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1 LightJockey Help file



To learn what's new in this version see [Update Notes](#)^[36]

Click [this link](#)^[15] to learn more about the types of hyper-links used within this on-line help.

[German online help-file](#)^[15]

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[Using the Data Restore Option](#) ^[55]



[The Offline Visualizer](#) ^[326]



[LJ manager \(plug-in\)](#) ^[349]



[Interfacing with Capture](#) ³⁴³

LightJockey and this helpfile may be updated by downloading the latest version from the Martin Website at www.martin.dk/service/software/logs/LightJockey_sw.htm

The current list of user-defined fixture profiles can be found at <http://www.martin.com/service/Software/controller/LJ/list.asp>

Finally, an end-user discussion forum dedicated to the LightJockey is hosted on the Martin Website. This forum can be accessed through the *service and support* entry on the Martin website or, if you have an active internet connection, directly from here: [LightJockey end-user forum](#)

2 Selecting between helpfiles

Selecting between helpfiles



To select between different help files use the main menu help. If the corresponding help-file is not available it will appear as grayed out.

Currently an English and German help file is available for LightJockey. Please note that especially with beta versions the non-English help-files may not include the latest changes and updates.

While an updated version of the English help-file is always shipped with Lightjockey it may be necessary to update the non-English help files when they become available. The latest versions will be available on the [Martin Website](#).

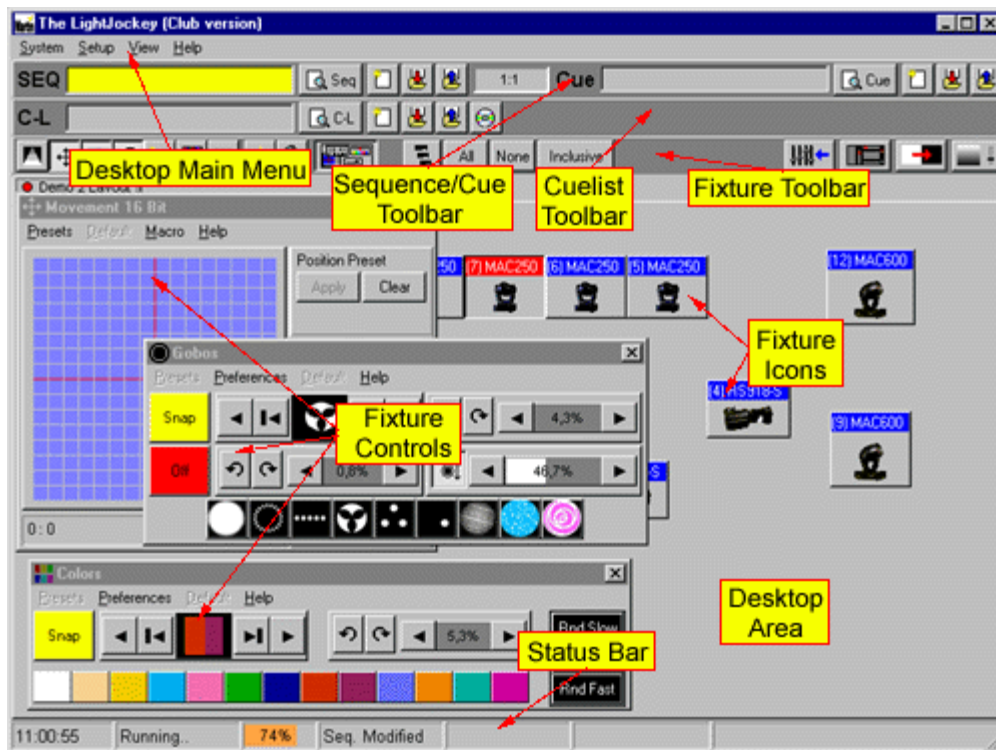
Die deutsche Hilfe könnte sich kurzzeitig auf eine ältere Softwareversion beziehen - bitte beachten Sie den Versionshinweis im Inhalt der online-Hilfe und besuchen Sie die Seite [LightJockey Software Log](#).

3 Overview of link types

Text in this help file, which is [green and underlined](#), represents internal hyper-links. Clicking this link will take you to another related topic within this helpfile.

[Blue and underlined](#) text represents internet links. To use these links you must have an Internet connection and a web-browser must be installed on the computer, and you must be online. Usually the link will cause the web-browser to load a web page off the Martin web site (www.martin.dk).

4 Desktop



5 Hotkeys

See also [Hotkey Functions](#)^[19]

Keyboard functions when selecting fixtures

When [selecting fixtures](#)^[120] by clicking on the fixture icons, the following mouse/keyboard combinations are available:

[\[shift\]+left-click fixture icon](#)

Force master. This will force the fixture into master status, regardless of it's previous selected state.

[\[Control\]+left-click fixture icon](#)

Solo fixture select. This will select the fixture as master and de-select all other fixtures.

[\[Control\]+ "rubber-banding" fixture icons](#)

This will select fixtures within rubber band frame only. Rubber-banding means to click and hold down left mouse button and then drag a rectangle around the fixture icons before releasing the button again.

Keyboard Hotkeys

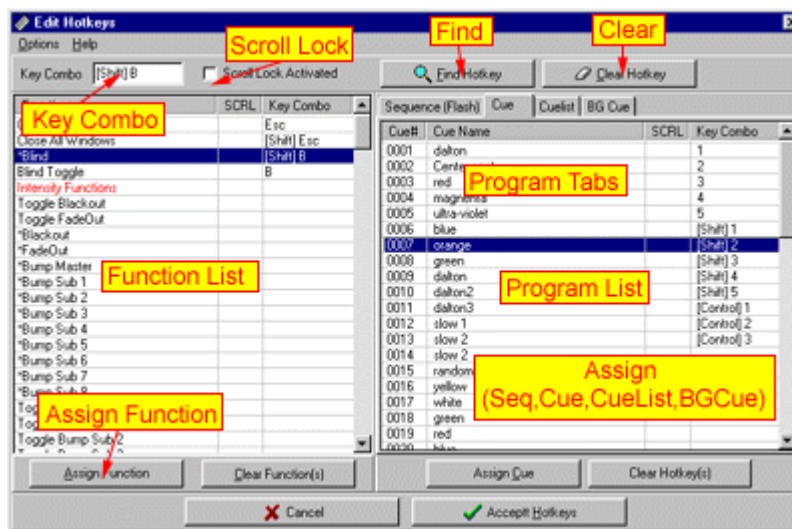
The PC keyboard keys may be setup as hotkeys to select various pre-defined functions, programs and effects directly.

In order for the hotkeys to work LightJockey must have the Windows focus (one of the LightJockey windows must be the 'active' window). If any other program has focus (this includes the [Offline Visualizer](#)^[326]), the keyboard commands will not be passed to the LightJockey application. The hotkeys will not have effect outside LightJockey.

The hotkey function may be globally enabled or disabled by setting or clearing the **Hotkeys Enabled** switch in the Main/Setup/Hotkeys menu.

To edit the function of the hotkeys select **Edit Hotkeys** from the Main/Setup/Hotkeys menu.

Note the the hotkey function may be disabled in some parts of the application, i.e. during [Fixture Configuration](#)^[40].



The Edit Hotkeys Dialog.

Configuring Hotkeys

The dialog lists the functions and programs that are can be assigned to hotkeys.

To assign a key or key combination to a function or program, first press the key or key combination to 'record' the key. The key/combination will appear in the *Key Combo* window.

Note that it is the key itself that is registered not the 'value' of the key. I.e. alpha-keys ("a" -"z") will always register as capitals ("A" -"Z"). [Control] and [Shift] combinations such as [Shift]E or [Control]E are recognized as separate hotkeys.

Some keys are not pre-defined in Windows but have a function that depends on the currently installed keyboard driver. These keys will list their value as [XXX], i.e. [123].

[Alt] combinations are not recognized by the hotkey system, but is reserved for use by the normal Windows hotkey system. Furthermore, Windows reserves a couple of keyboard combinations for it self, i.e. [Control]+[Esc]. These combinations are not available as hotkey combos.

To see if a particular key/combination is already in use, record the key/combination and click the **Find Hotkey** button. If the key is already assigned to a function or program, the assigned function or program will be highlighted in the relevant list.

To clear a particular key/combination, record the key and click the **Clear Hotkey** button. Alternatively locate and clear the relevant functions or programs and click the **Clear Functions** or **Clear Hotkeys(s)** buttons at the bottom of each list.

Disable hotkeys in dialogs

To disable the hotkeys in various dialogs (such as save dialogs) where normal keyboard operation is required, check the **Disable Hotkeys in Dialogs** item found in the options menu. By default hotkeys are disabled in dialogs.

Using Scroll Lock

The scope of hotkeys may be further limited by enabling the scroll lock switch for each key/combination. With scroll lock the hotkey will only work when scroll lock function of the keyboard is enabled. To set or clear the scroll lock attribute for multiple entries, select the lines, rightclick and select set or clear scroll lock from the popup menu.

Keyboard Function Keys (F1-F12)

The function keys F1-F12 and their respective shift/control combinations will always work, regardless of disable in dialogs or scroll lock setting.

Assigning Functions to hotkeys

To assign a function to a particular hotkey, record the key combination and highlight the function in the function list. Then click the **Assign Function** button.

See [Hotkey Functions](#) ^[19] for a more detailed explanation of the functions.

Assigning programs to hotkeys

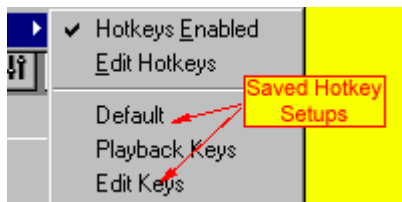
It is possible to assign hotkey to a specific program (Sequence, Cue, Cuelist or Background cue). To assign a hotkey to a program, record the hotkey and select (highlight) the program in the relevant list. Then click the assign 'program' (Sequence, Cue, Cuelist or Background cue).

Saving and Loading Hotkey setups

Since different operators may prefer different hotkey setups, or different setups may work better in different situations (i.e. programming vs. playback), it is possible to save and reload different hotkey setups.

In order to save the current setup, select **Save Hotkeys** from the options menu and use the standard Windows file dialog to save the setup with a filename.

To re-load the setup, either select **Load Hotkeys** from the options menu, or select the setup from the Main Menu/Setup/Hotkeys menu, where up to 8 previously saved setups will appear below the **Edit Hotkeys** item.



Selecting setups from the hotkey menu.

6 Hotkey Functions

Hotkey enable functions

A hotkey enable function is a function that enables a certain state, i.e. the Blackout function enables Blackout while Restore restores from the blackout.

Hotkey toggle functions

A toggle function is a function that toggles between two states. I.e. the blackout function will toggle between blackout and restore each time the key is pressed. Most functions are either enable or toggle functions.

Flash Functions

A Flash function is a function that is activated as soon as the hotkey combo is selected, and deactivated when the hotkey key combo is released.

Since the state of the [Shift] and [Control] keys are read at the point where the 'main' hotkey is pressed, make sure to press and the [Shift]/[Control] keys **before** the 'main' key and to release the [shift]/[Control] keys **after** the 'main' hotkey has been released. Or avoid using [Shift]/[Control] functions for flash functions. Flash functions are marked with an *.

Note that due to the nature of the PC keyboard, it may be impossible to hold more than a couple of keys down in flash mode before the keyboard buffer runs full and the keyboard stops responding.

System Functions

Close Window - Closes the current active LJ window (except the main LJ desktop)

Close All Windows - Closes all LJ windows (except the main LJ desktop)

***Freeze Output** - see [Freeze Output](#)^[107]. Freezes the DMX output values while the key is held down. Fade calculations and movement macros are stopped, but sequences in cues are still triggered. (flash function)

Freeze Output Toggle - see [Freeze Output](#)^[107] - the mode toggles on and off for each key press.

***Freeze + B/O** - Combines freeze and Blackout command (flash function)

Freeze + B/O toggle - Combines freeze and Blackout command - toggles on and off for each key press.

DMX Offline, DMX Online, DMX OnLine/OffLine toggle - see [offline/online switch](#)^[107]

2532 Control - Toggles the [2532 control](#)^[296]

Virtual Fingers - use to toggle [Virtual Fingers](#)^[102]

Fingers status panel - use to toggle [Finges status panel](#)^[107]

Intensity Functions

Toggle Master Intensity Control - Toggles the [Master Intensity Control](#)^[151] on and off

Blackout/Restore - Toggles blackout/restore (as the [blackout button](#)^[155])

Blackout - Sets Blackout

Restore - Restore from blackout

Fade Out/Fade In - Toggles the fade out / fade in states, using the fade time set in the

[Master Intensity Control](#)^[151]

Fade Out - Starts a Fadeout using the Master Intensity fadetime.

Fade In - Starts a Fadein using the Master Intensity fadetime.

Fade Out 1-10 Sec / Fade In 1-10 Sec - Starts a fade out or fade in using the specific time.

Master Intensity off/full/+1/+10/-1/-10 - Immediately sets or modifies the the level of the intensity master - note that when using a hotkey for 'fading' by holding down a key on the keyboard, the 'fadetime' is determined by the system keyboard repeat rate.

***BlackOut** - Sets Blackout for as long as the key is held down - when the key is released the output is restored.

***FadeOut** - Activates fadeout for as long as the key is held down - when the key is released a fade in is performed. Both fade out and fade in use the default fade time selected on the

[Master Intensity Control](#)^[151].

*Bump Master, *Bump Sub 1-8 - bumps the individual [Master intensity](#)^[151] faders (Flash Function).
Toggle Bump Master, Toggle Bump Sub 1-8 - toggles bump status on the individual faders on the [Master intensity](#)^[151].

HTP Groups

*HTP group X - Bump - Flashes the channels belonging to the [HTP Group](#)^[312] to On (DMX value = 255).

HTP group X - Toggle - Toggles the channels belonging to the [HTP Group](#)^[312] between On (DMX value = 255) and Off (DMX value = 0).

Fixture Controls

Fixture controls (Intensity -> Level/Special) - Toggles the individual [Fixture Controls](#)^[151] - fixture controls will only be shown if they are valid for the currently selected [master fixture](#)^[120]

Toggle Intensity Palette -> Toggle Levels/Special Palette - Toggles the corresponding [user palette](#)^[60] on and off.

Toggle Position Preset - Toggles the [Position Preset](#)^[139] list on and off.

Toggle All Palettes/Presets - Toggles all [preset](#)^[139] or [user palettes](#)^[60] on and off.

P/T Macro - Toggles the [Movement Macro Control](#)^[130].

FanOut Control - Toggles the [FanOut Control](#)^[134].

Position Options - Toggles the [Position Options Control](#)^[134]

Mirror Pan, Mirror Tilt, Swap and 360 deg - Activates each of the functions from the [Position Options Control](#)^[134]

Pan Relative +/- Tilt Relative +/- - Moves the pan/tilt for the selected fixture(s).

Home Selected Fixtures - Moves the pan/tilt for the selected fixture(s) to Home position.

[Fadestatus](#)^[128] is defaulted to Snap.

All Controls - Toggles all fixture controls from Intensity to Effects controls, controls will only be shown if they are valid for the current [master fixture](#)^[120]

Other

Generic Controls - Toggles the [Generic DMX Control](#)^[169] on and off.

Smoke Control - Toggles visibility of the [Smoke Control](#)^[351]

*Smoke Button - Controls the smoke button on the Smoke Control (flash function)

Toggle smoke timer - toggles the smoke timer button on the Smoke Control.

CD Control - Toggles the [Audio CD control](#)^[144]

Followspot 1-10 - Activates [Followspot settings 1 to 10](#)^[344]

Clear Followspot - Clears the current followspot setting (if any)

View DMX Output - Toggles the [DMX output monitor](#)^[117].

Toggle Notes - Toggles the Notes on and off. Normally standard keys are captured by the notes window which will prevent a 'normal' hotkey from closing the window. Assign a function key (F1-F12) for the function or use [Escape] to close the Window.

Autostrike lamps toggle - Toggles the autostrike lamps function on and off (see [Startup Options](#)^[112])

Assign Preset# - Assign position preset 1 to 10 to selected fixtures.

Sequence Functions

Sequence Control - Toggles the [Sequence Control](#)^[178]

Toggle List of Sequences - Toggles the [List of Sequences](#)^[208].

Next Scene - Advances the current sequence to the next scene

Previous Scene - Advances the current sequence to the next scene

Add Scene - Adds a scene to the current sequence

First Scene - Places the current sequence in the first scene

Last Scene - Places the current sequence in the last scene

Quick Save Sequence - [Quick saves](#)^[109] the current sequence

New Sequence - Performs a clear/new Sequence Command.

Set Sequence Blind - Sets the [Sequence Blind](#)^[183] state

*Sequence Blind - Sets the [Sequence Blind](#)^[183] state (flash function)
 Clear Sequence Blind - Clears the [Sequence Blind](#)^[183] state
 Sequence Blind Toggle - Toggles the [Sequence Blind](#)^[183] state
 Playback Fwd,Rev, Stop - Activates the playback functions on the [sequence control](#)^[178]

Cue Functions

List Of Cue Functions - these functions relates to the [List of Cues](#)^[208]

Toggle List of Cues - Toggles the [List of Cues](#)^[208].
 Load Selected Cue (global list) - loads the selected cue from the global list of cues.
 Load Selected Cue (Cue Page) - loads the selected cue from the current cue page.
 Force Cue# selection - forces Windows focus to the Cue# entry.
 Previous Cue Page - selects the previous cue page.
 Next Cue Page - selects the next cue page.
 Cue Page Latch Previous Cue - latches the previous cue on the current cue page.
 Cue Page Latch Next Cue - latches the next cue on the current cue page.
 Cue Page Select Previous Cue - selects the previous cue on the current cue page, but does not latch the cue.
 Cue Page Select Next Cue - selects the next cue on the current cue page, but does not latch the cue.

Cue Control Functions - these functions relate to the [Cue Control](#)^[184]

Toggle Cue Control - Toggles the [Cue Control](#)^[184]
 Toggle Chase Manual - Toggles 'Chase Man' function in the [Cue Control](#)^[184]
 Toggle Chase Fade - Toggles the *Disable Fadetime in Chase Mode* option in the [Cue Control](#)^[184] preferences menu.

*Flash selected Sequence - Adds the selected sequence (if any) to the current cue in flash mode (sequence is removed as soon as the key is released). If the sequence list is closed the last selected sequence is loaded.

Release latched Flash - Releases a latched flash sequence.
 Quick Save Cue - [Quick saves](#)^[109] the current Cue
 New/Clear Cue - Performs a new cue command.
 Toggle Select All - Toggles the select all / deselect all button on the [Cue Control](#)^[184].
 Cue Time Control - Toggles the [Cue Time](#)^[192] control.
 Cue Loop Control - Toggles the [Sequence Slot Loop Options](#)^[188] control.

Cue Macro Control Functions - these functions relate to the [Cue Macro Control](#)^[199]

Cue Macro Control toggle - Toggles the [Cue Macro](#)^[199] control
 Pan/Tilt Macro : Fade In, Fadeout, Macro Off, Macro On - Hotkeys for corresponding buttons in the [Cue Macro](#)^[199] control.
 Pan/Tilt Macro : Reset Amplitude, Reset Speed - Resets speed and amplitude in the [Cue Macro](#)^[199] control.

Pan/Tilt Macro : Freeze, Run, Toggle Freeze, *Freeze - Freezes pan/tilt macros running in the cue (*Freeze is a flash function')

Toggle Cue slot selection

Toggle Slot# - toggles slot selection state on/off

Toggle Seq On/Off

All Slots Off - Sets all sequence slots to off (effectively switching off the cue)

All Slots On - Sets all sequence slots to on

Toggle Slot## - Toggles the enabled/disabled state of the individual sequence slots

Clear Cue Slot

Clear Sequence # - Clears the corresponding sequence slot #

Sequences Stop/Go

Seq # Stop - Stops the corresponding sequence in slot #

All Sequences Stop - Stops all Sequences

Seq # Go - Starts the corresponding sequence in slot #

All Sequences Go - Starts all Sequences

Seq # Stop/Go Toggle - Toggles stop/go state for the the corresponding sequence in slot #

All Sequences Stop/Go - Toggles stop/go state all Sequences

Emulate Audio Trig - Emulates a trig from the [Audio Analyzer](#)^[322]

Triggering multiple sequences

Trig Selected Manual* (Default/Fwd/Rev/Rnd/Bounce) - Trigs individual selected (highlighted) sequences if the sequences are in manual trig mode.

Trig Selected Auto* (Default/Fwd/Rev/Rnd/Bounce) - Trigs individual selected (highlighted) sequences if the sequences are in auto trig mode.

Trig Selected* (Default/Fwd/Rev/Rnd/Bounce) - Trigs individual selected (highlighted) sequences.

(*) If no sequences are selected, all sequences in the relevant mode are triggered.

Trig All Manual (Default/Fwd/Rev/Rnd/Bounce) - Trigs all manual sequences regardless of selected state.

Default - Trigs with the sequence(s) with the default (programmed) loop function..

Fwd - Trigs the sequence(s) in a forward loop direction.

Rev - Trigs the sequence(s) in a reverse loop direction.

Rnd - Trig the sequence(s) random scene mode.

Bounce - Trig the sequence(s) in bounce mode.

Triggering individual sequences

Trig Seq# Default - Trigs the individual sequence slot # with the default (programmed) loop function.

Trig Seq# Fwd - Trigs the individual sequence slot # one scene forward

Trig Seq# Rev - Trigs the individual sequence slot # one scene backwards

Trig Seq# Rnd - Calls up a random scene in the sequence slot #

Trig Seq# Rnd - Calls up a random scene in the sequence slot #

Cue Builder Functions

Toggle Cue Builder - Toggles the [Cue Builder Control](#)^[201]

Toggle Cue Capture Activate - Toggles Cue Builder Cue Capture

Toggle Seq Capture Activate - Toggles Cue Builder Sequence Capture

Cue Stack Go - Activates Cue Builder Cue Stack Go Command

Cue Preset Go - Activates Cue Builder Cue Preset Go Command

Get Cue - Activates Cue Builder Get Cue Command

Clear Cue Stack - Clears the cue stack

Clear All Seq - Clears all sequences from the Cue preset list (same as rightclicking 'Clear Seq')

Generic Macro Editor Functions

Generic Macro Engine Off - Stops the [Generic Macro engine](#)^[244]. This affects all running macros including any macro running from the [Macro editor](#)^[244].

Generic Macro Engine On - Starts the [Generic Macro engine](#)^[244]

Generic Macro Engine Toggle - toggles on/off state of the [Generic Macro engine](#)^[244]

Toggle Generic Macro Editor - Toggles the [Generic Macro Editor](#)^[244]

Clear Generic Macro Editor - Clears the contents of the Generic Macro Editor

Generic Macro Slot Off - Switches the Generic Macro (if any) associated with the Cue Off.

Generic Macro Slot On - Switches the Generic Macro (if any) associated with the Cue On.

Toggle Generic Macro Slot - Toggles the Generic Macro (if any) associated with the Cue On/Off.

CueList Functions

CueList Control - Toggles the [CueList Control](#)^[216]

Toggle List of Cuelists - Toggles the [List of Cuelists](#)^[238]

Quick Save CueList - [Quick saves](#)^[109] the current CueList

CueList Start Top - Executes a Start Top Command

CueList Start Selected - Executes a Run Command

CueList Go - Trigs the cuelist Go command. If the cuelist is not already active (running) a 'Run from top' command is given to the cuelist.

CueList Back - Trigs the cuelist Back command. The cuelist must be active (running) for this command to be work.

CueList Stop - Stops the current cuelist executing.

CueList Stop and Clear - Stops the current cuelist executing and clears the current cue.

Cuelist Goto Mark 1-4 - jump to Mark

Cuelist Run from Mark 1-4 - Executes a Run command at Mark 1-4

Log Timecode - Logs timecode (if the the [log timecode control](#)^[228] is visible).

Background Cue Functions

Toggle BGCue control - Toggles the [Background Cue](#)^[238] control.

Clear BGCue - Clears the current [background cue](#)^[238].

Toggle BG Cue List - Toggles the [List of Background Cues](#)^[208].

BGCue - Toggle slot 1-5 - Toggles the individual slots of the Background cue on and off.

BGCue - All Slots Off/On - Sets the state of all slots in the Background Cue to off or on respectively.

Load Selected BG Cue - Loads the currently selected (highlighted) Background Cue from the select Background Cue list (this function only works when the list is opened)

Statics Control

Statics control - toggles the [statics control](#)^[241].

Static 01-10 - Sets the on/off state of the individual [statics control entries](#)^[241]. Note that the key will act as flash if the static entry is designated as flash.

Release statics - Releases all enabled static entries.

Fixture Selection

Toggle Inclusive/Exclusive - Toggles inclusive/Exclusive [fixture selection](#)^[120] mode.

Next Fixture - Selects next fixture (see [Next/Previous Fixture](#)^[347])

Previous Fixture - Selects previous fixture (see [Next/Previous Fixture](#)^[347])

De-select All Fixture - de-selects all fixtures.

Toggle Fixture Solo - Toggles [Fixture Solo](#)^[348] on and off.

*Fixture Solo - Sets [Fixture Solo](#)^[348] mode (flash function).

Select fixture like master - Hotkey for the [Fixture Icon popup](#)^[122] command 'Select all of this type' - selects all fixtures of the same type as the master fixture.

Select programmed - Hotkey for the corresponding [Desktop popup](#)^[61] command - selects all fixtures programmed in the current scene.

Select programmed (Master) - Hotkey for the [Fixture Icon popup](#)^[122] command 'Select all programmed of this type' - selects all fixtures of the same type as the master fixture which are programmed in the current scene.

Fixture Groups

Toggle Group View - Toggles the [fixture group view](#)^[118] on and off.

Fixture groups 1-10 - Selects user defined fixture groups 1-10. Note that the groups must be defined first using the [fixture group view](#)^[118].

Offline Visualizer

Toggle Offline Visualizer - Toggles the [O/V](#)^[328] enabled/disabled state. Note that when disabled, the O/V does not close down, but just minimize and deactivate.

User Camera 1-8 - Hotkeys for user defined cameras in the [Offline Visualizer](#)^[328]. Cameras 1-8 are selected in the order they appear in the list on the Visualizer Toolbar.

Emulate 2532

2532 Emulate Latch, 2532 Emulate Flash, 2532 Emulate User Key - Emulates the functions of 2532 keys. See [Emulating the 2532](#)^[304].

Release Flash - Releases the flash sequence. See [Emulating the 2532](#)^[304].

2532 Next page, 2532 Previous page - Selects next or previous page respectively.

DMX-In

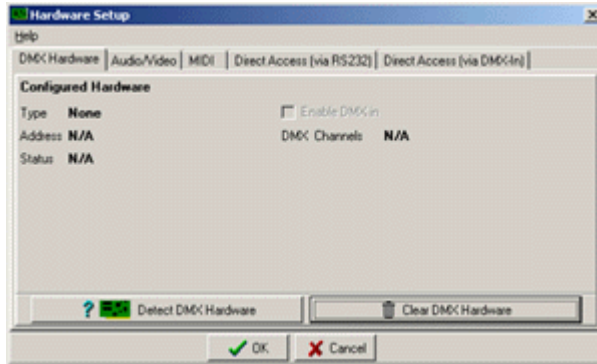
DMXin Functions Disable - Disables [DMX in functions](#)^[304].

DMXin Functions Enable - Enables [DMX in functions](#)^[304].

DMXin Functions Toggle - Toggles [DMX in functions](#)^[304] Enable/Disable.

7 Hardware Setup

In order for LightJockey to recognize hardware such as transmitter interfaces or direct access controllers, they must first be configured using the hardware setup dialog. The dialog is accessed through the main Setup menu (Setup/Hardware Setup).



The hardware setup dialog

The dialog locates different types of hardware and associated software settings on different tabs.

DMX Hardware

Configure and setup DMX transmitter and receiver hardware - [Details](#)^[24]

XLR Cable connections

Connecting the serial links to the interfaces. Converting 3 pin XLR to 5 pin XLR and phase reversing XLR cables - [Details](#)^[26]

Audio

Configure and setup Audio related hardware and software - [Details](#)^[27]

MIDI

Configure and setup MIDI related hardware and software - [Details](#)^[28]

Direct Access (via RS 232)

Configure and setup peripheral hardware that connects via RS-232 - [Details](#)^[28]

Direct Access (via DMX-in)

Configure and setup peripheral hardware that connects via DMX-in - [Details](#)^[29]

8 DMX Hardware

See also [XLR Cable Connections](#)^[26]

See also [Setting Transmitter hardware options](#)^[39]

DMX transmitter hardware is configured using the DMX hardware tab in the [hardware setup dialog](#)^[24].

LightJockey supports the following types of DMX transmitter/receiver hardware:

- LightJockey PCI 512 card, 512 DMX channels out and 512 DMX channels in.

- LightJockey PCI 2048 card, 2048 DMX channels out or 1536 DMX channels out + 512 DMX channels in.
- Martin 4064 ISA Card - club version, 2048 DMX channels out or 1536 DMX channels out + 512 DMX channels in.
- Martin 4064 ISA Card - DJ version, 512 DMX channels out and 512 DMX channels in.
- Martin DMXADP Parallel port adapter, 512 DMX channels out (not supported in Windows 2000/XP)
- Martin LightJockey PCMCIA interface, single card, 1024 channels out or 512 DMX channels out + 512 DMX channels in.
- Martin LightJockey PCMCIA interface, two cards, 2048 DMX channels out or 1536 DMX channels out + 512 DMX channels in.
- Martin LightJockey USB Interface, 512 DMX channels out.

Each interface ship with a printed installation guide, this help file only contains short installation notes. The latest installation guide can be downloaded from the support section of the Martin Website at www.martin.dk - support section.

[Installing the PCI DMX transmitter card \(PCI 512, PCI 2048\)](#) ^[29]

[Installing the ISA DMX transmitter card \(DJ, CLUB\)](#) ^[31]

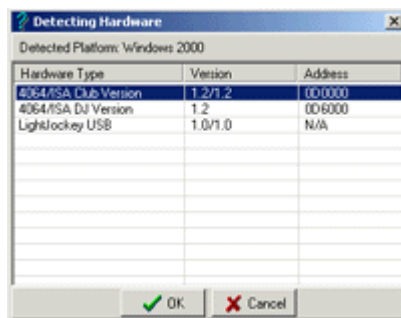
[Installing the ADP \(Parallel Port\) DMX interface](#) ^[32]

[Installing the PCMCIA DMX Interface](#) ^[33]

[Installing the USB DMX Interface](#) ^[34]

Configuring Hardware LightJockey

Once the hardware (and a Windows driver if required, see notes for individual interfaces) has been installed, start LightJockey and enter the hardware setup dialog via the main **Setup** menu. Click **Detect DMX Hardware** to detect and list the installed hardware.



Detected hardware list.

Select the required interface from the list and click OK.

Different hardware interfaces may have different setup options for adjusting DMX refresh rate or enabling DMX in - see [Setting Transmitter Hardware Options](#) ^[39].

Note that if the hardware type or options are changed LightJockey will need to restart in order to re-initialize correctly.

9 XLR Cable Connections

Connecting the DMX link(s)

All LightJockey transmitter hardware is configured as pin 1 to shield, pin 2 to cold and pin 3 to hot. See below for notes on 3 to 5 pin XLR converters and phase-reversing cables (for older Martin fixtures and some fixtures from other manufacturers). Always remember to terminate the end of the links with a 120-ohm terminating plug.

The 4064 ISA DJ card

The DJ card ships with a SUB-D to XLR cable. Connect to the female XLR for DMX out, and the male XLR for DMX in.

The 4064 ISA Club card

The Club card ships with 3 SUB-D to XLR cables. The D-SUB to 2 x female XLR should be used in the top SUB-D connector for 2 x DMX out(link 1 and 2). Use the second 2 x female XLR in the lower SUB-D socket if the card is configured with 4 x DMX out(link 3 and 4). Use male+female XLR cable if the card is configured to receive DMX in(link 3 and DMX in).

The PCI 512 card

The PCI 512 card ships with a SUB-D to XLR cable. Connect to the female XLR for DMX out, and the male XLR for DMX in.

The PCI 2048 card

The PCI 2048 card ships with 3 SUB-D to XLR cables. The D-SUB to 2 x female XLR should be used in the top SUB-D connector for 2 x DMX out (link 1 and 2). Use the second 2 x female XLR in the lower SUB-D socket if the card is configured with 4 x DMX out (link 3 and 4). Use the male+female XLR cable if the card is configured to receive DMX in (link 3 and DMX in).

To the DMXADP Interface

Connect a 3 pin XLR to the female XLR output of the interface.

To the PCMCIA interface

When using 1 PCMCIA interface, DMX outputs and DMX input are located as displayed on the breakout box. When using DMX in, connect the incoming DMX to link 2. When using two PCMCIA interfaces, outputs for link 3 & 4 are located on the breakout box connected to the second PCMCIA card.

To the USB Interface

Connect the link to the 3 pin XLR on the USB interface.

3 Pin to 5 pin XLR converters and phase reversing cables.

5-pin to 3-pin Adaptor		3-pin to 5-pin Adaptor		3-pin to 3-pin Phase-Reversing Adaptor	
Male	Female	Male	Female	Male	Female
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4			4		
5			5		
P/N 309160		Construct		P/N 309158	

10 Audio Setup

Use the audio setup tab to configure and select audio options for LightJockey.



The Audio Analyzer

The Audio analyzer program enables LightJockey to use audio input via a sound card to trig sequences in the cue. See [Using Audio in](#)^[319] and [Trigging Sequences](#)^[193] for more information.

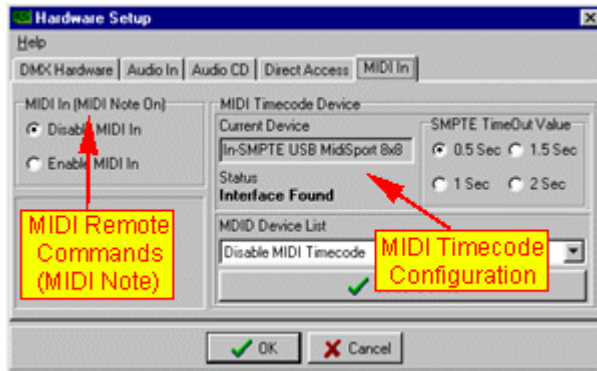
CD-Audio

Enabling CD-Audio allows LightJockey to control a CD-ROM drive for audio CD play back. It also allows LightJockey to take time code from the audio CD to synchronize the cuelist to audio CD time code. See [Audio CD Control](#)^[144] and [Using Timecode in Cuelists](#)^[226] for more information.

Digital Audio Playback

While not strictly a piece of hardware, LightJockey is able to connect to Winamp for playback of digital audio (MP3, Wav, etc..). The timecode from the digital audio may be used to synchronize sound and light in the Cuelist. See [Using Winamp for digital audio](#)^[232] and [Using Timecode in Cuelists](#)^[226] for more information. In order for LightJockey to automatically start Winamp when required (i.e. in the cuelist), the complete path to the Winamp executable must be entered in the 'Path to winamp' field. Click the folder button and navigate to the Winamp.exe file.

11 MIDI Setup



MIDI in Dialog

MIDI Note Commands

A number of functions including latching cues or flashing sequences may be remotely controlled via a MIDI interface. To enable MIDI remote control of LightJockey via MIDI, enable the MIDI In function on the MIDI In tab.

For more details on the MIDI implementation see [MIDI In](#)^[316].

MIDI Timecode

MIDI Timecode (MTC) may be used as a time source for [Cuelists](#)^[216]. To enable a MIDI timecode interface, select it from the MIDI device list via the lower right-hand corner (Select from list then click **Select Device**). Note that in order for LightJockey to recognize the MIDI device it must be installed with working Windows drivers.

The MTC Timeout Value determines the time it takes before an MTC driven cuelist to timeout after MIDI time code transmission has stopped. Normally the default value of 0.5 sec is a good selection, but special circumstances may make it necessary to increase the timeout value.

12 Direct Access (via RS 232) Setup

See also [Rs 232 Remote interface](#)^[82]

2532 Direct Access keyboard

Before the [2532 Direct Access](#)^[296] keyboard may be used with LightJockey it needs to be configured. Enable the the 2532 Direct Access and then select the appropriate serial port (COM1-COM4). It is not necessary (or recommended) to enable to enable the 2532 and select a serial port in order to use the 2532 control in virtual mode (using the control without a 2532 physically connected).

NOTE: The 2532 must have at least version 3.0 software in order to work with LightJockey.

Martin 2518 (via RS-232)

Connects the [Martin 2518 controller via RS-232](#)^[309]. Since the connection is via RS-232 it is possible to connect the 2518 without additional hardware (except an available RS-232 port and suitable cable).

13 Direct Access (via DMX-in) Setup

MC-X Controller

As the MC-X controller uses DMX to communicate with LightJockey, it is only useable with an appropriate hardware interface that supports DMX in.

Note that if the MCX interface is enabled, normal [DMX in](#) functionality is suspended.

See [MC-X Remote Controller](#) for details on setup and use.

14 Installing the PCI DMX transmitter card.

See also [XLR Cable Connections](#)

See also [Setting Tranmitter hardware options](#)

The PCI interface card comes in two flavors, the PCI 512 and the PCI 2048.

- The PCI 512 supports one full link of DMX out (512 channels) and one full link of DMX in (512 channels).
- The PCI 2048 supports 4 full links of DMX (2048 channels) and may be configured to drive 4 output links or 3 output links and 1 input link.

The PCI card is supported when operating under Windows 95, 98, ME, 2000 and XP.

Complete instructions for installing the PCI Card are shipped with the card and may also be downloaded from the [Martin website](#)

In order for LightJockey to use card the follow the 3 steps outlined below:

1. Install the Windows PCI driver
2. Install the LightJockey PCI/ISA driver
3. Configure LightJockey to use the card as DMX transmitter.

Installing the Windows PCI driver

Before the card can be used a Windows PCI driver must be installed - the installation process is identical for both PCI512 and PCI2048 cards and pretty much the same in all Windows versions. After installing the Windows driver, a second driver (LightJockey PCI/ISA driver) needs to be installed before LightJockey can communicate with the card - see below. Note that on windows 2000 and XP the login account used must have administrator rights - otherwise the drivers cannot install.

- Power off the PC, remove the mains connector, and then install the card in a free PCI slot taking all the necessary precautions against static electricity discharges. Switch on the PC
- After startup, Windows detects the presence of new card and starts the "found new hardware wizard".
- Use the wizard to locate the **4064PCI.inf** file located in the \HardwareDrivers\PCI_ISA\ folder (1). Select the 4064PCI.Inf file and finish the Wizard. If during the installation the Wizard requests a diskette with wdpnp.syst, just click OK to continue.
- Once the driver has been installed, open the device manager (1) to verify that the card has been detected correctly. The card should appear in the device list under Martin devices as **Martin PCI4064: DMX PCI Card**.

Installing the LightJockey Driver

The LightJockey driver used for the PCI card is identical to the one used for the ISA card on Windows 2000/XP PCs - so if the driver is already installed, the following steps can be skipped.

Also as the driver used for the ISA card is a generic Windows driver it may already be installed on the PC to drive other types of (non LightJockey related) hardware. The installer checks to see if the driver is already installed and displays a message accordingly. If the driver is already installed on the PC, it is not necessary to install the driver again.

The installation program for the driver is located in the <LightJockey>\HardwareDrivers\ISA_PCI folder (1). **In order for the install program to be able to install the driver, the user must be logged in to Windows 2000/XP with administrator rights.**

Use Windows explorer to open the folder, then select and double click to run the Installer (Installer.exe) program to install the driver for the PCI card.

If the driver is installed on a Windows 95,98 or ME computer, Windows needs to restart in order for the driver to load - under Windows 2000/XP a restart is not necessary.

Once the driver has been installed (and Windows restarted if needed), click *Locate Card(s)* to verify that all drivers has installed correctly and the card(s) can be found. The list will show all PCI4064 cards well as any [LightJockey ISA](#)^[31] cards installed.



LightJockey driver Installation program - listing cards

(1) On the LightJockey CD the \HardwareDrivers\ folder is placed in the root directory. The folder is also copied to the hard disk when LightJockey is installed or updated - it can be found in the folder where LightJockey was installed to.

(2) In Windows 2000/XP, Right click *my computer* on the desktop, select *Properties* then on the *Hardware* tab click *Device Manager*. In Windows 95/95/ME right click *My Computer* on the desktop, then select the *Device Manager* tab.

Configuring LightJockey

Once both drivers have been installed and verified, start LightJockey and use the [Detect DMX hardware function](#)^[24] to configure LightJockey to use the new card as DMX transmitter. See [Setting Transmitter hardware options](#)^[39] for notes on setup options and [XLR Cable Connections](#)^[26] for instructions on how to connect the card to the serial link.

Removing and re-installing the LightJockey PCI/ISA driver

IMPORTANT NOTE: The 4064 PCI/ISA driver is a generic windows driver that may be used to drive other types of hardware installed the PC. Removing the driver may cause other hardware to stop working. Do not remove the driver unless you are absolutely sure that it is not needed for other types of hardware.

To remove the driver, start the installer program and click *Remove Current Driver*.

Re-installing the driver is done in two steps. First use the installer to remove the driver. Then close the installer and restart it to install the driver again.

On Windows 95/98/Me it will be necessary to restart between removing and re-installing the driver.

Note that in case the driver is used by active applications it will not be removed completely until Windows is restarted. If the driver will not install after being removed (indicated by an error message when trying to install) - restart Windows to remove the driver completely before installing the driver again.

15 Installing the ISA DMX transmitter card

See also [XLR Cable Connections](#)^[26]

See also [Setting Transmitter hardware options](#)^[39]

The 4064 ISA card exists in two versions, Club and DJ, and is supported in Windows 95,98,ME, 2000 and XP installations.

Complete instructions for installing the 4064 ISA Card are shipped with the card and may also be downloaded from the [Martin website](#)

Windows 95,98 and ME installation.

No special drivers are required - just install the card and startup LightJockey.

Windows 2000/XP Installation

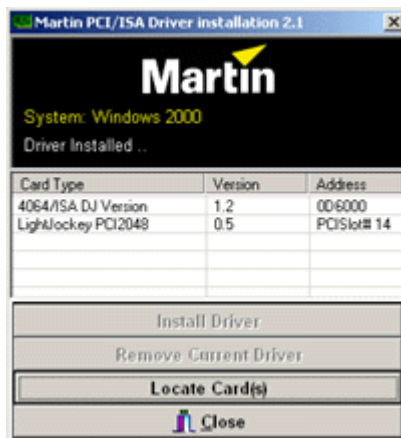
In order for LightJockey to recognize the card in Windows 2000/XP, a special driver must be installed using the ISA/PCI driver installation program .The program is located in the

<LightJockey>\HardwareDrivers\ISA_PCI folder. **In order for the install program to be able to install the driver, the user must be logged in to Windows 2000/XP with administrator rights.**

The driver when used in Windows 2000/XP is a dynamically loading driver so a Windows restart is not required after the driver has been installed.

Use Windows explorer to open the folder, then select and double click to run the Installer (Installer.exe) program to install the driver for the ISA card.

As the driver used for the ISA card is a generic Windows 2000/XP driver it may already be installed on the PC to drive other types of (non LightJockey related) hardware. The installer checks to see if the driver is already installed and displays a message accordingly. If the driver is already installed on the PC, it is not necessary to install the driver again.



ISA/PCI driver installation program - listing cards

Click **Install Driver** to install the driver. Once the driver has been installed (only takes a few seconds) - click **Locate Card(s)** to locate any LightJockey 4064 ISA or LightJockey PCI cards installed in the PC.

Configuring LightJockey

Once the driver has been installed and verified (if necessary), start LightJockey and use the Detect DMX hardware function to configure LightJockey to use the new card as DMX transmitter. See [Setting Transmitter hardware options](#)^[39] for notes on setup options and [XLR Cable Connections](#)^[26] for instructions on how to connect the card to the serial link.

Removing and re-installing the PCI/ISA driver

IMPORTANT NOTE : The PCI/ISA driver is a generic windows driver that may be used to drive other types of hardware in the PC. Removing the driver may cause other types of hardware to stop working. Do not remove the driver unless you are absolutely sure that it is not needed for other types of hardware.

To remove the driver, start the installer program and click *Remove Current Driver*.

Re-installing the driver is done in two steps. First use the installer to remove the driver. Then close the installer and restart it to install the driver again.

On Windows 95/98/Me it will be necessary to restart between removing and re-installing the driver.

Note that in case the driver is used by active applications it will not be removed completely until

Windows is restarted. If the driver will not install after being removed (indicated by an error message when trying to install) - restart Windows to remove the driver completely before installing the driver again.

16 Installing the ADP (Parallel Port) DMX interface

See also [XLR Cable Connections](#)^[26]

See also [Setting Transmitter hardware options](#)^[39]

The DMXADP Interface

The DMXADP interface connects the PC parallel port (printer port). It also requires external power (using the keyboard connector on the PC and special adapter cables). The interface transmits 512 DMX channels and is not capable of receiving DMX. The DMXADP interface is not supported on Windows 2000/XP PCs. No special drivers are required to use the interface. Connect the interface, start to PC and start LightJockey. If found, the interface will show up on the detect hardware list. Select the interface and restart LightJockey to activate the interface. The DMX refresh rate from the interface cannot be changed.

Special notes for laptop users.

Laptops often use different power saving schemes to try to save as much battery power as possible.

Disabling or reducing power for the parallel port or the external keyboard connector will cause the DMXADP interface to malfunction. To avoid this it is highly recommended to disable all power saving settings on the laptop.

17 Installing the PCMCIA DMX interface

See also [XLR Cable Connections](#)^[26]

See also [Setting Transmitter hardware options](#)^[39]

The PCMCIA interface

The PCMCIA interface is supported in all Windows 9X (including Windows ME) and 2000/XP versions. The card supports 2 DMX links (universes) and may be configured as 2 links with DMX out or one link with DMX out and one with DMX in. A complete installation guide is shipped with the card, and may also be downloaded from <http://www.martin.dk/service/Manuals/PCMCIA.pdf>

Drivers are required to operate the interface in both Windows 9X and Windows 2000/XP. The interface has Windows plug and play functionality so to install the required driver, simply start up Windows and insert the card. After a few seconds Windows will report that it has found new hardware and that a driver is required. To install the drivers, follow the steps in the Windows New Hardware Wizard. Note that the interface requires different drivers in the Windows 9X and Windows 2000/XP installations. The Windows 9X drivers are located in the `<LightJockey>\HardwareDrivers\PCMCIAW9X\` folder while the driver for Windows 2000/XP is located in the `<LightJockey>\HardwareDrivers\PCMCIAW2K\` folder. Please make sure to select the right driver. Once installation of the driver has been completed start up LightJockey and select the interface from the detect hardware list.

Using two PCMCIA interfaces

By using two PCMCIA interfaces the DMX capability may can be increased to a total of 4 links. To use a second PCMCIA card it must be a special 'card #2' revision (marked link III-IV) - it is not possible to combine two #1 cards (link I-II).

PCMCIA (one card) setup options

Check **Enable DMX in** to enable [DMX in](#)^[304] on the second link. When DMX in is enabled it is possible to select DMX refresh rate (44 Hz or 22 Hz). With DMX in disabled it is not possible to change refresh rate.

PCMCIA (two cards) setup options

Check **Enable DMX in** to enable [DMX in](#)^[304] on link 4 (marked link 2 on the break out box). When DMX in is enabled it is possible to select DMX refresh rate (44 Hz or 22 Hz) for the 3'rd link (3'rd link only). With DMX in disabled it is not possible to change refresh rate.

IMPORTANT

Although the PCMCIA interfaces are 'hot-plug' interfaces (can be removed and inserted while Windows is running) - do not remove the interfaces while LightJockey is running. If removed and re-inserted while LightJockey is running, interfaces will not be re-initialized correctly. To re-initialize the interfaces, LightJockey must be restarted.

18 Installing and using the USB DMX interface

See also [XLR Cable Connections](#)^[26]

See also [Notes on using multiple USB Interfaces](#)^[37]

See also [USB Warnings and Errors](#)^[35]

The LightJockey USB/DMX Interfaces

DMX/USB interfaces are supported in Windows 98, ME, 2000 and XP. The USB DMX interface transmits 512 DMX channels. From LightJockey version 2.5, a maximum of 4 USB DMX-out interfaces can be connected for a total of 2048 DMX out channels.

Driver locations - Important notes

If you are installing/updating the USB driver from a LightJockey release downloaded from the Internet, it may be necessary to run LightJockey once to decompress and update new files - the USB driver folder may not be available until the installation is properly updated.

If you are installing USB drivers from a version of LightJockey that has been updated with a newer version, you may see folders with names such as *HardwareDrivers\USBW9X* or *HardwareDrivers\USBW2K* - these are older versions of the driver from a previous installation or update, do NOT install the driver from these folders.

Multi USB interface installation - Important notes

Windows system level support for USB devices means that it is not possible for LightJockey to distinguish between physical USB interfaces of the same type.

To be sure that LightJockey routes the intended DMX data to the same physical USB interface each time, make sure that all USB interfaces are connected to the same connector as it was when configured. Also, interfaces should be connected to the USB ports before Windows starts up. See more [Notes on using multiple USB Interfaces](#)^[37] for more details

USB Interface Models

There are 3 different models of the LightJockey USB/DMX interface:

The original, 'square' DMX-Out model.

- In LightJockey, this model will be referred to as **USB/DMX Interface**

The newer, 'triangular' DMX-Out model.

- In LightJockey, this model will be referred to as **USB/DMX Interface II - DMX-out**

Installing USB interface drivers

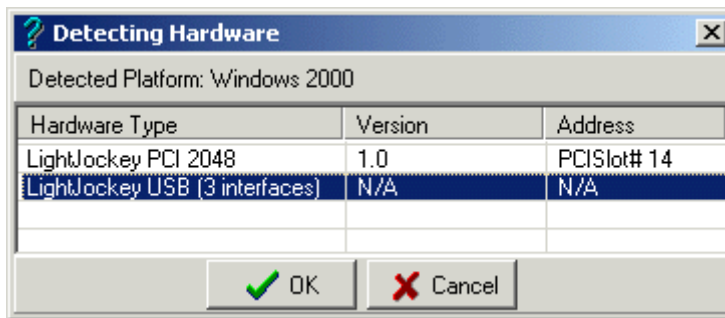
Windows drivers are required to operate the interface in any Windows version. The USB interface features Windows plug and play functionality. To install the required driver, connect the interface(s) and then start up Windows.

During startup Windows will report that it has found new hardware and that a driver is required. To install the drivers, follow the guidance in the Windows New Hardware Wizard. The driver for the interface is located in <LightJockey>\HardwareDrivers\USB2\. If multiple USB interfaces are connected, a driver must be installed for each interface. For a detailed walkthrough of the driver installation please refer to the hardware installation guide that came with LightJockey - or download a an installation updated guide from the support area of www.martin.dk

Configuring USB interfaces

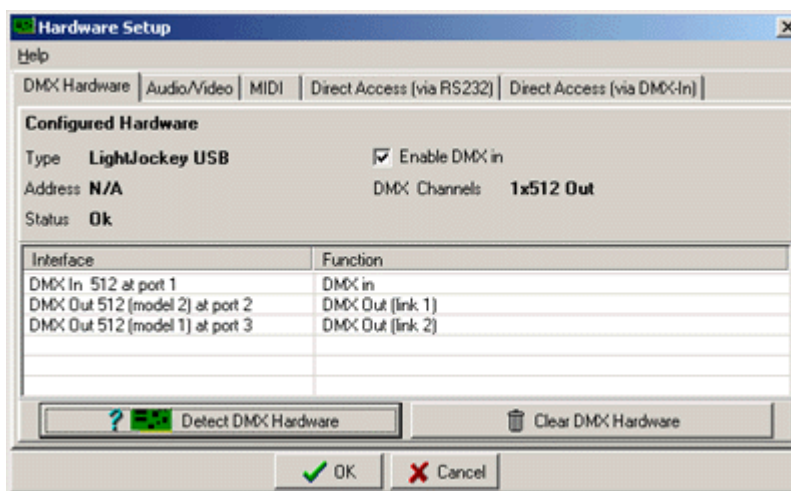
Once installation of Windows USB driver(s) is completed, start up LightJockey and go to the hardware setup Main Menu ->Setup

Click 'Detect DMX Hardware' to detect installed DMX hardware (note: performing a hardware detection will disconnect already configured USB interfaces - to reconnect the interfaces, LightJockey must be restarted).



Detecting DMX hardware

Wait for the hardware detection to finish, then select LightJockey USB (<x> interfaces) from the list and click OK.



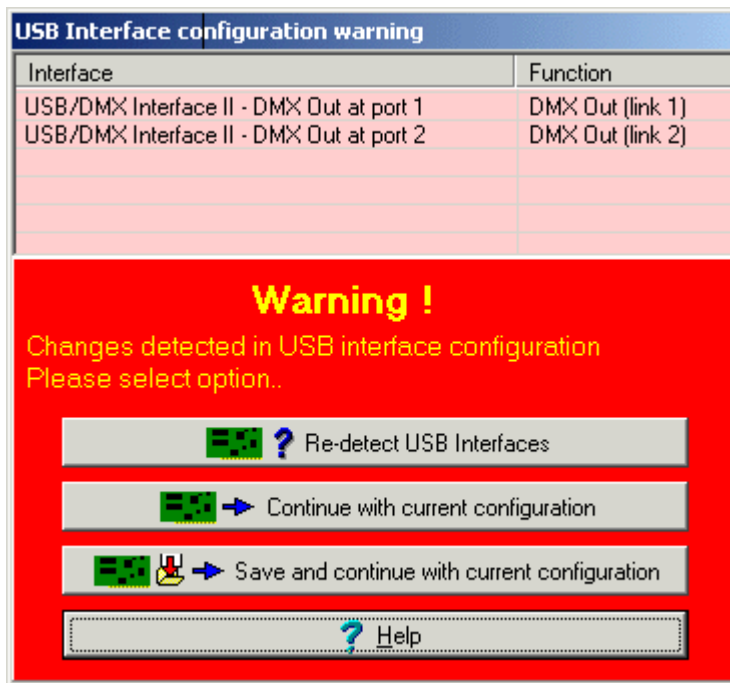
The hardware setup dialog will now show the configured USB interface(s) - the DMX output is automatically routed to the DMX out interfaces in the order they are detected (port number).

19 USB Warnings and Errors

See also [Installing and using the USB interface](#)^[34]

See also [Using multiple USB interfaces](#)^[37]

USB Configuration warning (startup)



USB configuration warning

When configuring USB hardware LightJockey will automatically register which type of interface is connected to which logical port. LightJockey distinguishes between 2 types of DMX-out interfaces (the 'old' DMX interface, and the newer type II interface) .

If there are changes in the way the USB interfaces are connected (e.g. one or more interfaces not found) when LightJockey starts up - a warning will appear listing the currently found interfaces.

This dialog will also appear the first time a LightJockey configured to use the USB interface is started after updating from below version 2.5 to version 2.5 or higher - more details

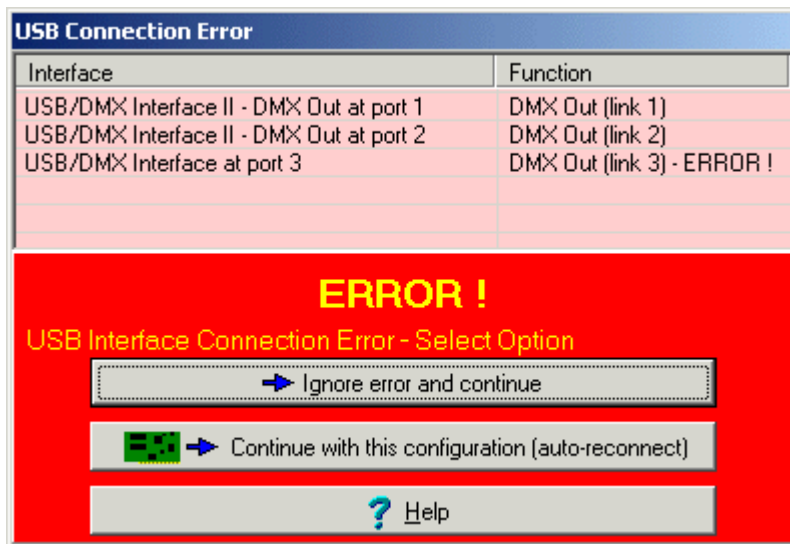
[USB Interface Update Information](#) ³⁸

Re-detect connected USB interfaces - attempt to detect interfaces again.

Continue with current configuration - continue with the currently detected interfaces. LightJockey will revert to the original USB configuration when starting up the next time.

Save and continue with current configuration - continue with the currently detected interfaces, and save as default USB configuration.

USB Connection Error (runtime)



USB connection error

During 'runtime', LightJockey monitors the USB interface states. If one or more interfaces suddenly disconnects, LightJockey will show the error dialog. By leaving the error dialog open and re-inserting the interface it is usually possible to automatically re-connect to the interface again. When attempting to reconnect a disconnected interface - it is very important to reconnect the interface to the same physical USB port as it was disconnected from.

Note: DMX out interfaces status is only checked when there are changes in the DMX output data. Disconnecting a DMX out interface will not provoke an error unless there are changes in DMX data on the relevant DMX link.

Ignore error and continue - ignore the error and continue. No attempt will be made to reconnect the interface.

Continue with this configuration (auto reconnect) - close the error dialog and continue with currently connected interfaces. LightJockey will automatically attempt to reconnect the USB interface if it becomes available.

20 Notes on using multiple USB interfaces

When LightJockey connects to a USB interface it makes the connection via a logical port determined by Windows USB subsystem. Windows determines the logical port when the USB device is detected and the logical port has no relation to the physical connection or physical interface. The only time that Windows is guaranteed to assign the same logical port to an interface connected to a given physical connector is when detecting attached interfaces during Windows startup.

This has the implication that in order to ensure that LightJockey routes the DMX data to the same physical USB interface the interfaces should be connected to the same physical USB connector each time. Please follow the guidelines below to ensure that DMX data is routed correctly.

1. Install and run LightJockey once to unpack new and updated driver files.
2. Shut down the PC.
3. Connect all USB interfaces.
4. Power up the PC and let Windows boot.

5. If Windows detects new USB devices, install drivers as required by the 'New Hardware Wizard' (new drivers are located in <LightJockey>\hardwaredrivers\USB2\
6. Start LightJockey - If an USB configuration warning appears upon starting LightJockey, select 'Continue with current configuration' (the warning will appear if LightJockey detects a different configuration of USB interfaces).
7. Enter the hardware setup dialog (Setup/Hardware) and click **Detect DMX Hardware**. Select USB interface(s) and click Ok

Hint: if the USB interfaces are frequently disconnected from the PC, it is a good idea to label individual interfaces with note telling which connector the interface should be connected to.

Interface checking at startup

When configuring USB hardware LightJockey will automatically register which type of interface is connected to which logical port. LightJockey distinguishes between 2 types of DMX-out interfaces ('old' DMX out interface, and newer type II interface).

If there are changes in the way the USB interfaces are connected (e.g. one or more interfaces not found) when LightJockey starts up - a warning will appear listing the currently found interfaces - [see USB warnings and errors](#)^[35].

Interface checking at runtime

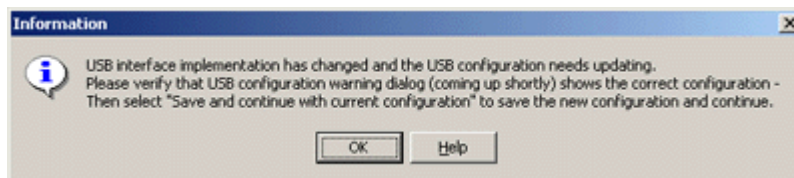
During 'runtime', LightJockey monitors the USB interface states. If one or more interfaces suddenly disconnects, LightJockey will show an error dialog - [see USB warnings and errors](#)^[35].

Note: DMX out interfaces status is only checked when there are changes in the DMX output data. Disconnecting a DMX out interface will not provoke an error unless there are changes in DMX data on the relevant DMX link.

21 USB Interface Update Information

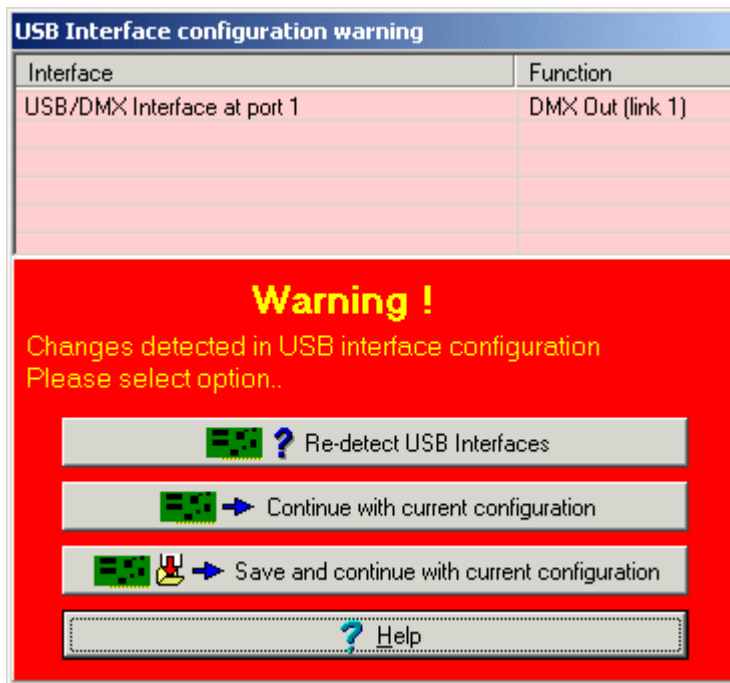
See also [Installing and using the USB/DMX interface](#)^[34]

After updating LightJockey configured with the DMX/USB interface from below version 2.5 to version 2.5 or higher, the following notification will appear.



Update Information

Version 2.5 introduces a new implementation of the USB/DMX interface, which changes the way that the USB interface is detected and configured. Once the information dialog is closed (click OK) the next dialog appears.



USB Configuration Warning

If the USB interface is connected, it should appear on the list as above. Click **Save and continue with current configuration** to register the USB interface and proceed as normally. Note, clicking **Continue with current configuration** will cause LightJockey not to save the information and to re-launch the information and warning dialogs on next startup.

If the USB interface is not appearing on the list it is probably not connected - click **Continue with current configuration** to re-launch the dialog the next time LightJockey is started - or use the hardware setup dialog to configure LightJockey to use the USB interface ([Setup/Hardware Setup./DMX Hardware](#)^[24]).

22 Setting Transmitter hardware options

Interface Setup Options

After selecting the appropriate interface from the detect hardware list, some interfaces support different settings such as enabling DMX in or selecting the DMX refresh rate.

Normally, the highest possible DMX refresh rate should be selected - it is well within DMX specifications. But in order to drive some (mainly older) DMX equipment that is not capable of receiving DMX with a high refresh rate, some interfaces implement an option to lower the DMX refresh rate. Note that lowering the refresh rate may cause some fixtures to respond less smoothly on higher fade times.

4064 ISA DJ Setup options

Check **Enable DMX in** to enable [DMX in](#)^[304] on the second link. Select between different DMX hardware refresh rates (40,22,12 Hz). Normally 40 Hz should be selected.

4064 ISA CLUB Setup options

The Club card may be configured to transmit 4 links (universes) of DMX or use 3 links for

transmission and one link for DMX reception.

Check **Enable DMX in** to enable [DMX in](#)^[304]. On the actual card the top SUB-D connector is for links 1 and 2 while the lower SUB-D connector is for links 3 and 4 (or link 3 and DMX in). When configured for DMX in, use the SUB-D to male+female XLR in the lower SUB-D connector.

With DMX in enabled it is possible to set the DMX refresh rate on the 3'rd (and 3'rd link only) link (40 Hz, 22 Hz and 12 Hz) With DMX in disabled, the refresh rate cannot be changed.

PCI 512 Setup options

Check **Enable DMX in** to enable [DMX in](#)^[304] on the second link.

Select between different DMX hardware refresh rates (40,35,30,25,20,15,10,5 Hz). Normally 40 Hz should be selected.

PCI 2048 Setup options

The PCI 2048 card may be configured to transmit 4 links (universes) of DMX or use 3 links for DMX transmission and one link for DMX reception.

Check **Enable DMX in** to enable [DMX in](#)^[304]. On the actual card the top SUB-D connector is for links 1 and 2 while the lower SUB-D connector is for links 3 and 4 (or link 3 and DMX in). When configured for DMX in, use the SUB-D to male+female XLR in the lower SUB-D connector.

Select between different DMX hardware refresh rates (40,35,30,25,20,15,10,5 Hz). Normally 40 Hz should be selected.

PCMCIA Interface (one card)

Check **Enable DMX in** to enable [DMX in](#)^[304] on link 2.

Select between different DMX hardware refresh rates (40 and 22 Hz). Normally 40 Hz should be selected.

PCMCIA Interface (two cards)

Check **Enable DMX in** to enable [DMX in](#)^[304] on link 4.

With DMX in enabled it is possible to set the DMX refresh rate on the 3'rd (and 3'rd link only) link (40 and 22 Hz) - normally 40 Hz should be selected. With DMX in disabled, the refresh rate cannot be changed.

ADP (Parallel Port) Setup options

The ADP interface does not support DMX in and it is not possible to change DMX refresh rate.

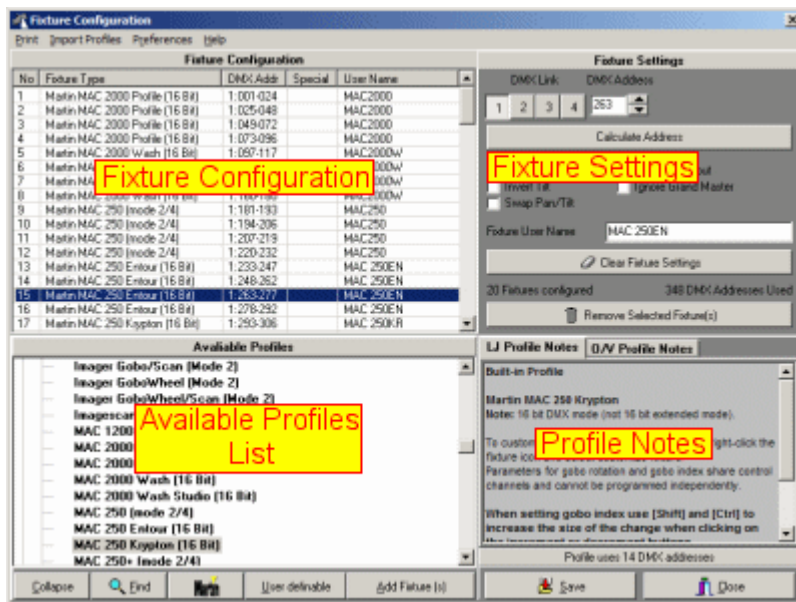
USB Setup options

See [Installing and using the USB DMX interface](#)^[34] for more details.

23 Fixture Configuration

Before LightJockey is able to control a fixture, the fixtures profile or 'personality' must be added to LightJockey's fixture configuration. The fixture configuration is a list of all the fixtures that LightJockey is currently set up to control and contains information about the individual fixtures capabilities, [DMX address](#)^[108] and other optional settings.

To open the fixture configuration dialog, select *Setup*, then *Fixture* configuration from the main menu. Alternatively rightclick any fixture icon on the desktop and select Fixture Configuration from the popup menu.



Fixture configuration dialog

The fixture configuration dialog is divided into 4 different areas.

Fixture Configuration - a list containing the current configuration.

Fixture settings - individual fixture settings such as **DMX address**^[108] or pan/tilt options. The profiles are arranged according to manufacturer, click the 'cross' symbol to the left of the manufacturer name to unfold the list of fixtures.

Available profiles - the list of available fixture profiles.

Profile notes - any notes on the individual profiles selected in the available profiles. O/V (Offline Visualizer) profile notes are only available if the O/V is running and the LightJockey profile is linked to an O/V profile.

Notes on different profile types

LightJockey uses two different types of fixture profiles - built-in profiles and user defined profiles.

Built-in profiles

The built-in profiles are usually used for Martin fixtures but also includes a number of generic profiles (see below). Built-in profiles are hard-coded into the LightJockey program code and cannot be modified by the user although some of them allows for some degree of customization (see [Customizing Palette Controls](#)^[125]). Updates to built-in profiles requires an update of LightJockey itself.

User defined profiles

User defined profiles are based on a profile framework where attributes and capabilities of the fixture are described in external data files. By using the [Generic Fixture Profile editor](#)^[267], it is possible for the end-user to modify or write his or her own fixture profile - indeed many of the user defined profiles supplied with LightJockey is created by end-users. Most non-Martin fixture profiles are supplied as user defined profiles.

Unlike built-in profiles, the collection of user defined profiles may be updated without updating LightJockey itself. The latest collection of user defined profiles can be found and downloaded from the Internet at

<http://www.martin.dk/service/software/controller/lj/Userprofiles.htm>

Special Profiles

While most profiles are listed under the fixture manufacturer a few are not:

Generic DMX profiles

Generic DMX profiles are profiles that do not relate to specific fixture types but are more generic in

nature. Use generic profiles to control 'generic' fixtures such as dimmer or switch packs. There are also generic profiles for controlling DMX smoke machines or Hazers as well as multiple packs of RGB fixtures (e.g. LED banks). Generic DMX profiles are found under the "Generic" heading in the list of available fixtures.

See also [Generic DMX profiles](#)^[167]

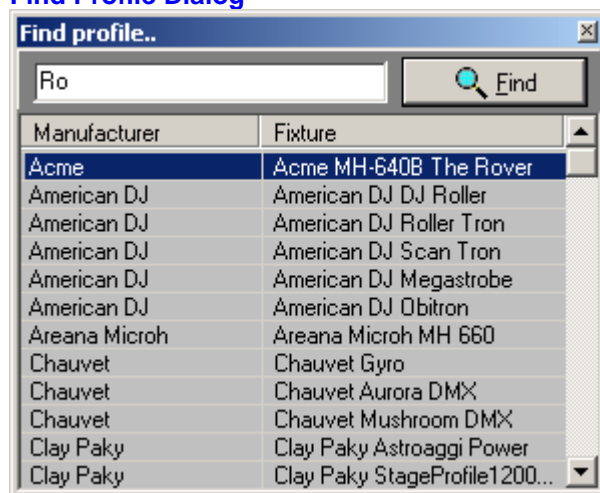
User defined profiles

The profiles listed under User definable heading are basically 'empty' profiles that may be used as a starting point for creating a new profile (see [user definable fixtures](#)^[258]).

Other Profiles

Profiles with an unlisted manufacturer (or no manufacturer) or for a specialized purpose are listed under the 'Other' heading.

Find Profile Dialog



Find profile dialog

Use the Find profile dialog (click Find button below the list of available profiles) to search the profiles for a specific name or part of name. Enter the string to search for then click Find. The find dialog searches both on manufacturer and fixture name and is not case sensitive.

No suitable Profile - what to do?

LightJockey does not ship with a profile for every fixture type in the world - there is a chance that there is no matching LightJockey profile for a fixture.

Options:

- * Make the profile yourself - see [Defining the Generic Fixture 2](#)^[267]
- * Maybe the profile has been added after the release of the LightJockey version running - look for profile updates at www.martin.dk/service/software/controller/lj/Userprofiles.htm
- * Ask at the LightJockey end-user forum on the Internet (<http://www.martin.dk/forum>) - maybe someone has already made a suitable profile or someone will help making one. Make sure to post as much information as possible, manufacturer, model, preferred mode, relevant web site information etc..
- * In case of a new Martin fixture, odds are that it will first be included in a LightJockey beta release - see LightJockey end-user forum for latest beta release notes.
- * As a last resort, use a Generic DMX profile to control the fixture.

User defined profiles [exported](#)^[276] from other installations must be imported to the current installation before they can be used. See [importing user defined fixture profiles](#)^[277] for more details.

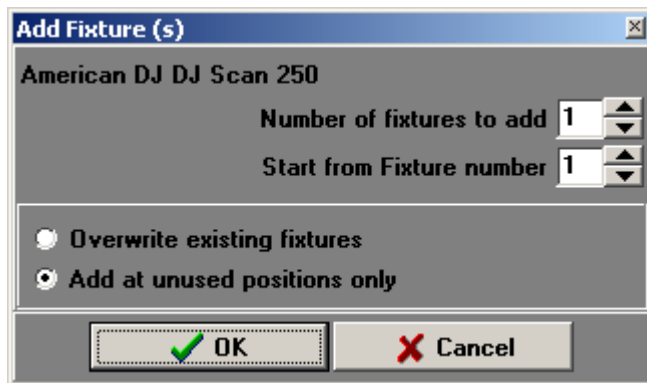
See also controlling older Martin fixtures through the [Martin DMX interface](#)^[328]

Adding fixtures to the configuration

Selecting the right profile

Since most modern fixtures have several modes available (e.g. 8 or 16 bit pan/tilt) which may be selected on the fixture itself, make sure to read the individual fixture profile notes (LJ profile notes tab). The profile author has usually included notes on which fixture mode the profile is designed to operate with. It may be necessary to change the mode on the fixture itself if a suitable profile is not available (but a profile for another mode is).

To add a fixture to the configuration first locate the profile in the available profiles list, then drag it from the list to an empty slot in the fixture configuration (or to an already occupied slot to replace the current fixture). To add multiple fixtures at once highlight the profile, then click **Add Fixture(s)** and use the Add fixtures dialog to add one or more fixtures.



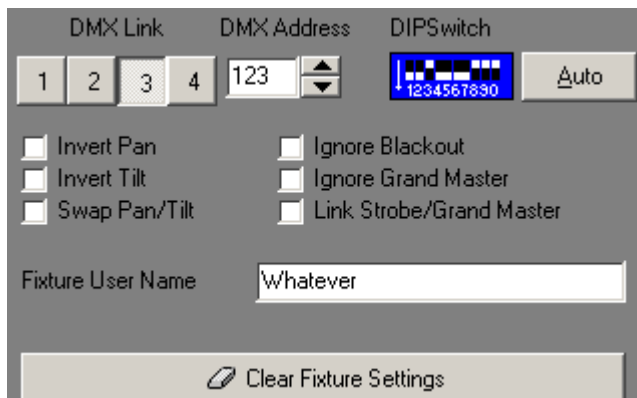
Add fixtures dialog

Removing fixtures from the configuration

To remove one or more fixtures from the configuration, highlight the fixtures in the Fixture configuration list and click **Remove Selected Fixture(s)**.

Setting individual fixture information

Each configured fixture has a number of individual options. Select one or more fixtures in the configuration list to set the individual options.



Individual fixture settings

Fixture DMX address

As a minimum the fixture's **DMX start address**^[108] must be set. The DMX address range of individual fixtures should be unique and not overlapped by other fixtures. Depending on DMX transmitter hardware, one or more links may be available for addressing. Make sure to specify which link the fixture is connected to. The Dipswitch setting is only shown for fixtures where the associated profile

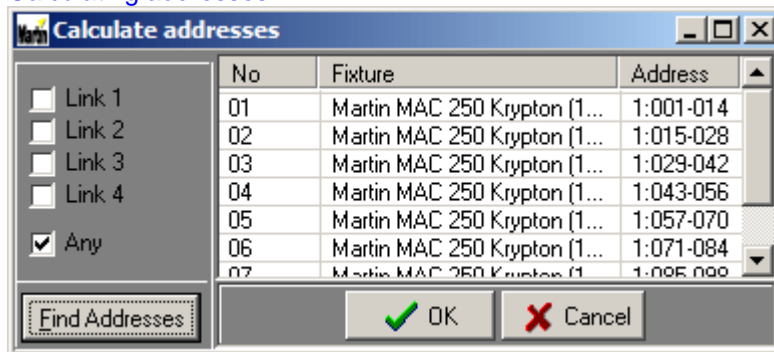
specifies addressing through a DIPswitch. Please refer to the fixtures documentation on how to set the fixture DMX start address.

IMPORTANT NOTES:

When programming fixtures in LightJockey, the 'programs' and settings such as preset position data are stored in data files according to the fixtures DMX address. If the DMX address is changed for an already programmed fixture it will invalidate the programs - changing the DMX address for a fixture will prompt a warning if the configuration was previously been saved. To change the DMX address for an already configured/programmed fixture use the copy from fixture function (see below).

When new fixtures are configured re-using a fixture number previously used by another fixture, by default, the program 'dataspace' for the new fixture will be cleared and re-initialized when saving the configuration. To retain data, for example when replacing one fixture with another very similar fixture, make sure to enable **Prompt for clear data for new fixtures** in the preferences menu (see *clear fixture data* below). If not enabled, programmed data will be cleared without warning when the configuration is saved.

Calculating addresses



Clicking the **Calculate address** button will open a dialog to calculate possible addresses for the fixtures selected in the configuration list. The calculation is based on addresses already in use by other fixtures as well as the number of addresses used by the fixture profiles with the following exceptions:

- * Patches created with the [global patch tool](#)^[312] will not be taken into account.
- * [User Definable Colors Scrollers](#)^[264] that needs a separate address for the scroller unit The address for the color scroller is not taken into account, and might be overwritten.
- * [Scanner 1 profiles](#)^[257]. If the actual fixture profile takes up less than the 8 of channels used by the scanner 1 profile, the free channels are not re-used when calculating addressing.

Note: this is calculation and suggestion only, LightJockey is not capable of setting the fixtures addresses remotely so the address will still need to be set on fixtures themselves.

Pan/Tilt options

Only available for fixtures with pan/tilt control. Check to invert control of pan/tilt or swap pan for tilt. The pan and tilt inverting and swapping is performed by LightJockey just before pan and tilt DMX values are transmitted to the fixture - setting any of these switches does not affect the contents of programmed positions.

Intensity control options

Not all options are available for all fixtures.

Ignore Blackout - Fixture ignores [blackout](#)^[155] commands

Ignore Grand Master - Fixture ignores [Grand Master](#)^[151] settings

Link Strobe/Grand Master - Fixture stops strobing when [Grand Master or associated submaster](#)^[151] is at 0

Fixture Username

Use for an individual description of the fixture - the user name is for example used on the as caption on the fixture icon on the desktop.

Saving the configuration

Any changes made to the configuration are temporary and will not take effect until the configuration is saved (click save). Upon saving the modified configuration, LightJockey will check the new configuration for potential problems (such as overlapping DMX addresses or missing DMX start address). If a potential problem is found a [warning list](#)^[46]

will be shown - To save the configuration regardless of warnings click **Save Anyway** below the list of warnings.

Advanced Options

DMX address range limit

By default, it is only possible to set a fixtures DMX address within the range supported by the installed and configured DMX transmitter hardware, e.g. a single USB/DMX interface allows fixture addressing on link 1 only. If no hardware is configured all 4 links are available for addressing. In some instances it may be useful to address fixtures outside the address space of installed DMX hardware - the *Disable Hardware address range check* in the *preferences* menu will temporarily disable the hardware range check and allow addressing on all 4 links regardless of configured transmitter hardware.

Copy from fixture

Use the **copy from fixture** function to copy all programmed data from one fixture to another fixture of identical type (profile). The copy from fixture function only works if the configuration has been saved first and only for identical fixture profiles that has been assigned a valid DMX address.

The copy from fixture function should also be used to change the DMX address of an already programmed fixture.

See [Copy from fixture](#)^[46] for more details

Clear fixture data

By default, when a configuration containing new fixtures is saved, LightJockey will prompt for "Clear data for new fixtures" when saving. Clearing the data space for newly configured fixtures will ensure that no 'garbage data' is present in data files from the previous configuration. Normally data for a new should be cleared (re-initialized), but in some circumstances, such as when reconfiguring a fixture with a very similar profile using the same DMX address space it does make sense not to clear data for the new fixtures - in this case click cancel when the prompt appears. Data may be cleared for individual fixtures after the configuration has been saved by selecting the fixture in the configuration list, right-click and then select **Clear Fixture Data** from the popup menu.

See [Clear Fixture Data](#)^[48] for more details.

The Preferences Menu

The entries in the preferences/warnings menu can be used to enable or disable different warnings when saving a modified configuration.

Warnings - enable or disable several types of warnings

Prompt for clear new fixtures - when checked the user will always be prompted to clear data for newly configured fixtures.

Always apply default DMX values - when checked, default DMX values for new/modified fixtures will be applied automatically. If unchecked, the user will be prompted to apply default DMX data (see [Applying default DMX values to new fixtures](#)^[49]).

Disable hardware address range check - enable to be able to address a fixture on any of the 4 links regardless of DMX hardware. This setting is temporary.

24 Configuration warnings

Configuration warnings

Before saving the configuration LightJockey will check for the following potential errors in the configurations:

Fixtures # XX has no DMX address.

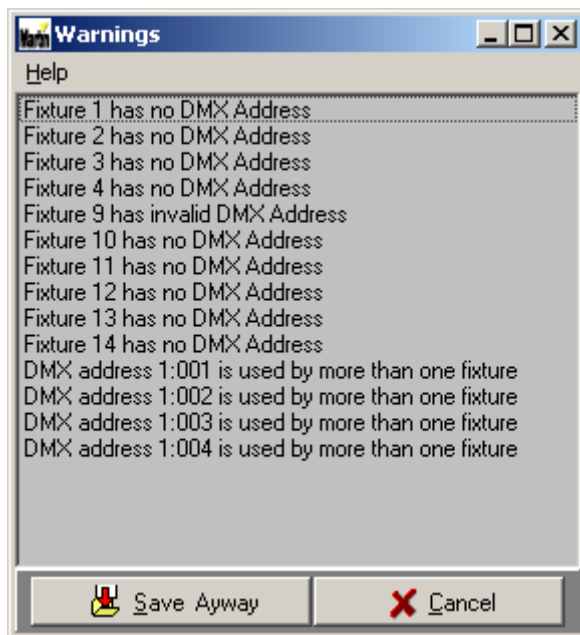
While not exactly an error, LightJockey will not attempt to control fixtures without a valid DMX address. Furthermore it is not really possible define [fixture profiles](#) ^[256] unless the fixture having a valid DMX address.

Fixture #XX has invalid DMX address.

The DMX address given to the fixture is invalid. Usually it is because there is not enough DMX addresses left to contain all the fixtures control channels.

DMX address L:AAA is used by more than one fixture.

Two or more fixtures are using the same DMX control channel - while this may be intentional it usually an error.

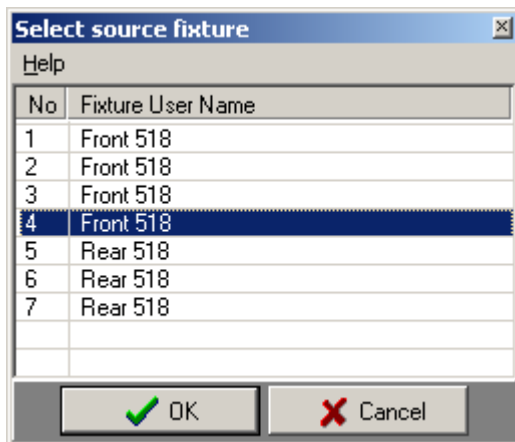


To save the configuration regardless of the warnings click **Save Anyway**

25 Copy from Fixture

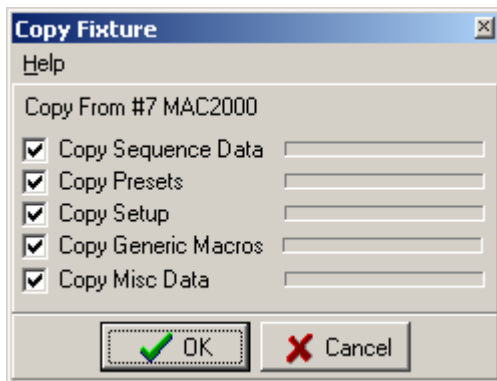
From the fixture configuration dialog it is possible to copy the entire programmed contents from another fixture if the two fixtures are of an identical type (using an identical profile). The configuration must be saved first before a copy from fixture can be performed.

To copy contents from one fixture to another, select the target fixture (the fixture to copy to), right-click and select *Copy From Fixture* from the popup menu.



Copy from source fixtures list

A list of possible source fixtures (if any) will now be shown in a List. Select the source fixture and click OK.



Now select what to copy from the source fixture.

- Copy Sequence Data** Copies all data in all sequences from the source fixture.
- Copy Presets** Copies all preset data from the source fixture.
- Copy Setup** Copies all setup specific data (except DMX address) from source fixture.
- Copy Generic Macros** Copies contents of [generic DMX macros](#)^[244] from source to target fixture.
- Copy Misc Data** Copies what doesn't fit in the previous categories (i.e. Default DMX)

There is normally no reason not to copy all data.

It is not possible to copy to multiple target fixtures in one operation, fixtures must be copied individually. Also note that for [user-definable color-scrollers](#)^[264] only the intensity information will be copied, the color information will not be copied.

Notes/Hints

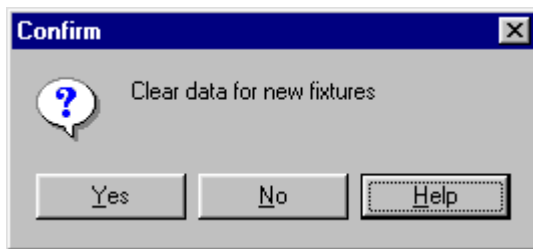
Changing a fixtures DMX address

The *copy from fixture* function may also be useful to move an already programmed fixture's DMX address. To move a fixtures DMX address do the following. Configure a new fixture of identical type and apply an unused DMX address (range) to the new fixture. Save the configuration. Copy the contents from the 'old' fixture to the new fixture. Change the old fixture's DMX address. Copy the contents from the new fixture to the old fixture and then remove the new fixture.

The copy function may also be used to build an entire library of sequences for various fixture configurations (useful for rental operations). Build a sequence library by programming sequences for one of each (or more) of the relevant fixture types. For the actual rental situation, copy sequence and preset data to each of the fixtures configured for the rental job. Although all the fixtures will contain the exact same data as their respective source fixture it does give a nicer starting point for the end-users (just re-editing position presets may be enough).

26 Clear Fixture Data

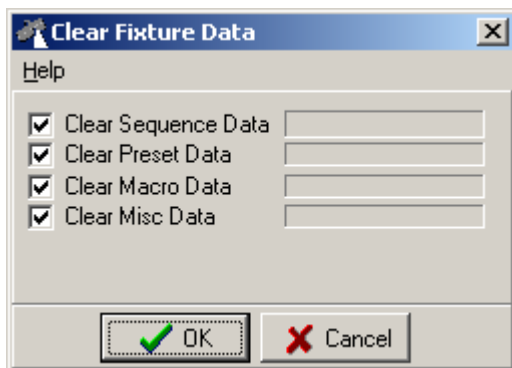
See also [copy from fixture](#)⁴⁶



The clear data dialog will be shown automatically to clear data for new configured fixtures, unless it has been disabled in the preferences menu in the fixture configuration.

When configuring a new fixture and re-using a DMX address range that has been used by a previously configured fixture, sequences and presets will contain data that will most likely appear as garbage for the newly configured fixture. To Clear all sequences, presets, and other programmable data so that the new fixture receives default data only, perform a Clear Fixture Data operation.

To manually clear one or more fixtures, select the fixture from list of configured fixtures. Right-click the line and select *Clear Fixture Data* from the popup menu. Note that it is not possible to select this option for a newly configured fixture before a valid DMX address has been assigned to the fixture and the configuration has been saved. It is possible to clear data for multiple fixtures by selecting all the relevant fixtures before right-clicking.



Clear Fixture Data dialog.

From the dialog select what type of data to clear.

Clear Sequence Data Clears all data in all programmed sequences.

Clear Presets	Clears all preset data.
Clear Macro Data	Clears contents of Generic DMX ^[244] macros
Clear Misc Data	Clears data that does not fit in the 2 previous categories (i.e. Default DMX values or contents of static entries ^[241])

Note that the clear data operation is irreversible - once cleared it is not possible to restore the cleared data.

Also note that for [user-definable color-scrollers](#)^[264] only the intensity information will be cleared, the color information will not be affected.

27 Apply Default DMX to new fixtures

Apply Default DMX to new/modified fixtures

See also [User defined profiles](#)^[267], [Special Tab](#)^[286].
See also [Default DMX output](#)^[113].

Normally LightJockey assumes a default value of 0 for all DMX control channels. However a few fixtures may implement DMX protocols where 0 values may have unwanted side effects, such as switching off discharge lamps. The [user defined fixture profiles](#)^[267] contain the option to specify default DMX output values for control channels that require non-0 default values. Click Yes to the "Apply Default DMX values to new/modified fixtures" dialog when saving the new configuration to automatically apply default DMX values to newly configured fixtures.

28 Basic Programming Terms and Elements

Fixtures

This term is used throughout the LightJockey to describe the 'equipment' that the LightJockey can control. The term may not only be confined to lighting fixtures, but everything that might be controlled from LightJockey via DMX protocol, such as smoke machines or motor control.

Fixture Profiles and protocols

Controlling fixtures via DMX is not a very 'intelligent' method of control. There are (for various reasons, some of them good reasons) no industry standards for commands like "go to red" or "move to home position". This means that each type of fixture has its own set of commands - the fixture DMX protocol. On generic DMX consoles, usually equipped with faders to set values, it is necessary for the programmer to know the correct command values to send and also which channel or address to send these values to. Most modern control systems implement more or less sophisticated fixture 'personalities' to hide the protocols from the end-user. LightJockey implements graphical 'personalities' or profiles for most DMX capable fixtures, so the user does not need to know anything about DMX values or addresses to program these fixtures.

See also [DMX Addresses and Links](#)^[108]
See also [Generic DMX Fixtures](#)^[167]
See also [User Definable Fixtures](#)^[256]
See also [Controlling Martin Fixtures via DMX interface](#)^[325]

Scene

A scene is the most basic programming element in LightJockey. In other types of consoles and controllers this is also known as a memory. Unlike most other consoles, LightJockey does not refer to individual memories, rather scenes only exists in sequences (see later).

Each scene in Lightjockey contains information on all fixtures and all their effects.

Usually, only a small number of the fixtures/effects will be programmed in a scene as LightJockey offers a possibility to combine several 'scenes' to create a final output (the cue). So most of the time an effect will be "unused" or "off" in that particular scene (see [off/snap/fade](#)^[128]).

An analogy to a scene in LightJockey is a single picture frame on a roll of film. As the picture frame, a scene only contains static information, so a scene may not contain both red and blue color commands for the same color wheel on the same fixture. Like the film, the 'animation' happens when the film progresses through the individual picture frames on the roll to form a movie. This is what happens when one scene is replaced by another scene, as in a sequence or when replacing one cue with another cue.

As mentioned, the scene only contains static commands, however the result of these commands may not be static at all. For example a command to a fixture to strobe or rotate it's color wheel will result in a 'dynamic' expression - in this case the static command specifies a strobe-frequency or rotation speed but the fixture performs the actual dynamics.

Another notable exception which is dynamic in expression are the [movement macros](#)^[130] that moves the light around in geometric patterns. Although the information to move the light in a circle has a dynamic expression (the movement in a circle) - the parameters to govern the macro are still static within the scene.

Sequence

A sequence is the lowest level of programmable unit in the LightJockey. A sequence consists of one or more numbered scenes chained together in a sequence (hence the name, sequence). If it contains more than one scene, the sequence can 'animate' the fixtures by executing scenes with different contents, like the film strip with different picture frames. The default behavior for a sequence when it reaches the last scene, is to loop back to the first scene to get a continuous execution of the sequence.

A very simplified example is a sequence containing 3 scenes:

Scene 1 instructs a fixture equipped with a color wheel to go to red, scene 2 instructs the fixture to go to yellow and in scene 3 the fixture is instructed to go to green.

When this sequence is played back in the default loop mode, the sequence will 'animate' the color of the fixture through the 3 colors, and after scene 3 it will loop back and start with scene 1 and the red color again.

Scene and Fade times

The **sequence** also contains some parameters that dictate how the animation is supposed to take place. First of all there is the **scene time**. In the previous example, a scene time of 1 second for all scenes would have LightJockey advancing through the sequence, with each scene being replaced by the next scene after 1 second of "display time".

The scene time can be set individually for each scene with the sequence control, i.e. scene 1 could have a scene time of 1 second, while scenes 2 and 3 could have a scene time of 0.5 and 2 seconds respectively.

The sequence also has a **fade time** for each scene. The fade time dictates how long time the physical transition will take from the position (i.e. color wheel position) programmed in the previous scene, to the position programmed in the current scene.

Here the film analogy might be used again. A film shot showing a person walking from one side of the scene to the other side requires 'a lot' of individual pictures in between the two positions to get 'smooth' movement. The way to make making slow, smooth movements like this with Lightjockey is to program the two end points (colors in the example) in two scenes, and then let LightJockey calculate all the

positions (pictures in the analogy) in between the two endpoints. This is exactly what fading the effects does.

With the previous color example, setting a fade time of 3 second for each scene, would mean that each color change takes 3 seconds. The way this works is that LightJockey calculates all the possible positions between the two colors, and outputs these values at a calculated rate so that the fixture moves the color wheel from one position to the next in one smooth movement taking exactly 3 seconds.

Note that in order for an effect to fade from one position to the next the fade status of that effect must be set to fade. See [off/snap/fade](#)^[128]

The sequence does not have to contain more than one scene - in this case, the term is a static sequence. While the scene time no longer is relevant since there will be no progression in the sequence, the fade time still controls the transition time from the previous effect position (whatever that was) to the one programmed into the scene.

See also [Scene and Fade Times](#)^[130]

See also [Sequence Control](#)^[178]

Cues

The cue construction allows up to 12 sequences to run in parallel. This will normally be the unit that is programmed and played back by the user. Although LightJockey allows playback of sequences the cue offers much more flexibility in terms of dynamics.

It is important to understand that the cue only contains references to the sequence, not the sequences themselves. This means that if a sequence is edited to a new contents, this change will take effect in **ALL** cues that use this sequence. This also means that it is not necessary to re-save cues just because the sequence has been changed, the changes will carry over automatically.

As mentioned it is normally not desirable to program every fixture and effect into the same scene even to obtain the 'complete look'. The reason for this, is that by combining a number of sequences, each with elements that together forms the complete look, it is much easier to re-use some of these elements to obtain other looks. It is also the only way of obtaining simultaneous different fade times on different effects, as the sequence only allows one fadetime pr scene. I.e. a slow color change with a medium speed intensity chase.

An example is a very simple cue consisting of 3 sequences:

- Sequence 1 contains instructions to all fixtures output light with full intensity (static sequence)
- Sequence 2 contains information to all fixtures to fade between red, green and blue colors (non-static sequence)
- Sequence 3 contains information that moves the fixtures around in a nice complicated pattern (non-static sequence)

The combined result has the fixtures moving around in the complex pattern, all changing between the colors and with full intensity.

By replacing sequence 1 with another static sequence that orders the fixtures to strobe on full intensity, you have a different cue. Still the same colors changes, still the same movements, but now the fixtures are strobing. To obtain the same result in a single sequence, all scenes would have to be edited so that they contain a strobe command and not full intensity for all fixtures.

Another example would be to have the original cue running, but two of the fixtures should point to a specific location in open white at 50% intensity, while all the other fixtures still moves around in the complex pattern, changing colors.

Again, without the cue construction, the only way to do this would be to edit the two fixtures in every scene of the sequence, creating a new sequence with this look particular look.

However, by using the cue and its rules of priority, it is possible to write just a single static sequence instructing just these two fixtures to go to the position in open white with the right amount of intensity. This static sequence is then added at a priority position with in the cue and takes control over only the programmed fixtures - the rest still runs the original cue since they are not affected by the new sequence.

The way the priority works within the cue is not related to fixtures, rater to individual fixtures/effects. It is very much up to individual tastes, and possible also fixture types and fixture count, how to program the sequences and use the cue.

Some programmers programs complete fixtures, or groups of fixtures into sequences including all desired effects for these fixtures. They then use the cue to combine different groups of fixtures, each group doing it's own sequence.

Other programmers swear to modularity and only programs single effects into sequences. I.e. only color information in one sequence, gobo information in another, movement information in a third sequence and so on. By combining these sequences in the cue they get complete looks.

Most people however, tends to use some from both methods. There are no rules governing how to use the cue - in the end it is up to personal preferences.

See also [Cue Control](#)^[184]

CueList

The final element is the CueList. The cuelist offers a way to playback cues in a pre-determined order. The cuelist may be synchronized to internal PC clock for elapsed time between cues or to timecode from a CD-ROM drive. It may also be executed manually with a 'go-button', if for example used in a theatrical type of show where everything is planned and pre-programmed.

The cuelist construction uses the normal cue construction to playback the cues. It is not have a separate mechanism to playback cues.

See also [CueList Control](#)^[216]

The current sequence

It is important to understand that the LightJockey **always** has a 'current sequence'. Think of the current sequence as a 'holder' for sequences when editing a sequence. When saving a sequence, it is always the current sequence that is being saved, and when loading an already saved sequence, the sequence is being loaded 'into' the current sequence for editing.

In principle the current sequence always contributes to the final DMX output of the LightJockey - however if the current sequence does not contain any 'instructions' there will be no visible effect of the current sequences contribution to the overall output.

The current Cue

In the same way as the current sequence the LightJockey always have a current cue. The current cue acts as a 'holder' for cues when editing, and when playing back cues, it is always done by loading cues into the current cue. As with the current sequence, the current cue always contributes to the final DMX output - but again, if the current cue contains no 'instructions' (i.e the current cue contains no sequences) - there will be no visible effect.

29 User Libraries

User Libraries

See also [Backup & Restore](#) ^[58]

See also [Using the Data Restore option](#) ^[55]

See also [Starting LightJockey in a specific user library](#) ^[54]

LightJockey implements the possibility for different user libraries. The user libraries contain most of the information that can be modified by the user. By using different libraries, individual setups and programs may be kept totally separate. Changing to a new user library requires restarting LightJockey.

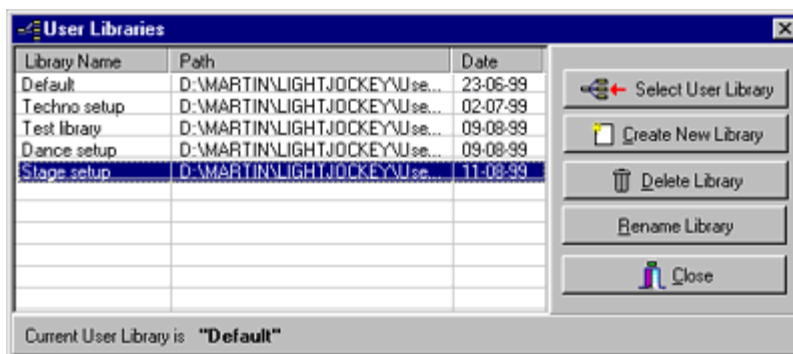
Lightjockey will always show the current user library in the caption of the main window.



Main window caption. Current user library is "Default".

It is not possible to share or import data from different libraries. It is not advisable to manually copy or move files from Windows explorer. The data structures of LightJockey are often very dependent on each other, and may not function when imported from different libraries. In any case don't ever copy or move files while LightJockey is running - if, in special cases, it is necessary to copy or move files, make sure that LightJockey is closed down first.

The user library dialog is accessed from the main system menu.



The user library dialog

The leftmost column of the list shows the (user-selectable) name of the library. The middle column shows the actual Windows path while the rightmost column shows the creation date of the library.

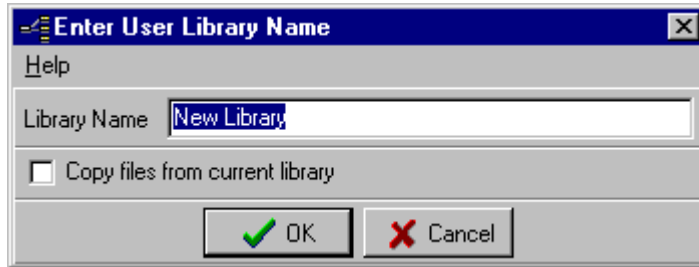
The Default Library

The default user library is a special case of user library. It cannot be renamed or deleted. If the default

library is not present at startup, Lightjockey will automatically create a new default library.

Creating a new user library

To create a new library, click the **Create New Library** button. This will prompt a new dialog.



Enter the new library name and check 'Copy files..' if applicable.

The copy files option will copy all data files from the current user library to the new library, making the contents of the two libraries identical.

Selecting a new user library.

Highlight the library in the list and click the **Select User Library** button. The button is only enabled if the highlighted library is different from the current library. In order to load the information from the newly selected library, Lightjockey needs to restart. Answer yes at the prompt to change the library, or no to cancel.

Deleting a user library.

To delete a user library, highlight the library in the list and click the **Delete Library** button. Note that it is not possible to delete the current library.

Renaming a library.

Highlight the library in the list and click **Rename Library**.

30 Starting LightJockey in a specific user library

LightJockey can be started up in a specific user library by adding a parameter to the startup command (or shortcut).

The syntax is <LightJockey> <U:[userlib_name]> where userlib_name is the name of the folder where the specific user library is located. Use the [User Library dialog](#) ⁵³¹ to see what path the individual user libraries are located.

When specifying the name the user library only the last folder name should be used.

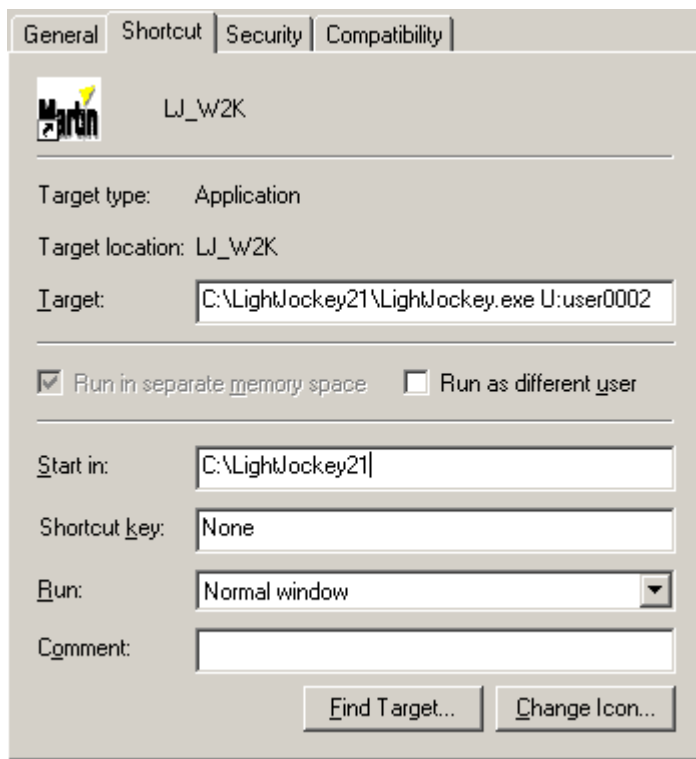
Examples:

LightJockey U:user0001 - will start LightJockey in the user library located in

<LJinstallation>\user\user0001

LightJockey U:Default - will start LightJockey in the default user library located in

<LJinstallation>\user\default



Modifying a LightJockey shortcut

31 Using the Data Restore Option

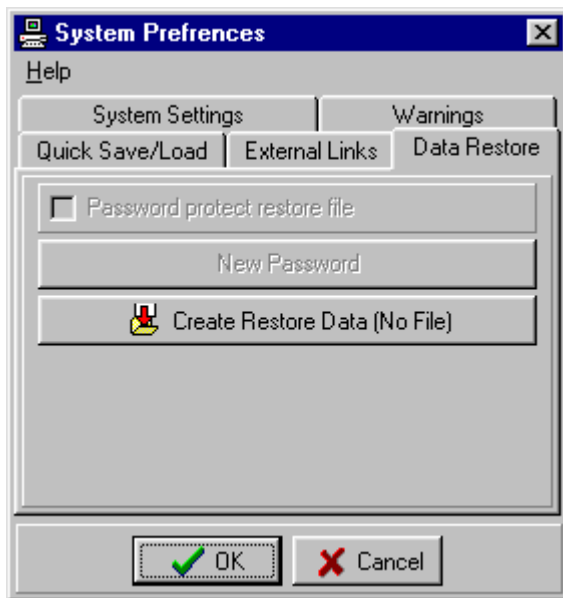
See also [Backup & Restore](#) ⁵⁸

LightJockey has the capability of backing up the contents of a single users library and on demand restore the backed up users library to the exact same contents as when the backup was created. The backup data may be password protected so that the backup data can only be created by authorized personnel. The backup data is stored locally on the PC hard disk.

This backup function is not intended as a general method to backup and restore data from LightJockey.

The option is mainly targeted towards installation types such as fixed installations in clubs where inexperienced users have access to various settings and programming. The option offers a quick way for the inexperienced user to restore LightJockey to the exact point at where the backup was created without having to locate individual backup files.

Creating the backup data

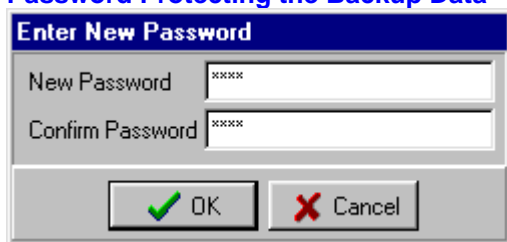


Create Restore Data dialog

To create the backup data set, open the system preferences dialog (setup/preferences/system) and select the **Data Restore** tab. Then click **Create Restore Data**. A complete snapshot of the current settings and user directory contents is now created and stored for later retrieval.

Once a restore data set has been created, access to the dialog may be password protected, see below.

Password Protecting the Backup Data



Password dialog

Once a backup data set has been created, the create data dialog may be password protected so that only authorized personnel has access to modify the backup data. To set or change a password click **New Password**. Make sure to enter the exact same password twice, and then click **OK**. Back in the Create Restore Data dialog, make sure to check the **Password Protect Restore File** option. The access to the Create Restore Data dialog is now password protected. New restore data cannot be created without re-entering the password.

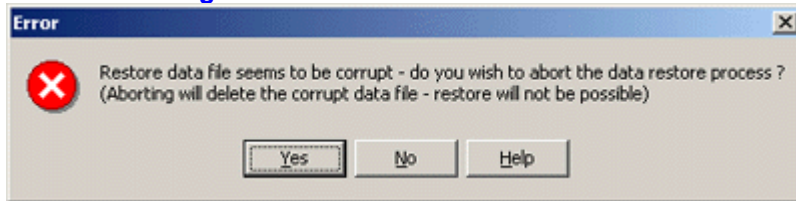
Restoring the backup data

If a restore data set needs to be restored, select Restore Program Data from the main **System** menu. Note that the option is only available in the menu if a restore set has previously been created. Accept the LightJockey restart prompt. Upon restarting LightJockey restores the user library data from the restore data set.

WARNING

Any data existing in the users library to be restored is deleted before the restore is performed. The process is not reversible.

File Error during data restore



After restart LightJockey will attempt to restore the data found in the restore data file. If the data restore file is found to be corrupt this error dialog will appear, offering an option to abort the restore operation. Note that aborting the operation will delete the restore data file.

32 Backup & Restore

See also [Using the Data Restore option](#)^[55]

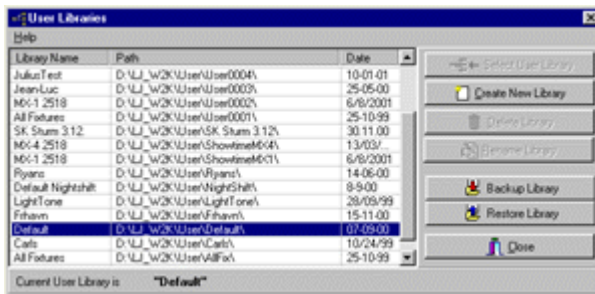
See also [User Libraries](#)^[53]

LightJockey implements a function to backup and restore data from individual [user libraries](#)^[53] - but does not implement functions to backup or restore the entire installation. To backup a complete installation use an application such as Winzip www.winzip.com

or use the backup/restore function built into Windows.

Note that restoring from a backup **completely** replaces the existing contents of the user library.

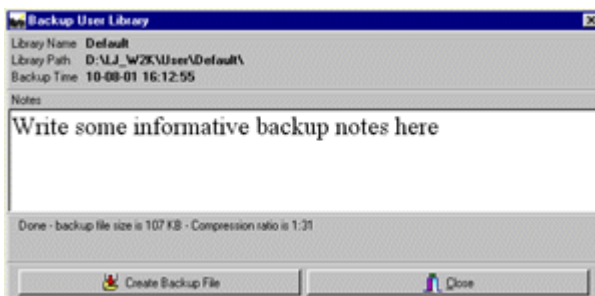
Creating a Backup



Selecting a user library for backup.

Select (highlight) the user library to backup from the list of user libraries (select System/User Libraries from the main menu). When creating a backup of the current library make sure to close all LightJockey dialogs before backup - a number of data files may not be properly updated until the corresponding dialogs are closed.

Alternatively close down LightJockey and re-start to make sure all relevant data has been saved.



Backup dialog

The backup dialog has a small note pad to add notes to the backup file - the notes will be embedded into the backup file and may be used as reference when searching through backup files.

Click **Create Backup File** to start creation of the backup. The backup procedure will collect and compress the entire contents and structure of the selected user library into one backup file. Once the file has been created - save the file using the standard Windows file dialog.

Using floppy disks for backup files

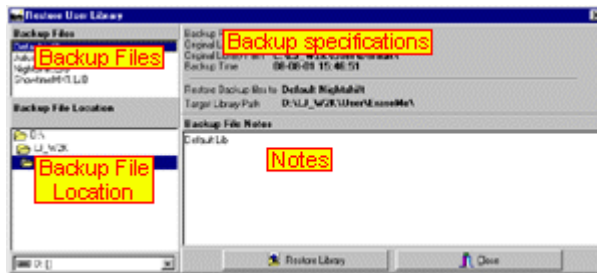
The backup file is saved as one large file, and it is the users responsibility that the media to which the backup file is saved has sufficiently space to hold the file. However since the backup file is compressed (often exceeding an 1:30 compression) most backup files will easily fit on a single floppy disk. Floppy diskettes are not really known for their reliability, so make sure that the diskette is properly formatted. If the backup is important or is to be stored for later, rather make identical backups to several diskettes rather than just one.

Restoring a User Library

A backup file can only be restored into an existing user library - to restore a backup to a new user library, create a new, empty library first.

NOTE Restoring a backup file to a library, will completely replace the contents of the library.

To restore a backup file, select (highlight) the user library to restore to from the user library dialog (Select System/User Libraries from the main menu) - then click Restore Library.



Restore User Library dialog

Use drive and directory selectors to navigate to the drive and folder where the backup file is placed. Select the backup file from the backup file list (the list will show all backup files in the selected folder). When a backup file is selected (highlighted) the embedded notes (if any) are extracted and shown in notes field.

Click **Restore Library** to start restoring data to the user library.

Note, if data is restored to the current, active user library LightJockey will automatically restart itself.

Using backup files in different installations

Backup files may be used to transfer the contents of user libraries from one LightJockey installation to the other - just make sure that the target installation is of the same or newer version. Restoring a data file to an older version may not work correctly.

33 User Palettes

The user palettes are accessible from the menu of most of the fixture controls (except lamp control, and pan/tilt controls).

The function of user palettes has much in common with [Position Presets](#)¹³⁹

The two main exceptions are :

1. When assigning a user palette entry to a fixture the actual values are assigned, not a reference. This means that if a palette entry is changed - this change will **not** affect scenes and sequences already programmed with the old values.
2. The fade status of each of the effects is saved together with the actual values. When applying the palette values, only entries with a [fade status](#) of fade or snap will be applied. This way it is possible to create palettes covering a sub-set of the palette functions, making it possible to assign combinations of palette entries of same type (i.e. one for iris and one for focus).

34 Downloading from the internet

To access information and files from the Internet, the PC must have a working web-browser installed, and of course it needs to be connected to the Internet as well.

On the Martin Website www.martin.dk there is a service area set aside for LightJockey.

General LightJockey service information :

<http://www.martin.dk/service/products/LightJockey.htm>

Software updates are be available from

http://www.martin.dk/service/software/logs/LightJockey_sw.htm

There is also a discussion forum dedicated to the LightJockey hosted on the Martin Website. It may be entered via the *service & support* entry or directly from here: [LightJockey end-user forum](#), and is open to everyone.

PDF Files

You need to have "Adobe Acrobat Reader" installed on your computer to be able to read these "PDF" files. It is downloadable for free from [Adobe](#).

35 Configuring the Desktop

See also [Fixture Icon Popup](#)^[122].

Right-click on an empty spot somewhere on the desktop to access the desktop pop-up menu.

Desktop Tabs

Fixtures are represented on the desktop by icons that may be placed anywhere on multiple pages or "tabs" This allows fixtures to be organized according to personal preferences.

To create or edit tabs, select "tabs" from the pop-up menu. Create a new tab by clicking add. Edit or delete the tab by selecting the tab from the list, and then click the appropriate button.

Placing fixture icons on the desktop

When a new fixture has been [configured](#)^[40] it's icon is not yet assigned to any tab on the desktop. A fixture is not programmable until it has been placed on the desktop - to place the fixture, drag it from the unassigned list that opens automatically when new fixtures are configured, and drop it on a suitable place on the desktop. Alternatively click **place all** in the menu to place all unassigned fixtures on the current tab.

Moving fixture icons

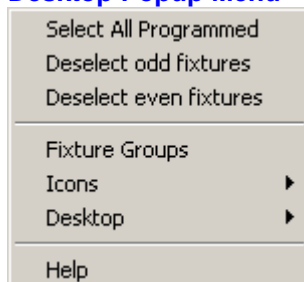
Select "Icons" then "move all" from the desktop pop-up menu. This will switch all icons into move mode. It is now possible to move the icons around on the current tab by dragging the icon to the new position. Icons in move mode cannot be selected for programming, so once the icons are placed deselect "move all" again on the desktop menu.

To place a fixture on a specific tab

If the fixture is still in the "unassigned window" simply activate that tab, and drag the fixture onto the desktop.

To move a fixture from one tab to the other, right-click the fixture icon to unassign the icon. The unassigned window will automatically open up. Activate the relevant tab and drag the fixture to the desktop.

Desktop Popup Menu



Rightclick the desktop to activate the desktop popup menu.

Select All Programmed Selects all fixtures programmed in the current sequence/scene. Requires that 'Show programmed fixtures' (see below) is enabled.

Deselect Odd Fixtures Deselects all fixtures with odd fixture number

Deselect Even Fixtures Deselects all fixtures with even fixture number

Fixture Groups Accesses the [fixture groups](#)^[116] dialog.

Icons Menu



Style

This option selects between two different styles of Fixture icons.

- Fixed Size : All Icons have the same base size.
- Image Size : Icons are sized according to the size of the fixture image on the icon and icon caption (fixture user name).

• Move all

Toggles all fixture icons between move mode (gray caption) and normal mode. For arranging the icons on the desktop, see above. When in move mode the icons cannot be selected for programming.

Auto-arrange Icons

This will auto arrange all the fixture icons on the current tab, according to fixture type or fixture number.

Show Programmed Fixture

When enabled each fixture icon will show a colored rectangle when the fixture is programmed in the current sequence. A green rectangle if the fixture is programmed in the current scene, and a cyan rectangle if the fixture as been programmed in any other scene in the sequence. The function is off by default. Note that checking the sequence runs as a low priority process, so especially for larger sequences or very busy systems, the status may take a few seconds to update.



Fixture programmed in current scene

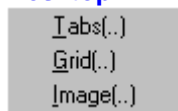


Fixture programmed in current sequence

Unassign Icons

Unassign all icons on the current tab, or just the [selected](#)^[120] icons.

Desktop



Tabs

Use this dialog to create, rename or delete desktop tabs.

Grid

Use the grid to help lining up the icons on the desktop.
Enable the grid from the desktop right-click menu.

Image

It is possible to use bitmaps (pictures) as wallpaper on the desktop.
Select "Image" from the desktop pop-up menu. Locate the required bitmap and click "Ok". Note that it is only possible to use standard Windows bitmap files (.BMP files). Also be aware that complex images requires a lot of CPU time when re-drawing and may slow down the graphics considerably.

- Stretch Image : sizes the image so that it fills up the desktop.
- Center Image : centers the image on the desktop. Does not resize image.

It is not possible to show the wallpaper and the grid at the same time.

36 QuickStart

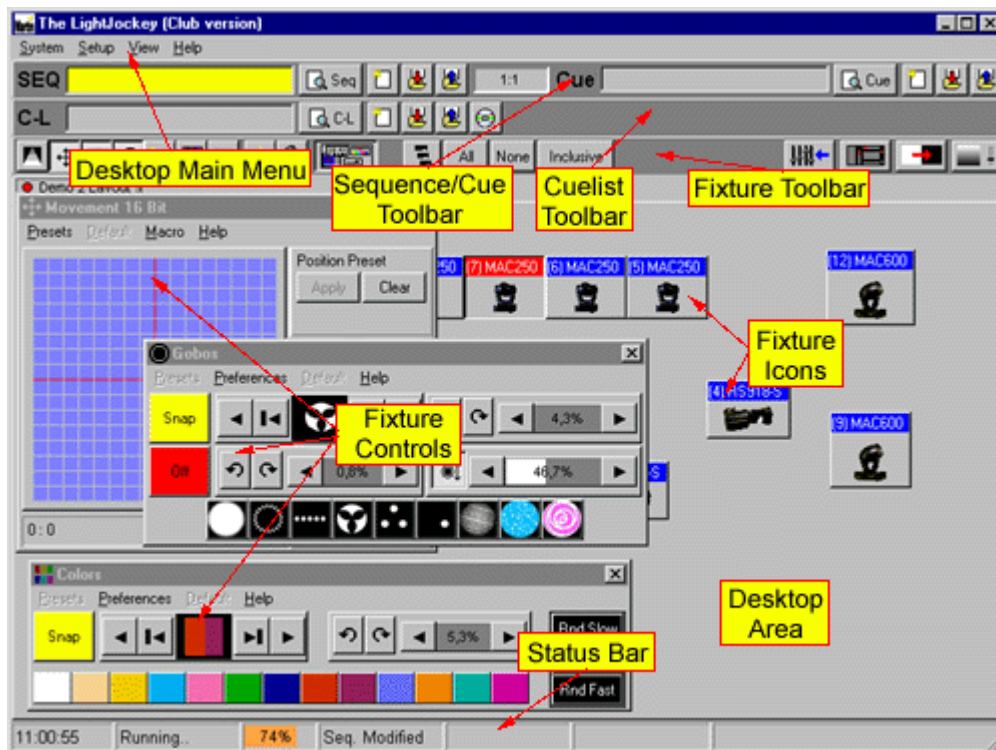
Programming LightJockey

Introduction to programming

This short introduction will help you get started using the Martin LightJockey quickly. It assumes that you have some basic experience programming moving lights and are familiar with Windows. Additional information is available in this on-line "Help" documentation.

Programming with the LightJockey is similar in many ways to programming with the 3032 Controller. Fade times and the Off/Snap/Fade control, however, will be new features to 3032 programmers.

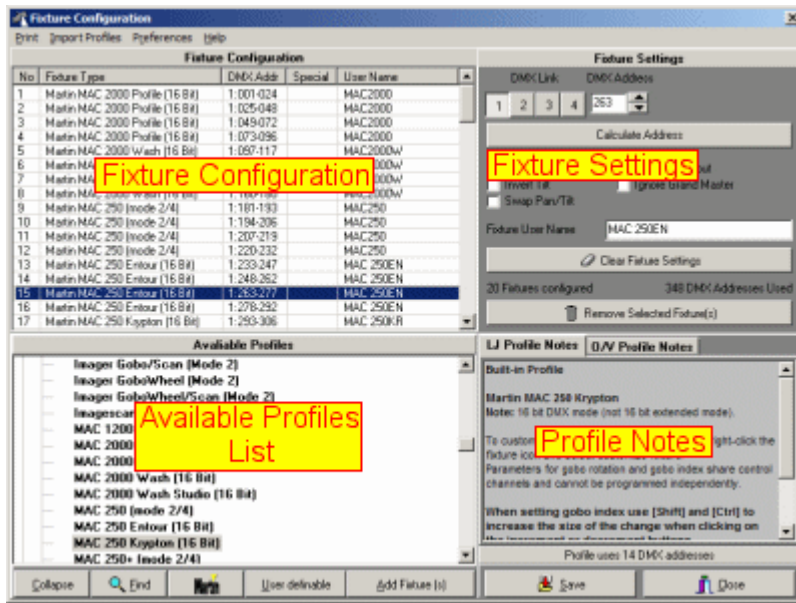
The best way to learn your way around the LightJockey is to experiment. As you try the controls, be aware that clicking with the left and right mouse buttons often do different things. Note: depending on software version, screens and button names may differ from those shown here.



Configuring fixtures

The first step after configuring the hardware is to select and address your lighting fixtures in the Fixture Configuration window. In the following example, the LightJockey is set up to control 2 MAC 600s.

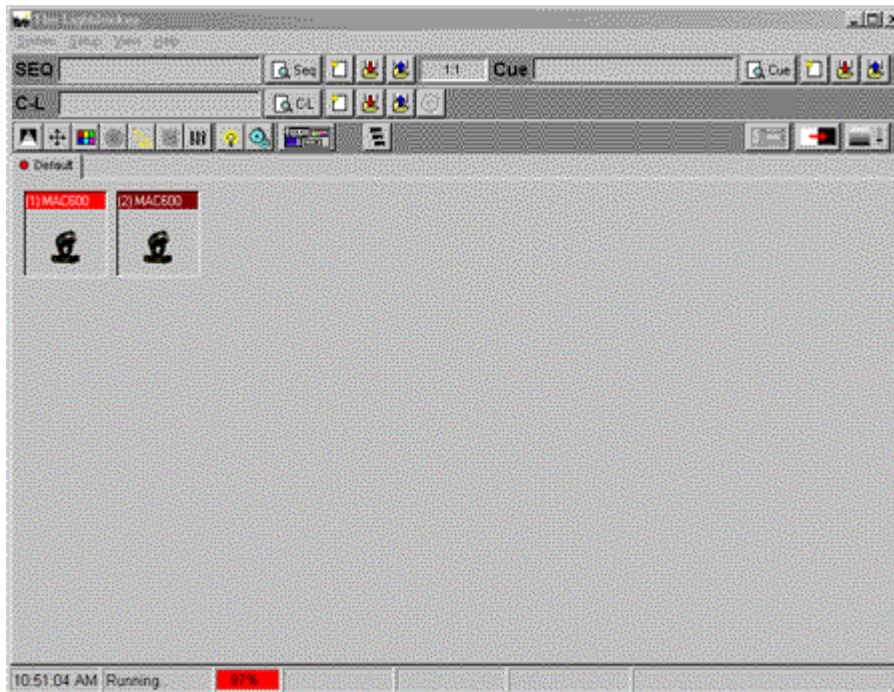
1. Choose Setup > Fixture Configuration from the main menu.
2. Select "MAC 600 (mode 2/4)" from the list of Available Fixture Types (found under the Martin Manufacturer heading). Drag and drop it on line 1. Add another MAC 600 to line 2. (Multiple fixtures can also be added using the Add (fixture name) button.)
3. If the addresses are already set on the fixtures, click the fixture, select the DMX link it's on, and enter its address in the DMX Address field.
4. If you want the controller to automatically assign addresses, click Auto Address. Click Find Addresses and then click OK. Remember to set the addresses on the fixtures to match the LightJockey's fixture configuration.
5. Click the first MAC 600. Type "Left" in the Fixture Username field.
6. Click the second MAC 600 and name it "Right."
7. Save the configuration and close the window.



Configuring the desktop

Lighting fixtures are represented by icons on the desktop. To create and place icons you drag fixtures from the Unassigned Fixtures list to the desktop. Icons can be organized any way you like on multiple pages or "tabs."

1. The list of unassigned fixtures is displayed on the desktop automatically. It can also be opened by selecting View > Unassigned Fixtures from the main menu.
2. Drag the MAC 600s to the desktop.
3. Right-click on the desktop. Select Icons > Auto Arrange. Click OK. Additional menus pop up when you right-click on the icons but we are not concerned with these now.



Key LightJockey concepts

Understanding these concepts is critical for successful programming with the Light-Jockey. Don't worry

if they are new to you, the programming example that follows is designed to illustrate them and they will make more sense once you have been through it.

Cues, sequences, and scenes

A light show is typically divided into cues that you program and then play back from the list of available cues. The LightJockey also supports cue playback from the Martin 2532 Direct Access Controller, which is available as an accessory.

A cue points to up to 12 sequences that run together in parallel. In addition to these pointers, cues have some additional sequence timing and loop options.

A sequence is a set of scenes that run one after the other. A sequence can have from 1 to 999 scenes.

A scene is a set of instructions for selected fixtures. These instructions are made up of a static command, a fade time, and a scene time. A static command is one or more instructions such as "insert the red filter" or "rotate the triangle gobo counterclockwise." Fade time is the time it takes, for example, for the color to change from blue to red. Scene time is simply how long the scene lasts before the next scene is executed. If scene time is greater than fade time, the fixture fades to the position and stops.

Current cues and current sequences

To program cues and sequences you either create new ones or load existing ones onto the desktop using Windows techniques such as dragging and dropping. Once on the desktop they become the current cue or current sequence.

The current cue is displayed differently from the current sequence. The action of the current cue is shown by changes in the control windows. The pan/tilt cursor in the movement window, for instance, slides back and forth to show a pan movement. This feature lets you see the program without actual fixtures.

The controls for effects programmed in the current sequence, however, stand still so you don't have to catch a moving target as you work. The pan/tilt cursor, to take the previous example, stops moving when you load the movement sequence onto the desktop. To see the sequence run again you have to clear it from the desktop by loading another sequence or clicking New/Clear Sequence on the Sequence toolbar.

Bottom to top execution

Understanding the order of execution is vital for successful programming. The Light-Jockey executes the current sequence first and then executes the current cue from bottom (sequence 12) to top (sequence 1). When two sequences contain instructions for the same effect, the sequence closest to the bottom has priority; instructions in the sequence closest to the top are not executed.

Off/Snap/Fade control

Most effect controls have an Off/Snap/Fade (O/S/F) button. In the default setting, the button is red and displays "Off." Clicking the red Off button once turns it into a yellow "Snap" button. Clicking again turns it into a green "Fade" button. Some controls, such as the Lamp Control, have Off and Snap only.

When an effect's O/S/F button is Off, the control sends no instructions. This allows a lower-priority sequence to control that effect. It does not turn off the effect itself. The dimmer O/S/F button must be Off in sequence 10, for example, if you want to program a dimmer command in sequence 9 or below.

When you set an effect's O/S/F button to Snap, the effect moves at maximum speed.

When you set an effect's O/S/F button to Fade, the effect's speed is determined by the fade time. To program a scene with a 10-second pan movement, you would first define the movement with the cursor, then set the Pan O/S/F button to Fade, and finally set the scene and fade times to 10 seconds. Setting an effect's O/S/F button to Snap or Fade overrides all programming for that effect in higher sequences in the cue. Leave the button on Off (the default) unless you are programming a command.

Striking lamps

Most Martin fixtures with discharge lamps, also known as arc lamps, must be struck (turned on) from the controller. There are three ways to do this:

- Use the LightJockey's automatic lamp-strike feature. This is recommended and is described in the following example.

- Program a "lamp on" cue. This is not recommended because Martin fixtures use the same DMX channel for lamp and shutter control. Therefore, the lamp-on command will be overridden by any higher-priority sequence with a shutter command. If you choose to program a "lamp on" cue, turn on the lamps one at a time with 3 - 5 second intervals to avoid excessive voltage drop and current draw.
- Strike a lamp manually by selecting it, clicking the Lamp button on the fixture tool-bar, and clicking Power On in the Lamp Control dialog. Depending on the fixture, the Lamp Control may also allow you to turn off the lamp.

Example: Programming a cue

The following example, in which you program a simple cue for 2 MAC 600s, demonstrates the basic steps and concepts involved in programming. To keep you focus on the screen, it is suggested that you program the first cue without fixtures attached.

The screens shots show how your screen will look if you follow the steps correctly.

Step I: Strike lamps

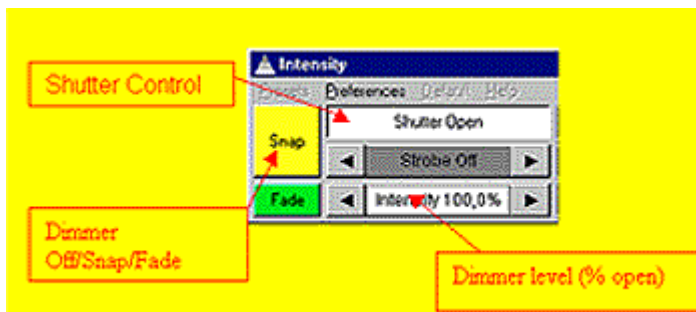
This step only applies if you have actual fixtures connected to the controller.

1. Configure 2 MAC 600s and place them on the desktop.
2. Turn on the MAC 600s, set them to mode 4, and set their addresses to match the LightJockey fixture configuration.
3. Choose System > Auto Strike Lamps from the main menu. Click Stop when the lamps have struck.

Step II: Program shutter/dimmer sequence

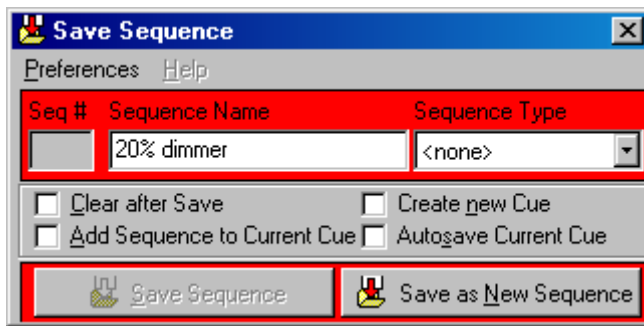
In this step you program a sequence to open the shutters and set the dimmers to 20%.

1. Configure 2 MAC 600s and place them on the desktop if you have not done so.
2. Click New/Clear Sequence on the Sequence toolbar. The new (blank) sequence is indicated by a gray Sequence name field.
3. Click both MAC 600s to select them. The fixture icon caption is blue when the fixture is not selected and red when it is selected.
4. Click Show Fixture Controls on the Fixture toolbar (see page 1). Arrange the control windows any way like by dragging them on the desktop. Since you will not be using the Beam control in this example, you can close it to make more room on the desktop. Individual controls can be opened and closed as needed by clicking buttons on the Fixture toolbar.
5. Find the Intensity dialog (see below). Click the shutter control. Three things happen: "Shutter Closed" changes to "Shutter Open," the shutter O/S/F button automatically changes to Snap, and the Sequence Name field in the Sequence toolbar changes from gray to yellow, indicating that the new (blank) sequence has been changed.
6. Drag the dimmer level to 20%. Click the dimmer O/S/F button twice to Snap.



7. Verify that your Intensity control looks like the one above and that the O/S/F buttons in all other controls are off.

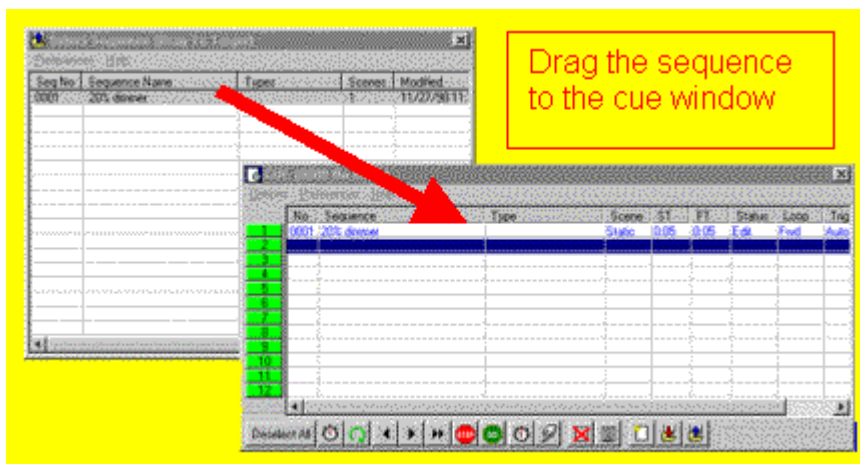
8. Click Save Sequence in the Sequence toolbar. Type "20% dimmer" in the dialog's Sequence Name field. Click Save as New Sequence or press Enter.



Step III: Add sequence to Cue

Checking "Add Sequence to Current Cue" in the Save Sequence dialog would have automatically added the sequence to the current cue when saving. Windows techniques such as drag and drop can also be used to add, delete, and rearrange items in lists.

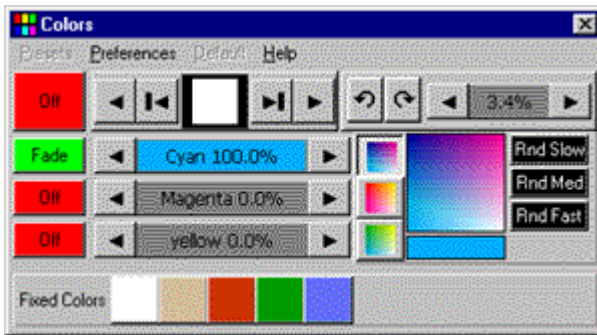
1. Click List of Sequences on the Sequence toolbar.
2. Click View Cue Control on the Cue toolbar.
3. Drag the "20% dimmer" sequence to position 1 in the cue. (If drag mode is not enabled, choose Preferences > Drag mode from the Select Sequence dialog menu.)



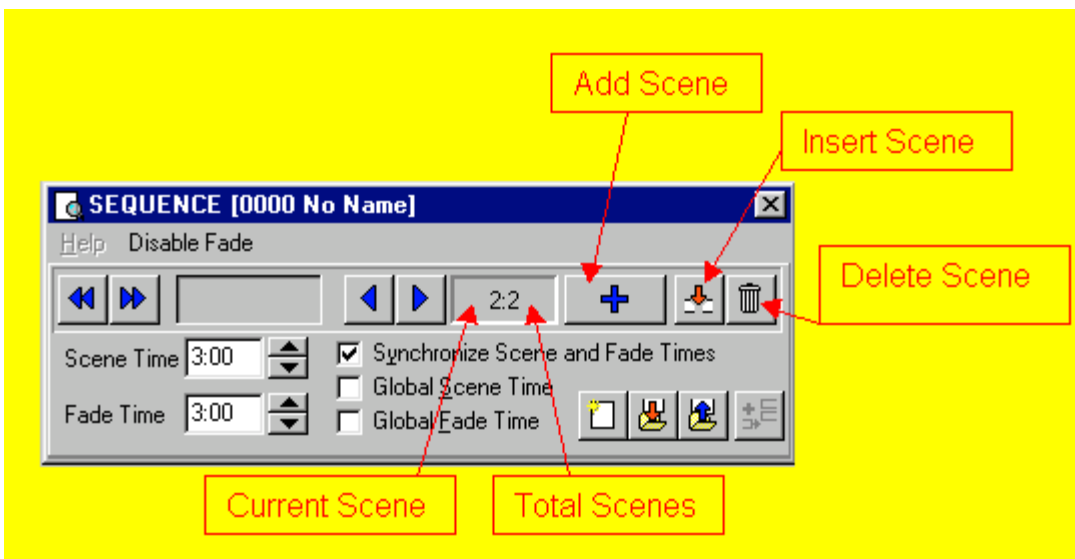
Step IV: Program CMY sequence

The next sequence is a CMY (cyan, magenta, yellow) color chase with 3 scenes. In the first scene, cyan fades in and yellow, which comes in scene 3, fades out. In the second scene, cyan fades out and magenta fades in. Finally, magenta fades out and yellow fades in. The scene and fade times for each scene is set to three seconds for a smooth continuous effect.

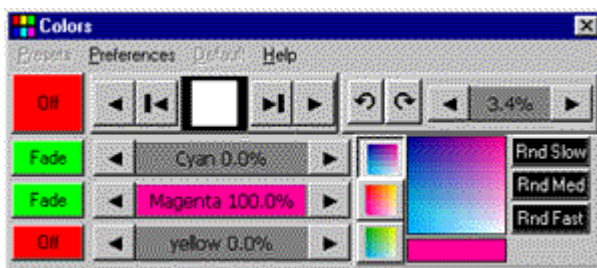
1. Close the cue editing and sequence list windows.
2. Click New/Clear Sequence on the Sequence toolbar.
3. Make sure both MAC 600s are selected: a fixture is selected when the icon caption is red. Drag and drop sequences to cues.
4. Place the cursor over the cyan fader and drag it to 100%. The O/S/F button automatically changes to Fade.



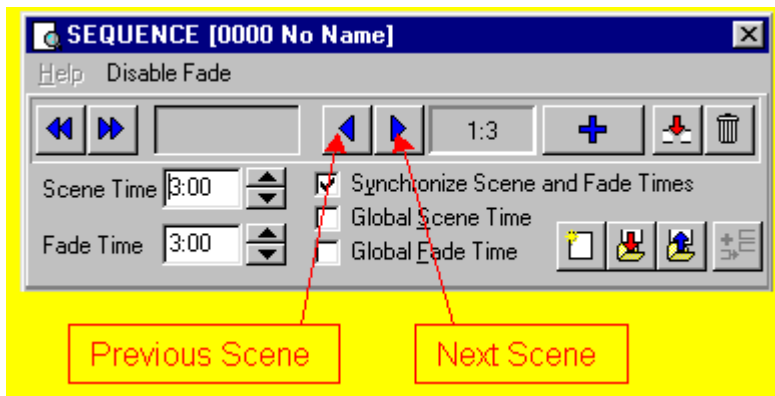
5. Click View Sequence Control in the Sequence toolbar.
6. Click the "Synchronize Scene and Fade Times" box. Set the scene (and fade) time to 3 seconds.
7. Click Add Scene in the Sequence dialog.



8. Drag the Cyan fader to 0%. Drag the Magenta fader to 100%.



9. Click Add Scene in the Sequence dialog.
10. Drag the Magenta fader to 0% and the Yellow fader to 100%.
11. Now you need to change scene 1 to fade out yellow. Scroll to scene 1 of 3 by clicking Next Scene (not Add Scene) in the dialog.



12. Yellow is already at 0% so you only need to click its O/S/F button to Fade.
13. Click Save Sequence in the Sequence dialog or toolbar.
14. Click the "Clear after Save" and "Add Sequence to Current Cue" boxes in the Save Sequence dialog.
15. Type "CMY chase" in the name field.
16. Click Save as New Sequence or press Enter. Notice how the CMY faders move once the sequence has been saved, cleared, and added to the current cue.

Step V: Program movement sequence

The LightJockey features a sophisticated engine for generating pan/tilt movements. The effects engine is not described here but detailed information is available in the on-line help. In the first two sequences, both fixtures were programmed together to do the same thing. In this sequence you program each fixture individually to move in opposite directions.

1. To program "Left" MAC 600, select it and deselect the "Right" MAC 600.
2. If the pan/tilt control window, shown below, is not open, click Movement on the Fixture toolbar.
3. Drag the movement cursor to the middle of the top-right quadrant. Click the Pan and the Tilt O/S/F buttons twice to Snap.
4. Click the "Left" MAC 600 to deselect it; select the "Right" MAC 600.
5. Drag the movement cursor to the middle of the top-right quadrant.
6. Click the Pan O/S/F button and the Tilt O/S/F button to Snap.
7. Open the Sequence Control if it is closed by clicking View Sequence Control. Set the scene time to 2 seconds.
8. Click Add Scene in the Sequence dialog. Click Synchronize Scene and Fade Times. Set the scene (and fade) time to 15 seconds.
9. Drag the movement cursor to the middle of the top-right quadrant. Click the Pan O/S/F button to Fade.
10. Click the "Right" MAC 600 to deselect. Select the "Left" one.
11. Drag the movement cursor to the top-left quadrant and click the Pan O/S/F button to Fade.
12. Click Save Sequence on the Sequence toolbar. Type "Pan" in the Sequence Name field. Click the "Clear after Save" and "Add Sequence to Current Cue" boxes. Click Save as New Sequence or press Enter.

If you programmed the sequence as described, the movement cursor will move slowly from left to right if when you select the "Left" MAC 600 and from right to left when you select the "Right" one.

Step VI: Edit movement sequence

This step demonstrates how to edit a programmed sequence. Here you edit the pan sequence to black out both fixtures in the first scene.

1. Click List of Sequences on the Sequence toolbar.
2. Drag the "Pan" sequence to the desktop. Close the sequence list. Notice that the cursor in the Movement control stopped moving.

3. Open the Sequence Control if it is closed. Click Next Scene to advance to scene 1 of 2.
4. Select both MAC 600s.
5. Click the shutter control in the Intensity dialog. It changes from "Shutter Open" to "Shutter Closed." Click, if necessary, to set the shutter O/S/F button to Snap.
6. Click Save Sequence on the Sequence toolbar or in the Sequence dialog. To save the changes to the sequence, click Save Sequence or press Enter. Click OK to confirm.

Step VI: Save the cue

Cues are handed much like sequences.

1. Click Save Cue on the Cue toolbar.
2. Type "M600 CMY pan" in the Cue Name field.
3. Click Save New or press Enter.

Step VII: Edit the cue

This step demonstrates how sequence order effects cue playback. Look at the Intensity control: the shutter closes for 2 seconds because of the command in the pan sequence. This sequence has the highest priority because it is closest to the bottom. When you put the 20% dimmer sequence underneath the pan sequence, the 20% dimmer sequence takes priority and keeps the shutter open all the time. With a little planning, you can create different looks using the same sequences just by changing their order.

1. Click New/Clear Cue on the Cue toolbar to clear the cue from the desktop. (This is not required; it just helps demonstrate how to load cues.)
2. Click List of Cues on the Cue toolbar.
3. Drag the "M600 CMY pan" cue to the desktop. Its name appears in the Cue name field and the cue begins to run. Close the list of cues to make room on the desktop.
4. Click View Cue Control on the Cue toolbar.
5. Drag the "20% dimmer" sequence from position 1 to position 4. Select Move Sequence from the pop-up dialog.
6. Click Save Cue in the Edit Cue window or on the Cue toolbar.
7. Click Save. Click OK in the confirmation dialog.
8. Look at the Intensity control: the shutter now stays open all the time.

Additional cue operations

When editing cues, remember that the current sequence has highest priority. Normal cue execution resumes when the current sequence is cleared. Note too that to synchronize the sequences in the current cue, you must clear the cue and reload it onto the desktop.

- To create a new cue and/or clear the current one, click New/Clear Cue.
- To load a cue, click List of Cues and drag it from the List of Cues to the desktop. Click View Cue Control to open the Edit Cue window. Here, sequences can be added, removed, rearranged, loaded, etc.
- To adjust cue timing, open the Cue Edit window and click Cue Times at the bottom. The cue master fader adjusts times (as a percent) for all sequences set to "CUE" time. Setting a sequence fader to another value overrides the master cue fader.

2532 Direct Access Controller

The LightJockey supports the Martin 2532 Direct Access Controller, which can be used to play back cues and sequences.

1. Connect the 2532 to a serial (COM) port on the LightJockey computer.
2. Apply power to the 2532.
3. Choose Setup > Hardware Setup > Direct Access and select the COM port.
4. Click Direct Access on the fixture toolbar to open the 2532 Direct Access window. For more information see the on-line help.

37 Using the 2510 Playback Controller with LightJockey

See also [Creating a list for the 2510 Controller](#)^[73]

See also [Using the 2510 after download](#)^[80]

See also [2510 Memory Test](#)^[78]

The Martin 2510 Playback controller is a device used to playback sequences, using another controller to program the actual sequences. It is not possible to create programs on the 2510 itself. Originally the 2510 controller was developed to playback sequences from the Martin 3032 PC controller (using Martin protocol to control fixtures), but has been upgraded to allow playback of sequences programmed on the LightJockey (using DMX protocol). Note that in order to work with LightJockey the 2510 must have firmware **version 2.0** or higher.

The sequences programmed in LightJockey are downloaded to the 2510 controller's non-volatile memory via RS-232 and does not require special hardware other than a cable (included with the 2510 controller or see below) and an available serial port on the PC. Once sequences are transferred to the memory of the 2510, the LightJockey is no longer needed to playback the sequences from the 2510.

When programming sequences for the 2510 on the LightJockey the following must be observed:

- The 2510 will control any DMX compatible fixture; it is not restricted to Martin fixtures.
- There is no restriction on how many fixtures can be programmed (except for the limits of the various LightJockey packages), but all fixtures to be programmed must be addressed on the same DMX link in the LightJockey configuration, thus allowing a maximum of 512 DMX channels.
- The 2510 cannot playback cues - only sequences.
- The 2510 can contain a maximum of 99 sequence entries. The number of possible scenes in the sequences depends on how many DMX channels the configured fixtures take up. If all 512 channels are used no more than 247 scenes in total can be programmed. If only 1 DMX channel is used the 2510 may hold as many as 42325 scenes.
- The 2510 cannot use fade times. The only way to program slow transitions into individual scenes is to use speed control that may be provided with the fixture profile (not all fixtures support speed control). Most of the built in Martin fixtures offer one speed control for pan/tilt and one for effects. It may be necessary to change to a different LightJockey personality/mode to access speed controls via DMX - usually that means changing the DMX mode on the fixture itself as well (i.e. a Roboscan 812 needs to run in DMX mode 2 for access to speed controls) please refer to the technical documentation for the fixture in question. Fixtures from other manufacturers may or may not offer speed controls, please refer to the fixtures technical documentation.
- The 2510 cannot use Movement Macros; Pan/Tilt movements must be programmed as static positions using the Pan/Tilt control.
- The 2510 uses Martin pin-out on the 3-pin XLR - this means that the signal on pins 2 & 3 are swapped compared to the output of the LightJockey. To use the 2510 with fixtures with 5 pin XLR or 3 pin XLR with DMX pin-out, construct a converter cable and plug it into the 2510 before connecting to any fixtures.

Although the 2510 does not support fade times or macros, it is possible to create entire sequences containing multiple scenes to emulate fade times and macros. The easiest way to do this is by using the real-time recording function - see [Snapshot and recording from DMX out](#)^[183]. **Be aware that emulating fades and macros this way may quickly use up the 2510's scene memory.**

5-pin to 3-pin Adaptor		3-pin to 5-pin Adaptor		3-pin to 3-pin Phase-Reversing Adaptor	
Male	Female	Male	Female	Male	Female
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4			4		
5			5		
P/N 309160		Construct		P/N 309158	

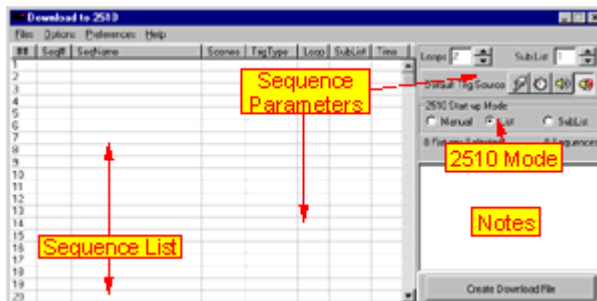
Cable converter configurations

25 pin PC output	9 pin PC output	2510 RS-232 input
pin 2	pin 3	pin 3
pin 7	pin 5	pin 5

2510 RS-232 cable configurations

38 Creating a list for the 2510 Controller

See also [The 2510 Playback Controller](#)⁷²



2510 Download List (empty)

Creating the 2510 Download File

Before downloading sequences to the 2510 a download file must be created. The download file is a binary image that contains the complete information that is needed for the 2510 to playback the sequences.

However, before the file can be created a list containing the sequences to download must be created.

To create a sequence list for the 2510 select *Download/Martin 2510 Controller* from the main desktop menu.

By default the 2510 download list is empty (select *New 2510 list* from the *Files* menu to clear the current list). The list contains 99 lines, each containing a sequence entry with sequence number and associated sequence attributes (see below)

Once the 2510 list has been created, click the **Create Download File** button to generate the download file. See [Generating the 2510 download file](#)^[76]

Selecting Fixtures

Select the fixtures that are supposed to be controlled by the 2510. Do this by [selecting](#)^[120] the fixtures as normally on the desktop. Note that all selected fixtures **MUST** be addressed on the same DMX output link - it is not possible to download data for fixtures on different links.

8 Fixtures Selected 24 Sequences
258 Scenes of 1476

Since the 2510 has a limited memory capacity there is a limit to how many scenes in total that can be downloaded into the 2510 memory.

The memory space used for sequence attributes in the 2510 has a fixed size, so the number of sequences downloaded does not affect the capacity of the 2510 - only the total number of scenes in the sequences.

Since only data from DMX address 1 to the last DMX address used by the selected fixtures is downloaded, the actual number of scenes depends on the last DMX address used.

LightJockey continuously keeps track of the scene count. If the scene count is not visible it is either because no fixtures have been selected or fixtures on different links have been selected.

The capacity ranges from a total of 42325 scenes if only DMX address 1 is used to 247 scenes in total if all 512 DMX addresses are used.

2510 Sequence List

##	Seq#	SeqName	Scenes	TrigType	Loop	SubList	Time
1							
2							

2510 list columns

##

Indicates the number of the sequence entry (and also the number the sequence will get once downloaded into the 2510).

Seq#

Indicates the LightJockey sequence number.

SeqName

The LightJockey Sequence Name.

Scenes

The number of scenes in the sequence.

TrigType

The default trig type of the sequence once downloaded into the 2510 (see below)

Loop

The number of times a sequence should loop when the 2510 is running in list or sub-list mode (see below)

SubList

The sub-list number assigned to the sequence (see below)

Time

The time it takes for the sequence to perform all its loops in list or sub-list mode (only calculated for sequences in auto-trig mode)

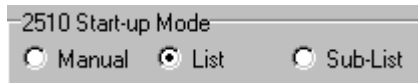
The 2510 will hold a maximum of 99 sequences (98 if a special startup sequence is used, see later).

To assign sequences to the 2510 list drag a sequence from the [list of sequences](#)^[206] to the 2510 list (sequence list must be in drag mode). Alternatively, right-click on the sequence in the list of sequences and select *add to 2510 list* from the pop-up menu to add the sequence to the topmost free line in the

2510 list (this option requires that the 2510 download list window is opened). Once a sequence is placed in the 2510 list various attributes can be set for the sequence. To set the trigmode, sub-list number or loop count, highlight the sequence(s) in the list, and change the settings. To insert an entry before or delete a sequence entry right-click the line and select the action from the pop-up menu.

2510 start-up modes

The download file may set the 2510 to default in one of 3 different modes:



Manual

Each sequence in the list loops continuously until a new sequence is selected on the 2510.

List

Each sequence loops the number of times indicated in the sequence loop attribute. After the last loop the next sequence in the list is automatically loaded and looped. When the list 'runs out', the list starts over.

Sub-List

In Sub-list mode the 2510 works similar to the list mode, except it only runs sequences belonging to a given sub-list (i.e. all sequences in sub-list 1). Each sequence can only be assigned to one sub-list. The actual sub-list may be selected on the 2510 itself after start up. The 2510 always start up using the sub-list with the lowest number.

Sequence Attributes

Sequence Trig Types

The sequences downloaded to the 2510 must be assigned a default trigmode. The actual trigmode of the sequence in the 2510 may be changed on the 2510 itself. The default trigmode is automatically selected after 2510 power up or when re-entering list or sub list mode. If the 2510 is to be used for automated purposes without human interaction it is important to set the right trigmode before creating the download file (i.e. auto or music).



The default trigmode is assigned by highlighting one or more sequences in the 2510 list and clicking one of trigmode icons on the right hand side.

Manual Trig

The sequence is only triggered by the [Manual] button on the 2510.

Auto Trig

The sequence is automatically triggered using the programmed scene time

Music Trig

The sequence is triggered using the microphone built into the 2510.

Music Trig/Random

The sequence is triggered using the microphone built into the 2510. If the sequence contains more than 2 scenes a random scene in the sequence is selected.

Loops

Indicates how many times a sequence loops before the next sequence is loaded. Loops are only used

in list and sub-list mode.

Sub-List

Indicates to which sub-list the sequence is assigned.

File Menu

New 2510 list

Select New 2510 list to clear the current list.

Save 2510 List - Load 2510 List

It is possible to save and re-load 2510 files from the *file* menu of the 2510 download list. Please be aware that the saving the file do **not** save the actual contents of the sequences in the download file or the actual fixture configuration. It only saves references to the sequences (sequence number), sequence attributes and selected fixture numbers. This means that if the fixture configuration or sequences are modified the contents of the 2510 download file is no longer the same as before. It is possible to save a binary image of the contents of the download file for download later, see

[Binary 2510 files](#)^[79].

Options

Compress List

Before the 2510 list can be made into a download file, it must be compressed. Compressed means that there are no empty lines between the individual sequences in the list.

Preferences

Auto Apply Fixture Selection

When this option is checked the last used fixture section will automatically be applied when the file is re-loaded.

Force DBO

Used for generating blackout values to be sent when the blackout button is pressed on the 2510. If not checked, the 2510 download file will contain blackout values based on the fixture's profiles. If Force DBO is checked, 0 values will be sent on all DMX channels when the blackout button is pressed on the 2510.

Set first Sequence as Startup Sequence Only

Check this to assign the first sequence in the list to be startup sequence only. If a dedicated startup sequence is assigned the 2510 list will designate the first sequence as "SU" rather than "01". Subsequent lines are numbered "01" to "98" leaving room for only 98 further sequences.

As a dedicated startup sequence, the sequence is loaded and executed right after the 2510 starts up. The sequence will loop the number of times given by the loop count attribute. After startup the sequence is no longer accessible on the 2510.

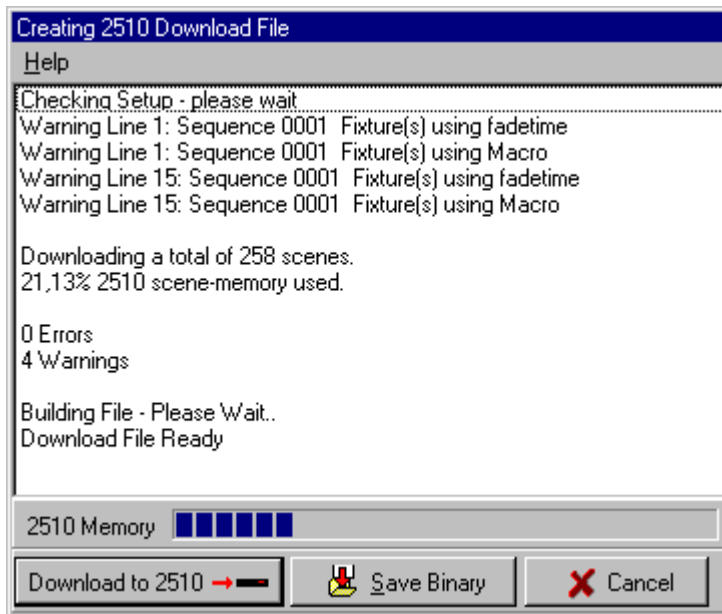
Use a dedicated startup sequence to for example strike discharge lamps in fixtures with lamp-on commands. Make sure that the sequence will run for long enough to allow fixtures to finish the power-on reset cycle and still receive the lamp-on command.

39 Generating the 2510 Download File

See also [Using the 2510 after download](#)^[80]

See also [Binary 2510 Files](#)^[79]

Setup the 2510 download file, then create the download file by clicking the **Create Download File** button.



Before creating the actual binary file, the validity of the list and the sequences used are checked. LightJockey checks for the following:

Errors:

[Fixtures addressed on different links](#) - generates an error and the file is not created.

[Download File too large for 2510 Memory](#) - generates an error and the file is not created.

[Sequence does not exist](#) (a sequence has been deleted after the list was made) - generates an error and the file is not created.

Warnings:

[DMX Channel #xxx is Patched](#). The DMX channel used by the fixture is patched from another source (DMX in or out). Since the datafile to the 2510 is generated from the DMX output values, and these values are influenced by the patches, the patched channels may not contain the values programmed into the sequence. Remove the patch using the [global patch tool](#)^[312].

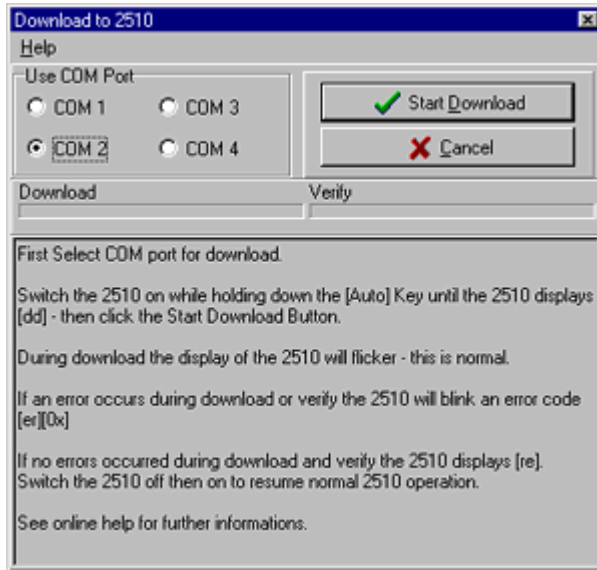
[Movement macros used](#). If any of the selected fixtures uses movement macros, a warning is issued. The file will be generated but the 2510 file does not include the macro information.

[Fadetime used](#). If any of the fixtures uses fade times a warning is issued. Note that it is possible to use effects in fade mode, as long as the scene fade time is set to the minimum of 0.05 sec. Any effects programmed with fade time will automatically be converted to be snapped by the 2510.

When the file has been created, [download](#)^[78] the file directly to the 2510 by clicking the **Download to 2510** or save the [binary file](#)^[79] for later retrieval and download by clicking the Save Binary button.

Save Binary

40 Downloading the 2510 download file



2510 download dialog.

This dialog is used to download data to the 2510. Select the right COM port and follow the onscreen instructions to download the data.

If the access to comport fails (error accessing COM port) it may be due to the fact that another LightJockey device is currently configured to the same COM port (such as a 2532 direct access or 2518 controller in RS232 mode). Use the [hardware setup](#)^[24] dialog to disable the configured device, then re-configure the device once the data has been downloaded.

The download procedure consists of a data download part and a verify part. The communication from the PC to the 2510 is one-way only so the PC will not know if the download has been successful, or even if a 2510 is connected at all. So to check that the download has been performed correctly check the result after download in the 2510 display.

If the downloaded data verifies correctly the 2510 will display [rd] after verification, if there was an error during download or verify the 2510 will flash [er] and [xx] where xx indicates an error code.

Error codes 02 and 03 download failed, but the contents of 2510 has not been changed.
Other error codes download failed, and the contents of 2510 has been compromised.

After a successful download, the 2510 must be switched off then on to start the sequence playback.

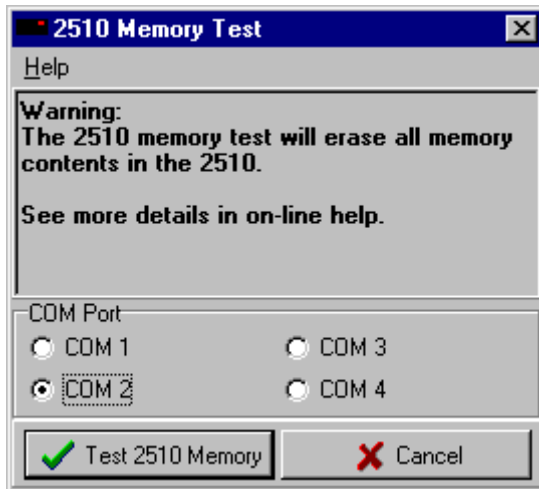
41 2510 Memory test

Warning !

The 2510 memory test is a destructive test - it completely erases the memory contents of the 2510 controller.

The test is used to check the flash memory chip mounted on the 2510 PCB.

The memory test is accessible from *Options* menu of the 2510 list dialog.



2510 Memory test dialog.

Switch on the 2510 while holding down the [Auto] key until the 2510 displays [dd]. Select the COM port on the 2510 Memory test dialog and click the **Test 2510 Memory** button to start the memory test.

During the test, the display of the 2510 will flicker a lot - this is normal. At the end of the test the 2510 displays [rd] if the memory test is OK, a flashing [er] [xx] indicates a problem with the 2510 flash chip.

42 Binary 2510 Files

See also [Generating the 2510 download file](#)^[76]

In contrast to the files saved from the 2510 list dialog, the binary 2510 file contains the complete binary image of the 2510 download file. The binary file may be saved right after the download file has been [created](#)^[76].

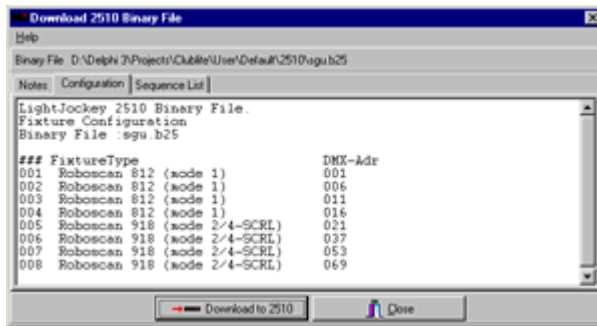
When the binary file is saved, the notes, a list containing the fixture configuration with DMX addresses and a list of sequences are attached to the binary file. The notes and lists may be viewed when re-loading the binary file. Please note that it is not possible to re-construct the original fixture configuration or sequences from the binary file.

If it is necessary to maintain 2510 file lists for different fixture configurations use a different user library for each configuration and save the 2510 list.

Since the binary file contains all data for download and documentation for the fixture setup and sequences it is a useful format for storing or distributing a 2510 download file for a known configuration. Make sure to include useful information about special fixture settings etc. in the notes on the 2510 list dialog before saving the binary file.

Loading a binary 2510 file

A binary file is loaded from the *file* menu of the [2510 list dialog](#)^[73].



Load Binary 2510 file dialog

Once the file has been loaded, click the **Download to 2510** button to download the data to the 2510. The notes and lists attached to the binary file may be viewed on each their own tab. While it is not possible to print the information directly, the content may be cut and paste'd to any word processor such as MS Word or even Windows Notepad in order to make a printout.

43 Using the 2510 for playback

Once the [sequence list](#)^[73] has been downloaded to the 2510 the 2510 must be switched off, then on, in order to playback the sequences.

2510 Startup

During startup the 2510 flashes [25][10], then the firmware revision [X.X] (i.e. 2.0) then the download host application i.e. [LJ] for LightJockey. Finally, the number of available sequences is flashed 3 times.

If a dedicated startup sequence has been setup, the 2510 will start running this sequence while flashing [SU] in the display. The startup sequence may be aborted at any time by pressing any key on the 2510.

If no startup sequence has been assigned or after the startup sequence has finished, the 2510 will start to playback the downloaded sequences in the default [2510 Startup Mode](#)^[73] set by the 2510 list.

Manual Mode

The 2510 will start executing sequence #1 in the default trig mode. Use [up] and [down] buttons on the 2510 to select different sequences and load the new sequence by pressing [Enter]. The trigmode of the sequence may be changed at any point, see later.

Sub-List Mode

The 2510 will start executing the first sequence in sub-list with the lowest number. The 2510 indicates the current sub-list number by displaying [-X] where X indicates the sub-list number. Use [up] and [down] buttons on the 2510 to select a different sub-list, and start the sub-list by pressing [Enter].

List Mode

The 2510 will start by executing the first sequence in the list, followed by the rest of the sequences in sequential order. When all sequences have been executed the list starts from top.

Changing list mode

The 2510 mode may be changed at any point in the following cycle:

Manual -> Sub-list -> List -> Manual

From Manual mode to sub-list mode: press and hold the [Enter] button until the 2510 displays [-X] where X indicates a sub-list number, then release the [Enter] button. To change directly to List mode hold down the [Enter] button until the display briefly shows [--].

From Sub-List mode, hold down the [Enter] button to until the display shows [--] to enter List mode.

From List mode, press the [Enter] button briefly until the display shows [--] to enter manual mode.

Note that when entering Sub-list or List mode, the sequence trig modes are reset to the default trig modes and scene times programmed in the 2510 list.

Trig modes

The 2510 has 4 different trig modes, each of the sequences are assigned a default-trig mode in the [2510 list](#)^[73].

The actual trig mode may be changed on the 2510 at any time using the [Manual], [Auto] and [Music] buttons. The actual trigmode will remain active and override the default trig mode until the 2510 is switched back into Sub-list or List mode.

Manual

Sequences are only triggered when pressing the [Manual] button.

Auto

Sequences are triggered by the internal clock, either using the scene time originally programmed in the LightJockey sequences or using the override time provided by the user. To set an override auto-trig time, press the [Auto] button continuously until the desired auto-rate is set. To restore to the pre-programmed auto time, press and hold the [Auto] button for more than 0.5 seconds.

Music

Press the [Music] button to switch to music trig mode. The 2510 will now trig the sequences via the built-in microphone.

Music Random

To enter the Music random mode, press and hold the [Music] button for more than 0.5 seconds. In Music Random mode, sequences with more than 2 scenes, when triggered by the microphone will select a random scene in the sequence rather than selecting scenes sequentially.

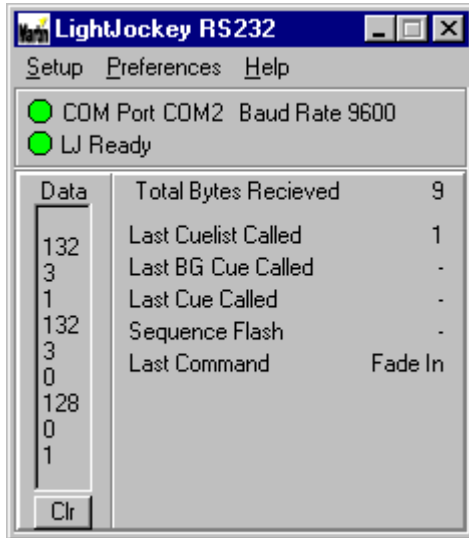
Blackout

Use the [Blackout] button to blackout the fixtures. Press the [Blackout] button to restore the light output.

Unless the *Force DBO* switch has been set for the [2510 list](#)^[73], the [Blackout] button will blackout the fixtures according to the fixture profile in LightJockey. This means that all effects not related to fixture intensity will not be affected, allowing a more graceful restore from blackout.

44 RS-232 Remote Interface

RS-232 Remote Interface



The RS-232 remote program.

The RS-232 remote option is supported through an external support program, LJ_RS232.EXE - located in the LightJockey Installation directory.

For automated purposes, either start the program via Windows Startup folder, or use LightJockey's auto-launch facility in the [startup options](#) ^[112].

The interface makes it possible to remote control various LightJockey options, such as calling up a cue or call a fade out.

Before the interface can be RS-232 settings to be used must be determined. Click on the *Setup* menu to set the RS-232 settings.

Select COM Port from 1 through 4 and one of the possible Baud-Rates. The data format is fixed at 8 databytes, 1 stop byte and no parity.

RS-232 Protocol

The RS-232 protocol is based on a 3 byte binary protocol.

The format for all commands are identical:

[Command] [Data1 (MSB)] [Data2 (LSB)]

All 3 bytes must be sent to LightJockey within 0.2 seconds, otherwise an incomplete command times out.

All bytes with a value of 128 or above are treated as a [command] byte. Consequently all data bytes must have a value of 127 or lower. When the both the data bytes are used to send a value the value must be split into an MSB and an LSB pair.

Examples:

To Load cue number 130:

Send [129] [1] [2] - 129 is the Load Cue command, and 1*128+2 selects cue number 130.

To Load Cuelist number 2:

Send [128] [0] [2] - 128 is the Load Cuelist command, and 0*128+2 selects cuelist number 2.

Listed below are the various commands accepted by the RS-232 interface.

Function	[Cmd]	[Data 1]	[Data 2]	Notes
Load Cuelist	[128]	[Cuelist # MSB]	[Cuelist # LSB]	Send Cuelist# 0 to stop current cuelist
Load Cue	[129]	[Cue# MSB]	[Cue# LSB]	Send Cue# 0 to clear
Load BG Cue	[130]	[BGCue# MSB]	[BGCue# LSB]	Send BGCue #0 to clear
Flash Sequence	[131]	[Sequence# MSB]	[Sequence# LSB]	Send Sequence#0 to clear
Smoke Off	[132]	[0]	[0]	' LJ Smoke control'
Smoke On	[132]	[0]	[1]	' LJ Smoke control'
Smoke timer Off	[132]	[1]	[0]	' LJ Smoke control'
Smoke timer On	[132]	[1]	[1]	' LJ Smoke control'
Restore	[132]	[2]	[0]	
Blackout	[132]	[2]	[1]	Restore from blackout
Fade In	[132]	[3]	[0]	Using preset fade time
Fade Out	[132]	[3]	[1]	Using preset fade time
Enable Static	[133]	[Static#]	[1]	Static# 1-20
Disable Static	[133]	[Static#]	[0]	Static# 1-20
Current Cuelist Go	[134]	[1]	[1]	'Manual' Cuelists only
Current Cuelist Back	[134]	[1]	[2]	'Manual' Cuelists only
Cue Sequence slot On	[135]	[Slot#]	[1]	Slot# 1-12
Cue Sequence Slot Off	[135]	[Slot#]	[0]	Slot# 1-12
BGCue Sequence slot On	[136]	[Slot#]	[1]	Slot# 1-5 (implemented from LJ 2.5 b 6)
BGCue Sequence Slot Off	[136]	[Slot#]	[0]	Slot# 1-5 (implemented from LJ 2.5 b 6)

45 Creating 2518 .Mem files

LightJockey may be used to create program sequences that may be downloaded and played back from the Martin 2518 DMX controller. Note that it is not possible to download directly from LightJockey to the 2518 controller. After selecting the sequences to download a special file is saved to harddisk - to download the file to the memory of a 2518 controller, a special 2518 upload/download utility program must be used. The upload/download utility may be downloaded from the Martin Website at www.martin.dk/service/software/controller/2518/2518.htm
A PDF document describing the use of the upload/download utility may be downloaded at www.martin.dk/service/manuals/2518-UP_DN-2.pdf

Download Restrictions

The way the 2518 controller works imposes certain restrictions on what can be downloaded.

Sequences should contain exactly 6 scenes. If a sequence contains less than 6 scenes the remaining scenes are patched with all 0 values. If the sequence contains more than 6 scenes only the first 6 scenes are used.

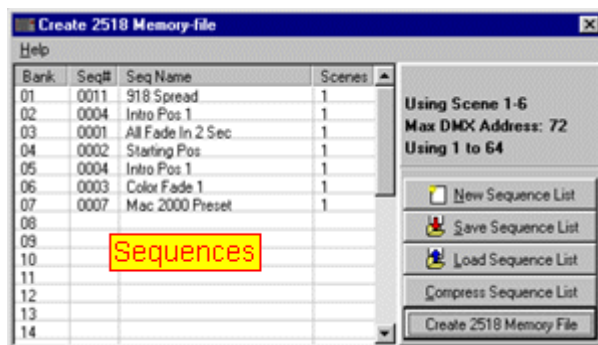
No more than 30 sequences of 6 scenes may be downloaded.

Only fixtures assigned DMX addresses 1-70 on link 1 may be included in the download. It is not possible to include fixtures that use DMX addresses above 70.

The 2518 does not support fade times, scene times or movement macros - while it is possible to download sequences containing fade times or [movement macros](#)^[130], these are ignored by the 2518. Slow transitions must be programmed using speed controls.

LightJockey will automatically resolve pan/tilt invert settings and [position presets](#)^[139] when generating the download file. The [default DMX output](#)^[113] will also be applied to all non-programmed DMX channels in each scene.

Building the 2518 Sequencelist



2518 sequence list

To build a list of sequences for the 2518, click **Download/Martin 2518 (.Mem file)** on the desktop main menu. This opens the 2518 sequence list. To add sequences to the list, drag the sequence from the [list of programmed sequences](#)^[206] to a line in the list. The 30 lines in the list each corresponds to a 2518 bank. Clear the sequence for a specific bank by right-clicking the line and select **Clear Bank** from the popup menu. Sequences in the list may be moved/swapped by drag and drop inside the list.

New Sequence List Clears the current 2518 sequence list.

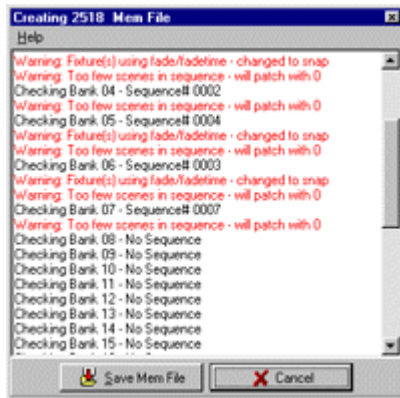
Save Sequence List Saves the current 2518 sequence list to hard disk for later retrieval (note only the sequence numbers are saved, not the actual contents of the sequences)

Load Sequence List Loads a previously saved 2518 sequence list.

Compress sequence list compresses the list by moving sequences up in the list to eliminate empty banks.

Once the 2518 sequence list has been set up, make sure to select the fixtures to include in the download by selecting them on the desktop (failing to select any fixtures before creating the download file will generate an error). Then click **Create 2518 Memory File**.

Each sequence will be checked before the download file is created and the results are shown in a list listing the total number of warnings and errors at the bottom.



Memory file list

The following situations will generate a warning:

Fixture(s) using macros: One or more fixtures have been programmed with a movement macro. The macro is ignored.

Fixture(s) using fade/fadetime - changed to snap: one or more fixtures have been programmed with fade times. Fade times are ignored.

Too few scenes in sequence - will patch with 0: there are less than 6 scenes in the sequence, the remaining scenes are patched with 0.

Too many scenes in sequence - scenes 1- 6 will be used: there are more than 6 scenes in the sequence, only scene 1 through 6 are used.

The only situation that will generate errors is if a sequence has been assigned to a 2518 bank and then deleted before the file is generated.

If the sequence list contains no errors, the memory file may be saved to disk by clicking **Save Mem File**.

Please refer to the documentation on the upload/download utility and the 2518 controller (all available from the Martin Website) for information on how to download the Memory file to the 2518 controller and how to use the 2518 controller for playback and programming.

46 Fingers for LightJockey



Fingers is a dedicated LightJockey add-on utilizing buttons, faders and jog wheels to control parts of LightJockey's functions. Fingers connects through RS-232 and requires a free serial port (COM1 - COM4). For PCs without serial port use a USB to RS-232 converter.

LightJockey contains a [virtual model of Fingers](#)^[102] that mimics the function of the real Fingers. Although the virtual model is not a substitute for the real Fingers, with a few restrictions, it may be used to setup and operate LightJockey as if the physical unit was connected.

[Fingers setup](#)^[86]

[Fingers controls overview](#)^[89]

[Configuring and using the function buttons](#)^[92]

[Configuring and using the scroll buttons](#)^[94]

[Configuring and using the cue slot button functions](#)^[95]

[Configuring and using fader and bump functions](#)^[96]


[Configuring and using jog-wheel functions](#)^[99]

[Fingers Status panel](#)^[101]

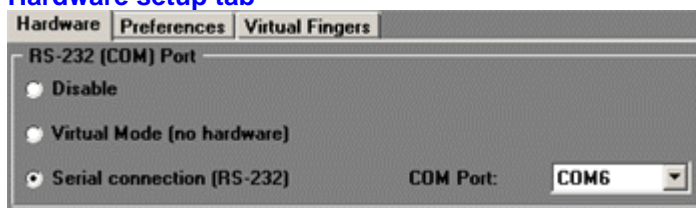
[Virtual Fingers](#)^[102]

47 Fingers setup

See also [Fingers for LightJockey](#)^[86]

Open Fingers setup dialog from "Fingers" on the main menu or via the setup button  on the [Fingers Status panel](#)^[101] or [Virtual Fingers](#)^[102]. It is necessary to configure Fingers as either Virtual or connected to a serial port (requiring the physical unit) before using any of the functions.

Hardware setup tab



RS-232 Port

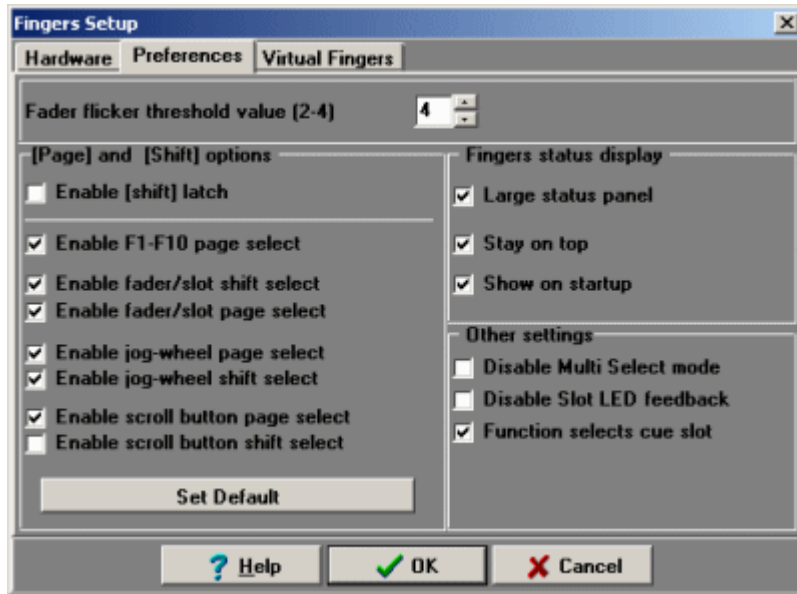
Disable - all fingers functionality is disabled

Virtual Mode - this enables the Virtual Fingers model. Note that enabling Virtual fingers causes LightJockey to use extra CPU cycles - even if no Fingers functions are used. If no Fingers functions are used The RS-232 Fingers should be disabled.

Serial connection (RS-232) - connect to physical Fingers. Select the serial port (COM1 - COM 9) in the drop down box to the right.

Note that enabling Fingers in virtual mode causes LightJockey it use extra CPU ressources if virtual fingers is used or not. If virtual fingers is not used make sure to disable Fingers in the setup dialog.

Preferences tab



Fader flicker threshold value

To avoid value flicker on the faders from the analogue to digital conversion, Fingers implement a filter that requires the value change for the fader to be above a certain treshold value. By default the treshold value is 4, which means that any change in fader value must be at 4 or higher to register. Fader changes to 0 and 255 (full) always registers regardless of treshold value. The treshold value may be lowered to 2 or 3, but be aware that this may cause fader values to flicker on some units.

[Page] and [Shift] options

Page and shift options refer to how the buttons, faders and jog wheels work in combination with shift and page (A,B,C,D) buttons.

It is possible to expand or restrict the number of possible combinations by enabling shift and page selections for each group of controls.

Enable [Shift] latch - latches the shift state - to release a shift state, press the button a second time (shift is always latched on the [Virtual Fingers](#)^[102])

Enable F1-F10 shift select - enables the F1 to F10 buttons to be configured according to shift state.

Enable Fader/slot shift select - enables the faders and slot buttons to be configured according to shift state

Enable Fader/slot page select - enables the faders and slot buttons to be configured according to page selection

Enable jog-wheel shift select - enables the jog-wheels to be configured according to shift state

[Enable jog-wheel page select](#) - enables the jog.wheels to be configured according to page selection

[Enable scroll button shift select](#) - enables the scroll buttons to be configured according to shift state

[Enable scroll button page select](#) - enables the scroll buttons to be configured according to page selection

[Set Default](#) - sets the default shift/page selection options. By default, only fader/slot page select and scroll button shift select are enabled.

For more information on the effect of shift and page selection see [Fingers controls overview](#)^[89]

Fingers Status Display

Settings relating to the [status panel](#)^[101]

[Large status panel](#) - uses the large [status panel](#)^[101]

[Stay on top](#) - forces the status panel to stay on top of other windows

[Show on startup](#) - automatically shows the status panel at startup

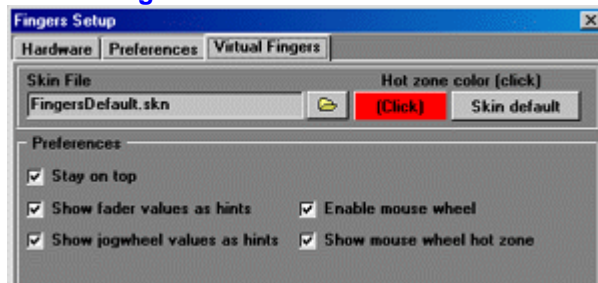
Other Settings

[Disable Multi Select mode](#) - Disables [multi select mode](#)^[101].

[Disable Slot LED feedback](#) - Disables [cue slot state feedback on LEDs](#)^[95]

[Function selects cue slot](#) - when enabled, functions that relate to a specific cueslot are reflected by selecting (high-lighting) the corresponding cue slot when the function is activated. If the option is disabled functions will not select the corresponding cueslot(s).

Virtual Fingers tab



[See Virtual Fingers](#)^[102]

[Skin File](#) - click the folder icon to select a different skin for Virtual Fingers (note in case of update by download, ekstra skins may not be available).

[Hot zone color](#) - click the left button to select a custom color for mouse wheel hot-zones. Select **Skin default** to use the default color for the skin in use.

[Stay on top](#) - forces Virtual Fingers to remain on top of other forms.

[Show fader values as hints](#) - displays a faders values as a hint when it is moved.

[Show jog -wheel values as hints](#) - displays a jog-wheels value change as a hint when it is moved.

[Enable mouse wheel](#) - enables mouse wheel control of faders and jog-wheels

[Show mouse wheel hot zone](#) - displays a 'hot' rectangle when the cursor is within range of a fader or jog-wheel for mouse wheel control.

48 Fingers controls overview

See also [Fingers for LightJockey](#)^[86]

The following sections gives a short description of each of Finger's control sections.

The Mode Buttons



The mode buttons may be used to switch Fingers into different modes of operation. Currently only mode 1 is available while modes 2 and 3 are non-functional and reserved for future expansions.

The Shift Buttons



The shift buttons may be used to alter the function of buttons, faders and Jog-wheels. The 3 buttons allows for 4 different shift states: no shift, shift 1, shift 2 and shift 3.

By default, the buttons works like the shift key on a PC keyboard, in the sense that the shift state is cleared to 'no shift state' as the button is released.

The shift buttons may be configured as 'latch' buttons so the shift state is not altered when the button is released (causing them to act more like a PC keyboard caps lock).

To release a latched shift, press the shift button a second time.

On [Virtual Fingers](#)^[102] the shift buttons are always treated as latch buttons.

The Page buttons (A-D)



Page buttons may be used to select 4 different pages of functions. Most control groups (faders, jog wheels, button groups) may be configured with different functions according to the selected page.

The current selected page is indicated by the page button LED. The page buttons are also used to invoke multi-select mode (see below)

Shift state and page selection, notes

Most Fingers controls may be [setup](#)^[86] to contain different functions according to shift state (shift buttons) and page selection (buttons A-D).

In order to use or configure the functions in the different shift states and on different pages, use the corresponding shift or page button to switch Fingers into the relevant shift state or to the relevant page.

Although enabling shift state and page selection for the various controls will greatly expand the number of possible functions it also means that functions may be spread over a large number of shift/page combinations, thus requiring multiple Fingers button presses to activate.

The B/O button and GM (Grand Master)



The B/O button and GM fader both have fixed functions and are always controlling LightJockeys [Blackout](#)^[155] state and [Master Intensity](#)^[151] level respectively.

Note both blackout state and Master intensity level may still be manipulated from LightJockey, even if

Fingers is attached. The Blackout button LED reflects the following intensity states:

Off: Master intensity at full

Blinking: Master intensity at less than full (Master intensity set at less than 100% or [Master Intensity](#)^[157] auto fade in/out in action)

On: Blackout

B/O and GM are not affected by shift or page button combinations.

The 'Square' button



The Square button has two functions. Tap the button to show and hide the [Fingers status panel](#)^[107]. Hold the button for more than 0.5 seconds to deactivate Fingers commands - when in deactivated state, the status panel still shows relevant feedback (fader positions or slot selections) but any commands sent from Fingers are ignored by LightJockey. The function of this button is not affected by shift state or page selection.

The Function buttons (F1-F10)



The Function buttons may be used to invoke a large number of LightJockey functions including [hotkey functions](#)^[19] and various programming elements such as cues or cue lists.

The function buttons are always decoded with respect to the current shift state, thus giving access to 40 (4 x 10) different functions - 10 functions for each shift state. The function buttons may also be [configured](#)^[86] to react on page selection as well as shift state, increasing the number of possible assignable functions to 160 (10 x 4 x 4).

If function button page selection is enabled, the [status panel](#)^[107] will show functions as assigned to each page (each column represents a page selection). Use the shift buttons to switch the shift state in order to access and configure the different 'shift block' of functions.

If function button page selection is disabled the status panel shows functions according to shift state (each column represents a given shift state).

See [configuring and using the function buttons](#)^[92] for configuration details and [Hotkey Functions](#)^[19] for more information on the individual hotkey functions.

The Scroll buttons

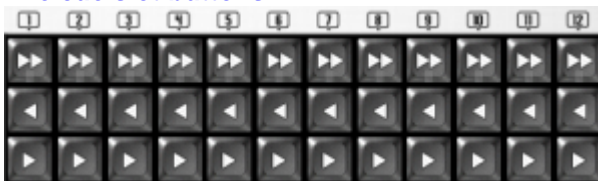


The scroll buttons may be configured to open and scroll in and select items from various lists (up, down, select). Alternatively the buttons may be configured as scroll in a cue list or go/back/run-stop in a manually driven cue list.

The function of the scroll buttons may be [configured](#)^[86] to depend on page selection and/or shift state allowing for a total of up to 16 different scroll functions.

See [Configuring and using the scroll buttons](#)^[94] for more information on the individual selection functions.

The cue slot buttons



The block of 3 x 12 buttons are referred to as the cue slot buttons. These buttons are primarily for

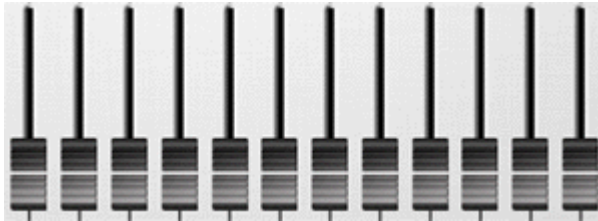
functions relating to individual sequence slots in the [cue control](#)^[184]. Each row of buttons may be configured with a function (e.g. sequence trig forward) and each button then affects an individual slot in the cue control (e.g. button number 3 affects cue slot no 3). Slot buttons may be configured to depend on shift state and page selection, resulting in a total of 32 (2 x 4 x 4)

See [Configuring slot button functions](#)^[95] for more information on the individual cue slot functions.



The top row of the cueslot buttons are also used to select slots or faders [in multi select mode](#)^[107]

The Faders



The block of 12 faders may be configured with several different types of functions ranging from intensity control to statics level control. Individual functions are assigned to all 12 faders as a whole, and each fader then controls one out of several individual sub-functions - e.g. when configuring the faders to [statics level](#)^[247] control for static entries 1-12 - each fader controls the level of one static entry (e.g. fader no 4 controls the level of static entry #4). Fader functions may be [setup](#)^[86] to depend on page selection and shift state allowing for a total of 16 (4 x 4) different functions assignable to the fader block.

See [Configuring and using fader and bump functions](#)^[96] for more information on the individual fader functions.

See also [multi select mode](#)^[107]

The Bump buttons



The function of each of the bump button is associated with the function of the fader that the button corresponds with. If for example the fader controls the value of an [intensity sun master](#)^[157] pressing the bump button will force the level of the sub master to 100%. Note that many of the fader functions have an inverted bump function - if the control level is already at full then activating the bump button will force the level to zero (inverted bump). When a bump button is released, the effect being bumped will return to the logical value of the corresponding fader.

E.g. if the bump button is pressed with the function at a value of 50% (bump forces the value of the control to 100%), the value of the control will return to 50% when the bump button is released.

It is still possible to move the corresponding fader while the bump button is held - this will cause the control to restore to the new value set by the fader as the bump button is released.

If a bump button is held during page and/or shift changes it will still release the function that was assigned to it when pressed.

See [Configuring and using fader and bump functions](#)^[96] for more information on the individual fader and bump button functions.

The Jog wheels

Since jog-wheels have no 'physical position' the 5 jog-wheels may used to affect values of various functions directly without concern for 'activating' the jog wheel first. Turn the wheel clockwise for increasing a functions value, counter-clockwise for decreasing the function value. Most jog-wheel functions implement an acceleration function - the faster the wheel is turned, the more the value is

increased or decreased. For small adjustments turn the wheel slowly.
The actual function of the jog-wheels may be [configured](#)^[86] to depend on page selection and shift states implementing up to 80 (5 x 4 x 4) possible jog-wheel functions.

See [Configuring jog-wheel functions](#)^[99] for more information on the individual functions

49 Configuring and using the function buttons

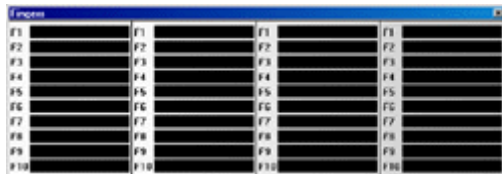
See also [Fingers for LightJockey](#)^[86]



Function buttons, shift state and page buttons

The function buttons are always affected by the current shift state - this means that each of the buttons may be configured with 4 different functions - the function invoked by the button depends on the shift state. Hint: To make sure a button always has the same function regardless of shift state simply configure the same function for all shift states.

Function buttons may also be [setup](#)^[86] to depend on page selection (using page buttons A-D) - in this case each button has 16 possible functions (4 for each shift state x 4 for each page).



Fingers status panel, function button columns

The [status panel](#)^[101] always shows 4 columns with functions buttons - if function button page selection is not enabled, the 4 columns shows the allocated functions according to each of the 4 shift states. If page selection is enabled, the columns show the functions assigned for pages A-D respectively. Change the shift state to view, use and configure functions for the other shift states - the status panel automatically change the contents of the function button columns to reflect the functions assigned to the function buttons for the selected shift state.



Fingers status panel, function button columns - shift state or page selection highlight (shift 1 or page B)
Note that column representing the current active set of functions will highlight the functions using a colored background to make it easier to identify which functions are currently active.

[Color codes](#)

Fingers	
F1	Close Window
F2	Sequence
F3	Cue
F4	BG-Cue
F5	Cuelist
F6	
F7	
F8	
F9	
F10	

For quick identification of the type of function assigned to the function button, the different types of functions are color-coded:

- Hotkey** functions are shown with a white color
- Sequences** are shown with an orange color
- Cues** are shown with a yellow color
- Background cues** are shown with magenta color
- Cuelists** are shown in cyan color

Assigning a hotkey function: on the [status panel](#)^[101], right click any of the fields representing the function buttons and select show function list from the popup menu. Then drag the function from the function list to the field representing the button. See [Hotkey functions](#)^[19] for more details on the individual functions.

Note that the small size status panel may display a short form of hotkey function names in order to fit the smaller layout of the small status panel - the large size status panel shows the regular hotkey function name.

Sequence, Cue, Background Cue or Cuelist : To assign an existing program element to a button, drag the element from the corresponding list off (i.e. [List of cues](#)) to the field representing the button. Alternatively, right-click the field and select "Assign current <element>" to assign an already active (loaded) element to the button.

Hint: to configure a button with a [generic macro](#)^[244], create a transparent cue containing only the macro and assign the cue to the button.

Hint: To see the number and full name of a program element (e.g. a sequence), make sure the status panel has Windows focus - then let the mouse cursor hover over the text field for a short while to see the full information being displayed as hint.

Pressing a button containing a hotkey function activates the function.

Pressing a button containing a sequence will cause the sequence to flash in the cue control.

Pressing a button containing a cue will load the cue

Pressing a button containing a Background cue will load the Background cue

Pressing a button containing a cuelist will load (but not start) the cuelist

Clearing functions: to clear a function, right-click the field representing the button. Select **Clear Function** to clear the function assigned to the button.

Select **Clear all** - to clear all assigned functions for all function buttons (including any shift and page combinations).

50 Configuring and using the scroll buttons

See also [Fingers for LightJockey](#)^[86]



The 3 scroll buttons are typically used scroll in and select items from various lists. The functions for the scroll buttons configures the specific function of all 3 buttons at once (e.g. with previous, next and select functions) - it is not possible to configure the 3 buttons individually.

Configuring shift state and page selection for scroll buttons

The scroll buttons may be [configured](#)^[86] to change their function according to shift state and/or page selection - thus giving access to assign up to 16 different scroll functions.



[Status panel](#)^[107] showing the current scroll button functions

Assigning a function: on the status panel, right-click either of the 3 text fields representing one of the scroll buttons, then select show function-list from the popup. Drag the desired function from the list to either of the text fields representing the scroll button functions.

Clearing functions: to clear a function, right-click any of the text fields representing the scroll buttons - then select **Clear Function**.

Select **Clear all** - to clear all assigned functions for all scroll buttons (including any shift and page combinations).

Available Scroll functions

List of selections (**Up/Down** scrolls up and down **R/S** selects cue loads).

Select Cue (Global) - scrolls and selects from the [global list of cues](#)^[208]

Select Cue (Page) - performs the same actions as select cue (global) above, except that it scrolls in and selects from the [list of cues](#)^[208] page view. Hint: check *Automatic page change* in the pages preferences menu on the list of cues dialog to automatically change pages when scrolling.

Select Sequence - scrolls in and selects from the [list of sequences](#)^[206]

Select Cuelist - scrolls in and selects from the [List of cuelists](#)^[238]

Select BGCue - scrolls in and selects from the [List of background cues](#)^[208]

Select Macro - scrolls in and selects from the [List of generic DMX macros](#)^[255]

The above functions all automatically open and make the relevant list visible if it is closed.

Active Select - scrolls in any of the lists mentioned above - in order to work one of the lists must have windows focus (be active)

Cuelist functions (in main cuelist window)

Cuelist (Manual) - used to run a manual [cuelist](#)^[216]. **Up** = back, **Down** = Go, **R/S** = start / Stop

Cuelist (Edit) - used to scroll in the cuelist in edit mode **Up** = back, **Down** = Go, **R/S** = start at current line/stop

51 Configuring and using the cue slot button functions

See also [Fingers for LightJockey](#)^[86]



The cue slot buttons are used for functions affecting individual sequences in the [cue control](#)^[184]. To manipulate more than one cue slot at a time with a single button, invoke [Fingers multi select mode](#)^[107].

Configuring shift state and page button selection for Cue slot buttons.

The functions of the cue slot buttons may be [setup](#)^[86] to change their function according to shift state and/or page selection - thus giving access to assign up to 16 different sets of cue slot button functions. Note that shift and page selection for cue slot buttons are the same as the shift and page selection for [faders](#)^[96].



[Status panel](#)^[107] showing the current cue slot button functions.

Assigning a function: on the status panel, right-click the text field representing the cue slot buttons, then select show function-list from the popup. Drag and drop the desired function from the list to the text field.

Clearing functions: to clear a function, right-click any of the text fields representing the scroll buttons - then select **Clear Function**.

Select **Clear all** - to clear all assigned functions for the cue slot buttons (including any shift and page combinations).

Available Cue Slot functions

Slot On/Off - toggles the sequence in the cue slot on and off

Slot Clear - clears the sequence in the cue slot

Slot Stop - stops the sequence in the cue slot

Slot Start - starts the sequence in the cue slot

Slot Start/Stop - toggles start stop for the sequence in the cue slot

Slot Trig Def - trigs the sequence in the cue slot with it's default loop options (see [Sequence Slot Loop Options](#)^[188])

Slot Trig Fwd - trigs the sequence in the cue slot in a forwards direction

Slot Trig Rev - trigs the sequence in the cue slot in a backwards direction

Slot Trig Rnd - trigs the sequence in the cue slot to a random scene

Slot Trig Bounce - trigs the sequence in the cue slot in a bounce fashion (see [Sequence Slot Loop Options](#)^[188])

Slot Auto Trig - switches the sequence in the slot into auto trig mode

Slot Audio Trig - switches the sequence in the slot into audio trig mode

Slot Manual Trig - switches the sequence in the slot into manual trig mode

Slot Trig Type - changes the trig type of the sequence in slot between auto, audio and manual trig mode

Slot On/Off (Sync), Slot Start/Stop (Sync), Slot Trig Type (Sync) - these functions work the same as above, except that in [multi-select mode](#)^[107] they synchronize the effect for all selected slots, e.g. all selected slots are switched on or off, rather than toggled individually.

Cue slot state LED feedback

If the top row of buttons is configured with the Slot On/Off function, the LEDs reflects the state of the cue-slot the in following way:

Off : slot is empty (or being sequence being edited)

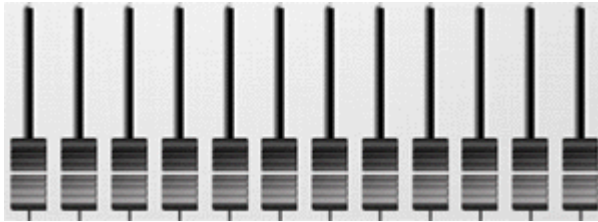
blinking : slot contains sequence but is off

On : slot contains sequence and is on

Slot state LED feedback may be disabled in the [set dialog](#)^[86]

52 Configuring and using fader and bump functions

See also [Fingers for LightJockey](#)^[86]

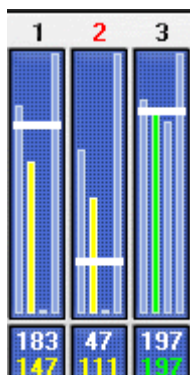


Using faders

Fader values - physical and logical values

As the faders may be configured, via page and shift buttons, to control different functions, the physical location of the fader may not always correspond with the value of the function controlled - this is typically the situation when using page or shift buttons to change the function of the faders or at startup where faders may be located randomly while the function value is determined by startup conditions. Also some functions controllable from Fingers may still be manipulated using the usual LightJockey controls so even if the intensity sub groups are controlled by faders, sub group levels can still be altered from the [master intensity control](#)^[157].

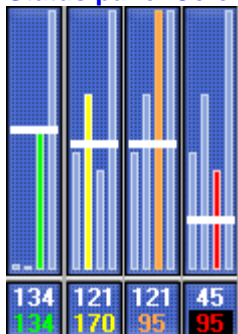
To get around the problem with faders not positioned at the same value as the function value, LightJockey implements a 'value crossing' method to activate a fader, which means that an inactive fader must physically cross from one side of the value to the other before it is activated. The method is best illustrated using the status panel where the fader and function values are both illustrated using different colors for different states.



Each of the 12 faders is represented on the status panel, showing the value of each of the 4 functions allocated to pages A to D. The value of the function assigned to the current selected page shown in as highlighted bars, in the example above, as yellow and green bars, while the functions assigned to the other pages are shown as cyan bars. The physical value of the fader is always represented as a white horizontal bar as well as a white numerical value shown just below the value bars. The logical value of the function controlled by the fader is shown as a color-coded bar with the numerical value (also color coded) as the second value below the fader value bars.

In the example above faders 1 and 2 have a physical value that is different from the value of the function they control (color code = yellow) while fader 3 is active (color code = green). Moving fader 3 will affect the function immediately while faders 1 and 2 must be moved to or across the function value (fader logical value) in order to activate. In the example fader 1 must be moved down to 147 or below to activate while fader 2 must be moved up to 111 or above. Inactive faders activate as soon as their physical value reaches or crosses the logical value (which is a representation of the function it controls).

Status panel Color codes



On the [Status panel](#)^[101], different color codes are used for the bar and numerical value representing the fader:

- Cyan - function on another page.
- Green - fader is active
- Yellow - fader is inactive (needs to reach or cross value to activate)
- Orange - Bump button held
- Red - Fingers deactivated (see 'square' button above).

Fine-tuning fader values

To avoid any flicker caused by the analogue to digital conversion of the fader values, Fingers implements a minimum change threshold value that must be exceeded before the change is accepted - any changes below that threshold is ignored, except when the new value is 0 or full (255) - these two values are always accepted. By default the threshold value is set to 4 (see [Fingers setup](#)^[86]) which means that a change in value must be 4 or greater to register. Most functions do not really require very fine adjustments but to fine-tune the value of a fader use the function [Fader relative](#)^[99] assigned to one of the jog-wheels (see below) to adjust the logical fader value and hence the assigned function value.

Selecting faders for relative adjustment without actually the values

In rare circumstances it may be desirable not to actually move a fader in order to activate it or select it for [relative adjustment](#)^[99] by jog-wheel - since a moving the fader may have an undesired effect - e.g. the need to adjust a fader value from 0 to exactly 1. In this case, hold down the square button for more than 0.5 seconds to deactivate fingers commands, then move the fader to select it and finally release the square button.

Forcing fader activation from a specific 'direction'

The above mentioned method is also useful to force an activation from a specific direction - for example when moving multiple faders activating at different values such as 'catching' a number of

statics levels from 'below' in one fluid motion. In this case the physical value of all relevant faders needs to be brought below the logical value, which normally may cause the fader to activate, but without actually activating the fader. To avoid activating any faders, press and hold the square button for more than 0.5 seconds. Then, while holding the square button, pull all faders below their logical values - and then finally release the square button.

Configuring fader functions

Fader functions are configured as single functions that is assigned to all 12 faders at once (fader page functions) - each fader then controls an individual sub-function (e.g. when using faders to control [static levels](#)^[24] each fader controls the level of a single static entry. The fader page function also determines the function of the bump button. By default Fingers can hold a separate function for each of the 4 pages (buttons A-D). This capacity may be expanded by [configuring](#)^[86] Fingers to include shift state selection for faders a well. Note that that shift state and page selection settings for faders are identical to the settings for [cue slot buttons](#)^[95].

A	Sequence Time
B	Statics 1-12 Level
C	Statics 13-20 Level
D	HTP Group 1-12

Status panel showing fader page functions - active page selection is highlighted

Assigning a function to a fader page: on the status panel, right-click the text field representing the fader page, then select show function-list from the popup. Drag and drop the desired function from the list to the text field.

Clearing functions: to clear a function, right-click any of the text fields representing the fader page - then select **Clear Function**.

Select **Clear all** - to clear all assigned functions for the cue slot buttons (including any shift and page combinations).

Available fader page functions

Sequence Intensity

See [sequence intensities](#)^[196]

Each fader controls the intensity component of the individual sequences in the cue (slots 1-12 respectively) - for fixtures that do not implement intensity control LightJockey will attempt to black out the fixture when the intensity level is set to 0.

Note - sequence intensity state is not reset when a new cue is loaded.

Bump button: holding the bump button will force the intensity to full (100%). If the intensity level is already at full it will be forced to 0.

Seq. Intensity/On-Off

This function controls the sequence intensity the same way as [Sequence Intensity](#) (see above) does, but it also automatically switches the sequence off if the intensity level is 0 and automatically switches the sequence on if the intensity level is > 0.

Sequence Time

See [Cue Time Control](#)^[192]

Each fader controls the time scale for individual sequences in the cue (slots 1-12 respectively)

Note, Cue times are reset when a new cue is loaded.

Hint: To control the cue time rather than individual sequence times, assign the **cue time** function to one of the [jog-wheels](#)^[99].

Bump button: pressing the bump button forces the time scale to 100% (default)

Statics 1-12 Level, Statics 13-20 Level

See [statics control](#)^[24]

Each fader controls the level of a static entry (entries 1-12 or 13-20 respectively)

Hint: When using Fingers to control statics levels, check level auto enable and disable options in the statics control preferences to automatically enable static entries when the level is set above 0% and automatically disable the entry when the level is set to 0%

Bump button: holding the bump button will force the level to full (100%). If the level is already at full it will be forced to 0.

Intensity Group

See [Master Intensity control](#)^[151]

Each fader (only faders 1-8) controls an individual intensity sub master.

Bump button: holding the bump button will force the submaster to full (100%). If the level is already at full it will be forced to 0.

HTP Group 1-12, HTP Group 13-24

See [HTP groups](#)^[315]

Each fader controls a single HTP group.

Bump button: holding the bump button will force the HTP group level to full (100%). If the level is already at full it will be forced to 0.

Sequence DMX Values

The value of each fader acts as a scaling factor for the DMX values generated by each of the 12 sequences in the cue. The DMX value generated by the sequence will be scaled by the fader value (scaling by 0-100%).

Note, the sequence DMX value scaling factor is not reset when a new cue is loaded.

Bump button: holding the bump button will force the scaling to 100%. If already at 100% scaling value will be forced to 0.

DMX in (1-12), (13-24), (25-36),(37-48)

See [DMX in](#)^[304]

Use this function to emulate DMX in function from Fingers - when in use the values of the 12 faders are emulating the values of DMX input channel 1-12, 13-24, 25-36 and 37-48 respectively.

Hint : Using the global patch dialog a single fader may be patched directly to the DMX output value of one or more DMX channels. Set the **DMX > 0** option (global patch) for each patched channel to automatically 'deactivate' the fader when set to 0%.

Bump button: holding the bump button will force the DMX in value to full (100%). If the value is already at full it will be forced to 0.

53 Configuring and using jog-wheel functions

See also [Fingers for LightJockey](#)^[86]

Turn the wheel clockwise for increasing a functions value, counter-clockwise for decreasing the function value. Most jog-wheel functions implement an automatic acceleration function - the faster the wheel is turned, the more the value is increased or decreased. For small adjustments turn the wheel slowly. The actual value that the jog-wheel changes the function with is displayed in on the [status panel](#)^[101] where the function of the jog-wheel is highlighted briefly together with the function value change.

Configuring shift state and page selection for jog-buttons

The jog-wheels may be [configured](#)^[86] to change their function according to shift state and/or page selection - thus giving access to assign up to 16 different scroll functions.

Function Value display

Depending on jog-wheel function, the [status display](#)^[101] will show either a relative value change or an

absolute function value.

Relative changes are displayed as *[nn] Function*, where nn is the relative value change, e.g. *[-47] Pan MSB*.

Absolute values are shown as *Function (nn)*, where nn is the absolute function value, eg: *Smoke Ctrl, Level (55%)*

Jog wheel functions

Cue Time

See [Cue time control](#)^[192]

Use this function to adjust the overall cue time in the cue time control.

P/T Macro, Ampl., P/T Macro, Speed

See [Cue Macro Control](#)^[199]

Use these functions to adjust the pan/tilt macro amplitude and speed settings. The inverted functions (inv) inverts the wheel direction.

Audio, Gain and Min Trglvl (trig level)

See [Audio Analyzer](#)^[319]

Use these functions to adjust gain and minimum triglevel threshold for the audio analyzer. If the Audio Analyzer has not been started the status displays *[N/A]* as value.

Smoke Ctrl, Level, Duration, Cycle

Hazer Ctrl, Level, Fan

See [Smoke control](#)^[357]

Use these functions to adjust the corresponding level settings in the smoke control

Pan MSB, Pan LSB (16-bit), Tilt MSB, Tilt LSB (16-bit)

See [Movement control](#)^[134]

Use these functions to adjust pan/tilt settings for fixtures in the current scene. If the current scene does not contain pan/tilt values (fade state is off), the initial pan and tilt values are captured from the current output values.

GM Relative

Use this function to fine-tune the value of the GM (see [using faders](#)^[96])

Fader Relative

Use this function to fine-tune the values of the active fader (see [using faders](#)^[96]). The function also works on multiple faders when in [multi selection mode](#)^[96].

A fader becomes active for jog-wheel adjustment when it is 'touched'. To select which fader to adjust without moving the fader directly (and modify the value), either use [multi select mode](#)^[107] or deactivate fingers commands (hold square button) before moving the fader. In deactivated mode the LEDs on the top row of the Cue Slot buttons reflects which fader is selected. The fader selection is cleared when changing page or shift state

The active fader is also indicated on the status panel where the fader number will be highlighted in red.



Status panel highlighting active fader

54 Fingers multi select mode

Press and hold one of the page buttons for more than 0.5 seconds to switch Fingers in to multi selection mode (when using Virtual Fingers, right-click a page button). As soon as multi selection mode is activated the page button LED will start to blink indicating multi-selection mode. In multi select mode, one fader or slot button may, depending on the slot selection, affect more than 'it's own' sub-function or cue slot. Use the select buttons (top row of 12 buttons) to select or deselect individual sub-functions and slots - the selection buttons reflects the selection state using it's built in LED by blinking when sub-function or cue slot is selected - press a button to toggle the selection state.

Note that multi-select mode may be disabled from the [setup dialog](#)⁸⁶



Use buttons to include or exclude slot from multi selection


Note - the [jog-wheel fader relative](#)⁹⁹ function also affects all selected faders when in multi-select mode.

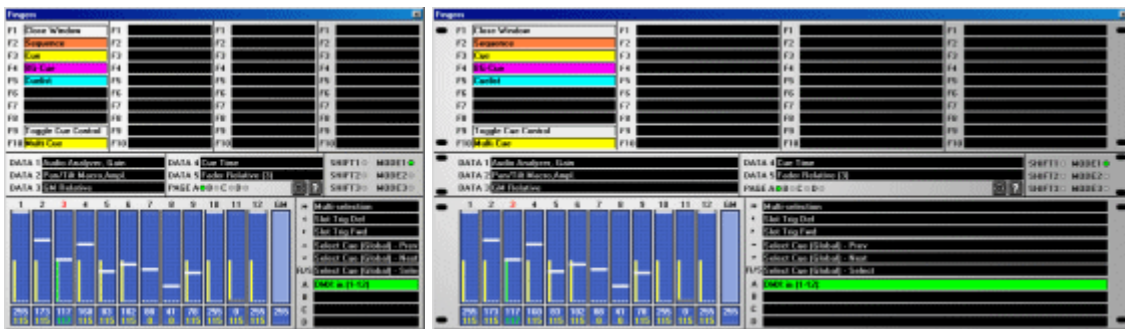
55 Fingers status panel

See also [Fingers for LightJockey](#)⁸⁶

The Fingers status panel is used to provide on-screen information about Fingers - it is also used when configuring Fingers functions by dragging functions to the status panel.

Open the status panel from the main menu (Fingers -> Status panel) or from Fingers itself by tapping

the square button . Tap once to open, one more time to close)



The status panel exists in two versions a small and a large version - the large version requires a horizontal screen resolution of 1024 or higher to be fully visible. Use the [Fingers setup](#)⁸⁶ dialog to change between the small and large formats.

Both panel versions shows the same type of information, the larger panel however, may contain function longer descriptions (e.g. full hotkey function names or longer cue names).

The top part of the panel shows the functions assigned to the F1-F10 buttons - each column

represents the functions of the buttons in different shift states or on different pages (see [Configuring and using the function buttons](#)^[92]).

The middle part shows functions assigned to [jog-wheels](#)^[99] including the changes made by turning a jog-wheel. It also shows the current shift state as well as the current mode and page selection.

The lower part shows the current physical and logical values and selection state of the [faders](#)^[96]. It also, in the lower right hand corner, shows the functions assigned to the current shift/page combination of [scroll buttons](#)^[94] and [cue slot buttons](#)^[95] and [fader pages](#)^[96].

56 Virtual Fingers

See also [Fingers for LightJockey](#)^[86]

Open Virtual Fingers from Main menu -> Fingers (or assign a [hotkey](#)^[19]).

Important

Please note that the current version of Virtual Fingers will not work with touch screens. In order for faders and jog-wheels, a mouse or similar device must be used.

In order to make the Virtual Fingers work with LightJockey make sure to select virtual mode in [Fingers setup](#)^[86] dialog - the Virtual Fingers will not work if LightJockey is configured to use Fingers on any of the serial ports (or if fingers is disabled). Note that enabling Fingers in virtual mode causes LightJockey to use extra CPU resources if virtual fingers is used or not. If virtual fingers is not used make sure to disable Fingers in the setup dialog.

The virtual mode of fingers is in most respects a faithful representation of the real fingers. When running Fingers in virtual mode it may be operated almost exactly as a real fingers, except that it is not possible to use more than one control at a time. Also the virtual model takes up space on the desktop, and is best used on dual-monitor systems or systems with quite large video resolutions.

Fingers button functions are activated by clicking the corresponding virtual button. Move the virtual faders by click, hold and drag. To rotate a jogwheel, click, hold and then move the mouse up or down to simulate rotation. Faders and jog-wheels may also be moved using a mouse wheel (see [setup](#)^[86])

On the virtual model, shift buttons are always treated as latch buttons (click once to set, a second time to release)

Use the following methods to overcome some of the other limitations of using the virtual model:
Right click the square button to simulate holding the button down (deactivating Fingers) - click a second time to release the hold.

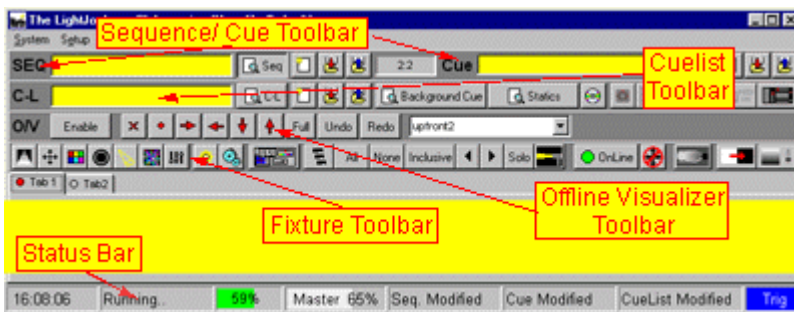
Right click the page buttons to simulate holding a page button for multi selection



Alternative skin

If you find the looks of the Virtual Fingers is just a bit too plain, use the [setup](#)^[86] dialog to select a different skin for the Virtual Fingers.

57 Tool- and Status-bars



LightJockey contains a number of toolbars with buttons for quick access to various functions. There is also a statusbar with status information.

The [Sequence/Cue toolbar](#)^[104] has functions relating to the current Sequence and the current Cue.

The [Cuelist toolbar](#)^[105] has functions relating to the cuelist, Background Cue and external control options such as [DMX in](#)^[304], [MIDI](#)^[316], [Audio CD](#)^[144] and the [2532 Direct Access](#)^[296] controller.

The Offline Visualizer toolbar contains functions related to the [Offline Visualizer](#)^[340]

The [Fixture toolbar](#)^[106] contains functions related to individual fixtures or groups of fixtures.

Finally the [Statusbar](#)^[107] contains various status information.

Any of the tool- or status bars may be displayed or hidden, see [Main View Menu](#)^[115]

58 Sequence/Cue Toolbar

See also [Tool- and Status-bars](#)^[103]

The left part of the toolbar contains buttons and information related to the current sequence, while the right half contains buttons and information relating to the current cue.

The Sequence part



'Current sequence' shows the name of the current sequence (if any). The background of the field will turn yellow if the sequence is 'active' (contains data). If the current sequence is empty, the field will show a gray background color.



Click this button to view the [Sequence control](#)^[178].



Click this button to clear the current sequence (see [Sequence Control](#)^[178]).



Click this button to bring up the [Save sequence dialog](#)^[197].



Click this button to get the [List of sequences](#)^[206].

The  buttons are replicated on the [Sequence Control](#)^[178] as well.

The toolbar also shows the current scene number in the current sequence, in the form of X:Y, where X is the current scene number and Y the maximum scene number. If the sequence is empty, the display shows '1:1'.

The Cue part



'Current Cue' shows the name of the current Cue (if any). The background of the field will turn yellow if the Cue is 'active' or modified (contains data). If the current Cue is empty, the field will show a gray background color.



Click this button to view the [Cue Control](#)^[184].



Click this button to clear the current Cue.



Click this button to bring up the [Save Cue dialog](#)^[204].



Click this button to get the [List of Cues](#)^[208].

The    buttons are replicated on the [Cue Control](#)^[184] as well.

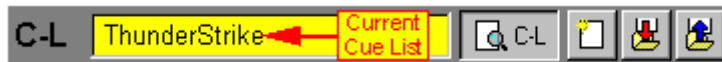
59 Cuelist Toolbar

Cuelist Toolbar

See also [Tool- and Status-bars](#)^[103]

The left part of the toolbar contains buttons and information related to the current [Cuelist](#)^[216], the right part contains a button for the [Background Cue](#)^[238], the Audio CD control and buttons for various external control option.

The Cuelist part



'Current Cuelist' shows the name of the Current [Cuelist](#)^[216] (if any). The background of the field will turn yellow if the Cuelist is 'active' (executing). If the current deactivated, the field will show a gray background color.



Click this button to view the [Cuelist Control](#)^[216].



Click this button to clear the current Cuelist (see [Cuelist Control](#)^[216]).



Click this button to bring up the [Save Cuelist Dialog](#)^[237].



Click this button to get the [List of Cuelists](#)^[238].

The    buttons are replicated on the [CueList Control](#)^[216] as well.

The Background Cue button



Click this button to view the [Background Cue Control](#)^[238].

If a Background Cue is active, the button will turn yellow. If no Background Cue is active, the button is gray.

The Statics Control Button



Click this button to view the [Statics Control](#)^[241].

If the static control is active the button will turn yellow.

The Audio CD Part



If a CD-ROM is installed in the system - use this button to access the Audio [CD Control](#)^[144]. Note that the button is not enabled (grayed out) unless the LightJockey has been [setup](#)^[24] to use the CD-

ROM Drive.

The External Control part



Click this to access the [MC-X Setup dialog](#)^[323]



Click this to access the [2518/RS232 Control](#)^[309] (must be configured [Scribble400](#) first)



Click this to access the [DMX In Setup](#)^[304]



Click this button to view the [MIDI In Control](#)^[316] (must be configured [Scribble400](#) first)



Click this to view the [2532 Direct Access Control](#)^[298] (must be configured [Scribble400](#) first)

60 Fixture Toolbar

See also [Tool- and Status-bars](#)^[103]

The fixture toolbar contains buttons to access fixture effects, buttons for fixture selection and selection modes, and buttons for special controls such as smoke control or global intensity controls.



Fixture Controls



Use these buttons to access the [fixture controls](#)^[157]. Note that none of these buttons will be enabled until at least one fixture is [selected](#)^[120].

Right-click a button to open the corresponding control and close the other fixture controls automatically (useful on a smaller desktop setup).

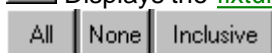


Use this button as a handy shortcut to display or remove all fixture controls with one click.

Fixture Selection



Displays the [fixture group](#)^[116] selection.



These buttons effects the desktop [Fixture Selection](#)^[120].



Selects previous or next fixture respectively - see [Next/Previous Fixture](#)^[347]



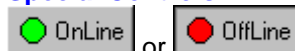
Selects [Fixture Solo](#)^[348] Mode

Followspot Button



toggles [followspot settings](#)^[344]

Special Controls



see [OffLine / OnLine Switch](#)^[107]



see [Freeze Output](#)^[107]



see [Smoke Control](#)^[357]



see [Blackout](#)^[155]



see [Master Intensity](#)^[157]

61 Freeze Output

See also [Sequence Blind Mode](#)^[183].

See also [Offline/OnLine Switch](#)^[107]

By default the freeze switch is disabled, the use of the freeze function may be enabled by checking *Allow freeze output* option in the [System preferences dialog](#)^[109].

When output is frozen, LJ immediately stops calculating new DMX output values as a result of fades or macros. When 'un-frozen' calculations are continued from where they were stopped.

Tied to a [hotkey flash function](#)^[167] the freeze function can be used to great effect to for example freeze lights in place when there is a break in the music.

Note that sequences running the cue are still being triggered - so freeze is best used with macros.



The freeze state can be set through  on the [Fixture Toolbar](#)^[106] or through a [hotkey function](#)^[197].


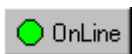
62 Offline / OnLine Switch

See also [Sequence Blind Mode](#)^[183].

See also [Freeze Output](#)^[107].

By default the Offline/Online switch is disabled, the switch may be enabled by checking *Allow Offline Switch* option in the [System preferences dialog](#)^[109].

When LightJockey is in offline mode all physical DMX output is blocked (output is frozen when the switch is set to **Offline** state). However all fade calculations and macros are still performed and the output is still routed to the Offline Visualizer. This allows for blind programming while still maintaining a static DMX output to connected fixtures.

The switch is set via the  or  button on the [Fixture Toolbar](#)^[106]. The button mimics the current offline state.

63 Statusbar



The statusbar is located below the main desktop.

The bar displays the current time of day, a system status (usually "Running..") and the current level of the [master intensity control](#)^[15]. The bar also shows if the current sequence, cue and cuelist have been modified. Finally the trig information from the [Audio Analyzer](#)^[31] is duplicated on the statusbar.

Windows utilizes both physical memory (RAM) and virtual memory (harddisk). Accessing information in the physical memory is magnitudes faster than accessing information

The % indication shows the % of used memory (out of the total physical and virtual memory available) that reported back from Windows. The % indication is not really an absolute capacity indicator; as more memory is needed Windows will automatically reduce memory allocation to other functions (typically by reducing the disk cache size).

The color of the memory 'bar' indicates the amount of free physical memory left.

Green indicates more than 3 Megabytes physical memory free.

Yellow indicates between 2 and 3 Megabytes free physical memory free.

Orange indicates between 1 and 2 Megabytes free physical memory free.

Red indicates less than 1 Megabyte physical memory free.

As long as the indicator stays in green everything is fine. When the indicator goes through yellow and orange, it indicates that there might be a slight loss of performance as there is little physical memory left. A red indicator means very little or no physical memory free, probably causing a pretty poor performance. Is still perfectly possible to run LightJockey even if the bar is red - just expect a slower performance.

64 DMX Addresses and Links

DMX Addresses

To enable communication between the LightJockey and the fixtures, an address must be assigned to each fixture. This address must also be set on the fixture itself - Martin fixtures has DIP-switches or LED display panels for address settings.

When assigning DMX addresses keep in mind that fixtures usually uses several continuous addresses. I.e. the Roboscan 918 uses 16 addresses. The first address is usually referred to as the *start-address*. This is important to remember since it is not possible to 'share' addresses between individual fixtures, so if the Roboscan 918 was given the start-address of 1, the next available address would be 17 (1+16).

The DMX protocol defines a maximum of 512 addresses (or channels) so all fixtures must fit within this address space.

There are two ways to assign an address to a fixture in LightJockey.

Set the address manually.

Use the address field in the lower left hand corner of the [Fixture Configuration](#)^[40] screen. Use this method to match addresses on fixtures that has already been given an address (on the fixture).

Use the "Auto Address" function.

This will prompt LightJockey to calculate addresses based on the fixtures selected and fixtures that has already been assigned an address. Use this approach when fixtures have not yet been addressed (on the fixture). There are a few exceptions where the auto address will not work - see details in the [Fixture Configuration](#)^[40] help topic.

Link

Link is a term that describes the physical connection from the controller to the fixtures (and between the fixtures). Since the DMX protocol allows only 512 channels on one link, the only way to add more channels to a system is to increase the number of links (physical connections).

Depending on what DMX transmitter hardware is in use in the installation, one or more links may be available for connecting fixtures. Links are numbered 1-4 and when addressing the fixtures, make sure to specify which link the fixture is connected to.

65 Desktop Main Menu

[System Menu](#)^[114]

[Setup Menu](#)^[109]

[View Menu](#)^[115]

[Off-line Menu](#)^[326], Offline Visualizer settings

Capture - settings for [Capture](#)^[343] link - only visible when Capture link is configured.

Fingers - settings for [Fingers for LightJockey](#)^[86]

Generics - provides access to the [Generic DMX control](#)^[169] - only visible if at least one Generic fixture has been configured

Download - Download to [2510](#)^[72] and [2518](#)^[84] controllers

Audio - use to launch Audio Analyzer or Digital Audio playback program. Only visible if either function have been configured in the [hardware setup](#)^[24] dialog.

[Help](#)^[116]

66 Main Setup Menu

The main setup menu has a number of sub-menus that facilitates settings of various options and settings.

The menu is located on the desktop main menu.

[Fixture configuration](#)^[40]

[Hardware Setup](#)^[24]

[Global Patch](#)^[312]

[Preferences/System](#)^[109]

[Preferences/Start Up](#)^[112]

[Preferences/Default DMX output](#)^[113]

[Hotkeys](#)^[16]

67 System Preferences

The system preferences allow settings of various system options. The access is through the main Setup menu, then "preferences" and "system".

The options are located on various tabbed pages.

System Settings

Bitmap Cache.

Enabling this function will give an increased performance when drawing controls. It also uses limited Windows system resources. If only one instance of LightJockey is running with little else, this will not be a problem, but if Windows throws up a warning regarding low system resources, make sure to deselect this option.

Allow Freeze Output

Enables or disables the users access to the [Freeze Output](#)^[107] function.

Allow Sequence Blind Mode

Enables or disables the [Sequence Blind Mode](#)^[183]

Allow Offline Switch

Enables or disables the [On/Offline Switch](#)^[107]

Start LightJockey on Secondary Monitor

Check to force LightJockey to start up on the secondary monitor in a multi monitor system. Setting is ignored if only one monitor is detected.

Open Controls on Windows Desktop

Normally most controls retain their last position when re-opened. When this option is enabled, all controls are forced to open within the boundaries of the Windows desktop. Checking this option ensures that if controls have been placed outside the visible area of the Windows desktop (i.e. when lowering the video resolution) they will become visible when re-opening.

Special note for multi-monitor systems:

Windows desktop is defined as the upper left corner of the primary display to the lower right corner of the last display. However, if displays are driven in different screen resolutions, the desktop height (or width if displays are vertically configured) is defined as the height (or width) of the primary display. This may cause problems if secondary displays are driven at a resolution different from the primary displays - in this case it is probably the best to disable the option.

Open Controls on LightJockey Desktop

When this option is enabled, all controls open within the boundaries of the main LightJockey desktop. Use this option if controls have been placed outside the visible area of the Windows desktop (i.e. when lowering the video resolution).

Restore LJ desktop on startup (Size/Position)

When checked, the LJ desktop will default to the same size and position and size it had when previously closed down. When not checked LJ will maximize on the designated monitor.

Warnings

Sequence/Cue/Cuelist Modified

Enable this to prompt a confirmation box every time before a modified sequence, cue or cuelist is overwritten by a clear or load command. Note that the Cue modified warning will not be shown if the cue was loaded as a [transparent cue](#)^[195].

Overwrite Sequence/Cue/Cuelist

Enabled this to prompt a confirmation box each time before a saving on top of an already saved sequence, cue or Cuelist.

Show Blackout Warning

Enable this to show a warning when blackout or fade-in or fade-out is active. Click the cancel button on the warning to restore from blackout or fade modes.

Show Freeze Warning

When enabled, a warning is shown when [DMX output is Frozen](#)^[107].

Show Offline Warning

When enabled, a warning is shown when [DMX output is offline](#)^[107].

Confirm Close Program

Enable this to show a confirmation dialog when LightJockey is closed.

Quick Save/Load

Enable Sequence/Cue/Cuelist quick save/load.



When quick save/load is enabled, right-clicking the "save" icons will re-save the current sequence, cue or cuelist without using the save dialog. It requires that the sequence, cue or cuelist has previously been saved, if this is not the case the save dialog will appear.



Likewise right-clicking on any get icon will re-load the current sequence, cue or cuelist. This will only work if a sequence or cue or cuelist is currently loaded.

External Links

External links allows LightJockey to talk to other Martin Windows applications. Normally, if not instructed otherwise, leave these options off.

The external links will only be enabled if transmitter hardware is detected.

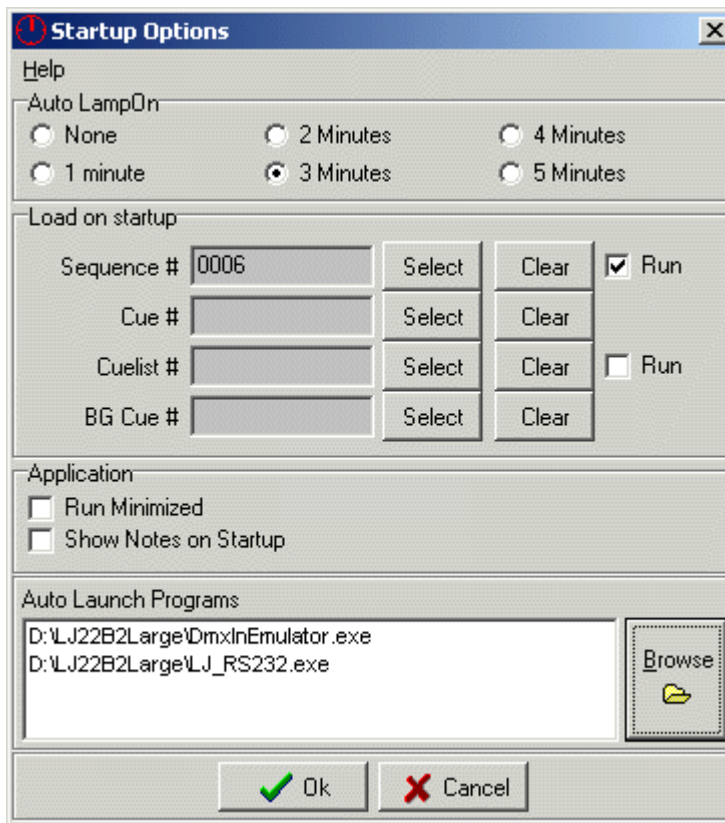
[Enable Offline Visualizer](#) - Enables communication to [Offline Visualizer](#)^[326].

If any of the two Visualizer switches are grayed out it means that LightJockey could not find the corresponding Offline Visualizer installed.

Data Restore

See [Using the Data Restore Option](#)^[55]

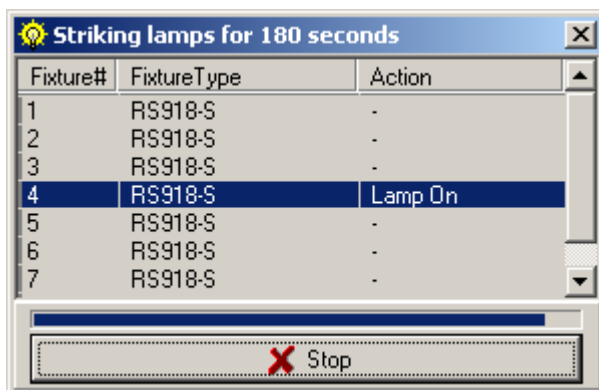
68 Startup Options



To access this dialog, select Setup/Preferences/Startup from the [Desktop main menu](#)^[109]. The startup options allows the user to configure various startup conditions for LightJockey.

Auto Lamp-On

Enabling this option will prompt LightJockey to startup with a lamp on cycle, sending lamp-on commands to all fixtures that support the lamp-on on command. The lamp-on will be sent to one fixture at a time with a delay of approx. 1 second to avoid a surge on the power line. Set the duration of the cycle to 1 to 5 minutes. If none of the configured fixtures support lamp-on, the cycle will be aborted. The cycle will engage before any auto-start programs are executed.



During the lamp on cycle a window will appear on the desktop, displaying the lamp-on cycle progress.

The cycle may be halted at any point by clicking the "Stop" button.

The auto-lamp on command is also available under the desktop main system menu. Here the cycle will continue until canceled.

Load On Startup (Auto-start)

These options enables LightJockey to start up with a specific sequence, cue, cuelist or background cue (BG Cue). Click the corresponding **Select** button to select the sequence, cue, cuelist or background cue to auto-start. Sequences and cuelists requires a checkmark in the "Run" checkbox to execute after load, else they will remain static.

If a Cuelist is selected to auto-start, the [cuelist control](#)^[216] will be displayed on the desktop.

Run Minimized

This will minimize the application as soon as the initializations are done. This setting is useful if LightJockey has to run silently in the background with other applications.

Show notes on startup

When enabled the user notes will automatically be shown when LightJockey starts up.

Auto Launch Programs

Use this option to automatically launch external support programs as LightJockey starts up. Click the Browse button to specify which programs should be launched by LightJockey.

An example of a support program that must be launched this way is the [RS-232 remote](#)^[82] program. To clear a program from the list, highlight it, right click and **select delete** entry from the popup menu.

During startup LightJockey will make no attempt to check if the program is already running, neither will the program automatically be shut down when LightJockey shuts down.

If the file launched is not an executable, eg. *.exe - it is up to the user to make sure that the datafile is properly associated with an executable. For example to launch an MP3 file, the .MP3 extension must be properly associated with a program to playback MP3 files.

If, for some reason a program causes LightJockey to crash or lockup before the entry can be removed from the list, the program entries may be manually removed from the startup.ini file located in the LightJockey installation directory.

69 Selecting programs for autostart

Selecting programs for autostart

Highlight the program (sequence,cue or cuelist) and click the OK button. See also [Startup Options](#)^[112].

70 Default DMX Output

Menu : Setup/System Preferences/Default DMX Output

By default LightJockey defaults to a value of 0 on all DMX channels when they are not programmed.

This menu option makes it possible to change these values. By customizing the defaults, it is often

easier to create a good basis for programming. The new defaults could contain values that homes the fixtures on pan and tilt, or opens the shutter on fixtures equipped with separate shutter and dimmer, so it won't be necessary to open shutters and program intensities as well. It could also be used to set a pre-heat value for fixtures running via dimmer packs.

Use Current Scene

This option will record the output from the current scene. If values have already been recorded they will be included in the default output, unless overwritten by the scene. This makes it possible to modify the default output just by programming the modifications into the scene and then select 'use current scene'.

Note : The default output cannot contain presets, if presets are present an error message will be displayed and the new values will not be recorded.

Clear Default Output

This will reset the default output to all 0 values.

71 Main System Menu

The menu is located on the desktop main menu.

User Libraries..

See [User Libraries](#)^[53]

Delete Files

See [Deleting multiple datafiles](#)^[114]

Restore Program Data

See [Using the Data Restore Option](#)^[55]. Note that this option is only available if a restore data set has previously been created.

Auto Strike Lamps

Start auto-strike lamp cycle - see also [Startup Options](#)^[112]

Restart LightJockey

Closes down LightJockey and restarts a new session.

72 Deleting Multiple Datafiles

Deleting Multiple Datafiles

From the main desktop menu select **System/Delete files**.

The following file types may be deleted:

- Sequence Files
- Cue Files
- Cuelist Files
- Background Cue files
- [Generic DMX Macros](#)^[244]

Selecting and deleting files




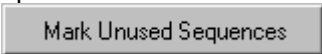
Select one or more files to delete by highlighting the files in the list. Use **Select All** or **Clear All** to select all files or clear all selections.

Once the files have been marked, delete the files by clicking the **Delete** button.

Checking Sequences

The Delete Sequences dialog contains an option to check if the sequence files are used in any cues.

To check the sequences click the  button. Used sequences will be marked with a 'Yes' in the rightmost column and unused sequences are marked with a 'No'.

Once the sequences have been checked, use the  button to highlight unused sequences only.

73 Main View Menu

The menu is located on the desktop main menu.

Toolbars

Use this submenu to toggle visibility of toolbars and the statusbar.

Controls

Use this submenu to show the sequence, cue or cuelist controls if the appropriate toolbar is not visible.

Unassigned Fixtures

Use this to show the list of unassigned fixtures if the list was previously closed.

Notes

This will show a handy little notepage - the notes are saved in the current user library and can be recalled at any time by selecting this menu item or by [hotkey](#) F10.

DMX Output

See [DMX Output Monitor](#) F11. Note, the monitor will be aligned with start address 0.

Windows System Memory

Shows important information regarding Windows system memory. Used for trouble shooting.

74 Main Help Menu

About

Shows the version and build of LightJockey. And the VIP hall of fame.

Help

Enters this help file.

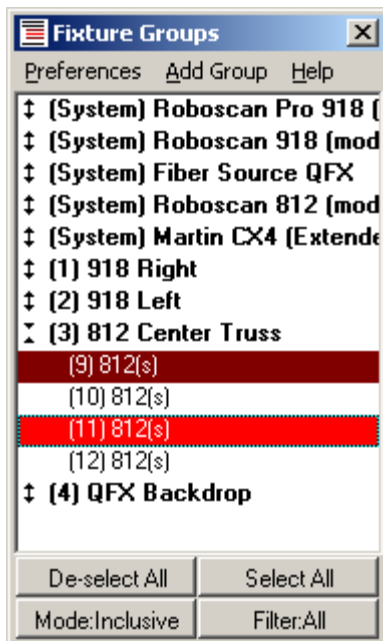
Select Helpfile

Select between helpfile in different languages (if help files available).

75 Fixture Groups



Click on the fixture groups icon on the [Fixture toolbar](#)^[106] and the fixture group view will appear. The function of this icon may also be assigned to a keyboard [hotkey](#)^[161].

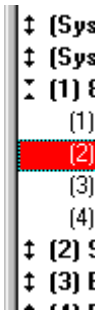


Select or de-select a group of fixtures by clicking on the appropriate line in the group view.

The system will automatically build fixture groups, by placing all the fixtures of the same type into groups. Disabling *Show system groups* in the *Preferences* menu will hide the system groups

To create custom fixture groups select "Add Group" from the menu. Name the new group and click "Ok". The new group will now appear in the group window. To assign fixtures to the new group, first [select the fixtures](#)^[120] Then right-click on the line with the newly created group and select click "Add selected fixtures to group". Likewise, use the other commands in the pop-up menu to remove fixtures from groups or to rename the group.

The number of user defined groups is limited to 99.



The fixture groups can be expanded to show individual fixtures by clicking on the double arrows on the left of the window. Collapse the fixture list by clicking on the arrows again.

Select All and **De-select All** selects and de-selects all fixtures respectively.

Selection Mode, Inclusive/Exclusive

The lower, leftmost button in the window toggles between inclusive and exclusive selection mode. Inclusive mode means that more than one group or fixture may be selected at a time. In Exclusive mode, fixtures already selected are automatically deselected before the new selection is applied. the function of this button may be assigned to a keyboard [hotkey](#)^[16].

Selecton Filter, All/Odd/Even

Use the selection filter (click button to change) to set a filter for fixture selection/deselection via the group window. **All** selects/deselects all relevant fixtures - **Odd** selects/deselects fixtures with odd fixture number and **Even** selects/deselects fixtures with even fixture number.

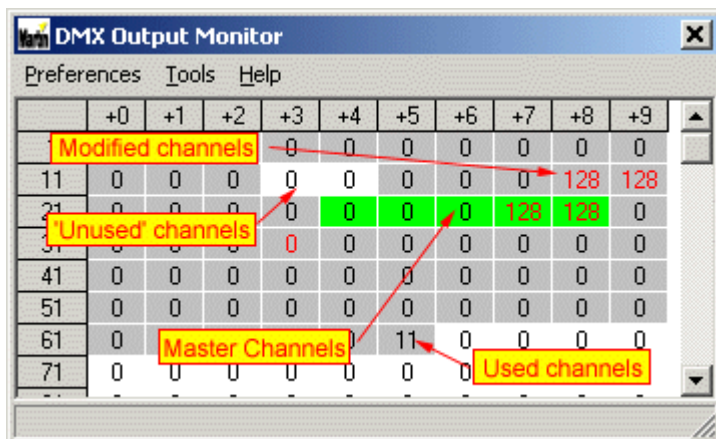
Fixture group Hotkeys

It is possible to assign selection of the first 10 user-defined fixture groups to [keyboard hotkeys](#)^[19].

76 DMX Output Monitor

Open the monitor from Main menu/View/DMX Output

This window shows the actual DMX values output from LightJockey. To align the view with a particular fixture, rightclick the fixture icon and select "DMX Output" from the popup menu.



DMX Output Monitor

Preferences menu (see color scheme below)

Highlight value changes

channels with changing values display values in red

Highlight used channels

channels that are in use by at least one fixture shows with gray background

Highlight selected Master fixture

channels in use by the master fixture is displayed with a green background

Autoscroll to master fixture channels

the DMX monitor automatically scrolls to bring the channels of the master fixture into view

Enable value overwrite

see below

Color scheme (background):

Gray background: DMX channel is used by at least one configured fixture

White background: DMX channel not used by any configured fixture

Green background: DMX channel used by selected Master fixture^[120]

Color scheme (text):

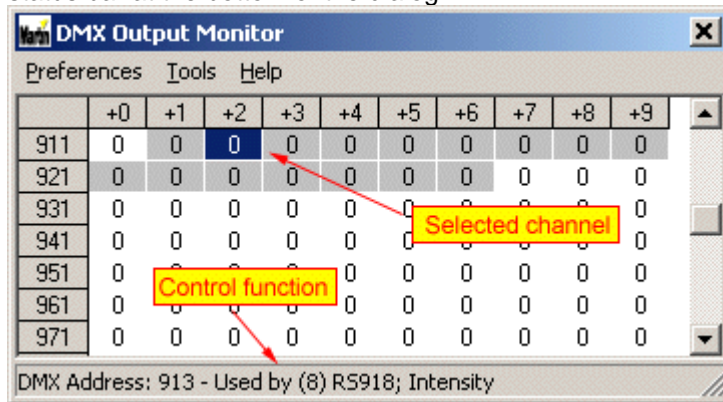
Black text: unchanged DMX value (since the dialog was opened)

Red text: DMX value changed (since the dialog was opened)

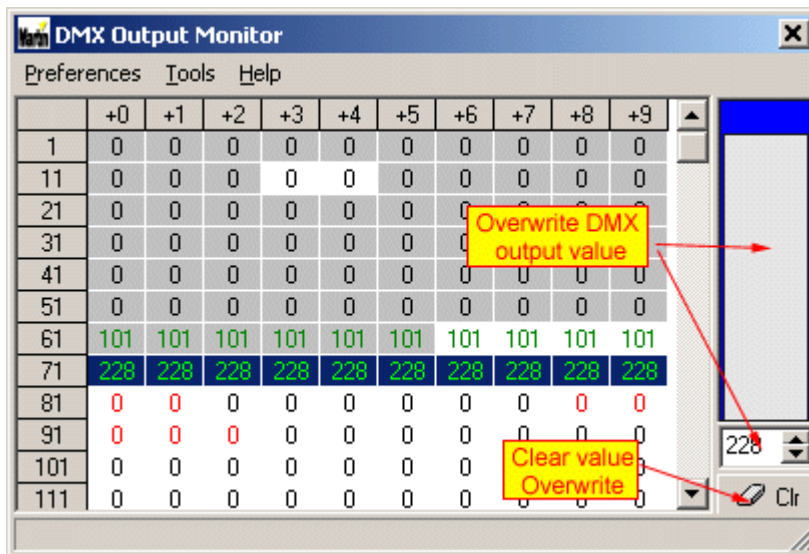
Green text: DMX value overwritten

Control channel function

Highlight a specific output channel (click it's value) to see it's control function which is displayed in the status bar at the bottom of the dialog.



Overwriting the DMX output values



Value overwrite enabled

The DMX output monitor allows DMX output values to be overwritten directly, without the need to configure a fixture first. The output value is written directly to the DMX channel without regards to any [patching functions](#)^[312].

DMX output value overwriting must be enabled from the *Preferences menu*. To overwrite DMX output values, select (highlight) the relevant DMX channel(s) and use either the virtual fader or value field to enter/modify the DMX value. Click the *clr* button to remove value overwrite on the selected channels. DMX output channels that has their value overwritten displays the value in green text.

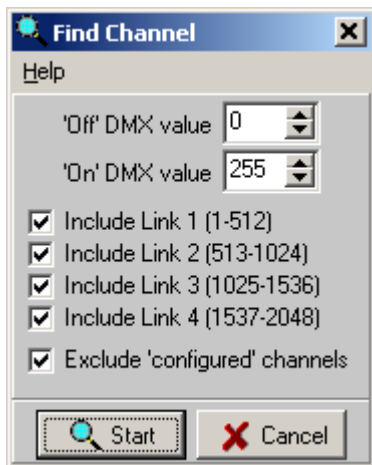
Note: The DMX output can only be overwritten this way as long as the DMX output monitor is open and DMX value overwriting is enabled. As soon as the monitor dialog is closed, the DMX values will revert to non-overwritten values.

Searching DMX output channels

The DMX output monitor contains a tool that can be used to search for a specific DMX channel by sending specific DMX values to specific channels in a search pattern. The tool is handy when trying to locate DMX equipment that is connected and addressed but not yet configured and the address has not been noted down.

The tool uses a binary search algorithm that is capable of locating a specific channel out of 2048 channels in a maximum of 11 'tries'.

Click Tools in the menu to open the search channel dialog and setup a channel search pattern.



Search channel dialog

During the search 'DMX on' and 'DMX off' values are sent to the channels in the search pattern. Modify the DMX off and DMX on values value if necessary.

Setting up the search pattern

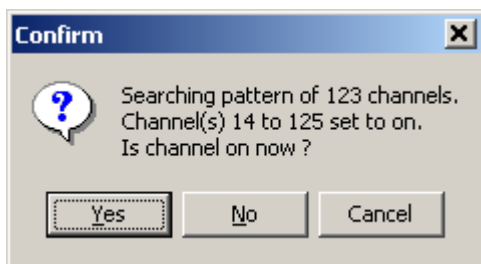
Un-check include link 1-4 to exclude fixtures on any specific link from the search.

Un-check exclude configured channels to include channels that are already in use by configured fixtures.

Default options will search on all 4 output links but exclude channels already used by configured channels.

Click Start to start the search

The search algorithm first applies the on value to all channels in the search pattern to check that the device is included in the pattern at all. Subsequent searches will apply the on value to half the channels in the search pattern and for each search iteration the number of channels in the search pattern is halved according to the answer in the search prompt.



Search channel prompt

Click **yes** if the channel is on - **no** if the channel is off

77 Selecting Fixtures

There are different ways to select the fixtures from desktop to make them active in programming.

Click with the left mouse button on the fixture icon on the desktop. This fixture now becomes the "Master fixture". By subsequently clicking on other fixture icons, these will be selected as well.

To de-select fixtures simply click on the icons again.

Method two is "rubber banding" a number of fixtures at once. Do this by holding the left mouse button down and drag a dotted square to encompass the fixtures.

To de-select the fixtures either left click on individual icons or "rubber band" an empty piece of desktop to deselect all fixtures.

Fixtures may also be selected through the [fixture groups](#)^[116] or fixture group [hotkeys](#)^[19].



This button, located on the [Fixture Toolbar](#)^[106] and duplicated in the [fixture group view](#)^[116], may be used to switch between selecting single (solo select) or multiple fixtures. Clicking the button changes between inclusive and exclusive modes.

When in **Inclusive** mode, fixture selection will take place as described above. When in **Exclusive** mode, clicking on a fixture icon will deselect all other fixtures, then select the fixture. This allows selection of one fixture at a time, just by clicking the fixture icon.

This function may also be assigned as a [keyboard hotkey](#)^[16] function.



These buttons, also located on the [Fixture Toolbar](#)^[106], selects and de-selects all fixtures respectively.

See also [Hotkeys](#)^[16]

See also [Next/Previous](#)^[347] fixtures

See also [Fixture Solo](#)^[348] function

Master and slave fixtures Fixture

The fixture icons may be in one of 3 different states:



Unselected fixture - blue icon caption.

An unselected fixture will not receive any commands from the fixture controls.



Master Fixture (bright red icon caption)

When in master mode all fixture controls will relate to that particular fixture type. The fixture controls will show the values that are currently set for that particular fixture. Although it is possible to select different types of fixtures it is not possible to access features that are not supported by the current master fixture, i.e. it is not possible to select the gobo control while a RoboColor II is master. Only one fixture can be master fixture at a time.



Slaver Fixture (dark red icon caption)

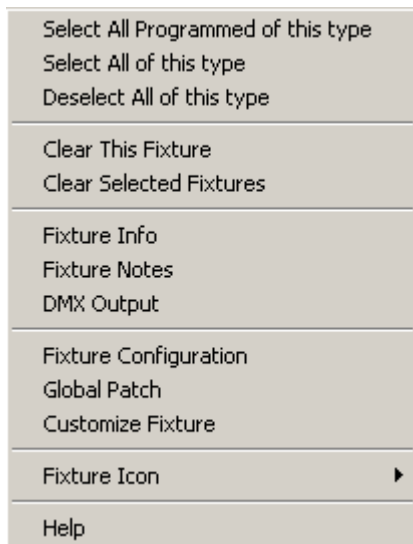
Selected fixtures that are not master fixtures are slave fixtures. This means that they will follow the master fixtures setting when these are changed on the fixture controls. I.e. when 4 Roboscan 918

fixtures are selected, 1 as master, the other 3 as slaves, setting the master to red on color wheel 1 will automatically set the color to red for all 4 fixtures.

Some effects are [cross-fixture type compatible](#)^[124], this means that changes to the master will also change the slave fixtures, even if they are not of the same type as the master fixture.

78 Fixture Icon Popup

To access this menu right-click on any of the fixture icons on the desktop.



Fixture Icon Popup.

Select All programmed of this type

Selects all fixtures of this type that are programmed in the current scene. This function requires that the [Show programmed Fixture](#)^[61] option is enabled.

Select All of this Type - Deselect All of this Type

Selects or de-selects all fixtures of the same type as the 'clicked' fixture. The 'clicked' fixture automatically becomes [master fixture](#)^[120] when this function is used.

Clear This Fixture - Clear Selected Fixtures

When clicked all fixture parameters are set to [off](#)^[128] in the current scene in the [current sequence](#)^[178]. Output generated by [Default DMX output](#)^[113], [statics](#)^[241], the [current cue](#)^[184] or [background cue](#)^[238] is not affected.

Fixture Info

Opens the fixture Info dialog.



This dialog shows The fixtures MX address and [intensity group](#)^[157]. Use the ID button to temporarily enable light output from the fixture.

Fixture Notes

Shows the fixture profile notes (same notes as shown in the [fixture configuration](#)^[40])

DMX Output

Opens the [DMX output monitor](#)^[117] aligned with the fixtures DMX address.

Fixture Configuration

Opens the [Fixture configuration dialog](#)^[40] with the fixture already selected.

Global Patch

Opens the [Global Patch](#)^[312] dialog aligned on the fixtures DMX address.

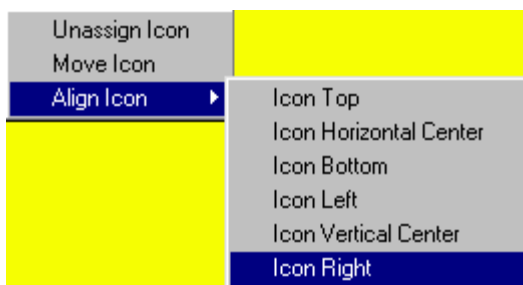
Define Fixture Profile

Opens the Fixture Profile dialog. This option is only available for [user definable fixtures](#)^[256].

Customize Fixture

Opens the [Customize Fixture palette](#)^[125] dialog. This option is only available for a number of [built-in fixture profiles](#)^[40].

Fixture Icon Menu



Unassign Icon

Select to de-assign the icon from the current tab. The fixture will go back into the unassigned fixtures list and can be re-placed on another tab. See [Configuring the Desktop](#)^[67].

Move Icon

Toggles the Icons 'movement' mode on and off. See [Configuring the Desktop](#)^[67].

Align Icon

Select the align command from the sub menu. The command will align the icons of all [selected fixtures](#)^[120] to the current icon, i.e. selecting **Icon Right** will align the right side of all selected icons to the current icon.

Note : the alignment will not work on icons that are in 'move' mode.

79 Cross fixture-type compatible effects

Some effects are cross-fixture type compatible, this means that changes to certain effects on the [master](#)^[120] fixture will also change the effects on the slave fixtures, even if they are not of the same type as the master fixture but still support the same type of effect. This means that applying 50% intensity to the master fixture will also set 50% intensity on the slave fixtures.

The following effects are cross-type compatible :

- Intensity
- Strobe
- Shutter (intensity)
- Pan, Tilt and Movement macros
- CMY and RGB
- Iris
- Focus
- Zoom
- Lamp commands
- Fixture reset
- Levels ([for generic DMX fixtures](#)^[167])

Other effects such as gobo or fixed colors are not cross-type compatible.

80 What is a preset

Presets, also known as 'preset focus' (position focus, not optical focus).

Scenes containing presets for effects contain references rather than an absolute 'physical' values. The result of the sequences depends on the actual contents of the reference, not the absolute contents of the scene.

Example:

When programming for a band on tour, it is often useful to use presets for beam positions rather than absolute pan/tilt values.

I.e. when lighting the drummer, create and use a preset rather than moving the pan and tilt values directly to the drummer position in every relevant scene. Later when in another venue, or when the drummer position or the fixtures are moved, simply change the physical values (edit the positions) and re-save the preset. Now all scenes using this preset will automatically position the fixtures with the new physical values. If presets are not used, then every fixture in every scene that lights the drummer will have to be corrected one by one.

Also since it is possible to name a preset, it is often easier to apply named positions to fixtures, rather than have to move them one by one to the desired position.

It is not necessary to move fixtures to the same physical position, a preset could easily contain a for example beam fan pattern.

It is also possible to use different presets for different fixtures on the same scene, i.e. part of the fixtures on preset "drummer", another part on preset "lead vocal".

See [Position Presets](#) ^[139]

81 Customizing palettes for built in fixture types

To define palettes for user defined fixture profiles see [user-definable fixtures](#) ^[256]

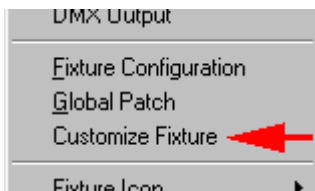
NOTE !

Any changes to the default fixture palette will NOT be reproduced in the Offline Visualizer. The changes only occurs in the fixture controls in LightJockey.

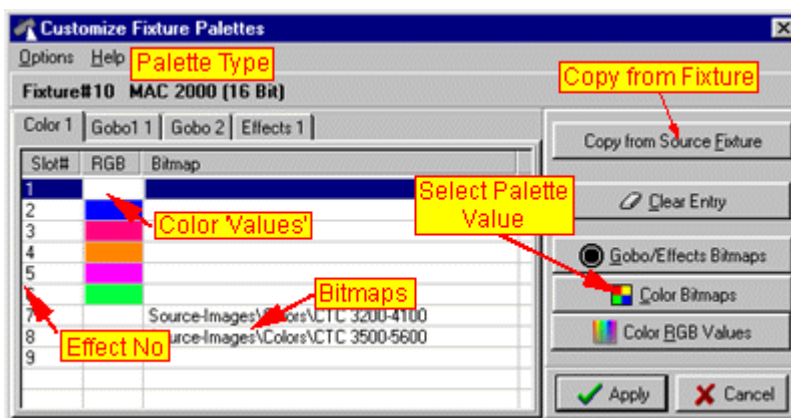
Most of the [built-in fixture profiles](#) ^[40] uses palettes for easy selection of effects like [colors](#) ^[159] or [gobos](#) ^[156].



MAC 500 color control with default palette



To customize color, gobo and effect palettes for a built-in profile, rightclick the fixture icon on the desktop and select **Customize Fixture** from the popup menu to open the Palette Configuration dialog. Note that not all built-in fixtures support the customize feature. If the feature is not supported, the *Customize Fixture* menu will not appear on the popup menu.



Palette configuration dialog

The palette configuration dialog lists each of the possible fixture palettes on an individual tab, i.e. color (wheel) 1 or gobo (wheel) 2.

Each line in the list corresponds to one 'effect', i.e. first color on color wheel 1. Each effect may be represented either by a 'pure color' or by a bitmap but not both. When a color is assigned to an effect the color is shown in the *RGB* column, while a bitmap is shown as a filename in the *Bitmap* column. If a bitmap file is assigned but does not exist the filename will be printed in *red* to indicate that the file is missing.

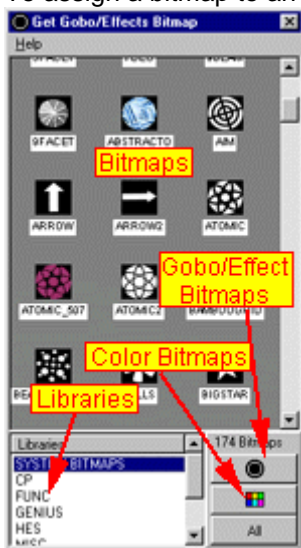
LightJockey already supplies a number of bitmaps for colors, gobos and effects - it is also possible (and fairly simple) to design new bitmaps. See [Creating Custom Palette Bitmaps](#)^[295].

Assigning a Color to an effect

To assign a color value to an effect, highlight the effect corresponding line and click the **Color RGB Values** button. Use the standard Windows color dialog to select a color for the effect.

Assigning a bitmap to an effect

To assign a bitmap to an effect either click the **Gobo/Effects Bitmaps** or the **Color Bitmaps** button.



Select Bitmaps dialog

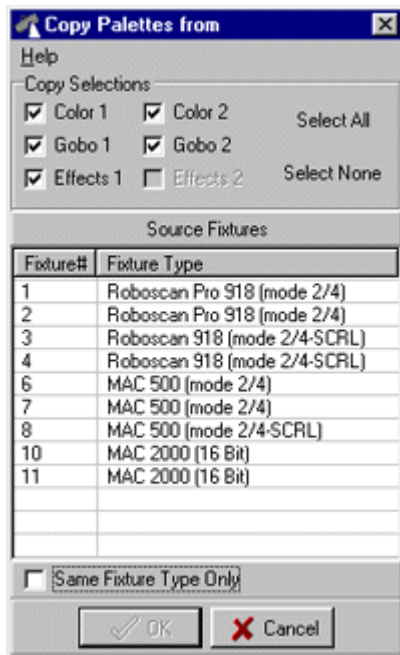
From the [Select Bitmaps](#)^[127] dialog, drag the bitmap to the line representing the effect. Alternatively highlight the line corresponding to the effect, then double click on the bitmap in the Select Bitmap dialog.

Default Palettes

All built-in fixtures have default palettes assigned to them when the fixture is configured. To restore all the palettes to default values select **Default all Palettes** from the options menu. To default single palettes (the one on the 'active' tab) select **Default Palette** from the options menu.

Copying Palettes from other fixtures

To copy one or more palettes from another fixture, click the **Copy from Source Fixture** button.

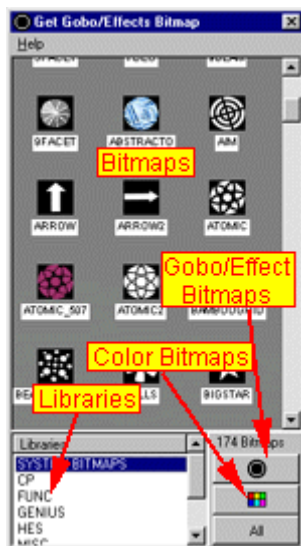


Copy Palette dialog

Use the Copy Palette dialog to select the source fixtures and copy one or more palettes from the source fixture.

Finally, to assign the new palettes to the fixture, click the **Apply** button.

82 The Select Bitmaps dialog



The select Bitmaps dialog

The select bitmaps dialogs are used to assign bitmaps to [palette controls](#) ^[177] when creating fixture

palettes for [user defined profiles](#)^[256], or [customizing palettes](#)^[125] for built-in fixture profiles.

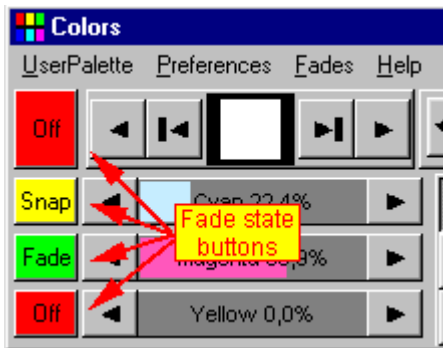
The bitmaps are organized into two groups, Gobo/Effect bitmaps and Color Bitmaps. Click the corresponding button to change the view between gobo/effect bitmaps and color bitmaps.

LightJockey organizes the bitmaps into different libraries. Libraries are listed below the bitmaps. To see bitmaps in a particular library only, click on the library name in the list. To see all bitmaps click the **All** button.

To assign a bitmap to a Palette Value, drag the bitmap directly to the line in the list representing the palette value.

Alternatively, highlight the line in the list, then double click the bitmap to associate. Note: when assigning a bitmap by double clicking, the list automatically advances to the next item until the last item is reached.

83 Off,Snap,Fade



Mac 2000 Color Control

The fade state buttons dictate the dynamic transitions of the programmable effects. Each DMX channel programmable by the control, has an associated fade state button.

Different effects will default to either snap or fade, however the status can be changed simply by clicking on the fade status button; note that left and right-clicking on the button cycles the off, snap and fade states differently.

Off



This effect will not contribute to the output of the scene.

Snap



The effect will snap (move as fast as physically possible) from its current position to this programmed position.

Fade



The effect will be moved from its present position to the new-programmed position in a fade. This means that the DMX values will be calculated into a slope that will move the effect at a certain speed. The time, and thus the speed, is determined by the current [scene and fade time](#)^[130]. Note that the default scene fade time is 0.05 seconds - this value is interpreted as a snap by the DMX output engine, so in order to have effects fading, the scene fade time must be changed from 05 seconds to something higher using the [sequence control](#)^[178]. Note that all effects programmed to fade will use the same scene fade time, the fade time is not individual from effect to effect.

To understand how snap and fade works, it is probably easiest to look at the [DMX output monitor](#)^[117]. Select a single fixture, and default all values for the fixture (clear the current sequence and cue). Open the DMX output monitor by right-clicking on the fixture icon and select "DMX Output". Select a simple effect such as intensity or color. Write two scenes that moves this effect from one position to another.

Try experimenting with snap and fade settings and different scene and fade times.

Note that not all effects have the possibility to 'fade' (i.e. [Lamp controls](#)^[165]).

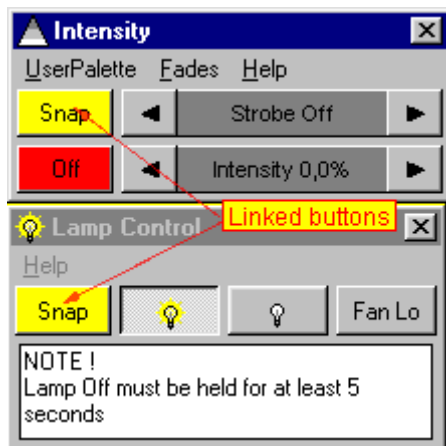
Multiple function buttons



Mac 500 Gobo Control (static gobo) - multiple functions to one fade status button.

One fade status button may control more than just one effect - actually, a fade status button usually controls the transition of one DMX channel, but it may control more than one channel. This means that whenever a fixture has multiple functions on one DMX channel, the same fade status button determines the transition for all of the effects on that channel. I.e. the MAC 500-S fixed gobo has 3 functions allocated to the same channel: gobo selection, wheel scroll and gobo shake. It is not possible to program transitions for these effects individually.

Multiple fade buttons for the same channel



Roboscan 518 - linked fade buttons

Sometimes when fixtures contain different types of functions on the same DMX channel, the functions are split onto different fixture controls - however the corresponding fade status buttons on each of the controls are linked (in fact programming the same DMX channel transition). In this case it is not possible to use individual fade status on the different effects. Also, usually the functions themselves are mutually exclusive, i.e. on the Roboscan 518 it is not possible to program a strobe AND a lamp command into the same scene, as they use the same DMX channel for the commands.

84 Scene and Fade Times

Each scene in a sequence has its own scene time and fade time , both can be set in the [Sequence Control](#)^[178].

The scene time defines how long each scene is active before the sequence advances to the next scene within the sequence. If the sequence contains only one scene, the scene time doesn't have any real effect since the sequence never advances to a new scene.

The scene time defaults to a value of 1.00 seconds.

Fade time dictates the way a scene changes effects from its previous position (DMX value) to the position(DMX value) stored within the scene.

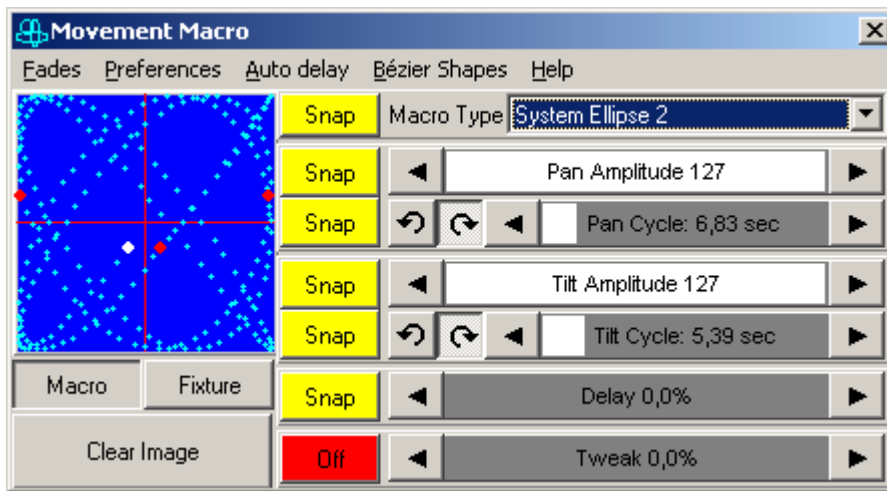
In order for an effect transition to be controlled by the fade time, the effect must be programmed with the fade status set to *fade*^[128]. If the effect is programmed with the fade status to *snap*, the effect will simply snap to the new position regardless of the fade time set in the scene.

The fade time defaults to a value of 0.05 seconds.

It is possible to set a fade time that is higher than the scene time. In this case the transition to the new value in the scene is never finished.

85 Movement Macro Engine

See also [Generic DMX Macros](#)^[244]



Movement macro control

LightJockey features a built-in engine for automatic generation of pan and tilt movements. To access the movement macro control, click "Macros" in the [Movement control](#)^[134] menu.

The major difference between the movement macros and normal movement programming (using the [pan and tilt movement control](#)^[134]) is that the macro is a continuous dynamic movement contained in one static scene.

The movement macro overlays the programmed pan and tilt, so it is possible to move the macro-shape around by modifying the regular pan and tilt positions.

To stop the macro from executing in the current scene, set the [fade status](#)^[128] of the macro type to off, select *No Macro* from the drop down or click *Clr Macro* on the Movement Control.

Macro display window.

The blue window on the left side of the control displays a real time visualization of the progression of the macro by tracing the fixtures pan and tilt coordinates. The display window tracks the macro of current master fixture only. To show the macro position for all selected fixtures, enable *Show all selected fixtures* in the preference menu - non master fixtures shows up as red dots.

- Macro** - shows the macro executing without considering the actual pan/tilt position of the fixture.
- Fixture** - shows the position of the fixture with the macro overlaying the current pan/tilt position.
- Clear Image** - This clears the window.

Macro Type

This list contains the possible macro types. There are 6 different system macros built into LightJockey. System macros are all based on continuously repeating sine/co-sine curves.

To create a new, user defined macros, select *Bézier Shapes* from the menu. See below for a detailed explanation.

Pan Amplitude

This parameter controls the amount of amplitude applied to the pan parameter. The higher the value, the further the pan will move in the macro.

Pan Cycle (time)

This parameter controls the 'speed' at which the pan part of the macro executes. The value displayed is the time taken for one cycle of the macro.

Pan and tilt cycle times into one common cycle time control for ellipse and stepped ellipse macros.

Tilt Amplitude

This parameter controls the amount of amplitude applied to the tilt parameter. The higher the value, the further the tilt will move in the macro.

Tilt Cycle (time)

This parameter controls the 'speed' at which the tilt part of the macro executes. The value displayed is the time taken for one cycle of the macro.

Macro Stepsize (Stepped Ellipse Macro only)

The Macro Stepsize parameter regulates the 'coarseness' of the macro by reducing the number of positions contained in the macro. Altering the macro stepsize does not change the macro cycle time. The higher the step value the coarser the macro appears - at stepsize 512 the ellipse only contains 8 pan and tilt positions. Reducing the number of points may cause slower moving fixtures to 'perform better' on faster ellipse macros. The actual 'look' of the macro depends on the fixture used as well as the combination of cycle time, amplitude and stepsize - some fixtures may not show any improvement at all. Since a high stepsize combined with a low speed (high cycle time) produces a very pronounced stepped movement, the stepped ellipse macro may also be used for 'special effects'.

Delay

This will 'delay' the fixtures position in the macro cycle. Use this to assign individual delays to fixtures performing the same macro for a more varied look. See below for a detailed explanation.

Tweak

This will tweak the macro a little - the result depends on the actual figure and the other parameters.

Auto Delay

Use the [auto-delay dialog](#) ^[142] (in the menu) to apply delays to several fixtures in a systematical fashion.

Macros - detailed explanation

There are two types of movement macros, system macros and Bézier Shapes.

System Macros

The system macros are basically built up of sine/cosine relations - the simplest one is an ellipse (circle). The other system macros are made up of various other sine/cosine relations.

Let's take the circle as an example :

The engine works out the circle by applying an index into two arrays containing the sine and cosine values (ranging from -1 to +1) to form a circle.

The cycle time parameter controls how fast the index increments (or decrements if the direction is set to CCW) through the two arrays.

The sine value is then multiplied with the tilt amplitude value and applied to the tilt value of the fixture, likewise the cosine value is multiplied with the pan amplitude and applied to the pan value of the fixture. Finally these pan and tilt values are combined with the regular pan and tilt values obtained with the normal movement control.

The pan and tilt amplitude parameters has values ranging from 0 to 128, 0 represents no amplitude at all, 127 represents half a complete pan or tilt movement range. So to get a complete maximum size circle, home the fixture in pan and tilt, select the system ellipse macro. Apply maximum pan and tilt amplitudes and a moderate cycle time value. If the fixture is positioned differently from the home position (centered pan and tilt) it will be necessary to reduce the amplitudes, otherwise the fixture will be 'cut off' at the edges (easily seen in macro 'fixture' mode).

Do remember that the parameters may be faded as well as snapped; it is quite easy to create for

example a spiral in just two scenes - first scene with low amplitude amplitudes, second scene with high amplitude. Remember to set a good long fade time to see the spiral in effect.

Macros that has both pan and tilt cycle time parameters, use two individual indexes to look up the sine and cosine values. By using different values for the two cycle times, the indexes increments differently though the sine / cosine arrays - i.e. if one parameter has the double value of the other the result will be a figure-eight type of macro when using the ellipse as macro.

The delay parameter simply applies a constant value to the index(es).

The effect is quite easily seen : select a single fixture, and create a maximum circle macro. Now drag the delay parameter around. The fixture still performs the same macro, but it just uses a different position (index value) in the macro.

Applying delays to one fixture doesn't make much of a difference, but when more fixtures are applied different delay values the result is a much more complex look, as the fixtures will now have their individual position within the macro.

Finally the tweak value will add a constant value to one of the indexes only - this will 'tweak' the shape more or less depending on the actual parameter values.

Bézier Shapes

The Bézier shapes are another kind of macro where the shape is defined by generating a number of positions from lines between points. Click on "Bézier Shape" and then select "New Shape" - the macro-control shows the Bézier shapes editor (on the right) with the default diamond shape in it. The shape has a number of 'dragging' handles - the square ones are called *nodes*, the round ones are *handles*. There are two handles for each node.

It is easy to re-define the shape simply by dragging the nodes or handles around, manipulating it into another shape.

Right-clicking either on one of the nodes (the square ones) or somewhere on the grid gives several further manipulation methods. It is possible to add or remove nodes, rotate and zoom the shape, etc. It is also possible to straighten elements between nodes by making them into lines, or re-convert them into curves again.

To the macro engine, there is really no difference between the system macros and the Bézier macros, both are still represented as two arrays of values, one for pan and one for tile, and the engine still uses indexes to lookup the values of the macro, and the same system with cycle time and amplitude applies to the Bézier macros as well.

When the Bézier macro is modified the system re-calculates the array values on the fly, and applies them to the pan and tilt calculations.

Note that the values are calculated with a fixed amount of points between nodes - this means that the time taken for the macro to move between nodes are the same, regardless of the distance involved.

This means that a fixture will move slower between nodes that have a short path between them, and faster if the path is longer.

More about the indexes

The final note is about the indexes used to calculate the pan and tilt macro values. The index is **only** reset when the current output does **not** contain a macro. This has the effect that the position of the index depends on the previous output meaning that the macro picture involving many fixtures may look quite differently, if the fixtures were performing another macro just before the current macro.

To re-create a precise 'macro picture' ensure that the fixtures go through at least one scene of 'no macro' between macros, thus re-setting the index.

86 Movement Control

See also [Non Pan/Tilt Movement Controls](#)^[141]

See also [Movement Macro Engine](#)^[130]

Mouse vs. Touch devices for movement control

In order to obtain the maximum resolution for fixture pan/tilt positions, the pan/tilt grid implements a special interpretation of normal mouse commands so the virtual size of the grid may be extended to a maximum size of 65536 x 65536 (representing full 16 bit pan/tilt resolution).

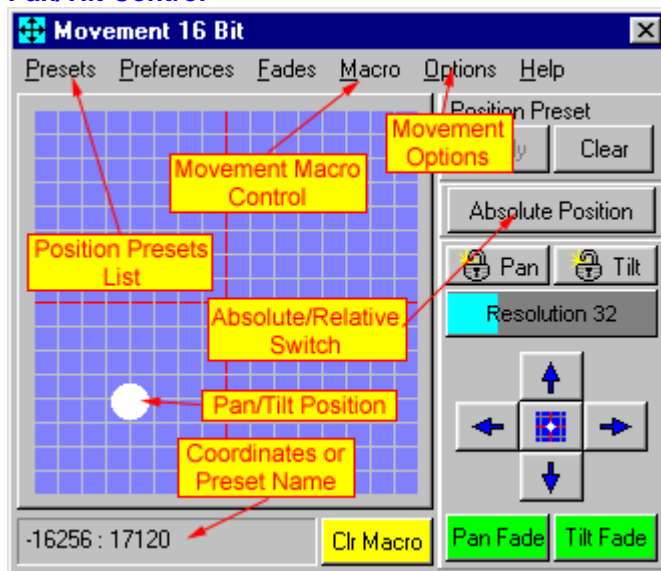
The special interpretation involves a programmatically reset of the mouse cursor position each time the mouse is moved. This approach does not work very well with touch devices where the cursor position (e.g. the users finger) cannot be reset by LJ.

To make the movement grid work with touch devices, select Preferences, Left-Click Mode, Touch from the movement control main menu. To switch back to normal mouse mode, select Preferences, Left-Click Mode, Mouse.

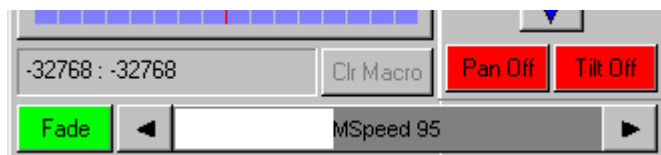
Note: Touch mode, can also be used with a mouse device - a touch device is not a requirement for using touch mode.

For more details on touch control, see below.

Pan/Tilt Control



The picture shows a typical pan/tilt movement control window containing controls for fixtures such as scanners with a mirror, or moving yoke fixtures. The primary control is the movement grid. The dot represents the absolute pan and tilt position of the mirror or yoke.

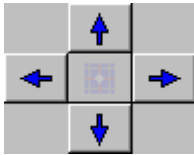


Some fixture profiles (usually [user defined profiles](#)^[256]) implement an extra 'speed' control on the movement control. The exact function of the speed parameter depends entirely on the fixture itself, as

different fixtures usually interpret the parameter in different ways (i.e. slow or fast at low values).

Adjusting the position of one or more fixtures

To adjust the the position of one or more fixtures, select the fixtures, then in the movement grid, left-click and drag the white dot to the desired position. Alternatively use the arrow buttons as described below.



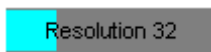
It is also possible to move the pan and tilt by using the arrow buttons in the lower right side of the control. Click and hold a button to move the fixture in a given direction.



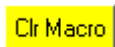
Finally, the fixture can be 'Homed' (50% pan, 50% tilt) by clicking on the home button between the arrows.



The two buttons marked pan lock and tilt lock will lock the pan and tilt movements respectively. When either pan or tilt is locked the position can be moved in one plane only.



Use the "Resolution" drag control to adjust the fineness of the movement controls. The less the delta value, the less the position will change when dragging in the movement grid, or when clicking the arrow buttons.



Use this button to clear an active macro.

Left-click options

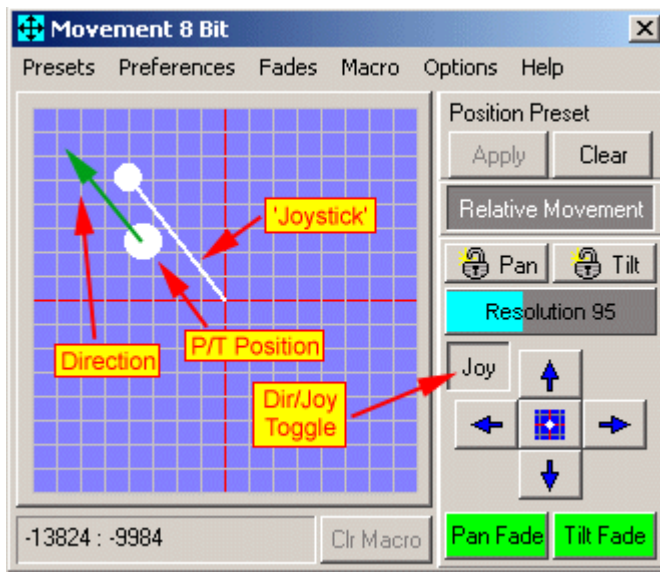
Use the preferences menu to select one of two left-click modes:

Mouse Mode (default) - select this mode when using a mouse or trackball type device to control position.

Touch mode - select this mode when working with a touch type device.

Touch Mode

When in left-click touch mode, there are two distinct operation modes. Direct mode or 'joystick' mode. The two modes are toggled between by clicking the Dir/Joy button located next to the 'arrow' buttons.



Movement grid, joystick mode.

Direct Mode

When in Direct Mode (Dir), the pan/tilt is set according to the position in the grid - resolution factor is ignored.

Joystick Mode

In Joystick mode, the pan/tilt position is continuously modified as long as the device is 'activated'. The distance from center is combined with the resolution parameter to define a 'speed' of position change - the direction of change is given by the direction of the 'line'. The direction/speed is illustrated by a 'joystick' superimposed on the pan/tilt grid.

Note: Joystick mode has nothing to do with a physical joystick. The movement grid cannot use an attached Joystick to control position.

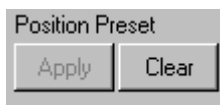
Right-click options

Use the preferences menu to select one of two right-click modes.

Goto Position (default mode) - the 'dot' jumps to the position where the cursor is located. Note that relative movement (see below) does not work with goto position.

Lock Cursor in Grid - the mouse cursor locks to the 'dot' until the next mouse click (handy option when using the [followspot](#)^[344] option).

Note: that if Left-click Touch mode is selected, all right-clicks will be Goto Position regardless of setting.



See [Position Presets](#)^[139] for an explanation on how to use the position presets.

See [Movement Macro Engine](#)^[130] for an explanation of how to create automated movements such as circles or squares.

See [Off/Snap/Fade](#)^[128] for an explanation of the pan and tilt fade buttons.

For the Fade menu see [Sequence Fades](#)^[182]

Absolute positioning vs. Relative movement



Use the absolute/relative button to toggle between 'Absolute Position' and 'Relative Movement' mode.

When in absolute position mode all [selected fixtures](#)^[120] are programmed with the same position information (i.e. pan, tilt = -1234,1234).

In relative movement mode all selected fixtures are programmed with the same relative movement distance. This means that if the pan position of the master fixture is moved 50 positions to the left, all selected fixtures are programmed to move the position 50 positions to the left. The relative mode may be used to keep beams together, or held in a specific pattern, when moving multiple fixtures around, although the usefulness depends on the fixtures position and where the pan and tilt is pointed. See also [followspot functions](#)^[344].

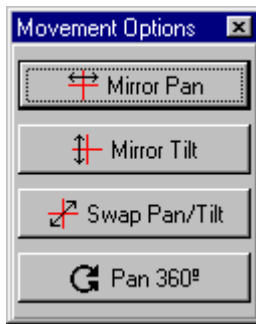
Right-clicking on the movement grid or clicking the home button always uses absolute position mode.

Notes on relative movement

Since fixtures with 8-bit pan/tilt has much less resolution on pan and tilt positions than 16-bit fixtures, moving both 8- and 16-bit fixtures in relative mode in a 16-bit movement control (16-bit fixture as master fixture) does not work properly. Small movement values are simply rounded off and possibly ignored when sent to 8-bit fixtures. To move 8- and 16-bit fixtures together in relative mode, make sure an 8-bit fixture is selected as master fixture.

The Options Menu

Position Options



The position options control is accessed from the options menu on the movement control.

Mirror Pan

The pan position is mirrored over the vertical centerline (pan = 0) on the movement grid.

Mirror Tilt

The tilt position is mirrored over the horizontal centerline (tilt = 0) on the movement grid.

Swap Pan / Tilt

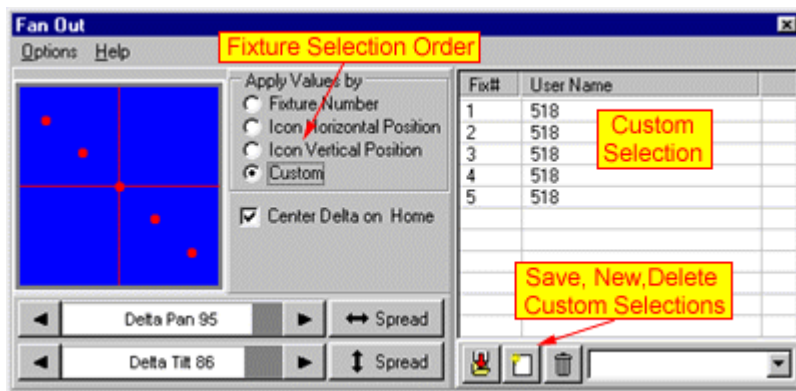
The fixture's pan and tilt coordinates are swapped.

Pan 360

May be used to program fixtures with more than a 360° pan range (moving yoke fixtures).

The functions of the position options may also be assigned to keyboard [hotkeys](#)^[19]. Note that individual functions are only enabled if supported by the fixture profile.

Fan Out



The Fan Out dialog is accessed from the options menu on the movement control.

The fan out dialog is used to set various fan-out patterns quickly in installations with fixtures hanging symmetrically.

The fan out tool does not create effects or macros, it simply works by modifying pan and tilt values on all selected fixtures in the current scene by symmetrical amounts.

To create a fan out pattern, select two or more fixtures and drag the delta pan and delta tilt bars to set the range of the fan out. If an odd fixture number is selected, the 'middle' fixture will act as a center for the pan and tilt fan-outs respectively. If an even number of fixtures is selected, the pattern will form around a 'virtual' center fixture.

Use the *Center Delta on Home* to default the middle fixture's pan and tilt to the home position.

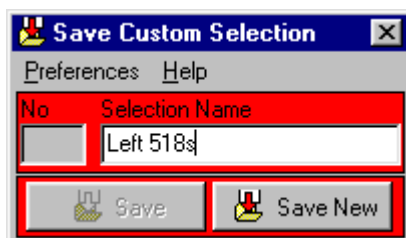
The spread functions are used to spread the pan and tilt over a 'physical' range. It works by distributing the pan and tilt delta from the actual position of the first and last fixture in the selection order. The effectiveness of the spread function depends very much on the actual physical locations of the fixtures.

The order of which the pan and tilt delta values are applied to the fixtures may be changed in the *apply values by* selections.

Using the custom options opens up a list where the fixture order may be customized. To add a fixture to the list, select the fixture icon. To remove a fixture from the list, deselect the fixture icon. The selection order may be changed further, by dragging the lines around in the list. Custom selections may be saved for later use.



This button will open the save selection dialog.



Click the save to button to re-save an existing selection or *save new* button to save the current selection as a new custom selection.

Previously saved selection are available from the selection box in the lower right hand corner of the control.



Clicking this button will clear the current selection.



Clicking this button will delete the selection.

87 Position Presets

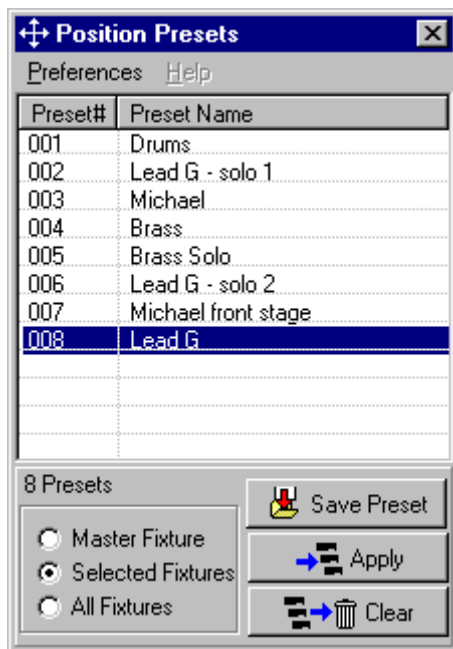
See [what is a preset](#)^[124].

Position presets are only available for fixtures with pan/tilt control.

The maximum number of position presets that can be created is 99.

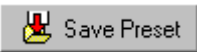


The position preset list is accessed through the **Preset** menu on the [movement controls](#)^[134].



Position Preset list

Creating and editing presets

Before any presets can be applied to fixtures, they must be created first. Create a preset by moving the individual fixtures to the desired position and click  on the preset list. (hint : give the preset a good name that identifies that position clearly - this will save time later when editing the presets).

The preset will now show up on the preset list.

When saving a new preset, a value will be saved for all fixtures - fixtures excluded by the fixture selection (see below) will save the default top/left pan/tilt position.

When editing a preset, the fixture selection on the preset list will decide which fixture positions are resaved within the preset :

Master fixture	This will save values for the master fixture only.
Selected Fixtures	This will save values for all selected fixtures.
All Fixtures	This will save values for all fixtures.

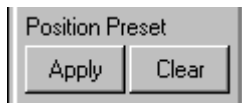
For an explanation of 'master' and 'selected' fixtures see [Selecting Fixtures](#)^[120]

This means that it is possible to edit a preset position on the fly for one fixture only (the master) without having to worry about the other fixtures presets.

Make sure that the correct preset is selected in the preset list before re-saving the preset.

Applying presets to fixtures

There are two ways of applying presets to the fixtures.

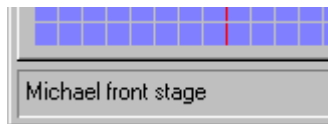


The first way is to highlight a preset in the list, and then use the apply button on the [movement control](#)^[134]. This will apply the preset to all [selected](#)^[120] fixtures.



The second is to select highlight the preset line in the preset list, and then click the apply button. Or simply double-click the preset line. This will apply the selected preset to the fixtures defined by the fixture selections on the list :

Master fixture	This will apply the preset to the master fixture only.
Selected Fixtures	This will apply the preset to the selected fixtures.
All Fixtures	This will apply the preset to all fixtures



Once a preset has been applied the usual pan/tilt coordinates in the bottom of the movement control will be replaced by the preset name.

Removing presets from fixtures

There are also a number of ways to remove a preset from fixtures. The easiest is to select the Clear button on the movement control, this will 'dissolve' the preset into the pan and tilt values contained in the preset. Alternatively use the clear button on the preset list, and set the fixture selection accordingly. Finally, any changes in pan and tilt values in the movement control, will clear the fixture automatically and replace the preset with the physical pan and tilt values. When editing a preset, do remember to re-save the preset.

Deleting presets

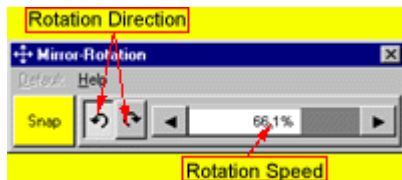
To delete a preset, right-click the preset in the preset list and select delete preset. Note that it is possible to delete a preset that is all ready in use in sequences. A deleted preset is not actually physically deleted, as all values are reset to default.

Auto Apply Preset

The preferences menu contains an option to automatically apply the preset to the fixtures when saving the preset. Saving with this option enabled is identical to saving the preset, and then click the apply button on the preset list.

88 Non Pan/Tilt Movement Controls

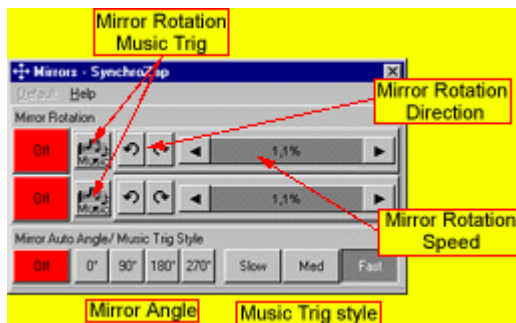
RoboZap Movement Control



The RoboZap movement control is used to program the rotating mirror drum of the RoboZap. Clicking on one of the two direction-buttons sets rotation direction. The speed [drag control](#)^[176] sets the speed of the rotation.

To stop the rotation, click the 'active' direction button to disable the rotation.

SynchroZap Movement Control

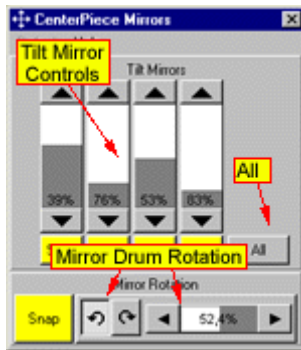


The SynchroZap movement control controls both of the revolving mirror drums.

For each of the two drums, clicking on one of the two direction-buttons sets rotation direction. The speed [drag control](#)^[176] sets the speed of the rotation.

The music trig buttons instructs the fixture to use its own internal microphone to trig random mirror drum movements, the 'style' of movements can be selected via the **Music Trig Style** buttons. Finally, the **Mirror Angle** Buttons, can be used to 'slave' the second drum in a specified angle to the first drum.

CenterPiece Movement Control



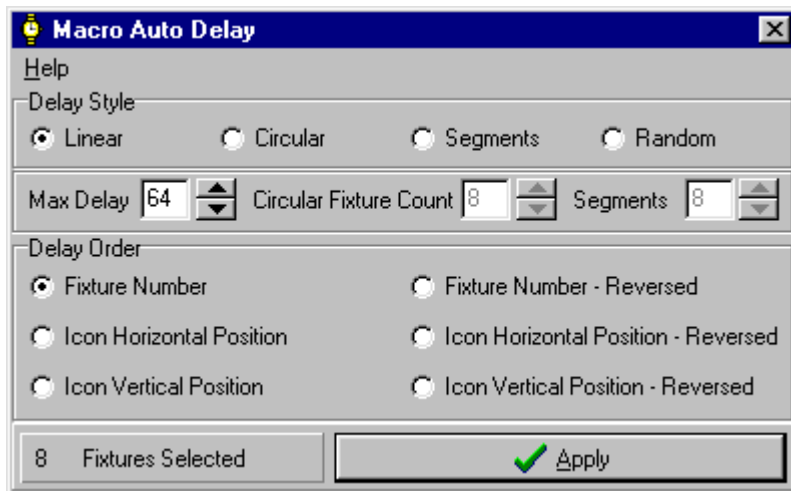
The CenterPiece movement control features 4 controls for each of the pairs of tilt mirrors, and a control for directing the rotation of the mirror drum.

To set a tilt mirror position, simply [drag](#)^[176] the tilt control to the desired position - using the **All** button it is possible to synchronize all 4 tilt controls.

On the rotation control, clicking on one of the two direction-buttons sets rotation direction. The rotation speed [drag control](#)^[176] sets the speed of the rotation. To stop the rotation, click the 'active' direction button to disable the rotation.

89 Auto Delay control

The autodelay function is accessible from the menu of the [movement macro control](#)^[130].



The Autodelay Dialog

The autodelay works by automatically applying a delay to the [movement macro](#)^[130]. It will not work with any other kinds of functions.

Use the autodelay dialog to automatically apply a range of calculated delays over a series of fixtures.

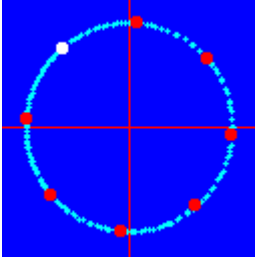
To automatically apply a delay to a range of fixtures, simply [select](#)^[120] the fixtures on the desktop. While the delays will normally be a part of the same sequence that contains the other macro parameters, they don't have to - they can easily be part of another sequence in the cue.

When applying the delays, use the Macro Control (make sure to check **Track All Selected Fixtures** in the preferences menu) to visualize the delays applied.

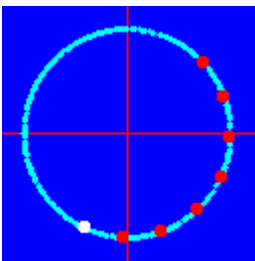
Max Delay

The delays applied to the fixtures are normally spread over a range of 0% to almost 100% (100% is identical to 0%). Use the Max Delay parameter to limit the maximum delay applied. The Max delay values ranges from 1 to 256, 256 represents the maximum delay, 128 represents a maximum 50% delay, etc.

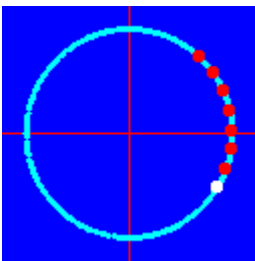
Lower the Max Delay value to generate **Follow the Leader** type of effects.



System Ellipse, Max Delay = 256 (100%)



System Ellipse, Max Delay = 128(50%)



System Ellipse, Max Delay = 64(25%)

Delay Style

Linear delay is applied to the fixtures in a linear fashion, ranging from 0% to 100%.

For example if a linear delay is applied to 4 fixtures you will see the following delays applied.

- Fixture 1: delay 0% - of Max Delay.
- Fixture 2: delay 25% - of Max Delay
- Fixture 3: delay 50% - of Max Delay
- Fixture 4: delay 75% - of Max Delay

The linear delay ensures that no fixture will have the same delay.

Circular delay means that the fixtures are applied a linear delay in a circular (repeating) pattern. Use the **circular fixture count** value to indicate how many fixtures in a pattern. For example if a circular

delay is applied to 6 fixtures with a fixture count of 3 the following delays will be applied :

Fixture 1: delay 0% - of Max Delay
Fixture 2: delay 33% - of Max Delay
Fixture 3: delay 66% - of Max Delay
Fixture 4: delay 0% - of Max Delay (repeating the pattern)
Fixture 5: delay 33% - of Max Delay
Fixture 6: delay 66% - of Max Delay

Using the maximum number as the fixture count values (total number of fixtures selected) has the same effect as applying a linear delay.

Segments applies the delay to the fixtures in segments. This usually means that two more fixtures in the delay order (see later) will get the same delay. The function will divide the fixtures into the number of segments indicated in the **segments** value, so if 6 fixtures are applied a segmented delay with a segment count of 3, the following delays are applied to the fixtures:

Fixture 1: delay 0% - of Max Delay
Fixture 2: delay 0% - of Max Delay
Fixture 3: delay 33% - of Max Delay
Fixture 4: delay 33% - of Max Delay
Fixture 5: delay 66% - of Max Delay
Fixture 6: delay 66% - of Max Delay

Random delay is applied to the fixtures randomly (taking the Max Delay value into account).

Delay Order

It is also possible to control in which order the delay is applied to the fixtures. The order can be either by fixture number or fixture icon horizontal or vertical position. Just another reason to spend a little time mimicking the physical setup on the desktop.

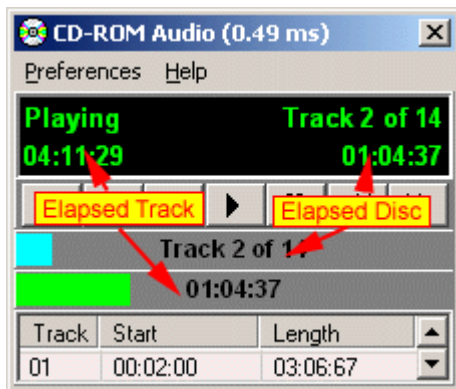
90 Audio CD Control

For troubleshooting see [Audio CD-ROM Trouble-shooting](#)^[356]

In order to get access to the audio functions from the CD-ROM drive, the drive must be configured in "[Hardware Setup](#)^[24]" dialog.



After configuration and a restart of LightJockey, the CD audio control will be available from the CD-icon on the [Cuelist toolbar](#)^[103].



The CD control functions like any domestic CD player, play, forward, next track etc. The [drag bars](#)^[176] may also be used to set the playing position.

When the CD time-code is used to drive a [cuelist](#)^[276] elapsed disc time is always used.

Analogue vs Digital Playback in Windows 2000 and XP

Windows 2000 and XP offer the option to playback CD audio mode - which may be a great option if there is no analogue connection from the CD/DVD drive to the soundcard. The response time from the digital mode driver seems to be much faster than the analogue driver.

However, experience shows that in digital mode the 'true' timecode update rate may actually be much slower than in analogue mode - the digital audio driver simply just returns the same timecode for sequential timecode requests.

The best way to check for the 'real' timecode update rate is to open an empty cuelist. Then open the timecode log panel in CD timecode mode, and hold down the [Ctrl] key for about 2-3 seconds to continuously log time codes from the CD drive (*). Then add the time codes to the cuelist and check the time between individual time codes.

(*) It may be necessary to set keyboard repetition rate to max to log as many time codes as possible.

Preferences Menu

[View Track Info](#) - Expand the control to show individual track time information.

CD Device Settings, Status Timer Interval

Set a rate between 50ms to 1000 ms or select minimum (fastest) - default value is 100 ms. Minimum depends on system, but is usually around 5 to 7 ms.

The lower the value the more often the timecode is read from the CD-ROM, allowing for a more precise timecode triggering of the cuelist. However some Windows versions/CD-ROM drive combinations take a very long time (25-100+ ms) to return time code for the CD-ROM. Setting a low value on a 'slow' system may slow down the PC a lot, even to the point of choking the PC. The caption of the CD control continuously displays the time taken for the last status polling - setting a time polling time at about or lower than the average polling time will cause the system to slow down a lot.

Tests have shown that the way Windows 2000 and XP drives the CD-ROM drive seems much more effective than Windows 9X (although this may not apply to all systems) - if CD audio is a crucial element of a Windows 9X system and response time from the drive is high (50ms+), it may be a good idea to upgrade the PC to Windows 2000 or XP.

Commands

Even though Microsoft has published a command interface for use of CD-ROM, not all Windows versions/drive combinations seem to work according to the command set - if the drive doesn't work as expected try set or clear the following options (by default all options are on).

[Use Stop as Pause Command](#) - The control issues a stop rather than a pause command (some drives

does not seem to recognize the pause command).

[Pause before cuing position](#) - Some drives ignores a position command if they are already playing.

Check this option to issue a pause command before re-positioning.

[Invalidate Timecode when stopped](#) - some drives return invalid or wrong time code when stopped (which may cause the cuelist to behave strangely). Check this option to automatically invalidate time (set to 0) code when the drive is stopped or paused.

91 Intensity Controls



Click the Intensity icon on the [Fixture controlbar](#)^[106] to open to the fixture Intensity Control.

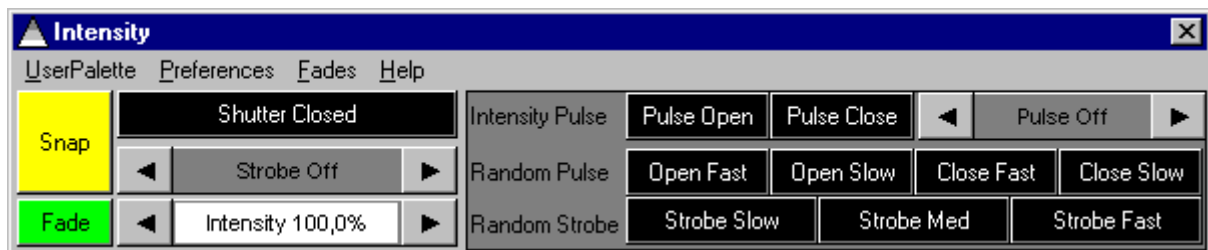
See also [drag controls](#)^[176]

See also [off/snap/fade](#)^[128]

See also [special functions controls](#)^[178]

See also [Sequence Fades](#)^[182]

See also [Intensity Controls for User defined Profiles](#)^[147]

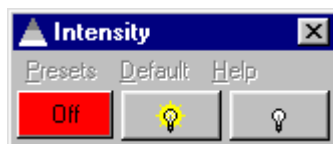


Example MAC500/Roboscan 918 intensity control.

An intensity control usually contains a shutter button, a strobe and an intensity [drag bar](#)^[176]. The shutter button controls the fixture shutter (light on/off), while the intensity bar controls the actual intensity of the light output. Note that not all fixtures have separate shutter and intensity controls, and some fixtures do not have any intensity controls at all (i.e. Roboscan 812 that uses color and gobo wheels to obtain a blackout). However with fixtures implementing both a shutter and an intensity control, the shutter must be opened in addition to the intensity setting to enable any light output.

The strobe [dragbar](#)^[176] controls the strobe frequency.

Note that shutter, intensity and strobe controls are compatible across fixture types.



Some intensity controls may implement lamp controls to control power to a fixture equipped with a halogen lamp. Do **NOT** confuse this with the [lamp control](#)^[165] that is for discharge lamps only.

See also ["off/snap/fade"](#)^[128]

The [Special functions controls](#)^[178] seen in the example may be shown or hidden from the local preferences menu.

92 Intensity Controls for Userdefined Fixtures



Click the Intensity icon on the [Fixture controlbar](#)^[106] to open to the fixture Intensity Control.

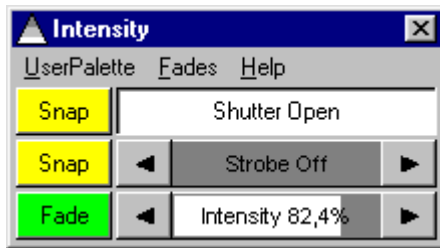
See also [drag controls](#)^[176]

See also [off/snap/fade](#)^[128]

See also [special functions controls](#)^[178]

See also [Sequence Fades](#)^[182]

See also [Intensity Controls](#)^[146] for built in fixtures.



Intensity control

An intensity control usually contains a shutter button, a strobe and an intensity [drag bar](#)^[176], although the actual contents depends entirely on the [user defined profile](#)^[267]. Some profiles may not have intensity functions at all, while other fixtures may combine controls on the same channel making it impossible to program effects individually.

Use the shutter button to open and close the fixtures shutter (light on / off) - note that smaller fixtures often does not have separate shutter and emulates shutter with the gobo or color wheel.

Use the strobe [drag bar](#)^[176] to program the strobe speed from minimum to maximum frequency - again note that some fixtures actually use the gobo or color wheel to strobe.

Finally, use the intensity [drag bar](#)^[176] to program the intensity level for the fixture.

93 Effect Controls



Use the Effects icon on the [Fixture controlbar](#)^[106] to open to the Effects control. Programming effect control are very much like programming the [gobo controls](#)^[156].

See also [drag controls](#)^[176]

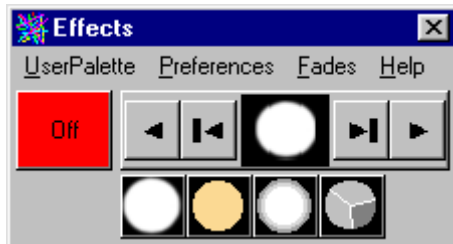
See also [off/snap/fade](#)^[128]

See also [special functions controls](#) ^[178]

See also [Sequence Fades](#) ^[182]

See also [Customizing Palettes](#) ^[125] for built in fixtures and [User defined fixture profiles](#) ^[267].

Fixed Effects



Roboscan 518 with one fixed effect wheel

The control implements two ways of selecting an effect.

Using the [scroll control](#) ^[175] to select a effect:



Use these buttons to select an effect.



To position the effect wheel between effects for a split effect use the split buttons. Not all fixtures may allow split effect positions.



Alternatively, use the [effect palette](#) ^[177] to select effects directly by clicking on the individual effect icons.

The effect palette may be hidden by un-checking **show palette** in the control preferences menu - check **show palette** to make the palette visible.

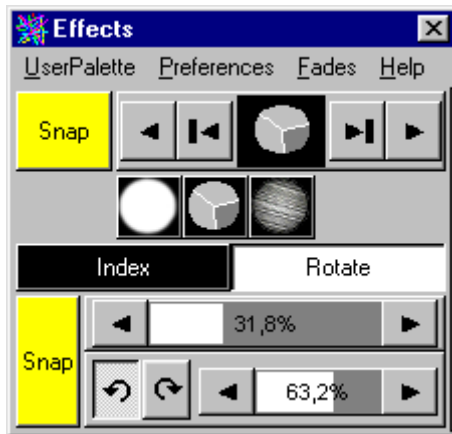
Controls with a single effect



Mac 500 Effect Control

Some fixtures such as the MAC 500 implement a single effect only. In this case click the 'effect button' to enable or disable the effect.

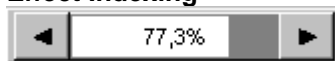
Rotating Effects




MAC 2000 rotating effects control.

Select rotating effects the same way as selecting fixed effects, using either the scroll control or the effect palette.

Effect Indexing



If the fixture is capable of indexing the effect use the index [drag control](#)^[176] to set the actual index. On fixtures with 16-bit effect index, hold down [Shift] and [Ctrl] keys to increase the changes in index when clicking the  buttons.

Effect Rotation



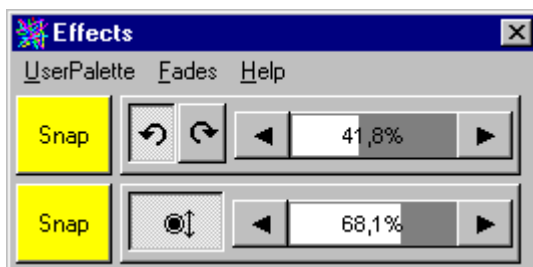
Use the rotation control to set rotation direction using the CW and CCW buttons and speed using the [drag-control](#)^[176].

Rotation Mode



Fixtures may often use the same control channel for rotation and indexing parameters. In this case it is not possible to program individual rotation and indexing parameters in the same scene (it would also not make much sense) - setting a rotation value effects the index value and changing the index value effects the rotation values. The actual response from the fixture (rotation or index) is determined by the rotation mode setting. Use the rotation mode buttons to select mode - note that it is usually not possible to rotate the first open effect.

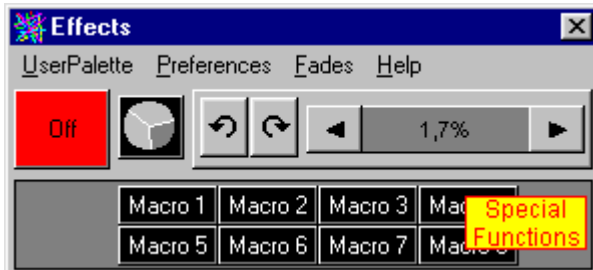
Other effect palettes



Punisher Effect Control.

Some effect controls may control other types of effects as well. In the above example the effect control is used to set the rotation direction and speed, as well as the shaking effect of the Punisher mirror parabola.

Special Effect functions



Some fixtures may implement [special functions](#)^[178], such as macros or random functions. Check **Show Special** in the effect controls preferences menu to see any special functions. Un-check **Show Special** to hide any special functions.

94 Effect Controls for Userdefined Fixtures



Click the Effect icon on the [Fixture toolbar](#)^[106] to access the Effect control.

See also [drag controls](#)^[176]

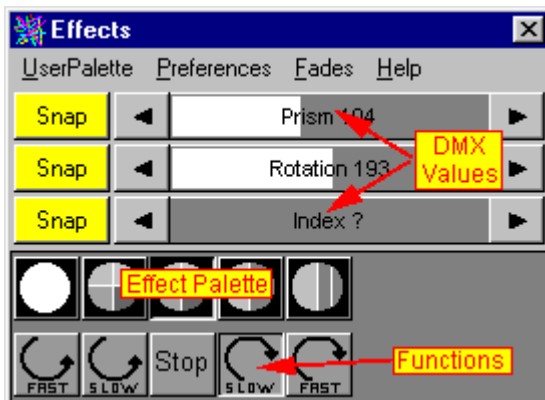
See also [off/snap/fade](#)^[128]

See also [special functions controls](#)^[178]

See also [Sequence Fades](#)^[182]

See also [User Definable Fixtures](#)^[267].

See also [Effect Controls](#)^[147] for built-in fixtures.



The actual contents of the Effect control depends entirely on the [user defined profile](#)^[267].

The control usually implements both [drag bars](#)^[176] for programming of DMX values directly and palette buttons for direct effect selection.

The drag controls and palette buttons may affect one or more DMX control channels.

Drag controls are also often used to control functions such as prism rotation or indexing, or effect wheel scroll.
Some controls may also implement palette buttons for effect related functions such as effect wheel scroll.

Note that the control may implement control of more than one effect wheel or type of effect.

95 Fixture Controls



Fixture Controls

-  [Intensity](#) ^[146]
-  [Movement](#) ^[134]
-  [Colors](#) ^[159]
-  [Gobos](#) ^[156]
-  [Beam](#) ^[176]
-  [Effects](#) ^[147]
-  [Extended Controls](#) ^[163]

-  [Lamp controls](#) ^[165]

-  [Generic DMX / Level Controls](#) ^[167]
-  [Resetting fixtures](#) ^[166]

See also

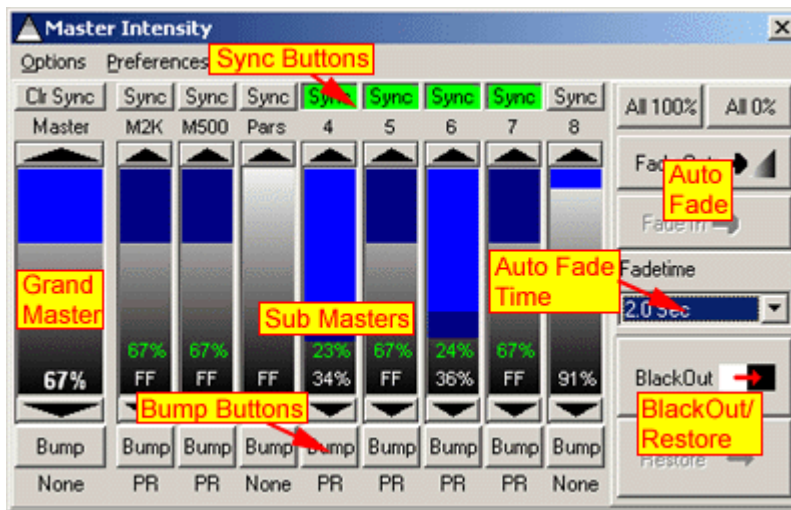
-  [Master Intensity](#) ^[151]
-  [Blackout/Restore](#) ^[155]

96 Master Intensity

Open the Master Intensity Control by clicking on  on the [Fixture toolbar](#) ^[108].

See Also [DMX In](#) ^[304].

See Also [Sequence Intensities](#) ^[196]



The master intensity control features a Grand Master and 8 sub-masters. The Grand Master and sub-masters are used to regulate the overall intensity of the fixtures controlled by LightJockey.

LightJockey will use the fixtures intensity controls to modify intensity levels. Some fixtures however do not implement means of controlling intensity. For example the Roboscan 218 only has shutter control for a light on/off control, Roboscan 812 or RoboColor III use gobo and or color wheels to obtain a blackout, these fixtures cannot regulate intensity beyond on/off. In this case LightJockey will blackout the fixture using shutter or color or gobo wheels when the overall intensity level reaches 0%.

By default a warning will appear on the screen when Blackout or auto fade in or out is engaged. This warning may be disabled in the [System Preferences Menu](#)^[109].

The Grand Master and sub-masters functions may be controlled via [DMX-in](#)^[304].

Grand Master

The Grand Master by default modifies the intensity level of all fixtures. The exception are fixtures assigned to sub-masters that are unaffected by the master (see below), and fixtures that are set to ignore the Grand Master in the [fixture configuration](#)^[40].

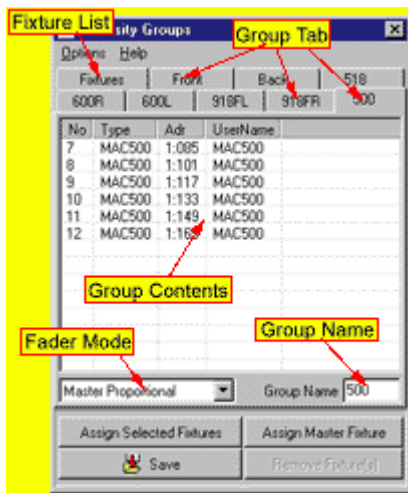
Both the grand master and sub-masters modify the level **proportional** to the programmed intensity level - they are not overwriting controls. That means if a fixture is programmed to 50% intensity and the grand master is set to 75 %, the resulting intensity is 75% x 50% = 37.5%.

The 8 sub-masters may be used to control the intensity level of groups of fixtures. Note that besides being modified by the grand master, the intensity level of a fixture can only be controlled by one other sub-master. The resulting intensity levels of the sub-masters them selves also depend on the level of the grand master as well (see below).



Note that the current level of the Grand Master is indicated on the status bar as well.

Sub Masters and Intensity Groups



The 8 sub-masters each work on 8 individual intensity groups. To assign fixtures to intensity groups, select **Groups** from the master intensity control menu.

The group intensity dialog contains 9 different lists accessed by the group tabs. The first list named 'fixtures' lists all the fixtures configured in LightJockey together with the group they are currently assigned to. If a fixture is not assigned to any groups it will indicate *master* as group control.

To assign fixtures to a group, activate the group on via the tab, and then [select](#)^[120] the relevant fixture icons on the desktop. After the relevant fixtures have been selected, click the **assign selected fixtures** button to assign the selected fixtures to the group. The **Assign Master Fixture** button will assign the master fixture only. If the fixture(s) are already assigned to another group, they will automatically be removed from that group. To remove fixtures from a group without assigning them to another group, highlight the fixtures in the group list and click **Remove Fixture(s)**.

The intensity groups can be given a name of up to 5 characters.

Note that modifications to groups do not take effect until saved.

The Bump Buttons

Each of the 9 faders has a bump button assigned. Left clicking and holding the bump button forces the level of the fader to full for as long as the button is held down. When released the level will return to the previous level before the button was pressed.

To latch the bump status (keep the button down without holding the mouse button) rightclick the button. When latched the bump status is kept at full until the button is clicked again.

A typical use of the bump buttons is to 'flash' fixture intensities manually to the beat of the music. The bump button functions may also be assigned to [keyboard hotkeys](#)^[19]

Note that bumping a fader will overwrite any level set by remote input (i.e. DMX in).

The Sync Buttons

The Sync buttons may be used to synchronize 2 or more sub-masters. When sync is enabled for multiple faders, the faders will synchronize their levels as soon as one is changed (including bump commands). Note that the sync has no effect on faders under remote control.

Sub Master Modes

The sub-masters may operate one of in 4 different modes.

Master Proportional mode

In this mode the master level modifies the sub-master just as fixture intensity is modified by the Grand Master. This means that if a fixture is programmed at 75% intensity, and it belongs to an intensity group at 50% and the Grand master is at 30% the resulting intensity will be $75\% \times 50\% \times 30\% = 11.25\%$.

Master LTP Mode (*)

In this mode intensity is decided by comparing the Grand Master level with the Sub Master level. What ever level is lowest is used to modify the fixture intensity (lowest take priority). This means that a sub master in LTP mode will still be faded out when the Grand Master fades below the sub master level. (*) The usual meaning of LTP is last (not least) takes precedence.

Master HTP Mode

Same as LTP mode, only the higher value is used (highest take priority). In this case the sub master will not fade below it's set level. This mode is especially useful for fixtures that should never dim out completely (i.e. front lights).

Master No Effect

In this mode the sub master is not affected by the Grand Master at all. Assigning fixtures to a non affected intensity group is the only way to stop fixtures being modified by the Grand Master.

Auto Fade out and in

The **Fade Out** and **Fade In** provides a tool to make timed fades on the Grand Master. It is also usually obtains a smoother fade than trying to fade directly on the screen with the mouse. Note that the **Fade In** button is only enabled when a fade out or blackout is currently active (since it needs a level to fade in from). Likewise the **Fade Out** is not active as long as a blackout or fade out is active.

It is possible to select between different times for the fade out/in. The times range from 0.5 second to 10 seconds in 0.5 seconds interval.

Note that selecting another the time will not affect a current active fade.

It is possible to fade in from a blackout, however this may not work on all types of fixtures as the fade uses the intensity function of the fixture, while blackout uses the shutter function to obtain blackout as fast as possible. For this reason fading in from a blackout will not work on for example a Roboscan 218 or Mac 600. However on fixtures with a physically combined shutter/dimmer fading in from a blackout will work just fine.

The auto fade out and fade in functions may be assigned to [keyboard hotkeys](#)^[19].

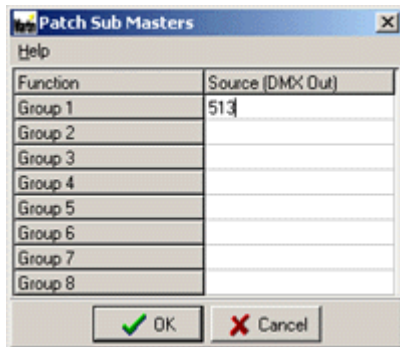
Blackout and Restore

The blackout / restore buttons duplicate the function of the single blackout/restore button on the [Fixture toolbar](#)^[10b]. It is possible to restore from a fade out.

See Also [Blackout/Restore](#)^[15b]

Options Menu

Patch Submasters



Patch Submasters dialog

The submaster patch offers the possibility of controlling the value of a sub master from a 'normal' DMX output channel. The option is probably useable in special situations only. An example of use would be to automatically fade a number of generic DMX channels while simultaneously running a chase on those same channels.

To use the option, configure a generic DMX fixture (up to 8 channels) and patch the addresses of the generic DMX output from the individual channels to the sub masters. Remember to include the relevant fixtures in the sub master group.

Hint: Record a default DMX output with sub master controlling channels set at max.

Preferences menu

Show Master Only

Check to hide the sub-masters, thus making the control take up less space on the desktop. Note that the sub-masters will be active even though hidden.

Show Values as %

It is also possible to toggle between values displayed on the fader between absolute values or % values.

Synchronize Bump

Check to enable simultaneous bumps on synchronized masters.

97 Blackout/Restore

The blackout function of the LightJockey is a global blackout. This means that when blackout is engaged, LightJockey will select the fastest way of disabling the light output on the fixtures. This usually means using the fixtures shutter. For fixtures without a shutter LightJockey will use alternatives to try to blackout the fixture - i.e. the RoboColor II us blacked out by shutting the halogen lamp off, and the Roboscan 812 is blacked out using the gobo wheel.

Use the Restore function to restore all fixtures from the blackout.

Blackout can be selected either from the  icon on the [Fixture toolbar](#)^[106], or via the [Master Intensity Control](#)^[151]. The Icon on the fixture toolbar works as a toggle button, when clicked the first time, it will set the blackout - when clicked a second time it will restore the fixtures from the blackout.

By default a warning will appear on the screen when blackout is engaged. This warning may be disabled in the [System Preferences Menu](#)^[109].

See also [Master Intensity](#)^[151]

98 Gobo Controls



Use the Gobo icon on the [Fixture controlbar](#)^[106] to open to the gobocontrol.

See also [drag controls](#)^[176]

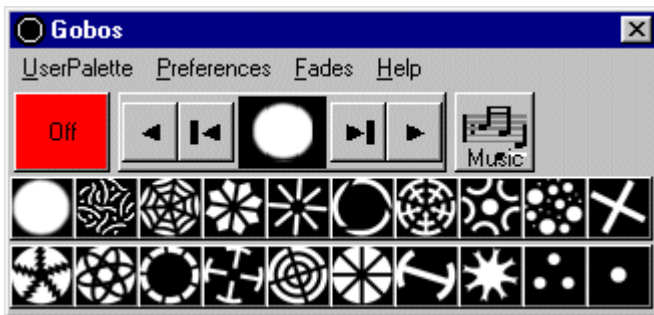
See also [off/snap/fade](#)^[128]

See also [special functions controls](#)^[178]

See also [Sequence Fades](#)^[182]

See also [Customizing Palettes](#)^[125] for built in fixtures and [User Definable Fixtures](#)^[267].

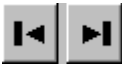
Fixed Gobos



MX-4 with one fixed gobo wheel

The control implements two ways of selecting a Gobo.

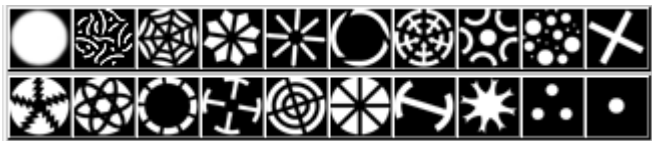
Using the [scroll control](#)^[175] to select a gobo :



Use these buttons to select a full gobo.



To position the gobo wheel between gobos for a split gobo effect use the split buttons. Not all fixtures may allow split gobo.



Alternatively, use the [gobo palette](#)^[177] to select gobos directly by clicking on the individual gobo icons. The gobo palette may be hidden by un-checking **show palette** in the controls preferences menu - check **show palette** to make the palette visible.

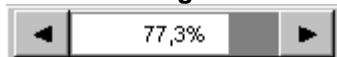
Rotating Gobos




MAC500/Roboscan 918 Rotating gobo controls.

Select rotating gobos the same way as selecting fixed gobos, using either the scroll control or the gobo palette.

Gobo Indexing



If the fixture is capable of indexing the gobo use the index [drag control](#)^[176] to set the actual gobo index. On fixtures with 16-bit gobo index, hold down [Shift] and [Ctrl] keys to increase the changes in index when clicking the  buttons.

Gobo Rotation



Use the rotation control to set rotation direction using the CW and CCW buttons and speed using the [drag-control](#)^[176].

Rotation Mode

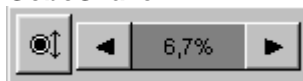


Fixtures may often use the same control channel for rotation and indexing parameters. In this case it is not possible to program individual rotation and indexing parameters in the same scene (it would also not make much sense) - setting a rotation value effects the index value and changing the index value effects the rotation values. The actual response from the fixture (rotation or index) is determined by the rotation mode setting. Use the rotation mode buttons to select mode - note that it is usually not possible to rotate the first open gobo.

Other Gobo Controls

Some fixtures offer other gobo options as well as selecting or rotating gobos.

GoboShake



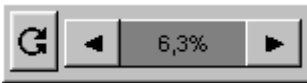
Goboshake, the fixture 'shakes' the gobo wheel around the selected gobo. Use the "gobo shake" control to enable and adjust the speed of the gobo shake. Note that the fixture may now allow gobo shake on all selectable gobos.

Gobo Wheel Scroll



Continuous rotation of the gobo wheel. Use the control to set the scroll direction and speed. Not all fixtures may allow the wheel to scroll both ways.

Gobo Swing



Gobo swing instructs the fixture to 'swing' the selected gobo (rotate the gobo back and forth). Use the control to set the swing speed and amplitude.

Fixture Triggered Gobos

Available on the Martin MX/CX series. The command sets the fixture to control the gobowheel in either auto or sound triggered mode, other control attributes (movement, colors) are not affected. The actual mode is programmed via [Extended Controls](#)^[163]. If neither auto or music trig has been programmed, the button displays a ? indicating an unselected trig mode.



Unknown (not programmed) trig mode



Auto trig mode



Sound trig mode

Special Gobo functions

Some fixtures may implement uncommon special functions. Check **Show Special** in the gobo controls preferences menu to see any special functions. Un-check **Show Special** to hide any special functions.



MiniMac profile random gobo settings.

99 Gobo Controls for Userdefined Fixtures



Click the Gobo icon on the [Fixture toolbar](#)^[106] to access the Gobo control.

See also [drag controls](#)^[176]

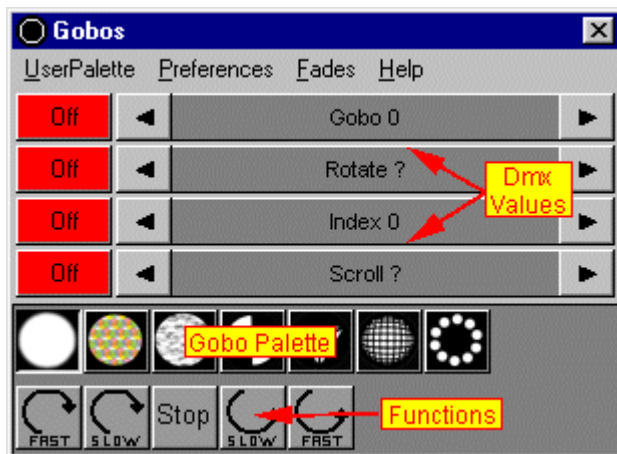
See also [off/snap/fade](#)^[128]

See also [special functions controls](#)^[178]

See also [Sequence Fades](#)^[182]

See also [User Definable Fixtures](#)^[267].

See also [Gobo Controls](#)^[156] for built-in fixtures.



The actual contents of the Gobo control depends entirely on the [user defined profile](#)^[267].

The control usually implements both [drag bars](#)^[176] for programming of DMX values directly and palette buttons for direct gobo selection.

The drag controls and palette buttons may affect one or more DMX control channels.

Drag controls are also often used to control functions such as gobo rotation or indexing, or gobo wheel scroll.

Some controls may also implement palette buttons for Gobo related functions such as Gobo wheel scroll.

Note that the control may implement control of more than one gobo wheel.

100 Color Controls



Use the color icon on the [Fixture toolbar](#)^[106] to open the color control.

See also [drag controls](#)^[176]

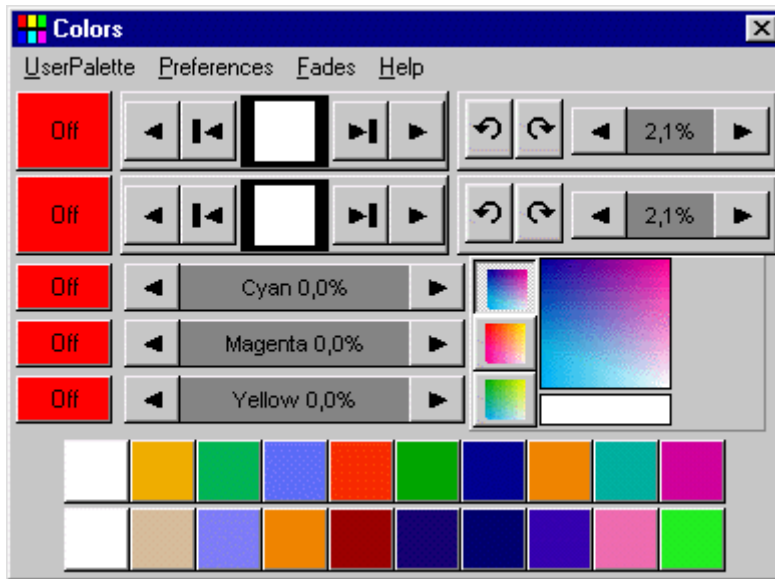
See also [off/snap/fade](#)^[128]

See also [special functions controls](#)^[178]

See also [Sequence Fades](#)^[182]

See also [Customizing Palettes](#)^[125].

See also [Color Controls for user defined profiles](#)^[162]



Roboscan 1220 CMYR with two color wheels, wheel scroll and CMY color mixing

The control implements two ways of selecting a color from a color wheel.

Use the [scroll control](#)¹⁷⁵ to select a color :



Use these buttons to select next or previous colors on the wheel.

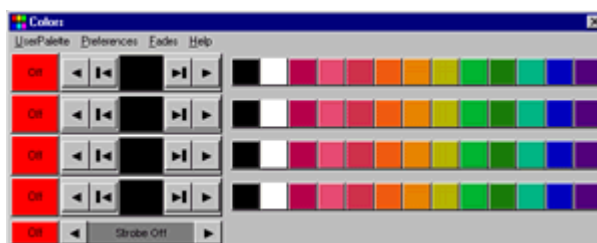


To position the color wheel between colors for a split color effect use the split buttons. Note that no all fixtures allows split colors.



Alternatively, use the [color palette](#)¹⁷⁷ to select colors directly by clicking on the color icons. The color palette may be shown or hidden by using "show palette" in the local preferences menu.

Multi-Head fixtures



Multi-head mode

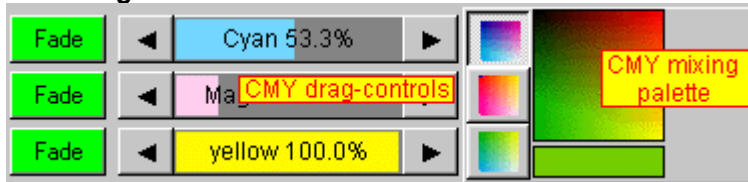


Single-head mode.

Fixtures with multiple heads such as the Martin RoboColor I,II and III may be switched into 'single head' mode by un-checking *show all heads* in the preference menu. When in single head mode only one control/palette appears and all heads are automatically synchronized during programming.

CMY Color Mixing

CMY drag-controls



Use the [drag controls](#)^[176] to program cyan, magenta, and yellow saturation. Some fixtures (i.e. MAC 2000) may also implement a CTC drag control.

CMY Mixing Palette

The mixing palette consists of 3 primary mix buttons, a color picker and a resulting mix color indicator. Use the three buttons to right of the CMY drag to select the primary color mix to work in cyan/magenta, yellow/magenta or cyan/yellow. Use the color picker to select a mix by dragging the mouse around the picker while holding down the left mouse button.

Example: to select an orange color, select the Yellow/Magenta button and drag the mouse in the color picker to the right hand side of the box until the required orange color is obtained.

Other Color Controls

Some fixtures implements other color options as well as selecting colors.

Color wheel scroll



Continous rotation of the color wheel. Use the control to set the scroll direction and speed. Note that not all fixtures may allow the wheel to scroll both ways.

Fixture Triggered Colors

Available on the Martin MX/CX series. The command sets the fixture to control the colorwheel in either auto or sound triggered mode, other control attributes (movement, gobos) are not affected. The actual mode is programmed via [Extended Controls](#)^[163]. If neither auto or music trig has been programmed, the button displays a ? indicating an unselected trig mode.



Unknown (not programmed) trig mode



Auto trig mode



Sound trig mode

Special Color Functions



MAC 2000 special color functions

Fixtures may implement special commands such as random color selection or random CMY. The special commands call up these [special functions](#)^[178] implemented in the fixture it self. The special commands section may be shown or hidden by checking or un-checking *Show Special* the preferences menu on the color control.

101 Color Controls for Userdefined Fixtures



Click the color icon on the [Fixture toolbar](#)^[106] to access the color control.

See also [drag controls](#)^[176]

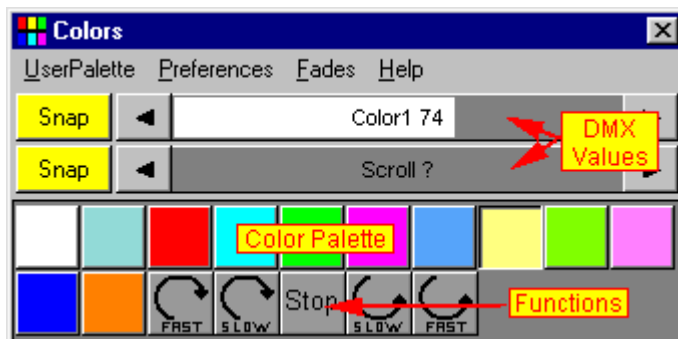
See also [off/snap/fade](#)^[128]

See also [special functions controls](#)^[178]

See also [Sequence Fades](#)^[182]

See also [User Definable Fixtures](#)^[267].

See also [Color Controls](#)^[159] for built-in fixtures.



The actual contents of the color control depends entirely on the [user defined profile](#)^[267].

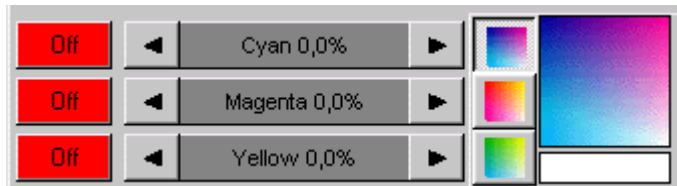
The control usually implements both [drag bars](#)^[176] for programming of DMX values directly and palette buttons for direct color selection.

The drag controls and palette buttons may affect one or more DMX control channels.

Some controls may also implement palette buttons for color related functions such as color wheel scroll.

Note that the control may implement control of more than one color wheel.

CMY and RGB Controls



CMY Control

Use the [drag controls](#)^[176] to program cyan/magenta/yellow saturation or red/green/blue saturation respectively.

CMY profiles may also implement a mixing palette:

The mixing palette consists of 3 primary mix buttons, a color picker and a resulting mix color indicator.

Use the three buttons to right of the CMY drag to select the primary color mix to work in

cyan/magenta, yellow/magenta or cyan/yellow.

Use the color picker to select a mix by dragging the mouse around the picker while holding down the left mouse button.

Example: to select an orange color, select the Yellow/Magenta button and drag the mouse in the color picker to the right hand side of the box until the required orange color is obtained.

102 Extended Controls

Extended Controls

To access the extended controls select the  icon from the [Fixture toolbar](#)^[106]. (For [Generic DMX fixtures](#)^[167] and [User definable fixtures](#)^[256] this will access the level controls, not the extended controls).

Besides a programmable fixture reset, the extended controls cover functions that takes influences several types of programmable effects. Not all fixtures implements extended controls.

Programmable reset



This function is almost identical to the reset function on the [fixture toolbar](#) ^[108] - however, when used, this reset command becomes part of the current scene. This may be useful when the fixtures are running unattended but within reach of an audience which may be touching mirrors etc. Take care not to program resets into sequences by mistake - use the fixture toolbar icon for regular resets.

Fixture Stand Alone

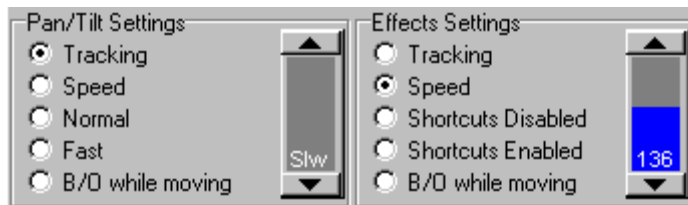


Some fixtures may support activation of stand-alone mode via DMX. In stand alone mode the it is the fixture that runs itself via internal firmware programming, and while in stand alone mode any other commands sent from the controller are simply ignored. The stand-alone mode offers no possibility of synchronization from the controller, and can quickly turn into a big mess when several fixtures are running in stand-alone. In certain instances, i.e. with a CenterPiece fixture the stand-alone mode may be a big timesaver.

Sound stand-alone will use the internal microphone of the fixture as trig source.

Note that activating stand-alone commands will often overwrite other commands such as lamp and reset commands.

Extended functions



This example is taken from the Roboscan 918-S.

Some fixtures may implement only a subset of these extended commands, and some fixtures have no extended controls at all.

The extended controls are split into two types :

Pan/Tilt Settings

These settings only have an effect on pan and tilt.

- Tracking. With this setting the fixture will calculate a movement speed according to the DMX signal received from the LightJockey. This means that a 5 second movement fade will move the pan and tilt to the new position in 5 seconds.
- Speed. This assigns a specific *speed* to the fixture. The fixture will move pan and tilt with that constant speed regardless of the fades rates calculated in LightJockey. Use the fader on the right to assign the speed value.
- Normal mode. This will override the fast setting in the fixture and force normal mode.
- Fast mode. This will override the normal setting in the fixture and force fast mode.
- B/O while moving. This will prompt the fixture to shut off the light while the pan and tilt is moving to a new position. This should not be used when moving pan and tilt in slow fading scenes.

Normal and Fast Mode

Most newer Martin fixtures are equipped with a command panel that allows various personality settings on the individual fixtures. One of these settings concerns the algorithm to calculate pan and tilt speeds. In *fast mode*, the fixture will use short acceleration ramps when starting and stopping - it will also have a slightly higher top speed. This will give the fastest movement from one position to the next. *Normal mode* will use longer acceleration ramps and a lower top speed. The advantage is that the fixture moves a little smoother, especially on slow movements.

Effect Settings

These settings will usually have effect on any other effect (color, gobo , intensity etc).

- Tracking. The fixture will calculate effect speeds according to the DMX signals received from LightJockey. This means that i.e. a color change programmed as a 5 second fade will take 5 seconds.
- Speed. This will assign a specific fixed speed to all effects. They will no longer move according to any fades programmed into scenes. Use the fader on the right to assign the speed value. In certain instances this is the only way to control speeds on some effects (i.e. gobo shake speed on the RoboScan 918-S or MAC 500-S).
- Shortcuts disabled. This will override the shortcut enabled setting in the fixture.
- Shortcuts enabled. This will override the shortcut disabled setting in the fixture.
- B/O When Moving. When enabled the fixture will cut off the light output while effects are moving, i.e. to hide a shift from one gobo to another.

Shortcuts.

Some fixtures implement a shortcut feature. This means that the fixture will use the shortest route to the new effect position. For example on a color wheel, when shortcut is disabled, the fixture will go the 'long way' from the first to the last color. If shortcut is enabled, the fixture will go the 'short' way (the other way around).

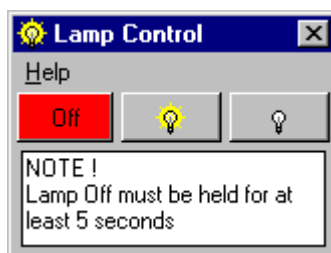
See Also [Off/Snap/Fade](#)^[128]

See also [Sequence Fades](#)^[182]

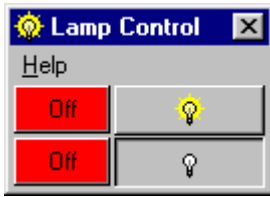
103 Lamp Controls



The lamp control is accessed by clicking on the lamp icon on the [Fixture toolbar](#)^[106]



Lamp control for built-in fixture



Lamp control for user defined profile

Note that the lamp control is usually only available for fixtures with discharge lamps. Since discharge lamps often takes several minutes to re-strike, and frequent re-striking wears out the lamp, it is not advisable to power off the lamps just to re-strike a few minutes later.

Use the [intensity control](#)^[146] to control lamp power to fixtures with halogen lamps.



Use this button to send a strike lamp command to the fixture.

Some Martin fixtures are capable of measuring the time between when the lamp was powered off and the strike command. If this time is less than the lamp cool down time (typically 3-6 minutes) the fixture will refuse to strike the lamp. In this case the fixture will display "HOT" in the display on the fixture.



Use this button to send a lamp off command to the fixture. Many fixtures require that the lamp-off command is left 'undisturbed' for at least 5 seconds before actually powering off the lamp.

Notes:

Both lamp strike and lamp off commands are programmed into the scene, so be careful not to unintentionally include a lamp off into the current sequence.

Most new fixtures that are equipped with a command display have the capability of disabling lamp off commands via DMX. This is to avoid sending a lamp off by mistake, when using a conventional DMX console without fixture profiles. Refer to the fixture documentation to learn how to enable the lamp off command. The fixture notes in the fixture configuration also shows the display settings to enable lamp off.

The lamp commands usually uses the same control address as shutter and strobe commands so when programming a lamp strike or power off into a cue, make sure that no other sequence overwrites these functions.

See also [off/snap/fade](#)^[128]

See also [auto lamp on](#)^[112]

104 Resetting fixtures



Click this icon on the [Fixture controlbar](#)^[108] to send a reset command to the [selected](#)^[120] fixtures.

When performing a reset the fixtures will re-align their mechanical parts to the default position. While

resetting the fixtures will not respond to any commands.

Note that the reset command from this icon is not programmed into sequences. To program a reset see [Extended Controls](#)^[163]

105 Generic DMX Fixtures

See also [User Definable Fixtures](#)^[256]

See also [Martin 6 Channel DMX Switch Box](#)^[173]


See also [The Generic DMX control](#)^[169]

The Generic DMX fixture profile allows the programming of DMX effects that does not have a suitable LightJockey profile.

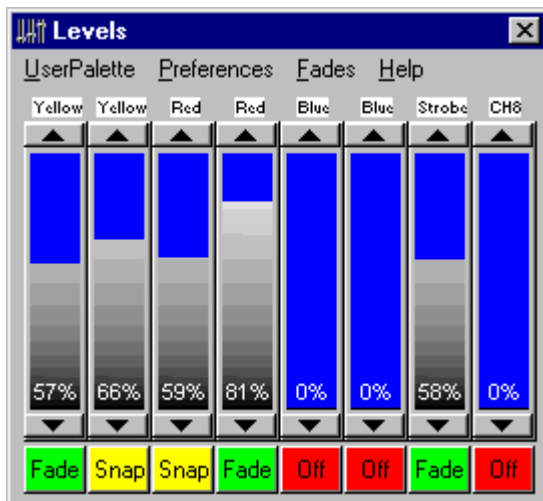
While a generic profile is not really that usable for programming intelligent fixtures (it may be used as a last resort control if no suitable control is available), it works fine for fixtures such as dimmers or switch packs (i.e. for Par and Pin spots or on/off effects) or DMX controllable smoke machines or stroboscopes.

The Generic fixture profile comes in 3 flavors: Level and Switch controls, each with 1, 2, 4, 6, 8, 12, 16, 24, 30 or 32 DMX channels respectively, and specialized controls. All Generic controls implement 8 bit control channels.

The specialized profiles contains controls for RGB Packs that are profiles for controlling fixtures consisting of multiple RGB elements (typically LED fixtures); other profiles are for controlling strobes, smoke machines or hazers.

The level and switch programming control is accessed from the levels/extended icon  on the [Fixture toolbar](#)^[106]. RGB Packs are controlled through the [RGB Pack Color Control](#)^[173]

Level Control

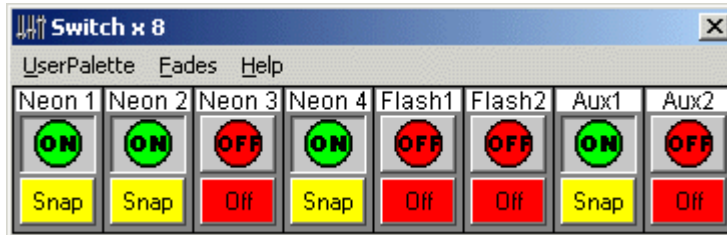


Level control (8 channels)

To program the control, simply [drag](#)^[176] the faders to the desired values. Use the Preferences menu to change the value format displayed on the fader between % (0-FF) values or digital values (0-255).

It is possible to set the value for all channels simultaneously (8+ channel controls only) - right-click on any fader and enable "All" on the pop-up menu. Disable "All" again to control channels individually.

Switch Control



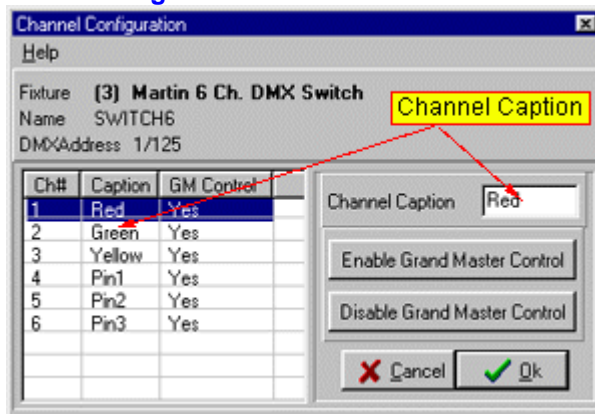
Switch control (8 channels)

The switch controls has only two states: on and off. Click the on/off button to change the state - off is represented with DMX value 0 and on is represented with DMX value 255. Also the switch control doesn't allow the fade state ([Off/Snap/Fade](#)^[128]) to be set to fade. Channels controlled by a switch control will not scale under control of the [Grand Master](#)^[157] or sub-master - programmed channels with on value will remain unaffected until the Grand Master or relevant sub-master reaches a value of 0 where the output of programmed channels will be overwritten by off (0 value).

See also [off/snap/fade](#)^[128]

See also [Sequence Fades](#)^[182]

Customizing the Control



Channel Configuration Dialog

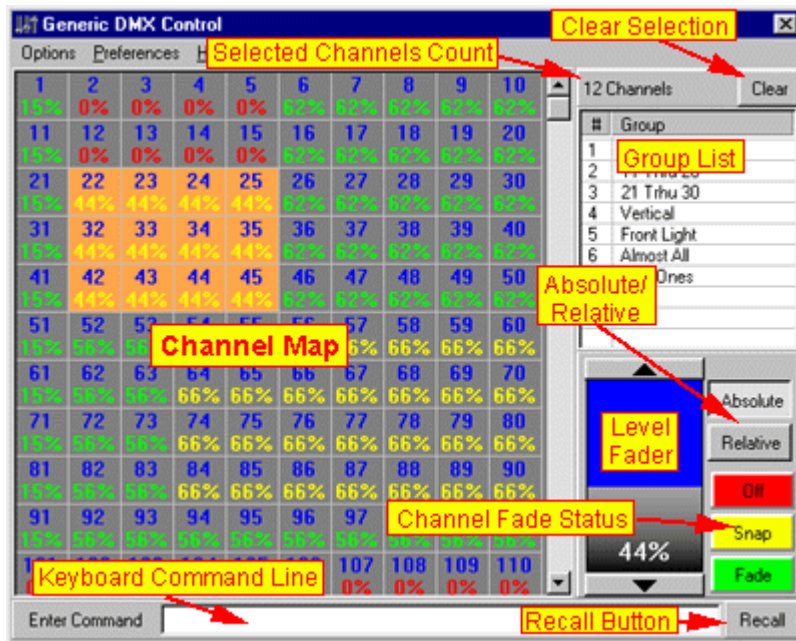
To customize the channel labels for each of the channels, right-click the fixture icon on the desktop. From the pop-up menu, select *Define Fixture Profile*.

From the channel configuration dialog it is also possible to disable [Grand Master](#)^[157] control for individual channels.

By default, all generic DMX channels (as controlled by the level or switch control) are affected by the Grand Master. Use the dialog to disable the Grand Master for individual channels.

These customization options also work for the [Martin 6 channel DMX switch Box](#)^[173].

106 The Generic DMX Control



The Generic DMX Control

The Generic DMX Control may be used to program Generic DMX channels across multiple [Generic DMX fixtures](#)^[167]. The control is primarily useful when programming a large number of generic channels specific values has to be programmed into various channels.

The Generic Control contains a map of all DMX Channels controlled by Generic DMX fixtures and also features a keyboard command interface for fast programming of the generic DMX channels. The control programs into the current scene in the [current sequence](#)^[178] like any other [fixture control](#)^[157], except that it is not related to a master fixture or other selected fixture icons.

To make the control available, at least one Generic DMX fixture must have been [configured](#)^[40], and the control only includes DMX channels allocated to Generic DMX fixtures.

The control is accessed from the desktop main menu (*Generics*) or by assigning a [hotkey](#)^[19] to toggle the control.

Programming the DMX channels with the mouse

To program channels with the mouse, select (highlight) the channels in the grid and use the Level fader and off/snap/fade buttons to program the channels. The level fader will act on all selected channels, and the [fade status](#)^[128] of each channel will default to fade (unless already snapped). The number of selected channels will be shown in the top right corner above the group list - use the clear button to deselect all selected channels.

The [fade status](#)^[128] of each of the channel in the map is shown in the grid in color codes: red for 'off' channels, yellow for 'snap' channels and green for 'fade' channels. Note that these are default colors and may be modified - see later.

Absolute vs. Relative

When in absolute mode, all selected channels are set to the exact value of the level fader. In relative

movement the values of the selected channels are increased or decreased with the same amount as the level fader is changed; i.e. if the level fader is increased with 10%, all selected channel have the value increased by 10%. Use the *absolute* and *relative* buttons to change the mode.

Keyboard shortcuts

By default a number of keyboard keys are mapped as shortcuts to the level fader - note that these keys will only work if they are not already used as hotkeys.

[Cursor Up]: Increases level by 1 unit (% or 8-bit value)
 [Cursor Dn]: decreases level by 1 unit (% or 8-bit value)
 [Page Up]: Increases level by 10 units (% or 8-bit value)
 [Page Dn]: decreases level by 1 unit (% or 8-bit value)
 [Home]: sets level to full (100% or 255)
 [End]: sets level to 0

Grouping Channels

Creating and modifying groups

It is possible to group channels for faster access. A maximum of 32 groups may be created and each channel may be assigned to any group. To rename or delete an already existing group, rightclick the group in the list, and select Rename or Delete as appropriate,

To create a group, rightclick somewhere on the *Group list* then Select *Create New Group* from the popup menu. If the maximum number of 32 groups have already been made, the *create group* option is not available.

Assigning Channels to Groups

To assign channels to a group, select the channels, then [Shift]-Rightclick the Group in the group list, and select *Set Group to Selected* or *Add Selected to Group* from the popup menu. To remove channels from a group, select the channels, then select *Remove Selected from Group*.

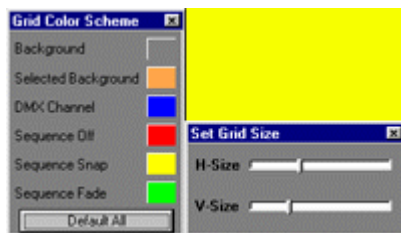
Customizing the Generic DMX Control

The control can be resized by dragging any of its corners, the channel grid will automatically resize to fit the available space.

Use the preferences menu to show or hide the group list and level fader respectively. If neither is visible, the channel grid resizes itself to fill out the whole control (the keyboard command interface is still available).

Customizing the Grid

From the Preferences menu, use the Grid Preferences menu to customize the grid cell-size, color scheme and the font used in the grid.



Grid Customization dialogs

Hiding Channels

By default all Generic DMX fixture channels are mapped in the Generic DMX control. Channels may be removed from the map (hidden) by highlighting the relevant channels, then select *Hide Selected Channels* from the options menu to remove the selected channels from the map. The number of hidden channels will be noted in the window caption of the Generic Control, i.e. (7 Channels Hidden).

Options Menu

[Delete All Groups](#) - deletes all groups

[Clear All Groups](#) - clears all groups without deleting the groups

[Hide Selected Channels](#) - see above.

[Show All Channels](#) - see above.

Preferences Menu

[View Group List](#) - toggles visibility of the group list

[View Level Fader](#) - toggles visibility of the level fader

[Use % Values](#) - when enabled all level values are displayed and programmed as % values (0-100%), when disabled all level values are displayed and programmed as 8 bit values (0-255)

Grid Preferences

[Auto Set Matrix Size](#) - When disabled the channel matrix does not automatically resize when the control is resized

[Mouse Select Rectangles](#) - When enabled the mouse selects cells in the grid in spread-sheet style (rectangles), when disabled the mouse selects by 'painting' cells.

[Auto-Scroll to first selected channel](#) - when selected, the grid will always automatically scroll to first selected channel whenever selections are changed.

[Grid Size](#), [Grid Font](#), [Grid Colors](#) - see Customizing the Grid above.

Keyboard Preferences

[Show Command Line](#) - toggles the visibility of the command line.

[Lock Cursor keys to grid](#) - locks the keyboard cursor keys to selecting cells in the grid (should not be used together with the command line interface).

[Empty Command Clears Selection](#) - When enabled an empty command line followed by [Return] clears the channel selection.

The keyboard command interface

Besides the mouse related programming interface, the control also implements a keyboard-oriented command interface. The keyboard interfaces uses the command line below the channel grid. The command interface may be enabled or disabled using the *show command-line* option in the *preferences / keyboard preferences* menu.

The command interface implements a quick way to access and program channels, and to minimize the number of keystrokes it uses different symbols for various functions:

Note that in order to be able to accept keyboard commands the generic control must have the Windows focus (must be the active window) and the keys must not already be assigned as standard [hotkey functions](#)^[16].

When the [Enter] key is pressed, the command line is automatically cleared. Use the Recall button to recall the last command non-empty command line (if any).

Selecting or deselecting channels

To select a (highlight) channel simply type in the channel number followed by [Return].

To select multiple channels, use a + between channels, i.e.; 1+3+5 selects channels 1,3 and 5.

To add channels to the current selection make sure to precede the first channel with the + operator, i.e.: +1+3+5 adds channels 1,3 and 5 to the current selection. If there is no + operator the current selection will be cleared before selecting the new channels.

To deselect channels, precede the channel with a -, i.e.: -1-3-5 will deselect channels 1,3 and 5 from the current selection.

To select a channel range use / between low and high channel number, i.e. 45/77 selects channels 45 through 77.

The select (+), deselect (-) and through (/) operators may be combined, i.e. the command: 1/10-4/6+12 selects channels 1,2,3,7,8,9,10 and 12.

Selecting groups

To select groups rather than single channels use the #[group no] symbol, i.e.: #1 selects all channels in group 1.

The +, -, and / operators may be used the same way as when used with single channels. When using the / operator, do not add a second # to the second group number, i.e.: #1/5 selects groups 1 through 5 while #1/#5 is considered an input error.

Note that the '.' or ',' keys present on the numerical keypad of most full-size PC keyboards may be used for the # symbol as well.

Setting levels

To set the value of the selected channels, use the @ operator. I.e.: the command @10 sets the value of all selected channels to 10 (% or 8-bit value, see later).

Use the + or - operators to set the values relatively, i.e.: @+10 will increase the level value for all selected channels, @-25 will decrease the value for all selected channels with 25. Note that the * key present on most numerical keypads on full-size PC keyboards may be for the @ symbol as well.

Setting Fade States

Use o or O to set the state to Off for selected channels.

Use f or F to set the state to Fade for selected channels

Use s or S to set the state to Snap for selected channels.

Special key combinations

selects all channels.

@@ programs all channels to the following value.

[Return] on a blank command line deselects all channels (may be disabled, see preferences menu)

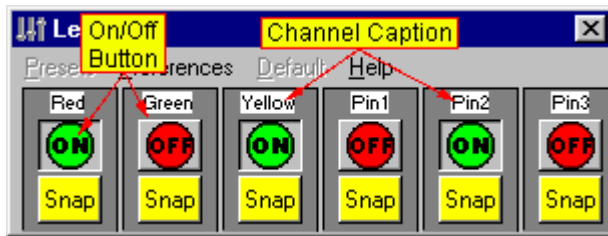
Combining multiple commands

Since the whole command line is not evaluated before the [Enter] key is pressed, multiple commands may be given in the same line, i.e.:

#1/3F@50-#2@+10 [Enter]

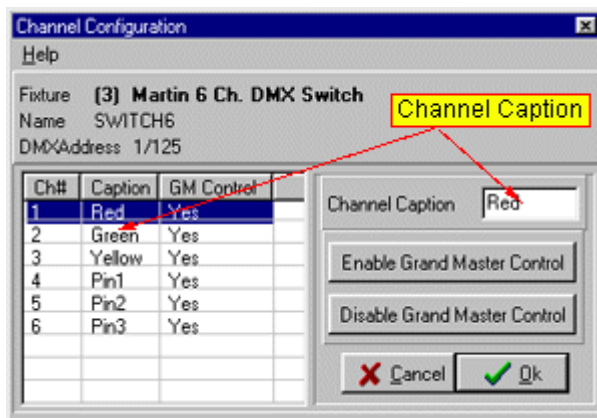
selects groups 1 through 3, sets the fade states to Snap, then programs the level to 50, deselects group 2, and finally increases the level of the channels in the remaining groups (1 and 3) by 10.

107 Martin 6 Channel DMX Switch Box



The Switchbox is a special implementation of the [generic DMX fixtures](#)^[167]. A switch box is typically used to switch mains supply for non-intelligent fixtures (i.e. Martin Starflash fixtures) on and off via DMX.

This profile matches the layout of the 6 channel DMX switch box from Martin, but can also be used for other brands of switch boxes that fits the layout (6 contiguous DMX channels). Each control channel has only two states: on and off.



To customize the labels above each button, right-click the fixture icon representing the fixture. From the pop-up menu, select *Define Fixture Profile*.

From this dialog it is also possible to disable [Grand Master](#)^[157] control for individual channels. By default, all generic DMX channels are scaled by the Grand Master.

108 The RGB Pack Color Control

The RGB pack fixture is designed to control packs of RGB only fixtures - typically fixtures like the Color Kinetics iColor/iCove fixtures that consist of a number of Red, Green and Blue LEDs.

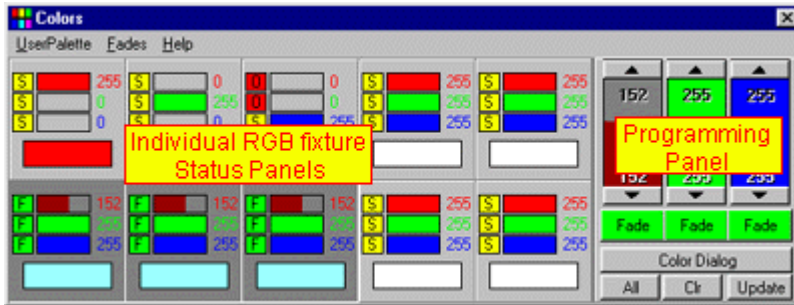
Each of the 'pack' profiles implements a number of individual RGB fixtures (4,6,8 or 10 individual fixtures in one).

The fixture profiles can be found under the Generic manufacturer heading in the [fixture configuration dialog](#)^[40].

The profiles uses up to 30 contiguous DMX channels and depends on the control channels being mapped as Red, Green and Blue intensity controls (in that order) for each RGB fixture (Red, Green, Blue, Red, Red, Green, Blue, Red...etc).

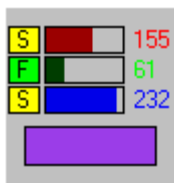


Fixture Icon - RGB Pack x10



The RGB pack color control

The only programming control for this fixture is the color control. The color control consists of two parts - status panels for each of the (up to) 10 individual RGB fixtures and a programming panel.



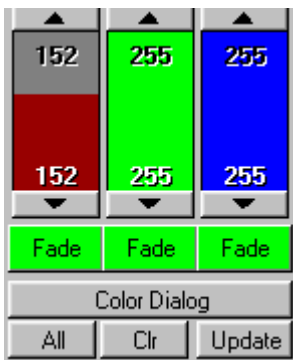
The Fixture Status Panel

The RGB status panels displays the current programming status for each of the individual RGB fixtures.

Each status panel shows the current DMX values for the red, green and blue control channels both as a graphical bar and as numeric values. The panel also shows the color resulting from mixing the Red, Green and Blue colors - note that the actual 'physical' color from the fixture may not at all look like the calculated value - this depends entirely on the construction of the fixture itself.

Programming the RGB fixtures

Enable programming of the fixtures by enabling one or more status panels (click the individual fixtures status panels to toggle enabled/disabled state, [Ctrl]-click to enable one fixture ly). When at least one status panel is enabled, programming is possible using the Programming Panel (the programming panel remains hidden as long as no fixtures are enabled).



The Control Panel

Note that when using the control panel to program - ALL fixtures represented by the enabled status panels are programmed. Click **All** to select all status panels - click **Clear** to deselect all status panels. Click **Update** to update all selected fixtures with the values and fade states contained on the control panel.

Click **Color Dialog** to select a color value using the built-in Windows color picker to select an RGB value directly (there is no feedback from the dialog to the fixtures - the color is not applied before approved by clicking OK).

109 Lamp Off Warning

This command will be stored as part of the current scene and sequence. This means that if the sequence is saved and later used, this command will power off the lamps.

Powering off discharge lamps usually means that they will have to cool down before being able to re-strike. Typically this will take 3 to 8 minutes.

Striking the lamps often will cause a significantly lower lamp life-time, so only power off the lamps when necessary.

See also [Lamp Controls](#)^[165]

110 Programmable Reset Warning

This reset command will be stored as part of the current scene. This means that if the current sequence is saved and later used, this command will cause the fixture(s) to reset.

See also [Resetting Fixtures](#)^[166]

See also [Extended Controls](#)^[163]

111 ERASE ME

ERASE ME

112 Scroll Controls

Scroll controls on the fixture controls look like this. They are used to control "Image-able" effects such as colours, gobos and prisms.



This image came from a Mac 500 but it could easily be any other fixture with gobos.



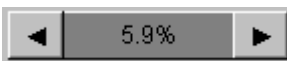
The buttons work like a tape deck, click on this button to shift the gobo wheel over one complete gobo.



Alternatively click on the button which looks like this, then the gobo wheel will only shift a small amount. This way split patterns may be achieved with on the gobo wheel (if the fixture permits)

Please note: Not all fixtures will allow splits on effects.

113 Drag Controls



The drag control is used to select a single value out of a range of values (i.e. an intensity value). To select a value left-click anywhere on the gray area of the control, and hold the button to drag the value left and right in the control.

Left-click on the two arrow buttons to modify the values in small steps, or right-click the buttons to set min or max values respectively.

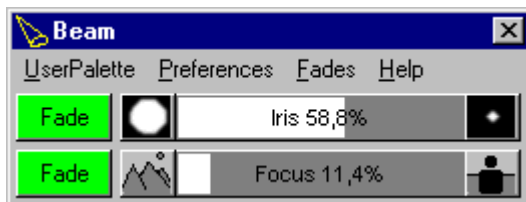
Usually the control is organized so that values that result in lower or slower effect are to the left (low values) and higher or faster values to the right.

Note that even though the display shows the value in percentages, it does not (with some [exceptions](#)^[124]) necessarily mean that these values are compatible across fixture types. For example 50% gobo rotation speed on a MAC 500 is **NOT** the same speed as 50% on a Roboscan 1220.

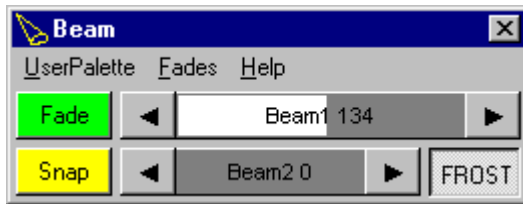
114 Beam Controls



Use the Beam icon on the [Fixture toolbar](#)^[106] to open the beam control.



Example MAC500/Roboscan 918 Beam Control.



Example MAC600 Beam Control.

The beam control is used to control the 'beam' parameters of the fixture, this includes effects such as Focus, Zoom, Iris, Beam shapers and Frost effects.

The fixtures may also implement [special functions controls](#)^[178] to access effects such as automated iris pulses.

See also [drag controls](#)^[176]

See also [off/snap/fade](#)^[128]

See also [Sequence Fades](#)^[182]

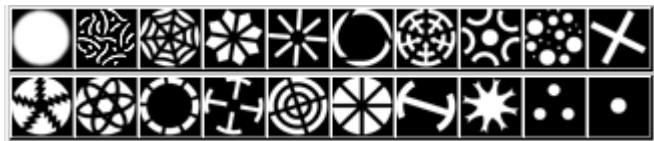
115 Focus Palette

Focus Palette

116 Palette controls



Color Palette from Roboscan 1220 CMYR.



Gobo Palette from MX-4.



Effect Palette Roboscan 1220 XR.

The palette controls are used to select effects such as colors, gobos or prisms directly. Simply left-click on the icon to select the relevant effect.

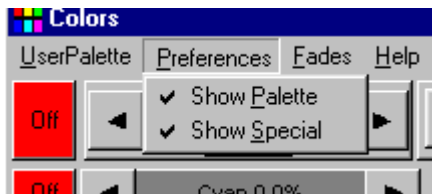
Palette controls may be shown or hidden via the local control preferences menu.

117 Special Functions Controls

Some fixtures implement special function controls. The special functions calls up predefined functions that are built into in the fixture. These functions are usually dynamic effects such as pulse effects, or relies on the fixture to call up random values such as a random CMY value.

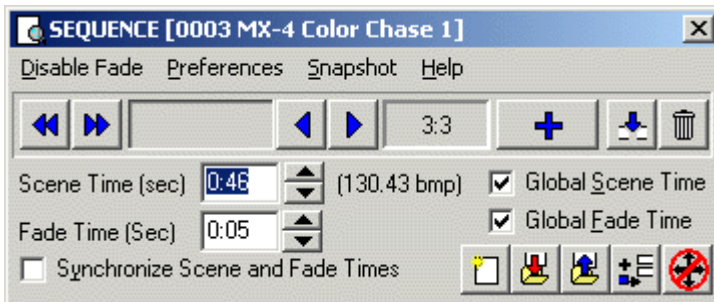


Mac 500 intensity control - special controls section.

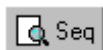


The special control section may be shown or hidden from the local control preferences menu.

118 Sequence Control



The Sequence control is used to program and control the current sequence, for for actions such as adding or deleting scenes or setting scene and fade times.



To open the sequence control, click the "View Sequence Control" on the [Sequence/Cue toolbar](#)^[104].

Saving and loading Sequences



This will bring up the [save sequence dialog](#)^[197].



This will bring up the [List of Sequences](#)^[206]. Use this list to select an existing sequence to load into the current sequence.

To an delete entire sequence, see [list of sequences](#)^[206] or [deleting multiple Datafiles](#)^[114].

New Sequence



This will clear the current sequence and create a new sequence.

If the current sequence is not saved before a new sequence is created will be lost. It is possible to enable a warning if the current sequence is not saved before a new sequence is created. See [System Preferences](#)^[109].

The save,load and new icons are all duplicated on the [Sequence/Cue toolbar](#)^[104].



Add, Insert and Delete.

Add

Clicking the Add button adds another scene to the sequence. The content of the current scene is copied to the new scene. The maximum number of scenes in one sequence is 999.

Insert

This button brings up the [Insert Scene Dialog](#)^[180]

Delete

This button brings up the [Delete Scenes Dialog](#)^[181]



- [See Sequence Blind Mode](#)^[183]

Previous and Next scene



These buttons are only enabled if the sequence has more than one scene.

Click these buttons to go to the previous or next scene in the current sequence. Upon reaching the first or last scene the sequence will loop to 'the other end', i.e. loop from last to first scene. Alternatively right-click the button to go directly to the first or last scene of the sequence.

Sequence Playback



These buttons will playback the sequence either in reverse or forwards. The playback will use the programmed [scene and fade times](#)^[130]. It is possible to disable the fadetime when using the playback function, see below.



During playback these lines will illustrate the elapsed scene and fade times. The upper, blue line shows the elapsed scene time. The lower, red line shows the elapsed fade time. If fade is disabled this line will be shown in gray.

Fade Mode



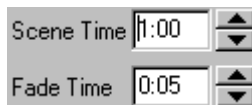
This menu option will toggle between 'enable fade' and 'disable fade'.

When fade is **enabled**, using playback or previous/next buttons, the sequence will use the programmed fadetime and the fade status of individual effects will be used.

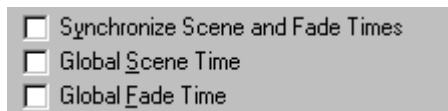
When fade is **disabled**, all effects will snap to the new position, regardless of fadetime and fade status. This makes it a lot easier to browse through (previous and next) a sequence with long fade times, since it is not necessary to wait for the fade to complete before evaluating the scene contents.

Note that the fade disable only takes effect in the sequence while editing. As soon as the sequence becomes part of a cue, it will use the programmed fade time and effect fades.

Scene and Fade Times



Use these controls to change the scene and fade time for the current scene. Use the up/down buttons to change the times, or type the time directly (click the field to activate, then type the new value). It is possible to assign an individual scene and fade time to each scene. For new sequences, the default scene and fade times defaults to 1.00 seconds and 0.05 seconds respectively.



Use the following options to manipulate the scene and sequence times:

Synchronize scene and fade time. This will synchronize the scene and fade time so they are always identical.

Global Scene Time. This will cause all scenes to use the same scene time.

Global Fade Time. This will cause all scenes to use the same fade time.

Add To Current Cue



This button will add the sequence to the current cue, provided there is enough free slots left in the cue. As the cue construction relates to sequence numbers, this button will only be enabled if the sequence has been previously saved (saving assigns a number to the sequence).

Snapshot

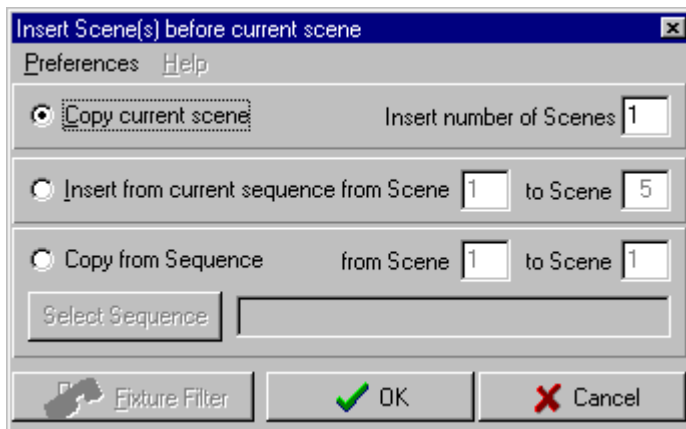
Select Snapshot from the menu to record current DMX output values to the current scene - see [Scene Snapshot](#)^[183] for details.

See also [Save Sequence Dialog](#)^[197]

See also [List Of Sequences](#)^[208]

119 Inserting Scenes

Clicking the Insert button on the sequence control prompts the following dialog



This dialog offers the following possibilities for inserting new scenes before the current scenes into the sequence.

Copy Current Scene, this will insert a new scene before the current, and copy the content of the current scene to this new scene.

Insert from current sequence from scene, this will insert a number of new scenes before the current scene, and copy the contents of the scenes into the new scenes.

For example : a sequence consists of 10 scenes, and the current scene is 6. Inserting scene 1 to 3 from the current sequence, will insert 3 new scenes before scene 6 and copy the contents of scenes 1 to 3 to these new scenes.

Copy from Sequence, this option works almost like the previous option, except it copies the contents from other existing sequences. Click the select sequence button to select which sequence to copy scenes from.

The Fixture Filter option is currently not implemented.

Preferences Menu

- Ok on [Enter]. This option lets the [Enter] key on the keyboard act as a hot-key for the Ok-button.

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120 Deleting Scenes

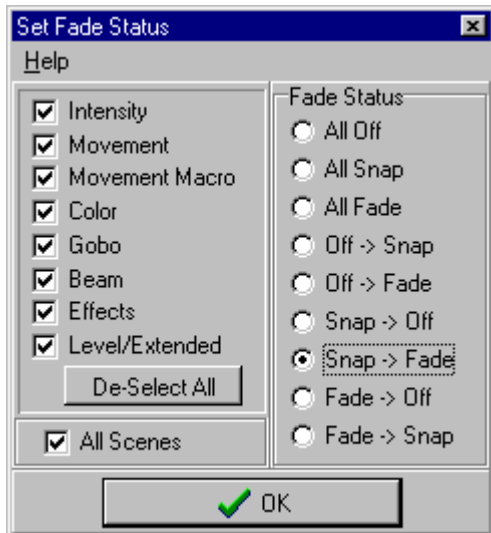
This dialog makes it possible to delete one or more scenes in the current sequence. Since the current sequence always contains at least one scene, deleting all scenes, resets the sequence to one scene with default (all off) output.

Preferences Menu

- Ok on [Enter]. This option lets the [Enter] key on the keyboard act as a hot-key for the Ok-button.

.

121 Sequence Fades



The Sequence Fade Control

The sequence fades control offers the possibility of modifying the fixtures fade status on a more global sequence level than just using the fade status button for each effect (control channel).

The control is accessible from the *fades* menu of most [fixture controls](#)^[151].

The fade control works the following way. LightJockey assigns a control type attribute to each of the fixtures control channels. The type of fixture control on which the control channel has its main function (i.e. a color-type control channel or a beam-type control channel) determines the value of this attribute.

Use the fade control to change the fade status of all the [selected](#)^[120] fixtures. To change the fade status in all the scenes in the sequence, check the *All Scenes* box.

I.e. to change the pan/tilt fade status from fade to snap for a number of fixtures in all scenes in the sequence, check the *Movement* box, the *All Scenes* box and the *Fade -> Snap* box. Then Click Ok.

The control may also be used to 'remove' certain effects from a sequence. I.E. check the *Intensity* box and the *All Off* box to remove intensity commands from all the selected fixtures.

Note that the control does not actually remove the programmed values, it just changes the fade status. Re-applying a snap or fade status will make the programmed values 'active' again.

Notes

Since each control channel is assigned one attribute value only, the fade control may not have obvious functions for multi function channels. A good example is the reset command or stand-alone commands for Martin fixtures. These commands are usually programmed on the same control channel as shutter and lamp commands. Since shutter commands are typical intensity commands the control channel has been given the attribute value of *intensity*, rather than the *level / extended* attribute. This means that setting the level/extended fade status to off does not affect these commands, even if they are placed on the extended fixture control control.

For [user-definable fixtures](#)^[256] the control channel attributes are applied in the following prioritized order (last has priority)

Movement/Position
Beam

Effects
Level / Extended
Intensity
Gobo
Color

122 Sequence Blind Mode

See also [Freeze Output](#)^[107].

See also [Offline/Online Switch](#)^[107].

By default Sequence Blind mode is disabled, the use of sequence blind mode may be enabled by checking *Allow Sequence Blind Mode* option in the [System preferences dialog](#)^[109].

The Sequence Blind mode is activated either via the  button on the [Sequence Control](#)^[178], or via keyboard [hotkeys](#)^[16].



When sequence blind mode is enabled the field containing the sequence name in the sequence/cue toolbaar turns orange as a reminder.

With the sequence is in blind mode, the output generated by the current sequence will not be part of the final output. Cues and background cues will continue to generate output. Once the blind mode is disabled, the current sequence will again contribute to the final output.

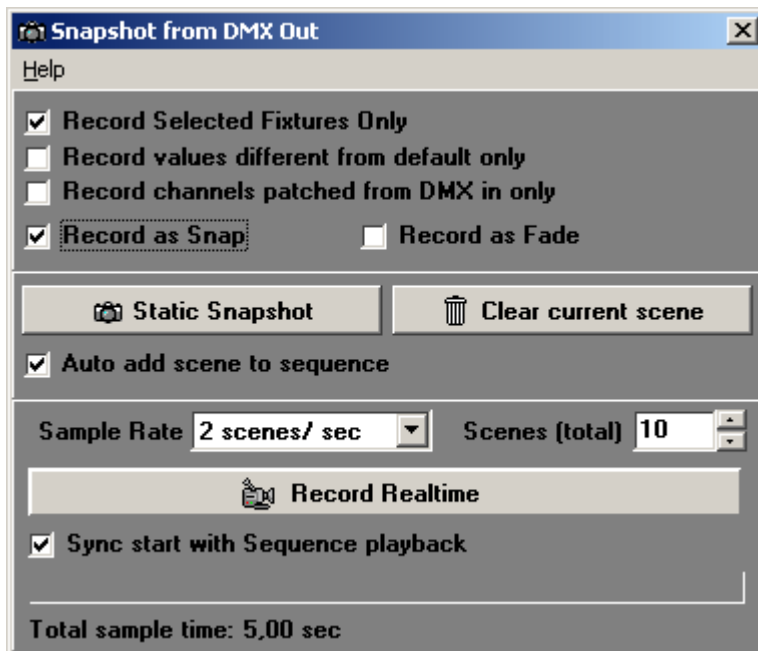
Using blind mode has several benefits. It is possible to program and edit sequences without changing the output (useful for rehearsals). It also is possible to change several parameters on several fixtures and enable the changes only when disabling blind mode, as a sort of *Go* command.

When entering blind mode the current contents (if any) of the current scene will be copied to a special buffer that will be made part of the output. This allows the user to enter and exit blind mode without the entire contents of the scene being removed whenever entering blind mode. The buffer is cleared when exiting blind mode. If a sequence that is part of the current cue is loaded to the editor while in blind mode, the contents buffer will automatically change to reflect the contents of the sequence being loaded so that the current cue will remain 'intact'.

The buffering may be disabled by un-checking the *Keep Contents When Entering Blind Mode* switch in the preferences menu on the Sequence Control.

123 Snapshot and recording from DMX Output

Using snapshot and real-time recording to capture the current DMX output convert it into static scenes in the current sequence.



Snapshot/real-time recording dialog.

Select **Snapshot** from the sequence control to open the dialog.

Filters and options

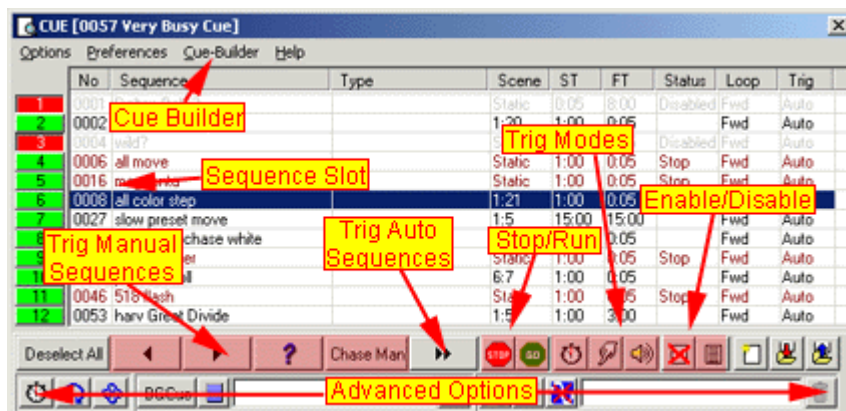
Record Selected Fixtures Only - record values for fixtures that are selected - if not checked, all values (all DMX control channels) for all fixtures are recorded.

Record values different from default values only - only record DMX output value (DMX control channels), if the value is different from the [default DMX](#) ^[113] output value.

Record channels patched from DMX in only - only record values for channels that has DMX-in as source (see [Global Patch](#) ^[7560])

124 Cue Control

Cue Control




See also [Background Cues](#) ^[238]

See also [Transparent Cues](#) ^[195]

See also [Sequence Intensities](#)^[196]

See also [Cue-builder](#)^[201]

See also [Generic DMX Macros](#)^[244]

The Cue Control is opened by clicking on the  icon on the right hand side of the [Sequence/Cue toolbar](#)^[104].

The Cue control is a construction that enables up to 12 sequences to execute in parallel. The cue control offers options to manipulate sequence timings, loop options and movement macro scaling. The cue control can also be used to launch [Background cues](#)^[238] or Generic [DMX macros](#)^[244].

The state of the cue control can be saved to a data file - the saved file can then be re-loaded from the list of cues. A saved data file is termed 'a cue'.

The cue control and associated cue files are the principal 'play-back' elements in LightJockey. A large number of cue control functions and options are available as [keyboard hotkeys](#)^[191] or via remote controls such as [DMX in](#)^[304] or the [2532 Direct Access Controller](#)^[296].

Building a Cue

There are several ways of assigning a sequence to each of the 12 sequence slots.

From the [List of Sequences](#)^[206]:

- Drag and drop the already saved sequence from the list into the cue slot (*drag mode must be selected in the preference menu on the list of sequences*).
- Right-Click the sequence line in the list and select *add sequence to cue* (this will only work if there is a free slot for the sequence).
- Enable the *Browse to Cue* function in list of sequences preferences menu and click the sequence to add.

From the [Save Sequence Dialog](#)^[197]:

Enable the *Add Sequence to Current Cue* switch - this will automatically add the sequence to the cue when the sequence is saved (provided there is a free slot for the sequence). If the sequence is already part of the cue, it will not be added a second time.

To remove one or more sequences from the cue, select the slots, right-click and select *Clear Slot(s)* from the pop-up menu.

Rearranging sequences within the Cue

To rearrange the order of the sequences simply drag the sequence to a different slot (note that *drag sequences* in the preferences menu must be enabled, otherwise dragging of sequences is disabled within the cue control). Dragging a sequence to a different slot prompts a popup menu the following options:

- Move Sequence - will move the sequence to the target slot.
- Swap Sequences - will swap the two sequences, if the target slot is already used.
- Copy Sequence - will copy the sequence line into the target slot.

See [Cue Control Columns](#)^[191] for an explanation on the individual columns of the cue control.

See [Sequence Slot Colors](#)^[192] for an explanation on the different colors used to indicate the different states of sequences in the cue.

Sequence slot priorities

Since it is perfectly possible to write several sequences that addresses the same fixture/effect; and to include these sequences in the same cue - the cue has a simple sequence priority system: **The higher the slot number, the higher the output priority**

Example: A sequence in slot 1 addresses a fixture color wheel and sends it to red. Another sequence in slot 2 also addresses the same fixture and color wheel but sends it to yellow. Since slot 2 has priority over slot 1 the resulting output will send the color to yellow.

The priority system works on individual DMX control channels so it is perfectly possible (and often desirable) to access individual effects on a fixture from different sequences in the cue.


Triggering sequences in the Cue

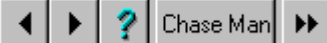
Once placed in a sequence slot, a sequence containing more than one scene is triggered (advanced to the next scene) using one of 3 different trig sources:


- Auto-trig, sequence is triggered automatically using the preprogrammed scene time
- Manual trig, sequence is only triggered by a user action
- Audio trig, sequence is triggered by an audio trig from the [Audio Analyzer](#)^[319]


For more details on trig options see [Triggering Sequences in the Cue](#)^[193]. For further options on sequence timings and sequence loop options see **Advanced Cue Options** below.

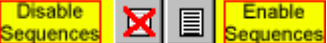
Cue Control Functions

 Click this to select (highlight) all sequences in the cue. If one or more sequences are already selected, click to de-select all sequences.


 Click these to manually trig sequences within the cue (see [Triggering Sequences in the Cue](#)^[193])

 Click to stop a sequence or restart a stopped sequence. A stopped sequence will not trig on any trig source. If no sequences are highlighted all sequences will be stopped or started when the button is clicked. The stop status is NOT saved with the cue.


 Click to set the trig mode of the sequences (Auto trig, Manual trig and Audio Trig). See [Triggering Sequences in the Cue](#)^[193]


 Enables/Disables sequences. See [Enabled/Disabled Sequences](#)^[195]

New Cue

 Clear the current cue. If the current cue is not saved before it is cleared it will be lost. It is possible to enable a warning if the current cue has been modified, but not saved, before the new cue is cleared. See [System Preferences](#)^[109] (this warning will not be shown if the cue is loaded as a [transparent cue](#)^[195]).


Saving and loading Cues

 Click this to bring up the [Save Cue dialog](#)^[204].


 Click this to bring up the [List of cues](#)^[208]. Use this list to select an existing cue and load into the cue control. See also [Transparent Cues](#)^[195].

Advanced Cue Options

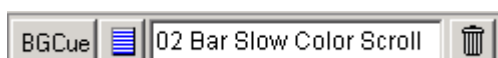
The advanced options panel at the bottom of the Cue Control contains several advanced tools to manipulate the cue. The panel may be hidden or displayed from the *Preferences/View* menu (see below).

 Click this to access the [Cue Time Control](#)^[192]

 Click this to access the [Sequence Slot Loop Options](#)^[188]


 Click this to access the [Cue Macro Control](#)^[199]

Launching Background Cues from the Cue control



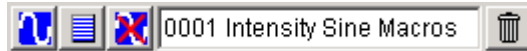
Add a [Background Cue](#)^[238] to be automatically launched when the cue is loaded, by dragging the BG Cue from the [List of Background Cues](#)^[208] to the BGCue field in the Cue Control.

Click  to toggle the [Background Cue Control](#)^[238]

Click  to toggle the [List of BG Cues](#)^[208]

Click  to clear the Background cue from the control.


Launching Generic DMX Macros from the Cue control



Add a Generic DMX macro to be automatically launched when a cue is loaded by dragging the macro from the [List of Generic Macros](#)^[255].

Click  to toggle [the Generic DMX Macro Editor](#)^[244]

Click  to toggle the [List of Generic Macros](#)^[255].

Click  to toggle the Generic Macro on/off.

Click  to clear the Generic Macro from the control.

Cue Control Preferences Menu

View Preferences

[Columns](#) - Show or hide the individual columns in the cue control

[View Advanced Options](#) - View or hide the advanced options panel

Sequence Slot Preferences

[Drag Sequences](#) - Enable/disable internal drag of sequences.

[Use Status Colors](#) - By default the different lines in the Cue Control are color coded according to the status of the individual sequence. Colors may be hard to read on some displays (i.e. Laptop displays). Use this switch to disable the color-coding of the lines. It may be necessary to reload the cue in order to get all lines updated. See [Sequence Slot Colors](#)^[192] for an explanation on the different colors used to indicate the different states of sequences in the cue.

[Double-click to edit Sequence](#) - With this option enabled, double clicking a sequence in the cue will place it into the [sequence editor](#)^[178].

[Sequence Slot Labels](#) - See [Sequence Slot Labels](#)^[205]

Sequence Flash Preferences

[Latch Flash Sequence](#) - Check this option to keep flashed sequences latched. A latched sequence will not disappear like a normal flashed sequence. To clear the latched sequence either flash the sequence a second time, or use the [Release Latched Flash hotkey](#)^[19].

[Release Flash on Load](#) - Checking this option will automatically release any flash sequence on load of a new sequence.

Sequence Trig Preferences

[Hotkey Trig Changes Sequence Direction](#) - When enabled, [hotkey](#)^[19] trigs (i.e. trig bounce slot#) will change the [sequence loop direction](#)^[188] according to the direction given by the hotkey trig. Note that manual triggered sequences in chase mode will always change the trig direction according to the latest hotkey press.

Cue Preferences

[Disable BG Cue Latch](#) - Disables the ability to latch Background Cues from the Cue

[Release Current Sequence on Load](#) - When enabled, the current sequence is automatically cleared whenever a new cue is loaded (disable the [sequence changed warning](#)^[109] to avoid warnings when the sequence is cleared)

[Restore Sequence Enabled State](#) - See [Enabled/Disabled Sequences](#)^[195]

Save Chase Times - Chase times for manually triggered sequences are saved with the cue, see [Triggering Sequences in the Cue](#)^[193]

Disable Fade Times in Chase Mode - Sequences in chase mode have their [fadetimes](#)^[128] disabled, effectively [snapping](#)^[128] all effects, see [Triggering Sequences in the Cue](#)^[193].

Allow Remote Enable/Disable - When this option is disabled, remote sequence on/off commands (i.e. via [DMX in](#)^[304]) are not accepted by the cue control.

Restore Macro Control Values - This option must be enabled to restore saved [Macro Control](#)^[199] values when reloading the cue. If not checked saved values are ignored when loading the cue.

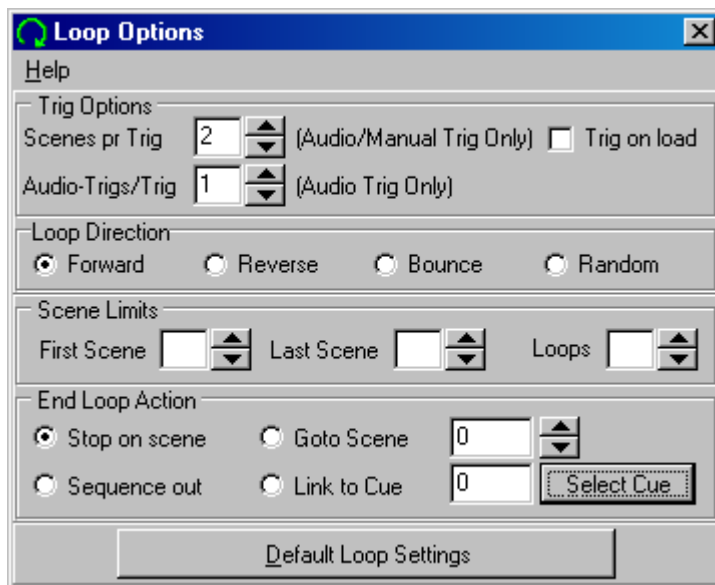
Show Scenetime as BPM

When enabled, scene time is displayed as BPM (beats per minute) rather than the usual time format.

Transparent Cues See [Transparent Cues](#)^[195]

Sequence Intensities See [Sequence Intensities](#)^[196]

125 Sequence Slot Loop Options



By default a (non static) sequence in the cue control will execute from the first to the last scene and then loop back to first scene again. The Sequence Loop Options dialog can be used to modify the trig and loop behavior for the sequences.

Sequence Trig Options

Scenes / Trig - indicates how many scenes the sequence executes when a manual or audio trig occurs. Note that scenes automatically following the first scene triggered are executed in auto trig mode, using the sequences pre-programmed scene and fade times. Also the sequence executes the 'extra' scenes in forward direction regardless of the sequence loop settings (see below).

This setting has no effect if the sequence is in auto-trig mode. Default value is 1 (1 scene pr. trig)

Trig on Load

This option forces the sequence to 'trig' when the cue is loaded (without any trig actually occurring) -

the option only has an effect if the scenes/trig value is higher than one.

Hint: One use of the scenes/trig option is a quick flash type effect for manual or audio triggered sequences. For example to program an audio triggered intensity *flash* effect, create a simple two-scene sequence. First scene should contain a blackout while the second scene should contain an *intensity-on* scene. Set fade and scene times to a low value. Add the sequence to a cue, and set the scenes/trig option to 2 scenes pr. trig and the sequence to manual or audio trig mode. When the cue is loaded it will include the sequence executing scene 1. When the sequence is triggered it will fire scene 2, automatically followed by scene 1, hence creating an automatic flash effect. Note that the sequence will not respond to a new trig before both scenes have executed (using auto time). Experiment with different scene/fade times and fade/snap states to obtain different types of flashes.

To create an audio-triggered *flash chase*, just add more alternating *off* and *on* scenes to the sequence.

Audio-Trigs / Trig - indicates how many audio trigs that should occur before the sequence actually trigs a new scene. This setting is ignored if the sequence is in auto or manual mode.

Sequence Loop Directions

The first set of options dictates the direction of the loop.

Forward - the default loop direction.

Reverse - execute the sequence backwards.

Bounce - execute the sequence from first to last scene, then 'bounce' back from last to first scene. I.E : 1->2->3->4->3->-2->1->2 etc.

Random - select a random scene from the sequence.

Tip:

The random scene option is actually a nice option when programming for clubs and dance venues where precise look are not that important. When two or more sequences in the cue use the random scene mode they will combine to create randomly selected looks, but still within the 'frame' programmed in the sequence. I.E. a sequence may contain 10 different warm color combinations; another sequence could contain 10 different gobo selections, while a third could contain 10 different movement patterns. This would potentially give $10*10*10 = 1000$! different looks - all in the same cue.

Limits

The limit options enable the user to limit the sequence to a certain scene interval by specifying a first and last scene.

It also allows for finite number of loops. When the number of loops is set it is possible to set an end loop action (see below).

Note that it is not possible to limit the number of loops for a sequence in random scene mode.

Tip:

When programming cues that are to be executed in a specific order (i.e. via the [cuelist](#)^[216]) it is often much easier to program transitions in the same sequence, even if the different elements goes into different cues. Use the first/last scene and loop count to 'clip' the sequence into the single transition elements in the cue. For example:

- Cue 1: sequence scene 1 to 3 , 1 loop (and stop)
- Cue 2: sequence scene 4, 1 loop (static)
- Cue 3: sequence scene 5-7, default loop (unlimited loops)
- Etc.

End Loop Actions

If the Loop count is set to a finite number, it is possible to define what should happen to the once the sequence has executed all the loops.

Stop on scene

The sequence stops on the last scene. The sequence maintains the output of the last scene.

Sequence out

The sequence disables itself - no longer contributing to the output of the cue.

Goto scene

Jumps to a specified scene within the same sequence and stop there.

Link to cue

Load and execute another cue. Click the **Select Cue** button to select the cue to link to. To avoid that the cue is performing the actual link while editing the cue - use the **Edit Cue**^[208] option to load the cue, rather than the 'Load Cue' when retrieving the cue.

126 Sequence Status within the Cue

Stop.

This means that the sequence has stopped executing either through user intervention using the stop button, or simply because the sequence is static and already has executed it's scene. The sequence will also stop if the loop options has identical first and last scenes (see later).

Disabled.

Sequence is disabled.

Error.

An error has occurred. The most likely error is that the sequence file has been erased after the cue was saved with the sequence number. In this case the sequence name will read 'load error'.

Edit.

The sequence is currently being edited. When the sequence is being edited it is temporarily taken out of the cue output. The sequence state will revert to normal when the current sequence is cleared again. The reason for this state is to avoid that a sequence being edited contributes to the cue with the 'old' sequence contents (the contents is not really changed until the sequence is saved) during editing.

Out.

The sequence has terminated its loop conditions and is now 'out' - see

[Sequence Slot Loop Options](#)^[188]

Link.

The sequence has terminated its loop conditions and is set to link to another cue - see

[Sequence Slot Loop Options](#)^[188]

127 Cue Control Columns



Each of these buttons corresponds to a single sequence slot in the cue. It also shows the number of the slot. The buttons can be used to enable and disable individual sequences in the cue. When a sequence is disabled it is still a part of the cue but it has no effect on the output of the cue. The default state for a sequence is the enabled state and the button is green and in raised state - when a sequence is disabled the button is red and depressed. The sequence state can be toggled by clicking on the button or by using the [keyboard hotkeys](#) ^[16].

No

This column contains the sequence number. The cue uses the sequence number as reference to the sequence, so all changes to a sequence are automatically carried over to the cue.

Sequence

This column contains the name of the sequence (if any).

Type

This column contains the sequence type (if any). Currently the sequence type has no effect but is reserved for future use.

Scene

This shows the current scene of the sequence in the slot in the form X:Y where X is the current scene, and Y the maximum number of scenes in the sequence. If the sequence only contains one scene this field will read static.

ST

Short for scene time. This shows the scene time for the current scene in the sequence. Unless the time has been scaled by the cue time control (see later) this will be the scene timed that was originally saved with the sequence.

FT

Sort for fade time. This shows the fade time for the current scene in the sequence. Unless the time has been scaled by the cue time control (see later) this will be the fade timed that was originally saved with the sequence.

Status

This column shows the current status of the sequence. If a sequence is present and the status field is empty it means that the sequence is executing the current scene. See [Sequence Status](#) ^[190] for an explanation of the different states.

Loop

The cue also allows different types of loop control settings for each sequence in the cue (see

[Sequence Slot Loop Options](#)^[188]).

If no loop options has been set the default value of this field is *fwd* which indicates that the sequence runs in a default loop, first to last scene, then loop to first scene again.

Trig

This field shows the trig source of the sequence (see [Triggering Sequences in the Cue](#)^[193])

128 Sequence Slot Colors

Sequence Slot Colors

Black is used to indicate that the sequence is running normally.

Maroon is used to indicate a static sequence or a sequence that has stopped.

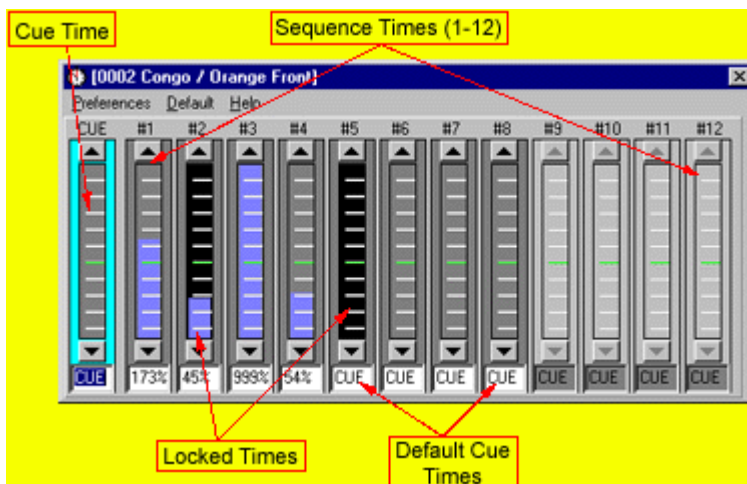
Red Indicates Error, such as referencing a sequence that does not exist, or to indicate that a manual sequence is in [chase mode](#)^[193].

Gray is used to indicate a disabled sequence.

Blue is used to indicate a sequence that is currently being edited

Green is used to indicate a 'link-cue' sequence in edit mode.

129 Cue Time Control



Cue Time Control

The cue time control allows the user to alter the 'dynamic' expression of a cue by scaling the scene and fade times of the individual sequences in the cue (much like x-fade speed/time on conventional consoles). The scaling method means that the time control will also work with sequences with different scene times.

By using the sequence cue time control is it often possible to re-use sequences in different contexts simply by slowing down or speed up the sequences in the particular cue.

The time control consists of 13 virtual faders. The first fader controls the overall cue, while the next 12 control the individual sequence slots. It is not possible to set times for sequence slots that does not have a sequence assigned (indicated by a light gray background color).

The cue time itself (controlled by the first fader) is an easy way to modify the overall dynamic expression of the cue of on the fly.

By default, all cue and sequence times are set to the default '**CUE**' time. Using the default time means that the sequences will play back with the scene and fade times they were programmed with.

It is possible to scale the sequences scene and fade times by using the fader for the individual sequences. The possible scaling ranges from 1% to 999% - 100% represents the original times (no scaling) and is equivalent to **CUE**. In order to change and synchronize more than one sequence in the cue, select the sequences by highlighting the lines in the cue control. Note that scaling will not make the sequence exceed the 60 second scene/fade time limit.

The cue time (the first fader) has overall control over all the sequences in the cue. However the cue time fader will only control the sequences that are not already controlled by the individual time faders (time for the individual sequences must be '**CUE**').

The times scales values set with the Cue Time control are saved together with the cue.

A scaling control for [movement macros](#)^[130] may be linked to the main cue time fader as well (see [Cue Macro Control](#)^[199]).

Overriding Cue times via DMX-in or 2518/RS232

It is possible to override the values of the virtual faders via DMX-in or from the 2518 Controller connected via RS232. This may transfer control from on-screen, virtual faders to real physical faders on a console.

Using the Cue time control preferences menu (**override options**) the override may be set to work on changes only (1,2,3) - default setting is on changes only (1).

Overriding **on changes only** means that cue time parameters are only changed if there is an actual change in the incoming DMX values - this allows the cue to load with it's pre-programmed timing parameters, and only change the timing if an actual DMX in change occurs. The selections 1, 2 and 3 indicates that a change of 1,2 or 3 DMX values must occur before the timings are changed. Use 2 or 3 for consoles with unstable fader decoding.

Selecting **Always** means that the timing parameters are always overwritten by the incoming DMX values.

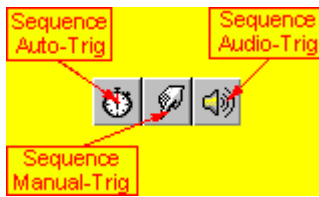
Note that an incoming DMX value of 0 automatically selects the per-programmed timing for the cue (time fader is marked '**CUE**').

130 Triggng Sequences In the Cue

Trig is the term that describes the 'action' that causes a sequence in a cue to jump to a new scene. Sequences with only one scene cannot be triggered.

The LightJockey supports three modes of triggering sequences: **Automatic** trig using internal clock and scene time, **Manual** trig requiring input from the user, and **Audio** trig - which requires audio input via a Windows compatible soundcard (see [Using Audio-Input](#)^[319]).

The auto and audio trig-modes may be combined with any of the [loop options](#)^[188], i.e. bounce or random. In manual trig mode the new scene is selected by the manual trig method (forward,reverse,random).



These buttons are used to select the trig method of the sequence(s). Highlight the sequence(s) in the cue control and click to select the trig mode.

The actual trigmode is displayed in the [Trig column](#)^[191] of the cue control.

Manual Trig Mode

When in manual trig mode the sequence must be triggered by the user in order for the sequence to change to the new scene.



Click any of these buttons to trig sequences in manual trig mode. Sequences may be triggered in reverse, forward or random direction. If no sequences are high-lighted in the cue control, all manual sequences in the cue will be triggered - otherwise only selected manual sequences are triggered.

The functions of these buttons are also available as [keyboard hotkeys](#)^[191], as well as keyboard hotkeys for triggering individual sequence slots.

Chasing sequences

Manual Triggered sequences in Chase Mode

The [Chase Man](#) button is used to switch manually triggered sequences in and out of chase mode. When in chase mode, a manual sequence switches into a special form of auto trig mode. The trig time of the sequence is determined by the user, by using the time between the last two clicks on any of the manual trig buttons or hotkeys.

The scene fade time is set to the same value as the chase time unless the *Disable Fade Time in Chase Mode* option in the cue preference menu is checked. When fadetime is disabled all effects in chased sequences will be snapped.

The chase rate is not affected by the [cue time control](#)^[192].

If the **Chase Man** button is disabled all chasing sequences switches back in to manual trig mode.

Note that current chase rates are only saved with the cue if *Save Chase Times* is enabled in the Cue control preferences menu and the **Chase Man** button is enabled.

Using global chase rate

Enable *Sequence Trig Preferences / Use global chase rate* in the cue control preferences menu to force all manually triggered sequences to chase to a global chase rate. The global chase rate is set the same way as chase rates for individual sequences (see above) but carries over when a new cue is loaded, effectively ignoring any previously saved chase times.

When the option is enabled and a new cue is loaded all manually triggered sequences will automatically be chased using the global chase rate, making it possible to 'follow a beat' using chases over multiple cues.

Automatic Trig Mode

Sequences in Auto trig mode will be triggered using the internal clock. By default sequences are triggered using the programmed scene times. The scene times may be modified (scaled) on the fly by using the [Cue time control](#)^[192].

The  may be used to trig sequences in auto-trig mode manually.

Audio Trig mode

Sequences in audio-trig mode will synchronize the trigs to the dynamics of the music- see (see

[Using Audio-Input](#)^[319]).

131 Enabled/Disabled Sequences

Enabled/Disabled Sequences

Disabled sequences do not contribute to the output of the cue. The state is saved with the cue, and will be used the next time the cue is loaded, providing the *Restore Sequence Enabled State* is enabled in the Preferences/Cue Preferences menu.

It is also possible to enable/disable sequences remotely using [DMX in](#)^[304], [keyboard hotkeys](#)^[16] or the [2532 Direct Access](#)^[298].

132 Transparent Cues

See also [Cue Control](#)^[184].

Normally when loading a cue, the contents of that particular cue will replace the entire contents of the previous cue. This means that slots not used in the newly loaded cue will 'overwrite' slots in the previous cue with an empty slot.

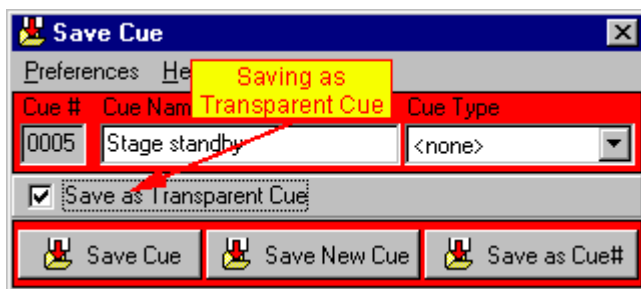
When a cue is loaded in transparent mode, only slots actually containing sequences will overwrite the slots from the previous cue.

This means that if a cue containing sequences in slot 1,2 and 3 is loaded transparently, it will leave whatever contents previously loaded into slots 4 to 12.

Using transparent cues effectively usually requires some pre-planning. One way of using transparent cues to good advantage is to keep individual groups of fixtures in single sequences, and use specific slots in the cue for these groups. This way a new cue containing a sequence for a particular group of fixtures only can be loaded into the existing cue, without 'disturbing' all other fixtures doing their own sequences.

Do be aware that some of the things that might be done with transparent cues (i.e. maintaining houselights) may just as well be done via [Background Cues](#)^[238].

When [Saving](#)^[204] a cue, it may be saved as a transparent cue. This means that under default circumstances (see below), the cue, when loaded, will load as a transparent cue.



The [Cue control](#)^[184] has a set of switches in the **Preferences/Transparent Cues** menu that dictates

the way transparent and non-transparent cues are loaded.

Use transparent cues - cues are loaded transparently only when previously saved as a transparent cue.

Force transparent cues - all cues are loaded transparently.

Ignore transparent cues - no cues are loaded transparently.

When programming transparent cues it may be useful to enable the *Show Add to Cue Slot* in the preferences menu of the [Save Sequence Dialog](#)^[197] to add the sequence to a specific slot in the cue.

133 Sequence Intensities

Sequence Intensities

The Sequence intensity function is only available as a function through [DMX in](#)^[304] or via [Fingers for LightJockey](#)^[86]

Each sequence slot in the cue may be assigned a DMX or in channel or Fingers fader that modifies the programmed intensity values of each of the fixtures in the sequence loaded into the sequence slot. The function only modifies 'active' intensity values ([fade status](#)^[128] must be either snap or fade), and the modification is proportional to the programmed value (Sequence intensity at 25% means output at 25% of programmed value). The function does not modify the programmed fade status, fade time or other components of the sequence.

If one or more, but not all Sequence intensities (1-12) have been assigned, LightJockey considers the remaining sequence slots to be set at a sequence intensity value of 100% (see below).

While the Sequence intensity works independently from the [Master Intensity](#)^[304] control, any modification to global intensities by the Master intensity or sub-masters still applies to the final intensity output.

The Sequence Intensities operate in one of 3 different modes. The mode is selected from the **Preferences Menu** of the [Cue Control](#)^[184]. The mode applies to all sequence intensities (1-12).

Default - In default mode the cue is evaluated as usual with the sequence in the highest number slot having highest priority. The final intensity of individual fixtures is determined by the highest priority sequence with 'active' intensity information for the particular fixtures *modified* by the assigned sequence intensity.

Use HTP - In HTP mode, the highest intensity value in *any* sequence with an active intensity component is used for the final output. This includes any sequences slots that are not directly modified by sequence intensity - these will always force the fixture to use programmed intensity (100%).

Use LoTP - in LoTP mode - the lowest modified intensity value of any sequence is used. Sequences that do not contain 'active' intensity values do not contribute to the lowest value.

Note that for HTP/LoTP calculations, it is the programmed scene value modified by the sequence intensity value that is used to determine which sequence generates the intensity output - not the value generated by an eventual fade programmed into the sequence; e.g. programmed value of 100% will be

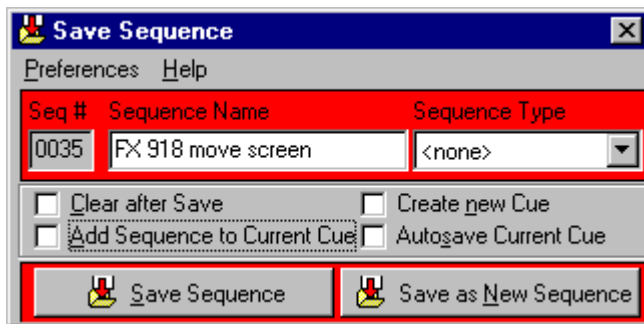
calculated as 100% even if the momentary output generated by the sequence is only 50% due to an active fade in the sequence.


A few examples - the % values represent intensity values programmed in the sequences, - represents no intensity value programmed. S.I. represents the Sequence Intensity value.

	Fixture 1	Fixture2	Fixture3	Fixture4	S.I.
Seq#1	-	100%	50%	10%	30%
Seq#2	100%	-	-	-	40%
Seq#3	30%	50%	-	50%	50%

Default	30%*50%	50%*50%	50%*30%	50%*50%	
HTP	100%*40%	100%*30%	50%*30%	50%*50%	
LTP	30%*50%	50%*50%	50%*30%	10%*30%	

134 Save Sequence Dialog



This dialog is used when saving a sequence. The dialog may be opened with the  buttons located on the left hand side of the [Sequence/Cue toolbar](#) ^[104] or on the [Sequence Control](#) ^[178].

See also Quicksave in [System Preferences](#) ^[109].



Seq #.

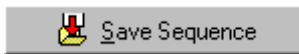
This is a number that is used to uniquely identify the sequence. The number is applied to the sequence when saving the sequence for the first time, so for a new sequence this field will be blank until the sequence is saved. It is not possible for users to change this number.

Sequence name.

This is the name that will be used through out LightJockey. The name can be changed at any point, providing that the sequence is saved after the name has been changed. The name has no other function than identifying the sequence to the user.

Sequence Type.

It is possible to assign a pre-defined sequence type to the sequence. Currently the sequence type is reserved for future use and has no effect, other than being able to act as a sort key in the [list of available sequences](#) ^[206].



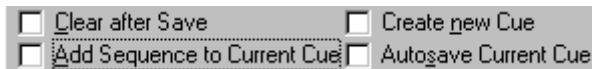
Save Sequence.

This option is used to re-save the current sequence. It is only available if the sequence has been previously saved and thus given a sequence number. Saving the sequence will overwrite the contents of the previous save.



Save as New Sequence.

This will save the current sequence as a new sequence (giving it a new sequence number). Both new sequences and sequences that have already been saved may be saved as new a sequence. If a previously saved sequence is saved as a new sequence, the old save is left intact.



Clear after Save.

Since the output of the current sequence always has higher priority than the current cue, the current sequence will always have all programmed effects 'visible'. This may not be the case when the sequence is part of a cue where effects may be overwritten by other, higher priority, cues. Enabling this option is analogue to selecting [new sequence](#)^[178] after the sequence is saved.

Add Sequence to Current Cue.

This option will add the sequence to the current cue after the sequence has been saved. The sequence is only added once so if it already is part of the current cue, it will not be added twice.

By checking the *Show Add to Cue Slot* option in the preference menu, it is possible to force the sequence to be added to a particular slot in the cue. When enabled the sequence will be added to the cue in the selected slot number, unless it is already part of the cue. Select the slot from the drop down list to the right. The list contains the *default* for the default sequence slot, and entries for the 12 individual slots in the [cue control](#)^[184]. Note that the slot names are [user defineable](#)^[205]. If the option is disabled the sequence will always be added in the default slot.



Adding the sequence to the cue in a specific slot.

Create New Cue.

This will auto create a new cue when the sequence is saved and add the sequence to the cue. The cue will be given the name of the sequence. Use this option (and possibly "autosave current cue") when writing sequences that are the basis of a cue, or when writing cues that only consists of one sequence.

Autosave Current Cue.

This will automatically save the current cue after the sequence is saved.

Preferences Menu

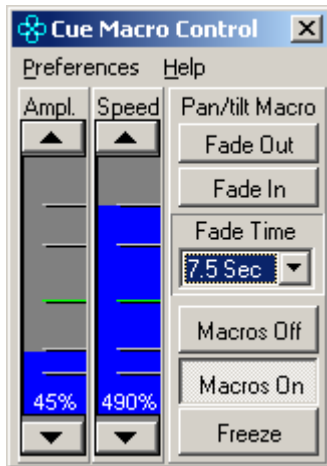
Auto Close - When enabled the dialog closes automatically when the sequence is saved.

Save on [Enter] - When checked the [Enter] key on the keyboard acts as hotkey for the Save and Save New buttons.

Quicksave use Save Options - when checked, [Quick-saving](#)^[109] the sequence uses the various save options (clear, add etc.). If not checked these options are ignored.

Show Add to CueSlot - shows the *add to cue in slot* list (see above)

135 Cue Macro Control



The Cue Macro Control.

The cue macro control may be used to scale the amplitude and speed parameters on any [movement macros](#)^[130] currently active in sequences in the cue. The control will not affect macros active in the [Background Cue](#)^[238] or in the current sequence.

The Macro control has two faders - one to scale the macro amplitudes (pan and tilt amplitude) and one to scale the macro speeds. The speed fader may be linked to other functions (see later).

By default the faders scales the amplitude and speeds from 0% to 100%, where 100% means that the macros run as programmed.

Setting the amplitude scale to 0% effectively disables the macros and the fixtures will move to the programmed pan/tilt positions.

Setting the speed scale to 0% will stop the macro from running but still include the macro's pan and tilt into the final fixture positions.

From the preferences menu it is possible to set the fader range from 1%-999% - values above 100% will scale the macro's amplitude and speeds above the programmed values. Note that the values will never exceed the maximum value 127 for amplitude or speed, but may scale down to a value of 0 as scaled values goes below 1.

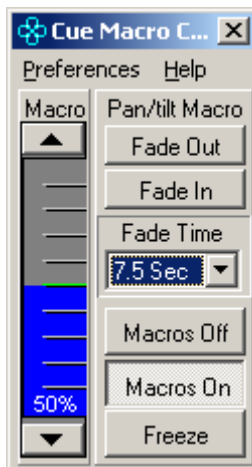
The function of both the amplitude and speed faders may be remote controlled via [DMX in](#)^[304].

In order to save the Macro Control values together with the actual cue, check *Save Macro Control Values* in the [save Cue dialog](#)^[204] when saving the cue. Also, make sure that the *Restore Macro Control Values* in the [Cue Control](#)^[184] preferences/cue preferences is checked, otherwise the values are ignored when reloading the cue.

Linking the speed fader

Linking speed to amplitude

Via the preference menu, the speed fader may be linked to the amplitude fader. When speed is linked to amplitude, only one fader is visible, making control with a mouse easier as one fader will control both the amplitude and speed.



Speed fader linked to amplitude fader

Linking speed to cue time

The speed fader may also be linked to the [cue time control](#)^[192] - when linked to the cue time, the cue time fader will control the speed, scaling the speed value from 1% to 999%. When the speed is linked to the cue time control, only the amplitude fader is available.

Fade out, Fade in buttons

These buttons will 'fade' the position of the faders in and out at in pre-determined time. The actual time is selected from the fade time list below the buttons.

Macros Off, Macros On

These works the same way as the fade buttons, except that the transition is instant (equals a fadetime of 0).

Freeze

This button freezes the macro in place (the macro doesn't 'advance') - the effect is identical to setting the speed scale to a value of 0%.

Macro fade, on/off and freeze buttons may be assigned to [Hotkeys](#)^[191] or [2532 direct access](#)^[296] keys.

The Preferences menu

Fader Range

Selects between 0%-100% and 1% to 999% ranges.

Speed Fader Link

Used to link the speed fader other functions.

Allow Fader preset

When disabled, clicking any of the faders will cancel any fade out or fade in or off state and activate the faders. When enabled it is possible to preset the faders values with the mouse while the macros are fading or off.

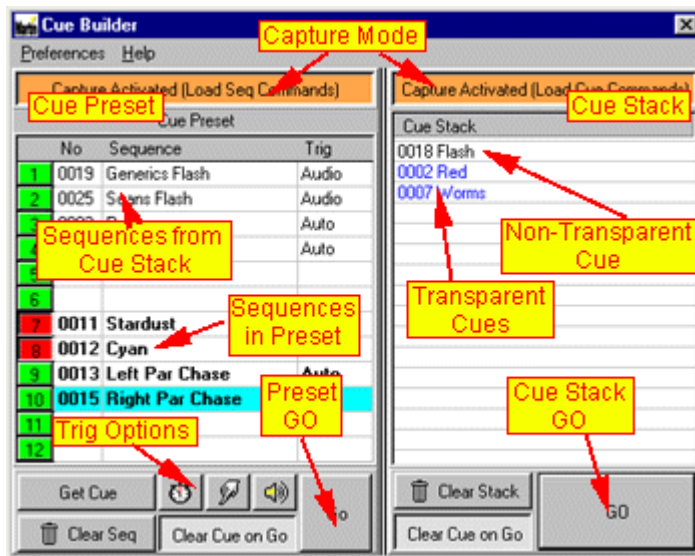
Show Values as %

Show the values as %-values or as numerical values.

136 Cue Builder

The Cue Builder control is a tool to pre-build the contents of a cue, before latching the elements to the current cue. The Cue Builder is usually used to build cues on the fly while the current cue is running.

The Control is opened from the Cue-BUILDER menu item on the [Cue Control](#)^[184] or via a [hotkey](#)^[19].



The Cue Builder Control

The Cue Builder consists of two parts, the Cue Preset part and the Cue Stack part. The two parts may work together and combine into a final cue or as separate controls.

Important

To avoid confusion, when the capture commands (see below) are enabled, the Cue-BUILDER is **ONLY** active as long as the control is visible. When the control is closed, capturing is disabled and cue builder functions (including hotkey access) are no longer accessible

View Options

Use the Preferences/View menu to enable or disable the Cue Preset or Cue Stack respectively.

The Cue Preset

The Cue Preset part mimics the actual cue control as it has the same 12 sequence slots as the cue control. Preset the cue by dragging sequences from the [list of sequences](#)^[206] to one of the 12 slots in the cue preset (or use the capture function - see below)

Then click the go button (or assign a hotkey to the go button) to latch all the sequences to the current cue.

Note that the cue preset only offers a few possibilities to preset the behavior of the sequences. For example, it is not possible to set any of the loop options from the cue preset. To preset cues with the more complex options use the cue stack instead.

Sequence On/Off


Each sequence slot has an on/off button on the left side. Use this to preset the sequence to on or off

state.

Get Cue

Click Get Cue to transfer sequences from the current cue to the cue preset.

Trig Options

Highlight sequences, and click either of the trig buttons  to pre-select the sequence [trig method](#)^[193] (auto, manual or audio). Right-click the trig buttons to set all sequences to that particular trig-mode.

Clear Seq

Highlight sequences and click **Clear Seq** to clear the highlighted slots - right-click **Clear Seq** to clear all slots.

Alternatively, right-click any slot and select the *Clear Selected Sequence* or *Clear All Sequences* from the popup menu

Clear Cue on Go

When enabled the current cue is automatically cleared before the sequences are latched. When disabled, the cue is not cleared before the sequences are latched.

GO

Click GO to transfer the pre-set sequences to the current cue.

The Cue Stack

The cue stack allows the user to pre-select multiple existing cues and latch these to the current cue simultaneously.

Cues are added to the stack by dragging them from the [list of cues](#)^[208] (or by using the capture option, see later). The content of the stack is then transferred to the current cue by a single GO command. Since the cue stack transfers cues rather than sequences, it is possible, using the cue stack' to build a cue that contains sequences with any of the options available to cue control (i.e. loop or timing controls).

Transferring multiple [non-transparent](#)^[195] cues doesn't really make sense (they would just overwrite each other), so only one non-transparent cue is allowed in the stack - adding a second non-transparent cue to the cue stack simply replaces the existing cue.

There is no limit to the number of transparent cues that can be added, but the same transparent cue can only be added to the stack once.

Since the cues in the stack are always added to the current cue from the top of the stack, the order of the cues in the stack is significant. If the stack contains a non-transparent cue, it will automatically be located at the top of the stack (if it was added to the current cue after a number of non-transparent cues, it would just overwrite these cues). The order of non-transparent cues in the stack may be re-arranged by drag and drop.

Clear Stack

Click to clear the entire contents of the stack

To remove individual cues, highlight the cues, right-click and select remove from the popup menu.

Clear Cue on Go

When enabled the current cue is cleared before the cues from the stack are applied. Note that if the stack contains a non-transparent cue the current cue will be cleared automatically by the non-transparent cue.

The cues in the stack are transferred to the current cue from the top of the stack.

Capture Buttons

Enable the capture buttons to capture *load sequence* (do not confuse with sequence flash) and load

cue commands to the preset cue and cue stack respectively. The respective capture commands are only active if the Cue Builder Control is open and the Cue-Preset and Cue Stack are visible.

Capturing Load Sequences commands

Sequences are automatically added to the cue preset in as high a priority position as possible. If there are no free slots in the preset it will replace the sequence in slot 12.

Capturing Load Cue commands

Cues are automatically added to the stack in the order they are loaded. Only one non-transparent cue may exist in the stack. Attempting to load another non-transparent cues will replace the existing transparent cue.

Attempting to add the same cue twice by capturing the load command will remove the cue from the stack.

Notes:

The cue stack capture command is primarily useful for installations using remote access such as the 2532 to load cues. Using Cue Stack capture allows the user to build the cue stack from cues using the 2532 load cue commands.

The Preferences Menu

View Menu

Default View - Resize the Cue Builder to default size.

Cue Preset - Enable or disable the Cue Preset

Cue Stack - Enable or disable the Cue Stack

Cue Preset Menu

Default Enable Sequence Capture - Enable the sequence capture by default.

Force Sequence Reload - If disabled, sequences transferred to the current cue will not restart if the slot in the current cue is already occupied by the same sequence. If enabled, the sequence will always restart regardless of the contents on the cue.

Auto Clear Sequences on Go - All sequences are cleared from the cue preset when the GO command is executed.

Cue Stack Menu

Default Enable Cue Capture - Enable the cue capture by default.

Auto Clear Stack on Go - The Cue Stack is automatically cleared when a GO command is executed.

View Cue Stack in Cue Preset

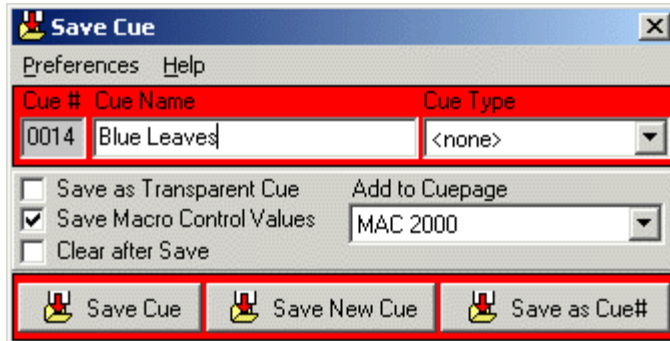
When enabled, the resulting contents (sequences in the resulting cue) of the cue stack are automatically added to the cue-preset. If a GO command is issued for the cue-preset, these sequences are included in the sequences that are transferred to the current cue. Note that it is not possible to change trig modes for the sequences from the cue stack in the cue-preset. When disabled, the cue stack sequences are not transferred to the cue preset.


This function is primarily useful as pre-view for users that uses the cue stack only.

Use Color Code for Transparent Cues

When enabled, transparent cues in the cue stack are shown in blue in the cue stack (non-transparent cues are shown in black).

137 Save Cue Dialog



This dialog is used when saving a Cue. The dialog may be opened with the  buttons located on right hand side of the [Sequence/Cue toolbar](#)^[104] or on the [cue control](#)^[184].



Cue #.

This is a number that is used to uniquely identify the cue. The number is applied by the LightJockey when saving the cue for the first time, so for a new cue this field will be blank until the cue is saved. It is not possible for users to change this number once given to the cue. see also *Save As Cue#*.

Cue name.

This is the name for the cue that will be used through out LightJockey. The name can be changed at any point, providing that the cue is saved after the name has been changed. The name has no other function than identifying the cue to the user.

Cue Type.

It is possible to assign a pre-defined cue type to the cue. Currently the cue type is reserved for future use and has no effect.

Save as Transparent Cue

When checked the cue is saved as a [transparent cue](#)^[195].

Save Macro Control Values

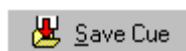
When checked the [Cue Macro Control](#)^[199] values are saved with the cue.

Clear after Save

When checked the cue is automatically cleared after being saved.

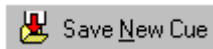
Add To Cuepage

Automatically add the cue to a specific page in the [List of Cues](#)^[208]. If a cue is already present on a page (when re-saved) it will not be added a second time; if it is present on a different page than the one specified it will not be removed from the original page.



Save Cue.

This option is used to re-save the current cue. It is only available if the cue has been previously saved and thus given a cue number. Saving the cue will overwrite the contents of the previous save.



Save New Cue

Save as New Cue.

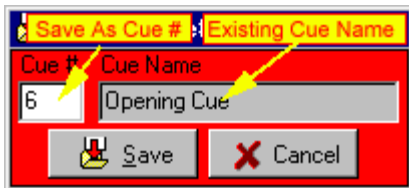
This will save the current cue as a new cue (giving it a new cue number). Both new cues and cues that have already been saved may be saved as a new cue. If a previously saved cue is saved as a new cue, the old save is left intact.



Save As Cue#

Save As Cue#

This allows the current cue to be saved with a cue number of the users choice.



Save as Cue# Dialog.

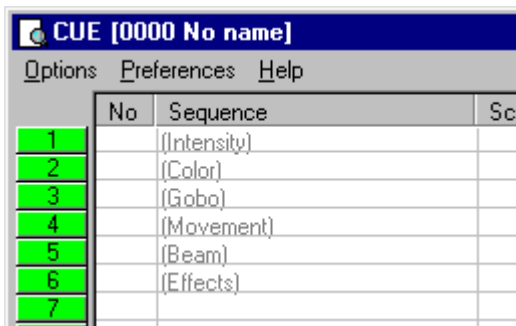
Clicking on the **Save As Cue #** button brings up the save as cue dialog. Type the new cue number in the Cue# field - if an existing cue is already registered with that cue number, the name of the cue will show up in the cue name field.

Warning : If a Cue using this number ready exists, saving the current cue will overwrite the existing cue with the current cue - there will be no further warnings if an already existing cue is overwritten.

Preferences Menu.

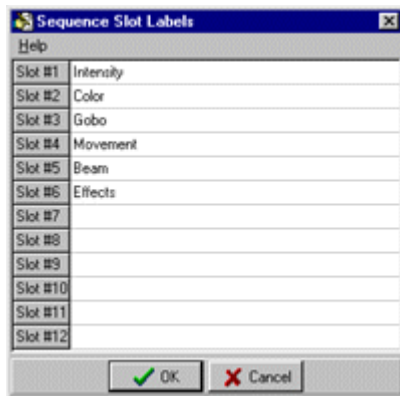
- Auto Close. This option will close the save dialog automatically when the cue is saved.
- Save on [Enter]. This option will allow the [Enter] key on the keyboard to act as a hot-key for the "Save Cue" and "Save as New Cue" buttons.

138 Sequence Slot Labels



To facilitate systematic cue programming the individual sequence slots of the cue may be labeled. Note that the slot label is only visible in the cue control when the sequence slot is empty.

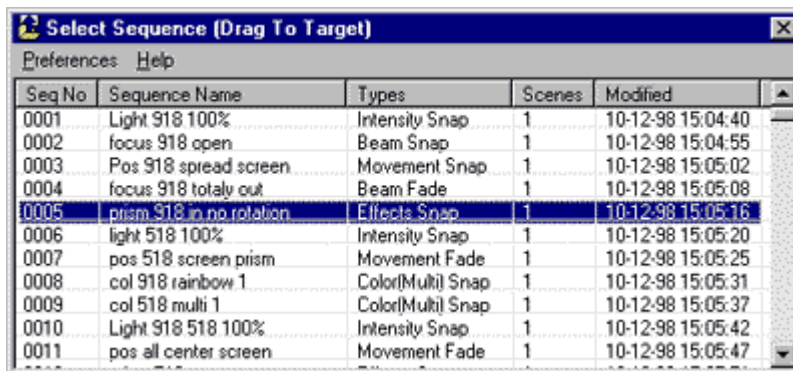
To label a slot, select **Sequence Slot Labels** from the preferences menu in the [Cue control](#)¹⁸⁴.




Sequence Slot Label dialog.

The label is also used for reference in the [save sequence dialog](#)¹⁹⁷, if the *Show Add to Cue Slot* option is selected.

139 List of Sequences



This list contains all previously saved sequences.

The list may be displayed by clicking on the  icon on the left hand side of the [Sequence/Cue toolbar](#)¹⁰⁴ or the [sequence control](#)¹⁷⁸.

There are a number of ways to select sequences from the list. The sequences may also be selected directly to various targets depending on options set in the preferences menu.

There are a number of ways to select cues from the list, depending on the mode selected in the preferences menu.

Drag Mode

This is the default mode for the sequence list. When in this mode it is possible to load the sequence into the current sequence in the following ways:

- Drag the sequence from the list to an empty spot on the desktop.
- Right-click the sequence line and select "Edit Sequence" from the popup menu.
- Double-click the sequence line.
- Highlight the sequence line and press [Enter] on the keyboard.

In general, when in drag mode, sequences can be dragged from this list to their intended targets, this includes the [cue control](#)^[184], where sequences can be placed in slots simply by dragging them from the list to the cue control.

Sometimes the list contains an OK button when selecting a sequence for a special purpose, i.e. a startup sequence or source sequence for scene insert. To select the sequence, simply highlight the sequence line and click OK.

Preferences menu

Browse to Edit. This will load the highlighted sequence into the current sequence. Use the mouse or keyboard to highlight the sequence lines. When using the keyboard, the window must have focus for the keys to work.

Browse to Cue. This will move the highlighted sequence into the cue, provided there is enough free slots. To move the sequence into a specific slot in the cue, highlight the slot in the cue and then browse the sequences. This mode may be useful when browsing through sequences to find some good 'looks'

Sequence information columns

By default, the list will show the following information about each sequence :

Seq No	The unique number that identifies the sequence.
Sequence Name	The name given to the sequence by the user.
Types	The sequence type assigned to the sequence. See Save Sequence Dialog ^[197] .
Scenes	The number of scenes in the sequence.
Modified	The time of the last modification to the sequence.

Hiding columns

The Preferences menu contains options to hide or show any of these columns. If the application doesn't require all information, hiding some of the columns may free some precious space on the desktop.

Sorting Sequences

It is possible to sort the list on each of the types of information in the columns. Simply click on the column header to sort the list in ascending order according to the column information type.

Sequence pop-up menu.

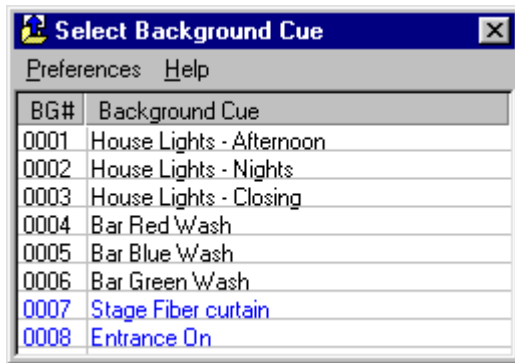
Right-click on any line containing a sequence to bring up the pop-up menu.

The menu offers possibilities to :

- Edit the sequence, that is loading the sequence into the current sequence.
- Add the sequence to the current cue.
- Add to BG Cue - add the sequence to the current [background cue](#)^[238]. If all slots are filled in the background cue the sequence will overwrite the sequence in the last slot.
- Add to 2510 list. This option is only available if the [2510 list control](#)^[73] is open.
- Delete the sequence file.


To delete multiple sequences in one go, select "System/Delete Files/Sequences" from the [main desktop menu](#)^[109].

140 List of Background Cues



List of Background Cues

This list contains all previously saved Background Cues. Use this list to select and load a Background Cue (a Background Cue may also be loaded using the drop down list on the [background cue control](#)^[238]). The list also acts as source for drag and drop operations for Background Cues.

Call up the list by on the  icon on the [background cue control](#)^[238] - or by assigning a [hotkey](#)^[19] to toggle the list on and off.

Loading Background Cues

To load the background cue either double click the line containing the cue, or highlight the line and use the [Enter] key on the keyboard (unless the [Enter] key has been assigned as hotkey for another action). Finally a Background Cue may be loaded by dragging it to the desktop.

Deleting Background Cue Files

Highlight the lines containing the Background cues to be deleted, then right click and select **Delete Background Cue Files** from the popup menu.


Preferences Menu

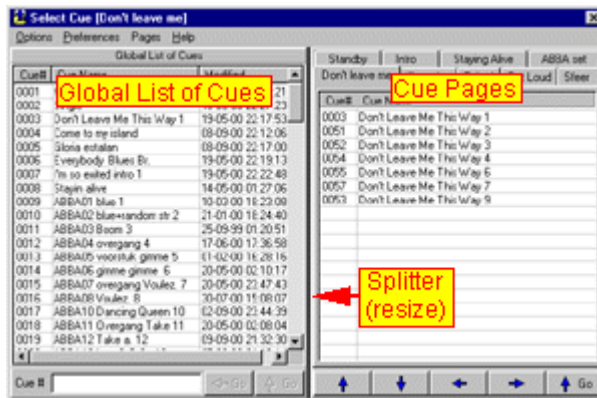
[Use Color Code for Transparent Cues](#) - when enabled transparent background will be shown in blue, when disabled transparent cue names will be pre-fixed with a (T)

[Follow Active BG-Cue](#) - when enabled the active Background Cue will be automatically selected in the list.

141 List of Cues

Use this control to retrieve previously saved cues or to drag cues to various configuration settings (do not confuse the list of cues with [Cuelists](#)^[216]).

The list is displayed by clicking on the  icon on the right hand side of the [Sequence/Cue toolbar](#)^[104] or the [cue control](#)^[184].



The list of Cues control

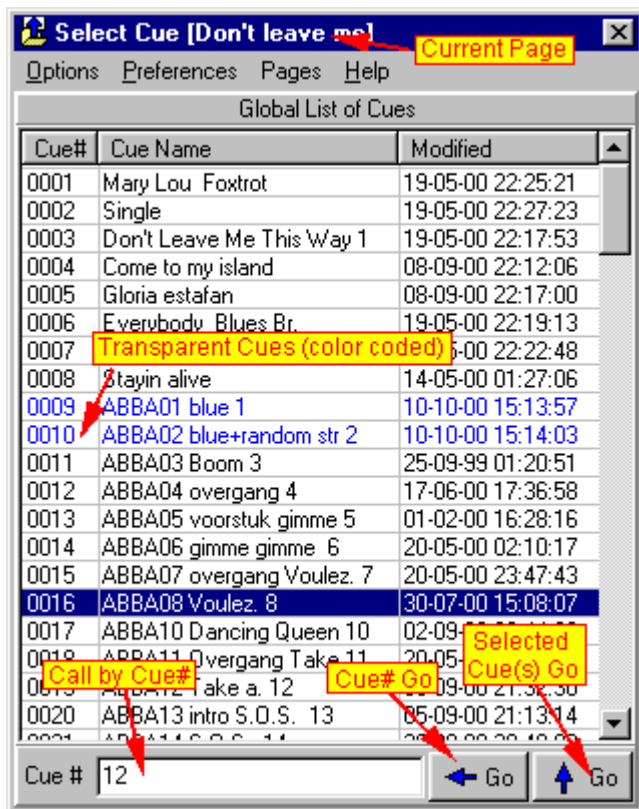
The list control contains two sections - the global cue list and the cue pages. The Global list contains all previously saved cues, while the Cue Pages section contains user defined pages with any of the cues from the global list in any order.

By default the control defaults to showing the global list only. Make the global list and cue pages sections visible by checking **View Global List** and **View Cue Pages** respectively in the preferences menu. To hide either section, un-check the respective view from in menu - note that one of the two sections are always showing.

When both the Global List and the Cue Pages are showing, the two sections can be horizontally resized by dragging the vertical splitter between the two sections.

See [Cue Pages](#)^[213] for information on how to configure use the Cue Page section.

The Global List of Cues



The Global Cue List

The Global Cue list is a list containing all previously saved cues. If no cues have been saved, there are no entries in the global list. It is also possible to delete cue from the global cue list.

List Columns

The list contains three columns, the cue# (cue number) which is a unique identifier for each cue, the cue name and a modified date. The columns may be individually horizontally resized by dragging the splitter between each column header. Alternatively use the Preferences/Global List Preferences/Columns menu to hide one or more columns. The global list may be sorted according to each column by clicking on the respective column header.

Transparent Cues

By default the list displays [transparent cues](#)^[195] using a blue color code (normal cues are drawn in black) - to disable the color coding and mark transparent cues with a preceding (T), un-check **Use Color Code for Transparent Cues** in the preferences menu.

Loading and Editing Cues

Loading a cue

There are a number of different ways to load a cue back into the [cue control](#)^[184] from the global cue list.

The simplest is to double click the line in the global list containing the cue. Alternatively a cue may be loaded by highlighting the line and then:

- press the [Enter] key (this option may be disabled, see later)
- rightclick the line and select load cue from the pop up menu
- use a keyboard hotkey (see later)

- click the **selected cues GO** button (up arrow)
- type the cue number in the call by cue# field and press [Enter] or click the **Cue# Go** button (left arrow)
- load the cue directly (using browse mode, see later)
- drag the line on to the desktop or the cue control

Editing a cue

To edit a cue, highlight the line, right-click and select **Edit Cue**. When editing a cue, the cue is retrieved to the cue control much like the load command. However, any [sequence link options](#)^[188] programmed in the cue are not actually performed - linking cues are stopped at the end of the loops without linking the next cue.

Loading Multiple Cues

Loading multiple cues at once only makes good sense if all (but one) of the cues to load are [transparent cues](#)^[195] - however there is no check that this is actually the case. Loading multiple non-transparent cues will just result in the last cue being executed.

Note : if multiple cues are loaded the warning on cue changed option is automatically disabled.

To load multiple cues, make sure that the Enable Multi-Cue Load option is enabled (in the preferences menu). First highlight the cues, then select a load option as when loading a single cue (except for the double click, or browse). Note that it is not possible to load multiple cues across cue pages.

When loading multiple cues via the global cue list or cue pages, the cues are loaded and evaluated in a top to bottom order.

Alternatively, type the cue numbers into the Cue# field. Separate the cue numbers with a '+', i.e. 1+2+3 loads cues 1,2 and 3.

Deleting cues

Highlight the cues to delete - then right-click and select Delete Cue(s) from the popup menu. Warning - deleted cues are gone for good.

Useful Hotkeys for the global list

A number of keyboard hotkey functions may be helpful when working with the global list of cues - see [hotkeys](#)^[161] for an explanation of how to assign hotkeys to functions.

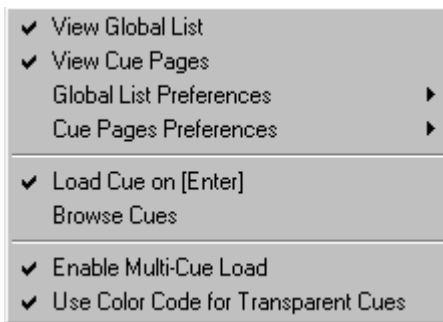
Toggle List of Cues - toggles the list of cues on and off.

Load Selected Cue (Global List) - loads the selected cue from the global cue list, regardless if the list has Window focus (the [Enter] key only works if the global list has focus).

Focus Cue# Selection - shows the list of cues if necessary and forces windows focus to the cue# selection field. This is a useful option if cues are usually selected via the cue# entry. If for example, the 'c' key is assigned to this function, precede all cue number entries with a 'c' (i.e. 'c123') to make sure that the cue# entry gets focus.

It is also possible to assign a specific cue directly to a hotkey - see [hotkeys](#)^[161].

The preferences menu



Preferences Menu

[View Global List & View Cue Pages](#)

Used to show or hide the global list and cue pages respectively.

[Global List preferences & Cue Pages preferences](#)

Used to set preferences for the global list and cue pages respectively.

[Load cue on \[Enter\]](#)

By default highlighting a line in the global cue list or one of the cue pages and then pressing enter will load the cue. This behavior may be disabled by un-checking this option.

[Browse Mode](#)

Check **Browse Cues** in the preferences menu to switch to browse mode. When in browse mode the cue is automatically loaded as soon as the line is highlighted, either by clicking on the line or using the keyboard cursor keys. When browse mode is enabled it works both in the global list and on the cue pages.

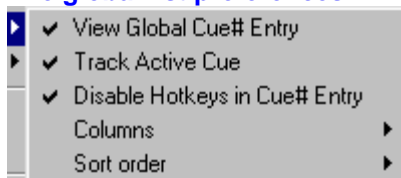
[Enable multi-Cue Load](#)

Used to enable or disable loading of multiple cues. The option also enables or disables multi-cue load from cue pages.

[Use Color Code for Transparent Cues](#)

When checked, transparent cues are shown in blue to distinguish them from non-transparent cues. When un-checked, the names of the transparent cues are preceded with a (T).

[The global list preferences](#)



The global list preferences menu is a sub-menu to the main preferences menu, use it to set preferences for the global list.

[View Global Cue# Entry](#)

When checked the call by Cue# field is visible at the bottom of the list. Un-check to hide the entry.

[Track Active Cue](#)

When checked the global cue list automatically tracks the active cue in the global cue list when ever a new cue is loaded (i.e. by the a cue list or hotkey)

[Columns](#)

Use this sub menu to hide columns or set the global list to the default view.

[Sort Order](#)

Use to set sort order for the global list. This sub menu may also be used to sort the list according to the cues transparent status.

[The Cue Pages Preferences](#) - see [Cue Pages](#)^[213]

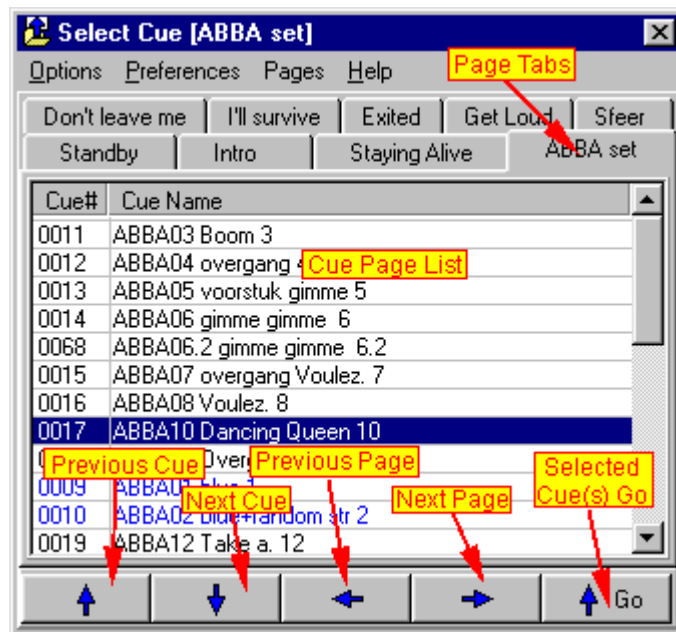
142 Cue Pages

The cue pages are a part of the List of Cues control and represent user defined lists of existing cues. Because of the more structured approach using pages, the cue page section often offer a better alternative to manually driven cue-lists.

Note that the maximum number of pages is limited to 255.

See [List of Cues](#)^[208] for general List of Cue configuration options and notes. Different pages are located on individual 'tabs'. There are always at least one cue page available.

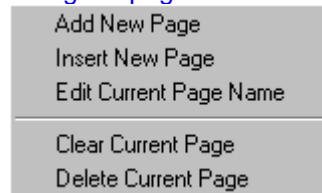
The actual page setup may be saved and then retrieved at a later point by selecting **Save Page Setup** or **Load Page Setup** from the options menu.



Cue Pages (view Cue Pages only)

Managing pages

Using the pages sub-menu



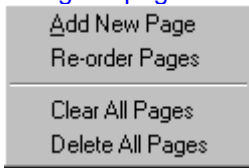
The pages sub-menu, right-click anywhere on the cue page list, and select pages from the pop-up menu.

Select **Add New Page** or **Insert New Page** from the pages sub-menu. The add command adds a new page to the end of the page list - the insert command inserts a new page right before the current page. To delete the current page select **Delete Current Page** from the pages menu.

To edit the name of an existing page, select **Edit Current Page Name** from the pages sub menu.

Select **Clear Current Page** to remove all cue entries from the current page.

Using the pages menu



The pages menu

Use **Add New Page** to add a new page (same as the pages sub-menu)

Use **Re-order Pages** to customize the order of pages - use drag and drop to re-order the pages in the **Re-order Cue Pages** dialog.

Clear All Pages clears all contents of existing pages.

Delete All Pages deletes all existing pages.

Adding Cues to Pages

Cues are added to the cue pages from the [Global List of Cues](#)^[208] so when adding cues make sure that both the global list and cue pages are visible (check both view entries in the preferences menu). The same cue may be added any number of times to any pages, even added several times to the same page - practical when setting up a 'sequential' list re-using the same cue several times.

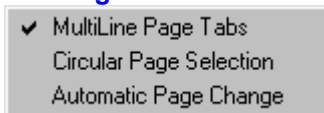
Add cues to the current page by dragging them from the global list (highlight several cues before dragging to add multiple cues at once). Alternatively, highlight the cue(s) in the global list, right-click one of the highlighted cues and select **Add Cues to Page** from the popup menu. To insert the selected cues before another cue on the page list, highlight the cue on the page list first, then select **Insert Cues on Page** from the popup menu.

To remove cues from the cue page, highlight the cues, rightclick and select **Clear Selected Cues**.

Re-arranging cues in page lists

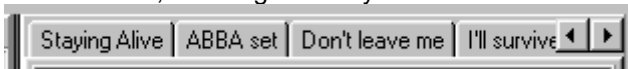
Re-arrange the cues on the individual simply by dragging them around in the list. To avoid unintended re-ordering of lists, The list may be **locked**, by checking **Lock Page Lists** in the list right-click popup menu. Highlight lines and then use standard cut, copy & paste operations to copy or move cues around on the same page or even to different pages.

Cue Pages Preferences



Access the Cue Pages preferences menu through the main preferences menu.

MultiLine Page Tabs - check to enable multi-line page tabs. If unchecked the page tabs will be forced onto one line, showing as many tabs as the width allows.



Single line tabs

Circular Page Selection - when checked, page selection (see later) is circular: selecting next page from the last page automatically swaps to the first page, and selecting previous page from the first page swaps to the last page.

Automatic Page Change - when checked, selecting next and previous cue (see later) will automatically change page to next or previous page respectively if necessary.

Maneuvering the cue pages

Maneuver between pages either by selecting the page directly on the tab or by using the previous and next buttons located at the bottom of the page list. Right-click previous or next buttons to go straight to the first or last page respectively. It is also possible to assign keyboard hotkeys for previous and next page selection (see later).

Selecting and loading cues

Cues can be loaded from the cue pages much like from the global cue list (double click, browse mode, right-click and select load, select and load using the go button, etc).

Previous/Next Cue buttons

Alternatively use the Previous/Next Cue buttons at the bottom of the list to load the previous or next cue on the page respectively. If no cue is selected on the current page, the last or first cue is automatically selected. Right-click the previous/next buttons to select the last or first cue line directly **without** actually latching the cue.

If the cues are normally executed in a sequential order, check **Automatic Page Change** in the Cue Pages Preferences menu for automatic change of page after the last or first cue on the page. If unchecked the page will not be changed automatically.

Useful Hotkeys for the cue pages

A number of keyboard hotkey functions may be helpful when working with the cue pages - see [hotkeys](#)^[16] for an explanation of how to assign hotkeys to functions.

[Toggle List of Cues](#) - toggles the list of cues on and off.

[Load Selected Cue \(Cue Pages\)](#) - loads the selected cue(s) of the current cue page, regardless if the page has Window focus (the [Enter] key only works if the page has focus).

[Previous/Next Cue Page](#) - selects previous or next cue page respectively.

[Cue Page Latch Previous/Next Cue](#) - Loads the previous or next cue on the page.

[Cue Page Select Previous/Next Cue](#) - Selects the previous cue on the page but does not load the cue.

It is also possible to assign a specific cue directly to a hotkey - see [hotkeys](#)^[16].

Useful DMX in functions for the cue pages

There's also a number of useful [DMX in](#)^[304] options if LightJockey is primarily run remotely from a DMX console. The options makes it fairly simple to create 'sequential' pages, e.g. pages for different songs at live performances.

[Latch Current Cue from Page](#) - Latches the currently selected cue on the page.

[Previous/Next Cue Page](#) - selects the previous or next cue page.

[Latch Previous/Next Cue from Page](#) - latches the previous or next cue from the cue page.

[Select Previous/Next Cue from Page](#) - selects but do not latch the previous or next cue from the cue page.

143 The Cuelist Control

See also [Cuelist Commands](#)^[222]

See also [Using Timecode in Cuelists](#)^[226]

See also [MIDI/SMPTE Timecode](#)^[229]

See also [Using Winamp for Digital Audio Playback](#)^[232]

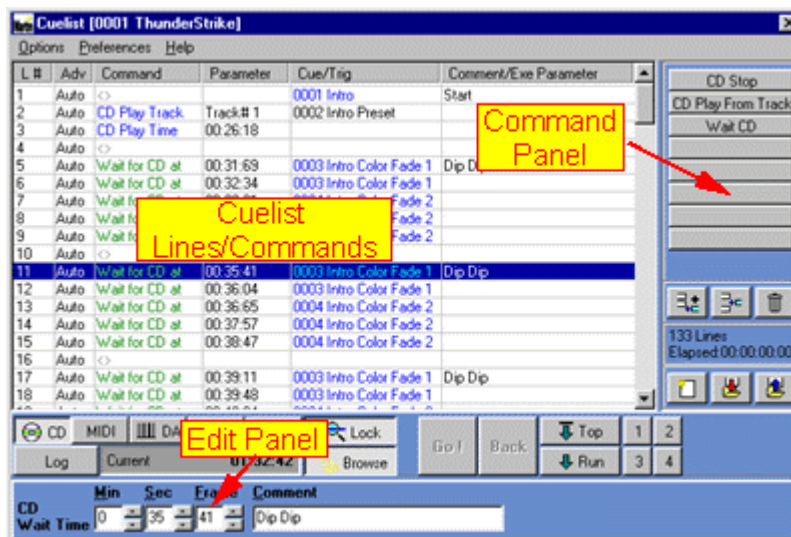
See also [Using the LightJockey Mediaplayer](#)^[234]

See also [Launching external programs from the Cuelist](#)^[230]

The Cuelist Control is opened by clicking the  icon on the [Cuelist Toolbar](#)^[105].

A Cuelist consists of a number of lines containing commands that are used to execute specific cues in a pre-defined order from top to bottom. The cue list may be driven manually (using a 'Go' to advance the cue list), by 'elapsed time' (using a specific wait time), by PC-Clock (24 hour clock) or by external timecode (i.e. Audio CD, Digital Audio or video (i.e. MP3 files) or MIDI timecode and SMPTE).

The cue list has two states, the passive *edit* state and the active *playback* state. When active, the cue list is 'locked' (signified by the blue background color), and cannot be modified.



The Cuelist control, edit mode

The Cuelist control

The cue list control consists of 3 parts, the cue list itself (with lines containing commands and various functions), the edit panel below the cue list and the command panel to the right of the cue list. The edit and command panels may be hidden (from the preferences/view menu); an option, which may be handy to save space on the desktop once the cue list has been programmed.

The Cuelist

The cue list itself is represented by a list of lines that may one of a number of 'active' or 'passive' commands. Active commands are commands that, for example, instructs the CD-ROM drive to play a certain track, while a passive command could be a wait command, that simply waits until a certain condition is met - i.e. the timecode has passed 1:00:00. Each line may also contain an instruction to latch or trig sequences in a cue.

Cuelist Columns

L #: Cuelist Line number

Adv: Advance method (manual or automatic)


Command: Contains the command for the line, i.e. a wait command


Parameter: Contains parameters for the command, i.e. a specific timecode


Cue/Trig: Contains cue number or instructs the cue control to trig certain sequences in the cue.

Comments/EXE Parameter: User comments or parameters for external applications.

Adding, inserting and removing lines in the cuelist

Click  to add one more lines to the cuelist (there is no practical limit to the number of lines in a single cuelist) - right click the button to add 10 lines at a time.

Select (highlight) a line in the cuelist, then click  to insert a new empty line before the selected line - right click the button to insert 10 lines at a time.

To delete lines in the list, select the lines to delete then click .


Rearranging lines in the cuelist

Lines may be rearranged in the cuelist by simple drag and drop operations. Select one or more lines and drag them to the desired location. Note that when dropped on an existing line the dragged lines will be inserted above the line on which they are dropped. Drag lines below the list to move to the end of the list.

It is also possible to rearrange the lines by selecting standard Cut, Copy & Paste operations from the right click popup menu. For example, to copy the 5 top lines to the bottom of the list, highlight the 5 lines, right click and select copy. Then right click at the bottom of the list (or deselect all highlighted lines), right click and select paste.

If lines are pasted 'on top' of a highlighted line the lines are pasted before the selected line.

Clearing, saving and loading cuelists.

Click  to clear the current cuelist and start a new cuelist.

Click  to [save the current cuelist](#) ^[237].

Click  to open the list of [previously saved cuelists](#) ^[238]. Select the cuelist to load into the cuelist control.

Note that these buttons are duplicated on the [Cuelist Toolbar](#) ^[105].

To delete a single cuelist file, right click the cuelist in the [list of cuelists](#) ^[238] and **select delete cuelist file**. To delete multiple cuelist files, use the delete cuelist files dialog (main menu/system/delete files).

Importing other cuelists into the current cuelist

To import a previously saved cuelist into the current cuelist, drag it from the [list of previously saved cuelists](#) ^[238] onto the cuelist lines - this will insert the imported cuelist before the line it is dropped on. To add the imported cuelist to the end of the list, drag the cuelist to an empty line below the current cuelist.

Manual Vs. Automatic Line Advance



Cuelist Go/Back buttons

Each line in the cuelist may be set to either manual or automatic advance (default is automatic). To change one or more lines, highlight, right click and select **Set Advance Mode** from the popup menu. The difference between a manual and automatic line is that the manual line waits for a user input (Go command) before performing the commands or latching the cues in the line. Also, if a line is set to manual advance certain commands (i.e. wait timecode commands) are ignored (see commands). The

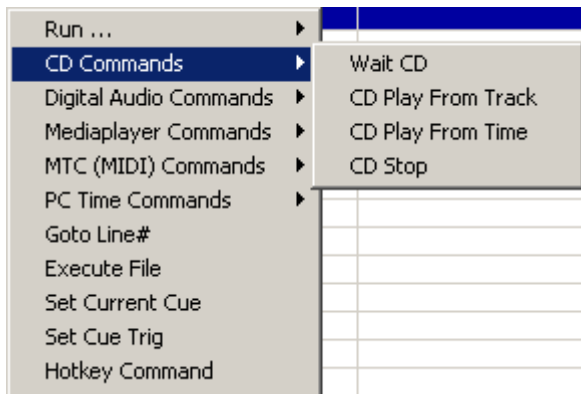
Go command may be set by clicking the **GO !** button (only enabled if the cuelist is active and waiting for a go command). Unless the cuelist is waiting for a Go command on the first line, it is also possible to issue a **Back** command that will cause the cuelist jump back one line. A few cuelist commands are ignored if the advance mode is Manual, see [Cuelist Commands](#)^[222].

Both the Go and Back commands are available through [Hotkeys](#)^[16], [DMX in](#)^[304], [MIDI in](#)^[316] commands or by assigning the function to the [2532 direct access controller](#)^[296].

Manual and automatic advances may be mixed freely within the cuelist; it is perfectly possible to 'interrupt' a predominantly automatic cuelist (i.e. timecode driven) by one or more manual lines to wait for a user input. Likewise a predominantly manual cuelist may include a number of automatic advance lines, for example to latch a number of cues with specific timing by a single Go command.

Assigning commands to lines

To assign a specific command to one or more lines, highlight the line(s), right click and select the command from one of the submenus on the popup menu.



Select commands from popup menu.

Once a command has been used it will appear on the 'recent commands list' on the command panel. The buttons stores the 8 commands that have been most recently used. Clicking a command button is similar to selecting the command from the popup menu. Right click the button to clear the command from the recent commands list.

To remove commands from one or more cuelist lines, highlight the lines, right click and select **Clear/Clear Command** (*Clear line* clears the whole line).

See [Cuelist commands](#)^[222] for details on individual commands and parameters.

Assigning parameters to commands

Most commands require a parameter to function, i.e. a 'CD Play Track' requires a track parameter (track number) and a 'Wait for CD at' command requires a timecode to wait for. Once a command has been set on a line the required parameters (and comments) may be set via the Edit Panel at the bottom of the control. To edit the parameters, highlight the required line(s) and edit the parameters. If several lines are highlighted, only lines with identical commands will have their parameters changed.



Editing a CD wait time.

See [Cuelist commands](#)^[222] for details on individual commands and parameters.

Assigning cues to lines

Assign a cue to be latched by the cuelist line simply by dragging it from the [list of cues](#)^[208] to the cuelist line. To add the same cue to multiple lines, load the cue then highlight the lines and select **Set Current Cue** from the right click popup menu.

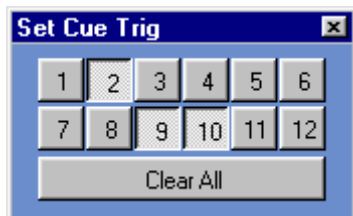
Both [transparent](#)^[195] and non-transparent cues can be assigned to a line. To latch multiple cues (one non-transparent, the rest transparent) to the same time code (or by the use of a single Go command), simply add multiple lines with auto advance and without any timecode or other commands. Remember that non-transparent cues overwrite all slots in the cue control so make sure to add the non-transparent cue BEFORE the transparent cues.

1	Auto	CD Play Track	Track# 1	
2	Auto	Wait for CD at	00:03:00	0015 Non-Transparent Cue
3	Auto	<>		0012 Transparent cue 1
4	Auto	<>		0013 Transparent Cue 2
5	Auto	<>		0014 Transparent Cue 3
6	Auto	Wait for CD at	00:04:00	0016 Another Cue
7	Auto	<>		

Latching multiple cues

Triggering sequences in cues

Rather than having a line latch a cue, the cuelist may trig one or more sequences in the cue. Highlight the relevant line (s) and select **Set Cue Trig** from the right click popup menu. Select one or more of the 12 sequence slots to be triggered - when the line is executes each of the sequences will be triggered exactly once, regardless of programmed trig method (auto, manual, audio). The sequence will be triggered in the programmed [loop direction](#)^[188].



Setting cue trigs

It is not possible to have a line latch a cue and trig the cue at the same time.

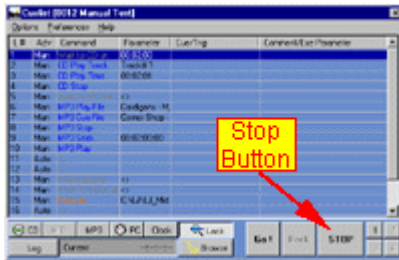
To remove cues or trig commands from one or more lines, highlight the lines, right click and select **Clear/Clear Cue/Trig** (*Clear line* clears the whole line).

Hint: When using trig from the cuelist, make sure to either set the sequence to manual trig in the cue, or alternatively give it a very long scene time when programming the sequence and then select auto trig in the cue. If the sequence is set to manual trig, make sure to disable **Chase Man** in the cue control otherwise the sequence will start chasing after the first two trigs.



Adding/editing comments

The final column is used for comments or for [external program parameters](#)^[230]. To set or edit a comment, highlight the line(s), and edit the comment via the comment field on the edit panel.

Starting and executing the cuelist



An active (running) cuelist

To start the cuelist, click  **Top** or  **Run**. Clicking Top will start the cuelist executing from the first line, while clicking Run will start the cuelist executing from the selected (highlighted) line in the cuelist.

While a cuelist is active the Top/Run buttons are both replaced by a **STOP** button. Click this to stop the cuelist from executing.

It is not possible to change any of the cuelist lines, and it is not possible to add, insert or delete any lines in the cuelist. To modify the cuelist, it must be stopped first (click STOP).

Alternatively the cuelist can be started from the right click pop up menu, where "Run from top" And "Run from line" have same functions as the **Top** and **Run** buttons. "Run to line" has a different function - see below.

It is also possible to start the cuelist by right clicking one of the mark buttons (see below), or via [hotkey functions](#) ^[19]

Preferences Menu

[View, Default Columns](#) - Resizes the list columns to default sizes.

[View, Edit panel](#) - toggles the edit panel on and off.

[View, Command panel](#) - toggles the command panel on and off.

[Use color codes](#) - toggles color codes on and off. When color codes are enabled, different types of commands and parameters are shown in different colors.

[Ignore first Wait Elapsed on run](#) - when enabled, the cuelist will ignore the first wait elapsed command if started with a run command. When programming, enable this to avoid having to wait for the first elapsed time before the cue is latched.

[Load Cue on doubleclick](#) - when enabled, double clicking a line containing a cue loads the cue into the cue control. Use to load cues directly from the cuelist without enabling cue browsing.

[Stop Audio/Media Playback when Cuelist stops](#) - automatically stops audio or media file playback started by the cuelist when the cuelist stops; either when the cuelist runs out or is stopped manually.

[Automatic Cue Update on Run](#) - When this option is enabled the cuelist control will automatically try to locate and launch the relevant cues that are located before the line that is used as start point for the run command. This option is only useful when working with [transparent cues](#) ^[195] in the cuelist. The cuelist control will search and launch cues after the following rules: Launch the latest previous non-transparent cue, and then launch any transparent cues between the non-transparent cue and the 'run-line'.

[Auto seek audio tracks/media file on Run](#) - When enabled, the cuelist control will automatically perform load, seek and play commands on audio an track if the run command is executed on a wait timecode line.

[MIDI Timecode, stop list on Timecode timeout](#) - automatically stops the cuelist when reception of MIDI time code stops.

[MIDI Timecode, Restart List on Timecode Timeout](#) - automatically restarts the cuelist when reception of MIDI time code stops. Enable this option to slave the cuelist after an external MTC/SMPTE device in continuous loops (i.e. from a laserdisc player).

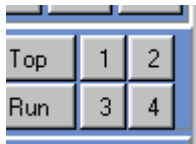
[Autosave Cuelist on Exit](#) - automatically save the cuelist when LightJockey is closed down. An autosave cuelist may be re-loaded via Options/Load Autosave. Note that only the most recent autosave is available for reload (and only if the autosave option is enabled).

Other Cuelist Functions

[Run to line \(Rightclick popup menu/Run..\)](#)

Using this command causes the cue control to be updated with the contents as if the cuelist has been executed until (and including) the specific cuelist line. The function is handy when loading transparent cues in the cuelist since the contents of the cue control depends on previously sequentially loaded (transparent) cues. The function ignores all other types of commands than cue commands.

Marks



The 4 mark buttons

The cuelist control contains 4 mark buttons (1-4). These buttons may be used as shortcuts to specific lines in the cuelist. To mark a specific line, highlight it, right click and select **Set Mark** from the popup menu. Once a line has been marked, click the mark button to jump to that line. If the button is right clicked the cuelist will start executing at this line (identical to highlighting the line, and then click **Run**) - as the mark functions are also available as [hotkey functions](#)^[19], using marks as shortcuts can be a considerable time saver when programming cuelists. Note that the marks refer to line numbers only, so if lines are inserted or deleted before the mark they will no longer point to the same line.

[The Lock button](#)

When the lock button is enabled, the cuelist control will try keep the 'currently active' line in the center of the scrolling list when executing the cuelist. The button has no function when the cuelist is not running.

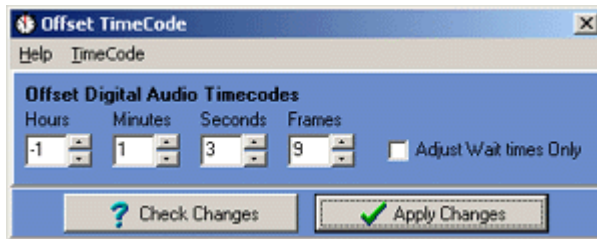
[The Browse button](#)

When the browse button is enabled, the cuelist control will launch and trig cues from the cuelist when individual lines are highlighted. This is a handy option when browsing through the cuelist manually. Disable to avoid that the cuelist launches and trigs cues. Enable "Load cue on double click" in the preferences menu to load cues from the cuelist without enabling cue browsing.

[Offset Timecode function](#)

It may sometimes be necessary to offset all or a portion of the timecodes in the cuelist, i.e. if the audio track is moved to a different media (from one CD to another).

To offset timecodes, highlight the relevant lines (possibly the whole cuelist), right click then select offset timecode from the popup menu. The 5 offset options will offset Digital Audio timecodes, Mediaplayer timecodes, CD timecodes, MIDI timecode and PC time (clock) respectively.



Offsetting CD timecode

Set the required timecode offset by entering the offset values in the corresponding fields. Click **Check Changes**, to check if offsetting will lead to overflow or underflow in the resulting timecodes - overflow is when a timecode is larger than the permitted values (i.e. 25 hours, 10 minutes on PC clock), underflow is when timecodes are below the permitted values (i.e. negative hour value on PC clock). If an offset is applied with resulting overflow or underflow values the resulting timecodes are automatically adjusted to maximum or minimum values, i.e. -01:00:00 is adjusted to 00:00:00.

Check **Adjust Wait times Only**, to adjust wait times only. If unchecked all relevant timecode commands are adjusted (i.e. play or seek commands).

When offsetting MIDI timecode, make sure to select the correct frame rate, otherwise the offset may be wrongly calculated using too few or too many frames.

Sorting wait Times

Lines in the cuelist may be sorted by wait times (ascending order only). Highlight the lines to sort, right click, and select **Sort Wait Times** - then select the type of wait time to sort: Digital Audio wait time, Media Player wait time, CD wait time or MIDI wait time.

Note that the following restrictions apply to lines being sorted:

1. Selection must not be fragmented (selected lines must be one continuous block).
2. Selected lines must not contain other commands than Wait of the selected type (i.e. wait CD).

Converting old-style cuelists

LightJockey version 1.08 build 2 implements a new cuelist engine adding new functionality to the cuelists. These changes require a new file format that is not compatible with previous versions. To manually update a cuelist created with previous LightJockey versions, select **Import Old Format Cuelist** from the Options menu. Select the cuelist file to import from the file dialog.

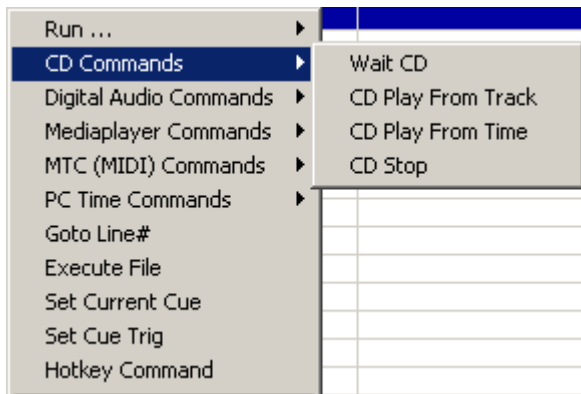
On import, the cuelist will automatically be converted to the new format - remember to re-save the cuelist in the new format.

IMPORTANT NOTE

If any of the old cuelists have been programmed to link to other cuelists it is vital that the new cuelists are saved with the same cuelist number as the old cuelists. Use the Save as Cuelist# on the [Save Cuelist Dialog](#) ^[237] to ensure that the cuelists are saved with the required number (find the old cuelist number from the filename when importing).

144 Cuelist Commands

Assign commands to the cuelist by highlighting one or more cuelist lines, then right click and select the command from the popup menu.



Select commands from popup menu.

Most commands have specialized parameters associated - to set or edit the parameters, highlight the line(s) and modify the parameters through the edit panel.



Editing command parameters

Audio CD Commands and parameters

The CD commands are used to control the audio CD playback via [CD-ROM drive](#)¹⁴⁴.

Wait CD

Instructs the cuelist to wait for a specific timecode from the Audio CD. Parameters are Minutes (0-99), Seconds (0-59) and Frames (0-74). Command is ignored in Manual Mode.

CD Play From Track

Instructs the CD-ROM drive to start playback from a given track. Parameter is track number (1-99).

CD Play From Time

Instructs the CD-ROM drive to start playback from a given timecode (i.e. in the middle). Parameters are Minutes (0-99), Seconds (0-59) and Frames (0-74).

CD Stop

Instructs the CD-ROM drive to stop playback. No parameters.


DA Commands (Digital Audio Commands)

Commands associated to Digital Audio played back via [Winamp](#)²³².

Wait DA

Instructs the cuelist to wait for a specific timecode. Parameters are Hours (0-23), Minutes (0-59), Seconds (0-59) and Frames (0-99). Command is ignored in Manual Mode.

Play DA File

Loads and plays Digital Audio file. Parameter is filename - click  on the edit panel to open the file dialog and select the file.

Cue DA File

Loads audio file but do not start playback. Parameter is filename.

DA Stop

Stops playback of audio file. No parameters.

Seek DA

Seeks to a position in the audio file. Parameters are Hours (0-23), Minutes (0-59), Seconds (0-59) and Frames (0-99).

To start playback within a track at a given timecode, **Cue** the audio file, then **seek** the timecode and finally add a **DA Play** command.

DA Play

Instructs Winamp to (re-)start playback - usually used after a cue or seek command.

DA Timecode Factor

Used to modify timecode from Winamp due to a Winamp timecode inconsistency - see [Winamp timecode problems](#)^[233]

Mediaplayer Commands

Commands associated to digital media files played back via [LightJockey Mediaplayer](#)^[234]

MP load file

Load a media file - either a Mediaplayer Playback file or a media file. Parameter is filename - click



on the edit panel to open the file dialog and select the file. Note that loading an actual media file may take several seconds. The cue list will wait for a maximum of 5 seconds for the file to load before proceeding to the next cue list line. If a longer wait is required add a wait real-time command after the cue file command.

MP Play

Play the loaded media file from its current position

MP Seek

Seek to a specific location within the loaded media file. Parameters are Hours (0-23), Minutes (0-59), Seconds (0-59) and Frames (0-99). Note that seeking into a media file (especially digital video files) may take several seconds.

Note that it may take the Mediaplayer several seconds to 'catch up' in audio and video after the seek command has completed.

The cue list will wait for a maximum of 5 seconds for the seek command to complete before re-proceeding to the next cue list line. If a longer wait is required add a wait real-time command after the seek command.

MP Stop

Stop playback and set position to beginning of file

MP Pause

Pause playback.

MP Wait

Instructs the cue list to wait for a specific timecode to be returned from the Mediaplayer. Parameters are Hours (0-23), Minutes (0-59), Seconds (0-59) and Frames (0-74). Command is ignored in Manual Mode.

MP Close Clip

Stop and clear the current media clip.

Mediaplayer/MP Start

Start the LightJockey Mediaplayer.

Mediaplayer/MP Close

Close the LightJockey Mediaplayer.

MTC (MIDI Timecode) Commands

See [Using Timecode in cue lists](#)^[226]

Wait MTC

Instructs the cue list to wait for a specific MIDI Timecode. Parameters are Hours (0-23), Minutes (0-59), Seconds (0-59) and Frames (0-23,24 or 29 depending on MTC format). This command is ignored in Manual Mode.

Autoseek MTC

Special MTC command, see [Using Timecode in cue lists](#)^[226]. This command is ignored in Manual Mode.

PC Time Commands

Timecode commands using the internal PC clock.

Wait Elapsed

Instructs the cue list to wait for a specific amount of time to pass. Parameters are Minutes (0-99),

Seconds (0-59) and frames (0-99). Command is ignored in Manual Advance Mode.

Wait PC-Clock

Waits for the PC clock to reach a specific time. The time code is based on a 24-hour clock. Parameters are Hour (0-23), Minutes (0-59) and seconds (0-59). Command is ignored in Manual Advance Mode.

Wait Date-Change

Waits for the PC date to change - use when PC-Clock timing crosses midnight (00:00:00).

For more advanced scheduling functions (such as running different cuelists according to calendar or day of week) see [LJ Manager](#)^[349].

Other Commands - command popup menu

Goto Line#

Instructs the cuelist to jump to a specific line within the cuelist itself. The command is really only useful at the end of a cuelist for automatic restart. Parameter is line number.

Execute File

Launches an external program. See [Launching External programs from the Cuelist](#)^[230]. Parameters are filename and command parameters for the external program.

Set Current Cue

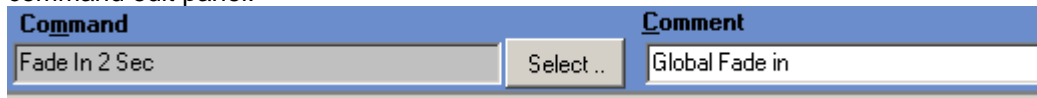
Sets the cue parameter of the highlighted line(s) to the current cue (if any).

Set Cue Trig

Trigs one or more sequences in the cue (see [Cuelist Control](#)^[216])

Hotkey Command

Executes a [hotkey command](#)^[19]. Select the command to execute via the **Select** button on the command edit panel.



Executing a hotkey command from the cuelist.

Note : not all hotkey commands makes sense in a cuelist context - especially 'flash' functions which will only execute the first part of the action (usually some kind of on function) - User discretion required.

Other Commands

Flash Sequence

This command is not found on the popup menu. To add a flash sequence command simply drag and drop the sequence from the list of [sequences](#)^[206]

. The sequence is flashed in the cue control context, so only one sequence may be flashed at any given time. Use the duration parameter to set the duration of the flash (max 99.9 seconds) - when the specified time has elapsed the flashed sequence is automatically removed.

Load Background Cue

This command is not found on the popup menu. To instruct the cuelist to load a [background cue](#)^[238] simply drag the background cue from the [list of background cues](#)^[208] to the required line in the cuelist. Alternatively, call up a regular [cue](#)^[184] that includes a background cue.

Link Cuelist

This command is not found on the popup menu. A cuelists may be instructed to link to another cuelist by dragging the cuelist to link to from the [list of cuelists](#)^[238] to the required line in the current cuelist. Then, when prompted select Link from the Cuelist Link or Import Dialog. Remember to save the cuelist before starting, as any changes are lost when linking to a different cuelist.

145 Using Timecode in Cuelists

See also [The Cuelist Control](#)^[216]

See also [Cuelist Commands](#)^[222]

Cuelists are often used to synchronize lights to music. The synchronization is obtained by utilizing timecode from playback media. Currently LightJockey supports the following types of timecode:

Audio CD timecode, when the CD is played in the CD-ROM drive.

MTC (MIDI timecode) - MIDI timecode also includes SMPTE using a suitable SMPTE to MTC interface.

Digital audio files using Winamp for playback. Winamp supports a wide number of Digital audio formats including MP3, WMA, MID (MIDI) and WAV (wave file format).

Windows media timecode - timecode returned from playback of Windows media files including digital audio and video files.

Program the cuelist to wait for a specific timecode, by using a **Wait command**^[222] from the relevant source (i.e. **Wait CD** from the [CD commands](#)^[222]). To edit a timecode, highlight the line and edit the timecode via the edit panel.

Audio CD via built in CD player using CD-ROM drive, see also [Audio CD Control](#)^[144]

The timecode from an Audio CD uses the timecode embedded in the CD audio track, and is based on elapsed disc time in the form of Minutes:Seconds:Frames.

The number of frames pr second is defined as 75. Use the [cuelist commands](#)^[222] to start and stop playback from the Audio CD.

MTC (MIDI timecode) and SMPTE via MIDI interface, See also [MIDI/SMPTE Timecode](#)^[229]

Use a PC/MIDI interface (or Soundcard with MIDI capabilities) to interface to MIDI/SMPTE devices. MIDI timecode is actually a subset of SMPTE timecode embedded in the MIDI protocol, To utilize a SMPTE timecode source the interface must be able to convert SMPTE to MTC. An example of such an interface is MIDISPORT 8X8S from MidiMan. See more details at www.midiman.net (www.midiman.net).

MTC is based on a 24 hour clock with Hours:Minutes:Seconds:Frames. The number of frames depends on the actual variant of MTC/SMPTE used by the source:

24 fps (frames 0-23)

25 fps (frames 0-24)

30 fps - drop frame (0-29 frames, two 'dropped' every 1 minute)

30 fps (frames 0-29)

Make sure to select the correct frame setting when editing MIDI time code.

The cuelist has a [special command](#)^[222] for MTC, the **AutoSeek MTC** command. When this command is placed at the very top of the cuelist and the cuelist is activated with a **start from top** command, it will

cause the cuelist to jump to the closest matching wait MTC line upon re-reception of timecode. This command is mainly useful when programming cuelists.

Digital Audio files using Winamp for playback, see also [Using Winamp for digital audio](#)^[232]

NOTE : Current versions of Winamp have a problem with timecode consistency (see [Winamp timecode problems](#)^[233]). This problem may make Winamp unsuitable for projects requiring tight timecode synchronization.

LightJockey implements a command and timecode interface to Winamp. Winamp is NOT distributed together with LightJockey but must be acquired separately.

Winamp supports a wide variety of digital audio formats, including MP1, MP2, MP3, WMA (Windows Media Audio files), WAV (wave files), CDA (Audio CD tracks) and more. LightJockey 'remote controls' Winamp and receives timecode back to use in the cuelist during audio playback. Winamp uses the same time format for all types of digital audio, regardless of media (hard disk / Audio CD). The time format used by the interface always elapsed track time in the form of Hours:Minutes:Seconds:Frames (0-99).

Windows Media files using LightJockey Mediaplayer for playback, see also using [LightJockey Mediaplayer](#)^[234]

Using the LightJockey Mediaplayer, which in turn uses Windows Media Player functions, a wide variety of media files including digital audio and video formats may be played on the PC and the time code from these files may be used to synchronize the lighting.

The time format returned the Mediaplayer is elapsed time in the form of Hours:Minutes:Seconds:Frames (0-99)

Displaying Timecode

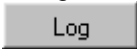
When using timecode, the Cuelist control will show the currently received time code (including elapsed time, and PC clock) below the actual list. Click the relevant button to change the source of the timecode being displayed (certain timecodes are unavailable unless a suitable interface has been configured. When the cuelist is running, the control will automatically switch to the relevant timecode display (i.e. when waiting for a CD timecode, it will automatically switch to display timecode from the CD).

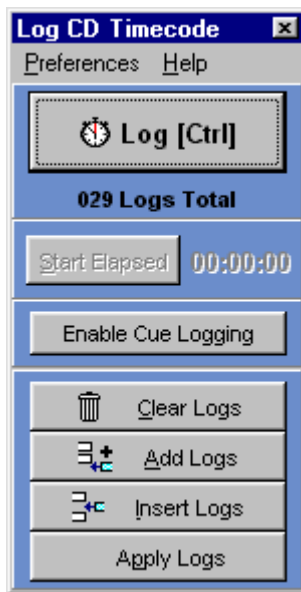


The cuelist timecode controls

The Log Timecode Control


While it is possible to enter timecodes manually through the edit panel, it is often much easier to log time code directly, i.e. while listening to audio track playback. To log timecode entries, display the

required timecode source in the cuelist control, and then click . This opens the Log timecode control.




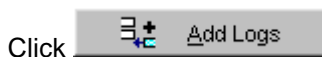
The Log Timecode control




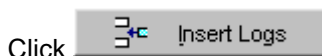
Click  to log the current timecode. One entry is logged for each click. To use the keyboard rather than the mouse to log timecodes, the [CTRL] will act as a hotkey when the log control has focus. Alternatively a regular [hotkey](#) ^[19] may be configured - this hotkey works regardless of focus, (but only if the log control is open).




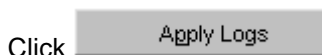
Click  to clear the current batch of logs (the total number of logs is shown below the log button).




Click  to add the logged timecode to the end of the cuelist - new lines are automatically created.



Click  to insert the logged timecodes above the selected line in the cuelist - new lines are automatically created.



Click  to apply the logged timecodes to the highlighted lines in the cuelist (the first log is applied to the highlighted line with the lowest number). Use this method when re-logging timecodes rather than editing them manually.

Start Elapsed

Only selectable when Elapsed PC Time has been selected as source on the Cuelist Control. Click to restart the elapsed clock timer.

Enable Cue Logging

When this button is enabled, each time a cue is loaded (from the list of cues, via the 2532, MIDI or DMX-in or via hotkeys) the cue number is logged together with the timecode. Note that logging will only occur if the log control is open. When the logs are assigned to the list, the logged cues are applied as well.

Preferences Menu

Auto-Insert Empty Lines - Automatically inserts an extra empty line after each timecode when the logs

are assigned to the cuelist.

Auto-Clear Logs - Logs are automatically cleared after add, insert or apply.

Notes

See [Cuelist Control](#)^[216] for notes on sorting and offsetting timecodes.

146 MIDI/SMPTE Timecode

See also [Using Timecode in Cuelists](#)^[226]

See also [Cuelist Commands](#)^[222]

MIDI Timecode may be used as a triggering source for the cuelist. Basically MIDI Timecode (MTC) is SMPTE timecode embedded in the MIDI protocol and should not be confused with MIDI Clock, MIDI Tempo or MIDI song pointers (which are not supported by LightJockey). To interface LightJockey to an MTC source, either use a MIDI interface and connect to a source transmitting regular MIDI timecode, or for SMPTE sources, an interface that converts SMPTE to MTC (see reference below).

Note that LightJockey only supports timecode transmitted by quarter frame timecode, not timecode transmitted by MIDI SysEx Messages.

Reference Interface

The LightJockey implementation has been written and tested with a MIDISPORT 8X8S from MidiMan. This highly recommended interface is an external 19" rack-mount and connects to the PC either with USB or standard RS232. The interface converts SMPTE timecode to MIDI timecode and has provisions for striping SMPTE code to an audio media as well. The interface automatically recognizes the SMPTE frame type received. The interface also has 8 MIDI channels out and 8 MIDI channels in. See more details at www.midiman.net (www.midiman.net).

Notes on SMPTE frame types

SMPTE timecode (and thus MIDI timecode) exists in a number of variations that varies in the number of frames that are transmitted per second).

SMPTE to MTC interfaces should by itself be capable of auto detecting the received SMPTE frame type and embed this information in the MTC. However, if this not the case, make sure that to match the maximum frame number in the cuelist entries does not differ from the number of frames in the actual timecode or the cuelist will not synchronize properly.

SMPTE formats includes

24 fps (frames 0-23)

25 fps (frames 0-24)

30 fps - drop frame (0-29 frames, two 'dropped' every 1 minute)

30 fps (frames 0-29)

Notes on SMPTE to MIDI timecode

The conversion from a SMPTE source to MIDI timecode has two effects. The full SMPTE timecode is broken down into 8 separate MIDI messages, and 4 MIDI messages are sent per SMPTE frame received. This effectively halves the resolution of the converted timecode since a total of 8 messages (two SMPTE frames) are needed. For this reason, if possible, select the highest possible frame rate when striping the media with timecode.

Subsequently, the conversion also means that upon completion of the 8 messages LightJockey is notified 2 frames later than the actual SMPTE timecode is received by the interface. This is not a problem if the time-codes are logged directly from the interface since the 'delay' is constant. However, if programming entries from a SMPTE timecode reference, remember to subtract 2 frames from each timecode entry.

Cuelist control, Preferences, MIDI Timecode, MTC Timeout**Stop List on Timecode time-out**

With this option enabled the cuelist will stop executing if the MIDI time code times out. Note that a timing threshold for timeout can be set in the [hardware configuration](#)^[28].

Restart List on Timecode time-out

To have the cuelist automatically restart when the timecode transmission is stopped, check this option. Use this option to avoid having to manually restart the cuelist when the timecode is terminated and then restarted.

This option should also be used if the time-code is paused and resumed during the execution of the cuelist - in this case, make sure to add an 'AutoSeek MTC' command at the top of the cuelist. This will ensure that the cuelist continues at the appropriate line when the time-code is resumed.

Ignore Timecode time-out

With this option enabled, the cuelist ignores any timeouts on the MTC stream.

Cuelist control, Preferences, MIDI Timecode, Sync Frames

Enable sync frames to skip a number of timecode frames from the timecode source before 'locking' on to the timecode. Some timecode sources may require a one or more complete timecodes before they start to transmit 'correct' timecode. Incorrect timecode may cause a waiting cuelist to execute one or more incorrect commands.

147 Launching External Programs from the Cuelist

Use the [Execute File command](#)^[22] in the cuelist to launch external programs. The external programs could in principle be anything, i.e. digital video viewers, but will most likely be a custom made program for specific requirements.

The program may be launched with a number of parameters such as a filename or special command switches. Parameters are entered in the column normally used for comments, so when using the execute command it is NOT possible to use comments on that particular line.

Since LightJockey doesn't know anything about the external programs, what they do or how they behave, there are a couple of considerations to consider when launching external programs.

The program must be able to take all settings and commands through the parameters (or by saving specific setups that are automatically recalled when the program is launched). It is not possible to communicate with the program from LightJockey.

If the program is repeatedly launched (i.e. by a looping cuelist), the program must be able to handle this by not launching a second instance if it is already running. If the program is re-launched in a new instance, it will eventually suffocate the PC when too many instances are running.

The entire path for the executable including the name of the executable cannot exceed 127 characters. The total length of the parameters cannot exceed 40 characters.

148 Playing multiple, simultaneous media files from the cueлист

See also [Cueлист Commands](#)^[222]

See also [Using Timecode in Cuelists](#)^[226].

See also [Launching External programs from the cueлист](#)^[230]

See also [Using the LightJockey Media Player](#)^[234]

By default, media clips played by LightJockey MediaPlayer returns current timecode to the cueлист. Since multiple simultaneous time codes makes no sense to the cueлист, only once instance of the LightJockey MediaPlayer interacting with the cuelists allowed at any time - this also means that only one media clip can be played using the LJ Media Player.

However, multiple instances of the MediaPlayer can be started by launching the media player as an external program from the cueлист.

Warning

Playing multiple simultaneous media clips (especially multiple video clips) can cause a serious CPU load on any PC to the extent that the PC bogs completely down or Windows crashes. If playback of multiple simultaneous media clips is needed please make sure to use a PC that is fast enough to handle the playback properly.

Restrictions when launching the LJ MediaPlayer as external program

When the MediaPlayer is launched as an external program it runs as an independent instance - so when launched this way it is not possible to interact with this instance of the MediaPlayer from the cueлист.

The MediaPlayer plays the media clip exactly one time from start all the way to the end, ignoring any loop options. A [MediaPlayer playback file](#)^[234] is required to specify the media clip and media player settings.

How to

13	Auto	Wait for MP at	00:00:45:00	
14	Auto	Execute	C:\LJ_W2K\LJMediaPlayer.exe	Avisample2.mps 5
15	Auto			

Launching the MediaPlayer

1. Use the [Execute file](#)^[222] command to specify the LJ Media Player as program to execute (LJMediaplayer.exe). The program is located in the main LightJockey folder.

2. Specify the Playback file to be loaded by the media player as parameter - specify the file name only (e.g : videosample1.mps).

Important:

The name of the playback file **must not** contain any spaces and the playback file **must** be located in the default playback files folder [in the current user library](#)^[53] :

<LightJockey>\User\<User Library Folder>\MediaPlayerSettings\ (this is the default location of playback files).

3. Specify an optional wait time parameter (in seconds).

Since loading time of a large media file may vary from time to time, the wait parameter is useful when the Media Player is loading a large media file but still required to start playback at a specific time. If no wait parameter is given the Media Player will load the media file and start playing immediately - when a wait time is used the MediaPlayer will load the media file on startup but wait the specified amount of

time before actually starting playback.

149 Using Winamp for Digital Audio Playback

See also [Using Timecode in Cuelists](#)^[226]

See also [CueList Commands](#)^[222]

Important Note:

After the initial implementation of the Winamp interface it has been discovered that Winamp has serious problems with timecode consistency. Please read the following section : [Winamp Timecode Problems](#)^[233] . If precise timecodes are needed for timecode synchronization the [LightJockey Mediaplayer](#)^[234] is be a better alternative to Winamp.

Winamp is a piece of software developed by Nullsoft for playback of digital audio files. Winamp is not restricted to MP3 files only, but supports a multitude of digital audio formats. Winamp is a registered trademark of Nullsoft.

Winamp is NOT distributed LightJockey but must be acquired separately. At the time of writing Winamp may be downloaded freely from www.winamp.com. Please refer to Winamp's own documentation on how to setup and operate Winamp.




Winamp

Note: The LightJockey interface only supports Winamp version 2 and a minimum of version 2.74 is required.

Configuration notes

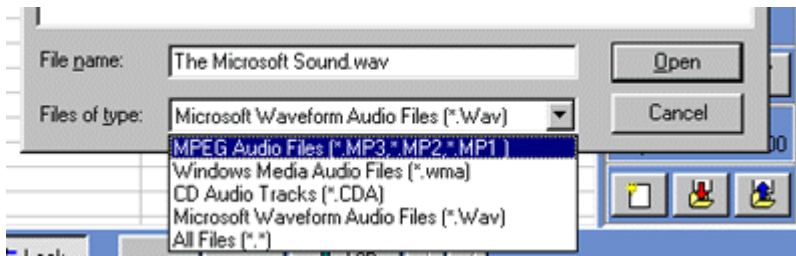
LightJockey's [cuelist](#)^[216] utilizes Winamp for playback of digital audio and timecode feedback by 'remote controlling' specific Winamp functions. To prepare LightJockey to use Winamp, it must be configured via the [hardware setup dialog](#)^[241]; on the Digital Audio/Audio CD tab, select **Winamp**. To automatically launch Winamp when needed, LightJockey must know the exact path to the Winamp

executable (usually winamp.exe). click  to open up a file dialog and locate winamp.exe.

Alternatively, Winamp should be started manually before any attempt to use Winamp from the cuelist.

Using Winamp in the cuelist

When using Winamp to playback audio in the cuelist, the actual digital audio file name is transferred from the cuelist to Winamp. When selecting the audio file for the cuelist, switch the file type in the file selection dialog to enable to selection of different audio file formats (Winamp actually supports more formats than indicated in the filter - check documentation for Winamp for the exact formats supported).



Changing the file filter

NOTES

The interface between LightJockey and Winamp has been tested with Winamp version 2.74 (the current version at the time of writing). Note that earlier versions of Winamp may not support the needed functions, and later versions may add functions/functionality that makes it incompatible with the LightJockey interface (in this case check for a LightJockey update).

150 Winamp timecode problems

After the initial implementation of the LightJockey/Winamp interface it has been discovered that there are problems with the timecode consistency of Winamp (as some users found out the hard way - sorry guys).

At the time of writing it is not known if there will be a bug fix for Winamp.

The problem is that Winamp gets the timecode wrong when playing the audio track - it simply doesn't advance the current timecode with as many milliseconds as it should. The problem affects almost any digital audio file format (MP3,WMA,WAV) except that MP3 files encoded at 96KBP seems to work just fine.

Experiments show that the problem exists with the following formats:

.MP3 (except for 96KBP encoded files) - Winamp only counts approx. 0.25 second less pr minute.

.WMA : Winamp counts approx. 1.75 seconds less pr. minute (factor may vary)

.WAV : Winamp counts approx. 0.25 seconds less pr. minute

The problem occurs as seek commands (Seek DA or moving the track bar on Winamp) seem to decode the time correctly. For example:

Use a DA seek to position the track in an MP3 track at around 04:00:00 and let the track play - log a timecode at some recognizable event in the track (i.e. 04:05:00). Next let the track play from the beginning - when the track reaches the event the timecode (which was logged at 04:05:00) the timecode from Winamp will be at approx 04:04:00 - so the timecode lags about a second after the original log (approx. 0.25 seconds pr minute).

Since most timecode synchronized cuelists are made by seeking and logging and fine-tuning to small bits of the track at a time this poses a real problem as Winamp does not return identical timecode when the track is played from the start.

Partial Fix

Fortunately the timecode inconsistency seems to be fairly consistent - at least with regards to MP3 files, which allows at least a partial fix namely multiplying the timecode from Winamp with a factor when playing the full audio track.

Use the fix the following way:

When logging timecodes:

Enable the **Auto Seek audio tracks/media files on Run** option in the preferences menu (the cuelist). Then highlight the closest cuelist line containing a wait or seek command above the 'area of interest' - depending on the contents of the cuelist it may be necessary to add 'artificial' wait commands just to force a seek close to the relevant part of the track. Start the cuelist with the **run** command (rather than the run from top command). Try to seek as close to the relevant part of the track as possible - remember that after just 30 seconds the timecode from an MP3 file will be about 1/8 of a second off behind.

When running the full track:

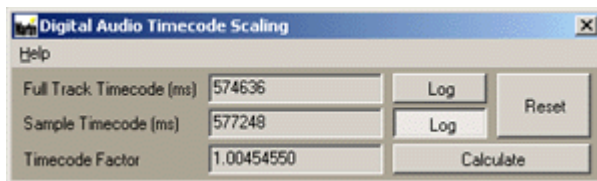
When you are ready to run the entire cuelist insert a **DA timecode Factor** (command menu, Digital audio commands) command at the top of the cuelist - the command accepts one parameter which is the factor that modifies the timecode received from Winamp. For MP3 files a factor of **1.0040 - 1.0045** seems a good choice.

Then start the cuelist from top. Note that the cuelist timecode display now marks the incoming timecode with an * since it is now modified by the factor (i.e. 03:33:44*).

Note that the factor is only applied when the cuelist actually executes a **DA Timecode Factor** command - it automatically cleared (or rather reset to 1.0) as soon as the cuelist is stopped or re-started. If necessary, multiple commands with different values may be inserted in the same cuelist.

Factor calculator

If the recommended factor doesn't seem to work then a small tool to calculate the relevant scaling factor for a particular track can be found in the cuelist 'tools' menu.



Scaling factor tool

The dialog works by comparing two timecodes and calculating the factor - here is the easiest way to use it:

Click the top log button (full track timecode) and start the track from the beginning (or from the intended start location). Let the track run all the way to the end - the highest timecode received is automatically kept as reference (click reset to reset the time to 0). Next, click the second log button (sample timecode), click reset (to reset the timecode to 0) - and start the track about 10 -20 seconds from the end of the track and let it play to the end.

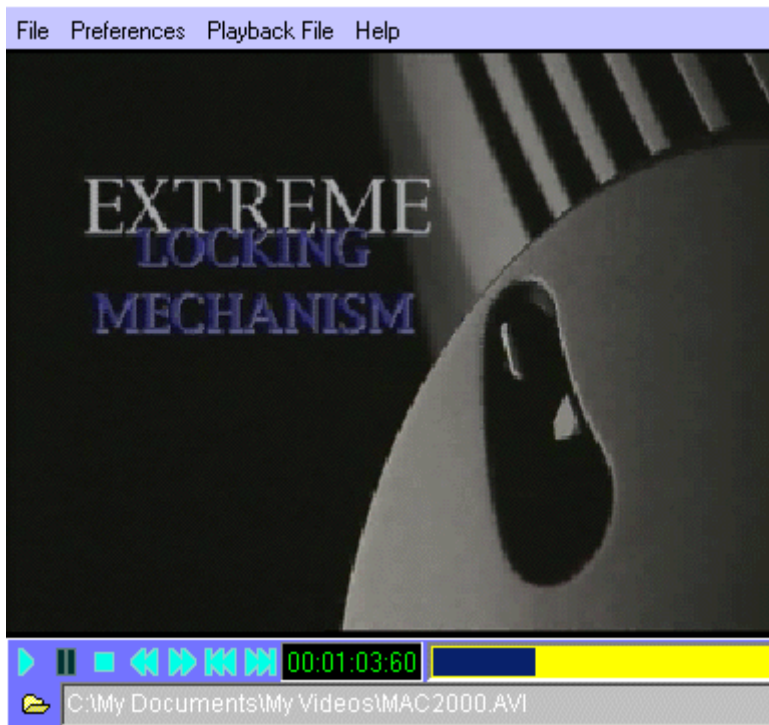
Once the track has finished playing click **Calculate** to calculate the factor between the two timecodes and use this factor in the cuelist.

151 Using the LightJockey MediaPlayer

See also [Cuelist Commands](#)^[222]

See also [Using Timecode in Cuelists](#)^[226].

See also [Playing multiple, simultaneous media files from the cuelist](#)^[237]



LightJockey MediaPlayer

The MediaPlayer

The LightJockey MediaPlayer is a separate application that utilizes Windows Media Player (tm) to play a multitude of digital media files including digital audio (MP3, WMA etc) or digital video (MPG,AVI, etc) files - note that the LightJockey MediaPlayer will not play any other formats not supported by the installed Windows Media Player (see below). Note that

Since the application uses Windows Media Player functions it must be installed on the PC for the LightJockey MediaPlayer to work. At the time of writing, the newest version of the Windows Media Player can be downloaded from

<http://www.microsoft.com/windows/windowsmedia/download/>

The LightJockey MediaPlayer is used from the [Cuelist](#)^[216] where it can be programmed to play back media files and send back time code to the cuelist for synchronization between media file and lights.

Media File Formats

Since the LightJockey MediaPlayer uses the functions of Windows Media Player it is capable of playing all media file formats that the Windows Media Player can with the exception of CD audio. For playback of audio CDs use the built in [Audio CD player](#)^[144].

There are however a number of pitfalls when using digital media files.

First of all, Windows Media Player may not directly support specific encoding formats (Codecs) - although sometimes a solution to running specific formats may be found from 3rd party providers (often free on the Internet). Also on multi-monitor systems, the Media Player may be capable of playing a video clip on the primary monitor but not on the secondary monitor, or only play the file on the secondary monitor with very poor performance.

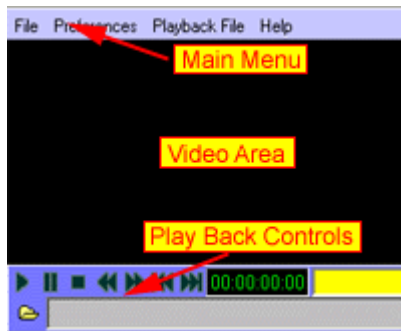
Another thing to look out for is Media License system recently introduced by Microsoft - the license system may prohibit playback of certain files on other PCs that they were originally 'licensed' to (for example when using the media Player to record tracks from an audio CD to the PC in WMA format). Also there may be a time limit associated with the file so it may only be used for a certain period.

Finally be careful using media files with variable bit rate - the Media Player may not be consistent in timecodes when comparing the timecode returned after playing the file from start to a certain point and seeking to that point; the MediaPlayer may return a different timecode for the same physical file

location depending on how it got there.

Media files and playback files

The Mediaplayer works with two different types of files: Media files, which are the basic digital video or audio files, and playback files which are files that contains the name of a media file plus some extra playback information about playback window position and size that may be useful when the Mediaplayer is programmed via the cuelist - see more below.



Using the Mediaplayer

To open the LightJockey Mediaplayer, click  in the Cuelist control.

By default the Media Player is divided into 3 distinct areas, the Main Menu, the Video area and the Playback Controls. If using the Mediaplayer for Audio Playback only, the window may be resized to take up as little space as possible (see below). The Mediaplayer doesn't have a normal windows caption bar to move the window around - to move the window around simply click the video area (or to the right of the main menu) and drag the window to the required position. To resize the window - hold down either [Shift] key, then click and drag the window.

Main Menu

Note that most of the commands in the main menu are also available from a popup menu that appears when right-clicking in the video area - use this popup menu when the control areas are toggled off.

File

Load Media File - load a media file

Save Playback Definition - save a playback definition.

Load Playback Definition - load a playback definition.

Recent Media file - pick from the 5 most recently loaded media files.

Recent Media file - pick from the 5 most recently loaded playback files.

Exit - close the Mediaplayer.

Preferences

Start up/Display Size - use to select the default window size and position on startup. Check 'Custom Size' to start up using the same position and size as the window had when the Media Player was used the last time. Select 'Full Screen' to start up in full screen mode, for multi-monitor a systems specific monitor may be specified as well.

Show Controls - when disabled the main menu and playback controls will not be visible on startup (use the right click popup for most commands).

Stay on Top - check the Mediaplayer to stay on top of other Windows (requires a restart of the Mediaplayer).

Minimum Size - resize to minimum hiding the video area; a useful setting when the Mediaplayer is used for playback of audio files only.

Default Size - resize to a size of 320x200 pixels.

Media Clip size - resize the video area to the original size of the video clip (especially useful when in no-controls mode).

Playback File

Use this menu to program settings for a playback file.

Use current settings - use the current settings for the playback file.

Show Controls - check to show the main menu and playback controls; uncheck to hide menu and controls.

Loop Playback - instructs the MediaPlayer to loop the media clip indefinitely. The only way to stop a looped playback from the cuelist is by an explicit [MP Stop command](#)^[22].

Custom Display Size - use the same window position and size as when the playback file was saved.

FullScreen display - use a full screen window.

FullScreen Monitor - select monitor for full screen window.

Save Playback Definition - Save the current playback definition.

Load Playback Definition - Load a playback definition.

The Playback controls



The playback controls are (in order): Play, Pause, Stop, Fast rewind, Fast Forward, Frame back and Frame forward. Note that not all digital media formats support frame forward and back commands (the frame buttons will be disabled). The play and pause commands are duplicated on the video area popup menu.

The media time code is in the format of elapsed hours:minutes:seconds:1/100 seconds (this is the timecode returned to the cuelist).

The clip position bar may be used to set the current position - simply drag the bar to the desired location.

Click the folder button to load a new media file.

152 Save Cuelist Dialog



This dialog is used to save the current [Cuelist](#)^[21].

List #.

This is a number that is used to uniquely identify the cuelist. The LightJockey applies the number when saving the cuelist for the first time, so for a new cuelist this field will be blank until the cuelist is saved.

CueList Name.

This is the name for the cuelist that will be used through out LightJockey. The name can be changed at any point, providing that the cuelist is saved after the name has been changed. The name has no other function than identifying the cuelist to the user.



Click this to re-save the current cuelist. It is only available if the cuelist has been previously saved and thus given a cuelist number. Saving the cuelist will overwrite the contents of the previous save.



Click this to save the current cuelist as a new cuelist (giving it a new cuelist number). If a previously saved cuelist is saved as a new cuelist, the old file is left intact.



Click this to save the current with a specific cuelist number. Use the following dialog to specify the cuelist number.



Save cuelist as dialog

Note that if an existing cuelist has the same number as specified it will be overwritten by the new save.

Preferences Menu

Auto Close This option will close the save dialog automatically when the cuelist is saved.

Save on [Enter] Check this option to make the [Enter] key act as hotkey for the **Save** button.

153 Select Cuelist

To load a previously saved cuelist into the [cuelist control](#)^[216], double click the cuelist in the list or rightclick the line and select **Load Cuelist**.

To sort the list by the contents of any column, click the column header.

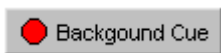
To delete a cuelist file, highlight the list right-click and select **Delete Cuelist File** from the popup menu.

154 Background Cue

Background Cue

See also [Cues, Cue Control](#)^[184]



Clicking the  button on the Cuelist toolbar opens the Background Cue Control. Note that the 'LED' on the button changes its color to green if any sequences are 'active' in the Background Cue. A red 'LED' means no sequences are active.

The total number of background cues in one user library is limited to 99.

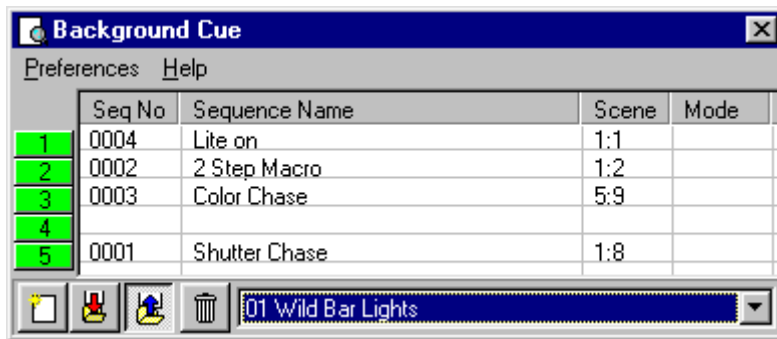
The background cue is a construction quite similar to the [Cue](#)^[184]

construction, as it allows multiple sequences to be executed in parallel. The resulting output if the Background Cue is independent of the contents of the current sequence and the current cue. The background cue holds up to 5 sequences and does not offer most of the sequence loop- and trig options of the regular cue: i.e. any sequence that is a part of the background cue will always execute in a forward direction.

The background cue also differs from the regular cue as the output from the sequences contained in the Background Cue has higher priority than both the contents of the regular Cue and the [Current Sequence](#)^[178]. This enables the Background Cue to run sequences that are always 'On' independently of any modifications being done to the current sequence or cue.

As with the regular Cue, the higher the number of the slot in the background Cue the higher the priority of the sequence in the background cue.

Note that fixtures programmed in the sequences running in the background cue are still manipulated by the [Blackout](#)^[155] and [Master Intensity](#)^[151] controls. To make certain fixtures (i.e. house lights) totally independent of the blackout and master intensity controls, enable the **Ignore Blackout** and **Ignore Master Intensity** switches in the [Fixture Configuration](#)^[40] for the relevant fixtures. Alternatively, assign the fixtures in question to a separate [intensity sub-master](#)^[151] and make this sub-master independent of the intensity Master. This way it is still possible to regulate the intensity of those fixtures.



The background cue control

Assigning Sequences to the Background Cue

To assign a sequence to the Background Cue, drag the it from the [list of sequences](#)^[206] to a slot in the background cue control. Alternatively right click the sequence in the list of sequences and select *add to BG Cue*.

To clear one or more slots in the Background Cue, highlight the slot, right-click then select **Clear Sequence(s)**.

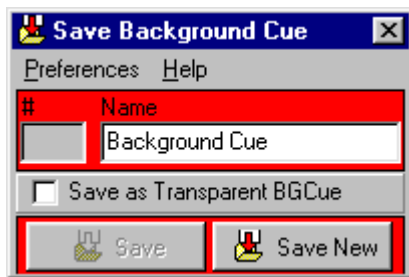
Clearing and saving the Background Cue



Click to clear the current Background Cue.

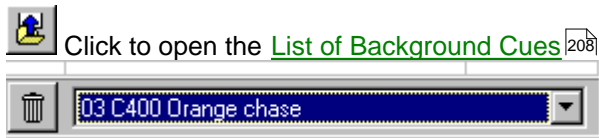


Click to open the save Background Cue dialog.



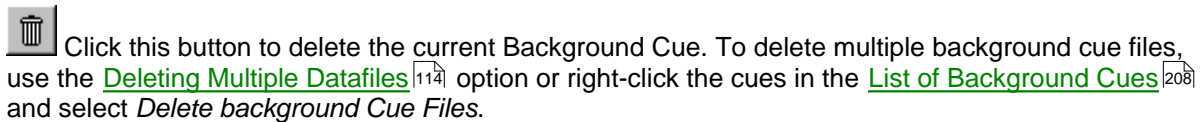
The save Background Cue dialog.

Click the **save** to resave an existing background cue or the **save new** to save the current background cue as a new cue.



Previously saved Background Cues are also selectable from the selection dropdown box in the lower right hand corner of the Background Cue control.

In order to restore the sequence slot state (on or off) that the background cue was saved with, make sure that **Restore Sequence On/Off State** in the preferences menu is enabled. If disabled the BG Cue will always load with all slots on.



Selecting Sequence Trig Mode

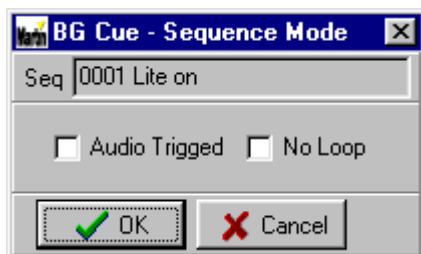
Right-click the sequence slot to access the Sequence Mode dialog to set the sequence mode. The following trig modes are possible for sequences in the background cue:

Auto triggered - Default mode. Uses the preprogrammed scene and fade times.

Audio triggered - Using trig information from the [Audio Analyzer](#) and the sequences preprogrammed scene and fade times.

No-Loop Mode - Same as Auto triggered but the sequence doesn't loop after the last scene.

When sequences are set to Audio triggered or No-Loop mode, an indication (A and -L respectively) will appear in the mode column of the Background Cue control.



The Sequence Mode dialog


Transparent Background Cues

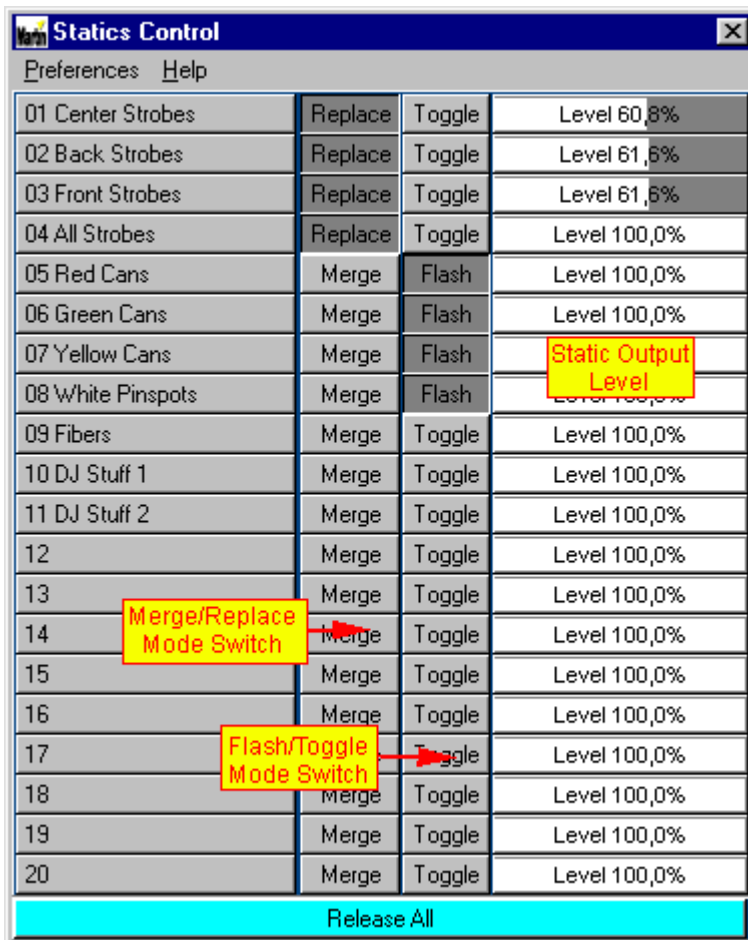
Like the ordinary cue the background cue implements [cue transparency](#)

Normally, when loading a background cue, each of the background cues slots will be overwritten by the contents of the loaded background cue - even if the slots in the new cue has no sequence assigned. However, when a background cue is saved as a transparent cue, on reloading, empty slots will not overwrite existing sequences.

To save a background cue as transparent - check '**Save as Transparent BGCue**' in the save dialog. In the background cue dropdown list, transparent background cues display a **(T)** in front of the Background Cue name.

155 Statics Control

The Statics Control is available from the  button located on the [Cuelist Toolbar](#)¹⁰³. If any of the static control entries are active, the 'LED' on the button turns green as a reminder - when no entries are active, the 'LED' is red.



The Statics Control

The primary purpose of the statics control is to control 'simple' fixtures with only on/off states, usually controlled via dimmer- or switch packs. It may however, be used to control any parameter of any fixture.

The static control works by combining the contents of up to 20 individual static scenes into a single static scene, which in turn are combined with the output of the current cue to create the final output. The combined output of the static entries has a higher priority than the current cue, but lower priority than the current background cue.

To activate the contents of a static single entry, click the corresponding button (or assign a keyboard [hotkey](#)^[16]). Releasing (see toggle and flash modes later) the entry will remove the contents of this entry from the combined output of the static control.

The combined output of the active static entries is calculated by using the latest take precedence (LTP) principle. This means that if the same parameter (DMX control channel) is accessed in more than one static entry, the **last activated** entry has priority. The LTP evaluation works even if multiple entries are deactivated. This method is different from the current cue, where the sequence priorities are based on their location within in the cue.

Programming the static entries

The contents of the static entry is programmed like programming any other scene using the [current sequence](#)^[49]. To apply the contents of the current scene to one of the 20 static entries, right-click the corresponding button and select **record and save current scene** from the popup menu. **Note that the record and clear options are not available as long as the entry is enabled (button is down) - release the entry before trying to save saving to it.** The content of the current scene is now copied to the static entry. Give the entry a descriptive name and click save. To clear the contents of the entry, select **Clear Static Entry** from the popup menu.

Note: Keep all scenes for the static control in one sequence, this will make it easier to re-edit the contents of the static entries later.

Toggle and Flash Modes

The entries may be activated in one of two modes, toggle mode or flash mode. In toggle mode, one click on a button (or one press of a hotkey) will activate the entry, another click will release it. In flash mode the entry is only active for as long as the mouse button or hotkey is held down.

For hotkey activation of entries in flash mode, please note that the PC keyboard does normally not register more than 3 or 4 keys held down simultaneously.

Merge and Replace Modes

The buttons may apply the scene contents in one of two modes, replace or merge mode. Use the buttons on the control to switch each entry between replace and merge mode.

In replace mode, the entire contents of the static scene are replaced by the contents of the entry selected. In merge mode the contents of the entry is merged with the contents already present in the static scene.

Example:

Entry 1 contains 8 red Par cans on.
Entry 2 contains 8 blue Par cans on.

Entry 1 is enabled; resulting in the 8 red Par cans coming on.

In replace mode, enabling entry two will clear entry 1 and replace the contents with Entry 2, the 8 blue Par cans - the button representing Entry 1 is automatically disabled.

In merge mode the contents of Entry 1 is merged with the contents of the static scene that already contains the contents of Entry 1 - so now both the 8 red and 8 blue Par cans are on. Disabling either of the two entries removes the corresponding contents, so in effect an entry acts as on/off switches for

each their set of fixtures.

Static Output Levels

The level controls are hidden by default - enable **View Static Levels** in the preferences menu to show the drag bars. Use the static level controls to scale (0-100%) the overall output values of the statics entry. Note that all values in the static entry are scaled; regardless of what control channel the value belongs to, so the static level is typically only used when the static entry contains settings for fixture intensities or generic fixtures like dimmer packs.

Typically the level controls will be remotely controlled via DMX in or RS232 from the 2518, but they can also be controlled manually via the mouse.

Using Scene Fade times

While it is possible to use scene fade times with the statics control, the static scene will always use the fade time associated with the latest entry activated. This means that if a fade from a previously applied has not finished when a new entry is activated, it will finish the fades with the fade time from the new entry.

The use of fade times in the statics control are deactivated by default (all values are snapped regardless of programmed fade status) - to enable the use of fade times, enable the **Statics use Fadetimes** switch in the preferences menu.

The Preferences Menu

Statics Use Fadetimes - enable to set the static control to use scene fadetimes, when disabled, fadetimes are ignored.

View Static Levels - enable to view the static levels (default disabled).

Default Levels at 0%,

Default Levels at 100% - selects the default value for the level controls - default is 100% (full output)

Level Auto Static Enable,

Level Auto Static Disable - with these options enabled, the static entry will automatically be enabled when the level control is at a level higher than 0%, and disabled when the level is at 0%. When the options are disabled the enable/disable state must be set separately. Typically these options are used to automatically enable/disable the static entries when the level is remotely controlled via DMX in or the 2518. Note that every time an entry is enabled, it will take first priority in the output of the statics control (LTP).

Typical uses of the Static control

The primary strength of the static control is its independence of the contents of the cue. This means that the statics may be enabled or removed on the fly regardless of the contents of the actual cue, or even during programming.

For 'club' or DJ use the static control would typically be used to switch various 'simple' fixtures on and off. Each static entry contains one or more fixtures; individual fixtures are only programmed into one entry. The static control could also be used to flash various modifications such as colors moods or strobe onto intelligent fixtures.

For 'live' use, the static controls could contain settings for i.e. guitar or drum solos, audience 'blinders' or other effects.

156 Generic DMX Macros

See also [Movement Macros](#)^[130].

See also [Generic DMX Macro Editor](#)^[Scribble7262]

157 The Generic DMX Macro Editor

Before programming generic macros for the first time, please read the [Generic DMX Macros](#)^[244] section.

See also [Movement Macros](#)^[130]

See also [The Macro Shapes Lists](#)^[247]

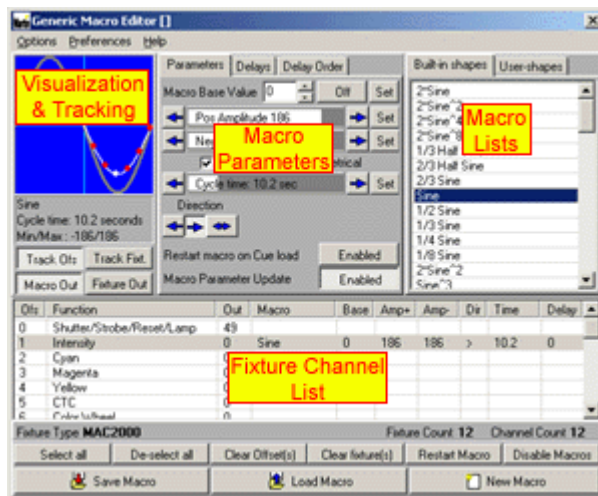
See also [Macro Visualization and Tracking panel](#)^[248]

See also [Fixture Channel List](#)^[250]

See also [Generic Macro Parameters](#)^[251]

See also [Generic Macro Delays](#)^[252]

The macro editor is opened by clicking the  button in the [Cue control](#)^[184] or by assigning the relevant function to a [hotkey](#)^[19]



The Generic Macro Editor

The Macro Editor

The Generic Macro editor is used to program the [Generic DMX Macro](#)^[244] entries in the [Cue control](#)^[184].

The editor is split into 4 different parts plus a command panel with often-used commands.

Macro Shapes List

The Macro list on the far right contains the available macro shapes - note that before a specific macro shape can be assigned to fixture control channels at least one fixture and at least one DMX control channel must be selected. For a more detailed description see [Macro Shapes Lists](#)^[247]

Visualize & tracking

The Visualization and tracking panel visualizes the current macro by showing the graphical shape of the macro and tracking the resulting DMX values of the affected fixtures/DMX channels. For a more detailed description see [Macro Visualization and Tracking panel](#) ^[248].

Fixture Channel List

The Fixture Channel list allows selection and programming of one or more DMX channels of the selected fixtures. The list also shows the programmed macros and associated parameters for each channel (offset) for the selected master fixture.

For a more detailed description see [Fixture Channel List](#) ^[250]

Macro Parameters

The Macro parameter panel contains the various parameters that will effect the execution of the programmed macro. For a more detailed description see [Generic Macro Parameters](#) ^[251]

Selecting which fixtures/channels to program

Select the fixture(s) to program by selecting the icons on the desktop as normal. When one or more fixtures are selected on the desktop, the available DMX control channels of the selected [master fixture](#) ^[120] are shown in the fixture channel list. Note that it is only possible to program one type of fixture at a time, much like programming for example color settings using the [fixture color control](#) ^[159].

Selecting the Macro type

To program a macro or edit macro parameters for one or more fixture channels, simply highlight the line(s) representing the DMX control channels (note that channel offset value starts at 0 not 1). Once one or more channels are highlighted select the macro shape to use from the macro list by clicking it (double click if already highlighted). Once the macro has been selected, use the controls on the parameters panel to set the associated macro parameters and delays.

Setting macro parameters

See [Generic Macro parameters](#) ^[251] for more information on the individual macro parameters. See [Generic Macro delays](#) ^[252] for more information on delay settings.

Note: It is not possible to program parameters before a macro has been assigned to the control channel - so before setting any parameters make sure that a macro is programmed for the selected channel(s)

Use the first tab on the macro parameter panel to set the following parameter values:

Base Value: set a value between 0 and 255, select 'Off' to disable the use of base values for the programmed macro.

Positive Amplitude: Use the negative amplitude drag bar to set the amplitude for positive parts of the macro shape. Right click on the bar for a pop up menu with often-used values.

Negative Amplitude: Use the negative amplitude drag bar to set the amplitude for negative parts of the macro shape. Right click on the bar for a pop up menu with often-used values.

Cycle Time: Use the cycle time drag bar to set the time for a complete macro cycle.

Direction: Use the direction arrows to set the macro execution direction to left, right or bounce which automatically changes direction on the left or right 'bounds'.

Delays: Use the controls on the two last tabs on the parameter panel to set delay style, order and values for the selected channels.

The Command panel

The command panel contains buttons for often-used functions such as multiple channel selection and saving and loading macros.

Click **Select All** to select all DMX channels in the Fixture channel list, and Deselect all to deselect all channels. Selecting all channels for a fixture is primarily useful when programming generic DMX controls, for example a dimmer pack running par lamps controlled with a single

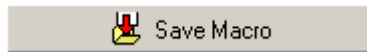
[generic DMX fixture](#)^[167].

Click **Clear Offset(s)** to clear all macro parameters from the selected channels - click **Clear Fixture(s)** to clear all channels for all selected fixtures.

Click **Restart Macro** to reset the *channel macro index* to 0 for all fixtures (see

[Generic DMX Macros](#)^[244] - delays section, for an introduction to *channel macro index* and delays).

Click **Disable Macros** to disable **ALL** macros running - this includes any macro running from the cue. This function is especially handy when retrieving the base and amplitude values from the current sequence.



Save Macro

Save the macro using the [Save Macro dialog](#)^[246]. Make sure to give the macro a descriptive name before saving it.

Note, if [macro quick save](#)^[109] is enabled, the macro may be re-saved without using the save dialog, just by right-clicking the save button. Once a macro has been saved it can be launched from any cue simply by adding the macro from the [Select macro list](#)^[255] to the Generic Macro slot in the [Cue control](#)^[184].



Load Macro

Click this button to view the list of previously saved macros.

To load a macro to the macro editor, either drag it from the list to an empty spot on the desktop, or right click the macro in the list and select **edit macro** from the popup menu. See also

[Select Macro List](#)^[255]

Note, if [macro quick load](#)^[109] is enabled, the current macro may be re-loaded from file without using the macro list, just by right-clicking the load button.



New Macro

Click this button to completely clear the contents of the macro editor.

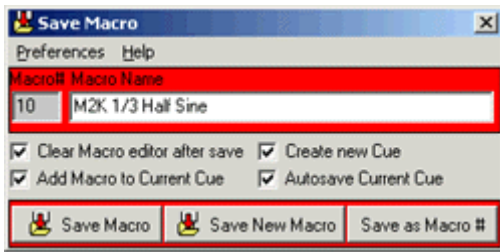
Preferences Menu

Clear Macro on Editor Close: Automatically clear the macro editor when it is closed - default is checked.

Slow Macrodisplay Update: Halves the update rate of the graphical macro display - recommended setting on slower PCs.

158 Save Macro Dialog

See also [The Generic DMX Macro Editor](#)^[244]



Save Macro dialog

Macro# - each generic macro is identified by a unique number.

Macro Name - Macro name/description.

Click **Save** to (re-) save the current macro using the same macro number (is only enabled if the macro has been previously saved)

Click **Save New** to save the current macro using a new (free) macro number.

Click **Save as Macro#** to save the macro with a specific macro number. The maximum macro number is 9999.

Check *Clear Macro editor after save* to automatically clear the macro editor after the macro has been saved.

Check *Add macro to cue* to automatically add the saved macro to the [cue control macro slot](#)^[184].

Check *Create New Cue* to autosave the current cue as new cue.

Check *Autosave Current Cue* to to automatically save the current cue (unless *Create New Cue* is checked this will resave the current cue)

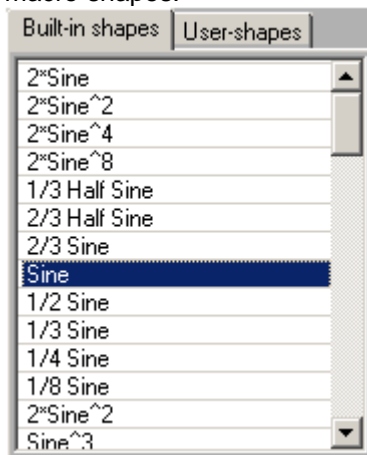
Preferences menu

Auto Close - automatically closes the save dialog when a macro has been saved.

Save on Enter - saves the macro by pressing [enter] on the keyboard when typing the macro name.

159 The Macro Shapes Lists

There are two macro shapes lists available. A list of built-in macro shapes, and a list of user-defined macro shapes.



The built in macro shapes list.

The built-in Macro shapes list contains a number of predefined macro shapes. These macro shapes cannot be modified. To assign a shape to one or more fixtures/DMX channels, first select the fixture icons on the desktop. Next, highlight the channels in the Fixture Channel list. Finally, select (highlight) the macro shape in the shapes list (if the shape is already selected but not assigned, double click to force assignment).

The different types of shapes in combination with [delays](#)^[252] and macro cycle time can be used for a wide variety of effects. As different fixture types allocate different functions on different DMX control channels in different ways, there aren't really any rules for applying shapes to DMX control channels. Experiment a lot, and check the fixtures DMX protocol for possible pitfalls (such as programming an unintended fixture reset).

Shapes such as *Sine* macros are typically used for slow smooth effects, while shapes such as *Square* or *Stair* generates snap-type effects. Most shapes exists in several versions, for example the sine shape exists as a *sine*, *1/2 sine*, *1/3 sine*, *1/4 sine*, *1/8 sine*. Use the *Sine* shape for a continuous effect, and the *1/X Sine* shapes in combination with delays for chase effects.

The user-defined macro shapes list.

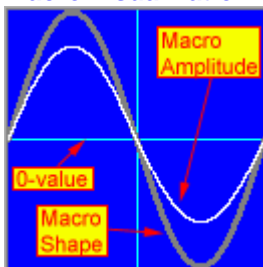
There is currently no editing facilities for user defined macros available within LightJockey. This will be added at a later stage.

160 Macro Visualization and Tracking panel

The Visualization and Tracking panel is used to visualize the currently selected macro shape and parameters. The panel has two basic modes of operation: Macro visualization (Macro out) and Fixture Output Visualization (Fixture Out). The panel also may also visualize the DMX values transmitted by fixtures in either Offset Tracking mode (Track Ofs) or Fixture tracking mode (Track Fixt.). The name of the current selected macro shape is displayed below the tracking panel together with the programmed macro cycle time and min/max DMX values generated by the macro. To monitor the macro shape and parameters for a particular fixture/channel, select the fixture on the desktop, then highlight the channel in the [Fixture Channel List](#)^[250].

Note: 16 -bit LSB control channels are not shown on the tracking panels.

Macro visualization

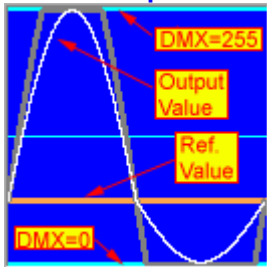


Macro visualization (Macro Out button)

In *Macro out* mode the panel displays the macro shape and amplitude parameters without regards to other DMX values generated for the DMX channel that is being monitored. The original macro shape is shown as a gray line while the resulting macro after applying positive and negative amplitudes is shown as a white line (note, default amplitude values are zero - use the amplitude drag bars to set amplitude

values). The horizontal cyan line represents the 0-point - values above the line are positive (1 to 255 that are added to the DMX output value) while values below the line are negative (1 to 255 that are subtracted from the DMX output value). By setting amplitude values less than 0 (negative amplitude values), the macro shape will be mirrored over the 0-point reference line so that positive values become negative values and negative values become positive. Note that the Min/Max values generated by the macro shape/amplitude combination is displayed below the macro image.

Fixture Output

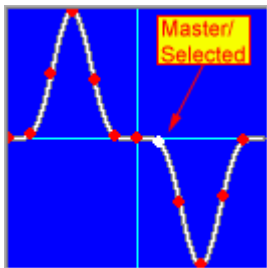


Fixture output visualization (Fixture Out button)

In *Fixture Out* mode the display changes to show the resulting DMX output values after the value is generated by combining macro with the reference value. The basic macro shape is still shown in gray, while the white line now represents the resulting, combined DMX output value. The top horizontal cyan line represents the absolute maximum DMX output value at 255, while the bottom cyan horizontal line represents the absolute minimum DMX output value at 0 (the center cyan line is for 50% reference). If the reference value is a static [macro base value](#)^[253] the base value is shown as an orange line - if the macro base value is disabled, the reference value (i.e. as generated by the cue) is shown as a green line.

Note that the Min/Max DMX values generated by the macro shape combined with the current reference value is displayed below the macro image.

Fixture DMX value tracking



Fixture DMX channel tracing

The current DMX output value may be tracked for multiple or individual fixtures by enabling *Track Of's* or *Track Fixt* buttons. In *Track Of's* mode the panel tracks the selected channel (offset) in the fixture channel list across selected fixtures (master fixture value is shown as a white dot, slave fixtures are shown as red dots). In *Track Fixture* mode the panel tracks channels for the selected fixture only - select (highlight) the channels to display in the fixture channel list.

Track Fixture mode is primarily useful when applying macros to several of the fixtures control channels - for example chasing macro channels on a [generic DMX fixture](#)^[167] or when creating effects that uses multiple fixture control channels such as CMY rainbow effects.

Note : The value tracking only shows values for fixture types identical to the selected master fixture.

161 Fixture Channel List

Ofs	Function	Out	Macro	Base	Amp+	Amp-	Dir	Time	Delay
0	Shutter/Strobe/Reset/Lamp	0							
1	Intensity	0							
2	Color1 Wheel	0							
3	Color2 Wheel	0							
4	R-Gobo Wheel	0							
5	R-Gobo Pos/Speed	0							
6	F-Gobo Wheel	0							
7	Focus	0							
8	Iris	0	Log	0	255	255	-	0.0	0
9	Prism	0							
10	Pan MSB (16 bit MSB)	249	Sine	128	127	127	>	16.8	0
11	Pan LSB (16 bit LSB)	222	N/A						
12	Tilt MSB (16 bit MSB)	0							
13	Tilt LSB (16 bit LSB)	0	N/A						
14	Dim/Tilt Speed	0							

Fixture Channel list

The fixture channel list is used to select fixture DMX control channels to program as well as monitor values for already programmed channels. Simply select (highlight) one or more control channels to program.

Note:

The channel list represents how the fixtures control channels are mapped internally. For user-defined profiles with 16-bit control channels (pan/tilt) this may not necessarily be identical to the way the final output is patched (see [global patch](#)^[312] or [DMX output monitor](#)^[117] for properly patched DMX out data)

List Columns

Ofs

DMX Control channel offset - note first offset is 0 (not 1)

Function

Contains a functional description of the control channel. Note that for user defined fixture profiles, the column contains what ever the original profile author decided to enter as channel description which may be nothing at all. 16-bit control channels are marked as MSB or LSB control channels - It is not possible to assign Macro shapes or parameters to LSB control channels - LightJockey automatically utilizes the superior value resolution offered by 16-bit parameters and splits the MSB/LSB parts accordingly.

Out

This column shows the current *DMX output value*.

Macro

The macro column displays the programmed macro shape.

Base

The base column shows the programmed base value - if the base value is disabled the value is displayed as *off*.

Amp+

Shows the programmed positive amplitude.

Amp-

Shows the programmed negative amplitude.

Dir

Shows programmed direction. > Indicates forward direction, < indicates reverse direction and <> indicates a bounce.

Time

Shows the programmed Macro Cycle time

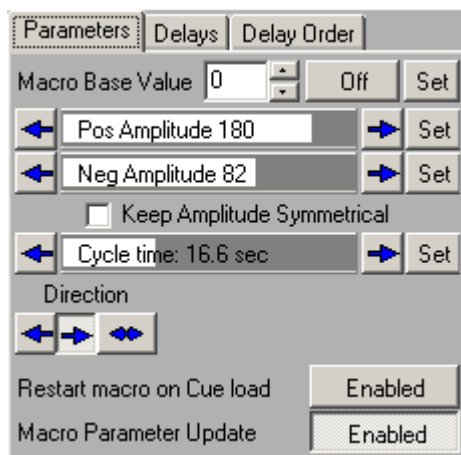
Delay

Shows the programmed delay. Maximum delay value is 8191.

162 Generic Macro Parameters

See also [Generic Macro Delays](#) ²⁵²

Besides basic macro shape the macro engine also associates a number of parameters with each DMX control channel.



Setting Macro Parameters

Use the *set* buttons to force the displayed parameters to fixtures - useful for example when updating fixtures that are selected as slave fixtures after the values have been set - or to synchronize parameters for multiple fixtures.

Base Value

When a macro is programmed it may contain a base value (default is base-value enabled, value = 0). When a base value is selected the macro engine will automatically use the base value as reference value when adding and subtracting values from the macro.

When base values are disabled, the macro engine will add or subtract values *from whatever DMX value is generated by other programming elements*.

The base value may be disabled for the macro by clicking the **off** button. Right clicking the base value field brings up a popup menu with often used values.

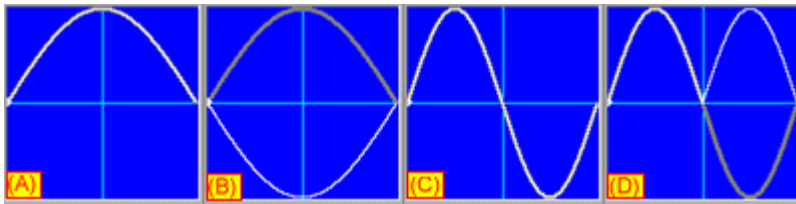
The advantage of programming a base values is that the resulting DMX output is predictable since it always combines with the static base value.

Disabling the base value allows much more flexibility in the combined DMX value output - for example, a macro that 'oscillates' around a color on a fixtures color wheel can be combined with a multi-scene sequence that has different color wheel positions in each scene. The result is that the color wheel 'oscillates' around different colors depending on the actual scene of the sequence. The disadvantage to disabling the base value is that some combinations of DMX values may actually lead to very undesirable effects, such as fixture reset or lamp off.

Positive and Negative Amplitudes

The positive and negative amplitudes dictate the 'vertical size' of the macro shape - or in other words

how much the macro shape is amplified. The macro shape contains values ranging from -1 through 0 to 1, so the amplitude values translates directly into DMX min/max values generated by the macro - i.e. a positive amplitude of 45 will add a maximum of 45 to the output value (when the shape is at max value). Note that when the amplitudes are negative, the shape is mirrored across the shape 0-value line basically inverting the shape.



- (A) 2*Sine shape - positive amplitude = 255
- (B) 2*Sine shape - positive amplitude = -255 (shape inverted)
- (C) Sine shape - Positive and Negative amplitudes = 255
- (D) Sine shape - Positive and Negative amplitudes = -255 (shape inverted)

Macro Cycle Time

The macro cycle time determines how fast the macro shape is 'traveled through'. The time interval ranges from 0.4 seconds to 595 seconds (approx 10 minutes). That the distribution of cycle times is not linear, the 'resolution' is much higher at lower time values. Note that the default value is 0, which means that the macro is static.

Macro Direction

Use the direction arrows to set the 'travel' direction of the macro (best seen when tracking offset values). The bounce direction will automatically bounce the macro off either. Note that delay values are not considered when bouncing the macro.

Restart Macro on Cue Load

When enabled loading the macro in a cue will automatically restart the affected channels - for more details see [Generic DMX Macros](#)^[244], Channel Macro Index and delays. Note that the option will only restart the macro channel indexes when the macro is actually loaded as part of a cue - not when the macro is added to a cue, neither when the macro is loaded into the editor.

Macro Parameter update

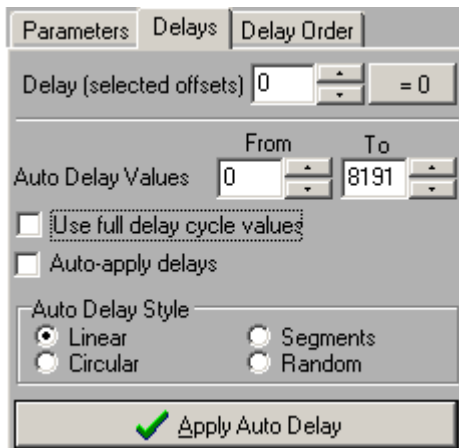
When disabled, manipulated parameters are not actually programmed - disable to select different macro shapes and amplitudes without actually effecting the selected fixtures.

163 Generic Macro Delays

See [Generic DMX Macro](#)^[244] for details on Delay and channel macro index.

Macro delays and delay order parameters are set on two different tabs.

Delays Tab



Delays tab

Manually setting delay values

Delay (selected offsets).

Use this field to manually set the delay for one or more control channel offsets selected in the [fixture channel list](#)^[250]. Maximum delay value is 8191. Right click the field to select often-used delay values (expressed in percentages) from a popup menu. Note that the option to set the delay value manually is disabled if *Auto-apply delays* (see below) is checked.

Calculated delay values

Usually, it is a lot easier to let the macro engine calculate delay values than setting them manually.

Auto Delay Values From/To

Enter delay start and end values in these fields and click **Apply Auto Delay** to calculate new delay values (or check **Auto Apply Delays**). Max delay value is 8191 - if the end delay value is less than the start value, the engine will apply delays in the range of: start value->8191->0->end value. Right click the fields to select often-used delay values (expressed in percentages) from a popup menu.

Use Full Delay cycle values

When checked, the engine will always distribute the full delay range (0-8191) over the selected fixtures, still taking the *from value* into account. Checking this option will disable the *Auto Delay To* field.

Auto apply delays

Check this to automatically let any changes in delay parameters take effect immediately. If not checked, it will be necessary to click *Apply Auto Delay* to apply the changes.

Auto Delay Style

The auto delay can be calculated and applied in a number of different ways (delay styles) Note that the order in which the delays are applied to the fixtures and channels is determined by settings on the **Delay Order** tab (see below).

Linear Delay (default)

The delay range (from -> to) is applied in a linear fashion with delays spread evenly between the selected fixtures. For example:

From/To = 0/8191; 10 fixtures selected.

Fixture 1: delay = 0%

Fixture 2: delay = 10%

Fixture 3: delay = 20%

...

Fixture 8: delay = 80%

Fixture 9: delay = 90%

Circular Delay

The selected fixtures are split in to a number of groups (set the circular group count on the Delay Order tab) - and the delay range is then distributed evenly over the fixtures in each group. For example:

From/To = 0/8191; 12 fixtures selected; circular groups count = 3 (4 fixtures in each group):

(Group 1)

Fixture 1: delay = 0%

Fixture 2: delay = 25%

Fixture 3: delay = 50%

Fixture 4: delay = 75%

(Group 2)

Fixture 5: delay = 0%

Fixture 6: delay = 25%

Fixture 7: delay = 50%

Fixture 8: delay = 75%

(Group 3)

Fixture 9: delay = 0%

Fixture 10: delay = 25%

Fixture 11: delay = 50%

Fixture 12: delay = 75%

Circular Delay

The selected fixtures are split in to a number of groups (set the segment group count on the Delay Order tab) - and the delay range is then distributed by evenly over each group so that each fixture in the same group gets the same delay. For example:

From/To = 0/8191; 12 fixtures selected; segment groups count = 4 (3 fixtures in each group):

(Group 1)

Fixture 1,2,3: delay = 0%

(Group 2)

Fixture 4,5,6: delay = 25%

(Group 3)

Fixture 7,8,9: delay =50%

(Group 4)

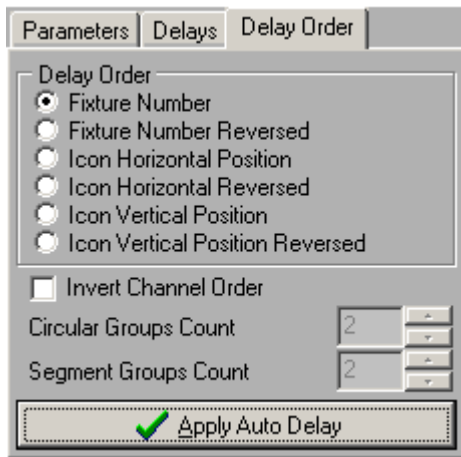
Fixture 10,11,12: delay =75%

Random

The delay applied is a random figure within the from/to range.

When applying a random delay to multiple offsets of the same fixtures, use the Random Delay setting in the preferences menu to select between random delay *By Offset* (all offsets gets individual, random delays) or random delay *By Fixture* (identical, random delays are applied to the fixture for all selected offsets).

Delay Order Tab



Delay Order Tab

The order in which the auto delay is applied to fixtures is determined by the order selected in the delay order box.

Fixture Number / Reversed: the delay is applied in fixture number order (low to high) or in reverse order (high to Low).

Icon horizontal Position/Reversed: the delay is applied according to the fixture icon horizontal position (left to right) or in reverse order (right to left)

Icon vertical Position/Reversed: the delay is applied according to the fixture icon vertical position (top to bottom) or in reverse order (bottom to top).

Invert Channel Order

Normally, when assigning delays to multiple channels within the same fixture, delays are assigned to individual channels from top to bottom. Check *Invert Channel Order* to assign the delays from bottom to top.

Circular Groups Count

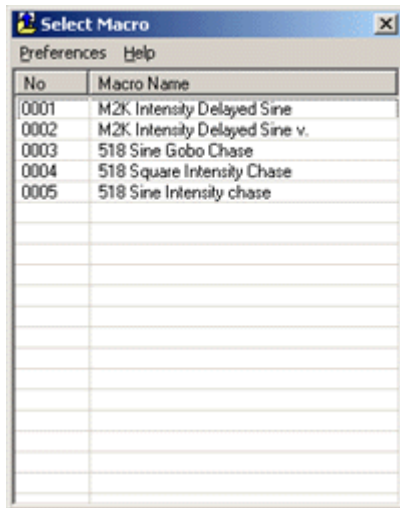
Sets the Circular Groups count - see Auto Delay Style above.

Segment Groups Count

Sets the Segments Groups count - see Auto Delay Style above.

164 Select Macro List

See also [Generic DMX Macro Editor](#)^[244]



Select Macro List

Use the select macro list to select previously saved macros for either editing or to include the macro in a cue.

Editing a macro

To edit an existing macro highlight right click the entry in the list. From the popup menu select *Edit Macro*.

The [Macro Editor](#)^[244] will automatically open if not opened already.

Alternatively, drag the line to the already opened Macro Editor, or to an empty spot on the desktop.

Also, if neither browse options in the preferences menu (see below) are enabled, double clicking the line will send the macro to the editor.

Adding a Macro to the cue.

To add a macro to the cue - drag it from the list to the macro slot in the [cue control](#)^[184]. Alternatively, right click the line and select *Add Macro to Cue*.

Delete Macro file

To delete a macro, right click the line and select *Delete Macro File* from the popup.

Preferences

Browse to editor - When enabled, the selected macro is loaded directly into the macro editor right away. Use this option to browse through previously saved macros quickly.

Browse to Cue - When enabled, the selected macro is added directly into the cue right away. Use this option to browse through previously saved macros quickly.

165 User Definable Fixtures

User Definable profiles

The user definable fixture profiles make it possible to define profiles for fixtures that are not already included in LightJockey or modify existing profiles. The profiles can be saved, reused and transferred to other installations. The profiles include all normal functions available in LightJockey including

[position presets](#)^[139], [movement macros](#)^[130] and [palettes](#)^[177] for color, gobos and effects.

To use an already defined fixture profile, configure the fixture from the normal [fixture configuration dialog](#)^[40]

Note that user defined fixtures will only show up in the [Offline Visualizer](#)^[326] if they are linked to a [suitable OV profile](#)^[294].

To define a profile a generic **user definable fixture** must be [configured](#)^[40] and brought to the desktop.

See [Defining the Generic Fixture 2 \(max 32 channels, 16 bit pan/tilt\)](#)^[267]

See [Generic Scanner 1 \(8 bit, max 8 channels, limited number of available effects\)](#)^[257]

See [Generic DMX Fixtures - Color Scroller, color palette and intensity control](#)^[264]

166 User Definable Fixtures - Scanner 1



Scanner 1 Fixture Icon

Note: this profile is included for backwards compatibility only - the [Generic fixture 2 profile Scribble7300](#) should be used for writing new profiles.

Using this personality it is possible to control a fixture that runs entirely on 8 bit control and has no more than 8 DMX control channels.

The scanner 1 profile supports the following (optional) user definable features.

[Intensity Control](#)^[146] - including shutter, strobe, [Grand Master](#)^[151] and [blackout](#)^[155].

[8 bit Pan and Tilt control](#)^[134], including position presets and movement macros.

[Color Palette](#)^[159] - max 16 colors.

[Gobo Palette](#)^[156] - max 16 gobos.

Other features may be controlled via [generic controls](#)^[167].

The profile may be saved to disk and re-used for other scanner 1 fixtures.

Configuring the scanner 1 fixture

To configure the fixture select **User Scanner 1** in the list of available fixtures (see [Fixture Configuration](#)^[40]).

By default the scanner 1 takes up 8 DMX channels - it is possible when defining the fixture profile to reduce the number of channels used by the fixture. Note, that no matter how many channels the fixture actually uses, the auto address feature will always allocate 8 channels for the fixture.

Once the fixture has been configured and the Fixture Icon has been placed on the desktop, fixture profile including the optional features can then be defined, see [Defining the Scanner 1 Profile](#)^[258]

167 Defining the Scanner 1 Profile

Note : The scanner 1 profile is provided for backwards compability only - new profiles should be created using the [Generic Fixture 2](#) profile.

In order to use the fixture it is necessary to define the fixture's control channels, and optionally color and gobo palette values.

The scanner 1 profile dialog becomes available by right-clicking on the fixture icon on the desktop and selecting **Define Fixture Profile** from the pop-up menu.

Make sure to read the notes on each control before allocating control channels.

[Defining the Scanner 1 Intensity Control](#)

[Defining the Scanner 1 Pan and Tilt Control](#)

[Defining the Scanner 1 Color control](#)

[Defining the Scanner 1 Gobo control](#)

[Defining the Scanner 1 Level controls](#)

The File Menu

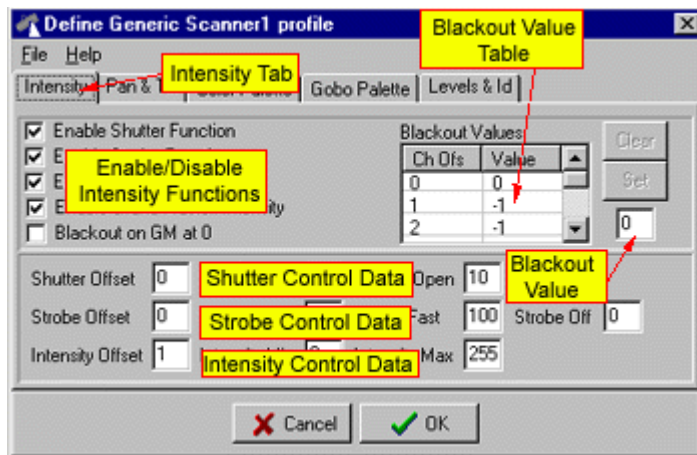
Save Profile - this will save the current profile to a named file. The profile can then be loaded into other fixtures. Note that the profiles are not dynamic, saving a profile will not automatically update other fixtures.

Load Profile - this will load a previously saved profile into the current fixture.

Clear Profile - this will clear the current profile.

LightJockey defaults the profiles files to the following directory <LightJockey Installation dir>\User\UserFixtures\

168 Defining Scanner 1 Intensity Control



Scanner 1 Intensity Dialog.

Use this Dialog to set up the intensity control definitions for the Scanner 1 fixture.



Scanner 1 Intensity Control.

Only controls for the enabled functions will be visible - if no intensity control functions are enabled the, intensity control will not be available for the fixture.

Notes

Shutter control - the shutter control must be controlled on one DMX control channel.

Strobe control - the strobe control must be controlled on one DMX control channel - strobe and shutter control channel may be the same.

Intensity control - the intensity must be controlled by one channel, and the DMX value for minimum intensity must be lower than the value for maximum intensity. For the intensity control to be linked to the [Grand Master controls](#)^[157] the DMX values for intensity must be valid within 0 to maximum intensity value.

Enable Shutter Function (Intensity Control Function)

To enable the shutter function for the fixture, check this option. Make sure to fill out the strobe data fields with appropriate data.

Enable Strobe Function (Intensity Control Function)

To enable the strobe function for the fixture, check this option. Make sure to fill out the strobe data fields with appropriate data.

Enable Intensity Function (Intensity Control Function)

To enable the Intensity function for the fixture, check this option. Make sure to fill out the intensity data fields with appropriate data.

Enable Grand Master/Intensity (Intensity Control Function)

Checking this option will link the [Grand Master control](#)^[157] to the fixtures intensity control. When not checked the Grand Master does not affect the intensity level of the fixture. This option should only be selected if the fixture supports intensity control. Since the Grand Master works by scaling the DMX value sent to control the intensity, do not enable this option unless the DMX values for controlling the fixture's intensity are within the range of 0 to max-intensity (see later).

Blackout on GM at 0

If the fixture does not support intensity control, checking this option will cause the [Grand Master controls](#)^[157] to instruct the fixture when the overall intensity level reaches 0.

Blackout Value Table

Use this table to setup the DMX values needed to blackout the fixture. The table contains values for the maximum 8 control channels allocated for the fixture (note that first channel is numbered 0). A value of -1 means that the specific channel is not affected by the blackout command. If the fixture supports shutter or intensity control use values that addresses these functions.

If no values are entered the fixture will not respond to blackout instructions.

To set a channel value, highlight the line in the table then type in the value in the blackout value field and click the set button. To reset the value to -1 highlight the line and click the clear button.

Shutter Data

Use these fields to set the DMX channel and values needed to control the shutter function.

The offset value represents the control channel used to control the shutter on the fixture - note that offset values starts at 0. The shutter close value represents the DMX value used to close the shutter (no lights), and the shutter open value represents the DMX value used to open the shutter.

Strobe Data

Use these fields to set the DMX channel and values needed to control the strobe function.

The offset value represents the control channel used to control the strobe function on the fixture - note that offset values starts at 0. The strobe slow value represents the DMX value where the fixture strobes at the slowest rate, the strobe fast value represents the DMX value where the fixture strobes at the fastest rate.

Intensity Data

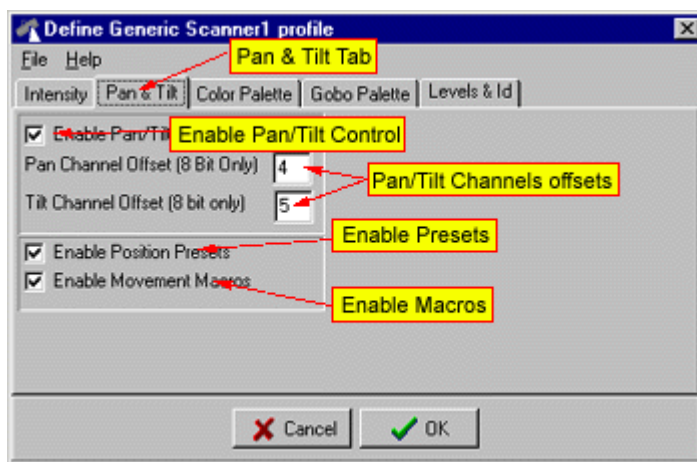
Use these fields to set the DMX channel and values needed to control the fixture's intensity function.

The offset value represents the control channel used to control the intensity function on the fixture - note that offset values starts at 0. The intensity min value represents the DMX value where the fixture has minimum light output, the intensity max value represents the DMX value where the fixture has maximum light output. Note that the minimum value must be smaller than the maximum value for the intensity control to work.

[See also Defining the Scanner 1 Profile](#)^[258]

169 Defining Scanner 1 Pan & Tilt Control

Defining Scanner 1 Pan & Tilt Control



Scanner 1 Pan/Tilt Dialog.

Use this Dialog to set up the Pan and Tilt control definitions for the Scanner 1 fixture. The scanner 1 only supports 8-bit Pan and Tilt control.

Notes

In order for the fixture to use the Pan/Tilt movement control, pan and tilt must be controllable on two individual 8-bit control channels. Further more the fixture must have valid pan/tilt DMX values from 0 to 255.

Enable Pan/Tilt Control

Checking this option allows the fixture to use the standard [pan/tilt movement control](#)^[134]. This is the only movement control available for the scanner 1 fixture.

Pan/Tilt Channel offsets

Use these fields to set the DMX channels offsets needed to control the pan and tilt functions of the

fixture. Note that channel values starts at 0 for the fixture's first control channel.

Enable position presets

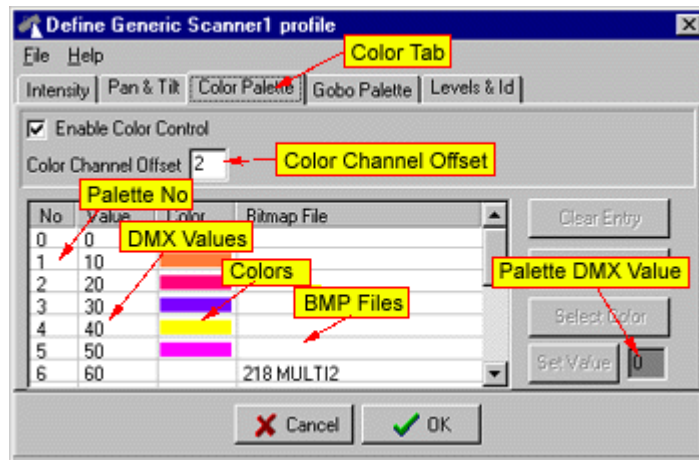
Checking this option allows the fixture to use the LightJockey's [position presets](#)^[139].

Enable Movement macros

Checking this option allows the fixture to use the [movement macros](#)^[130] associated with the pan/tilt control.

[See also Defining the Scanner 1 Profile](#)^[258]

170 Defining Scanner 1 Color Control



Scanner 1 Color Dialog.

Use this Dialog to set up the Color control definitions for the Scanner 1 fixture.

[See also Color Controls](#)^[159]



Scanner 1 Color Control.

Notes

The Scanner 1 color control supports one single 8-bit color control channel. It also supports a user definable color palette with a maximum of 16 colors, using standard Windows colors or bitmaps.

Enable Color Control

To enable the color control function for the fixture, check this option.

Color Channel offset

Use this field to set the DMX channels offset needed to control fixture's color function. Note that

channel values starts at 0 for the fixture's first control channel.

The color palette

To define color palette entries first highlight the appropriate color palette line.

Then select the color or bitmap for the palette button by clicking either the **get color** or **get bitmap** button. Finally set the corresponding DMX value by entering the value in the Palette DMX value field and click **Set Value**. Clear palette entries by highlighting the lines and click **Clear Entry**. A DMX value of -1 indicates that the palette button is unused.

Note that when selecting a bitmap file for the palette button, the selected file must be present in the windows directory that is selected by default.

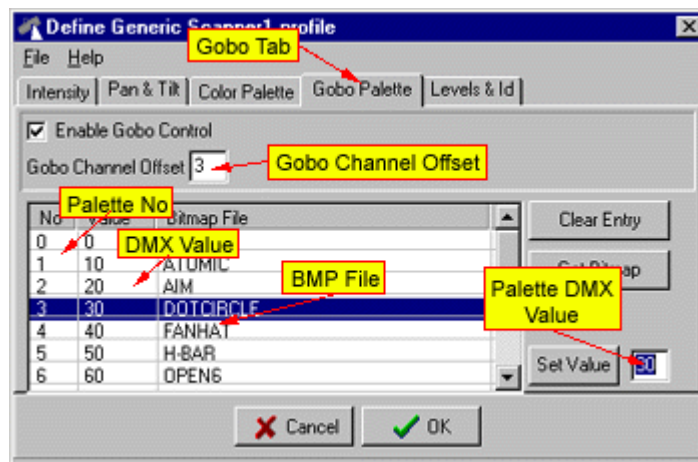
Only palette buttons with defined values will appear on the color control.

See also [Creating Custom bitmaps for palette controls](#)^[295]

See also [Defining the Scanner 1 Profile](#)^[258]

171 Defining Scanner 1 Gobo Control

Defining Scanner 1 Gobo Control



Scanner 1 Gobo Dialog.

Use this Dialog to set up the Gobo control definitions for the Scanner 1 fixture.

See also [Gobo Controls](#)^[158]



Scanner 1 Gobo Control.

Notes

The Scanner 1 Gobo control supports one single 8-bit Gobo control channel. It also supports a user definable Gobo palette with a maximum of 16 gobos, using standard Windows bitmaps.

Enable Gobo Control

To enable the Gobo control function for the fixture, check this option.

Gobo Channel offset

Use this field to set the DMX channels offset needed to control fixture's Gobo function. Note that channel values starts at 0 for the fixture's first control channel.

The Gobo palette

To define Gobo palette entries first highlight the appropriate Gobo palette line.

Then select the Gobo bitmap for the palette button by clicking **get bitmap** button. Finally set the corresponding DMX value by entering the value in the Palette DMX value field and click **Set Value**.

Clear palette entries by highlighting the lines and click **Clear Entry**. A DMX value of -1 indicates that the palette button is unused.

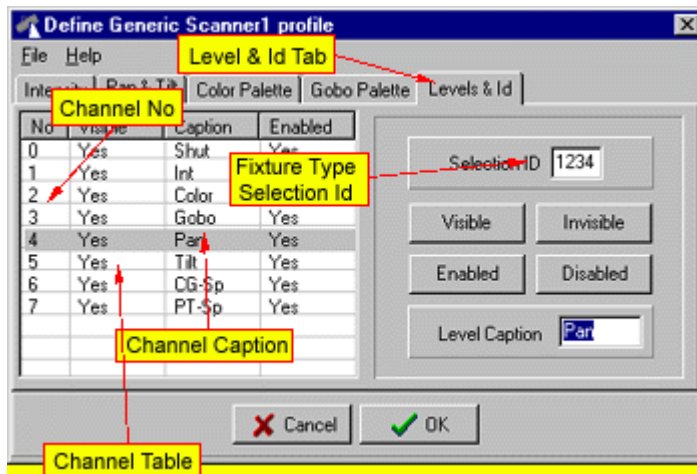
Note that when selecting a bitmap file for the palette button, the selected file must be present in the Windows directory that is selected by default.

Only palette buttons with defined values will appear on the Gobo control.

See also [Creating Custom bitmaps for palette controls](#)^[295]

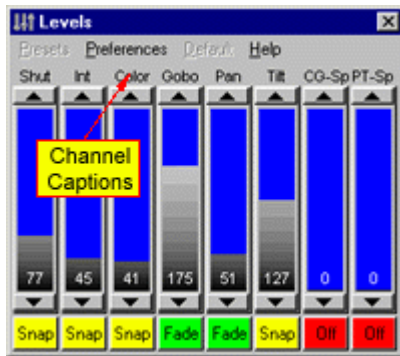
See also [Defining the Scanner 1 Profile](#)^[258]

172 Defining Scanner 1 Level Control



Scanner 1 Level Dialog.

Use this dialog to set up the level control definitions for the Scanner 1 fixture.



Scanner 1 level Control.

See also [Defining the Scanner 1 Profile](#) ^[258]

See also [Generic DMX Controls](#) ^[167]

Notes

The Scanner 1 Level Control supports up to 8 channels of 8-bit DMX. Channels may be allocated to Intensity, Pan/Tilt Movement, Color and Gobo Controls. Other fixture functions must be programmed via the level control.

Configuring the Channel Control

It is possible to label each of the levels with an individual Caption. Highlight the line(s) in the channel table and type the new caption in the level caption field.

Reducing the number of required DMX channels.

By default the Scanner 1 level control has all 8 DMX levels enabled and visible. If the actual fixture uses less than 8 control channels, disabling the unneeded channels will free them to be used by other fixtures. To disable the unused channels, highlight the channels in the channel table click the disable button, those channels will now be available for other fixtures. Note that channels that are marked as unused this way are not used by the auto-address feature in the [fixture configuration](#) ^[40].

Selection Id

The selection Id is a small optional 'tag' that allows LightJockey to distinguish between different 'flavors' of user-defined profiles all using the scanner 1 profile - the tag is a 4-character user definable value. Use this tag to ensure that values are not sent to selected fixtures that are not compatible with the currently selected [master fixture](#) ^[120].

Note that values programmed via the intensity or pan/tilt movement controls per definition are cross fixture compatible and will always work across fixture types.

173 User Definable Fixtures - Color Scroller 1



Color Scroller Fixture Icon

The color scroller profile is a special case of the generic DMX control that allows a light source with mounted color scroller to be programmed as one unit. It also has a palette feature that allows the user to setup a color palette that matches the colors mounted in the color scroller.

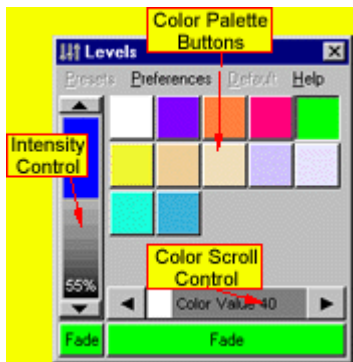
Often color scrollers are attachments to an individual light source (i.e. a par can that is driven from a dimmer pack). As a consequence of this the DMX address of the light source and the color scroller may not be contiguous, as is normally the case with multi parameter fixtures.

Configuring the color scroller

To configure a color scroller fixture, select **Color Scroller 1** in the list of available fixtures (see [Fixture Configuration](#)^[40]).

When setting the DMX address of the fixture, **the DMX address of the Intensity control channel must be given - NOT the address of the color scroller.**

Once the fixture color scroller icons are placed on the desktop, each fixture must be configured with a DMX address for the color scroller unit and (optionally) values for the color palette - see [Defining the Color Scroller Profile](#)^[26].

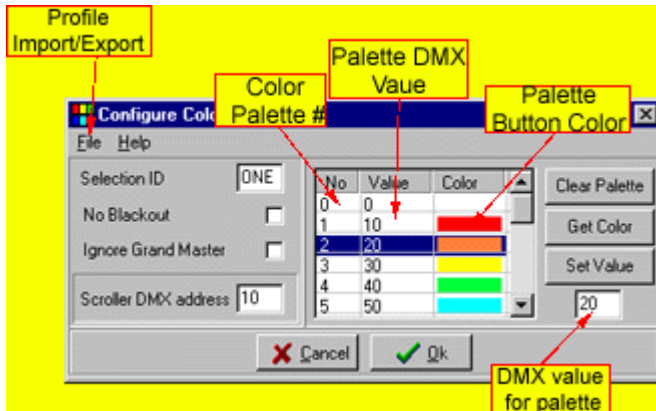


Color Scroller Control

Once the color scroller has been setup it can be programmed as any other fixture via the color scroller control. The control features a [drag bar](#)^[17] for controlling the intensity, and another drag bar for controlling the position of the color scroller. If the fixture has been setup with values for the color palette, colors can also be selected by clicking on the color palette buttons.

See Also [Off, Snap, Fade](#)^[12]

174 Defining the Color Scroller Profile



Color scroller setup dialog.

The color scroller profile dialog becomes available by right-clicking on the fixture icon on the desktop and selecting **Define Fixture Profile** from the pop-up menu.

No Blackout

By default the color scroller will perform a [blackout](#)^[155] by reducing the level of the intensity control to 0. This feature can be disabled by checking this option.

Ignore Grand Master

By default the color scroller intensity is controlled by the [Grand Master](#)^[151]. This feature can be disabled by checking this option.

Scroller DMX address

This is the DMX address of the color scroller unit. The address range is 1-2048 for the Club/PCMCIA versions, 1-512 for the ADP, DJ and USB versions. For the Club/PCMCIA version this address is calculated as $Scroller\ Address + ((DMX\ Link\ No - 1) \times 512)$, assuming that the color scroller addresses starts with 1.

Note that LightJockey does not check if the address given is already allocated to other fixtures - it is entirely up to the end user to make sure that the address is correct. The allocated address is also **not** taken into account when using the Auto Address feature in the [Fixture Configuration](#)^[40] - this may cause other fixtures to overwrite the DMX output values of the Color Scroller if DMX addresses overlap.

Configuring the color palette

The color scroller profile supports up to 20 color palette buttons (numbered 0-19). To set the values (DMX value and color value) for the individual buttons, highlight the line with the button number. Select the color from the color dialog by clicking on **Get Color**. Set the corresponding DMX values by entering the value in the field in the lower right hand corner and click **Set Value**.

Palette entries may be cleared by highlighting the line(s) and click **Clear Palette**.

Selection Id

The selection Id is a small optional 'tag' that allows LightJockey to distinguish between different 'flavors' of color scrollers (i.e. scrollers with different gels) - the tag is a 4-character user definable value.

Normally when setting the color with the color [drag control](#)^[176] or palette buttons, the value will be programmed into all [selected](#)^[120] color scroller fixtures. By setting the id to different values for different flavours of scrollers only color scrollers with the same ID value as the [master fixture](#)^[120] will be programmed.

The File Menu

Save Profile - this will save the current profile to a named file. The profile can then be loaded into other color scroller fixtures.

Load Profile - this will load a previously saved profile into the current color scroller fixture. Loading a profile does not change the scroller DMX address.

Clear Profile - this will clear the current profile.

LightJockey defaults the profiles files to the following directory <LightJockey Installation dir>\User\UserFixtures\

175 Defining the Generic Fixture 2

See also [Importing user defined fixture profiles](#)^[277]

In order to use a user-definable fixture profile for programming it is necessary first to define the fixtures control channels, functions, and optionally palette values.

Defining a profile, unless it is a very simple fixture - usually requires a detailed knowledge of the fixture's [DMX Protocol](#)^[49].

Please make sure to read the notes on the individual tabs before defining the profile.

The user-definable fixture profile is limited to a maximum of 32 contiguous DMX channels and supports 16 bit control on pan and tilt.

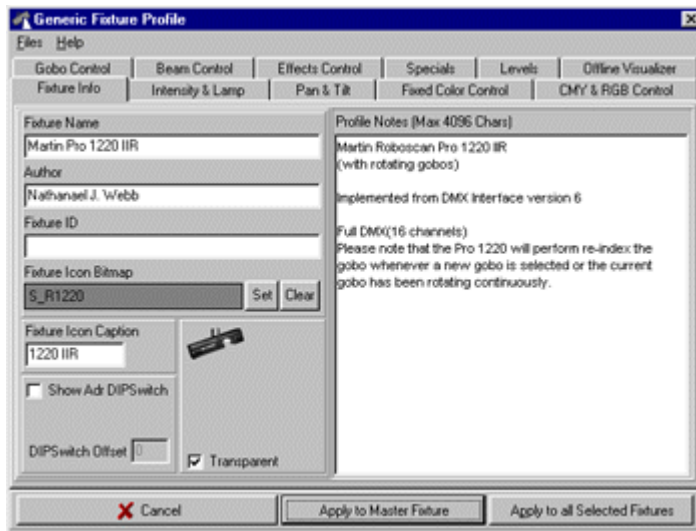
By default, a new profile will only have the [generic level control](#)^[167] enabled, enabling 8 bit control of all 32 channels. Further functionality must be defined using the profile dialog.

To define a new profile or edit an existing profile, configure a **generic fixture 2** in the [fixture configuration](#)^[40]. Set a valid DMX address for the generic fixture. If a DMX fixture is already connected to LightJockey, set the DMX address of the generic fixture to the fixtures DMX address (eventually refer to fixture manual).

Make sure that the address does not overlap with other fixtures already configured in LightJockey and leave enough free addresses for all of the fixtures control channels. Defining a profile without giving the generic fixture a valid DMX address does not work properly.

Once the new fixture icon is placed on the desktop, open the fixture profile dialog by right-clicking on the fixture icon and select **Define Fixture Profile** from the pop-up menu.

The fixture icon will automatically be selected as [master](#)^[120] fixture.



Define Fixture Profile Dialog

The dialog consists pages located on a number of different tabs, each containing groups of specific fixture related functions.




Any changes in the fixture profile dialog must be applied (click any of the **Apply** buttons) to the fixture before taking effect.

The **Apply to Master Fixture** button will apply the new profile to the [master](#)^[120] fixture only, where as the **Apply to all Selected Fixtures** button brings up a [new dialog](#)^[275] to apply the new profile to all or some of the selected fixtures.

Applying a profile to a fixture will dynamically change the available controls and functions for that fixture - so it is actually possible to 'program' the fixture while still defining the profile. This feature is very useful for testing the profile with a fixture connected.

NOTE

If another fixture icon on the desktop is selected while the profile dialog is open, the contents of the dialog will change to the new fixture, and any non-applied changes to the profile are lost.

- | | | |
|--------------|---|--|
| Clicking the |  | will apply the actual profile to the fixture. |
| Clicking the |  | will apply the profile and close the dialog. |
| Clicking the |  | will cancel changes and close the dialog. Fixture profile will remain unchanged. |

The File Menu

[Load Profile](#) - this will load a previously saved profile data.

Saving profiles

Saving profile data will apply and save the current profile to a named file. The profile data may be loaded into other fixtures or the fixture may then be configured from the normal fixture [configuration dialog](#)^[40]. Note: updating and re-saving a profile will not automatically update other fixtures using the same profile.

Save Profile - This option will only be available if the profile data has been loaded from an already saved file (either loaded manually or configured via the fixture configuration). The file name suggested in the save file dialog is the same as the profile data was originally loaded or configured, making it simpler to modify and re-save a profile without hunting for the original filename.

Save profile as - Opens the save dialog without suggesting the filename.

WARNING! - when using an already existing profile as basis for a new fixture, be careful NOT to overwrite the original profile by using the filename suggested by the save option.

Clear Profile - this will clear the current profile data.

LightJockey saves the data-files containing the profile to the following folder <LightJockey Installation dir>\User\UserFixtures\<>filename.GS2<>.

See also [Exporting user defined fixture profiles](#)^[276]

Control types.

The generic profiles basically uses two types of controls :

The [dynamic](#)^[269] control type allows the user to select between different values (usually via some kind of [drag control](#)^[176] or palette on the final fixture control).

Some dynamic function may have an associated [palette](#)^[271].

The [static](#)^[271] of control type contains static values for one or more fixture control channels and is usually used to select more specialized functions such as fixture reset or lamp on or off commands.

[The Fixture Info Tab](#)^[279]

[The Intensity & Lamp Tab](#)^[280]

[The Pan & Tilt Tab](#)^[291]

[The Fixed Color Tab](#)^[283]

[The Gobo Tab](#)^[284]

[The Beam Tab](#)^[285]

[The Effects Tab](#)^[285]

[The Special Tab](#)^[286]

[The Levels Tab](#)^[288]

[The Offline Visualizer Tab](#)^[294]

See also [Dynamic functions](#)^[269]

See also [Static functions](#)^[271]

See also [User definable palettes](#)^[271]

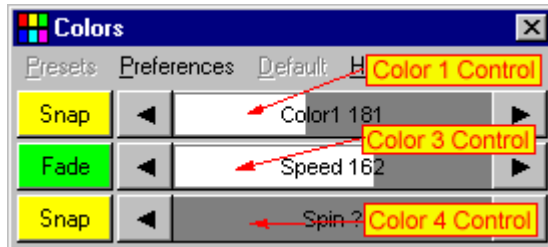
See also [Customizing Palettes for built-in fixture profiles](#)^[125].

176 User-definable Dynamic Functions

DMX Offset		Dmx Values	
<input checked="" type="checkbox"/> Enable Color 1 Control (Palette)	4	Min	128 Max 255
<input type="checkbox"/> Enable Color 2 Control (Palette)	0	Min	0 Max 0
<input checked="" type="checkbox"/> Enable Color 3 Control	5	Name	Speed Min 0 Max 255
<input checked="" type="checkbox"/> Enable Color 4 Control	4	Name	Spin Min 0 Max 127

Dynamic function definition (example, color controls)

The dynamic fixture functions usually work on one fixture DMX channel using 8-bit values from 0 to 255. Usually, defining dynamic functions result in a corresponding [drag control](#)^[176] on the final [fixture control](#)^[151].



Corresponding drag controls.

An exception is that the [Pan/Tilt function](#)^[291] may work on 2 channels for pan and tilt respectively for 16 bit pan/tilt control.

Most of the dynamic functions are named functions, for example Intensity, Focus or Iris. A majority of these named functions are [cross fixture-type compatible](#)^[124] - this means that they will work across different types of fixtures.

Other functions are of a more generic nature, i.e. Beam 1 or Effects 2, but as the names implies, drag controls for these functions will show up on the corresponding [fixture control](#)^[151].

To define a function, check the relevant enable box and enter the fixtures DMX address offset and minimum and maximum values.

If no special minimum or maximum values are required, enter 0 for minimum and 255 for maximum.

IMPORTANT : Address offset values start at 0 not at 1 - this means that the first fixture control channel must be entered as 0.

Entering minimum and maximum values do not impose a minimum or maximum constraint on the DMX output value (see [global patch](#)^[312]), it just limits the 'active' area on the control inside to given interval. This means that two or more functions may 'share' the same fixture control channel using different value intervals. The functions may even be allocated on different tabs (i.e. an iris function can share fixture control channel with a gobo function). It is not uncommon that fixtures have multiple functions like this allocated to the same control channel.

On the fixture control, normally the drag control will show the current output value, either as decimal or percentage value.

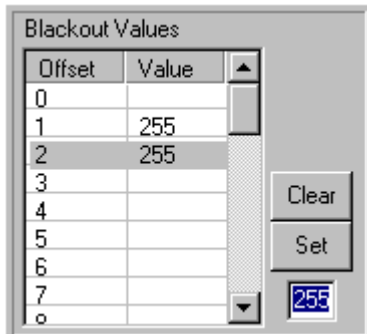
If the current output value is outside the legal range of the function, the drag bar control will use a '?' as value indicator.

Some functions uses limits other than min/max. For example the strobe function has entries for 'slow' and 'fast'. This is used for certain [cross fixture-type compatible](#)^[124] functions, when several different types of fixtures are selected, to allocate the same 'amount' of effect to all selected fixtures. For example setting the strobe at 25% will instruct all selected fixtures to strobe at 25% speed (note that in real life a 25% setting may not necessarily result of 25% 'effect' - this depends entirely on how the fixture interprets the DMX values).

Some of the functions have a name field - this may be used to enter a more specific name for the function of the control, i.e. 'Speed' to indicate that this drag bar controls a speed parameter, or 'ColParm' to indicate that the dragbar controls a color parameter.

See also [User definable Palettes](#)^[177].

177 User-definable Static Functions



A static function (example blackout)

The static functions are used to define functionality that require pre-defined values to be sent to one or more fixture control channels.

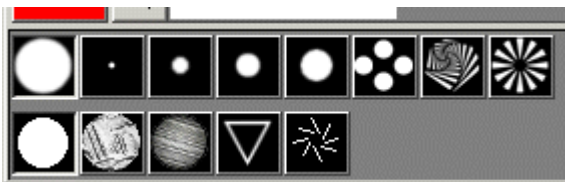
For example, a fixture command such as lamp off (for discharge lamps) may require a specific value on the last fixture control channel, while all other channels are set to 0.

The static control allows different values to be defined for one or more of the fixtures possible 32 channels.

To define values for the static function, simply highlight the line(s) corresponding to the DMX offset (note first offset is 0, not 1) and enter the value in the field to the bottom right and click the **Set** button. To clear the offset so that no value is sent when the function is selected, highlight the line(s) and click the clear button. When activating a particular function (i.e. lamp on) from a fixture control, the values entered for each offset will be sent to the relevant control channels - if no value has been defined nothing will be sent. Note that some named functions needs to be enabled before values can be entered.

178 User-definable palettes

The use of palettes allows the fixture controls for user defined fixture profiles to show individual buttons for specific control values (e.g. button for a specific gobos, colors or functions).



Gobo control with palette buttons for gobo selection

Palettes may be created for color, gobo and effect controls. The palettes are created by editing the palette definitions located on their respective tabs on the [Generic Fixture Profile](#)^[267]

dialog.

Each control may contain up to two palettes, each palette is activated by checking the corresponding control - i.e. checking *Enable Gobo Control 1 (Palette)* on the gobo control tab, will activate the first palette on the gobo control.

Each palette is limited to 20 entries (0-19). Two palettes may be combined to control features on the same control channel by setting identical offset values.

The screenshot shows a dialog box titled 'Gobo 1 Palette' with a tab for 'Gobo 2 Palette'. It contains a table with columns: No, Def, CW, CCW, Idx, Shk, Color, and Bitmap File. The table has 10 rows (0-9). Annotations include: 'Palette Entry No' pointing to the 'No' column; 'Button Color' pointing to the 'Color' column; 'Button Bitmap' pointing to the 'Bitmap File' column; and 'Palette Button Values' pointing to the 'Def' column. The 'Color' column shows a color swatch for entry 4, and the 'Bitmap File' column shows a small icon for entry 7.

No	Def	CW	CCW	Idx	Shk	Color	Bitmap File
0	0						OPEN
1	10	115	120	125	130		BEAMSPLITTER
2	20	135	140	145	150		FUSED DICHRO001
3	30	155	160	165	170		FLOWERS
4	40	175	180	185	190		PETALS
5	50	195	200	205	210		STARS
6	250						
7	255						
8							
9							

Palette definition list

Defining the palette entries

Each palette button can be assigned a specific color or bitmap visualizing the effect of clicking the button. Also each button can be assigned up to 5 different values.

Selecting the palette functions

Note: if the fixture does not have multiple functions it is not necessary to define the functions. See below.

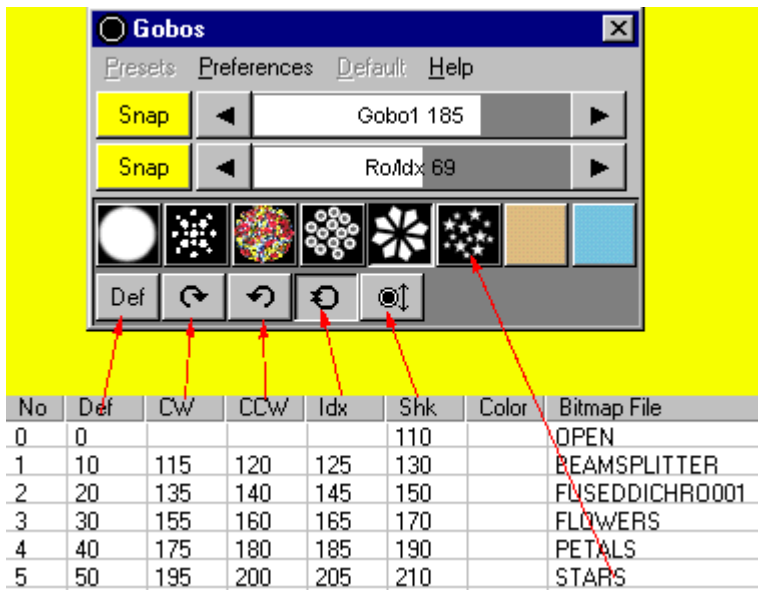
Some of the more advanced fixtures may map different functions for the same effect (i.e. the same gobo) onto one DMX control channel.

An example would be a fixture with rotating gobo where the 'function' (static, rotation, index etc..) of each individual gobo is selected via different DMX values on the same control channel.

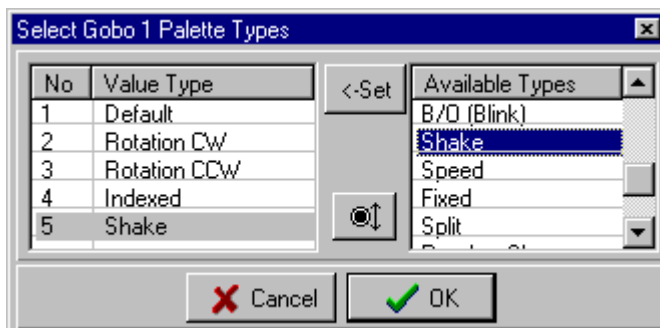
For example :

<u>DMX Values for :</u>	<u>Static</u>	<u>Rotating CW</u>	<u>Rotation CCW</u>	<u>Indexed</u>	<u>GoboShake</u>
Open gobo	0				110
Gobo 1	10	115	120	125	130
Gobo 2	20	135	140	145	150
Gobo 3	30	155	160	165	170
etc..					

In order to be able to select the different functions for the gobos, LightJockey allows up to 5 different functions for each palette.



By default all 5 possible palette functions are defined as Def (for default). To select new functions or edit the current functions for the current palette, click the **Palette Functions** button in the lower right-hand corner of the dialog.



Assign a function by high-lighting the function number (1-5) in the left hand list, then high-light the function in the available functions list on the right side and click the **<-Set** button. Alternatively, drag the function to the function list. Note that the available functions are pre-defined and that it is not possible to define new functions.

Defining simple palettes

If the fixture does not have multiple functions it is not necessary to define the different palette value types. Enter the DMX values in the leftmost Def column using the first value field. If all DMX values are kept in the same column the different value type buttons will not show up on the fixture control at all.

Selecting button color

Each palette button may have a color or a bitmap assigned (if no color or bitmap is assigned, the palette button will be black). It is not possible to assign both a color and a bitmap to the same button.

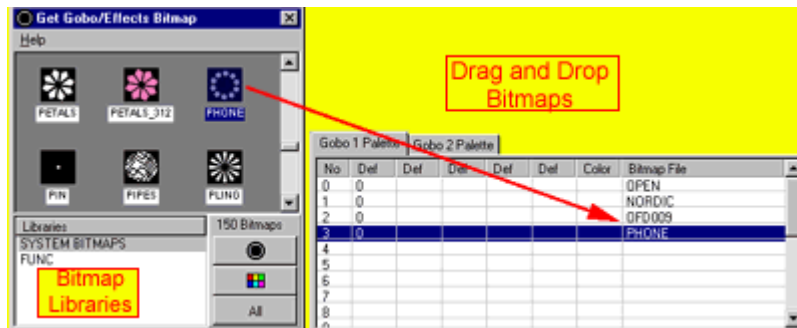
To select a color, highlight the relevant line in the palette list, and then click the **Color** button on the right hand side of the dialog. Use the standard Windows Color dialog to select a suitable color.

To save system resources it is advisable to assign colors to buttons that represent color functions, rather than bitmaps.

Selecting button bitmap

To select a bitmap click the **Bitmaps** button on the right hand side of the dialog button to open the

[select bitmap dialog](#) ^[127].



Select Bitmap dialog.

To assign a bitmap to a palette entry, just drag and drop the bitmap from the bitmap dialog to the palette entry. Alternatively high-light the palette entry and double-click the bitmap. Note that it is not possible to assign color bitmaps to gobo/effect palettes, or gobo bitmaps to color palettes.

Click the gobo and color buttons to change the view between gobo/effect and color bitmaps.

LightJockey comes with a number of bitmaps for colors, gobos and effects - it is however likely that when defining profiles for non-Martin fixtures, the correct bitmaps will not be present. In this case, it is possible to create custom bitmaps to use with the palette buttons - see

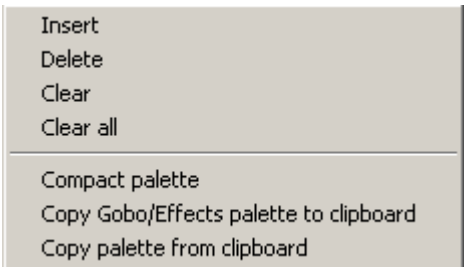
[Creating Custom Bitmaps for Palette Controls](#) ^[295].

Note that the bitmaps available for the color palettes and gobo/effects palettes are not the same - in order to use color bitmaps for gobos or visa versa, the bitmap file must be copied into the correct directory - see [Creating Custom Bitmaps](#) ^[295].

Editing palette DMX control values

Bitmaps		Colors	
Def	40	CCW	175
CW	180	Idx	185
		Shk	190
Set Palette Values			
Palette Functions			

To set DMX control values for each palette button, highlight the entry in the palette definition list and enter the values in the value fields to the right of the palette list. Note that the labels describing each values corresponds to the value types defined for the palette and change dynamically with the value types selected. If a particular button does not have the same or all the functions of other buttons, i.e. the open gobo does not have values for rotation or index just leave the field blank; then, when selecting open gobo on the fixture control the functions will not be available. When the values have been entered, click the **Set Palette Values** button. Right-click the palette list to access the palette right-click popup menu.

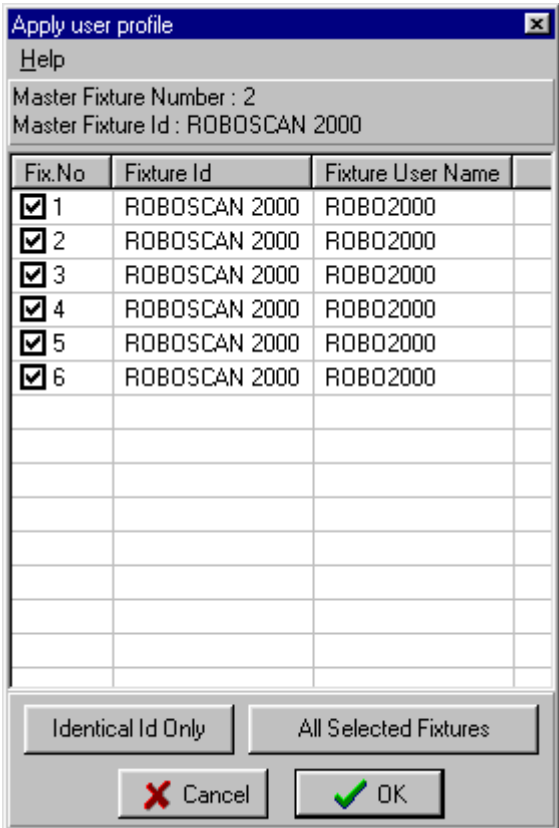


Palette right click popup menu

- Insert** - inserts empty line (disabled if last palette entry is already used)
- Delete** - deletes the highlighted palette entries
- Clear** - clears the selected palette entries
- Clear all** - clears all palette entries
- Compact palette** - removes (deletes) 'empty' palette entries and compacts palette
- Copy palette to clipboard** - copies palette to clipboard
- Copy palette from clipboard** - copies the contents of a palette that has previously been copied to the clipboard.

Note : color palettes can only be copied from other color palettes - while gobo and effect palettes may be copied from each other.

179 Applying User Profiles to Multiple fixtures



Use this dialog to apply the user defined profile to one or more of the [selected](#)^[120] fixtures.

Click the fixture lines to check or uncheck fixtures.

Click the **Identical Id Only** button to uncheck fixtures with a [Fixture Id](#)^[279] different from the current Master fixture.

Click the **All Selected Fixtures** button to check all selected fixtures.

Click the **OK** button to apply the profile to all checked fixtures.

Click the **Cancel** button to return without applying the profile to any fixtures.

180 Exporting user defined fixture profiles

Exporting user defined fixture profiles

See Also [Importing User Definable Fixture Profiles](#)^[277]

Use the export function to create a single file containing the fixture profile and bitmaps used, including any custom bitmaps created for the profile as well as Offline Visualizer support files. Once an export file has been created and saved it can be later be imported to another LightJockey Installation.

To export a profile, first make sure to save the profile using the save function in the [profile definition dialog](#)^[267] file menu.

Once the profile has been saved, open the [Fixture Configuration dialog](#)^[40] and find the profile amongst available fixture profiles.

Since version 2.6 build 5 LightJockey can include Offline Visualizer data files in the profile export file.

Note - when including offline data files the profile is saved in a different format (*.udo files) and cannot be imported into LightJockey installations lower than version 2.6 build 5.

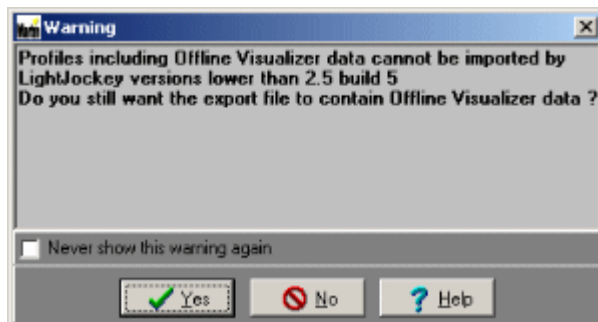
Exporting without Offline Visualizer data

Locate and right-click the profile in the available profiles list and select *Create Export File without Offline Visualizer data*

Exporting with Offline Visualizer data

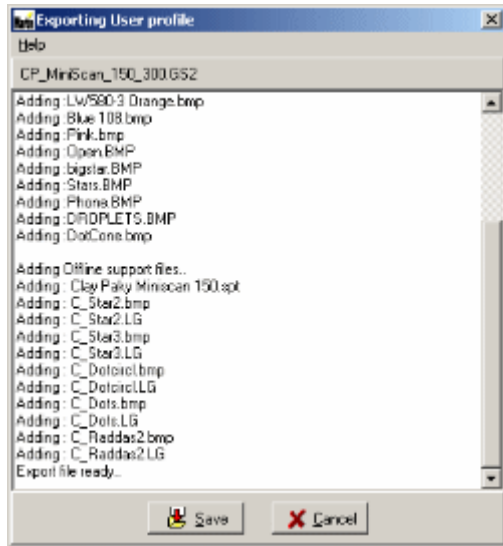
This option is only available if the profile is linked to an existing Offline Visualizer profile and the Offline Visualizer is running.

Locate and right-click the profile in the available profiles list and select *Create Export File including Offline Visualizer data*



A confirmation dialog will appear (if not disabled) prompting to verify that the profile should be created including Offline Visualizer data.

Saving the Export File



Export File List

The contents of the profile export is now shown in a list - to save the final export file click the **Save** button and save the file using the standard Windows file dialog. LightJockey defaults the directory to "<LJ installation>\Exports\". Export files that contain Offline Visualizer support data files are saved as .udo files - exports without Offline Visualizer support files are saved as .udf files.

The saved file may now be moved or copied to another LightJockey installation and imported via the [Import profile](#) ^[277] function.

181 Importing user defined fixture profiles

Importing user defined fixture profiles

See also [Exporting user defined fixture profiles](#) ^[276]

Use the Import profile to import user definable profiles that has previously been created on and exported from another installation.

The profile export file is usually a collection of several files - much like a ZIP file. It contains the fixture profile definition plus any bitmaps used by the profile. From version 2.5 build 5 the export file may also contain support files for the fixture used by the Offline Visualizer.

To import a profile, open the [fixture configuration](#) ^[40] and select *Import/Import Profile* from the main menu. Use the standard Windows file dialog to select which file to import.

Note:

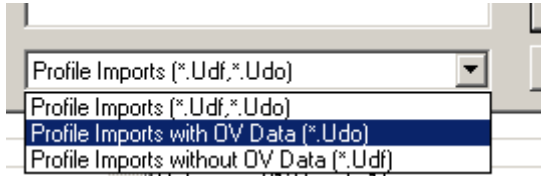
Export files exists in two formats.

.udo files - this format includes Offline Visualizer support files as well as the LightJockey profile. This type can only be imported in LightJockey version 2.6 build 5 or higher.

.udf files - this format includes the LightJockey profile only.

Use the file dialog filter to list either or or one of the two formats. Offline Visualizer support files will not

be imported if the Offline Visualizer is not installed with LightJockey.



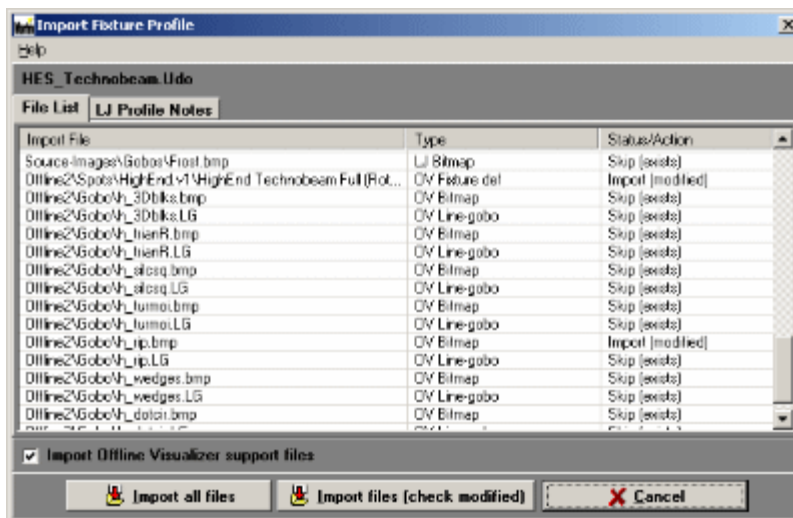
Filtering for filetypes

Select a file and click Open to start the profile import.

The Import File List

Before copying any files to the installation, LightJockey checks all files contained in the import file to see if the individual file already exists in the installation or if a file with the same file name but a different contents (i.e. a bitmap file with a different picture of a gobo) is already present in an installation. All files contained in the export file will be listed in the File Import List.

If the export file contains Offline Visualizer support files, import of these files may be disabled by unchecking the *Import Offline Visualizer support files* option below the list.



Import File List

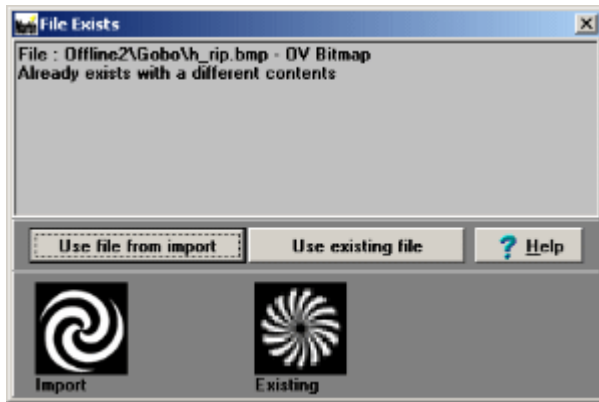
- If the file is new it will always be imported - Import(new).
- If the file already exists and has the same contents it will not be imported - Skip (exists)
- If a file with the same name already exists but has a different contents, a new dialog will appear to decide what action to take - Import (modified)

Import All Files

Selecting this option will import all new and modified files from the profile export file.

Import Files (check modified)

Selecting this option will import all new files and prompt for an action for each file that already exists but with a different contents. The filename is shown together with a small description of the purpose of the file. In case of bitmap files (.bmp) the dialog displays both bitmap versions, both from the import and the already existing bitmap file - note that the bitmaps may not be displayed in their 'natural' size.



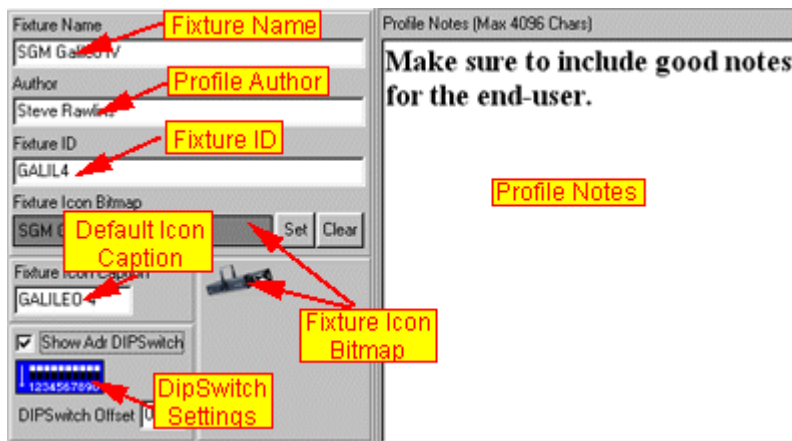
File Exists Dialog

Use file from import - This option will overwrite the existing file with the new file from the import. For profile definition files (.gs2,spt files), this means that the existing profile (LightJockey and/or Offline Visualizer profiles) will be overwritten by the new one. For bitmap files, any fixture already using the old bitmap (i.e. a gobo bitmap) will now use the new bitmap since the file is being replaced.

Use existing file - This option will keep the existing file and skip the new one. If the skipped file is a profile definition file, the new profile will not be imported. If the file is a bitmap the new profile will automatically use the existing bitmap in place of the one contained in the import file.

182 The Fixture Info Tab

See also [Defining the Generic Fixture 2](#)^[267]



The first tab displays general profile information, including the fixture name, profile author (feel free to promote yourself:) and notes about the profile.

Hint: Cutting and pasting the notes from a word processor like Microsoft Word, enables use of different text attributes, such as different colors and various text attributes such as **bold**. Note that formatted text, because of the embedded attribute commands, normally takes up a lot more 'character' space than just the 'visible' characters.

It is also possible to select a default bitmap for the fixture icon, to select a bitmap click the **Set** button and select the bitmap from the file dialog. If no bitmap is specified, a generic scanner bitmap will be

used for the fixture button.

In the quite likely event that a suitable bitmap is not supplied with LightJockey, it is possible to create custom bitmaps - see [Creating Custom Bitmaps for Fixture Icons](#)^[295]. Check the transparent flag to make the bitmap background color transparent.

Use the Icon caption field to specify the default caption on the fixture icon. Note that the caption may still be changed by changing the fixtures user name in the [fixture configuration](#)^[40].

Fixture ID (IMPORTANT)

Since all fixtures configured as [Generic Fixture 2](#)^[256] are considered identical by LightJockey regardless of the actual profile, the fixture ID has been implemented to distinguish between different 'flavors' of profiles. While the [cross fixture compatibility](#)^[124] is designed to let certain effects be compatible across fixture types, specific DMX values for effects such as color and gobo does normally not make sense when applied to different types of fixtures.

When applying values to non-compatible effects, LightJockey uses the Fixture ID to distinguish between the different flavors of user profiles - values for i.e. colors will only be applied to selected fixtures if the [master and slave](#)^[120] fixtures have identical fixture IDs.

When applying the ID it is usually a good idea to select a name that uniquely identifies the fixture type, i.e. "Roboscan 2000".

Addressing DIP Switch

If the fixture uses a fairly simple Dipswitch addressing scheme, enable the Adr-DIPSwitch to show the address setting in the fixture configuration. The fixture should use a simple addressing scheme with a 1-1 connection between DMX start address and fixture Dipswitch setting. It is possible to add a constant to the dipswitch setting to offset the dipswitch by a constant value, i.e. -1 to set DMX address 1 = all dips off, or 512 to always set dipswitch 10 on.

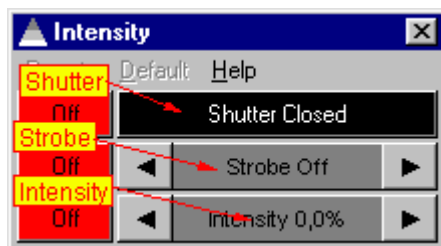
183 The Intensity & Lamp Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]

See also [Static functions](#)^[271]

This tab defines the fixtures intensity and (discharge) lamp functions.



Fixture Intensity control

Shutter function (semi dynamic function)

Enabling the shutter function results in a shutter button on the intensity control. The function requires two values. One for shutter closed and one for shutter open.

Note that the shutter button will only reflect the shutter open state if the current output value has exactly the same value as the shutter open command (most fixtures actually opens the shutter on a large interval of the control channel).

This function may also be used to switch the lamp on and off for fixtures equipped with a halogen lamp.

Strobe function (dynamic function)

The strobe function requires a value for slowest strobe, a value for fastest strobe and a value for strobe off. The **strobe off** value is sent when the strobe control is dragged all the way to 0%.

Intensity function (dynamic function)

Enables the fixtures intensity/dimmer function. That the values required are the minimum/maximum DMX values for intensity control interval (not DMX values relating to minimum/maximum lightoutput).

Enable Grand Master/Intensity

The intensity function may be linked to the Grand Master or sub-masters by checking the **Enable Grand Master/Intensity** box.

Blackout when Grand Master at 0

If the fixture does not have intensity control it is possible by checking **Blackout when Grand Master at 0** to have the fixture blackout when the Grand Master reaches 0 (assuming blackout values are entered into the blackout values list - see below).

It is not possible to link both intensity and Blackout to the Grand Master at the same time.

Invert entire Intensity Channel

If the fixture implements max intensity at DMX value 0 and minimum intensity at DMX value 255 check this option to invert the DMX values for the control channel before transmitting. Output values are calculated as 255-value before transmitting. This function affects the entire control channel intensity control channel. This function is mainly for backwards compatibility.

Invert Intensity value range (*)

This function inverts the DMX values as soon as the value is within the range specified in intensity min/max values. Use this switch when the fixture implements maximum intensity at lowest DMX value and minimum intensity at maximum DMX value. Note, this function inverts the DMX value as soon as it is within the intensity control range regardless of actual source of the value. This includes sources such as [default DMX values](#)^[288] - to set a default DMX value to intensity off for a fixture with inverted intensity, type the DMX value for maximum intensity into the default DMX values list (the value is automatically inverted to minimum intensity before being transmitted). Note with this option AND grandmaster control both enabled make sure to check *Limit GM to intensity range* as well, otherwise the Grand Master may produce unwanted results.

Limit Grand Master (GM) to intensity range (*)

This option limits the Grand Master (and submasters) 'working range' - they will only take effect when the DMX value is within the given intensity interval. Use this function to stop the GM affecting other functions on the intensity channel (such as shutter or strobe commands). If the action of the GM is not limited it will affect the whole Intensity control channel.

(*) Note - these options are new to version 2.5 build 6 - they will be ignored if the profile is used on an earlier LightJockey version.

Examples:

Single function Intensity channels

Example 1 (single function command channel)

DMX 0-255 : Intensity 0-100%.

Set Intensity Min/Max to 0 and 255 respectively and enable *GM/Intensity control*.

Example 2 (single function command channel)

DMX 0-127 : Intensity 0-100%.

DMX 128-255 : no function

Set Intensity Min/Max to 0 and 127 respectively and enable *GM/Intensity control*.

Example 3 (single function command channel, inverted)

DMX 0-255 : Intensity 100%-0%
 Set Intensity Min/Max to 0 and 255 respectively. Enable *GM/Intensity control* and check *Invert Intensity value range* (or entire intensity channel for backwards compatibility)

Example 4 (single function command channel, inverted)

DMX 0-127 : Intensity 100%-0%

DMX 128-255 : N/A

Set Intensity Min/Max to 0 and 128 respectively. Enable *GM/Intensity control* and check *Limit GM to intensity range*

Examples:

Multi function Intensity channels

Example 5 (Multi function command channel)

DMX 0-127 : Intensity 0-100%.

DMX 127-255 : strobe (or whatever)

Set Intensity Min/Max to 0 and 127 respectively and enable GM. Also check *Limit GM to intensity range* (unless the GM should affect the whole channel).

Example 6 (Multi function command channel, Intensity inverted)

DMX 0-99 : strobe (or whatever)

DMX 100-200 : Intensity 100%-0%.

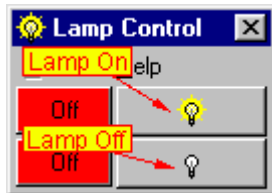
DMX 201-255 : strobe (or whatever)

Set Intensity Min/Max to 100 and 200 respectively and enable *GM/Intensity control*. Also check *Invert Intensity Value Range* as well as *Limit GM to intensity range*.

Blackout values (static function)

Fill out this [static function](#)^[27] to enable LightJockey to blackout the fixture.

The values are sent when [Blackout](#)^[15] is enabled directly or via the Blackout when Grand Master at 0 function.



Fixture Lamp Control.

Lamp On Values (static function)

Enable the lamp on function and fill out the static values to enable LightJockey to send a lamp on command to the fixture. Note that the [auto lamp on](#)^[112] does not work with the user definable fixtures.

Auto LampOn Time

Some fixtures may require a lamp on command to be held for a minimum time. To ensure that the [auto lamp on](#)^[112] function holds the command for the required duration, enter the required minimum time in this field (in milliseconds).

Lamp Off Values (static function)

Enable the lamp off function and fill out the static values to enable LightJockey to send a lamp off command to the fixture.

Both lamp on and lamp off commands are available from the fixtures lamp control. Note that these commands are intended to be used with fixtures that are equipped with discharge lamps that requires a certain cool down time before the lamp can be re-struck. Fixtures equipped with halogen types of lamps should use the normal intensity/shutter commands to control the lamp.

184 The Fixed Color Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]

See also [User definable palettes](#)^[271]

The functions on this tab define the fixtures fixed color controls (i.e. colors mounted on a color wheel) available on the fixture Color control.

CMY and RGB functions must be defined via the [CMY & RGB Tab](#)^[283].



Fixture Color Control

Color 1 and Color 2 (dynamic functions)

The color 1 and 2 function is intended to be used with selection of colors. Both have the possibility of having an associated [palette](#)^[271].

Color 3 & 4 (dynamic functions)

The primary purpose of the color 3 and color 4 functions are to control color related functions other than direct color selection. The functions do have an associated palettes.

Some fixtures have combined functions on one control channel, i.e. fixed color selection and continuous color rotation on one channel. In this case it is possible to 'share' the same control channel between 2 controls.

For example :

Fixture has color control channel offset at 4.

Color selection is from DMX value 0 to 200 and values over 200 sets continuous color wheel rotation. Enable the color 1 control and set the DMX offset to 4 and set min and max values to 0 and 200 respectively (and create the palette).

Also assign color control 3 to offset 4 and set min and max values to 201 and 255 respectively.

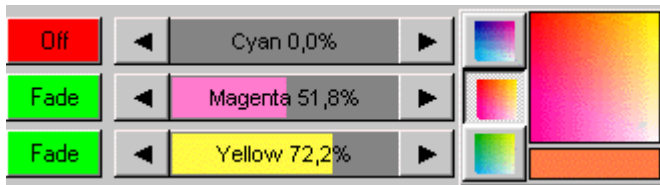
The two controls now shares the same control channel, but color control 3 is limited to the higher interval it will be much easier to select the right value for color wheel rotation.

185 The CMY & RGB Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]

The functions on this tab define the fixtures CMY and RGB Color functions. To define other color functions use the [Fixed Color Tab](#)^[283].



Fixture CMY Control (part of color control)

CMY and RGB (dynamic functions)

The profile implements functions specifically for CMY and RGB controls. Besides the [drag controls](#)^[176] for each individual color, the CMY function implements a [CMY color picker](#)^[159]. The CMY color picker is only available if each CMY control channel uses the full 0-255 value range.

For fixtures that invert the CMY or RGB values (full saturation at 0 value, no color at 255) use the Invert CMY/RGB values option to reverse the controls (especially when using the CMY color picker).

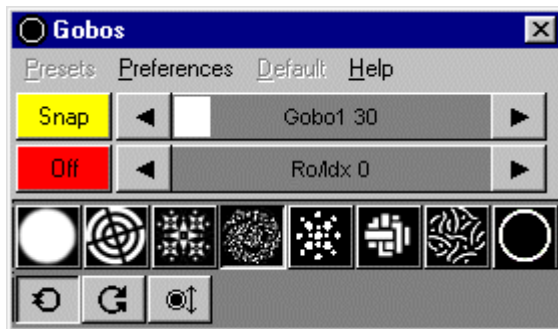
186 The Gobo Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]

See also [User definable palettes](#)^[271]

The controls available on this tab define the fixtures gobo functions.



Fixture Gobo Control

Gobo 1 and Gobo 2 (dynamic functions)

The gobo 1 and 2 function is intended to be used with selection of gobos. Both have the possibility of having an associated [palette](#)^[271].

Gobo 3 & 4 (dynamic functions)

The primary purpose of the gobo 3 and 4 functions are to control gobo related functions other than direct gobo selection, such as gobo rotation and indexing. The functions do not have associated palettes.

Some fixtures have combined functions on one control channel, i.e. gobo selection and continuous gobo wheel rotation on one channel. In this case it is possible to 'share' the same control channel between 2 controls.

For example :

Fixture has gobo control channel offset at 4.

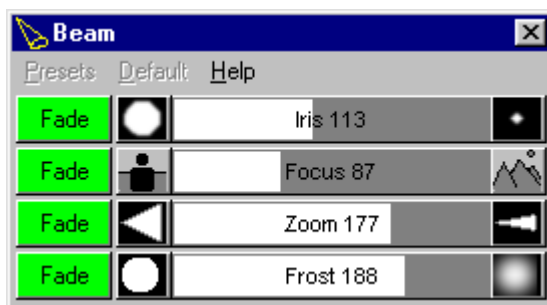
Gobo selection is from DMX value 0 to 200 and values over 200 sets continuous gobo wheel rotation. Enable the gobo 1 control and set the DMX offset to 4 and set min and max values to 0 and 200

respectively (and create the palette).
 Also assign gobo control 3 to offset 4 and set min and max values to 201 and 255 respectively.
 The two controls now shares the same control channel, but color control 3 is limited to the higher interval it will be much easier to select the right value for gobo wheel rotation.

187 The Beam Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]



Fixture beam Control

The profile supports 4 named dynamic 'beam' functions, namely Iris, Focus, Zoom and (variable) frost or wash.

These functions are all [cross fixture type compatible](#)^[124]. In order for the cross fixture compatibility to work properly make sure to fill in the correct values in the appropriate fields.

It is possible to define 2 other beam controls for other beam related functions. These functions are not compatible across fixture types.

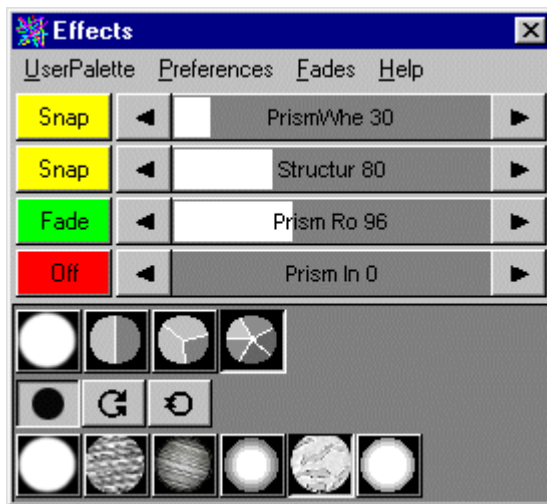
188 The Effects Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]

See also [User definable palettes](#)^[271]

The controls available on this tab define the fixture's effect functions.



Fixture Effects Control

Effects 1 and 2 (dynamic functions)

The effects 1 function is intended to be used with selection of effects (i.e. prism effect). Each of the effects controls may use an associated [palette](#)^[271].

Effects 3 & 4 (dynamic functions)


The primary purpose of the effects 3 and 4 functions are to control effect related functions other than direct selection via the palette, such as rotation, indexing or speed selection. The functions do not have an associated palette.

189 The Special Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Static functions](#)^[271]

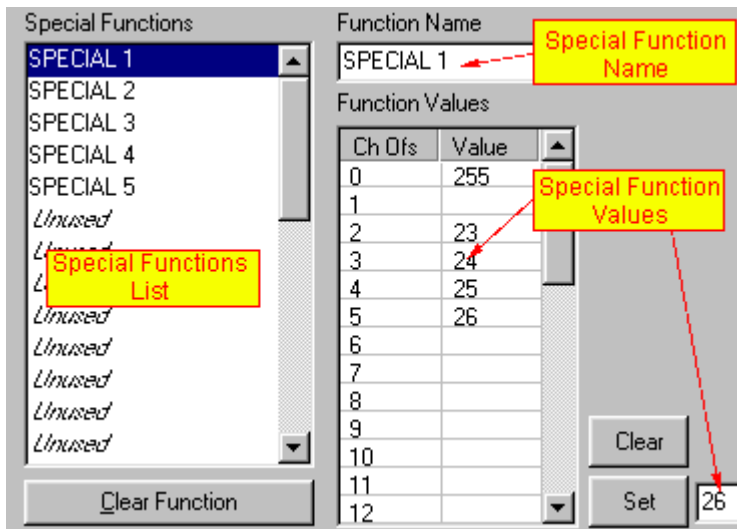
Fixture Reset

The special control tab contains an entry for the [fixture reset command](#)^[166] - the reset command is sent to selected fixtures when clicking the  icon on the [Fixture toolbar](#)^[106]. Note that the reset command is only sent for a very short time, and cannot be used for fixtures that requires the reset command being sent for a certain period.

Minumum Reset Time

Some fixtures may require the reset command to be held for a minimum amount of time. To ensure that the reset command is held for the required duration, enter the required minimum time in this field (in milliseconds).

Special Functions



The profile also contains the option to define up to 32 individual static functions that are not already pre-defined in LightJockey (i.e. reset or lamp on).

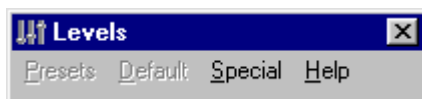
Since the special functions are not defined, LightJockey does not indicate that a special function has been selected, other than showing the values in the fixture controls if the control channels used accidentally coincides with the channels used for the special command. As a consequence of this, there is also no way of removing a special command, short of clearing the scene or defining another special command that counters the first command.

Also note that the special commands are not presets - changing the contents of a special command does not alter already programmed scenes.

All parameters contained in a special command are snapped by default unless another control already fades the channel.

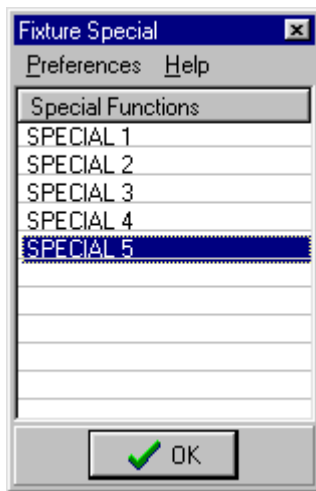
Defining special functions

To define or edit a special function highlight the line in the special functions list (*unused* denotes a currently undefined function) and enter the special function values DMX values. Finally, give the function a name in the 'Function name' field.



Once a special function is defined it available in a list from the Special Control menu. To get the

Special/Level control click the  icon on the [Fixture toolbar](#)^[106].



Selecting a fixture special function from the special functions list.

Apply the special command by selecting it from the list and click OK, or double-click the line in the list.

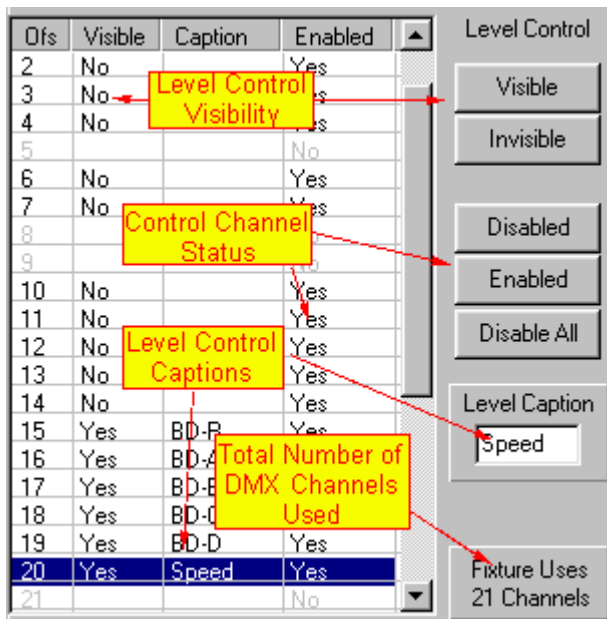
Default DMX Values

Normally LightJockey assumes 0 as default DMX output values for newly configured fixtures. However some fixtures may exhibit unwanted side effects when receiving value 0 on a control channel (such as shutting off a discharge lamp). In this case make sure to specify a suitable default DMX value for the critical control channels. The specified values are applied to the current [default DMX output values](#)^[113] when the profile data is applied and stored with the profile definition when saved.

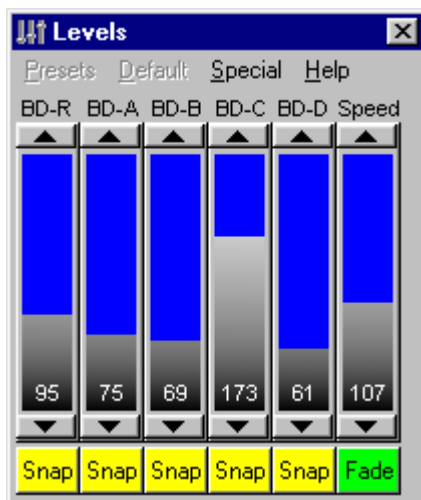
190 The Levels Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]



The levels tab on the fixture profile dialog implements up to 32 generic [8 bit level controls](#)^[167]. These may be used to define any dynamic functions that is cannot be defined in the profile or takes up too many control channels to fit inside the profile (i.e. barn-doors or extra color or gobo functions).



The Level control

Enabled and visible status

By default, the generic fixture has all 32 DMX control channels enabled and visible in the level control. LightJockey uses the status of each of the channels to determine if the fixture has a valid control for that particular offset, so by default all 32 channels are available for control from the level control.

If a control channel is disabled, LightJockey will not send any values to that offset.

The 'visible' status of each offset determines if that particular control channel has a corresponding 'fader' in the generic level control.

When applying a profile to a fixture, LightJockey will automatically evaluate all [dynamic](#)^[269] and [static](#)^[271] functions and enable channel control for the offsets used in the various functions. To avoid having control channels allocated to named functions(i.e. Intensity) show up in level control,

LightJockey also sets the visible status to off.

To change the visibility of the individual offsets in the fixtures level control, high-light the line(s) and click the **Visible** or **Invisible** button.

To assign one or more generic level controls, high-light the offset line(s) and click the **Enable** button, or the **Visible** button if the offset is already enabled. Also remember to add a caption to each offset line that identifies the function of the individual level controls.

Normally the actual fixture profile will use much less than 32 DMX channels. To disable the unused channels high-light the line(s) and click the **Disable** button, or click the **Disable All** button and then apply the profile (which will re-enable all channels used in the rest of the profile).

When finishing the profile it is usually a good idea to verify that the total number of offsets enabled matches the total DMX channels used by the fixtures DMX protocol.

Fixture ID (IMPORTANT)

Since all fixtures configured as [Generic Fixture 2](#)^[256] are considered identical by LightJockey regardless of the actual profile, the fixture ID has been implemented to allow LightJockey to distinguish between different 'flavors' of profiles. While the [cross fixture compatibility](#)^[124] is designed to let certain effects be compatible across fixture types, specific DMX values for effects such as color and gobo does normally not make sense when applied to different types of fixtures.

When applying values to non-compatible effects, LightJockey uses the Fixture ID to distinguish between the different flavors of profiles - values for i.e. colors will only be applied to selected fixtures if the [master and slave](#)^[120] fixtures have identical fixture IDs.

When applying the ID it is usually a good idea to select a name that identifies the fixture type, i.e. "Roboscan 2000" .

Bitmap



Fixture icon using the Generic Scanner bitmap.

This entry specifies a different bitmap to use for the fixture icon button. If no bitmap is specified, or if the bitmap is not found, The generic scanner bitmap is used for the fixture icon.

To select a different bitmap for the fixture icon click the **set** button. Use the dialog to select the new bitmap for the Icon. Note that the bitmap **MUST** reside in the initially selected directory, and the filename of the bitmap file must not exceed 25 characters in total.

All fixture bitmaps supplied with LightJockey with are named with an 'S_' pre-fix.

To clear a bitmap selection click the **Clear** button. To change the caption of the fixture Icon, use the username entry in the [fixture configuration](#)^[40].

See also [Creating Custom Bitmaps for Fixture Icons](#)^[295].

Notes

The note field lets the author of the profile include notes about the profile.

Hint: Cutting and pasting the notes from a word processor like Microsoft Word, enables use of different text attributes, such as different colors and various text attributes such as **bold**. Note that such a text ,because of the embedded attribute commands, normally takes up a lot more 'character' space than just the 'visible' characters and it is pretty easy to exceed the size limit of 4096 characters.

Author

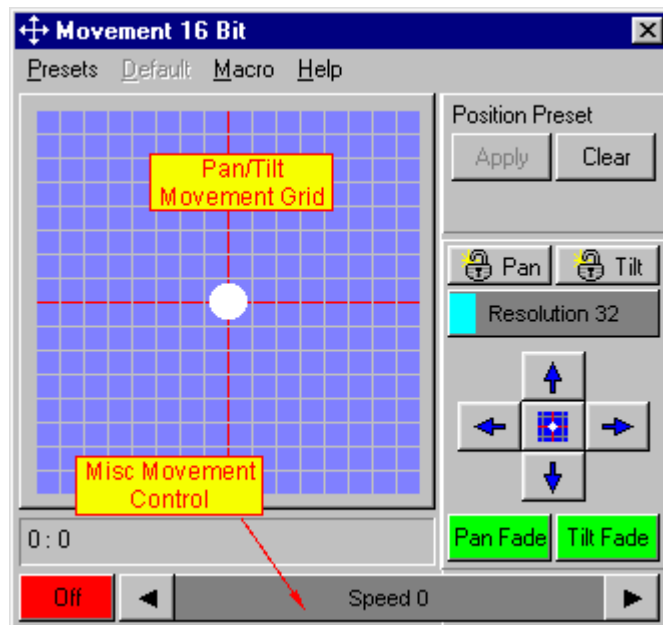
Used to identify the author of the profile.

191 The Pan & Tilt Tab

See also [Defining the Generic Fixture 2](#)^[267]

See also [Dynamic Functions](#)^[269]

See also [Movement Control](#)^[134]



Fixture Pan/Tilt Movement Control

The profile supports Pan and Tilt Controls in 8 or 16 bit resolutions in any combination of control channels.

[Defining 8-bit Pan/Tilt \(dynamic function\)](#)

Defining pan and tilt controls with 8 bit resolution is pretty straight forward. Check the **Enable Pan/Tilt Control 8-bit** box and enter the relevant offsets in the **pan and tilt offset fields** respectively.

[Defining 16-bit Pan/Tilt \(dynamic function\)](#)

To enable 16 bit Pan/tilt control, check the **Enable Pan/Tilt Control 16-bit** box. If the fixture uses MSB/LSB on adjacent channels simply enter the relevant offsets in the **pan and tilt offset fields**. Otherwise please read through the see *Pan/Tilt Patching* section below.

[Misc Movement Control \(dynamic function\)](#)

Check this box to enable a [drag bar](#)^[176] control below the main Pan/Tilt Movement Grid. This control can for example be used to control a speed attribute linked to the fixtures movement.

[Enable Position Presets](#)

Check this option to enable [Position Presets](#)^[139].

[Enable Movement Macros](#)

Check this option to enable [Movement Macros](#)^[134].

Enable Follow Spot Function

Check this option to enable the fixture's [Followspot function](#)^[344].

Patching the 16 bit Pan and Tilt channels

This option is only available when 16 bit pan/tilt control has been selected.

In order to perform the internal calculations (i.e. fades or Movement Macros) LightJockey requires the **Pan and Tilt values respectively** to be present in an **adjacent MSB/LSB format** (the pan and tilt control channels do not have to be adjacent). MSB and LSB is also often referred to as coarse and fine respectively. However not all fixtures follows this format in their DMX Protocol. To control these fixtures it is necessary to patch the pan and tilt values to the correct control channels after the relevant calculations have been performed.

While a similar patching is possible via the [Global Patch](#)^[312]

, using the profile ensures that the patching is correctly performed regardless of the fixtures DMX address.

Note that in the examples below pan and tilt could be swapped.

Example 1.

Fixture control channels offsets (offset at 0):

Pan MSB(coarse)	10
Pan LSB(fine)	11
Tilt MSB(coarse)	15
Tilt LSB(fine)	16

Since the fixture has adjacent MSB/LSB control channels no patching is necessary.

Example 2.

Fixture control channels offsets (offset at 0)

Pan LSB(fine)	10
Pan MSB(coarse)	11
Tilt LSB(fine)	15
Tilt MSB(coarse)	16

The fixture has adjacent pan/tilt MSB/LSB control channels, but the MSB/LSB format is reversed (LSB is first) - so in this case it is necessary to patch the Pan and Tilt values.

Pan patch MSB to	11
Pan Patch LSB to	10
Tilt Patch MSB to	16
Tilt Patch LSB to	15

Example 3.

Fixture control channels offsets (offset at 0)

Pan MSB(coarse)	4
Tilt MSB(coarse)	5
Pan LSB(fine)	13
Tilt LSB(fine)	14

The fixture has non adjacent pan and tilt control channels, but since it has two control channels in adjacent pairs it is still possible to use the control channels to perform the calculations and then patch them afterwards, i.e. :

Pan DMX Offset	4
Tilt DMX Offset	13
Pan patch MSB to	4
Pan Patch LSB to	13
Tilt Patch MSB to	5
Tilt Patch LSB to	14

Example 4.

Pan MSB(coarse)	4
Tilt MSB(coarse)	7
Pan LSB(fine)	13
Tilt LSB(fine)	16

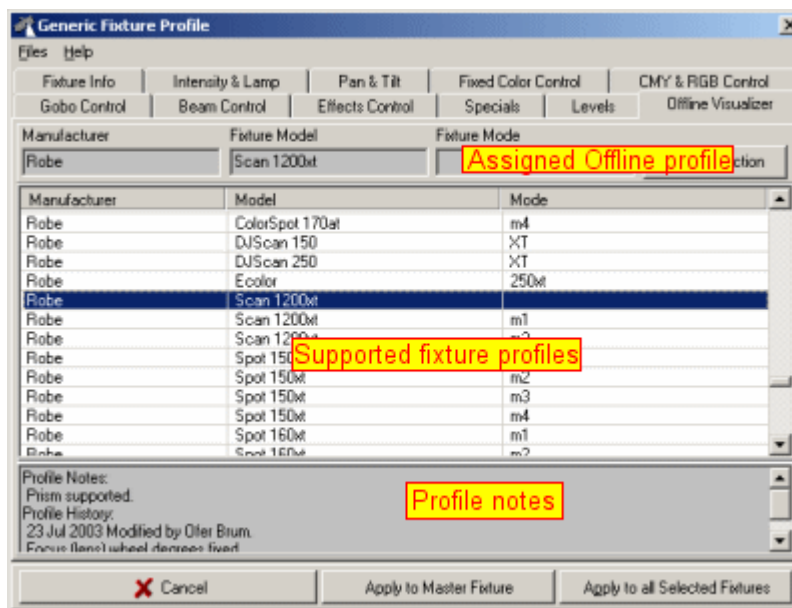
In this case there are no two adjacent channels to that LightJockey needs to perform the calculations so it is necessary to perform the calculations in channels that are not used for other purposes. This means reserving 4 extra control channels, effectively using 4 channels extra pr fixture and limits the profile to a total of 28 DMX channels. So for example, if the fixtures last used offset is 20 enter the following values:

Pan DMX Offset		21
Tilt DMX Offset	23	
Pan patch MSB to	4	
Pan Patch LSB to	13	
Tilt Patch MSB to	7	
Tilt Patch LSB to	16	

192 The Offline Visualizer Tab

Note : Using userfined fixtures in the [Offline Visualizer](#)^[326] is only possible when using OV version 4.3+. If a lower version is used the assignment is ignored.

In order to make a fixture appear in the Offline Visualizer an O/V profile for the particular fixture must be linked to the user defined LightJockey fixture profile (LightJockey and Offline Visualizer profiles are two different things)



The Offline Visualizer Tab

Assigning an MSD/offline profile to the Profile

To assign a MSD/offline profile to a user defined LightJockey profile, first make sure that [Offline version 4.3+ is running](#)^[326].

Then go to the Offline Visualizer Tab.

LightJockey now requests a list of fixtures that are supported by the Offline Visualizer from the OV application. The entire list of supported fixtures are shown in the list. Select the profile to link to the LightJockey profile from the list. If a suitable profile does not appear in the list, the Offline Visualizer does not support the fixture.

Profile Notes

Offline version 4.6 implements a function to extract notes embedded in the Offline Visualizer profiles - notes and profile history is shown below the list. Not all profiles include notes and history.

Updating Offline profiles

The complete LightJockey installation package and some update versions ship with a number of Offline Visualizer . New and updated profiles may be found at the Martin Website at [User Defined Fixture Profiles](#).

The latest official library with offline visualizer profiles may be downloaded directly from the manufactureres of the Offline Visualizer at www.lighthouse.nl, download area. Follow on-site instructions on how to update the Offline Visualizer fixture library.

193 Creating Custom bitmaps for palette controls

To create custom bitmaps for the color, gobo and effect palette buttons of various fixture-controls, the ing procedure must be followed:

The bitmap files must be standard Windows BMP files, and must not be RLE encoded. The size of the bitmap should be 31x30 pixels and the color depth should be either monochrome(black/white) or 256 colors. The filename of the bitmap file must not exceed 30 characters in length excluding the .BMP extension and library name (see later). Note that the scanner1 profile only allow 15 characters in total .

It is possible to use one of the already existing bitmaps as model when creating new custom bitmaps - however be sure to leave the original bitmap intact when saving the new modified bitmap.

The bitmap files for color palette buttons are located in the following directory structure:
<installationdirectory>\Source-Images\Colors<library>

The bitmap files for gobo and effects palette buttons are located in the following directory structure:
<installationdirectory>\Source-Images\Gobos<library>

User-defined bitmaps must be placed into the same corresponding directories - take care not to overwrite the original bitmaps.

Bitmap Libraries

To organize the bitmaps it is possible to create libraries containing the individual bitmaps. The libraries are created simple sub-directories under either the \Colors or \Gobos directory. For example <installationdirectory>\Source-Images\Colors\MyColors will enable the library MyColors. See [user-definable palettes](#)^[271].

Since updated versions of LightJockey is likely to contain new bitmaps for gobos and colors, it is advisable to use filenames that are unlikely to be used by LightJockey in the future - i.e.: Peters_Cone.Bmp.

194 Creating Custom Bitmaps for Fixture Icons

To create custom bitmaps for the fixture Icons the following procedure must be followed:

The bitmap files must be standard Windows BMP files, and must not be RLE encoded. The height of the bitmap should not exceed 50 pixels to fit the fixed size Icon size. The filename of the bitmap file must not exceed 25 characters in length exclusive the .BMP extension.

It is possible to use one of the already existing bitmaps as model when creating new custom bitmaps - however be sure to leave the original bitmap intact when saving the new bitmap.

The bitmap files for fixture icons are located in the following directory structure:
<installationdirectory>\Source-Images\fixtures\

User-defined bitmaps must be placed into the same directory - take care not to overwrite the original bitmaps.

Transparent background bitmaps



No-Transparent/Transparent fixture bitmap

For user defined profiles check **Transparent** on the [Fixture Info tab](#)^[279] in order to make the bitmap background color transparent (assume the color of the 'surface' the bitmap is imposed on). Note that for bitmaps the background color is `_defined_` as the color of the pixel in the lower left hand corner. When using transparent background bitmaps the bit map should be saved in 24 bit BMP - otherwise it may not show up correctly on different PCs.

195 2532 Direct Access

The 2532 Direct Keyboard is an add-on device that connects to the PC via a standard RS-232 port. The 2532 offers a good alternative for the standard PC keyboard and mouse when calling up programs and performing various actions.

The 2532 does not know anything about the application it is controlling (in this case the LightJockey application), so the functions of the 2532 needs to be configured within LightJockey.

By connecting a suitable printer to the PC, the 2532 configuration may be printed out to be mounted on the 2532.

Note :

**The 2532 must have at least software version 3.0 in order to work with LightJockey.
The 2532 must be enabled in the [hardware setup](#)^[24] before it can be configured.**

[The 2532 layout](#)^[297]

[Configuring the 2532 control](#)^[298]

[The 2532 Menus](#)^[302]

[Transparent Page Mode](#)^[303]

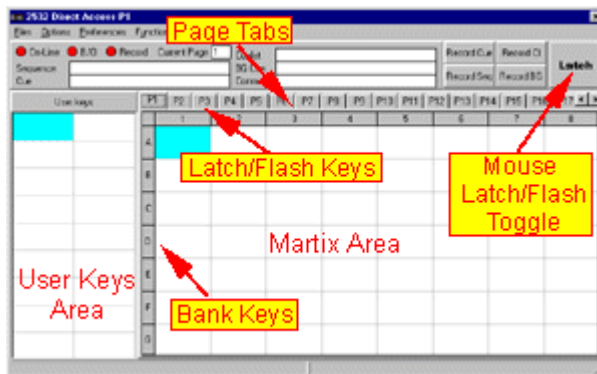
[Printing the overlays](#)^[303]

[Emulating the 2532](#)^[304] with keyboard and mouse.

196 The 2532 Layout



The 2532 keys are divided into two sections. The bank, latch and flash keys forming the 7 x 8 matrix - and the 18 user keys.



The LightJockey 2532 control - emulating the 2532 layout

The Matrix Keys

The matrix consists of 7 bank keys and 8 latch and flash keys giving a total of 56 'virtual' keys pr. 2532 page.

Latch keys

The 2532 has 8 latch keys (1-8) placed in a row above the matrix area. The primary purpose of the latch keys are to latch programs (cues, cuelists and background cues). The term latch indicates that the program is loaded and executed when the key is pressed. The programs are not 'unloaded' when the key is released.

The latch keys may also be used to trig various functions such as fade-out or sequence trig, however if the function itself is a flash function releasing the key will also release the function, even if the key is actually latching the function (see later).

Flash keys

Placed below the matrix area the 2532 has 8 flash keys (1-8). The purpose of the flash keys is to flash sequences on top of the current cue. The sequence is only active for as long as the flash key is held down.

The output of the flashed sequence has a higher priority than the output sequences in the cue, so the output of flashed sequences will always be effective compared to the output of the cue. I.e. if a sequence is programmed with all fixtures in red, then flashing this sequence on top of a cue with all fixtures in blue will force all fixtures to red since the flashed sequence has highest priority. The flashed sequence never becomes part of the cue, and a multi-scene sequence will always run in a forwards direction with the [scene and fade-times](#)^[130] programmed into the sequence.

Bank keys

Together with the latch and flash keys the 7 bank keys A-G sets up a matrix of 56 "virtual" flash keys

for each page.

Each bank key enables another row of latch and flash keys. The 2532 always has an active bank (the LED is on), to select a key in a different bank, press the bank key so it flashes (is pre-selected). The active bank is changed to the pre-selected bank as soon as a latch key is pressed - pressing a flash key selects the flash key in the pre-selected bank, but does not change the active bank.

Pages

The 2532 control may contain up to 18 matrix pages (for a total of $18 \times 7 \times 8 = 1008$) virtual latch and flash buttons. There are no keys pre-allocated to change page, assign one or more user keys to the task of changing the active 2532 page, or change the active page directly in the control.

The User Keys

The User keys are usually used to activate functions such as changing the active page or perform 'global' functions such as activating a fade-in or fade-out. The function of user keys does not change with the active 2532 page (the matrix keys does), so the 18 function assigned to the user keys are always instantly available. The user keys can only perform 'functions' they cannot be used to execute programs.

The Blackout Button

The Blackout button on the 2532 may be used to toggle blackout/restore. However since communication from the 2532 to the PC is one-way, the LED indicating Blackout may be out of sync with the LightJockey blackout status if the blackout is canceled directly in LightJockey.

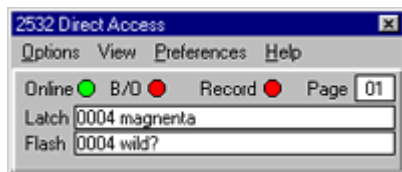
197 Configuring the 2532 Controller

See also [2532 menus](#)^[302]

The 2532 control is toggled on and off by clicking the  icon on the [Cuelist toolbar](#)^[105]

The 2532 control may be displayed in two modes, a large size control and a smaller version that can be used to monitor the status of the 2532 connection. Use *Show Large Control* in the preferences menu to toggle between the large and small control size.

The large size control may be resized to better show the contents of the various buttons, also the [preferences menu](#)^[302] contains several options to manipulate the text used in the virtual buttons.



The small 2532 control

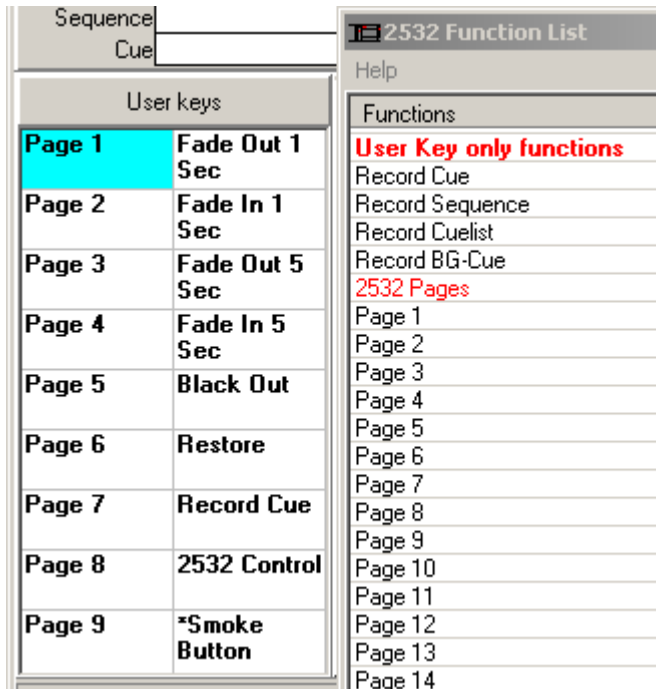
The online status LED indicates if the 2532 is currently online, the B/O LED indicates if blackout is enabled via the [Black-out key](#)^[297] on the 2532. The Record LED shows if any record (see later) mode is currently enabled.

The page indicator shows which page is currently active, and the sequence and cue values show latched cues and flashed sequence enabled via the 2532.

The functions of the 2532 are identical no matter what mode the control is displayed in.

To configure the function of the 2532 keys, switch the control into large size.

Configuring the User keys



The 2532 user keys can only be used to activate functions (not programs). To configure the keys, open the list with functions by selecting *Function-List* from the menu. To assign a function to a user key, drag the function from the list to the user key on the control.

The list contains 3 types of functions, the "User key only functions" at the top of the list, the 2532 pages and the regular [hotkey functions](#)^[19]. The "User key only functions" may only be assigned to the 2532 user keys and not the matrix keys. 2532 page and hotkey functions may also be assigned to the matrix keys, but do be aware that assigning 2532 page functions to matrix keys can be very confusing for the inexperienced operator - especially if [transparent page mode](#)^[303] is enabled.

To clear one or more of the user keys, select the keys (hold the mouse button and drag to select multiple buttons), right-click and select *Clear Key(s)*.

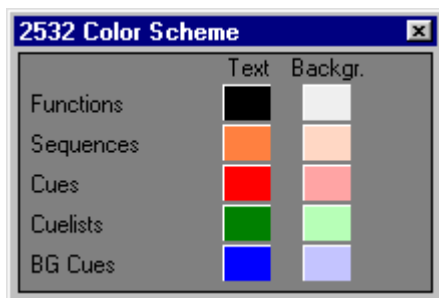
Configuring the Matrix keys

	P1	P2	P3	P4	P5	P6	P7	P8
		1	2	3				
A		Blue Circles	Pink Circles					
B		Bumpy Fire 1	Rotating whites					
C		Go-Go CueList	Macro On					
D		The Slow List	Macro Off					
E		Barlights 1	Macro Fade In					
F		BarLights 2	Macro Fade Out					
G		Strobe White Fast	Strobe White Med	Strobe White Slow				

The Latch Keys

The latch matrix keys may be used to launch programs (cues, cuelists and background cues) as well as changing page and activating [hotkey functions](#)^[19].

The virtual key will display both the latch and flash values of the individual latch and flash matrix keys.



The different types of functions (cues, cuelists, background cues and hotkey functions) may be color coded in order to differentiate them better - to set the color codes for the text or background select *Font Properties / Color Scheme* from the properties menu.

Assigning Cues

To assign a cue to a latch key, open the [list of cues](#)^[208] and drag the cue from the list to the appropriate key. Alternatively, right-click the virtual key and select *set latch/current cue* to set the key to latch the current active cue (if any, otherwise the option is grayed out).

Assigning Cue Lists

To assign a cue to a latch key, open the [list of cue lists](#)^[238] and drag the cue list from the list to the appropriate key. Alternatively, right-click the virtual key and select *set latch/current cue list* to set the key to latch the current active cue list (if any, otherwise the option is grayed out).

Assigning Background Cues

To assign a background cue to a latch key, open the [list of background cues](#)^[208] and drag the cue list from the list to the appropriate key. Alternatively, right-click the virtual key and select *set latch/current background cue* to set the key to latch the current active background cue (if any, otherwise the option is grayed out).

Assigning Hotkey functions

The hotkey functions are assigned to the latch keys in the same way as they are assigned to the user keys. Open the list with functions by selecting *Function-List* from the menu and drag the function from the list to the user key on the control. Note that "User Key only functions" cannot be assigned to the matrix keys. See [Hotkey functions](#)^[19]

for an explanation on individual hotkey functions.

The Flash Keys

Assigning Sequences

The flash keys may only be used to flash a sequence. To assign a sequence to a flash key open the [list of sequences](#)^[208] and drag the sequence from the list to the appropriate key. Alternatively, right-click the virtual key and select *set flash/current sequence* to set the key to flash the current sequence (if any, otherwise the option is grayed out).

Using the record function

As an alternative to selecting programs from a list, the record functions can be used to 'record' the currently active program onto the matrix keys. The record function may be enabled by clicking the relevant button on the control (or assign the function to a user key). When the record function is enabled the next key press on the 2532 will 'record' the active program (if any) onto the 2532 key. Note that record cue, record cuelist and record BG cue are mutually exclusive.

Clearing matrix keys

To clear one or more matrix keys, select the keys (hold the mouse button and drag to select multiple buttons), right-click and select *Clear*. Select *Clear Latch Values* or *Clear Flash Values* to clear latch or flash values only. Select *Clear Latch & Flash Values* to clear both at the same time.

Customizing text

Often the text for the user, latch and flash functions may not fit completely into the area representing the button, so sometimes it may be necessary to customize the text. To do this, right-click the button and select *Customize Text* - make sure that only one button is selected before the right-click, otherwise the option to customize text will be disabled.

For the matrix buttons it is possible to customize both the latch and flash text. Note that the custom text is cleared whenever a new program or function is assigned.

Cut & Paste

It is possible to replace or move matrix button functions by using simple copy/cut and paste operations. To move button assignments, highlight one or more buttons (click and hold the mouse button, then drag the cursor to include more buttons), right click and select cut/copy. Select the target area, right-click and select paste to paste both latch and flash values or paste latch or flash values only.

Customizing Page Tabs

The page tab names may be edited for better identification. To edit the tab names, select *Preferences/Tab Options/Name Page Tabs* from the 2532 control main menu.

To modify the size of the tabs select *Preferences/Tab Options/Set Tab Size*.

To modify background and text colors select *Preferences/Tab Options/Tab Colors*.

198 2532 Menus

The Files Menu

[New 2532 Setup](#) - default all contents of the 2532 control.

[Load 2532 Setup](#) - Loads a previously saved 2532 setup.

[Save 2532 Setup](#) - Saves the current 2532 setup to a separate file.

[Import Old-Style Setup](#) - Use this option to import setups made with previous versions of LightJockey. Use the file type selector at the bottom of the file dialog to select between the previous default setup (Select *Oldstyle setup*, then select the 2532.cfg file) or any previously saved setups (Select *Saved 2532 Files - Old Format*, then select any of the .D25 files). Imported setups are automatically converted to the new setup format.

The Options Menu

[Clear All Pages](#) - Clears the contents of all the matrix pages

[Print Layout](#) - Sends the 2532 layout (user keys and matrix pages to the printer) - see

[Printing the 2532 configuration](#)^[303]

The Preferences Menu

[Show Control at Startup](#) - If enabled the 2532 control is automatically shown when LightJockey starts up.

[Show Large Control](#) - Toggles between large and small control format.

[Hide Status Panel on large control](#) - Hides the top status panel when the control is in 'large' format, leaving more space for the user and matrix buttons.

[Emulate With Mouse](#) - See [Emulating the 2532](#)^[304]

[Enable Transparent Pages](#) - See [Transparent Page Mode](#)^[303]

[Synchronize 2532 Page Selection](#) - If disabled, changing pages on the 2532 will not automatically change the page tab on the LightJockey 2532 control.

[Auto-release Record](#) - If enabled the record function will be turned off each time a new program is recorded to a 2532 button.

[Font Properties](#) - Select Font. Select the font used to display the entries in the user and matrix buttons.

[Font Properties](#) - Color Scheme. Setup a color scheme for the various types of entries in the user and matrix keys.

[Tab Options](#) - Name page tabs. Select this to edit the names on the page tabs.

[Tab Options](#) - Set Tab Size. Select to customize the size of the individual tabs.

[Tab Options](#) - Tab Colors. Select to customize background and text colors (check Enabled to use customized colors)

[Show user keys](#) - If disabled, the control will not show the contents of the user keys leaving more space for the matrix keys.

[Wrap User Key text](#) - When enabled the control will try to fit the complete text for each of the user keys by wrapping the text inside the button area. When disabled, only one line of text is shown pr. button and the text may be cut.

[Wrap Matrix text](#) - When enabled the control will try to fit the complete text for each of the matrix keys by wrapping the text inside the button area. When disabled, only one line of text is shown for latch and flash text respectively and the text may be cut. Note that wrapping the text does not guarantee that the text fits into the button.

[Always split matrix buttons](#) - Normally text within matrix buttons is only split in an upper and lower part if the button contains both a latch and a flash text. Enable this option to force the button to always split the text into an upper (latch text) and lower (flash text) part.

Matrix button info -Enable. When the matrix button info is enabled the lower part of the 2532 control shows the contents of the selected matrix button in the two panels below the user keys and matrix. If the function is disabled the panels are removed.



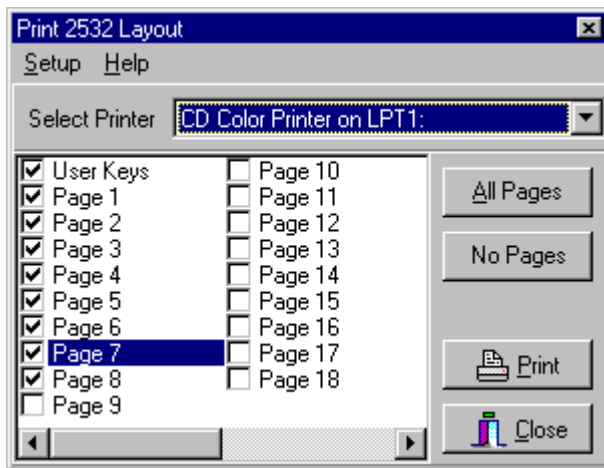
Matrix button info - Show at Mouse cursor. Shows info for the matrix button under the mouse cursor.
Matrix button info - Show at Mouse cursor. Shows info for the currently selected (highlighted) matrix button.

Function-List

Calls up the list of functions. Assign the functions to keys by dragging them from the list to the key.

199 Printing the 2532 configuration

To print out the current user key functions and page layouts select **Print Layout** from the options menu.



Select to print out the user keys and page layouts by checking each item in the list. Click the Print button to print.

If more than one printer is connected to the PC a different printer may be selected from the list at the top of the dialog.

To setup a particular printer, select the Setup/Printer menu.

Note that the printout uses the wrap and split options selected in the [preferences menu](#) ^[302].

200 Transparent Page Mode

The transparent page mode is enabled or disabled from the preferences menu.

When in transparent page mode, Lightjockey will try to find an alternative latch or flash value when ever a key without a latch or flash value is pressed. LightJockey will search through all 18 pages using the same bank and latch or flash key values for a page containing a value. If a page is found to contain a value, the latch or flash value is taken from that page.

This mode is mainly useful to fix the "2532 not working problem" when operators by mistake changes the active page to a page containing no values, and then gets no response on key presses.

201 Emulating the 2532

See also [2532 Direct Access](#) ^[296]

It is possible to emulate the latch and flash functions of the 2532 by using the 2532 Control, mouse clicks and/or keyboard hotkeys.

To setup the control for mouse emulation, *Select Enable Mouse-Click Select* from the *Preferences/Emulate with Mouse* menu. When this option is enabled, clicking a virtual key on the 2532 control is identical to pressing the corresponding Latch key on the 2532 controller.

To access the matrix flash functions hold down the [CTRL] key on the keyboard, or click the virtual key using the middle mouse button on a 3-button mouse. The *Release flash on Mouse-Up* in the *Preferences/Emulate with mouse menu* option determines if the flash function is released as soon as the mouse button is released. If disabled, the flash can only be released by using the [release-flash keyboard hotkey](#) ^[19].

Alternatively, use **Mouse Latch/Flash Toggle** in the top right corner to swap the latch/flash function of a mouse click - when pressed (**Flash**) the mouse click will perform a flash function, when depressed (**Latch**) the mouse click will perform a latch function.

Finally, from the *Preferences/Emulate with Mouse* menu select either of the two *Mouseclick autoselect options*. When enabled, a click on a button containing either a flash or latch function (but not both) will automatically select the function - when the button contains both a flash and a latch function the default selection of either flash or latch is indicated by the priority selection in the menu. Holding [CTRL] while clicking will invert the selection priority.

These options are mainly handy when most buttons contain only one function (either one latch or one flash function).

To use keyboard hotkeys, assign the needed functions (emulate latch, flash and userkeys) to keyboard hotkeys. The emulate latch and flash hotkey functions activates the currently selected (highlighted) matrix button, while the emulate userkey function activates the currently highlighted user key. Note that the 2532 control must be open for the hotkey functions to work.

202 DMX In

DMX in is only available when using the Club, DJ or PCMCIA versions of LightJockey. The ADP version does not support DMX in. When a link is configured as DMX in all 512 DMX channels are available for DMX-in controls.

The DMX in capability of LightJockey allows remote control of certain features, such as intensity levels or cues from another DMX source. The remote control is obtained by assigning certain DMX channels from the received DMX signal to pre-defined functions within LightJockey. Some functions such as remote cue, work by combining the values of several DMX input channels. When in DMX in mode LightJockey just listens to the DMX like any other DMX fixture, so it is perfectly possible to connect other DMX fixtures to the same DMX link that is used to remote control LightJockey. However, since the cable supplied with LightJockey does not have a DMX through like most DMX fixtures, LightJockey usually goes into the 'end' of the link.


To override individual DMX output channels via DMX in, see [Global Patch](#)^[312]

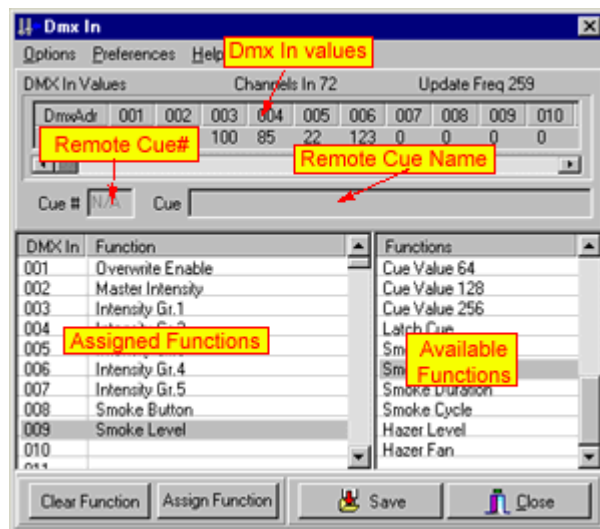
Currently the DMX in allows remote control of the following features:

- Activating Sequences (flash), Cues, BG Cues, Cuelists and statics.
- Toggle the cue sequence on/off state and override the intensity components of individual sequences in the cue.
- Override Master and sub-master intensities.
- Override single or multiple DMX output values (patch input to output)
- Override the Smoke control functions.
- Override Macro control (scaling amplitude & speed) and Cue Time functions.

To utilize the DMX input - DMX-in must be enabled in the [Hardware Setup](#)^[24] dialog.

Configuring DMX-In

The dialog used for DMX in configuration is accessed through the  icon on the [Cuelist toolbar](#)^[105].



DMX-in dialog

Monitoring incoming DMX

The upper part of the setup dialog displays the incoming DMX signal. Number of channels received, DMX refresh rate and DMX channel values are displayed. The refresh rate is not really important unless very low (below 10 Hz) - but the number will signify if LightJockey is currently receiving DMX.

Assigning functions to DMX in

To assign a function simply drag the function from the list of DMX functions on the right side to the assignment list on the left side, or highlight both the relevant lines and click the assign function button. The leftmost column in the assignment list is the incoming DMX channel number, so to assign the blackout function to incoming DMX channel 10 simply drag the blackout function to the line marked 10 in the assignment list.

To clear assignments use the options menu to clear all or specific assignments, or highlight the relevant line(s) and click the Clear Function button.

Disable DMX-in functions

The hardware option to receive DMX in can only be disabled in the hardware setup dialog. The

functions controlled by DMX-in may be disabled by checking **Disable DMX-in functions** in the Options menu (buttons and lists will be grayed out when functions are disabled). Note that disabling functions does not disable DMX in overrides defined in the [Global Patch](#)^[312], only the functions configured in the DMX in dialog. DMX in may also be enabled/disabled through [hotkeys](#)^[16].

IMPORTANT: New assignments and options will **NOT** take effect until the DMX in configuration has been saved.

Calling up cues via DMX in

As all LightJockey cues have a unique number, it is possible to use DMX values to call up a cue, simply by passing the cue number to LightJockey. The cue number is passed using a 'binary' combination of 'on/off' channels, much like a dipswitch. A single channel acts as a 'latch' command so that cue numbers may be setup without actually latching the cue before the complete number has been setup.

DMX In	Function	Overwrite
001	Cue Value 1	
002	Cue Value 2	
003	Cue Value 8	
004	Cue Value 16	
005	Cue Value 32	
006	Cue Value 64	
007	Cue Value 128	
008	Latch Cue	

The example above assigns 7 DMX channels (from 1 to 7) for the cue numbers (**Cue Value** 1 to 128) and one for the **Latch Cue** function. With these 7 DMX channels it is possible to call cues with numbers between 1 and 255 (1+2+4+8+16+32+64+128, cue 0 has a special function). To setup a cue number, set the controlling channels to a value above 127 (50%). The 'function value', (i.e. Cue Value 8) will then be added to the cue number. In the example if channels 1,2,6 have values above 128, cue number 1+2+64=67 will be preset. The dialog will show the current cue number called up, and if there is an existing cue, it will also show the cue name. Use the **Latch Cue** channel to actually latch the cue - the cue will be latched when the channel has a value above 127 (50%) - if the value is below 128, the cue number will just be preset but not latched.

IMPORTANT: without the **Latch Cue** function it is **NOT** possible to actually load and execute cues via DMX in.

When **Cue Latch** is enabled (value above 127) and a valid cue number is selected, it is not possible to manually load another cue - it will be overwritten by the remote DMX cue. Cues can be manually loaded if **Cue Latch** is not enabled (value below 128) or if an invalid cue number is selected. In the preferences/Cue Latch menu there is an option to have remote cue #0 clear the current cue. If this option is not enabled, cues can be loaded manually, as long as remote cue #0 is latched.

Using Cue Page functions via DMX in

A number of [cue page](#)^[213] functions are available as DMX in commands. These commands are primarily useful for 'sequential' loading of cues where the cue pages may act as a sets of small manually driven cue-lists. A good example would be live performances with cues and pages pre-programmed for each song. The commands may be assigned to one DMX in channel and are executed when the DMX value for the channel rises from below 127 (50%) to 127 or above (assign bump buttons if they are supported by the console).

Latch Current Cue from Page - Latches the currently selected cue on the page.

Previous/Next Cue Page - selects the previous or next cue page.

Latch Previous/Next Cue from Page - latches the previous or next cue from the cue page.

Select Previous/Next Cue from Page - selects but does not latch the previous or next cue from the cue page.

Flashing Sequences via DMX-in

DMX In	Function	Functions
001	Flash Seq 0001 All On./Center	Overwrite
002	Flash Seq 0002 All Red	Master Int
003	Flash Seq 0003 All Yellow	Blackout
004		Intensity G
005		Intensity G
006		Intensity G

It is possible to use a DMX in channel to flash a specific sequence in the current cue, the function is similar to using the flash buttons of the [2532 direct access](#) ^[296] controller. To assign a DMX in channel to flash a specific sequence, drag the sequence from the [list of sequences](#) ^[206] to the DMX-in channel assigned functions list on the assigned functions list. The sequence assigned is flashed as soon as the level of the DMX in channel is above 127 (50%) and released when the level is below 128.

Latching Cues, Cuelists and Background cues using a single channel.

It is also possible to latch a cue, cuelist or Background cue via a single DMX-in channel. To assign a cue or cuelist to a specific DMX-in channel, drag the cue or cuelist from the [list of cues](#) ^[208], [list of cuelists](#) ^[238] or [list of Background Cues](#) ^[208] to the DMX-in channel.

Controlling HTP group levels

[HTP group levels](#) ^[312] may be controlled via DMX in by assigning the HTP Group (X) function to a DMX in channel.

Activating Static Entries

A DMX-in channel may be used to activate a [static entry](#) ^[241], the entry is activated as soon as the level reaches 50%. Note that the static control entry flash and merge/replace modes disregarded when entries are controlled via DMX-in.

Static Control Levels

Used to remotely set the level of the individual [static entries](#) ^[241].

Sequence On/Off

The DMX in may be used to control the on/off state of each of the sequences in the cue. For this function assign the function **Sequence XX On/Off** to the DMX input channel. Note that the [Cue Control](#) ^[184] has the capability to enable/disable this function - in order for the Cue Control to accept remote on/off make sure to enable the *Allow Remote Enable/Disable* in the preferences menu on the cue control as well - also make sure to disable the [Cue Modified warning](#) ^[109] to avoid the warning when the sequence state has been changed.

Sequence Intensities

DMX in may be used to override intensity parameters in individual sequences in a cue. See [Sequence Intensities](#) ^[196] for more details.

Remote controlling Master Intensity Levels and Blackout

The [Master Intensity control](#) ^[151], featuring a grand master and 8 sub-masters, can be remote controlled via DMX in. Simply assign the relevant function to the appropriate DMX in channel, the **Master Intensity** function will control the grand master, while **Intensity Gr.1 to Intensity Gr.8** will control the sub-masters.

When the grand master or any of the sub masters are controlled by DMX in, it is no longer possible to set the value manually with the mouse - even if no DMX in is received. When the Grand Master or sub masters are remotely controlled, it will be indicated by displaying the fader mode in red on the Master Intensity Control.

The [Blackout](#)^[15b] function can also be assigned to DMX in. To set blackout the channel value has to be above 127 (50%).

Auto Fade Out/In and blackout/restore will still work on intensity levels, even though the levels are controlled by DMX in - though manual blackout will not work if the function is controlled remotely.

Patching DMX input to DMX output

The values of single or multiple DMX output channels may be controlled directly from the DMX input, effectively patching DMX in values to the DMX output of the LightJockey. Use the [Global Patch](#)^[312] dialog to patch values from DMX in channels to one or more DMX out channels. Several different overwrite conditions may be set in the global patch (i.e. overwrite on HTP conditions).

Overwrite Enable Function

The Overwrite Enable function is used as a switch to enable or disable the output overwrites. If the DMX value of the DMX in channel allocated to this function is above 127 (50%) the overwrite function is enabled, if below 127 the overwrite is disabled. If this function is not assigned to any channel, overwrite is always enabled. To setup which DMX input channels should overwrite which DMX output channels, use the [Global Patch](#)^[312]. Note that the override enable function only enables/disables direct DMX value overrides set through the global patch - it does not affect overrides such as intensity override.

Cuelist Commands

A number of cuelist commands are available through DMX in. The commands are activated when the level of the DMX in channel crosses over from below 128 (50%) to above 127 (50% - 100%).

Cuelist Go - Trigs the cuelist Go command. If the cuelist is not already active (running) a 'Run from top' command is given to the cuelist.

Cuelist Back - Trigs the cuelist back command. The cuelist must be active (running) for this command to be work.

Cuelist Stop - Stops the current cuelist executing.

Cuelist Stop and Clear - Stops the current cuelist executing and clears the current cue.

Cuelist Go (Alt) - This version of Cuelist Go uses different value transitions to activate a go command:

Transitions from less than 50% to 50% or above (0-127 -> 128-255)

Transitions from 50%-75% to 75%-100% (128-191 -> 192-255)

Transitions from 75% -> 100% to 50-75% (192-255 -> 128-919)

Where the regular Cuelist Go commands may require 2 discrete steps from the external console - the alternate command allows the external console to embed each go command in a single static value simply by alternating output values values between 50%-75% and 75%-100%. Note: make sure that the external console do not fade value transitions;fading the value from 0% to100 may cause 2 go commands to be issued.

Patching several output channels to one DMX in channel

Use the [Global Patch Tool](#)^[312] to patch the value to several output channels. In this way it is possible to control multiple DMX channels via one DMX control channel. This can be quite useful if the 'master' console does not support patching, and there is a need to control multiple channels from one fader (i.e. dimmer channels for par or pin-spots).

Smoke Control Override

Smoke Button, Smoke Level, Smoke Duration, Smoke Cycle, Haze Level and Haze fan may all be used to override the corresponding controls on the [Smoke Control](#)^[351]. The smoke button will be activated as long as the DMX value of the channel is kept above a value of 127.

Overriding the Cue Macro Control

Assigning **Cue Macro Amplitude** and **Cue Macro Sped** functions to DMX in channels allows the two functions to be remotely controlled via DMX in. Note that both functions scale from 0%-100.0% so it is not possible to increase the amplitude more than the previously programmed amplitude, nor is it possible to increase the speed above the programmed speed.

Each of the two functions have a complimentary inverted version. The inverted function inverts the captured DMX value, so the higher the 'physical' DMX value, the less amplitude and speed - in effect the macro slows down. The inverted functions makes the functions comparable to overriding the cue time functions (see below) where a higher DMX in value slows the sequence down as well.

See [Cue Macro Control](#)^[199] for more details.

Overriding the Cue Time Control

The Cue Time control allows direct control with the cue's dynamic timings by scaling the scene and fade times of each of the sequences in the cue. It is possible to assign control of the Cue time fader, and each of the 12 sequence time faders to DMX in. Via the [Cue Time Control](#)^[192] preferences menu it is possible to set up if the DMX in override should override always or only when changes occurs on the DMX in values.

Audio Analyzer options override

Audio Analyzer, Gain - Overrides the gain setting on the [audio analyzer](#)^[319].

Audio Analyzer, Noise Threshold - Overrides the noise threshold setting on the [audio analyzer](#)^[319].

Trig all manual default, Emulate Audio Trig

Activates the corresponding [hotkey functions](#)^[19] - note that these functions will activate on a DMX value transition from less than 128 (decimal) to 128 or higher.

203 2518 controller via RS-232

Using a standard RS-232 connection, LightJockey may be remotely controlled from a Martin 2518 controller. Since this form of remote control does not require other hardware than a standard RS-232 port it is possible to connect the 2518 to a laptop PC that uses the Parallel port ADP interface to transmit DMX to the fixtures.

The RS-232 connection uses the same type of RS-232 cable (straight through) as the Upload/Download utility for the 2518 controller (see 2518 manual).

When the 2518 is connected as remote control via RS-232 it is not capable of performing as normal, i.e. it does not transmit DMX. When switched into RS-232 mode the LightJockey continuously reads the status of the 2518's buttons and faders and controls the output of the 2518 display.

LightJockey implements the 2518 interface in two modes. Mode 1 is supported by all firmware revisions of the 2518, **while mode 2 requires firmware version 2.0** or better in the 2518. The actual version of 2518 firmware is shown as the 2518 is powered up.

See [2518 Controller via RS-232, mode 1](#)^[311].

See [2518 Controller via RS-232, mode 2](#)^[309].


204 2518 Controller via RS-232, Mode 2

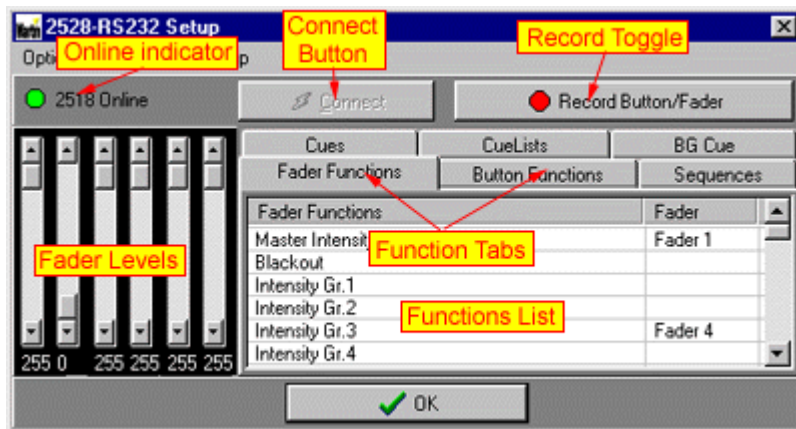
2518 Controller via RS-232, Mode 2

See also [2518 Controller via RS-232, mode 1](#)^[311].

Mode 2 of the LightJockey 2518 RS232 interface is only supported by 2518 firmware revisions 2.0 or higher. The actual firmware revision is shown in the 2518 display during power on.

In order to use the 2518 it must first be configured in the [hardware setup](#)^[24], make sure to **select the 2518 Mode 2** option in the dialog.

Once configured the 2518 control is available via the  icon on the [CueList Toolbar](#)^[105].



The 2518 Control (mode 2)

Under normal circumstances the 2518 will connect as remote control when LightJockey starts up - however if the 2518 fails to connect (i.e. it is switched off when LightJockey started), use the **connect** button to connect the 2518 to the PC (also see auto reconnect later). This also works if the 2518 is temporarily disconnected while LightJockey is running. The online LED indicates the current 2518 connected state.

There are two types of functions available via the 2518, fader functions and button functions. The fader functions are a sub-set of the functions available via [DMX-in](#)^[304]. Functions not available from the 2518 are the Latch Cue, Cuelist commands, Flash sequence and single channel override functions.

The button functions are identical to the functions available via [keyboard hotkeys](#)^[19]. Like the [keyboard hotkeys](#)^[16] it is also possible to assign specific sequences, cues, cuelists and background cues to the 2518 buttons.

Click the appropriate **Function Tab** to select between different lists of fader and button functions.

Assigning faders and 2518 buttons to functions

There are two ways of assigning functions to faders or buttons.

Enable the Record Toggle button to switch into record mode. When in record mode, moving the fader more than 50% or pressing a button, will assign the fader or button to the selected function.

Alternatively, select the function in the list and right-click the line; then assign the fader or button from the pop-menu.

To clear one or more functions, highlight the line(s) and select *clear functions* from the right-click pop-up menu.

To clear all functions, select *New Setup* from the options menu.

Saving and re-loading setups

The actual setup may be saved into a file for later use. Select *save setup file* and *load setup file* from the options menu to save and reload setups.

Auto Reconnect

Normally if the 2518 fails to connect during LightJockey startup, the connect button should be used to. The auto reconnect option found in the preferences menu will prompt LightJockey to automatically attempt a connection to the 2518 every 2 seconds.


The auto reconnect option may lead to a slightly slower execution of the LightJockey program and is best left off if no 2518 is connected to the PC.

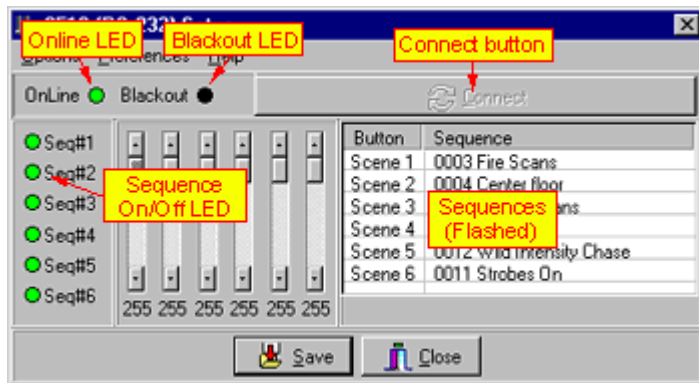
205 2518 Controller via RS-232, Mode 1

See also [2518 Controller via RS-232, mode 2](#)^[309].

Mode 1 of the LightJockey 2518 RS232 interface is supported by all 2518 firmware revisions.

In order to use the 2518 it must first be configured in the [hardware setup](#)^[24], make sure to **de-select the 2518 Mode 2** option in the dialog.

Once configured the 2518 control is available via the  icon on the [CueList Toolbar](#)^[105].



The 2518 Control

Under normal circumstances the 2518 will connect as remote control when LightJockey starts up - however if the 2518 fails to connect (i.e. it was switched off when LightJockey started), use the **connect button** to connect the 2518 to the PC. This also works if the 2518 is disconnected while LightJockey is running. The online LED indicates the current 2518 connected state.



The connect button.

2518 Functions

Fixed functions

The following functions are fixed and cannot be changed by the user.

DMX Channels buttons

The DMX channels buttons (the column of buttons leftmost on the 2518) controls the sequence on/off State for the 6 first sequences in the Cue Control. The state is mimicked by the LEDs on the 2518, LED on is sequence on, LED off is sequence off.

Faders

The faders of the 2518 is used to remote control the Master intensities. The leftmost fader controls the Master intensity while the last 5 faders controls sub-masters 1-5.

Blackout button

The blackout button toggles the blackout/restore state of the LightJockey.

User definable functions

Scenes buttons (Scenes 1-6)

The 'scenes' buttons may be used as 'bump' buttons for the Master Intensity control or may be used to flash 6 different sequences in the cue.

When used as bump buttons, the buttons may either be configured as bump-flash or bump-latch buttons (set in the preferences menu).

When used as Sequence flash buttons, configure the buttons by dragging the sequence from the [list of sequences](#) ^[206] onto the line representing the button. Alternatively right-click on the line and select *Add Current Sequence* to add the current sequence (sequence being edited). To clear a button, right-click the line and select *Remove Sequence*. A change in sequence configuration does not take effect until saved (click the save button).

Options Menu

Calibrate faders - May be used to initialize the fader calibration routine of the 2518.

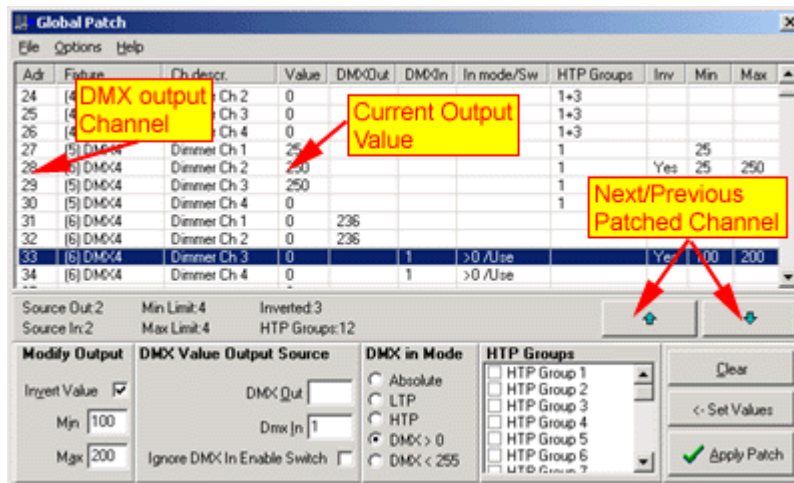
Click **Yes** to initiate the calibration routine.

Once the 2518 has entered the calibration state (DMX channel LEDs are 'running'), move all faders to the absolute top - then press the top **DMX Channels** button. Once all LEDs are out, press the top **DMX Channels** button again. Wait until the 2518 has performed a reset ('01' flashing in the display), then click the **Ok** button on the dialog. Wait until LJ has re-connected to the 2518.

Preferences Menu

Scenes buttons - used to assign the function for the scenes button on the 2518 (see above).

206 Global Patch



The global patch is accessed via the [Main Setup Menu](#) ^[109] or by right-clicking on a fixture icon and select Global Patch from the pop-up menu. The latter method will align the patch list with the fixtures DMX start address.

The main purpose of the global patch dialog is patching of the source of individual DMX output channels as well as setting a minimum and maximum value or inverting the values for individual DMX output channels. The dialog is also used to assign individual channels to HTP channel groups.

Note: Changes in the patch dialog will not take effect on the actual output until the patch is applied

(click *Apply Patch*)

Clicking the previous or next buttons will locate the previous or next channel with any patch settings.

To clear all settings for one or more lines, highlight the relevant lines and click *Clear*.

To clear all settings, select *New Global Patch* from the File Menu.

To 'synchronize' all settings for multiple channels, highlight the relevant lines, change settings if necessary, then click *<-Set Values*.

Modifying the source of output values

Setting the minimum and maximum output value of a DMX channel.

To set the minimum or maximum output value of one or more channels, select (highlight) the relevant lines in the patch list. Set the minimum and or maximum values in the *Min /Max* fields respectively followed by [Enter].

Clear the values by entering a blank in the respective fields followed by [Enter]. Alternatively, highlight the lines, right-click and select *Clear->Min* or *Max* from the popup menu.

The minimum value of 0 and the maximum value of 255 are default values and will not be shown in the patch-list.

When the patch is applied, minimum and maximum limits are applied to the DMX output values before the values are transmitted to the fixtures and do not affect the programmed data.

For example, if an output channel is programmed to a value of 5 and a minimum value of 10 is set for the channel, the DMX output will never go below 10. If the minimum value is removed, the channel will output 5 as programmed.

Tip

Applying a minimum output level for Par cans for similar fixtures can drastically shorten the time it takes the lamp to 'go on' (pre-heat).

Inverting the output

Setting the invert flag inverts the output value of the channel, i.e. a programmed value of 0 is inverted to the value of 255, or a value of 100 is output as 155. The operation performed is analog to inverting the output of a fader on a normal console so that the fader has maximum output when pulled down and minimum output when pushed to the top. The inverting of the value is performed before any min/max constraints are applied so the inverted output values will still be inside the min/max interval.

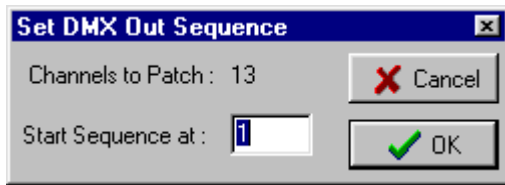
Setting the DMX Output source

Changing the DMX output source means changing the source of the DMX output value transmitted to the channel. The source of the DMX output value can be another DMX output channel and/or a DMX input channel.

Patching several output channels to the same source may be useful when there is a need to control multiple channels from one source (i.e. a generic DMX fixture fader) or, using DMX in, from a console fader. Often, when using generic DMX fixtures such as Par 64 or pin spots, it is practical to control the fixtures in groups, even if each fixture has an individual DMX address (see HTP groups below). Unless the dimmer/switch packs supplying the fixtures has the capability of patching and it would be necessary to allocate an individual channel to each of the fixtures (which may use up a lot of generic controls/channels). Using the patch tool it is possible to reduce the number of 'control channels' needed to the number of groups that are used.

Setting the source to a DMX output channel

To patch one or more channels so that they take their output value from another output channel, select (highlight) the lines representing the channels to be patched, and then enter the source address in the DMX Out field followed by [Enter]. The source channel will be displayed in the 'DMXOut' column in the patch-list. To patch multiple channels sequentially (i.e. 30->1,31->2,32-3 etc.), highlight the target channels and, right-click and select *Set DMX out Sequence* from the popup menu. In the dialog enter the address for the first source channel.



Patching channels sequentially.

[Setting the source to a DMX input channel](#)

[See DMX in](#) ^[304]

To patch one or more channels so that they take their output value from a DMX input channel, select (highlight) the lines; then enter the relevant DMX input channel in the DMX In field followed by [Enter]. The source channel will be displayed in the 'DMXIn' column in the patch-list. To patch multiple channels sequentially (i.e. 30->DMX in 1; 31-> DMX in 2; 32-> DMX in 3 etc.) highlight the target channels and, right-click and select *Set DMX In Sequence* from the popup menu. In the dialog enter the address for the first DMX in source channel.

To patch a full DMX 512 in to a specific DMX out Link, select *Patch DMX in to Link* from the *Options* menu. This function is primarily useful to verify programs via the Offline Visualizer. For example when programming on a different console, the Visualizer can be used to verify programming via DMX in.

Selecting the DMX in mode

The DMX in may be applied in one of 5 modes:

- **Absolute** The DMX input value always overwrites the output value.
- **LoTP** The DMX input value only overwrites when the DMX input value is lower than the programmed output value (lowest takes precedence).
- **HTP** The DMX input value only overwrites when the DMX input value is higher than the programmed output value (highest takes precedence).
- **DMX > 0** The DMX input value only overwrites when the DMX input value is higher than 0.
- **DMX < 255** The DMX input value only overwrites when the DMX input value is lower than 255.

Set or change the DMX in mode for individual channels by selecting the relevant lines and then select the mode.

The two last modes are particular useful to control certain fixture functions manually via DMX-in. For example, to control the color wheels of a number of fixtures on one fader, patch the color control channels to a DMX in channel, and set the mode to < 255. When the console fader is at a value < 255 it overwrites the output value generated by LightJockey, when the fader is at max (value = 255) the value generated by LightJockey will not be overwritten.

The DMX input patches is by default linked to the *Overwrite Enable* function in the [DMX-in setup](#) ^[304] dialog. The *Overwrite Enable* switch may be used to enable or disable all DMX in overwrites entirely. To make the DMX-in patching independent of the *Overwrite Enable* function, select the relevant lines, right-click and set the *Ignore DMX In Enable* switch. Channels marked as ignoring the switch will always be overwritten by the DMX in channel values.

HTP Groups - see [HTP Groups](#) ^[315]

Saving and loading Global Patch settings

The global patch settings may be saved to a file for later retrieval. Save and Load functions are available from the File menu.

Notes:

LightJockey will try it's best to warn about 'suspicious' patches (e.g. channel 1 is patched from channel 2, that in turn is patched from channel 2). If a suspicious patch is found, a warning dialog will be shown (Nested Patches Found). If the dialog appears, please re-check the patches.

Tips

If the patched channels are used to control fixtures that does not need a fixture profile (i.e. generic DMX fixtures) - any unused DMX channel may be patched without configuring a fixture in the [fixture configuration](#)^[40]. When unused channels are patched this way there will be no way to actually see that the channels are used if new fixtures are added later on. It is therefore a good idea to configure generic DMX fixtures to match these addresses, even if programming the fixtures via these controls is not possible since the output values are taken from the source channels, and not from the programmed scenes. But at least there will be an indication to show that the channels are already in use. The icons may even be 'hidden' on a [desktop tab](#)^[61] created for this purpose.

If the patched channels does have a fixture profile assigned to them (i.e. [Generic DMX fixture](#)^[167]), the fixture controls will reflect the output ONLY when the controls [fade status](#)^[128] is set to off.

207 HTP groups

HTP groups is a useful tool to for patching multiple groups of single channel fixtures through DMX in (such as multiple groups of par cans via dimmer packs). HTP groups are configured via the [Global Patch](#)^[315] dialog.

Access to HTP groups is only possible through [DMX in](#)^[304], [Fingers for LightJockey](#)^[86] or (limited) via [hotkeys](#)^[19].

LightJockey implements 24 different HTP groups, and each DMX output channel can be member of one or more HTP groups.

When determining the DMX output values for a particular channel belonging to one or more HTP groups, LightJockey compares the DMX value generated by any active 'program' with the 'value' of each of the HTP groups - and then selects and outputs the numerically highest value.

Hotkeys can be used for the first 12 HTP groups, but are restricted to HTP group values of off (DMX value = 0) and on (DMX value = 255) which may still be quite useful for on/off fixtures running though a switch pack, or for flashing par cans full on and off.

Caution !


Checking DMX output generated by HTP groups is a very time consuming process, especially if many channels are affected. Users of low spec PCs may experience a degradation of overall speed and DMX output 'quality' if many channels are assigned to HTP groups.

HTP groups and Master Intensity

By default, output generated by HTP groups is not affected by [Intensity master or submaster](#)^[151] settings. Check *Enable HTP group master intensity control* in the preferences menu to enable master intensity control of HTP groups. Note that only 'intensity type' channels are affected by master intensity settings.

208 Midi In

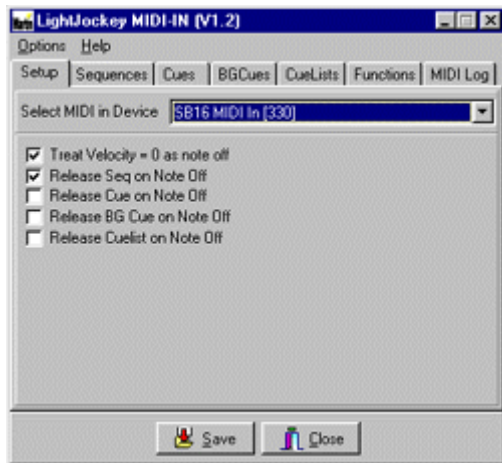
LightJockey may use a MIDI signal to remote control certain functions. Before use, the MIDI in option in the [hardware setup](#)^[24] must be enabled.

Once enabled, the MIDI in module will automatically launch whenever LightJockey starts up. After it is launched the MIDI in module can be accessed by clicking the  on the [Cuelist toolbar](#)^[105]

The MIDI implementation relies on the MIDI functionality that is built in to Windows, LightJockey does not talk to the MIDI devices directly. This means that the MIDI receiver device (i.e. a sound card with MIDI in capability) must be correctly installed in Windows and the correct drivers must be installed as well. Please refer to the documentation for the MIDI device on how to install the device in a Windows environment. The MIDI in program relies on connecting to LightJockey for certain dynamic data - if LightJockey is not running when the MIDI in program starts up an error message is issued.

The current implementation uses MIDI note on and off commands only to latch cues and cuelists and to flash sequences and access functions.

MIDI In Setup



Selecting the MIDI in Device

Since Windows supports multiple MIDI devices, the first thing to do is to select the MIDI in Device. Select the relevant device from the list of devices on the Setup tab. If no devices are listed, Windows has not registered any MIDI in devices.

Treat velocity = 0 as note off

Although the MIDI protocol specifies different values for note on and note off commands, some MIDI devices (i.e. MIDI keyboards) use a note on command with a velocity parameter to indicate a note off. LightJockey will by default treat a note on command with velocity = 0 as a note off command - to disable this function uncheck this option.

Release Seq on Note Off

When option this is checked, the MIDI in module will clear the flashed sequence (see later) as soon as a note off command corresponding to the last sequence note on is received.

Release Cue on Note Off

When option this is checked, the MIDI in module will clear the latched cue (see later) as soon as a note off command corresponding to the last cue note on is received.

Release BGCue on Note Off

When option this is checked, the MIDI in module will clear the latched Background cue (see later) as soon as a note off command corresponding to the last background cue note on is received.

Release Cuelist on Note Off

When option this is checked, the MIDI in module will stop the latched cuelist (see later) and clear the current cue as soon as a corresponding to the last cuelist note on note off command is received.

The Options Menu

Run Minimized

When enabled, this option causes the MIDI in module to start up in minimized form. To bring the module up, click the MIDI in button on the [Fixture toolbar](#) ¹⁰⁶.

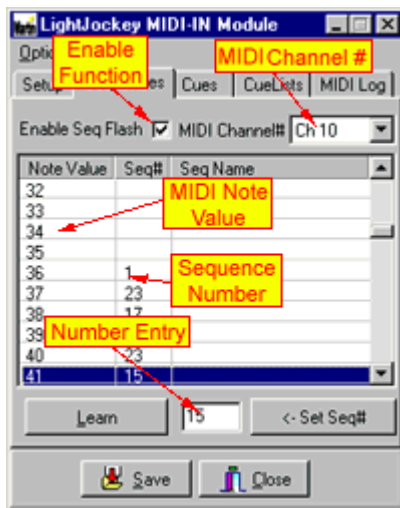
Stay on Top

This option keeps the MIDI in module on top of the main LightJockey desktop.

Auto Save Changes

When enabled, all changes are automatically saved when the module closes down. If this option is not enabled changes must be saved by clicking the **save** button.

Sequence, Cue, Background Cues and Cuelist tabs.



Note that the name column of the lists are currently unused and reserved for later use.

Using MIDI in it is possible to flash sequences on top of the current cue, exactly like the flash function of the [2532 Direct Access](#)^[297]. The MIDI in may also be used to load via for example a MIDI keyboard, and finally MIDI can also be used to select, start and stop cuelists.

The sequence, cue, background cues and cuelists configurations are located on individual tabs.

To enable either function, check the enable function box (i.e. enable Sequence Flash) on the relevant tab.

Next select what MIDI channel (MIDI address) the MIDI in will have to listen to for the particular function. MIDI supports up to 16 different channels (channels 1-16). Select either 'All' to receive the note on command on all MIDI channels or a single channel to receive the command on that single channel only.

Specifying specific Midi channels allows the MIDI transmitter device (i.e. sequencer or keyboard) to use other channels for other purposes, such as MIDI instruments or other controllers. It also allows the same note values to be used for sequences, cues and cuelists as long as the MIDI channel is different. Note that not all MIDI transmitters have the possibility to use specific channels, please refer to the documentation for the MIDI transmitter. The MIDI log tab may be used to monitor incoming MIDI note on and note off data, including the MIDI channel used.

There are two ways of assigning sequences, cues, background cues and cuelists to various MIDI note values.

The first is to enter the sequence, cue or cue number directly. Highlight the line with the required note value, enter the relevant number in the entry field, and click the **<-Set** button.

The second method is to load the relevant sequence, cue, background or cuelist in LightJockey, click the '**Learn**' button and send the MIDI command (i.e. press the key on the MIDI keyboard). The MIDI In Module will register the current sequence, cue, background cue or cuelist and assign this to the note value.

To clear the program for a specific MIDI value, right-click the line representing the value and select **Clear Values**.

Functions

The functions tab makes it possible to assign LightJockey [hotkey functions](#)^[19] to midi devices. Note that LightJockey must be running as the MIDI in program starts up, otherwise functions data will not be transferred to the MIDI in program correctly. To assign a function to a note value go to the functions tab and click **Get Functions List**. This brings up a list of available functions. Now simply drag and

drop the function from the list to the line representing the MIDI note value.

Assigning flash functions

Note that some MIDI devices prefers to send velocity = 0 rather than note off commands. If this is the case, make sure to check **Treat velocity = 0 as note off** on the setup tab. Otherwise the flash function will never be disabled again.

MIDI Monitor.

The final tab consists of a list showing the latest incoming MIDI note on and note off commands. The Monitor may be used to decide what MIDI channels are used by the MIDI transmitter.

209 MIDI-In Connect Error

Could not connect MIDI-in to LightJockey - Dynamic data not available.

The MIDI-in program could not connect to a running instance of LightJockey. No dynamic data such as functions are available.

Make sure that LightJockey is running when the MIDI-in program is started.

210 Using Audio-in

See also [Audio Analyzer options](#)^[322]

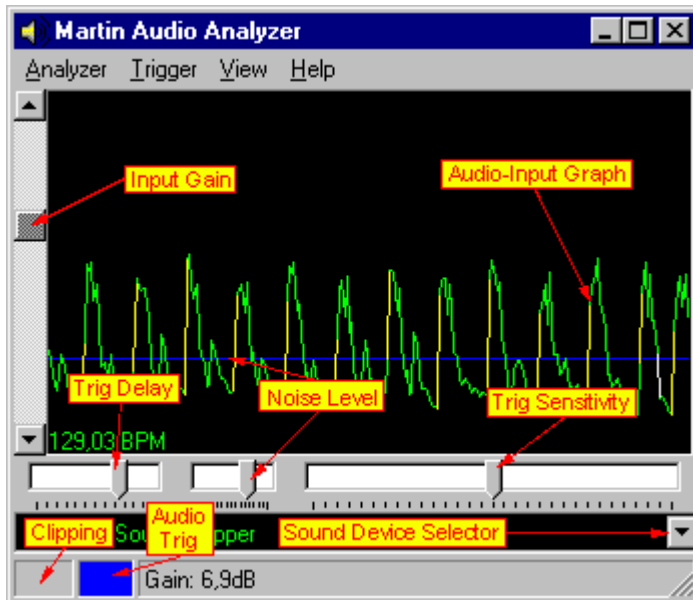
The Audio-in function in LightJockey is used to trig [scenes in a sequence](#)^[193] when the sequence is part of a cue.

The function relies on the Windows sound system, which means that the PC must be equipped with a Windows compatible sound card with working drivers in order to use audio-in.

The audio-in function must be enabled via the [Hardware setup](#)^[24]

dialog (*Main Menu/Setup/Hardware Setup*).

The audio-input from the sound card is analyzed via a separate module(Martin Audio Analyzer) before information is passed to LightJockey. The module is an external program that auto-launches when LightJockey starts up. If the Analyzer for some reason is closed down it may be restarted via the *Audio in* menu on the main desktop.



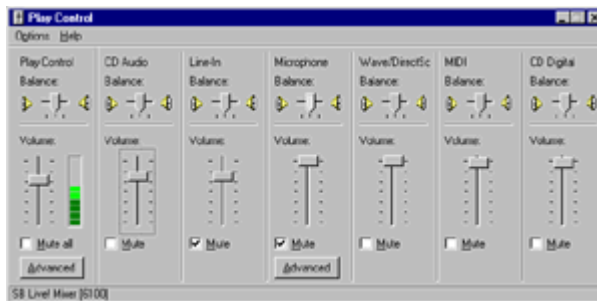
Audio Analyzer - Timeline View

Adjusting Windows audio properties

Since the audio-in uses the Windows sound system, it might be necessary to adjust the Windows audio properties. Usually, when Windows installs drivers for sound cards it also installs a volume or play control that usually lies with a small icon in the tray on the Windows taskbar. Depending on which features are supported by the actual sound card and drivers, the play control may support more or less features.

If the PC contains more than one audio-input device, different devices may be selected via the *sound device selector*. Note that the *Microsoft Sound Mapper* is not a physical device. Selecting the sound mapper will always use the default/primary sound device in the system.

Usually sound cards supports numerous audio inputs such as microphone, Line-in and CD-ROM - but the support for different input sources may vary with the actual sound hardware, especially on laptop a PC. Also note that some sound cards/drivers may limit the number of input sources that may be used at any one time.



A typical example of a play control.

Use the play control to ensure that the input source is enabled (not muted) and to adjust the input level of the sound source.

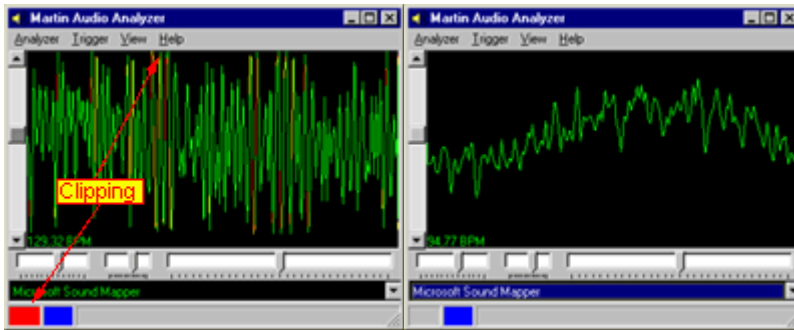
Before adjusting the input level, switch the Audio Analyzer into real-time view (*View menu/Show Input/Real-Time*).

The real-time view continually shows a small portion of the sampled sound input. If the input is adjusted too high there is a good chance that the sound card hardware will 'clip' the samples which means that the analyzer no longer gets the proper information about the dynamic characteristics of the

music. If the input is adjusted too low, the input may no longer have enough 'resolution' to enable a good trig analysis.

A well-adjusted input will show a graph that never 'max-out', thus clipping the input - but still have enough dynamics for a good analysis.

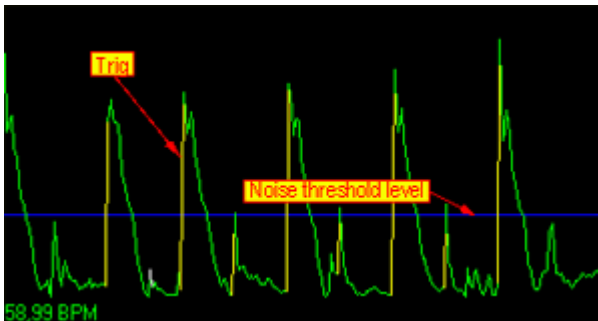
Note that the Sound Analyzer draws the graph in yellow when the sample is close to clipping level and in red when the sample is actually clipped. The analyzer also shows a clip indicator in the lower left corner even when the real-time view is not used.



Audio Analyzer - Real-time view

Adjusting the triggering sensitivity

Once the input level has been adjusted - there are various parameters that may be adjusted that decides how the analyzer finds the trig information in the music. Adjusting these parameters is best done with the analyzer in time-line view (*View menu/Show Input/time-line*). The time line view shows the last 5.8 seconds of 'dynamic' information contained in the audio in.



Basically the analyzer detects trig information by comparing the actual input level with the previous input levels. If the current level exceeds the previous levels by a certain factor (see below) the analyzer indicates a trig. Detecting trigs this way ensures that the trigs are found relatively independent of the actual input level of the sampled sound. Trigs are shown on the graph as yellow lines.

There are various factors that may influence whether the analyzer detects a trig or not.



Noise Level

First of all a noise threshold limit may be applied. The threshold may be used to filter out noise, or may be used to filter out trigs that appear below a certain level. The range of the noise threshold may be set from low to high in the *Trigger/Noise level* menu.

The threshold itself may be adjusted using the middle drag bar or by dragging the blue line representing the threshold directly on the graph.

Trig Decay

The trig decay is a representation of the time that must pass from one trig has occurred until the next may occur. The decay time may be adjusted using the leftmost drag bar from between approx. 0.05 to 0.6 seconds.

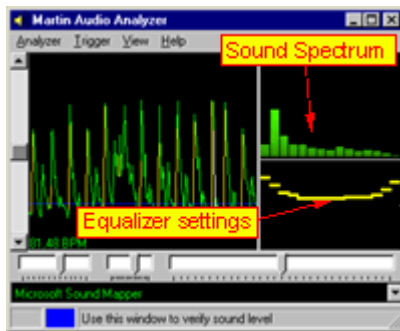
Trig Sensitivity

The trig sensitivity regulates how much the current sample must exceed the previous sample in order to detect a trig. The sensitivity is set using the rightmost drag bar, and ranges from about a factor 2 to a factor 10.

Input Gain

The input gain works by scaling the graph representing the audio-input. While the scaling will not affect trig decay or sensitivity, it will affect how the trigs are found with regards to the noise threshold level.

Using the Equalizer



The audio analyzer also implements a 16-band equalizer that may be used to enhance or dampen certain frequency ranges of the sound spectrum. Enhancing certain frequency ranges means these ranges will be enhanced in the final sound input for the analyzer - i.e. enhancing the 3 lowest bands will ensure that the input that is analyzed is very dominated by bass information in the music.

*Please note that the equalizer routines contain a lot of calculations and are **VERY** CPU insensitive. For this reason running the sound analyzer on a low spec PC is not really recommended since it will slow anything else down including the rest of LightJockey. Minimum recommended PC for using the equalizer is a Pentium 300 MHz or equivalent.*

211 Audio Analyzer options

See also [Using audio-in](#)^[319].

Menu options

Analyzer menu

Auto save changes

Saves any changes as soon as they are applied.

Pass keypresses to LightJockey

Pass any key presses to LightJockey; this allows the use of LJ hotkeys even if the Audio Analyzer has Windows focus.

Trigger menu**Use Equalizer**

Enables the equalizer, see [Using audio-in](#)^[319].

Set default > Equalizer or Gain

Re-sets levels to default for Equalizer and Gain.

Noise level > Low, Medium and High

Sets the range of the noise threshold.

View Menu**Run minimized**

When launched the analyzer will minimize and not take up space on the desktop. To restore click the *ljsound* button on the windows taskbar.

Stay on Top

When checked the analyzer stays on top of most other forms even when another window gets the focus.

Show Input

None, Real-time or Time-Line. Either disables the graph or shows the graph as real time or time line.

Trigger Faders

Shows or hides the adjustment dragbars.

Sound Cards

Shows or hides device selector.

212 MC-X Remote Control

MC-X Remote Control

Since the MC-X uses the DMX in function of LightJockey, it is only available in the DJ, Club and PCMCIA versions, and further more it is not possible to use the standard [DMX-in](#)^[304] remote options at the same time as using the MC-X.

The Martin MC-X Remote Control is a small 8 button device that uses the DMX protocol to communicate to the main controller.

The 8 buttons have an on/off toggle function and are mutually exclusive (only one can be 'On' at a time).


The buttons are divided into 7 "Preset" buttons and 1 "Auto" button.

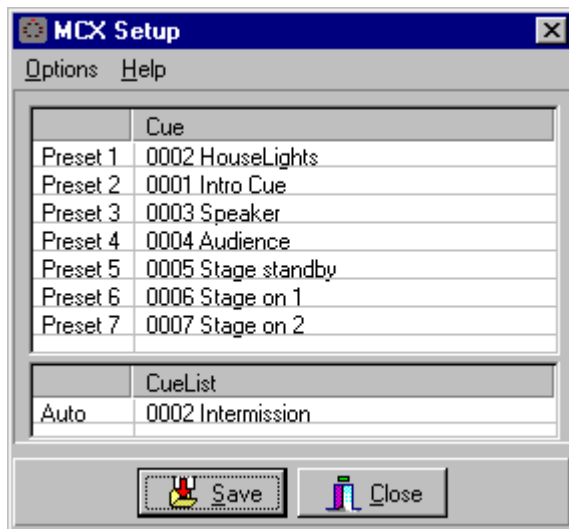
When connected to the LightJockey the preset buttons may be used to latch [cues](#)^[184] or [background cues](#)^[238]

and the auto button may be used to launch a [cuelist](#)^[216]. Connecting the MC-X does not exclude the 'normal' use of cues and cuelists. Cues and cuelists may still be loaded manually or via remote control options (excluding DMX-in).

The MC-X must be configured in the [hardware setup](#)^[24] before use.

MX-C Setup

To access the MX-C setup dialog, click the  icon on the [Cuelist toolbar](#)^[105].



The dialog contains 7 entries for the 7 preset buttons and one entry for the auto button.

The Preferences menu

Preset use Cues/Preset use Background Cues - use this switch to determine if the preset buttons are used to call up regular [cues](#)^[184] or [background cues](#)^[238]. The dialog will automatically switch between showing assigned cues or background cues.

Clear Cue/BGCue on Preset Off - when enabled the current cue or background cue is cleared when the preset button is toggled off. Note that the cue will only be cleared if it is identical (same cue/BG cue number) as the one assigned to the preset button - i.e. if cue #1 is loaded by preset button 1 it will only clear the cue when toggled off, if the current cue is #1.

Clear Cuelist on Auto off - When enabled, toggling the Auto button off clears the current cuelist, but only if the current cuelist is identical to the cuelist assigned to the Auto button (see above)

Clear Cuelist on Preset - When enabled the current cuelist will be cleared as any of the preset buttons toggled on. This function will clear any cuelist.

Assigning cues to the Preset buttons

Make sure the MC-X is setup to use cues in the preferences menu.

Cues may be assigned by dragging the cue from the [list of cues](#)^[208], or by right-clicking the line representing the preset and select "Assign current Cue" from the pop-up menu. The second approach requires that a cue has been loaded.

Assigning Background Cues to the Preset buttons

Make sure the MC-X is setup to use background cues in the preferences menu.

Background Cues may be assigned by dragging the background cue from the [list of background cues](#)^[208], or by right-clicking the line representing the preset and select "Assign current Background Cue" from the pop-up menu. The second approach requires that a background cue has been loaded.

Assigning a Cuelist to the Auto button

The cuelist may either be dragged and dropped from the [list of Cuelists](#)^[238] or it may be assigned by loading the cuelist and right-clicking the 'auto' line in the MC-X setup dialog.

Clearing cues and Cuelists

To clear a cue or cuelist, rightclick the line representing the button and select clear.

213 Controlling Martin Fixtures via DMX interface

Many of the older Martin fixtures do not support the DMX protocol directly - so to control these fixtures from LightJockey it is necessary to use a Martin DMX interface in between LightJockey and the fixtures. The interface translates from the DMX protocol sent from LightJockey to the Martin protocol used by the fixtures.

When addressing fixtures, do remember that the DMX interface can only be set at odd start addresses (1,3,5 etc..).

More information on the interface is available on the Martin Service Web page at www.martin.dk

There are a couple of issues related to the control of fixtures via the DMX interface.

First of all, there is an important difference in how the Martin protocol and the DMX protocol implemented in LightJockey works.

In LightJockey, slow movements and transitions are usually done by 'fading' values from start-point to end-point. The fixtures calculate a suitable speed using the in-between points sent by LightJockey. See [Basic Programming Terms and Elements](#) ⁴⁹ for more information.

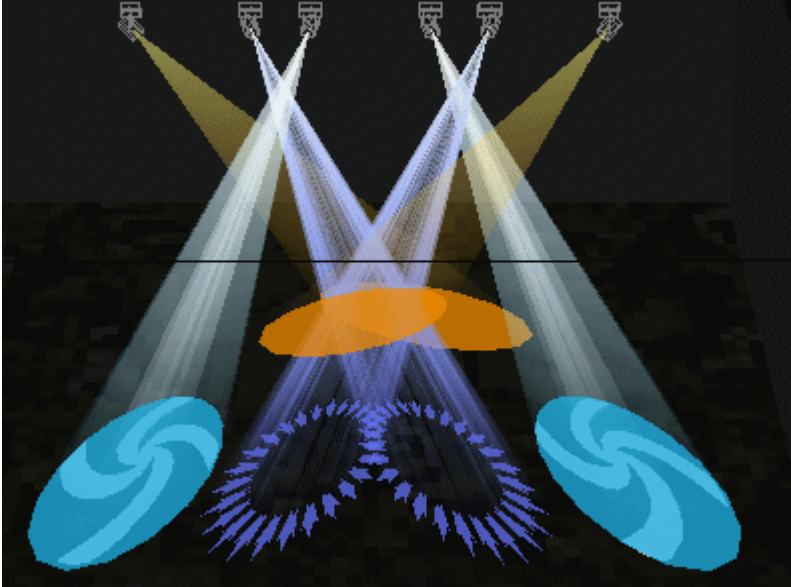
The Martin Protocol is a vector protocol - it works by specifying an 'end-point' and a fixed speed - the point and speed are taken directly by the fixture, and there are no connections between the distance and speed and the time taken to move the effect. This means that moving an effect a longer distance takes longer time than moving it a short distance, when using the same fixed speed. If transitions are programmed as faded transitions, the fixtures running off Martin protocol will not calculate a suitable speed based on the in-between points - they will simply move to the in-between points with the fixed speed, often causing a jerky movement.

The effect of this is that unlike the fixtures running directly off DMX, it is not possible for LightJockey to control the physical transition time of the effects when the fixtures run from Martin Protocol in a nice way. Trying to control transitions via fade times will most likely cause jerky movements. This is also the case with the movement macros.

The only real way of programming the fixtures to run with slow movements and transitions is to use the speed controls implemented in the profile - note that the speeds implemented often controls two or more effects at a time.

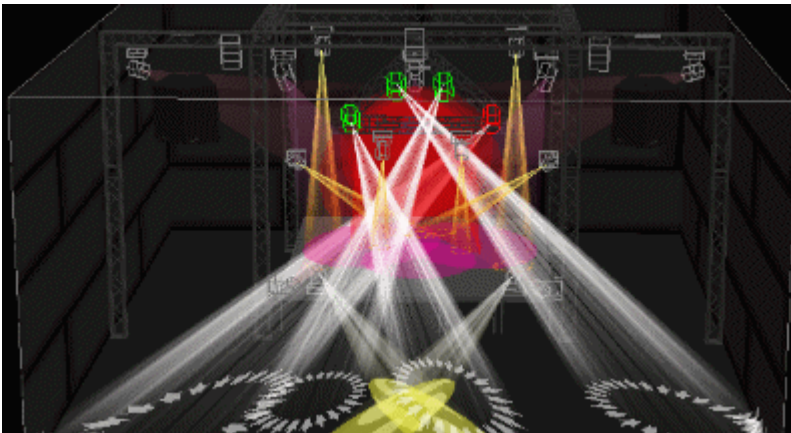
214 The Offline Visualizer

Introduction Notes and getting started



The Offline Visualizer

The Offline Visualizer (the OV) is a scaled down version of the offline module from Martin Show Designer (MSD) that has been integrated into LightJockey. The OV is used to display real-time rendering of the lights programmed with LightJockey. The integration means that no hardware, dongles or other add-ons are needed to enable communication between the two programs.



The OV using a scene built with MSD

The scene file format used in the OV is compatible with the scene format used in the MSD from version 4.0. Since the formats are compatible, it is possible to load scenes complete with fixtures and objects created in MSD into the OV.

Get more info on the MSD Package on the Internet.

Fixture profiles

Important:

The fixture profiles used by LightJockey and the OV are not the same - the fact that a fixture is supported in LightJockey does not necessarily mean that the fixture is also supported by the Offline Visualizer. LightJockey releases will always contain the OV profiles available at release time but it may be necessary to obtain supplemental OV profiles to use the Offline Visualizer with certain fixtures (if available at all). The latest library of OV fixture profiles can always be downloaded from www.lighthouse.nl - go to the download area and follow directions on how to download the latest OV fixture libraries.

See [the Offline Visualizer tab](#)^[294] for instructions on how to link user-defined fixture profiles to existing OV fixture profiles.

First time setup

Before the OV can be used LightJockey must be configured to launch it. This is done via the Setup/Preferences/System menu - External Links tab. Note that in newer releases the Offline Visualizer is enabled by default (and this section can be skipped). Make sure to check the **Enable Offline Visualizer**. If the checkbox is grayed out it means that LightJockey could not find the OV installed so possibly an update has been installed rather than the full version. Click Ok and restart LightJockey.

Starting the offline Visualizer

Once LightJockey has been restarted there will be a new item in the main desktop menu: **Off-line** and a new toolbar for quick access to some of the OV functions. Start the OV by selecting **launch** either from the Off-line menu or via the toolbar.

To automatically launch the offline whenever LightJockey starts up, check **Auto Launch on Startup** option in the off-line/preferences menu.

Once the Visualizer is running it is also possible to **enable** or **disable** it via the toolbar button. In disabled state the Visualizer is minimized and uses virtually no CPU resources.

Finally, if the OV shares monitor with the LightJockey desktop, make sure to check the **Always on top** option in the OV Settings menu otherwise it will just disappear behind the LightJockey desktop when ever LightJockey takes the Windows focus.

LightJockey Offline Visualizer preferences

Most settings for the OV is done within the offline visualizer itself. LightJockey itself has a few preference settings relating to the OV. These are located in preferences section of the **Off-Line** menu item on the main desktop menu.

Auto Launch on Startup - Automatically launches the OV when LightJockey starts up.

Autoload last used scene file - When checked, the OV automatically loads the last used (and saved) scene file on startup.

Enable Fixture Selection - Enables LightJockey fixture selection from the OV (note: OV fixture selection is automatically disabled when fixture definition or configuration dialogs are active).

Auto Minimize on dialogs - Automatically minimizes the Offline Visualizer when certain LightJockey dialogs are shown - typically confirmation dialogs that require user input. On single monitor systems, such dialogs could easily hide behind the OV window when the OV is set to Always on top. To avoid the OV obscuring dialogs on single monitor systems make sure to enable this option. On multimonitor systems where the OV window is located on a different monitor than the LightJockey desktop, disable this option to avoid the OV being automatically minimized.

Offline Visualizer performance

Direct X

The OV requires that Microsoft Direct-X version 6.0 or higher is installed on the PC. The latest version of Direct-X is currently available from the Microsoft Web-site at <http://www.microsoft.com/directX>

PC Speed

The overall speed of the PC of course affects the performance of the OV - the 'faster and bigger' the PC the better the OV performs. The one hardware component that influences the performance the most, is the video card. For best performance make sure that the video system is up to scratch with plenty of on-board RAM (32 MB+) and good 3D acceleration support - rule of thumb: the newer the card the better the performance. Also make sure to check if newer drivers are available from the video card manufacturer's and update accordingly.

See [Display Modes and Video Drivers](#)^[339] for more info on the various driver modes and display settings supported by the OV. Changing between the different driver and display modes can have a dramatic effect on the OV performance both in terms of speed and rendering quality.

Displaying scene rendering time

The OV can be set to show the current scene rendering time (the time it takes to render one 'static picture') - Use the rendering times as a guideline to optimize performance - the lower the rendering time, the better the performance.

In the OV main menu:

Make sure that Check View->Status bar is checked (status bar showing)

Make sure Settings -> Send Keys to LJ is unchecked (set checkmark again to send keypresses to LightJockey)

Make sure the OV has windows focus - then press <ctrl>T (control + T on the keyboard)

The current rendering time is now shown on the status bar at the bottom of the window.



Displaying rendering time

Multimonitor systems

If LightJockey runs on a multi-monitor system it is usually a good idea to leave LightJockey and the OV running on each their own monitor. However, since most multi-monitor video systems have different performance on individual monitors (usually 3D accelerated programs such as the OV runs much faster and smoother on the primary monitor) running the OV on the primary monitor usually gives the best overall performance.

[Setting up the OV 3D room](#)^[329]

[Using the view point camera](#)^[330]

[Display Modes and Video Drivers](#)^[339]

[Importing the LightJockey Fixture Configuration](#)^[332]

[Positioning the fixture icons](#)^[333]

[Changing fixtures attributes](#)^[335]

[Beam Focus \(pan/tilt programming\)](#)^[336]

[Offline Visualizer Menus](#)^[337]

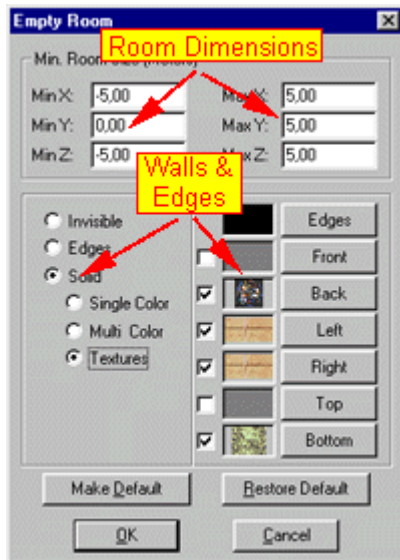
[Offline Visualizer Toolbars](#)^[339]

[LightJockey O/V Toolbar](#)^[340]

215 Setting up the OV 3D room

The first thing to do before starting to use the Offline Visualizer is to setup the dimensions of the 3D world in which the fixtures are placed. In the OV the 3D world called 'the room'. No fixtures can exist outside the room.

To set up the room dimensions and preferences, select the **Room Preferences** dialog from the **Settings** menu.



The Room Preferences dialog

Room Dimensions

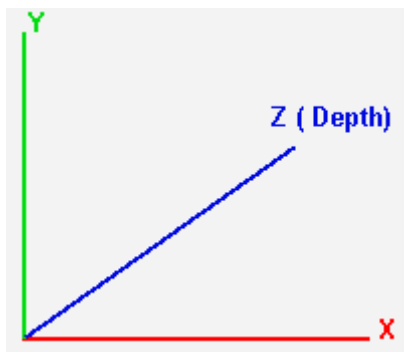
Rooms in the real world may not always be of the nice rectangular room type that is what the OV emulates. The room dimensions need not necessarily be identical to a real room that is to be emulated but must be large enough to contain all fixtures in their hanging positions. Generally it pays off to get the room dimensions as close to the real world room as possible.

The 3 standard X, Y and Z coordinates are used to describe any point in the room (the 3D world). When the Offline room is viewed from the front:

X value describes the position on the horizontal axis,

Y describes position on the vertical axis

Z describes the position in 'depth'.



X, Y & Z axis (front camera view)

NOTE: The default metric units may be changed in the *Settings, Preferences menu*, units tab.

All points and positions in OV are specified according to a reference point (0,0,0). For example, to setup a room with the width of 10 meters, height of 6 meters and depth of 8 meters enter the following values (assuming that system units are set to meters) :

Min X : 0 Max X : 10
Min Y : 0 Max Y : 6
Min Z : 0 Max Z : 8

While it is possible to place the room anywhere in the 3D space it is recommended to keep the minimum values at (0,0,0) to make it easier to relate to a real world room.

When importing the fixture configuration from LightJockey, fixtures will be placed at default positions which may be outside the room dimensions so the room may temporarily grow in size to accommodate all fixtures. The room will automatically resize towards the default size as fixtures moved inside the default room.

Walls, Edges, colors and textures

The walls of the room may invisible, individually colored or a specific texture may be applied to each of the walls.

Select **Invisible** to keep walls and edges invisible - note that beams will still project on the invisible walls.

Select **Edges** to make the edges between walls visible (click the Edges button to select the color to use for the edges).

Select **Solid** to make the walls visible.

Select **Single Color** to make all walls the same color.

Select **Multi Color** to give each wall it's individual color - click each 'wall button' to set the color.

Select **Textures** to give each wall an individual texture - click each 'wall button' to and use the file selection dialog to select the texture file apply to the wall. Use the checkmark to the left of each wall button to disable the use of textures for individual walls.

In order to see the textures on the walls make sure to select *Scene Solid* from the [Display Mode menu](#) ^[339].

Texture Files

LightJockey ships with a number of different texture images located in the <installation directory>\offline2\textures\ directory. However, most BMP or JPG files can be used as texture files - just select them via the file dialog.

Finally - click the OK button.

216 Using the viewpoint camera in Offline Visualizer

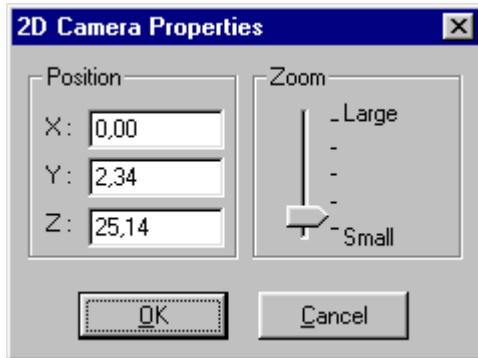
The user view of the Offline Visualizer is comparable to that a camera view - hence the camera terminology used to describe the viewing parameters. The camera positions and view points use the same 3D world coordinates as the offline [room settings](#) ^[329].

2D Cameras

The Visualizer has a number of pre-defined 2D cameras. The cameras are used to view the room 'straight on', i.e. directly from the front or directly from the left. The camera is always pointed towards the room. The 2D camera views are primarily used when positioning fixtures as the 3D camera view usually gives much better impression of the lights.

Select the 2D camera views from the LightJockey Offline toolbar or the Offline Visualizer [tool bar](#)^[339] or via the **camera** menu (camera/default, then select a 2 D camera).

To manually set an absolute viewpoint for a 2D-camera first select a 2D view. Then select properties from the Camera menu to get the 2D-camera properties dialog.



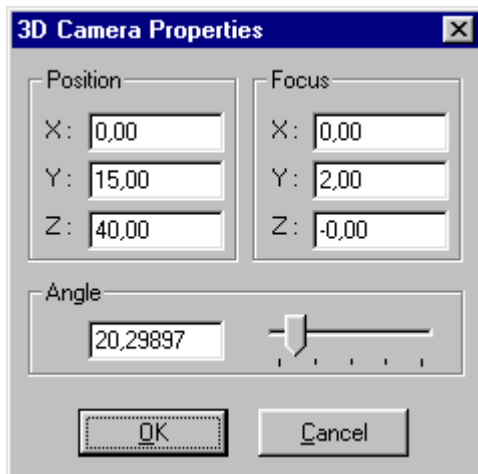
2D camera properties dialog.

Use the X, Y and Z coordinates to set the camera position and the Zoom slider to set the view angle. To manipulate the viewpoint without setting absolute coordinates, see below.

3D cameras

The 3D camera uses a 3D perspective that makes objects seem smaller the further they are from the camera. The 3D-camera position and focus point (the point that the camera is directed at) can be placed anywhere in the 3D world.

To setup a 3D camera first select the 3D view (Camera menu). Then select properties from the Camera menu to get the 3D-camera properties dialog.



3D camera properties dialog.

Use the Position X, Y and Z parameters to set the 3D-position of the camera, and the Focus X, Y and Z parameters to set the focus point of the camera (the point the camera is pointed at). Usually the position point is located somewhere outside the room, while the focus point is located inside the room. This makes the camera look into the room from the outside.

Saving and Loading Camera Views

Any Camera view setting can be saved for later retrieval. To save a view, select **Save Camera** from the camera menu. Make sure to give the view a good description in the save camera dialog. To retrieve

a view, rightclick and select camera/camera select. From the submenu select the required view. Alternatively, select the saved camera view from the [LightJockey Offline toolbar](#)^[340].

Manipulating camera views

Besides the camera properties dialogs there are several ways to manipulate the camera settings. Rightclick and drag a rectangle to 'zoom' in on a particular section of the view (this may modify the focus point).

Use the toolbar buttons or the camera menu to access other functions:

Zoom



Use to set the 'view angle' of the view in 2D and 3D.

Camera Move



Use to set the focus point (the point the camera is pointing at).

Camera Move to/from



Use to move the camera 'in and out' of the view without changing the focus point or zoom angle. This function only works in 3D camera view.

Camera Inspect



Use to 'rotate' the camera around the focus point while still pointing towards the focus point. This function works in 3D views only

217 Importing the LightJockey Fixture configuration into the Offline Visualizer

See [Positioning the fixtures in the Visualizer](#)^[333]

See [Changing fixtures attributes in the OV](#)^[335]

Reading the fixture configuration from LightJockey

Before the OV can be used to display fixtures it needs to know what fixtures to use.

To transfer the LightJockey fixture configuration from LightJockey to the Offline Visualizer, select *Control / Read Fixturelist* in the main OV menu. Read Fixturelist instructs the OV to read the entire LightJockey fixture configuration. It is not possible to manually insert, remove or substitute any fixtures in the Visualizer.

Not all fixtures configured in LightJockey are necessarily implemented in the Offline Visualizer.

After reading the fixture configuration from LightJockey, use the [View Fixturelist](#)^[342] command to check which fixtures are not supported in the OV.

Martin Fixtures

Most new fixtures are implemented, except some of the DJ range fixtures typically Robozap, Acrobat and Wizard type of fixtures. Non DMX fixtures (running through DMX interface) are typically not supported.

Multi channel generic and multi-head Fixtures

When importing a multi channel generic or multi head fixture (such as Martin Robocolor II or III) the LightJockey fixture is split up into a number of individual OV fixtures. The generic fixture it is split into

as many 'spots' as there are channels in the generic fixture (i.e. a 8 channel generic is split into 8 individual spots). The individual fixtures in the OV associated with one LJ fixture are marked with an index, i.e.: 8.1, 8.2, 8.3 etc.

User defined profiles

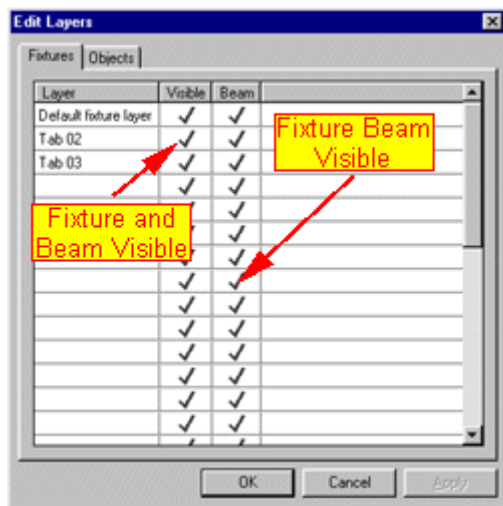
The user defined profiles are only supported in the O/V if the relevant MSD fixture profile for the fixture exists and has been linked to the LightJockey profile. See [The Offline Visualizer tab](#)^[294] for notes on how to assign an MSD fixture profile to a user defined profile.

Reading the fixturelist may enlarge the current room size - no fixtures are allowed outside the room so the room may resize when reading the fixturelist and placing new fixtures in a default location. When the fixtures are moved towards the center of the room, the room dimensions may shrink back towards the default room size, but never smaller than the size set in [room preferences](#)^[329].

Fixture Layers

If the imported fixtures are assigned to different desktop tabs in LightJockey they are automatically assigned to the corresponding fixture layer in the OV (the OV supports a maximum of 32 layers).

The individual fixture layers may be marked as invisible (fixture and light beam, or just the light beam) via the Edit Layers dialog: *Edit/Edit Fixture Layers*.



The Edit Layers dialog - fixtures tab

Remove the check mark in the to make the fixtures / beams invisible. Reset the checkmark to make the fixtures/beams visible again.

To move a fixture to a separate layer without assigning it to a specific tab in LightJockey, highlight the fixture, rightclick and select properties from the popup menu. Then, from the fixture preferences dialog, set the checkmark to move the fixture to the desired layer (a fixture can only be placed on one layer). To create new OV layers, open the fixture layers dialog (*Edit/Edit Fixture Layers*), select a layer, then click the cell in the layers column to enter a layer name. Note that a manual layer settings will be reset when performing a subsequent Read Fixturelist command.

218 Positioning Fixtures in the Offline Visualizer

See also [Using the Calibration Function](#)^[340]

See also [Focus Beam](#)^[336]

Hint: Switching to a [2D camera view](#)^[330] often makes positioning fixtures easier.

Setting Fixture Positions in the 3D space

When [importing fixtures](#)^[332] into a new scene in the Visualizer the fixtures are placed at default positions in 3D space - often on a line or in a grid.

Note: Reading the fixturelist may actually enlarge the current room size - all fixtures must fit inside the room since no fixtures are allowed outside the room. When these fixtures are moved towards the center of the room, the room dimensions may shrink back towards the default room size (but never get smaller than the default size).

Setting the fixture position parameters correctly is extremely important for the [beam position feedback](#)^[336] to work correctly.

See [Focus Beam](#)^[336] for how to use the focus beam function to focus (point) non moving fixtures in the 3D space.

See [Using the Offline calibration function](#)^[340] for how to automatically calculate positions of connected fixtures (moving fixtures only)

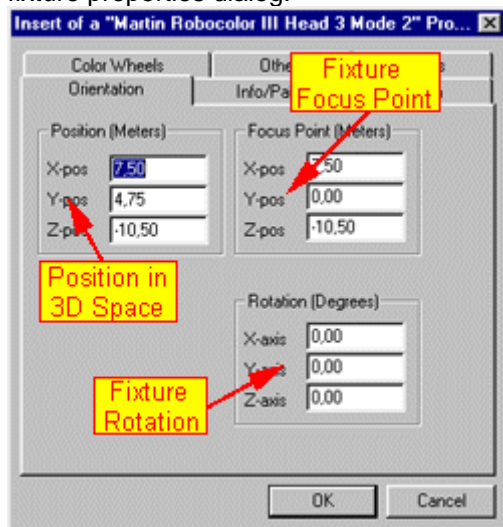
Moving fixture icons directly in the camera views

Make sure that no other functions such as [camera view settings](#)^[330] or [focus beams](#)^[336] are active, otherwise the icon movement operation do not work.

To move a fixture directly in any of the camera views, select it as master fixture (click the icon until it highlights in red or select the fixture [as master](#)^[120] in LightJockey). Then, while holding down the Alt key, click and drag the fixture to the desired position. In 2D camera views helper lines are shown for easier alignment of fixture icons.

Setting the absolute fixture position

To set the absolute and precise position and orientation of the fixture, select the fixture as master (highlight in red) and rightclick anywhere in the view. From the popup menu, select properties to get the fixture properties dialog.



Position and rotation values may also be set via the [fixturelist](#)^[342].

Position parameters

The position parameters are measured from the fixtures hanging point (on the bracket). For fixtures

placed without brackets (e.g. moving heads placed on the floor), measure the point from the non existing-bracket ;)

The positions are given in same 3D as the [room dimensions](#)^[329]. If a fixture is placed outside the room dimensions, the room will automatically grow in size since a fixture cannot exist outside the room.

Focus Parameters

The focus parameters (where the fixture points at) are only available for non-moving fixtures (spots, Martin RoboColor etc.). Use focus parameter to set the fixtures orientation in 3D space (rather than using the rotation parameters).

Rotation Parameters

Use the rotation parameters to set the fixture orientation in 3D space. Note that the X, Y and Z axis relate directly to the fixture, not to the room (although they are related).

X-Axis: Rotate the fixture around the X-axis (the left/right axis), similar to tilt on a scanner.

Y-Axis: Rotate the fixture around the Y-axis (the up/down axis).

Z-Axis: Rotate the fixture around the Z-axis (the 'through' axis), similar to pan on a scanner.

When setting the rotation parameters for moving heads, the fixture icons contain an arrow (zoom in close to see) that identifies the 'front' of the fixture.

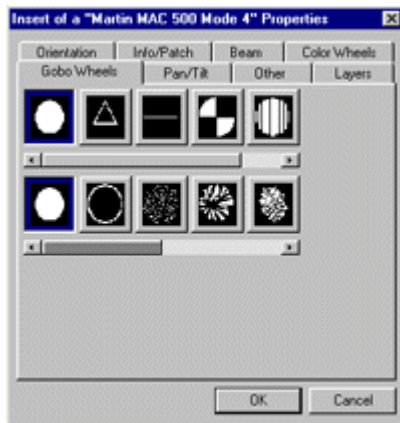
219 Changing Fixture Attributes in the Offline Visualizer

Changing Fixture attributes

LightJockey and the OV only shares information regarding fixture types and DMX addresses, not information regarding attributes such as fixture gobo or color configuration. Some attributes (such as gobos or beam angle, or color for single channel spots may be [changed](#)^[335] directly on the fixture in the OV). The type of attributes that may be changed may vary from fixture type to fixture type.

To change attributes for a fixture, select (highlight in red) the fixture, rightclick and select properties from the popup menu. Most of the fields on the different tabs contain data directly taken from the DMX output values from LightJockey and cannot be changed. Also be very careful not to accidentally change values on the info/patch tab as this may stop the fixture from being able to react on DMX data from LightJockey.

Changing Gobos



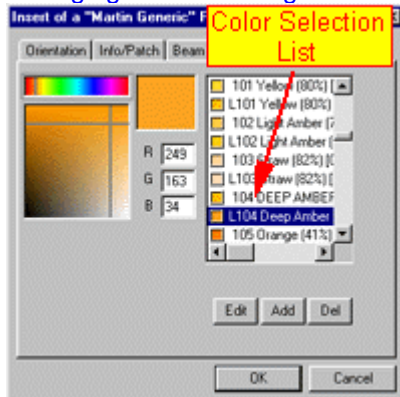
Fixture Properties, Gobo tab.

To change gobos for a fixture, go to the gobo wheels tab, right-click the gobo, select change and select a new gobo image file via the file dialog.

Changing beam angle

Some fixtures may exist in several optical configurations, i.e. the Martin MAC 600 exists in 3 different optical configurations (standard, narrow, diffuser). If supported by the Visualizer fixture profile, the optical configuration may be selected on the beam tab.

Changing attributes for generic fixtures

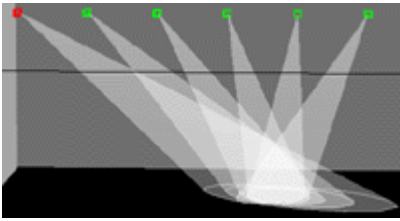



Selecting color for 'generic' fixture

For generic single-channel type fixtures (par-lamps and spots), use the zoom attribute on the beam tab to set the beam angle. Use the color picker on the color tab to set color for the fixture (i.e. color filter on par lamp), or select from the predefined library of colors.

220 Offline Visualizer Beam Focus (Pan/Tilt Programming)

The beam focus function enables the Offline Visualizer to feed back fixture pan/tilt positions to LightJockey. The Pan/Tilt positions are imported into the current scene, overwriting any pan/tilt values already present and sets the fade status to snap (if not already set otherwise).



Select **Beam Focus** from the **Operations** menu (or click the  icon on the toolbar) to enable the Beam Focus function. To set pan/tilt positions, select the fixture(s) and position the beams by left-click and drag in the OV view.

The Focus beam function may also be used to focus (point to) non moving fixtures in the 3D world. Select the fixture(s) and enable light output via LightJockey, then enable the focus beam function and point the fixture to the desired location.

221 Offline Visualizer Menus

See also right-click popup menu below.

The File Menu

New - creates a new OV scene (setup), using the [default room parameters](#)^[329]. No fixtures are imported (see [importing fixtures](#)^[332]).

Open - opens a previously saved scene (setup). If loading scenes created with the MSD package, the MSD version used to create the scenes, must be version 4.0 or higher.

Open and Update - Newer versions of the offline visualizer is generally compatible with scene files created with older versions of the Offline Visualizer (version 4.0 or higher) - however new features may not be properly enabled until the scene file format is updated. To update the scene file format, clear the current scene (new) - then re-open the scene file with **Open and Update** from the files menu. Make sure to re-save the scene file. The open and new command should also be used if fixtures used in existing scene files are to be updated with new profile information (i.e. after updating OV support files through a [LightJockey profile import](#)^[277], installing a new LJ update or downloading a new OV fixture library).

Save - saves the current scene (setup).

Save as.. - saves the current scene with the option of renaming the file.

Print Setup - printer selection and setup

File List - list of most recently scene files (will not be shown until files have been saved/opened)

Exit - closes the Offline Visualizer

The Edit Menu

Edit Fixture Layers - Hides or shows fixtures and beams on fixture layers

Edit Object Layers - Edits object layers - object are only relevant if the scene has been built using Martin Show Designer

The View Menu

Toolbars - show or hide individual [toolbars](#)^[339]

Fixture List - display the [fixture list](#)^[332]

Status Bar - show or hide the bottom status bar

The Window Menu

Save as Bitmap - saves the current view as a bitmap (BMP and JPG format supported - select from type field in save file dialog),

Display Mode menu - see [Display Modes and Video Drivers](#)^[339]

Operations menu

Beam Focus - see [OV Beam Focus](#)^[336]

Calibrate - see [Using the OV Calibration function](#)^[340]

Camera menu

Properties - opens the current [camera properties dialog](#)^[330]

Full View - shows whole scene in the current view

Default - select default 2D or 3D camera

Undo - undo last camera changes

Redo - redo last camera undo

Zoom, Move, Move To/From, Inspect - [manipulate camera in OV view](#)^[330]

Save Camera - saves the current camera view for later retrieval

Delete Camera - deletes the current camera view

Settings menu

Window Color - sets the 'base color' of the Offline Visualizer Window (default black)

Preferences

Beam Tab

Smoke level - use to set the current smoke level - the higher the smoke level, the more visible the beams will be in 'mid air'.

Projection Enhancement - set at higher levels to enhance the visibility of beams projected onto surfaces

Ambient - used to set ambient light level

Max Framerate - used to control the maximum update frame rate - note that the resulting frame rate may be much lower than selected; the actual framerate depends on the complexity of the setup as well as the PC specifications.

Units Tab - Used to select various measurement units.

Direct X Driver Tab - used to select Direct-X video driver mode, see

[Display Modes and Video Drivers](#)^[339]

Room Preferences - use the [Room Preferences dialog](#)^[329] to setup the room

Always on Top - sets or clears the always on top property of the OV. When cleared the OV will disappear behind other active windows.

Show Fixture tooltips - shows a tooltip when the cursor hovers over a fixture icon

Send keys to LJ - setting this switch will forward all keyboard actions (except ALT+Key combinations) on to LightJockey. Enable this switch to use LJ hotkeys, even if the Offline Visualizer has the Windows focus. Note that when this switch is set the 'normal hotkey' functions in the Offline Visualizer is suspended.

Control menu

Hold/Go - stop or start interpretation of the LightJockey DMX values. Note the DMX interpretation state is mimicked by the 'LED' on the bottom toolbar right hand corner.

Read Fixturelist - see [Importing the LightJockey Fixture configuration](#)^[332]

The right-click popup menu

Rightclick anywhere in the OV view to access the popup menu.

Properties - Access the properties for the selected fixture (fixture position and attributes)

Display Mode - see [Display Modes and Video Drivers](#)^[339]

Camera - Access camera menus

[Other/Axis](#) - inserts an X, Y, Z axis into the view for reference
[Fixture Layer](#) - Use to select/enable one fixture layer at a time

222 Offline Visualizer Toolbars

The Offline Visualizer toolbars offer a fast access to often used OV [menu functions](#)³³⁷. The individual toolbars may be enabled or disabled via the **View/Toolbars** menu. Also the individual toolbars may be detached from the main toolbar, exist as a separate window or re-docked at any of the edges (top, bottom, left or right).

223 Offline Visualizer Display Modes and Video Drivers

This version of the Offline Visualizer requires that Microsoft Direct-X version 6.0 or higher is installed on the PC.

The latest version of Direct-X is currently available from the Microsoft Web-site at <http://www.microsoft.com/directX>

The Offline Visualizer supports a range of different display modes and video drivers.

Display Modes

[Scene Wireframe](#) - displays walls and objects as wireframe graphics

[Scene Wireframe \(Lit\)](#) - displays walls and objects as lit wireframe graphics

[Scene Solid](#) - displays walls and objects as solid objects

[Beams Normal](#) - displays beams as wire frame graphics

[Beams DirectX](#) - displays beams as wire frame graphics using DirectX functions

[Beams DirectX Solid](#) - displays beams as 'solids' using DirectX functions

[Beams Projection](#) - offers the most realistic solid beam rendering and projection

Wireframe graphics takes up much less CPU time than solid graphics. To see textures applied to walls make sure to switch to Scene Solid Mode.

Scene Solid and Beams Projection has far the best rendering quality - but for low-end PCs or PCs with a low-end graphics card it may be necessary to switch to a lower image quality to get sufficient speed.

Display modes may be selected via *Display Mode* in the main menu

Video Drivers

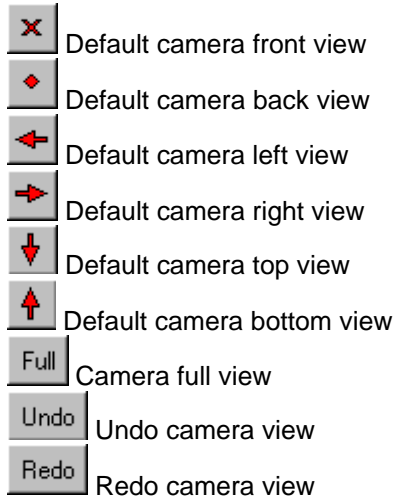
From the settings/preferences menu - DirectX driver tab, it is possible to select between the modes of the installed video driver(s). Usually it is advisable to leave the selection to AUTO DETECT as this will select the most optimal driver (with hardware support if available). However sometimes problems with vido drivers may force the need to manually select a less speed-optimal driver mode.

224 LightJockey Offline Toolbar



The LightJockey OV toolbar

The first button changes between **Launch** (start OV), **Disable** (hide) and **Enable** (show if hidden).



The last list box contains the User Camera List. The list contains the cameras previously saved in the Offline Visualizer. The camera views may be selected via this list or via [hotkeys](#)^[19]. Note that the LightJockey application must have focus on order to activate the hotkeys.

225 Using the Offline Visualizer calibration function

The Offline calibration function is a function designed to help positioning fixtures that are already positioned in 'the real world' into the 3D room. It is of no use when positioning 'virtual' fixtures only.

The calibration function works by using LightJockey to point the beam of the fixtures onto known 3D references in the 3D room and then let the Offline Visualizer calculate the physical location and orientation of the fixtures.

To use the calibration function first setup the fixtures in LightJockey - then perform a 'read fixture list' in the Offline Visualizer. Next mark out 4 reference points in the real world - use some kind of markers (i.e. on the floor of the room) for later when moving the beams onto the points. Then measure the 3D values of the 4 reference points. The values must be expressed in the same virtual coordinate system that is used to describe the 3D room.

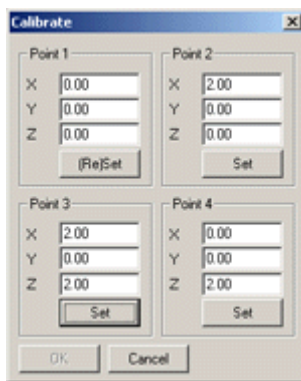
For example in a OV room with the following dimensions:
 Left -10; Right 10
 Bottom 0; Height 10
 Back -5; Front 5

The reference point (0, 0,0) represents the exact middle of the room at 'floor level' (ref 1)

The reference point (2,0,0) represents the point located 2 'units' to the right of ref1.
The reference point (-2,0,0) represents the point located 2 'units' to the left of ref1.
The reference point (0,1,0) represents the point located 1 'unit' in front of ref1
The reference point (0,-3,0) represents the point located 2 'units' behind ref1.

When selecting reference points try to select points that are reachable by all or as many fixtures as possible - each fixture needs 4 reference points in order to perform a position calibration - but they don't have to be the same 4 points for each fixture. Also note that it is not necessary to locate the references around the center of the room; neither do they need to be at 'ground' level - however try to keep a fair distance between the points (couple of meters should be good).

Once the 4 points have been marked out (and their positions measured out), select the first fixture to calibrate in LightJockey (select only one fixture). Next in the Offline Visualizer, select *Calibrate* from the *Operations* menu.



The fixture calibration dialog

In the calibration dialog, enter the coordinates of the 4 reference points one by one (the order of the points is not important). Next in the 'physical world' - for each reference point use LightJockey to point the center of the beam of the fixture onto the point represented by the coordinates; then click *set* (or *reset*) below each reference point. Once all 4 reference points have been set, click the OK button (the button will not be enabled before 4 valid points have been set). Knowing the relations between the 4 reference points, the corresponding DMX values (from LightJockey) and the pan/tilt properties of the fixture, the Offline Visualizer will now re-position the fixture into the 3D room.

Repeat the calibration procedure for the all the remaining fixtures.

Notes:

8 bit pan/tilt may not have enough position resolution to position them with the beam center exactly on the reference point. For those the calibration process may give better results by positioning the beam center at any point, and then use the coordinates of the center of the beam and use those coordinates as reference point.

226 The Offline Fixturelist



Spot No.	Spot Type	Purpose	Supported	Position X	Height	Position Z	Orientation X	Orientation Y	Orientation Z
1	Martin Roboscan 812 Mode 1 812		Yes	-4,00	3,20	-10,69	45,00	180,00	0,00
2	Martin Roboscan 812 Mode 1 812		Yes	-2,00	3,20	-10,69	45,00	180,00	0,00
3	Martin Roboscan 812 Mode 1 812		Yes	-1,00	3,20	-10,69	45,00	180,00	0,00
4	Martin Roboscan 812 Mode 1 812		Yes	1,00	3,20	-10,69	45,00	180,00	0,00
5.1	Martin Generic	DMX4	Yes	-0,88	4,75	-9,17	0,00	0,00	0,00
5.2	Martin Generic	DMX4	Yes	-0,63	4,75	-9,17	0,00	0,00	0,00
5.3	Martin Generic	DMX4	Yes	-0,38	4,75	-9,17	0,00	0,00	0,00
5.4	Martin Generic	DMX4	Yes	-0,13	4,75	-9,17	0,00	0,00	0,00
6.1	Martin Generic	DMX16	Yes	1,13	4,75	-9,17	0,00	0,00	0,00
6.2	Martin Generic	DMX16	Yes	1,38	4,75	-9,17	0,00	0,00	0,00
6.3	Martin Generic	DMX16	Yes	1,63	4,75	-9,17	0,00	0,00	0,00
6.4	Martin Generic	DMX16	Yes	1,88	4,75	-9,17	0,00	0,00	0,00
6.5	Martin Generic	DMX16	Yes	2,13	4,75	-9,17	0,00	0,00	0,00

OV Fixturelist

Select View/Fixturelist from the main menu to display the fixturelist. The list contains the current fixture configuration as well as a number of fixture properties.

Fixtures that are selected (highlighted) directly in the fixturelist, will be displayed with a blue outline in the 3d view.

Spot No

The fixtures configuration number - this number is the same as the LJ fixture number.

Spot type/Purpose

The name of the OV profile used, the purpose column often lists profile sub types (such as 16 bit DMX mode).

Supported

This column indicates OV support (or no support) for the given fixture in the LightJockey configuration. No means that the fixture is not supported (or not linked to an OV profile).

DMX

DMX address of the fixture

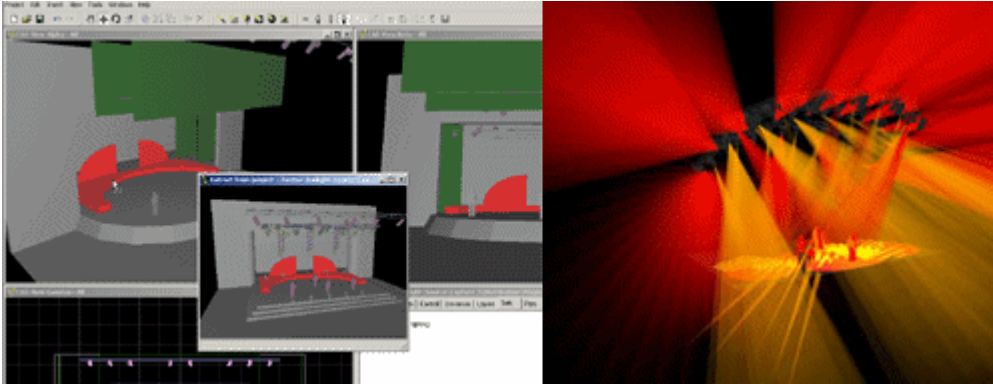
Position X,Y,Z

The fixtures [position](#) ³³³ in the 3D room - the position values can be edited directly from these fields (edit directly or double click to bring up an edit dialog).

Orientation X,Y,Z

The fixtures [orientation](#) ³³³ in the 3D room - the position values can be edited directly from these fields (edit directly or double click to bring up an edit dialog).

227 Interfacing with Capture



Capture screen shots

Capture is an application for lighting designers and programmers which includes real time, virtual visualization of lighting designs in on a PC. Capture is developed and supported through Capture Sweden (www.capturesweden.com).

LightJockey is capable of interfacing with Capture through CITP (*Capture Interface Transport Protocol*) and a special LightJockey interface module distributed with Capture. The fact that the communication interface is based on network protocols means that the two applications can run on the same PC or on two different PCs connected through a standard network.

The interface requires Capture version 3.0.16 or higher and LightJockey version 2.6 build 6 or higher.

Features

The current LightJockey/Capture interface supports bi-directional transfer of DMX data between the two applications. Lighting programs made with LightJockey can be visualized in real-time Capture, and data from Capture, such as setting fixture pan/tilt positions in the 3D view may be used to program LightJockey scenes.

Requirements

Capture must be installed on the same PC as LightJockey even if the connection is made between different PCs.

Network requirements

- The computer(s) used must have TCP/IP protocol installed.
- All involved computers on a network must be part of the same subnet.

Firewall issues

Since the communication between LJ and Capture is based on a network protocol, it may be necessary to allow communication through certain security applications or devices such as firewalls or routers, even if the two applications are running on the same PC. Specifically, port 4810 must be opened for UDP traffic, and port 4811 must be open for TCP traffic.

Interface Setup

Please refer to Capture documentation for system requirements and instructions for configuring Capture to use CITP and how use LightJockey as data provider (the current version of Capture requires that LightJockey has an active connection before it can be selected as data provider).

LightJockey Setup

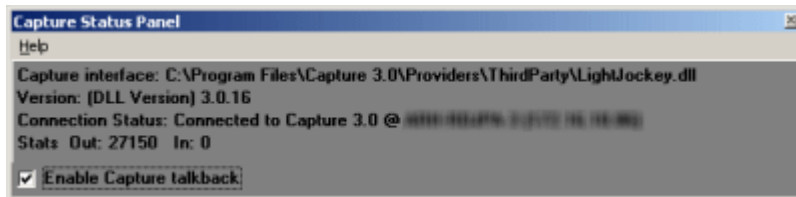
Since the all interfacing software is distributed with Capture, this means that Capture should be

installed on the same PC as LightJockey, even if the actual connection is made through network on two different PCs. The Capture interface option will not be available unless LightJockey can find the interface module on the local PC.

Configuring LightJockey

The Capture interface is enabled by checking "Enable link to Capture" on the External Links tab in the System Preferences dialog (main menu/Setup/System Preferences).

As soon as the link is enabled, the interface will start looking for Capture application through the network connection (which includes the local PC) and the Capture status panel will be available through the Capture menu (from the main menu).



Capture connection status

The connection status shows:

Capture Interface: the location of the interface module

Version: Version of the Interface module

Connection Status: status of connection (disconnected, connection IP)

Stats: DMX data packages sent and DMX data packages received through talkback (see below).

Note that the number of DMX data packages sent represents the number of packages sent to the interface module and not necessarily the number of packages that has reached Capture (it will still increase even if disconnected).

Talkback

The bi-directional communication means that Capture may be used to program LightJockey scenes - DMX data from Capture is used to program the current scene. To enable talkback, check "Enable Capture talkback" on the Capture Status panel.

Note: talkback may not work properly if the fixture is configured with different addresses in Capture and LightJockey - especially:

- Fixture has pan or tilt inverted or pan/tilt swapped and the DMX output is patched through the global patch dialog (e.g. fixture with inverted pan has DMX address 1 in LightJockey and 100 in Capture)
- Fixture DMX protocol implements 16 bit pan/tilt different from MSB/LSB pairs and output is re-patched through the global patch dialog.
- Nested patching through the global patch dialog (e.g. DMX channel 1 takes the output from channel 2 which takes the output from channel 3).


Talkback also requires 'receiving' fixtures in LightJockey - programming fixtures that are only configured in Capture will not work properly.

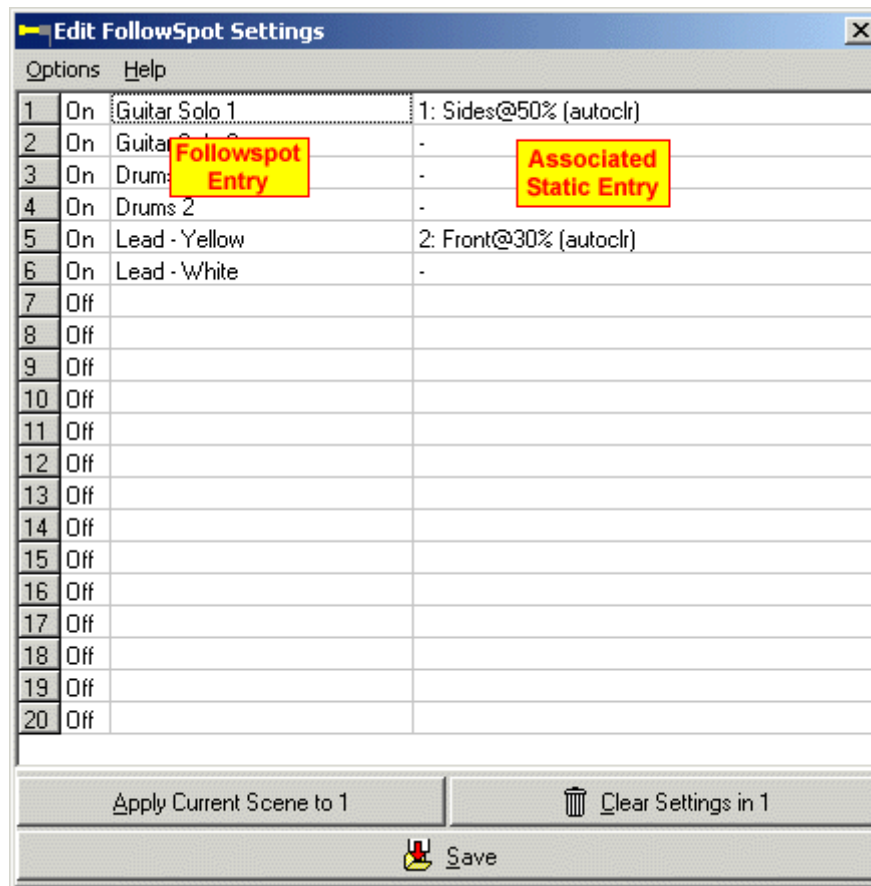
228 Followspot Function

The followspot function uses the [Current Sequence](#)¹⁷⁸ to switch fixtures into a predefined state. The

function works by applying pre-programmed effects into the current sequence/scene during playback of cues, and then use the normal fixture controls to control the followspot fixtures. Note that the followspot settings will **not** overwrite output created by [Cue macros](#)^[199]. LightJockey may hold up to 20 different followspot settings.

Editing the Followspot settings.

To edit the followspot settings using the followspot settings dialog, select **Edit Followspot Settings** from the Main Menu/Setup/Preferences menu - or right click the followspot button () on the [fixture toolbar](#)^[106], and select **Edit Settings** from the options menu of the Followspot List.



Edit Followspot settings dialog

The followspot settings are not restricted to merely using pan/tilt positions and intensity settings, any effect may be programmed into the followspot setting (i.e. color, iris settings). Note however that followspot settings will only be recorded for fixtures capable of followspot functions (fixtures with pan/tilt controls).

To set the parameters which should be applied to each fixture when in followspot mode, simply program them into the current scene - Hint: clear the current cue before programming the followspot scene as this makes it easier to see exactly what is being programmed. Once the fixtures are programmed, **make sure that all programmed followspot fixtures are selected on the desktop**, then highlight one of the 20 followspot presets, and click **Apply Current Scene to Preset#**. When applying the preset scene, LJ records the programmed parameters for all selected fixtures. Effects that are not programmed will use [default DMX values](#)^[113] when the followspot settings are used (see later). Enter a name for the followspot directly in the field in the 'Followspot Entry' column.

To clear a followspot setting, highlight the setting, then click the **Clear settings in preset#** button - to clear all followspot settings select **Clear all Followspot Settings** from the Options Menu.


Associating static entries with followspot settings

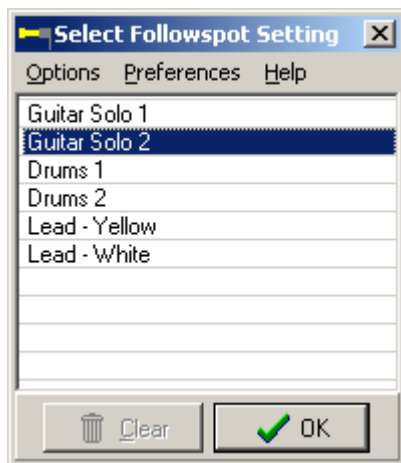
Any of the followspot settings may be assigned an associated static entry - an associated static entry will automatically be latched when the followspot setting is activated (see below). Use the static entry to enforce specific settings to fixtures that are not included in the followspot setting - one use could be to automatically reduce front lights to 30% intensity as soon as the followspot setting is activated - without overwriting other parameters such as colors or positions from the current cue.

Static Auto Clear

Mark the static as Auto Clear (right click and select from popup menu) to automatically disable the static when deactivating the followspot setting (see below)..

Using the Followspot Settings

To activate a followspot settings during cue playback, right-click  on the fixture toolbar to display the followspot setting selection dialog. If the button is left-clicked, the last activated setting will be re-activated.



Followspot selection dialog.

To select a followspot setting, highlight the setting and click OK (or double click the setting). The settings may also be activated using keyboard [hotkeys](#)^[19] or the [2532 direct access](#)^[298]. Once a followspot setting has been activated, it may be 'released' by clicking the Clear button or by clicking the followspot button on the [fixture toolbar](#)^[108]. When a followspot setting is activated, LJ will automatically call up the [intensity](#)^[146] and [movement controls](#)^[134] for the selected fixtures. When the followspot setting is activated, LightJockey will apply all preprogrammed parameters to the followspot fixtures; parameters not programmed will be set to the [default DMX values](#)^[113]. Finally, all effects are set to [snap](#)^[128] to move the fixture into the followspot settings as fast as possible.

Use only selected fixtures as Followspots

When a followspot setting is recorded, the selection state of all fixtures are also recorded. When activating a followspot setting, LightJockey will automatically re-select the fixtures and deselect all other fixtures. If **Use only selected fixtures as Followspots** in the preferences menu of the Followspot selection dialog is checked, ONLY the fixtures that already are selected will be re-selected when a new followspot setting is activated.

HINT:

If multiple fixtures are used together in a followspot setting, make sure to select **Relative Movement** in the [Movement control](#)^[134].

229 Next/Previous Fixture

See also [Fixture Solo](#)^[348] function.



The Next and Previous buttons on the [Fixture toolbar](#)^[106] may be used to select the previous or next fixture respectively.

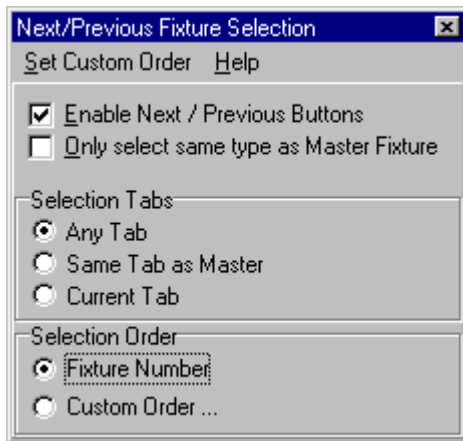
Selecting fixtures this way is mainly useful during sequence programming where one often needs to adjust fixtures one at a time.

The nex/previous functions may also be assigned to keyboard [hotkeys](#)^[16].

By default the buttons select the previous or next fixture based on the icon's fixture number. The new fixture is selected as master while all other fixtures are de-selected. The new fixture will always be next or previous fixture in relation to the current [master](#)^[120] fixture.

If no fixtures are selected, **next fixture** will select the fixture with the lowest fixture number, while **previous fixture** will select the fixture with the highest fixture number.

The order of selection may be customized with the two next dialogs. To open the setup dialog, right-click either of the two buttons, or select the dialog via the *Main Menu/ Setup/ Preferences/ Previous/Next Fixture Selection* menu.



Previous/Next Fixture setup dialog

Enable Next/previous Buttons

Use this switch to show or hide the buttons on the toolbar.

Only select same type as Master Fixture

When enabled, only fixtures of the same type as the [Master](#)^[120] fixture will be selected as next fixture.

Selection Tabs

Any Tab - selects the fixture from any tab.

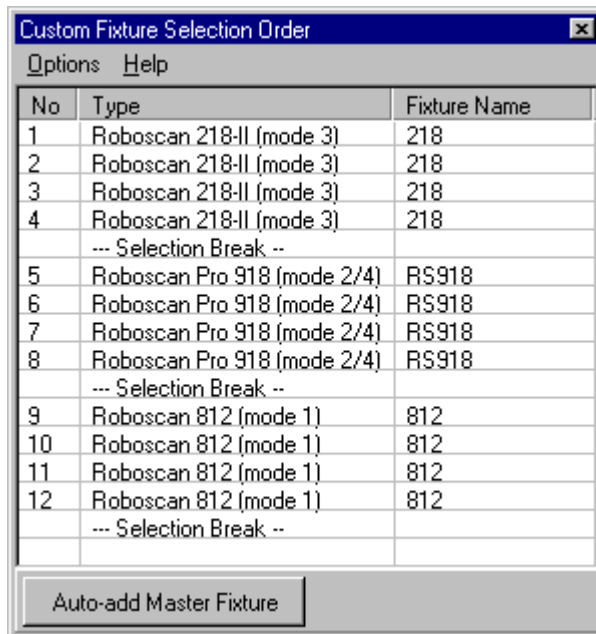
Same as Master - selects the fixture only if placed on the same tab as the Master fixture.

Current tab - selects the fixture if it is placed on the current tab only.

Selection Order

Fixture Number - uses the fixtures number as base for selection

Custom Order - uses a custom selection order (see below)



Previous/Next Fixture custom order dialog

Open the selection order list by selecting *Custom Order*, or by selecting *Set Custom Order* from the menu of the setup dialog.

The Custom Order allows precise control over the fixture selection order. When selecting Custom order, the *Only select same type as Master Fixture* and any tab restriction will be disabled.

To add fixtures to the order of selection, enable the **Auto-add Master Fixture** button, and select the fixtures to add to the list by clicking the fixture icons one by one. Alternatively, select the required fixture as Master fixture, and right-click the list to insert or add the fixture to the list. Fixtures may be removed from the list by highlighting the line(s) and **selecting remove fixture** or **remove lines** from the right-click pop-up menu. Use the Clear All function in the preferences menu to clear all entries into the list.

Selection breaks may be inserted or added to the list by selecting a line and right-clicking. Inserting or adding a *Selection Break* creates a 'break' in the next/previous selections. In the example above, the break after fixture number 8, means that when fixture 8 is selected as master, clicking **next fixture** the selection will loop back to fixture number 5 since this is the first fixture in the block contained by the two breaks. Likewise when fixture number 5 is selected, clicking **previous fixture** will loop the selection to fixture number 9 as this is the last fixture in the block.

230 Fixture Solo Function

The Fixture Solo function is activated via the **Solo** on the [Fixture toolbar](#)^[106], or the function may be activated via a keyboard [Hotkey](#)^[19]. The solo function may be disabled to avoid confusing

inexperienced users via the *Main menu / Setup / Preferences / Enable Solo Function* switch. When disabled the button is not visible on the fixture toolbar.

The solo function is primarily a tool to help programming sequences. It works by sending a blackout command to all [non-selected fixtures](#)^[120]. Only fixtures that has a defined blackout function is affected. The blackout means that only selected fixtures will be 'visible'. The blackout 'moves' with the fixture selection - this means that if, for example, the solo function is used in connection with the [Next/Previous fixture](#)^[347] function, only the current fixture will be visible.

If no fixtures are selected, the blackout command will be cleared from all fixtures.

231 LJ Manager

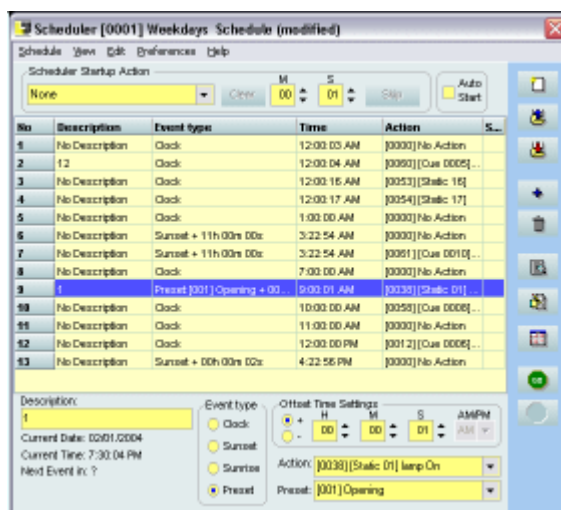


LJ Manager logo

LJ manager is a separate plug-in application that works together with LightJockey to greatly expand the capabilities of the combined system.

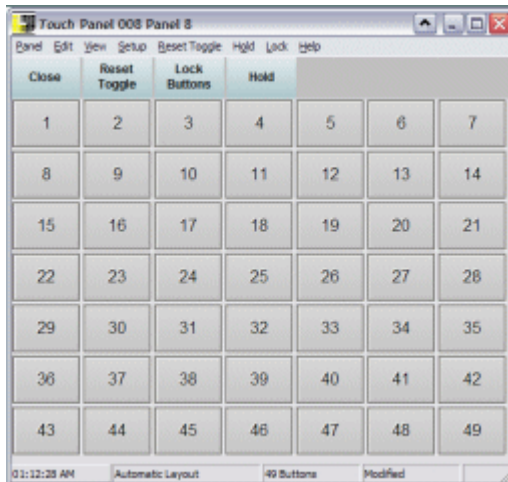
The current version includes two modules:

The Scheduler module which can be used to automate an installation so certain events happen at a specific time and date.



Scheduler

The Touch Panel module which allows a wealth of functions and commands to be structured and used with a touch screen (or mouse).

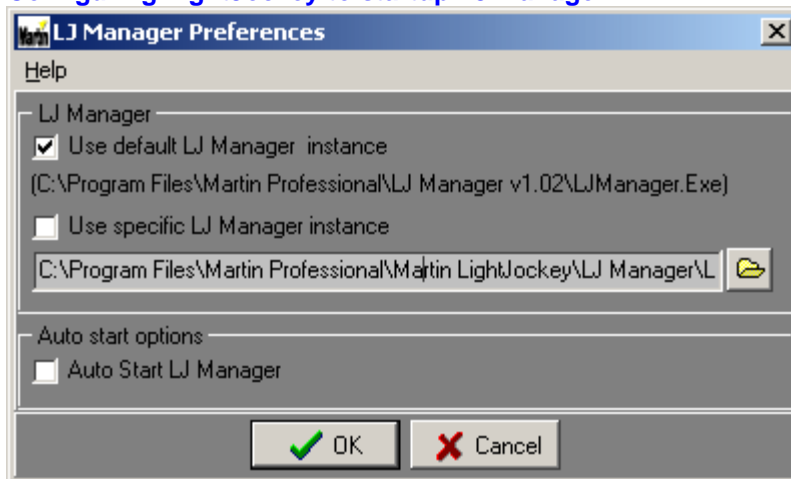


Touch panel

Nightclubs, Live Shows or a Remote Control Screen for architectural installations are only a few examples of where LJ manager can be used.

LJ Manager must be installed as a separate application and its functions are documented through its own help file and on-line manual.

Configuring LightJockey to startup LJ Manager



LJ manager preferences dialog

Although LJ Manager can be started as a separate application, it may be more practical to have it launched automatically by LightJockey.

To do so, click *LJ Manager* on the main menu and open the preferences dialog. Make sure *Use default LJ Manager instance* is checked and also check *Auto Start LJ manager*. LJ manager will now be automatically launched as soon as LightJockey has initialized after startup.

LJ Manager user data

LJ Manager saves its user data in the current [user library](#)^[53] of LightJockey. This means that data saved from LJ manager is included in the regular LightJockey [backup option and restore files](#)^[58].

Multiple installations issues

When LJ Manager is installed it registers itself as the 'default instance' in Windows registry. If LJ is

setup to launch the default instance it will always use the latest installed instance. To maintain a system with several instances of LightJockey and/or LJ manager installed there are a few issues that should be considered.

A specific installation (which can be different from the default instance) of LJ manager can be used by checking *Use specific LJ Manager instance* and locate the LJManager.exe through the file dialog (click folder button to open file dialog). However, do be aware that since LJ Manager stores data in the current LightJockey user library, different LJManager instances should be used from different LJ user libraries or even different LJ installations - otherwise different LJ manager instances may actually use the same data which can be a problematic if the instances are of different versions.


232 Controlling DMX Smoke Machines and Hazers

Light Jockey offers two distinct ways of controlling and programming DMX controllable smoke machines and hazers.

One is to use the [Generic DMX](#)^[167] profiles and program the smoke machines as intensity controls.

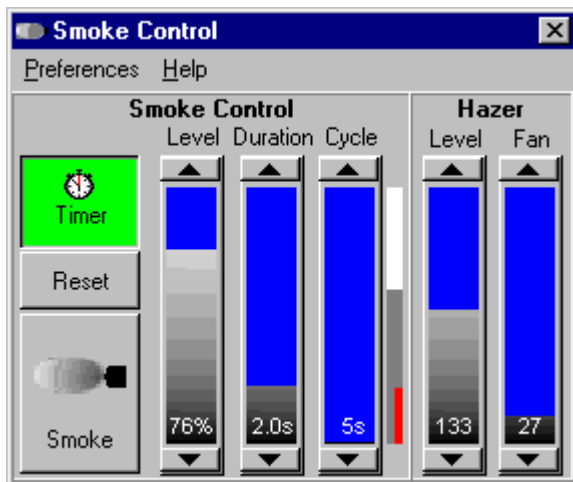
The second way is to configure a [DMX Smoke Machine](#)^[353] or [DMX Hazer](#)^[354] profile. Besides offering profiles and specific fixture icons, the configured fixtures are automatically linked to the [Smoke Control](#)^[357] that allows control of smoke machines and hazers independently of programming.

233 The Smoke Control

The smoke control is accesible via the  icon on the [Fixture toolbar](#)^[106].

This allows control of DMX compatible smoke machines and hazers independently of programming. The utilize the smoke control the smoke machine(s) or hazer(s) must be configured using either the [DMX Smoke Machine](#)^[353] or [DMX Hazer](#)^[354] profile. The smoke control will work on all smoke machines or hazers configured.

Once configured, the smoke machine or hazer can be programmed into scenes as usual using the level controls, or may be controlled independently via the smoke control, overriding the programmed output.



The Smoke Control

The Smoke control has two parts - one part (the left side) controls smoke machines by emulating a standard smoke machine remote control - the other part (the right side) is used to set a continuous level of haze on a DMX hazer without the need to program the level into scenes or the [default DMX output](#)^[113].

Smoke Control

The smoke control emulates a typical smoke machine remote control by implementing a timed level, duration and cycle control.

Smoke Button

Clicking and holding down the smoke button will instruct the smoke machines to smoke for as long as the button is held down (see preferences).

Timer

The timer button enables and disables the smoke controls automatic cycle.

Cycle

The cycle time is represented by the cycle fader and has 32 different levels, ranging from 5 seconds to 60 minutes, when the timer is enabled the control will repeat the cycle continuously.

Reset

Clicking the reset button will instruct the smoke control to 0 the cycle time, and restart the cycle.

Duration

The duration fader represents the length of time in which the smoke machine is instructed to output smoke once every cycle (at the end of the cycle).

Level

The level fader represents the level at which the smoke machine is instructed to output smoke during the duration time.

The small vertical bar in the right hand side of the smoke control illustrates the cycle time (total height), the duration (white part of the bar) and the elapsed cycle time (red line).

During smoke output either via the smoke button or via the timer function, any smoke levels programmed into scenes will be overridden.

Haze Control

The haze control may be used to set an output and fan level on a DMX hazer without the need to program the level into scenes. The hazer controls does not use the timer function, the levels set are always active and are sent continuously to the hazer.

The level and fan values will override any levels programmed into scenes as soon as the output level or fan level is set above 0.

Preferences menu

View haze control

View or hide the haze controls. (hiding does not disable the haze controls)

Enable timer on startup

The timer will be activated as soon as LightJockey starts up.

Reset Cycle on Smoke

Clicking on the smoke button will automatically reset the cycle time (this does not work with DMX in or 2532).

Smoke button use level

The output generated by clicking the smoke button is identical to the level set with the level fader. If this option is disabled the smoke machine will be instructed to smoke with full output when the smoke button is pressed.

Smoke button toggle X seconds

These options makes it possible to output smoke for a longer time using the smoke button, without actually holding down the mouse button. For example if the 'Smoke button toggle 4-5 seconds' option is selected the button will stay pressed for another 4-5 seconds after the mouse button is released. This option only works when clicking the smoke button directly, not when the smoke button is activated through [hotkey](#)^[19] or via the 2532 or DMX-in.

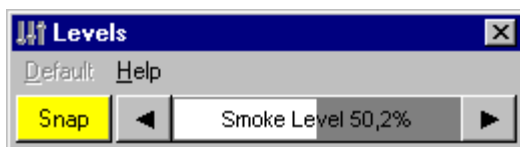
Remote control options

All of the smoke control levels may be remote controlled by [DMX in](#)^[304] - and the smoke button may be overridden by one of the user buttons on the [2532 Direct Access](#)^[296] controller.

234 DMX Smoke Machine



DMX smoke machine fixture icon.



Smoke Machine Control

This profile links the smoke machine to the [Smoke Control](#)^[351] - to program a smoke machine without linking it to the smoke control, use any of the [generic DMX](#)^[167] profiles.

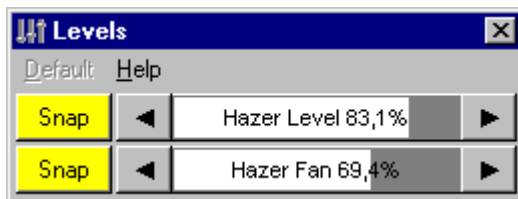
The profile implements control for single channel DMX smoke machines. In order to work with this profile the smoke machine must have no output at DMX value 0 and full output at DMX value 255.

Note that the level of smoke on some smoke machines may not correspond to the level indicated on the 'smoke level' bar. Also, some smoke machines may switch off the heater when DMX value 0 is received, to keep the heater on at all times a default DMX value may be specified via the [default DMX output](#)^[113].

235 DMX Hazer



DMX Hazer fixture icon.



DMX Hazer Control

This profile implements control for DMX controlled hazers.

The profile links the hazer to the [Smoke Control](#)^[351] - to program a hazer without linking it to the Smoke Control, use any of the [Generic DMX](#)^[167] profiles.

The profile implemented is compatible with the Jem Hydrosonic 2000 DMX protocol - this means that the profile uses two DMX channels - the first is assigned to control the haze output level, the second to control the speed of the fan. However other hazers may be controlled by this profile if they have a compatible protocol (level on first DMX channel and no more than 2 DMX channels total).

236 External Application/Device profile plugin

The External Application/Device profile is a specialized profile that enables communication from LJ to a 'plugin' type application rather than a DMX device. The plugin application may in turn control other applications or external devices.

The profile acts like a regular fixture profile - this means that the external application or device can be controlled and programmed in the same contexts as a normal DMX fixture (i.e. scenes/sequences/cues, statics etc).

An example of a plugin application is *LJ-RS232Send* that allows control of RS-232 devices from LightJockey - *LJ-RS232Send* can be found in *<Main LJ Folder>\LJ-RS232Send*, please see *LJ-RS232in* helpfile for more specific information.

Capabilities

The capabilities of the *External Application/Device* link depends entirely on the external application itself - the following lists the possible options, which may or may not be implemented in the external application.

String based interface

The external application link implements a string based interface where commands strings are sent from LightJockey to the external application. Command strings may contain ASCII characters from CHR(32) to CHR(127) with a length not exceeding 32 characters pr command. If the external application is controlling an external device, It is up to the external application to transfer the command strings into something meaningful for the device.

DMX out & in channels

Besides the commands string, the external application link may transfer the value of up to 4 user-selectable DMX output channels and 4 user-selectable DMX input channels pr profile. Note, there is a maximum limit of a total of 8 DMX output channels unless the output channels are within the addressing space of configured DMX transmitter hardware.

Configuring an external application link

To setup a link to an external application, first [configure](#) ⁴⁰ an 'external application/device' profile located under the 'others' manufacturer.

The profile requires a valid DMX address and requires a total of 32 DMX channels. Since it is normally not required that the command data is sent out to the DMX link, the profile does not need to be addressed in the DMX address space covered by DMX hardware (see below).

Addressing outside the hardware supported DMX address space

If the installed DMX hardware does not cover all available DMX out addresses (link 1-4), the external application/device profile may be addressed on an 'unused' link. In order to be able to access links not covered by DMX transmitter hardware, re-configure LJ to no DMX hardware (this allows access to the full addressing space). Set the DMX address for the profile to an unused link - then finally, reconfigure LJ with the DMX transmitter hardware. Note that subsequent modifications to the fixture configuration will give a warning that the profile does not have a valid DMX address - in this case, the warning may be ignored.

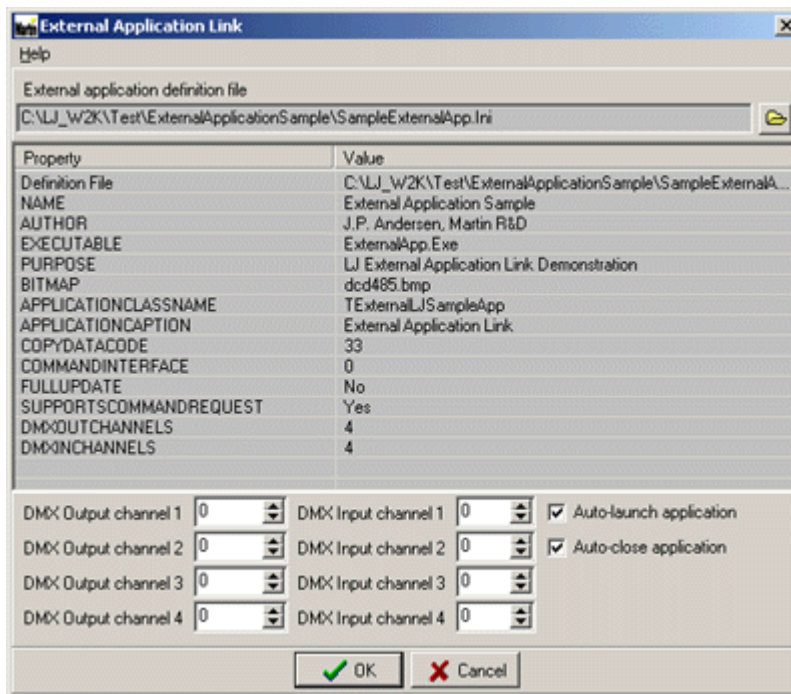
Application link setup

Once the profile has been setup, it will appear on the LightJockey desktop as an 'unlinked' external application link.



'Unlinked' external link

Right-Click the fixture icon, and select **Define Application Link**. Click the folder icon (top right) to browse for the .ini file associated with the external application. Select the ini file. If the external application uses DMX output/input values (see application documentation) specify the relevant source channels. Check Auto-launch and Auto-close to have the external application automatically start and close down with LightJockey.



External application setup dialog

Writing External Application/Device plugins for LightJockey

Documentation for writing plugins will be publicized via the Internet on the LightJockey end-user forum found at <http://www.martin.dk/forum/>

237 Trouble shooting

{keepn}

[System Errors](#) ^[357]

[CD ROM Trouble Shooting](#) ^[356]

238 Audio CD-ROM Trouble Shooing

No Disc or Drive Not Ready

No disc is inserted into the CD-Rom Drive or system is still initializing

Cannot open drive tray

Some CD-ROM drives will return a tray-open status even when the tray is closed if there is no CD present in the drive. On "Eject" LightJockey will try to "Close the tray that is already closed. Shift click on the eject button to force the tray open if necessary.

Message: CDROM drive already in use. The drive cannot be shared between applications

Another application is already using the CD-ROM drive. Most likely it is used by the Windows CD - Player (check in the Windows taskbar). Often this will happen when "CD insert notification" is enabled on the CD-ROM drive, auto-starting the Windows CD PLAYER application whenever a new Audio CD

is inserted.

There are two ways of fixing this problem. The first fix is to disable the auto insert notification. This may be done by right-clicking on the "my computer" icon on the desktop. Select "properties" and "device manager". Select "properties" for the particular CD-ROM Drive, and disable "auto insert notification" on the "settings" tab. Please note that this will disable the auto-start feature for any CD-ROM.

The second is to remove the file-type association of the audio CD. The exact method may depend somewhat on what version of windows is installed, and what type of desktop manager is used. In general, open any folder and select the "File type" tab. Find the "AudioCD" entries in the "registered file types" and remove the entry.

Message CDROM drive not found

LightJockey cannot detect the presence of a CD-ROM drive - please check Windows installation.

See also [Audio CD Control](#)^[144]

239 System Errors

Error Message: Error Initializing Windows MM timer

This message indicates problems initializing the Windows multimedia system timer. This problem only seems to be present on the original Windows-95 release and then only on certain systems.

It seems that Windows doesn't initialize the timer system right away, and any call to the timer services just crashes the whole timer system. The error usually appears when a shortcut to LightJockey has been placed in the Windows start folder for auto-start after PC power-up.

If the PC is running the original Windows 95 release, the safest fix seems to be to upgrade to Windows 95 OS/R 2 or Windows 98.

Error Message: Error opening COM port

A problem occurred when trying to open the COM-port. Usually this means that the comport is used by another device (often a mouse), or is not installed. Try to select a different port if appropriate.

240 Link 4 has been disabled for output, continue saving ?

Link 4 has been disabled for output, continue saving ?

Link 4 DMX output has been disabled. This is most likely due to link 4 being used as DMX input. Fixtures configured to link 4 will not produce any DMX output.

241 Hardware Error

See also [Transmitter Hardware trouble shooting](#)^[357]

The transmitter hardware that has been configured for this setup has not been located. This most likely reason is that the hardware has been re-configured (4064 card DIP switches) or has

been removed. If the IO address for the parallel printer port is changed or the port is disabled, this will also cause the validation of the Parallel Port Adapter (ADP) to fail.

If the hardware has been reconfigured or the parallel port has been moved in the BIOS setup try to autodetect the hardware in the [Hardware Setup](#)^[24].

A number of reasons may cause Lightjockey to report errors on the 4064 card on startup, even if the card was found during the autodetection. If the card does not pass the initial tests a message will be shown with one or more diagnostics messages:

The DJ card only shows messages for CPU 1, while the CLUB card will show messages for two CPUs.

Diagnostics messages:

CPU X Located OK - CPU and memory map was located at the configured memory location.

CPU X Not found - CPU and memory map was not located at the configured memory location.

The most likely reason is that the Dipswitch setting on the card has been changed or that newly configured hardware or other drivers are using the same memory location as the 4064 card. Try another autodetect, if the card is still not found, remove the card and check that the memory location is vacant. Alternatively try another memory area for the 4064 card by changing the [Dipswitch settings](#)^[358].

Read/Write Test OK - Read/Write test passed.

Read/Write Test Failed - The read/write test to the card's memory failed. A likely reason is that another piece of hardware or a driver is using the same memory space as the 4064 card. Check that the memory area is vacant, or try to re-locate the 4064 card (see above). Another reason may be that the BIOS setting for shadow memory is enabled for the memory area that the 4064 card is using. Memory shadowing will allow the 4064 card to be detected - but the card will not work properly. Make sure to disable memory shadowing in the area that the 4064 card is using. The actual process of disabling shadow memory may vary from PC to PC.

Reset Test OK - Internal reset test passed.

Reset Test Failed - Internal reset test failed - the card is most likely defect.

CPU X Test Ok - Internal test passed.

CPU X Failed Test - Internal test failed - the card is most likely defect.

242 Transmitter Hardware trouble shooting

Transmitter Hardware trouble shooting

If LightJockey cannot find the 4064 transmitter card during autodetect

If Lightjockey is unable to locate the 4064 card it might be because the address set on the card collides with another piece of hardware installed in the PC, or because Windows already reserves the memory area for other purposes.

Switch off the computer and remove the card. Check with the Windows device manager that other resources do not use the relevant memory block. Change the card's DIP switch settings to another address if necessary (refer to table below or the LightJockey installation instructions).

Please be aware that drives such as EMM386.EXE that may be loaded in the config.sys file may use the memory area without showing up in the device manager list. EMM386 is normally not needed for Windows applications so the line may be removed (remember to backup the file first!) or commented out.

See more [trouble shooting tips](#)^[357].

Block	Address Range	Pins On	Block	Address Range	Pins On		
C SEGMENT	C0	000C0000 000C0FFF	None	D SEGMENT	D0	000D0000 000D0FFF	5
	C1	000C1000 000C1FFF	1		D1	000D1000 000D1FFF	1, 5
	C2	000C2000 000C2FFF	2		D2	000D2000 000D2FFF	2, 5
	C3	000C3000 000C3FFF	1, 2		D3	000D3000 000D3FFF	1, 2, 5
	C4	000C4000 000C4FFF	3		D4	000D4000 000D4FFF	3, 5
	C5	000C5000 000C5FFF	1, 3		D5	000D5000 000D5FFF	1, 3, 5
	C6	000C6000 000C6FFF	2, 3		D6	000D6000 000D6FFF	2, 3, 5
	C7	000C7000 000C7FFF	1, 2, 3		D7	000D7000 000D7FFF	1, 2, 3, 5
	C8	000C8000 000C8FFF	4		D8	000D8000 000D8FFF	4, 5
	C9	000C9000 000C9FFF	1, 4		D9	000D9000 000D9FFF	1, 4, 5
	CA	000CA000 000CAFFF	2, 4		DA	000DA000 000DAFFF	2, 4, 5
	CB	000CB000 000CBFFF	1, 2, 4		DB	000DB000 000DBFFF	1, 2, 4, 5
	CC	000CC000 000CCFFF	3, 4		DC	000DC000 000DCFFF	3, 4, 5
	CD	000CD000 000CDFFF	1, 3, 4		DD	000DD000 000DDFFF	1, 3, 4, 5
	CE	000CE000 000CEFFF	2, 3, 4		DE	000DE000 000DEFFF	2, 3, 4, 5
	CF	000CF000 000CFFFF	1, 2, 3, 4		DF	000DF000 000DFFFF	1, 2, 3, 4, 5

4064 DipSwitch settings

If LightJockey cannot find the Parallel port adapter during autodetect

To save battery power, most laptops come with an option to save as much power as possible during normal operation. The ADP needs both the external keyboard connector and the parallel port enabled on the PC. By default these are often disabled.

There is no standard way of telling if the external keyboard and the Parallel port are enabled, since most manufacturers implement their own ways of configuring the PC power-saving options. Checking and changing status may both involve settings in the PC BIOS and in Windows or maybe even a third type of application.

- Make sure that the external keyboard is enabled.
- Make sure that the Parallel port is enabled.

If LightJockey found the Parallel port adapter during autodetect, but there is no signal reaching the fixtures.

Again the most likely culprit is the power saving settings on the PC. Make sure that both the parallel port and the external keyboard are enabled. As a last resort try disabling all power saving features on the PC, including all possible settings in the BIOS and Windows.

243 External Link Warning

External links will only work when valid transmitter hardware is detected.

Currently, the only use for external links is to have LightJockey work together with the MSD Offline module. LightJockey will not export data to the Offline, unless valid LightJockey transmitter hardware has been detected.

See [System Preferences](#) ⁽¹⁰⁹⁾

244 File Format Update

One or more data-files (i.e. sequences, cues, and configuration files) have been found not to be of the same format as the currently used file format.

This usually happens when a new format is introduced to implement new functions in the software with a new release.

On startup LightJockey will check all relevant data files to see if they are of an older format, and prompt to update the files to the new format if needed. Updating the file format is usually **irreversible**, meaning that the data-files are no longer recognizable by older versions of LightJockey.

With most updates LightJockey may not be able continue before all relevant data-files have been updated to the new format.

Backing up data files

Some update dialogs will offer the possibility to back up the data files before updating. By checking "Backup Datafiles First" LightJockey will automatically backup the data-files in question before proceeding with the update. Backups will be stored in a separate library in the main installation library, i.e. \LightJockey\BackUp_Version1_03\. Only affected files will be backed up.

245 Updating Cuelist File Format

A new cuelist has been implemented in LightJockey version 1.08 build 2. The new cuelist implementation requires that cuelists programmed with previous versions of LightJockey have their file format updated in order to be compatible with the new cuelist.

If cuelist files in the old format exists in a user library, LightJockey will prompt for update right after start and before any cuelist files are used (i.e. when using the auto start option). The update dialog gives the following options:

Read Help notes - read these notes.

Ok, do the updates now - proceeds with updating the cuelist data files.

Don't update now, but remind me later - don't update, but show the prompt the next time LJ starts in this user library.

Don't update and don't remind me - don't update and don't show the prompt again when starting in this user library.

The update function only checks and updates cuelist files that are present in the current [user library](#)^[53]. Upon changing to another user library that contains old format cuelists, LJ will prompt for update of the cuelist format again.

IMPORTANT note on updating the file formats

A lot of cuelist functionality relies on the numbers given to the cuelist when saving it. Examples are launching cuelists via the 2532 direct access or via hotkeys, or cuelists that link another cuelist by cuelist number. If old format cuelists are not immediately updated when LJ starts up, it may not be possible to convert the cuelists and save them with the same number as the original cuelist. This may cause some of the functions that rely on cuelist numbers not to work as intended - it is highly recommended to update the cuelist files at the update prompt.

246 Update notes

[Version 1.01 Notes](#)^[361]
[Version 1.03 Notes](#)^[362]
[Version 1.04 Notes](#)^[363]
[Version 1.05 Notes](#)^[364]
[Version 1.06 Notes](#)^[365]
[Version 1.07 Notes](#)^[370]
[Version 1.08 Notes](#)^[375]

[Version 2.0 Notes](#)^[379]
[Version 2.1 Notes](#)^[380]
[Version 2.2 Notes](#)^[383]
[Version 2.3 Notes](#)^[385]
[Version 2.5 Notes](#)^[385]
[Version 2.6 Notes](#)^[388]

247 Version 1.01 Notes

[More Update Notes](#)^[361]
[Next Notes](#)^[362]

Implemented :

- Support for the [2532 Direct Access](#)^[296] is now implemented.

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Features added :

- A "clear command"- command has been added to the "command" popup-menu of the cuelist.
- Double-clicking on a sequence slot in a cue now loads the sequence (if any). This feature may be disabled from the preferences menu.
- A "Close LightJockey" confirmation dialog as been added when Light Jockey is closed. This dialog might be disabled from the [System Preferences](#)^[109] menu.

Bugs fixed:

- A major bug that would cause LightJockey to freeze on startup has been fixed. This bug would often strike when re-starting after configuring the 4064 Club version card.
- Loading an empty cue does not update the DMX output accordingly - this is now fixed.
- Using the "Select All" function from the [group selection](#)^[116]
-
- no longer causes an access error, when no fixture is configured as fixture number one.
- Improper resizing of the Cue-control when using "Default view" has now been fixed.
- Sequence hotkeys now works when the select cuelist control has focus.
- Cuelist now updates cue information when cues are re-saved with a different name or deleted.

248 Version 1.03 Notes

File Format Change

The sequence file format has been changed. Sequence files of an older format will automatically be updated to version 1.03 at startup. This update is irreversible.

Features added:

To make sequence editing faster, a fade enable/disable toggle menu has been added to the sequence control. When fade is disabled via this menu, all fades in the current scene will be evaluated as snap. The scenes will still be saved with the programmed fade status.

A "Follow Cue" menu option has been added to the select cue view when enabled the currently active cue will be highlighted in the list, even if selected via cuelist or 2532 Direct Access Controller.

Bugs fixed:

A bit more work was needed on the freeze on start up bug. A timeout has been added to the hardware validation routine.

Previous versions could have a problem when setting sequence scene and fade times. The problem would occur when Windows regional settings would define the decimal point as a '.' (full stop). LightJockey will now accept '.' as well as ',' as decimal points.

A bug concerning fading pan and tilt values after running a macro has been found and fixed. In previous versions fading pan and tilt to a static position from a movement macro would move pan and tilt with a seemingly random speed to the new position. Pan and tilt is now moved with the correct speed according to the actual fade time.

The "Get Sequence" button on the sequence control is now properly synchronized with the button on the Sequence /Cue Toolbar.

The save sequence control no longer updates the sequence name and type when sequence is triggered or scenes deleted or inserted (quite annoying when trying to rename a sequence with playback active)

Sequence "Quick Save" function now considers the save options set (clear, add to cue etc.)

The field for the current time in the statusbar as been widened to fit a 12 hour time setting.

When editing a sequence, changing the current fade-time in a scene would take immediate effect. This has now been fixed.

Notes on demo version:

It is now possible to enable [CD-ROM](#)^[144] in the demo version.

249 Version 1.04 Notes**Fixture personality added:**

- The Imagescan fixture has been implemented.
- Controls for the PAL profile shutters has been implemented.
- Personalities for MAC500 and Roboscan 918 with scrollable gobowheel has been added.

Features added:

- A couple of new mouse+keyboard combinations has been implemented for fixture selections. See [Hotkeys](#)^[16]
- A programmable fixture reset has been added. See [Extended controls](#)^[163]
- Position Presets has been implemented. See [Position Presets](#)^[139].
- A save button has been added to the confirm (overwrite/new etc.) dialogs. Clicking this button will bring up the relevant save dialog. If the sequence, cue or cuelist was previously saved, it will be re-saved without the save dialog appearing (quick save).
- A couple of buttons has been added to the fixture toolbar :
 - **All** : this will select all fixtures
 - **None** : this deselects all fixtures
 - **Inclusive / exclusive** toggle button : When in exclusive mode, selecting fixtures with the mouse is different. A left-click on a fixture icon will select that fixture as master and deselect all other fixtures (solo select), this is identical to the [Control]+left-click combination. A rubber-band selection will de-select all other fixtures before selecting the fixtures that are rubber-banded.

Bugs fixed:

- A bug that disabled the autodetect of the parallelport adapter has been found. Version 1.03 would often fail to autodetect the adapter. This is now fixed.
- The bugfix regarding fading pan and tilt after a movement macro from version 1.03 now also works when restoring from macros with separate pan and tilt speeds.
- A bug that would cause the cue to 'forget' fixture values in some of the sequences has been found and fixed - the bug would strike periodically and only under certain circumstances.
- On the Punisher, it was not possible to assign effects shake if the parabole rotation was already set - this is now fixed.
- After 'testing' an already configured 2532 DA controller in the hardware setup- the 2532 would no longer work until LightJockey was restarted. This is now fixed.
- Using the lamp auto strike feature would sometimes leave one fixture to 'hanging' with the lamp strike command active, and no control over functions on DMX address 1. This has now been fixed.
- A bug that would cause the cue modified warning to appear even though the cue was not modified has been found and fixed. This bug was especially annoying when playing back cue lists.
- Selecting a startup cuelist with the select cuelist window already open would lead to a freeze up. This is now fixed.
- Error message when trying to run a cuelist with CD commands and CD ROM not configured.

Finally, we have now started a discussion forum dedicated to the LightJockey hosted on the Martin Website.

This forum can be accessed through the *service and support* entry on the Martin website or directly from here: [LightJockey Forum](#)

250 Version 1.05 Notes

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[Next Notes](#) ^[365]

Offline Visualizer from MSD integrated Several features has been updated.

Note : to move fixtures in the Visualizer hold down the [alt] key on the keyboard.

German on-line helpfile is now available See details [here](#) ^[15]

Fixture personalities added:

- Personality for Mac 300 has been added.
- Personality for Martin DJ Scan has been added (fixture working title).
- Personality for a [user-definable DMX color scroller](#) ^[264] has been added.
- Personality for an [8-bit small user-definable scanner](#) ^[257] with user-definable palettes has been added.
- Personalities for 24 and 32 channel [Generic DMX](#) ^[167] has been added.
- Personalities for DMX [Smoke Machines](#) ^[353] and [Hazers](#) ^[354] added.
- [Smoke control](#) ^[357] for DMX Smoke Machines and Hazers added.

The following fixture personalities has been added for control through the Martin DMX interface:

- Roboscan 805 - this personality will also work with Roboscan 804.
- Roboscan 218 (the old model)
- Roboscan 1220 II R.
- RoboZap MSR 1200.
- RoboZap 250.
- Martin CenterPiece.
- Robocolor I.
- RoboColor II (the old model)

Notes on controlling fixtures through the DMX interface [here](#) ^[325]

Features added:

- [Master Intensity](#) ^[157] control has been rewritten. It now supports a Grand Master and 8 sub-masters.
- [DMX In](#) ^[304] capability has been added. DMX in can be utilized to 'remote' control various features in the Light Jockey from any other DMX source.
- A [global patch](#) ^[312] tool has been implemented. The Patch tool allows the patching of one DMX channel value to several other channels.
- Auto fade-in and out with specific timing has been added to the [2532 user key functions](#) ^[298].
- Added Fixture stand-alone to selected fixtures. The function will be available on the [extended control](#) ^[163] I.
- Added Grand Master Control toggle for individual channels on the [Generic DMX fixtures](#) ^[167]
- User definable [default output values](#) ^[113] as been implemented.
- Added global patch option to fixture icon right-click pop up. This aligns the global patch view with the fixtures DMX address.
- Added [Smoke Control](#) ^[357] for integration of DMX controllable Smoke Machines and Hazers.

Bugs fixed:

- Random color selection now works with the Exterior 600.
- Moving icons with selection in exclusive mode didn't work. This is now patched.
- A bug would cause movement presets to fail when fade was disabled in the sequence control. This is now fixed.
- A problem with selecting a cue to link in the "link to cue" loop option in the cue control has been found and fixed.
- [Hotkeys](#)^[16] F1-F12 had been disabled in certain controls by mistake (notably the cue time control). This has been fixed. Note that the hotkeys will still not work when dedicated keyboard input fields has focus (such as sequence name in the [Save Sequence Dialog](#)^[197]).
- A much needed shutter-button has been added to the MAC1200 personality.
- Fixed problem with locking sequence times in the [Cue Time Control](#)^[192].
- Fixed random strobe that didn't work on the Exterior 600.
- The GO option in the cuelist didn't work properly - it is now fixed.
- Fixed problem with Imagescan gobo rotation control.
- Fixed problem with intensity master and sub masters and fixtures with intensity status off.
- The gobo control bug that caused a resource leak when bitmap-caching was enabled has been fixed.

Misc. Changes:

- Changed caption on movement "delta" to "Resolution" on the Pan/Tilt control. The function is unaltered.
- The blackout warning has been changed slightly so that it no longer grabs the focus when forced in the foreground (quite annoying when using menus and other controls).
- It is no longer possible to disable the [Master Intensity](#)^[151] and [Blackout](#)^[155]. Both controls are now always present on the fixture toolbar.
- Position presets can now be assigned by double-clicking on the line in the [preset list](#)^[139].
- Added [Control]+ "rubberbanding" to [Hotkeys](#)^[16].
- Changed ADP driver (ADPDriver.exe) for the Parallel port version - now version 2.03

251 Version 1.06 Notes

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[Next Notes](#)^[370]

Fixture personalities added/changed:

Build 15

- Personality for Martin Acrobat added

- Build 16

- Personality for Martin MAC 250+ added

- Build 19

- Implemented P/T speed for the MX-1

- Build 22

- Personality for the Martin CX2 color changer added
- Personality for the Martin QFX Fibersource added
- Personality for the Martin Exterior 600 Compact added
- Personality for Roboscan 812, mode 2 added
- Added Fixture Stand Alone modes for Roboscan 518, Roboscan 218-II and the RoboColor 400
- Added speed controls for 1220CMYR, 1220RPR and 1220XR

- Build 23

- Added personality for Martin MX-4

- Personality for 4 channel Generic DMX control added
- Added Speed Controls to MAC 500 and Roboscan 918 in Fixed Gobo mode
- Added personalities for Roboscan 218 and Roboscan 512 in mode 2 (8 bit pan/tilt - tracking/speed)
- Added personalities for Robocolor II and II, mode 2 (speed control)

- Build 24

- Added Pan/Tilt Speed Control to ImageScan
- Added Personality for RoboColor 400, mode 2 (speed control)

- Build 25

- Added Personality for Martin MiniMacs, Profile and Wash.
- Added Speed Controls to PAL and PAL-FX
- Added Speed Controls to MAC 1200
- Added Speed Control to Exterior 600
- Added Speed Control to Mac 250, Mac 250+, Mac 300 and Mac 600
- Added Intensity Control and pan speed control to Acrobat

Features added:

- The [Global Patch Tool](#)^[312] now implements minimum and maximum settings for DMX output as well as inverting the DMX value. Note that nesting patches is no longer possible.
- A new [User-Definable Fixture](#)^[256] personality has been added. The new fixture profile supports 16-bit Pan and Tilt and a maximum of 32 DMX control channels.
- Added [MIDI in](#)^[316] as remote control option.
- Added the possibility to align fixture icons on the desktop. The alignment menu is available from the [Fixture Icon Popup](#)^[122].
- The possibility of inverting and swapping pan and tilt has been added to the [fixture configuration](#)^[40].
- The [Fixture Configuration](#)^[40] has been rewritten. User defined profiles (type 2 only) are now available for direct selection and configuration.

- Build 15

- The PC keyboard [Hotkey](#)^[16] implementation has been completely re-written. Hot keys and are now user assignable to pre-defined functions.

- Build 16

- added more functions and a *disable in save dialogs* option to the [Hotkeys](#)^[19]
- added save cue as # to the [Save Cue Dialog](#)^[204]
- added user fixture profile [Export](#)^[276] and [Import](#)^[277] functions.
- added bump function to the [Master Intensity Control](#)^[151]

- Build 17

- The [2532 Direct Access](#)^[296] Interface has been re-written to include resizing of control, font selection and print out.
- A *Place All* option has been added to the unassigned list. This option places all unassigned fixtures on the current desktop.
- A [Followspot](#)^[344] function has been added.
- [Fixture Solo](#)^[348] function added.
- [Next/Previous Fixture](#)^[347] function added.
- Audio-input for synchronizing cues to music has been implemented. See [Using Audio-in](#)^[319] and [Triggering Sequences in the Cue](#)^[193]

- Build 18

- Added *Ignore Blackout* and *Ignore Grand Master* to the [Fixture Configuration](#)^[40].

- Build 19

- Added chase mode to manually triggered sequences in the cue. See [Cue Control](#)^[184] and [Triggering Sequences in the Cue](#)^[193]
- Added check sequences to the Delete Sequences dialog, see [Deleting Multiple Datafiles](#)^[114].
- Added printer setup dialog to the [2532 printout dialog](#)^[303].
- Added 'latch' functions to the [Master Intensity Control](#)^[151] bump buttons.
- Added support for the [MC-X Controller](#)^[323] to be used as external control option.
- Added a [Background Cue](#)^[238] to control house lights or similar functions.

- Added a [Transparent Cue](#)^[195] mode.
- Implemented individual [User Libraries](#)^[53].
- Added [Sequence intensities](#)^[196] (DMX in only) for overriding intensities in individual sequences.
- **Build 22**
 - Added relative movement to the [Movement Control](#)^[134].
 - Added a couple of movement options including mirror, swap and pan 360° to the [Movement Control](#)^[134].
 - Added a list of user cameras to the Offline Toolbar. [Hotkeys](#)^[19] for quick access to user camera views added.
 - Added a save to cue slot option to the [save sequence](#)^[197] dialog.
 - Added a second palette to the user definable fixtures [effects control](#)^[285].
 - Added a switch to disable fadetimes for sequences in [chase mode](#)^[193] in the cue.
 - Added a [control](#)^[199] to scale and disable/enable active movement macros in the cue.
 - Added [diagnostics messages](#)^[357] to help trouble shooting problems with the 4064 card.
 - Added a [Martin 2518 via RS-232](#)^[309] as remote control option.
 - Added [Blind mode](#)^[107].
- **Build 23**
 - Added [Sequence Blind Mode](#)^[183]
 - Added [Sequence Fade](#)^[182] control.
 - Added [Copy from Fixture](#)^[46] option to the [fixture configuration](#)^[40].
 - Added [Clear Fixture Data](#)^[48] to the [fixture configuration](#)^[40].
 - Added New Sequence and Trig All Manual Sequences as [hotkey functions](#)^[19]. Also added Trig all manual fwd as [2532 user function](#)^[298].
- **Build 25**
 - Added a *Trace Selected Fixtures* option to the realtime view of [Movement Macros](#)^[130]
- **Build 27**
 - Added emulation mode to the [2532 Control](#)^[304]
 - Added an optional link between the master intensity control and strobe for selected Martin products. This function may be enabled in the [fixture configuration](#)^[40].
- **Build 28**
 - Added support for download to [2510 playback controller](#)^[72].
 - Added Clear Fixture options to [fixture rightclick pop-up menu](#)^[122].
 - Added 'Add to BG Cue' to [sequence list](#)^[206] rightclick pop-up
 - Added dedicated load selected cue and flash selected sequence [hotkeys](#)^[19] These will work even if the cue and sequence lists no longer has focus.
 - Added an auto-launch feature for external support programs to the [Startup options dialog](#)^[112].
 - Added an external support program for [remote control by RS-232](#)^[82].
 - Added a print option to the [Fixture Configuration](#)^[40].
- **Build 29**
 - New fixtures added to the Offline Visualizer

Misc. Changes:

- The [DMX in Configuration](#)^[304] is now always available, even if no hardware is present. This allows clearing any functions allocated to DMX in control, even if DMX in is not enabled.
- The DMX input override DMX output function has been moved to the [Global Patch](#)^[312]. Using the Global Patch allows assigning multiple outputs to a single input without having to nest the patches. It also enables the [Enable DMX Override](#)^[304] switch to work when multiple outputs are patched to a single input.
- The driver for the Parallel port has been updated again. The new driver consists of a new DMXPLUS.DLL (version 8.06) and a new ADPDriver.exe (version 2.5)
- Some of the bitmaps used for the fixture icons has been resized. This means that if fixture icons are displayed in 'Image Size', icons for certain fixture types will change their size slightly.
- Added fan control to the 518 fixture. The fan control is located on the lamp control.

- It no longer possible to reach the scanner1 and color Scroller profile definitions from the level control. Right-click the fixture icon and select Define Fixture Profile.

- **Build 14**

- Added a 5 second reset hold to the MX1 personality required by the final version of the fixture software.
- Added personality for the DJ Acrobat fixture.
- Added Sequence On/Off to the [DMX in](#)^[302] options.

- **Build 16**

- Added a skip first wait to the Cuelist Preferences - when checked the first real-time wait will be skipped (only on Run). The flag is not saved.
- moved profile setup for [Generic DMX](#)^[167], [Martin 6 Channel Switch](#)^[173] and [Color Scroller](#)^[264] to the fixture icon right-click menu.
- A delete shapes has been added to the *Bézier Shapes* menu on the [Movement Macro Control](#)^[130].
- Added Enable Followspot Function to the User [Fixture Pan & Tilt](#)^[291] definition (user fixture 2 only).

- **Build 16**

- Buttons for external controls (MIDI, DMX in, 2532) has been moved to the [Cuelist toolbar](#)^[105].

- **Build 19**

- The audio trig information is now duplicated on the [statusbar](#)^[107].
- Added a **restart** option to the [Main System Menu](#)^[114].
- Added a **Quicksave use Save Options** switch to the [Save Sequence](#)^[197] dialog.

- **Build 22**

- The test button in Hardware Setup for testing the RS-232 connection to the 2532 has been removed.
- Flashed sequences are now shown on the title bar of the [Cue Control](#)^[184].
- The driver for the ADP interface has been re-written (now version 3.0). The new driver is needed to work with the forthcoming release of firmware revision 1.13 for the ADP interface. It also introduces a new, more efficient method of communication with the LightJockey application.
- Added Blackout and Fadeout as flash functions to the [Keyboard Hotkeys](#)^[19] and [2532 user key functions](#)^[298].

- **Build 23**

- [Blind mode](#)^[107] (s) is now disabled by default.

- **Build 25**

- Added [hotkeys](#)^[16] for [List of Sequences](#)^[206], [List of Cues](#)^[208] and [DMX Output Monitor](#)^[117].
- Added [hotkeys](#)^[19] for [fixture group selection](#)^[116] and [fixture selection](#)^[120] mode (inclusive/exclusive).

- **Build 27**

- Added an *Audio In* item to the main desktop menu to allow restart of the Audio Analyzer if the audio analyzer for some reason has been closed down. The menu item is only visible if audio in has been enabled.

- **Build 28**

- Added a switch in the preferences menu to disable the color coding of lines in the [Cue Control](#)^[184].
- Added Strobe to Grandmaster link to the Roboscan 218 personalities.

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Bug fixes:

- Last used [Helpfile Selection](#)^[15] is now saved for the next session.
- Problems in previous 1.06 releases with the intensity control of the Color Scroller personality have been fixed.
- Fixed the Clear Cue on 0 bug in the DMX in cue latch function.
- Right-clicking a fixture icon after saving the configuration would sometimes throw a Windows system error message - this has been fixed.

- **Build 17**

- Fixed protocol error in the implementation of the RoboZap via DMX interface.
- Fixed corrupted Master Intensity Control when *Show Master Only* is enabled.
- Fixed bug that would sometimes crash LightJockey when closing down the sound module

- **Build 18**

- Fixed 2532 'Edit selected flash' bug.

- Fixtures no longer use fadetimes when restoring from the solo function.
- **Build 19**
- Fixed Destroyer Parabole rotation values.
- Fixed bug that would display wrong pan/tilt values when channels were inverted or pan/tilt swapped (thanks to Derrick Markotter for spotting that one).
- Fixed Printer selection bug in the [2532 Printout Function](#)^[303].
- **Build 22**
- Fixed Punisher Parabole rotation values.
- The [Auto Lamp on](#)^[112] now also works for user-definable fixtures.
- The Preserve [sequence enabled](#)^[193] switch in the [Cue Control](#)^[184] now works again.
- Fixed bug where LJ would freeze up if the Close All hotkey was used when a modal dialog (i.e. Close LJ dialog) was active.
- **Build 23**
- The right DMX values for *lamp off* and *fan lo* are now being sent to 1220CMYR, 1220XR and 1220 RPR.
- Fixed wrong size for Exterior 600 Compact Color control.
- Fixed numerous bugs related to relative pan/tilt movement.
- **Build 24**
- Fixed Acrobat pan bug introduced in build 23
- Modified 4064 initialization routines that would report error on some cards.
- **Build 27**
- Fixed a bug that wouldnt allow the offline user cameras to update properly in the offline toolbar.
- **Build 28**
- Fixed a bug in the *browse to* function of the sequence list.
- Fixed disappearing *launch* item in the off-line menu, if the Visualizer was closed down manually
- **Build 30**
- Fix for potential problem with download to 2510 (err 6 and err 7 during download).
- **Build 31**
- Loading a transparent cue no longer resets the internal elapsed scene times on sequences already present in the cue
- Loading a transparent cue no longer resets the current scene to 1 on already present sequences stopped by a loop limit.
- A fix has been provided for the situations where the ADP interface fails to transmit the correct DMX start byte. The fix is supplied as a separate installation file. Please read the readme.txt file found in the Adpfix sub-directory.

Offline Visualizer updates

- The visualizer now automatically loads the last used *.ofs file when launching.
- The complete visualizer setup is now contained in the *.ofs files. This means that different setups are no longer constrained to the room dimensions entered in the room preferences. *.Ofs files created with earlier versions of the Visualizer will take the room dimensions from the current user preferences - but once re-saved with the new version, the Visualizer will automatically update the file to the new format.
- The Hidden file type bug is now fixed - it is no longer necessary to disable 'hide known filetypes' in the Windows setup.

Version 4.0, rev 2 (shipped with LJ version 1.06 build 19).

- Added 2D functionality to cameras, default cameras (front, back, top, bottom, left and right are now 2D) so zooming in, will no longer rotate the camera
- Beam visibility on solid room walls is 100%, and on the scene it is improved. In previous version, the lines of the beam were sometimes obscured by the walls of the room.
- The MX-1 fixture is now supported.
- There is a list with all fixtures that are used in the scene and there is an indication in the list whether the fixture is supported or not. The list is available from the view/spotlist menu.

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Version 4, Rev 2 (shipped with LJ version 1.06 build 23)

- MAC 250+, CX-2, Exterior 600 Compact and Roboscan 812 mode 2 (no speed emulation) are now supported.

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Version 4, Rev 2 (shipped with LJ version 1.06 build 29)

- MiniMAC Profile and MiniMAC Wash. Martin MX-4 now supported.
- .

252 Version 1.07 Notes

[More Update Notes](#) ^[36]

[Previous Notes](#) ^[36]

[Next Notes](#) ^[37]

Note, the URL for the LightJockey forum has changed. The new URL is
<http://www.martin.dk/service/forums/ForumViewData.asp?ForumID=1>

Fixture personalities added/changed:

Build 2

- Personality for Acrobat, extended DMX mode added
- Personality for MX1, extended DMX mode added
- Personality for MX4, extended DMX mode added
- Personality for MiniMac Profile and Wash using fadeable shutter control added. Note that sequences made with the non-intensity profile must have intensity levels re-programmed.
- Color selection for MiniMac Profile and Wash are now compatible, meaning that selecting a color on MiniMac profile fixtures will also select the same color on MiniMac Wash fixtures.

- Build 5

- Personality for MAC 600 NT added

- Build 9

- Personality for MAC 2000 added. Color, Gobo and Effect palettes may be customized by right-clicking the fixture icon and selecting [Customize Fixture](#) ^[125].
- Added [customizable color/gobo and effect palettes](#) ^[125] for MAC 500 and Roboscan 918.

- Build 10

- Added [customizable effect palettes](#) ^[125] to MiniMAC Profile and Wash and Roboscan 518.

- Build 11

- Personality for MiniMac Maestro added. Use [customizable palettes](#) ^[125] to configure the gobo palette.

•Build 12

- Added [customizable Color palette](#) ^[125] to FiberSource QFX.

•Build 13

- Added [customizable Color palette](#) ^[125] to MAC300, MAC 600, Exterior 600 and MAC 600 NT.
- The gobo controls for MAC 500/ Roboscan 918 has been re-written to allow separation of gobo selection and gobo rotation parameters.

- Build 14

- Added [customizable Color, Gobo and Effects palettes](#) ^[125] to MAC250/250+
- The gobo control for MAC 250+ has been re-written to allow separation of gobo selection and gobo rotation parameters.
- Added access to the built-in Gobo/Prism macros on the MAC 250/250+ : Effects control - preferences - show special.
- Added [customizable Color, Gobo and Effects palettes](#) ^[125] to Roboscan 1220XR and Roboscan 1220

CMYR. The gobo control was re-written to allow separation of gobo selection and gobo rotation parameters

- Added [customizable Color, Gobo and Effects palettes](#)^[125] to Roboscan 1220RPR. The gobo and effect controls were re-written to allow separation of gobo/effect selection and rotation parameters.
- Added [customizable Color, Gobo palettes](#)^[125] to PAL 1200. The gobo and control was re-written to allow separation of gobo/effect selection and rotation parameters.
- Added [customizable Gobo palettes](#)^[125] to PAL 1200 FX. The gobo and control was re-written to allow separation of gobo/effect selection and rotation parameters. Use Color 1 palette values for first gobo control (uses color wheel).
- The effect control for MAC 2000 profile has been re-written to allow separation of effect selection and effect rotation parameters.
- The gobocontrol for the Imagescan has been re-written.
- **Build 17**
- Added personalities for 30,12,6 and 2 channel generic DMX fixtures.
- Color/Gobo music trig buttons for MX/CX series has been replaced by a fixture trig button.
- Added personality for Martin CX-4 extended DMX mode (profile not yet supported by the Offline Visualizer)
- **Build 18**
- Changed gobo default for CX4 from DotCone to Holes3 (default palette to update configured fixtures).
- **Build 19**
- Added personalities for controlling packs of [RGB fixtures](#)^[173].

Features added:

Build 2

- Added [hotkey](#)^[16] options for the [movement options](#)^[134].
- Added a hotkey option for the [smoke control](#)^[35] smoke timer button.
- Added a [Statics Control](#)^[24] for faster control of various types of 'static' fixtures, i.e. strobes or fixtures controlled through dimmer- or switch-packs.
- Added a an optional switch to the [cue control](#)^[184] to automatically release the current sequence when a new cue is loaded.
- Added a Show Programmed Fixtures option to the [Desktop popup menu](#)^[61]. This option will mark fixtures programmed in the current scene/sequence.
- Added an option to the [System Preferences](#)^[109] dialog that forces controls to open within the boundaries of the LightJockey desktop.
- Added a Clear Macro button to the [pan/tilt movement controls](#)^[134].
- Added a mouse right-click to open single fixture controls from the [fixture tool bar](#)^[106].

Build 3

- Added a new option to the right-click function of the mouse in the pan/tilt [movement grid](#)^[134]. A right-click may now lock the mouse to the grid until another mouse click is made.
- Added the option of naming the [2532 pages](#)^[298].
- Added new DMX in options to the [Global Patch](#)^[312].
- Added the possibility to assign programs (sequences, cues, cuelists and BG Cues) to hotkeys.

Build 4

- Added *Cuelist Go*, *Cuelist Back*, *Cuelist Stop And Cuelist Stop and Clear* commands to [hotkey](#)^[19] functions and [DMX-in](#)^[304] commands.
- Added the possibility to flash sequences via [DMX-in](#)^[304].
- Added [Hotkey functions](#)^[19] for sequence trig default (programmed) and bounce loop mode.
- Added rightclick popup menu to clear multiple key combos and set or clear the scroll lock attribute in the [hotkeys setup](#)^[16].
- Added an option to put a [label](#)^[205] in the sequence slots in the [cue control](#)^[184].
- The internal cuelist engine has been re-written to ensure better program flow when the cuelist is active (running) - there are no functional changes in the cuelist itself.
- Added a new [2518 via RS-232](#)^[309] mode. The new mode requires firmware version 2.0 or higher

present in the 2518.

- The [global patch](#)^[312] now supports simultaneous patching from DMX in and DMX out. A couple of new options added.
- Added a pan/tilt fan-out function to the [movement controls](#)^[134] options menu.
- **Build 5**
- Added value inversion on RGB control for the user definable Generic Fixture 2.
- Added selection/de-selection of all fixtures of a given type to the [Fixture Icon popup](#)^[122] menu.
- **Build 6**
- Added support for [PCMCIA DMX Interfaces](#)^[24].
- The [2532 Direct Access](#)^[296] implementation has been rewritten. The 2532 may now be used to latch cuelists and background cues and trig hotkey functions. Use the [File/Import](#)^[302] menu entry on the 2532 control to import and convert setups made with previous implementations.
- Added a bunch of new [hotkey functions](#)^[19] including Clear Sequence Slots, New Cue, De-select All Fixtures, Pan/Tilt relative and timed fade out and fade in. A number of functions have been renamed for a clearer description.
- Added a search help option to the main help menu.
- Added Sub-Master synchronize buttons to the [Master Intensity control](#)^[151].
- Added a [DIP Switch](#)^[279] option to the user definable type 2 fixture.
- Added Latch Cuelist, Latch Background Cue and Enable Static to the [DMX in commands](#)^[304].
- Added an automatic prompt to clear data for new fixtures in the [Fixture Configuration](#)^[40].
- Implemented an [offline/online switch](#)^[107]. In offline mode the physical DMX output is blocked (frozen) - output is still routed to the Offline Visualizer making it possible to utilize the Visualizer to program blind, while maintaining different a (static) DMX output to the connected fixtures.
- **Build 7**
- Added a 4th (non palette) [effects control](#)^[285] to the user definable fixture type 2. Note that the 4th control will not be useable if the profile is used in installations with software below this version.
- Added *Home Selected Fixtures* [Hotkey function](#)^[19].
- Added a Call Cue by Number option to the [List of Cues](#)^[208].
- Added a new [Generic DMX control](#)^[168] with keyboard command line interface.
- Added the an option to the [Cue Control](#)^[184] so that hotkey trigs also changes the programmed sequence direction.
- **Build 9**
- Added Hotkey for Master Intensity Control toggle.
- Added Hotkey for User Palettes and Position Preset toggle.
- Added Hotkey for View Notes.
- Added the option of assigning background colors to the [on-screen 2532](#)^[298] matrix (*Font Properties / Color Scheme*)
- Added a Link to Cuelist to the Cuelist commands so one cuelist may link to another cuelist.
- Added Custom Palette options to Built-in fixtures. Not all fixtures are yet supported. Note that changes to palettes does not reflect in the Offline Visualizer.
- **Build 13**
- Added master intensity status to the [statusbar](#)^[107].
- **Build 14**
- The [list of cues](#)^[208] has been completely rewritten. The new version offers improved functionality including cue pages and new hotkeys and DMX in commands.
- Added mouse latch/flash toggle button to the [2532 control](#)^[304] (mouse emulation).
- Added a Latch Flash Sequences option to the [cue control](#)^[184].
- Added LightJockey hotkey functions to the [MIDI in](#)^[316] program.
- **Build 15**
- Finalized USB support. The USB interface is only supported from this build.
- Added lots of help notes to the [new Offline Visualizer](#)^[326].
- Added a DMX refresh-rate switch to the hardware setup (4064 cards only)
- **Build 17**
- Added the possibility to backup and restore data from a single user library. This option is primarily

useful when inexperienced users needs to restore LJ to a working order. See

[Using the Data Restore Option](#)^[55].

- Added the possibility to override cue times with DMX in or the 2518 on RS232, see [DMX in](#)^[304], [2518/RS232](#)^[309] and [Cue Time control](#)^[192].
- Added MIDI Timecode interface to the Cuelist. See [Hardware Setup](#)^[24], [Cuelist control](#)^[216] and MIDI/SMPTE Timecode driven cuelists.

Build 18

- Added 'Autostrike Lamp' and 'toggle Background Cue control' to hotkey functions (and 2532).
- Added the option to control audio gain and noise threshold setting on the audio analyzer via [DMX in](#)^[304].
- Increased the capacity of the [background cue](#)^[238] to 5 sequences, and added modes for cue transparency and audio-triggered and 1-shot sequences
- Added 'Scenes/Trig' and 'Audio-Trigs/Trig' options to the [sequence slot loop options](#)^[188].
- Added Windows accelerator keys to the [global patch](#)^[312] to ease the entering of patch information. The [Enter] key now works as hotkey for the **Set Values** button, the selected address is automatically advanced by one and focus is automatically returned to the last edit field after pressing [Enter]. Hope you like it Jimmy :)
- Added level control capability to the [statics control](#)^[241].
- Added a '[Cue Builder](#)^[201]' with a cue-preset and cue-stack for building cues on-the-fly.

Misc. Changes:

Build 3

- The resolution parameter in the movement controls is now saved between sessions, one value for 16 bit controls, and one value for 8 bit controls.

Build 4

- Renamed the [Movement options](#)^[134] dialog to position options and moved it to a submenu in the movement control options menu.

Build 5

- List of sequence and list of cue now opens with the same top line they had when they were closed.

Build 6

- Changed Destroyer gobo selection to match production version.
- Changed the [Statics Control](#)^[241] to use true LTP evaluation (Latest Takes Precedence).
- Renamed the blind mode to [Freeze Output](#)^[107] to make the function clearer.

Build 7

- The Offline Visualizer is now by default enabled for new installations.

Build 14

- Increased the number of user defined [fixture groups](#)^[116] to 99.

Bug fixes:

Build 2

- Fixed a bug that sometimes would throw access violation errors when closing fixture controls.

Build 3

- Fixed MiniMac Wash fade bug.
- Fixed potential bug in cuelist introduced in 1.07 build 2 (sluggish cuelist)

Build 5

- Fixed Audio in function that broke in 1.07, build 4.

Build 6

- Fixed bug that would connect the 2518 controller via COM 1 regardless of the COM port setting in the hardware setup.
- Fixed bug that would sometime lock a cuelist using CD time code commands if the CD control was not visible.
- Fixed split color bug on SynchroZap Color control.

Build 7

- Fixed hotkey *clear sequence* # bug that would not clear the sequence when the cue consisted of static sequences only.
- Added *Show Offline Warning* switch to the [system preferences](#)^[109].
- Fixed inconsistency in the find hotkey function.
- Fixed a bug that would lock a CD timecode cuelist if no CD-ROM was configured.
- **Build 8**
- Fixed the 'cannot execute CD Timecode Commands'-error bug on cuelists not containing CD timecode commands
- **Build 9**
- Fixed a bug that would likely cause instability or even crash the application if the "show programmed fixtures" feature was enabled and fixtures were configured without DMX address.
- Swapped captions 'Near' and 'Far' for zoom in the beam section of the Generic Fixture Profile
- Fixed bug that would lead to repeated 'flashes' when using keyboard emulation of the 2532 (hope no-one is using it as a feature).
- **Build 11**
- Fixed bug that would cause position presets and user palettes to fail on the Mini MAC profile.
- Fixed level/special hotkey toggle bug.
- **Build 11**
- Fixed bug that would show *No Control Functions* Controls when using show all controls.
- **Build 13**
- Fixed MAC 2000 color wheel scroll DMX values
- Fixed bug restoring from frozen mode after loading cues.
- **Build 14**
- Fixed bug displaying MAC500/RS918 gobo control without palette.
- Fixed bug that could cause an access violation when opening a list of cues.
- Fixed FID speed fade button bug in 1220-IIR intensity control.
- Fixed bug in MCX configuration that wouldn't allow drag and drop configuration and removal of cues.
- Fixed Bug that might hinder saving of MIDI setups if not in default user library.
- **Build 15**
- Fixed bug that would make 8 bit pan/tilt fixtures very 'twitchy' when overlaying fading pan/tilt movements with movement macros.
- **Build 16**
- The first cue in the global list of cues no longer automatically loads when LJ starts up if Browse Cue mode is enabled.
- Fixed critical bug that could cause the to stop loading from the global cue window.
- **Build 17**
- Fixed bug that would reset the hotkey dialog disable option when LightJockey was restarted.
- Fixed bug that would save color schemes for the 2532 control incorrectly.
- Fixed bug that would print 2532 latch text incorrectly (or not at all) unless always split matrix buttons was selected.
- Fixed bug in Mac 250+ gobo control that would affect the focus fade parameters as well.
- Fixed bug that could cause an access violation when selecting an 'empty' channel output channel in the generics control.
- Fixed bug so the effect control for fixtures now resizes properly with 10 or more palette buttons.
- Fixed bug in Static Control so when statics are using fadetimes they should now work as intended.
- **Build 18**
- Cue/Sequence times now reset correctly when replacing sequences in the cue.
- Fixed bug in MAC 2000 effect rotation control.
- Fixed bug that would sometimes quick save an existing cue as a new cue.

Offline Visualizer updates

Build 5

Support for the following fixture modes added:

- MX-4 Extended DMX
- Roboscan 218, mode 2 (*)
- Roboscan 518, mode 2 (*)
- MiniMac Profile, Fadeable shutter mode
- MiniMac Wash, Fadeable shutter mode
- RoboColor Pro 400, mode 2 (*)
- RoboColor II, mode 2 (*)
- RoboColor III, mode 2 (*)
- (*) Speed parameters are not emulated.

Build 6

- Fixed problems with direction markers on MAC 250/300/500/600
-

Build 14

- Introduced new Offline Visualizer version (4.3). The old O/V will no longer be updated with new fixtures.
-

Build 15

- Fixed bug visualizing the 4 channel generic DMX fixture.
- Added 3D beam positioning to OV/LightJockey.
-

Build 17

- Added support for 30,12,6 and 2 channel generic DMX fixtures.
-

253 Version 1.08 Notes

**The LightJockey end user forum on the Martin Website has moved - the new
URL is <http://www.martin.dk/cgi-bin/Ultimate.cgi>
LightJockey Forum**

Fixture personalities added/changed:

Build 1

- Added personality for Martin Exterior 200
- Added Blackout and Master Intensity functionality to RGB fixtures
-

Build 2

- Added personality for Martin Atomic 3000
-

Build 4

- Added personalities for Martin Wizard
-

Features added:

Build 2

- Added Max Delay value to the [Auto Delay Control](#)^[142]. Decrement Max Delay for 'follow the leader/Snake' effects in movement macros.
- Added [Select Background Cue list](#)^[208] to select background cues from a separate list rather than from the drop down list. Background cues may now also be dragged and dropped from this list ([Cuelist](#)^[216], [DMX-in](#)^[304], [2532](#)^[298] and [MC-X](#)^[323] configuration).

- Added [Hotkeys](#)^[19] and [2532 Functions](#)^[298] for Background Cue sequence toggle (individual slots, and all on/off).
- Added [Hotkeys](#)^[19] to switch all cue slots on and off respectively.
- Added fixture profile notes to the [Fixture Icon popup](#)^[122] menu.
- Added Autolamp on command time for [user definable fixture profiles](#)^[280].
- Added Reset Command time for [user definable fixture profiles](#)^[286]
- Added paste latch/flash only in the [2532 configuration](#)^[298]
- Added the option to launch [Background Cues](#)^[238] from [MIDI](#)^[316].
- Added the option to [create 2518 .mem](#)^[84] files that may be downloaded to a 2518 controller.
- Added Hotkey for [Cue builder](#)^[201] Get Cue, and hotkeys to reset macro amplitude and speed in the [Cue Macro Control](#)^[199]
- Added the option to Customize the tab size on the [2532 dialog](#)^[302] (for touch screen use)
- Increased the number of DMX channels for the DJ ISA card (to 512 out+512 in) and the USB interface (512 Out). The restriction of the number of controllable fixtures for those two packages has also been increased to 100.
- [New cuelist implementation](#)^[216]. Includes the option to synchronizing to digital audio file formats using Winamp for playback (including MP3 files)
- The [Cue Control](#)^[184] has been slightly redesigned.
- The ability to latch [Background cues](#)^[238] from the Cue has been added.
- Specific Cue Macro Control settings for a Cue may now be [saved](#)^[204] and restored when reloading the cue.
- Added [Default DMX values](#)^[286] to the user defined fixtures (type 2 only), and the option to [apply the default DMX values](#)^[49] when saving a modified configuration.

Build 4

- Implemented Windows 2000 compatibility. Note that new [hardware drivers](#)^[24] are required to run the DMX transmitter hardware under Windows 2000.
- The implementation for the DMXADP interface has been changed. The external ADPDriver.exe application is no longer used or required.
- Increased the number of followspot presets to 10. The [followspot](#)^[344] function has been slightly modified.
- The sync buttons on the [Master intensity control](#)^[151] now also synchronizes Bump commands.
- Increased the number of entries in the [Statics Control](#)^[241] from 10 to 20.
- Added the option to restore sequence slot on/off status in the [Background Cue](#)^[238] (optional)
- Added option to show the notes on [start up](#)^[112]
- Added optional bitmap transparency to user [defined fixture profiles](#)^[279].

Build 6

- Added integrated [backup and restore](#)^[58] of user libraries.

Misc. Changes:

Build 4

- A lot of controls and dialogs have been redesigned slightly for better resizing when using different Windows fonts.
- The [BGCue button](#)^[238] and [Statics button](#)^[241] on the toolbar have been redesigned - active BG cues or statics are now indicated with a green 'LED'.
- It is no longer necessary to allocate a serial port to use the 2532 in 'virtual' mode (using the control without actually connecting the 2532). The control is now always enabled, even if no 2532 is configured. For existing installations it is recommended to disable the 2532 hardware connection (select disabled in the [hardware setup dialog](#)^[24]) since 'noise' on an un-connected RS232 port may cause unpredictable behavior.
- Added bitmap background transparency to various buttons and built in fixtures icon bitmaps (almost all fixture icon bitmaps have been updated)

Bug fixes:

Build 1

- Sequences in the Background Cue no longer advance when in 'off' mode.
- Hotkeys for Macro auto delays no longer sets sequence changed state
- Clear Cue option on Cue Stack now works.

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Build 2

- Flash sequences activated via keyboard hotkeys are no longer continuously restarted due to keyboard repetition.
- Setting on/off states of individual sequences in the Background Cue now updates the Background Cue output immediately.
- The memory load indicated in the Status Bar now updates correctly (once every second). The %-value and color interpretation has also changed. See [StatusBar](#)^[107].
- Launching external programs (i.e. the Offline Visualizer) and restarting LightJockey now works correctly when the install path exceeds 60 characters.
- The problem with the Sound Analyzer locking up when exiting in Windows 2000 has been fixed
- A bug in the manual sequence trig that could cause overlapping scenes or 'no-trigs' has been fixed.
- The Get Cue function in the [Cue-builder](#)^[207] now also reads the sequence slot on/off state in the cue control.
- Sequence time overrides via DMX in bug fixed - it is no longer necessary to override cue time via DMX in as well.
- Fixed bug on CX-4 gobo strobe fade button.
- Fixed bug that would create an access violation if the special commands control was open when a different type of user defined fixture was selected.
- Fixed bug in smoke control so that the smoke timer always uses programmed level regardless of 'Smoke Button use Level' state.
- Position presets can now be used in followspot settings.

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Build 4

- Fixed bug that would crash LightJockey if the 2532 toggle command was applied to a 2532 button and then used to close the 2532 control.
- Added a check on data files marked for read-only. Read-only file attributes will now be cleared on startup, rather than crashing the application.
- A running Cuelist (started with a startup command) no longer stops the first time the cuelist control is opened
- Fixed 'Toggle GroupView' hotkey bug
- Fixed a Windows 2000 related bug concerning the fixture CMY controls.
- Fixed bug causing instability and crashes related to unaddressed fixtures and the 'show programmed fixtures' option.
- Fixed bug concerning the 'Follow active BG cue' in the Select BG cue list.
- Fixed bug concerning export of bitmaps for the second effects palette when exporting user defined fixture profiles.
- Fixed bug that prevented the 'Open Controls on LightJockey Desktop' option to work correctly with the 2532 Control.

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Build 6

- Fixed bug in Wizard movement control (missing update)
- Fixed timing problem in initialization of PCMCIA interface
- Fixed timing problem in initialization of ISA Club interface
- Fixed problem with updating installations using ADP interface - Version 1.08 build 4 ADP installations will need re-configuration of the ADP to work.
- Fixed bug related to double click processing in the movement-preset list.
- New Windows 2000 driver for LightJockey PCMCIA card. The new driver fixes problems in installations where the old driver wouldn't work after reboot - if the existing driver works fine, there is no need to update.

· To update the driver in existing installations first install the LightJockey update - then right click *my computer* on the Windows desktop. From the popup menu select *Properties*, and then from the *Hardware* tab select *Device Manager*. Locate the DMX Card under *Other Devices* in the hardware list. Right Click the DMX Card entry and select *Properties* from the popup. On the *Driver* tab select *Update Driver* to start the *Upgrade Device Driver Wizard*. Select the *Search for suitable driver* option, then select *specify a location* and click next. Use the Browse function to locate updated driver in <LightJockey Installation>\HardwareDrivers\PCMCIA\W2K - select the *dmxcard.inf* file located in the directory and click *Open*, then *OK*. Once Windows has examined the new driver, click *next* to update the installation with the new driver.

Build 7

- Another initialization bug of the ISA Club interface fixed - the bug could cause the ISA card to pass initial tests, but not initialize correctly (no DMX output).
- Fixed problem in Windows 9X installations when restoring user data library if the restore file was placed in the root directory of the media.

Offline Visualizer updates

Build 1

The old version of the Offline Visualizer is no longer distributed with update files or installation CDs. Existing installations that rely on the old version will still be able to use it, but it is no longer possible to select it from [system preferences](#)^[109]. References to the old version of the Offline Visualizer have been removed from the help file.

Build 4

- Added Acrobat (mirror drum rotation not emulated)
- Added Profile for CX-4
- Added Profile for Exterior 200
- Added Profile for SynchroZap (mirror rotation not emulated)

The following non-Martin Fixtures now have partial support in the OV

Clay Paky

Golden Scan HPE
Mini Scan 150/300
Mini Scan HPE
Pin Scan
Stage Scan
Stage Color 300
Stage Color 575
Stage Color 1000
Stage Color 1200
Stage Light 300
Stage Zoom 1200
Super Scan Zoom
Tiger Scan

HES

AF 1000
Color Pro HX/FX/HX-I
Cyberlight CL/SV
Cyberlight CX
EC-1
ES-1
Intellabeam (13 ch, 8ch)

Studiobeam PC (std/puremix)
Studio Color 250
Studio Color 575
Studio Spot 250
Studio Spot 575 CMY
Technobeam
Technobeam (Iris)
Trackspot (lo/hi res)

254 Version 2.0 Notes

Fixture personalities added/changed

Build 1

- Added personality for Martin FiberSource CMY150.
- **Build 3**
- Fixed bug In Roboscan 1220II Rotating gobo function.

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Misc. Changes:

Build 1

- Changed driver implementation for Windows 2000 ISA card driver so that it is now useable under Windows 2000 when not logged in as administrator (i.e. standard user login). **To make updates of previous versions work in non-administrator login under Windows 2000, the driver must be-re-installed**^[24].
- Note that the location of the new installer program has changed to <LightJockeyInstallation>\HardwareDrivers\PCI_ISA.

Bug fixes:

Build 1

- Fixed fixture ID function for a number of built-in fixture profiles.
- Fixed bug in Clear Fixture functions on the fixture popup menu. The clear command would in certain circumstances overlap to first channel of the next fixture.
- Fixed bug that could cause the cue-builder to appear in multiple invalid copies.
- **Build 2**
- Fixed bug in smoke control with smoke button on duration toggle, and duration < 1 second.

- **Build 4**
- Fixed bug that would cause the Static Use Fadetime option to reset after LJ restart.

Misc. Changes:

Build 3

- the Set Current Cue command now appears on the command panel in the cuelist after use.

Offline Visualizer updates

Build 2

- Added the option to pass keyboard actions to LightJockey from the Offline Visualizer ([OV Settings Menu](#)^[337]) - LightJockey hotkeys will now work even if the Visualizer has the Windows focus.
- [Focus beam](#)^[336] on non-moving fixtures (i.e. Par Cans or RoboColors) now focuses the selected fixtures in real time.

Build 3

- Added proper profile for Roboscan 1220IIR

255 Version 2.1 Notes

[Previous Notes](#)^[379]

[Next Notes](#)^[383]

Fixture personalities added/changed

Build 1

- Built-in profiles for Mac 250 and Mac 250 now programs color, effect and extended controls when both types are selected.
- Built-in profiles for MiniMac Profile and MiniMac Wash now programs extended control functions when both types are selected.

• Build 8

- Added profile for MAC 2000 Performance

• Build 12

- Added profile for Alien O5

• Build 13

- Added speed control for the RoboColor I/II via DMX interface to the specials control.

• Build 14

- Fixed the number of configurable gobos on Mini Mac profiles. It is now possible to customize the last gobo as well.

• Build 16

- Corrected the number of DMX channels used by the MAC600NT profile to 15.
- Modified the MAC2000 Performance profile to fit version 1.0 (production version) of the DMX protocol.
- Modified AlienO5 profile to include reset command according final fixture protocol.

• Build 20

- Added programming compatibility between MAC500 and Roboscan 918. It is now possible to select colors/gobos/effect simultaneously for these fixtures (fixed gobo only on fixtures in identical SCRL/non-SCRL modes)
- Removed random gobo buttons from Maestro profile (was never implemented in fixture).

Features added:**Build 3**

- Added Import Cuelist option to the cuelist control. Drag the cuelist to import from the list of cuelists to the line where the cuelist should be imported to (below the last line to add the cuelist). Then from the Link or Import dialog select Import.

Build 6

- Finalized support for the [PCI 512 and PCI 2048](#)^[24] interface cards.

Build 8

- Fixture selection mode (exclusive/inclusive) is now saved and restored when LJ is restarted.
- Added 'Add to Cuepage' option to the [save cue dialog](#)^[204].
- Added MTC sync frames to the Cuelist [MIDI Timecode](#)^[229] options.
- Added 'Select all programmed' to [desktop popup menu](#)^[61] - also as [hotkey command](#)^[19]
- Added 'Select fixture like Master' as [hotkey command](#)^[19]
- Added 'Select All programmed of this type' to the [Fixture Icon popup](#)^[122] menu - also as [hotkey command](#)^[19]
- Added 'key press pass to LJ' to the [Audio Analyzer](#)^[322] - LJ hotkeys may now be used even if the Sound Analyzer has the Windows focus.

Build 12

- The [Master Intensity control](#)^[151] can now be opened by double clicking the Master Intensity field in the [status bar](#)^[107]
- Added display of pan/tilt cycle time to the [Movement Macro Control](#)^[130].
- Added [hotkeys](#)^[19] for assigning position presets 1-10 to selected fixtures.
- Added the option of patching the value of a [Master Intensity](#)^[151] sub master from a DMX out channel.
- Added the [LightJockey Mediaplayer](#)^[234] for playback and timecode synchronization of digital media files (including digital video files).

Build 14

- Added option to disable functions controlled by DMX-in in the [DMX-in dialog](#)^[304]
- Added [Hotkey](#)^[19] for Cue control 'Chase Man' function

Build 16

- Added [Generic DMX Macros](#)^[244] as a new type of programming elements. Generic DMX macros allows programming of macros on any DMX control channel. Added one macro slot to the cue control to hold a generic macro to be launched together with the cue.
- Added a [Sequence Snapshot](#)^[183] option to the sequence control to 'record' the current DMX output values to the current scene.
- Added a couple of buttons to the [Cue Control](#)^[184] for quicker access to the [Background Cue Control](#)^[238] and [List of Background cues](#)^[208].

Build 17

- Added sorting by column to the [list of cuelists](#)^[238].
- Added functions to automatically select function when using mouse emulation in the [2532 control](#)^[304] and the virtual button only contains one function (latch or flash).

Build 19

- Added option to abort [data restore process](#)^[55] if the restore file is corrupted.

Build 20

- Added function to ensure that only one instance of the same LightJockey installation can be running - it is no longer possible to start a second instance of the same LightJockey.exe. To run multiple instances of LightJockey at the same time make sure to install and run the individual instances from different installations.
- Added option to startup LightJockey in a user library [determined from a command line parameter](#)^[54].
- Added [Hotkey functions](#)^[19] to stop and start individual sequences in the cue.
- Added option to set random delay by fixture rather than by offset in the [Generic DMX Macro Control](#)^[252]

Misc. Changes:**Build 3**

- The cuelist now maintains focus on inserted lines after cut & paste operations.
- The cuelist control now gives a warning when trying to run a modified cuelist containing a link to another cuelist.

Build 6

- Modified setup timing on ISA club and DJ cards. This should fix remaining problems with cards that seems to initialize correctly, but doesn't transmit DMX.

Build 8

- Windows9X USB drivers located in the <LJPath>\HardwareDrivers\USB\ folder will automatically be deleted when LightJockey is updated and started.

Build 12

- Warnings (freeze, blackout and offline) now appears centered on the main LJ desktop.

Bug fixes:**Build 1**

- Fixed bug that disabled 'open on LightJockey Desktop' for the List of Cues view.
- LJ will no longer shut down Winamp unless it Winamp was originally launched by LJ.
- Fixed control value refresh bug when using clicking up/down buttons on the cue macro control.

Build 2

- The auto lamp on command no longer sends a zero value to the first channel of a 4 channel generic DMX fixture.
- The smoke button on the smoke control no longer stays active if the cursor moved out of the smoke button before the (mouse) button is released.

Build 8

- Another fix for ISA Club cards that did not initialize correctly (no DMX output)

Build 12

- Fixed bug in Cue and Sequence times controlled from the 2518 via RS232.
- The Off-line entry in the main menu that disappeared a couple of releases ago is now back in place.
- Fixed MAC2000 Performance shutter rotation angle fade button bug.
- Added explanation and a partial fix for [Winamp timecode inconsistencies](#)^[233].
- Fixed bug associated with the autostart of external executables.
- Fixed bug related to auto lamp function and user defined fixture profiles.

Build 14

- Fixed bugs with various up/down buttons getting stuck in auto-repeat.
- Fixture Home hotkey function will now actually home the fixtures.

Build 16

- Fixed problem with the [Sequence Control](#)^[178] in [blind mode](#)^[183]. The '*Keep contents when entering blind mode option*' now also works when loading a sequence in blind mode.

Build 17

- Fixed a User Library restore from floppy diskette Windows 9X bug (again).
- Fixed problem when fixtures are set to invert pan/tilt or pan/tilt-swap and using the focus beam function in the Offline Visualizer.
- Fixed problem where LJ would starve the Offline Visualizer for CPU resources when multiple fixtures were positioned using the focus beam function.

Build 19

- Fixed DMX offline problem when using the USB interface.

Build 20

- Fixed desktop grid resize bug.
- Fixed problem when setting pan/tilt or effect speeds with multiple fixture types selected.

Offline Visualizer updates**Build 3**

- Added a new [calibration option](#)^[340] to help positioning fixtures in the 3D room. The calibration feature

only works when the fixtures are physically connected to LJ.

256 Version 2.2 Notes

Fixture personalities added/changed

Build 4

- Added profile for AlienO2

• Build 6

- Added profile for MAC 2000 Wash

Features added:

Build 1

- Added Pan/Tilt Macro Freeze option to the [Cue Macro Control](#)^[199]
- Added MTC timeout ignore option to the [cuelist](#)^[229]
- Added a warning dialog if the [USB](#)^[34] interface gets disconnected when in use. The interface now gets properly reinitialized when re-attached. Note - the warning and subsequent re-initialization only occurs if there are modifications in the DMX output values while the interface is disconnected.
- **New USB driver available** - the new driver no longer crashes the PC when powering down from software in Windows 2000/XP.
- Added [hotkeys](#)^[19] for individual cue control slot selection toggle (selection on/off).

• Build 2

- Added hotkey function to load selected Background Cue from the [Select Background Cue list](#)^[238]

• Build 4

- Added new [HTP channel](#)^[312] groups, primarily for patching multiple single channel fixtures (e.g. par cans through dimmer packs, or on/off fixtures via switch packs) through DMX-in using HTP (highest takes precedence) from the DMX-in values combined with values generated by LJ.
- Due to popular demand the Sequence Playback buttons will no longer be disabled when loading a static sequence (sequence with only one scene)

• Build 5

- Added [Hotkey function](#)^[19] to emulate a music trig from the sound analyzer.
- Added [Hotkey functions](#)^[19] to set/clear DMX in Enable.
- Added [System Preferences](#)^[109] option to force LightJockey to start on the secondary monitor in a multi-monitor system.
- Added [System Preferences](#)^[109] option to confine positions of controls within the Windows desktop (option default on)

• Misc. Changes:

• Build 1

- Modified names of cue macro (hotkey) functions from 'cue macro, <function>' to 'Pan/Tilt Macro, <Function>'.
- The [CD control](#)^[144] has been re-written to cope better with different CD-ROM setups (including CD-ROM using digital playback). A number of options has been added for better CD_ROM performance.

• Build 3

- Limited the number of [Cue Pages](#)^[213] in the [List of Cues](#)^[208] to 255.
- Modified the version check on the PCI/ISA driver so that it will no longer refuse to work with newer driver versions installed by other applications.
- Disable hotkeys in dialogs now set as default in new installations.

• Build 4

- The [Global Patch dialog](#)^[312] has been rewritten to include fixture/channel information and setup for the new HTP Channel Groups.

Build 5

- The [autolaunch file dialog](#)^[112] will now accept any file type.
- Modified the [Audio CD control](#)^[144] slightly and added minimum polling time (users of audio CDs should read notes)

Build 6

- Added odd/even fixture filter to the [group selection dialog](#)^[116].
- Added deselection of odd/even fixtures to the [main desktop popupmenu](#)^[61].

Bug fixes:**Build 1**

- Fixed bug that could lead to access violation or crash when browsing color and gobo bitmaps for user defined fixtures.
- Fixed problem that could cause the movement macro control to display garbage on the main desktop on Windows 9X systems.

Build 3

- Added a check for invalid cue page files that could cause LJ to crash on startup.
- Fixed bug that would not display desktop tabs correctly after restoring a backup to the current user library.
- CMY and RGB values for user defined fixtures now gets saved in user palettes.

Build 4

- Fixed bug where channels patched from another DMX output source would not react to blackout commands.
- Fixed bug in MIDI in module - 'Release Seq on note Off' option is now saved between sessions.
- Fixed bug where Windows file dialogs would cause user defined fixtures to display the default fixture icon.
- Hotkey settings loaded from the hotkey menu now loads properly.
- Problem with synchronizing shift button status and popup menu when adding channels to groups in the generic DMX control fixed.
- Loading a transparent cue no longer resets sequence on/off states for non affected sequence slots.
- 'Smoke button use level' setting in smoke control now works correctly.
- Fixed bug in pan 360deg function for built in moving head profiles.
- User Palettes will now save the correct fade state when the effect is 'off'.
- Wrong value for Lamp Off command for Roboscan 1220CMYR,RPR,XR fixed
- Show Programmed Fixtures function rewritten and should cause no more random fatal crashes.
- Fixed bug in LJMedia Player (now version 1.1), returning from full to default screen size now allows normal movement of the control.
- Backing up a user library will no longer mess with LightJockeys ability to find the correct icons and bitmap files.
- Triggering chased manual sequences with the bounce hotkey no longer resets chase direction to fwd or rev.

Build 7

- Fixed resize problems under Windows XP on Statics Windows and Sequence Slot Names Window.

Offline Visualizer updates

257 Version 2.3 Notes

Features added:

Build 1

- Added **Trig all manual default** and **Emulate Audio Trig** functions to [DMX-in](#)^[304].

Misc. Changes:

Build 1

- Modified timer resolution of the sequence chase function in the cue from 0.05 to 0.001 seconds - resulting in a much better 'tab' synchronization.

Bug fixes:

Build 1

- Fixed bug that would cause access violations when an RGB fixture doesn't have a DMX address assigned.
- Fixed help file entry on [Freeze Output function](#)^[107].

Offline Visualizer updates

Build 3

The Offline Visualizer has been updated to version 4.4 rev 2.

The new version includes support for prism and frost effects - note that the prism effect does not model the prism effect realistically but it does provide a suitable visual feedback when prisms and related effects such as rotation are applied.

The new version is compatible with scene files created with older versions of the O/V - however some of the new features such as prism emulation may not be properly enabled until the scene file format is updated. To update the scene file format, clear the current scene (new) - then re-open the scene file with **Open and Update** from the files menu. Make sure to re-save the scene file with the updated format.

MSD line gobo version 2 format is now supported making the OV compatible with the latest version of MSD fixture profiles.

The offline visualizer will now automatically create line gobo files for bitmaps used for gobos that are not already present - the automatic process works best for black and white bitmaps that are not too small.

The scene update frequency may now be set by a priority timer rather than running on idle process time (Settings/Preferences/Max framerate).

258 Version 2.5 Notes

Fixture personalities added/changed

Build 1

- Added profile for Martin MX-10
- Added profiles for generic [DMX switch packs](#)^[167] (1,2,4,6,8,12,16,24,30,32 channels)

Build 5

- Modified gobo controls for: MAC250+, MX-10, MAC500 (SCRL), RS-918 (SCRL). Gobo rotation may now be stopped by clicking the active rotation direction (CW or CCW).

- **Build 6**

- Added built in profiles for Martin CYCLO 02,03 and 04.

- **Build 7**

- Added built-in profile for Martin MAC 250 Krypton
- Note: Martin Minimac Maestro and Image scan has been moved to 'Imagers' section in the [built-in profiles list](#)^[40].

- **Features added:**

- **Build 1**

- Implemented support for up to 4 USB DMX-out interfaces, as well as support for DMX-in via dedicated USB DMX-in interface. This means that configuration and use of the USB/DMX interface has changed - please see [USB hardware installation notes](#)^[34]. Note the USB DMX-in interface has not yet been released.
- [The Generic DMX Macro](#)^[244] now implements 16 bit DMX macros for 16-bit DMX control channels, making it much more suitable for use with 16-bit pan & tilt and other 16-bit control channels. It is no longer possible to assign macros or macro parameters to 16-bit LSB control channels - macros and parameters assigned to LSB channels in previous LJ versions will no longer work - macros and parameters assigned to MSB channels will run unaffected.
- Added new 'Stepped Ellipse' macro type to the [movement macro engine](#)^[130].

- **Build 5**

- Added [hotkey](#)^[19] for 'Toggle list of cuelists'
- Added ability to execute [hotkey commands](#)^[19] from a [cuelist](#)^[222].

- **Build 6**

- Added a few commands to the [RS232 remote interface](#)^[82]

- **Build 7**

- Added mode for using touch devices (rather than a mouse) in the [movement control](#)^[134].
- Profile for [External Application/Device plugin](#)^[354] implemented. The profile implements a link between LJ and an external application that can be used to control various external devices or applications.

- **Misc. Changes:**

- **Build 1**

- The state of various options in the save sequence dialog is now preserved between sessions.
- Added BMP readout to the [sequence control](#)^[178]. Added option to display scene time as BPM on the [cue control](#)^[184]
- Added Cue value 512 to the DMX in cue latch function
- Added 'Auto load last used scene' switch to Offline/Preferences on the LightJockey main menu. If unchecked - the offline visualizer will no longer automatically load the last used scene.
- Added driver files for PCMCIA card, hardware revision 3.

- **Build 2**

- Fan Out and Movement options windows now automatically close when the movement control closes.
- Import fixture definition file dialog will now create and default to an 'exports' folder rather than defaulting to 'my documents' if an exports folder doesn't exist.
- The [DMX output monitor](#)^[117] has received a major overhaul. It now includes functions such as being able to modify DMX output values directly as well as a 'search channel' function.

- **Build 3**

- Changes to [LJ Media player](#)^[231] (now version 1.3) - it is now possible to launch multiple instances of the LJ media player from the cuelist to playback multiple simultaneous media files. Also a loop playback option has been implemented to loop playback of a media clip indefinitely.
- Cuelist Timecode log window now retains last opened position.
- Added "Load Cue on doubleclick" option to [Cuelist preferences menu](#)^[216].
- Added "Run to line" in the Cuelist Popup Menu - using "Run to" will update the cue control with any cues (including transparent cues) that are loaded previously in the cuelist, giving an 'up to date' content of the cuelist corresponding with the contents that is loaded to the cue control when the

cuelist is running. The Run to line function only updates the cue control contents and ignores time/timecode, media and other types of commands.

- Added remaining cuelist hotkey functions to 2532 and 2518/Rs232 command set.
- **Build 5**
- Added new 'Color' palette function to Generic Fixture Profile dialog. Note that profiles using this palette function will show another default function on earlier LJ releases.
- Added view 'Fixture Notes' to rightclick popup menu in the Configured Fixtures list in the Fixture Configuration dialog - note that the function is not enabled for modified fixtures unless the configuration has been saved first.
- Added new functions to [edit palette values](#)^[271] in the 'Generic Fixture Function' dialog. New functions include the ability to cut and paste entire palettes, as well as value insert and delete functions.
- Changed *LTP* designation to *LoTP* in the Global Patch dialog to avoid confusion.
- **Build 5**
- Save cue control now retains 'save as transparent' and 'save macro control values' states between sessions.
- **Build 6**
- Added new options to the [Intensity definition](#)^[280] for user defined fixtures. Please note that users will need to run at least LightJockey version 2.5 build 6 in order for the new options to take effect (earlier versions just ignores the new options).
- Added Clear after Save option to the [Save Cue Dialog](#)^[204]
- Added 'Clear Cue Stack' and 'Clear All Sequences' hotkey functions for the [Cue builder](#)^[201].
- Added option to hide the top status panel on the large size [2532 control](#)^[302].
- Blackout and freeze warning dialogs now retains their positions on screen between sessions.
- Changed pan/tilt maximum resolution factor for built-in 16 bit fixtures from 128 to 256.
- **Build 7**
- **Sequence control snapshot function temporarily disabled until further bugs are fixed!**

Bug fixes:

Build 1

- Fixed bug restoring cue sequence slot names and other cue control properties from backup file. Fixed problem restoring cue page names and other load cue control properties from backup.
- Fixture information now rebuilds properly when replacing user defined fixture profiles with built in fixture profiles without starting LightJockey.
- Replacing a userdefined profile with the generic user definable fixture 2 now correctly updates the fixture username.
- Selecting between fixtures with different user defined profiles would not update the channel list in the [Generic Macro editor](#)^[244]. This is now fixed.
- In previous versions the [Generic DMX Macro editor](#)^[244] display the wrong pan/tilt channels for user defined fixtures that patches pan and tilt parameters differently from the default MSB/LSB format. The editor now shows the channel allocation correctly according to the 'internal' control channel representation - which may not be the same as the final allocation if MSB/LSB parameters are patched.
- Previous versions of LightJockey would correctly identify the presence of user defined Generic Macros in individual user libraries, but still attempt to load the macros from the main LightJockey installation folder. This has now been fixed - the macros are now correctly loaded from the individual user library.
- Fixture Group window now restores position correctly.
- Startup options are now properly restored when restoring a backup to the active user library.
- Added code to compensate for small, accumulating timing errors in the sequence and cue timings which would cause the sequences and cues to 'slide' over time.
- **Build 2**
- Fixed bug that would cause the cursor to disappear if the pan/tilt control was closed with a hotkey while in right-click lock cursor mode.
- The bugfix in 2.5 build 1 concerning wrong display of patched pan/tilt parameters in the generic DMX macro unfortunately affected the display in the global patch dialog so that it would display wrong

channel information. This has now been fixed.

- A bug that would cause LJ to attempt a printout when saving 2510 binary files has been fixed.

• **Build 3**

- Fixed bug that would cause the cuelist timecode log to return "Wait DA" commands rather than "Wait MP" when "Enable Cue Logging" is enabled.
- Bugfix "Autosave cuelist on exit" option in the cuelist preferences may now be disabled.
- Changed timeout value that could cause the media player to not start playing the media clip when using the "Run from Line" command in the cuelist.
- Fixed bug that could cause certain Windows (e.g. cue control) to reset their "stay on top" state if other programs using stay on top was launched through the auto launch program function (autostart).

• **Build 5**

- Reloading a custom fixture selection in the fan out control now correctly re-loads the fixture selection order as well as the fixture selection status.
- Fixed bug that could crash LightJockey if a sequence was saved at the same time as being active as a flash sequence.
- Fixed bug in scene snapshot function that would cause pan/tilt inverted fixtures to be inverted twice.
- Fixed bug that would cause an access violation error when pressing enter after modifying channel description for channel 32 in the Generic Fixture Profile dialog.
- Fixed bug that would cause subsequent library restore operations to fail if a restore was previously performed from a write protected file (typically copied or restored from a read-only media such as a CDROM).
- Bugfix: Clear Fixture/Clear Selected fixtures from the fixture icon popup now properly clears pan/tilt macro parameters.
- Rewrote function requiring the presence of SHLWAPI.DLL which is not part of the original Windows 95.

• **Build 6**

- Problem with certain windows and controls such as the sequence- or cue-control disappearing behind the desktop is now fixed.
- Fixed built-in profiles for Wizard and MiniMacs in Intensity Mode so that DMX-in Sequence Intensity only affects DMX values within the intensity value interval.
- Fixed a potential timing issue with functions from LightJockeys external functionlist called from other applications (such as LJ touch).

• **Offline Visualizer updates:**

Build 7

- LightJockey now ships with offline visualizer version 4.5.

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259 Version 2.6 Notes

Fixture personalities added/changed

Build 1

- Added built-in profiles for Martin Imager Gobo and Imager Gobo+Scanner attachment.
- Added built-in profiles for Imager Rotating GoboWheel and Imager Rotating GoboWheel + Scanner attachment.
- Modified Martin Wizard profiles to include auto lamp strike command.
- Swapped prism CW/CCW rotation direction in MAC250 Krypton, MAC250, MAC250+ and MX10 profiles to match protocol specifications (this does not affect scenes already programmed).
- Added built-in profile for Martin CYCLO 04 DMX
- Fixed several bugs in bug in MAC 250 Krypton profile. Effect speed control not working, gobo shake

control not allowing gobo# 6 to shake, and bugs in focus, prism and pan/tilt speed not being included in user palettes. Made a few cosmetic changes to color and gobo controls.

• **Build 3**

- Swapped gobo rotation directions (CW and CCW) on Imagers without scanner attachments (does not affect already programmed sequences).
- Added built-in profiles for MAC 250 Entour and MAC 550 Profile.

• **Build 3**

- Swapped gobo rotation directions (CW and CCW) on Imagers without AND without scanner attachments- again. Hopefully this time they are correct.

• **Build 4**

- Added profiles for Atomic Color (combined Atomic+Color scroller profile) and separate Atomic Color-scroller.

• **Build 5**

- Modified Fibersource CMY 150 Offline Visualizer link to match O/V Profile.
- Modified MAC 2000 gobo and effects palettes
- Added built-in profile for MAC 2000 Wash Studio mode
- Added built-in profile for CYCLO 03 DMX
- Fixed bug in CYCLO 04 DMX color control
- Added built-in profile for Martin CX-10.

Features added:

Build 1

- Added hotkey hooks for [Offline/Online switch functions](#)^[107]
- Added [hotkey functions](#)^[19] for Generic Macro enable/disable and Marco Engine enable/disable
- Added [hotkey functions](#)^[19] for Master intensity full/off, +/- 1 and +/-10.
- Added option to automatically activate a static entry when activating a [follow spot setting](#)^[344].
- Added [Hotkey function](#)^[19] for Offline Visualizer enable/disable
- Support for [Fingers for LightJockey](#)^[86] implemented. The implementation includes a functional virtual model of Fingers.

• **Build 2**

- Added hotkey function to show the Virtual Fingers (doesn't toggle Virtual Fingers)
- Added *stop* to userdefined fixtures palette functions.

• **Build 4**

- Added alternative [DMX-in function](#)^[304] *Cuelist Go (Alt)*, which implements Go commands using a single DMX-in value transition.
- Added Restore LJ desktop on startup option to [System Preferences](#)^[109].
- Added Flash Sequence option to [Cuelist commands](#)^[222]
- Added Sequence Intensity + on/off to [Fingers Fader functions](#)^[96]
- Added DMX-in emulation of channels 13-24, 25-36, 37-48 to [Fingers Fader functions](#)^[96]
- Added combined Freeze+B/O function to [hotkey functions](#)^[19].
- Added Statics latch and Statics level control to [2518 fader functions](#)^[309]
- Added Inverted versions of Macro amplitude and speed control via [DMX in](#)^[304] and [Fingers Jogwheel functions](#)^[99]

• **Build 5**

- The [fixture configuration](#)^[40] dialog has been modified considerably. Fixture profiles are now listed according to manufacturer.
- Added extraction of Offline Visualizer notes to the [Fixture Configuration dialog](#)^[40] as well as the [Offline Visualizer tab](#)^[294] in the Generic Fixture Profile dialog.
- Added a new, optional [fixture profile export format](#)^[276] - the new format includes support data files for the offline visualizer (if present). As a consequence of the new format, bitmap files can no longer be renamed during profile import. **Note: the new import file format cannot be imported in versions lower than 2.6 build 5.**
- Added [Use Global Chase Rate](#)^[193] to Cue control. The new option forces all manually triggered

sequences to follow the a 'global' chase, even when a new cue is loaded.

- Added function to [disable Fingers automatically selecting cueslots](#)^[86] when a function or multi-selection is activated. Fader functions changed so that only functions with relevance to cueslots may select cueslots. Flash button functions now included in cue slot selection.
- Added [option](#)^[315] to have HTP groups affected by the the intensity Master and submasters - by default HTP groups are not affected by intensity masters.
- Added [option](#)^[326] to disable automatic minimizing of the Offline Visualizer when certain dialogs are shown.
- **Build 6**
- Added support for linking up with [Capture](#)^[343]
- Added [hotkey functions](#)^[19] for [Sequence Playback](#)^[178] control (forwards, reverse and stop).
- Although still a separate application (and installation), [LJ Manager](#)^[349] is now an officially supported plug-in for LightJockey.
- Top row of Fingers Cue slot buttons may now be configured with cue slot functions. Added button LED feedback to Slot On/Off function when assigned to top row.
- Added *Wait PC Date-Change* to [cuelist commands](#)^[222] for PC clocked cuelists crossing midnight

Misc. Changes:

Build 1

- Modified [2532 function list](#)^[298] so page selections are now assignable to matrix buttons.
- [Hotkey function](#)^[19] trig sequence default now also trigs sequences in audio trig mode.
- Changed LTP designation to LoTP in [sequence intensity](#)^[196] settings to avoid confusion with the usual meaning of LTP (latest takes precedence)

Build 5

- Applying a user defined profile from the [definition dialog](#)^[286] now includes the specified default DMX values to the current default DMX output.
- Modified **Save** and added **Save as** function for user defined profiles. **Save as** works 'as usual' - **Save** will suggest the original profile data filename (if any) making it easier to modify and re-save a profile without hunting down the original filename. Note that the save option is not be available for fixtures configured in earlier versions.
- Modified [Disable Hotkeys in Dialogs](#)^[16] function for more consistency.
- Removed *Disable Hotkeys when Active* option from [the Generic DMX control](#)^[169]. Keys assigned as hotkeys now perform assigned actions.
- Removed *Disable Hotkeys in Cue# Entry* option from the [list of cues](#)^[208]. Keys assigned as hotkeys now perform assigned actions.
- Added COM5 through COM9 options to [Fingers setup](#)^[86], 2518 connection through RS-232.
- Modified timings on RS-232 connection to 2518 in mode 2.
- Doubleclicking a bitmap in the [Select Bitmaps](#)^[127] dialog now automatically advance the list by one item until the last item is reached.
- Modified Fingers pan/tilt jogwheel functions so initial pan/tilt values are captured from the current output values if the current scene does not have any pan/tilt values (fadestate is off)

Build 6

- Fixture selection from the Offline Visualizer now disabled when individual fixture definition or configuration dialogs are open.
- Several Fingers [jogwheel](#)^[99] functions now display the actual value of the function controlled on the status panel rather than the relative value change (e.g. smoke level is now shown as absolute value) - names of several functions changed slightly. [Snapshot and recording from DMX Output](#)^[183] (previously known as Sequence Snapshot) is back, now supports multi-scene recording of real-time DMX output to sequences
- Removed the pan/tilt cycle time display option from the pan/tilt macro control. The cycle times are now shown directly on the drag bars (which has been renamed from speed bars to cycle time bars). There are no changes in the function of the drag bars.
- Sequence slots in chase mode (manual trig mode, chase enabled) now retains the loop direction with witch they were saved rather than defaulting to forward.

- Sequence loop direction can now be set for sequences in chase mode through the [loop options](#)^[188]
- Individual [position options](#)^[134] are now disabled if functions are not supported by fixture profile.
- CMY Control color picker now refreshes when the 'hidden' color is modified.
- Added Hotkey disable in dialogs filter to [Cue Time control](#)^[192]
- The top row of Fingers cue slot buttons are no longer reserved for multi selection mode, but may now be configured with cue slot functions. The multi select function (which is unaltered) may now be disabled from the [setup dialog](#)^[86]. Since the buttons can contain functions they will no longer select a fader for relative adjustment via jog-wheel. To select the fader value to be adjusted, use the deactivated state (hold square button) before pressing the button (or move the fader) to select which fader to adjust.
- Fingers cue slot buttons now updates cue slot selection in cue control even when Fingers is in inactive state.

Bug fixes:

Build 1

- Fixed bug in 2532 dialog - tab names now refresh properly after loading a setup file.
- Fixed a couple of bugs in [RS-232-in](#)^[82] program. MSB data bytes now correctly calculated as 128*value (not 127). Clear Cue command (Cue #0) now works. RS-232-in application is now version 1.3.
- Fixed problem that would cause various errors if data files containing user defined fixture profiles is tagged as read-only (read-only tag is cleared).
- Fixed bug executing Hotkey commands in cuelists when in manual advance mode.
- Any channel type (not just only intensity channel types) may now be assigned to one or more HTP groups without ignoring the DMX value generated by LightJockey programs.

Build 2

- Fixed pan/tilt control size problem with built in 16-bit fixtures under large fonts.
- Fixed size problem with Fingers setup dialog and large fonts.
- Fixed Fingers bug refreshing F1-F10 button contents on Status Panel with shiftlock disabled
- Fixed Fingers bug on status panel showing strings with & character as keyboard accelerator character (&key would become key)
- Fixed missing help file link from Virtual Fingers
- Fixed bugs that could cause blackout and freeze warnings to occasionally reset their positions to default.
- Fixed bug that would cause sequences with start- and end-scene limited by cue loop options to start incorrectly at scene 1 when *restore sequence enabled state* was set in cue preferences

Build 3

- Fixed bug in Fingers DMX-in emulation function (flash wouldn't release properly)

Build 4

- Fixed bug that could cause automatic launching of Virtual Fingers to launch applications included in startup options twice.
- More fixes on sequence loop options - added Trig on Load option to the [Sequence Slot Loop Options](#)^[188] dialog.
- Invalid bitmap formats no longer stops palette gobo bitmap selections from building (added error message)
- Fixed Global patch bug where assigning a DMX in or DMX out sequence could cause an already patched source to reset to channel 1.

Build 5

- Fixed relative pan bug for MAC 250 Entour and Krypton
- Fixed bug where different fixture selection options would not always update solo states.
- Using [sequence intensities](#)^[196] (through DMX in or Fingers) no longer affects fade times programmed with the sequences.

Build 6

- Fixed Fingers statics levels bug (output from statics not correctly updating)
- Fixed problem with DMX output monitor value overwrite function messing with DMX overwrite values

from external applications.

- Fixed problem that could cause LJ to stop calculating DMX output values after creating a 2510 or 2518 download file.
- Fixed bug that could cause the cuecontrol to incorrectly indicate chase state for sequences switched from chase mode to auto or music trig.
- In exclusive fixtureselection mode fixture group hotkeys no longer de-selects fixtures unless the new fixture group actually exists (it is still possible to create and select an empty fixture group for quick deselection of all fixtures).

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Offline Visualizer updates:

Build 1

- Offline visualizer updated to version 4.5.0. build 2. This release supports visualization of continuous color scroll and removes 'black' beams (when colors or gobos are specified as black). Note that some offline fixture profiles may need to be updated in order to show continuous color scroll.

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Build 5

Offline visualizer updated to version 4.6.2 (build 4).

- Supports extraction of notes from Offline Visualizer profiles
- Supports exports of Offline visualizer support files through LightJockey.
- Supports new "solid beams projection" display-mode.
- Supports fixture position editing via fixturelist.

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Build 6

Offline visualizer updated to version 4.6.4 (build 6)

- Adds support for animation wheels
 - Fixes bug in initial startup folder selection
 - Fixes arrow pointer (fixture direction) bug
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