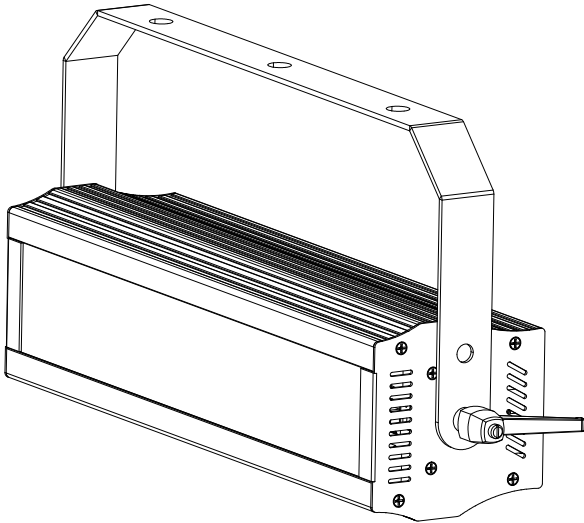


Strobe CWL



User Manual



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Manual: Revision C

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Safety information



WARNING!

Read the safety precautions in this manual before installing, operating or servicing this product.

The following symbols are used to identify important safety information on the product and in this manual:



Warning!

Safety hazard. Risk of severe injury or death.



Warning!

Powerful light emission. Risk of eye injury.



Warning!

See user manual for important safety information.



Warning!

Hazardous voltage. Risk of lethal or severe electric shock.



Warning!

Hot surfaces and fire hazard.



Risk Group 1 product according to EN 62471. May be harmful to the eyes. Do not stare at the light source and do not view the light output with optical instruments or any device that may concentrate the beam.

This lighting fixture is for professional use only and must be installed by a qualified technician. It is not for household use. It presents risks of severe injury or death due to fire hazards, electric shock, falls, and epileptic seizure in persons who are flicker-sensitive. It produces a powerful light that can create a fire hazard or a risk of eye injury if the safety precautions below are not followed.



Install, operate and service RUSH by Martin™ products only as directed in their user manuals, or you may create a safety hazard or cause damage that is not covered by product warranties.

Follow the safety precautions listed below and observe all warnings in this manual and printed on the product. Keep this user manual for future use.

For the latest user documentation and other information for this and all Martin™ products, please visit the Martin website at <http://www.martin.com>

If you have any questions about how to install, operate or service the fixture safely, please contact your Martin™ distributor (see www.martin.com/distributors for details) or call the Martin™ 24-hour service hotline on +45 8740 0000, or in the USA on 1-888-tech-180.

Respect all locally applicable laws, codes and regulations when installing, operating or servicing the fixture.



Protection from electric shock

Do not expose the fixture to rain or moisture.

Disconnect the fixture from AC power before carrying out any installation or maintenance work and when the fixture is not in use.

Ensure that the fixture is electrically connected to ground (earth).

Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.

Socket outlets or external power switches used to supply the fixture with power must be located near the lighting fixture and easily accessible so that the lighting fixture can easily be disconnected from power.

Replace defective fuses with ones of the specified type and rating only.

Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other component is damaged, defective, deformed, wet or showing signs of overheating. Do not reapply power until repairs have been completed.

Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.

Use only a Neutrik PowerCon cable connector to connect to the power input socket.

Do not connect devices to power in a chain that will exceed the

electrical ratings of any cable or connector used in the chain.

The supplied power input cable is rated 6 A and can safely supply only one fixture with mains power. Do not connect any device to the fixture's MAINS OUT connector when using this cable. If you replace this cable and also use the replacement cable to supply only one fixture with mains power, the replacement cable must also be rated 6 A minimum, have three conductors 18 AWG or 0.75 mm² minimum conductor size, have an outer cable diameter of 6 - 15 mm (0.2 - 0.6 in.) and be temperature-rated to suit the application. In the USA and Canada the cable must be UL listed, type SJT or equivalent. In the EU the cable must be type H05VV-F or equivalent.

To connect fixtures to mains power in a chain, you must first obtain 14 AWG or 1.5 mm² power input and throughput cables that are 16 A rated and temperature-rated to suit the application. In the USA and Canada the cables must be UL-listed, type SJT or equivalent. In the EU the cables must be type H05VV-F or equivalent. Suitable cables with Neutrik PowerCon connectors are available from Martin™ (see 'Accessories' on page 29). If you use these cables, you can connect fixtures to power in a linked chain, MAINS OUT throughput socket to MAINS IN input socket, but do not connect more than a total of four (4) RUSH Strobe CWL fixtures.

The voltage and frequency at the MAINS OUT socket are the same as the voltage and frequency applied to the MAINS IN socket. Only connect devices to the MAINS OUT socket that accept this voltage and frequency.



Protection from burns and fire

Do not operate the fixture if the ambient temperature (T_a) exceeds 40° C (104° F).

The surface of the product casing can reach up to 55° C (131° F) during operation. Avoid contact by persons and materials. Allow the fixture to cool for at least 10 minutes before handling.

Keep flammable materials well away from the fixture. Keep all combustible materials (e.g. fabric, wood, paper) at least 10 cm (4 in.) away from the fixture.

Ensure that there is free and unobstructed airflow around the

fixture. Provide a minimum clearance of 10 cm (4 in.) around fans and air vents.

Do not use the fixture to illuminate surfaces within 20 cm (8 in.) of the fixture.

Do not attempt to bypass thermostatic switches or fuses.

Do not stick filters, masks or other materials onto any optical component.



Protection from eye injury

The light from the LED lamp is possibly hazardous and may be harmful to the eyes. Do not stare directly into the product's light output.

Do not look at the light output with magnifiers, telescopes, binoculars or similar optical instruments that may concentrate the light output.

Ensure that persons are not looking directly into the front of the fixture when the product lights up suddenly. This can happen when power is applied, when the product receives a DMX signal, or when certain control menu items are selected.

To minimize the risk of eye irritation or injury, disconnect the fixture from power at all times when the fixture is not in use, and provide well-lit conditions to reduce the pupil diameter of anyone working on or near the fixture.



Protection from injury

Do not operate the fixture near stairways or in other locations where there is a risk of falls, in corridors or near public exits.

Fasten the fixture securely to a fixed surface or structure when in use. The fixture is not portable when installed.

Ensure that any supporting structure and/or hardware used can hold at least 10 times the weight of all the devices they support.

If suspending from a rigging structure, fasten the fixture to a rigging clamp. Do not use safety cables as the primary means of support.

If the fixture is installed in a location where it may cause injury or damage if it falls, install as directed in this manual a secondary attachment such as a safety cable that will hold the fixture if a primary attachment fails. The secondary attachment

must be approved by an official body such as TÜV as a safety attachment for the weight that it secures, must comply with EN 60598-2-17 Section 17.6.6 and must be capable of bearing a static suspended load that is ten times the weight of the fixture and all installed accessories.

Check that all external covers and rigging hardware are securely fastened.

Do not operate the fixture with missing or damaged covers, shields or any optical component.

In the event of an operating problem, stop using the fixture immediately and disconnect it from power. Never attempt to use a fixture that is obviously damaged.

Block access below the work area and work from a stable platform whenever installing, servicing or moving the fixture.

Do not modify the fixture in any way not described in this manual or install other than genuine RUSH by Martin™ parts.

Refer any service operation not described in this manual to a qualified technician.



Protection from epileptic seizure

Flashing light is known to trigger epileptic seizures in persons who are flicker-sensitive. Provide advance notice that strobe lighting is in use. Display advisory notices at the point of ticket sales, on tickets if possible, in the program, and at the entrance(s) to the venue.

Avoid extended periods of continuous flashing, particularly at frequencies of 10 to 20 flashes per second. At flash rates below 5 flashes per second, it is estimated that only 5% of flicker-sensitive persons will be at risk of seizure.

Make sure that personnel at the venue are trained in the care of a person who is having an epileptic seizure and able to provide care if necessary.

If a person has a seizure, switch the fixtures off immediately.

Mount the fixture as high above head height as practicable.

Introduction

The RUSH Strobe CWL™ is a bright, compact LED linear strobe fixture with ninety-nine Cree XP-D 3 watt LEDs and an output of 17 000 lumens. Its reflector design gives a traditional Xenon strobe look. From a single flash to a blinder effect, it is the perfect companion for mobile DJs, lounge bars, venues and cruise ships. The fixture's compact, lightweight design and increased flexibility allow specification of multiple units in small- to large-scale installations.

This versatile strobe can be operated using any DMX-compliant controller or as a stand-alone unit in Show Mode. It provides a built-in microphone for sound-triggered action, master/slave operation, and 12 pre-programmed routines that synchronize dynamic effects among multiple fixtures.

The fixture is supplied with this user manual, a 1.5 m (5 ft.) power cable (local power plug not included on some versions) and a mounting bracket.

Before using the product for the first time

1. Read 'Safety information' on page 4 before installing, operating or servicing the fixture.
2. Unpack and ensure that there is no transportation damage before using the fixture. Never attempt to operate a damaged fixture.
3. If the fixture is not going to be hard-wired to an AC mains power source, install a suitable local power plug (not supplied on some models) on the end of the supplied power cable.
4. Before operating, ensure that the voltage and frequency of the local power source match the power requirements of the fixture.
5. Check the RUSH support pages on the Martin Professional™ website at www.martin.com for the most recent user documentation and technical information about the fixture. RUSH by Martin™ user manual revisions are identified by the revision letter at the bottom of the inside cover.

Physical installation



Warning! Read ‘Safety information’ on page 4 before installing the fixture.

The fixture is designed for indoor use only and must be used in a dry location with adequate ventilation. Ensure that none of the fixture’s ventilation slots are blocked.

Fasten the fixture to a secure structure or surface. Do not stand it on a surface or leave it where it can be moved or fall over.

If you install the fixture in a location where it may cause injury or damage if it falls, install as directed on the next page a safety cable that will hold the fixture if the primary fastening method fails. Martin™ can supply suitable safety cables and rigging clamps (see ‘Accessories’ on page 29).

Fastening the fixture to a flat surface

The fixture mounting bracket can be fastened to a hard, fixed, flat surface. The fixture and surface can be oriented at any angle. Ensure that the mounting surface and all fasteners used can support at least 10 times the weight of all fixtures and equipment they will support.

Mounting the fixture on a truss

The fixture can be clamped to a truss or similar rigging structure in any orientation. When installing the fixture hanging vertically down, you can use an open-type clamp such as a G-clamp. When installing in any other orientation, you must use a closed-type rigging clamp such as half-coupler clamp (see illustration on right) that completely encircles the truss chord.



To clamp the fixture to a truss:

1. Check that the rigging structure can support at least 10 times the weight of all fixtures and equipment to be installed on it.
2. Block access under the work area.
3. Bolt a rigging clamp securely to the mounting bracket, passing it through the center hole in the bracket. Use an M12 bolt, grade 8.8 steel minimum, and self-locking nut.
4. Working from a stable platform, hang the fixture on the truss and fasten the rigging clamp onto the truss.

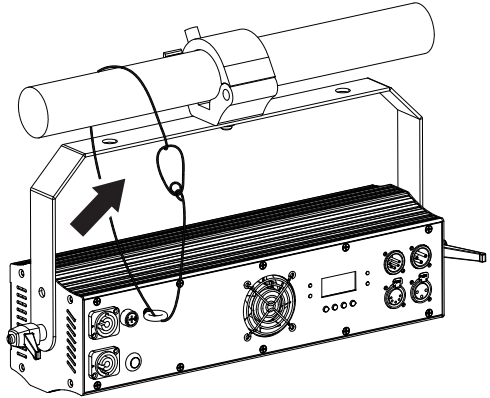
5. If you adjust the position of the fixture, tighten all fasteners once the fixture is aimed correctly.
6. Secure the fixture with a safety cable as directed below.

Securing with a safety cable

Secure the fixture with a safety cable (or other secondary attachment) that is approved for the weight of the fixture so that the safety cable will hold the fixture if a primary attachment fails.

See illustration on right. Loop the safety cable through the eye bolt on the fixture's rear panel and around the truss or other secure anchoring point.

See 'Accessories' on page 29 for suitable safety cables.



Multiple fixture mounting bracket

A mounting bracket that holds four RUSH Strobe CWL fixtures is available from Martin™ (see Accessories on page 29).

When using this mounting bracket, ensure that the bracket and all fixtures are held safely and secured with approved safety cables. Each fixture must be secured by its own safety cable. If four fixtures are installed on the bracket, you must provide five safety cables: one for each fixture and one for the mounting bracket.

AC power



Warning! Read 'Safety information' on page 4 before connecting the fixture to AC mains power.



Warning! The mains power input cable supplied with the fixture is rated 6 A and can supply only one fixture with mains power. Do not connect any device to the fixture's MAINS OUT power throughput socket when using this input cable. If you want to connect other fixtures to the MAINS OUT socket, see 'Linking fixtures to power in a chain' on page 13.

For protection from electric shock, the fixture must be grounded (earthed). The power distribution circuit must be equipped with a fuse or circuit breaker and ground-fault (earth-fault) protection.


Socket outlets or external power switches used to supply the fixture with power must be located near the fixture and easily accessible so that the fixtures can easily be disconnected from power.

Do not insert or remove live Neutrik PowerCon connectors to apply or cut power, as this may cause arcing at the terminals that will damage the connectors.

Do not use an external dimming system to supply power to the fixture, as this may cause damage to the fixture that is not covered by the product warranty.

The fixture can be hard-wired to a building electrical installation if you want to install it permanently, or if a cable with suitable power plug pre-installed is not supplied, a power plug that is suitable for the local power outlets can be installed on the power cable.

If you install a power plug on the supplied power cable, install a grounding type (earthed) plug with integral cable grip that is rated minimum 250 V, 6 A. Follow the plug manufacturer's instructions and connect the wires in the power cable as shown in this table:

	Live or L	Neutral or N	Earth, Ground or 
US system	Black	White	Green
EU system	Brown	Blue	Yellow/green

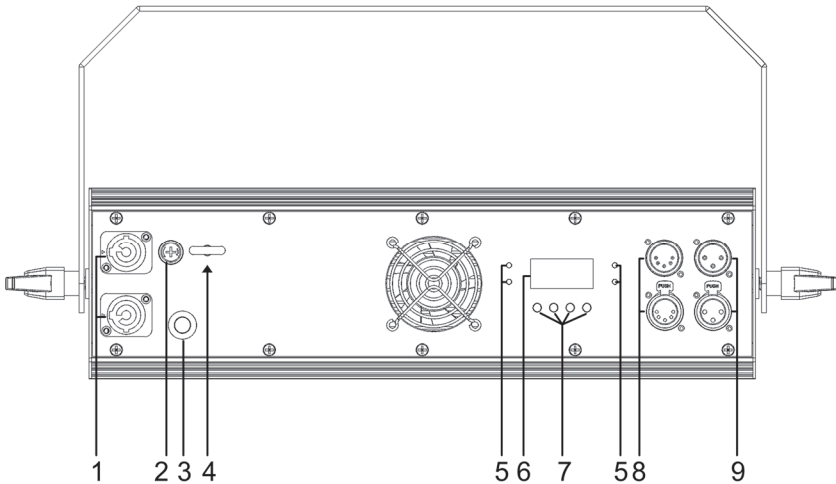
The fixture has an auto-ranging power supply that accepts AC mains power at 100-240 V at 50/60 Hz. Do not apply AC mains power at any other voltage or frequency to the fixture.

Linking fixtures to power in a chain

If you obtain a 16 A rated, 14 AWG / 1.5 mm² power input cable and 16 A rated, 14 AWG / 1.5 mm² throughput cables from Martin™ (see 'Accessories' on page 29), you can relay mains power from one fixture to another by connecting fixtures to power in a linked daisy-chain, MAINS OUT throughput socket to MAINS IN input socket. Using this method, you can link a maximum of four (4) RUSH Strobe CWL™ fixtures in total to power in a chain.

If you install a power plug on the 14 AWG / 1.5 mm² power cable, install a grounding type (earthed) plug with integral cable grip that is rated minimum 250 V, 16 A.

Fixture overview



1 – AC mains power input/output

Neutrik PowerCon sockets are provided to connect the fixture to mains power. If you use 16 A, 14 AWG / 1.5 mm² cables (not supplied), up to 3 additional RUSH Strobe CWL™ fixtures may be connected to mains power through the MAINS OUT socket.

2 – Fuse

The main fuse is located on the rear panel in a fuse holder. Replace only with one of the rating printed on the rear panel.

3 – Microphone

The built-in microphone provides sound-triggered activation in Show Mode.

4 – Secondary attachment point

An eyebolt is provided for attaching a safety cable (not supplied).

5 – Status LEDs

The 4 rear panel LEDs indicate the following:

LED	State	Indication
DMX	Flashing	DMX control signal present
	Off	No DMX control signal present
Master	On	Fixture operating as master
Slave	On	Fixture operating as slave
Sound	Flashing	Microphone receiving sound signal

6 – Display

7 – Control buttons

The buttons located below the display have the following functions:

Button	Function
MENU	1) Activate menu mode 2) Return to previous menu level 3) Hold to exit the menus
▼ (down)	Go down a menu branch
▲ (up)	Go up a menu branch
ENTER	Confirm the displayed setting

8 – 5-pin DMX input/output

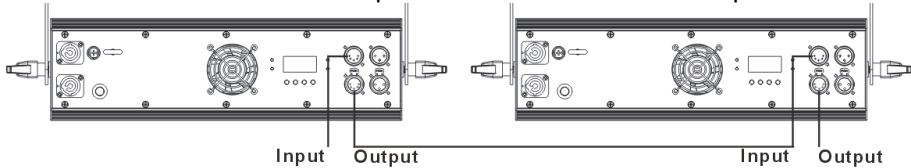
5-pin XLR sockets are provided for DMX input and output (throughput) using 5-pin cables.

9 – 3-pin DMX input/output

For your convenience, 3-pin XLR sockets are also provided for DMX input and output (throughput) using 3-pin cables. In each case, use either the 3-pin or 5-pin socket, not both.

Control data link

A DMX 512 data link is required in order to control the fixture via DMX. The fixture has 3-pin and 5-pin XLR sockets for DMX data input and output. These are connected so that either output socket can be used for output.



Up to 32 devices can be linked together on a single daisy chain. To add more fixtures, use a second DMX universe or split the data link into branches.

Tips for reliable data transmission

Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters (1000 ft.). Heavier gauge cable and/or an amplifier is recommended for longer runs. The pin-out on all connectors is pin 1 = shield, pin 2 = cold (-), and pin 3 = hot (+). Pins 4 and 5 in the 5-pin XLR connectors are not used in the fixture but are available for possible additional data signals as required by the DMX512-A standard. Standard pin-out is pin 4 = data 2 cold (-) and pin 5 = data 2 hot (+).

To split the link into branches, use a splitter such as the Martin DMX 5.3 Splitter™. Terminate the link by installing a termination plug in the output socket of the last fixture. The termination plug, which is a male XLR plug with a 120 Ohm, 0.25-Watt resistor soldered between pins 2 and 3, “soaks up” the control signal so it does not reflect and cause interference. If you use a splitter, terminate each branch of the link.

Connecting the DMX data link

To connect fixtures to a controller:

1. Connect the DMX data output from the controller to the first fixture's male 3-pin or 5-pin XLR DMX input connector.
2. Connect the first fixture's 3-pin or 5-pin DMX output to the DMX input of the next fixture and continue connecting fixtures output to input.
3. Terminate the last fixture on the link with a DMX termination plug.

Fixture setup



Warning! Read 'Safety information' on page 4 before operating the fixture.

This section explains the fixture settings and utilities that the user has access to via the control panel. Settings are retained when the fixture is powered off. A map of the control menu can be found on page 26.

Using the control menus

To access the control menus, press the MENU button. Navigate the menu structure using the ENTER, DOWN and UP buttons. Select any required menu option using the ENTER button. To return to the previous level in the menu structure without making a change, press the MENU button. To exit the menus, press and hold the MENU button.

DMX settings

DMX address

The DMX address, also known as the start channel, is the first channel used to receive instructions from a DMX controller. Each DMX-controlled fixture must have a DMX address set. If a fixture that requires 4 DMX channels has its DMX address set to 1, for example, then it uses channels 1, 2, 3 and 4. The next fixture can have its DMX address set to 5, the next to 9 and so on until the 512 channels in one DMX universe are allocated.

For independent control, each fixture must be assigned its own control channels. Two fixtures of the same type and set to the same mode may share the same address if identical behavior is desired.

To set the fixture's DMX address:

1. Press MENU to enter the control menu.
2. Use the UP and DOWN buttons to select DMX ADDRESS and press ENTER to confirm. The present address will blink on the display.
3. Use the UP and DOWN buttons to select the address assigned to the fixture on the controller (1 to 512). Press ENTER to set it.
4. Press MENU to exit.

DMX Mode

The RUSH Strobe CWL™ has two DMX modes.

- 1CHAN mode provides simple 1-channel control of the strobe rate and the “blinder” effect.
- 4CHAN mode provides control of the flash intensity, flash duration, and flash rate on the first 3 DMX channels. When the flash rate is set to 0 on channel 3, you can trigger a single flash on channel 1. The fourth channel provides access to special effects: ramp up, ramp down, ramp up-down, lightning, and random flash.

To set the fixture’s DMX mode:

1. Press MENU to enter the control menu.
2. Select CHANNEL MODE and press ENTER. The present mode setting will blink on the display.
3. Use the UP and DOWN buttons to select 1CHAN or 4CHAN mode. Press ENTER to set it.
4. Press MENU to exit.

Behavior when DMX signal is not present (DMX STATE)

By default, the fixture blacks out if the DMX signal is suddenly lost. For stand-alone operation, where the fixture operates in Show Mode if DMX is lost, select SHOW MODE as follows:

1. Press MENU to enter the control menu.
2. Select DMX STATE and press ENTER.
3. Use the UP and DOWN buttons to change from BLACKOUT to SHOW MODE. Press ENTER to set it.
4. Press MENU to exit.

Stand-alone Show Mode settings

The RUSH Strobe CWL™ is pre-programmed with 12 stand-alone routines and a random flash mode that you can run without a controller using Show Mode. The routines provide dynamic effects when multiple RUSH Strobe CWL fixtures are connected and operating in master/slave mode.

To run a stand-alone routine, the DMX STATE setting must be set to SHOW MODE and a DMX control signal must not be present — DMX overrides Show Mode. Refer to ‘Behavior when DMX signal is not present’, above, to select SHOW MODE.

Stand-alone shows work best with 4, 8, 12, or more multiples of four fixtures operating in master/slave mode. The following table describes the dynamic effects provided by the shows when 4 fixtures are set up as master, slave 2, slave 3, and slave 4.

Show	Routine (M=Master or Slave 1, 2=Slave2, 3=Slave3, 4=Slave4)
1	M+2+3+4 synchronized flash
2	M-2-3-4 chase
3	4-3-2-M chase
4	M-2-3-4 wipe
5	4-3-2-M wipe
6	M+4, 2+3 synced pairs, alternating triple flash
7	M+2, 3+4 synced pairs, alternating triple flash
8	M+3, 2+4 synced pairs, alternating double flash
9	M+2+3+4 synchronized flash
10	chaotic flash, slow
11	chaotic flash, fast
12	random synced pairs

Selecting a Show Mode routine

1. Press MENU to enter the control menu.
2. Select SHOW MODE and press ENTER to confirm.
3. Use the UP and DOWN buttons to select from shows 0 to 12. Show 0 is random flash. Press ENTER to save the selection.
4. Press MENU to exit.

Selecting trigger mode

Stand-alone routines can be automatically triggered or sound triggered.

To select trigger mode:

1. Press MENU to enter the control menu.
2. Select SOUND MODE and press ENTER to confirm.
3. Use the UP and DOWN buttons to select ON for sound trigger or OFF for automatic trigger. Press ENTER to save the setting.
4. Press MENU to exit.

Adjusting sound trigger level

1. Press MENU to enter the control menu.
2. Select SOUND SENSE and press ENTER to confirm.
3. Play the sound source (music beat, for example) at a typical volume. Press the UP button to increase microphone sensitivity or the DOWN button to decrease sensitivity. When sound triggering is satisfactory, press ENTER to save the setting.
4. Press MENU to exit.

Master/slave operation

Multiple fixtures can be operated in Show Mode without a controller using the master/slave function. You can select any convenient fixture to be the master fixture that controls the others. You set the remaining fixtures as slaves.

There are 4 slave mode options that allow you to create dynamic effects among multiple fixtures. Fixtures set to SLAVE1 flash at the same time as the master. Fixtures set to SLAVE2, SLAVE3, and SLAVE4 flash with a timing delay that is determined by the show selection. SLAVE1 is the default setting.

You can connect up to 32 fixtures using DMX cable to connect one fixture's DMX OUT socket to the next fixture's DMX IN socket. See 'Control data link' beginning on page 16 for more information about connecting fixtures.

To set up the master fixture:

- 1) On the fixture selected to be the master, press MENU to enter the control menu.
- 2) Select MASTER/SLAVE. Press ENTER.
- 3) Press UP or DOWN to select MASTER. Press ENTER to save the setting.
- 4) Set the master fixture to run one of the stand-alone shows. See 'Selecting a Show Mode routine' on page 19.

- 5) Set the master fixture's trigger mode. See 'Selecting trigger mode' on page 20. If using music trigger (SOUND MODE = ON), adjust the sound trigger level as well.
- 6) Set the master fixture's DMX STATE setting to SHOW MODE. (See 'Behavior when DMX signal is not present' on page 18).

Set all other connected fixtures to be slaves. If you want all slaves to flash at the same time as the master, use the SLAVE1 option. If you want to achieve dynamic effects with multiple fixtures using a trigger delay, skip SLAVE1 on the first 3 slaves and set them to SLAVE2, SLAVE3, and SLAVE4. If you have more than 4 fixtures, start over using SLAVE1 instead of MASTER.

To set up slave fixtures:

- 1) On each slave fixture, press MENU to enter the control menu.
- 2) Select MASTER/SLAVE. Press ENTER.
- 3) Press UP or DOWN to select a slave mode (SLAVE1 – SLAVE4).
- 4) Press ENTER to save the setting.
- 5) Set the DMX STATE setting to SHOW MODE. (See 'Behavior when DMX signal is not present' on page 18).

Make sure that the fixtures are not receiving a DMX control signal. When fixtures are correctly connected and set up for master/slave operation, the Master status LED on the master fixture and the Slave status LED on slave fixtures light constantly.

If master/slave synchronization is lost, press MENU on the master fixture's control panel. Then, after a few seconds, press MENU again to exit the menus. This will restore synchronization.

Utilities and readouts

Backlight on/off

To turn the control panel display backlight on or off:

1. Press MENU to enter the control menu.
2. Select BACK LIGHT and press ENTER to confirm.
3. Select ON or OFF.
4. Press ENTER to save your selection. Press MENU to exit.

Auto test

To perform a test of all fixture functions:

1. Press MENU to enter the control menu.

2. Select AUTO TEST and press ENTER. The fixture will run a self-test routine.
3. Press MENU to exit the test.

Temperature readout

To check the onboard temperature of the fixture:

1. Press MENU to enter the control menu.
2. Select FIXTURE TEMP and press ENTER. The display will show the temperature of the unit.
3. Press MENU to exit.

Fixture operating hours readout

To display the fixture's operating hours counter:

1. Press MENU to enter the control menu.
2. Select FIXTURE TIME and press ENTER. The display will show the number of hours the fixture has been in operation since manufacture.
3. Press MENU to exit.

Firmware version readout

To display the software version installed in the fixture:

1. Press MENU to enter the control menu.
2. Select FIRMWARE VERSION and press ENTER to confirm. The firmware version is shown in the display.
3. Press MENU to exit.

Maintenance



Warning! Read 'Safety information' on page 4 before servicing the fixture.

Refer any service operation not described in this user manual to a qualified service technician.

Disconnect the fixture from mains power and allow to cool completely before cleaning or servicing.

Service fixtures in an area where there is no risk of injury from failing parts, tools or other materials.

Cleaning

Excessive dust, smoke fluid, and particle buildup degrades performance, causes overheating and will damage the fixture. Damage caused by inadequate cleaning or maintenance is not covered by the product warranty.

The cleaning of the front glass must be carried out periodically to optimize light output. Cleaning schedules for lighting fixtures vary greatly depending on the operating environment. It is therefore impossible to specify precise cleaning intervals for the fixture. Environmental factors that may result in a need for frequent cleaning include:

- Use of smoke or fog machines.
- High airflow rates (near air conditioning vents, for example).
- Presence of cigarette smoke.
- Airborne dust (from stage effects, building structures and fittings or the natural environment, for example).

If one or more of these factors is present, inspect fixtures within their first 100 hours of operation to see whether cleaning is necessary. Check again at frequent intervals. This procedure will allow you to assess cleaning requirements in your particular situation. If in doubt, consult your RUSH by Martin™ dealer about a suitable maintenance schedule.

Use gentle pressure only when cleaning, and work in a clean, well-lit area. Do not use any product that contains solvents or abrasives, as these can cause surface damage.

To clean the fixture:

1. Disconnect the fixture from power and allow it to cool.
2. Vacuum or gently blow away dust and loose particles from the outside of the fixture and the air vents.

3. Clean glass by wiping gently with a soft, clean lint-free cloth moistened with a weak detergent solution. Do not rub the surface hard: lift particles off with a soft repeated press. Dry with a soft, clean, lint-free cloth or low-pressure compressed air. Remove stuck particles with an unscented tissue or cotton swab moistened with glass cleaner or distilled water.
4. Check that the fixture is dry before reapplying power.

Replacing the primary fuse

If the fixture is completely dead, the fixture's primary fuse may have blown and it may be necessary to install a new fuse. See 'Fixture overview' on page 14 for the fuse location.

To replace the primary fuse:

1. Disconnect the fixture from power and allow it to cool.
2. Use a large flat-bladed screwdriver to unscrew the cap of the fuse holder.
3. Remove the blown fuse. Replace with a new one of the specified type and rating only.
4. Reinstall the fuse holder cap before reapplying power.

If the replacement fuse blows immediately, disconnect the fixture from power and refer it to a qualified service technician. Do not attempt to use the fixture until it is repaired.

Other service and repairs

There are no user-serviceable parts inside the fixture. Do not open the housing.

Refer any service or repair operation not described in this manual to an authorized RUSH by Martin™ service technician. Do not try to carry out such an operation yourself, as doing so may present a health or safety risk. It may also cause damage or malfunction, and it may void your product warranty.

Installation, on-site service and maintenance can be provided worldwide by the Martin™ Global Service organization and its approved agents, giving owners access to Martin's expertise and product knowledge in a partnership that will ensure the highest level of performance throughout the product's lifetime. Please contact your RUSH by Martin™ supplier for details.

DMX protocol

1-channel mode

Channel	Value	Function
1	0-5	Blackout
	6-250	Flash rate, slow to fast
	251-255	Continuous “blinder” effect

4-channel mode

Channel	Value	Function
1	0-5	Blackout
	6-255	Flash intensity, minimum to maximum
2	0-255	Flash duration, minimum to maximum
3	0-5	No flash (single flash with ch. 1)
	6-255	Flash rate, slow to fast
4	Special Effects	
	0-5	No effect
	6-50	Ramp up
	51-100	Ramp down
	101-150	Ramp up-down
	151-200	Lightning
	201-255	Random

Control menus

To access the control menus, press MENU. Scroll through options with the UP and DOWN arrow buttons. Press ENTER to confirm and save a setting. Press MENU to return to previous level. Press and hold MENU to exit.

Default settings are shown in **bold**.

Menu	Option/setting	Explanation
DMX Address	(001-512)	Fixture DMX address setting
Channel Mode	1Chan	1-channel DMX mode
	4Chan	4-channel DMX mode
Master/Slave	Master	Master fixture in master/slave mode
	Slave1	Slave fixture that flashes with master
	Slave2..Slave4	Slave fixture with timing delay
Show Mode	Show 0 ...Show 12	Random flash (show 0) and 12 programmed shows. See table on page 19.
DMX State	Show Mode	If DMX signal stops, fixture enters Show Mode.
	Blackout	If DMX signal stops, fixture blacks out
Sound Mode	On/Off	Music trigger on/off.
Sound Sense	000...100	Microphone sensitivity for music trigger. The default value is 90.
Back Light	On/Off	Control panel backlight on/off.
Auto Test		Test all functions
Temp.		Displays temperature readout
Fixture Time		Displays total hours of operation
Firmware Version		Displays installed firmware version

Troubleshooting

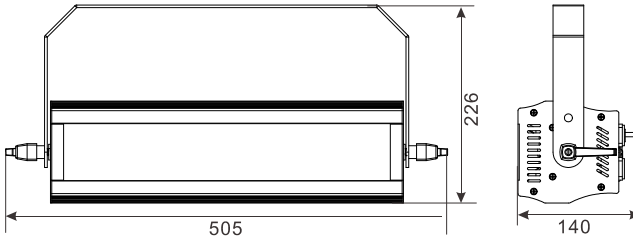
This section describes some problems that may occur and provides troubleshooting suggestions.

Symptom	Potential cause	Remedies
No light from fixture, fans not working and fixture appears dead.	Power supply issue such as blown fuse, faulty connector or damaged cable.	Ensure that the mains supply is supplying power to the fixture. Check all power connections and cables. Replace the fixture fuse.
DMX LED flashes but fixture does not respond to controller.	Incorrect DMX addressing, poor data signal, or interference from proximity to a high voltage installation.	Ensure that the DMX network is terminated. Check that the fixture is set to the DMX address that is set on the controller. Check that linked components all use standard DMX polarity. Move fixture away from unshielded high-voltage installation.
Fixture connected to DMX link but DMX LED does not flash.	Fault in the DMX network due to damaged connector or cable.	Connect the fixture directly to the controller. If it works, check all DMX cables and connections to ensure the integrity of the physical network.
Show Mode does not work as expected.	Incorrect DMX State, Sound Mode, Sound Sense, or Master/Slave setting.	Check the fixture settings described under 'Stand-alone Show Mode settings' starting on page 19.
Master/Slave operation does not work as expected.	Multiple sources of control data or fault in the data link.	Check that there is only one master fixture and no DMX signal. Check all cables and connections. Terminate link on both ends.

Specifications

Physical

Length	505 mm (19.9 in.)
Width	140 mm (5.5 in.)
Height	226 mm (8.9 in.)
Weight	4.0 kg (8.8 lbs.)



Dynamic Effects

Strobe rate	0 - 25 Hz
Strobe duration	0 - 10 ms (50 Hz supply), or 0 – 8.3 ms (60 Hz supply)
Blinder effect	Continuous with auto fade
Special effects	Ramp up/down, up-down, random flash, lightning, blinder, single flash

Control and Programming

Control options	DMX, stand-alone, master/slave, sound trigger
DMX channels	1 or 4
Setting and addressing	Control panel with LCD display
Compliance	USITT DMX512/1990

Optics

Beam angle	87°
Light source	99 x 3 W CREE white XB-D LED
Color temperature	7000-8000 K
Minimum LED lifetime	50 000 hours (to >70% luminous output)*

*Figure obtained under test conditions

Construction

Color	Black
Housing	Steel and aluminum
Protection rating	IP 20

Installation

Mounting points	Bracket with 13.5 mm holes
Orientation	Any

Location Indoor use only, must be fastened to surface or structure
 Minimum distance to illuminated surfaces 0.2 m (8 in.)
 Minimum distance to combustible materials 0.1 m (4 in.)
 Minimum clearance around fans and vents 0.1 m (4 in.)

Connections

AC power in/thru..... Neutrik PowerCon
 DMX data in/thru 3-pin and 5-pin locking XLR

Electrical

AC power..... 100-240 V nominal, 50/60 Hz
 Power supply unit..... Diode bridge

Typical power and current

110 V, 60 Hz..... 2.5 A, 250 W, PF 0.9
 230 V, 50 Hz..... 2.7 A, 380 W, PF 0.6
Measurements made at nominal voltage. Allow for a deviation of +/-10%.
PF = Power Factor

Thermal

Cooling Forced air (temperature regulated, low noise)
 Maximum ambient temperature (T_a max.)..... 40° C (104° F)
 Minimum ambient temperature (T_a min.).....0° C (32° F)

Approvals



EU safety EN 60598-2-17 (EN 605981-1)
 EU EMCEN 55015, EN55032, EN 55103-2, EN 61000-3-2,
 EN 61000-3-3, EN 61547
 US safety UL 1573
 US EMC FCC Part 15 Class A
 Canadian safetyCSA 22.2 No. 166
 Australia/NZ.....C-Tick N4241

Included Items

EU version 1.5 m (5 ft.) power cable without mains plug, mounting bracket
 US version..... 1.5 m (5 ft.) power cable with mains plug, mounting bracket

Accessories

Power cables, 16 A, for connection to power in chains

Power input cable, 14 AWG, SJT, 1.5 mm², H05VV-F,
 with PowerCon input connector, 3 m (9.8 ft.).....P/N 11541508

- Power relay cable, 14 AWG, SJT, 1.5 mm², H05VV-F,
with PowerCon connectors, 1.4 m (4.6 ft.).....P/N 11541509
- Power relay cable, 14 AWG, SJT, 1.5 mm², H05VV-F,
with PowerCon connectors, 2.25 m (7.4 ft.).....P/N 11541510
- Power relay cable, 14 AWG, SJT, 1.5 mm², H05VV-F,
with PowerCon connectors, 3.25 m (10.7 ft.).....P/N 11541511

Power connectors

- Neutrik PowerCon NAC3FCA
female connector for power in, cable mount, blueP/N 05342804
- Neutrik PowerCon NAC3FCB
male connector for power out/thru, cable mount, light grey.....P/N 05342805

DMX-related items

- DMX termination plug, 3-pin male XLR.....P/N 91613017
- 5-pin male XLR to 3-pin female XLR adaptorP/N 11820005

Installation hardware

- Four-unit bracket for RUSH Strobe CWL.....P/N 91606019
- Half-coupler clampP/N 91602005
- G-clamp.....P/N 91602003
- Safety cable, safe working load 50 kgP/N 91604003


Related Items

- RUSH Software Uploader 1™.....P/N 91611399

Ordering Information

- RUSH Strobe CWL™ EU model in cardboard box.....P/N 90480110
- RUSH Strobe CWL™ US model in cardboard box.....P/N 90480115

Specifications are subject to change without notice. For the latest product specifications, see www.martin.com



Disposing of this product

RUSH by Martin™ products are supplied in compliance with Directive 2012/19/EC of the European Parliament and of the Council of the European Union on WEEE (Waste Electrical and Electronic Equipment), where applicable. Help preserve the environment! Ensure that this product is recycled at the end of its life. Your supplier can give details of local arrangements for the disposal of RUSH by Martin™ products.

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