The Snapshot system allows the user to store records of the console's settings. When a Snapshot is stored it becomes part of a Cue: a Cue contains a Snapshot and optional MIDI and GPIO/HiQnet events. These Cues can then be recalled during a performance. Cues can be deleted, copied and moved within the running order of the show.

The Cues are stored on the console's flash drive, each set of Cues is stored as a Show. The Shows can be backed up onto, and downloaded from, a USB data storage device.

Note that some of the console's settings are not stored within Cues, but they are recorded as part of the Show. These settings therefore do not change within a Show. Other settings are not recorded at all. A list of what is recorded, and what is not, is provided at the end of this chapter.

SNAPSHOT FILTERING

Snapshot filtering means the selective recall of certain snapshot parameters. The complete set of parameters is always stored, so filtering only affects recall.

There are two types of snapshot filtering: Snapshot Scope and Global Filter.

Snapshot Scope is a way of selecting the parameters which are recalled from snapshots. The Snapshot Scope is stored with each snapshot. This allows special snapshots to be created to perform specific functions, only acting on a defined part of the console.

Global Filter is stored in the Show, and affects all snapshots. It can be edited and switched on or off using the ISO buttons on the channel strips.
Global Filter is useful as an 'emergency' tool to stop some parameters from being recalled, e.g. a microphone slipping making an EQ change necessary, or a fault of some kind meaning a spare channel has to be used which has all parameters set to defaults in all snapshots.

Any snapshot recall is subjected to both these filters in series (assuming Global Filter is switched on), so if a parameter is filtered in either or both of the filters then it will not be recalled.

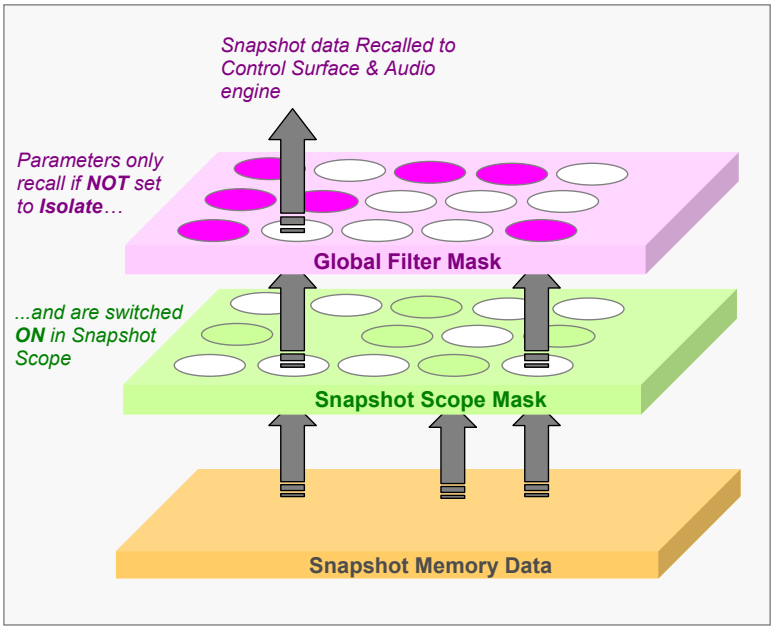


Figure 15-1: Showing The Effect Of Snapshot Scope And Global Filter On Recalled Data

FRONT PANEL DISPLAY AND CONTROLS

The Cues of the currently-loaded show are displayed in the Cue List displayed on the master screen (see Figure 15-2). The Show's title is also displayed.



Figure 15-2: Cue List.

The Snapshot/Cue keys (see Figure 15-3) are used as described below.



Figure 15-3: Front Panel Snapshot/Cue Controls.

SETUP

The [SETUP] key causes the Setup page to be displayed on the master screen, see Figure 15-4.

DATA Socket

This accepts a USB data storage device. There are three data sockets on the console: the other two are located on the rear panel.

STORE

Pressing [STORE] will record the console's current settings into a new cue.

UNDO

Pressing [UNDO] will undo the effect of pressing [RECALL], [NEXT] or [LAST]. It is useful if any of these 3 keys get pressed by mistake, and if the console's previous settings, which will get overwritten, are needed and have not yet been recorded into a cue.

PREV MODE

This mode locks the audio where it is, and allows the control surface to be recalled to any desired Cue, for checking purposes, or to make updates to future Cues, without changing any audio.

The surface re-synchronises with audio when Preview mode is switched off. See page 6 for more information.

LAST

The [LAST] key is used in conjunction with the information displayed in the Cue List (see Figure 15-3). Pressing [LAST] causes any settings pointed to by the previous Cue, in the Cue List, to be loaded into the desk, i.e. the desk is configured according to the settings held against the previous Cue. This Cue becomes the current one in the list.

NEXT

The [NEXT] key is used in conjunction with the information displayed in the Cue List (see Figure 15-3). Pressing [NEXT] causes any settings pointed to by the next Cue, in the Cue List, to be loaded into the desk, i.e. the desk is configured according to the settings held against the next Cue. This Cue becomes the current one in the list.

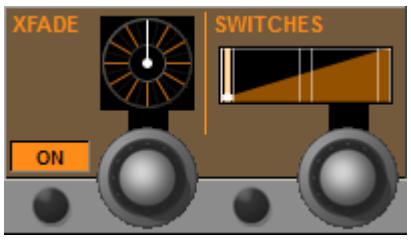
The NEXT and LAST keys are duplicated near the front of the desk, above the SOLO CLR and GANG keys. For safety, these duplicated keys are normally disabled, and have to be switched on via the MENU/ SETTINGS page. Once the keys have been enabled this will be stored when the Show is saved.

The Arrow Keys and RECALL

The [up arrow] and [down arrow] keys are used in conjunction with the information displayed in the Cue List (see Figure 15-3). Pressing either of these keys will scroll up or down the list, without implementing the settings of any of the Cues which are being scrolled through.

When the required Cue is reached, the user presses [RECALL]: this causes any settings pointed to by the selected Cue to be loaded into the desk, i.e. the desk is configured according to the settings held against this Cue. This Cue becomes the current one in the list and the cue name is displayed in green text to indicate this.

Snapshot Crossfade



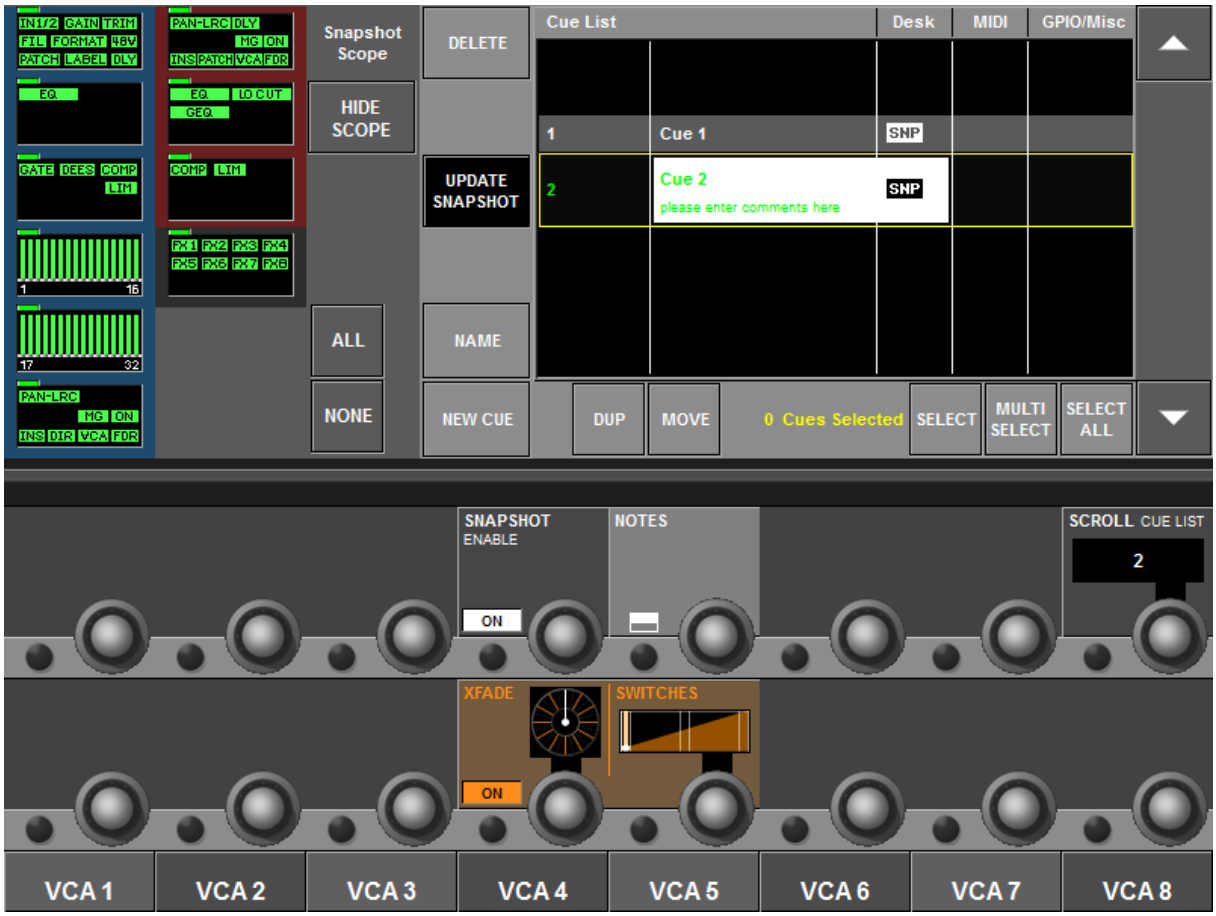
Snapshot Crossfade allows the recall of a desk snapshot to happen over a predefined time interval, rather than immediately. The interval can be set anywhere from 0.1 to 30 seconds, in 0.1s increments, using the Crossfade time control. This parameter applies to all parameters on all channels globally on the desk (it is not possible to set different Crossfade time on different channels).

Most 'variable' audio parameters of the desk that are included in snapshots will be included in the Crossfade, the exceptions are listed below.

- EQ and Hi/lo cut frequencies
- All Lexicon FX parameters

All switched parameters, plus the exceptions listed above will have their values changed at one of three points in the Crossfade: at the start, in the middle, or at the end. This is set globally for all the parameters via the 'Switches' control.

To set the Crossfade time for a specific Cue, press the Setup button in the Snapshot Control area of the control surface to open the Cue List page, then select the required Cue using the scroll bars or up/dwn arrow keys, and touch the name area of the currently selected Cue in the centre of the Cue List (the area becomes highlighted white, as shown in the picture below):



The time selected on the XFADE control below the Cue List will be the time taken for the desk to change from its current state, to the state of the snapshot in the selected Cue. In other words, the XFADE time can be thought of as an 'In' time for the Cue.

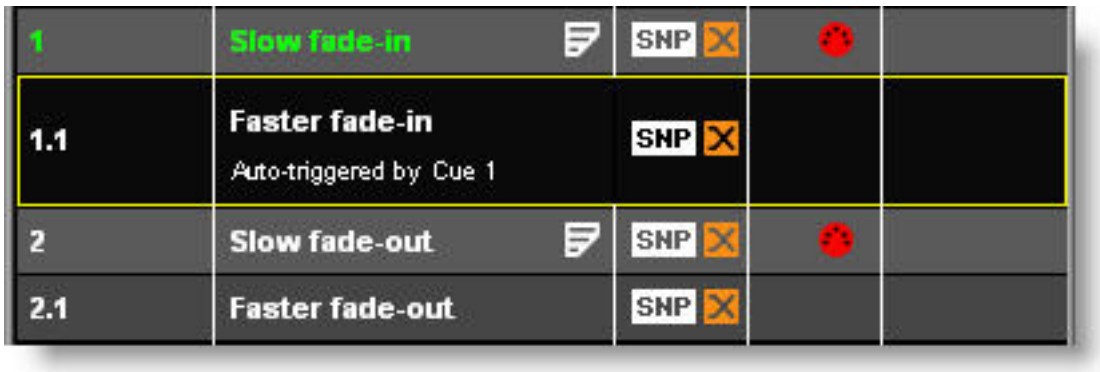
Each Cue can have its own 'In' time set using the XFADE control.

The Crossfade time can be disabled without affecting the time by using the On/Off switch. An icon  is shown in the Cue List next to the desk snapshot icon if a Crossfade time has been enabled for that Cue.

Using Crossfade and Cue Chaining to create 'pseudo-dynamic Cues'

Using the Cue Chain facility that was part of the Version 3.0 software, in conjunction with the Crossfade function allows an approximation to 'dynamic' cue fader automation to be achieved. Using the Snapshot Scope facility to control what is recalled on each Cue can also be used to achieve different Crossfade times on different channels, if that is required.

To do this, try to break up the overall fader move required into several sections, and make Cues corresponding to the start and end points each section. Then chain the Cues together using the 'Go To Cue' parameter in the Cue List. (To find these parameters, open the Cue List page and touch the left-hand side of the currently selected Cue bar in the list):



Old Show files and Crossfade parameters

When loading an old pre-V4.0 Show file, be aware that these do not contain any Crossfade information in their Cue List, and so whatever Crossfade settings that might be present on the desk, for example from the previously loaded Show, will remain on the desk and appear to get copied into the Cue list of your old show.

To avoid this, always load a Default show onto the console before loading a pre-V4.0 show that has not yet been saved on a V4.0 desk. Loading the Default show will clear out any Crossfade parameters and result in the cue list of the old show loading correctly. Once the old Show has been saved on a desk running V4.0, the problem will not happen any more, with this particular show.

Snapshot Preview Mode

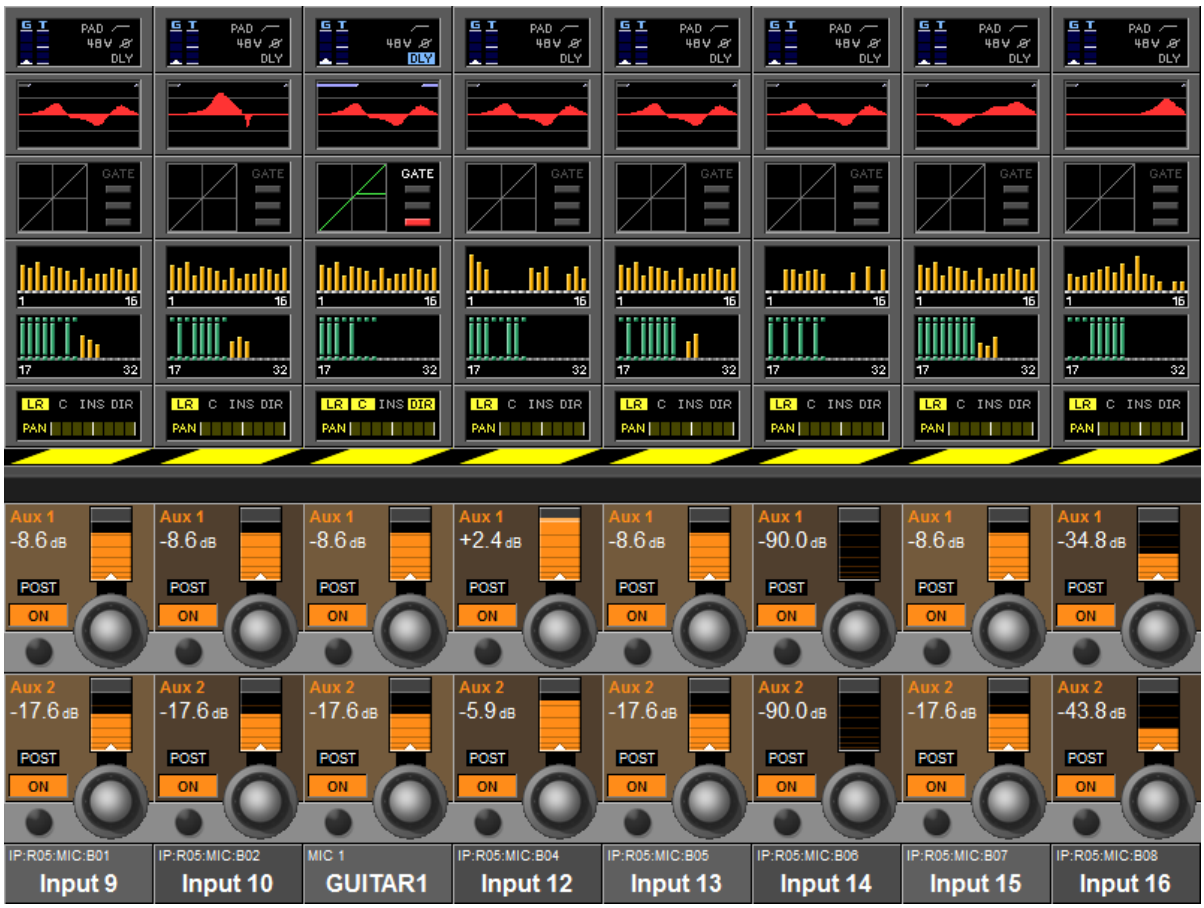


Snapshot Preview mode allows snapshots to be recalled to the console surface without affecting the audio running in the DSP core, and so provides as useful way to check what is about to be recalled in a Cue, during a show.

When the desk is in Preview mode, the Control Surface is effectively taken off-line from the DSP core, so that existing Cues can be recalled or edited, or new ones created, and there will be no effect on the audio, which will continue running with the settings that were active at the moment Preview mode was switched on.

When Preview mode is switched OFF again, the surface will automatically jump back to match the state that it was in at the moment Preview mode was switched ON – meaning that it will once again be in sync with the audio.

When the desk is in Preview mode, no control of audio is possible, so the Preview button itself flashes, and a yellow/black striped strip is displayed across the bottom of all Input bay touch screens as a warning. If you have made changes to the desk parameters whilst in Preview mode, and you want to keep these,



you must either update an existing snapshot, or create a new one, otherwise the changes will be lost when you exit Preview mode.

You can also use Preview mode to 'lock' the audio before you change to a new Show file – the audio settings will remain as per the old show, and when you switch off the Preview mode the new Show settings will be applied to the audio.

Cue List Display

A Cue is a combination of a desk snapshot, various types of events and some text notes. The list allows the snapshots to be combined with transmitted events and arranged into a running order.

The Cue List is stored in the current Show. The list comprises columns for Cue Number (or Timecode), Cue Name, Desk Snapshot status (DESK), MIDI event status (MIDI), and GPIO, HiQnet and Blackout event status (GPIO/misc).

The oversize entry with a yellow border, in the centre of the list, represents the currently selected Cue (this cue is not necessarily the currently recalled cue). Within the selected Cue is also an additional space that displays text notes that can be entered to give information about what the Cue does.

The columns of the list are able to display various icons that represent the various types of event that are possible to trigger, or be triggered by, the cues:



Snapshot icon: this is displayed in all Cues to represent the presence of the desk snapshot in the Cue, but is greyed out if the desk snapshot is disabled locally within the Cue. It also appears greyed-out if the Desk column has been globally disabled.


MIDI IN & OUT Icons: these icons indicate the presence of a valid MIDI event in the cue. The blue icon represents a MIDI In event, where a MIDI message can be used to recall the cue. The red icon represents one or more MIDI out event(s). These icons will be greyed out if the MIDI column is globally disabled, or if the MIDI IN and/or MIDI out have been switched off in the MENU\MIDI page.



GPI/GPO/Blackout/HiQnet event icons.
Displayed in the relevant column, these icons indicate whether an incoming or an outgoing event has been set for the Cue. If no event has been set the icon does not appear. Icons appear greyed-out if the column is disabled. In general, blue icons indicate incoming events, and red or yellow icons indicate outgoing events.

Global Enable/Disable control using Cue List Column heading buttons

These column headings can be touched to disable an event column (all events of that type are disabled for the whole list) or the whole Cue List can be completely disabled by touching the Cue #/Cue Name column heading. Pressing the column headings has a toggle disable/enable action. As with all other parameters on the Cue List page, the states of these buttons is stored with the current Show.

<Cue List> column heading button: Enables/disables the recall of entire Cue List. If set to Off, the Cue List is locked and Cues cannot be recalled. The scrolling of the list, and editing of events is still allowed: only the [NEXT], [LAST] and [RECALL] keys on the surface are disabled.

<Desk> column heading button: Enables/disables the recall of desk snapshots for all Cues.
When set to off, no desk snapshots will be recalled, even if desk snapshots are switched On within individual Cues. If a new Cue is created (e.g. by pressing STORE) whilst the Desk column is disabled, a cue will be created which does not include any desk snapshots.

<MIDI> column heading button: Enables/disables both incoming and outgoing MIDI events for all Cues. When set to off, no MIDI messages will be sent or received, even if the MIDI events are switched On within individual Cues.

<GPIO/Misc> column heading button: Enables/disables both incoming GPI and outgoing GPO events for all Cues. When set to off, no GPIO messages will be sent or received, even if the GPI or GPO events are switched On within individual Cues. For HiQnet, no HiQnet messages will be sent, even if the HiQnet events are switched On within individual Cues. Any blackout events set within cues will also be disabled.

SETUP

Pressing [SETUP] opens the following page. This page can also be opened by touching the Cue List in the top right corner of the Master screen, see page 15-2.

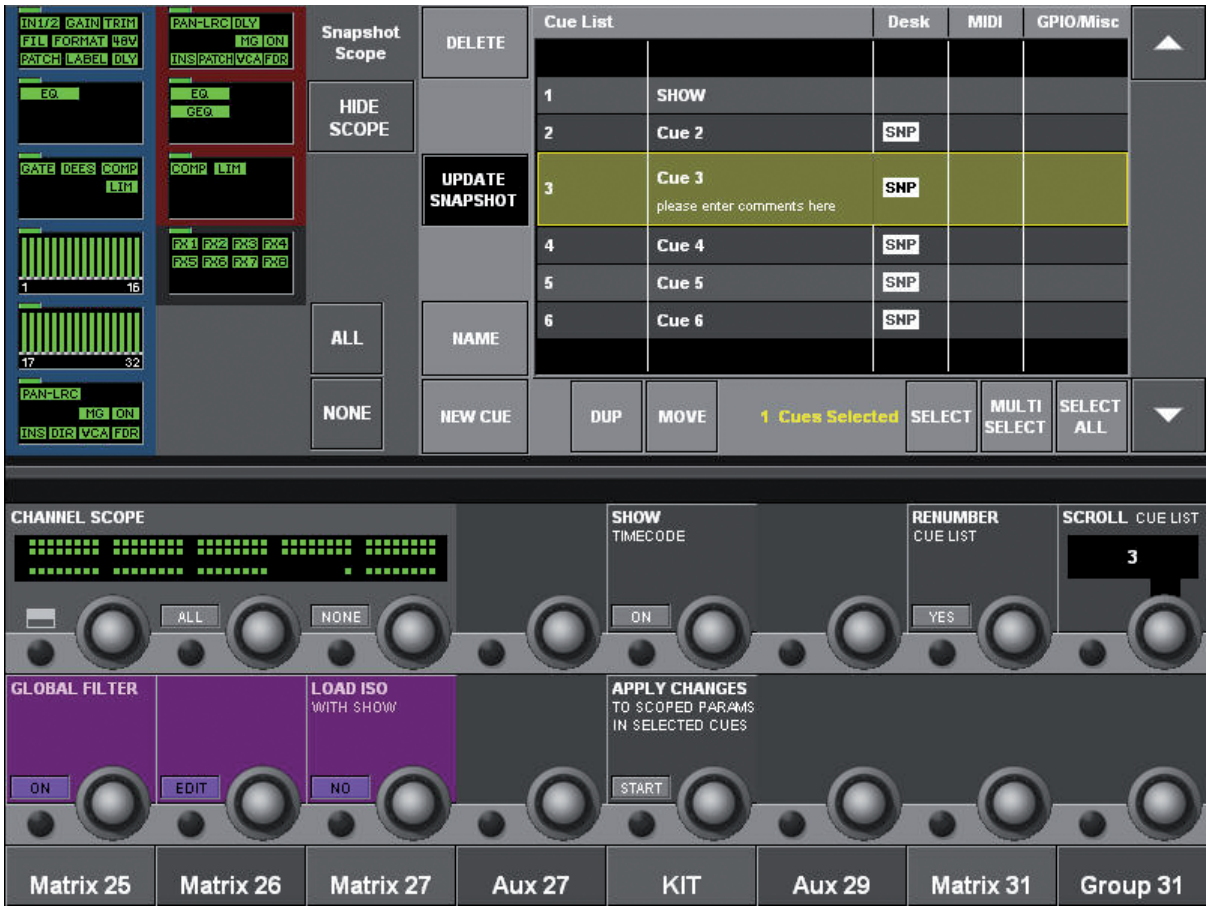


Figure 15-4: Snapshot & Cues Setup Page.

HIDE SCOPE/SHOW SCOPE Buttons

If the left-hand side of Figure 15-4 is not shown on your console it is because the Snapshot Scope is hidden in order to simplify the screen for new users. If you wish to see these controls, press the <SHOW SCOPE> button. The setting of the show/hide scope is stored in the Show.

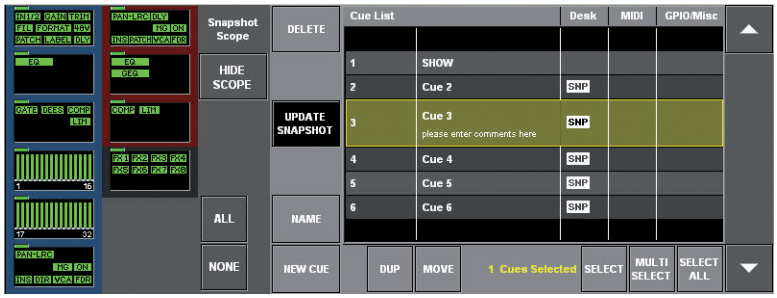


Figure 15-5: Cue List Touch-Screen Layout Map

The Cue List main page is divided into three main sections, please refer to Fig 15-5: The Cue List display itself (tinted grey for clarity in Fig 15-5); a set of touch buttons (tinted pink) associated with the Cue List and performing various editing and other operations on the Cue List; and the Snapshot Scope Graphical User Interface -GUI (tinted green), providing a way of quickly enabling various parameter groups to be recalled by desk snapshots, for each Cue.

Edit & Control Buttons

These touch buttons allow a) creation of Cues, scrolling of the list, and b) various editing operations on the list such as Delete, Move, Duplicate, rename etc. To allow these operations to be carried out on more than one Cue at a time, a set of Multi Select buttons c) are also provided.

a) Action buttons

<SCROLL UP/DOWN> buttons: Moves the Cue List up and down through the central selection cursor. These buttons are duplicated by the action of the UP/DWN arrow buttons on the surface. The Cue List cursor will always indicate the Cue that will be recalled if the Recall button on the surface is pressed. The main Cue List page also contains a green highlight indication which shows which was the last recalled Cue.

<NEW CUE> button: If Cursor is at the end of the Cue List, pressing New Cue creates a new Cue with default name Cue xxx, where xxx = number of existing entries in the list +1. If the cursor is in another position in the list, a new Cue is inserted in the next position in the list (see Cue Numbering). In both cases, a desk snapshot is also generated and associated automatically with this cue, and the Desk Snapshot enable/disable state is set to ON (enabled).
The events status of all other event types is set to disable (OFF) and no events are assigned.
The settings of the Snapshot Scope are also stored with the currently displayed settings, along side the audio and surface parameters.

<UPDATE SNAPSHOT> button: Updates only the Desk Snapshot associated with the Cue, by overwriting the snapshot with the current state of the surface. A dialogue box appears to confirm this action. Note that Snapshot Scope settings do not need the Update button to be pressed in order to save them - changes to Scope are stored immediately.

b) Edit function buttons

<NAME> button: opens the QWERTY keyboard to allow the name of the currently selected Cue to be edited. The Cue is given a default name on creation in the format 'Cue X'. (The number is automatically incremented with each subsequent creation operation).

<DELETE> button: deletes the currently selected Cue(s). A dialogue box appears to confirm this action.

<DUP> button: creates a copy (or copies) of the currently selected Cue(s). The copies contain all aspects of the Cue, ie: Desk Snapshot and Events.
The names of the copies have a (D) added to the beginning of the Cue Name, in order to distinguish them from the originals, and are placed after the original.
If multiple non-adjacent Cues are selected and the DUP operation performed, the duplicates appear after their own original.

<MOVE> button: (Latching) Simulates a 'click & drag move function. When latched ON, a pre-selected Cue or adjacent group of Cues can be moved within the list by using the scroll buttons or encoder.
Note that only a continuous range of Cues can be moved – the Move operation will be inhibited if a selection of non-adjacent Cues is active when Move is pressed.

The <MOVE> button is renamed <DROP> after it is switched on, and pressing <DROP> will 'drop' the Cue or group of Cues at the point immediately after the last visible Cue above the selection bar. The Cue Numbers of these moved Cues will be recalculated according to the 'Inserted Cue' numbering rules (see Cue Numbering).

c) Selection mode buttons

<SELECT> button.
The SELECT button allows single or any number of adjacent or non-adjacent Cues to be selected for Delete, Duplicate or Move operations. It is equivalent to CTL+Click on a PC running Windows.

Touching SELECT will change the background colour of the central Current Cue selection bar from black to pale yellow. The Cue can be deselected by pressing Select again.
If the list is scrolled to another Cue after one has been selected, the yellow background will be retained on that previously selected Cue. A new Cue can now be chosen in the central bar and Select pressed again to add this one.

To deselect selected Cues, each one must either be brought into the Current Cue selection bar one at a time and the SELECT button pressed to deselect, or a 'select all' followed by 'select none' operation can be carried out –see Select All below.

<MULTI SELECT> button: dabbing the <MULTI SELECT> button selects the currently highlighted Cue with a latching mode, as with Select described above, but in this case the scroll control or arrow keys can be used to scroll through the list, and a continuous range of cues will then be selected.

When the required number of Cues has been selected, the Multiselect button is switched OFF, and the selection range stays in operation – the range can be seen by all visible selected Cues having a pale yellow colour.

Another range of Cues, not necessarily adjacent to the first, can be selected by repeating the above procedure in a different part of the Cue list. The 'Selected items' field (see later) keeps track of the number of selected Cues and is useful when some of the selections are outside the visible window.

Deselecting a range of Cues in Multiselect mode
If any of the Cues in an existing selected range is positioned in the Current Cue selection bar, then Multiselect is switched ON, the whole existing range selection is cancelled, ready to select a new range.

In order to go back and deselect individual Cues, the <SELECT> button must be used, as described above.

<SELECT ALL> button: Selects ALL the Cues in the List. When all Cues are selected, the button changes to a <SELECT NONE> button, which when pressed, deselects all Cues.
Pressing this button twice can therefore be used as a shortcut to clearing any existing selections in the Cue List.

Cues Selected field: A number is displayed next to the Select button, indicating how many of the Cues are currently selected.

CUE NUMBERING

CUE NUMBERING

New Cues that are created at the end of the list (depends on cursor position when Store or New Cue is pressed) are always given whole numbers.

Inserting cues (by moving an existing one or creating a new Cue with the cursor in the list) always generates a new number with one or two decimal places, at approx the mid-point of the existing numbers:

1.0
Insert -> 1.5
2.0

1.0
Insert -> 1.25
1.5

MOVING CUES

Moving Cues causes the moved Cues to be automatically renumbered.
The following example shows what happens to the numbering when Cues 2 & 3 are moved one step up the Cue List.
Select the range, press <MOVE>, scroll to required position, press <DROP> (cues will be renumbered),

1 cue 1
2 cue 2
4
3 cue 3
2
4 cue 4
3
5 cue 5
5

Move Cue 2 & 3 one step up:

1 cue 1
4 cue
4.3 cue
4.6 cue
5 cue

If some of the numbers end up being duplicated after this operation, this can be solved by selecting a wider range than the original block and pressing the Renumber Cue List button.

DUPLICATED CUES

A duplicated cue counts as a new cue as far as numbering is concerned.

RENUMBERING CUES

If cues have been moved around or have been inserted in the Cue List, the Cue Numbers will be a mixture of whole and decimal numbers. The RENUMBER CUE LIST {YES} key will renumber the cues. Pressing the button initiates a renumbering of the Cue List (Cue # column), the cues are renumbered as consecutive integers. NOTE: There is a confirmation box which displays, 'Are you sure you want to renumber the Cue List?' and displays <YES> and <NO> touch buttons. The operation cannot be undone.

MANUALLY RENUMBERING

The Cue number can always be manually edited at any time by pressing the NAME button to open the QWERTY keyboard for renaming the Cue. The top left field in the keyboard allows the Cue number to be selected and a new number typed in. The Cue will be moved to the appropriate place in the list, according to the number given.

Snapshot Scope GUI

Please refer to Fig 15-6. Note the <HIDE SCOPE> button, if the screen on the Vi isn't showing the scope information, press the <SHOW SCOPE> button.

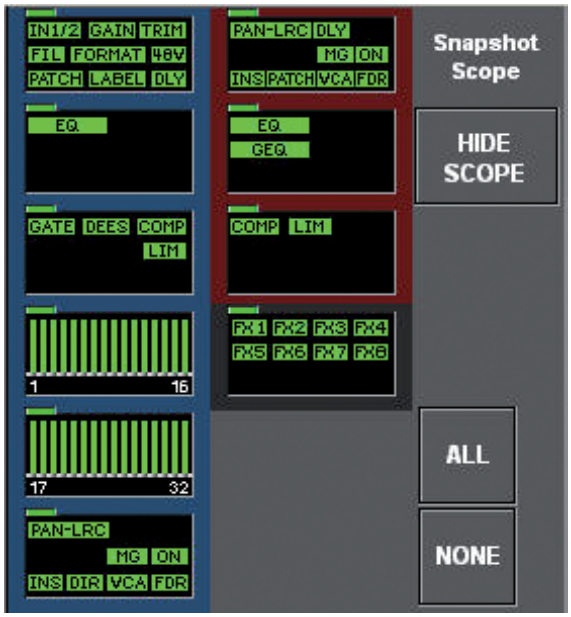


Figure 15-6: Snapshot Scope GUI.

The Snapshot Scope GUI allows the Snapshot Scope filter to be edited globally – by function block or parameter group, and by channel. Shortcut buttons in the GUI allow <ALL> or <NONE> of the parameter groups to be quickly selected or deselected in the Scope.

The elements displayed are divided into three categories: Input Channel (blue block border), Output Channel (red block border) and FX (grey block border). Within these categories, the parameters are grouped by function blocks.

Each Cue has its own Snapshot Scope, and the state of the Snapshot Scope for each Cue can be seen by viewing the Snapshot Scope GUI whilst scrolling through or recalling the Cues. **Note that the Cues do not have to be recalled to do this.**

The Scope of each Cue can be easily edited by simply touching the Scope fields, to select a whole block, or pressing & holding, to zoom a block onto the VST encoders below, where the encoder touch or VST buttons are used to select parameter groups within the block.

Illuminated Green mini-icons in the GUI show which parameter groups are enabled for recall in the corresponding snapshot. Note that these mini icons do not necessarily correspond exactly to the ones in the actual channel strips, but instead represent Parameter Groups, e.g. in the Dynamics block there is a Gate parameters group which represents the individual channel parameters of threshold, attack, hold, release and range: these individual parameters cannot be enabled for recall individually, they have to be selected as a group of parameters.

In the disabled state, the mini-icons are displayed in a low-intensity colour corresponding to their function (eg: blue for inputs, green for dynamics, etc), but this changes to bright green in all cases when the parameter group is enabled.

At the top left of each function block there is a green indicator LED. It indicates if all, some or none of the parameters in the block are selected.

Storing changes to Scope Settings

Storing changes to the Snapshot Scope is NOT done in the same way as for other desk parameters: ie: it is not necessary to press the <UPDATE SNAPSHOT> button to save the changes made to Scope into the currently selected Cue. Instead, the changes made to the Scope are immediately saved to the Cue as they are made.

When a new Cue is created, by touching the <NEW CUE> button, the Snapshot scope settings used for the new Cue will be the same as are currently displayed in the Scope GUI. They can then be edited after the Cue is created.

Changes to Scope across multiple Cues

If more than one Cue is selected, using the Multiselect function, then the Scope parameters behave as if they were in a gang – changing a Scope parameter in one Cue will cause the same parameter to change in the other selected Cue(s).

As with normal ganging on the console, Scope parameters that were already set to the desired state of the parameter being changed will not change unless the parameter is changed back to its original state again, in which case they will follow.

Selecting a complete function block:
A short press on the function block will select all the parameter groups within the block – all the mini icons will change to bright green. As many function blocks as required can be selected at the same time.

Zooming into a function block:
Press & hold the function block to open the zoom page on the VST encoders below, and allow individual elements within the block to be toggled. A white border to the block indicates its zoomed selection state. To exit, press & hold again.
When enabled, both the VST field and the mini-icon in the function block change to bright green.

Channel-wise selection of Scoped parameters
Immediately below the Scope GUI, there is a section of the VST encoder that allows a channel selection (input and output) to be defined for the parameter groups. See Fig. 15-7.



Figure 15-7: Channel Scope GUI
The channel selection section works in conjunction with the parameter group selection in the scope GUI so that a parameter will only be enabled in the snapshot recall on a given channel if both the parameter and the channel are enabled.
The channel selection is therefore stored with each Cue, as with the parameter group status.
When a new Cue is created, the default state of the channel selection is ALL ON.

This channel selection GUI is designed to allow an overview display of which channels are selected, using a 'dot-matrix' type display. As the Cue list is scrolled, it is possible to watch the dot-matrix display and see which channels are selected on which cues, in the same way as the parameter groups can be watched in the upper part of the Scope GUI.

The  button is used to open a sub-page (see Fig. 15-8) that allows channel selection to be made on the touch screen for each of the Input Fader pages A-C and the All Busses page. These are selected by Bay number. Bay Numbers corresponding to Input Fader Bays give access to all input channels plus all busses, via the A,B,C and ALL BUSSES rows of 8 latching enable buttons.
The <ALL> and <NONE> buttons in the VST section allow quick setting and clearing of all channels, busses and VCA masters, without opening the sub-page. Note: depending on how many DSP cards are fitted to the desk, not all Fader Pages may be used.

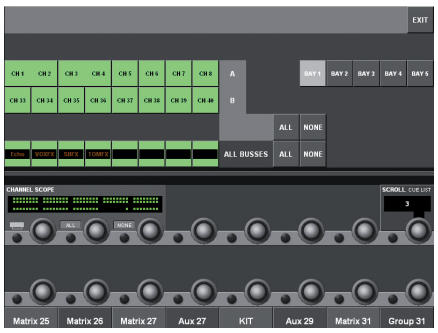
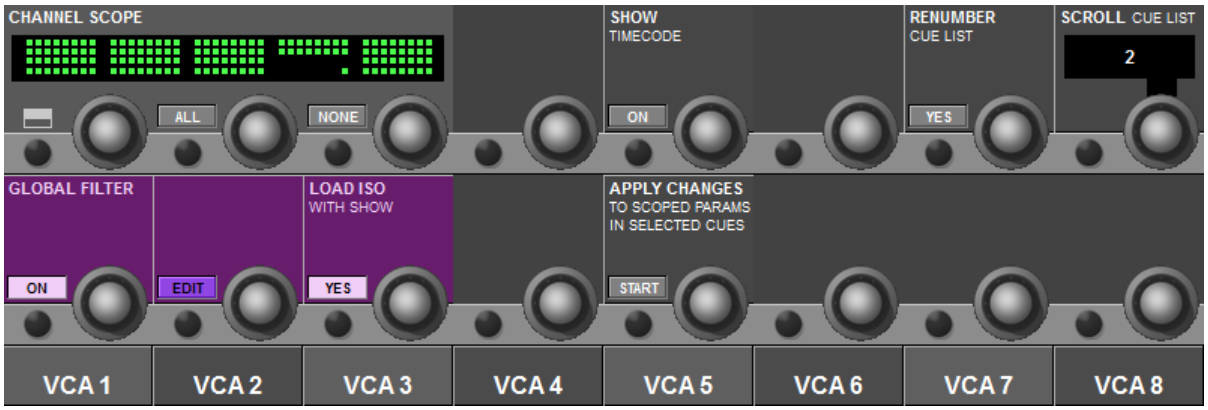


Figure 15-8: Channel Scope Sub-Page

The bay number corresponding to the output master bay gives a different-looking sub-page that only displays enable buttons for the 16 VCA groups (2 rows of 8 buttons) and the LCR button, plus ALL and NONE buttons. (Note that this scope relates only to the VCA **Master** parameters (Fader & On), not to the channel assignments which are controlled within the input channel scope).
The **SOLO/SEL** buttons of channels and busses act as an additional way of selecting channels whenever the Channel Scope sub-page is open (Solo operation is always suspended when the sub-page is open).

SCROLL CUE LIST

The SCROLL CUE LIST encoder is always shown at the bottom right of the Cue List, and provides a faster alternative to scrolling the list using the scroll bars on the right-hand side of the touchscreen.



SHOW TIMECODES

When activated, the SHOW TIMECODE <ON> key replaces the cue number in the left-hand column of the cue list, with the trigger timecode value, if one has been set (see Page 15 - 13).

SORT BY TIMECODE

If a number of cues have a trigger timecode value set, pressing the {SORT BY TIMECODE} key allows the cues to be automatically re-arranged into timecode order. Cues that have no timecode trigger values are placed together in numerical order at the end of the list.

APPLY CHANGES TO SCOPED PARAMS IN SELECTED CUES

The software includes the capability to copy control settings that exist on the surface, into one or any number of other Cues in the Cue list. It is possible to define which controls from the current surface state will be stored, and which Cues you want to update with these control settings.
The changes made to the Cues will be 'absolute', ie the original setting of that parameter will be replaced by the new setting.



Start the process by ensuring the parameters you want to Apply are active on the surface. They do not have to be stored already in an existing Cue.
Press the START button in the Appy Changes field that is located on the bottom row of Vistonics controls below the Cue List.

Figure 15-9: Start.

This brings up the Scope selection panel on the left of the Cue list - this is now used to choose which parameters on the surface you want to copy to other Cues. You will notice the Scope panel appears with all parameters deselected, but all channels selected, this should speed up the selection process.
In the example (Fig 15-10), the EQ on channel 24 only has been selected.

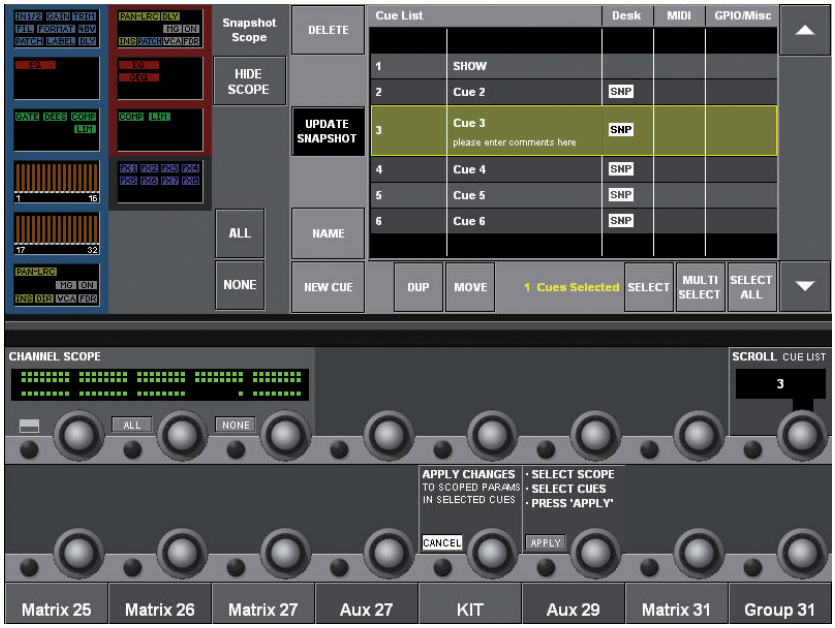


Figure 15-10: Scope and Channel Selection.

After the Start button has been pressed you will also see an additional field appear to the right of the Start button, giving the basic instructions for Apply Changes, and showing an APPLY button.
Once you have selected the parameters in the Scope selection panel, select which Cues you want to update by using the Select, Multiselect or Select All buttons below the Cue List.
Then when you are satisfied with your selection, press the APPLY button. You still have another chance to make changes or cancel the process at this point, because a dialogue box appears asking you to confirm that you want to update the snapshots in the selected Cues.
Touch YES to finish the operation or NO to go back to the selection stage. When you press YES, the desk goes through an automated process where the Cues are recalled and automatically updated. You will see a progress dialogue as this is happening.
Note that you will see controls moving on the surface as this is happening, but ***no audio will be changed*** during the process.

CUE LIST PAGE - Cue Number Field Touched

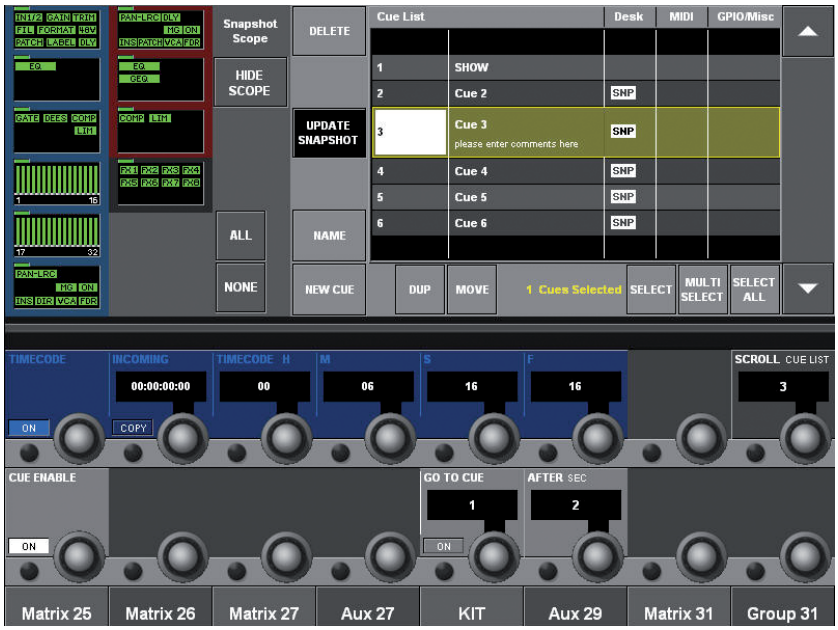


Figure 15-11: Cue Number Field Touched.

Touching the Cue Number area of the highlighted Cue switches the Vistonics encoders below to a new mode that allows specific parameters relating to this Cue to be edited.

CUE ENABLE {ON} key: Enables/disables the recall of this Cue in the List. When set to OFF, the Cue is jumped over in the list, if the [NEXT] and [LAST] keys are used to sequentially recall Cues. The Cue can still be selected by the scroll or up/dwn arrow keys on the surface (to allow editing of properties) but cannot be recalled by pressing the [RECALL] key (ie: no desk snapshot recalled, no events generated).
When set to off, the whole Cue appears greyed out in the Cue List.

SEQUENCER
The sequencer functionality allows auto-triggering of another Cue at a preset time delay after this Cue has been recalled. In this way several Cues can be 'chained' together.

GO TO CUE {ON} key: Enables/disables the sequencer function.

GO TO CUE encoder: Selects the Cue number of the Cue that will be triggered after the set time interval. (The numbers in the field match the current Cue List numbers).

AFTER SEC: encoder: Sets the time delay after which the Cue specified in the GO TO field is recalled. Range 0- 30s, in 0.5s steps.

TIMECODE encoders: Allows a MIDI timecode value to be set (Hrs:Mins:Secs:Frames). The Cue will be recalled automatically when the set timecode value is received at the MIDI In, if the **ON** button is enabled. There is also a global Timecode ON switch in the Menu \MIDI page which must be enabled in order for timecode triggering to occur. Timecode frame rate is detected automatically, and the value of the received timecode is displayed in the INCOMING field..
The {COPY} key transfers the value in the INCOMING field to the encoders.
The **{STEAL}** key becomes active if the whole Timecode value matches one that is already assigned to another Cue. Pressing {STEAL} will reassign this value to the current Cue. The default value of all fields will be '-' (= no value). The values will be shown greyed out if they match the values of another cue.

CUE LIST PAGE - Cue NAME Field Touched

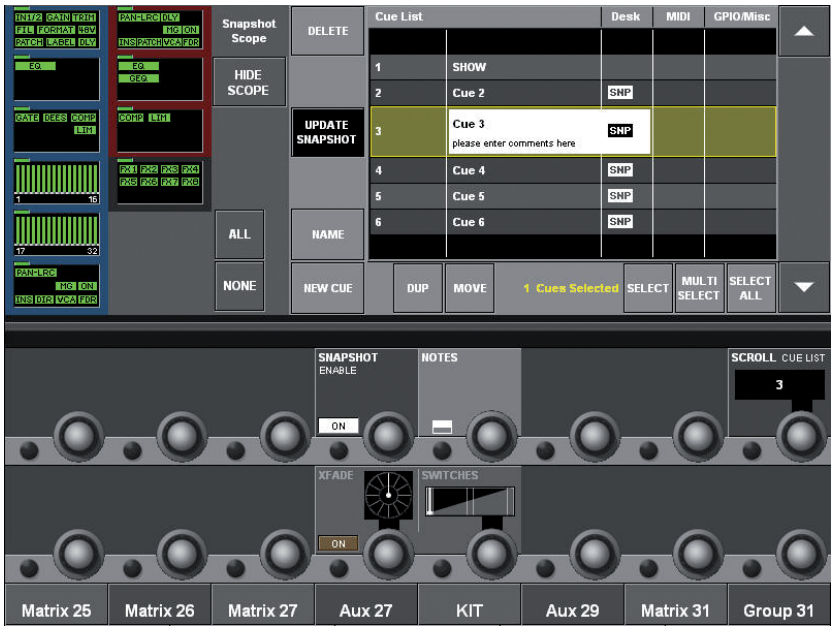


Figure 15-12: Cue Name Field Touched.

Touching the Cue Name area of the highlighted Cue switches the Vistonics encoders below to a new mode that allows specific parameters relating to this Cue to be edited.

SNAPSHOT ENABLE - {ON} key: Enables/disables recall of the desk snapshot in this Cue.
When not set to ON, the SNAP icon in the Cue List is greyed out.

NOTES sub-page key: Opens/closes the QWERTY keyboard and allows text notes to be typed that will be displayed in the highlighted Cue field in the Cue List page, and also (in shortened form) in the message area above the Cue List display in the Main Control Bay VST screen.

CUE LIST PAGE - MIDI Field Touched

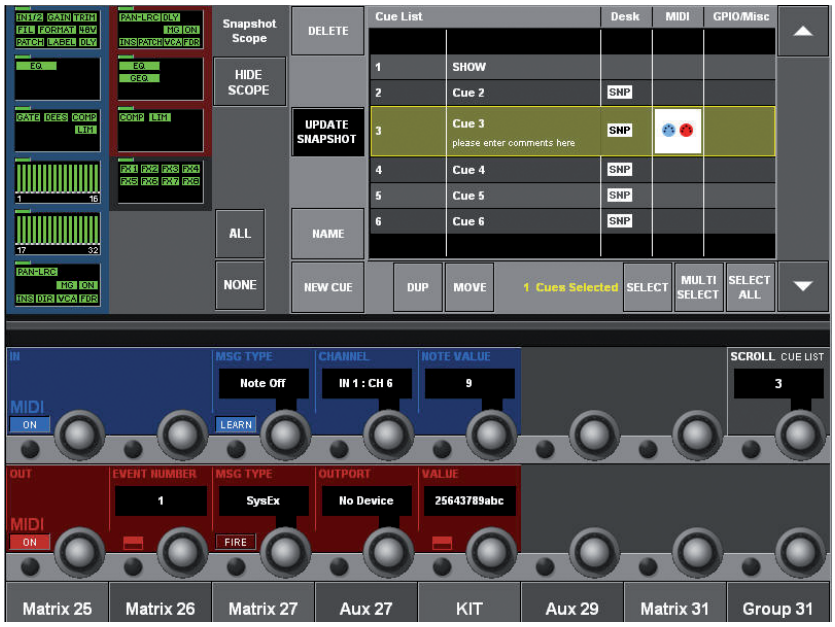


Figure 15-13: MIDI Field Touched.

This page displays setup controls for a unique MIDI IN message that can trigger the current Cue to be recalled, and up to 20 MIDI OUT events that can be sent when the current Cue is recalled.

MIDI IN Setup

{ON} key: enables/disables the selected MIDI parameters from triggering recall of this Cue when they are received by at the MIDI input. When off, the currently selected Cue cannot be triggered by an incoming event. The ALL MIDI In {ON} key in the Main Menu\MIDI page must also be enabled for messages to be received.

MSG TYPE encoder: Defines the type of MIDI Message being received for this Cue. See page 22-5 for Message types, how displayed, and whether used for RX, TX or both.
VALUE 1 encoder: Sets the Value 1 for the selected message type (field name may change dynamically to reflect actual parameter type according to selected message type).
VALUE 2 encoder: Sets the Value 2 for the selected message type (field name as above).
Value 2 is not applicable to all types of messages, but in this case an empty field will be displayed.
CHANNEL encoder: Allows the MIDI 'listening' channel for this Cue recall to be set. Value range is 'No Device', then 1-16, then 'Global' but the displayed value for 1-16 is taken from the Device Name field of the MIDI RX Device List (see Page 22-1, Main Menu\MIDI page). The Device list allows MIDI Channels to be mapped to a text name for easier identification of the devices being selected.

{REC} key: When active, the MIDI input of the desk 'listens' to incoming messages on all channels, and when it receives the first one that matches a supported trigger event type, it automatically populates the Channel, Msg Type and Value 1& 2 fields to match the received message. Any previous parameters are overwritten with no warning. The {REC} key switches off automatically when a valid message has been received, or the MIDI page is closed. (note: SysEx, MMC or MSC messages are not supported by the REC function).

{STEAL} key: Only appears if exactly the same combination of message type, channel, and values 1,2 (all these parameters must match) has been set up as a trigger on another Cue.
Pressing the {STEAL} key when it is visible immediately reassigns the displayed parameters to the current Cue.

Default settings stored in current Show are:

On key = OFF
Channel = 'No device'
REC key = OFF
Message Type= blank
Value 1&2 = blank

MIDI OUT Setup

The MIDI Out setup differs from MIDI In, in that instead of only 1 event for the Cue, there is an 'Events List' per Cue of **up to 20** events that can be transmitted.
Each of the events can be transmitted on any of the 16 MIDI channels on the two MIDI OUT ports (32 channels in total).

{ON} key: enables/disables the transmission of the currently-selected MIDI event when the currently selected Cue is recalled (separate value for each of the 20 events).
The ALL MIDI Out {ON} key in the Main Menu\MIDI page must also be enabled for messages to be transmitted.

EVENT NUMBER encoder: Scrolls through the 20 available MIDI OUT events on each Cue, and allows the Event parameters to be viewed or edited on the other VST encoders.

EVENT NUMBER sub-page key: Opens the Event List sub-page (see Figure 15.16). Although the 20 Events can be set up parameter-wise using the VST encoders, and scrolling the Event Number, the Events List makes it easier to see a glance all 20 events, and view their parameters in a table format.

MSG TYPE encoder: Defines the type of MIDI Message being sent for the selected Event Number.
See Chapter 22 for Message types, how displayed, and whether used for RX, TX or both.
VALUE 1 encoder: Sets the Value 1 for the selected message type.
(Field name may change to reflect actual parameter type according to selected message type).

There are two special cases of the MSG Type parameter – MMC Locate and SysEx – which cannot be accommodated by the Value 1 & 2 fields.

These two cases also result in the Channel parameter being replaced by a DEVICE ID, selected from the global TX Device ID list in the Menu\MIDI page).

When the **MMC Locate** message type is selected, the Value 1 & 2 fields are replaced by 4 fields allowing the Timecode value to be set – see Fig 15-14.



Figure 15-14: MMC Locate Message Type.

When the **SysEx** message type is selected, the Value 1 field changes to include a sub-page key which opens the QWERTY keyboard and allows the string to be entered in Hexadecimal format. When the string is longer than the number of characters displayable in the VST field, it is abbreviated with '…' – see Fig 15-15.



Figure 15-15: SysEx Message Type.

CHANNEL encoder: Allows the MIDI 'transmit' channel for the currently selected Event Number to be set. Value range is 'No Device', then OUT1:1-16 and OUT2:1-16, then 'Global', but the displayed value for OUT1:1-16 and OUT2:1-16 is taken from the Device Name field of the MIDI Devices LIST in the Main Menu\MIDI page.
The Devices list allows MIDI Channels to be mapped to a text name for easier identification of the devices being selected.
Note that where the Message Type being selected has a Device ID rather than a MIDI Channel (which will be the case only if the MSG Type is set to MMC Locate, SysEx or Go to Cue – see next page) then the Device ID will be displayed instead of the channel.

{FIRE} key: When pressed this transmits the displayed MIDI event for test purposes during equipment setup. Only the currently-selected event from the list of 20 is transmitted.

SCROLL CUE LIST encoder: Allows the Cue list to be scrolled whilst the EDIT MIDI page is open, allowing the Events Setup to be compared between Cues.

Default settings stored in current Show are (for each of the 20 Events):

On key = OFF
Channel = 'No device'
Message Type= blank
Value 1&2 = blank

CUE LIST PAGE - MIDI Field Touched & Event List Open

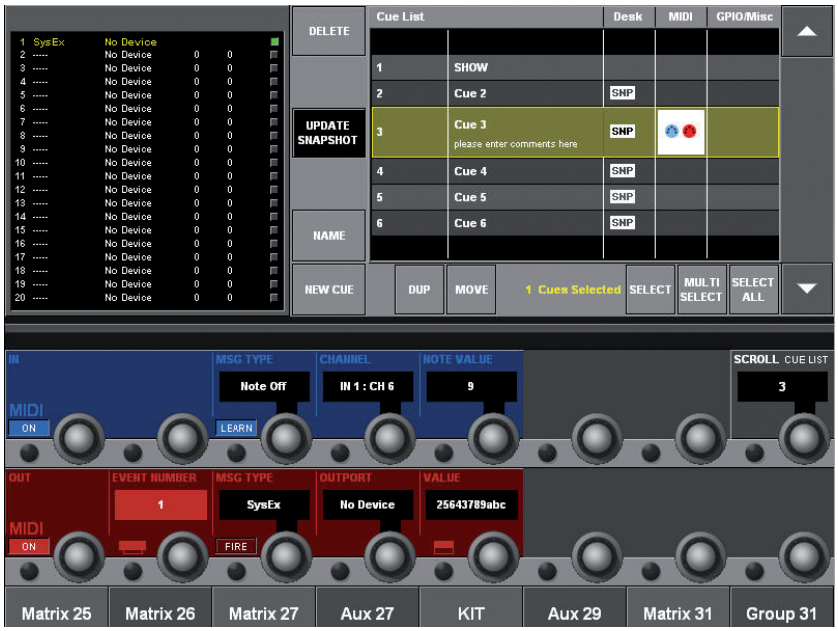


Figure 15-16: MIDI Field Touched & Event List Open.

Pressing the sub-page key in the EVENT NUMBER VST field opens the Events sub-page, which is displayed to the left of the Cue List.

Note that the events will be transmitted in the order that they appear in the list (i.e. No.1 first), although the speed of transmission of all 20 events is almost simultaneous. However the order can be important: if, for example, you wish to locate a playback machine to a timecode value and then start it playing the Locate command must be placed before the Play command.
The page gives visibility of all of the MIDI out events that have been set up for the currently selected Cue (up to 20 events).

The {SCROLL CUE LIST} encoder can be used to scroll through the Cue List whilst the Events sub-page is open. In this way it is easy to compare the MIDI Event setups for different Cues.

If more than 20 Events are necessary, the Sequencer function (see page 15-13) can be used to 'chain' two or more Cues together from a single Recall command.

The sub-page is closed again by pressing the sub-page key (there is no Exit button).

CUE LIST PAGE - GPIO/Misc Field Touched

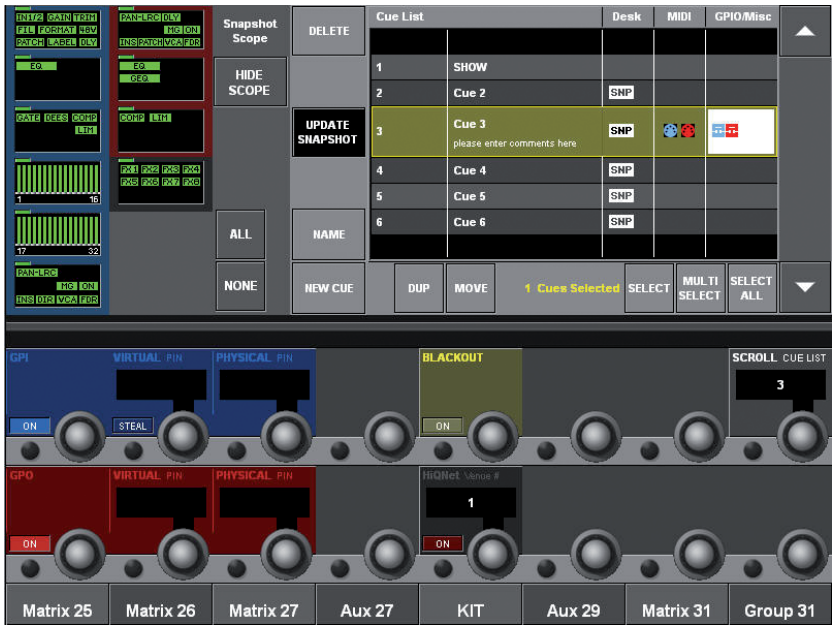


Figure 15-17: GPIO/Misc Field Touched.

GPI {**ON**} key: Enables/disables reception of the defined GPI signal from recalling the current Cue.

VIRTUAL PIN encoder: Allows a Cue List Virtual GPI Pin to be selected as the trigger source. The Virtual Pin must be assigned to a real (Physical) Pin in the GPIO Page. There are 80 Virtual GPI Pins available. (allows for 32 local plus up to 48 on 6 stageboxes). The Virtual pin number display is in grey text if that pin is already used by another Cue.

{STEAL} key: Only displayed if the selected Virtual pin is already assigned to another Cue.
Pressing the STEAL button reassigns the Virtual pin to the current Cue (no warning dialogue given).

PHYSICAL PIN field: displays the physical Pin number that is currently assigned to the selected Virtual Pin. (Display only). If a physical pin has not been assigned, this field will be empty.

GPO {ON} key, as above, but for outgoing GPO events. The Virtual GPO pins must be set up in the GPIO page.
There is no need for a Steal key on GPOs, several Cues can be assigned to the same v-pin. Note that although there is only one v-pin per Cue, a v-pin can be assigned to any number of physical pins in the GPIO setup page.

BLACKOUT {ON} key: Enables/disables the Blackout event on this Cue. This is intended for use in a dark scene in a theatre production.
The Blackout event switches off all console LEDs, screens and desk illumination, except for the NEXT and LAST buttons and the [F6] key. Pressing the [F6] key switches all illumination back on, but does not activate any other function assigned to it. When the illumination is back on, [F6] is returned to its normal function (if any).

HiQnet {ON} key: enables/disables the transmission of the assigned HiQnet Venue Change message upon recall of this Cue.

HiQnet encoder: Allows selection of the Venue Change number that will be transmitted from the HiQnet Ethernet port when this Cue is recalled.
Note that the IP address of the console must be set up in order to use the HiQnet functionality. These parameters are available in the Menu\system\HiQnet page (see chapter 14).

Global Filter

ISO Key Functionality

[ISO] keys have 3 states: 2 ON states and 1 OFF state.
Pressing the key will cycle round the states in the order OFF, ON1, ON2, OFF, ON1 etc.
Note that state ON2 will only exist if a partial Isolation has been set up on the strip (using the press & hold functionality – see below).

OFF state: (key not illuminated): No Isolation of any parameters.
ON1 state: (key illuminated): Full channel Isolation – purple border around channel/bus
ON2 state: (key illuminated): Partial Isolation activated on strip, if this has been set up using one of two methods : Press & Hold or Edit Global Filter mode. Indicated by the selected individual parameters displayed in purple.

Press & Hold ISO Key Functionality

To make a partial isolation: hold down an [ISO] key and make a short press on the VST function block to select the whole block. A wide purple LED-style indicator on the screen shows the isolated block state.

If the function block is NOT already zoomed, it is possible to hold down the [ISO] key and then press & hold the function block for 2 secs, in order to activate the zoom mode.

If the function block is already zoomed, individual parameters can be touched, (or the adjacent VST key pressed) and the parameter label text will change to purple to indicate selection.
The colour of that parameter in the function block touch field will change to purple to indicate parameter-level isolation.

Global Filter ON/OFF switch

A set of master controls for the Global Filter is located in the lower left-hand side of the VST area in the Cue List screen. See Fig 15-18.



Figure 15-18: Global Filter Controls

The Global Filter master {ON} key allows the complete Global Filter settings on all channels to be temporarily switched off if required.
The Global Filter Master {ON} key switches ON as soon as any ISO buttons on the console are pressed
If Global Filter On is then switched OFF, the isolation state and all indications of it on the surface will be removed (including illuminated [ISO] keys and purple Vistonics graphics). The state of these will be held in memory however, enabling it to be switched back on again later.

If Global Filter On is switched ON again, without pressing any [ISO] keys in the meantime, then the state of the filter will be restored from memory to the surface.

Clearing The Global Filter

If the Global Filter {On} key is OFF, pressing any local [ISO] key (either short or long press) will clear any previously set Global Filter, which may be being held in memory, and start a 'new' Global Filter on the surface with the newly-selected parameters.

The Global Filter On switch in the Cue List page will automatically change to the ON state when the first parameter is selected.

Global Filter settings are indicated on the Vistonics screens by means of the colour purple, as follows:

A complete* purple border around an input channel or output bus = full channel/bus isolated
A wide purple LED indicator in the top left of a function block = complete function block isolated
A narrow purple LED indicator in the top left of a function block & individual purple parameter icons in the function block = some parameters isolated
Purple parameter name(s) within a zoomed function block = parameter isolated
A horizontal purple bar across the screens (except the control bay) indicates that the whole console is in Edit Global Filter mode (see later).

*Note: if there is no FX assigned to an output bus the purple border will not encompass the FX function block.

Remember that the Global Filter of the console can also be edited directly on the console surface, without losing control of the majority of the surface, by using the [ISO] keys, as described on the previous page.

In conjunction with the Gang function, the [ISO] keys enables horizontal groups of channels, function blocks or individual parameters to be quickly set in and out of isolate (Global Filter) mode.

Edit Global Filter Mode

The {EDIT} GLOBAL FILTER key (see Fig 15-18) will switch the whole console into an edit mode which is the equivalent of 'Press & Hold on all ISO keys at the same time'. (ISO keys continue to work, but only with their 'Isolate All on this Channel' function, in this edit mode. There is no actual press & hold ISO functionality in this mode – it is not required).

In this mode the horizontal bars across all VST screens (except the control bay) will change from their normal colour (Blue or Red) to Purple, to indicate that audio can no longer be controlled from the VST screens.

Selecting function blocks or individual parameters is then done as follows: touch the function block with a short press to select the whole block (indicated by the wide purple indicator) or press & hold the function block to enter zoom mode, where individual parameters can be touch selected (or by VST key).

Note that the filter parameters being edited here are the same ones that are set by the "holding down [ISO] key" method previously described.

The reason for having two methods of editing the same parameters (locally using ISO or globally using Edit Global Filter mode) is that whilst the ISO method allows very fast, immediate control of channel filtering, even using Gang in addition to quickly set filters across the whole console, if there are a lot of parameters to be set into Isolate mode, the latching Edit Global Mode will be easier to use.

The [SEL] key is used to select whole channel to isolate mode. The [ISO] key can still also be used.

LOAD ISO WITH SHOW

The {YES}/{NO} key (its legend toggles) enables the user to recall (or not) the new Global Filter settings when a new Show is loaded.
The purpose of this feature is to allow ISO buttons to be used to protect sections of the console (e.g.. output section and master outputs) from changing when a new show is loaded in. This can be useful in a multi-band situation where the desk outputs are set up for the PA system but a visiting engineer wants to load their own show without changing the output section (or the interval music CD player for example). Setting LOAD ISO WITH SHOW to NO, and then switching the required parts of the show to ISO, will allow the show to be loaded without changing the isolated parts. The state of the key is not saved but defaults to YES when the desk is powered up.

MANAGING SHOWS

Loading Shows, copying Shows to and from USB data storage devices, and creating new Shows is done from the following page. It is reached by pressing [MENU] and then the <SHOW> tab at the top of the page (or the Show name at the top of the Cue List display area, which is at the top right corner of the main screen, can be touched).

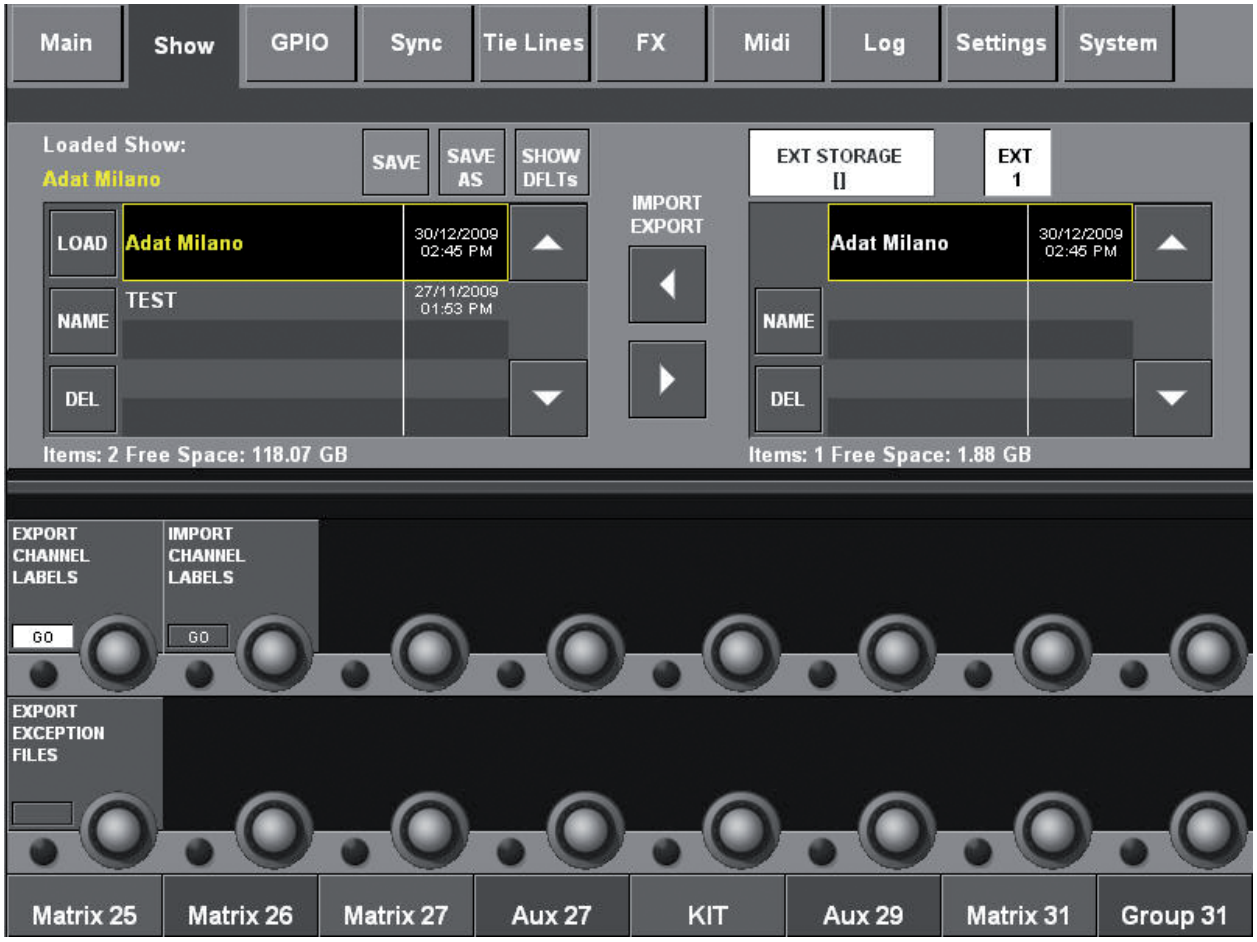


Figure 15-19: The Show Page

Note that the Show page appears as shown in Figure 15-19 if a USB data storage device is present in the USB slot. If there isn't any external memory, the right-hand side of the screen is blank, and the Export/ Import Controls are not shown. Up to 3 external storage devices can be connected: if more than one is detected, additional buttons will appear to the right of the <EXT1> button, and pressing the required button will select that device.

Flash Drive

The left-hand side of the page displays the shows which are present on the console's flash drive. The up and down-arrows on the touch screen are used to scroll though the available Show titles. Pressing and holding the arrow keys scrolls at a higher speed. Once the required show has been highlighted, in the double-height yellow-outlined box, the three buttons on the left can be used as follows:

The <LOAD> button will load the selected Show into the console (note that the currently-loaded show's title is shown in yellow text above the list).

The <NAME> button allows the user to name/rename the show, the on-screen keyboard is displayed.

The<DEL> button deletes the show from the flash drive (note that the currently-loaded show cannot be deleted). A confirmation dialogue is displayed.

Default Shows

The console comes with some factory-installed shows. These are not normally visible in the list, but they can be seen by pressing the <SHOW DFLTs> button. The default Shows are at the top of the list and are shown in italic text. They cannot be deleted with the <DEL> button, nor renamed. The Default Shows are designed to reset the whole console back to a 'flat' starting point.

Creating A New Show

The user can select a default show or another existing show and use the <SAVE AS> button. The user will then be asked to enter a name for the new Show using the on-screen keyboard. This new show can then be edited as required.



IMPORTANT: If you want to base your Show on one of the defaults, you MUST save it as a new show before you start working, otherwise you will not be able to store Cues. This is because of the write-protection assigned to the default Shows. It is good practice to create your new show using the SAVE AS facility before you start to make your setup on the console.

Updating A Show

A loaded show can be updated at any time by pressing the <SAVE> button. If you are not using Cues to store the state of the desk, it is essential that you save your Show in order to keep any changes made to the surface since you created the Show.

USB Data Storage Device

The right-hand side of the page displays the shows which are present on the installed USB data storage device. Normally the front panel USB Data Socket will be used (EXT1), but it is possible to connect USB data storage devices to the rear panel USB sockets (EXT2 and EXT3), and select the required device by using the <EXT1><EXT2><EXT3> buttons. The up and down-arrows on the touch screen are used to scroll though the available Show titles. Once the required show has been highlighted, in the double-height yellow-outlined box, the two buttons on the left can be used as follows:

The <REN> button allows the user to rename the show, the on-screen keyboard is displayed.
The<DEL> button deletes the show from the USB data storage device.

Exporting A Show To A USB Data Storage Device.

Pressing the right-facing arrow will export the currently-selected Show to an installed USB data storage device. Note that the date and time of the latest save is shown in both lists.

Importing A Show From A USB Data Storage Device.

Pressing the left-facing arrow will import the currently-selected Show from an installed USB data storage device. Note that the date and time of the latest save is shown in both lists.
With Importing and Exporting, a dialogue box appears showing progress. To avoid data loss do not remove the storage device until the progress box has disappeared

Export/Import Channel Labels

These keys allow the user to export a list of current Channel names in CSV (comma-separated values) format. This file can be edited in a PC spreadsheet package and then imported back into the desk. The file name is Soundcraft Vi channel labels.csv. Pressing the appropriate GO key immediately exports or imports the file to a USB memory device. These keys are only available if a USB memory device is connected.
Note that there is no progress dialogue because the operation is almost instantaneous.

Export Exception Files

If the console's on-board computer malfunctions an exception file is automatically written to the flash drive. Pressing the GO key will write this file to a connected USB memory device. A service engineer may want to look at this file. This key is only available if a USB memory device is connected.

RECORDED DATA

As was mentioned previously, some settings are recorded as part of a Show, others as part of a Snapshot, and a few are not recorded at all. The following diagram (Figure 15-20) shows how this is done.

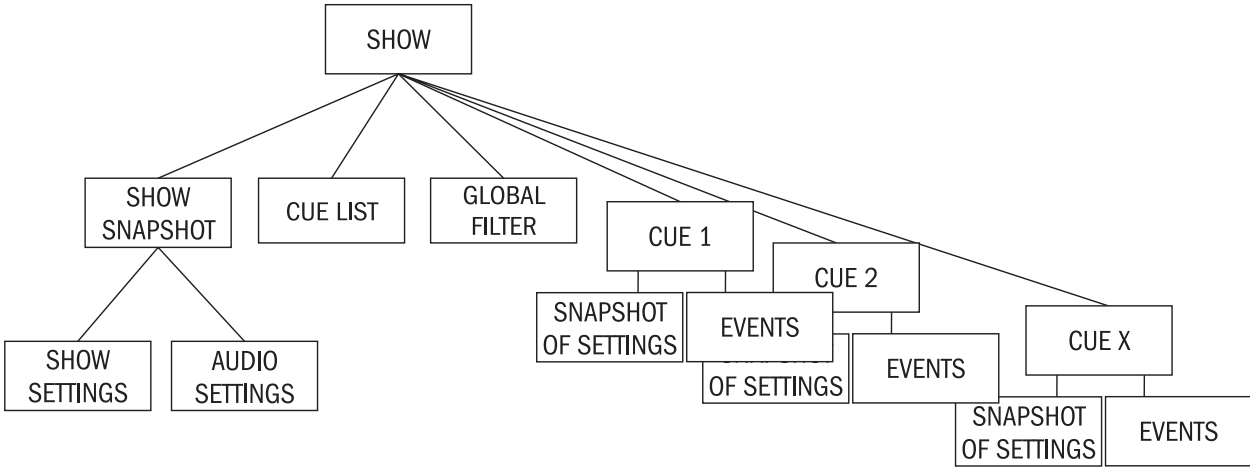


Figure 15-20: Recorded Data Structure

Note that a Show has one hidden Show Snapshot. This Show Snapshot is generated automatically, and it cannot be seen by the user. It holds the Cue List, the Show Settings and Audio Settings. These three sets of data contain all of the parameters which change when a Show is loaded.
The Show Snapshot's Audio Settings contains all the settings which a standard Snapshot can store; as a result, the Show Snapshot can be thought of as the last settings before the Show was unloaded. The Show Snapshot allows the complete status of the console to be recorded with the Show, even if no Cues have been saved.

Settings Recorded Within A Show Snapshot's Show Settings

Monitoring Settings: Monitor Level; Phones Volume; Solo Trims; Solo Blend; Monitor A/B Switch Status; Monitor On/Off Switch Status; Monitor Source Selection Status; Monitor Setup states.
All switches in Talkback section.
Talkback Settings: Talkback Levels; Talkback setup.
Generator Settings: OSC Level, Type.
Mute Safe Status (Input & Output).
System Preferences: Current Sample Rate; Sample Clock Settings.
Automation Setup States.
VCA / MG Assign View switches status: Currently selected view.
Bus Config States: Bus Formats; Bus Types and Bus Labels.
Channel Pairing States: Stereo Channel pairings (but only when Shows have been saved on the same console type: Vi4 or Vi6).
MIDI Configuration Setup: MIDI Channel names.
ISO switch status (Input & Output). This depends on the setting of the LOAD ISO WITH SHOW parameter in the Cue List page.
O/P Vistonics Lock Mtr switch status.
O/P Vistonics Solo/OnOff/TB switches.

All parameters in the menu/settings page.
Follow Solo switches.
Mute Group Master switch status.

Settings Recorded Within Audio Settings

This applies to the Show Snapshot and to any standard Cues.

All Channel* audio settings on the console: Channel ON; Fader positions; Pan; Channel Parameters (EQ/ Dynamics/input/output/ insert).
All Channel Bus assigns, levels, Pre/Post states and Channel Labels.
All Channel Patch settings.
All I/O controls.
*A 'channel' is an input, output or Master LRC channel.

Settings Not Recorded

PFL/SOLO switch status.
LRC Sel switch status.
All round Setup switch status.
User Defined switches (O/P fdr pnl) status.
All switches in Snapshot Control section.
Copy/Paste/Undo switch status.
Set Pre/Post modes switch status.
Pan/Level toggle switch status.
Upper & Lower Encoder Row Assign switches status.
Gang Mode switch status.
Solo Clear switch status.

Settings Restored To Their State At the Last Power-Down

Which Show was loaded.
LOAD ISO WITH SHOW switch status.

Show Compatibility

Vi2, Vi4 and Vi6 Consoles

From software V4.7, all shows are compatible between all Vi2, Vi4 and Vi6 consoles. running V4.7.

Previous to V4.7, shows saved ony Vi console (including Vi1) can be loaded on any Vi2/4/6. All settings will be recalled except for the channel pairing, which is not imported due to the differing vertical arrangement of channels in the fader pages.

When using files from a Vi6 on a Vi4 configured for 64 inputs or less, or a Vi1, some data in user layers may be lost because of the lower I/O configuration.

V4.0 and Older Software

There is full backward and forward compatibility between Shows saved on Version 4.0 consoles and older version consoles.

Shows saved on V2.x software can be loaded into a V4.7 console.

Shows saved on a V4.7 console can be loaded into a desk running V2.x software (without any of the features such as snapshot scope, partial isolation and events that were not present in the V2.x software).

This is achieved by converting the old Shows to V4.7 format when they are loaded on the V4.7 desk, and also saving the Show and Snapshot files in both old and new sessions when a Show is saved on V4.7.



Note: there is a maximum limit of 100 Cues when importing a V2.X Show into a V4.7 desk. If you have an existing Show with more than 100 Cues that you need to load onto a V4.7 desk, contact Soundcraft for advice about splitting the Show into two or more Shows, importing them separately, exporting them and re-combining them on an external laptop.