

8 Palettes

8.1 Palettes

When programming a show you will find that you frequently use certain positions, colours, etc. The console lets you store these settings so you can recall them at the touch of a button rather than having to find them on the wheels every time. This is very useful for rapid programming and when busking a show.

When you use a palette to **record a cue** (Section 10.2.2), the console stores a reference to the palette, rather than the actual value. This means that if you program your cues using palettes, you can easily change all the positions in your show just by reprogramming a few palette entries rather than having to reprogram all the cues. This is handy if you are touring and have to cope with different stages or truss heights every show.

Palettes can be **nested** (Section 8.2.3) so you can use palettes in other palettes. If you change a master palette, the changes will track through to all the palettes in which it is used.

Palettes are stored and selected using the buttons in the **Colours**, **Gobos/Beams** and **Positions** windows. You can also store palettes on Macro/Executor buttons or store and recall numerically from the keypad.

You can **set a legend** (Section 8.2.5) for each button so that you know what you're going to get.



If the **Colours**, **Positions**, **Gobos & Beams** windows are not shown, open the workspace [Groups and Palettes] to show all three windows.

8.2 Creating Palettes

8.2.1 Which Attributes are Stored in Palettes

Although each palette entry could store all attributes of a fixture, it's easier to operate the console if you create some palettes which only set positions, some for colour, some for gobo and so on. The console helps you with this by providing separate windows for **Colour** palettes, **Position** palettes, and **Gobo/Beam** palettes.

When you store a palette, it will only contain what's in the programmer (the attributes you have changed since you last pressed <Clear>). For example to create a colour palette you would just set the colour, and not change any other attribute. You can also make palettes which contain effects such as shapes and pixel mapping. If fade or delay times are programmed for fixtures or attributes, these will also be stored in the palette, and you can also create **palettes which contain only time information** (Section 8.2.7).

If the programmer contains more than one attribute, you can set a mask to restrict which fixture attributes will be stored in the palette.

Palette information may be **Global**, **Shared** or **Normal**:

- **Global** palettes work on any type of fixture.
- **Shared** palettes apply the same value to all fixtures of the same type - *for example when setting colours, the "Red" palette would set the same colour values for "Red" to all MAC 2000 fixtures.*
- **Normal** palettes are used when each fixture requires its own value - *for example when programming positions, each fixture will have a different setting.*

It is possible, by merging information into palettes, to create a palette which contains global, shared and normal attributes.

Available attributes for Global palettes are Dimmer, Pan, Tilt and Colour. When creating a global palette for a colour mixing fixture, both CMY and RGB attributes are calculated and a special "dynamic" value is added to colour wheel channels, the console will attempt to match the closest fixed colour wheel colour to the selected mix colour.

There is a **User Setting "Minimum Palette Mode"** (Section 8) which can force the console to record palettes in **Shared** or **Normal** mode.

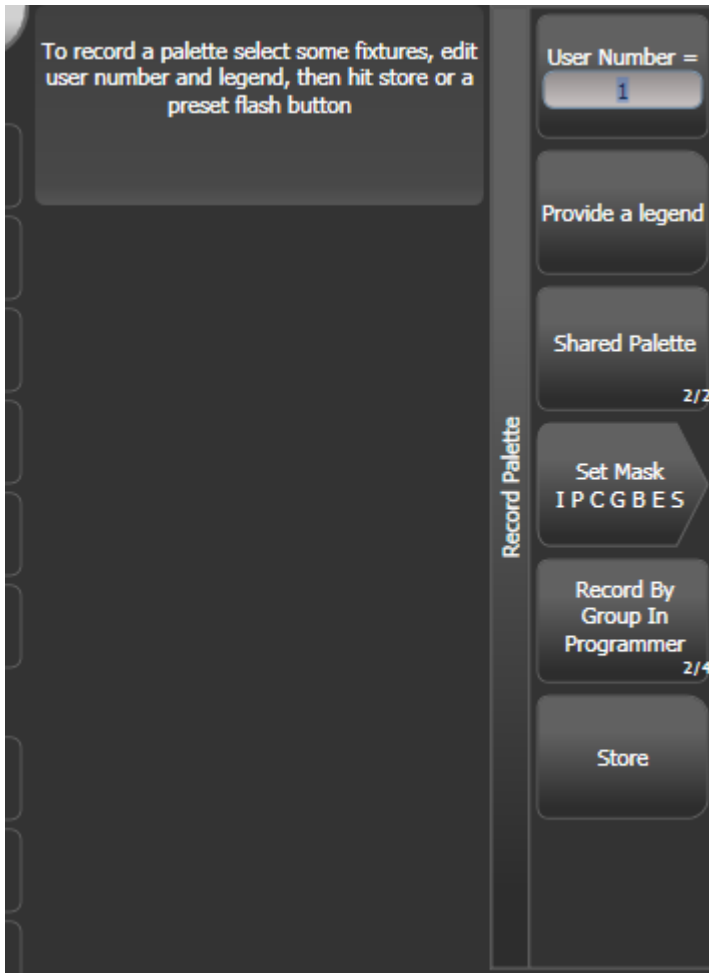
8.2.2 Storing a Palette

This is how you save a palette value to one of the palette windows: *If the palette windows are not shown then press the [Groups and Palettes] workspace button.*

1. Press <Clear> to clear the programmer.
2. Select the fixtures for which you want to store palette values.
3. Using the attribute buttons and wheels, set the attributes you want in the palette entry. *You can store any or all attributes of a fixture in each palette entry.*
4. Press <Record> then <Palette> (or <Palette> then [Record Palette])
5. If you wish, set the palette mask - this sets which attributes will be recorded in the palette. Select attributes using the Attribute Bank buttons - anything lit up will be saved. [Set Mask] and [Record by] softkeys also control the Mask (see below).
6. Touch a button in one of the palette windows to store the palette (if you touch a used button you will be given further options). Or enter a palette number and press [Store].

- Using **Quick Record (Section 3.5.1)** you can skip steps 4 and 5 - just double tap a blank palette button and the palette will be stored with the palette mask set automatically to match the window - Positions only includes P, Colours only C and Beams includes IGBES.

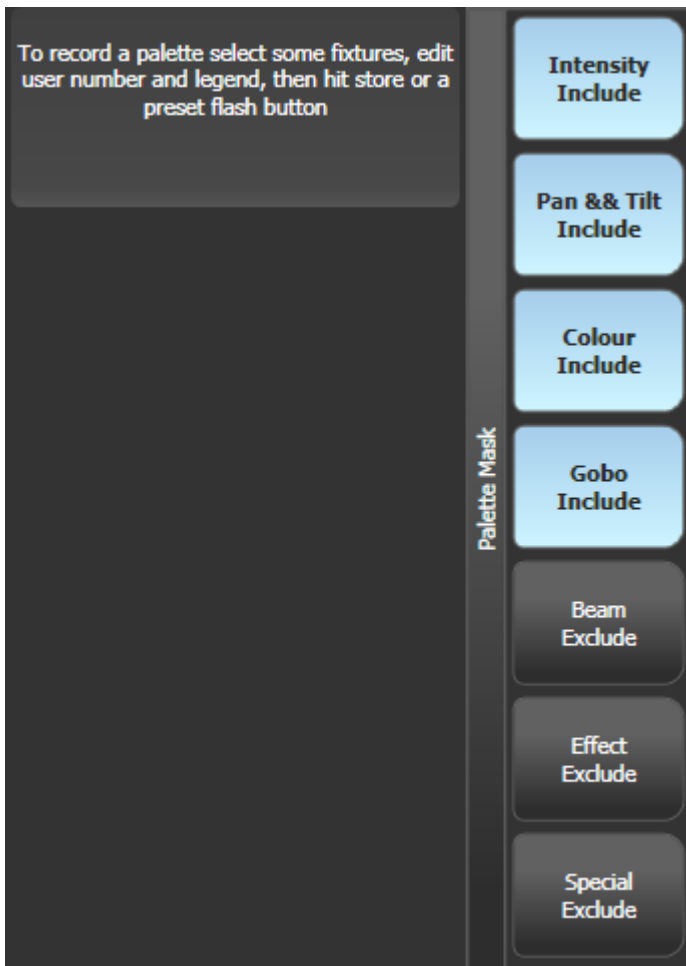
If you want to record to a physical button, press <Record> then <Palette>. All buttons where you can store the palette will then flash, press one to store.



- The console will automatically set the palette as Global, Shared or Normal (by checking if the values to be stored are the same across all fixtures of the same type). You can override the setting by pressing [softkey C]. See below for more details of how this automatic choice works.
- [Set Mask] allows you to specify which attribute groups will be included in the palette. You can also use the Attribute Bank buttons by the wheels to set the mask.

An attribute group is included when the softkey is inverted (like the Colour group in the picture) and when the LED is lit on the Attribute Bank button. The mask can only be set if you use the <Record> button to record the palette, if you use Quick Record then it is set automatically (see above).

- Press the <Attribute Options> (or <Options> on newer consoles) button to toggle all mask groups between Include and Exclude.



- [Record By...] allows you to control how the mask is used when saving the palette. The options are:
 - [Channel in programmer] records only channels which are in the programmer (ones which you have changed)
 - [Group in programmer] records all channels in any attribute group which has one or more channels in the programmer. *For example if Cyan is in the programmer, all colour channel settings will be recorded even if not in the programmer.*

- [Group in mask] records everything included by the mask set on the attribute buttons
- [Mixed] records by attribute group for **Position** and **Colour** but by channel for all other controls.
- The console will automatically create a legend for your palette (unless the **User Setting (Section 8) Auto Legend** is set to Off).
 - **Colours:** a coloured icon is used to show the selected colour. If the palette contains fixtures set to different colours, a coloured bar will be shown for each.
 - **Gobos:** show the gobo image (if available in the personality - you might need to **update the patched personalities (Section 6.3.10)**).
 - **CITP (media server):** show the media thumbnail.
 - **Pan and tilt:** show a default legend.
 - For **other** attributes the legend is set to the value of the attribute you last changed.



- You can also manually set a legend for the palette while you are saving it using [Provide a legend]. See **Setting Legends for Palettes (Section 8.2.5)**.
- If you select a Palette button which is already used, the console offers you options to [Cancel], [Replace], [Merge] or [Quick Merge] the existing palette.
 - [Replace] will erase the palette and save only the latest changes you have made.
 - [Merge] will combine your changes with the palette.
 - [Quick Merge] will merge only the attributes which are currently stored in the palette - the button shows you which attributes.

This allows you to add settings for additional types of fixtures to a shared palette or to update the existing fixture settings. Pressing the palette button again will automatically merge using Quick Merge.

- The console will select **Global** mode if the programmer contains the same values for all selected fixtures and one or more of the attributes is suitable for Global. If the values are the same but none of the attributes are suitable for Global the console will select Shared. If some attributes are suitable and some aren't, the console will record the suitable ones as Global and the others as Shared. If the values are different the console will select Normal. You can prevent the console from using Global and/or Shared modes using the **Minimum Palette Mode** option in the Palettes tab of **User Settings (Section 8)**.

8.2.3 Nested Palettes

Palettes can contain references from other palettes. For example an odd/even colour palette could be created using two other colour palettes as the masters. If you wanted to change the colours, changing the master colour palettes would also change the odd/even colours.

The [Record/Don't Record Nested Palettes] option in the Record Palette menu sets whether nested palettes are recorded (*default*) or whether the attribute values are recorded instead.

If you've created a new palette using nested palettes, you can switch the palette to be non-nested (to use the values which were set at the time it was recorded). This can be useful if a palette was recorded as nested, but then you need to break the link to the source palettes so you can change them without changing the new palette.

1. Press [Options].
2. Press the handle of the palette.
3. In the [Palette] tab switch off the option [Fire Nested Palettes].
4. Now when you fire the palette, it will use the values which were set when you recorded it, rather than the current values in the nested palettes.

- You can reinstate the link by switching the [Fire Nested Palettes] option on again.

8.2.4 Quick Record

The palette windows allow you to quickly record a new palette. Just touch the button where you want to record - the button will turn red with a + sign. At this point you can enter a legend for the new palette or change mask settings. A second press on the button will save the palette.



When using Quick Record, the palette mask is automatically set to match the window - the **Position** window only stores **P**, the **Colours** window only **C**, and the **Gobos and Beams** window stores **IGBES**. This does not happen if you use the <Record> button.

Quick record also works for groups and workspaces.

If you want to load a show from a **Pearl Expert** onto another Titan console, use the **Groups and Palettes workspace window** to access the fixtures/palettes on the blue/grey preset buttons on the Pearl. See [Compatibility Windows for Pearl Expert Shows \(Section 5.2.11\)](#) for more details.

8.2.5 Setting Legends for Palettes

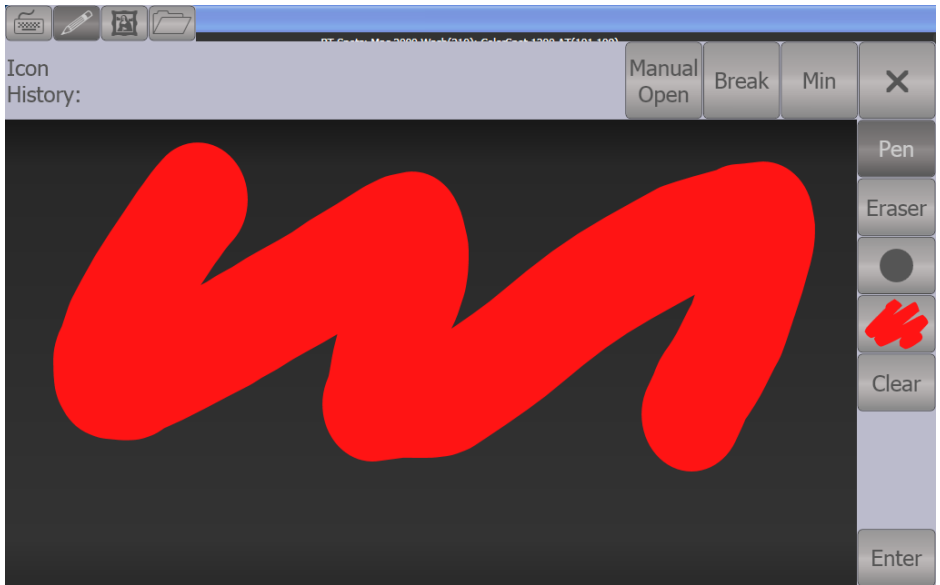
You can enter a legend for each palette to tell you what it is. Titan will automatically create helpful legends when you create the palette.

1. Press [Set Legend] at the top level menu
2. Press the palette button for the palette you want to legend
3. Type the legend on the keyboard
4. Press <Enter> when you have finished

On touch buttons, the palette number is shown top left. The **IPCG BES** attribute groups contained in the palette are displayed below your legend, so for example **Position** palettes will show a **P**, **colour** palettes a **C** and so on. In the top right corner is shown **G** for **Global**, **N** for **Normal** or **S** for **Shared** palette.



You can create a picture legend for your palette which could for example represent the colour or gobo it will create. After pressing [Set Legend] and the palette button, press [Picture]. The picture editor will open.



The tab buttons on the top left allow you to select Keyboard entry (legend reverts to text), Draw, Icon Library, or Load File. On the right you can choose Pen or Eraser, set the pen/eraser size, set the colour (white in the above picture), **clear** the whole picture, and **Enter** the legend. The **Min** button top left reduces the editor to a smaller size.

If you select Library you can choose a picture from a wide range of pre-programmed pictures. The pictures are sorted into various folders which are listed on the left.



8.2.6 Creating an Effects Palette (Shape or Pixel Mapper)

Speed up your programming by creating some palettes which apply **shapes or pixel mapping effects** (Section 9.1). You can't save a key frame shape to a palette.

For an effects palette to be useful, it needs to contain only effect settings (for example, for a pan/tilt circle you want it to move the fixtures around their current set position, not to change the position as well). To achieve this you can either use the FX mask when saving the palette, or you can just remember not to set any other values when programming.

1. Press <Clear>, select some fixtures and <Locate> them. *If you need to move them so you can see what's happening, you can do that, and the position can be removed later.*
2. Press [Shapes and Effects], [Shape Generator] and choose a shape to start. *See Shape Generator (Section 9.2) for more information about shapes.*
3. Alter the parameters of the shape as you require.
4. Press <Record> then <Palette> *You cannot use Quick Record to store shape/FX palettes.*
5. If you moved the fixtures in **step 1**, press [Set Mask] and exclude everything except **FX**.
6. Press a palette button to store the shape palette.

You can't use an effects palette as a **Quick Palette (Section 8.3.4)** (this is when you recall a palette with no fixtures selected). You must have some fixtures selected when you recall an effects palette.

8.2.7 Creating a Time Palette

You can create palettes which contain only **time** information. These can be used to set cue times and fixture attribute times without needing to set times manually. Using a time palette also means that you can go back and change the times once in the palette, and the changes will automatically apply to all cues which use the palette.

1. Press <Clear>, select some fixtures and <Locate> them. *If you need to move them so you can see what's happening, you can do that too.*
2. Press <Time> (May be labelled <Set> on Mobile/Sapphire/Quartz, and <Next Time> on Expert/Tiger).
3. Change Fade time to 2 sec. This sets the global fade time into the programmer.
4. Press <Record> then <Palette>.
5. If you moved the fixtures in step 1, press [Set Mask] and exclude everything except **Time**.
6. Press a palette button to store the Time palette.

8.3 Using Palettes

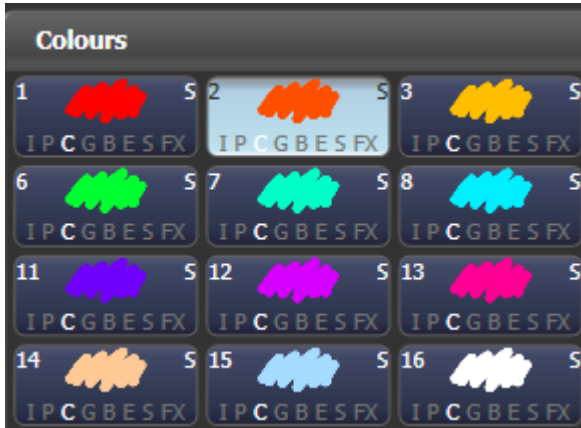
8.3.1 Recalling a Palette Value

Recalling From a Button

To recall a palette value from a button:

1. Select the fixtures to be changed. Shared palettes can be set to any fixture of the same type. Normal palettes will set individual values to each fixture. If no fixtures are selected, the palette will apply to all fixtures it is relevant to.
2. Press the Palette button you want to recall. The palette will be set to the selected fixtures.

- You can make palettes fade over a time when you recall them, see [Timing with Palettes \(Section 8.6\)](#).
- When a palette is used in the programmer, the touch button will light up to indicate this (you can disable this in the [User Settings \(Section 8\)](#)). This makes it easier to see which palette you have selected.



Recalling From the Keypad

You can also recall a palette by its number by typing the number on the numeric keypad.

1. Select some fixtures.
2. Press <Palette> above the numeric keypad.
3. Type in the number of the palette you want to recall.
4. Press <Enter> or [Apply Palette].

The [Apply Palette] softkey shows the legend of the palette which will be applied.

If you want to recall multiple palettes simultaneously you can use the Blind to Live function. Put the console into Blind mode (either press the <Blind> button if provided, or hold <Avo> and press [Blind Inactive]). Select the palettes you want to use. Enter a fade time in seconds on the keypad (or 0 to snap), then press <Blind> again. The palettes will fade to the live output.

8.3.2 Palette Pages

If you have stored palettes on physical buttons on the console, the <Page+>/<Page-> buttons will change to a different page of palettes.

If you want a palette to be locked on its handle and not change when the page is changed, you can set a lock or transparent lock on the palette handle. See [Handle Paging \(Section 10.6.1.1\)](#) for more details about locks.

Each of the palette windows can either display pages of palettes, with page buttons on the left, or a continuous scrolling window of palettes. To change between pages and scrolling, touch the **Pages Show/Hide** context menu button, then change pages using the page buttons to the left of the palette buttons.

8.3.3 Only Showing Relevant Palettes

If the **User Setting (Section 8) Filter Relevant Palettes** is enabled, when you select fixtures any palettes which are not applicable will grey out. This is very useful to see which palettes are available for the fixtures you are working with.

8.3.4 Quick Palettes with no Fixtures Selected

If you press a palette button when no fixtures are selected, the palette will be set to all the fixtures the palette applies to. This is called a **Quick Palette**.

For example if you've got some colour palettes programmed for your MAC 2000s, pressing one of the palettes when no MAC 2000s are selected will set the colour to all the MAC 2000s.

Effects palettes can't be recalled as Quick Palettes.

8.3.5 Setting Palettes to All Fixtures in a Playback

You can apply a palette to all fixtures in a particular playback. Hold the palette button and press the **Select** button of the playback which the palette is to apply to.

An alternative way to do the same thing is to hold down the **Flash** button of the playback then press the palette button you want to use.

8.4 Editing Palettes

8.4.1 Viewing and Editing the Content of Palettes

You can view the contents of a palette in the **Palette View window**. This lists all fixtures in the palette and the attribute values stored for them. A context menu button allows you to switch to displaying **Times**.

Press <Open/View>, then the button of the palette. The **Palette View window** will open.

Palette - Palette 1																
Attributes		Number	Order	Colour Macros	Colour Func	Colour	White	CTO	Cyan	Red	Magenta	Green	Yellow	Blue	CMY Macros	
All P C G B E S	I	BB7	-	1						100		0		0		
		BB4	-	1						100		0		0		
		R600 LED W	-	1	Open			0	0	100		0		0		
		Robins600ES	-	1		Fixed	Open		0	0		100		100	Open	
Fixture Type																
All Fixtures																
BB7																
BB4																
Robin 600 LED Wash																
Robin 600E Spot																

You can filter which attributes are shown using the **All/IPCGBES** buttons in the top corner, or which fixtures are shown using the fixture type buttons below that.

To edit an attribute value, touch/click on it in the window. The softkeys will give you a list of available settings for this attribute or you can type in a numerical value.

You cannot **Delete** a value from a palette, but you can disable it by selecting the value and pressing the [Off] softkey or <Off> button. If you select a value which shows '[Off]', the softkey will show [On], and would re-enable the previous value.

- When the palette contains other palettes, the context menu option [View/Hide Nested Palettes] sets whether or not the view shows the actual attribute value or just the name of the nested palette.
- When the palette contains shapes, the context menu option [View Shapes] will open the Shape View showing all the shapes with their parameter. Clicking **View** will open the **Shape Fixture View** which lets you edit the fixtures running the shape; the **Add Fixtures** menu button will add selected fixtures into the shape.
- When the palette contains effects (Pixel Mapper) the context menu option [View Effects] will open the **Effect View window** to let you edit the effect.
- The softkey option [View Playbacks Using Palette] shows you which playbacks reference the palette you are viewing.

8.4.2 Changing the Content of Palettes

To edit a palette entry, press <Edit> (<Update Palette> on Pearl Expert and Tiger Touch 1), then select the palette to edit. For Normal palettes this will automatically select the fixtures used in the palette; for Shared palettes the first fixture in the palette will be selected. Next, make the changes you want, then press the [Update Palette x] softkey to save the changes.

The <Edit> button also allows you to change the palette name and number.

You can also load the palette into some fixtures, modify the attributes and record the new information back on top of the existing palette entry. The console will give you options on the softkeys to **Replace**, **Merge** or **Quick Merge** the palettes. If you select **Merge**, anything you haven't changed will not be affected, values you have changed or added will be amended. **Quick Merge** will only update the attributes stored in the original palette and ignore others (*for example if you are merging with a position palette, but have also modified the colour attributes, the colour attributes would not be merged in*).

When double clicking a palette button to update, the default option is **Quick Merge**.

- You can set the console to **Always Merge** (so it doesn't ask you) using the **User Settings** (Section 19.5.4). You can also press the palette button a second time to select the **Merge** option.
- You can add settings for additional fixture types to a palette without affecting existing ones.
For example, if you have colour palettes for Mac Auras, you can add colours for your Robe BMFLs without affecting any previously recorded values in the palette.
- You can remove attributes from palettes using the <Off> button as described above.
- When editing a palette the state of the programmer will be preserved; when the modified palette is saved, your original programmer contents will be restored and the programmer will be left in the same state as when you started editing the palette.

8.4.3 Identifying Playbacks Which Use a Palette

If you are going to edit a palette it can be useful to check which playbacks reference that palette. You can do this by viewing the palette as described above, then select the context menu option [View Playbacks Using Palette]. This will highlight all the playbacks which include the current palette.

8.4.4 Updating Palettes Used in a Playback

If you need to quickly update a palette during a show, for example you fire a green cue and the Green palette used turns out to be not quite the right colour, the <Update> function lets you automatically update the palette used in the cue.

1. With the cue fired, select the fixtures and change them to the settings you want to store.
2. Press <Update> (on Pearl Expert, <Record Cue>, [Update]).
3. The cues and palettes which relate to the cue and can be updated are shown on the softkeys.
4. Select the items you want to update and press <Update> again.

8.5 Copying

8.5.1 Copying or Moving a Palette

Using the <Copy> and <Move> buttons you can make a copy of an existing palette or move it to a new button. You can copy or move multiple palettes in one operation. You cannot link palette buttons like you can with cues.

Move is useful for tidying up the console.

1. Press <Copy> or <Move> (if the console does not have a **Move** button, you can get this function by holding <Avo> and pressing <Copy>).
2. Press the **Select** button of the palette you want to copy/move. You can select multiple palettes - use the <Thro> and <And> buttons to add more to the selection - hold down <And> to keep adding them.
3. Press the empty button where you want it to go.

- The <Menu Latch> button latches the **Copy/Move/Link menu**, so you can keep copying, moving or linking things without having to keep pressing <Copy>. Press <Menu Latch> again to unlatch.
- [Retain Layout] or [Bunch Up] is used when copying a group of palettes with empty handles in the group - you can either keep the empty handles, or bunch up the used handles together.
- When in Copy mode, option [Copy Legends] can be changed to [Don't copy legends] so that the copied palettes are given default legends.
- When in Move mode, [Swap Items if Required] will attempt to reposition any existing handles which are in the way of the move. This is useful when rearranging buttons on a page which is nearly full.

8.5.2 Deleting Palettes

You can delete a palette by pressing <Delete>, then pressing the button of the palette to be deleted. Press the palette button again to confirm the deletion. For palettes stored on physical buttons you can delete a range of palettes in one go by holding down the first one while pressing the last one.

Other ways to delete a palette:

- If the console has an <Update Palette> button, press it, then select a palette, then use the [Delete] softkey option
- Press the <Palette> button above the numeric keypad and use the [Delete] option in the [Palette Utilities] menu
- Press <Delete> then [Palette], type the palette number, press <Enter>

If you have playbacks which use the deleted palette, they will go back to the values which were stored in the programmer when the playback was recorded.

8.6 Timing with Palettes

Palettes may be created with timing information, or you can manually override the timing when recalling the palette.

8.6.1 Palettes with Saved Times

If you have saved a **timed palette** (Section 8.2.7), the times will be used in any playback which is recorded using this palette. So if you programmed a 2 second fade into this palette, every playback with this palette will have a 2 second fade.

By default these times are **not** used when the palette is called directly, to allow for fluent programming. You may however turn this on (which further enhances **busking with palettes** (Section 3.5.2)) using the palette key setting in the **Key Profile** (Section 19.4). You can set [Palette Is Fired With Its Times] or [Palette Is Fired Ignoring Its Times].

8.6.2 Manually Overriding Palette Times

Being able to recall palettes with a manual fade allows easy “busking” of shows. When a palette is recalled in this way, a time is added and the palette fades in over that time.

1. Select some fixtures.
2. Type in the fade time for the palette on the numeric keypad.
3. Press a palette button to recall the palette.

- This overrides any timing stored in the palette itself.
- You have to re-enter the time each time you recall a palette. To use the same fade every time, you can set a **Master Time** (Section 8.6.4).
- Palette fading can be very useful when recalling a palette live during a show, as you can smoothly move fixtures to a new position or change colour slowly (on colour mixing fixtures).

8.6.3 Manual Fixture Overlap when Recalling Palettes

You can set a **Fixture Overlap** (Section 10.5.1) when recalling a palette, which means that the palette will be applied in sequence to each fixture in the group. This is a very quick way to busk complex effects.

100% means that all fixtures will change together.

0% means that each fixture must complete its fade before the next will start its fade.

- You need to also have a fade time set, otherwise Overlap has no effect.

1. Type in the overlap percentage for the palette on the numeric keypad.
2. Press [Set Overlap].
3. Type in the fade time if fade is also required.
4. Press a palette button to recall the palette.

- You have to re-enter the overlap each time you recall a palette. To use the same overlap every time, set a **Master Overlap** (Section 8.6.4).
- Fixture Overlap always requires a fade time in order to have a visible effect.

When using Fixture Overlap with global palettes without fixtures selected (Quick Palette) bear in mind that Fixture Overlap may be performed on a large number of fixtures which may lead to unwanted results.

8.6.4 Master Time and Overlap for Palettes

Option [Master Time] on the Palette menu (press the <Palette> button above the numeric keypad) allows you to set a default fade time. This fade time will be used for all palettes unless you manually type in a different time. This can be useful when “busking” a show with palettes. Set Master Time to zero to disable.

The [Master Overlap] option similarly sets the default Overlap for palette recall. Set Master Overlap to 100% to disable it.

You can create macro buttons to set different palette fade times. Press <Macro>, [Record], press a button to store your macro on. Then press <Palette>, [Master Time], <3> (for 3 sec), <Exit>, <Macro>. Repeat these steps to create a Palette Snap button (0 sec), or a 1 sec fade button, and so on.

A number of macros for various fade times ([Palette Fade x s]) and overlaps ([Palette Overlap y%]) are available in the macro library. To open this press <Macro>, then the softkey [View All]. Macros from the library can be copied onto buttons using <Copy> as usual.