16 Running The Show

16.1 Useful functions

Titan has many features to make it easier to run your show or event.

16.1.1 Back up the show

At regular intervals while you are programming, and when you have finished programming (or you've run out of time) and it's show time, the most important thing is to save the show (Section 5.8.1). It is wise to also make a separate copy of show by saving it to a USB drive, enabling you to swap to a different console if there are problems.

16.1.2 Label the console

When you are running your show you will need to know where everything is. Most handles have an associated display area for you to use the Set Legend function (see Legends and picture legends), or you can't beat the low tech method of marker pen and tape.

16.1.3 Saving screen layouts using Workspaces

You can save different **Workspaces** which store the layout of the various windows displayed on the console screen(s). This allows you to quickly recall different setups. Workspaces are stored and recalled from the touch buttons to the left of the menu buttons (or down one side of the screen for Diamond 9, Sapphire Touch, Titan Go, and on external screens). You can also store workspaces to any executor button on the console.

Workspace buttons can recall a screen layout for each individual screen, or can reconfigure all screens with a single button press.

Double press <Open/View> to show the window select buttons. See Saving workspace layouts (Section 5.2.2) for more details about saving screen layouts using the Workspace buttons.

You can also create a Set List (Section 16.3) which will automatically recall a workspace layout for each song.

16.1.4 Locking the console

The console controls can be locked to prevent unwanted tampering with it while you're not there. You can set a background image to show while locked. You can also show a workspace when locked to allow basic controls for non-technical staff, this is called *Venue Mode*.

While the console is locked, all functions are disabled except the DMX outputs and currently running playbacks.

1. Hold down <Avo>
2. Press [Lock]
3. Type a password (numbers from the keypad, or letters if you have a keyboard connected).
4. Press [Lock]
5. To unlock, enter the same password again.

After a few seconds, the “Enter password” prompt will fade out from the lock screen but will appear again if you press buttons or touch the screen.

You can set a saved **Programmer Password**, to save typing a password each time, by pressing [Set Saved Password] at step 3 (you can also set this from the Lock tab of User Settings). If you have a Programmer Password set then you can skip step 3 and just press <Avo> [Lock] [Lock] to lock the console.

> You can always unlock the console using the Avo master code “68340”.
> Locking / password does not protect or encrypt your show file in any way. This is just a simple operational lock to prevent unwanted tampering with the controls on the console.

Setting a background image for Lock screen

You can set a background image for the lock screen from the **Lock Screen Background** option in the **Lock** tab of User Settings (hold <Avo>, press [User Settings]). The image can be either loaded from a picture file (using the folder tab of the image selector) or drawn using the touch screen.

If you load a picture file, the softkey [Scaling Mode] sets how the picture will be scaled to fill the screen:

- None: Image is displayed 1:1
- Letterbox: scales the image until it fills either the width or height of the screen, leaving black bars on the other edges of the screen.
- Fill: scales the image until it fills the whole screen, keeping the aspect ratio
- Stretch: scales the image until it fills the whole screen, ignoring the aspect ratio

The [Clear] softkey will remove the image.

To fill the screen without scaling, the background image needs to be sized as follows:

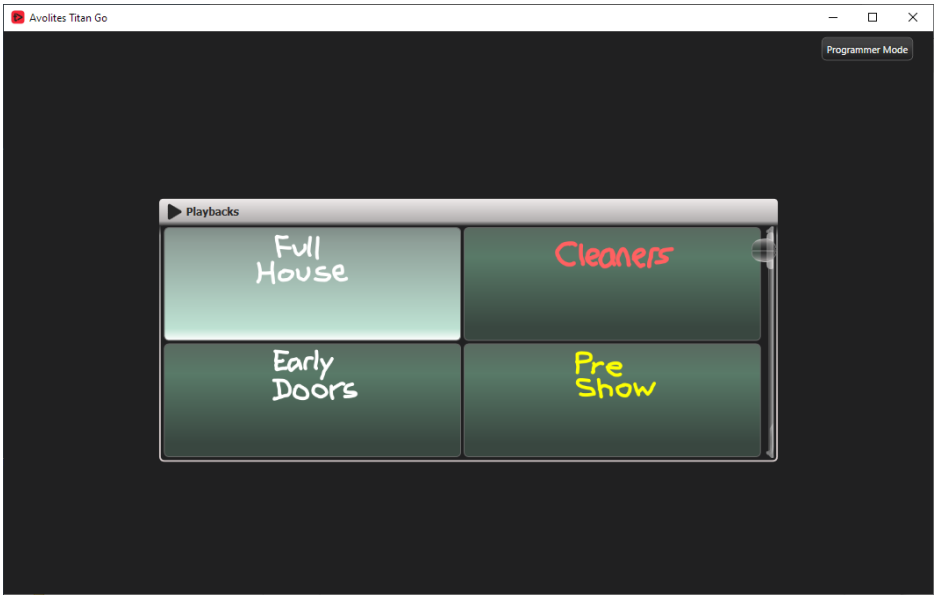
Console	Screen
D9 (-330 / -215)	1920 x 1080
Sapphire Touch	1366 x 786
Arena	1366 x 786
Tiger Touch II	1366 x 786

Console	Screen
Quartz	1280 x 800
TNP	800 x 480

Setting a Venue Mode workspace for basic controls while locked

You can designate a workspace to be displayed on the screen when the console is locked, this is called a **Venue Mode** workspace. This lets you provide a selection of playbacks or other controls on the lock screen, allowing basic controls for non-technical staff when the lighting operator is not present.

1. Save a workspace to be used for Venue Mode showing only the controls you want to be accessible (for example use the Playbacks window to provide buttons to turn on a basic lighting state, or the Virtual Faders window to give more control.)
2. Go to **Venue Mode Workspace** in the **Lock** tab of User Settings (hold <Avo>, press [User Settings]) and select your workspace from the list on the softkeys.
3. Lock the console as described above. The workspace you selected should be shown.
4. To unlock the console into normal mode, click the [Programmer Mode] button at the top right of the screen and enter the password you used.



All hardware controls are disabled in this mode. Only the following workspace windows will show: - All Handle Windows (Colours, Playbacks, Media, etc.) - Active Playbacks - Audio Triggers - Capture Visualiser -

Channel Grid - DMX - Event Log - Intensity View - Pioneer DJ - Pixel Map Preview - Playback Groups - Timecode Windows - Video Multi View - Virtual Faders

Fixture selection is disabled, but quick palettes will still function.

> Menu changes are disabled in Venue mode - this means that user macros which press menu softkeys or which change to a particular menu won't work in Venue mode, because when you record a menu softkey the macro also automatically records a command to open the correct menu (in case you run the macro when you are in a different menu). This also means that double-press button functions won't work in Venue mode since these operate by opening a menu with the first press then activating a menu option with the second press (for example double pressing <Release> for Release All wouldn't work in Venue mode.)

Using the **Lock on Startup** setting in the **Lock** tab of User Settings (Section 19.5.3) you can configure what lock mode the console will power up into, so you can ensure that staff can gain an appropriate level of control even if the console was not powered on, or was not turned off in a locked state. If you set the console to start up in a Locked state, you need to also set a Programmer Password to be used.

If the console is in a publicly accessible location you can also lock the venue mode screen using the **Venue Mode Password** on the **Lock** tab of User Settings. To lock the screen press [Lock] in the top right hand corner. This will show the normal lock screen. When you unlock using the Venue Mode Password, the console will go back to showing the Venue Mode workspace. This allows venue staff to be able to secure the console without having full programming access.

16.1.5 Tidying the console with the Move function

If the layout of the fixture buttons, palettes or playbacks has become a bit mixed up during programming, you can use the Move function to move recorded items around and produce a better layout. When an item is moved, all links to other recorded items are retained.

1. Press <Move> to select Move mode (if the console does not have a **Move** button, you can get this function by holding <Avo> and pressing <Copy>).
2. Press or touch the **Select** button(s) of the item(s) to move.
3. Press or touch the **Select** button of the destination.

When moving a range, it is possible to select a range containing different types of items, and there can be gaps between them. If you want, you can set [Bunch Up] mode to have all of the gaps in the range removed.

[Swap Items if Required] will attempt to reposition any existing handles which are in the way of the move. This is useful when rearranging handles on a page which is nearly full.

- If there is not enough space, (there is an item in the way or there is not enough space before the end of the page) then the action will not be completed.
- Press <Latch Menu> to keep Move mode active if you have a number of things to move around.

16.1.6 Blind mode

If you want to program palettes or cues using the visualiser (or in your head) without affecting the look on the stage, you can set the console to Blind mode. Just press the <Blind> button (on consoles which don't have a dedicated button, hold down the <Avo> button and select [Blind]). While in Blind mode, changes on the console will have no effect on the stage but active playbacks will continue. The <Blind> button will be lit and the console will show **BLIND MODE** in the status display area.

To return to Live mode, press <Blind> again.

You can preview a playback on the visualiser without affecting the stage by setting the playback into Blind mode - hold the <Blind> button and press the playback select button. Repeat this to restore the playback to Live mode. You can also set Blind mode in the playback's Options.

You can convert the Blind output to the Live output with a fade. This is useful to set up a live state in blind mode then output it without having to save to a playback. It also allows you to select multiple palettes then fade to them all at once - though Scene Master (Section 16.2.5) is probably a better way of doing this.

To convert blind to live, type a number to set fade time then press the <Blind> button.

- If any attribute fade times have been set in the programmer, these will be used instead of the fade time you type.

16.2 Playback controls

16.2.1 Grand Master fader and assignable masters

Any playback fader on the console can be assigned to act as a master fader, which allow you to set the overall intensity of various areas of the console. Different types of master fader are available:

- **Grand Master** controls the intensity of all output from the console.
- **Swop and Flash masters** control intensity of the swop/flash buttons
- **Preset master** controls intensity of the preset faders
- **Playback master** controls intensity of all playbacks.

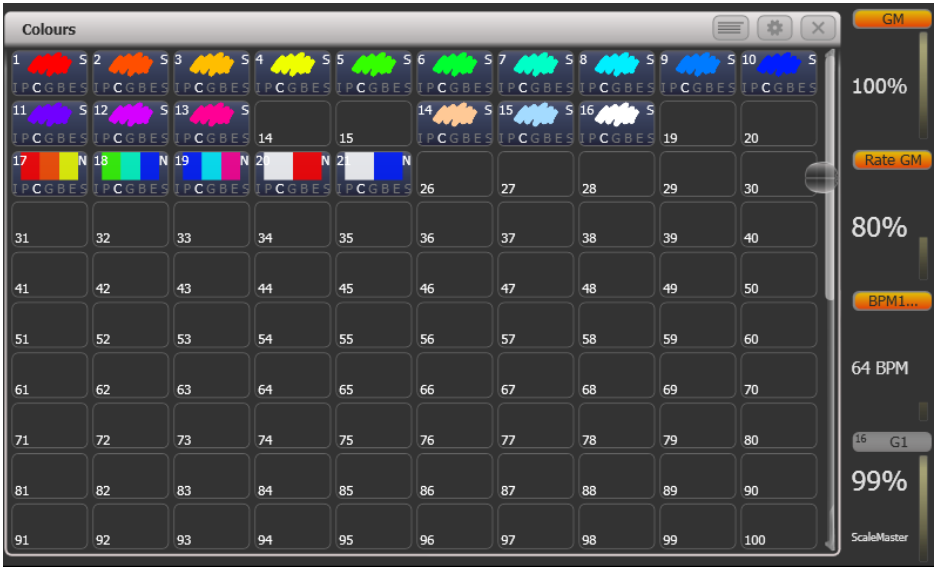
To assign master faders:

1. Press <Record>.
2. Press [Create Master].
3. Press the **Select** button for the fader you want to use as a Master.

> By default, master faders are stored on the fader page where you created them and will not be accessible from other fader pages. It is often useful to set the master to have a lock or a transparent lock, which makes the master fader remain in position even when the playback page is changed. You can set this from the Options screen for the master, see Handle Paging.

You can also assign masters from the **System** menu by selecting [Assign Masters].

- If you store a fixture group on a fader handle, the fader becomes a Group Master for the intensity of that group.
- On the Diamond 9, the rotary encoders at the sides of the touchscreen (or on the Arena the rotary encoders beside the Mini Screen) are very useful as speed masters or group masters - press the encoder to select it as a master. Press the Display button below the encoders to show legends for the encoders on the screen if they are not already shown (there are 4 display modes to cycle through).



> If you assign a master to a handle with an LED, the LED will flash if the fader is at zero… just as a reminder to help you work out why no lights are coming on.

- Some consoles are fitted with a designated Grand Master fader. This is disabled by default in a new show to prevent confusion over why nothing is lighting up. It can be enabled in the Handles section of the User Settings if required.
- The Pearl Expert has additional master faders: Swop and Flash masters control intensity of the swop/flash buttons; Preset master controls intensity of the preset faders; Playback master controls intensity of all playbacks.

16.2.2 Speed and Size Masters

Playbacks can be assigned to a **Speed Master** and/or a **Size Master** which allow you to control the speed and size of shapes or effects stored in a cue (or in the case of chases, to modify the speed of the chase).

There are twelve possible Speed Masters and four Size Masters which allow you to separately control the parameters of different playbacks, if you need to – for example Rate Master 1 could be assigned to control position shapes, Rate Master 2 to dimmer shapes, and so on.

A playback is assigned to a Speed/Size Master by pressing [Effects] then [Speed Source] or [Size Source] in the playback Options. The following speed sources are available:

- Free Run (default - no Speed Master. Effect runs at programmed speed)
- BPM 1-8 (override the local speed with a fixed value from the master)
- Rate 1-4 (proportionally modify the local speed using the master)
- LocalClock - the playback is set to Tap Tempo mode and all other speed settings are ignored. Using Key Profiles you can assign one of the playback buttons to [Tap Tempo] mode, and then set the effect speed by tapping the button. Effects will synchronise to the tap.

There is also a **Rate Grand Master** which, if used, proportionally controls the speed of any effect or chase (whether or not they have a BPM or rate master assigned).

To use Speed or Size Masters you will need to assign some handles on the console to act as the Master faders:

1. Press <Record>.
2. Press [Create Master].
3. From the softkeys select the type of master you want to create.
4. Press the **Select** button of the handle you want to be the master.

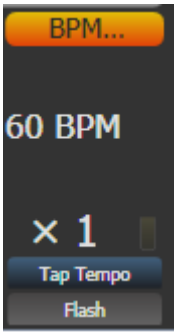
- Special key profile options are available to set what the buttons do on Speed Masters, BPM Masters default to Tap Tempo.

Speed or Size masters can have various scales, 0-100%, 0-200% and so on. A 0-200% scale would allow you to slow down and speed up the speed to double the programmed setting. Scales are set in normal (non-system) mode by pressing <Options> (or [Options] softkey) then press the Select button of the master.

BPM master options

BPM masters can have multipliers or dividers set which allows you to vary how the tapped speed relates to the effect speed. To modify the options, press <Options> (or [Options] softkey) at the top level menu then press the **Select** button of the BPM master.

Normally the BPM master fader sets the BPM, and the multiplier is shown below. Tapping the **Select** button will also set the BPM or you can enter BPM on the keypad and press the **Select** button of the master to set it. This is how a BPM master looks with the BPM set by the fader:



The [BPM On Fader]/[Multiplier on Fader] option sets the master so that the fader now controls the multiplier and the BPM is set by tapping. This is how the master looks when set to Multiplier on Fader:

The [Multiplier Scale] option now allows you to set the range of multipliers/dividers which can be set on the fader – from x2-/2 to x32-/32.

The [Keep Multiplier On Tap]/[Reset Multiplier On Tap] option sets whether the multiplier should be reset to “x1” when a new speed is tapped.

In the Times tab of User Settings, there is an option “Compensate for Rate Grand Master” which comes into play if you have assigned a Rate Grand Master set to less than 100%. If the option is On (default), a tapped tempo will come out at the speed you tapped and will not be scaled by the Rate Grand Master. If the option is Off, when you tap a tempo, it would then be scaled down by the Rate Grand Master.

Adjusting masters using the wheels

You can adjust Intensity, Size, Rate and BPM masters from the wheels by pressing <Connect> followed by the **Select** button of the master. This is useful for making fine adjustments to the setting of a master. For a BPM master you can also adjust "Edge Sync" which allows you to nudge the synchronisation forwards or backwards.

While a wheel is connected you can touch up or down in the wheel display area to nudge the value up or down. Pressing the <@> button for the wheel opens a softkey menu where you can input a numerical value or [Release] the speed and multiplier to default values.

> Using Key Profiles (Section 19.4) you can set one of the buttons of the master to act as the "Connect" button.

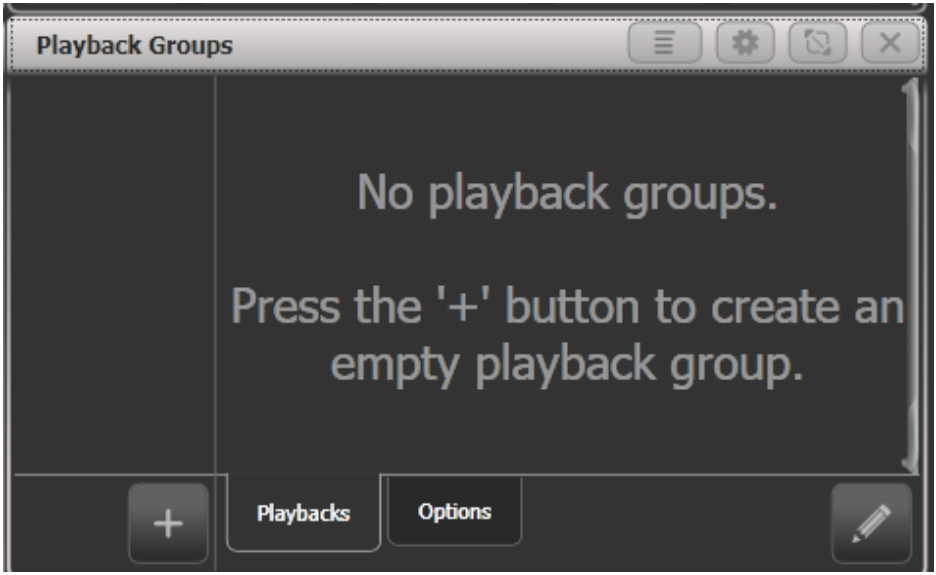
16.2.3 Playback Groups

Playbacks can be assigned to groups. This allows you to create a set of playbacks which automatically switch off other playbacks in the same group. This can be useful when you have playbacks setting colours on executor buttons so only the most recent playback stays active, or to make life easier when busking so you don't end up with lots of playbacks fired which have superseded each other.

On a console with motorised faders, the faders for the killed playbacks will return to zero. Otherwise the LED in the playback's select button will go out to show that the playback is now inactive.

Creating a Playback Group

First open the Playback Groups workspace by double pressing <Open/View> then press [Playback Groups] from the window select buttons.



1. Press the {+} button. This creates a new empty playback group in the left pane.
2. Press the new group button (if this is your first group it will be [Playback Group 1])
3. Press the {Pencil} button at the bottom right of the window to place the group into edit mode.
4. Select the playbacks to include in the group by pressing their select buttons once. The playbacks will appear in the workspace as you select them.
5. Press <Exit> when you have finished adding playbacks.

- The playback selection toggles while in edit mode so you can remove a playback by pressing its select button again. You can also remove a playback by pressing its button in the groups window while in edit mode.
- You can also create a playback group using the <Group> button – press <Group>, [Playback Groups], [Record playback group]. Then select the required playbacks which will highlight, then press [Store].
- You can set the legend or halo for a playback group by pressing the [Set Legend] softkey then the group button in the left pane of the workspace.
- You can fire playbacks (when not in edit mode) by pressing the playback buttons in the Playback Groups window.

> When a playback is part of a group, an asterisk * is shown at the end of the playback legend to help you remember which playbacks are in groups.

Editing Which Playbacks are in a Playback Group

From the Playback Groups workspace, select the group to be edited on the left then press the {Pencil} button bottom right to edit it.

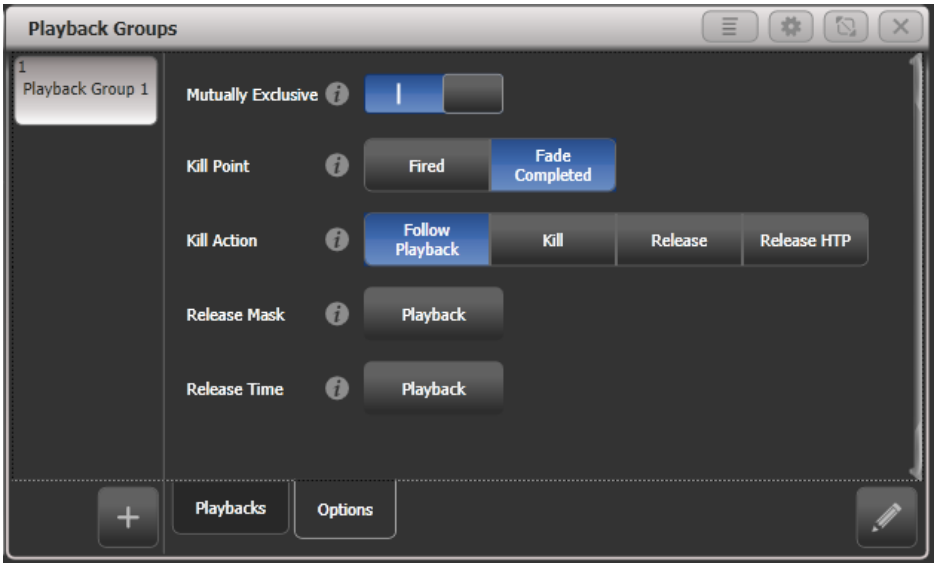
The playbacks in the group highlight and you can toggle them in and out of the group using their select buttons.

There are also softkeys to set the User Number and Legend for the group.

- To delete the entire playback group, press <Delete> then the group button in the left hand pane of the workspace. To confirm click the group button again, or click [Confirm] or press <Enter>.

Playback Group Options

For each group you can set how playbacks in the group will behave. From the Playback Groups workspace, select the group to be edited on the left then press the Options tab at the bottom of the workspace.



- **Mutually Exclusive** switches the exclusive mode on and off. This allows you to temporarily disable the exclusive action of a group without deleting the group.

- **Kill Point** sets when other playbacks in the group will be killed when you fire a new playback:
  [Fired] - as soon as the playback passes the trigger point
  [Fade Completed] – when the new playback has completed its fade in time.

- **Kill Action** sets whether the playbacks being killed will use Release rules or not.
  [Follow Playback] - each killed playback uses its own settings for release.
  [Kill] - playbacks are always killed without any release.
  [Release] – playbacks are always released using the settings in the mask and time below
  [Release HTP] – HTP channels are released but LTP channels are killed.

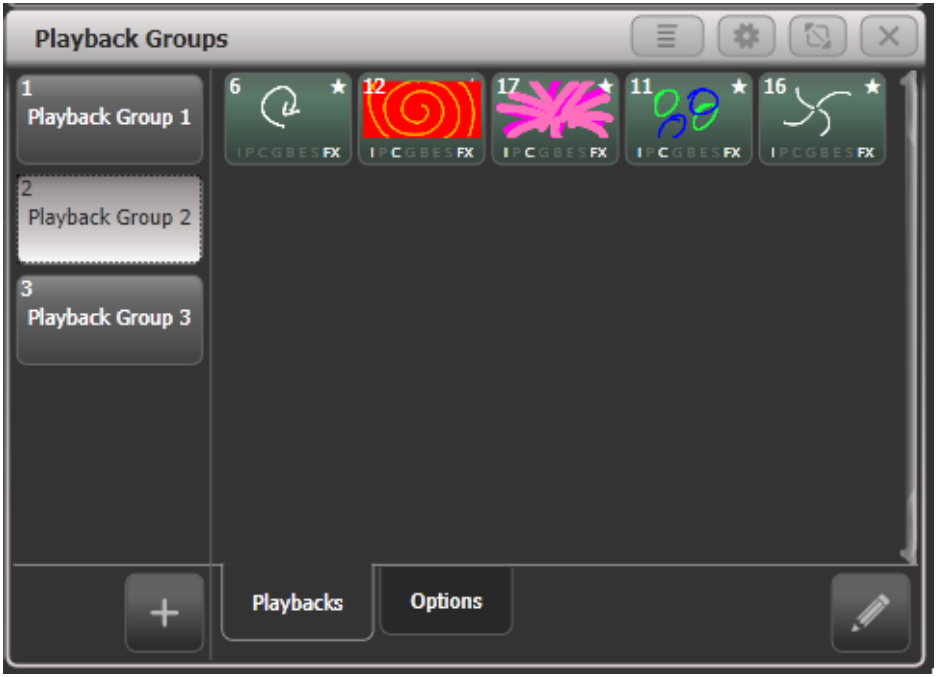
- **Release Mask**, **Release Time** allow you to override the release settings for killed playbacks. If set to the default of [Playback] then the playback's own settings are used.

Playback Group Workspace Display Options

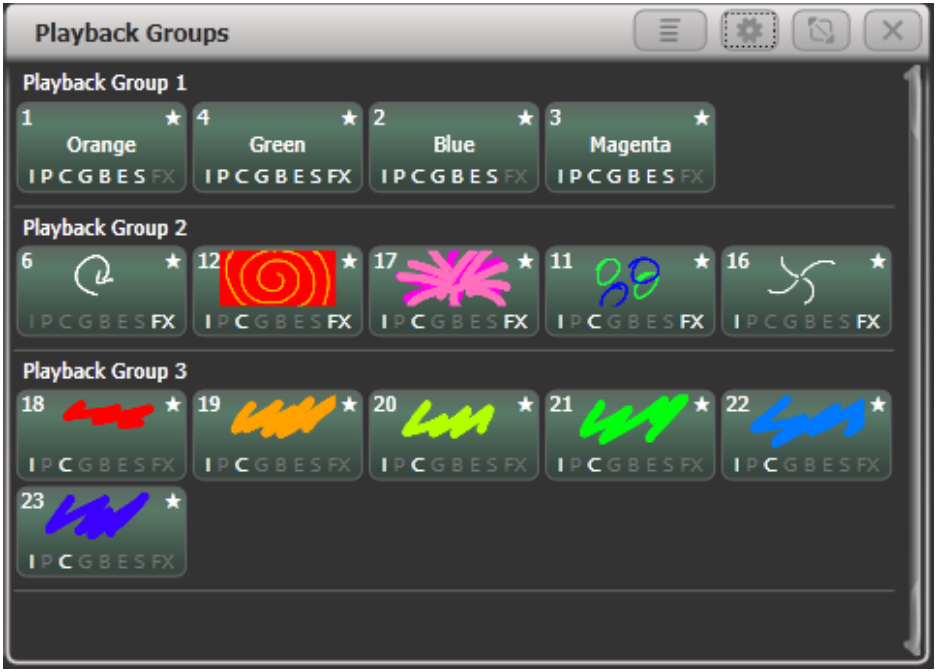
Using the workspace options menu ({Cog} button at the top of the window) you can set three different display modes for the Playback Groups workspace:

[View Mode All] – 2 panes with group buttons on the left and all the playbacks in each group shown on the right

[View Mode Single] – 2 panes with group buttons on the left, but only the playbacks in the currently selected group are shown on the right. Handy if you have groups with a lot of playbacks in each one.



[View Mode Playbacks Only] – Single pane with just the playbacks for each group shown.

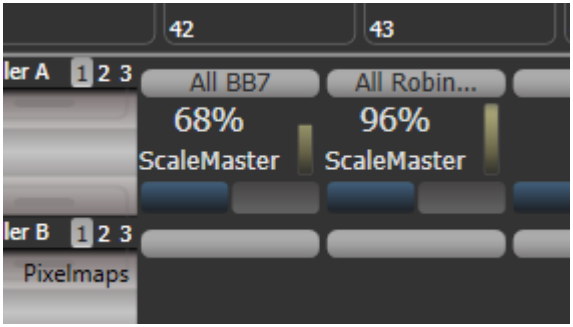


16.2.4 Fixture Group Masters

You can assign a fader to control the master intensity of each fixture group. To do this you simply save (or move) the group button to a handle with a fader.

Press <Options> (or [Options] softkey) and then the **Select** button above the fader to set the fader mode to the following: - Scale master (proportional control). Scale masters can be set to variable scales of 100%, 200%, 400%, 600% and 1000%. The higher settings allow you to increase an intensity above its recorded level. - HTP (override level if higher than current output) - Limit (sets hard limit) - Take Over (place fixture and its intensity in programmer when level matched) - Disabled (ignore fader)

If the playback fader has a display area on the screen, the level and mode of the master will be shown.



When a group master is set to disabled or moved to a handle without a fader, it will become locked at the current fader level. Re-enable or move back to a fader to adjust the level.

Using Key Profiles (Section 19.4), you can set different behaviour for the buttons of a group master – the Select and Flash buttons if it is on a fader handle, or the touch button if it's on screen. - Flash Fixtures – flashes the dimmer level of fixtures in the group to the level set by the group master fader, while the button is held - Timed Flash – as above, but fade in and out using fade times set using the "Edit Times" option for the group master - Flash Master – flashes the group master fader to full - Timed Flash Master – as above, but fade in and out using fade times - Swop fixtures – like Flash Fixtures, but turn off all other fixtures that aren't in the group

If a Flash Master is configured, this will also master the group flash.

> You can release all masters by pressing <Release> then [Release All Masters]. This can be useful if something is being controlled by a master but you are not sure where it is.

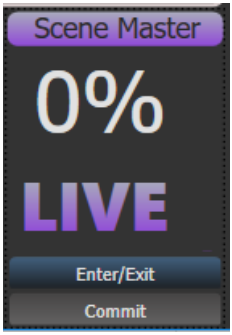
16.2.5 Scene Master

The Scene Master allows you to preset an output state by firing a number of playbacks or making live changes, using the visualiser to see the effects but without anything happening on stage. When you are ready for the new state, you fade the Scene Master fader to the other end of its travel and the new state is output.

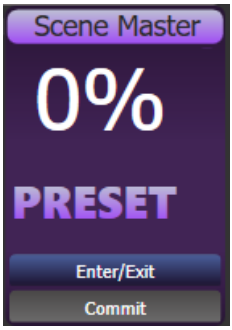
You assign a handle to be Scene Master by pressing <Record> then [Create Master] (or from the [Assign Masters] button on the **System** menu).

The Diamond 9 has a dedicated T-bar control and buttons for Scene Master, with an associated display to show the status.

The Scene Master is set to Live mode by default which means that all changes are immediately output as usual.



To **enter** preset mode, press the **Select** button of the Scene Master (or <Enter/B> below the T-bar on the Diamond 9). The display above the master will show “Preset” and the background turns purple. To **exit** preset mode and return to normal live operation, press the **Select** button again (or <Exit/A> below the T-bar on the Diamond 9).



Once you have entered preset mode, any changes you make - firing playbacks, stepping cue lists, applying palettes and so on - will only be shown on the visualiser and won’t change the output. Everything you change for the preset will also turn purple on its display.

You can now smoothly fade all your preset changes to the output by fading the Scene Master to the other end of its travel. If times are programmed for cues or palettes they will also run. Once the fader has reached the end of the travel, the new state is “committed” to the output, or you can press the flash button (<Commit> on Diamond 9) to manually commit the new state. The Scene Master will remain in Preset mode until you change back to Live mode.

Normally the Scene Master will auto-reverse so you can just keep presetting new states, moving the fader alternately up and down. You can also set it to require you to move it back to zero each time - press <Options> (or [Options] softkey) then the **Select** button of the master to change the options:

- [Auto Commit and Invert] Commits the changes once the fader has reached the end of travel. You can then preset a new state and fade the fader the other way to output it.

- [Auto Commit] You always have to fade from 0 to 100% to output the new state. The changes are committed at 100% and you then have to lower the fader to 0% to preset the next state.
- [Manual Commit] The new state does not commit at 100% and if you move the fader back to 0 the output state will go back to what it was before. You need to manually commit the changes using the flash button (the button can be changed using Key Profiles).

On the Diamond 9, there are additional Scene Master buttons <Reset> which clears all preset changes back to the current live state, and <Preload> which acts like a normal preload button for the preset changes, loading the LTP attributes.

A Scene Master can also be set on executor buttons or touch buttons in the Playbacks workspace. In this case, hold <Avo> (or Release) and press the button to enter or exit preset mode, and press the button on its own to commit the preset to the output, You can view the state of the Master by opening the Static Playbacks workspace.

You can assign the handle buttons to do different things using Key Profiles - the options are Exit scene mode, Enter scene mode, Commit changes, Commit changes and exit scene mode, Enter or Exit scene mode, Enter or commit scene mode.

- On Pearl Expert and Tiger Touch 1, you set a handle to Scene Master by switching to System mode using <Avo> and <Disk> together, then select [Assign Masters].

16.2.6 Flash and swop buttons

Normally the Flash and Select buttons on a playback are set up so that pressing Flash will flash, and pressing Select will swop (solo) the playback.

- Flash adds the playback into the current output
- Swop turns off all other intensity output

The Flash button can also be set to Timed Flash which will use the pre-programmed timings of the cue when flashing – for normal flash mode the timings are ignored.

You can reallocate the functions of the Flash and Select buttons on the console using Key Profiles (Section 19.4). A useful alternative function is Preload which allows you to pre-position the attributes of the fixtures before you raise the playback fader, which is handy for avoiding unwanted movements (any fixtures which are already active in another playback will not change when you use Preload). You can also allocate Go and Stop buttons for cue lists and chases. To quickly change the key profile, hold <Avo> and press [Edit Key Profile]. The Sapphire Touch also has a configurable Black button for each fader, and a virtual fader (on the touch screen) can also have a black button.

The screen relating to each playback fader shows the allocated function of the Select and Flash buttons.

16.2.7 Playback priority

You can set playbacks to high priority (Section 10.6.2) if you do not want them to be overridden by other playbacks using the same fixtures. For example, if you have a couple of fixtures acting as a spotlight, but they are also programmed into some colour washes, you probably want the spotlight cue to take priority over the colour washes.

16.2.8 Virtual faders

If you need more playbacks and you're happy to operate them on a touchscreen fader, you can use the Virtual Faders workspace window (double press <Open/View> then press [Virtual Faders] from the window select buttons). This provides 10 more paged faders which work exactly the same as the hardware playback faders. A roller display at the left side allows you to select different pages.

Press the {Cog} button at the top of the screen to

- Show or hide the page select roller
- Show or hide the blue, grey and black buttons
- Set how many faders are shown per page. This can be set to 5, 10 or 15 to match the playback fader layout on the console hardware.

16.2.9 Preset playbacks (Tiger Touch only)

On the Tiger Touch, as well as the 10 playback faders across the bottom of the console, there are 10 further playbacks on the top right of the console. These are not affected by the playback page buttons and so are useful for memories you use a lot, such as par can washes, basic stage illumination or smoke machines.

You can switch to different pages for the preset playbacks using a factory-preloaded macro in two of the Macro/Executor buttons. This macro is loaded with the Personality Library, if you do not see the page macros you need to update the library.

16.2.10 Locking a playback onto the same handle on every page

Sometimes you might want to keep a playback accessible on a handle no matter which page you are on. The [Handle Paging] option in the [Options] menu lets you do that without having to copy the playback onto multiple pages.

- [Locked] ensures the playback always appears on that handle no matter what page is selected. Any other playbacks programmed on that handle on other pages will not be accessible.
- [Transparent Lock] means the playback will appear on the current page only if the handle is empty on that page. If the handle is in use on the new page, then that playback will appear instead of the locked one. This can be useful if you only need the locked playback to appear on certain pages but wish to reuse the handle on other pages.

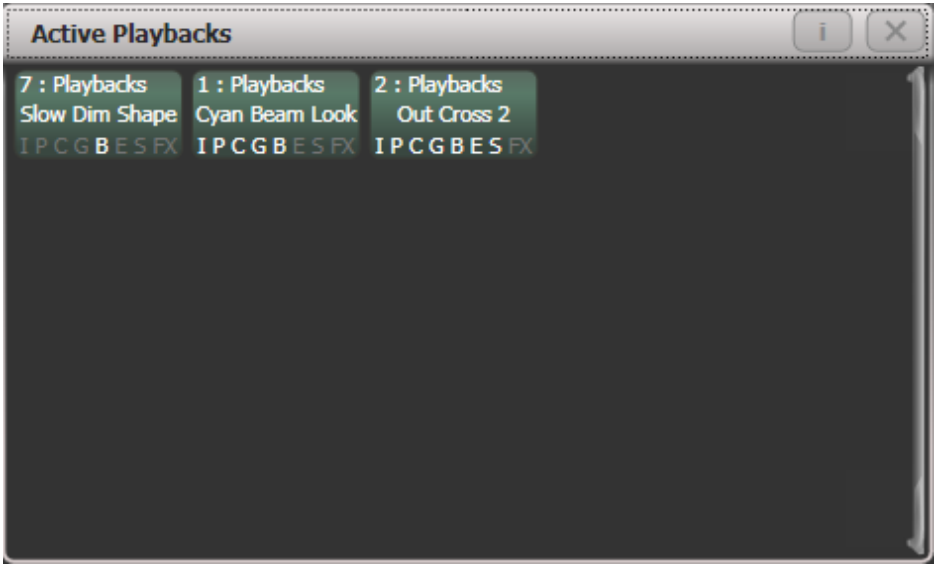
You can also lock Palettes stored on the grey handle buttons (Pearl Expert only), and macros stored on the macro/executor buttons which is useful with the Macro page change buttons.

Lock options are also available for master faders.

16.2.11 Viewing active playbacks

The Active Playbacks window shows details of which playbacks are active. This provides an easy way to see what is currently running. To open this window double press <Open/View> then select [Active Playbacks], or use the shortcut <Open/View> + <Off>.

The top line of the button shows the page number and tells you where on the desk the playback is stored. The second line shows the legend, and the third line shows which attributes are affected by the playback.



Click on a playback to instantly kill it. You can also press [Playback Options] followed by the playback in this window to change parameters of the playback.

16.2.12 Busking with palettes

If you have not had as much programming time as you would have liked, you might need to make up some additional effects during the show. This is sometimes called “busking”, and is where the fun starts!

You can create instant variations by recalling palette values to modify your existing cues. Palette values can have fade times saved with them, or you can set a fade at show time for added effect.

1. Select some fixtures which are already in use on stage.
2. Type “2” (or any time, in seconds) on the numeric keypad.
3. Touch a Palette button to recall a palette.
4. The selected fixtures will change to the new palette over a time of 2 seconds.

If the palette contains programmed times, you can change the Key Profile of the palette button to set whether the programmed times will be used or not. (Press <Avo> + [Key Profiles], then [Palettes] to set the key profile). Options are [Palette is fired ignoring its times] or [Palette is fired with its times]. A time entered manually as above will always override a programmed time.

When a fade time is entered on the numeric keypad, you can also change the Fixture Overlap (Section 10.5.1) using the [Overlap] softkey. This allows you to create “roll” or “peel” effects when using a series of fixtures. With overlap=100%, all fixtures change at the same time. If overlap=50%, the second fixture will not start

its fade until the first fixture is half way (50%) through fading. The order of the fixtures is set by the order in which you selected them.

If a fade time or an overlap are set this way they are applied only to the immediate next palette recall. If you want to use a certain time or overlap for the next few palette recalls then set the values in the **Palettes menu**: press <Palette>, and set [Master Time] and [Master Overlap] with the softkeys. Also factory macros are provided for some most common values, see Master Time for Palettes (Section 8.6.4).

If you apply a palette as a "Quick Palette" (i.e. without selecting any fixtures) then it will be overridden by the next cue (so if you fade to green using a Quick Palette, then fire a cue which sets those fixtures blue, they will go blue). If you apply a palette after selecting fixtures, it will go into the programmer and override any subsequent cues until you press <Clear>.

When programming your palettes, group all the colour palettes in one area of the console, position palettes in another area, and so on. This helps you to find them when the show is running and the pressure is on.

If you are lighting a band, make position palettes for every person on stage so you can spotlight them for those unplanned solos.

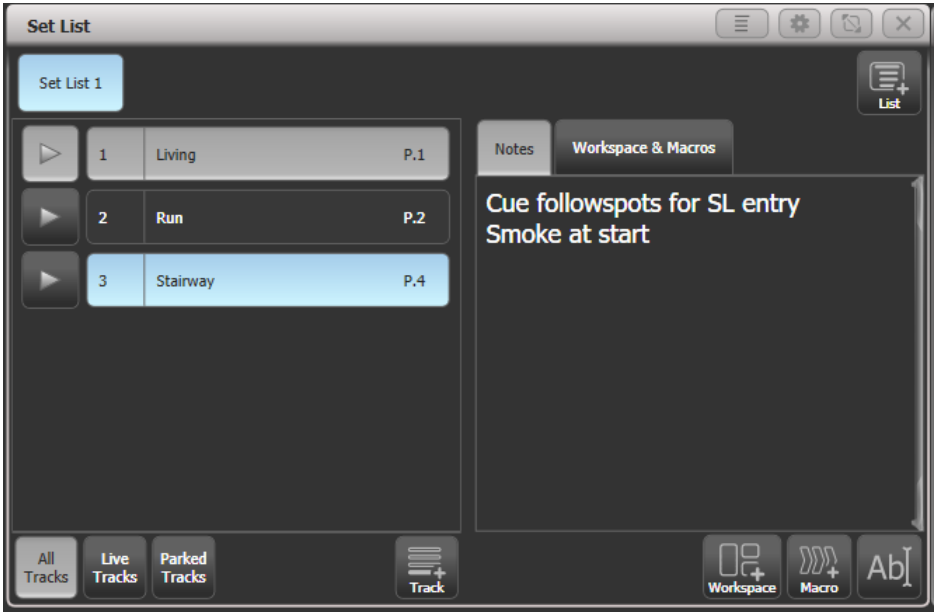
You can use the Off (Section 7.2.12) function when programming to set some cues to only affect position, and other cues to set colours, gobos, add shapes, and so on. By combining two or more cues you can produce a much wider range of effects than if all your cues set all the attributes. However, for this to work well you need to make sure you know what attribute is going to be affected by each cue; as if you fire two "colour only" cues then nothing is going to light up.

16.3 Set List Window

The Set List window is a handy way of linking playback pages to songs/events in your show which you can then easily step through. You can also make notes, handy for avoiding bits of paper lying around. You can have multiple set lists in a show.

To open the Set List window, double press <Open/View> then press [Set List] from the window select buttons which pop up. Or from the top level menu press [Open Workspace Window] then [Set List].

The Set List feature works best if you arrange your playbacks to have a page of playbacks for each song in the show.



A set list is made up of tracks. When a track is added it automatically links to the current page. Pressing the Play button [>] to the left of the track name will automatically select the correct playback page (except on Pearl Expert, because the rollers cannot be moved automatically).

16.3.1 Creating a Set List

To create a Set List, click the {+} button *in the top right corner* of the window. You can choose **Empty**, **Pages**, and **Build**: - Pages will automatically create a set list using the legends of your existing playback pages, one page per track. - Build allows you to select the pages in the order you want them. - Empty: your start with an empty list and can manually add tracks using the {+} button *below the track list*.

16.3.2 Configuring Tracks

Enter notes by selecting a track and clicking the text entry button, bottom right, or the Edit Note context menu button.

- You can temporarily remove a track from the set list using the Park Track context menu button.
- If you prefer to operate by using the <Page+>/<Page-> buttons, you can change the function of these buttons to step through the tracks in the set list window, using the Page Mode context menu button. When Page Mode is set to Set List, the <Page+>/<Page-> buttons are reassigned to step through tracks

in the Set List, and the playback pages will automatically change as programmed in the Set List. Set Page Mode to Normal to restore normal operation. (Not available on Pearl Expert).

- You can copy, move and delete tracks using the appropriate function buttons on the console.
- You can change the legend of the Set List or of individual tracks using the [Set Legend] option.

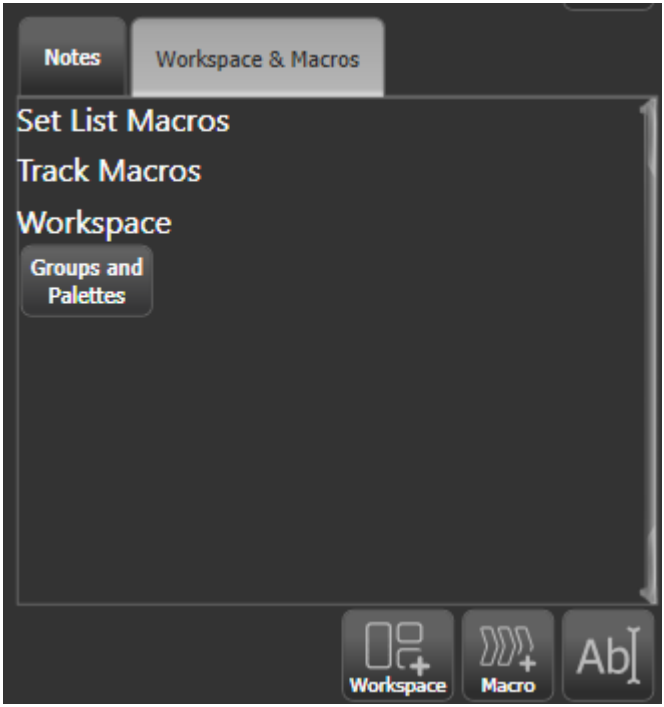
16.3.3 Track Workspace and Macro links

You can trigger macros and workspace shortcuts from tracks using the [Workspace] and [Macro] buttons in the bottom right hand corner of the window.

To add a workspace link to the current track, click [Workspace], then either click a workspace shortcut or press the [Record Workspace] softkey to save the current workspace.

Macros can be added either to the whole Set List or just to the current track. Set List macros will fire every time a new track is selected, this is useful for setting the console to a preset state at the start of every song. Track macros will just fire for that individual track.

To view or edit the workspace links and macros, click the Workspace & Macros tab on the right hand half of the window. The window will then show a button for each programmed link.



You can fire the macro or Workspace shortcut by clicking on the link button. Delete the button by pressing <Delete> then clicking the button, then press [Remove].

16.3.4 Playback Control Macros

Key Macros (Section 5.4.3) allow you to record a sequence of actions on the console then play them back (either instantaneously or as a timed sequence). This can be very useful for reducing a complex sequence of actions to a single button push.

Some special preset macros are available to help with controlling playbacks when used with a Set List.

Macro	Action
[Fire First Playback]	Fires the first playback on the current page.
[Fire First Playback Page 1]	Fires the first playback on page 1, regardless of current page.
[Fire Playback 1]	Fires the playback with user number 1.
[Kill First Playback]	Kills the first playback on the current page.
[Kill First Playback Page 1]	Kills the first playback on page 1, regardless of current page.
[Kill Playback 1]	Kills the playback with user number 1.
[Release First Playback]	Releases the first playback on the currently selected page.
[Release First Playback Page 1]	Releases the first playback on page 1, regardless of current page.
[Release Playback 1]	Releases the playback with user number 1.
[Release Me]	Releases the associated playback (cue list).
[Goto My Cue 1]	Go to cue 1 of the associated cue list.

16.4 External triggering

You can set up the console to allow most features to be triggered by external events. This is very useful in complex shows or when using in an automated setup.

The following types of trigger are available:

- Audio (not on all console hardware)
- DMX
- GPIO (not on all console hardware)

- MIDI (except T1)
- Streaming ACN

> Audio trigger (sound to light) requires special hardware which is not fitted on Sapphire Touch, Tiger Touch, Titan Mobile, T1, T3 and Pearl Expert. You can plug a T2 into these consoles to provide audio triggering. The motherboard “line in” socket can’t be used for audio trigger.

GPIO trigger is available on Diamond 9, Arena, Tiger Touch II and Sapphire Touch.

16.4.1 Connecting External Trigger Sources

Audio input is connected to the dedicated audio in jack (not the line in jack on the motherboard) – see information box above for consoles which provide this.

DMX inputs are connected to one of the DMX output connectors using a DMX male to male gender changer cable. (This is a simple plug to plug cable with all pins wired straight through, i.e. 1-1, 2-2 and 3-3).

GPIO uses a contact closure for trigger which is connected using a dedicated jack socket, currently only on the Diamond 9, Arena, Tiger Touch II and Sapphire Touch consoles. The Diamond 9 additionally has a 15-pin D connector for GPIO trigger. The TNP can optionally have a GPIO input fitted, contact Avolites.

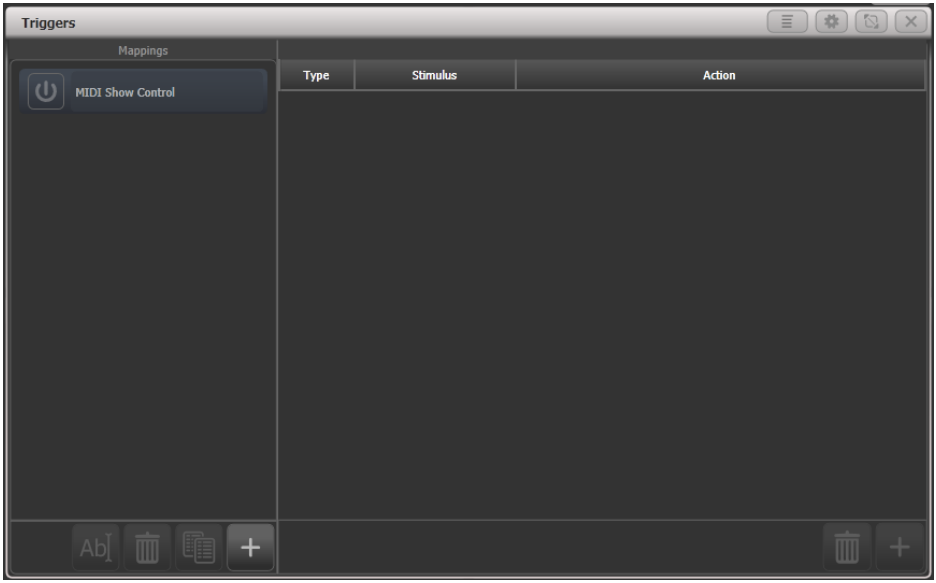
Most console hardware has a standard 5-pin MIDI connector, also USB-MIDI devices supporting the DirectX MIDI driver may be used on all consoles except T1. For the T2 this allows you to connect a MIDI fader controller to give you real playback faders.

sACN is connected using the normal Ethernet connection on the console.

- You can link a networked PioneerDJ system to Titan to automate BPM masters; this is described in the next section (Section 16.5). This replaces the old “Pro DJ Tap” function.

16.4.2 Setting up External Triggering

Go to the **System** menu (<Avo> + <Disk>) and select [Triggers]. The Triggers window will open.



The left hand side of the window has a list of trigger Mappings, where each mapping can contain one or more trigger setups. A default set is provided for MIDI Show Control which includes standard show control messages (see next section for details).

Each trigger mapping can be enabled or disabled using the “power” button at the left hand end of the mapping name. This allows you to configure the console to react in different ways and easily swap between them.

This is how you set up a trigger:

1. Add a new mapping using the {+} button at the bottom of the *left hand* column, and enter a name for it.
2. Add a trigger to the mapping using the {+} button in the *right hand* column or softkey [Add trigger].
3. Select [Trigger Type] as [Hardware] or [Item].

- **Hardware** triggers a physical or touch button, or fader move, and will use the key profile set for the button/fader, just as if the user pressed the button or moved the fader.
- **Item** triggers a programmed item, such as a cue or chase, but you can select what action happens to it when it is triggered.

4. Press the button or move the fader to be triggered, or containing the item to be triggered. The

status area of the screen will update to show you what has been triggered. For Item triggers you can select what action the trigger will cause, using the [Action] softkey:

- Set Level (sets playback level to trigger level - but see Level Match below)
- Fire At Level (like Set Level but ignores Level Match and will "kill at 0" if used with a cue list)
- Re-Fire at Level (any level change will re-fire the LTP values in the playback - see below)
- Flash (like pressing Flash button)
- Swop (like pressing Swop button)
- Preload (fires only the LTP values in playback)
- Latch (latches the playback on)

The [Level Match] option sets what happens if the playback has already been fired by the user when the trigger happens. If set to **On** then the trigger must match the current playback level before it will take effect. If **Off** (default) the trigger will override the playback at any level.

5. Press [OK]. You have now set up the console action which is to be triggered.
6. Now you need to set up the external stimulus which will cause the trigger. Select [Trigger Type] as Audio, DMX, GPIO, MIDI or Streaming ACN.
7. By default the [Learn] option is set to On, so you can generate the stimulus from your device (for example play the MIDI note, or turn on the DMX channel) and the console will automatically detect it and set the correct values.

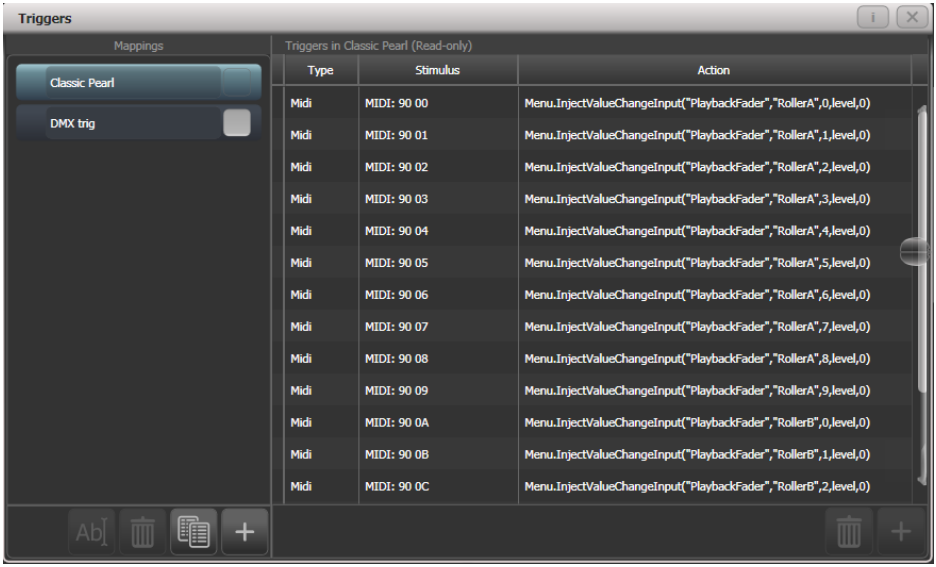
   Or you can enter the trigger details using the softkey options.

- For Audio, set the [Band] (frequency band) for the trigger (see Audio Control (Section 16.4.4))
- For DMX, press [DMX Port] to select which DMX port you are using for DMX input. As soon as a DMX port is used for triggering it is switched to Rx (Receive) mode. Set the DMX address to act as trigger using the [Address] button.

  If you want to use it as output (Tx mode) again you need to re-assign it in DMX settings (Section 19.6).
- For GPIO, you can [Invert] the trigger (to trigger on contact open rather than close). The Pin option allows multiple GPIO inputs but currently no consoles support this, so it should be set to 1.
- For MIDI, set the MIDI channel, MIDI Command, Value, and Level (velocity) ranges
- For sACN, select the [Universe] and [Address] for the trigger.

8. Press [Add] to add the trigger to the list.
9. The window will show the trigger stimulus and the action to be carried out.

You can continue to add other triggers to the mapping.



- To delete a trigger from the mapping, select it in the list and press the {Rubbish Bin} button at the *bottom of the right hand column*.
- To delete a complete mapping, select it and press the {Rubbish Bin} button at the *bottom of the left hand column*.
- The **Re-Fire At Level** action will cause the playback to be re-fired when the trigger level changes, so any LTP values in the playback will be set again. So for example if the playback sets fixtures to red, but then another playback changes the colour to white, the Re-Fire action would set the fixtures back to red when the trigger level changes, but the Set Level / Fire At Level actions would leave them at white and just change the intensity.

Setting up a MIDI fader controller with T2

This is how to set up a MIDI fader controller to act as playback faders on T2. Ensure your MIDI device is connected and recognised by Windows (you can use a utility such as Midi-OX to test it).

1. From the **System** menu select [Triggers].
2. Add a new mapping using the {+} button at the bottom of the left hand column, and call it “T2 playbacks”.
3. Add a trigger to the mapping using the {+} button in the right hand column or softkey [Add trigger] – by default this is set to the correct Trigger Type of [Hardware].
4. Move playback fader 1 on Titan Go.

5. Click [OK]
6. Move the first fader on your MIDI controller. Titan Go should recognise the MIDI commands and display the trigger in the prompt area.
7. Click [Add]. The trigger for playback 1 is added to the list on the right.
8. Repeat from **step 3** to add the other 9 playback faders.

16.4.3 MIDI Show Control

The following MIDI Show Control messages are supported:

Command	Action
GO	Fire the specified playback or cue
STOP	Pause the specified playback or cue
RESUME	Un-pause the specified playback or cue
LOAD	Set the playback level to full
ALL OFF	Release all playbacks
RESET	Same as ALL OFF
GO OFF	Same as resume

Playbacks/Cues are identified by their User Number. To set the user number, press [Set Legend] then the select button of the cue, then [User Number].

MIDI show control devices are identified by a device ID. To set Titan's device ID select [User Settings] from the **System** menu, then go to the [Timecode] tab. The default setting is 0.

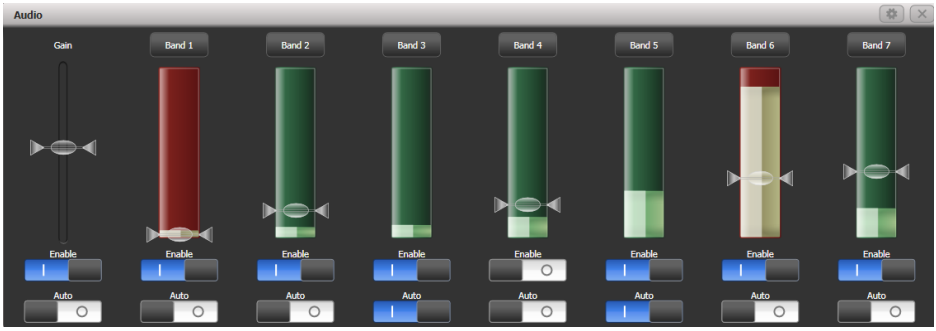
16.4.4 Audio Control (Sound to Light)

On supported consoles the audio input is divided into frequency bands which can be used to provide the trigger. The [Band] option selects which of the bands is being used.

Band	Sound frequency
1	50Hz
2	140Hz
3	380Hz
4	875Hz
5	2400Hz

Band	Sound frequency
6	6200Hz
7	14000Hz

Audio triggers are adjusted in the Audio Triggers workspace which also shows the levels in the different bands of incoming audio.



If the console does not have suitable hardware a warning message is displayed (see top of page for list of audio-enabled consoles).

- The Enable switch below the gain slider disables all audio triggers
- The left hand gain slider sets the overall input gain, which can be used to boost weak signals
- Auto gain will automatically adjust the gain, this disables the slider from manual changes
- The Enable switches below each band disable triggers on that particular band
- Trigger level sets the threshold for triggering on each band. The band shows red when triggered.
- The Auto switches on the bands automatically adjust the trigger level on each band when no triggers are occurring.

You can quickly allocate a playback to a trigger by clicking the top Band button above the trigger, then select the playback to be triggered.

On the Arena and Quartz consoles, the Audio LED (just above the power switch) will flash when audio is received. Note that the headphone socket on these consoles is linked to the motherboard audio output and can't be used for monitoring the audio trigger input.

16.5 Linking PioneerDJ System to Titan

Using the Pioneer Pro DJ Link Bridge software you can automate BPM masters on the Titan console from a network-equipped Pioneer DJ system. You can either run the bridge software on the console itself or on an intermediate laptop.

> Pioneer DJ integration is compatible with the following Pioneer hardware:
> CDJ-TOUR1
> DJM-TOUR1
> CDJ-2000NXS2
> DJM-900NXS2
> CDJ-3000 (added in v15.1)

16.5.1 Connecting Titan to the Pioneer System

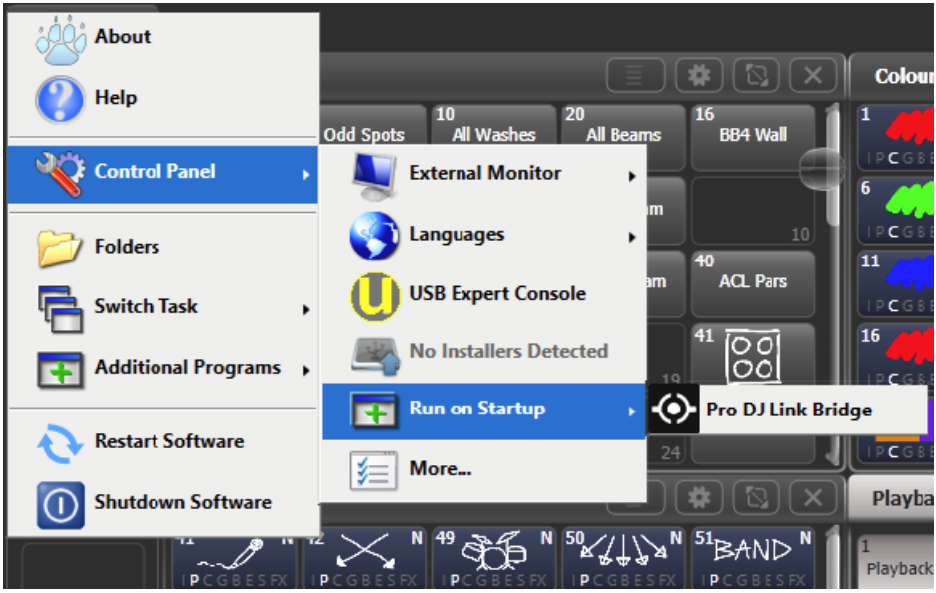
You need to get the console and the Pioneer equipment connected to the same network. The Pioneer equipment has some limitations with its network IP address - it either needs to be assigned an address using DHCP or it uses an automatic address in the range 169.254.*.* - which means that if you are already using networking to control the lights (Art-Net or sACN) things can get a bit complicated as many lighting products cannot use that address range.

Pioneer Bridge running on the console

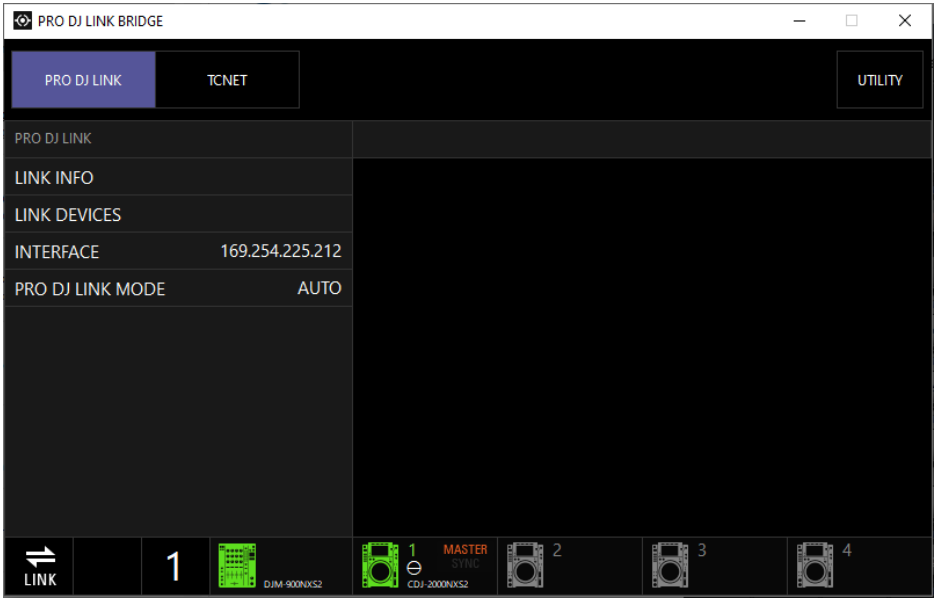
If you aren't using networking, or your console has two network interfaces, or you can adjust your lighting to a suitable address range, then you can run the Pioneer Bridge software on the console itself. If your console includes an Ethernet switch, you can connect the "Extension" Ethernet socket on the Pioneer equipment directly to the console, otherwise you need to go through an external switch.

Run the Pro DJ Link Bridge software from the **Tools > Additional Programs** menu on the console.

- You can set the Bridge software to run automatically when the console powers up using the **Tools > Control Panel > Run on Startup** menu option. This is useful in club environments where the console is always linked.



Look at the Interface tab of the bridge software to see what IP address is being used by the Pioneer equipment. You need to set the network interface on the console to use an IP address in the same range – if it is using DHCP, just set the console to DHCP as well, or if using the automatic addresses set a fixed address. For example if the bridge is set to 169.254.225.212 as in the image below, set the console to 169.254.225.1 (assuming nothing else on the network is using that address).



- Once you have everything connected up and have got all the IP addresses right, the bridge software should show connections for both the Titan console and the DJ mixer.
- Some Art-Net / sACN equipment can be configured to run on the 169.254.*.* address range, in which case you can run everything on the same network.
- It may be necessary to toggle 'Node Mode' in the 'TCNet' settings from 'Client' to 'Auto'. For more information please see the PRO DJ LINK Bridge Manual (external link).

Pioneer Bridge running on separate computer

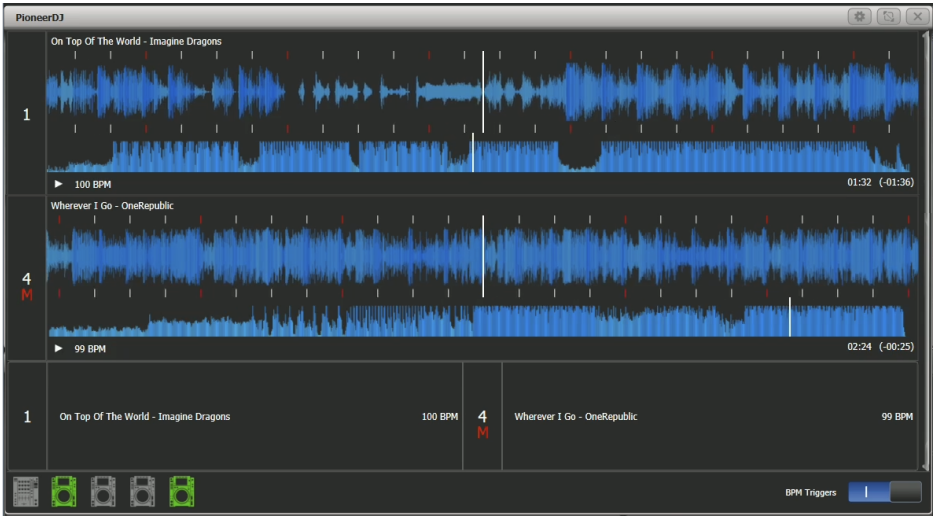
If you need to keep the Pioneer network separate to the lighting network and your console only has a single network port, or if you just prefer to have the bridge separate from the console, then you can download the bridge software from the Pioneer website and run it on a separate computer.

If you need two separate address ranges then your computer will need two network interfaces.

Once you have everything connected up and have got all the IP addresses right, the bridge software should show connections for both the Titan console and the DJ mixer.

16.5.2 Pioneer Workspace window

Open this window the usual way by double pressing <Open/View> and selecting [PioneerDJ] from the window select buttons.



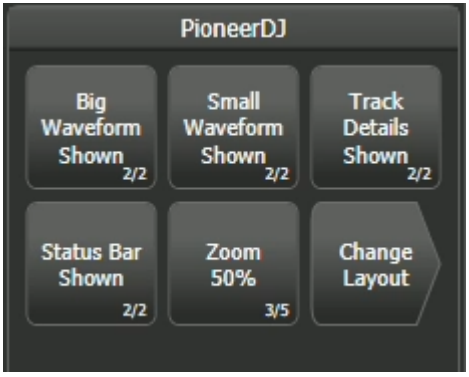
The top of the window shows a big (detail) waveform and a small (full track) waveform for the current track. Multiple tracks can be shown one above the other.

Below that, details of the current track playing on each device is shown.

At the bottom, the connection status of the Pioneer equipment is shown – green when connected.

You can select which track is currently the Master by pressing the track number on the left or in the detail area at the bottom. A red “M” shows which track is the master. If you assign your trigger as “Master” this lets you quickly change which track is controlling the BPM.

Context menu buttons allow you to show or hide the big and small waveform displays, the track details and the status bar. The other elements of the window will change to fill the space.



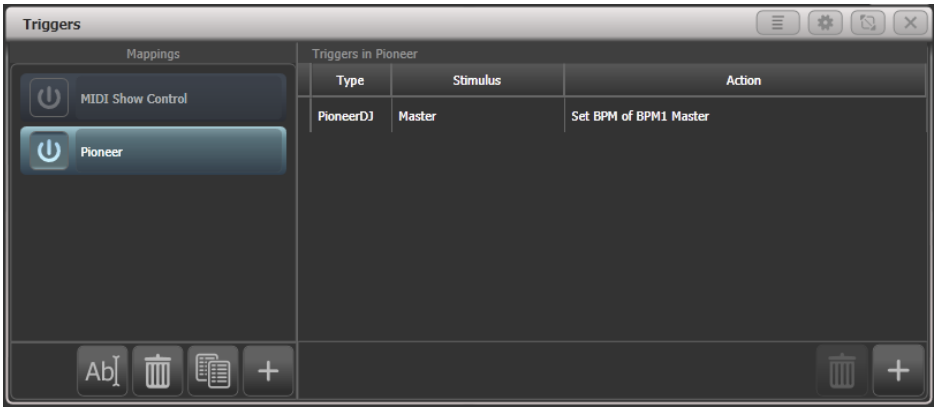
- The [Zoom] button allows you to set the scale of the big waveform.

- The [Change Layout] button allows you to select the view in the workspace. This is useful if you want a smaller window:
  - [Full] – shows all the currently playing tracks
  - [Master] – shows only the waveform of the master track
  - [Condensed] - shows details of all the tracks at the bottom, but only shows the waveform of the master track. You can change the master track by pressing the track number in the Track Details area.

16.5.3 Setting up BPM triggers from Pioneer

You will need a fader on the console configured as a BPM master which will be automatically controlled by the track BPM playing on the Pioneer devices. See BPM Master (Section 16.2.2.1) section for how to set up a BPM master.

Go to the **System** menu (<Avo> + <Disk>) and select [Triggers]. The Triggers window will open. 1. Add a new mapping using the {+} button at the bottom of the *left hand* column, and enter a name such as “Pioneer”. 2. Add a trigger to the mapping using the {+} button in the *right hand* column or softkey [Add trigger]. 3. Select [Trigger Type] as [Item]. 4. Press the button for the BPM master you want to control. 5. The [Action] button will show [PioneerDJ] as this is currently the only action for a BPM master. Press [OK]. You have now set up the console action which is to be triggered. 6. Now you need to select which Pioneer deck will control the BPM. Select [Deck=] as Master, 1, 2, 3, 4. [Master] will use the track you have currently selected as Master (red M displayed). The 1-4 options let you fix the control to one of the decks. 7. Press [Add]. The trigger should now appear as shown below.



Now you should see the BPM master automatically change to match the BPM of the track playing which you have selected as Master (or on the selected CDJ player if you selected a fixed player number).

- To regain local control of the BPM master, switch off the “BPM triggers” switch at the bottom of the PioneerDJ workspace window.

16.6 Linking Consoles for Multi

On large shows it is sometimes necessary to have multiple operators programming or running different aspects of the show. The Titan system allows a number of consoles to be connected together to give an integrated system with multiple control surfaces.

In addition, on many shows it is important to have a backup console running in case the main console fails during the show. Titan allows you to run a second console over the network which it keeps synchronised with the main console. Should the worst happen, a single keypress can transfer control to the backup console.

> Linked consoles must be running the same version of Titan. If using PC Suite (Titan Go or Simulator) you may need to disable any firewalls on the PC.

16.6.1 Setting Up Consoles for Multi-User

Titan consoles may be connected to each other for collaborative programming or show operation. See the Multi-User Operation (Section 5.5) section for more information.

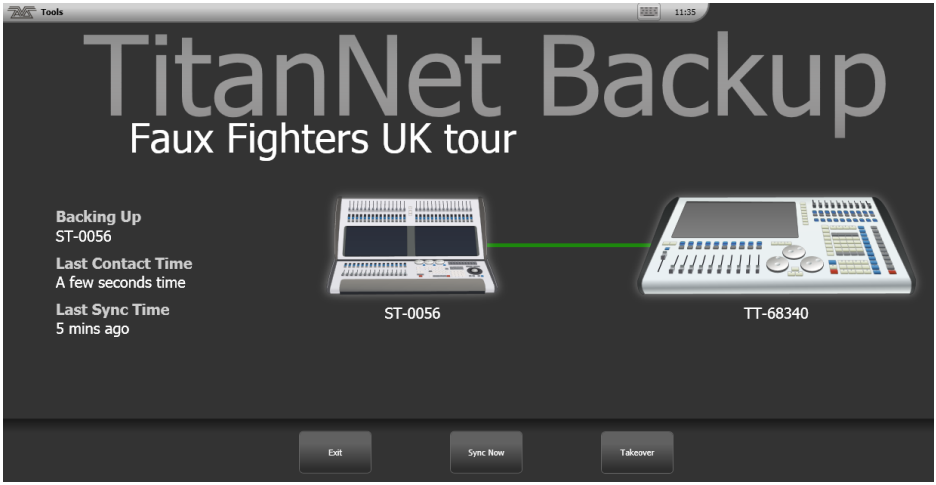
16.6.2 Setting Up Consoles for Backup

Any Titan console can act as backup for any other console, they do not have to be the same model. For example you could run a laptop with T3 as backup. You can also in an emergency use the screen on a TNP to operate.

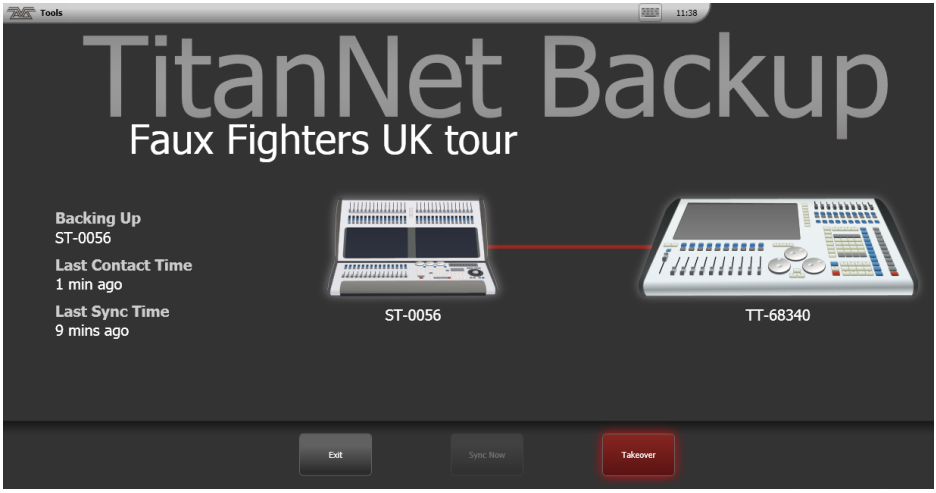
However do plan ahead and think about what parts of your show will become inaccessible if the backup device has less faders/handles than the main console.

1. Connect both consoles to the same network and ensure they are set to the same IP range. See the networking section (Section 21.1) for more information.
2. On the console which will be the Backup, press <Disk>, [TitanNet Sessions], [Backup].
3. Consoles available for backup will be listed in the softkeys.
4. Selecting a console will place the console you are working on into backup mode and sync the show to the selected console.
5. The backup console will show a display indicating the backup status and show name.

In backup mode the backup console screen displays the current connection and sync status including current show name.



A green line between consoles represents a good connection. If a red line is shown there is a problem with the network connection. A blue line will appear during sync operations.



- Shows will automatically sync whenever a show is saved on the main console (including autosave). You can also choose to sync at any time by selecting [Sync Now].
- Pressing [Exit] will abort backup.
- [Takeover] will enable control on the backup console and disable DMX output on the main console. A prompt will appear on the main console to warn that DMX has been disabled. On touch consoles

touching on this prompt will open the 'Exit Safe Mode' menu with a softkey option to re-enable output. On the Pearl Expert you can re-enable DMX output via the <Avo> menu.