

Titan Mobile

Operator's Manual



Version 4.0



Installation CD inside



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*Before contacting Avolites for service enquiry please ensure that you have the product serial number and the Software version. The serial number can be found on the back of the desk; the software version is displayed on the menu prompt when the system is switched to System mode.

The latest version of this manual and Titan Mobile Software can be downloaded from the Avolites website.

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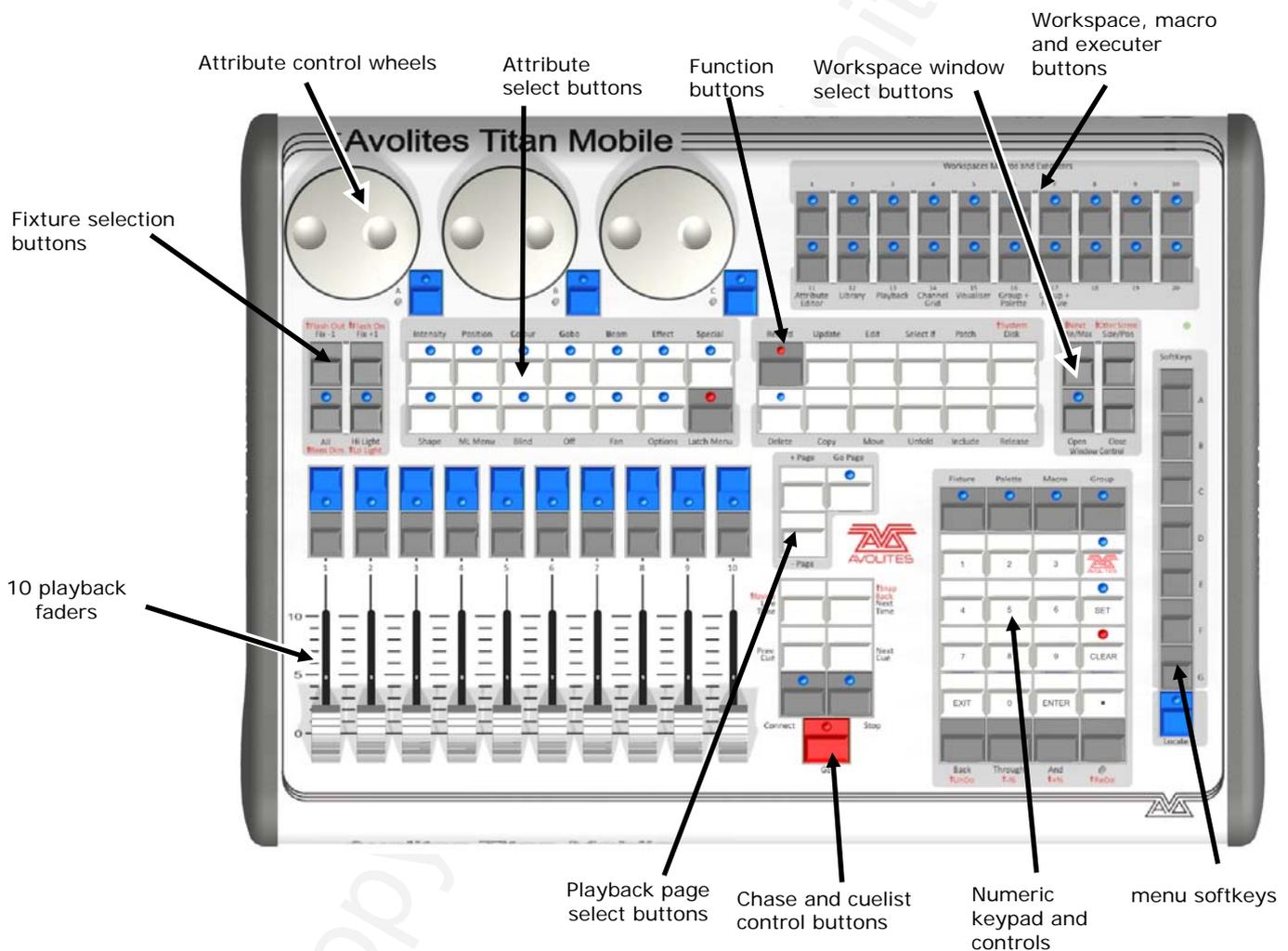
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1. Setting up Titan Mobile

This chapter contains: Connecting to laptop, DMX lines, guide to the desktop; guide to where everything is on the system; loading and saving shows.

Avolites TITAN Mobile binds the awesome power of TITAN software with a compact and lightweight unit that connects to your laptop to produce a fully featured moving light control system. This manual is a reference guide to all the functions of the system.

1.1 Guide to the controls



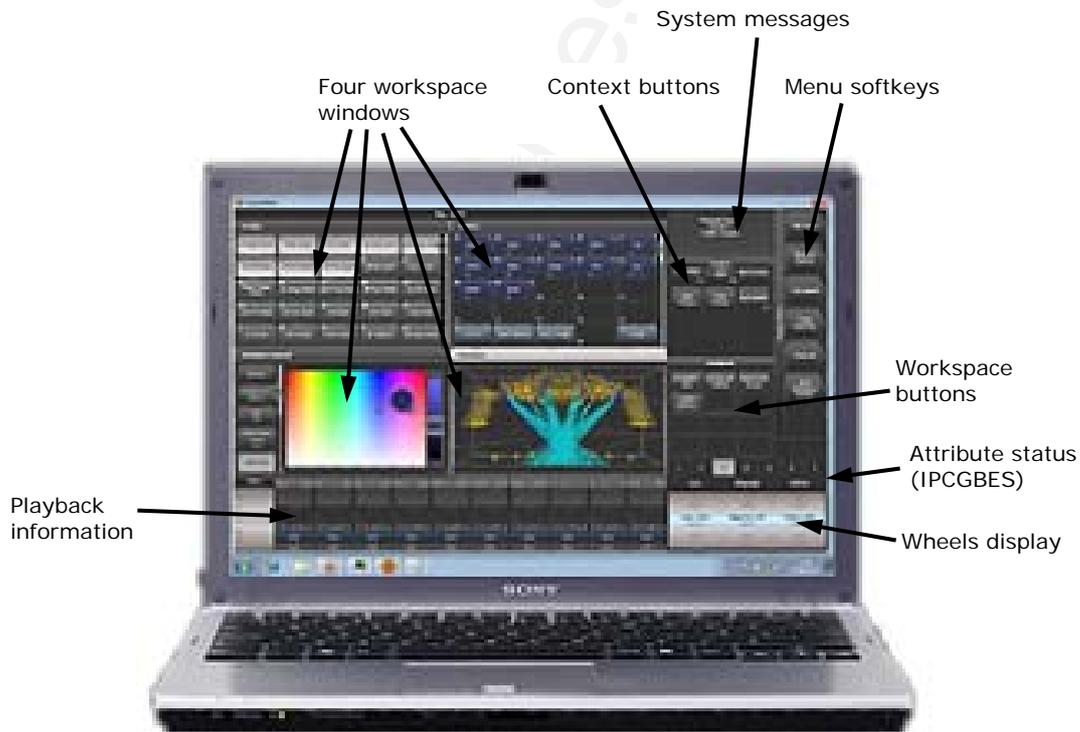
- The **Playback faders** are used to store and play back cues or chases. The **Page Select buttons** let you change to a different page of playbacks. The bottom of the screen shows information about each playback.
- The **Attribute Control wheels** are used to set control values (attributes) for the fixtures, and to set chase speeds and fades. The

bottom right corner of the screen shows information about the attributes being controlled.

- The **Attribute select buttons** are used to select which attributes of a fixture (e.g. colour, gobo, position) are going to be controlled using the Control wheels. The buttons have lights on to show you which attributes are active. Attribute functions such as Fan and Shapes are also controlled here.
- The **Chase and Cuelist control buttons** allow you to start and stop chases and cuelists, and move about in the list.
- The **Numeric keypad** and other control buttons are used to enter values and change controls on the system.
- The **Function buttons** are used to carry out functions such as storing cues, copying, saving to disk, etc.
- The **Workspaces, Macros and Executors** buttons are programmable buttons which can be used to store workspaces (screen layouts), button macros or cues.
- The **Workspace Window select buttons** are used to set which windows are shown on the screen.

The screen

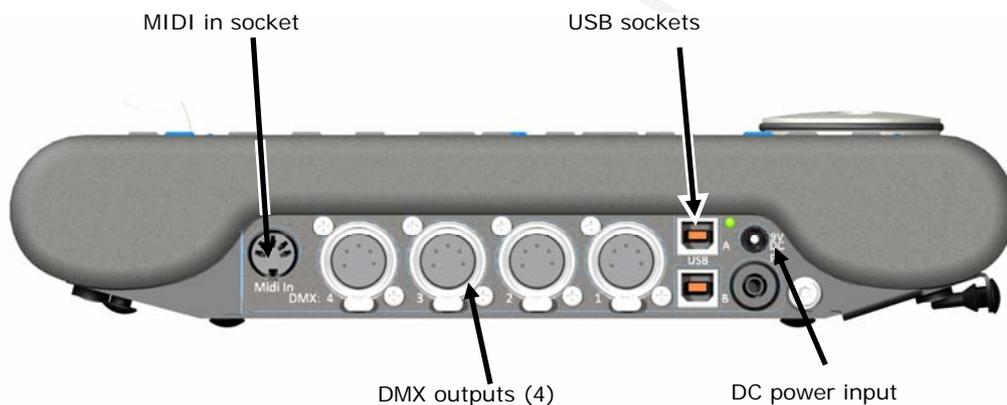
The system is designed to be used with a touch screen, but may be used with a mouse.



- Four **Workspace Windows** may be shown on the screen. These contain touch buttons to control fixture selection, palette selection, groups, shapes, attributes, and so on. Visualiser may also be shown in a window.

- The system **Menu softkeys** are down the top right hand side. You can select these by touching or clicking them, or by using the menu buttons on the right hand edge of the control panel.
- **System messages** are shown just to the left of the menu keys. Below that are **Context buttons** which appear when relevant to the operation you are doing.
- The **Workspace Buttons** allow you to quickly select and save different workspace screen layouts.
- The **Wheels display** shows the current attributes available on the 3 wheels. The **Attribute status display** above that shows which attributes are currently active or modified.
- The **Playback information** shows the legend and other information about the playbacks on the 10 faders.

Connections panel



All the connections required for the control panel are found on the right hand side. Most are self-explanatory.

- Normally the panel is powered via the USB connection. Some laptop USB ports may not provide sufficient power for the panel, in which case the DC power input can be used to connect an external 9V DC power supply, available from Avolites.

1.2 Connecting up

1.2.1 Software installation

Do not connect the Titan Mobile panel to your PC for the first time until you have installed the Titan Mobile software, which you do simply by running the installer file. This will make sure the drivers for the panel are installed.

Having installed the software, connect the two USB cables for the panel. If your PC asks you for drivers, select "Install the Software Automatically".

The first time you run Titan you will need to register the security dongle in the panel with Avolites.

1.2.2 Connecting to your laptop/PC

For best usability, your PC should have a touch screen. However, if not you can use the mouse to select touch buttons.

The panel connects to the PC using two USB cables. Both cables must be connected for correct operation. Power is supplied down the USB connection, though you can connect an external DC power supply if this is needed.

1.2.3 Starting up and shutting down

Make sure the Titan Mobile panel is connected to your PC before running the Titan Mobile software. Start the software in the normal way by double clicking the program icon, or selecting it from the Start menu.

If the Titan Mobile panel is not connected, the software will tell you that the Avolites Dongle is missing.

To shut down the Titan Mobile software, click the X button in the top right of the window. Titan will ask you if you want to save the current show.

1.2.4 Connecting DMX lines

Titan Mobile communicates with lighting fixtures using the DMX512 system. It can produce 12 universes of DMX (each 512 control channels). It has 4 physical DMX outputs for direct connection to fixtures and dimmers, and can also send DMX over Ethernet and wireless Ethernet systems to allow connection to remote DMX Ethernet nodes and to the Avolites System DMX Interface (ACDI) system which is used to connect visualiser applications. The Ethernet connection of your PC is used for this.

When you patch a dimmer or fixture you tell Titan Mobile which of the 12 DMX universes it is on. Each universe can be configured to come out of one or more of the 4 standard DMX outputs on the side of the control panel, or over an Ethernet protocol (section 10.4.1 on page 113.)

The 4 standard DMX outputs come out of the 5 pin XLR sockets on the side of the panel. They are wired like this:

Pin 1	Earth
Pin 2	Data -
Pin 3	Data +
Pin 4	Not used
Pin 5	Not used

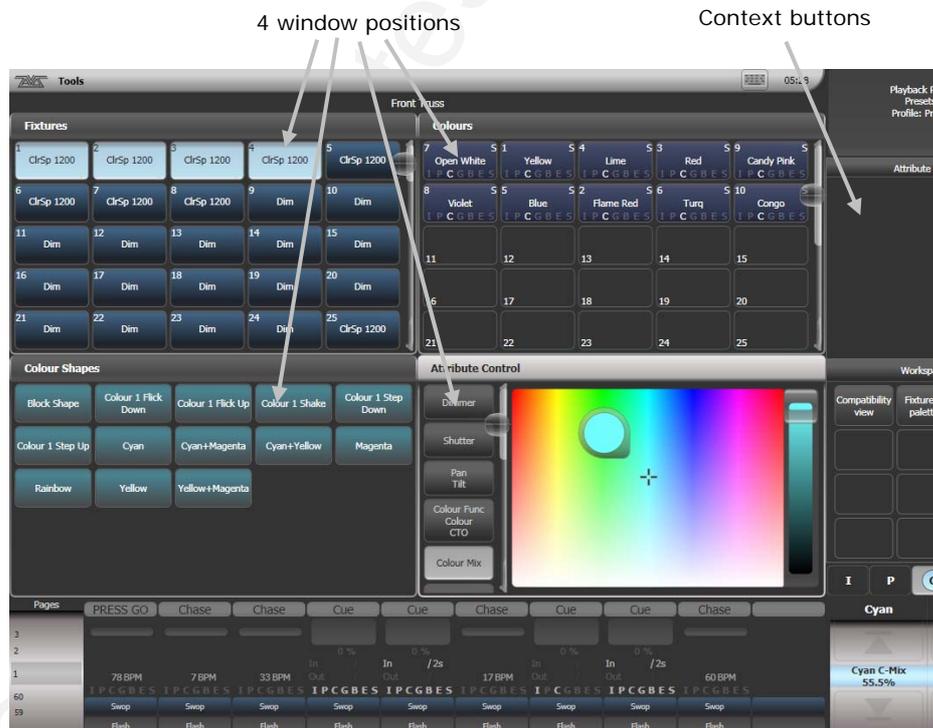
Each DMX line should pass through all the fixtures to be connected on that line one after the other and have a DMX terminator fitted at the end (120 ohm resistor between pins 2 and 3). You should not split the DMX lines using passive splitters (Y-splitters) as this can corrupt the data.

1.3 Using the on-screen workspace

As well as the Titan Mobile control surface, the on-screen workspace provides many useful features. The workspaces are designed to be used with a touch screen.

1.3.1 Workspace windows

The main area of the screen contains the workspace windows. These contain touch buttons for selecting fixtures, groups, palettes, playbacks and so on. Information windows such as Playback View and the integrated Visualiser application can also appear as a workspace window.



Up to 4 windows can be shown on the screen in a 2x2 grid, but if you need a larger view, you can make a window twice as big, or it can take up the whole area. Some possible window sizes/positions are shown below.



Quarter size

Double wide

Double height

Maximised

Some windows have associated control buttons, these are positioned in the "context buttons" area as shown in the picture.

Selecting and positioning workspace windows

You select which workspace windows you want to see using the [Open Workspace Window] menu command on the root menu.

You can change the positions and sizes of the windows by using the Window Control buttons above the numeric keypad. The min/max button swaps the active window between full screen and quarter size. The size/position button moves the active window around the possible positions. You make a window active by touching its header bar.

If your monitor is not touch-enabled, you can click buttons using the mouse as normal.

Note: Titan Mobile does not currently support a second monitor.

Window shortcuts

Press Window Open (above the numeric keypad) then an Attribute Bank button to open the Palette window for that attribute.

Press Window Open then Patch to open the DMX output window.

Press Window Open then Connect to open the View Cue window.

Press Window Open then Macro to open the Macro window.

Workspace window options

You can change the window sizes and positions by clicking the small 'i' button in the top right corner of the window. These options also allow you to set the button size and the text size of the window.



Saving workspaces

You can save different workspace setups to the Workspaces touch buttons (above the wheels display) or to the 20 “Workspaces Macros and Executors” buttons on the panel by pressing View then [Record Workspace], then touching or pressing one of the Workspaces buttons. This allows you to reconfigure the workspace at the touch of a button.

Workspaces are saved with the show.

Setting up and recording workspaces is described in more detail in section 10.1 on page 106.

Quick record

Some windows – Groups, Workspaces, Playbacks, and all the Palette windows - have a Quick Record function. Set up what you want to record, then touch or click the button once. The button will light up red with a + sign. At this point you can enter a legend. Touch or click again to store the item.



The Quick Record function can be disabled using Key Profiles (see section 10.2.1 on page 109).

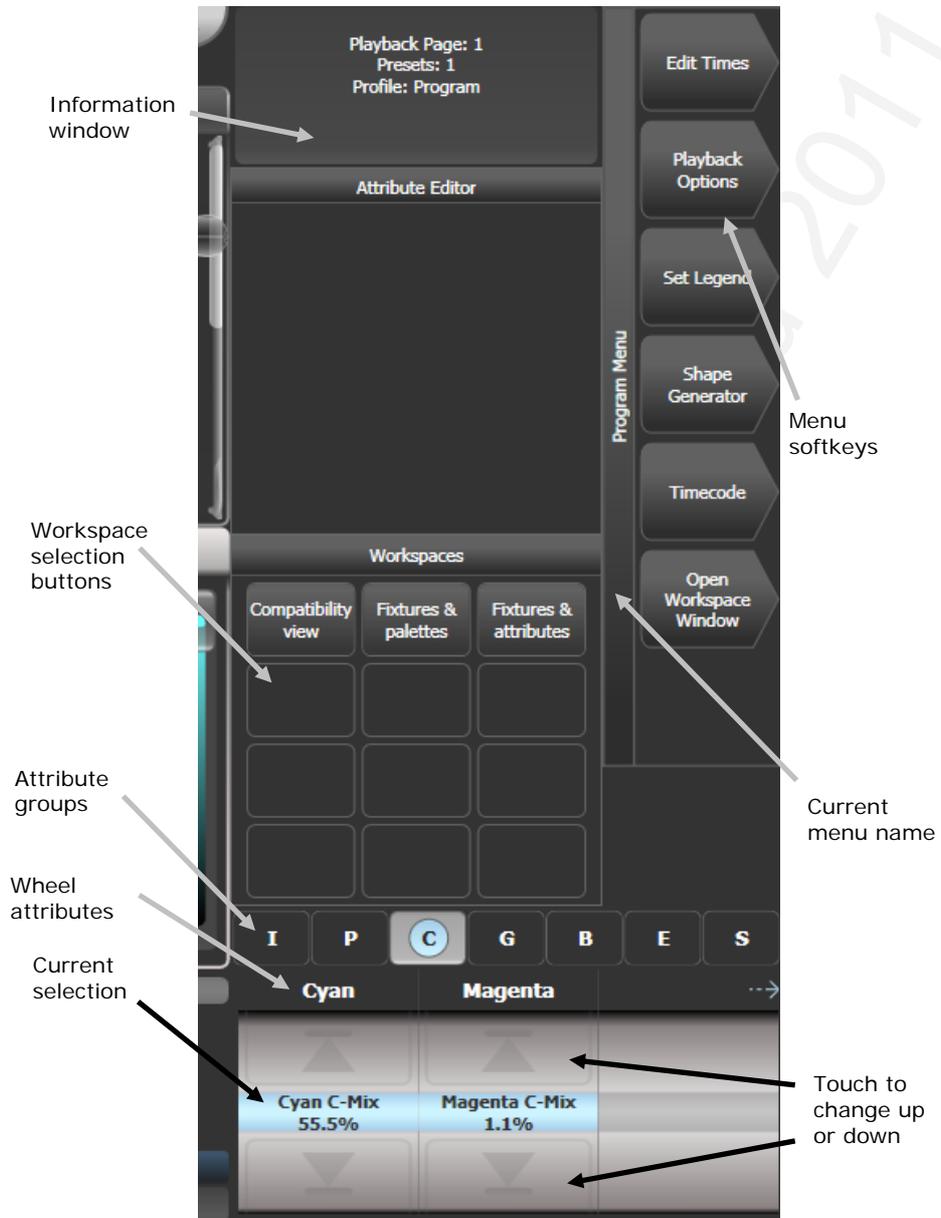
Legends and picture legends

All touch buttons can have legends set to remind you what they do. In addition, you can draw picture legends on the buttons. To do this, select [Set Legend] then press [Picture]. A drawing space will open on the screen for you to draw the legend.



1.3.2 The menu area of the screen

The right hand side of the screen is used for the operating menu display.



Down the right hand side of the screen, the functions of the A-G menu softkeys are listed. If there are more functions than will fit on one screen, [Previous] and [Next] buttons are provided to page through the functions. You can either press the real button or touch the key on screen.

The vertical bar to the left of the softkeys shows you which menu you are currently in. You can “latch” the menu (so that you don’t have to keep reselecting it) by pressing the Latch Menu button below wheel C. The menu bar turns red when latched.

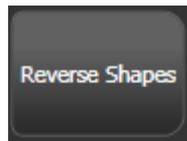
At the bottom of the screen, the current function of the wheels is shown. If fixture attributes are being set, this shows the possible settings which are available on the fixtures. Above the roller image a legend shows which attributes are being controlled by each wheel and

the centre of the roller shows the current attribute. If a chase is being controlled, information about the chase is shown here.

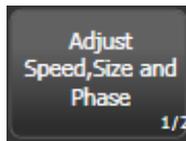
Above this, the screen shows which attribute group (Intensity, Position, Colour, Gobo, Beam, Effect and Special) is selected (grey box) and which are currently modified (blue circle).

The area at the top of the screen shows instructions to the user and information from the system.

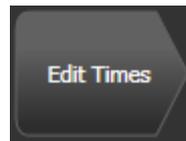
The appearance of the softkeys varies to indicate the type of actions available:



Action button: system will carry out the action shown



Option button: cycles through a range of options shown



New menu button: jumps to a new menu



Text entry button: press and enter text using the touch keyboard

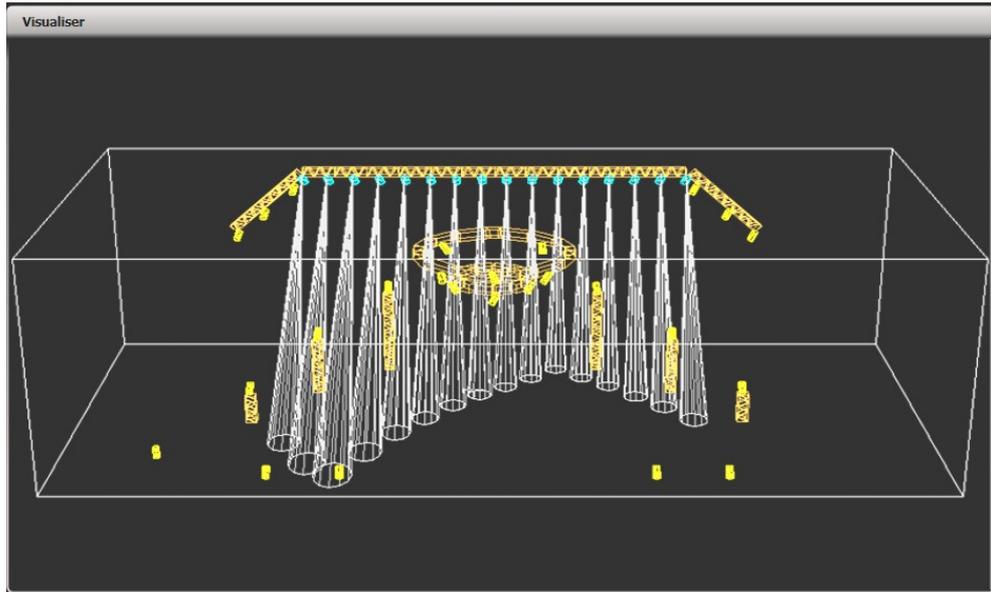
1.3.3 The Heads-Up Display (HUD)

The HUD window is shown as one of the workspace windows. You can move it between the screen and external monitor using the [Window Options] [Move Screen] command from the View menu. Most of the HUD information is already shown on the screen, but if you're used to using it on the Pearl Expert Classic you might like to have it displayed.

Fixtures are highlighted in dark blue if in the programmer and in light blue if selected.



1.3.4 Visualiser



Titan Mobile runs an integrated version of Avolites Visualiser. This allows you to view the output of the system if you can't use the real lights, enabling you to make changes to your show at home or in your hotel. You can also use Blind Mode to make changes during a live show.

Visualiser is shown in one of the workspace windows.

Configuration buttons for Visualiser are provided in the context button area to the left of the menu buttons.

The operation of Visualiser is not covered in this manual, please refer to the Visualiser manual.

Auto Patch

The Auto Patch function automatically creates a Visualiser rig from your Titan Mobile show. When you start Visualiser, it will open with an automatic representation of your patch.

You will see the fixtures laid out on screen with 60 fixtures in a row, sorted by handle number.

The Visualiser will start in run mode, with the simulator tab selected so you can start controlling lights immediately.

Multiple dimmers patched to one handle will appear as a single fixture in Visualiser.

Fixture selection

When a fixture is selected on the system, it is highlighted in blue in Visualiser.

1.3.5 Key profiles

Titan Mobile allows you to change the function of the blue and grey panel buttons associated with the playback faders. You can also change the way some of the touch keys work. You can save your settings as a Key Profile. Different profiles can be selected for different users or to enhance the operation of the system for a particular use. See section 10.2 on page 109 for details.

1.3.6 Undo/Redo

You can undo and redo up to 20 actions by pressing Avo shift and the grey left arrow (undo) or right arrow (redo) buttons below the numeric keypad. So for example if you press Clear then wish you hadn't, the Undo function will restore the system state.

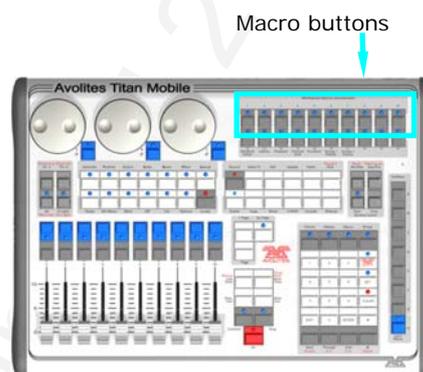
1.3.7 Key macro buttons

Lighting programming can sometimes require a repeated sequence of button presses. You can record sequences of keypresses and play them back with a single keypress – this is called a macro.

Macros can be stored in the 20 dedicated buttons on the top right of the panel, and there is also a Macro touch button window which can be shown in the workspace. The macro buttons correspond to the first 10 macros in the window.

To record a macro:

- 1> Press the Record button.
- 2> Press the Macro button above the numeric keypad.
- 3> Press an empty Macro button, or touch an empty button on the screen. Recording starts. The Insert/Macro button flashes during recording.
- 4> Press the sequence of buttons you want to record.
- 5> Press Macro to finish recording.



To play back the macro, just press or touch the button where you recorded the macro. The macro will repeat all your button presses (with no delay or timing between the presses).

1.3.8 Titan application

The Titan application is the "engine room" of the system and can be seen on the PC screen as a black window with the Titan logo.

Some functions such as saving and loading shows, and configuring DMX outputs, are available on the Titan application menu. However, the control panel provides easier ways to access these functions.

Setting up DMX outputs is described in section 10.4.1 on page 113.

1.4 Loading and saving shows

You can save any number of different shows to your PC's disk. Titan Mobile will also autosave the show periodically.

Note: Titan Mobile shows can be transferred to any other Titan console, so if you discover there's a Pearl Expert or Diamond 4 at the venue, you can run your show on it and take advantage of the extra faders.

It's a good idea to save or copy your show to a USB pen drive in case something bad happens to the PC or if you want to transfer a show to a different system.

1.4.1 Manual save and load

You can save your show at any time either with its current name or with a new name.

-
- 1> Press the Disk button.
 - 2> Press [Save Show].
 - 3> If you have a USB drive connected, use the softkeys to select whether to save on [Removable Disk] or [Internal hard drive].
 - 4> Enter a name for the show on the keyboard (the screen shows a list of shows which already exist).
 - 5> Press Enter or [Save] (or [Overwrite] if the show already exists). The show will be saved.
 - 6> Press Exit or [OK] to leave Disk mode.
-

If you save to hard drive, shows are saved in the C:/Program Files/Avolites/Titan/ShowData folder, unless you change this in the User Settings.

Titan Mobile will automatically load the last show when it is started up.

If you want to load a different show:

-
- 1> Press the Disk button.
 - 2> Press [Load Show].
 - 3> If you have a USB drive connected, select which drive you want to load from.
 - 4> Available shows are listed on the softkeys; press the key to load the show (the F and G keys show more pages). If you type the first few letters of the show name on the touch keyboard, the list will only include shows starting with those letters, which can make it easier to locate the show you want.
 - 5> Press Exit to leave Disk mode.
-

You can save any number of different shows on the disk.

1.4.2 Autosave

Titan Mobile will automatically save your show to hard disk when you shut it down. It will also autosave the show every 30 minutes in case the system loses power. The time remaining to the next auto save is shown on the status bar of the Titan application.

You can disable Autosave or alter the time between saves using option [Auto Save] on the Disk menu (selected using the Disk button). Softkey A enables or disables autosave and Softkey B sets the time between saves. We recommend that you have autosave enabled while programming in case the system power fails, but disable it while running a show as it can cause the system to pause slightly at inconvenient moments.

1.4.3 Backing up existing show files to USB pen drive

If you just want to save a copy of your current show, you can use the normal save function to save it to the USB drive instead of the hard drive.

To copy an existing show file on the hard disk to a USB drive, first ensure your current show is saved, then use the Disk functions to load the existing show from hard disk, then save it to the USB drive.

You can also use the normal Windows method of opening the C:/Program Files/Avolites/Titan/ShowData folder and dragging the showfile to your removable disk.

1.5 Clearing the system

When you start a new show on Titan Mobile it is usually a good idea to clear the system. All programming and patching is deleted, but user options are not changed.

-
- 1> *Press the Disk button.*
 - 2> *Press [New Show].*
 - 3> *Press [OK] to confirm.*
 - 4> *Press Exit to leave Disk mode.*
-

- There is also an option [Wipe] in the System menu (press AVO and Disk) which has the same function, and is located in the same place as on other Avolites systems.

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2. Patching

This chapter contains: patching dimmers; patching moving light fixtures; checking the patching; changing the DMX address; deleting a patched fixture; patching options.

Patching is the process where you tell Titan Mobile

- What type of lighting units you have connected to it
- What DMX addresses they are operating at
- Which DMX line (universe) each unit is connected to (there are 12)
- Which fixture buttons on the screen you want to use to access them

You should normally plan out the lighting rig in advance to allow the DMX addresses on your fixtures to be set up before they are rigged. The easiest way to do this is to patch the fixtures on the system, then read off the DMX addresses from the system (using the Fixture Patch view) and use them to set up the addresses on the actual fixtures.

Alternatively you can allocate the DMX addresses to the fixtures yourself, and set up the system to match.

2.1 Create

2.1.1 Fixture select buttons

To control intelligent fixtures or dimmer channels, they must be patched to a fixture button in the Fixtures workspace window on the screen.

If the Fixtures window is not shown, press Open Window then the Fixtures button above the numeric keypad.

Fixture buttons can be shown either in pages with Page buttons, or you can use the scroll bar to show different pages. Use the [Pages Show/Hide] touch button on the right of the screen to select between page buttons and scrolling mode. on the left of the screen. You can change the fixture page at any time.

Titan Mobile also allows you to allocate fixtures and dimmers to Groups, which allows you to quickly select a set of fixtures with one button touch. Groups are described in the next chapter.



2.1.2 Patching dimmers

Each fixture button can control single or multiple dimmer channels.

- 1> Press Patch (one of the function buttons above the numeric keypad), then [Dimmers].
- 2> Softkey A [DMX Line=] shows you which of the 12 DMX output lines you are patching onto. Press A then enter a new number (1-12) to change the line. Softkey B shows the DMX address about to be patched. You can change this by pressing B [Address=xx], typing in the new address on the numeric keypad and pressing Enter.
- 3> To patch a single dimmer, touch a Fixture Select button. To patch a sequence of dimmers each to its own button, touch and hold the Select button for the first dimmer in the range, then touch the last Select button in the range, then release the first button (or you can sweep your finger along the range). The range of dimmers will be patched to sequential DMX addresses.
- 4> The Select buttons turn dark blue to show that they are patched.
- 5> Repeat from step 2 for other dimmers.



- When setting the DMX address using Softkey B, you can set the DMX line (universe) as well by entering {line}.{DMX}, for example 2.56 will set DMX address 56 on DMX line 2.
- To see how DMX channels are patched, press View (next to the numeric keypad) then [Fixture Patch]. The fixture patch view is described in section 2.2.3 on page 33.
- C [User Number = xx] allows you to set a user-defined number for each dimmer or fixture patched, to help you identify them later. You can also edit the User Number from the Repatch Fixture menu.
- You can patch multiple dimmer channels to a single handle. This can be useful if, for example, you want to control all the lights for one area together. To do this, just press the same Fixture Select button again when patching the new dimmer channel. You can tell the dimmer channel has patched OK because the DMX address will increase by 1.

2.1.3 Patching moving light fixtures

Moving light fixtures are more complicated to patch than dimmers because they have more attributes to control, such as pan, tilt, colour etc., whereas a dimmer channel just has intensity.

Titan Mobile uses a "personality" system to control fixtures. This means you don't have to know how each fixture works, you just tell Titan Mobile what you want to do and it will send the right control commands. There is a personality file in Titan Mobile for most types of fixture, which tells it what attributes are available and how to control them. If Titan Mobile does not have the personality for your fixture, you can download further personalities from the Avolites website or Avolites can create one for you. See section 11 on page 122 for details of how to find personalities.

1> Press Patch (bottom right of system).

2> Press [Fixtures].

3> Select correct fixture manufacturer from the softkeys ([Previous] and [Next] page through the list of manufacturers). Or use Quick Search and type the first few letters of the manufacturer's name on the keyboard to find the one you want.

4> Select correct fixture from the softkeys (F and G show other pages). You can use Quick Search here as well.

5> Select the correct fixture operating mode from the softkeys.

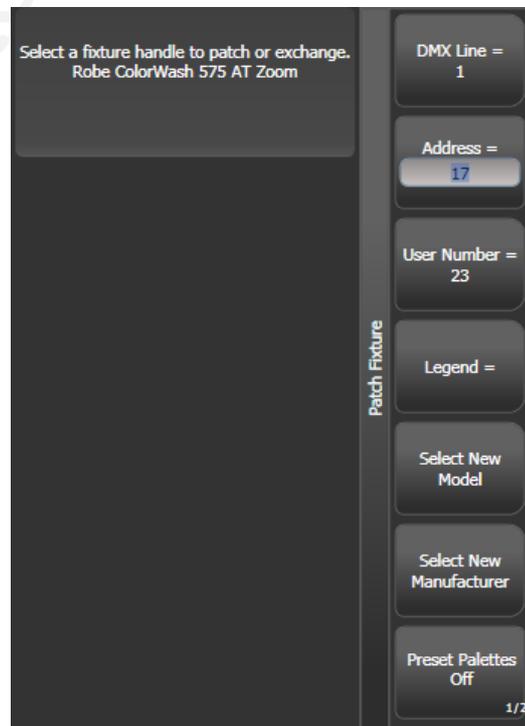
6> Softkey B shows the first free DMX address. Type the new address on the numeric keypad if you want a different one. Press A [DMX line=xx] to patch to a different DMX line, or you can enter the address as [line].[address], e.g. 2.45 would set address 45 on line 2.

7> Touch a Fixture Select button to patch the selected fixture.

8> The Select button will turn dark blue to show that it is patched.

9> Repeat from 7 to patch more of the same fixture type. The DMX address automatically updates so you can just keep patching by pressing Select buttons.

- You can patch a range of fixtures by sweeping your finger across the buttons, or by touching and holding the first button, then touching the last button, then releasing the first button, in the same way as for dimmers.
- You cannot patch more than one fixture onto a button. If the button is already used, the patch will fail.
- If you are patching a fixture which uses a separate dimmer channel, such as a VL5, you can patch the dimmer channel onto



the same handle as the moving light part of the fixture so you can control it all together. This is called a Pending Dimmer.

- [Preset Palettes] sets whether the system will create default colour, gobo and position palettes for the new fixture. These are assigned to palette handles 1-30.
- You can use the View > DMX option on the Monitor to show the DMX address for fixtures, or the View [Fixture Patch] screen on the system.
- If a patch goes over the capacity of a DMX line, Titan Mobile will patch at the beginning of the next line. For example if you try to patch a Mac500 at channel A510, it will actually be patched at B1.

2.1.4 Visualiser Auto Patch

If you want to use Visualiser, start it by pressing the Visualiser button, or press View then [Open Workspace Window] then [Visualiser]. Visualiser will open in one of the workspace windows with an automatic representation of your patch.

You will see the fixtures laid out on screen in handle number order.

2.2 Edit

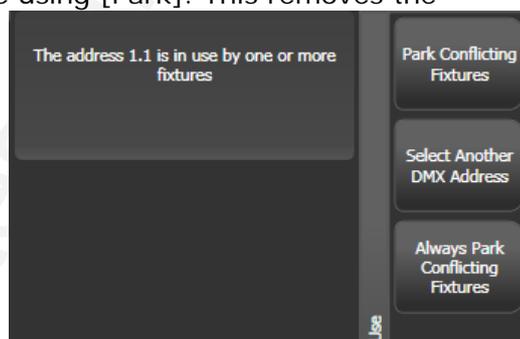
2.2.1 Changing the DMX address of a fixture

You can re-patch a fixture to a different DMX address or a different DMX output line. All programming is kept.

- 1> Press Patch (if you're not already in Patch mode).
- 2> Press [Repatch Fixtures].
- 3> Touch the Select button of the fixture you want to change.
- 4> To change DMX press [Address], type the new address and press enter. If this address is already in use, a warning icon will be shown.
- 5> To change the DMX output line, press [DMX Line=x] and enter a new output line number 1-12.
- 6> Press Enter or [Repatch] to confirm the change.
- 7> Repeat from step 3 if you want to change other fixtures.



- You can "Park" the fixture using [Park]. This removes the fixture from the DMX output map, but all programming is retained.
- If the new DMX address already has another fixture or dimmer patched on it, the system will warn you (unless this is disabled in User Options, see section 10.3.3 on page 111). You can either press [Select another DMX address] to abort the change or [Park Conflicting Fixtures]. All programming for the parked fixture is preserved, but you need to repatch it to a free DMX address using the above procedure before you can use it again. If you press [Always Park Conflicting Fixtures] the system will park this and any future conflicting fixtures without warning you. (You can change this option back in the User Settings).



2.2.2 Setting legends

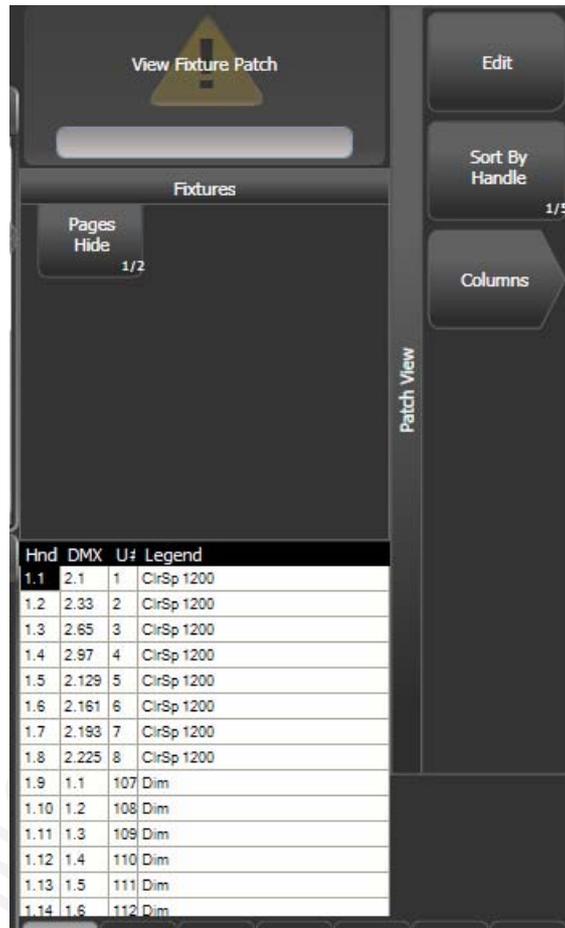
You can set a legend for each fixture or dimmer you've patched which is displayed in the Fixture Select touch button. This can be really useful to help you identify the fixture.

- 1> At the main menu press [Set Legend].
- 2> Touch the Select button for the fixture you want to legend.
- 3> Type the legend on the touch keyboard.
- 4> Press Enter when you have finished.

- You can set the same legend for multiple fixtures by selecting a group of fixtures after pressing [Set Legend].
- You can automatically allocate User Numbers for multiple fixtures by selecting a group of fixtures, then using softkey A on the Set Legend menu. The first fixture will have the User

Number you entered, and the other selected fixtures will be given a number increasing by 1 for each fixture.

- You can set a legend for the current page of fixtures using the [Set Legend] function from the main Program menu. The legend is shown on the touch button for the page and on the HUD.



2.2.3 View Fixture Patch

The fixture patch view allows you to see and edit how fixtures are patched on the system.

To open the fixture patch view, press Window Open followed by [Fixture Patch]. You will get a table on the screen showing all your fixtures. The list of fixtures can be filtered by typing in a search term on the keyboard. You can also use the wheels to scroll around the list and select different fixtures, or touch the list or one of the fixture buttons. As you select a fixture its button will be highlighted in red.

You can edit the selected item by pressing [Edit]. This option toggles between [Edit] and [Search] modes.

- Please note that some values are input in the following form:
 - Handle Number: {Page} . {Index}
 - DMX address: {Universe} . {Address} .
- You can choose which columns are displayed by pressing [Columns] and choosing which columns to hide or show.
- You can Park a fixture by moving to its DMX address and deleting the address using the left arrow key (or backspace on the keyboard).

2.2.4 DMX view window

When you're having problems getting fixtures to work it can be useful to see the actual DMX output values coming from the system. Press Window Open, then [Open Workspace Window], then select [DMX].

Line	Index	Line	Address	Control	Output
Line 1	1	1	1	Dimmer	227
Line 2	2	1	2	Dimmer	0
Line 3	3	1	3	Dimmer	196
Line 4	4	1	4	Dimmer	0
Line 5	5	1	5	Dimmer	0
Line 6	6	1	6	Dimmer	0
Line 7	7	1	7	Dimmer	30
Line 8	8	1	8	Dimmer	0
Line 9	9	1	9	Dimmer	0
Line 10	10	1	10	Dimmer	0
Line 11	11	1	11	Dimmer	0
Line 12	12	1	12	Dimmer	0
	13	1	13	Dimmer	0
	14	1	14	Dimmer	0
	15	1	15	Dimmer	0
	16	1	16	Dimmer	0

The buttons on the left let you select the different output lines from the system. Scrolling the window to the right shows more information about each DMX channel.

2.2.5 Fixture Exchange

The Fixture Exchange function enables you to repatch fixtures in your show using alternative fixtures, retaining important elements such as cue times, shapes and legends. This is very useful for touring shows and venues with a high turnover of events.

For example, if you have programmed your show in a venue which has MAC 500s and are moving to a venue with VL6s you can exchange the MAC 500s for VL6s whilst retaining many elements of your show.

Fixture Exchange works best if you use Palettes to create your cues. This allows you to adjust for position differences and so on by reprogramming a few position palettes, rather than having to reprogram every cue. Cues recorded with absolute values will need to be re-recorded, preferably using palettes.

The pan, tilt and dimmer will always be preserved from one fixture type to the next, as will times, shapes and legends for recorded items. Links from the palettes to groups, cues, chases and cue lists will also be preserved, so the show can be easily recreated by updating your palettes as normal.

Fixture exchange also gives you a powerful way to re-use an existing show with new lights, so you can give yourself a programming head start when faced with a new fixture.

- It's a good idea to save your show before performing major changes such as fixture exchange. Should you change your mind or have problems, you will easily be able to return your show to its previous state.

-
- 1> *Enter patch mode by pressing Patch.*
 - 2> *Select the new fixture type you wish to use.*
 - 3> *Touch the select button of the fixture which is to be exchanged.*
 - 4> *The system will warn you that the fixture is in use. Press the [Exchange Fixture] option.*
 - 5> *Repeat from step 3 to exchange other fixtures with the same type of new fixture.*
-

Note: After exchanging fixtures you need to update the palettes which used those fixtures. If you have trouble switching values off in a palette, set new values for all the attributes in the attribute group and re-record the palette. You should then be able to switch off an attribute group as required.

2.2.6 Update personalities

This option allows you to update the personality for a fixture used in your show. Normally the fixture personality is saved in the showfile, so updating the personality library on the system would not update fixtures which are already patched.

- It's a good idea to save your show before using Update Personalities, then you will be able to undo any changes if you change your mind or have problems.

-
- 1> *Enter patch mode by pressing Patch.*
 - 2> *Press [Update Personality].*
 - 3> *The system shows you a list of personalities used in the show which can be updated.*
 - 4> *Press the personality you want to update.*
-

- The new personality is loaded from the Titan/Personalities folder.

2.3 Copy and Move

2.3.1 Copying or moving a patched fixture

Using the Copy or Move buttons you can make a copy of an existing fixture or move it to a new button. You cannot link fixture buttons. You can copy or move multiple fixtures in one operation.

Move is useful for tidying up the system.

-
- 1> *Press the Copy or Move button.*
 - 2> *Touch the Select button of the fixture you want to copy/move. You can select multiple fixtures by sliding your finger across the buttons.*
 - 3> *Touch the empty Select button where you want it to go.*
-

- The Latch Menubutton latches the Copy menu, so you can keep copying or moving things without having to keep pressing the Copy button. Press again to unlatch.
- The [Retain Layout] or [Bunch Up] option is used when copying a group of fixtures 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 fixtures 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.

2.3.2 Using copied fixtures

Fixture copying is very useful if you need an additional fixture of a type you've already patched and programmed. The new copy will come complete with all the cues and palettes of the original fixture you've copied.

The copied fixture will be "Parked" (have no DMX channel allocated) and you will need to repatch it before you can use it (see section 2.2.1 above).

2.4 Delete

2.4.1 Deleting a patched fixture

You can delete a fixture or dimmer from a button if you patched it accidentally or if you change your rig and want to use the button for something else.

-
- 1> *Enter Patch mode by pressing the Patch button.*
 - 2> *Press the Delete button.*
 - 3> *Touch the Select button of the fixture you want to delete.*
 - 4> *The fixture will light up red and the system asks for confirmation. Touch the Select button again to confirm.*
-

- All programming for the fixture is also deleted. You cannot undo deletion of a fixture or get the programming back by repatching a fixture to the same handle.

2.5 Advanced options

2.5.1 Swap pan and tilt

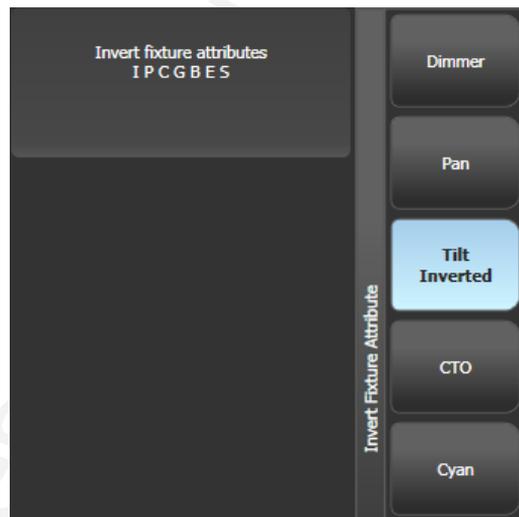
This allows you to make the pan channel control tilt and the tilt control pan. This is useful for moving-mirror fixtures rigged sideways.

-
- 1> Press Patch.
 - 2> Press [Edit Fixtures]
 - 3> Press [Swap Pan and Tilt].
 - 4> Select the fixtures to be pan-tilt swapped. Press [Pan and Tilt ...] to select either [Swapped] or [Normal] for the selected fixtures.
 - 5> Press Exit when finished.
-

2.5.2 Invert attributes

This option inverts individual attributes of fixtures. Useful if you have a fixture which pans right when the rest pan left, saving a trip up the rig to set fixture options, but you can invert any attribute.

-
- 1> Press Patch.
 - 2> Press [Edit Fixtures].
 - 3> Press [Invert Attribute]
 - 4> Select fixture(s) to be changed.
 - 5> Select the attribute to invert from the softkeys. The display shows [Inverted] when the attribute is inverted.
 - 6> Press Exit to finish.
-



- You can change the invert on multiple fixtures by selecting more than one, but the "Inverted" display will not show if there is a mixture of inverted and non-inverted fixtures in the selection.
- Some attributes cannot be inverted.

2.5.3 Freeze fixtures or attributes

This option allows you to freeze individual attributes of a fixture, or to freeze the whole fixture. Attributes or fixtures which are frozen are not affected by playbacks or by the programmer.

-
- 1> Press Patch.
 - 2> Press [Edit Fixtures]
 - 3> Press [Freeze Fixture or Attribute].
 - 4> Select the fixtures to be frozen/unfrozen.
 - 5> Use the softkeys to select which attributes are frozen, or to freeze the whole fixture. Frozen attributes are indicated on the softkey..
 - 6> Press Exit when finished.
-

3. Controlling dimmers and fixtures

This chapter contains: Selecting fixtures and dimmers for control; changing attributes of the selected fixtures; using groups.

When you are programming a show, and sometimes when you are running a show, you need to manually control the fixtures and dimmers to set the intensity, position, colour, etc. To do this you first select the fixtures you want to change using the select buttons, then you set the attributes of those fixtures using the Wheels and Attribute buttons.

3.1 Create

3.1.1 Selecting fixtures and dimmers for control

To select the fixtures or dimmer channels that you want to control, you use the Fixture Select buttons on the screen to load the fixtures into the Editor. You can select fixtures or dimmers individually, or



several at once.

- 1> *Touch the Select buttons for the fixtures you want. The select button will light up pale blue for selected fixtures (they are also shown in light blue on the HUD).*
- 2> *To select a range of fixtures, slide your finger across the touch buttons. To select a large number of fixtures you can touch and hold the Select button for the first fixture, then touch and hold the Select button for the last fixture, then release the button for the first fixture.*

Here are some other things to know:

- Press Locate (bottom right corner) to light up the selected fixtures in open white and move them to a central position. See the next section for more Locate options.
- You can deselect a fixture by touching the select button again.
- At the top of the screen, just above the top windows, the system will show you which fixtures are currently selected.

- Press Clear (right of numeric keys) to deselect all fixtures and remove all changes from the programmer. See the next section for more Clear options.
- Once you have changed any attribute, touching a Select button will deselect all fixtures and start the selection process again. All previously selected fixtures (since you last pressed Clear) stay in the programmer. Once a fixture has been edited, the button shows a darker blue (also on the HUD). The picture shows the first two fixtures selected, with the second three in the programmer and the others unselected.
- You can select fixtures on another page by touching one of the page buttons to the left of the fixture buttons, if you have "Pages" set to Show (using the context button to the left of the menu buttons). Otherwise you can use the scroll slider to show other pages.
- Using Key Profiles (see section 10.2.1 on page 109) you can set the fixture touch button to latch mode so that it turns the fixture's dimmer channel on (like putting a preset fader to full).

3.1.2 Setting fixtures to a start position

The Locate button (bottom right corner) is used to put the fixture into a known position with light coming out, so that you can start programming it.

A quick press of the button will move all selected fixtures to a central position and reset all the attributes so that you get a white light. However you sometimes might not want to move the fixture, and by holding down the Locate button, you get some more options.

- You can mask off some of the Locate settings (such as only turning the fixture on, but not changing its position or colour) by holding down Locate and pressing [Set Mask to Exclude All]. Then (still holding Locate) turn on the Attributes you want to change using the Attribute Bank buttons down the right hand side. Only the lit attributes will be changed by Locate. Pressing the Attribute Options button will clear the mask.
- Option [Auto Reset Mask] sets the mask to be automatically reset to include everything each time Locate is pressed, or you can toggle the option to [Remember Mask] which will keep the mask setting you used last time.
- Option [Clear/Don't Clear Located Attributes] sets whether the attributes changed by the Locate function will be saved into any cues you store. If the option is set to "Clear" then the Located attributes will not be stored in the Programmer unless you modify them using the wheels. This is useful if for example you want to program a cue which sets the position of fixtures, but does not turn them on. The Locate button will light up the fixtures for programming, but the lit state will not be stored in any cues you save.

3.1.3 Clearing selection

The Clear button (on the right of the numeric keypad) is used to remove all changes from the Programmer and deselect all fixtures. A quick press of the Clear button just clears everything, however if you hold down the Clear button, then more options are available.

- You can mask which attributes are to be cleared (for example, leaving the pan/tilt in the programmer but clearing everything else) by holding down Clear and pressing [Set Mask to Clear Nothing]. Then (still holding Clear) turn on the Attributes you want to change using the Attribute Bank buttons down the right hand side, or press [Set Mask] and use the softkeys. Only the lit attributes will be cleared. Pressing the Attribute Options button will clear the mask.
- [Clear Options] opens a submenu showing some further options (described below).
- [Clear All Fixtures/Selected Fixtures] sets whether all fixtures will be cleared from the programmer, or if only currently selected fixtures will be cleared. This is useful if you want to clear specific fixtures.
- [Individual Attributes] allows you to clear individual attributes from the Programmer. When you press the softkey, you are given a list of attributes in the Programmer – press the appropriate softkey to clear that attribute.

The options in the “Clear Options” submenu are:

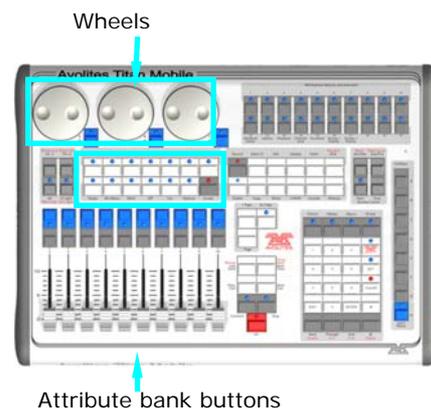
- [Auto Reset Mask] sets the mask to be automatically reset to clear everything each time Clear is pressed, or you can toggle the option to [Remember Mask] which will keep the mask setting you used last time.
- [Leave/Zero Preset Fader Levels] is used to set whether latched fixtures are cleared (the fixture key profile can be set to “Latch” mode, which turns on the fixture dimmer channel when the fixture button is touched. See section 10.2.1 on page 109.)
- [Freeze current values] sets what happens to LTP (non-intensity) channels you have modified. If set to [Freeze Current Values] the channels remain as you set them. If set to [Release To Playback Values] the channels will go back to how they are set in the current playback. For example: you have an active playback making some lights green, then you select the lights and change them to red. If you press Clear with this option set to [Freeze] then the lights remain red. If the option is [Release] the lights will go back to green.

You can use the Channel Grid window to selectively attributes from fixtures. See section 3.2.1 on page 49.

3.1.4 Changing attributes using the wheels

“Attributes” are the functions of the fixture, like pan, tilt, colour, dimmer, etc. You select which attributes you want to modify using the buttons below the wheels and set values using the wheels. The attributes available depend on the fixture type. Dimmer channels only have a dimmer attribute.

You can also select attributes by touching the IPCGBES buttons on the screen, and modify them using



the Attributes workspace window; this is described in the next section.

Each attribute button controls several attributes, one on each wheel.

1> *With some fixtures selected, press the button for the attribute to be changed*

2> *Turn the wheels to set the attribute. The display above the wheels shows which attributes are being controlled, and the settings which are available scroll up and down as you turn the wheels.*

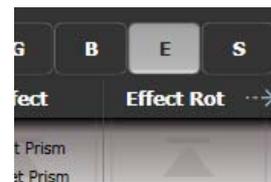


You can also touch the roller image on the screen to change the attributes up or down by one. For continuously variable controls like a dimmer, touching the roller will set the attribute to full or zero.

3> *Repeat from 1 to change other attributes of the selected fixtures.*

Some other things to know about attributes:

- If an attribute is in the programmer, it is shown in pale blue (as shown with the "Green" setting in the screen picture above). This provides a quick way to see which attributes are in the programmer.
- You can also select the attribute to be changed from the softkeys by pressing the "Attribute Options" button.
- If the wheel display does not show the attribute when you press the button, that attribute is not available on the selected fixtures.
- If the wheel display shows a blue arrow next to the legends, this means that there are more than three attributes to control. Press the Attribute button again to toggle through the attributes.
- The wheels operate in an "acceleration" mode. If you spin the wheel fast, the fixture changes in larger steps. If you move the wheel slowly, the fixture moves in its smallest increment.
- Holding down the Avo button while turning a wheel puts the wheel into "Fast" mode. When in this mode, a single rotation of the wheel changes the attribute you are controlling over its full range. For example, if while moving the Pan wheel you hold down Avo the fixture will make a complete pan movement between end stops in one rotation of the wheel.
- Some LED colour mixing fixtures have a Virtual Dimmer function (using the Intensity wheel) which offers intensity control by mastering the RGB levels when the fixture itself does not provide an intensity channel.



3.1.5 Setting attributes using the screen

For attributes with fixed values such as gobos and fixed colour wheels, the Attribute Editor window can be easier to work with than the wheels. It also offers a colour picker window for fixtures with RGB or CMY colour mixing.

Press Window Open then Options (below wheel C) to show it. As a shortcut you can also show it by touching the attribute name text just below the IPCGBES buttons (for example Colour Func in

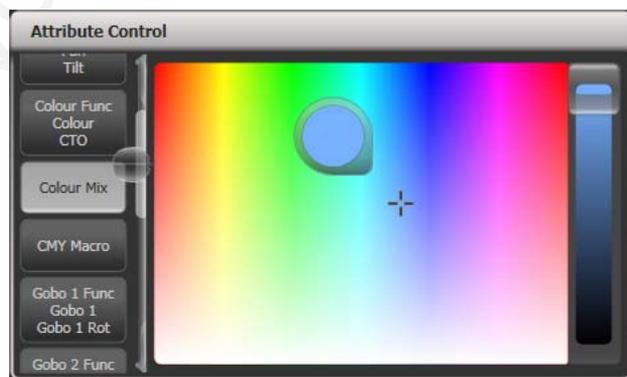
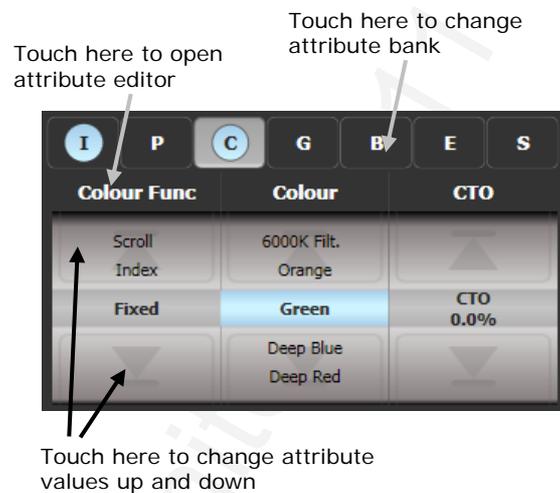
the above picture).

The buttons on the left of the window select the attribute to change.

The rest of the window contains buttons or controls to set the attribute value. For attributes such as gobos and fixed colours, a button is provided for each one, making selection a lot quicker than scrolling through on a wheel.

When you apply an attribute, the button turns blue to show that the attribute is in the programmer. If you touch the button again, the attribute will be removed from the programmer.

Touching the title of each attribute (such as "Colour Func") expands the attribute to the full window, displaying more buttons.



For variable attributes like Dimmer, holding down the button will display a horizontal slider bar. You can then move your finger left or right to change the value.



Active fixtures such as media servers will display a thumbnail of the media clip in the button. The media server must support CITP and be patched as an active fixture.



Fixtures which support keystone or blades/shutters can be controlled graphically in the attribute window. Select and drag the corners or sides of the image to control the fixture.



Note: Updated personality files may be required to support the keystone/blade functions

3.1.6 Setting attributes by number

You can directly enter a numeric value for the attributes which are live on the wheels. You must be at the main Program menu to do this (keep pressing Exit until the vertical menu bar shows “Program Menu”).

Type a number on the numeric keypad then press one of the softkeys to set the value to the fixture. The Softkey legend will show what effect your value is going to have (such as [Gobo 5], or [Deep Blue]).

For attributes displayed in percent, such as Dimmer, or Colour Mix, you enter a value from 0-100 to set the percentage output. For attributes where the output is divided up into ranges, such as colour wheels, you enter the index of the range you want. For example to select the 3rd colour (as displayed in the list above the wheel) you would enter 3.



3.1.7 Selecting fixtures and dimmers by number (Channel)

In some situations, for example when programming lots of dimmers, it can be easier to type in the dimmer channels you want to program. The Channel menu allows you to do this for dimmers or fixtures. To access the Channel menu, press the Channel button on the top left of the numeric keypad. You can also simply start typing numbers on the keypad, when you press Thro, And or @ (functions of the arrow buttons below the numeric keypad) then the Channel menu will be shown.

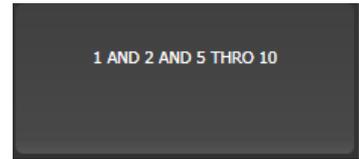
Fixtures may be selected by User Number, Handle Number or DMX Address, as set by the option on Softkey A.

For Through, And and @ you can either use the softkeys or the grey arrow buttons below the numeric keypad.

When using the Channel menu it is helpful to latch it by pressing the Latch Menu button.

- To select a fixture, type the number and press Enter.
- To select more than one fixture, press the [And] softkey between each number. For example 1 And 2 And 5 Enter will select 1, 2, 5.
- To select a range of fixtures, press [Through]. For example 1 Through 8 Enter will select 1-8.
- To miss out fixtures in a range, use [Not], for example 1 Through 4 Not 3 Enter will select 1, 2, and 4.
- The @ softkey sets a dimmer level to the selected fixtures, for example 1 Through 8 @ 5 Enter will set 1-8 at 50%. (You can choose whether 50% is entered as “5” or “50” in the User Settings – see section 10.3.3 on page 111). When you press @ there are softkey options for Full, Off and +/- (increase or decrease brightness).
- You can work with Groups using the Group button, for example Group 1 And Group 2 Not 5 Enter will select all fixtures in group 1 and group 2 except for fixture 5.

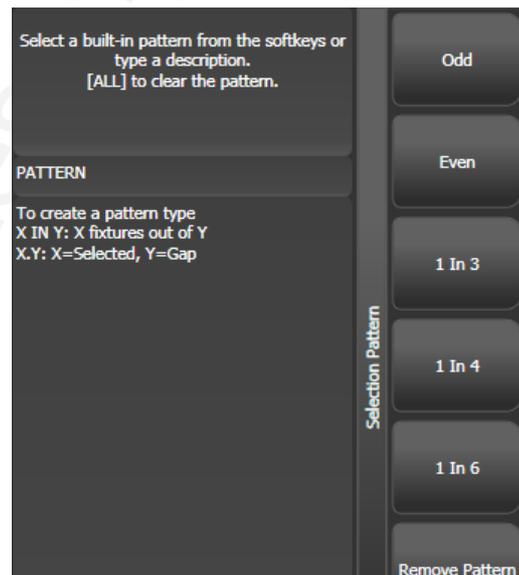
- You can use the Locate button instead of Enter, to select fixtures and locate them. For example 1 Through 4 Locate will select fixtures 1 to 4 and locate them.
- When entering a command, the command line is shown on the display. You can go back using the grey ← button and you can abandon the line using the grey → button.
- The AND, THRO and @ functions are also provided on the arrow buttons as printed next to the buttons.



3.1.8 Selecting using a pattern

When programming you will often want to select patterns of fixtures. Rather than having to individually select and deselect fixtures, Titan Mobile has an easy way of selecting odd then even fixtures in a range of fixtures, or it can, for example, select every 4th fixture.

- 1> Select some fixtures.
- 2> Press the All button (above playback 1).
- 3> Select a pattern from the softkeys. Your selection is modified so you will only be controlling, say, the odd fixtures.
- 4> Press the Fix+1 or Fix-1 button to change the selection to the next stage of the pattern.
- 5> To end the pattern selection, press All twice.



- For example, if you are programming a chase using 16 fixtures and you want every 4th fixture to do the same thing, you just select the 16 fixtures, then press All, then D [1 in 4]. You will see that the 1st, 5th, 9th and 13th fixtures are now selected, and you can create the look for those fixtures. Then press Fix+1, and the 2nd, 6th, 10th and 14th fixtures will be selected ready for programming. After you have programmed the fourth set of fixtures, the pattern will go back to the first position again, until you press All twice to end.
- You can enter your own patterns using the numeric keypad and softkeys, for example "2" A [In] "6".

3.1.9 Attribute groups - IPCGBES

To make life a bit simpler, Titan Mobile groups together attributes which have similar effects, using the letters IPCGBES.

- I-Intensity (dimmer, strobe shutter)
- P-Position (pan, tilt)
- C-Colour (colour wheel, CMY mixing)
- G-Gobo (gobo wheels, gobo rotate, gobo position)
- B-Beam (iris, focus, zoom, beam shaper)
- E-Effects (prism)
- S-Special (motor speeds)

These groups are used to select which attributes you want to work with in many of the functions on the system, particularly when you are “masking off” certain attributes from being saved.

Above the attributes roller on the screen, Titan Mobile shows you which attribute group you are currently changing (the grey box). The

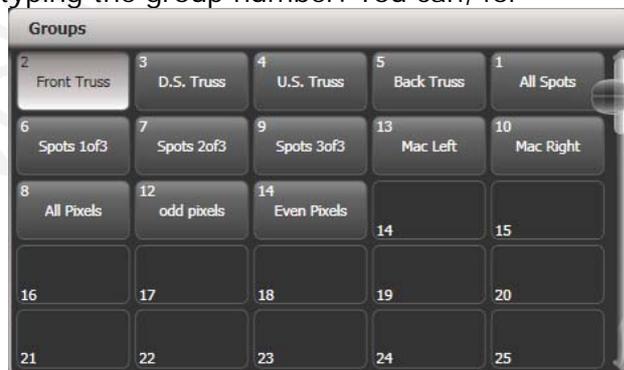


Attribute Group is also highlighted in blue if the programmer contains any of those attributes. For example in the image above we are currently changing Colour attributes, but Intensity and Special attributes have also been modified.

3.1.10 Using fixture groups

You can create groups of fixtures or dimmer channels, which can then be quickly selected together by touching a group button (shown in the Groups window) or typing the group number. You can, for example, make a group for each type of fixture, or group by stage left / stage right, etc.

If the Groups window is not visible, you can show it by pressing Open Window then Group.



- 1> Select the fixtures/dimmers you want in the group (the order in which you select them will also be stored in the group).
- 2> Press the grey Group button (top right of the numeric keys).
- 3> Press [Record Group]
- 4> Use softkey A to enter a number for the group, or B [Provide a legend] to set a legend.
- 5> Touch an empty Group button where you want to store the group, or press C [Store] to store as a numbered group.
- 6> Press Clear then repeat from 1 to store other groups.

- You can also press the Avo button and the Group button to go directly to the Record Group menu, or touch the button twice to use Quick Record – on



the first touch the button will turn red with a +, on the second touch the group will be recorded.

- To select all the fixtures/dimmers in a group, just touch the button for the group.
- The order in which you originally selected the fixtures when creating the group is also stored. This takes effect when you use the last fixture – next fixture functions described in the next section, and when you use Shapes, Fan mode and Fixture Overlap functions. You can change this later, see page 75.
- You can also recall a group by its number:

-
- 1> *Press the grey Group button.*
 - 2> *Type in the number of the group you want to recall.*
 - 3> *Press [Recall Group].*
-

- The Group button also gives you facilities on the softkeys to edit and delete groups.

3.1.11 Stepping through selected fixtures one at a time

If you have selected a range of fixtures, or a group, Titan Mobile has functions to step through the selected fixtures one at a time. This can make it easier to program a range of fixtures because you don't have to select each one manually.

This mode uses the Fix+1/Fix-1/All/Hilight buttons below wheel A.

-
- 1> *Select a range of fixtures or a group.*
 - 2> *The Fix+1 and Fix-1 buttons will select the fixtures in the range one at a time (in the order you selected them).*
 - 3> *The ALL button will select all fixtures in the programmer (everything which has been selected since Clear was last pressed).*
-

- The Hilight function can be used to highlight the output of the selected fixture (make it brighter onstage), see the next section.

3.1.12 Highlighting the selected fixture

- When stepping through a fixture selection using the Fix+1/Fix-1/All buttons, you can highlight the selected fixture on stage. This makes it very easy to see which fixture you are controlling. The other fixtures in the selection go to a dimmed level.
- Press the HiLight button to enable highlight mode. Press HiLight again to disable hilight mode. When you are in hilight mode, the hilighted attribute is overridden and any changes you make to it are not stored in the programmer (so if the hilight uses intensity, you cannot change the intensity of the fixture).

3.1.13 Align fixtures

You can copy attributes from one fixture to another using the Align Fixtures function. This is very useful, for example, if you've accidentally left a fixture out of a cue you can copy settings from its neighbour.

-
- 1> *Select the fixtures you want to Align.*

- 2> *At the top level menu press ML Menu (just below wheel B) then [Align Fixtures].*
 - 3> *Set the mask to include the attribute groups you want to copy (using the Attribute Bank buttons on the right of the system, or the softkeys set options for exclude and include all attributes).*
 - 4> *Touch the select button of the fixture you want to copy the settings from.*
-

3.1.14 Flip

Moving head fixtures can point at the same stage position from two possible yoke positions. Sometimes to get the fixture moving the same as other fixtures, you need to swap to the opposite yoke position and the Flip function lets you do that.

- 1> *Select the fixtures you want to Flip.*
 - 2> *At the top level menu press ML Menu then C [Flip Pan and Tilt].*
-

3.1.15 Fan mode

Fan mode automatically spreads out the values on a selected range of fixtures. If used on pan and tilt, the result is spreading out “rays” of light beams. The first and last fixtures of the range are affected most, and the central fixtures are affected least. The amount of fan can be set using the attribute wheels.

As with shapes, the order in which you select the fixtures sets how the fan effect works. The fixtures you select first and last will be the ones which change most. If you use a group to select the fixtures, the order you selected the fixtures when you recorded the group is used.

The fan effect, while normally used on pan or tilt attributes, can be applied to any attribute.

- 1> *Select the fixtures you want to fan.*
 - 2> *Press the Fan button.*
 - 3> *Select the attribute you want to Fan using the attribute bank buttons.*
 - 4> *Set the amount of fan using the attribute wheels.*
 - 5> *Turn off Fan by pressing the Fan button again when you have finished.*
-

If you have selected fixtures from multiple groups, you can choose whether the fan effect works with or ignores the groups. For example if you have 12 fixtures across the stage in 3 groups of 4, you may want a fan of light beams spread evenly across the stage, or you may want 3 groups of separately fanned light beams.

By holding down the Fan button you can select:

- [Ignore groups] All fixtures are fanned as one large group
- [Fan group as fixture] All fixtures in a group take on the same value.

- [Fan Within group] Fan runs across individual fixtures in each group.

Holding down the Fan button also allows you to select the Curve used for the fan. The different curves allow you to obtain different fan effects.

Fan mode needs to be used on at least 4 fixtures to give good effects. If you have an odd number of fixtures, the central fixture will not change in fan mode.

Press the Fan button again to leave Fan mode. Any effects you have set will remain in the programmer.

- It's fairly easy to accidentally leave Fan mode turned on and be very confused about why the wheels aren't working properly, so turn it off as soon as you have completed the effect.

3.2 Edit

3.2.1 The Channel Grid window

It can sometimes be useful to display and edit exactly what each fixture is doing. The Channel Grid window allows you to do that. Display it by pressing Window Open then [Show workspace window] then [Channel Grid].

Channel Grid												
	Number	Dimmer	Shutter	Shutter Func	Pan	Tilt	Colour Func	Colour	CTC	CTO	Cyan	Red
ClrSp 1200	1	-	Closed		54.89	40.68	Fixed	Open	-	-		
ClrSp 1200	2	-	Closed		45.78	39.77	Fixed	Open	-	-		
ClrSp 1200	3	-	Closed		59.67	39.88	Fixed	Open	-	-		
ClrSp 1200	4	-	Closed		60.77	40.51	Fixed	Open	-	-		
ClrSp 1200	5	-	Closed		53.30	45.85	Fixed	Open	-	-		
ClrSp 1200	6	-	Closed		51.78	47.06	Fixed	Open	-	-		
ClrSp 1200	7	-	Closed		48.32	47.26	Fixed	Open	-	-		

The window can be set to different modes using the context buttons to the left of the menu. The modes are:

- Playbacks: shows which playback is controlling each attribute of each fixture
- Levels: shows the output levels of each attribute. These may be shown numerically or as range names.
- Palettes: shows which palettes are allocated to fixture attributes
- Shapes: shows which shapes are running on fixtures
- Output/Programmer: switches between the attributes on the system output, and the attributes currently in the programmer
- Highlight off/changes: if set to [Highlight changes] then changing attributes will be highlighted.
- Narrow/Wide columns: changes the column width on the screen.

You can **select** fixtures by touching the fixture names on the left of the screen, or if you select any fixture values, the appropriate fixture will automatically be selected.

You can **clear** attributes in the channel grid by selecting them (touch or touch and drag to select multiple attributes). Then press Clear.

You can **edit values** by selecting one or more values in the grid, then modify the values using the wheels, or type a new value on the numeric keypad and press Enter.

3.3 Advanced options

3.3.1 The ML Menu button

The ML Menu button opens the Moving Light Actions menu which contains options to Locate Fixture (same as the Locate button) and to run Macros on fixtures such as Lamp On, Lamp Off, Reset etc. The Align Fixtures and Flip functions as described above are also in this menu.

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4. Palettes

This chapter contains: About palettes; shared and normal palettes; recalling a palette; storing a palette; palette masks.

When programming a show you will find that you frequently use certain positions, colours, etc. Titan Mobile 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. Palettes are stored and selected using buttons on the screen, grouped into different windows for Colours, Positions and Gobos & Beams. You can set a legend for each button so that you know what you're getting.



If the Colours, Positions, Gobos & Beams windows are not shown, press Window Open then [Open Workspace Window] then [Groups and Palettes] to show all three windows.

4.1 Create

4.1.1 Palette values stored as a reference

The most important thing about palettes is that when you use a palette value in a cue, Titan Mobile 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.

4.1.2 Which attributes are stored in palettes

A palette entry can store any or all attributes of a fixture, so you could store position, colour and gobo in the same palette entry. However, it's easier to operate Titan Mobile if you have some palettes which only set positions, some for colour, some for gobo and so on. Titan Mobile helps you with this by providing separate windows for Colour palettes, Position palettes, and Gobo/Beam palettes.

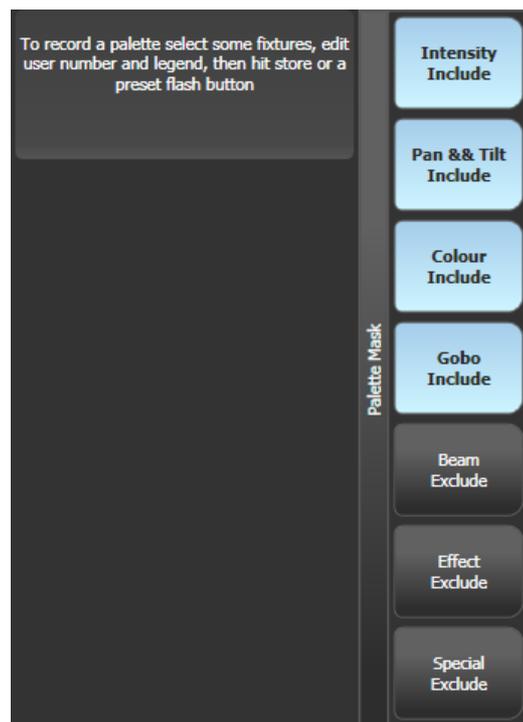
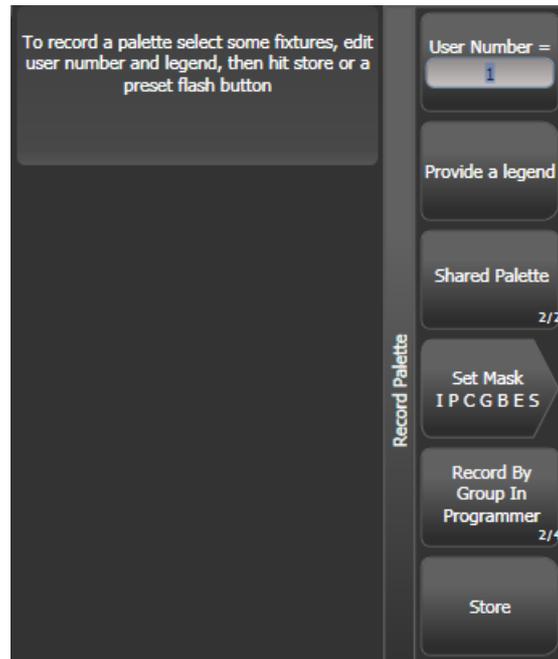
To create these separate palettes, when saving a palette you can set a mask which limits which fixture attributes will be stored in the palette.

In addition, palettes may be either Shared or Normal. Shared palettes are used where the same value is set for 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.

4.1.3 Storing a palette

This is how you save a palette value:

- 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 the Record button, then press [Create Palette]
 - 5> 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). Some masks are automatically set by the window you save the palette in – Positions only includes P, Colours only C and Beams includes IGBES.
 - 6> Touch an unused Palette button to store the palette. Or enter a palette number and press [Store]
-
- The system will automatically set the palette as 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.
 - [Set Mask] allows you to specify which attribute groups will be included in the palette. You can also use the grey Attribute Bank



buttons on the right hand edge of the system 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. Some masks are automatically set by the window you save the palette in – Positions only includes P, Colours only C and Beams includes IGBES.

- [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 (which have been 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.
- You can set a legend for the palette while you are saving it using [Provide a legend]. See section 4.3.2 for how to change the palette legend.
- If you select a Palette button which is already used, Titan Mobile offers you options to [Cancel], [Replace] or [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. This allows you to add settings for additional types of fixtures to a shared palette. Pressing the palette button again will automatically merge.

4.1.4 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.



Quick record also works for groups, workspaces and the playback window.

4.2 Playback

4.2.1 Recalling a palette value

To recall a palette value, this is what you do:

-
- 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.*
 - 2> *Touch 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 section 4.6.1 below.
- You can recall a palette by its number by typing the number on the numeric keypad and selecting [Apply Palette] from the softkeys. The softkey shows the legend of the palette which will be applied.

4.2.2 Palette pages

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 button in the context button area to the left of the menu buttons. using the page buttons to the left of the palette buttons.

- You can also recall a palette from any page using its number by doing the following:

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

4.2.3 Quick palettes with no fixtures selected

If you touch 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 2000's, pressing one of the palettes when no MAC 2000's are selected will set the colour to all the MAC 2000's.

4.2.4 Setting palettes to fixtures in a playback

You can apply a palette to all fixtures in a particular playback. Touch and hold the palette button and press the select button of the playback which the palette is to apply to.

4.3 Edit

4.3.1 Editing palettes

To edit a palette entry, press the Update button, select the palette to edit (this will automatically select the fixtures used in the palette), make the changes you want, then press the [Update Palette x] softkey to save the changes.

The Update 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. Titan Mobile will give you options on the softkeys to Replace or 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.

- You can set the system to "Always Merge" (so it doesn't ask you) using option A of the User Settings (hold down the Avo button to set these). You can also press the palette button a second time to select the Merge option.
- You can add additional fixtures to a palette without affecting existing ones. For example, if you have colour palettes for Mac 600s, you can add colours for your Mac 500s without affecting any previously recorded values in the palette.
- You can remove attributes from palettes using the Off function, see section 6.3.4 on page 72.
- When editing a palette from a touch button, 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.

4.3.2 Setting legends for palettes

You can enter a legend for each palette which is displayed on the palette touch button.

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

- Also on the touch button, the palette number is shown top left. The IPCGBES 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 N for a Normal palette or S for Shared.



4.4 Copy and Move

4.4.1 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.

Move is useful for tidying up the system.

-
- 1> Press the Copy or Move button.
 - 2> Touch the Select button of the palette you want to copy/move. You can select multiple palettes by sliding your finger across the buttons.

3> Touch the empty Select button where you want it to go.

- The Latch Menu button latches the Copy menu, so you can keep copying, moving or linking things without having to keep pressing the Copy button. Press Exit 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.

4.5 Delete

4.5.1 Deleting palettes

You can delete a palette entry by pressing the Delete button, then touching the palette select button to be deleted. Touch the palette button again to confirm the deletion.

Other ways to delete a palette:

- Press the Update Palette button, select a palette, 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.

4.6 Timing

4.6.1 Fading a palette and fixture overlap

A timed palette is a very useful tool allowing 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> Touch a palette button to recall the palette

- 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).
- Palettes applied with a fade time do not get put into the programmer, so will not be saved in any cues; don't use fade times when programming. This is to ensure that when used in a live situation, the next cue will override the palette and play back as intended.
- Additionally you can set Fixture Overlap, which means that if you recall the palette to a group of fixtures, the change will be applied in sequence to each fixture in the group. This is a very

quick way to busk some amazing effects. Fixture Overlap=100% means that all fixtures will change together. Fixture Overlap=0% means that each fixture must complete its fade before the next will start its fade.

- To set an overlap, type the overlap amount then press [Set Overlap]. Then type the fade time (if required) and recall the palette by pressing its button.

4.6.2 Master Time for palettes

Option [Master Time] on the Palette menu (press the grey 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.

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5.1 Playback

5.1.1 Creating a shape

To create a shape you simply pick the type of shape from a list on the softkeys, then choose the shape you want from the Shapes window. Shapes are organised using the IPCGBES attribute groups, so you can pick from a list of Dimmer shapes, or a list of Pan/Tilt shapes, or Colour shapes, and so on. You can also pick from a list of All Shapes.

When you choose a shape, it will be applied to all selected fixtures.



- 1> *Select the fixtures the shape is to be applied to.*
- 2> *Press the Shape button (or select [Shape Generator] from the main menu).*
- 3> *Press [Create] to start a new shape.*
- 4> *Press a softkey to select the attribute type to use in the shape or press [All shapes] for a full list.*
- 5> *Touch the desired shape in the Shapes window, or press a softkey to select a shape. You can type a search word on the touch keyboard to search for a particular shape.*
- 6> *The shape will be applied to all selected fixtures.*

- If you open the Shapes window as part of your workspace, it will remain open for instant selection of shapes (you don't need to press Shape). The window will only show



shapes which are possible on the selected fixtures. Pressing attribute buttons will filter the Shapes window to show only shapes for that attribute. Press the Dimmer attribute button to show all shapes.

- Shapes are based on the current settings of the fixture, so a circle would move around the current pan-tilt position of the fixture.
- You can change the base value of a shape (e.g. the centre of a circle) by changing the attributes using the wheels in the usual

way. You can reduce the Size to zero (see next section) to help you see what the base value actually is.

- You can run more than one shape at a time by repeating the above procedure. You can run several shapes on one fixture.
- Press Shape then [Edit] to show what shapes are running.
- If you apply the same shape to two different groups of fixtures, the shape will appear twice on the shape list. You can edit the two shapes separately to give different directions, speeds etc (see later)
- Each shape is designed to work on a particular attribute. Obviously if the fixtures don't have the attribute, you will not see any effect if you use the shape.
- Each shape has a default size and speed setting (defined in the shape file).

5.1.2 Changing size and speed of a shape

It is easy to change the size and speed of a shape after it has first been created. If the display above the wheels is showing Spread and Offset rather than Size/Speed, press softkey E to select [Adjust Speed, Size and Phase].



- 1> Control the speed of the shape using the left hand wheel.
- 2> Control the size of the shape using the middle wheel.
- 3> The size and speed is shown above the wheels on the display.

Other things to know about size and speed of shapes:

- If you have more than one shape running, the controls operate on the most recent one. You can edit the parameters of any shape that's running using the Edit Shape function, see section 5.2 on page 63.
- The minimum size is zero. This will "hide" the shape, and the fixture will resume its previous settings. The shape is, however, still active.
- You can edit the shape individually on each fixture by selecting the fixtures you want to change. Use the Shape mode of the channel grid window to show the shape running on each fixture. To show the channel grid, press Open Window then [Open Workspace Window] then [Channel Grid].

5.1.3 Changing the phase of a shape across multiple fixtures

Shapes get more interesting (and look more impressive) when you apply them to multiple fixtures. Titan Mobile lets you control how a shape is phased across several fixtures. You can also control Spread, which is a different way of selecting the same thing.

The sequence of the shape across the fixtures is controlled by the order in which you selected the fixtures when you created the shape..

- 4> *By the softkeys is a list of the currently running shapes.*
 - 5> *Press a softkey to make the shape active. The active shape is highlighted.*
 - 6> *Press Enter to get back to the Shape Generator menu.*
-

- If you applied the same shape several times to different fixtures, you can change each copy of the shape independently.

5.2.2 Changing fixture order in a shape

The way a shape spreads across a number of fixtures is set by the order in which you selected them when you create the shape. You can change this order using the [Fixture Order] function in the [Edit] menu. The current fixture order is shown in large green numbers on the HUD window, or in the fixture touch keys . See section 6.6.2 for details on how to set fixture order.

5.2.3 Removing or adding fixtures

You can add or remove individual fixtures from a shape using the [Add/Remove Fixtures] option in the [Edit] menu. All fixtures currently included in the shape will be selected. You can select or deselect fixtures to add or remove them from the shape.

5.2.4 Reversing a shape

You can reverse the direction of a shape by pressing [Reverse Selected Fixtures] from the shape menu. The shape will be reversed only on fixtures which are selected, allowing you to run the shape forward on some fixtures and backwards on others.

5.3 Delete

5.3.1 Deleting shapes

You can delete a running shape by pressing [Delete] from the shape menu, then pressing the softkey for the shape you want to delete.

5.4 Advanced options

5.4.1 Shape fade mode

When a shape is stored in a cue, you can set how the shape fades in using the cue's Mode setting (use [Edit Times] from the main menu then [Fade Mode]).

Modes 0,1 and 3: The shape size will grow from zero to the programmed size using the time/delay settings of the cue.

Mode 2: The shape size will be set by the fader position. It will start at zero and grow to its programmed size when the fader reaches 100%.

If a new cue is fired which controls the same attributes (for example, a second shape controlling the same fixtures as a currently running shape), the new shape will crossfade from the running shape.

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6. Cues

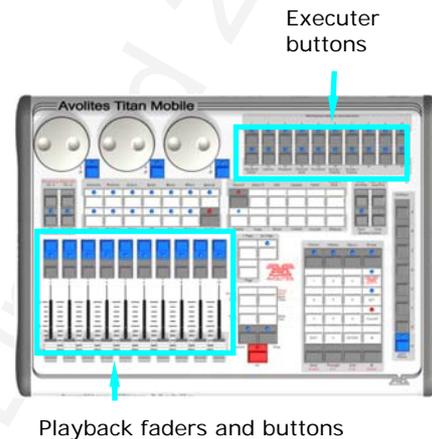
This chapter contains: HTP and LTP channels; how Titan Mobile works when programming; recording a cue; playing back a cue; changing playback pages; setting fade times for a cue; copying and deleting cues; the include function; editing cues; the “off” button; blind mode; using shapes in cues.

Titan Mobile has many functions for producing a complex light show, and the most fundamental part is a Cue, in which you can store a “look” you have created using your lights.

Titan Mobile has 600 playbacks, in 60 pages of 10, which can be used to store cues, chases (sequences of “looks”) or cue lists. Chases and Cue Lists are covered in the next chapters. The playbacks are controlled using the 10 sliders and flash buttons across the near edge of the system.

In addition, you can store 20 cues in the Executer buttons top right and many more cues in touch buttons in the Playbacks window, provided you don’t need a fader.

The cue functions on Titan Mobile are very powerful; the first part of this section explains the basics of how Titan Mobile uses cues.



6.1 Create

6.1.1 How Titan Mobile works when programming

When you select one or more dimmers or fixtures for control, they are loaded into the Editor. You can then use the wheels and palettes to change the settings on the fixture. You can also apply shapes to it.

If a fixture is selected after you have changed some attributes then the current list of fixtures is emptied and a new list is started.

All fixtures and attributes that have been edited since the last Clear are stored in the Programmer. The order in which you selected the fixtures is also stored, and is used with the Fixture Overlap function. When you record a cue, the contents of the Programmer are saved into the cue.

When you press Clear (by the numeric keypad), the programmer and editor are emptied. This makes sure you don’t record fixtures you don’t want. You also need to press Clear when you finish programming, because any attributes in the programmer will override playbacks.

Fixtures which are in the programmer are shown in mid blue on the HUD windows and on the touch buttons. Attributes in the programmer (the things you have changed) are shown in cyan on the HUD windows and attribute displays.

Firing a cue does not place the values from the cue in the programmer (although the Include function lets you do this, see section 6.3.3 on page 70).

6.1.2 Creating a cue

- 1> Press Clear to clear the programmer. This ensures that you are starting with a clean slate.
- 2> Set up the look using the fixtures. You can save shapes in a cue. Remember that only the fixtures you have selected will be saved in the cue.
- 3> Press the Record button.
- 4> Press the Swop button of an empty Playback to record the cue. (Select a new playback page first if you want to use a different page). You can also record a cue onto a touch button in the Playbacks window or into one of the 20 executer buttons.
- 5> Press Clear to clear the programmer. Repeat from 2 to program more cues.

Other useful things to know about recording cues:

- [Record Mode] lets you select Record By Fixture (all attributes of any modified fixture are saved), Record By Channel (only modified attributes are saved) or Record Stage (all fixtures with a non-zero dimmer channel are saved). Record By Channel is useful if you want to layer multiple cues to create an effect.
- If you are recording a lot of cues, you can press the Latch Menu button to keep the Record Cue menu active. Press Exit to leave Record Cue mode.
- The bottom of the screen shows a legend for the playback. To set this, press [Set Legend], then the playback Swop button (or the touch select button), then enter a legend on the keyboard. Press Enter to store it.



6.1.3 Using shapes in cues

As you would expect, any shapes you have set up will be saved as part of the cue.

You can create a cue which contains a shape with no base reference values; a shape cue like this can then be fired with other cues to overlay the shape on the cue and give you instant effects based around the settings in that cue. When recording the cue, use the "Off" function to remove the other attributes from the programmer as described on page 72.

6.1.4 Blind mode

Blind mode allows you to program cues without affecting the current look on the stage. This can be very useful for making changes during a live show. Your changes are still shown in the Visualiser window.

To select Blind mode, hold down the Avolites button and select the [Blind] option. The option shows [Active] or [Inactive].

Individual playbacks can be set to Blind mode using [Playback Options]. The playback will then output only to Visualiser, not to the stage.

6.2 Playback

Because it's possible to play back a large number of cues at the same time, Titan Mobile has to have rules on how it combines the output from different cues. These are called HTP and LTP rules.

6.2.1 HTP and LTP

Titan Mobile treats control channels in two ways:

- Dimmer or intensity channels work on the principle of "Highest Takes Precedence" (HTP). If an HTP channel is active at different levels in several cues, the highest level will be output. When you fade out a cue, the HTP channels fade out with it.
- All other channels work on the principle of "Latest Takes Precedence" (LTP). The latest change takes over from any other values, so the most recent cue to be turned on is the one which is output. When you fade out a cue, LTP channels retain their values until changed by another cue.

6.2.2 Playing back a cue

To fire (play back) a cue, raise the fader. (Make sure there are no values in the programmer by pressing the Clear button, because anything in the programmer will override the playback).

- You can fire several cues at once.
- The HTP levels in the cue will be mastered by the fader level; for example if you set the fader at 50% then all HTP levels will be 50% of their programmed values.
- LTP channels are triggered as soon as the fader goes above 0%. If a fade time is programmed the LTP channels will start to fade; if there is no fade time they will snap to position (unless the cue is set to Mode 2; see the timings section 6.6 on page 73 for details of modes).
- You can Flash the cue by pressing the grey flash button. You can Swop (solo) the cue by pressing the blue Swop button (all other active cues will turn off while the button is pressed). Flash and Solo only work when the key is set to Run mode (and if you haven't reassigned the function of the buttons using Key Profiles, see below).
- You can Preload the cue by assigning the Preload function to the blue or grey buttons using Key Profiles. Preload sets the attributes of fixtures in the playback which are not currently active in any other playbacks. This is useful to avoid the fixtures visibly moving into position or changing colours or gobos when you raise the fader of the cue. To assign Preload, hold Avo Shift and press [Edit Key Profile], then press the button you want to assign (also see section 10.3.4 on page 112.) Note that this will

assign the function to all buttons of the same type. Also if you are using one of the system key profiles, which are not editable, you will need to select or create an editable key profile first.

6.2.3 Changing playback pages

You change playback pages using the +1 and -1 buttons to the right of the playback faders.. You can also press Go Page or touch the "Pages" roller graphic and enter a page number.

If you have stored cues on the touch select buttons, you select different pages using the Fixtures and Playbacks page touch buttons.

- Playbacks which are fired when you change page remain active. If you want to fire a cue on a fader which is already on from a previous page, lower the fader to zero then raise it again. The cue from the previous page will stop and the cue from the new page will fire.
- If you return to a page with an active playback, the fader will not resume control of the playback until it matches the current level of the playback. This prevents the playback level "jumping" when the fader is first moved.
- You can set a legend for each playback page. The legend is shown on "Pages" roller on the screen and on the HUD. Use [Set Legend] from the main Program menu then [Page Legends]. While in this menu you can change the page to set legends for different pages.

6.2.4 Releasing running playbacks

You can release a running playback to its previous state by pressing the Off button, then the Select button of the playback to be released. Channels will release back to their state in the previous playback until no playbacks are left to be released, at which point they will go to the power-on state. You can release all running playbacks by pressing the Off button then [Release all playbacks].

Channels will always release with a fade time of 2 seconds.

You can set a mask to release only some channels from the playback using the [Release Mask] option in the Playback Options menu.

- You can instantly kill a playback by pressing Avo+the swop button of the playback.

6.3 Edit

6.3.1 Editing a cue

You can edit any part of a cue you have already saved simply by making the changes and saving the new information on top of the cue.

-
- 1> Press Clear to empty the programmer.
 - 2> Fire the cue you want to edit, so you can see what you are doing. Kill all other cues to avoid confusion.
 - 3> Select the fixtures you want to change, and make the changes.
 - 4> Press Record.
 - 5> Press the Swop button for the cue you are editing.

- 6> Press [Merge] (the cue being edited is highlighted on the screen)
- 7> Titan Mobile will merge the existing cue with your changes. Unchanged information is not affected.

- If you want to overwrite the cue entirely, use the option [Replace] at step 6.
- To speed up editing, you can set the system to “Always Merge” the cue. This is option A in the User Settings (press Avo and select User Settings).
- You can also press the Swop button for the cue a second time to select the “Merge” option (quicker than selecting the softkey Merge option).

6.3.2 Playback and Cue view

To see the current timings of the cue, touch the playbacks display above the fader, or press Window Open then the swop button of the playback you want to view. The screen will show details of the delay, fade, overlap and curve settings for the cue. You can touch each item to enable editing.

If you touch the View button at the right hand end of the row or the [View Cue] context button, the Cue View window opens, showing you details of the settings individual timings for all the fixtures in the cue.

Delay In	Fade In	Fade Out	Fixture Overlap	Curve	View Cue
0	0	0	Disabled	100%	Linear View

The Cue View has four different views: Levels, Palettes, Times, Shapes. Views are selected using the context buttons to the left of the menu buttons.

- The **Levels** view shows the individual attribute values for each fixture.
- The **Palettes** view shows which palettes have been used to record the cue. Palettes are shown by their legends. Where an absolute value was saved rather than a palette, the value is shown instead. Again you can edit or remove the values.
- The **Times** view shows individual attribute timings for fixtures. If global timings are set, no times are shown in the cue view.
- The **Shapes** view shows which attributes of each fixture are running shapes.

Cue View -																	
	Number	Order	Dimmer D F	Shutter D F	Pan D F	Tilt D F	Colour Func D F	Colour D F	Cyan D F	Red D F	Magenta D F	Green D F	Yellow D F	Blue D F	CMY Macro D F	Gobo 1 Func D F	Gobo 1 D F
ClrSp 1200	1		100.00	Closed	49.44	55.04	Fixed	Open	0.0	0.0	99.6	-	-	-	Index 0.0	-	-
ClrSp 1200	2		100.00	Closed	43.00	57.04	Fixed	Open	0.0	0.0	99.6	-	-	-	Index 0.0	-	-
ClrSp 1200	3		100.00	Closed	57.59	57.48	Fixed	Open	0.0	0.0	99.6	-	-	-	Index 0.0	-	-
ClrSp 1200	4		100.00	Closed	47.33	54.11	Fixed	Open	0.0	0.0	99.6	-	-	-	Index 0.0	-	-
ClrSp 1200	5		100.00						0.0	0.0	-	-	-	Index 0.0	-	-	-
ClrSp 1200	6		100.00						0.0	0.0	-	-	-	Index 0.0	-	-	-
ClrSp 1200	7		100.00						0.0	0.0	-	-	-	Index 0.0	-	-	-

You can edit or remove one or more individual control values in the cue.

Touch or drag over the required control values in the grid to select them – they will be highlighted in blue.

The softkeys then give you available settings for that control value, or you can directly edit values by typing numeric values and pressing enter,

You can delete the selected control(s) using the [Delete] softkey.

Any changes take immediate effect.

6.3.3 The Include function

The Include function lets you load selected parts of a cue back into the programmer. (Normally, only manual changes to fixtures are put in the programmer). You can then use this to make a new cue. This is useful if you want to make a cue which is similar to one you already have, or to build a new cue from various parts of other cues.

There are two modes, Quick Include and Advanced Include. Quick Include simply reloads the whole cue. Advanced Include allows you to specify which attributes of which fixtures you want to load into the programmer. So, for example, if you have a cue which contains position, colour and gobo information for 8 fixtures, you can use the include function to load only the colour information for 4 of the fixtures into the programmer. You could then "Include" position information from another cue into the programmer, and build up a new cue using information from several existing cues.

If you Include a chase or cue list, the screen shows you a list of the cues within it, and you select the one you want to Include using Wheel A or by touching the cue. You can also type in the cue number to Include.

- 1> Press Include (above numeric keypad).
- 2> Press [Quick Include] or [Advanced mode] if you want to change the mode
- 3> Press the Swop button of the cue you want to include. If you are in Quick Include mode, this Includes the cue and finishes.
- 4> If you are in Advanced mode, all fixtures in the cue will be selected. If you don't want them all, deselect the fixtures you don't want. The fixtures in the cue are highlighted on the HUD and on the fixture buttons.
- 5> Use [Set Mask] or the Attribute Bank buttons to select which Attributes you want to include (All are included by default –

Softkey C turns them all off and D turns them all on). Softkey E lets you include or exclude Shapes from the cue.

- 6> *Press Enter. The selected attributes of the selected fixtures will be loaded into the programmer.*
- 7> *Repeat from 2 to include other attributes from the same fixtures, or repeat from 1 to include other fixtures.*

- In Quick Include mode, you can set a mask for the include by pressing one or more of the attribute bank buttons before you select the cue to include.

6.3.4 Removing attributes from cues using "Off"

The "Off" button allows you to remove an attribute which has been stored in a cue, as if you'd never recorded it.

For example, suppose you recorded a cue which had scans at a certain position, with the colour set to green. If you later decide that you don't want a colour recorded at all in the cue, so that the colour set by previous playbacks will remain, you set the colour values to Off in the programmer, which will remove those values from the cue. You can also use the Off function to remove complete fixtures from a cue by selecting all the attributes.

Setting an attribute to Off is not the same as recording an attribute at zero, since this would change the attribute when the cue was fired. It is the same as excluding that attribute using the mask when recording, and the attribute will remain unchanged when the cue is fired.

- 1> *Use the Quick Include function (described in previous section) to load the cue you want to change into the programmer.*
- 2> *Press the OFF button to display the Off menu.*
- 3> *All fixtures in the cue will be selected. If you don't want to change them all, deselect the fixtures you don't want.*
- 4> *Use the softkeys to select which Attributes you want to remove.*
- 5> *Press Record, then set the record mode to [Replace], and press the Swop button of the cue to update it.*

- You can merge "Off" attributes into a cue without including it first.
- You can also remove attributes from palettes using the Off function.
- Another way to remove attributes is from the Cue View window. See section 6.3.2 on the previous page.

6.4 Copy, Move and Link

6.4.1 Copying or moving a cue

Using the Copy and Move buttons you can make a copy of an existing cue, move it to a new playback, or create a new playback which is linked to the existing playback. You can copy, move or link multiple playbacks (which may be cues, chases or cue lists) in one operation.

Move is useful for tidying up the system. Linked cues are handy if you want a cue to appear on more than one page for ease of

programming; also the linked cue will have the same cue information in it, but can have different timings and playback options.

-
- 1> *Press the Copy or Move button. To select Link, press Copy twice.*
 - 2> *Press the Swop button of the cue you want to Copy. You can select a range of playbacks by holding the first button while pressing the last in the range.*
 - 3> *Press the empty Swop button where you want it to go.*
-

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

6.5 Delete

6.5.1 Deleting a cue

To delete a cue:

-
- 1> *Press the Delete button.*
 - 2> *Press the Swop button of the cue you want to delete.*
 - 3> *Press the Swop button again to confirm the delete.*
-

- Press Latch Menu to keep the delete mode active. You can keep deleting using steps 2 and 3 without having to keep pressing the Delete button. Press Exit to leave latched delete mode.

6.6 Timing

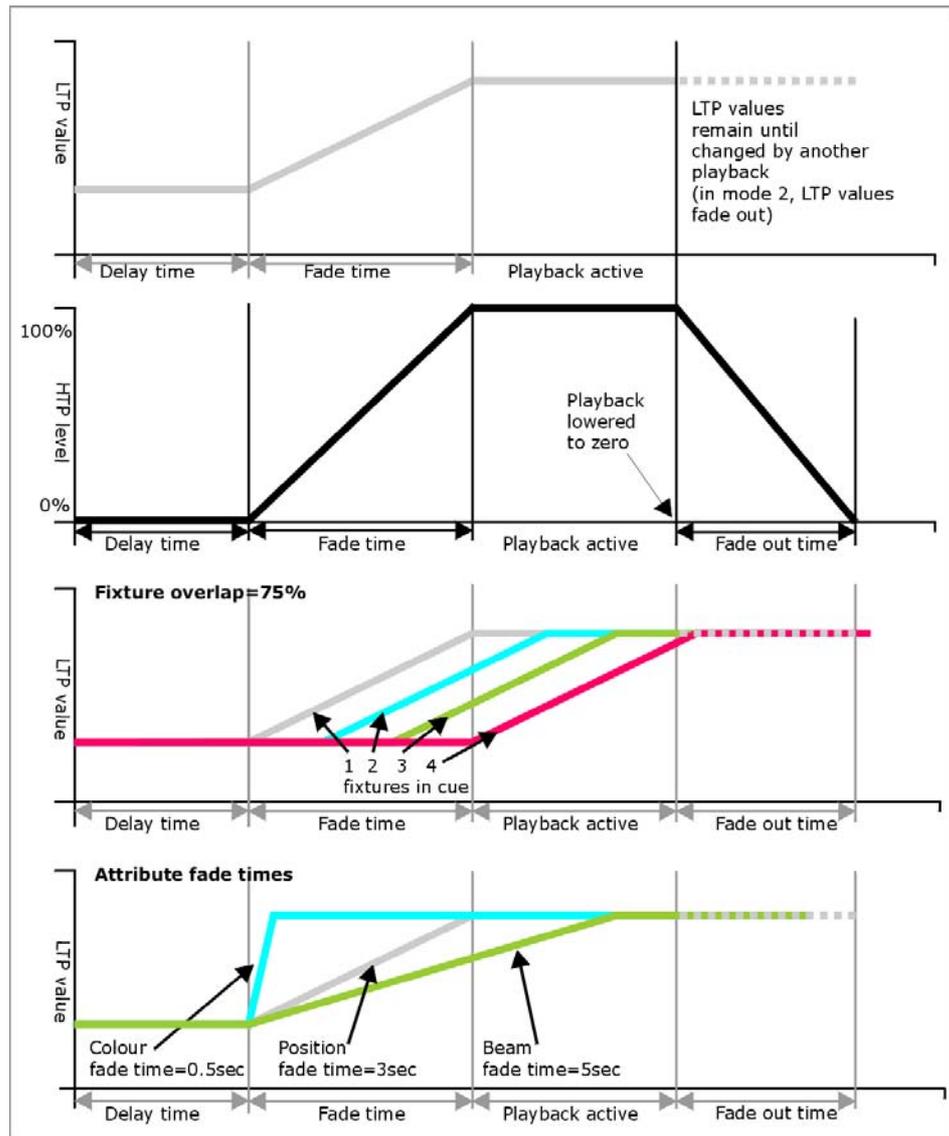
Titan Mobile allows a wide variety of timing functions to be set.

6.6.1 Setting fade times and Overlap for a cue

You can set a delay, fade in and fade out time independently for every cue. Shapes in the cue will also be affected, depending on the fade mode.

You can delay the fade times between fixtures in a cue so that the cue is applied sequentially to each fixture. This is called Fixture Overlap and can create some amazing "peel off" or "roll" type effects with no programming at all.

In the diagram below, the top picture shows how the LTP channels change when used with delay, fade and fade out times. The second picture shows how the HTP channels change. The third and fourth pictures show what happens to the LTP channels when fixture overlap and attribute fade are used.



The times are set like this:

- 1> Press [Edit Times] at the top level menu.
- 2> Press the Swop button of the cue.
- 3> Press [Fade Mode x] to set the cue mode. This sets how the times are used, see below.
- 4> Press [Delay time] to set the delay before the cue starts, [Fade time] to set the fade-in time of the cue, and [Fade out time] to set the fade-out time of the cue.
- 5> Type the new time (in seconds) using the numeric keypad and press Enter to save it.
- 6> Press [Fixture Overlap] to change the overlap, then enter 0-100 on the keypad. 100% means all fixtures fade together. 0% means that the first fixture will finish its fade before the next one starts. 50% means that the 2nd fixture will start fading when the first one is half way through its fade. The order of the fixtures is set by the order you selected them (but you can change this, see section 6.6.2).
- 7> Press Exit to get out of Edit Times mode.

- You can also set independent times for the IPCGBES attribute groups, and for each individual attribute, see next section for details of this.

The times you enter are affected by the cue mode which is set using the [Fade Mode] option:

- Mode 0 – Channels will fade in as set by the fade time. The Fade Out time is ignored. If times are set to zero, the HTP channels fade in with the 0-100% position of the playback fader and the LTP channels will snap.
- Mode 1 - Channels fade in as set by the fade time. HTP channels fade out as set by the fade out times (LTP channels remain as set in the cue). If times are set to zero, the HTP levels will fade in and out with the fader and the LTP channels will snap when the cue is fired.
- Mode 2 – Channels will fade in as set by the fade time. The Fade Out time is ignored. However, the fade will stop when the fader position is reached, so if the fader is set to 50%, the attributes will stop half way to their programmed position. You can reverse the fade back to the original position by moving the fader back. If times are set to zero, both HTP and LTP channels are controlled by the fader position. In this mode LTP channels revert to their previous settings when the cue is deactivated.
- Mode 3 - Crossfade cue. All channels, including intensity channels, will fade to the settings in the new cue. All other cues fade out and all other active playbacks become inactive; if you need to re-fire a playback, take the fader to zero and put it up again.
- If the cue includes shapes, then the shape will change with fade times. The changes will be timed for a Mode 1 cue and controlled by the fader position for a Mode 2 cue. This allows you to create a shape which gets bigger or faster as you push up the fader.

6.6.2 Changing fixture order

You can change the order of the fixtures stored in a cue. Normally this is set to the order in which you selected the fixtures when the cue was created, but you might want to change this (for example to pair up fixtures so they move together).

- 1> Press [Edit Times] at the top level menu.
- 2> Press the Swop button of the cue to be changed.
- 3> Press [Fixture Order].
- 4> Set the sequence number to start from using option A.



- 5> *If you want the sequence number to increase automatically, set [Autoincrement] to On. If you want some fixtures to have the same sequence number, set it to Off.*
 - 6> *Touch the Select buttons of the fixture(s) you want to place in that position in the sequence. The sequence number is shown in the top right hand corner of the fixture select touch buttons.*
 - 7> *Press Exit to finish.*
-

- You can set several fixtures to have the same sequence number. This means, for example, when used with Overlap they will all do the same thing at the same time.
- You can remove a fixture from the sequence by giving it the same sequence number it already has. The fixture sequence will show X. Touch the button again to put it back in the sequence.

6.6.3 Setting attribute fade times for a cue

You can set individual fade times for each attribute group (such as Position). If you set a time, it overrides the normal times.

To set an attribute group fade time:

- 1> *Press [Edit Times] at the top level menu.*
 - 2> *Press the Swap button of the cue to be changed.*
 - 3> *Press the Attribute Bank button (below wheel B) for the attribute you want to change.*
 - 4> *Press [Delay] to set delay time or [Set fade] to set fade time.*
 - 5> *Type the new time using the numeric keypad and press Enter to save it, or press [Use Global] to delete the attribute times and go back to the normal times.*
 - 6> *Press Enter to save the changes.*
-

You can take this even further and set individual fade times for each fixture. When you select the cue to be changed, you will see that all the fixtures in the cue are selected. To set attribute times for only certain fixtures, change the fixture selection using the Swap buttons.

The Cue View window will display when editing cue timings to help you see what you are editing. You can touch fixtures or attributes in the grid to select which items are going to be edited.

Press the ALL button to select all fixtures in the cue.

When you are in the Set Attribute Times menu you can only select fixtures which are in the cue you are editing.

6.7 Advanced options

To set options for a cue, press [Playback Options] on the root menu, then press the swap button of the playback to be edited.

These options are also available for Chases and Cue Lists.

6.7.1 Release mask

[Release Mask] lets you specify which attributes will be released to the state they were in from a previously fired playback when this

playback is killed. You can also use the Attribute Bank buttons on the right side of the system to set the mask. The default setting is to not release any attributes.

6.7.2 Shape size/speed on fader

If the cue contains shapes, options B and C set how the shape behaves when the playback fades in. You can set the size and/or speed to be either fixed or to change with the fader.

6.7.3 Curve

[Curve] defines how the attribute values will change when the playback is faded in. The various curves are illustrated in section 10.6 on page 117.

6.7.4 Handle Paging

This option allows you to lock the playback on a handle so that it always appears on that handle no matter what page is selected. This is useful if you have some general playbacks you want on every page, without having to copy the playback onto each page.

If you select "Transparent Lock" then the playback will appear on the current page only if no other playback is programmed in that position.

6.7.5 Playback priority

This option allows you to configure how playbacks will behave if you turn on two playbacks controlling the same fixture. The priority can be set to Low, Normal, High or Very High. If a fixture is being controlled by a playback and you turn on a playback of the same or higher priority, then the new playback will take over. However, if the new playback is set to lower priority than the first playback, the fixture will not change.

This is useful if, for example, you've programmed looks using all your fixtures, then you decide you want a couple of them to spotlight a singer. If you set the Spotlight playback to be high priority, then while it is active no other playback will affect the spotlight fixtures.

Swop also obeys the priority settings and this provides a useful way of preventing certain playbacks from being swopped.

6.7.6 Blind mode

Individual playbacks can be set to Blind mode using this option. The playback will then output only to Visualiser, not to the stage. This can be very useful if you need to program cues during a live show.

6.7.7 Key Profile

Each playback can have an individual Key Profile allocated to it. This allows you to customise the panel button functions differently for each playback. A list of available Key Profiles is shown, or you can add a new one. The softkeys show the function allocated to the blue and grey buttons for each of the available Key Profiles.

If the playback Key Profile is set to "None", the default global profile is used.

7. Chases

This chapter contains: Programming a chase; running a chase; setting speed, crossfade and direction; manually controlling the chase steps; setting step times and unlinking; editing a chase using unfold; editing a chase which is running; copying chases; chase options.

As well as being used to store static cues, the playback faders on Titan Mobile can also be used to store chases (sequences of cues). You can also store chases on touch buttons in the Playbacks window and in the Executer buttons.

Chases can run once or repeat continuously. You can set individual fade time for each cue in the chase and unlink cues so that the system waits for you to press Go before the chase continues.

7.1 Create

7.1.1 Programming a chase

To program a chase, you have to set up the look for each cue in the chase, then save it.

You can either set all the fixtures and dimmers manually for each cue in the chase, or you can use Include to load in the information from cues you have already recorded.

- 1> *Press the Record button then press [Create Chase] (or just press the Record button twice) .*
- 2> *Press the Swop button of the playback where you want to store the chase (you can also store chases on touch buttons in the Playbacks window or in the Executer buttons).*
- 3> *Set up the look for the first cue, either manually or by using "Include" on existing cues.*
- 4> *You can change the number given to the step using [Step Number].*
- 5> *Press the Swop button of the playback to store the programmer contents as a step of the chase. You can also press [Append Step] on the menu.*
- 6> *Press Clear (unless you want to re-use the contents of the programmer), then repeat from step 3.*
- 7> *Press Exit to finish when you have stored all the cues you want.*

- [Record Mode] lets you select Record By Fixture (all attributes of any modified fixture are saved), Record By Channel (only modified attributes are saved) or Record Stage (all fixtures with a non-zero dimmer setting are saved).
- The cue number currently being saved, and the total number of cues, is shown on the top line of the display.
- Press Clear when you have finished recording the chase, otherwise when you try to play it back the programmer will override the chase and you won't see the chase properly.
- You can record shapes in a chase. If the same shape is saved in subsequent cues it will continue from step to step and if not it will stop at the end of the cue. (Titan Mobile considers the

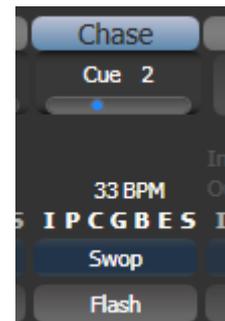
shape to be the same if you didn't press Clear after the previous step, and didn't change the speed, size or phase of the shape from the previous step; or if you Included the shape from the previous step and have not modified it)

- You can set a legend for the chase by pressing Set Legend, then pressing the Swop button for the chase and entering the legend, as with cues.
- There is no limit to the number of steps in a chase.

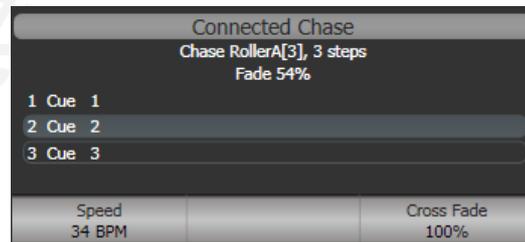
7.2 Playback

7.2.1 Playing back a chase

To fire a chase, raise the fader of the playback. (You can also use the Flash/Swop buttons). The chase will start to run. The playback display on the screen shows the current cue number and speed of the chase.



- The HTP (intensity) channels in the chase will be controlled by the fader; if fade times are programmed, the fade will stop at the fader level. The other channels (LTP) will be set as soon as the fader moves above zero according to the fade times programmed in the chase. You can set the point at which the LTP channels activate from the User settings menu.
- While the chase is running, the wheel area of the screen shows details of the chase steps.
- You can temporarily pause the chase by pressing the Stop button to the right of the wheels. Press Go to resume playback.



There are many options you can set to determine the way the chase runs and these are described in the rest of this chapter.

7.2.2 Connecting a chase for control

When you fire a chase, the wheels and Stop/Go buttons are automatically allocated to control the Speed and Crossfade of the chase – this is called Connecting the chase. If you have more than one chase running, you can choose which chase is connected to the controls using the Connect button.

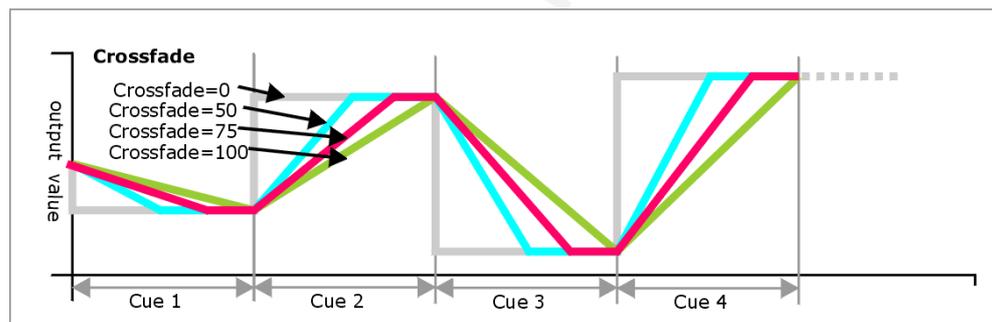
- Connect a different chase to the controls by pressing the Connect button (right of the playbacks) then the Swop button of the chase you want to control.
- Disconnect a chase from the controls by double pressing the Connect button.
- You can turn off the "chase autoconnect" option in the User Settings menu if you don't want to connect to a chase when you fire it. You will have to use the Connect button to control the chase if you do this.

- Normally if you change the speed or crossfade of a chase, the new setting is saved. However you can set this change to be temporary, so that when the show is reloaded the speed and fade will go back to the previously saved settings. Go to User Settings (Avo button + [User Settings]) and set option C to [Connected View Sets Temporary Chase Speed]. You can still save a temporary speed by pressing [Save Temporary Speed] in the Set Times menu.

7.2.3 Setting speed and crossfade for a Chase

The left wheel is assigned to control the Speed of the chase it is connected to. The speed is shown in Beats Per Minute (BPM) on the display. You can also enter a speed from the keypad as described below. The last speed you set on the wheel is always remembered, you do not have to tell Titan Mobile to save it.

Crossfade is the “slope” between cues; with a crossfade of 0, the fixtures snap instantly to the next cue, but with a crossfade of 100, the fixtures spend the whole cue time fading to the next cue. With a crossfade of 50, the fixtures delay for half the cue time and fade for the other half of the time.



You set the crossfade and speed as follows:

- 1> Press [Edit Times] from the top level menu then the Swop button of the chase.
- 2> To set the crossfade, press [Xfade] and type the fade from 0 – 100. 0=no fade (the chase will “snap”), 100=max fade (the chase will move continuously from step to step).
- 3> To set the speed, press [Speed], type the new speed, then press Enter. The speed can be set in Beats Per Minute (BPM) or seconds depending on the User Settings.

There are other options you can set for the chase from this menu including Fixture Overlap, which are described in the Timings section 7.6.1 on page 84.

You can set individual times for each cue in a chase and unlink cues from each other so they wait for you to press the Go button. This is done using the Playback View, or the Unfold function which is described in section 7.3.2 on page 82.

You can select whether the chase speed is displayed in Seconds or in Beats Per Minute (BPM). Press Avo and [User Settings], then press

[Tempo Units] to set the option to [Tempo Units Seconds] or [Tempo Units Beats Per Minute (BPM)].

7.2.4 Manually controlling the steps of a chase

You can pause a chase, if the chase is connected to the wheels, by pressing the Stop button next to the wheels. Press the red Go button to resume playback of the chase.

While the chase is stopped you can use the Next Step and Prev Step buttons above the Connect button to move to the next or previous step.

You can also configure the blue and grey buttons of the playback handle to be Stop and Go. This uses the Key Profiles function.

-
- 1> Switch the mode switch to System and press [Key Profiles].
 - 2> Press [Edit Profile] and then press the profile you want to edit (normally this would be "Run" for run mode or "Program" for program mode).
 - 3> Press [Chases] then choose either the Blue key or the Grey key.
 - 4> Select Go or Stop from the function menu. Then press Exit and set the function for the other key if required.
 - 5> Switch the mode switch back to Program or Run to continue using the system.
-

7.2.5 Changing chase direction

To change the chase direction press [Playback Options] at the main menu then press softkey C to select the direction you want.

7.2.6 Jumping to a step

You can jump directly to a step in a chase by pressing the Connect button, then typing in the desired step number, then pressing Enter or softkey A. Alternatively at the top level menu you can type the step number then press Connect.

7.3 Edit

7.3.1 Opening a chase for editing

You can open a chase for editing by pressing Record then the Swop button of the chase. This does not affect any existing cues in the chase. You can then save new cues at the end by pressing the Swop button just like normal recording.

To see a list of the cues in the chase, use Playback view (touch the playback display for the fader or press Window Open then the Swop button of the playback). To edit any of the time settings in each cue, select the setting to be modified by touching or dragging in the grid, then use the softkey options to change the setting.

Playback View - Chase 'PRESS GO'							
	Legend	Delay In	Fade In	Fade Out	Fixture Overlap	Link	View Cue
1	Cue 1	Global	Global	= As In	Global	After Previous	View
2	Cue 2	Global	Global	= As In	Global	After Previous	View
3	Cue 3	Global	Global	= As In	Global	After Previous	View
5	Cue 5	Global	Global	= As In	Global	After Previous	View
6	Cue 6	Global	Global	= As In	Global	After Previous	View
7	Cue 7	Global	Global	= As In	Global	After Previous	View
8	Cue 8	Global	Global	= As In	Global	After Previous	View

7.3.2 Editing a chase using Unfold

Titan Mobile has a powerful chase editing system. The Unfold button places each cue in a chase on one of the playback faders, allowing you to fire and edit each cue individually as if it was a stand-alone cue. Unfold also allows you to set individual timing for cues in the chase.

- 1> Press the Unfold button, then the Swop button of the chase to be edited.
- 2> The first 10 cues of the chase are loaded into the playback faders.
- 3> Raise a playback fader to output the contents of that cue (fade times will operate as programmed).
- 4> Various Unfold options are available, the details are below.
- 5> Press Unfold again to get out of unfold mode.

- To edit the contents of a cue: Press Clear to empty the programmer, raise the fader to output the cue, make the changes, press [Record Step], then the Swop button for the cue number.
- To Insert a new cue at the end of the chase, set up the look for the new cue, press [Insert Step], then press the swop button of the first free playback.
- To Insert a cue between two other cues, set up the look for the new cue, press [Insert Step], then type the cue number for the new cue (such as 1.5 to go between 1 and 2). If this cue number already exists it will be merged with the look you have created. Otherwise a new cue is inserted.
- To change individual times for the cue, press [Edit Times], then the Swop button for the cue (or type the cue number), then set the times. This is described in detail in the Timing section on the following page.
- If the chase has more steps than there are playback faders, you can go between pages using the [Previous Page] and [Next Page] buttons.

7.4 Copy, Move and Link

7.4.1 Copying or moving a chase

Using the Copy and Move buttons you can make a copy of an existing chase, move it to a new playback, or create a new playback which is linked to the existing playback. You can copy, move or link multiple playbacks (with cues, chases or cue lists) in one operation.

Move is useful for tidying up the system. Linked chases are handy if you want a chase to appear on more than one page for ease of programming; also the linked chase will have the same chase information in it, but can have different timings and playback options.

-
- 1> *Press the Copy or Move button. Press Copy twice for Link.*
 - 2> *Press the Swop button of the chase you want to Copy. You can select a range of playbacks by holding the first button while pressing the last in the range.*
 - 3> *Press the empty Swop button where you want it to go.*
-

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

7.5 Delete

7.5.1 Deleting a chase

To delete a chase:

-
- 1> *Press the Delete button.*
 - 2> *Press the Swop button of the playback you want to delete.*
 - 3> *Press the Swop button again to confirm the delete.*
-

Press Latch Menu to keep the delete mode active. You can keep deleting using steps 2 and 3 without having to keep pressing the Delete button. Press Exit to leave latched delete mode.

7.5.2 Deleting a step from a chase

To delete a single step from a chase:

-
- 1> *Press the Delete button.*
 - 2> *Press the Swop button of the chase.*
 - 3> *The steps in the chase are listed on the screen. Use the left hand wheel to select the step you want to delete, or type in the number of the step to be deleted.*
 - 4> *Press [Delete Cue x] to delete the step.*

5> Press [Confirm] to confirm the delete.

- Alternatively you can use the Unfold function to delete a step from a chase.

7.6 Timing

7.6.1 Global timings for chases

When a chase is first programmed, each cue in the chase has identical timing. This is called the global timing for the chase. If you want you can then set each cue to have its own timings using the Playback View window or Unfold. This is described in the next section.

1> Press [Edit Times] from the top level menu then the Swop button of the chase.

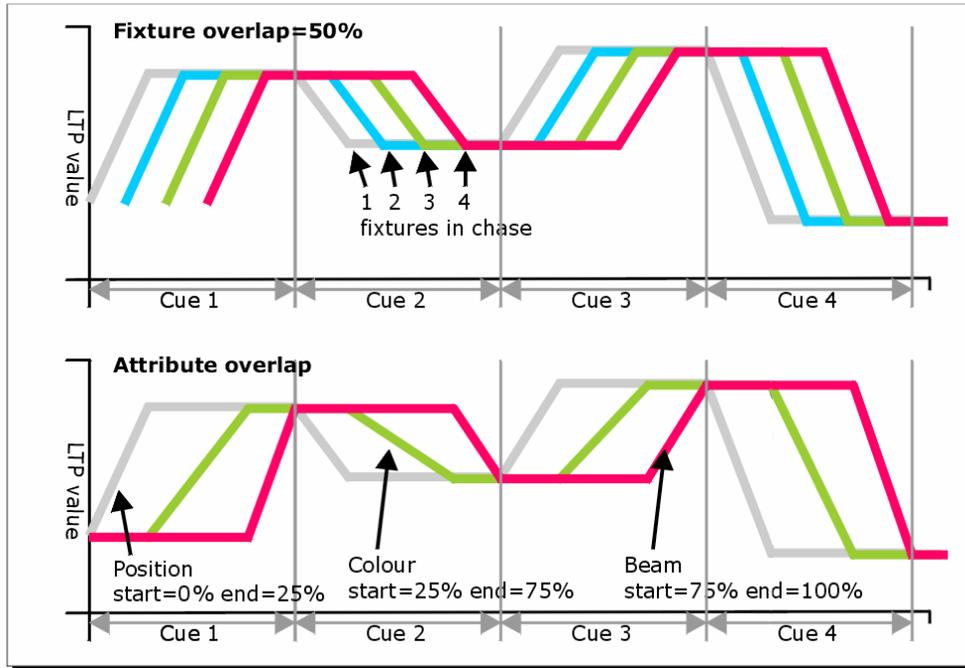
2> Set the Crossfade, Speed, Fixture Overlap and Attribute Overlap settings as described below.

3> Press Exit to finish.

- To set speed, press [Speed] then type the new speed, then press Enter. The speed can be set in Beats Per Minute (BPM) or seconds depending on the user settings.
- To set crossfade, press [Xfade] then type the fade from 0 – 100 and press Enter. 0=no fade (the chase will “snap”), 100=max fade (the chase will move continuously from cue to cue)
- When in Run mode, you can set the chase speed of the connected chase by tapping the [Tap Tempo] button in the main menu at the speed you want the chase to run. (The option only appears when a chase is connected). You can also assign the blue or grey handle button to be a “tap tempo” button using the Key Profiles option (see section 10.2.1 on page 109).

The Overlap functions allow you to offset and overlap the timing of changes in the chase. This can create really amazing visual effects with hardly any programming. The best way to learn about overlap is to program a chase with two cues involving several fixtures, then experiment with the overlap settings to see the various “roll” and “peel off” effects which result.

The following diagram shows you the effects of cue overlap, fixture overlap and attribute overlap in chases.



- Press [Fixture Overlap] then enter 0-100 on the keypad to change how fixtures overlap in the cue. 100% (the normal setting) means all fixtures fade together. 0% means that the first fixture will finish its fade before the next one starts giving a “rolling” change across a range of fixtures. 50% means that the 2nd fixture will start fading when the first one is half way through its fade. The order of the fixtures is set by the order you selected them when the cue was saved; you can change the order using Unfold.

Note: From v3 software, [Cue Overlap] is no longer available in chases. Instead use a Cue List set to “Link With Previous” and set the Offset as desired.

7.6.2 Individual cue times in chases

You can configure each cue in a chase to have its own timing information. You can use the Playback View window, or the Unfold function to set individual times for cues in chases.

Note: It is easier to use a Cue List rather than a chase if you need a lot of different timings or link/unlinks. Cue lists are described in the next chapter.

Using the Playback View window:

- 1> Touch the playback display for the fader, or press View then the swop button of the playback. The Playback View window will open.
- 2> In the grid, touch the times you

Playback View - Chase 'PRESS GO'							
	Legend	Delay In	Fade In	Fade Out	Fixture Overlap	Link	View Cue
1	Cue 1	Global	Global	= As In	Global	After Previous	View
2	Cue 2	Global	Global	= As In	Global	After Previous	View
3	Cue 3	Global	Global	= As In	Global	After Previous	View
5	Cue 5	Global	Global	= As In	Global	After Previous	View
6	Cue 6	Global	Global	= As In	Global	After Previous	View
7	Cue 7	Global	Global	= As In	Global	After Previous	View
8	Cue 8	Global	Global	= As In	Global	After Previous	View

want to edit.

- 3> *Use the softkey options to change the times or settings.*
- 4> *Repeat from 2 to change other times or settings.*

- You can change a range of cues all at once by dragging across the grid to select multiple cells, or you can use wheel B to select multiple cells for editing.

Using Unfold:

- 1> *Press the Unfold button, then the Swop button of the chase to be edited.*
- 2> *Press [Edit Times] then the Swop button of the unfolded cue you want to edit.*
- 3> *Set up the timing options as required. The options are described below.*
- 4> *Press Unfold to get out of unfold mode.*

Initially all the timing options are set to Global. You can cancel any individual timings and set the time back to global timings by pressing the softkey for the option then pressing [Use Global].

The timing options for the cue are:

- Delay
- Fade (in)
- Fade Out
- Fixture Overlap
- Linking with previous step
- Attribute times (see next section)

Linking can be set to [Link After Previous] (the chase will run automatically) or [Link Wait For Go] which will stop the chase until you press Go.

7.6.3 Setting attribute fade times for a cue in a chase

For each cue in a chase, you can set individual fade times for each attribute group (such as Position). If you set a time, it overrides the normal times. You can use the Cue View window, or the Unfold function to set attribute times.

To set an attribute group fade time:

- 1> *Press Open Window or the Unfold button, then the Swop button of the chase to be edited.*
- 2> *Press [Edit Times] then touch the cue you want to edit in the Playback View, or if using Unfold, press the Swop button of the unfolded cue you want to edit.*
- 3> *Press the Attribute Options button (right hand side) for the attribute you want to change.*
- 4> *Press [Delay] to set delay time or [Set fade] to set fade time.*
- 5> *Type the new time using the numeric keypad and press Enter to save it, or press [Use Global] to delete the attribute times and go back to the normal times.*
- 6> *Press Enter to save the changes.*

7.7 Advanced options

To set options for a chase, press [Playback Options] on the root menu, then press the swop button of the playback to be edited.

The same options are available as for Cues (see section 6.7 on page 76), with some additional options for Chases.

7.7.1 Loop/Stop on Final Cue

Option B lets you specify whether the chase will loop back to the beginning or stop on the final cue.

7.7.2 Forwards/backwards/bounce/random

Option C sets the direction of the chase.

7.7.3 Cue linking

Option D sets how the cues in the chase are linked. The settings are:

- [Always Link Steps]: The chase will run on its own using the times
- [Never Link Steps]: The chase will pause after every delay/fade time for the user to press Go.
- [Link according to individual steps]: Each step in the chase will obey its individual link settings which are set using the Playback View window or the Unfold function.

7.7.4 Renumber cues

Option [Renumber cues] will renumber all the cues in the chase starting from 1.

8. Cue Lists

This chapter contains: Programming a cue list; running a cue list; editing, copying and deleting cue lists; setting fade times; cue list options.

Cue Lists allow you to record a sequence of cues, each of which can have its own timings and can be triggered by the Go button or run automatically to the next cue. This allows you to build a complete show in a single list and is ideal for theatrical shows where the show must be exactly the same each time.

Cue lists differ from chases in the way the system handles changes between cues. Chases will crossfade between cues whereas a cue list will track changes.

For example: You record dimmer 1 in cue 1, press clear, record dimmer 2 in cue 2, press clear, record dimmer 3 in cue 3. If this were a chase, when you play it back each cue will fade out the dimmer from the previous cue, as it is not in that cue. Therefore once you get to cue 3, you will only have dimmer 3 active.

Cue lists on the other hand track the cues. This means that the cue list only knows about the changes, so in going from cue 1 to 2 it won't change dimmer 1 as there is no data about dimmer 1 in cue 2. This means that once you get to cue 3, it will have accumulated the data from all the cues and the output will consist of dimmers 1, 2 and 3 together.

If you wanted cue 2 to turn off dimmer 1, you would have to explicitly set the level of dimmer 1 at zero (by selecting it and setting the Intensity to 0); or you can miss out pressing Clear in between saving each cue.

This means that you need to be mindful of what is actually being saved in each cue when you record your cue list.

To view the contents of a cue list, touch the playback display for the fader or press Window Open then the swop button of the playback.

Playback View - Cue List Playbacks[7]												
	Legend	Delay In	Fade In	Delay Out	Fade Out	Fixture Overlap	Link	Link Offset	Preload	Curve	Autoload	Tim
1	Tabwarm	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear	Load Cue RollerB[3];	23:5
2	Cue 1	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
3	End of scene	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
4	Cue 2	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
5	Cue 5	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
6	Cue 6	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5

8.1 Create

8.1.1 Programming a cue-list

Programming a cue list is similar to recording a chase.

You need to set up the look on the stage for each cue and then add it to the cue list. If you want to set fade times, you can either set them while saving the cues or later.

-
- 1> Press Record then [Create Cue List] (or just press Record 3 times).
 - 2> Press the blue Select button of the playback where you want to store the Cue List (you can also store cue lists in the Playbacks window).
 - 3> Select the Record Mode of the system: by Fixture, Channel, or Stage using [Record Mode Stage] is safest as you are sure to record the whole system output.
 - 4> Set the default Fade and Delay times, and automatic cue linking, using [Set Times]. These settings will be allocated to every new cue.
 - 5> Set up the look for the first cue, either manually or by using "Include" on existing cues. [Shape Generator] allows you to program shapes.
 - 6> If you require a legend for the cue, set it now using Softkey C. You can also change this later using Unfold or Set Legend (see next section).
 - 7> Press the Select button of the handle or [Append Cue] to store the programmer contents as Cue 1 of the cue list.
 - 8> Repeat from step 5 for the next cue. Do not press Clear in between cues, unless you want levels to track through from previous cues, as any faders moving to zero will not be stored. If you do press clear, you must make sure that all channels you want to record are selected or in the programmer (inverted display).
 - 9> Press Exit to finish when you have stored all the cues you want.
-

- [Record Mode] lets you select Record By Fixture (all attributes of any modified fixture are saved), Record By Channel (only modified attributes are saved) or Record Stage (all fixtures with a non-zero dimmer channel are saved). Record By Channel is useful if you want to layer this cue list with other playbacks to create an effect.
- You can reopen the cue list to add more cues by repeating the procedure above; this does not affect any cues already stored in the cue list.
- To add more cues to the end of the existing cues press [Append cue].
- To edit an existing cue, press [Cue Number=] and type the cue number to edit. Make the changes then press [Update Cue x].
- To insert new cues, see section 8.3.2.
- The Advanced Options menu allows you to renumber all the cues, and to change the number of an existing cue.
- There is no limit to the number of cues in a cue list.

8.1.2 Changing legends for cues in a cue list

You can set a legend for each cue, which is shown on the screen when running the cue list and can be helpful for keeping track of where you are.

-
- 1> Press [Set Legend] in the top level menu. If you are setting legends for several cues, press Latch Menu to latch the Set Legend menu.
 - 2> Press the Select button of the Cue List.
 - 3> The cues in the cue list are shown on the LCD screen. Use Wheel A or touch the list to select the cue which is to have a legend set.
 - 5> Press E and type the legend on the keyboard, then press Enter.
 - 6> If you latched the menu, you can continue to set legends for other cues, or press Exit to finish.
-

8.1.3 Autoloading a playback within a cue list

You can program a cue within a cue list to automatically load one or more playbacks when the cue fires. The playback can be a single cue, a chase or another cue list. This can be useful to trigger off chases or effects from the cue list.

You can either automatically save active playbacks as Autoloads, or you can manually allocate Autoloads to cues.

To automatically record active playbacks as Autoloads:

-
- 1> After selecting Cue List Record, turn on [Autoload Live Playbacks] in the [Advanced Options] menu of the cuelist record screen.
 - 2> Turn on the playbacks you wish to load for this cue.
 - 3> Save the cue. Active playbacks will be saved as Autoloads.
-

To manually edit autoloads:

-
- 1> Press [Playback Options] in the top level menu.
 - 2> Press the blue Select button of the Cue List.
 - 3> Press [Autoload].
 - 4> The cues in the cue list are shown on the screen. Use Wheel A to select the cue which is to have the Autoload set.
 - 5> Press the Select button of the playback which is to be loaded. The playback legend appears on the softkeys.
 - 6> You can continue to add Autoloads to other cues, or press Exit to finish.
-

Playback View - Cue List Playbacks[7]												
	Legend	Delay In	Fade In	Delay Out	Fade Out	Fixture Overlap	Link	Link Offset	Preload	Curve	Autoload	Time
1	Tabwarm	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear	Load Cue RollerB[3];	23:5
2	Cue 1	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
3	End of scene	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
4	Cue 2	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
5	Cue 5	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5
6	Cue 6	0	2	= As In	= As In	100%	Wait For Go	Disabled	<input type="checkbox"/>	Linear		23:5

The Autoloaded playback will be fired when the cue starts, and killed when the cue list moves on to the next cue, unless you have also loaded the playback into the next cue.

You can set options for each Autoloaded playback by pressing the softkey where the Autoloaded playback is shown.

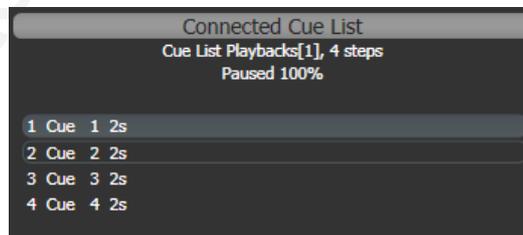
For a cue, the only option is [Remove this Autoload].

For a chase or cue list, softkey B lets you select whether to load the playback from the start, to start at a specific cue, or to press Go on the target playback.

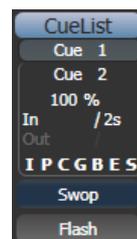
8.2 Playback

8.2.1 Running a cue list

Raise the fader of the cue list and press the Go button to run the first cue. The bottom section of the display shows the cue list; the current cue is highlighted in grey and the next cue has a box round it.



Also the display above the playback fader shows information about the cue list, including the current and next cue, fade progress of the current cue, and fade in/out times.



- The HTP levels of cues in the cue list are mastered by the fader level.
- You can pause a fade by pressing the Stop button above the Go button. Press Go again to resume the fade.
- You can skip to any cue in the cue list by selecting a "next" cue using Wheel A, or using the left/right arrow keys. When you press Go, the cue list will run that cue next.
- You can snap back to the previous cue by pressing the Snap Back button
- You can jump directly to a cue by pressing the Connect button, then typing in the desired cue number, then pressing Enter or softkey A. Alternatively at the top level menu you can type the cue number then press Connect.

- You can use Key Profiles to set the blue and grey buttons of the playback to have various functions including Go, Stop, Connect, Next Cue, Prev Cue, Cut Next Cue To Live, and Snap Back.
- When you lower the fader for a cue list, the HTP channels will fade out, but the cue list will remain active. The section below details how to kill the cue list.
- You can use timecode to play back a cue list automatically. See section 8.6.5 on page 98.

8.2.2 Killing a cue list

Once a cue list is fired, it remains active until you kill it. You do this by holding down the Avo Shift button and pressing the blue Select button of the cue list's handle.

You can change this in the Playback Options to make the cue list automatically clear when the fader reaches zero (press [Playback Options] at the program menu, then press the Select button of the cue list, then select [Fader Mode Intensity Kill At 0]).

8.3 Edit

8.3.1 Editing a cue list using Unfold

The Unfold button places each cue of the cue list on one of the playback faders. This allows you to fire and edit each step individually as if it was a stand-alone cue.

-
- 1> Press the Unfold button, then the Select button of the cue list to be edited.
 - 2> The first 10 cues are loaded into the playback faders. The display shows the cue numbers and legends.
 - 3> Raise a playback fader to output the contents of that cue (fade times will operate as programmed).
 - 4> Various Unfold options are available, the details are below.
 - 5> Press Unfold again to get out of unfold mode.
-

- To edit the contents of a cue: Press Clear to empty the programmer, raise the fader to output the cue, make the changes, press [Record Step], then the Select button for the cue number.
- To change the times or cue linking for the cue, press [Edit Times], then the Select button for the cue, then set the times (see Timing on the following page)
- To Insert a new cue, set up the look for the new cue, press B [Insert Step], then press the playback button where you want the new cue to go. All following cues will be shifted on by one and the new cue will be given a number in between the two existing cues (for example, if you press playback 3, your new cue will be 2.5).
- To Delete a cue, press the Delete button then the Select button for the cue you want to delete. Press the Select button again to confirm.

- To change the cue legend, press [Set Step Legend] then the playback select for the step you want to change.
- If the cue list has more cues than there are playback faders, you can swop to the next page using softkeys F and G.

8.3.2 Editing a cue list which is running

You can also edit cues in a cue list while you are running it without using Unfold.

-
- 1> Fire the cue list by raising its fader.
 - 2> Use Wheel A to select the cue number you want to change then press the Connect button to jump to it.
 - 3> Press Clear to make sure the programmer is empty.
 - 4> Make the changes that you want to the current step.
 - 5> Press Record then Connect (or Avo and Connect), then select [Replace], [Merge] or [Insert After] to save the changes (pressing Avo+Connect again will select Merge).
 - 6> Press the Connect button to jump on to the next step.
-

- You can edit the times for a cue using the Live Time and Next Time buttons as follows:

-
- 1> Fire the cue list by raising its fader.
 - 2> Use Wheel A to select the cue number you want to change then press the Connect button above the Snap Back button to jump to it.
 - 3> Press the Live Time button to set the times for the current step, or the Next Time button for the next step. The Live and Next step numbers are shown on the display above the controller wheel.
 - 4> Use the softkeys to set the times, linking and overlap settings you want (see section 6.6.1 on page 73 for description of the times). If you set the [Link to next step] option to On, then the next cue will not wait for the Go button.
 - 5> Press the Next Step button to jump on to the next step.
-

- The Next Time button allows you to set the time of the next cue without actually running it.
- The Review button (Avo+Live Time) lets you test the live step with the new timings.
- You can also use Unfold to set the times as described in the Unfold section above.

8.3.3 Editing a cue list while recording

You can edit cues while you are in the Record Cue List menu.

-
- 1> Press [Cue Number=x] and type the cue number to be edited.
 - 2> Titan Mobile will jump to the cue and show the output.
 - 3> Make the changes that you want to the programming of the current step, or to the timings using [Edit Cue x Times].
 - 4> Press [Update Cue x] to save the changes..
-

- You can't change the cue number using this menu – if you press [Cue Number] this will change the cue you are editing. Use [Advanced Options] to change cue numbers.

8.4 Copy, Move and Link

8.4.1 Copying or moving a cue list

Using the Copy or Move buttons you can make a copy of an existing cue list, move it to a new playback, or create a new playback which is linked to the existing playback. You can copy, move or link multiple playbacks (which may include cues, chases or cue lists) in one operation.

Move is useful for tidying up the system. Linked cue lists are handy if you want a cue list to appear on more than one page for ease of programming; also the linked cue list will have the same cue list information in it, but can have different timings and playback options.

-
- 1> Press the Copy or Move button. For Link press Copy twice.
 - 2> Press the Swop button of the cue list you want to Copy. You can select a range of cue lists by holding the first button while pressing the last in the range.
 - 3> Press the empty Swop button where you want it to go.
-

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

8.5 Delete

8.5.1 Deleting a cue list

To delete a cue list:

-
- 1> Press the Delete button.
 - 2> Press the Swop button of the playback you want to delete.
 - 3> Press the Swop button again to confirm the delete.
-

Press Latch Menu to keep the delete mode active. You can keep deleting using steps 2 and 3 without having to keep pressing the Delete button. Press Exit to leave latched delete mode.

8.5.2 Deleting a cue from a cue list

To delete a single cue from a cue list:

-
- 1> Press the Delete button.
 - 2> Press the Swop button of the cue list.
 - 3> The cues in the cue list are listed on the screen. Use the left hand wheel to select the cue you want to delete, or type in the number of the cue to be deleted.
 - 4> Press [Delete Cue x] to delete the cue.
 - 5> Press [Confirm] to confirm the delete.
-

- Alternatively you can use the Unfold function to delete a cue from a cue list.

8.6 Timing

8.6.1 Time and fade options for Cue Lists

Time settings are independent for each cue in the cue list. The display shows which cue you are working with. You can select which cue is active using Wheel A or softkey A of the Edit Cue List Cue Times menu.

See the diagrams in section 6.6.1 on page 73 and section 7.6.2 on page 85 for more information about overlaps and fade times.

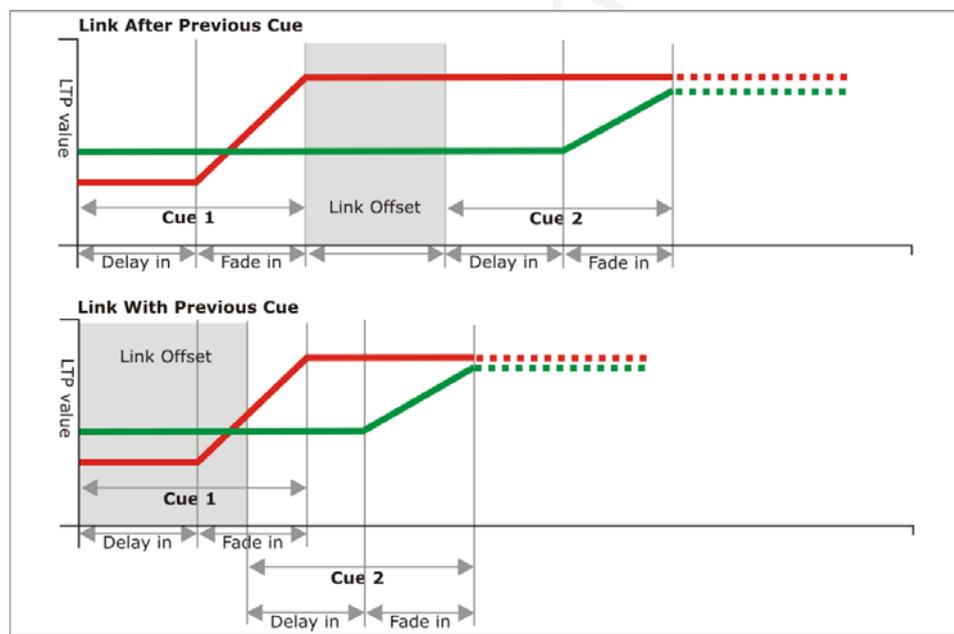
-
- 1> Press A [Edit Times] at the main Program menu then the Swop button of the Cue List.
 - 2> To change which cue you are editing, scroll through the list using Wheel A or press A [Cue Number] then type the cue number you want to edit and press Enter. The Chase arrow buttons to the right of the Connect button also step through the cues.
-

- You can select a range of cues, enabling you to alter the timings of multiple cues all in one go, by using Wheel B, or in the Playback View window, dragging across the cues you want to select in the grid.
- To set the delay time before the cue starts once the Go button has been pressed, press B [Delay In] then type a time in seconds and press Enter.
- To set the fade-in time of the cue, press C [Fade In] then type a time in seconds and press Enter. Both HTP and LTP channels are affected by the fade.
- The fade-out time of the cue is set by default to be the same as the fade in time. You can change the Fade-Out time by pressing E [Fade Out], then type the time in seconds and press Enter. To set equal to Fade In time, delete the time and leave the box blank.
- The Delay Out time of the cue would normally be used if the system links automatically to the next cue, and sets the wait time before the next cue starts.

8.6.2 Cue linking & Link Offset

Cues in cue lists may be linked together, allowing you to build up complex self-timed sequences. The link options are set using the softkeys and are:

- [Link Wait For Go]: the cue waits for the Go button to be pressed then fires immediately. Link Offset is disabled.
- [Link After Previous Cue]: The cue fires when the previous cue has finished its delay in and fade in times. A Link Offset can be set to add a delay between the previous cue finishing and this cue firing. The offset can be given as a time in seconds, or as a percentage of the fade time of the previous cue.
- [Link With Previous Cue]: The cue fires at the same time as the previous cue fires. A Link Offset can be set to add a delay between the previous cue firing and this cue firing, set either in seconds or as a percentage of the fade time of the previous cue.



These options allow you to create complex self-timed sequences by building up simple steps. For example if you wanted the following effect:

- Go is pressed, Fixture one starts fading up over 20s
- After 10s Fixture two fades up over 15s
- Both lights stay on for 5s
- Both lights go off in 3s

You could program

- Cue 1 - Fixture 1 @ 100%, Fade In 20s, Link Wait For Go
- Cue 2 - Fixture 2 @ 100%, Fade In 15s, Link With Previous, Link Offset 10s
- Cue 3 - Fixture 1 AND 2 @ 0%, Fade Out 3s, Link After Previous, Link Offset 5s

Note: To obtain the effect which was called "cue overlap" in previous versions of software, use [Link With Previous Cue] and set a percentage Link Offset time. Link Offset of 100% is equivalent to Cue Overlap of 0% and vice versa.

8.6.3 Individual attribute fade times

You can set individual fade times for each IPCGBES attribute group. You can also select which fixtures this is applied to. For example you can make the position change take 2 seconds, but the colour change take 10 seconds.

Additionally you can set individual times for each attribute so you could make the pan fade over a different time to the tilt.

To set times for an attribute group, first select the Set Times menu and go to the cue you want to set as described above, then press G [Next] to go to the second page of options.

-
- 1> Press C [Attribute times].
 - 2> All fixtures in the cue will be selected. If you don't want to change the times for any fixtures, deselect them now. You can press the ALL button (below Next Time) to select all fixtures in the cue or Shift+ALL to deselect all fixtures.
 - 3> Press the softkey for the attribute group you want to change.
 - 4> Press A [Delay] to set the delay time, or press B [Fade] to set the fade time. Press G [Use global] to remove the attribute group timing and go back to the normal delay/fade times for the cue.
-

- You can use [Individual Attributes] to set times for one attribute within the group, for example just Pan from within the Position group. You can also use the Cue View window to set times for individual attributes.

8.6.4 Fixture overlap

For each cue you can set a (linked together) fixture overlap, which causes Titan Mobile to apply the settings in the cue to each fixture sequentially giving a "rolling" change across the fixtures in the cue. This can create some great effects without much programming on your part.

- Press A [Fixture Overlap] (on the second page of the Cue Times menu) then enter 0-100 on the keypad to change how fixtures overlap in the cue. 100% means all fixtures fade together (the normal setting). 0% means that the first fixture will finish its fade before the next one starts. 50% means that the 2nd fixture will start fading when the first one is half way through its fade.

- To change the fixture order when using overlap, press D [Set Fixture Order].

Normally this is the order in which you selected the fixtures when you programmed the cue. The Fixture window shows the fixture order in large green



numbers. Reorder the fixtures by pressing A [Step Number] then type the start number on the numeric keys, then press the fixture Select buttons in the order you want them. For example, to set the order of 8 fixtures, press 1 on the keypad, then press the Select button of the fixture to be first, then the Select button for the second, and so on. You can set several fixtures to the same number if you want them to change simultaneously. If you press a fixture button twice, it will show X and be excluded from the sequence. Press Exit to finish setting the fixture order.

8.6.5 Running a cue list to timecode

Titan Mobile can run a cue list automatically to a timecode. This is very useful for complex performances which must be exactly the same time after time, or for unattended operation. Each step in the cue list is assigned a time at which it will run.

The timecode can be read from the system clock, from an internal timecode source, from MIDI or from Winamp. Internal timecode is useful for programming a sequence which will later be triggered by an external timecode source.

- 1> Connect the cue list for which you want to set timecode.
- 2> Press [Timecode] on the top-level menu.
- 3> Press Softkey A to select the desired timecode source.
- 4> Press [Record].
- 5> Start the timecode source. If using internal timecode, press [Play] to start it.
- 5> Press the red Go button to step each cue at the time you wish the cue to start.
- 6> Press [Record] when you have finished.

To play back a timecoded cue list, press [Connected Cue Lists] and select the cue list which is to be played. Then press [Timer ...] to enable the timecode input.

When you start the timecode source (or press [Play] if using internal timecode), each cue will

Lead	Curve	Autoload	Timecode	Notes	View
	Linear		00:00:00.24		Vi
	Linear		00:09:00.00		Vi
	Linear		00:12:00.00		Vi
	Linear		00:25:00.24		Vi
	Linear		23:59:59.24		Vi
	Linear		23:59:59.24		Vi

fire as the timecode matches its programmed time.

You can edit the timecode for each cue by using Wheel A to select the cue, then press Enter and type the new timecode for the cue.

While editing a time you can also use Wheel B to select multiple cues, and use the softkey options to enter a value to change the time of all the cues (offset, add a fixed time or subtract a fixed time).

You can open a timecode display window to show you the incoming timecode – press [Open Workspace Window] then [Timecode].



8.7 Advanced options

Advanced cue list options are set from the Playback Options menu. You can enter the playback options menu by doing the following

- 1> At the top level Program Menu press B [Playback Options].
- 2> Press the blue Swop key for the cue list you wish to edit.

8.7.1 Release mask

[Release Mask] lets you specify using the softkeys which attributes will be released back to their state in other live playbacks when the playback is killed. You can also use the Attribute Bank buttons on the right side of the system to set the mask. The default setting is to not release any attributes.

8.7.2 Fader mode

This option sets how the cue list fader behaves. If set to [Fader Mode Intensity Kill With Off], the fader masters the overall HTP level and the cue list remains active (connected) even when the fader is lowered to zero. If set to [Fader Mode Intensity Kill At 0], the fader masters the overall HTP level and the cue list is killed when the fader is lowered to zero. If set to [Manual Crossfader] the fader behaves as a manual crossfade control, and the cue list will automatically step on to the next cue when the fader reaches the top or bottom of travel.

8.7.3 Handle Paging

This option allows you to lock the playback on a handle so that it always appears on that handle no matter what page is selected.

If you select "Transparent Lock" then the playback will appear on the current page if no other playback is programmed in that position.

8.7.4 Cue Options

This option allows you to change settings for each cue in the cue list. To select the cue number to edit, use the left hand wheel or press softkey A then enter the cue number on the numeric keypad.

- [Curve] allows you to set a different fade curve for the cue; this affects how the fade progresses from one cue to the other (for example you can select a fade which starts off slow, speeds up in the middle and then slows down at the end). Press [Curve] then select a new curve from the softkeys. The effect of the various curves is described in section 10.6 on page 117.
- [Link] can be set to Press Go, With Previous Cue or After Previous Cue. See section 8.6.2 on page 96.
- [Preload] allows you to make this cue load the LTP values from the next cue within the cue list (for example to pre-position some fixtures for an effect).
- [Legend] allows you to set a legend for the cue which is displayed on the cue list display.
- [Notes=] lets you enter a note for the cue ("Leaves stage pursued by bear" or "wake up spot operator").

8.7.5 Autoload

This option allows you to automatically load a playback with a cue and is described in section 8.1.3 on page 90.

8.7.6 Key Profile

Each playback can have an individual Key Profile allocated to it. This allows you to customise the panel button functions differently for each playback. A list of available Key Profiles is shown, or you can add a new one. The softkeys show the function allocated to the blue and grey buttons for each of the available Key Profiles.

If the playback Key Profile is set to "None", the default global profile is used.

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9. Running the show

This chapter contains: Operating modes, master faders, manual control during a show, setting up workspaces

9.1 Playback

9.1.1 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 showtime, the most important thing is to save the show to USB pen drive or hard disk (see section 1.3.5 on page 23 for instructions).

9.1.2 Flash and swop buttons

The Flash and Swop buttons on the playback faders may be used at any time to flash and solo cues and chases. The Flash button adds the playback into the current output, the Swop button turns off all other output. You must have the mode switch set to Run mode to use Flash and Swop.

You can reallocate the functions of the Flash and Swop/Select buttons on the system using Key Profiles – see section 10.3.4 on page 112. A useful alternative function is Preload which allows you to preset the attributes of the fixtures before you raise the playback fader, which is handy for avoiding visible changes (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 Shift and press [Edit Key Profile].

The bottom of the screen shows the allocated function of the blue and grey buttons for each playback fader.



9.1.3 Playback priority

You can set playbacks to high priority 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. See section 6.7.5 on page 77.

9.1.4 Executer buttons

As well as the 10 playback faders across the bottom of the panel, you can program up to 20 cues into the executer buttons on the top right of the panel. These are useful to fire strobes, smoke machines etc.

9.1.5 Blind mode

You can set the system to Blind mode by holding down the Avo button and selecting [Blind]. This allows you to program cues using the visualiser window without affecting the look on the stage.

9.1.6 Manual control during a show (“busking”)

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. Titan Mobile can fade to the palette values 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.*
-

When a fade is entered, you can also change the “Fixture Overlap” using softkey A. 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.

The palette fade time remains active while the Palette Fade menu is open. Press Exit to leave the menu and return to instant palette recall.

If you apply a palette with a fade time, then it will be overridden by the next cue (so if you fade to green using a palette, then fire a cue which sets those fixtures blue, they will go blue). If you apply a palette without a fade time, it will go into the programmer and override any subsequent cues (so if you use a green palette with no fade, the fixtures will be locked in green until you press Clear).

Having the palette overridden by the next cue is quite useful when “busking”. If you need to “snap” a palette but still have it overridden by the next cue, set a fade time of 0 (leaving the Palette fade menu open).

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 function (see section 6.3.4 on page 72) 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.

9.2 Workspaces on screen

Titan Mobile allows you to configure “workspaces” which store how the various windows are displayed on the screen. Workspaces are stored and recalled from the touch buttons to the left of the menu buttons.

9.2.1 View menu

Pressing Open Window (above numeric keys) takes you into the View menu. From here you can set up what is shown on the screens.

- [Window Options] allows you to reposition and resize windows, and to move them between the screen and the external monitor.
- [Open Workspace Window] allows you to open and close all the possible windows.

9.2.2 Titan application window

The View menu on the Titan application window lets you show various useful displays. Some of the options do nothing in this version of the software.

9.3 Reorganising the buttons

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.

9.3.1 Using the Move function

To move fixtures, palettes, groups and playbacks is very simple.

-
- 1> *Press Move.*
 - 2> *Press or touch the select key(s) of the item(s) to move.*
 - 3> *Press or touch the select key 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. In this case, you can set option B to [Bunch Up] 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.

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10. User Settings and other options

This chapter contains: Configuring the workspace; Key Profiles; Setting Titan Mobile options using the Titan application menu; the Utilities menu; Curves; upgrading the software.

Titan Mobile has a large number of options to help you set it up just the way you like it. Commonly used options can be set from the User Settings softkey; you can also set a few options using the onscreen Tools menu on the Titan application.

In this chapter there is also information on how to upgrade the application software.

10.1 Configuring the Workspace

The main area of the touchscreen can show up to 4 workspace windows. Workspaces can be saved to a touch button and called back immediately.

Some windows have associated touch buttons, when the window is active these are shown in the "context buttons" area in the middle right hand side of the screen.

10.1.1 Opening workspace windows

You select which workspace windows you want to see using the [Open Workspace Window] menu command on the root menu or the Open Window menu.

10.1.2 Selecting and positioning workspace windows

To change the position of a workspace window you first make it active by touching its header bar.

You can change the positions and sizes of the active window by using the Window Control buttons above the numeric keypad. The min/max button swaps the active window between full screen and quarter size. The size/position button moves the active window around the possible positions. There are also softkeys on the Window Options menu for the same functions.

Some possible window sizes/positions are shown below.



Quarter size

Double wide

Double height

Maximised

If you don't have a touch screen you can click buttons using the mouse.

You can close the active window using the Close button. You can close all windows by pressing Avo+Close, or use the [Close All] softkey.

10.1.3 Saving workspaces

You can save different workspace setups to the Workspaces touch buttons (to the left of the menu) or to one of the 20 hardware buttons by pressing View then [Record Workspace], then touching one of the Workspaces buttons. This allows you to reconfigure the entire workspace with the touch of one button.

Workspaces are saved with the show.

As an example of setting up a workspace, suppose while programming you wanted to be able to access fixtures, position palettes, fixture attributes and shapes:

- 1> Press Exit to get to the root menu then the [Open Workspace Window] menu softkey.
- 2> Find the [Fixtures] window in the list and press it.
- 3> If the window is not in the top left quarter, press the Size & Position button (above the numeric keys) until the window occupies the top left quarter
- 4> Press [Open Workspace Window] again and select the [Positions] window. Press the Size & Position button to position it in the desired location.
- 5> Repeat to activate the [Attribute Control] and [Shapes] windows.
- 6> Press View (to the right of the numeric keys) then [Record Workspace], or hold Avo and press View. Type in a name for the workspace. Then touch the Workspace button where you want to store this workspace layout. Or, you can use Quick Record – just touch an empty workspace button and it will turn red with a +. Type a name for the workspace and touch again to store it.



- [Record Visible/All Windows] lets you set whether the workspace will contain only the windows which are currently visible, or will also include any windows which are hidden underneath other windows.
- [Remove/Leave other windows on recall] sets whether all other windows will be closed when this workspace is recalled.

10.1.4 Compatibility view

This workspace shows the “blue and grey handle” view which was used in version 2.x of Titan software, and which also allows you to access the preset fader handles in shows which have been programmed on the Pearl Expert.

When the compatibility view is opened, there is a softkey option to [Move to workspace]. This will move the handles from the compatibility window to the appropriate workspace window. You need

to do this twice, once with the “Fixtures and playbacks” window selected, and once with the “Palettes and groups” window selected.

10.1.5 Configuring a second monitor

- Titan Mobile currently only supports a single monitor.

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10.2 Key Profiles

Titan Mobile allows you to reconfigure how the front panel buttons work to suit your method of working. You can save your settings as a Key Profile. Different profiles can be selected for different users or to enhance the operation of the system for a particular use.

Titan Mobile has standard Key Profiles for Run mode, Takeover Run mode and Program mode. These standard profiles cannot be edited, so you always know how they will behave. You can create your own editable profiles using one of the standard profiles as a starting point.

The current settings of the playback buttons are shown on the screen above the playback faders.



10.2.1 Creating and editing key profiles

To create or edit a profile, switch the mode switch to System then select [Key Profiles]. You can then use the Manage Profiles menu to View, Edit, Add, Delete or Rename profiles.

When Adding a new profile, you can select an existing profile to copy settings from.

You can also edit Key Profiles from Program mode by holding Avo, then selecting [Edit Current Key Profile]. If the current key profile is one of the non-editable system ones, you are prompted to add a new profile or select an existing editable profile.

The current settings for the [blue], [grey] and (where available), [touch] buttons are shown on the left side of the screen.

The groups of keys you can set are as follows. On Titan Mobile there are no blue or grey fixture/palette buttons.

Fixtures: the blue, grey or touch key can be allocated to Disabled, Select, Flash, Swop, Latch. The "Latch" function is equivalent to putting the fader to full for that fixture and touching again returns the fader to 0.

Palettes: the palette (grey) key can be allocated to Disabled, Select Palette. You can select if the palette function takes precedence over the flash function (if a handle has both palette and flash functions) or vice versa.

Groups: the group (grey) key can be allocated to Disabled, Select Group. You can select if the group function takes precedence over the



flash function (if a handle has both group and flash functions) or vice versa.

Cues: the blue or grey key can be allocated to Disabled, Flash, Swop, Latch, Preload.

Chases: the blue or grey key can be allocated to Disabled, Flash, Swop, Latch, Go, Stop, Preload, Connect, Tap Tempo.

Cue Lists: the blue or grey key can be allocated to Disabled, Flash, Swop, Go, Go Back, Stop, Preload, Connect, Next Cue +, Next Cue -, Review Live Cue, Cut Next Cue To Live, Snap Back.

Macros: can be set to Select or Prefer Macro (the Macro function will take precedence over other functions stored on the button).

Quick Record: allows you to disable the quick record function.

10.2.2 Selecting a key profile

A Key profile is selected in Run mode by pressing Softkey B and selecting the desired profile from the list. In Program mode, hold the Avo Shift button and press [Select Key Profile].

10.2.3 Individual Key profiles for playbacks

Each playback can have an individual Key Profile allocated to it. This allows you to customise the panel button functions differently for each playback. The Key Profile for the playback is selected using the [Key Profile] option on the Playback Options menu (Softkey B on the main program menu). If the playback Key Profile is set to "None", the default global profile is used.

10.3 The System menu

Titan Mobile System menu is accessed by pressing Avo and Disk. The options in this menu are separated from the other options on the system because you would normally only change them occasionally, or because they can have serious effects on the way the system works and you wouldn't want to change them accidentally.

Note: When in System mode, playback control, preset controls and programming buttons are all disabled.

10.3.1 Avotalk Security

This option sets how the system communicates with Active Fixtures and with Remotes. See section 12.6 for details of Active Fixtures.

10.3.2 Network Settings

This option sets up networking (Ethernet) parameters for the system. See section 12 for details.

10.3.3 User Settings

The User Settings menu may also be accessed from Program mode: hold down the Avo Shift button and press [User Settings].

There are several pages of options and the bottom two softkeys go through the different pages.

- [Grand Master...] is not used on Titan Mobile
- [Prompt for Merge or Replace...] sets the system action when you try to save to a handle or playback which is already used. The options are [Prompt for Merge or Replace] - the system will always prompt, [Always Merge] - the system will never prompt or [Palettes Always Merge] - the system will prompt unless you are saving a palette.
- [Warn before parking fixtures ...] sets the system action when you patch a fixture which overwrites the DMX channels of another fixture. This causes the overwritten fixture to be "parked" The options are [Always] (system will warn you) and [Never] (system will park the fixture without warning you).
- [Tempo Units...] sets the units for displaying tempo. The options are [Beats per Minute] or [Seconds].
- [Connected View ... Chase Speed] sets the system action when you change the speed of a connected chase. [Connected View Sets Temporary Chase Speed] means that the system will not save the modified speed, and the next time the chase is fired it will go back to its programmed speed. [Connected View Sets Chase Speed] means that the system will modify the saved speed of the chase.
- [Auto Connect...] sets whether Chases and Cue Lists will auto-connect to the wheels when the playback is fired. The options are [Off], [Chases], [Lists] and [Chases and Lists].
- [Channel Levels...] sets how you enter channel levels when using numeric entry of levels. If set to [Channel Levels Set In Tens], you enter one digit for the channel level (e.g. 5 = 50%). If set to [Channel Levels Set in Units] you enter two digits, i.e. 50 = 50%.

- [Preload Time] sets a fade time for the Preload function, normally 2 seconds. This value would normally be set for quiet fixture movement.
- [Key Profiles] accesses the key profiles menu which can also be found on the System menu. The option is also found here so that you can access it using the Avo Shift button. See section 10.2.
- [LED Levels] sets the behaviour of the LEDs in the Select buttons. This option has no effect on Titan Mobile.
- [MIDI timecode] This option lets you select the settings for glitch detection, tolerance and timeout when using MIDI timecode.
- [Wheel sensitivity] The sensitivity of the encoder wheels, and the pan/tilt threshold settings can be adjusted using this option. Wheel sensitivity is adjusted using Wheel A and the current level is shown on the display.
- [Handle Buttons] lets you set the size of the touch buttons to [Small], [Normal], [Large] or [Super Size].

10.3.4 Key Profiles

Allows you to modify the functions of some buttons. See section 10.2.

10.3.5 Wipe

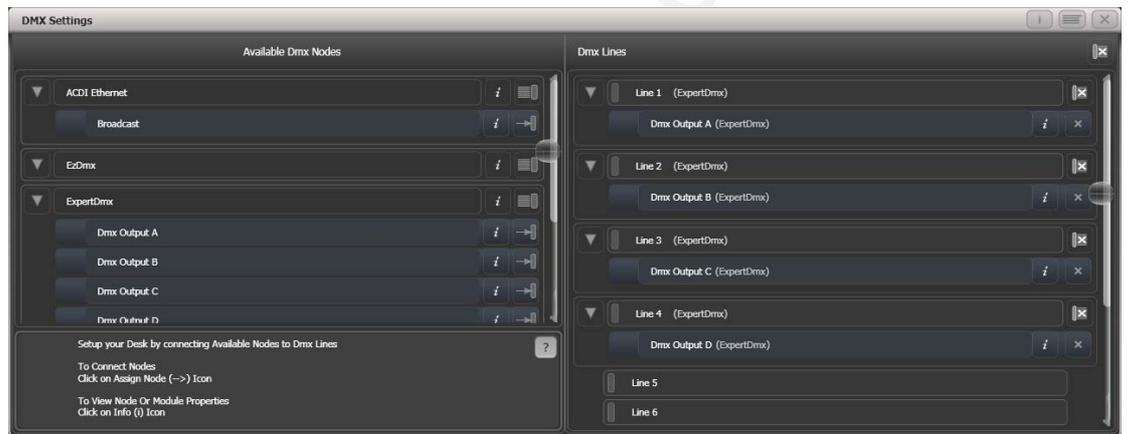
The Wipe menu erases the current show. This is the same as the [New Show] option on the Disk menu, but is provided here for experienced Avolites users who are used to it being on the System menu.

10.4 DMX output mapping

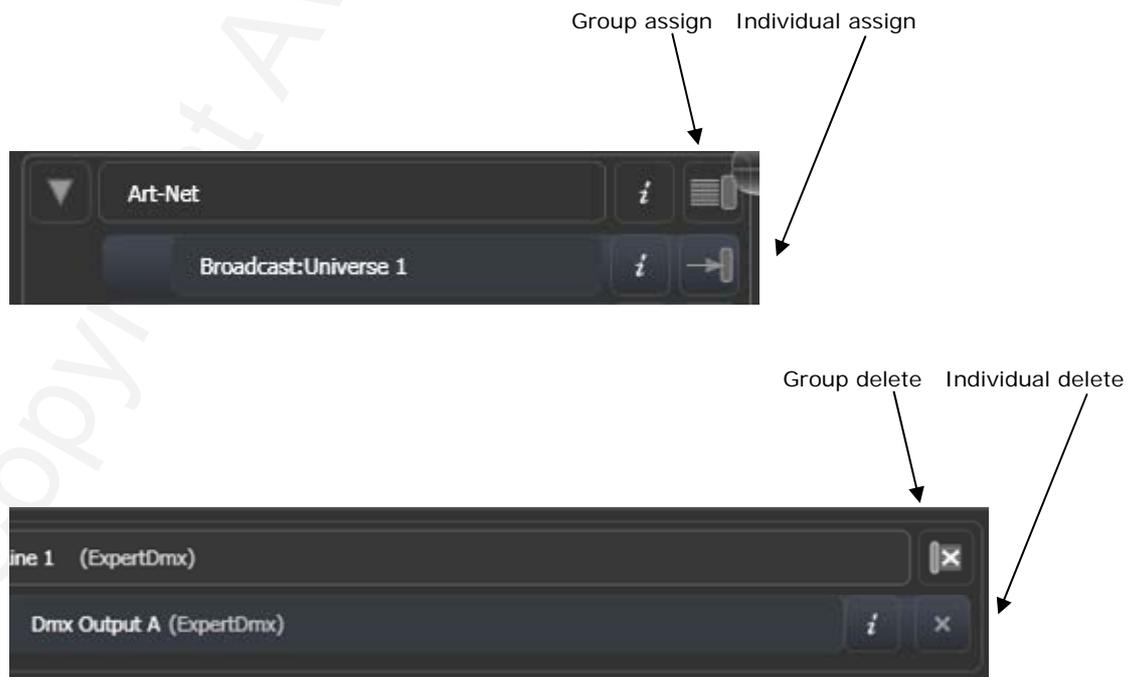
Titan allows you a lot of flexibility in how you connect fixtures to the system. As well as the 4 sockets on the rear of the desk, you can connect fixtures using Ethernet and wireless links.

10.4.1 Configuring DMX outputs

Press AVO+Disk to change to System mode and select [DMX Settings] on the second page of options. The screen shows a list of available DMX nodes (places where you can send the DMX to) on the left, and a list of the 12 available DMX lines (outputs from the system) on the right. Each DMX line can send data to one or more nodes. If you assign data more than one node to a line, those nodes receive duplicated data.



You can individually assign Nodes to Lines using the arrow button, or assign all Nodes of the same type using the group assign button. For example, to assign the four XLR output sockets on the back of the system to for DMX lines, you would click on the Group Assign button of the ExpertDMX nodes.



To delete a node from the DMX lines, click on the X button. To delete all nodes from a line, click on the Group delete button

You can show information about the DMX nodes, or the DMX lines, by clicking the i button.

10.5 Titan application Tools menu

Some “system” options on Titan Mobile can also be set from the Tools menu on the Titan application which will be visible in the windows taskbar. This method of setting options will be removed in future versions as all options can now be set from the touch screen.

10.5.1 Virtual Panel

The virtual panel will be accessed from the Avolites shell toolbar and this option is obsolete.

10.5.2 Visualiser

This option is obsolete. Visualiser is now displayed using the Open Workspace Window functions.

10.5.3 Titan User settings

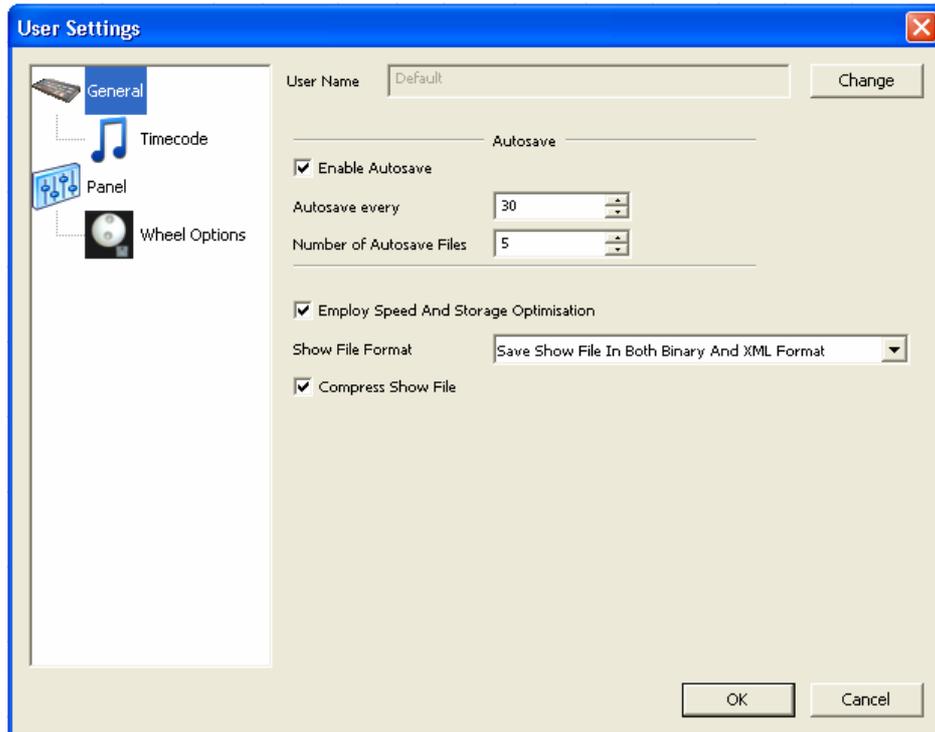
The user settings menu on the Titan application allows you to configure a few options you can't set using the console.

If the system has different users, each user can have their own option settings. You create new users or select from a list of existing users by clicking the user Change button at the top of the screen. You can also use the File → Change User menu command.

To add a new user, click the Add User button in the Change User dialog and type a user name. To select an existing user, click the username in the list then click OK.

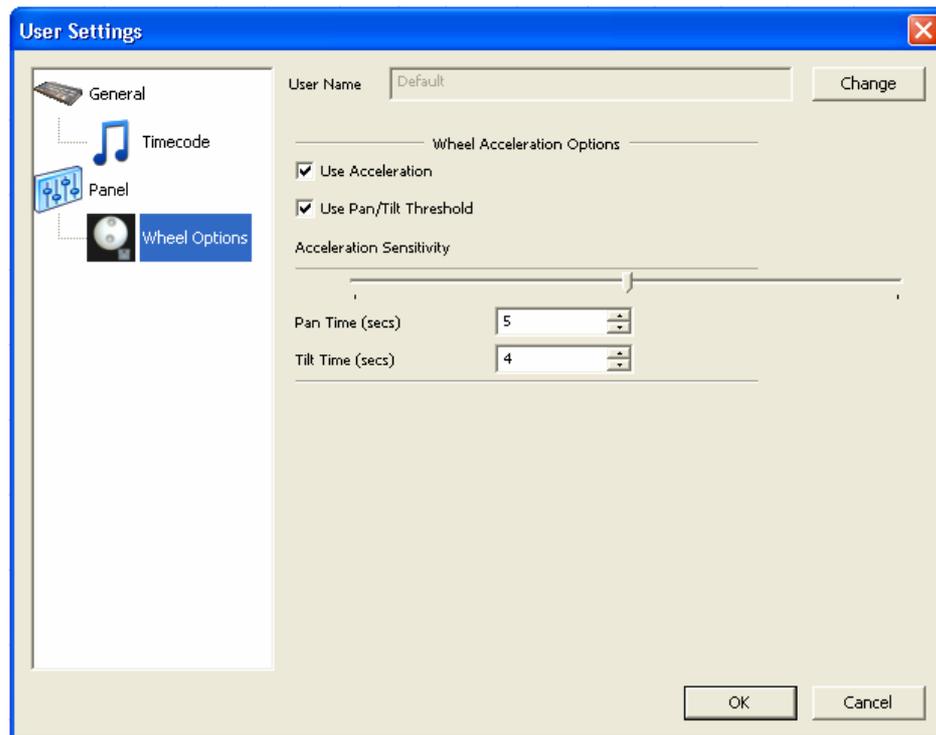
The user settings menu has the following tabs:

General tab



- Autosave enables or disables the autosave option and allows you to set how often the show is saved, and how many previous versions are saved. You can also adjust this from the Disk menu.
- Employ speed and storage optimisation will speed up loading and saving by not saving "off" and "on" mode information.
- Show file format allows you to change the file format to enable compatibility with earlier software versions.
- Compress show file will cause Titan Mobile to compress the file before saving.

Wheel options tab



- Wheel acceleration options set how the wheels behave when you spin them.

10.5.4 Factory settings

The factory settings menu sets low-level operation of the system. of the system.

- The top drop-down box allows you to set what type of system hardware is fitted. You would only change this selection on the simulator, to simulate the correct type of system.
- The base directory allows you to change where the operating files and show files are stored.
- Show heartbeat on LED: No effect on this system
- Log panel keypresses: All keypresses are logged to a file on the hard disk. This enables Avolites to reconstruct what you've done, should a problem occur.
- DMX Properties...: Allows you to modify the timing of the DMX generated by the system, if you have problematic devices which need specific timings.



10.5.5 Exchange fixture

Titan Mobile allows you to exchange fixtures in your show for entirely different fixtures while retaining the show programming. This feature is described in section 2.2.5 on page 34.

10.5.6 Setup DMX outputs

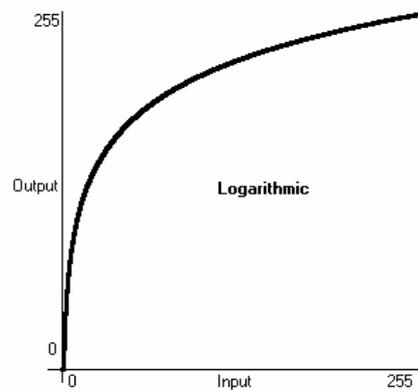
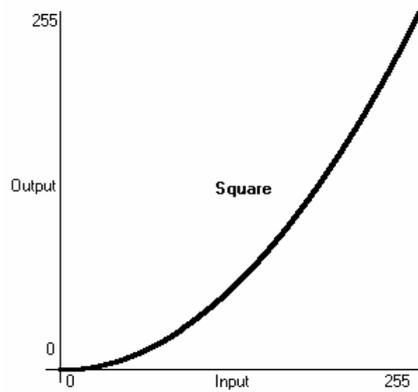
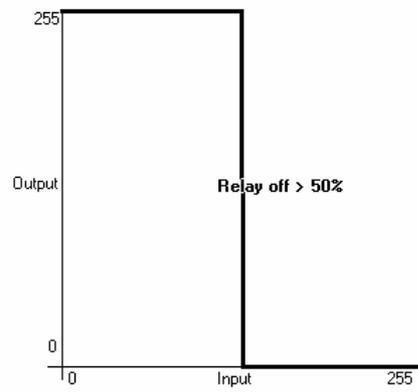
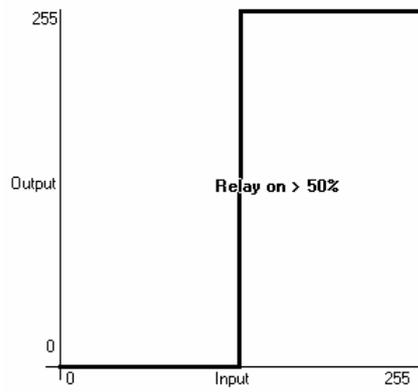
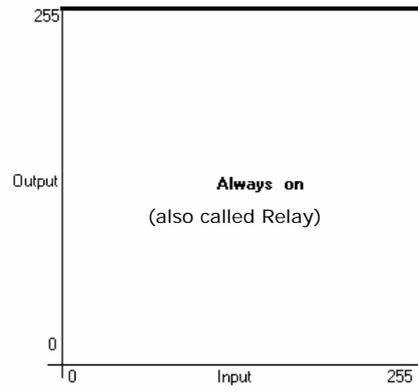
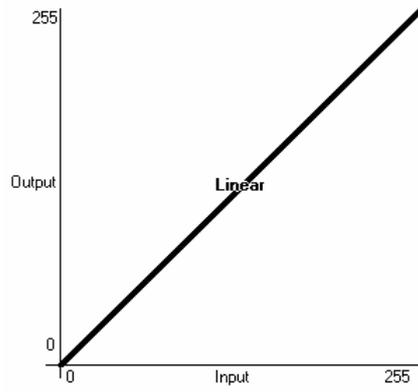
This option allows you to setup how the 12 DMX universes produced by the system are output. This is described in detail in section 12 starting on page 132.

10.5.7 Hotkeys

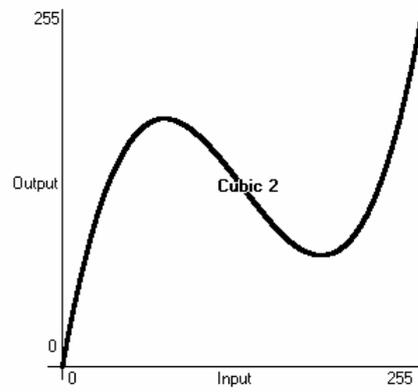
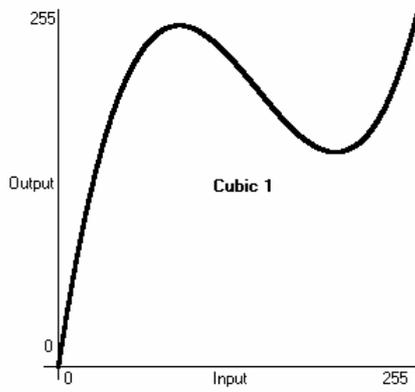
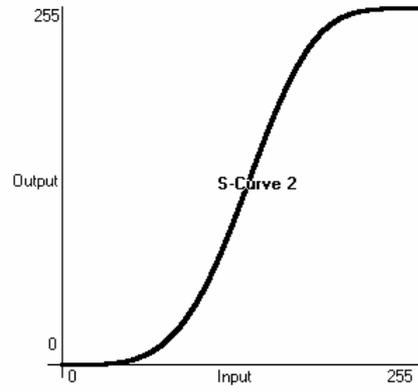
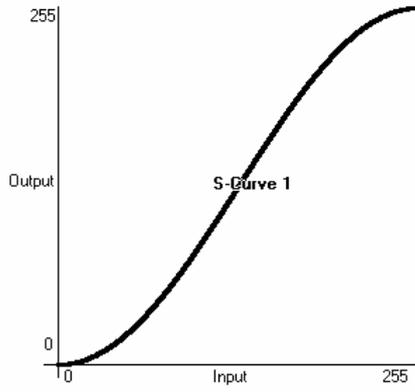
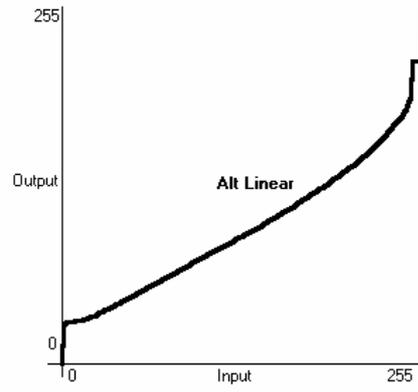
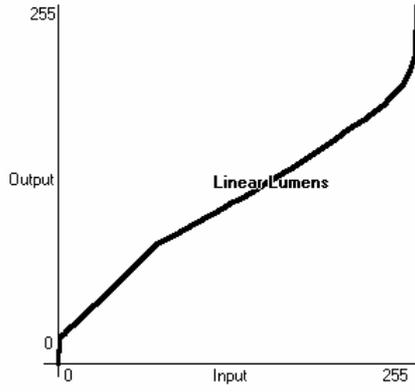
The Hotkeys function is not available on Titan Mobile.

10.6 Curves

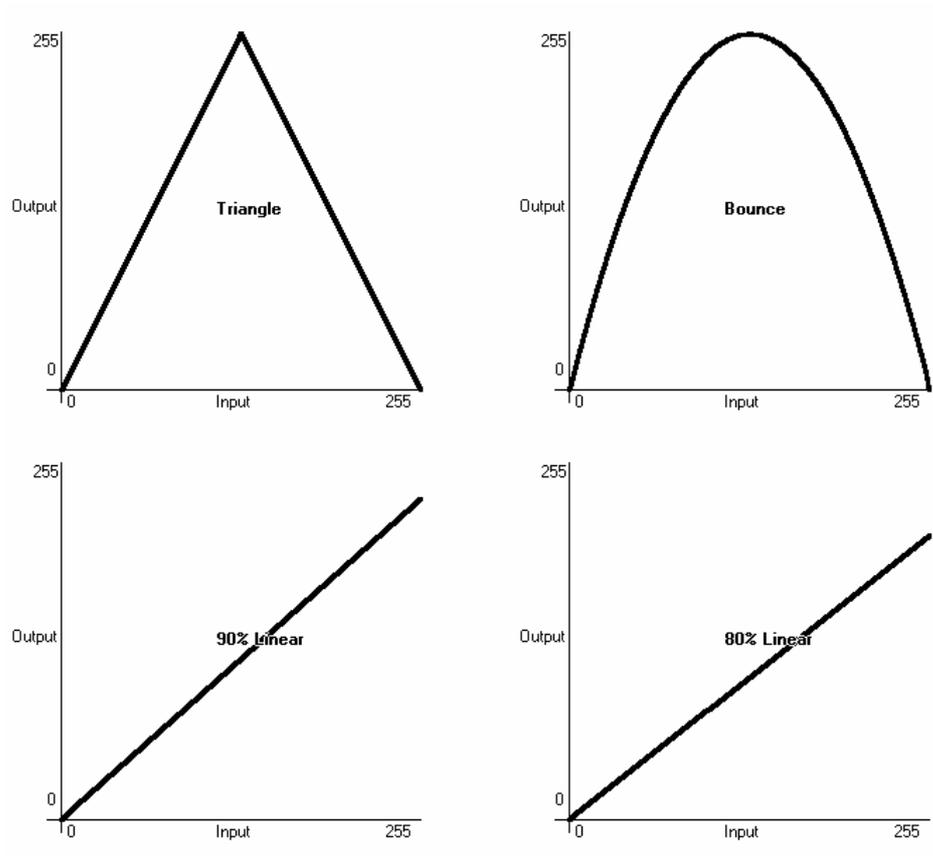
Titan Mobile provides a variety of curves which set how the system tracks the fade; either the same speed all the way (linear), or starting and ending gently but faster in the middle, and various other options.



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10.7 Upgrading the software

Titan Mobile operating software is under constant revision by the Avolites team. You can always download the latest version of the software from the Avolites website:

<http://www.avolitesdownload.com>

Software upgrades for Titan Mobile are installed like any other Windows application.

Having downloaded a new version of software, install it on the system like this:

-
- 1> *Stop Titan Mobile software by closing the window using the red X button.*
 - 2> *Run the installer program.*
 - 3> *When the installation has completed, double click the Titan Mobile icon to start the new version.*
-

11. Working with Fixture Personalities

For each type of fixture, Titan Mobile has a “personality” file which tells it how to control the fixture, which channel is the dimmer (HTP) channel, and a large amount of other fixture-specific information. When you patch each fixture, you tell Titan Mobile which personality to use for it.

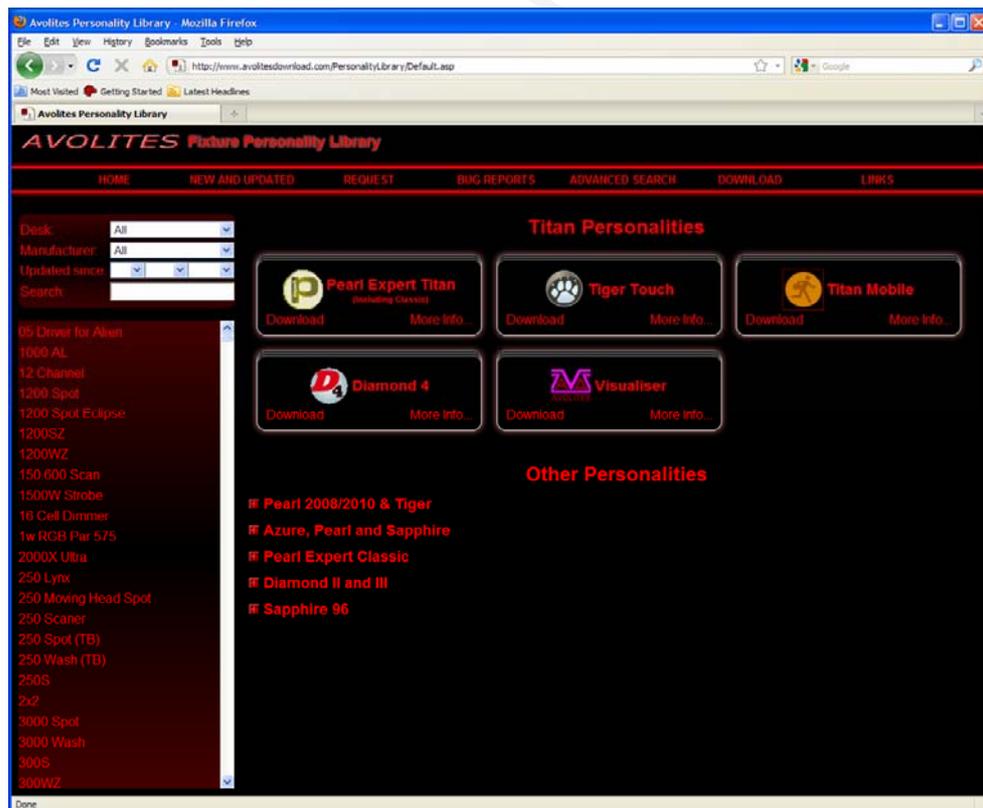
Titan Mobile holds a wide range of fixture personalities internally in the “personality cache”, but you might find a fixture it doesn’t know about. This section explains what you do when this happens.

11.1 Downloading fixture personalities

11.1.1 Personality library website

The Avolites website lists all fixtures for which personalities have been created. You should look here first if the system does not contain a personality for your fixture. The address is

<http://www.avolitesdownload.com/personalitylibrary>



To download the latest personality library for Titan Mobile, just click on the Titan Mobile link.

If you want to check on the availability of a fixture in the library, all available fixture personalities are listed down the left side of the screen. You can use the boxes on the top left to filter the list to show fixtures from specific manufacturers, or fixtures available for a certain system, or to search for a specific fixture name.

Note: Ensure you have selected "Titan Mobile (.d4)" in the "Desk" field. Personalities are the same for all Titan consoles.

Click on the fixture name to open the details in the right hand window. This shows all the personalities available for that fixture type (if you have entered the system type on the top left, only personalities for that system will be displayed).

If there is a personality listed for your fixture on Titan Mobile, download it by clicking on the Disk icon. This will download a copy of the complete personality cache.

11.1.2 Updating the personality cache on the system

Download the current Titan personality cache by clicking on the disk icon in the Cache column for any fixture. Alternatively you can get this file by clicking on the Download link at main screen, or using the Download link at the top of the screen, then clicking on Titan Mobile.

Then use the following procedure.

- 1> *Locate the downloaded TitanMobileFixtureLibrary.exe file and double tap on it to run it. Click "Ok" on the warning box.*
- 2> *If you had any custom fixture personalities installed, copy them from the C:\Program Files\Avolites\Titan\FixtureLibraryBackup folder into the FixtureLibrary folder.*
- 3> *Close and restart the Titan software.*

- Titan Mobile caches the FixtureLibrary folder when the Patch option is used. You therefore need to restart the Titan software to ensure new fixture personalities are loaded.
- Once a fixture is patched, its personality is embedded in the show file. Any changes to the fixture library will not affect fixtures patched in the show. To update fixtures already patched, use the Update Personality function in the Patch menu.

11.1.3 Requesting a new fixture personality

If a personality does not exist for your fixture, Avolites will create one for you. Click on the "Request" link on the above web page to submit your request. A list of current requests is shown.

Your new personality will be incorporated into the cache – to install the new personality, download and install the latest personality cache as described above.

11.1.4 Reporting a personality bug to Avolites

If you find a problem with a fixture personality, Avolites would like to know about it so it can be fixed. Search for the personality on the website then click on the "Report Bug" icon on the right of the screen. If you click on the "Bug Reports" tab at the top of the window, a list is shown of currently outstanding problems, so you can check if someone else has already reported the problem.

11.1.5 In an emergency

Titan Mobile contains a selection of "Generic" fixtures which you can use in an emergency if you need to operate a fixture with no personality. When patching, go through the manufacturer list until

you find [Generic]. In this section (among other fixtures) are the following:

Multi-DMX: Has up to 10 DMX channels, all channels are LTP. You can select from 1-10 channels on the Mode screen. Press Attribute Bank and use the softkeys to select channels.

Generic RGB: Allows you to control an RGB fixture such as LED colour changers. This offers 5 modes:

1=Dim 2=R 3=G 4=B

VDim 1=R 2=G 3=B

1=R 2=G 3=B 4=Dim

VDim + 4xRGB

4xRGB.

VDim is a virtual overall dimmer channel for fixtures without a DMX dimmer control. When you use the Dimmer attribute Titan Mobile will adjust the RGB levels accordingly.

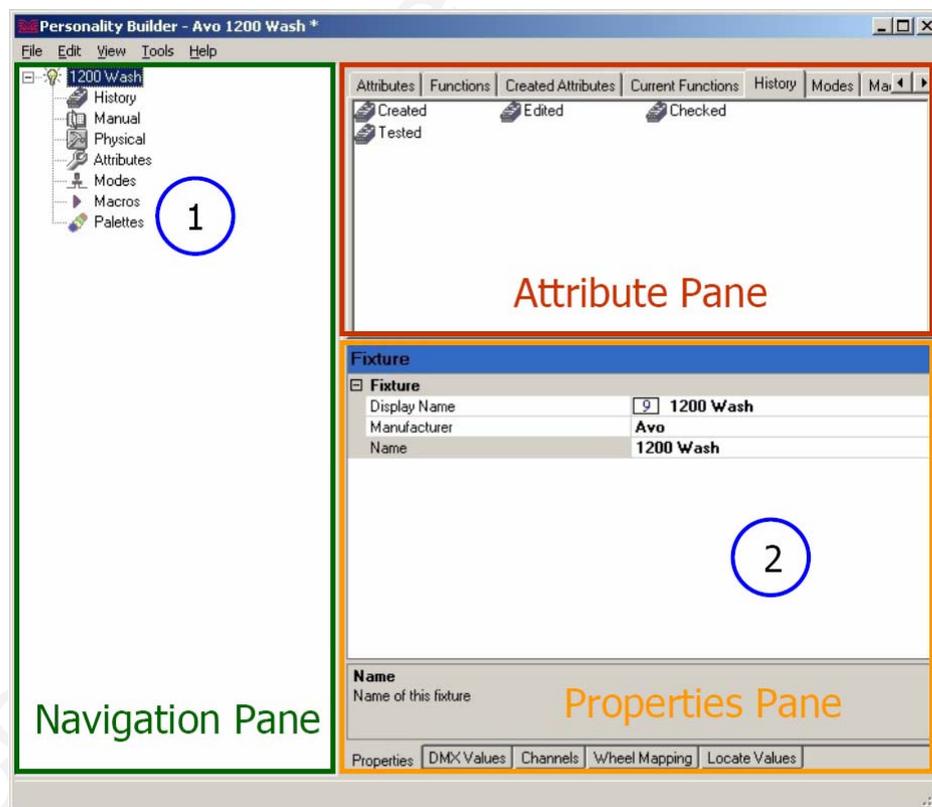
11.2 Creating your own personality

The Avolites Personality Builder is included as part of the Titan Mobile installer. This allows you to create your own personalities for fixtures which are not in the library.

Run Personality Builder from the Avolites section of the Start menu.

11.2.1 Naming the fixture

After opening the program, select 'New' from the File menu.



1. Select 'Fixture 1' in the Navigation Pane.
2. In the Properties Pane there will now be a list of fields.
Enter a Manufacturer name in the Manufacturer field.

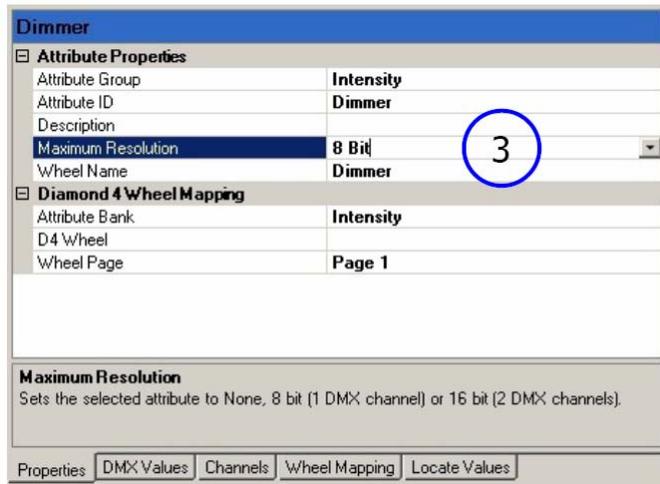
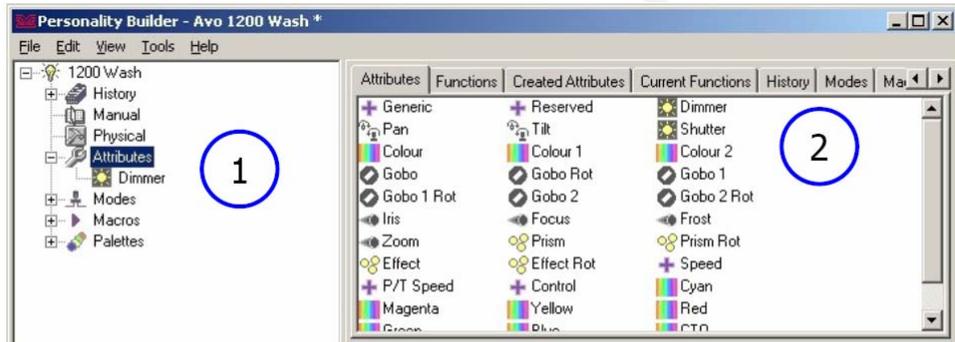
Enter the fixture's name in the Name field

Enter a name in the Display Name field. (The Display Name field has a maximum length of 10 Characters).

Note: Creating your own unique Manufacturer name for all your created fixtures will ensure they all appear under the same Manufacturer name in your console's patch menu.

11.2.2 Adding attributes

Now that the fixture information has been added we can start to add attributes to our fixture.



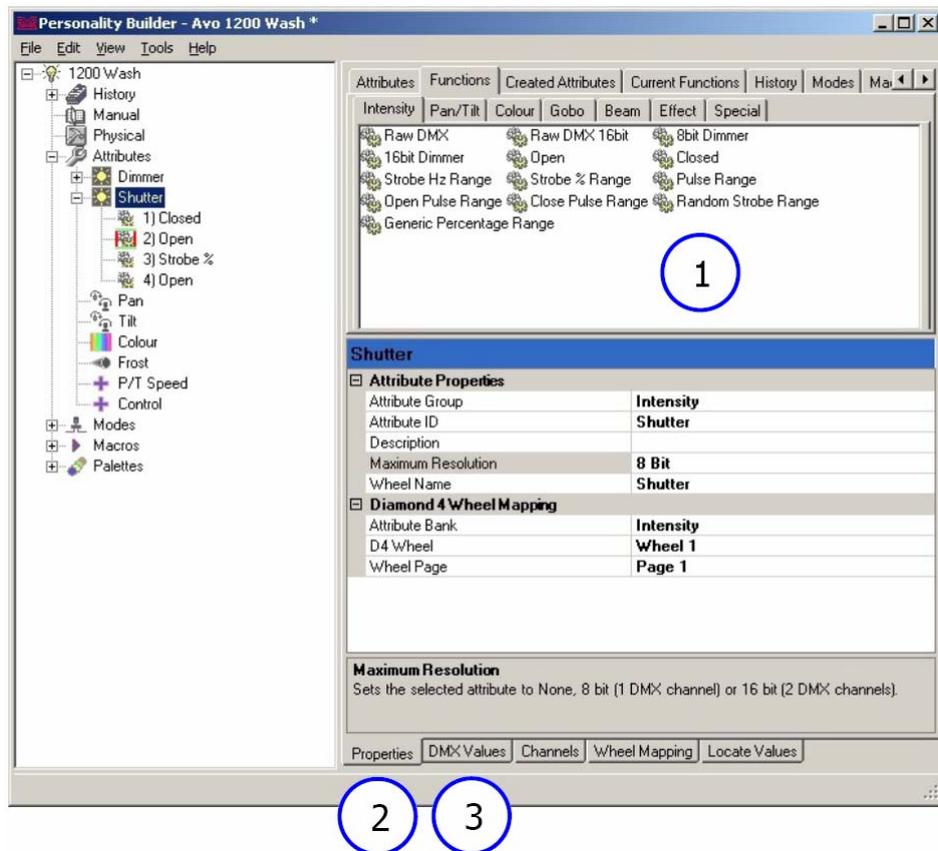
1. Select the 'Attributes' item in the Navigation Pane. A list of possible attributes that can be added to the fixture will be displayed in the Attribute Pane.

2. Find the attributes you need in this pane and double click them to add them to the fixture (alternatively they can be dragged across from the Attribute Pane to the Properties Pane).

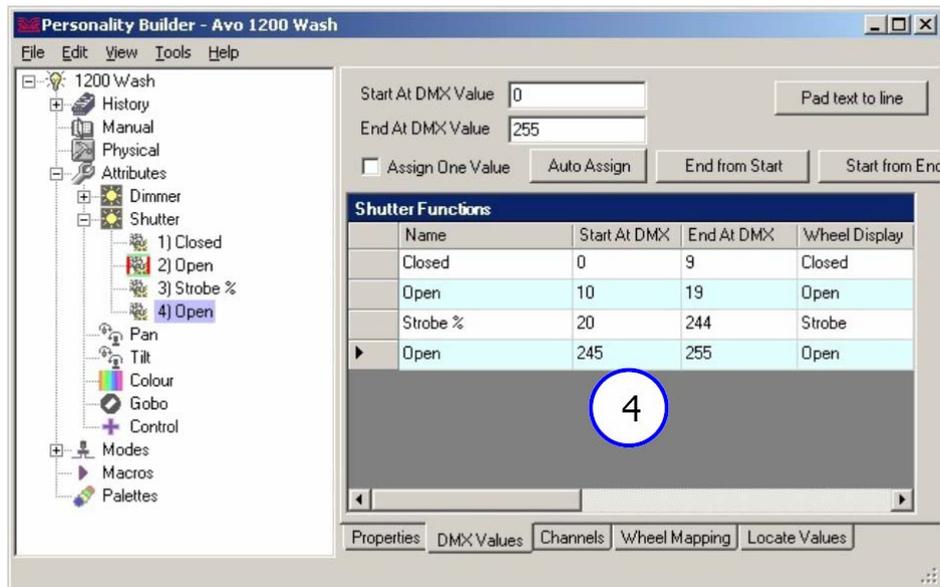
3. Select the correct Maximum Resolution for each attribute. To do this select the attribute name in the Navigation Pane and change the 'Maximum Resolution' to the appropriate level by selecting it from the drop down box.

4. Ensure that all created attributes have functions and the relevant DMX information added to them.

11.2.3 Adding functions to attributes



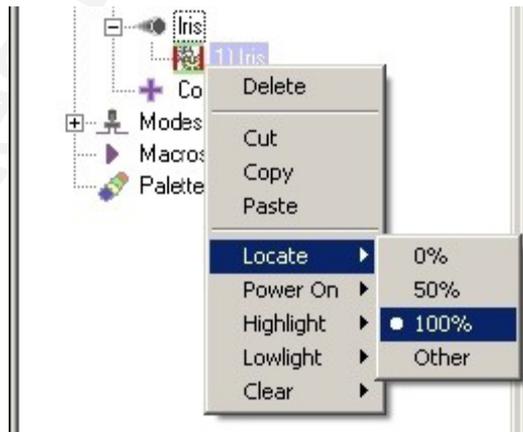
1. Add the appropriate functions for each attribute from the Attribute Pane by dragging them across to the Navigation Pane.
2. Once all the functions have been added, you can add their DMX Values by selecting the 'DMX Values' tab at the bottom of the Properties Pane and entering the values for each function listed.
3. To return to the Properties Pane, select the 'Properties' tab to the left of the 'DMX Values' tab.



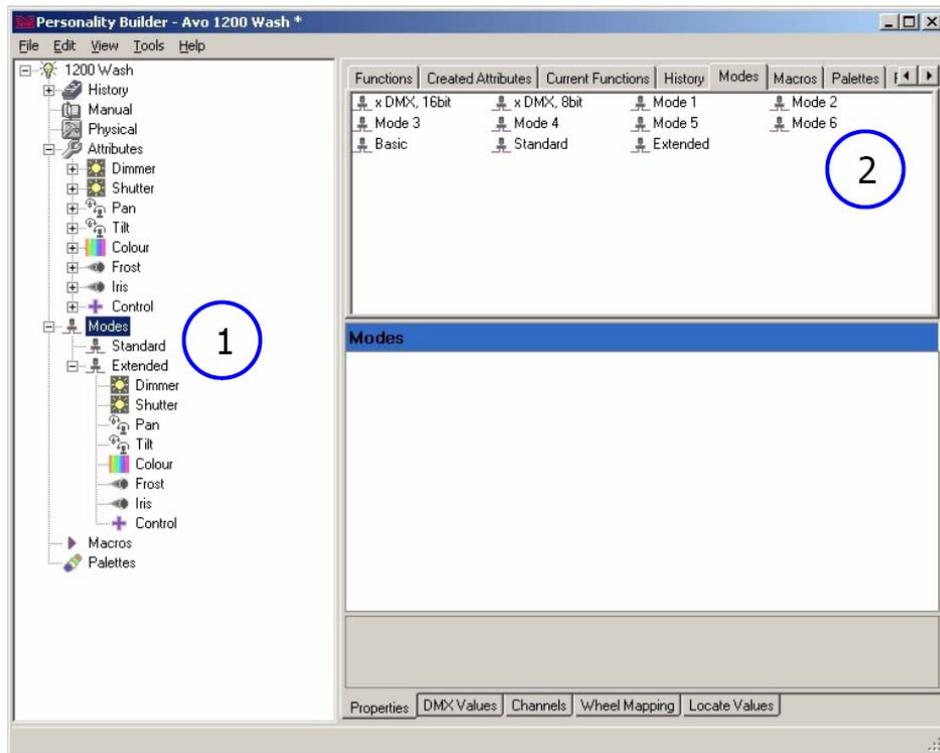
4. Ensure that all created attributes have functions and the relevant DMX information added to them.

11.2.4 Setting Locate Values:

Expand an attribute from the Properties Pane so that all the functions it contains are visible. Right click on the function that you wish set as the locate value, select 'Locate', then (in the case of an attribute range, such as 'Speed') select a locate value.



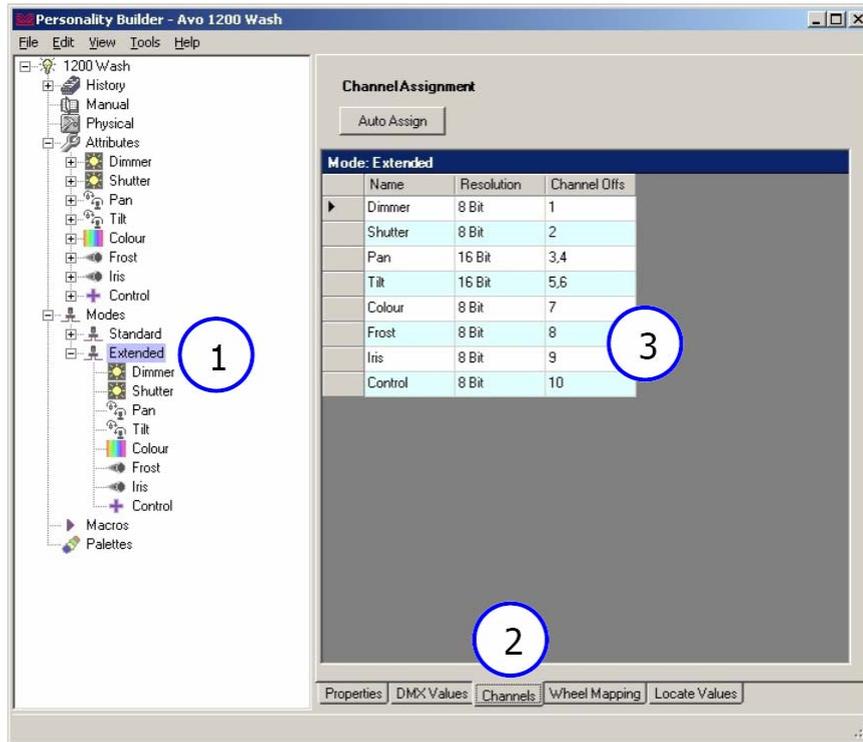
11.2.5 Creating Modes



1. Select 'Modes' from the Navigation Pane.
2. Choose a mode template from the Attribute Pane and double click it to add it to the list of Modes.

From here you are able to add any combination of created attributes to this mode by first selecting the relevant mode, then dragging the created attributes across from the Attribute Pane.

11.2.6 Assigning DMX channels for each mode



1. Select the appropriate mode in the Navigation Pane.
2. Click on the 'Channels' tab at the bottom of the Properties Pane.
3. While this page is filled in automatically, you may need to edit the order of DMX channel assignments listed in the 'Channel Offs' column.

Note: When you have both 16 bit and 8 bit channels performing the same functions on two different modes (most commonly Pan and Tilt) you should set the attribute resolution to 16 bit and add it to both modes. Then for the 8 bit mode, you then select the attribute inside that mode and change the Resolution from '16 bit' to '8 bit' in the Attribute Pane.

11.2.7 Configuring Wheel Allocation

Once the channels for all modes have been assigned you must allocate a separate wheel for every attribute.

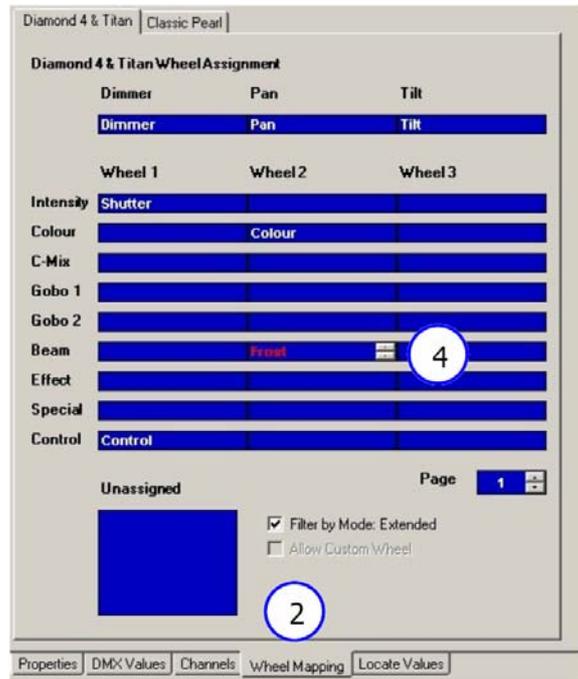
1. Select the appropriate mode in the Navigation Pane.

2. Select the 'Wheel Mapping' tab from the Properties Pane. In this tab click on the Filter by Mode box. This ensures that only the channels used by this mode are displayed. Where two modes use the same attributes, changing the attribute position in one will change the attribute position in the second mode.

3. Move the attributes to whichever wheel you want them to appear on by clicking on the attribute name, and dragging to the appropriate wheel.

4. If there are 2 or more functions on the same wheel, the names will turn into a Magenta colour. You need to ensure that the two attributes are put on separate wheels for the personality file to function correctly.

Note: To put an attribute on the second page of a wheel, drag it into the 'Unassigned' box, select the desired page then drag the unassigned attribute to the desired wheel.



11.2.8 Adding to the Titan Mobile Fixture Library

If you haven't done so already, save your personality file. It is a good idea to name your file using the following format: Manufacturer Name_Fixture Name.d4.

Copy the personality to C:\Program Files\Avolites\Titan\FixtureLibrary

Restart the Titan Mobile software for the changes to take effect.

If any previous versions of your file are patched, your show will have to be updated via the 'Update Personality' function.

Note: You can do this within the Personality Builder program by selecting File then 'Save to Fixture Library'. This should only be done once the personality has been completed in order to prevent 'work-in-progress' files from appearing in your patch menu.

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12. Networking

This chapter contains; Connecting to a Simulator with ACDI; Connecting to fixtures with ArtNet, eDMX and EzDMX; AvoTalk; explanation of IP addressing.

There are a number of ways for Titan Mobile to communicate with lighting fixtures beyond the traditional DMX sockets, which are described in this chapter. Titan Mobile also supports communicating with a number of different simulators/visualisers over various communication methods.

At the end of the chapter is a section which aims to cover the basics of IP addressing, which is essential for various features on Titan Mobile such as ArtNet.

Note: Lighting networks need to transfer of large amounts of data. For best reliability you should use network wiring which is dedicated to the lighting system and physically isolated from other networks. Connecting to an existing network with other network traffic is possible but can lead to problems both with the lighting equipment and with other IT equipment on the network. If you need to do this please read about the IP addresses you should use, in section 12.7.5.

12.1 Setting Titan Mobile's IP address

Before your Titan Mobile PC can talk to another lighting device over the network, it has to be given a unique network address in the correct range. This is called its "IP address".

Note: If your PC is already on a network, changing its IP address using these functions will cause it to disconnect from the network. Only change IP addresses if you are connecting to a lighting fixture network.

12.1.1 Setting IP address

We recommend that you use Titan Mobile's automatic IP setting function. However, if you need to you can also set the IP address using Windows Control Panel as shown on page 139.

- 1> Switch to System mode by pressing Avo and Disk, then press [Network Settings]
- 2> Press [Local Area Connection].
- 3> Press [Subnet Mask] and set to 255.255.255.0
- 4> Press [Set IP 2. *. *. *]
- 5> Press [Save settings]
- 6> Press Exit to go back to Program mode.

- Some equipment may operate on IP addresses 10.*.*.* (softkey D) – see later in this chapter for details.
- If you need a non-standard IP address range you can use softkey A.

12.2 Setting up DMX outputs

Titan Mobile has 12 DMX lines which can be routed to the DMX sockets on the side of the control panel and/or can be sent out of your PC's Ethernet socket.

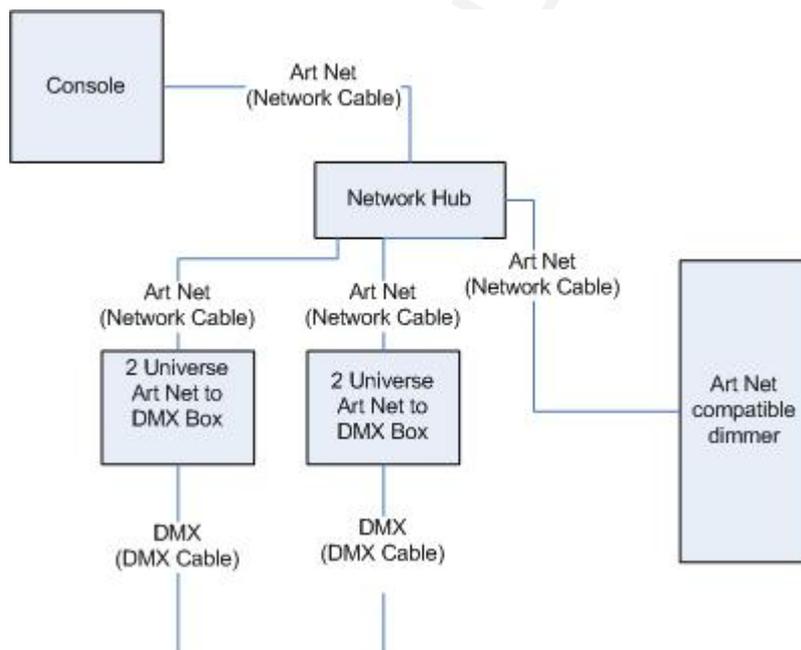
The Setup DMX Outputs screen lets you determine where the DMX lines are routed to. This is found on the System menu as shown in section 10.4.1 on page 113.

12.3 ArtNet

Art Net is an open standard for transmitting Lighting information over Ethernet. It is not specific to one range of products, and is recognised and implemented by a growing number of manufacturers. Many products (such as Dimmers and Moving lights) can accept the Art Net signal directly, so there is no need to convert the signal to DMX. Most people will, however, need to output DMX to their equipment and this can be done using an Art Net to DMX converter.

12.3.1 A simple ArtNet system

In the following diagram, an Art Net compliant System (such as Titan Mobile) is connected via a network hub to an Art Net compatible dimmer and 2 DMX conversion boxes.



Once the system is connected together, the different outputs (or Nodes) can be configured.

- The dimmer is given the start address of 200
- The 1st DMX box is set to universe 1 and universe 2
- The 2nd DMX box is also set to universe 1 and universe 2

The system is then used to set the DMX lines to the Art Net nodes.

It is important to remember:

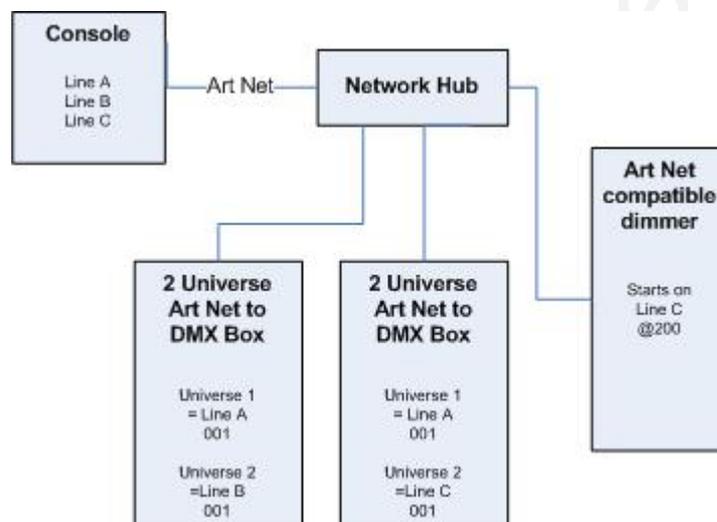
- Each Art Net to DMX box (or compatible Dimmer, or compatible moving light) is a device,

- Each device may have one or more nodes (i.e. the Art Net to DMX box has 2 nodes, these are the 2 DMX outputs; the dimmer itself is a node),
- Each node can be set to a Universe (1-256). This universe is equivalent to a 512 channel DMX line

You can then specify which system line is assigned to each node. A system line can be assigned to multiple nodes (this will duplicate the DMX universe), but each node should have only one system line assigned to it.

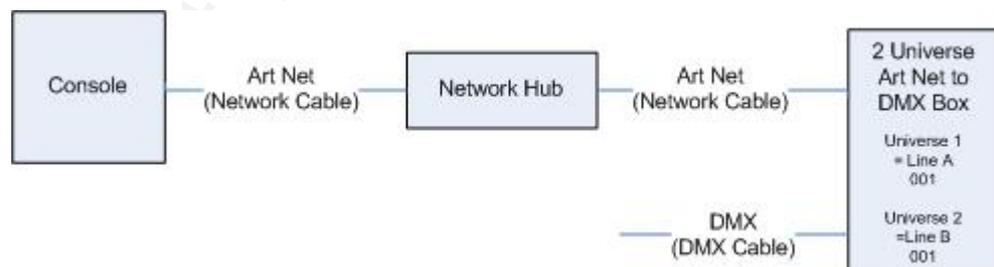
Here, the system assigns the following:

- Line A to Box 1 universe 1 and box 2 universe 1
- Line B to Box 1 universe 2
- Line C to Box 2 universe 2 and the dimmer rack



12.3.2 Setting up an ArtNet system

For this example, it is assumed that you will connect Titan Mobile to an Art Net DMX output box (such as an Artistic License Net-Lynx) via a network hub.



Using standard network cables, attach the devices together.

- If you are using a hub/switch as shown above, use straight-through cables. If you are directly connecting Titan Mobile to another Ethernet device you need to use crossover cables

Set the Net-Lynx box as follows:

- Subnet Mask = 0
- DMX A Universe = 1
- DMX B Universe = 2

A lot of Art-Net devices, including the Net-Lynx box, are set to IP address 2.x.x.x as default, and can be set to 10.x.x.x using an option jumper, so you should check what the setting of your device is.

If your ArtNet devices need to be set to a non-standard IP address, then in steps 1 and 2 you need to use Windows Control Panel to set Titan Mobile to that address range instead of 2.x.x.x

With everything connected, start Titan Mobile.

-
- 1> *Ensure Titan Mobile has an IP in the 2.x.x.x range as described at the start of the chapter.*
 - 2> *On the Titan application, click on Tools, Setup DMX outputs.*
 - 3> *Click on settings*
 - 4> *Select the ArtNet module. If the module is not shown in the list, it may not be installed; see section 12.5 on page 137.*
 - 5> *Ensure that the correct Network adapter is set (this may not be the Default Adapter)*
 - 6> *If you wish to turn off the Art Net output, you can un-check the "Enable DMX output" option. This will stop the System from outputting Art Net on any Lines.*
 - 7> *Art Net normally only sends Data when it is changed, rather than a continuous stream. There are times when it is preferable to send Art Net all the time. to do this, check the "Continuous ArtNet Data Stream" option.*
 - 8> *The "Always broadcast ArtNet" option enables you to send Art Net to the entire network, rather than a specific IP address.*
 - 9> *Click OK*
 - 10> *Select a DMX line for Titan Mobile*
 - 11> *Select the ArtNet node that you want to connect to*
 - 12> *Click on Add Node. This will add an ArtNet node to that DMX output.*
 - 13> *Select the node you have added to make sure the properties are correct. (Problems can be caused if you attach multiple DMX lines to a single node.)*
 - 14> *Make sure that the Universe is set to 1 for Line 1, and 2 for Line 2.*
Art-Net uses a subnet mask with its universe. For Titan Mobile purposes:
Titan Mobile universes 1 - 16 are subnet mask = 0, Art-Net universes = 1 – 16
 - 15> *Click OK*
-

Titan Mobile should now be working correctly.

To remove a node from a DMX line, select the node and select Remove Node.

12.3.3 Additional ArtNet Resources

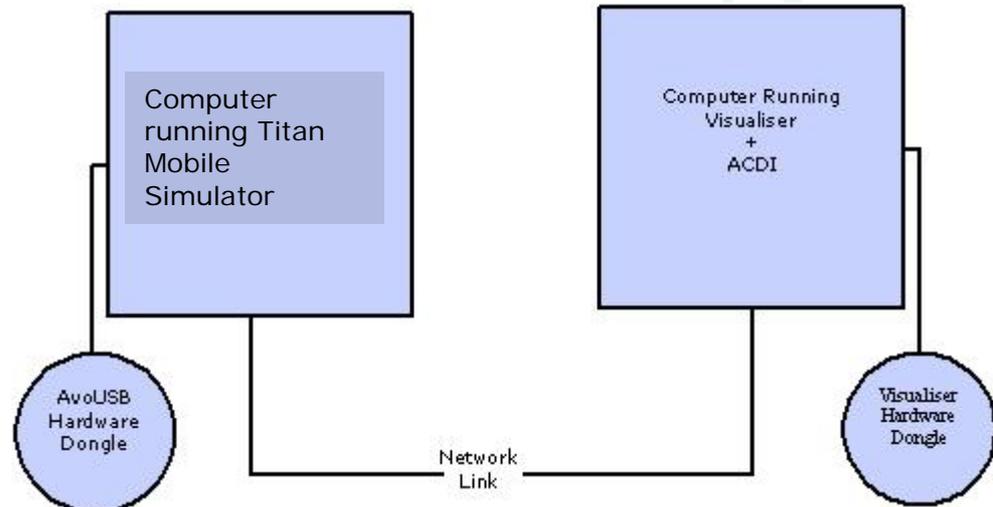
To find out more information about Art Net please refer to the Art Net Standard published by Artistic Licence.

12.4 Connecting to a simulator with ACDI

ACDI is Avolites' Application for Interfacing Systems and Simulators with lighting software such as Visualiser, Capture or Show designer.

12.4.1 ACDI

If you are using Titan Mobile Simulator with the Avolites Visualiser, running on 2 separate computers, you will need a separate Dongle connected to each computer.



The network link connection can be made through either a crossover cable, or through a network hub.

For this example, both computers are connected together via a crossover cable.

First, we will set up the Network setting for both computers. It is important that both computers use an IP address in the same range (2.0.0.x in this example) and have the same subnet mask, or they won't be able to communicate.

On Titan Mobile, set the address to 2.x.x.x as described in section 12.1.1 at the start of this chapter. If you need to set a custom address to match the visualiser PC you can use Control Panel to do this.

On the computer running the Visualiser:

-
- 1> Click Start, Control panel, Network connections.
 - 2> Right click on the connection you wish to use.
 - 3> Click Properties.
 - 4> In the connection properties window select TCP/IP and click Properties
 - 5> Set the PC network adapter to a free address on the network in the range 2.0.0.x.
 - 6> Set the subnet mask to 255.0.0.0.
 - 7> Click OK.
-

Close any network windows on both machines.

Install and run ACDI on the Visualiser Computer.

In ACDI change "Source" to "Simulator"

Do not close the ACDI window

Refer to the previous section to setup a DMX line on Titan Mobile to be sent to the Visualiser.

Finally, start Titan Mobile, and open or create the theatre file. (See the Visualiser manual for more information on this)

Once ready to connect to Titan Mobile, go to run mode in the Visualiser, and select simulator under DMX.

Titan Mobile should now be working with the Visualiser.

12.5 Module Setup

A module is a method of sending DMX and can be thought of as a collection of nodes.

For example, consider using wireless networking technology to transmit DMX to several individual receivers. Each receiver is configured to output a specific universe of DMX. In this case, the wireless system as a whole is the module, and each receiver is a node.

The Module Settings window (top right of the Setup DMX Outputs screen) enables you to set the specific properties of the Modules used with Titan Mobile. These were selected during the installation process. If you are running Titan Mobile simulator, some (or all) modules may be missing, depending on what Avolites hardware you have attached.

You can only use different modules (e.g. Art Net) if you have several network adapters, or by re-configuring the IP addresses of the Devices to be compatible.

In the Setup DMX Modules window, click on the Module that you wish to adjust, and its properties will be shown.

This allows you to adjust settings for each module, and to select a network adapter for ACDI and Art-Net. Most people will only have one network adapter, however many laptop users will have their standard network adapter and also a Wi-Fi (wireless) adapter, both of which will be shown.

12.5.1 Installing additional Modules

If the DMX Module that you want to use has not been installed, you can add it by running Titan Mobile installer again and checking the option(s) that you want in the setup window.

12.6 AvoTalk

AvoTalk is a legacy system which allows devices on a standard network to communicate and share information. In the case of Avolites systems it allows the system to talk to fixtures and to retrieve and change information such as personalities and Mode information.

Note: Active fixtures such as media servers now use the CITP system to communicate with the console instead of Avotalk.

For example, when using a media server such as Hippotizer with Titan Mobile you have the option of patching it as an "active fixture". In order for this to work you must download and install an "Active Fixture Plugin" for the device you want to use and install that plugin

on the device (i.e. the Hippotizer). When the plugin is run on the active device, it interrogates the device and generates a personality and other information specific to that device such as media thumbnail clips, and provides this info to Titan Mobile over the network using the AvoTalk protocol. These thumbnails, for example, can then be used in the wheel view on Titan Mobile to provide a preview of the media selected on a particular media layer.

Active fixtures can also perform other tasks such as readdressing themselves to a new DMX universe or DMX address etc and all these tasks are performed by sending commands using AvoTalk across the network.

AvoTalk is designed to work alongside other lighting protocols such as eDMX or ArtNet. Once a network connection is established AvoTalk will detect any compatible devices and start talking.

12.6.1 Example AvoTalk setup

We will look at setting up a Green Hippo Hippotizer with Titan Mobile using a combination of AvoTalk and ArtNet.

You will need the following:

- Titan Mobile with Titan Software Version 1.5 (or greater)
- Green Hippo Hippotizer
- AvoTalk Hippo Plugin
- Crossover cable

-
- 1> *Turn on Titan Mobile and the Hippotizer. For this example we assume you have performed a wipeall on Titan Mobile.*
 - 2> *Connect Titan Mobile and the Hippotizer together using the crossover cable. Note that there may be a cable already connected to the network port on the Hippotizer that comes from within the unit. This is connected to the DMX box on the front, and can be disconnected.*
 - 3> *Set up Titan Mobile for ArtNet. For more information on the DMX Modules, see Chapter 3 on DMX outputs.
At the moment you don't need to add any nodes, so click OK to close the Setup DMX Outputs window.*
 - 4> *Install the AvoTalk Hippo Plugin on the Hippotizer, but don't run it just yet. The Hippotizer software should not yet be running either.*
 - 5> *Using the Stage Settings application, set up the Hippotizer to run in the preferred mode (please refer to the Hippotizer manual for further information).*
 - 6> *Run the Hippo Plugin on the Hippotizer. Click on "Set network adapter" and set the adapter, then click on "Detect Hippotizer Layers". The plugin will now look for all of the media files and setup of the Hippotizer. Please note that this may take some time, depending on the number of clips that are available. If you receive the message "No Hippotizer available" ensure that the Hippotizer is enabled.*
 - 7> *On Titan Mobile, go to Patch / Active fixture and select "Hippo (Ser.No.)". In this case the Active Device is called Hippo 15. If there are no active devices found, try exiting the menu and*

waiting for a few moments before trying again (there can be a short delay while the media clips are examined by the plugin).

- 8> *On Titan Mobile, enter a DMX address and press a swop button to patch the Hippotizer. The required number of fixtures will be patched to consecutive handles, and the Hippotizer DMX address will be assigned to the one entered on Titan Mobile.*
- 9> *Now run the Stage application on the Hippotizer. **DO NOT CLOSE THE PLUGIN.***
- 10> *Finally, on Titan Mobile, go to Setup DMX Outputs and you will see the Hippotizer appear as a Node. Add this to the required DMX line. Again, there may be a slight delay before the Hippotizer node appears.*

Once the Hippo Plugin is installed, it will automatically start every time the Hippotizer is started. If you change the Hippotizer mode, you will need to go to the Hippo Plugin, re-detect the Hippotizer and re-start Titan Mobile.

If you disconnect the network cable you will need to go to the Hippo Plugin, re-detect the Hippotizer and re-patch Titan Mobile.

If you decide to re-patch to a different DMX address you will need to re-start the Hippotizer software. You will also need to reset the ArtNet nodes if you are moving across DMX lines.

12.7 All about IP addressing

This section attempts to explain the basics of IP addressing, and what you will need to know when setting up a lighting control network.

IP addresses will normally come in the format "w.x.y.z" where w, x, y and z are numbers between 0 and 255. For example "298.23.46.166". Every object (or node or device) on a network should have a unique IP address. This is the same concept as DMX as each fixture requires a unique DMX address, for IP addresses the same is required.

12.7.1 Setting your IP address

Titan Mobile has a setup function to quickly set its IP address as described on page 132

You can also set your IP address using Windows Control Panel. This is done in the following way:

- 1> *Go to control panel from the Windows Start menu*
- 2> *Double Click on Network Connections*
- 3> *You will now be confronted with various network adaptors. It is likely that you will only have one or two of importance. The "Local Area Connection" and "Wireless Network Connection". These names may slightly differ but the icons are likely to look like these:*



- 4> *The Local Area Connection (icon on the left) refers to your wired connection and your Wireless Network connection (icon*

on the right shown disconnected) refers to your wireless connection.

- 5> *At this point you need to decide which connection you are using and therefore which connection you want to set the IP address for. Select this connection, right click on it and click on Properties.*
- 6> *The Dialogue box you have should have at least three tabs, "General", "Authentication" and "Advanced". It should already be on the General tab which is the only tab where you should need to change settings.*
- 7> *In the middle of the box there is a selection box labelled "This connection uses the following items:" You need to select the item called "Internet Protocol (TCP/IP)" ensure this is ticked and click on "Properties" just below the selection box.*
- 8> *You are now presented with a box which allows you to select whether you want to "Obtain an IP address automatically" or "Use the following IP address". By selecting "Use the following IP address" it is possible to enter in a new IP address and Subnet Mask. The Default gateway, Preferred DNS server and Alternate DNS server and not important in this situation as they are only required if you are connecting to the internet, therefore they can be left blank.*
- 9> *Once you have entered in the new IP address and Subnet mask press Ok on all the dialogue boxes that have been opened. After a few moments your new IP address should be set.*

There is a strong possibility that if you set the IP address on one network device you will have to set it on all of them, therefore if you manually set your IP address on Titan Mobile you will have to do it on any tracking backup you are using and any ArtNet fixtures. Beware that some ArtNet fixtures have a fixed IP address in the range 2.x.x.x, in which case you have to set Titan Mobile to that range.

12.7.2 Subnet Masks

These are best kept simple. All devices or nodes on a network who wish to communicate with each other must have the same subnet mask. The mask determines which parts of the IP address are unique in that network to each node. If the part of the subnet mask is a 0 then the corresponding digit in an IP address must be unique for each fixture. If the part in a subnet mask is 255 then this part of the IP address needs to be the same for each node.

12.7.3 Choosing an IP address and Subnet Mask

This is the hardest part of setting up a network as your IP address totally depends on what you are using on the network and what IP addresses you can and cannot change. Below are a number of different scenarios for standard lighting networks using a Titan Mobile and what IP addresses should be set. These aren't guaranteed to work but try them if the scenario matches your network:

Titan Mobile and ShowSafe, all output is standard DMX.

	IP Address	Subnet Mask
Titan Mobile	192.168.1.30	255.255.255.0
ShowSafe	192.168.1.31	255.255.255.0

Titan Mobile outputting over ArtNet Fixtures (and DMX).

	IP Address	Subnet Mask
Titan Mobile	2.100.100.100	255.0.0.0
ArtNet Fixtures	2.x.y.z	255.0.0.0

Or

	IP Address	Subnet Mask
Titan Mobile	10.100.100.100	255.0.0.0
ArtNet Fixtures	10.x.y.z	255.0.0.0

Where a combination of x, y and z are unique for these fixtures.

Titan Mobile and ShowSafe outputting over ArtNet (and DMX).

	IP Address	Subnet Mask
Titan Mobile	2.100.100.100	255.0.0.0
ShowSafe	2.100.100.101	255.0.0.0
ArtNet Fixtures	2.x.y.z	255.0.0.0

Or

	IP Address	Subnet Mask
Titan Mobile	10.100.100.100	255.0.0.0
ShowSafe	10.100.100.101	255.0.0.0
ArtNet Fixtures	10.x.y.z	255.0.0.0

Where a combination of x, y and z are unique for these fixtures.

Note: Never set the last number of an IP address to be 255. This is a special address which will not function correctly.

12.7.4 Automatically assigning IP addresses (DHCP)

There is another way of assigning IP addresses via an automatic system called DHCP. For this you need one of the devices on the network to be a DHCP server. If you know none of your devices are a DHCP server then this is irrelevant however, if you have a router on the network or some such similar device then it is likely that you have a DHCP server. If you do then in the 8 step instructions in section 12.7.1 on page 139 when you come to step 7 you should ensure that "Obtain an IP address automatically" is selected then press ok. When you are using DHCP all the devices on the network must be capable of obtaining an IP address automatically. If one device cannot (eg some ArtNet devices) then you must manually set all the IP addresses.

12.7.5 Private IP address ranges

If your network is connected to the internet it is important to use a private IP address range. These are special IP addresses that will not be routed onto the internet. They are:

Start Address	Final Address	Subnet Mask
10.0.0.0	10.255.255.255	255.0.0.0

172.16.0.0	172.31.255.255	255.255.0.0
192.168.0.0	192.168.255.255	255.255.255.0

For Art-Net, the 10.x.x.x range must be used.

12.8 Repairing a Network Connection

If you are sure your network connection settings are correct or had them working but they are no longer working it may be necessary to repair the network connection. This is a simple windows function that can be accessed by doing the following:

-
- 1> *Go to control panel from the Start menu.*
 - 2> *Double Click on Network Connections*
 - 3> *Double Click on the Network Connection you would like to repair*
 - 4> *Click on the Support tab.*
 - 5> *Click Repair.*
-

Windows will complete a number of tasks and give you a message informing you it has finished repairing the connection. Click close then ok to all the open windows.

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13. Titan Mobile for Avolites users

Titan Mobile is designed to be used in conjunction with a laptop to be a small, portable but fully featured lighting control system with all the power of bigger Avolites consoles. It is fully compatible with the other Titan consoles – Pearl Expert Titan, Tiger Touch and Diamond 4 Titan – and shows can be loaded between the different consoles.

Obviously you've got a few less faders and buttons on the Titan Mobile panel, so this section helps you to move between consoles.

Note: Titan shows cannot be loaded into the classic Pearl Expert, or a Pearl 2000/2004/2008 system, because the show file has a different format.

13.1 The controls and screen

The controls on the Titan Mobile panel are organised slightly differently to the other consoles.

Button positions

The Attribute select buttons are in a horizontal row below the wheels, rather than being down the right hand side as on other consoles.

The "function" buttons are slightly changed and are now above the numeric keypad, also there is now a single Record button which can record Cues, Chases, Cue Lists and Palettes.

The Menu softkeys are down the right side of the panel.

There are new dedicated buttons for some features such as Shape and Blind.

Screen

Your laptop screen provides a user-configurable "workspace" which can show windows containing buttons for fixtures, palettes, groups, shapes, attribute control and more.

Titan Mobile is easiest to use with a touch-screen laptop, but you can also click the screen buttons with the mouse.

You can select which windows are visible, and their size and position, using the Window Control buttons above the numeric keypad. The View menu (press Window Open) also gives you some options. You can store different workspace layouts in the "workspaces" touch keys or in the 20 Workspaces buttons on the top right of the panel.

The right hand side of the screen is the menu area. To activate the menu buttons you can either touch/click the screen button or press the softkey buttons down the right side of the panel.

You can lock any menu (to keep it active) by pressing the Latch Menu button.

The bottom of the screen gives information about the current page of playback faders.

When selecting a range of fixtures on a touch screen, you have to use the screen slightly differently to how you'd use buttons; touch and

hold the first in the range, then touch and hold the last, then release the first; or you can drag your finger along the buttons.

Cues and Chases on the screen

In addition to the playback faders, you can store cues (memories) and chases on the screen using the Playbacks window. For playbacks which don't need a fader, this gives you instant fingertip access to an enormous number of effects.

Macro and executer buttons

10 buttons are provided in which you can store frequently used button sequences. Any sequence of button presses can be stored in each of these buttons making those repetitive programming tasks a thing of the past. If you need more than 10, you can show a Macro window on the screen.

Change button functions

You can change the functions of the blue and grey buttons on the playback faders to give you quick access to the functions you want, such as Preload, Stop and Go for chases, Tap Tempo and so on. This feature is called Key Profiles (see page 112).

13.2 New programming features

There are some great new programming features which previously were only found on the Diamond 4.

Fixture overlap, Attribute overlap

The overlap functions allow you to sequence the way a cue plays back. Normally when you fire a cue, everything would move to its programmed setting all together. The fixture overlap feature causes each fixture to move to the new setting in sequence, giving some amazing roll or peel effects without any programming. Attribute overlap is a similar effect with different attributes. When "busking", palettes can also be applied with overlap.

Fixture exchange and Copy Fixture

The Fixture exchange function enables you to replace fixtures which are used in your show with alternative fixtures, retaining important elements such as cue times, shapes and legends. It is very useful for touring shows and venues with a high turnover of events, allowing you to cope with different house rigs or equipment availability.

You can copy fixtures you already have in your show. The new copy will come complete with all the cues and palettes of the original fixture you've copied.

Multiple times

The Titan software allows multiple timers for cues. This means in a complicated show you can have lots of fades going on from different cues each under the control of a different timer.

Playback priorities

You can configure how playbacks will behave if you turn on two playbacks controlling the same fixture. For each playback, priority can be set to Low, Normal, High or Very High. If a fixture is being controlled by a playback and you turn on a playback of the same or

higher priority, then the new playback will take over. However, if the new playback is set to lower priority than the first playback, the fixture will not change.

This is useful if, for example, you've programmed looks using all your fixtures, then you decide you want a couple of them to spotlight a singer. If you set the Spotlight playback to be high priority, then while it is active no other playback will affect the spotlight fixtures.

Release

When a playback is killed, you can set how the LTP channels release. The default setting is to not release any attributes (i.e. LTP channels will not change when the playback is killed), but you can set attributes to revert to their state in the most recently active playback.

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14. Release notes

This section describes changes in the most recent version of software. Please ensure you save and backup your shows before attempting to upgrade any software.

Note: This section only lists the changes in the most recent update; for changes in earlier versions, please check the release notes provided on the system using the VDU menu option Help → Release Notes.

14.1 Version 4.0

14.1.1 Upgrading from previous versions

Version 4.0 is the first released version of Titan Mobile.

14.1.2 New features in v.4.0

Undo / Redo: You can now undo and redo up to 20 actions. This applies to the following actions:

- Clear
- Attribute adjustment (providing the Attribute Bank has been changed after the adjustment).
- Keypad input.
- Palette application.
- Fixture selection.
- Group selection.
- Off.
- On.
- Align.
- Flip.
- Shape application.
- Locate.

Fan across groups: You can now apply fan to a number groups rather than across individual fixtures. The option is accessed by holding down [Fan] where you can choose between:

- Ignore Groups – Fan treats each fixture individually whether selected individually or by a group.
- Fan Group as Fixture – All fixtures in each group take on the same value.
- Fan Within Group – Fan runs across individual fixtures within each group.

Freeze attributes: Freeze individual attributes of selected fixtures and/or whole selected fixtures through [Edit Fixtures] in [Patch]. Frozen attributes cannot be changed by either playbacks or programmer. Deselect frozen individual attributes of selected fixtures and/or whole selected fixtures, in [Edit Fixtures] in [Patch] to release.

Blind Mode for programmer: Blind Mode is activated and deactivated through the softkey options displayed when Shift is held down.

Blind for playbacks: An individual playback can be set to Blind through [Playback Options]. The playback will then only output to Visualiser and not the stage.

Thro, And and @: Thro, And and @ keys allow dimmers and fixtures to be selected and an intensity applied numerically via the keypad.

DMX output mapping: DMX output mapping is now available; this option is opened by selecting [DMX Settings] in System Mode. You are presented with a list of DMX Nodes and a list of DMX Lines. DMX Nodes can be assigned individually to DMX Lines by selecting their individual assign key alternatively, all DMX Nodes of one type can be assigned at once by selecting the assign key in the header of a DMX Node type. DMX Nodes can be cleared individually from DMX Lines by selecting their individual clear key alternatively, all DMX Nodes can be cleared from a DMX Line by selecting the clear key in the header of a DMX Line or all DMX Nodes can be cleared from all DMX Lines by selecting the clear key in the DMX Line header. Information about a DMX Node can be accessed using the DMX Node's individual information key.

DMX view: A DMX view in which the output of each DMX channel can be seen is now available through [Open Workspace Window], [DMX].

Wheel acceleration: The sensitivity of the encoder wheels, pan threshold and tilt threshold can all now be adjusted through [Wheel Sensitivity] from within [User Settings] in System Mode.

Russian language pack: Russian language pack available.

Chinese language pack: Chinese language pack available.

14.1.3 Improvements in v.4.0

Reverse shapes: Shapes can now be reversed on individual fixtures in Shape Generator.

Fixture order for shapes: When a shape is applied to a selection of fixtures it applies in the order the fixtures were selected and phase then uses that order when spreading the shape across the fixtures. The order of your fixtures can now be changed after a shape has been applied by using the [Fixture Order] option found in [Edit] within [Shape Generator].

Add and/or remove fixtures from a shape: New fixtures can be added and existing fixtures removed from a shape applied to a selection of fixtures and by accessing the [Add/Remove Fixtures] option found in [Edit] within [Shape Generator] and selecting the fixtures you wish to add and/or remove in the Fixtures window.

Keystone and blade graphical control: Keystone and/or blades of appropriate fixtures can be edited through a graphical interface accessed from the [Attribute Editor] in [Open Workspace Window]. Select keystone or blades from the Attribute Control options in the window and then adjust by selecting and dragging the corners or sides of the space displayed.

Picture legends: A picture legend can be assigned to any item for which it is possible to set a text legend. Select [Select Legend], select the item and then either select [Picture] or the pencil icon on the virtual icon to open the drawing space. Brush size, colour and erase are all available within the window; Enter applies the drawing to the item selected.

Set button and text size: The information button in the top right corner of each window opens options which allow you to change the size and position of that window and the button and text size to be used within that window.

Using Autoload in Cue Lists: It is now easier and faster to create an autoload step when recording a Cue List. Turn on Autoload Live Playbacks in the [Advanced Options] menu within Cue List Record; live playbacks are then recorded as Autoloads when a Cue List step is recorded removing the need to create blank steps and edit them to contain Autoloads.

Editing legends: When editing a legend the existing legend appears in the display area of the keyboard for ease of editing.

Timecode clock: A new workspace window is available which displays timecode as a digital clock including the ability to select the timecode source, an enable/disable button and play, pause and reset buttons for internal timecode.

Workspace window shortcuts: Pressing the View key and then one of the following keys will cause the corresponding workspace window to open. N.B. the LEDs of keys acting as workspace window shortcuts will flash once View has been pressed for ease of identification:

- Attribute Bank – opens the Palette window for the corresponding bank.
- Patch – opens the DMX patch window.
- Connect – opens the view cue window for the connected Cue List.
- Record Macro – opens Macro window

Toggle workspace windows: Holding down the Shift key and pressing the Min/Max Window Control key will cycle through workspace windows.

Fade effect: The performance of fade has been enhanced and is now smoother.

MIDI timecode settings: Glitch detection, tolerance and timeout can be set under [MIDI Timecode] within [User Settings] in System Mode.

14.1.4 Bugs fixed in v.4.0

Flash buttons did not register when a Swap button was depressed: Found in version: 1.5 – If a Swap button was held down whilst a Flash button was also pressed, the fixtures being flashed did not come on when the Swap button was released.

Macros including numeric input did not recall correctly: Found in version: 1.3.6 – Macros did not recall correctly if they included a numeric input.

Clear LED remained on after New Show or Load Show: Found in version: 3.1.

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15. Glossary of terms

ADDRESSES	The DMX Channels occupied by individual Fixtures. The first Channel occupied is usually encoded onto the Fixture somehow (often by switches or using a menu) and called its ADDRESS.
ALIGN	A means of copying Attribute characteristics from the first Fixture selected to other selected Fixtures, resulting in the Fixtures being aligned to each other.
ATTRIBUTE	One Channel or function of an Intelligent Fixture, such as "Colour Wheel".
ATTRIBUTE GROUPS	see IPCGBES.
AUTOLOAD	A playback which is automatically fired by a cue in a cue list. Enables a chase to be fired by a cue list.
BACKUPS	Copies of a show stored to an external storage device for safety.
BPM	Beats Per Minute. 60BPM is equivalent to one step per second.
BUSKING	Operating the system live (usually for live music) when you have insufficient programming and need to make up stunning effects as you go along using palettes etc.
CHASE	A sequence of one or more pre recorded steps which automatically run one after the other.
CHASE STEPS	Individual cues within a Chase. See above
COLOUR CHANGER	A mechanical Fixture for changing the colour of a light source, usually by scrolling through a roll of different coloured gels or by moving special filters into the light beam.
COLOUR MIX / CMY	A system of three filters that can each crossfade from white to a colour, or one colour to another. It is a feature of some Intelligent Fixtures, which enables thousands of different colours to be created.
CONNECTED CHASE	A Chase which has been brought under control of a chase Controller by pressing the CONNECT button.
CUE	A single stage look programmed onto a Playback button or fader. Also known as MEMORY, STATE, SCENE, LOOK.
CUE LIST	A sequence of cues programmed onto a Playback button or fader. Each cue can have its own delay and fade times and can also start other cues or playbacks. Also known as a CUE STACK or STACK.
CUE MODE	A playback format programmed into a Cue. There are Cue Modes 0 - 3.
DEVICE	See FIXTURE.

DIMMER	Device used to control the intensity of an individual light.
DMX	DMX512(1990) a specification for communication between control desks and Fixtures, Originally for Dimmers it has been adopted as a control protocol for most Intelligent Fixtures. It can carry 512 different Channels of data.
FADE	A continuous transition from one level to another.
FIXTURE	Any lighting instrument that is patched using a Personality. Generally refers to a moving light or colour changer, not an individual Dimmer channel. Also called Intelligent Fixture, Device, Instrument, Moving Light.
FLASH	Pushbutton which adds a playback into the existing output of the system. Historically called the ADD button. See also SWOP.
FLIP	A function for use with Moving Head Fixtures. They have two possible Pan and Tilt positions for each point on stage, and FLIP will alternate between them.
FOCUS	What Palettes are called on other Avolites systems. See PALETTE. May also be used in connection with moving fixtures to focus (set the sharpness) of a gobo projection.
FUNCTION WHEEL	A wheel which does not directly control an Attribute channel on a fixture, rather it controls only part of an attribute and another function wheel may control other parts. For example a rotating gobo attribute may have one function wheel to control continuous or indexed mode, and another function wheel to control rotation speed or position, though the actual fixture only uses one DMX channel to control both these functions.
GENERIC	Term used to indicate a Dimmer channel. See also FIXTURE.
GROUP	A GROUP is a pre-programmed collection of Fixtures that can be selected with a single button press.
HTP	Highest Takes Precedence, a mechanism for determining the output level of a channel being controlled by more than one Playback. The Playback outputting the Highest value at any given time will determine the level of the channel. Also see LTP.
HUD	Heads-up-display, an information screen shown on the external VDU monitor.
INCLUDE	A means of transferring the contents of a Cue or Chase Step into the Programmer.
INSTRUMENT	See FIXTURE.
INTELLIGENT FIXTURE	See FIXTURE.
IPCBES	The Attribute Groups, used by the system to conveniently group together similar attributes. For

	example the P(osition) group includes Pan and Tilt attributes.
LCD	Refers to the system's on-board displays (stands for Liquid Crystal Display).
LED	Refers to the small red lights within the buttons on the system (stands for Light Emitting Diode).
LINKS	Connections between cues in a Cue List or Chase enabling them to run on from one to another automatically.
LOCATE	A feature of the system that makes it easy to find your selected Fixtures by putting them in Open White. Pressing Shift+Locate additionally sets the Pan and Tilt at 50%.
LTP	Latest Takes Precedence, a mechanism for passing control of a channel from one Playback to another on the basis that the latest Playback Fader to be moved has control, providing that Playback Fader has moved past the Trigger point. (See TRIGGER POINT). Also see HTP.
MACROS	Macros allow functions programmed into an Intelligent Fixture by the manufacturer to be executed by sending a DMX command sequence from the system. They can allow you to reset the Fixture for example. The DMX command sequences are defined within the Personality File. Also used on Titan Mobile to refer to a stored sequence of button presses.
MEMORY	The name for a Cue on other Avolites systems.
MIDI	Stands for Musical Instrument Digital Interface. It is the established hardware and software specification enabling the exchange of data between digital musical instruments (such as keyboards) and other devices such as computers, sequencers and sound and lighting systems.
MENU LATCH	Provides functions for control of Moving Lights (Moving Light Menu).
ON and OFF	Any channel stored in a playback can be On or Off. A channel which is ON is changed by the playback when it is fired. A channel which is OFF is stored in the playback for future re-use but has no effect when the playback is fired.
OVERLAP	Sets how Titan Mobile allocates new values to a group of fixtures. 100% means that all fixtures are updated simultaneously. 0% means that the fixtures will be updated one after the other.
PALETTE	A term used to describe a referenced pre-defined state for an Attribute that can be recalled whenever required during programming. Each Fixture may be set to a different value in the Palette, the entries can be named, and recalled with a single button press.

PARK	A Parked fixture is one which is patched to a handle but has no DMX address set. This happens to a fixture when its DMX address is taken by another fixture during a later patching session; the Repatch function is used to give it a new DMX address.
PERSONALITY	A description of what Attributes a particular Intelligent Fixture has and how the system will patch and use these. It also determines which Attribute Wheel will control which Attribute.
PLAYBACK	Area of the system that can replay recorded Cues or Chases using Playback Faders.
PRELOAD	A playback button which sets the LTP channels in a cue but not the HTP channels. Used to pre-position fixtures before firing a cue. Also a cue list function which allows one cue to preload the LTP channels in another cue.
PRESET FOCUS	What Palettes are called on other Avolites systems. See PALETTE.
PROGRAMMER	The part of the system which contains Channel information which has been changed by the user, prior to recording.
SAFE	Desk mode in which all Playback functions are enabled, but all programming functions disabled.
SELECTED	A Fixture that is under manual control.
SEQUENCE	See CHASE.
SHAPE	A preprogrammed effect available which is applied to an Attribute. It can then be customised and stored in a Cue.
SHARED PALETTE	A Palette in which information is only stored for one Fixture, but is available to all Fixtures of that type.
SOFTKEY	Buttons marked A-J, with different functions which are shown on the LCD screen above.
STACK	See CUE LIST.
SWOP	Type of flash button which turns on the output being flashed and turns off all other output while the button is pressed. Sometimes called "Solo". Also used for selecting fixtures or playbacks when programming. See also FLASH.
TABLE	List of pre-defined levels for an attribute allowing settings to be recalled by name (for example the colours available from a colour wheel may be found in a table).
TIMECODE	An electronic timer signal which allows cue list playback to be synchronised to a soundtrack or other events. The system can read MIDI timecode or can take a timecode from the Windows sound player application "Winamp". An internal free-running timer is also provided.
TRACKING	A mode in which Moving Lights can move around an area all pointing at the same spot.

TRAINING	The process of recording points on a stage so that the system can work out the TRACKING for Moving Lights.
TRIGGER POINT	The level set in the User Settings which determines at which point a Playback Fader triggers the LTP Channels programmed onto it.
UNFOLD	A function that allows Chase Steps to be laid out onto Playback Faders for easy editing.
USER SETTINGS	User definable desk settings. Found in the Tools menu on the VDU.
VDU	A computer monitor plugged into the VDU socket on Titan Mobile giving further information about the operation of the system.
VIRTUAL DIMMER	Used with LED RGB (red-green-blue) colour mixing fixtures, these add an intensity function to the fixture which masters the RGB controls on the fixture when it does not actually have an intensity control channel.
WIPEALL	A process which clears all the previous programming out of the desk, but does not touch the System Software.
WHEEL	Wheels are used on Titan Mobile to set Fixture Attributes and to control chases and cue lists (see FUNCTION WHEEL).

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Softkey Menu items are indicated with capital letters (for example "Activate A Timecode Cuelist")

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