

Titan Release Notes

Version History

Version	Release Date	Details
15.0	26/04/21	New features, improvements and fixes.

Version 15.0

Upgrade Procedure

1. Upgrading from: All Platforms:

Please note that version 12.0 and above will require an AvoKey dongle. This can be purchased from Avolites and is included free of charge for new consoles purchased from 1st June 2019. For consoles where it is not already pre-installed this will need to be licensed and must be inserted in the correct USB port (please refer to AvoKey installation instructions) for the software to be licensed and run. You can find detailed information about the AvoKey dongle and the licensing procedure [here](#). It is important that a matching version of the personality library is installed. The Titan Fixture Library installers and instructions can be found on the downloads page of the personality website.

2. Upgrading from: Consoles 12.0 and above:

Please ensure you save and backup your shows before attempting to upgrade any software. An automated upgrade path from Titan 12.0 and above is provided. You can download the latest Titan software by clicking on the relevant console [here](#). Full instructions for upgrading both with an installer and a recovery stick are supplied with the download and can be found in the console manual. The installer upgrade procedure is reproduced briefly below: Please save the software to the root directory of a USB stick or other storage device. Insert the USB stick in the console and select Control Panel > Titan Installers > Titan 15.0 Setup on the tools menu. Follow the instructions presented by the installer, taking care to read each step carefully. Once the setup completes you need to restart the console. When the console restarts it should be updated to the new software; please check this by reading the version number in system mode.

3. Upgrading from: PC any version:

Windows 10 (64-bit) is the only version of Windows supported for PC Suite, which includes Titan Go, Titan Mobile, Titan Simulator and Personality Builder. Please ensure you save and backup your shows before attempting to upgrade any software. You can download the latest Titan software [here](#). When it has finished downloading find the setup file and double click to run it. Follow the instructions presented by the installer, taking care to read each step carefully. Once the setup completes you need to restart the computer. This requires an AvoKey which must be inserted in one of the USB ports. If you have not done so previously follow the instructions in the Authenticator to license the software.

4. Upgrading from: Titan Remote Apps:

Users wishing to use Titan Remote with version 15.0 should download the new Titan Remote V15 app from the relevant app store. The existing apps will continue to work with previous Titan software versions. Please note the Known Issues for the Android app.

New Features

1. Timeline:

A new feature called Timeline has been added. This is designed to make programming timecoded shows easier.

A timeline can be thought of as simulating moving playback faders and pressing the associated buttons at specific points in time. Unlike other types of playback, a timeline playback does not contain any control information but instead comprises 'triggers' that fire existing playbacks or various associated actions using the playback times at specific points in time. A show can contain multiple timelines and they can run simultaneously.

Each timeline can be split up into separate 'tracks' providing a way to organise and manipulate sets of triggers. Triggers can either be added manually or by recording live, including the ability to merge multiple live recordings to build up complex effects with the option to edit later if required.

A timeline playback can be linked to one of the various timecode sources or unlinked (default). When linked to an external timecode source the triggers in that timeline will play according to the source time. When unlinked or linked to internal timecode the playback of the timeline can be controlled manually (manual controls for timelines linked to an internal timecode control the internal timer directly).

Where a timeline playback is assigned to a handle with a fader the fader level affects the intensity of any playbacks being triggered.

By default, the frame rate displayed follows the timecode source. Optionally this can be overridden via the Display Frame Rate timeline user setting providing the ability to view and edit in a specific frame rate when the source is not available. Options are 'Follow Source', '24 FPS', '25 FPS', '30 FPS', '100 FPS' and '1000 FPS'.

(for further details see the end of the New Features section)

2. **Clear Action Precedence:**

Some new options have been added to determine what happens when clear is pressed. These provide the ability to clear the programmer and selection separately in a two-part action where the first press clears one part and the second clears the other.

A 'Clear Action Precedence' option has been added to the User Settings Clear section and the Clear Options menu (Avo+Clear -> [Clear Options]). This comprises three toggle settings:

- 'Selection With Programmer' - Both the selection and programmer are cleared together in a single press. This is the behaviour in all previous versions and is the default.
- 'Selection Then Programmer' - Clears the selection if there is one, otherwise clears the programmer.
- 'Programmer Then Selection' - Clears the programmer if it contains any data, otherwise clears the selection.

If the 'Clear Selected Fixtures' option is enabled the action will be applied to the current selection if there is one.

3. **Timecode Connected Cuelist Playback Option:**

A new 'Timecode Connected' toggle option has been added to Cuelist Playback Options. This provides the ability to temporarily prevent the cuelist from reacting to timecode.

When set to disabled the Cuelist Playback View Timecode column header will indicate this with a black background and '(Disconnected)'.

4. **Timeline (item types):**

A timeline can contain any of the following triggers:

- Set Level - Sets the playback to a level over a fade time (equivalent of moving a playback fader).
- Goto cue - Go cue in a cuelist (next cue or specific cue number). This will follow the fade times in the cuelist. Any disabled cues will be ignored.
- Flash - Flash a playback.
- Timed Flash - Timed flash of playback.
- Flash and Go - Flash and go for a cuelist.
- Timed Flash and Go - Timed flash and go for a cuelist.
- Swop - Swop a playback.
- Preload - Preload the LTP values of a playback over a period of time.

When unlinked or linked to internal timecode 'Wait For Go' triggers can be used to specify points where the timeline will pause until you press play again allowing for situations where it is not possible to specify exact times, for example an awards type show: When the person's name is announced you fire the timeline. This might fire some shapes but it is not known how long they'll take to walk on to the stage. To allow for this you can use a 'Wait For Go' which will pause the timeline. The shapes will keep running while the timeline is paused until they've arrived on stage at which point Go will resume the timeline which might fade out the shapes.

Timelines can also contain markers. These are guides that can be used to align triggers or just help identify specific points in the timeline. These can be created manually or imported from .csv files providing a way to use guides exported from other sources such as Reaper.

5. Timeline (playbacks - general):

A new Timeline playback type is now available. Pressing RECORD reveals a new [Create Timeline] softkey and selecting this followed by an empty playback handle will create a new timeline playback. A new 'Timeline' filter has been added to the Show Library window - when selected this will show handles for any timeline playbacks.

The Timecode Source can be selected in the Timecode group of the timeline playback options along with a Timecode Source Unlinked toggle providing an option to run the timeline independently of the timecode when enabled (default).

When a new timeline is created it is initially 30 seconds long and contains one empty track.

The timeline start and duration times can be changed either in the timeline [Edit Times] menu or [Options] menu under Times. If the 'Kill Out Of Range' timeline option is enabled (default) the timeline will automatically be killed when it reaches the end time. When this is disabled the timeline will keep playing until it is stopped regardless of the end time. Enabling the 'Loop' timeline option will cause the timeline to loop back to the start whenever it reaches the end when unlinked or (when active) linked to internal timecode (note if a timeline linked to an internal timecode is set to loop the timer will run according to this loop and therefore affect any other timelines linked to the same timecode source).

Additionally, it is possible to set an offset time providing a way to apply a time offset to the entire timeline while maintaining a zero-timecode base on the underlying trigger times. Smaller offsets of a few frames can be useful to synchronise with audio/video. This can be set in the Set Timeline Offset menu accessed via [Set Offset] in the timeline [Edit Times] menu ([Edit Times] -> <select timeline playback>) where you can [Add] or [Subtract] the [Nudge Amount] to or from the current offset (shown in the prompt area) and [Reset Offset] will reset the offset to 0.

By default, triggered playbacks will follow their local release settings. Where the triggered playback release mask or release time is set to global they will be released according to the 'Timeline-Global Release Mask' (default is exclude all) and 'Timeline-Global Release Time' (default is 2s) found in the Release group of playback options. Enabling 'Override Playback Release' will apply these settings to all triggered playbacks, regardless of their local release settings. This can be useful where the playbacks all have different release masks and you don't want to check or change them individually.

When the 'Release Playbacks to Home' toggle option is enabled (default) attributes will return to their home values if there is no previous LTP value source when a playback is killed by the timeline. This prevents LTP values hanging around and can be helpful to ensure the output is more predictable when scrubbing the timeline and to understand where values are coming from.

6. Timeline (playbacks - faders and sequence control):

Where available the touch legend area of a timeline playback displays the current time. If the timeline is linked to timecode this will change to read 'TC Disabled' in red if the timecode is disabled.

Where the timeline playback handle has a fader the fader scales the intensity level of any applicable triggers.

Triggers will not fire unless the timeline is activated. Lifting a playback fader from zero will activate the associated timeline and RELEASE or hold Avo -> <select timeline playback> will deactivate.

- Where a timeline is not activated and the 'Activate In Range' timeline option is set to 'Activate at 100%' (default) the timeline will automatically activate and the timeline fader level will automatically be set to full when it reaches the start time. This ensures that timelines output as expected and can be used unattended. On non-motorised faders the fader needs to be manually set to full in order to take control of the intensity if required.
- Where a timeline is not activated and the 'Activate In Range' timeline option is set to 'Activate at 0%' the timeline will automatically activate and the timeline fader level will automatically be set to zero when it reaches the start time. This provides a way to take manual control of the intensity from the start. On non-motorised faders the fader needs to be manually set to zero in order to take control of the intensity if required.
- Where a timeline is not activated and the 'Activate In Range' timeline option is set to 'Off' the timeline will not be automatically activated and instead will activate when the associated fader is raised from zero.

Where a timeline is inactive the time will appear in orange to indicate this and when a timeline is active and the fader level is at zero the associated LED will pulse to provide a visual indication that there will be no intensity output.

Some playback options are available to determine the behaviour of the associated fader when the timeline is unlinked or linked to an internal timecode source:

- 'Fader Raised Action' - When set to 'No Action' (default) the timeline will do nothing when the fader is raised from zero. When set to 'Play' raising the fader from zero will play the timeline or start the internal timer.
- 'Fader Zero Action' - When set to 'No Action' the timeline will do nothing when the fader reaches zero. When set to 'Stop' the timeline or internal timer will stop when the fader reaches zero. When set to 'Pause' the timeline or internal timer will pause when the fader reaches zero.
- 'Kill At Zero' - When enabled the timeline will be killed automatically and the timer will be stopped when the fader reaches zero.

Pressing the CONNECT/CUE button followed by a timeline playback will display the current time in the wheel display and connect the timeline to the sequence controls where, when the timeline is unlinked or linked to an internal timecode source, the GO button functions as pause/resume, the STOP button stops the timeline or internal timer and the NEXT/PREV buttons skip the timeline or internal timer forward or backwards by the current Timeline Skip Length found in User Settings under Timeline (default 5s).

7. Timeline (playbacks - key profiles):

Various key profile actions are available for timeline playbacks providing options to control aspects of the timeline via the associated buttons:

- 'Flash Timeline' - equivalent to lifting the timeline playback fader while pressed.
- 'Latch Timeline' - toggles the timeline level between full and zero (default touch action).
- 'Stop' - stops the timeline when unlinked or the internal timer when linked to an internal timecode source.
- 'Play or Restart' - plays or restarts the timeline when unlinked or the internal timer when linked to an internal timecode source.
- 'Pause or Resume' - pauses/resumes the timeline when unlinked or the internal timer when linked to an internal timecode source.
- 'Restart' - sets the time back to the start of the timeline when unlinked or the internal timer when linked to an internal timecode source.
- 'Skip Forward' - skips the timeline time forward by the current Timeline Skip Length found in User Settings under Timeline (default 5s) (when unlinked or linked to an internal timecode source).
- 'Skip Backward' - skips the timeline time backwards by the current Timeline Skip Length found in User Settings under Timeline (default 5s) (when unlinked or linked to an internal timecode source).
- 'Play From Cursor' - plays the timeline from the current cursor position when unlinked or the internal timer when linked to an internal timecode source.

8. Timeline (Timeline View window):

By default, whenever a new Timeline playback is created it will automatically open the Timeline View window. This window provides a way to view, add items, edit and replay the timeline via an intuitive graphical interface. This window can also be accessed at any time by pressing the OPEN or VIEW buttons (depending on console) followed by a timeline playback handle or by touching the associated legend where applicable. Settings that determine whether this window opens automatically can be found in User Settings under Timeline.

The link button at the bottom-left of the window mirrors the Timecode Source Unlinked playback option and can be used to toggle the timecode between linked and unlinked (default). When unlinked the timeline stops listening to the timecode source providing the ability to make edits independently of the timecode source.

Where a timeline is linked to a timecode with internal source or where a timeline is not linked to timecode (default) various transport controls are available at the top left of the window. These comprise reset cursor to start time (|<), play from cursor (|>), play/pause (>||), stop & reset to start time (square) and record (circle). Pressing play or play from cursor will play unlinked timelines or the internal timecode from the start time or cursor position respectively. Pressing stop will stop and reset the timer to the start.

While the Timeline View window is selected it is also possible to control timelines that are unlinked or linked to an internal timecode source via a keyboard where pressing space will pause or resume the timeline/internal timer, pressing S will stop the timeline/internal timer and Shift+Space will play from the

current cursor position.

Where a timeline is linked to a timecode which is not set to internal source all transports controls except record are replaced with the current timecode/source and any triggers will fire according to the timecode. If the timecode is disabled it will read 'TC Disabled' in red instead.

When playing the viewport automatically scrolls to ensure the current time is in view.

Next to the transport controls is the current time with framerate and any offset (if set) underneath. An orange time indicates that the timeline is not currently active and the playback triggers won't fire. If the timeline is connected to a timecode source and the source is disabled the time will display in red.

In the 'sidebar' below these you can find the tracks & any associated playbacks that are being triggered.

- Selecting the arrow button to the left of a track header will cycle the track between expanded (default), semi-collapsed and collapsed view modes providing control over the amount of height a track occupies.
- Pressing the padlock button toggles the track between locked and unlocked (default). When tracks are locked they cannot be edited - this is useful to prevent accidental edits. Locked tracks are indicated with a black background.
- Pressing the power button toggles the track between muted and unmuted (default). While tracks are muted any playback triggers in that group will not play back providing a way to temporarily disable all the triggers in a track. Muted tracks are visually faded.
- There are two arrow buttons for each playback that is being triggered. These can be used to select the next or previous trigger in chronological order for editing.

The playback headers in the sidebar are linked to their underlying playbacks and the majority of actions are common. For example, tapping on a playback header will open the underlying playback view. RECORD, OPEN/VIEW, UNFOLD, INCLUDE, SELECT IF, UPDATE, RELEASE, [Edit Times], [Options], and [Set Legend] actions will apply directly to the underlying playback. Exceptions to this are COPY, MOVE and DELETE which perform editing functions and do not affect the underlying playback.

The right-hand side of the window contains the viewport comprising a time ruler with any items global to all tracks (such as markers and wait for go triggers) at the top and any playback triggers relating to each track below this along with an 'overview bar' representing the entire timeline (from start to end time) at the bottom.

A light blue vertical line represents the current 'live' time in both the viewport and the overview bar.

A white vertical line and triangle represents the current cursor position in both the viewport and overview bar. The cursor position sets the time to play from when using play from cursor and also a time to align triggers to. Touching/dragging in the ruler will move the cursor accordingly. If the timeline is unlinked or linked to an internal timecode source adjusting the cursor will immediately change the live time to this point and if the timeline is active this will fire any corresponding triggers, even when paused. This can be useful if you want to quickly check the triggers at a specific point time. Selecting this also provides the ability to set the cursor position by wheel or numerically via the associated @ menu. The @ menu includes additional softkey options to [Reset to Start Time] and the ability to [Add] or [Subtract] by the [Nudge Amount]. The Select Cursor context menu toggle can be used to select the cursor which can be useful if the cursor is difficult to select or if you want to ensure the cursor position doesn't accidentally change.

By default, Markers are represented as a vertical yellow line and handle in the ruler and as a yellow 'pip' at the top of the overview bar. Where a legend is set it will appear next to the handle in the ruler and the marker colour can be changed via set legend/ Halo.

By default, Wait For Go triggers are represented as a vertical grey line and handle (circle containing a '||' pause symbol) in the ruler and as a white 'pip' at the top of the overview bar. Where a legend is set it will appear next to the handle in the ruler and the outline colour can be changed via set legend/ Halo.

Any areas in the viewport that are beyond the bounds of the start and end times are visually faded.

When tracks are in the fully expanded view mode triggers for each playback in any given track are aligned with the playback in the sidebar. The height of level triggers indicates the playback level resulting in a graphical representation of a playback fader level over time. Where the triggers for a particular playback include any button triggers or go cues for cuelists the height of the playback row is increased to show these above with any level triggers below. When tracks are in the semi-collapsed view mode any triggers at unique times will be collected in a single row and when tracks are fully collapsed all triggers are collected together visually faded on a single row in line with the track header. (note the playback headers are not relevant to the collapsed modes and therefore only show when in the fully expanded view mode)

Trigger 'groups' (for example the time between a playback level trigger going from zero to a level above zero and when it returns back to zero or the time between a button on and off pair) are represented with a filled background in a darker shade than the triggers/levels.

If a playback has a halo set this is shown on the left-hand side of the playback in the sidebar and is used to colour the level triggers for that playback. Otherwise, if the track has a halo this will be used to colour any level triggers contained in the track. Where there is no track halo and no halo set for a particular playback the level triggers for that playback will appear in green.

Where relevant, on button actions are depicted with an up arrow and off actions as a down arrow. 'F' represents flash; 'F T' represents timed flash; 'F G' represents flash & go; 'F TG' represents timed flash & go; 'S' represents swop; 'P' represents preload. Go for cuellists are represented with '>'. Go specific cue for cuellists include the cue number. Disabled cues appear visually faded. Where a flash on or swop on trigger exists with no subsequent off trigger they are indicated in red.

In the overview bar level triggers are represented as rectangular blocks using the same colours as in the viewport with button and cuellist go triggers superimposed as white dots. If there are multiple tracks each track is represented as a separate row.

9. **Timeline (Timeline View window - navigating):**

When the view is first opened the viewport will show the full length of the timeline (from start to end time).

The viewport can be horizontally zoomed via wheel (by toggling 'Timeline Wheels' on in the context menu), by holding control on a keyboard and using a mouse scroll wheel or by dragging the handles at either end of the overview bar. When adjusting zoom by wheel the value equates to the timespan of the viewport and, if required, can be set numerically via the associated @ menu.

When zoomed out such that the viewport shows areas beyond the start / end times arrows will appear at the ends of the overview bar to indicate this. When zoomed in, the window on the overview bar represents the timespan currently visible in the viewport with any triggers outside this visually faded. The viewport can be panned by dragging this, touching in the overview bar to pan directly to that time (and drag if required), by using the keyboard cursor left/right keys, by mouse scroll wheel, by touching and dragging in the viewport (with pan mode enabled in the context menu or by selecting the hand icon) or via wheel (with Timeline Wheels enabled in the context menu). When adjusting horizontal scroll by wheel the value equates to the left-most time and, as with zoom, it is possible to enter a horizontal scroll position numerically via the associated @ menu. Fit to View in the context menu can be used to reset the viewport zoom to show the full length of the timeline.

By default, if there is not enough vertical space to show all the information a vertical scroll bar will appear which can be used to navigate. This can be toggled on/off in the window appearance settings. When turned off the scroll bar will be collapsed to indicate the current scroll position (where relevant). The vertical scroll position can also be adjusted by wheel (with Timeline wheels enabled in the context menu), by using the keyboard cursor up/down keys, by holding shift on a keyboard and using a mouse scroll wheel or by touching and dragging in the viewport (with pan mode enabled in the context menu or by selecting the hand icon).

10. **Timeline (Table View window):**

Selecting the Open Table View in the Timeline View context menu will open the Timeline Table View window. This provides a way to view, add and edit items in a non-graphical 'raw' form. Optionally this window can be set to open automatically when creating a new timeline in User Settings under Timeline.

Each row in the table view represents a trigger with the triggers ordered chronologically. If required, the view can be filtered to include/exclude markers or specific tracks by toggling the relevant option on the left-hand side of the window.

- The 'Time' column represents the time the item occurs.
- Where relevant the 'Track' column represents the track the item is assigned to. Triggers are represented by the track legend. Markers and Wait for Go items are represented by 'Markers' as these are global to all tracks within a timeline.
- Where relevant the 'Referenced Playback' column represents the playback a trigger is related to. These are represented with the playback legend and selecting the associated 'View' button will open the Playback View for the associated playback. Markers and Wait for Go items cannot reference playbacks and are therefore empty.
- The 'Action' column represents the item type comprising Set Level, Goto Cue, Flash, Timed Flash, Flash and Go, Timed Flash and Go, Swop, Preload, Marker and Wait For Go.
- Where relevant the 'Value' column represents the value corresponding to the trigger. For Set Level triggers this will show the level as a percentage and the time taken to reach this. For Goto Cue triggers this will show 'Next Cue' or the cue number and legend as appropriate and selecting the associated

'View' button will open the Cue View for the associated cue. For Swop and the various Flash triggers this can be either 'On' or 'Off' and for Preload triggers this represents the time over which the associated playback's LTP values are set. Marker and Wait for Go items do not have any values and are therefore empty.

When active a blue line under a row represents the last trigger fired. Disabled cues appear visually faded.

Selecting the 'Open Timeline View' context menu option will open the Timeline View window for the timeline providing a quick way to open the Timeline View window complementing the option to open the Timeline Table View window in the Timeline View context menu.

The 'Import Markers' context menu option provides a way to import a markers .csv file via the Timeline Table View window.

Similar to the Timeline View window, pressing [Set Legend] then selecting one or more rows will set the legend or halo for the associated underlying playback.

11. **Timeline (adding items - manual):**

The add (+) button in both the Timeline View and Timeline Table View windows toggles a popup menu where you can select items to add to the timeline manually.

- o Blank Track - adds a new track.
- o Marker - adds a new marker.
- o New Playback - adds a level group for a new unassigned playback containing anything currently in the programmer.
- o Existing Playback (or selecting playbacks) - adds a level group for the selected playback(s) (or unassigned copies of).
- o Set Level - adds a single level trigger for the selected playbacks (useful if you want to add extra fade steps to an existing level group).
- o Goto Cue - adds a goto cue trigger for the selected cue list playbacks.
- o Playback Preload - creates a preload trigger for the selected playbacks (or unassigned copies of), selected level group(s) or for all level groups in a track.
- o Flash - adds a flash group for the selected playbacks (or unassigned copies of).
- o Swop - adds a swop group for the selected playbacks (or unassigned copies of).
- o Wait For Go - adds a new wait for go trigger.

Choosing 'Blank Track' will add a new empty track to the timeline.

Choosing one of the remaining options and selecting any playbacks where relevant will open a menu where inputting a time and then selecting [Record At]/[Reference At] or pressing <enter> will add the chosen item at the specified time; Selecting [Record at Live Time]/[Reference At Live Time] will add the chosen item at the current live time; Touching in the viewport in the Timeline View window will add the chosen item at the time and (where relevant) track touched and, similarly, selecting anywhere on a row in the Timeline Table View window will add the chosen item at the time and (where relevant) track corresponding to that trigger.

Choosing 'Playback Preload' followed by a track header will add a preload trigger to all level groups in that track. Choosing 'Playback Preload' and then selecting one or more level groups will apply a preload trigger to the selected level groups.

Additional menu options are available depending on the item being added:

- o When adding 'Existing Playback', 'Flash' and 'Swop' items, [Reference Existing Playbacks] will add triggers that reference the selected playback(s) (default). Toggling this to [Create New Playbacks] will create unassigned copies of the selected playback(s) and add triggers that reference the unassigned playback(s) instead.
- o When adding 'New Playback' or 'Existing Playback' items enabling the [Create Preload Trigger] option will also add an associated preload trigger.
- o When adding 'Existing Playback' items if [Cue List Go Triggers] is set to 'All', Goto Cue triggers will be created for all the cues in any cue list playbacks in the selection. If [Cue List Go Triggers] is set to 'None' a single level trigger will be created for any given cue list playback. If [Cue List Go Triggers] is set to 'Timecode' Goto Cue triggers will be created for any cues in any cue list playbacks that have timecode values using the timecode values as the trigger point providing a quick way to convert existing timecode cue lists into timelines. Note that when using the [Cue List Go Triggers] option timecode will automatically be disconnected on the associated cue list playback. If required, this can be reconnected via the playback options for the cue list playback.

- When adding 'Flash' items toggling the [Flash Mode] option between 'Flash' (default), 'Timed Flash', 'Flash and Go' and 'Timed Flash and Go' will add a flash trigger of the chosen mode. If [Flash Type] is set to 'On/Off Pair' (default), it will add a pair of flash on and flash off triggers for each of the selected playback(s). Toggling this to 'On' will add only flash on triggers and 'Off' will add only flash off triggers. Normally you would always have a pair. If one or the other is missing the latter two options provide a way to restore.
- When adding 'Swop' items if [Swop Type] is set to 'On/Off Pair' (default) it will add a pair of swop on and swop off triggers for each of the selected playback(s). Toggling this to 'On' will add only swop on triggers and 'Off' will add only swop off triggers. As with flash triggers normally you would always have a pair. If one or the other is missing the latter two options provide a way to restore.
- When adding 'Set Level' items [Level] can be used to set the level of the trigger.
- When adding 'Goto Cue' items if a single cue list playback is selected selecting [Target] will open a sub-menu where you can select the cue or [Next Cue] (default). If multiple cue list playbacks are selected the [Target] is fixed as [Next Cue].

New level groups will default to 100% level. The default length for level groups, flash and swop on/off pairs and cue triggers (when adding level triggers for cue lists with the [Cue List Go Triggers All] option enabled) is defined by 'Default Playback Length' which can be found in User Settings under Timeline. Similarly, the default fade time for preload is defined by 'Preload Time' which can be found in User Settings under Times.

Level triggers can also be added manually using the following methods:

- RECORD -> touch on Timeline View viewport/ Timeline Table View row adds a level group to the timeline currently being viewed for a new unassigned playback at the time touched.
- RECORD -> <select timeline playback> opens the same menu as when selecting 'New Playback' from the Add Timeline Item popup where the target is the selected timeline playback.
- COPY -> <select playback(s)> -> touch on Timeline View viewport/ Timeline Table View row adds level groups for the selected playback(s) to the timeline currently being viewed and at the time touched.
- COPY -> <select playback header in Timeline View> -> touch on Timeline View viewport adds a copy of all the triggers for the selected playback/track to the track starting from the time touched, maintaining offsets.
- COPY -> <select playback header in Timeline View> -> select track adds a copy of all the triggers for the selected playback/track to the selected track maintaining all times and offsets.
- COPY -> <select playback(s)> -> <select timeline playback> opens the same menu as when selecting 'Existing Playback' from the Add Timeline Item popup where the target is the selected timeline playback.

Where relevant enabling the Create New Playbacks option will add triggers for new unassigned playback(s) that are copies of the original playbacks. This is useful if you want different playback timings and where the timings will give different results to fader level.

12. Timeline (adding items - import markers):

Selecting the 'Import Markers' context menu option in the Tools sub-menu opens a menu from which you can select a .csv file. This provides a way to import markers created in another application such as Reaper. Suitable locations are My Documents\Titan\Markers, USB Stick\Titan\Markers, USB Stick\Titan or USB Stick root.

The marker import mapping is defined in MarkerImportMappings.xml and is included in the Titan Fixture Library installers. This is located in the fixture library folder and can be edited to create custom mappings if required. If this is not present you will need to download and install the latest library.

It is also possible to import markers via WebAPI
http://127.0.0.1:4430/titan/script/2/Timelines/CreateOrUpdateMarker?handle_location=RollerA_1_1&externalId=test&time=00:00:05.15/30&legend=test.

13. Timeline (live record):

Pressing record in the Timeline View window or selecting [Live Record] from any of the add trigger menus (for example RECORD -> <select timeline playback>) will open the Timeline Live Record menu where you can optionally specify the target track (including a new track if required) and start/end times of the live record (similar to 'punch in/out' in audio recording) along with a softkey to quickly reset these. In the Timeline View window a red highlight representing the live recording time is displayed on the ruler, track and overview bars along with red 'pips' at the start and end times.

Pressing the Timeline View record button a second time, pressing play or selecting [Start Live Record] will begin the live recording. This will then either follow the timecode time (if linked) or the internal time (when

unlinked). When the live time is within the live record times the track and overview bar in the Timeline View window will highlight in red and it will capture firing any playbacks including fader level where applicable (level trigger) or pressing the associated flash or swop buttons. While in live record any captured level triggers within the live start and end times will appear immediately in red in the Timeline view window. If no live record end time has been set and the timeline is not set to loop the timeline end will automatically extend until live recording is finished at which point the timeline end time will adjust to the end of the final trigger. If the timeline is set to loop it will keep looping between the start and end times until the live record is ended.

While live recording, the global release settings will temporarily change to match the timeline settings. This ensures the output during capture will be the same when played back (based on the current settings). When live record is ended the original global release settings will be restored.

While in live record mode the prompt will show the Global Release Override settings and the logo will pulse in red, a red border will appear on all displays, the record button in the Timeline View window will pulse in red, the timeline playback will highlight in red and the associated LED will flash where applicable providing a clear and hopefully unmissable warning! If for any reason you leave the live record menu you can re-enter it by touching the prompt area.

Pressing the Timeline View record button again or selecting [Merge] will merge any captures into the target track and end the live record session. [Replace] will replace the target track with the captures and end the live record session. [Cancel Live Record] will discard any captures and end the live record session.

Ordinarily using the faders when live recording can create large numbers of level triggers which can be difficult to edit and may not be what you want - for example you will often just want a simple linear fade. When enabled (default), [Auto-Simplify] will reduce the number of steps in fader moves once the live record is complete. It is recommended you leave this enabled wherever possible to reduce the resources required but if necessary you can turn this off (an option to toggle this on/off can also be found in User Settings under Timeline).

Masters are not live recorded. This includes Group, BPM, Size, Rate, Intensity and actions triggered via the Scene Master.

14. **Timeline (editing - overview):**

After triggers have been added to a timeline they can be edited via the Timeline View or Timeline Table View.

15. **Timeline (editing - Timeline View window):**

In the Timeline View window touching a trigger in the viewport will select it. Touching in the shaded area representing a level group or between an on/off pair will select all the triggers in the level group or both the on and off triggers respectively. Selecting the level group or on/off pair again will cycle through the individual triggers in the level group or between the on and off trigger respectively providing a way to quickly select an individual trigger within a group or on/off pair. With the Selection tool enabled (pointer icon or 'Tool Select' context menu toggle) dragging a marquee will select any triggers intersecting with the rectangle (while dragging these highlight in light blue with a vertical line representing level triggers so that you can see what will be included in the selection). Selections are additive and can be cleared either by touching in an empty area of the viewport or via the Clear Trigger Selection context menu option.

Pressing the left or right arrow in a playback header will clear the current trigger selection and cycle through each trigger in that playback chronologically providing a way to select individual triggers.

Touching and dragging a selection will move the selection to the new time maintaining any relative offsets. Similarly pressing the left or right cursor keys on a keyboard will nudge the selection forwards or backwards in time while maintaining any relative offsets.

Pressing the Del key on a keyboard will delete all items in the selection.

Selecting Tools in the context menu will reveal the following options:

- Simplify Selected Triggers - this will try to convert level triggers in the selection to linear fades reducing the number of level triggers in level groups. This is particularly relevant for level triggers recorded live which can create large numbers of triggers that might be difficult to edit and provides an alternative to 'Auto-Simplify' post-recording.
- Smooth Selected Triggers - where more than one level group for a particular playback is selected this will set the fade time of a trigger to the time of the next trigger so that there is a continuous fade.
- Crop Start Time To Triggers - this will set the start time of the timeline to the first trigger in the timeline.
- Crop Duration To Triggers - this will set the duration of the timeline such that it ends after the last trigger.

Pressing COPY or MOVE followed by a trigger, trigger group, (marquee) selection of triggers or playback header provides the ability to copy or move the triggers (selecting a playback header will select all triggers for that playback/track). Touching in the viewport will copy or move the first of the selected triggers to the time touched with all other triggers maintaining their offsets relative to this. Selecting a track header will copy or move the selected triggers to the selected track maintaining all times. If [Use Referenced Playbacks] is selected when copying the new triggers will trigger the source playback. If [Create New Playbacks] is selected new unassigned playbacks will be created and the new triggers will reference these instead. Note copy or move does not affect the underlying playback(s).

Pressing DELETE followed by a playback header in the sidebar provides the option to delete all triggers for the selected playback/track. This does not delete the underlying playback. Additionally, pressing DELETE followed by a trigger, trigger group or selection of triggers provides the option to delete the selected triggers and DELETE followed by a track header provides the option to delete the track.

Note when selecting items to copy, move or delete the sidebar will highlight in red if all of the triggers for a particular playback are selected to indicate this.

Any new unassigned playbacks created via a timeline can be found in the Show Library under 'Timeline' when filtered to 'All' or 'Playbacks' and with the context menu option 'Show All Handles' or 'Show Unassigned Handles' enabled.

16. **Timeline (editing - general):**

Trigger selections are synchronised between the Timeline View and Timeline Table View. If the Timeline Table View window is selected, selecting triggers in the Timeline View window will connect the wheels to relevant actions and highlight the associated rows with a white rectangle representing the current property. The left or right cursor keys on a keyboard can then be used to change the current property and pressing <enter> will open a menu with relevant options.

17. **Timeline (editing - wheels):**

While either the Timeline View or Timeline Table View windows are selected when one or more items are selected the wheels will connect to properties common to all items in the selection. The legend of the connected timeline and item are shown at the top of the wheel display. If more than one item is selected the values and legend will represent the first item in the selection chronologically where an asterisk (*) suffix on the legend indicates multiple items.

'Time' represents the time the item occurs in the timeline. If more than one item is selected this represents the time of first item in the selection chronologically and adjusting this by wheel will change the time of the first item while maintaining offsets for any other items in the selection. Pressing the associated wheel @ button or touching in the middle of the wheel display will open a menu where you can enter a time numerically or use [Snap Previous] and [Snap Next]. These softkeys include the legend of the item that will be snapped to along with the associated time. By default, these will snap to triggers, markers and the current cursor position. Selecting the [Snap Options] softkey or context menu option will reveal a sub-menu where you can toggle the snap target items on or off. Where the selection comprises more than one level group and/or on/off pairs if [Maintain Trigger Offset] is enabled (default) the new time will apply to the first trigger in the selection with other triggers maintaining their relative offsets. If [Maintain Trigger Offset] is disabled the time will apply to the first trigger of every level group and on/off pair. This menu can be latched making it possible to repeatedly press the [Snap] keys to snap to various snap targets as required. Note that it is not possible to snap to triggers of the same type and group of a particular playback.

'Level' represents the level a playback will be set to in level triggers. If more than one trigger is selected this represents the level of the first trigger in the selection chronologically and adjusting this by wheel will adjust the level of all level triggers in the selection proportional to their current level. Pressing the associated wheel @ button or touching in the middle of the wheel display will open a menu where you can enter a value numerically.

'Fade' represents the time over which the level of a level trigger will be set or the length of time a preload trigger will load. If more than one trigger is selected this represents the fade of the first trigger in the selection chronologically and adjusting this by wheel will adjust the fade value of all triggers in the selection proportional to their current value. Pressing the associated wheel @ button or touching in the middle of the wheel display will open a menu where you can enter a value numerically.

(Note that if the wheels are connected to another function while the window is selected (for example to a chase or cue list or to a fixture by selecting an attribute bank) the item selection can be reconnected to the wheels either via CONNECT/CUE -> <select timeline handle> or double tap CONNECT/CUE)

18. **Timeline (editing - Timeline Table View window):**

Selecting cells in the Timeline Table view will open a menu corresponding to the column and relevant to the item type:

- Selecting cells in the 'Time' column for all item types opens the 'Set Trigger Time' with options to change the time. These are similar to those in the wheel @ menu for timeline time where you can enter a time numerically or use [Snap Previous] and [Snap Next]. These softkeys include the legend of the item that will be snapped to along with the associated time. By default these will snap to triggers, markers and the current cursor position. Selecting the [Snap Options] softkey or context menu option will reveal a sub-menu where you can toggle the snap target items on or off. Where the selection comprises more than one level group and/or on/off pairs if [Maintain Trigger Offset] is enabled (default) the new time will apply to the first trigger in the selection with other triggers maintaining their relative offsets. If [Maintain Trigger Offset] is disabled the time will apply to the first trigger of every level group and on/off pair. Note that it is not possible to snap to triggers of the same type and group of a particular playback.
- Selecting cells in the 'Track' column for all item types opens the 'Track' menu with softkeys representing available tracks. Selecting one of these will move the trigger(s) to the chosen track providing a way to move triggers to different tracks while maintaining times.
- Selecting cells in the 'Referenced Playback' column for any trigger items opens the 'Playback' menu and highlights the playback that is currently being referenced. Selecting another playback and pressing [Confirm] (or selecting the playback again) will change the trigger to reference the selected playback providing a way to change which playbacks triggers are referencing.
- Selecting cells in the 'Value' column for Set Level triggers opens the 'Level' menu where the Target Level and Fade Time can be set numerically by selecting the appropriate softkey.
- Selecting cells in the 'Value' column for Goto Cue triggers opens the 'Set Target Cue' menu where [Target Cue] provides an option to set the target cue numerically. Selecting [Set Target = Next] will change the Goto Cue trigger type to next cue. Selecting [Select Cue] will open the 'Pick Target Cue' menu with softkeys representing each of the available cues providing a way to select cues where you can see the cue legends.
- Selecting cells in the 'Value' column for Preload triggers opens the 'Preload' menu where the Preload Time can be set numerically.

Note that the trigger action cannot currently be edited.

Improvements

1. **Mobile Wing window:**

The Mobile Wing window has been improved adding more flexibility in the display and dynamic scaling according to window size.

By default, the Mobile Wing window will now show a 'Combined' representation of the faders and executors in a similar way to how they appear in reality with two rows of 15 executors and one row of 20 playbacks and their associated grey and blue keys stacked vertically underneath.

If desired this can be toggled in the window context menu to 'One Row' and 'Two Rows'. These modes filter the window to only show the playbacks or one of the three sets of executors, selected via one of the four dedicated context menu options. In 'One Row' mode these display in a single horizontal line where the playback layout reflects how they appear in reality and the executors represent the top five followed by the bottom five. In 'Two Row' mode these display in two rows where the executor layout reflects how they appear in reality and in the playbacks layout the top row represents the first 10 playbacks and the bottom row represents playbacks 11-20 with the grey and blue buttons presented horizontally (this is equivalent to the window layout in previous versions).

The width of all items are now scaled according to the window width so that they fill the window and are always in view.

2. **Third display on PC Suite:**

It is now possible to use three displays with Titan PC suite where connected.

3. **Window resize button always visible:**

Improvements have been made to windows so that the resize button in the window title bar is always visible making it easier to adjust the size of small windows.

4. **Blind mode indication:**

The prompt area now pulses when in blind mode to help make it more obvious.

Changes

1. Record menu tracking mode removed:

The [Tracking] softkey has been removed from the Record menu to make way for the [Create Timeline] option. The Tracking mode can still be set from the Record Cue List menu.

2. Clear selected fixture options renamed:

The [Clear All Fixtures (Selected)] and [Clear Selected Fixtures (All)] clear option toggles have been renamed to [Clear Selected Fixtures Off] and [Clear Selected Fixtures On] respectively for better clarity.

3. Timecode Source playback option moved:

The Timecode Source cuelist playback option has been moved from the Playbacks section to a new Timecode section.

4. Avolites logo updated:

The Avolites logo has been updated to the new logo in various places including the shell, prompt area and reports.

5. Memory Playback Options Kill Point:

A new Kill Point toggle option has been added to memory playbacks. This provides a way to determine whether a memory playback is killed after any fade out is complete or as soon as the fader reaches zero. This is particularly useful where playbacks are set to release, especially when using latch (for example where playbacks are assigned to handles in the playbacks window) and you want to fade out intensity at the same time as releasing LTP values:

- 'Fade Out Complete' - LTP data is killed after the fade out of the memory is complete (default).
- 'Fader At 0' - LTP data is killed as soon as the playback level is set to 0 (either by fader or when unlatching).

Note that dimmers in mode 0 memories will no longer fade out according to release mask/time when killed by unlatch as they did in previous versions. However, this can still be achieved by setting memories to mode 1 and using a fade out time. To achieve a simultaneous dimmer fade out and LTP release fade out should be set to the same as release time and Kill Point should be set to 'Fader At 0'. Any existing latching mode 0 dimmer memories using release to fade out will need to be modified to ensure they behave in the same way as in previous versions.

Bugs Fixed

1. Firing MIDI macros on consoles without MIDI output stops DMX output:

Previously attempting to fire a MIDI macro on a console that doesn't have MIDI output capability would cause the DMX output card to crash with a resulting loss of DMX output. Consoles that don't support MIDI output will now block any MIDI out messages preventing the DMX output card from crashing, thus maintaining DMX output.

2. Setting Next Cue to a Link After cue fires it immediately:

In a cuelist, if the next cue was set to a cue which had Link set to Link After, that cue would fire immediately. This has now been resolved.

3. Dimmer stuck on when fading blind to live:

Fixed an issue where the current intensity would be placed in the programmer when fading blind to live resulting in the intensity being stuck on.

4. Swap active playback containing multi-cell fixtures loses intensity:

Fixed an issue where swapping an active playback containing multi-cell fixture intensity where the recorded intensity is from the master fixture only would result in the intensity going to zero.

5. Timed fade out ignored after flashing an active playback:

Fixed an issue where flashing an active playback would cause the fade out time to be ignored when killed.

6. Flash tracked shapes broken:

Previously attempting to flash a cue in a cuelist containing a shape that was tracked from a previous cue would not flash the tracked shape. This has now been resolved.

7. Disabled cue in cuelist fired by timecode fires when enabled:

Fixed an issue where, with a cuelist that is being fired by timecode, enabling a disabled cue would cause that cue to fire immediately.

8. Firing playback handles with no associated internal ID causes hang:

Fixed a rare issue where, if a show file is loaded that has somehow got into an erroneous state with handles referencing playbacks that don't exist, attempting to fire the erroneous handle could cause the software to hang.

9. Broken shared shape and effect palettes:

Fixed an issue where shared shape and effect palettes could become corrupt when importing from a show that has a different version of the same personality.

10. Show names ending with dots and/or spaces fail to save:

Previously, attempting to save a show with a name ending in a space and/or dot could result in the show not saving or a confusing warning message. Dots and spaces are now trimmed from the end of show names prior to saving. If the resulting name is empty it will prompt a warning. Similarly, attempting to save a show with a name that is a special Windows reserved type will prompt with a relevant warning and curly brackets are now ignored when typed to prevent errors.

11. Pixel mapper displacement random distance:

Previously the random distance for pixel map displacement animations was not actually random. This has now been resolved.

12. Legend doesn't highlight in set legend after set cue legend:

Fixed an issue where, when using [Set Legend] to legend a playback, the Legend softkey would not be focussed if a cue legend had been set previously.

13. Titan won't start if the show data locations don't exist:

Previously if the showfile or personality library locations were somehow changed to a location that didn't exist Titan would fail to start. This has been changed so that if the locations cannot be found it will reset the settings and try again.

14. Undo replace pixel map:

Fixed an issue where undo would not work properly after a playback containing a pixel map was replaced.

15. Invalid MIDI drivers prevent Usb Expert from starting:

Previously invalid MIDI drivers that returned an error when attempting to open an output would prevent the Usb Expert service from running. Invalid MIDI drivers are now ignored allowing the Usb Expert service to start.

16. Timed flash, autoload and preset kill don't follow LTP rules:

Previously when an autoload was killed (for example by moving to the next cue in a cue list where the current cue is autoloading a playback), or a cue was flashed with timed flash it would behave as if the playback were set to release. Similarly, if a cue was fired and killed in preset mode a timed commit to live would also behave as release. This has now been fixed so that it follows standard LTP rules in these situations.

17. Motorised faders don't restore level after exiting preset mode:

Previously, if a motorised (or virtual) fader was raised prior to entering preset mode then lowered to zero it would not return to its previous level after exiting preset mode. This has now been resolved.

18. Occasionally Usb Expert service fails to start on restart:

Fixed an issue where the shell would not always wait long enough for Usb Expert to shutdown when a USB MIDI device was attached resulting in it not restarting again.

19. Network adapters with no IP address could cause an error:

Fixed a rare issue where network adapters with no IP address could result in the sessions view opening as a black window with no contents.

20. Titan Health Check fails to report AvoKeys stuck in firmware update mode:

Fixed a regression where Titan Health Check had stopped reporting where AvoKeys were stuck in firmware update mode (FUM) and providing an option to fix.

21. Cannot calibrate Tiger Touch Pro and Original touch screens:

Fixed an issue where touch screen calibration adjustments were no longer being retained on the original and pro Tiger Touch.

22. Shell occasionally disappears:

Fixed an issue where in certain circumstances it was possible for the shell to disappear.

23. Blind playbacks continue to indicate as active after killed:

Fixed an issue where, after firing blind playback, the playback would still show as active when killed.

24. Can't legend unassigned items:

Fixed an issue where it was not possible to legend unassigned items in the show library.

25. Timecode enabled/disabled status does not update on multi-user clients:

Fixed an issue where toggling a timecode source between enabled and disabled on a master console would not be reflected in the timecode window on any slave consoles.

26. Setting effect speed for a cuelist affects the displayed cue progress:

Fixed an issue where changing the effect speed for a cue list could cause the cue progress indicator to display incorrectly.

27. Blind playbacks output live in preset mode:

Fixed an issue where any playbacks that had been toggled to blind would output in scene master preset mode including when they were set back to non-blind.

Known Issues

1. Downgrading to pre-V12 versions is unsupported:

Please note that using upgrade installers for older versions of Titan after running the V12 recovery is not currently supported and will prevent the console from starting if attempted. If you need to downgrade to a previous version it is important that this is done via a relevant recovery stick only. Consoles not starting following an attempt to use an earlier upgrade installer can be fixed by running a recovery stick and selecting Full Erase option (if recovering to a version prior to V12, you can reuse the license which was emailed to you previously).

When downgrading from V12 to previous versions of Titan it is also important that the Sapphire DMX panel firmware is downgraded in any consoles with ST-DMX cards (Sapphire Touch, TitanNet Processor, Tiger Touch II and Arena). This is because new features in the firmware are not compatible with previous versions. To downgrade the firmware open USB Expert Console and put any Sapphire DMX Panels into Boot Mode. This is found in the Service Tab. When the panels have re-appeared in boot mode, select Program which will open a file dialog. In the file dialog navigate to C:\Program Files (x86)\Avolites\UsbExpert\Panel Software and select the st_dmx.bin file. This will now install the previous ST-DMX firmware. Once this is complete do the same on all Sapphire DMX panels and then exit Boot mode. Now restart the console and you should now be OK to use the previous version of Titan. When you next upgrade to V12 you will need to carry out the firmware update again.

2. Touchscreen input on Tiger Touch II consoles can become inverted after running calibration:

In some circumstances, it is possible for the touchscreen calibration utility on a Tiger Touch II to leave the touch input inverted. Users of Tiger Touch II consoles are advised not to run the calibration utility at this time.

If you have been affected by this issue, an interim workaround can be applied by running the calibration utility and tapping the targets upside down, so that the touchscreen is re-calibrated to the correct

orientation.

3. Master console sometimes gets stuck in safe mode:

The Master console sometimes gets stuck in safe mode when the network cable is removed mid-session and the backup takes over and then reassigned to be the backup console after reconnecting the network cable to the original master. Most of the time the backup console automatically relinquishes control of the TNP and the Master automatically reconnects to the TNP, sometimes the backup console gives you a softkey option of allowing the master console to assign all lines to the TNP, and every now and then the master console gets stuck in safe mode.

4. Connecting an external touchscreen to a certain TNPs causes internal touchscreen issues:

If an external touchscreen is connected to a TNP containing an LV67H motherboard, the internal touchscreen will not be assigned correctly, and will be mapped to the wrong screen.

5. Android Remote has issues discovering Titan consoles and can disconnect during use:

Due to a bug discovered in the Android operating system, certain newer Android phones may fail to discover Titan sessions on the network, and may disconnect seemingly at random while in use. We have published detailed guidance on how to mitigate this issue as FAQ-10035, which can be found at <https://www.avolites.com/support/titan-troubleshooting>. Users wishing for more information on the bug in Android (which we have reported to Google) can find more information at <https://issuetracker.google.com/issues/132686258>.

6. Remote may crash in particularly complex showfiles:

Due to a bug in the underlying communication system, the Titan Remote app may crash when loading or using particularly complex showfiles. Whilst we have made efforts to mitigate this problem, crashes may still occur. If this happens you can usually restart the app to continue.

7. Cannot run Ai and PC Suite on the same host in a Synergy Session:

It is not currently possible to use Synergy in PC Suite if Ai is on the same machine.

8. Output can pause occasionally for a short time:

In certain situations under heavy load, the output can pause briefly.

9. Synergy Lightmap can very occasionally allow underlying fixture colour to display at high workloads :

In certain situations where system load is higher than the specified maximum, fixtures running a Synergy Lightmap can occasionally show their underlying fixture colour rather than the colour obtained via Synergy.

10. Synergy Multiview re-establishes NDI streams when window moved between screens:

If the Synergy Multiview window is moved between console screens, the NDI streams must be re-established, which takes a few seconds.

11. Undo programmer releases all applied Quick Palettes:

When undoing a change to the programmer, all previously applied quick palettes are released.

12. Pixel maps in single cues do not fade over fade-in time:

Pixel mapped effects do not respect the fade-in time set on a single-cue playback.

13. Layout Editor Triangle Arrange feature fails on certain fixture types:

In layout editor, the triangle arrange feature does not set the height correctly when arranging groups of certain fixtures.

14. Go key profile on cue playbacks cause fade to snap through black:

If the key profile for a cue playback is set to go and a fade-in time is set for the playback, then pressing the 'Go' key profile will cause the playback to fade in from black, instead of crossfading fixtures from their previous state.

15. For the PioneerDJ integration to function the console software may need restarting:

When opening the PioneerDJ window on occasion the waveforms will not populate. If this occurs and the bridge software is functioning correctly the software may not have detected the bridge. The console may

need to be restarted for the connection to the bridge software to be made.

16. Capture visualiser render fault with Windows 10 versions prior to 1809:

When resizing or moving the capture visualiser window parts of the visualiser may temporarily remain rendered at the wrong location on the screen. Using other windows in the interface will cause the stale window to be removed. This only affects Windows 10 versions prior to 1809; this includes consoles on V12 recovery. This can be resolved on consoles by running the v14 recovery or later. PC Suite users should update Windows to version 1809 or higher to avoid this issue.

17. DMX output assignments in old shows are lost when lines transferred to a TNP:

When moving lines from a pre-V12 show file from a console to a TNP, physical DMX outputs are not automatically assigned to those line. Outputs can be assigned manually after the lines have been transferred to the TNP.