ROTOLIGHT

TITAN

A NEW ERA OF CINEMATIC LIGHTING

USER MANUAL V2.0

STORAGE & SAFETY

General

• We recommend that you read these instructions carefully before attempting to use Titan™ for the first time. The information below will assist with safe handling and operation

• If selling or transferring the product, please ensure that these instructions are available for future users

• Titan™ is designed for professional use. Always ensure that the product is operated by qualified, experienced personnel

• Only use original Rotolight Titan™ accessories and spare parts

• Always be responsible and observe local recycling regulations when disposing of packaging

• Please comply with all reasonable and local safety requirements

• Please ensure that all warnings and safety instructions are observed at all times.

Product usage

Rotolight Titan™ is designed to provide illumination of people and subjects in a dry environment. Please follow all safety information. Inappropriate use, disassembling or tampering with the unit may lead to increased risk of short circuiting, electric shock or fire. Tampering with, attempting to modify the product in any way or usage other than described above is not recommended and will invalidate the warranty.

Responsible disposal

Please be aware of local regulations for the safe and responsible disposal of electronic equipment that is no longer functional or economic to repair. Disposal of electronic equipment with domestic waste should be avoided. Details for the safe and responsible disposal of electronic equipment is available from your local waste disposal facility or local authority.

Safety advice

• Always check that mains and connector cables are securely connected prior to using Titan™

• Always clean Titan™ with a clean, dry cloth and avoid the use of abrasive materials

• Always use a grounded mains electrical outlet rated for 100-240V AC, 50/60Hz

• Always use Titan™ in a dry environment. Never submerge in liquid or place on a wet surface. Exposure to rain, liquids or moisture may increase the risk of electric shock or fire

• Any damage to Titan's™ components, power supply or product housing must be remedied by an approved Rotolight service centre or agent

• Do not mount, operate, store or transport Titan™ near any heat source or heating device, or in an environment with an ambient temperature greater than 65 degrees C (149 degrees F)

• Never allow Titan™ to be operated if damage to cables, power supply or product housing is evident

• Never open the Titan™ product housing or power supply or operate the product with the housing open to the elements

• Never restrict airflow around Titan™ and ensure that fans and ventilation grilles are free from obstruction at all times. Rotolight use the latest 'super quiet' fans for exceptional performance

• Never use cables to move, adjust, hold or suspend the light or power supply

• Only use original Rotolight Titan™ cables and power supplies as the usage of third-party options may invalidate the warranty

• Titan™ is only suitable for operation in an environment with an ambient air temperature of -20 degrees C to +45 degrees C (-4 degrees F to 113 degrees F) with less than 85% relative humidity (RH) and no condensation. In extreme cold we strongly recommend the use of the Rotolight rain cover and that the light should always be left on even 1 or 2 percent to avoid condensation or moisture.

Storage conditions

Please ensure that Titan™ is securely stored in a dry environment, avoiding excessive humidity that could cause condensation or moisture in extremes of temperature.

Note:

Product information and technical specifications may be subject to change without notice.

Always consult Rotolight if Titan™ has been dropped, suffered impact damage, the power supply or cable has been damaged, the unit has been exposed to rain, liquid or moisture and does not appear to be operating correctly.

⚠ Rotolight Titan™ is equipped with high intensity RGBWW LED emitters. Never stare directly into the active light source.
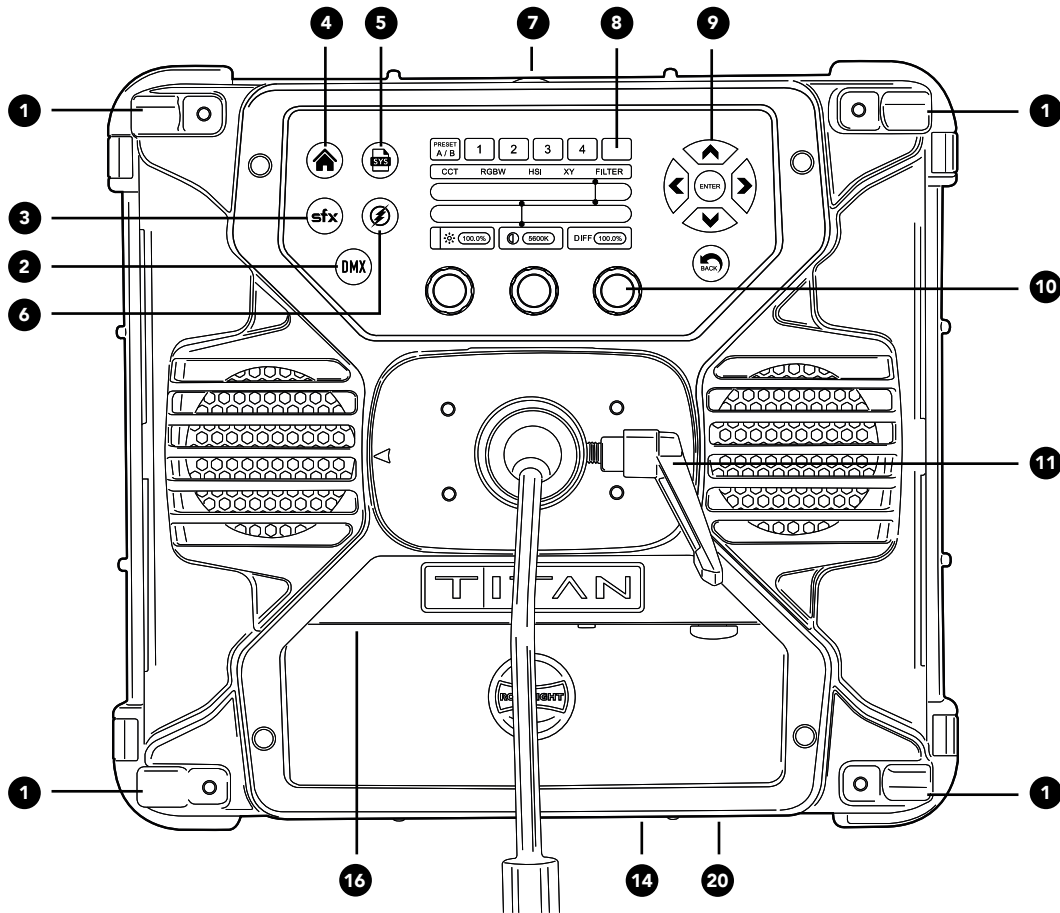
CONTENTS

Titan X1 - Quick Start Guide

1. Yoke Mounting Points (M8)
2. DMX Menu
3. SFX Menu
4. HOME Menu
5. SYS Menu
6. FLASH Menu
7. Wi-Fi Aerial
8. Touchscreen Display
9. Navigation Buttons
10. Rotary Knobs

11. K-Mount (shown with a Swan Neck Mount)
12. Power Switch ON | OFF | ON
13. DC Cable
14. Built-in Foot
15. DMX Ports
16. Port Plate
17. Mini Jack Flash Port
18. USB Port
19. Factory Programing Port
20. Handle

Factory Programming Port	USB Port	DMX Port	DMX Port	DMX Port (RJ45)	DC Input 24V	Power Switch (ON/OFF/ON)
19	18		15		13	12

Titan X2 - Quick Start Guide

1. Yoke Mounting Points (M8)

2. DMX Menu

3. SFX Menu

4. HOME Menu

5. SYS Menu

6. FLASH Menu

7. Wi-Fi Aerial

8. Touchscreen Display

9. Navigation Buttons

10. Rotary Knobs

11. K-Mount (shown with a Swan Neck Mount)

12. Power Switch ON | OFF | ON
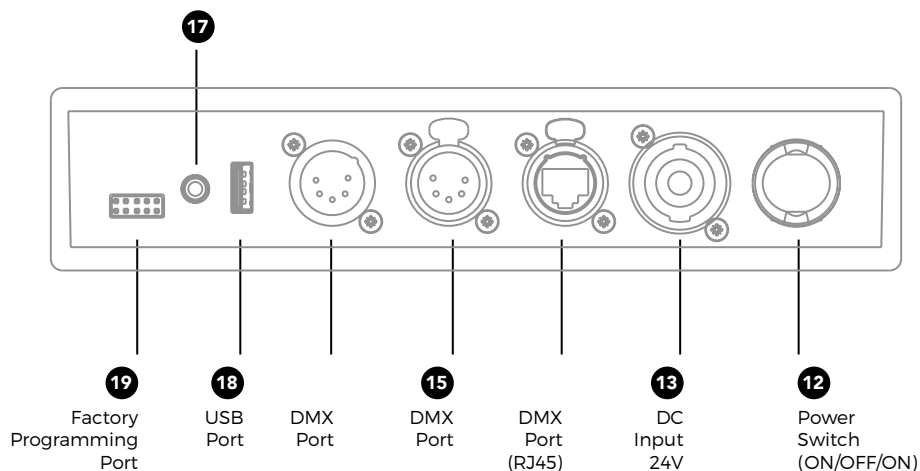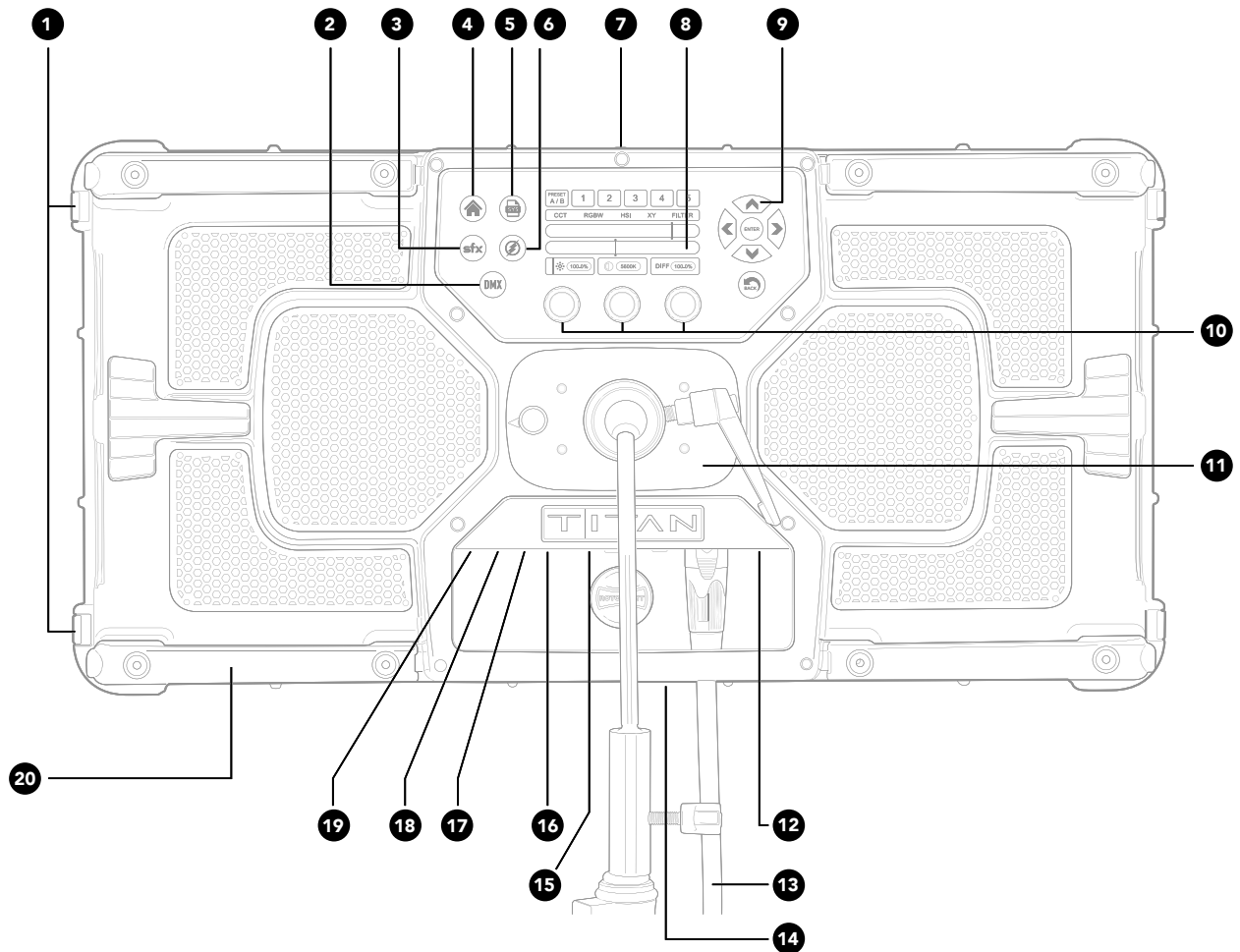
13. DC Cable

14. Built-in Foot

15. DMX Ports

16. Port Plate

17. Mini Jack Flash Port

18. USB Port

19. Factory Programing Port

20. Handle

| Factory Programming Port	USB Port	DMX Port	DMX Port	DMX Port (RJ45)	DC Input 24V	Power Switch (ON/OFF/ON)
19	**18**		**15**		**13**	**12**
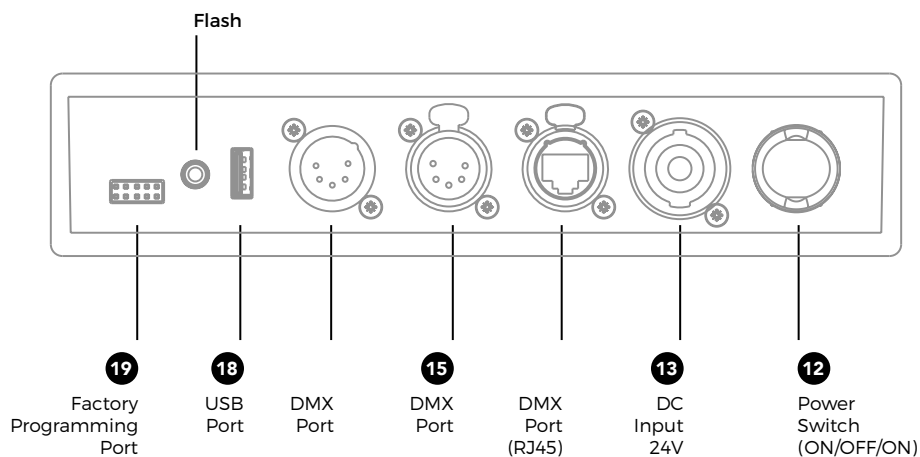
INTRODUCTION

Thank you for purchasing Rotolight Titan™, the most powerful range of LED lighting fixtures ever made. We at Rotolight are committed to bringing the finest and most inspirational lighting tools to image makers. Rotolight Titan™ fixtures includes industry-first technologies such as SmartSoft™ electronically adjustable diffusion, High Speed Sync Flash (HSS), and other revolutionary technologies developed by Rotolight such as CineSFX™. We hope you enjoy using your Rotolight Titan™ as much as we enjoyed creating it!

Please register your product at www.rotolight.com/register

Please ensure that your firmware is up to date and download future updates at www.rotolight.com/titan-updates
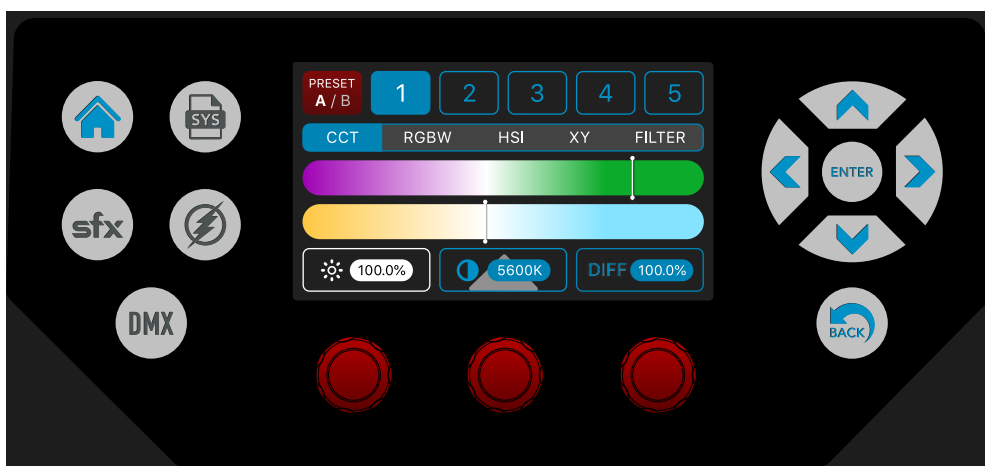
Titan™ Graphic User Interface Overview

Titan™ is the first light to have an interactive touchscreen interface. We have combined this with navigation controls and dual function rotary knobs with switches. There are also five master menu buttons (Home/ System/ CineSFX/Flash/DMX).

HOME comprises all of the colour editing functions, i.e.; CCT (where you set the Titan™ system white balance), RGBW (where you can create or edit a colour and add the CCT 'whites' to de-saturate it), HSI (Hue, Saturation, Intensity), XY (where you can enter the coordinates of your desired colour), and finally the Filter page, which includes over 2400 electronic versions (at 3200K and D6500) of virtually all of the colour lighting gels and sampled light source matching.

SYS (System) contains all of the customisable key system settings and read only information including temperature settings, colourspace, brightness mode etc. You can also perform system updates via the USB port within this menu.

SFX (Cinematic Special Effects, 'CineSFX™') contains over 20 fully customisable special lighting effects, developed by Rotolight and visual effects veteran, Stefan Lange. You can edit a lighting gel or create a custom colour in one of the Home menus, and combine it with an edited effect in SFX to create your own customised lighting FX.

FLASH allows you to use Titan™ as a High Speed Sync photographic flash unit, utilising the built in library of lighting gels or custom created RGBW colours . Titan™ has a built-in Skyport 2.4Ghz HSS receiver capable of syncing at up to 1/8000th of a second, with colour tuneable RGBWW flash and modelling light, capable of running at any repeated frame rate, with zero recycle time. There is also an Exposure Effects (X-FX) section for customisable multi–exposure effects, where you can control delay, repetitions and gaps between flash events for creative photography.

DMX allows you to set the base DMX channel, the channel mode (i.e. number of channels used to control Titan™ over DMX) and control Titan™ via the built-in Lumenradio TimoTwo wDMX chip, Rotolight wDMX, or wired DMX port from a lighting control desk. You can set the system parameters via RDM (Remote Device management) (this feature will be introduced in Q1 2021).

Each of these five master menus has ten dedicated radio preset buttons (in two switchable banks of five), where you can store your edited settings (50 presets in all). You just tap the preset button to recall, hold the button to store, and double tap to open a dialogue page where you can name the preset and save or load it to/from the USB stick (feature to be introduced in Q1 2021). The Titan™ graphic user interface is designed to be intuitive to use, yet totally comprehensive in the functionality on offer. Navigate, touch, rotate and refine your Titan™ controls, with the assurance of having a back button to correct any mistakes.

TOUCH TO SELECT
In firmware V2.0 onwards, there are now four ways to adjust the controls on Titan:-

1. Control knobs – you can rotate these to adjust the selected parameter
2. Press, Hold and Turn – if a knob parameter has a grey triangle behind it , this indicates there is a second function to this rotary control if you 'press, hold and turn'.
3. Touchscreen, many controls are directly editable by using sliders on the touchscreen
4. New 'Touch to Select' allows you to select a parameter on the touchscreen and adjust it using the knob below. If you want to revert to the original parameter, simply click the knob to unlatch the 'Touch to Select', or touch a new parameter to control.

We hope you will find this simplifies your workflow with Titan.

Future features
Important: any feature displayed as a greyed out (i.e. not active) GUI menu item or icon will be available in future updates. All future updates will be announced to our customer base.
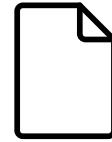
HOW TO UPDATE TITAN™
VIA USB PEN DRIVE

STEP 1
Choose a USB stick (preferably San Disk or reputable brand), (not compatible with USB 3.0, needs to be USB 2.0 or earlier)
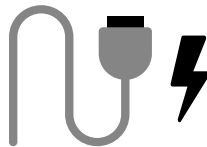
FAT32

STEP 2
Format the USB Stick to FAT32 format and have no other files on the stick

STEP 3
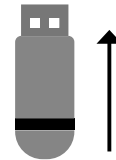Copy and paste the update file to the USB Stick

update.bin

STEP 4
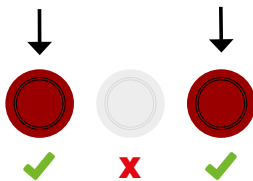Once on the stick, rename the file to 'update.bin'

STEP 5
Connect your Titan to power, but make sure the unit is turned off

STEP 6
Insert the USB stick to the unit

STEP 7
Hold down both the left and right knobs and, keeping the knobs held down, turn on the power.

STEP 8
Keep the knobs held down for around 15 seconds until you see the Flash icon specifically light up, (you will see other icons light up first), and once Flash icon lights up, you can release the buttons

50%

Updating: Don't turn off

STEP 9
The light will start a firmware update process, let it complete. **Do not turn the power off whilst this is underway.**

Once complete reboot your light

Troubleshooting: If you have any problems, try a different USB Stick, and ensure the file is named correctly.

HOW TO ATTACH THE YOKE MOUNT

STEP 1

Align the yoke with the mounting points on the side of the Titan

STEP 2

Secure using bolts and included Allen key.

STEP 3

The Yoke can then be mounted onto a lighting stand. We recommend using a C-Stand with sandbags.

Recommended stand: The Titan X1 is compatible with RL-LIGHTSTAND as well as c-stands, whilst the Titan X2 requires a Junior to Baby adapter (RL-CSTAND-J2B) if mounting onto a c-stand 16mm Baby spigot. We recommend using a sandbag to provide additional support.

The Titan X1 can either be mounted onto a 16mm Baby Spigot, or , by removing the tensioner , The 16mm TVMP socket becomes a 28mm Junior stud.   Titan X2 is equipped with a 28mm Junior stud. Rotolight also sell a 28mm Junior socket to 16mm Baby stud adapter, available from our accessories page.

HOW TO ATTACH THE SWAN NECK

STEP 1

Align the pins on the swan neck with the matching holes on the rear plate of the Titan.
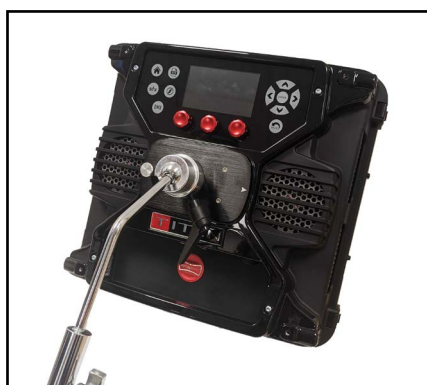
STEP 2

Rotate the swan neck clockwise until it clicks into place. Use the tension knob to adjust angle and position as required, taking care to support the weight of the unit when making any adjustments.

STEP 3

To remove, firstly get a good hold of the Lighting fixture, then pull the quick release knob....etc. The Fixture will become loose rather quickly, so take care not to drop it.

HOW TO ATTACH THE BATTERY ADAPTOR

STEP 1
Mount the battery adapter to the Titan clamp by aligning the hexagonal pin on the adapter with the corresponding hole on the clamp.

STEP 2
Slide the batteries into the mounting positions on each side of the adapter
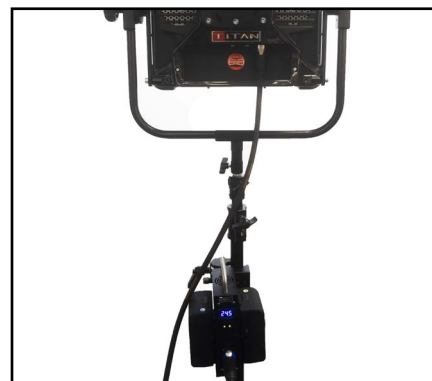
STEP 3
Connect the adapter to the Titan using the DC cable.

USING TITAN ON BATTERY POWER

To use the Titan on battery power, use the Rotolight 2-way or 4-way adapters; we do not recommend third-party adapters. Please note that these adapters support 14.8V batteries, DO NOT use 24V batteries as it may cause the adapter and Titan to sustain damage. A full range of recommended batteries including 95Wh, 155Wh and 310Wh batteries are available from rotolight.com (see page 48)

THE HOME MASTER MENU
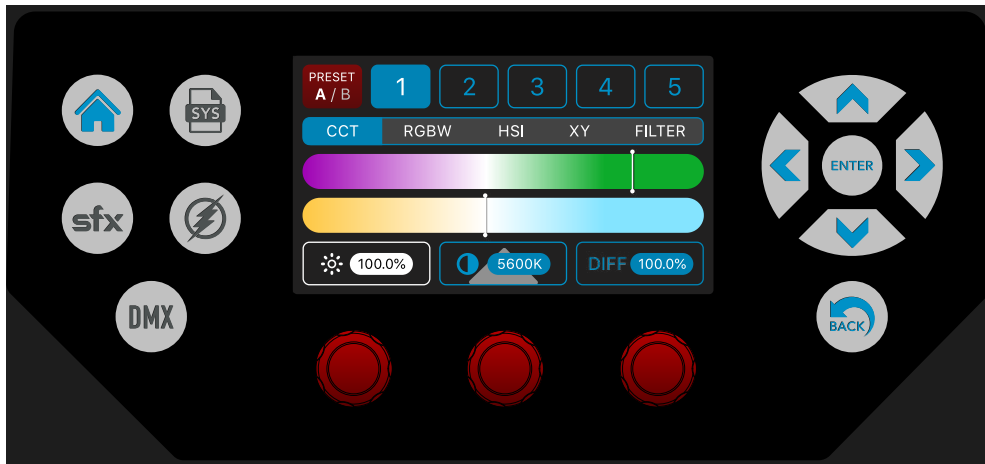
When you select the touch button labelled 'HOME', it will take you to the page where you can select one of five colour editing submenus below:

1. CCT - when this submenu is selected you can set the white balance. Using the left knob, you can change the brightness. Using the centre knob or the CCT touchscreen slider you can adjust the colour temperature, from 3,000 to 10,000 kelvin. Please notice that there is a grey triangle behind the CCT window, this indicates that there is a second function to this knob if you press and turn. This second function controls the green / magenta balance (also available as a touch slider function on screen). Finally the right hand knob controls the SmartSoft™ electronic diffusion. You can store or recall your custom CCT settings using any of the HOME menu radio preset buttons (hold the preset button to store, tap to recall).

2. RGBW – when this submenu is selected you can create a custom colour, or edit a filter, or source match sample. Use the left knob to set the amount of red, use the centre knob to set the amount of green, and the right knob to set the amount of blue. All three knobs have grey triangles behind indicating that there are second functions to all three knobs. If you press and turn the left knob you can adjust the overall brightness of the Titan™, if you press and turn the centre knob you adjust the amount of whites (from the CCT page) that you are adding to the custom colour – this will have the effect of desaturating the RGB colour. Finally press and turn the right knob to control the SmartSoft™ electronic diffusion. You can store the RGBW custom colour settings to any of the HOME menu radio preset buttons by holding the preset button.

NB – You can edit a filter or source match setting in RGBW and store the customised result in a preset button.
3. HSI - (Hue, Saturation, Intensity) when this submenu is selected you can create a custom colour using the left knob (Hue), or swipe on the touchscreen slider colour display. The colours are represented as degrees from 0-360, and you mix from red (0 degrees) to green (120 degrees) through to blue (at 240 degrees) back to red (at 360/0 degrees). In this mode you are only ever mixing two of the RGB colours. The centre knob adjusts Saturation (i.e. adding white to pastelise the selected colour). The right knob adjusts overall fixture intensity (brightness). Finally press and turn the right knob to adjust SmartSoft™. You can store the HSI custom colour settings to any of the HOME menu radio preset buttons by holding the preset button. There is a preview display of the selected colour below the HSI colour bar.

4. XY – when this submenu is selected you can create a custom colour by swiping the marker to a custom colour on screen (the CIE 'sharksfin' curve of visible colours is shown), and the selected colour is also shown on the preview window in the screen. You can use the left knob to enter an 'X' colour co-ordinate, or the centre knob to enter a 'Y' colour co-ordinate. The right knob allows you to adjust the fixture intensity and pressing, holding and turning the right knob adjusts the SmartSoft™ electronic diffusion. You can store the XY custom colour settings

to any of the HOME menu radio preset buttons by holding the preset button. NB - You can select a colourspace on the Titan™ by clicking the centre knob. Choose 'Full Gamut' for photography or cinematography, choose REC: 2020 for Ultra HD 4K, or REC:709 for HD 2K. This will impose a bounding triangle in the XY display that will prevent you from inadvertently selecting a colour that the camera cannot record or playback, or that the broadcaster cannot broadcast. A text display to the right of the CIE graphic indicates which colourspace is currently active.

5. FILTER – when this submenu is selected you can browse through a library that contains electronic simulations of virtually all of the 1,400+ colour gel filters from the likes of Lee, Rosco, Apollo and GamColour®. The filters are available at 3200K or D6500 versions giving nearly 2500 varieties. In addition, there is a second library of sampled lighting source matches. The colour filters are arranged in colour groups, which you select on screen by touching the colour group, or rotate the left knob ('colour'). To browse through the gels rotate the centre knob ('number') and this will scroll through all of the available filter gels in that selected colour group (there can be 300-400 in some of the groups). To change the 'illuminant' colour base of the filter, click the left knob, you will see the text information in the preview screen change from '3200K' to 'D6500' and the filter colour displayed will change correspondingly. The right knob controls fixture intensity (brightness), and if you press and turn the right knob you can control the SmartSoft™ electronic diffusion. On the right hand side of the colour group bar there is a black segment marked 'S' for source matching. This contains a library of 50+ sampled light sources (e.g. Tungsten, Candle, HMI, Fluorescent , Sodium Vapour, etc). You can scroll through these sampled sources using the centre knob (number). You can edit ANY filter or source match by switching to the RGBW submenu and using the controls to tweak your selected filter or source. You can immediately jump to the SFX or FLASH menu and use your custom colour in a special effect or in RGBW flash. You can store your edited filter or source in any of the HOME menu preset buttons by holding the button.

There is a preview window below the colour group bar which displays the selected colour filter, and which gives you a text display of the filter number, and the filter name. If the filter number begins with letter 'L' it is a sample of a Lee™ filter, if it begins with 'R' it is Rosco™, 'A' for Apollo™, or 'G' for GamColour®. If you tap the filter preview window, a pop up window will appear with a description of the selected filter, tap 'done' to return to the filter screen.

SmartSoft™ Electronically Variable Diffusion

SmartSoft™ is a radically new technology developed by Rotolight. It allows the user to electronically adjust the diffusion, focus and spread on Titan™ lighting fixtures. It provides two stops of programmable diffusion, and can be operated from the local controls on the light or remotely via DMX or wireless DMX. If the user intends to operate the light for long periods at high temperatures then the performance of the SmartSoft™ diffusion may be impaired. Ideally best performance is achieved when the temperature of the fixture is kept below 45 degrees C.

'SYS' (TITAN™ SYSTEM MENU)
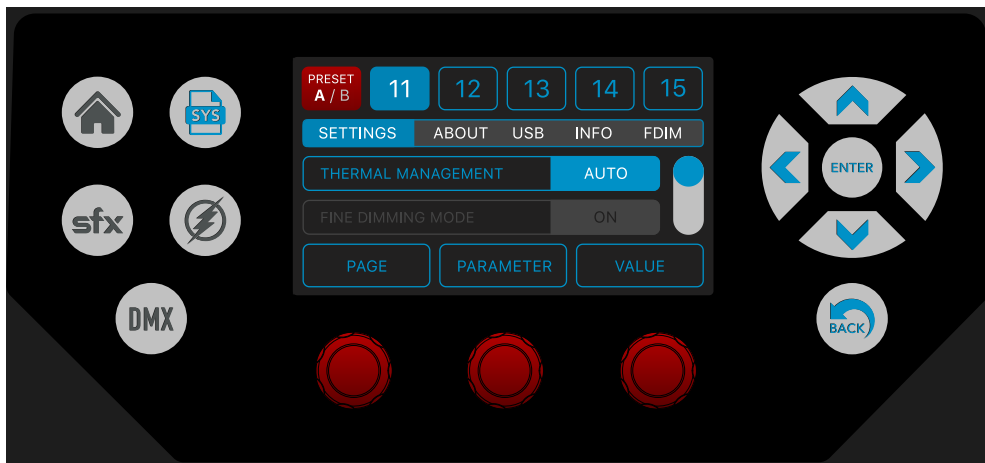
Pressing the dedicated 'SYS' menu touchscreen button opens the system settings menu in Titan™.

SETTINGS Submenu

The first submenu item, SETTINGS is a scrollable list of settings. These include the following:

1. Thermal Management: there are three options available:

STEALTH – in this mode the fans are mostly off when minimal noise is required. We strongly recommend leaving the Titan in auto mode wherever possible.
AUTO – in this mode the fans react to the measured operating temperatures of the LED boards, the graphic user interface PCB and the driver PCB. This mode uses Advanced Intelligent algorithms to manage the fans whilst maintaining the quietest possible operation.
MAX – use this mode if shooting in high ambient temperatures, or operating the light continuously with a high output.
NB: when Titan™ is controlled by DMX the fan speed is controlled directly over DMX.   If Titan™ is unintentionally disconnected from DMX then it will revert to AUTO Fan control.

2. Fine Dimming Mode: options off/medium/finest.
Fine dimming mode enables Titan™ to mix RGBW colours and dim them smoothly right down to 0%. It is not recommended for high frame rate shooting.

3. Colour Space: options Full Gamut / REC:709 / REC:2020.
Selectable colourspace allows you to control the colour output of Titan™ so when using XY colour editing, it is not possible to accidentally set a colour that cannot be captured/recorded/broadcast in a particular codec. So for photography or cinematography we recommend you use Full Gamut. For 2K HD (i.e. 1080P) use the 'REC:709' colourspace. For 4K Ultra HD (i.e. 2160P) use the 'REC:2020' colourspace.

4. Camera LUT (Look Up Table): options Alexa / Sony Venice / Panasonic Varicam / Red Dragon / Canon C300.

This feature allows you to select a LUT profile for the Titan™ which matches a specific camera sensor. In this mode the Titan™ will tailor its colour profile to enhance the light spectrum, optimising the images being captured in your camera LOG mode. (This feature will be introduced in future updates.)

5. Display: options Auto Off / Buttons Only / Always On.

The default mode for the display option is Always On.

a. If you select Auto Off, then the display will only illuminate when you touch a control knob, the touchscreen, or a menu icon on the GUI, it will turn off again after five seconds of inactivity.

b. If you select Buttons Only the colour touchscreen will automatically turn off after five seconds of inactivity, but the backlit menu and navigation buttons will remain illuminated.

c. If you select Always On, then the display remains illuminated at the default level.

6. Rotate Display: options Off / On

This allows you to rotate the display through 180 degrees.   Very useful if the light is upside down on a truss.

7. Power Source: options AC adapter / DC battery

If you select 'AC adapter', Titan™ will operate fully without restriction in all modes. If you select 'DC Battery', the potential output of Titan™ (X2) will be restricted, running at 60% of normal output. Titan™ X1 will operate at 100% on both AC adapter and DC Battery.

8. Frequency: Frame rate options 24 / 25 / 29.97 / 30 / 50 / 60 / 100 / 120 / 240 / 300). This allows you to specify specific frame rates for the SmartSoft™ diffusion.   When SmartSoft™ is set to 100% there is no need to specify the frame rate.

9. Dimming Curve: options Linear / Exponential

Select your desired dimming curve.

10. Brightness Mode: options MAX LUX / CONSTANT LUX

In MAX LUX mode the power output will vary dependent on the CCT kelvin setting, giving more output when both channels are at full output (at approx. 4200K). In CONSTANT LUX mode, the output will remain constant regardless of the colour temperature setting.

11. Language:

English (UK) The following languages will be available in future updates: German, French, Spanish.

12. Factory Reset: options Apply / Cancel

This feature will restore the adjustable parameters back to the factory defaults. There is also a second option '
Erase User Presets'. so please save your data before using this feature. **NB**: Very useful for rental houses.

ABOUT submenu

The second submenu item is a scrollable list of 'about' information. This includes the following:

1. Serial number: this feature will display the serial numbers for the LED1 PCB / LED2 PCB / Driver PCB and GUI PCB together with the Titan™ assembly serial number.

2. Firmware version: this feature will display the driver PCB firmware version.

USB submenu

The third submenu item is a scrollable list of USB settings. This includes the following:

Please note that 5V DC power is available at the USB port, so it can be used as a power source for optional interfaces, i.e. SACN, ArtNet etc. THIS 5V DC IS POTENTIALLY DANGEROUS TO SOME USB DEVICES, SO PLEASE USE THIS FEATURE WITH CARE.

1. USB: UPDATE FIRMWARE system. Download the latest firmware from Rotolight/titan-updates. Rename the file to 'update.bin', then copy it to a 16GB (or 32GB) USB2 memory stick that is formatted in 'FAT32' mode.

2. Insert the USB memory stick into the USB socket on Titan's port plate.

3. Go to SYS / USB and switch 'Firmware Update' on.

4. Reboot Titan (it will take roughly 2 minutes to complete the update)

5. When the update has finished, it is good practice to do a Factory Reset,

NB: you do not have to erase your User Memory Presets.

INFO submenu

1. Temperature: Titan™ reads the temperature of LED1 and LED2 PCBs, and also the driver PCB. It also reads the RPM of the Fans. This is read-only data. Please note that Titan™ X1 does not have a 'Right LED' board, but will continue to display the RPM of the right hand Fan. RE: Fan RPM: the current fan RPM is displayed here. This will be based on the operating temperature of Titan™, and the selected 'thermal management' mode (see SYS/settings).

2. Volts: Titan™ accurately measures the incoming voltage and this is displayed here. Titan™ also calculates the average voltage during the last three flash events, so you can see if your power supply is coping well with the extra power required for flash.   Finally the right hand knob controls fixture brightness on this page, and you can adjust this and see what effect this has on the power source voltage. Please note that we recommend that you only use Rotolight power adapters or battery adapters. The incoming voltage must not exceed 24-25volts DC or damage may occur to Titan™

FDIM (True Aperture Dimming™) submenu

The fifth submenu item, is a special function called FDIM (i.e. F-Stop Dimming/True Aperture Dimming™). This feature is an exposure calculator. It shows the brightness setting as an accurately calculated aperture (f-stop) for your subject at a given distance, using your camera ISO and shutter. It also provides a nice way to accurately adjust your key light to match your camera settings, rather than the other way round, which can be very useful.

Select the menu item 'FDIM' . Rotating the left knob adjusts the 'Exposure' duration setting (set this to match your camera). The centre knob adjust the ISO setting (set this to match your camera). If you press and turn the centre knob, you can input the distance of the Titan™ from you subject.. Finally, if you rotate the right knob, it will adjust the brightness of the Titan™, whilst displaying the correct Aperture (f-stop) setting for your camera.

Please note the 'True Aperture Dimming™' algorithm calculates the f-stop based on the Titan™'s brightness setting, your camera's ISO and shutter speed, the distance to the subject and compensates for the skin contrast of the subject.

You can also decide to work in reverse, i.e. you creatively choose an Exposure duration, ISO, AND aperture (i.e. f3.0), so now you can match your light to your camera exposure settings, this way all the photos from your shoot will have the same grain structure, depth of field, etc. This is a novel and very useful way of working creatively, and can also save a lot of time, whilst delivering consistent results from a shoot.

SYS User Presets

The user presets in the SYS menu are numbered from 11 through to 20.   You can store your custom system settings by holding one of the preset buttons, you can recall a system preset by tapping one of the preset buttons,   and if a preset is highlighted you can delete it by pressing the 'BACK' button.   On future updates you will be able to 'load/save' presets and banks to/from the USB stick, by double tapping the preset or bank button (feature due 2021)

'SFX' (Cinematic Special Effects)
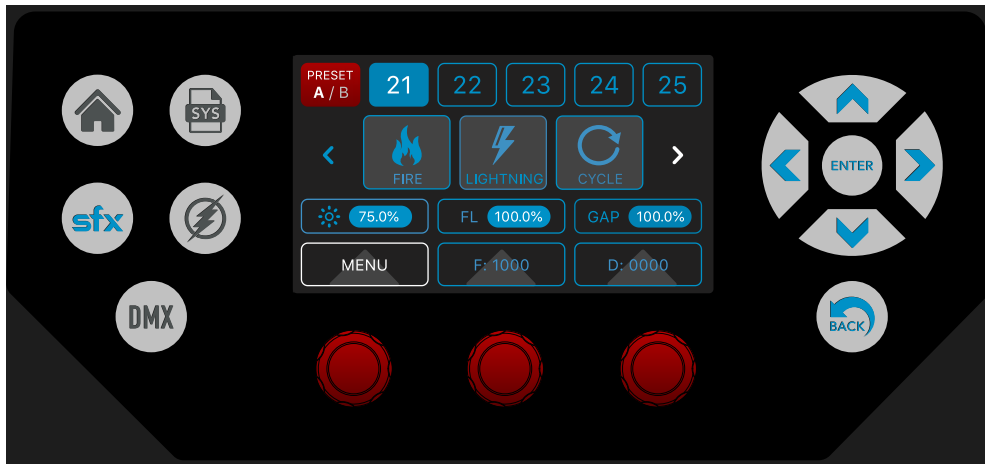
In collaboration with Stefan Lange, DOP and VFX veteran, we have created an arsenal of cinematic special FX (CineSFX™). These production tools are designed to complement your feature, music video or short film.

Before you start: you can create a custom colour or recall a filter in the home menu, and bring that colour across to the SFX menu to use with a customised effect. The combination of your custom colour and the tweaked SFX preset can be stored into the user programmable SFX radio preset buttons.

Pressing the dedicated 'SFX' touchscreen button activates the CineSFX™ menu in Titan™.

All SFX can be triggered via DMX or wireless DMX. You can also trigger the SFX using a Skyport wireless trigger or an electrical trigger attached to the trigger port.

WARNING - HEALTH HAZARD – USE STROBE WITH CAUTION:
CineSFX™ mode uses strobe lighting effects that carry a minor risk of causing photosensitive seizures/epilepsy. Manufacturer accepts no liability or responsibility for misuse of this product. You should take all precautions to pre-warn and ensure the safety of those who may come into contact with the product. If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before using. If you feel unwell from using these effects, immediately discontinue use and consult a doctor. If strobe lighting is to be used in a production, warnings should be posted at the front of house or entrance doors to the set/theatre as well as in a video or program, if distributed. Example: "WARNING: strobe lights are used during this programme".

This product is not suitable for use by children of any age and is designed for professional use only. Rotolight have a policy of continuous product improvement and so some of the CineSFX™ may operate in a slightly different way than is described here, or may be forthcoming on a future firmware update, check www.rotolight.com for details or ask your local dealer.

Touch the SFX menu button to enter 'CineSFX™'. The available effects are listed in a carousel. You can swipe through the SFX to get to the desired effect. You can stop/start the selected effect by touching the 'TRIGGER' on the touchscreen. Rotating the 'MENU' knob also cycles through the available CineSFX™: 'FADE' - 'STROBE' - 'LIGHTNING' - 'THROB' - 'CYCLE'- 'FIRE' - 'POLICE'- 'TV' - 'SHOT' - 'NEON' - 'FILM' - 'WELD' - 'PAPARAZZI' - 'CHASE' - 'DEMO'

Please note that the 'CHASE' effect will only be available if the Master Titan 'IN/OUT' is set to 'LOCAL IN' and OUTPUT is set to WIRELESS.

The three control knobs are usually assigned to MENU, SPEED and BRIGHTNESS.   There are some secondary functions assigned to the knobs which are accessible if you press and turn the knobs, these are assigned to specific parameters for each effect and are indicated by grey triangles behind the main parameter displays.

Most of the effects will also have the trigger function , assigned to the Centre knob (click the centre knob to trigger start/stop the selected effect), or tap the TRIGGER on the touchscreen.

'FADE' (Designer Fade™)

Fade is a programmable fade that you can trigger to produce in-camera practical fade effects.   Create a colour, set your max brightness and diffusion in HOME, then go to SFX/FADE. You can trigger the fade by clicking the centre knob, or touching the 'TRIGGER' on the touchscreen.   Rotate the middle knob to set the fade duration, Rotate the right knob to adjust the brightness. Best Fade results are obtained when 'SYS/SETTINGS/Fine Dimming Mode' is set to 'FINEST'.

'LIGHTNING'

The Lightning effect simulates real lightning, it is a random effect but you can control the speed at which the lightning bursts re-occur, ideally you would set the brightness (BRI) to 100% and the colour (COL) temperature to 7000k or create a cool white with added blue. Click the centre knob to trigger (start/stop) the Lightning effect. Rotate the centre knob to adjust the duration between the bursts of lightning (it will display XX which is an indication of the effect frequency). The lightning range is from 1 up to 50 . Click the centre knob to arm the effect and fade to black, TRIGGER will be highlighted - re-click the centre knob to trigger the effect, you can also trigger the effect from an external trigger source via the PC port or Skyport wireless trigger. Press, hold and rotate the right knob to adjust the pulse duration or rolling shutter compensation. Rotate the right knob to adjust the maximum brightness level. You can create a custom colour in the Home menu, and then select SFX/lighting to combine your custom colour with your edited effect.   Finally you can store your custom colour and effect combined into one of the SFX preset buttons.

NB - the duration of the lightning flashes is 20ms which is the recommended duration for cinematography, although this value is adjustable so you can compensate for rolling shutter artifacts. The lightning strikes come in bursts of between two and eight random length pulses.

'STROBE'

The Strobe effect produces a regular flashing light. Create a colour in the HOME menu then go to SFX/STROBE.   .
Click the centre knob to trigger (start/stop) the strobe effect, or touch the 'TRIGGER' activator onscreen (or use a wireless trigger or a connection to the trigger port). Rotate the centre knob to adjust the strobe speed (it will display X.X Hz, where = 'X.X' = number of strobe cycles per second) the strobe range is from 0.3 Hz up to 7 Hz.

NB - the last used strobe parameters are stored in non-volatile memory.

Rotate the right knob to adjust Brightness. Press and turn the right knob to adjust WIDTH (duty cycle/pulse duration), this is also known as 'rolling shutter compensation', where you can trim out the artifacts associated with rolling shutters

'THROB' (NB: now integrated into CHASE effect)

Throb is a regular smoothly pulsing light effect. It has been integrated into the 'CHASE' effect.   So if you want to get a controlled throbbing light (or coloured light), create the colour in HOME, and go to SFX/CHASE to integrate your custom colour with the throbbing light effect.

'CYCLE' (RGB colour cycle)

Colour Cycle is a regular smoothly pulsing light which fades smoothly between the Red, Green and Blue LEDs. Rotate the centre knob to adjust the effect SPEED (it will display XX which is an indication of the effect frequency). The cycle SPEED range is from 1 up to 50. Rotate the right knob to adjust brightness.

'FIRE'

Fire is a complex emulation of a burning fire and it can be tuned to your requirements. Some VFX artists like to use multiple lights with slightly different settings/gels to achieve a fire with dancing 3D shadows. Choose an appropriate colour or Gel from HOME/FILTER or HOME/RGBW and then go to SFX/FIRE

Rotate the centre knob to adjust the FLAME flicker frequency (it will display XX which is an indication of the effect frequency – around 15 is nice for a 'camp fire').

Press and turn the centre knob to adjust the Fire effect residual GLOW depth threshold (about 25% is nice for a 'camp fire'). (It will display XX % which is an indication of the effect depth). Rotate the right knob to adjust brightness.   You can save the combination of your custom colour and customised effect in any of the SFX preset buttons (hold to save, tap to recall)

'POLICE'

This effect is an emulation of an emergency services light. Click the centre knob (or touch the TRIGGER touchscreen) to activate the Police effect. Rotate the centre knob to adjust the police beacon speed. (It will display XX, which will give you an indication of the effect speed). Press, hold and turn the left knob to select the colour (red, blue, red/blue, blue /red) Press, hold and turn the right knob to select Flash type (i.e. 2-pulse, 3-pulse, 4-pulse, 5-pulse, 6-pulse) Rotate the right knob to adjust brightness.

'TELEVISION'

This effect is an emulation of a TV flicker – it works best by setting the colour temperature to 6000K or choosing an 'LHT 061 at 3200K Mist Blue' filter from the HOME/FILTER menu.

Click the centre knob or touch the TRIGGER on the touchscreen to activate the TV effect, or pause & fade to black. You can also trigger this effect from a trigger connected to the flash sync port or via the Skyport or DMX.

Rotate the centre knob to set the SPEED of the TV effect speed (it will display XX, which will give you an indication of the effect speed).

Press and rotate the right knob to adjust brightness.

'GUNSHOT' (Muzzle Flash)

This effect simulates the light produced when a gun is fired (commonly known as muzzle flash). Select the GUNSHOT effect from the SFX carousel. Trigger the effect by clicking the centre knob, or tapping the TRIGGER touchscreen, or trigger the effect externally via the trigger port or via the Skyport or DMX. Control the SHAPE of the gunshot by rotating the centre knob. Rotate the right knob to adjust brightness. Select a base colour for the GUNSHOT effect from the HOME menu, then go to SFX/GUNSHOT.

'NEON' (Broken Neon Light)

This effect is used to simulate a faulty neon or fluorescent fixture. Trigger the effect by clicking the centre knob, or tapping the TRIGGER touchscreen, or trigger the effect externally via the trigger port or via the Skyport or DMX. Rotate the centre knob to control the flicker SPEED of this effect. Rotate the right knob to adjust brightness.

You can create a custom colour for this effect in the HOME menu and combine that with the 'NEON' SFX. The customized preset can be stored in the SFX User Presets.
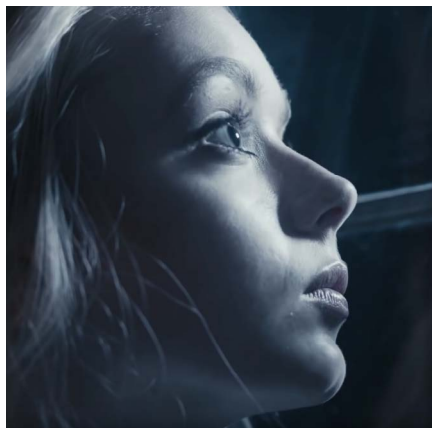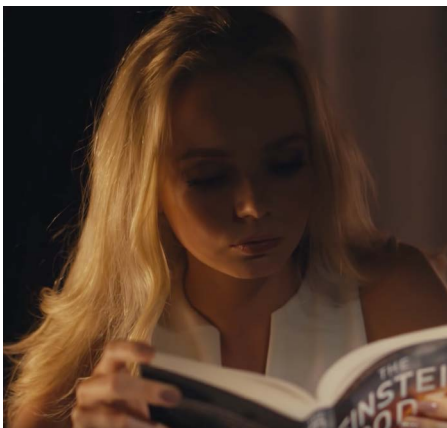
'FILM' (Old Cinema Projector)

The Film effect is designed to simulate the flickering light coming from a celluloid film projector in a movie theatre. Create a base colour for this effect in the HOME menu then go to SFX/FILM to combine the customized colour with your edited effect. You can start / stop (or pause/fade to black) the effect by clicking the centre knob, or touching the 'TRIGGER' on the touchscreen or using an external trigger from the sync/trigger port, DMX or wDMX. Rotating the centre knob changes the flicker SPEED. Ideally set the flicker SPEED quite slow so that a camera running at 24 or 25 frames per second can easily record it. Rotate the right knob to adjust brightness of the effect. Store your customized effect in one of the SFX User Presets (hold to store / tap to recall).

'SPARK WELD' (Arc Welding Light)

This effect simulates the light from an electric arc welding torch. Select the SPARK WELD effect on the SFX carousel. Clicking the centre knob or tapping the touchscreen TRIGGER starts/stops the effect (or pause – fade to black), or you can also start/stop the effect via the external trigger port or via the Skyport or DMX. Rotating the centre knob varies the SPEED of the effect. A key characteristic of the arc welding process is the electric blue arc flame interspersed with vivid orange sparks, and this effect emulates this beautifully.

'PAPARAZZI' (Press Photography Flash Mob)

This effect simulates a flash mob of Paparazzi photographers. Select a suitable base colour from HOME menu (usually a CCT at 5600K) and set your diffusion and core brightness here. Go to SFX and enter the effect by selecting the PAPARAZZI symbol on the SFX carousel. Tap the touchscreen 'TRIGGER' or click the centre knob, or tap the PAPARAZZI symbol on the carousel, or trigger the effect externally via the flash/trigger port or via the Skyport or DMX. Rotate the centre knob to control the speed of the effect. Rotate the right knob to change brightness.

'CHASE' (Moving or Throbbing Light Emulator)

This effect allows Titan™ to wirelessly control a line of up to 12 Rotolight Titans to simulate passing streetlights.

This effect requires some settings in the DMX menu as follows:- Master Titan™ should be set to DMX/IN-OUT (Input – Local Control) (Output Sync-SFX) and Network 'ROTOLIGHT', in DMX/OVERVIEW set the Master to Roto wDMX Channel 1.   Any connected slaves should be set to DMX/IN-OUT (Input wDMX-In) and Network 'ROTOLIGHT'.

The Slaves should be set in DMX/OVERVIEW/Roto-wDMX Channel to base addresses in clusters of 16 (i.e. channels 1, 17, 33, 49, 65, 81, 97, 113, 129, 145, 161, 177, 193).

However, If you are using CHASE to generate a THROB effect, (or any other SFX effect) and you want an unlimited number of lights to do the same thing, then the Master & Slave lights should all be set to the same Roto-wDMX channel DMX address.

The controls for Chase are as follows:

Rotate centre knob to control the Chase 'SHAPE'

Rotate right knob to control Brightness

Press, hold and turn the left knob to control the Chase 'SPEED'

Press, hold and turn the centre knob to control the Chase 'light FLOOR' (i.e. the amount of residual light across all the lights in the Chase)
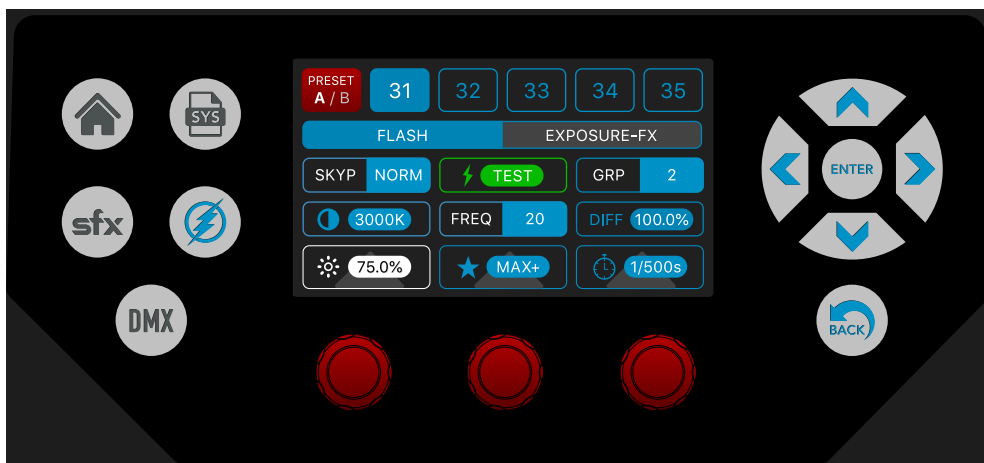
Press, hold and turn the right knob to control the Chase 'GAPs' between each of the lights in the Chase.

DEMO (Auto Demo Mode)
This is a useful way to demo the light in a retail store. Select DEMO by tapping the symbol on the SFX carousel. Right click or tap the symbol again to start/stop (toggle) the DEMO.

FLASH INTERFACE

Titan™ flash with modelling light Overview

Titan™ is the first professional lighting fixture that provides an RGBWW High Speed Sync flash (HSS) at up to 1/8000th second, with no recycle time. You can flash in any colour temperature (3000-10,000 Kelvin), whilst enjoying up to 200% more power (1 stop), than in regular continuous mode, and considerably preserving battery power. Titan™ also gives you a fully adjustable modelling light so in a dark environment you can achieve optimal focus, adjust the selected colour temperature of the flash/modelling light to match any ambient light in the image, whilst previewing and optimizing the shadows in your image.

Rotolight HSS

Providing more than 200% of the normal maximum continuous output (in MAX+ mode), Rotolight HSS flash also provides incredible colour accuracy (CRI 98, TLCI 99) with the ability to electronically tailor the diffusion, spread, brightness, duration and colour temperature to your needs. The advantage of the Titan™ is that the modelling light allows you to better compose your shot; letting you obtain focus and preview how the light will fall in the final image. You can also shoot in high fps mode to ensure you never miss a shot (at any frame rate* and with no recycle time).

High Speed Sync, (HSS), allows flash to be synchronised at a shutter value beyond your camera's normal X-Sync speed (X-Sync is the speed at which your camera can synchronise the flash and the shutter, typically around 1/250th second). In so doing it allows you to freeze action, or enables shooting wide open (with a 'faster' aperture) for lovely bokeh in bright sunlight conditions, which requires your flash to be able to sychronize to higher HSS shutter speeds to avoid over exposure.

Please note, with certain cameras at the highest fps settings the camera switches from mechanical to electronic shutter, and in so doing disables the hot shoe and flash synchronization. Flash can only be synchronized with mechanical shutter so please consult your camera manual. Additionally, many cameras disable flash synchronisation when in silent shutter mode, so ensure this mode is switched off.

USING THE FLASH MODE

Please note : The Titan will use the previously selected colour temperature (CCT), RGB/HSI/XY colour, or filter that was selected prior to entering flash mode. Therefore for regular operation, before entering the flash menu select your desired Colour temperature from the 'CCT' tab on the HOME menu from 3000-10,000 Kelvin (with 5600K being 'daylight' and 3200k being 'tungsten' ie sunset).
Then, tap the 'FLASH' menu button on the touchscreen panel to enter 'FLASH' mode.
(**NB** - Titan is not a TTL flash, it is a manual flash with adjustable flash power, modelling light, colour temperature, diffusion and duration settings.)

Set your camera into manual flash mode, for exposure guide, take a test shot and either adjust flash power, or distance to the subject to achieve optimal exposure. Alternatively you can use the FDIM mode (SYS menu) to calculate exposure for continuous mode, noting that your exposure will be + 1 stop for flash power.

Rotate the left knob to set the desired modelling light level in order to preview focus, shadows and highlights on your subject (in %, 0-100%) and compose your photograph.

NB: Titan™ is intentionally less bright whilst in modelling light mode than regular continuous light mode, in order to make the light more comfortable for the subject and prolong battery life.

Press, hold and rotate the left knob to set the desired 'colour temperature' for your flash (in kelvin, range 3000K-10000K). Or, touch the colour temperature box, then adjust with the left knob. NOTE : If you are shooting using an RGBW colour or filter, then this control is ignored (it only works if you are using a CCT colour)

Rotate the centre knob to set the flash output power,
'MAX+' (>200% of maximum continuous output **plus RGB**), (RECOMMENDED)
'MAX' (=100% of maximum continuous output)
'1/2' (=50%),
'1/4' (=25%),
'X8' (modelling light level x 8)
'X4' (modelling light level x 4).

Using the X4 or X8 output allows you to use the modelling light on your Titan™ to compose and balance the lights in a multi-light setup, and when they flash they will keep this relationship but be four or eight times brighter.
Press, hold and rotate (or touch and adjust) the right knob to set the desired SmartSoft™ diffuser setting.
Rotate the right knob to set the desired duration for the flash, in shutter intervals, i.e. 1/50s, 1/60s, 1/80s, 1/100s...up to 1/2500s ('1/2K5').

Recommended flash settings for simple one-light Titan™ flash operation:
Set flash power to MAX +
For HSS set flash duration to 1/50th (any faster shutter speed i.e. 1/100th will be automatically captured) this ensures that the image will be lit for the entire duration of the flash/shutter event.
Set colour temp (kelvin) to midpoint (approx. 4200K – for maximum output), or carefully match the colour temperature to the ambient light colour in the background of your image.

NB- We strongly recommend to leave the duration set to 1/50th and in HSS mode Titan™ will automatically adjust the duration for you if it detects overlapping flash events.

To shoot with a colour filter or custom RGBWW colour

Titan can flash in any colour temperature (3000-10,000 Kelvin), whilst enjoying up to 200% more power (1 stop), than in regular continuous mode*, and considerably preserving battery power. Alternatively, Titan can flash in any of the 16.7Million RGB colours, or 2500 filters, for optimized battery life.

To shoot in an RGB colour, simply choose the desired filter or create a custom colour in the RGBW / HSI / XY / FILTER menus found on the HOME page. Once you have chosen the desired colour, then go to the FLASH page, and your custom colour will be automatically transferred.

*Please note : The additional flash power boost is provided when the Titan flash is in"CCT" mode in traditional 'white light flash' ie 3000-10,000 Kelvin. In RGB or filter mode, the flash will be at the same maximum ouput as in regular continuous mode, but will considerably increase battery life by dramatically reducing power consumption.

Rotolight/Elinchrom HSS transmitter - Recommended

To shoot in High Speed Sync, you will need an HSS wireless transmitter. Titan™ features an in-built Elinchrom Skyport 2.4Ghz wireless HSS receiver, capable of High Speed Sync flash (HSS, 1/8000th. For best results, use the Rotolight HSS Transmitter (RL-HSS-TX) by Elinchrom available now for Sony, Canon, Nikon, Olympus, Panasonic and Fujifilm cameras, available from from www.rotolight.com and Rotolight retailers globally. Capable of controlling up to ten Rotolights, in four groups, the Rotolight HSS transmitter also provides wireless control of Titan brightness and colour temperature in both flash and continuous modes (Rotolight HSS transmitter only), and can trigger CineSFX™, X-FX (Exposure FX) and Designer Fade™.

Shooting in High Speed Sync

Titan™ will happily work with any camera and any trigger/receiver with a PC sync input, however to shoot in High Speed Sync a) your camera must itself be capable of HSS (many are not), and b) you must use a HSS capable transmitter and receiver (most are not natively HSS compatible unless explicitly stated).

NB – When triggered, Titan™ will flash once for the duration set shutter interval when syncing in HSS, ensuring that the complete frame is illuminated, without banding or gradation. If Titan™ detects a flash re-trigger event that overlaps the next flash event during a set interval, it will automatically adjust the duration of the flash to a shorter interval, to avoid damage occurring to the LEDs.

'TrigSync' and custom flash duration and triggering

Rotolight have developed a special duration and control mode, aimed at the cinematographic industry. It enables Flash mode to support high frame rate, super Slo-Mo production, called 'TrigSync'. If TrigSync is selected in the Duration control (rotate duration to the far left and TrigSync will be displayed after the 1/2500th value, then both Triggering and Duration are controlled from an analogue electronic input signal via the minijack sync port. It can be triggered at virtually any frame rate, and duration is also controlled by the length of each trigger signal, and can be as short as 20uS (20 millionths of a second).

NB: when TrigSync is selected in 'Duration' wireless trigger signals from the Elinchrom HSS receiver are ignored.

Wired Flash Sync using your camera's PC Sync port

To trigger the flash from the PC Sync port on your camera (wired operation), connect a PC sync cable from your camera's PC sync port to the 3.5mm mini jack on the Titan™ port plate. If your camera does not have a PC sync port, then you can purchase the optional 'Rotolight Accessory Shoe to PC' adapter and the PC flash sync cable, which converts your accessory shoe into a PC socket **NB** - PC sync is limited to your camera's internal sync speed (X-Sync) (usually 1/60th up to 1/250th). IT IS NOT HIGH SPEED SYNC.

Recommended triggers

To avoid the need for additional cables or receivers the following transmitters work natively with the inbuilt Elinchom skyport receiver :
Rotolight HSS Transmitter (Canon, Nikon, Sony, Olympus/Panasonic, Fuji)
Elinchrom Transmitter PRO (supports HSS) (Canon, Nikon, Sony, Olympus/Panasonic, Fuji)
Elinchrom HS Transmitter Plus (not HSS) (Canon, Nikon, Sony, Olympus/Panasonic, Fuji

Third-party triggers

Alternatively, you can connect third party flash receivers or transceivers which have a PC sync or 3.5mm flash output, with a PC sync/3.5mm cable to the 3.5mm mini jack flash trigger input jack located on the port plate of Titan™. Connect the transmitter to your camera accessory shoe (such as Godox X1T/R, Phottix, Sony, Pocket Wizard, etc) and follow the instructions supplied with your transmitter. Recommended third party transmitters include:

Godox X1T (use with the Godox X1R receiver)
Pixel King Pro-Sony, Canon, Nikon
Flashpoint R2
Phottix ODIN II (HSS) – Canon, Nikon, Sony
PocketWizard (HSS): FlexTT5, and FlexTT6 support High Speed Sync (HSS) for Canon and FP Sync for Nikon.
Cactus VI II (HSS): Fuji, Canon, Nikon, Pentax, Olympus, Panasonic

Please note: most transmitters require a setting enabled to output a flash sync signal via the PC sync port, please ensure this setting is enabled on your transmitter/receiver

Setting up a Rotolight Elinchrom HSS Transmitter

The below setup instructions are based on the HSS transmitter firmware 1.3 and Titan™ firmware V2.0. To check the firmware version on your HSS transmitter, this is shown on the screen briefly whilst the device turns on. To check the Titan™ firmware version, go to the about information in the SYS menu.

If your HSS transmitter has a version earlier than 1.3, please visit the Elinchrom website to update manually, which should only take a few minutes. If you need an update to your Titan™ firmware, please visit www.rotolight/titan-updates

First, turn on your Titan™ then after a few seconds, turn on your Rotolight or Elinchrom HSS Transmitter. If you are operating from the correct firmware, the transmitter should automatically find the Titan™ and display this on Screen (if it does not you can press setup 'Scan' on the transmitter to force it to search for compatible devices). (Note : It may detect it as 'Apollo' or 'Titan X1' / Titan X2) We automatically set the units to default to channel 1, frequency 1 out of the box.

Ensure that Skyport receiver mode is set to 'SPED' on the Titan™. This ensures that Skyport is active and is in HSS mode. Similarly ensure the Skyport transmitter is in the same "Speed" mode by pressing setup> ELSP mode> Speed.

Then, on Titan™ Flash menu check that both FREQ and GRP are both set to 1, or whatever the desired channel and group is that you wish to use. The frequency setting (channel 1-20) should be set to the same on both your Titan™ and the HSS transmitter.

Press the setup button on the right-hand side of the HSS transmitter. Scroll using the rotary wheel to 'Frequency', and ensure it is on the desired frequency – we recommend defaulting to channel 1, however if you happen to encounter interference from other signals, try changing to a lesser used frequency, such as channel 20.
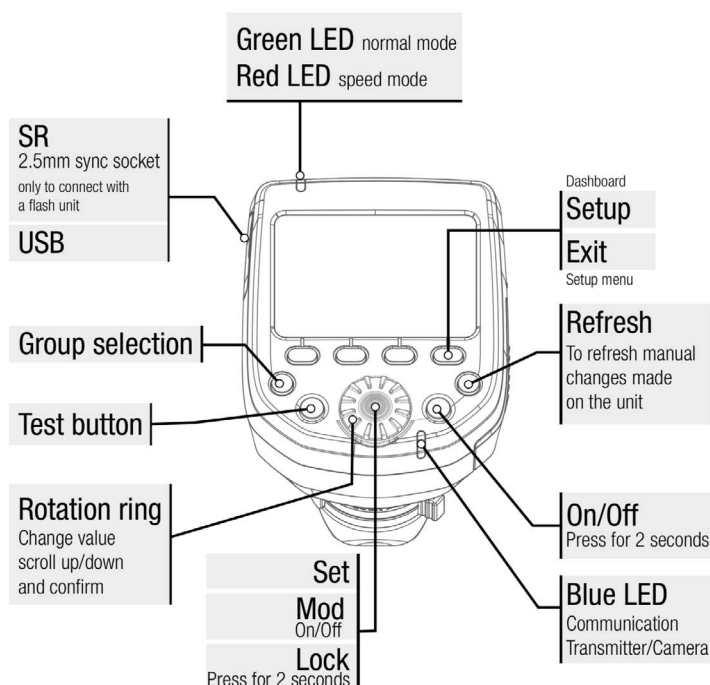
To then adjust the frequency, press the button in the centre of the rotary wheel and scroll to change the number. Press the centre button to confirm, which also navigates you back to the main setup menu.

For users wishing to operate both Elinchrom and Rotolight units simultaneously using the HSS transmitter, scroll using the rotary wheel to 'ELSP mode', use the centre button to enter the mode and scroll to adjust to 'Normal'. Press the button in the centre of the rotary wheel centre to confirm. The screen will change to a green background colour to confirm you are in Normal mode. Ensure you also change this setting on your Titan™ in the FLASH menu. You may then need to turn off your transmitter and turn back on again for it to re-register the units on the display. If you are only operating Rotolight units via the HSS transmitter, we recommend using Speed mode, which will turn the background colour red.

Flash User Presets : There are ten user programmable radio button user presets available to store and recall your favourite customised Flash settings (presets 31-40). Press and hold to store a setup, tap the button to recall the preset. Tap the bank button to access presets 36-40.

'X-FX' (Exposure Effects)

Titan™ X2 includes an Exposure Effects (X-FX) feature set, delivering multi-flash intra-frame imaging for photography that allows users to capture multiple stroboscopic frames of movement within one exposure, or programmable delayed flash events. It is easy to use and can provide some really fun ways of creating unusual multi-exposure images to capture the spirit of movement in still photography.

As a rule , it is a good practice to use a dark background, and to track the camera slightly through the image capture, to avoid burned out hotspots within the image. X-FX works using the Flash settings you have created in the FLASH submenu. If you exit the X-FX submenu, then the X-FX parameters, (DLAY / REPS / GAPS) will be switched off. The X-FX and FLASH settings can be stored in the Flash menu User Presets (hold to store, tap to recall).

A typical X-FX setup would comprise 2 or more Titan Lights, using one as a "big finish/keylight" which would fire once at the end of the captured motion sequence, usually with a DLAY set. The other light would be at a lower power output setting, with a very short duration (so the motion doesn't blur), and with no DLAY, multiple REPS, with short GAPS set between the REPS. e.g. The second light triggers first, with 5 REPS, and GAPS of 0.1seconds, at half power (maybe as a coloured RGBW Flash?), that will take a total of exactly 0.5 seconds, so your main "big finish/keylight" should have 0.5seconds DLAY and fire once, to conclude the shot. Your camera exposure duration should be at least 0.6 seconds. The sequence of flashes between the two lights will be synchronised to start from the same flash trigger event (could be a wireless or wired flash trigger)

'DLAY' (Delay before the 'Repetitions or Gaps')

Rotate the left knob to set your desired 'DLAY' 0.00s (in seconds). This will introduce a delay that follows the flash trigger, and before the Titan™ flash fires, after the shutter release or trigger is received. The REPS (with their set GAPS) follow the DLAY.

'REPS' (Repetitions)

Rotate the centre knob to set the required REPS (flash repetitions). (maximum 20).

'GAPS' (The Gaps between the Repetitions)

Press the right knob to set the desired duration of the 'GAPS' (between the REPS),displayed in fractions of a second (i.e. 0.10s – 1/10th of a second) between the repeated flashes ('REPS').
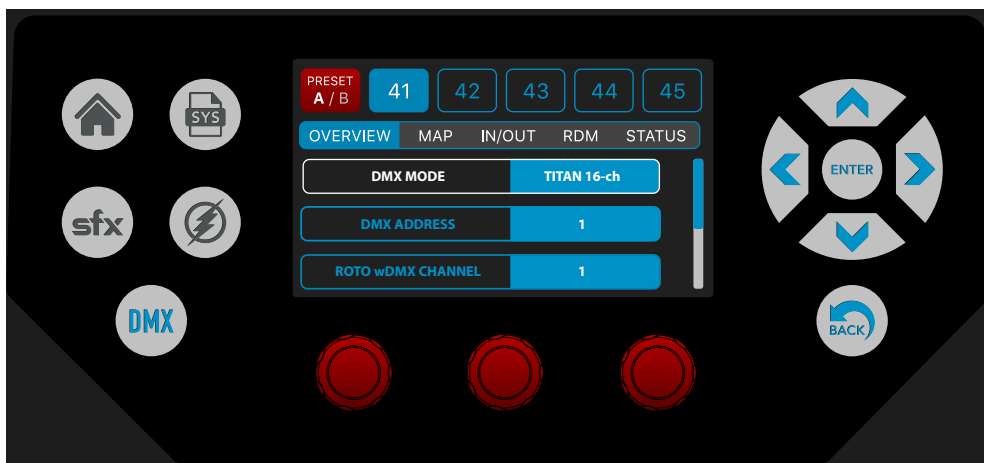
When you have set any desired DLAY, REPS or GAPS you can test X-FX by tapping the 'TEST' switch on screen, or clicking the centre knob.

NB - X-FX are only active whilst you remain in the X-FX menu.

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DMX INTERFACE

NB - There are ten user programmable radio button presets available to store and recall customised DMX settings (presets 41-50). Press and hold to store a setup, tap the button to recall the preset. Tap the bank button to access presets 46-50. These presets can be very handy (even if you only use them to store your DMX Base Address so that tapping the preset buttons gives you fast access to multiple DMX Base addresses for the Titan™.)

OVERVIEW
This can be scrolled up and down, and provides a snapshot of the key DMX controls

In OVERVIEW the three knobs work as follows : Left and Centre knob = Menu Scroll, Right knob = Value.   You can also use the touchscreen to scroll the OVERVIEW menu items up and down.

The OVERVIEW submenu displays the following key DMX parameters:-

DMX MODE - Rotate the right knob to select your desired DMX Master Mode. Choose from Titan 16 channel/Titan 8 Channel / Rotolight Legacy 2 Channel/ Rotolight Legacy 8 Channel / Arri compatible 24 channel mode / Gemini 10 channel mode

DMX ADDRESS   - select the base DMX channel address for this Titan™

ROTO wDMX CHANNEL – NB: this is the same as the Skyport Channel # in the FLASH menu.   Choices are channels 1-20

DMX SMOOTHING – this operates on all incoming DMX Data, and introduces smoothing to the data, because Titan's DMX interface is so fast, so that fades and transitions are less stepped. Options: OFF/LOW/HIGH

Bluetooth PIN Code – This allows the user to reset the Bluetooth PIN code on the LumenRadio TimoTWO chip. (This PIN can become locked if set by the 'CRMX Toolbox' APP) so you can use this function to reset the TimoTWO bluetooth PIN.
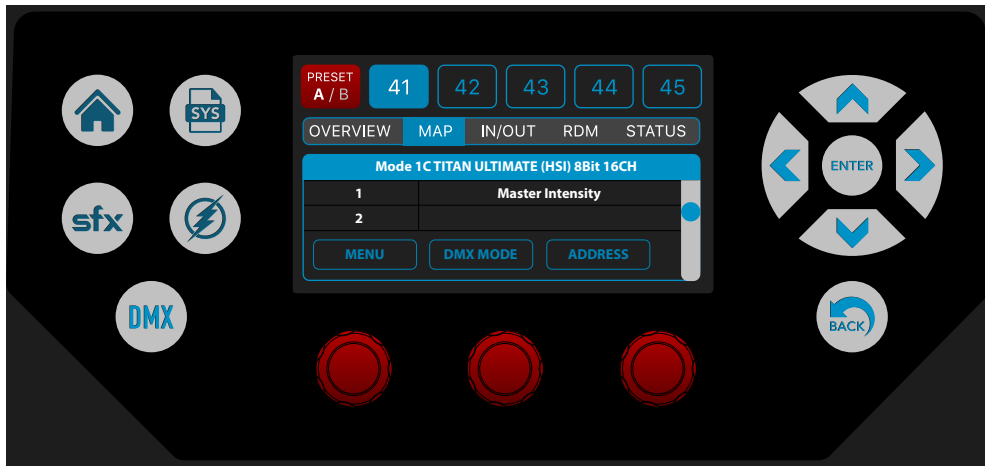
MAP

This can be scrolled up and down, and provides a dynamic snapshot of the channel assignment of the DMX parameters for the currently selected DMX Mode. Changing the address via the right knob will be immediately reflected in the channel assignments. Changing the mode using the knobs or via DMX will be shown in the channel and parameter allocations.

Press , hold and turn DMX MODE to Select a DMX 'submode' within your selected DMX Master Mode, and all the updated channel assignments will be shown. Rotate MENU to scroll down through the MAP page(or use the touchscreen). Rotate ADDRESS to adjust your DMX Base Address (the MAP page will illustrate all the changes to the assigned channels at the same time.)

Rotolight Titan™ has six Master DMX protocol modes:

Mode 1: **Titan™ Ultimate 16 channel DMX Protocol (8 Bit) (see chart on p.35)**
Provides full control over all of the Titan™ features using sub modes 1A (CCT) through to 1H (Flash)

Mode 2: **Titan™ Utility Protocol eight channel (8 bit) (see chart on p.36)**
Provides an eight channel control over all of Titan™'s key features using sub modes 2A (CCT) through to 2H (Flash)

Mode 3: **Rotolight Legacy two Channel (8bit) (see chart on p.36)**

2 Channel operation for Titan™ in 'Rotolight Legacy Mode', i.e. this works with other Rotolight products such as Anova PRO 2, AEOS, and NEO 2

Mode 4: **Rotolight Legacy eight Channel (8bit) (see chart on p.36)**
8 Channel Limited operation for Titan™ in 'Rotolight Legacy Mode', i.e. this works with other Rotolight products such as Anova PRO 2, AEOS, and NEO 2
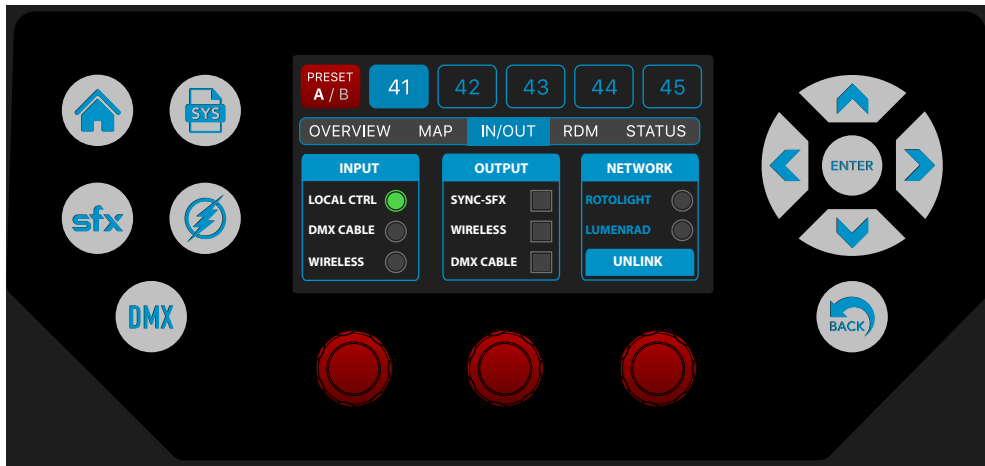
Mode 5: **ARRI ® Ultimate (#30) emulation, 24 Channel (8 Bit) (see chart on p.37)**
Allows Titan™ compatibility when being used alongside ARRI ® S60 SkyPanels, including dual colour engine support using sub modes 4A (CCT &G/M Point) through to 4G (Effects)

Mode 6: **Gemini ® Ultimate emulation 10 channel (8 Bit) (see chart on p.38)**
Allows Titan™ compatibility when being used alongside Lightpanels Gemini ® fixtures using sub modes 5A (CCT) through to 5H (Presets)

IN/OUT

This page offers a simple radio button system for users to select the desired input and output configuration for Titan™. Configure using the touchscreen.

INPUT options are as follows:

LOCAL CONTROLS

Titan™ will ignore inputs from DMX sources and is operated by the local controls.

DMX CABLE

Titan™ will respond to incoming DMX Data from the wired DMX inputs on the selected DMX Base Channel, using the selected DMX Mode.

WIRELESS DMX

If NETWORK / LUMENRAD is selected, Titan™ will respond to incoming wireless DMX data from the Lumenradio TimoTwo wireless DMX communications module, on the selected DMX Base Channel, using the selected DMX Mode. This data can be in Bluetooth or wDMX /CRMX (2.4Ghz WiFi) format.

NB: Please don't confuse the Skyport Frequencies 1-20 (ROTOLIGHT wDMX CHANNELS) and the DMX Base Address channel, they are two separate things.   For SYNC-SFX to work, you will need to configure both to match the Master Titan™.

OUTPUT options are as follows:

SYNC-SFX

Titan™ will wirelessly output special effects in multichannel format so that other slave Titans™ can operate the same special effect in perfect synchronization, (i.e. Lightning, Fire etc). See "Using Roto-wDMX mode for Master and Slave operation" (p.31)

WIRELESS

Titan™ will output DMX Data via the selected wireless DMX transmitter (i.e., either LumenRadio or Skyport/ Rotolight wireless DMX)

DMX CABLE

Titan™ will output DMX Data via the Cable DMX port.

NETWORK

You can select either ROTOLIGHT (which uses the Skyport/Roto wDMX protocol), or LUMENRAD (which is standard wDMX/CRMX by Lumenradio).   Use the UNLINK button to disconnect from a CRMX network before switching networks.

USING ROTO-wDMX MODE FOR MASTER AND SLAVE OPERATION

ROTO-wDMX uses a proprietary Rotolight 2.4Ghz network to synchronise and slave Colour Temperature (CCT), Brightness and/or SFX across multiple Rotolights, without the need for a DMX desk, cables or operator. This mode can be used to slave all Rotolight models (NEO, AEOS, Anova, Titan X1 and X2).

The Master Titan should be set to :
DMX/IN-OUT: INPUT = LOCAL CNTL, OUTPUT = SYNC-SFX , WIRELESS and NETWORK = ROTOLIGHT, (NB when you select SYNC-FX, the DMX CABLE output will also be selected automatically)
 in DMX/OVERVIEW set "ROTO wDMX CHANNEL" = 1
In DMX/OVERVIEW set "DMX ADDRESS " Channel 1
In DMX/OVERVIEW set "DMX MODE" = TITAN 16-ch

Any connected Slaves should be set to
DMX/IN-OUT : INPUT = WIRELESS and NETWORK = ROTOLIGHT.
in DMX/OVERVIEW set "ROTO wDMX CHANNEL" = 1.
In DMX/OVERVIEW set "DMX ADDRESS " = Channel 1 *

*DMX ADDRESS for Slaves should always be the same as the Master, i.e. Channel 1, with the only exception being SFX / CHASE effect, where each Slave should be set in DMX/OVERVIEW / "DMX ADDRESS" in clusters of 16 (i.e. SLAVE 1 set to DMX ADDRESS = 1, SLAVE 2 set to DMX Address = 17, SLAVE 3 set to DMX address 33, ... 49, 65, 81, 97, 113, 129, 145, 161, 177, 193 and so on).

If you would like to control legacy Rotolight fixtures like ANOVA PRO 2, AEOS or NEO from a Titan Master, then you need to set up the legacy Slaves as follows:-
NEO / CNTL / ADDR = 1 , MODE = wDMX
AEOS / CNTL / ADDR = 1 , MODE = wDMX
ANOVA PRO 2 / CNTL / BASE / ADDR = 1 , MODE = wDMX

Finally, it IS possible to control Titan from an ANOVA
Set the Master ANOVA PRO 2 to CNTL / BASE / ADDR = 1 , MODE / LOCL , MSTR = wDMX

Set the Slave Titan to
DMX / OVERVIEW / DMX MODE = ROTO 2-ch
DMX / IN/OUT / INPUT = WIRELESS , NETWORK = ROTOLIGHT

The Titan will now follow the ANOVA PRO as a slave, the CCT range on the Titan will be automatically adjusted (by the Mode setting) to be the same as the ANOVA , i.e. 3150K to 6300K.

These are incredibly useful features for existing owners of Rotolight legacy products, as the entire family of Rotolight products are designed to work together , wirelessly , in perfect SYNC.

'ROTO-CLONE' is a process which automatically sends out the same DMX data on multiple groups of channels, based on the channel footprint of the currently selected DMX Mode. So in plain English, this means that if you select a 16channel Titan DMX mode on the master, it will replicate the DMX date onto multiple DMX address locations in blocks of 16, You could select a 2 channel mode, or even a 24channel mode, and the data will be replicated in channel blocks of 2 or 24channels accordingly.

These technologies make it possible to set up groups of lights doing the same effect, (Lightning, Fire etc) in perfect synchronization, wirelessly.

REMOTE DEVICE MANAGEMENT (RDM)

Rotolight are designing the RDM functionality for Titan™ (RDM = Remote Device Management) and this feature will be launched in 2021. We are registered with the RDM Technical Standards Program at ESTA.org (our RDM ID is 1809h). While we are finalising the rollout of the RDM functionality for Titan™ we would welcome any suggestions you have for key functions to be included. Please email your suggestions to rod@rotolight.com, with the subject 'Titan RDM Wishlist'. Here is a table containing the Titan™ RDM features currently in development:-

FEATURE TITAN TO CONTROLLER	NOTES
GET MANUFACTURER	
GET MODEL NUMBER	Titan X1 or X2 (read from Serial Number)
GET SERIAL NUMBER	
GET UID	The RDM Unique Identifier of the RDM Device
GET FIRMWARE VERSION	
GET FRIENDLY NAME (LABEL)	SET from Controller OR TITAN ie. Fill/backlight/key etc
SET DMX STARTADDRESS	
SET DMX PERSONALITY (Master Base Mode)	1-5 , sub modes are set over DMX
GET DMX SUB MODE	1A CCT, 1B RGBWW, 1C XY, etc
GET DMX SLOTS	1-24 dependent on Mode
GET BRIGHTNESS	
GET DIFFUSER	Electronic diffuser (0-100%)
GET/SET FILTER BASE TEMP	(3200K or D65/6500K)
GET COLOUR TEMP	3000K to 10,000K
GET/SET LAMP ON/OFF	Turns Lamp output On or Off (Toggle)
GET LAMP HOURS	
GET RED LEVEL	
GET GREEN LEVEL	
GET BLUE LEVEL	
GET WARM WHITE LEVEL	
GET COOL WHITE LEVEL	
SET FAN MODE	
GET FAN SPEED	
SET COLOURSPACE	DCI P3 (FULL Gamut) , Rec. 2020 or Rec. 709
SET CAMERA LUT	
GET LED TILE 1 TEMP	
GET LED TILE 2 TEMP	
GET SYSTEM TEMP	
LOCK TOUCHSCREEN	
SET DMX SOURCE	WIRED, wDMX, BLUETOOTH, Roto-wDMX
SET DMX OUTPUT	WIRED, wDMX, BLUETOOTH, Roto-wDMX
GET CINE-SFX MODE	ie. fire effect, lightning effect, gunshot effect, TV effect
GET STATUS	Gets current Warning/Error/Status messages
GET SENSOR INPUT VOLTAGE (V)	
GET SENSOR OUTPUT POWER (W)	
SET POWER SOURCE (AC ADAPTER / BATTERY)	
LINK CRMX DEVICE (LUMENRADIO wDMX)	

STATUS

This page offers a highly visible screen that can be viewed from distance, to exit the STATUS page, touch the screen , or the DMX menu button.

The STATUS page displays the following information:
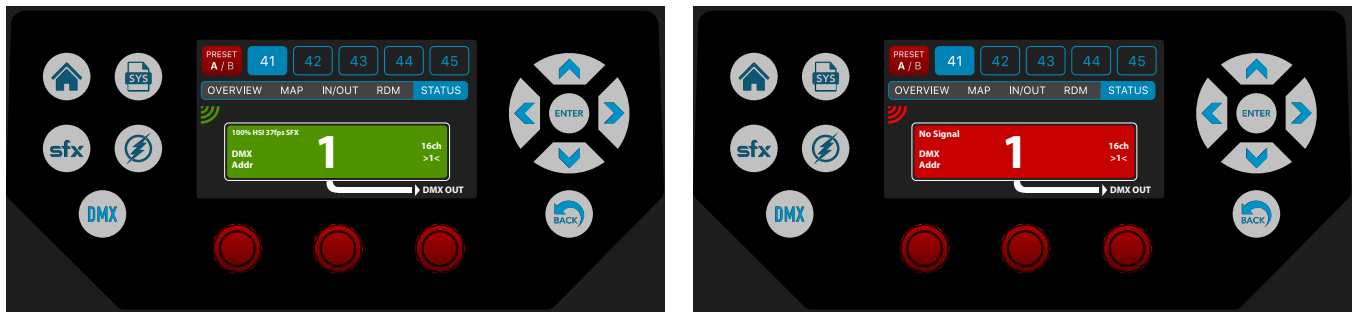
1. DMX channel
2. Connection status (green is 'good', red is 'no signal').
3. DMX input type (cable or wireless)
4. Output type (cable / wireless)
5. Frequency (for Rotolight wDMX/Skyport)
6. Signal strength
7. DMX footprint (i.e. '16 Channel', plus '> <' indicators showing if the grouping of channels is contiguous

The rest of this chapter will cover the operation of Titan™ using Mode 1 and Lumenradio, plus information about Rotolight wireless DMX.

Notes re Titan™ DMX Protocol Mode 1

Titan™ Ultimate 16 channel DMX Protocol (8 Bit) (Mode 1)

This protocol has some dynamic parameters (channels 5 through 15) and the function assigned to these faders is dictated dynamically by the DMX values on the fourth DMX fader channel, which sets the submode . (See table)

This creates seven sub modes (modes 1A to 1G), the DMX value of channel 4 which sets the sub mode is shown in blue:

Mode 1A. CCT	(0 – 30)	Mode 1E. FILTER	(121 – 150)
Mode 1B. RGBW	(31 – 60)	Mode 1F. CineSFX	(151 – 180)
Mode 1C. HSI	(61 – 90)	Mode 1G. FLASH	(181 – 210)
Mode 1D. XY	(91 – 120)		

See the Titan™ DMX 'Mode 1' Protocol table on page 35.

Notes re ARRI Ultimate DMX Mode (#30) (Titan Mode 5)

This Titan mode is designed to emulate the 24 channel 8 bit ARRI Ultimate mode (#30). Currently Titan will respond to the first 10 channels of DMX Data, plus the Fan Control Data. We hope to support the second block of 10 channels for the second light engine plus the crossfade function, early in 2021. 'Colour Mode Selection' is dictated by the DMX Data value on channel 2 of this mode, as follows:-

Mode 'CCT & Green–Magenta Point'	(0-9)	Source Matching	(40-49)
Mode HSI	(10-19)	X,y Coordinate	(50-59)
RGBW	(20-29)	Effects	(60-69)
Gel Selection	(30-39)	Reserved	(70-255)

For a list of DMX values for Rotolight filters and effects, please refer to www.rotolight.com/Titan

MODE 1: TITAN ULTIMATE PROTOCOL 1: 8Bit 16 Channel

DMX CHANNEL	FUNCTION	MODE 1A	MODE 1B	MODE 1C	MODE 1D	MODE 1E	MODE 1F	MODE 1G
1	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Modelling Intensity
2	CCT	CCT				CCT (D32/D65)		CCT
3	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion
4	MODE SELECT	Col Mode: CCT (0-31)	Col Mode: RGBW (32 - 63)	Col Mode: HSI (64 - 95)	Col Mode: XY (96 - 127)	Col Mode: FILTER (128 - 159)	Col Mode: Cine SFX (160 - 191)	Col Mode: FLASH (192 - 223)
5	Green/magenta	Magenta / Green				Magenta / Green		Magenta / Green
6	Red		Red	Hue lo	CIE x hi	Brand (FILT1)	Red	XFX Delay
7	Green		Green	Hue hi	CIE x lo	GelNumber 100s (FILT2)	Green	XFX Reps
8	Blue		Blue	Saturation	CIE y hi	GelNumber 1s (FILT3)	Blue	XFX Gaps
9	Warm White Intensity		Warm		CIE y lo	(FILT4)	Warm	
10	Cool White Intensity		Cool				Cool	Flash Duration
11	Trigger	SFX Trigger	SFX Trigger	SFX Trigger	SFX Trigger	SFX Trigger	SFX Trigger	Flash Trigger
12	FX & Flash Parameter	SFX Select	SFX Select	SFX Select	SFX Select	SFX Select	SFX Select	Flash Power
13	FX & Flash Parameter	SFX Frequency	SFX Frequency	SFX Frequency	SFX Frequency	SFX Frequency	SFX Frequency	Skyport mode
14	FX & Flash Parameter	SFX Duty	SFX Duty	SFX Duty	SFX Duty	SFX Duty	SFX Duty	Sky Group
15	FX & Flash Parameter	SFX Misc	SFX Misc	SFX Misc	SFX Misc	SFX Misc	SFX Misc	Sky Frequency
16	Fan Control	Fans Auto->127->Manual	Fans Auto->127->Manual	Fans Auto->127->Manual	Fans Auto->127->Manual	Fans Auto->127->Manual	Fans Auto->127->Manual	Fans Auto->127->Manual

MODE2: TITAN UTILITY PROTOCOL 2: 8Bit 8 Channel

DMX CHANNEL	FUNCTION	MODE 2A	MODE 2B	MODE 2C	MODE 2D	MODE 2E	MODE 2F	MODE 2G
1	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Modelling Intensity
2	CCT	Colour Temperature	Colour Temperature	Colour Temperature	Colour Temperature	Colour Temperature	Colour Temperature	Colour Temperature
3	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion
4	MODE	Col Mode: CCT (0-31)	Col Mode: RGBW (32 - 63)	Col Mode: HSI(64 - 95)	Col Mode: XY (96 - 127)	Col Mode: FILTER (128 - 159)	Col Mode: Cine SFX (160 - 191)	Col Mode: FLASH (192 - 223)
5	Colour Parameter #1	Magenta / Green	White	Hue Hi	CIE x hi	Brand (FILT1)	SFX Select	Magenta / Green
6	Colour Parameter #2		Red	Saturation	CIE y hi	GelNumber 100s (FILT2)	SFX Frequency	Flash Power
7	Colour Parameter #3		Green			GelNumber 1s (FILT3)	SFX Duty	Duration
8	Colour Parameter #4	Fans Auto->127->Manual	Blue	Fans Auto->127->Manual	Fans Auto->127->Manual	Fans Auto->127->Manual	SFX Trigger	Flash Trigger

MODE 3: ROTOLIGHT LEGACY: 8Bit 2 Channel

DMX CHANNEL	FUNCTION	MODE 3
1	Master Intensity	Master Intensity
2	CCT	Colour Temperature (CCT)

MODE 4: ROTOLIGHT LEGACY: 8Bit 8 Channel

DMX CHANNEL	FUNCTION	MODE 4
1	Master Intensity	Master Intensity
2	CCT	Colour Temperature (CCT)
3	FX Select	SFX Select
4	FX Speed	SFX Speed
5	FX Depth	SFX Depth
6	Red	Red
7	Green	Green
8	Blue	Blue

MODE 5: ARRI ULTIMATE (#30) 8Bit 24Channel

DMX CHANNEL	FUNCTION	MODE 5A	MODE 5B	MODE 5C	MODE 5D	MODE 5E	MODE 5F	MODE 5G
1	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity	Master Intensity
2	Colour Mode Selection	Col Mode: CCT (0-9)	Col Mode: HSI (10-19)	Col Mode: RGBW (20-29)	Col Mode: GEL (30-39)	Col Mode: SourceMatch (40-49)	Col Mode: XY (50-59)	Col Mode: Effects (60-69)
3	Colour Parameter #1	CCT	Hue	Red	CCT D32 D65 switch	Category (FILT3)	CIE x (FILT3)	FX Select (FILT3)
4	Colour Parameter #2	Magenta / Green	Saturation	Green	Colour Mode (FILT4)	Source (FILT4)	CIE y (FILT4)	
5	Colour Parameter #3			Blue	Gel Brand (FILT1)			
6	Colour Parameter #4			White	Category (FILT2)			
7	Colour Parameter #5			CCT	Gel Number (FILT3)			
8	Colour Parameter #6			Magenta / Green				
9	Colour Parameter #7							
10	Colour Parameter #8							
11	Cross Fade	Cross Fade	Cross Fade	CROSS FADE	CROSS FADE	CROSS FADE	CROSS FADE	CROSS FADE
12	Colour Mode Selection	Col Mode: CCT (0-9)	Col Mode: HSI (10-19)	Col Mode: RGBW (20-29)	Col Mode: GEL (30-39)	Col Mode: SourceMatch (40-49)	Col Mode: XY (50-59)	Col Mode: Effects (60-69)
13	Colour Parameter #1	CCT	Hue	Red	3200K/5600K	Category	CIE x	FX Select
14	Colour Parameter #2	Magenta / Green	Saturation	Green	Colour Mode	Source	CIE y	
15	Colour Parameter #3			Blue	Gel Brand			
16	Colour Parameter #4			White	Category			
17	Colour Parameter #5			CCT	Gel Number			
18	Colour Parameter #6			Green Magenta				
19	Colour Parameter #7							
20	Colour Parameter #8							
21	Fan Control	Fan Control	Fan Control	Fan Control	Fan Control	Fan Control	Fan Control	Fan Control
22	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset
23	Light Strobe	Light Strobe	Light Strobe	Light Strobe	Light Strobe	Light Strobe	Light Strobe	Light Strobe
24	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion

MODE 6: GEMINI ULTIMATE 8Bit 10Channel

DMX CHANNEL	FUNCTION	MODE 6A	MODE 6B	MODE 6C	MODE 6D	MODE 6E	MODE 6F
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	CCT	CCT	Hue	CCT	CCT	FX Select	Preset Select
3		Magenta / Green	Saturation	GEL ID 1's (FILT3)	White	FX Parameter #1	Trigger
4				GEL ID 10's (FILT2)	Red	FX Parameter #2	Factory User
5	MODE	Col Mode: CCT (0-31)	Col Mode: HIS 43 - 85	Col Mode: Filter 86-127	Col Mode: RGBW 128 - 170	Col Mode: EFFECTS 171 -212	Col Mode: PRESETS 213 - 255
6		Fan Control	Fan Control	Fan Control	Fan Control	Fan Control	Fan Control
7					Green	FX Parameter #3	
8					Blue	FX Parameter #4	
9						FX Parameter #5	
10	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion

HOW TO CONNECT TO LUMINAIR

STEP 1

Ensure your Titan has the latest firmware installed via the USB update process. At the time of writing this is V200_201

STEP 2

Ensure you also have the latest LumenRadio firmware installed via the CRMX toolbox app. At the time of writing this is v1.0.1.0

STEP 3

Power on your Titan

STEP 4

Select DMX / IN/OUT - INPUT = WIRELESS, NETWORK = LUMENRAD

STEP 5

Now go to the STATUS tab in the DMX menu - at this stage this should display a red no-signal indication since we have not yet setup Luminair

STEP 6

If you have a Titan project loaded and have previously controlled your Titan from it - the app should automatically connect to your Titan at this point (this may take up to 10 seconds), at which point the DMX status screen will turn green and show the signal info.

STEP 7

If you are starting with a blank Luminair installation, then you will first need to create a new Luminair project and add the Titan X2 fixture to the project as follows:

STEP 8

On Luminair, select the menu icon in the top left and select 'Projects' then click '+' to add a new project.
Enter your project name.

STEP 9

On the blank project page - click the '+' in the top left to add a fixture. Select 'DMX fixture / Select a Profile', scroll down the list of manufacturers to Rotolight then select TitanX2 (Note: it may be necessary to first download a fixture file for Rotolight before you see Rotolight in the list of manufacturers).

STEP 10

Select the mode you would like to run the light in. eg. Titan X2 Mode 1A (CCT)

STEP 1
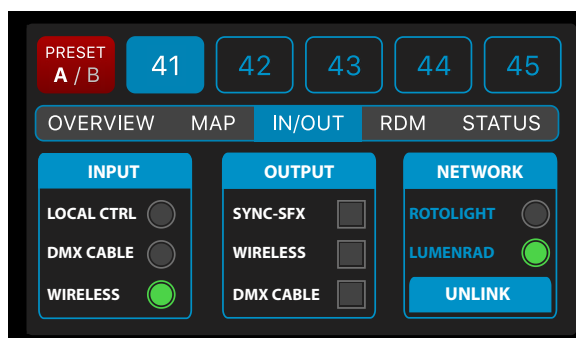
STEP 4

STEP 5
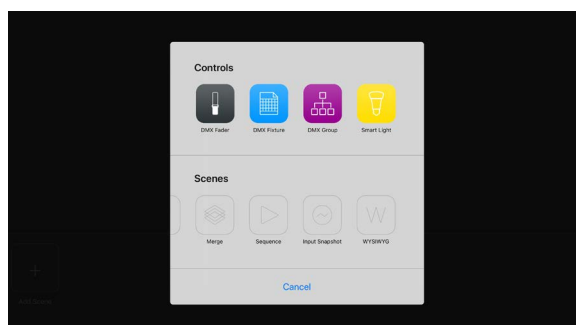
STEP 9

STEP 11

Select the 'Start Channel' DMX address number you would like the fixture to be located at (typically Ch1)

STEP 12

A range of sliders will automatically be added to your project.

STEP 13

STEP 13

Now click the green or red circle in the top right of the Luminair app to bring up the network status page.

STEP 14

Select the Bluetooth tab. You should see a list of all available BLE devices here. By default the Titan will appear as 'Rotolight Titan X2' (you can change the displayed name via the CRMX Toolbox app). In the screenshot below the Titan is named 'DevTitan'.

STEP 15

STEP 15

Tick the Titan unit which you want to control.

STEP 16

This should connect to the Titan and the DMX status page should change to green as shown

STEP 17

The 'STATUS' page on Titan should now display in green, showing a good signal from Luminair.
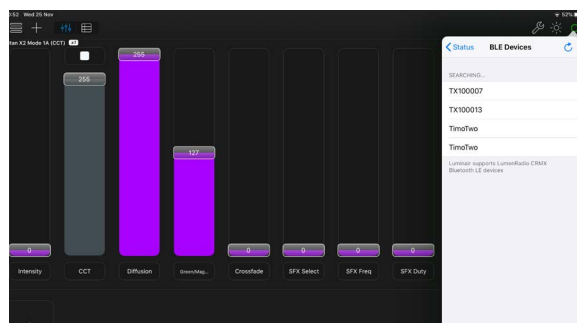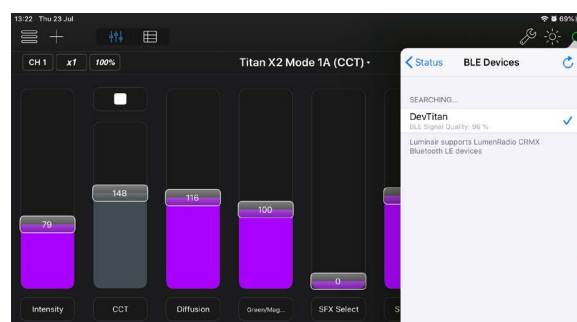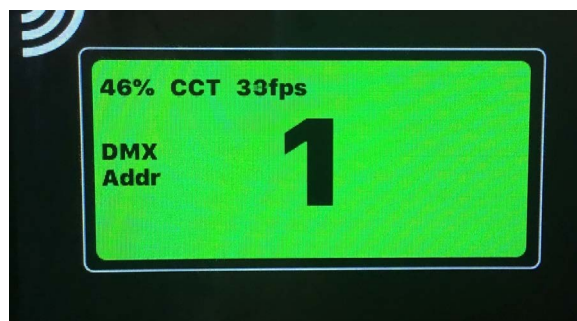
STEP 17

TIPS

1) SOMETIMES THE LUMINAIR APP WILL USE A START ADDRESS OF 2 INSTEAD OF 1 - CAUSING A MISALIGNMENT OF THE CHANNEL MAPPING.

TO CORRECT THIS ON THE LUMINAIR APP, CLICK ON THE FIXTURE NAME IN THE TOP LEFT OF THE DISPLAY THEN CLICK EDIT. THEN CLICK THE BOX THAT SAYS CH2 AND CHANGE TO CH1. DISMISS THE SETTINGS BY CLICKING THE EYE SYMBOL ON THE RIGHT THEN SHOW ALL FIXTURES.

2) ENSURE THAT THE SFX SELECT CHANNEL IS SET TO ZERO TO TURN OFF THE SPECIAL EFFECTS.

	1m / 3.3ft 3200K	1m / 3.3ft 5600K	3m / 9.8ft 3200K	3m / 9.8ft 5600K	5m / 16.4ft 3200K	5m / 16.4ft 5600K	7m / 23ft 3200K	7m / 23ft 5600K	9m / 29.5ft 3200K	9m / 29.5ft 5600K
Titan™ X2 no diffusion	15900 lx / 1477 fc	16500 lx / 1533 fc	2220 lx / 206 fc	2260 lx / 210 fc	939 lx / 87 fc	1120 lx / 104 fc	548 lx / 51 fc	551 lx / 51 fc	384 lx / 36 fc	377 lx / 35 fc
Titan™ X2 50% diffusion	14500 lx / 1347 fc	11900 lx / 1106 fc	2080 lx / 193 fc	1750 lx / 163 fc	872 lx / 81 fc	877 lx / 81 fc	472 lx / 44 fc	397 lx / 37 fc	346 lx / 32 fc	284 lx / 26 fc
Titan™ X2 full diffusion	9060 lx / 842 fc	6250 lx / 581 fc	1320 lx / 123 fc	929 lx / 86 fc	573 lx / 53 fc	475 lx / 44 fc	318 lx / 30 fc	227 lx / 21 fc	222 lx / 21 fc	158 lx / 15 fc
Titan™ X2 with intensifier	17200 lx / 1597 fc	16500 lx / 1533 fc	2640 lx / 245 fc	2250 lx / 209 fc	1080 lx / 100 fc	1232 lx / 114 fc	583 lx / 54 fc	606 lx / 56 fc	411 lx / 38 fc	355 lx / 33 fc
Titan™ X1 no diffusion	8240 lx / 766 fc	8290 lx / 770 fc	1060 lx / 98 fc	1090 lx / 101 fc	468 lx / 43 fc	477 lx / 44 fc	237 lx / 22 fc	261 lx / 24 fc	168 lx / 16 fc	174 lx / 16 fc
Titan™ X1 50% diffusion	8230 lx / 765 fc	7560 lx / 702 fc	1080 lx / 100 fc	913 lx / 85 fc	474 lx / 44 fc	395 lx / 37 fc	240 lx / 22fc	217 lx / 20 fc	167 lx / 16 fc	143 lx / 13 fc
Titan™ X1 full diffusion	4900 lx / 455 fc	3030 lx / 281 fc	672 lx / 62 fc	471 lx / 44 fc	304 lx / 28 fc	216 lx / 20 fc	161 lx / 15 fc	113 lx / 10 fc	103 lx / 10 fc	72 lx / 7 fc
Titan™ X1 with intensifier	8140 lx / 756 fc	8400 lx / 780 fc	1170 lx / 109 fc	1200 lx / 111 fc	508 lx / 47 fc	521 lx / 48 fc	278 lx / 26 fc	287 lx / 27 fc	186 lx / 17 fc	193 lx / 18 fc

Photometrics tested in September 2020 using a Sekonic C7000. Titan™ X2 & Titan™ X1 in Max Lux mode

Titan™ Family

Specification	Titan™ X2	Titan™ X1
LED System	Rotolight PentaChromic Colour Engine™	
Diffuser System	Rotolight SmartSoft™ Diffusion	
Beam Angle	Electronically variable 68 degrees to 150 degrees	
Light Aperture	650 x 300 mm / 25.6" x 11.8"	340 x 300 mm / 13.4" x 11.8"
Weight	Titan™ X2 body: 11.5kg / 25.3 lbs Titan™ X2 + standard yoke: 13.6kg / 29.9 lbs Titan™ X2 + pole yoke: 15.1kg / 33.2 lbs Titan™ X2 + swan-neck: 12.5kg / 27.5 lbs	Titan™ X1 body: 6.8kg / 14.9 lbs Titan™ X1 + standard yoke: 8.6kg / 18.9 lbs Titan™ X1 + pole yoke: 10.2kg / 22.4 lbs Titan™ X1 + swan-neck: 7.9kg / 17.4 lbs
Dimensions	Titan™ X2 body: 350 x 150 x 705mm 13.7" x 5.9" x 27.7" Titan™ X2 body + standard yoke: 575 x 150 x 830mm 22.6" x 5.9" x 32.6" Titan™ X2 body + pole yoke: 560 x 155 x 850mm 22" x 6.1" x 33.4" Titan™ X2 + K-mount swan neck: 350 x 295 x 705mm 20.9" x 5.4" x 27.7"	Titan™ X1 body: 400 x 145 x 360mm 15.7" x 5.7" x 14.1" Titan™ X1 body + standard yoke: 510 x 155 x 510mm 20" x 6.1" x 20" Titan™ X1 body + pole yoke: 545 x 170 x 500mm 21." x 6.6" x 19.6" Titan™ X1 + K-mount swan neck: 400 x 200 x 360mm 15.7" x 7.8" x 14.1"
Handling	Pole operated yoke (pan and tilt), standard yoke K-mount swan-neck with baby 16mm socket	
Mounting	28mm Junior Spigot or 16mm baby spigot (K-Mount swan-neck)	
Tilt Angle	+/- 90 Degrees	
Lamphead DC Voltage Input	24 V DC	
Power Consumption	420W Nominal	230W Nominal
Lamphead Power Connection	Neutrik Speakon (Positive Pin 1+ 2+ / Negative Pin 1- 2-)	
Battery DC Voltage Range	20.5 V DC to 26 V DC	

Specification	Value
Battery Mode Light Output	100% using Rotolight Titan™ 4 way (X2 & X1) or 2 way (X1 only) regulated 24V battery adaptor
White Light	3000K to 10,000K continuously variable Correlated Colour Temperature
Coloured Light	Full RGBWW Colour gamut with Hue, Saturation and Diffusion Control
Colour Temperature Tolerance	+/- 50 K (Nominal). +/- 5% Green-Magenta (Nominal)
CRI	3200K >97, 5600K >95
TLCI	98
Green-Magenta Adjustment	Continuously variable (full minusgreen to full plusgreen)
Dimming	0 - 100 % continuous
Diffusion	0 - 2 stops continuous (0%-100%)
Control	Local 5 pin DMX, RJ45, Bluetooth (via Luminair app). LumenRadio, wired/w.DMX, Elinchrom Skyport
Remote Device Management (RDM)	DMX Setup, Hour Counter, and Standard RDM Commands
Flash	Skyport HSS (range 200m / 656 ft). up to 1/8000th sec
Software Interface	Firmware/software upgrade via USB-A
Factory Interface	Firmware installation, system configuration and calibration interface
Housing Colour	Black, red and silver
Ambient Temperature operation	-20 to +45 C (-4 to 113 degrees Fahrenheit) Active Intelligent Thermal Management
Protection Class / IP Rating	IP20
Estimated LED Lifeline (L70)	50,000 Hours
Estimated Colour shift over lifetime (CCT)	+/- 5 %
Certifications	CE, FCC, UL. TÜV Rheinland . CB, cTUVus, PSE
Safety Testing	UL 1573:2003, UL 8750. CAN/CSA C22.2 No166-15:2015, CAN/CSA C22.2 No 9 0S1-97:2011, CSA C22.2 NO. 250.13 IEC 60598-1 - Luminaire Safety EN 62471 - Photobiological safety of lamps and lamp systems

TECHNICAL SPECIFICATONS: POWER SUPPLY UNIT
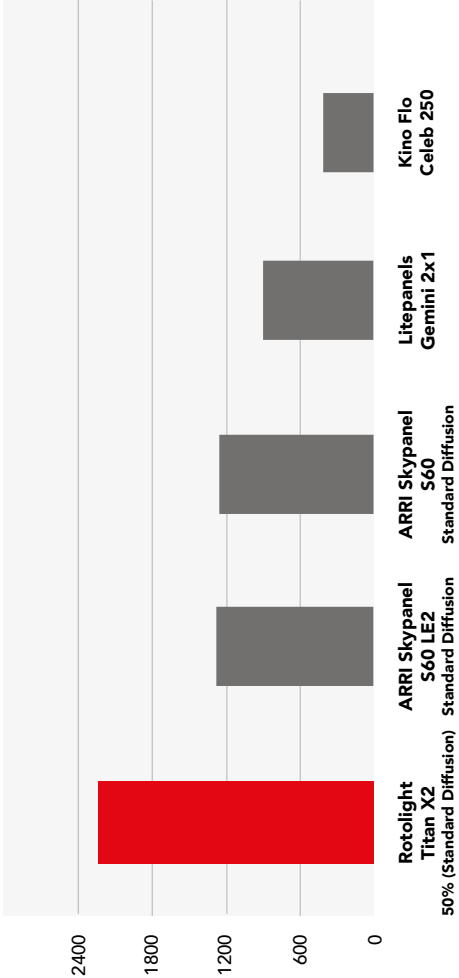
TITAN X1

Power Supply Input Range	110 to 240 V AC, 50/60 Hz
Power Supply Output	24 V DC 350 watt
Power Input Connector	PowerCON TRUE1 (Bare Ends/Shuko/Edison cables available)
Power Output Connector	PowerCON TRUE1 (mains power through)
DC Output Connector	Female speakCON (positive pin 1+ 2+ / negative pin 1- 2-)
Weight	3.6kg / 7.9 lbs
Dimensions	380 mm x 135 mm x 85 mm
Control	On-board latching on/off switch
Mounting	Central K-Mount, latching K-Mount, or to truss/pole via K-Mount adapter with superclamp
Certifications	CE, CB, cNRTLus, TUV, FCC, PSE, UL

TITAN X2

Power Supply Input Range	110 to 240 V AC, 50/60 Hz
Power Supply Output	24 V DC 750 watt
Power Input Connector	PowerCON TRUE1 (Bare Ends/Shuko/Edison cables available)
Power Output Connector	PowerCON TRUE1 (mains power through)
DC Output Connector	Female speakCON (positive pin 1+ 2+ / negative pin 1- 2-)
Weight	3.6kg / 7.9 lbs
Dimensions	380 mm x 135 mm x 85 mm
Control	On-board latching on/off switch
Mounting	Central K-Mount, latching K-Mount, or to truss/pole via K-Mount adapter with superclamp
Certifications	CE, CB, cNRTLus, TUV, FCC, PSE, UL

Titan X2 Competitor Comparison

Brightness (Lux) at 3m (3200k)

2400	
1800	
1200	
600	
0	

Rotolight Titan X2 50% (Standard Diffusion) · ARRI Skypanel S60 LE2 Standard Diffusion · ARRI Skypanel S60 Standard Diffusion · Litepanels Gemini 2x1 · Kino Flo Celeb 250

Colour accuracy - TLCI (Television Lighting Consistency Index)

100	
98	
96	
94	
92	
90	
88	
86	

Rotolight Titan X2 · Litepanels Gemini 2x1 · Kino Flo Celeb 250 · ARRI Skypanel S60

Value for money - Lux output per dollar spent

0.7	
0.6	
0.5	
0.4	
0.3	
0.2	
0.1	
0	

Rotolight Titan X2 50% (Standard Diffusion) · Litepanels Gemini 2x1 · ARRI Skypanel S60 LE2 Standard Diffusion · ARRI Skypanel S60 Standard Diffusion

Energy Efficiency: Brightness (Lux) Output per Watt consumption

8	
7	
6	
5	
4	
3	
2	
1	
0	

Rotolight Titan X2 50% (Standard Diffusion) · ARRI S60 Skypanel LE2 Standard Diffusion · Litepanels Gemini 2x1 · ARRI S60 Skypanel Standard Diffusion

Titan X1 Competitor Comparison

Brightness (Lux) at 5m (3200k)
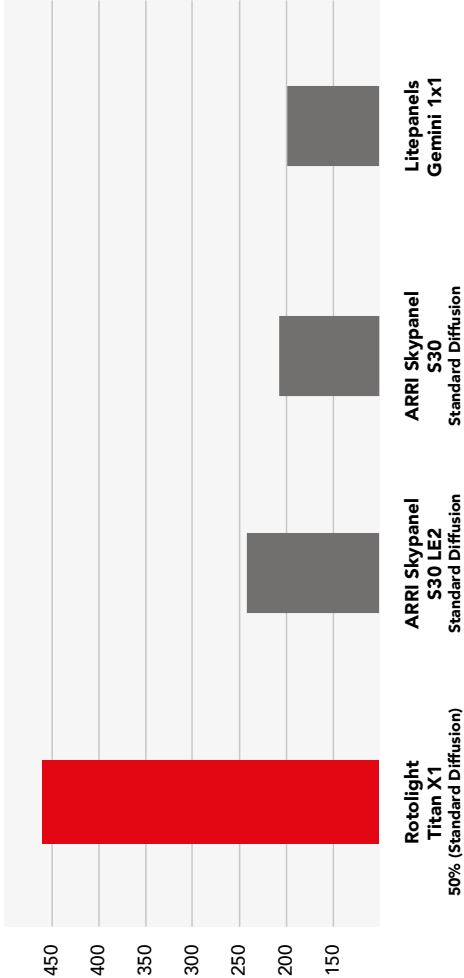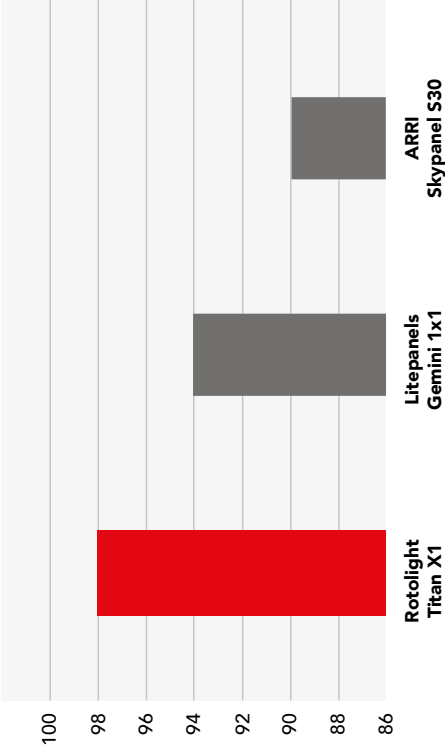
450	
400	
350	
300	
250	
200	
150	

Rotolight Titan X1 50% (Standard Diffusion) — **ARRI Skypanel S30 LE2** Standard Diffusion — **ARRI Skypanel S30** Standard Diffusion — **Litepanels Gemini 1x1**

Colour accuracy - TLCI (Television Lighting Consistency Index)

100 · 98 · 96 · 94 · 92 · 90 · 88 · 86

Rotolight Titan X1 — **Litepanels Gemini 1x1** — **ARRI Skypanel S30**

Value for money - Lux output per dollar spent

0.14 · 0.12 · 0.1 · 0.08 · 0.06 · 0.04 · 0.02 · 0

Rotolight Titan X1 — **Litepanels Gemini 1x1** — **ARRI Skypanel S30 LE2** Standard Diffusion — **ARRI Skypanel S30** Standard Diffusion

Energy Efficiency: Brightness (Lux) Output per Watt consumption

3.5 · 3 · 2.5 · 2 · 1.5 · 1 · 0.5 · 0

Rotolight Titan X1 50% (Standard Diffusion) — **ARRI Skypanel S30 LE2** — **Litepanels Gemini 1x1**
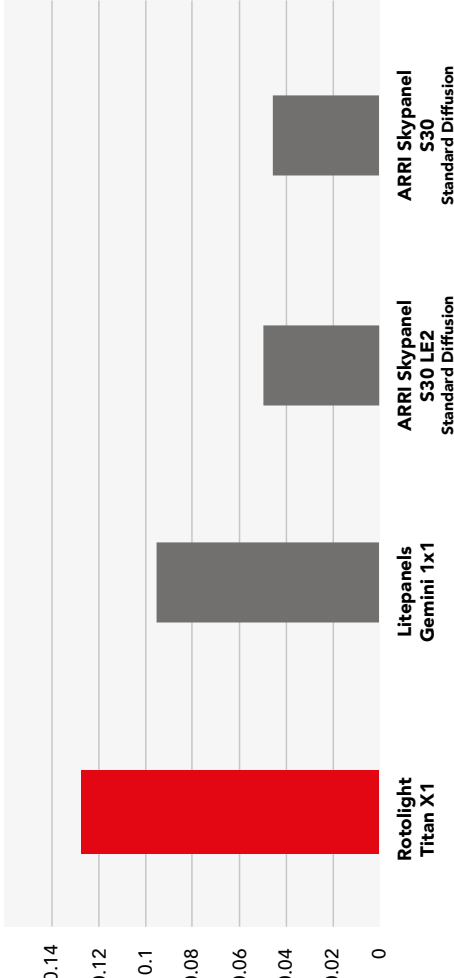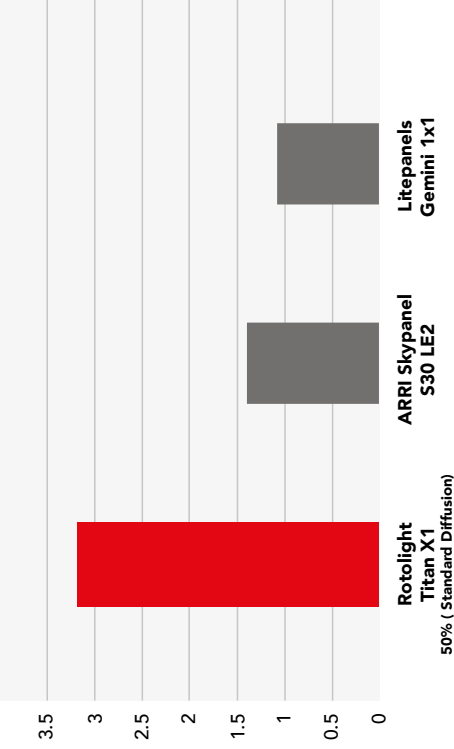
S30 photometrics taken from latest September 2018 product information sheet, and LE2 information from the official ARRI photometrics app accessed September 2020. Litepanels Gemini 1x1 data sheet accessed 9th September 2020. Rotolight Titan X1 measured using unit serial TX100010 measured in September 2020 in a controlled environment, using a Sekonic C-800 light meter, Titan in Max Lux Mode. TLCI quoted at manufacturer average values. ARRI, Skypanel, Rotolight, Titan, Litepanels and Gemini, are registered trademarks and the exclusive property of their respective owners. No association is intended or implied. Pricing based on full retail prices in USD at BHphoto.com as of 20th September 2020.

Titan Family Competitor Comparison Chart

	Rotolight Titan X1 & X2	ARRI Skypanel	Litepanels Gemini Family
Electronic diffusion	✓	✗	✗
Touchscreen interface	✓	✗	✗
Integrated wireless DMX	✓ LumenRadio® Timotwo bluetooth & Wireless DMX (CRMX)	✗ Needs Skylink module $510/light & basestation $1840	✗ Needs LYKOS® Bluetooth® dongle $110/light
Intergrated Bluetooth®	✓ LumenRadio® Timotwo bluetooth & Wireless DMX (CRMX)	✗	✗ Needs Wireless DMX module $260/light
Intergrated app control	✓	✗ Needs Skylink module $510/light & basestation $1840	✗ Needs LYKOS® Bluetooth® dongle $110/light
Adjustable colour space (Rec.2020,Rec.709)	✓	✗	✗
Filter library size	1400	318	600
Programmable user presets	50	10	12
Save/load user presets over USB	✓	✗	✗
High Speed Sync flash	✓	✗	✗
Quick access menu buttons	✓	✗	✗
Designer Fade® mode (custom fade up/fade down FX)	✓	✗	✗
Lighting modes	6 modes: CCT, XY, HSI, RGB, Filter, Source Matching	6 modes: CCT, XY, HSI, RGB, Filter, Source Matching	4 modes: CCT, HSI, RGB, Filter
X-FX stroboscopic FX	✓	✗	✗
RDM communication	✓	✓	✓
Special effects	✓	✓	✓

ACCESSORIES

Titan X2 with Standard Yoke

SKU: RL-TITAN-X2-Y

Titan X2 with Pole Operated Yoke

SKU: RL-TITAN-X2-P

Titan X2 with Swan Neck

SKU: RL-TITAN-X2-S

Titan X1 with Standard Yoke

SKU: RL-TITAN-X1-Y

Titan X1 with Pole Operated Yoke

SKU: RL-TITAN-X1-P

Titan X1 with Swan Neck

SKU: RL-TITAN-X1-S

Titan X2 Barn Doors

RL-TITAN-X2-BD

Titan X1 Barn Doors

RL-TITAN-X1-BD

Titan X2 Rain Cover

RL-TITAN-X2-RAIN

Titan X1 Rain Cover

RL-TITAN-X1-RAIN

SNAPBAG® For Titan X2

RL-TITAN-X2-SB

SNAPBAG® For Titan X1

RL-TITAN-X1-SB

ACCESSORIES

TIitan X2 SNAPGRID® For SNAPBAG®

RL-TITAN-X2-SGSB

TIitan X2 SNAPGRID®

RL-TITAN-X2-SGT

TIitan X1 SNAPGRID® For SNAPBAG®

RL-TITAN-X1-SGSB

TIitan X1 SNAPGRID®

RL-TITAN-X1-SGT

Titan X2 Rental Kit

RL-TITAN-X2-RENTAL

Titan X1 Rental Kit

RL-TITAN-X1-RENTAL

Titan X2 Reporter Kit

RL-TITAN-X2-REPORTER

Titan X1 Reporter Kit

RL-TITAN-X1-REPORTER

Spare PSU For Titan

RL-TITAN-X2-PSU

RL-TITAN-X1-PSU

Rotolight 2-way 24V V-Lock
/ Gold Mount Battery Adaptor

RL-VL2-24 / RL-VL2-24-GM

RL-TITAN-X1-PSU

Rotolight 4-way 24V V-Lock
/ Gold Mount Battery Adaptor

RL-TITAN-4BAT / RL-TITAN-4BAT-GM

RL-TITAN-X1-PSU

Rotolight 95 Wh V-Mount Battery

RL-BATT-95

Rotolight 155 Wh V-Mount Battery
RL-BATT-155

Rotolight 310 Wh V-Mount Battery
RL-BATT-310

2-way V-Lock Battery Adaptor & 155 Wh
V-Mount Battery Bundle
RL-VL24-BUN

X4

4-way V-Lock Battery Adaptor & 155 Wh
V-Mount Battery Bundle
RL-4BAT-BUN

Rotolight 155 Wh V-Mount Battery
and Dtap Charger Bundle
RL-BATT-BUNDLE-155

Rotolight 310 Wh V-Mount Battery
and Dtap Charger Bundle
RL-BATT-BUNDLE-310

Titan X2 Flight Case
RL-TITAN-X2-FLC

Titan X2 Soft Bag
RL-TITAN-X2-SOFT

Titan X1 Flight Case
RL-TITAN-X1-FLC

Titan X1 Soft Bag
RL-TITAN-X1-SOFT

Rabbit-Ear Rectangular
for 2x1 Panels
RL-TITAN-X2-RE
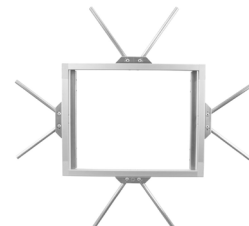
Rabbit-Ear Mini
for 1x1 Panels
RL-TITAN-X1-RE

RABBIT-EARS ACCESSORIES

SNAPBAG® Lantern 3' Rabbit-Ears

RL-TITAN-SBRL3

Cover For SNAPBAG® Lantern 3'

RL-TITAN-SBRL3-C4

SNAPBAG® Lantern 5' Rabbit-Ears

RL-TITAN-SBRL5

Cover For SNAPBAG® Lantern 5'

RL-TITAN-SBRL5-C4

SNAPBAG® Octa 3' Rabbit-Ears

RL-TITAN-SBRO3

SNAPBAG® Octa 5' Rabbit-Ears

RL-TITAN-SBRO5

SNAPBAG® Octa 7' Rabbit-Ears

RL-TITAN-SBRO7

SNAPBAG® Medium Rabbit-Ears

RL-TITAN-SBRM

SNAPGRID® 40˚ For 3' SNAPBAG®
& Chimera Octaplus

RL-TITAN-SGC3W40

SNAPGRID® 40˚ For
SNAPBAG® OCTA 5'

RL-TITAN-SGC5W40

SNAPGRID® 40˚ For
SNAPBAG® OCTA 7'

RL-TITAN-SGC7W40

SNAPGRID® 40˚ For
Softbox Medium

RL-TITAN-SGCM40

ACCESSORIES

60-Degree Honeycomb Grid
for Titan X2
RL-TITAN-X2-GRID-60

30-Degree Honeycomb Grid
for Titan X2
RL-TITAN-X2-GRID-30

60-Degree Honeycomb Grid
for Titan X1
RL-TITAN-X1-GRID-60

30-Degree Honeycomb Grid
for Titan X1
RL-TITAN-X1-GRID-30

Rotolight 20-Inch
Chrome-Plated C-Stand
RL-CSTAND-20

Rotolight 20-Inch Chrome-Plated
C-Stand and Adapter Bundle
RL-CSTAND-20-BUN

Junior To Baby
C-Stand Adapter
RL-CSTAND-J2B

Titan Clamp
RL-TITAN-X2-CLAMP

Cart For Titan X2
RL-TITAN-X2-CART

Titan 3m
AC Mains Cable
RL-TITAN-MAINS-3M

Titan DC Cable
RL-TITAN-X2-DC-0.5M
RL-TITAN-X2-DC-1.25M
RL-TITAN-X2-DC-5M

Speakon to Hi Rose
DC Cable 1.25m
RL-TITAN-DC-HIROSE-1.25M

Speakon to 4pin
XLR DC Cable 1.25m
RL-TITAN-DC-4XLR-1.25M

WARRANTY INFORMATION

Manufacturer's Limited Warranty

Rotolight Group Ltd will extend to its customers a Limited Manufacturer's Product Warranty of one year on manufacturer's products from their date of purchase. This warranty shall not include damage caused by general 'wear and tear', or tampering with, products that have been dropped or damaged through misuse. The manufacturer's product warranty will specifically not include misuse, damage by water, battery acid, extreme heat or cold, over-voltage, stress fractures to the unit, or battery mount (unless reported on delivery), or disconnection of wires (unless reported on delivery).

Customer will be solely liable for any and all shipping costs, duties and import taxes of any components or units returned for service/repair. This warranty is subject to the manufacturer's standard terms and conditions available on request.

This product is made for professional use.
Optional extended three-year warranty is available within the first month of purchase from www.rotolight.com
Register online now to activate your warranty at www.rotolight.com/register

SERVICE

For products outside of warranty or where they have been damaged by the customer, Rotolight HQ in the UK can provide costed repairs. Please contact Rotolight for more information.

LIMITATION OF LIABILITY

The liability of the Manufacturer or Distributor, if any, for damages for any claim of any kind whatsoever with regard to any order placed for the Manufacturer's products, regardless of the delivery or non-delivery of the products, or with respect to the products covered thereby, shall carry no ability to claim for consequential loss for the loss of present or prospective profits, expenditures, investments, or commitments, whether made in the establishment, development, or maintenance of business reputation or goodwill or for any other reason whatsoever.

Nor can any such other claim be greater than the actual purchase price of the products with respect to which such claim is made. Under no circumstances shall the Manufacturer or Distributor be liable for claims of injury, harm, compensation, reimbursement, or damages caused by the products misuse.

Rotolight Titan™ have been individually examined and found to pass Rotolight's quality assurance testing and has been externally certificated by qualified testing houses for use.

IP / PATENT INFRINGEMENT

Note: Rotolight has invested heavily in R&D since 2009 and will protect and enforce its IP from infringement. However subject to negotiations it may grant a fair commercial licence for the use of its IP if proactively approached. In the first instance to discuss a licence contact: Rod Gammons (CEO) at rod.aaron@rotolight.com or Helen Gammons (COO) at helen@rotolight.com. The company's patent lawyers are listed below.

Dani Kramer, DKramer@mathys-squire.com, Mathys & Squire LLP
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www.rotolight.com/patents

INDEX

"The gold standard for
which all other lights should now be judged"

Matt Allard ACS

Newsshooter

"The Titan™ X2 is a versatile and powerful light with features
none of its rivals can offer at any price"

Adam Duckworth - Editor In Chief

Pro Moviemaker

"It's incredibly exciting to have a light where you can shape and
control the light without any modifiers. I use Rotolight now for
virtually every setup"

Roy Wagner ASC

Director of Photography: A Nightmare on Elm Street, Elementary, House