ROTOLIGHT

TITAN

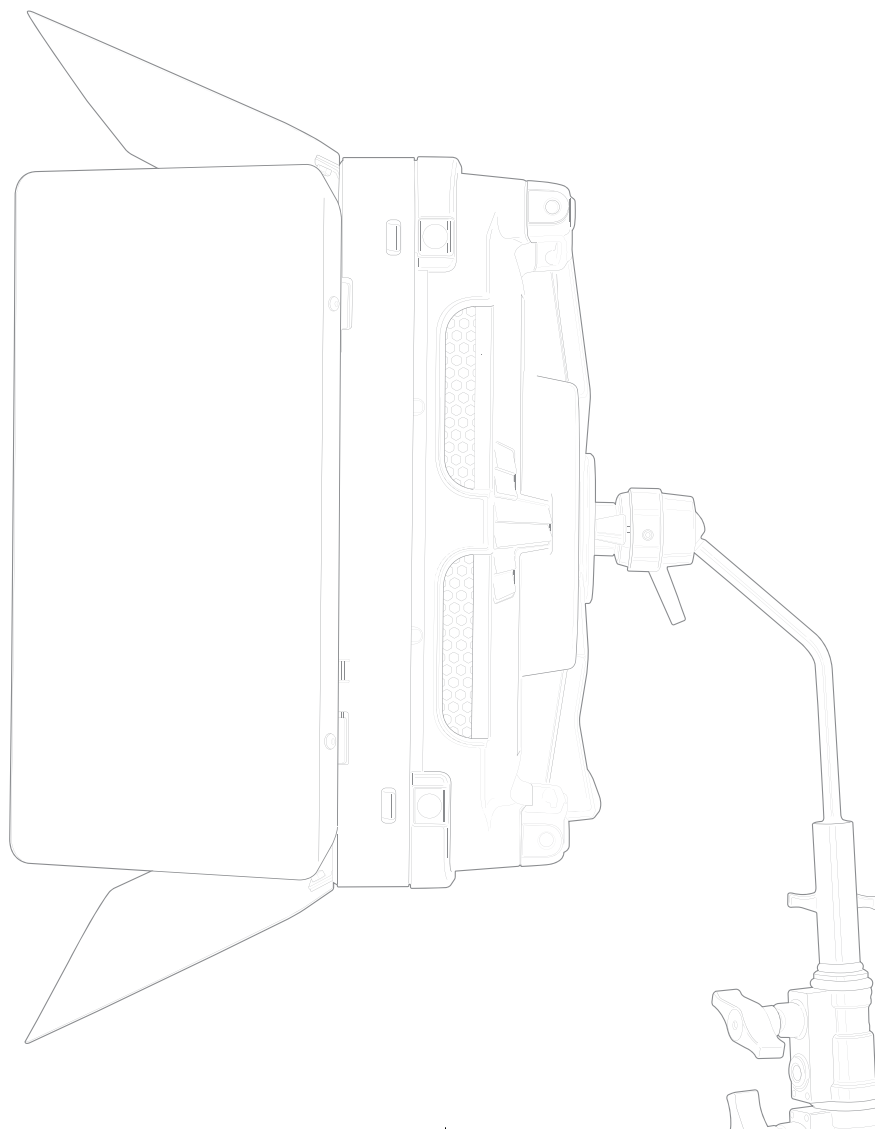## A NEW ERA OF CINEMATIC LIGHTING

USER MANUAL V1.0

CONTENTS

10/01/2020   14:29

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.
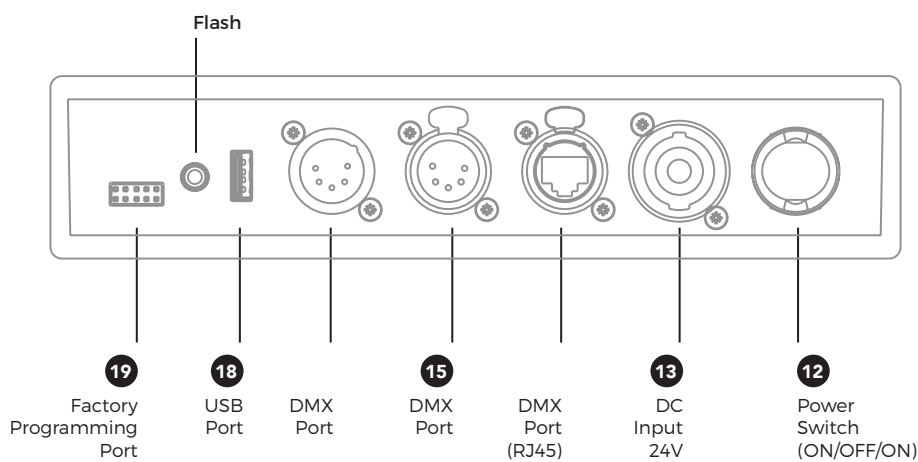
⚠ **Rotolight Titan™ is equipped with high intensity RGBWW LED emitters. Never stare directly into the active light source.**
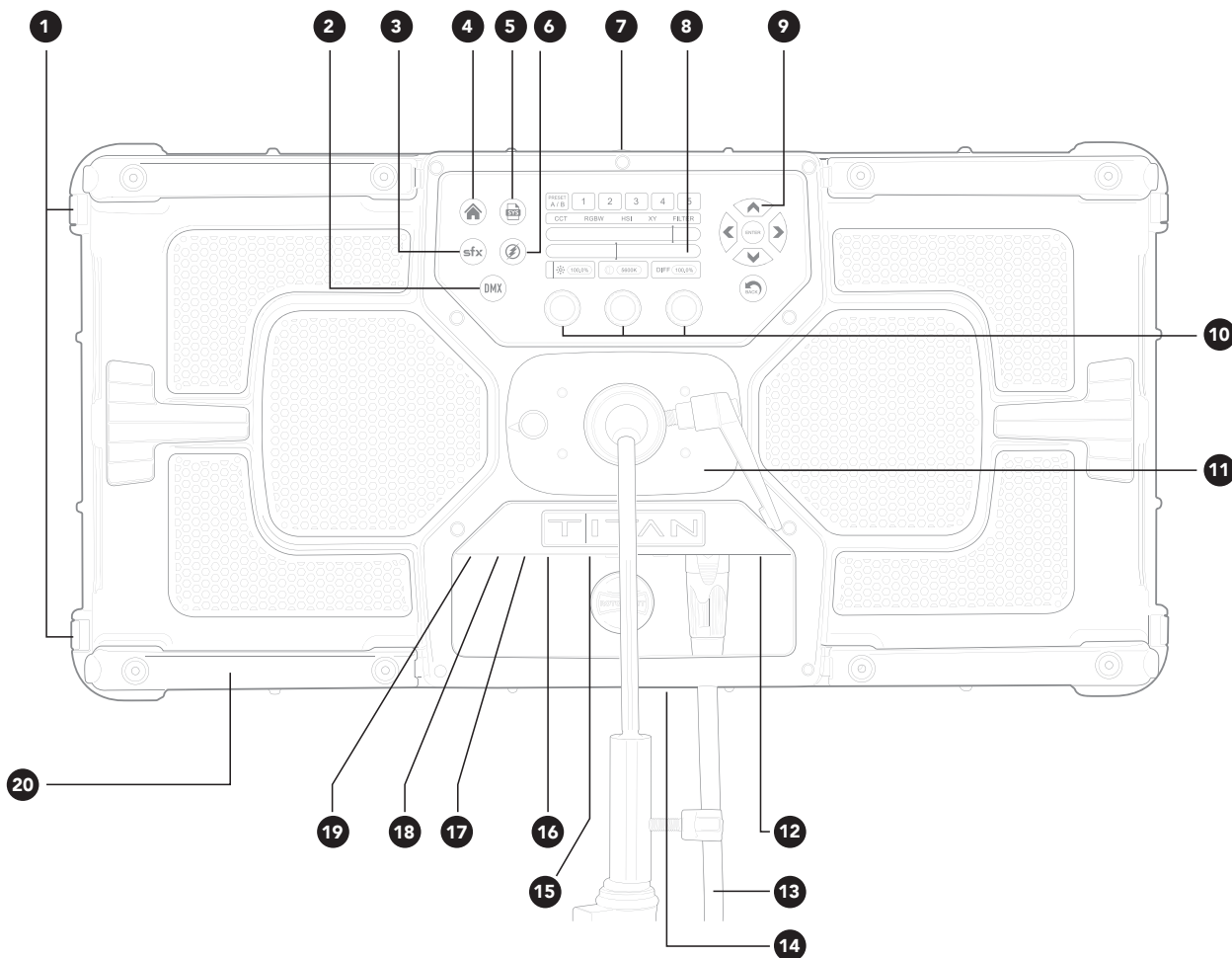
1. Yoke Mounting Points (M8)
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Factory Programming Port	USB Port	DMX Port	DMX Port	DMX Port (RJ45)	DC Input 24V	Power Switch (ON/OFF/ON)

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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™ X2. 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 55 degrees C.

INTRODUCTION

Thank you for purchasing Rotolight Titan™ X2, the most powerful 2x1 fixture ever made. We at Rotolight are committed to bringing the finest and most inspirational lighting tools to image makers. Titan™ X2 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 the Titan™ X2 as much as we enjoyed creating it!

The Titan™ Graphic User Interface

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).

The Home menu 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 1,400 electronic versions of virtually all of the colour lighting gels and sampled light source matching.

The SYS (System) menu 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.

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

The Flash menu allows you to use Titan™ as a High Speed Sync flash unit. Featuring a built-in Skyport 2.4Ghz HSS receiver capable of syncing at up to 1/8000th of a second, with colour tuneable flash and modelling light, capable of running at any repeated frame rate, with zero recycle time. There is also an Exposure Effects section for customisable multi–exposure effects, where you can control delay, repetitions and gaps between flash events for creative photography.

The DMX menu allows you to set the base DMX channel, the channel mode (i.e. number of channels used to control Titan™ over DMX) and control the built-in Lumenradio TimoTwo wDMX chip, or set the parameters for RDM (this feature will be introduced in Q1 2020).

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 2020). 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.

Future features

Important: any feature as a greyed out (not active) GUI menu item or icon will be available in future updates. All future updates will be announced to our customer base. Please register your product at www.rotolight.com/register

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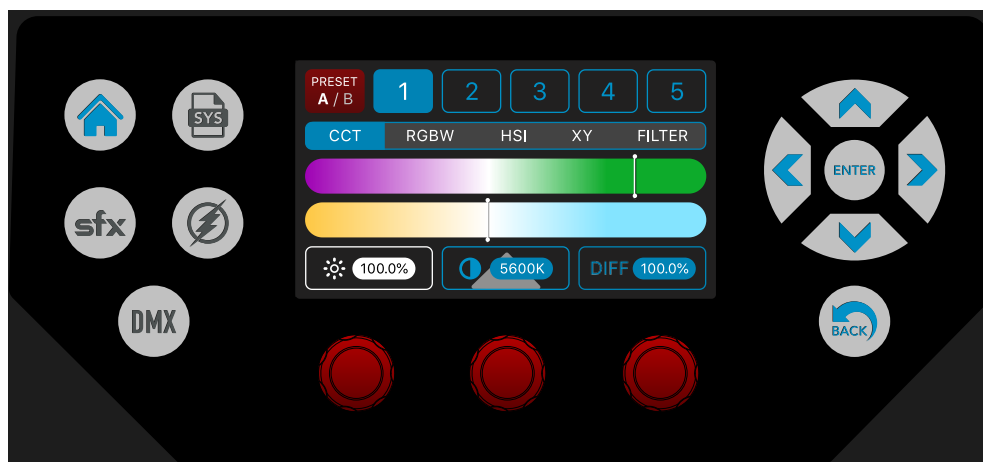
When you select the touch button labelled 'HOME', it will take you to the page where you can select one of five colour editing submenus below:

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 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 function on screen). Finally the right hand knob controls the SmartSoft™ electronic diffusion. You can store the CCT settings to any of the HOME menu radio preset buttons by holding the preset button.

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 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 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 pastellise 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 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** - in the SYS menu, you can select a

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colourspace on the Titan™. 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®. 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). 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 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.

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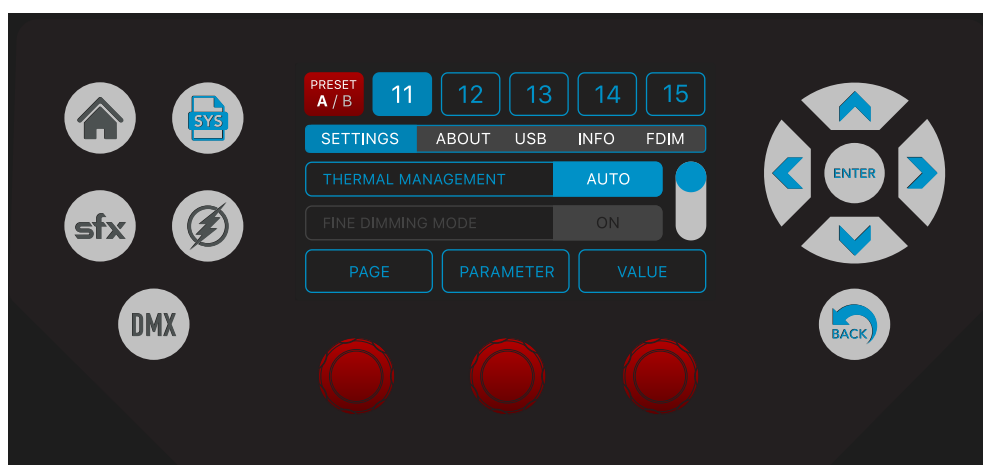
Pressing the dedicated 'SYS' menu touchscreen button opens the System settings menu in Titan™.

There are ten user radio button presets available to store and recall customised system settings (presets 11-20). Press and hold to store a setup, tap the button to recall the preset. Tap the bank button to access presets 16-20. In the next update - Q1 2020 - you will also be able to load/save presets or preset banks to/from the USB stick, by double tapping the preset or bank button.

Settings Submenu

The first submenu item is a scrollable list of settings. These include the following:
1. Thermal Management: there are four options available:
STEALTH – in this mode the fans are mostly off.
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.
DMX – in this mode, the fan speed is controlled directly over DMX.

2. Fine Dimming Mode: options on/off.
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 none / 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. Control Mode: options Local / Master / Slave

a. In LOCAL mode, Titan™ will respond to controls via the GUI on the rear of the unit. DMX and wireless DMX will be ignored. Skyport and flash operations can still be used if Skyport is turned on.
b. In MASTER mode, Titan™ will output DMX and/or wireless DMX generated from its local controls or SFX engines.
c. In SLAVE mode, Titan™ will respond to control inputs from DMX or wireless DMX, local control inputs will be ignored.

6. Display: options off / buttons only / low / high.

The default mode for the display option is high.
a. If you select 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 of after five seconds of inactivity, but the backlit menu and navigation buttons will remain illuminated.
c. If you select low, the display will remain illuminated, but at a lower brightness level.
d. If you select high, then the display remains illuminated at the default level.

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™ will be restricted, running at 60% of normal output.

8. Frequency / Frame Rate: options 24 / 25 / 29.97 / 30 / 50 / 60 / 100 / 120 / 240 / 300).

This allows you to select specific frame rates for the SmartSoft™ diffusion.

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. 4500K). 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 yes / cancel

This feature will restore the adjustable parameters, and all the presets back to the factory defaults so please save your data before using this feature. 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:
1. USB 5V Power: you can apply 5V DC power to 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 NORMAL USB DEVICES, SO PLEASE USE THIS FEATURE WITH CARE.
2. USB: update firmware
Save system parameters / recall system parameters via the radio preset buttons.

Info submenu

The fourth submenu item is a scrollable list of info. This includes the following:

1. Hours Counter Log: (day / week / month plus average temperature).
This feature is for the rental houses, so they can see if a client has been operating the light with the fans turned off at very high temperatures. The displayed data is read-only and cannot be zeroed.
2. Volts: Titan™ accurately measures the incoming voltage and this is displayed here.
3. Temperature: Titan™ reads the temperature of LED1 and LED2 PCBs, and also the driver PCB. This is read-only data.
4. 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).

FDIM (True Aperture Dimming™) submenu

The fifth submenu item is a special function called FDIM. 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.

Cycle the menu to 'FDIM' then press the right knob to enter 'FDIM' mode. Rotating the left knob cycles through the available user parameters:
'ISO' (your camera ISO setting), 'EXP' (your camera shutter speed) and 'FEET' (the distance from the light to your subject in feet).

Rotating the right knob will adjust the value of the selected user parameter (ISO/EXP/FEET).
Clicking the right knob will enter the 'f-stop dimming display' where the brightness is dynamically displayed as an aperture or f-stop.

Adjust the brightness with the right knob and the display will show the adjusted f-stop aperture 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.

To re-adjust the last selected parameter, (usually feet), click the right knob, make the adjustment, then click the right knob again to return to the f-stop dimming display. Alternatively rotate the left knob to select a different parameter to edit, and then click the right knob to re-enter f-stop dimming display.

This enables you to effectively 'bookmark' the active user parameter that is dynamically changing during your shoot (i.e. distance to subject), and without needing to re-meter the shot, update the parameter and calculate the revised f-stop, allowing you to work fast.

You can also decide to work in reverse, i.e. you creatively choose an aperture (i.e. f3.0) and 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.

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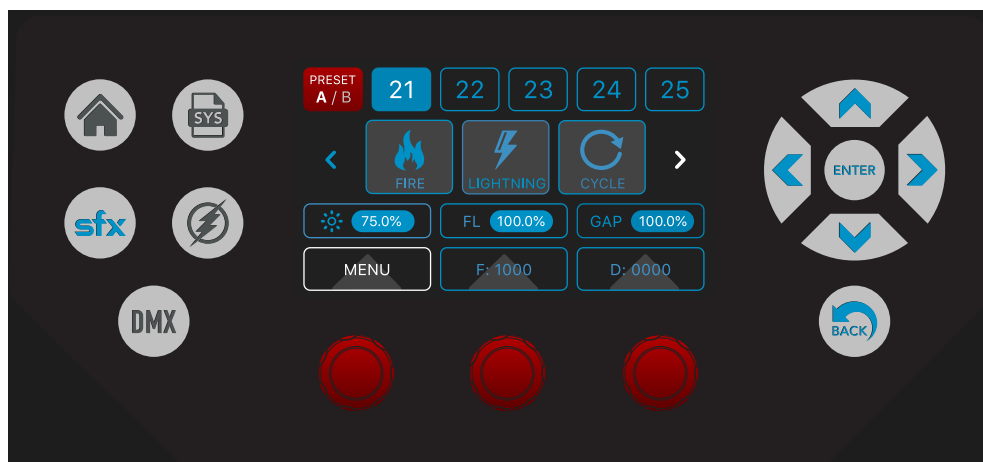
In collaboration with Stefan Lange, DOP and VFX veteran, we have created an arsenal of cinematic special FX (CineSFX™). These production tools are designed to complement your feature, music video or short film.

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.

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 toggle tapping the effect again. Rotating the left 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 'Master mode' plus output to DMX (or wireless DMX) is selected.

Most of the effects will have secondary push and turn functions on the knobs as follows:

Left push, hold and turn = brightness

Middle push, hold and turn = CCT (if applicable)

Right push hold and turn = diffusion

Right 'click' = trigger / pause (toggle)

Strobe

The Strobe effect produces a regular flashing light.

Rotate the right knob to adjust the strobe speed (it will display X.X Hz, where = 'XX' = 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 middle knob to adjust duty cycle/pulse duration, this is also known as rolling shutter compensation, where you can trim out the artifacts associated with rolling shutters. Press and rotate the left knob to adjust maximum brightness, press and rotate the middle knob to adjust CCT.

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 right knob to activate the Lightning effect. Rotate the right knob to adjust the duration between the bursts of lightning (it will display XX Hz which is an indication of the effect frequency). The lightning range is from 1 Hz up to 50 Hz. Click the right knob to arm the effect and fade to black, 'Trig' will be displayed - re-click the right knob to trigger the effect, you can also trigger the effect from an external trigger source via the PC port or Skyport wireless trigger. Rotate the middle knob to adjust the pulse duration or rolling shutter compensation. Press, hold and rotate the left knob to adjust the maximum brightness level. Press, hold and rotate the middle knob to adjust the colour temperature of the lightning.

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.

Throb

Throb is a regular smoothly pulsing light.

Rotate the left knob to adjust the duration between each throb from 0.1s-9.0s. Rotating the right knob adjusts the speed of each throb from 1 Hz to 50 Hz. Hold and rotate the middle knob to adjust the output of the minimum light level (light floor). Hold and rotate the left knob to adjust the maximum light level of the throb. You can adjust diffusion by press holding and turning the right knob.

Colour Cycle

Colour Cycle is a regular smoothly pulsing light which fades between the tungsten and blue LEDs. Click the right knob to activate the Colour Cycle effect and rotate the right knob to adjust the effect frequency (it will display XX Hz which is an indication of the effect frequency).

The cycle range is from 1 Hz up to 50 Hz. Press and rotate the left knob to adjust brightness, press and rotate the middle knob to adjust CCT.

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 shadows.

Click the right knob to activate the Fire effect, rotate the right knob to adjust the flicker frequency (it will display XX Hz which is an indication of the effect frequency – around 45 Hz is nice for a 'campfire').

Rotate the left knob to adjust the Fire effect residual glow depth threshold (about 30% is nice for a 'campfire').
(It will display XX % which is an indication of the effect depth). Press and rotate the left knob to adjust brightness.

Police

This effect is an emulation of an emergency services light.

Click the right knob to activate the Police effect. Rotate the right knob to adjust the police beacon speed. (It will display XX Hz, which will give you an indication of the effect speed). Rotate the left knob to select double, triple or quad. Rotate the middle knob to select the colour, i.e. red, blue or red/blue split or Home colour (choice of red, blue flashing or flashing the currently set home colour). Press and rotate the left knob to adjust brightness, press and rotate the right knob to adjust diffusion. Tap the effect symbol on the screen or click the right knob to start/stop (toggle) the Police effect.

Television

This effect is an emulation of a TV flicker – it works best by setting the colour temperature to 6000K or choosing a 116 Medium blue/green filter from the Home/Filter menu.

Click the right knob to activate the TV effect, rotate either the left or right knob to adjust the TV effect speed (it will display XX Hz, which will give you an indication of the effect speed).

Click the right knob to pause the effect / fade to black - 'Trig' will be displayed. Click the right knob again to trigger the effect. You can also trigger this effect from a trigger connected to the flash sync port or via the Skyport or DMX. Press and rotate the left knob to adjust brightness. Tap the effect symbol on the screen or click the right knob to start/stop (toggle) the TV effect.

'SHOT' Muzzle Flash

This effect simulates the light produced when a gun is fired (commonly known as muzzle flash). Select the effect from the SFX carousel. Trigger the effect by clicking the right knob, or tapping the effect symbol on the screen or trigger the effect externally via the trigger port or via the Skyport or DMX. Control the delay time of the gunshot using either knob. Press and rotate the left knob to adjust brightness, press and rotate the middle knob to adjust colour. Press and rotate the right knob to adjust diffusion.

'NEON' Broken Neon Light

This effect is used to simulate a faulty neon fixture. Trigger the effect by clicking the right knob, tapping the effect symbol on the screen or trigger the effect externally via the trigger port or via the Skyport or DMX. Alternatively use the sync/trigger input port to externally start/stop the effect.

The right knob controls the flicker speed of this effect. Press and rotate the left knob to adjust brightness, press and rotate the middle knob to adjust colour. Press and rotate the right knob to adjust diffusion.

You can create a custom colour for this effect in the home menu and combine that with the 'NEON' SFX for a custom setup.
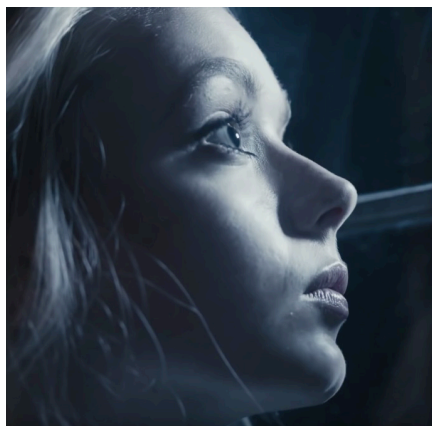
Old Cinema Projector

The Film effect is designed to simulate the light coming from a celluloid film projector in a movie theatre. To enter the effect press the right knob. You can start / stop (toggle) the effect using the right knob or an external trigger from the flash sync, trigger port, DMX or by tapping the Film symbol on the carousel. Rotating the right knob changes the speed. Press and rotate the left knob to adjust brightness of the effect. Press and rotate the middle knob to adjust colour. Press and rotate the right knob to adjust diffusion. Ideally set the CCT (middle knob / press+turn) to around 4500K for this effect or create a custom colour in the home menu to combine with this effect.

Arc Welding Light

This effect simulates the light from an electric arc welding torch. To enter the effect press the right knob. Rotating the right knob varies the speed of the effect. Clicking the right knob or tapping the effect symbol on the carousel starts/stops (toggles) the effect, or you can also start/stop the effect via the external trigger port or via the Skyport or DMX. A key characteristic of the arc welding process is the electric blue arc flame and the orange sparks and the Weld effect emulates this beautifully. Press and rotate the left knob to adjust brightness, press and rotate the middle knob to adjust colour. Press and rotate the right knob to adjust diffusion.

Paparazzi

This effect simulates a flash mob of Paparazzi. Enter the effect by selecting the PAPA symbol on the SFX carousel. Trigger the effect by clicking the right knob, or tapping the PAPA symbol on the carousel, or trigger the effect externally via the flash/trigger port or via the Skyport or DMX.
Rotate the right knob to control the speed of the effect. Press and rotate the left knob to change brightness. Press and rotate the middle knob to change colour (ideally most flash guns are set to 5600K). Press and rotate the right knob to adjust diffusion.

Chase

This effect allows Titan™ to wirelessly control a line of up to 48 Rotolight devices to simulate passing streetlights. This effect is only available if the master Titan™ is set to Master mode and output to wireless DMX or wired DMX.

The controls for Chase are as follows:

Rotate right knob = speed, 1-100
Rotate left knob = ramp (shape), 1-50hz
Rotate middle knob = gap (between the lamp posts), 0.1s – 9s
Press, hold and rotate middle knob = light floor (residual light) 0 – 50%
Press, hold and rotate left knob = brightness, 0 – 100%
Press, hold and rotate right knob = diffusion, 0 – 100%
Clicking the right knob or tapping the effect symbol on the carousel starts/stops (toggles) the effect, or you can also start/stop the effect via the external trigger port or Skyport.

NB - to control multiple Rotolight units using wireless DMX, each light will need to be set to 'Slave' mode and each light should be set to a different DMX channel (in a consecutive sequence of channels).

'FADE' (Designer Fade™)
This effect allows cinematographers to have a programmable fade up / fade down on set, for in-camera lighting fade FX rather than having to do it in post-production. Enter the effect by selecting the FADE symbol on the SFX carousel. Trigger the effect by clicking the right knob, or tapping the FADE symbol on the carousel, or trigger the effect externally via the flash/trigger port or via the Skyport or DMX.
Rotate the right knob to control the speed of the Fade.
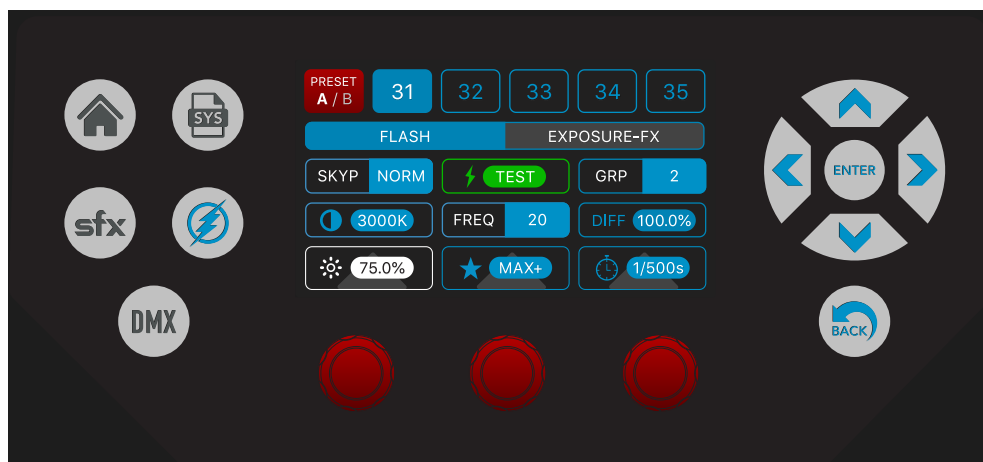You can create a custom colour in the Home menu and combine it with this SFX.

'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

NB - There are ten user programmable radio button presets available to store and recall 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.

Titan™ flash with modelling light
Titan™ is capable of shooting in High Speed Sync (HSS) at up to 1/8000th second. HSS is a tool that allows photographers to control depth of field when shooting in sunlight, by adjusting the aperture to be more open and using a high shutter value to control the exposure you can take control of the amount of bokeh and creatively control the desired depth of field in your image. You can also freeze fast action as HSS allows flash to be synchronised at a shutter value beyond your camera's normal X-Sync speed (the speed at which your camera can synchronise the flash and the shutter, typically around 1/250th second). Titan™ also allows you to adjust the power output of the flash system so you can adjust the brightness of light on your whilst separately adjusting the brightness of the background using shutter speed. Titan™ also gives you a fully adjustable modelling light so in a dark environment you can see to hold focus, and also see how the selected colour temperature of the flash/modelling light matches any ambient light in the image, and also to see and optimise the shadow falling within your image. Using Titan™ in HSS flash mode gives the photographer a huge number of advantages, i.e. SmartSoft™ electronic diffusion, colour tunable flash and modelling light, no limit of flash frame rate and no recycle time, separately adjustable flash duration and flash power output and the ability to see what you are actually shooting. Cinematographers will also appreciate the flash capability of Titan™, as it is now a regular requirement on set to shoot stills of the scene and this can now be done in Flash mode using the same lighting system. Finally, Titan™ has the Elinchrom HSS Skyport wireless flash receiver system built-in, as well as a standard mini jack trigger port for direct connection to cameras or other flash triggers, or for triggering SFX etc.

Rotolight HSS
Providing 200% of the normal maximum continuous output, Rotolight HSS flash also provides incredible colour accuracy (CRI 98, TLCI 99) with the ability to electronically tailor the brightness and colour temperature to your needs. The Rotolight HSS flash fires in synchronisation with the shutter, and remains at full flash power whilst the letterbox slit shutter crosses the image sensor, evenly illuminating the entire image. 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 multi-frame mode to ensure you never miss a shot.

Like standard HSS the flash duration extends throughout the normal X-Sync period of your camera (typically 1/60th to 1/200th second), and so the best method for freezing fast motion is to use a dark environment and adjust the flash duration to stop the action. Alternatively, use Rotolight HSS mode, where you set 1/50th duration on the flash, and let the camera freeze the action by shortening the shutter exposure duration (up to 1/8000th second).

Flash mode

Titan™ is capable of High Speed Sync flash (HSS, 1/8000th), and has a built-in Elinchrom Skport wireless HSS receiver. For best results, use the Rotolight HSS Transmitter (RL-HSS-TX) by Elinchrom available now for Sony, Canon, Nikon, Olympus, Panasonic and Fujifilm cameras 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™.

USING THE FLASH MODE: tap the 'Flash' menu button on the touch to enter 'FLASH' mode.
NB - in order to use the flash, you must be in flash mode (indicated by shutter speed on the display. 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, refer to the f-stop table (page 30) for exposure guide, take a test shot and either adjust flash power, or distance to the subject to achieve optimal exposure. 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, from 3000K-10000K).

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').
NB - you can just leave the duration set to 1/50th and Titan™ will automatically adjust the duration for you if the number of frames per second requires a shorter flash.

Press, hold and rotate the right knob to set the flash output power, 'MAX' (=200% of MAX continuous output), '1/2' (=100%), '1/4' (=50%), 'X8' (modelling light level x 8), and 'X16' (modelling light level x 16). Using the X8 or X16 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 eight or 16 times brighter.

To trigger the flash from 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.

Rotolight HSS transmitter by Elinchrom:
To shoot in High Speed Sync, you will need an HSS wireless transmitter, such as the Rotolight or Elinchrom HSS transmitter (both are compatible with the internal Skyport receiver inside the Titan™).

Using 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, Phottix, Sony, Pocket Wizard, etc) and follow the instructions supplied with your transmitter.

Recommended settings for simple one-light Titan™ flash operation:
Set flash power to MAX (or MAX +, if available).
For HSS set flash duration to 1/50th (any faster shutter speed i.e. 1/100th will be automatically captured) this ensures that the flash will be lit for the entire duration of the shutter event.
Set colour temp (kelvin) to midpoint (approx. 4100K – midpoint is indicated by a dot in lower right hand corner of the kelvin display), or carefully match it to the ambient light colour in the background of the image.

Shooting in High Speed Sync
Titan™ is a High Speed Sync (HSS) capable flash. High Speed Sync allows you to utilise the flash of Titan™, and synchronise it with your camera's shutter release at speeds faster than your cameras native internal sync speed (typically 1/160th or 1/250th). This enables you to freeze action, and shoot with wider apertures for controlled depth of field.

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 - 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 during a set interval, it will automatically adjust the duration of the flash to a shorter interval, to avoid damage occurring to the LEDs.

Recommended triggers:

Compatible with internal built-in flash receiver

Rotolight HSS Transmitter (Canon, Nikon, Sony, Olympus/Panasonic, Fuji)
Elinchrom HS Transmitter Plus (Canon, Nikon, Sony, Olympus/Panasonic, Fuji download latest firmware from www.elinchrom.com for Rotolight integration). Other HSS transmitters which will require a receiver or transceiver connected to the Flash Sync Port on Titan™.

Third-party triggers:
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

To exit Flash mode, tap the HOME, SFX or SYS menu.

Setting Titan™ to use the built in Skyport HSS Receiver (2.4Ghz wireless flash triggering using the built-in Elinchrom Skyport HSS receiver).

NB - Titan™'s factory default settings are channel 1, group 1 (same as the Rotolight HSS transmitter by Elinchrom), with Skyport trigger turned ON, in speed mode (HSS). Therefore, to use flash, you do not need to access the SYS menu unless you wish to turn Skyport off, or to change the group or channel.

Setting up your HSS Transmitter

The below setup instructions are based on the HSS transmitter firmware 3.0 and Titan™ firmware V1.0. 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 3.0, 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 contact us on sales@rotolight.com or +44 1753 422750.

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. 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. Scroll through the Flash menu to check 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™. 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.

Then, back to the transmitter, use the rotary wheel to scroll to 'SC Setup' (Second Curtain). The SC Setup should automatically to default to the 'By Camera' setting. However, for Nikon compatible HSS transmitters only, ensure the Second Curtain is set to OFF.

Scroll to Auto MOD and ensure this is set to 'No Use.' However, for Nikon compatible HSS transmitters only, ensure this is set to 'OFF'.

Scroll to 'Iden.' at the bottom of the Setup menu and ensure this is set to 'Type' to display the Rotolight units correctly during control.

Then scroll to the top of the menu and press scan, this will now re-scan for devices and will find the Titan™ and display it in the control menu.

NB - On older versions of HSS transmitter firmware Titan™ may be recognised as 'Apollo'. This can be changed by updating to the latest Elinchrom HSS firmware.

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'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.

'DLAY' Delay before the 'Repetitions or Gaps'

Press the right knob to enter 'DLAY' 0.00s is displayed. Use the left or right knob to dial in a delay value (in seconds). This will introduce a delay in the flash event, after the shutter release or trigger is received.

'REPS' Repetitions

Press the right knob to enter. 'REP x1' is displayed. Rotate the left or right knob to set the number of flashes required (maximum 20).

'GAPS' The Gaps between the Repetitions

Press the right knob to enter 'GAPS'. '0.05s' is displayed. Use either knob to set the desired duration of the 'GAPS' 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, Titan™ will display the 'FLSH' settings, so you can adjust flash duration, flash output power, modelling light and colour temperature of the light.

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

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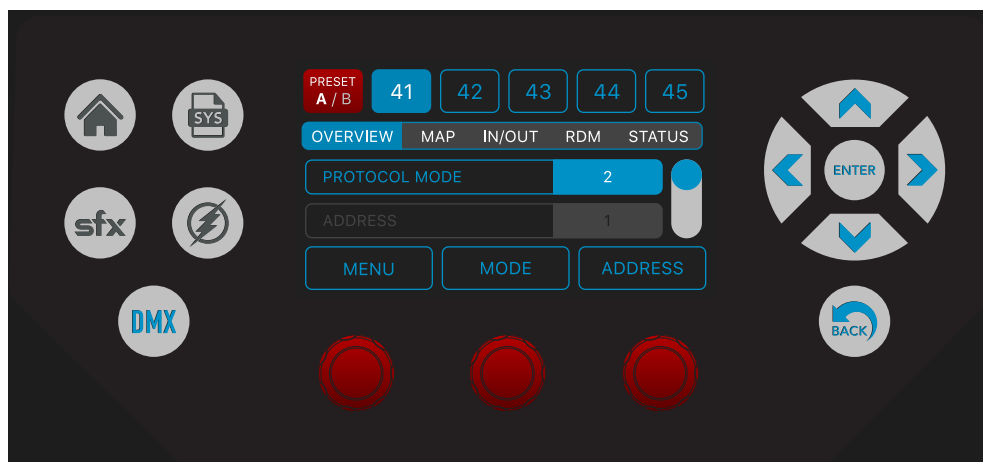
NB - There are ten user programmable radio button presets available to store and recall customised DMX settings (presets 41-50). Press and hold to store a setup, tap the button to recall the preset. Tap the bank button to access presets 46-50. These presets can be very handy even if you only use them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

Rotolight intend to equip the Titan™ with five DMX protocol modes:

1. Titan™ Ultimate 16 channel DMX Protocol (8 Bit) (see chart on page 28)
Provides full control over all of the Titan™ features using sub modes 1A (CCT) through to 1H (Flash)

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

3. Rotolight Legacy eight Channel (8bit) (*)
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

4. ARRI Ultimate (#30) emulation, 24 Channel (8 Bit) (*)
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)

5. Gemini Ultimate emulation 10 channel (8 Bit) (*)
Allows Titan™ compatibility when being used alongside Lightpanels Gemini fixtures using sub modes 5A (CCT) through to 5H (Presets)

(*) In the first update of the Titan™ Firmware (Q1, 2020) modes 2 , 3, 4, and 5 will be introduced.

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

The DMX Menu

You can use the three knobs as follows:

Rotate the left knob to control the menu

Turn the middle knob to select DMX Sub Mode (1A,1B,1C,1D,1E,1F,1G,1H, etc)

Press, hold and rotate the middle knob to select DMX Mode (1,2,3,4,5 etc)

Rotate the right knob to control DMX Base Address (i.e. Channel 1 etc)

The rest of the controls in the DMX menu can be adjusted using the touchscreen.

1. OVERVIEW

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

2. 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.
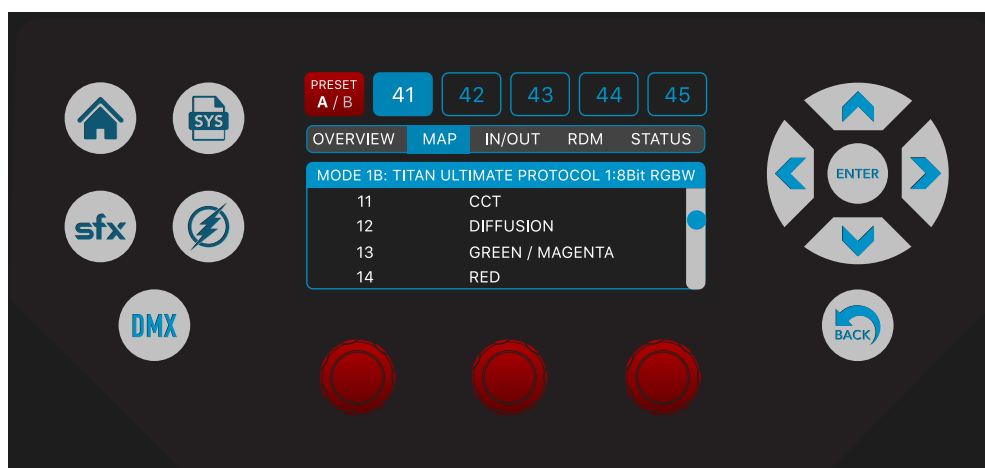
3. IN/OUT

This page offers a simple radio button system for users to select the desired input and output configuration for Titan™.
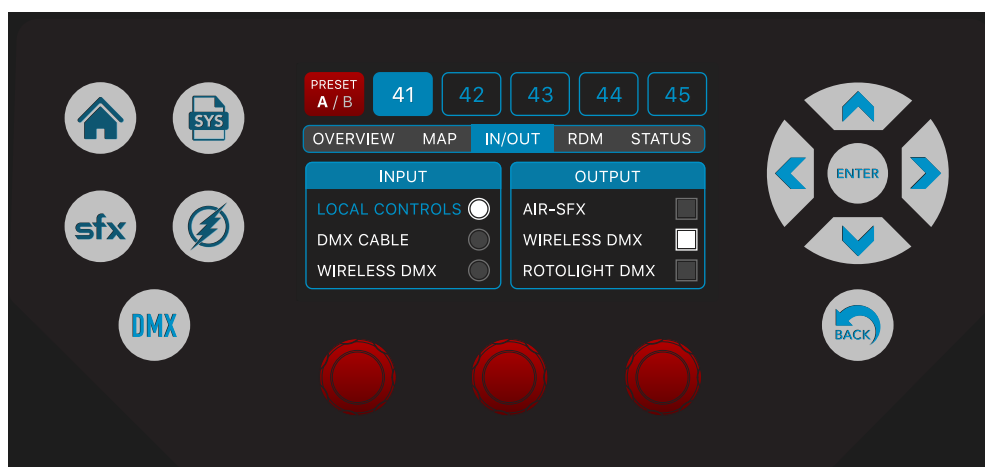
Input options are as follows:

1. LOCAL CONTROLS

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

2. 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.

3. WIRELESS DMX

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.

Output options are as follows:

1. AIR-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). The slave Titan™ needs to be set to the same channel and mode, and input set to Wireless DMX.

2. WIRELESS DMX

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

3. DMX CABLE

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

4. REMOTE DEVICE MANAGEMENT

Rotolight intend to offer RDM functions in Titan™ (RDM = Remote Device Management) in Q1 2020. We are registered with the RDM Technical Standards Program at ESTA.org (our RDM ID is 1809h). While we are planning 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'.

5. STATUS

This page offers a highly visible screen that can be viewed from distance, which displays the following information:
1.   DMX channel
2.   Signal strength
3.   DMX input type (wired or wireless)
4.   Output type (cable / wireless DMX / or AIR-SFX)
5.   Frequency (for Rotolight wireless DMX/Skyport)
6.   Connection status (green is 'good', red is 'no signal')
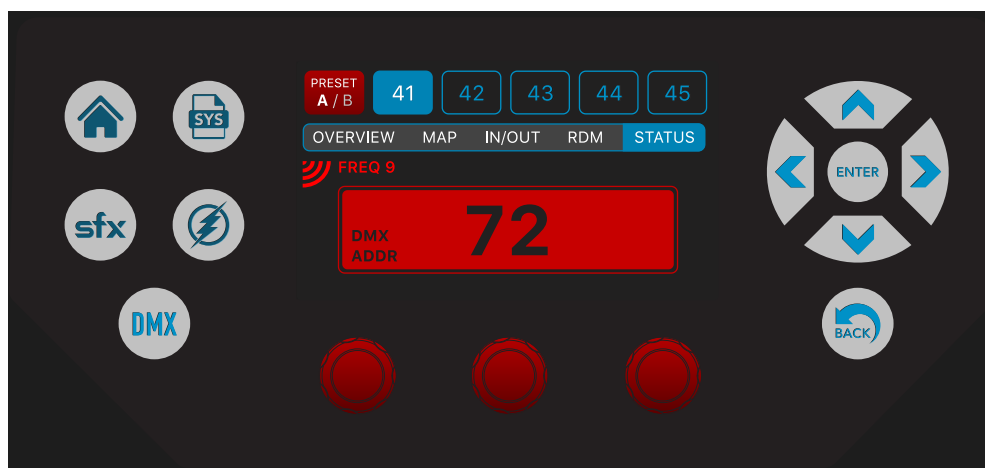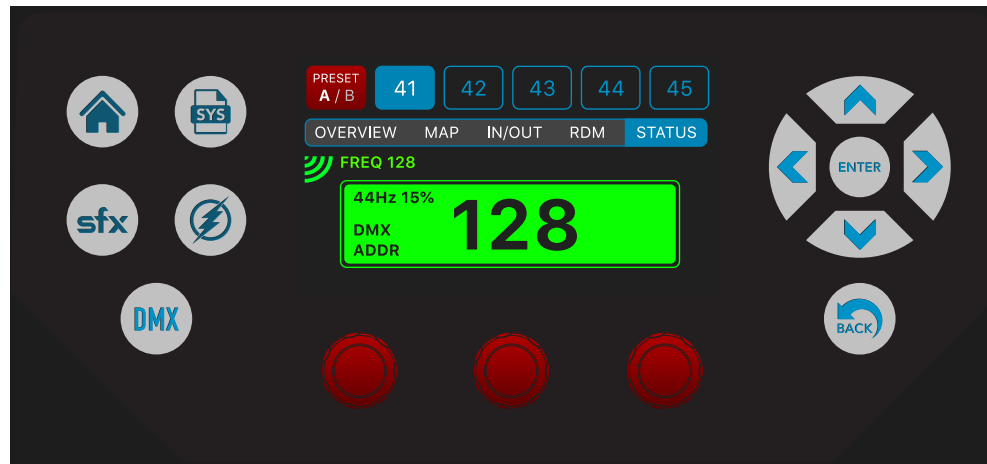
DMX Protocol Mode 1

Titan™ Ultimate 16 channel DMX Protocol (8 Bit)

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

This creates seven sub modes (modes 1A to 1G):

1A.   CCT (0 – 30)

1B.   RGBW (31 – 60)

1C.   HSI (61 – 90)

1D.   XY (91 – 120)

1E.   FILTER (121 – 150)

1F.   CineSFX (151 – 180)

1G.   FLASH (181 – 210)

See the Protocol table on page 28.

You can also select the DMX mode using the middle knob, but this will be overridden by incoming DMX data on channel 4.

You can set the starting DMX channel address for this 16-channel layout using the right hand address knob.

If you disconnect the wired DMX or your wireless DMX fails, then the fan control will revert to the previously selected fan setting on the local controls.

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

TITAN™ ULTIMATE PROTOCOL 1: 8 BIT 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	Master Intensity
2	CCT	CCT	CCT	CCT	CCT	CCT	CCT	CCT
3	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion
4	MODE	CCT	RGBW	HSI	XY	Filter	CineSFX	FLASH
(DMX VALUE)		0-30	31 - 60	61 - 90	91 - 120	120 - 150	151 - 180	181 - 210
5	Green/magenta	Green/magenta	Green/magenta	Green/magenta	Green/magenta	Green/magenta	Green/magenta	Green/magenta
6	Red	Red	Red	Hue		Red	Red	Red
7	Green	Green	Green		X Co-Ordinate	Green	Green	Green
8	Blue	Blue	Blue		Y Co-Ordinate	Blue	Blue	Blue
9	White intensity	White intensity	White intensity	Saturation	White intensity			Modelling light
10	Preset recall	Preset recall	Preset recall	Preset recall	Preset recall	Preset recall	Preset recall	Preset recall
11	White to RGB crossfade	White/RGB fade	White/RGB fade	White/RGB fade	White/RGB fade	White/RGB fade	FX select	Skyport mode
12	FX & flash parameter					Brand	FX parameter #1	Flash output
13	FX & flash parameter					Gel number 100s	FX parameter #2	Duration
14	FX & flash parameter					Gel number 1s	FX parameter #3	Group
15	FX & flash parameter					Source number	FX parameter #4	Frequency
16	Fan control	Fan control	Fan control	Fan control	Fan control	Fan control	Fan Control	Fan control

TECHNICAL SPECIFICATIONS

Pole operated yoke

564

834

157

Standard yoke

784

677

421.00

30°

15°

Power supply unit

82

I/O   DC-OUT   AC-OUT   AC-IN

141
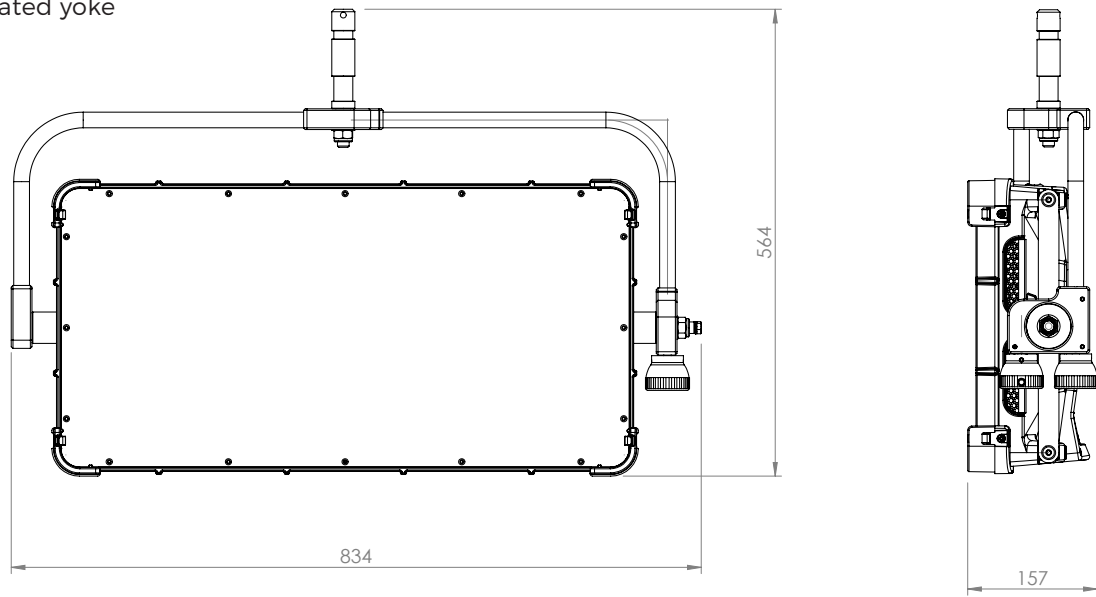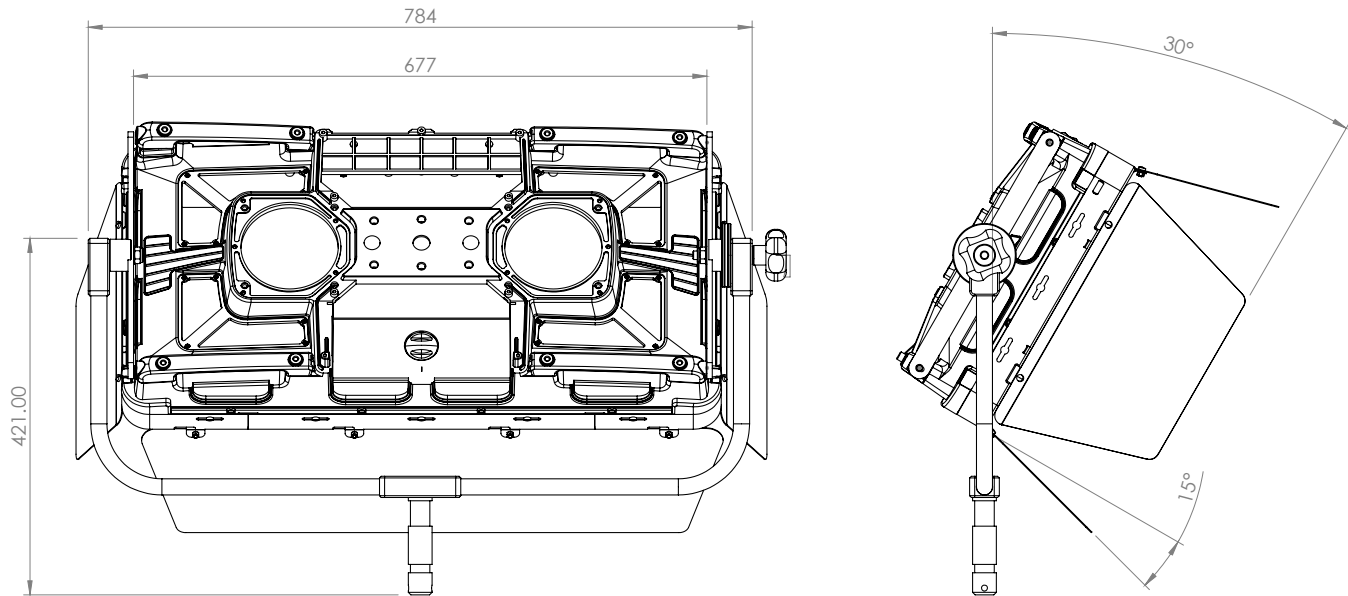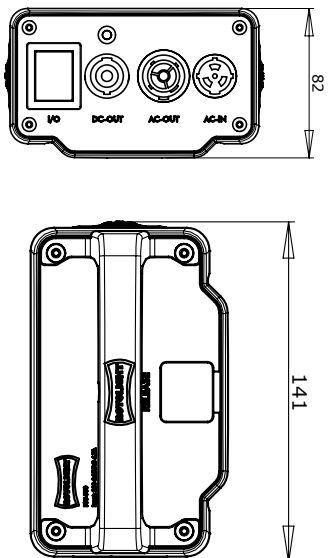
Power Supply Input Range	110 to 240 V AC, 50/60 Hz
Power Supply Output	24 V DC 750 watt
Power Input Connector	PowerCON TRUE1 (Bare Ends/Shuko/Edison cables available)
Power Output Connector	PowerCON TRUE1 (mains power through)
DC Output Connector	Female speakCON (Positive Pin 1+ 2+ / Negative Pin 1- 2-)
Weight	3.7kg / 8.15 lbs
Dimensions	379 mm x 141 mm x 82 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*, EAC*, cNRTLus*, TUV*, FCC*, EN*, UL*

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LED System	Rotolight PentaChromic Colour Engine™
Diffuser System	Rotolight SmartSoft™ Diffusion
Light Aperture	650 x 300 mm / 25.6" x 11.8"
Beam Angle	Electronically variable 68 degrees to 150 degrees
Weight	Titan™ X2 body: 10.6kg / 23.3 lbs Titan™ X2 + Standard Yoke: 13.1kg / 28.8 lbs Titan™ X2 + Pole Operated Yoke: 14.6kg / 32.1 lbs Titan™ X2 + Swan-Neck: 11.5kg / 25.3 lbs
Dimensions	Titan™ X2 body: 350 x 150 x 705mm (*13.7" x 5.9" x 27.7"*) Titan™ X2 body + Standard Yoke: 546 x 158 x 840mm (*21.4" x 6.2" x 33"*) Titan™ X2 body + Pole Operated Yoke: 532 x 139 x 814mm (*20.9" x 5.4" x 32"*) Titan™ X2 + K-Mount Swan Neck: 350 x 295 x 705mm (*20.9" x 5.4" x 27.7"*)
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
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
Battery Mode Light Output	4 way adapter: 50%
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	5600K >97 3200K >98 Skintone R15 = 98
TLCI	99
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*, LumenRadio*, wired/wDMX, Elinchrom Skyport *Bluetooth connectivity and LumenRadio control coming Q1 2020*
Remote Device Management (RDM)	DMX Setup, Hour Counter, and Standard RDM Commands
Flash	Skyport HSS (range 200M), 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 Lifetime (L70)	50,000 hours
Estimated colour shift over lifetime (CCT)	+/- 5 %
Certifications	CE, FCC*, UL*, TUV*

Photometric Data	1m / 3.3ft		3m / 9.8ft		5m / 16.4 ft		7m / 23 ft		9m / 29.5 ft	
Rotolight Titan™ X2	**3200K**	**5600K**	**3200K**	**5600K**	**3200K**	**5600K**	**3200K**	**5600K**	**3200K**	**5600K**
Titan™ X2 No Diffusion	15525 lx 1442 fc	16800 lx 1561 fc	2220 lx 206 fc	2415 lx 224 fc	953 lx 88 fc	983 lx 91 fc	543 lx 50 fc	524 lx 48 fc	365 lx 34 fc	351 lx 32 fc
Titan™ X2 50% Diffusion	11700 lx 1087 fc	16200 lx 1505 fc	2003 lx 186 fc	2310 lx 215 fc	848 lx 78 fc	930 lx 86 fc	511 lx 47 fc	503 lx 47 fc	320 lx 29 fc	343 lx 32 fc
Titan™ X2 Full Diffusion	9225 lx 857 fc	10425 lx 968 fc	1500 lx 139 fc	1470 lx 137 fc	582 lx 54 fc	604 lx 56 fc	318 lx 29 fc	325 lx 30 fc	209 lx 19 fc	219 lx 20 fc
Titan™ X2 With Intensifier	16650 lx 1547 fc	18375 lx 1707 fc	2258 lx 209 fc	2498 lx 232 fc	960 lx 89 fc	1016 lx 94 fc	544 lx 50 fc	518 lx 48 fc	373 lx 35 fc	363 lx 33 fc

*Provisional Photometrics tested in September 2019 using a Sekonic C7000
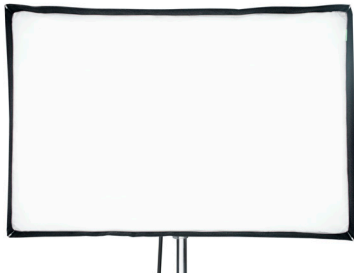
ACCESSORIES

Titan with Standard Yoke
SKU: RL-TITAN-X2-Y

Titan with Pole Operated Yoke
SKU: RL-TITAN-X2-P

Titan with Swan Neck
SKU: RL-TITAN-X2-S

DOP Choice™ Snap Bag
SKU: RL-TITAN-X2-SB

DOP Choice™ SnapGrid for SnapBag (40˚)
SKU: RL-TITAN-X2-SGSB

DOP Choice™ SnapGrid for Titan
SKU: RL-TITAN-X2-SGT

Barn Doors
SKU: RL-TITAN-X2-BD

Rain Cover
SKU: RL-TITAN-X2-RAIN

Titan Flight Case
SKU: RL-TITAN-X2-FLC

Spare PSU
SKU: RL-TITAN-X2-PSU

Soft Bag
SKU: RL-TITAN-X2-SOFT

Titan Clamp
SKU: RL-TITAN-X2-CLAMP

WARRANTY INFORMATION

Manufacturer's Limited Warranty

Rotolight 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 general 'wear and tear', and shall be invalidated by tampering with, dropping or damaging the product or misuse. The manufacturer's products warranty will specifically not include water damage to the unit, battery acid damage to the unit, 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 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 not (except in respect of liability for death or personal injury caused by the Manufacturer or Distributor's negligence or in the case of fraud) 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 injury or harm caused by product misuse or compensation, reimbursement, or damages on account of 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.

ROTOLIGHT QUALITY ASSURANCE

Your Rotolight Titan™ has been individually examined and found to pass Rotolight's quality assurance testing.

INDEX

"

The Rotolight Titan X2 is a versatile and powerful light - a well-built piece of high-tech kit with features that none of its rivals can offer at any price

- Pro Moviemaker Magazine

"

One of the nicest features is the interface, it's so well thought out. It's a joy to use and actually encourages you to go and play with it

- Stefan Lange

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DESIGNED & ENGINEERED AT PINEWOOD STUDIOS, UK