

# **CANTO<sup>®</sup> FOLLOWSPOT OPERATING INSTRUCTIONS**

**FOR THE NORTH AMERICAN REGION 120/208V 60 HZ**

## **MODELS COVERED**

01207190

Canto<sup>®</sup> Astro 250 Wi-Fi RGBW DMX 512+RDM LED

We hope that this product will meet your requirements, but if for any reason this should not be the case, we ask that you contact us directly at **888-252-5912** to help address your needs. We wish to provide all of our customers with the best quality products available. The product you purchased has been manufactured with maximum care in construction and choice of components. If you have received your equipment damaged for any reason beyond our control, please contact your local dealer who supplied the product to you within 72 hours after receiving our product.

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## **CAREFULLY READ THE OPERATING INSTRUCTIONS BEFORE USING THIS FIXTURE.**

The instructions given here ensure safe usage of this product. User's failure to comply with the installation, operation, maintenance and safety procedures mentioned in this manual as well as those generally applicable to lighting equipment, may cause the fixture not to perform as expected.

CantoUSA accepts no liability for direct, indirect, incidental, special, or consequential damages resulting from the customer's failure to follow the installation, operating, maintenance and safety procedures described in this manual. These limitations extend to damages for personal injury, property damage, loss of operation, loss of profits, loss of product or loss of time, whether incurred by the customer, the customer's employees, or third-party vendors or users.

Apart from the instructions given in this manual, all relevant safety and health standards of the appropriate local city and state electrical / safety directives must be complied with.

PLEASE SEE OUR GENERAL TERMS OF SALE AND WARRANTY CARD PROVIDED WITH YOUR NEW EQUIPMENT OR EMAIL US FOR A COPY AT ANY TIME.

## **1. IMPORTANT SAFETY NOTES**

This product may reach high temperatures depending on the model ordered. Avoid any direct contact with its metal exhaust parts.

**\*NEVER WORK INSIDE AN OPERATING UNIT WITHOUT IT BEING COOLED AND UNPLUGGED FROM POWER SOURCE. NEVER EVER WORK INSIDE A UNIT THAT IS TURNED ON.**

**\*WARNING: HIGH VOLTAGE IGNITION, DISCONNECT THE UNIT FROM POWER BEFORE SERVICING**

- \* Continuous mains power is required for this spotlight as an internal dimmer controls the intensity via DMX or local rotary knob. An accessory moving manual dimmer is furthermore available for positioning on the side grab handles.
- \* Use of a phase control dimmed mains supply may damage the internal electronics.
- \* This product features fan-assisted ventilation. Make sure you do not cover the fans or obstruct the air flow at any one time.
- \* Make sure the fans are working correctly. Should you detect even the slightest malfunction, switch the luminaire off and carry out the necessary servicing. Replace the fans if necessary.
- \* This product is rated IP 20 and is therefore designed for interior use only. For details on maximum ambient temperature, minimum distance from flammable objects and tilt angle, please refer to what indicated on the product label.
- \* Repairing and replacement of any component of this product must be carried out exclusively by professional personnel in conformity with the relevant safety and health standards and only with original Canto USA components.
- \* Replacement of any part of the wiring system must be carried out exclusively by professional personnel in compliance with the original wiring diagram and with components identical to or compatible with those originally fitted.
- \* Installation of this product must be exclusively carried out by professional personnel

## **BEFORE YOU GET STARTED, PLEASE READ THIS INSTRUCTION MANUAL COMPLETELY.**

## **2. CHECKING BOX CONTENTS:**

Upon opening the boxes, please make sure the boxes contain the following items:

### **FOLLOWSPOT:**

#### **A. In case you bought just the followspot – item #01207190 Canto ASTRO 250 Wi-Fi RGBW**

##### **1. Fixture:**

- a. Followspot
- b. Separate mains power cable with PowerCon
- c. Iris diaphragm
- d. 28mm spigot with M12 self locking nut and plain washer
- e. Clamp-on digital dimmer A20702071
- f. Universal mobile device holder A20702073

#### **B. In case you bought the complete kit – item #K01207190 packed in a flight case:**

- a. Followspot
- b. Separate mains power cable with PowerCon
- c. Iris diaphragm
- d. 28mm spigot with M12 self locking nut and plain washer
- e. Clamp-on digital dimmer A20702071
- f. Universal mobile device holder A20702073

## **TRIPOD STAND:**

Tripod – May or may not include casters for the tripod. Casters are an accessory that can be purchased.

## **3. MOUNTING THE SPIGOT:**

Make sure the tripod you are going to use features a (28mm) top aperture for the supplied spigot.

Remove the M12 nut and washer from the spigot and insert the threaded end into the center hole of the yoke of the followspot from beneath the yoke. Tighten the M12 nut with a suitable tool so that the spigot securely holds the followspot in place but allows proper movement of the fixture.

Loosen the “T” Handle screw where the spigot inserts into the tripod. Mount the followspot onto the tripod. Place the tripod in such a manner where the “T” Handle screw runs parallel to the yoke. Make sure the spigot shaft sits 12mm above the base of the tripod. There is a recess in the spigot shaft just below the base that is a good indication of where to mount the spigot. Make sure the area you are placing the product on can withstand the product load (see product label to check on weight) i.e. catwalk or balcony.

## 4. MOUNTING THE IRIS DIAPHRAGM:

The iris diaphragm supplied with the followspot has 20 leaves to size the beam from a maximum aperture of 68mm to a minimum of 5mm. A black-out iris diaphragm is available to special order.

1. Using a Phillips screw-driver remove the two phillips screws from the sides of the iris plate.
2. Slide the diaphragm in the gate area.
3. Tighten the screws.

**IMPORTANT NOTICE: DO NOT LEAVE THE IRIS CLOSED FOR OVER 5 MINUTES WHILE THE LED IS ON**

**FAILURE TO COMPLY WITH THE ABOVE NOTICE MAY CAUSE THE IRIS AND THE FOLLOWSPOT TO SUFFER MAJOR HEAT DAMAGE AND WILL INVALIDATE THE PRODUCT WARRANTY.**

## 5. SHUTTER BLADES:

Shutter blades are not supplied with the unit, but are available as a separate accessory. They are sold as single items and the relevant part number is R80208019. 4 are required.

## 6. ADJUSTING THE YOKE:

This followspot is provided with a yoke balancing adjustment. The balancing point is factory set for a standard usage of the product configuration supplied (without color); however, should you need to adjust the balancing, please proceed as follows:

1. The followspot must be mounted on the tripod stand with all relevant accessories attached.
2. Using a Phillips screw-driver, loosen the 2 (M5) screws on each side of the mounting plate of the yoke.
3. Gently slide the followspot backward or forward to the required position.
4. Make sure the yoke is correctly aligned horizontally.
5. Tighten the 4 5mm screws.

## 7. WIRING:

Before being connected to power, please make sure that the unit is outfitted with a suitable plug. Make sure the plug conforms to the lamp power load. This fixture must be grounded. Ensure the plug conforms to the relevant local safety requirement and UL electrical standards.

To perform a correct wiring, please note that the cores in this mains lead are color-coded as follows:

**Ground: green+yellow – Neutral: blue - Hot: brown**

In case the colors of the wires do not correspond to the color of the connection points on your plug, please proceed as follows:

- The green or green and yellow wire is ground and must be connected to the connection point marked with the letter E or with the symbol  $\perp$  or colored in green or in green+yellow
- The blue wire is neutral and must be connected to the connection point marked with the letter N or with the symbol  $\perp$  or colored in black
- The brown wire is hot and must be connected to the connection point marked with the letter L or with the symbol  $\perp$  or colored in red

Before you finally position this product for use, temporarily connect it to a properly fused power supply to check the lamp works correctly.

## 8. VOLTAGE:

Before operating this unit please refer to the product label mounted at the back of the luminaire to check you are operating with the correct voltage.

The Astro 250 LED can be operated between 120V and 208 V.

## 9. LOCAL CONTROL PANEL AND OPERATION:

OPERATION: LCD display for DMX address, system setup and status details.

POWER: power LED status indicator , red color. ON= power

DMX: DMX LED status indicator, green color. LED OFF = DMX OFF and manual control activated , LED ON = DMX MODE activated with no DMX signal, FLASHING LED = receiving DMX

MENU: rotary switch selector to select and modify the operational modes.

Turn left or right to navigate through the menu and press to select or to confirm

DMX IN: input DMX signal (pin1=0 , pin2= DATA- , pin3=DATA+ ).

DMX OUT : Loop through DMX signal output

POWER IN: Mains power input

POWER OUT: Mains power output

## 10 MENU:

There are fourteen different menus to control the settings of ASTRO RGBW LED. The rotary selector is used to adjust the settings and to navigate through the menu. Turn left or right to select the menu and push to access or to confirm the selected data or functions. To exit the selected menus without saving the data, press the rotary selector for at least 1 second.

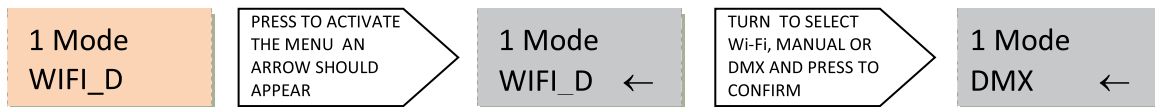
### 10.1 WI-FI, DMX OR MANUAL (MODE):

Color control of the Astro is achieved through a totally innovative technology. The Astro Wi-Fi generates a proprietary Wi-Fi access which will recognize one device only and whose range reaches 15m approximately in obstacle-free environments. Access to the Wi-Fi access is protected by password. A universal mobile phone holder (3.5/6.5in), rotatable over 360°, supplied with the Astro and clamped on one of the side bars, allows the installation of a mobile device, either IOS or Android to take control of the followspot.

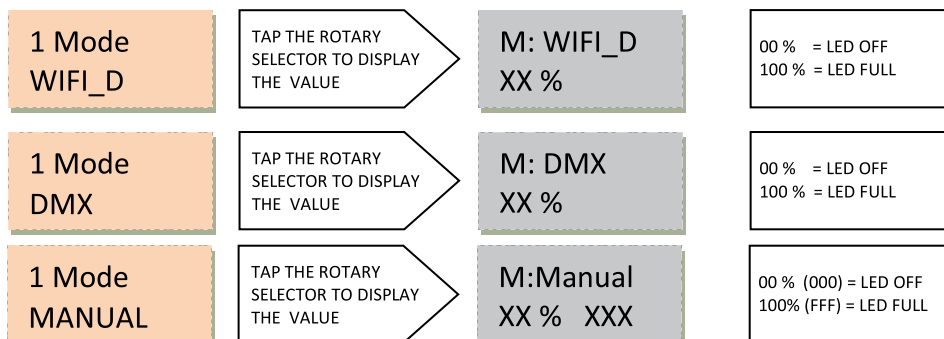
If the Astro was purchased complete with the Canto USA controller A20702074 (available as an optional accessory) Smartphone Honor 75 Black, pre-loaded with the Android Art-Net Controller app, relevant settings and libraries, it is ready to be operated. In case you are using your own mobile device, please refer to chapter 12 and 13 of this manual for all the necessary steps needed to set up the control system.

Select the LED control mode between Wi-Fi (factory setting – if you want to control the color mixing through a mobile device), DMX and manual. To change the control mode press once the rotary selector until an arrow appears on the menu. Turn the selector to the right or the left to select the desired mode of operation and press to confirm your selection.

In order to work properly with an external mobile device the Astro must be set in Wi-Fi mode at the default settings. If default settings have been changed, please refer to chapter 10.23-B to reset the product to factory settings.



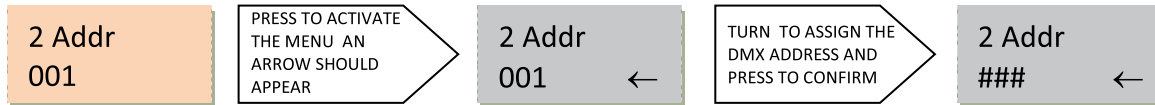
Tap the rotary selector and the LCD screen will display the mode status and the current value:





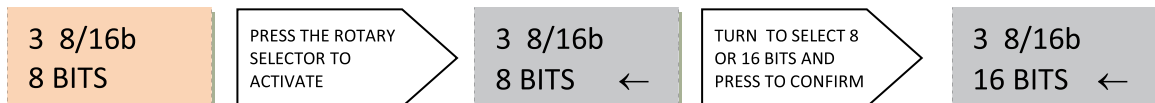
## 10.2 DMX ADDRESS (ADDR):

It allows to select the initial DMX starting address to remotely control the LED functions. To change the initial DMX address press the rotary switch until an arrow appears, then turn to change to the desired DMX starting address. Press to confirm your selection. Factory setting is 001.



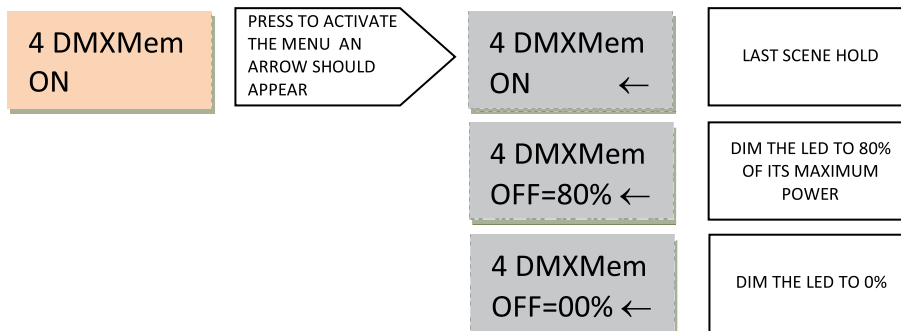
## 10.3 DIMMER RESOLUTION (8/16B):

The dimming resolution can be controlled at 8 bits from one DMX channel to 16 bits with 2 DMX channels. Factory setting is 8 Bit.



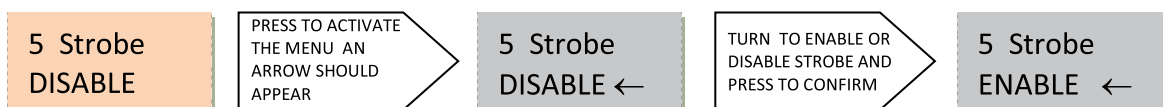
## 10.4 LOST DMX SIGNAL (DMXMEM):

In case of signal failure this function allows to store in memory the last DMX value. This function is forced ON in Wi-Fi mode. Factory setting is ON. Three options are available:



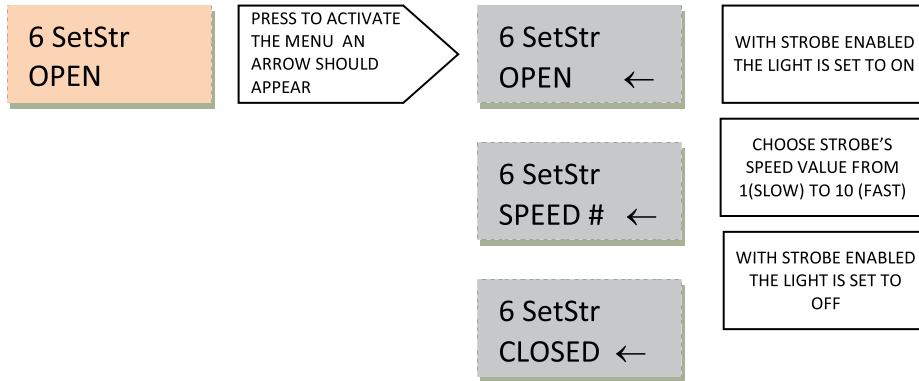
## 10.5 STROBE (STROBE):

This function allows to activate the strobe function. Factory setting is DISABLE.



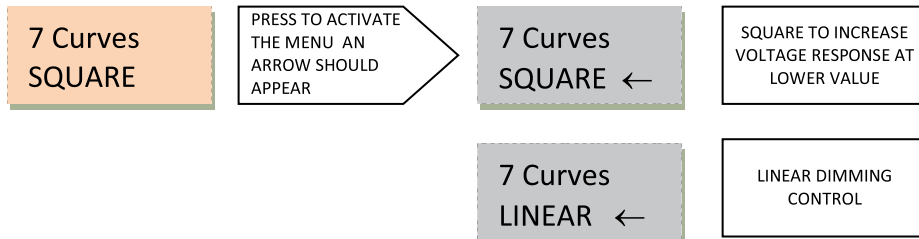
## 10.6 STROBE SPEED (SETSTR):

It allows to set the strobe speed. This menu is not active when the strobe function is disabled or when it is remotely controlled through DMX. Factory setting is OPEN.



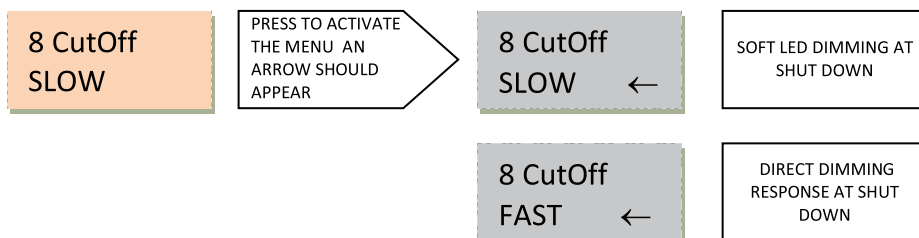
## 10.7 DIMMING CURVE (CURVES):

This function allows to select a response curve for the Astro. A choice of two curves is available: Square and Linear. Factoring setting is SQUARE.



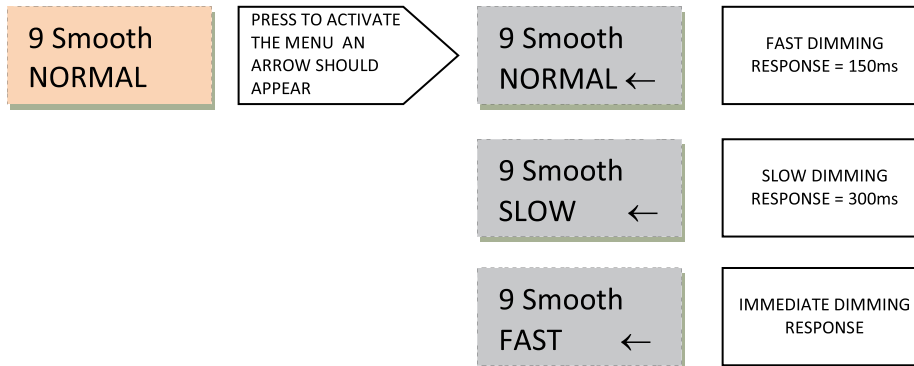
## 10.8 CUT OFF DIMMING RESPONSE (CUTOFF):

This function allows to select a LED behavior simulating a tungsten-halogen lamp during the dimming cut off. Factory setting is SLOW.



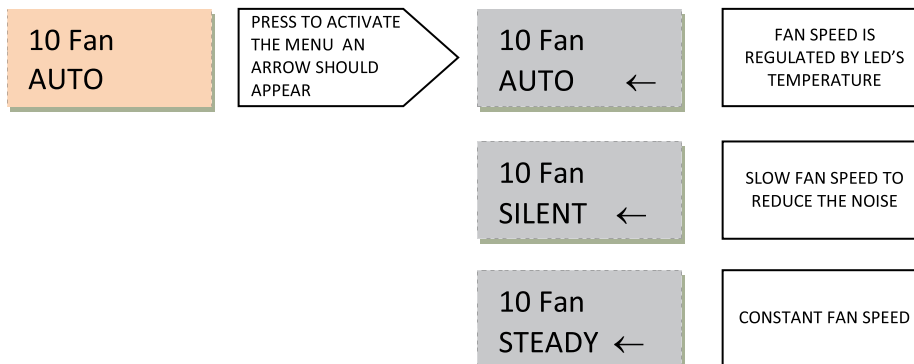
## 10.9 DIMMING BEHAVIOR (SMOOTH):

This function allows to set the LED dimming response. Factory setting is NORMAL.



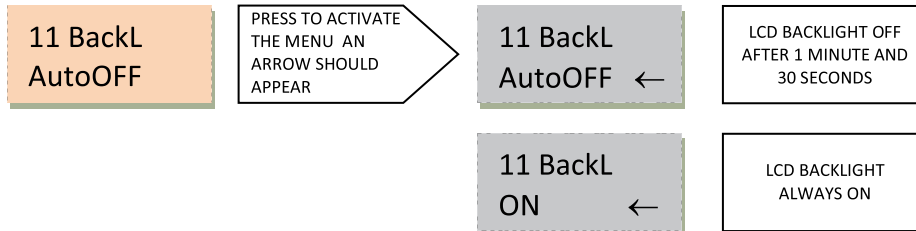
## 10.10 FAN SETTING (FAN):

This function allows to set the fan's response. A choice of three modes is available: Automatic, Silent or Steady. When fan is in Auto mode, the speed is controlled by the LED temperature. In Silent mode the fan runs slowly to reduce noise. In Steady mode the fan runs at constant speed, halfway between the minimum and maximum speed. In all cases, if the LED temperature exceeds the maximum admitted value, the LED is protected by a de-rating security system. Factory setting is AUTO.



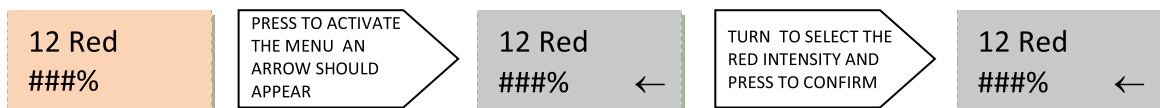
## 10.11 LCD SCREEN ILLUMINATION (BACKL):

This function allows to turn off the LCD backlight, the POWER led and the DMX led light after 1'30" from the last setting. Factory setting is AutoOFF.



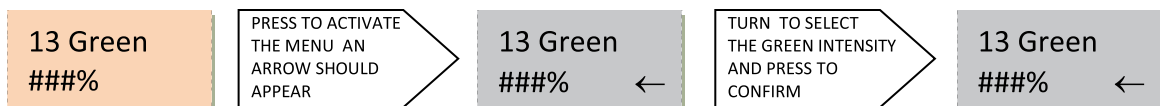
## 10.12 RED COLOR INTENSITY (RED):

This function allows to set the intensity of the red color for the manual mode. By selecting the manual mode, 100% is automatically set.



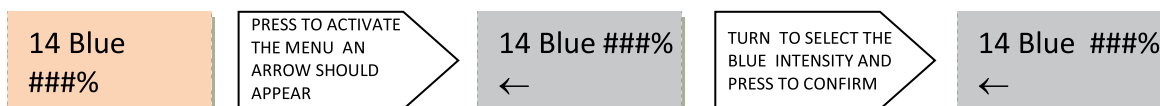
## 10.13 GREEN COLOR INTENSITY (GREEN):

This function allows to set the intensity of the green color for the manual mode. By selecting the manual mode, 100% is automatically set.



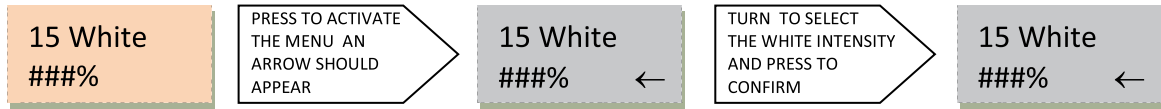
## 10.14 BLUE COLOR INTENSITY (BLUE):

This function allows to set the intensity of the blue color for the manual mode. By selecting the manual mode, 100% is automatically set.



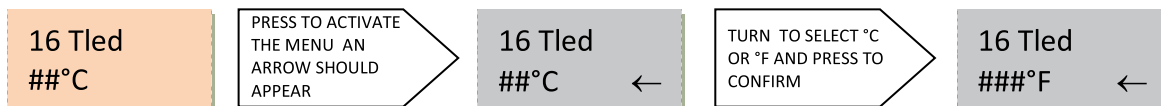
## 10.15 WHITE COLOR INTENSITY (WHITE):

This function allows to set the intensity of white color for the manual mode. By selecting the manual mode, 100% is automatically set.



## 10.16 TEMPERATURE CONTROL (TLED):

This function allows to visualize the LED temperature. Factory setting is °C.

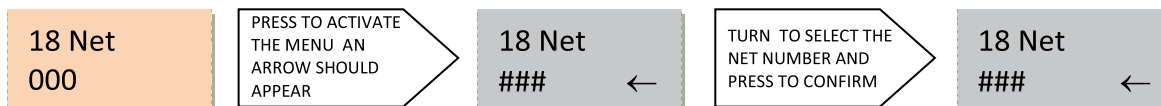


## 10.17 SOFTWARE VERSION (SWVER):

This function allows to visualize the software version.

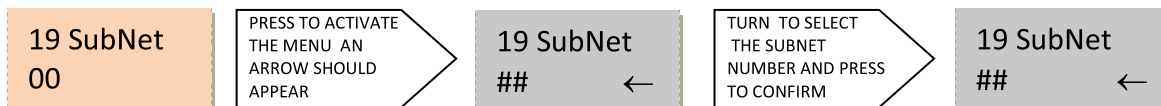
## 10.18 NET (NET):

The apps used in Wi-Fi mode work with Art-Net 3 protocol. The Port-Address is composed of three separate fields: NET, SUB-NET and UNIVERSE. This function allows to set the NET field, in a range between 0 and 128. Factory setting is 000.



## 10.19 SUB-NET (SUBNET):

This function allows to set the SUB-NET field of Art-Net 3 Port-Address, in a range between 0 and 15. Factory setting is 00.



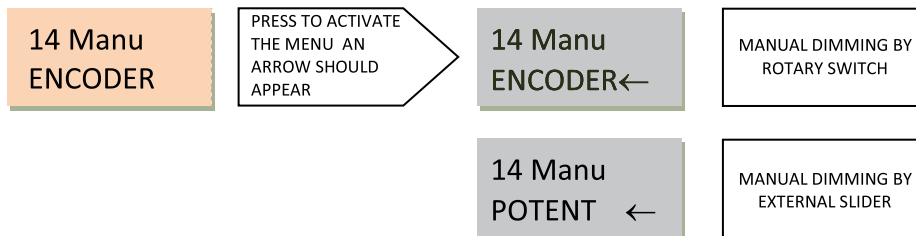
## 10.20 UNIVERSE (UNIV):

This function allows to set the UNIVERSE field of Art-Net 3 Port-Address, in a range between 0 and 15. Factory setting is 00.



## 10.21 MANUAL DIMMER TYPE (MANU):

This function allows to select the manual dimmer type, when Astro is set in Manual mode (see chapter 10.1). When in Wi-Fi mode this setting is disregarded, as dimming on the Astro will be achieved through the manually operated Digital Clamp-on Dimmer A20702071, supplied, or through the dimming function on the App loaded on the controlling mobile device. For full details on the Digital Clamp-on Dimmer please refer to chapter 12 of this manual. Factory setting is ENCODER.

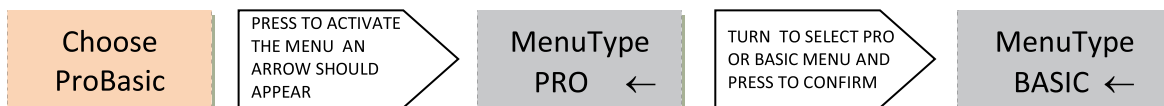


## HIDDEN MENUS

There are furthermore nine different hidden menus which allow to select the advanced settings of the ASTRO WI-FI RGBW. To activate this function turn OFF and then ON again the Astro while keeping the rotary switch pressed.

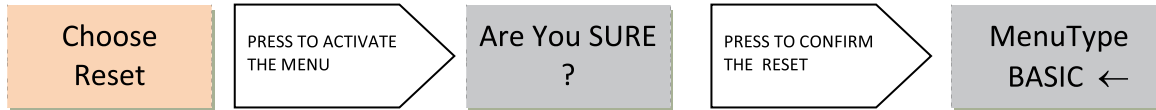
## 10.22-A PRO OR BASIC CONTROL (PROBASIC):

The PRO-BASIC control is a special function which allows to limit the access to the control menu. Select ProBasic with the rotary switch and press to access the menu. Select : PRO, to enable access to all available functions. BASIC, to limit the access to functions 10.1 Wi-Fi, DMX or MANUAL MODE, 10.2 DMX ADDRESS, 10.12 - 10.13 - 10.14 - 10.15 RGBW Color intensity in manual mode, 10.16 Temperature Control, 10.17 Software version and 10.18 - 10.19 - 10.20 Net, Sub-Net and Universe for Art-Net Port-Address. Factory setting is PRO.



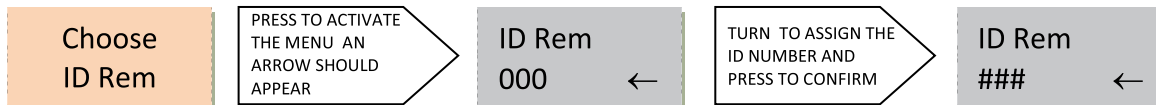
## 10.23-B FACTORY SETTINGS (RESET):

The RESET control is a special function which allows to RESET the product to factory settings.



## 10.24-C ID REMOTO (ID REM):

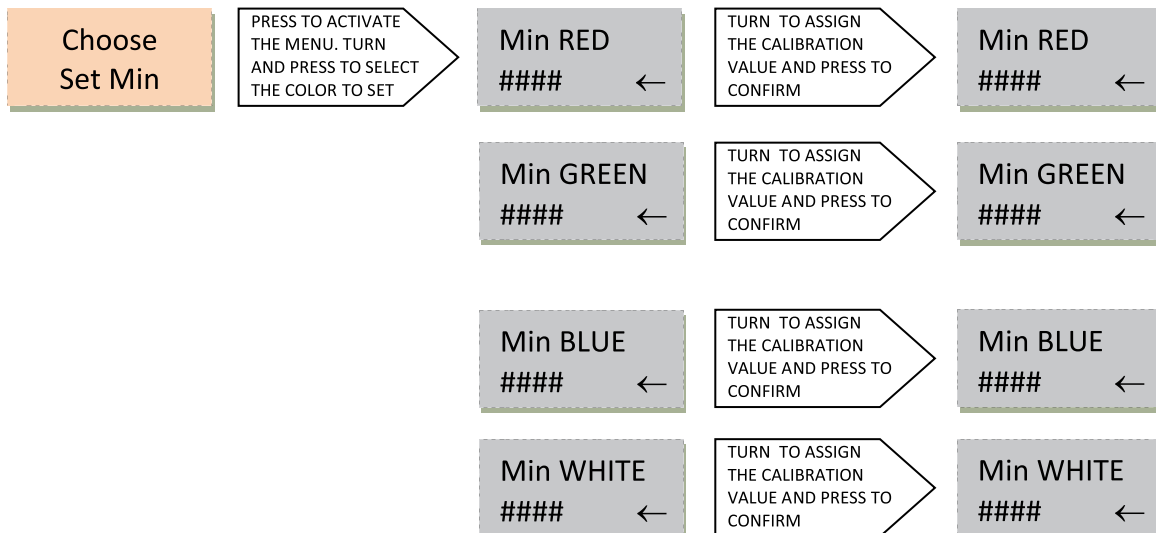
It allows to select the ID number to connect the Wi-Fi Astro to the REMOTO gateway to upload and download firmware. To change the initial ID press the rotary switch until an arrow appears, then turn again to change to the desired ID number. Press to confirm your selection. It is possible to select an ID number's value between 0 and 250. If the ID number=0, remote control is not active. Factory setting is 000.



## 10.25-D CALIBRATION (SET MIN):

It allows to calibrate the minimum output level of each color.

NOTICE: Reset doesn't restore the default settings of minimum levels.



## IMPORTANT NOTICE

If the Astro is used in Wi-Fi mode, DO NOT CHANGE the default output levels because the colors generated by the controlling App depend on these.

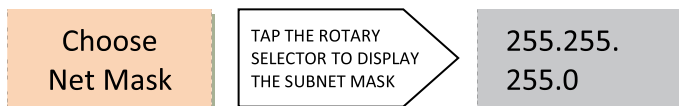
## 10.26-E IP ADDRESS (IP ADDR):

It allows to view the Astro IP address when operating in Wi-Fi mode. The IP address cannot be changed and is required to correctly connect the external mobile controller to the ASTRO



## 10.27-F SUBNET MASK (NET MASK):

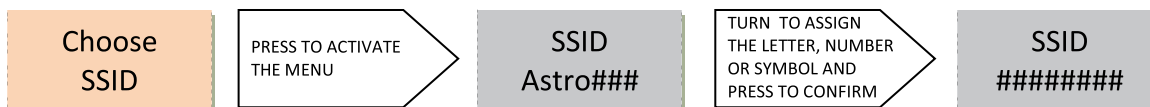
It allows to view the Astro Subnet Mask when operating in Wi-Fi mode. The Subnet Mask cannot be changed.



## 10.28-G SERVICE SET IDENTIFIER (SSID):

It allows to set the name of the network generated by the Astro. Default SSID is "Astro###", where "###" is a value between "000" and "254". Because the SSID is assigned randomly, you might experience the unlikely case of receiving different fixtures with identical SSID. In order to avoid conflicts, we strongly recommend you change the SSID name of your Astro should you have purchased more than one unit. You will be allowed to create an 8 digit SSID of your choice.

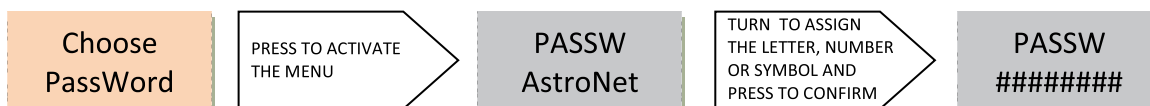
**NOTICE: Reset (see chapter 10.23-B) doesn't restore the default settings of the SSID.**



## 10.29-H PASSWORD (PASSWORD):

It allows to set the password to connect the controller to the network generated by Astro. **Default password is "AstroNet"** We strongly recommend you change the password of your Astro should you have purchased more than one unit. You will be allowed to create an 8 digit password of your choice.

**NOTICE: Reset (see chapter 10.23-B) doesn't restore the default settings of the password.**



## 10.30-I EXIT HIDDEN MENU (EXIT):

It allows to exit from hidden menus.

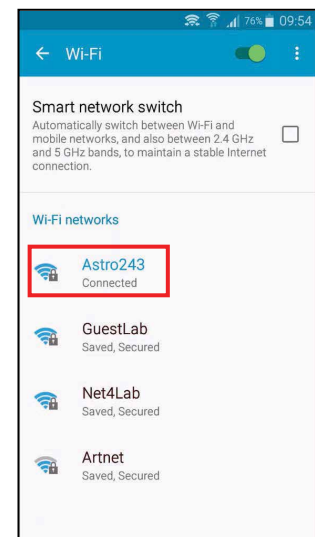
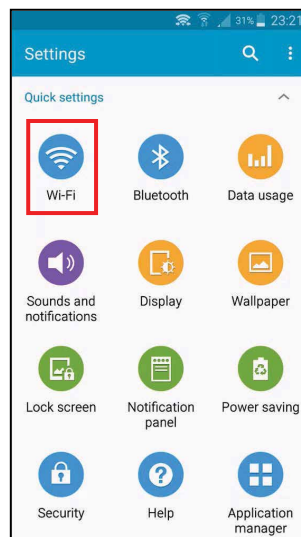
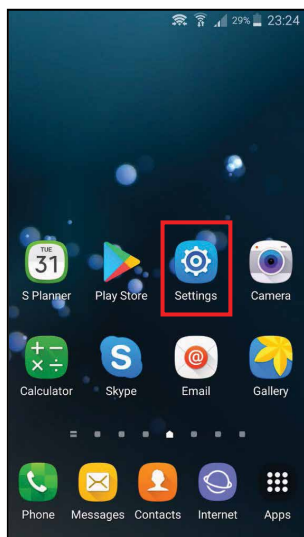


## 11. APP SETTINGS AND OPERATION FROM LDR MOBILE CONTROLLER SMARTPHONE HONOR 7S BLACK – # A20702074 – OPTIONAL ACCESSORY

If the Astro was purchased complete with the LDR controller A20702074 Smartphone Honor 75 Black , (available as an optional accessory), pre-loaded with the Android Art-Net Controller app, relevant settings and libraries, it is ready to be operated.

In case you are using your own mobile device, please refer to chapter 12 and 13 of this manual for all the necessary steps needed to set up the control system under either Android or IOS.

- Set the Operation Mode of the ASTRO to WI-FI (refer to chapter 10.1)
- Make sure the controller is connected to the network generated by Astro. From the home screen, tap Settings / Wi-Fi and check that the controller is connected to the Wi-Fi network "Astroxxx".
- Make sure the clamp-on digital dimmer is connected and its fader above zero. Please see relevant instruction manual supplied with the item.



Click on the Art-Net Controller icon: from the home screen, tap Pb Ov, which will bring you to the existing library of colors, which also includes 3 whites (2700K, 3200K and 5600K) and a black-out option. Click on the chosen color to have it on.



In order to change color simply click on the following one.

Please refer to chapter 12.2 of this manual for detailed operating instructions

Should you need to create and store more cues, please refer to chapter 12.3 of this manual.

## 12. APP SETTINGS AND OPERATION FROM USER'S ANDROID MOBILE CONTROLLER

If you are planning to use an ANDROID mobile device of your own to control the ASTRO WI-FI, please carefully follow the here-below described steps to ensure a correct configuration of your mobile device.

### 12.1 SETTINGS

From the Play Store, download and install Art-Net Controller and Art-Net Controller Libraries Apps.

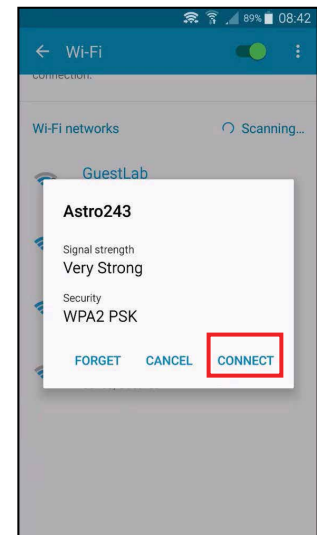
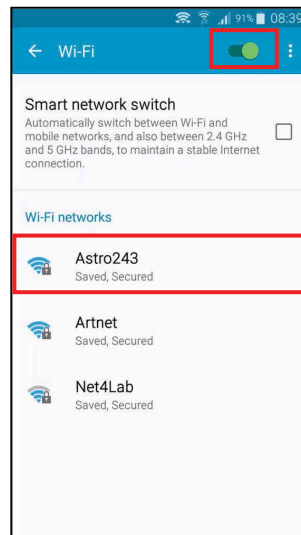
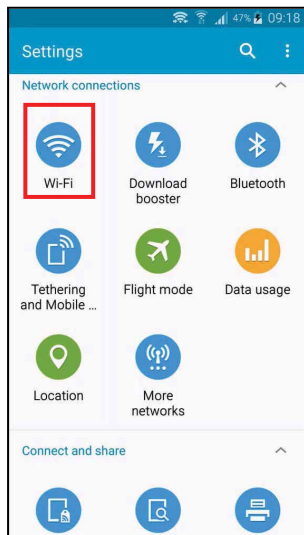
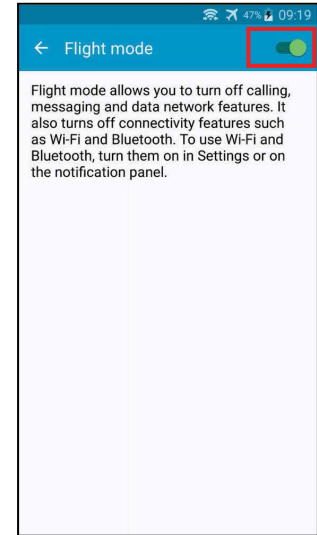
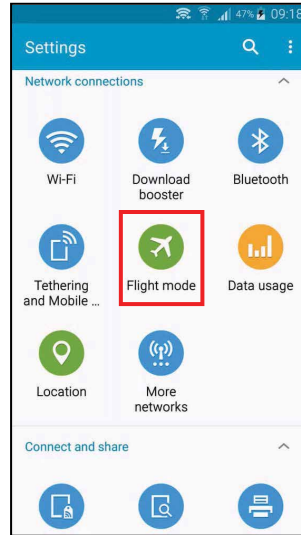
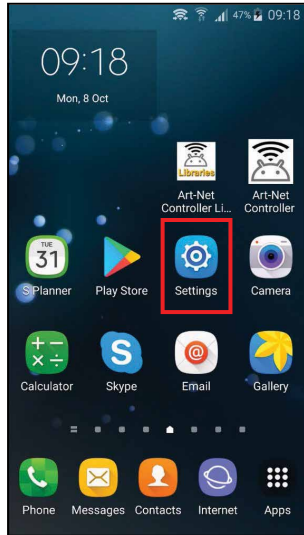


Art-Net Controller  
litux



Art-Net Controller Libraries  
litux

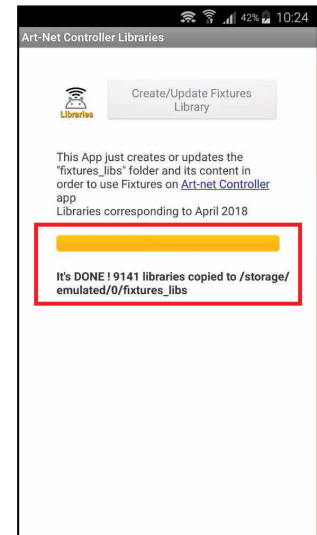
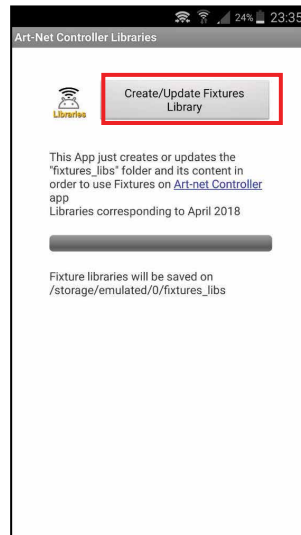
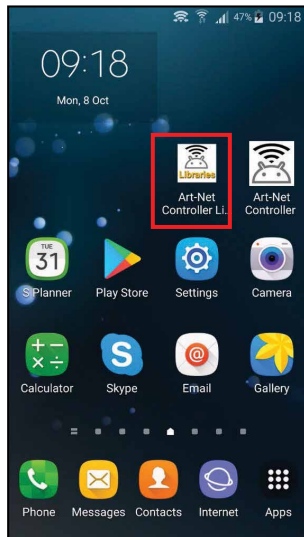
On the App's screen, tap Settings / Flight mode. Drag the Flight mode switch to the right. Select Settings / Wi-Fi. Drag the Wi-Fi mode switch to the right, select "Astroxxx" from the list of detected Wi-Fi networks and tap CONNECT.



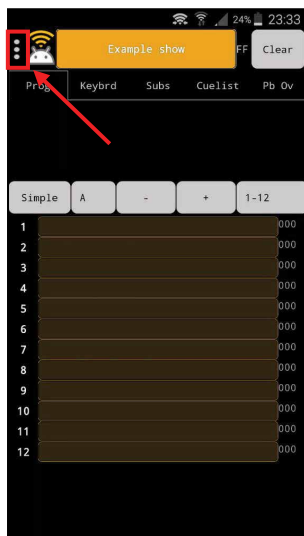
Enter the password (default AstroNet) and press CONNECT.

When the device is connected to the network, exit from the Wi-Fi settings and tap on the Art-Net Controller Libraries icon. Please refer to chapter 10.28G and 10.29H to reset your SSID code and password, if desired (not compulsory)

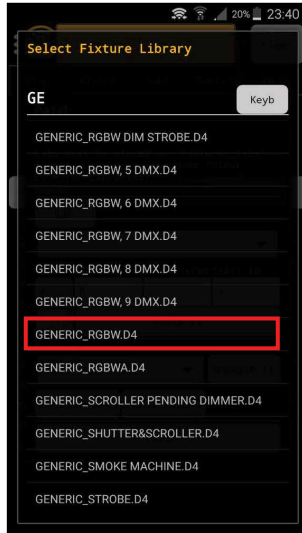
Tap Create/Update Fixtures Library and wait until loading is completed.



Open the Art-Net Controller app: by default the app displays the Prog (Programmer) window. Tap the three dots located on the upper left corner (or lower right corner – depending on models) of the screen to open the main menu and select Patch / Lib.



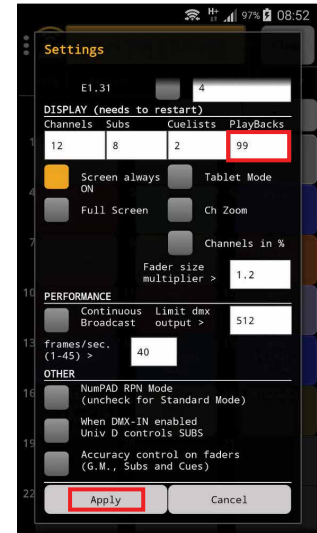
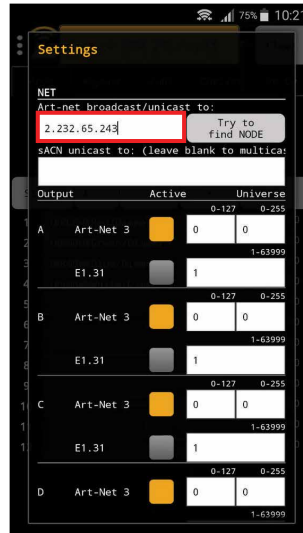
Scroll the fixtures library and select GENERIC\_RGBW.D4. Insert "1" in the following fields: Start DMX, n° Fixtures and Start ID. Tap Patch it and then exit the Patch menu.



Open the main menu and select Options / Play 'Pb Ov' by / Fixture.

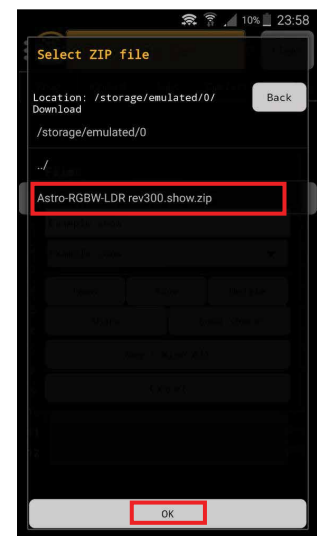


Open the main menu and select Settings. Enter your ASTRO's IP address in the "Art-net broadcast/unicast to:" fields. Please refer to chapter 10.26-E of this user guide to know the IP address to be used. Scroll the Settings window downwards, enter "99" in the PlayBacks fields and confirm (Apply).



In order to load on your device the Canto USA color libraries and settings the "Astro RGBW-LDR revxxx.show.zip" file is needed. The file can be obtained by email directly from Canto USA or your dealer.

Open the main menu and select Files / Load share / Select download and Search for your SHOW.ZIP file (for example in the download folder if received by e-mail or downloaded and confirm (OK): the Canto USA settings and libraries will be loaded and saved.



Your mobile device is now ready to control the Astro Wi-Fi

## 12.2 OPERATING THE ASTRO WI-FI

Make sure the clamp-on digital dimmer is connected and its fader above zero. Please see relevant instruction manual supplied with the item.

From the home screen (Prog), tap Pb Ov (Play-Backs) in the main app toolbar, and you will get the latest available library of saved colors. These currently also include 3 different whites (2700K, 3200K and 5700K) plus a black-out option. Tap on the desired color to get the Astro to reproduce it, and choose the next one when needed.

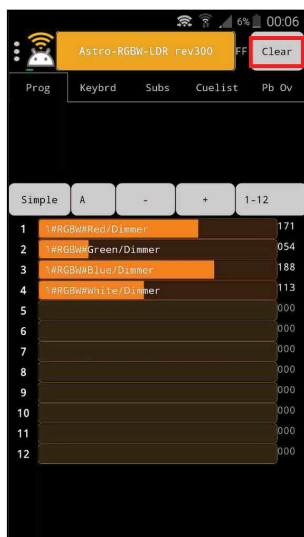
A Rec function (top-right button, above the colors) is active by default. If accidentally pressed it will cause the settings of your colors (scenes) to change.

**We strongly recommend you de-activate this function as follows:**

Open the main menu (3 dots top left or bottom right) and choose OPTIONS Tap on REC to make it PLAY and then exit. The REC button is no longer active Dimming can be performed either through the digital clamp-on dimmer (supplied, suggested option) or by sliding the yellow bar located above the colors' palette. The percentage of power out is indicated beside the yellow bar and changes according to the set level (100% full power; 0% black-out).

**WARNING: the levels for RGBW set on the 4 virtual channels in the Prog window will always take precedence over the levels set when creating and storing a color in the Pb Ov menu.**

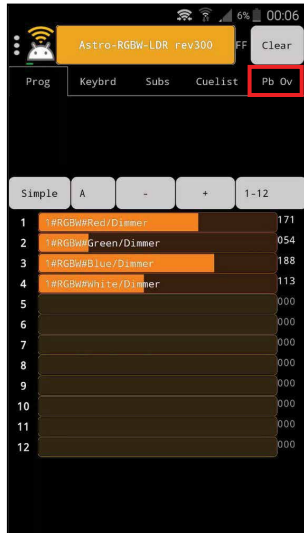
In order to avoid undesired changes to the stored colors and problems during their reproduction, tap Clear when in the Prog window before selecting any color (scene) from the Pb Ov window.





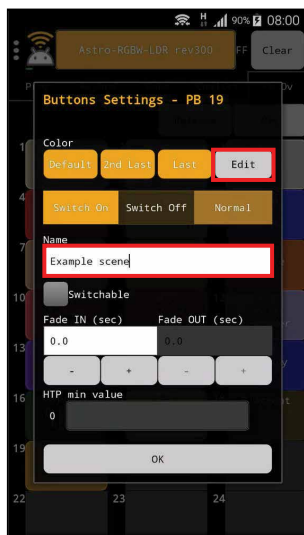
## 12.3 CREATING, STORING AND DELETING COLORS

ART-NET Controller allows you to create any desired color and to store up to 99 different options at one time.



If you want to create and store a new color (or scene), select Prog in the main app toolbar to view the RGBW faders and set each color (Red, Green, Blue, White) to the required level by sliding each fader to the right (higher level) or to the left (lower level) until you get the desired color. Select Pb Ov, tap Rec and then the desired position in your color palette (in the above example position n.19)

Tap and hold the PB button to access the color's details view. Type in the name for your PB Button, choose its color (Color / Edit) and confirm (OK). Your new color has been stored.



In order to delete any of the stored colors (scenes), tap Rec briefly until the button's name turns to (/ Delete) then the PB

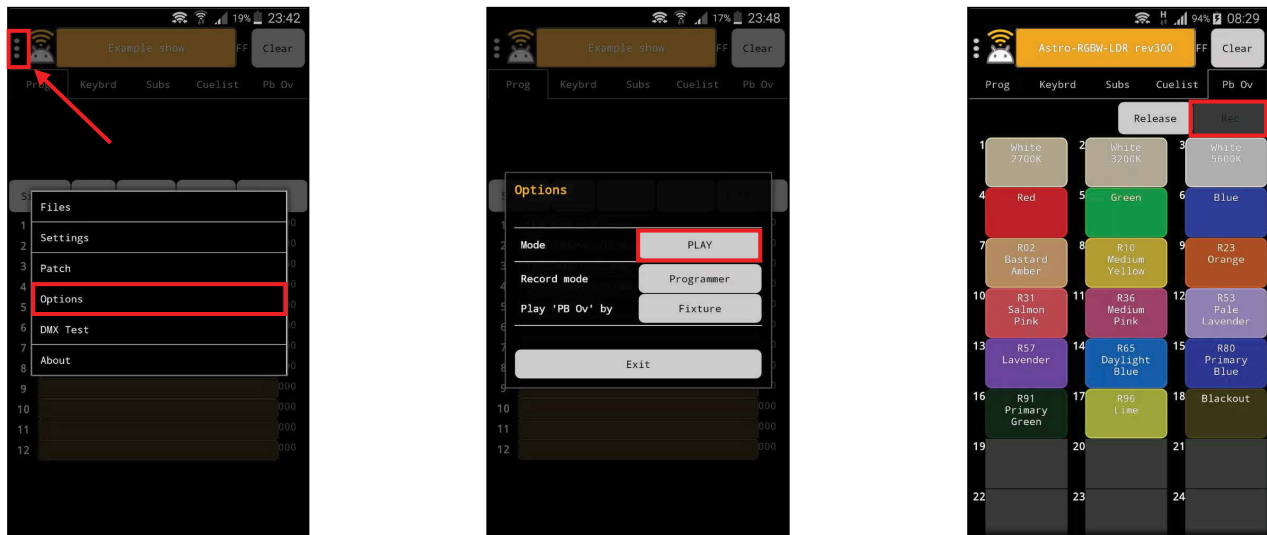


Button you want to delete.

To avoid undesired or accidental changes to the stored colors (scenes), carefully make sure the App is set to Play mode when operatin the ASTRO: open the main menu and select Options / Mode=Play.

Use the CLEAR option to cancel any undesired or accidental modification.

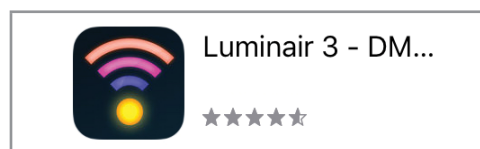
**WARNING: by default the App always starts in Rec Mode.**



## 13. APP SETTINGS AND OPERATION FROM USER'S IOS MOBILE CONTROLLER

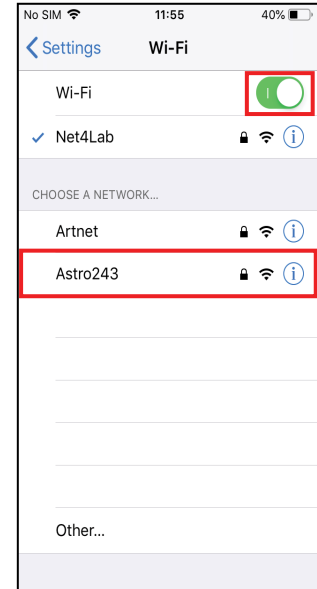
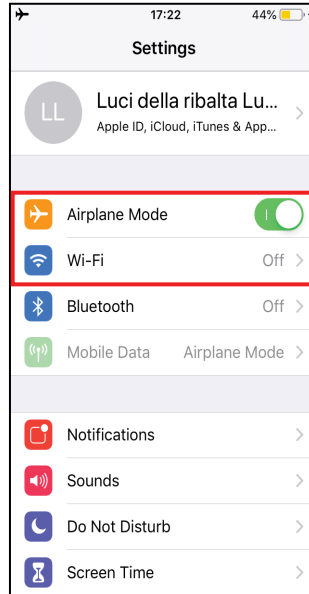
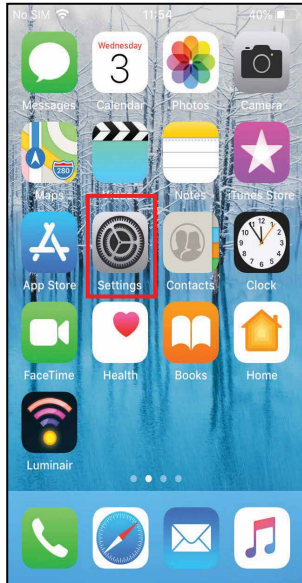
If you are using an iOS mobile device (iPhone or iPad) to control the ASTRO, please:

From the App Store, purchase, download and install Luminair 3. The price of this app will depend on the country you are purchasing it from.

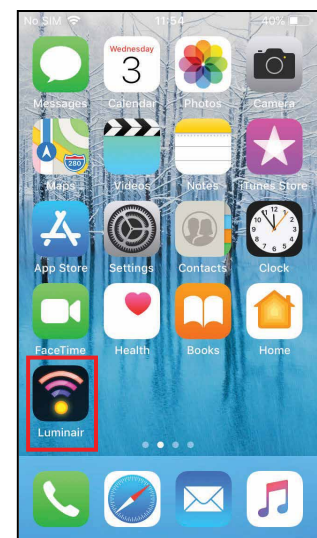
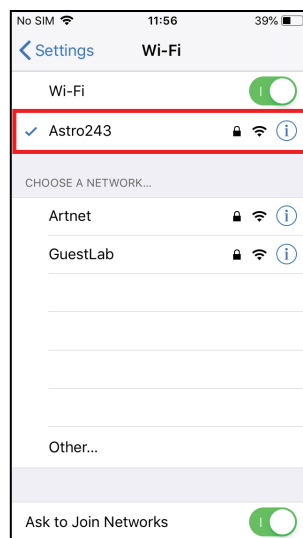
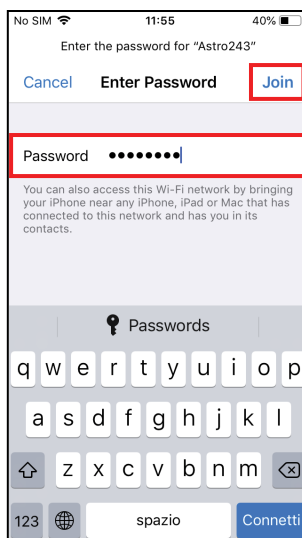


From Settings set your device to Airplane Mode first, as this will avoid any interference from incoming calls, emails or

messages. Drag then the Wi-Fi switch to the right and select "Astroxxx" from the list of detected Wi-Fi networks, in order to connect your device to the Astro network.



Enter the password (default AstroNet) and press join to connect to the network. Once the device is connected, exit from the Wi-Fi settings and tap on the Luminair icon.



The App will start at the default factory settings, specifically with a Factory Test Project.

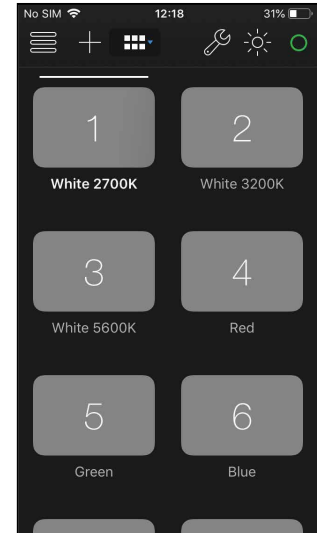
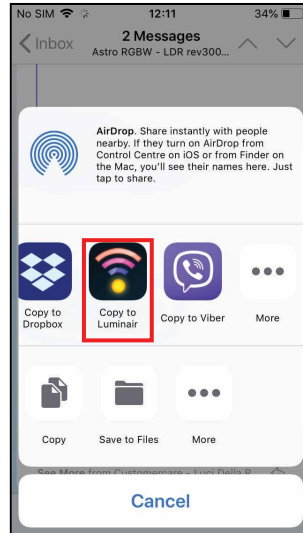
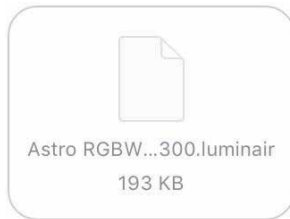
By default, Luminair broadcasts Art-Net over the network to Net 0, Subnet 0 and Universe 0. In this scenario, data will be delivered to all Art-Net interfaces on the local network and then no special configuration should be necessary.

To load the LDR settings which will allow you to control the Astro, please request the

## “Astro RGBW - LDR revxxx.luminair”

file and open it with Luminair App.

This file can be requested directly from Canto USA or your dealer and can be received by email.



Once the file has been loaded, your mobile device is ready to take control of the Astro.

## 13. 1 OPERATING THE ASTRO WI FI

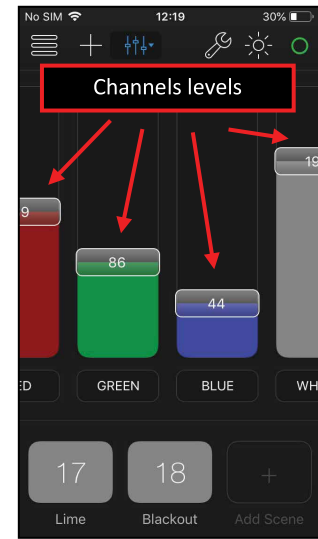
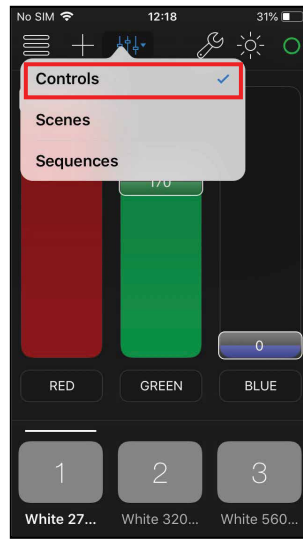
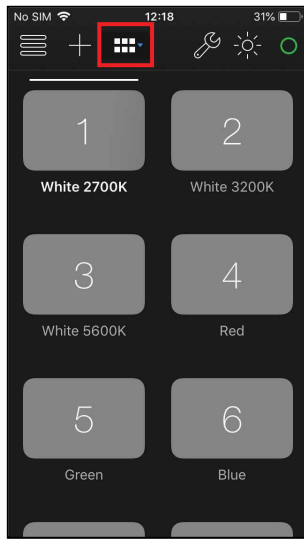
Make sure the clamp-on digital dimmer is connected and its fader above zero. Please see relevant instruction manual supplied with the item.

By default, Luminair will take you to the buttons area. Each button carries a reference number and the description of the stored color. Tap on the desired color to get the Astro to reproduce it, and choose the next one when needed. Use the clamp-on digital dimmer to dim the light output.

## 13. 2 CREATING, STORING AND DELETING COLORS

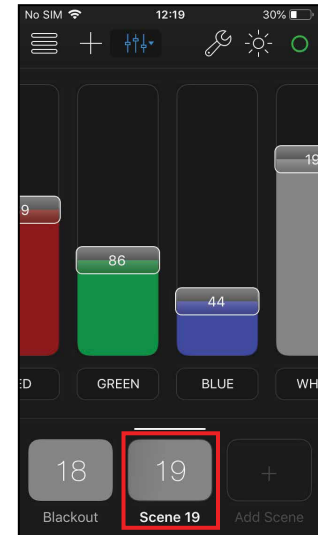
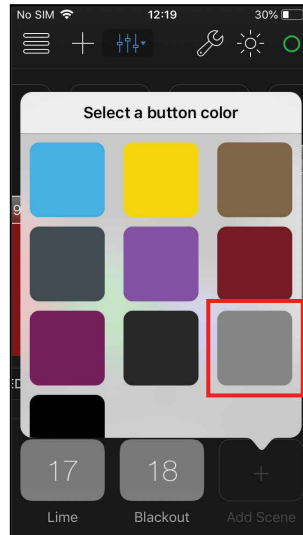
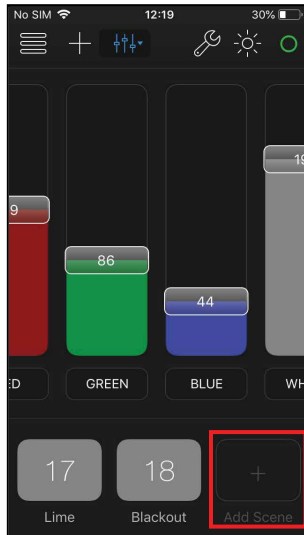
In addition to the supplied library of colors, Luminair 3 allows you to create and store any extra customized color.

To add a new color (scene), select Controls in the main app toolbar to view the RGBW faders and set the desired channel levels for R, G, B and W.



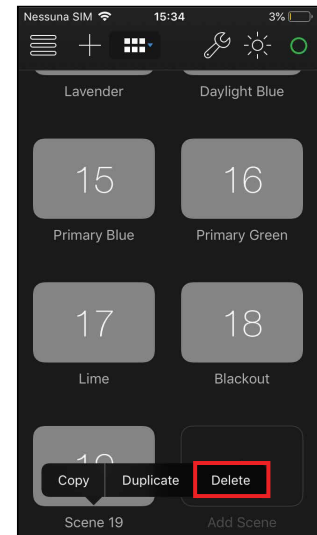
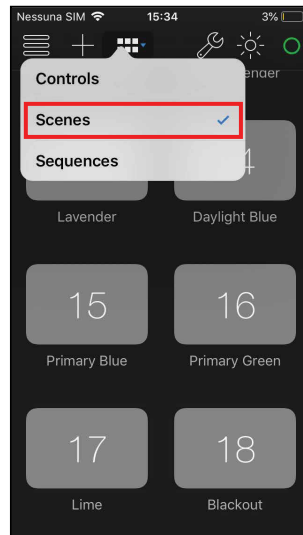
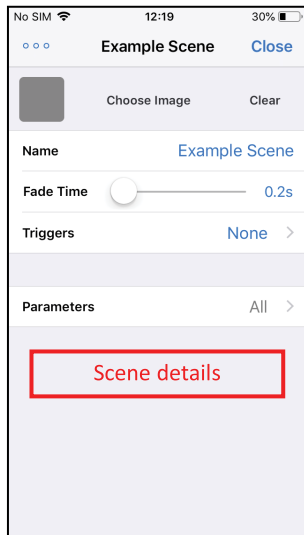
Tap the + button (Add Scene): after selecting the button color, the parameters are automatically saved on the scene.

**WARNING:** because Luminair3 only offers 10 color codings, which do not correspond to the loaded colors, we have chosen GREY for all buttons. You can modify these settings if desired. Buttons can be customized by adding pictures or emoticons to them but this option risks to overload and slow-down your system.

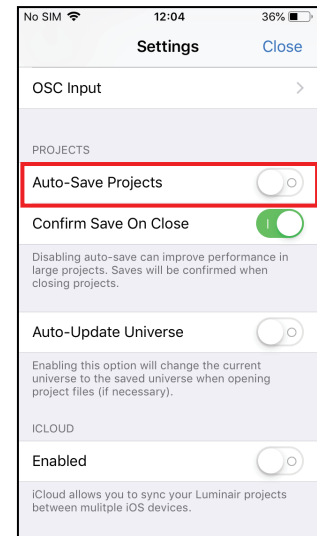
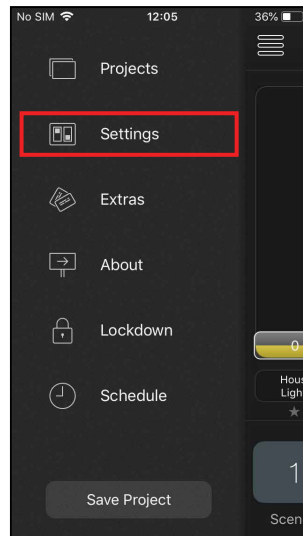
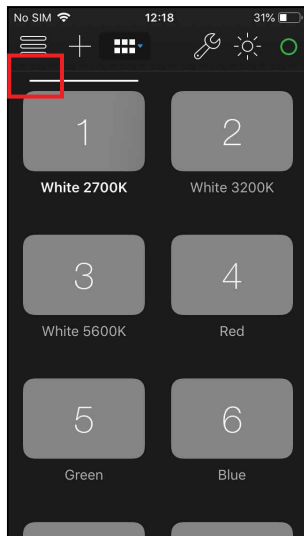


Any change to the color levels made when a color (scene) is selected/active will automatically be recorded into that scene. Switching between (colors) scenes will automatically recall the levels last auto-saved into the newly selected scene. Luminair will fade between colors based upon the fade time assigned to that color scene. Tap on the scene's name label to access the scene details view. To avoid undesired or accidental changes to the stored colors, always make sure you recall the Scenes view from the main app toolbar.

To delete a stored color (scene), tap and hold on the scene's name label and press Delete.



To avoid undesired or accidental changes to a project, uncheck Auto-Save Projects from the Settings menu.



## 14. UNIVERSAL, 360° ROTATING MOBILE DEVICE HOLDER, SUPPLIED

Your Astro Wi-Fi will have been delivered with an universal, 360° rotating, mobile device holder. The holder is factory-mounted in a convenient position on the right-hand side control bar, in order to avoid damages in transit. You can re-position the holder anywhere on one of the two control bars, at your best convenience. In order to do so, slacken the knob at the bottom of the clamp, slide or remove the mobile holder, position where desired and re-tighten the clamp.

**CAUTION:** make sure you do not drop the holding nut and knob as you might find it difficult to put it back to its original position

## 15. POSITIONING YOUR MOBILE DEVICE

Because the WI-FI signal emitted by the Astro covers a distance of approximately 15/18m (provided there are no obstacles to its diffusion), you can choose to position your mobile device on the provided mobile holder, or anywhere else within the range of transmission and actually have the color changing of the Astro remotely controlled by a second operator.

Should your device lose connection to the Wi-Fi signal the Astro will not switch off but be left « frozen » at the last chosen settings.

In order to fit your mobile device to the supplied holder, move the red button at the rear of the holder to the OPEN position, and, while keeping it pressed, rotate the red toothed wheel until the desired opening of the 4 holding arms is reached and turn it again clockwise to close the arms and have your mobile securely held. Rotate your mobile to the desired angle and operate the followspot.

In order to remove your mobile from the holder, press the red button at the rear of the holder to release the arms open.

## 16. RE-CHARGING YOUR MOBILE'S BATTERIES

A USB Port is provided on the rear of the Astro. This will allow you to re-charge your device while the Astro is being operated, without risking to run flat on batteries during a show or having to rely on an external power supply unit.

## 17. CLAMP-ON MOBILE DIGITAL DIMMER, SUPPLIED

The Astro Wi-fi is supplied with a clamp-on mobile digital dimmer, which is packed separately in a plastic bag inside the box/flight case of the Astro. Please refer to the dimmer's separate Instruction manual provided in the packing to install and use it correctly.

## 18. FOCUSING:

This fixture features a variable beam angle from 8° to 22°. The variable beam is altered by adjusting the front and rear zoom lenses in relation to each other. The front lens defines the beam spread, the rear lens then focuses the degree of 'softness' or 'hardness' of the beam edge or shutters.

## 19. CLEANING AND MAINTENANCE:

To ensure maximum performance of the product, a regular maintenance service should be carried out. Please make sure the product is cold and disconnected from power supply when doing this. Use a clean cloth and non-abrasive glass cleaner like denatured alcohol.

## GENERAL MAINTENANCE:

Clean all reflective parts such as reflector, mirrors, and lenses as necessary. Check the lenses and replace any visibly damaged component. Clean air ducts and fans in order to allow proper ventilation activity on the product, we recommend vacuuming NOT blowing. Check internal and external wiring and replace any cable which shows wear and tear.

**WARNING: NEVER USE AMMONIA, BLEACH, VINEGAR, OR WINDOW CLEANER, WHICH CAN HARM OUR COATED LENSES.**

## CLEANING OF OPTICAL COMPONENTS:

### LED house lenses:

- Open the lens compartment door by removing the two M4 cross head screws on the top of the ledhouse tube and slide the top cover free
- Remove the condensor lenses assembled block by removing the two M5 cross head screws.
- Clean the lenses with a soft cloth and re-position

### Zoom lenses:

- Slide the front zoom door positioned on the bottom of the lens tube and clean with a soft microfiber cloth.

## 20. SPARE PARTS

All components are available as spare parts. We strongly recommend you always use original components as spare parts. Please call our technical team at **888-252-5912** should you need to order and/or replace any parts on your unit.

## 21. WARRANTY

Our warranty covers all structural and manufacturer defects for three years from the date you purchased this product and 10 years on any LED array. In case of any issues, we strongly recommend you call us at **888-252-5912** or contact the local dealer who supplied the product to you. In any case, please report the serial number of the product when making a warranty claim.

## 22. AVAILABLE ACCESSORIES

20102900	Underhung Mounting Yoke
20100206	Safety Guard
20107070	One Handed Iris/Douser/Controller
20100807	Gobo Holder, A/B size
20102200	Spare Spigot
3171212	Stage Pin Plug
7201285	Canto Caster Kit
80852039	Shutter Blades (4)
20102401	Followspot Tripod Stand
20102400	Leveling Leg Tripod Stand
20102311	HD Tripod with Bearing Head. 265 lbs capacity.
20102401-CW	Followspot Catwalk Mounting Stand
20102401-PM	Followspot Permanent Mounting Stand
3030277	Remote Ballast cable for Canto followspots
3113030	Color Changers Gels
20100106	Additional Color Frames
A20105106	Spare Boomerang Color Changer
80SP0068	Canto Reflector
20107180	Custom Flight Case
20107080	Canto Custom Road Case
PTW50507BK-B	HD Tripod Casters (Set of 3)
20102100	HD Stand Adapter
CT1510	Pan Bearing Adapter
SGHT00001	TelRad Targeting Site
EXTW-0001	Extended warranties are available up to 2 additional years past the standard 3 year warranty period.

Canto USA reserves the right to modify this document without prior notice.



## 23. SUMMARY OF CONTROLS AND FUNCTIONS

#	Function	Description	Available Options	Factoring Setting
1	Mode	Wi-Fi, DMX or MANUAL control	Wi-Fi = controlled by Apps and external slider ; DMX ; MANUAL = controlled from the rotary switch or external slider	DMX
2	Addr	Select the DMX starting address other remotely controlled functions are assigned in sequence to the 1st assigned DMX address	From 001 to 512	001
3	8/16b	8 or 16 Bits dimming resolution	8 BITS on 1 channel ; 16 BITS on 2 channels	8 BITS
4	DMXMem	Set the behaviour of the unit in case of DMX failure	ON = last dmx value ; OFF=80% fade to 80% after 1,5 Sec ; OFF=0%	ON
5	Strobe	Activate the Strobe function	ENABLE ; DISABLE	DISABLE
6	SetStr	Select the Strobe speed. This menu is inactive when the Strobe function is disabled or when is remotely controlled through DMX	OPEN = ON ; SPEED = ## (select value from 01 slowest to 10 fastest); CLOSED = OFF	OPEN
7	Curves	Select the dimming curve	SQUARE ; LINEAR	SQUARE
8	CutOff	Replicate the halogen lamp dimming behaviour at cut off	FAST = NOT ACTIVE ; SLOW = ACTIVE	SLOW
9	Smooth	Dimmer response	NORMAL = 150ms ; SLOW = 300ms FAST = Immediate response	NORMAL
10	Fan	Fan setting	AUTO = regulated by Tled ; SILENT = slow speed, low noise ; SILENT = constant speed	AUTO
#	Function	Description	Available Options	Factoring Setting
11	BackL	LCD screen retro-illumination	ON ; AutoOFF = LCD light off after 1'30"	AutoOff
12	Red	Red intensity for manual mode	From 00% to 100%	---
13	Green	Green intensity for manual mode	From 00% to 100%	---
14	Blue	Blue intensity for manual mode	From 00% to 100%	---
15	White	White intensity for manual mode	From 00% to 100%	---
16	Tled	Visualize the LED temperature	Select the LED Temp in °C or F°	°C

## 23. SUMMARY OF CONTROLS AND FUNCTIONS (CONTINUED)

17	SwVer	Visualize the software version		---
18	Net	Set the Net number of Art-Net Port Address	From 000 to 127	000
19	SubNet	Set the Sub-Net number of Art-Net Port Address	From 00 to 15	00
20	Univ	Set the Universe number of Art-Net Port Address	From 00 to 15	00
21	Manu	Select the manual dimmer type	ENCODER = rotary switch POTENT = external slider	ENCODER
SPECIAL FUNCTIONS : to activate these functions press the rotary switch at power on				
#	Function	Description	Available Options	Factoring Setting
A	ProBasic	Set the functions available from the control menu	PRO = Enable acces to all functions ; BASIC = Limit the access to: 1 Mode, 2 Addr, 12-13-14-15 Color Intensity, 16 Tled, 17 SwVer, 18-19-20 Art-Net Port Address	PRO
B	RESET	Factory RESET	Return to factory settings	---
C	ID Rem	Set the ID number to activate Remoto control for upload and download firmware	From 000 (no remote control) to 250	000
D	Set Min	Set the minimum output level of each color	Red: from 000 to 9999	---
			Green: from 000 to 9999	---
			Blue: from 000 to 9999	---
			White: from 000 to 9999	---
E	IP Addr	Visualize the IP address of Astro access point		---
F	Net Mask	Visualize the subnet mask of Astro access point		255.255.255.0
G	SSID	Set the SSID of Astro Wi-Fi network		---
H	Password	Set the password of Astro Wi-Fi network		AstroNet
I	Exit	Exit from hidden menus		---

## 24. DMX CHARTS

### 24.1 DMX CHART 1 (16 BIT DIMMER AND STROBE DISABLED) :

This DMX chart refers to the followspot set at the default parameters.

DMX Channel	Function	Type of Control	Effect	Decimal			Percentage		
1	Master Dimmer	Proportional	Adjust luminous output intensity from 0 to 100%	0	-	255	0%	-	100%
2	Spare Channel	Step	No effect	0	-	255	0%	-	100%
3	Red	Proportional	Proportional setting of the red color from 0 to 100%	0	-	255	0%	-	100%
4	Green	Proportional	Proportional setting of the green color from 0 to 100%	0	-	255	0%	-	100%
5	Blue	Proportional	Proportional setting of the blue color from 0 to 100%	0	-	255	0%	-	100%
6	White	Proportional	Proportional setting of the white color from 0 to 100%	0	-	255	0%	-	100%
Projector: Astro RGBW			Table name: DMX512 Functions chart 1 (Default)	Edition: 1			Date: 03/09/2018		

### 24.2 DMX CHART 2 (16 BIT DIMMER ENABLE, STROBE DISABLED) :

This DMX chart refers to the followspot set at 16 bits resolution (See chapter 10.3 of this user guide).

DMX Channel	Function	Type of Control	Effect	Decimal			Percentage		
1	Master Dimmer	Proportional	Adjust luminous output intensity from 0 to 100%	0	-	255	0%	-	100%
2	Dimmer Fine	Proportional	Fine dimmer control 16 bit	0	-	255	0%	-	100%
3	Red	Proportional	Proportional setting of the red color from 0 to 100%	0	-	255	0%	-	100%
4	Green	Proportional	Proportional setting of the green color from 0 to 100%	0	-	255	0%	-	100%
5	Blue	Proportional	Proportional setting of the blue color from 0 to 100%	0	-	255	0%	-	100%
6	White	Proportional	Proportional setting of the white color from 0 to 100%	0	-	255	0%	-	100%
Projector: Astro RGBW			Table name: DMX512 Functions chart 2 (16 bits)	Edition: 1			Date: 03/09/2018		

## 24.3 DMX CHART 3 (STROBE FUNCTION ENABLE, 8 BIT DIMMER) :

This DMX chart refers to the followspot set at strobe function active  
(See chapter 10.5 of this user guide).

DMX Channel	Function	Type of Control	Effect	Decimal		Percentage	
1	Master Dimmer	Proportional	Adjust luminous output intensity from 0 to 100%	0	- 255	0%	- 100%
2	Spare Channel	Step	No effect	0	- 255	0%	- 100%
3	Red	Proportional	Proportional setting of the red color from 0 to 100%	0	- 255	0%	- 100%
4	Green	Proportional	Proportional setting of the green color from 0 to 100%	0	- 255	0%	- 100%
5	Blue	Proportional	Proportional setting of the blue color from 0 to 100%	0	- 255	0%	- 100%
6	White	Proportional	Proportional setting of the white color from 0 to 100%	0	- 255	0%	- 100%
7	Strobe	Step	Open	0	- 20	0%	- 8%
		Step	Strobe speed 1 (minimum frequency)	21	- 40	9%	- 15%
		Step	Strobe speed 2	41	- 60	16%	- 24%
		Step	Strobe speed 3	61	- 80	25%	- 31%
		Step	Strobe speed 4	81	- 100	32%	- 39%
		Step	Strobe speed 5	101	- 120	40%	- 47%
		Step	Strobe speed 6	121	- 140	48%	- 55%
		Step	Strobe speed 7	141	- 160	56%	- 63%
		Step	Strobe speed 8	161	- 180	64%	- 71%
		Step	Strobe speed 9	181	- 200	72%	- 78%
		Step	Strobe speed 10 (maximum frequency)	201	- 220	79%	- 86%
		Step	Closed	221	- 255	87%	- 100%
Projector: Astro RGBW			Table name: DMX512 Functions chart 3 (Strobe)		Edition: 1		Date: 03/09/2018

## 24.4 DMX CHART 4 (16 BITS DIMMER AND STROBE ENABLED) :

This DMX chart refers to the followspot set at 16 bits resolution and strobe function active (See chapter 10.3 and 10.5 of this user guide).

DMX Channel	Function	Type of Control	Effect	Decimal		Percentage	
1	Master Dimmer	Proportional	Adjust luminous output intensity from 0 to 100%	0	- 255	0%	- 100%
2	Dimmer Fine	Proportional	Fine dimmer control 16 bit	0	- 255	0%	- 100%
3	Red	Proportional	Proportional setting of the red color from 0 to 100%	0	- 255	0%	- 100%
4	Green	Proportional	Proportional setting of the green color from 0 to 100%	0	- 255	0%	- 100%
5	Blue	Proportional	Proportional setting of the blue color from 0 to 100%	0	- 255	0%	- 100%
6	White	Proportional	Proportional setting of the white color from 0 to 100%	0	- 255	0%	- 100%
7	Strobe	Step	Open	0	- 20	0%	- 8%
		Step	Strobe speed 1 (minimum frequency)	21	- 40	9%	- 15%
		Step	Strobe speed 2	41	- 60	16%	- 24%
		Step	Strobe speed 3	61	- 80	25%	- 31%
		Step	Strobe speed 4	81	- 100	32%	- 39%
		Step	Strobe speed 5	101	- 120	40%	- 47%
		Step	Strobe speed 6	121	- 140	48%	- 55%
		Step	Strobe speed 7	141	- 160	56%	- 63%
		Step	Strobe speed 8	161	- 180	64%	- 71%
		Step	Strobe speed 9	181	- 200	72%	- 78%
		Step	Strobe speed 10 (maximum frequency)	201	- 220	79%	- 86%
		Step	Closed	221	- 255	87%	- 100%
Projector: Astro RGBW			Table name: DMX512 Functions chart 4 (16 bits + Strobe)		Edition: 1		Date: 03/09/2018