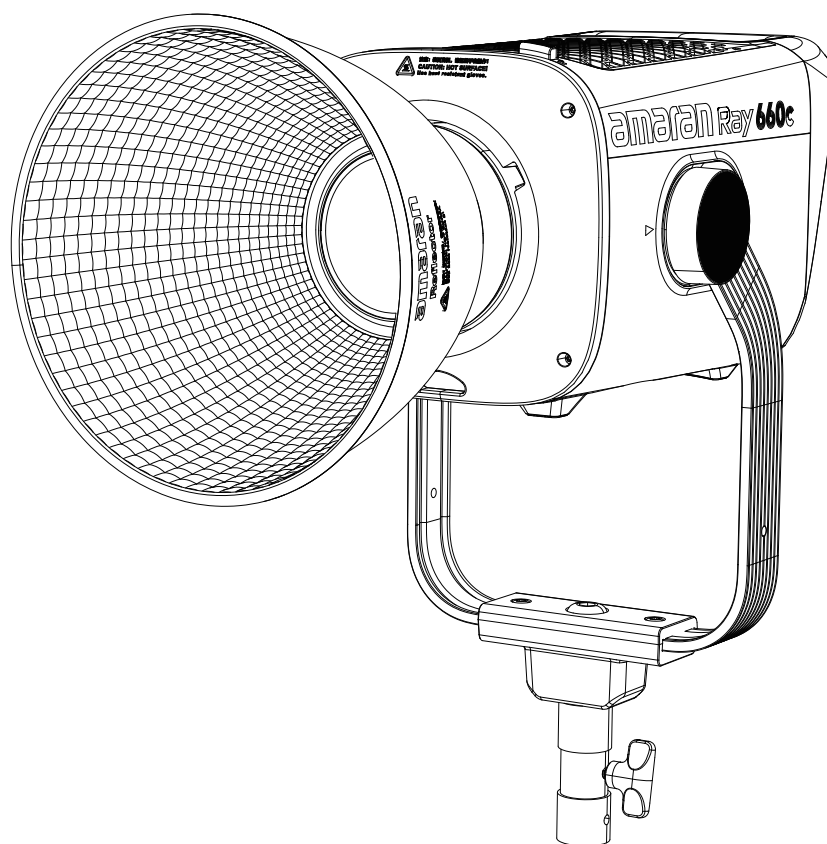


amaran[®]



amaran Ray 660c

Product Manual

English

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Introduction

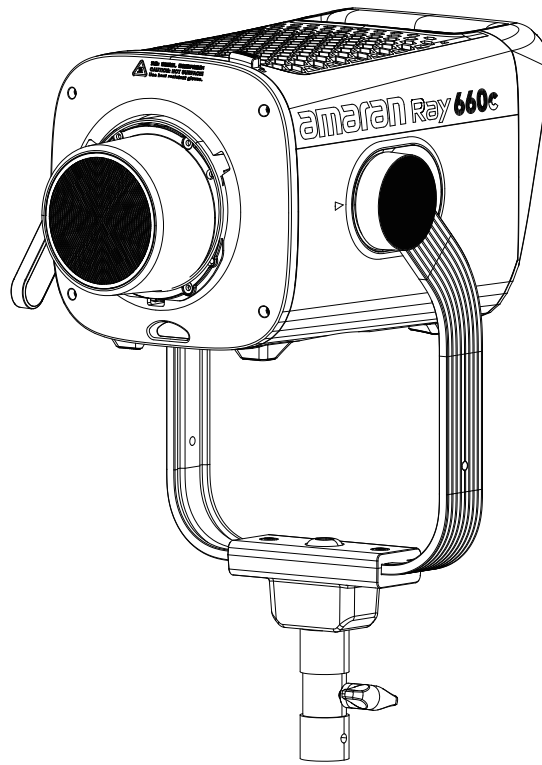
Thank you for purchasing the amaran Ray 660c.

Designed for home studios and on-location spaces that need more punch, the amaran Ray 660c is a 660W full-color point-source LED light powered by the OmniColor light engine – delivering true-to-life color and powerful, studio-quality output in a streamlined, monolight design that runs on a single AC cable. With DMX control via USB-C¹ and an IP54-rated build for real-world shoots, the amaran Ray 660c keeps setups simple and efficient – from larger studios to expansive outdoor spaces.

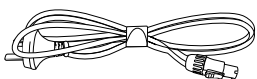
¹The amaran USB-C to 5-Pin DMX In&Out Adapter is sold separately.

Components List

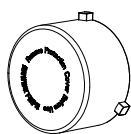
Please make sure all accessories listed below are complete before using. If not, please contact your sellers immediately.



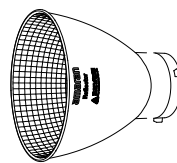
amaran Ray 660c × 1



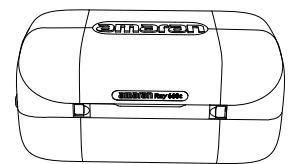
amaran
AC Power Cable (5m) x 1



amaran Blue Bowens
Mount Protection Cover x 1



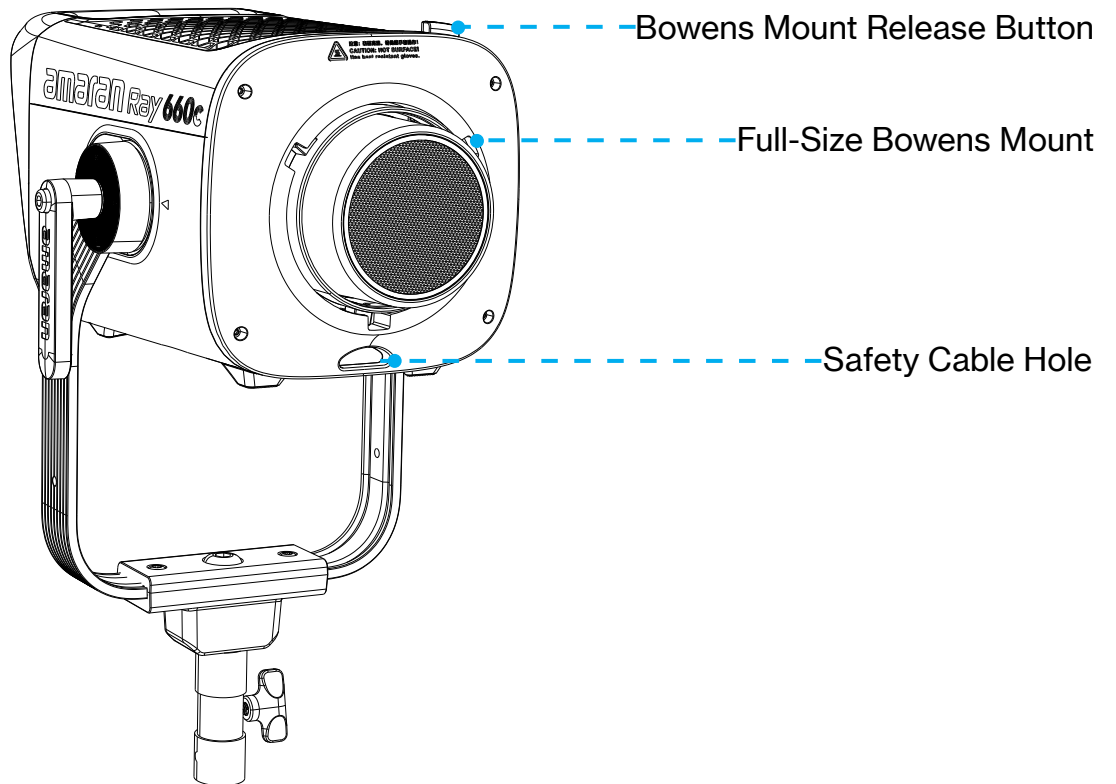
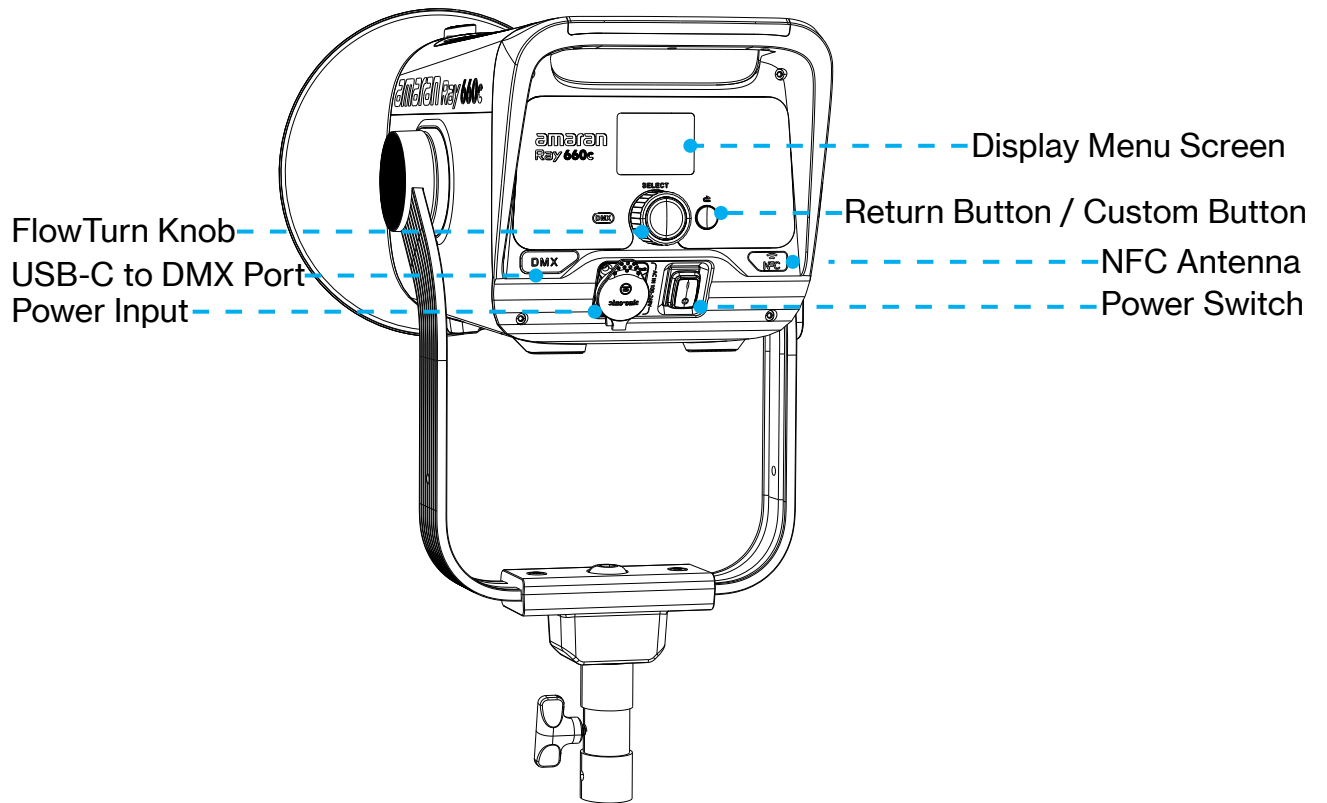
amaran Reflector×1



amaran Ray 660c
EPP Carrying Case x 1

Tip: The illustrations in the manual are diagrams for reference only. Due to the continuous development of new versions of the product, if there are any differences between the product and the user manual diagrams, please refer to the product itself.

Product Overview

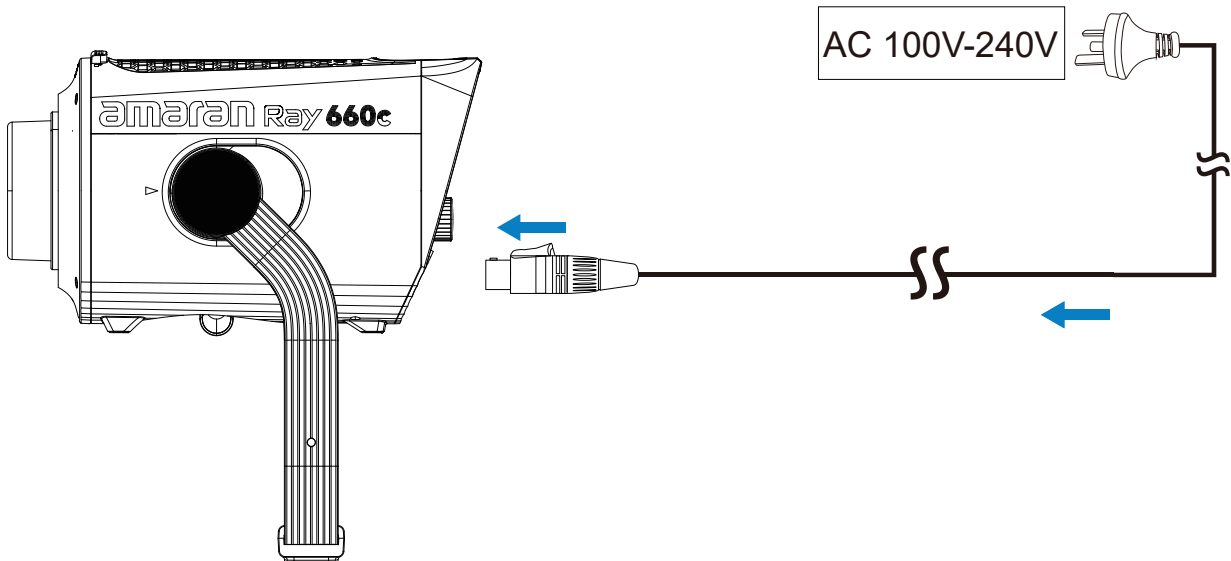


Display Menu Screen	Displays settings and status of your light.
FlowTurn Knob	Rotate to toggle the menu or adjust values and lighting settings, such as brightness, color temperature, and color mode.
Return Button / Custom Button	Click to return to the previous menu screen. Hold or double click on the return button to execute customizable shortcuts set in Custom Mode.
USB-C to DMX Port	Connect the USB-C to DMX Adapter cable to achieve wired DMX control. This fixture does not support power supply via this USB-C port.
NFC Antenna	Used for NFC pairing. When a smartphone is brought close to the light's NFC area, it can quickly trigger a Bluetooth connection, enabling seamless pairing and control via the amaran app without the need to manually search for the device.
Power Switch	Toggle to turn the light on or off.
Power Input (AC IN 100–240V)	Supports a universal voltage range to provide stable mains power to the light.
Bowens Mount Release Button	Press to release the Bowens Mount accessory.
Full-Size Bowens Mount	Compatible with a variety of full-size, standard Bowens Mount accessories.
Safety Cable Hole	Used for attaching a safety cable or tether. When the light is used in elevated or complex environments, it provides additional security and fall protection, ensuring the safety of both the equipment and personnel.

Operations

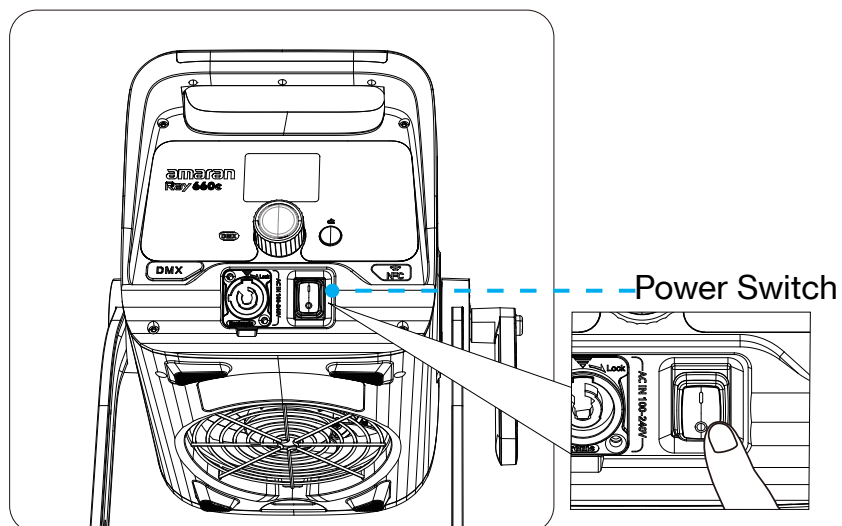
1. Power Supply

Insert one end of the AC power cable into the light's AC power input port, and the other end into an AC power outlet to supply mains power to the light. Ensure the plugs are securely connected to ensure proper operation.

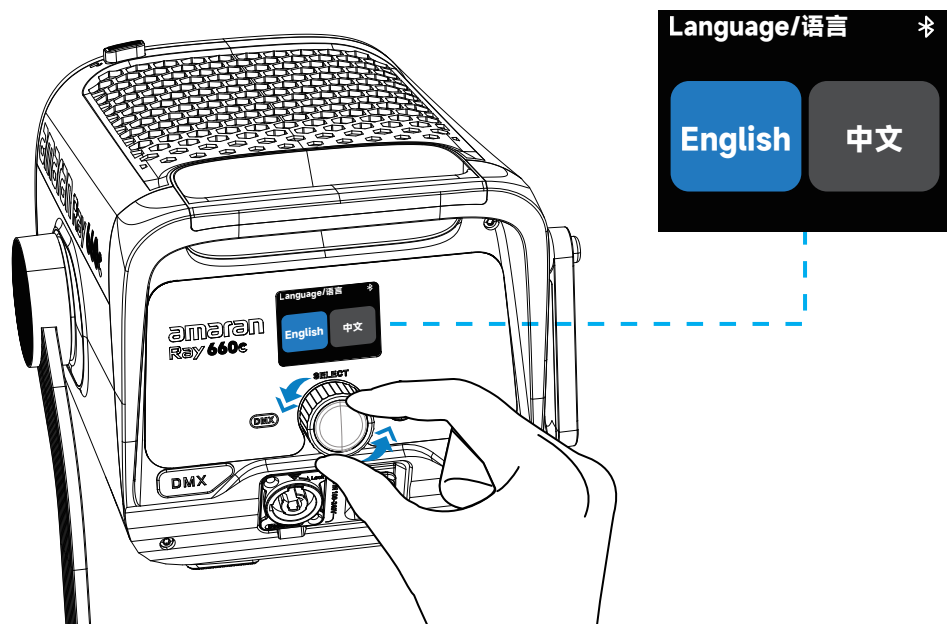


2. Power On/Off

1. After connecting to power, you can turn the light on or off by toggling the power switch.

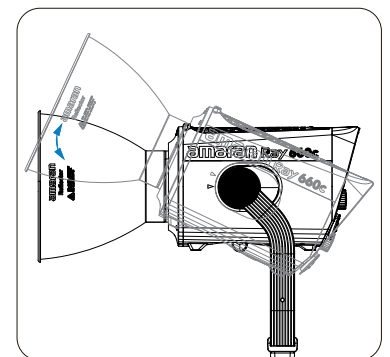
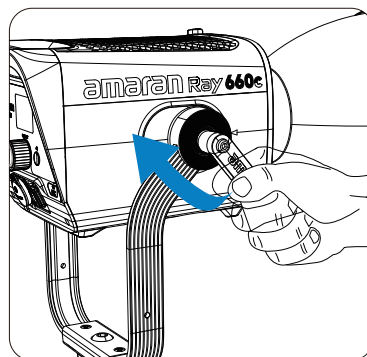
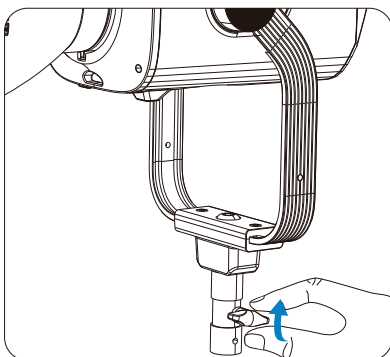


2. You can select your preferred language when you turn the light on for the first time. Rotate the knob to select your language. Click to confirm.



3. Light Installation

1. With the mounting bracket installed onto the light, place the end of the mounting bracket onto the light stand and turn the locking knob to secure into place. Adjust the angle of the light and turn the tilting bracket knob to secure into place.

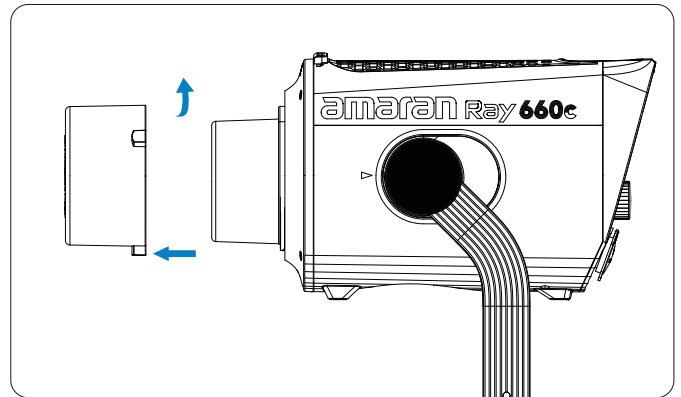
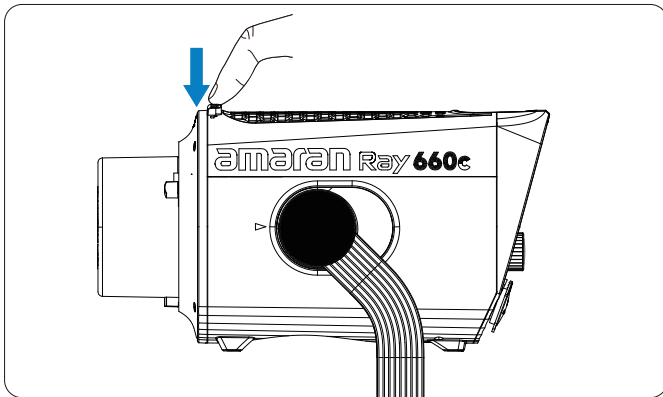


4. Protection Cover & Modifier Installation/Removal

1. This fixture uses a Bowens Mount, and the installation/removal method is the same for both the protection cover and modifiers

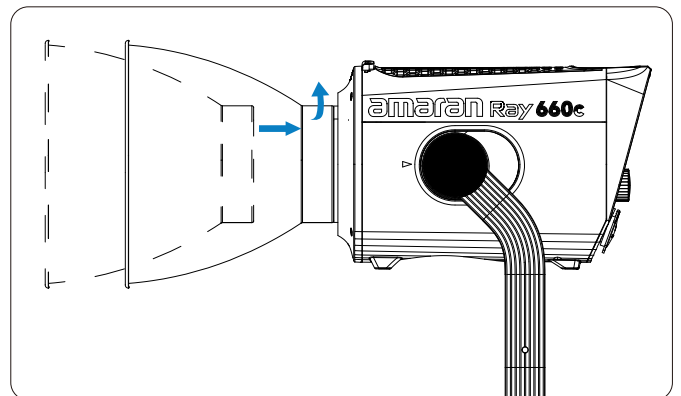
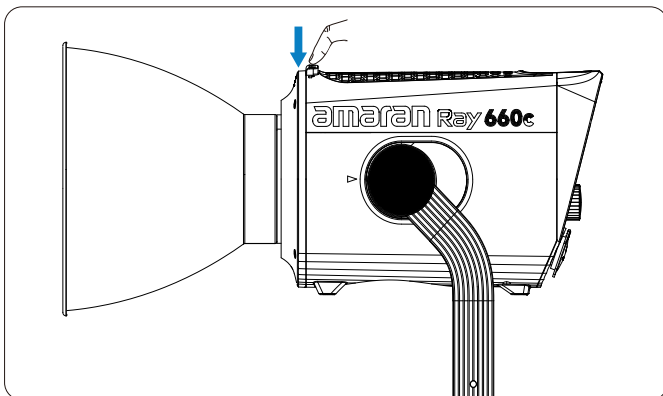
WARNING

Always remove the protection cover prior to turning on the light. Always re-install the cover when packing it away.



To install: Align and insert the protection cover or modifier into the Bowens Mount, rotate clockwise until the release button pops out.

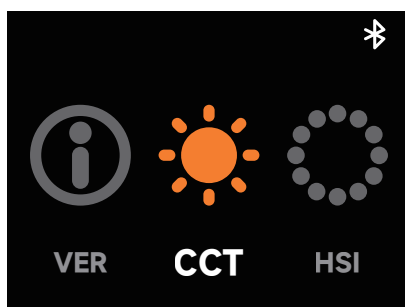
To remove: Press and hold the release button, then rotate counterclockwise to detach.



**When replacing with other accessories, please ensure compatibility with the fixture. For detailed compatibility information, refer to the official website.*

5.Main Menu

Rotate the control knob to browse through options, then press the knob to select a lighting mode or adjust function settings.



5.1 CCT Mode

Rotate the knob and press the knob to enter CCT Mode from the main menu. In this mode, press the knob to toggle between parameters, and rotate the knob to adjust the corresponding values.

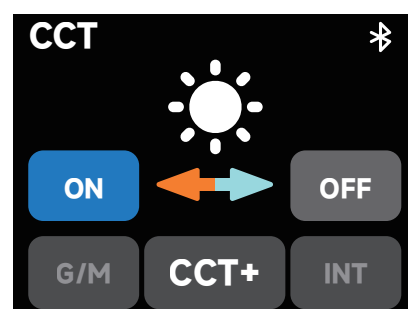
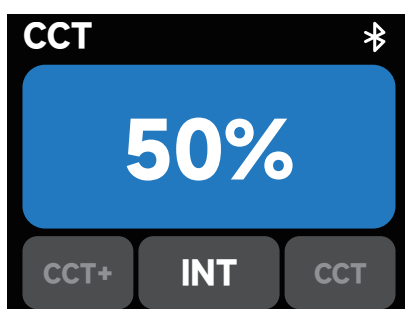
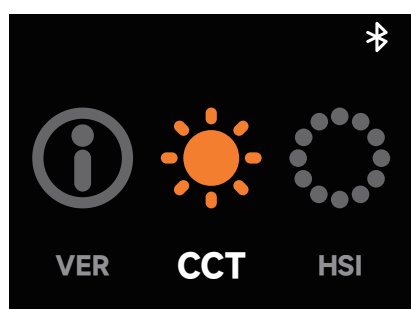
INT (Intensity): Adjust your light's brightness from 0%-100%.

CCT (Correlated Color Temperature): Adjust your light's color temperature from warm white (2,300K CCT) to cool white (10,000K CCT).

G/M (Green-Magenta): Adjust the green-magenta shift in ± 10 increments.

CCT+ (Expanded CCT): Enables or disables extended CCT range. When enabled, the adjustable color temperature in CCT mode is expanded to 1,800K to 20,000K CCT.

Please note that the color rendering when in the expanded CCT range is lower.

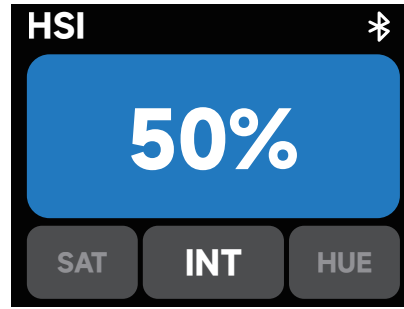
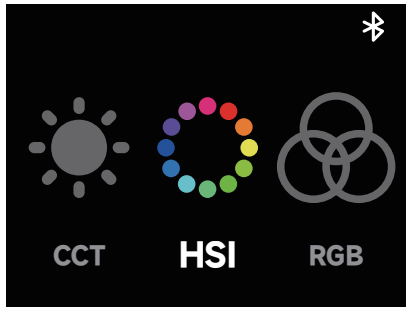


Rotate the knob and press the knob to enter HSI Mode from the main menu. In HSI, press the knob to select INT, HUE, or SAT and rotate the knob to adjust the corresponding value.

INT (Intensity): Adjust your light's brightness from 0%-100%.

HUE: Adjust your light's hue value from 1° to 360° .

SAT (Saturation): Adjust the saturation of the color from 0%-100%.



5.3 RGB Mode

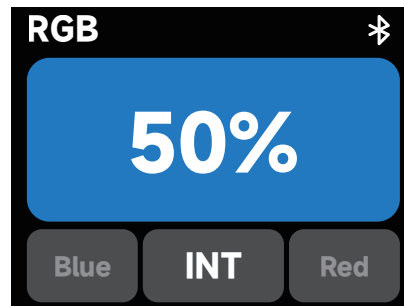
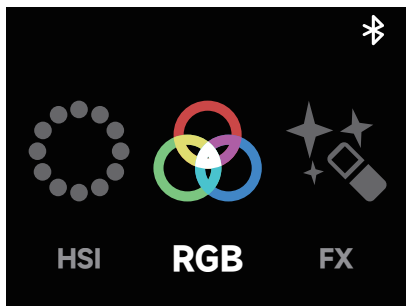
Rotate the knob and press the knob to enter RGB Mode from the main menu. In this mode, press the knob to select INT, Red, Green, or Blue and rotate the knob to adjust the corresponding value.

INT (Intensity): Adjust your light's brightness from 0%-100%.

Red: Adjust your light's Red value from 0%-100%.

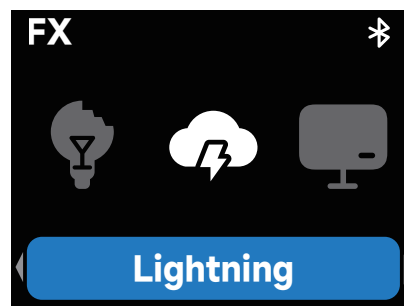
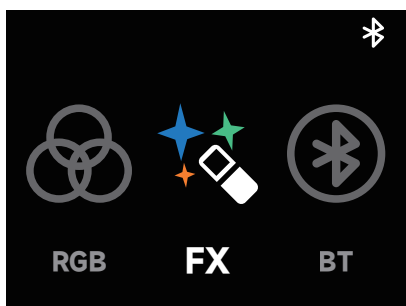
Green: Adjust your light's Green value from 0%-100%.

Blue: Adjust your light's Blue value from 0%-100%.



5.4 FX Mode

Rotate the knob and press the knob to enter FX Mode from the main menu. In FX mode, rotate the knob to switch between different lighting effects. After entering an effect's settings, you can rotate the knob to adjust the corresponding value.



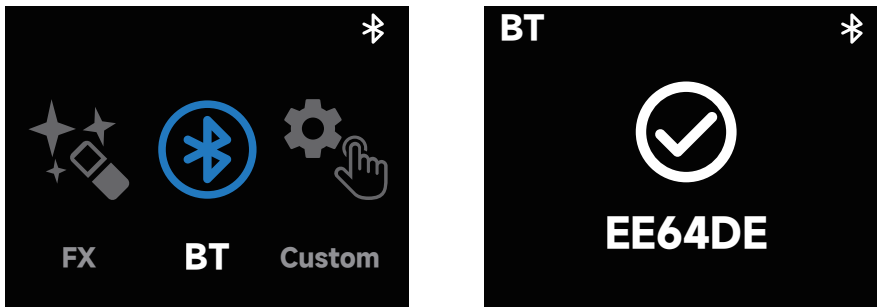
Supported lighting effects:

Fireworks	Faulty Bulb	Lightning	TV	Pulsing	Strobe
Explosion	Fire	Paparazzi	Welding	Cop Car	Party Lights

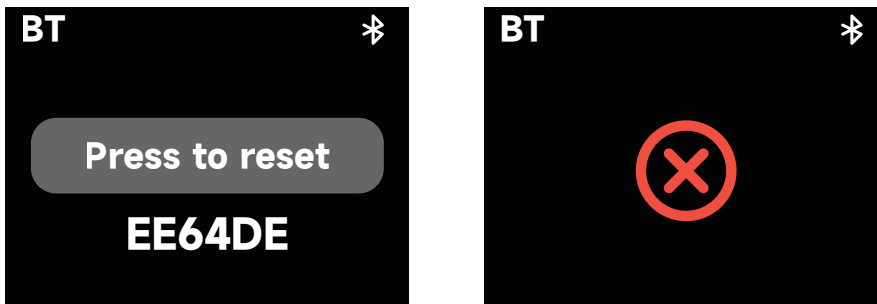
5.5 BT Bluetooth Reset

Rotate the knob and press the knob to enter BT mode from the main menu. Press and hold the knob until the end of the progress bar. Release the knob to cancel.

1. Bluetooth reset is successful.



2. Bluetooth reset is unsuccessful. Please reset Bluetooth again.



5.6 Custom Mode

Rotate the knob and press the knob to enter Custom Mode from the main menu.

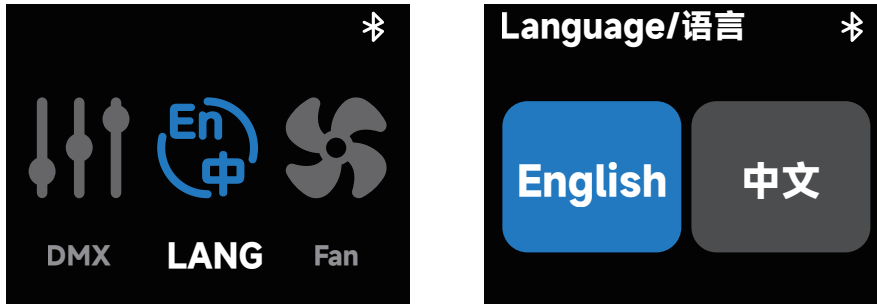
In Custom mode, you can assign a custom shortcut function to either a long-press or double-press of the back button.

Press the knob to enter the settings. Rotate the knob to choose from the following functions: No / SOS / Bluetooth Reset / CCT Mode / HSI Mode / RGB Mode / FX Mode / Rotation / CCT+ / Fan Mode. Press the knob again to confirm your selection.



5.7 LANG (Language)

Rotate the knob and press the knob to enter Language settings from the main menu. In this menu, rotate the knob to switch between English and Chinese. Press the knob to confirm your selection.



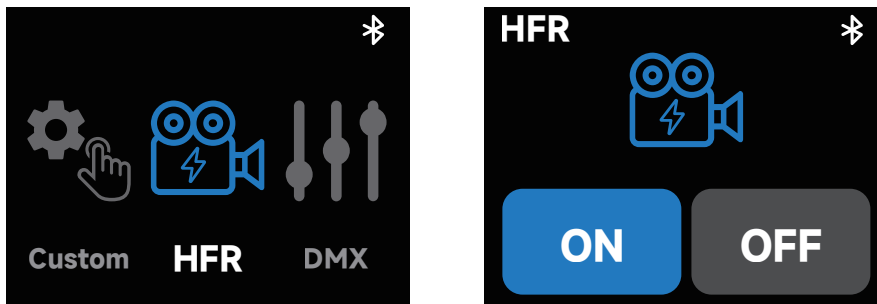
5.8 HFR Mode (High Frame Rate)

Rotate the knob and press the knob to enter High Frame Rate Mode from the main menu. In High Frame Rate mode, rotate the knob to toggle between On and Off, then press the knob to confirm your selection.

HFR Mode On: Optimized for high-speed shooting at up to 240fps, ensuring minimal flicker for smooth and stable image capture.

HFR Mode Off: The fixture operates in standard mode.

**When High Frame Rate Mode is enabled, the minimum brightness will be limited to 50%. To adjust the brightness below 50%, please disable High Frame Rate Mode first.*

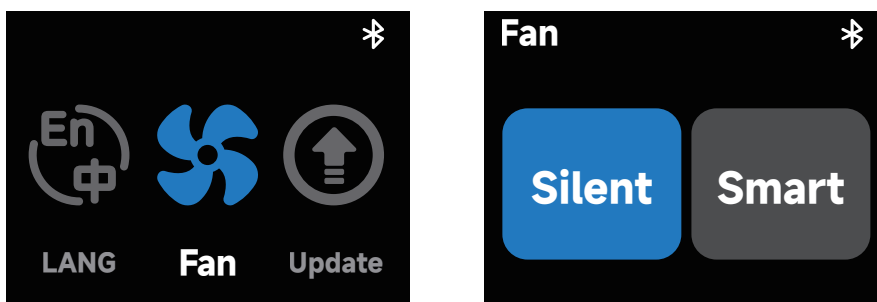


5.9 Fan Mode

Rotate the knob and and press the knob to enter Fan mode from the main menu. In Fan mode, rotate the dial to toggle between Silent and Smart fan mode. Press the knob to confirm your settings.

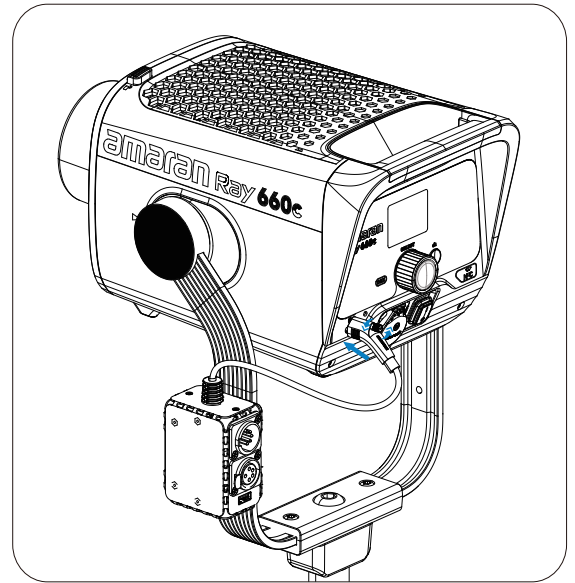
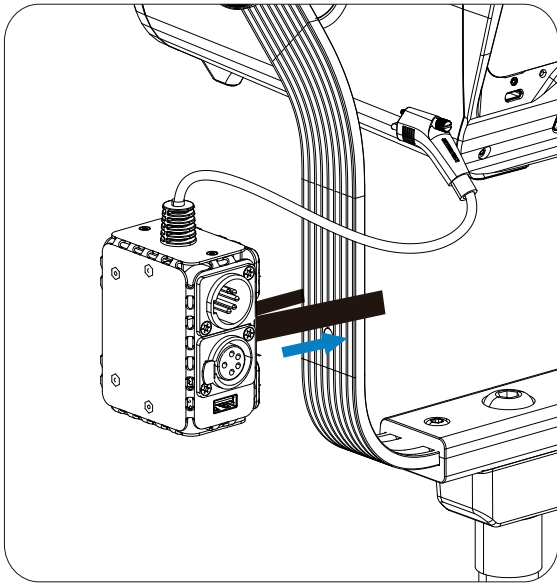
Silent Mode: The fan will be completely turned off, and the light will not produce any noise. To ensure safe operation, the maximum power output will be limited to 99W.

Smart Mode: The fan speed will automatically adjust according to the temperature of the light.

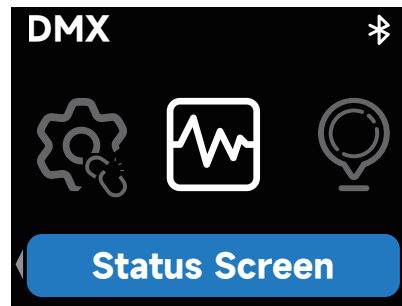
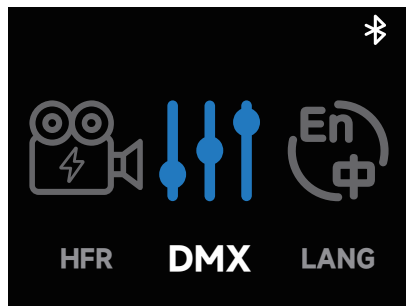


5.10 DMX Control Settings

Insert the USB-C connector of the amaran USB-C to 5-Pin DMX In&Out Adapter into the USB-C port of the fixture, and tighten the locking screw to secure the connection. You may use the included Velcro strap to attach the adapter to the fixture's handle for convenient cable management and stability.



The USB-A port on the adapter provides a 5V/1A power output and supports firmware updates via USB flash drive.



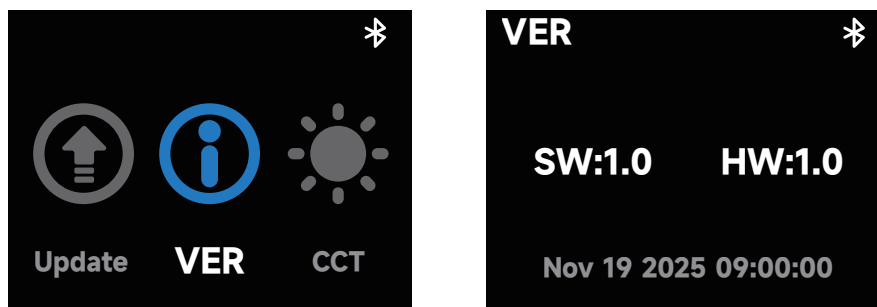
To enter DMX Mode, follow these steps:

- Rotate the control knob and press it to select “DMX Mode” from the main menu.
- Once inside, rotate the knob to toggle between the following options:
 - DMX Status Display: View the current DMX address and selected DMX configuration.
 - DMX Address: Set the DMX start address of the fixture, ranging from 1 to 512.
 - DMX Signal Loss Behavior: Choose how the fixture responds to DMX signal loss. Options include: Hold Last State, Instant Off, Fade Out, or Hold for 2 Minutes then Fade Out.
 - DMX Profile: Select the desired DMX channel profile. For detailed configuration files, please refer to the official documentation.

**The amaran USB-C to 5-Pin DMX In&Out Adapter is sold separately.*

5.11 Firmware Update

Firmware updates can be updated online via the amaran app.



Firmware can be updated via a USB flash drive. If using a USB-C flash drive, it can be plugged directly into the fixture's DMX port for the update.

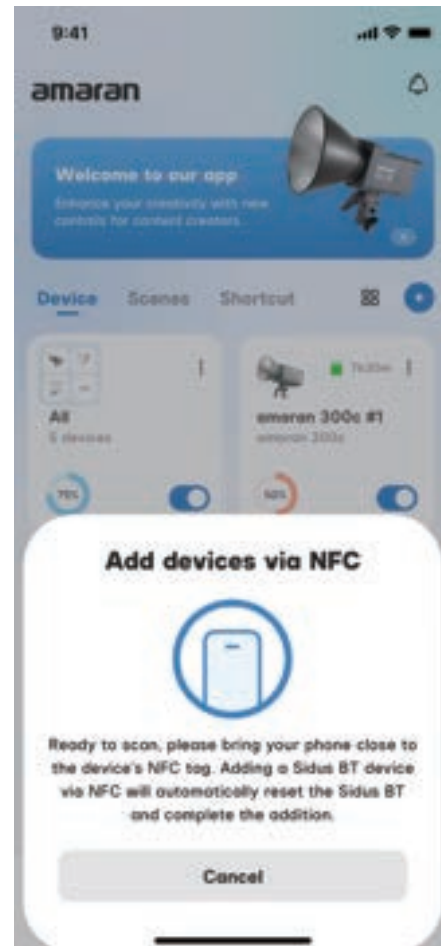
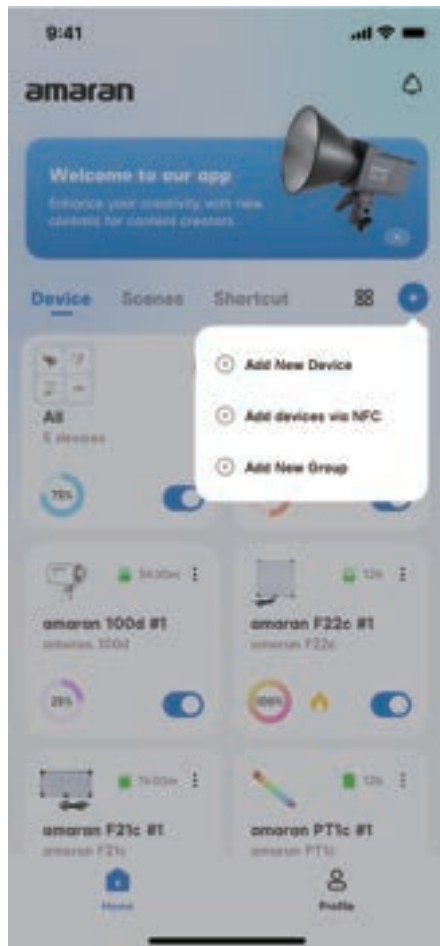
When using the amaran USB-C to 5-Pin DMX In/Out Adapter, the firmware can be updated by inserting the USB drive into the adapter's USB-A port.

**The amaran USB-C to 5-Pin DMX In&Out Adapter is sold separately.*

5.12 Pairing via NFC

To pair your light to the amaran app via NFC, open the amaran mobile app, tap the + sign, and select NFC Add Device. Place the NFC sensor area of your phone to the fixture's NFC tag. Hold your phone still until the fixture has been detected and successfully paired before removing your phone.

Even if the light is powered off, pairing via NFC is still supported. The light will automatically connect to the app once it is turned on.



Using the amaran App

You can download the amaran mobile app from the iOS App Store, Google Play Store, and other platforms to enhance your lighting experience. The amaran desktop app is also available for download on the amaran website. For more detailed information on how to use the app to control amaran products, please visit amarancreators.com.



amaran App



amarancreators.com

Specifications

Power Consumption	750 W (Max)	Power Output	660 W (Max)
CCT	Standard: 2,300-10,000K	Luminous Flux	45,904 lumens
	Expanded(CCT+): 1,800-20,000K		
CRI	95+	TLCI	95+
TM-30 Rg (Average)	100	TM-30 Rf (Average)	94
SSI(D32)	87	SSI (D56)	80
Operating Voltage	AC 100V-240V	AC Power Cable Length	5m/16.40ft
Control Methods	On-board, amaran App,*DMX Control	Firmware Upgradeable	amaran App
Screen Type	TFT	Wireless Operating Rang	≤80m / ≤262.5ft
Cooling Method	Active Cooling	Max Noise Level	≤28 dBA @ 30°C
Operating Temperature	-10°C-40°C	Storage Temperature	-20°C-80°C
Fixture Dimensions	29.9x24.1x42cm/ 11.77x9.49x16.54in	Fixture Weight	5.7kg/12.57lb
Carrying Bag Dimensions	59.7x35.5x32cm/ 23.5x13.98x12.60in	Carrying Bag Weight	1.11kg/2.45lb

**The amaran USB-C to 5-Pin DMX In&Out Adapter is sold separately.*

**The above technical specifications are from the Aputure laboratory, and there may be some variation between individual units*

Photometrics

amaran Ray 660c				
CCT	Dis.	No Accessories	Octa Dome 90	Reflector
2300K	1m	24,640Lux	16,650Lux	58,800Lux
		2,289fc	1,547fc	5,463fc
	3m	2,860Lux	1,141Lux	5,870Lux
		266fc	106fc	545fc
3200K	1m	36,300Lux	24,620Lux	86,900Lux
		3,372fc	2,287fc	8,073fc
	3m	4,220Lux	1,682Lux	8,670Lux
		392fc	156fc	805fc
4300K	1m	38,500Lux	26,060Lux	91,600Lux
		3,577fc	2,421fc	8,510fc
	3m	4,470Lux	1,776Lux	9,180Lux
		415fc	165fc	853fc
5600K	1m	37,900Lux	25,700Lux	90,400Lux
		3,521fc	2,388fc	8,398fc
	3m	4,420Lux	1,751Lux	9,010Lux
		410fc	163fc	837fc
6500K	1m	37,400Lux	25,210Lux	88,900Lux
		3,475fc	2,342fc	8,259fc
	3m	4,350Lux	1,717Lux	8,860Lux
		404fc	160fc	823fc
10000K	1m	35,600Lux	24,080Lux	84,400Lux
		3,307fc	2,237fc	7841fc
	3m	4,150Lux	1,635Lux	8,440Lux
		386fc	152fc	784fc
Red	1m	5,790Lux	/	/
		538fc		
Green	1m	22,350Lux		
		2076fc		
Blue	1m	3,140Lux		
		292fc		

Photometrics

amaran Ray 660c			
CCT	Dis.	Fresnel	
		Spot 15°	Flood 45°
2300K	3m	20,230Lux	4,250Lux
		1879fc	394fc
	5m	7,420Lux	1,627Lux
		689fc	151fc
3200K	3m	29,900Lux	6,310Lux
		2778fc	586fc
	5m	10,990Lux	2,414Lux
		1021fc	224fc
4300K	3m	31,700Lux	6,680Lux
		2945fc	621fc
	5m	11,640Lux	2,558Lux
		1,081fc	238fc
5600K	3m	31,300Lux	6,600Lux
		2,908fc	613fc
	5m	11,500Lux	2,525Lux
		1,068fc	235fc
6500K	3m	30,900Lux	6,490Lux
		2,871fc	603fc
	5m	11,310Lux	2,474Lux
		1,051fc	230fc
10000K	3m	29,450Lux	6,230Lux
		2,736fc	579fc
	5m	10,790Lux	2,370Lux
		1,002fc	220fc

Declaration of Toxic and Hazardous Substances in Electronic Information

Component	Toxic and Hazardous Substances or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr VI)	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCB	X	O	O	O	O	O
Plastic	O	O	O	O	O	O
Metal	X	O	O	O	O	O
Accessories	O	O	O	O	O	O

This table is prepared in accordance with the provisions of SJ/T 11364.

O: Indicates that the content of the toxic and hazardous substance in all homogeneous materials of the component is below the limit specified by GB/T 26572.

X: Indicates that the content of the toxic and hazardous substance exceeds the limit specified by GB/T 26572 in at least one homogeneous material of the component.

The information in this table is provided to suppliers in the form of data and testing results that comply with RoHS environmental requirements.

IC regulatory conformance

This device complies with CAN ICES-003 (B)/NMB-003(B) and CAN RSS-216 / CNR-216.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme à la norme CAN ICES-003 (B)/NMB-003 (B) et CAN RSS-216 / CNR-216.

Cet appareil contient des émetteurs / récepteurs exempt (s) de licence qui sont conformes aux RSS exemptes de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes:

(1) Cet appareil ne doit pas provoquer d'interférences.

(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme aux limites d'exposition aux radiations de la IC définies pour un environnement non contrôlé.

FCC

FCC regulatory conformance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

WARNING

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

UL

NOT FOR RESIDENTIAL USE
NON DESTINÉ À UN USAGE DOMESTIQUE

Notice: This control circuit is not isolated – see installation instructions

Note: ce circuit de commande n'est pas isolé - voir les instructions d'installation

CSA

NOT FOR HOUSEHOLD USE
NON DESTINÉ À UN USAGE DOMESTIQUE

DISCONNECT POWER BEFORE SERVICING
COUPER L'ALIMENTATION AVANT L'ENTRETIEN

Important Safety Instructions

When using the amaran Ray 660c, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions before using the fixture.
2. Close supervision is necessary when any fixture is used by or near children. Do not leave the fixture unattended while in use.
3. Care must be taken as burns can occur from touching hot surfaces.
4. Do not operate the fixture if any power cable is damaged, or if the fixture has been dropped or damaged, until it has been examined by qualified service personnel.
5. Position any power cables such that they will not be tripped over, pulled, or come into contact with hot surfaces.
6. Always unplug the fixture from the power outlet before cleaning, servicing, or when not in use. Never pull on the power cord to unplug from the outlet.
7. Allow the fixture to cool down completely before storing. Unplug all cables and store them properly. If a carrying case is used, place cables in their designated compartments.
8. Do not immerse the fixture in water or any other liquid to avoid electric shock.
9. Do not disassemble the fixture to avoid the risk of fire or electric shock. For service, contact cs@aputure.com or consult qualified service personnel. Improper reassembly may result in electric shock when the fixture is in use.
10. Using any accessory not recommended by the manufacturer may increase the risk of fire, electric shock, or personal injury.
11. Power this fixture only by connecting it to a properly grounded outlet.
12. Remove the protective cover before use.
13. Do not block the ventilation openings. Do not look directly at the LED light source when it is powered on, and never touch the LED emitters under any condition.
14. Do not place the fixture near flammable materials or volatile solvents, as this may cause damage.
15. Use a soft, dry cloth to clean the device.
16. When operating in humid or wet environments, ensure that all ports and plugs are completely dry to avoid short circuits or electric shock.
17. All service and maintenance should be performed by authorized personnel only. Any malfunctions caused by unauthorized disassembly are not covered under warranty and may result in repair costs borne by the user.

Important Safety Instructions

18. When hanging the fixture overhead, always attach an additional safety measure (such as a certified safety chain) rated for the weight of the fixture. We strongly recommend using only original Aputure cables and accessories. Malfunctions caused by the use of unauthorized accessories are not covered under warranty and may result in repair costs borne by the user.

19. This product is certified by RoHS, CE, KC, PSE, and FCC. Please operate the product in full compliance with the regulations of your country or region. Malfunctions caused by improper use are not covered under warranty and may result in repair costs borne by the user.

20. This User Manual is based on extensive testing conducted by the company. Design and specifications are subject to change without prior notice.

Disclaimer

Before using this product, please read the product manual to ensure correct use under the complete understanding. After reading, please keep the product manual properly for future reference. In case of not operating this product correctly, it may seriously harm yourself or others, or result in product damage and property loss. When using this product, it shall be deemed that you have understood, recognized and accepted all clauses and contents of this document. The user commits to be responsible for their own behaviors and all consequences thereof, amaran shall not be liable for any loss due to the user who does not use this product in accordance with the product manual.

Under the laws and regulations, our company holds the final explanation right of this document and all related documents of this product. No prior notice will be given for any update, revision or termination. Please visit the official amaran website for the latest product information.