



POWER BOX

User Manual
PWB



Contact information

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1 CE AND FCC CONFORMITY

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, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC statement

Note: 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.

EU Declaration of Conformity

These products comply with the RED (Radio Equipment Directive) of the European Union (2014/53/EC). This equipment meets the following conformance standards: ETSI EN 301 489-1 V1.8.1; ETSI EN 301 489-3 V1.4.1; ETSI EN 300 328 V1.8.1; EN 609 50.

2 SAFETY AND HANDLING

Before you operate this unit read the manual carefully. Always make sure to include the manual if you pass/rent/sell the unit to another user. Keep in mind that this manual cannot address all possible dangers and environments. Please use your own caution when operating. This product is for professional use only. It is not for household use.



- Do not operate the unit in areas of high temperature conditions or under direct sunlight. It will cause abnormal function or damage the product.
- Always use a suitable safety wire when mounting the product overhead.
- Connect the safety wire only to the intended safety mount.
- Always follow local safety requirements.



- Only qualified personnel may repair this product.
- Do not open the product housing.
- Do not apply power if the unit is damaged.
- Do not submerge the unit into any liquid.
- Caution, risk of electrical shock



- The exterior surfaces of the product can become hot, up to 70°C (158°F) during normal operation.
- Ensure that accidental physical contact with the device is impossible.
- Install only in ventilated locations.
- Do not cover the product.
- Allow the product to cool before touching.



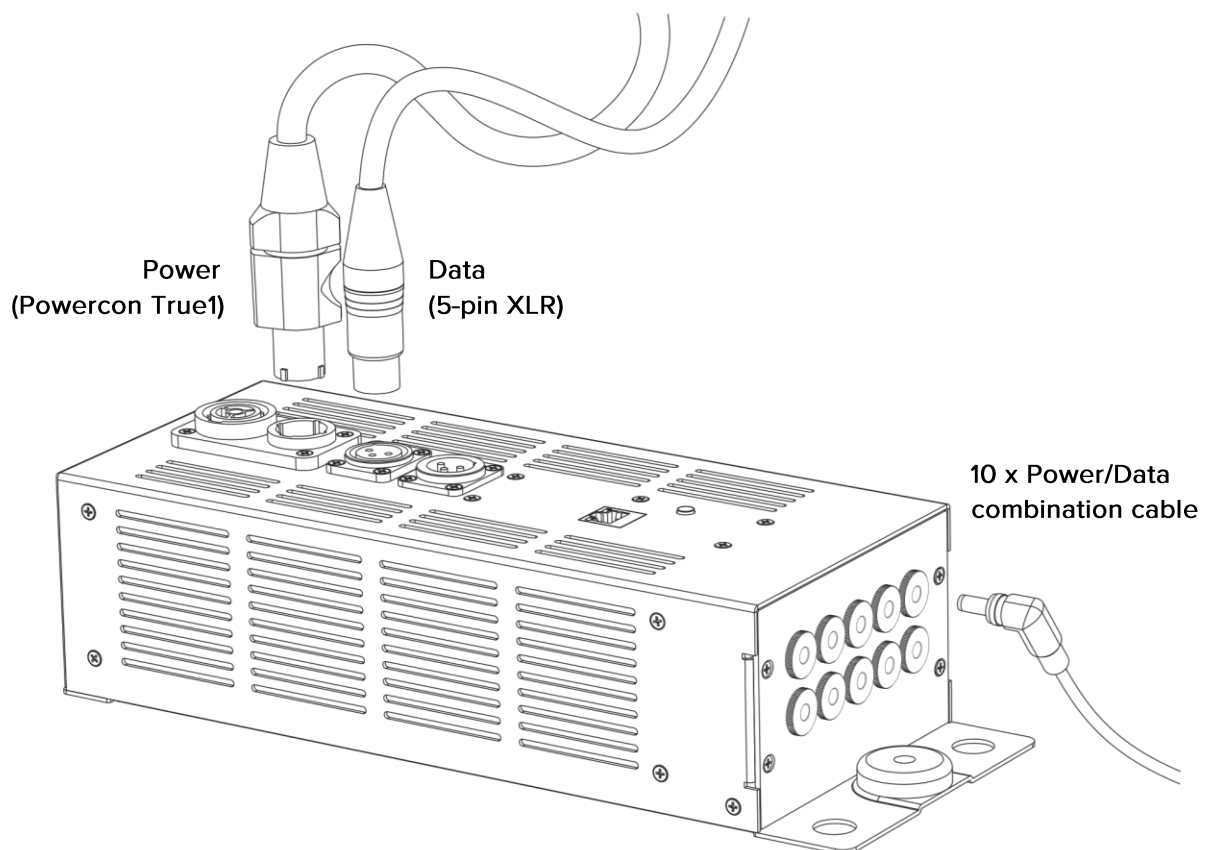
- Don't throw the unit into the garbage at the end of its lifetime.
- Make sure to dispose according to your local ordinances and/or regulations, to avoid polluting the environment!
- The packaging is recyclable and can be disposed.

2.1 AC AND DMX WIRING

AC power and DMX data can be connected to the Titan Tube via Astera's PowerBox (FP1-PWB) and Astera's power/data combination cable (FP1-PWB-CAB). That way, the tubes can be wired for a longer show or permanent installation.

The PowerBox contains Neutrik True1 Powercon in and out sockets and 5-pin XLR in and out sockets so that several PowerBoxes can be daisy chained. In addition, data can also be applied to the PowerBox via its RJ45 Ethernet socket which accepts Art-Net DHCP, 2.X and 10.X as well as sACN. Its operation is explained in the next chapter.

The PowerBox has 10 DC sockets to wire 10 Titan Tubes via power/data combination cables (sold separately, item code: FP1-PWB-CAB-5, -10, -15). 10 output means that a whole DMX universe of tubes can be connected (10 tubes x 16 pixels x 3 channels).



2.2 POWERBOX BUTTON AND STATUS LED

The PowerBox contains Powercon True1 in and out sockets as well as XLR in and out sockets. Also, there is an Ethernet socket which accepts Art-Net (DHCP, 2.X and 10.X) and sACN

2.2.1 Input

The inputs have the following priorities:

1. XLR
2. sACN
3. Art-Net

As long as XLR is received, sACN and Art-Net are deactivated.

While sACN or Art-Net are received, the DMX is also output on the XLR connector.

2.2.2 Status LED

The PowerBox has a status LED next to the Ethernet socket. If the LED is constantly on, this indicates that no DMX data is being received. If the status LED blinks slowly, this indicates that the PowerBox receives DMX.

The indicator LED can light up in different colors which indicate which data source is being received:

Blue	Art-Net DHCP
Magenta	Art-Net 2.X address
Green	Art-Net 10.X address
Yellow	sACN
Cyan	XLR

Button

Next to the indicator LED is a button. A single press on the button cycles between the different IP settings for Art-Net: DHCP, 2.x and 10.x.

2.2.3 Reset

The controller can be reset to restore the universe ID to 1 again.

Also, during each reset the controller tries to download a software update from the internet. To be successful, it must be connected to a LAN with DHCP.

The reset is done like this:

Hold the button down -> LED blinks blue -> hold still -> stops blue blinking after 4 seconds.

Then the LEDs turn red for a moment and return to Art-Net 2.x again if no update was found.

If an update was found, the LED flashes green/blue until the update has been installed.

2.2.4 To update PowerBox software:

1. Connect to a LAN which has an internet access. Be sure that the PowerBox is in Art-Net DHCP mode: blue LED is on.
2. Hold the button down -> LED blinks blue -> hold still -> stops blue blinking after 4 sec.
3. Then the LEDs turn red for a moment. If an update was found, the LED flashes green/blue until it is done.

2.2.5 To change the universe id manually:

When the PowerBox is in the normal mode a long press (4 seconds)* enters the universe id setting mode. In this mode the blue LED blinks shows the universe id. For example; if the universe id is 8, the blue LED blinks 8 times then it stops for 2 seconds, this sequence is looped. A single short press increases the universe id. As the maximum id is 16 in this mode, a single short press sets to 1 if the universe id is 16. During the universe id setting mode a long press (4 seconds) goes back to normal mode.

* be aware that 8 seconds long press enters the reset mode and restore the universe ID to 1 again.

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