

# Chroma-Q Color Web PSU 10-DMX

## User Manual



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# Table of Contents

<b>1. Product Overview</b>	<b>3</b>
<b>2. Operation</b>	<b>3</b>
2.1 Unpacking the unit	3
2.2 Control and power cables	3
2.3 Mounting the unit	4
2.4 Connection to Color Web	4
2.5 Web layout	5
2.6 DMX control mode	5
<b>3. Additional equipment</b>	<b>5</b>
<b>4. Technical specifications</b>	<b>6</b>

## 1. Product overview

PSU 10-DMX is an integrated power controller for Color Web. It will find primary application with Color Web due to the robust design and truss mounting capability. Five outputs are provided; each output can drive a total of 32 pixels.

## 2. Operation

- 2.1 Unpacking the unit
- 2.2 Control and power cables
- 2.3 Mounting the unit
- 2.4 Connecting to Color Web
- 2.5 Web Layout
- 2.6 DMX Addressing

### 2.1 Unpacking the unit

The Chroma-Q™ PSU 10-DMX package comes with the following items.

- Chroma-Q™ PSU 10-DMX Unit
- Power supply cord
- User manual

**Note:** The packing material protects the unit during shipment. Further copies of this manual can be downloaded from the A.C. Lighting website – [www.aclighting.com](http://www.aclighting.com)

### 2.2 Control and power cables

The Chroma-Q™ PSU 10-DMX is designed to control Color Web 250 & Color Web 125. For how these connect together please see Section 2.4 on connecting the web.

#### DMX input

The DMX input is a 5 pin XLR connector wired to the USITT DMX512 (1990) Standard. Please ensure that your DMX cabling follows accepted guidelines and is suitably terminated.

Pin No	Function
1	Screen/shield (0 V)
2	Data comp (-ve)
3	Data true (+ve)
4	Future Developments
5	Future Developments

#### DMX loop through

The DMX through connector is a 5 pin XLR connector wired to the USITT DMX512 (1990) Standard. This allows onward connection to other DMX512 devices. If this feature is not required the unit must be terminated as specified by DMX512-A

#### Output wiring

The Chroma-Q PSU 10-DMX output is a 25pin multiway connector.

Connector Pin	Function
A,E,J,N,T	+V (Red)
B,F,K,P,U	Data (Green)
C,G,L,R,V	Clock (Yellow)
D,H,M,S,W	GND (Black)

Each output of the PSU 10-DMX is capable of powering/controlling 32 pixels. Please see Section 2.4 for details on connecting this to the Color Web 250/125.

#### Indicators

Data (Green) Indicates that DMX512 is being received.  
Power (Red) Indicates good power and normal operation.

## Earthing

The following table summarises the internal earth interconnection and isolation

Circuit	Description	
Chassis	Bonded to Earth-Ground.	
DMX512 Input (including Loop Through)	Type:	Isolated.
	Pin 1:	Connects to internal isolated circuit. No connection to Earth-Ground.
	Shell:	The connector shell is connected to chassis.
DMX512 Output	Type:	Grounded.
	DMX GND:	Connected to Earth-Ground.
Internal Logic Ground	Connects to Earth-Ground.	

## 2.3 Mounting the unit

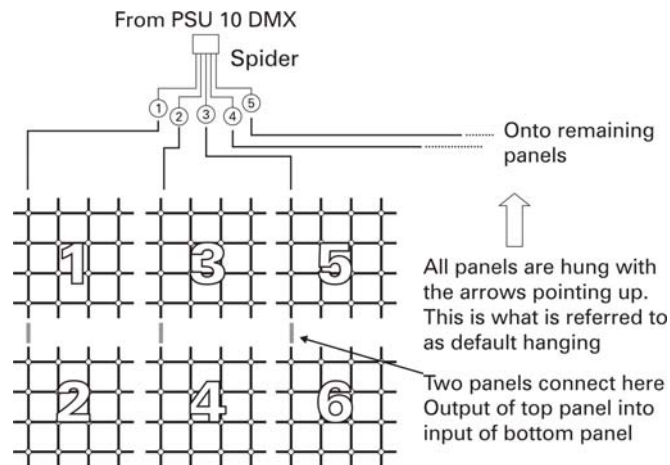
- Flying or overhead mounting of equipment shall be undertaken by qualified staff. The staff shall be capable of undertaking a risk assessment.
- Each PSU 10-DMX provides safety wire points that must be used.
- Safety should be your prime concern. If in any doubt seek professional advice.

## 2.4 Connecting to Color Web

The PSU 10-DMX can be used with Color Web 250 & Color Web 125. Below are diagrams that show how these connect together to the PSU.

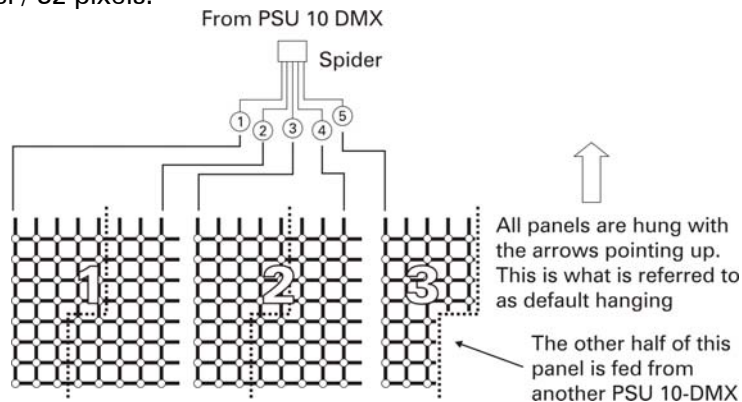
### Color Web 250

The PSU 10-DMX will connect to 10 panels of Color Web 250. Each output from the PSU feeds two panels / 32 pixels.



### Color Web 125

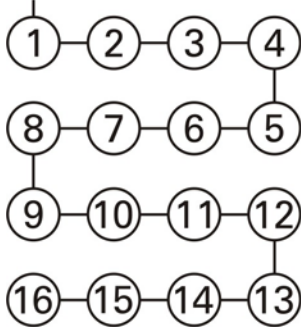
The PSU 10-DMX will connect to 2.5 panels of Color Web 125. Each output from the PSU feeds one half of a panel / 32 pixels.



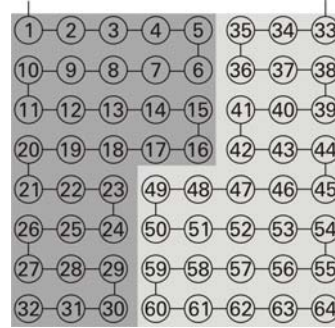
## 2.5 Web layout

This is the default layout of the Color Web 250 and 125. Nodes are addressed in order and each node takes 3 channels of DMX, Red, Green and Blue. This is how the string of nodes are wired into the panels. This is viewed from the front with arrows facing up.

**Color Web 250**



**Color Web 125**



## 2.6 DMX control mode

Each Chroma-Q PSU 10-DMX will control up to 160 Led Nodes. Each node has 3 DMX channels. Red, Green and Blue. This is a total of 480 DMX control channels per Chroma-Q PSU 10-DMX. Each one is factory set to DMX address 001. There are no modes or other setting on the Chroma-Q PSU 10-DMX.

Each output on the spider plugs into an input on the web and the patching is sequential across each output. The tables below show how each panel is typically patched.

Color Web 250		
Panel Number	DMX Address	Spider Output
1	1	1
2	49	Linked to panel 1
3	97	2
4	145	Linked to panel 3
5	193	3
6	241	Linked to panel 5
7	289	4
8	337	Linked to panel 7
9	385	5
10	433	Linked to panel 9

Color Web 125		
Panel Number	DMX Address	Spider Output
1 Left	1	1
1 Right	97	2
2 Left	193	3
2 Right	289	4
3 Left	385	5

## 3. Additional equipment

### Color Web Spiders CHCWSPY

Each Color Web PSU 10-DMX has a connector on the front for a Spider. The Spider plugs into the PSU and has 5 x 1m leads coming from it with 4 pin connectors at the ends. Each output is marked with white plastic rings, one thru five.



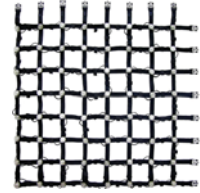
### Color Web 250 CHCW250

Each Color Web 250 panel is made up of one string of 16 LED nodes. This starts In the top left and snakes down to the bottom left. Each LED Node has its own DMX address. This is assigned depending on which output from the PSU it is plugged into.



### Color Web 125 CHCW125

Each Color Web 125 panel is made up of two strings of 32 LED nodes. This starts in the top left and top right and snakes down. Each LED Node has its own DMX address. This is assigned depending on which output from the PSU it is plugged into.



### Color Web Extension Cables CHCWCE#

Extension cables are available in 1m, 2m, 3m, 4m, 5m and 6m lengths. These are used to extend cable runs from the spider to the panels.



### Multicore CHCWME5/CHCWME10

There are 2 multicore lengths, 5m and 10m. These go between the power supply and the spider. The maximum length between PSU and spider is 10m.



### IP65 End Caps CHCWCECAP

Whilst the Web is IP65 rated, the connectors that are not in use are exposed. This cap will protect the exposed connectors to an IP65 rating.



### Color Web Fly Adapters

Fly Adapters are used to attach the Panels to a hanging point, normally a pipe or piece of truss. These have two ways of hanging. If you click the connector into the top this will hang the Web with a 576mm drop from the bar to the first pixel. If you click it into the bottom connector then this will lift it 125mm allowing you to offset the Web and double hang. So you then put the adapters at 125mm intervals and every other one is lifted. You can use these up to a 10m drop before you need to use a secondary fixing on the back of the Web



## 4. Technical Specifications

### Chroma-Q PSU 10-DMX

Dimensions:	218 x100 x 110mm (8.58 x 3.93 x 4.33 in)
Weight:	1.05kg / 2.31lb
Input protocol:	USITT DMX512 (1990)
Mains connection:	IEC
IP rating:	IP20 indoor use (this is not suitable for outdoor use. Use Extension cables CHCWME5/CHCWME10 from PSU 10-DMX to Color Web)
Power consumption:	100W
Input Voltage:	90-264 V AC
Input frequency:	47-440Hz
Current - inrush:	20A-115V / 40A-230V
Output Voltage:	9VDC
Output current:	10A

Duty Cycle: 80%

Control connection: 5 pin male XLR

Loop connection: 5 pin female XLR

Mating multi-way connector: Trident ringlock plug TR1823PMS1NB

**Chroma-Q Color Web (CHCW250 and CHCW125)**

Dimensions: 1m x 1m  
3.3 ft x 3.3 ft

Weight: CHCW250: 800g / 1.76lbs  
CHCW125: 1.8kg / 4.06lbs

Connector: CHCW250: Mini 4-pin in and out  
CHCW125: 2 x Mini 4-pin in and out

Colour: Black

Led cells: CHCW250: 16 x Osram RGB  
CHCW125: 64 x Osram RGB

Cell pitch: CHCW250: 250mm / 10"  
CHCW125: 125mm / 5"

Lamp life: 25,000 hours estimated average

IP rating: IP65 (when end caps used)

Max drop: 10m drop with 4:1 safety ratio

Beam angle: 120°

