

# ChromaRange™ ~ ChromaZone™

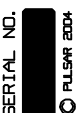
100-240V~  
50-60HZ  
150W MAX

MAINS  
FLUSE  
F SAH  
5X20MM

ON-1  
OFF-0

CAUTION  
RISK OF SHOCK  
ELECTRIC OPEN  
DO NOT TOUCH

TO REDUCE THE RISK OF FIRE OR  
ELECTRIC SHOCK DO NOT EXPOSE  
THIS APPLIANCE TO RAIN OR MOISTURE

SERIAL NO. 

PULSAR  
PULSAR LIGHT OF GREAT BRITAIN LTD.  
3 COLDHAM BUSINESS PARK,  
NORWICH NW1 5JL, U.K.  
WWW.PULSARLIGHT.COM

CE  
EMC DIRECTIVE  
EN 60335-1/2  
LOW VOLTAGE DIRECTIVE  
2006/95/EC

CONFORMS TO:  
ANSI/UL STD. 6600  
CERT. TO:  
UL CUL/CSA-60065-00

3048422

### RECEIVING DMX/PMX MODE - CHANNEL ASSIGNMENTS

RECEIVING DMX/PMX MODE	CHANNEL MODE	CHANNEL MODE	CHANNEL MODE
91.0	36 CHANNEL MODE	42 CHANNEL MODE	46 CHANNEL MODE
91.1	1 ALL RED 2 ALL GREEN 3 CHASE SELECT (SEE TABLE) 4 CHASE SPEED 5 CHASE LEVEL 6 CHASE LEVEL (16 CHANNEL MASTER 07)	1-7 OUTPUT 1 RED 8 OUTPUT 1 GREEN 9 OUTPUT 1 BLUE 10 OUTPUT 1 WHITE 11 OUTPUT 2 RED 12 OUTPUT 2 GREEN 13 OUTPUT 2 BLUE 14 OUTPUT 2 WHITE 15 OUTPUT 2 BLUE	1-7 OUTPUT 1 RED 8 OUTPUT 1 GREEN 9 OUTPUT 1 BLUE 10 OUTPUT 1 WHITE 11 OUTPUT 2 RED 12 OUTPUT 2 GREEN 13 OUTPUT 2 BLUE 14 OUTPUT 2 WHITE 15 OUTPUT 2 BLUE

12V LOW VOLTAGE SUPPLY  
8 DISABLE INPUT SMOOTHING (FOR FAST VIDEO/GRAPHIC USE)

### DIL SWITCH SELECT FOR STAND ALONE (NO SIGNAL) MODE CH.4 AND CH.7 INPUT FOR CHASE SELECT IN SIGNAL MODE

CHASE NO.	CH.4/7 INPUT	CHASE DESCRIPTION TABLE
15	100%	AUTO YELLOW
14	90%	GREEN YELLOW RED BAR GRAPH REV
13	80%	GREEN YELLOW RED BAR GRAPH FWD
12	70%	RAINBOW STRIPE
11	60%	WHITE/ANY COLOUR CROSSOVER
10	50%	BLUE-YELLOW WAVE REV
9	40%	BLUE-YELLOW WAVE FWD
8	30%	GREEN-MAGENTA WAVE REV
7	20%	GREEN-MAGENTA WAVE FWD
6	10%	RED-CYAN / ANY COL-OPPOSITE COL WAVE FWD
5	0%	RED-CYAN / ANY COL-OPPOSITE COL WAVE REV
4	50%	RANDOM COLS. CHASE 1. XFAKE. CHASE 2. SNAP
3	50%	RANDOM COLS. CHASE 1. XFAKE. CHASE 2. SNAP
2	50%	RANDOM CROSSFADE FWD (MORE PRIMARIES)
1	50%	RANDOM CROSSFADE REV (MORE PRIMARIES)
0	50%	NO CHASE

OPTION SELECT ADDRESS  
DIGITAL START ADDRESS

DATA STATUS  
LOW VOLTAGE SUPPLY (LVS)  
DATA ERROR  
RECEIVING DMX  
RECEIVING PMX

PMX (RS232/423)  
1-SCREEN 2-2 SIGNAL 3-SIGNAL 4-  
4-NOT USED. 5-LVS 16-25VDC (MALE ONLY)

DMX  
1-SCREEN 4-2-DATA 7-2-DATA 8-  
4-NOT USED. 5-LVS 16-25VDC (MALE ONLY)

DIGITAL INPUT

## SPECIFICATION

4500	- ChromaZone12™ Controller+50m ChromaFlex
24550NC	- ChromaZone 6™ Controller - No ChromaFlex
CPSU2	- ChromaPSU2™ PSU
CBANK2	- ChromaBank™ Mk 2 (Black)
8075G	- ChromaFlex Grey 5 Core Multiway Cable

Pulsar's Chroma Lighting Fixtures - ChromaLight™, ChromaDome™, ChromaFlush™, ChromaStrip™, ChromaPanel™, ChromaScape™, ChromaHearts™, etc., contain state of the art, high brightness, high efficiency Red, Green and Blue LEDs. These three primary colours can be mixed together to make an incredible pallet of 16.7 million colours.

Each ChromaFixture™ requires a +24VDC supply at up to 520mA and three 0 to +10V control signals to control the level of Red, Green and Blue. These control signals and the low voltage power are provided by the ChromaZone 12 and ChromaZone 6 controllers which can drive up to 12 or 6 ChromaFixtures respectively.

The ChromaZone has numerous chases and effects built in making it possible to achieve fantastic effects without programming. These internal effects can be selected via the DIL switches on the side of the unit in Stand Alone mode or from a controller using a digital PMX (Pulsar Multiplex) or DMX (Digital MultipleX) signal.

When receiving a signal the ChromaZone 12 can operate in 6, 9, 10, 36, 42 or 46 Channel Modes. The ChromaZone 6 operates in 6, 9, 10, 18, 24, or 28 Channel Modes. Please see the lid printing page for details of these Operating Modes, how to select them, Channel Listings, and further information.

The ChromaZone has mounting Flanges making it ideal for wall, ceiling or rig mounting, close to the fixtures it is driving.

The ChromaBank, which contains 12 ChromaHearts, has a built in ChromaZone 12 to power and drive them.

Please see the ChromaFixtures Leaflet for details of the luminaires themselves.

NB - Patents applied for. Trade Marks, Copyright, Registered and Unregistered Design Rights apply on all Chroma Products.

## CHROMAZONE MAINS SUPPLY

**Mains Supply** - The ChromaZone works correctly on any mains voltage from 100-240 VAC, 50-60Hz, (self adjusting). Power consumption ranges from 10 Watts to 150 Watts depending on the number of fixtures connected and their output levels.

A mains cable is provided with an IEC female connector attached. The other end of the cable should be fitted with a suitably approved and rated mains plug. Note: in some countries it is a requirement that such a plug be fitted by a qualified electrician.

### CABLE COLOURS

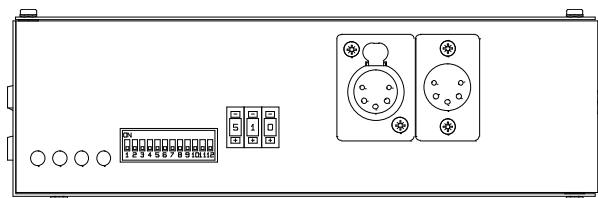
- Green/Yellow =  $\perp$  Earth / Ground
- Brown = Live / Phase / Hot
- Blue = Neutral

### WARNING - THIS APPLIANCE MUST BE EARTHED

For safety we recommend the use of a Residual Current Circuit Breaker. An RCCB MUST be used when powering e.g. ChromaScares in wet environments.

Electronics On/Off Switch with built in Indicator Neon.

Electronics Mains Fuse: 5 Amp, HRC, 5x20mm.



## CHROMAZONE SIGNALS AND OPERATION

### Data Status Indicators:

**Receive DMX LED** - This green Light Emitting Diode shows that DMX data is reaching the **ChromaZone**.

**Receive PMX LED** - This yellow LED shows that PMX data is reaching the **ChromaZone**.

**Data Error LED** - This red LED shows that the **ChromaZone** did not recognise the last information received. Errors can often occur if the DMX line is not terminated. The end of the DMX line must always be terminated with a 100R or 120R resistor connected between signal+ and signal-, this resistor can be conveniently mounted in a 5 pin XLR plug which should be inserted in the last unit on the DMX line.

Unlike DMX, PMX may be branched and needs no termination.

**LVS LED** - This blue LED shows that a Low Voltage Supply (+23VDC, 120mA max.) is connected to Pin 5 of the male XLR connector, via switch 12, to power a desk or other equipment.

**Start Address Switches** - the **ChromaZone** receives a block of 6 to 46 channels from the signal, depending on the operating mode – see lid printing. The **Start Address Switch** selects the number of the first channel in the block. Dial up the start address required using the Hundreds, Tens and Units switches provided.

### Channel functions:

The channels have the following functions in 46 Channel mode and subsets of these in the other operating modes – see lid printing:

- Channel 1 - All Red Master
- Channel 2 - All Green Master
- Channel 3 - All Blue Master
- Channel 4 - Internal Chase 1 Select - see front panel printing
- Channel 5 - Internal Chase 1 Speed
- Channel 6 - Internal Chase 1 Level Master
- Channel 7 - Internal Chase 2 Select - see front panel printing
- Channel 8 - Internal Chase 2 Speed
- Channel 9 - Internal Chase 2 Level Master
- Channel 10 - Master for the individual RGB Chs 11-46 (Option 7 Dn) Global Grand Master (Option 7 Up).
- Channel 11 - ChromaFixture No.1 Red
- Channel 12 - ChromaFixture No.1 Green
- Channel 13 - ChromaFixture No.1 Blue
- Channel 14 - ChromaFixture No.2 Red ... etc through to Channel 46

### 12 Way DIL Switch – in Stand Alone Mode when not receiving:

The DIL (Dual In Line) switch is used to select various fixed colours, chases and chase speeds. Please see the lid printing for full details.

**Switches 1, 2, 3** select All Red, All Green and All Blue.

**Switches 4, 5, 6 and 7** select from 14 pre-programmed internal chases. The Auto Chase runs a sequence of these chases.

**Switches 8, 9, 10** select the chase speed.

### 12 Way DIL Switch - when receiving a digital signal:

**Switch 11** (with 9 & 10 down) selects 9 or 28/46 channel mode

**Switch 11** (with 9 down but 10 up) selects 6 or 24/42 ch. mode.

**Switch 11** (with 9 up) selects 18/36 channel mode.

**Switch 8** disables the input smoothing for fast response to video graphics signals for example.

**Switch 7** makes the 11-46 Master on ch.10 a Global Grand Master.

**Switch 12** connects the LVS to pin 5 of the MALE XLR.

### PMX/DMX In/Thru 5 Pin XLR Connectors

**Digital Control Signals:** Two 5 pin XLR sockets (in/thru) are provided. The pin connections of the sockets are:

#### PMX (RS232/423) SIGNAL

- Pin 1 = Screen - Chassis Earth
- Pin 2 = Signal
- Pin 3 = Signal Earth
- Pin 4 = no connection
- Pin 5 = LVS (male only)

#### DMX SIGNAL

- Pin 1 = Screen- Chassis Earth
- Pin 2 = Signal -
- Pin 3 = Signal +
- Pin 4 = no connection
- Pin 5 = LVS (male only)

## CHROMAZONE OUTPUT CONNECTIONS

**Outputs** – 6/12 five pole, cage clamp connectors are provided on the side panel. Each connector provides the necessary power and signal to drive a **ChromaFixture**.

Two **Connectors** are supplied with many of the **ChromaFixtures**. 50m of grey **ChromaFlex** is supplied with each **ChromaZone 12** and extra **ChromaFlex** is available.

It is recommended that the maximum run of **ChromaFlex** between the **ChromaZone** and a **ChromaFixture** is 20m.

**Wiring:** Strip back the outer insulation and the insulation from the cores of the **ChromaFlex** a suitable distance. Insert a flat blade screwdriver into the cage clamp connector and press it down to open the terminal. Insert the wire. Release the screwdriver. The spring loaded cage clamp holds the wire tightly ensuring a long term, reliable connection.

Pin No.	Function	ChromaFlex Core Colour
1	0V	Black
2	Red 0 -10V	Red
3	Green 0 -10V	Green
4	Blue 0 -10V	Blue
5	+24Vdc	White

## FUSES AND PRECAUTIONS

Failure of the **ChromaZone Electronics 5 Amp, HRC, 5x20mm Fuse**, usually indicates an internal fault requiring servicing by a qualified engineer.

Each 24VDC output is protected by an internal, resettable solid state fuse. Switch off the unit, fix the fault and switch on again to reset the fuse.

The 0-10V signal inputs and outputs are protected against shorts to 24V, 0V and static damage.

## OTHER INFORMATION

**PORTABLE APPLIANCE TESTING** - The **Pulsar ChromaZone** may be safely Earth Bond and Insulation Tested.

**STANDARDS** - The **Pulsar ChromaZone** complies with the following International and National Standards:

**Electrical Safety** - IEC65, EN60065, BS415

**EMC** - EN50081-1, EN55022, EN50082-1

**Index of Protection** - IP20



**Marking Directive 93/68/EEC** - The **Pulsar ChromaZone** meets both the EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC.



**Conforms to:** ANSI/UL Standard 6500  
**Certified to:** CAN/CSA-E60065-00

3048422

**GUARANTEE** - 12 months from the date of original purchase. The guarantee is limited to parts and labour. The guarantee is void if the unit is misused, unauthorised persons perform repairs, or the incorrect type of fuse has been used. In the unlikely event of a fault occurring, do not use without repair. Return the unit to your supplier with a description of the fault, or direct to Pulsar for immediate attention.

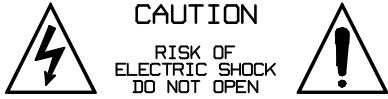
## DIMENSIONS AND WEIGHTS

Code	Unit	Width	Height	Depth	Weight
		mm	mm	mm	kg
24500	ChromaZone12 + 50m ChromaFlex	210.0	342.0	70.0	9.0
24550NC	ChromaZone 6 - no cable	210.0	342.0	70.0	2.0

# ChromaZone™ Software Version 3.1

**Pulsar ChromaZone / ChromaBank Software Version No. 3.1** (MAIN micro 3.1 29-11-04 + DMX micro 3.0 26-02-04) has many exciting new features. The additions since version 1.2 are: • Two built in Chases – allowing superimposition of effects and crossfading between chases. Chase 1 and 2 use the same table of 31 chases but there are differences to give you more choice - Chase 1 uses the Master Red, Green and Blue Channels 1, 2 & 3 to change the colour of some chases (see table) while Chase 2 stays white and uses them to give a background colour. • There are chase enhancements - shown in **Bold Italic** below. • The chases now have smoother waveforms. • There are 4 new operating modes: 9 Channel, 10 Channel (from 3.1), 36 Channel and 46 Channel Modes, in addition to the original 6 and 42 Channel Modes. • There's a Master Dimmer Channel (Ch.10) for the 36 individual RGB channels and, with option 7 up, this becomes a **Global Grand Master** for the All R/G/B and Chases Levels too (from 3.1). • A new Dimmer Law doubles the bottom end resolution for smoother dimming and increases the top end action. • Input Smoothing Disable Switch for fast display of video graphics, **and video frame rate capability** (from 3.0). • Plus a new, more useful choice of Stand Alone Chase Speeds. • Please see the lid printing pages for details of the Operating Modes and how to select them, Channel Listings, and further information. • Version 3.1 is suitable for both the ChromaZone 12 and the ChromaZone 6.

DIL Switch	Chase	Ch.4&7	Bit	Chase	Notes
4 5 6 7	No.	Input	No.	Description	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	15	100%	255	Auto Chase	
		95%	242	Green Yellow Red Bar Graph Rev	Use Ch.1
		92%	235	Green Yellow Red Bar Graph Fwd	Use Ch.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	14	90%	230	Rainbow Strobe	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	13	85%	217	White / Any Colour Strobe	Chs.1, 2, & 3 set colour
		82%	209	White / <b>Any Colour</b> Crossover	<b>New: Chs. 1, 2 &amp; 3 set colour</b>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	12	80%	204	Blue-Yellow Wave Rev	
		77%	196	Blue-Yellow Wave Fwd	
		73%	186	Green-Magenta Wave Rev	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	11	70%	179	Green-Magenta Wave Fwd	
		67%	171	Red-Cyan / <b>AnyCol/Op.Col</b> Wave Fwd	<b>New: Chs. 1, 2 &amp; 3 set colour</b>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	10	65%	166	Red-Cyan / <b>AnyCol/Op.Col</b> Wave Rev	All 3 at 0% = Red-Cyan
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	9	60%	153	Black-White/ <b>AnyColour</b> Wave Fwd	<b>New: Chs. 1, 2 &amp; 3 set colour</b>
		57%	145	Black-White/ <b>AnyColour</b> Wave Rev	All 3 at 0% = White.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	8	55%	140	Random Cols. <b>Chs1 Xfade, Chs2 Snap</b>	<b>New in 3.1: Chase1 Xfades</b>
		52%	133	Rainbow 2 Crossfade Fwd	Wider primary colours to compensate for extra diffusion
		48%	122	Rainbow 2 Crossfade Rev	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	7	45%	115	Rainbow Crossfade Fwd	Equal width primary & secondary colours
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	6	41%	105	Rainbow Crossfade Rev	
		38%	97	"Follow 3" 18 Contrasting Cols Rev	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5	35%	89	"Follow 3" 18 Contrasting Cols Fwd	
		32%	82	18 Crossfading Colours Rev	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	4	30%	77	18 Crossfading Colours Fwd	
		27%	69	White/AnyColour/ <b>AutoColour</b> Cascade Rev	Chs. 1, 2 & 3 set colour. All 3 at 0% = White. <b>New: All 3 at 100% = Auto Colour Change</b>
		23%	59	White/AnyColour/ <b>AutoColour</b> Cascade Fwd	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3	20%	51	6 Crossfading Pastel Colours	
		17%	43	Colour Wipes	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2	15%	38	6 Crossfading Colours	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1	10%	26	6 Separate Colours	
		7%	18	Red Green Blue Bar Graphs Rev	Use Chs. 1, 2 & 3
		5%	13	Red Green Blue Bar Graphs Fwd	Use Chs. 1, 2 & 3
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	0	0%	0	No Chase	



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

ON-1  
OFF-0

MAINS  
FUSE  
F 5A H  
5x20MM

100-240V~  
50-60HZ  
150W MAX

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

SERIAL NO.

© PULSAR 2004

# ChromaZone6

## PULSAR

MADE IN EUROPE BY:  
PULSAR LIGHT OF CAMBRIDGE LTD.,  
3 COLDHAMS BUSINESS PARK,  
NORMAN WAY, CAMBRIDGE, CB1 3LH, UK.  
WWW.PULSARLIGHT.COM

RECEIVING DMX/PMX MODE - CHANNEL ASSIGNMENTS			
<input type="checkbox"/> <input type="checkbox"/> 10 11	9 (10) CHANNEL MODE	<input type="checkbox"/> <input type="checkbox"/> 10 11	6 CHANNEL MODE
<input type="checkbox"/> <input type="checkbox"/> 9 10 11	18 CHANNEL MODE		
1 ALL RED 2 ALL GREEN 3 ALL BLUE 4 CHASE1 SELECT (SEE TABLE) 5 CHASE1 SPEED 6 CHASE1 LEVEL 7 CHASE2 SELECT (SEE TABLE) 8 CHASE2 SPEED 9 CHASE2 LEVEL (10 GLOBAL GRAND MASTER <input type="checkbox"/> 7)		1 ALL RED 2 ALL GREEN 3 ALL BLUE 4 CHASE SELECT (SEE TABLE) 5 CHASE SPEED 6 CHASE LEVEL	
		1 OUTPUT 1 RED 2 OUTPUT 1 GREEN 3 OUTPUT 1 BLUE 4 OUTPUT 2 RED 5 OUTPUT 2 GREEN ↓ 18 OUTPUT 6 BLUE	
<input type="checkbox"/> <input type="checkbox"/> 9 10 11	28 CHANNEL MODE	<input type="checkbox"/> <input type="checkbox"/> 9 10 11	24 CHANNEL MODE
1-9 AS 9 CHANNEL ABOVE 10 11-46 GRAND MASTER <input type="checkbox"/> 7 OR 10 GLOBAL GRAND MASTER <input type="checkbox"/> 7 11 OUTPUT 1 RED 12 OUTPUT 1 GREEN 13 OUTPUT 1 BLUE 14 OUTPUT 2 RED 15 OUTPUT 2 GREEN ↓ 28 OUTPUT 6 BLUE		1-6 AS 6 CHANNEL ABOVE 7 OUTPUT 1 RED 8 OUTPUT 1 GREEN 9 OUTPUT 1 BLUE 10 OUTPUT 2 RED 11 OUTPUT 2 GREEN ↓ 24 OUTPUT 6 BLUE	
<input type="checkbox"/> 12 LOW VOLTAGE SUPPLY			
<input type="checkbox"/> DISABLE INPUT SMOOTHING 8 (FOR FAST VIDEO/GRAPHIC USE)			



EMC DIRECTIVE  
89/336/EEC  
LOW VOLTAGE DIRECTIVE  
73/23/EEC



CONFORMS TO:  
ANSI/UL STD. 6500  
CERT. TO:  
CAN/CSA-E60065-00

3048422

DIL SWITCH SELECT FOR STAND ALONE (NO SIGNAL) MODE						
CH. 4 AND CH. 7 INPUT FOR CHASE SELECT IN SIGNAL MODE						
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3	FIXED COLOURS	CHASE NO.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 4 5 6 7	CH. 4&7 INPUT	CHASE DESCRIPTION TABLE	SPEED STEP TIME <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8 9 10
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	WHITE	15	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	100%	AUTO CHASE	0.5 SEC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	CYAN	14	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	95%	GREEN YELLOW RED BAR GRAPH REV	1 SEC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	MAGENTA	13	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	92%	GREEN YELLOW RED BAR GRAPH FWD	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	YELLOW	12	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	90%	RAINBOW STROBE	1.5 SEC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	BLUE	11	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	85%	WHITE/ANY COLOUR STROBE	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	GREEN	10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	82%	WHITE/ANY COLOUR CROSSOVER	2 SECS <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	RED	9	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	80%	BLUE-YELLOW WAVE REV	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	BLACK	8	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	77%	BLUE-YELLOW WAVE FWD	3 SECS <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		7	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	73%	GREEN-MAGENTA WAVE REV	
		6	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	70%	GREEN-MAGENTA WAVE FWD	5 SECS <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	67%	RED-CYAN / ANY COL-OPPOSITE COL WAVE FWD	
		4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	65%	RED-CYAN / ANY COL-OPPOSITE COL WAVE REV	10 SECS <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		3	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	60%	BLACK-WHITE/ANY COLOUR WAVE FWD	
		2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	57%	BLACK-WHITE/ANY COLOUR WAVE REV	20 SECS <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	55%	RANDOM COLS. CHASE 1 XFADE, CHASE 2 SNAP	
		0	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	52%	RAINBOW 2 CROSSFADE FWD (MORE PRIMARIES)	
				48%	RAINBOW 2 CROSSFADE REV (MORE PRIMARIES)	
				45%	RAINBOW CROSSFADE FWD	
				41%	RAINBOW CROSSFADE REV	
				38%	FOLLOW 3, 18 CONTRASTING COLOURS REV	
				35%	FOLLOW 3, 18 CONTRASTING COLOURS FWD	
				32%	18 CROSSFADING COLOURS REV	
				30%	18 CROSSFADING COLOURS FWD	
				27%	WHITE/ANY COLOUR/AUTO COLOUR CASCADE REV	
				23%	WHITE/ANY COLOUR/AUTO COLOUR CASCADE FWD	
				20%	6 CROSSFADING PASTEL COLOURS	
				17%	COLOUR WIPES	
				15%	6 CROSSFADING COLOURS	
				10%	6 SEPARATE COLOURS	
				7%	RED GREEN BLUE BAR GRAPHS REV	
				5%	RED GREEN BLUE BAR GRAPHS FWD	
				0%	NO CHASE	

1  
0V BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

2  
0V BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

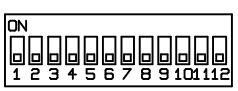
3  
0V BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

4  
0V BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

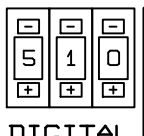
5  
0V BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

6  
0V BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

DATA STATUS  
LOW VOLTAGE SUPPLY (LVS)  
RECEIVING DMX  
RECEIVING ERROR  
RECEIVING PMX



OPTION SELECT



DIGITAL START ADDRESS

PMX (RS232/423)  
PINS: 1=SCREEN ↗, 2=SIGNAL ↘, 3=SIGNAL ⇐,  
4=NOT USED, 5=LVS 18-25VDC (MALE ONLY)

DMX  
PINS: 1=SCREEN ↗, 2=DATA -, 3=DATA +,  
4=NOT USED, 5=LVS 18-25VDC (MALE ONLY)

DIGITAL INPUT



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

ON-1  
OFF-0

FUSE  
F 5A H  
5X20MM

MAINS

100-240V~  
50-60HZ  
150W MAX



OV BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

OV BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

OV BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

OV BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

OV BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

OV BLACK  
RED  
GREEN  
BLUE  
WHITE +24V

LOW VOLTAGE SUPPLY (LVS)  
DATA ERROR  
RECEIVING  
RECEIVING  
RECEIVING  
RECEIVING  
DATA STATUS

# ChromaZone12

## PULSAR

SERIAL NO.



PULSAR 2004

MADE IN EUROPE BY:  
PULSAR LIGHT OF CAMBRIDGE LTD.,  
3 COLDHAMS BUSINESS PARK,  
NORMAN WAY, CAMBRIDGE, CB1 3LH, UK.  
WWW.PULSARLIGHT.COM

### RECEIVING DMX/PMX MODE - CHANNEL ASSIGNMENTS

<input type="checkbox"/> <input type="checkbox"/> 1011 9(10) CHANNEL MODE	<input type="checkbox"/> <input type="checkbox"/> 1011 6 CHANNEL MODE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 91011 36 CHANNEL MODE
1 ALL RED 2 ALL GREEN 3 ALL BLUE 4 CHASE1 SELECT (SEE TABLE) 5 CHASE1 SPEED 6 CHASE1 LEVEL 7 CHASE2 SELECT (SEE TABLE) 8 CHASE2 SPEED 9 CHASE2 LEVEL (10 GLOBAL GRAND MASTER <input type="checkbox"/> 7)	1 ALL RED 2 ALL GREEN 3 ALL BLUE 4 CHASE SELECT (SEE TABLE) 5 CHASE SPEED 6 CHASE LEVEL	1 OUTPUT 1 RED 2 OUTPUT 1 GREEN 3 OUTPUT 1 BLUE 4 OUTPUT 2 RED 5 OUTPUT 2 GREEN ↓ 36 OUTPUT 12 BLUE
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 91011 46 CHANNEL MODE 1-9 AS 9 CHANNEL ABOVE 10 11-46 GRAND MASTER <input type="checkbox"/> 7 OR 10 GLOBAL GRAND MASTER <input type="checkbox"/> 7 11 OUTPUT 1 RED 12 OUTPUT 1 GREEN 13 OUTPUT 1 BLUE 14 OUTPUT 2 RED 15 OUTPUT 2 GREEN ↓ 46 OUTPUT 12 BLUE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 91011 42 CHANNEL MODE 1-6 AS 6 CHANNEL ABOVE 7 OUTPUT 1 RED 8 OUTPUT 1 GREEN 9 OUTPUT 1 BLUE 10 OUTPUT 2 RED 11 OUTPUT 2 GREEN ↓ 42 OUTPUT 12 BLUE	
<input type="checkbox"/> <input type="checkbox"/> 12 LOW VOLTAGE SUPPLY <input type="checkbox"/> <input type="checkbox"/> 8 DISABLE INPUT SMOOTHING (FOR FAST VIDEO/GRAPHIC USE)		



EMC DIRECTIVE 89/336/EEC  
LOW VOLTAGE DIRECTIVE 73/23/EEC



CONFORMS TO:  
ANSI/UL STD. 6500  
CERT. TO:  
CAN/CSA-E60065-00

3048422

### DIL SWITCH SELECT FOR STAND ALONE (NO SIGNAL) MODE CH. 4 AND CH.7 INPUT FOR CHASE SELECT IN SIGNAL MODE

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 123 FIXED COLOURS	CHASE NO.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 4567 CH. 4&7 INPUT	CHASE DESCRIPTION TABLE	SPEED STEP TIME	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 8910
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> WHITE	15	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	100% AUTO CHASE	0.5 SEC	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> CYAN	14	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	95% GREEN YELLOW RED BAR GRAPH REV	1 SEC	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> MAGENTA	13	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	92% GREEN YELLOW RED BAR GRAPH FWD	1.5 SEC	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> YELLOW	12	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	90% RAINBOW STROBE	2 SECS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> BLUE	11	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	85% WHITE/ANY COLOUR STROBE	3 SECS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> GREEN	10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	82% WHITE/ANY COLOUR CROSSOVER	5 SECS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> RED	9	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	80% BLUE-YELLOW WAVE REV	10 SECS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> BLACK	8	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	77% BLUE-YELLOW WAVE FWD	20 SECS	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	7	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	73% GREEN-MAGENTA WAVE REV		
	6	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	70% GREEN-MAGENTA WAVE FWD		
	5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	67% RED-CYAN / ANY COL-OPPOSITE COL WAVE FWD		
	4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	65% RED-CYAN / ANY COL-OPPOSITE COL WAVE REV		
	3	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	60% BLACK-WHITE/ANY COLOUR WAVE FWD		
	2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	57% BLACK-WHITE/ANY COLOUR WAVE REV		
	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	55% RANDOM COLS. CHASE 1 XFADE, CHASE 2 SNAP		
	0	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	52% RAINBOW 2 CROSSFADE FWD (MORE PRIMARIES)		
			48% RAINBOW 2 CROSSFADE REV (MORE PRIMARIES)		
			45% RAINBOW CROSSFADE FWD		
			41% RAINBOW CROSSFADE REV		
			38% FOLLOW 3, 18 CONTRASTING COLOURS REV		
			35% FOLLOW 3, 18 CONTRASTING COLOURS FWD		
			32% 18 CROSSFADING COLOURS REV		
			30% 18 CROSSFADING COLOURS FWD		
			27% WHITE/ANY COLOUR/AUTO COLOUR CASCADE REV		
			23% WHITE/ANY COLOUR/AUTO COLOUR CASCADE FWD		
			20% 6 CROSSFADING PASTEL COLOURS		
			17% COLOUR WIPES		
			15% 6 CROSSFADING COLOURS		
			10% 6 SEPARATE COLOURS		
			7% RED GREEN BLUE BAR GRAPHS REV		
			5% RED GREEN BLUE BAR GRAPHS FWD		
			0% NO CHASE		

ON  
1 2 3 4 5 6 7 8 9 10 11 12

OPTION SELECT

5 1 0  
+ + +

DIGITAL START ADDRESS

PMX (RS232/423)

PINS: 1=SCREEN ↗, 2=SIGNAL, 3=SIGNAL ⇐, 4=NOT USED, 5=LVS 18-25VDC (MALE ONLY)

DMX

PINS: 1=SCREEN ↗, 2=DATA -, 3=DATA +, 4=NOT USED, 5=LVS 18-25VDC (MALE ONLY)

DIGITAL INPUT

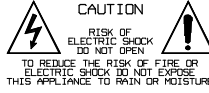


# ChromaBank 2<sup>®</sup>

## PULSAR

SERIAL NO. XXXXXXXXXX

COPYRIGHT PULSAR 2004



MADE IN EUROPE BY:  
PULSAR LIGHT OF CAMBRIDGE LTD.,  
3 COLDHAMS BUSINESS PARK, NORMAN WAY,  
CAMBRIDGE, CB1 3LH, UK.

TEL: +44 (0) 1223 403500  
FAX: +44 (0) 1223 403501  
WWW.PULSARLIGHT.COM

### RECEIVING DMX/PMX MODE - CHANNEL ASSIGNMENTS

9(10) CHANNEL MODE	6 CHANNEL MODE
1 ALL RED 2 ALL GREEN 3 ALL BLUE 4 CHASE1 SELECT (SEE TABLE) 5 CHASE1 SPEED 6 CHASE1 LEVEL 7 CHASE2 SELECT (SEE TABLE) 8 CHASE2 SPEED 9 CHASE2 LEVEL (10) GLOBAL GRAND MASTER <input type="checkbox"/> 7	1 ALL RED 2 ALL GREEN 3 ALL BLUE 4 CHASE SELECT (SEE TABLE) 5 CHASE SPEED 6 CHASE LEVEL
46 CHANNEL MODE	42 CHANNEL MODE
1-9 AS 9 CHANNEL ABOVE 10 11-46 GRAND MASTER <input type="checkbox"/> 7 10 GLOBAL GRAND MASTER <input type="checkbox"/> 7 11 OUTPUT 1 RED 12 OUTPUT 1 GREEN 13 OUTPUT 1 BLUE 14 OUTPUT 2 RED 15 OUTPUT 2 GREEN 46 OUTPUT 12 BLUE	1-6 AS 6 CHANNEL ABOVE 7 OUTPUT 1 RED 8 OUTPUT 1 GREEN 9 OUTPUT 1 BLUE 10 OUTPUT 2 RED 11 OUTPUT 2 GREEN 42 OUTPUT 12 BLUE
36 CHANNEL MODE	
1 OUTPUT 1 RED 2 OUTPUT 1 GREEN 3 OUTPUT 1 BLUE 4 OUTPUT 2 RED 5 OUTPUT 2 GREEN 36 OUTPUT 12 BLUE	
<input type="checkbox"/> LOW VOLTAGE SUPPLY <input type="checkbox"/> DISABLE INPUT SMOOTHING <input type="checkbox"/> FOR FAST VIDEO/GRAPHIC USE	

### DIL SWITCH SELECT FOR STAND ALONE (NO SIGNAL) MODE

CH. 4 AND CH. 7 INPUT FOR CHASE SELECT IN SIGNAL MODE

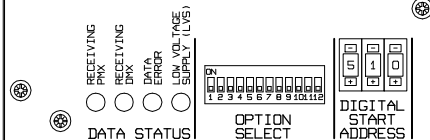
FIXED COLOURS	SPEED STEP TIME
WHITE	0.5 SEC
CYAN	1 SEC
MAGENTA	1.5 SEC
YELLOW	2 SECS
BLUE	3 SECS
GREEN	5 SECS
RED	10 SECS
BLACK	20 SECS

CHASE NO.	CH. 4 & 7 INPUT	CHASE DESCRIPTION TABLE
15	100%	AUTO CHASE
	95%	GREEN YELLOW RED BAR GRAPH REV
	92%	GREEN YELLOW RED BAR GRAPH FWD
14	90%	RAINBOW STROBE
13	85%	WHITE/ANY COLOUR STROBE
	82%	WHITE/ANY COLOUR CROSSOVER
12	80%	BLUE-YELLOW WAVE REV
	77%	BLUE-YELLOW WAVE FWD
	73%	GREEN-MAGENTA WAVE REV
	70%	GREEN-MAGENTA WAVE FWD
11	67%	RED-CYAN / ANY COL-OPPOSITE COL WAVE FWD
10	65%	RED-CYAN / ANY COL-OPPOSITE COL WAVE REV
9	60%	BLACK-WHITE/ANY COLOUR WAVE FWD
8	57%	BLACK-WHITE/ANY COLOUR WAVE REV
	55%	RANDOM COLS. CHASE 1 XFADE. CHASE 2 SNAP
	52%	RAINBOW 2 CROSSFADE FWD (MORE PRIMARIES)
	48%	RAINBOW 2 CROSSFADE REV (MORE PRIMARIES)
	45%	RAINBOW CROSSFADE FWD
7	41%	RAINBOW CROSSFADE REV
6	38%	FOLLOW 3. 18 CONTRASTING COLOURS REV
5	35%	FOLLOW 3. 18 CONTRASTING COLOURS FWD
	32%	18 CROSSFADING COLOURS REV
	30%	18 CROSSFADING COLOURS FWD
4	27%	WHITE/ANY COLOUR/AUTO COLOUR CASCADE REV
	23%	WHITE/ANY COLOUR/AUTO COLOUR CASCADE FWD
3	20%	5 CROSSFADING PASTEL COLOURS
	17%	COLOUR WIPES
2	15%	6 CROSSFADING COLOURS
1	10%	6 SEPARATE COLOURS
	7%	RED GREEN BLUE BAR GRAPHS REV
	5%	RED GREEN BLUE BAR GRAPHS FWD
0	0%	NO CHASE

PMX (RS232/423)  
PINS: 1=SCREEN +, 2=SIGNA, 3=SIGNA -, 4=NOT USED, 5=LVS, 18=25VDC (MALE ONLY)

DMX  
PINS: 1=SCREEN +, 2=DATA -, 3=DATA +, 4=NOT USED, 5=LVS, 18=25VDC (MALE ONLY)


### DIGITAL INPUT



# IMPORTANT SAFETY INSTRUCTIONS

Read the Product Instruction Leaflet and this Safety Instructions Leaflet before attempting to install or operate this apparatus.

Keep this leaflet and the Product Instruction Leaflet for future reference.

Observe ALL warnings indicated by the  symbol, both in the Product Instruction Leaflet and on the apparatus.

Follow ALL instructions given in the Product Instruction and this Safety Leaflet. Failure to do so may result in serious injury or death.

Protect the power cord from being walked on or pinched, particularly at plugs, auxiliary outputs, and the point where they exit from the apparatus.

Only use attachments/accessories specified by the manufacturer (Pulsar Light of Cambridge Ltd. UK).

Use only with the stand/bracket or other mounting arrangement specified in the Product Instruction Leaflet. In case of doubt, consult with the manufacturer (Pulsar Light of Cambridge Ltd. UK).

Unplug this apparatus before lightning storms or when unused for long periods.

Refer all servicing to suitably qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Clean only with a DRY cloth.

Protect the apparatus from dripping and splashing.


DO NOT place objects containing liquids on the apparatus.

DO NOT use this apparatus near water or in a condensing atmosphere, unless explicitly stated in the Product Instruction Leaflet.

DO NOT block any of the ventilation openings. Install the apparatus as specified in the Instruction Leaflet.

DO NOT defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is for YOUR safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete unit.

## **Mains Supply Cable colours**

Green/Yellow =  Earth / Ground

Brown = Live / Phase / Hot

Blue = Neutral / Grounded Conductor