PULSAR

POWER AND CONTROL

July 2005

Company Profile

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PULSAR

LIGHTING FOR EFFECT

About Pulsar

Based in the heart of Cambridge UK, Pulsar develops and manufactures electronic control and lighting systems that provide the core of many hi-tech installations around the world.

Pulsar's philosophy is to create products that can be integrated into as wide a range of design applications as possible, thus making the investment in our products a logical choice when taking into consideration the comparison of their functionality, together with a commitment to quality and customer service that is second to none.

Pulsar's roots began way back in 1966, when founder

Paul Mardon built his first Sound to Light machine using valves and relays before studying Engineering and Management at Cambridge University. In 1970 Pulsar Ltd was born with just a handful of staff, today Pulsar has become a market leader, employing one hundred personnel all committed to working together to further develop Pulsar as a world renowned manufacturer of high-technology lighting equipment.

Advanced Production

Throughout our history Pulsar has always embraced the latest developments in technology and today is no exception. Recent developments in high-power LED devices have been harnessed by Pulsar to provide our customers with a substantial range of LED lighting products that are suitable for entertainment and architecture. As technology advances, you can be sure that Pulsar will continue to develop state-of-the-art lighting and control solutions.

Our Cambridge UK factory translates the efforts of the research and development department into lighting control systems and products. Pulsar employs advanced production technology, to manufacture units which are shipped to our network of distributors all over the world.

Pulsar products go through rigorous test procedures which ensure they conform to the internationally recognised standards they are designed to meet. Once delivered to the client, Pulsar products have a long and trouble-free life.

Distributor Training

The successful use of our high technology products, require a highly trained distributor network. Pulsar has a comprehensive training program to equip our distributors and customers with the knowledge to translate client needs into a successful installation and excellently maintained lighting systems. Our comprehensively equipped demonstration theatre is where a series of our monthly seminars take place. Topics range from basic programming to programming of advanced automated lighting systems. Pulsar's skills in CAD design is harnessed to aid distributors in making high level presentations to prospective clients and maintaining up to date accurate information for the instruction manuals which are to help assist installations, once projects are successfully completed.

Customer Support

Pulsar is committed to caring for its customers and ensuring that buying our products entitles them to achieve their maximum potential with the help of ourselves and our highly skilled distributor network. At Pulsar we believe in long and trusted business relationships with our distributors and customers from around the globe – we look forward to hearing from you soon.

ChromaRange

The innovative ChromaRange™ is a state-of-the-art family of LED lighting fixtures offering endless colour changing possibilities to enhance your environment.

The infinite colour palette ranging from pretty pastels to deep intense hues makes these products ideal for entertainment, architectural and retail applications. Transform a look, highlight a feature, create an atmosphere – the choice is yours.

ChromaRange Features

Each fixture houses powerful high efficiency LEDs, comprising a mixture of Red, Green and Blue types to allow endless RGB colour mixing – making 16.7 million colours possible. Advance electronic design and thermal management techniques mean that ChromaRange fixtures have a rated life of 25,000 hours at full power white but this is increased to 100,000 hours when the fixture is dimmed or producing coloured light as in normal use. There is no lamp to change and heat output is minimal.

The fixtures are exceptionally robust, durable and very cost effective – making them easy to install, run and maintain. The units can crossfade slowly and smoothly from any colour to another or strobe if required as they feature fast response electronics. A selection of optional lenses are also available to change or modify the beam shape. So whatever your application – there is a fixture available in the family to suit your needs.

◆ State-of-the-art, high efficiency, high brightness LED lighting
◆ 3 channel control of Red, Green and Blue light output
◆ 256 levels of Red, Green and Blue
   = 16.7 million colours
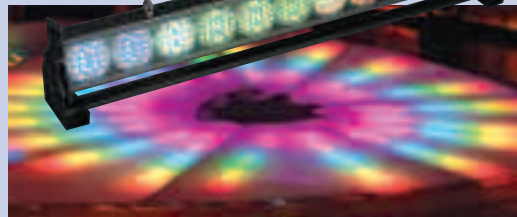
◆ Constantly crossfade directly from any colour to any other colour
◆ Fast response electronics – can be strobed
◆ Flicker-free electronics produce rock solid colour and sequences
◆ Typical 25,000 hour life at full power white (100,000 hours with normal colour changing usage)
◆ Extra Low Voltage power input 24VDC for total safety
◆ Low power consumption saves power and generates very little heat
◆ Produces no infra-red or ultra-violet light therefore does not heat or discolour illuminated objects
◆ Control input 3 x 0-10V for RGB
◆ Ever growing range of alternative enclosures, formats and finishes for a wide range of lighting applications
◆ Optional ChromaZone power and control unit provides flexible stand alone and DMX remote control functionality

Entertainment Applications

The versatile nature of the Pulsar ChromaRange has been embraced by all sectors of the entertainment industry. Theme parks, cinemas, clubs, stadiums and television studios worldwide have come to rely on ChromaRange to add a new dimension of lighting dynamics to their shows.

◆ ChromaRange can be used as the ultimate in "eye candy" for modern set designs
◆ Cool operation is ideal for any air conditioned environment

Architectural Applications

Colour mixing with the Pulsar ChromaRange gives the architect an unlimited colour palette, never before available in a range of lighting fixtures, that can enhance building facades, water features and focal displays. ChromaRange enables a new era of coloured light generation for indoor and outdoor applications.

◆ An infinite range of static colours to moving rainbows
◆ ChromaZone stand alone functionality allows for simple installation
◆ Outstanding longevity and low power consumption
◆ Wide range of fixture configurations for any application
◆ ChromaZone Digital remote control allows integration into large control systems
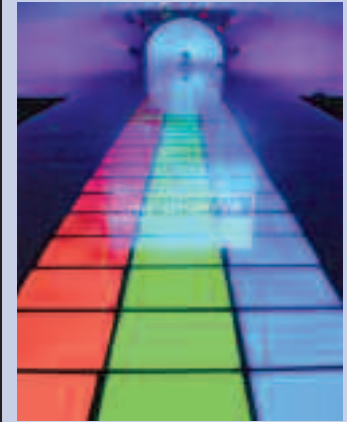
For full details of Pulsar's ChromaRange™ LED products please ask for our separate brochure.

Masterpiece™

The Masterpiece™ range of universal lighting controllers will control theatre lanterns, scans, par cans, strobes, pinspots, tubelights, display spots, downlighters, floods, multi-mirror lamps, neon, etc. and produce every look you could ask for. The Masterpiece range breaks the boundaries of stage, effects and environment lighting control by having a powerful multi-tasking structure for simple and quick programming and editing.

Masterpiece Multi-tasking Structure

- ◆ CHANNELS are the level at which Masterpiece communicates with lighting fixtures. Channel level information is transmitted in both Pulsar MultipleX (PMX) and DMX serial digital formats. A number of channels are also available as 0-10V analogue
- ◆ SCENES – each containing any of the output channels recorded at any level. Scenes allow you to save a particular look or position
- ◆ SCENE CHASES – a sequence of Scene memories. All may run concurrently, with individual speeds, slopes, directions and triggers. Chases can also utilise a powerful Chase Generator system *(see opposite page)*
- ◆ ENVIRONMENTS contain any combination of Channel Levels, Scenes and Scene Chases. Each Environment memory contains all of the items you require to produce a particular dynamic mood in your performance. Environments also facilitate powerful structured moving-light programming
- ◆ ENVIRONMENT CHASES – complete shows on one button. They can even be recorded and played in real-time!

Masterpiece units feature internal non-volatile memory to protect your programmes. In addition you can store your shows on credit card sized RAM cards for backup, changing shows or transfer between Masterpieces.

Masterpiece units also provide an advanced security facility making it ideal for pre-programmed applications. All Masterpiece controllers are supplied complete with memory card, gooseneck lamp, comprehensive manual and training video.

Masterpiece 216

- ◆ 216 PMX dimmable output channels (Pulsar MultipleX)
- ◆ 512 DMX output slot patching system
- ◆ 0-10V analogue outputs provided for channels 1-36
- ◆ 216 Scenes each with individual fade in and out times
- ◆ 54 Scene Chases with fade in and out times, slopes, etc.
- ◆ Chase Generator system
- ◆ 8 shows stored in memory
- ◆ 6 Environment Chases
- ◆ 48 Environments
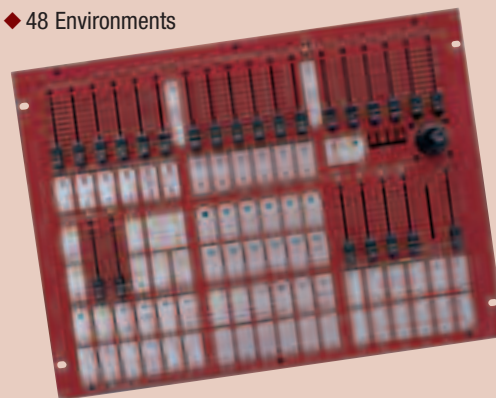
- ◆ 3 Zone, 4 band fully patchable Sound-to-Light
- ◆ Configurable joystick control

The Masterpiece 216 is a memory desk designed for the control of theatre, band, discotheque, environmental and audio-visual applications.

From a theatrical point of view, the Masterpiece 216 features:

- ◆ Fully automatic timed crossfades
- ◆ Manual crossfades using the 'A' and 'B' masters
- ◆ Individual scene fade in and fade out times
- ◆ Instant access to the channels, scenes and chases is always provided
- ◆ Grand master and blackout provided for the whole desk

The Masterpiece 216 accepts an audio input which is used for Sound-to-Light. Pulsar Modulator's Sound-to-Light circuits are built in to give 3 zones of 4 audio bands, each patchable at any level to the 216 channels. Scene chases can also be selected to bass and treble burst or step modes.

A fully programmable joystick is provided, that can be "patched" to any of the 216 channels to control motors, moving mirrors, etc.

The Masterpiece 216 features a DMX patching system that allows the standard 216 PMX channels to control up to a maximum of 512 DMX output slots. This is particularly useful when controlling large numbers of intelligent lighting fixtures.

The Masterpiece 216 provides a powerful Chase Generator that allows for quick generation of complex chase effects and aids the efficient use of Scenes. The memory of Masterpiece 216 is able to hold 8 shows at any one time and each show can be easily recalled.

Code 20216	Masterpiece 216
Power supply	100-240V AC, 50-60Hz 15W
Control channels	216 fully dimmable PMX
Output patch	to 512 DMX slots
Outputs	Analogue 1-36 x 0-10V via 6 x 8-pin DIN, PMX(RS232) via 1 x XLR5 and 1 x XLR3, DMX(RS485) via 2 x XLR5
Audio Inputs	Microphone via 1 x mono 1/4" jack Pre-amp via 2 x stereo 1/4" jack (In/Thru) Speaker via 2 x stereo 1/4" jack (In/Thru)
Remote Control	6 x 0-10V via 8-pin DIN Input
MIDI Input	via 2 x 5-pin DIN (In/Thru)
Dimensions	H 354.8mm (8U), W 482.6 (19"), D 150mm
Weight	5.6 kg

Masterpiece 108
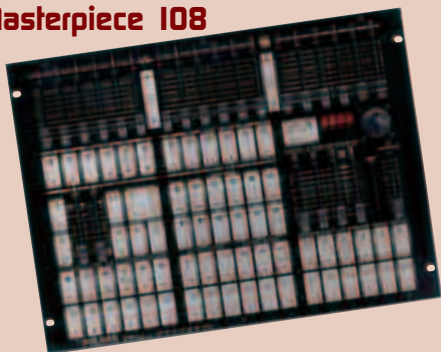
The design and concept behind the Masterpiece 108 is similar to the Masterpiece 216, the differences being as follows:

◆ 108 PMX dimmable output channels (Pulsar MultipleX)
◆ 256 DMX output slot patching system
◆ Single show stored in memory
◆ Single show stored in memory card

Code 24000	Masterpiece 108
	Specifications as per Masterpiece 216 except for:
Control channels	108 fully dimmable PMX
Output patch	to 256 DMX output slots

Masterpiece 96

◆ 96 Pulsar MultipleX (PMX) and DMX serial digital output channels
◆ 0-10V analogue outputs provided for channels 1-24
◆ 96 Scenes each containing any of the 96 channel levels
◆ 24 Scene Chases with individual speeds, slopes, directions, etc.
◆ 22 Environments

◆ 2 Environment Chases
◆ 3 Zone, 4 band fully patchable Sound-to-Light
◆ Chase Generator system

The Masterpiece 96 has been designed for smaller applications where fewer channels of control are required and is ideally suited to band, discotheque and moving light applications. The multi-tasking structure provides just the right amount of programming power required for smaller venues that have a combination of scans, generic and strobe fixtures.

Code 23000	Masterpiece 96
Power supply	100-240V AC, 50-60Hz 15W
Control channels	96 fully dimmable
Outputs	Analogue 1-24 x 0-10V via 4 x 8-pin DIN, PMX(RS232) via 1 x XLR5 and 1 x XLR3, DMX(RS485) via 2 x XLR5
Audio Inputs	Microphone via 1 x mono 1/4" jack, Pre-amp via 2 x stereo 1/4" jack, (In/Thru) Speaker via 2 x stereo 1/4" jack (In/Thru)
Remote Control	6 x 0-10V via 8-pin DIN input
Dimensions	H 266.7mm (6U), W 482.6 (19"), D 150mm
Weight	5.2 kg

Screen Driver™

◆ On Screen Text Labelling of all your programs
◆ Works with Masterpiece 216, 108, 96, 48 and Replay Unit
◆ Stores 2 shows in memory
◆ Memory card backup

An optional screen interface is available for the Masterpiece range. This interface is designed to help the lighting operator by replacing the program record sheets with an on screen display of the Channels, Patch, Scenes, Chases and Environments programmed. On-line Help Screens and Tutorial pages in many languages and a Bar Graph display also show the channel levels in a graphical format.

The Screen Driver additionally stores important DMX patching information when used with the Masterpiece 216 and 108 units.

Text for up to 2 shows can be stored. A Memory card is supplied to store the text.

Code 23900	Masterpiece Screen Driver
Power supply	18 to 25V DC at 100ma via 8-pin DIN (supplied by Masterpiece Remote Control Socket)
Outputs	RGB (PAL colour TV) via 8-pin DIN and SCART, CGA via 9-pin D Composite, monochrome video via BNC
Data Input	PMX(RS232) via 2 x XLR3 (In/Thru)
Dimensions	H 43.6mm (1U), W 482.6 (19"), D 150mm
Weight	1.9 kg

Chase Generator™

The Masterpiece Chase Generator software is an exciting development to the Masterpiece range. Available for all the Masterpiece models, this software enables the rapid creation of complex chase sequences.

Chase Generator FAQs

Q What is the Chase Generator?
A The Chase Generator is an extremely quick and powerful way of creating complex chase sequences on the Pulsar Masterpiece from just a single Scene memory!

Q How does the Chase Generator work?
A The Masterpiece Chase Generator works by using mathematical functions to automatically calculate the Channel levels for pre-defined effects. The Channels used by the Chase Generator are derived from a single Scene Memory or two Scene Memories, one containing maximum levels and the other containing minimum levels.

Q Can I load existing shows into a Chase Generator equipped Masterpiece?
A Yes, it is possible to load existing shows into a Chase Generator equipped Masterpiece or Replay Unit.

Q Can I upgrade an old Masterpiece to the Chase Generator?
A Yes, all Masterpiece and Masterpiece Replay Unit models can take the new Chase Generator software. To order your free of charge upgrade, simply contact Pulsar with the model and serial number of your unit and one will be posted to you.
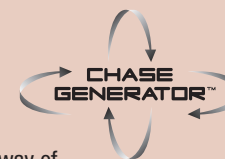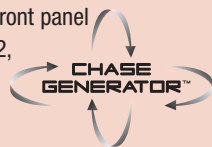
Masterpiece

Masterpiece

Replay Unit™ 216

Masterpiece Replay Unit™ 216

- ◆ Performs Shows created on Masterpiece 216, 108, 96 and 48 Units
- ◆ Up to 8 selectable Shows in memory
- ◆ Up to 216 (PMX) Pulsar dimmable control channels
- ◆ Up to 512 DMX digital output slots
- ◆ Simple push button operation via front panel
- ◆ Remote control using MIDI, RS-232, contact closures or 0-10V inputs
- ◆ 0-10V analogue outputs also provided for channels 1-18
- ◆ Chase Generator system

CHASE GENERATOR™

The Masterpiece Replay Unit 216 is capable of controlling up to 216 PMX or 512 DMX channels. It will faithfully reproduce Shows that have been programmed on the Masterpiece 48, Masterpiece 96, Masterpiece 108 or Masterpiece 216 controller and transferred to the Replay Unit via a memory card. Shows created on the Masterpiece 216 and 108 units can utilise a DMX patching system that allows the PMX channels to control an increased number of DMX control slots. This is particularly useful when controlling large numbers of intelligent lighting fixtures.

Code 27216	Masterpiece Replay Unit 216
Power supply	100-250V AC, 50-60Hz 10W
Control channels	48, 96, 108 or 216 fully dimmable (depending on program)
Output patch	512 DMX slots (dependng on program)
Outputs	Analogue 1-18 x 0-10V via 3 x 8-pin DIN, PMX(RS232) via 1 x XLR5 and 1 x XLR3, DMX(RS485) via 1 x XLR5
Audio Inputs	Microphone via 1 x mono ¼" jack, Pre-amp via 2 x stereo ¼" jack, (In/Thru) Speaker via 2 x stereo ¼" jack (In/Thru)
Remote Control	6 x 0-10V via 8-pin DIN input, MIDI via 2 x 5-pin DIN (In/Thru), RS-232 via 1 x 5-pin XLR-F(In), 1 x 5-pin XLR-M (Thru)
Dimensions	H 43.6mm (1U), W 482.6 (19"), D 210mm, 3.2 kg

Outstation OS1™

The OS1 is a compact 12 Button, 60 Scene, 54 Channel DMX programmable control desk that is ideal as an architectural controller. It can also work as a programmable Remote Control for the Masterpiece Family. In this mode it connects via the 21850 lead to the Masterpiece PMX RS232 input and can drive all the Masterpiece's accessible functions.
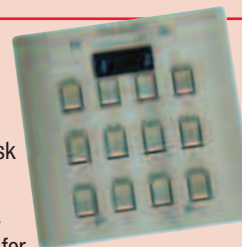
It is beautifully finished in stainless steel, fitted with chrome push buttons and a blue display, so it will fit into any decor. The OS1 is ideal for offices, bars, restaurants and foyers – in fact anywhere an easy-to-use-and-program controller is required.

The OS1 automatically receives its 8-25V DC power from any Pulsar Dimmer, ChromaZone or from a Masterpiece via the 21850 lead.

The OS1 may be mounted in or on a wall or surface using the mounting box supplied or a 4 way UK electrical box.

Code OS1	Outstation 1 54 Channel DMX Controller
21850	OS1 to Masterpiece RS232 remote control & power cable

Masterpiece Status Outstation™

- ◆ 12 push button keys to control Masterpiece Environment Cues
- ◆ Keys can be easily assigned to any environment
- ◆ Status version includes LED cue indicators
- ◆ Status versions are available in Black, White, Grey & Silver

The Pulsar Masterpiece Outstations are ideal for applications where remote access to cues is required.

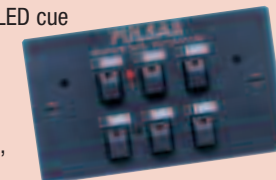| Code 29800ST	12 Way Masterpiece Outstation Status Version – Black
Code 29800STW	12 Way Masterpiece Outstation Status Version – White
Code 29800STG	12 Way Masterpiece Outstation Status Version – Grey
Code 29800STS	12 Way Masterpiece Outstation Status Version – Silver
Power supply	18 to 25V DC via 10 metre 8-pin DIN cable (supplied by Masterpiece Remote Control Socket)
Control buttons	12, binary coded to select any Environment or Environment Chase via 6 way DIL switches
Outputs channels	6, binary coded
LED Status indicators	12, 0-10V via 2 x 10 metre 8-pin DIN cables
Dimensions	H 146.0, W 146.0, D 31.8mm, 2.1 kg

Masterpiece Basic Outstation

For applications where the Status LED indicators are not required, our 12 Way Basic Outstation can be utilised.

Code 29800AA	12 Way Masterpiece Outstation Basic Version

6 Way Masterpiece Status Outstation

- ◆ Status version includes LED cue indicators
- ◆ 2 gang socket box compatible (supplied)
- ◆ Available in Black, White, Grey and Silver

Code 29805ST	6 Way Masterpiece Outstation Status Version – Black
Code 29805STW	6 Way Masterpiece Outstation Status Version – White
Code 29805STG	6 Way Masterpiece Outstation Status Version – Grey
Code 29805STS	6 Way Masterpiece Outstation Status Version – Silver
Control buttons	6, each binary coded to select any Environment or Environment Chase via 6 way DIL switches
Termination	2 x 8 way terminal strips (1 x control + 1 x LEDs)
Power supply	18 to 25V DC (from Masterpiece RemoteControl Socket)
LED Status Indicators	6, 0-10V
Output channels	6, binary coded
Dimensions	H81, W146, D48mm, 0.4 kg

Masterpiece Flight Cases

A flight case is available for the Masterpiece range. This quality flight case is the ideal housing for use on the road. The case features a lockable, removable lid and the controller can be sloped to make operation easier when opened.

21707	Masterpiece 8U Road Quality Flight Case

Masterpiece Accessories

24301.1	Masterpiece Monitor for Screen Driver
4327	Masterpiece Gooseneck Lamp
22202	Masterpiece/Screen Driver RAM Card (128kb)

Minipiece™ 54

Minipiece™ 54

- ◆ 54 channels of DMX digital output
- ◆ 30 programmable real-level Scene memories
- ◆ 3 Chases with individual Speed and Slope controls, fade in and out time
- ◆ Variable Crossfade time between Scenes and Chases
- ◆ Compact 19"(3U) panel mounting or free-standing enclosure
- ◆ Dual low voltage and mains power supply capability
- ◆ Set User Access Level (SUAL) system to protect settings
- ◆ Perfect for Architecture, Band, Exhibition and small Theatre
- ◆ Available in Black, White, Grey and Silver

Code 20054	Minipiece 54 – Black
Code 20054W	Minipiece 54 – White
Code 20054G	Minipiece 54 – Grey
Code 20054S	Minipiece 54 – Silver
Power supply	18-25V (XLR5-pin5) / 100-240V AC, 50-60Hz 5W (IEC cable supplied)
Control channels	54 fully dimmable
Outputs	1 x DMX via trailing 1.5m XLR5
Dimensions	H 133mm (3U), W 482.6 (19"), D 100mm
Weight	2.3 kg

The Pulsar Minipiece 54 controller has been designed to cater for many applications where up to 54 DMX control channels are required. The unit is ideal for bands, exhibition stands, small theatres and architectural applications – in fact anywhere where a small compact easy to use memory desk is required.

The Minipiece 54 is easy to program and operate by untrained personnel and the provision of a Set User Access Level (SUAL) system allows for protection of settings and can further simplify user operation. 30 real-level Scenes that each contain any of the 54 output channels are provided along with 3 programmable Chases for when continuous sequencing is required.

Minipiece will automatically swap between Scenes and Chases with a selectable cross-fade speed of 0-600 seconds (10 minutes). A special user function provides the ability to run all 3 Chases together along with 1 Scene, this allows for advanced usage with moving lights for example.

The Minipiece 54 is fitted with angle brackets to allow desktop use, these may be removed allowing the unit to be 3U 19" rack mounted. To cater for different environments the Minipiece 54 is available in Black, White, Grey and Silver.

The Minipiece 54 can be powered by both mains and low voltage.

The Pulsar Minipiece 54 provides a cost effective and simple, yet highly effective, control solution to many of your control requirements.

OS1 - Outstation OS1 Control Desk

The Outstation OS1 is a compact 60 Scene (5 Pages of 12) 54 Channel DMX programmable control desk that is ideal as an architectural controller and as a remote for our ChromaZone, ChromaBank, ChromaFloods or ChromaBattens.

It is beautifully finished in stainless steel, fitted with chrome push buttons and a blue display, so it will fit into any decor.

The OS1 is ideal for offices, bars, restaurants or foyers – in fact anywhere an easy-to-use-and-program controller is required.

The OS1 is powered with a Low Voltage Supply of 8-25V DC @ 60-25mA connected to pin 5 of the provided 5 pin XLR or by hardwiring to the lever operated terminal block on the Printed Circuit Board (PCB).

This supply is available from the ChromaZone and ChromaBank. On these products, set DIL switch 12 up. The blue LED will illuminate to show power is connected to pin 5 of the male XLR socket.

OS1	Outstation 1 54 Channel DMX Controller
Dimensions	H 145 x W 85 x D 35mm
Weight	0.9 kg
21850	OS1 to Masterpiece RS232 remote control and power cable

Minipiece/OS1

18 Channel Rock Desk

- ◆ 12 Matrix masters
- ◆ Two chases
- ◆ Speed & Slope Control
- ◆ Flash button master
- ◆ 18 Output Channels
- ◆ DIN and BICC outputs
- ◆ 12 Flash buttons
- ◆ Expandable

The desk is equipped with 12 faders patched via a matrix of miniature switches into 18 output channels. Each fader can group together any of the output channels, allowing you to program reds onto one fader, blues onto the second, greens onto the third for example, or any other combination. Each fader has its own flash button and can also be included in a chase. Master faders are fitted to control individually the overall level of matrix, chase and flash button sections. Two chase sequences can be programmed with full control over speed and crossfade slope. The crossfade control alters the slope on the chase, making possible slow crossfades or sharp chase effects. Chases may also be superimposed on other settings on the matrix. Select switches are provided for blackout/go, chase pattern 1 or 2, forward/reverse chase and run/single step. In the single step mode the chase is activated by the step flash buttons, either forward or reverse, by one step each time the button is pressed. An optional foot-switch allows remote control. Designing your lighting rig around a Pulsar Rock Desk gives you the flexibility and wide range of effects demanded by today's top performers.

Product Code 24400	18 Channel Rock Desk
Power supply	18-25V DC (supplied from dimmers)
Control channels	18 fully dimmable
Outputs	Analogue 1-18 x 0-10V
Output Connectors	6 x 8-pin DIN and 1 x 18 channel BICC
Dimensions	H 266mm (6U), W 483, D 150mm, 6.6 kg

Two Preset Desk Range

Standard Features
- ◆ High quality sliders
- ◆ 0-10V positive output, diode protected
- ◆ 10 Metre DIN cables supplied
- ◆ Electrical Safety – IEC65, EN60065, BS415
- ◆ Low voltage powered from Pulsar Power Packs
- ◆ EMC – EN50081-1, EN55022, EN50082-1
- ◆ Rack Mounting – IEC297
- ◆ Index of Protection – IP20
- ◆ Marking Directive 93/68/EEC – 89/336/EEC
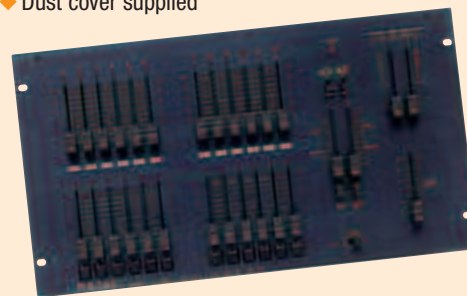
12 and 18 Channel Two Preset Desks

- ◆ Analogue outputs via DIN connectors (10 metre cables supplied)
- ◆ DMX output via 5-pin XLR connector
- ◆ Easily expandable via Master/Slave mode
- ◆ Two timers (0-360 seconds)
- ◆ Free-standing brackets supplied
- ◆ 19" 6U format allows for rack and console mounting
- ◆ Capable of acting as DMX multiplexer (converting analogue to DMX)
- ◆ Grand Master
- ◆ Two presets
- ◆ Two preset Masters
- ◆ Dipless Crossfade
- ◆ Flash buttons
- ◆ Dust cover supplied

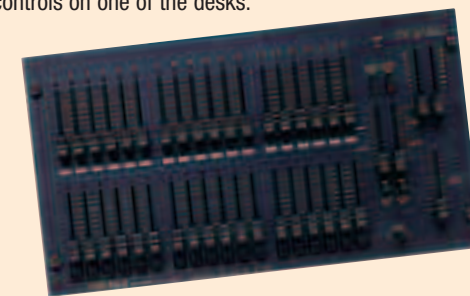| Code 23940	12 Channel Two Preset DMXDesk
Cables Supplied	2 x 10m 8-pin DIN-DIN
	1 x 1.5m trailing 5-pin XLR female
Dimensions	H 266 (6U) x W 483 (19") x D 130mm, 5.2 kg

The 12 and 18 Channel Desks have identical features and are designed for use in drama and stage lighting.

Each desk has 2 sets of preset faders, both fitted with a 0-360 second timer and a crossfade master. Dipless crossfade is a standard feature with a choice of 'pile-adding' or 'averaging' modes of operation.

Each channel has a flash button linked to a master disable switch. There is a Blackout switch for the faders of each preset, while a Grand Master controls the overall level of the desk. The 2 preset desks are designed with expandability in mind and you can easily set up a 24, 30 and 36 channel system by adding extra desks, cross-linking them and switching control to the master controls on one of the desks.

| Code 23950	18 Channel Two Preset DMX Desk
Cables Supplied	3 x 10m 8-pin DIN-DIN
	1 x 1.5m trailing 5-pin XLR female
Dimensions	H 266 (6U) x W 483 (19") x D 130mm, 5.8 kg

18 Channel Single Preset Desk/Tester with DMX

The 18 channel analogue desk is also available with a DMX output. This model is ideal for the controlling and testing of Clay Paky moving lights in addition to the conventional control of DMX dimmers. The unit is 19" rack mount and comes complete with angle brackets for desktop use.

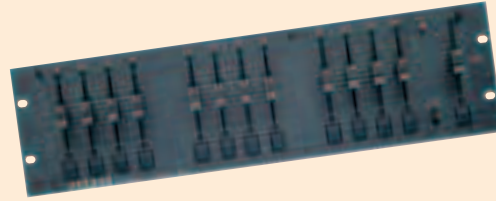| Code 23930	18 Channel Single Preset Desk/Tester with DMX
Cables Supplied	1 x 1.5M trailing 5-pin XLR male
Dimensions	H 133 (3U) x W 483 (19") x D 70mm
Weight	1.8 kg

18, 12 & 6 Channel Single Preset Desks

◆ Grand Master Slider
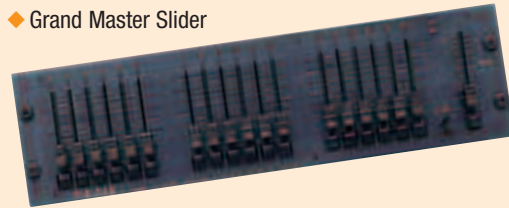
Code 23920	18 Channel Single Preset Desk
Cables Supplied	3 x 10M 8-pin DIN-DIN
Dimensions	H 133 (3U) x W 483 (19") x D 70mm
Weight	1.8 kg

Pulsar Control Desks offer you technical excellence and outstanding reliability at a highly competitive price. 6, 12 and 18 Channel Desks are available. The 6, 12 & 18 Channel Single Preset units feature flash buttons on each channel and a master fader controlling the overall output of the desk. These desks are ideal for use by smaller drama societies, schools and clubs. All are fitted with the same slider controls used on our larger desks which have a very smooth positive action and steel shafts for greater strength and reliability. Every desk is supplied with the appropriate number of 10 metre, 6

Code 23910	12 Channel Single Preset Desk
Cables Supplied	2 x 10M 8-pin DIN-DIN
Dimensions	H 133 (3U) x W 483 (19") x D 70mm
Weight	1.8 kg

channel DIN cables. These units are also suitable for installations in hotels, restaurants and clubs. All lighting may be wired to dimmer packs at a central point, control panels then individually positioned where convenient, requiring only a low voltage connection to the dimmer pack. The 12 and 18 channel units are standard 19" rack and 3 units in height, whilst the 6 channel model is designed to fit a double-width conduit box. A flexible control system may be built up with advantages of savings in energy costs, installation costs and greater ease in controlling the atmosphere for differing types of function or times of day.
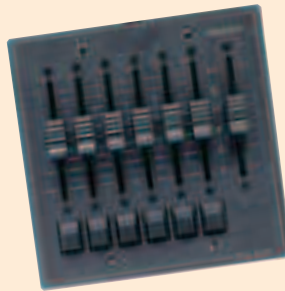
Code 25200	6 Channel Single Preset Desk
Cables Supplied	1 hardwired 10M 8-pin DIN
Dimensions	H 145 x W 145 x D 35mm
Weight	1.5 kg

3 & 4 Channel Slider Desks

The competitively priced 3 & 4 Channel Desks are supplied complete with 10 metres of DIN signal cable. These desks are ideal for use with our 3 and 4 channel Minipaks making them ideal for smaller drama societies,

schools and clubs. These units are also suitable for installations in hotels, restaurants and clubs where all lighting may be wired to dimmer packs at a central point, control panels then individually positioned where convenient, requiring only a low voltage connection to the dimmer pack. The 4 channel version additionally features channel flash buttons.

Code 23100.2	3 Channel Desk
Cables Supplied	1 hardwired 10M 8-pin DIN
Dimensions	H 145 x W 85 x D 35mm
Weight	1.0 kg

Code 23705	4 Channel Desk
Cables Supplied	1 x 10M 8-pin DIN-DIN
Dimensions	H 145 x W 85 x D 35mm
Weight	1.3 kg

## Single Channel Slider Desk

◆ LED Power Indicator

The Single Channel Desk is ideal for applications where a single control slider is required. The slider gives 0-100% control of a single channel 0-10V output channel. A Flash Button is provided, allowing this channel to be flashed to 100%. The indicator LED shows when power is being applied to the unit. This desk is particularly suited to the Clay Paky range of Smoke Machines.

Code 23600.4	1 Channel Desk + Flash Button + LED
Cables Supplied	1 x 10M 8-pin DIN-DIN
Dimensions	H 145 x W 85 x D 35mm
Weight	0.9 kg
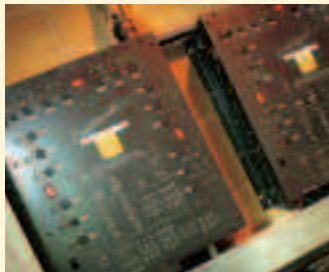
The Datapak™ Range

◆ 6, 9, 12 or 18 channel versions available

◆ 5, 10 or 20A per channel load capability

◆ Fully inductive and/or resistive compatible at any load

◆ Outputs protected by fuses or double pole circuit breakers depending on the model

◆ Dimming or Switching

◆ Preheat facility on dimming versions

◆ 100 – 240V AC, 1, 2 or 3 phase 50-60 Hz

◆ Analogue 0-10V – PMX digital (RS232) – DMX digital inputs

◆ Internal channel override and test switches for ease of installation

◆ Internal diagnostic indicators for analogue and digital input

◆ "Status" Indicators show output status for each channel

◆ All connections accessible by removal of front cover

◆ Wall or 19" rack mounting

Pulsar's Datapak range has been specially designed with cost effective permanent installations in mind. The digital input and ability to be either wall or rack mounted makes the range ideally suited to high quality professional applications. The Datapak range of power packs provides the same electronic reliability as our full range of rack mounted dimming and switching packs. All models within the range are capable of receiving the 3 major control standards – Analogue 0-10V, PMX and DMX using an internal demultiplexing system with full diagnostic indication that makes them ideal for large scale installation.

All units in the Datapak range will accept mains voltage in the range of 100 – 240 V AC, 1 or 3 phase, star or delta, frequency 50-60Hz. There is no voltage selector as the electronics automatically adjusts to the incoming voltage and frequency. Three phase supply neons are also provided to show when there is mains voltage at the Datapak. An electronics on/off switch with built in indicator neon, controls the power to the electronics.

Pulsar Datapaks use the very latest techniques (pioneered by Pulsar) to completely eliminate the need for routine adjustments. The sophisticated circuits we have developed, are self stabilising against changes in mains voltage, mains frequency, top and bottom control voltage levels, preheat drift, drifting of component values, etc.

On the front panel two sets of indicators are provided; fuse blown neons (Red) which show when their channel fuse has blown, and output monitor neons (Green) that show the status of the output.

All dimming versions feature a lamp preheat switch which prevents the lamp filaments from cooling right down. This can be used to prevent heavy surge currents that occur when cold filaments are switched on, thus extending lamp life.

Additionally, input smoothing is used to control attack and decay times to extend lamp life and ensure flicker free operation.

Dimming versions allow for channels to be selected to "Switch" mode allowing the pack to be used for both dimming or switching.

The Datapak range features many internal controls and indicators designed to assist the installation and service engineers. Some of the internal features include:

Normal/Full-on channel test switches – one per channel. The switches should be in the "norm" position for control from a desk. Use the "full on" position for testing and diagnostics without having to connect a desk.

Output monitor LEDs (Green) – one per channel, indicating its status before the output circuitry (triac, choke etc.). Thus it may be used in conjunction with the output "monitor neon" to indicate the location of a possible fault.

Digital circuitry LEDs (Red) – there are four LEDs provided. The DMX and PMX (Pulsar MultipleX using RS232/423) LEDs show the type of data being received by the Datapak, the ERR LED indicates an ERRor in the received data, and the RX LED shows when data is being received. The software automatically recognises both DMX and PMX.

Digital start address select and test switches are provided to allow the installer to select the required digital start address for the Datapak. A test switch also provides an automatic internal test sequence where a block of 3 channels moves through the Datapak channels.

Code	Datapak Description	width	height	depth	weight
29900.3BR	12x5A Dimming + Breakers	482.6	533.4	150	11.5 kg
29901.3BR	12x10A Dimming + Breakers	482.6	533.4	150	12.0 kg
29902.3BR	18x5A Dimming + Breakers	482.6	533.4	150	14.0 kg
29903.3BR	18x10A Dimming + Breakers	482.6	533.4	150	14.5 kg
29905.3	6x5A Dimmer Datapak	482.6	266.7	150	6.0 kg
29906.3	6x10A Dimmer Datapak	482.6	266.7	150	6.5 kg
29900.3	12x5A Dimmer Datapak	482.6	533.4	150	11.5 kg
29901.3	12x10A Dimmer Datapak	482.6	533.4	150	12.0 kg
29902.3	18x5A Dimmer Datapak	482.6	533.4	150	14.0 kg
29903.3	18x10A Dimmer Datapak	482.6	533.4	150	14.5 kg
29904.3	9x20A Dimming Datapak	482.6	533.4	150	14.5 kg
29950	12x5A Switching Datapak	482.6	533.4	150	10.0 kg
29951	12x10A Switching Datapak	482.6	533.4	150	10.0 kg
29953	18x10A Switching Datapak	482.6	533.4	150	10.5 kg

Code	Description	width	height	depth	weight
29811	12 x 5A 2 Pole Breaker Unit	482.6	177	140	4.5 kg
29812	12 x 10A 2 Pole Breaker Unit	482.6	177	140	4.5 kg
29817	18 x 5A 2 Pole Breaker Unit	482.6	177	140	4.5 kg
29818	18 x 10A 2 Pole Breaker Unit	482.6	177	140	4.5 kg

Datapak™

Breaker Datapaks

The Breaker Datapaks feature the latest double pole thermal-magnetic circuit breakers, which offer thermal trip protection against long-term overload and magnetic trip for instant disconnection of fault currents.

The double pole circuit breakers provide total circuit isolation, for optimum safety with each circuit breaker fully isolating both poles of each circuit. The breakers also allow channels to be independently turned off for maintenance operations etc.

12 & 18 Channel Circuit Breaker Units
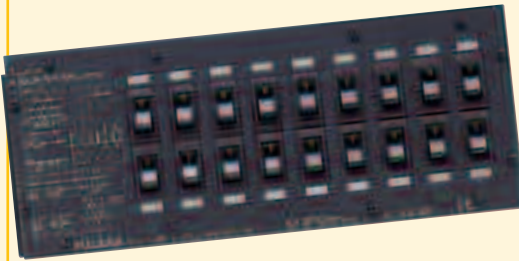
- ◆ 12 or 18 channel versions available
- ◆ 5A or 10A breaker options
- ◆ Compact 19" 4U rackmount format
- ◆ May be directly wall mounted
- ◆ Double pole output protection
- ◆ Suitable for any voltage
- ◆ Lever operated terminal connections for speed and reliability
- ◆ Ideal for use with Pulsar Datapak or Rackpak

These units complement our range of packs. They may be wall mounted for use with our Datapaks or rack mounted (4U high) for use with our Rackpaks. They provide 2 pole overcurrent protection and isolation – particularly useful for 3 phase delta supplies. The breakers are mounted on a PCB and each is provided with input and output, lever operated, terminal blocks for speed of wiring and for reliability of connection.

Minipak ™

Minipak™ Range

Minipaks are the ideal solution for small mobile dimming applications and are perfect for school, college or drama productions, whilst the hardwired versions are ideal for many smaller installations.

With a power rating of 5 Amps per channel over either 3 or 4 channels, the Minipak is ideal when mounted close to the lanterns it controls, such as on a lighting stand or on a wall next to the lanterns in a fixed installation. The units are fitted with output options including hardwired, Bulgin, IEC, 15 Amp or 110V sockets, while the 0-10V input signals are supplied via locking DIN connectors. Mains supply is via a 10 metre cable. Each channel is individually fused with fast acting fuses to protect the outputs.

SW6000-19" ™

The SW6000 is capable of controlling any resistive load such as tungsten lighting and any inductive load such as neon, pinspots, properly ballasted fluorescent lamps and motorised effects.

The unit is designed to operate on 100-240V AC, 50-60Hz mains supplies and can handle 5 Amps per channel with a maximum total load of 15 Amps. Each of the 6 switching channels has a LED indicator, override control switch and a 5 Amp protection fuse on the front panel. On the rear a single IEC mains output connector is provided for each channel. Low voltage control input is 0-10V provided via two 8-pin DIN connectors mounted on the rear panel.

Code	Minipak Model	width	height	depth	weight
27700	3 x 5A - 6 x IEC Sockets+Plugs	314	178	80	4.5 kg
27730	3 x 5A - 3 x 15A Sockets	314	178	80	4.5 kg
27740	4 x 5A - 8 x IEC Sockets+Plugs	314	178	80	5.0 kg
27750	3 x 5A - Hardwired	314	178	80	4.5 kg
27760	4 x 5A - Hardwired	314	178	80	5.0 kg
27780	3 x 5A - 6 x Shuko Sockets	314	178	80	5.0 kg
29209	SW6000 Switching pack	483	44	206	2.9 kg

UniPak™ 1 Channel Digital Dimmer/Switch

The Pulsar UniPak is ideal for local control of all types of lighting, including discharge, fluorescent, neon, tungsten, low voltage, intelligent projectors and other loads such as electric motors and heaters.

- ◆ 10A rating – internal 10A HRC fuse
- ◆ 100-240V AC, 50-60Hz, auto-sensing mains input
- ◆ Capable of dimming or switching resistive and inductive loads, and switching capacitive loads (loads with PFC capacitors)
- ◆ Connections are by lever operated terminals for quick economical installation and reliable operation or XLR and Speedcon on the socketed version
- ◆ DMX (Digital MultipleX)/PMX (Pulsar MultipleX) control signal input/thru
- ◆ Up/Down HTU type address selection for digital input

Code	Description	W	H	D	Wt
UNIPAK HW	1 Channel Digital Dimmer/Switch Hardwired Version	255	110	60	1.0 kg
UNIPAK SKT	1 Channel Digital Dimmer/Switch Socketed Version	255	110	60	1.0 kg

Rackpaks

The range of Pulsar Rackpaks encompasses equipment suitable for the smallest venue up to the largest. Exported throughout the world, Pulsar Rackpaks are available in a wide range of configurations and are suitable for many different markets. Rackpaks are designed with electrical characteristics to tolerate wide differences in electrical supplies across the world. Within the range, models providing 1, 2 or 3 phase, star or delta, mains supply capability are available. All Rackpak units are designed to accept analogue control as standard with the option of an easily fitted PMX/DMX input kit to provide digital compatibility when required.

Rackpak™ Standard Features

◆ 0-10V control input by locking 8-pin DIN socket
◆ 100-230V AC, 50-60Hz, auto-sensing
◆ Suitable for resistive and/or inductive loads with no minimum load requirement
◆ Outputs protected by fuses or double pole circuit breakers depending on the model
◆ Low voltage power supply to feed control desks
◆ Electronics On/Off switch with built in indicator neon controlling the power to the electronics
◆ Channel fuse blown neon indicators
◆ Dimming versions feature lamp Preheat switch to extend lamp life
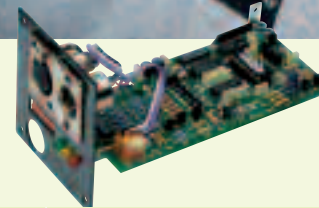◆ Input smoothing extends lamp life and ensures flicker free operation

Status Option Packs

Many Rackpaks are available as status-ST versions. They feature additional operator visual feedback by adding channel status indicators for each channel. In addition to this, individual override and test control is also provided for each channel. The features provided by the status range make rigging and testing on the road a much simpler task.

PMX/DMX Digital Input Rackpak Kit

The Rackpak range can be easily converted to provide digital input with the addition of a PMX/DMX card.

Code 28806	6Ch PMX/DMX optional kit for Rackpaks
Control connectors	1 x 5-pin XLR-F (In), 1 x 5-pin XLR-M (Thru)
Product weight	0.2 kg

Breaker Rackpaks

The Breaker Rackpaks feature the latest double pole thermal-magnetic circuit breakers, which offer thermal trip protection against long-term overload and magnetic trip for instant disconnection of fault currents.

The double pole circuit breakers provide total circuit isolation, for optimum safety with each circuit breaker fully isolating both poles of each circuit. The breakers also allow channels to be independently turned off for maintenance operations etc.
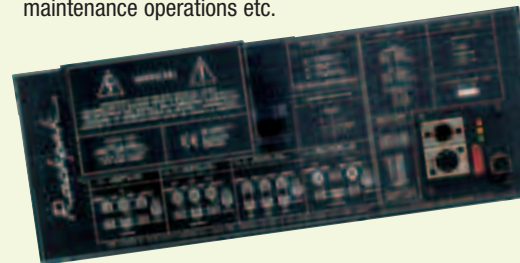
Code 21112BRDX	4U 6x10A Dimming Breaker 12 x Shuko skts
Code 21118BRDX	4U 6x10A Dimming Breaker 12 x 15A skts

4 Unit Rackpaks

The Pulsar 10 Amp 4 Unit Rackpak offers an ideal solution to high power dimmer requirements. The units have channel output connectors mounted on the front panel with many different output configurations available. They are designed for either fixed installation or in touring racks.
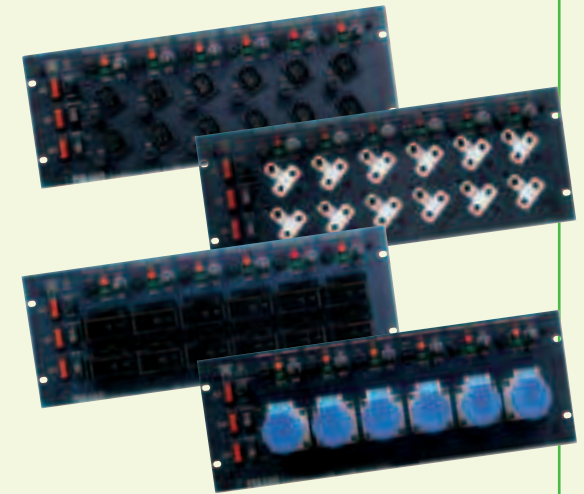
All 4 Unit Rackpaks have the following common features:

Status features	6 x level control pots, 6 x output neons
Mains supply	100-240V AC, 50-60Hz @ 60A (full load) 1-3 phase
Load outputs	6 x 10A Inductive and/or Resistive
Control channels	6 x 0-10V analogue via 8-pin DIN socket (optional DMX)
Dimensions	W482.6mm(19") x H177.8mm(4U) x D240mm
Shipping details	540 x 280 x 260mm 7.5 kg

Code 21112ST	6 x 10A Rackpak Status – Schuko
Output connectors	12 x Schuko sockets, 2 per channel
Code 21115ST	6 x 10A Rackpak Status - French
Output connectors	12 x French sockets, 2 per channel
Code 21116ST	6 x 10A Rackpak Status – IEC
Output connectors	12 x IEC sockets, 2 per channel (plugs supplied)
Code 21118ST	6 x 10A Rackpak Status - 15A
Output connectors	12 x 15A sockets, 2 per channel
Code 21119ST	6 x 10A Rackpak Status - CEE17
Output connectors	6 x CEE17(16A) sockets, 1 per channel

2 Unit Rackpaks

The Pulsar 2 Unit Rackpak™ is the basis of our Portapak series of professional dimmers. The units are compact and offer 100% duty cycle capability. Supplied in basic hardwired format with cable glands, the unit may be fitted with a wide range of output options.

All 2 Unit Rackpaks have the following common features:

Output connectors	Hardwired with 2 x knockout plate (interchangeable)
Dimensions	W482.6mm(19") x H88mm(2U) x D240mm
Shipping details	540 x 280 x 160mm 6.0 kg

6 x 5A Rackpak Dimming

Code 25902AA	6 x 5A Rackpak Dimming
Mains supply	100-240V AC, 50-60Hz @ 30A (full load) single phase
Control channels	6 x 0-10V analogue via 8-pin DIN socket (optional DMX)

6 x 5A Rackpak Status Dimming

Code 25902ST	6 x 5A Rackpak Status Dimming
Status features	6 x level control pots, 6 x output neons
Mains supply	100-240V AC, 50-60Hz @ 30A (full load) single phase
Control channels	6 x 0-10V analogue via 8-pin DIN socket (optional DMX)

6 x 5A Rackpak Switching

Code 25802AA	6 x 5A Rackpak Switching
Mains supply	100-240V AC, 50-60Hz @ 30A (full load) single phase
Control channels	6 x 0-10V analogue via 8-pin DIN socket (optional DMX)

6 x 10A Rackpak Status Dimming

Code 28802ST	6 x 10A Rackpak Status Dimming
Status features	6 x level control pots, 6 x output neons
Mains supply	100-240V AC, 50-60Hz @ 60A (full load) 1-3 phase
Control channels	6 x 0-10V analogue via 8-pin DIN socket (optional DMX)

6 x 5A Rackpak Status Switching

Code 25802ST	6 x 5A Rackpak Status Switching
Status features	6 x Test (full) switches, 6 x output neons
Mains supply	100-240V AC, 50-60Hz @ 30A (full load) single phase
Control channels	6 x 0-10V analogue via 8-pin DIN socket (optional DMX)

6 x 10A Rackpak Status Switching

Code 28702ST	6 x 10A Rackpak Status Switching
Status features	6 x Test (full) switches, 6 x output neons
Mains supply	100-240V AC, 50-60Hz @ 60A (full load) 1-3 phase
Control channels	6 x 0-10V analogue via 8-pin DIN socket (optional DMX)

8x5A Dimmer Pack Hardwired

This special 8 channel pack is designed to accommodate 8 channels of 5A dimming control housed within a 2U 19" enclosure. The unit is compact and offers 100% duty cycle capability.

| Code 26452AA	8 x 5A Dimmer Pack Hardwired
Mains supply	100-240V AC, 50-60Hz @ 40A (full load) single phase
Control channels	8 x 0-10V analogue via 8-pin DIN sockets

6 x 10A Breaker Dimming Hardwired

Code 28802BRDX	6 x 10A Breaker Rackpak Dimming H/W (DMX)
Status features	6 x level control pots, 6 x output neons
Mains supply	100-240V AC, 50-60Hz @ 60A (full load)
Control channels	6 x 0-10V analogue via 8-pin DIN socket DMX via 1 x 5-pin XLR-F (in), 1 x 5-pin XLR-M (thru)

2U Power Pack Back Plates

A wide variety of pre-wired socket panel options are available for the 2U range of packs. The panels provide increased connectivity making them ideally suited to mobile and touring applications. The panels replace the knockout back plate and glands normally supplied. Each back plate is provided with ring connectors and cables to enable easy installation.

| 2U Power Pack Back Plate - Bulgin	
23702	4 Channel 2 x Bulgin sockets (P552)
2U Power Pack Back Plate - 110V	
28901.3	3 Channel 3 x 110V sockets
2U Power Pack Back Plate - 6 x IEC	
28901.6	3 Channel 6 x IEC sockets (parallel wired)
28901.5	3 Channel 6 x IEC sockets (series wired)
2U Power Pack Back Plate - Harting	
28901.7	1 x Harting socket
2U Power Pack Back Plate - Socapex	
28901.2	6 Channel 1 x Socapex socket
2U Power Pack Back Plate - IEC	
28901.4	3 Channel 3 x IEC sockets (plugs included)
2U Back Plate Panels (panels only, no sockets supplied)	
28901.9	Blanking back plate
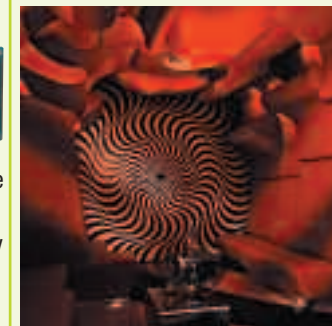
Universal Interface™

The Universal Interface decodes DMX, PMX/RS232 signals or MIDI format, into channels of analogue 0-10V.

◆ Low voltage supply, needs no mains connection, receives its low voltage supply from Pulsar power packs or power supply

◆ XLR 5-pin in and thru connectors for Pulsar MultipleX (RS232) and DMX protocols

◆ DIN 5-pin in and thru for MIDI protocols

◆ DIN 8-pin female 0-10V output to devices or power packs

◆ 0-10V output channels short-circuit protected and diode isolated

36 Channel Universal Interface
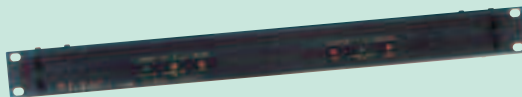
18 Channel Universal Interface
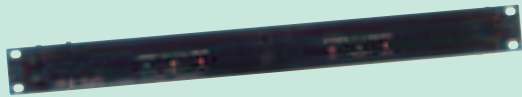
6 Channel PMX/DMX Interface

◆ Receive and data error LED indicators

◆ PMX (Pulsar MultipleX using RS232) and DMX data input compatible

◆ 6 channel 0-10V output

The 6 Channel PMX/DMX Interface is suitable for use with any Pulsar 3 or 4 Channel Minipak, 6 Channel Rackpak, older style non-DMX Clay Paky scan or for use in OEM applications. The unit decodes a block of 6 channels from a standard PMX/DMX signal into six 0–10V outputs. The enclosure allows mounting on truss or direct wall fixing.

Data Splitter

◆ Distribution of digital signals from DC to 500KHz

◆ In/Thru and 8 independent outputs

◆ Protection on all inputs and outputs

◆ Compatible with DMX, PMX, RS232, RS423, RS422, RS485 etc).

◆ 100-240V AC, 50-60Hz, mains input or 12-25V DC

◆ Mains On/Off switch with indicator neon

◆ Compact 1U 19" rack mount

◆ M10 sockets for G-Clamps to enable truss mounting

◆ All connections are by via locking 5-pin XLR (3-pin model also available)

PMX/DMX – Switching Interface

◆ 100-240V AC, 5 Watts, 50-60Hz mains input

◆ Digital start address DIL switch

◆ PMX (Pulsar MultipleX using RS232) and DMX data input compatible

◆ 5-pin XLR in and thru connectors

◆ Mono 1/4" type jack output sockets

The PMX/DMX – Switching Interface is designed to convert digital channel information into analogue trigger signals suitable for strobe lighting, thus enabling dimming and strobe type lighting systems to run through a single digital data cable.

Power Supply Unit

All Pulsar power packs provide a safe low voltage (18-22 Volt) output that is normally used to power Pulsar's smaller controllers and interfaces. The Power Supply Units can be used to provide this required supply for applications that do not require the use of Pulsar power packs. Two models are available, one with only DIN connectors and the other with both XLR and DIN connectors.

| Code	Description	width	height	depth	weight
27300	36 Ch Universal Interface	483	44	135	2.4 kg
27350	18 Ch Universal Interface	483	44	135	2.4 kg
27770	6 Ch PMX/DMX Interface boxed	83	222	70	0.7 kg
DS5	Universal Data Splitter 8 Way 5-pin XLRs	483	44	135	2.4 kg
DS3	Universal Data Splitter 8 Way 3-pin XLRs	483	44	135	2.4 kg
27400	PMX/DMX Switching Interface	140	280	65	1.5 kg
25101	LV Power Supply Unit XLR+DIN	163.7	135	54.7	1.1 kg
BI6CH	Ballast Interface (0-10 V to 1-10 V)	60	32	123	0.13 kg

6 Channel Ballast Interface

The Pulsar 6 Channel Ballast Interface is designed to interface 6 standard 0-10 Volt analogue outputs into 6 specialised 1-10 Volt analogue signals that are used on some equipment such as electronic fluorescent ballasts.

◆ 18-22 DC Supply @ 250 mA max required
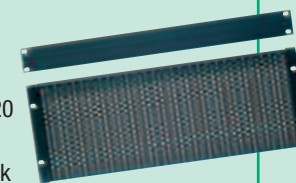
Rack Cabinets

Pulsar produce a very competitive range of rack cabinets and accessory panels. This allows us to produce a complete customised power control system using our own racks, panels, dimmers, switching packs and mains distribution units.

◆ Black powder coat finish

◆ 4, 8, 12, 20, 29 and 38 Unit versions

◆ 29U and 38U models supplied flat packed for transportation

◆ Recessed handles on all versions

◆ Supplied with 24 cage nuts, screws and washers
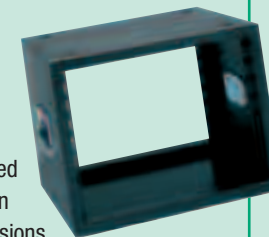
Rack Doors

◆ Chubb "star" type lock fitted

◆ Available for 4, 8, 12 and 20 unit racks

◆ Can be fitted front and back

Code	Description	Code	Description
	Rack Cabinets & Doors		**19" Rack Panels**
25400	4U Rack Cabinet	25125	1U Blank Panel
25600.1	8U Rack Cabinet	25126	2U Blank Panel
25600.2	12U Rack Cabinet	25047	3U Blank Panel
25600.2D	12U Rack Cabinet Deep Version	25048	4U Blank Panel
		25261	1U Ventilation Panel
25700	20U Rack Cabinet	25262	2U Ventilation Panel
26600	29U Rack Cabinet	25263	3U Ventilation Panel
26700	38U Rack Cabinet	25264	4U Ventilation Panel
25601.1	8U Rack Door		
25601.2	12U Rack Door		
25700.1	20U Rack Door		

Zero 4001™
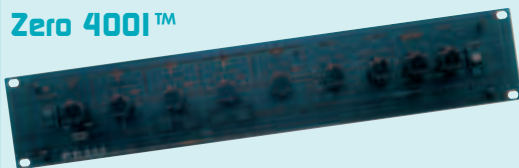
- 4 fully dimming 5 Amp Channels (15A total unit load maximum)
- 100-240V AC, 50-60Hz automatic self adjusting mains operation
- Interference suppression to EN55014, BS800, VDE0875 etc.
- Suitable for P.A.T. testing
- Bulgin, U-Ground, and IEC output versions available
- Standby/Go facility with remote control capability
- MASTER DIMMER control
- MANUAL flash buttons provide hands on channel control
- Individual CHANNEL switches control each channel independently
- 4 band Sound-to-Light with CONTRAST control and AVC
- 11 Chase Patterns with Auto Change facility and Slope to vary from gentle crossfade to stepping
- Direction control with Forward, Reverse, Bass, Bounce and Auto change facility
- Chase Speed control allows chases from 10 minutes per step to 50 steps per second
- Bass Burst chase facility
- Remote Control input socket

The ZERO 4001 has been designed for club, band, mobile and display applications and has been based upon the industry standard Zero 3000 and 4000 units. To these world famous units many additional features such as full dimming and remote control have been included by our research and development team to make the Zero 4001 the most comprehensive 3/4 channel effects controller available today.

Litefoot™

- Floor-standing foot control unit perfect for bands, duos etc.
- Robust construction using heavy duty switches for on the road use
- Blackout/Go switch perfect for the end of each number
- LiteFoot/Remote switch allows control to be passed on to another Litefoot or the 4 Channel Desk
- Run/Step chase selects run or step mode chasing
- Step switch advances the chaser
- Chaser/Soundlite changes from chase and Sound-to-Light modes
- Connects to Remote Control socket of Zero 4001

SLC4000-19 and SLC4000™

- Compact 1 Unit 19" rack mounting
- 100-240V AC, 50-60Hz – self adjusting
- 4 output channels of up to 5 Amps resistive and/or inductive load
- 4 IEC type output connectors
- Rear panel mounted 5 Amp channel protection fuses provided
- Twin stereo jack connectors for audio in/thru
- Sound-to-Light: Bass, Tenor, Alto and Treble audio bands
- Chase Pattern types: Light, Dark, Pairs and Auto-change
- Chase Direction modes: Forward, Reverse and Auto-change
- Constant or bass-burst chase speed
- Standby switch with remote socket

The SLC4000 features are as SLC4000-19 except:
- Compact free-standing enclosure
- Internally mounted 5 Amp channel protection fuses provided
- Bulgin (P552) multiway channel output connector

The SLC4000 and SLC4000-19 are capable of controlling any resistive load such as ordinary tungsten lighting and any inductive load such as neon, pinspots and motorised effects in any combination.

12 Way Switch Unit (Mains Voltage)
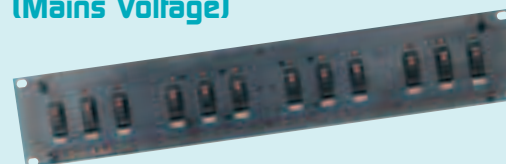
The SW12MV is capable of controlling resistive or inductive loads, allowing an easy and convenient way to turn on your ancillary equipment by the flick of a switch. It is 2U high and fits comfortably in any Pulsar 19" Rack Cabinet. 12 Neon Rocker Switches control the power to the outputs. Each switch is capable of taking a maximum of 10 Amps resistive, 3A inductive, with a total maximum of 20 Amps.

Input and output connections for hardwiring the mains input/output connections are provided on the rear of the units.

| Code	Description	width	height	depth	weight
23700UK	Zero 4001 with BULGIN P552 sockets	482.6	88.1	160	3.0 kg
23700IE	Zero 4001 with I.E.C. sockets	482.6	88.1	160	3.0 kg
23706	LiteFoot footswitch	425.0	64.4	106.8	1.5 kg
24700.2	SW12MV Mains Switch Unit	482.6	88.1	71.8	1.6 kg
29207	SLC4000	221.8	72.5	151.8	1.7 kg
29208	SLC4000-19 x 1 Unit	482.6	43.6	205.2	2.9 kg

Effects Control MV
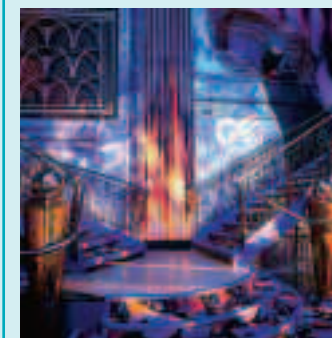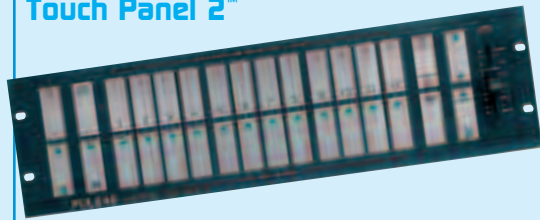
Touch Panel 2™

- Low voltage, 12 channel controller
- Can be used to run strobes directly
- Remote Standby input allows a "Master" Touch Panel to control "Slave" Touch Panels
- 12 on/off, latching pads – 1 per output channel
- 24 programmable touch pads (on 2 keyboards) – each one can control any combination of the 12 output channels
- Chase Keyboard with 4 Chases
- All 3 Keyboards may have Flash, Latching (toggle), Swop, or Solo action. Swop and Solo may work globally across the Keyboards
- 4 fully programmable Chases – total of 170 steps available
- Wide Chase speed control range: 30 steps/sec – 1 step in 10 mins
- Chase manual step
- Chase step input/output for synchronising groups of Touch Panels
- Audio circuits built in for Bass Step and Bass Burst of the Chases
- "Programmer" can deny "Operator" access to any pad
- Internal battery maintains memory of pad status and your program
- Battery recharges automatically during use

The Pulsar Touch Panel provides low voltage output signals to control 12 channels of lighting, motors and effects, strobes and other controllers. The unit is supplied with 12 on/off, latching pads. Additionally there are 24 programmable touch pads (on 2 keyboards) – each one can control any combination of the 12 output channels.

Modulator™
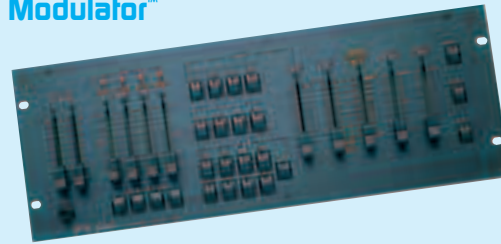
- 4 channels (shown above) or 3 channels (not shown)
- Individually selectable 3 zones of output to lights
- Dimming (0-10V output) for use with remote Pulsar Power packs
- Modulator 4 also features two auxiliary sliders
- Master and Individual channel control sliders
- Chaser: Constant speed/Music rev-up/Music rev-down/Bass step
- Reversing: Forward/Reverse/Auto reverse/Bass reverse
- Patterns: 8 patterns + auto change
- Speed, Effect mix, Sound-to-Light decay and contrast sliders
- Remote enable socket for Touch Panel input

The Pulsar Modulators provide features that allow the operator complete control over the lighting. Each unit possesses the same basic controls. Individual channel sliders are used either as straight-forward level controls or to set the average brightness. Each channel is also fitted with a flash button.

The chaser section offers a very comprehensive range of eight pre-programmed chase sequences which can be individually selected or automatically selected in turn through the auto-change facility. Chase can be at constant speed (set by a speed control) or controlled by music using music rev-up, music rev-down and bass step modes. The reversing section of the Modulator provides forward, reverse, auto-change and bass reversing functions. The operator can mix between combinations of chase and Sound-to-Light for some fantastic effects. The Sound-Light decay slider enables the operator to vary the decay time of the lights.

The Master Contrast is one of the most important controls because with it the operator sets the mood of the lighting. As the contrast level is increased the effect produced changes from soft to more dramatic. A Master Dimmer controls the overall lighting level and three Zone switches are fitted allowing the unit to control up to three different displays of lighting.

The units produce a low voltage output and are designed to be used with Pulsar's range of dimmer packs.

A zone switch remote control socket is provided. This means that each zone can be switched remotely by a Touch Panel.

12 Way Switch Unit (Low Voltage)

The SW12LV is intended for use as a remote switching controller. Switching (or Dimming) Packs (or any Pulsar product with input DIN sockets) may be controlled via the two DIN sockets located on the back panel, this will allow your SW12LV to switch on your Pack(s) from a different location. It is 1U high and fits any Pulsar 19" Rack Cabinet.

A master power switch controls the power from the controller to the 12 relevant channel switches with a red LED that indicates when power is applied to the unit. Each channel has its own On/Off Mini Rocker Switch, with a green monitor LED to show the state each channel is in.

Two output DIN sockets are provided on the back panel. The 12 way switch unit is ideally used together with the SW6000 (see page 16).

Code	Description	width	height	depth	weight
26000.3	Touch Panel 2	483	133	40	3.0 kg
25000	Modulator 4	483	177	43	3.4 kg
24750	SW12LV Low Voltage Switch Unit	483	43.6	31.8	1.0 kg

Demon Strobe™

- Powerful 1.5Kw linear strobe tube
- Remote control by digital (PMX & DMX) and analogue
- Push button decimal digital start address selection
- Three remote control channels (Trigger, Speed & Brightness)
- Speed & Brightness control knobs built into rear panel
- Power On/Off double pole circuit breaker with LED power indicator
- PMX, DMX and Data Error digital input indicator LEDs

The Pulsar Demon Strobe is designed to provide high power strobe lighting for entertainment. It features a powerful 1.5Kw linear tube, the light from which is concentrated by means of a linear parabolic reflector.

State of the art digital electronics provide both analogue and digital remote control inputs, with potentiometer Speed and Brightness controls provided for local control. Diagnostic LED indicators provide status information.

Due to the high power of the Demon Strobe, fan cooling is provided with speed controlled by software.

Code 27800	Demon Strobe
Power class	1.5Kw linear tube
Mains supply	100-240V AC, 50-60Hz single phase
Control channels	3 channels (Trigger, Speed & Brightness)
Digital input	DMX & PMX via 1 x 5-pin XLR-F (In), 1 x 5-pin XLR-M (Thru)
Analogue input	0-10V via 1 x 8-pin DIN socket (In), 1 x 8-pin DIN socket (Thru)
Trigger input	0-10V via 1 x mono 1/4" jack socket
Dimensions	W410 x H90 x D200mm (W465 x H160 x D200mm with bracket), 3.0 kg
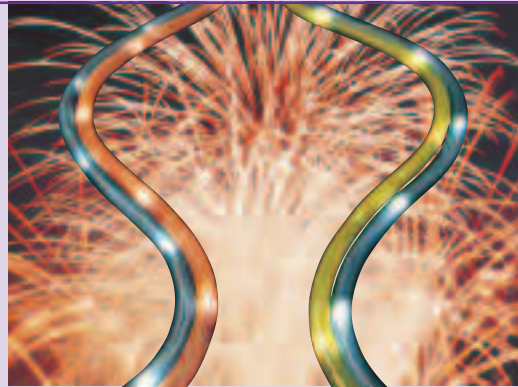
Flexi-Flash™ System

Flexi-flash and Rigi-flash system comprises the Flexi-flash controller together with a range of Flexi-flash and Rigi-flash tubes. Flexi-flash tubes are 10m long by 60mm in diameter and are available in clear and blue fluorescent. Each tube contains 20 strobe circuits linked by three core cable to the controller. Rigi-flash tubes are 1.8m long by 55 mm in diameter and are also available in clear and blue fluorescent. Each tube contains 4 strobe circuits, linked by three core cable to the controller.
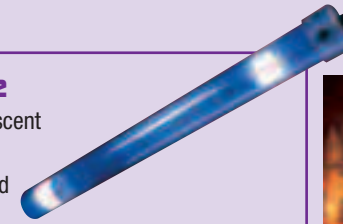
Flexi-Flash Tube
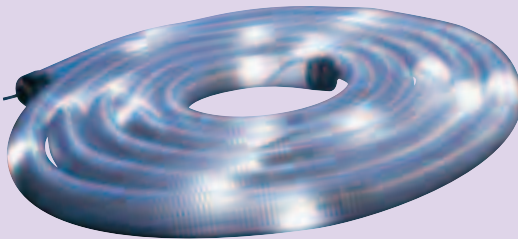
- Clear and blue fluorescent colours available
- Flash circuits mounted at 50cm centres
- Supplied in 10m lengths, can be cut to any length
- 20 flash heads per 10m length
- Extra end-caps and connectors supplied
- Branching possible, may be split in two between flash circuits
- Uses 3 core cable for all connections
- Fixing straps supplied

Rigi-Flash™ Tube

- Clear and blue fluorescent colours available
- Flash circuits mounted at 50cm centres
- Supplied in individual 1.8m lengths
- 4 flash heads per 1.8m length
- Branching possible, may be split in two between flash circuits

Flexi-Flash Controller
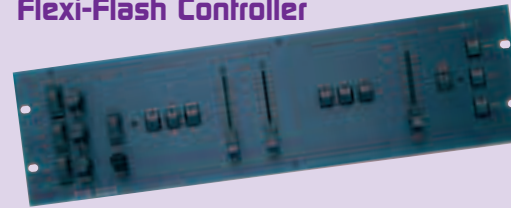
- Produces lightning streaks in either direction and at any speed
- Runs forward, reverse, both simultaneously, or auto reverse mode
- Streaks can be manual, bass beat or auto with speed control
- Controls up to 3 zones of tubes (up to 50m of tube per zone possible)
- Auto zone change facility
- 200-240V mains operation
- Remote control of all front panel controls, except Auto Zone Change, via 2 x 8 pin DIN sockets

The Flexi-flash controller will control Flexi-flash and/or Rigi-flash tube. Pulses are generated and sent to the tube, passing up or down, firing the strobe circuits. The controller can fire sequences forwards and backwards simultaneously and at different speeds. The direction can be selected manually or automatically.

Code	Description	width	height	depth	weight
29000	Flexi-flash Controller	483	132	75	3.5 kg
29100AA	Flexi-flash Clear 10m	60	10m		9.0 kg
29100AD	Flexi-flash Blue 10m	60	10m		9.0 kg
29101AA	Rigi-flash Clear 1.8m	55	1.8m		2.0 kg
29101AD	Rigi-flash Blue 1.8m	55	1.8m		2.0 kg
28069SP	Flexi-flash cable/metre				

Rainbow Strobe Controller™

- Strobe controller or lighting chaser
- 1/2/4/8 channels
- Audio input for bass burst
- 8 built-in patterns
- 100-240V AC, 50-60Hz

The Rainbow Controller offers a versatile choice of lighting effects, combinations and movements for the most sparkling lightshows.

Up to eight strobes can be controlled by the Rainbow in single flash or burst mode, either at constant speed or with bass burst.

The Rainbow Controller's 48 channel lighting chaser has eight pre-programmed chases, offering a choice of brilliant illumination in motion. Ordinary lighting can also be run by the Rainbow Controller using Pulsar switching or dimmer packs via DIN outputs.

Strobe Remote Controller

- Manual flash + speed control
- 100-240V AC, 48-62Hz

This simple, compact and inexpensive unit, just plugs in to give you control over strobes from a centralised position. It features a speed control, manual override, and off switch.

Strobes

- Speed 0.5-16 f.p.s.
- Patented circuit maximises light output at all speeds
- 3 secondary colour filters included - makes 6 colours
- Powerful beam from focused parabolic reflector
- Remote control input socket

Pulsar strobes are used to give a climax to lightshows with distinctive 'freezing' of motion. A jack socket is provided on all strobes to allow connection from a controller which provides a +10V pulse. Pulsar flash tubes are chosen for their long life and typically last about five million flashes. The parabolic reflector is made of highly-reflective, super-pure anodised aluminium.

Super-Maxi Strobe™

The most compact strobe within the range is the Super-Maxi Strobe. The cabinet holds the specially designed parabolic reflector and the unit is also fitted with a remote control socket for the Rainbow, Remote Control or other suitable controllers.

Jumbo Strobe™

The Jumbo Strobe is the professional choice. It features increased light output and is ideal for the stage use and is used all over the world. Used in combination with the Rainbow Strobe unit it gives a show that more than justifies its popularity.

Monster Strobe™

The Monster Strobe is the block-buster Pulsar strobe. The Monster is three times the power of the already powerful Jumbo. The Monster utilises the patented Pulsar strobe circuitry to produce an absolutely devastating effect.!

POWER RATINGS:	Watts	JF1	JF2
SuperMaxi Strobe	20	1.25	5
Jumbo Strobe	60	3.75	15
Monster Strobe	180	11.25	45
Joules per flash:	JF1 = @ 16 flashes per second		
	JF2 = @ 4 flashes per second		

Code	Description	width	height	depth	weight
20450	Rainbow Strobe Controller	483	88	75	2.1 kg
21000	Strobe Remote Controller	152	102	51	0.8 kg
21300	Super-Maxi Stobe (230V)	230	310	120	3.7 kg
20700.1	Jumbo Strobe (230V)	280	360	120	4.9 kg
28600	Monster Strobe (230V)	280	360	185	6.0 kg
24180	Replacement Super-Maxi Strobe Tube				
24181	Replacement Jumbo Strobe Tube				
23030	Replacement Monster Strobe Tube				
3181	Replacement Demon Strobe Tube				

Pulsar Luminaires

Our range of fully CE marked luminaires is suitable for many applications and is conceived, designed and manufactured to the highest standards.

The luminaire range covers usage from effects spots suitable for mobile, discotheque and effects applications through to stage lanterns suitable for educational, stage and architectural use.

Our luminaire range gives outstanding value for money and performance.

Par 64/56 Lantern

◆ 300-l000W PAR 64/56
◆ Spot, flood or wide flood
◆ Accepts colour gels

An attractively designed, rugged, lightweight lantern that will accept either a 300W PAR 56 or a 500W-1000W PAR 64 lamp. The filter change system is extremely simple to use especially as its built-in filter frame will accept untrimmed gels. Safety features meet all the required standards ensuring the lanterns can be CE marked.

Code	Description	width	height	depth	weight
22600	PAR 64/56 Lantern (black)	250	250	480	3.4 kg
22601	PAR 64/56 Lantern (silver)	250	250	480	3.4 kg
22602	PAR 64/56 Lantern (white)	250	250	480	3.4 kg

650W Fresnel

◆ 650W(T26), 500W(T18) or 300W(M38)
◆ 8.5 – 68 degree beam
◆ Includes gel frame

This model is the first in the 650W stage lantern range. The focus is adjustable giving a very wide range and making it possible to use the unit as a spot or flood. Other features include integral safety bracket, locking cup, sculptured matching lock-off and focus control knobs for smooth, accurate positioning and focusing.

The unit has a positioning handle on rear of unit, sprung gel frame retaining clip, hinged bottom tray for safety and ease when changing lamps, is insulation flash-tested, has cable heat protection and is supplied with one gel holder. The unit features an interchangeable lens and system to convert the unit to a pebble convex lantern.

650W Pebble Convex

◆ 650W(T26), 500W(T18) or 300W(M38)
◆ 6 – 71 degree beam
◆ Harder edged beam

This unit comprises the same 650W housing as the 650W Fresnel but fitted with a pebble convex lens. The advantage this gives is that a tighter focus can be obtained down to 6 degrees, making the unit a very effective spot.

650W Profile Spot

◆ Dual lens zoom/focus   ◆ 14 – 36 degree beam
◆ 4 Shutter blades   ◆ Optional gobo holder

Completing the 650W range is the 650W Profile Spot. Designed to full professional standards this unit enables the lighting designer to achieve a fully-focusable hard or soft-edged beam, together with all the usual facilities expected on a profile spot.

Code	Description	width	height	depth	weight
27000	650W Fresnel (black)	150	160	230	2.7 kg
27002	650W Fresnel (white)	150	160	230	2.7 kg
27102	650W Pebble Convex (white)	150	160	230	2.7 kg
27050	650W Profile (black)	150	160	440	4.0 kg
27052	650W Profile (white)	150	160	440	4.0 kg
68092	650W Barndoor	150	160	25	0.5 kg
27025.1	Gobo Holder 50mm	75	120	5	0.2 kg

500W Cyclorama Flood

Complementing the Pulsar stage spotlights is the Pulsar Cyclorama Flood. Using up to 500W linear lamps this unit provides even floodlighting over a wide area.

Code	Description	width	height	depth	weight
27200	500W Flood Light (black)	213	208	123	2.9 kg
27202	500W Flood Light (white)	213	208	123	2.9 kg

Pinspot Range

◆ Fitted with automatic self-resetting fuse
◆ 5.1V, 2500 hour tapping
◆ 6.0V, high brightness tapping
◆ 230V transformer

Pulsar pinspots are fitted with solid-state fusing, which gives complete protection, although tolerating short-term abuse without tripping unnecessarily. No longer is it necessary to dismantle an installed pinspot after fuse failure because the fuse will be automatically re-set after about one minute, provided the fault condition is no longer present. Protection covers all eventualities. The pinspot offers two possible voltages: 6.0V for high brightness giving a nominal lamplife of 250 hours (excellent for intermittent use on controllers) and 5.1V giving a nominal lamplife of 2500 hours (excellent for continuous use). Taking the various features together, high quality transformer, solid state fusing and extra long life for the lamps, we can truly say we manufacture a 'fit and forget' pinspot.

Code	Description	width	height	depth	weight
22400.2	Par 36 Pinspot (black)	120	130	140	1.2 kg
22400.5	Pinspot (gold)	120	130	140	1.2 kg
22402	Pinspot (white)	120	130	140	1.2 kg

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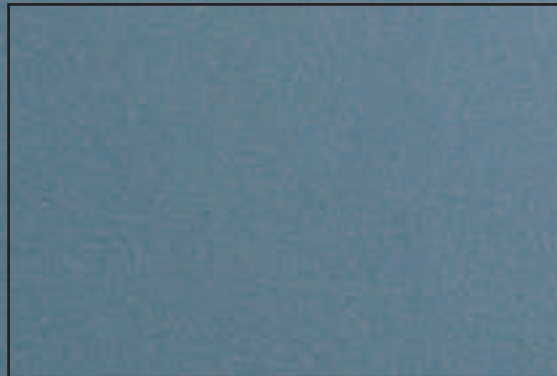
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which are used for illustrative purposes only and do not necessarily portray
our products in use in actual events.
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PULSAR
LIGHTING FOR EFFECT