SPECTRE KIT

Features of the Spectre

- 1500W dichroic floodlight
- Temperature controlled fan cooling.
- Extruded aluminium case
- Fitted with barn doors as standard
- Three 500W halogen lamps
- 65536 colours
- Built in dimmer
- Control from DMX, Midi or 0-10V analogue.
- 2 year warranty

Features of the SFC2

- Full control over colour and brightness
- Controls up to 32 Spectres or Mirages
- Four channel chase
- Four channel cross-fade chase
- Random colour change to sound
- Needs no separate power supply
- Bulit in microphone for sound activation

IMPORTANT

Installer and Users please note:

These instructions should be read carefully and left with the user of the product for future reference.

Installation

The Spectre must be installed by a competent electrician in accordance with the current IEE wiring regulations.

Fitting the lamps

• Unscrew the two fixing knobs at either side of the colour filter plate.Then remove the colour filter plate and reflector assembly by pulling forwards (this may be quite a tight fit).

• Remove each lamp from its outer packaging. Do not touch the glass bulb. Hold the lamp by its ceramic base, or with the paper packet in which it is supplied. If the bulb is accidentally touched, clean it before use with methylated spirit, otherwise lamp life may be reduced or the lamp could shatter due the deposits of grease from the skin reacting with the quartz at high temperature.

• Insert the lamp into the lampholder and make sure it is pushed in firmly.This type of lamp has a GY9.5 base, with one large and one small pin. This is to ensure that it is inserted the correct way round.

• Replace the colour filter and reflector assembly.

• Fix the Spectre with the hanging bracket provided. If the Spectre is to be mounted with the bracket below the product, then remove the handle, and re-assemble beneath the product. The Spectre must be installed the correct way up. Installing the Spectre upside down will seriously affect lamp life.

• To comply with Health and Safety legislation, a safety chain must be employed. A loop is provided at the top of the rear panel for fixing the safety chain.

This symbol means that the Spectre should be mounted at least 0.8m from any object that it is illuminating.

• Ensure that there are no obstructions to the ventilation, the air intakes are around the edges of the colour-filter frame, and hot air is exhausted through the fan. Also ensure that there are no readily flammable items in contact with the case.

• The Spectre is only intended for use indoors.

• Connect the Spectre to the mains supply using the lead provided.

- **Brown = live**
- **Blue = neutral**
- **Green/yellow = earth.**
- **The Spectre must be earthed**

The supply must be fitted with an isolating switch, or plug and socket, and protected by fuse or circuit breaker rated at either 10A and 16A. If the Spectre circuit is connected via an MCB then it is recommended that a time-delay MCB is used (Type 3 or Type C to BS3871). This will reduce the possibility of "nuisance tripping" due to the large inrush current of the halogen lamps.

It is not recommended that the Spectre is connected to a switching pack.

• The Spectre must not be connected to the output of a Dimming pack. This is not necessary, as the Spectre contains its own dimming circuitry.

If you wish to use more than one Spectre, where there is a possibility of all three lamps being switched on at the same time (i.e. if selecting "white"), then make sure that you have a mains supply and connectors capable of handling this amount of current. (6.5A for ONE Spectre, 13A for TWO Spectres)

Connecting the SFC2 remote control

Connect the RJ11 lead provided from the SFC2 to the RJ11 jack on the rear panel of the Spectre. Ensure that the plug is pushed into the socket until a "click" is heard.

Power to run the remote controller is supplied by the Spectre, so no other power supply connection is required.

Connecting the DMX Lead

Connect the 5-pin XLR lead between the **DMXout** socket on the first Spectre and the **DMXin** socket on the second.

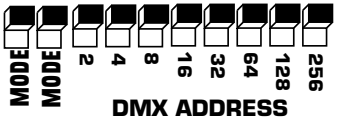
If using more than two Spectres, connect additional 5-pin XLR DMX leads between the **DMXout** connector on the second Spectre, and **DMXin** on the third, and so on.

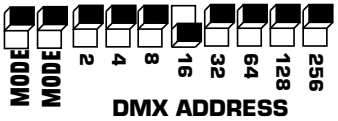
Setting the DIL switches

When set to Chase or Fade, the SFC2 produces four channel chasing patterns, in the same way as a four channel lighting controller. This allows the system to be expanded to four Spectres.

If using two SPECTRES

- Set both the MODE switches OFF.
- Set the DIL switches on the first SPECTRE to DMX address 1 (all switches off)
- Set the DIL switches on the second SPECTRE to DMX address 17 (Switch 16 on)

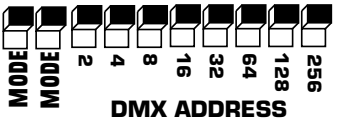


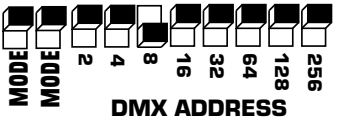


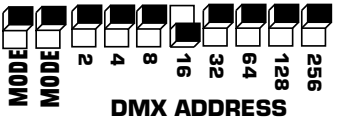
If operating four or more Spectres.

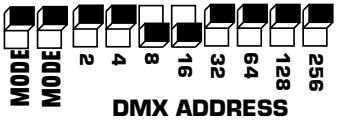
- Set both the MODE switches OFF.
- Set the DIL switches on all Spectres that are required to operate as channel 1 to DMX address 1 (all switches off)
- Set the DIL switches on all Spectres that are required to operate as channel 2 to DMX address 9 (switch 8 on)
- Set the DIL switches on all Spectres that are required to operate as channel 3 to DMX address 17 (switch 16 on)
- Set the DIL switches on all Spectres that are required to operate as channel 4 to DMX address 25 (switches 16 and 8 on)

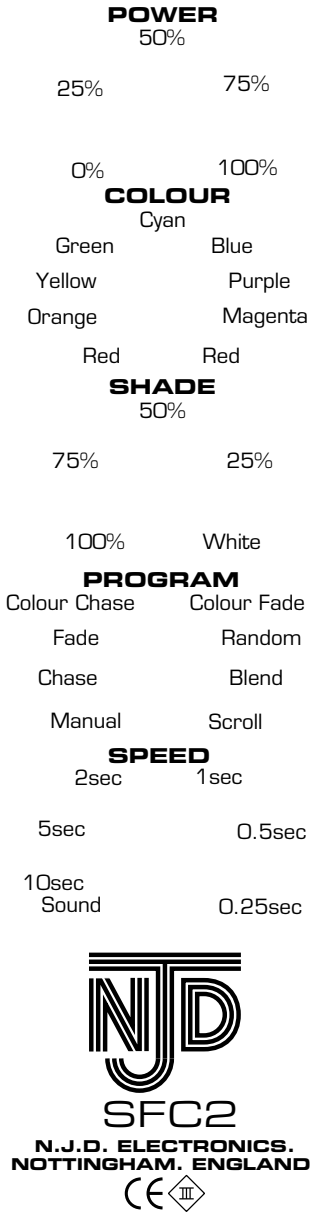
If you have a set of four Spectres, set one to each channel, to obtain the best effect.











Operation

The **POWER** control operates at all times regardless of the setting of any other controls. At 0% all lamps will be off. At 100% the power supplied to the lamps will be 500W. The effects on lamp life and brightness are shown in the table on the next page.

During chases, the **POWER** control sets the brightness of the channels that are switched on by the chaser, during cross-fades, it sets the maximum brightness achieved during the fade.

Two controls operate the **COLOUR** selection labelled COLOUR and SHADE. The upper control sets the base colour (known technically as the "hue" and the lower control sets the shade of the colour set on the upper control (known technically as the "saturation")

For example: if the upper control is set to "RED", then by varying the saturation control, every shade of red can be selected from deep red with the saturation control set to 100% all the way through pink and all possible pastel shades of red to white when the control is set to 0%.

Two controls operate the **PROGRAM** selection. The upper control selects the program, and the lower control selects the speed.

At the furthest anticlockwise position (of the upper control) labelled "MANUAL" all lanterns will be illuminated at the level set on the **POWER** control, and the colour set on the COLOUR and SHADE controls

The **CHASE** position selects a four channel chase program with one lantern on at a time.

The next position "FADE" select the same chase pattern but this

time operated in "soft-fade". Each lantern fades up from zero to the brightness set on the **POWER** control, and back down to zero.

The COLOUR CHASE position is the same as the CHASE position except that the COLOUR control is overridden, and a random colour is selected, which changes every sixteen steps of the Chaser.

The COLOUR FADE position is the same as the FADE position, except that the COLOUR control is overridden, and a random colour is selected, which changes every sixteen steps of the Chaser.

The RANDOM position overrides the COLOUR control and selects a colour which changes at random, the same colour is selected on all four channels.

BLEND selects a colour at random, and blends from the present colour to the new colour, and then pauses on the new colour.

The lower of the two **PROGRAM** controls sets the chase speed, the times labelled are the time taken for each chase step.

If the PROGRAM speed control is turned fully anticlockwise, to the position labelled SOUND, the chaser will operate to the bass beat of the music, changing to the next step in the pattern on the beat.

The final position (SCROLL) selects a slow colour scroll, which changes gradually from red through orange, yellow. green, cyan, blue, purple, magenta and back to red.

The soft-fade programs (FADE, COLOUR FADE and BLEND) are not available sound-activated. If SOUND is chosen when a soft-fade program is selected, then the SFC2 will produce normal ON-OFF chase patterns with no cross fading.

Maintenance

Replacing the lamps

- To replace a lamp, disconnect from the mains supply
- Unscrew the two fixing knobs at either side of the colour filter plate.
- Remove the colour filter plate and reflector assembly by pulling forwards (this may be quite a tight fit).
- The lamps are now accessible, and the faulty lamp may be replaced by a new lamp type A1/244. This type of lamp has a GY9.5 base, with one large and one small pin. This is to ensure

that it is inserted the correct way round.

• Do not touch the glass bulb. Hold the lamp by its ceramic base, or with the paper packet in which it is supplied. If the bulb is accidentally touched, clean it before use with methylated spirit, otherwise lamp life may be reduced or the lamp could shatter due the deposits of grease from the skin reacting with the quartz at high temperature.

• Replace the colour filter and reflector assembly.

• Ensure that you use the correct voltage lamps for your area. Although the entire European Union theoretically has a 230V supply, the voltage tends to be higher in Britain, so use a 240V rated lamp in Britain, and a 230V rated lamp in the remainder of Europe. Using a 230V rated lamp in Britain will result in poior lamp life.

Lamp life

Lamp life can be extended by the following techniques:

1) Use the high brightness/extended life switch. This extends the lamp life by reducing the power to the lamps. This slightly reduces the brightness, but extends the life by up to 10 times.

2) Operate at less than full brightness.

3) If flashing or chasing the lamps, use a soft-fade type chase.

4) If flashing or chasing the Spectre, leave the filament slightly illuminated so that it just glows red-hot similar in appearance appearance to the element of an electric fire when the Spectre is off. (This can be achieved bu setting the saturation control to about 3%. It will have negligible effect on the colour, but will keep all the lamps slightly illuminated.)

5) Leave the Spectre to cool before moving it. Filament lamps are most vulnerable to failure just after switching off.

The expected lamp life at various settings of the dimmer are shown below.

Setting	**Power**	**Brightness**	**Lamp Life**	
				
0%	0W	0%	*	*
25%	62.5W	1.5%	*	*
50%	150W	12.5%	204000	*
75%	320W	42%	1500	11000
100%	500W	100%	50	350

*At power settings this low, the lamp life will be determined by other factors than the power consumed by the lamp, such as switching on and off repeatedly, or mechanical damage. The settings shown above have been chosen after extensive research and testing to produce a control that appears linear to the eye.

Replacing the fuse

There is a small possibility that the fuse may blow when a lamp fails. (This is caused by the filament of the failing lamp producing a short circuit as it falls apart) There are four fuses, one for each lamp, and one for the mains input. The lamp fuses are located on the rear panel; the mains input fuse is located in a drawer beneath the mains input connector.

Replace with another fuse type F3.15A HBC. (3.15A Quick-blow, high breaking capacity 5x20mm) for the lamp fuses, and F10A (10A Quick-blow high breaking capacity 5x20mm) for the mains input fuse. If the new fuse fails consult a dealer.

Cleaning

The Spectre should be cleaned periodically as dust will tend to obstruct the fan, and impair the ventilation system. Clean the dichroic filters with a soft lint-free cloth using alcohol or hi-fi cleaning fluid

Operation

The Spectre is a floodlight, and does not produce a focused beam of light. Aim the lantern in order to get the best illumination. The barn doors may be used to control light spill at the edges of the area to be illuminated, but should be used with care, as multiple-coloured shadows will result when more than one lamp is illuminated.

The Spectre must not be operated with the barn doors completely closed, as this will result in an obstruction to the ventilation system, and will overheat the barn doors.

Do not place coloured gels in front of the Spectre. The dichroic filters must not be replaced by colour gels.

It is recommended that all four barn-doors are closed when the product is to be transported, in order to protect the dichroic filters, which are expensive to replace.

The fan is operated by a temperature sensing circuit, and switches on when the temperature exceeds 50°C and off when it falls below 40°C

Replacement leads.

The SFC2 lead is an RJ11-RJ11 straight wired lead, which is generally referred to as a "line cord". Modem leads are also RJ11 to RJ11, but are generally cross wired, and some only contain two cores.

Replacement RJ11 leads are available in 3m and 10m lengths, part codes P250B and P250D.

Replacements DMX leads are available in 3m, 6m or 10m lengths. Part codes G038VH, G038VJ and G038VK.

If connecting more than two Spectres, or using leads longer than 10m it is advisable to fit a DMX terminator (Part code G019SB) to the DMXout socket of the final SPECTRE.

Standards

The Spectre complies with Electrical Safety Standard EN60598 Parts 1 and 2-17 (1997), and Electromagnetic Compatibility Standard EN55015.

Fault Finding

SPECTRE

No output
- No mains supply
- Mains fuse failed
- No DMX controller
- One or more Lamps failed.

The LED on the rear panel changes colour from red to green when data is being received. If the LED remains red, no data is being received.

Poor lamp life
- Wrong lamp specification.
  If in Britain, use a 240V rated lamp
- Faulty lamps

Lamps that fail with a white or yellow deposit on the glass, or appear to have a perfectly intact filament yet do not light are faulty.

- High mains voltage.

The mains voltage may be as high as 253V, which will give 50% less life than at 240V.

SFC2

No operation:
- Plugs not fully pushed into sockets
- Wrong type of RJ11 lead

(should be STRAIGHT not REVERSED)

- DIL switches set to wrong address, must be 1, 9, 17 or 25.
- Power control set to ZERO.

No soft fade:
- SPEED control set to SOUND - soft fade only operates at fixed speeds

No sound chase
- Music contains no bass beat, or is not loud enough

Technical Specification.

SPECTRE

Dimensions:	250mm x 250mm x 245mm
Weight:	5.2kg
Lamps:	3 x A1/244 (230V 500W)
Lamp Life:	50 hours at 240V AC 100 hours at 230V AC
Colours:	Red: (0.700,0.296) Green: (0.246,0.686) Blue: (0.128,0.153) and all intermediate shades
Power Supply:	230V AC 50Hz
Power:	1500W (all lamps illuminated)
Current:	6.5A rms. (all lamps illuminated)
Power factor:	cos ϕ = 1.000 (The Spectre is a resistive load)
Switch-on Surge:	30 Amps for 60ms (all three lamps switched at the same time, 0.4Ω mains source impedance)
Beam spread:	56° (to 50% brightness). (1m wide at 1m distance)
Beam intensity:	2200 candela per channel.
DMX input/output:	complies with DMX512 (1990) 4µsec protocol
Connectors:	5-pin XLR Data+: Pin 3 Data-: Pin 2 Earth: Pin 1 +12V supply: Pin 5
Analogue input voltage:	0-10V
Analogue input impedance:	44kΩ
Analogue connector:	7-pin DIN
Channel 1:	pin 3
Channel 2:	pin 5
Channel 3:	pin 4
Channel 4:	pin 1
0V (ground):	pin 2

SFC2

Dimensions:	182mm x 65mm x 37mm
Weight:	0.3kg
Power Supply:	12V DC @ 15mA
Output:	DMX512 (conforms to electrical and data specifications)
Connections:	RJ11

Guarantee

This product is guaranteed for a period of 24 months against faulty components or manufacture (excluding fuses and lamps) from the date of manufacture. Upon proof of purchase, NJD shall, at its own option, repair or replace the defective item at no cost to the purchaser.

This guarantee is contingent upon the proper use of the product in the application for which it is intended and does not cover products that have been modified, subjected to unusual physical conditions, or electrical conditions outside its specification, or damaged in any way.

This guarantee is limited to the product only and does not cover carriage costs, installation costs or travel expenses. Your statutory rights are not affected.

In the event of any problems with this product contact the retailer from which it was purchased for technical assistance, or e-mail technical@njd.co.uk

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