Logic 8000sb

- Individual 4-channel dimming
- Adjustable minimum and maximum brilliance levels
- 12 built-in programs
- 3 Auto-run programs
- Sound activated or manually adjustable speed
- Manual flash buttons
- 1.15kW power handling per channel
- Twin 8-pin output connectors
- Blackout and Flood foot-switch inputs
- Add-on power-packs available to increase handling capacity

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 Logic 8000sb is not fitted with a mains plug. This is because:

a) it is capable of controlling more than 13 Amps

b) it may be installed permanently

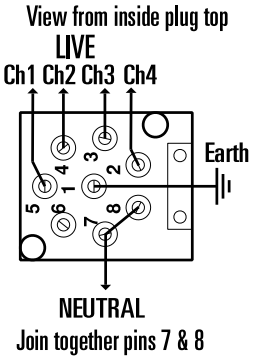
c) it is an appliance for professional use.

The Logic 8000sb must be installed by a competent electrician in accordance with the current IEE Wiring Regulations.

Mains input

Connect the 3-core lead to the mains supply of the appropriate voltage. (If connecting by a 13 Amp plug and socket to BS1363 then the maximum load must be reduced, see Technical Specifications.)

- **Brown = live**
- **Blue = neutral**
- **Green/Yellow = earth.**
- **The Logic 8000SB must be earthed.**



Output

Mains output is via two 8-pin sockets. The Connections are as shown. Both sockets are identical. Connect the load using a P551 or PX0956/P plug. **No more than 12A total load spread across all four channels may be connected to each socket.**

A maximum of load of 1150W per channel may be connected if the unit is permanently installed or connected via a plug and socket rated at 20 Amps or more.

If connected to the supply via a 13A plug and socket, the maximum total load must not exceed 2990W, otherwise the fuse will fail in the mains plug.

2990W total load can be made up of:

either: 745W watts on each of the four channels

or: different loads on each channel so that the total does not exceed 2990W (but not more than 920W on any one channel)

or: 990W load on all channels, in three-channel mode.

or: 1150W load may be connected to all four channels provided that the unit is operated so that all four channels are not switched on together at full power. (If this happens briefly, as in an all-flash pattern, it is unlikely to blow the 13A fuse)

Sound input

Connect an audio signal from the speaker output of any amplifier up to 450W rms to the ¼" jack on the rear panel labelled 'sound'. The sound input has an impedance of 15kΩ so that it does not affect the loudspeaker/amplifier loading.

The sound input requires a signal of at least 1.5V rms before it will start to operate (about ½W into 4Ω). This means that the sound-chase may not operate at low levels. (½W is about 96dB(A) on an average pair of PA speakers)

Flood and Blackout.

¼" jack inputs are provided for the connection of footswitches for flood and blackout. A latching type switch should be used such as the FS50A.

Flood: When the flood switch is closed, all four channels are brought up to full brightness. If soft chase is selected on the MODE control, the SPEED control will determine the fade rate.

Blackout: When the blackout switch is closed, all four channels of the chaser will be turned off. This reduces the outputs to the "foreground" levels set on the sliders. If the sliders are at their centre position or below, then all channels will be blacked out. It may be useful to set one or more channels above zero, so that some illumination remains when blackout is selected.

3/4 Channel Selection.

Your Logic 8000SB is supplied operating as a four-channel controller; if you require it to operate in the three-channel mode, proceed as follows:

Disconnect from the mains and remove the lid. The 3-4 channel switch is located between the printed circuit and the front panel, between the beat switch and the program switch. Using a small screwdriver, move the switch

towards the program switch for 3-channel or towards the beat switch for 4-channel.

In 3-channel mode, the fourth slider can be used as a manual dimmer control.

Replacing Fuses.

The Logic 8000sb is fitted with a 5A fuse on each channel, to protect the unit from overload. If the fuse fails, check that the output is not being overloaded (no more than 1150W is connected to each output), before replacing the fuse. In the case of lighting which takes a high surge current (halogen lamps) it may be necessary to reduce the output loading.

To replace the fuse, proceed as follows: DISCONNECT from the mains, remove the five lid-fixing screws located at the top of the case, and remove the lid. The fuses are located on the horizontal printed circuit board. The fuse for channel 1 is at the left of the board, the fuse for channel 4 is towards the right.

Replace the fuse with a F5A HBC fuse (5A fast blow, high breaking capacity). A HBC fuse has a ceramic case. Do not use any other type or value of fuse (this will invalidate the warranty).

Replace the lid, and the lid-fixing screws.

If the channel remains permanently on after replacing the fuse, then the triac has been damaged (This may happen in the case of an extreme overload or short circuit on the output). If this happens the product should be taken to a dealer for repair. Triacs are not covered by the warranty, because they only fail if the product has been misused or overloaded.

OPERATION

4-channel Dimming.

With the program switch turned to the 0 position, the 4 slider controls can be used as individual channel dimmers. The centre (0) position of the slider is fully off, move the slider towards the on position to increase brightness.

The MODE control should be set to chase or sound chase.

Chase facilities.

With the mode switch in the chase position, normal chasing facilities are provided, the program switch sets the chase pattern (1 - 12), and the speed control sets the chase speed.

Two auto-run selections are provided, “A” runs through all twelve chase

patterns, “B” just runs through singles, pairs and triples.

“C” is a random pattern.

Hold Reverse

The hold rev. switch prevents the chaser from reversing, forcing it to run through the patterns in the forward direction only. The green LED lights in hold reverse mode.

Soft sound and soft chase

With the mode switch in the soft chase position, the chaser runs through the chase pattern, increasing each channel from zero to full brightness, and then dimming back to zero. The speed control sets the chase speed, the fade rate is automatically adjusted to match the chase speed. The speed range available on the speed control is extended to provide a very slow ‘blend’ mode, where the channels are gently crossfaded. This is very effective in three-channel mode using flood lamps of the three primary colours (red, green and blue) when it will produce a constantly changing colour flood.

With the mode switch in the sound chase position, the chase pattern will progress to the bass beat of the music; in soft sound the channels are increased to full brightness and then dimmed to zero to the bass beat of the music. A sound connection is required to the LOGIC 8000s, see ‘installation’.

Background and foreground levels.

In all chase modes, the four slider controls can be used to set the background and foreground levels.

The foreground level is the maximum level reached when the channel is on. This is set by moving the slider control downwards towards off. 0 corresponds to full brightness, off to fully off.

The background level is the minimum level reached when the channel is off. This is set by moving the slider control upwards towards on. 0 corresponds to fully off, on to fully on.

Beat.

The beat switch flashes all channels together to the beat of the music. In chase and sound chase modes, the channels are brought to the foreground level instantly, and then reduced to zero.

In soft chase the attack and decay times are set by the speed control; in soft sound the channel will be flashed with a fast attack and a slow decay.

A sound to light effect may be produced by selecting program "C" and sound-chase together with Beat

Flash switches.

The flash switches can be used to force any channel instantly to full brightness, regardless of the settings of foreground and background levels.

Stand-by.

The stand-by switch disables all chasing facilities, allowing manual operation on the sliders and flash switches only. The stand-by LED shows green during normal operation and red in stand-by mode.

If the LOGIC 8000s needs to be completely disabled, this can be done by either using the 'enable' input on the slave-pack, (see 'Additional Technical Information') or by disconnecting the mains power to the slave pack 240V AC terminals.

Mimic

The four red LEDs allow the user an instant visual indication of the unit's performing mode.

Standards

The Logic 8000sb complies with EN60065 (European Standard for Electrical Safety) and EN55015 (European Standard for Electromagnetic Compatibility)

Additional Technical Information

All items in this section must be carried out by a competent electrician.

Preheat

Preheat allows a small current to be passed through the filaments of lamps which are 'off'. This current is not sufficient to illuminate the lamp, but keeps the filament warm enough to prevent a large surge when the lamp is brought up to full brightness. This increases lamp life.

The Logic 8000s is supplied with preheat disabled; the preheat adjustment trimmer is on the printed circuit board between the 'enable' terminal block and the transformer. Rotate clockwise using a small insulated screwdriver to increase brightness. The correct setting for the preheat controls is when the lamp filament glows orange (looks like the element of an electric fire)

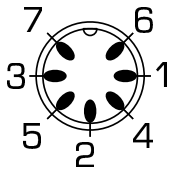
Exercise extreme care whilst making this adjustment with the power switched on as live mains voltages are present on the printed circuit.

Analogue Outputs

0 - 10Volt analogue outputs are provided on the 7-pin DIN socket on the rear of the vertical printed circuit board for connection to further slave packs. This will require a hole to be punched in the case, and a grommet inserted for the cable, or anternatively, a duplicate 5- or 7-pin DIN socket fitted to the rear panel of the case. Connect using a 5-pin DIN plug (pins 6 and 7 must not be connected). Up to 10 NJD DP10000 slave packs (or any other slave packs requiring a 0-10 Volt input) can be connected.

Connections are shown below: Alternatively, connect to the terminal block on the slave pack labelled "Analogue inputs"

Pin 1	channel 1
Pin 2	0 volts (common)
Pin 3	channel 4
Pin 4	channel 2
Pin 5	channel 3
Pins 6,7	do not connect.



Blackout.

If a complete blackout is required, overriding the slider controls on the fascia, then the blackout socket may be rewired to provide this.

Disconnect both wires from the blackout jack socket, and disconnect the link between the "+10V" and "enable" terminals on the horizontal printed circuit board. Reconnect the jack socket to the +10V and enable terminals. If it is required that the Logic 8000sb should operate if the footswitch is not plugged in, then a switched jack socket may be used.

Technical Specification

Size:	483×133×280mm 19”×5¼” (1U)×11”
Weight:	3.6kg
Audio impedance:	15kΩ
Audio input range:	1.5V rms - 60V rms
Power Supply:	230V AC 50Hz 6VA
Maximum load:	5 Amps per channel: 1150VA @ 230V AC

(1150VA corresponds to 1150 Watts resistive load, approximately 750 Watts inductive load)

Maximum total load: 20 Amps
3.45kVA @ 230V AC
1.8kVA @ 120V AC

Reduce to 13 Amps (2.99kVA @ 230V AC) if connecting via a standard 13 Amp (BS1363) mains plug/socket.

Fuses: F5A HBC (to IEC127)

HBC means "high breaking capacity" - a HBC fuse has a ceramic case.

Connections:

Audio: ¼" jack.

Mains in: 1.5mm² cable (to BS6500)

Output: 2 × Bulgin P552 or PX0957/S socket.

Triacs: 16 Amp 600V isolated tab sensitive gate

Type: BTA16-600BW or equivalent

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