

## **Appendix K: Starlight Linings (Pea Bulb, LED & Optic Fibre)**

### **Pea Bulb: Care**

- ❑ Take care with handling – the bulbs are fragile (do not stand on roofs when installing)
- ❑ Ensure linings are kept clean and dry.
- ❑ When fitting, check wiring looms are not caught on sewn on hooks.
- ❑ When removing, fold carefully with bulbs to the inside and return to the box provided.

### **Installation**

- ❑ Ensure black master looms are all down one side and that all plugs are connected correctly.
- ❑ On 2-channel roofs, make sure yellow goes to yellow and blue to blue.
- ❑ 2 channel roofs require 2 transformers (1 per channel)
- ❑ Tie the centre of roofs to lifting poles and lift roof to just above head height. Fit the outer edges to the eaves and Velcro roofs together.
- ❑ Connect to mains and check that electrics are functioning before lifting to desired height.

### **Wiring**

- ❑ Input = 240V
- ❑ Single transformers will run 300 bulbs safely
- ❑ This equates to a maximum of 2 x 12m roofs or 3 x 9m roofs (single channel)
- ❑ 2 transformers will run 3 x 15m two-channel roofs.
- ❑ There is a thermal reset on each transformer. Damp or overloads are common causes of tripping.
- ❑ Roof circuits run at 26V
- ❑ Lamp looms fused with 2A slow burning fuses.

### **Safety**

- ❑ Do not remove plugs fitted to transformers.
- ❑ Lamp loom fuses will blow if there are more than six bulbs out or if there is a short circuit.
- ❑ Approx power requirements:      9m = 140w    12m = 160w    15m = 120w
- ❑ Spare fuses are available if required (if hire roof they are located in lid of bin)

## Simple Fault Finding

Whole roof not working:	If transformer trips, check for damp or overload. If lights do not work, check plugs and mains connection. Check you have less than the maximum amount of roofs connected for the transformer to run.
Single lamp loom not working:	Check lamp loom fuse, spares available. Check if the bayonet connection is loose or the lamp loom holder is damaged.

## LED: Care

- ❑ Take care with handling – the LEDs and wiring are fragile (do not stand on roofs when installing)
- ❑ Ensure linings are kept clean and dry.
- ❑ When fitting, check wiring looms are not caught on sewn on hooks.
- ❑ When removing, fold carefully with bulbs to the inside and return to the box provided.

## Installation (Same as Pea Bulb installation)

### Wiring

- ❑ Input = 240V
- ❑ Single transformers will run 500 LEDs safely.
- ❑ This equates to a maximum of 3 x 12m roofs or 4 x 9m roofs (single channel)
- ❑ There is a thermal reset on each transformer. Damp or overload are common causes of tripping
- ❑ Roof circuits run at 5V DC
- ❑ Lamp looms fused with 2A slow burning fuses.
- ❑ LEDs sensitive to + & - so way bayonet plug fitted to master loom is important.

### Safety

- ❑ Do not remove plugs fitted to transformers.
- ❑ Lamp loom fuses will blow if there are more than ten LEDs out or if there is a short circuit.
- ❑ Approx power requirements:
  - 9m = 140w
  - 12m = 160w
  - 15m = 120w

## Simple Fault Finding

- ❑ Same as Pea Bulb installation. Or;
- ❑ Check if the bayonet connection is in the holder the wrong way round.

## **Fibre Optic: Care**

- ❑ The fibres will break or have permanent damage if they are bend in a radius smaller than 10mm. Thus care is required when hiring and especially when packing.
  - Do not stand on roofs
  - Do not crush into storage boxes – see folding advice
  - Keep clean and dry
  - Do not use chemical cleaners as these can affect the fibre coating
  - Do not over bend or kink the fibre (see above)

## **Folding and Storage**

- ❑ Fold carefully lengthwise into three with fibre optic inside
- ❑ Gently roll (NOT fold) the panel to just fit the packaging
- ❑ Lift carefully into box without forcing it in
- ❑ When returning boxes, please ensure they are security tagged and covered, as boxes are not watertight.

## **Installation**

- ❑ Ensure the fibre optic tail exits from the panel on the power supply side
- ❑ Attach the centreline of the roof to the lifting pole and lift to just above head height.
- ❑ Fit the outer edges to the eaves and Velcro roofs together.
- ❑ Connect to mains and check that electrics are functioning before lifting to desired height.
- ❑ Where a two-side roof is used on the smaller size, wall linings can be hung from the cord fitted to the underside at the eave.

## **Electrical**

- ❑ The fibre optic roof panels are supplied with a light source for each roof. Each light source has its own transformer, halogen bulb and colour wheel. The light source connects to a standard 240V 50Hz supply and draws 50, 75 or 100 watts as indicated. The colour wheel can be changed by opening the case and releasing a small grub screw fitted to the drive shaft. Do not open the light source while still live and protect it from water.

## **Simple Fault Finding**

### Whole roof not lighting:

- ❑ Fibre optic tail not plugged into roof
- ❑ Light box not powered
- ❑ Powers supply failure
- ❑ Fuse /Bulb in light box blown

### Individual light point not bright:

- ❑ Fibre detached from cloth
  - ❑ Fibre damaged/snapped
- Note: Both need rectification at Factory*

### Colours incorrect:

- ❑ Wrong twinkle wheel fitted or specified.