Fitting the lamp (also known as bulb or globe)
Before your PhotonBeam can be used a lamp must be fitted.
The voltage of the lamp must match the voltage of the electrical supply you are using.
1) ***Make sure that the mains plug is disconnected from the electrical supply.***
2) Press the accessory lock release trigger (A) to open the accessory lock (B).
3) Release the safety screen retaining screw (C), which will remain captive in the safety screen (D).
4) Carefully rotate the safety screen a small amount to free the retaining screw from its mating bracket, then lift the screen free. It may be necessary to flex the screen a little to achieve this
5) Insert one end of the tubular lamp onto one of the lampholder contacts, which are spring loaded to allow the other end of the lamp to be fitted onto the other contact.

NOTE: If the quartz envelope is touched with bare fingers it will be indelibly marked when the lamp is next burned. Always place a pacer wrapper around the quartz part of the lamp when handling it, and remove it when the lamp is in place.

6) Replace the safety screen as a reverse of removal and retighten the screw

Using your PhotonBeam

MAKE SURE THE SAFETY SCREEN (D) IS ALWAYS FITTED.
Tungsten halogen lamps are pressurized and can sometimes explode projecting particles of hot quartz. The safety screen will ensure these particles are retained within the PhotonBeam.

Your PhotonBeam has ‘anti-surge’ which protects the lamp and switch contacts from the high surge of current when the lamphead is switched on. This surge, which can be 17 times the normal running current, occurs because a tungsten filament lamp has no resistance when cold; ‘anti-surge’ reduces this surge to a safe level and helps to prolong lamp life. Its action is completely automatic, and does not affect the colour temperature of the lamp.

Your PhotonBeam is fitted with the international standard 5/8” (16mm) hollow fitting, so it will fit most types of industry lighting mounts. **Always ensure that the mount you are using is of appropriate strength and stability.**

If your PhotonBeam is hanging from an overhead mount fit a safety bond to prevent the lamphead falling if the mount clamp screw (G) is accidentally loosened.

When using your PhotonBeam do not cover the cooling vents. If using diffusers or colour effect filters make sure they are of a heat resisting type.

You may use your PhotonBeam outdoors, but remember that it is not weatherproof. **DO NOT USE IN RAIN OR SPRAY CONDITIONS.** On no account should moisture be allowed to contact glass filters, lamps or any electrical part.

All tungsten lights get hot in use; when making adjustments of pan, tilt or focus always use the heat resistant handles to avoid discomfort.

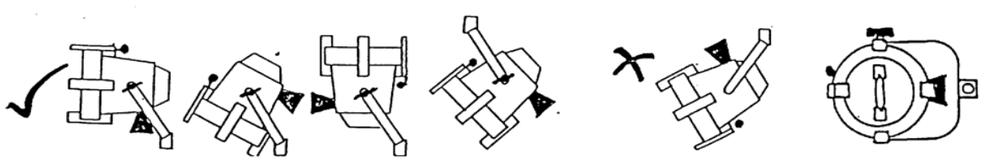
Take care when using your PhotonBeam close to inflammable or heat sensitive things, as the beam projects heat as well as light.

Take care with the mains cable. Route it carefully so that people will not trip or push wheeled equipment over it. Never release the plug from a mains socket by tugging the cable, you will only damage it.

After use allow the lamphead to cool for a few minutes before packing away.

Permitted burning angles

In order to prevent overheating of the PhotonBeam and its lamp there are limitations on the angle at which the unit may be used, as shown below



Maintenance

BEFORE CARRYING OUT ANY MAINTENANCE DISCONNECT THE PHOTONBEAM FROM THE MAINS SUPPLY BY REMOVING THE MAINS PLUG FROM THE SOCKET.

Your PhotonBeam should be inspected regularly for deterioration of the electrical parts. The mains cable should be free from damage, and the lamp holder contacts should be clean. Blackened or pitted contacts will require new lamp holders to be fitted. These are available as a spare part. All electrical repairs should be carried out by a competent electrician.

Glass filters and the aluminium reflector may be cleaned with a damp cloth when cool. Do not use cleaning agents, which may damage the delicate surfaces.

Under the UK Electricity at **Work Regulations 1989** it is recommended that portable electrical appliances are tested for electrical safety from time to time. It is the practice in many institutions to use an ordinary Portable Appliance Tester (PAT) for this. It should be noted that many of the simpler PATs will give a ‘fail’ result for the following reasons:

1) Earth Continuity Test.
Because the mains cable of a studio light is much longer than most portable appliances its resistance is higher. Most PATs have a fail level of 0.1 or 0.2 ohms using a test current of 20 amps at 6 volts, where as the actual resistance of a studio light cable may be from 0.2 to 0.3 ohms. The more sophisticated PATs have a trip level adjustable from 0.1 to 0.5 ohm

2) Phase/Neutral (Short Circuit) Test.
The tungsten filament of a studio light has a very low resistance when cold, typically seventeen tines less resistance than when running. This means that there is a current surge when the lamp is switched on of approximately seventeen times the running current. For a 1000 watt lamp at 240v this current is a massive 70 amps for a fraction of a second. All PATs read this as a short circuit and fail the appliance. The lamp should be removed prior to the test and the switch set to the “ON” position. The PAT will then test for short circuit up to and including the lampholder and give a genuine result.

Accessories for your PhotonBeam
There are a number of accessories available for your PhotonBeam, which add to its versatility.

A102 Barndoors - these provide a means of shaping the light beam, and have the added advantage of spring clips to hold diffusers, colour correction and effect filters.
A103 Daylight Dichroic Filter - a mounted coated glass filter which converts the output of the PhotonBeam from 3200K (Tungsten) to 5000K (Daylight).
A104 Scrim Set - a set of four wire mesh screens to reduce light output without changing colour temperature. Single scrim reduces light by one f-stop, Double scrim reduces light by two f-stops. Each is supplied as a full circle and a half circle.
A105 Fresnel Lens - a borosilicate glass lens which intensifies the light beam and reduces light spread when used with the PhotonBeam in spot mode.
A106 Snoot - a conical funnel which restricts the light beam to a tight circle for spotlighting effects and close-up work.

Fitting Accessories

1) Press the accessory lock release trigger (A) to open the accessory lock (B)

2) Insert the accessory into the slots. The scrims, fresnel lens and daylight filter fit into the rear slot. The slot will hold a maximum of two accessories. The snoot or barndoor fit into the front slot.

3) Close the accessory lock (B) by pushing down until it locks.

Service & Spare Parts
We operate a full repair service at our factory. We can also supply spare parts for people wishing to carry out their own repairs. When ordering spare parts please quote the Serial No. shown on the rating plate.

Conformity

Photon Beard products conform to appropriate European standards, specifically:
73/23/EEC 1995 Low voltage directive
93/68/EEC 1995 CE marking directive
89/336/EEC EMC directive
Standards applied: EN60950, EN 50081-2, EN55014, EN55022

RoHS Photon Beard products do not contain more than the maximum permitted levels of hazardous substances as laid down in the European directive on the restriction of use of certain hazardous substances

WEEE Under the European directive on the disposal of waste electrical and electronic equipment this equipment should only be disposed of through approved recycling facilities and not through landfill waste disposal.

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PhotonBeam 800 & 1000 models

(June 04-)

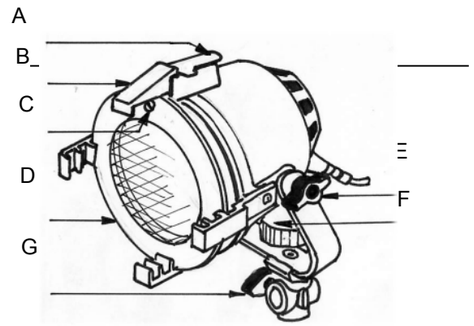
Instructions for use

These instructions cover PhotonBeam 800 (model A108) and PhotonBeam 1000 (model A109)

Please read these instructions carefully before using your PhotonBeam. By following them you will ensure the maximum performance and life from the unit, and ensure safety for the user.

Controls

A) Accessory lock release
B) Accessory lock
C) Retaining screw for safety screen
D) Safety screen
E) Tilt Clamp
F) Focus Control
G) Mounting Clamp Screw



Before using your PhotonBeam

The PhotonBeam is suitable for use on electrical supplies of 110v to 240v with alternating or direct current (AC or DC). If power is being supplied by a generator it is essential that the chassis of the generator is earthed for the safety of the user.
It is also possible to use a 30v battery as the power source for the PhotonBeam 800 provided it is fitted with a 30v lamp as shown below.

UK Model Each lamphead is fitted with a fused plug for connection to standard UK 13 amp mains socket.
European Model Each lamphead has a fuse fitted to the switch unit and a Schuko style 16 amp European plug.
If the prewired plug is replaced or a plug is being fitted it should be done by a competent person following the European standard colour code used for the PhotonBeam mains cable:
BROWN - LIVE BLUE - NEUTRAL GREEN/YELLOW - EARTH (GROUND)

USA Model Each lamphead is fitted with an unfused NEMA5-15P plug. The mains cable uses the USA standard colour code:
BLACK - LIVE WHITE - NEUTRAL GREEN - EARTH (GROUND)

It is essential that the mains supply is earthed and that the PhotonBeam is overload protected by fuse or circuit breaker.

Fusing The correct fuse rating for the PhotonBeam is 5 amps at 220/240v, or 10 amps if used on 110/120v supplies.
when using 30v 250w lamps the power supply should be fused at 10 amps
UK Model uses standard BS1362 HBC quick acting (F) fuses 1/4 x 1", European Model uses standard BS4265 (IEC127) HBC quick acting (F) fuses 5 x 20mm.

Lamps for the PhotonBeam
The following lamps are the only ones which should be used in your PhotonBeam:
PhotonBeam 800:

ANSI Ref.	European Ref.	Watts	Volts	Colour Temperature
FAD	P2/6	650	110/120	3200K
-	JPD	650	240	3200K
DXX	P2/13	800	220/240	3200K
-	P1/8	250	30	3400K
PhotonBeam 1000				
-	P2/35	1000	220	3200K
-	P2/35	1000	240	3200K
DXW	-	1000	110/120	3200K

Special note: The PhotonBeam 800 and the PhotonBeam 1000 are alike in all respects except that they take lamps of different lengths. Therefore it is not possible to exchange lamps between different the models.