

PAG ™

Professional Broadcast Equipment

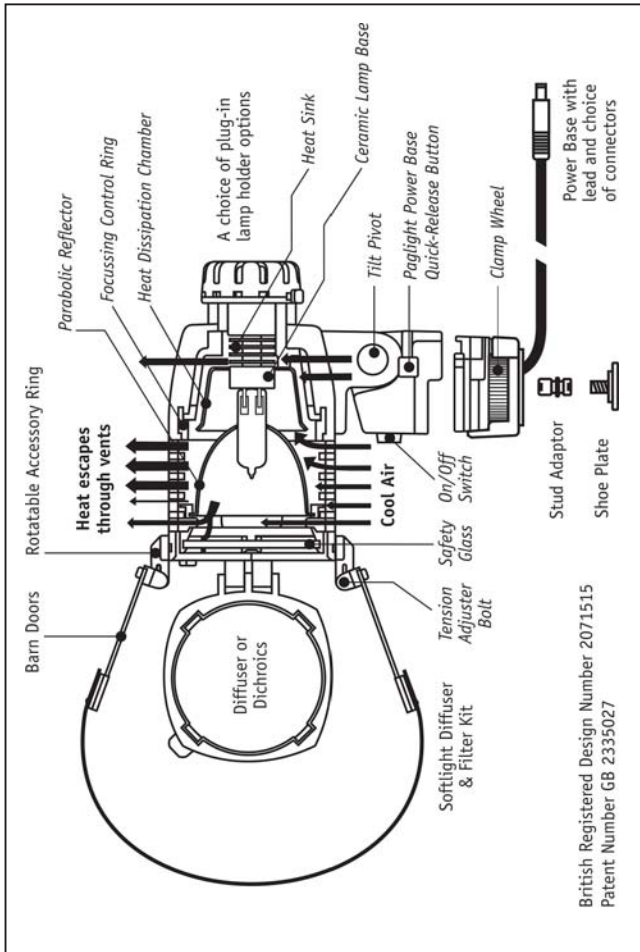
Paglight

Professional Camera Light



Instruction Manual





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Professional Broadcast Equipment

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SECTION 1

SAFETY

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE USE.

This leaflet contains important safety information.

- 1.1** Low voltage DC input only. Do not connect to incorrect supplies (see Specifications).
- 1.2** Avoid the possibility of water ingress. This could cause the lamp to rupture forcibly.
- 1.3** The Paglight is not intended for any use other than video lighting purposes.
- 1.4** Do not disassemble the Paglight or any of the lamp holder units. There are no user-serviceable parts. Incorrect reassembly may result in a safety hazard.
- 1.5** Do not operate if the fixed safety glass is cracked or broken.
- 1.6** Do not leave the Paglight switched on while unattended. Do not obstruct the cooling vents or operate near combustible materials. Allow the Paglight to cool before storage.
- 1.7** Always turn-off the Paglight before removing or replacing any of the plug-in lamp holder units.
- 1.8** The PowerArc generates high voltages when striking. Do not insert a damaged or misaligned lamp into the Paglight.
- 1.9** For optimum performance never handle the lamp's quartz envelope directly. Should you inadvertently handle the quartz

envelope you must clean it carefully with methylated spirit or industrial alcohol, using a lint free cloth.

- 1.10** The LED Dimmer Unit is designed for use only in conjunction with the 12V Broadcast Paglight. NEVER attempt to run the unit away from its enclosure.

IMPORTANT: Never stare directly into the emitters when lit.

For optimum performance never leave the soft acrylic domed lens, situated at the end of the silver aluminium heat sink, unprotected and exposed to dust. If the domed lens becomes dusty, you must clean it carefully with a moistened finger. Use of a cloth will merely add more dust particles.

- 1.11** After removing the lamp holder units from the Paglight always place them in a PAG heat-resistant lamp protector, to avoid contact and damage to the unit.

SECTION 2

SPECIFICATION

2.1 HALOGEN LAMPS:

Low voltage halogen capsules, long life (2000 hours at 12V).

Voltage: Nominal 12V.

Watts: 20W (M76)

35W (M75)

50W (M32)

75W (M73)

100W (M28)

Colour Temperature: 3200°K at 12V (5600°K with dichroic filter).

Filament: Axial filament with centre 30mm from end of pins.

Base: Type GY6.35.

2.2 POWERMAX/VARILUX LAMP HOLDER:

Input Voltage: Maximum 20V DC.

Output Voltage: Regulated 12V DC.

Maximum consumption: 100W nominal.

2.3 PAG POWERARC (LAMP):

Low wattage, single-ended short-arc metal-halide lamp.

Wattage: 24W.

Colour Temperature: 5600°K.

Lumens: 1850.

Warm-up Time: 20 seconds to 90% of full output. 30 seconds to normal colour temperature.

PAG POWERARC (BALLAST):

Input Voltage: 10V-16V DC. 32W.

Output Voltage: Striking 3000V, running 60V.

2.4 LED DIMMER UNIT:

Input Voltage Range: 10V to 20V DC.

Power Consumption: 11W.

Output: 850 lux at 2m (spot), 175 lux at 2m (flood).

Spot and Flood Angles: Flood 62°, Spot 22.6°.

Colour Temperature: The colour temperature of the LED output is a perfect blend with daylight.

2.5 PAGLIGHT BASE CONNECTIONS:

PP90: Centre pin negative.

XLR-4: Pin 1 negative, Pin 4 positive, Pins 2 & 3 (no connection).

2.6 GENERAL:

Voltage: Nominal 12V to 14.8V battery supply.

Maximum Power Rating: 100W lamp with 13.2V battery.

SECTION 3

OPERATION AND MAINTENANCE

3.1 HALOGEN LAMP HOLDERS:

There are three halogen lamp holder units Standard, Softstart and PowerMax Control/VariLux. They utilise 12V halogen lamps, available in 5 wattages: 20W, 35W, 50W, 75W and 100W. Halogen lamp holders can be exchanged instantly without the need to handle the bulb.

The **Softstart** lamp holder is designed for use with suitable Lithium-Ion batteries, capable of powering both a medium-consumption broadcast camera and a light of up to 35W (check with the battery manufacturer). Lithium-Ion batteries incorporate electronic over-current protection that may be triggered by the high current pulse that occurs when a tungsten-filament light is turned on from cold. The Softstart lamp holder overcomes this effect. This unit will not be required when using the regulated light socket on a Sony digital camera, or if the camera is fitted with PAG System RTI, and the Softstart feature is enabled.

Halogen lamps, typically specified for 12V operation, are over-run when they are used with 13.2V or 14.4V camera batteries, and consume far more power than they are designed to. The specified wattage of a 12V halogen lamp is correct only at 12V, and rises proportionally with the supply voltage. A fully charged 13.2V Nickel-Cadmium battery can present over 16V at the terminals, and a 12V '100W' lamp connected to such a battery can actually consume over 135W of power. The result is reduced camera run time, shortened lamp filament life, and incorrect colour temperature. It is

also possible for the camera low-voltage cutout to be triggered as a result of the voltage depression caused by the unnecessarily heavy load on the battery. For these situations we recommend the use of the **PowerMax Control/VariLux** lamp holder, which incorporates a voltage control circuit. The PowerMax unit efficiently regulates the running voltage of the Paglight while conserving the unused battery power, thereby extending available run-time by as much as 25%. In addition to this, colour temperature remains constant and lamp filament life is dramatically improved.

The VariLux feature of PowerMax is a dimming facility that enables you to control the light output, which unlike other systems, further conserves battery power. The manual control features a detent position which corresponds to the mid-point in the brightness range. NOTE: The PowerMax is not suitable for use with the 30W regulated light outputs of Sony SX cameras.

3.2 POWERARC UNIT

The PowerArc unit enables the Paglight to be instantly converted from tungsten halogen to a daylight balanced metal-halide arc light. The ballast and lamp combined consume approximately 55W in total, whilst having an output equivalent to nearly 100W of halogen light. The output can be converted to match halogen using PowerArc Conversion Filter Model 9973.

3.3 LED DIMMER UNIT

The LED Dimmer unit provides a daylight balanced output, equivalent to 50W of halogen light, but with a low power consumption of 11W. The intensity of the light can be adjusted by using the dimmer control situated on the rear of the unit. Additionally, the spot and flood facility of the Paglight lamp head can be used. The output can be

converted to match halogen using LED Conversion Filter Model 9998.

3.4 PLUGGING A LAMP HOLDER UNIT INTO THE PAGLIGHT:

IMPORTANT: First turn-off the Paglight.

To avoid the risk of damage when inserting any lamp holder into the lamp body, ensure that the lamp is correctly aligned through both reflectors. Gently engage the unit into the body of the Paglight. When it is fully home the securing latch will lock. To ensure compliance with the EMC Directive 89/336/EU a suppressor is supplied with the PowerArc unit. This should be clipped around the supply cable as close to the unit as possible.

3.5 REMOVING A LAMP HOLDER UNIT FROM THE PAGLIGHT:

IMPORTANT: First turn-off the Paglight.

Pressing the release button, gently withdraw the lamp holder from the rear of the Paglight keeping it straight until the quartz envelope is clear of the lamp body. Remember that the lamp may be very hot. In the interests of safety, the unit should be placed in a PAG Lamp Protector immediately following withdrawal from the Paglight. This will also protect the lamp during storage and transportation.

3.6 CHANGING HALOGEN LAMPS:

Allow the old lamp to cool before removing it from the lamp holder. The halogen lamp is a push fit into the lamp holder. Gently push the lamp into the lamp holder taking great care not to twist or bend the pins. Do not handle the glass envelope directly. If it is touched inadvertently, clean it with a lint-free cloth moistened with methylated spirit. Finger marks cause hot spots in the lamp, leading to reduced life and possible rupture of the glass.

3.7 CHANGING POWERARC LAMPS:

IMPORTANT: See the instructions supplied with the arc lamp or PowerArc Unit before fitting. Remove the quartz arc lamp from the packaging without touching the quartz envelope itself. The arc lamp is a push fit into the lamp holder. Carefully holding the arc lamp by its base flange and without touching the quartz envelope, align the indexing slot of the flange with that of the PowerArc lamp holder. Gently push the arc lamp into the lamp holder taking great care not to twist or bend the pins.

3.8 THE LAMP HEAD:

The lamp head incorporates a tilting facility with a friction locking mechanism. From the horizontal, the lamp head can be adjusted upwards by 85° and downwards by 15°. The friction lock includes an adjustment lever which can be positioned in any orientation.

Focusing is provided by a lever on each side of the lamp body, and is continuously variable from narrow to wide angle, thereby increasing or decreasing light intensity.

A toughened, heatproof safety glass is provided at the front of the light. This provides protection from flying glass in the unlikely event of a quartz lamp envelope forcibly rupturing. Never operate the light if this glass is broken or missing.

The lamp head is designed around a clever heat dissipation system, which allows external parts of the light to operate at a far lower temperature than other models currently on the market. However, halogen lamps operate at very high temperatures (the quartz envelope can reach 900°C), and considerable heat can still be projected from the front of the light, especially when using high wattage lamps. Do not operate the light with the barn doors fully closed.

Do not operate the light in the vicinity of highly combustible materials, especially explosive heavy vapours. Never leave the light turned on while unattended. Do not obstruct the airflow through the cooling vents.

3.9 THE PAGLIGHT HOT-SHOE POWER BASE:

The Paglight Power Base incorporates a swivelling facility with a captive locking mechanism. Use the 1/4" Whit. stud or Camera Shoe Plate to fit the Power Base directly to the camera. Always tighten the locking wheel firmly; this will secure the base while retaining the swivelling facility.

Paglight Power Bases are available with the following connectors and lead lengths:

PP90: for connection to the power output socket of the PAGlok Connector (available in 150mm, 500mm and 1.5m lead lengths).

XLR-4: for connection to an XLR-4 output (lead length 1.5m).

D-Tap: a 2-pin connector for a Sony camera light output (lead length 150mm) or Anton-Bauer battery mount light output (lead length 500mm).

The Paglight can be quickly detached from its low-profile hot-shoe Power Base, allowing the camera to be stowed in its flight case without the need to remove the base and wiring. The light is removed from the base by depressing the release catch and sliding the lamp head rearwards.

3.10 FILTERS AND BARN DOORS:

An accessory ring fits onto the front of the Paglight, and accepts a range of snap-in filters and barn doors (parallel and tapered). The accessories include colour temperature

conversion filters and a frosted diffuser. The ring will accommodate any four accessories, available either as a complete kit, or individually. Accessories are a snap-fit onto the ring, and may be assembled in any permutation. To adjust the position of the accessory ring, slacken the screw, rotate the ring to the desired position, and re-tighten the screw. To remove the ring, unscrew the screw completely, and expand the ring over the front rim of the light. The barn doors and filters feature screws to adjust the tension of the hinges.

3.11 SERVICE:

If a fault develops, do not disassemble the Paglight or its ancillaries. The electronics assemblies do not require periodic maintenance, and contain no user-serviceable parts. Unqualified personnel should not attempt further investigation. Any such interference will invalidate the guarantee, may give rise to a fire hazard or the risk of electric shock, and could cause more damage than the original fault.

In order to maintain the PAG quality standard for which this product was originally selected, seek advice from your nearest PAG Dealer or direct from PAG Ltd. London by telephoning +44 (0)20 8543 3131, or by emailing service@paguk.com

SECTION 4

PAGLIGHT SYSTEM

PAGLIGHT SYSTEM:

*Components of the Paglight system may be purchased separately.
See Page 15 for an illustration of the Paglight System.*

Lamp Holders:

- 9950 Standard Halogen (includes lamp protector).
- 9938 Softstart Halogen (includes lamp protector).
- 9958 PowerMax Control/VariLux Halogen (includes lamp protector).
- 9955 PowerArc HMI (includes lamp protector).
- 9997D LED Dimmer (includes lamp protector).
- 9968 Lamp Protector.

Lamps:

- 9930 Halogen Lamp: 12V 20W.
- 9931 Halogen Lamp: 12V 35W.
- 9912 Halogen Lamp: 12V 50W.
- 9932 Halogen Lamp: 12V 75W.
- 9911 Halogen Lamp: 12V 100W.
- 9967 Arc Lamp.

Filters and Barn Doors:

- 9959 Halogen Rotatable Accessory Kit.
Comprises rotatable accessory holder, 1 pair of parallel barn doors, 1 dichroic filter (converts halogen to daylight) and 1 diffuser.
- 9959D LED Rotatable Accessory Kit.
Comprises rotatable accessory holder, 1 pair of parallel barn doors, 1 LED conversion filter and 1 diffuser.
- 9953 Rotatable Accessory Holder (ring only).
- 9951 Dichroic Filter. Converts nominal colour temperature

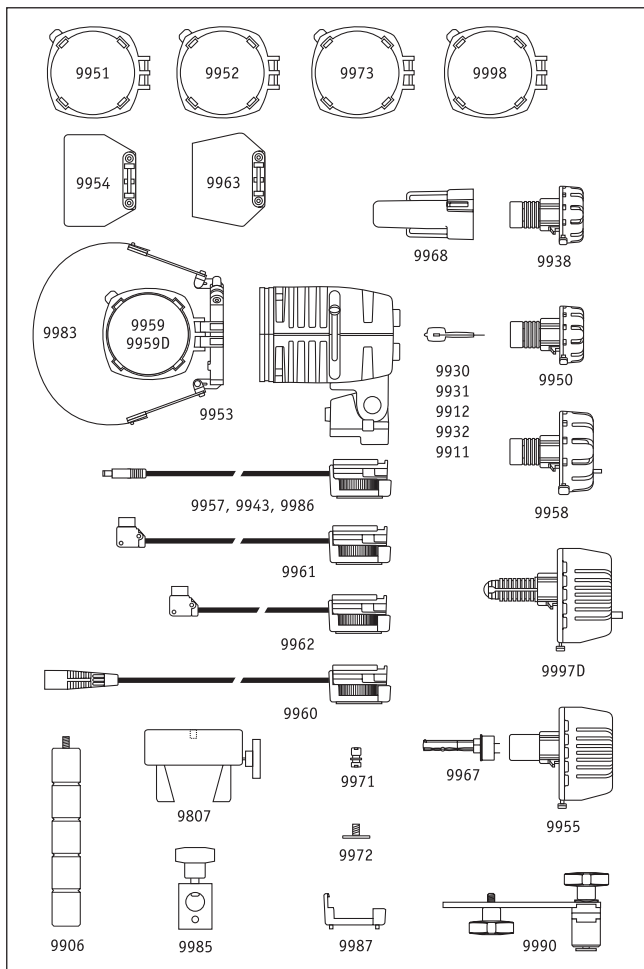
- from halogen (3200°K) to daylight (5600°K).
- 9973 PowerArc Conversion Filter. Converts PowerArc colour temperature from daylight (5600°K) to halogen (3200°K).
- 9998 LED Conversion Filter. Converts LED unit colour temperature to match halogen (3200°K).
- 9952 Diffuser.
- 9954 Parallel Barn Doors (pair).
- 9963 Tapered Barn Doors (pair).
- 9983 Softlight Diffuser & Filter Set.
Comprises: 2 filter holders, 2 Softlight diffusers, 2 full CT blue filters, 2 half CT blue filters & 2 full CT orange filters.
- 9979 Replacement Softlight diffusers x 6.
- 9984 Replacement Filter holders x 2.
- 9980 Replacement Full CT blue filters x 6.
- 9982 Replacement Half CT blue filters x 6.
- 9981 Replacement Half CT orange filters x 6.

Power Bases:

- 9957 Hot-Shoe Power Base, PP90 with 500mm lead.
- 9943 Hot-Shoe Power Base, PP90 with 1.5m lead.
- 9986 Hot-Shoe Power Base, PP90 with 150mm lead.
- 9960 Hot-Shoe Power Base, XLR-4 with 1.5m lead.
- 9961 Hot-Shoe Power Base, D-Tap with 500mm lead.
- 9962 Hot-Shoe Power Base, D-Tap with 150mm lead.
- 9987 Power Base Locking Adaptor.

Mounting Options:

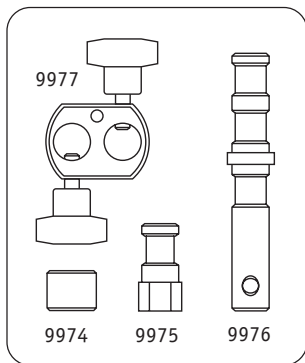
- 9971 Male to Male Stud Adaptor 1/4" Whit.
- 9972 Camera Shoe Plate 1/4" Whit.
- 9906 Handle 1/4" Whit. stud to bush. Length 127mm.
- 9807 Camera Clamp: 1/4" Whit. bush.
- 9990 Extender Arm: 1/4" Whit.
- 9985 Spigot Adaptor: 1/2" dia. to 1/4" Whit.



Mounting Adaptors:

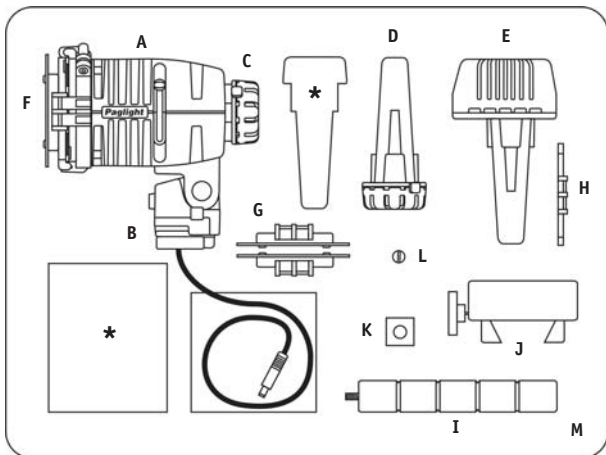
These handy spigots and spigot adaptors enable the Paglight to be mounted to any camera, tripod, lighting rig or gaff grip.

- 9974 Thread Adaptor: 3/8" Whit. to 1/4" Whit.
- 9975 Spigot Pin: 1/2" dia. to 1/4" Whit.
- 9976 Spigot Pin: 5/8" dia. to 1/4" Whit.
- 9977 Multi-Configuration Spigot Adaptor: In-line or 90°, 5/8" to 5/8" to 1/2" dia. & 1/4" Whit.
- 9978 Mounting Adaptor Kit: Comprises: 9971, 9974, 9975, 9976 & 9977.



PAGLIGHT LED & POWERARC FIELD KITS:

Models 9825L and 9825



A Paglight

B Choice of Power Base

C Standard lamp holder
(choice of lamp)

D Standard lamp holder
and protector
(choice of lamp)

E LED Dimmer unit or
PowerArc unit, lamp and
protector

F Accessory Kit

Comprising: accessory holder,
1 pair of parallel barn doors,
1 dichroic filter and 1 diffuser

G Tapered barn doors

H LED or PowerArc Conversion
Filter

I Handle

J Camera Clamp

K Camera Shoe Plate

L Stud Adaptor

M Fitted Flight Case

***** Storage space for additional
items

SECTION 6

WARRANTY

Notwithstanding any provision of any agreement the following warranty is exclusive: PAG Limited warrants each Paglight (with the exception of glass parts) it manufactures to be free of defects in material and workmanship under use and service for **TWO YEARS** from the date of purchase. This warranty extends only to the original purchaser. This warranty shall not apply to fuses or any product or parts which have been subject to misuse, neglect, accident or abnormal conditions of operation.

In the event of failure of a product covered by this warranty, PAG Ltd. will repair and calibrate equipment returned to an authorised service facility within the period of the warranty, provided the warrantor's examination discloses to its satisfaction the product was defective. The warrantor may, at its option, replace the product in lieu of repair. With regard to any equipment returned within this period, said repairs or replacements will be made without charge. If the failure has been caused by misuse, neglect, accident or abnormal conditions of operation, repairs will be billed at a nominal cost. In such a case, an estimate will be submitted before work is started, if requested.

The foregoing warranty is in lieu of all other warranties, express or implied, including but not limited to any implied warranty or merchantability, fitness or adequacy for any particular purpose or use. PAG Limited shall not be liable for any special, incidental, or consequential damages, whether in contract, tort, or otherwise.

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