



# UAL

## Unidirectional Approach Light



A generator powered, radio controlled, portable, unidirectional approach light providing three pre-set levels of light intensity.

### GENERAL DESCRIPTION

The UAL is based upon the OREL and uses many common components, namely the polycarbonate body mouldings, lamp base, electronics enclosure, control panel and radio antenna. The lower section houses the encapsulated transformer. The adjustable lamp housing is secured to the body assembly via a pivot arrangement which allows precise adjustment of the lamp in elevation between 2° and 8°.

### CONSTRUCTION & FINISH

The upper and lower body sections are injection moulded from colour impregnated high strength polycarbonate. Specific internal surfaces are covered with a metal coating to provide total electromagnetic compatibility. All fittings are fully corrosion protected. The lens is manufactured from borosilicate glass and emits white light through 20° in azimuth. The light source is a 35w tungsten halogen bi-pin lamp. Fuses beneath the lamp pivot arrangement provide circuit protection. The base has a high grade "Velcro" covering which, when attached to a fixed baseplate provides extremely good adhesion. Power is supplied via a sealed connector. Control and operation of the unit can be accomplished whilst the operator is wearing full NBC or Arctic clothing.

### PHOTOMETRIC PERFORMANCE

The UAL produces white light at three pre-set levels of intensity:

- Level 1 100cds
- Level 2 1,000cds
- Level 3 5,000cds

### POWER SUPPLY

Power is supplied from a 2.0Kw generator producing 240v AC @ 60Hz. An encapsulated transformer in the base of the unit converts this for supply to the electronic control. The physical connection between the UAL and the generator is made using the fixed lengths of heavy duty three core rubber sheathed cable supplied with MOSKIT.

### ENVIRONMENTAL PERFORMANCE

The UAL has successfully completed a full and comprehensive schedule of environmental and type testing designed to meet rugged and exacting UK military standards. These include :

- Climatic conditions
- Corrosion and Salt Resistance
- Mould Growth
- Fluid Contamination
- EMC
- Vibration and Shock
- Reliability & Maintainability



### CONTROL

Control of the UAL is achieved either manually or remotely by radio using the Master Switching Unit (MSU). A selector switch on the control panel of the UAL enables either mode to be selected by the operator during deployment. Radio control is via a coded VHF receiver module mounted inside the electronics enclosure. The coding of the radio signal ensures a high rejection of radio interference from other transmissions and protects the unit from unauthorised operation either by accident or intent.

### DEPLOYMENT

When used as part of the MOS layout the UALs are placed in line with the centre of the runway at the approach end. The first UAL is set 150mtrs from the threshold, the second a further 60mtrs out. Correct spacing is achieved by the solid state distance measuring equipment (DME) mounted on the trailer. Elevation of the lamp can be adjusted between 2° & 8° by setting the desired approach angle on the scale and adjusting the spirit level. When deployment times are not critical, aluminium baseplates can be fixed to the ground using the cordless hammer drill or metal anchor pins depending upon the type of surface encountered.

The baseplates have a "Velcro" covering to engage with the bottom of the UAL. This allows deployment to pre-positioned bases for semi-permanent and emergency lighting configurations.

### DIMENSIONAL DATA

- Height 300mm (excluding antenna)
- Width 195mm x 195mm
- Weight 6.4kgs



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