



TAC PAPI

Tactical Precision Approach Path Indicator



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A rugged, lightweight, tactical precision approach path indicator (PAPI).

GENERAL DESCRIPTION

The unit is generator powered and can be controlled either manually or remotely by radio. It emits a red and white signal at three pre-set levels of intensity.

CONSTRUCTION & FINISH

The projector base is manufactured from a honeycomb sandwich composite material which provides a flat, light weight but extremely rigid platform upon which the optical system is mounted. The optical system comprises two parabolic reflectors, two dichroic red filters and two doublet lens assemblies. The transformer, inclinometer and spirit level are also mounted on the projector base. Three threaded adjusting legs, fitted with coil springs, support the projector base which is protected from the elements by a weatherproof enclosure which is secured in position by the attitude adjusting knobs. The enclosure incorporates viewing windows for both the inclinometer and the spirit level. A hinged panel gives access to the inclinometer to enable the operator to set the desired approach angle. A window in the forward face of the unit protects the optical system from stone damage that may be caused by jet efflux. The radio antenna, control switches and sealed power supply connector are also mounted on the enclosure. A sealed electronics module is mounted on the inside of the enclosure. All fittings are fully corrosion protected.

PHOTOMETRIC PERFORMANCE

The TAC-PAPI is a two lamp unit which complies fully with the ICAO specification and produces a variable intensity split red/white beam.

The three pre-set levels of light intensity are;

- Level 1 500cds
- Level 2 5,000cds
- Level 3 50,000cds

An abbreviated two unit A-PAPI system is supplied with MOSKIT and the information presented to the pilot is as follows:

- 2 x White Signal - ABOVE THE GLIDE SLOPE
- 1 x White 1 x Red - ON SLOPE
- 2 x Red Signal - BELOW THE GLIDE SLOPE

Approach angles of between 2 and 8 degrees can be achieved and the unit is accurate to within 1 minute of arc. Greater angles can be supplied following discussion at the time of ordering.

POWER SUPPLY & ENDURANCE

When used with the MOSKIT power is supplied from a 2.0Kw generator producing 240v AC @ 60Hz. The encapsulated 330Va toroidal transformer converts this for supply to the electronic control. The physical connection between the TAC-PAPI and the generator is made using the fixed lengths of heavy duty three core rubber sheathed cable supplied with MOSKIT. The TAC-PAPI can also use mains power of the appropriate voltage if this is available.



ENVIRONMENTAL PERFORMANCE

The TAC-PAPI has successfully completed a full and comprehensive schedule of environmental and type testing designed to meet 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 TAC-PAPI is achieved either manually or remotely by using the Master Switching Unit (MSU). A selector switch mounted on the control panel of the TAC-PAPI enables either mode to be selected by the operator during deployment. Radio control is via a coded VHF receiver module mounted inside the sealed 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

Once the optimum glide path angle has been decided the two TAC-PAPI units are deployed in a wing-bar 9 mtrs out from the runway edge (port side on approach) and spaced 6 mtrs apart. The approach angle and angle differential settings between the two units can be set prior to deployment, it is then only necessary to level the units once they have been positioned. When deployed the TAC-PAPI is mounted upon a base plate, which may be fixed into place, and is then secured by a spring and bobbin arrangement at the fore and aft positions.

DIMENSIONAL DATA

Height	425mm (Including antenna)
Width	410mm
Length	600mm
Weight	14kgs



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