Airport Lighting Specialists Pty Ltd

www.airportlighting.com.au
ABN 480 0742 0742
PO Box 94, Rosanna 3084 Victoria Australia
Tel (03) 9432 0511 Fax (03) 9432 1952

AFRU - Airport Frequency Response Unit
or
PAALC- Pilot Activated Airport Lighting Control
or
AFRU+PAL - Airport Frequency Response Unit + Pilot Activated Lighting

General Description

The ALS/PAALC (AFRU+PAL) has been designed as a direct replacement for the ageing DCA PAALC. It is a standard 19" rack mount and 3 'rack units' (3U) high, (same as the old DCA PAALC). That makes the body about 17" wide, 5¼" high and 15" deep, allowing for wiring and antenna connections at the back. The width of the facia plate is of course 19". For the metricated, that's 432x133x380mm with a 483mm wide facia.

The power connections to the cubicle remain the same as the old DCA PAALC, with identical terminal strip numbering 1-12.

The radio type is an ICOM A110, designed for Australian outdoor temperatures.

The frequency selection, radio transmission, and signals received indicators may be viewed through the perspex window on the front of the unit.

Pilot Activation of Airfield Lighting

When installed as a **PAALC** unit, the VHF carrier activation code is to consist of three bursts of carrier signal anywhere between 1 and 5 seconds long, with the last two code bursts being completed within 24 seconds of the first acceptable burst. (Same as the existing DCA PAALC unit).

When installed as an **AFRU+PAL**, the VHF carrier activation code is to consist of three bursts of carrier signal anywhere between 0.3 and 1.99 seconds long, with the last two bursts being completed within 5 seconds of the first acceptable burst. Any signals greater than 2 seconds in length will activate the aerodrome frequency response messages.

PAALC or AFRU+PAL Specifications and Features

The PAALC has a fail safe output as per the CASA requirements. This allows immediate selection of the airfield lighting in the event of a PAALC failure. The lights will remain on until the fault is rectified.

The Radio is an ICOM A110. Selectable to 25kHz spacing over the air band frequency range of 118.000 – 136.975MHz.

Receiver sensitivity set to 15uV.
Transmitter power within the CASA requirements of 2-5 watts.

Recorded Voice Messages. Stored on a microchip with a maximum storage time 90 seconds. Average message length 14 seconds. Aerodrome message, maximum 18 seconds.

Aerodrome Message. This feature allows the aerodrome reporting officer to select a message informing pilots that a serviceability inspection is currently in progress. The message follows a CTAF/MBZ confirmation only.

Very useful for ARO's who have no radio, or are not qualified to transmit on the Air Band.

Operator Interface Panel. This is particularly useful for ground staff. The interface panel allows manual selection and a range of monitoring features not available on other PAALC units.

Field Current Monitoring. The level of runway lighting current is measured for confirmation to pilots that the lights are on.

Key switch operation. A remote key switch may be connected to the PAALC to operate the airfield lighting. Particularly useful for airline staff. When deselected after a key switch operation, the lights will remain on for the 'set period.'