

# Multi Function Personal Locator Beacons

## 500-12

The Series 500-12 Personal Locator Beacons are simple, compact, lightweight units which can be used either manually or automatically via ejection seat harness.

### FEATURES

- Simultaneous Transmissions
- Beacon and Speech Modes & COSPAS/SARSAT coverage
- Unique remotely programmable country code function for 406.025MHz
- Manual or automatic operation
- Meets NATO STANAG 7007 latest issue, EUROCAE ED 62, RTCA DO-204, DO-183
- Waterproof to 10 meters
- Reprogrammable on aircraft



Fully compatible with the majority of search and rescue equipment including the COSPAS/SARSAT satellite based survivor location equipment.

The PLB is a one-piece unit with the transmitter housed in a yellow pigmented or NATO green moulded thermoplastic case, which is designed such that the replaceable battery pack can be mounted within the overall package to form a smooth but non-slip hand portable unit.

The design is such that easy replacement of the battery module (15 seconds) is possible during beacon operation. Full speech capability on 121.5 and 243MHz together with an audible tone indicating live beacon transmissions.

The unit is designed to survive for up to ten years with the only maintenance being battery replacement every five years. The antenna (supplied) is capable of being attached directly to the PLB or remote through a cable assembly for operation in a dinghy.



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# Specification

## Frequency

The PLB transmits modulated homing signals on both 121.5MHz (Civil) and 243.0 (Military) distress frequencies, with characteristics in accordance with STANAG 7007. Together with 406.025MHz in accordance with COSPAS/SARSAT.

## Channel Spacing

Transmissions and reception on both frequencies are compatible with 25KHz channel spacing.

## Modulation (121.5 & 243MHz)

Continuous Swept Tone of at least 700Hz within the Sweep Range

- **Sweep Range** 1.6KHz to 300Hz (i.e. downwards)
- **Sweep Rate** 2-3Hz

Amplitude Modulated with Rectangular Wave Modulation Depth 67% minimum (80% typical)

## Modulation (406.025 MHz)

0.5 Secs 5W pulse every 50 secs

Phase modulation of  $\pm 3$  rad (peak)

Digital modulation to include (see C/S G.005 Iss. Rev 1, Section 3)

- Bit Synchronisation
- Frame Synchronisation
- Protected Field Emergency - Code/National Use Field
- Long Message (optional)

## Power Output

### 121.5 & 243MHz

- 48 hours min, 100mW (+20dBm) on both frequencies at -20°C

### 406.025MHz

- 24 hours min, 5W (+37dBm  $\pm$  2dBm) at -20°C

## Activation

### Manual

- The PLB can be manually turned on & off, as required by the operator

### Automatic

- The PLB is capable of being reliably activated automatically on ejection from a suitably equipped aircraft

## Physical Attributes

### Dimensions

- 150mm x 87.5mm x 37.5mm

### Weight

- 600gm nominal

### Colour

- Reflective yellow or NATO green

## Compliance

The PLB is compliant with the following specifications:

### Civil

- EUROCAE ED62/RTCA DO-204/RTCA DO-183
- EUROCAE ED14C/RTCA DO-160C

### Military

- NATO - STANAG 7007 latest issue Personal

## Locator Beacon Approvals

- Full FAA and JAA approvals in accordance with TCO C91a and C126, JTSO-2C91a and 2C126
- COSPAS/SARSAT approval 111 CAA approval no. WR1029, Boeing and Airbus approved

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