HR Smith
Group of Companies

Street Court, Kingsland, Leominster
Herefordshire, HR6 9QA, ENGLAND
t. +44 (0) 1568 708 744
f. +44 (0) 1568 708 713
e. sales@hr-smith.com
w. www.hr-smith.com

Multi Function Personal Locator Beacons

Series 500-12

Techtest Limited

Emergency Location and Rescue Equipment

GELBYSON
Products for Aerospace Applications
Since 1947

Distributor & Repair Station

www.gelbyson.com - **E-mail:** info@gelbyson.com

Multi Function Personal Locator Beacons Series 500-12

Features

- Simultaneous Transmissions
- Beacon and Speech Modes and COSPAS/SARSAT coverage
- Unique remotely programmable country code function for 406.025 MHz
- 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

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

Technical Specification

Transmitter Signal

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 406.025 MHz in accordance with COSPAS/SARSAT.
Channel Spacing	Transmissions and reception on both frequencies are compatible with 25KHz channel spacing.

Modulation (121.5 and 243 MHz)

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

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

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 $\pm \pi/3$ rad (peak)

Digital modulation to include (see C/S G.005 Iss. Rev1, Section 3):

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

Power Output

121.5 & 243 MHz	48 hours min., 100mW (+20dBm) on both frequencies at -20°C
406.025 MHz	24 hours min., 5W (+37dBm ± 2dBm) at -20°C

Activation

Manual	The PLB can be manually turned on and 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

Specmat Technologies Inc.

Advanced high technology materials and structures

215 Dunavant Drive, Rockford, Tennessee 37853, USA
t. (865) 609 1411
f. (865) 609 1911
e. sales@specmatinc.com

GELBYSON
Products for Aerospace Applications
Since 1947

Distributor & Repair Station
www.gelbyson.com - **E-mail:** info@gelbyson.com
Tel. (+39) 06.363.04.761 - (+39) 06.363.04.941
Fax (+39) 06.32.97.337