

# Multi Function Personal Locator Beacon 500-12



TECHTEST LTD  
LEOMINSTER  
ENGLAND

BEACON ID No. SPACE  
SERIAL No. MODEL

**EMERGENCY LOCATOR TRANSMITTER (TYPE S)**  
**PERSONAL LOCATOR BEACON: TYPE 500-12V**

**WARNING! FOR EMERGENCY USE ONLY**

121.5 / 243 / 406 MHz  
WITH SPEECH ON UHF & VHF

CLASS 2 (20°C to +55°C)  
J780-3C91a & J780-3C12b  
T80-C91a & T80-C12b

**OPERATING INSTRUCTIONS**  
ROTATE ANTENNA 180° AND EXTEND  
PULL LANYARD / SLIDE SWITCH  
DOWN TO ACTIVATE BEACON  
SLIDE SWITCH UPWARDS TO  
ACTIVATE BUILT IN TEST (B.I.T.)  
UNTIL STATUS IS SHOWN  
USE PRESS TO TALK ONLY WHEN  
RESCUE CRAFT IS SEEN OR HEARD

**BUILT IN TEST (B.I.T.) STATUS**  
CONT. ON: PLB OPERATIONAL  
FAST FLASH: BATTERY FAILURE  
SLOW FLASH  
FLASH 10TH  
PAUSE: INTERNAL FAULT

TO: BEACON ID No. SPACE  
SERIAL No. MODEL

**FOR TRANSMITTER (TYPE S)**  
**FOR BEACON: TYPE 500-12**

**EMERGENCY USE ONLY**

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# Multi Function Personal Locator Beacons 500-12

## 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

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.

## 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 $\pm \pi/3$ 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		