

PRC-648 PLB

Personal Locator Beacon



Elbit Systems™

C⁴I and Cyber

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Variants and Accessories

True to its rooted tradition of continuous evolutionary improvement, since the first model of the PRC-648 PLB was released to the market Elbit Systems has gone on to develop a variety of models and complementary devices designed to support diverse customer needs and requirements.

In addition to the advanced capabilities of its predecessor, the PRC-648 PLB with Water Sensor incorporates an externally connected sensor that automatically and instantly actuates an internal switch upon contact with sea water.

A custom-designed Pressure Proof Container allows submerging the PRC-648 to a depth of 200 meters and be ready for use immediately upon return to the surface. This waterproof deep-pressure vessel is made of anodized aluminum and is fitted with an internal rubber seal and a carrying strap.

External V/UHF and GPS antennas can be integrated into the flight jacket stole and connected to the PRC-648.

The PRC-648 **Floating Device (FD)** is designed to enable undisturbed transmission of distress signals when the device lands in a body of water. In the aircraft, the device with the beacon radio inside is stored in a stowage case within the Survival Kit. In case of crash landing or ejection over a body of water, a lanyard is pulled and the device is deployed, a CO₂ cartridge is triggered on contact with water and instantly inflates a balloon and deploys the antenna, which will stay in an upright position, in any sea conditions.

The **ELT-648 Emergency Locator Transmitter** is a distress beacon intended for fixed installation for aircraft flying over land or water. The ELT-648 is designed to provide emergency transmission in the event of aircraft crash. Upon crash landing impact the ELT automatically begins transmitting beacon signals on all of the international distress frequencies.



PRC-648 PLB with water sensor



Pressure Proof Container



External antennas on stole



Floating Device

ELT + Control Box



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System Performance

Primary Mission	Non-Combat SAR Personal Locator Beacon
Beacon Frequencies	121.5 and 243 MHz (training frequencies are available)
COSPAS-SARSAT Beacon	406.025 ÷ 406.100 MHz
Voice Communication Channel	121.5, 243, 282.8 MHz (training frequencies are available)
Beacon Range	
121.5, 243 MHz	>30 km with receiver aircraft at 1,000 ft AGL
406.025 MHz	>60 km with receiver aircraft at 10,000 ft AGL Over-The-Horizon (OTH)
GPS Geolocation Accuracy	~10m (<33 ft) with embedded C/A code GPS
Identification	Unique COSPAS-SARSAT identification numbers
MTBF	>3,500 hours
Environmental Characteristics	-20°C to +55°C operation; -20°C to +85°C storage; Aircraft Carrier EMI
Water Immersion	10 m (33 feet)
Activation	Automatic + Manual
Battery Type	<ul style="list-style-type: none"> • Lithium Bromide Chloride complex, one D-size battery • Field replaceable
Battery Life	<ul style="list-style-type: none"> • >48 hours in 406.025 MHz Beacon Mode • >30 hours in Dual Beacon Mode (121.5, 243.0 MHz) • >24 hours in Triple Beacon Mode (121.5, 243.0, 406 MHz)
BIT/Support Equipment	Advanced Go/No-Go BIT + mini-USB connector for support/configuration
Weight (including battery)	≤550 gr.
Size - W x H x D	7.8 x 14 x 4 cm



PRC-648 PLB

Over-the-Horizon COSPAS-SARSAT Personal Locator Beacon

Elbit Systems SAR & Data Links' PRC-648 PLB is an advanced Over-the-Horizon COSPAS-SARSAT Beacon SAR Locator, intended for non-combat SAR missions. The PRC-648 PLB is designed to provide ultra-reliable performance in severe environments.

This uniquely feature-rich Personal Locator Beacon has an integral voice transceiver offering multichannel VHF/UHF resources.

An embedded GPS receiver provides for automatic position reporting, for geolocation with better than 10 meters (33 feet) accuracy. The triple beacon enables transmitting distress signals over the internationally recognized emergency frequencies, including the Cospas-Sarsat protocol, and complying with the requirements of C/S T.001 and T.007, as well as STANAG 7007.

Four modes of operation and a complete Built-In Test (BIT) function, complement the unique operational strengths and robust make-up of the PRC-648 PLB.

Operational Highlights

- Advanced OTH Cospas-Sarsat Personal Locator Beacon, for use in fighter aircrew flight vests, for non-combat rescue operations
- Can be integrated into helicopter, transport, and fighter aircraft survival kits
- Automatic activation is assured by an internal G-switch and a sea-water sensor, while a magnetic switch provides for additional mechanical and manual activation options
- Internal and external (auxiliary) V/UHF and GPS antennas
- One-hand operation even while wearing gloves

Advantages

- Exceptionally long battery life
- Complete Built-In Test (BIT) function
- Non-rechargeable lithium battery can be field replaced in less than two minutes
- Compact, low weight, highly reliable system