

# SARBE® 6 - BE 515



The SARBE 6 Personal Locator Beacon is designed for use as a survival radio by military or commercial aircrew. On activation, the unit transmits a continuous internationally recognised, swept-tone radio distress signal in the UHF or VHF distress frequencies. It also provides two-way voice communications between the survivor and approaching rescuers. Built-in 'Self-Test' facilities allow a simple confidence check to be carried out for correct functioning of the unit and battery state.

The unit is activated by the removal of an operating pin - either manually by a single, or automatically, by such functions as liferaft inflation or ejector seat operation.

Simultaneous, omnidirectional transmission of both 121.5 and 243 MHz signals then continues automatically for a minimum of 24 hours to facilitate detection by search aircraft or vessels, or by any other land, sea or airborne installations monitoring these frequencies.

Switches conveniently located on the side of the unit allow the survivor to select the voice mode, permitting two-way communication with the rescuers. Voice communication is on both distress frequencies simultaneously and this mode is intended for use only when the survivor can see or hear the rescue craft.

SARBE 6 can be tested quickly and simply before the commencement of a flight or at regular intervals by lifting a lever mounted on the side of the unit. A green light gives an instant 'Go / No go' indication.

An optional antenna extension is available for life preserver storage.

On inflation of the life preserver, correct deployment of the antenna is automatically ensured, even in the worst survival environment at sea.

The SARBE 6 is waterproof to a depth of 10m (33ft) and the battery has an unused shelf life of 5 years when stored in continuous temperate conditions.

Fully approved by the CAA, and meeting the relevant sections of NATO STANAG 7007 edition 2, 5th edition, the unit is Cospas-Sarsat compatible.



## Technical Specification

### General

#### Frequency Range

Simultaneous Operation on:  
VHF 121.5 MHz  $\pm 3.75$  kHz.  
UHF 243 MHz  $\pm 7.5$  kHz.

#### Modulation

AM.

#### Antenna

Combined 1/4-wavelength 243 MHz and 1/4-wavelength loaded 121.5 MHz vertical, mounted on equipment or, using optional extension, for life preserver mounting.

#### Battery

Lithium manganese dioxide (non-pressurised 'safe' system) or lithium sulphur dioxide for very low temperature operation.

#### Endurance (dependent on battery age)

Continuous beacon: not less than 24 hours at 0°C to 3dB end point.

#### Operating Temperature

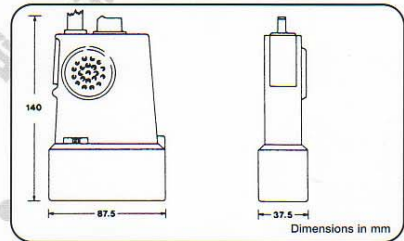
+55°C to -20°C (-40°C with Li<sub>2</sub>O battery).

#### Weight

638g (22.5oz).

### Design Specification

NATO STANAG 3281 5th edition, relevant sections of STANAG 7007 edition 2 and General Signature DDP 1035.



### TRANSMITTER

#### Power Output: RF

Beacon: 300mW nominal peak, but not less than 200mW mean during pulse, into 50ohms on both frequencies.  
Speech: not less than 50mW unmodulated into 50ohms, on both frequencies.

#### Modulation

Beacon: AM not less than 85%. Audio frequency swept at 2 to 3 sweeps per second.  
Speech: AM up to 80%.

#### Mode of emission

Beacon: A2 on both frequencies simultaneously, with modulation and carrier keyed at 1:1 on/off ratio, pulse duration 0.75s approx.  
Speech: A3 on both frequencies simultaneously.

#### Range

Beacon: at least 110km (60nm) at 3,000m (10,000ft).  
Speech: at least 18km (10mi) at 3,000m (10,000ft).

### RECEIVER

#### Sensitivity

Better than 10 $\mu$ V terminated on each frequency, 80% modulation at 1,000Hz or 25mW audio output.

#### Signal to Noise

S+N/N ratio not less than 10dB with input signal of 20 $\mu$ V terminated, with 30% modulation at 1,000Hz.

Approval British CAA-approved, no. WR 790-1984.