

# Type 935 Series

Tactical Direction Finders

# COBHAM

935-Series-DS Issue 1

The most important thing we build is trust

The ability to locate personnel in distress in all theatres needs to be quickly and accurately executed to maximise rescue success, whatever the prevailing conditions.

The **935 Series** of tactical Direction Finders (DF) provides a range of integrated DF solutions for bus-controlled and stand-alone direction finding systems. 935 DFs include an integral synthesised receiver covering the frequency range 30 MHz - 470 MHz, together with five Guard Receivers to monitor pre-defined distress frequencies. Bearings may be taken on all six receivers simultaneously. Data decoding is provided for COSPAS-SARSAT messages and for marine DSC messages on the associated Guard Receivers. There is also the option to output On Top Position Indication (OTPI) and home onto sonobuoy frequency bandwidth.

When used with a Personnel Locator System (PLS) Interrogator, a 935 DF system has the capability to operate with Personnel Survival Radios (PSR), such as the AN/PRC-112 and PRC-434, to provide range and bearing information. In addition, the system can provide the bearing coordinates from an embedded Global Positioning System (GPS) in the URX3000 PSR. Bearings are taken in one of two Customer selectable modes: Search and Rescue (SAR) and Combat SAR (CSAR).

The synthesised receiver provides the Direction Finding function and may be tuned in 5.0 kHz, 6.25 kHz or 8.33 kHz steps.

The Guard Receivers may be tuned in the frequency ranges shown in the following table:

| Receiver  | Band          | Frequency Range (MHz) |
|-----------|---------------|-----------------------|
| Guard RX1 | VHF           | 121.2 – 123.2         |
| Guard RX2 | Maritime      | 155.6 – 158.5         |
| Guard RX3 | UHF           | 241.2 – 245.1         |
| Guard RX4 | GMDSS DSC     | 156.525 (CH70)        |
| Guard RX5 | COSPAS-SARSAT | 406.0 - 406.1         |

The VHF, Maritime and UHF Guard Receivers have a Main frequency and an associated Auxiliary frequency. The Main frequencies are pre-programmed, while the auxiliary frequencies can be programmed by the Customer. Such an arrangement allows distress monitoring to take place on the Main frequencies and training to be carried out on the Auxiliary frequencies.

The GMDSS DSC Guard Receiver is pre-programmed to the VHF DSC Channel 70. The system may be programmed to monitor and report Distress Alerts, All-Ships Calls, Selective Calls and either Distress or Urgency categories. Full reporting of the vessels MMSI, Nature of Distress and GPS coordinates is made available to the user.

The COSPAS-SARSAT Guard Receiver monitors the 406 MHz COSPAS-SARSAT frequencies and provides a decoded output from the beacon, including; the 15 digit HEX ID, the country of registration and any GPS coordinates if present.



935-11



935-1



715-40 Type Controller

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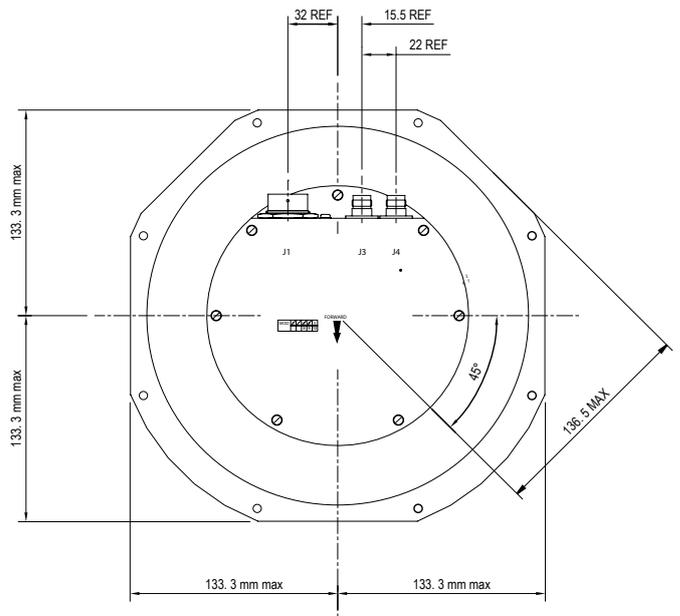
## Typical Specifications

### Typical Electrical Specification

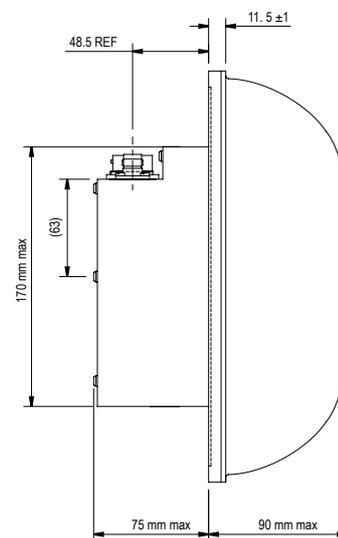
|                         |   |
|-------------------------|---|
| Frequency Range         | 30 MHz - 407 MHz  |
| Primary Power           | 16.0 to 31.5 V d.c., 1.6 A max                          |
| Operational Performance | Accuracy: Better than 5 rms (dependent on installation) |

### Typical Environmental Specification

|                       |   |
|-----------------------|---|
| Mounting Attitude     | In line with airframe, normal or inverted   |
| Mounting Method       | Rigid   |
| Temperature Altitude  | EUROCAE ED-14C/RTCA DO-160C Section 4<br>Cat B2 25,000 feet   |
| Temperature Variation | EUROCAE ED-14C/RTCA DO-160C Section 5<br>Cat A External to Aircraft   |
| Vibration             | EUROCAE ED-14C/RTCA DO-160C Section 8<br>Cat L Fixed Wing<br>Cat Y Helicopter   |
| Shock                 | EUROCAE ED-14C/RTCA DO-160C Section 7<br>Normal operation: 6 g, 11 ms ½ sine<br>Crash Condition: 15 g, 11 ms ½ sine<br>Sustained (Acceleration): 12 g, 3 secs in 6 directions |
| EMC                   | DEF-STAN 59-41, Part 3, Issue 5<br>Categories: DCE01, DCE02, DCE03, DRE01, DRE02,<br>DCS01, DCS02, DCS03, DCS04, DCS10, DRS01, DRS02  |
| Humidity              | EUROCAE ED-14C/RTCA DO-160C Section 6<br>Cat C External   |
| Magnetic Influence    | EUROCAE ED-14C/RTCA DO-160C Section 15<br>Class Z 0.3 m   |
| Waterproofness        | EUROCAE ED-14C/RTCA DO-160C Section 10, Cat R   |
| Fluid Contamination   | EUROCAE ED-14C/RTCA DO-160C Section 11, Cat F   |
| Antenna Type          | Modified annular slot with a cardioid receiving pattern   |



935-1 / 935-3 /  
935-5 / 935-6



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