Type 935 Series

Tactical Direction Finders

935-Series-DS Issue 2

The most important thing we build is trust

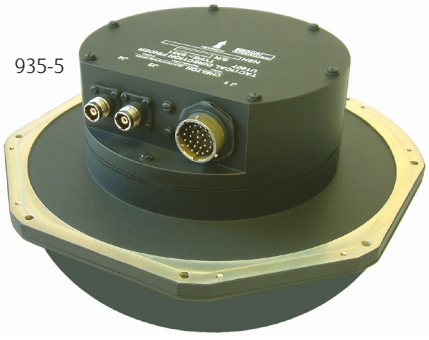
The location of persons in distress needs to be quickly and accurately determined in order to maximise the chances of a successful rescue, regardless of the prevailing conditions or the theatre of operation.

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 select sonobuoy bandwidth for DF to sonobuoys.

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).

Discrete outputs are provided for on-top position indication (OTPI) and distress alert.

935-11



935-5

The Main synthesised receiver may be tuned in 1 kHz steps.

The Guard Receivers may be tuned in 1 kHz steps across the frequency ranges shown in the following table:

Receiver	Band	Frequency Range (MHz)
Guard RX0	VHF	120.000 – 130.000
Guard RX1	Maritime	150.000 – 160.000
Guard RX2	UHF	240.000 – 250.000
Guard RX3	COSPAS-SARSAT	Main channel preset to 406.048 (see text below)
Guard RX4	GMDSS DSC	156.525 (CH70)

The VHF, Maritime and UHF Guard Receivers have a Main channel and an associated Auxiliary channel. The Main frequencies are pre-programmed, while the auxiliary channels 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 selectable 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 embodies a unique technique that enables it to receive and decode SARSAT message data over the full range of standard frequencies from 406.025 MHz to 406.070 MHz without the need for scanning or operator intervention. The Auxiliary channel can be tuned to cover frequencies down to 399 MHz, or up to 406.10 MHz, if required. This enables the DF to cover all channels currently listed by the COSPAS/SARSAT organisation (C/S T.012 Issue 1 – Rev 9 October 2013). The COSPAS/SARSAT decoded messages are reported on the control bus, for display on the controller. The HEX ID of the beacon, together with any GPS position data is reported for display. In addition, the latitude and longitude data of the most recently decoded beacon is output on the ARINC429 bus.

715-40 Type Controller

Type 935 Series

Tactical Direction Finders

Typical Electrical Specification

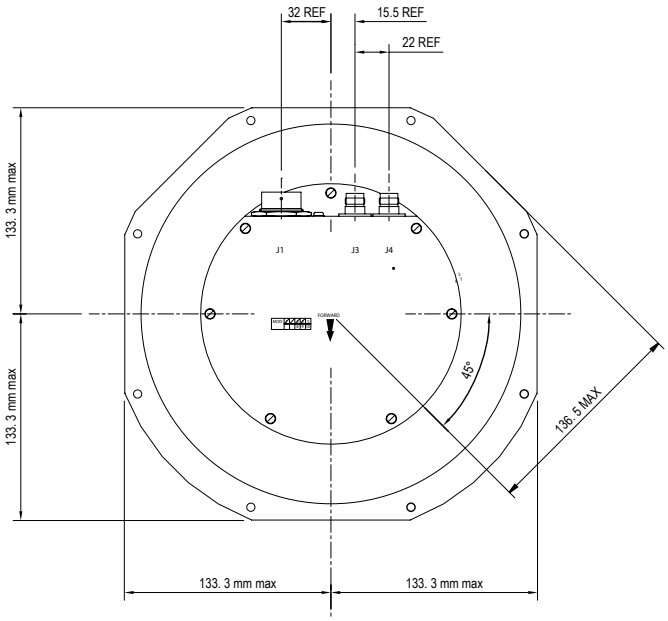
Frequency Range	30 MHz - 470 MHz
Primary Power	16.0 to 31.5 V d.c., 1.6 A max
Operational Performance	Accuracy: Better than 5 rms (dependent on installation)

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 Cat B2 25,000 feet
Temperature Variation	EUROCAE ED-14C/RTCA DO-160C Section 5 Cat A External
Vibration	EUROCAE ED-14C/RTCA DO-160C Section 8 Cat L Fixed Wing Cat Y Helicopter
Shock	EUROCRAE ED-14C/RTCA DO-160C Section 7 Normal operation: 6 g, 11 ms ½ sine Crash Condition: 15 g, 11 ms ½ sine Sustained (Acceleration): 12 g, 3 secs in 6 directions
EMC	DEF-STAN 59-41, Part 3, Issue 5 Categories: DCE01, DCE02, DCE03, DRE01, DRE02, DCS01, DCS02, DCS03, DCS04, DCS10, DRS01, DRS02
Humidity	EUROCAE ED-14C/RTCA DO-160C Section 6 Cat C External
Magnetic Influence	EUROCAE ED-14C/RTCA DO-160C Section 15 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

Mechanical Specification

Dimensions (mm)	286 x 286 x 90 (maximum)
Weight (kg)	3.8 (maximum)
Connectors	MS3114-16-26P GB711 5009-1 GB711 5009-2



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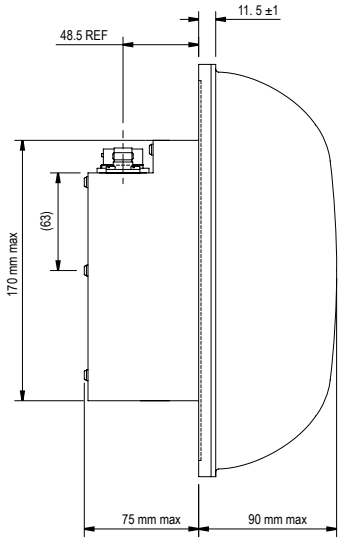

For further information please contact:

Cobham Antenna Systems
The Cobham Centre
Fourth Avenue, Marlow,
Buckinghamshire, SL7 1TF England
Tel: +44 (0)1628 472072
Fax: +44 (0)1628 482255
Email: antennasystems.marlow.marketing@cobham.com

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