

DF-430 Multi-Mission Direction Finder – Surface Applications



Greater accuracy means shorter searches, faster rescues and more lives saved.

When it comes to airborne Search and Rescue (SAR) missions, saving time is often the difference between a rescue and a recovery. That's why government, military and civilian SAR organizations are upgrading their DF capabilities with Rockwell Collins' DF-430 Multi-Mission Direction Finder.

Lightweight, compact and rugged, the DF-430 is specifically designed to receive and interrogate all current international distress frequencies including 121.5 MHz, 243 MHz, 406 MHz, as well as ARGOS and COSPAS-SARSAT encoded beacon signals.

Proven SAR performance

The DF-430 has been in production for over 10 years and there are over 2,000 units in service with government and military SAR providers including the U.S., Italian and Canadian Coast Guards. It is also serving military SAR/CSAR units throughout Europe, and in Japan, Taiwan, New Zealand and Australia.

Multi-mission flexibility

While designed primarily as a highly accurate airborne direction finding system, the DF-430's compact size and minimal power requirements make it attractive for surface SAR applications including installations on towers and a ship's mast.

One example of a land-based application is the U.S. Coast Guard's requirement for 406 MHz direction finding equipment as part of its Rescue 21 SAR system. Rescue 21 will cover coastline, navigable rivers and waterways in the continental United States, Alaska, Hawaii, Guam and Puerto Rico. Rockwell Collins has conducted studies that indicate the DF-430 could be easily modified to satisfy the USCG's needs.

KEY FEATURES

- › 30 - 407 MHz frequency range
- › Flush-mounted omni-directional, vertically polarized antenna with permanent 360° scanning
- › Lightweight – less than 3.3 kg
- › Compact design
- › No external receiver required
- › No calibration required

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KEY BENEFITS

- ▶ Easy installation and system integration
- ▶ Small radome size is easily mounted on towers and ships' masts
- ▶ Multi-Mission government, civilian and military SAR
- ▶ High reliability – MTBF as per MIL-HDBK-217 calculated at over 3,900 hours for ARW and over 14,025 hours for AIC (at 35°C)
- ▶ Full MIL-STD-1553B and ARINC 429 configurability
- ▶ Highly cost effective
- ▶ Designed to meet tomorrow's SAR needs
 - Software upgradable to meet all future COSPAS-SARSAT frequencies
 - Ready to host new 406 MHz downlink protocol for the new Galileo SAR system

TECHNICAL SPECIFICATIONS

General radio specifications

Frequency range	30 - 407 MHz
Antenna	Omni-directional, vertically polarized

Receiver characteristics

30 - 407 MHz coverage	All VHF and UHF frequency bands including the distress frequencies: 30 - 87.975 MHz 25 kHz steps 108 - 118 MHz 25 kHz steps (excepted VOR modulation) 118 - 136 MHz 25 kHz steps or 8.33 kHz steps 136 - 173.975 MHz 25 kHz steps (compatible with 99 channels sonobuoys) 225 - 399.975 MHz 25 kHz steps 121.5 MHz, 243 MHz distress and 406.025 MHz frequencies ARGOS and COSPAS-SARSAT frequencies
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Precision figures	Bearing intrinsic accuracy <math><3^\circ</math> over 360° for the whole frequency range 30 - 407 MHz
	Bearing intrinsic stability <math><\pm 5^\circ</math> at the sensitivity limit
Bearing acquisition delay	Bearing acquisition time <math><200</math> msec

Physical and environmental characteristics

Weight	ANT-430	3.0 kg
	BC-125	0.8 kg
	RPU-430	3.3 kg
	MT-125	0.93 kg
Size/dimensions	ANT-430	266.7 mm diameter/ 97.7 mm height
	BC-125	146 x 120 x 65.5 mm
	RPU-430	57.2 x 367.15 x 193.5 mm
	MT-125	80 x 120 x 347 mm (for 1/4 ATR processor)
Operational temperature	ANT-430	-50°C to +55°C
	BC-125	-20°C to +70°C
	RPU-430	-40°C to +75°C
Storage temperature	ANT-430	-55°C to +90°C
	BC-125	-55°C to +85°C
	RPU-430	-55°C to +90°C

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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