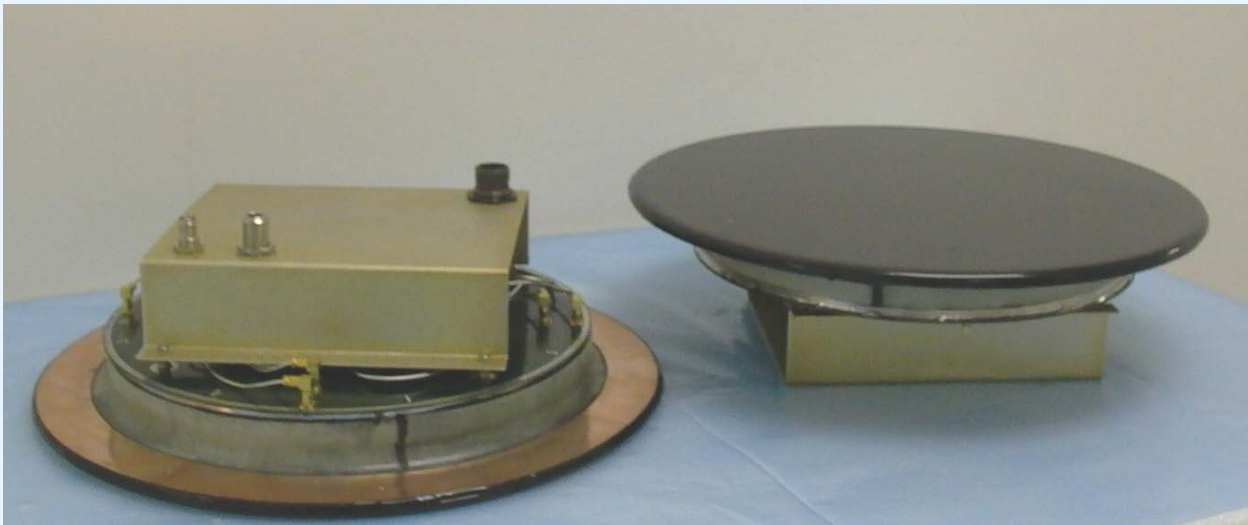


TechComm

Direction Finder
Systems

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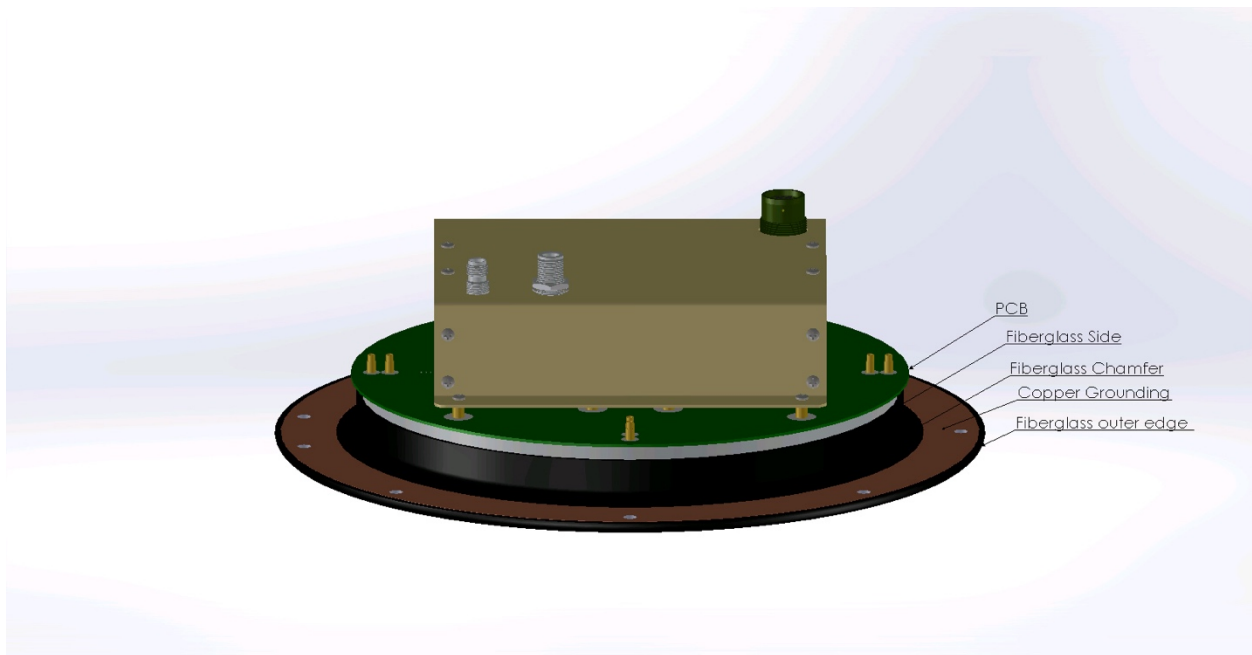
TC-8111-3
20-2000 MHz
Conformal DF Antenna Array
For
Airborne or Ground Mobile Applications

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The Tech Comm, Inc. TC-8111-3 is a Multi-Bay Annular Slot Direction Finder Antenna using Rogers material for the elements to provide improved performance over the previous -2 version. The TC-8111-3 is designed to operate over the frequency range of 20-2000 MHz. The TC-8111-3 Direction Finder Antenna is a low power, low profile conformal disc antenna used with the TC-9300 COMINT/DF system. The antenna uses a patented non-disruptive phase/amplitude processing technique to provide line of bearing information from the Direction Finder Antenna to the radio transmission source.

General Specifications

Antenna Model	TC-8111-3
Frequency	20 – 2,000 MHz Band 1 Operates 20-350 MHz Band 2 Operates 350-2000 MHz
Polarization	Vertical
Horizontal Coverage	360 degrees
Sense Antenna	None Required
Accuracy	4 degrees RMS, typical
Impedance	50 Ohms, nominal
Pre-Amplifier	Switchable In / Out
RF Outputs	DF, OMNI
Electronics	2 Goniometers Hi / Low Band
Goniometer Control	Automatic, supplied by DF Processor
Power	+12 VDC, supplied by DF Processor
Diameter	Element: 11.25 inches (Overall 14 inches)
Height	
Element	1.50 inches (0.5" radome height)
Electronics	2.00 inches
Overall	3.50 inches
Weight	9 pounds, Nominal
Environmental	
Operating Temperature	-20 to +60° C
Non-Operating Temperature	-50 to +70° C
Relative Humidity	0 to 95%



The TC-8111-3 includes a BIT (Built-In Test) feature to verify DF array performance via GUI screens used with companion DF Processor. The TC-8111-3 can be configured with or without an internal Omni antenna for signal intercept and monitoring functions.

The TC-8111-3 goniometer accepts RF inputs from the annular slot elements. Low noise, high 3rd order preamps (LNA's) are used with combining circuits to provide a single, commutated phase & amplitude DFRF output to the companion TC-3000pps system receiver. TC-8111-3 control and DC power is provided via a 15-pin MS connector from the companion TC-373 DF Processor.