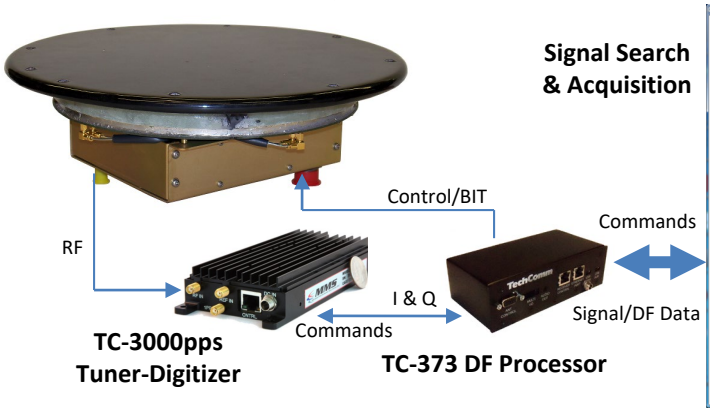
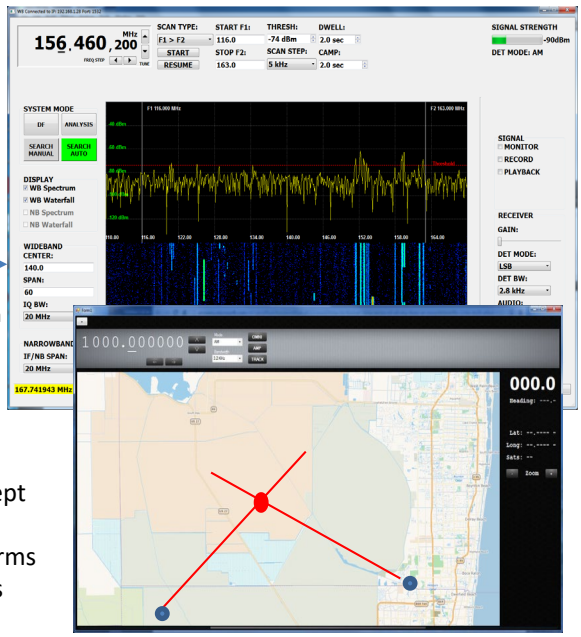
TC-9300 COMINT/DF SYSTEM

TC-8111-3 Airborne DF Array



Windows Based Mission GUI



Geo-Location

SYSTEM FEATURES

- Multi-Role: DF and COMINT Signal Search/Analysis
- 30-2000 MHz Direction Finding, 20-6000 MHz signal Intercept
- Advanced digitally implemented algorithm DF processor
- SWAP compliant man-carry, Leave behind, UAV/UAS platforms
- Shipboard, Patrol Boat, Airborne and Vehicle configurations
- Uses rugged laptop, Windows based tablet or Droid.
- Mission/Platform specific DF Antenna Arrays (airborne, shipboard, vehicle, fixed)
- Configurations to support On-The-Move (OTM) operation
- Comprehensive Operator GUI, built-in compass and GPS
- DF and Signal Intercept for AM/FM/SSB/CW and complex signal formats (third party software option)

SYSTEM DESCRIPTION

The TC-9300 COMINT/DF System provides advanced geo-location capability over the 30 to 2000 MHz range with an option for 3 or 6 GHz coverage, and signal intercept over the 20-6000 MHz range in a next-gen single channel architecture. From 1 to 3 COMINT signal intercept and analysis channels can be added for simultaneous DF and COMINT functions. The system is designed for tactical ground, vehicle, shipboard, airborne and leave-behind applications. Systems are complete with a choice of DF array to fit the application, DF receiver channel (SDR tuner-digitizer), DF processor/demodulator, choice of rugged PC, tablet or Droid and battery pack/AC-DC power adapter. Windows based software and GUI is provided for system control, BIT status, RF/Baseband spectral displays, DF LOB plots, moving map display and mission data logging. As an option, the receiver channel and DF processor is mounted at the antenna location eliminating the requirement for long RF coax cable runs. The system includes a built-in GPS and electronic compass and accepts external platform NAV data. The TC-9300 provides direction finding and signal intercept for AM, NBFM, WBFM, USB, LSB, CW and PM signals. Optional Krypto500/1000 and Signal Works/Mod-Rec decoding, classification and analysis software packages are available to address a wide range of complex signal formats.

The TC-9300 system uses proven, in-production COTS equipment configured into custom enclosures for transportable, bulkhead mount, OTM, leave-behind and fixed applications that are mission/platform specific. This approach provides a ***'Customized COTS'*** solution.

Call or visit our web site for more details and to view a narrated operations video for the TC-9300 COMINT/DF system.

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SPECIFICATIONS

DF Frequency Range	30-2000 MHz, option for coverage to 3 or 6 GHz
Signal Intercept Range	20-6000 MHz, uses DF channel or separate 1>3 COMINT channels
System Noise Figure	10 dB VHF/UHF, 12-14 dB SHF, typical
DF Array	8-element broadband annular slot
DF Methodology	Single channel phase/amplitude, proprietary algorithm, 8 port goniometer/commutator/combiner
DF Accuracy and Resolution	4 degrees RMS, 1-degree resolution
DF Measurement	5 MSec,, internal/external 'tip-off' command with LOB confidence factor
DF Processor	Phase/amplitude digitally implemented proprietary design. Built-in compass/GPS and ext. NAV data interface, external DF cueing and event time stamping
Receiver Channel	High performance SDR tuner-digitizer, rugged mini-brick, 300 uSec. tuning time, 16-bit A/D, 120 dB dynamic range, Ethernet I&Q output stream
System Computer	Rugged MIL-STD-810, choice of laptop or tablet, 64-bit windows CPU, 2.6 GHz processor, 8GB SDRAM, 320GB HDD, 1 GIgE/ USB 2.0 ports,
Signal Processing	Performs DF on AM/NBFM/WBFM/LSB/USB/CW and PM signals. Optional software supports classification, decode for over 2500+ plus complex signal types
GUI Screens	System Control: Receiver operation, DF processor modes, system BIT, outside world interface set-up, signal search and DF (auto, manual and directed), touch screen, mouse and display
	System Displays: RF and baseband spectral, mouse click on signal receiver tuning, band-scope, BIT panel, LOB and geo-location display on moving map, mission log, Remote/Local hand-off for DF
Audio Outputs	800 mW, 8 ohm mono; 600 ohm balanced line
Environmental	Designed to meet but not tested to applicable MIL-STD-810F methods and procedures
Operating Temperature	-20 to +60 degrees C
Storage temperature	-40 to +70 degrees C
Humidity	Deployed equipment, 0 to 95%, non-condensing
Water Resistance	Pelican case, waterproof to 3 feet immersion for 10 minutes IP67, deployed equipment splash proof IP54
Salt Fog	MIL-STD-810F, 509.4
Shock	MIL-STD-810F, 526.5
Vibration	MIL-STD-810F, 514.5
Altitude (unpressurized)	35,000 ft, MSL
RFI/EMI	Designed to meet but not tested to applicable MIL-STD-461E, CS and RS methods and procedures
Power Requirements	35 Watts, 11-32VDC external, or AC power adapter at 90-260VAC/48-63Hz input, high density Lithium-Ion battery pack equivalent to BA-5590 (single channel system)
Size	Varies per configuration; Tuner-Digitizer, 3.0"W x 6.0"L x 0.75" H, DF Processor 3.25"W x 6.25" L x 1.2" H; DF Assembly 10"W x 14"L x 2"H
Weight	TC-8111 DF array, rugged tablet, single channel, 17 lbs. OTM and platform versions vary