SKYHAWK MARITIME COMINT/DIRECTION FINDING SYSTEM

Instantaneous Warning of In-Theater Threats

DESCRIPTION

• Breakthrough, low SWaP maritime COMINT/Direction Finding (DF) system

• Measures instantaneous Line-of-Bearing (LOB) and elevation angle for MF/HF/VHF/UHF/SHF transmissions from only a single pulse

• Single, compact (24” x 30”) mast-mount radome and single below-deck rack

• Blind search (no a priori signal knowledge required) identifies previously unknown signals

• High sensitivity for detection of low-power frequency hopping and fixed-frequency emitters at extreme ranges

• Real time Agile Signals Reconstruction (ASR)

• Supports specific signals and general search modes

• Automatic and manual search and detection of signals of interest

BENEFITS

• High-accuracy DF of MF/HF/VHF/UHF/SHF single-pulse transmissions, including short duration emissions

• Discriminates Skywave, Near Vertical Incidence Signals (NVIS) and airborne emitters from surface wave

• Instantaneous warning of in-theater threats

• Distinguishes individual emitters in multiple overlapping network environments

• Compact, lightweight radome results in lower maintenance costs compared to large mast-mount and deck-edge DF antenna arrays

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SKYHAWK MARITIME COMINT/DIRECTION FINDING SYSTEM

FEATURES
Revolutionary approach to maritime direction finding
- Measures an instantaneous vector to surface and airborne targets
- Utilizes small, fractional wavelength antenna elements
Superior DF approach compared to traditional systems (e.g., amplitude, phase, TDOA, FDOA)
- Adds measurement of elevation angle
- Discriminates Skywave, Near Vertical Incidence Signals (NVIS) and airborne emitters from surface wave
- Permits operator to discriminate between in-theater threats and out-of-theater emitters
Patented high-capacity processing architecture maintains performance in high-density, high-interference, complex signal environments
- Unique interference rejection algorithms prevent processing overload
- Signal enhancement and noise thresholding algorithms provide high detection sensitivity with low false alarm rate
- Detects low-power agile or continuous-frequency emitters, even at extreme ranges
- Distinguishes individual emitters in multiple overlapping network environments
- Intuitive search plan generation
Detects and geo-locates any emission with temporal or spectral structure
- No a priori signal knowledge required
- Supports specific signals and general search modes
- Discovers previously unknown signals
Modular, Open, Scalable Architecture
Frequency Coverage:
- MF/HF/VHF/UHF/SHF: 300 KHz to 6 GHz
Eight 40 MHz IBW Receivers
DF Accuracy: 2.5° RMS (Azimuth & Elevation)
Robust Signals Analysis Suite

Signal Copy and Recording:
- Pre-D, Post-D, Metadata
- Real Time Agile Signals Reconstruction (ASR)
Cursor-on-Target (CoT) messaging compatible with existing C2 shipboard systems
JICD 4.2 compliant

PHYSICAL CHARACTERISTICS (RADOME)
Size: 30" diameter x 24" high
Weight: 85 pounds
Power: 65 watts

PHYSICAL CHARACTERISTICS (BELOW DECK)
Size: 19" rack, 10 RU
Weight: 140 pounds
Power: 600 watts

ENVIRONMENT
Temperature: -40 °C to +50 °C

NETWORK INTERFACES
Gigabit Ethernet for Command, Control and Data

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This document consists of L3 Communication Systems-East general capabilities information that does not contain controlled technical data as defined within the International Traffic in Arms Regulations (ITAR) Part 120.10.