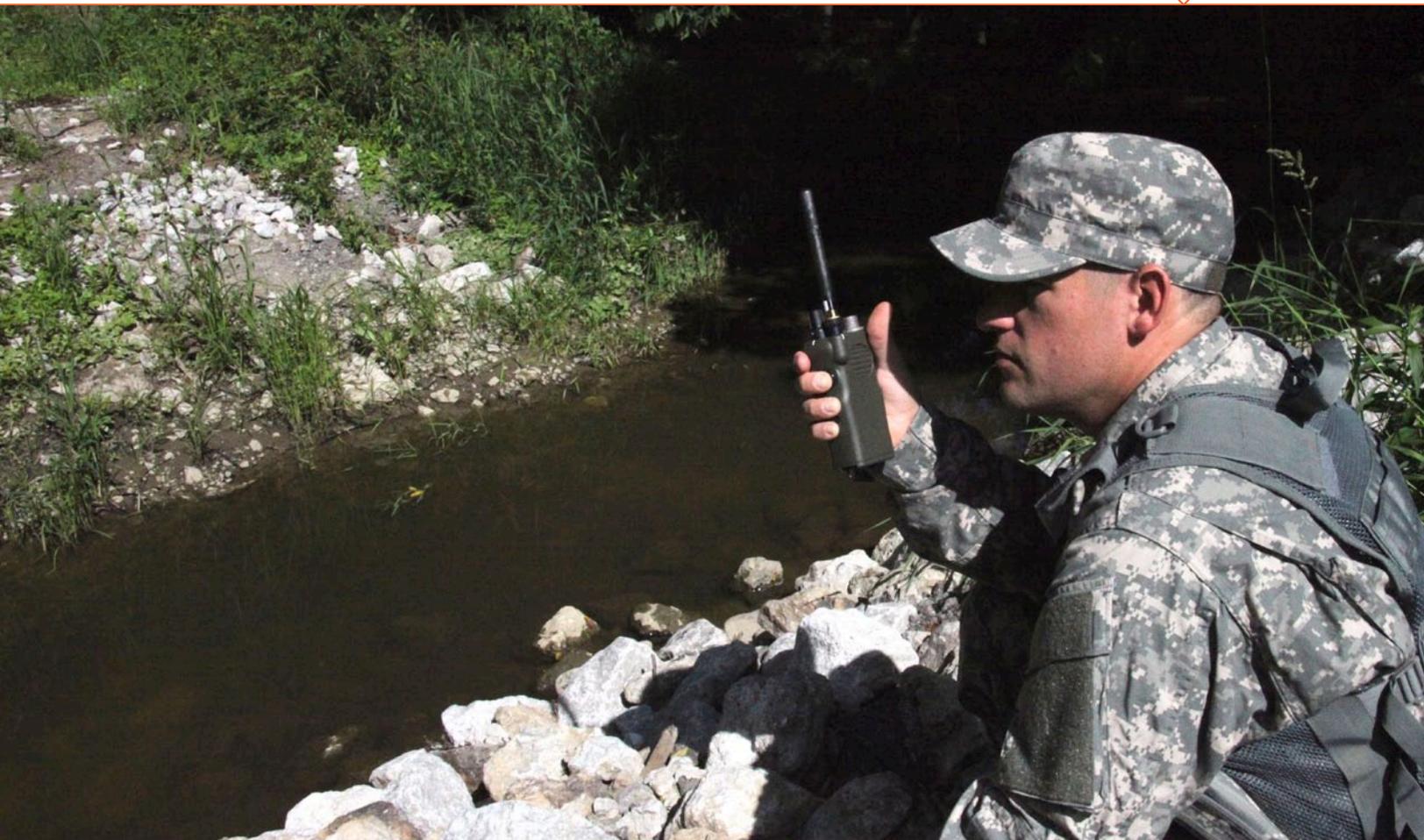


## RO<sup>®</sup> Tactical Radio

When instant communications are required, the handheld RO tactical radio responds with a revolutionary push-to-talk capability providing pole-to-pole coverage and position location.



## RO<sup>®</sup> Tactical Radio

The RO tactical radio, based on Exelis AssuredReach™ technology, goes to extremes to provide on-the-move (OTM), over-the-horizon (OTH) secure voice, data, and position location information in a ruggedized, field-proven handheld communications device.



The RO tactical radio utilizes the Distributed Tactical Communications System (DTCS) provided by the Defense Information Systems Agency's (DISA) Enhanced Mobile Satellite Service (EMSS) office.

Its design is simple for operators to use and is similar to a secure "walkie-talkie" in that it does not require ground infrastructure. The "talker" can reach thousands of other RO tactical radios within a 100-250 mile range anywhere in the world with line-of-sight to the sky.

Communication occurs over a distribution of secure nets. Each radio may be a registered member of up to ten nets. Secure voice communication is available to any registered RO tactical radio in the net that is also within the 100-250 mile range of the "talker". The talker selects the net using the band knob and secure voice communications occur when a talker joins the selected net via the Push-to-Talk (PTT) button. Pressing the PTT button establishes a control and broadcast channel for the selected net. The channel setup occurs and crystal clear voice communications can be heard in less than two seconds from PTT and is indicated by a single audible tone. The call is ended and channel resources are released when the PTT button is released. Three short tones indicate the end of the transmission. Secondary nets may be monitored simultaneously while maintaining the ability to talk on a selected net.

Equipped with an embedded GPS receiver, each radio transmits and receives voice and GPS over a single antenna. Encrypted Position Location Information (PLI) is transmitted with flexible configurable options to meet operational requirements. PLI can be sent upon release of the PTT as well as configured for time intervals (e.g. every five minutes) or movement intervals (e.g. 1 kilometer). These settings are available for two types of PLI transmissions: Global PLI and Regional PLI. The Global PLI type transmits the PLI data from anywhere in the world securely over the satellite constellation to the DoD Gateway. The encrypted data is then sent from the DoD Gateway to the Mission Management Center (MMC) and into a format compatible with the Global Command and Control System (GCCS).

Regional PLI is transmitted and may be collected locally with a RO tactical radio configured to operate in Data Collector mode. This feature provides local personnel awareness of friendly force positions within the operating range and enables the radio to initiate and receive voice communications. The collector also receives PLI data from other RO tactical radios on the nets it is monitoring and is registered to. RO tactical radio registration includes net assignments, encryption keys and PLI settings and data collector operation is managed by a DTCS Net Manager.

## SPECIFICATIONS

### ENVIRONMENTAL

- > Operating temperature: -30°C to +71°C (-22°F to +160°F)
- > Meets IP67 and MIL-STD-810F: Temperature shock, humidity, salt fog, sand and dust, immersion, vibration and shock

### PHYSICAL CHARACTERISTICS WITHOUT ANTENNA

- > Length with connectors 5.6 in (142.2 mm)
- > Width 3.0 in, Depth 1.7 in, Weight 18 oz (Width 76.2 mm, Depth 43.2 mm, Weight .51 kg)

### FUNCTION MODES

- > Manual registration
- > Signal strength
- > Battery level
- > Broadcast PLI collector state
- > LED brightness
- > Secondary net monitoring and configuration
- > Field application tool to specify networks
- > Configuring the tone volume
- > Zeroing the radio

### COVERAGE

- > 100% - Pole to pole with any line of sight to the sky (no need to locate a geostationary satellite)
- > On-the-move
- > 100-250 mile (160.9-402.3 km) range
- > Immune to solar flux and ionospheric propagation

### POSITION LOCATION INFORMATION (PLI)

- > Built-in commercial GPS receiver (utilizes same small antenna as voice communications)
- > Completely transparent to the user (simultaneous voice and data)
- > Modes of Transmitting: Time, Distance and PTT
- > Modes of Receiving
  - Regional, a RO tactical radio can be connected to a PC to collect the location of all the radios in the same satellite beam
  - Global, the position of all radios can be located from anywhere in the world via the Mission Management Center (MMC)

### VOICE QUALITY

- > Crystal clear voice communications
- > Fast real time connections without noticeable delays

### SIMPLE

- > PTT with one to many
- > Automatic walkover protection
- > Simultaneous voice and position
- > Off the shelf headsets, handsets and batteries

### SECURE

- > NIST certified AES 256 voice and data encryption (can be used by coalition troops)
- > Local zeroing

### MULTI-CHANNEL OPERATION

- > Up to ten unique nets
- > Prioritization with primary and secondary nets

### SMALL AND RUGGED

- > Handheld and lightweight
- > 18 oz (.51 kg)
- > Compact 5.8 in (147.3 mm) long antenna
- > Aluminum enclosure
- > Immersion and dust protection

### INTERFACES

- > RS-232 for data
- > Built-in speaker, up to 84 dBA
- > Built-in microphone
- > LED with variable brightness

### NO GROUND

#### INFRASTRUCTURE NEEDED

- > No central antennas needed
- > No backup power needed
- > Interoperability with terrestrial networks and equipment

## PERIPHERALS

### RO TACTICAL RADIO

- > Conveniently located connectors

### ANTENNAS

- > Compact antenna to attach directly to the radio. Vehicle antenna with magnetic mount and 16 foot (4.8 m) cable.

### POUCH

- > Tan or green camouflage with battery door

### BATTERIES

- > Four CR123 disposable batteries

### VEHICLE MOUNT

- > The vehicle mount provides a vehicle mounted platform for the radio. It includes a lever-lock, ball arm and pivoting base stand.

### HEADSETS

- > Urban tactical headset with PTT button

### CABLES

- > Data cable, AC power cable, 5590 battery cable and vehicle power adapter.

### RO<sup>®</sup>-MOBILE AWARENESS PLATFORM (RO<sup>®</sup>-MAP) PDA

- > The RO-MAP utilizes a rugged PDA and the RO tactical radio to provide Friendly Force Tracking (FFT), text messaging and RO tactical radio remote control.

### HANDSETS

- > Noise cancelling handset



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