



L3HARRIS™
FAST. FORWARD.

RO® TACTICAL RADIO





WHEN INSTANT COMMUNICATIONS ARE REQUIRED

The RO tactical radio, based on L3Harris AssuredReach™ technology, goes to extremes to provide on-the-move (OTM), over-the-horizon (OTH) secure voice, data and position location information (PLI) in a ruggedized, field-proven handheld communications device.

The RO tactical radio uses 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-site 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 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. one 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.

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 meter) cable

POUCH

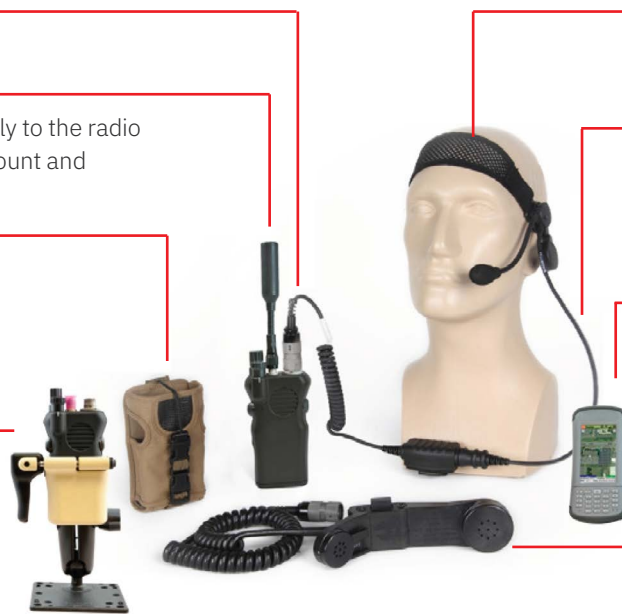
Tan or black with battery door

BATTERIES

Four CR123 or RCR123 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-MOBILE AWARENESS PLATFORM RO-(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

SPECIFICATIONS

ENVIRONMENTAL

Operating temperature: -30°C to +71°C (-22°F to +160°F)
Meets IP67 and MIL-STD-810G: 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
Zeroizing 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 (uses 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 MMC

SPECIFICATIONS (CONTINUED)

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 zeroizing

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



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