

URC-200 LOS Transceiver

The standard for multi-band, multi-mode radios.



What are LOS communications?

LOS refers to any “Line-of-Sight” (LOS) radio antenna communications system and covers the entire non-commercial, service and aviation bands of the AM/FM, UHF/VHF spectrum, from 30MHz to 400Mz.

In a Line-of-Sight system, the antenna of the transmitting radio must, theoretically, be in direct, visible sight of the receiving antenna. VHF frequencies and, to a lesser extent, UHF frequencies will “bend” some, thus allowing communications when true Line-of-Sight does not exist.

The URC-200 LOS Transceiver makes radio communications easier and more effective – without corrupting privacy. And you can have full confidence in this field-proven radio which is backed by nine years of production experience.

The URC-200 LOS Transceiver

General Dynamics designed its URC-200 equipment to provide highly dependable service and to withstand the most demanding, harsh treatment and situations in the field. This multi-band, multi-mode radio offers you rugged flexibility to operate in the UHF and VHF spectrum and the AM and FM bands. With more than 3,400 transceivers delivered to all major military commands within the United States and government agencies in over 20 foreign countries, the URC-200 has a demonstrated reliability of over 85,000 hours.

The accessories for the URC-200 are designed to the same exacting standards. And like the URC-200, which can be customized to do only the things you need it to do, many of the URC LOS accessories can be specially designed to suit your needs.

These components can add power, privacy, durability and usefulness to your URC-200, all at a reasonable price.

GENERAL DYNAMICS
C4 Systems

Technical Specifications

Benefits/Features

Why you should buy the General Dynamics URC-200 LOS Transceiver:

Highly Versatile

- UHF, VHF, AM and FM capability provides interoperability with a variety of RF systems
- Adaptable to many applications, including manpack, rackmount, vehicular and intercom

Greater Coverage

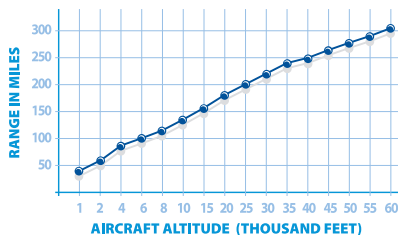
- Covers from 30 to 420 frequency range with optional frequency enhancements
- Can use with KY encryptors for secure communications

Remote Control

- The RS-232 interface allows for remote control access for both single and multiple remote operations.

Easy to Use

- All frequencies are easy to set and access via the front-panel control presets.



Optimal Line-of-Sight (LOS) transmission distances relative to aircraft altitude on a clear night with low humidity, over flat terrain.

1. URC-200's Antenna is fixed at a height of 6 feet.
2. Flight is over level terrain and ground station at sea level
3. Graph depicts optimal distance that may not be attainable due to terrain and ground station variables.
4. All frequencies are above 100 MHz. Lower frequencies and other phenomena may reduce the effective range.

General

Frequency range:	VHF: 115 MHz to 149.9950 MHz (AM) VHF: 115 MHz to 173.9950 MHz (FM) UHF: 225 MHz to 399.9950 MHz
Tuning increments:	25 kHz, 12.5 kHz, 5 and 8.33 kHz (opt.)
Frequency stability:	± 5 PPM
Operating modes:	AM/FM Plain text voice AM/FM Cipher text data with external COMSEC
Remote:	3-wire RS-232; all control functions plus balanced audio up to a distance of 300 feet
Remote Maintenance Monitoring Status (RMMS):	Transmit power, overtemp, power supply status, synthlock, calibration status, receive signal strength, squelch status, scan detect and radio configuration (front panel) status.
Reliability:	Over 7200 hours MTBF (calculated per MIL-HDBK-217)
Preset channels:	10 transmit; 10 receive
Pre-emphasis/De-emphasis:	FM plain text pre/de-emphasis nominal 6dB per octave from 300 to 3000 Hz, 132 to 173.9950 MHz

RECEIVER CHARACTERISTICS

Minimum Sensitivity:	AM PT: -103.5 dBm for 10dB SINAD with 30% modulation at 1 kHz AM CT: -105 dBm for 10 ⁻³ BER, 70% AM at 16 kb/sec. FM PT: -114 dBm for 10dB SINAD with ± 6.5 kHz deviation at 1 kHz FM CT: -107 dBm for 10 ⁻³ BER with ± 5.6 kHz deviation on 16 kb/sec.
Image response:	-80 dB typical
Spurious response:	-80 dB typical
Half IF response:	-70 dB typical
Audio response:	PT: 300 Hz to 3000 Hz CT: 30 Hz to 10.2 kHz
Squelch range:	Operator adjustable from below sensitivity to above -80 dBm

TRANSMITTER CHARACTERISTICS

Output power:	FM high power = 10w (± 2dB) FM medium power = 5w FM low power = 0.1w AM high power = 10w* AM low power = 5w* *(at 80% AM)
Cipher test modulation:	Data rates to 16 kb/sec.
Spurious output:	> 70 dB below the carrier typical
Harmonic output:	> 53 dB below the carrier typical

PHYSICAL CHARACTERISTICS

Weight:	9 lbs. (less batteries)
Dimensions:	9.6"L x 10.4"W x 3.1"H (without battery and handles) 15.3"L x 10.8"W x 3.1"H (with battery and handles)
Environmental:	Environmentally tested for humidity, vibration, shock and drop; splash proof
Temperature:	-20°C to +55°C (operating) -50°C to +70°C (non-operating)

POWER SUPPLY

Battery:	BB-590, BB-490 (rechargeable) BA-5590 (non-rechargeable)
Battery case dimensions:	5.2"L x 10.3"W x 2.8"H
Current drain : (+28 V)	High power <3.5 amps Medium power 1.7 amps Low power 800 mA Receive 320 mA

URC-200 OPTIONS/ACCESSORIES

- 19" rackmount for base station applications
- Shock trays for most vehicular, marine and airborne applications
- 30 to 90 MHz frequency enhancement
- 30-watt AM, 50-watt FM external power amplifier
- 400-420 MHz frequency enhancement
- Multiple antenna configurations
- AC/DC, DC/DC and battery power supplies
- 8.33 kHz Frequency Tuning Increments

GENERAL DYNAMICS

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