

SYSTEMS

LONG-RANGE

TACTICAL

LINE-OF-SIGHT

COMPUTERS

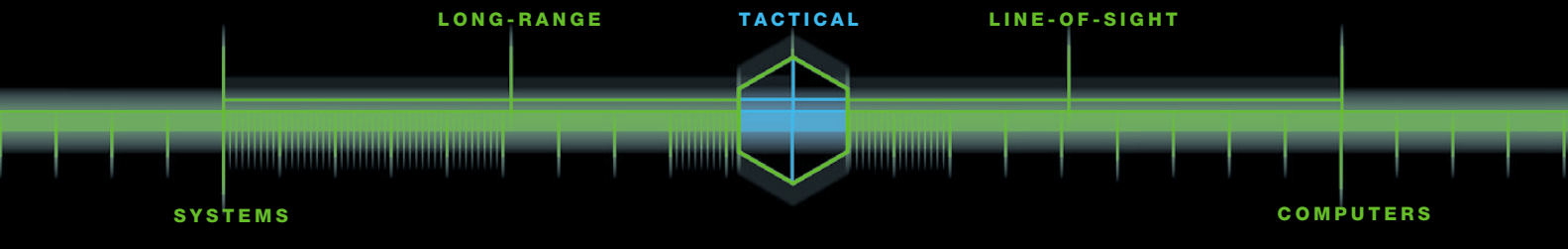


PRC-710MB

MULTI-BAND RADIO FOR MULTI-MISSION COMMUNICATIONS

Advanced multi-band handheld radio for military voice and data communications

The PRC-710MB was designed and developed by Tadiran Communications to specifically meet the growing demand for versatile and highly reliable communications in operations involving multiple forces. Providing ground-to-ground, ground-to-air and ground-to-sea communications, the PRC-710MB offers users exceptional frequency band coverage and waveforms to enable radio communications with a wide range of forces, units and stations, by means of a single radio unit.



With a comprehensive set of features packed into its small volume, the PRC-710MB weighs less than 800 grams and is one of the lightest and most advanced radios of its type on the market. Implementing Tadiran Communications' combat proven synchronous-orthogonal frequency hopping technology, it is fully compatible with Tadiran Communications' frequency hopping legacy CNR-900, PRC-710 and CNR-9000 radio systems. Operating in its fixed frequency mode of operation, it is compatible with current-generation fixed-frequency VHF and UHF radios.

PRC-710MB main features

- Multi-Band: 30-512 MHz
- Multi waveform: FM & AM (voice) and FSK (data) modulations
- Unique ECCM/COMSEC capability using synchronous-orthogonal frequency hopping to effectively counter interception, jamming, spoofing, eavesdropping and other forms of active electronic warfare
- Dynamic network synchronization that eliminates the need for a central control station thereby minimizes communication vulnerability
- Advanced digital encryption for high level voice and data security (COMSEC)
- Powerful error detection / correction codes and automatic data rate adaptation to ensure error-free data communications at various data rates
- State-of-the-art, innovative MMI
- AM Beacon
- GPS interface
- Selective calling
- Auxiliary channels scanning
- Two way hailing
- Future growth capability; Programmable hardware supports software-updates for future product improvement.

TECHNICAL SPECIFICATIONS

General

Frequency:	30.000 to 512.000 MHz
Frequency step:	12.5 kHz spacing
Modulation:	FM (F3E), AM (A3E), CVSD (voice) FSK (data)
Modes of Operation:	Fixed frequency (FF): CLEAR and encrypted (COMSEC) Frequency hopping (FH): ECCM/COMSEC
Preset Channels:	10
Scanning:	Up to 4 pre-selected channels
Selective Call:	Up to 27 addresses and 3 groups
Frequency Stability:	3 ppm
Built-In Test (BIT):	On-line and operator initiated, microprocessor controlled
Power Sources:	14V nominal
• Primary:	LiMnO ₂ (BT-6625)
• Rechargeable battery:	Lithium Ion (TLI-714/TLI-718)
Operation Hours: at 1:1:8 Tx: Rx: Stby and 2W power output:	BT-6625: 14 hours; TLI-718: 15 hours TLI-714: 7 hours
Environmental	
• Operating temperature:	-30°C to +65°C
• Storage temperature:	-40°C to +71°C
• Relative Humidity:	95%
• Immersion:	1 meter of water for 2 hours
• Dynamic & Mechanical:	per MIL-STD-810E
Max. Dimensions (H x W x D):	180 x 75 x 55 mm
Weight:	Less than 800 grams

Receiver

Sensitivity:	FM: 0.5µV for 10 db SINAD AM: 1.5µV for 10 db SINAD
Spurious, Image & IF Rejection:	-60 dB
Adjacent channel rejection:	>55dB at ±25 kHz
Audio Outputs:	
• Adjustable:	12 mW/600 ohm (earphone) 150mW/45 ohm (ext. speaker) 300 mW internal loud speaker
• Fixed level:	220 mV/150 ohm
Squelch:	CTCSS, 150 Hz or noise activated
Front-end Protection:	+ 37dBm

Transmitter

Power output:	FM: adjustable from from 1/4W up to 5W; AM: adjustable; 1W, 5W
Harmonic suppression:	-47dBc
Spurious emission:	Less then -60 dBc
Beacon:	121.5 MHz or 243 MHz or preload in frequency range 116-150 MHz, 225-400 MHz

Anti - jamming (ECCM)

Technique:	Orthogonal frequency hopping
Hopping Rate:	2 levels
No. of preset hopping keys:	10
No. of preset frequency tables:	10
Synchronization:	Self and seamless (no master station); based on time of day (T.O.D.) reference Acquired at up to 4.5 minutes T.O.D. difference. Auto resynchronization capability. No special procedures required.
Late entry:	Keygun loader, another PRC-710MB or PC.
Programming & Data Loading:	Hailing from frequency hopping to fixed frequency and vice versa.
Special features:	

Encryption (COMSEC)

Type:	Digital, using very long non-linear "white" sequences
No. of preset COMSEC Keys:	10
Programming & Data Loading:	Keygun loader, another PRC-710MB or PC.
Special Features:	CLEAR override, COMSEC alarm

Data Communication

Type:	Synchronous and asynchronous
Rate:	50 to 4800 bps with error correction 16 kbps (synchronous) w/o error correction
Interface:	RS-232
Special Feature:	Automatic rate adaptation

PRC-710MB/09/03

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