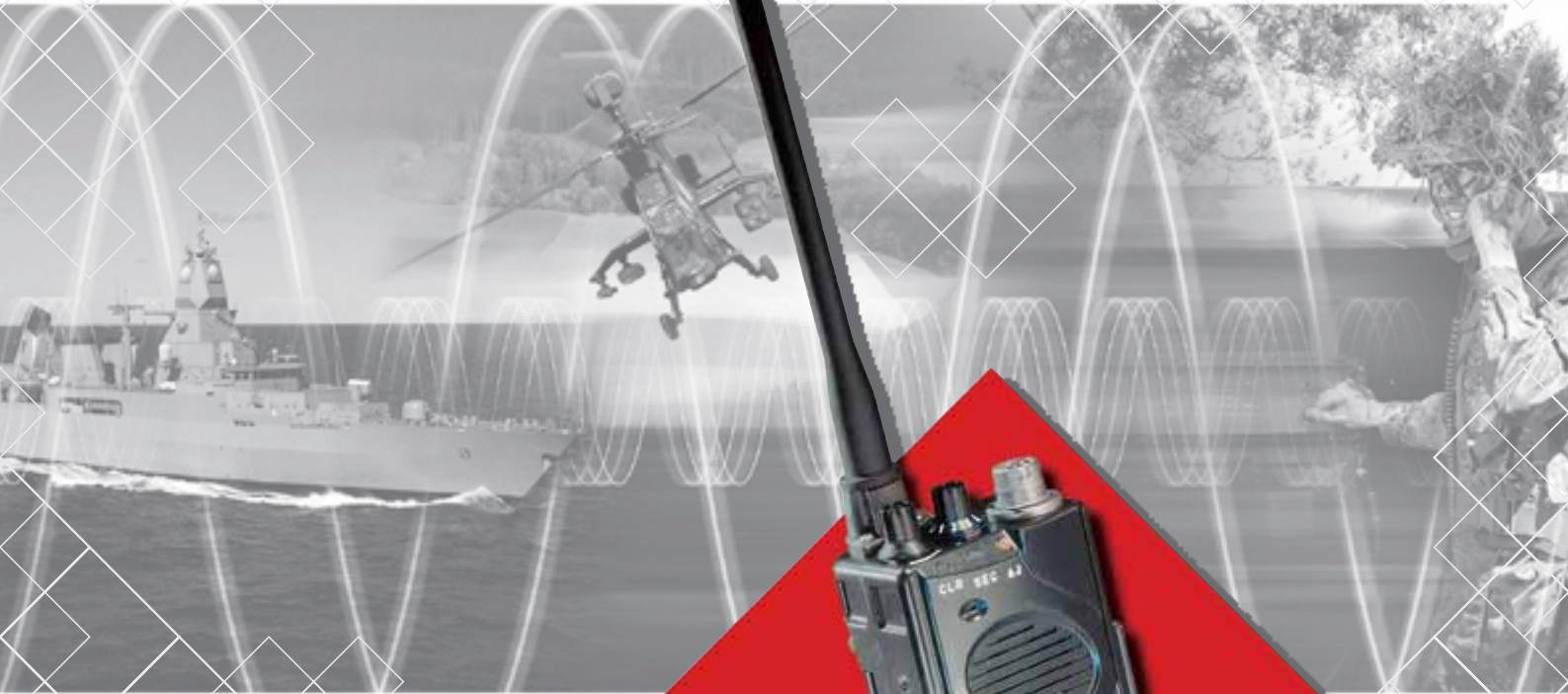


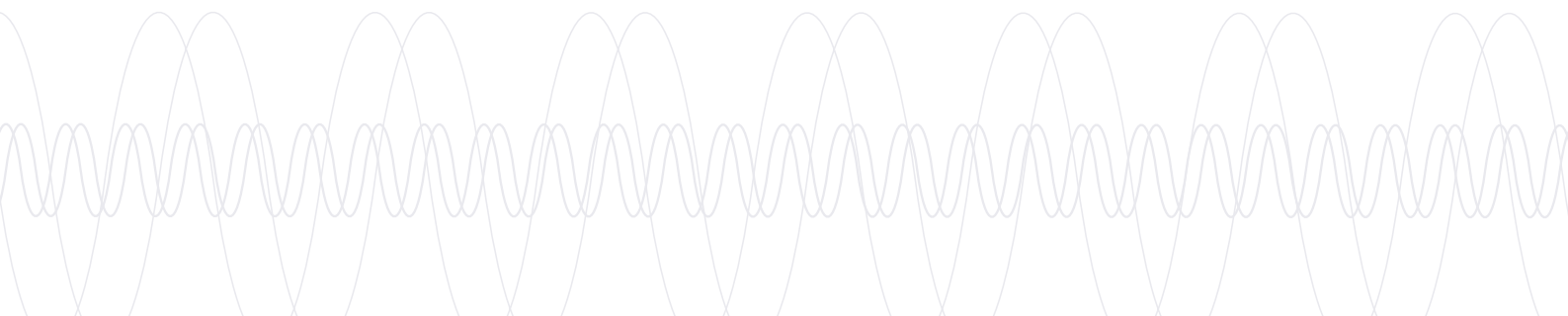


TELEFUNKEN
RACOMS



PRC-710

VHF/FM Voice & Data
COMSEC/ECCM Handheld Radio



The advanced, powerful, and lightest military handheld VHF/FM voice and data COMSEC/ECCM radio in the battlefield

The latest generation PRC-710 radio was designed and developed in direct response to emerging combat requirements. The PRC-710 incorporates improvements driven by real combat experience. The RT-710 weighs less than 750 grams, making it the lightest radio of its type on the market. At the same time, this advanced, powerful radio packs a comprehensive set of features. The PRC-710 is fully compatible with the frequency-hopping CNR-900 and CNR-9000 radio systems. The PRC-710 completes the CNR-900 and CNR-9000 families of man-pack, vehicular and fixed station radios, delivering seamless interoperability.

- ◆ Unique ECCM facility defeats powerful EW
- ◆ High degree of voice and message security
- ◆ Powerful error detection/correction codes and automatic data rate adaptation
- ◆ State-of-the-art, innovative MMI
- ◆ Fully compatible with CNR-900 and CNR-9000 radio systems

Across-the-board latest generation features

Advanced frequency hopping (ECCM), message security (COMSEC) and data communications (DATA) are embedded in the handheld PRC-710. The highly advanced ECCM facility includes such unique features as orthogonal nets with inter-net synchronization, defeating even the most persistent and powerful EW systems. Co-location radio interference is reduced to a minimum even under severe radio environments.

Powerful error detection and correction codes, together with automatic data rate adaptation, ensure error-free data communications at various data rates.

The sophisticated digital encryption (COMSEC) facility delivers a high degree of voice and data message security.

An optional, add-on lightweight 20W amplifier is available for extended communication ranges (25 km typical).

Operationally flexible and user-friendly

The PRC-710's functional simplicity, modular design and extensive Built-in Test (BIT) support operational and logistic flexibility.

An innovative Man Machine Interface (MMI) makes operation simple and intuitive, even under the stress of extreme combat conditions. The SECURE alarm and CLEAR override functions, are two examples of the many features designed to simplify operations.



Parameter Programming
And Loading By Pc

PRC-710



Main Features



Operational flexibility

- ◆ The lightest handheld radio with 5 watts power output
- ◆ Built-in microphone and loudspeaker
- ◆ Whisper mode
- ◆ Variety of antennas and audio accessories
- ◆ Option: PRC-710HP high power 6/20 watt manpack
- ◆ Audible indications



PRC-624



PRC-624 (HP)



PRC-624(S)



CNR-9000



CNR-900

Built-in information security and immunity

Built-in encryption (COMSEC)

- ◆ Very high level of voice and data security
- ◆ Encryption keys protected against unauthorized access

Anti-jamming (ECCM)

- ◆ Synchronous, orthogonal frequency hopping minimizes friendly collocation interference and identification
- ◆ Very high probability of synchronization and resynchronization under severe jamming conditions
- ◆ PTT-oriented, self-distributed synchronization eliminates need for master stations
- ◆ Unlimited radio silence
- ◆ Latecomers enter the net without special procedures

Data communications

- ◆ Powerful data rate adapter
- ◆ Automatic adaptation of communication type (voice/data, sync/async, data rate)
- ◆ Error correction – high probability of error-free data transfer under severe communication conditions

Logistic flexibility

- ◆ Reduced equipment downtime and logistic costs
- ◆ High MTBF: 10,000 hours
- ◆ Low MTTR; plug-in modular design
- ◆ Extensive and efficient Built-in Test (BIT)
- ◆ State-of-the-art human engineering
- ◆ Functional simplicity- does not require a skilled operator
- ◆ User-friendly, display-guided operations for higher level functions and data loading
- ◆ Visual and audio alerts
- ◆ Auto synchronization, clear override, secure indication
- ◆ Quick emergency erasure of radio COMSEC and ECCM parameters

Interoperability

- ◆ Compatible with previous generation radios and newer generation CNR-900, CNR-9000, PRC-624/624(S) VHF/FM radio systems
- ◆ Interfaces with a wide range of peripherals

Retransmit capability

- ◆ Voice and data transmission
- ◆ Built-in retransmission capability (no external units for retransmission)
- ◆ Auto protection against security breach
- ◆ Operation modes: CLEAR, COMSEC, ECCM

Technical Specifications

General

▶ Frequency	30.000 to 87.975 MHz
▶ No. of Channels	2320 at 25 kHz spacing
▶ Modulation	F3 Simplex, voice, analog and digital data up to 16 kbps
▶ Modes of Operation	
Fixed frequency (FF)	CLEAR and COMSEC
Frequency hopping (FH)	ECCM/COMSEC
▶ Preset Channels	10 FF (CLEAR or COMSEC), and 10 FH hopping nets
▶ 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	Lithium (LiMnO ₂)
Rechargeable battery	Lithium ion (TLI-714/TLI-718)
▶ Operation Hours (in Aj mode, at 1.9 Tx Rx and 2W power output)	LiMnO ₂ battery (BT-6625) 14 hours Li-Ion battery (TLI-718) 15 hours Li-Ion battery (TLI-714) 7 hours

Environmental (per MIL-STD-810E)

▶ Operating Temperature	-30°C to +65°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
▶ Weight	Less than 750 grams

Receiver

▶ Sensitivity	0.5µV for 10 db SINAD
▶ IF Rejection	-70 dB
▶ Audio Outputs	
Adjustable	12 mW/600 ohm (earphone) 150 mW/45 ohm (ext.speaker) 300 mW internal loudspeaker
Fixed level	220 mV/150 ohm
▶ Squelch	150 Hz or noise activated
▶ Front-end Protection	+ 37 dBm

Transmitter

▶ Power Output	Adjustable from 1/4 W up to 5W
▶ Frequency Deviation	5.6 kHz

Anti-jamming (ECCM)

▶ Technique	Orthogonal frequency hopping over the entire frequency band (or partial band)
▶ Hopping Rate	Medium
▶ No. of preset hopping keys	10
▶ No. of preset frequency tables	10
▶ Synchronization	Based on time of day (T.O.D.) reference. Acquired at up to 4.5 minutes T.O.D. difference. Auto resynchronization capability
▶ Late Entry	No special procedures required
▶ Programming & Data Loading	Keygun loader, another PRC-710 or PC
▶ Special features	Hailing from frequency hopping to fixed frequency and vice versa

Encryption (COMSEC)

▶ Type	Digital, using very long non-linear »white« sequences
▶ No. of Keys	10
▶ Synchronization Time	Less than 250 msec
▶ Programming & Data Loading	Keygun loader, another PRC-710 or PC
▶ Special Features	CLEAR override, COMSEC alarm Auto resynchronization capability

Data Communication

▶ Type	Synchronous and asynchronous
▶ Rate	50 to 4800 bps with error correction 16 kbps (synchronous) without error correction
▶ Comm. Protocol	RS-232
▶ Special Feature	Automatic rate adaptation

TELEFUNKEN

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