

Tadiran PNR-500

Personal Network Radio – Full-duplex voice and data conferencing





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The Tadiran PNR-500 maximizes mission coordination and effectiveness for dismounted soldiers at the platoon or company level. Deployed by infantry, special forces, forward observers, snipers and anti-terror units, the Tadiran PNR-500 provides voice and data communications over a 1500 meter range in a variety of operational environments, including urban, woodland, open and mixed terrain. Rarely found in equipment of this class, the radio's light weight, long range and comprehensive feature set make it an important component in mission success.

The Tadiran PNR-500 offers simultaneously voice (full-duplex conference conversation) and data communication. In addition, it features ease of use, dynamic synchronization, handsfree operation and inter-connectivity to long-range radio networks. The Tadiran PNR-500's unique full-duplex conference capability enables communication up to six simultaneous users with an unlimited number of listeners. Consequently, crucial operational decisions can be made according to real-time information, improving coordination and eliminating fatal errors.

Highly reliable communications

Utilizing proven, proprietary self-synchronizing technology, the Tadiran PNR-500's dynamic network architecture eliminates the need for a central control unit or master station. This unique technology maximizes communication dependability while minimizing the network's vulnerability.

A software-defined radio designed to meet changing operational needs

The majority of Tadiran PNR-500's advanced functions are software-based, thereby ensuring a long service life. Software updates are all that is required to configure the radio to changing operational requirements.

The leading communication choice for soldier modernization programs

The Tadiran PNR-500 is the ideal solution for armed forces who wish to provide their dismounted soldiers with the most advanced voice and data communication technology.

Special features and customization options

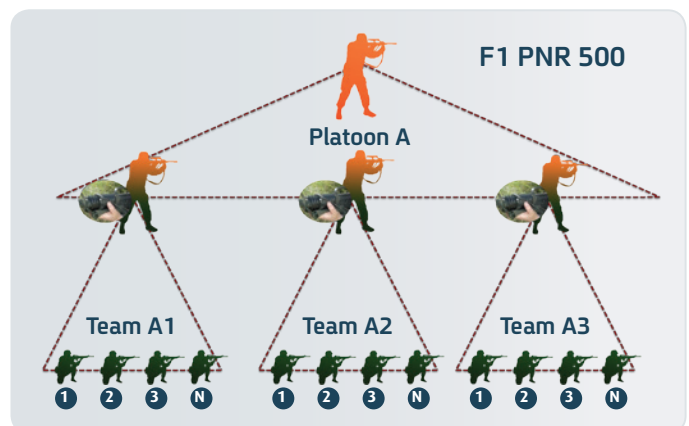
- Support for high data rates
- Sub-networks: allowing access to four “virtual private channels” over a single physical frequency

- Emergency break-in and broadcast
- Transmission priority mode
- Customized radio functionality with audible menu messages and alerts
- Whisper function for covert operations
- Free frequency search (FFS): a dynamic frequency allocation module for optimal performance in noisy/jammed environments
- Internal GPS receiver
- AES encryption
- VOX
- VA capabilities: VA adapter and charger
- Up to 800 mW power output

Tadiran PNR-500's main benefits:

- **Sub-networking on a common single channel**

The Tadiran PNR-500 network allows up to four combat units and up to six conference users to share a single frequency channel (three conference users are allowed within each subnet unit). Each unit has its own “virtual private channel” and by pressing the PTT key, users can communicate with members of the other three units without having to retune the radio.



- **A rugged construction that meets the strictest military standards**
- **An “always available” channel for emergency break-in**



- **Optimal frequency selection for all-terrain operability**

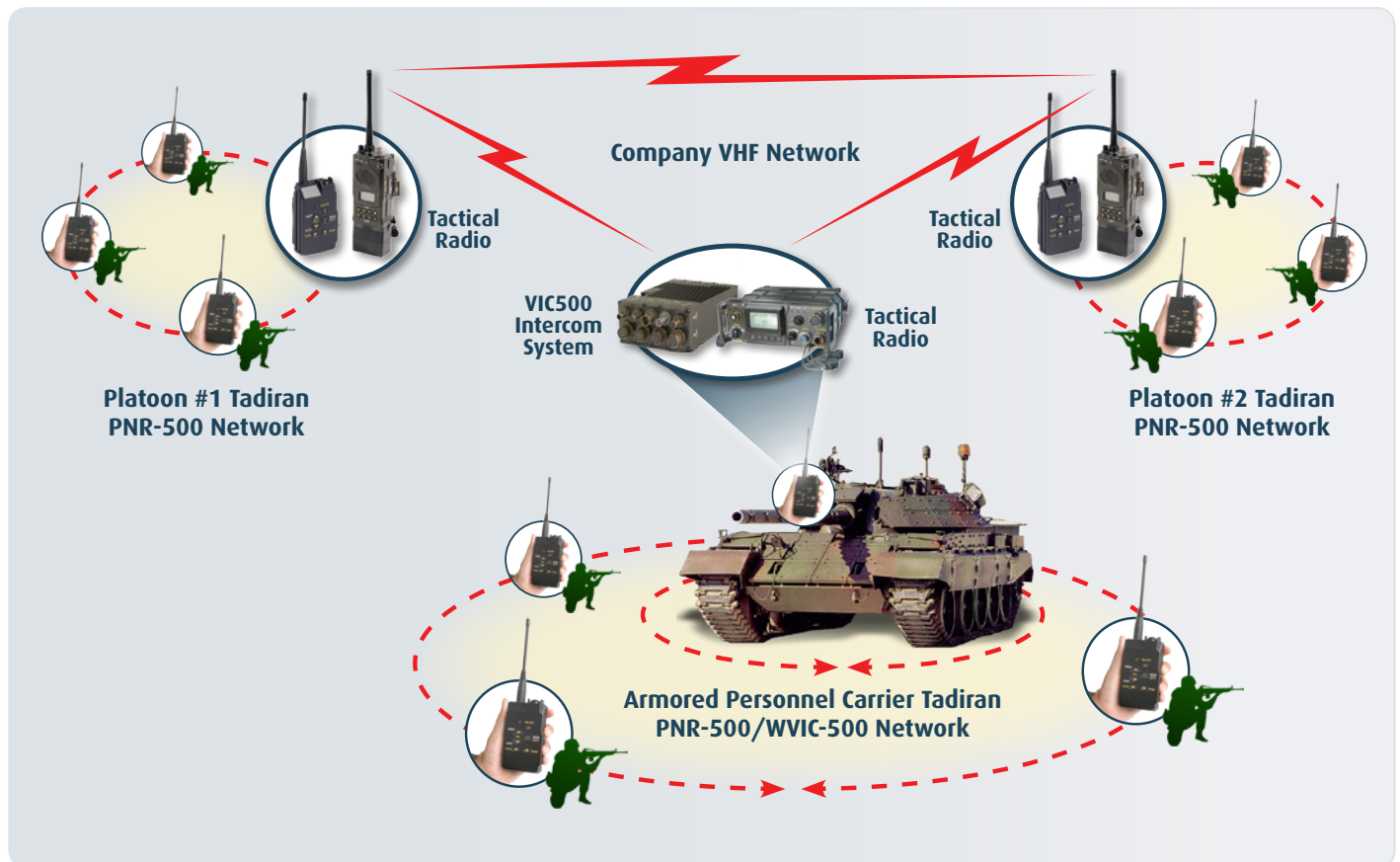
Tadiran PNR-500's UHF frequency band was specifically selected – after extensive trials – because of its excellent propagation properties in various climatic conditions over a wide range of terrains including:

- Open terrain
- Urban terrain
- Woodland terrain
- Mixed terrain

- **Both intra-team and inter-team communications**

Tadiran PNR-500's headset include two PTT keys, enabling users to:

- Immediately access the local PNR network and pass instructions and information to other crew members.
- Connect to external long-range tactical VHF/HF or other radio networks and switch seamlessly back and forth between the networks by pressing the PTT buttons.
- Mounted and dismounted armored personnel carrier (APC) crew members can freely move inside and outside of their vehicle up to a distance of 1500 meters. In addition, they can communicate with other crew members and forces deployed in other locations. The long-range link is made via a Tadiran VIC-500 intercom unit and a tactical VHF/HF radio.



DOMINATOR® – Integrated Infantry Combat System

The Tadiran PNR-500 is fully integrated with the DOMINATOR® combat system. Based on hardware components and C4I applications developed by Elbit Systems, DOMINATOR® enables full situational awareness from the infantry battalion level down to the individual soldier. The system dramatically shortens the sensor-to-shooter loop with unprecedented

speed, enhancing the combat effectiveness of the dismounted soldier. Elbit Systems was selected by Israel's Ministry of Defense as the prime contractor for the Israel Defense Forces' (IDF) Integrated Infantry Combat System (IICS) project.

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Technical Specifications

General	
Frequency	380-430 Mhz or 400 to 450 MHz
Channel spacing	100 kHz
Modulation	Data: PI/4 DQPSK Voice: CVSD
Preset channels	15 frequency
Stability	±3 ppm
Built-in test (BIT)	On-line and operator initiated
Power	Li-Ion rechargeable battery
Typical Operation Hours	At 1:2:17 Tx: Rx: Stby: up to 20 hours
Environmental	
Operating temperature	-30°C to +65°C
Relative humidity	95%
Immersion	One meter of water for one hour
Dynamic and mechanical: According to MIL-STD-810E	
Dimensions	
H x W x D	128 x 70 x 50 mm
Weight (with battery)	Less than 450 grams
Special features	
Full-duplex and conference	
Up to three simultaneous speakers in each subnet unit	
Up to six simultaneous speakers over the entire network	
Unlimited number of listeners	
Synchronization	Self and seamless (no master station); auto resynchronization capability
Late entry	No special procedures required
Programming	Using a PC or an RPDA
Transmitter	
Power output	Up to 800 mW
Data communications type	
Asynchronous rates	High data rate



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