Iran
Communications
Industries

VRC-411/E

Direct Sequence Spread Spectrum
Vehicular Radio Communication System

VRC-411/E system is a direct sequence spread spectrum radio designed and manufactured for establishing communication in the UHF1 frequency band. Due to the method used in this radio i.e. expanding the frequency spectrum in a wider bandwidth and decreasing power level of transmitter and as a result hiding radio signal under the noise level, the signal is prevented from monitoring by enemy for eavesdropping and jamming. A keypad included handset is designed for the radio to set the system parameters and establishing voice communication. In addition, parameters of the system can be set via the GUI software.

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General specifications

Frequency range.....225~400 MHz
Signal bandwidth.....10MHz
Data transmission rate.....4800, 9600, 19200 bps
Wideband jammer to signal ratio.....17dB
Processing Gain.....in data transmission rate of 19200: 24dB
in data transmission rate of 9600: 27dB
in data transmission rate of 4800: 30dB
Expander code type.....Long
Synchronization code type.....Short
Transmission delay.....<200msec
Communication type.....Simplex, Half-duplex
Supply.....21-27VDC
Data connection type.....RS-232
Modulation type.....MCSK

Transmitter specifications

Output power.....maximum 20W (adjustable in three levels)
Harmonic rejection.....better than 50dBc
Antenna type.....BPA-210

Receiver specifications

Receiving sensitivity.....(BER=10E-6) -108dBm
Maximum receivable signal level.....-15dBm
Image rejection.....better than 50dBc
IF rejection.....better than 50dBc

Physical & environmental specifications

Maximum speed.....1000km/h
Operating temperature.....-33°C ~ +65°C
Vibration standard.....MIL-STD-810F
Dimension.....100×350×350 mm
Weight.....about 10kg
Case material.....aluminum