



PRC-140/E

HF Digital Portable Radio Communication System

PRC-140/E is a Software Defined Radio (SDR) in HF frequency band designed and manufactured according to the MIL-STD-141B standard. Modem of the radio meets the MIL-STD-188-110C for stability and increasing quality of voice/data transmission in HF frequency band. In addition, this radio is a frequency hopping radio to establish stable communication in EW situation. In order to keep away the operators from propagation center, the radio can be operated via a remote control unit as a panel. Output power of the radio is 20W. PRC-140/E is designed for operating as a manpack radio communication system.

General specifications

Main Mission.....	voice/data/SMS and Morse transmission
Communication type.....	simplex and half-duplex
Operation type.....	Manpack
Technology.....	Software Defined Radio (SDR)
Frequency Band.....	1.6- 30MHz
Numbers of pre-set channels.....	100
Frequency Stability.....	±2PPM
Modulation type.....	LSB-CW, USB-CW, LSB, USB, AME
Antenna type.....	Whip, Wire
VSWR.....	better than 2
GPS.....	Internal, connect to external GPS
Power supply.....	12-18 VDC
Data/Control type.....	ISDN, RS232, LAN port
ALE 3G.....	comply
Voice coding type.....	MELPE-600/1200bps
Data trans. with internal modem.....	max. 19200 bps, 2400 bps in hopping mode
Environmental standard.....	MIL-STD-810F
EMC/EMI standard.....	MIL-STD-461E

Transmitting specifications

Microphone Input level.....	minimum 20mv for 600Ω
Power output.....	LP: 5W, MP: 10W, HP: 20W
Frequency response.....	3KHz
Harmonic rejection.....	better than 40dB
Carrier signal rejection in SSB.....	better than 40dB
Undesired sideband rejection in LSB & USB.....	better than 40dB
Matching type.....	Automatic Tuning Unit (ATU)
Time duration for matching.....	less than 10 seconds
Power efficiency.....	better than 30%
TX current consumption.....	less than 6A

Receiving specifications

RX sensitivity.....	minimum -111dBm for 10dB SINAD
Squelch type.....	digital
Image rejection.....	-70dB
Undesired IF rejection.....	-70dB
Broadcasting type.....	handset, external speaker, internal speaker
Distortion.....	maximum 5%
Maximum audio output.....	10mw in 300Ω impedance for handset 2w in 6Ω impedance
Automatic Gain Control (AGC).....	-103dBm ~ -13dBm maximum 3dB
RX input protection.....	maximum +43dBm for 5 minutes

Mechanical specifications

Radio dimension (W×H×D).....	245×90×340 mm
Remote dimension.....	195 × 140 × 53 mm
Color.....	green
Material.....	aluminum
Radio weight (without battery).....	4.5kg
Remote weight.....	less than 2kg