



GRC-620/E

VHF/UHF

Ground-Based Radio Communication System

GRC-620/E is a VHF/UHF ground-based software defined radio considered for establishing Ground-to-Air communication in air traffic control towers, radar sites, ROC, and installing inside the Command Posts (CPs) as well.

Key Features

- ✓ SDR (Software Defined Radio)
- ✓ Containing Internal Digital Encryption Unit
- ✓ Modular Architecture
- ✓ Supporting Several Remote Control Units
- ✓ Supporting Channel Search
- ✓ Containing Efficient Built-In Tests (BIT)
- ✓ Meeting Military Standard
- ✓ Advanced Software/Hardware Technology
- ✓ Easy Installation and Set-Up
- ✓ Containing High Resolution Display (5" TFT Display)
- ✓ Rugged Military Connectors/Switches
- ✓ Resistant to Shock, Vibration, Humidity, High Temperature and Low Temperature

Technical Features

- ✓ AM/FM/FSK Radio Modes
- ✓ Advanced ECCM
- ✓ Independent Guard Receiver at 121.5 MHz and 243 MHz
- ✓ Data Transmission (Up to 28,800 bps)
- ✓ EMR (Emergency Mode)
- ✓ High Voltage/Reverse Polarity/High VSWR Protection

General specifications

Frequency range.....	VHF: 118~173.975 MHz/UHF: 225~399.975 MHz
Channel spacing.....	25KHz, 12.5KHz, 8.33KHz
Number of preset channels.....	119
Power supply.....	DC supply: 28V/AC supply: 220VAC
Power Consumption.....	approx. 100W (receive mode, DC) approx. 450W (transmit mode, DC)
Radio Modes.....	AM: A3E standard/FM: F3E standard/FSK
ECCM capability.....	FHSS (Frequency Hopping Spread Spectrum)
Guard receiver.....	121.5MHz and 243MHz
Radio control interface.....	RS422, 10/100 Ethernet (RJ45 connector), Optic fiber (Optional)
Radio data interface.....	RS232

Transmitting specifications

Output power.....	AM carrier power: 40W $\pm$ 1dB FM: 60W $\pm$ 1dB ECCM: 200W $\pm$ 1dB (pulse)
AM Modulation factor.....	at least 80%
FM frequency deviation.....	$\pm$ 5.0KHz in 25KHz channel spacing $\pm$ 2.5KHz in 12.5KHz channel spacing
Modulation distortion.....	maximum 8%
Harmonic suppression.....	$\geq$ 60dBc
Nonharmonic spurious suppression.....	$\geq$ 80dBc
AF input.....	200mV to 600mVrms into 600 Ω $\pm$ 10%
AF response.....	300 to 3400Hz

Receiving specifications

Receiving sensitivity.....	AM: -103dBm for 10dB SINAD FM: -108dBm for 10dB SINAD
Selectivity.....	WIDEBAND: $\geq$ 60dB/ $\pm$ 25KHz NARROWBAND: $\geq$ 40dB/ $\pm$ 8.33KHz
Squelch sensitivity.....	setting the squelch on/off points in 5~25 dB output SINAD
Image rejection.....	-80dB
IF rejection.....	-80dB
Loudspeaker output.....	2W
Sound recorder output.....	700mVrms into 600 Ω
Differential AF output.....	700mVrms into 600 Ω balanced
AF response.....	300 to 3400Hz
Audio distortion.....	maximum 5%
Receiver input protection.....	+30dBm input

Physical/Environmental Specifications

Dimension of R/T unit.....	19" standard rack, 3HU, 480mm depth
Weight of the R/T unit.....	maximum 30kg
Dimension of the remote control unit.....	maximum 100×132×202 mm
Weight of the remote control unit.....	maximum 2kg
Operating temperature.....	-20°C ~ +55°C
Environmental standard.....	MIL-STD-810F
EMC standard.....	MIL-STD-461F