



GRC-630/E

VHF/UHF Radio family for ATC communication

GRC-630/E represents the latest generation of stationary radios for both civil and military air traffic control. Possible applications range from small airport emergency systems requiring only a few radio channels to countrywide communications systems with several hundred radio channels.

Product Overview for the VHF and UHF Frequency Ranges

GRC-630/E radios for the VHF frequency range (118 MHz to 136.975 MHz) are suitable for civil applications. This radio for the UHF frequency range (225 MHz to 399.975 MHz) is suitable for applications in military air traffic control (air force, navy, army aviation forces).

VHF Receiver

118 MHz to 136.975 MHz

VHF Transmitter

40 W, 118 MHz to 136.975 MHz

UHF Receiver

225 MHz to 399.975 MHz

UHF Transmitter

40 W, 225 MHz to 399.975 MHz

Key Facts

- Output power of 40 W for VHF and UHF
- Automatic main/standby operation
- 8.33/25 kHz channel spacing for VHF and 25 kHz channel spacing for UHF
- Carrier offset (only in VHF)
- Excellent RF characteristics
- High intermodulation rejection
- High output power at high modulation depth
- Receiver with excellent immunity to interference
- Cross modulation rejection better than required by ETSI standard
- Low noise/low distortion receiver mode
- Very compact design
- Five basic modules: transmitter, receiver, power supply, power AMP, Baseband unit
- The transmitter is designed for 15 W continuous (ideal for ATIS)
- The AC power supply has a wide supply voltage range (230V AC or 115V AC)

General Specifications

Channel Spacing.....	25 kHz, 8.33 kHz
Number of Preset Channels.....	119
Power Supply.....	DC supply: 28 VDC AC supply: 230V AC or 115V AC
Power Consumption.....	Approx. 120W (Receive) Approx. 420W (Transmit)
Radio Mode.....	AM A3E Standard
Radio Control Interface.....	RS422 10/100 Ethernet (RJ45 Connector)

Transmitting Specifications

Output Power.....	AM Carrier Power 40W $\pm$ 1dB
AM Modulation Factor.....	At Least 80%
Modulation Distortion.....	Maximum 5%
Harmonic Suppression.....	$\geq$ 70 dBc
Non-Harmonic Spurious Suppression.....	$\geq$ 80 dBc
AF Input.....	200 mV to 600 mV RMS into 600 Ω $\pm$ 10%
AF Response.....	300 to 3400 Hz

Receiving Specifications

Receiving Sensitivity.....	AM: -103 dBm for 10 dB SINAD
Selectivity.....	Wideband: $\geq$ 60dB/ $\pm$ 25 kHz Narrowband: $\geq$ 40dB/ $\pm$ 8.33 kHz
Squelch Sensitivity.....	Setting the Squelch on/off Points in 5~25dB Output SINAD
Image Rejection.....	-80 dB
IF Rejection.....	-80 dB
Loudspeaker Output.....	2 W
Differential AF Output.....	0dBm into 600 Ω balanced
AF Response.....	300 to 3400Hz
Audio Distortion.....	Maximum 5%
Receiver Input Protection.....	+30 dBm Input

Physical/Environmental Specifications

Dimension of R/T Unit.....	19/2" Standard Rack, 3HU, 330 mm Depth
Weight of R/T Unit.....	Maximum 10 kg (Transmit) Maximum 6 kg(Receive)
Operating Temperature.....	-20°C ~ +55°C
EMC Standard.....	MIL-STD-461F