



RF INNOVATIONS

Introducing the

RFI-590A

VF Radio Transceiver

The RFI-590A is a smaller, compact version of the RFI-590 VF transceiver.

The RFI-590A is a half-duplex radio aimed at applications operating in common 12.5kHz or 25kHz UHF channels using external modems. The new-look fully synthesised UHF radio is suitable for Analog FSK systems using signalling such as Bell-202, V.23 and POCSAG. The RFI-590A can be used in existing networks with radios from other manufacturers.

Features

- Rugged and Economical
- Compact Size
- User friendly configuration software
- Up to 16 software configurable channels
- Low Power mode
- Serial configuration port
- RF power 100mW to 2.5 Watts software selectable



Applications

Control and Data Acquisition

Typical RFI-590A applications include SCADA and telemetry over point-to-multipoint wireless links.

External modems, connected to data loggers, PLCs or computers, establish the end-to-end link over the wireless connection provided by the RFI-590A. Internal software configuration allows tailoring of audio and RF parameters to suit modem interface requirements.

Linking of Data Systems

Depending on geography, terrain and antenna setup, reliable radio communications can be achieved for distances in excess of 40km. Repeater options allow for range extension when required.



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RFI-590A Half-Duplex VF Radio

SPECIFICATIONS

PHYSICAL

Dimensions 170mm L x 81mm W x 36mm H
Weight 260 grams

GENERAL

Operating voltage 10.8 to 17VDC negative ground.
Operating current
 Sleep Mode 25mA (average)
 Standby mode 90 mA
 Transmit mode (2.5Watts) 850mA.
Operating temperature range -10 to +65 DegC.
Operating Humidity range Up to 95% non-condensing RH @ 50 DegC.
Parameter and mode settings In-built software Windows™ based.
Channel selection Hardware and software selectable
Channel spacing 12.5 KHz or 25 KHz (25/12.5/6.25 KHz Raster)
Antenna port BNC
Data Port DB9 Connector, custom pin-out including power

TRANSMITTER

Output Power 100mW to 2.5 Watts software selectable.
Modulation Bandwidth 100Hz to 4KHz.
Deviation +/- 4 KHz (25 KHz channels), +/- 2.0 KHz (12.5 Channels)
Spurious emissions <-30 dBm
Duty cycle 100% @ 60 degrees C
Output protection Transmitter is fully protected for any load @ full pwr @ 60 deg C.

RECEIVER

Sensitivity <-118dBm for 12 dB SINAD
Frequency range 390 to 399.9 MHz (Military), 400-520 MHz (General use)
RSSI output -130 to -60 dBm accurate to +/- 1 dB

INTERFACE

Configuration Port RS-232 using external level converter
Program interface 75 to 9600 bps, software selectable Rs232
Character size 8 bits plus no parity and 1 stop bit.
Audio Range 300Hz to 3KHz
Audio Input 1Vpp @ 100k Ω input impedance
Audio Output 1Vpp @ 100k Ω input impedance

Typical Applications:

