

FMTR-27R

27MHz, 1Watt Transceiver

Features

- Half-duplex radio data module
- 1W Power Output
- 300 - 4800 bauds data rates

Application

- Long distance mobile applications
- Wireless communications
- Radio remote controls
- Telemetry or wireless security systems

Description

The FMTR-27R transceiver is a 27MHz **half-duplex** radio data module. With a RF power output of **1W** combined with its light weight and compact size, makes it suitable for long distance mobile applications. Applications such as wireless communications, radio remote controls, telemetry or wireless security systems is most suitable for the FMTR-27R transceiver.

Data rates from 300 to 4800 bauds can be transmitted and received.

Transmit Mode

When the enable pin is high (+5Volts) the transceiver goes to transmit mode. In transmit mode, when an input signal (Data) is fed to the TX Data pin a FM modulated signal is transmitted directly through the antenna output terminal (Sh A Sh) block. A suitable 27MHz antenna should be connected to this terminal block. We recommend the Elsema ANT27M or ANT27L 27MHz antenna.

Transmit mode should be disabled (TX enable pin to 0 Volts) to avoid unnecessary transmission if no data is on TX Data pin. This also enables the receiver which puts the transceiver into the receive mode.

For technical specifications on the transmitter refer to the **FMT-2712** radio data module.

Receive Mode

When the transmitter is disabled the receiver will receive signals. This can be from another FMTR-27R transceiver or any other FM modulated signal that matches the carrier signal.

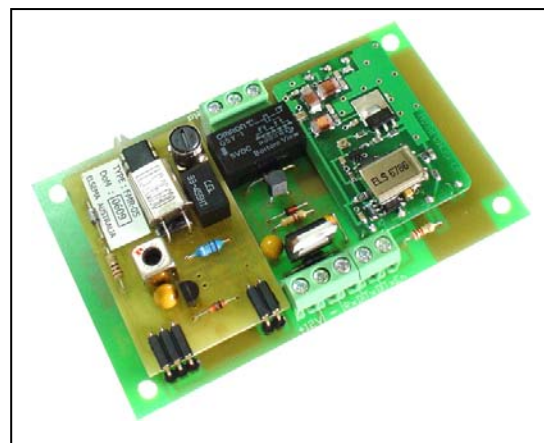
For reception a suitable antenna must be connected to the antenna terminal block. Transmitter output and receiver input uses the same antenna terminal. We recommend the Elsema ANT27M 27MHz antenna.

For technical specifications on the receiver refer to the **FMR-05** receiver.

Operating Distance

Up to 2000m, depending on installation and type of antenna used. Recommended Antenna is Elsema ANT27M.

(Range tests were done in an open area test site with line-of-sight operation and no interference. The receiver antenna wire was fixed vertically, away from any metal objects.)



Compatibility

All Elsema type FMR-... series:

FMR-201

FMR-212

FMR-224

FMR-212T

FMR-202

FMR-204/16

FMR204-12

FMR204-24

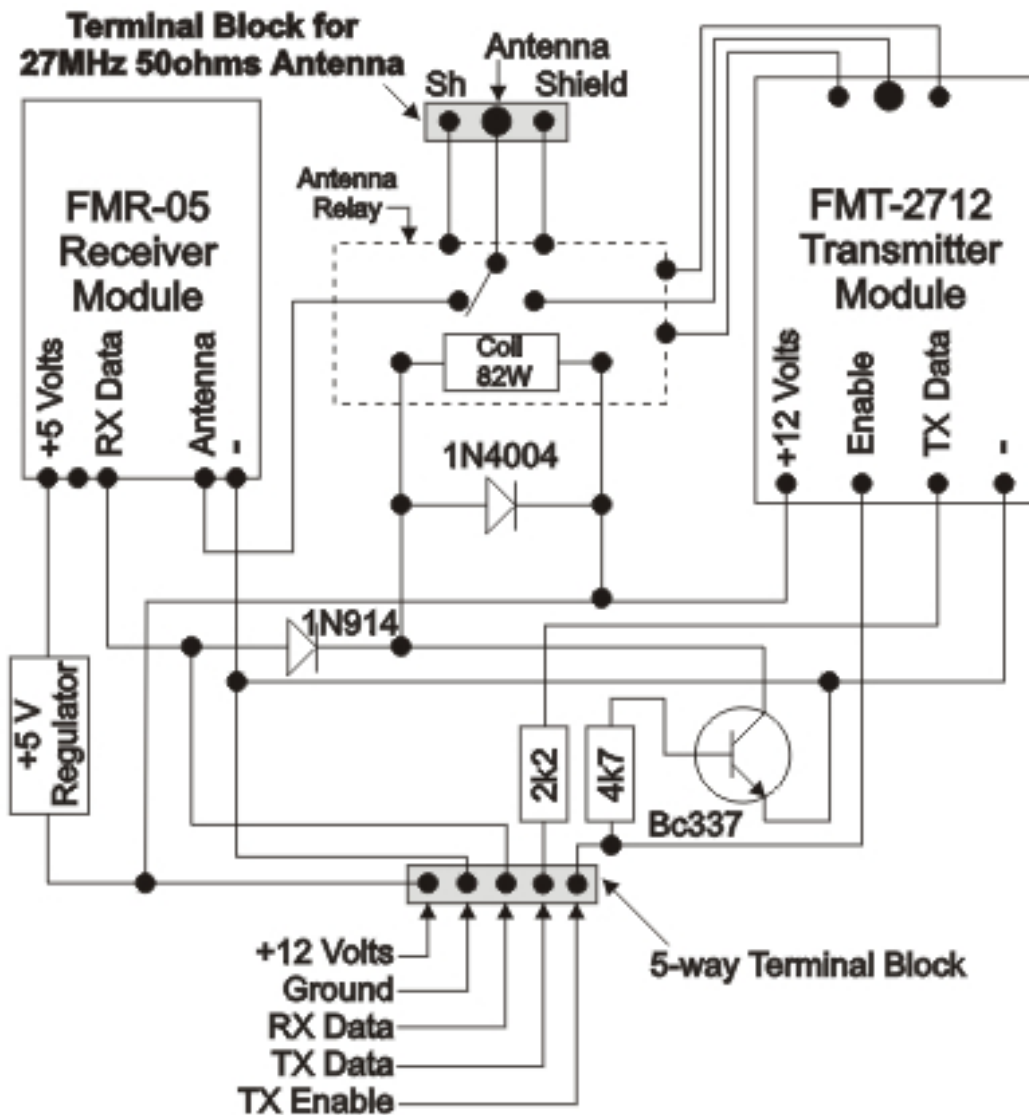
FMR-240

FMR-232R

Technical Data

Supply Voltage	11-13.6VDC (for constant RF-Output), screw type terminal block. Do not use AC supply.
Current Consumption	Transmitting: 300mA Receiving: 12mA
Operating Frequency	27.145MHz (Other freq. available: 27.045, 27.195 & 27.455MHz. NB. 27.455 freq. is not available for Australia)
Carrier Freq Tolerance	Crystal controlled, 30 parts per million (0-50 deg C)
RF Power Output	1W into 50 Ohms at 13.6VDC, SO239 Socket
Antenna	Terminal Connection provided. Optimum performance use Elsema ANT27M antenna. A piece of 1m wire will give an operating range up to 100m. Use longer wire for better results.
Transmitter Data Input Level	0-5V
Receiver Frequency Response	100Hz - 2400Hz
Receiver Data Input Level	0-5V (22kOhms source)
Dimension	100 x 61 x 20mm
Weight	54g
Mounting Hole Size	3.97mm or 5/32"
Useable Operating Range	Up to 2000m, depending on installation and type of antenna used. Recommended Antenna is Elsema ANT27L

Block Diagram



FMTR-27R

Manufactured by

Elsema Pty Ltd
 3/10 Hume Rd, Smithfield
 NSW 2164
 Ph: 02 9609 4668
 Fax: 02 9725 2663
 Website: <http://www.elsema.com>

Distributed by

