

FMR-204/16

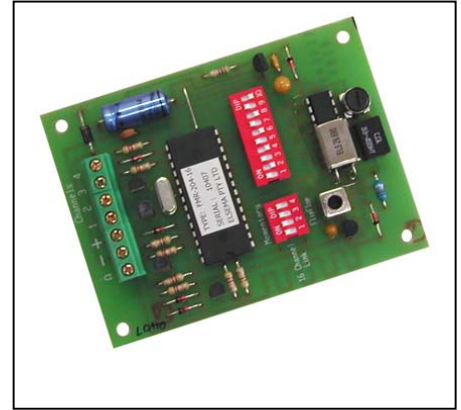
4/16 Channel receiver with Open Collector Output

Features

- Crystal Controlled
- 4/16-Channel
- Digitally Encoded

Applications

- Remote control of garage doors, gates, lights, alarms



Description

The FMR-204/16 is a **four-channel receiver** that can also be configured as a **sixteen-channel** binary encoded receiver. The four outputs of the receiver are an open collector NPN transistor (BC337). If relay outputs are needed refer to FMR204-12 or FMR204-24 receivers.

The FMR-204/16 is an improved model to the FMR-204. It is compatible in performance, size and has the following additional features:

- A 4-way code switch is provided to independently select “Momentary” or “Flip-flop” for each transistor output i.e.

	On	Off	Transistor (Open Collector)
Switch 1 :	Momentary	Flip-Flop	1
Switch 2 :	Momentary	Flip-Flop	2
Switch 3 :	Momentary	Flip-Flop	3
Switch 4 :	Momentary	Flip-Flop	4

- Provision for a 0.3” wire link (Left side of 4-way code switch), to easily configure as a 16 channel binary encoded receiver.
- Data is multi-tasking i.e. when 16 channels is configured, the receivers four transistor outputs always matches the data from the transmitter code switches 9, 10, 11 and 12, even if the data changes during a continuous transmission.
 - The old FMR-204, the four output transistors did not change state when new (different) data is received from a “continuous transmission”, transmission had to momentarily stop and then re-transmit the new data.
 - The new FMR-204/16 transistor outputs will change state even if different data is received during a continuous transmission.

- When the receiver is set to 16-channel mode, the 4-way code switch is use for extra options. See below table:

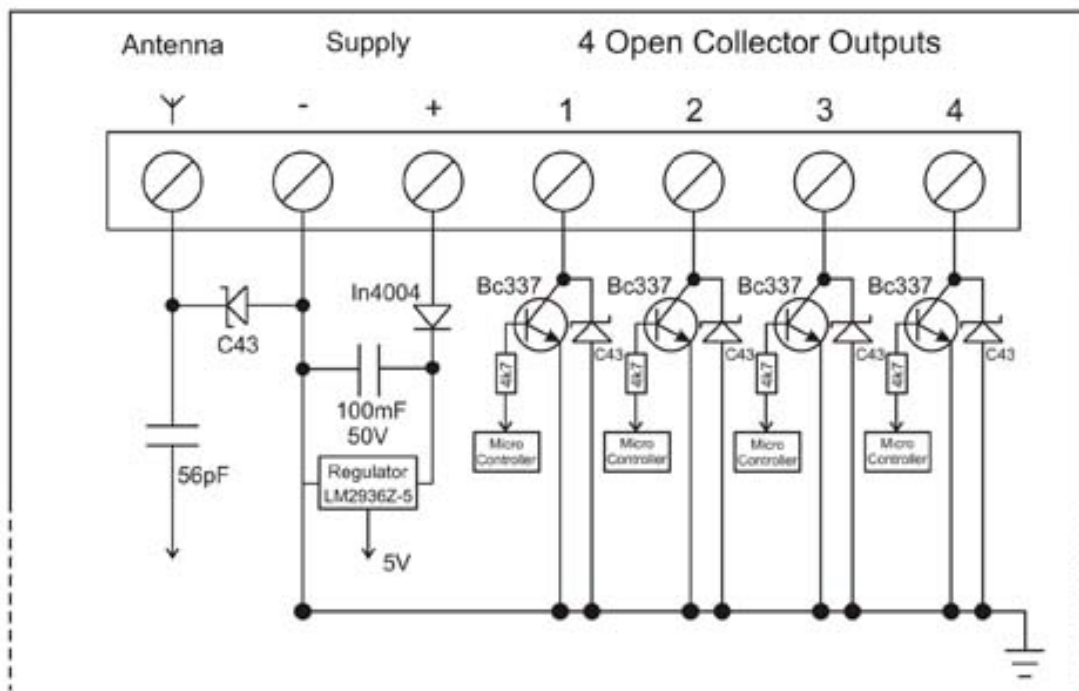
Switch on 4-way code switch	ON	OFF
Switch 1	Data on the four transistor outputs is retained, even when transmission to the FMR-204/16 stops (latched). Transistor outputs will change upon reception of different signal.	Data on the four transistor outputs appears momentary.
Switch 2	Reserved for future use.	Reserved for future use.
Switch 3	Reserved for future use.	Reserved for future use.
Switch 4	Reserved for future use.	Reserved for future use.

Technical Data

Supply Voltage	8 - 24 VAC/DC. Can use Elsema 12V AC Power Supply (PP12)		
Current Consumption	10mA stand by.		
Receiving Freq	27.145 MHz (Other frequencies available on 27.045, 27.195 and 27.455 MHz. The 27.455 frequency is not available for Australia).		
Type of Crystal	26.690 MHz, 3rd overtone, 20 pf, 30ppm at 0 to 50°C.		
Operating Temperature Range	-5 to 50°C		
IF Freq	455 KHz		
Selectivity	At least -40 dB at + - 10 KHz.		
Sensitivity	Better than 1µV (For transistor to switch on).		
Type of Demodulation	Narrow-band-width Frequency Modulation (FM).		
Decoding System	Onboard 10-way coding switch (1024 digital channels)		
Band Width	+ - 2.5 KHz		
4-channel Mode	Switch 11 and 12 of said transmitter will determine the channels 1 - 4. eg.		
	Channel	Code 11	Code 12
	1	ON	ON
	2	OFF	ON
	3	ON	OFF
4	OFF	OFF	
16-channel Mode	When 16-channel link is inserted, the data from code switches 9-12 appears in binary form at the 4 outputs		

Output	4 Open Collector NPN transistors (BC337)
Transistor Specifications	Max switching 40V 100mA
Connections	6-way screw type terminal block
Antenna	50 ohms, 27 MHz CB-Antenna or piece of approximately 300 mm long wire for short range applications.
Dimensions	95 x 70 x 20mm
Weight	49.0 grams
Useable Transmitters	A All Elsema type FMT-... series

**FMR-204/16
OUTPUT CIRCUIT AND CONNECTIONS**



Connections are drawn as “View to Component Side”

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>