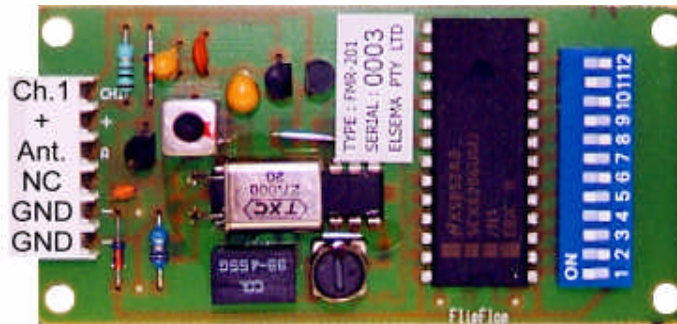


## FMR-201 27MHz FM RECEIVER, PCB STRIP RECEIVER WITH OPEN COLLECTOR OUTPUT

The FMR-201 is a crystal controlled single channel receiver, comprising of receiving, decoding and open collector output sections. A specially designed LARGE SCALE INTEGRATED CIRCUIT (LSI) is employed in the decoder section, which ensures operation at low supply voltage, highest reliability, associated with very low power drain.



The receiver works on a digitally encoded 27 MHz frequency modulated (FM) signal. It may be used in applications which requires the 27MHz receiver to be mounted on a printed circuit board. If the code of the input signal (from a transmitter) matches the setting of the coding switch on the receiver (up to 4096 combinations), an output is obtained i.e. the open collector is switched to ground. Connection to the receiver is via a six-way female connector. The male receptacle is the Molex M2373-6A connector, which can be soldered onto any type of printed circuit board, requiring a 27 MHz receiver. As an antenna, a piece of any type of wire, approximately one meter long, will be sufficient for a reliable control range of up to 400 metres, with our FMT... series hand transmitters. A longer wire or a proper 27 MHz CB-Antenna should further improve control range. The default mode is in momentary mode, i.e. the output transistor is only activated while the correct signal is received. When a flip/flop mode (toggling the output every correct incoming signal) is required the "AL" tracks on the copper side of the receiver must be joined. In flip/flop mode, the output transistor is on at the initial "power-up". Care must be taken, not to bring a receiver near strong magnetic fields, such as DC-Motors, speakers, magnets for reed switches, transformers etc. as it would magnetise the coils and may cause severe de-tuning.

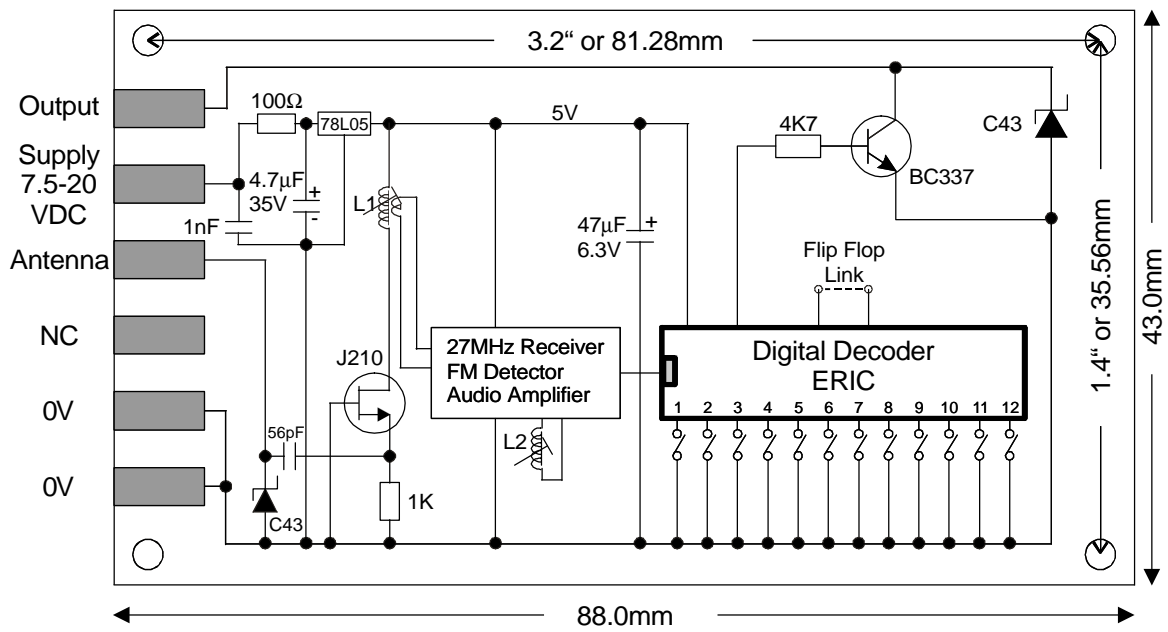
## TECHNICAL DATA ON FMR-201

SUPPLY VOLTAGE :	7.5 to 20V DC, absolute maximum +30VDC
CURRENT CONSUMPTION :	10mA stand by.
RECEIVING FREQUENCY :	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 USED :	26.690 MHz, 3rd overtone, 20 pf, 30ppm at 0 to 50°C.
IF FREQUENCY :	455 KHz
SELECTIVITY :	At least -40 dB at + - 10 KHz.
SENSITIVITY :	Better than 1 $\mu$ V (For transistor to switch on).
TYPE OF DEMODULATION :	Narrow-band-width Frequency Modulation (FM).
BAND WIDTH :	+ - 2.5 KHz
DECODING SYSTEM :	On board 12-way coding switch (4096 Digital Channels).
OUTPUT :	Transistor output Maximum-switching 100mA/40VDC. Transistor is normally "OFF", it switches "ON" if correct code is received. Joining "AL" tracks on copper side of Printed Circuit Board will change Output from "Momentary" to "Alternating"
CONNECTIONS :	6-way female connector type. Male connector is soldered to a PCB (Avail from Elsema)
ANTENNA :	50 ohms, 27 MHz CB-Antenna or piece of approximately 1 metre of wire.
DIMENSIONS :	88 X 43 X 15 mm
MOUNTING HOLE SIZE :	3.97 mm or 5/32"
MOUNTING HOLE SPACING :	Length 81.28 mm (3.2") Width 35.56 mm (1.4")
WEIGHT :	28.5 grams
USEABLE TRANSMITTERS :	All Elsema type FMT-... series.

### Note

- All inputs and outputs are protected against possible transients or static charges.
- If antenna is a piece of wire, install away from metal parts.
- Keep coils L1 and L2 away from magnetic components such as speakers, motors, transformers etc
- Do not change factory tuning of L1 and L2 coils

# FMR-201 CIRCUIT DIAGRAM AND CONNECTIONS



Connections are drawn as "View to Component Side"