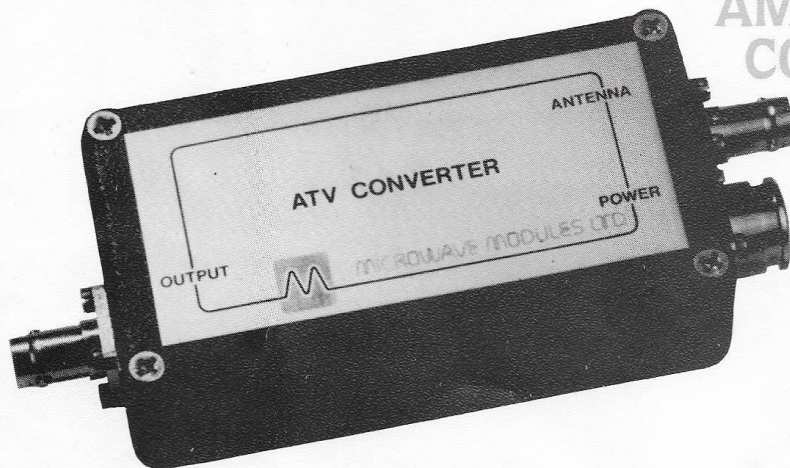


MICROWAVE MODULES LTD

MMC 435/600 435 MHz AMATEUR TV CONVERTER



FEATURES

- Ultra Low-Noise First RF Amplifier Stage
- High-Q Output filter for Minimum Spurious Responses
- Output Tuneable Over Band IV

SPECIFICATION

INPUT FREQUENCY	: 430-440 MHz
OUTPUT FREQUENCY	: Tuned to Channel 35 but can be retuned over Band IV
TYPICAL GAIN	: 25 dB
OVERALL NOISE FIGURE	: Better than 1.9 dB
RF CONNECTORS	: 50 ohm BNC
DC POWER REQUIREMENTS	: 11-13.8 Volts @ 40mA
POWER CONNECTOR	: 5 pin DIN (matching plug supplied)
SIZE	: 110 x 60 x 31 mm
WEIGHT	: 260 g.

DESCRIPTION

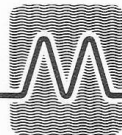
This converter is intended for use with a standard domestic UHF TV set to produce a high reliability receive capability for amateur television communication at 435 MHz.

The MMC435/600 can be used either on its own as a receive only unit, or in conjunction with the MTV 435, 20 watt ATV transmitter, for full transceiver operation.

Incoming 435 MHz signals are fed to the first RF amplifier stage, which incorporates one of the latest silicon bipolar transistors, yielding a genuine overall noise figure of better than 1.9 dB. The signal is further amplified by a BFY90 transistor, before being passed to gate 1 of the 3N204 dual-gate MOSFET mixer. The local oscillator signal is fed to gate 2 of this mixer, to produce the required intermediate frequency.

The use of printed stripline techniques together with a high Q IF output filter, and an ultra low-noise first RF amplifier transistor, give this converter substantial advantages over the commonly used UHF TV tuner approach.

The converter is housed in a highly durable black diecast case, and all circuitry is constructed on high quality glass-fibre printed circuit board.



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POWER CONNECTOR INFORMATION

An improved method of power connection has now been incorporated on the enclosed product.

We have replaced the two PTFE terminal pins, mentioned in the data, with a 5 pin DIN plug and socket arrangement.

The connections are detailed below.

This improvement will make the product far easier to use and reduce the risk of any accidental heat damage.

—— POWER ——

When looking at the socket as pictured below connections are as follows—

PIN 3—NEGATIVE (EARTH)

This line should be connected to the negative side of the supply, and earth.

PIN 5—POSITIVE (+ 12 V)



MIW FEBRUARY 1983

MICROWAVE MODULES
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CONNECTIONS AND USE OF YOUR CONVERTER

Now that you are the proud owner of a Microwave Modules converter you will be expecting the usual high quality, and performance associated with our name. To ensure this performance and reliability it is important to read and follow the advice below.

1. All coaxial leads should be made using good quality 50 ohm coax cable. Care should be taken to ensure correct and proper connection to the relevant plugs.
2. A well regulated and stabilised DC power supply is essential for reliable operation. We do not recommend car batteries as a 12v supply, but if this is the only available source it is important to ensure that a battery charger is not connected to the battery when the converter is in use.
IN ALL CASES EXTREME CARE SHOULD BE TAKEN TO AVOID REVERSE POLARITY.
3. A resonant aerial should be used with the converter, in the form of a multi-element beam, a vertical collinear or a dipole or similar. Best results will be obtained if this aerial is well in the clear and away from surrounding obstructions. Good quality coax cable must be used to connect the aerial to the converter.
Long wire aerials and random length aerials are not suitable.
4. The converter output (IF output) should be fed to the aerial input socket of your existing receiver using coax cable. The receiver should be disconnected from any other aerial system whilst the converter is in use.
5. If there is any static discharge (lightning) in the atmosphere it is advisable to disconnect the aerial from the converter and earth it accordingly.

TYPICAL CONFIGURATION :

