



*****DEM Part Number 144-28INT*****

2 Meter Transverter for converting microwave transverters to 28 MHz.

Operating Specifications:

Operating Voltage:	12.0 - 15.5 VDC, 13.8 nominal
Current Drain:	Receive / Transmit 400 mA maximum
Output Power:	5 - 10 mW nominal linear
Receive Noise Figure and gain:	3.5 dB NF maximum, 5 dB gain minimum, adjustable
TX Drive Level:	-20 dBm to 10 watts, adjustable

General:

The DEM144-28INT will be offered as a board kit, complete kit with enclosure and connectors or assembled and tested. This design replaces the DEM144-28DC.

Operational Overview:

The DEM 144-28INT is designed to be used as a 2nd conversion IF for microwave transverters that require a 2 Meter IF. Because of its limited RX gain and low output power, **this transverter should not be used as a stand-alone 2-meter device!** The 144-28 INT has a nominal linear output power of 5 - 10 mW with any 28 MHz. drive level between -20 dBm and 10 watts. On the receive side, a high dynamic range amplifier, a high level double balanced mixer (+17.0 dBm) and a three chamber helical filter are employed to providing a over load proof, low gain front end with superior selectivity. It is similar in design as our standard high performance 2-meter transverter without the GaAs FET front end.

If an assembled version or complete kit version is ordered, it utilizes our standard microwave transverter enclosure with BNC connectors for both RF and IF. The transverter comes complete with built in relays for RF and IF switching, and for external switching if required. TXIF gain or attenuation is also included. The transverter may be configured for common or separate ports for both RF and IF. Simplified push-to-talk connections can be made through the IF coax and can be mirrored through the RF connections if desired.

After the IF drive level range is configured, the maximum output level of the transverter may be adjusted between -10 and +10 dBm. The RX gain may be set between -10 dB to a nominal level of +5 dB to prevent receiver overload. The local oscillator is "heater controlled" for frequency stability.

The DEM144-28INT can be easily configured with many different 28 MHz. transceivers and then connected to any Down East Microwave Inc. transverter, 902 MHz and above. It can be utilized as a PC board kit to implement into a home station or assembled into its custom enclosure for portable use with any microwave station.