Fort Purbrook Amateur Radio Club, Fort Purbrook Activity Centre, Peter Ashley Lane, Cosham, Hampshire, PO6 1BJ, United Kingdom

SPECTRUM COMMUNICATIONS 4M TRANSVERTER

MICK M0GWD 1 July 2024

Spectrum Communications TRC4-10sl 4m Transverter

This kit is the Spectrum Communications TRC4-10sl 4m Transverter, designed to transvert a 10m (28MHz) signal to 4m (70MHz).

It has an output of approximately 25W due to the inclusion of a separate PA board and a maximum input of 5W. Minimum input is 500mW.

This is a really nice kit to build using quality components and preformed coils. There are no toroids to wind. It comes with a black metal enclosure which has a printed front panel, giving a professional finish. The transverter is used with a Yaesu FT-897D, with its output power reduced to 5W. The transverter switches to transmit by sensing the RF power from the FT-897D when the PTT on the microphone is pressed.

The transverter has an output power control and a receive gain control. Normally both LEDs are red, but I changed the PWR LED for a green one–just a personal preference. For final calibration, the completed unit was sent to Spectrum Communications, as I didn't have an accurate enough power meter for 70MHz in order to correctly commission the unit at home.

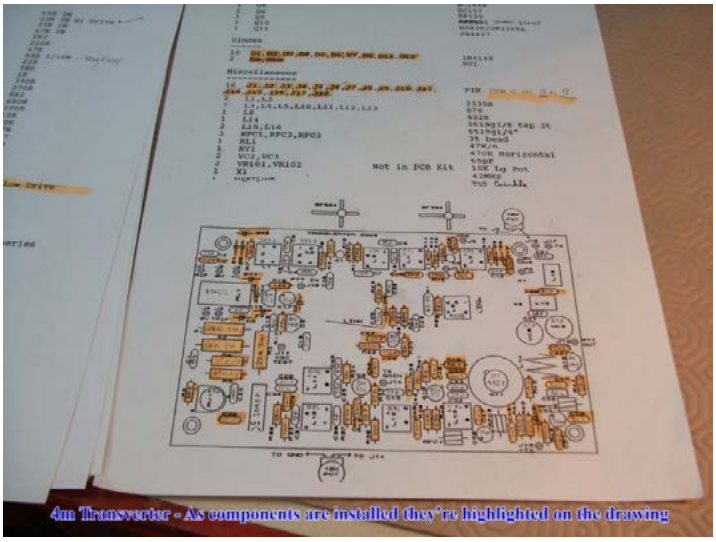
Spectrum Communications has further details with current prices, etc.

73
Mick M0GWD

SPECTRUM COMMUNICATIONS 4M TRANSVERTER

MICK M0GWD

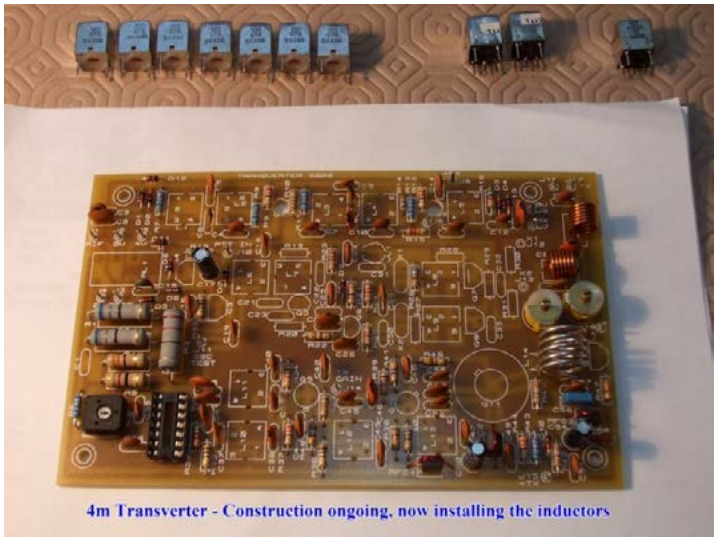
4m Transverter - Close-up of the main Transverter board



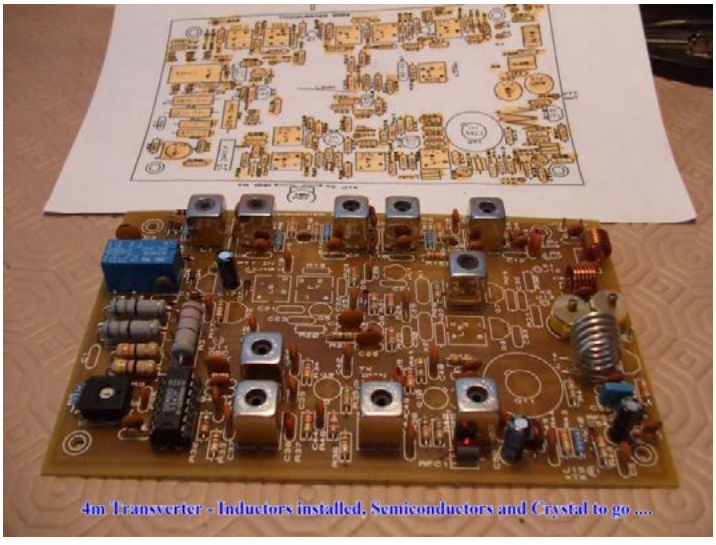
4m Transverter - As components are installed they're highlighted on the drawing

4m Transverter - The supplied aluminium case with printed front panel

4m Transverter - 25W Power Amplifier components and remaining hardware



4m Transverter - Construction ongoing, now installing the inductors



4m Transverter - Inductors installed, Semiconductors and Crystal to go ....

SPECTRUM COMMUNICATIONS 4M TRANSVERTER

MICK M0GWD

4m Transverter - Semiconductors installed, along with the single heatsink

4m Transverter - Commissioning the main board using 5W output of the FT-897D

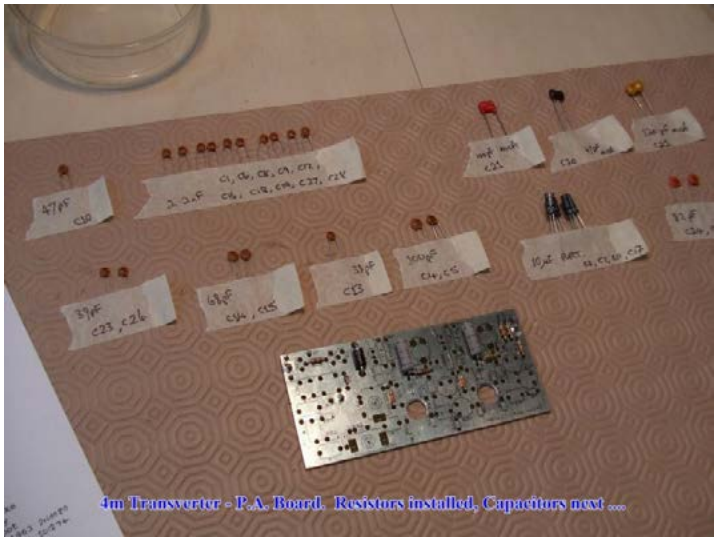
4m Transverter - Main Board.
Checking the conversion frequency
with a 28MHz input - Spot on !!

4m Transverter - Starting construction of the 25W Power Amplifier Board

4m Transverter - Starting construction of the 25W Power Amplifier Board

4m Transverter - P.A. Board. Identifying components for installation

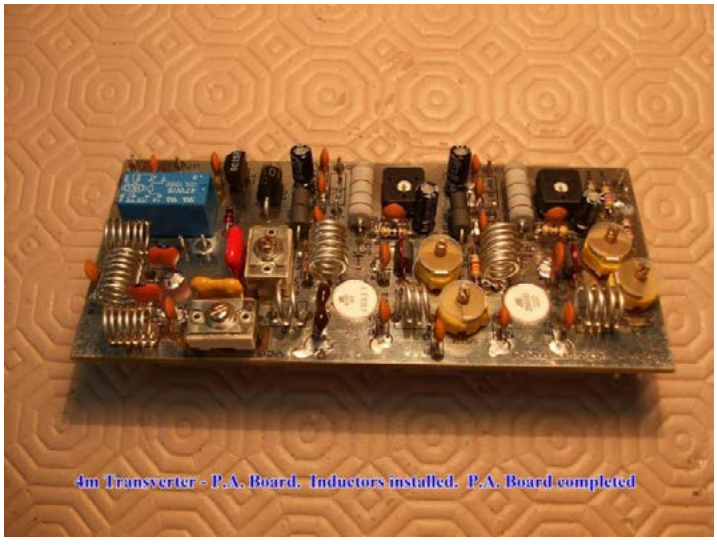
MICK M0GWD


4m Transverter - P.A. Board. Resistors installed, Capacitors next ....

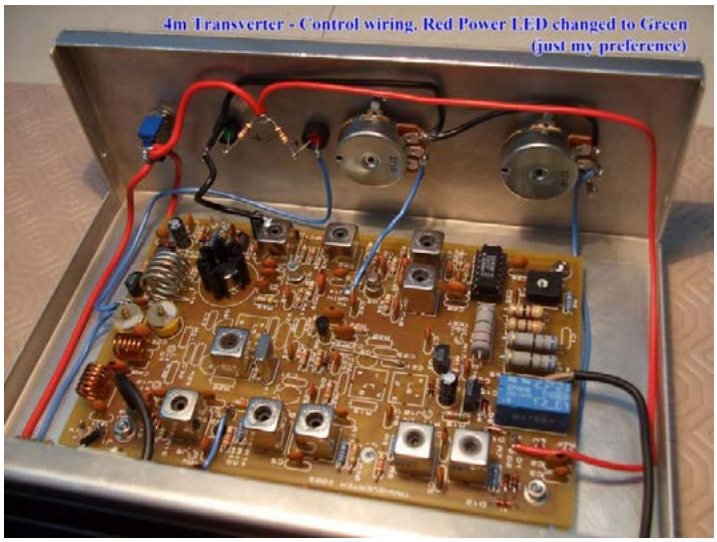
4m Transverter - P.A. Board. Trimmer Pots next ....

4m Transverter - P.A. Board.
Using the weight of a spanner to hold the Power Transistors in place for soldering

4m Transverter - P.A. Board. Trimmer Caps installed, 8 x Inductors to go ....


4m Transverter - P.A. Board. Inductors installed. P.A. Board completed

4m Transverter - P.A. Board. 'End-on' view

SPECTRUM COMMUNICATIONS 4M TRANSVERTER

MICK M0GWD