222/28 MHz TRANSVERTER BOARD

With this Transverter board you can work on 1.25 meter band using any type of the HF radio that has 10 meter band. It would work the whole 1.25 meter band at 222 to 226 MHz if your base radio has the 28 to 32 MHz band. It works any modes such SSB, CW or FM if its available in your radio.

Technical specifications

- RF range - 222 ... 226 MHz
- IF range - 28 ... 32 MHz
- IF input power - 1 ... 50 mW (0.05 W max.) or 0 ... 17 dBm
- LO frequency - 194 MHz
- Output power - 8 ... 10 W
- RX gain - typ. 20 dB
- Noise figure - typ. 1.0 dB
- Image rejection - typ. 70 dB
- PTT control - Contact closure to ground
- Supply voltage - +13.8 V DC (+12 ... 14 V DC)
- Current consumption - typ. 1.3 A (TX)

Pinout of the connectors:

1. IF 28 MHz transverter input – output line
2. Ground
3. PTT line (ground it to switch Transverter to the TX mode)
4. Separate RX 28 MHz line (remove JP2)
5. +12 V
6. Ground
7. Antenna 222 MHz
8. Ground
To read the tips below and mount your transverter EXACTLY as described.

1. **RF input** power to the transverter from your HF radio should be NO MORE than 50 mW (0.05 watts max). You can adjust it using RV1 pot on the board.
2. Initially Transverter set on the common IF 28 MHz RX/TX line on the pin 1.
3. Removing JP2 jumper allows you to use the RX/TX lines separately (TX pin 1, RX pin 4).
4. DC supply is +12 ... 14 V
5. To get the transverter switched to the TX mode close the PTT line to the ground.
6. RV1 pot adjusts OUTPUT POWER of the Transverter.
7. RV2 pot adjusts BIAS of the output transistor.

The transverter board suppose to be mounted onto heat sink.
Using TWO metal bolts screw down the transverter board onto heat sink THROUGH the hole 1 and output transistor hole. Put a few nuts or washers under mounting hole 1 between the transverter board and the heat sink so to get the board flat mounted above the heat sink about a few millimetres. Or you can just use a piece of plastic between the board and heatsink under mounting hole drilling the hole in and get the bolt through. Do not use hole 2 ! I discovered that in some enclosures it might cause oscillating the transverter! The stable work of the transverter depends of this!

The output transistor should be mounted onto heat sink without insulation.
All RF RX and TX lines should be done with the coax cable!

**BE CAREFUL !**
Applying more than 0.1 W from your radio to the transverter board you instantly get the transverter board killed.

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