DIFFERENCES BETWEEN THE T41
V011 and V012 – MAIN BOARD
December 5, 2023

Background

The T41 Transceiver is an excellent radio, loaded with hardware and software features from the start that make it a great platform for beginners and experimenters alike. The unmodified T41 Version 011 platform (or V011) provides a person wanting to build their own radio with a transceiver able to transmit and receive CW, SSB, and digital modes on the amateur bands 80M-15M. With a simple modification, that operation can expand to 12M and 10M as well. The end user is also able to experiment with the open hardware and software to make enhancements for a customized radio to meet the individuals needs.

The new Version 012 boards (or V012) improve on/ expand the RF capabilities, options, and extraneous RF noise suppression.

The Main board is released and the Gerbers and BOM are out in the Files section of the SoftwareControlledHamRadio forum (group buy/sales will take place shortly).

There are two ways to get to a T41 V012 radio. You can:

1. Start from an existing V010/V011 radio that is working… and do the following:
    a. Discard the power supply board.
    b. Replace the V010/V011 Main board with a V012 board.
    c. Replace the V010/V011 QSD and QSE boards with a single RF board.
    d. The rest of the boards all play together.

2. Build a V012 radio from a new set of V012 boards (includes some of the older V011 boards like Switch matrix, filter board, and PA board).

The differences between MAIN V012 vs. V011 boards are:

1. si5351 has moved off the main board to the RF board.
2. Two IC2 busses are not available through connectors to operate a number of add-ons.
3. The voltage regulators on the main board only power the main board...
4. The display voltage can now be selected on the main board via a jumper.
5. The Band signals have been MUX-ed (4 bits) to correspond to the existing Elecraft/ Kenwood/ Yaesu band signals for using external devices.
6. The ethernet connector now is available.
7. The front panel rework/ board works flawlessly with the new main board.
8. New signals/ connectors are available for RF-mode and switching.

9. A/D and D/A chips are now placed directly on the board and optimized for the I/Q streams.
10. LEDs are provided for the 3 voltages and PTT for visual confirmation of same.
11. A soft-start, push-on/off circuit has been added that allows the processor to run a "shutdown" routine before the power goes off to the processor.
12. Display buffer has been removed (generated RFI).
13. Both sides of the board are utilized for components.