T41-EP SDT v12 Interconnect Kit Assembly Manual

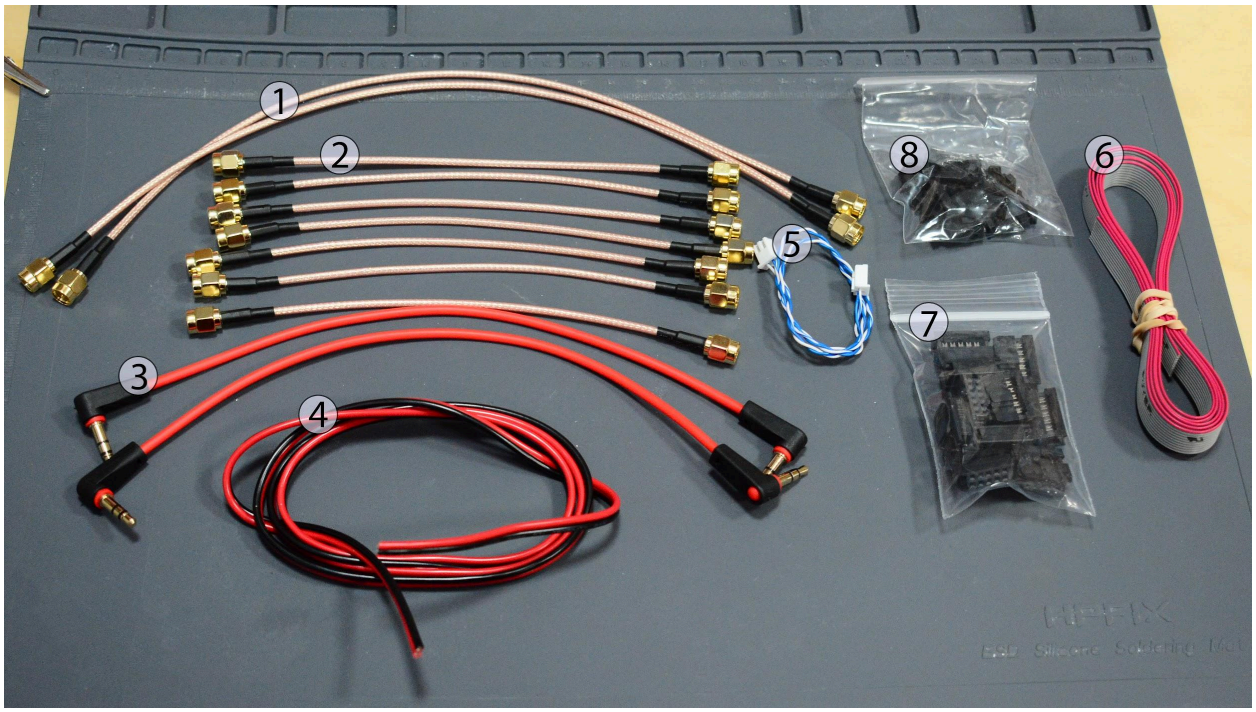


Figure 1. Parts included in Interconnect Kit

The interconnect kit provides all of the cabling necessary to connect the various T41-EP SDT v12 modules together. This assembly is non-trivial, I recommend connecting modules as they are installed in the enclosure.

This assembly module is less detailed than most of my manuals. For that I apologize, I've lost a significant amount of images and footage from the assembly of this radio and will need to recreate it.

What's Included (Parts List)

1. (2) 30cm (12″) SMA Terminated Coax Cables
2. (7) 15cm (6″) SMA Terminated Coax Cables
3. (2) Right-Angle TRS Cables
4. (1) 90cm (3′) 18AWG Twin-Lead Power Cable
5. (1) 30cm (12″) XH Terminated Twisted Pair

6. (1) 120cm (4′) 10-Conductor Ribbon Cable
7. (11) 2×5 IDC Connectors
8. (11) Strain Relief Clips for IDC Connectors

You Will Need

1. Vise or Mallet
2. Scissors
3. Angled Snips
4. Small Flathead Screwdriver

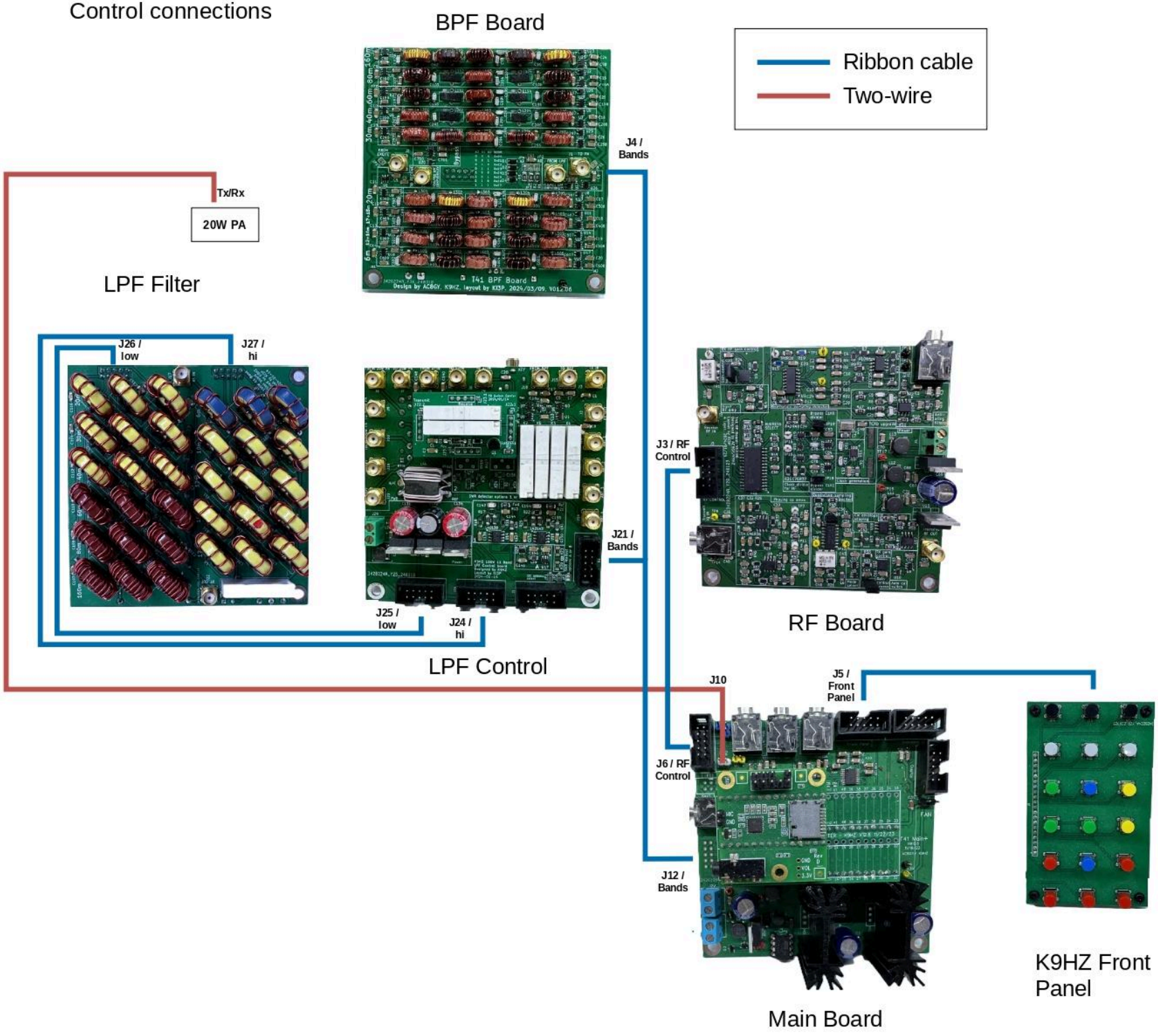
Missing a part? Send an email to justin@ai6ym.radio.

Connection Drawings

Credit to Oliver King (KI3P) for these drawings.

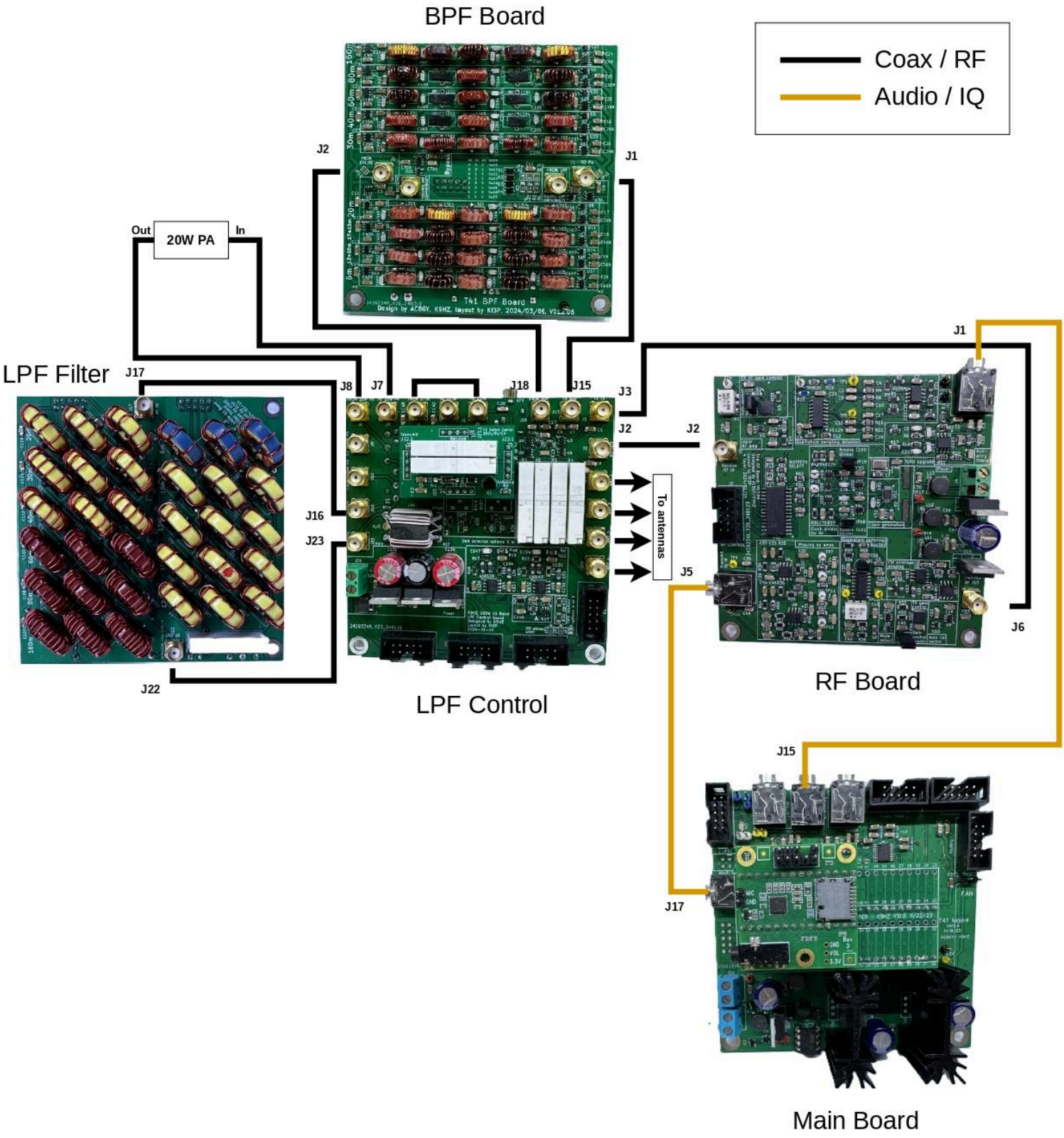
T41 V12 boards: single receiver option

Control connections



T41 V12 boards: single receiver option

RF & IQ signal connections



Description of Parts & Connections

- Power (12V) from the output of the main board (*J1* – the top molex block) is carried to all of the other boards by the included twin-lead cable in a simple daisy-chain arrangement. Each of these blocks can accept two wires twisted together. Soldering or crimping those wires together with a wire ferrule is also possible but require a bit of extra care to fit properly.
- I/Q signals are routed between the main and RF boards by the included right-angle TRS cables.
- Digital signals are carried between the various boards with the included 10-conductor ribbon cable. These connections are point-to-point except the bands connection. The bands ribbon connects the main, LPF control, and BPF boards.
- The amplifier keying signal is carried from the main board to the 20W PA by the included twisted wire pair (terminated by XH connectors).
- RF signals all connect through the LPF control board. The specific connections are labelled in the drawings above. Note the jumper between *J4* and *J5* which bypasses the optional attenuator. Most of these connections can be made with the 15cm (6″) cables included in the kit. The longer (30cm / 12″) cables are included for reaching the farthest board, for me this was the RF board.