## **G4HUP Panoramic Adaptor Installation – TS850**

Important Note: In carrying out this modification to your TS850 you will remove and cut one of the existing Taiko Denki TMP terminated jumpers. If you prefer not to damage an existing cable, you will need to obtain a spare from your Kenwood agent.

- 1. Build and test the PAT kit use a 12v supply and you should measure a gain of a few dB at 70MHz. The TS850 uses a 73.05MHz 1<sup>st</sup> IF
- 2. Remove the bottom cover from the TS850 as per instructions in the Kenwood TS850 Manual.
- The TS850 has a suitable signal pick-up point already available on the PCB, and it has an IF out jack on the rear panel. In this installation you will reroute an existing cable, via the PAT module to the rear panel connector.
  The PAT board mounts conveniently on top of one of the crystal filters on
  - . The PAT board mounts conveniently on top of one of the crystal filters on the TS850 RF Unit see Fig 1. From this position, both the input and the +Vcc connections are just short runs.



## Fig 1 – View of PAT inside TS850, showing it mounted on one of the crystal filters and the connection routing. PAT input is to the right of the picture

5. The PAT board is held in place by double sided tape, so can easily be removed should it become necessary – although it is shown mounted on a filter case, it does not obstruct anything else, and since filters are not very often removed, it is out of the way.

- **6.** Identify the cable that runs from CN26 (near the filters) to CN7 (near the rear panel). Remove the cable from CN26 this is the 2<sup>nd</sup> IF signal at 8MHz. CN7 connects to the rear panel RCA phono jack, and will be use for the PAT output connection
- 7. Measure the cable length needed to run directly from CN7 to the PAT output pads. Cut the cable, prepare the end and solder to the PAT output pads. With the remaining cable and plug, locate CN6 (TP2) on the board it is diagonally across L81 from CN26. This is where the PAT input signal will be picked up.
- 8. Again, measure the length it should be just about right prepare the cable ends and connect to the PAT input, as you can see in Fig 1.
- 9. The Vcc supply for the PAT is picked up from the cold end of L63, as shown in Fig 2, below. This will be found close to CN29, which is by the IF filters, and can be seen clearly in Fig 1.



Fig 2 – Pick up point for Vcc, on L63.

- 10. Connect to your SDR/PC,tuned to 73.05MHz and test
- 11. Replace the TS850 bottom cover.