

Duke City Hamfest Buildathon

WWVR Receiver Building Notes

Gang,

Here are my notes for what I did to get my WWVR Receiver up and running and tuning WWV.

1. Schematic is posted but there were some last minute changes for the Buildathon kits:
 - a.) Last minute substitution of 10MHz crystals for the 10.006MHz xtals in the schematic
 - b.) Last minute swap of MV209 varactor for the varactors originally supplied in the kits.
2. We don't have to pull the crystals as hard to get to 10MHz so the L2 choke on the band module should be changed from 18uh to 10uh which is 14 turns on the toroid instead of 19 turns.
3. MV209 varactor should be installed in the 2 pin LED style VD1b location with the flat side to the front of the board.
4. Transformer T1 on the band module is a little awkward to install. The S2 pad is out of position so the winding lead has to go up and over the toroid to get to the pad.
5. I think I got most of the main round boards modified and working on Sunday morning as most of the builders dropped by my booth to check out the solution to the problem. I inspected the boards, made any necessary connections and tested them out using my modified band module board. I used the 4-FER Frequency Counter kit that was the Duke City Hamfest Buildathon kit from last year to debug and check out my kit in my room on Saturday night.
6. I purchased about 40 feet of speaker wire at the flea market on Saturday to make a long wire antenna to see if I could get a signal while debugging Saturday night. The only signal I could get was NOISE. Since the hotel is practically brand new, almost all the lighting in the casino and hotel is LED and compact florescent bulbs. Both types create lots of RF hash and HF reception on 10MHz was impossible. I just hooked up the WWVR kit to my vertical antenna here at home and tuned right in to 10MHz. I could tune and eventually hear WWV but there is a Spanish language broadcaster sitting right next to WWV that made tuning it in kinda tricky. I will be trying out WWV on 5MHz tomorrow.

Hope this helps you all get your band modules completed and kits receiving WWV. Thank you all for participating in the Buildathon.

Rex W1REX