CS-Series Single Band SSB Transceiver Kit : One-Page Quick Guide

20170403 by CRKITS.COM

Thank you for the order. We are available for consultation by email at rongxh@gmail.com and at the Yahoo group http://groups.yahoo.com/group/CHINA_QRP

This quick guide only highlights the key points you need to take care during the building. A step-by-step manual will be available for downloading at http://crkits.com/csmanual.zip

The YouTube video https://youtu.be/D2RQTk1blUA explains the basic operation and major difference from the KN-Q7A.

Notes for parts inventory: All the resistors, trimmers, potentiometers, rotary encoders and 0.1 µF (104) capacitors are in one plastic bag inside the components bag. A complete part list will be available in http://crkits.com/csmanual.zip

Notes for the main PCB dated 20170226:

- It follows KN-Q7A PCB V2.2 with very slight modifications. PCB marking should be self-explanatory, but do not install the components with a * marking until you read all the manual and understand the reason for the marking. Don't install all parts with a # marking. Don't install DIY7-7*#, Xa'# and 2 pcs Xb#. Although PCB marking still says x/y marking = 40m/20m band value, it only applies to the band dependent parts in TX BPF, TX LPF and RX BPF. That said, the IF filter and amplifier still follows the 40m value to have the common 8.4762 MHz IF for all bands.
- C3357 is the only surface mount component. It comes with RE or RF marking on the body.
- The 7808, D882, and IRF510 semiconductors should be installed on the chassis bottom to help the heat dissipation. The 7808 may be installed directly with an M3x10 screw and M3 nut, the D882 needs to add an insulator pad between the component and the chassis bottom, and the IRF510 needs to add both an insulator pad and a small white insulator washer.

Notes for Sandwich: Please refer to the manual http://crkits.com/sandwichkitassemblymanual.pdf If you wish to update the firmware, please download correct version as CS-series uses common IF 8.4672 MHz.

Notes for assembly: You will need to drill 7x M3 holes in the chassis bottom by yourself. A drilling template will be available at http://crkits.com/knq7atemplate.pdf and you will need to print on the A4 size paper in 100% scale. Use M3x10 screws and M3 nuts to install the chassis feet and 7808, D882, and IRF510 semiconductors. Eight black screws are used for the front and rear panels. Rotary encoder and LED are installed to the front panel by the washer and nut.

Alignment: Calibrate Sandwich crystal first in crystal calibration mode. Peak the RX IFT's with on-air signals. Calibrate Sandwich in BFO calibration mode to get proper audio spectrum of about 350~2200Hz. Preset SET BIAS trimmer fully counter clockwise first and adjust the TX bias current by **VERY SLOWLY** turning the SET BIAS trimmer clockwise until the current increases 60mA (likely from 0.50A to 0.56A, while you just press PTT and don't speak to microphone). Finally peak the TX IFT's for maximum power using UNBAL jumper (refer to the above YouTube video.).