DDS-STB 3/1/24 V5a

The DDS-STB now has the DDS-PC V5a board and the 9 pin option port has a few changes from the original model. Please take note when installing Option cable.

Important:
Clk-0 is not decoupled internally, you must use a capacitor at the injection point. The supplied capacitor (.0001uf) works well for most transistorized installations.

Kiss Mode:
On the rear of the STB, you will notice a switch labeled (Norm / Kiss) Switching to Kiss mode will lock the STB into AM for simple generation of the frequency needed for simple VFO operation. *Always check the offset AM Rx / Txto verify it is at 00000000*

Mode select pins.
Transistor switches has been added internally so that the Am / Usb/CW/FM will require a high (nominal 8-12Vdc) to select modes.

Scan logic.
A voltage divider has been placed internally for start/stop scan logic. It expects a nominal 4 to 6 vdc SQ and < 1vdc USQ, if your installation has any higher voltage, you must adjust so the Arduino sees no more that 2-4 volts high and less than 1.2v low.

PTT sense.
A 1N4148 diode has been placed internally to provide protection from any voltage on the microphone line.

Ptt out.
The Ptt out is now controlled by an internal transistor open collector. The internal transistor can drive a relay if needed for PTT. Newer radios can be direct connect. Max sink to ground 250MV.

Spectrum scan.
This pin now has a 100K in series. Make sure that at max signal (60 over S9) in RX is no more than 1.5Vdc going to the STB. Many tube type radio will not have this feature.

Roger Beep.
The output for the beep now has an internal pad, 100k Ohm in series with a .1uf non polarized capacitor. This will produce a nice level for most all microphone audio in points.

Fusing:
An internal Dc 1.5A fuse has been added.

DB-9 Pin-out

1= AM / Active high.
2= USB / Active high.
3=Roger beep out.
4=Ptt sense. Active low.
5=Ground.
6=Ptt out to radio. Open collector 2N3904 250ma max.
7=Spectrum Scan in (Max 60 over S9=1.5Vdc)
8=HFRX *(If HFRX was not ordered, then Auto-scan switch active low.)*
9=Channel scan logic. (SQ= 2 to 6vdc / USQ <1.2vdc)

DC input:
Tip Positive 8 to 13 VDC @ 200ma

Your new STB has been calibrated with a GPS disciplined Rubidium lab oscillator to 8 digits I.E 20000000Hz and should need no further calibration.

As with all DDS kits, the service jumper is “IN” so do not for get to remove it then place it back in when your install is completed.

The Si5351a has been calibrated at the time your STB kit was made, however if you feel you need to re-calibrate, please see that section in the DDS install guide.

Clk-2 (2nd sma) can be set for any frequency from 1 to 160 Mhz continuous for whatever you may need. Some like to set it for a 10 Mhz reference to their bench!

Remember, all information is at www.ddsvfo.com Email toby@troyradio for technical support.

Thanks
73,
N5SIM