CONVERSION TO 6M (TUNING)

When you get your surplus radio, its bound to be in relatively rough shape. You may encounter clipped cables, missing plugs, missing molex connectors as well as 20 years worth of dirt!

Here I hope to explain the process of getting the radio up and running, tuned into the 6 meter amateur radio band, programming and use.

In the meantime, here is the short synopsis of the conversion:

If you want to program a TK-630H -3 in the ham band its very simple. The radio must first be programmed to the frequencies you wish to use. (That’s another section — Programming.) Assuming your all set to go, make a note of the channels which have the highest and lowest transmit and receive frequencies. Also find one around the center of the band to make your adjustments. Put the radio on that channel.

The 6m ham band runs from 50-54MHz. On my radio, my programmed lowest and highest frequencies are RECEIVE CH4 (51.640MHz LOW) and RECEIVE CH 26 (53.830MHz HIGH) When adjusting my RX section, these are my two extremes.

Likewise, my transmit spread is TRANSMIT CH 4 (51.120MHz LOW) and CH 26 (52.830MHz HIGH.)

My CH 9 was 53.05MHz RECEIVE and 52.050MHz TRANSMIT, which was a nice center frequency to do my setup.

Your going to want to make sure you have your radio terminated into a 50 ohm dummy load, and your power supply around 13.8V. Put your voltmeter negative terminal on the (-) terminal of the supply.

Remove the bottom cover and put your voltmeter (+) probe on TP 302 and assuming you are holding the radio with the front part facing you, adjust the first contol to your right (RX) inside the metal box (TC52). Should set it for about around 6.5V.

(Don’t go crazy, keep an idea of your starting location. And just give it a little tweak, maybe a quarter turn at a time.) If the tone is on, your not locked. Keep turning until you get the voltage you want, and the tone stops.

Then with the radio keyed adjust the TX adjustment (TC51). Try to adjust it to about 5V at TP302. Same thing with the PLL tone, if it’s unlocked it will sound.

The idea here is to get the radio to “lock in” on your transmit and receive frequencies you have programed. If the Phase Locked Loop (PLL) cannot lock on your frequency, a tone will be emitted from the speaker, and the radio will not receive or transmit depending on which is out of lock.

Now try out your highest and lowest transmit frequencies. You may have to slightly adjust TC 51 and TC52 to keep the radio in lock. Hopefully buy making those adjustment on your programmed center frequency, you’ll be in the ballpark.

To adjust the receiver, again assuming you have the radio facing you put a 1khz signal using your service monitor or a signal generator and turn the mon button on and adjust the four coils in your upper right hand corner. These are L301-305once you get a good signal, turn off the 1 khz signal. Now take off the metal cover that covers you power board. Play around with VR2 with the radio keyed. Put VR1 at maximum. (These directinons are to get the most power) Now you got your self a nice little ham radio.

