

Headset for Icom 706 Radio

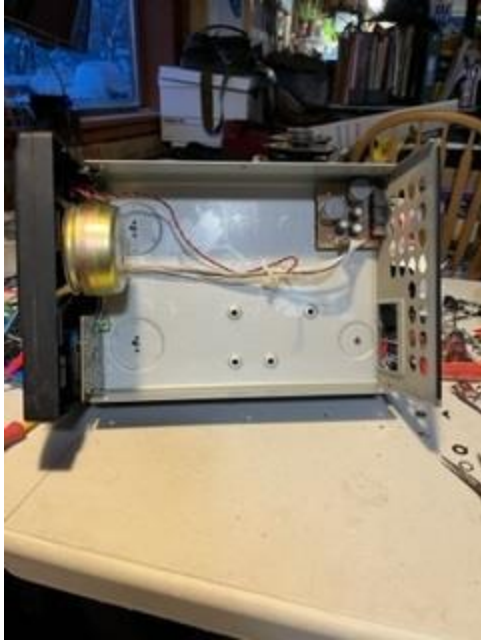
I wanted a headset for my base station because the sound of the carrier dropping off drives the dog a little bit crazy. A Heli Set is a bit rich for my pocket, so I took advantage of the Black Friday sale at The Source and picked up a couple of comfortable feeling game headsets. I wanted ones that had as little built-in electronics (sound enhancing, lighting, others and there are many) as could find.

I have seen PTT encased in a tube which can be attached to a belt or clothing but didn't want anything hanging on me. I have several old sewing machines – most on last legs – and looked at the makeup of the foot pedals. Some newer allow you to start slow and then go to the max. Look for an older one that is just on or off – they have an insulated plunger with a plate on the bottom that closes the circuit. I cleaned up the plate and the two-contact points, adjusting them so they made firm contact with the plate when pedal is pressed

I use a Yaeus SP-8 speaker for radios on the bench. For the price of this speaker there is very little to it. It will give me some isolation between the headset and the radio. I put a 3.5 mm female plug assemble and a 2PDT switch into the speaker case. The switch allows me to monitor via the speaker rather than the headset without having to plug and unplug the headset.



I am big for using a glue gun to provide wire restraint and in this case mount the 3.5 mm female plug assemble that I salvaged from a computer board. Once glue is dry, I buffed with Dremel.



A view of the inside of the Yaesu speaker cabinet.



This is the 3.5 plug assemble I took off an old computer board. The top plug was damaged sometime in its life, so I cut in flat with the Dremel and just wired the one of two for now. Perhaps later plans for 2nd plug.

For the PTT foot pedal, I wanted to include a coiled section of the wire going to the junction box everything is run through incase the pedal got pulled it would have quit an amount of give. I put a piece of microphone cable and mounted the 4-pin plug from an old radio on the junction box.



The spliced from foot pedal cord and the coiled mic cable is within this small tube.... wire restraints on both ends and a little hot glue to ensure cap doesn't open.



This pedal happens to come an old Kenmore Sewing Machine.



The junction box is just an old box I am re-sourcing for this project. The terminal strip was salvaged from a circuit board I had – no idea what it was used for but had a wealth of parts. I soldered it to an Arduino board for stability and put dabs of glue on wires to prevent breakage as it was being assembled. A USB female plug assembly was a Logitech desk mount for something I don't have any more. Cut hole with Dremel and glued it firmly in place. For now, only the microphone cable is run through the USB. It then terminates on the terminal strip – making sure the polarity of the wires. There is a FET mounted in the microphone and requires around 3 Vdc to work. If reverse polarity is applied, it will not work.

The RJ-45 Cat cable from the 706 radio connects to the microphone through pins 5 (blue/green) and 6 (green) with number 6 being the positive connection to the microphone. (See diagram on last page)



Here is the connection between the microphone (was a 3.5 mm mail plug) and the USB female plug that enters the junction box. I could have stayed with 3.5 plug however I could not find a female 3.5 mm chassis mount plug. Also, as most projects end up being fluid, I plan on further looking at the use of the USB plug.



Here it is buttoned up with wire restraints in place.



Here is the headset I used to experiment with. I had to mount a different microphone on it because during my experimenting I got an unforeseen circuit to the electret mic while using the ohm meter... I think the 9 volts from the meter took out the FET.

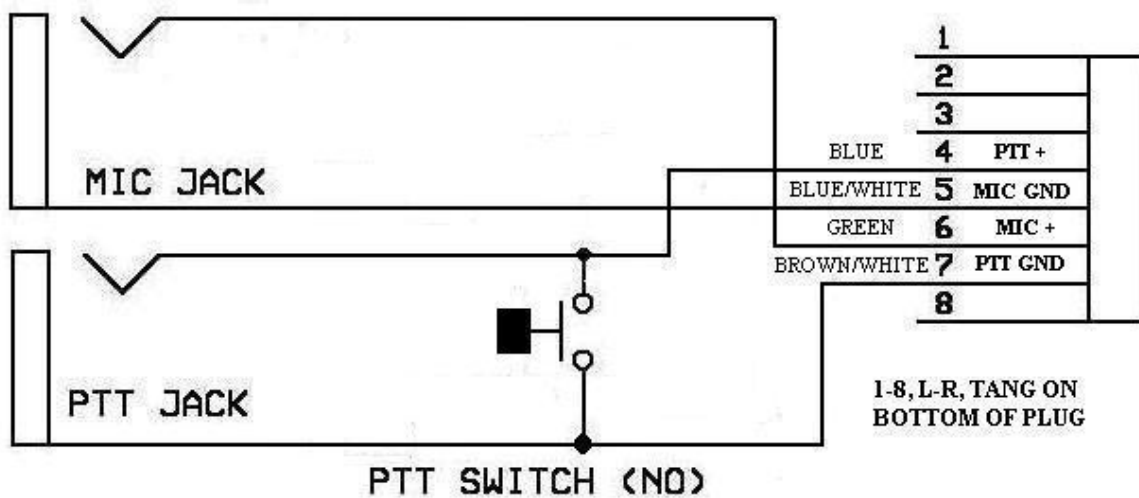


Diagram of the connection for the Icom 706

VY1GS

Gord Settle