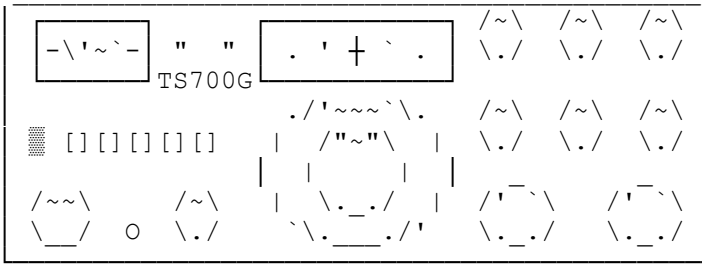


Trio TS700G CW KOX add on unit.

By G8MNY

(Updated Sep 09)

(8 Bit ASCII Graphics use code page 437 or 850)

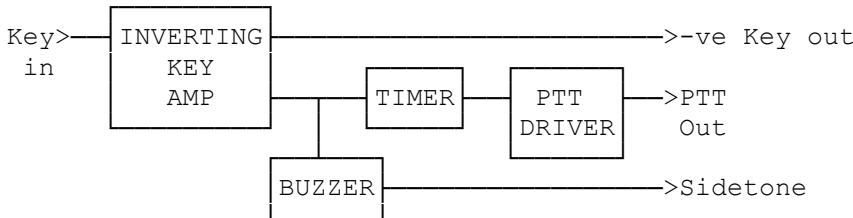


This is a homemade double sided PCB unit that fits over and plugs into the rear auxiliary socket, CW jack and Phono PTT socket of the rig.

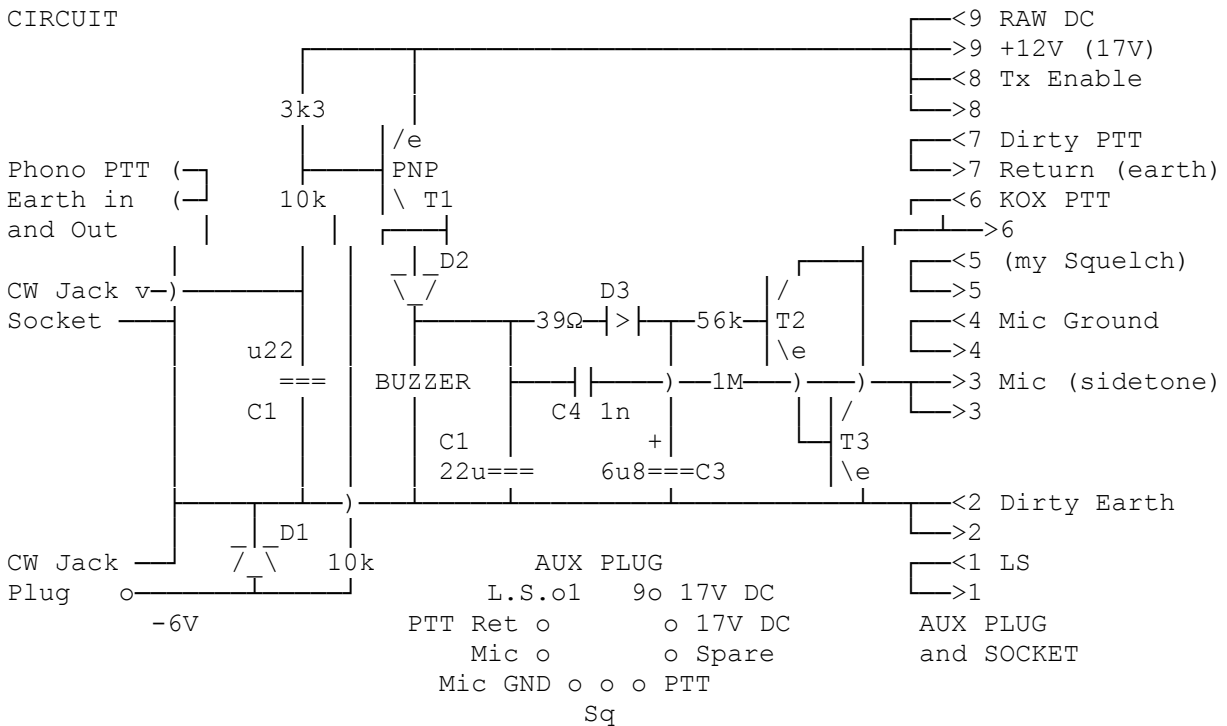
It provides..

- 1/ CW Kox (key up Tx automatically)
- 2/ CW sidetone (acoustic buzzer) (and if a mic sidetone mod done in H/P as well)
- 3/ Key level conversion from - voltage on key to + (auto/bug keys need this)
- 4/ As well as repeating the Aux socket, CW key jack and Phono PTT.

SCHEMATIC



CIRCUIT



HOW IT WORKS

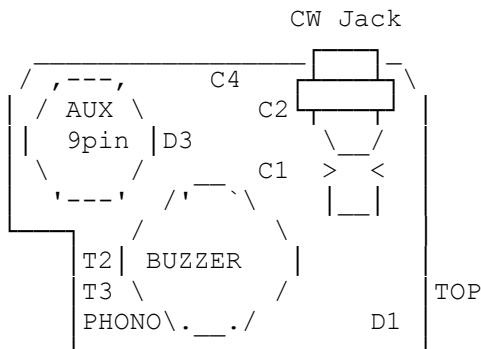
An earth on the CW key after filtering with C1 turns on PNP T1, that in turn via D2 sounds the buzzer (a crude small tin can tone osc unit).

T1 collector voltage also powers on NPNs T2 and T3, PTT rig held operating via the peak hold time delay D3 and C3, that puts the rig on Tx and holds it there for half a second or so longer than the CW is being sent. T3 has to be a TIP type NPN as it has to conduct the high PTT relay current.

The rigs' CW Key socket that normally has -6V it, now has +0.6V (earth) via the 10k and +ve clipping diode D1, the rig sends CW carrier.

With a headphone Mic Tx sidetone modification I have, a small amount of buzzer ripple is added to the mic circuit to provide headphone sidetone as well.

PCB LAYOUT



CONSTRUCTION

The unit is made from double sided PCB that will cover the AUX B9A socket, the phono PTT socket and the CW jack socket.

- 1/ AUX. The most difficult bit was to make the 9 pin plug on the PCB. I drilled the 9 holes and knife cut around each of the 9 pins (except the dirty earth), both sides of the double sided PCB. Then soldered in 1mm copper wires that protruded 8mm both sided and checked it plugged into the rig OK. Then I soldered on a 9 pin B9A valve base (as I wanted the Aux socket function for other things as well).
- 2/ CW Jack Pin. Next I marked out the exact location of the rigs' CW jack socket, drilled a whole to take the pin from an old jack plug, removing some of the rig side pcb to leave the pin insulated. Soldered on the tube and put in the jack pin and insulating collar. Cut he track around the pin centre and DC test OK.
- 3/ PHONO. Next I marked the exact location of the rigs' PTT phono socket drilled and fitted a 3mm dia pin from an old phono plug. Then cut the PCB around both sides of the pin and added a phono socket on top. This phono socket only provides stability for the PCB and could be left as a large access hole in the PCB if you like.
- 4/ Now build up the circuit on cut pads in the available space and wire to the connectors as needed.
- 5/ Cut off surplus PCB.

TESTING

Make sure there is no shorts on the +DC rail as this can damage the rig! Put the rig into a dummy load and switch to CW position. Plug in the adapter and check out the features are all working one at a time.

Why Don't U sent an interesting bul?
73 de John G8MNY at GB7CIP