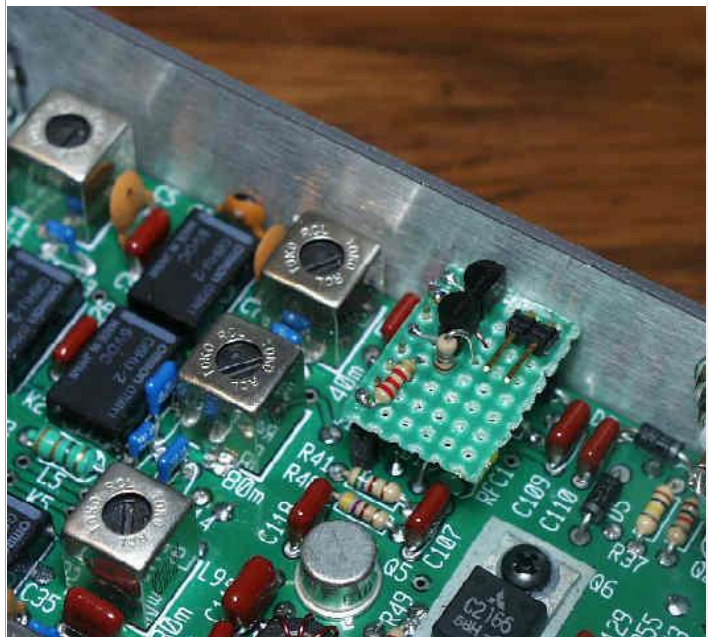
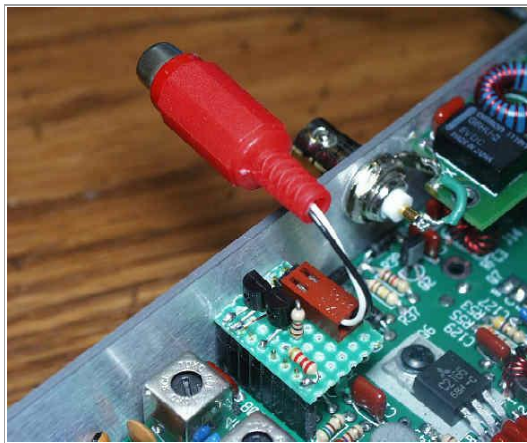
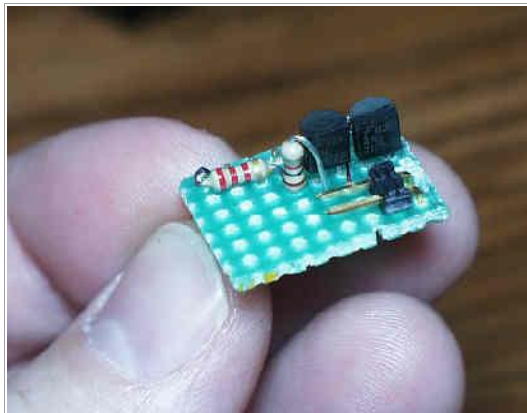




K2 Amplifier Keying Circuit

Date: February 16, 2000

We supply a key line out for amplifiers with our 100W KPA100 option for the K2. A number of people (especially those running SSB) have expressed an interest in driving their amplifiers directly with the basic 10W K2, so here's a simple two transistor circuit built to key an external amplifier. It takes less than an hour to build and it works great!



(The red RCA jack shown in the above picture is used when the K2's top cover is removed.)

It takes the K2's 8R line and buffers it with two transistors to create an open collector keyed line to ground on TX. We used 8R because it transitions from 8V to 0V about 15-20ms before the K2 TX turns on.

The 8R signal, 6V, and GND are taken off the Xverter connector, J13, on the RF board. (See page 3 of the RF board schematic in Appendix B.) We put a female in-line connector in this slot and plugged the little perf board into it. The key line runs to a RCA jack mounted into one of the transverter jack holes in the K2's top cover.



Keep the line from 8R to the 2N7000 short to minimize loading and RF pickup.

Here's the circuit.

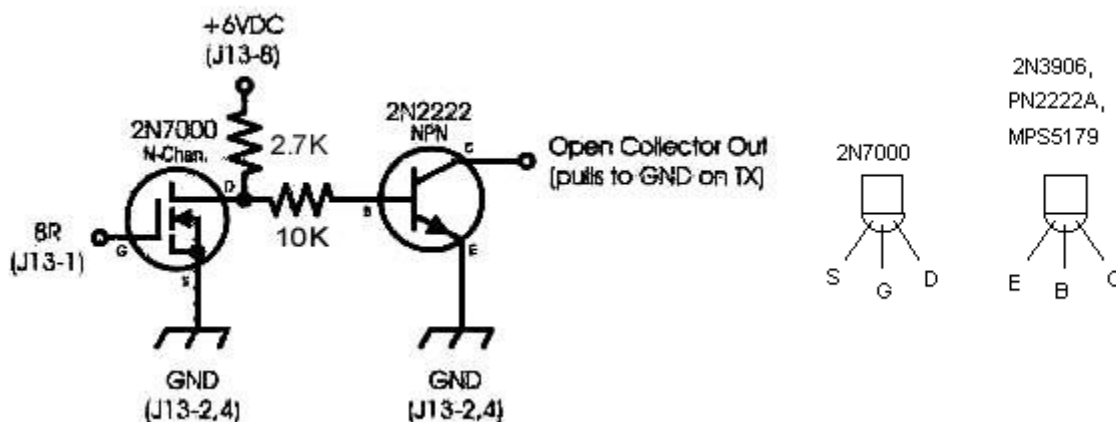
1 ea 2N7000

1 ea 2N2222A (PN2222A, 2N2222, 2N3904, or other NPN transistors are OK too.)

1 ea 10K 1/4 W

1 ea 2K 1/4W (1.5 to 2.7K OK)

Resistor values can be +/- 50% as per junk box availability.



Schematic drawing courtesy of Tom, NOSS

This circuit is designed for amplifiers that pull up to 5 to 12V on their keying input jack. Higher voltages should use this circuit to key a relay which in turn key's the amplifier. You can add a small relay running to 6V on the collector of the 2N2222A if you need to key an older amp. Make sure to also put a diode from the collector of the 2N2222A to ground (anode side to ground) to protect the transistor from negative pulses from the relay coil.

If you don't have a 2N7000, you can substitute another 2N2222 for it with a 10K resistor in series with 8R to its base.)

If you find you have RF getting into the keying circuit you can add a 0.01uF capacitor from the collector of the 2N2222A to ground. (This was not necessary in our testing)

This circuit works great keying Eric's Alpha 87A. The K2 drives it to 500W on all bands! (Yes, we know, it's **not** QRP..) It's so silent that you won't know it's in line unless you look at the wattmeter. (No relays in the 87A.)