Interface circuits for the FT817

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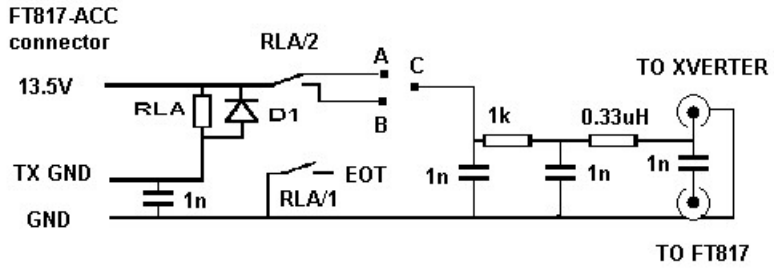
After getting enquiries after the mention in the RSGB microwave newsletter about how to interface the Yaesu FT817 here are 2 circuits I use.

Interfacing to a transverter

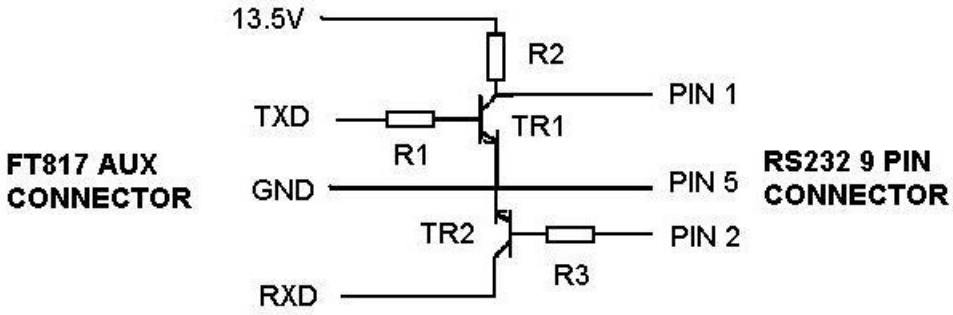


For IC202 connect points A and C
For IC402/FT290 connect points B and C

This unit simulates either an IC202 (9V on RX) or IC402/FT290 (9V on TX). . I used a very minature relay (the antenna changeover relay from a Pye PF2UH!), mounting the components in a small diecast box with a miniature 6 pin DIN socket for the FT817 connections. I then have a lead from the accessory socket of the FT817 to the interface box. The advantage of this is that I can use the same box with a minature 6 pin din to 13 pin din lead and use it to interface with an IC706mkIIG. The box also produces a ground on transmit signal on a 3.5mm socket to control other circuits. When the unit is completed make doubly sure there are no shorts on the 13.8V pin, as measured at the minature 8 pin din aux plug that goes into the FT817, unless you have 40/40 vision and would like to learn how to remove the main FT817 PCB to replace an 0604 chip resistor! *If you are worried about this possibility, provide the 13.5V from a supply external to the 817.*

Computer Interfacing

Loading the memories of the FT817 before a contest was a pain, until I discovered the FT817 commander software by Simon Brown HB9DRV (ex GD4ELI). (http://www.hb9drv.ch). All I needed was a cheaper RS232 inerface than the Yaesu CT62. I came across a circuit of Russian origin that only required 2 NPN transistors and 3 resistors arranged as follows



The transistor types aren't critical, I just had some 2N3904 around. R1=R3 =39k, R2=3k9. I built mine easily into the 9-pin RS232 connector using 1/8W resistors with a lead connecting to the FT817 auxiliary connector.

Other Notes:

Be aware that even with the FT817 turned off there is still 13.5V on the aux connector 13.5V pin, don't leave accessories plugged into the aux socket when running off batteries or they will flatten. For those worried about conserving every last mA of battery drain see the KA7OEI web site http://www.ussc.com/~turner/ft817pg.shtml where the matter is thoroughly investigated, along with lots of other related topics.
My radio bought in the USA was supplied with a ferrite choke but nothing to say why (my addendum sheet was missing). I soon discovered why whilst using it for talkback with W5LUA on 432.1MHz SSB. RF gets into it and it is so distorted as to be unreadable. It doesn't matter if you are using the helical antenna on the front panel or back panel, same effect. I couldn't repeat the effect on any other band/mode, even the HF bands with the ATX whip. Putting the choke on the external power lead close to the power connector cured it on the Yaesu supplied DC power chord. Interestingly when powering the radio off an external G3TUX power adaptor (http://www.g3tux.co.uk/) the same ferrite choke doesn't cure it. Having got tired of having to remove the radio from its leather case every time I wanted to plug in his adaptor (because it has a right angled plug which wont fit easily through the hole) I chopped it off and fitted a straight plug with a 100pF chip capacitor soldered across it and that fixed the problem.