MOD. FOR THE A.T.5

TANK-TAPPING FOR BETTER TWO-BAND WORKING

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THE CODAR AT5 is an excellent little transmitter for Top Band and 80-metre CW/AM working and does when adjusted in conjunction with a good ATU emit surprisingly potent signals of good quality. The VFO runs at the same frequency on both bands but when the bandswitch is placed for Eighty an additional coil, associated with the EF80 buffer/double stage, is brought into circuit—*see* Fig. 1. The tank coil, L4, is not usually switched and it is thus necessary to be careful when tuning up to select the correct anode current dip for the band required since two dips may be found over the "Tune" range.

Not particularly liking this compromise two-band tank system, the AT5 was carefully examined whereupon it was soon found possible to modify the rig to make the PA coil switchable for 80m. simultaneously with the buffer/doubler switching.

The AT5 bandswitch was found to be an SPST slide-type and inspection revealed it possible to substitute a physically identical DPDT item.

The modification—which in no way cannibalises the transmitter—allows one section of the new switch to actuate the EF80 doubler coil L3, as before, the other section controlling the tank circuit.

Mechanical Points

The mechanical problems were most simply overcome by adopting the following logical procedure, enabling the transmitter to be back on the air in less than an hour.

The four plastic feet were first removed and the outer case withdrawn. The VFO tuning capacitor was then rotated until the vanes were fully enmeshed, whereupon a fine pencil mark was made on the VFO dial as an aid to subsequent correct replacements. With the "Tune" and "Load" controls set fully anti-clockwise grub screws and knobs can be removed. The two grub screws on the VFO epicyclic drive are also loosened.

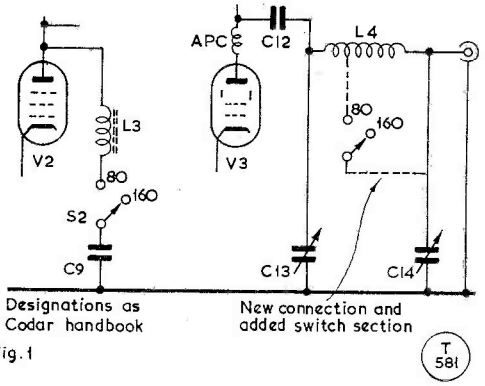

Fig. 1

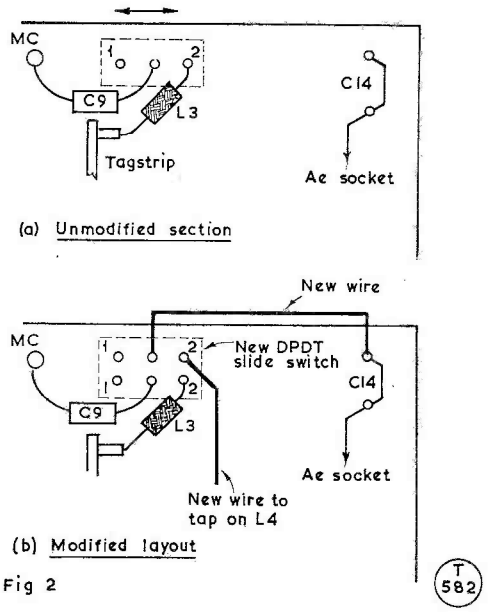

Fig 2

By removing the four self-tapping screws from the underside of the base-plate the chassis can be gently withdrawn about an inch from the panel, after which the red and blue meter leads are taken off by extracting the appropriate screws.

The main chassis, held now to the panel only by the leads to the neon, can then be turned upside down.

Replacement of the existing bandswitch with a miniature DPDT slide-type from the *Eagle* range was found to be but a simple wiring job—though use of a heat shunt when dealing with the miniature ferrite-cored 80-metre coil is recommended. Wiring changes are indicated in Fig. 2, above.

Tapping the PA coil centrally on top of the chassis to accept the new lead from the switch needs to be done carefully lest the coil be damaged. After a little thought this was neatly accomplished by first inserting a $\frac{1}{4}$-in. wide strip of card through the coil on either side of the winding to be tapped. The single turn displayed between the card sections was then filed clean and a good connection made using an iron with a pencil bit. When the joint cooled off the card was pulled out slightly and the parts blackened by the iron snipped off, the remainder being left *in situ*.

Re-assembly is of course merely a reversal of the dismantling procedure—although before refitting the outer case the VFO dial should be correctly set frequency-wise after a warming up period against the station receiver, in conjunction with a crystal calibrator.

Subsequent dummy load and on-the-air tests then proved the worth of this simple modification, which leaves the transmitter looking exactly as it did before!