

the insulation.

T5 is tapped, and wound using 13cm of wire for the 6 turns, and 5 cm for the 2 turns, the join being the tap. Likewise, the primary can have slightly longer leads than the secondary for identification.

Solder both into place.

7. Insert and solder Q28, with a ferrite bead on the gate lead. The gate earth connection is made via C98 which is soldered to the pcb on both sides at one end.

8. Finally, insert and solder the 10 inductors, checking the identification of the screened transformers before insertion (there is no need to solder the cans to the top foil). Then insert and solder the crystals, with the bodies resting against the pcb — do not attempt to solder the cans to the pcb.

Alignment

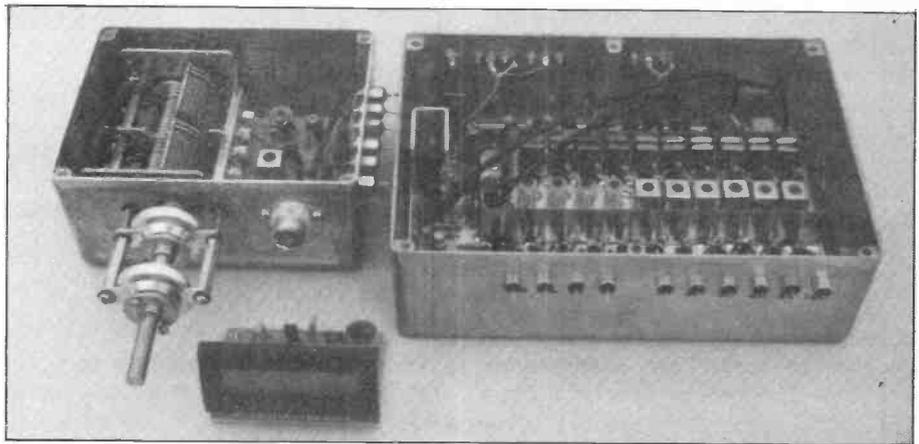
Now check the operation of the oscillators as follows:

1. Apply +12v to the main board terminal and to one of the oscillator pins on the VCO side of the screen (we suggest you start with 160M (11.2MHz) and work down).

2. Using the correct trim tool (kit builders will have the tools required supplied) adjust the core of the inductor for maximum RF output from T4 (at the terminal pin) using your diode probe. Switch the supply on and off to check for reliable oscillation — if the oscillator does not restart adjust the core slightly until it does.

If you check the output frequency, it should be within a kHz or two of nominal — the exact frequency is not important as the Digital Readout will compensate for any offset.

If any circuits refuse to



oscillate, look for component errors (if most of them do work), and check dc voltages. If none work, make sure you wound and connected up the transformer's correctly, and then look at the circuit around Q28 for errors.

VCO's

Next the VCO circuits are assembled as far as the bifilar transformer,

T2. If you are going to use all bands eventually it is important that ALL the PIN diode circuits are in place as the VCO frequency coverages are affected by their presence, and it is difficult to allow for this after assembly.

1. Insert and solder R's 13-22 (2k2) — keep the leads short so that the earthy end is just near the screen. Then R's 23-32 (220R — bodies in the positions shown),

