



Standard C58 block diagram

considering a piece of equipment is the handbook. The 64 page A5 size manual supplied with the FT290R was invaluable. Printed in black and white on glossy paper, it includes many photographs and illustrations with a clear description of the user functions. Page 24 contains a very useful if rather small block diagram of the internal workings — backed by a full description of the receive transmit, and PLL circuitry as well as a comprehensive measurement and alignment section. The type and make of recommended test equipment is also mentioned — strangely enough it's either Yaesu or Hewlett-Packard!

Clear photographs locate important adjustment points and individual board layouts. The handbook concludes with a complete list of components and parts included in the rig. A loose leaf circuit diagram opens out and looks typically 'Yaesu' with eye strain developing when trying to follow one in a group of parallel lines. Labelling of these is barely sufficient as not all lines are labelled at both ends. Test voltages at given points are not included on the diagram. It must be said that Yaesu has incorporated a vast number of facilities into the FT290R, many of which are not present on much more expensive pieces of equipment. Having said this, there are several modifications needed to justify the initial outlay in my opinion. After all

what is the point of spending £250 on a piece of equipment if it can be so easily improved? A few design changes would not go amiss.

### Standard C58

The other two metre portable multi-mode on the market is the Standard C58. The range of equipment from Standard is increasing rapidly with new designs being produced all the time. First impressions of the rig are that it is considerably smaller than the Yaesu being 55(h) 141(w) and 214(d)mm weighing in at just 1.44kg complete with batteries. Although seeming perhaps to lack a number of features present on the FT290 such as that second VFO, 10 memories and split working facilities, there are more essential facilities on the C58 such as superior RIT, reverse repeater working option, and tone burst facility from the mic. More about these features . . .

### Positive assets

Two buttons control the mode of operation — one selects USB/CW/LSB/FM, the other for simplex, repeater and reverse repeater working. Having two buttons can cause problems as you have to remember to select 'simplex' when working sideband, otherwise the

repeater shifts remains operative.

Standard like many other manufacturers save space on the front panel by using one switch position for many function controls. Volume and squelch levels and the noise blanker (ssb only) are all on the same spindle — make sure the right part is adjusted!!

Tuning is achieved by turning a rather nasty VFO control knob — very stiff in operation with an unpleasant feel; leaving a rubbery deposit on the fingers, it is not at all comfortable to use. Perhaps removing the ratchet would help here. An interesting control is that labelled 'MHz' and is one of a group of eight similar metal buttons. Selecting a 1 MHz sequence in the frequency bands 144, 145, 146 and 147 MHz, saves on rapid turning of the tuning knob. The feature is a virtual necessity since the C58 has just one VFO.

### Operation

I never really grasped the memory operation properly, or at least if I did it did not live up to expectation. There are five independent memories, although access is strictly sequential. The memories store not only a frequency but also a mode of operation and a frequency stepping interval. Before data can be stored, the appropriate memory must first be recalled, thus