



Yaesu FT290R block diagram

appearance and value.

An external speaker jack (3.5mm) is located on the side of the rig and when in use cuts the internal speaker. This internal speaker tended to produce generally good audio if lacking in 'top', and coped with high audio output levels well. A very useful feature is the 'Stand By' jack which is hard wired as a parallel PTT line and may be used in conjunction with attached linear amplifiers to prevent them dropping out of transmit due to a lack of RF. This socket would also allow the use of an independent PTT such as a footswitch.

The bottom plate of the FT290R is removed by undoing a latch. This plate conceals the battery compartment as well as internal switches. The first, labelled "T Squelch", is unused on British models — although it can be utilised for a reverse repeater modification (see later). The second internal switch selects the VFO and memory scanning to halt on either clear or occupied frequencies, while a third position gives totally manual scanning. It is a pity that this switch is not easily accessible. A better idea might have been to have utilised the spare position on the memory select control (there are two identical settings) and thus give front panel operation of this facility. One certain plus about the 290 over some equipment is the main tuning knob. This is very smooth in operation giving a positive response with ratchet positions to aid the operator.

Operation

Repeater operation is simply a

matter of dialling the repeater output frequency in any of the FM positions and then selecting the negative shift to move the transmit frequency down by 600kHz. The display will show the transmit frequency when the PTT or tone burst keys are activated. Having established a repeater contact it is not possible to listen on the input frequency without either dialling down on the VFO or storing all the repeater inputs in the memory channels. It is however possible, providing that the second VFO is on a frequency below 144.600, to press the PTT & VFO control button simultaneously to hear the input frequency. An 'E' will appear on the display as the rig is out of range and hence will not transmit despite the PTT being pressed.

Reports through local repeaters were favourable; even the fussy ones didn't give deviation pips, and it was very easy to use as a portable unit with the shoulder strap supplied as well as in the car without the mounting bracket. Similarly simplex contacts indicated good audio. When a linear was used, however, there were reports of the 290 'hooting' slightly despite efforts to prevent this. This could be due to RF feedback into the audio circuitry.

Sideband operation from my location has never been easy despite lots of time and money on a reasonable antenna set-up. The majority of SSB signals seemed to be lost in the noise and I turned to a 9dB pre-amp which improved matters considerably. I suspect that, because of the vast difference the pre-amp made, the sensitivity of the rig could perhaps have been a little better. I

was told by local stations that there were 'DX' stations responding to my calls although I could not receive them. A much advertised addition to the FT290R is to replace the Q1001 front end MOSFET with a 3SK88. During these tests I recalled various FM and SSB frequencies from the ten memories only to find that I couldn't re-tune away from them by using the VFO tuning. The memory recall facility allows direct access to any one memory using a memory select control located on the front panel. The clarifier facility allows independent receive tuning but only in 100Hz steps up to 10Hz either side of the VFO frequency, and sideband signals could not always be properly resolved. One word of warning is that the 'micro' seems to be easily confused. For instance if whilst in transmit power is lost and restored, the transmit LED remains alight and the meter suggests that transmission continues but in fact there is no RF produced. To re-set the machine the rig must be turned off and then on by its switch. A similar condition occurs when replacing the internal batteries after either servicing or replacement. After replacement the internal memory back up switch and then the on-off switch must be switched. There exists on the 290 very versatile scanning facilities, controlled from the microphone unit and selectable to stop for a few seconds before continuing to scan on either a busy or clear frequency. Total manual scanning can also be achieved.

Documentation

A very important aspect when