



'skip' second function, and finally a 1750Hz repeater access tone key. Again all these key functions are illuminated for night time use, and to aid location a series of small individually lit segments illuminate the keys themselves.

On The Air

Placing the set in operation from the shack, coupled to a rooftop colinear and powered from a hefty external AC power supply, proved the set to be quite a capable performer with its high output power. Distant repeaters were easily workable, and quite good audio reports were received on the transmission quality. On receive, audio from the small speaker positioned at the top of the case seemed rather on the 'topy' side, but was quite readable. With the speaker in this position, it was possible to lay the set down flat on a shelf rather than needing to allow space beneath the set as is the case with many sets having the speaker pointing downwards.

For general communication, I did find a slight limitation in the number of memory channels, but it was possible to program all the repeater channels plus a few locally-used simplex channels into the available memory channels. In use, to avoid a lot of repeater shift switching, I programmed the repeater channels RO-R7 into the memory channels, together with S20 and the programmed VFO scan limits, and used a combination of VFO/Memory switching operation instead.

Testing the set on 2m packet radio connected to my TNC and computer, showed that it communicated well with the local Network Nodes, a TXDelay of less than 100mS being used showing the set had a fast switching time. I did however notice a bit of distortion from the receiver on well deviated stations, suggesting a

narrow receiver bandwidth in the set. Testing this further on speech channels showed the set to have very good rejection of signals when tuned 12.5kHz off frequency, this of course being useful in areas where 12.5kHz channelling is used.

Mobile Use

Once the required memories for my local area had been programmed, I installed the set in my car; due to the set's small size and speaker position it was possible to place it on top of the dashboard on the centre shelf position, the set's display and controls then being at eye level to reduce the amount of eye travel distance needed while operating on the move. An added advantage of this mounting position was a good sound reflection from the speaker in my direction due to the angled windscreen, and even when driving at high speed I didn't feel the need for an external speaker.

The set's control illumination at night was excellent, the frequency display itself being very easy indeed to read without causing excessive glare. Locating the VFO/M switch along the keyboard row was reasonably easy, but I would still have preferred mobile operation by just using the main tuning knob or the up/down microphone buttons. The 1750Hz tone button was very easily located though, this being at the extreme right of the key row next to the microphone socket, but again I would really have preferred this duplicated on the microphone itself as with the majority of other sets.

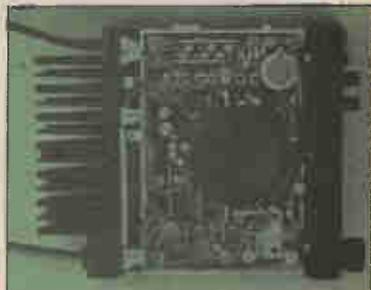
While operating mobile in fringe areas, I found the high output power to be very useful in achieving 'solid copy' of my signals at the other end, although I sometimes had a bit of difficulty receiving one or two distant stations. Due to this few dB 'extra' power over the usual 25W, replacing my usual $\frac{1}{4}$ or $\frac{1}{2}$ whip with one of the

tiny 25cm long affairs still allowed good coverage to be obtained while keeping a low profile. This also allowed me to use multi-storey car parks without the need for an aerial tilt-over job each time!

When using the set for long mobile QSOs throughout the hot summer weeks, the set's large heat-sink became quite warm but never too hot to worry about, although I was careful to avoid placing the rig in a confined position. The S-meter often read full scale on moderate strength signals, with weak but perfectly readable signals giving no indication, but this is often the case with FM-only sets, and I've often come to the conclusion that today's S-meters are little more than a relative indication.

Inside The Box

Opening the set up shows a solid die-cast chassis has been used, this being far better in standing up to mobile operating conditions of heat and vibration than the common bent-in chassis used for many sets nowadays. Several small 'daughter' boards are fitted to a main RF 'mother' board, surface mounted



components being used to improve reliability. The large block transmitter power amplifier is bolted directly onto the rear heatsink, the delicate control circuits being fitted at the opposite end of the chassis on a separate pcb surrounded by the front panel moulding. A very high standard of construction has been used, the accuracy of component placing suggesting that many of the pcbs have been assembled by machine rather than by human beings!

Laboratory Tests

The receiver sensitivity seemed fairly reasonable, not poor by any