

increasing. The presence of QRM or QRN also pushed up the error rate. This phenomena is very much less apparent on RTTY — there is always a tone for the unit to refer to on RTTY. But on CW, no equivalent to the Space tone, so any form of interference during the key up times is likely to be decoded as part of the signal.

RTTY

As mentioned earlier, all RTTY QSO's were conducted using an electronic key as the input to the MBA-RC, rather than any keyboard as such. The unit will accept an ASCII keyboard input, use of a micro via an RS-232C, or a standard teletype, and can use any of these to output CW as well as RTTY, of course.

Using the key as input is obviously somewhat slower than a true keyboard, but it does have the same end results. Keying accuracy is essential, as the same circuitry is used as for decoding on receive. The input code can be seen on the alphanumeric display as it is being

sent, which helps a great deal — also hard copy can be kept on a printer. Mind you, unless you already possess such a printer, you are unlikely to want to fork out £300+ for one for this purpose only.

The CW speed input is immaterial (the MBA will cope with up to 80 wpm+ in either transmit or receive modes), automatically adjusting to the speed. Very few people will be able to key sufficiently fast to keep up with RTTY output (60 wpm). Judging by the average typing speed of amateurs, this isn't a problem! In practice you may actually do better.

Considering the facilities offered by the unit, it is a shame that no proper message storage facility exists, such as would be obtained using a dedicated micro program, enabling you pre-program in CQ's, QTH and equipment info etc. There is a 1024 character FIFO buffer, used when the output device is slower than the input, for instance when receiving 110 Baud ASCII, but outputting to a 45.5 Baud teletype unit, or converting to CW. Conceivably this could have been

used as an optional buffer for the purpose.

Tuning RTTY

The bargraph LED display is quite easy to use, once the technique of tuning is mastered. The trick is to start tuning across the signal at a low beat note, and gradually increase until the bargraph totally illuminates and does not flicker between mark and space. This is easy on 170Hz shift, but on other shifts entails tuning to the Mark tone first, then adjusting the variable control for closure of the display.

Copying RTTY

Given almost any sort of signal, the unit copes very well, even in the presence of QRM/QRN, returning virtually faultless copy. Signals fairly close to the noise can be recovered, but you do need a stable receiver (and received transmission) — a shift of a few 10s of Hz will introduce errors. The input filtering is via active filters, with no phase locked loops to keep hold of the frequency.

The display uses all sorts of strange characters to indicate such things as CR/LF, Bell and the other Baudot control codes. The Epson printer responded quite happily to

