reasonably sent code. With a few more years, I might learn to deal with the CW slang which permeates the low ends of the HF bands. Unfortunately, the morse decoder, like me, is not so equipped.

To put a dimension to the problem I spent at least three hours of one September day trying to record the perfect amateur CW QSO for this review. I failed. There wasn't one that I could photograph which did not have lots of blemishes. The problem was almost entirely due to rotten sending and had very little to do with QRM, QRN and QSB. However the moment I tuned to a commercial CW station, it worked perfectly.

Operating the device is easy. You simply hook the AF input on the unit to the external speaker on the associated receiver, connect the RF output — you can purchase the unit with a baseband video output — to a domestic TV set tuned to channel 36, connect the power leads to a 12V supply and you are in business to receive either CW or RTTY.

The operating mode is set by a front panel switch. There are a pair of push buttons (upshift of space, letters/figures) pertinent to RTTY reception. The machine will display the current page while storing the previous one and a reset button scrubs the display file and sets the cursor to the top left hand corner of the screen.

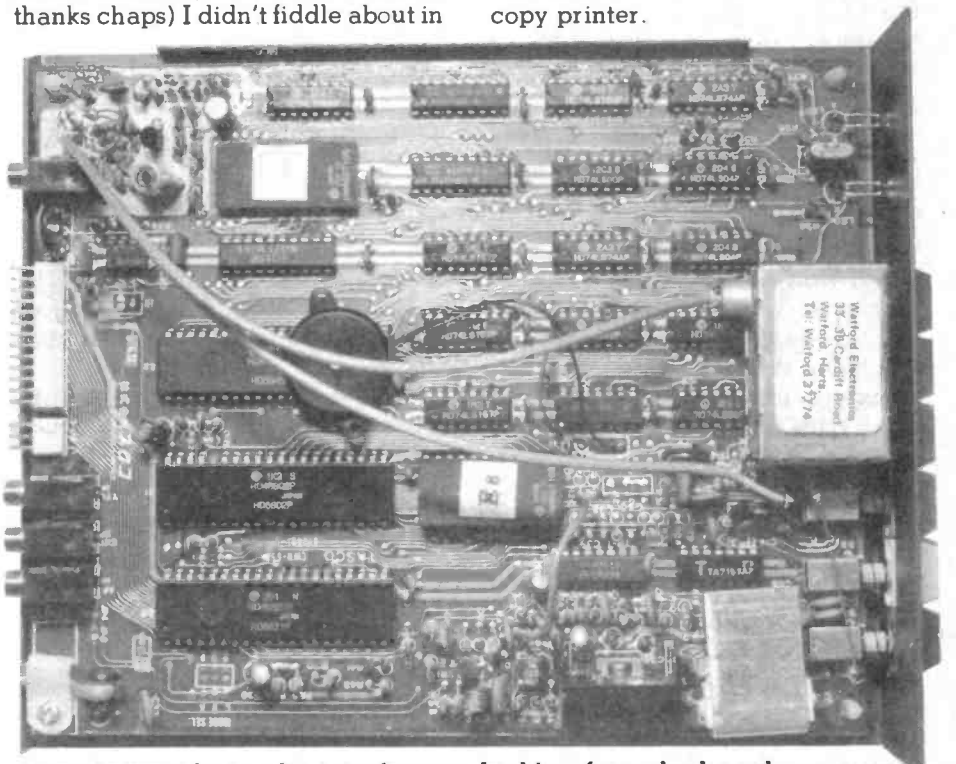
Incoming CW or RTTY lights a monitor LED and sounds a mimic buzzer inside the unit. The two between them tell the user when the pitch of the input signal is sufficiently close to the required 800 Hz to be correctly demodulated.

The handling of CW is relatively easy, the only critical adjustment being the tuning of the receiver or transceiver. It is not quite so straightforward for RTTY.

As set by the factory, the unit will only work with RTTY of 45.5 bauds. This is the amateur standard. Most other traffic is centred on 50 bauds, not much different but enough to throw the decoding circuitry. The manual supplied with the machine gives details of the internal adjustments required to alter the baud rate. The procedure seems straightforward. However, since the review unit belonged to Amateur Radio Exchange of Acton (many thanks chaps) I didn't fiddle about in an attempt to change the baud rate.

It handles RTTY very well. It decodes correctly down to signal strength S3 or less. The main tuning is rather fiddly, perhaps the only shortcoming as an RTTY decoder. This is because the input circuitry handles RTTY in the same way as CW — unlike dedicated RTTY decoders there is no PLL tracking of the frequency shift keying. The moment the carrier shifts away from the 800Hz tone, the unit sees a mark whether the shift be 170 Hz (amateur) or much more.

The unit has a Centronics interface connector on the back for those with about £300 to spend on a hard copy printer.



It works well but radio interference leaking from the board can cause problems.