CWR600 REVIEW

I went to one of those schools which taught Latin. I realised that lessons in the dead language, at least from a practical view, were a complete waste of time but I put myself through the hoop to gain the requisite 'O' level. Quite a few years have passed since then and I still haven't been able to justify the pains of my study. More to the point, I feel much the same about the Morse code.

I drove myself to spend a quarter of an hour per night, over a four month period listening to five character groups at progressively higher speeds until I had brainwashed myself sufficiently to persuade the likes of a Post Office radio officer that I wss indeed fit for the HF bands. The ordeal of the Morse test felt about as long as that last sentence. Anyway, I passed. "Your sending is a bit ropey but your receiving's OK" and, with that, the radio officer signed the form.

Ocassionally I attempt to struggle through Julius Caesar's 'Commentaries' written in his own tongue. I also take to the key with just about the same frequency. The principle use of the Latin exam these days is as a tool to keep the proletariat masses out of the Foreign Office. The principle use for the Morse test is to keep the proletariat masses off the overcrowded HF bands . . . Yes, I believe that you have to limit the numbers otherwise it's no fun for anyone. I say base the exam on practical radio equipment design or a subject at least half pertinent to amateur radio. Then people would have something to talk about once they have gained access to the airwaves . . .

Want somebody to take your morse test? This little box will for just £189.

By Frank Ogden
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Inhuman operators

All this sets the stage for a review of a device which is designed to take the chore out of a virtual anachronism. Actually, that's rather unfair to the CWR-600 since it also decodes RTTY transmissions extremely effectively. When the device is asked to deal with CW it behaves singularly like a human being: if it is given correctly spaced Morse, properly sent, it reproduces the code reasonably effectively. If the sending is bad with lots of 'swing' and running together of characters then it gets it wrong or gives up, just as a human operator would.

The device also has a finely tuned 'ear', in reality a phase locked loop input filter which enables the unit to differentiate a desired CW signal through the adjacent QRM. It is pretty good at this. It will ignore interfering signals of equal amplitude within a few tens of Hz of the wanted one. However, any fading on the desired signal in respect of the interfering one causes the decoder to trip up. The CWR-600 will decode good morse at the 12 wpm rate down to about S2 signal strength. This is through a standard 2.4 kHz filter in the associated receiver. There was little or no advantage to be gained by dropping the bandwidth to 250 Hz on the receiver because the PLL input filter has a far narrower acceptance band. With the receiver's 250 Hz filter thrown in weak signal performance was marginally improved, perhaps down to S1, but low level interference spikes were drawn out causing E's to appear all over the place while throwing the speed sensing circuitry. The unit is commendably insensitive to interference spikes when used with an SSB filter. The higher the morse speed, the higher the signal strength required to decode the signal correctly. At speeds around the 30 wpm mark the input signal has to be at least S6 to S8 and of perfect morse formation.

Ropey Morse

All the forgoing assumes that the unit is used with a textbook morse signal. Unfortunately there are very few of these on the amateur bands. The plain fact is that the average amateur CW operator sends virtually unreadable morse unless he is using a fully automatic keyer. The algorithm used by the decoding programme should be adequate to deal with reasonable aberrations from standard CW but most hand keyed amateur CW represents an unreasonable — and unreadable — aberration. Generally I found that there was a very good correlation between what the machine could decipher and what I could. OK, I grant that I am not a particulary experienced or willing CW merchant but I can copy