Watkins-Johnson 8711A

Many readers will know the Watkins-Johnson 8711 as the professional precursor of the consumer-market HF-1000 introduced in 1993 and discontinued in 1999 when the company's telecommunications group was sold. BBC Monitoring at Caversham was for many years a large-scale user of Racal receivers but in the 1990s it changed to Watkins-Johnson, initially using the 8718 and then acquiring the 8711. Although HF listening is nowadays a tiny part of Caversham's task, there are still some 8711As in service. The 8711A was a later variant with slightly different hardware (notably a different DSP IC) and some other changes to improve performance and address issues such as extremely harsh audio quality and a susceptibility to internally generated noise. Both receivers cover 5kHz-30MHz and handle AM, synchronous AM, ISB, USB, LSB, CW and FM. There are 100 memory channels and a versatile scanning facility. An optional sub-octave preselector is available and the BBC's experience was that this was useful if the receiver was used in conjunction with some of its larger antennas.

Visually the 8711A is impressive although it must be one of the lightest high-grade receivers ever made; the internal switching-regulator power supply was one of the first of its type to be used in a professional HF receiver and is both very lightweight in comparison with a conventional linear supply and more efficient and cool-running. Intended for mounting in a standard 19in rack, the front panel is dominated by the large and clear LED frequency display (reading to 1Hz) and the tuning knob and keypad beneath it. The 'feel' of the tuning is pleasant and positive. Unlike some later DSP receivers with continuously variable filters, the 8711A has 66 discrete IF bandwidths ranging from 56 Hz to 16kHz. Initially this facility seems a little unusual, principally because not all of them are available to each mode; each has 'factory defaults' which may be easily changed if desired, although in practice they are quite well chosen. For use with teletype and other data modes the BFO frequency is adjustable in 10Hz increments. There is also a notch filter and adjustable noise blanker. The latter is simply superb and in our experience capable of dealing with practically any source of extraneous noise if it is correctly used.

The manufacturer's claimed performance is on a par with that of other receivers in its class, notably a +30dBm IPI_3 and very tightly defined IF filter shape factors. In use, an 8711A certainly sounds very clean and capable even when driven from a large antenna. The synchronous detector seems to work quite well although there have been reports that in earlier receivers it loses lock rather more easily than might be expected. Later firmware releases apparently addressed this issue with a degree of success, and in fact the 8711A saw several revisions and improvements to both hardware and firmware during its production lifetime.

Neither the 8711 and 8711A nor the HF-1000 derivative are particularly rare but they continue to command quite high prices. If you must have a Watkins-Johnson receiver in your collection but would prefer to pay rather less, the earlier 8718 is also something of a classic.

depends on whether you have the ability to maintain it yourself or know someone who can; many classic receivers of the period are complex and documentation is not always easily available. Some of them also lack modern features and functionality. But for receivers with external 455kHz IF outputs, the addition of a suitable 12kHz down-converter can bring DRM and the benefits of DSP together with noise reduction, notch filtering and so on.

But we repeat last years' word of warning; you may become so attached to the combination of wonderful ergonomics and superb performance that one may not be enough.