SUBJECTIVE TESTS AND ERGONOMICS: The tuning mechanism is one of the best that I have encountered and I could barely hear the 10Hz steps as they have less glitching than usual for a synthesiser. The front panel is uncluttered and only the more important facilities are included, which is an advantage in many ways, as it improves the ergonomics. All the functions work superbly well and the reproduced quality was excellent although the internal speaker was rather inefficient. Particularly noticeable was the clean sound across the lf bands, which is unusual for a synthesiser rig. Some breakthrough from mw was, however, noted on the 1.8MHz band if an atu was not used. The antenna attenuator is particularly useful and both sensitivity and selectivity seemed very good.

The tx compressor worked well and transmitted quality received considerable praise from many stations. The notch filter was not quite deep enough although it was quite effective. The interfacing possibilities are very extensive and these all worked well. I must particularly commend the superb internal modular construction and layout which is amongst the neatest noted. The rig was extremely reliable. The frequency readout facilities and vfo functions are all excellent and it was useful that you could store mode in memory and change it after reaccess. Although there is no normal rit, the facility of using vfo A for this is quite reasonable, especially as you can see the difference between A and B on the display. I liked the sound of this rig a lot.

LABORATORY TESTS: The rf sensitivity measured very well on all bands. The rf intercept point measured reasonably well but could, of course, be improved with the attenuator, thus allowing the window to be placed where you want it. Reciprocal mixing measured extremely well moderately close in but became just fairly good very close to the carrier. Way out, it was so good that it showed up a synthesiser spurii every 50kHz but well below -96dB!

Selectivity measured very well down to -60dB but the skirt opened out considerably below this. The S meter was very sensitive and offered a 36dB range between S1 and 9; higher levels were rather optimistic. The agc threshold was at a very low level, thus all signals will give very similar audio output levels which is excellent, agc fast being around 0.4 secs for recovery and slow around 2 secs, reasonable compromises. Product detector distortion was adequate but bettered by quite a few rigs, whilst output power was also just adequate. Frequency accuracy was reasonably good and drift was minimal.

The tx output power could be varied from very low levels to around 90W at lf but up to around 110W at hf. Harmonics and spurious outputs were normally well down, but the second harmonic of 14.2MHz was a little high at -42dB. Carrier and sideband rejections were both very good. The transmitted audio passband fell very steeply below 475Hz and above 2.7kHz. For general use I would have preferred a little more lf but its characteristic gave tremendous punch, especially when the compressor was used, which helps dx reception. Transmit accuracy was particularly good, cw being only 10Hz out.

CONCLUSIONS: This rig clearly performed very well indeed, and it did not seem to have any particular snags either in performance or ergonomics. Its superb construction and layout are obviously strong points in its favour. The reciprocal mixing performance is clearly better than that of most other synthesised rigs, although one with an analogue vfo is clearly superior close in to the wanted frequency.

At the time of writing the JST100 has become comparatively more competitive and thus recommendable as a basic hf transceiver having just ssb, cw and rtty. It is almost in a class of its own, perhaps its