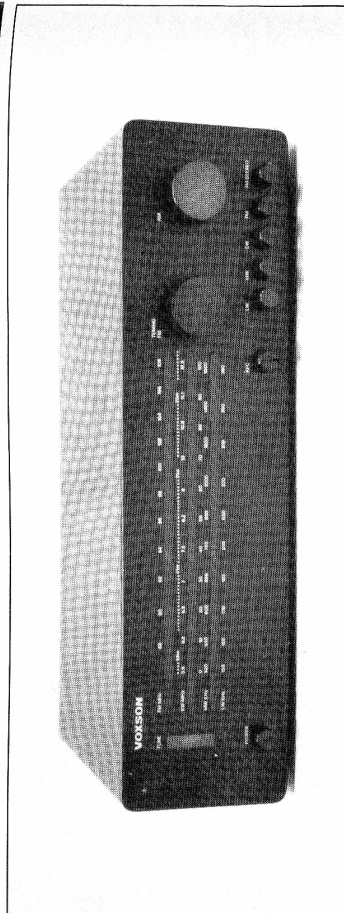


Voxson R-303

The Centre of Sound, 120 Notting Hill Gate, London W.11.



Voxson equipment was originally manufactured for EMI. The situation now, however, is that the entire stock has been acquired by The Centre of Sound, 120 Notting Hill Gate, London, W11 — the exclusive and only seller. Because we were informed by the firm that the R-303 would continue to be available into 1978, that spares are being retained for this and other items of the Voxson range, and that each item is being sold with a two-year free-parts-and-labour guarantee, we decided to include the tuner in this book.

It is an interesting tuner because it includes long, medium and short wavebands and separate tuning mechanisms for FM and AM. It is also well constructed and completely shrouded in black-anodized brushed-aluminium, including the fascia. Four metal bolts release the enclosure to expose both the upper and lower sides of the printed circuit board, thereby facilitating servicing. The components are also identified.

The two tuning scales are formed by cut-outs along the length of the fascia, on which the FM and AM frequencies are printed in white. The cursor of the band selected glows softly through the slots against engraved tuning lines.

Although small flywheels are used in the mechanisms, it is not possible to spin the tuning over the band. Nevertheless, the tuning action is precise, but having minimal readout accuracy. Mid-band tuning error of the sample was also fairly large. IEC-type sockets are used for FM and AM aerials, but for LW and MW a rear swivel type ferrite rod aerial gathers a fair amount of signal. An external aerial, of course, is required for SW reception. Although it is possible to connect 75-ohm coaxial cable to the IEC FM aerial socket, the best results call for a

balun transformer. These are not very expensive, and such a device was used for our lab measurements and listening tests.

Bearing in mind the selling price of the tuner and the quality of construction with the three AM bands, the performance was not too bad in real terms. Absolute FM sensitivity was good, as also were the 50dB signal-to-noise ratio sensitivities. A shortfall was the limiting action, which was rather late in arriving at full effect. The stereo 1mV signal-to-noise ratio could have been better; but the mono ratio was all right.

Front-end performance was consistent with a design using two variable-tuned circuits between aerial and mixer, and with the rather poor third-order IM performance, the tuner cannot be recommended for long-range DX activities. Alternate channel selectivity can only be classified as fair, and the signal meter dynamic range was not very large. There is no FM tuning meter, but there is switchable afc. The idea, then is to tune roughly using the signal meter with the afc off, and then switch the afc on to correct mild tuning error. The pull-in range of the afc was substantial.

The audio section failed to gain a very high relative ranking owing to the fairly high distortion, undulation in frequency response and poorish stereo separation. However, we would stress that the distortion was reduced and the separation increased by slightly detuning from the optimum provided by the afc.

The designers have achieved a good pilot tone rejection ratio (at the expense of upper-frequency response accuracy), but less rejection at the sub-carrier frequency. In troublesome areas birdsies interference could cause problems.

AM performance was around average or, perhaps, a little above. Fewer whistles were detected than on some models. The SW sensitivity seemed extra good, but one of two image responses were detected with an external aerial.

FM quality was not up to the standard achieved by some of the more expensive models with fewer AM bands. The fall in treble response tended to take the edge off upper-frequency transient information; but using system and off-air signals of average modulation level, the distortion was not distressing. The level of the breakthrough distortion referred to the speaking channel signal was round 0.5% (at full modulation), which is not bad.

In summary, a tuner suitable for non-difficult reception areas, and one which would probably satisfy the enthusiast requiring three AM wavebands.

Voxson R-303

Mono 1kHz ± 22.5 kHz dev. worst ch.	0.18
2nd harmonic (%)	noise
3rd harmonic (%)	noise
4th harmonic (%)	noise
Total on breakthrough signal (%)	17.8
Response 15kHz worst ch. (dB)	-10
Response 20kHz worst ch. (dB)	-8
Stereo separation 1kHz (dB)	32**
Stereo separation 10kHz (dB)	23**
Birdies suppression (dB)	60
Dimensions (W x H x D) (mm)	385 x 105 x 203
Typical selling price (£)	£90.00***

Additional information/comment:

*Also DIN output.

**Better with slight detuning.

***Available only from The Centre of Sound, 120 Notting Hill Gate, London W11.

Features include LW, MW & SW with rear, encapsulated swivel ferrite rod aerial; separate tuning mechanisms for FM and AM bands; 'phono' & DIN outputs; rear level presets; switchable afc; signal meter; 300-ohm aerial input only.

VHF Section	
Sensitivity 30dB S/N CCIR mono (μ V)	1.6
Sensitivity 50dB S/N CCIR mono (μ V)	4
Sensitivity 50dB S/N CCIR stereo (μ V)	35
S/N CCIR mono 1mV av. (dB)	72
S/N CCIR stereo 1mV av. (dB)	67
Limiting -1dB (μ V)	10
Front-End Performance	
3rd-order RF IM av. (dB)	61
Rept. spot (dB)	32
Eq. select. figure-of-merit (dB)	76
Capture ratio (dB)	3
Select. ± 400 kHz av. (dB)	40
Select. ± 200 kHz av. (dB)	4
Muting threshold (μ V)	2 (stereo thresh.)
Sig. meter saturation (μ V)	250
Tuning error 95MHz (kHz)	± 160

Audio Section	
Output ± 67.5 kHz dev. L-ch. (mV)	958 (max)*
Output ± 67.5 kHz dev. R-ch. (mV)	903 (max)*
AM rejection 1mV (dB)	51
Pilot tone suppression ref. ± 67.5 kHz dev. (dB)	66
Sub-ch. spurious ref. ± 67.5 kHz (dB)	45
Hum ref. ± 67.5 kHz (dB)	70

Distortion	
Stereo 1kHz ± 67.5 kHz dev. worst ch.	
2nd harmonic (%)	0.35
3rd harmonic (%)	0.56
4th harmonic (%)	noise
L+R 1kHz ± 67.5 kHz dev. worst ch.	
2nd harmonic (%)	0.35
3rd harmonic (%)	0.5
4th harmonic (%)	noise
L-R 1kHz ± 67.5 kHz dev. worst ch.	
2nd harmonic (%)	0.13
3rd harmonic (%)	0.8
4th harmonic (%)	noise
Mono 1kHz ± 67.5 kHz dev. worst ch.	
2nd harmonic (%)	0.4
3rd harmonic (%)	0.6
4th harmonic (%)	noise

