

Neal 103



Based on the highly successful Model 102, this new unit from North East Audio Ltd, (a British company based in Newcastle) incorporates many of its features plus one or two additional facilities. It is classed as a 'transcription' unit, and as such is purely functional with no unnecessary extras or gimmicks. Indeed, its appearance could be described as austere compared with most (if not all) of those in this survey.

Apart from the teak end panels the entire machine is in black. The deck slopes up slightly to the rear with the cassette compartment in the middle. This compartment is simply an open recess and has no cover, although a dust cover is provided which fits over the whole deck when not in use.

The Wollensak heavy duty tape transport mechanism is employed, giving rise to an exceptionally low wow and flutter and very fast winding speed. The 'Cassette Guardian' disengages the drive in the event of a cassette jamming, and at the end of a tape. The play and stop controls are mechanically linked to the mains on/off switch such that the power comes on if the play control is pressed, and should the mains switch be put to off while a tape is running the stop control will operate.

The wind/rewind control is simply a lever which the user must hold in the appropriate directions while spooling takes place. A click-stop would have been preferred, leaving the hands free during this operation. A small plastic tab to the right of the record button acts as a pause control, but as this cannot be engaged before the tape drive has been set to 'play' it involves a rather cumbersome three finger operation to select record mode without start-

ing up the tape first.

Three pairs of dual concentric potentiometers are provided for input fading — one pair of controls for each input (DIN, phono and mic). Each of these inputs is connected via a separate pre-amp and full mixing of the three stereo or six mono inputs is possible.

The meters are on the left hand side of the unit, arranged in back-to-back fashion. Their circuitry is designed to give them peak programme characteristics — rise time of 2ms and decay time of 400ms. A very useful feature, not seen elsewhere to date, is the ability to display the bias level on the meters, and further, the ability to adjust the bias, through holes in the bottom panel of the unit, with a special trimming tool provided. Factory settings of -3dB (regular) and -0.5dB (chrome) were noted on the test sample, but reducing these to -4 and -1 respectively resulted in a substantial improvement in frequency response. The unit can be safely stood up on its end whilst adjustments are carried out.

A 500Hz calibration oscillator is provided, enabling different tape sensitivities to be compensated for by means of other presets accessible through the bottom panel. Similar presets for equalisation and playback level calibration are also provided.

A recess in the left-hand end panel contains all input and output sockets — DIN and phono for line connections and standard jacks for microphones and headphones. Also in this recess there is a headphone volume control (line outputs are at a fixed level) plus push-button switches for the bias monitoring and cal oscillator.

The unit could not be faulted in any way from

the performance point of view. The frequency response met the specification after adjustment of the bias for the brand of tape used for testing, and the unweighted signal to noise ratio was quite exceptional at 57.5dB. Wow and flutter was also excellent at 0.08%.

Conclusion

An exceptionally versatile machine, with accessible adjustments to enable optimum performance to be obtained from any brand of tape. With the additional flexibility offered by the input mixing capability this would be the obvious choice of the serious enthusiast or semi-professional.

Manufacturer's Specification	
Fast wind time	45 sec, C60
Wow and flutter	0.09% RMS, DIN weighted
Sensitivity	
Mic	0.2mV/2kohms
DIN	5mV/10kohms
phono	80mV/2Mohms
Output	600mV/5kohms
Frequency response	34-12,000 +1-3dB Ferric 35-15,000 +1-3dB Chrome
Crosstalk	45dB
Signal/noise ratio	53dB LH CCIR weighted 62dB LH Dolby weighted 55dB Chrome weighted 64dB Chrome, Dolby weighted
Size	13½ x 6½ x 9½ in.
Price	£241.00 exl.VAT.RRP
Distributor	North East Audio Ltd, 5 Charlotte Square, Newcastle upon Tyne NE1 4XF