

Meridian MCA-1

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In the space available here we cannot do full justice to the new Meridian modular system of electronics. When complete, the range of modules will allow the purchaser to select the combination to meet his requirements. For example, if you only play records you need only buy the amplifier with phono facilities, but modules can be added to give other combinations of multiple inputs, with tuner, tone controls, headphone outputs, and separate power amplifiers.

All the modules clip readily together with automatic electrical interconnection, so there are no trailing wires. The slimline cases are all finished in durable grey Nextel paint.

We tested the MCA-1 unit, which assumes the role of an integrated amplifier selling at about £375, offering only a single moving-magnet disc input; in adding moving-coil and auxiliary input options we brought the total cost to nearer £500.

Internal design of the MCA-1 is also unusual — the power amplifier has complementary transistor outputs in a double-mono configuration, fed from a balanced input signal. Power supplies use 'flyback transformer' switching and are regulated. The pre-amp itself is designed with balanced signal handling stages based on the use of multiple high

quality integrated circuits. The moving-coil input is discrete and employs shunt feedback which gives a 'universal' input with a terminating impedance of 12ohms resistive.

Sound quality

As an integrated amplifier, the MCA-1 rated a 'good plus' score, and as a pre-amplifier used with more substantial power amplifiers, this improved to 'very good.'

Via moving-coil input, the sound was substantially good, with a clean and articulate bass, a natural and pleasant midband, and quite good treble, the latter suffering from just a hint of 'edge' or 'featheriness'. In stereo image terms it was particularly competent, proving capable of fine natural perspectives with good space and depth, plus much low level detail. The moving-magnet input was generally similar; these input options are in each case dedicated modules rather than 'add on' compromises.

Via aux the sound was still clearer, and slightly more 'open'. The mid treble anomaly remained however. Driven hard the amp did not clip well, and sounded a little 'small', while heavy drive into the adverse load constrained the maximum level to a modest 97.5dBa. The pre-amp section could sound better with a

larger power amplifier, where the dynamics were better reproduced.

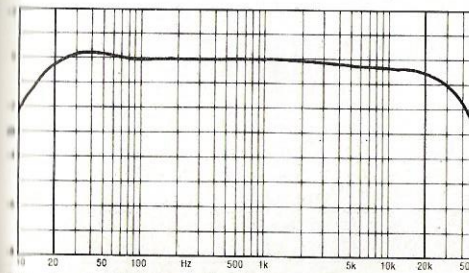
Lab results

Measured output levels were close to specification, with a good power bandwidth into the 8ohm load. Sufficient peak current, $\pm 12A$, was available to fully drive all the loads on the peak programme tests, while the loss from 8 to 2ohms was only 0.8dB — an excellent result. Clean, short peaks will be well handled into some of the most difficult loads. Harmonic and intermodulation distortion results were fine, and even better at low levels, with the signal to noise ratios particularly good, even though some dc offset was observed at the speaker terminals.

Input overload margins were ample, while the pre-amp could produce decent output levels from a 600ohm balanced or 300ohm unbalanced terminal. Stereo separation was very good, and output impedance negligible, while channel balance was fine and the input characteristics well in order. Disc equalisation was to a good accuracy, with a subsonic rolloff on moving-coil but not on moving-magnet.

Conclusion

Its musical, spacious and relaxed sound quality makes this combination a natural candidate for recommendation despite the fairly high price tag, which is not particularly competitive in view of its 100dBA or so maximum sound level. The pre-amplifier section also sounded good, and is also a competitive contender in the quality stakes; this too is recommended, especially for use with Meridian's own active speaker systems.



Disc input: RIAA equalisation accuracy

Test measurements

To show how well the amplifier sustains its 8ohm output into real loudspeaker loads, the level into 4ohms and 2ohms is given in dBW (where 0dB = 1W), without adding 3dB or 6dB respectively, as in usual 'power' ratings.

GENERAL DATA

Pre- and power amplifier

Power output			
Rated power into 8ohms, maker's spec.	35W (= 15dBW)		
Power output	20Hz	1kHz	20kHz
One channel, 8ohm load	14.6dBW	15.3dBW	14.2dBW
Both channels, 4ohm load	13.8dBW	14.0dBW	13.0dBW
One channel, 2ohms, pulsed	14.2dBW	14.7dBW	14.0dBW
Instantaneous peak current	+12 A	-11 A	

Distortion			
Total harmonic distortion,	20Hz	1kHz	20kHz
at rated power, aux input	-76dB	-84dB	-74dB
Intermodulation, 19/20kHz, rated power, aux input	-77dB		
Intermodulation, 19/20kHz, at 0dBW, disc (mm)	>-80dB		
Intermodulation, 19/20kHz, at 0dBW, disc (mc)	>-80dB		

Noise			
Disc (mm) input (IHF, CCIR weighted)	-84dB		
Disc (mc) input (IHF, CCIR weighted)	-76dB		
Aux/CD input (IHF, CCIR weighted)	-94dB		
Residual, unweighted (volume control at min)	-87dB		
DC output offset	40mV		

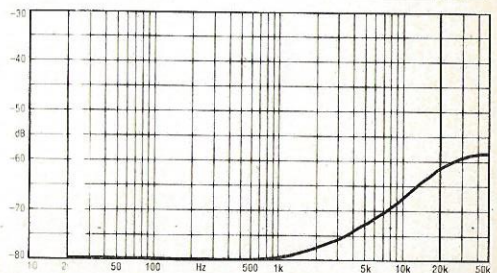
Input overload			
Disc (mm) input (IHF)	20Hz	1kHz	20kHz
Disc (mc) input (IHF)	30dB	29dB	30dB
Disc (mc) input (IHF)	24dB	23dB	22dB
Aux/CD input (IHF)	>20dB	>20dB	>20dB

Stereo separation			
Disc input	-80dB	-78dB	-58dB
Aux input	-80dB	-82dB	-61dB

Output impedance (damping)			
	0.06ohm	0.05ohm	0.10ohm
Channel balance, disc, at 1kHz	0.5dB		
Volume/balance tracking	0dB	-20dB	-60dB
Aux input	0.1dB	0.1dB	0.9dB

Input data			
		socket type	sensitivity
Disc (mm) input	Phono	0.36mV	50kohms, 100pF
Disc (mc) input	Phono		12ohms, 0nF
Aux input	Phono	24.4mV	495kohms, 130pF

Output, pre-amp	>6V	600/300ohms
Disc equalisation error, 30Hz-15kHz	+0.2dB, -0.3dB	
Size (width, height, depth)	480 x 6 x 31cm	
Typical price inc VAT	£375 (disc only)	
*Cartridge-dependent		



Disc input: stereo separation