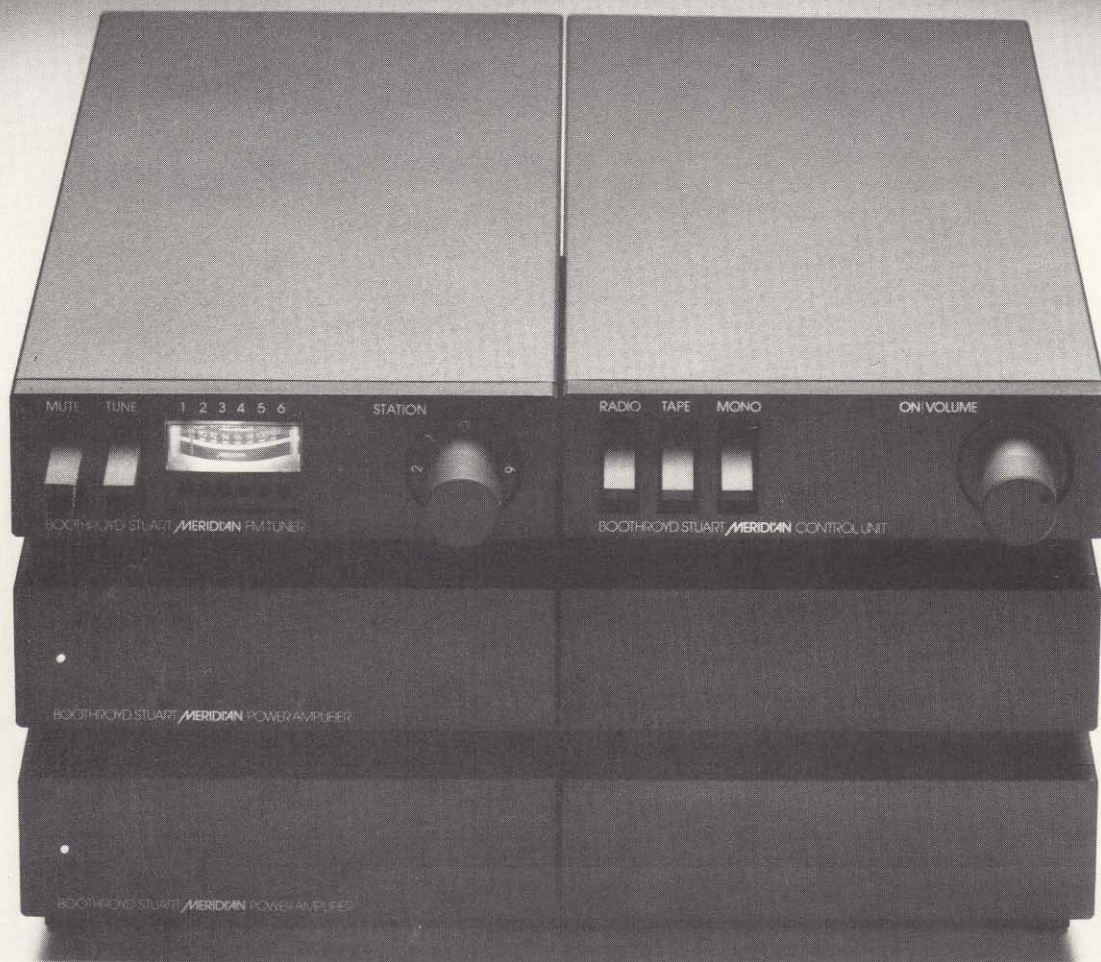


MODULAR
AMPLIFIER SYSTEM
AND
ACTIVE LOUDSPEAKER

BOOTHROYD STUART
MERIDIAN



Boothroyd Stuart Meridian high fidelity equipment is the result of many years of experiment, experience and research by Boothroyd Stuart and Partners in Cambridge, England. Background research into spectral, phase, harmonic, intermodulation and transient distortion, and their subjective and musical effects, into techniques of circuit design for low noise and distortion and into loudspeaker distortions, radiation pattern and stereo image reconstruction, has been carried out in great depth, scientifically and with sympathy for the end result which is an accurate musical sound. Painsstaking research into fundamental questions of psycho-acoustics and system balancing has resulted in our ability to design equipment which is extremely musical, and has heavy emphasis placed in crucial areas, for example transient distortion effects, overload margins, clipping effects, dynamic loading of loudspeakers, and phase effects. Our experience has been distilled in designs which are pure and show excellent comparative value.

Our design goal is your enjoyment of music at home, brought about through a crystal clear detailed reconstruction of the stereo stage and by equipment which is simple, beautiful and discreet. The circuits are cased in machined aluminium housings with inner steel skins to ensure minimum stray field effects. The choice of materials and finishes throughout the range has been governed by the desire to reflect the accuracy and precision of the products.

The amplifiers are finished in dark chocolate brown textured enamel with gold blocked lettering. Some alternative finishes are available to special order.

This modular range of amplifiers has been designed to meet the needs of the discerning listener who can obtain the best value in sound and music. We believe that a choice of the correct input module for the Boothroyd Stuart Meridian 101 control unit, combined with selection of the most suitable power amplifier from our range will provide the listener with the finest performance available at any price.

All specifications given at 25°C ambient 50%rh at rated line input after 5 minutes. Units operational up to ambient 50°C.

101/101MC



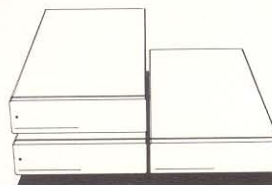
104



103



103D



105



GENERAL SPECIFICATION

The Boothroyd Stuart Meridian Control Unit would appear to offer fewer facilities when compared with some preamplifiers, however in seeking the ultimate accuracy of sound it is important to insure that there is no redundancy in electronics. Every facility is a stage of circuitry through which the music has to pass, therefore this control unit has been constructed in order to avoid effects which may blur detail and upset special attributes of the signal. This control unit provides for the following system: a pick-up cartridge

(moving coil or standard output), a radio input, a tape monitor with output for recording, a mono switch and a combined balance, volume and on/off control. In addition a range of alternative input modules is available to optimise leading cartridges.

Designed to match and complement the 101 preamplifier both visually and sonically, the 104 is a high performance limited facility FM Tuner. Six preset stations and one standby position are selected by the rotary switch, other controls are a combined mono + mute switch and a tune switch which disables the AFC and converts the meter from frequency indication to centre tuning for accurate alignment. Emphasis has been placed on foolproof operation maintaining very low levels of noise, distortion and intermodulation distortions. The radio circuit

combines a dual gate MOSFET input stage with a double balanced mixer for low intermodulation, a linear phase IF for low distortion and an advanced stereo decoder with pilot tone cancel circuitry.

The Boothroyd Stuart Meridian 103 Power Amplifier has been designed simply to give the very best possible sound when playing music through passive loudspeakers. The circuit makes extensive use of complementary and cascade techniques which, when used in a very low feed-back design as this is (25dB), result in extremely low levels of static, dynamic and transient distortion. The high energy power supply contained in a separate case will supply high peaks of power into difficult loudspeaker loads—the load can reduce to 3Ω without adverse subjective effects – whilst the

cleanest clipping characteristic allows very high sound levels to be achieved.

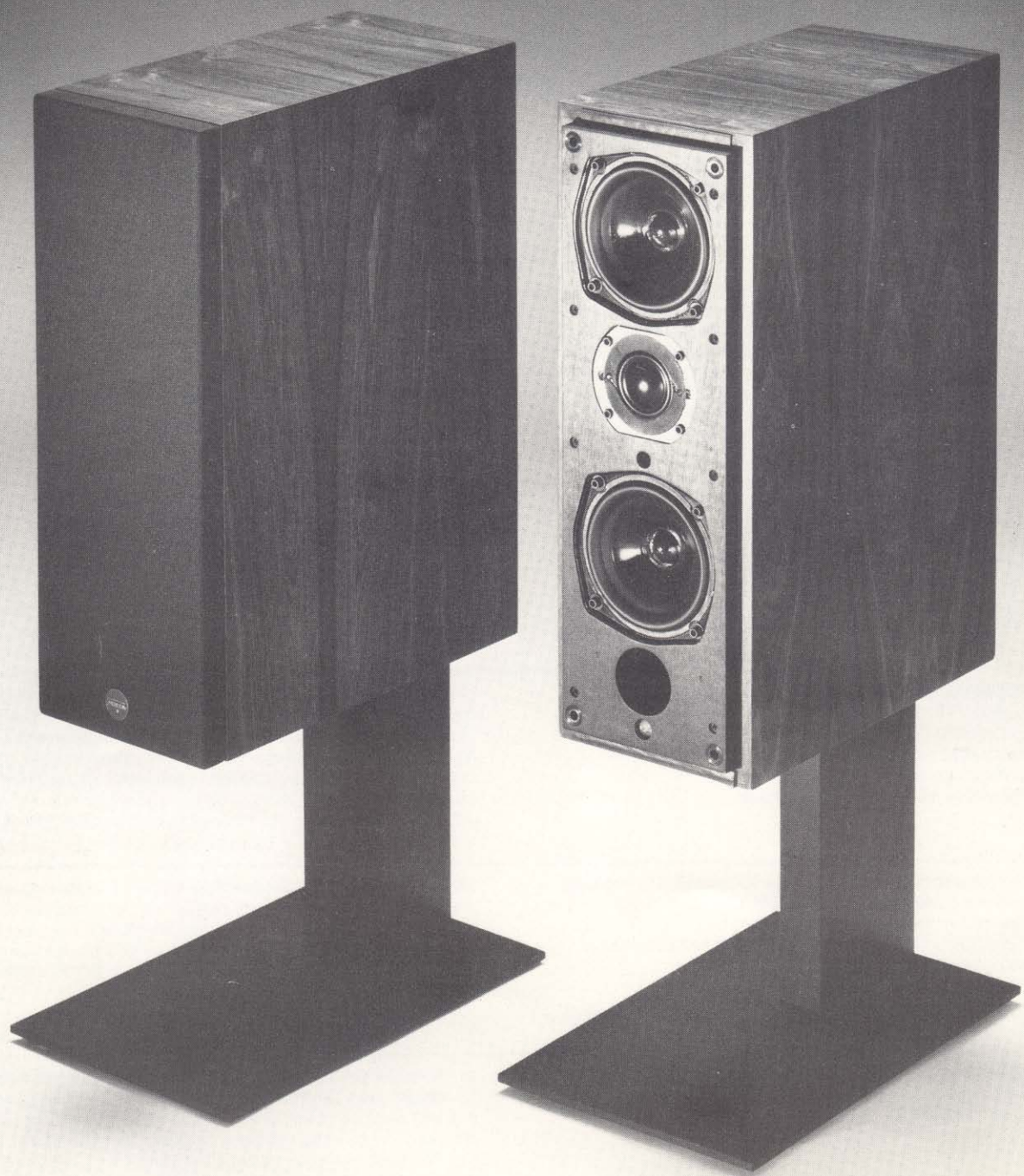
The 103D is an extension of the 103 amplifier system and gives a useful improvement in performance on most loudspeaker systems. A second power supply is added and connected so that the left and right channels each have a separate supply. This system gives more power output and improved definition. A 103 can be converted to a 103D at any later stage.

This, the newest amplifier in the Boothroyd Stuart Meridian range, uses highly developed electronics to produce outstanding performance of power, stability and inner detail of sound. The amplifier is presented in a mono format, each channel being a separate self-powered section delivering 100W minimum which can be purchased separately for driving a sub-woofer, or in pairs for normal stereo installations. It is possible with the mono arrangement to locate each power section very close to its loudspeaker with improved results due to short 'speaker cables. It is of

course ideally matched to the 101/101MC Control Units.

TECHNICAL SPECIFICATION

Input	Phono 1.4mV @ 1KHz over 47K // 100pf., Maximum input 160mVrms @ 1K., Noise -80dB CCIR, Radio 90mV over 100K, Noise -90dB CCIR, Tape monitor 450mV over 47K, Noise -90dB CCIR	Distortion	Less than 0.01%
Output	0dBm (775mV) for rated input behind 600Ω, Max output +20dBm, Tape output -20dBm behind 5K	Power	115/230 50/60Hz 6VA
Response	RIAA ±0.5dB 20Hz - 20KHz (Sept 1977), Radio/Tape ±0.5dB 5Hz - 50KHz	Size	140mm (5.5in) wide, 52mm (2in) high, 315mm (12.5in) deep
		Weight	Approx 1.8kg (4lb)
		Option	101 MC. for moving coil cartridges
		Input	Phono 150μV @ 1KHz over 330R // 33nF, Noise -70dB CCIR
Frequency range	87.5 - 102MHz Europe, 87.5 - 108MHz US/Canada, 76 - 92MHz Japan	Separation	50dB
IF	10.7MHz Linear phase	Frequency response	±0.5dB 15Hz - 15KHz
Sensitivity	Useable < 1μV, 30dB s/n 1μV, 50dB s/n 2.5μV mono 22μV stereo	Size/weight	As Control Unit 101
Distortion	< 0.1% mono < 0.2% stereo		
Sig/noise	Better than 67dB CCIR		
Output	270mV rms		
Output	35W/ch. in 8Ω	Size	140mm (5.5in) wide, 52mm (2in) high, 300mm (12in) deep, the power supply unit is identical in overall size to the above unit and can be placed beside or beneath the power amplifier
Input	0dBm (775mV) over 10K for 35W	Weight	Power amplifier 1.6kg (5.5lb) PSU 4.0kg (8.8lb) Total 5.6kg (12.3lb)
Distortion	Less than 0.1% 20Hz - 20KHz at all powers up to 35W, Typically less than 0.01% @ 1KHz		
Noise	Better than -90dB CCIR		
Protection	Full electronic and thermal protection		
Input	Performance of the 103D is as the 103 except that separate power supplies allow typically 45W/channel into 8Ω Each power supply in the 103 system 115/230V 50/60Hz 20 - 150VA, Unswitched outlet as input maximum 2.5A load	Weight	Total 10kg (26lb)
Output	100W in 8Ω	Size	283mm (11in) wide, 52mm (2in) high, 300mm (12in) deep
Input	0dBm (775mV) over 11K for 100W	Weight	6kg (13lb)
Distortion	Less than 0.1% 20Hz - 20KHz at all powers up to 100W, Typically less than 0.01% @ 1KHz		
Noise	Better than -90dB CCIR		
Protection	Full electronic and thermal protection		



The M2 is a 2-way integrated active loudspeaker system from Boothroyd Stuart. Careful alignment of the two high power long-throw bass-mid drivers with the enclosure, the electronic crossover and the committed power amplifiers, has resulted in a new low frequency system giving a perturbed 6th order Butterworth response at low frequencies. The result is a smooth, firm and powerful bass response down to 38Hz with accurate transients.

An electronic time delay of 76 micro seconds allows time alignment of the dome tweeter with the bass units, this alignment preserves the important radiation pattern through the

crossover region.

This clever loudspeaker system benefits from our years of experience in the design of loudspeakers, amplifiers and active loudspeakers, and represents a true systems approach.

M2 incorporates an adjustable stand to ensure optimum stereo performance but is equally at home on a bookshelf.

The power amplifiers, power supply and electronic crossovers are contained within the cabinet.

The M2 is, of course, ideally driven from the 101 Control Unit.

Response	-3dB @ 38Hz and 35KHz ($3/8 \pi$ radiation)
Sensitivity	-20dBm (unbalanced) for 83dB spl @ 1m @ 1KHz
Output Maximum	105dB spl @ 1m music programme
Noise	less than 24dB spl
Input for full output	0dBm (+ 3dBm peak) over 11K Ω balanced or unbalanced
Crossover	1.75 KHz, double Butterworth
Frequency	24dB/octave acoustic slopes
Response shape	Roll off at 38Hz 6th order Butterworth Roll off at 35KHz 2nd order Bessel
Cabinet size	500 mms (19.7 inches) high, 180 mms (7.1 inches) wide and 375 mms (14.8 inches) deep. On the stand the top of the cabinet is 830 mms (32 inches) high
Weight (with stand)	18 Kgs (40 lbs)

Finishes	American Walnut, Brazilian Rosewood or Black Laquer (others to order)
Electronics	Contains two power amplifiers similar to 105s of power output 70W bass, 35W tweeter
Distortion	In whole electronic system total less than 0.05% at all levels and frequencies, typical 0.01%
Driver	2 x 110 mm bextrene high power low frequency drivers 1 x 52 mm dome tweeter
Connection-Power	IEC detachable power input
Audio	DIN 5 pin and RCA (unbalanced only)

Aspects of the design of these products are protected by British and foreign patents, registered designs and copyright.

Trade Descriptions Act 1968: The manufacturer reserves the right to alter any specifications without notice.

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