

BOOTHROYD STUART  
**MERIDIAN**



**MERIDIAN 600 SERIES**  
The leaders in digital music systems

## What is a digital music system and why is it better?

For many hi-fi enthusiasts around the world, state-of-the-art digital audio and the name Meridian are synonymous. Meridian was one of the first specialist audio manufacturers to recognise the benefits of digital and to commit itself to working at the leading edge of digital audio technology. The result has been a stream of highly acclaimed, prize-winning products. Products which not only sound superlative but which are tastefully and distinctively styled, to please the eyes as much as the ears.

It is fitting that a British company should enjoy this preeminence since digital audio as we know it today was originally the invention of an Englishman, Alec Reeves, a communications engineer who conceived it as a way of making signals robust against the effects of noise, distortion and interference. In 1938 when he patented his idea for encoding a continuous waveform as a stream of binary numbers - the digital encoding and decoding system properly known as pulse code modulation - it was well ahead of available technology. But with the invention first of the transistor and then the integrated circuit, it gradually came into its own. First for low-quality telecommunications applications where the emphasis is on intelligibility, then - as high-speed electronics became cheaper - for high-quality transmissions.

In 1972 the BBC began using PCM microwave links to feed its FM transmitter network. Two years later the first LPs recorded using a 14-bit digital tape recorder went on sale, and by the end of the 1970s all the major record companies were releasing digital recordings on LP. In 1978 Philips announced Compact Disc; in 1980 it teamed up with Sony to complete CD's development; and in late 1982 the first commercially produced CDs and CD players went on sale. Digital audio had become a domestic technology.

From that moment, as Meridian was quick to recognise, the days of analogue sound reproduction were numbered. For decades audio engineers had dreamt of circumventing the noise- and distortion-inducing electrical, magnetic and mechanical processes inherent

in recording and replaying analogue signals. Digital audio was the answer to their prayers. But it was not all so straightforward as the advertising copywriters made out. Perfect sound forever was the promise; to make it a reality demanded engineers with wide audio experience.

This explains how small, specialist audio manufacturers - of which Meridian is a preeminent example - have been able to carve such an enviable reputation for themselves among discerning hi-fi buyers who demand the very best. Digital audio is the most exciting, most promising new technology ever to come to the science and art of sound reproduction. But technology is one thing, its skilful application is another. Meridian's unparalleled track record proves that it is uniquely endowed to place digital audio at the service of the music lover.



The 600 Series is the ultimate expression of that capability. A range of no-compromise high fidelity equipment for which the description 'state of the art' is no ad-man's hyperbole. A range of equipment which looks every bit as good as it sounds and which offers genuine convenience features to the user. A range of equipment, in short, fit to grace any music enthusiast's home.

**Recordable Compact Disc, CD-R, is an optical disc recording medium capable of outstanding sound quality. Meridian, true to its reputation for innovation, was one of the first companies worldwide to offer a CD Recorder. A testament to its performance is that it is now in use as a master recorder by leading British record companies, together with the Meridian 607 analogue-to-digital converter. In cooperation with the leading British audio magazine Hi-Fi News, Meridian has produced a CD to demonstrate the remarkable results of which this new technology is capable.**

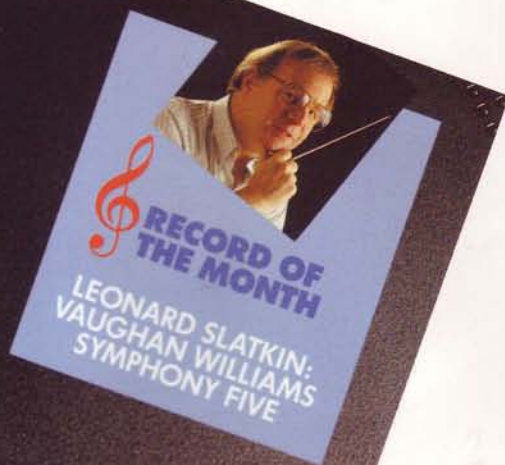


Audio professionals and hi-fi enthusiasts have commonly eyed one another with distrust. Audiophiles have suspected the professionals of being more concerned with traditional pro equipment virtues of robustness and reliability than with achieving the very best sound quality; professionals have suspected the hi-fi enthusiasts of exaggerating differences in sound quality between competing items of well-designed equipment.

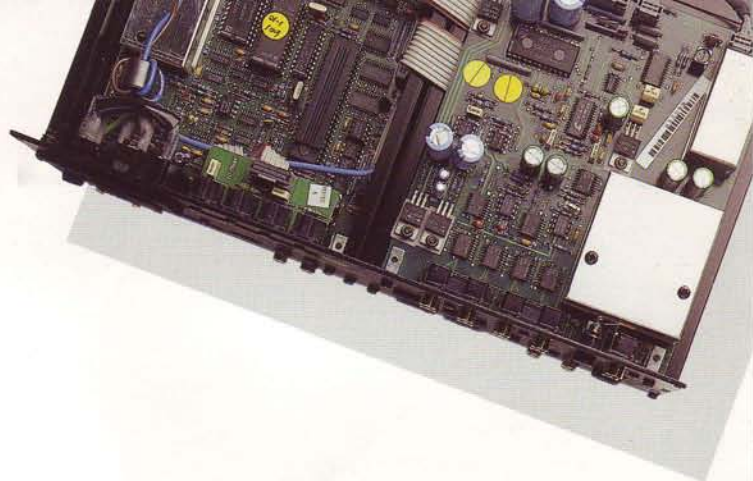
Meridian, by addressing the demands of both professional and domestic users, has become one of the very few companies to cross the divide.

The Meridian CD Recorder is a prime example. Its supreme sound quality, especially when used with the 607 A/D converter, is far from being its only attraction. It also caters for professional input and output requirements, and even corrects for inconsistencies in the digital subcode standards used by professional and domestic equipment. Add to this the fact that the CD-R medium offers access times measured in seconds, whereas digital tape can take many minutes to wind to a desired point and you have a complete recipe for professional success.

With products like the CD Recorder, the 607 A/D converter and the 601 DSP-equipped control unit, Meridian is raising standards in both the studio and the home.



**BUDGET  
AMPLIFIERS**  
**SONY'S  
LOW-COST DAT**  
**DYNACO  
TUBE REVIVAL**



### Meridian 602 CD Transport

Compact Disc was the first domestic digital audio format and it remains the choice of those who demand the very best sound quality. Digital audio tape and the new data reduced formats just do not match up. But to realise the full potential of Compact Disc demands an exceptional CD player. One which isolates the disc from vibrations and which physically and electrically separates the disc transport and digital-to-analogue conversion functions to prevent undesirable interactions. The transport half of Meridian's ultimate CD player, the 602 is at its remarkable best when partnered with the 606 D/A converter or D6000 digital loudspeaker. But it will also produce excellent results through the 601 or 603 control units, or the D600.



### Meridian 606 D/A Converter

Reading, demodulating and error correcting the signal from a Compact Disc - a task performed supremely by the 602 - is only half the job of a CD player. The other half, just as critical to the overall result, is conversion of the digital code back into an analogue waveform. For this the 606 uses the very latest digital filter and Bitstream PDM conversion chips, operated in true differential mode. Matched with Meridian's proprietary jitter-reduction circuits, these provide a sound quality which is truly state-of-the-art.



### Meridian 607 A/D Converter

Analogue-to-digital conversion, like digital-to-analogue conversion, can be performed to the very highest standard only in a circuit which is physically and electrically separate from other circuit elements. So for the very highest sound quality when recording analogue signals on to Meridian's CD Recorder or a digital audio tape machine, you need to bypass the on-board A/D converters with a 607. In so doing you will join those professional recording engineers who have already chosen it for its unparalleled sound quality. In addition the 607 can be used downstream of an analogue preamplifier to play analogue signal sources through the D600 or D6000 digital speakers.



### Meridian 604 FM Tuner

As a rich and varied source of musical and other entertainment, FM radio is unmatched. It is also capable, particularly when concerts are broadcast live, of an extremely high sound quality. But to convey the frisson of a live concert demands a first-class radio tuner. That feeling of being there - be it the Albert Hall or the Hammersmith Odeon - is what the Meridian 604 provides. State-of-the-art analogue circuitry captures, demodulates and decodes the FM signal, then it is converted into digital code for feeding to D600 or D6000 loudspeakers. Manual scanning and 18 station presets make operation quick and simple.

### Meridian 603 Control Unit

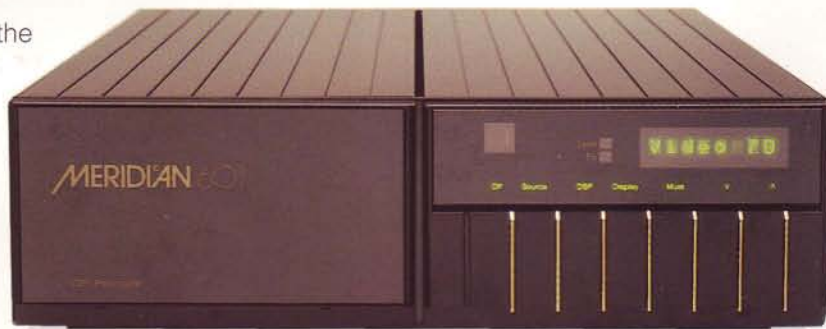
This is Meridian's top analogue-output preamplifier, capable of accepting digital as well as analogue inputs and feeding them either to a power amplifier or to analogue active loudspeakers in a single-room or multi-room system. Addition of a 607 A/D converter will allow the 603 to be used with Meridian digital active speakers. Four digital inputs are provided - two high-speed optical, two electrical - which, after de-jittering, are converted to analogue by differential Bitstream converters. Four analogue inputs are also available, one of which can be adapted to accept signals from either an MM or MC pickup cartridge. Remote, 64-step control of volume is provided by a high quality, FET-controlled amplifier stage.



### Meridian 601 DSP Control Unit

Meridian first demonstrated the power of digital signal processing to transform hi-fi equipment performance in the D600 and D6000 digital loudspeakers. Now it brings DSP to another hi-fi component, the preamplifier, with equally astonishing results.

At its simplest the 601 is a no-compromise, audiophile quality preamplifier with five analogue inputs and two analogue outputs, one of which is balanced (for use with the balanced input on the 605 power amplifier). But even in analogue mode the powerful on-board digital signal processing makes its mark, for the 601 is the first preamplifier in the world to employ digitally-realised equalisation of the phono input. Not only is RIAA equalisation, standardised since the early 1960s, offered but also the various incompatible equalisations in use prior to that.



Naturally, digital inputs and outputs are also provided - two high-speed optical and four electrical inputs; two high-speed optical and two electrical outputs - and both analogue and digital inputs can be DSP-processed in a variety of ways. For example, octave and speaker equalisation offer tonal adjustment of unprecedented subtlety; a properly realised loudness control obviates bass and treble loss at low listening levels; and headphone processing provides the controlled inter-channel crosstalk necessary to prevent 'in the head' imaging.

All these facilities are accessible via the full-function remote control, and of course the 601 is multi-room compatible. Professional users will be attracted to the 601 too because of its ability to accept, route, monitor and control a variety of analogue and digital sources consistently and conveniently.

The DSP-equipped 601 is unique: uniquely powerful, uniquely adaptable - uniquely Meridian.



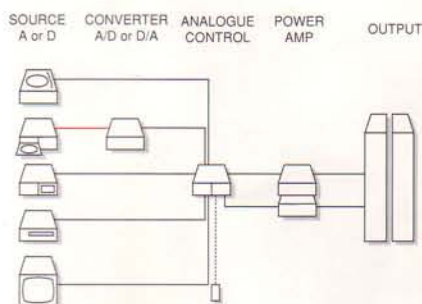
## Power amplifiers and active loudspeakers

### Meridian 605 150 watt Power Amplifier

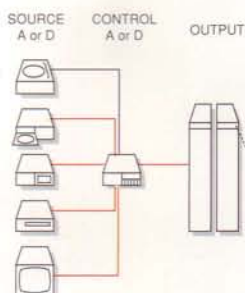
Meridian's early reputation among audiophiles was established by its amplifiers, and the 605 continues that tradition. It is the best power amplifier that Meridian makes and takes its place among the very finest available anywhere, at any price.

With an output of 150W per channel into 8 ohms, the monoblock 605 has as much power as you are ever likely to need. But this is no crude muscle-amp - high on impact, low on subtlety. Its class AB output stage has a large standing current, so that at the low power levels which predominate during normal listening it operates substantially in class A. Crossover effects are banished, guaranteeing a smooth but lucid sound quality across the entire dynamic range, whatever the sensitivity of the partnering loudspeakers and whatever your choice of listening level.

Sound quality is further enhanced if you use the 605's balanced input facility, which can be driven from the balanced outputs of the 601 and 603 control units.



Conventional hi-fi layout. Long signal path with many connections



Meridian digital active hi-fi layout. Short, direct, digital signal path - unified control of sound

### Meridian Active Loudspeakers

Since the company's foundation in 1977, Meridian has been an ardent promoter of the active loudspeaker. It not only offers significant technical advantages but also lends itself to use in multi-room hi-fi installations.

In a conventional, passive loudspeaker the output of the power amplifier is divided into overlapping frequency bands by a crossover network comprised of inductors, capacitors and resistors, according to the needs of the speaker's drive units. This network squanders signal power, introduces distortions and reduces the ability of the amplifier to damp spurious motion of the drive unit diaphragms.

In an active speaker, by contrast, each drive unit has its own, directly-connected power amplifier. Frequency division is performed earlier in the circuit by active filters, which as well as obviating the failings of a passive crossover are much more versatile. Equalisation of frequency response and time alignment of the drive units can be more easily and accurately achieved, and the loudspeaker's bass response can be extended without recourse to a large-volume speaker cabinet.

The result is not merely a better sounding speaker but one which also reduces the clutter of a conventional hi-fi system. A power amplifier is not required, nor is there any need of thick, ugly speaker cabling.

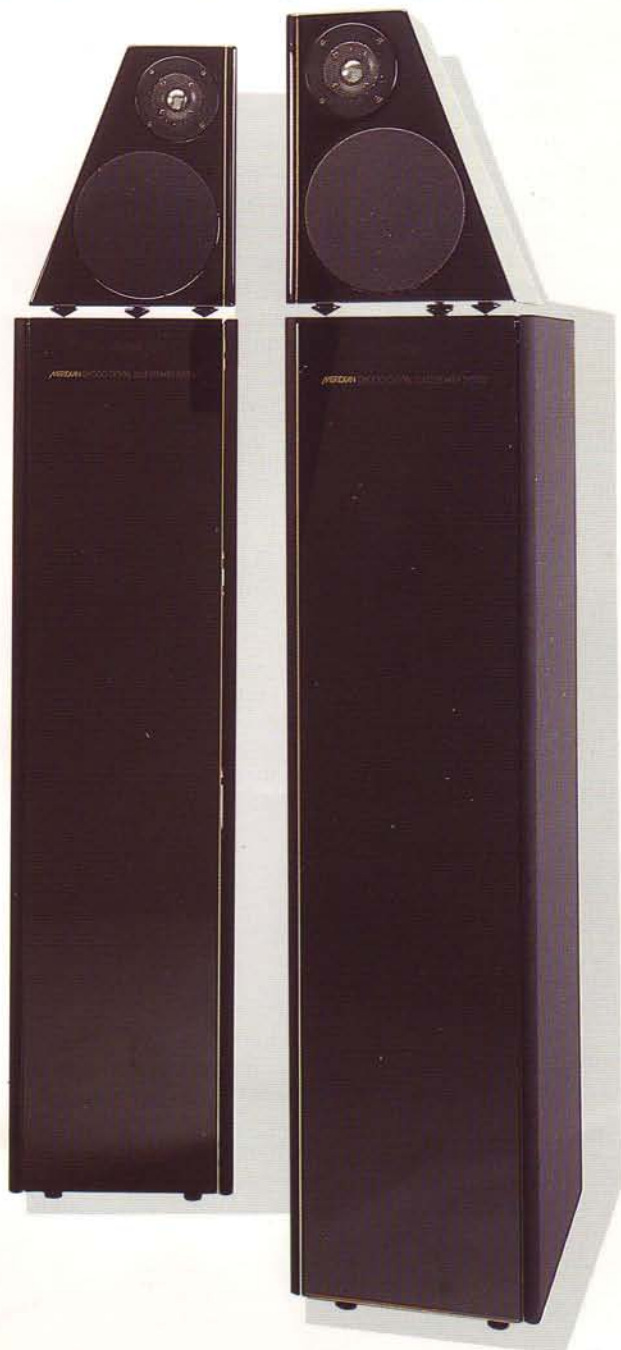
These familiar benefits of the active loudspeaker are persuasive enough. But in the 600 Series models, Meridian has advanced the argument an exciting stage further.

## Digital active loudspeakers

With the advent of domestic digital audio, Meridian saw the opportunity to advance the active loudspeaker concept a significant step further. By incorporating digital signal processing within the speaker, crossover filtering and equalisation could be performed in the digital domain. As well as keeping the audio signal in digital form - and so immune from additional noise and distortion - as far along the signal path as possible, this would allow a new freedom and accuracy in crossover design and open up possibilities for signal control which would be difficult or impossible to achieve using analogue circuitry. It would, in addition, be an important development for multi-room installations, in which a digital active speaker could act as the conduit through which user commands are communicated to remote system components.

The first product of this revolutionary new approach to active speaker design was the Meridian D600, one of the very first digital loudspeakers to be made anywhere in the world. Now equipped with the latest Bitstream D/A converters, it continues to offer an unrivalled blend of performance and convenience features. In addition to its optical and electrical digital inputs it has an analogue input with remote volume control, so that it can be connected directly to line-level analogue source components or to analogue-distribution multi-room systems.

Meridian's second digital loudspeaker, the phenomenal D6000, builds on the D600's strengths. A technical tour de force unmatched by any other hi-fi manufacturer worldwide, it represents the ultimate in active loudspeakers. A four-driver, four-amplifier, three-way, split-cabinet design, it incorporates all the acoustical expertise Meridian has amassed in 15 years of active speaker manufacture, added to which are all the sound quality and convenience benefits of DSP. It can be connected directly to the digital output of any Meridian source component, to the digital output of the 601, or as part of a digital-distribution multi-room system. However you use the D6000, its music making will astound you.



## 600 series outline technical specifications

| No    | Type                                                          | Purpose                                                                                                              | Features                                                                                                                                                                                                                                                                                                    | Inputs                                                                                                                                 | Controls                                                                                                            | Outputs                                                                                                                                                                      |
|-------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 601   | Digital Signal Processing (DSP) Preamplifier and Control Unit | Audiophile Preamplifier with analogue and digital input and output.                                                  | DSP available on all outputs.<br>Configurable input and output options.<br>DSP Programs for:<br>Headphone compensation<br>Octave equaliser<br>Speaker compensation<br>Loudness compensation<br>LP archive equalisation<br><br>Hafner surround decoding available with all programs.<br>Upgradable programs. | Digital<br>4 Coax cable<br>2 High speed optical<br><br>Analogue<br>4 Line level<br>1 Phono/MC/MM<br>Meridian comms, optical and cable. | Source, DSP, Display, Mute, Volume.<br>Full function remote control included.<br>Sensitivity control on all inputs. | Digital<br>2 Coax cable<br>2 High speed optical<br><br>Analogue<br>4 Unbalanced RCA/Phono<br>2 Balanced Cannon/XLR<br>Headphone socket<br>Meridian comms, optical and cable. |
| 602   | CD Transport                                                  | Audiophile Quality CD Transport.                                                                                     | High stability mounted drawer system.<br>Fast response Hall effect Philips' CDM.<br>Twin processor control.<br>De jittered digital output.<br>Powerful Reed Solomon error correction.                                                                                                                       | Meridian comms, optical and cable.                                                                                                     | Open, Play, Stop, Pause, Next, Previous.<br>Full track programming features.<br>209 System remote control included. | Digital<br>2 High speed optical<br>1 Coax cable<br>Meridian comms, optical and cable.                                                                                        |
| 603   | Control unit with digital inputs                              | Analogue output control unit to drive power amps or active speaker systems. High quality D/A with preamp facilities. | Microprocessor control.<br>Analogue and digital inputs.<br>64 step discrete FET volume control.<br>PLL lock range from 32kHz to 48kHz.                                                                                                                                                                      | Analogue<br>3 line level<br>1 Phono MC/MM<br><br>Digital<br>2 Coax cable<br>2 High speed optical<br>Meridian comms, optical and cable. | Source, Copy, Display, Mute, Volume.                                                                                | Analogue<br>Balanced and unbalanced variable output.<br>Unbalanced fixed output.<br>Meridian comms, optical and cable.                                                       |
| 605   | Power Amplifier                                               | High power, monoblock power amplifier for output to passive loudspeakers.                                            | 150W into 8ohms. MOSFET output with high bias for low distortion short circuit, DC, and thermal overload protection.                                                                                                                                                                                        | Unbalanced<br>550mV sensitivity<br>Balanced 1.6V sensitivity XLR/Cannon                                                                | Resetable overload trip                                                                                             | Gold plated terminals accept 4mm plugs or bare wire.<br>Dual terminals for bi-wiring.                                                                                        |
| 606   | Digital to Analogue (D/A) Converter                           | Audiophile D/A Converter Used to connect CD Transport or DAT etc to analogue systems.                                | Crystal PLL with automatic frequency selection between 32kHz 44.1kHz 48kHz.<br>6 separate regulated power supplies.                                                                                                                                                                                         | Digital<br>2 Coax cable<br>2 High speed optical                                                                                        | Input selection<br>Absolute phase                                                                                   | Analogue unbalanced<br>Fixed output.                                                                                                                                         |
| 607   | Analogue to Digital (A/D) Converter                           | High quality A/D Converter for digital recording or to convert analogue source for output to digital only speakers.  | Selectable input sensitivity.<br>Selectable 15µs - 50µs pre-emphasis.<br>44.1kHz or 48kHz sampling frequency.                                                                                                                                                                                               | Analogue<br>A. Low 650mV sensitivity<br>A. High 2V sensitivity<br>B. Direct 2.4V sensitivity (no pre-emphasis option).                 | Input selection A or B<br>Sampling frequency<br>Pre-emphasis                                                        | Digital<br>2 Coax cable<br>2 High speed optical                                                                                                                              |
| D600  | Digital or Analogue Input Active Loudspeakers                 | Digital or analogue input active loudspeaker. Very high quality 2.5 way system.                                      | Bitstream D/A converters.<br>3 x 65W power amplifiers per speaker.<br>Volume bass and treble control.<br>Configurable inputs.                                                                                                                                                                               | Analogue<br>2 balanced or unbalanced.<br>1 technical ground.<br><br>Digital<br>2 Coax cable<br>1 High speed optical<br>Meridian comms. | System and speaker control via dedicated remote control (included).                                                 | Digital<br>1 Coax cable<br>Meridian comms<br>Slave comms.                                                                                                                    |
| D6000 | DSP Digital Input Loudspeaker                                 | Exceptional quality 3-way active loudspeaker. Crossover performed in digital domain by DSP.                          | 3 x Bitstream D/A converters.<br>4 x 75W power amps per speaker.<br>Bass, treble, axis, loudness, crossover, volume and balance all performed in digital domain.<br>4 character display for system control.                                                                                                 | Digital<br>2 Coax cable<br>2 High speed optical<br>Meridian comms optical and cable<br>Slave comms optical and cable.                  | System and speaker control via dedicated remote control (included).                                                 | Digital<br>1 Coax cable<br>Meridian comms optical and cable<br>Slave comms optical and cable<br><br>Analogue<br>Connection to speaker head unit.                             |

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Meridian Audio Ltd reserve the right to amend the design and specification of their products at all times.

'Meridian' is a registered Trademark of Meridian Audio Ltd.

600 Series products come in a hard anodised black aluminium case with glass display window and gold plated control switches.

The standard size of 600 Series units is 100 H x 320 W x 325 D mm (607mg 160W)

All inputs and outputs are on gold plated RCA/phono connectors unless otherwise stated.

D600 Loudspeakers are available in Black Ash Veneer or 'Rosewood' type veneer.

D6000 Loudspeakers are available in Black Piano Laquer finish only.