

A large, stylized, light gray letter 'M' is centered on a black background. The 'M' is composed of thick, solid strokes. Inside the right-hand vertical stroke of the 'M', the words 'user guide' are written in a white, lowercase, sans-serif font, oriented diagonally from the bottom-left towards the top-right.

user guide

Meridian 563 Digital to Analogue Converter

Sales and service in the UK

Meridian Audio Ltd
14 Clifton Road
Huntingdon
Cambs
PE18 7EJ
England

Tel (0480) 52144
Telex 32577 (MERIDN)
Fax (0480) 459934

Sales and service in the USA

Meridian America Inc
3800 Camp Creek Parkway
Building 2400
Suite 112
Eastpoint
Atlanta
GA 30331

Tel (404) 344 7111
Fax (404) 346 7111

Designed and manufactured in the UK by

Digital Gramophone and Wireless Ltd
14 Clifton Road
Huntingdon
Cambs
PE18 7EJ
England

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Introduction

In choosing the 563 Digital to Analogue Converter you have acquired a component that combines major advances in digital audio and engineering design. The 563 Digital to Analogue Converter provides three digital inputs and one optical input, and uses a high definition dual differential digital to analogue Delta Sigma converter to give up to 19 bit precision. Dual phase lock loops ensure low jitter, and balanced Class A output amplifiers give extremely low distortion.

This guide is designed to enable you to obtain the best possible results from the unit, whether your requirements are simply to convert the output from a compact disc transport, or to work with inputs from several digital sources.

If you have just purchased the 563 Digital to Analogue Converter, you should first turn to the section *Setting up the digital to analogue converter*, page 11, which explains how to unpack and install the digital to analogue converter correctly.

The Meridian 500 Series

The Meridian 500 Series is a unique system of digital, analogue, and video components designed to meet the demand for absolute quality, ease of use, and lasting value.

The flexibility of the Meridian 500 Series is such that you can assemble a system as simple or as complex as you need, perfectly suited to your musical and environmental requirements, and with the ability to add to it or change it at a later date should your requirements change. The 500 Series is also compatible with the existing Meridian 200 Series and 600 Series components.

Each Meridian 500 Series component is housed in a matching slim line case. Front panel controls provide access to the most important functions, and the full range of functions is available from the Meridian System Handset using a simple and intuitive control interface.

500 Series communications

The Meridian 500 Series includes a sophisticated communications link, to ensure that any configuration of units will work together as a fully integrated system.

The 500 Series communications system allows you to control any combination of units using a single handset, and ensures that your commands from the handset are interpreted unambiguously. Any unit can be designated as the controller for the system, allowing you to position the other units out of range from the handset beam if desired. It also allows all the units to be switched off from the front panel of any unit in the system.

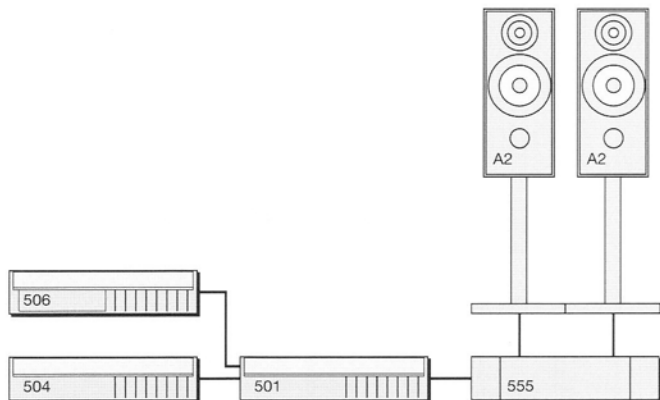
Professional features

The 500 Series also includes features for professional users, including RS232 computer control (501, 562, and DSP5000), and balanced outputs (563).

The following pages give examples of four suggested configurations to illustrate the flexibility of the Meridian 500 Series.

Sample configurations

506 Compact Disc Player

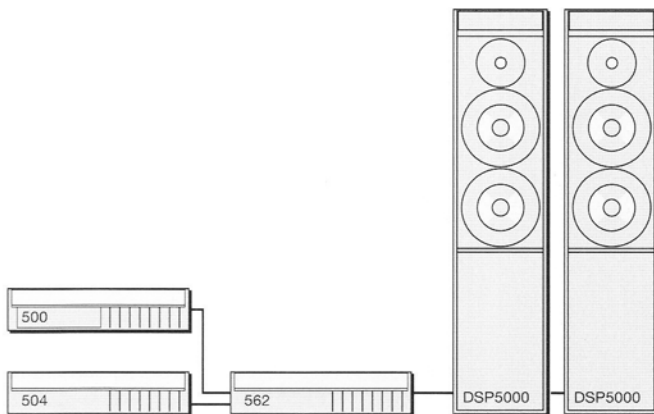


The 506 Compact Disc Player is an integrated CD transport and converter, providing both digital and analogue outputs.

The 506 Compact Disc Player is ideally suited for use with the Meridian 555 Stereo Power Amplifier and A2 Loudspeakers, with control over the volume and source selection provided by the 501 Remote Control Preamplifier.

The 504 FM Tuner is an ideal addition to the system if radio reception is required.

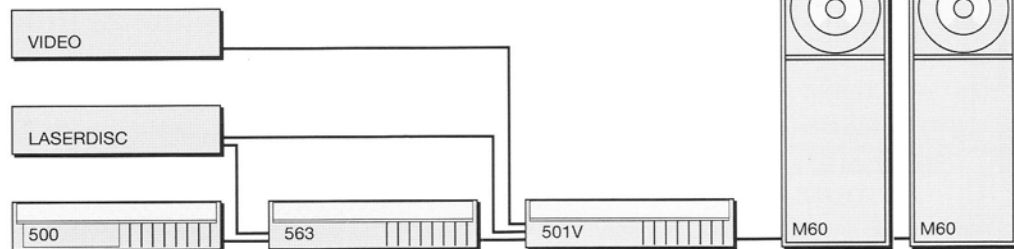
500 Compact Disc Transport



The 500 Compact Disc Transport provides a precision digital output, and can drive DSP5000 Digital Loudspeakers directly.

A 562 Digital Controller can be added to cater for conventional analogue sources, such as the 504 FM Tuner, and provide source selection between up to 12 different analogue or digital sources.

563 Digital to Analogue Converter



The digital output provided by the 500 Compact Disc Transport can be decoded by the 563 Digital to Analogue converter to provide a high-quality audio output for use with a conventional audio preamplifier.

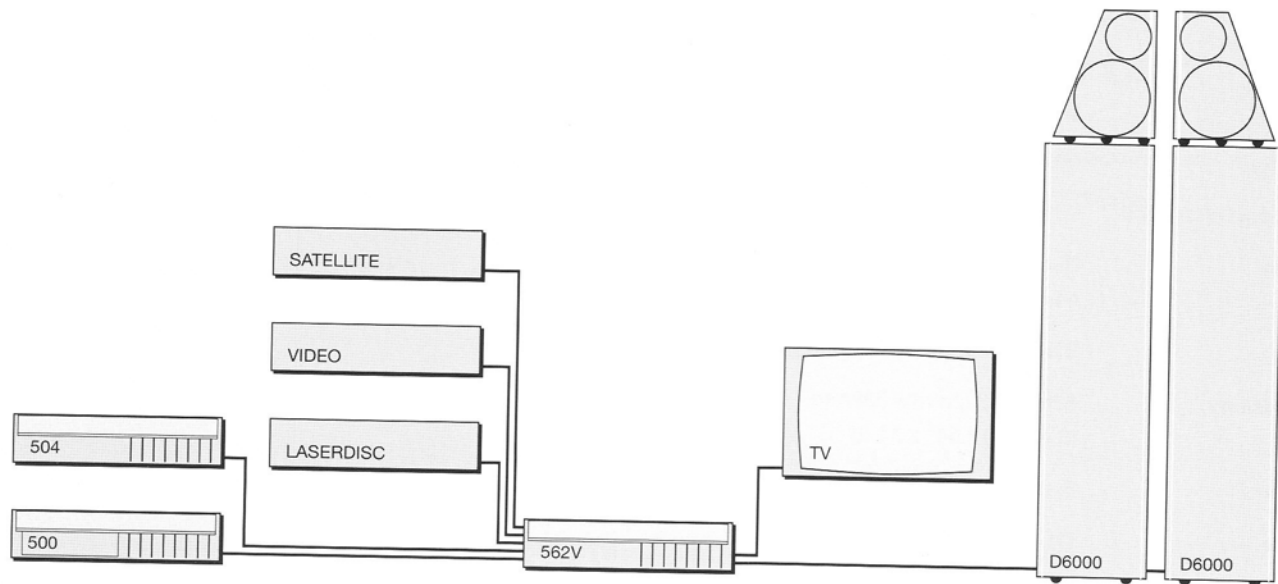
The 563 Digital to Analogue Converter can also decode digital signals from other sources, including LaserDisc players and Digital Audio Tape.

501V Control Unit

The 501V Control Unit is a full function preamplifier for use with any analogue source, and includes video switching for complete control of systems that include video sources such as a LaserDisc player and video recorder.

It provides a high-quality audio output ideal for use with the Meridian M60 Active Loudspeakers.

562V Multimedia Controller



The 562V Multimedia Controller is the ideal control unit for use with the Meridian D6000 Digital Loudspeakers.

It provides direct digital inputs for digital sources, such as the 500 Compact Disc Transport and LaserDisc sound, together with precision Delta Sigma Analogue to Digital Conversion, for

conventional analogue sources such as the 504 FM Tuner and video sound.

It also includes video switching for CVBS and S-VHS signals, such as from a satellite receiver, LaserDisc player, or video recorder.

Specification and accessories

Specification

Conversion	Dual differential Delta Sigma, 64 times oversampled at 2 bits per channel giving 19 bits resolution.
Jitter	Less than 1ps rms.
Noise and distortion	Less than -95dB.
Display	Illuminated legends for EQ, Lock, 44.1kHz, and Phase.
Finish	Black textured enamel and glass.
Dimensions	88mm x 321mm x 332mm (3.46" x 12.64" x 13.07").
Weight	6.4kg (14lbs).
Inputs	D1 – D3 digital audio, unbalanced phono SPDIF input at 75Ω. AES/EBU connection via optional XLR connection on D1. Optical digital audio high speed TOSLINK input.

Outputs

Unbalanced analogue output 2V nominal.
Balanced analogue output on 2 x XLRs.

Consumption

20VA.

Meridian Audio reserves the right to amend product specifications at any time.

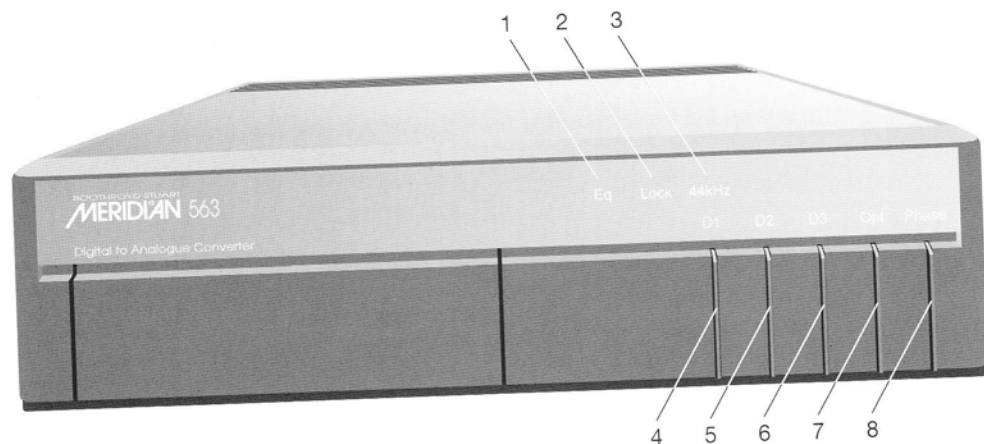
Available accessories

The following accessories are available from your dealer:

- ☐ Additional digital cables.
- ☐ Power cord Europe.
- ☐ Power cord Canada and USA.

If you have problems purchasing these items, you can order them direct from Meridian Audio Limited, who can also supply a range of digital cables suitable for connecting the 563 Digital to Analogue Converter to other equipment.

Front panel



- 1 **Eq**
Equalisation indicator.
- 2 **Lock**
Lock indicator.
- 3 **44kHz**
Double lock indicator.
- 4 **D1**
Selects digital input 1.
- 5 **D2**
Selects digital input 2.
- 6 **D3**
Selects digital input 3.
- 7 **Opt**
Selects optical input.
- 8 **Phase**
Toggles absolute phase.

Selecting the input

During normal use the digital to analogue converter is designed to be left switched on. This uses a negligible amount of electricity, but ensures that the components of the digital to analogue converter operate at maximum efficiency from the moment you start using it.

If you are not going to use the digital to analogue converter for a period of several days you should switch the unit completely off, at the rear panel, and disconnect it from the AC power supply.

To select the input

- Press the appropriate key **D1**, **D2**, **D3**, or **Opt** to select the input you want.

An indicator shows the currently-selected input.

The digital input D1 is automatically selected when the digital to analogue converter is first switched on.

Lock and 44kHz indicators

The digital to analogue converter will automatically lock to the input signal providing it is in the correct range, and the **Lock** indicator will be illuminated.



In addition, if the input is from a 44.1kHz source, such as the 500 Compact Disc Transport, and the signal is within tolerance, double lock will be achieved and the **44kHz** indicator will be illuminated.

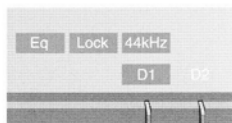


Preemphasis and phase

Eq indicator

The compact disc specification allows for a disc to be recorded with preemphasis, which for some types of material can give lower noise levels.

The 563 Digital to Analogue Converter will automatically correct for preemphasis on playback, and the **Eq** indicator will be illuminated whenever material with preemphasis is being played.



Phase

The 563 Digital to Analogue Converter allows you to change the absolute phase of the output signal; in some circumstances this can give a noticeable improvement in realism.

To change the phase

■ Press the **Phase** key.

The **Phase** indicator is illuminated when negative phase is selected.

Setting up the Digital to Analogue Converter

This chapter explains how to install the digital to analogue converter. It describes what you should find when you unpack the digital to analogue converter, how you should connect it to your other audio equipment, and the siting constraints.

Before you begin installation, you should ensure that your digital to analogue converter is the correct voltage for your local AC supply. If it is not, do not try to install the digital to analogue converter, and contact your dealer.

You should not make any connections to the digital to analogue converter or to any other component in your system whilst the AC power supply is connected and switched on.

Unpacking

The 563 Digital to Analogue Converter comes in a box containing the following components:

- 563 Digital to Analogue Converter.
- 1 power cord.
- 1 digital cable.
- 1 optical connector blanking plug.
- This manual.

You are advised to retain the packing in case you need to transport the unit.

To position the digital to analogue converter

Do not place the digital to analogue converter:

- In direct sunlight.
- Near heat sources, eg a radiator.
- On top of a power amplifier, as the heat generated may damage the digital to analogue converter.

However, it can be stacked on a 500 Compact Disc Transport, if you have this Meridian component in your system.

In common with all digital equipment, the digital to analogue converter emits some radio-frequency signals. Therefore, you should try to keep all power cables and network leads away from signal cables, including audio, antenna, and loudspeaker cables.

Radio interference

FCC Warning: This equipment generates and can radiate radio frequency energy and if not installed and used correctly in accordance with our instructions may cause interference to radio communications or radio and television reception. It has been type-tested and complies with the limits set out in Subpart J, Part 15 of FCC rules for a Class B computing device. These limits are intended to provide reasonable protection against such interference in home installations.

EEC: This product has been designed to comply with the limits set out in EN55013 and EN55020C.

Connecting the digital to analogue converter

Rear panel

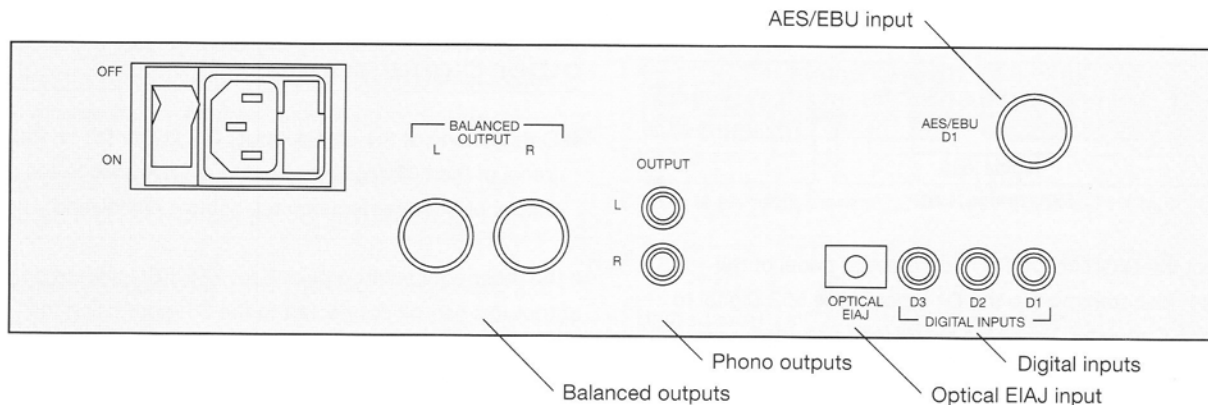
The diagram below shows the rear panel connections.

Digital inputs

The 563 Digital to Analogue Converter provides four alternative digital inputs, selectable from the front panel, and these support three different digital input standards. The following table gives details of the standards, and the recommended choice for different equipment:

<i>Input</i>	<i>Description</i>
D1, D2, D3	Unbalanced phono at 75Ω, for use with SPDIF or AES/EBU standard signals.
AES/EBU D1	XLR connection on D1, for AES/EBU standard signals. Note that if this input is used D1 must be left unconnected.
Optical EIAJ	Optical digital audio high speed TOSLINK input.

For best results with equipment providing a high quality digital output the D1, D2, or D3 phono inputs are recommended.

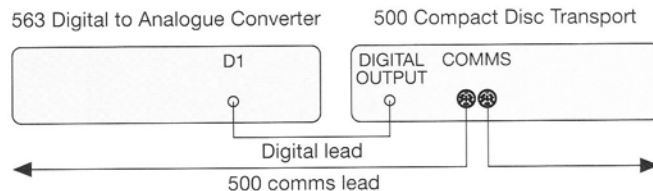


Analogue outputs

The following two alternative audio outputs are provided:

<i>Output</i>	<i>Description</i>
Output	Unbalanced analogue output, 2V nominal, on RCA phono pair.
Balanced output	Balanced analogue output on XLR connectors.

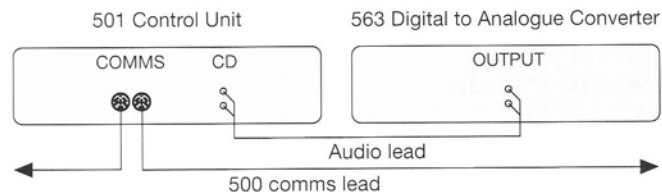
To connect to a 500 Compact Disc Transport



- Connect the DIGITAL OUTPUT on the rear panel of the compact disc transport to the D1 input of the 563 Digital to Analogue Converter, using the digital lead provided.

Alternatively, the D2 or D3 inputs may be used if preferred.

To connect to a 501 Control Unit



- Connect the OUTPUT L and R phono sockets on the rear panel of the 563 Digital to Analogue Converter to the CD inputs of the 501 Control Unit, using a phono to phono audio lead.

To connect to a DAT recorder, or other digital source

- Connect one of the digital inputs D1, D2, or D3 on the rear panel of the 563 Digital to Analogue Converter to the digital output of the other equipment, using a digital lead.

If the other equipment provides an AES/EBU standard digital output this can be connected to the D1 input using the alternative XLR connector.

Troubleshooting

This section describes problems you may encounter when using the 563 Digital to Analogue Converter and includes suggested solutions.

If these suggestions fail to cure the problem, please contact your Meridian dealer for further assistance.

No lights are displayed when switching on

- Check that your AC power supply is connected correctly.
- Check that the **ON OFF** switch on the rear panel is in the ON position.
- Check that the fuse on the digital to analogue converter rear panel and the fuse in the unit's power plug have not blown; see *To change the mains fuse*, page 17.

There is a ticking sound when the compact disc player is paused

This is perfectly normal with some compact disc players, and does not indicate a fault.

There is no Lock light

- Check that one of the source indicators is lit.
- Check the digital connection between the digital to analogue converter and the compact disc player, or other equipment.

A few compact disc players, which do not conform to recommended practice, apply the digital signal to the output only when the disc starts to play.

There is no 44kHz indicator

This indicates that the source is outside the range of the double lock.

The Eq indicator flashes when there is no input

This is perfectly normal, and does not indicate a fault.

Maintenance

Cleaning

When cleaning the digital to analogue converter bear in mind that the front of the digital to analogue converter is plastic, and the display panel and lid are glass.

Disconnect the power cord before cleaning the unit.

Note: Do not use abrasive cleaners on any part of the digital to analogue converter.

To clean the case, display panel, and keypad

- Use a slightly damp cloth.

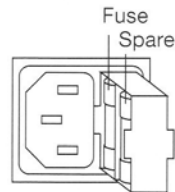
Ensure that no water is allowed to get inside the case, and do not reconnect the power until you are certain that the digital to analogue converter is completely dry.

To clean the connections

The audio and digital phono connectors on the rear of the digital to analogue converter are gold-plated and need no cleaning if

gold-plated phono plugs are used. Otherwise, it is recommended that you unplug and reconnect each plug at least once a year. A proprietary contact cleaner can be used to some advantage.

To change the mains fuse



- Remove the mains connector, and pull out the drawer next to the power input to access the fuses.

Before replacing a blown fuse, if possible ascertain the cause of the failure.

The fuse drawer includes a spare fuse. This should be replaced by one of the same rating.

Service and guarantee

Service

The Meridian 500 Series of hi-fi components have been carefully designed to give years of untroubled service. There are no user-serviceable parts inside the case, nor do the units require any form of maintenance.

In the unlikely event that your digital to analogue converter fails to function correctly, it should be returned, in its original packaging, to your Meridian dealer.

In case of difficulty within the UK or USA please contact the appropriate sales and service address shown on page ii.

In case of difficulty outside the UK or USA, contact the importing agent for the territory. A list of Meridian agents abroad is available from Meridian Audio.

No responsibility can be accepted for the digital to analogue converter whilst in transit to the factory or an agent, and customers are therefore advised to insure the unit.

When seeking service under guarantee, proof of the date of purchase will be required.

Guarantee

The 563 Digital to Analogue Converter is guaranteed against defects in material and workmanship for 2 years from the date of purchase.

The guarantee is void if the 563 Digital to Analogue Converter has been subject to misuse, accident, or negligence, or has been tampered with or modified in any way without the written authorisation of Meridian Audio Limited. Attempted servicing by unauthorised people may also invalidate this guarantee. Labour and carriage charges are not covered unless by local agreement.

Outside the UK, local warranty liability is restricted to equipment purchased within the territory. Our agents abroad are only under contractual obligation to service under guarantee equipment sold through them. They are entitled to make a non-refundable charge for any service carried out on other equipment.

This guarantee does not limit your statutory rights within the United Kingdom.