A large, stylized, grey letter 'M' is centered on a black background. The 'M' is composed of thick, solid grey bars. The text 'user guide' is written in a white, lowercase, sans-serif font, following the diagonal slope of the right-hand side of the 'M'.

user guide

Meridian 566 24-Bit Digital to Analogue Converter

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Gramophone and Wireless Ltd

Part no: 566/2

This guide was produced by
Human-Computer Interface Ltd,
Cambridge, England.

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Introduces the 566 24-Bit Digital to Analogue Converter, and provides an overview of the other products available in the Meridian 500 Series.

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Introduction

In choosing the 566 24-Bit Digital to Analogue Converter you have acquired a component that combines major advances in digital audio and engineering design. The 566 24-Bit Digital to Analogue Converter provides three digital inputs and one optical input, and uses the latest 24-bit dual-differential delta-sigma digital to analogue converter, combined with balanced Class A output amplifiers, to 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 566 24-Bit 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 which can be added to or changed 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. It also allows all the units to be switched off from the front panel of any unit in the system.

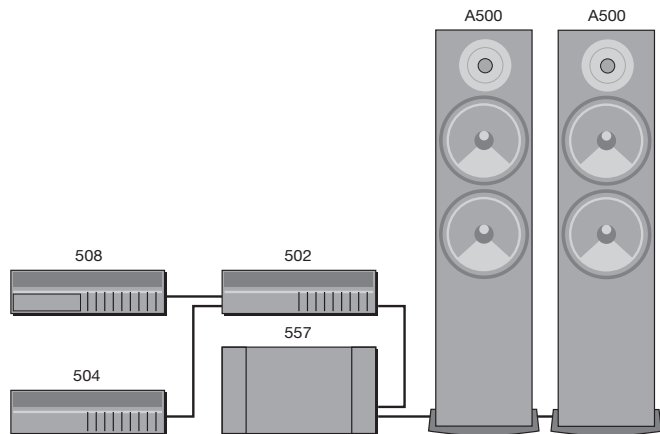
Professional features

The 500 Series also provides features for professional users, including RS232 computer control and balanced connections.

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

Sample configurations

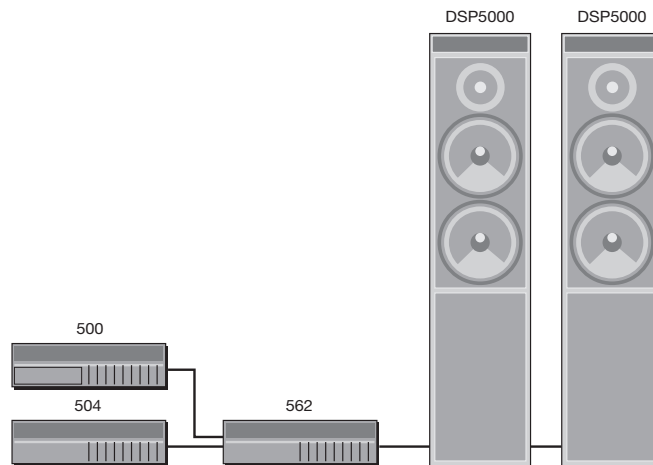
508 24-Bit CD Player



The 508 24-Bit CD Player is an integrated CD transport and converter, providing both digital and analogue outputs.

The 508 24-Bit CD Player is ideally suited for use with the Meridian 557 Stereo Power Amplifier and A500 Loudspeakers, with control over the volume and source selection provided by the 502 Analogue Controller. These units provide balanced inputs and outputs, allowing a completely balanced system to be created.

500 Compact Disc Transport



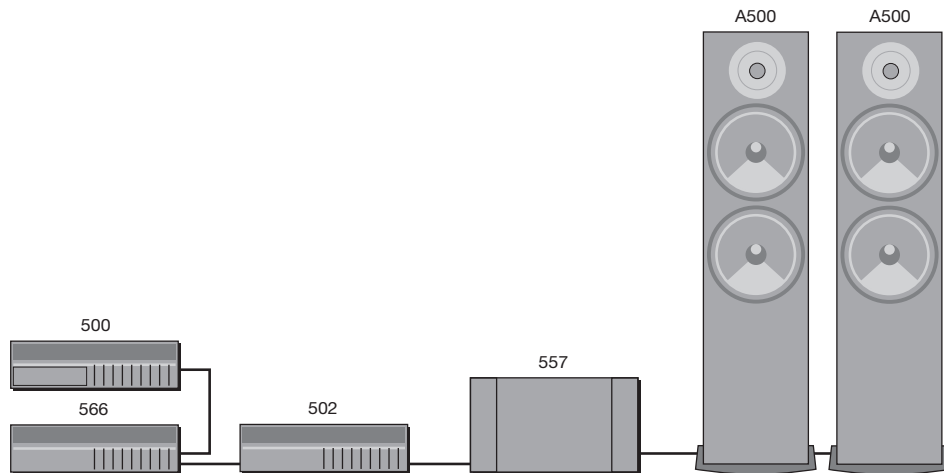
The 500 Compact Disc Transport provides a precision digital output, and can drive DSP5000 Digital Loudspeakers directly.

A 562 Digital Control Unit can be added to cater for conventional analogue sources, and provide source selection between up to 12 different analogue or digital sources.

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

566 24-Bit Digital to Analogue Converter

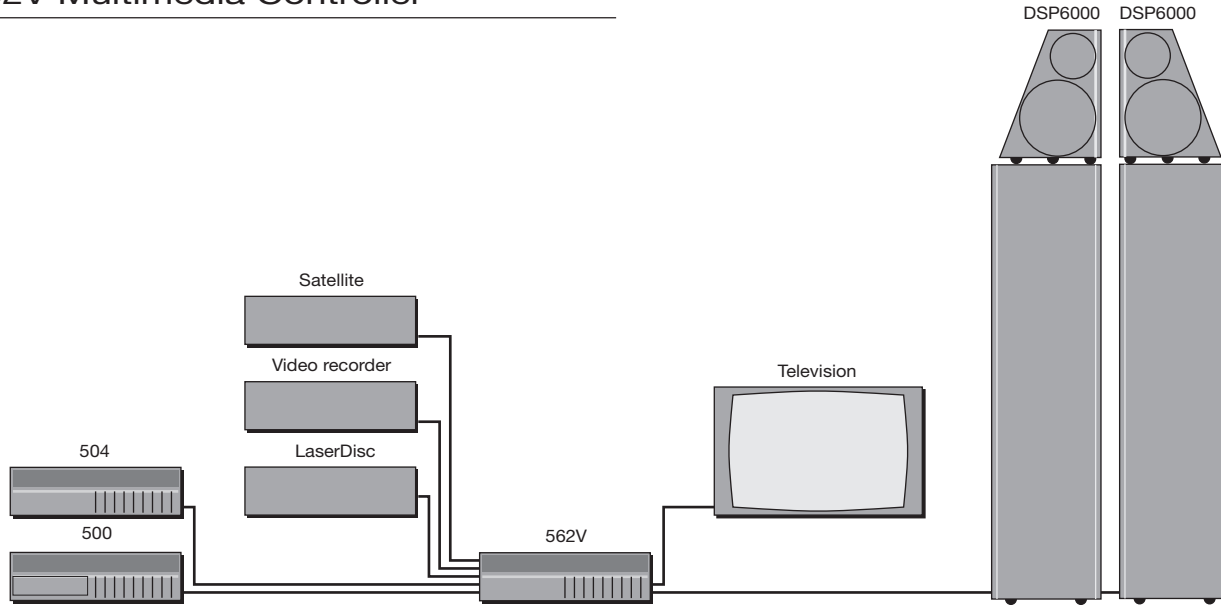
502 Analogue Controller



The digital output provided by the 500 Compact Disc Transport can be decoded by the 566 24-Bit Digital to Analogue Converter to provide a high-quality audio output for use with a conventional audio preamplifier. The 566 24-Bit Digital to Analogue Converter can also decode digital signals from other sources, including LaserDisc players and Digital Audio Tape.

The 502 Analogue Controller is a full function preamplifier for use with any analogue source, and includes balanced inputs to allow you to take advantage of balanced sources, including the 566 24-Bit Digital to Analogue Converter. It provides balanced outputs which are ideal for use with the 557 Stereo Power Amplifier.

562V Multimedia Controller



The 562V Multimedia Controller is the ideal control unit for use with the Meridian DSP6000 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 Stereo 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, 128 times oversampled at 2 bits per channel giving 24 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 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:

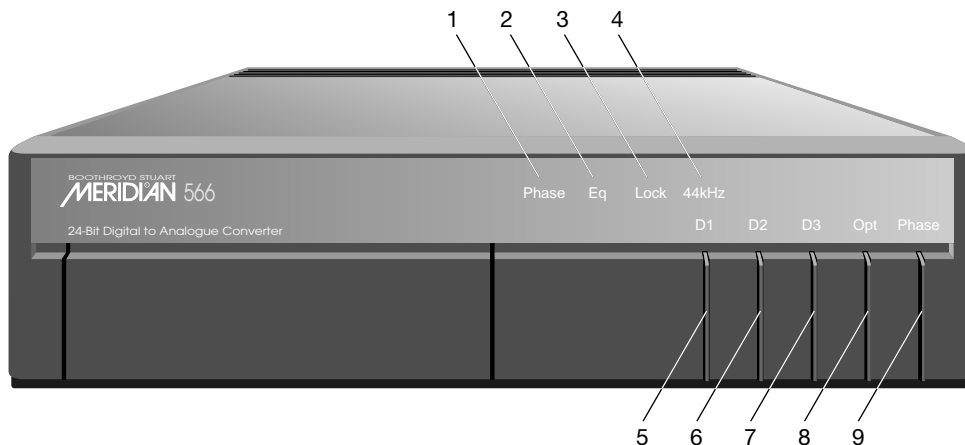
- Additional digital cables.
- Power cord Europe.
- Power cord Canada and USA.

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 566 24-Bit Digital to Analogue Converter to other equipment.

Using the Digital to Analogue Converter

This chapter explains how to use the Digital to Analogue Converter, and explains the function of the front panel keys and indicators.

Front panel



- 1 Phase**
Phase indicator.
- 2 Eq**
Equalisation indicator.
- 3 Lock**
Lock indicator.
- 4 44kHz**
Double lock indicator.
- 5 D1**
Selects digital input 1.
- 6 D2**
Selects digital input 2.
- 7 D3**
Selects digital input 3.
- 8 Opt**
Selects optical input.
- 9 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 back panel, and disconnect it from the AC power supply.

To select the input

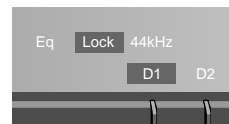
- Press the appropriate key **D1**, **D2**, **D3**, or **Opt** to select the input you want.

An indicator shows the currently-selected input.

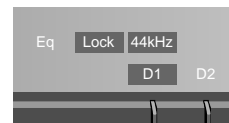
The digital input D1 is automatically selected when the Digital to Analogue Converter is first switched on.

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.

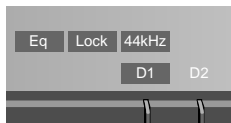


Preemphasis and phase

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 566 24-Bit 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 566 24-Bit 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 positive 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 566 24-Bit Digital to Analogue Converter comes in a box containing the following components:

- 566 24-Bit Digital to Analogue Converter.
- 1 power cord.
- 1 digital cable.
- 1 optical connector blanking plug.
- 1 500 comms lead.
- 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

Back panel

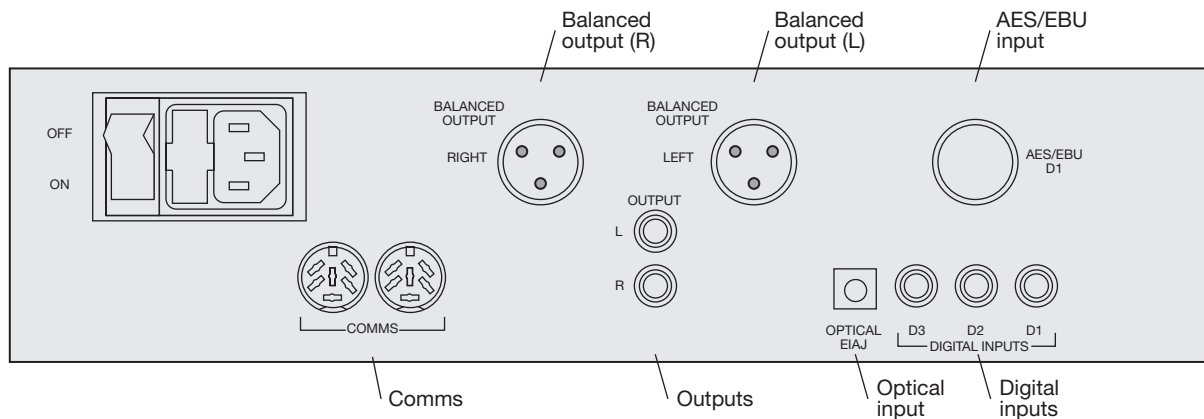
The diagram below shows the back panel connections.

Digital inputs

The 566 24-Bit 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.

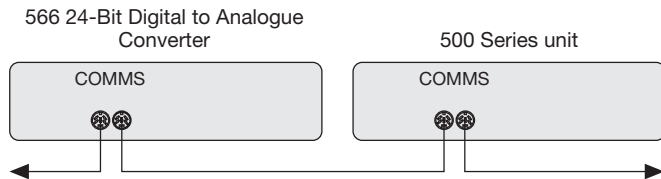


Analogue outputs

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 other Meridian 500 Series equipment

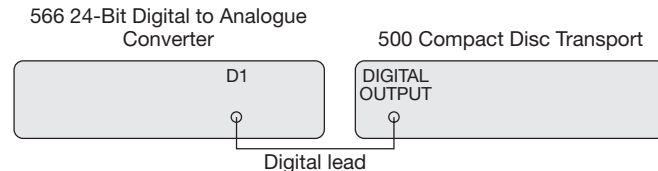


- Connect one of the COMMS sockets on the back panel of the 566 24-Bit Digital to Analogue Converter to one of the COMMS sockets on another 500 Series unit, using the 500 comms lead provided.

The sequence in which you connect the units is not important.

Note: Do not, under any circumstances, connect any equipment other than Meridian 500, 600, or 200 Series to the socket marked COMMS on the back of the 566 24-Bit Digital to Analogue Converter.

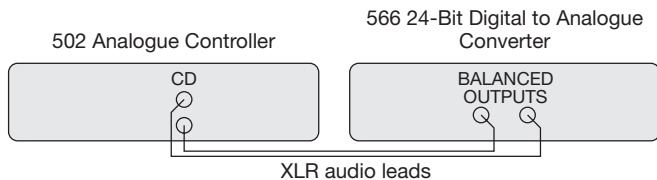
To connect to a 500 Compact Disc Transport



- Connect the DIGITAL OUTPUT on the back panel of the compact disc transport to the D1 input of the 566 24-Bit Digital to Analogue Converter, using the digital lead provided.

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

To connect to a 502 Analogue Controller



- Connect the BALANCED OUTPUT LEFT and RIGHT XLR sockets on the back panel of the 566 24-Bit Digital to Analogue Converter to the balanced CD inputs of the 502 Analogue Controller, using two XLR to XLR audio leads.

To connect to a DAT recorder, or other digital source

- Connect one of the digital inputs D1, D2, or D3 on the back panel of the 566 24-Bit 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.

Configuring the Digital to Analogue Converter

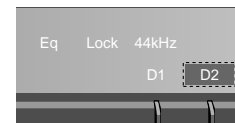
The Digital to Analogue Converter is initially set up so that you select the digital input you want by pressing the appropriate key on the front panel.

If you are using the 566 24-Bit Digital to Analogue Converter in conjunction with a 501/501V Control Unit or 502 Analogue Controller you can configure the Digital to Analogue Converter so that it uses the COMMS signal to select the correct input automatically when you choose a particular source on the Control Unit.

To configure the Digital to Analogue Converter

- Connect the 566 24-Bit Digital to Analogue Converter to the other 500 Series units, making sure you connect the COMMS sockets; see *To connect to other Meridian 500 Series equipment*, page 14.
- Switch off the Digital to Analogue Converter, using the power switch on the back panel.
- Switch on the other units in the system.
- Switch on the Digital to Analogue Converter while holding down the key corresponding to the first digital input you want to configure; for example **D2**.

The corresponding indicator will flash:



- Using the Meridian System Remote, select the source that should select this input; for example, **CD**.

The indicator will stop flashing.

- Press the key corresponding to the next digital input you want to configure, followed by the next source you want to associate with it, and repeat for any other sources you want to configure.

When you have programmed all the sources you want to configure:

- Press **Phase** to return the Digital to Analogue Converter to normal operation, or switch it off using the power switch on the back panel.

Note that you should not configure any of the analogue sources connected directly to the Control Unit in your system. Otherwise selecting one of these will change the digital input on the Digital to Analogue Converter which could interrupt a source you are tape recording.

To reset the Digital to Analogue Converter

You can reset the Digital to Analogue Converter to its initial configuration using the following procedure:

- Turn off the Digital to Analogue Converter, using the power switch on the back panel.
- Turn on the power again while holding down the **Phase** key on the front panel.

All the indicators on the front panel will be illuminated for one second.

The inputs will be programmed so that they are only selected by the appropriate front panel key.

Troubleshooting

This section describes problems you may encounter when using the 566 24-Bit 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 back panel is in the ON position.
- Check that the fuse on the Digital to Analogue Converter back panel and the fuse in the unit's power plug have not blown; see *To change the mains fuse*, page 20.

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.

There is interference on the radio and/or television when the digital converter is switched on

Before following the steps below, ensure all units are switched off first.

If this equipment does cause or suffer from interference to/from radio or television reception then the following measures should be tried:

- Reorient the receiving aerial (or antenna) or route the antenna cable of the receiver as far as possible from the digital converter and its cabling.
- Ensure that the receiver uses well-screened antenna cable.
- Relocate the receiver with respect to the digital converter.
- Connect the receiver and this product to different AC outlets.

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

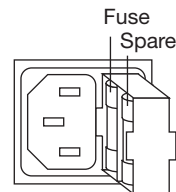
- Use a slightly damp cloth.

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 back 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 a fuse 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 566 24-Bit 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 566 24-Bit 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.



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