Meridian 508 20-Bit CD Player

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Introduction

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Introduces the 508 20-Bit CD Player, and provides an overview of the other products available in the Meridian 500 Series.

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Provides step-by-step instructions on how to operate the CD player, using either the front panel or the Meridian System Remote.

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Introduction

In choosing the 508 20-Bit CD Player you have acquired a component that combines major advances in digital audio and engineering design. The 508 20-Bit CD Player incorporates a three-beam laser CD mechanism, for superb sound quality and disc playability. The precision-engineered turntable combines the advantages of drawer loading with the superior disc clamping normally associated with top loading players. The digital signal is decoded using the latest 20-bit dual-differential Delta Sigma digital to analogue converter, combined with a discrete class A output for superlative audio performance.

This guide is designed to enable you to obtain the best possible results from the unit, whether your requirements are simply to play a disc or to programme a selection of music.

If you have just purchased the 508 20-Bit CD Player, you should first turn to the section *Setting up the CD player*, page 17, which explains how to unpack and install the CD player correctly.

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 Remote 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.

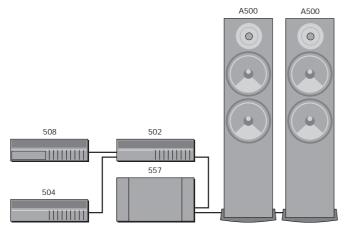
The 500 Series communications system allows you to control any combination of units using a single remote, and ensures that your commands from the remote are interpreted unambiguously. The communications system also allows you to extend your hi-fi system into two or three rooms, with the ability to control the sources in one room from the controller in another room.

Professional features

The 500 Series also includes 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.

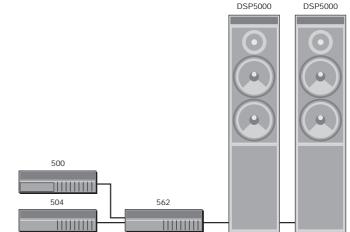
508 20-Bit CD Player



The 508 20-Bit CD Player is an integrated CD transport and converter, providing both digital and analogue outputs.

The 508 20-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



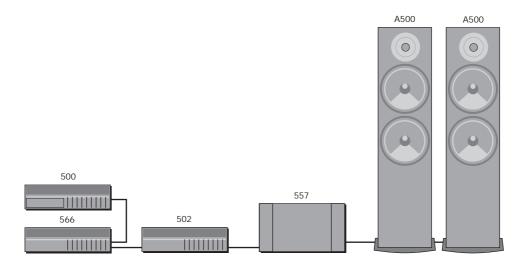
The 500 Compact Disc Transport provides a precision digital output, and can drive DSP5000 Digital Loudspeakers directly.

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.

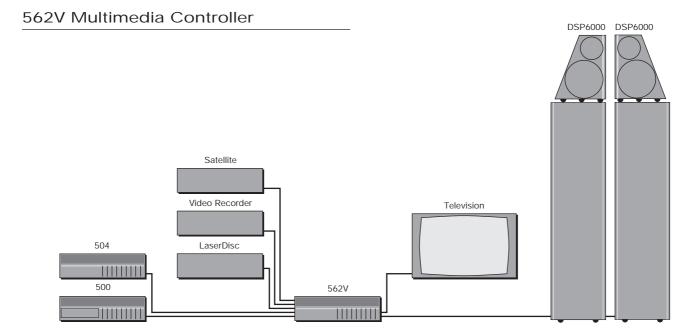
The 504 Stereo FM Tuner is an ideal addition to the system if radio reception is required.

566 20-Bit Digital to Analogue Converter

502 Analogue Controller



The digital output provided by the 500 Compact Disc Transport can be decoded by the 566 20-Bit Digital to Analogue Converter to provide a high-quality audio output for use with a conventional audio preamplifier. The 566 20-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 20-Bit Digital to Analogue Converter. It provides balanced outputs which are ideal for use with the 557 Stereo Power Amplifier.



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

Consumption

		sp
THD	Less than -93dBFS.	
Noise	Less than -93dBFS.	<u>A</u>
Mechanism	Three-beam laser.	Th
Conversion	Dual differential 20-bit Delta Sigma.	0
Display	Eight character dot-matrix display for track, time, and index.	0 0
Finish	Black textured enamel and glass.	Tŀ
Dimensions	88mm x 321mm x 332mm (3.46" x 12.64" x 13.07").	pr fro
Weight	6.4kg (14lbs).	ar
Audio output	2V fixed, class A.	lf
Balanced outputs	XLR sockets, 1=ground, 2=positive phase output, 3=negative phase output.	th ra Pl
Digital outputs	Co-axial, optical.	
Communications	Two 5 pin 240° DIN sockets.	

20VA.

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

Available accessories

The following accessories are available from your dealer:

Meridian System Remote.
Power cord Europe.
Power cord Canada and USA.

The Meridian System Remote provides access to all the facilities provided by the 508 20-Bit CD Player, including those available from the front panel controls. In addition, it allows you to control any other 500 Series units in your system.

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 508 20-Bit CD Player to other equipment.

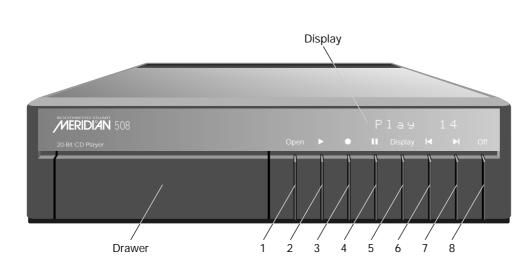
Using the CD player

This chapter provides a summary of the functions of the CD player in order to identify the controls which you will use to operate the unit.

It also describes all aspects of using the CD player, beginning with essential instructions such as switching on and loading a disc, to the more advanced functions such as programming.

Unless otherwise specified, each function is available from the front panel or the remote.

Front panel



1 Open

Opens and closes the disc drawer.

2 ► (Play)

Plays a selected track, or moves to the next track.

- 3 (Stop) Stops the disc.
- 4 **II (Pause)** Pauses the disc.
- 5 Display Selects the information displayed.
- 6 I◄ (Previous) Selects the previous track.
- 7 ►I (Next) Selects the next track.
- 8 Off

Switches to standby.

During normal use the CD player should be left in the standby state. This uses a negligible amount of electricity, but ensures that the components of the CD player operate at maximum efficiency from the moment you start playing a disc.

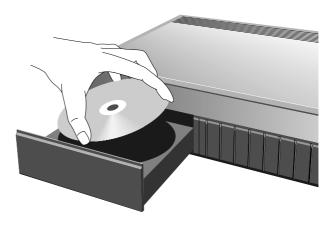
If you are not going to use the CD player for a period of several days you should switch the unit completely off, at the back panel, and disconnect it from the AC power supply.

To switch on from standby

- Press Open (front panel only), ▶ (Play), (Stop), or II (Pause).
- Switch on any other equipment connected to the CD player which is not part of the Meridian 500 Series.

To insert a disc

- Press **Open** (front panel only) to open the drawer.
- Place your disc, label side up, over the hub, as shown opposite.
- Press **Open** again to close the drawer.



To switch to standby

• Press Off.



The display will show:

If you have other Meridian 500 Series equipment connected to the CD player, these units will also switch to standby.

If a disc is currently playing, switching to standby will stop the disc, and the disc can safely be left in the unit.

Playing a disc

The CD player allows you to play an entire disc, or start playing from any track. While a disc is playing you can go back to the start of the track or skip to the start of the next track.

If you have programmed a selection, these functions also work with the selection of tracks you have programmed. For information about programming; see *Programming a selection*, page 12.

Play

To play the disc

● Press ► (Play).

The display will show your selection:

The display will then show the track being played:

To restart the current track

● Press I (Previous).



● Press ► (Play).

To play starting from a particular track

● Press ►I (Next) or I◄ (Previous) to step through the track numbers until the track you want to play is displayed, or type the number of the track (remote only).

For example:



With the remote you will need to press **CD** first if you have the 504 Stereo FM Tuner.

After a short delay the track you have selected will start to play.

If you have programmed a selection you will also need to:

● Press ► (Play).

Stopping, pausing, and repeating play

You can pause a disc while keeping it spinning, so that you can resume play instantly.

You can also set a disc to play repeatedly, so that when the disc (or selection) has played, it will begin again from the beginning. This function is only available from the remote.

To stop play

Press • (Stop).

The display will show the total number of tracks on the disc.

For example:

--20

To pause play

• Press II (Pause).

The **Paused** indicator will appear, and the disc will remain spinning.

To continue after pausing

● Press II (Pause) or ► (Play).

To continuously repeat a disc

• Press Repeat (remote only).

The Repeat indicator will appear.

To cancel the repeat function

• Press Repeat again.

Programming a selection

With the remote you can programme a selection of tracks, and then play only those tracks you have programmed.

You can programme a selection either by storing the tracks you want to play, or by clearing the tracks you do not want to play. If you programme a selection by storing the tracks you want to hear, you can play the tracks in any order and repeat tracks in the sequence.

You can programme a selection while the disc is playing, in which case the selection will be played after the current track finishes.

Error

Attempting to programme more than 31 tracks will display an error warning:

To choose a track to programme

Press Next or Previous to step through the track numbers until the track you want is displayed, or type the number of the track you want.

To programme by specifying the tracks you want to play

• Choose the first track you want to play, as described above.

The display will show the track number; for example: The class of the track $\ensuremath{\mathsf{Track}}$

Press Store (remote only).

The display will change to:

Store 14

You should store the track within two seconds, or it will begin to play.

The track will be labelled Store.

All the other tracks are initially programmed not to play, and will be labelled Clear.

To programme by specifying the tracks you do not want to play

 Choose one of the tracks you do not want to play, as described above.

The display will show the track number; for example:

Press Clear (remote only).



Clear



You should clear the track within two seconds, or it will begin to play.

The track will be labelled Clear. All the other tracks are initially programmed to play, and will be labelled Store.

To add a track to a selection

- Select the track you want to add, as described above.
- Press Store (remote only).

The Clear label will change to Store to indicate that the track is stored.

To remove a track from a selection

• Select the track you want to remove, as described above.

• Press Clear (remote only).

The Store label will change to Clear to indicate that the track has been cleared.

To clear a programme

• Press • (Stop) twice.

The display will show C.P. (Cancel Programme):



A programme is automatically cancelled if you open the disc drawer, or press **Off**.

Disc information and scanning

To change the display

• Press Display.

Each time you press the appropriate key, the display will step between the following display options:

Display	Example
Track (and index) number. This is the usual display.	14
Elapsed time for the whole disc.	58:12 14
Elapsed time for the current track.	0:59 14
Time remaining for the whole disc.	1:47 14
Blank.	

Scanning a disc

The scan controls allow you to move quickly to any position on the disc at approximately 20 times normal speed.

During scanning, the sound is muted and the display automatically changes to show the elapsed time for the whole disc, unless you have already selected one of the other time displays.

This function is only available from the remote.

To scan through a disc

● Hold down ►► or ◄◄ (remote only).

The display will show your position on the disc; for example:

12:37 >>

• Release the key when you have reached the point you want.

Using index points

In addition to dividing music into tracks, some discs provide index points within each track to allow you to locate individual movements or bars.

For any disc with index points, the CD player's track display will show the track and index number.

With the remote you can use index points to move rapidly to particular positions within a track.

To display the index number

• If necessary, select the track number display.

After the first index point, the index number will be shown after the track number on the display.

For example, on track 14 index number 7 the display will show:



To move to an index point

• Type the number of the track, followed by . and the number of the index point (remote only).

For example, to play from track 3, index number 2, press 3.2.

The display will show:



After a short delay the disc will start to play at the track and index point you have selected.

Changing the absolute phase

You can use the remote to change the absolute phase of the analogue output signal, which in some circumstances can give noticeable improvement in realism.

To review the phase setting

• Press **Phase** (remote only).

The display will show:



To change the phase setting

• Press Phase.

The display will show:

• Press Phase again.

The display will show:





Setting up the CD player

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

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

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

Unpacking

The 508 20-Bit CD Player comes in a box containing the following components:

O 508 20-Bit CD Player.

- O1 power cord.
- O1 optical connector blanking plug.
- O This manual.

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

To position the CD player

Do not place the CD player:

O In direct sunlight.

- O Near heat sources, eg a radiator.
- O On top of a power amplifier, as the heat generated may damage the CD player.

However, it can be stacked under a 562 Control Unit and 504 Stereo FM Tuner, if you have these Meridian components in your system.

In common with all CD players, the 508 20-Bit CD Player 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.



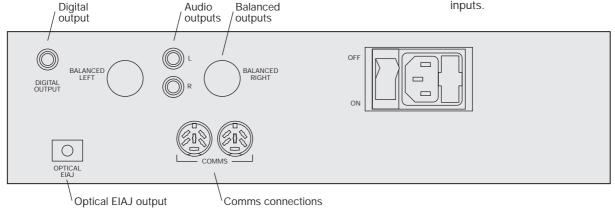
Back panel

The CD player provides two analogue and two digital outputs to allow you to choose the highest-quality method of connection to your system.

The 508 20-Bit CD Player produces an extremely low-noise low-jitter electrical digital output, and this is the recommended method of connection to digital equipment.

The following table lists the equipment which uses each of the four output types:

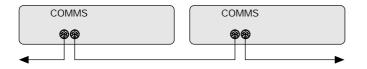
Use this output	To connect to this
Digital Output	DSP6000 or DSP5000 Digital Loudspeakers, a D/A converter, digital preamplifier, or digital recorder, using digital cable.
Optical EIAJ	A D/A converter, digital preamplifier, or digital recorder, using optical fibre.
Phono outputs	A 501 Control Unit, or other audio equipment, using conventional analogue audio leads.
Balanced outputs	Equipment having balanced analogue inputs.



To connect to other Meridian 500 Series equipment

 Connect one of the COMMS sockets on the back panel of the CD player to one of the COMMS socket on another 500 Series unit, using the 500 comms lead provided with the other unit.

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



Then configure the units with the following automatic setup procedure:

- Switch all the units to standby.
- Press Clear on the remote.

Each unit will display:



One unit will then be designated as the controller, and display:

This is the unit that will respond to the remote.

All the other units will be configured as non-controllers, and display:

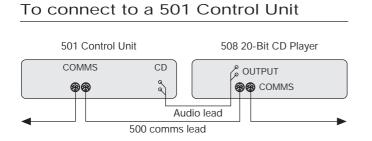
N.Con.

Con.

Your system is now set up and ready for use.

- If for any reason the automatic setup does not give the configuration you want, restore the default operation by selecting Type 1 as described in *To connect to Meridian 600* or 200 Series equipment, page 22.
- If you want to change the automatic setup configuration refer to the Meridian 500 Series User Guide.

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 CD player.



 Connect the sockets marked OUTPUT L and R on the back panel of the CD player to the CD input on the back panel of the 501 Control Unit.

To connect to a conventional preamplifier

 Connect the sockets marked OUTPUT L and R on the back panel of the CD player to an appropriate input on your preamplifier.

You should consult the manufacturer's manual to determine which input to use, but generally it will be labelled CD or AUX.

You should either use a twin-screened audio cable, or a pair of single-screened audio cables. These cables can have a considerable effect on the quality of the sound, and you are advised to seek your dealer's advice on the best types of cables for your system.

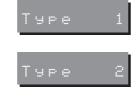
To connect to Meridian 600 or 200 Series equipment

If your system includes any Meridian 600 or 200 Series units, with 600 COMMS or 200 COMMS sockets, you should set all the 500 Series units to 200 COMMS operation using the following procedure:

- Turn off the CD player, using the power switch on the back panel.
- Turn on the power again while holding down the **Off** key on the front panel.

The display will show the current setup:

Press ►I (Next) on the front panel to change to Type 2:



- To connect to DSP6000 or DSP5000 Digital Loudspeakers
- Connect the socket marked DIGITAL OUTPUT on the back panel of the CD player to the M-lead, supplied with the DSP6000 or DSP5000 speakers.
- Follow the instructions provided in the DSP6000 or DSP5000 manual for connecting to a CD player.

The DSP6000 and DSP5000 loudspeakers are fully programmable, and you should consult your manual before deciding which input to use. If you have any doubts, your dealer will be able to assist you.

Suitable cables are available from your Meridian dealer, or Meridian Audio Limited.

 Switch the power off and on again to restore the CD player to normal operation.

 To return to 500 COMMS operation repeat the above procedure, and select Type 1.

Troubleshooting

This section describes problems you may encounter when using the CD player, 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

O Check that your AC power supply is connected correctly.

- O Check that the **ON OFF** switch on the back panel is in the ON position.
- O Check that the fuse on the CD player back panel and the fuse in the unit's power plug have not blown; see *To change the mains fuse*, page 25.

The drawer will not open

O Check that the standby display is shown.

If the standby display is shown:

O Switch off the CD player and disconnect it from the AC power supply.

O Try opening the drawer gently, by hand. Do not use force.

O Restore power to the CD player.

There is no sound when playing a disc

- O Check that your preamplifier is switched on, and the volume is at an appropriate level.
- O Check that the CD player is connected correctly to the other components of your system; see *Connecting the CD player*, page 19.
- O Check that the correct source has been selected on your preamplifier.
- O Check that the Pause indicator is not lit.
- O Try playing another disc. If this disc works, check the problem disc for signs of dirt or damage.

There is interference on the radio and/ or television when the CD player 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:

- O Reorient the receiving aerial (or antenna) or route the antenna cable of the receiver as far as possible from the 508 20-Bit CD Player and its cabling.
- O Ensure that the receiver uses well-screened antenna cable.
- O Relocate the receiver with respect to the CD player.
- O Connect the receiver and this product to different AC outlets.

The display shows No disc when attempting to play a disc

- O Check that the disc is positioned correctly in the drawer, with the label uppermost; see *To insert a disc*, page 9.
- O Try playing another disc. If this disc works, check the problem disc for signs of dirt or damage.

The display shows Error when attempting to programme a disc

- O Check that the disc includes the track number you are attempting to programme.
- O Check that you have not already programmed 31 tracks, the maximum number.

Cleaning

When cleaning the CD player bear in mind that the front of the CD player 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 CD player.

To clean the case, display panel, and keypad

• Use a slightly damp cloth.

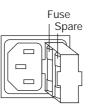
Ensure that no water is allowed to get inside the case, and do not reconnect the power until you are certain that the CD player is completely dry.

To clean the audio connections

The audio sockets on the back of the CD player are gold-plated and need no cleaning if gold-plated phono plugs are used. Otherwise, it is recommended that you unplug and reconnect the plugs at least once a year. A proprietary contact cleaner can be used to some advantage.

The electrical digital output should be treated in a similar way.

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

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 CD player 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 CD player 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 508 20-Bit CD Player is guaranteed against defects in material and workmanship for 2 years from the date of purchase.

The guarantee is void if the 508 20-Bit CD Player 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. Note that connecting anything other than the correct network lead to the COMMS sockets may cause damage to the 508 20-Bit CD Player which will not be covered by this guarantee. 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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