818 Reference Audio Core
User Guide

Important safety instructions

• Read the instructions.
• Keep these instructions.
• Follow all instructions.
• Do not use this apparatus near water.
• Clean only with a dry cloth.
• Install only in accordance with the manufacturer's instructions.
• Refer all servicing to approved service personnel.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

This apparatus has been designed with Class 1 construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding pin).

This apparatus uses a single-pole power switch. As a result it is not isolated from AC mains power when switched off at the rear panel. The apparatus may be isolated from mains power either by unplugging the power connector from the rear of the unit, or by unplugging the connector at the opposing end of the power cord or cable from its supply outlet. As a result, either or both of these connectors should remain accessible.

Safety warnings

• Do not expose the unit to dripping or splashing.
• Do not place any object filled with liquid, such as a vase, on the unit.
• Do not place naked flame sources, such as lighted candles, on the unit.

To avoid overheating

• Leave at least 10cm around the equipment to ensure sufficient ventilation.

Do not position the unit:

• In direct sunlight.
• Near heat sources, such as a radiator.
• Directly on top of heat producing equipment, such as a power amplifier.

To avoid interference

Do not position the unit:

• Near strong electrical or magnetic radiation, such as near a power amplifier.

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 and type-tested to comply with the limits set out in EN55013 and EN55020.

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Contents

Copyright and acknowledgements

Product registration

Register your Meridian 818 Reference Audio Core at:

www.meridian-audio.com/support

and receive Exclusive Meridian News and discover more about the Meridian Collection.

Introduction

Welcome to the Meridian 818 Reference Audio Core.

This User Guide provides full information about using the 818 in conjunction with your other equipment, to achieve the superb results you can expect from it.

The 818 Reference Audio Core

Incorporating the advanced technology from Meridian's popular 808 Signature Reference CD Player, the Meridian 818 Reference Audio Core is a stereo audio controller with a wide range of digital and analogue inputs.

Outputs

The 818 Reference Audio Core provides two Meridian SpeakerLink connectors for simple, straightforward connection to Meridian DSP Loudspeakers via Cat 5 cables.

Alternatively, balanced and unbalanced analogue outputs are provided for connecting to an external power amplifier or preamplifier.

If you are using DSP loudspeakers you can connect a headphone amplifier, such as the Meridian Prime Headphone Amplifier, to the analogue outputs for headphone listening. A headphone mode is provided to mute the loudspeakers when listening on headphones.

Inputs

On the input side, the 818 Reference Audio Core provides a wide range of possibilities.

The 818 Reference Audio Core provides a network socket to connect directly to a Sooloos network, allowing it to play music from and control a Sooloos Digital Media System.

A SpeakerLink input is provided for connecting to other Meridian sources with SpeakerLink outputs. In addition, two digital coaxial S/PDIF inputs and two Toslink optical digital inputs are provided, for connecting to other digital sources.

A USB B-type connector is provided to allow the 818 Reference Audio Core to be connected to a computer system and used as an external sound card.

Six stereo analogue inputs are provided on gold-plated phono connectors.

Audio processing

The 818 Reference Audio Core features high-quality audio processing. Analogue inputs are converted to digital at 96kHz sampling, and digital inputs accept signals up to 192kHz. High resolution files may be replayed from a Meridian Sooloos Digital Media System or a computer connected to the USB input.

Signals are processed with Meridian's exclusive apodising filter that ensures maximum audio quality with outputs at 96kHz/24 bit (digital) or 192kHz/24 bit (analogue).

The 818 Reference Audio Core will also decode MQA (Master Quality Authenticated) audio streams. It can extract the finest of details from music and deliver the audio for rendering either to its own analogue outputs, or to an attached DSP loudspeaker system. The front panel display will indicate MQA as will any attached DSP loudspeaker system that can recognise the stream.

When used with analogue loudspeakers the 818 Reference Audio Core can provide tone adjustments as well as balance and volume controls.

When used with Meridian DSP Speakers, the 818 Reference Audio Core provides control of additional audio processing in the speakers, such as treble and bass tone controls and enhanced room boundary equalisation.

System integration

An RS232 interface provides full remote control capability as well as the ability to configure the unit with Meridian's innovative Windows-based graphic configuration application.

Three programmable trigger outputs are provided for direct control of external devices, for example powering-up amplifiers, etc.

The 818 Reference Audio Core is supplied with the
MSR+ learning/programmable remote control, which
not only operates all Meridian products but also
includes an extensive database of third-party products
and the capability to learn commands from existing
remotes.

Specifications

Audio outputs

- 2-channel balanced audio output, driven by a 192kHz digital to analogue converter.
- 2-channel unbalanced audio output, driven by a 192kHz digital to analogue converter.
- 2-channel digital coax output.
- Two 2-channel Meridian SpeakerLink outputs.
- Optional MHR encryption on digital outputs at high rate.

Audio inputs

- Six 2-channel unbalanced analogue inputs. Adjustable sensitivity.
- Two 2-channel digital coax inputs. 44.1kHz to 192kHz sampling and up to 24-bit precision.
- One 2-channel Meridian SpeakerLink input. 44.1kHz to 192kHz sampling and up to 24-bit precision.
- Two 2-channel digital optical inputs. 44.1kHz to 96kHz sampling and up to 24-bit precision.
- One network input (Ethernet) for connection to a Meridian Sooloos Digital Media System.
- One USB input, for connection to a computer. Up to 192kHz sampling and up to 24-bit precision.
- All inputs provide renameable legends.

Signal processing

The 818 uses Meridian's proprietary DSP software to provide the following powerful features:

- Apodising filter.
- Upsampling.
- FIFO and error correction.
- Resolution enhancement.
- MQA decoding and rendering.

Controls

Front-panel facia controls for:

- Source, Play/Pause, Previous, Next, Mute, Volume Up and Down, and On/Off.

A hinged control panel provides additional controls for:

- Volume +/-, Source, Display, Mute, Setup, Fast Forward/Reverse, and Menu keys.

Display

- 20-character dot-matrix display with adjustable brightness and contrast.
- Indicators for Emphasis and Phase.

Using the 818 Reference Audio Core

This chapter provides a summary of the functions of the 818 Reference Audio Core to identify the controls you use to operate the unit.

It also provides step-by-step instructions for operating the 818, using either the front panel or the MSR+.

Front panel keys

Eq
Emphasis
indicator

Menu
Not currently
used

**Fast Forward/
Fast Reverse**
Scans forwards/
backwards

Source
Selects a source

Mute
Mutes or restores
the sound

Phase –
Indicates inverted
phase

Left/Right
Selects a menu
parameter

Up/Down
Changes a menu
parameter

Setup
Displays the
setup menus

Display
Changes the
information
displayed

Reference Audio Core 818

Menu

Source   Volume +

Setup   Display   Mute   Volume –

Reference Audio Core 818   Source   ▶❙❙   ❙◀   ▶❙   Mute   ▼   ▲   Off

Play/Pause
Plays or pauses
the track

Mute
Mutes or restores
the sound

Off
Switches to
standby

Source
Selects a
source

Previous/Next
Selects the
previous or next
track

Volume keys
Change the
system volume

Volume keys
Change the
system volume

MSR+ keys

Source keys
Select a source

Previous
Selects the
previous track

Play
Plays the track

OFF
Switches to
standby

Fast reverse
Scans backwards

Stop
Stops the track

Next
Selects the next
track

Fast forward
Scans forwards

Pause
Pauses
the track

Volume keys
Change the
volume

Number keys
Select a track by
number

Repeat
Repeats a
track/album

Clear
Clears a selection

Mute
Mutes or restores
the sound

Function
Selects a special
function

Menu keys
Select or change
the balance,
phase, contrast,
or brightness

Store
Stores
a preset

Display
Changes the
front-panel
display

Switching on and off

When not playing, the 818 should be left in the standby state. This uses a minimal amount of electricity, but ensures that the components of the 818 operate at maximum efficiency from the moment you start.

If you are not going to use the 818 for several days you should switch the unit off completely at the rear panel, and disconnect it from the AC power supply.

To switch on from standby

• Press **Source** (front panel), or select a source on the remote.

If the 818 is part of a Meridian system it will automatically switch on any other units in the system, such as the 861 Reference Digital Surround Controller and Meridian DSP Loudspeakers.

To switch to standby

• Press **Off** (front panel or remote).

If you have other Meridian equipment or Meridian DSP Loudspeakers connected to the 818 these units will also switch to standby.

Selecting a source

The 818 responds to the following 12 source keys on the remote:

CD, Radio, DVD, SLS, Disc, Tape, TV, Cable, Sat, PVR, USB, and Game.

The input associated with each of the sources depends on how the 818 has been set up; for more information refer to the *Meridian Configuration Program Guide*.

Your installer may have customised the labels displayed for each source to suit your other equipment.

To select a source

• Press **Source** (front panel or under the front panel) until the display shows the source you want, or press the appropriate source key on the remote; eg **CD**.

The display shows the source and volume setting.

For example, if you select the Radio source:

The display shows: `Radio            65`

The 818 mutes the sound while you change source.

To play music from a Sooloos system

Either:

• Press **Source** (front panel or under the front panel) until the display shows SLS, or press the **SLS** key on the remote.

Or:

• Select the 818 zone from the Sooloos controller.

You can then listen to music streamed from the Sooloos server.

The volume and mute controls on the Sooloos controller will operate the 818.

To control the Sooloos system

When the SLS source is selected you can control the Sooloos system from the 818 front panel controls.

• Press ▶❚❚ (front panel) or ■, ❚❚, and ▶ (remote) to control playback.

• Press ❚◀ or ▶❚ (front panel or remote) to step between tracks in the Sooloos play queue.

For more information please refer to the *Meridian Sooloos Network Card Guide*.

Adjusting the system volume

The 818 Reference Audio Core provides a volume control which can be adjusted from the front panel or remote control. The volume changes in precise steps of 1dB, where 9dB is equivalent to doubling the loudness. The current volume setting is displayed in dB on the front-panel display, and can be varied in the range 1 to 99dB.

You can choose what startup volume is set when you switch the 818 on; see *To set the startup volume*, page 36.

If the 818 is set up with variable outputs (see Choosing a standard setting, page 34) the analogue output level is varied, allowing the 818 to drive an amplifier or active loudspeakers. If the 818 is set up with fixed outputs the volume control is performed by the DSP loudspeakers.

To change the volume

• Press **Volume ▲** or **Volume ▼** (front panel), **Volume +** or **Volume –** (under the front panel), or the red ▲ or ▼ keys on the remote.

As you adjust the volume setting the display shows the current volume level.

For example:

```
CD                    65
```

To mute the sound

• Press **Mute** (front panel, remote, or under the front panel).

The display shows:

```
Mute
```

To restore the sound

• Press **Mute** again.

Alternatively, the sound will be restored if you adjust the volume.

Changing the treble, bass, or balance

The 818 Reference Audio Core provides sophisticated treble and bass controls, to allow you to adjust the broad balance of the sound to correct for the acoustics of your listening room, or for a misbalanced recording.

The controls are more subtle than conventional tone controls, and take advantage of digital signal processing techniques to provide a more natural adjustment of the frequency response.

The balance control uses digital signal processing to compensate for an off-centre listening position by delaying and diminishing the sound in one speaker, thus effectively shifting the speaker's image back.

These controls only affect the analogue outputs when the 818 Reference Audio Core is set up with variable outputs.

To change the treble

• Press ◄ or ► (remote or under the front panel) until the display shows the current treble.

For example:　　　　　`SLS    Treble    +1.0`

• Press ▲ or ▼ (remote or under the front panel) to change the treble.

The treble control tilts the frequency of the response over the entire frequency range to make the sound brighter or dimmer. It can be adjusted between ±10db in 0.5dB steps. Normally settings between +1.0 and -2.0 will give the most natural results.

To change the bass

• Press ◄ or ► (remote or under the front panel) until the display shows the current bass setting.

For example:　　　　　`SLS    Bass      +1.0`

• Press ▲ or ▼ (remote or under the front panel) to change the bass.

The bass control allows you to adjust the bass response in the room by ±5dB in 0.5dB steps. Normally settings between +3.0 and -2.0 will give the most natural results.

To change the balance

• Press ◄ or ► (remote or under the front panel) until the display shows the current balance.

For example:　　　　　`SLS    Balance    <0>`

• Press ▲ or ▼ (remote or under the front panel) to move the listening position.

The display shows the direction and position of the listening position.

For example:　　　　　`SLS    Balance    <3`

The arrow indicates the direction, and the number indicates the position where 0 is central, 8 is in line with the corresponding main speaker, and 10 is fully to one side.

Changing the axis or phase

Larger models of the DSP loudspeakers have an axis control that allows you to compensate for the height of the listener relative to the tweeter.

You can also change the absolute phase of the signal, to compensate for signals which are out of phase, giving an unnatural-sounding bass.

The axis control is only available if your 818 is set up with fixed outputs.

To change the axis

- Press ◀ or ▶ (remote or under the front panel) until the display shows the current axis setting.

For example:

`SLS   Axis      -1`

- Press ▲ or ▼ (remote or under the front panel) to change the axis.

The axis can be adjusted between -2 and +3, where 0 corresponds to the axis of the treble unit. Usually a listener will be below that position, so we recommend settings of -1 or -2.

To change the phase

Either:

- Press ◀ or ▶ (remote or under the front panel) until the display shows the current phase.

For example:

`SLS   Phase +`

- Press ▲ or ▼ (remote or under the front panel) to change the phase.

Or:

- Press **Function II** on the remote.

The display will show the new phase setting.

For example:

`SLS   Phase -`

To store the tone settings

If you are using SpeakerLink loudspeakers or your 818 Reference Audio Core is set up for variable output you can store your preferred treble, bass, and axis settings in the 818.

- Press **Function Store** (remote).

The display shows:

`Tones Stored`

Adjusting the sensitivity of sources

This section explains how to use the input gain menu to set up the analogue sources connected to the 818.

To adjust the sensitivity of a source

To obtain the best signal-to-noise ratio for your analogue sources you can adjust the sensitivity of each input to give the highest level that does not produce clipping.

• Set **Input Gain Menu** to **Show**; see *Setup parameters*, page 35.

• Select the source you want to adjust, with loud source material playing.

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current sensitivity.

For example: `Radio 2.0V In`

• Press ▲ or ▼ (remote or under the front panel) to change the sensitivity.

You can select between sensitivities of 0.5V (most sensitive), 1.0V, 2.0V, or 2.5V (least sensitive).

If the sensitivity is set too high the input will clip the loudest passages. The display shows:

For example: `Radio 0.5V In Clip`

In this case reduce the sensitivity.

If you have selected a digital source you cannot adjust the sensitivity. The display shows:

For example: `CD    Not Analogue`

Changing the front-panel display

The 818 Reference Audio Core displays information and settings on the 20-character front-panel display.

You can adjust the contrast and brightness of the front-panel display for optimum viewing, and choose what information is displayed.

To change the contrast or brightness

• Press ◀ or ▶ (remote or under the front panel), until the display shows the current contrast or brightness.

For example:

```
SLS   Contrast   10
```

• Press ▲ or ▼ (remote or under the front panel), to change the selected setting.

You can change the contrast or brightness between 0 and 15.

To change the displayed information

• Press **Display** (remote or under the front panel).

Each time you press **Display** the display will step between the following options:

Display option	Example
Source and volume	SLS 65
Audio format	SLS PCM 44k
Blank	

If the 818 Reference Audio Core has detected an authentic MQA music stream the audio format display will indicate this, and show the original sample rate as encoded in the studio.

For example:

```
SLS    MQA       384k
```

If the **Diagnostic displays** option has been selected, additional diagnostic displays are included; see *Setup parameters*, page 35.

Headphone mode

The 818 Reference Audio Core provides a headphone mode, which mutes the outputs to DSP loudspeakers. This allows you to connect a headphone amplifier, such as the Meridian Prime Headphone Amplifier, to the analogue outputs for headphone listening. For more information see *To connect to a Meridian Prime Headphone Amplifier*, page 31.

This option is only available if your 818 Reference Audio Core is set up with fixed outputs.

To select headphone mode

• Put the 818 into standby by pressing **Off** (front panel or remote).

• Press ◀ or ▶ (remote or under the front panel).

The display shows the current headphone mode setting:

For example: `Headphone Mode    Off`

• Press ▲ or ▼ (remote or under the front panel) to change the headphone mode setting.

For example: `Headphone Mode    On`

When you select a source the loudspeakers will be muted, and the display shows **Headphone Mode** in place of the volume.

For example: `CD    Headphone Mode`

Use the headphone amplifier to adjust the volume of the headphones.

If you want to mute the analogue outputs when not in use, set Relay Mute to Silent; see To set the relay mute mode, page 39. The relay mute acts normally when headphone mode is selected and returns to the silent mode when it is deselected.

Using the SpeakerLink controls

The 818 Reference Audio Core allows you to control several other settings supported by recent Meridian DSP loudspeakers

The controls described in this chapter are only available if your DSP loudspeakers are connected via SpeakerLink, the volume mode is **Fixed**, and **SpeakerLink** is set to **On** in the Setup menus; see *Setup parameters*, page 35.

The loudspeakers can be configured to ignore the SpeakerLink controls set via SpeakerLink, in which case these controls will have no effect.

Primary SpeakerLink controls

The **EBA** (Enhanced Bass Alignment) control improves the bass alignment in DSP loudspeakers that support it. Note that the extra processing adds a time delay, so it should be disabled for video sources.

The **Position** control adjusts the sound to compensate for the placement of the main loudspeakers, such as near a wall or corner.

The **EBC** (Enhanced Boundary Compensation) control adjusts the sound to compensate for the height of the ceiling.

The **Loudness** control alters the frequency response to make music sound more natural when played at a low volume setting.

Each of these controls is only available if the corresponding option **EBA Menu**, **Position Menu**, **EBC Menus**, or **Loudness Menu** is set to **Show** in the setup menus; see *Setup parameters*, page 35.

To specify Enhanced Bass Alignment

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current EBA setting.

For example:

SLS   EBA   On

• Press ▲ or ▼ (remote or under the front panel) to choose between **On** or **Off**.

To specify the main speaker position

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current location setting.

For example:

SLS   Position Corn.

Press ▲ or ▼ (remote or under the front panel) to choose between **Corn.** (corner), **Shelf**, **Wall**, or **Free** (free standing).

To specify Enhanced Boundary Control

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current EBC setting.

For example:

SLS   EBC   Max

• Press ▲ or ▼ (remote or under the front panel) to specify how reflective the room surfaces are. Choose between **Off** (unreflective), **Min**, **Med**, or **Max** (highly reflective).

To change the loudness

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current loudness setting.

• Press ▲ or ▼ (remote or under the front panel) to turn the loudness control on or off.

For example:

SLS   Loudness   On

Subwoofer setup controls

If you have one or more subwoofers connected to your 818 Reference Audio Core via SpeakerLink, the following controls allow you to adjust the relationship between the subwoofers and main speakers.

The **Mode** control changes the distribution of bass between the main speakers and the subwoofer to suit different types of material.

The **Sub Filter** control adjusts the subwoofer crossover frequency.

The **Sub Gain** control adjusts the subwoofer gain.

The subwoofer controls are only available if **Subwoofer Menus** is set to **Show** in the setup menus; see *Setup parameters*, page 35.

To select Music Mode or Movie Mode

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current mode.

For example:

<div style="text-align:center">`SLS   Music Mode`</div>

• Press ▲ or ▼ (remote or under the front panel) to select between Music Mode, recommended for classical music, and Movie Mode, recommended for movie soundtracks.

To change the subwoofer filter

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current subwoofer filter mode.

For example:

<div style="text-align:center">`SLS   Subwoofer   1`</div>

• Press ▲ or ▼ (remote or under the front panel) to select between: **Off** (subwoofer off), **1** (80Hz crossover), or **2** (120Hz crossover).

To change the subwoofer gain

• Press ◀ or ▶ (remote or under the front panel) until the display shows the current subwoofer gain.

For example:

<div style="text-align:center">`SLS   Sub. Gain   0`</div>

• Press ▲ or ▼ (remote or under the front panel) to adjust the relative subwoofer gain between **-15**, **0** (the normal setting), and **+15** in 1dB steps.

Installing the 818 Reference Audio Core

This chapter explains how to install the 818 Reference Audio Core. It describes what you should find when you unpack the product, and how you should connect it to the other equipment in the system.

You should not make any connections to the product or to any other component in the system while the AC power supply is connected and switched on.

Unpacking

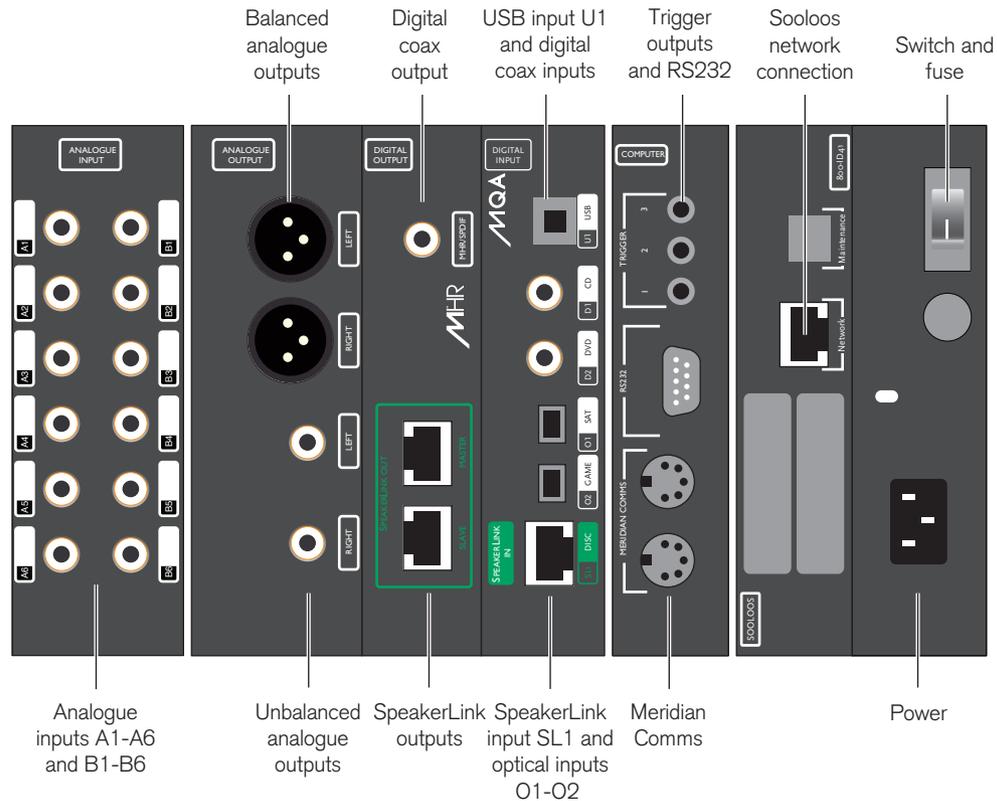The 818 Reference Audio Core is supplied with the following accessories:

• MSR+ remote control with batteries, manual, and spare key caps.
• Meridian Comms lead.
• Power cord.
• This manual.

If any of these items are missing please contact your retailer.

NOTE: You should retain the packaging in case you need to transport the unit.

Back panel

The following diagram gives details of the back panel connections:

Balanced analogue outputs

Digital coax output

USB input U1 and digital coax inputs

Trigger outputs and RS232

Sooloos network connection

Switch and fuse

Analogue inputs A1-A6 and B1-B6

Unbalanced analogue outputs

SpeakerLink outputs

SpeakerLink input SL1 and optical inputs O1-O2

Meridian Comms

Power

Audio outputs

Use this output	To connect to this
BALANCED OUT	The balanced analogue inputs of a preamplifier, or a power amplifier such as the G57, using XLR leads.
ANALOGUE OUT	The unbalanced analogue inputs of a preamplifier, or a power amplifier such as the G57, using analogue phono leads.
DIGITAL OUT	The digital input of a surround processor, such as the 861 Reference Digital Surround Controller, or DSP loudspeakers, using a 75Ω digital cable.
MERIDIAN SPEAKERLINK	DSP Loudspeakers with Meridian SpeakerLink connectors, using SpeakerLink leads. Use the upper socket for the Master speaker.

Audio inputs

Use this input	To connect to this
ANALOGUE IN A1+A2 (Radio), A3+A4 (TV), A5+A6 (Cable), B1+B2 (Tape), B3+B4 (PVR), B5+B6*	The analogue outputs of a source, such as a TV or tape deck.
DIGITAL INPUT D1 (CD), D2 (DVD)	The digital output of a source such as a DVD player.
SPEAKERLINK INPUT SL1 (Disc)	The SpeakerLink output of a Meridian source, using a Meridian SpeakerLink lead.

* In each case the odd-numbered input is the left channel and the even-numbered is the right channel.

Audio inputs (continued)

Use this input	To connect to this
OPTICAL INPUT O1 (Sat), O2 (Game)	The optical output of a source such as a satellite receiver.
USB INPUT U1 (USB)	A personal computer USB socket.
NETWORK (SLS)	A Meridian Sooloos Digital Media System.

The default assignment of the source to each input is shown in brackets after the input name in the above table.

Communications connections

| Use this connection	To connect to this
MERIDIAN COMMS	Other Meridian equipment, or Meridian DSP loudspeakers.
RS232 connection	A computer, for configuring the 818, or a serial control system.
TRIGGER OUTPUT 1, 2, 3	Equipment to be triggered by a 12V 100mA signal.

Applications

To connect to a digital source (eg DVD player)

Digital source

818 Reference Audio Core

DIGITAL
OUT

DIGITAL IN
D1
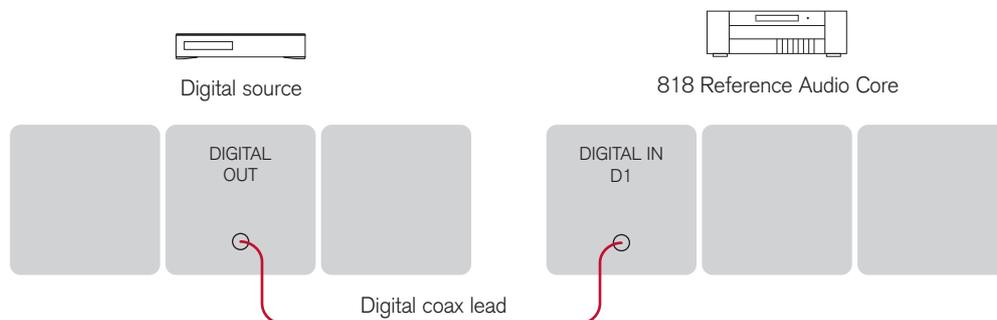
Digital coax lead

You can connect up to two digital coax inputs and two
digital optical inputs to the 818 Reference Audio Core.

• Connect the digital source to an appropriate digital
  input socket on the 818, using either screened coax
 phono leads, or a Toslink lead.

To connect to an analogue source (eg TV tuner)

Analogue source

818 Reference Audio Core

ANALOGUE
OUT

ANALOGUE IN
A1+A2
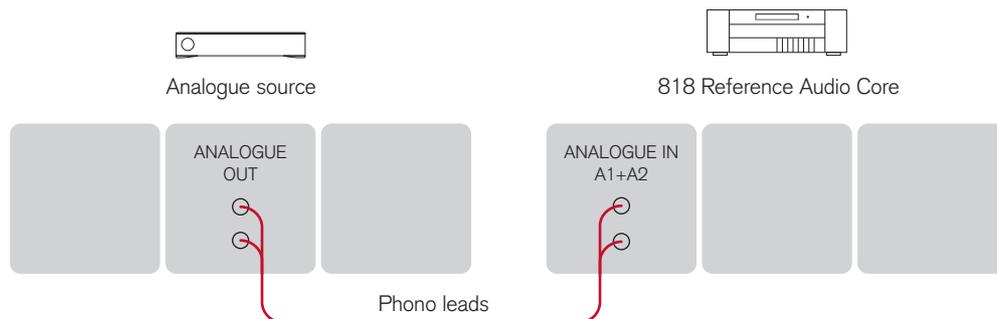
Phono leads

You can connect up to six analogue sources to the 818
Reference Audio Core

• Connect the analogue source to one of the analogue
  input sockets of the 818, using screened coax phono
  leads.

To connect to a computer via USB

Computer

818 Reference Audio Core

USB

USB

USB A-B lead
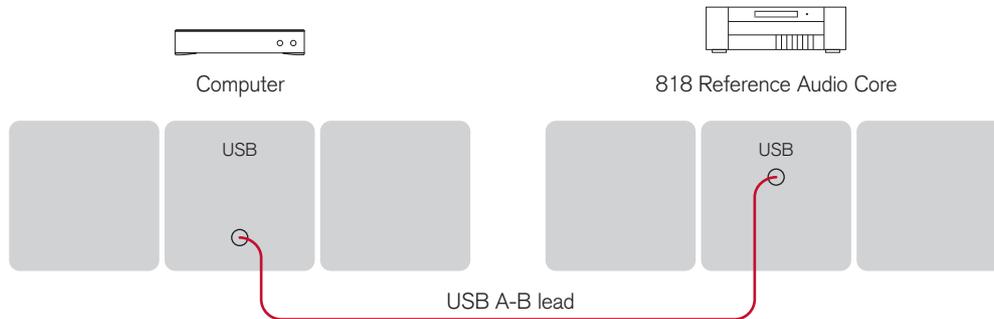
You can connect the 818 Reference Audio Core to a PC or Mac USB socket to allow you to use the 818 as a digital audio output device.

On a PC, Windows XP/SP2 or later is required. Note that you must install the drivers (available from your Meridian dealer or www.meridian-audio.com) before you connect the product to a Windows PC.

On a Mac, OS X 10.4 or later is recommended. Appropriate drivers will be installed automatically when you connect for the first time.

Linux computers that support USB Audio Class 2.0 drivers can also be used.

When the 818 is plugged in to the computer it will appear as a sound output device called **Meridian 800 Series Output** in the **Sound** control panel (PC) or **Sound** System Preferences panel (Mac).

The source will be labelled USB, unless it has been given a custom label.

Note: The computer volume control will continue to work as expected, but for highest quality you should set it to maximum and use the Meridian volume control in the 818 instead.

To connect to DSP loudspeakers using SpeakerLink (daisy chain)
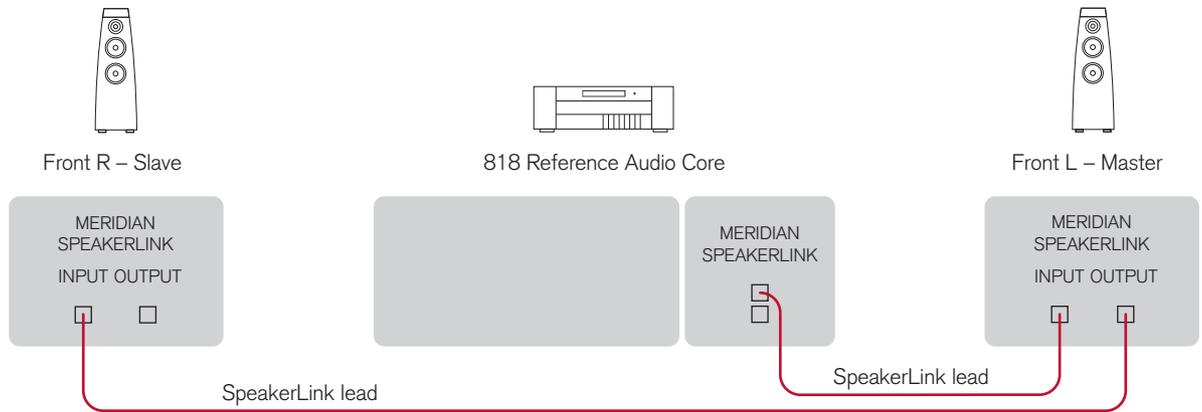
Front R – Slave   818 Reference Audio Core   Front L – Master

The 818 can be connected directly to Meridian DSP loudspeakers to create a complete stereo system, with volume and other preamplifier controls provided by the loudspeakers via the MSR+ or the front panel.
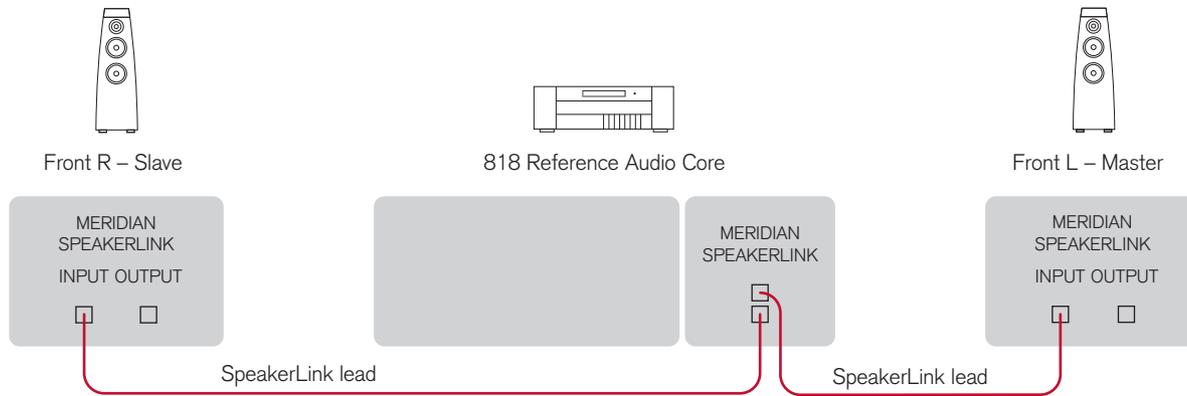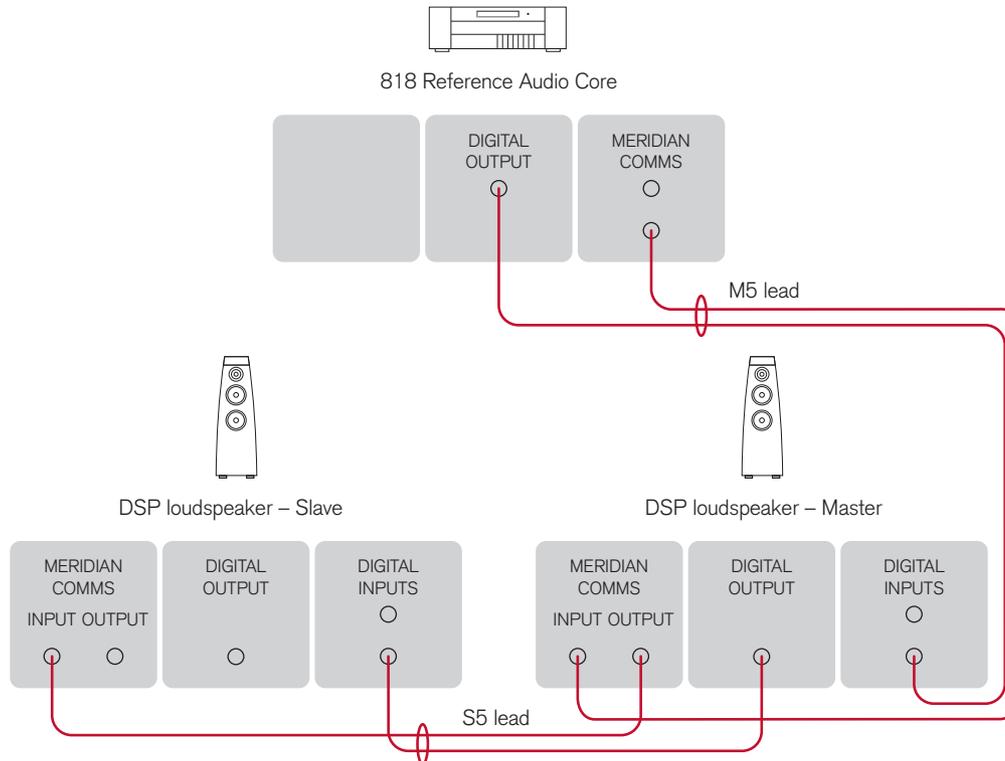
The Meridian SpeakerLink connection provides both two-channel digital audio and Meridian Comms control.

This is an alternative to the "home run" wiring configuration shown in the next section.

• Connect the upper SpeakerLink output from the 818 to the SpeakerLink input on the DSP loudspeaker chosen as the Master, using a SpeakerLink lead.

• Connect the SpeakerLink output from the Master DSP loudspeaker to the SpeakerLink input on the other (Slave) DSP loudspeaker, using a second SpeakerLink lead.

• Configure the loudspeakers as described in the *Meridian DSP Loudspeaker User Guide*.

• Configure the 818 as described in *Configuring the 818 Reference Audio Core*, page 33, or by using the Meridian Configuration Application; see *Installing the Meridian Configuration Application*, page 40.
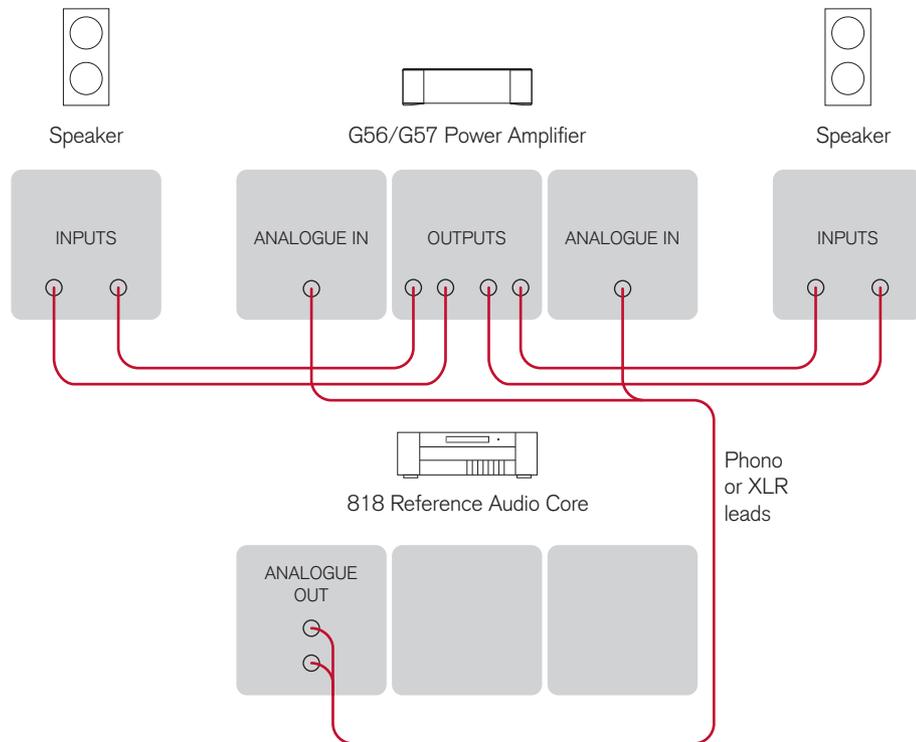
To connect to DSP loudspeakers using SpeakerLink (home run)

Front R – Slave   818 Reference Audio Core   Front L – Master

| MERIDIAN SPEAKERLINK | | MERIDIAN SPEAKERLINK | MERIDIAN SPEAKERLINK |
| INPUT OUTPUT | | | INPUT OUTPUT |

SpeakerLink lead   SpeakerLink lead

The 818 can be connected directly to Meridian DSP loudspeakers to create a complete stereo system, with volume and other preamplifier controls provided by the loudspeakers via the MSR+ or the front panel.

The Meridian SpeakerLink connection provides both two-channel digital audio and Meridian Comms control.

This is an alternative to the "daisy chain" wiring configuration shown in the previous section.

• Connect the upper SpeakerLink output from the 818 to the SpeakerLink input on the DSP loudspeaker chosen as the Master, using a SpeakerLink lead.

• Connect the lower SpeakerLink output from the 818 to the SpeakerLink input on the other (Slave) DSP loudspeaker, using a second SpeakerLink lead.

• Configure the loudspeakers as described in the *Meridian DSP Loudspeaker User Guide*.

• Configure the 818 as described in *Configuring the 818 Reference Audio Core*, page 33, or by using the Meridian Configuration Application; see *Installing the Meridian Configuration Application*, page 40.

To connect to DSP loudspeakers using the digital and Comms connections

818 Reference Audio Core

DIGITAL OUTPUT   MERIDIAN COMMS

M5 lead

DSP loudspeaker – Slave   DSP loudspeaker – Master

MERIDIAN COMMS   DIGITAL OUTPUT   DIGITAL INPUTS   MERIDIAN COMMS   DIGITAL OUTPUT   DIGITAL INPUTS

INPUT OUTPUT   INPUT OUTPUT

S5 lead

If your DSP loudspeakers do not provide Meridian SpeakerLink connections you can connect to them using the Digital and Meridian Comms connections.

• Connect the DIGITAL OUTPUT and a COMMS socket from the 818 to DIGITAL INPUT 1 and the COMMS input on the DSP loudspeaker chosen as the Master, using an M5 lead.

• Connect the DIGITAL and COMMS outputs from the Master DSP loudspeaker to DIGITAL INPUT 1 and the COMMS input on the other (Slave) DSP loudspeaker, using an S5 lead.

• Configure the loudspeakers as described in the *Meridian DSP Loudspeaker User Guide*.

• Configure the 818 as described in *Configuring the 818 Reference Audio Core*, page 33, or by using the Meridian Configuration Application; see *Installing the Meridian Configuration Application*, page 40.

To connect to a power amplifier

Speaker		G56/G57 Power Amplifier			Speaker
INPUTS	ANALOGUE IN	OUTPUTS	ANALOGUE IN	INPUTS

818 Reference Audio Core

Phono
or XLR
leads

ANALOGUE
OUT

The 818 analogue outputs allow you to connect to a
pair of analogue active loudspeakers, or to analogue
passive loudspeakers via a power amplifier.

• Connect the balanced or unbalanced ANALOGUE
OUTPUT connections from the 818 to the inputs of
the analogue active loudspeakers or power amplifier.

• Configure the 818 as described in *Configuring the
818 Reference Audio Core*, page 33, or by using the
Meridian Configuration Application; see *Installing the
Meridian Configuration Application*, page 40.

To connect to an 861 Reference Digital Surround Controller

818 Reference Audio Core

861 Reference Digital Surround Controller

SPEAKERLINK
OUT

SPEAKERLINK
IN
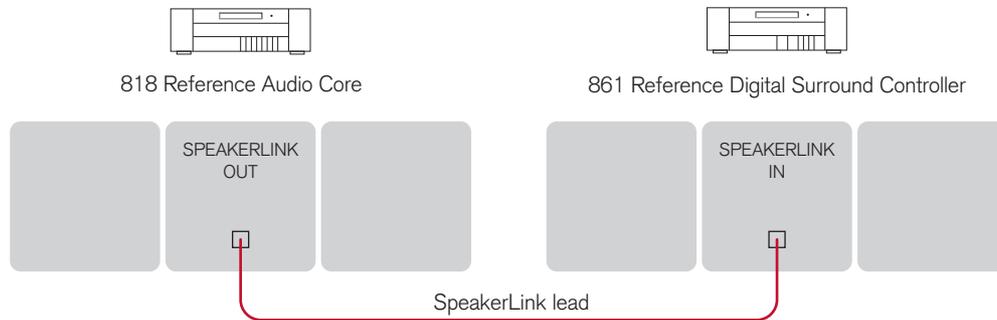
SpeakerLink lead

You can use the 818's SpeakerLink outputs to connect to other Meridian products, such as the 861 Reference Surround Controller.

• Connect the SpeakerLink output from the 818 to the SpeakerLink input on the 861, using a SpeakerLink lead.

• Configure the 818 as described in *Configuring the 818 Reference Audio Core*, page 33, or by using the Meridian Configuration Application; see *Installing the Meridian Configuration Application*, page 40.

• Configure the 861 using the Meridian Configuration Application so that all sources connected to the 818 are received by the 861 on the SpeakerLink connection.

To connect to a Meridian Prime Headphone Amplifier

818 Reference Audio Core

Meridian Prime Headphone Amplifier

ANALOGUE
OUT

ANALOGUE
INPUTS

Phono lead
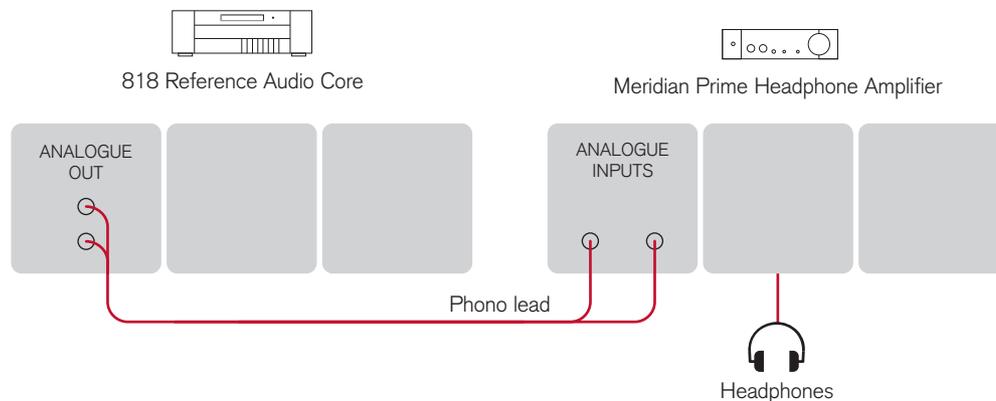
Headphones

If your system uses DSP loudspeakers, you can use the analogue outputs from the 818 Reference Audio Core to connect to a headphone amplifier, such as the Meridian Prime Headphone Amplifier.

- Connect the Unbalanced Analogue output from the 818 to the Analogue Input on the Meridian prime Headphone Amplifier, using phono leads.

- Select **Headphone Mode** to mute the sound through the loudspeakers; see *Headphone Mode*, page 15.

- Use the volume control on the Meridian Prime Headphone Amplifier to adjust the level for the headphones.

To connect to other Meridian G Series or 800 Series equipment

818 Reference Audio Core   G Series, 500 Series, or 800 Series unit

MERIDIAN
COMMS

MERIDIAN
COMMS

Comms lead
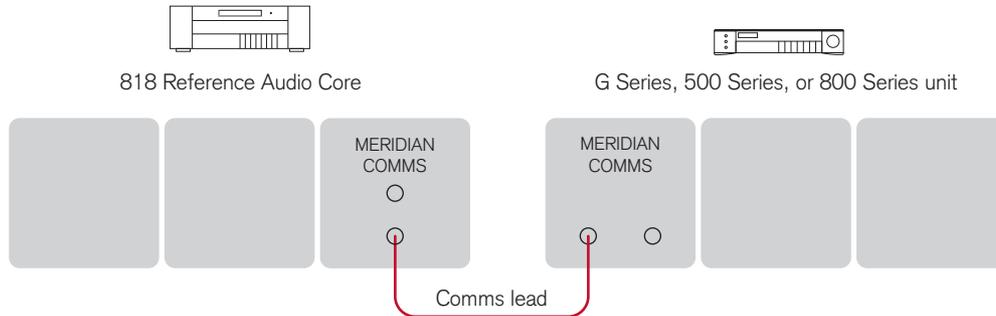
In a system of Meridian products, one of the products acts as the controller for the system, receiving infra-red commands from the MSR+ and then, if appropriate, relaying them to the other products via the Comms link.

The following automatic setup procedure should be used to set up the Comms correctly between several products:

• Connect one of the DIN COMMS sockets on the back panel of the 818 to one of the COMMS sockets on another G Series, 500 Series, or 800 Series unit, using the Comms leads provided with the products.

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

• Switch all the units to standby.

• Press **Clear** (remote).

Each unit will display: `Auto`

One unit will then be designated as the controller.

The display shows: `Controller`

All the other units will be configured as non-controllers.

The displays show: `Not Con.`

If for any reason the automatic setup does not work, make sure you are operating the remote from a position where all the units can receive the infra-red, and try again.

If this fails:

• Restore the default operation by selecting one of the standard types; see *Choosing a standard setting*, page 34.

Do not, under any circumstances, connect any equipment other than Meridian G Series or 800 Series to any socket marked COMMS on the back of the product.

Configuring the 818 Reference Audio Core

This chapter explains how to set up the 818 Reference Audio Core for most standard configurations of your other equipment, using just the front-panel controls and MSR+.

For complete control over all aspects of the 818's configuration it is recommended that you use the Meridian Configuration Program; for more information see *Installing the Meridian Configuration Application*, page 40.

Choosing a standard setting

The 818 provides two standard settings, called Types, which configure all aspects of the 818 into standard configurations.

These standard Types are shown in the following table:

Type	Label	Description
1	**Fixed**	Fixed output, for use with Meridian DSP loudspeakers.
2	**Variable**	Variable output, for use with power amplifiers and analogue speakers.

In addition, your installer may have provided one or more named User Types, with settings appropriate to the configuration of equipment when your 818 was installed.

You can reset the configuration of the 818 to any of these Types to restore it to the state it was in when it was installed. **Note:** Selecting a Type will clear any configuration changes you have made.

To select a standard setting

Warning: this procedure will reset any configuration changes you have made.

- Switch off any power amplifiers that are connected to the 818 and put any digital speakers into standby.

- Put the 818 into standby by pressing **Off** (front panel or remote).

- Press and hold down **Volume +** (under the front panel).

The display shows: `Type in... 3`

- Keep holding down **Volume +** for a further three seconds.

The display shows: `Type- please wait.`

Then after a short delay the display shows the current Type.

For example: `Type 1  Fixed`

- Press ▲ or ▼ on the front panel (or **Volume +** or **Volume +** under the front panel) to change the Type number.

The display shows: `Typing, please wait.`

Either:

- Press **Setup** (under the front panel) to skip directly to front panel setup mode; see *Setup parameters*, page 35.

Or:

- Wait for one second, and then put the 818 into standby by pressing **Off** (front panel or remote).

- Switch on again to use the standard settings you have selected.

Setup parameters

To enter front panel setup mode

- Put the 818 into standby by pressing **Off** (front panel or remote).

- Press and hold down **Setup** (under the front panel).

The display shows: `Setup in... 3`

- Keep holding down **Setup** for a further three seconds.

When the countdown finishes the display will show the first of the setup menus.

For example: `IR Auto`

To use the setup menus

- Press ◀ or ▶ (under the front panel) until the display shows the parameter you want to change.

For example: `Output      Fixed`

- Press ▲ or ▼ (under the front panel) to change the parameter.

The following table gives a list of all the Setup parameters:

Parameter	Range	Default	Notes
IR	Auto, Controller, Not Controller	Auto	See *To connect to other G Series or 800 Series equipment*, page 32.
Startup Volume	LV or 25 to 87	Last Valid	See *To set the startup volume*, page 36.
Output	Fixed, Variable		See *To set the output mode*, page 37.
SpeakerLink	Off, On	On	See *To set the SpeakerLink mode*, page 37.
EBA Menu *	Show, Hide	Show	Enables the EBA menu; see *Primary SpeakerLink controls*, page 18.
Position Menu *	Show, Hide	Hide	Enables the position menu; see *Primary SpeakerLink controls*, page 18.
EBC Menus *	Show, Hide	Hide	Enables the EBC menus; see *Primary SpeakerLink controls*, page 18.
Measurement *	Inches, Metric	Inches	See *To set the measurement units*, page 38.
Room Height *	58-158 inches, 150-400cm	58inches (150cm)	See *To specify the room height*, page 38.
Subwoofer Menus *	Show, Hide	Hide	Enables the subwoofer menus; see *Subwoofer setup controls*, page 19.
Loudness Menu *	Show, Hide	Hide	Enables the **Loudness** menu; see *Primary SpeakerLink controls*, page 18.
Relay Mute	Normal, Silent	Normal	See *To set the relay mute mode*, page 39.
Input Gain Menu	Show, Hide	Hide	Enables the input gain menu; see *Adjusting the sensitivity of sources*, page 13.
Diagnostics	Show, Hide	Hide	To help diagnose technical issues.

* These options are only available if **Output** is **Fixed** and **SpeakerLink** is **On**.

Setting the startup volume

When you switch the 818 from standby you can
choose to set the volume to a fixed value, or to the last
value it was set to.

To set the startup volume

● Press ◀ or ▶ (under the front panel) until the display
shows the startup volume setting.

For example:

```
Startup Volume     25
```

● Press ▲ or ▼ (under the front panel) to change the
parameter.

You can set it to any value between 25 and 87, or LV
(Last Valid) which restores the volume to the last value
it was set to.

For example:

```
Startup Volume     LV
```

Setting the output mode and SpeakerLink setting

The output mode determines whether the 818 provides the volume control for the analogue outputs.

The SpeakerLink setting is only available if **Output Mode** is set to **Fixed**, and determines whether the loudspeaker settings are sent to DSP loudspeakers connected via the SpeakerLink connection.

If **SpeakerLink** is set to **On**, the volume, bass, treble, axis, and balance are sent to the speaker via SpeakerLink; otherwise they are sent via the Comms connection.

In addition, if **SpeakerLink** is set to **On** additional EBA, position, EBC, subwoofer, and loudness controls are available, and will control those features in DSP loudspeakers that support them.

The following table shows which settings you should choose for different applications:

818 application	Output	SpeakerLink
Connected to recent DSP loudspeakers via SpeakerLink.	Fixed	On
Connected to digital loudspeakers that do not support SpeakerLink, or a Digital Surround Processor.	Fixed	Off
Connected to an analogue preamplifier or integrated amplifier.	Fixed	Off
Connected directly to a power amplifier.	Variable	Off

To set the output mode

• Press ◄ or ► (under the front panel) until the display shows the current output setting.

For example:　　　　　　`Output        Fixed`

• Press ▲ or ▼ (under the front panel) to change the setting.

For example:　　　　　　`Output      Variable`

To set the SpeakerLink mode

• Press ◄ or ► (under the front panel) until the display shows the current SpeakerLink setting.

For example:　　　　　　`SpeakerLink      On`

• Press ▲ or ▼ (under the front panel) to change the setting.

For example:　　　　　　`SpeakerLink      Off`

Configuring the EBC settings

The EBC control uses information about the room
dimensions to compensate for reflections from the walls
and ceiling. These menus are only available when **EBC
Menus** is set to **Show**.

To set the measurement units

• Press ◄ or ▶ (under the front panel) until the display
shows the current measurement setting.

For example:

```
Measurement    Metric
```

• Press ▲ or ▼ (under the front panel) to change the
setting.

For example:

```
Measurement    Inches
```

To specify the room height

• Press ◄ or ▶ (under the front panel) until the display
shows the current room height setting.

For example:

```
Room Height     150cm
```

• Press ▲ or ▼ (under the front panel) to change the
setting.

For example:

```
Room Height     200cm
```

The room height setting can be varied between 150
cm (58in) and 400cm (158in) in steps of 5cm (2in). If
your room height is outside this range set the nearest
available value.

Muting the analogue relay

The 818 Reference Audio Core includes relay control of the analogue outputs, to ensure a totally silent output. The relay is activated when you mute the sound, and to avoid clicks in the loudspeakers when changing source.

If **Output Mode** is set to **Fixed** and you are using DSP loudspeakers you can choose to disable the muting relay, which permanently mutes the analogue outputs.

To set the relay mute mode

• Press ◀ or ▶ (under the front panel) until the display shows the current relay mute setting.

For example:

```
Relay Mute      Normal
```

• Press ▲ or ▼ (under the front panel) to change the setting.

For example:

```
Relay Mute      Silent
```

Installing the Meridian Configuration Application

The Meridian Configuration Application is not included with this product.

The application should be installed from the Internet.

Requirements

To use the Meridian Configuration Application you need:

- A computer running Windows 95, 98, 2000, NT 4, ME, XP, Vista, Windows 7, or Windows 8.
- 10Mbytes of free disk space.
- A 9-pin serial port or suitable serial adaptor (such as USB-Serial, PC Card, etc).
- An RS232 null-modem cable.
- A mouse or similar pointing device – the application cannot be operated solely from the keyboard.

The Meridian Configuration Application communicates with the products you are setting up via a serial cable.

You can connect the product to a 9-pin serial port on the computer.

Alternatively, a USB-to-serial converter, available from most computer retailers, can be used to connect between the product and a USB port on the computer.

Installation

To install the application you will need a computer that is connected to the Internet.

- Type the following URL into the address bar of a Web browser:

www.meridian-audio.com/download/setup.exe

If you are asked whether to Run or Save the application:

- Click **Run**.

Otherwise:

- Run the setup.exe application once it has downloaded.

The **Setup** application's **Welcome** page will be displayed.

- Follow the instructions.

On the **Preferences** page:

- Leave **Install for all users** selected, unless you want to restrict use of the application to yourself on a multi-user machine.

User guide

You can download an electronic copy of the *Meridian Configuration Program Guide* in Acrobat format from our website:

www.meridian-audio.com

Follow the links to the 818 support section where you will find this and other useful documentation.

Index