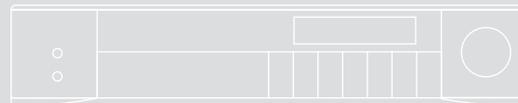


G65 Digital Surround Controller User Guide



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.



Contents

Introduction	1	Audio inputs	31
The G65 Digital Surround Controller	2	Audio outputs	35
DSP presets and layouts	3	Communications connections	40
Specifications	5		
Using the G65 Digital Surround Controller	7	Configuring the G65 Digital Surround Controller	43
Operating your G65	8	Configuration Wizard	44
Using the MSR+	9	Stage 1: Resetting the product	45
Switching on and off and selecting a source	10	Stage 2: Configuring speakers	47
Adjusting the volume	11	Stage 3: Configuring sources	49
Changing the DSP preset	12	Stage 4: Configuring other settings	51
Changing the display	13	Installing the Meridian Configuration Application	53
Customising the G65 Digital Surround Controller	15	Calibrating the system	55
Locking and unlocking the menus	16	Introduction	56
Changing the DSP parameters	17	Calibration tests	58
Changing treble, bass, or phase	19	Speaker size	60
Changing the listening position	20	Using the Sine/Sub/Sens controls	61
Changing the integration of the centre	21	DSP presets	65
Changing the spaciousness of the sound	22	DSP presets for two-channel material	66
SpeakerLink controls	23	DSP presets for multichannel material	70
Changing the LipSync	24	Troubleshooting	73
Changing the DSP preset for a source	25	General operating problems	74
Defining your own presets	26	Audio problems	75
Installing the G65 Digital Surround Controller	29	Maintenance	77
Unpacking	30	Service and guarantee	78
		Index	79

Copyright and acknowledgements

Sales and service in the UK

Meridian Audio Ltd
Latham Road
Huntingdon
Cambridgeshire
PE29 6YE
England

Tel (01480) 445678
Fax (01480) 445686

Sales and service in the USA

Meridian America Inc.
110 Greene Street, Suite #407
New York
NY 10012
USA

Tel (646) 66 0140
Fax (646) 66 0152

Designed and manufactured in the UK

Meridian Audio Ltd
Latham Road
Huntingdon
Cambridgeshire
PE29 6YE
England

Visit us on the Web

<http://www.meridian-audio.com>

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Part no: G65 (P88427)

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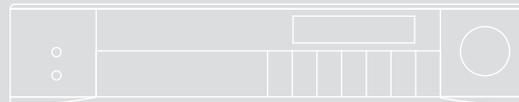
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Introduction

Welcome to the Meridian G65 Digital Surround Controller.

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



The G65 Digital Surround Controller

The G65 is a powerful, flexible surround controller, with eight balanced analogue outputs and eight digital outputs.

At the heart of the G65 is a powerful DSP engine consisting of five Freescale 56367s running at 150MHz – delivering an incredible 750MIPS (million instructions per second) capability. Processing is performed at high sample rates and with 48-bit precision throughout, ensuring that all filtering, processing, and other operations are carried out beyond the limits of human hearing. The G65 is thus a perfect processor for the very latest in digital audio.

Inputs

Analogue signals are converted via a 24-bit Delta-Sigma converter to high-sample-rate digital on input to the processor, while all digital signals are reclocked to minimise jitter and maintain total data integrity. The G65 includes one MMHR six-channel digital input, two SpeakerLink inputs, two Toslink optical inputs, and six S/PDIF stereo coax digital inputs. In addition, there is a six-channel analogue input, and five stereo analogue inputs.

Formats supported

The G65 combines controller and surround processor functions, meeting THX specifications and including MPEG, DTS, Dolby, Trifield, and Ambisonic decoding. In many cases the decoders incorporate our own code, giving them superior integration with the Meridian design philosophy, as well as superior performance. As a result, the G65 can decode surround signals from all PCM optical discs.

Smart Source feature

The G65's 'Smart Source' feature continually monitors the digital inputs and automatically loads the correct decoding software for the format, speaker layout, and encoding of the incoming signal. This capability is

enhanced by MHR SmartLink, which provides a digital link between a Meridian optical disc player or HD621 and surround controller, carrying explicit information about the nature of the datastream as well as encrypted high-resolution digital signals from all copy-protected media – the first system of its kind to be approved. Virtually all other manufacturers oblige you to go through an analogue connection, losing quality in the process.

You can also store separate parameters for each source (such as DVD) depending on whether the incoming signal is stereo or surround, so that any source material is played with the DSP mode of your choice.

Outputs

The eight outputs can be provided as digital signals to feed Meridian DSP Loudspeakers, or as variable analogue outputs using a proprietary on-board 24-bit resolution conversion method.

Meridian Room Correction

The G65 incorporates Meridian Room Correction, a unique system that compensates for acoustic deficiencies in your listening room, particularly at the bass end. It achieves this by automatically analysing the room response and then using powerful Digital Signal Processing (DSP) technology to build a set of filters, called a profile. This audibly improves the sound by eliminating resonances and making the decay time consistent for frequencies below about 250Hz.

DSP presets and layouts

The G65 provides an extensive range of options for decoding and processing analogue and digital signals for multichannel reproduction.

Music on CD or radio

The following DSP presets add a surround dimension to stereo recordings, such as on audio CDs or radio.

Music extracts the mono and surround components of the original recording for the centre and surround speakers to give a spacious open sound field.

Trifield is similar to **Music** but generates a centre-front signal that is completely integrated with the front stereo image, for a more stable, accurate, and focused stereo image. The image width is also adjustable.

Super produces a very good surround effect with many live recordings, including live TV.

PLIIx Music and **Music Logic** are recommended for use with studio produced music, and provide different options for adjusting the sound field.

Two-channel movie soundtracks on DVD, video, and TV

Many movie soundtracks are Dolby Surround Encoded onto a two-channel stereo soundtrack.

The following DSP presets re-create the surround components from this type of material:

PLIIx Movie is Dolby's recommended choice for Dolby Surround Encoded material, and **PLIIx THX** provides a variant of this better suited to home listening.

TV Logic uses the same processing techniques as **PLIIx Movie** but with adjustable steering to give better results with TV material.

Special presets for two-channel materials

Direct uses only the left and right speakers; compare this with the effect of surround processing using the other modes. **Stereo** will use a subwoofer if it is present.

Ambisonics is specially designed for two-channel materials that are UHJ Ambisonically encoded, such as certain audio CDs. The encoded surround information is recovered and played back using all the loudspeakers in your system. In addition it will give impressive results with other two-channel material.

Multichannel movie soundtracks on DVD

The following presets are designed for use with multichannel movie soundtracks encoded using Dolby Digital or DTS. Typically these are labelled 5.1 because they provide five full-range channels (three front and two rear) and one LFE (bass effects) channel.

Cinema and **THX** decode the soundtrack to render the original six channels to your speaker layout. **THX** adds some additional signal processing to match the sound to typical home listening conditions.

PLIIx Mov6, **PLIIx Mus6**, **THX Surround EX**, **THX Ultra2**, and **THX Music** create an additional pair of surround channels from the 5.1 channel soundtrack and are available if you have four surround speakers in your system. Use **PLIIx Mus6** or **THX Music** for music.

Multichannel music recordings

The following presets are recommended for music recordings containing more than two channels:

Discrete renders the source channels to your speaker layout with the ultimate precision and transparency.

Ambisonics is especially designed for multichannel recordings on DVD-Audio discs that use Ambisonic encoding.

Speaker layouts

The surround controller provides great flexibility in the way in which you use the loudspeakers in your system. With the Meridian Configuration Program you can specify three different speaker layouts, each with a different use of subwoofers and centre speaker:

Layout	DSP presets
Music	For music presets: two-channel (eg Trifield) and multichannel (eg Discrete).
Logic	For two-channel movie presets: eg PLIIX Movie.
5.1 Movie	For multichannel movie presets: eg Cinema.

Specifications

Audio inputs

- 1 MMHR 6-channel input.
- 2 stereo SpeakerLink inputs.
- 6 coax digital inputs; D2/D4/D6 can be used as a 6-channel coax input.
- 2 optical digital inputs.
- 8 stereo unbalanced inputs; A1-A3 and A4-A6 can be used as two 6-channel unbalanced inputs.

Audio outputs

- 8 Meridian SpeakerLink digital outputs: L+R, C+SUB, SIDE L+R, REAR L+R.
- 8 balanced analogue outputs: Main L/R, Rear L/R, Centre/Sub, Side L/R.

Control signals

- 1 12VDC/100mA trigger output configurable by source.
- 2 Meridian Comms 5-pin 240° DIN sockets.
- USB and RS232 interfaces for maintenance.

DSP

- 5 Freescale 56367s running at 150MHz to give a total of approximately 750MIPS. 48-bit arithmetic throughout.
- Up to 192kHz, 24-bit Sigma-Delta conversion on all analogue inputs and outputs.
- Formats include Dolby Digital, DTS, MPEG Surround, and AAC.
- DSP modes: Direct, Music, Trifield, Ambisonics, Super, Stereo, MusicLogic, Mono, TV Logic, PLIIx Music, PLIIx Movie, PLIIx THX, Discrete, Cinema, PLIIx Mov6, PLIIx Mus6, THX, THX Surround EX, THX Ultra2 Cinema, THX Music.

Display

- Multi-character dot-matrix Vacuum Fluorescent Display.

Controls, etc.

- Front-panel soft keys include control of Source, Preset, etc. Standby and display buttons, volume control, mute.
- Full remote control of all features via MSR+.
- Standby button lit when off.

Miscellaneous

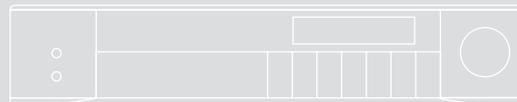
- Linear power supply with region-specific high-quality toroidal transformer.
- Dimensions: 440mm x 90mm x 350mm (17.32" x 3.54" x 13.78") WHD.
- Weight: 10kg (22lb) approx.

Using the G65 Digital Surround Controller

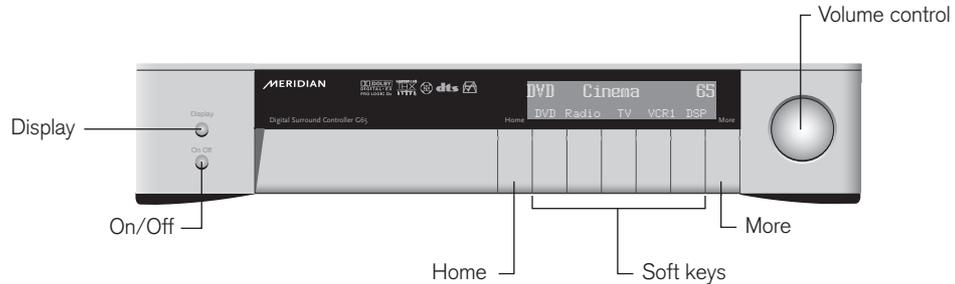
This chapter provides a summary of the functions of the G65 Digital Surround Controller to identify the controls which you use to operate the unit.

It gives information about switching your G65 on and off, using the soft keys, and changing the display format.

It also provides instructions for operating the digital surround controller, using either the front panel or the MSR+.



Operating your G65



The five soft keys under the display make the G Series products particularly easy to use. They change to reflect what the product is doing. For example, if you are customizing the DSP settings they provide controls to label and store the preset. The current function of each key is shown above the key on the bottom line of the display.

This initial set of soft keys is called Home. You can get back to it at any time by pressing **Home**, to the left of the soft keys.

You can display additional, less frequently needed commands by pressing **More** to the right of the soft keys.

To display the Home soft keys

- Press **Home**.

The Home keys provide access to the first four sources (DVD, Radio, TV, and VCR1), and DSP, to change the DSP preset.

To access more soft key commands

- Press **More**.

To select a command

- Press **More** until the command you want is displayed above the soft keys.
- Press the soft key corresponding to the command.

If you do not select a command after a few seconds, the soft keys revert to the Home soft keys.

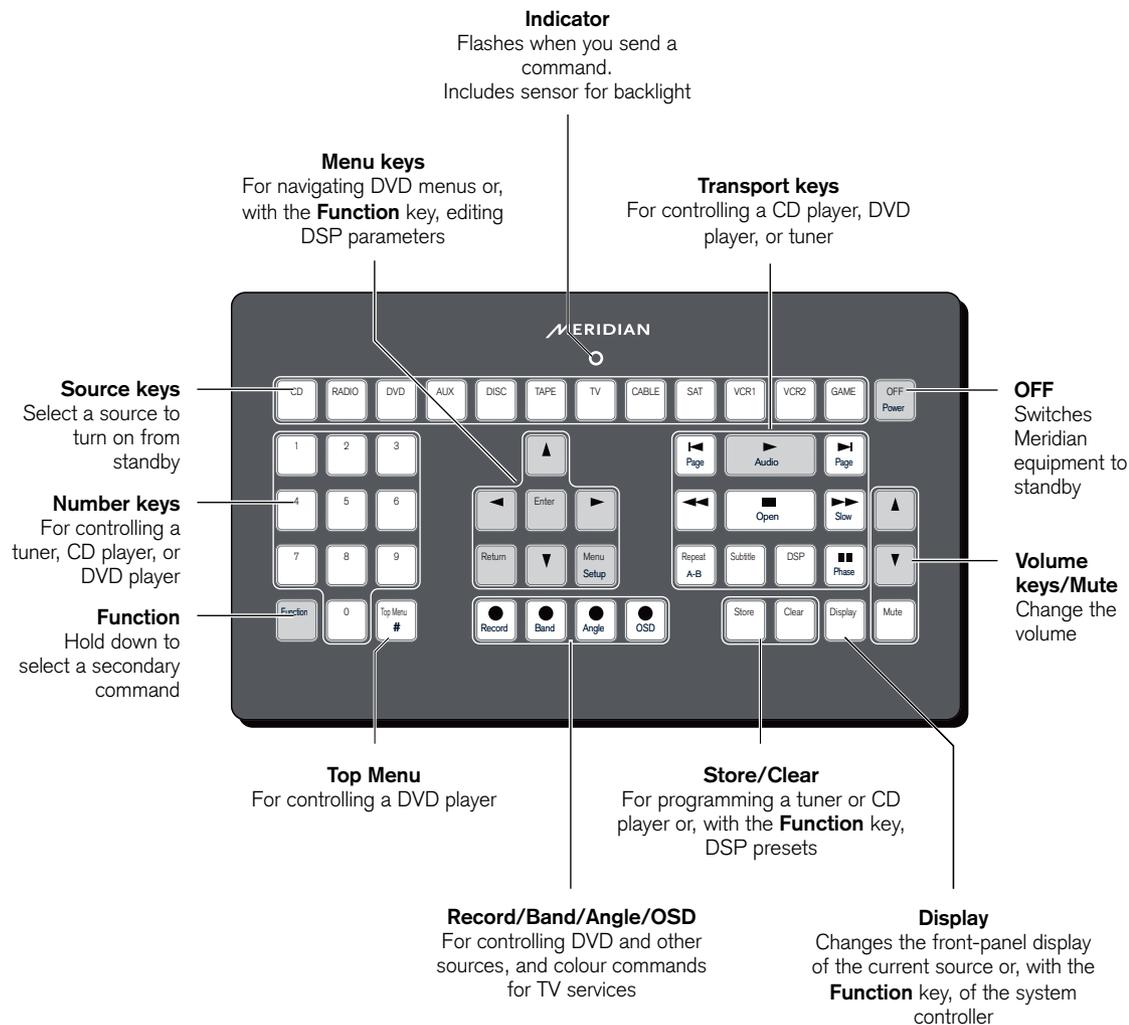
Using the MSR+

You can control all of the functions of your G Series products using either the front-panel controls, or the MSR+ remote control provided with the products.

This page summarises the commands available from the remote. To access the secondary commands hold

down the **Function** key in the lower left corner and press the key.

For information about programming the remote to control the other equipment within your system please refer to the *MSR+ User Guide*, supplied separately.



Switching on and off and selecting a source

When not playing, the digital surround controller should be left in the standby state. This ensures that the components of the digital surround controller operate at maximum efficiency from the moment you start.

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

Sources

The digital surround controller provides the following 12 sources:

CD, Radio, DVD, Aux, Disc, Tape, TV, Cable, Sat, VCR1, VCR2, and Game.

The input and DSP preset associated with each source depends on how the digital surround controller has been set up; for more information see *Source options*, page 50.

You can customise the labels displayed for each source via the Configuration Wizard (see Configuration Wizard, page 44) or the Configuration Application (see Installing the Meridian Configuration Application, page 53).

To switch on from standby

- Press **On/Off** (front panel), or select a source by pressing the appropriate source key on the remote; eg **CD**.

The soft keys revert to the Home set in standby, even though the display is blank, so the G65 can also be turned on by pressing one of the first four soft keys.

The display shows the source, DSP preset, and volume setting. For example, if you select the CD source, the display shows:



```

CD Trifield 65
DVD Radio TV VCR1 DSP
  
```

The G65 Digital Surround Controller mutes the sound while you change source.

If the digital surround controller is part of a Meridian system it will automatically switch on any other unit in the system, such as the 800 Reference DVD/CD Player and Meridian DSP Loudspeakers.

To switch to standby

- Press **On/Off** (front panel) or **Off** (remote).

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

Adjusting the volume

The G65 Digital Surround Controller adjusts the volume 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. When you first connect power to the digital surround controller the volume is set to 65, which is similar to the mid-way position of the rotary volume control on a conventional preamplifier.

A setting of 87 corresponds to THX reference gain, the level at which film soundtracks are mixed.

For normal to high level listening you should expect to use volume levels in the range 60 to 90.

To change the volume

- Turn the volume control, or press the red ▲ or ▼ keys on the remote.

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

For example:

```
CD   Trifield  70
DVD Radio TV  VCR1 DSP
```

To mute the sound

- Press the volume control, or press **Mute** on the remote.

The display will show:

```
Mute
DVD Radio TV  VCR1 DSP
```

To restore the sound

- Press the volume control again, or press **Mute** on the remote again.

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

Changing the DSP preset

Each source has a set of DSP presets associated with it, one for each of the alternative content types: Music 2 (2-channel music), Music 6 (multichannel music), Movie 2 (2-channel movie soundtrack), or Movie 6 (multichannel movie soundtrack).

When you choose a source, a DSP preset is selected depending on the incoming content type.

For example, if you have selected the CD source and are playing a conventional CD, the **Trifield** DSP preset will initially be selected.

You may then wish to choose a different DSP preset, such as **Music** or **Ambisonics**.

You can also change the default DSP preset assigned to the source; see *To assign a DSP preset to a source*, page 25.

The sequence of DSP presets for each content type is as follows:

Content type	Presets available
Music 2, Movie 2	Music, Trifield, Ambisonics, Super Stereo, Music Logic, PLIIx Music, Stereo, Direct, PLIIx Movie, PLIIx THX, TV Logic, Mono.
Music 6	Discrete, PLIIx Mus6, THX Music, Ambisonics B format.
Movie 6	Cinema, PLIIx Mov6, THX, THX Surround EX, THX Ultra2 Cinema.

In each case these will be followed by any user-defined presets you have stored for the appropriate content type.

To change the DSP preset

- Press **DSP** (front panel or remote) to step between the different DSP presets.

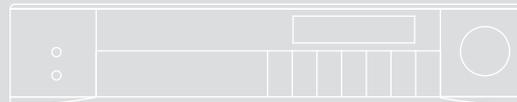
You will be able to choose any of the predefined DSP presets, or any user-defined presets you have stored.

Customising the G65 Digital Surround Controller

In addition to being able to change the source, volume, and DSP preset, the G65 Digital Surround Controller provides a sophisticated range of more advanced adjustments for each DSP preset, to allow you to tailor the sound.

This chapter explains how to change these parameters, using the menu keys on the remote or under the front panel, and gives detailed instructions for adjusting common parameters.

For information about the parameters specific to individual presets see the chapter *DSP presets*, page 65.



Locking and unlocking the menus

To simplify the normal operation of the digital surround controller, and to protect the settings from accidental changes, you can lock the menus so that the DSP parameters cannot be accessed.

The only parameter available with the menus locked is **Brightness**.

To display or change the DSP presets, or to define your own presets, you first need to unlock the digital surround controller menus.

To unlock the menus

- Press **On/Off** to put the digital surround controller into standby.
- Press **More**.

If the product is locked the display shows:



Version Unlock

- Press **Unlock**.

The display shows:



Unlocked

To lock the menus

If the product is unlocked the display shows:



Version IR Wizard Calib Lock

- Press **Lock**.

The display shows:



Locked

Changing the DSP parameters

Each DSP preset provides a series of parameters that you can vary to customise the behaviour of the preset to your specific requirements. For example, most presets provide **Balance** and **Depth** parameters to allow you to alter the characteristics of the sound.

For each of the built-in DSP presets these parameters are set to standard values, designed to give the best sound in typical listening conditions and with most source materials. Each time you select a different DSP preset the parameters are reset to these standard values, even if you have previously altered them.

You can save the changes you have made to one or more DSP parameters in place of the original DSP preset. Alternatively you can create a new user-defined DSP preset with a name of your choice. User-defined presets appear in the list of DSP presets after the built-in ones. For more information about doing this see *Defining your own presets*, page 26.

Standard parameters

All DSP presets (except Mono, Stereo, and Direct) provide the following standard parameters:

Parameter	Range	Default	What it changes
Treble*	-10dB to +10dB	+0.0dB	The slope of the frequency response.
Bass*	-5dB to +5dB	+0.0dB	The bass response.
Phase*	+ or -	+	The absolute phase.
Axis	-2 to +3	-1	The vertical balance (only available with Meridian DSP loudspeakers).
Balance	<10 to 10>	<0>	The L-R balance.
HS Out?*	Y or N	Y	Select Y for high-rate audio, upsampled if necessary. Select N for standard-rate audio, downsampled if necessary.
Centre	-3.0dB to +3.0dB	+0.0dB	The level of the centre.
Depth	-2.5ms to +5ms	+0.0ms	The delay of the centre.
C.Elev	Off, Min, Med, Max	Off	The centre elevation (see <i>SpeakerLink controls</i> , page 23).
Rear	-30dB to +10dB	+0dB	The level of the rears.
Sides	-30dB to +10dB	+0dB	The level of the sides.
R Delay	0ms to 30ms	Varies	The delay of the rears.
S Delay	0ms to 30ms	Varies	The delay of the sides.
EBA	On, Off	Off	The bass alignment (see <i>SpeakerLink controls</i> , page 23).
LipSync	0ms to 50ms	0ms	The sync. delay.
RC	As defined	Bypassed	The Room Correction profile, or Bypassed for no room correction

* These parameters apply to all DSP presets.

Individual DSP presets provide additional parameters, to allow you to adjust specific features provided by that preset. For full details refer to *DSP presets*, page 65.

Note: Parameters not relevant to your configuration are omitted from the sequence of menus.

To change a DSP parameter

- Make sure the menus are unlocked; see *To unlock the menus*, page 16.
- Press **More** to display the menu keys.
- Press ◀ or ▶, or **Function** ◀ or ▶ on the MSR+, until the display shows the name of the parameter you want to change.

For example:



- Press ▲ or ▼, or **Function** ▲ or ▼ on the MSR+, to change the value of the parameter.

As you change the value you will be able to hear the effect on the sound, and the display will show the current value. After a short delay the display will revert to the normal display of DSP preset and volume.

Changing treble, bass, or phase

The digital surround controller provides sophisticated treble and bass controls, to allow you to adjust the broad balance of the system 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.

You can also change the absolute phase of the signal, to compensate for recordings which are out of phase.

In each case all the outputs of the digital surround controller are given the same frequency adjustment, to ensure a correct surround effect.

*If you have a Meridian DSP Loudspeaker the **Treble** and **Bass** settings apply to all DSP presets.*

To change the treble

- Press ◀ or ▶ until the display shows the current treble setting.

For example:



- Press ▲ or ▼ to change the treble.

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

To change the bass

- Press ◀ or ▶ until the display shows the current bass setting.

For example:



- Press ▲ or ▼ to change the bass.

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

To change the absolute phase

- Press ▶ or ◀ until the display shows the current phase.

For example:



- Press ▲ or ▼ to change the phase.

Changing the listening position

A conventional stereo system provides a single balance control, which changes the relative loudness of the two speakers. The G65 Digital Surround Controller provides a more sophisticated adjustment which corresponds to moving the listening position to the left or right.

The axis control allows you to adjust the optimum listening height of the loudspeakers, like a balance control operating in the vertical plane. This option is only available with Meridian DSP loudspeakers.

You can also change the level of the centre, side, and rear loudspeakers relative to the main speakers.

To move the listening position to the left or right

- Press ◀ or ▶ until the display shows:



- Press ▲ or ▼ to move the listening position.

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



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.

Note: This adjustment is not available for the **Mono** preset.

To change the axis

- Press ◀ or ▶ until the display shows the current axis setting.

For example:



- Press ▲ or ▼ 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 relative level of the side or rear loudspeakers

- Press ◀ or ▶ until the display shows the speakers you want to adjust.

For example:



- Use ▲ or ▼ to change the relative level of the speakers, in dB.

You can change the relative loudness of the rear loudspeakers from -30dB (about one-eighth of the loudness) to +10dB (about double the loudness).

For example, to double the loudness of the loudspeakers:

- Adjust their level until the display shows:



Note: This adjustment is not available for the **Direct**, **Stereo**, or **Mono** presets.

Changing the integration of the centre

If you have a centre loudspeaker you can adjust its relative loudness, to provide the best integration of the centre with the main left and right speakers.

You can also adjust the relative delay, or depth, of the centre speaker to give the best perspective between the three front speakers.

Note: These adjustments are not available for the **Direct**, **Stereo**, or **Mono** presets.

To change the relative level of the centre speaker

- Press ► or ◀ until the display shows the current centre level.

For example:



- Press ▲ or ▼ to change the relative level of the centre speaker.

You can change the relative level by ± 3 dB.

To change the relative delay of the centre speaker

- Press ◀ or ► until the display shows the current centre depth.

For example:



- Press ▲ or ▼ to change the relative depth of the centre speaker.

You can change the depth between -2.5 ms, which corresponds to moving the centre speaker 0.75 m ($2\frac{1}{2}'$) nearer to the listening position, and $+5$ ms, which corresponds to moving it 1.5 m ($5'$) further away from the listening position.

*Increasing the depth makes the sound more open.
Decreasing it makes the sound more focused.*

Changing the spaciousness of the sound

You can adjust the spaciousness of the sound by altering the delay on the rear and side channels.

Note: These adjustments are not available for the **Direct**, **Stereo**, or **Mono** presets.

To change the relative delay of the rear or side speakers

- Press ► or ◀ until the display shows the current rear delay.

For example:



- Press ▲ or ▼ to change the relative delay of the rear speakers.

Increasing the delay by 1 ms is equivalent to moving the speaker 0.3m (1') further away.

If you have side speakers an additional **S Delay** option allows you to adjust the delay on the side speakers.

*For best results you should never set the **S Delay** to be less than the **R Delay**.*

SpeakerLink controls

Certain Meridian DSP loudspeakers provide additional digital processing features that can be controlled by the G65 Digital Surround Controller.

To access these features you need to:

- Connect to the DSP loudspeakers via the SpeakerLink connection.
- Enable the SpeakerLink controls using the Meridian Configuration Application (see *Installing the Meridian Configuration Application*, page 53), or via the SpeakerLink menu (see *Settings*, page 52).

The settings for each control are stored in the DSP preset (see *Defining your own presets*, page 26), allowing you to customise the settings for each source.

The **Centre Elevation** control raises the image projected by the centre speaker. This creates a much more involving movie experience, with superior image integration across the whole width of the audio presentation.

The **Enhanced Bass Alignment** control improves the presentation of music. Note that the extra processing adds a time delay, so it should be disabled for video sources unless the video delay can be adjusted to compensate.

You may need to update the firmware in your SpeakerLink-enabled DSP loudspeakers to access these features.

To change the Centre Elevation

- Press ◀ or ▶ until the display shows the current **Centre Elevation** setting.

For example:



Press up or down to select between **Off**, **Min**, **Med**, or **Max**.

To change the Enhanced Bass Alignment

- Press ◀ or ▶ until the display shows the current **Enhanced Bass Alignment** setting.

For example:



Press ▲ or ▼ to choose between **On** or **Off**.

Changing the LipSync

To adjust the LipSync

The LipSync parameter is a feature originated by Meridian that allows you to adjust the delay between the sound and the video image by up to 50ms, or up to 85ms if Meridian Room Correction is not being used.

Most movies are mixed for a viewing distance of 9m (30'), and when viewed from 3.6m (12') or less the sound arrives too early, giving a disconcerting effect. Using the LipSync parameter you can add an overall delay to the sound to accommodate your closer home viewing distance.

Many TV broadcasts delay the picture by half a frame, and can benefit from a LipSync setting of 12ms.

Note: The LipSync setting is associated with a source rather than a DSP preset. The value set here will be applied whenever that source is selected, whatever the DSP preset.

- Press ► or ◀ until the display shows the current LipSync.

For example:



- Press ▲ or ▼ to change the delay in milliseconds.

You can adjust the delay between 0 and 85ms, where 30ms corresponds to sitting 9m (30') further away from the screen.

Changing the DSP preset for a source

Each source has an appropriate DSP preset associated with it for each music format. For example, for a standard stereo (PCM) signal the CD source uses **Trifield** and the TV source uses **TV Logic**.

This section explains how to change the DSP preset associated with any source.

To assign a DSP preset to a source

- Make sure the menus are unlocked; see *To unlock the menus*, page 16.
- Select the source you want to change by pressing the **Source** key on the front panel or the appropriate source button on the remote, eg **CD**.
- If necessary, select a signal in the appropriate format. For example, to change the DSP preset used for DTS compact discs, play a DTS CD.

The display will show the source and the DSP preset currently assigned to that source.

For example:

```
CD   Trifield   65
DVD Radio TV VCR1 DSP
```

- Press **DSP** until the display shows the new DSP preset you want to assign. For example:

```
CD   MusicLogic
DVD Radio TV VCR1 DSP
```

- Press **More** until you see **Assign**.
- Press **Assign** to save the new assignment.

The display shows, for example:

```
CD   =MusicLogic
◀ ▶ ▾ ▹ Assign
```

Defining your own presets

The G65 Digital Surround Controller allows you to modify any of the built-in presets, and save them for future use.

You can either save the changes to the built-in preset, or you can create up to 10 presets of your own, with names of your choice, so you can use them alongside the built-in presets.

To save the preset settings

- Make sure the menus are unlocked; see *To unlock the menus*, page 16.
- Press **DSP** (front panel or remote) to select the preset you want to modify.
- Change the preset parameters to the values you want to store; see *To change a DSP parameter*, page 18.
- Press **More** until you see **Store**:



CD Trifield 65
-Bright+ Store Clear

- Press **Store**.

The display shows the next available user-defined preset.

For example:



Pick Preset to overwrite User 1
Store

- If you want to overwrite an existing user-defined preset press **▲** to select the preset you want to overwrite.

For example:



Pick Preset to overwrite Classical
Store

Alternatively press **▼** to choose the built-in preset you started with. For example:



Pick Preset to overwrite Trifield
Store

- Press **Store** (remote or under the front panel).

The settings have been stored in the new or existing preset you selected.

If you are defining a user preset you can now edit the name of the preset if you wish.

- A flashing cursor shows the letter you are editing:



Write Label For Preset User 1
Store

- Press **▶** or **◀** to select the character position you want to edit.
- Press **▲** or **▼** to change the character.

Each press steps through the sequence A to Z, a to z, 0 to 9, full stop, and blank. You can also select a blank directly by pressing **Clear** on the remote.

For example, you could change the name to:



Write Label For Preset La Scala
Store

- When you have entered the name you want to use press **Store**.

The display shows:



Stored
Assign

To make the new preset the default for the current source and audio format:

- Press **Assign**.

To clear a user-defined preset

- Make sure the menus are unlocked; see *To unlock the menus*, page 16.
- Press **DSP** (front panel or remote) to select the preset you want to clear.
- Press **More** until you see **Clear**:
- Press and hold down **Clear** for several seconds.

The display shows:



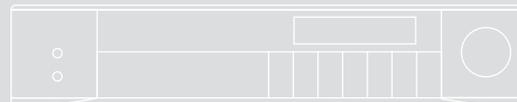
The screenshot shows a dark grey background with white text. At the top, 'Preset Clear' is displayed in a large, monospaced font. Below it, there are two smaller options: '-Bright+' on the left and 'Store Clear' on the right, both in a smaller monospaced font.

If you clear a preset that was saved over a built-in preset, the original preset name and settings are restored.

Installing the G65 Digital Surround Controller

This chapter explains how to install the digital surround controller. 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

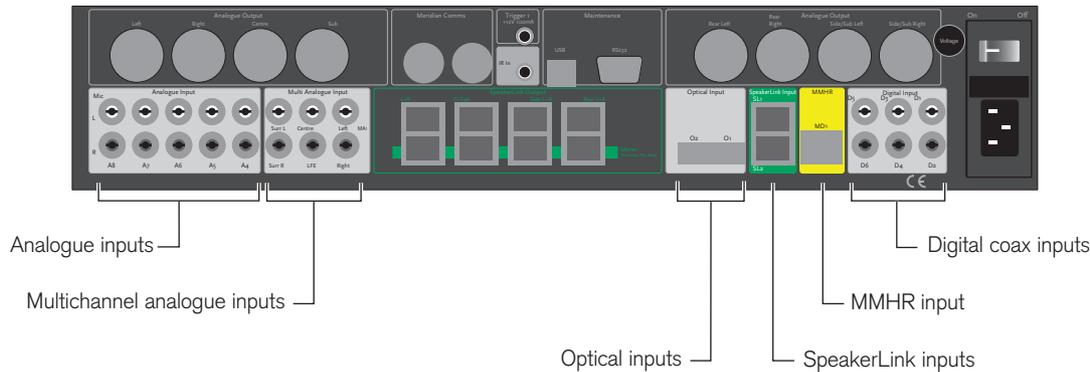
The G65 Digital Surround Controller is supplied with the following accessories:

- 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 dealer.

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

Audio inputs



Use this connector

MMHR (DVD)

SpeakerLink inputs SL1 (Aux), SL2

Digital Input D1 (CD), D2, D3 (Disc), D4, D5 (VCR2), D6 *

Multi Analogue Input 1 (or A1-A3)

Analogue Input A4 (TAPE), A5 (TV), A6 (Cable), A7 (VCR1) †

Optical Input O1 (Sat), O2 (Game)

Analogue input Mic (A8-L)

To connect to this

The multichannel digital output of a Meridian HD621 HDMI Audio Processor.

The SpeakerLink output of a Meridian source, such as the 808 Signature Reference CD Player.

The digital output of a source such as a G07 24-bit CD Player or DAB tuner.

A multichannel analogue source such as an SACD player.

The unbalanced analogue output of a source such as a tape recorder, TV tuner, cable box, or VCR.

The optical output of a source such as a satellite receiver or computer game console.

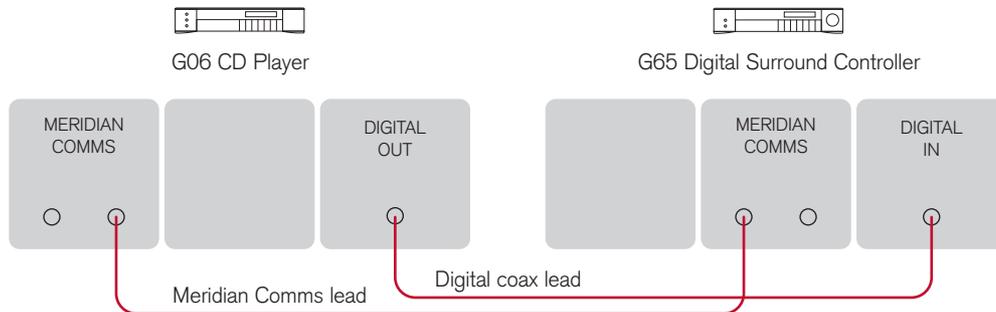
An SPL meter for use in room correction configuration.

*D2, D4, and D6 can be configured as Multi Digital 2 to connect via coax to other Meridian multi-channel sources.

†A4-A6 can be used as Multi Analogue Input 2 to connect to a second multichannel analogue source such as an SACD player.

The default assignment of the sources to each input is shown in brackets after the input name in the above table. To assign a different input to a source see *Configuring sources*, page 49.

To connect to a digital source (eg G06 24-bit CD Player)

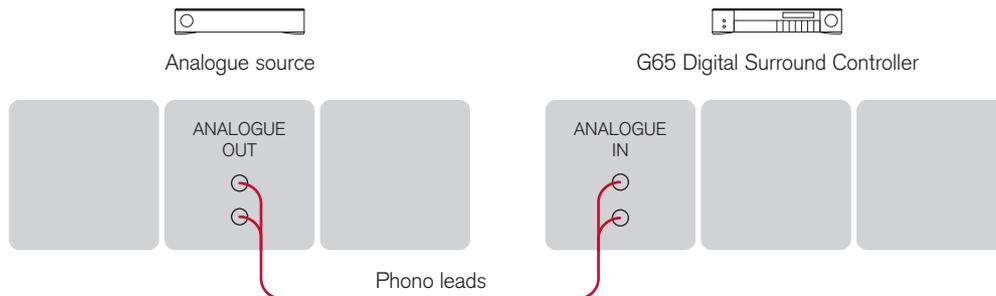


You can connect up to six digital coax sources to the G65 Digital Surround Controller.

If the source is a Meridian product connect together the Comms sockets using the Comms lead provided.

- Connect the digital source to one of the digital input sockets of the digital surround controller, using a 75Ω screened coax phono lead.

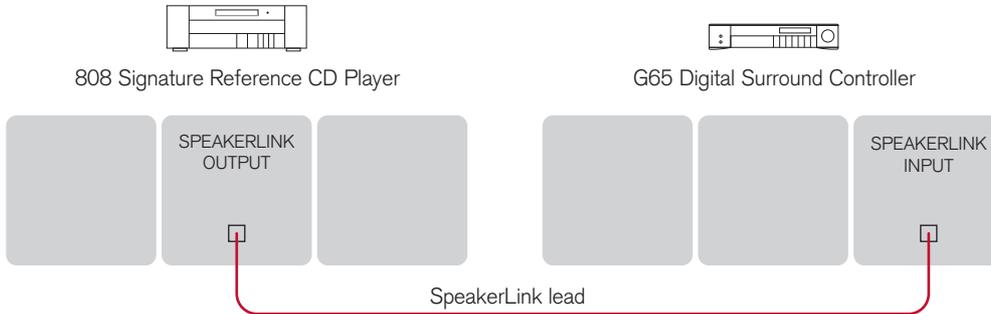
To connect to an analogue source (eg TV tuner)



You can connect up to eight analogue sources to the G65 Digital Surround Controller.

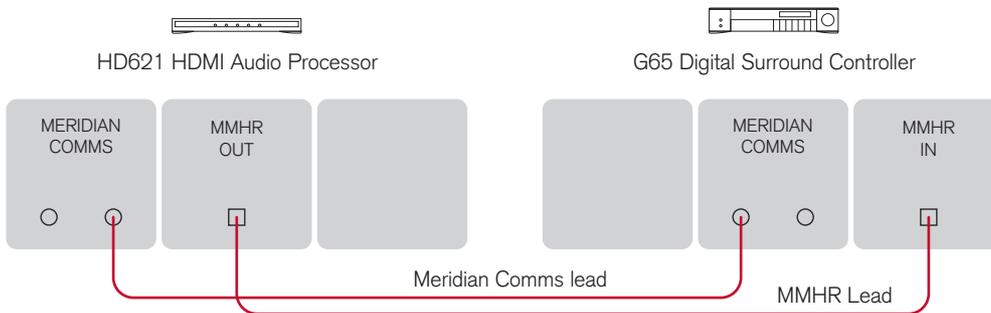
- Connect the analogue source to one of the analogue input sockets of the digital surround controller, using screened coax phono leads.

To connect to a digital source using SpeakerLink (eg 808)



- Connect the DIGITAL output from the 808 to one of the SpeakerLink inputs on the digital surround controller, using a Meridian SpeakerLink lead.

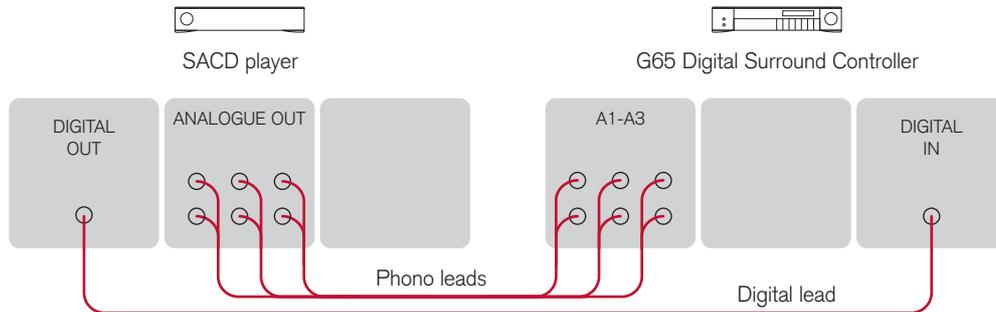
To connect to a Meridian HD621 HDMI Audio Processor



The G65 provides an MMHR multichannel input which can be used with the HD621 HDMI Audio Processor.

- Connect the MMHR output from the HD621 to the MMHR input on the G65, using an MMHR lead.

To connect to a source with analogue multichannel outputs (eg SACD player)



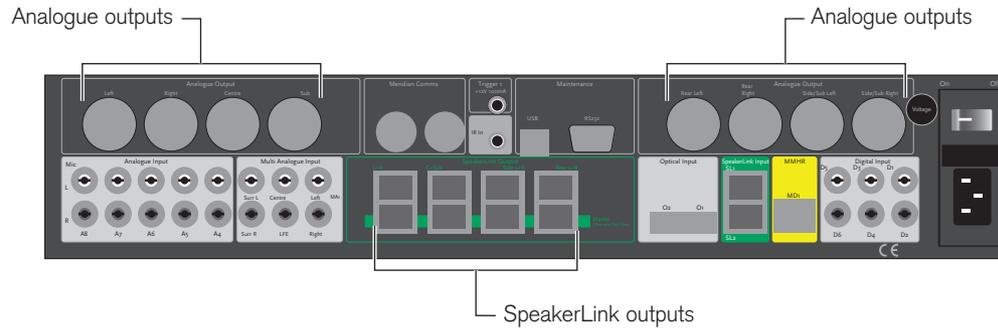
Analogue inputs A1 to A3 can be used as a multichannel input from a source with a suitable analogue multichannel output, such as an SACD player. Analogue inputs A4 to A6 can optionally be used as a second multichannel analogue input.

- Connect the Analogue Output sockets from the source to the analogue multichannel inputs on the digital surround controller using six phono leads.
- Optionally connect a digital output from the source to digital input D4 (DISC) on the digital surround controller, using a digital phono lead.

You can then select the source corresponding to the multichannel input for playing surround material, and the source corresponding to the digital input to decode other formats.

Note: Multichannel analogue sources may have subwoofer level outputs that vary by up to 10dB, so it may be necessary to reduce the LFE level to give correct bass integration; see *DSP presets*, page 65.

Audio outputs



Use this output

SpeakerLink Output L+R, C+Sub,
Side L+R, Rear L+R

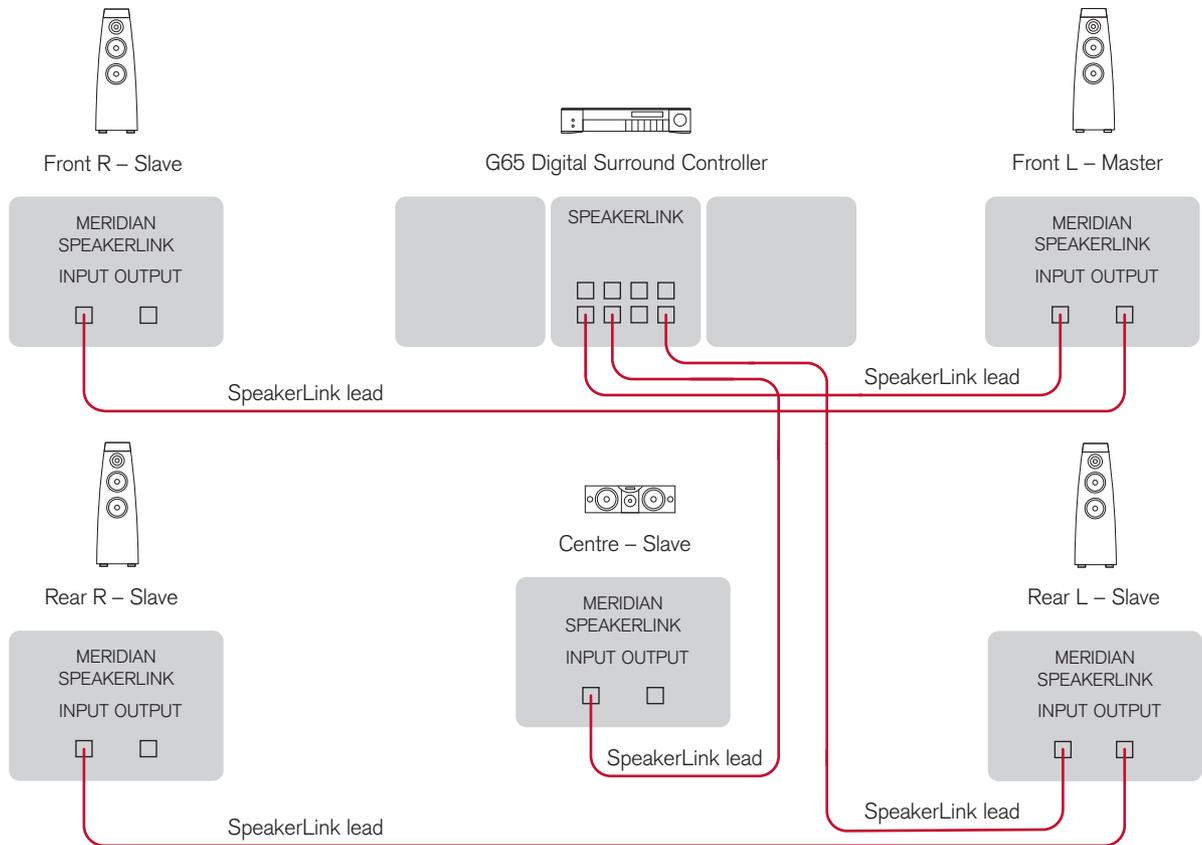
Analogue Output Left, Right, Centre,
Sub, Rear Left, Rear Right, Side/Sub
Left, Side/Sub Right

To connect to this

Digital loudspeakers, using Meridian SpeakerLink leads or standard CAT5 network cables. Connect the master speaker to the appropriate socket on the lower row. Connect the slave speakers to the other sockets as shown in the following diagrams.

The balanced analogue input of a power amplifier or active loudspeakers.

To connect the G65 to Meridian DSP loudspeakers (daisy chain)



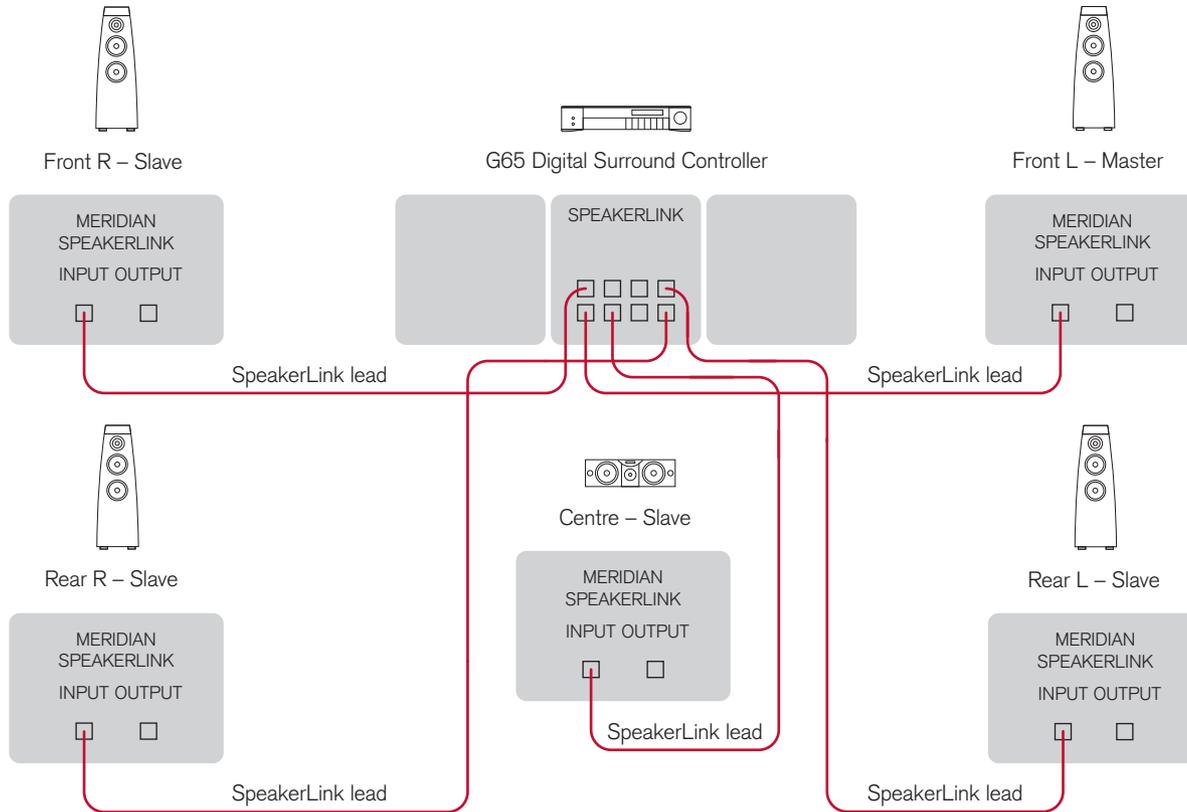
This is an alternative to the “home run” wiring configuration shown in the next section.

- Connect the appropriate SpeakerLink output on the lower row of the G65 to the master digital speaker (typically the main left speaker), using a Meridian SpeakerLink lead.
- Connect the appropriate SpeakerLink outputs on the G65 to one of each of the remaining pairs of speakers, using a Meridian SpeakerLink lead.

- Link each pair of speakers together with a Meridian SpeakerLink lead, out of the first speaker and into the second speaker, as shown in the diagram.

The speakers should then be configured appropriately as master and slaves, and Left, Right, Centre, and Surround; see *Meridian DSP Loudspeaker User Guide* for more details.

To connect the G65 to Meridian DSP loudspeakers (home run)



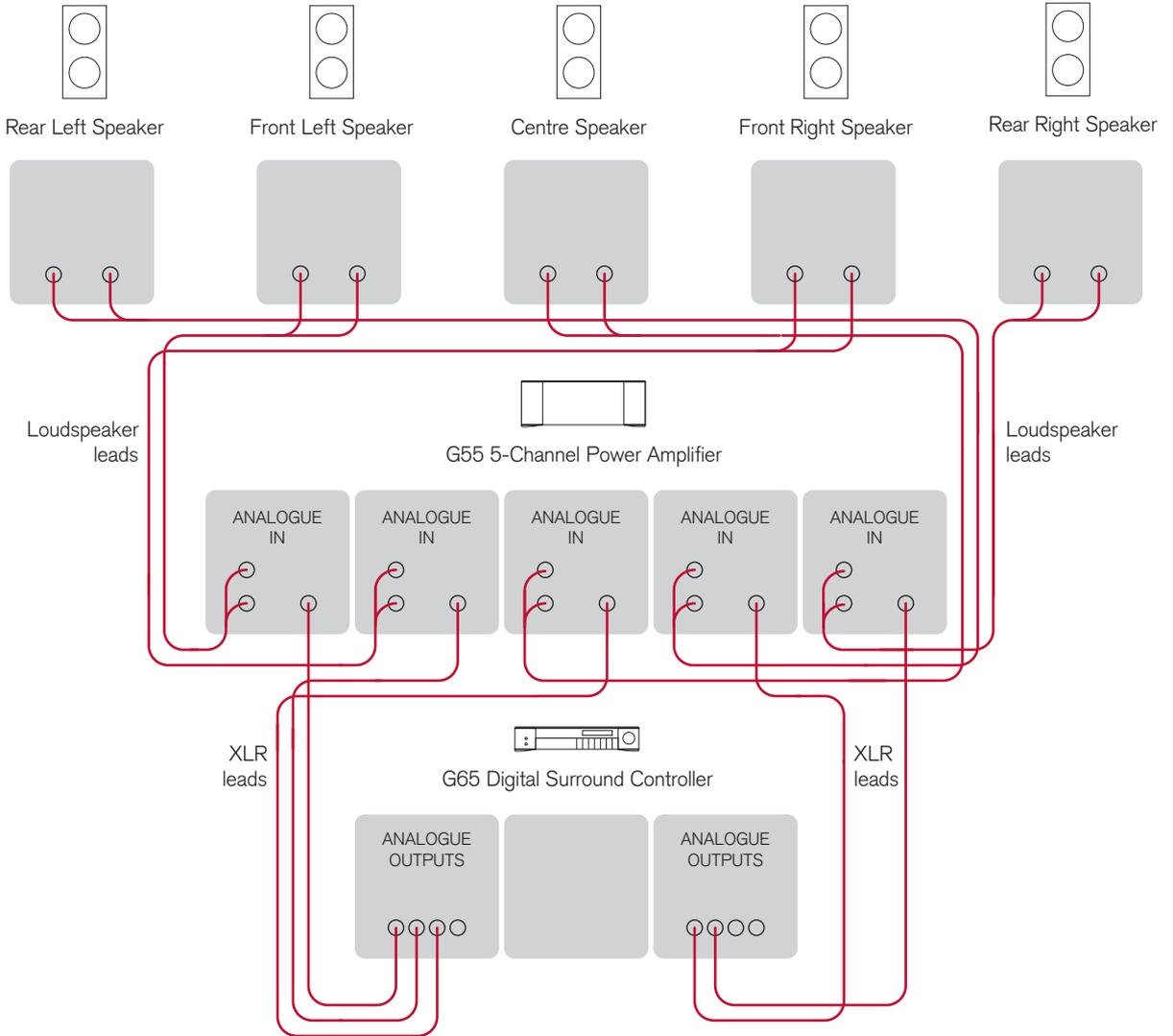
This is an alternative to the “daisy chain” wiring configuration shown in the previous section.

- Connect the appropriate SpeakerLink output on the lower row of the G65 to the master digital speaker (typically the main left speaker), using a Meridian SpeakerLink lead.
- Connect the appropriate SpeakerLink outputs on the G65 to each of the remaining speakers, using a Meridian SpeakerLink lead.

The speakers should then be configured appropriately

as master and slaves, and Left, Right, Centre, and Surround; see *Meridian DSP Loudspeaker User Guide* for more details.

Alternatively you can use standard CAT5 network cables instead of SpeakerLink leads.

To connect to passive loudspeakers powered by a Meridian G55

The G65 provides eight balanced analogue outputs to allow you to connect to active loudspeakers, or power amplifiers and passive loudspeakers. An ideal choice is the Meridian G55 5-Channel Power Amplifier.

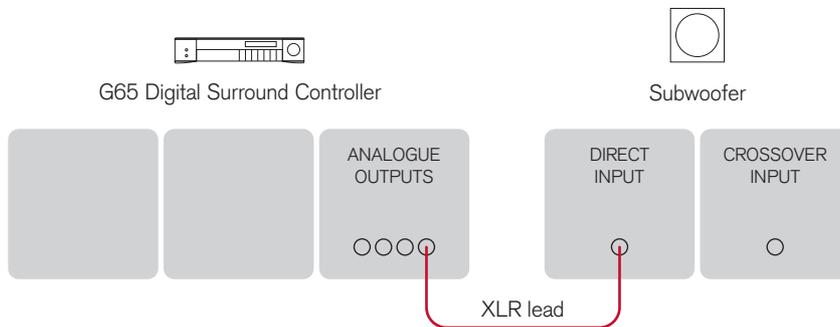
- Connect the Left and Right analogue outputs to the G55 balanced inputs for the main front loudspeakers.
- Connect the Rear Left and Rear Right analogue outputs to the G55 balanced inputs for the rear loudspeakers.

- Connect the Centre analogue output to the G55 balanced input for the centre loudspeaker.
- If the system includes a subwoofer connect the Sub analogue output to an active analogue subwoofer.

Make all the connections using XLR leads.

- On the G55 set the UNBALANCED/BALANCED switch to the BALANCED position for each channel.

To connect to an active subwoofer

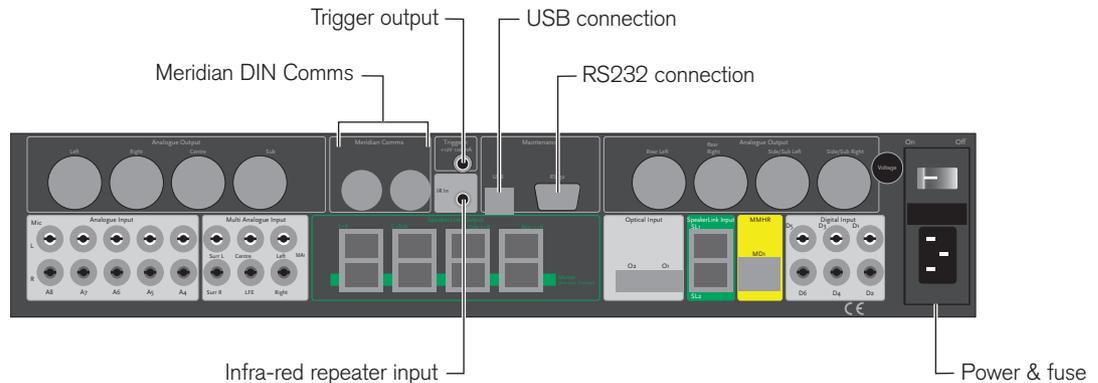


The digital surround controller provides a very high-quality crossover for the subwoofer, and for best results you should use this instead of the subwoofer's crossover. The subwoofer crossover can be set from the front panel of the G65; see *Subwoofer crossover frequency*, page 61.

- Connect the Sub analogue output socket from the G65 Digital Surround Controller to the subwoofer's line-level input using a balanced audio lead.
- Use Side/Sub Left and Side/Sub Right if you have two subwoofers.

If the subwoofer does not have a direct input, or a setting that completely removes the crossover, you should set the crossover in the subwoofer to the highest setting available.

Communications connections



Use this connector

DIN COMMS

RS232 connection

USB connection

IR IN

TRIG 1

To connect to this

Other Meridian G Series, 500 Series, or 800 Series equipment, or Meridian DSP loudspeakers.

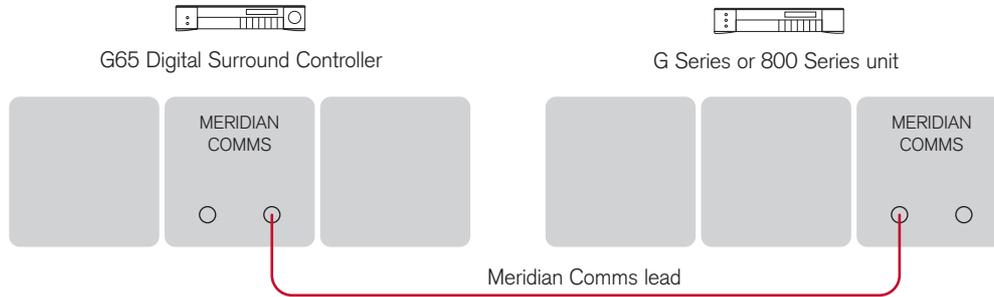
A computer, for configuring the digital surround controller.

A computer, for configuring the digital surround controller.

A G12 IR Receiver, or approved alternative infra-red receiver. Contact your dealer for details.

Other equipment, via a mono 3.5mm jack plug output (centre pin hot) providing 12VDC. It is always low in standby. By default it is high for all sources, so can be used to bring a G Series power amplifier out of standby. Alternatively you can program it to be high for specific sources; eg to control a projection screen.

To connect to other Meridian G Series or 800 Series equipment



In a system of Meridian products the products should be linked together in a chain, via the COMMS sockets, using the Comms leads supplied with each product. The sequence in which you connect the units is not important.

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 procedure should be used to set up the Comms correctly between several products:

- Switch all the units to standby.
- Press **Clear** (MSR+).

Each unit will display:

Auto

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

Controller

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

Not Controller

The system is now ready for use.

If the automatic setup does not work, first make sure you are operating the MSR+ from a position where all the units can receive the infra-red, and try again. Then:

- Check that none of the units have been configured to be IR Controller; see *Settings*, page 52. Either all products should be set to Auto, or one should be configured as Controller and the others as Not Controller.

Note: 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 G65 Digital Surround Controller

This chapter explains how to configure the digital surround controller using the Configuration Wizard.

Alternatively, for complete control over all aspects of the product's configuration you can set up the unit from a computer using the Meridian Configuration Program; see *Installing the Meridian Configuration Program*, page 53.



Configuration Wizard

The **Configuration Wizard** leads you through the correct sequence to configure your digital surround controller. Alternatively, you can skip between the configuration stages, which allow you to reset the configuration, or configure the sources or other settings of the digital surround controller.

To run the Configuration Wizard

- If necessary press **On/Off** to put the digital surround controller into standby.
- Press **More**.

If the product is locked the display shows:



Version Unlock

- Press **Unlock** to unlock it, then press **More**.

The displays then shows:



Version IR Wizard Calib Lock

- Press **Wizard**.

Follow the sequence of configuration stages described in the following pages, pressing **Next** to proceed after each stage.

At any stage in the Configuration Wizard the following options are available:

To do this	Press
Go back to an earlier configuration option	Back
Return to the title screen for the stage	Home
Exit from the configuration menus	On/Off
Display help about the current option	More

Stage 1: Resetting the product

The digital surround controller provides several alternative standard settings, called Types, which configure all aspects of the product into the most commonly needed configurations.

Choosing one of the Types overrides any other configuration you may have performed, and so can be used to reset the configuration of the unit.

To reset the configuration

- Press **Wizard**.

The display shows the title screen for stage 1:

```

Press More for help
1: Reset settings
Back      Enter      Skip
  
```

- Press **Enter** to proceed or **Skip** to go stage 2.

If you pressed **Enter** the display shows:

```

Reset all settings?
Back Yes
  
```

- Press **Yes** to proceed or **Back** to exit.

The display shows the current Type:

```

7.1, All An, Mono/THX Sub
                                Type 1
Back Next  ▼ ▲
  
```

- Press **▲** or **▼** to step through the available Types.

A description of the speakers for each type is shown on the top line of the display. As you select each Type the digital surround controller is reset to that Type.

When you have selected the Type you want:

Either:

- Press **Next** to proceed to configuring speakers, as described in the next section.

Or:

- Press **On/Off** to return to standby.

Types

The following table lists the available Types:

Type	Speakers	Music Sub	Logic Sub	5.1 Movie Sub
0	All analogue.	LFE	Centre	LFE
1	All analogue.	Mono	Mono	Mono
2	All digital.	LFE	Centre	LFE
3	All digital, large centre.	None	None	None
4	Digital left, right, and centre.	LFE	Centre	LFE
5	Digital left and right.	LFE	Centre	LFE

Music Sub refers to a subwoofer used for all Music DSP presets, Logic Sub to a subwoofer used for all Logic DSP presets, and 5.1 Movie Sub to a subwoofer used for all 5.1 Movie DSP presets; see *Speaker layouts*, page 4.

LFE subwoofer is only active in multichannel presets. Mono and Centre Subwoofers are active in all presets.

Note that any Types stored using the Meridian Configuration Program will also be available in this list; see the *Installing the Meridian Configuration Application*, page 53, for more information.

Stage 2: Configuring speakers

The Speakers configuration stage allows you to set up the digital surround controller for the particular arrangement of loudspeakers in your system.

To configure the speakers

Either:

- Press **Next** after resetting the product; see page 45.

Or:

- Press **Wizard**; see *To run the Configuration Wizard*, page 44.
- Press **Skip** to skip past the **Reset settings** menu.
- The display shows the title screen for stage 2:

```

Press More for help
2: Select speakers
Back      Enter      Skip
  
```

- Press **Enter** to proceed or **Skip** to go to stage 3.
- The display shows the first speaker configuration option:

```

Number of Subwoofers:
Back Next  ▾  ▴  one
  
```

- Press **Next** or **Back** to step between options.

A description of each option is shown on the top line of the display, and its current value is shown below this to the right.

The options are summarised in the table on the next page.

To change an option

- Press **▲** or **▼** to step between the alternative values for the option.

When you have stepped through all the speaker options the display shows:

```

Speaker choice finished.
Back Next
  
```

Either:

- Press **Next** on the last option of the last speaker to proceed to configuring sources, as described in the next section.

Or:

- Press **On/Off** to return to standby.

If you press **On/Off** before completing the configuration a warning is displayed, giving you the option of continuing or abandoning the configuration.

Speaker options

The following table summarises the speaker options:

Option	Values	Description
Number of Subwoofers:	none, one, two, three	How many subwoofers.
The main L&R speakers are:	small analogue/THX, small DSP, large analogue, large DSP, small SpeakerLink, large SpeakerLink	The types of the main left and right speakers. If you have no subwoofers, you cannot specify small main speakers.
The Centre is used:	always, never, for music, for movies	When the centre speaker is to be available.
The Centre speaker is a:	small analogue/THX, small DSP, large analogue, large DSP, small SpeakerLink, large SpeakerLink	The type of the centre speaker.*
Number of Surrounds:	none, two, four	The total number of rear and side surround speakers.
The Side speakers are:	small analogue/THX, small DSP, large analogue, large DSP, small SpeakerLink, large SpeakerLink	The types of the side speakers.*
The Rear speakers are:	small analogue/THX, small DSP, large analogue, large DSP, small SpeakerLink, large SpeakerLink	The types of the rear speakers.*
The Subs are used:	for movies only, always	When the subwoofers are used. If you have small main speakers, the subwoofer must always be used.
The Sub handles:	all the bass, only the LFE	Whether to use the subwoofer for all bass or just the LFE channel. Only available if there is only one subwoofer.
The bass balance is:	neutral, heavy	Whether the bass is distributed to all the large speakers and subwoofer (heavy) or just the subwoofer (neutral – recommended). Only available if there is only one subwoofer, and it handles all the bass not just the LFE.
The 2 Subs are used for:	Left and Right, Front and Surround	If there are two subwoofers, their position. Only available if there are two subwoofers.
The sub is:	analogue, digital, SpeakerLink	The type of subwoofer(s).

*If you have small main speakers, you cannot specify large centre or surrounds.

Stage 3: Configuring sources

The digital surround controller provides up to 12 sources corresponding to the 12 source keys on the MSR+:

CD, RADIO, DVD, AUX, DISC, TAPE, TV, CABLE, SAT, VCR1, VCR2, GAME.

For each source the Configure sources stage allows you to configure a series of options, including:

- Whether it is in use.
- The label used for it on the front-panel display.
- The audio input it selects.
- The Trigger output level it selects.

The procedure for doing this is as follows.

To configure a source

Either:

- Press **Next** after configuring speakers; see *Configuring speakers*, page 47.

Or:

- Press **Wizard**; see *To run the Configuration Wizard*, page 44.
- Press **Skip** to skip past the **Reset settings** and **Select speakers** menus.

The display shows the title screen for stage 3:

```
Press More for help
3: Configure sources
Back      Enter      Skip
```

- Press **Enter** to proceed or **Skip** to go to stage 4.

The display shows the first source and the first configuration option for that source, whether it is in use:

```
This source is:
CD              in use
Source Back Next  ▼ ▲
```

- Press **Next** or **Back** to step between options.

The top line of the display shows a description of each option, and its current value is shown to the right of the source name.

When changing the source name, **Next** and **Back** step between character positions.

The options are summarised in the table on the next page.

To change an option

- Press **▲** or **▼** to step through the alternative values for the option.

To move to the next source

- Press **Source**.

When you have finished configuring sources:

Either:

- Press **Next** on the last option of the last source (Game) to proceed to configuring settings, as described in the next section.

Or:

- Press **On/Off** to return to standby.

Source options

The following table summarises the source options:

Option	Values	Description
The source is:	in use, not in use	Whether the source is enabled.
Audio input:	D1-D6, SL1, SL2, MMHR, MD2, O1, O2, A1-A8, MA1, MA2, Last Valid*	The audio input used for the source; digital, multichannel digital, optical, analogue, or multichannel analogue.
Source name:		Any name of up to five characters.
Trigger #1:	High, Low, Last Valid	Trigger outputs for the source.
Comms Type:	CD 1C, Tuner 2C, DVD 3C, Sooloos 4C, 5C-8C, No Comms NC	Set to NC unless the source is a Meridian or Sooloos product.
Comms Address:	1A-8A	Allows you to have up to eight of each source type.

*Last Valid leaves the input set to the last input you selected.

Stage 4: Configuring other settings

The next stage allows you to configure other aspects of the product's operation.

To configure other settings

Either:

- Press **Next** after configuring the sources; see *Configuring sources*, page 49.

Or:

- Press **Wizard**; see *To run the Configuration Wizard*, page 44.
- Press **Skip** to skip past the stages 1 to 3.

The display shows the title screen for stage 4:



```

Press More for help
4: Other settings
Back Enter Skip
  
```

- Press **Enter** to proceed or **Skip** to go to the calibration procedure.

The first setting is displayed:



```

The fan is:
used as necessary
Back Next
  
```

A description of each setting is shown on the top line of the display, and its current value is shown to the right of the display.

The settings are summarised in the table on the next page.

To change a setting

- Press **▲** or **▼** to step through the alternative values for the setting.

To calibrate the system

When you have finished configuring the settings:

- Press **Next** to proceed to calibrating the system, as described in the next chapter.

Alternatively, to return to standby:

- Press **On/Off**.

Settings

The following table summarises the product settings:

Option	Values	Description
The fan is:	used as necessary, never used	Specifies how the optional temperature controlled fan operates.
Distance measurement:	feet/inches, metres	Units for displaying and entering distances.
Do your subs play to 20Hz?	No, THX Ultra2/yes	Subwoofer frequency response.
Boundary Gain Compensation:	off, on	Reduces the bass to compensate for listening positions close to a wall.
Rear speaker separation	<12"/0.3m, 12-48"/0.3-1.2m, >48"/1.2m	Separation between rear speakers; only available when there are four surrounds.
Timeout to Home buttons:	on, off	Whether the soft keys revert to the home keys after a delay.
Diagnostic displays:	on, off	Whether diagnostic displays are shown.
Is the G65 IR Controller?	Auto, Controller, Not Controller	Whether the product is the infra-red controller for the system.
Main System Address	1-8	Advanced setting (normally 1).
Product Address	1-8	Advanced setting (normally 1).
EBA on SpeakerLink?	off, on, Music streams only, all audio streams	Whether to show the EBA menu or force the setting to off or on.
Legends on SpeakerLink?	no, yes	Whether to show the custom source labels with a mix of older DSP and newer SpeakerLink loudspeakers.
Centre speaker is horizontal?	no, yes	Whether to show the centre elevation menu.

To toggle the IR mode

- If necessary press **On/Off** to put the surround controller into standby.
- Press **More**.

The display shows:

```
Version IR Wizard Calib Lock
```

- Press **IR** to toggle between **IR Auto** (auto setup), **IR Con.** (controller), and **IR N.Con.** (not controller).

After a short delay the surround controller will return to standby.

Installing the Meridian Configuration Application

The Meridian Configuration Application is a Windows program that allows you to configure the G65 Digital Surround Controller, together with any other Meridian products in your system, using an intuitive visual interface.

The Meridian Configuration Application is an alternative to using the Configuration Wizard, or you can view or modify a configuration previously created using the Configuration Wizard. It also provides control over several features not available from the front panel, including programming of the soft keys.

The Meridian Configuration Application is not included with this product, but is freely available from our website.

Requirements

To use the Meridian Configuration Application you need:

- A computer running Windows 95, 98, 2000, NT 4, ME, XP, Vista, or Windows 7.
- 10Mbytes of free disk space.
- A 9-pin serial port or USB port.
- A mouse or similar pointing device – the application cannot be operated solely from the keyboard.

The Meridian Configuration Application can communicate with the G65 you are setting up either through a serial cable or a USB cable connected to the appropriate Maintenance socket; see *Communications connections*, page 40.

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:

<http://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 the G65 support pages at the following URL:

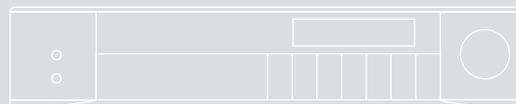
<http://www.meridian-audio.com/support>

Calibrating the system

To help you to set up the installation to give the best possible sound with any particular combination of associated equipment, the G65 Digital Surround Controller includes a built-in calibration procedure.

This calibration procedure uses test signals to present a series of sounds, which you use to adjust certain aspects of the system to their optimum settings.

You should use the calibration procedure the first time you set up the system, and whenever you want to check the calibration, such as after changing the layout of the room.



Introduction

We recommend that you perform the calibration procedure using the MSR+ and from the listening position.

As you run the calibration procedure the name of each calibration test is shown on the front-panel display, followed by the parameters adjusted in the test.

Each calibration test uses a test signal designed to give the best results.

Using a Sound Pressure Level meter

Although you can perform the calibration procedure by ear, it is recommended that you perform the tests using a Sound Pressure Level meter.

Set the Sound Pressure Level meter to C weighted, and Slow. Take readings with the meter at the listening position, pointing vertically. You should hold the meter with an outstretched arm to minimise reflections from your body.

You can choose to display and enter distances in either feet and inches or metres.

To start the calibration procedure

Either:

- Press **Next** on the last option of configuring settings; see *To calibrate the system*, page 51.

Or:

- Press **On/Off** to put the digital surround controller into standby.
- Press **More**.

If the product is locked the display shows:

```
Version          Unlock
```

- Press **Unlock**.

The display shows:

```
Version IR Wizard Calib Lock
```

- Press **Calib**.

The display shows **Please wait...**

After a few seconds the display shows the first calibration test:

```
Press More for help
Left Level +0.0dB
◀ ▶ ▾ ▴
```

For more detailed information about this and the other calibration tests see the following sections.

To exit from the calibration procedure

You can exit from the calibration procedure at any time, and any parameters you have set will be retained:

- Press **On/Off**.

To complete the calibration procedure

When you reach the end of the calibration procedure the following display confirms that you have completed the calibration of the system:

```
Calibration complete.
Back Next Restart
```

- Press **Restart** to restart the calibration procedure, or **Next** to complete the wizard.

The display shows:

```
Press More for help
Wizard complete
Back Exit Restart
```

Either:

- Press **Exit** to return to standby.

Or:

- Press **Restart** to return to stage 1; see *Stage 1: Resetting the product*, page 45.

Calibration tests

Levels

These tests allow you to adjust the output level to each speaker individually, and it follows the general guidelines from Dolby Laboratories and THX.

In each test the display shows the speaker being tested, and the current relative level. For example:



- Use **▶** and **◀** to move between each of the speakers in the layout in the sequence: Left, Centre, Right, Side R, Rear R, Rear L, Side L, and subwoofers.
- Use **▲** and **▼** to adjust the level of the speaker. Ignore any tonal difference.

For correct THX reproduction you should adjust each speaker to 75dB SPL using an SPL meter. Even if the speakers are not THX approved this setting is recommended.

If you have Meridian DSP loudspeakers they cannot be set above +0dB.

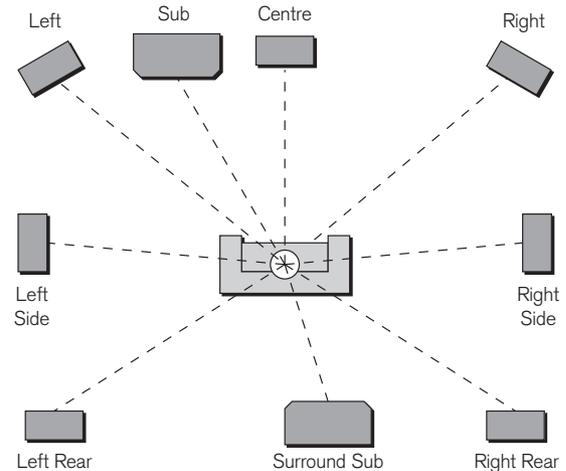
Note: You cannot set the level of a subwoofer by ear, because low-frequency noises sound quieter. To set the subwoofer correctly either use an SPL meter, or set it by ear and then reduce the subwoofer gain by 15dB to correct for human hearing.

- When you have completed the Levels section press **▶** to proceed to the next test.

Distance

These tests allow you to adjust the delay of each of the speakers in the layout to time-align the system so that sounds are coincident when they arrive at the listening position.

Before setting up the speaker outputs you need to measure the distance to each speaker from the listening position:



Measure from ear height at the listening position to the tweeter on each speaker (where applicable), in the distance units you have chosen; see *Settings*, page 52.

- Use **▶** and **◀** to move between each of the speakers in the layout.

The display shows the speaker being tested, and the distance:



- Use **▲** and **▼** to change the distance.
- You can press **Units** to change between feet/inches and metres.

Repeat this for each of the speakers in your layout.

- Press **▶** to proceed to the next calibration stage.

Fine tuning

These tests allow you to fine-tune the phase and delay of each speaker when used in conjunction with other speakers on the layout.

- Use ► and ◀ to move between each of the speakers in the layout.

The first display allows you to adjust the phase. For example:



The next display shows the distance for the same speaker. For example:



- Choose the correct setting as follows:

Setting	What it sounds like
Correct	The sound between the speakers is very even, and does not change radically as you move your head.
Incorrect	The sound appears diffused, and changes in timbre and apparent location as you move your head.

Pay particular attention to the centre channel, as this can have a dramatic effect on the overall sound.

- Press ► to proceed to the next calibration stage.

Speaker size

These tests allow you to determine the bass handling capability of subwoofers and large analogue speakers. Once set, the digital surround controller will limit the bass level to protect the speakers from potential damage.

On starting the test the speaker sizes are set to zero to avoid the possibility of damaging the speakers, and the display shows:



Press More for help
Sizes set to zero

The display then shows the first large analogue speaker; for example:



Press More for help
Left Size 0

- Press ▲ or ▼ to adjust the size value for the speaker until it just begins to distort distinctly, and then reduce the value by one.
- Press ► or ◀ to move between each of the speakers to be adjusted.

This is the last test in the calibration procedure; see *To complete the calibration procedure*, page 57.

Using the Sine/Sub/Sens controls

This section explains how to use the Sine/Sub/Sens controls to check for room resonances, adjust the subwoofer crossover frequency, or adjust the sensitivity of the analogue sources.

To display the Sine/Sub/Sens controls

- If necessary, unlock the digital surround controller as described in *Configuration Wizard*, page 44.
- Select a source and press **More** until the bottom line of the display shows:

```
Radio Trifield 65
Sine/Sub/Sens.
```

- Press **Sine/Sub/Sens**.

The bottom line of the display shows the **Sine/Sub/Sens** controls:

```
Radio Trifield 65
Sine -Xover+ -Sens.+
```

Subwoofer crossover frequency

The G65 Digital Surround Controller allows the crossover frequency for any subwoofers which you have to be adjusted between 30 and 150Hz. The crossover can be set independently for Music, Logic, and 5.1 Movie layouts. The default is the THX standard of 80Hz.

To adjust the subwoofer crossover frequency

- Select a source, then display the **Sine/Sub/Sens** controls as described above.
- Press **Xovr-** or **Xovr+** to decrease or increase the crossover frequency.

The display shows the current crossover frequency:

```
CD Xover 85Hz
Sine -Xover+ -Sens.+
```

For THX loudspeaker systems you should not adjust these settings; they should be left at 80Hz. 80Hz is also the recommended setting for all movie listening. You may prefer, however, to lower the crossover frequency for music if the main speakers have good bass handling down to, say, 50Hz.

Sinewave sweep test

The G65 includes a sinewave signal test, to help you set the subwoofer crossover frequencies, or check for room resonances. To avoid possible damage to the speakers the volume is reduced to 50 on entering the test.

Warning: This test is very loud. Bass protection is turned off during this test, and very loud low-frequency signals may damage the speakers.

To use the sinewave sweep test

- Select a source, then display the **Sine/Sub/Sens** controls as described above.
- Press **Sine** to turn on the sinewave signal.

The display shows:

```
CD Sine 80.0Hz
Chan ▾ ▲ Sound Exit
```

An 80Hz sinewave will be played through all channels.

You can change the test signal using the menu keys, as described in the following sections.

To select the channel

- Press **Chan**.

You can select any individual channel, or **All Channels**.

To change the sweep rate

- Press ▲ or ▼ to change the sweep rate and direction, as follows:

Display	Description
	Fast sweep up.
	Slow sweep up.
	Paused.
	Slow sweep down.
	Fast sweep down.

To change the volume

- Use the volume keys in the usual way.

To change the input

- Press **Sound**.

You can select between the following inputs:

Option	Description
Input	The current input.
Sine	A sinewave.
Noise	Pink noise, band pass 500Hz to 2kHz for main channel.
Silent	Silence.

Alternatively you can switch between inputs using the menu keys on the MSR+.

To adjust the source input sensitivity

This section explains how to use the **Sine/Sub/Sens** controls to adjust the sensitivity of the analogue sources.

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

- Select the source you want to adjust, with loud source material playing.
- Display the **Sine/Sub/Sens** controls as described above.
- Press **Sens-** or **Sens+** to decrease or increase the sensitivity.

The display shows the current sensitivity and the peak level; for example:

```
TV 1.4V Peak -3
Sine -Xover+ -Sens.+
```

You can adjust the sensitivity between 0.7, 1.0, 1.4, 2.0, and 2.8V (least sensitive).

If the sensitivity is set too high the input will clip the loudest passages, and the peak will be 0dB.

The display shows, for example:

```
TV 2.0V Clip -0
Sine -Xover+ -Sens.+
```

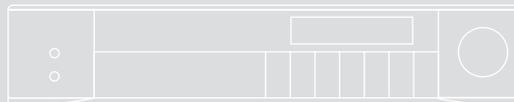
In this case reduce the sensitivity by selecting a higher number.

If you have selected a digital source you cannot adjust the sensitivity and the display shows, for example:

```
DVD Not analogue
Sine -Xover+ -Sens.+
```


DSP presets

This chapter gives technical information about each of the DSP presets built in to the G65 Digital Surround Controller, including information about which preset you should select for different types of material. It also gives details of the special DSP parameters available for each preset.



DSP presets for two-channel material

The digital surround controller provides several signal processing options for two-channel material. The Music DSP presets are designed for use with music from sources such as CD or radio:

- Music, Trifield, Ambisonics, Super Stereo, Music Logic, PLIIx Music, Stereo, and Direct.

The Logic DSP presets are designed for use with film soundtracks or TV programmes:

- PLIIx Movie, PLIIx THX, TV Logic, and Mono.

The Music and Logic DSP presets use the Music and Logic speaker layout respectively; see *Speaker layouts*, page 4.

Music

The Music DSP preset extracts the mono and surround components of the original recording. These components provide an alternative representation of the original sound, and this is sometimes used for recording systems or in broadcasts such as FM radio. The mono element is equalised using a proprietary Meridian technique to match the tone colour of the centre speaker, and to compensate for the fact that the frequency response of human hearing changes with direction.

The Music DSP preset is recommended for recordings made with spaced omnidirectional microphones, or using a mono-surround technique.

Trifield

As for the Music DSP preset, the Trifield preset extracts the mono and surround components of the original recording. It then calculates the signals for the front, left, centre, and right speakers, using the phase and amplitude differences between the three front channels, to redistribute the sounds on a frequency-dependent basis.

This gives a significant improvement over traditional

stereo, which converts the differences between the microphone signals into amplitude differences in the speaker signals. This version of the Trifield algorithm is virtually impossible to implement without digital signal processing.

Trifield is recommended for well-made recordings and stereo television broadcasts that are not Dolby Surround encoded. An advantage over the Music DSP preset is that the front stereo image is more focused, and the width of the image can be adjusted.

Music and Trifield DSP preset parameters

Parameter	Options	What it changes
Centre	Flat, EQ1–3	The timbre of the centre loudspeaker.
Width†	0–1.5	The width of the image.
Surr. Rear	Surr. Rear, Surr. Side, Surr. All	Switches the surround signal between the side and rear speakers.
R Filter	Off, 1kHz, 3kHz, 7kHz	The cutoff of high frequencies from the rear surrounds.
S Filter	Off, 1kHz, 3kHz, 7kHz	The cutoff of high frequencies from the side surrounds.

† Trifield only.

Ambisonics

The Ambisonics DSP preset can decode two-channel UHJ format, the stereo-compatible surround encoding found on Ambisonically-recorded discs and broadcasts. This material is specifically encoded for surround reproduction and can give breathtakingly realistic sound when replayed using the digital surround controller.

Ambisonic surround sound is quite unlike conventional stereo. A special microphone can be used to capture the sound of the original performance in all three dimensions, allowing a recording to be made in a special format (B-Format) that describes the soundfield exactly at the microphone position. Alternatively, special mixing techniques including Ambisonic spatial localisation controls (panpots) can be used to mix conventional multitrack into the same Ambisonic surround format. The channels of this recording can then be encoded using a phase-amplitude matrix (UHJ) to allow the surround information to be conveyed, typically via a two-channel medium such as disc or FM broadcast. On playback, the decoder reconstructs the soundfield captured by the original recording.

The digital surround controller uses accurately matched, frequency-dependent, phase-amplitude matrices to decode the signal and construct the signals for each speaker feed.

The fundamental difference between Ambisonics surround sound and conventional stereo is that the signals from all the speakers combine to produce a coherent soundfield at the listening position, giving the illusion that you are sitting inside the recording space whether you are at the exact central seat or well off to one side.

Of all the signal-processing options, Ambisonics is the one that requires the greatest attention to speaker choice and positioning.

Super

Super synthesises a signal from a conventional stereo recording or broadcast so that it can be decoded using the Ambisonic decoder. The result is especially effective for two particular types of recordings:

- Those using true coincident microphone techniques.
- Multi-tracked or multi-miked recordings.

Ambisonics and Super DSP preset parameters

Parameter	Options	What it changes
Width*	0 to 1	The width of the image.
Row†	A, C, E, G, I, K, M	The seating position; the letters are like rows in a hall.
Channels	7, 6, 5, 4	The number of speakers.
R Filter	Off, 3kHz, 7kHz, 9kHz	The cutoff of high frequencies from the rear surrounds.
S Filter	Off, 3kHz, 7kHz, 9kHz	The cutoff of high frequencies from the side surrounds.

* Super only.

† Ambisonics only.

MusicLogic

MusicLogic is a music DSP preset based on Pro Logic II with the addition of user-adjustable steering, designed to provide an exciting experience with many types of studio-produced music.

MusicLogic DSP preset parameters

Parameter	Options	What it changes
Roll	Off, Low, Med, Max	The degree of left-right steering.
Yaw	Off, Low, Med, Max	The degree of front-rear steering.
Steered All	Steered Rear, Steered Side, Steered All	Which of the four surround channels are generated by steering.

PLIIx Music

The PLIIx Music preset is designed to use the Pro Logic IIx DSP processing mode to decode music sources. It provides additional **Width**, **Dimension**, and **Panorama** preset parameters to allow you to adjust the soundfield.

PLII Music DSP preset parameters

Parameter	Options	What it changes
Steered All	Steered Rear, Steered Side, Steered All	Which of the four surround channels are generated by steering.
Width	0 to 7	The centre spread, where 0 is full centre and 7 is full left and right.
Dimension	-3 to +3	The spatial soundfield, where -3 puts the balance to the rear of the room and +3 puts it to the front.
Panorama	No, Yes	Extends the front stereo image to include the surround speakers, to give a wrap-around effect.

Stereo and Direct

The Stereo preset passes the left and right input signals directly to the left and right main speakers. Any mono or front left and right subwoofers continue to be used. With the Direct preset only the left and right main speakers are used, bypassing any spatial processing and bass management.

There are no additional DSP preset parameters for Stereo and Direct.

PLIIx Movie and PLIIx THX

PLIIx Movie and PLIIx THX use the Dolby Pro Logic IIx DSP processing mode, and are the recommended choice for Dolby Surround encoded material. They also give excellent results with two-channel sources not specifically encoded for Dolby Surround, including two-channel Dolby Digital sources.

Pro Logic IIx re-creates 7.1-channel movie surround from the two-channel source, using improved decoding techniques that preserve the directness of the soundfield, resulting in enhanced image stability compared with the original Pro Logic decoding. Meridian's implementation of Pro Logic IIx uses proprietary code based on 48-bit precision to give outstanding clarity.

The PLIIx THX DSP preset uses the same PLIIx processing as PLIIx Movie, but adds THX Cinema processing. THX is a set of standards and technologies developed by Lucasfilm Ltd. with the aim of making your experience of the film soundtrack as faithful as possible to what the director intended.

Re-equalisation is used to restore the correct tonal balance for watching a film soundtrack in a small home environment. The information going to the surround speakers is filtered so that it closely matches the tonal characteristics of the sound coming from the front speakers, to ensure seamless panning between the front and surround speakers.

THX can also be used with the 5.1 Movie DSP presets; see *THX*, page 71.

PLIIx Movie and PLIIx THX DSP preset parameters

Parameter	Options	What it changes
Surrounds	Rear, Side, All	Which of the four surround channels are generated by steering.
Pro Logic	Off, On	On selects an emulation of the original Pro Logic decoding.

TV Logic

TV Logic is a Logic preset based on Pro Logic IIx with the addition of user-adjustable steering, designed to give higher intelligibility and a more appropriate spatial presentation for studio-based TV material.

TV Logic DSP preset parameters

Parameter	Options	What it changes
Roll	Off, Low, Med, Max	The degree of left-right steering.
Yaw	Off, Low, Med, Max	The degree of front-rear steering.
Surrounds	Rear, Side, All	Which of the surround channels are generated by steering.

Mono

In the Mono DSP preset you can choose to listen to:

- Only one of two input channels, such as when different languages or material are carried on each channel.
- A combined version of the two input channels, such as if the material was originally mono and has been conveyed on a two-channel carrier.

If **Party?** is set to **No**, the combined or selected signal is played only through the centre speaker, or the left and right speakers if there is no centre, to centrally localise high-frequency hiss and clicks.

Note: If **Party?** is set to **Yes**, full range bass is played through any speakers that are not supplemented by a subwoofer, and this may damage small speakers at high volume levels.

Mono DSP preset parameters

Parameter	Options	What it changes
Input	Auto L+R, Input L, Input R, Input L+R	The channel selected.
Academy	Off or On	Select On to include an equalisation (recommended by Lucasfilm Ltd) to correct for a high-frequency balance in some old mono films.
Party?	No or Yes	Select Yes to play the mono signal through all speakers, including subwoofers.

DSP presets for multichannel material

Multichannel audio signals can come from either encoded data streams (such as Dolby Digital) or as discrete channels from a DVD player. If you are using Meridian SmartLink then all formats will reach the G65 as discrete channels. With suitable loudspeakers the G65 can upsample these to provide a more enjoyable surround experience.

The G65 Digital Surround Controller will automatically select the right decoder algorithm and present the same set of preset choices for all streams. **Note:** Some presets are only available if there are four surround speakers in the system.

There are four multichannel Music presets:

- Discrete, PLIIx Mus6, THX Music, and Ambisonics B format (discrete inputs only).

There are five multichannel Movie presets:

- Cinema, PLIIx Mov6, THX, THX Surround EX, and THX Ultra2 Cinema.

The multichannel Music presets all use the Music speaker layout and the multichannel Movie presets all use the 5.1 Movie speaker layout; see *Speaker layouts*, page 4.

Cinema

The Cinema preset is recommended for listening to multichannel movie soundtracks when no further processing is required.

Discrete

The Discrete preset is similar to Cinema, except that it uses the Music speaker layout and sets the LFE level to -10dB.

Discrete and Cinema DSP preset parameters

Parameter	Options	What it changes
2+2+2*	Off, 5.1, Side, 7.1	Allows you to specify how DVD Audio channels 3+4 should be interpreted: Off ignores them, 5.1 and 7.1 use them for centre and LFE, Side uses them for the side speakers, 7.1 adds side speakers to 5.1.
Surround†	Surr. Rear, Surr. Side, Surr. All	Allows you to specify which speakers the surround channels should be sent to in a system with four surrounds.
R Filter	Off, 1kHz, 3kHz, 7kHz	The cutoff of high frequencies from the rear surrounds.
S Filter	Off, 1kHz, 3kHz, 7kHz	The cutoff of high frequencies from the side surround.
LFE	-28dB to 0dB	The relative level of the LFE bass channel.

* Discrete only.

† Cinema only.

THX

As with the PLIIx THX DSP preset, THX re-equalises the signals to suit domestic listening conditions, and applies frequency-response correction and decorrelation to the surround channels to make the surround sound more realistic. It can be used whether or not your other equipment is THX Certified.

THX DSP preset parameters

Parameter	Options	What it changes
Surround	Surr. Rear, Surr. Side, Surr. All	Switches the surround signal between the side and rear speakers.

PLIIx Mov6, THX Surround EX, PLIIx Mus6, THX Ultra2 Cinema, and THX Music

These presets are available if you have four surround speakers. They use Dolby Pro Logic IIx, Dolby Surround EX, and THX Ultra2 Cinema processing to generate multiple signals for larger home theatres. Note that if your source material is already eight-channel you should choose Cinema, Discrete, or THX instead.

PLIIx Mov6 uses extended PLII technology from Dolby to generate four surround signals from traditional multichannel source material like Dolby Digital 5.1. It is intended for use with movie soundtracks.

PLIIx Mus6 also creates four surround signals; it is intended for multichannel music playback from sources such as DVD-A or SACD music discs.

THX Ultra2 Cinema and THX Music use a THX proprietary process called advanced speaker array to provide a mix of ambient and directional surround sounds using four surround speakers. Optimum

performance of THX Ultra2 Cinema and THX Music is produced when the two rear speakers are placed close together behind the listening position. THX Ultra2 Cinema is recommended for movie soundtracks that are not Dolby Surround EX encoded, and THX Music is recommended for listening to multichannel music.

PLIIx Mov6, THX Surround EX, PLIIx Mus6, THX Ultra2 Cinema, and THX Music preset parameters

Parameter	Options	What it changes
LFE	-28dB to 0dB	The relative level of the LFE bass channel.

Ambisonics

The Ambisonics preset allows you to decode multichannel sources which have been encoded in Ambisonics B format.

Ambisonics B format contains four independent channels of information to give a three-axis representation of the sound at the recording position. The signals are: mono sound pressure, left-right velocity component, front-back velocity component, and up-down velocity component.

Using dynamic range control

If the input format is Dolby Digital, the 5.1 Movie DSP presets provide an additional **Compress** parameter to allow you to take advantage of the dynamic range information provided in the Dolby Digital format to provide dynamic range control without the distortion involved in analogue methods.

The **Compress** parameter allows you to set one of the following options:

Option	Description
Compress off	No compression.
Quiet boost	Provides a moderate amount of bottom-up compression. This raises quiet sounds above the background noise, which is ideal for demonstration and quiet listening.
Compress med	Provides moderate amounts of both bottom-up and top-down compression.
Loud cut	Provides a moderate amount of top-down compression. This reduces loud sounds.
Compress max	Provides full bottom-up and top-down compression. Quiet sounds are raised to be audible and loud passages are minimised to avoid disturbance, which is useful for late-night listening.
Compress mix	Bypasses dialogue normalisation and references the sound pressure level in the studio where the material was mixed

Dialogue Normalisation display

Dolby Digital audio streams include Dialogue Normalisation and Mix levels, to specify the recommended listening level of the soundtrack.

The surround controller uses the Dialogue Normalisation level to adjust the volume level so that the soundtrack is reproduced at the correct absolute level, assuming the system is calibrated to produce 75dB SPL at volume 87.

The Mix level is an alternative level which you can select by setting the **Compress** parameter to **Compress mix**.

The Dialogue Normalisation or Mix level is shown in a separate display option for Dolby Digital sources. For example:

```
DVD DialNorm -31
DVD Radio TV VCR1 DSP
```

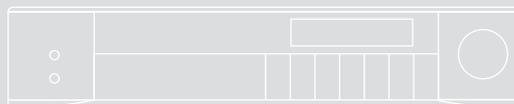
Or:

```
DVD MixLevel -27
DVD Radio TV VCR1 DSP
```

Troubleshooting

We expect you to achieve superb results with your digital surround controller. If, however, you encounter any problems, either when installing and configuring it, or during operation, please check the following pages for suggested solutions.

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



General operating problems

Standby light not lit

- Check that the AC power supply is connected correctly.
- Check that the **ON OFF** switch on the back panel is in the **ON** position.

If the light still does not illuminate, check any fuses in your power supply and the fuse in the inlet of the G65. If these are all intact, contact your dealer.

Erratic or unexpected system behaviour

Redo the Auto Configure process as follows:

- Put the whole system into standby.
- Make sure you are operating the MSR+ from a position where all the units can receive the infra-red.
- Press **Clear** on the MSR+.
- Observe all units responding correctly.

In extreme cases, the memory of the G65 may have been corrupted. If this is suspected perform a full reset; see *Resetting the product*, page 45.

Remote not working

Check the following:

- The battery in the MSR+.
- Remove the Comms connections from the G65 and check whether it responds now. If so, replace the connections and perform an Auto Configure procedure; see *To connect to other Meridian G Series or 800 Series equipment*, page 41.
- See if the G65 has been set up as Not Controller in the Configuration Menu; see *Configuring other settings*, page 51.

Note: This may be deliberate by your dealer.

When playing a Dolby Digital DVD, the G65 selects a two-channel preset

DVDs include a two-channel Dolby Digital soundtrack, which will use the default two-channel preset.

- Select a six-channel soundtrack, if it is available.

Unit is overheating

Check that there is adequate ventilation around the unit.

Audio problems

Hum on analogue input

- Check the source equipment. Disconnect each source in turn.
- If the hum originates from a ground loop, an antenna or cable supply may be the cause. In this case an antenna-lead isolator should be fitted.
- If the G65 seems to be the cause of hum consult your dealer.

There is radio interference

The G65 is a digital audio and computing device which has been designed to very high standards of electromagnetic compatibility.

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 G65 and its cabling.
- Ensure that the receiver uses well-screened antenna cable.
- Relocate the receiver with respect to the G65.
- Connect the receiver and this product to different AC outlets.
- If the problem persists contact your dealer.

Sound not clear

- If speech sounds muffled in a system with a centre speaker, check that sound is coming from the centre as there may be a connection problem.
- If the centre is a Meridian digital speaker, check that it is configured as left. If configured as right it will be receiving the subwoofer signal.
- If speech sounds muffled in a system with no centre speaker, you may have selected a layout that expects one. See *Configuring speakers*, page 47.

Audible hiss at high volume settings

The input dynamic range of most current recordings is at maximum 16 bit. The reason for this is that currently CD, DVD, and LaserDisc use a 16-bit standard, although DVD can support up to 24-bits. The analogue sources you have cannot achieve this kind of range. For comparison, analogue sources are likely to be of the order of:

- VCR, 12 bits.
- FM radio, 13 bits.
- Reel to reel tape, 13 bits.
- Cassette tape, 12 bits.
- LP, 11 bits.

Note: There may be a difference between the dynamic range of the source channel when it is operating, and the noise you hear in standby. For example, LP normally has lower noise when the stylus is not in the groove; similarly tape will be quieter when it is stopped. CD may also be quieter when it is stopped, producing so called 'digital silence'.

The G65 has a 24-bit capability on its internal analogue-to-digital converter, which is used for analogue sources. When the volume is turned up high you may hear its dither as a hiss when the sources are stopped. This hiss is lower than the background noise of your recordings and should be of no consequence.

Centre not working

There may be a connection problem.

- If the centre is a Meridian digital speaker, check that it is configured as left. If configured as right it will be receiving the subwoofer signal.

There is a hiss when starting DTS LaserDiscs or CDs

The DTS audio stream is indistinguishable from a PCM audio stream; the G65 takes 30ms to identify the encoding, during which a hiss is heard.

- With non-video DTS sources you can add a 30ms delay to avoid this.
- With video sources you can create a DTS-only source to avoid any hiss.

For more information about each of these options see *Installing the Meridian Configuration Application*, page 53.

The preset changes unexpectedly with a multichannel source

If you are using a non-Meridian source on the MHR SmartLink input, proprietary data may cause preset switching.

- Select **Force this source to be six-channel** for the source. See *Installing the Meridian Configuration Application*, page 53.

Maintenance

To clean the case, display panel, and keypad

- Disconnect the power cord before cleaning the unit.

The exterior surfaces of Meridian G Series products are made from solid anodised aluminium, powder coated steel, thermoplastic rubber, and glass.

They are designed to be easily wiped clean with a dry, lint free cloth. Greasy marks should be removed by light rubbing with a slightly damp cloth and a trace of proprietary glass cleaner. Do not use any other solvent or abrasive based cleaners.

Ensure that no liquid enters the casework and that the product is completely dry before re-connection.

To clean the audio connections

The audio sockets on the back of the product are gold plated and do not need to be cleaned 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.

To change the mains fuse

- Remove the mains connector, and pull out the drawer above the power input to access the fuse.

Before replacing a blown fuse, it is best to 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 G Series of hi-fi components has 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 product 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 iv.

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

No responsibility can be accepted for the product 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 product is guaranteed against defects in material and workmanship for two years from the date of purchase.

The guarantee is void if the product 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:** Connecting anything other than the correct network lead to the Comms sockets may cause damage to the product 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 outside the UK 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 country of purchase.

Index

A

Academy (DSP parameter) 69
 accessories 30
 active subwoofer, connecting to 39
 Ambisonics (DSP preset) 66, 71
 analogue inputs 31
 analogue outputs 35
 analogue source, connecting 32
 audio inputs 31
 audio outputs 35
 automatic setup 41
 Axis (DSP parameter) 17
 axis, changing 20

B

Balance (DSP parameter) 17, 20
 balanced analogue outputs 35
 Bass (DSP parameter) 17, 19
 bass, changing 19
 brightness, display 13
 built-in presets, replacing 26

C

C.Elev (DSP parameter) 17, 23
 calibration procedure 55
 moving between tests 57
 starting 57
 tests 58
 calibration tests 58
 distance 58
 fine-tuning 59
 levels 58
 speaker size 60

Centre (DSP parameter) 17, 21, 66
 Centre Elevation control 23
 centre loudspeaker
 changing the relative delay 21
 changing the relative level 21
 Channels (DSP parameter) 67
 Cinema (DSP preset) 70
 COMMS, connecting 41
 communications connections 40
 Compress (DSP parameter) 72
 compression 72
 configuration, resetting 45
 Configuration Wizard 44
 configuring
 settings 51
 sources 49
 connections
 audio inputs 31
 audio outputs 35
 cleaning 77
 communications 40
 content types 12, 13
 Movie 2 12
 Movie 6 12
 Music 2 12
 Music 6 12
 Controller, setting 41

D

Depth (DSP parameter) 17, 21
 Dialog Normalisation 72
 digital inputs 31
 digital source, connecting 32
 Dimension (DSP parameter) 68

Direct (DSP preset) 68
 Discrete (DSP preset) 70
 display
 brightness 13
 information 13
 DSP parameters
 changing 17, 18
 standard 17
 DSP presets 65
 Ambisonics 66, 71
 assigning to a source 25
 changing 12
 Cinema 70
 clearing 27
 Compress parameter 72
 defining 26
 Direct 68
 Discrete 70
 editing name 26
 Mono 69
 multichannel 70
 Music 66
 PLIIX Mov6 71
 PLIIX Movie 68, 69
 PLIIX Mus6 71
 PLIIX Music 68
 PLIIX THX 68, 69
 selecting 12
 Stereo 68
 Super 67
 THX 70, 71
 THX Music 71
 THX Surround EX 71
 THX Ultra2 Cinema 71

DSP presets (*continued*)

- Trifield 66
- two-channel 66
- user-defining 26
- dynamic range control 72

E

- EBA (DSP parameter) 17, 23
- Enhanced Bass Alignment control 23

F

- functions, selecting 8

G

- guarantee 78

H

- HD621 HDMI Audio Processor 33
- Home soft keys 8
- HS Out? (DSP parameter) 17

I

- Input (DSP parameter) 69
- inputs
 - analogue 31
 - digital 31
 - mic 31
 - MMHR 31
 - multichannel analogue 31
 - optical 31
 - SpeakerLink 31

L

- layouts 4
 - 5.1 Movie 70
 - Logic 66
 - Music 66
- LFE (DSP parameter) 70, 71
- LipSync 24
- LipSync (DSP parameter) 17, 24
- listening position, changing 20
- locking the menus 16
- loudspeakers
 - configuring 47
 - connecting to 36, 37, 38
 - options 48
 - setting up 60

M

- mains fuse, changing 77
- menus, locking 16
- Meridian Configuration Application
 - 53
- mic input 31
- Mix level 72
- MMHR input 31
- MMHR multichannel input 33
- Mono (DSP preset) 69
- More key 8
- Movie 2 12
- Movie 6 12
- multichannel analogue inputs 31
- Music (DSP preset) 66
- Music 2 12
- Music 6 12

- Music DSP presets 66
- muting the sound 11

O

- optical inputs 31
- outputs
 - analogue 35
 - SpeakerLink 35

P

- Panorama (DSP parameter) 68
- Party? (DSP parameter) 69
- Phase (DSP parameter) 17, 19
- phase, changing 19
- PLIIx (DSP preset) 68
- PLIIx Mov6 (DSP preset) 71
- PLIIx Movie (DSP preset) 69
- PLIIx Mus6 (DSP preset) 71
- PLIIx Music (DSP preset) 68
- PLIIx THX (DSP preset) 68
- presets
 - defining 26
 - multichannel 70
 - two-channel 66
 - user-defined 26
- Pro Logic (DSP parameter) 69

R

- RC (DSP parameter) 17
- R Delay (DSP parameter) 17, 22
- Rear (DSP parameter) 17, 20

rear loudspeakers
 changing the relative delay 22
 changing the relative level 20
 R Filter (DSP parameter) 66, 67, 70
 Roll (DSP parameter) 67, 69
 room correction 2
 Row (DSP parameter) 67
 RS232 connection 40

S

SACD player, connecting to 34
 safety warnings ii
 S Delay (DSP parameter) 17, 22
 selecting a source 10
 settings 52
 configuring 51
 S Filter (DSP parameter) 66, 67, 70
 Sides (DSP parameter) 17, 20
 side speakers
 changing the relative delay 22
 changing the relative level 20
 Sine/Sub/Sens controls 61
 sinewave sweep test 61
 Sound Pressure Level meter 56
 sources 10
 assigning DSP presets 25
 default DSP preset 12
 options 50
 selecting 10
 setting up 63
 sources, configuring 49
 spaciousness of the sound, changing
 22

speaker layouts 4
 5.1 Movie 70
 Logic 66
 Music 66
 SpeakerLink
 connecting digital source 33
 connecting loudspeakers 36, 37
 SpeakerLink controls 23
 Centre Elevation 23
 Enhanced Bass Alignment 23
 SpeakerLink inputs 31
 SpeakerLink outputs 35
 standard DSP parameters 17
 standby, switching to 10
 Steered All (DSP parameter) 67, 68
 Stereo (DSP preset) 68
 subwoofer crossover frequency 61
 subwoofers
 connecting to 39
 crossover frequency 61
 Super (DSP preset) 67
 Surr. Rear (DSP parameter) 66, 70,
 71
 switching on and off 10

T

THX (DSP preset) 70, 71
 THX Music (DSP preset) 71
 THX Surround EX (DSP preset) 71
 THX Ultra2 Cinema (DSP preset) 71
 Treble (DSP parameter) 17, 19
 treble, changing 19
 Trifield (DSP preset) 66
 troubleshooting 73

2+2+2 (DSP parameters) 70
 Types 45, 46

U

UHQ format 66
 unlocking the menus 16
 USB connection 40
 user-defined presets 26
 clearing 26
 editing name 26

V

volume, adjusting 11

W

Width (DSP parameter) 66, 67, 68

Y

Yaw (DSP parameter) 67, 69

