



# 251 POWERED ZONE 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 does not include a power switch. 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

	<b>WARNING!</b> <b>RISK OF ELECTRIC SHOCK – DO NOT OPEN</b>	
<b>ATTENTION!</b> <b>NE PAS OUVRIR – RISQUE DE DÉCHARGE ÉLECTRIQUE</b>		

**Caution:** to reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## Climate

The equipment has been designed for use in moderate climates and in domestic situations.



Only use at an altitude not exceeding 2000m.

## 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

- Do not position the product in direct sunlight.
- Do not position the product near heat sources, such as a radiator.
- Do not position the product on a soft surface such as a carpet.
- Leave at least 10cm around the product to ensure sufficient ventilation.

## 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 EN55032:2015 and EN55024:2010 + A1:2015.

## Building code

Due consideration should be given to building and electrical codes when selecting speaker wiring. In the U.S.A. Class 2 wiring should be used.

## Copyright and acknowledgements

### Designed and manufactured in the UK

### Sales and service in the UK

Meridian Audio Ltd, Latham Road, Huntingdon,  
Cambridgeshire, PE29 6YE, England.

### Visit us on the Web

[www.meridian-audio.com](http://www.meridian-audio.com)

Copyright © 2021 Meridian Audio Ltd.

Part no: P88498

**MHR:** this product incorporates copyright protection technology covered by certain patent applications and intellectual property of Meridian Audio Ltd. This technology is provided for the express purpose of securely containing copyright audio within the Meridian System only. Reverse engineering or circumvention of this protection is strictly prohibited.

Manufactured under licence from MQA Limited. The MQA logo is a trade mark of MQA Limited. © MQA Limited 2017.

Boothroyd|Stuart Meridian and Meridian are registered trademarks of Meridian Audio Ltd.

Roon is a trademark or registered trademark of Roon Labs LLC.

Sonos and all other Sonos slogans are trademarks or registered trademarks of Sonos, Inc.

This guide was produced by:  
Human-Computer Interface Ltd, [www.interface.co.uk](http://www.interface.co.uk)

### Product registration

Register your Meridian 251 Powered Zone Controller at:  
[www.meridian-audio.com](http://www.meridian-audio.com)

# Contents

Introduction	1
Specifications	4
Unpacking	5
Applications	8
Configuring the 251 Powered Zone Controller	15
Controlling the 251 Powered Zone Controller	22
Index	23

## Introduction

The Meridian 251 is a compact, networked, Powered Zone Controller designed to integrate a high quality audio switch and modern, power efficient amplifiers into an automated home audio system.

It has analogue and digital stereo inputs, a Roon audio endpoint, and it supports *Works with Sonos* integration in order to meet the needs of a wide range of connectivity and installation requirements.

### Outputs

The 251 Powered Zone Controller features high efficiency (>95%) Class D amplifiers which produce very little heat, allowing fanless operation. Two Phoenix connectors allow simple connection to passive loudspeakers via standard speaker cable. It also has a pair of unbalanced analogue outputs that can be used to drive a stereo power amplifier and passive loudspeakers, a pair of active loudspeakers, or one or two powered subwoofers.

### Inputs

The 251 provides a choice of audio input connections to cater for a range of installation requirements. These include a digital (co-ax/RCA) S/PDIF input, an optical (TOSLINK) input, and a Meridian SpeakerLink input, as well as an unbalanced analogue input.

The 251 also provides an Ethernet network socket to connect to a Roon streaming system, or to a Sonos system using *Works with Sonos* integration.

### Audio processing

The 251 Powered Zone Controller features high-quality audio processing. The digital inputs accept signals up to 192kHz, and the analogue inputs are converted to digital at 96kHz sampling. High-resolution files may also be replayed from a Sonos or Roon system.

Signals are processed with Meridian's exclusive apodising filter that ensures maximum audio quality with both phono and amplifier outputs driven by independent 192kHz/24 bit DACs.

The 251 Powered Zone Controller will also decode MQA (Master Quality Authenticated) audio streams. It can extract the finest of details from music and deliver the highest quality audio to all outputs. The front panel will indicate the MQA stream type using LEDs behind the MQA logo.

The 251 Powered Zone Controller can be configured to provide tone adjustments as well as balance and volume controls, for use with power amplifiers or active analogue speakers.

## 2 Meridian 251 Powered Zone Controller *User Guide*

### Works with Sonos

*Works with Sonos* enables users to seamlessly stream music from their Sonos app to their Meridian system while allowing them to control the music anywhere around their home using the Sonos interface. This is done by using the 251 in conjunction with the Sonos Port or Sonos Connect products, using the Sonos S1 or S2 apps.



### Roon Tested

Roon's fundamental goal is to provide a consistently stellar user experience. This goal doesn't stop at the software... the experience extends all the way down to the audio playback hardware, regardless of manufacturer.



As a Roon Tested partner, Meridian has provided equipment to Roon for testing with a variety of different operating systems and computers, and shared information about its design and capabilities.

### Power supply

The 251 uses a linear power supply, which provides isolation from the AC supply and offers both high sound quality and intrinsic durability. It is based on a massive low-noise toroidal power transformer, with an electronic trip for protection against short circuits or overheating.

### System integration

The 251 Powered Zone Controller is designed to be both configured and controlled via its Ethernet socket.

The 251 can be configured simply by entering the product's IP address into a standard web browser; this then gives access to the range of setup and operational options.

The 251 is controlled using the Automation Protocol, which allows full control of all the runtime settings of the unit, including source selection, volume, and audio menus. This can be integrated into the automation system provided by the installer as well as accessed directly via a tablet or smartphone running the **Meridian Control** application; see *Controlling the 251 Powered Zone Controller*, page 22.

The Trigger output is provided for direct control of external devices, such as enabling a power amplifier.

## Accessories

The following accessories are available for the 251:

- A rack tray for mounting the 251 in a standard 19" rack; see *Installing 251 Powered Zone Controllers in a rack tray*, page 13.
- A mount kit for mounting the 251 under a shelf, on a wall, or in a backbox; see *Mounting a 251 Powered Zone Controller*, page 14.
- A Meridian G12 remote eye to receive infra red signals.
- A Meridian MSR2 or AC200 remote to control the 251 via the G12.

## 4 Meridian 251 Powered Zone Controller *User Guide*

# Specifications

### Audio outputs

- 2-channel loudspeaker outputs on terminal blocks supplied with mating connectors suitable for 12-24 AWG wire. Up to 100W per channel into 4Ω, or up to 65W per channel into 8Ω.
- 2-channel unbalanced analogue output, driven by a 192kHz digital to analogue converter.

### Audio inputs

- One 2-channel unbalanced analogue input with adjustable sensitivity.
- One 2-channel digital coax input (RCA), 44.1kHz to 192kHz and up to 24-bit precision.
- One 2-channel Meridian SpeakerLink input, 44.1kHz to 192kHz and up to 24-bit precision.
- One 2-channel digital optical input (Toslink), 44.1kHz to 96kHz and up to 24-bit precision.
- One network input for connecting to a Sonos or Roon streaming system and IP control systems.

### Control signals

- One 12VDC/100mA trigger output configurable by source.
- One IR input, compatible with the Meridian G12 remote IR sensor.

### Signal processing

The 251 uses Meridian's proprietary DSP software to provide the following powerful features:

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

### Indicators

- Front panel indicators for source selection, standby state, and MQA status.
- Rear panel indicator for power.

### Physical

- Dimensions: 203mm x 42mm x 221mm (8.0" x 1.65" x 8.7") (W x H x D without feet or connectors).
- Weight: 2.5kg (5.51lb).

### Power

- 9W standby; 160W max.
- Factory set to: 100V AC, 115V AC, or 230V AC, 50-60Hz.

## Unpacking

The 251 Powered Zone Controller is supplied with:

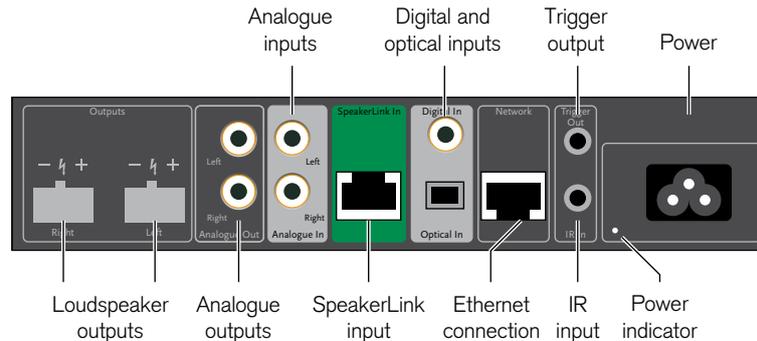
- A power cord.
- Four self-adhesive feet.
- Two Phoenix speaker connectors.
- Quick Start Guide

Please contact your retailer if the power cord has the wrong plug for your territory.

The feet can be fixed to the base of the product, which is printed with circles as a guide. The feet will not be needed if you are mounting the unit on a rack tray; see *Installing 251 Powered Zone Controllers in a rack tray*, page 13.

### Back panel

The following diagram gives details of the back panel connections:



## 6 Meridian 251 Powered Zone Controller *User Guide*

### Front-panel indicators

The currently selected source is indicated by one of five white indicators on the front panel.

In standby the leftmost indicator shows blue.

The rightmost indicator shows the MQA status: magenta (MQA Core), green (MQA) or blue (MQA Studio).

### Audio inputs

Use this input	To connect to this
Analogue in (Radio, Tape)	The analogue outputs of a source, such as a radio or tape deck.
Digital In (CD, USB)	The digital output of a source such as a CD player.
SpeakerLink In (DVD, Disc)	The SpeakerLink output of a Meridian source, using a Meridian SpeakerLink lead.
Optical In (TV, Cable, Sat, PVR, Game)	The optical output of a source such as a satellite receiver.
Network (SLS)	A Sonos or Roon streaming system and IP control systems.

The default source assignments are shown after the input name in the above table.

### Audio outputs

Use this output	To connect to this
Right +/- , Left +/-	Loudspeakers of between 4Ω and 8Ω, using Phoenix pluggable 2-way terminal blocks, 12AWG/20A.
Analogue Out	The unbalanced analogue inputs of a preamplifier, power amplifier, or active subwoofers, using analogue phono leads.

### Communications connections

Use this connection	To connect to this
Trigger Out	Equipment to be enabled by a DC signal, such as a power amplifier.
IR In	A Meridian infra-red eye.

### Connecting to a network

Many domestic routers feature processes for handling network traffic which interfere with the operation of Meridian networked audio products. A simple unmanaged network switch should therefore be inserted into the system between the router and the Meridian products, as shown in the following applications, and this will allow the audio system to work as expected.

## Subwoofer options

The 251 Powered Zone Controller provides a range of options for using the loudspeaker outputs and analogue outputs to connect to the main left and right loudspeakers, and mono or stereo subwoofers. The following table shows some typical configurations, and the corresponding **Audio output** settings:

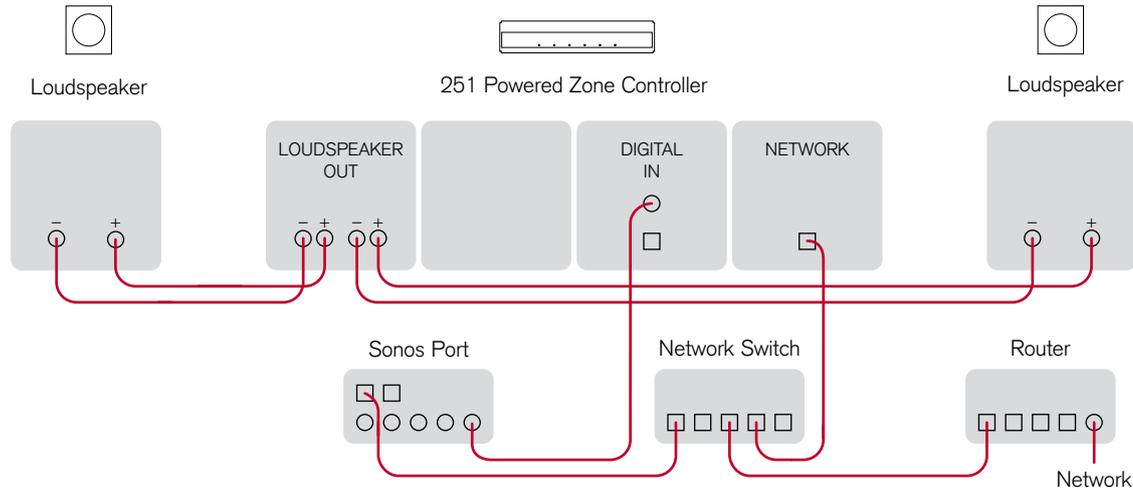
<b>Loudspeaker outputs (amplifier)</b>	<b>Analogue outputs (phono)</b>	<b>Audio output settings</b>		
		<b>Amplifier output</b>	<b>Phono output</b>	<b>Subwoofer(s)</b>
Full range main left/right channels.	Full range main left/right channels.	Left/Right	Left/Right	-
Full range main left/right channels.	One/two mono subwoofers.	Left/Right	Sub	Mono
Full range main left/right channels.	Stereo left/right subwoofers.	Left/Right	Sub	Stereo

In the **Audio output** section select **L/R High Pass Filter** if you want the subwoofer(s) to handle the bass instead of the main speakers (recommended), or **Full Range** if you want bass from both the subwoofers and main speakers.

In the **Audio menus** section use **Subwoofer gain** to adjust the relative level of the subwoofers, and set **Crossover** to the crossover frequency you want to use.

# Applications

## Minimal system



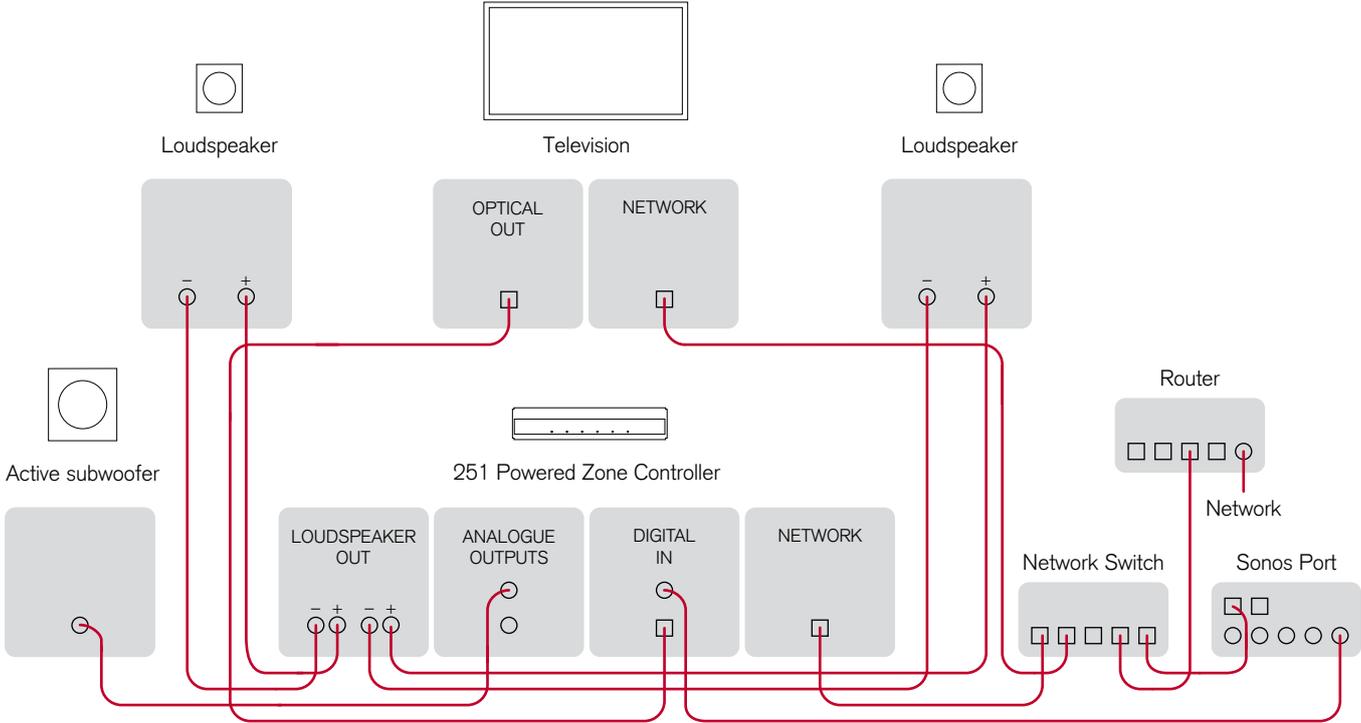
This is a simple, standalone system replaying audio from a Sonos or Roon streaming system.

- Connect the loudspeaker outputs to the loudspeakers, using loudspeaker cables.
- Connect the 251 to the LAN using an RJ45 cable.

- Select the zone in the Sonos or Roon UI and play music in the usual way.

Volume, mute and standby will be controlled from the Sonos or Roon UI. To control other 251 features download the **Meridian Control** app to your mobile device; see *Controlling the 251 Powered Zone Controller*, page 22.

**Audio-visual system**



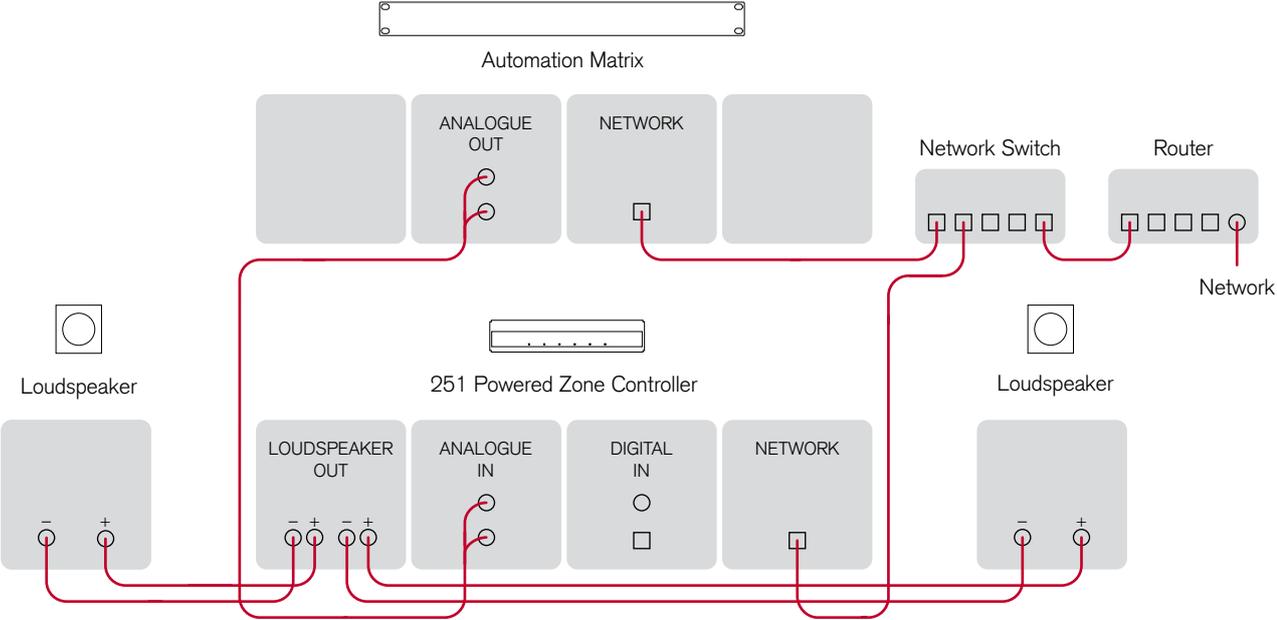
## 10 Meridian 251 Powered Zone Controller *User Guide*

This is a larger system with an active subwoofer, local sources, and more control options.

- Connect the loudspeaker outputs to the main left and right loudspeakers, using loudspeaker cables.
- Connect the analogue output to the analogue subwoofer, using a phono cable.
- In the **Audio output** section set the **Phono output** option to **Subwoofer**; see *Audio output*, page 16.
- In the **Audio menus** section specify the crossover frequency using the **Crossover** option; see *Audio menus*, page 17.
- Connect the TV to the Optical input socket.
- Connect the 251 to the LAN using an RJ45 cable.
- Optionally connect a Sonos Port or other digital source using a 75Ω RCA cable.
- Optionally connect an analogue source using 50Ω RCA cables.

The system can be controlled via the Sonos or Roon UI, the (optional) MSR2, or the Automation Interface using the **Meridian Control** app; see *Controlling the 251 Powered Zone Controller*, page 22.

**Distributed zone**



## 12 Meridian 251 Powered Zone Controller *User Guide*

This layout is intended to play back audio in a single zone as part of a larger, whole-house, automation system. The 251 is located in a central rack along with the automation system's audio matrix.

- Connect the loudspeaker outputs to the main left and right loudspeakers, using loudspeaker cables.
- Connect the audio matrix to the 251 analogue input using phono leads.
- Connect the 251 to the LAN using an RJ45 cable.

The system can be controlled using a remote control for the automation system; it will have access to the 251's Automation Interface. The controls that are presented to the user will depend on the UI chosen by the installer.

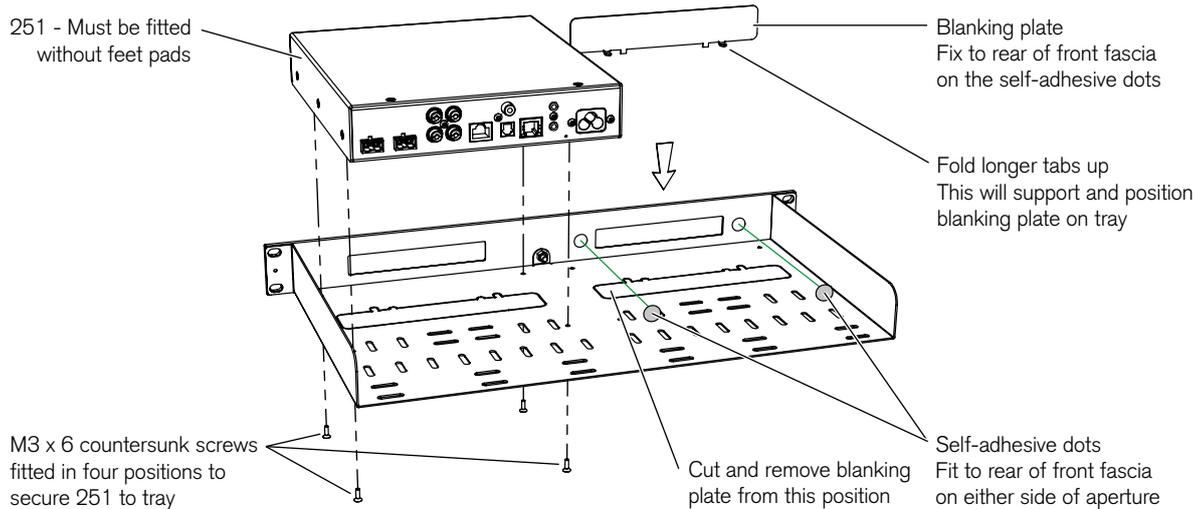
## Installing 251 Powered Zone Controllers in a rack tray

A 251 Rack Tray is available separately, to allow two 251s to be mounted in a standard 19" rack. The Rack Tray is supplied with the screws required to mount the 251.

The MAC address of each 251 is provided on the base of the unit, and we recommend that this is recorded on the tray as it is installed so that it can be identified in future. Adhesive labels

are supplied with each Rack Tray for this purpose.

Note that if only one 251 is being installed in a tray then the open side of the fascia can be blanked by one of the knock-outs included in the tray. Remove the knock-out from the tray and bend the two longer tabs to 90 degrees. Affix the two self-adhesive dots and slide the shorter tabs down between the fascia and the tray, resting the longer tabs on the top surface of the tray. Press the knock-out firmly against the back of the fascia to secure.

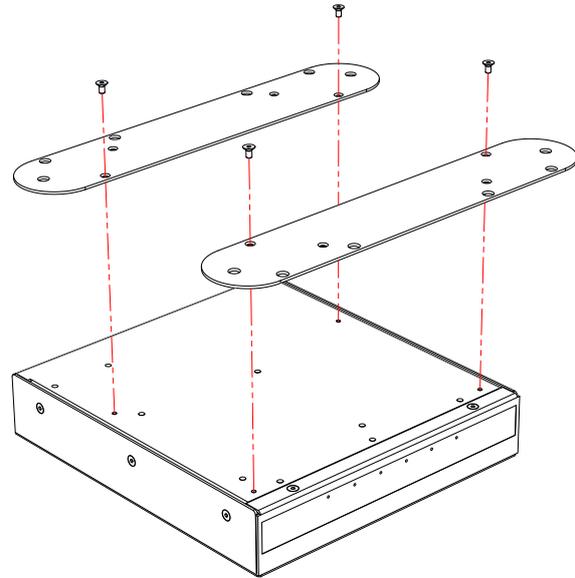
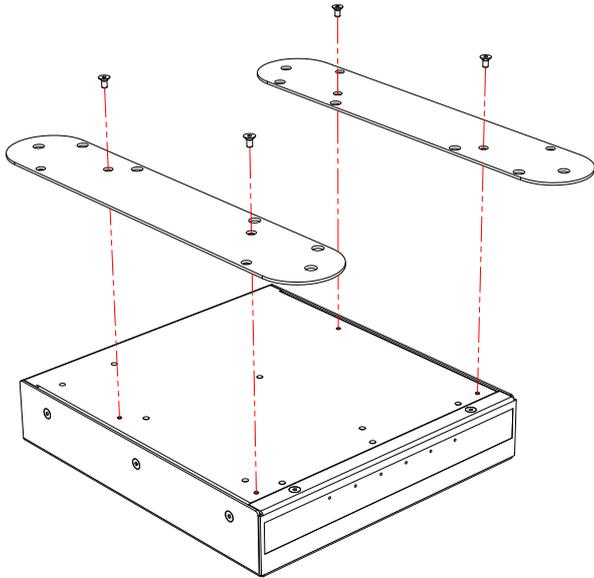


## 14 Meridian 251 Powered Zone Controller *User Guide*

### Mounting a 251 Powered Zone Controller

A universal mount kit is available separately, to allow a 251 to be mounted on any flat surface, such as under a shelf, on a wall, or in a backbox.

The kit consists of two plates and four screws, allowing the 251 Powered Zone Controller to be mounted in either of two orientations, as shown in the following diagrams:



# Configuring the 251 Powered Zone Controller

The 251 contains a built-in web interface, allowing it to be configured via the Ethernet connection using a standard web browser.

## Displaying the 251 configuration page

### To display the 251 configuration page

- Connect the 251 to a network.
- Identify the IP address assigned to the 251 (see below).
- Type this address into the address bar of a standard web browser running on a computer or tablet on the same network.

You should then see the **Meridian 251 configuration** page. This allows you to see or change the 251 settings, or reset them to their defaults, and also gives access to an online version of this user guide.

Full details of each of the groups of settings are given in the following sections.

### To store the settings

After changing any settings click the **Store Settings** button below the settings panels.

## Restoring settings

- Click the menu button at top left of the **Meridian 251 configuration** page.
- Click **Restore Settings**.

For more information see *Restore Settings*, page 21.

## Discovering the IP address of the 251

To discover the IP address of the 251 you can use any of the following methods:

- The **Meridian Control** app (see *Meridian Control app*, page 22) will automatically discover the 251 and link directly to the 251 configuration page.
- Run the **Meridian Device Manager** program on a PC or Mac connected to the same network as the 251.
- Log in to the network router and view the list of attached devices.
- Use a network IP scanner to 'ping' a list of addresses on the network.

## 16 Meridian 251 Powered Zone Controller *User Guide*

### Identification

The screenshot shows the 'IDENTIFICATION' settings page. It lists the following information:

Serial number:	000013
Software version:	1.1, build 240
Co-processor version:	0.6.3
Hardware version:	0.2
MAC address:	00-24-c5-00-18-f9

Below this information is a text input field for the 'Zone name' containing the text '251 #0024c50018f9 Zone'.

Identifies the product software version, network MAC address, and Zone name.

**Zone name:** This identifies the product in the appropriate control interface such as the **Meridian Control** app. It is initially set to a unique string, but would normally be set to a meaningful label such as Kitchen or Study.

### Audio output

The screenshot shows the 'AUDIO OUTPUT' settings page. It contains the following controls:

- Amplifier output:** Radio buttons for Left/Right (selected), Subwoofer, and Off.
- Phono output:** Radio buttons for Left/Right (selected), Subwoofer, and Off.
- Left/Right mix:** Radio buttons for Mono and Stereo (selected).
- Subwoofer mix:** Radio buttons for Mono and Stereo.
- Left/Right filter:** Radio buttons for High Pass and Full Range.
- Gain offsets:** Three dropdown menus for Main, Left/mono subwoofer, and Right/mono subwoofer, all currently set to '0dB'.

**Amplifier output** and **Phono output:** Can be independently set to **Left/Right**, corresponding to the main left and right channels, **Subwoofer**, corresponding to the subwoofer(s), or **Off**, to switch the corresponding output off.

**Left/Right mix:** specifies whether the main left and right channels are mixed to mono, or kept stereo.

**Subwoofer mix:** Specifies whether the subwoofer(s) are mono or stereo.

**Left/Right filter:** select **High Pass** to filter low frequencies from the outputs corresponding to the main left and right channels, or **Full Range** to send the bass to both the main loudspeaker outputs and the subwoofer output(s).

**Gain offsets:** Allows you to add a gain offset to the **Main**, **Left/mono subwoofer**, and **Right/mono subwoofer** outputs.

## Audio menus

The screenshot shows the 'AUDIO MENU' panel with the following settings:

- Treble: +0.0dB
- Bass: +0.0dB
- Balance: <center></center>
- Phase: +ve
- Crossover: 80 (Valid range is 30 to 250 Hz.)
- Subwoofer gain: +0dB

The options on the **Audio menus** panel allow you to specify the default values of DSP settings when the 251 is powered

up, and change the settings when the loudspeakers are being used.

**Treble:** Tilts the frequency of the response over the entire frequency range to make the sound brighter or dimmer. It can be adjusted between  $\pm 10$ db in 0.5dB steps.

**Bass:** Adjusts the bass response in the room by  $\pm 5$ dB in 0.5dB steps.

**Balance:** Compensates for an off-centre listening position where 0 is central, 8 is in line with the corresponding main speaker, and 10 is fully to one side.

Note: **Balance** only affects the subwoofer outputs when they are set to stereo.

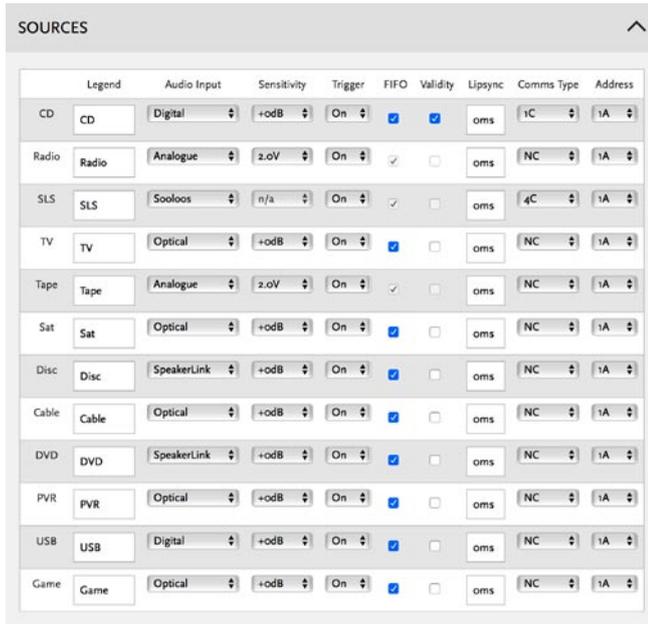
**Phase:** Changes the absolute phase of the signal, to compensate for signals which are out of phase, giving an unnatural-sounding bass.

**Crossover:** Allows you to adjust the crossover frequency of the subwoofer(s).

**Subwoofer gain:** Allows you to adjust the gain of the subwoofer(s).

## 18 Meridian 251 Powered Zone Controller *User Guide*

### Sources



Legend	Audio Input	Sensitivity	Trigger	FIFO	Validity	Lipsync	Comms Type	Address
CD	Digital	+0dB	On	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	oms	1C	1A
Radio	Analogue	2.0V	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
SLS	Sooloos	n/a	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	4C	1A
TV	Optical	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
Tape	Analogue	2.0V	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
Sat	Optical	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
Disc	SpeakerLink	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
Cable	Optical	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
DVD	SpeakerLink	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
PVR	Optical	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
USB	Digital	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A
Game	Optical	+0dB	On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	oms	NC	1A

Allows you to configure the 12 Meridian sources.

**Legend:** A string of up to 5 characters which will be displayed on the Automation interface.

**Audio input:** Each of the 12 logical sources can be assigned to any of the audio inputs: **Analogue**, **Digital**, **Optical**, **SpeakerLink**, or **Sooloos**. Alternatively any source can be set to **Last Valid**, which changes the other settings but leaves the input unchanged, **Other** which just makes the source switch on from standby when selected, or **Off**, which makes the source ignore commands.

**Sensitivity:** For analogue inputs you can select one of five sensitivities: the maximum RMS voltage that can be input before clipping occurs in the ADC. For digital inputs you can select one of five gain values to compensate for loud or quiet digital sources.

**Trigger:** Can be set to **On**, **Off**, or **LV** (Last Valid) to control the trigger output. Note that the trigger is always off in standby.

**FIFO:** The FIFO box would normally be checked, but can be unchecked for digital sources with a poor quality clock that the 251 is unable to relock.

**Validity:** Some sources, such as the Meridian CD players, use the Validity flag in the S/PDIF audio stream to indicate that the audio should not be played. Setting this may reduce unwanted noises in some situations.

**Lipsync:** Allows you to delay the audio by up to 85msec so that it aligns correctly with a video signal that has been delayed by a scaler. The default is 0ms.

**Comms Type:** For Comms-connected systems, ensures that the appropriate set of commands is sent to the product. The following categories are available:

**1C** = CD player, **2C** = Radio, **3C** = DVD player, **4C** = Roon, **5C** = Sonos. All others should be set to **NC** (No Comms).

**Address:** If there are two or more products of each type then the address should be **1A** for the first, **2A** for the second, etc.

## Works with Sonos

The screenshot shows a configuration panel titled "WORKS WITH SONOS". It contains two dropdown menus. The first is labeled "Sonos device:" and is currently set to "None". The second is labeled "Preferred source:" and is currently set to "TV".

**Sonos device:** Shows the names and product types of all Sonos products on the network. Select the Sonos device that should send audio to the 251.

The 251 is not itself a Sonos streaming component. It must be used with a Sonos Port or Sonos Connect. Both the Sonos S1 and S2 apps are supported.

**Preferred source:** Selects the source to be associated with Sonos playback. On the **Sources** panel the same source should be assigned to the audio input on the 251 that is connected to the Sonos device.

## Startup

The screenshot shows a configuration panel titled "STARTUP". It contains three main sections:
 

- Startup volume:** A text input field containing the number "1". Below it, a note reads "(Valid range is 25 to 87 only, others mean 'last valid')".
- Startup source:** A dropdown menu currently set to "SLS".
- State after power up:** Two radio button options: "Standby" (which is selected) and "On".

**Startup volume:** Specifies the initial volume for the analogue outputs and, if the 251 is a Controller, sent on Meridian Comms for other connected products. The start volume is set when the 251 is first powered up, and a few seconds after going into standby.

By default the 251 starts at volume 50 and retains the last volume setting when it enters and leaves standby.

**Startup source:** Specifies the source that the 251 will start with if the user has a Source key on their chosen user interface.

**State after power up:** Set this to **On** to have the 251 playing the startup source when powered up.

## 20 Meridian 251 Powered Zone Controller *User Guide*

### Comms

COMMS

System Address: 1A Product Address: 1A

IR mode:  Auto  
 Controller  
 Not Controller

IR receiver is currently: On (Changing to Auto will have no effect until you perform an autosetup.)

**System Address:** If an installation contains multiple zones that are connected together with Meridian Comms, each one needs a different System Address if they are to have independent source selection and volume controls. If the installation uses LAN connections then this can be left at its default, **1A**.

**Product Address:** If there are two or more Meridian sources in the same category on the same Comms-connected system then each unit must have a different Product Address. The setting does not apply to IP connected systems and should be left at its default, **1A**.

**IR mode:** The IR mode is only relevant if a G12 has been connected to the 251. In this setup the installer should set the

mode to **Controller** to ensure that the unit functions as the system controller.

**IR receiver is currently:** Shows the state of the IR receiver.

### Ethernet

ETHERNET

Active Ethernet address: 192.168.1.121  
Active Ethernet mask: 255.255.255.0  
Active Ethernet gateway: 192.168.1.254  
Active Ethernet DNS: 192.168.1.254

Connection type:  DHCP  
 Static IP

Static Ethernet address: 192 . 168 . 1 . 80  
Static Ethernet mask: 255 . 255 . 255 . 0  
Static Ethernet gateway: 192 . 168 . 1 . 1  
Static Ethernet DNS: 192 . 168 . 1 . 1

Allows you to change the Ethernet configuration. Note that incorrect settings may make the 251 unreachable via the web page.

## Restore Settings

**RESTORE SETTINGS** ^

Select one or more reset buttons and click below to restore a section to factory defaults.  
Take extra care with the Ethernet option - your unit may change its IP address and render this page unreachable.

Zone name:

Audio output:

Audio menus:

Source configuration:

Comms and Startup choices:

Ethernet configuration:

Allows you to restore one or more groups of settings to their factory defaults. Note that restoring the Ethernet settings will enable DHCP, which may change the IP address of the 251, and you may have to find the new address as described below.

- Select the checkboxes corresponding to the settings you want to restore.
- Click **Reset Selected** at the bottom of the panel.

**Zone name:** This is used by the Automation Interface to identify the unit. The factory default uses a combination of the product name and MAC address.

**Audio output:** Returns the phono and amplifier outputs to their defaults.

**Audio menus:** Resets the settings on the **Audio menus** panel.

**Source configuration:** Restores the source legends, their associated audio inputs and Comms configurations; see *Sources*, page 18.

**Comms and Startup choices:** Returns the startup state to standby and volume to last valid.

**Ethernet configuration:** Removes any static IP selection and re-enables DHCP. If this box is ticked then the unit will begin the process of getting a new IP address automatically. It may be given a new address by the DHCP server, in which case you will have to find the new address; see *Discovering the IP address of the 251*, page 15.

# Controlling the 251 Powered Zone Controller

The Meridian 251 can be controlled using the following options:

- Via Meridian Comms from another product such as a Meridian CD Player.
- Via the Ethernet connection using the Sonos or Roon system.
- Via the Ethernet connection using the Automation Interface.
- Via Infra Red, using the optional G12 remote IR sensor and either the MSR, MSR+, or AC200 remote controls.

## Meridian Control app

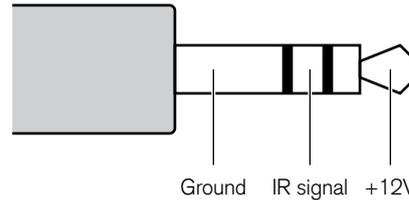
Meridian provide a free app for iOS and Android devices called **Meridian Control** that gives access to the source selection and audio controls via the Ethernet connection. Search for **Meridian** in the Apple App Store or Google Play Store to download it.

## Ethernet connection

A LAN connection is required to configure the 251 Powered Zone Controller. Also, various aspects of the update and support systems require that the LAN allows Link Local addressing and multicast transmission as well as UDP and TCP traffic (for the music stream and its control). Simple unmanaged switches will always pass this traffic but Wireless Access Points should be selected carefully and managed switches must be configured correctly to pass this traffic.

## Third-party IR inputs

The Meridian G12 IR sensor has the following pinout:



Third-party IR receivers with the same pinout may be compatible but their operation is not guaranteed.

Many home automation/control systems feature outputs suitable for feeding IR emitter devices (also referred to as “IR blasters”). These signals differ from those derived from infra-red receivers in that they are modulated with a carrier frequency. The 251 will automatically detect this and extract the underlying IR signal. Use only the Ring and Sleeve connections for these devices; the Tip (12V) should be left unconnected.

The Automation Interface and IR codes are available to authorised Meridian dealers.

# Index

## A

---

accessories 3  
Address option 19  
Amplifier output option 16  
analogue inputs 6  
analogue outputs 6  
applications  
    audio-visual system 9  
    distributed zone 11  
    minimal system 8  
audio-visual system 9  
Audio input option 18  
audio inputs 6  
Audio menus panel 17  
Audio output panel 16  
audio outputs 6  
audio processing 1  
auxiliary output 5

## B

---

back panel connections 5  
Balance option 17  
Bass option 17

## C

---

Comms, connecting 6  
Comms panel 20  
Comms Type option 19  
communications connections 6  
configuration 15  
connecting to a network 6  
Control app 22  
controlling 22  
Crossover option 17

## D

---

digital inputs 6  
distributed zone 11

## E

---

Ethernet connection 22  
Ethernet control 3  
Ethernet panel 20

## F

---

FIFO option 18  
front-panel indicators 6  
Full Range option 17

## G

---

Gain offsets option 17

## I

---

Identification panel 16  
indicators 6  
inputs 1, 6  
installing in a rack tray 13  
IP address, discovering 15

## 24 Meridian 251 Powered Zone Controller *User Guide*

IR input 6  
IR mode option 20  
IR sensor pinout 22

### L

---

Left/Right filter option 17  
Left/Right mix option 16  
Legend option 18  
Lipsync option 18  
loudspeaker outputs 5

### M

---

MAC address 13  
Meridian Control app 22  
minimal system 8  
mounting 14  
MQA status 6

### N

---

network, connecting to 6  
network switch 6

### O

---

optical input 6  
outputs 1, 6

### P

---

panels  
    Audio menus 17  
    Audio output 16  
    Comms 20  
    Ethernet 20  
    Identification 16  
    Restore Settings 21  
    Sources 18  
    Startup 19  
    Works with Sonos 19  
Phase option 17  
Phono output option 16  
power supply 2  
Preferred source option 19  
Product Address option 20

### R

---

rack tray, installing in 13  
registration iv  
Restore Settings panel 21  
restoring settings 15  
Room Tested 2

### S

---

safety warnings iii  
Sensitivity option 18  
Sonos device option 19  
Sonos Port, connecting 10  
Sources panel 18  
SpeakerLink input 6  
specifications 4  
Startup panel 19  
Startup source option 19  
Startup volume option 19  
State after power up option 19  
Subwoofer gain option 17  
Subwoofer mix option 17

System Address option 20  
system integration 2

## T

---

Treble option 17  
Trigger option 18  
trigger outputs 6

## V

---

Validity option 18

## W

---

Works with Sonos 2  
Works with Sonos panel 19

## Z

---

Zone name option 16