G68 Surround Controller

G68ADV rear panel shown

Outline Specifications

All units include:
Digital (S/PDIF) Input:
4 x optical in, 6 coax stereo in, 2 x 6-ch MHR coax in
Analogue Input:
5 x stereo, 1 x 6-ch analogue in, unbalanced
Tuner:
FM/AM antenna connections
Zone2/Tape/Zone3 Audio:
2 x analogue audio out, 2 x digital out. BNC
Meridian Comms
Comms:
2 x Meridian Comms (DIN) Trigger, IR in, USB, RS232

Primary Options:
G68D adds *Digital (S/PDIF) Output:* 10-channel digital surround out w/MHR (5 x phono); 2 x analogue out (phono)

G68ADV adds:
Analogue/Digital Output: 10-channel digital out w/MHR (5 x phono); 8 channels of analogue out
Primary Video:
2 x S-Video out, 4 x S-Video in,
2 x composite out, 4 x composite in
Component Video I/O:
1 x component video out, 3 x component video in (phono); Trigger 2, 3; 1 x additional optical digital in
A/V multi-zone (replaces Audio zone output):
2 x S-Video out, 2 x composite video out, 2 x analogue audio out, 2 x digital out. BNC Meridian Comms.

G68AXV adds *Bal/Unbal Analogue Out instead of digital outputs:* L, R, C, Sub balanced outs; 6 x surround outs, unbalanced

G68XXV adds *Balanced Analogue Out instead of the above:* 8 x balanced outputs

Processing:
5 x Motorola 56367s running at 150MHz to give a total of approx. 750MIPS (million instructions per second). 48-bit arithmetic throughout.

Conversion:
24-bit Sigma-Delta converter chips operating at up to 96 kHz on analogue inputs and outputs

Analogue outs:
Variable between 0 and 3.5Vrms, output impedance 47Ω. Distortion <0.01%. Noise & hum <-95dB CCIR.

Analogue ins:
0.5–2.5V

Control:
Meridian Comms (2x DIN + BNC); RS232; USB

Trigger:
12v trigger output(s) allow control of amps, etc

Front panel:
Soft Keys include: Source, Copy, Preset and other functions. Buttons provided for Standby, Display; and Volume knob

Displays:
Multi-character dot-matrix vacuum fluorescent display, plus custom OSD.

Indicators:
Front-panel keys back-illuminated; Standby button lit when off.

Formats:
Include Dolby Digital, DTS, MPEG Surround, THX, THX Surround EX and Meridian EZ, and more.

DSP Modes:
Include Direct, Music, Trifield, Ambisonics, Super Stereo, Music Logic, THX, Mono, Discrete, TV Logic, Digital, Digital THX, DTS, DTS THX, DTS Music, MPEG, MPEG THX, MPEG Music, ProLogic II Music, ProLogic II Movie, ProLogic II THX, ProLogic IIx, Cinema. Meridian Room Correction, and more.

Dimensions:
Width – 440mm (17.32 in); Depth – 350mm (13.78 in) plus connectors; Height – 132mm (5.20 in)

Construction:
Meridian black or silver, in metal and glass

Rack Mounting:
Kit available from Meridian authorized dealers

Weight:
TBD

Power:
Universal supply 100–240V, 50–60Hz, 25W.

Information contained in this data sheet is correct as far as possible, but Meridian Audio accepts no liability for errors or omissions. Trademarks are the property of their respective owners. Meridian Audio reserves the right to amend product specifications at any time.

Further technical details, images, product reviews and company history are available from Meridian Audio or from our web site, www.meridian-audio.com

©Text & images 2003 Meridian Audio Ltd.

Meridian Audio Limited
Stonehill, Stukeley Meadows
Huntingdon, Cambridge PE29 6EX
UK
Tel +44 (0) 1480 445678
Fax +44 (0) 1480 445686

Email info@meridian-audio.com

Meridian America Inc
3800 Camp Creek Parkway
Building 2400 Suite 122
Atlanta GA 30331 USA
Tel +1 (404) 344 7111
Fax +1 (404) 346 7111

Web: www.meridian-audio.com

G68DS v2.4 • 05.08.03 RE

PRELIMINARY

G68 Surround Controller

Derived from the acclaimed 861 surround processor

Meridian Room Correction system counteracts room resonances

AM/FM Tuner with RDS and powerful DSP features

Modular construction allows for future upgrades

Digital, analogue balanced/unbalanced and video options

Powerful DSP engine with five processors delivering 750MIPS

6-channel analogue & digital inputs

Meridian's G Series *line of high performance digital and analogue consumer audio components feature a stylish cabinet design in traditional black or a sleek silver finish.*

Designed to be either free-standing or rack-mounted, G Series components build on their predecessors, the multi-award-winning 500 and our flagship 800 Series, and include entirely new circuitry developed specifically for the G Series.

Multi-layer boards reduce system noise and improve performance. In products which include video capabilities, broadcast-quality, wide-bandwidth video components are employed for maximum image integrity.

G Series units are easy to use. Where appropriate, a knob is included to control volume. The positive-action front-panel keys are software-defined: their legends are presented in the vacuum fluorescent display and change intelligently according to context.

Full installation configuration of many G Series components is achieved by running a special setup program on a Windows computer, connected to the G Series unit via a serial link.

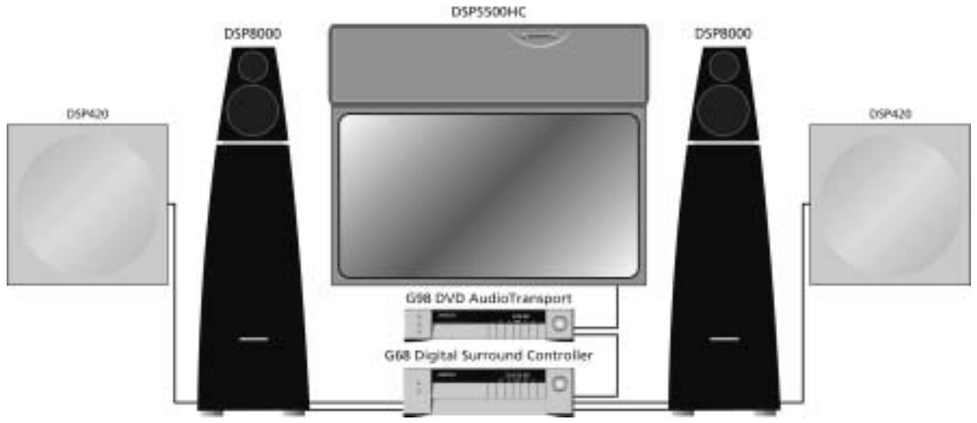
G Series products also include serial ports for remote operation and configuration, along with infra-red sensor input and trigger capabilities, plus Meridian communications ports. A comprehensive back-lit learning/programmable remote is included.

Virtually every piece of audio equipment has its own, characteristic sound. But at Meridian, our intention is to represent the original acoustic or studio event as accurately as possible. The characteristic sound of Meridian, therefore, is clear: it's the real thing. We achieve this sound in many ways, including careful choice of the right components, the right signal processing, the shortest possible analogue chain, precision digital design and the lowest jitter.

The G68 builds on the technology that went into Meridian's flagship, AAA-rated 861 surround processor. It is a powerful, flexible surround controller with an AM/FM tuner built-in, and represents the centrepiece of the G Series range, with multiple variants available to suit a wide range of applications.

At the heart of the G68 is a powerful DSP engine consisting of five Motorola 56367s running at 150MHz – delivering an incredible 750MIPS (million instructions per second). Processing is performed at high sample rates and with 48-bit precision throughout, ensuring that all filtering, processing and other operations are carried out far, far above the limits of human hearing. The G68 is thus a perfect processor for the very latest in digital audio and video, such as DVD-Audio and DVD-Video. Analogue signals are converted via 24-bit multibit Delta-Sigma converters to high-sample-rate digital on input to the processor, while all digital signals are reclocked to minimize jitter and maintain total data integrity.

G68 Surround Controller



The G68 Digital Surround Controller is an ideal complement to the G98 DVD Transport, and provides the basis of a stunning Meridian Digital Theatre system. The units are shown here connected to a pair of Meridian's top-of-the-line DSP8000 speakers for front left and right, coupled with a pair of DSP420 in-walls for the surrounds and a DSP5500HC for the centre front channel. Any kind of video display device can be supported, whether composite, S-Video, Component (progressive or interlaced) or even the latest interfaces such as HDMI or DVI. With the video processor in the G98, different video inputs are converted to all formats, so there is only need for one display connection.

And that's just one reason it sounds so good.

All versions of the G68 include two 6-channel S/PDIF digital inputs (coax), five stereo Toslink optical inputs, and six more stereo coax digital inputs. In addition, there's a 6-channel analogue input, and five stereo analogue ins. All the inputs are reconfigurable for an incredible degree of flexibility, and analogue inputs are converted to digital at high resolution – 24-bit, 96kHz.

The G68 is not only an audio processor – the video versions make it a superb video switcher too, with broadcast-quality switching and signal handling for the highest quality picture you've ever seen. There are four S-video inputs and two outputs; four composite inputs and two outputs; and three component inputs with one output.

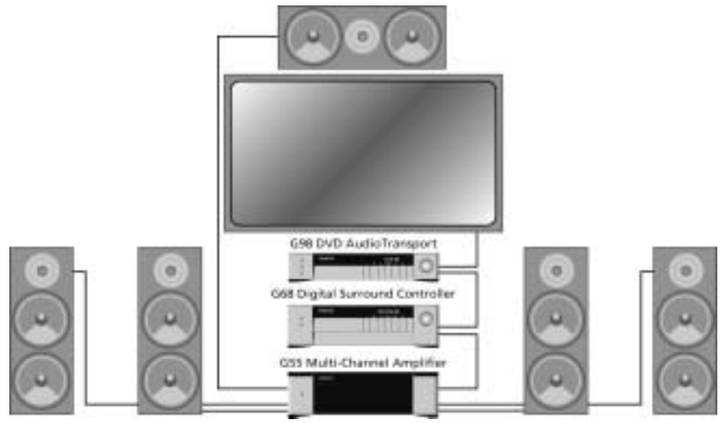
The G68 combines controller and surround processor functions, meeting the latest THX specifications and including MPEG, DTS, Dolby, Trifield and Ambisonic decoding, to name just a few. The decoders consist exclusively of our own code, giving them superior integration with the Meridian design philosophy, as well as superior performance.

The G68'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 and processor, carrying explicit information about the nature of the datastream as well as encrypted high-resolution digital signals from DVD-Audio – the first system of its kind to be approved. Virtually all other manufacturers oblige you to go through a D/A-A/D chain, losing quality in the process.

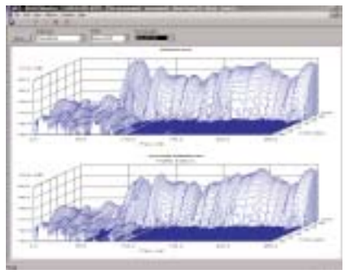
You can also store separate user parameters for each source (such as DVD) depending on whether the incoming signal is stereo or surround, so that any source material is played with the decode of your choice.

The G68 includes Meridian Room Correction software, accessed via the computer setup

G68 Surround Controller



In this analogue alternative to the system shown opposite, the G98 and G68 are augmented with the G55 5 x 100W multichannel power amplifier. The amplifier will drive any conventional passive analogue loudspeakers. The available analogue versions of the G68 include both balanced and unbalanced variants and combinations of the two. A digital output version of the G68 without video is also available.



Meridian Room Correction software automatically detects room resonances and counteracts them, utilising awesome DSP power to generate up to 60 filters.

Output panel for the G68XXV – compare with the G68ADV overleaf. See specifications for details.

program used to configure the unit via the serial port. This unique feature automatically measures room resonances using a simple microphone, employing powerful DSP technology to build up to 60 high-quality digital filters that limit the reverberation time at resonant frequencies to a value similar to the overall reverberation time of the room. The filters can be examined graphically and numerically, and edited if required. The result is that 'muddiness' in the sound is removed, while stereo and surround imaging are dramatically improved.

Coupled with this is a powerful bass management system that can handle up to three subwoofers.

Multi-zone/recording features include stereo digital and analogue outputs providing independent sources to two additional zones (video versions add two sets of S-video and composite video, with auto-switching and conversion between S and composite).

The tuner provides AM (LF/MF) and FM (VHF stereo Band II) reception and RDS, and is fitted with its own 24-bit, 96kHz A/D stage. Digital signal processing provides a sophisticated FM stereo blend/width control which allows the user to minimise noise on a received signal. There is also a DSP-based lowpass filter and whistle filter for improved AM reception.

Four versions of the G68 are available. The G68D version does not include video I/O, but provides 10 configurable digital and two analogue outputs, plus a multizone/tape audio capability. The G68ADV version includes 10 channels of digital out with MHR along with 8 channels of analogue output. On the video front, there are two S-Video outs, four S-Video ins, two composite outs and four in, plus component out and three component inputs. The included multizone/tape feature adds composite and S-Video capability. The G68AXV replaces the audio outputs described above with six unbalanced and four balanced analogue outputs, while the G68XXV instead provides eight balanced analogue outputs on XLR connectors.

The G68 can be configured with a powerful Windows graphical set-up application (supplied), which allows access to all the unit's functions and configuration. However, the G68 can also be configured from the front panel, thanks to the comprehensive 'soft-key' based user interface which is common to all the G Series components. Five of the seven keys take on functionality intelligently according to context, with their legends displayed above the buttons in the front-panel display. As a result, 'wizards' can be used to lead you through the configuration procedure, allowing a powerful degree of customization without having to hook up a computer. Further keys take you back to the top level of the interface ('Home'), and display different options available at a given level ('More').

The G68's firmware can be updated via the serial port, and it is possible for the unit's hardware to be upgraded by a Meridian service centre.

This sophisticated, powerful product is difficult to fully describe on paper – contact your Meridian dealer for a demonstration of the G68 and other G Series components, along with Meridian DSP Loudspeakers, which form an ideal complement to them.