DSW15
DIGTAL ACTIVE SUBWOOFER SYSTEM

DATASHEET

OVERVIEW



The DSW15 subwoofer system is the latest product to emerge from Meridian's Extreme Engineering programme, a result of years of investment and research at the extreme edge of audio design. The outcome is the highest-performing subwoofer Meridian has ever produced.



The subwoofer system comprises of two parts: the DSW15 acoustic enclosure carrying a 15-inch drive-unit, and a separate electronics unit, the 205 Mono Subwoofer Amplifier. The 205 uses advanced audio engineering, including thirteen of Meridian's proprietary DSP technologies, to fully exploit the capabilities of the audio enclosure. This enables the combination to extract higher performance than could be achieved by a conventional powered subwoofer.

The 205 features analogue inputs in addition to its Meridian SpeakerLink connections, making it suitable for use in non-Meridian systems as well as Meridian set-ups. Its flexibility means that the DSW15 is suitable for a wide ranges of applications; from a single subwoofer extending the bass in a two-channel set-up, to multiple subwoofers integrated into the largest cinema rooms. Whatever the circumstances, the DSW15 can be configured to suit its role within the system using the Meridian Control app running on a Windows or macOS device.

205 MONO SUBWOOFER AMPLIFIER - HIGHLIGHTS

- Installation flexibility provided by Meridian SpeakerLink connections and analogue inputs (balanced and unbalanced.
- Quiet operation with no cooling fans.
- Compact 1U 19-inch rack-mount form-factor - multiple units can be mounted adjacent to each other in the rack.
- Amplification delivers over 1000W RMS, but is capable of over 3000W under normal programme material conditions.
- Linear power supply based on a custom-designed, high-mass, low noise toroidal transformer.
- Secondary outer feedback loop provides improved audio performance compared to passive filters used by other subwoofers.

DSW15 ACOUSTIC ENCLOSURE - HIGHLIGHTS

- 15-inch long-throw drive-unit with massive motor system.
- Slow-grown birch plywood cabinet with internal acoustic damping material, all panels and bracing at least 25mm thick.
- Heavily-braced internal construction for maximum rigidity, even at high power levels.
- Recessed steel carrying handles on sides of enclosure.
- Four adjustable floor supports adaptable for use as spikes or feet to provide stability to maximise performance.
- Can be installed with drive-unit firing upwards.
- Threaded inserts on back and top of enclosure to assist with tethering during installation.

CONNECTIVITY



The rear panel of the 205 Mono Subwoofer Amplifier features SpeakerLink (RJ45) connections to carry audio and control signals when the subwoofer is used with other Meridian equipment. The channel selector switch determines what is played back by the subwoofer. This can be either of the two audio channels present on the SpeakerLink input, or a mix of those two channels.

Analogue audio is accepted in either unbalanced form (RCA phono socket), or balanced form (XLR socket) – selectable using the switch located between the two sockets.

The output of the 205 is connected to the DSW15 acoustic enclosure using an appropriate speaker cable fitted with Speakon™ connections. The audio connection on the acoustic enclosure is concealed under a cover held in place magnetically.

Please note: As the distance between the 205 and the acoustic enclosure will vary between installations, no ready-made speaker cable is supplied with the product. Instead, two Speakon™ connectors are supplied to allow a cable of a suitable length to be constructed.

TECHNOLOGIES

The 205 Mono Subwoofer Amplifier employs a number of Meridian's unique DSP technologies.

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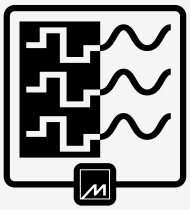
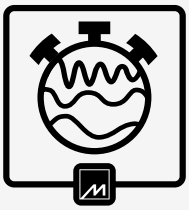
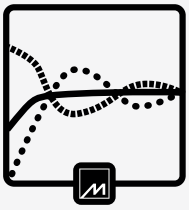
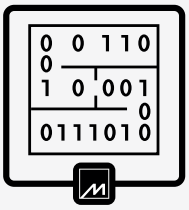
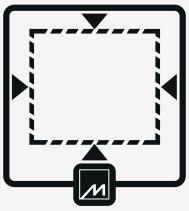
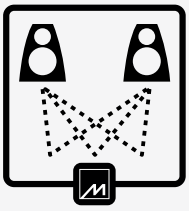
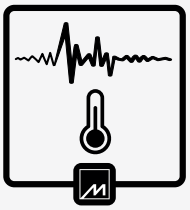
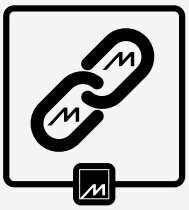
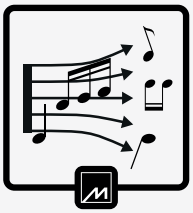
 DIGITAL PRECISION	 FFA	 E3 BASS	 PRO-ACTIVE BASS
 Q-SYNC	 FREE-Q	 IMAGE FOCUS	 PRO-ACTIVE THERMAL
 TRUE LINK	 PERFECT BALANCE		 PRO-TEC
 TRUE TIME	 BSM		

COMBINING MULTIPLE SUBWOOFERS

The DSW15 subwoofer system is designed to allow multiple subwoofers to be used in an installation. The compact 1U height of the 205 Mono Subwoofer Amplifier, combined with its cool-running characteristics, means that rack-space is minimal even for multiple units.

If the specification of the installation dictates that multiple DSW15 acoustic enclosures are required to be grouped together, they can be placed side-by-side, or stacked vertically. The enclosure is fitted with threaded inserts to assist with tethering – either to each other, or to adjacent walls and other structures. Refer to the product's user guide for details

The DSW15 subwoofer is supplied in two parts, designed so that each 205 Mono Subwoofer Amplifier drives a single DSW15 acoustic enclosure. The audio processing behind Meridian technologies employed within the 205, such as E3 Bass and Pro-Tec, takes into account electrical and mechanical characteristics specific to a single enclosure. Similarly, the power amplification within the 205 is intended to drive the impedance offered by the single drive-unit within the enclosure.

The 205 should not be connected to more than one DSW15 acoustic enclosure.

If the 205 is connected to two enclosures with the two drive units wired in parallel, the reduction in load impedance will render the subwoofer's protection systems redundant. This is likely to lead to catastrophic results, causing serious damage to the product.

If the 205 is connected to two enclosures with the drive units wired in series, sound will be produced from both enclosures, but the overall sound pressure level achievable will not exceed what is available from a single enclosure.

SPECIFICATIONS

205 Mono Subwoofer Amplifier

CONNECTIONS	1 x Meridian SpeakerLink input: RJ45	
	1 x Meridian SpeakerLink output: RJ45	
	1 x line-level balanced analogue audio input: XLR	
	1 x line-level unbalanced analogue audio input: RCA phono	
	1 x subwoofer amplifier output: SpeakonTM connector	
	1 x maintenance socket: USB-B	
POWER INPUT	IEC mains connector – 1000W max	
CONTROL AND SET-UP	Three-way channel selector to choose playback of “left”, “right”, or “left + right” digital channels	
	Front-panel On/Off switch with soft-start circuit for silent turn-on	
	LED indicator showing product status	
	Factory reset button	
	Meridian comms via SpeakerLink connections	
	Mains power on/off switch	
	Maintenance socket allows for configuration from Windows PC, firmware updates and integration with third-party control systems	
POWER AMPLIFIER	Class D amplifier capable of over 1000W RMS	
PRODUCT DIMENSIONS	HEIGHT: 44mm [1.7 in]	WIDTH: 480mm [18.9 in]
	DEPTH: 360mm [14.2 in]	WEIGHT: 10kg [22 lbs]
PACKED DIMENSIONS	HEIGHT: 170mm [6.7 in]	WIDTH: 580mm [22.8 in]
	DEPTH: 490mm [19.3 in]	WEIGHT: 11kg [24 lbs]

DSW15 Acoustic Enclosure

BASS DRIVER	1 x 15-inch long-throw	
AUDIO OUTPUT*	SPL (ANSI/CTA) in Free Space: 124dB	
	SPL (Peak) in Free Space: 132dB	
	Frequency response in room (+/- 3dB): 19Hz to 200Hz	
	Frequency response in room (+/- 6dB): 15.5Hz to 200Hz	
FLOOR SUPPORTS (x4)	M8 x 1.25 adjustable spike running through knurled aluminium locking disc, fitted with removable, heavy-duty foot, self-adhesive friction pad supplied	
PRODUCT DIMENSIONS	HEIGHT: 550mm – 570mm [22.4 in – 23.3 in] †	WIDTH: 540mm [22.0 in]
	DEPTH: 300mm [11.8 in] ‡	WEIGHT: 35 kg [77 lbs]
PACKED DIMENSIONS	HEIGHT: 750mm [29.5 in]	WIDTH: 665mm [26.2 in]
	DEPTH: 430mm [16.9 in]	WEIGHT: 37kg [82 lbs]

* Measurements taken when driven by 205 Mono Subwoofer Amplifier

† Dependent on height adjustment of floor supports

‡ Including the surround of the drive-unit, which protrudes slightly from the front of the enclosure