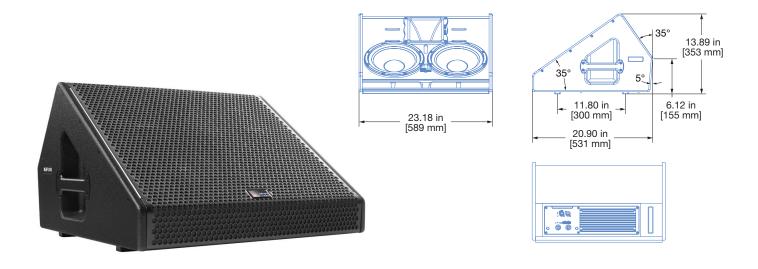
DATASHEET ULTRA

MFJ-210 Low-Profile High-Power Stage Monitor





The MJF-210 low-profile high-power stage monitor reproduces audio faithfully with high intelligibility at high output levels with ample low-frequency headroom. The self-powered MJF-210 exceeds the stringent requirements of today's touring applications, withstanding the rigors of road and stage while occupying a small, lightweight footprint and a fraction of the truck space of similar monitors requiring external amplification.

The MJF-210's phase-corrected 55 Hz to 18 kHz frequency range ensures that vocals and instruments are reproduced accurately with low distortion and no signal coloration. Exhibiting flat phase and frequency responses, as well as exceptional impulse response, the MJF-210 surpasses the sonic capabilities of conventional stage monitors while offering the simplicity of self-powered setup and operation.

The MJF-210's durable, vented enclosure houses two high-power, long-excursion, 10-inch low-frequency drivers, as well as a 4-inch diaphragm compression driver coupled to a 50° horizontal by 70° vertical constant directivity horn. The face of the low-profile cabinet slopes 35° from the stage, ensuring optimal monitoring

for the performer, permitting freedom to move upstage and downstage while remaining within the horn's consistent, wide vertical coverage.

Drivers are powered by a three-channel, class D amplifier. The Intelligent AC^{TM} power supply provides automatic voltage selection, EMI filtering, soft current turn-on, and surge suppression.

The optional RMS™ remote monitoring system module provides comprehensive monitoring of loudspeaker parameters from a Mac® or Windows®-based computer. Optional XLR 5-pin connectors support use of composite cables to carry both RMS and balanced audio.

Constructed of premium birch plywood, the MJF-210's cabinet is coated with a slightly textured black finish and includes protective rubber strips on the bottom of the unit that prevent changes in position due to vibrations. A hex-stamped steel grille lined with acoustical black mesh protects the drivers.

FEATURES AND BENEFITS

- Self-powered system guarantees simplified setup and operation
- Small lightweight footprint with no external amplification occupies less truck space
- Low profile cabinet preserves onstage sight lines
- Wide vertical coverage permits the freedom to move upstage and downstage
- High peak power ensures excellent transient response
- Flat frequency and phase responses yield high gain before feedback

APPLICATIONS

- Main vocal monitor
- High output instrument monitor

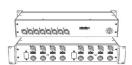
ASSOCIATED PRODUCTS

Galileo GALAXY Network Platform: The Galileo GALAXY Network Platform provides state-of-the-art audio control technology for loudspeaker systems with multiple zones. With immaculate sonic performance, it provides a powerful tool set for corrective room equalization and creative fine-tuning for a full range of applications.

MDM-832 Distribution Module: MDM-832 units conveniently power systems, routing up to eight channels of AC power, balanced audio and RMS signals to loudspeakers.



Galileo GALAXY Network Platform



MDM-832 Distribution Module

SPECIFICATIONS

ACOUSTICAL ¹	
Operating Frequency Range ²	55 Hz – 18 kHz
Frequency Response ³	60 Hz – 16 kHz ±4 dB
Phase Response	200 Hz – 16 kHz ±45°
Linear Peak SPL ⁴	134 dB with crest factor >17 dB (M-noise), 132.5 dB (Pink noise), 132.5 dB (B-noise)
COVERAGE	
Horizontal Coverage	50°
Vertical Coverage	70°
TRANSDUCERS	
Low Frequency	Two 10-inch high-power cone drivers; 4 Ω nominal impedance
High Frequency	One 4-inch diaphragm compression driver; 8 Ω nominal impedance
AUDIO INPUT	
Туре	Differential, electronically balanced
Maximum Common Mode Range	±5 V DC, clamped to earth for voltage transient protection
Connectors	XLR 3-pin female input with male loop output; optional XLR 5-pin connector to accommodate both balanced audio and RMS signals.
Input Impedance	10 $k\Omega$ differential between pins 2 and 3
Wiring ⁵	Pin 1: Chassis/earth through 1 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 2: Signal + Pin 3: Signal – Pin 4: RMS (polarity insensitive) Pin 5: RMS (polarity insensitive) Case: Earth ground and chassis
Nominal Input Sensitivity	0 dBV (1.0 V rms) continuous is typically the onset of limiting for noise and music
Input Level	Audio source must be capable of producing of +20 dBV (10 V rms) into 600 Ω to produce the maximum peak SPL over the operating bandwidth of the loudspeaker.
AMPLIFIER	
Туре	Three-channel, Class-D
Total Output Power ⁶	1950 W peak
THD, IM, TIM	< 0.02%
Cooling	Convection
AC POWER Connector	powerCON 20 input with loop output
Automatic Voltage Selection	90–265 V AC
Safety Agency Rated Voltage Range	100–240 V AC, 50–60 Hz
Turn-on and Turn-off Points	90 V AC turn-on, no turn-off; internal fuse-protection above 265 V AC
CURRENT DRAW Idle Current	0.26 A rms (115 V AC); 0.25 A rms (230 V AC); 0.28 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	1.8 A rms (115 V AC); 1.1 A rms (230 V AC); 2.6 A rms (100 V AC)
Burst Current (<1 sec) ⁷	3.5 A rms (115 V AC), 1.8 A rms (230 V AC), 4.2 A rms (100 V AC)
Maximum Instantaneous Peak Current	8.1 A peak (115 V AC), 3.9 A peak (230 V AC), 9.3 A peak (100 V AC)
Inrush Current	4.1 A peak (110 v Ao), 3.5 A peak (250 v Ao), 9.5 A peak (100 v Ao) 4.20 A peak
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SPECIFICATIONS, CONT'D.

RMS NETWORK (OPTIONAL)	
	Two-conductor twisted-pair network that reports all operating parameters of amplifiers to system operator's host computer.
PHYSICAL	
Dimensions	W: 23.18 in (589 mm) x H: 13.89 in (353 mm) x D: 20.90 in (531 mm)
Weight	67 lb (30.4 kg)
Enclosure	Premium multi-ply birch with slightly textured black finish; 35° front angle
Protective Grille	Powder-coated, hex-stamped steel with black mesh

NOTES

- 1. Loudspeaker system predictions for coverage and SPL are available in Meyer Sound's MAPP System Design Tool.
- 2. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
- 3. Measured 1 m on axis with typical boundary loading.
- 4. **Linear Peak SPL** is measured 1 m on axis with typical boundary loading. Loudspeaker SPL compression measured with M-noise at the onset of limiting, 2-hour duration, and 50 °C ambient temperature is < 2 dB.

M-noise is a full bandwidth (10 Hz–22.5 kHz) test signal developed by Meyer Sound to better measure the loudspeaker's music performance. It has a constant instantaneous peak level in octave bands, a crest factor that increases with frequency, and a full bandwidth Peak to RMS ratio of 18 dB. The presence of a greater-than (>) symbol with regard to crest factor indicates it may be higher depending on EQ and boundary loading.

Pink noise is a full bandwidth test signal with Peak to RMS ratio of 12.5 dB.

B-noise is a Meyer Sound test signal used to ensure measurements reflect system behavior when reproducing the most common input spectrum, and to verify there is still headroom over pink noise.

- 5. Pins 4 and 5 (RMS) only included with XLR 5-pin connector that accommodates both balanced audio and RMS signals.
- 6. Peak power based on the maximum unclipped peak voltage the amplifier will produce into the nominal load impedance.
- 7. AC power cabling must be of sufficient gauge so that under burst current rms conditions, cable transmission losses do not cause the loudspeaker's voltage to drop below the specified operating range.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered stage monitor; its transducers shall include two 10-inch cone drivers and one 4-inch diaphragm compression driver on a 50° x 70° horn. The loudspeaker shall incorporate internal processing electronics and a three-channel amplifier, one channel for each driver. Processing functions shall include equalization, phase correction, signal division, and protection for the low- and high-frequency sections. Amplifier channels shall be class D. Distortion (THD, IM, TIM) shall not exceed 0.02%.

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating frequency range, 55 Hz to 18 kHz; phase response, 200 Hz to 16 kHz $\pm45^{\circ}$; linear peak SPL shall be 134 dB with crest factor > 17 db measured with M-noise, 1 m on axis with typical boundary loading. Coverage shall be 50° horizontal by 70° vertical.

The audio input shall be electronically balanced with a 10 k Ω impedance and accept a nominal 0 dBV (1.0 V rms) signal. Audio connectors shall be XLR 3-pin, female and male, accommodating balanced audio, or XLR 5-pin, accommodating both balanced audio and RMS.

The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on, and surge suppression. Power requirements shall be nominal 100, 110, or 230 V AC line current at 50–60 Hz. UL and CE operating voltage range shall be 100–240 V AC at 50–60 Hz. Maximum instantaneous peak current draw shall be 8.1 A peak at 115 V AC, 3.9 A peak at 230 V AC, and 9.3 A peak at 100 V AC. Current inrush during soft turn-on shall not exceed 20 A peak at 115 V AC. AC power connectors shall be powerCON 20 with loop output.

The loudspeaker shall optionally include the RMS remote monitoring system module.

Loudspeaker components shall be mounted in an acoustically-vented, wedge-shaped enclosure constructed of premium multi-ply birch with a slightly textured black finish. The protective grille shall be hex stamped steel with black mesh screen. Dimensions shall be W: 23.18 in (589 mm) x H: 13.89 in (353 mm) x D: 20.90 in (531 mm). Weight shall be 67 lb (30.4 kg). The enclosure's front angle shall be 35°.

The loudspeaker shall be the Meyer Sound MJF-210.

