corporate AV small theatres houses of worship ballrooms sidefill frontfill

milo family

M’elodie

UltraCompact High-Power Curvilinear Array Loudspeaker

Meyer® Sound

A new generation,
in a strong family line

M’elodie

UltraCompact high-power curvilinear array loudspeaker

Sometimes, big things come in small packages. The M’elodie ultracompact high-power curvilinear array loudspeaker is a good example. M’elodie is Meyer Sound’s newest generation of a strong family line: the celebrated M Series. M’elodie brings the sonic signature and easy to use rigging of the MILO family of loudspeakers, along with an extraordinary power-to-size ratio to a package smaller than the company’s MICA compact high-power curvilinear array loudspeaker. As a result, M’elodie is compact enough for small theatres, ballrooms and clubs, as well as being an outstanding performer in theatrical productions and corporate AV applications.

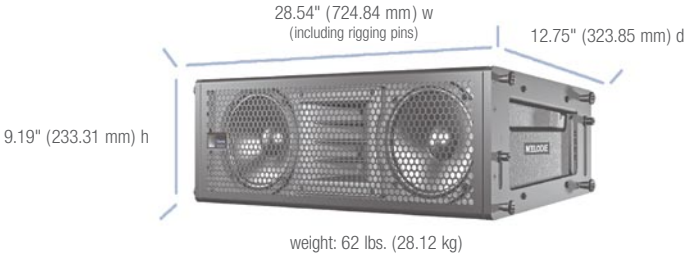
While M’elodie can be used as a main system in small venues, its broad 100-degree horizontal coverage makes it ideal for use in larger venues, too, as it is designed to integrate seamlessly with MICA. M’elodie’s QuickFly rigging, which features captive GuideALinks for the maximum in flexibility and safety, make it easy to add as downfill to a MICA array, but individual M’elodie cabinets also work

FEATURES & BENEFITS

- Exceptional power-to-size ratio
- Wide and even horizontal coverage pattern
- Very small footprint keeps a low profile appearance
- Seamless integration with MICA
- QuickFly rigging with captive GuideALinks simplifies use in flown or groundstacked arrays, alone or with MICA and/or 600-HP subwoofer

APPLICATIONS

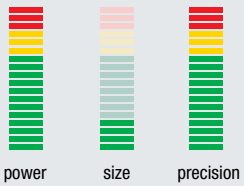
- Corporate AV
- Small theatres
- Houses of worship
- Ballrooms
- Downfill or sidefill for systems using MICA
- Frontfill
- Under-balcony coverage



exceptionally well for frontfill or under-balcony coverage. Best of all, M'elodie's small footprint takes up little truck space.

M'elodie is the latest self-powered loudspeaker from Meyer Sound, the company that introduced controller-assisted loudspeakers more than 27 years ago and self-powered sound reinforcement systems over 11 years ago. With an all-new low-frequency driver and amplifier, plus Meyer Sound's famous complex crossover, driver protection, and frequency and phase correction circuitry, M'elodie provides a reliable, low-distortion solution for a key segment of the sound reinforcement market.

M'elodie's diminutive size belies a powerful voice: conservatively rated at a maximum peak output of 131 dB SPL, M'elodie is capable of filling rooms much larger than one would expect.



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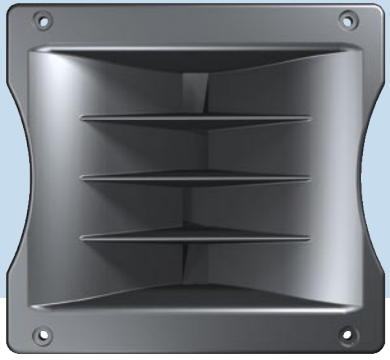
COMPONENTS

M’elodie is a three-way system in which each Meyer Sound-designed and manufactured driver is powered by its own amplifier channel.

Low/Mid-Frequency Section

The low and mid frequencies in M’elodie’s operating frequency range are produced by two new neodymium magnet 8-inch cone drivers with 1.5-inch voice coils. The two drivers work in a two-way configuration in which they operate in parallel at lower frequencies to obtain the greatest acoustic output, while one driver rolls off before the crossover frequency to maintain optimal polar and frequency response through the crossover region.



A low-distortion horn provides wide, 100-degree constant directivity horizontal coverage.

A single 3-inch diaphragm, 1.2-inch exit, neodymium magnet compression driver is mounted on Meyer Sound's patented REM manifold.

"With M'elodie, we have completed the MILO Family, our new generation of curvilinear array loudspeakers. We created M'elodie to satisfy all of our customers' requests for a curvilinear array product that is powerful, yet compact enough for situations where aesthetics or load limits are restrictive."

– John Meyer

High-Frequency Section

M'elodie uses the same 3-inch diaphragm, 1.2-inch exit, neodymium magnet compression driver found in M'elodie's larger sibling, MICA, to produce the smooth, extended high-frequency response that is a hallmark of the MILO family. The driver is mounted on one of Meyer Sound's patented REM manifolds, which is coupled to a low-distortion, 100-degree horizontal coverage, constant directivity horn. The REM produces a wave front with low distortion and radiation behavior similar to that of a high-frequency line source, yet the high output generated by compression drivers. The horn's smooth, controlled, narrow vertical dispersion minimizes destructive high-frequency interactions between cabinets, an essential quality for line array applications.

“I can’t imagine doing a job of this complexity without the self-powered loudspeakers... With no amp racks to deal with, we ran very short audio lines to the Meyer loudspeakers, nearly all of which we could control individually. It was a straightforward, elegant solution.”

– *Steve Sockey*,
Sound Designer
SIA Acoustics

A new, three-channel class AB/H amplifier provides 1275 watts total burst output (2550 watts peak) power to M’elodie.

THE MEYER SOUND SELF-POWERED ADVANTAGE

Having manufactured self-powered sound reinforcement loudspeakers since 1995, Meyer Sound has pioneered and refined this technology to produce systems that are powerful and reliable. Self-powered systems eliminate heavy, expensive, amplifier racks and large loudspeaker cables, thereby lowering costs. With no need to calibrate gain and crossover settings, self-powered systems are easy to use and go from the truck to fully rigged and back in minutes.

M’elodie features an all-new, three-channel class AB/H amplifier conservatively rated at 1275 watts total burst output (2550 watts peak). The amplifier/processing module is field replaceable and includes limiting to extend driver life and hold long-term power compression to a minimum. Meyer Sound’s Intelligent AC power supply automatically adjusts for any line voltage worldwide and provides both soft turn-on and transient protection.

Like all Meyer Sound self-powered systems, M’elodie contains all of its amplification and processing circuitry within the cabinet, yielding greater performance, lower overall system cost, and extremely fast setup and teardown.

The increase in performance comes from all of the components being designed as an integrated system from the beginning, rather than being designed separately and then married together. Compromises to accommodate unknown amplifiers or loads in passive systems are entirely eliminated, as are signal losses from long loudspeaker cable runs.

Self-powered systems also enable complete consistency: each component that goes into a M’elodie cabinet is tested at the factory to insure it performs identically to every other, and final testing is done to confirm consistency of each complete system. Consistency is critical in line array applications, where performance differences corrupt the coupling between cabinets that is the basis of line array theory.

The MCF–M'elodie caster frame allows up to five cabinets to be transported fully rigged.

Captive GuideALinks make it safe, easy, and quick to choose any of 12 angle positions.

Up to six M'elodie cabinets can be groundstacked on the MG–M'elodie.

QUICKFLY RIGGING

Meyer Sound builds all of its products to meet the real needs of its customers. Rigging design is key to a loudspeaker's practicality, especially for events where efficiency in setup and teardown is paramount. This need led Meyer Sound to create the QuickFly rigging series. The subject of multiple patents, QuickFly broke new ground in providing rigid rigging that allows arrays to travel fully rigged and virtually eliminated the need for pullback cables.

But the innovations didn't stop there. M'elodie's QuickFly rigging features the same captive GuideALinks introduced with MICA's rigging. No more sorting through a box of links to find the right one, no need for anyone to risk fingers and hands by placing them between cabinets while pinning links. At Meyer Sound, we know that setup and teardown are often done under pressure, and, while speed is crucial in these situations, working fast brings with it the possibility of accidents. M'elodie's rigging enables shorter rigging times while reducing the potential for injuries.

- The **MG–M'elodie** grid can fly up to 18 M'elodie cabinets with a 7:1 safety ratio, or 25 cabinets at a 5:1 ratio. The grid can also be used for groundstacking M'elodie.
- The **MTF–MICA/M'elodie** transition grid facilitates using M'elodie as downfill for a MICA array, for flying M'elodie under the 600–HP high–power subwoofer, or for groundstacking with the 600–HP.
- The **MCF–M'elodie** caster frame allows up to five cabinets to be transported fully rigged, and is dimensioned for tight packing in both U.S. and European trucks. Durable nylon covers are also available to make M'elodie completely ready for the road.
- The **MUB–M'elodie** U–bracket enables use of M'elodie for frontfill and under–balcony coverage.

M’elodie can be ordered in custom colors to accommodate situations where the loudspeaker system needs to blend into the background.

WHEN APPEARANCE COUNTS

M’elodie’s small size presents an elegant, low-profile appearance in applications where aesthetics are important. To complete the effect, M’elodie can be ordered with custom finishes meticulously matched to a customer paint sample with the same attention to detail that is applied to the product’s performance.

A beautiful look is always beneficial, but outdoor applications require robustness as well. With systems installed everywhere from outdoor shopping malls to cruise ships, Meyer Sound knows what it takes to protect loudspeakers from the elements, so you can order a weather-protected version of M’elodie with the confidence it will operate at its rated specifications, rain or shine.

SUBWOOFER INTEGRATION

The clarity and power M’elodie provides deserves low-frequency support with the same qualities. Meyer Sound’s 600-HP high-power subwoofer provides sufficient low-frequency output for demanding applications, with a maximum peak output of 138 dB SPL over its operating frequency range of 33 Hz to 150 Hz. The 600-HP is the ideal partner for M’elodie when it is desirable to fly a subwoofer as part of a M’elodie array. Flown arrays can be built using the MG-MICA multipurpose grid for the 600-HP and then the MTF-MICA/M’elodie transition frame. The 600-HP can also be groundstacked, and even configured into a horizontal line array for uniform low-frequency coverage over a large area.

A 600-HP compact high-power subwoofer with rigging can be flown with M’elodie using the MTF-MICA/M’elodie transition frame.

For the most extreme applications the 700-HP ultrahigh-power subwoofer can provide M’elodie with unparalleled low-frequency output.

PLAYS WELL WITH MICA

With its high power and wide coverage, there is no better downfill option for a MICA array than M’elodie. M’elodie has been designed to match the MILO family sonic signature, so when a performing arts center, theatre, church or other location is medium-large in size or needs higher SPL, the transition from a MICA main system to a M’elodie downfill or sidefill system will be smooth.

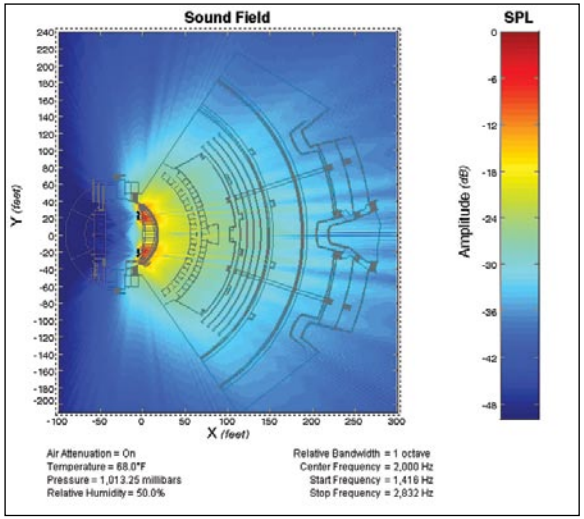
Meyer Sound’s RMS remote monitoring system is standard on all M Series models, making it easy to keep an eye on critical performance parameters for all of the loudspeakers in a MICA/M’elodie system.

SYSTEM DESIGN AND INTEGRATION TOOLS

Meyer Sound knows that building the world's best loudspeakers is only part of the job; ensuring they are well used is the other part. Good tools can make all the difference in achieving optimal loudspeaker use.

MAPP Online Pro

Meyer Sound MAPP Online Pro acoustical prediction software, available free from Meyer Sound, gives users accurate predictions of how Meyer Sound loudspeakers will work in use in a given venue. MAPP Online Pro lets users view coverage, and, using the included Virtual SIM feature, SPL and frequency response at any spot in the venue, making it easy to design M'elodie arrays by themselves or complete systems incorporating MICA.

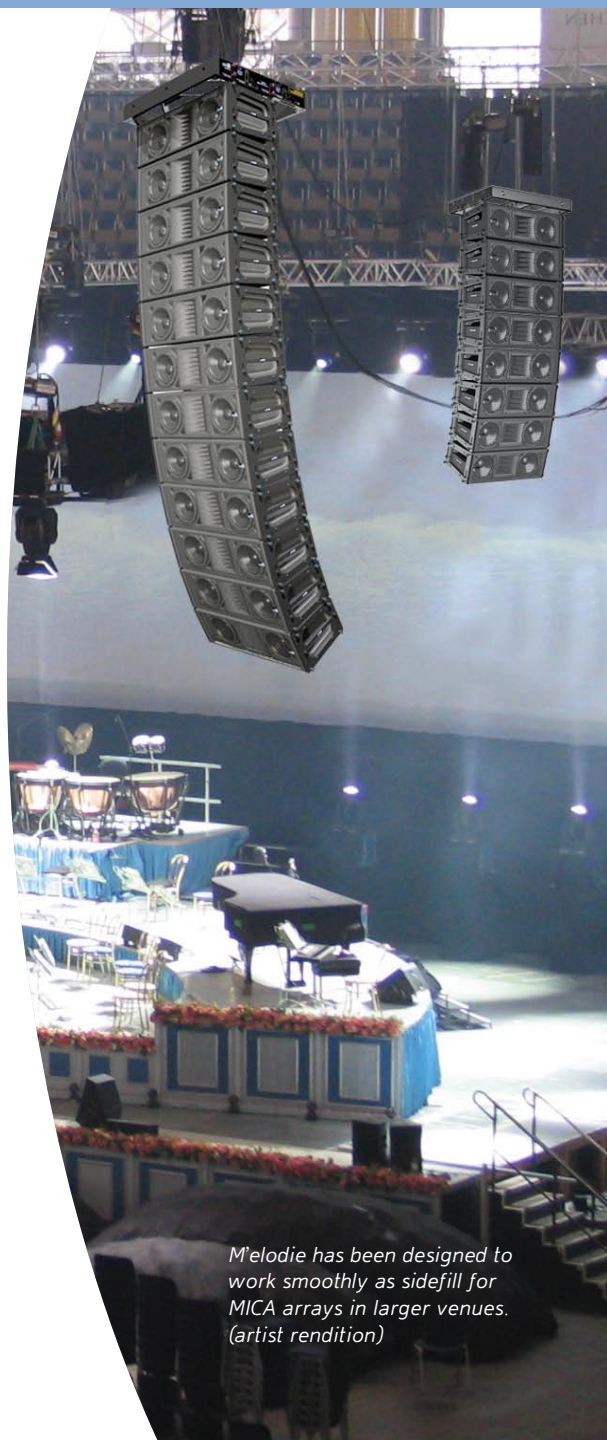


A MAPP Online Pro soundfield plot of a system with a MICA main array and a M'elodie sidefill array (splayed 40 degrees from the main array) on each side of the venue.

Galileo 616 and Compass

The Galileo loudspeaker management system, consisting of the Galileo 616 processor and Compass control software, is designed to provide all of the facilities required to drive a Meyer Sound self-powered loudspeaker system, including array compensation equalization for M'elodie and MICA, among other models.

Galileo 616 loudspeaker management system



M'elodie has been designed to work smoothly as sidefill for MICA arrays in larger venues. (artist rendition)

SPECIFICATIONS

ACOUSTICAL[1]	
Operating frequency range[2]	70 Hz – 18 kHz
Frequency response[3]	76 Hz – 16 kHz ±4 dB
Phase response	1.5 kHz – 16 kHz ±30˚
Maximum peak SPL[4]	131 dB
Dynamic range	›110 dB
Acoustical crossover[5]	1100 Hz
COVERAGE	
Horizontal coverage	100˚
Vertical coverage	Varies, depending on array length and configuration
TRANSDUCERS	
Low/low-mid frequency[6]	Two 8” cone drivers with neodymium magnets
	Nominal impedance: 4 Ω
	Voice coil size: 1.5”
	Power handling capability: 600 W (AES); 900 W peak[7]
High frequency[8]	3” compression driver
	Nominal impedance: 8 Ω
	Voice coil size: 3”
	Diaphragm size: 3”
	Exit size: 1.2”
	Power handling capability: 180 W (AES); 360 W peak[9]
AUDIO INPUT	
Type	Differential, electronically balanced
Max. common mode range	±15 V DC, clamped to earth for voltage transient protection
Connectors	Female XLR input with male XLR loop output or VEAM all-in-one connector (integrates AC, audio, and network)
Input impedance	10 kΩ differential between pins 2 and 3
Wiring	Pin 1: Chassis/earth through 220 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies
	Pin 2: Signal +
	Pin 3: Signal –
	Case: Earth ground and chassis
DC Blocking	Differential DC blocking up to max common mode voltage
CMRR	›50 dB, typically 80 dB (50 Hz – 500 Hz)
RF filter	Common mode: 425 kHz
	Differential mode: 142 kHz
TIM filter	‹80 kHz, integral to signal processing
Nominal input sensitivity	0 dB V (1 V rms, 1.4 V pk) continuous is typically the onset of limiting for noise and music.
Input level	Audio source must be capable of producing +20 dBV (10 V rms, 14 V pk) into 600 Ω in order to produce maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIERS	
Amplifier type	Three-channel complementary MOSFET output stages (class AB/H)
Output power	1275 W (three channels; 2 x 500 W, 1 x 275 W); 2550 W peak[10]
THD, IM TIM	‹ .02%
Load capacity	4 Ω low and mid; 8 Ω high channels
Cooling	Convection cooled

AC POWER

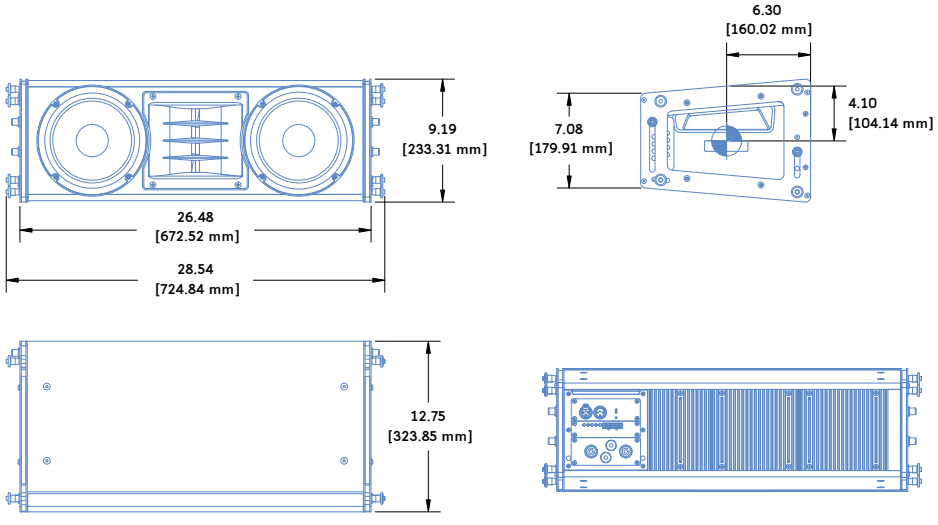
AC power connector	PowerCon with looping output or VEAM all-in-one connector (integrates AC, audio and network)
Voltage selection	Automatic, two ranges, each with high-low voltage tap (uninterrupted)
Safety agency rated operating voltage	95 V AC – 125 V AC, 208 V AC – 235 V AC, 50/60 Hz
Turn on/turn off points	85 V AC – 134 V AC; 165 V AC – 264 V AC
Idle current	0.680 A rms (115 V AC), 0.360 A rms (230 V AC), 0.760 A rms (100 V AC)
Max. long-term continuous current (>10 sec)	2.3 A rms (115 V AC); 1.2 A rms (230 V AC); 2.6 A rms (100 V AC)[11]
Burst Current (<1 sec)	4 A rms (115 V AC), 2 A rms (230 V AC), 4.5 A rms (100 V AC)
Ultimate Short-Term Peak Current Draw	13 A pk (115 V AC), 6.5 A pk (230 V AC), 15 A pk (100 V AC)
Inrush Current	10 A pk (115 and 100 V AC), 18 A pk (230 V AC)

RMS NETWORK

Equipped with two-conductor twisted-pair network, reporting all operating parameters of amplifiers to system operator's host computer.

PHYSICAL

Enclosure	Premium birch plywood
Finish	Black textured
Protective grille	Powder-coated, hex-stamped steel, black mesh
Rigging	QuickFly rigging with four captive GuideALinks in the bottom corners of two aluminum and steel end frames, secured with quick-release pins
Dimensions	28.54 w x 9.19 h x 12.75 d (724.84 mm x 233.31 mm x 323.85 mm)
Weight	62 lbs (28.12 kg)



1 *The low-frequency power response of the system will increase according to the length of the array.*

2 *Recommended maximum operating frequency range. Response depends upon loading conditions and room acoustics.*

3 *Measured free field with 1/3-octave frequency resolution at 4 meters.*

4 *Free field, measured with music referred to 1 meter.*

5 *At this frequency, the transducers produce equal sound pressure levels.*

6 *To eliminate interference at shorter wavelengths, the two 8-inch drivers work in combination at lower frequencies (70 Hz – 320 Hz). At mid frequencies (320 Hz – 1100 Hz) only one cone driver is active to maintain optimal polar and frequency response characteristics.*

7 *Power handling is measured under AES standard conditions: both transducers driven continuously for two hours with band limited noise signal having a 6 dB peak-average ratio. Peak power handling is measured with both transducers driven for 100 milliseconds with pink noise signal having a 12 dB peak-average ratio.*

8 *The driver is coupled to a 100-degree-horizontal constant-directivity horn through a proprietary acoustical combining manifold (REM).*

9 *Power handling is measured under AES standard conditions: transducer driven continuously for two hours with band limited noise signal having a 6 dB peak-average ratio. Peak power handling is measured with transducer driven for 100 milliseconds with pink noise signal having a 12 dB peak-average ratio.*

10 *Amplifier wattage rating based on the maximum unclipped burst sine-wave rms voltage that the amplifier will produce for at least 0.5 seconds into the nominal load impedance: 45 V rms low channels and 47 V rms high channel. Peak power based on the maximum unclipped peak voltage that the amplifier will produce for at least 100 milliseconds into the nominal load impedance: 63 V peak low channels and 67 V peak high channel.*

11 *AC power cabling must be of sufficient gauge so that under burst current RMS conditions, cable transmission losses do not drop voltage below specified operating range at the speaker.*

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