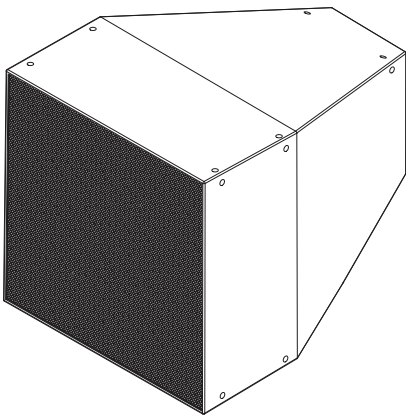


MTS-4153-43FWB Loudspeaker  
high output 40x30 FW blk



Electro-Voice

- Full-range, high-output, horn-loaded loudspeaker with exact directivity for very long throw applications
- Lossless Hydra™ waveform converter couples dual coaxial compression drivers to a constant directivity (CD) waveguide with pattern control to below 350 Hz
- Four woofers couple to the same waveguide, creating a true point source with substantial bass response
- Optimized acoustic design, amplifier matching, and DSP to ensure perfectly controlled SPL and coverage, even at full output



The MTS-4153-43FWB is a full-range, high-output, point-source loudspeaker with exact directivity for very-long-throw applications. MTS is the product of a holistic system approach. Acoustic design, amplifier matching, and digital processing are optimized with proprietary software to ensure precisely distributed SPL that is balanced and controlled throughout the entire coverage area, even at full output. Four slot-loaded, 15-inch high efficiency low-frequency drivers are coupled to the same full-range constant directivity waveguide as two coaxial mid/high frequency compression drivers. This creates a true point-source with substantial bass response, eliminating the need for subwoofers in many applications. The three-way MTS-4153-43FWB has a 40° x 30° coverage pattern. The loudspeaker can deliver 152 dB peak (music, with low-frequency response that extends to 50 Hz at -10 dB) and 155 dB peak (speech). The speaker is typically configured in biamp mode with two low-frequency inputs driven as a single 4 Ω load. The installer could also drive the low-frequency inputs separately using two cable runs to minimize signal losses over long distances. The loudspeaker is designed for outdoor use with full exposure to the elements. All MTS loudspeakers have an IP55 rating, indicating that they are impervious to dust and water ingress. MTS is engineered for use with Dynacord IPX series amplifiers. Proprietary speaker settings and limiter functions ensure exceptional performance with long-

term reliability at extremely high output levels. A package of design files is provided for advanced system simulation in venues. Electro-Voice PREVIEW Loudspeaker Software is the fastest and most accurate way to create acoustic designs with MTS.

Parts included

Quantity	Component
1	Full-range horn-loaded speaker
1	Gland nut cover
1	Installation manual
1	Warranty card

Technical specifications

Frequency response (-3 dB) <sup>1</sup> :	55 Hz - 18 kHz
Frequency range (-10 dB) <sup>1</sup> :	50 Hz - 20 kHz
Max. SPL (music) <sup>2</sup> :	152 dB
Max. SPL (speech) <sup>3</sup> :	155 dB
Coverage (H x V):	40° x 30°
Input connections:	LF1, LF2, MHF
Minimum required amplifier channels 2 (LF1 + LF2 wired parallel):	
LF1 maximum input power (20 ms avg) <sup>4</sup> :	1250 W
LF1 maximum peak input voltage <sup>5</sup> :	150 V
LF1 nominal input impedance:	8 Ω
LF2 maximum input power (20 ms avg) <sup>4</sup> :	1250 W
LF2 maximum peak input voltage <sup>5</sup> :	150 V
LF2 nominal input impedance:	8 Ω
MHF maximum input power (20 ms avg) <sup>4</sup> :	1250 W
MHF maximum peak input voltage <sup>5</sup> :	140 V
MHF nominal input impedance:	6 Ω
Connectors:	10 AWG (6 mm <sup>2</sup> ) Phoenix/ Euroblock input and pass through
Enclosure:	Weather resistant birch plywood with EVCoat
Grille:	16 gauge stainless steel with hydrophobic screen
Suspension:	(24) M10 hard points
Color:	RAL 9005 Black
Dimensions (H x W x D):	1092 mm x 1092 mm x 1491 mm (43.0 in x 43.0 in x 58.7 in)
Net weight:	188 kg (414 lbs)
Shipping weight:	235 kg (519 lbs)
Weatherization:	FW: outdoor full exposure
Ingress Protection (IP) rating:	55

<sup>1</sup>Full space with MTS full range preset.

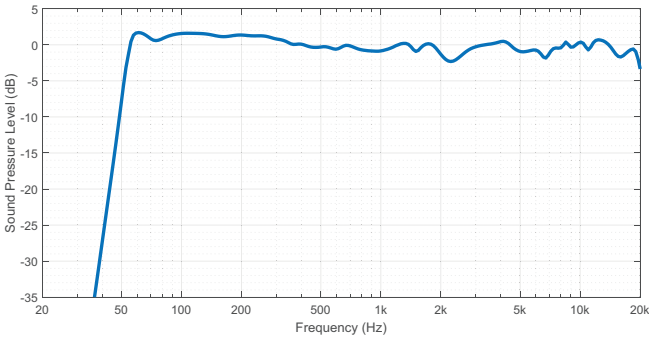
<sup>2</sup>Peak SPL measured full space at 4 m and referenced to 1 m. 12 dB crest factor broadband pink noise.

<sup>3</sup>Peak SPL measured full space at 4 m and referenced to 1 m. 12 dB crest factor 100-5k Hz pink noise.

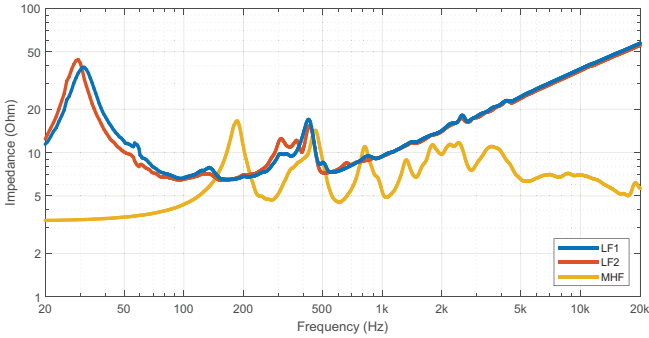
<sup>4</sup>Required amplifier power for maximum output.

<sup>5</sup>Electro-Voice 500 hour accelerated life test.

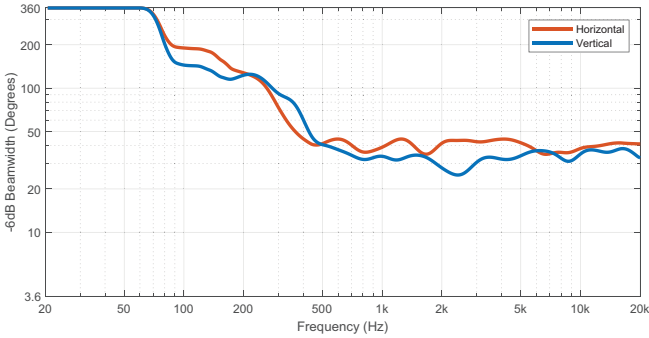
Frequency response



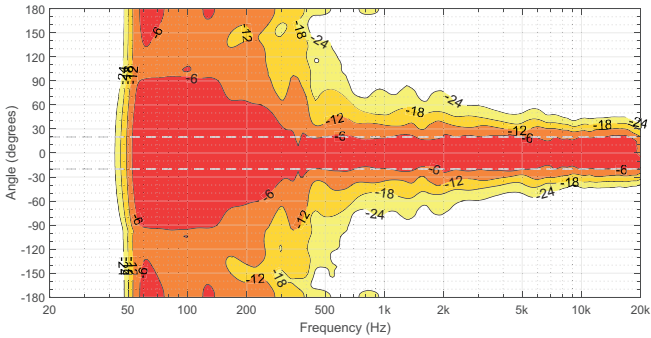
Impedance response



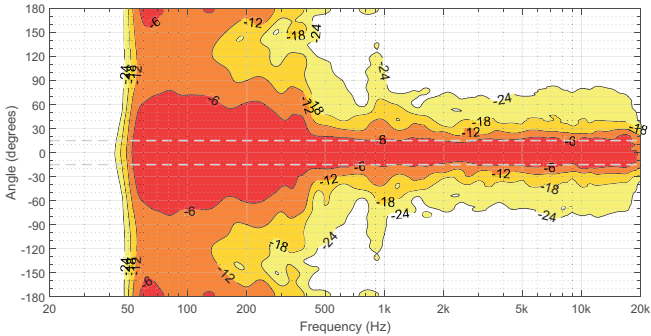
Beamwidth



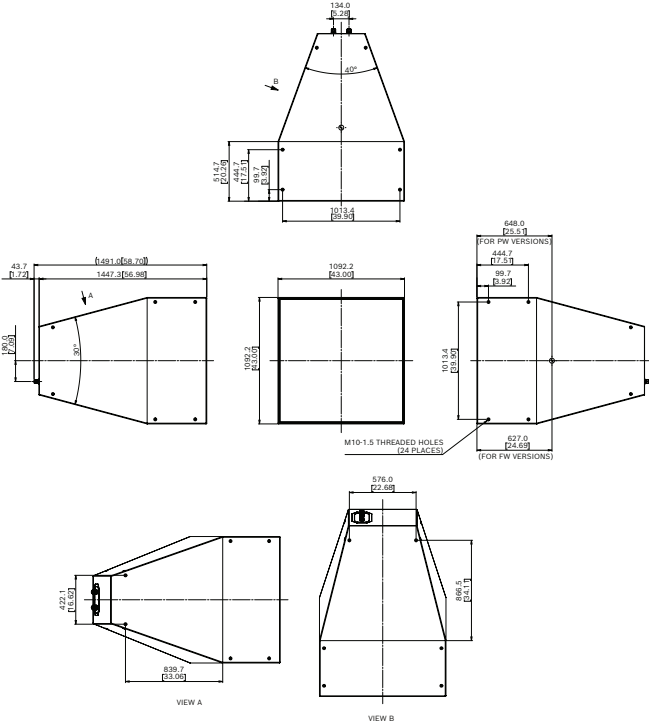
Horizontal spatial frequency response



Vertical spatial frequency response



Dimensions



Amplifier configurations

Amplifier	IPX 20:4		IPX 10:4
Total no. of speakers	2	4	2
Channel			
1	LF1    LF2 (1 box)	LF1    LF2 (2 boxes)	LF1    LF2 (1 box)
2	MHF (1 box)	MHF (2 boxes)	MHF (1 box)
3	LF1    LF2 (1 box)	LF1    LF2 (2 boxes)	LF1    LF2 (1 box)
4	MHF (1 box)	MHF (2 boxes)	MHF (1 box)
Monitoring and processing	Per Box	Per Pair	Per Box
Worst case Max SPL reduction (dB)	0 (3 dB Headroom)	-0.8	0

Architectural and engineering specifications

The loudspeaker system shall be a three-way, bi-amplified design with dual Phoenix-type input connectors, wherein connector terminals 1 +/- and 2 +/- are wired to two separate pairs of 15-inch low-frequency transducers, terminals 3 +/- are wired to a passive crossover that feeds two mid/high-frequency coaxial compression drivers, and terminals 4 +/- are wired as a pass thru between the two input connectors. The mid-high-frequency ring radiator coaxial drivers shall be coupled to a 40° x 30° constant directivity arc-source horn through a low-loss waveform converter. Each mid/high-frequency compression driver shall be constructed with concentric voice coils: a 100 mm voice coil driving an annular diaphragm for midrange frequencies and a 65 mm voice coil driving a separate annular diaphragm for high frequencies. The mid/high-frequency coaxial compression drivers shall be wired in parallel and driven through a passive network with a crossover point of 3.6 kHz, presenting a nominal 6 Ohm load. The maximum peak input voltage and maximum input power to the mid/high frequency section shall be 140 volts and 1250 Watts, respectively. The 15-inch low-frequency drivers shall all be constructed with 3-inch voice coils and shall be slot-loaded and co-entrant on the same arc-source horn. Each pair of low-frequency transducers shall be wired in parallel for a nominal 8 Ohm load. The maximum peak input voltage and maximum input power to each of the low-frequency pairs shall be 150 volts and 1250 Watts. The trapezoidal cabinet angles shall be 40° in the horizontal aspect and 30° vertical aspect, mirroring the loudspeaker's acoustic coverage pattern. The loudspeaker system shall have a protective EVCoat black finish applied to completely seal the cabinet interior and exterior, making it suitable for installation in locations with full exposure to the elements. The grille shall be constructed using 16 gauge perforated stainless steel and shall be assembled with a hydrophobic screen backing. The loudspeaker shall have an ingress protection rating of IP55 when installed at a minimum 5° down angle. The loudspeaker system shall include a moisture-proof gland nut cover that accepts cable diameters between 9 mm (0.35 in.) and 19 mm (0.74 in.). When driven by the manufacturer's recommended amplification and signal processing, the system shall be capable of producing 152 dB dB peak SPL output for an input signal comprising full-range pink noise with a 12 dB crest factor. The loudspeaker's -3 dB bandwidth corner frequencies shall be 55 Hz Hz and 18 kHz; the end points for -10 dB bandwidth shall be 50 Hz Hz and

20 kHz. For a 12 dB crest factor pink noise input that has been band limited from 100 Hz to 5 kHz, the maximum peak SPL output shall be 155 dB dB. The system shall employ 24 M10 hard points for attachment to cable support systems or structural framing. Net weight shall be 188 kg (414 lbs.) The loudspeaker dimensions shall be 1092 mm (43.0 in.) high by 1092 mm (43.0 in.) wide by 1491 mm (58.7 in.) deep. The loudspeaker shall be the MTS-4153-43FWB from Electro-Voice.

Complementary products

- MTS-4153-64FWB Loudspeaker high output 60x40 FW blk
- MTS-6154-43CFWB Loudspeaker cardioid 40x30 FW blk
- MTS-6154-64CFWB Loudspeaker cardioid 60x40 FW blk

Compatible system solutions

- X12I-128-FGB 2x18" Install sub black FG

Compatible system solutions, electronics

- Dynacord IPX10:4 DSP power amplifier 4x2500W, install
- Dynacord IPX20:4 DSP power amplifier 4x5000W, install
- Dynacord IPX10:8 DSP power amplifier 8x1250W, install
- Dynacord IPX5:4 DSP power amplifier 4x1250W, install

Compatible system solutions, software

- Dynacord SONICUE control software
- Electro-Voice PREVIEW Loudspeaker software

Ordering information

MTS-4153-43FWB Loudspeaker high output 40x30 FW blk

Full-range, point-source, three-way loudspeaker with 40° x 30° coverage, fully weatherized, black  
Order number **MTS-4153-43FWB | F.01U.386.398**

Represented by:

<b>Germany:</b> Bosch Sicherheitssysteme GmbH Robert-Bosch-Ring 5 85630 Grasbrunn Germany www.electrovoice.com	Bosch Security Systems, LLC 12000 Portland Avenue South Burnsville MN 55337 USA
---	--