



## FEATURES

- Highly coherent coaxial design (10-inch woofer, vented)
- Enhanced fidelity and power handling
- Upgraded transducers and crossover design
- Convenient input connector location
- Sturdy balance for console bridge monitor use

## DESCRIPTION

The MicroWedge MW10 is collaboration between original MicroWedge Series inventor Dave “Rat” Levine (owner of Rat Sound Systems, Inc.) and the EAW Engineering Department, resulting in dramatically upgraded performance and ergonomics. The coaxial design pairs a 10-inch woofer with a 2.5-inch voice-coil compression driver to provide full yet controlled 90-degree conical dispersion.

All frequencies emanate from the exact same point, eliminating crossover region problems and time/phase irregularities, as well as optimizing coherency. The coaxial approach also contributes to a very compact, low-profile footprint.

The port on the front of the cabinet enhances LF response in coupling with the floor, the opening also houses a convenient carrying handle and dual NL4 connectors.

The MW10 enjoys the advantage of working equally well as a stage monitor or as a console bridge monitor. It was designed with a sturdy balance so that when set upright (on its backside) it rests easily on either side of a console bridge. A conveniently located pair of NL4 connectors further simplifies console setup. An optional pole mount is also available.

The Baltic birch cabinets are available in a black or white finish. The black monitors are protected with EAW’s RoadCoat™ which provides a black finish and tremendous scratch resistance. The white monitors are coated in an extremely durable latex finish. The rugged steel grill keeps its distinctive shape even if stood upon. Points for Omni-mount plates are located the bottom of the MW10 to aid in hanging the monitors.

For applications that require enhanced performance the MW10 can be optimized using the EAW UX8800 digital signal processor.

6 year warranty.

## 2-WAY FULL-RANGE STAGE MONITOR

See *NOTES TABULAR DATA* for details

### CONFIGURATION

#### Subsystem:

	<i>Transducer</i>	<i>Loading</i>
LF	1× 10 in cone	Vented
HF	1× 1.4 in exit, 2.5 in voice coil compression driver	Coaxial Loaded

#### Operating Mode:

	<i>Amplifier Channels</i>	<i>External Signal Processing</i>
	Single-amp LF/HF	High pass filter

### PERFORMANCE

**Operating Range:** 65 Hz to 20 kHz

**Nominal Beamwidth:** (conical)

Horz 90°

Vert 90°

**Axial Sensitivity** (whole space SPL):

LF/HF 95 dB 65 Hz to 20 kHz

**Input Impedance** (ohms):

	<i>Nominal</i>	<i>Minimum</i>
LF/HF	8	6.9 @ 220 Hz

**High Pass Filter:** High Pass =>60 Hz, 12 dB/octave Butterworth

**Accelerated Life Test:**

LF/HF 63.2 V 500 W @ 8 ohm

**Calculated Axial Output Limit** (whole space SPL - 6 dB Crest Factor):

	<i>Average</i>	<i>Peak</i>
LF/HF	122 dB	128 dB

**Max SPL** (whole space SPL - 12 dB Crest Factor): 134 dB

### ORDERING DATA

<b>Description</b>	<b>Part Number</b>
EAW MW10 2-Way Full-Range Stage Monitor Black	2037561-90
EAW MW10 2-Way Full-Range Stage Monitor White	2037949-90

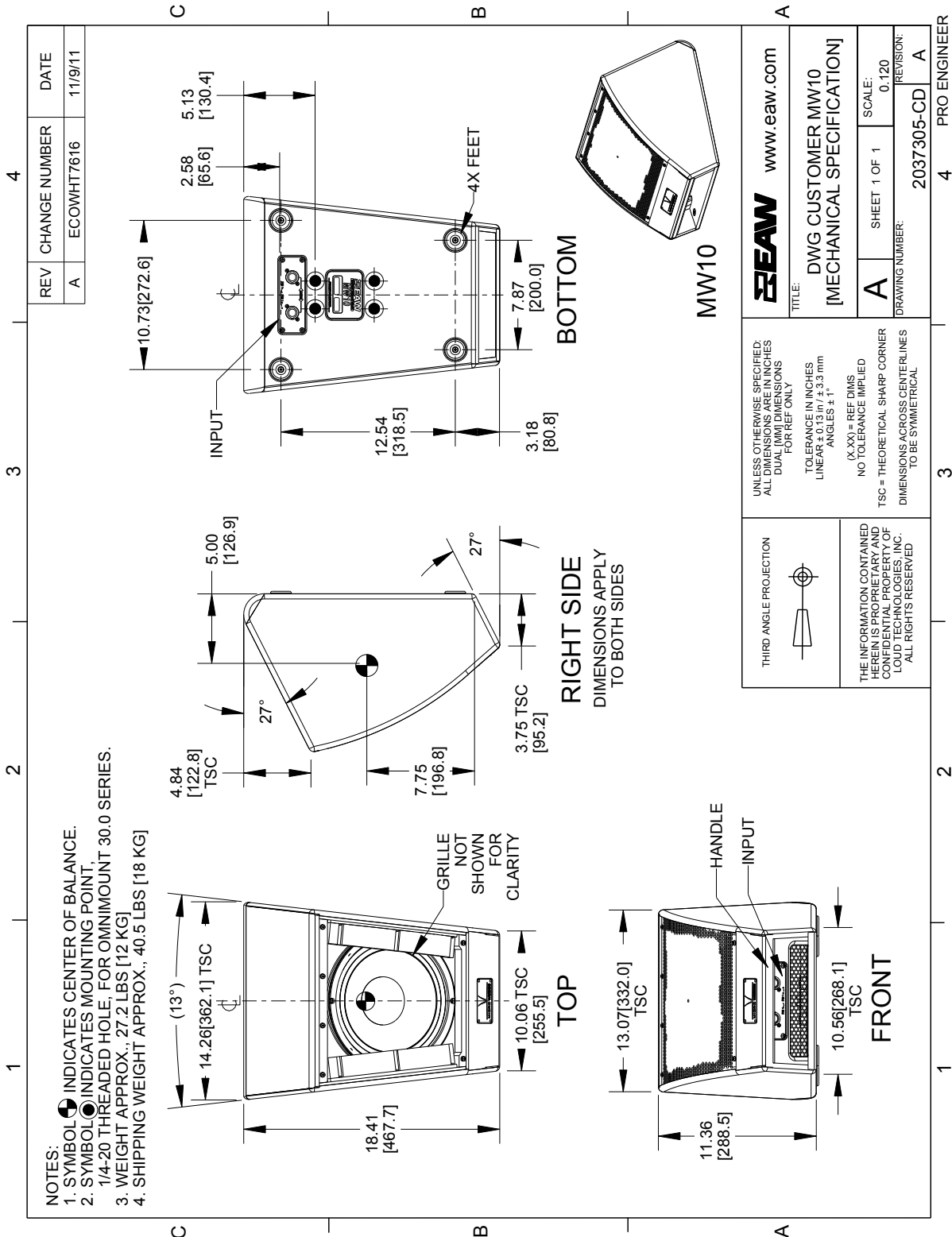
#### Optional Accessories

## ENCLOSURE

Material Exterior-grade Baltic birch plywood

Finish Roadcoat™ wear resistant textured black paint

Grille Powder-coated perforated steel



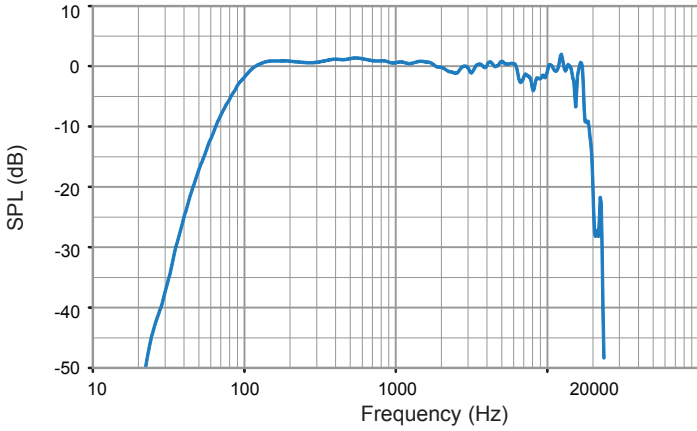
**NOTE:** This drawing has been reduced. Do not scale.

**PERFORMANCE DATA**

See *NOTES GRAPHIC DATA* for details

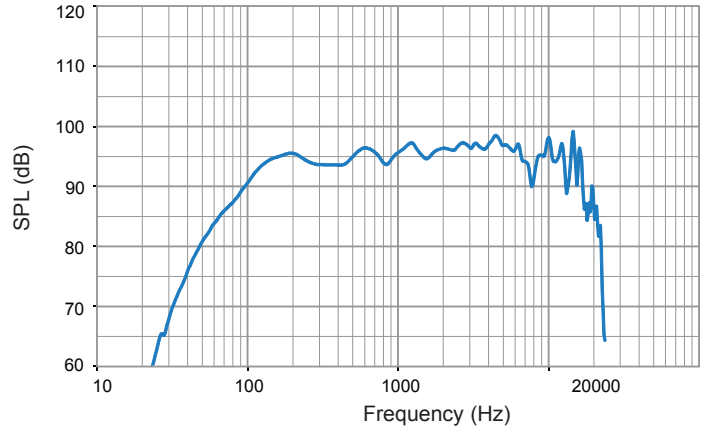
**Frequency Response: Processed**

Complete = blue



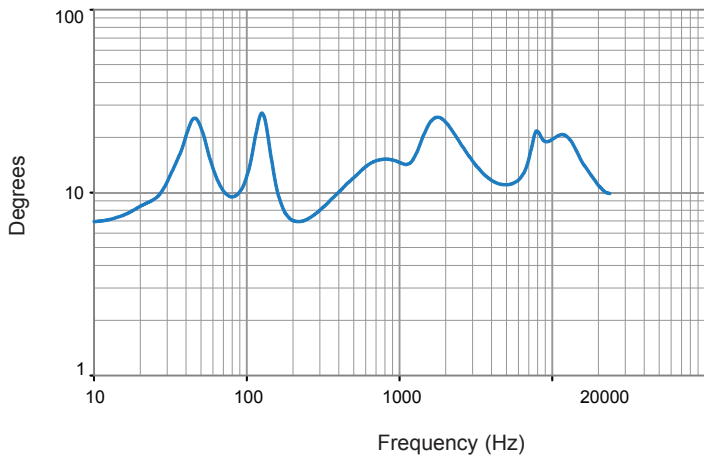
**Frequency Response: Unprocessed**

Complete = blue



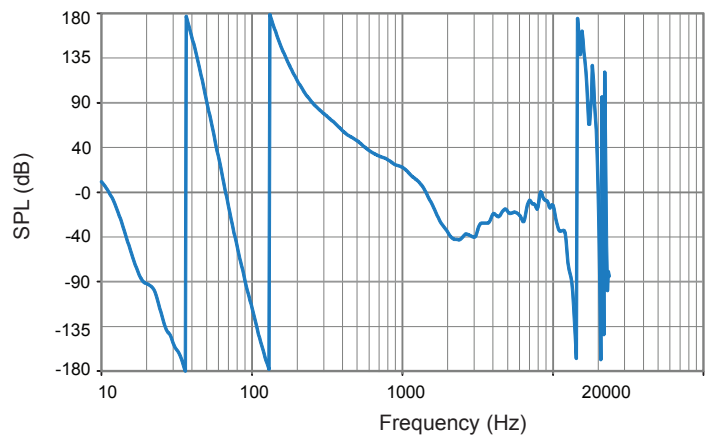
**Impedance**

Complete = blue



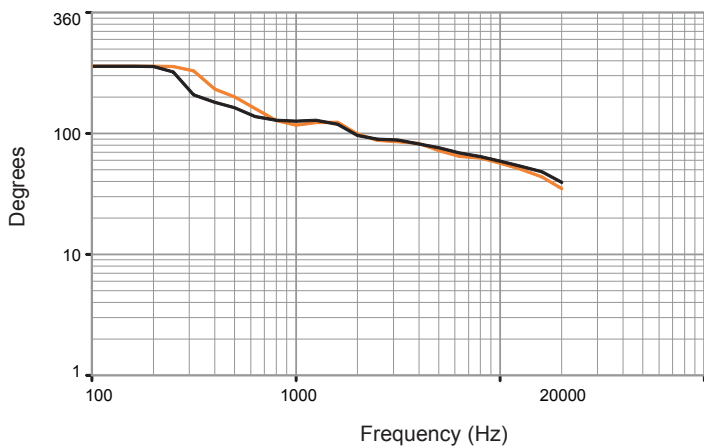
**Phase Linearity**

Complete = blue



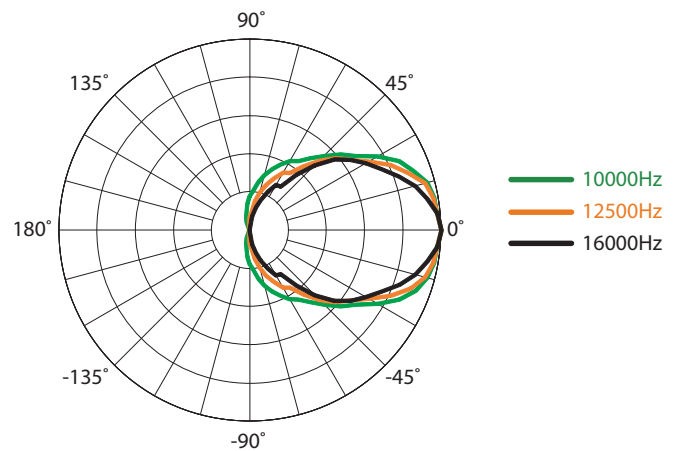
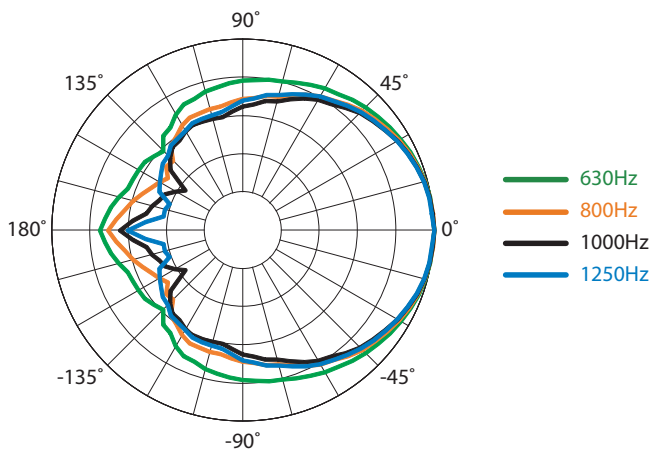
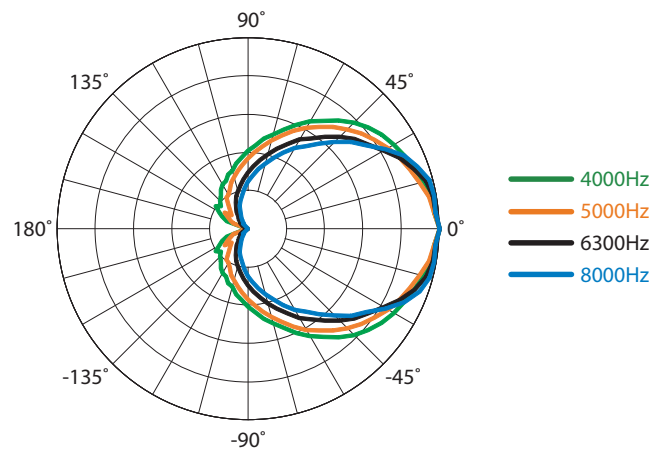
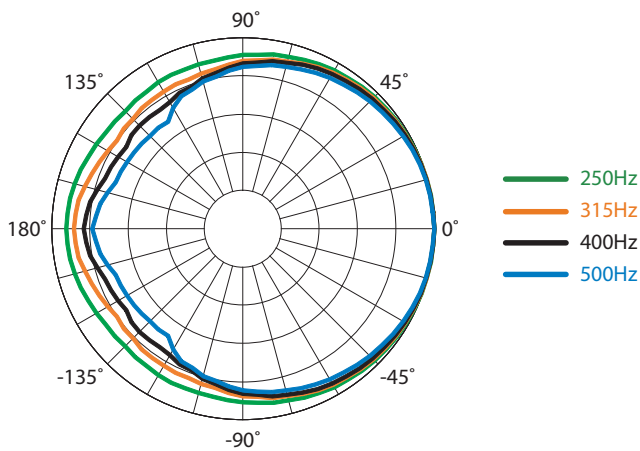
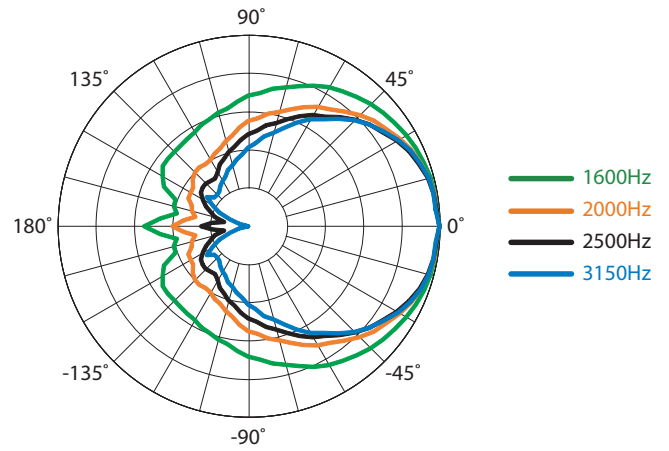
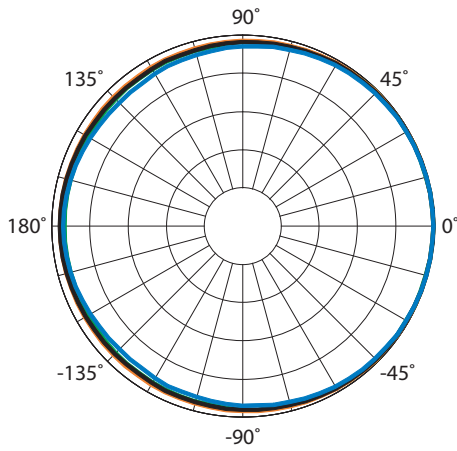
**Beamwidth**

Horizontal = orange Vertical = black



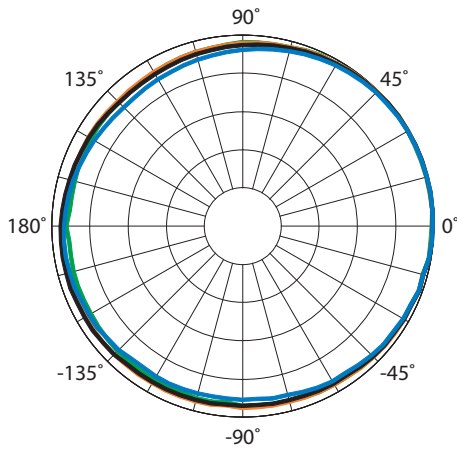
**HORIZONTAL POLAR DATA**

See *NOTES GRAPHIC DATA* for details

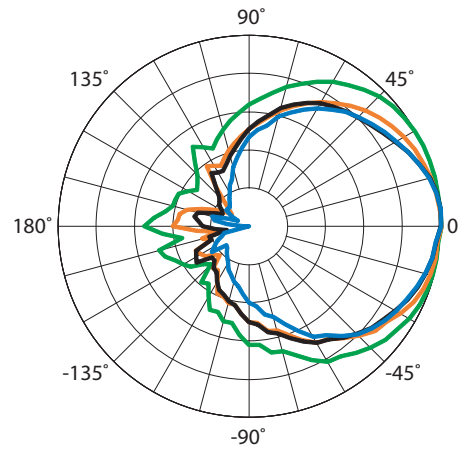


**VERTICAL POLAR DATA**

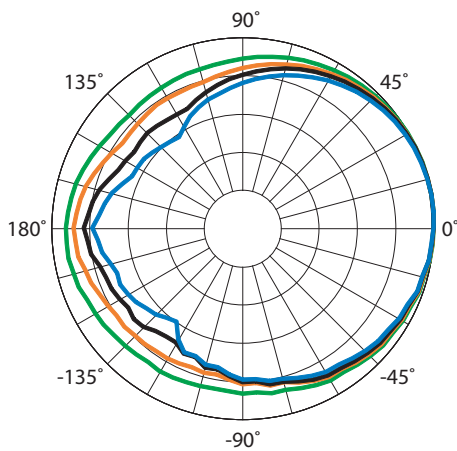
See *NOTES GRAPHIC DATA* for details



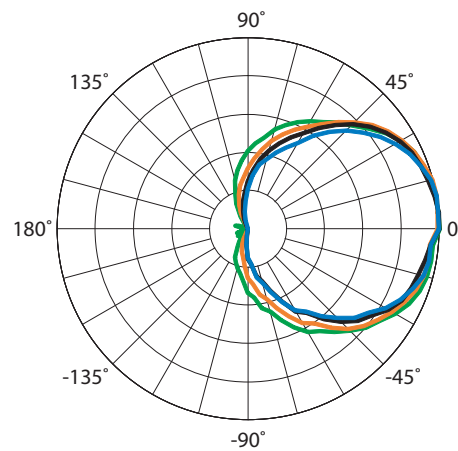
- 100Hz
- 125Hz
- 160Hz
- 200Hz



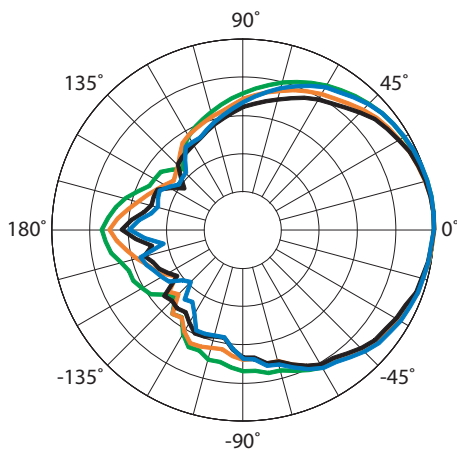
- 1600Hz
- 2000Hz
- 2500Hz
- 3150Hz



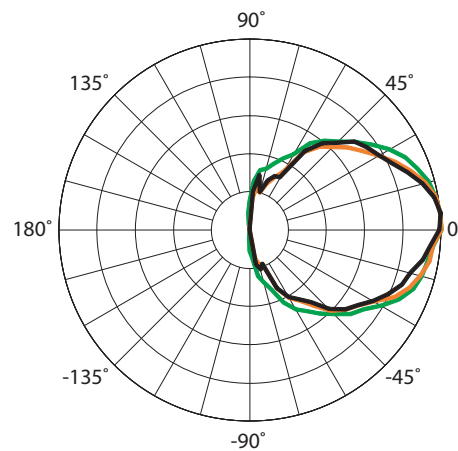
- 250Hz
- 315Hz
- 400Hz
- 500Hz



- 4000Hz
- 5000Hz
- 6300Hz
- 8000Hz

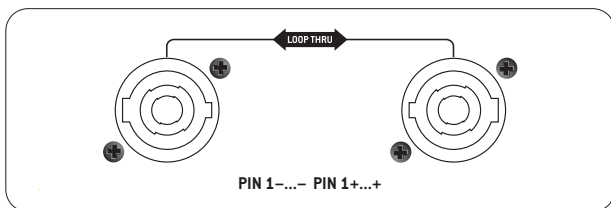
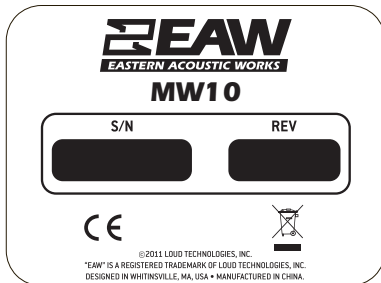


- 630Hz
- 800Hz
- 1000Hz
- 1250Hz

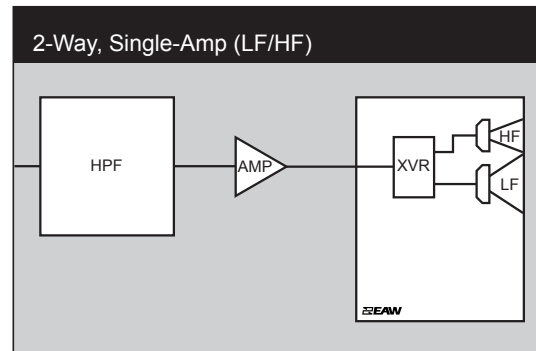


- 10000Hz
- 12500Hz
- 16000Hz

## INPUT PANEL



## SIGNAL DIAGRAM



## LEGEND

- HPF:** High Pass Filter for crossover –or– Recommended High Pass Filter.
- LPF:** Low Pass Filter for crossover.
- LF/MF/HF:** Low Frequency / Mid Frequency / High Frequency.
- AMP:** User Supplied Power Amplifier –or– Integral Amplifier for NT products.
- XVR:** Passive LPFs, HPFs, and EQ integral to the loudspeaker.

## NOTES

### TABULAR DATA

1. **Measurement/Data Processing Systems:** Primary - FChart: proprietary EAW software; Secondary - Brüel & Kjær 2012.
2. **Microphone Systems:** Earthworks M30; Brüel & Kjær 4133
3. **Measurements:** Dual channel FFT; length: 32 768 samples; sample rate: 48 kHz; logarithmic sine wave sweep.
4. **Measurement System Qualification** (includes all uncertainties): SPL: accuracy +/-0.2 dB @ 1 kHz, precision +/-0.5 dB 20 Hz to 20 kHz, resolution 0.05 dB; Frequency: accuracy +/-1 %, precision +/-0.1 Hz, resolution the larger of 1.5 Hz or 1/48 octave; Time: accuracy +/-10.4  $\mu$ s, precision +/-0.5  $\mu$ s, resolution 10.4  $\mu$ s; Angular: accuracy +/-1°, precision +/-0.5°, resolution 0.5°.
5. **Environment:** Measurements time-windowed and processed to eliminate room effects, approximating an anechoic environment. Data processed as anechoic or fractional space, as noted.
6. **Measurement Distance:** 7.46 m. Acoustic responses represent complex summation of the subsystems at 20 m. SPL is referenced to other distances using the Inverse Square Law.
7. **Enclosure Orientation:** For beamwidth and polar specifications, as shown in Mechanical Specification drawing.
8. **Volts:** Measured rms value of the test signal.
9. **Watts:** Per audio industry practice, "loudspeaker watts" are calculated as voltage squared divided by rated nominal impedance. Thus, these are not True Watt units of energy as defined by International Standard.
10. **SPL:** (Sound Pressure Level) Equivalent to the average level of a signal referenced to 0 dB SPL = 20 microPascals.
11. **Subsystem:** This lists the transducer(s) and their acoustic loading for each passband. Sub = Subwoofer, LF = Low Frequency, MF = Mid Frequency, HF = High Frequency.
12. **Operating Mode:** User selectable configurations. Between system elements, a comma (,) = separate amplifier channels; a slash (/) = single amplifier channel. DSP = Digital Signal Processor. IMPORTANT: To achieve the specified performance, the listed external signal processing must be used with EAW-provided settings.
13. **Operating Range:** Range where the processed Frequency Response stays within -10 dB SPL of the power averaged SPL within this range; measured on the geometric axis. Narrow band dips are excepted.
14. **Nominal Beamwidth:** Design angle for the -6 dB SPL points, referenced to 0 dB SPL as the highest level.
15. **Axial Sensitivity:** Power averaged SPL over the Operating Range with an input voltage that would produce 1 W at the nominal impedance; measured with no external processing on the geometric axis, referenced to 1 m.
16. **Nominal Impedance:** Selected 4, 8, or 16 ohm resistance such that the minimum impedance point is no more than 20% below this resistance over the Operating Range.
17. **Accelerated Life Test:** Maximum test input voltage applied with an EIA-426B defined spectrum; measured with recommended signal processing and Recommended Protection Filter.
18. **Calculated Axial Output Limit:** Highest average and peak SPLs possible during the Accelerated Life Test. The Peak SPL represents the 2:1 (6 dB) crest factor of the Life Test signal.
19. **High Pass Filter:** This helps protect the loudspeaker from excessive input signal levels at frequencies below the Operating Range.

### GRAPHIC DATA

1. **Resolution:** To remove insignificant fine details, 1/12 octave cepstral smoothing was applied to acoustic frequency responses and 1/3 octave cepstral smoothing was applied to the beamwidth and impedance data. Other graphs are plotted using raw data.
2. **Frequency Responses:** Variation in acoustic output level with frequency for a constant input signal. Processed: normalized to 0 dB SPL. Unprocessed inputs: 2 V (4 ohm nominal impedance), 2.83 V (8 ohm nominal impedance), or 4 V (16 ohm nominal impedance) referenced to a distance of 1 m.
3. **Processor Response:** The variation in output level with frequency for a constant input signal of 0.775 V = 0 dB reference.
4. **Beamwidth:** Average angle for each 1/3 octave frequency band where, starting from the rear of the loudspeaker, the output first reaches -6 dB SPL referenced to 0 dB SPL as the highest level. This method means the output may drop below -6 dB SPL within the beamwidth angle.
5. **Impedance:** Variation in impedance magnitude, in ohms, with frequency without regard to voltage/current phase. This means the impedance values may not be used to calculate True Watts (see 9 above).
6. **Polar Data:** Horizontal and vertical polar responses for each 1/3 octave frequency band 100 Hz to 16 kHz or Operating Range.