TECHNICAL SPECIFICATIONS EP3

FEATURES

- Compact, self-powered three-way system
- Horn-loaded MF/HF (65° x 45° coverage pattern)
- 15-in LF/8-in MF/1.4-in exit HF
- Close Coupled Power Module™ provides ideal processing and powering
- For portable use or permanent installation

DESCRIPTION

The EP3 Powered Loudspeaker System optimizes performance and reliability for a wide range of portable and permanently-installed sound reinforcement applications. The internal Close Coupled Power Module™ provides ample distortion-free amplification as well as sophisticated, transparent driver/amplifier protection circuitry and signal processing.

CLOSE COUPLED POWER™

The Close Coupled Power™ concept integrates amplification with the loudspeaker system to maximize performance, reliability and efficiency. Precisely matching the amplifier design to the specific system's driver/horn/enclosure characteristics provides a substantial amount of headroom without compromising reliability. State-of-the-art protection systems - actuated by real-time current and voltage monitors – apply complex compressor/limiters and soft clipping circuitry for virtually transparent protection of both the amplifier and the drivers, even when driven to the highest output levels.

Authorized service professionals can access many elements of the Close Coupled Power Module™ simply by removing the back panel. When necessary the CCPM™ can be removed as a self-contained unit.

APPLICATIONS

Applications Include:

- CorporateEvents
- Convention Centers
- Ballroom Events
- Band PA
- Small Worship Spaces
- Live Music Club

DESCRIPTIVE DATA

Configuration	3-way, Full Range
Powering	Internal/Biamplified (passive LF/MF crossover)
LF Subsystem	1x 15-in, Vented
MF Subsystem	1x 8-in Cone, Horn-Loaded
HF Subsystem	1x 1.4-in exit/75mm voice coil Compression Driver on Constant Directivity Horn
Coverage Angles	65° (h) x 45° (v)
Cabinet Type (shape)	Trapezoidal
Enclosure Materials	Baltic Birch Plywood
Finish	Wear-resistant Textured Black Paint
Connectors	1x Neutrik PowerCon (AC mains); XLR female (audio input); XLR male (audio output) Pin 2 Hot
Suspension Hardware	(6) 3-Position Flytracks with Integral 3/8"-16 Threaded Mounting Points (3 top and 3 bottom)
Grill	Powder Coated Perforated Steel
Options	Flyclip w/Ring (179001)
	Flyclip w/Hook (179002)

Dimensions	**Inches**	**Millimeters**
Height	34.0	864
Width (Front)	19.75	502
Width (Rear)	11.0	280
Depth	22.0	559
Trapezoid Angle	15° per side	

Weights	**Pounds**	**Kilograms**
Net Weight	175	79.6
Shipping Weight	190	86.2

EAW
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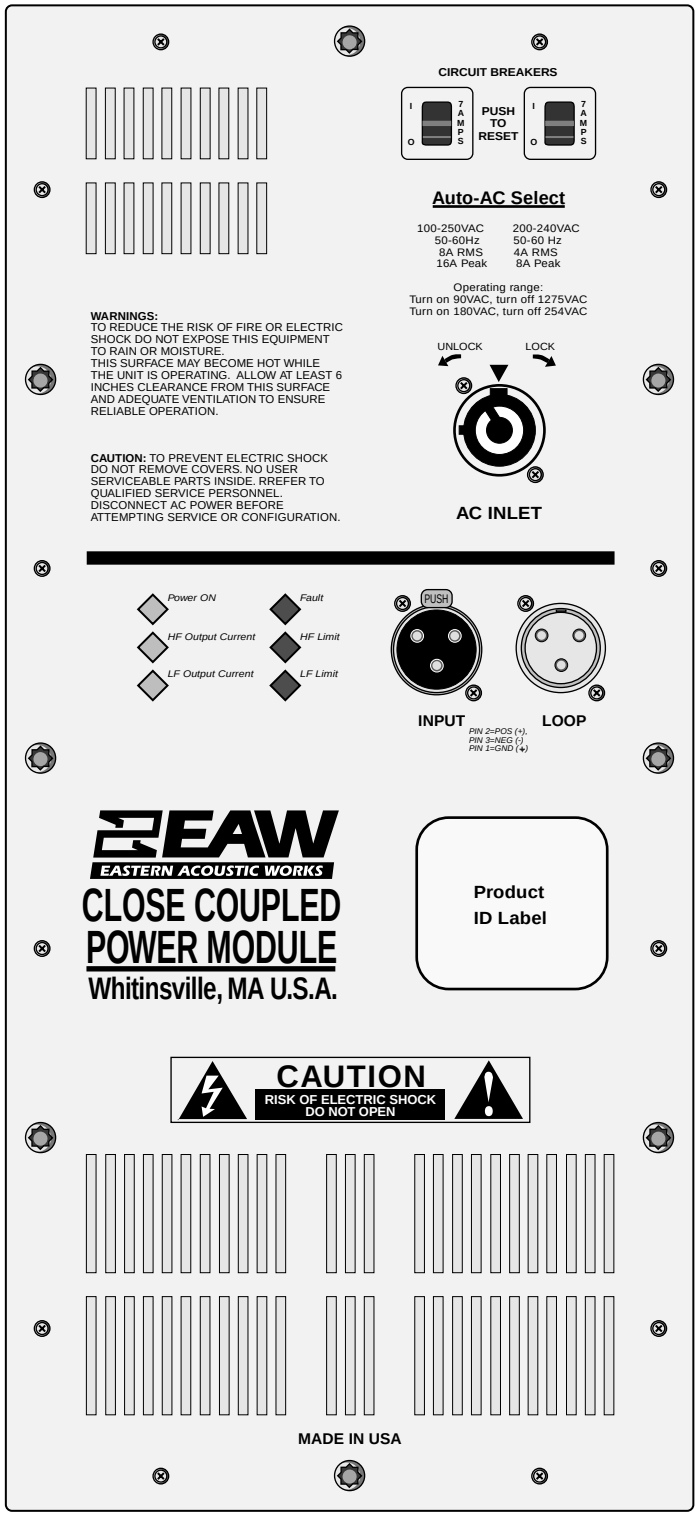
CLOSE COUPLED POWER™ MODULE



Fault LED

Indicates that protection circuitry has shut down the unit to avoid damage to drivers or electronic devices.

Power ON LED

Indicates that the unit is powered and ready for operation.

HF/LF Output Current LEDs

Indicates output current for both the high and low amplifier channels.

HF/LF Limit LEDs

Indicates that protection circuitry is actively limiting output to protect the drivers or electronic components.

Rear Exhaust Grills

The fan exhaust grills are the main exits for air drawn into the unit for cooling. Avoid blocking air flow.

Circuit Breakers

The AC Circuit Breakers protect the unit from power line faults and electronics failure.

AC Input

Neutrik PowerCon locking AC connector provides AC power connection. Auto-sensing power input operates from 95-125 VAC and 190-250 VAC.

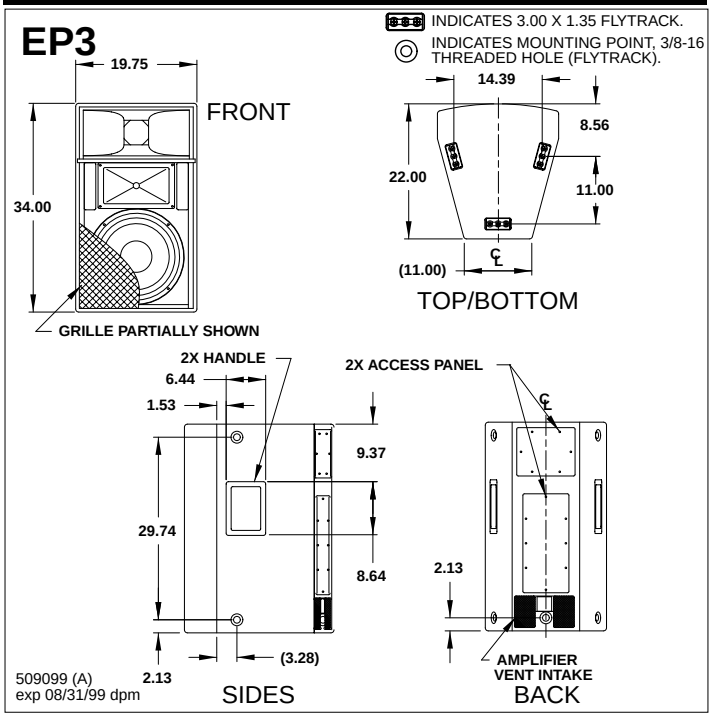
Audio Signal Input

A balanced, 3-pin, female XLR connector is provided for the audio signal input connection.

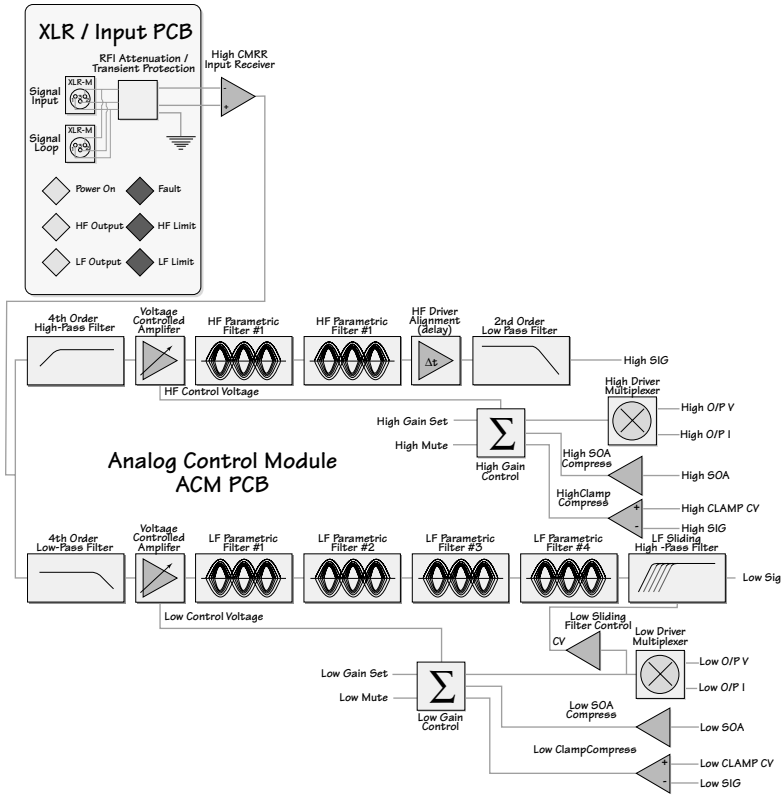
Audio Signal Loop Output

A balanced, 3-pin, male XLR connector provides a hardwired loop out of the input signal.

DIMENSIONAL DRAWING



CCPM™ INPUT SECTION BLOCK DIAGRAM



TECHNICAL SPECIFICATIONS EP3

NOMINAL DATA

Frequency Response (1 Watt @ 1m)	
±3 dB	62Hz to 18kHz
-10 dB	45 Hz
Calculated Maximum Output (dB SPL @ 1m)	
Full Range Peak	133.3
Full Range Long Term	127.3
Nominal Coverage Angle, -6 dB Points (degrees)	
Horizontal	65
Vertical	45
Close Coupled Power™ Module	
Topology	Class H, linear power supply, vertical N-channel MOSFET output devices
AC mains voltage	Auto-sensing, 95 – 250 VAC, 47-66 Hz
AC power requirement (max)	1800 W peak, 950 W continuous
AC wiring	Ground, plus two hot lines or hot plus neutral
Input Sensitivity	0.775 V
Input Impedance (Ohms)	600
Protection	Short Circuit, Latch-up, device Safe Operating Area, overtemperature, Soft Clip, soft turn-on, turn-off, fault mute, driver thermal protection, driver excursion limiting. The EP3 must be disconnected from the AC mains in order for the Fault trip to reset.
CMRR	90 dB (typical)
LED Indicators	Power On, LF Current, HF Current, LF Limit, HF Limit, Fault
Maximum Ambient Temperature For Full Output	50° C
Altitude	6500 ft
Humidity	10% to 95%, non-condensing

ARCHITECTURAL SPECIFICATIONS

The self-powered, biamplified 3-way full range loudspeaker systems shall incorporate a 15-in LF transducer, an 8-in MF cone and a 1.4-in exit/75mm voice coil HF compression driver.

The LF driver shall be mounted in a vented enclosure tuned for optimum low frequency response. The MF driver shall be loaded into a midrange horn constructed of 3mm birch plywood backed with high density polyurethane foam that shall incorporate a conical/hexagonal displacement/phase plug. The HF driver shall be loaded on a constant directivity horn with a nominal coverage pattern of 65° (h) x 45° (v). An internal passive filter network shall provide fourth order acoustical crossover and system equalization between the LF and MF subsystems.

System frequency response shall vary no more than ±3 dB from 62 Hz to 18 kHz measured on axis. The system shall be capable of producing a peak output of 133.3 dB SPL on axis at 1 meter.

The internal active signal processing shall provide complex, asymmetrical LF/MF to HF crossover. The internal amplification module shall provide class H amplifier topology, linear power supply and vertical N-channel MOSFET output devices each of which is load-matched to the subsystem it powers. Amplifier power shall provide substantial headroom such that transient peaks are reproduced with the appropriate dynamic range.

Driver/amplifier protection systems shall be actuated by sensors continuously monitoring Voltage and current in real time. Driver/amplifier protection systems shall gradually apply compressor/limiter-based soft clipping circuitry to minimize changes to the output sound characteristics when engaged.

The amplifier module shall be designed so that most components shall be accessed by removing the rear panel. The input circuitry shall be of a modular design to allow for future upgrades. The entire amplifier module shall be easily removable as a discreet unit.

The loudspeaker enclosure shall be trapezoidal in shape with radiused front. It shall be constructed of 15mm thickness void-free cross-grain-laminated Baltic birch plywood and shall employ extensive internal bracing. It shall be finished in wear-resistant textured black paint.

The AC power input connector shall be Neutrik PowerCon. Auto-sensing power input shall operate from 95-125 VAC and 190-250 VAC. The audio input connector shall be a female XLR (pin 2 hot) chassis-mount connector. A complementary male XLR chassis-mount connector (pin 2 hot) shall be provided for audio output (loop through). Five (6) 3-position flytracks (3 top and 3 bottom) shall be installed in the enclosure. The front of the loudspeaker shall be covered with a powder-coated perforated steel grill.

The self-powered, biamplified 3-way full range loudspeaker shall be the EAW model EP3.

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