



TECHNICAL SPECIFICATIONS EP1

FEATURES

- Compact, self-powered dedicated subwoofer
- Sub Bass Subsystem (2x 15-in, vented)
- Close Coupled Power Module™ provides ideal processing and powering
- For portable use or permanent installation

DESCRIPTION

The EP1 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/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:

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



DESCRIPTIVE DATA

Configuration	Dedicated Subwoofer	
Powering	Internal/Mono Amplifier	
Sub Bass Subsystem	2x 15-in, Vented	
Cabinet Type (shape)	Rectangular with Integral 2x Swivel Caster and 2x Fixed Caster	
Controls	2x 7-Amp Circuit breakers for AC Main, 1x High Pass Filter in/out for XLR Audio Output	
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	(4) 3-Position Flytracks with Integral 3/8"-16 Threaded Mounting Points (4 top); Pole Mount Cup for 1 3/8-in Diameter Pole (4-ft length recommended)	
Grill	Powder Coated Perforated Steel	
Options	Flyclip w/Ring (179001) Flyclip w/Hook (179002)	
Dimensions	Inches	Millimeters
Height	34.0	864
Width	19.75	502
Depth	29.75	756
Weights	Pounds	Kilograms
Net Weight	200	91.0
Shipping Weight	215	97.8





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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.

LF Output Current LED

Indicates output current for the low amplifier channel.

LF Limit LED

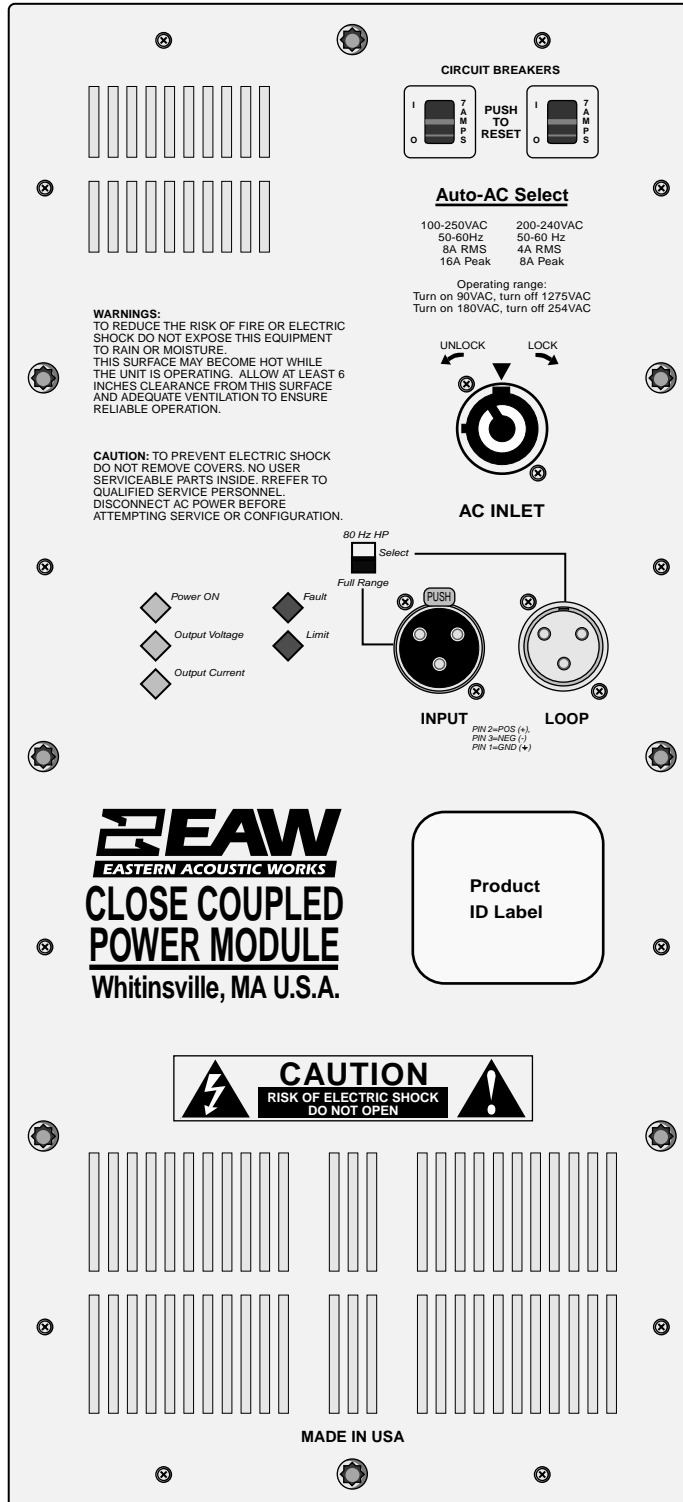
Indicates that protection circuitry is actively limiting output to protect the drivers or electronic components.

LF Output Voltage

Indicates output voltage for low amplifier channel.

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.

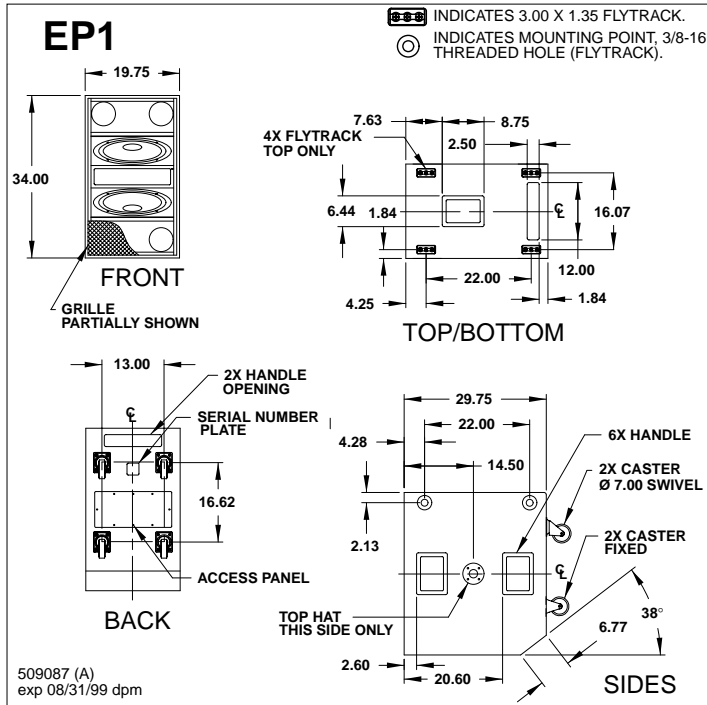
Audio Signal Input

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

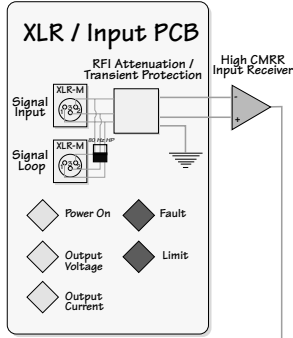
Audio Signal Loop Output

A balanced, 3-pin, male XLR connector provides a hardwired loop out of the input signal. A switchable 80Hz High Pass filter allows for connection to another EP1 or EP2/EP3.

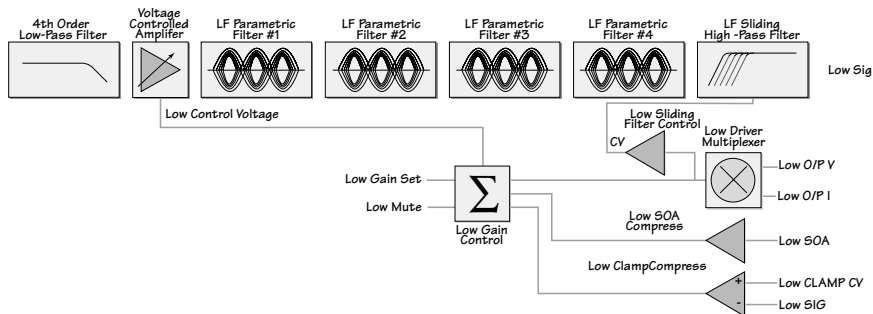
DIMENSIONAL DRAWING



CCPM™ INPUT SECTION BLOCK DIAGRAM



Analog Control Module ACM PCB





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NOMINAL DATA

Frequency Response (1 Watt @ 1m)	
±3 dB	35Hz to 100Hz
-10 dB	30 Hz
Calculated Maximum Output (dB SPL @ 1m)	
Sub Bass Peak	137.1
Sub Bass Long Term	131.1
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 EP1 must be disconnected from the AC mains in order for the Fault trip to reset.
CMRR	90 dB (typical)
LED Indicators	Power On, Output Voltage, Output Current, Fault, Limit
Maximum Ambient Temperature For Full Output	50° C
Altitude	6500 ft
Humidity	10% to 95%, non-condensing

ARCHITECTURAL SPECIFICATIONS

The self-powered, dedicated sub bass loudspeaker system shall incorporate 2x 15-in LF transducers.

The LF drivers shall be mounted in angled internal baffles tuned for optimum low frequency response.

System frequency response shall vary no more than ±3 dB from 35 Hz to 100Hz measured on axis. The system shall be capable of producing a peak output of 137.1 dB SPL on axis at 1 meter.

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 rectangular in shape. 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) with switchable HP filter for output to an EP2 or EP3. Four (4) 3-position flytracks (4 top) and a pole mount cup shall be installed in the enclosure. The front of the loudspeaker shall be covered with a powder-coated perforated steel grill.

The self-powered, bi-amplified dedicated sub bass loudspeaker shall be the EAW model EP1.