



# TECHNICAL SPECIFICATIONS EP2

## FEATURES

- Compact, self-powered, 2-way, Full Range System
- 1.4-in Exit/75mm Voice Coil Neodymium Compression Driver on Wave Guide Plate
- LF 1x 15-in, Vented
- Close Coupled Power Module™ provides ideal processing and powering
- For portable use or permanent installation

## DESCRIPTION

The EP2 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/wave guide/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        | 2-way, Full Range  |                    |
| Powering             | Internal/Bi-amplified  |                    |
| LF Subsystem         | 1x 15-in, Vented   |                    |
| HF Subsystem         | 1x 1.4-in exit/75mm Voice Coil Neodymium Compression Driver on Wave Guide Plate              |                    |
| Coverage Angles      | 90° (h) x 90° (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)<br>Flyclip w/Hook (179002)   |                    |
| <b>Dimensions</b>    | <b>Inches</b>  | <b>Millimeters</b> |
| Height               | 27.0   | 686                |
| Width (Front)        | 19.75  | 502                |
| Width (Rear)         | 11.0   | 280                |
| Depth                | 22.0   | 559                |
| Trapezoid Angle      | 15° per side   |                    |
| <b>Weights</b>       | <b>Pounds</b>  | <b>Kilograms</b>   |
| Net Weight           | 135  | 61.4               |
| Shipping Weight      | 150  | 68.0               |





## 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

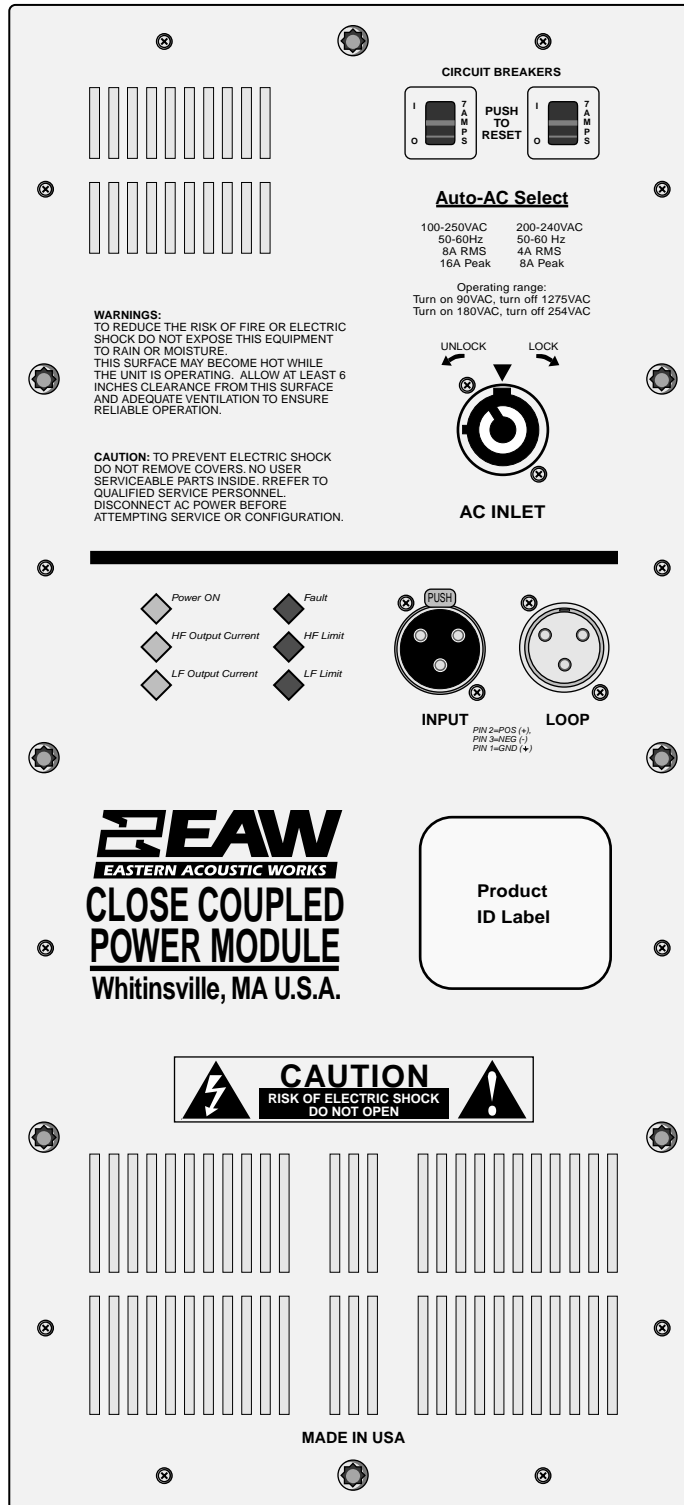
Indicates output current for both the high and low amplifier channels.

### 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.

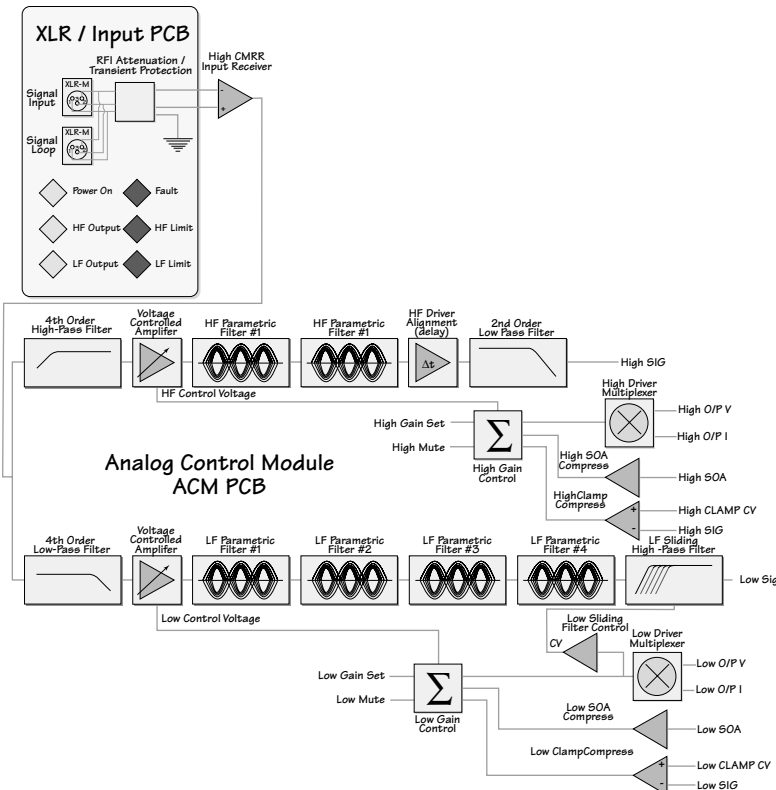
### Audio Signal Loop Output

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 EP2

## NOMINAL DATA

|   |   |
|---|---|
| <b>Frequency Response (1 Watt @ 1m)</b>               |   |
| ±3 dB   | 60Hz to 17kHz   |
| -10 dB  | 45 Hz   |
| <b>Calculated Maximum Output (dB SPL @ 1m)</b>        |   |
| Full Range Peak                                       | 132.8   |
| Full Range Long Term                                  | 126.8   |
| <b>Nominal Coverage Angle, -6 dB points (degrees)</b> |   |
| Horizontal  | 90  |
| Vertical  | 90  |
| <b>Close Coupled Power™ Module</b>                    |   |
| 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 EP2 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 2-way full range loudspeaker systems shall incorporate a 15-in Neodymium LF transducer and a 1.4-in exit/75mm voice coil Neodymium HF compression driver.

The LF driver shall be mounted in a vented enclosure tuned for optimum low frequency response. The HF driver shall be loaded on a wave guide plate with a nominal coverage pattern of 90° (h) x 90° (v).

System frequency response shall vary no more than ±3 dB from 60 Hz to 17 kHz measured on axis. The system shall be capable of producing a peak output of 132.8 dB SPL on axis at 1 meter.

The internal active signal processing shall provide complex, asymmetrical LF 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 a 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). 6 (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 2-way full range loudspeaker shall be the EAW model EP2.