**HD1221**

The HD1221 2-Way High-Definition Powered Loudspeaker delivers 1200W of peak system power via Class-D Fast Recovery™ amplification in an ultra-portable package. The Class-D amp design delivers high efficiency and, along with the lightweight switch-mode power supply, drastically reduces loudspeaker weight.

Mackie High-Definition Audio Processing provides unmatched sonic accuracy and clarity. Mackie Active technology includes a precision 2-way crossover, transducer time alignment, and phase correction. Plus, patented acoustic correction algorithms harness the power of proprietary measurement tools that identify sonic anomalies that are inherent to all horn-loaded systems. Extremely complex algorithms are then applied to the HD1221 to counter these anomalies; this improves vocal intelligibility while removing high frequency discord.

EAW custom-designed HD Series transducers maximize efficiency and performance when matched with the system’s internal amps. The 12-inch woofer uses a neodymium magnet for reduced weight, and the 3-inch voice coil dissipates heat extremely well. The 1.75-inch compression driver utilizes heat-treated titanium, which provides increased diaphragm rigidity, eliminating distortion that can occur due to surface inconsistencies. It is mounted to a 90˚ x 50˚ user-rotatable custom designed horn by Martin Audio.

The integrated three-position voicing mode switch allows the user to custom-tailor the system tone for their application. The monitor position has a dedicated voicing mode paired with the steep 60˚ cabinet angle.

The 15mm birch plywood enclosure is rugged and ready for install using the 12 integral fly points. Standard M10 eyebolts allow the HD1221 to be flown both vertically and horizontally. The look of the HD1221 is understated and the front LED can be defeated for maximum stealth. The lightweight design of the HD1221 allows for pole-mounting on a tripod stand, atop a subwoofer, or hanging under an HD1801.

**APPLICATIONS**

Small to mid-size club/band PA systems, houses of worship, DJs, rehearsal spaces, gymnasiums, banquet halls, A/V rentals and many, many more.

**FEATURES:**

- 120W of efficient Class-D Fast Recovery™ amplification
  - LF amp: 500W RMS / 1000W peak
  - HF amp: 100W RMS / 200W peak

- Custom designed transducers by EAW
  - 12” neodymium woofer with 3” voice coil
  - 1.75” compression driver with heat-treated titanium diaphragm

- High-definition audio processing includes:
  - Revolutionary patented acoustic correction
  - Transducer time alignment and phase correction
  - Precision 2-way crossover

- Custom designed horn by Martin Audio
  - User rotatable 90˚ x 50˚

- Three voicing modes allow on-the-fly system tuning

- Integrated limiting and protection circuitry

- Ultra-compact and lightweight (50 lb / 22.7 kg)

- Rugged all wood cabinet (15mm birch plywood)

- 12 integrated fly points for horizontal and vertical rigging using M10 threaded eyebolts

- Stand / pole mountable

- Ultra-steep 60˚ monitor angle
### HDI221 Specifications

#### Acoustic Performance
- **Frequency Response (–10 dB):** 55 Hz - 20 kHz
- **Frequency Response (–3 dB):** 65 Hz - 18 kHz
- **Horizontal Coverage (–6 dB):** 1 90° averaged 2 kHz to 10 kHz
- **Vertical Coverage (–6 dB):** 1 50° averaged 2 kHz to 10 kHz
- **Max peak SPL (calculated):** 133 dB
- **Max peak SPL (measured):** 124 dB
- **Crossover Point:** 1.5 kHz

1. HF horn can be rotated 90° if desired.
2. Calculated from driver sensitivity and amplifier power.
3. Measured with pink noise, free field at 1 meter, before limiting.

#### Input / Output
- **Input Type:** Female XLR balanced
- **Input Impedance:** 11 kΩ balanced
- **Loop Out:** Male XLR balanced
- **Monitor:** 100 Hz HPF, broad cut @ 3 kHz

#### Voicing Mode
- **Contour:** LF, HF boost
- **Normal:** Nominally flat

#### Low-Frequency Power Amplifier
- **Rated Power:** 500 watts rms, 1000 watts peak
- **Rated THD:** < 0.03%
- **Cooling:** Convection Extrusion
- **Design:** Class D

#### High-Frequency Power Amplifier
- **Rated Power:** 100 watts rms, 200 watts peak
- **Rated THD:** < 0.03%
- **Cooling:** Convection Extrusion
- **Design:** Class D

#### Low-Frequency Transducer
- **Diameter:** 12 in / 305 mm
- **Voice Coil Diameter:** 3 in / 76 mm
- **Diaphragm Material:** Paper
- **Magnet Material:** Neodymium

#### High-Frequency Transducer
- **Voice Coil Diameter:** 1.75 in / 44 mm
- **Horn Entry Diameter:** 1 in / 25 mm
- **Diaphragm Material:** Heat-treated titanium
- **Magnet Material:** Ferrite

#### Line Input Power
- **US:** 100 – 120 VAC, 50 – 60 Hz, 200W
- **EU, CN:** 200 – 240 VAC, 50 – 60 Hz, 200W
- **AC Connector:** 3-pin IEC 250 VAC

#### Safety Features
- **RMS limiting, power supply and amplifier thermal protection**

#### Construction Features
- **Basic Design:** Asymmetrical monitor, 60° tilt
- **Material:** 15 mm exterior grade premium birch plywood
- **Finish:** High durability black paint
- **Handles:** One on each side, one on top
- **Grille:** Powder-coated galvanized steel
- **Display LEDs:** Power ON, Voicing Mode selection, Sig / Limit, Thermal protection, Front Power Light ON
- **Fly Points:** Twelve M10 x 1.5 mm
- **Operating Temperature:** 0° - 40°C, 32° - 104°F

#### Physical Properties (packaged product)
- **Height:** 26.8 in / 680 mm
- **Width:** 20.2 in / 513 mm
- **Depth:** 25.6 in / 650 mm
- **Shipping Weight:** 66 lb / 29.9 kg

#### Physical Properties (product)
- **Height:** 24.0 in / 610 mm
- **Width:** 15.2 in / 386 mm
- **Depth:** 15.0 in / 381 mm
- **Monitor position depth:** 16.2 in / 412 mm
- **Net Weight:** 50 lb / 22.7 kg

#### Mounting Methods
- Floor mount, pole mount, or fly via 12 integrated M10 mounting points (using M10 x 1.5 x 37 mm forged shoulder eyebolts).

#### Options
- PA-A2 Forged Shoulder Eyebolt Kit (4 x M10 x 1.5 mm x 37 mm) P/N 0028272
- SPM200 Loudspeaker Pole Mount P/N 2035170-01

#### Ordering Information
- HD1221 12” 2-Way High Definition Powered Loudspeaker, US P/N 2034680-00
- HD1221 12” 2-Way High Definition Powered Loudspeaker, EU P/N 2034680-01
- HD1221 12” 2-Way High Definition Powered Loudspeaker, CN P/N 2034680-05
HD1221 FREQUENCY RESPONSE

HD1221 DIMENSIONS

HD1221 INPUT PANEL

HD1221 MONITOR POSITION

VIEW A-A

LEFT SIDE

POLE CUP

FRONT

BOTTOM

POWER AMPLIFIER

NOTES:
1. SYMBOL "\(\text{•}\)" INDICATES CENTER OF BALANCE.
2. SYMBOL "\(\text{•}\)" INDICATES PI ANGLE M10.
3. WEIGHT APPROX. 22.7 kg [50 lb]
4. SHIPPING WEIGHT APPROX. 29.9 kg [66 lb]
HD1221 FLY POINTS

Three each on the top and bottom (6 total)

12 Fly Points
Two on each side (6 total)

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Electronic files for this product are available at:
www.mackie.com
Specification Sheet  HD1221_SS.PDF
Owner’s Manual   HD1221_OM.PDF