

# ELEVATE YOUR EXPERIENCE

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**MACKIE®**



Introducing HD™ Series High-Definition Powered Loudspeakers. Experience the power and clarity of a completely optimized and perfectly tuned system.

Class-leading power, precision crossovers, phase and driver time alignment and patented acoustic correction processing work in harmony to create high-definition sound that was previously only found in high-end stadium touring systems. Clean, smooth lines and understated beauty define the robust enclosure that fits seamlessly into any environment.

HD Series High-Definition Powered Loudspeakers — Elevate Your Experience.



**HD 1531**



**HD 1521**



1800 WATTS

## HD1531

- Class-D Fast Recovery™ amplification
  - LF 700W RMS / 1400W Peak
  - MF 100W RMS / 200W Peak
  - HF 100W RMS / 200W Peak
- High-Definition Audio Processing
  - Patented acoustic correction
  - Driver time alignment
  - Precision 3-way crossover
- Custom designed transducers by EAW
  - 15" neodymium woofer
  - 6" high-output mid-range driver
  - 1.75" compression driver
- User-adjustable 3-band contour EQ
- Ultra-compact and lightweight (96 lbs)
- Rugged all-wood cabinet (15 mm birch)
- 12 integrated M10 fly points
- Pole-mountable
- Optimized WaveFront™ wide-dispersion high/mid horn system



1600 WATTS

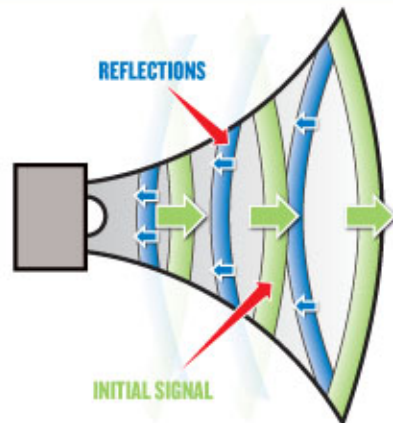
## HD1521

- Class-D Fast Recovery™ amplification
  - LF 700W RMS / 1400W Peak
  - HF 100W RMS / 200W Peak
- High-Definition Audio Processing
  - Patented acoustic correction
  - Driver time alignment
  - Precision 2-way crossover
- Custom designed transducers by EAW
  - 15" neodymium woofer
  - 1.75" compression driver
- User-adjustable 3-band contour EQ
- Ultra-compact and lightweight (80 lbs)
- Rugged all-wood cabinet (15 mm birch)
- 12 integrated M10 fly points
- Pole-mountable

## DEFINE THE EXPERIENCE

Mackie created the "Active" electronics game long ago, incorporating precision crossovers and transducer time/phase alignment processing into the loudspeaker. This instantly took the guesswork out of setting up a perfectly tuned system and the world of loudspeakers irreversibly changed. HD Series High-Definition Powered Loudspeakers not only advance Active technology, they take it to an entirely new level, marking the next major advancement for powered loudspeakers: High-Definition Live Sound.

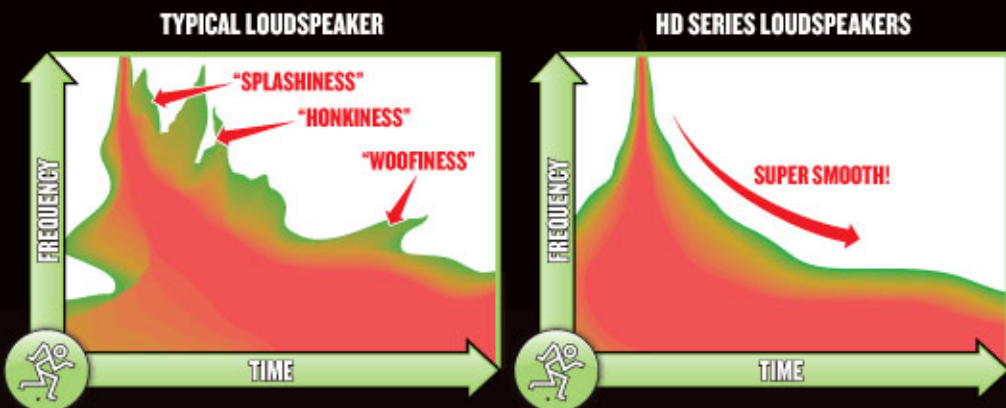
Every audio professional is all too familiar with the "horn sound" — a megaphone-like "honkiness" that is unmistakable. If you've forgotten, cup your hands in front of your mouth and speak loudly. This prominent resonance, caused by reflections between the compression driver diaphragm and the horn mouth is responsible for the characteristic horn "honk." Likewise, cone drivers have resonances in their upper frequency range that result in "muddiness" in the middle of the vocal range. But what can a loudspeaker designer do to counter these inherent physical characteristics? Can Mackie defy the very laws of physics?



REFLECTIONS EQUAL HONK. OUR PATENTED PROCESSING ELIMINATES IT FOR GOOD.

**Introducing Mackie High-Definition Audio Processing.** The key to high-definition live sound is the detailed measurement and analysis of the inherent problems of horns and woofers. The experts at EAW developed proprietary measurement tools and software for acoustical analysis. These extremely innovative and NASA-esque tools were used to investigate the unprocessed responses of transducers.

The team developed custom (and rather radical) DSP algorithms specifically engineered to correct loudspeaker anomalies. The graphs below detail the traditionally problematic loudspeaker issues and the improvement that HD provides. Now you and your audience can enjoy clarity and accuracy that was previously available only in ridiculously high-end, expensive line array systems. HD Series — defining high-definition live sound...and elevating the experience for anyone within earshot.



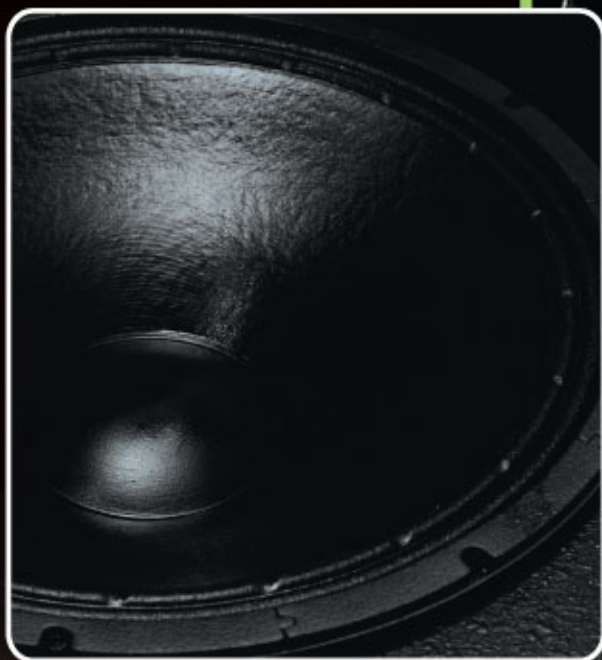
## MAXIMIZE YOUR OUTPUT

Like computer technology, amplifier technology is rapidly and continuously evolving. If you are not ahead of the curve, you might as well stay home. HD Series loudspeakers represent the pinnacle of Class-D amplifier technology and pack more power than any other speaker in their class. Delivering up to 1800W of combined peak system power, our Class-D Fast Recovery™ amplifiers are lighter and more powerful, with less distortion, even when pushed to clipping. And all-new, ultra-efficient switch-mode power supplies ensure the amplifiers are always well fed and ready to perform. Get the most wattage for your money with HD Series loudspeakers.



## EAW INSIDE

Our custom-designed transducers are specified by the award-winning EAW design team to ensure the highest possible quality and efficiency when integrated into an HD system. A high-end 15" neodymium woofer with a 3" voice coil is built to handle the massive power delivered by the Class-D Fast Recovery™ amplifier. A 1.75" diaphragm compression driver is made using heat-treated titanium, ensuring years of brilliant high-frequency reproduction. The 3-way HD1531 incorporates a 6" midrange transducer. Improving on traditional hi/mid horn designs, Mackie's optimized wide-dispersion WaveFront™ system focuses energy directly at your audience, ensuring optimum intelligibility for every seat in the house. Once the transducers are selected, all aspects of the system are custom-tuned to achieve the most output and best possible sound from every single component.



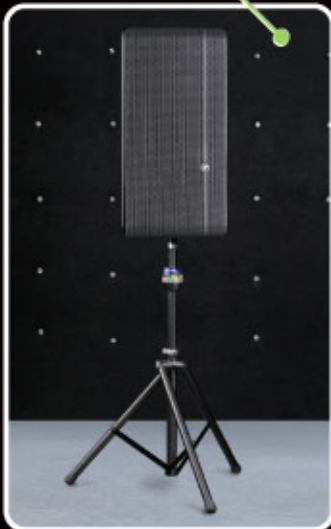
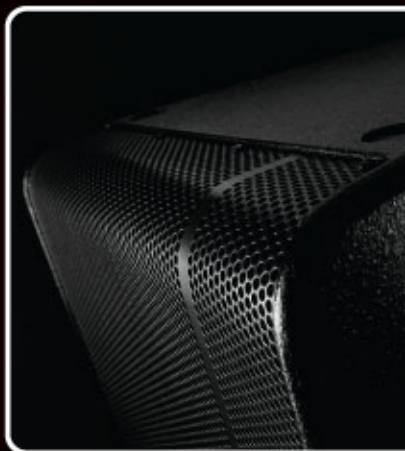
## TAILOR YOUR TONE

A proper loudspeaker system needs to be extremely flexible to fit your application. HD Series Powered Loudspeakers feature an integrated 3-band contour EQ right on the rear panel, allowing the user to gently and flexibly EQ the system for the task at hand. High shelving, low shelving and a sweepable mid allow you to correct room anomalies, emphasize vocals, add some low-end when a subwoofer is absent or bump highs and lows for low volume applications. This indispensable tool allows you to refine the system at will, making for a great-sounding show each and every time.



## FIT AND FINISH

HD Series Powered Loudspeakers are ridiculously compact and lightweight but they don't resort to less professional attributes to achieve these goals. The premium components are housed within 15 mm thick birch plywood that's coated with a durable, textured black paint. Fronted by a black, powder-coated, cold-rolled steel grill, the HD Series are tough enough for even the most abusive touring performers and sound companies. They feature a classy, unimposing look that's designed to blend into the environment (the front panel power LED can be turned off for maximum stealth) and with 12 integrated M10 fly points, they make a great choice for fixed installations as well. Ergonomic handles make pole-mounting and transporting the HD Series a breeze. HD loudspeakers are long lasting, great looking and completely professional.



# HD 1531

Frequency Response (-10dB): 38Hz – 20kHz  
Coverage Pattern: 90° x 40°  
Max Peak SPL (calculated): 135 dB<sup>1</sup>  
Max Peak SPL (measured): 126 dB<sup>2</sup>  
Crossover Points: 400Hz, 1500Hz

HF Driver: 1.75" (44.5 mm) heat-treated titanium compression driver  
MF Driver: 6" (152.4 mm) mid-range driver  
LF Driver: 15" (381 mm) neodymium woofer with 3" (76.2 mm) voice coil

## Power

Total System Power: 900W RMS / 1800W Peak  
Low Frequency: 700W RMS / 1400W Peak  
Mid Frequency: 100W RMS / 200W Peak  
High Frequency: 100W RMS / 200W Peak  
Amplifier THD: < 0.03%  
Amplifier Design: Class-D

## Construction Features

Basic Design: Trapezoidal, 20 degree included angle  
Material: 15 mm exterior grade premium birch plywood  
Finish: High durability black textured paint  
Handles: One on each side  
Grill: Powder-coated galvanized steel  
Fly Points: Twelve M10 x 1.5 mm

## Physical Properties

Height: 35.40 in / 900.0 mm  
Front Width: 18.25 in / 463.5 mm  
Rear Width: 11.82 in / 300.2 mm  
Depth: 18.81 in / 477.8 mm  
Weight: 96 lb / 44 kg

AC Input: 120 VAC/60Hz, 9 amps (US model), 230 VAC/50Hz, 5 amps (EU model)



# HD 1521

Frequency Response (-10dB): 40Hz – 20kHz  
Coverage Pattern: 80° x 50°  
Max Peak SPL (calculated): 135 dB<sup>1</sup>  
Max Peak SPL (measured): 125 dB<sup>2</sup>  
Crossover Point: 1200Hz

HF Driver: 1.75" (44.5 mm) heat-treated titanium compression driver  
LF Driver: 15" (381 mm) neodymium woofer with 3" (76.2 mm) voice coil

## Power

Total System Power: 800W RMS / 1600W Peak  
Low Frequency: 700W RMS / 1400W Peak  
High Frequency: 100W RMS / 200W Peak  
Amplifier THD: < 0.03%  
Amplifier Design: Class-D

## Construction Features

Basic Design: Trapezoidal, 20 degree included angle  
Material: 15 mm exterior grade premium birch plywood  
Finish: High durability black textured paint  
Handles: One on each side  
Grill: Powder-coated galvanized steel  
Fly Points: Twelve M10 x 1.5 mm

## Physical Properties

Height: 30.00 in / 762.0 mm  
Front Width: 18.25 in / 463.5 mm  
Rear Width: 11.82 in / 300.2 mm  
Depth: 18.81 in / 477.8 mm  
Weight: 80 lb / 36 kg

AC Input: 120 VAC/60Hz, 9 amps (US model), 230 VAC/50Hz, 5 amps (EU model)



<sup>1</sup> Calculated from driver sensitivity and amplifier power.

<sup>2</sup> Measured with pink noise, free field at 1 meter, before limiting.

# HDA

Mackie earned a reputation for bringing high-end technology into designs that fit the needs and budgets of the working musician. The Mackie HDA High-Definition Arrayable Powered Loudspeaker System exemplifies this philosophy, delivering superior performance and unparalleled sonic quality in the most cost-effective constant curvature line array ever created. Powered by 1200W of peak system power, with a coverage pattern of 110° x 20°, the compact 12" 2-Way HDA loudspeakers are highly configurable. With acoustic and mechanical design by the award-winning engineering experts at EAW and patented HD audio processing, HDA offers proven line array performance and technology at a price point attainable by more users than ever before.



## HD 1221

Never before has there been such a perfect blend of power, portability and professional sound. The HD1221 12" 2-Way High-Definition Powered Loudspeaker delivers class-leading power, unmatched clarity and extreme flexibility in a design that looks as good as it sounds. Class-D Fast Recovery™ amplification produces 1200W of peak system power. A simple 3-position voicing switch allows you to dial in the right tone with minimal fuss. The flexible design lets you stack it, pole-mount it, fly it or even use it as a premium stage monitor.



## HD 1501 / HD 1801

HD Series powered subwoofers provide intense low-frequency extension at unmatched power levels, adding massive low-end to any system. Designed and tuned by the experts at EAW, HD subs incorporate premium Linkwitz-Riley crossovers, precision tuning filters and phase alignment for ultra-accurate bass response. The all-wood cabinets feature a ported, direct radiating design for chest-pounding punch, while the Class-D amplifiers and switching power supply deliver maximum efficiency with less weight. The HD1501 is ultra-compact for portable applications and the powerful HD1801 is even flyable, providing the perfect sub for installs that need to save valuable stage space.



## CONFIGURATIONS

From a single stage monitor to a high-output, professional line array, Mackie's HD Series delivers a comprehensive selection of loudspeakers perfect for nearly any application. Fly, stack, or mount the full-range loudspeakers in a variety of configurations or add some serious low end with the HD powered subwoofers. Pair the HD1501 with the HD1221 for the ultimate high output portable PA. Rock a club or outdoor festival with HD1801 subwoofers and either HD1521 or HD1531 loudspeakers. Even fly the HD1801 with any of our full range loudspeakers, or step up to a full HDA rig for a truly professional system. With so much versatility, plus design and voicing by EAW, the HD Series has your show covered.







## SPECIFICATIONS

### HDA

### HD 1221

### HD 1501

### HD 1801

	HDA	HD 1221	HD 1501	HD 1801
PRODUCT				
POWER	<b>SYS:</b> 600W RMS 1200W Peak <b>LF:</b> 500W RMS 1000W Peak <b>HF:</b> 100W RMS 200W Peak	<b>SYS:</b> 600W RMS 1200W Peak <b>LF:</b> 500W RMS 1000W Peak <b>HF:</b> 100W RMS 200W Peak	<b>600W RMS</b> 1200W Peak	<b>800W RMS</b> 1600W Peak
MAX SPL (PEAK)	Calculated <sup>1</sup> : 131 dB @ 1 m Measured <sup>2</sup> : 124 dB @ 1 m	Calculated <sup>1</sup> : 133 dB @ 1 m Measured <sup>2</sup> : 124 dB @ 1 m	Calculated <sup>3</sup> : 131 dB @ 1 m Measured <sup>4</sup> : 126 dB @ 1 m	Calculated <sup>3</sup> : 133 dB @ 1 m Measured <sup>4</sup> : 129 dB @ 1 m
FREQUENCY RESPONSE	-10 dB: 52 Hz – 20 kHz -3 dB: 60 Hz – 18 kHz	-10 dB: 55 Hz – 20 kHz -3 dB: 65 Hz – 18 kHz	-10 dB: 36 Hz – 145 Hz -3 dB: 43 Hz – 92 Hz	-10 dB: 35 Hz – 145 Hz -3 dB: 44 Hz – 95 Hz
PHYSICAL	110° × 20° constant curvature 4 M10 Fly Points 14.7 × 24.7 × 15.9" 373 × 628 × 405 mm 59 lb / 26.7 kg	90° × 50° rotatable horn 10 M10 Fly Points 24.0 × 15.2 × 15.0" 610 × 386 × 381 mm 50 lb / 22.7 kg	20.0 × 18.3 × 25.0" 508 × 464 × 635 mm 80 lb / 36.4 kg	10 M10 Fly Points 23.0 × 23.0 × 25.8" 584 × 584 × 655 mm 106 lb / 48.2 kg

<sup>1</sup> Calculated from driver sensitivity and amplifier power.

<sup>2</sup> Measured with pink noise, free field at 1 meter, before limiting.

<sup>3</sup> Calculated from peak driver sensitivity and amplifier power, half space.

<sup>4</sup> Measured with swept sine at 1W within operating range, scaled for max power, half space.

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