

# TECHNICAL INFORMATION

## HR624 MK2 Specifications

### Enclosure

#### Materials and Construction:

¾-inch (19 mm) thick MDF cabinet construction with internal bracing to add to cabinet stiffness.

Piano-black gloss finish.

Die-cast aluminum exponential wave guide for controlled, wide dispersion from high-frequency driver and Zero Edge Baffle™ to minimize diffraction around the cabinet edges.

Open cell adiabatic “foam fill” acoustical damping material absorbs internal reflections, preventing delayed sound coloration.

Flush-mount connector system allows monitor to be placed against a wall without need for connector clearance.

### Transducers

#### Low-frequency driver:

Diameter:	6.7 inches (170mm)
Sensitivity (2.83V, 1 m):	89 dB SPL
Nominal Impedance:	4 Ω
Voice Coil Diameter:	1.25 inches (32mm)
Power Handling (Long Term/Program):	50/150 watts
Frequency Range:	45 Hz to 6 kHz
Frame:	Die-cast magnesium
Magnet:	Ferrite
Fully shielded:	Ferrite opposing magnet

#### High-frequency driver:

Sensitivity (2.83V, 1m):	91 dB SPL
Nominal Impedance:	6 Ω
Power Handling (Long Term/Program):	20/50 watts
Frequency Range:	1.6 kHz to 22 kHz
Diaphragm/Suspension:	Titanium with polymer suspension
Voice Coil Diameter:	1.0 inch (25.4mm)
Magnet:	Neodymium
Bucking Magnet:	Ferrite opposing magnet

#### Passive Radiator:

6-inch x 9-inch (152mm x 228mm) mass-loaded elliptical flat piston with variable thickness filleted edge rubber surround.

### Crossover Section

#### Crossover Type:

Modified Linkwitz-Riley, 24 dB/octave @ 3 kHz

### Amplifier Section

#### Low-frequency power amplifier

Rated Power (at 1 kHz with 1% THD):  
100 watts

Rated Load Impedance: 4 ohms  
Rated THD (1W to -1 dB of rated power):  
0.1 %

Slew Rate: 15V/μS  
Distortion (THD, SMPTE IMD, DIM 100):  
< 0.035%

Signal-to-Noise  
(20Hz-20kHz, unweighted, referenced to 100W into 4Ω):  
> 101 dB

Cooling: Convection  
Design: Monolithic IC, Class AB,  
Parametric Servo Feedback

#### High-frequency power amplifier

Rated Power(at 1 kHz with 1% THD):  
40 watts

Rated Load Impedance: 6 ohms  
Rated THD (1W to -1 dB of rated power):  
0.1 %

Slew Rate: 15V/μS  
Distortion (THD, SMPTE IMD, DIM 100):  
< 0.035%

Signal-to-Noise  
(20 Hz-20 kHz, unweighted, referenced to 40 W into 8Ω):  
> 93 dB

Cooling: Convection  
Design: Monolithic IC,  
Conventional Class AB

### System Specifications

Input Type:	Balanced Differential (XLR and 1/4" TRS) Unbalanced (RCA)
Input Impedance:	20 kΩ Balanced 10 kΩ Unbalanced
Input Protection:	RFI and Level Protected
Maximum Input Level:	+20 dBu
Low Frequency Filter:	80 Hz, 2nd Order, Butterworth
HF Equalization:	Shelving ±2 dB @ 10 kHz

#### Acoustic Space:

A position:	-4 dB @ 50 Hz, shelving
B position:	-2 dB @ 50 Hz, shelving
C position:	Flat

#### Compressor:

Independent high and low frequency overload detection	
Enclosure Alignment:	6th Order
Over Excursion Prevention:	2nd Order High-Pass Filter
Low Line Voltage Shut Down:	60% of Nominal Line
Thermal Protection:	Amplifier Shut-Down, Auto Reset
Muting:	5 seconds at turn-on
Signal Sense Threshold:	-74 dBu (0.155 mV)
Driver Protection:	Independent LF and HF Detection Overall Compression

**Acoustic Section**

Free-Field Frequency Response:  $\pm 1.5$  dB, 49 Hz to 20 kHz  
 Lower cutoff frequency: -3 dB @ 45 Hz  
 Upper cutoff frequency: -3 dB @ 22 kHz  
 Sound Pressure Level at 1 meter, -7.5 dBu into balanced input: 100 dB SPL @ 1m  
 Maximum peak SPL per pair: 115 dB SPL @ 1m  
 Maximum short term SPL on axis, half space 80 Hz to 2.5 kHz: 106 dB SPL @ 1m  
 Residual noise (maximum gain, 600 $\Omega$  source, 20 Hz-20 kHz bandwidth): < 8 dB SPL @ 1m

**Rated Line Input Voltage and Power:**

Power consumption:  
 Standby mode: 12 watts  
 Quiescent (idle): 20 watts  
 Musical Program, Loud mix: 105 watts  
 Both channels driven into resistive loading to 1% clipping (LF 86W/4 $\Omega$ , HF 38W/8 $\Omega$ ): 255 watts

US: 120 VAC, 60 Hz  
 Europe: 240 VAC, 50 Hz  
 Korea (AC Power Selector at 240 V): 220 VAC, 60 Hz  
 Japan (AC Power Selector at 120 V): 100 V, 50-60 Hz

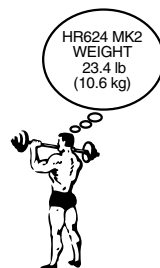
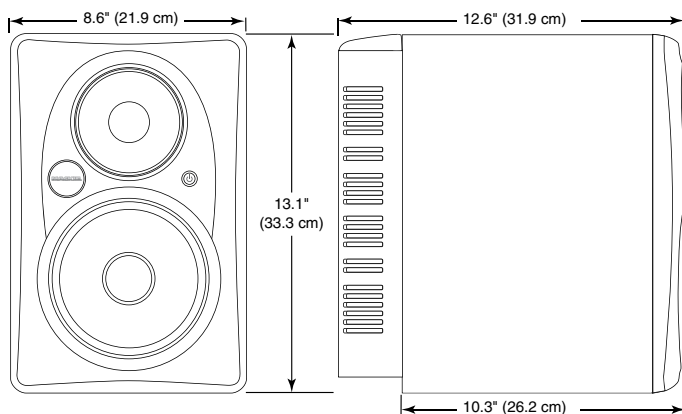
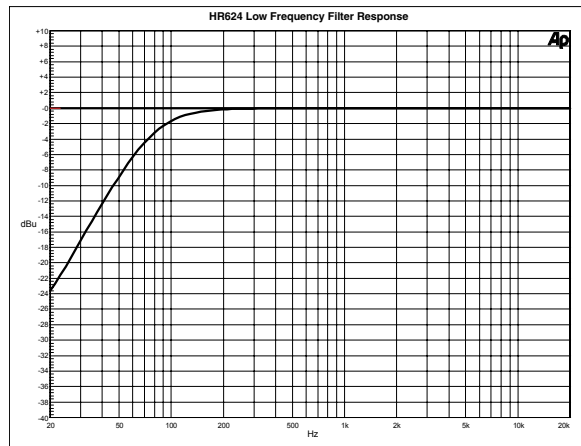
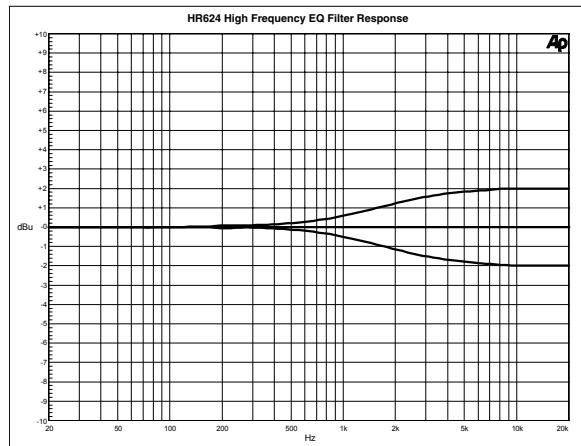
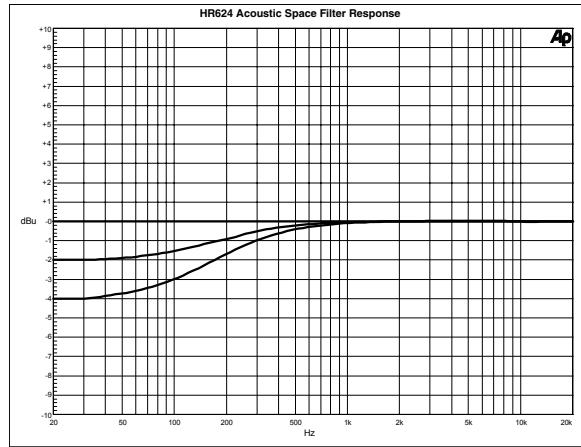
Rated Power  
 (For UL-6500, CSA-E65-94, EN-60065): 130 watts

**Physical Properties**

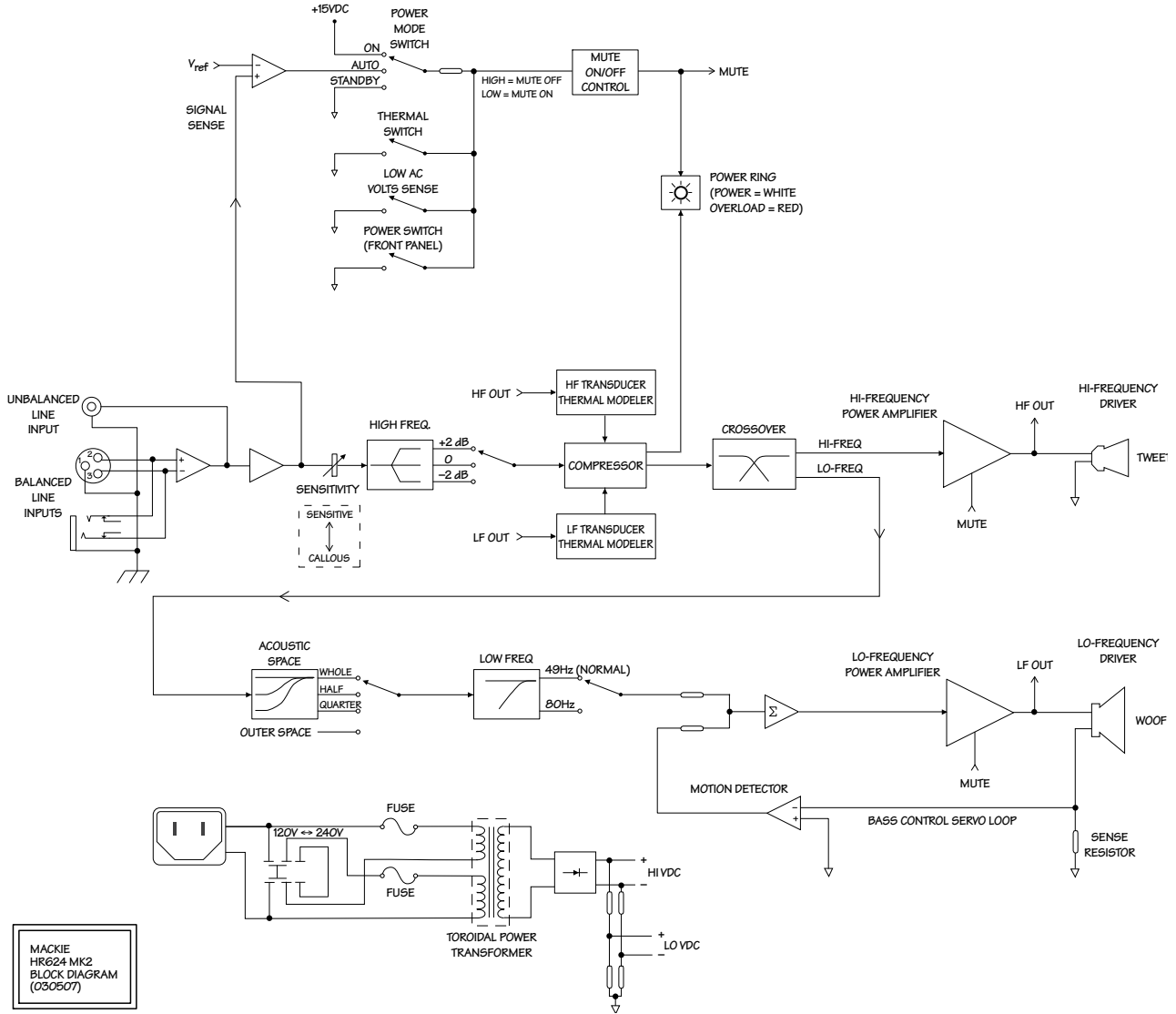
Height: 13.1 in/33.3 cm  
 Width: 8.6 in/21.9 cm  
 Depth Enclosure: 10.3 in/26.2 cm  
 Depth Overall: 12.6 in/31.9 cm  
 Internal Volume: 0.29 cubic feet (8.2 liters)  
 Weight: 23.4 lb/10.6 kg

LOUD Technologies is always striving to improve our products by incorporating new and improved materials, components and manufacturing methods. Therefore, we reserve the right to change these specifications at any time without notice.

**Graphs**



# HR624 MK2 Block Diagram



MACKIE  
HR624 MK2  
BLOCK DIAGRAM  
(030507)

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HR624 MK2 design protected under the following patent: DES. 387,351

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