

McIntosh[®]
THE GREAT AMERICAN POWERHOUSE



academy
LOUDSPEAKERS



Of all audio components, the loudspeaker may seem the least complex. Yet the many trade-offs in loudspeaker design – the give and take between drivers, crossovers, and cabinet volume – call for well-informed subjectivity. McIntosh has been selling loudspeakers since 1970. Make that *manufacturing* loudspeakers, as fewer and fewer speaker companies actually build or even design what they sell. As a company fixated on musical fidelity, McIntosh is uniquely qualified to make the subjective judgements necessary to create truly musical loudspeakers.

The new Academy Series results from the most ambitious speaker development project in McIntosh history. Never have McIntosh speakers and electronics enjoyed such harmony of quality, performance, and purpose.

The popularity of home theaters has had a dramatic effect on the speaker market. Amid confusion over how many speakers to buy and where to place them is a lingering question: Does a good “music” loudspeaker make a good “theater” speaker, and vice versa?

With the Academy Series loudspeakers, the answers are “yes” and “yes.” Because from the very beginning the Academy models have been designed for low-distortion performance, thanks to patented LD/HP® drivers and unique arched bridge truss cabinet construction. Music benefits from smooth, extended response without the coloration and fuzzy imaging caused by driver distortion and cabinet vibrations. Movie sound benefits from high power handling and fast, clean dynamic response from the high-output LD/HP drivers.

The Academy speakers are a true family, sharing a common tonal quality that allows for great configuration flexibility. Virtually any combination of speakers can be used in multichannel applications.

High-end loudspeakers in particular are often characterized by just one aspect of their performance. It could be bass response, treble transparency, depth of image, cosmetic appearance, or even price. In all of its products,

however, McIntosh seeks balance, and so is the case with speakers. The Academy models certainly have an extremely smooth and broad frequency response, and they do “measure” well in front of a microphone and spectrum analyzer. But in the final analysis, they are distinguished by their sheer musicality, which can only be measured by listening.

The non-parallel, arched sides of the Academy Series cabinets help eliminate resonances and reflections that disrupt a smooth frequency response. The sides are made from several layers of MDF and wood, laminated together for strength. Within the graceful arch shape, internal trusses create an extremely strong and durable cabinet virtually immune to flutter and vibrations that distort sound.

Academy Series drivers and crossovers are designed for high efficiency as well as high power handling. For example, the smallest Academy model – the LS320 – will provide a sound pressure level in excess of 100dB using McIntosh’s *smallest* power amplifier. Shielding around the drivers allows safe placement near video monitors and TV sets.

Academy speakers deliver the ultra-realistic dynamics of today’s digital movie sound. Yet in contrast to most so-called “theater” loudspeakers, they also possess the musicality demanded by critical music listeners.

While you can choose virtually any combination of Academy speakers for a surround-sound theater or listening room, McIntosh dealers will typically recommend one of four Academy Systems. Each system has one or more alternative model choices and expansion options. Chances are that at least one system will match your needs based on the type of system you own, your budget, and the parameters of your theater or listening room.

Arched Cabinet Sides

The arch shape creates non-parallel sides, preventing internal resonances that muddy the sound.

Internal Trusses

Cross-braces span the entire length of the arched sides, creating an extremely rigid cabinet structure that virtually silences unwanted vibrations.

Precision Crossovers

Designing the optimal crossover for any speaker is a challenge. To do so for several and make them sound like a true family is more like an art. And this is exactly what McIntosh has done.

LD/HP® Drivers

In a LD/HP driver, a pair of aluminum shorting sleeves makes the magnetic

field more symmetrical and reduces distortion. The sleeves also lower the impedance of the voice coil, permitting greater current flow and hence higher output levels.



Bessel Function Tweeter Array

In the LS360 and CS350 the individual tweeter amplitudes and phase relationships are adjusted so that the array acts as a high frequency point source with a broad dispersion pattern. The array also greatly increases power handling for high frequencies.

Hand-Crafted Drivers

Woofer and midrange cones are constructed of polypropylene, which has a high stiffness-to-mass ratio and good damping properties. Rubber surrounds ensure linear cone excursion, and like the cones are immune to decay. Drivers are mounted in proprietary die-cast aluminum frames and undergo rigorous tests in McIntosh's anechoic chamber.

Flared Ports

The ports in the LS360, LS340, and PS112 have flares at both ends to minimize air noise with high levels of bass.



HT-5

The HT-5 is a compact, high-performance three-way speaker ideal for use in home theaters. In addition to the acclaimed LD/HP® drivers – which significantly reduce bass distortion while increasing power handling – the HT-5 features a special tweeter mounting that all but eliminates edge diffraction cancellation of specific high frequencies. Perfect for L/C/R and surround-channel use, the efficient HT-5 has a footprint less than ten inches square.

Black Ash finish.



PS112

What do you get when you put 400 McIntosh watts and a McIntosh 12-inch long-throw woofer into an enclosure with monumental rigidity? Deep, clean, glorious bass. And lots of it. The PS112 is the most powerful amplified subwoofer ever produced by McIntosh. The PS112 delivers its punch through a 12-inch long-throw woofer featuring LD/HP® technology, which significantly reduces bass distortion. Features include variable low- and high-pass filters (40Hz to 120Hz), a two-position phase switch (0°, 180°), and a front-firing port. All controls and indicators are conveniently located on the beveled glass front panel.

Natural Cherry, Red Cherry, and Black Ash (shown) finishes. Exotic woods and finishes available by special order.



Academy System I

(3) HT-5 left, center, right • (2) HT-5 left & right surround • (1) PS112 subwoofer

Alternative: (1) HT12 passive subwoofer (available Spring 2001) • *Expansion: (2) HT-5 back surround*

HT-5

- Three-way, sealed cabinet
- Dual 6.5" woofer/mid
- 1" dome tweeter with a special low-diffraction mounting
- Black Ash finish

PS112

- Subwoofer, ported
- 12" woofer
- 400W McIntosh amplifier
- Beveled glass control panel
- Natural Cherry, Red Cherry, and Black Ash finishes

HT12

- Subwoofer, ported
- 12" woofer
- Black Ash finish



PS112
SUB



HT-5
LEFT



HT-5
CENTER



HT-5
RIGHT



HT-5
SURROUND



HT-5
SURROUND



HT-5
BACK 1



HT-5
BACK 1



LS320

Although it's one of the smallest loudspeakers ever crafted by McIntosh, the LS320 delivers full-bodied sound, thanks to its 8-inch LD/HP® woofer. The tweeter features a special low-diffraction mounting that reduces the "edge hole" effect – cancellation of certain frequencies caused by diffraction at the edge of the cabinet. As in all LS models, the tweeter is mounted on traditional McIntosh screened black glass. *Natural Cherry (shown), Red Cherry, and Black Ash finishes. Exotic woods and finishes available by special order.*



WS320

The WS320 is a high-performance, two-way in-wall speaker with an integral sealed aluminum enclosure. The sealed enclosure enables deep bass output from the 8-inch woofer while minimizing wall transmission into the listening room as well as adjoining rooms. The acclaimed LD/HP® driver significantly reduces bass distortion while increasing power handling.

At just four inches deep, the WS320 fits within any standard wall, its grille and frame extending just a half inch past flush. Finished in a white primer coat, the WS320 is designed to be painted to match the surrounding decor. Perfect for applications where space and style are primary considerations, the WS320 will be popular in home theaters as well as multiroom systems. In addition, its tonal qualities are carefully matched to those of the LS, CS, and HT models, making a variety of combinations possible.



Academy System II

(3) LS320 left, center, right • (2) LS320 left & right surround • (1) PS112 subwoofer

Alternatives: (1) HT-5 center • (2) WS320 left & right surround • (1) HT12 passive sub (available Spring 2001)

Expansion: (2) LS320 back surround • Expansion alternative: (2) WS320 back surround

LS320

- Two-way, sealed cabinet
- 8" woofer
- 1" dome tweeter with a special low-diffraction mounting
- Natural Cherry, Red Cherry, and Black Ash finishes

HT-5

- Three-way, sealed cabinet
- Dual 6.5" woofer/mid
- 1" dome tweeter with a special low-diffraction mounting
- Black Ash finish

WS320

- In-wall, two-way, sealed enclosure
- 8" woofer
- 1" dome tweeter
- Paintable white primer coat finish

PS112

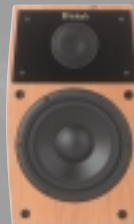
- Subwoofer, ported
- 12" woofer
- 400W McIntosh amplifier
- Beveled glass control panel
- Natural Cherry, Red Cherry, and Black Ash finishes

HT12

- Subwoofer, ported
- 12" woofer
- Black Ash finish



PS112
SUB



LS320
LEFT



LS320 or HT-5
CENTER



LS320
RIGHT



LS320
SURROUND



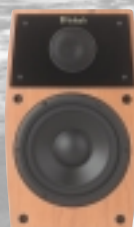
WS320
SURROUND



WS320
SURROUND



LS320
SURROUND



LS320



WS320

BACK 1



WS320



LS320

BACK 2



LS340

Standing a little more than three feet tall, the elegant LS340 is a three-way design with dual 8-inch LD/HP® woofers. Like the LS320, its tweeter has a special low-diffraction mounting that reduces the “edge hole” effect – cancellation of certain frequencies caused by diffraction at the edge of the cabinet. The bass port is flared at both ends to form a natural horn and minimize air noise. As in all LS models, the tweeter is mounted on traditional McIntosh screened black glass. *Natural Cherry (shown), Red Cherry, and Black Ash finishes. Exotic woods and finishes available by special order.*



CS350

The CS350 is designed as the center speaker with any of the LS models. A clever stabilizer bar on the back prevents the cabinet from rocking when placed on its side, and is adjustable to provide a downward angle for placement above a video display.

Dialogue intelligibility and audience coverage are the two most critical performance criteria for a center-channel speaker. The CS350 features five tweeters wired to produce a Bessel Function array. The individual tweeter amplitudes and phase relationships are adjusted so that the array acts as a high frequency point source with a broad dispersion pattern. In addition, the array greatly increases power handling for high frequencies. *Natural Cherry, Red Cherry (shown), and Black Ash finishes. Exotic woods and finishes available by special order.*



Academy System III

(2) LS340 left & right • (1) CS350 center • (2) WS320 left & right surround • (1) PS112 subwoofer

Alternatives: (2) LS320 left & right surround

Expansion: (2) LS320 back surround • Expansion alternative: (2) WS320 back surround

LS340

- Three-way, ported
- Dual 8" woofers
- 6.5" midrange
- 1" dome tweeter with a special low-diffraction mounting
- Natural Cherry, Red Cherry, and Black Ash finishes

CS350

- Three-way, sealed cabinet
- Dual 6.5" woofers
- 4" midrange
- Five 1" dome tweeters in a Bessel Function array
- Adjustable tilt bracket
- Natural Cherry, Red Cherry, and Black Ash finishes

WS320

- In-wall, two-way, sealed enclosure
- 8" woofer
- 8" woofer
- 1" dome tweeter
- Paintable white primer coat finish

LS320

- Two-way, sealed cabinet
- 8" woofer
- 1" dome tweeter with a special low-diffraction mounting
- Natural Cherry, Red Cherry, and Black Ash finishes

PS112

- Subwoofer, ported
- 12" woofer
- 400W McIntosh amplifier
- Beveled glass control panel
- Natural Cherry, Red Cherry, and Black Ash finishes



LS360

At just more than four feet tall, the magnificent LS360 is the flagship of the Academy Series. Like the CS350, its five tweeters are wired to produce a Bessel Function array. The individual tweeter amplitudes and phase relationships are adjusted so that the array acts as a high frequency point source with a broad dispersion pattern. In addition, the array greatly increases power handling for high frequencies. Two 10-inch LD/HP® woofers and an 8-inch LD/HP® midrange round out the driver complement. The two bass ports are flared at both ends to form a natural horn and minimize air noise. The tweeters are mounted on traditional McIntosh screened black glass. *Natural Cherry, Red Cherry, and Black Ash finishes. Exotic woods and finishes available by special order (Piano Black shown).*



Why Choose McIntosh?

Consumer electronics products usually are viewed as short-term investments because they don't last or they quickly become obsolete in some way. But behind every McIntosh is a fifty-year heritage of excellence, proudly carried forward by every employee. No production lines, no "price-point" engineering, no planned obsolescence. McIntosh equipment is made to sound better and last longer.

When customers are presented with McIntosh products, criteria they have been conditioned to overlook – reliability, longevity, craftsmanship, ease-of-use, adaptability, pride of ownership – suddenly leap to the top of their list. The choice then becomes clear: ***There is nothing like a McIntosh.***

Academy System IV

(2) LS360 left & right • (1) CS350 center • (2) WS320 left & right surround

(2) LS320 back surround • (2) PS112 subwoofer

Alternatives: (2) LS320 left & right surround • (2) LS320 back surround

LS360

- Three-way, dual ports
- Dual 10" woofers
- 8" midrange
- Five 1" dome tweeters in a Bessel Function array
- Natural Cherry, Red Cherry, and Black Ash finishes

CS350

- Three-way, sealed cabinet
- Dual 6.5" woofers
- 4" midrange
- Five 1" dome tweeters in a Bessel Function array
- Adjustable tilt bracket
- Natural Cherry, Red Cherry, and Black Ash finishes

WS320

- In-wall, two-way, sealed enclosure
- 8" woofer
- 1" dome tweeter
- Paintable white primer coat finish

PS112

- Subwoofer, ported
- 12" woofer
- 400W McIntosh amp
- Beveled glass control panel
- Natural Cherry, Red Cherry, and Black Ash finishes

LS320

- Two-way, sealed cabinet
- 8" woofer
- 1" dome tweeter with a special low-diffraction mounting
- Natural Cherry, Red Cherry, and Black Ash finishes



PS112
SUB 1

LS360
LEFT

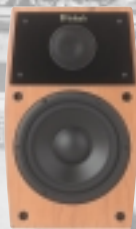
CS350
CENTER

LS360
RIGHT

PS112
SUB 2



WS320
SURROUND



LS320



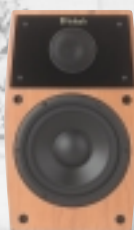
LS320



WS320
SURROUND

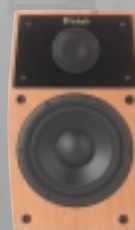


WS320



LS320

BACK 1



LS320



WS320

BACK 2

Specifications

Dimensions include grille cover.



LS360 3-WAY

Anechoic Response
29Hz to 20kHz, ± 2 dB

Sensitivity (2.8V/1m)
88dB

Nominal Impedance
4 ohms

Drivers
(2) 10" LD/HP woofer
(1) 8" LD/HP mid
(5) 1" dome tweeters

Crossover Frequencies
200Hz, 1.5kHz

Suggested Amp Power
200 – 600 watts

Dimensions (h x w x d)
inch: 49.25 x 13.5 x 17.38
cm: 125.1 x 34.3 x 44.1

Weight
176 lbs. (80kg) boxed ea.

LS340 3-WAY

Anechoic Response
48Hz to 20kHz, ± 2 dB

Sensitivity (2.8V/1m)
87dB

Nominal Impedance
4 ohms

Drivers
(2) 8" LD/HP woofer
(1) 6.5" LD/HP mid
(1) 1" dome tweeter



Crossover Frequencies
250 Hz, 1.5 kHz

Suggested Amp Power
100 – 350 watts

Dimensions (h x w x d)
inch: 40.25 x 10.25 x 17.38
cm: 102.2 x 26.0 x 44.1

Weight
110 lbs. (50kg) boxed ea.

LS320 2-WAY

Anechoic Response
60Hz to 20kHz, ± 2 dB

Sensitivity (2.8V/1m)
86dB

Nominal Impedance
4 ohms

Drivers
(1) 8" LD/HP woofer/mid
(1) 1" dome tweeter



Crossover Frequency
1.5 kHz

Suggested Amp Power
50 – 200 watts

Dimensions (h x w x d)
inch: 17.0 x 10.25 x 10.625
cm: 43.2 x 26 x 27.0

Weight
33 lbs. (15.0kg) boxed ea.

CS350 3-WAY

Anechoic Response
80Hz to 20kHz, ± 2 dB

Sensitivity (2.8V/1m)
86dB

Nominal Impedance
4 ohms

Drivers
(2) 6.5" LD/HP woofer
(1) 4" LD/HP mid
(5) 1" dome tweeters



Crossover Frequencies
250 Hz, 1.5 kHz

Suggested Amp Power
100 – 350 watts

Dimensions (h x w x d)
inch: 9.0 x 25.5 x 9.13
cm: 22.9 x 64.8 x 23.2

Weight
50 lbs. (22.7kg) boxed ea.

HT-5 3-WAY

Anechoic Response
80Hz to 20kHz, ± 2 dB

Sensitivity (2.8V/1m)
86dB

Nominal Impedance
4 ohms

Drivers
(2) 6.5" LD/HP woofer/mid
(1) 1" dome tweeter



Crossover Frequencies
400Hz, 1500Hz

Suggested Amp Power
50 – 200 watts

Dimensions (h x w x d)
inch: 20.5 x 9.25 x 9.0
cm: 52 x 23.5 x 22.9

Weight
38 lbs. (17.3kg) boxed ea.

WS320 2-WAY IN-WALL

Anechoic Response
60Hz to 20kHz, ± 2 dB

Sensitivity (2.8V/1m)
86dB

Nominal Impedance
4 ohms

Drivers
(1) 8" LD/HP woofer/mid
(1) 1" dome tweeter



Crossover Frequency
1.5 kHz

Suggested Amp Power
50 – 200 watts

Dimensions (h x w x d)
inch: 23.5 x 14.0 x 3.65
cm: 59.7 x 35.6 x 9.3
(fully assembled)

Weight
30 lbs. (13.6kg) boxed ea.

PS112 AMPLIFIED SUBWOOFER

POWER AMPLIFIER
Power Output
400 watts sine wave cont. power

Total Harmonic Distortion
0.03% maximum from 250mw to 400 watts

A-Weighted Hum and Noise
100dB below rated output

IHF Dynamic Headroom
1.1dB

Input Sensitivity
0.4V for rated output

Input Impedance
15k ohms



Maximum Input Signal
9V

Power Guard
Clipping is prevented and THD does not exceed 4% with up to 10dB of overdrive

Power Requirements
120VAC 50/60 Hz at 5 amps

FILTERS AND CONTROLS

Low Pass Filter
40-120 Hz variable with defeat

High Pass Filter
40- 120 Hz variable
(RCA outputs)

Level Control
Variable level control

Low Frequency Boost
3dB at 35Hz

Power Control
5 - 20VDC trigger (1/8" mini-phone jack) or signal-sense (RCA) input, both with 5VDC output (1/8" mini-phone jack)

ENCLOSURE

Enclosure Configuration
Front-firing flared port design

Maximum SPL
115dB

Driver
12" LD/HP® woofer

Dimensions (h x w x d)
inch: 22.5 x 15.0 x 19.0
cm: 57.2 x 38.1 x 48.3

Weight
119 lbs. (54.1kg) boxed ea.