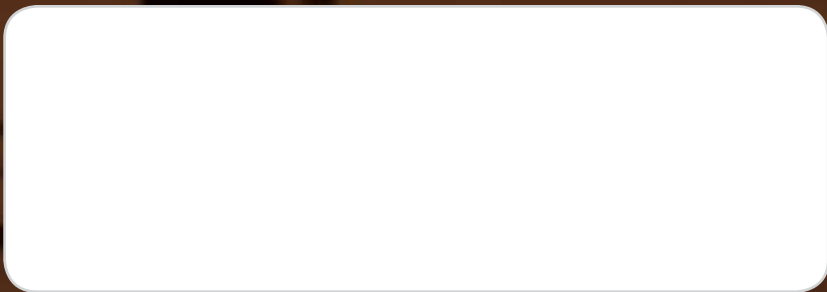


3023 E. Sangamon Ave.  
Springfield, IL 62702



PRESORT STD  
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# Reference Guide



LEGACY AUDIO 217 544 3178 FAX 217 544 1483  
800 283 4644 info@legacyaudio.com

[www.legacyaudio.com](http://www.legacyaudio.com)





## The HD Experience

### Still listening in the 1980s?

Consider this: Your speakers were designed to play back a format that is now a quarter century old – the 16 bit, 44.1kHz compact disc. Did you know that stereo and multi-channel 24 bit audio Blu-ray Discs™ are capable of up to 48 dB more dynamic contrast than compact discs? And that Blu-ray's 192kHz recordings can exhibit more than 4 times the resolution of your CDs?

Playing the new audio formats with an out of date audio system is like showing off your new HDTV monitor with a VCR tape at slow speed. Hear what you've been missing. The LEGACY HD series speakers display the broadest dynamic contrast, bandwidth and resolution in audio. Quick, clear, and with visceral impact. Welcome to a new era of HD listening.





# Helix HD FRONT MAINS

*Helix is the world's most advanced loudspeaker system.*

## Impeccable Design

Helix is the result of years of continuous auditory research and driver development led by Legacy Audio's chief designer and founder, Bill Dudleston. The HELIX speaker system applies cutting edge technologies to establish new performance standards.

- HELIX preserves clarity by avoiding early room reflections.
- HELIX utilizes the exclusive Wavelaunch algorithm for acoustic steering.
- HELIX broadens the listening "sweet spot" via longer projection.
- HELIX delivers greater than 120 dB of SPL full spectrum.
- HELIX utilizes separate amplification for each drive section.
- HELIX benefits from built-in stereo subwoofers powered by 750 watts of ICE power amplification for lower distortion and greater spatial integrity.



## The Speaker Array

Building a more dynamic speaker is like constructing a greater geometric pyramid. Achieving higher peaks demands a proportionally greater base (or in this case, bass).

With assistance from component manufacturers from France, Italy and Canada, Legacy has developed a unique family of drivers for the HELIX system. Symmetrically arrayed neodymium mid-bass and midrange drivers provide a carefully shaped directivity pattern that virtually eliminates sidewall and early floor reflections. A pair of 1" tweeters are splayed precisely to compliment this radiation pattern. Each tweeter takes advantage of dual-pole neodymium magnets. A special lens was designed to provide acoustical impedance to the diaphragms and prevent comb filtering.

Deep bass notes emerge from the Silver-Graphite/Rohacell reinforced 15" subwoofer. This ultra-long throw driver is rear firing for the earliest pressurization and rarefaction. Mounted just above this rear woofer is a phase compensated, wave-terminating 15" driver which minimizes buildup of standing waves.



## Digital Steering

HELIX architecture is based around a sophisticated digital time-compensating processor. Within the digital matrix, the transfer functions for each driver can be derived via summation and subtraction, parametrically equalized, and then time shifted. The result is accuracy; a totally coherent, spatially integrated, acoustic event. Custom room adjustments are readily implemented via serial/USB port.





# Whisper<sup>®</sup> HD

## FRONT MAINS

By utilizing a special directionally controlled array, the Whisper HD is the most precise imaging loudspeaker system available.

Whisper HD has been proven to:

- Improve clarity by preventing early reflections
- Minimize low frequency resonant buildup and placement sensitivity
- Maintain exceedingly low distortion levels
- Deliver a far more realistic dynamic range, via four 15" pistons
- Project a more solid 3-dimensional image
- Generate a sweet spot large enough for multiple listeners



Whisper's unique open air differential array is similar to the world's finest microphone technology.

*"I've never heard a speaker even begin to do what the Whisper does. It's the first speaker whose design addresses every major problem in recreating music. It is not merely an evolutionary refinement in the state of the art, but in fact a revolutionary quantum leap forward. Whispers simply make music sound more alive than any speakers I've ever heard."*

**Tom Port, Better Records**

*"The market is full of products meant to fix room problems by controlling resonances and reflections. Dudleston's approach is to avoid interaction with the room in the first place... The result is a revelation. The Whispers sound far more open with fewer speaker artifacts, than any dynamic speaker in my experience."*

**William Heck, The Sensible Sound**

*"Exceptionally clean, not just in detail resolution, but in reproducing dynamics and subtle changes. The Whispers display exceptional air and life with warmth similar to the finest tube amplifiers... These are great speakers".*

**Anthony Cordesman, The Absolute Sound**

*"Whisper comfortably accommodates a room of nearly any size, presents fewer problems of placement than any other large speaker I have encountered, and fulfills each of Bill Dudleston's design goals and performance claims. The Whisper plays large-scaled works with the sort of grandeur and easy authority I have previously heard only from speakers costing tens of thousands more... A fabulously enjoyable speaker system."*

**Paul Bolin, Stereophile**





# Focus SE

## FRONT MAINS

### FOCUS Silver Edition

*- Marking a quarter of a century of continuous refinement.*

While the Classic was the speaker that first put Legacy on the map, it was the FOCUS that shook up the high end with world class performance in a full range speaker under \$10,000. For Legacy Audio's 25<sup>th</sup> anniversary, Chief Designer, Bill Dudleston pulled out all the stops for the new Silver Edition version, FOCUS SE.

"I started by re-sculpting the cabinet, making it a bit narrower, yet deeper. I stiffened and angled the sidewalls, front baffle, and cabinet top to avoid parallel surfaces and potential standing waves. Facets were machined into the cabinet corners to progressively narrow the baffle with rising frequency. Even the grille of the FOCUS SE has been sculpted to prevent diffraction.

While the driver tolerances on the FOCUS are a stringent  $\pm 1$  dB of the target function, the FOCUS SE drivers are then performance matched to  $\pm 0.25$  dB. The measurement data is then recorded in our database and archived by serial number.

I chose to use Solen metallized polypropylene capacitors imported from France as bypasses in the high frequency network and braided silver cable by Ray Kimber to the upper ribbon. As final assurance, I hand-tune the final crossover network personally, before signing the Silver Edition owner's certificate.

The FOCUS SE makes a statement of quality and performance that I feel is unmatched by any other company at twice the price."

Since some smaller rooms can load up in the 60 to 80 Hz region when driven by full range speakers, a sculpting network can be activated to tame such conditions. It is completely out of circuit until engaged, yet eliminates overhang or 'droning' when needed.



Black chro-med cone feet, turned from solid brass, properly anchor the speaker to the floor boundary. A knurled adjustable leveling washer

and a stabilizing centering disc are incorporated. An elastomeric isolation pad is installed between the cabinet and cone to prevent re-radiation of mechanically induced vibration reaching the listener.

The 14 step Black Pearl finish is cured for three weeks prior to hours of hand polishing and buffing. The completed system is protected by a custom made velvet bag and encased by three inch thick polyethylene foam for transport.





# Focus HD

## FRONT MAINS

Tracking a musical waveform precisely is no simple task for a loudspeaker. Diaphragms must reverse directions more 10,000 times per second, while traveling a total distance as much as two feet per driver in that same second.

The new FOCUS HD incorporates the world's most efficient magnetic structure (patented AURA technology) in the dual 12" aluminum cone woofers. By achieving more magnetic uniformity in the gap, displacements up to 1" remain tightly controlled and linear. Accompanied by Legacy's proprietary stepped voltage crossover, the woofers are immune to DC offset and are turbocharged in the first musical octave.

The 7" mid-bass drivers are Legacy's exclusive silver/graphite technology. Threads of silver are woven into a carbon fiber diaphragm to distribute bending modes across the spectrum, then backed with a layer of ultra-light Rohacell. This remarkable driver exhibits a smooth response over seven octaves, and an unmatched sensitivity of 95 dB (providing 8 times the intensity of a typical high performance 6.5" driver). Beneath the custom phase plug is an additional neodymium wafer. Reverting conventional magnetic losses, the wafer provides a uniform BL product down the entire length of the pole piece.

The unprecedented dynamics of the FOCUS are topped off with two new neo-ribbon drivers. The mid-ribbon features a push pull neodymium magnetic structure with an ultra low mass diaphragm. This ribbon is specifically voiced to provide a seamless integration between the cones and the tweeter above.

Articulating the top end of the spectrum is a pleated ribbon with a custom machined acoustic chamber, a carefully shaped lens to precisely control dispersion, and a neodymium motor structure. Development of this driver was essential to the new FOCUS, as no other ribbon previously available could match the dynamic requirements of high sensitivity, high output, and transient performance. Cymbals will shimmer without a trace of the edginess of hard domes.

*"...the Legacy FOCUS is the finest value that I have ever encountered in high-end audio."*

*Paul Bolin, Stereophile*

*"Sonically, the Focus was like moving from DVD to Blu-Ray...Focus HD can create a recorded environment, and the principle players in it, as none others I have heard in its price class."*

*Douglas Schroeder, Dagogo*



Rosewood Finish





# Classic HD & Studio HD FRONT MAINS

The new Classic HD is designed from the ground up to deliver amazing sound. Great as a front pair in home theater applications; exacting enough for the most critical audiophile. Highs are sweet and clear, vocals are natural and effortless—free of the thin, compressed nasality so common today. Midbass has punch, and bass is solid and well defined.



Natural Cherry Finish

The Legacy folded ribbon tweeter is suspended between front and rear magnets, delivering four times the volume velocity of a flat diaphragm. This provides high efficiency, wide bandwidth and terrific power handling.

The midrange is our own cast frame design, providing a larger radiating surface for reduced distortion and much higher output capability. The diaphragm is our silver/graphite weave, bonded to a stiff rohocell backer. Tucked under the precisely shaped phase plug is a secondary neodymium magnet which concentrates the magnetic field in the voice coil gap. The result is an ultra-smooth response with incredible dynamics.

To keep up with the speed of the midrange and treble required two custom 8" bass drivers. We tooled a deep and rugged cast frame with an extra large mounting surface to allow long excursion and prevent midbass blurring. The cone mass was optimized to provide extended bass without overhang.

The versatile Classic HD cabinetry is as rich and detailed as its sound. Choose from warm cherry, exquisite rosewood or elegant black pearl finishes.

## Studio HD

The new Studio HD is a butt kickin' compact monitor utilizing the same pleated ribbon tweeter and 8" midwoofer as its bigger brother, Classic HD.

Studio has been a favorite among professionals for a decade. The editor of Pro Audio Review wrote in 2008:

*"An excellent imaging speaker system, the Studio HDs are impressive in the amount of information they convey. On 24 bit/96kHz recordings, the Studio HDs sound very natural with accurate presence and imaging deep and wide. The bass also appeared more accurate than my original Studios."*

*The transient response is quite good; cymbals reflect the speed and air of a well recorded setup, without a hint of harshness... just like it sounds in the session.*

*My listening notes contained the word "accurate" over and over. As for negatives with the Studio HDs, I simply found none. They sound great, look good, and are easy to place."*

*John Gatski, PAR*





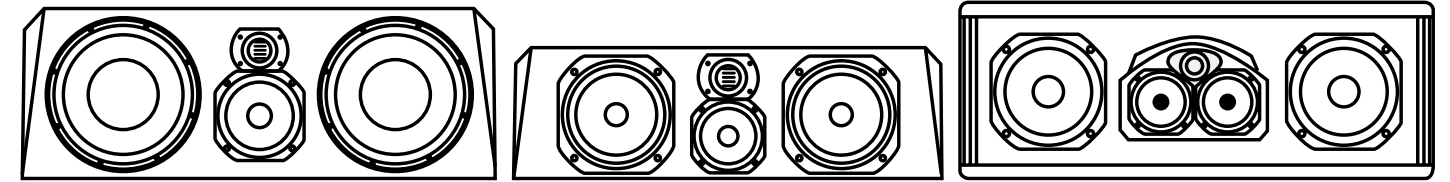


# SPECIFICATIONS



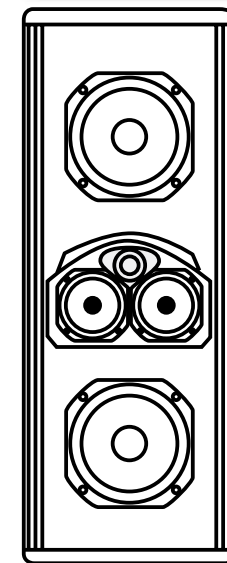
**Helix**      **Whisper HD**      **Focus SE**      **Focus HD**      **Classic HD**      **Studio HD**

Fronts	Helix	Whisper HD	Focus SE	Focus HD	Classic HD	Studio HD
System Type	10 driver, 4 way	10 driver, 4 way	6 driver, 4 way	6 driver, 4 way	4 driver, 3 way	2 driver, 2 way
Tweeter	Neo-Quadra-pole	(1) 1" dual pole neo ribbon, folded Kapton diaphragm	(1) 1" dual pole neo ribbon, folded Kapton diaphragm	(1) 1" dual pole neo ribbon, folded Kapton diaphragm	(1) 1" dual pole neo ribbon, folded Kapton diaphragm	(1) 1" dual pole neo ribbon, folded Kapton diaphragm
Midrange	(4) 6" Curitinear ultra light diaphragm with cast frame	(1) 3" dual pole neo ribbon, vapor deposited kapton diaphragm	(1) 3" dual pole neo ribbon, vapor deposited kapton diaphragm	(1) 3" dual pole neo ribbon, vapor deposited kapton diaphragm	NA	NA
Midwoofer	(3) 15" Carbon pulp with Neodymium motors, cast frame	(4) 7" Rohacell reinforced-Silver Graphite, cast frame	(2) 7" Rohacell reinforced-Silver Graphite, cast frame	(2) 7" Rohacell reinforced-Silver Graphite, cast frame	(1) 7" Rohacell reinforced-Silver Graphite, cast frame	(1) 8" Rohacell reinforced-Silver Graphite, cast frame
Subwoofer	(1) 15" Rohacell reinforced-Silver Graphite, cast frame, 750 watt ICE Amplifier	(4) 15" carbon/pulp composite	(2) 12" spun aluminum diaphragm, rubber surround, total enclosed neo motor, long throw suspension, with cast frame	(2) 12" spun aluminum diaphragm, rubber surround, total enclosed neo motor, long throw suspension, with cast frame	(2) 8" Rohacell reinforced-Silver Graphite, cast frame	N/A
Low Frequency Alignment	Multi-coil stabilized	2nd order differential	Assisted 6th order Butterworth, vented	Assisted 6th order Butterworth, vented	B6 Assisted	B4 Reflex
Frequency Response	16-30K, includes 24 bit processor	22-30K, includes 24 bit processor	16-30K	18-30K	32-30K	41-30K
Impedance	4 Ohm	4 Ohm	4 Ohm	4 Ohm	4 Ohm	4 Ohm
Sensitivity (Room, 2.83V @ 1m)	100 dB	95 dB	95.4 dB	95 dB	94 dB	93 dB
Recommended Amplification	Treble 10-200 watts, Mid 10-300 watts, Bass 50-500 watts	10-600 Watts	10 - 500 Watts	10 - 500 Watts	25 - 300 Watts	25 - 200 Watts
Crossover	60, 400, 4.5K	300, 3K, 10K	120, 2.8K, 8K	120, 2.8K, 8K	450, 4K	2.8K
Binding Posts	3 pair	2 Pair	2 Pair	2 Pair	2 Pair	2 Pair
Dimensions HxWxD (inches)	74.5 x 18.5 x 23	63 x 17 x 13	56 x 13 x 16	55 x 15.5 x 13	44 x 10.75 x 13	13 x 10.8 x 10.8
Weight	320 lbs. each	210 lbs. each	200 lbs. each	195 lbs. each	110 lbs. each	28 lbs. each



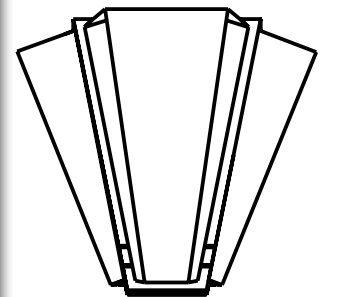
**Marquis HD**      **Silverscreen HD**      **Harmony Center HD**

Centers	System Type	Low Frequency Alignment	Freq. Response (Hz, +/-2dB)	Impedance	Sensitivity (Room, 2.83V @ 1m)	Crossover	Dimensions (Inches)	Weight
Marquis HD	4 driver, 3 way	3rd Order Butterworth	22-25K	4 Ohm	95 dB	250, 4K	38 x 14 x 13	80 lbs.
Silverscreen HD	4 driver, 3 way	4th Order Butterworth	41-25K	4 Ohm	93.5 dB	2.2K, 12K	29.5 x 9 x 10	45 lbs.
Harmony Center HD	5 driver, 3 way	3rd Order Butterworth	49-25K	4 Ohm	91 dB	300, 3K	40.75 x 6 x 12.5	52 lbs.

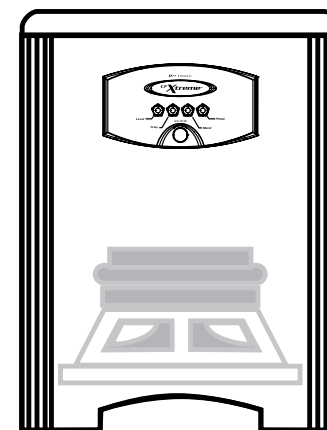


**Harmony HD**

Surrounds	Harmony HD	Phantom HD
System Type	5 driver, 3 way in-wall	4 driver, 3 way on-wall
Low Frequency Alignment	3rd Order Assisted	Boundary Compensated, M-S Array
Freq. Response Hz	49-25K	50-25K
Impedance	4 Ohm	4 Ohm
Sensitivity (Room, 2.83V @ 1m)	92 dB	93 dB
Crossover	300, 3K	200, 3K
Mounting	3.25" depth fits between studs 16" on center	Wall plate included
Dimensions (Inches)	40.75 x 6 x 16.25	21 x 9 x 19
Weight	54 lbs.	48 lbs.

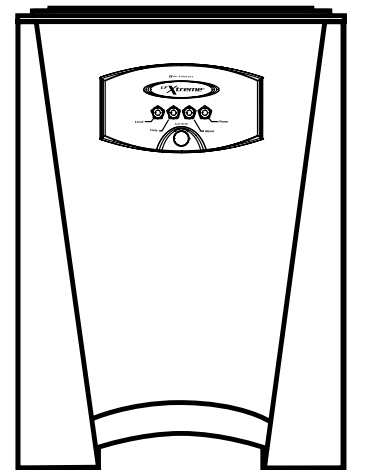


**Phantom HD**



**Point One HD**

Subwoofers	Point One HD	Xtreme HD
System Type	Subwoofer, pneumatically coupled	Subwoofer mass loaded, pneumatically coupled
Low Frequency Alignment	6th Order/Dynamic Braking	6th Order/Back EMF canceling circuit
Internal Amplification	750 Watt, ICE Power	1000 Watt, ICE Power
Freq. Resp. Hz	18- 150	16- 100
Input Imped.	10K	10K
Phase adjust.	Cont. +/-180	Cont. +/-180
Blend EQ	+/- 12 dB @45Hz	+/- 12 dB @45Hz
Max. SPL	117dB @1m	120dB @1m
Low Pass Filter Slope	18 dB per octave	18 dB per octave
Crossover	45-150	40-100
Dimensions (Inches)	24 x 17 x 17	28 x 18 x 18
Weight	95 lbs.	115 lbs.



**Xtreme HD**



# CENTER SPEAKERS

You are looking at a selection of the finest center channel speakers in existence. Each is carefully designed to provide optimal coverage and dynamic range for their applications.

Today there is much more demand placed on center channels beyond the previous simple reinforcement of dialogue. From kick drums to collisions, the center speaker is working harder than ever.

The Silverscreen HD is a perfect match for Classic HD, Focus HD, or with TV monitors under 52 inches. It is designed to provide wide dispersion and can be placed above or below the screen. The Silverscreen HD utilizes our pleated ribbon tweeter and our 5.25" silver/graphite midrange housed in a sealed sub-enclosure. The stylish cabinet is well braced to deliver impact from a pair of long throw, high efficiency, cast frame 8" woofers featuring silver/graphite cones and extended phase plugs for smooth, off-axis response.

## Silverscreen HD



## Harmony Center HD

The Harmony HD center speaker takes in-wall performance to the max. Using the same driver array found in the Harmony HD, the horizontally optimized cabinet literally straddles wall studs on 16" centers. The intricately designed enclosure couples the internal chambers to maximize cubic air displacement and features an ingenious (and patented) shock mounting scheme. The result is high efficiency, low distortion and ultra-smooth response from a gorgeous built-in cabinet. Harmony HD keeps a low profile while delivering free-standing performance.



## Marquis HD

If you haven't experienced the Marquis HD, you are missing out on something very special. A worthy companion to Focus SE, Whisper HD and even our flagship tower Helix, the Marquis HD offers the piston area to do the center channel the way it should be done; dual 12" Aura™ encapsulated neodymium motor structures with custom heat sinks, high temperature voice coils and spun aluminum diaphragms offering 1" of linear travel. Our unique Rohacell reinforced silver/graphite 7" with dual pole neodymium drive, and the sweetest ribbon highs... fully unthrottled. Marquis HD can be placed above or below a 60" monitor, or behind a perforated projection screen.





## SIDE & REAR SPEAKERS

The role of the surround speaker is to create a convincing, continuous envelopment for each listener, without introducing distractions such as bright spots, dead zones, or timbre imbalance.

Legacy Audio offers versatility and performance in surround speaker options by providing on-wall, in-wall, stand mount and pivoting bracket designs. You can be assured that each of these speakers is of premium quality and is carefully voiced to integrate within the Legacy line.

The Phantom HD on-wall speaker provides a multi-polar radiation pattern for the ultimate in spatial envelopment. The front firing 8" Silver/Graphite mid-bass and the 1" spiral ribbon tweeter are precisely angled for optimal coverage of the listening area, while the bipolar 5.25" drivers fill the off-axis response. On-wall mounting is accomplished easily with a double keyhole mounting bracket (included) which locks the speaker securely into position.

The Harmony HD offers high quality side/rear performance from a 'built-in' low profile design. The dual 8" Silver/Graphite woofers provide great punch while splayed dual 5.25" mids and a soft-dome tweeter deliver unsurpassed clarity from an in-wall. One rear pair of Harmony HD required for 5.1 systems, two pair for 7.1 systems or longer rooms.

### Harmony HD

### Studio HD

The versatile Studio HD may be stand or shelf mounted and is extraordinary for rear channel applications. Timbre matched to our renowned tower designs, this compact speaker is in a price performance class of its own. We dare you to compare it to anything near its size. Studio HD may be wall mounted using pivoting brackets rated for 30 lbs (not included).

### Phantom HD





# SUBWOOFERS



Cramming a 12" woofer into a compact box does not make it a subwoofer. By its very nature it will be inefficient, exhibit limited dynamic range, and have inherently high distortion.

Our subwoofers are not just gorgeous pieces of furniture, but have the guts and internal volume to get the job done efficiently. The 15" Silver Graphite cone is bonded to an ultra-stiff Rohacell layer and driven by a massive 35 lb. magnet

structures. A high speed rubber suspension is incorporated with a high temperature 3" voice-coil. The voice-coil lead wires are initially braided, then woven into the spider to prevent fatigue from heavy use.

The front mounted preamp control panel allows continuous adjustment of level, crossover frequency, and phase. A special blend EQ control assures perfect integration with your speaker system. The internal amplifier modules

are the renowned ICE POWER design. These extremely reliable, wideband units are of the same type used in our flagship HELIX speaker system.

The 750 watt Point One HD subwoofer offers speaker level inputs, stereo line level and LFE inputs; the Xtreme HD also includes a balanced (XLR) input and a carefully weighted down-firing slave radiator.

The 1000 watt Xtreme HD also incorporates a dynamic-braking coil which utilizes driver back EMF to counter overshoot as the driver reverses direction or comes to a halt.

Using two or more carefully positioned and phased subwoofers can further reduce distortion, minimize response variation due to room modes and enhance transient response. See white papers on our website regarding this topic.



Point One HD



Xtreme HD





Harmony HD is the no compromise solution when demanding great sound from an in-wall speaker system. Elegant, yet powerful, Harmony is built from the finest components available and utilizes a patented shock mounting system making installation a breeze while greatly reducing wall chatter.

An exclusive multi-chamber construction method enhances performance and allows the main channels to fit between any wall studs on 16" centers. The perfectly matched Harmony HD Center straddles



two studs and will deliver exceptional sound quality from your movies and concerts.

With a choice of three finishes, Harmony HD is at home with any décor. Choose gloss black pearl for a clean modern look, rich rosewood for a traditional look, or warm cherry for a cozy environment.

*"...The Harmony ensemble will forever change your perception of what in-wall speakers can be."*

**Performance Rating: 98**

**Build Quality: 98**

**Darryl Wilkinson, Home Theater**

## Harmony HD In-Wall System

*"... perhaps the first truly high-performance in-wall we've ever heard... it's craftsmanship matched its sonic appeal - it was surprisingly deep and dynamic, but very natural sounding through the midrange and highs."*

*Barry Willis -  
Stereophile, Guide to Home Theater*

