

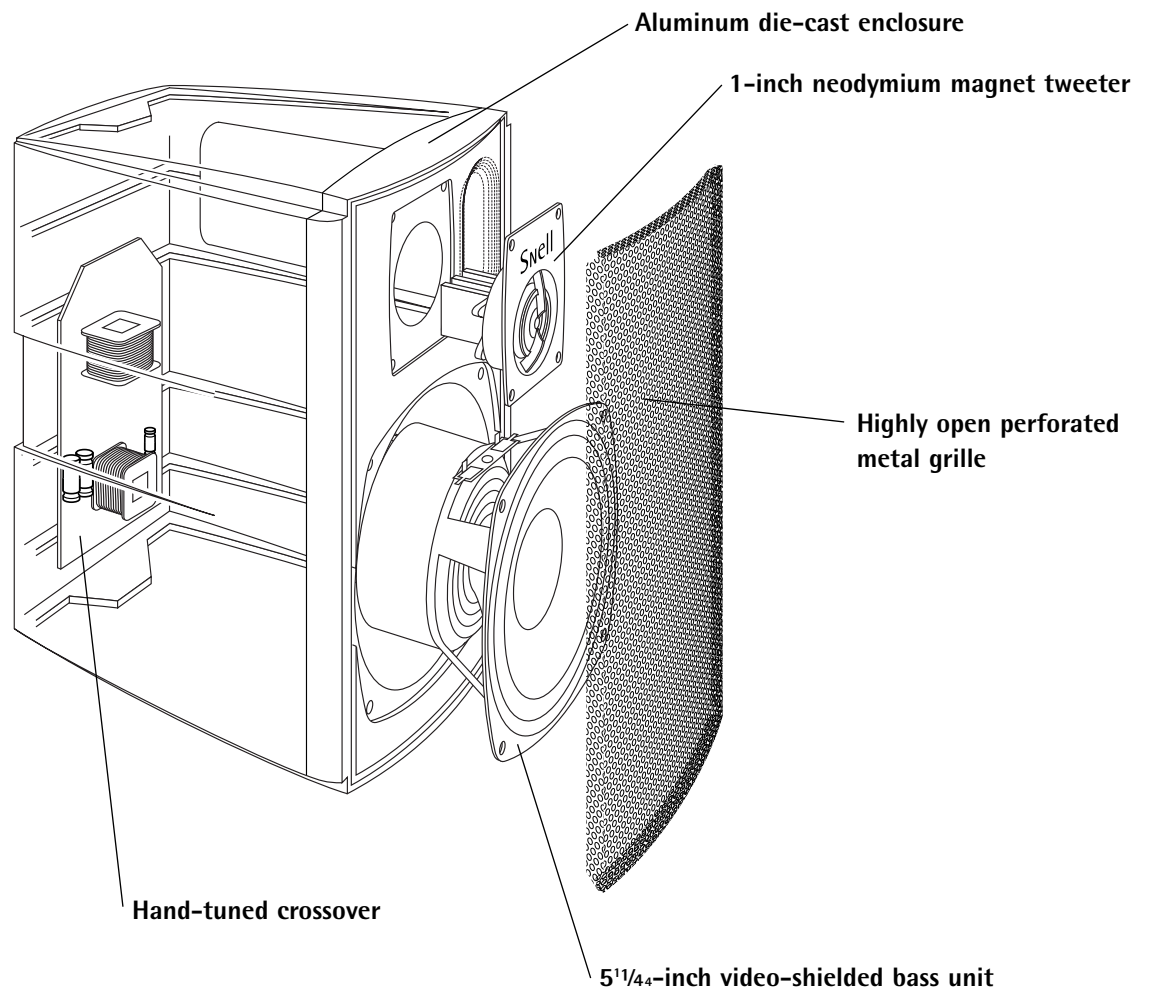
CLS.5
Owner's Manual

CLS.5

Snell

SPECIFICATIONS

Specifications	CLS.5
Frequency Response (± 2 dB)	80Hz–20kHz, -6dB @ 60Hz
Recommended Amplifier Power	15–150 watts (above 80Hz)
Nominal Impedance	8 ohms
Sensitivity [1 watt (2.83v) at 1m]	89dB SPL
Tweeter (video-shielded)	1-inch (25mm) black-anodized aluminum dome with neodymium magnet structure
Bass Unit (video-shielded)	5 $\frac{1}{4}$ -inch (135mm) cast aluminum basket. Copolymer cone and butyl rubber surround resist environmental extremes.
Grille	Perforated aluminum (47% open), powder-coated paint
Dimensions (HxWxD)	10 $\frac{1}{2}$ x 6 $\frac{5}{16}$ x 8 $\frac{1}{4}$ " 26.7cm x 16cm x 20.5cm
Weight/each	11 lbs (5kg)
Finish	Black or white powder-coated paint



PRODUCT DESCRIPTION

The CLS.5 is a high-performance die-cast monitor loudspeaker for use wherever space is limited and in a wide variety of applications. The CLS.5 is a two-way design with a complex crossover for best sound quality. This two-way monitor uses a 1-inch black-anodized aluminum dome tweeter and a 5¹/₄-inch bass unit. Both are video-shielded for placement near a TV. An extremely rigid and heavy die-cast aluminum enclosure contributes minimally to the CLS.5's sound.

Grille Design

The grille is made of perforated metal with a high percentage of open areas to minimally affect high frequency performance.

Enclosure Shape

Besides exhibiting distinctive styling, the enclosure uses careful design to maximize performance. Specifically, the bass reflex port tube is carefully flared at both ends to minimize wind noise. The area surrounding the tweeter is smooth with minimal recesses to maintain a smooth and transparent high frequency response.

Hand-Tuned Crossover

These networks adhere to an "in-phase" or Linkwitz-Reilly design (time alignment and coherency are achieved through the transition region from driver to driver.) Each crossover is individually tuned by production technicians to within ± 0.5 dB of the Master Reference, assuring predictable performance in your home.

The CLS.5 is ideal for use as:

- fi *All channels of a surround system where space is limited.*
- fi *The front stereo pair of a compact music system.*
- fi *A multiroom extension speaker.*
- fi *A wall-mounted surround of a larger home theater system.*
- fi *An extension speaker in environments that need its weather-resistant characteristics.*

Heat Sink/Terminal Plate

Heat-producing crossover components are mounted to a die-cast aluminum heat sink for stable, consistent performance at high power. This large heat sink also draws heat from inside the cabinet, keeping critical driver components cooler. The tweeter has its own multifinned aluminum heat sink.

Video-Shielded

Video-shielded driver complement provides unlimited placement options.

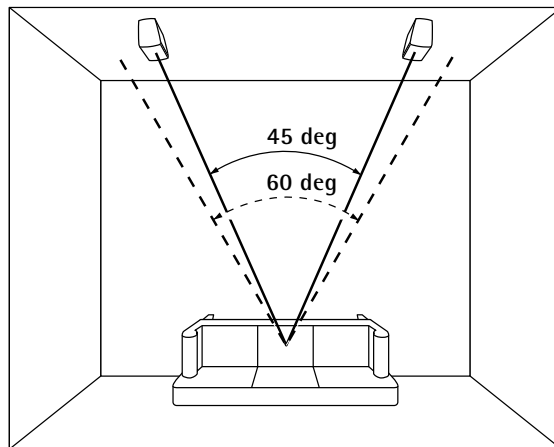
HOW TO PLACE YOUR SPEAKER SYSTEMS

Stereo Image

The distance between the speakers determines the width of the stereo image. If the speakers are placed too close together, the image will be too narrow; too far apart and the blend will suffer, creating a hole in the middle. When properly placed, your speakers will create a continuum of "virtual images" from left to right, with an illusion of sound outside, in front, and behind the speaker systems.

- fi *We recommend an angular separation between 45 and 60 degrees (when viewed from above). This is equivalent to a separation between the speaker systems that is about 85% to 100% of the distance to either of the speakers.*
- fi *Aim the center of the speaker to your ear level while listening in a seated position.*

Creation of sounds between the speakers requires precise placement. The distance from the left speaker to the listener location should equal the distance from the right speaker to the listener location. We advise using a tape measure to equalize these two distances to the primary listening position. The payoff will be well worth the time and effort.



Toe In

"Toe in" refers to the angling of the speaker systems toward the listening location. Toe in is a matter of taste. As the degree of toe in increases, the stereo effect becomes more direct-sounding, like a pair of headphones. Wider angling will give a more diffuse sound with perhaps a less well-defined central image. Use the pivoting bracket to experiment for the best effect.

Location Affects Bass Level

Close proximity to rigid wall, floor, and ceiling boundaries will accentuate the bass level, but may cause uneven bass. Experiment until you find the best overall sound for your room. Choose a source with a heavy and continuous bass line, repeat a short section until you have a firm impression of it in your mind, and then try another speaker location. Repeat this process until you are content with the bass response you are getting. Moving your listening position may affect the sound as much as moving the speakers. Try different listener locations as well as speaker locations.

- fi *Try the speakers at the intended location before permanent mounting.*
- fi *Moving speakers nearer to a wall increases bass level.*
- fi *Moving speakers toward a corner will increase bass level even more.*
- fi *Bass response is smoother if you keep the distance from the back wall and the distance from the side wall different.*
- fi *The CLS.5 was designed to have the optimum balance when close to one boundary surface.*

HOW TO MOUNT YOUR CLS.5 LOUDSPEAKER

Bookshelf Mounting

For shelf mounting, use the enclosed conical feet. The feet are rubber-tipped to absorb vibration and to prevent marring your shelves. The feet can be used to tilt the system forward or backward if needed. For example, using two feet at the front and no back feet will tilt the system upward approximately 10 degrees. Two feet at the back and none at the front will tilt the system forward slightly. Bringing the two back feet forward toward the center line will increase the down tilt (if mounted on a high shelf). You might try the feet before permanent mounting. Mount the feet by peeling back the paper covering over the self-adhesive pads. Make sure that the area for attachment is clean and dry.

Bracket Mounting

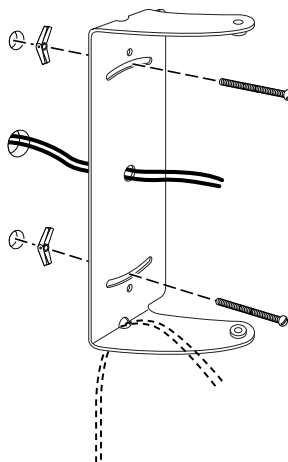
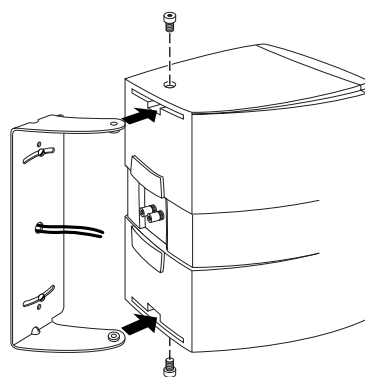
The CLS.5 loudspeaker includes a versatile wall-mounting bracket. With it, you can aim the system over a wide range of angles. The bracket slots into the back of the CLS.5 to preserve its appearance. Wires can come through the wall and through the center of the bracket; or if run external to the wall, can go through small holes at either end of the bracket.

Note: The design of the bracket allows a wide swing from perpendicular to the wall to nearly parallel to the wall in one direction. Before mounting the bracket, make sure that you are using the proper bracket orientation to allow the system to swing in the desired direction.

Note: Use the two toggle bolts supplied for mounting to plaster board. Any smaller inserts will not be sufficient to hold its weight.

1. Mount the bracket to the wall first and then mount the speaker to the bracket.
2. Mark the location for drilling through the bracket's mounting holes. Then drill two $\frac{1}{4}$ -inch diameter holes.
3. Insert the bolts through the bracket and start the toggle bolts onto the threads.

4. Pass the wire through the appropriate hole and then push both toggle bolts through the $\frac{1}{4}$ -inch holes. The toggle bolts will fold up to go into the hole and then spring back. It may be easier to tighten the toggle bolts by pulling outward on the bracket while tightening the bolts. Proceed with care because once the toggle bolts are inserted into the wall, they will not come out.
5. Once the bolts are tight, connect the wires and mount the speaker to the bracket. The supplied Allen Bolts and hex wrench will hold the speaker tightly at the desired orientation.



Aftermarket Mounts

A single tapped hole on the back of the system can be used for any of the available pivoting brackets that use a $\frac{7}{16}$ by 20 thread.

When Used As a Center Channel

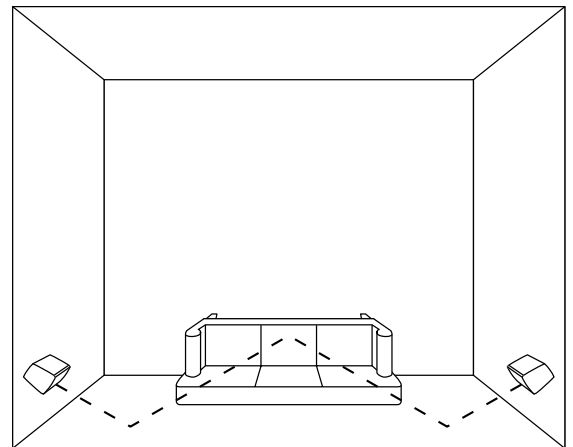
The center channel keeps dialog or soundtrack information centered in the listening area. Therefore, its placement relative to the left and right speakers is critical.

- fi *Place the speaker on top of or beneath your TV, with its front edge as far forward as practical. Try to keep the front of the speaker flush with the front of the screen.*
- fi *Use two of the rubber-tipped feet along the back edge of the loudspeaker to raise it to be parallel to the TV screen.*
- fi *Try to place all front speakers at approximately the same height. If possible, have the center system's height within 2 feet (60cm) of the height of your left and right speakers.*
- fi *If you need to place the speaker any higher or lower, angle it toward ear level.*

When Used As a Surround Speaker

Surround speakers play a different roll than front speakers. With three well-placed front speakers arrayed over a fairly narrow angular area, we can achieve a precise aural image both at and between the speakers. By contrast, the surrounds have the combined task in that they must create an illusion of many diffuse sound sources in the vast area beyond the narrow arc of the front speakers, yet allow for more directed pans of off-screen objects. As the best compromise, the surrounds should be placed to achieve a semidiffuse effect.

- fi *Mount high and to the sides or rear of the main listening area.*
- fi *Aim the speakers away from the listeners to make them less "visible" as the source of surround sound.*
- fi *Side-mounted speakers can be aimed to bounce sound off of the ceiling. Rear-mounted speakers might bounce sound off the back wall or the ceiling.*
- fi *Use the pivoting bracket to experiment for the best effect.*



CONNECTING THE SPEAKERS

Connecting to a Surround Processor

When using a powered subwoofer:

- fi Select the **SMALL** or **NORMAL** setting on your receiver or processor for your main and center channels. This routes all bass information (typically below 120Hz) to your subwoofer.

When not using a powered subwoofer:

- fi Select the **LARGE** setting on your receiver or processor for your main speakers. This routes all bass information (typically below 120Hz) to your main speakers.

Match the sound levels of each speaker:

- fi Your home theater system most likely includes a test signal that simplifies level matching. Refer to the instructions provided with these electronics.

Choosing Cable

We recommend 16-gauge cable or thicker for runs up to 25 feet (8m) and 12-gauge wire or thicker for longer runs.

Connecting with bare wire:

- fi Insert bare wire into holes and tighten.

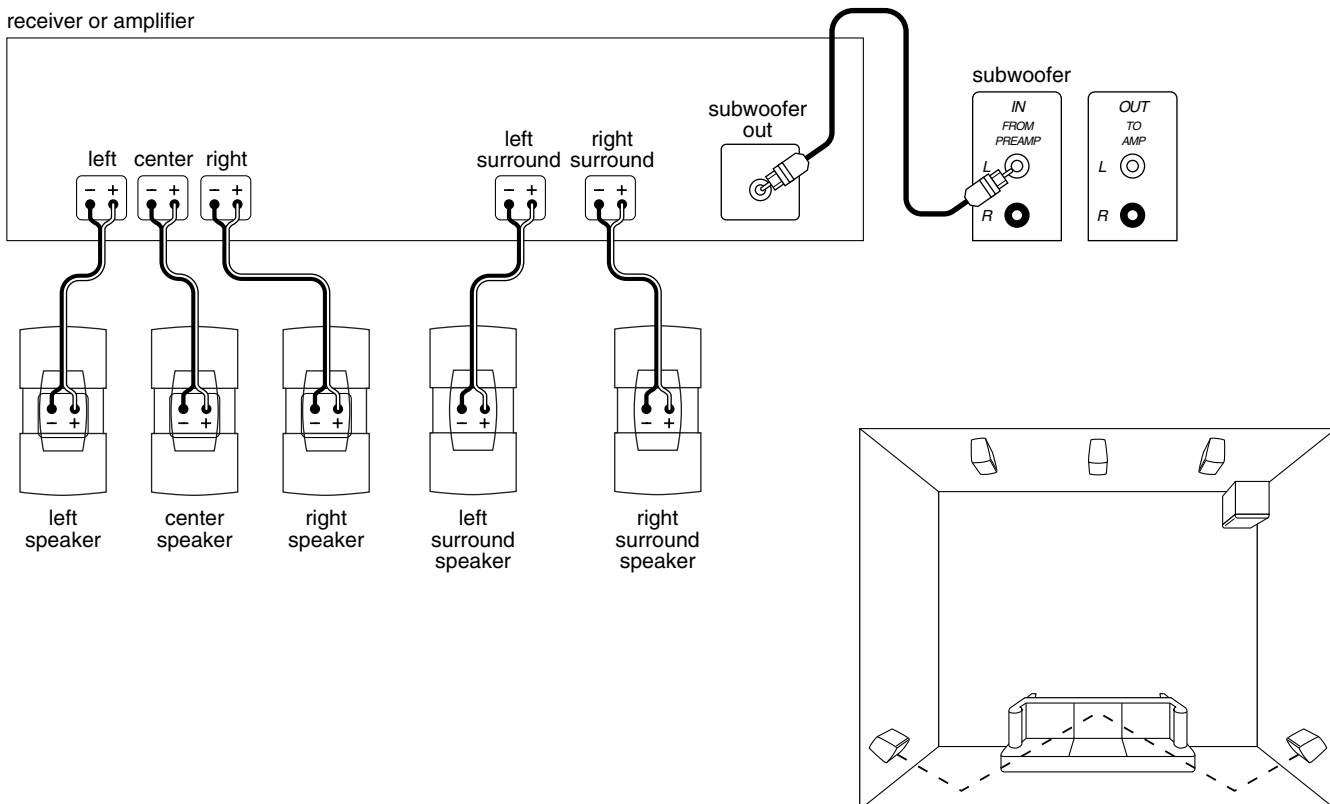
Connecting with banana plugs, spade lugs, or pins:

- fi The binding posts accept standard banana plugs and pins, and can accommodate spade lugs up to $\frac{5}{16}$ inch.

Warning! To prevent electrical shock, always switch off the amplifier or receiver when making connections to the speaker system.

Basic Connections

- fi When making connections, be sure to connect + to + (red) and - to - (black).



HOW TO CARE FOR YOUR SPEAKERS

- fi *Use a soft terry cloth towel slightly dampened with water or a mild detergent. The towel should be just damp enough to wipe the surface clean without leaving a trail of moisture.*
- fi *Do not use abrasive cleaners or any cleaner containing chemicals harsher than those found in glass cleaner.*

LISTENING LEVELS AND POWER HANDLING

- fi *The power recommendation for the system assumes you will operate the amplifier in a way that will not produce distortion. All speakers can be damaged by a modest amplifier if it is producing distortion. If you hear a gritty noise or other signs of strain, turn down the volume. Prolonged or repeated operation of your speakers with a distorted signal can cause*
- damage that is not covered by the warranty. Especially important with smaller speakers is that you do not overdrive their bass capability. Watch for noises such as pops caused by the music's bass line. Use of the loudness control and/or full bass boost at louder volumes is likely to overdrive the woofer. Use such controls sparingly.*

LIMITED WARRANTY

For five years from the date of purchase, Snell Acoustics will repair for the original owner any defect in materials or workmanship that occurs in normal use of the speaker system, without charge for parts and labor.

Your responsibilities are to use the product according to the instructions supplied, to provide safe and secure transportation to an authorized Snell Acoustics service representative, and to present proof of purchase from an authorized Snell dealer in the form of your sales slip when requesting service.

Excluded from this warranty is damage that results from abuse, misuse, accidents, shipping, repairs, or modifications by anyone other than an authorized Snell Acoustics service representative. This warranty is void if the serial number has been removed or defaced.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

If Service Seems Necessary

Contact the dealer from whom you purchased the speaker system. If that is not possible, call us at 978-538-6262, or write to:

Snell Acoustics
300 Jubilee Drive, PO Box 3717
Peabody, MA 01961-3717

We will promptly advise you of what action to take. If it is necessary to return your speaker system to the factory, please ship it prepaid. After it has been repaired, we will return it freight-prepaid in the U.S. or Canada.

Snell

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