

Owner's Manual

B7
Tower

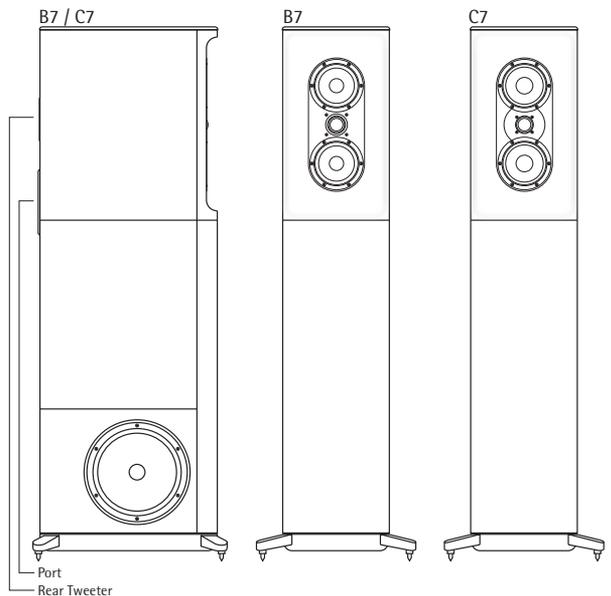
C7
Tower

D7
Tower

CR70
Center Channel

Snell

SPECIFICATIONS	B7	C7
Frequency Response ($\pm 3dB$)	35 Hz–20 kHz	35 Hz–20 kHz
Recommended Amplifier	50–300W	50–300W
Nominal Impedance	4 ohms	4 ohms
Sensitivity (2.83v at 1m)	89dB SPL	89dB SPL
Tweeter/Midrange	1 inch SEAS silk dome, dual 4 1/2-inch machined magnesium midranges, 1 inch rear tweeter	1 inch SEAS silk dome, dual 4 1/2-inch treated paper midranges, 1 inch rear tweeter
Bass Drivers	Dual 8-inch (203mm) aluminum cone, "Force Balanced" mounting	Dual 8-inch (203mm) aluminum cone, "Force Balanced" mounting
Crossover Point	300 Hz / 2.8 khz	300 Hz / 2.8 khz
Boundary Compensation	Yes	Yes
Grille	Perforated steel with black powder-coat paint	Perforated steel with black powder-coat paint
Dimensions (HxWxD)	47 1/4 x 9 1/2 x 16 inches (1200 x 241 x 406mm)	47 1/4 x 9 1/2 x 16 inches (1200 x 241 x 406mm)
Finish*	Natural cherry or Black-painted walnut	Natural cherry or Black-painted walnut
Shipping Weight	115 lbs (52.2 kg) / each	115 lbs (52.2 kg) / each



* Custom paint and grilles are available for an extra charge

D7

CR70

38 Hz–20 kHz

62 Hz–22 kHz

50–250W

50–250W

4 ohms

4 ohms

90dB SPL

89dB SPL

1" SEAS silk dome,
1 inch rear tweeter

1 inch SEAS silk dome, with
a 4-inch treated paper
midrange

Dual 6 $\frac{1}{2}$ -inch (165mm) SEAS
treated paper cone,
6mm excursion

Dual 6 $\frac{1}{2}$ -inch (165mm) SEAS
treated paper cone,
6mm excursion

400 Hz / 2kHz

375 Hz / 3.2kHz

Yes

Yes

Perforated steel with
black powder-coat paint

Perforated steel with
black powder-coat paint

40 $\frac{1}{2}$ x 8 x 12 inches
(1029 x 203 x 305mm)

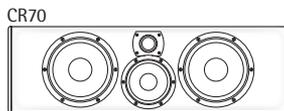
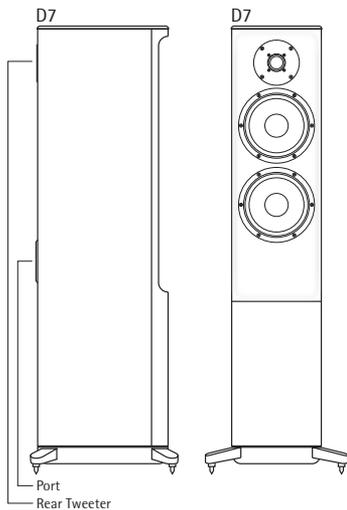
8 x 25 $\frac{7}{8}$ x 12 inches
(203 x 657 x 305mm)

Natural cherry or
Black-painted walnut

Natural cherry or
Black-painted oak

66 lbs (30 kg) / each

52 lbs (23.5kg) / each



PRODUCT DESCRIPTION

The Snell B7, C7 and D7 are high performance tower-configuration loudspeakers, suitable for use in a wide variety of applications. The CR70 is a center channel speaker designed and voiced to work with the other Series 7 models. Most models feature a D'Appolito Array MTM design. All the Series 7 models feature exceptional cabinet construction, superior drive units, and complex crossovers, which contribute to their exceptional sound quality.

The Snell B7, C7 and D7 are ideal for use as:

- ▶ *The main speakers of a music system*
- ▶ *Front channel speakers of a surround system*

Note: The four legs supplied with the B7, C7 and D7 *must* be attached to the base of the cabinet. This is necessary for stability as well as bass performance. The legs and mounting hardware are in the accessory box shipped with each speaker. Floor spikes are included

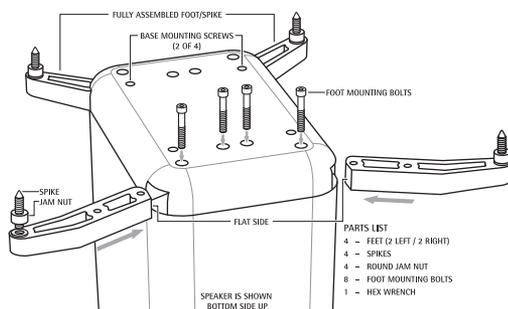
For A/V systems the CR70 is the perfect center channel speaker for the use in systems with the other Series 7 models

These Snell loudspeakers reveal the depth, impact and nuance in every piece of music and every movie soundtrack. Handcrafted in Massachusetts from real wood and solid aluminum, the elegant Series 7 models, with their soft lines and superb finish, plays perfect host to the technology inside.

INSTALLING THE FEET

Before the B7, C7 and D7 are connected you must install the feet. The feet improve the stability of the speakers and helps avoid injury or damage from the speaker falling over.

Carefully turn the speaker over on its side, then onto its top. Do this on a carpeted surface to avoid damage to the cabinet finish. Insert the four feet into the openings in the corners of the cabinet. Insert the foot mounting bolts through the bottom of the cabinet. Tighten the bolts with the supplied hex wrench.



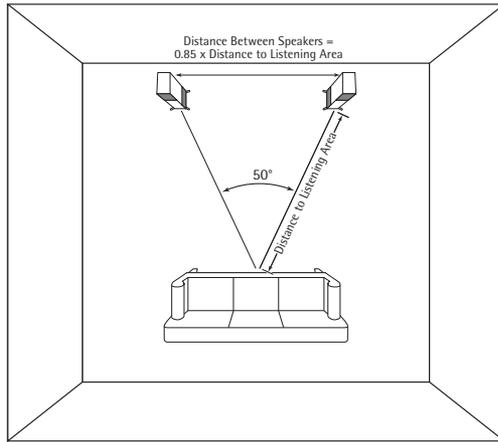
If you are using the supplied carpet spikes, assemble the spikes and jam nuts and thread them into the feet. Do not tighten the jam nuts until the speaker is turned back upright and the spikes have been adjusted to compensate for any irregularities in the floor.

HOW TO PLACE YOUR SPEAKER SYSTEMS

Front Speaker Separation

The distance between the front speakers in a dedicated music system, or an A/V system, 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.

- *We recommend an angular separation of about 50 degrees (when viewed from above). This is equivalent to a separation between the speaker systems that is about 85% of the distance from the speakers to the listener location.*



Speaker Distance

The left and right speakers both be the same distance from the listener location. We advise using a tape measure to equalize these two distances to the primary listening position. The results will be well worth the time and effort.

Center Channel Speaker Placement

In a multichannel system, the center channel keeps dialogue or soundtrack information centered. Therefore, its placement relative to the left and right speakers is critical. The CR70 should be placed directly above or below the television screen in an A/V system. Use the location that is closest to ear level. Place the CR70 with its front edge as far forward as practical. Try to have the front of the speaker flush with the front of the screen.

Avoid placing the CR70 in a partially enclosed area. This can produce response errors in the lower midrange. An open area, near a wall, is the best location.

The CR70 speakers are designed to produce a very smooth response over as wide a range of radiated angles as possible. Like all speakers of this type, the response evenness is maintained over a wider horizontal arc than vertical. Take this into account when placing and aiming your speakers.

- *Try to place the CR70 so it is within 2 feet (60cm) of the height of the midrange/tweeter arrays of the left and right front speakers.*
- *If the speakers are mounted very high or very low, aim the center of the speaker to your ear level while listening in a seated position.*

Toe-In

"Toe-in" refers to the angling of the speakers toward the listener 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. Speakers not toed-in will give a more diffuse sound with a less defined central image. In an A/V system with a center channel speaker it will won't be necessary to toe-in the left and right speakers unless they are separated by more than the ideal amount.

Location Affects Bass

As speakers are moved closer to rigid room boundaries - the walls, the floor, and the ceiling the deep bass part of the sound range is accentuated. However, if speakers are too close to the room boundaries, particularly corners, the bass output can be uneven. Furthermore, the B7, C7 and D7 should be placed at least 18-inches (0.5m) from the wall behind them so the bass port and rear tweeter will perform properly. Experiment until you find the best overall sound for your room. Choose a musical selection with a strong, continuous bass line. Repeat a short section until you have a firm impression of it in your mind, then try another speaker location. Repeat this process until you are content with the bass response you are getting. Moving your listening position will affect the sound as much as moving the speakers. Try different listener locations as well as speaker locations.

CONNECTING THE SPEAKERS

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

Choosing Cable

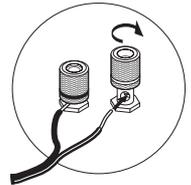
We recommend 16 gauge cable or thicker for runs up to 25 feet (8m) and 12 gauge wire or thicker for longer runs. (We use a custom-configured 12 gauge oxygen-free cable in our cross-over networks.)

Connecting with bare wire:

- ▶ *Insert bare wire into holes and tighten.*

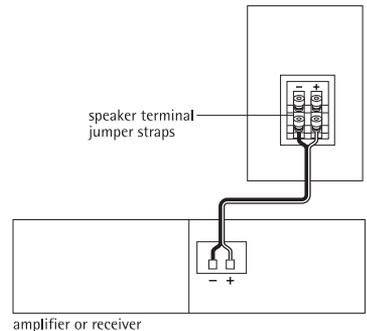
Connecting with banana plugs, pins or spade lugs:

- ▶ *The gold-plated binding posts accept standard banana plugs and pins, and can accommodate spade lugs to 5/16-inch.*



Basic Connections

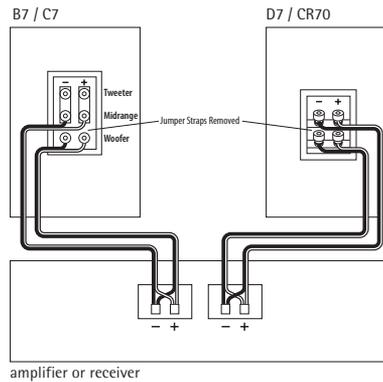
- ▶ *Keep the speaker terminal jumper straps in place*
- ▶ *Connect the wires to any of the terminal sets.*
- ▶ *When making connections, be sure to connect + to + (red) and - to - (black).*



Bi-Wiring

Performance can be improved by using two sets of speaker wires to connect the speakers to the amplifier

- ▶ Use equal lengths of the same kind of cable when bi-wiring each speaker
- ▶ Unscrew the terminals and remove the jumper straps between the woofer and tweeter or, on the B7 and C7, between the woofer and midrange.
- ▶ When making connections, be sure to connect + to + (red) and - to - (black).

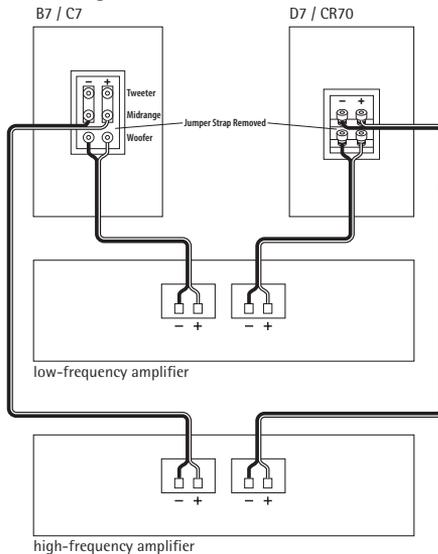


Bi-Amplifying

Performance can be further improved by using multiple amplifiers to drive the speakers. There are two ways of doing this.

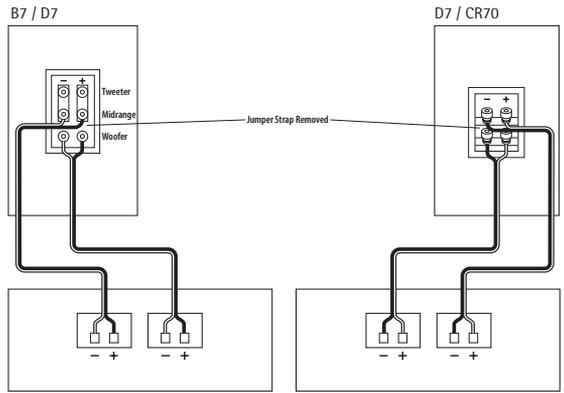
Using One Amplifier for the Bass and One for the High End

- ▶ Unscrew the terminals and remove the jumper straps between the woofer and tweeter, or on the B7 and C7, between the woofer and midrange.
- ▶ Connect the cables from the bottom set of terminals to the amplifier driving the bass unit
- ▶ Connect the cables from the top set of terminals to the amplifier driving the tweeters
- ▶ When making connections, be sure to connect + to + (red) and - to - (black)
- ▶ Do not use an external crossover. It will interact with the phase and frequency response of the speaker.



Using One Amplifier for Each Speaker

- ▶ Use two identical amplifiers
- ▶ Unscrew the of terminals and remove the jumper straps between the woofer and tweeter or, on the B7 and C7, between the woofer and midrange.
- ▶ Connect the cables from the bottom set of terminals to the first amplifier's right channel
- ▶ Connect the cables from the top set of terminals to the first amplifier's left channel
- ▶ Repeat steps 2 and 3 for the second amplifier



Tri-Wiring and Tri-Amplifying

The B7 and C7 have three sets of terminals—one each for the tweeter, midrange and woofer. You can tri-wire the speakers, although the performance improvement will be minor and it can be difficult to connect three wires to the amplifier terminals. Tri-amplifying the speakers will produce a more significant improvement, although the difference won't be as great as the difference between a conventional system and a bi-amplified system.

To tri-amplify the speakers, remove all the jumper straps. Refer to the "Using One Amplifier for the Bass and One for the High End" section of this manual and use the same procedure. Connect three identical amplifiers to the left and right tweeters, midranges and woofers.

CONTROL SETTINGS

Depending on the model, your Series 7 speakers have two or three control switches that adjust the sound of the speaker to suit the room acoustics and installation location. These switches are located near the connection terminals.

The Boundary Switch

In some situations it may be best to position the speakers in a location that does not produce the best overall sound balance. A common example is in audio/video installations where, in order get the best sound image, the speakers must be placed next to a large cabinet or big screen television. This can cause uneven response in the upper bass and lower midrange which can make voices sound unnatural. The Snell B7, C7, D7 and CR70 feature a Boundary Switch that can help restore smooth response in such situations.

If the speaker is located where it has at least 12 inches (30cm) of clearance on three sides, use the Normal switch setting. If it is placed next to a large object, try the Boundary switch position to see if it results in smoother response.

Tweeter Level Switch

The B7, C7 and CR70 have a three position switch to adjust the output level of the tweeter. In most rooms, the "Flat" position will produce the best sound. In rooms that have plush carpeting, heavily upholstered furniture and other sound absorbing furnishings, try the switch in the "Boost" position. In rooms that have more hard reflective surfaces, try the "Cut" position.

Rear Tweeter Switch

The B7 and C7 have a rear tweeter on/off switch. Typically the tweeter should be left on. In some rooms, particularly those that have more hard reflective surfaces, the rear tweeter can detract from the stereo image. Set the switch to "Off" in such situations.

Using With a Multichannel Surround Processor

When using a subwoofer:

- ▶ Select the *SMALL* setting on your receiver or processor for your main and center channels. This routes all bass information (typically below 100Hz) to your subwoofer.

When not using a subwoofer:

- ▶ Select the *LARGE* setting on your receiver or processor for your main speakers. This routes all bass information (typically below 100Hz) to your main speakers. Otherwise, bass information will be lost.

Matching the sound levels of each speaker:

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

HOW TO CARE FOR YOUR SPEAKERS

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

LISTENING LEVELS AND POWER HANDLING

- ▶ 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 even 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. It is especially important that you do not overdrive the bass capability of smaller speakers. 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.

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
Peabody, MA 01960

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 in the original factory packaging. Please note that Snell Acoustics will not be held liable for shipping damage due to improper packaging. After it has been repaired, we will return it freight prepaid in the U.S. or Canada.



For EU Customers Only

This symbol found on the product indicates that the product must not be disposed of with household waste. Instead, it may be placed in a separate collection facility for electronic waste or returned to a retailer when purchasing similar product. The producer paid to recycle this product. Doing this contributes to reuse and recycling, minimizes adverse effects on the environment and human health and avoids any fines for incorrect disposal.

©2009 Snell Acoustics. All Rights Reserved.
Specifications are subject to change without notice.
Covered by patents issued and/or pending.
Part #542-1040

Snell

300 Jubilee Drive, P.O. Box 3717
Peabody, MA 01961-3717
phone: 978-538-6262
fax: 978-538-6266
email: info@snellacoustics.com
www.snellacoustics.com