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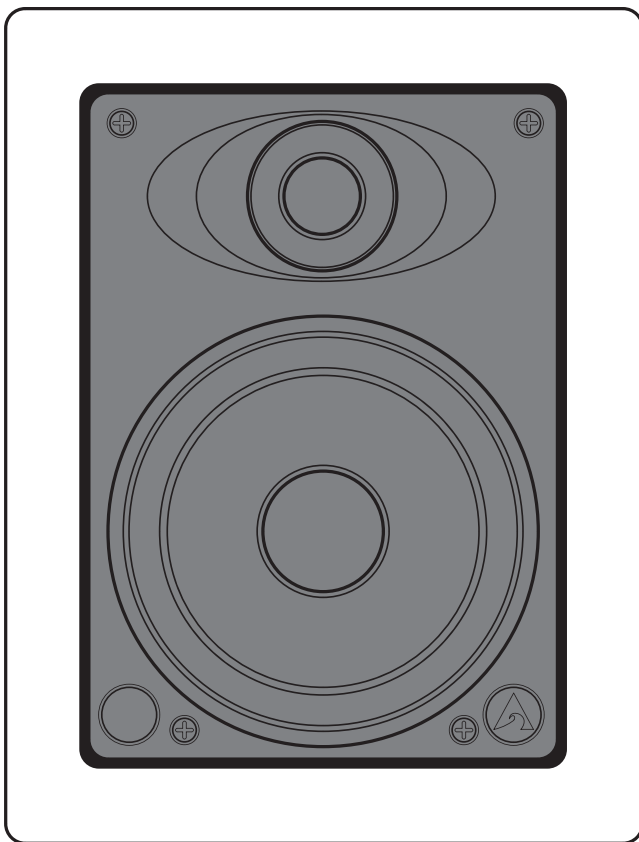
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System 5 LCR

High Performance
InWall Loudspeaker System



Instruction Manual

 **Atlantic Technology**[®]
INNOVATIVE HOME THEATER

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SYSTEM 5 LCR

High Performance InWall Loudspeaker System

Thank you for purchasing Atlantic Technology products. Our speaker systems have been designed to deliver exceptional sound and value. We hope you like what you hear from them, and are happy with your decision to buy them.

Please take a few moments to read these instructions. They're intended not only to tell you how to mount the speakers, but how to get the best performance from them.

Important Considerations Before Installation

Recommended Wire Sizes

The longer the wire run, the heavier the wire should be. Use the following recommendations as a guide for your installation. And if you're in doubt, remember that it never hurts to get the next heavier grade of wire. Also note that lower gauge numbers equal heavier wire sizes.

Wire Run	Wire Gauge
<15 ft.	18 ga.
15 to 30 ft.	16 ga.
30 to 50 ft.	14 ga.
50 to 80 ft.	12 ga.
80 to 120 ft.	10 ga.

Location, Location, Location

A major determinant of any speaker's sound quality is the room and its location in it. With in-wall speakers there are fewer placement options than with box speakers, so giving some thought to location can really pay off. Additionally, the wall your speaker is mounted in will affect its sound. Our InWall Theater Systems have been computer designed to minimize the detrimental effects wall mounting can have on sound, so they sound better than most, if not all in-wall speakers.

Locations of Choice

Assuming that you'll be using System 5 speakers for more than simple background listening, here are some placement recommendations:

Stereo Systems

For stereo music reproduction the speakers are best located at approximately ear level when seated, both on the same wall, facing the prime listening location. A separation of approximately six to eight feet between the left and right speakers is usually good. Ideally, the distance between the two speakers will be the same as the distance from the speakers to the listening position. The speakers and the listening position will then form an equilateral triangle. There is a benefit to mounting the speakers approximately the same distance from the side walls, so they both create the same reflective patterns.

Hard surfaces create lots of sound reflections in the room while soft surfaces tend to absorb sound. Note the speaker's location in terms of proximity to glass and other highly sound reflective or absorptive surfaces. A simple pair of curtains can make a major difference in sound quality and intelligibility! The more similar the speaker's surroundings, the more consistent the sound will be. So placing one speaker directly adjacent to a glass wall, with the other speaker by an open archway, will make for two dramatically different sounding speakers.

Note that as bass frequencies reflect within the room, some locations may be bass heavy while other areas may be bass shy. With an external subwoofer, changing its placement within the room may reduce these effects. But when in-wall speakers are utilized full range, the only real option is to change the listening position, if you end up in a difficult bass area.

Home Theater Systems

Today's home theater systems require you to place six or more speakers in your room. Placement for these speakers is potentially more critical than with pure music reproduction alone. That's because the goal of setting up a good home theater isn't to put you in the movie theater; it's to put you in the movie! That's right, we want you to believe you're in the jungle, the restaurant, the office, or wherever the video scene is taking place. If you keep this goal in mind throughout the system development process you'll end up with a better home theater, for sure.

Left/Center/Right Locations The front three speakers should be at ear height when seated, just as with stereo speakers. Unfortunately, the presence of the television tends to make this difficult, if not impossible to achieve. (Unless you're using a front projector and a perforated screen with the center channel speaker directly behind it). The closer you can get to this ideal the better, however. Try to keep the left and right speakers within 3 feet to either side of the TV screen. If possible, place the left and right speakers no more than 2 feet above or below the height of the center channel speaker. The center speaker itself should be centered on, and directly above or below the TV screen.

IMPORTANT: The System 5 LCR speaker may be used in a vertical (portrait) or horizontal (landscape) orientation.

The All Important Surround Speakers In order to achieve optimum performance we strongly recommend Atlantic Technology Dipole or TriVector surround speakers. If you are using our dedicated surround speakers please follow the placement recommendations included in their installation instructions.

Non-Dipole Surrounds If you decide to use the System 5 LCR as a surround speaker keep the following in mind. The more a direct radiator like the System 5 LCR is aligned with your ears, the more localizable its sound will be. And since the vast majority of surround information consists of sonic cues that aren't supposed to be localized, this is particularly undesirable. Generally then, when used as a surround speaker, place the System 5 LCR on the side or rear walls at least 2 feet above ear level, when seated.

Mounting Issues for System 5 LCR (IWTS-5 LCR)

NOTE: We always recommend a professional be involved in the installation of InWall Theater System speakers, if at all possible.

The System 5 LCR speaker can be easily mounted in most any standard wall material, from 1/2 to 1-1/2 inches thick. Its rotating wall clamps firmly fix it to the wall surface after the proper cutout has been made. Here are some important precautions to take before mounting:

Keep the sides of the actual mounting hole at least 1-1/2 inches away from beams or studs. The clamps require 3/4 of an inch to rotate, and a stud or other obstruction that's too close will stop them from properly doing their job.

Wall cavity size will effect the bass and midrange performance of any in-wall speaker. The System 5 LCR is designed to play optimally in a 0.5 to 1.0 cubic foot space (measured before wall insulation is inserted). Cubic dimensions can be determined by multiplying the length x width x height of the cavity. A larger cavity won't hurt, but a smaller one will definitely impact the bass and midrange response of the system.

Some of the sound from the speaker will transmit to the space on the other side of the wall cavity. If this is a major concern, you can build a box within the wall that provides the required cubic volume. The larger the volume, the better the bass response will be, up to .75 cubic feet. Beyond this size there will be no effective performance gain. Also please note that there is very little room behind the drivers in a standard "2 x 4" wall cavity (there's only 1/4 inch), so the back of any enclosure box must be made from relatively thin materials, yet it should not physically contact the back wall. Typically then, the back wall material of your enclosure will be roughly 1/8 to 1/4 inch thick.

For optimum sound install the Atlantic Technology IWTS Foam Damping Kit in the speaker cavity. If you don't install this kit, at the very least line the cavity with fiberglass wool (insulation), observing all the relevant precautions and instructions from the insulation manufacturer. If you have built a back box, you can use common fiberglass insulation or open cell foam rubber in the enclosure. Be sure to push the insulation back from the drivers to ensure that it doesn't get into the moving cone area.

Ceiling Mounting

It is especially important when mounting the speaker in a ceiling that you cover the back of the system with a fiberglass window screening (available at any home center or hardware store) to keep insulation and other foreign matter out of the assembly. You also should install safety wires from the rear of the assembly to a secure mounting place, like adjacent beams or the floor above, for added security. Should you be installing System 5 speakers in a suspended ceiling, it is imperative to install safety wires from the speaker to the support structure above, to ensure security under all conditions.

Installation of System 5 LCR in New Construction

Atlantic Technology offers an optional Rough-in Frame Kit to ease installation in new construction. Instructions for its use are included with this kit. The kit's model nomenclature is IN-NC-5

Installation of System 5 LCR in Existing Construction

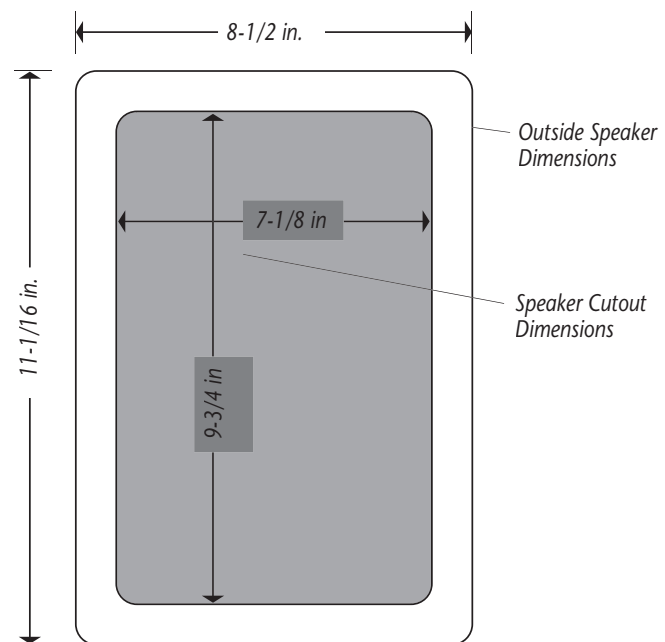
Removing and Installing the Grille

Remove the grille from the speaker using an awl or the point of a drywall screw in a grille opening near one of the grille corners. Slowly pry the grille out, being careful not to damage the speaker's frame or its finish. Install the grille by pressing it carefully into the appropriate opening in the frame assembly. Since it's designed to fit snugly, please take your time and use care when installing the grille.

Cutting the Opening

After determining the best location for the speaker as outlined above, use the enclosed template to cut the proper size hole (9-3/4" x 7-1/8").

WARNING: Exercise extreme care before making any wall cuts to ensure that you will not cut through any wires, pipes, or other items that may be in the wall. You may sometimes, but not always, be able to determine the approximate location of wires and pipes by looking at the locations of nearby outlets and plumbing. But their location or absence is never an assurance that there is not something within the wall cavity.



Installing the Mounting Frame

The clamping mechanism allows the wall material to range from 1/2 to 1-1/2 inches (12 to 38 mm) in thickness. There must be a minimum depth behind the wall face of 3-5/8" (92 mm). As noted above, be sure to keep the edges of the cutout at least 1.5 inch (37.5mm) away from any stud or obstruction, as the rotating clamps will not operate properly if you don't. The speaker baffle (the part with the drivers mounted in it) is designed to mount into the white frame, after the frame is mounted into the wall.

Insert the frame into the cutout and using a level or square carefully align it so it is (or it appears) level. Tighten the mounting screws, which will cause the attached clamps to rotate and position themselves properly behind the wall. Continue to tighten until the frame is snug in the wall. You want the bezel to conform to the wall board, and the frame not to rattle from the speaker's vibration but be very careful not to overtighten the screws.

Painting the Speaker Assembly

The white plastic frame of the speaker baffle assembly and the metal grille may be left as is, or painted to match your décor. You can paint the frame before or after it is installed in the wall. Spray painting (using slightly thinned paint) is the best method to use for painting the grille. After painting the grille, use air pressure to “blow out” any grille holes that are covered over with paint.

Speaker Connection and Assembly

Strip about 1/2" of insulation from the connecting wires. Connect them to the appropriate push terminal, being careful to observe polarity (positive to the red terminal, negative to the black terminal). Install the speaker baffle assembly into the previously mounted frame assembly, being careful to ensure that the speaker wire isn't pressed up against the back of a speaker cone, and screw it into place using the supplied screws. Again, be careful not to over-tighten the screws. Insert the grille into the frame as outlined above, being careful not to damage the frame or the grille's finish.

High Frequency Level Control

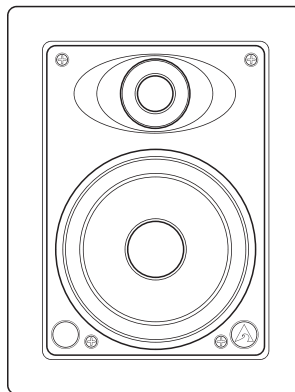
There is a switch located behind the grille on the front of the speaker. This switch is accessible by removing the grille as outlined above. You can change the switch setting with your fingernail or a small pointed object, such as a ball point pen. The switch has three settings that adjust the high frequency output from the speaker. We strongly recommend that you try all three settings, using both music and movies (if the System 5 LCR is part of a home theater system). Please note that recordings vary in their sound balance so try several different discs. Try to achieve the best balance of natural overall sound with good detail and clarity. The switch settings are “Normal” in the lower position, “-2dB” in the middle position, and “+2dB” in the upper position. To aim the tweeter, press gently on the plastic ring that surrounds the dome, but not the dome itself. Aim the tweeter at the prime listening position when the LCR is used as a front speaker, and away from the listening position if it's used as a surround.

There's a “knockout” plug in the front baffle. You can identify it by locating the Atlantic Technology wave logo which is molded into it. If you are using a multi-room control system, you can install a standard IR receiver in the knockout hole.

Should you have any questions or problems please feel free to contact us at 781-762-6300 or through our web site, www.atlantictechnology.com.

Specifications

System 5 LCR (IWTS-5 LCR)



Dimensions	11"H x 8-7/16"W x 3-5/8"D
Cut-out Dimensions	9-3/4"H x 7-1/8"W
Optimum wall volume	0.5 - 1 cu. ft.
Drivers/Design	1 - 6.5" IMG woofer 1 - 1" Silk dome tweeter
Frequency Response	52 - 20kHz ± 3dB
Sensitivity	87dB
Impedance	6 Ohms
Crossover Frequency	3400Hz, 4th order Linkwitz-Riley
Companion Components	Subwoofer(s): 172 PBM, 272 PBM Surround(s): IWTS-6 or 8 CMS, System 10e SR, 174 SR
New Construction Kit	IN-NC-5