

IWTS-155 LCR Speakers
In-Wall THX Ultra2 Theater System Speakers



**AVAILABLE AT
DIGITAL CINEMA**



Instruction Manual

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Model IWTS-155 LCR In Wall THX Ultra2 Theater System Speakers

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.

What's THX?

THX is a series of standards and technologies originally developed by LucasFilm Ltd. (of Star Wars fame) and now an entity unto itself. These technologies and standards are intended to ensure that what you hear and see on your A/V system, as closely as possible, matches what the director/artist/engineer heard and saw during the final mixing of the source material. THX standards are intended to enhance every type of viewing and listening experience including the latest discrete multi-channel digital formats. Please note however that, although there is proprietary THX electronic processing, THX is not a surround format.

THX Ultra2 standards are based on a 3000 cubic foot room (L x W x H = cu. ft.). This does not mean Ultra2 certified components must be used in rooms this exact size. The room sizes simply provide a frame of reference, as the standards specify that the system must deliver certain performance minimums (volume, frequency response, etc.) in the specified space. For more information, see the THX website at www.thx.com.

For Future Reference

Record your serial numbers and date of purchase here:

Model Number _____

Serial Number _____

Date of Purchase _____

The serial number is found on the back panel.

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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. 16 ga.
15 to 30 ft. 14 ga.
>30 to 50 ft. 12 ga.

Location Considerations

A major determinant of any speaker's sound quality is its location in the room. With in-wall speakers there are fewer placement options than with free-standing speakers, so giving some thought to location can really pay off. Our In-Wall Theater Systems have been designed to minimize the detrimental effects wall mounting can have on sound, so they sound better than conventional in-wall speakers.

Room Acoustics

Hard surfaces create lots of sound reflections in the room while soft surfaces tend to absorb sound. Note the speakers' location in terms of proximity to glass and other highly sound reflective or absorptive surfaces. A simple set of curtains or an area rug can make a major difference in sound quality and intelligibility by reducing excessive reflections.

Speaker Placement

For all the following situations, it's recommended that you first place small box speakers in the proposed locations, just to get a good idea of how that location will sound. In-wall speakers are tough to move once they're installed!

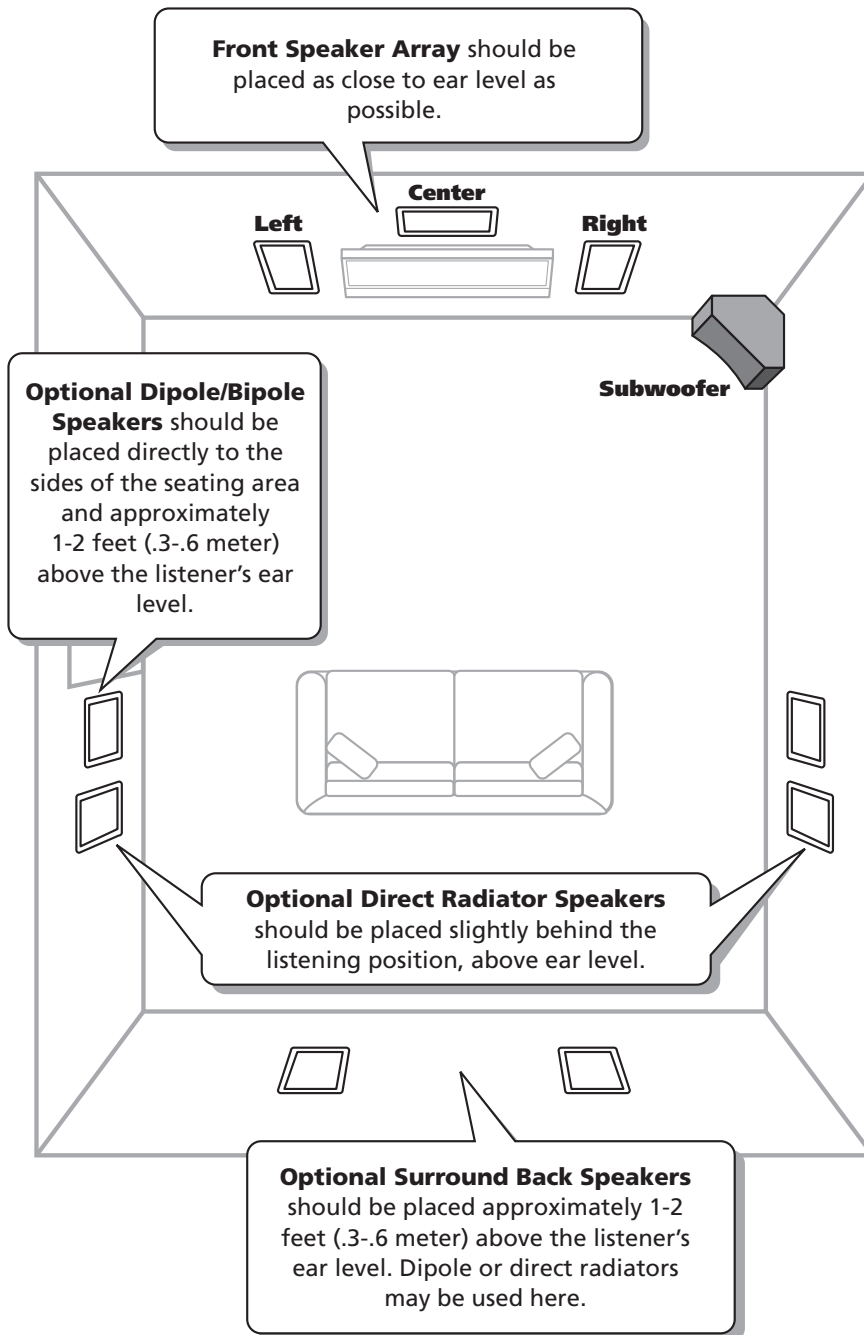
For all the following placement instructions, it's important to bear in mind that for aesthetic considerations, many people prefer to mount their in-wall speakers well above seated ear level, as doing so minimizes the speakers' visual intrusion on the room.

The IWTS-155 LCR uses Atlantic's renowned 1" soft-dome Low Resonance Tweeter (LRT™). Because of its low crossover point, this remarkable tweeter allows the IWTS-155 LCR to deliver much wider midrange dispersion than conventional in-wall speakers for greater placement flexibility, without the severe acoustic and mechanical drawbacks of the so-called "pivoting tweeter."

Stereo Music Listening

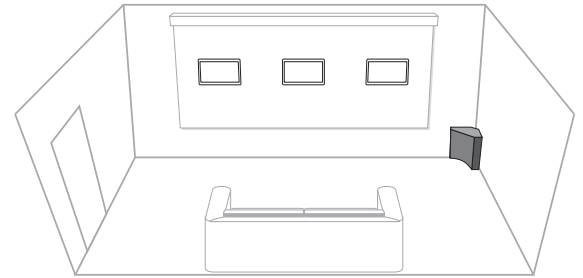
For stereo music reproduction, place the speakers at approximately ear level when seated, with both speakers on the same wall facing the prime listening location. A separation of approximately 6 to 8 feet between the left and right speakers is usually good. Ideally, the distance between the two speakers will be close to the same as the distance from the speakers to the listening position.

Home Theater Systems



Today's home theater systems require you to place six or more speakers in your room. For the most convincing theater effects, speaker placement must be very carefully thought out. This is especially true with in-wall speakers, since their installation is permanent!

Left/Center/Right Locations The tweeter in the front three speakers should be at or just above ear height when seated, just as with stereo speakers. Try to keep the vertical position of the three front speakers within 18 inches of each other, as this will maintain smooth, believable left-center-right pans.



The spacing of the left-right speakers can be a little wider than with 2-channel stereo speakers, since in a theater system, the center channel speaker reproduces the on-screen effects and anchors the center image. Left-right spacing of about 8 to 10 feet usually works well.

NOTE: *The IWTS-155 LCR is not magnetically shielded. If you are using it with an old-styled CRT-type television, be sure the speakers are located at least 12 inches away from the picture tube to prevent video interference.*

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 The most realistic surround effects occur when the listener can't localize the actual location of the surround speaker. If you decide to use the In-Wall Theater System speakers as surround speakers, mount them above the listeners' ears, slightly behind the listening area either on the side or rear walls.

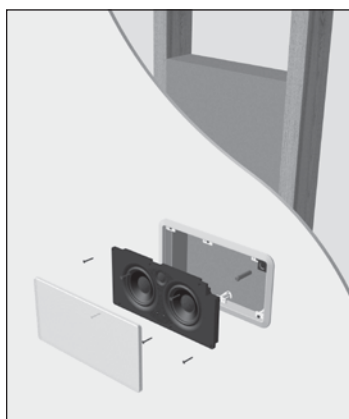
Mounting the IWTS-155 Speakers

NOTE: We always recommend a professional be involved in the installation of the IWTS-155 LCR, if at all possible.

The IWTS-155 LCR can be easily mounted in most any standard wall material, from ½ to 1½ inches thick. Use the grille/frame assembly GFR-155, sold separately. The GFR's rotating wall clamps firmly fix it to the wall surface after the proper cutout has been made. An important precautions to take before mounting:

Keep the sides of the actual mounting hole at least ½ inch away from beams or studs to ensure that the clamps have adequate room to rotate. A stud or other obstruction that's too close will stop them from properly doing their job.

Installation of the IWTS-155 in New Construction with Optional Back Box

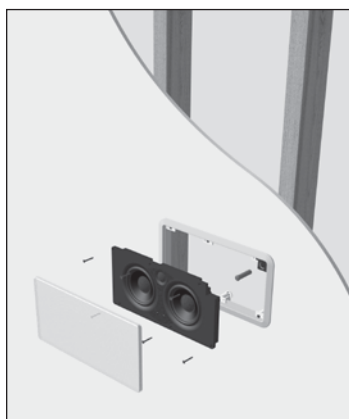


For new construction, we highly recommend that you use the optional Back Box IN-BOX-155. The Back Box provides the correct acoustic environment for the 155 LCR and ensures its THX-level performance. The rotator clamps (sometimes called "dog legs") will easily grab the combined thickness of 5/8" sheetrock and the 3/8" back box's front panel. The sheetrock must be adhered to the front panel of the back box very solidly and positively.

Use very liberal amounts of a high-quality construction adhesive, such as *Liquid Nails*, to ensure a secure, vibration-free bond.

Please see the installation instructions that come with the IN-BOX-155 for more details.

Installation of the IWTS-155 in New Construction without Optional Back Box



There may be new construction situations where the Back Box IN-BOX-155 is either not desired or not feasible. For those situations, Atlantic Technology offers an optional Rough-in Frame Kit IN-NC-155 to ease installation in new construction. Instructions for its use are included with this kit. Ask your Atlantic dealer for more details.

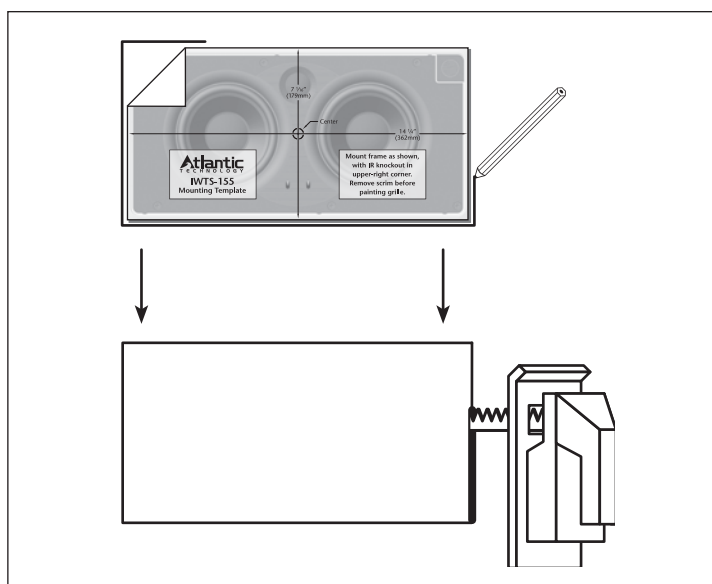
IMPORTANT: If the IN-BOX-155 is not used in New Construction situations, it's recommended that the wall cavity be treated with acoustic filler and that all extraneous wires, etc. in the wall cavity are securely "buttoned down" so there is no unwanted vibration or rattling after the speaker is installed. Try to make the wall cavity as airtight as possible by sealing all the stud-to drywall seams with a flexible silicon caulk or similar substance.

It is also recommended that you create an 'enclosure' by installing cross studs between the existing vertical studs. Space these cross studs approximately 30-36" apart. That will enclose the proper amount of air volume needed for the 155 to achieve its optimal performance. Again, take care to seal these cross studs to the sheetrock.

Installation of the IWTS-155 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.



To re-install the grille later, press 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.

IWTS-155 LCR

14 ¼" x 7 ⅛"

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

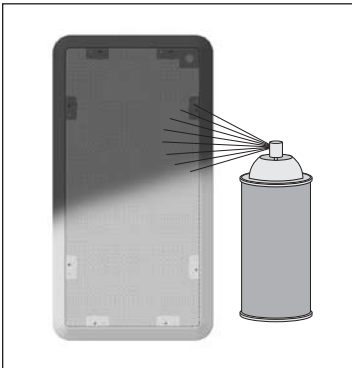


The clamping mechanism allows the wall material to range from ½ to 1½ inches (13 to 38 mm) in thickness. There must be a minimum depth behind the wall face of 3 ⅝" (92 mm). As noted above, be sure to keep the edges of the cutout at least ½ inch (13 mm) away from any stud or obstruction, as the rotating clamps will not operate properly if you don't. Insert the frame into the cutout and using a level or square carefully align it so it is 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 wallboard, 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 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. Before painting the grille, carefully peel off the cloth scrim. After painting the grille, use air pressure to "blow out" any grille holes that are filled in with paint.

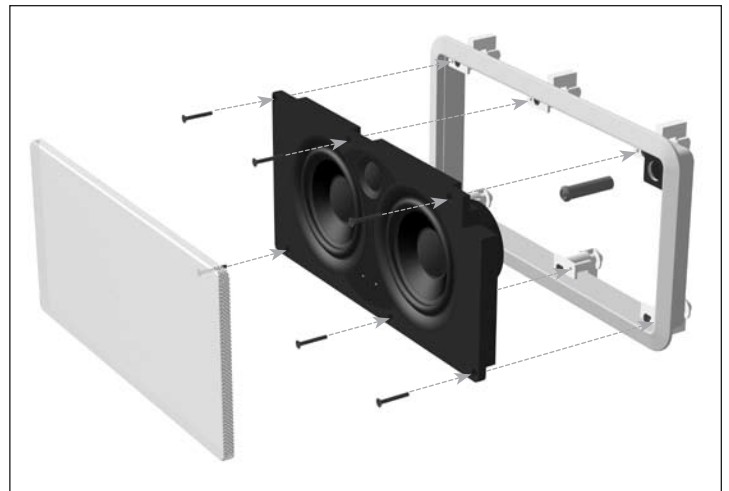
Once the paint is dry, re-apply the scrim to the inside of the grille.

Speaker Connection and Assembly



Strip about ½" (13 mm) 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).

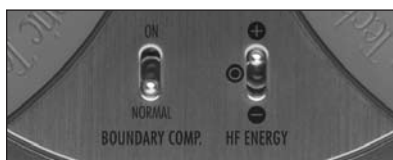
Installing the Speaker Enclosure into the Frame



Once the frame is mounted in the wall, the speaker simply fits into the frame. Note that there is a gasket around the edge of the MDF baffle. This gasket ensures an airtight fit between the baffle and the frame. Therefore, the baffle may fit tightly in the frame. This is normal.

Use the included screws to attach the baffle to the mounting frame, *but be very careful not to overtighten the screws.*

Front Panel Controls



The IWTS-155 has two controls that help optimize the speaker's performance regardless of mounting location or room acoustics.

HF (High Frequency) Level Control



This control adjusts the relative level of high frequency output to compensate for varying room acoustics or placement behind a screen.

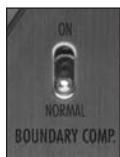
“+” is for absorptive, acoustically “dead” rooms (or when the speaker is behind a movie screen). Use this position to increase the HF level and restore the proper sparkle and liveliness to the sound.

“0” is for rooms of average absorptive characteristics.

“-” should be used in rooms that are highly reflective, with hard floors and exposed windows.

The setting of the HF control is mostly a matter of personal taste, so try it in all three positions and see which one is preferred.

Boundary Compensation Control



Large room boundaries, such as floors, walls, and ceilings, reinforce sound by acting essentially as acoustic “mirrors.” When the speaker is mounted too close to the corner or a wall/ceiling intersection, this sonic “reinforcement” often results in an unnatural heaviness or coloration of the sound.

Specifications

IWTS-155 LCR

Type	2-way
Drivers	Woofer (2) 5 ¼" (135mm) GLH* Tweeter 1" (25mm) soft dome LRT™
Frequency Response	58Hz – 20kHz ±3dB
Nominal Impedance	6 Ohms
Crossover Frequency	2.1kHz, 3rd order
Sensitivity	89dB
Recommended Power	10 – 150 Watts RMS
Dimensions (grill frame) (W x H x D)	15 ½ x 8 ½ x 3 ¾" 395 x 216 x 97mm
Cutout Dimensions (W x H)	14 ¼ x 7 ⅞" 362 x 181mm
Net Weight	8lbs; 3.6kg each

*Graphite Loaded Homopolymer

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If it's necessary to mount the speaker closer than 12 inches to the ceiling or corner, you may find that by switching the Boundary Compensation control “on,” the speaker sounds better. We recommend that you try the control in both positions and see if it helps in your particular installation.



IR Knockout

There's an IR “knockout” plug in the upper right corner of the front baffle. 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.



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