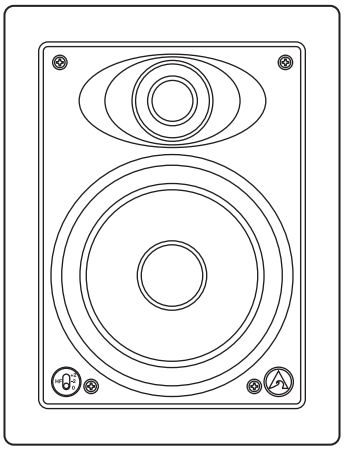
IWTS Series

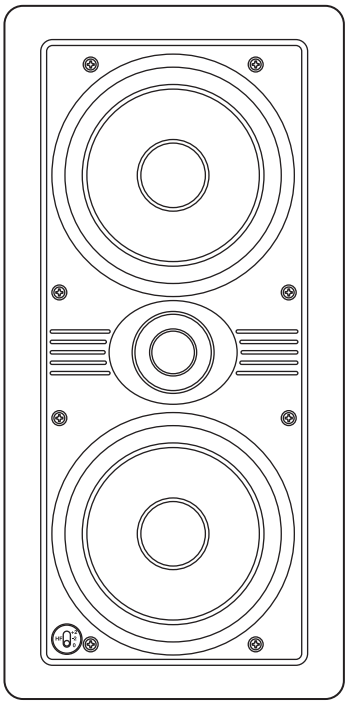
IWTS-5 LCR & IWTS-10 LCR
In-Wall Theater System Speakers

Instruction Manual

IWTS-5 LCR



IWTS-10 LCR



Atlantic TECHNOLOGY

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IWTS-5 LCR & IWTS-10 LCR

High Performance In-Wall 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.

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.

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.

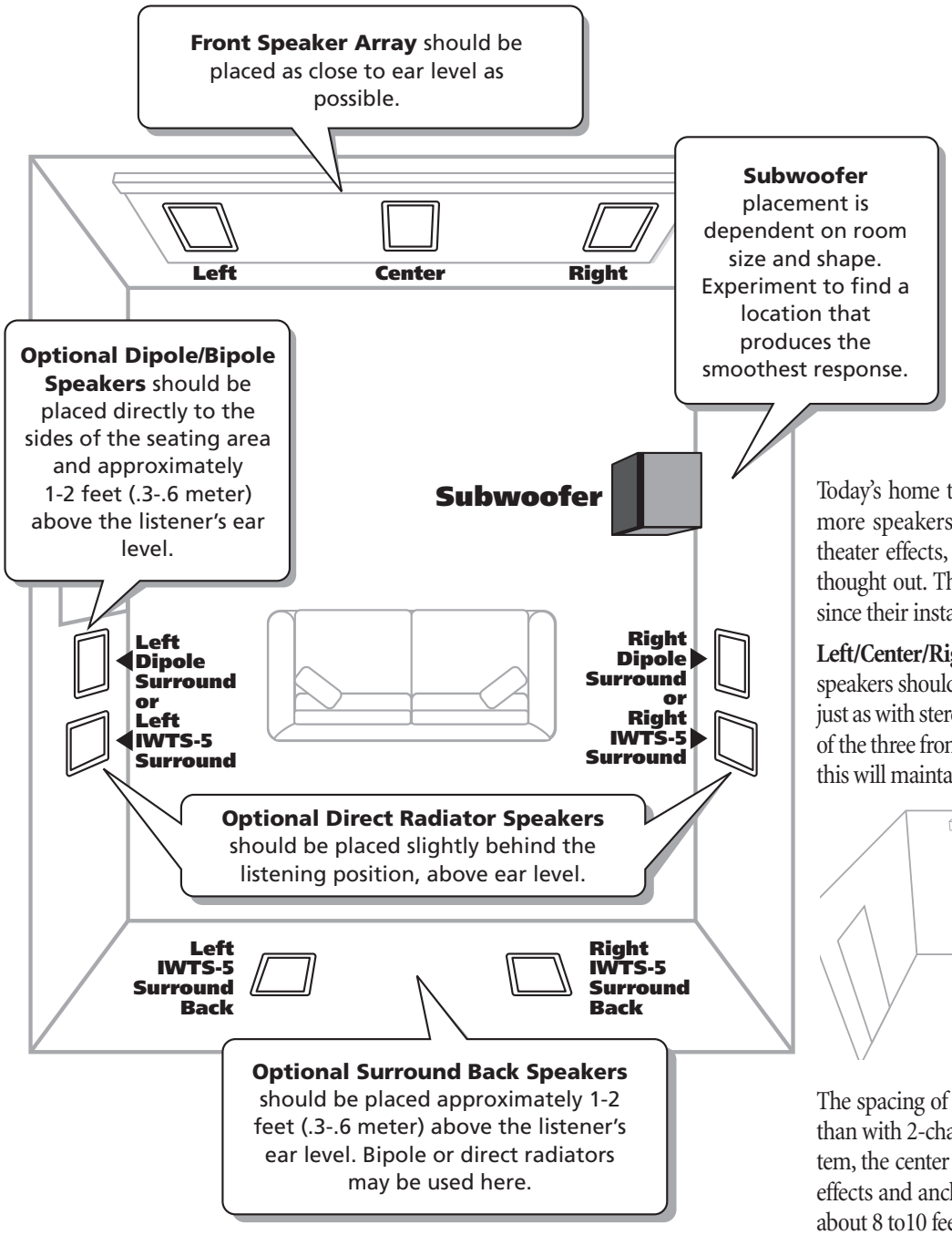
Speaker Placement

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!

Stereo Music Listening

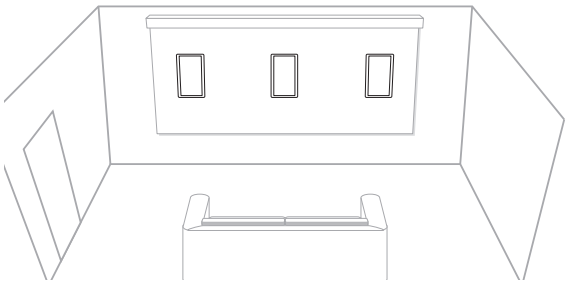
For stereo music reproduction the speakers are best located at approximately ear level when seated, both on the same wall, facing the prime listening location. A separation of approximately six to eight feet between the left and right speakers is usually good. Ideally, the distance between the two speakers 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.

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 to10 feet usually works well.

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 Speakers

NOTE: *We always recommend a professional be involved in the installation of IWTS speakers.*

The IWTS speaker can be easily mounted in most any standard wall material, from ½ to 1½ inches thick. Its rotating wall clamps (sometimes called "dog legs") 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 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.

Wall cavity size will affect the bass and midrange performance of any in-wall speaker. The IWTS-5 LCR is designed to play optimally in a 0.5 to 1.0 cubic foot space (measured before wall insulation is inserted) and the IWTS-10 LCR in a 0.75 to 1.5 cubic foot space. 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 negatively 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. 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 thin material. Typically then, the back wall material of your enclosure will be roughly 1/8 to 1/4 inch thick.

For optimum sound we recommend lining the cavity with fiberglass or polyfill, 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.

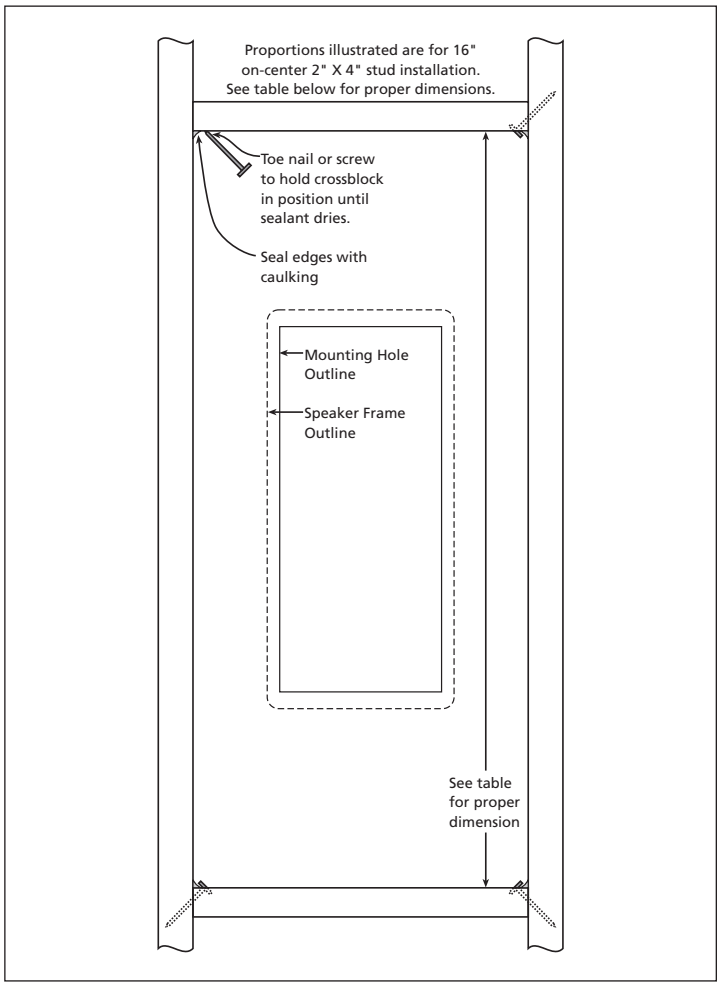
In-Wall Enclosure Recommendations

Please use this information to construct an in-wall enclosure if you so desire. Doing so will generally improve the performance and increase the power handling of the system.

Be sure to line the cavity with insulation, being careful to avoid letting the insulation touch the backs of the woofer cones. It's also important to seal the joints of the enclosure with a high quality non-shrinking caulk.

Be careful to keep the wires from touching the chassis of the drivers or baffle in such a manner that the wire might vibrate and buzz. You may use nylon wire ties to keep the wires properly positioned. Such ties are available that are designed to screw directly to studs making them ideal for this purpose.

As always, take care to wire the speakers properly, with the positive lead (normally marked with a red terminal or a "+" sign) from the amplifier connected to the positive terminal on the speakers and the negative (marked with a black terminal or a "-" sign) connected to its respective terminals.



2 x 4 Construction	1ft³	1.25ft³	2 x 6 Construction	1ft³	1.25ft³
16" O.C.Studs	34"	42.5"	16" O.C.Studs	21.7"	27"
24" O.C. Studs	22"	27.5"	24" O.C. Studs	16"	17.5"

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 IWTS 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 the IWTS in New Construction

Atlantic Technology offers optional new construction brackets (IN-NC-5/10LCR) to ease installation in new construction. Instructions for its use are included with that kit.

Installation of the IWTS in Existing Construction

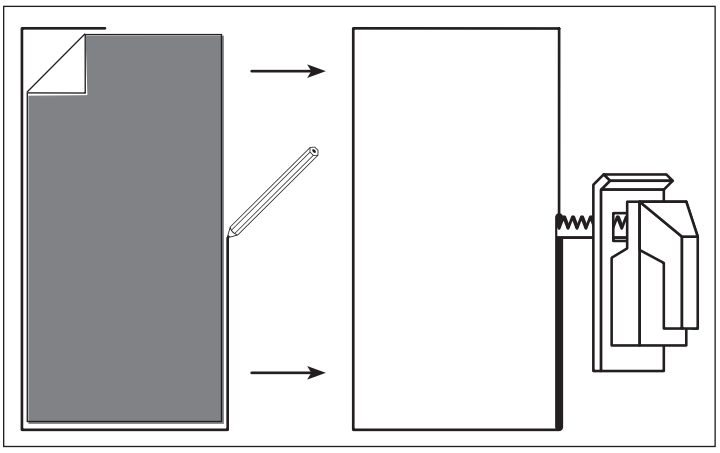
Removing and Installing the Grille

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.

For shipping, the speaker's baffle will be attached to the frame with two screws. Remove these screws to separate the baffle from the frame. Reserve the two screws for installation later.

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-5 LCR	**7 1⁄8" x 9 ¾" (181 x 248mm)**
IWTS-10 LCR	**7" x 15 13⁄16" (178 x 402mm)**

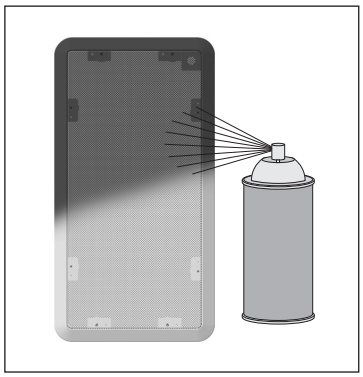
WARNING: *Exercise extreme care before making any wall cuts to ensure that you will not cut through any wires, pipes, or other items that may be in the wall. You may sometimes, but not always, be able to determine the approximate location of wires and pipes by looking at the locations of nearby outlets 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.

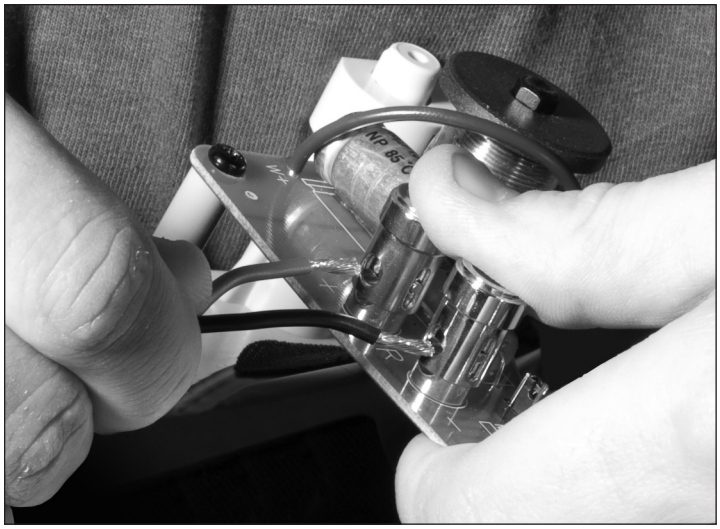
Continue to tighten until the frame is snug in the wall. You want the bezel to conform to the wallboard, and the frame not to rattle from the speaker's vibration, *but be very careful not to overtighten the screws.*

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. Remove scrim before painting. After painting the grille, use air pressure to "blow out" any grille holes that are filled in with paint. Replace scrim after paint is dry.

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).

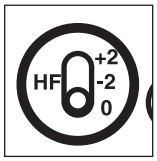
Installing the Speaker Baffle into the Frame

Once the frame is mounted in the wall, the speaker simply fits into the frame. Use the included screws (including two removed earlier) to attach the baffle to the mounting frame, *but be very careful not to overtighten the screws.*

Front Panel Controls

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.



"+2" 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.

"-2" 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.

IR Knockout (IWTS-5 LCR only)

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.

Specifications

	IWTS-5 LCR	IWTS-10 LCR
Type	2-way	M-T-M
Optimum wall volume	0.5 - 1 cu. ft.	0.75 - 1.50 cu. ft.
Drivers/Design	woofers 1 - 6½" GLH* tweeter 1 - 1" Silk dome	2 - 6½" GLH* 1 - 1" Silk dome
Frequency Response	52 - 20kHz ± 3dB	46 - 20kHz +/- 3dB
Sensitivity	87dB	89dB
Impedance	6 Ohms	6 Ohms
Crossover Frequency	3400Hz, 4th order Linkwitz-Riley	
Amplifier Power	25-125 Watts	25-150 Watts
Dimensions (grill frame) (W x H x D)	8 7/16" x 11" x 3 5/8" 215 x 280 x 86mm	8 7/16" x 17 1/4" x 3 5/8" 215 x 438 x 86mm
Cutout Dimensions (W x H)	7 1/8" x 9 3/4" 181 x 248mm	7" x 15 13/16" 178 x 402mm
Net Weight	6.3lbs; 2.8kg each	7.5lbs; 3.4kg each
New Construction Kit	IN-NC-5/10LCR	IN-NC-5/10LCR

*Graphite Loaded Homopolymer

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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.

Warranty

First, we'd like to thank you for purchasing an Atlantic Technology product. We wish you many years of enjoyment and satisfaction from it.

Second, be aware that you don't have to send in any Warranty card to be covered by the Limited Warranty. All you need to do is keep your original Invoice or Bill of Sale for proof of purchase, meet the stated requirements, and follow the instructions listed within that Warranty. Please attach your Original Invoice or Bill of Sale to this manual as proof of purchase and keep them in a safe place.

VERY IMPORTANT NOTE: *PLEASE NOTE THAT ATLANTIC TECHNOLOGY PRODUCTS CARRY ONLY A 90 DAY LIMITED WARRANTY. YOU MUST MEET ALL THE BELOW REQUIREMENTS AND REGISTER ONLINE IN ORDER TO BE COVERED BY THE FREE EXTENDED SERVICE AGREEMENT TO ASSURE EXTENDED FREE PROTECTION!!*

Free Extended Service Agreement

Atlantic Technology offers a free Extended Service Agreement that provides enhanced protection against product defects. In order to qualify for the free Extended Service Agreement you must:

1. Have purchased your Atlantic Technology products from an Authorized Atlantic Technology Reseller or Installer.
2. Go to www.atlantictechnology.com and click on Support>Register Your Warranty. Fill out the required information. Be sure to have your home address, name, address and invoice from the business you purchased, and the serial numbers of all Atlantic Technology products purchased. **THIS MUST BE DONE WITHIN 30 DAYS OF PURCHASE.**
3. If you purchased multiple Atlantic Technology products you will be able to enter them all using one online form. Model and Serial numbers can be found on the back of each unit and on the outside of their respective boxes.

Once all the criteria have been met, you will receive, by return email, a free Extended Service Agreement that entitles you to additional coverage against defects in workmanship and manufacturing for a period of up to 5 years on passive speakers and up to 1 year on powered speakers (including subwoofers). This coverage is in addition to the 90 Day Limited Warranty included with all Atlantic Technology products.

If you are not able to register your product using the internet, please call customer service at 781.762.6300.

Limited Warranty

Statement of Warranty: Atlantic Technology International Corp. warrants Atlantic Technology Products to be free from defects in material and workmanship for 90 days from the time of original purchase. This Warranty covers the original retail purchaser of this product only and is valid only in the Continental United States, Alaska, and Hawaii and all US Possessions.

Extended Service Agreement (only available in the Continental United States, Alaska, and Hawaii and all US Possessions): You must complete the Extended Service Agreement application, and meet all of the purchase criteria stated on that application, to receive an Extended Service Agreement that covers your Atlantic Technology products well beyond the standard 90 day Warranty.

To obtain Warranty service: Please contact your local Atlantic Technology reseller to determine if they are an Authorized Repair Center for Atlantic Technology products. You will need your original Invoice or Bill of Sale to prove Warranty eligibility. If your local dealer is not an Authorized Warranty Center you may contact us at 781-762-6300 for further help or to send the product back to us for service and repair. You must first get a Return Authorization Number from us to ship the product back, so it is imperative that you call us first.

What we are responsible for: We will pay for all labor and parts for covered items. If the repairs are eligible for coverage under the terms of this Warranty we will also pay for return shipping charges to you.

What you are responsible for: You must pack the product properly for safe shipping to your Authorized Dealer or us. You are responsible to pay for all packing, shipping, and insurance costs to get the unit(s) back to Atlantic Technology or your Authorized Dealer.

Optional replacement: We, at our option, may replace rather than repair your Atlantic Technology product with a new or reconditioned one of the same or similar design. The repair or replacement will be warranted for 90 days from date of receipt back to you. All details in terms of eligibility for an Extended Service Agreement will carry over from the original purchase to the replacement item.

What this Warranty does not cover: This Warranty does not cover defects resulting from accidents, damage while in transit, alterations, unauthorized repair, failure to follow instructions, misuse, fire, flood, and Acts of God. This Warranty will be void if the product's serial number has been altered or removed or if the product has been modified or defaced.

Exclusions and Limitations: Implied warranties, including those of fitness for a particular purpose and merchantability (an unwritten warranty that the product is fit for ordinary use) are limited to the period of any Warranty granted hereby. We will not pay for loss of time, inconvenience, loss of use, or property damage caused by your Atlantic Technology product or its failure to work, or any other incidental or consequential damages.

State law rights: Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

This Warranty is valid only when Atlantic Technology products are purchased from an Authorized Atlantic Technology Reseller in the Continental United States, Alaska, and Hawaii and all US Possessions. If you purchase Atlantic Technology products outside the United States please consult your local distributor or reseller for applicable Warranty coverage and restrictions.

Atlantic TECHNOLOGY

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