



Now Hear This.

02-ARC

Indoor / Outdoor Loudspeaker
Installation Guide

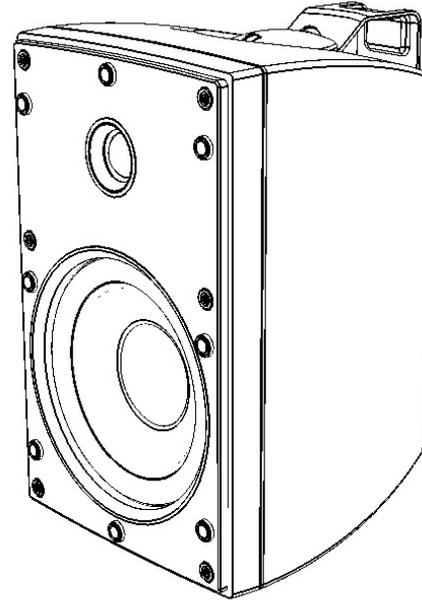


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Introduction

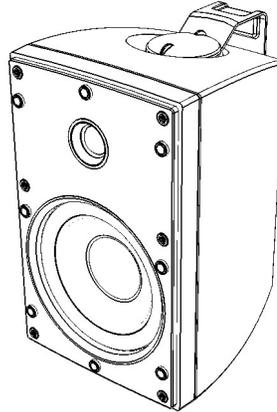
We're glad you chose an NHT outdoor loudspeaker. We won't let you down – we promise. Please take a few minutes to read this entire Installation Guide prior to installing your new speakers. The information provided will help you to obtain maximum bang for your buck. If you have questions or need assistance at any time before, after or during the installation or operation of your new speakers, we're here to help.

Our telephone number is: 707-747-0122
Our web address www.nhthifi.com

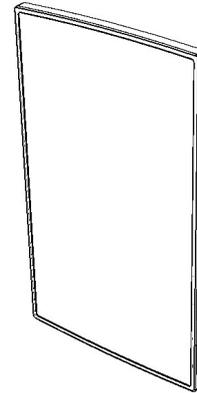
What's In The Box?

- (1) O2-ARC speaker assembly
- (1) Metal grill
- (1) NHT Logo

Speaker Assembly



Metal Grille



Logo



Some Advice

Before we start, please, think twice about hiring a bonafide, professional installer to do this while you consider a fishing adventure with some old friends.

Installing heavy objects above you and your loved ones heads is some serious business. There are also numerous decisions concerning wiring, control systems, methods, and best practices only a professional will have knowledge of. Please consult a professional with a nice looking truck to install this speaker. Find an Installer near you by visiting www.nhthifi.com - navigate to the Where to Buy section or visit www.cedia.org to find a CEDIA installation professional.

One last word of advice - It is up to you to insure that the installer we just recommended you call actually (NHT referred or not) possesses sufficient skill, the proper tools, knowledge of local fire and building codes, and a familiarity with the structure of the building (especially wall and/or ceiling materials, layouts, electrical and plumbing lines, etc.). Look for that expensive truck as well.

With the above said, we know there are capable do-it-yourselfers. If you are one of them and want to install the speaker on your own or with the help of an expert friend, read on. If you have questions or need assistance at any time before, during or after the installation or about the operation of you new speakers, we're here to help. Finally, like our fathers told us, measure twice and cut once.

Next Up, A Paint Warning: NHT recommends that you use a capable, professional painter only to paint this speaker and grill (if you must). Latex paint will definitely clog the micro-perforated grill holes and constrict the speaker's performance capability. If you don't

like the white, buy the black or vice versa. Contact us if you need a new grill cover because yours is plugged up with paint. Unfortunately for you, they are not free.

Placement

Spend some time considering placement prior to installing the speakers. Once they are installed, they are more or less permanent, so their location should be selected carefully. When possible, mount the speakers so that they radiate over the widest possible area where people are. If you care about the best stereo effect, position the speakers so that they are equidistant from the most likely listening area. That way, that guitar part on Led Zep's Whole Lotta Love will make you think you saut'ed the wrong mushrooms. Oh, and find a nice piece of wood to screw the bracket into, usually called a stud, not the Pool guy kind, the wood kind.

Wiring

How you wire is an important subject. If you are just wiring for 2 speakers from the Zone 2 on your home theater receiver it's a fairly simple wiring task. Be sure to always leave yourself some extra length on the ends for working room. Be sure you caulk those holes you might drill through to the exterior with a non-hardening caulking compound. All this will make your life easier and your house last longer. If you are running wire in new construction, don't nail the wire down in place unless building codes require it – use wire guides - you may want to pull additional cables later, if you must, use large staples to "guide" the wire. At this point you once again may consider hiring a professional installer and go bowling with some old friends instead.

Multi-zone audio, where you will use multiple pairs of speakers in different areas, is a completely different wiring situation and the methods for doing so are too numerous to cover here. Consider what device you will amplify them with, if you will have local controls you need to wire to, if you need to pull control cables like CAT6, or will the speaker wires home run to the head-end? On. And on. And on. Home runs to a single location are the safest but controlling the volume remotely in a room will then require a wireless command and control system and a multi-channel amplifier that can get pricy. If all this sounds foreign to you, stop everything now and consult a professional to learn more about your options and at least consider having them wire your house for the command and control system you plan to use leaving you to hang the speakers if it makes you feel better.

Getting Wired.

Proper loudspeaker wiring methods and type and quality of wire are essential to good sound. At a minimum, 16 AWG 2-conductor speaker wire is recommended for runs up to 50 feet or less, 14AWG for longer runs. When permanently installing wire inside walls, be sure to use wire that is rated for in-wall use and has special jacketing for fire prevention. In the U.S., the U.L. standard is CL-2, CL-3 and CM wire, and in Canada the CSA standard is FT4 wire. If you bury the wire in the ground make sure the wire is rated for direct burial or use conduit. The wire should be run in accordance with National Electrical Code best practices to meet any applicable local or national building codes. Be forewarned, MDU and high-rise developments have additional requirements and restrictions. For best

results, avoid running speaker wire near AC wire, as it may induce a 60Hz hum in the audio signal. In new construction, it's a good idea to run the speaker wire after the AC wiring has already been completed allow you to route the speaker wire away from the AC wiring. If speaker wire and AC wiring must run parallel, install the speaker wire within a steel conduit. Note that low voltage wiring (doorbell, intercom, telephone, security, network, etc.) can also induce hum.

Drill with Caution.

Remember, these are only suggestions – like a run-a-way bride we won't commit. There are building codes and best practices to be followed – be sure you are familiar with them. When drilling holes through wall studs or ceiling joists, use a drill bit that is (sharp) wider than the speaker cable that will be routed (pulled) through them. Always drill through the center of the stud or joist. If the hole must be drilled within one inch of the edge of a wall stud, add a nail plate to the drywall side to protect the wire from possible nails and screws put in the wall later. Line up the holes in the studs or joists as you go, so that pulling the wire through them will be easier. Maybe you consider hiring a professional installer and see a movie with some new friends instead.

Installation

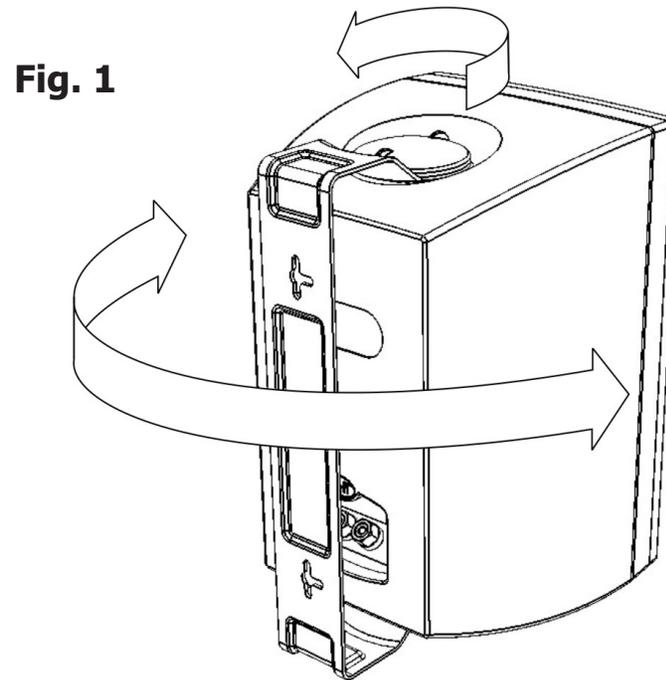
Tools You'll Need:

- Heavy-duty wood screws Philips or hex heads
- Washers
- Lock washers
- Caulk
- Pencil
- #2 Philips screwdriver
- Tape measure
- Safety goggles
- Dust mask
- Protective gloves
- A solid and stable ladder
- Electric drill with #2 Philips bit
- Socket and ratchet
- Band-aids

Use caution to avoid dropping the O2-ARC, it's possible to hurt whatever it lands on. Drop it from a high enough place you might crack the case...but unlikely. The real fear is hitting someone! Please, be careful – rope off the area with that yellow caution tape!

The integrated bracket has two "T" shaped keyholes to accommodate your mounting fasteners and allows you to mount the bracket horizontally or vertically and have some positioning wiggle room. The bracket is designed to allow the speaker to rotate so you can aim

the speaker at the listening area. Loosen the two large recessed knobs (wing-dings) a little bit, but not too far on each end to free up the bracket and enable you to rotate the speaker – click-click-click into position (Fig. 1). You tighten the two large wingdings to lock the speaker in position by twisting hard and making a grunting sound. Farting is optional.



Prepare for the big wire connection moment by stripping 1/4" to 3/8" of insulation from the wire ends and twisting the exposed wire strands tightly. We have heard counter-clockwise sound better. The gold plated, push-to-open posts on the back of the speaker will prefer to bite down on bare wire and other stuff too. Be sure to wire both the left and right speakers "in-phase." That fancy hi-fi lingo for making sure, the positive (red +) terminal on the amplifier speaker output is connected to the corresponding positive (red +) terminal on the speaker. Do the same with the negative (black -) terminals. Explaining it is harder than actually doing it. All speaker cables have some sort of marking along one or both conductors to help you make the correct connections. Proper wiring of the speakers is critical to good sound - speaker wires have some sort of marking along one or both conductors to help you make the correct connections. If they don't have this marking, take them back to that guy in the white van in the grocery store parking lot that sold you the stuff.

Logo Installation Instructions? Really.

An adhesive NHT logo is supplied with the O2-ARC. If you choose to be festive and advertise your NHT investment, peel off the adhesive backing and place it on the center of the grille, about a half inch from the bottom edge, or on the side-center-bottom-edge, or on your computer monitor, stove, your car dashboard, or on your cat, or not.

2nd Painting Warning

Don't. Stop. Buy black instead or if you have black, buy white instead. If you must paint the speakers and grills to keep the "decorator" happy, take them to a professional painter. Bring a sample of the color you want with you along with a box of chocolates. High-end custom automotive painting shops can match the color and paint the grill without plugging up the 659 grill holes and the stuff will probably stay on. We have extra grills available, for a charge, if you do not heed our warning and try to paint the grill yourself with latex paint.

In Use

The NHT speakers are designed to handle a wide range of listening levels, but every speaker has limits. It is important to use common sense and listen for signs of possible distress from the speakers – here are some pointers to remember:

- Noticeable distortion or harsh breakup is an indication that the amplifier or your speakers are running beyond their capacity, and the volume should be decreased now. Like your Dad said, turn it down.

- Speaker damage most often occurs from sustained high volume levels, not from transient sounds or brief musical peaks. Again, like your Dad said, turn it down.

- Excessive boosting of bass, treble or equalizer controls can worsen the problem, and is not recommended. Do this with cheap speakers for fun and watch them fizzle then stop working. Take a video and put it on your Facebook page.

- Having more power is always better than having less. Underpowered amplifiers are most often the cause of speaker damage. Man up. Get some watts.

3 - If you tend to listen at higher volume levels, get a powerful amplifier because they are less likely to run out of power. Like we said, watts up.

- One more time for the hard of hearing - Proper wiring of the speakers is critical to good sound - speaker wires have some sort of marking along one or both conductors to help you make the correct connections. If they don't, take them back to that guy in the white van.

- Weak bass and the lack of a well-defined stereo image indicate incorrect speaker phase (the + and – are reversed on one speaker). Some people call bass, bass like the fish. Ukrainians say bazz.

Maintenance

Unless you ice fish, you may want to consider bringing your O2-ARC speakers inside for the winter and store them in the shed along with the tulip bulbs and lawnmower. If not, at least cover them with a canvas blankie.

Do not attempt to clean the actual speakers in the speakers. Really, don't. They are fine no matter how ugly they might look.

You may clean the grill after removal with a citrus-based cleaner to cut a greasy film otherwise a mild detergent will clean the speaker up nicely. Rinse and repeat. Avoid harsh cleaners, power and car washes. Let dry completely. Style as usual.

Service & Support & Troubleshooting

Contact the NHT Authorized Reseller who sold you the products or;
Contact NHT by telephone go online at www.nhthifi.com and navigate to the Service Center area for more information.

Professional Specifications

System Type: 2-way, 7.4 liter acoustic suspension design

Driver Complement: 6.5" long-throw polypropylene woofer, 1" fluid-cooled dome tweeter

Crossover: 2.5KHz, 12db/octave

Response: 60Hz - 20KHz, +/- 3dB

Sensitivity: 88db (2.83V at 1M)

Power Rating: 25W/ch minimum, 125W/ch maximum

Impedance: 6 ohms nominal

Inputs: 5-way binding posts or

Weight: XX lbs. each

Dimensions: 11.7"H x 7.3"W x 7.5"D

Finish - Matte White or matte black (professionally paintable only)

Op. temperatures - -20 to 140 degrees Fahrenheit.

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