

GoldenEar™



Aon™ Series

Ultra-High Performance Bookshelf Monitor

Owner's Manual



Congratulations!

Congratulations and thank you for purchasing GoldenEar's™ Aon speakers! You are about to hear the spectacular difference these very special speakers will make in your music and/or home theater system!

Our engineers' many years of experience in developing loudspeakers has led to this extraordinary product. In order to ensure that you experience maximum performance, please take a moment to fully read this owner's manual and familiarize yourself with the unique installation, assembly and set-up procedures for your Aon speakers.

Please visit our website at www.GoldenEar.com for more information on the technology behind your new speaker system. If you have additional questions, contact your Authorized GoldenEar™ Dealer or visit the Q&A page in the Tech Support section of our website.

Your New GoldenEar Speakers

GoldenEar Aon speakers are designed to fit beautifully in a wide variety of applications. Their compact dimensions allow for easy installation in many locations within your home. To get the best performance possible and for a product that lasts a lifetime, we strongly recommend that you follow the placement and setup guidelines provided in this manual.

Cleaning

Do not use a strong or abrasive cleaner on your new speakers. Clean them only with a damp cloth, but do not get them wet. Do not set wet objects on top of the speakers as they may damage the enclosure.

Wall Mounting



IMPORTANT: GoldenEar does NOT supply the hardware for mounting speakers to the wall.

Your speakers have an optional keyhole hanger to facilitate mounting on a wall. If you are wall mounting speakers, take extra care in installation and the use of safety straps as a secondary restraint is recommended. We suggest wall mounting installation be performed by a qualified contractor or your authorized GoldenEar dealer.

Preventing Speaker Damage



USE AN APPROPRIATE AMPLIFIER. At high volumes a very powerful amplifier can overdrive your speakers and damage them. And if the amplifier is not powerful enough, it can produce distortion that can easily damage your speaker. (Consult your dealer for assistance.)



DON'T BE FOOLED BY YOUR RECEIVER'S VOLUME CONTROL. It only adjusts how loud, it is not an indication of power output. If your speakers begin to sound harsh or grating or if you hear other forms of distortion, turn down the volume immediately!



Avoid use of tone controls and loudness controls as they will demand even more power from an amplifier, lowering the volume at which damage could occur.

GoldenEar Aon speakers are efficient and can be driven to loud listening levels with moderate amplifier power. They are also able to handle the output of very powerful amplifiers. To prevent damage to your speakers, please read all of the following guidelines before hooking them up.

Amplifier Distortion — #1 Threat to your New Speakers!

Amplifier distortion is the principal cause of speaker damage. When listening at loud levels your amplifier may run out of clean power. It will then begin to produce speaker-damaging distorted power. This will damage any brand of speaker very quickly! More powerful amplifiers are actually safer – For example: A 40 Watt/channel amplifier will have substantial distortion above 40 Watts. If driven to 50 Watts, this amplifier will deliver speaker-damaging distorted power! But a 100 Watt/channel amplifier will have very low distortion below 100 Watts. Therefore, when the speaker requires 50 Watts, this more powerful amplifier will deliver clean power and speaker damage is less likely to occur. (See your GoldenEar dealer for amplifier recommendations.)

Volume Setting

Do not be fooled by the Volume setting of your receiver/preamplifier. It only adjusts listening level — it is not a “power-output” dial. The amount of amplifier power actually used at a given Volume setting depends solely on the nature of the source material you are listening to (at a given Volume setting a quiet section of music will use less amplifier power than a loud section). With typical material, the rated output power of many receivers/ amplifiers is often reached when the Volume is set to around -10dB, or between the “11” and “1 o'clock” settings with an analog control (with bass/ treble and loudness controls not used — otherwise rated power may be reached at even lower Volume settings). Remember, all amplifiers produce distortion when operated beyond their rated output power. The resulting distortion will damage all speakers! If you listen at loud levels, be careful to listen for the point of audible distortion — if the speakers begin to sound distressed, turn the Volume down or your speakers and/or amplifier(s) will be damaged! This type of damage constitutes abuse and is not covered by the warranty. If louder volumes are desired, consider a more powerful amplifier.

There is Actually a Limit!

Even with these safer, more powerful amplifiers, there is a point at which you could have more power than the speaker can handle. At that point you will overpower the speaker and damage it. At loud levels do not increase bass/treble controls from zero and ensure that all loudness/contour/bass EQ buttons are off (otherwise rated output power will be reached at even lower volume control settings).



The Right Amount of Power

A power-range rating is given in the specifications as a guide to indicate the approximate minimum and maximum power input of your GoldenEar Aon speakers. Amplifiers that meet or even exceed the speaker's power-range rating are recommended as their greater power reserves provide better sound. But always use the speakers within their power-range rating to prevent damage — that is, keep listening levels below the point of obvious audible distortion.

Unpacking your Aon Loudspeakers

Please Inspect for Shipping Damage

Each loudspeaker leaves our plant in perfect condition. Any visible or concealed damage most likely occurred in handling after it left our plant and should be reported at once to your GoldenEar Dealer and/or the delivery company that delivered your loudspeaker. Please unpack your system carefully.

Save all cartons and packing materials in case you move or need to ship your system. Record the serial number found on the back of the Aon loudspeaker here:

(Serial Number)

Please go to <http://www.goldenear.com/support/registrationandwarranty> and use the serial number(s) above to complete your warranty registration.

Speaker Placement

GoldenEar Aon speakers are designed to allow flexible placement while providing a very large window of sound throughout your listening room. Please remember that although the following recommendations are usually valid, all rooms and listening sets-ups are somewhat unique, so do not be afraid to experiment with the speakers. Remember, whatever sounds best to you is correct.

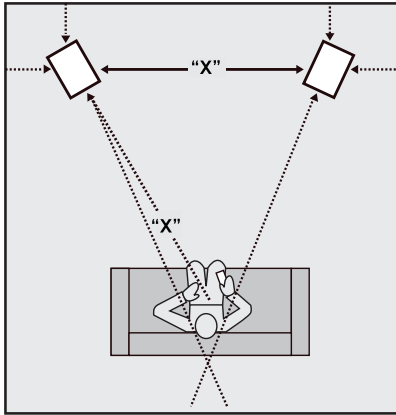
Room Acoustics

GoldenEar Aon speakers are designed to provide exceptional sound in a wide variety of domestic settings. It is important to note however that listening room construction, dimensions and furnishings all play a part in the quality of sound you will ultimately achieve from your new speakers. The listening room will impose its own character on the performance capabilities of the speaker system. Regarding the room, please note that:

- Mid and high frequencies are affected by the amount of soft furnishings in your room — curtains, carpets, sofas, wall coverings, etc. An excess of such items can result in a somewhat dull sound. The same room without any soft furnishings can produce an overall bright sound. The typical quantity of soft furnishings found in most living environments provides the right acoustic characteristics to allow the speakers to sound balanced;
- Concrete floors and walls tend to aggravate low-frequency standing wave problems and are less preferred;
- Rooms where height, width and length are similar should be avoided as they can exhibit significant low-frequency standing wave problems. This may result in reduced clarity. If no other room is possible, experiment with speaker placement to minimize acoustic problems.

The extra care you take in correctly positioning the speakers will result in greater listening enjoyment. So, keep the following guidelines in mind when deciding on the best speaker placement.

Positioning Aon as Left/Right Fronts



To ensure the best performance possible, observe the following placement guidelines:

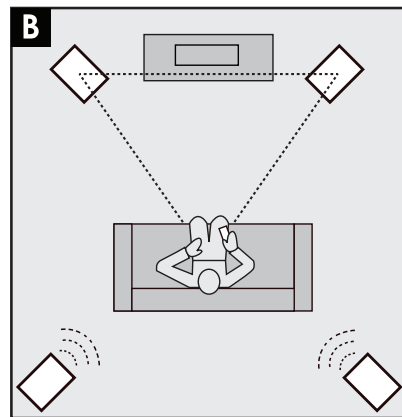
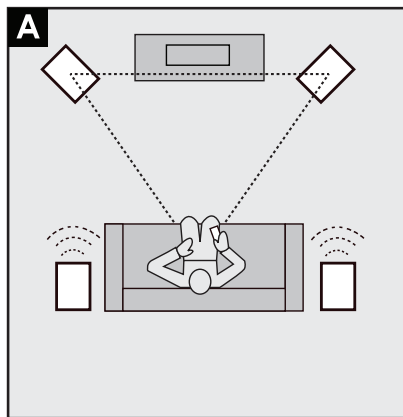
Accurate Timbre: For the most accurate and natural timbre, speakers' high-frequency drivers should be at approximately ear level.

Balanced Bass: Placing speakers in corners will over-emphasize bass and reduce overall clarity. If possible, position speakers 8 in (20 cm) or more from the wall behind the speaker and as much as possible from either side wall. This will ensure better bass performance and optimal midrange clarity.

Best Imaging: Measure the distance from your main listening area to the left front speaker (we'll call this distance "X"). For optimal imaging and largest soundstage, place speakers "X" distance apart from each other (and no less than $\frac{3}{4}$ of that distance — $\frac{3}{4}$ of "X"). To further optimize imaging, turn speakers inward so they point toward the listening position with their axes crossing just behind it.

Positioning Aon as Surrounds

When used as surround speakers, Aon speakers may be located on the side or behind the listeners. When used on the sides, take care never to locate the speakers forward of the listeners (A). If the speakers are placed along the rear wall as surrounds, it is suggested that they be positioned fairly wide apart if possible. For instance, if there is a couch in the center of the rear wall on which the listeners will sit, try to position the speakers wider apart than the couch (B).



Speaker Break-in

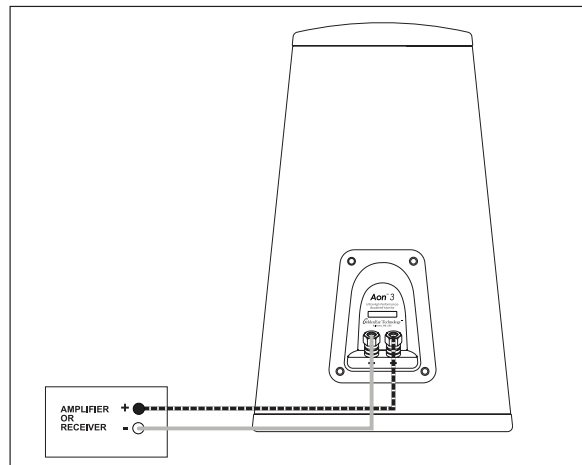
Your new Aon loudspeaker system should sound good right out of the box; however, an extended break-in period of 40-60 hours or more of normal playing time is required to reach full audiophile performance capability. Break-in allows the driver suspensions to work-in and crossover components to “heal,” resulting in fuller and tighter bass, a more open “blossoming” midrange and smoother high frequency reproduction.

Speaker Connection



Turn your amplifier/receiver OFF before performing any connection steps, in order to prevent accidental damage to your amplifier.

Your Aon speakers are equipped with a set of 5-way binding posts that can be used with bare wire, pin or spade connectors or banana plugs. Tighten the posts firmly by hand, but do not over tighten them. Make sure all wires are firmly fastened. Always use high quality speaker wire of sufficient gauge for the distances you are running (see your dealer for assistance).



For the front Aon speakers, hook up the left main/front channel red(+) terminal of your receiver or amplifier to the red(+) terminal of your left loudspeaker and the left main/front channel black(-) terminal of your receiver or amplifier to the black(-) terminal of your left loudspeaker. Connect the right channel main/front channel red(+) terminal of your amplifier or receiver to the red(+) terminal of your right loudspeaker and the black(-) terminal of the right main/front channel of your receiver or amplifier to the black(-) terminal of your right loudspeaker. It is essential that both speakers be connected in the same way (in phase) to its own channel of the amplifier. If you experience a great lack of bass, it is likely that one speaker is out of phase (+ and – reversed) with the other.

If you are using the Aon speaker as surround speakers, hook up the left surround red(+) terminal of your receiver or amplifier to the red(+) terminal of your left surround speaker and the left surround black(-) terminal of your receiver or amplifier to the black(-) terminal of your left surround speaker. Connect the right surround red(+) terminal of your amplifier or receiver to the red(+) terminal of your right surround loudspeaker and the black(-) terminal of the right surround channel of your receiver or amplifier to the black(-) terminal of your right surround loudspeaker. Again, it is essential that both speakers be connected in the same way (in phase) to its own channel of the amplifier.



Setting Bass and Treble Controls on Receiver or Amplifier

Normally we recommend that you set the "Bass" and "Treble" controls on flat (or off, or 0 dB). Same applies for a graphic equalizer; we recommend that you leave it flat (or off). This will give you the most accurate and natural sound. If you want more bass, raise your subwoofer's "Level" control (or raise the subwoofer level on you're a/v receiver), keeping in mind that even a little turn of the knob can make a big difference in the sound. The reason for this recommendation is that we have discovered what is often thought to be improper sounding speakers is, in fact, a problem caused by the use of tone controls. When in doubt, leave them out (flat); this almost always results in the best possible and most natural sounding system performance.

Setting Channel Levels and Bass Management in Multi-Channel Home Theater Systems

Multi-channel surround sound systems have bass management systems (systems which direct the bass to the various channels) which vary from unit to unit. Many problems relating to the overall sound of the system can be traced back to improper bass management. Also note that Multi-channel surround sound systems have a critical channel balancing procedure for setting the level for all speakers which must be followed if the system is to perform properly. Many problems relating to the overall sound of the system can be clearly traced back to improper system balance.

SETTING CHANNEL LEVELS: On your receiver or A/V processor's Speaker Level Calibration Menu, set each speaker (channel) in the system to the same volume level. While you can get reasonable results doing this by ear, it is best to use an inexpensive Sound Pressure (SPL) meter to get better channel to channel balance. Some new receivers and processors have Auto Set Up functions that use a supplied microphone to set levels automatically.

Complete Home Theater Systems

We strongly suggest that you use a GoldenEar center channel and rear/surround speakers, and a ForceField™ subwoofer, to complete your GoldenEar home theater system. Aon speakers are designed to be used as rear or side surround speakers as well, with exceptional results for both music and movies. Of particular note, the GoldenEar ForceFieldSubs have been designed specifically to make a perfect match with the Aon speakers.

Mounting Instructions

Your new GoldenEar Aon speakers are designed for Bookshelf, Table Top, Floor Stand, or Wall mounting. Rubber bumpers have been attached to the bottom of the speaker to prevent rattling and "walking" at high volumes.

Wall Mounting Instructions

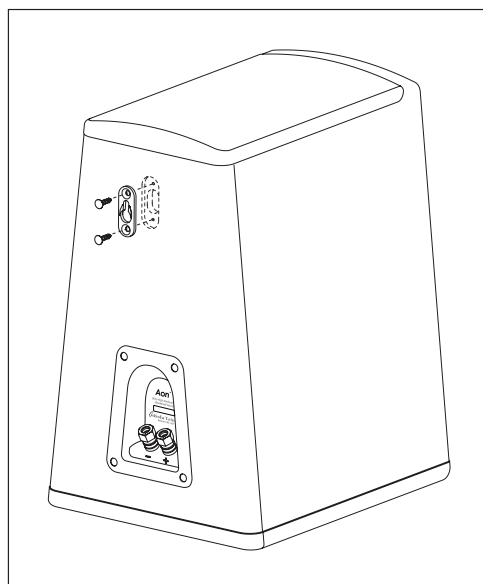
If you are not comfortable performing the following mounting procedures we strongly suggest having a professional wall mount your speakers (see your Dealer). Please note that hardware for the wall is not included — make sure to use hardware appropriate for your wall type and the weight of the speaker being mounted.

Parts Included: One Key Hole Hanger
Two T4 x 18mm, flat head self-tapping screws

Tools Required: Screwdriver
Pencil
Appropriate Wall Mounting Hardware and necessary tools - use screws, and/or anchors, that are rated to hold securely into the wall material and that have a head diameter at least 0.33inch (8mm) in diameter.

After the speaker wires have been run and are in place:

1. Position the key hole hanger on the back of the speaker as shown below. Use the provided screws to attach the hanger and tighten securely;
2. Use the pencil to mark the mounting screw's desired location on the wall;
3. Install your mounting hardware in this location, leaving 1/8" (3mm) of space between the back of the screw head and the wall.
4. You may wish to position two small, thin rubber bumpers on the back of the speaker towards the bottom to prevent rattling against the wall at high volumes;
5. Carefully align the keyhole hanger on the back of the Aon with the screw in the wall and gently slide the speaker into place.
6. If the speaker does not slide in place, back the screws out a turn and try again; If the speaker is loose, turn the screws in another turn and try again. Repeat as necessary.





Troubleshooting

If you experience any difficulties with your Aon speakers, try the suggestions described below. If you are still having problems, please consult your GoldenEar Authorized Dealer for assistance.

1. Make sure all your system interconnects and power cords are solidly in place.
2. Check that no foreign objects or liquid has entered the speaker.
3. If no sound comes out or the sound is distorted in some way and you are sure the system is set up properly, please bring the speaker to your GoldenEar Authorized Dealer for assistance. But make sure you call first.

Service

Service and warranty work on your GoldenEar loudspeakers will normally be performed by your local GoldenEar dealer. If, however, you wish to return the speaker to us, please contact us first, describing the problem and requesting authorization as well as the location of the nearest factory service center. **Please note that the address given in this booklet is the address of our office only. Under no circumstances should products or parts be shipped to our offices or returned without contacting us first and obtaining return authorization.**

The Quest Group dba
GoldenEar™
2621 White Road
Irvine, CA 92614 USA
Phone: 949-800-1800

Technical assistance

It is our pleasure to offer assistance if you have any questions regarding your Aon speakers or their set-up. Please contact your nearest GoldenEar dealer or contact us directly at (949) 800-1800.

Recycling and Reuse Guidelines for Europe



In accordance with the European Union WEEE (Waste Electrical and Electronic Equipment) directive effective August 13, 2005, we would like to notify you that this product may contain regulated materials which, upon disposal, according to the WEEE directive, require special reuse and recycling processing. For this reason GoldenEar (manufacturers of GoldenEar speakers) has arranged with our distributors in European Union member nations to collect and recycle this product at no cost to you. To find your local distributor please contact the dealer from whom you purchased this product or go to our website at www.goldenear.com.

Please note that the product only falls under the WEEE directive. When disposing of packaging and other shipping material we encourage you to recycle through the normal channels.

Specifications

Aon™ 2

Dimensions:	12" (30.5 cm) H x 8" (20.3 cm) W x 10" (25.4 cm) D
Weight:	12 lbs. (5.4 kg)
Frequency Response:	40 Hz – 35 kHz
Efficiency:	89 dB
Nominal Impedance:	4Ω (Compatible with 8Ω)=
Driver Complement:	One 6" cast-basket mid/bass driver One HVFR™ High-Velocity Folded Ribbon (HVFR™) high-frequency radiator Two 6.5" side-mounted planar low-frequency radiators
Rec. Amplication:	10 – 200 Watt/channel

Aon™ 3

Dimensions:	14" (35.6 cm) H x 9" (22.9 cm) W x 11" (27.9 cm) D
Weight:	15 lbs. (6.8 kg)
Frequency Response:	36 Hz – 35 kHz
Efficiency:	90 dB
Nominal Impedance:	4Ω (Compatible with 8Ω)
Driver Complement:	One 7" cast-basket mid/bass driver One HVFR™ High-Velocity Folded Ribbon (HVFR™) high-frequency radiator Two 8" side-mounted planar low-frequency radiators
Rec. Amplication:	10 – 250 Watt/channel

Specifications are subject to change without notice.

GoldenEar™

Limited Warranty

5-YEARS FOR DRIVERS AND CABINETS, 3-YEARS FOR ELECTRONIC COMPONENTS

GoldenEar™ warrants to the original retail purchaser only that this GoldenEar Loudspeaker Product (the "Product") will be free from defects in materials and workmanship for a period of five (5) years covering the drivers and cabinets, and three (3) years for the electronic components from the date of the original purchase from a GoldenEar Authorized Dealer. However, this warranty will automatically terminate prior to the expiration of five (5) years for the drivers and cabinets and three (3) years for the electronic components if the original retail purchaser sells or otherwise transfers the Product to any other party. The original retail purchaser shall hereinafter be referred to as "you." Defective Products must be shipped, together with proof of date of purchase, prepaid insured to the Authorized Dealer from whom you purchased the Product, or to the nearest factory service center. Product(s) must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If, upon examination at the Factory or a GoldenEar Authorized Dealer, it is determined that the unit was defective in materials or workmanship at any time during this Warranty period, GoldenEar or the GoldenEar Authorized Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Product(s) become the property of GoldenEar. Product(s) replaced or repaired under this Warranty will be returned to you, within a reasonable time, freight collect.

This Warranty does not include service or parts to repair damage caused by accident, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage in excess of the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defects in materials or workmanship, or service, or repair or modification of the Product which has not been authorized by GoldenEar. GoldenEar makes no Warranty with respect to its Products purchased from dealers or outlets other than GoldenEar Authorized Dealers. This Warranty is in lieu of all other expressed Warranties. If this Product is defective in material or workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will GoldenEar be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if GoldenEar or a GoldenEar Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation may not apply to you.

All implied warranties on the Product are limited to the duration of this expressed Warranty. Some states do not allow limitation on how long an implied Warranty lasts, so the above limitations may not apply to you. This Warranty gives you specific legal rights, and you also may have other rights which vary from state to state.



This product complies with the essential requirements of the EMC directive 89/336/EEC

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