



Owner's Manual

Insight Series P2m
On-Wall/Bookshelf
Planar Magnetic Hybrid Loudspeaker

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DOCUMENT CONVENTIONS

This document contains general safety, installation, and operation instructions for the Wisdom Audio Insight Series P2m Loudspeaker. It is important to read this document before attempting to use this product. Pay particular attention to:

WARNING: Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in injury or death.

CAUTION: Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in damage to or destruction of part of or the entire product.

Note: Calls attention to information that aids in the installation or operation of the product.

Introduction

Congratulations on purchasing your Wisdom Audio loudspeakers. They incorporate many design features designed to give you decades of pleasure and performance. Many of these design choices are uncommon among loudspeaker manufacturers and bear some explanation. See the following section entitled “Overview” for more information.

While we expect your local Wisdom Audio dealer to take care of the setup and calibration of the system, we still recommend that you at least briefly review this and your other manuals to better understand your system’s full capabilities.

You do not have to do anything to register your warranty for your Wisdom Audio products. (Isn’t that a pleasant surprise?)

In the unlikely event that your loudspeakers ever require service, please contact the dealer from whom you purchased them. Between their records and ours, you should be all set.

However, please keep your sales receipt in a safe and easily found place. Should you move or lose touch with your original dealer, it will serve as your proof of purchase for warranty purposes.

Overview

Your **Insight Series P2m** loudspeakers take advantage of several critical technologies to deliver a level of performance that has never been available in a loudspeaker that intruded so modestly on your living space. In fact, this level of performance has rarely been attained, regardless of the space and budget at one’s disposal.

Since several of these technologies cannot readily be found elsewhere, we will take the time to describe them in more detail than would be necessary for more conventional designs.

Our planar magnetic drivers use an advanced, thin film membrane to move the air. This film can respond instantly to the smallest detail in the signal. It has vastly less inertia than traditional “cone & dome” drivers, so the signal is never blurred in any way.

One of the most remarkable things about the sound of well-designed planar magnetic speakers is their lack of thermal or dynamic compression. There are several reasons for this:

- The lightweight diaphragm responds quickly to even the smallest signals yet is robust enough to handle a great deal of power.
- The voice coil is laid out flat and is exposed to the air on both sides; the large resulting surface area dissipates heat extremely quickly and efficiently.
- Since heat does not build up in the voice coil (as it does in conventional dynamic drivers), the load seen by the amplifier does not change at high power levels.

When you become accustomed to the sound of your new **Insight Series P2m** speakers, conventional speakers sound a bit bland and lifeless. You may also discover yourself hearing details at even modest levels on the P2m that were previously inaudible even at loud volumes on more conventional speakers.

The “voice coil” in the planar magnetic driver is spread out over a large, flat area that is exposed to the open air. As such, when a huge transient comes along, any heat that is generated is immediately dissipated. This compares quite favorably to other designs in which the voice coil is buried inside a massive piece of metal, where the heat has effectively no place to go.

The excellent heat dissipation of these drivers makes them remarkably reliable. Planar magnetic speakers can handle a great deal of power without undue stress or audible strain. In fact, for a given size, they can handle many times the power of a traditional dynamic driver.

Because the conductor of a planar magnetic driver is essentially a long, thin wire, it presents a purely resistive load to the amplifier. This is comparable to the simple test loads that amplifier companies use when measuring their amplifiers to show how terrific they are. As such, you can be assured that your amplifiers will sound and work their best.

Authoritative, deep bass requires that you move a lot of air. We have chosen to use dynamic woofers for the bass because they can provide excellent performance at lower frequencies.

To get comparable bass performance from a planar magnetic design, you would need to have a huge speaker that would be impractical in most domestic living spaces. It simply makes more sense to use the best transducer technology in each

area of the reproduced spectrum. One of Wisdom Audio's strengths is in seamlessly blending these technologies — particularly important given the high standards set by our planar magnetic drivers.

Of course, the dynamic woofers themselves must be rather extraordinary to “keep up” with the planar magnetic drivers right up to the crossover frequency.

Our woofers are different because they must be in order to do their job. Specifically, we need highly dynamic, uncompressed bass (to keep up with the planar magnetic drivers) that does not depend on a critical amount of enclosure volume (since these speakers are mounted in your wall and use the space inside the wall as their “enclosure”). These two design goals require rather extraordinary attention to myriad details.

The motor and suspension system of these woofers therefore includes all the critical damping required for optimal operation. (In most speakers, the woofers depend on the air trapped inside their enclosures as an additional “spring” to help them behave properly.) Technically, this approach is known as an “infinite baffle” design. In practice, the volume of air behind the speaker does not have to be infinite, of course. It just needs to be large enough to not act like an acoustic “spring.” Recommended and minimum enclosure volumes for the speaker are listed in the Specifications section and repeated on the Dimensions page.

Many speakers include a mid-bass “bump” in their response to give the illusion of going deeper in the bass than they actually do. Unfortunately, this “bump” makes blending them seamlessly with a high-quality subwoofer almost impossible.

All Insight Series speakers have been designed for optimally at response to 80 Hz, which is the most-common crossover frequency used with subwoofers.

Unpacking and Installing the P2m

Your new **Wisdom Audio Insight Series P2m** on-wall loudspeaker is relative compact, but surprisingly heavy compared to most on-wall speakers. Please exercise caution when unpacking your P2m to ensure that you do not strain yourself from its weight.

CAUTION: Do not attempt to lift your P2m module while bending or twisting from the waist. Use your legs for lifting, not your back. Always stand as straight as possible and keep the P2m close to your body to reduce strain on your back.

Carefully lift the speaker out of the box and lay it on a soft surface (carpet or similar).

Carefully remove the magnetic grille by gripping the edge of the one of the short sides of the grille and lifting it off the speaker from one side to the other to avoid damaging the grille. Lay the grille face up on a flat surface.

Unwrap the cloth wrapping from the speaker that prevents the finish from being scratched by any of the packaging. Your P2m is now ready to be installed.

After unpacking your P2m, keep all packing materials for future transport.

If you need to ship your speaker, only the original, purpose-designed shipping carton is acceptable. Any other method of shipping this product runs a significant risk of damage to the speaker – damage that would not be covered by the warranty. (If you lose your packaging and need to ship your speakers, replacement packaging can be purchased from Wisdom Audio.)

Mounting the P2m on the Wall

The mounting bracket is shipped in a small plastic bag inside the packaging of the loudspeaker. Included are drywall anchors, screws, and the mounting brackets.

All Insight On-Wall loudspeakers ship from the factory oriented for vertical mounting position. Pay proper attention to the intended orientation of the loudspeaker.

When mounting horizontally, be sure to follow step 7: Planar Magnetic Driver Orientation and step 8: Mounting Bracket Orientation. **When mounting vertically**, skip these steps and proceed to step 9.

Please note that this guide assumes the wall surface is flat. If not, shims must be applied to the rear of the mounting bracket so that the mounting bracket is uniformly secured to the wall and flat (not distorted). The mounting steps are as follows:

1. Locate the area with the speaker wire coming out of the wall.
2. Using the installation template included in the box, tack or tape the template to the wall in the location where the speaker is to be installed.

3. For drywall anchors, use a 5/16" (8 mm) bit to drill 1.5" (40 mm) deep pilot holes in each of the six marked locations. For installations without the drywall anchors use a 1/8" (3 mm) bit to drill pilot holes in each of the six marked locations.
4. Remove the template from the wall.
5. For installations using the drywall anchors, insert them into the wall until the head is seated flush by lightly tapping them into place with a hammer.
6. **If the speaker is to be mounted horizontally**, proceed to steps 7 and 8. Otherwise, skip steps 7-8 and proceed to step 9.
7. Planar Magnetic Driver Orientation: The Planar Magnetic Driver in your new P4m is orientation specific. There are two orientation-marking lines on either side of the Planar Magnetic Driver's faceplate. These two lines must always be vertical, regardless of the speakers mounting orientation. Use extreme caution during this procedure to prevent scratching the high gloss surface of the speaker cabinet.
 - a) Lay the speaker with the front face down on a soft surface (carpet or similar) and use the foam from the packaging can be used to prevent the speaker from being scratched.
 - b) Use a metric #3 Hex key or Allen wrench to remove the four screws holding the Planar Magnetic Driver in place.
 - c) Using a Mini Pick or Hook tool, insert the tip into one of the screw holes and turn it slightly to catch the bottom edge of the front plate of the Planar Magnetic Driver.
 - d) Gently raise the Planar Magnetic Driver from the speaker cabinet until it can be removed by hand. Use care not to pull the driver too far from the cabinet and stress the attaching speaker wire.
 - e) Rotate the Planar Magnetic Driver 90° so that the orientation lines point out from the speaker, away from the woofers.
 - f) Re-insert the four screws and tighten the Planar Magnetic Driver into place.
8. Mounting Bracket Orientation: Use extreme caution during this procedure to prevent scratching the high gloss surface of the speaker cabinet.
 - a) Lay the speaker with the front face down on a soft surface (carpet or similar) and use the foam from the packaging can be used to prevent the speaker from being scratched.

- b) Using a #2 Phillips screwdriver remove the mounting brackets from the speaker.
 - c) There is one mounting bracket screw installed in the speaker directly below each bracket. Remove the screw.
 - d) Rotate the mounting bracket 90° towards the now upwards facing side of the speaker and re-install the bracket.
 - e) Ensure the additional screw is inserted back into the vacant hole where the mounting bracket was factory installed.
- 9.** Using assistance, while holding the speaker back from the wall, connect the speaker cables to the rear spring terminals, while attending to proper polarity.
- 10.** Align the speaker on the wall, just above the mounting brackets, and lower it down until you feel the speaker's weight being taken by the bracket. Unlike Sage On-Wall speakers the speaker will not snap into position.
- 11.** Carefully align and replace the magnetic grille onto the speaker. The grille is an integral part of the design; moreover, the planar magnetic film should never be touched, as it is tensioned precisely at the factory. The grille plays an important protective role as well as an aesthetic one. If you need to remove the speaker from the bracket for any reason, simply support the speaker and raise it upwards until it comes free of the wall bracket.

Making the P2m Connections

As with any system, you should make changes to the connections only when the power is turned off to avoid any chance of inadvertently causing a problem (such as a short-circuit).

One set of speaker wires is required for each P2m loudspeaker.

We recommend using heavy-gauge speaker wire, particularly when the installation forces you to use longer wires than you might otherwise. A good rule of thumb is to keep the "loop resistance" below 0.07 ohms.

The loop resistance can be easily measured with an inexpensive volt-ohm meter. Simply twist the two conductors at one end of the cable together, and then measure the DC resistance across the two conductors at the other end of the speaker wire. Doing this measures the total resistance going down one side and back the other,

hence the term “loop resistance”. If this figure is at or below 0.07 ohms, you are in good shape.

The P2m and Subwoofers

All Insight Series loudspeakers are optimized for use with subwoofers, with a crossover of 80 Hz. (This is the most common frequency below which subwoofers are used.)

When properly installed on the wall, your P2m has inherently a response to 80 Hz, without the common “bass bump” that characterizes most in-wall speakers and is placed there to yield the impression of “more bass” than there really is. This makes it easy to blend seamlessly with a high-quality subwoofer such as one of Wisdom Audio’s Regenerative Transmission Line™ (RTL™) subwoofers.

You should setup your surround processor speaker bass management to “Small” and or with an 80 Hz crossover to maximize the speaker’s output. Doing so ensures that all content below 80 Hz is directed to the subwoofer(s) for reproduction.

Care and Maintenance

To remove dust from the front of your P2m, use a feather duster or a lint-free soft cloth.

To remove stubborn dirt and fingerprints from the grille, we recommend isopropyl alcohol and a soft cloth. Lightly dampen the cloth with alcohol first and then clean the grille of the P2m with the cloth. Do not use excessive amounts of alcohol—there is no need for the cloth to be wet; merely damp is better.

Never attempt to clean the drivers themselves.

CAUTION!

Do not touch the surface of the planar magnetic drivers, under any circumstances. The thin film has been carefully pre-tensioned at the factory; any subsequent contact can only damage it.

North American Warranty

Standard Warranty

When purchased from and installed by an authorized Wisdom Audio dealer, Wisdom Audio loudspeakers are warranted to be free from defects in material and workmanship under normal use for a period of 5 years from the original date of purchase.

Furthermore, the transducers (“drivers”) in your Wisdom Audio speakers are warranted to be free from defects in material and workmanship under normal use for a period of 10 years from the original date of purchase.

Harsh Conditions Use

Wisdom Audio loudspeakers are designed for installation and operation in environmentally controlled conditions, such as are found in normal residential environments. When used in harsh conditions such as outdoors or in marine applications, the warranty is three years from the original date of purchase.

During the warranty period, any Wisdom Audio products exhibiting defects in materials and/or workmanship will be repaired or replaced, at our option, without charge for either parts or labor, at our factory. The warranty will not apply to any Wisdom Audio products that has been misused, abused, altered, or installed and calibrated by anyone other than an authorized Wisdom Audio dealer.

Any Wisdom Audio product not performing satisfactorily may be returned to the factory for evaluation. Return authorization must first be obtained by either calling or writing the factory prior to shipping the component. The factory will pay for return shipping charges only if the component is found to be defective as mentioned above. There are other stipulations that may apply to shipping charges.

There is no other express warranty on Wisdom Audio products. Neither this warranty nor any other warranty, express or implied, including any implied warranties of merchantability or fitness, shall extend beyond the warranty period. No responsibility is assumed for any incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and other 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 also have other rights, which vary from state to state. This warranty is applicable in the United States and Canada only. Outside of the U.S. and Canada, please contact your local, authorized Wisdom Audio distributor for warranty and service information.

Obtaining Service

We take great pride in our dealers. Experience, dedication, and integrity make these professionals ideally suited to assist with our customers' service needs.

If your Wisdom Audio loudspeaker must be serviced, please contact your dealer. Your dealer will then decide whether the problem can be remedied locally, or whether to contact Wisdom Audio for further service information or parts, or to obtain a Return Authorization. The Wisdom Audio Service Department works closely with your dealer to solve your service needs expediently.

IMPORTANT: Return authorization must be obtained from Wisdom Audio's Service Department BEFORE a unit is shipped for service.

It is extremely important that information about a problem be explicit and complete. A specific, comprehensive description of the problem helps your dealer and the Wisdom Audio Service Department locate and repair the difficulty as quickly as possible.

A copy of the original bill of sale will serve to verify warranty status. Please include it with the unit when it is brought in for warranty service.

WARNING: All returned units must be packaged in their original packaging, and the proper return authorization numbers must be marked on the outer carton for identification. Shipping the unit in improper packaging may void the warranty, as Wisdom Audio cannot be responsible for the resulting shipping damage.

Your dealer can order a new set of shipping materials for you if you need to ship your loudspeaker and no longer have the original materials. There will be a charge for this service. We strongly recommend saving all packing materials in case you need to ship your unit someday.

If the packaging to protect the unit is, in our opinion or that of our dealer, inadequate to protect the unit, we reserve the right to repackage it for return

shipment at the owner's expense. Neither Wisdom Audio nor your dealer can be responsible for shipping damage due to improper (that is, non-original) packaging.

Specifications

All specifications are subject to change at any time to improve the product.

- **Frequency response:** 70Hz – 20 kHz
- **Crossover frequency:** 650 Hz
- **Nominal Impedance:** 8Ω
- **Sensitivity:** 87 dB/2.83V/1m
- **Recommended Amplifier:** 50-200w
- **Maximum SPL:** 110 dB @ 1m
- **Dimensions HxWxD:** 16.61" x 8.07" x 4.13" (42.2cm x 20.5cm x 10.5cm)
- **Weight, each:** 14 lbs. (6.3 kg)

For more information, see your Wisdom Audio dealer or contact:

Wisdom Audio

1572 College Parkway, Suite 164

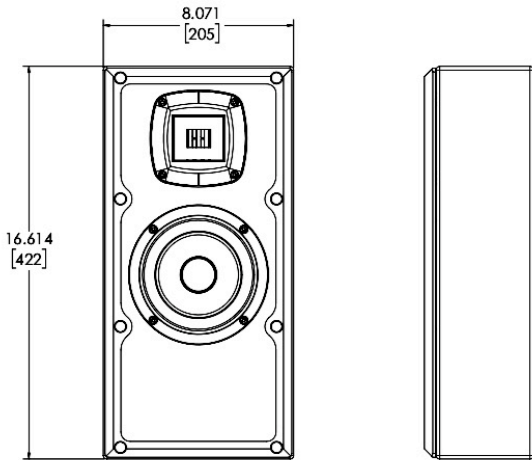
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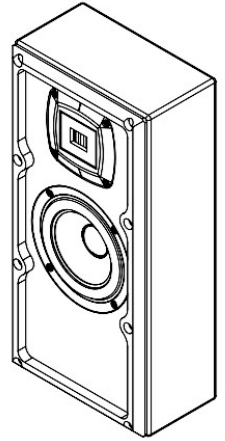
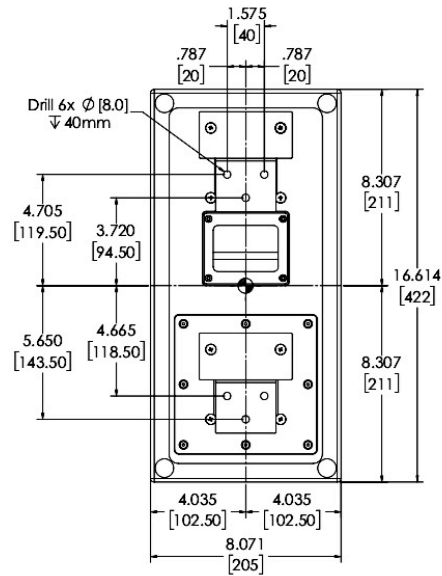
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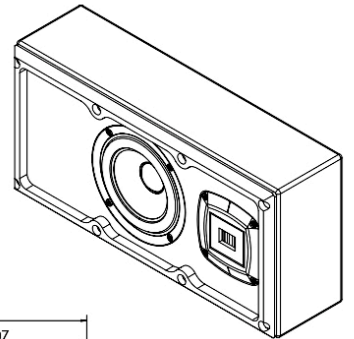
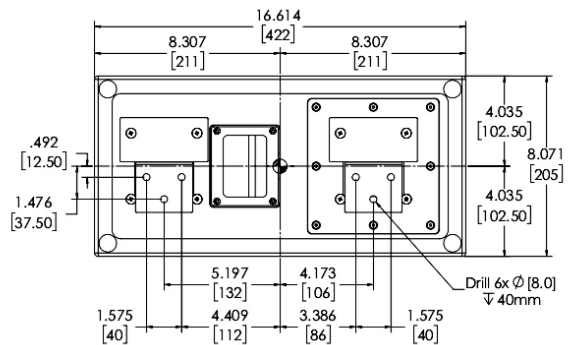
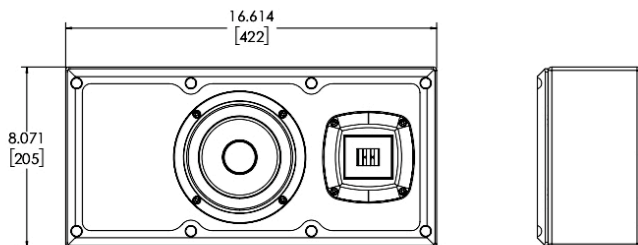
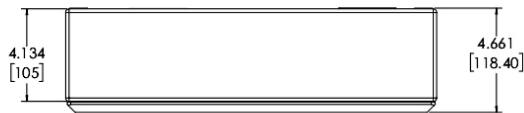
P2m Dimensions



P2m Vertical



P2m Horizontal





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