



HD-IWS10 Inwall Subwoofer
and
Digital Amplifier
Owner's Manual

Home Theater Direct, Inc.
www.htd.com

Expert Support:
866-HTD-AUDIO (483-2834)
info@htd.com

Safety Instructions for the SDA-120 Digital Amplifier

Warning - To reduce the risk of fire or shock, do not expose this appliance to rain or moisture.

Caution - To reduce the risk of fire or shock, do not remove the cover or back. No user serviceable parts inside.
Refer servicing to qualified service personnel.

Caution - To prevent electric shock, match wide blade of plug to wide slot, fully insert.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence to un-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this appliance.

Read Instructions

All safety and operating instructions should be read before the appliance is operated.

Retain Instructions

The safety and operating instructions should be adhered to.

Heed Warnings

All warnings on the appliance and in the operating instructions should be adhered to.

Follow Instructions

All operating and use instructions should be followed.

Water and Moisture

The appliance should not be used near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

Ventilation

The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings: or placed in a built-in situation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Heat

The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

Power Sources

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

Grounding or Polarization

Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

Power Cord Protection

Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Cleaning

The appliance should be cleaned only as recommended by the manufacturer.

Power Lines

An outdoor antenna should be located away from power lines.

Non-Use Periods

The power cord of the appliance should be unplugged from the outlet when left unused for long periods of time.

Object and Liquid Entry

Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

Damage Requiring Service

The appliance should be serviced by qualified personnel when: a) the power supply cord or the plug has been damaged: b) objects have fallen, or liquid spilled into the appliance: c) the appliance has been exposed to rain: d) the appliance does not appear to operate normally or exhibits a marked change in performance or e) the appliance has been dropped, or the enclosure damaged.

Servicing

The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Product Servicing

If your system fails to operate properly, please contact HTD directly for further assistance, at 1-866-483-2834.

Additional information, including detailed specifications for each model, can be found on our website, www.htd.com. Thanks again for choosing Home Theater Direct!

If you have any questions, we can be reached at...
info@htd.com or toll free 1-866-HTD-AUDIO (483-2834)

Thank you for giving Home Theater Direct the chance to win your business! We are confident you will find that HTD offers an outstanding combination of performance and value in everything we make. To ensure you get the most out of your new subwoofer and amplifier, please take a moment to read this manual before you get started. Should you lose this manual, you can always download or print a copy from **www.htd.com**.

HTD In-Wall / In-Ceiling Speakers are designed to accurately reproduce soundtracks from both music and video sources, including today's demanding digital signals. Mounted flush to the wall or ceiling, in-wall / in-ceiling speakers are ideal for many applications where traditional speakers would be impractical or impossible. They are especially suited for distributing sound throughout a home and can also be used to enhance surround sound systems.

Tips Before You Begin

Subwoofer Placement

Once installed, the Inwall subwoofer is not easily moved or repositioned. Take a little extra time to carefully consider a good location before you begin the installation.

Ideally, you should try to locate your In-wall Subwoofer so that it is on the front wall, facing toward the seating position. If this is not practical, you can alternately locate it on a side wall, close to the front of the room. A 3rd choice would be on a side wall, further back in the room. A 4th choice would be to locate it on a back wall, facing toward the front.

In all cases, make sure the location will not be blocked by furniture or other objects.

Since the Subwoofer will be installed in a wall, some of the low frequency sounds will be transmitted to the room on the other side of the installation wall. Insertion of fiberglass insulation blankets/batts in the wall, above and below the Subwoofer is recommended to minimize such sound transfer and to enhance the overall performance of the Subwoofer.

Connecting the Wires

The terminals will accommodate up to 14-gauge speaker wire, which should be used for longer connections (greater than 50 feet of wire). For shorter distances, 16-gauge wire will suffice, although we still recommend 14-gauge for best performance. For behind-the-wall installations such as this, we recommend using UL Class 3 approved cable (marked "CL3") for compliance with local building codes. Consider using HTD cable for all of your home theater and whole-house audio installations. HTD cable offers exceptional performance, and of course, is priced significantly lower than retail.

Leave about two feet of extra wire at the speaker end to make installation and positioning of the speaker easier. Do not use staples, nails or other metal objects to secure the speaker wire. The resulting short could affect your system's performance, and could also damage components in your system, especially the amplifier. You will get the best sound quality and least amount of hum by keeping the speaker wires at least 18 inches away from other electrical wires and cables. Always cross speaker wires with other cable at a 90-degree angle.

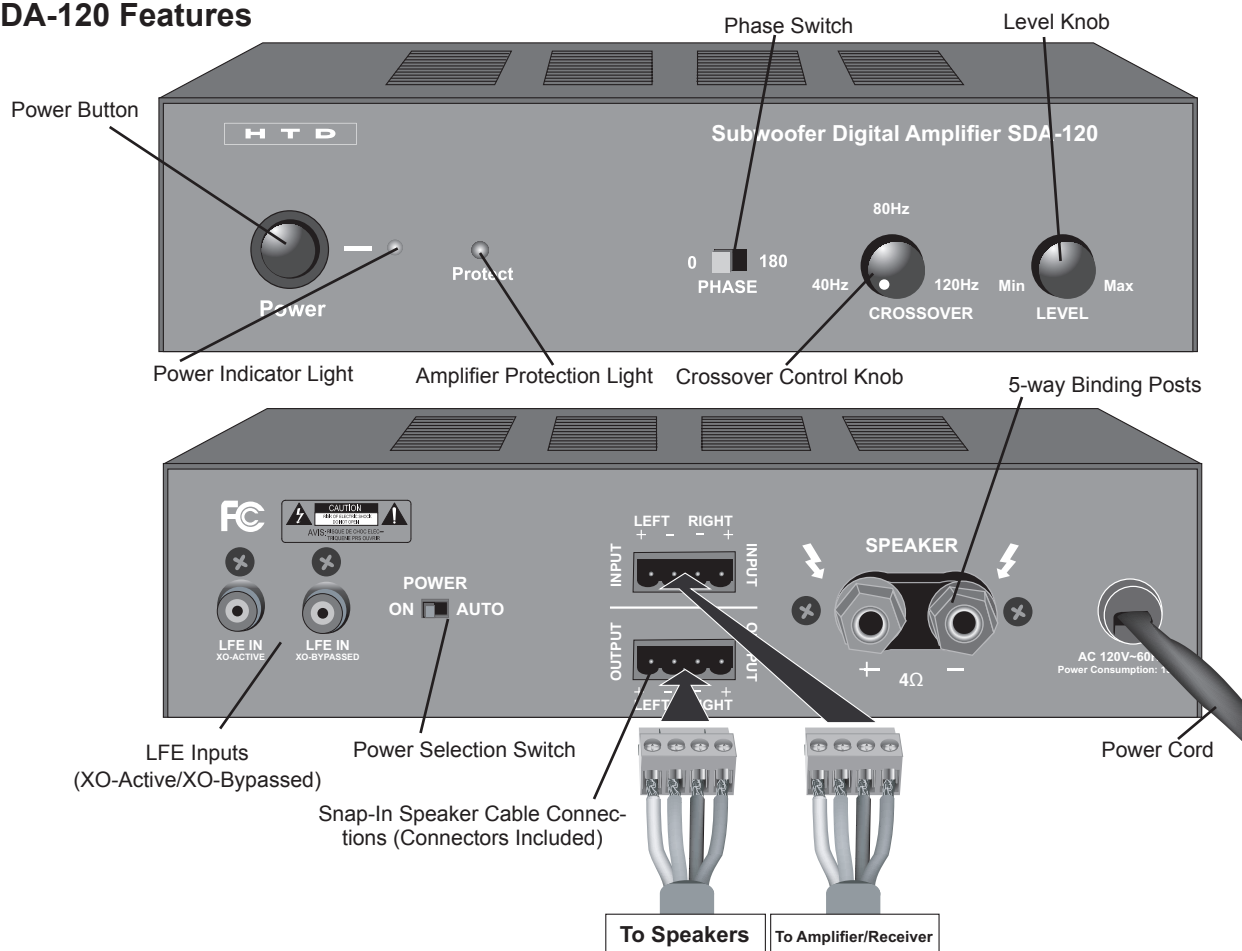
When connecting the subwoofer, it is very important to retain the correct wiring polarity. To do this, be sure that the wire attached to the +, red, or positive terminal on the speaker connects to the +, red, or positive terminal on the subwoofer amplifier. Similarly, the -, black, or negative terminal on the speaker must connect to the respective -, black, or negative terminal on the subwoofer amplifier.

Mounting the Speaker (if you are unsure, consult a professional contractor)

Yes, you will be cutting a hole in the wall. With the right tools and a little extra care and preparation, installing the Inwall subwoofer can be both quick and easy. Follow the instructions beginning on page 6 for best installation practices.

Product Features

SDA-120 Features



Power Selection Switch, Power Button, and Power Indicator Light

The Power Selection Switch is found on the back of the amplifier. It includes two settings that will affect how the amplifier is turned on and off.

- **AUTO** - the amplifier will turn ON when an input signal is sensed by the source that is selected and will go into STAND-BY/OFF after several minutes of no signal. The Power Button should be in the IN position. If the Power Button is in the OUT position, the amplifier will not turn on.
- **ON** - allows the user to manually turn the amplifier ON and OFF by pushing the power button IN or OUT on the front panel.

The Power Indicator Light will be amber when the amplifier is in stand-by mode and bright blue when the amplifier is active. The Power Indicator Light will not be lit when the Power Button is in the OUT position.

Amplifier Protection Light

The Amplifier Protection Light will only light when a problem exists that triggers the built-in protection mode. The amplifier will shut down until the problem is resolved.

Phase Switch

The phase switch allows setting the output to be out of phase with another subwoofer (if used) to minimize “dead spots” in the room caused by speaker wave interaction and cancellation.

Product Features (Cont.)

Crossover Control Knob

The Crossover control knob allows control of the frequencies which your subwoofer will produce.

Level Knob

This knob is used to adjust input level to blend subwoofer volume with the other speakers in the room. The level is usually set just once.

LFE Inputs (LFE = Low Frequency Effects)

Inputs for line level subwoofer signal from the LFE or Subwoofer output connector on your surround sound receiver.

- **XO-Active** - Use this input if you would like to use the built-in crossover on the front of the amplifier.

- **XO-Bypassed** - Use this input if you would rather use the crossover frequency set by your receiver.

Snap-In Speaker Cable Input and Output Connectors

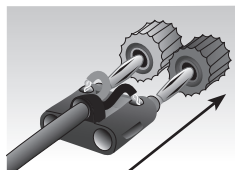
Used to obtain the audio signal from existing speaker cable in the instance that an LFE Signal is not available from your receiver.

In the event your receiver does not have a dedicated line-level LFE or Subwoofer output connector, you can get the needed signal by connecting speaker cables from your receiver's Left & Right Front output connectors to the SDA-120's rear INPUT connectors and then connecting speaker cables from the SDA-120's rear OUTPUT connectors to your Left & Right Front speakers.

Note: This connection would not be needed if your receiver has a dedicated LFE or Subwoofer output connector.

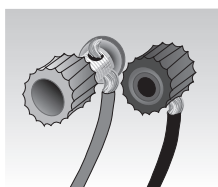
5-way Binding Posts

These posts are used for connecting standard speaker cable from the amplifier to the subwoofer.



Banana Plug Connection

Make sure binding posts are tightened then push in banana plug.



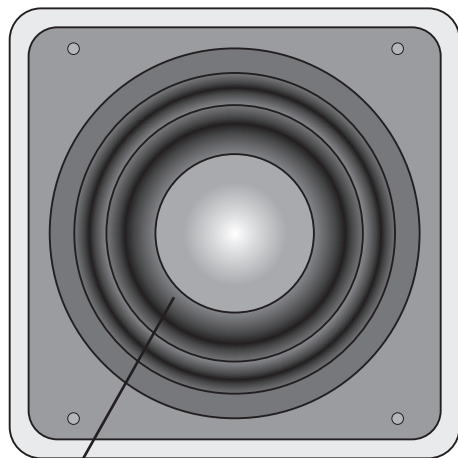
Bare Wire Connection

Rotate binding post counter-clockwise to reveal "eye". Strip back 3/8" insulation from cable. Tightly twist copper wire and insert into "eye". Rotate binding post clockwise to tighten.

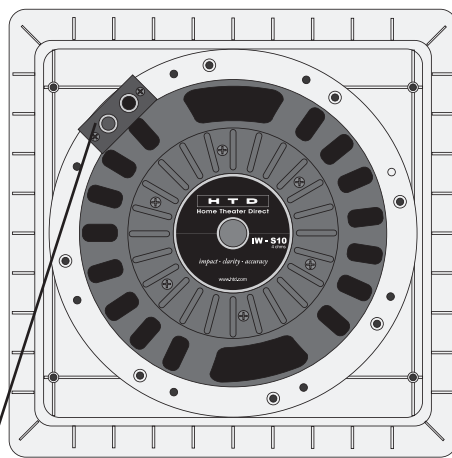
Be sure to maintain polarity

(Subwoofer + to Amplifier +, Subwoofer - to Amplifier -)

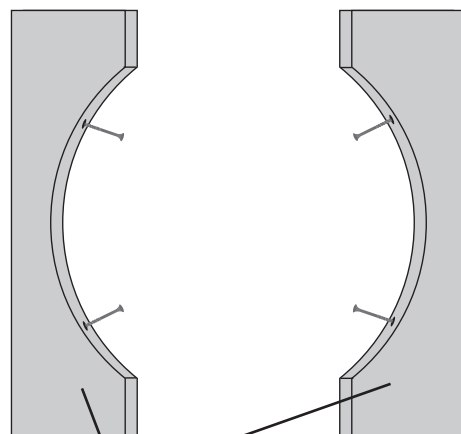
HD-IWS10 Features



10" Reinforced Long-throw Aluminum Driver



Gold-plated Compression Terminals



Sturdy Wooden Mounting Braces (included). Braces attach to existing studs. Fits easily through hole cut for subwoofer.

Quick Steps: Install HTD In-Wall Powered Subwoofer

You will need the following tools:

Optional: 1/2" foam tape



Pencil

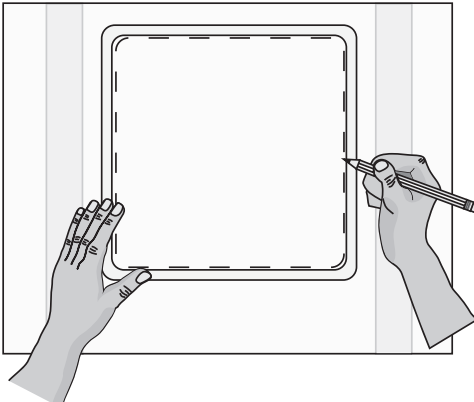


Drywall Saw

Drill
(with phillips
head bit and
1/8" drill bit)



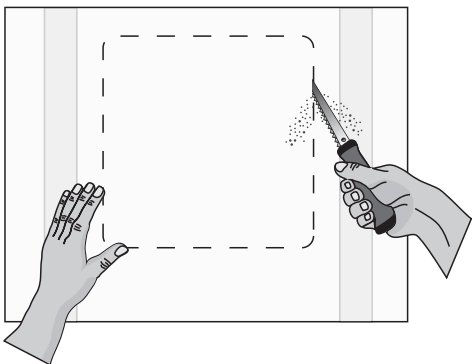
Step 1



After checking for stud locations and confirming there are no obstructions hidden behind the wall, position the cardboard template and trace along the inside edge.

TIP: Check for obstructions before you cut the hole. Drill a small hole in the center of the area you plan to mount the speaker. Cut a piece of coathanger wire and bend it with a 90 degree angle. Insert the wire into the small hole and fish around to make sure that no pipes, studs, or other objects will get in the way. If you do find something, you can easily patch the small hole you drilled. Otherwise, cut the big hole with confidence!

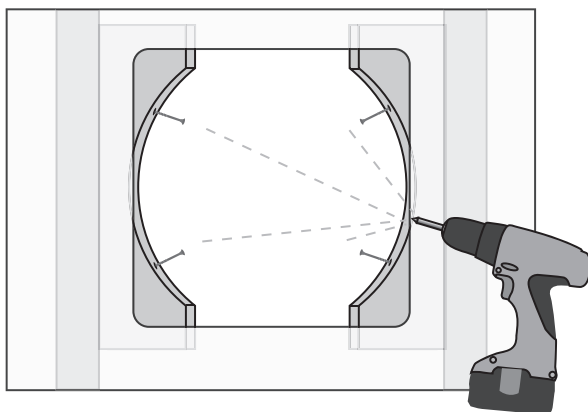
Step 2



Cut along the traced line using a drywall saw or rotary drill. A utility knife will also work but is more difficult to control for beginners.

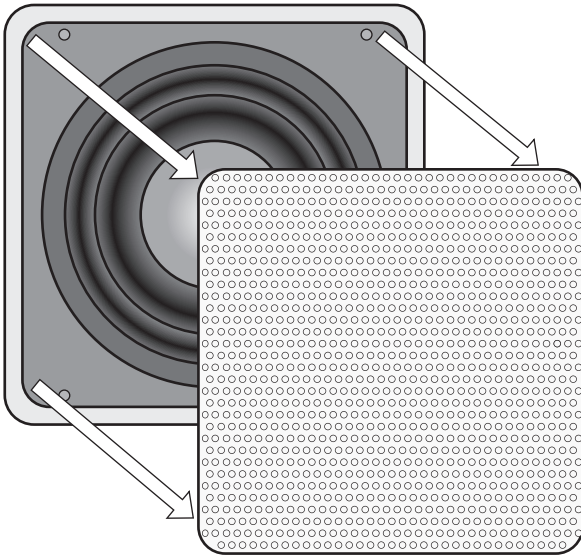
TIP: Use a drywall saw to cut the hole. A utility knife will make the cleanest cuts in drywall, but a utility knife can be difficult to control by a non-expert. Electric rotary saws make cutting drywall physically easy, but they too can be difficult to control. A simple, inexpensive drywall saw (about \$10 at your local hardware store) is the best bet for beginners. The speaker's frame will cover up any rough edges.

Step 3



Insert wood mounting bracket through the hole, with the curved portion facing toward the center of the hole. The wood bracket should sit against the back side of the drywall and against the stud. Center the bracket up/down so it is centered vertically in the side of the hole. Screw the two pre-threaded screws into the stud. This will hold the bracket securely in place. (Repeat process for second bracket on opposite side of the hole.)

Step 4



Removing the grille from the in-wall powered subwoofer is easy if you know a couple of tricks.... Here they are:

Brand new (un-installed) subwoofer:

* **Awl Method** - Using an awl, insert the hook end of the awl into a hole of the grille (along the edge, not in the center). Pull firmly to raise the grille from the seat. Repeat at multiple positions around the edge of the grille until it pops off.

* **Reverse Mounting Hole Method** - Turn subwoofer facing away from you. Find the four mounting holes located on the back. (These holes will be used to mount the subwoofer to the wooden mounting brackets later.) Insert a straight, thin, sturdy object (such as a nail, or thin screw driver) into one of the four holes and apply slight pressure. This will in turn apply pressure to the back of the grille dislodging it from the subwoofer frame. (Repeat in each of the four mounting screw holes if necessary)

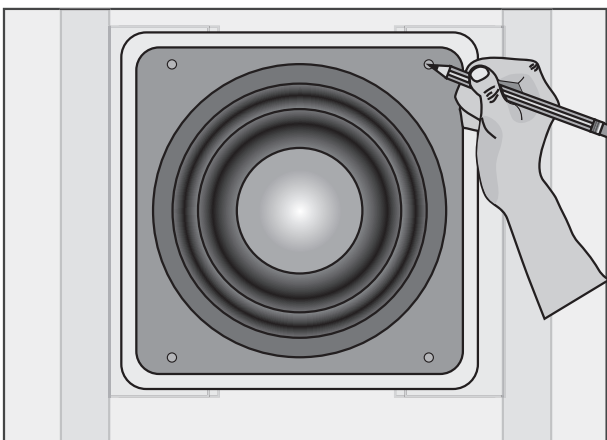
* **Paper Clip Method** - Bend a paperclip into the shape of a "J" and then inserting the "J" through the small holes in the grille, along the edges. Pull on the paperclip "J" and the grille will lift out of the subwoofer.

Already-installed subwoofer:

* Use either the Awl Method or the Paper Clip Method above.

Note: The grille is intentionally very tight inside the frame. A loose grille would buzz or rattle during loud or bass-heavy operation. This "press-fit" design is used by most of today's manufacturers.

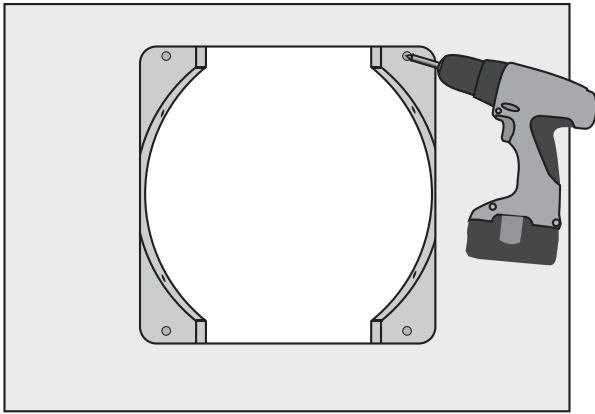
Step 5



With the gold-plated spring-loaded speaker cable connectors positioned at the TOP of the subwoofer, insert the Subwoofer into the hole in the wall. Push the Subwoofer up against the drywall and hold it there with your hand (always hold the subwoofer by the frame - Never by the cone).

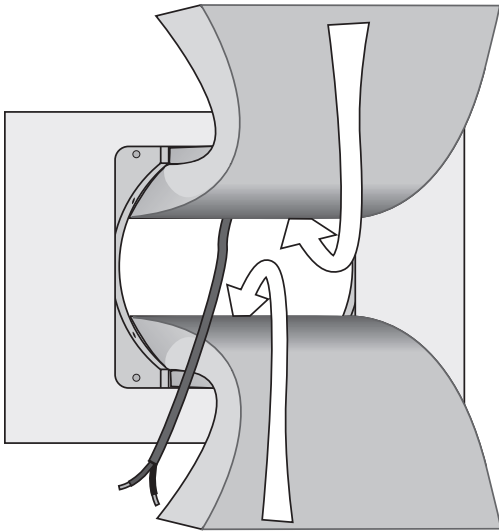
Insert your pencil or a long nail through each of the four holes in the front corners of the Subwoofer to mark each hole location on the wood bracket that is now directly behind each hole. Remove subwoofer from the hole cut in the dry wall and set it aside.

Step 6



Using a 1/8" drill bit, drill pilot holes into the wood brackets at the four previously marked locations. This prevents the wood from splitting when the screws are driven in.

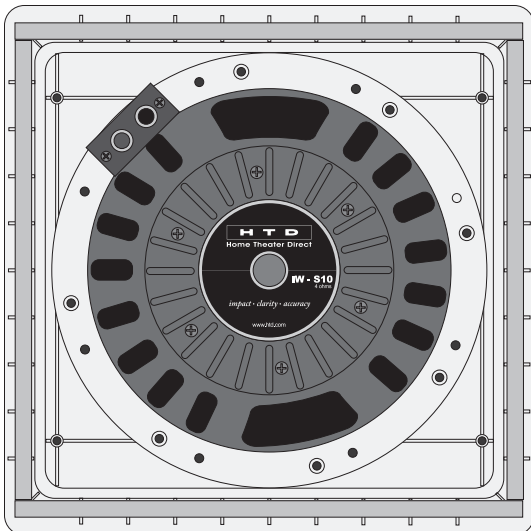
Step 7



If you have not already done so, run the 2-conductor speaker cable from the location of the SDA-120 Amplifier, to this wall-space where the Subwoofer will go. Allow some extra cable length at the end for ease of connection. Strip about 3/8" of insulation off of the ends of the two wires in the speaker cable. But do not connect subwoofer at this time.

Cut two 12"- 24" pieces of fiberglass batt insulation. Completely insert one piece into the wall cavity above and below the subwoofer location.

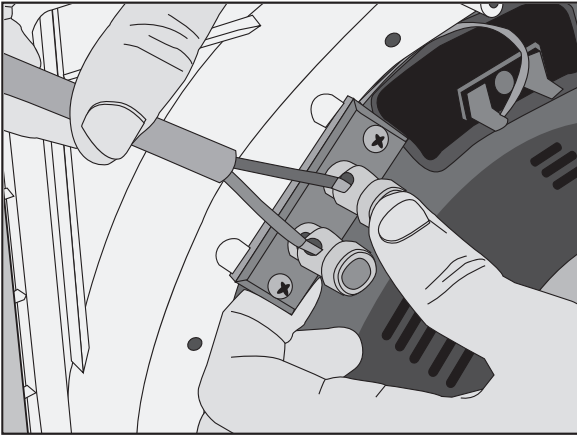
Step 8 - Optional



Optional: If you wish you can purchase foam tape from a home improvement store. Peel the backing off of the foam tape to expose the adhesive. Attach the foam tape around the BACK surface of the Subwoofer's outer plastic frame (about 1/2" in from the outer edge.) The non-sticky side of the foam tape should be facing out. The foam tape will be out of sight when the Subwoofer is installed, and it will seal the gap between the Subwoofer's frame and the wall to prevent vibration and rattling.

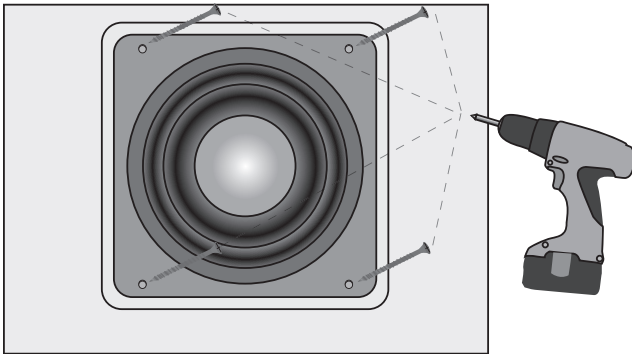
Note: The powder coated aluminum grille, as well as the plastic frame, can be painted to match any decor. If you choose to paint them, plan to do so before installation of the subwoofer. This would be the best time to paint the grille and frame, if you have not done so already.

Step 9



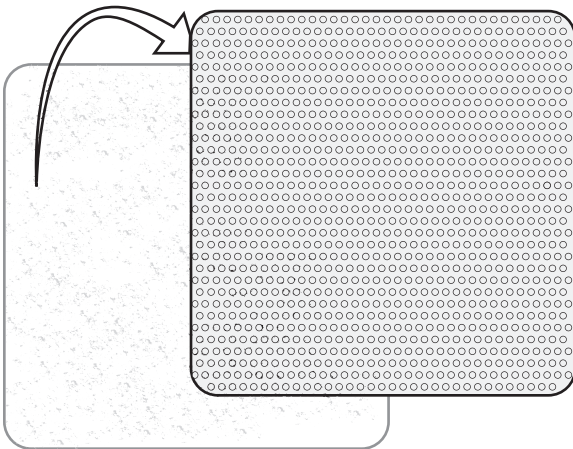
Pick up the Subwoofer and hold it near the hole in the wall. Connect the speaker wires to the Subwoofer by pressing down on the gold-plated spring-loaded cable connectors on the back, top of the Subwoofer, and inserting one of the stripped ends into each one. Be sure to connect the speaker wires to the correct Red (+) and Black (-) connectors

Step 10



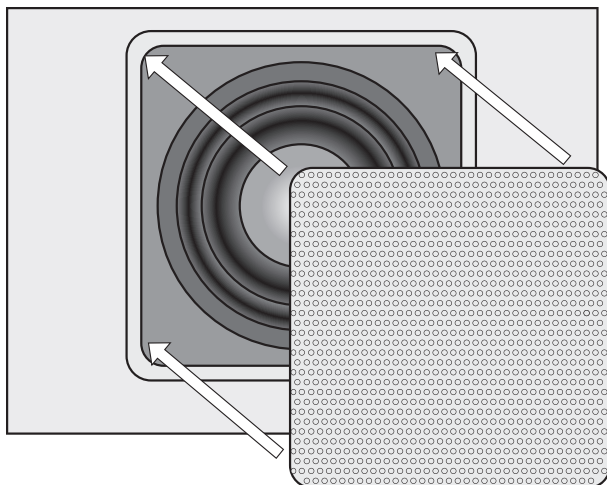
Insert the Subwoofer into the wall opening with the speaker connectors at the top. Using the four black Phillips-head screws (included), insert one through each of the four holes in the corners of the front of the subwoofer and screw them into the wood bracket. This will compress the foam tape and pull the Subwoofer snugly against the wall. Tighten the screws just enough to pull the Subwoofer snug, but do not over-tighten them enough to warp the outer frame.

Step 11



Place the included acoustically transparent fabric on the back-side of the grille if you have not already done so. This material prevents seeing through the holes in the grille and enhances visual appearance.

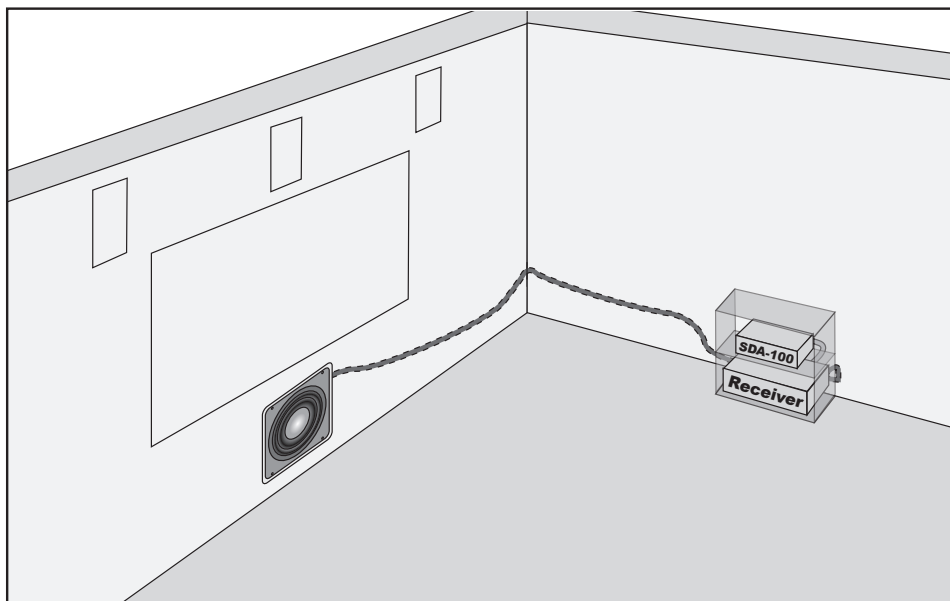
Step 12



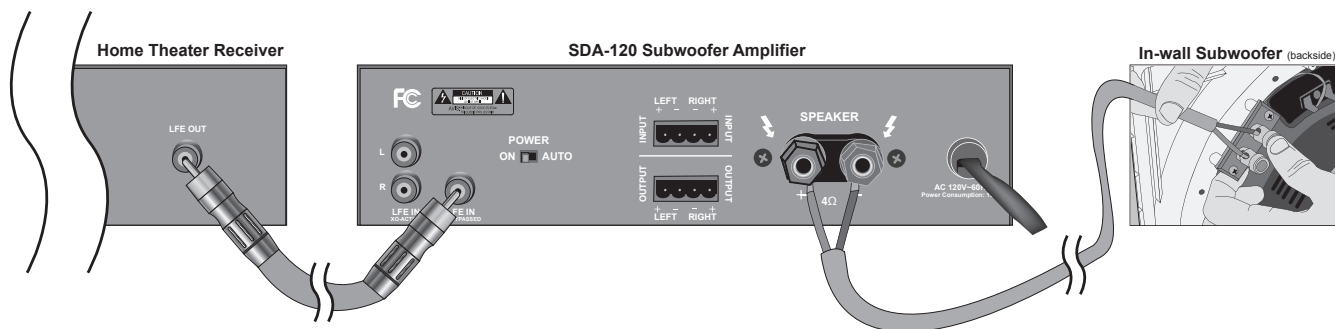
Insert the grille into the grooves around the front of the Subwoofer, pushing it in around the edges until it is flush with the outer frame.

Your In-wall Powered Subwoofer installation is now complete. Enjoy!

Installation Idea #1



The diagram to the left shows that the SDA-120 Amplifier can be located near the surround sound receiver (recommended) and connected to the In-Wall Subwoofer unit using 2-conductor, in-wall speaker cable.

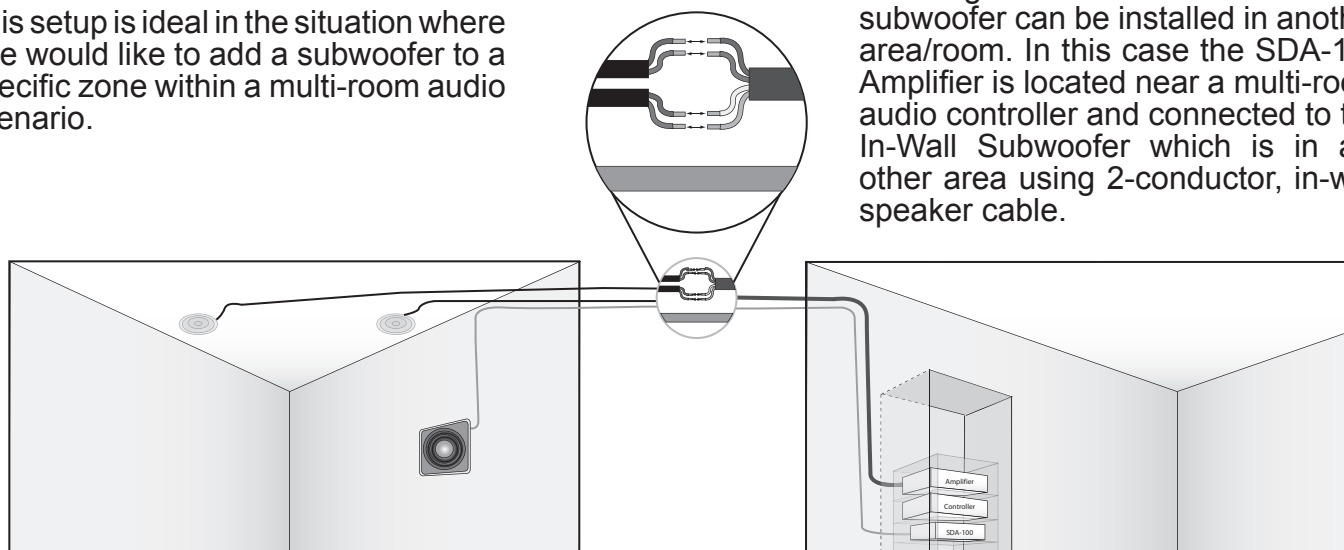


The connection of the inwall subwoofer in this example is performed as such: the SDA-120 amplifier is connected to a receiver's LFE or Subwoofer Out connector using a shielded subwoofer cable (available from HTD), and the SDA-120 and In-Wall Subwoofer are connected using standard 2-conductor 14-gauge speaker cable.

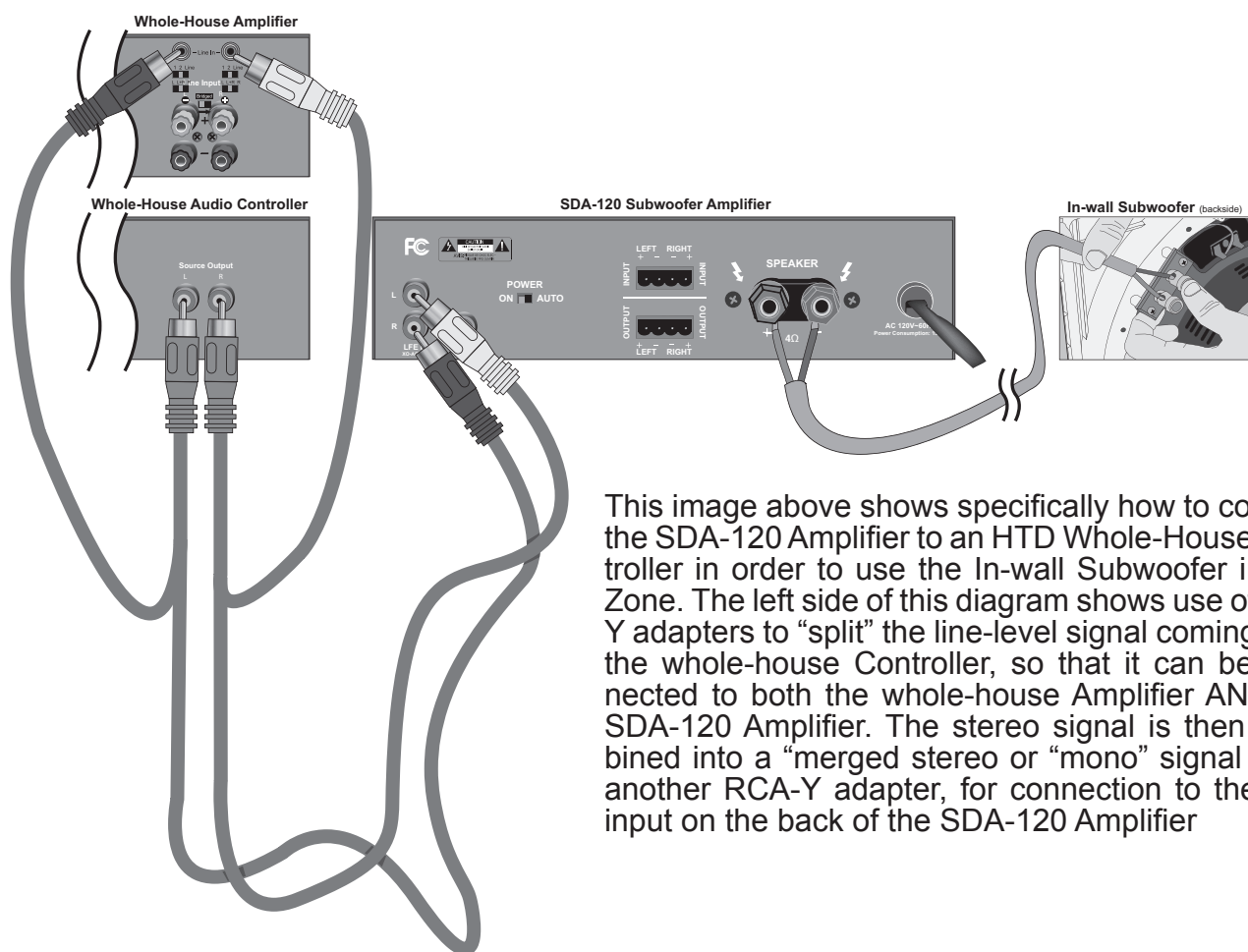
Installation Idea #2

This setup is ideal in the situation where one would like to add a subwoofer to a specific zone within a multi-room audio scenario.

The diagram illustrates how the inwall subwoofer can be installed in another area/room. In this case the SDA-120 Amplifier is located near a multi-room audio controller and connected to the In-Wall Subwoofer which is in another area using 2-conductor, in-wall speaker cable.



A separate run of 2-conductor speaker cable connects from the SDA-120 Amplifier, to the In-Wall Subwoofer. The other two speakers are connected to the multi-room setup as usual.



This image above shows specifically how to connect the SDA-120 Amplifier to an HTD Whole-House Controller in order to use the In-wall Subwoofer in one Zone. The left side of this diagram shows use of RCA Y adapters to "split" the line-level signal coming from the whole-house Controller, so that it can be connected to both the whole-house Amplifier AND the SDA-120 Amplifier. The stereo signal is then combined into a "merged stereo or "mono" signal using another RCA-Y adapter, for connection to the LFE input on the back of the SDA-120 Amplifier

Specifications:

10" aluminum cone with butyl rubber surround for long life

Power handling: 120 watts RMS, 150 watts program

Frequency response: 34 Hz - 200 Hz

Flush-mount grille and frame provides clean, professional appearance

Reinforced resonant-absorbing ABS polymer frame

Moisture-resistant design includes powder-coated aluminum grille that will not rust

Grille and frame can be painted to match any decor

Impedance: 4 ohms

Sensitivity: 88dB

Dimensions: 13" x 13"

Hole Cutout: 11.5" x 11.5" template included with speakers

Special wood braces included and required; will work with wood studs spaced 15" to 18" on center (note: most walls are built with studs spaced at 16" on center)

Minimum install depth: 3.75"

Weight (without amp or braces): 15 lbs

Includes 120 Watt RMS High Efficiency Digital Amplifier with:

- LFE (subwoofer) RCA-type Input

- Hi Level (speaker level) inputs and outputs

- Level Control

- Phase Switch

- Auto-on capability with dual color LED indicator (amber:stand-by; blue:on)

Warranty

All HTD electronics carry a two-year parts and labor warranty. Details can be found at www.htd.com/info/warranty.
Warranty registration occurred automatically at the time your order was placed. There is no need to complete or mail in additional paperwork.

If you have any questions, we can be reached at...
info@htd.com or toll free 1-866-HTD-AUDIO (483-2834)

Also Note that the amplifier that is packaged with this subwoofer complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

HTD

Home Theater Direct, Inc.
www.htd.com

Expert Support:
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