



Home Theater Direct

Cabinet Speakers
Owner's Manual

Home Theater Direct

Toll free: 866-HTD-AUDIO (483-2834)
www.htd.com
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SAFETY INSTRUCTIONS FOR THE POWERED SUBWOOFER

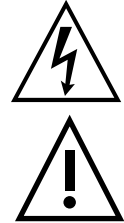


Warning - To reduce the risk of fire or shock, do not expose this appliance to rain or moisture.

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 of 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 the 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 the 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 speaker 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.

Please read the following warnings and tips before hooking up your HTD Powered Subwoofer:

- Never connect speaker wire or line level connections with the Subwoofer power button in the ON position. Always make your connections with the amplifier OFF.
- Only use the power cord supplied with your HTD Powered Subwoofer.
- Never plug the HTD Powered Subwoofer into the back of another electrical component.
- We highly recommend plugging the HTD Powered Subwoofer into a power tree with surge protection.


The amplifier that is packaged with the subwoofer in this instruction manual 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.


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 speakers, 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.

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

Level THREE Speakers


for dedicated theater rooms and large living room theaters.






Level TWO Speakers

for smaller theaters and most living room theaters






Level THREE Surround Sound Speaker

Bi-Pole/Di-Pole Surround Sound Speakers

Level TWO Surround Sound Speaker



About HTD and our Cabinet-Style Product Lines

Our mission is to produce home audio products with outstanding performance and build quality that will compete with other systems costing at least twice as much at retail. We achieve this through exceptional components, many of which are proprietary to HTD, and a business model that allows us to design, manufacture, and distribute our speakers in the most efficient and cost-effective way possible. Selling direct also provides close interaction with our customers which gives us a level of insight for improvements and future products our competitors can't imagine. At the same time, this close interaction allows us to provide unbeatable personalized service.

All of our cabinet-style speakers include mid-range drivers that include our proprietary FCD cone structure. This is a lightweight, yet extremely rigid cone that sounds smooth and warm and does not exhibit any of the harshness or ringing often associated with metal cones. **FCD™** stands for **F**abric, **C**eramic, **D**oping. A lightweight fabric is used to create the cone's shape. A ceramic coating is then hand applied, heated, and hardened to give the cone its stiffness. Finally, a slightly sticky polymer coating (doping) is also hand applied that helps increase bass response and add warmth to the overall tone. The ceramic and polymer coatings also serve to protect the fabric so that the speaker will last virtually forever. Bottom line: FCD™ cones are at the heart of the best sounding mid-range drivers we've ever produced.

Our tweeters are made with the finest materials including either hi-grade silk domes or Kapton ribbons, and high efficiency Neodymium magnets. The result is speakers that are clear, detailed, and never harsh sounding. Low and mid-range drivers are blended with the tweeters using 2nd or 3rd order crossovers that effortlessly transition audio output between components.

Our powered subwoofers include long-throw drivers with doped pulp cones and powerful neodymium magnets. For added bass, we include an internal transmission line that ends in a front-firing port. Power is supplied via a high-efficiency digital amplifier built around an ICEpower™ module developed by Bang and Olufsen and customized for our subwoofers. This amplifier is provided separate from the subwoofer cabinet allowing the flexibility to be positioned either with your other audio components or with the subwoofer.

About HTD and our Cabinet-Style Product Lines (cont.)

All of our speaker cabinets are cut using computer-managed machines and made of quality 1/2" to 1" MDF with internal bracing to minimize unwanted cabinet resonance. We never use cheap imitation vinyl wraps, instead our cabinets are painted with mid-gloss lacquer or expertly covered in gorgeous real wood veneers.

Speaker Placement

Speaker Placement

There is quite a bit of information about speaker placement theory available, but Dolby® (a pioneer in the world of surround sound) has a really some really helpful information explaining speaker placement in a 5.1 or 7.1 setup. Check out their website if you really want to dig deeper into this topic.

Basically, the center channel speaker (C) should be as close as possible to the video screen in order to help "lock" dialogue to an actor's movements on screen, and the front left (FL) and front right (FR) speakers should be placed about 7-15 feet apart for most rooms. Ideally you want the three front speakers (FL, C, and FR) to be at approximately the same height and distance from the primary listening spot. This works well with audio-transparent video screens, but for most other applications you'll have to compromise a little bit by placing the Center speaker directly above or below the screen. The key is to make sure all listening positions have a clear line-of-site to the tweeter. It is okay for the FL and FR speakers to be placed at a height that is just below or above the height of the C speaker, but the ideal position is to have all of the tweeters at approximately ear level.

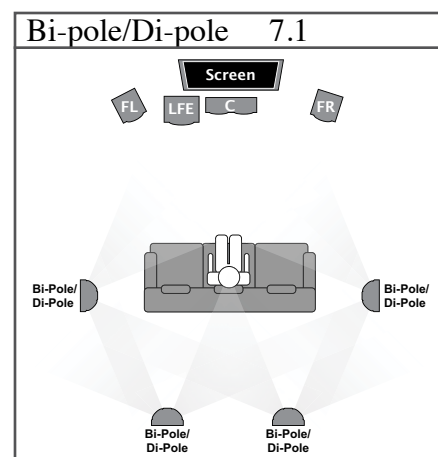
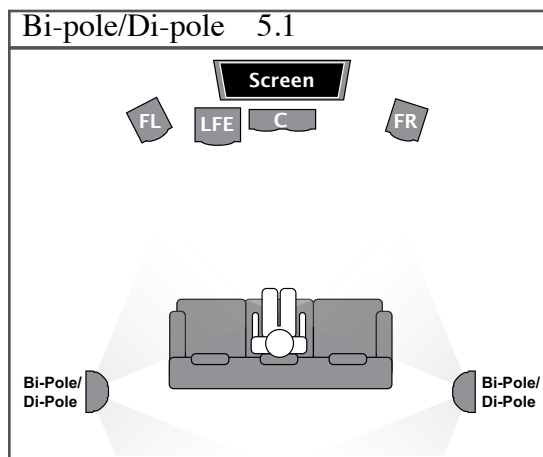
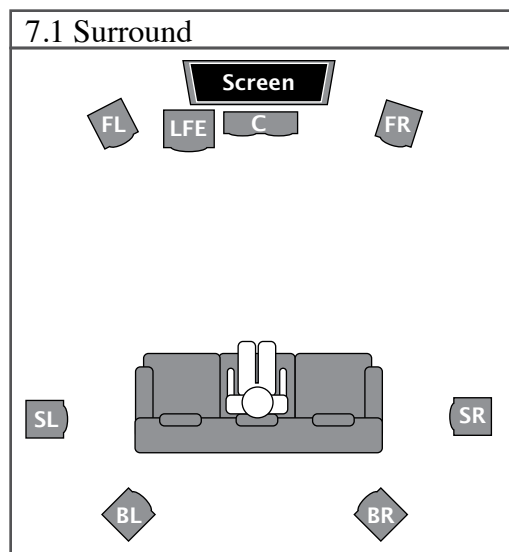
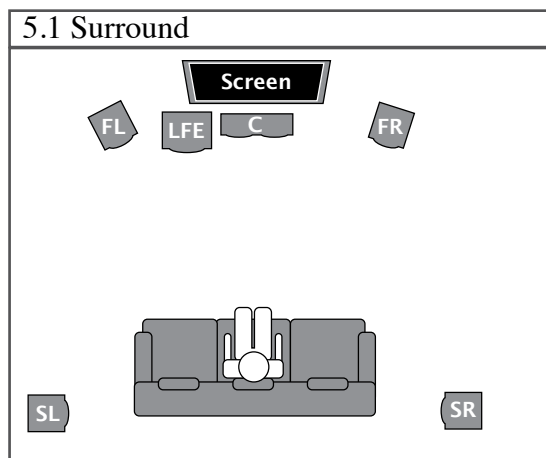
The two side surround speakers (SL=surround left; SR=surround right) should be placed to the sides and slightly behind the listening position at a height that is slightly above ear level. If you are setting up for 5.1, we recommend placing these speakers approximately 20 degrees behind the listening area. For 7.1 it is okay to place these speakers only slightly behind the listening area. With 7.1, the back surround speakers (BL=back left; BR=back right) should be placed behind the listening area and spread apart about the same amount as the FL and FR speakers. The subwoofer can be placed almost anywhere in the room because it is playing frequencies below the point where the human ear and brain can identify its location. That said, if you have flexibility in the location of the powered subwoofer, we recommend placing it at the front of the room.

Bi-pole/Di-pole

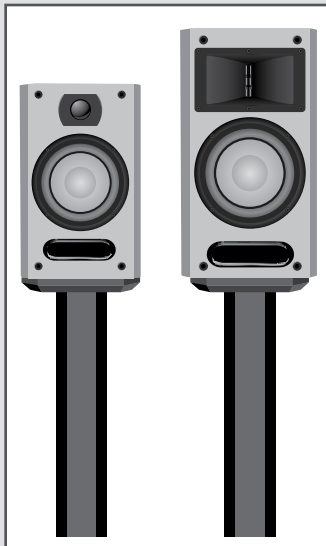
A **Di-pole Speaker** is one which has matching drivers facing in opposing directions (approximately 90 degrees) with the drivers on one side firing "out of phase". A **Bi-pole Speaker** physically looks like a Di-pole Speaker but provides a somewhat less diffuse sound because all the drivers are firing "in phase".

Placement of Bi-Pole and Di-Pole Speakers is important, as your primary listening area should generally be located in what is referred to as the "Null". The "Null" is basically an area where none of the drivers are directed straight at the listener.

The primary reason for selecting a Bi-pole or Di-pole speaker design is to create a more diffuse surround field and recreate the ambience of a larger space or true theater experience through reflected vs. direct sound.



Mounting Options



Speaker stands position your bookshelf speakers at the proper listening height. They also add a touch of elegance and a custom finish to your home audio system.

Speakers are placed on top of a wide platform and held in place by four non-slip pads. Speaker cable is run up through the bottom of the stand and through the center of the post to a hole located just below the platform. A wide base is equipped with optional brass tip-toe feet for decoupling the stand from its surroundings, and keeping the stand safely upright.

Our speaker stands are made of 3/4" MDF and finished with a mid-gloss black lacquer that beautifully compliments all of our speaker colors.

HTD BR-TPR and BR-TPRX brackets are a great solution for wall or ceiling mounting our Level Two and Level Three bookshelf and center speakers.

BR-TPR and BR-TPRX brackets must be anchored to a stud (or similarly reinforced surface).

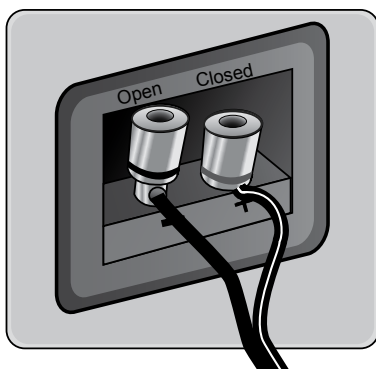
BR-TPR and BR-TPRX brackets are purchased separately from the speakers.



Connecting the Speaker Cable

Gold-plated 5-way binding posts ensure a solid connection

Level TWO

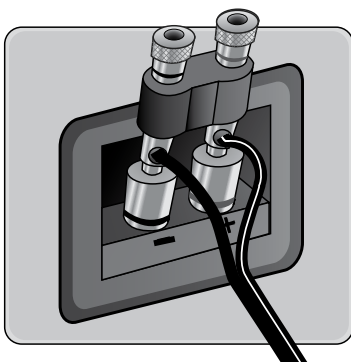


Bare Wire

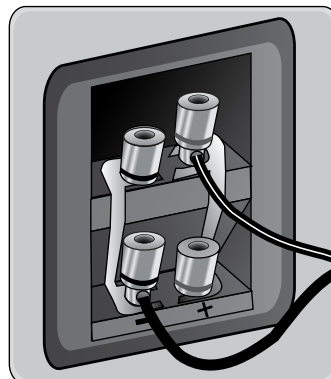
Twist binding posts counter-clockwise to reveal the "eye". Insert positive conductor to the red binding post, negative conductor to the black binding post. Twist binding posts clockwise to tighten.

Banana Plug

First, attach cables to banana plug. Twist binding posts clockwise before inserting banana plug to ensure they are tight. Push banana plug into binding posts maintaining polarity (plus to plus; minus to minus).



Level THREE

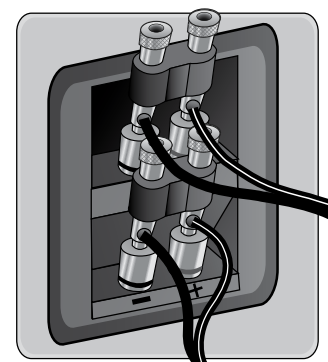


Bare Wire with Jumpers

Leave gold-plated jumpers in place; connect positive conductor to a red binding post, negative conductor to a black binding post. Note that it is okay to connect to the top or bottom pair or one of each.

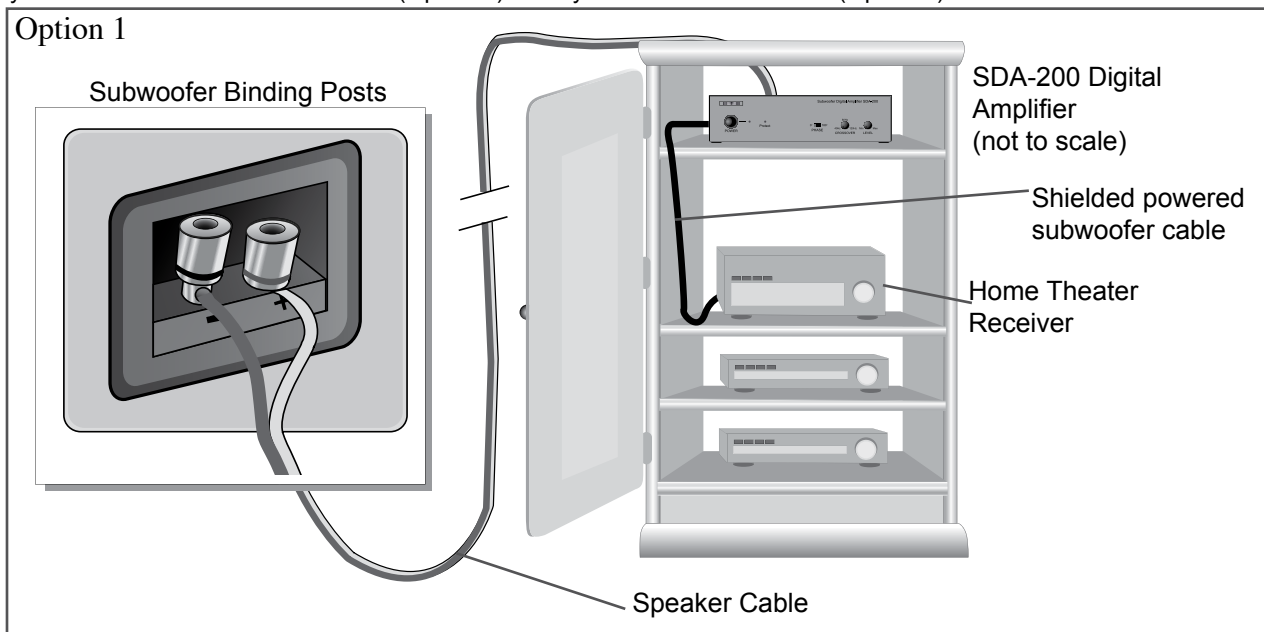
Bi-Wire with Banana Plugs

Remove gold-plated jumpers; top pair of binding posts are for high frequencies, bottom pair are for mid-low frequencies.

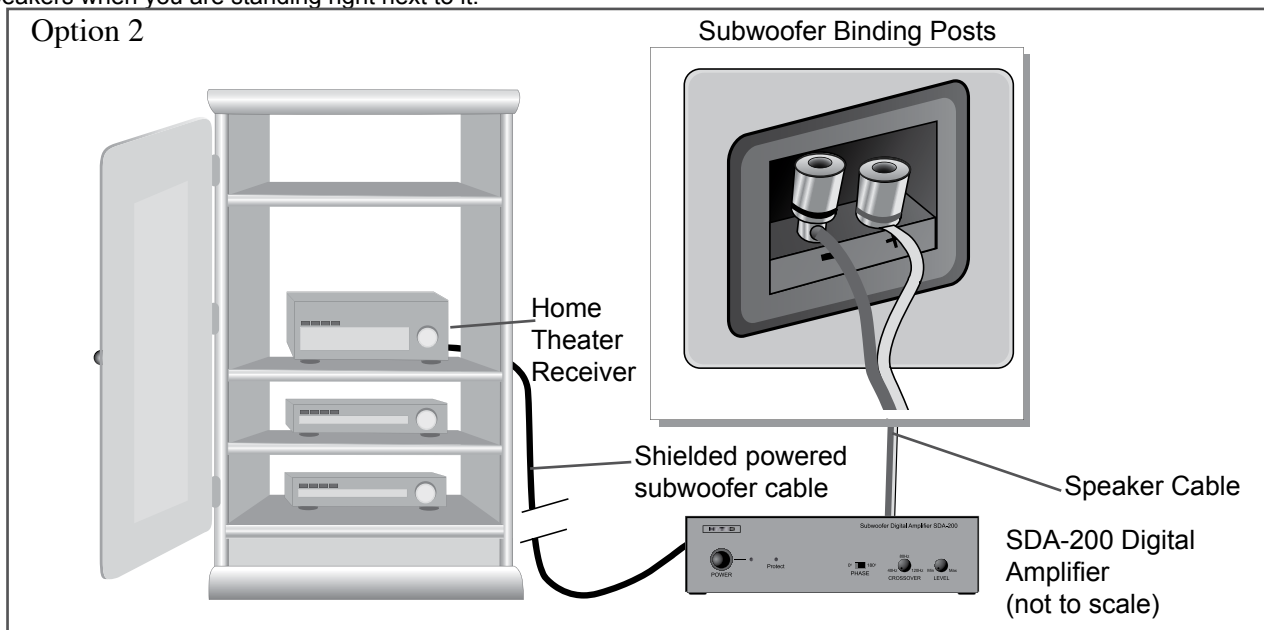


Connecting the Powered Subwoofer

Our new powered subwoofers include an innovative design that separates the amplifier from the subwoofer cabinet. This allows you to position the amplifier anywhere between your home theater receiver and the subwoofer. The amplifier is always connected to the receiver via a shielded powered subwoofer cable using the LFE output on the receiver and the LFE input on the amplifier. The amplifier is connected to the subwoofer using regular speaker cable. You will likely place the amplifier either very close to the home theater receiver (Option 1) or very close to the subwoofer (Option 2).

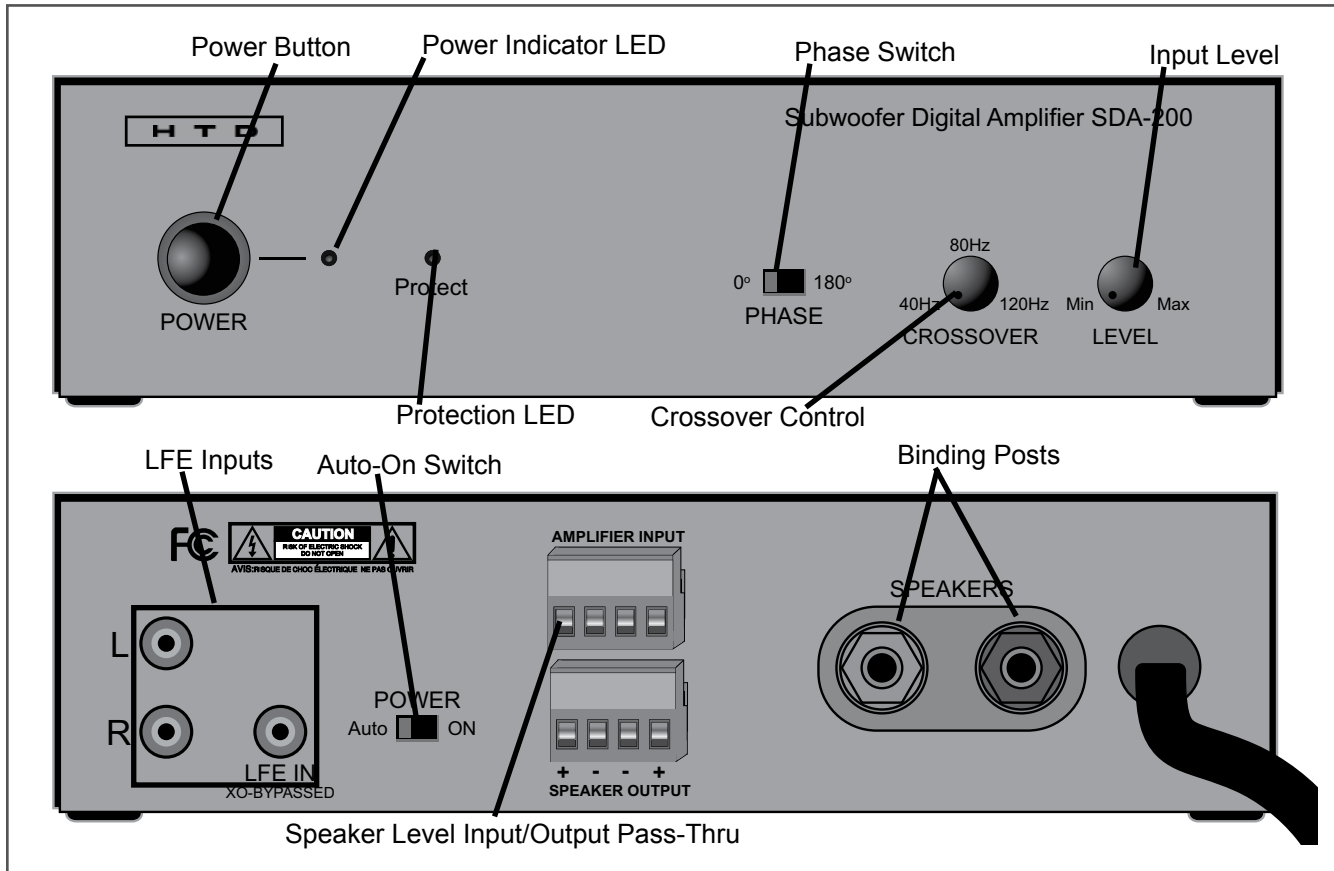


Because shielded cable is more expensive and larger in diameter than most speaker cable, Option 1 is often the most economical and easiest to install solution. Option 1 also allows you to tweak the amplifier settings for the subwoofer from a distance away from the subwoofer itself. This is beneficial because it is difficult to gauge the relative volume of the subwoofer to the other speakers when you are standing right next to it.



If you have had your room pre-wired, chances are you will need to follow Option 2 because most installers will run a shielded cable to the subwoofer's location. This is a more typical arrangement simply because most powered subwoofers on the market today still have the amplifier built into the cabinet. This has been beneficial to manufacturers because the cost to add a metal case to a large analog amplifier can be quite expensive. The digital amplifier we use is smaller and significantly more efficient. The metal case is a minor expense compared to the benefits we achieve by not having the amplifier built-in. In addition to increasing installation options, removing the amplifier from the subwoofer cabinet provides more volume inside the cabinet and allows us to add a longer transmission line, both of which enhance deeper bass.

Powered Subwoofer Settings



Power Button, Indicator LED, and Auto-On Switch: When the Power Button is in the out position, the amplifier is completely powered off and the blue Power Indicator LED will be off. Pressing the Power Button in will turn the amplifier on if the Auto-On circuitry is set to “OFF” and the Power Indicator LED will be a bright blue. When the Auto-On circuitry is active (set to “ON”), pressing in the Power Button will place the amplifier in stand-by mode and the Power Indicator LED will be a dim blue. Once a signal is detected at the LFE input, the amplifier will immediately power on and the Power Indicator LED will become bright. After a signal has not been detected for approximately ten minutes, the amplifier will return to stand-by mode.

Protection LED: This LED will light red when there is a fault in the connection to the subwoofer. When this is lit, the power amplifier will not be active until the problem has been resolved. A red light usually indicates a bad cable or connection between the binding posts on the amplifier and the binding posts on the subwoofer.

Phase Switch: The position of this switch will depend on the location of the subwoofer in your room and the acoustical characteristics of the room itself and the other speakers in the room. For most installations where the subwoofer is located near the front of the room, this switch should be placed in the 0 position. If the subwoofer is placed in an odd location in the room, or nearer the back of the room, you may achieve better results by placing this switch in the 180 position. Listen to a stereo recording with heavy bass to determine which position results in the best blend between the subwoofer and the other speakers in the room. Bass notes will be slightly punchier when they are correctly in phase with the front three speakers.

Input Level: Set this level one time in order to match the overall volume of the subwoofer with the other speakers in the room. Again, barring the availability of special test equipment, the best way to do this is by listening to a stereo recording of which you are very familiar. Once set, the subwoofer volume will move up and down proportionately with the other speakers based on the volume level of the home theater receiver.

Crossover Control: used to adjust the crossover for the subwoofer and only allow the frequencies you would like the subwoofer to reproduce when using the “LFE IN XO Active Input” or when using the Speaker Level Input.

LFE Input: Connect a shielded powered subwoofer cable between the LFE input and the LFE output on your home theater receiver. LFE stands for Low Frequency Effects, and is synonymous with “Subwoofer Line-level Signal”. If you are using the subwoofer with a stereo receiver and no dedicated subwoofer output is available, simply connect the line level Left and Right outputs on your stereo receiver to the “L” and “R” Inputs. In this case, make sure you connect to a variable line output on your receiver. A fixed line level output will not work as the volume of the subwoofer will stay constant while the volume of the other speakers connected to the stereo receiver will move with the volume level of the receiver.

Binding Posts: Connect speaker cable between these binding posts and the binding posts on the subwoofer. We recommend using at least 14 gauge cable, although 16 gauge will work for short distances. Bare wire connection is fine, but you can also use spade connectors or banana plugs. Be sure to maintain polarity between the amplifier and the subwoofer, i.e. connect positive to positive and negative to negative.

Subwoofer Internals

By removing the amplifier from inside the subwoofer cabinet, we gain greater volume of air and the ability to extend the internal transmission line, both of which help extend low bass performance.

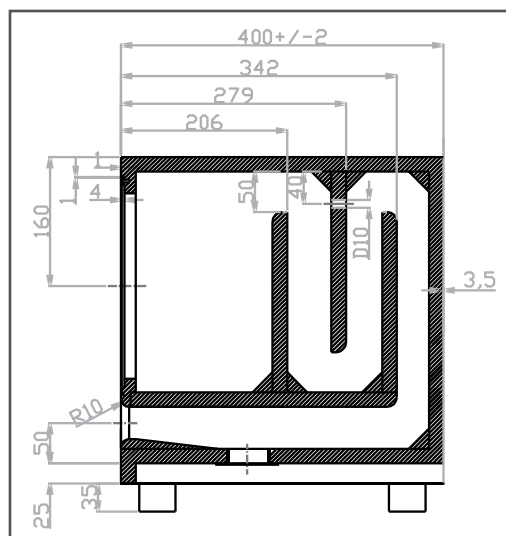


Diagram depicting internal transmission line of the Level TWO Subwoofer. (drawing not necessarily to scale and dimensions are subject to change)

Speaker and Subwoofer Settings in Your Home Theater Receiver

In order for your speakers and subwoofer to work properly for all types of audio recordings, it is important that you follow the directions for setting up your speakers in the Owner's Manual provided by the manufacturer of your home theater receiver. Your speaker size and subwoofer settings are critical:

Speaker Size: For all but our Tower Speakers, it is best to set the speaker size to "small". This will instruct the receiver to direct the lowest frequencies recorded for that speaker's channel away from the speaker and into the LFE or Subwoofer output. The idea is to send the lowest frequencies, which are not directional, into the powered subwoofer which is best suited for reproducing these super low frequencies. This also allows the amplifier for that channel to be used more efficiently across the frequency range the speaker is best suited to reproduce.

Most home theater receivers allow you to set a frequency point, below which all frequencies are redirected to the subwoofer. You can experiment with settings of 100 Hz and below with each of our speakers, but you will likely achieve the best performance with the following settings:

Level THREE: 60 Hz (80 Hz if 60 Hz is not available)

Level TWO: 80 Hz

Subwoofer: Make sure you tell your home theater receiver that your setup includes a powered subwoofer. Believe it or not, some receivers have the default setting for this set to "no". You may also be asked if you want the subwoofer to be active for recordings that do not include a dedicated .1 channel, e.g. stereo. For most listeners, the answer should be "yes".

Warranty

All HTD speakers carry a five-year parts and labor warranty. All HTD electronics (amplifiers, controllers, etc.) carry a two-year parts and labor warranty. Warranty registration occurred automatically at the time your order was placed. There is no need to complete or mail in additional paperwork.

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

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