

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**.

A Few Words About Your New Panel Speaker and Surround Sound

HTD speakers are designed to accurately reproduce high fidelity music as well as dialog and effects in movies. Most of us are familiar with the concept of 2-channel audio, commonly known as stereo. In a home theater environment, recording engineers have the option of recording into additional channels. A majority of today's movies are recorded in 5.1 surround sound formats, most often either Dolby Digital or DTS. When these movies are played with a digital source, such as a DVD player, audiences at home have the opportunity to hear all of these channels if their system has been equipped with the appropriate speakers for each channel. When these movies are played through an analog stereo source, such as a VCR, a 5.1 surround signal is usually available in Dolby ProLogic, ProLogic II or some other analog matrixed format. ProLogic makes use of the same 5.1 speaker channels, although the back two (surround) speakers will receive identical information and it is not a full range signal. ProLogic II sends discrete, full-range channels to the back two speakers. The subwoofer is provided the low frequencies sent to the other channels in a Dolby ProLogic or ProLogic II recording. By contrast, a true 5.1 digital recording includes a completely unique channel of both low frequencies and effects (LFE). This channel is most often referred to as the LFE channel or subwoofer channel and represents the .1 in a 5.1 system. In most of today's receivers, the five full frequency channels: front right, front center, front left, rear (surround) right and rear (surround) left; are "powered" channels, meaning the receiver has built-in amplification for each channel. The LFE channel however, is most often not powered. And because this channel only includes very low frequencies, a powered subwoofer is necessary to produce the LFE channel.

Speaker Size

Most of today's home theater receivers allow you to tell the receiver what type of speakers you are using. This is important since you don't want to waste power across a full-frequency signal to a speaker that can only handle a limited range. Receivers will typically ask whether or not the speaker is "small" or "large". In most cases, setting the speaker to "small" will cause only frequencies above 100 Hz to be sent to the speaker. "Large" allows the full frequency range to be passed to the speaker. Some receivers take this a step further and allow you to set the cut-off frequency, usually somewhere between 60 and 120 hz. All HTD Panel speakers will reproduce signals below 100 Hz, but not as low or with the same authority as the powered subwoofer. Sending the full frequency to these speakers will not harm them at moderate volumes. However, if you often play your speakers at very high volumes, it is better to set all but the tower speakers to small. This will prevent the smaller speakers from peaking out and distorting when strong low frequency information is present. Therefore, we recommend that you try both settings to see which works best in your situation and to your listening taste. Never play a speaker so loud that it distorts. In many receivers, setting a speaker to "small" automatically sends the low frequencies that would otherwise go to that channel to the subwoofer connected to the LFE channel. Check the "bass management" section of your receiver's owner's manual to be sure. This section should also address the options you have for utilizing the powered subwoofer in audio-only applications.

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

HTD Panel Speaker Features



Rubber dome feet (included) can be attached to the bottom of the speaker making it an ideal low-profile Center Channel speaker. Although the rubber dome feet can be attached to the bottom of the speaker to make it stand upright, the speaker is still unstable. We recommend using a wall mount bracket for secure installation. Flush-mount brackets are included with each speaker.

Key Features

Speaker Drivers

Speaker drivers are essentially the moving components that produce sound from a speaker. Panel speakers utilize a mid-range driver and high frequency driver. The mid-range driver consists of an FCD™ Cone, a powerful magnet and 1" voice coil. FCD™ stands for Fabric Ceramic Doping. A lightweight fabric is used to produce the shape of the cone. A ceramic coating is then hand applied to stiffen the cone, while at the same time keeping it lightweight. Finally, a thin polymer coating (doping) is also applied by hand to help improve the lower frequency response and add warmth to the overall tone. The result is a mid-range driver that is smooth, punchy, and accurate without the "ringing" or "harshness" often associated with metal cones. The high frequency driver, called a tweeter, is constructed of a silk dome with a strong magnet and 1" voice coil that is ferro-fluid cooled. The resulting performance is silky smooth with a clarity and crispness that is never harsh or "in your face". These drivers, combined with the added bass assistance of a tuned internal transmission line and front-firing port, produce a dynamic yet pleasant sound that is both musical and powerful.

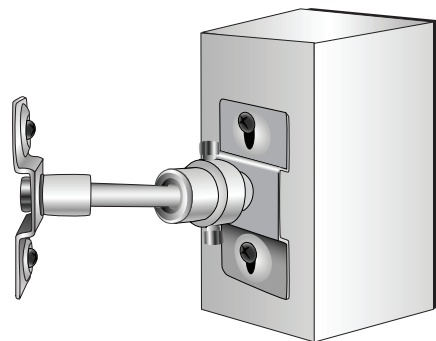
Panel Speakers include:

- three 2.5" doped bass driver
- one 2.5" midrange driver
- a 1" soft dome tweeter, ferro-fluid cooled
- gold-plated 5-way binding posts
- a knife-edge fit and finish cabinet made of CNC carved 5/8" MDF with internal bracing
- a removable shaped wood and cloth grille
- hardware to make mounting to an HTD wall-bracket easy (bookshelf and center speakers only)
- two internal tuned channel that ends in a front firing, elliptical port
- a magnetic shield for safe placement on or near a TV
- optional press-fit brass tip-toe feet

Mounting Brackets and Stands

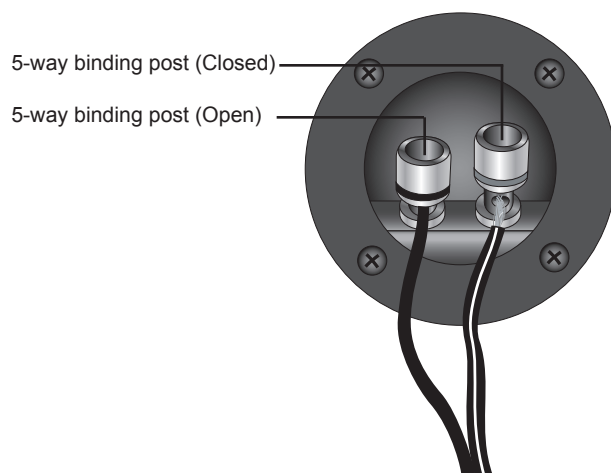
HTD offers optional wall-mount speaker brackets and stands that are ideal for use with our speakers. Panel and center channel speakers are equipped with hardware on the back that allow for easy attachment to a wall-mount bracket. This hardware should be left in place even if you are not using the brackets. Removing this hardware may cause "whistling" through the open holes. Do not over tighten as stripping of the threaded nut inside the cabinet can occur. Should the nut become stripped, the speaker mounting has been jeopardized and the speaker should NOT be hung. More detailed instructions are provided with both the brackets and stands.

Optional wall mount brackets
can be used to aim the speaker

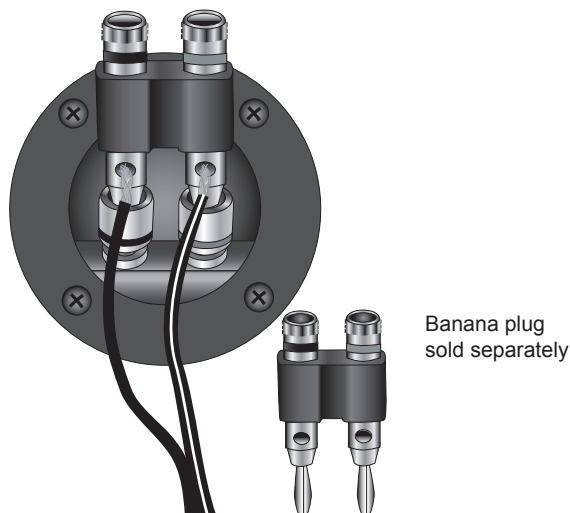


Connections

Bare Wire Connection



Banana Plug Connection

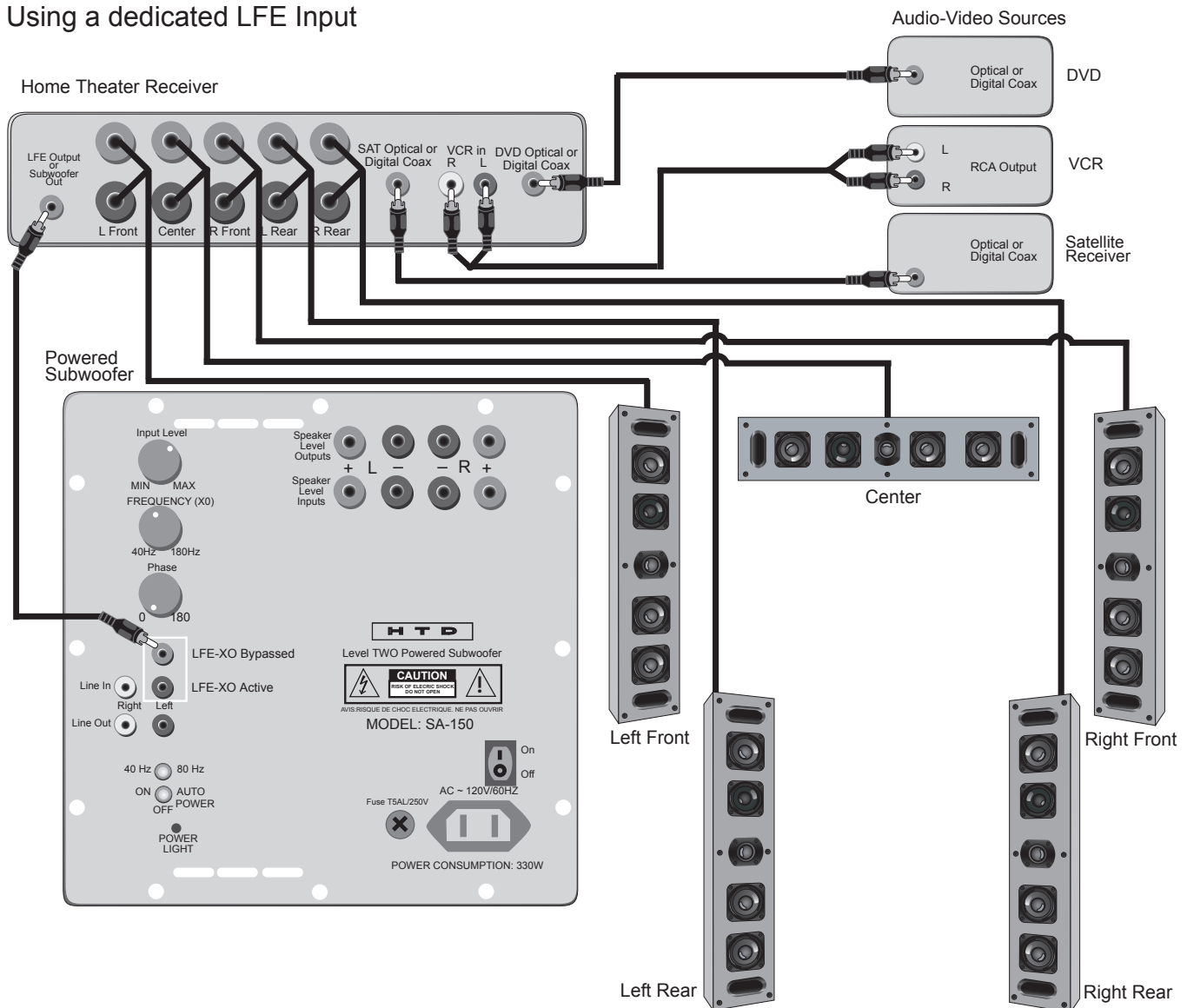


Hooking Up Your Speakers

HTD speakers utilize quality gold-plated, five-way binding posts in conjunction with a complex high pass and low pass crossover. The gold-plated binding posts ensure an efficient transfer of signal and power from any standard type of cable or wire connector, including bare wire. For bare wire or pin-type connectors, simply thread the wire or pin through the hole in the threaded post near the base of the binding post, then tighten the red or black collar down against it. Spade connectors can be fitted around the threaded post near the base. Again, simply tighten the red or black collar against it to maintain the connection. Individual or paired banana plugs can be inserted directly into the holes at the mouth of the collar with the binding posts already tightened down.

When connecting the speakers, it is very important to retain the correct polarity. This means that the wire attached to the +, red, or positive terminal on one component must be attached to the +, red, or positive terminal on the corresponding component's speaker output terminals. Similarly, the -, black, or negative terminals must connect to the respective -, black, or negative terminals. We recommend using 14 gauge oxygen-free cable, although the binding posts can accept up to 10 gauge.

Using a dedicated LFE Input

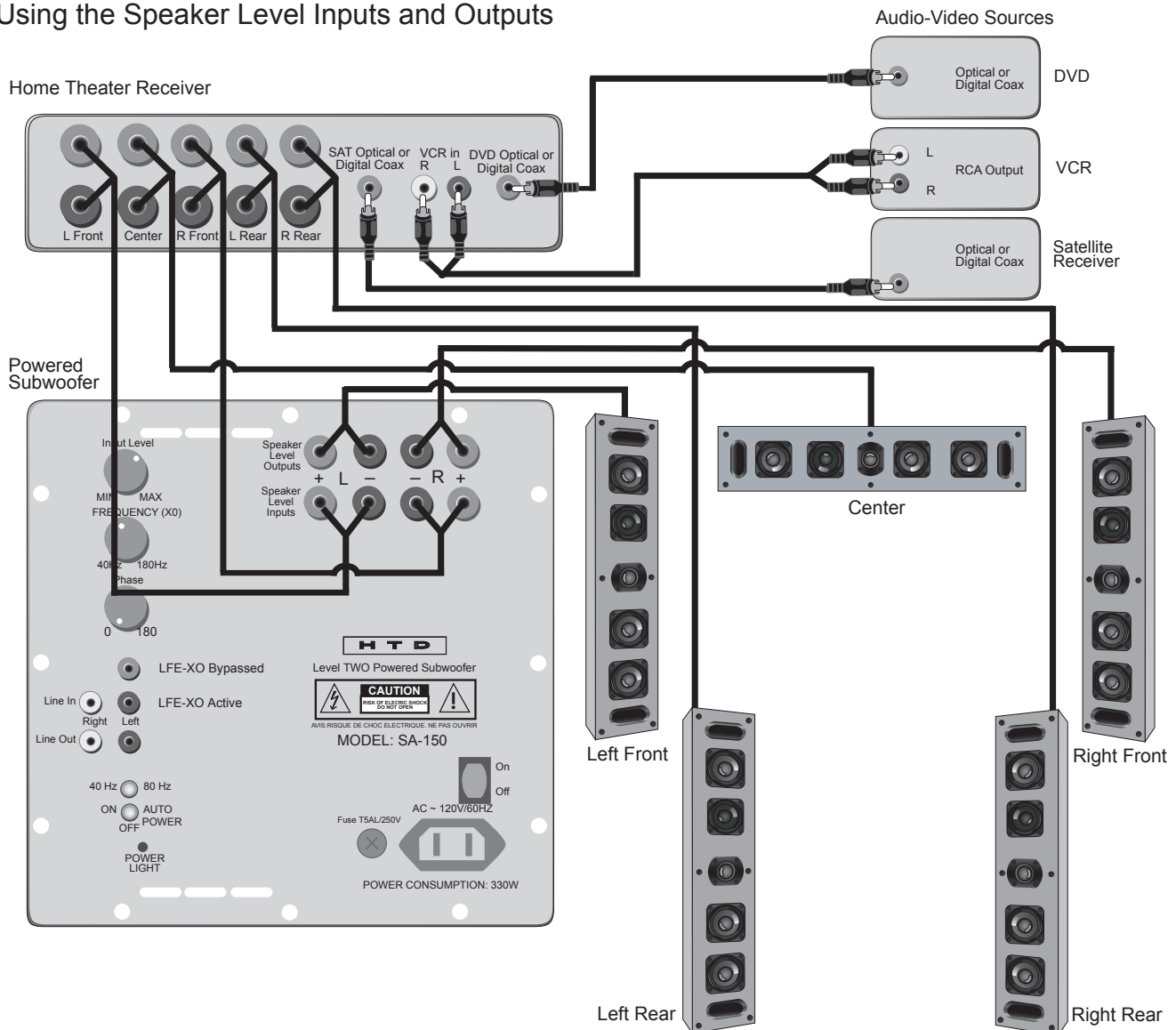


5.1 Speaker Placement

NEVER PLACE A SPEAKER WHERE IT, OR THE CABLE CONNECTED TO IT, ARE WITHIN EASY REACH OF CHILDREN OR PETS. ALWAYS USE GOOD JUDGEMENT AND COMMON SENSE WHEN PLACING A SPEAKER WHERE PEOPLE OR PETS WILL HAVE ACCESS TO IT AS SERIOUS INJURY OR DEATH CAN OCCUR IF THE SPEAKER WERE TO FALL.

All three of the front speakers (left, center and right) are intended to be directional and should be placed at approximately the same height and distance from the ideal listening spot. The center speaker should be placed as close to the viewing screen as possible, so that the audio appears to come straight out of the picture. The front left and right speakers should be placed far enough from the television to ensure that you can distinguish sounds coming from the left and right. Typically, placing the front left and right speakers between seven and fifteen feet apart is appropriate. Many audio enthusiasts recommend positioning the speakers such that drawing a line from the left speaker to the listener and back to the right speaker creates a 45-degree angle. This setting generally mimics the condition set by the recording engineer at the film studio.

Using the Speaker Level Inputs and Outputs



Ideally, the surround speakers should be positioned about as far from the ideal listening spot as you placed the front left and right speakers, and at about the same height or higher. This, of course, is only a guideline. The size and shape of your room will almost certainly dictate a modification to the "ideal" set-up. Often, a home theater is set up in a living room where the listener is sitting very close to the back wall. In this case, it is usually best to position the surround speakers to the sides of the listener as opposed to on the back wall. Additional information and diagrams are available online in our "Help Setting Up" section. Volume and distance adjustments within your home theater receiver will help balance your system.

The powered subwoofer ideally should be placed near the front, center of the room. However, since the human ear and brain has difficulty distinguishing the location or source of low frequencies, especially below 100 hz, for practical purposes, the powered subwoofer can be positioned virtually anywhere in the room.

5.1, 6.1, 7.1 Surround Sound Defined

The digital audio multichannel format developed by the Moving Picture Experts. 5.1 refers to the five discrete, full bandwidth (20-20kHz) channels - left, right, & center fronts, plus left & right surrounds - and the ".1" usually refers to the limited bandwidth (20-120Hz) subwoofer channel. 6.1 is the same as 5.1 only there is an additional rear center channel while 7.1 has no rear center channel but instead an additional pair of surround speakers.

Beyond 5.1...6.1, 7.1, 9.2, etc.

Surround formats continue to be introduced that provide a myriad of additional speaker placements for even more control over home theater and hi-end audio. See your receiver's owner's manual for more details about these setup options. You can also visit our online "Help Setting Up" section for more information and diagrams.

Connecting the Powered Subwoofer to your Home Theater Receiver

If your receiver includes a dedicated RCA-type "LFE or Subwoofer output jack"... use a shielded subwoofer interconnect cable, such as the HTD CBL-SW30, to connect this jack to one of the LFE input jacks on the Powered Subwoofer. In this example, we've plugged into the "LFE XO-Active" input, which allows us to adjust the Frequency Crossover (XO) control on our Powered Subwoofer to achieve the best blend with the other speakers. Alternatively, you could plug into the "LFE - XO Bypassed" jack which would utilize your Home Theater Receiver's crossover point only. When the XO-Bypassed input is used, the Variable Frequency (XO) control is bypassed. Some hi-end receivers offer a variable crossover point for each channel's "Bass Management". When using this feature in a receiver, it is usually best to use the Subwoofer's "XO-Bypassed" input to avoid any additional frequency filtering that could add "noise" and possibly create a "gap" or "hole" in the frequency range.

Connect the speakers to the corresponding speaker jacks on your Home Theater receiver and follow the instructions in the Receiver's Owner's Manual for setting up your speakers.

Warranty

All HTD speakers carry a five-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!

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

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