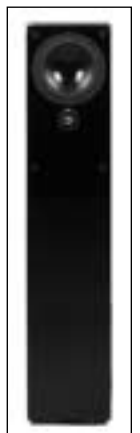




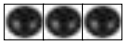
# User's Manual



Model

ST4

Tower Loudspeaker



Thank you for your purchase of the NHT ST4 Super Tower loudspeaker.

Like all NHT loudspeakers, the ST4's development has been guided by the study of human hearing, its design rigorously tested, and its components optimized to deliver clean, clear musical sound.

Since the quality of your speakers is one of the most important factors in maximizing the sound you'll get from your music and home theater system, we're sure that you'll find your purchase of the ST4 a good investment, and invite your comments.

If you find your experience with the ST4 as satisfying as we believe you will, and wish to enjoy its high quality sound through your entire system, you'll find information about other sonically matched NHT Super Series loudspeakers on the back of this manual.

Please take a few minutes to read through this owner's manual before setting up your speakers; this information will help you get the most out of them. Also, please keep the ST4's packaging to use in case you move or transport them.

If you have questions at any time during setup or use, feel free to call your NHT dealer or our Toll-Free Customer Hotline at 1-800-NHT-9993.

## Background

NHT's new ST4 is a remarkable hybrid product -- a two-way loudspeaker combined with an integral subwoofer -- which offers the newest of our full range loudspeaker technology in a small-footprint cabinet.

Inside the Super Tower are two separate chambers, one containing the same high-quality midrange and tweeter drivers as the NHT SB3, and the other, a side-firing, long-throw 8" subwoofer producing bass down to 29Hz.

This approach offers the midrange clarity and detail of the finest two-way designs combined with the dynamic range of a 3-way system, while placing the drivers at their optimal height for a natural listening experience. This enables the ST4 to deliver the pinpoint imaging and subtle detail your music or home theater system is capable of, and yet provide the dynamic output required by video soundtracks.

## Placement

Although the ST4 is a floorstanding loudspeaker that may be used in any (indoor only) location without stands or mounting, its height-to-width ratio makes it potentially unstable without spikes or stabilizer bars. The moment you have found the ideal location for your ST4's, please install the SpikeKit (instructions below) on your speakers.

Since the upper, mid / tweeter portion of the ST4 is magnetically shielded, and can be placed in close proximity to a television without causing picture discoloration, you'll find the ST4 to offer unusual flexibility in placement.

ST4s are designed to be used as a mirror image pair with the side loaded subwoofers facing opposite directions; ie, facing away from each other (fig. 2). In situations where this isn't possible, and you don't have anything between the woofers blocking them, set up the ST4s so that the woofer face inward toward each other.

Be aware, though, that small changes in speaker position can have a significant effect on sound. Moving speakers nearer to walls or corners will increase bass output, but also may add "boom." Placing them farther away tends to decrease bass output, but can give tighter imaging.

Room furnishings also play an important role. Soft furnishings (sofas, carpets and curtains) absorb midrange and high frequencies, potentially dulling the sound, while hard surfaces and emptier rooms brighten it.

Experimenting with the effects of different placements in your own listening/viewing room is the key to finding the sound you like best.

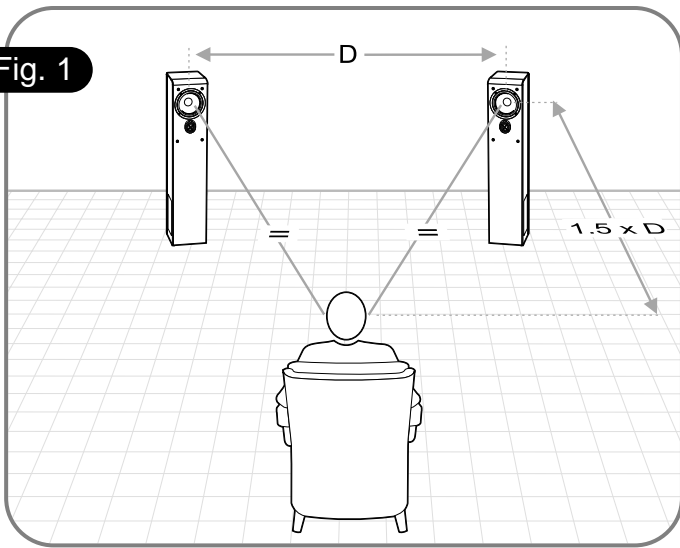
## Placement Tips

Ideally, you'll usually get the best sound when your speakers are:

- 1.5 times as far away from you as from each other
- L and R speakers are equidistant from the listener

Once you've placed them, finish by moving them around so that they're:

- Greater than 1 foot from back walls, 2½ feet from side walls
- Pointing inward a bit toward your ears.

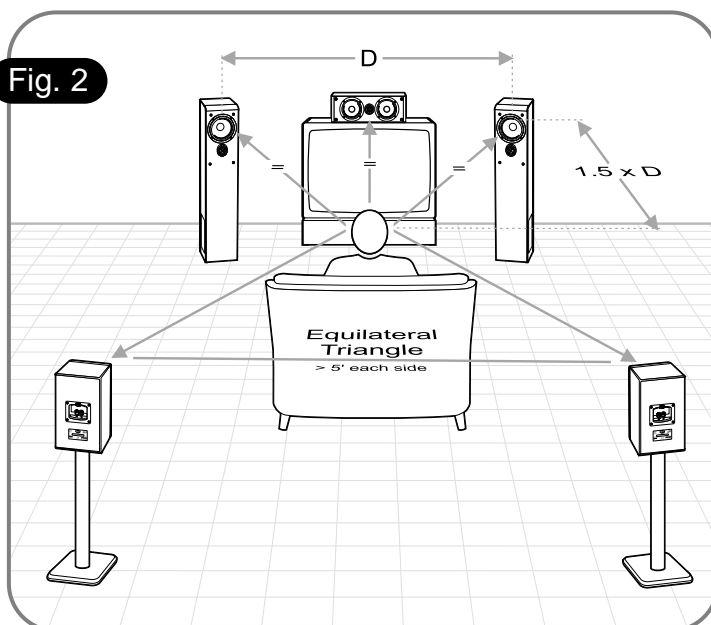
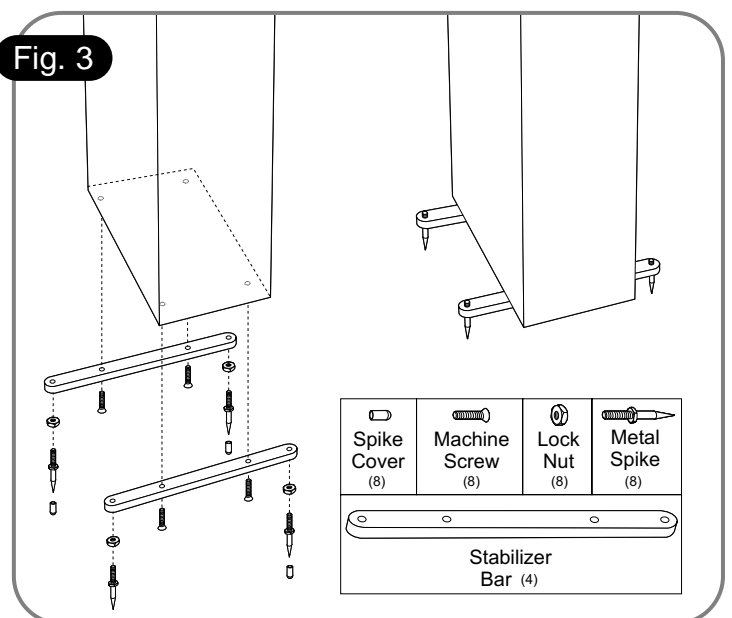
**Fig. 1**

Taking these steps -- all shown in Figure 1 -- will give you the smoothest response, and put you right in the center of the stereo image at its most well-defined point.

For five-channel music and home theater systems, use the same basic setup -- all shown in Figure 2 -- and when possible, set up the system so that:

- The center speaker is right above or below the TV.
- The rear speakers are in an equilateral triangle with the listening position, the speakers at least 5 feet apart.
- The rear speakers are at the same height or slightly higher than the fronts

In many situations, it won't be possible to place the rear speakers in their ideal positions. If this is the case in your room, try to place the rear speakers equidistant from the center of the main seating area. If you must place the rear speakers close to the main seating area, position them so that they are above the ear height of the

**Fig. 2****Fig. 3**

Start by carefully turning the speaker upside down (or on its back) and installing the stabilizer bars. Attaching them with the Phillips head machine screws, starting with finger-tightening (to avoid cross threading) and finishing with a #2 Phillips screwdriver.

Next, turn the speakers upright and position them. When you've found the optimum location for each (the speakers can be awkward to move after the spikes are installed), slip the lock nuts onto the spikes, carefully tilt the speakers, and screw in the spikes. Caution: The spikes are very sharp. To avoid injury, use extreme care when handling and installing them.

Adjust the spikes as needed to ensure that the ST4 is level and does not rock in any direction, then tighten the lock nuts against the bottom of the stabilizer bars to lock the spikes in place.

If you have hardwood or other soft floors, which the spikes might scratch or pierce, you may prefer to use the rubber feet included in the SpikeKit. To do so, simply peel the adhesive backings from the rubber feet and place them over the spike holes on the stabilizer bars.

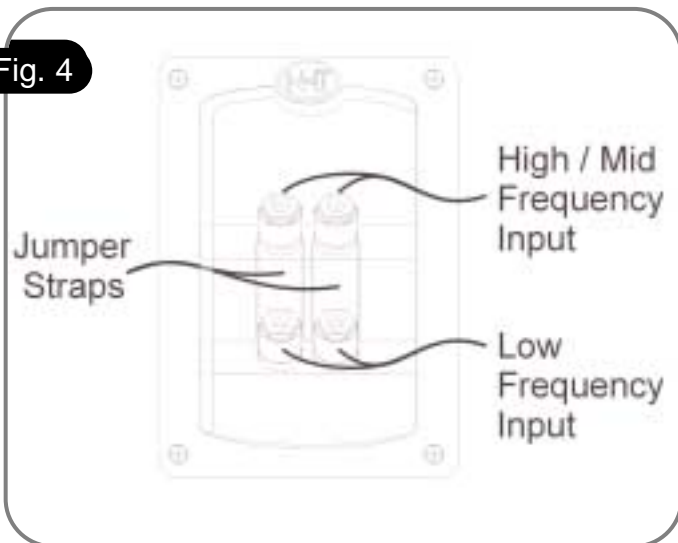
## Connections

Before connecting your ST4 loudspeakers to your system, turn off the power to your amplifier / receiver to avoid damaging the components or the speaker.

First, please take a look at the five-way binding posts on the back of your speaker. They accept raw wire, banana plugs or spade plugs. They should always be tightened by hand, since pliers can strip or break them.

You'll notice that there are two sets of binding posts: a top set and a bottom set, joined by a metal jumper strap. For a normally-amplified connection, simply connect the speaker wires to either the top set or bottom set of binding posts; it doesn't matter which, since the jumper straps will carry the audio signal to the other set. Only remove the strap if you're bi-amplifying (fig. 4).

Fig. 4



Next, choose your speaker wires. Like all wires, speaker wires are rated by a gauge number representing how many fit in an inch-thick tube, so the numbers getting smaller as the wire gets thicker. Thicker wires transmit more signal easily; we recommend 14-gauge for shorter runs, and thicker for runs longer than ten feet (your authorized NHT dealer can help with wire). Equal lengths of wire for all speakers is ideal, but not absolutely necessary.

Prepare the wires by stripping 1/4" to 3/8" of insulation from the ends and, if the wire is stranded rather than solid, tightly twisting the exposed wire strands.

Finally, connect your speaker to your amplifier or receiver, connecting the conductors "in-phase;" that is, the same half of the wire-pair to the positive / red amplifier terminal and the positive /red speaker terminal. Similarly, connect black output and input. If you have trouble following which wire half is which, look closely, and you'll see that your speaker wires have some sort of marking -- lettering, ridges, or color difference -- to help.

Before powering up your amplifier or receiver, separate different kinds of cables to minimize noise. Keep speaker wires at the maximum practical distance from line-level, digital, and power cables, and if they must cross, keep them at right angles.

## Bi-amplification

On the back panel of the ST4 you'll find two sets of binding posts (fig. 4) and a metal jumper strap connecting them. These provide a different way to connect the ST4's to your system, namely, bi-amplifying.

Bi-amplification is the use of two amplifiers, one to power the bass driver and a separate one to power the midrange / high frequency drivers. Why bi-amplify? Because this configuration provides greater dynamic range, since each of the two amplifiers is spared the task of reproducing the entire frequency range. And in home theater systems, bi-amplifying turns the passive subwoofer section of the ST4 into a powered subwoofer.

The most important factor in bi-amplifying is making sure that identical line-level audio signals -- ie, signals matched in tone and level -- both reach the two amplifiers and, after amplification, reach the ST4's. This involves three steps.

### 1) Sending identical audio signals to your amplifiers:

Check whether your preamplifier or system controller offers multiple sets of line-level output jacks. If so, simply lead two sets of connectors to your two amplifiers. When your pre-amplifying component offers only one

set, use a "Y" splitter to send your two amplifiers identical signals.

## 2) Sending identical amplified signals to your speakers:

To ensure that your amplifiers send out tone-and-level matched signals to the ST4's, use either two identical amplifiers, or two amplifier models of similar sound. If two different models, make sure that at least one amplifier has a volume control for level matching. If using an audio / video receiver, use its left and right speaker outputs to drive the upper section, and a separate amplifier to drive the subwoofer section.

## 3) Ensuring proper connections to the ST4's two sections:

It is very important, when bi-amplifying, to remove the ST4's jumper straps, or you will damage your amplifiers! Also, as in standard connection procedure, turn off all preamplifier and amplifier power before connecting your speakers. After doing so, connect one amplifier's output speaker wires to the top set of ST4 binding posts and one set to the bottom set, hand-tighten the posts, and as in standard mode, separate the speaker cables from others.

Some audio enthusiasts also believe that bi-wiring -- ie, connecting two separate pairs of speaker wire, from the two sets of speaker output terminals that many amplifiers provide, to each set of speaker binding posts -- can bring about improvements in sound. To bi-wire the ST4's, first remove the metal jumper strap, and connect.

For more detailed information about bi-amplification, contact your local authorized NHT dealer, or visit our Web site at [www.nhthifi.com](http://www.nhthifi.com).

## Operation

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The NHT ST4 is compatible with virtually all quality amplifiers, and is designed to handle a wide range of listening levels.

Every speaker, however, has limits, and it's important to listen for them. Speaker damage most often results not from brief loud musical peaks, but from sustained high volume levels in some or all frequencies. For this

reason, extreme volume settings and excessive bass, treble or equalizer boosts are not recommended. If you hear unusual distortion or breakup, or notice heat coming from either your woofer or tweeter, decrease volume immediately, neutralize any excess bass, treble or equalizer boosts, and avoid setting any controls to similar extremes again.


## Maintenance

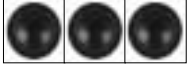
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Your speaker requires no or minimal maintenance under normal use, as long as you avoid exposing it to direct sunlight, high temperatures, or moisture. Clean cabinet, when necessary, using a damp cloth or a mild, non-abrasive cleaner; to clean grille, remove from speaker and use a soft brush or a vacuum on its lowest setting. Do not attempt to clean the actual drivers.

## Satisfaction

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Your satisfaction with your new NHT ST4 loudspeaker is important to us. Please note the matched products and accessories we provide for them, and your warranty, printed at the end of this manual. And again, if you have any questions regarding your speakers' use, feel free to call NHT at 1-800-NHT-9993. Enjoy your listening and viewing! 



## **Limited Warranty Valid Only in the U.S.A.**



### **Warranty Period**

For a period of 5 years for parts and 5 years for labor (1 year parts and 90 days labor for electronics) from the date this product is first purchased from an authorized NHT dealer, Now Hear This (NHT) warrants that if it fails to function properly due to a manufacturing defect, despite its being installed and operated according to these instructions and used under normal conditions, it will be either replaced or repaired with new or rebuilt parts (both at NHT's option) with a unit of comparable value without charge to you.

### **What's Not Covered**

**Altered, defaced or removed serial numbers void this warranty.**

This warranty does not cover any product used in trade, business, industrial or commercial applications.

This warranty also does not cover the cabinet or appearance factors, or costs, defects or damage resulting from misuse, abuse, accident, improper maintenance, alterations or modifications not authorized in writing by NHT, or parts or labor from any source other than an authorized NHT service location.

Damage due to power exposure in excess of the speaker's published power ratings; ie, overpowering, lightning or power surges, are also not covered.

### **Your Rights**

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

NHT limits this warranty to the purchase price of the product, excludes incidental or consequential damages, and limits its obligations under any implied warranties under state laws to a period not exceeding their warranty periods. As some states do not allow the above limitations, however, they may not apply to you.

### **To Obtain Service**

NHT has appointed a number of authorized service companies throughout the USA who can provide warranty service upon your presenting your sales receipt showing place and date of original owner's transaction.

To find the name and address of the nearest authorized NHT service location, call or write:

**AB Tech Services, 17C Airport Drive, Hopedale, MA 01747. 1-800-225-9847**

[info@abtechservices.com](mailto:info@abtechservices.com)

**For your future convenience, please keep this warranty with your sales receipt, and record date and place of purchase for further reference.**



# Specifications

All Super Series products are sonically matched for seamless integration into multichannel systems.

## Super Series



**SB1      SB2      SB3      ST4      SC1      SW10**

	SB1	SB2	SB3	ST4	SC1	SW10
<b>System Type</b>	2-Way Acoustic Suspension	2-Way Acoustic Suspension	2-Way Acoustic Suspension	3-Way Acoustic Suspension	2-Way Acoustic Suspension	Vented / Powered - 150 watts Class AB Amplifier
<b>Driver Complement</b>	1" fluid cooled aluminum dome tweeter with neodymium magnet structure					
Tweeter-	1" fluid cooled aluminum dome tweeter with neodymium magnet structure					
Woofers- Video Shielded Unless Noted	5.25" Polypropylene	6.5" Polypropylene	6.5" Polypropylene	6.5" and 8" Polypropylene (8" Not Video Shielded)	(2) 4.5" Polypropylene	10" Polypropylene (Not Video Shielded)
<b>Response</b>	68Hz - 22kHz +/- 3dB	51Hz - 22kHz +/- 3dB	39Hz - 22kHz +/- 3dB	31Hz - 22kHz +/- 3dB	78Hz - 22kHz +/- 3dB	31Hz - 180Hz +/- 3dB
<b>Crossover Frequency</b>	2.6 KHz	2.7 KHz	2.4 KHz	135 Hz 2.6 KHz	2.3 KHz	Speaker level and line level high pass 100Hz Continuously variable low pass: 40Hz -180Hz
<b>Sensitivity</b>	86dB / 2.83v	86dB / 2.83v	86dB / 2.83v	86dB / 2.83v	86dB / 2.83v	
<b>Impedance</b>	8 ohm nominal	8 ohm nominal	8 ohm nominal	8 ohm nominal	8 ohm nominal	
<b>Recommended Amplifier Power</b>	Minimum 15 watts Maximum 125 watts	Minimum 15 watts Maximum 150 watts	Minimum 15 watts Maximum 175 watts	Minimum 15 watts Maximum 200 watts	Minimum 15 watts Maximum 150 watts	
<b>Weight (each)</b>	8 lbs.	13 lbs.	16 lbs.	47.5 lbs.	11 lbs.	43 lbs.
<b>Dimensions</b> Length" x Width" x Height"	6.75 x 6.25 x 10.25	8.75 x 7.5 x 11.85	10 x 8 x 13	12 x 8 x 38	6.63 x 16.54 x 5.63	14.5 x 14.5 x 14.5
<b>Finish</b>	White or Black High Gloss Piano Finish	White or Black High Gloss Piano Finish	Black High Gloss Piano Finish	Black High Gloss Piano Finish	Black High Gloss Piano Finish	Black High Gloss Piano Finish