# Signature Series

## T SYSTEM MODULAR SPEAKERS

rbh®

# OWNERS MANUAL

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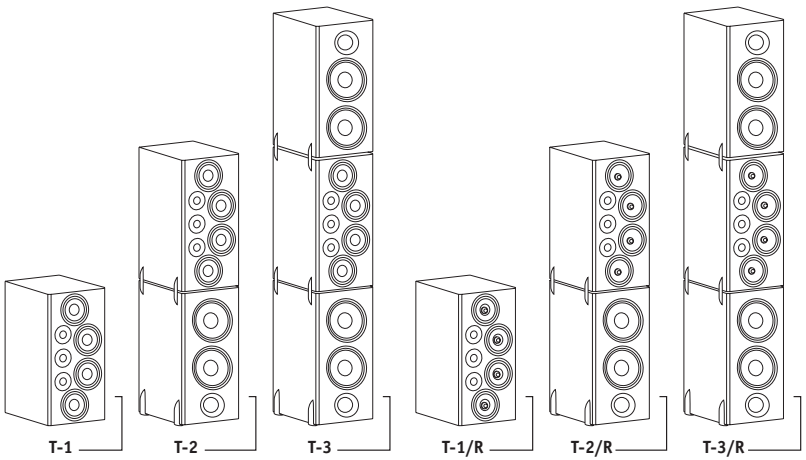
# Introduction

Congratulations on your purchase of an RBH Sound speaker system! Your speakers are the result of many years of research and development dedicated to producing high quality products for home audio systems.

This manual contains features, setup recommendations and specifications for the RBH Sound T System high performance speaker systems. We recommend you thoroughly read through the material contained in this manual before connecting your speakers. This will ensure you have a good understanding of how to setup your speakers for optimum performance and allow for many years of listening enjoyment.

# T System Speakers




# Break-in Period

Allow 10-15 hours of listening time to adequately break-in the RBH Sound Signature Series speaker systems. As the speakers break-in, the driver suspension will loosen. The result of break-in will be an increase in low frequency response, improved definition, and increased clarity and detail.

# Care and Cleaning

To maintain speaker appearance, we recommend wiping them down with a clean and damp, soft cloth. To clean dust from the grille cloth, use a vacuum with a brush attachment.

# Features

At the heart of the RBH Sound T System speaker system are proprietary aluminum cone bass/woofers and midrange drivers. The unique aluminum cone material combines stiffness, low mass and self damping properties in a manner that allows virtually uncolored presentation of program material.

A powerful magnet, extended voice coil and bumped back plate give the bass/midrange divers high excursion capability. This ensures accurate dynamic reproduction.

For high frequencies, a premium quality silk dome tweeter is used. This tweeter uses liquid cooling for greater power handling.

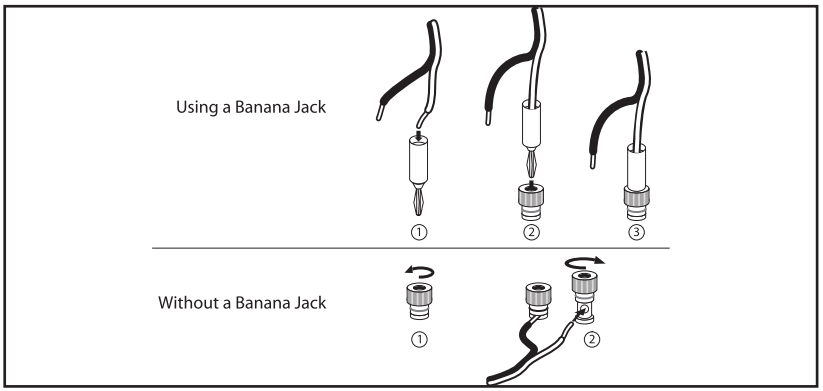
Each speaker features an extensive crossover network. Steep acoustic slope crossovers are used to integrate drivers. The use of steep crossover slopes allows for higher power handling, minimizes driver interaction anomalies, and maximizes the ability of each driver in their respective band of frequencies. Large 5-way binding posts ensure a good, solid electrical connection to these crossover networks.

Cabinets are constructed of ¾-inch medium density fiberboard because of its inert properties, thereby preventing sound coloration due to cabinet diffraction. The thickness of the front baffles also prevents excess acoustic radiation. Sophisticated computer modeling and measurement techniques are used extensively throughout the RBH Sound Signature Series speaker design process.

# Attaching Speaker Wires

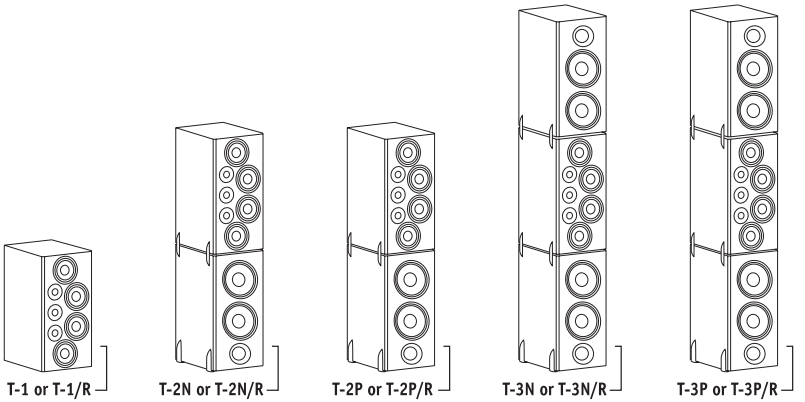
When using a banana jack to attach speaker wires to the binding post terminals, insert the speaker wire into the banana jack. Next insert the banana jack into the hole provided in the top of the terminal. Repeat for the other speaker wire(s) as necessary.

If not using a banana jack, simply loosen the binding nut to allow the hole in the side of the terminal to become exposed. Strip ¼-inch of the insulation from the end of the speaker wire and insert the exposed wire end into the now exposed hole in the side of the terminal. Tighten the binding nut by turning the nut clockwise until the speaker wire is secured. Repeat for the other speaker wire(s) as necessary.



# Setup Suggestions

The T System is a modular speaker system designed to be used individually or with the RBH Sound 1010-SEN or 1010-SEN/R subwoofer. This combination with the subwoofer provides full-range reproduction of the program material. There are four basic models or configurations within the T System:




## T System Configurations

**T-2N or T-2N/R:**
2 each T-1 or T-1/R Modular Speakers
2 each 1010-SEN or 1010-SEN/R Non-powered Subwoofers
2 sets of T-Module Clamps
2 sets of T-Module Feet

**T-2P or T-2P/R:**
2 each T-1 or T-1/R Modular Speakers
2 each 1010-SEN or 1010-SEN/R Non-powered Subwoofers
2 each SA-400 Subwoofer Amplifiers
2 sets of T-Module Clamps
2 sets of T-Module Feet

**T-3N or T-3N/R:**
2 each T-1 or T-1/R Modular Speakers
4 each 1010-SEN or 1010-SEN/R Non-powered Subwoofers
4 sets of T-Module Clamps
2 sets of T-Module Feet

**T-3P or T-3P/R:**
2 each T-1 or T-1/R Modular Speakers
4 each 1010-SEN or 1010-SEN/R Non-powered Subwoofers
4 each SA-400 Subwoofer Amplifiers
4 sets of T-Module Clamps
2 sets of T-Module Feet

**T-1 or T-1/R:** The T-1 or T-1/R is the main speaker section that reproduces the high and mid-range frequencies. The T-1 or T-1/R can be used by itself as a main, center or rear speaker, or used as part of the next four options.

**T-2N or T-2N/R:** The combination of the T-1 or T-1/R with the 1010-SEN or 1010-SEN/R non-powered subwoofer creates the T-2N or T-2/R system. The T-1 or T-1/R is typically placed on top of the subwoofer by using the bracket system included with this configuration.

**T-2P or T-2P/R:** This is a T-1 or T-1/R with the addition of a 1010-SEN or 1010-SEN/R non-powered subwoofer and the SA-400 subwoofer amplifier. The T-1 or T-1/R is typically placed on top of the subwoofer by using the bracket system included with this configuration.

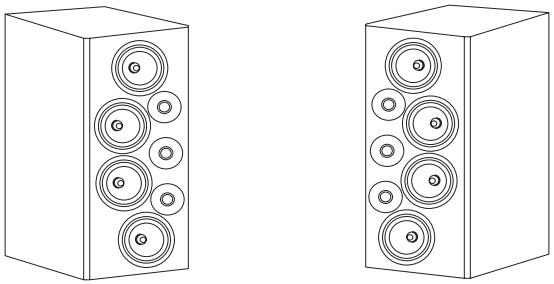
**T-3N or T-3N/R:** The T-2N or T-2N/R system, with the addition of a second 1010-SEN or 1010-SEN/R non-powered subwoofer. The second subwoofer is typically placed on top of the existing T-2 or T-2/R, but can also be placed elsewhere in the room.

**T-3P or T-3P/R:** This is a T-2P or T-2P/R system, with the addition of a second 1010-SEN or 1010-SEN/R non-powered subwoofer and the SA-400 subwoofer amplifiers. The second subwoofer is typically placed on top of the existing T-2 or T-2/R, but can also be placed elsewhere in the room.

# Setup Suggestions (continued)

In order to obtain the best possible sound from your speaker system, it is important to determine where the speakers will sound best in your listening room. Room reflections from the floor, ceiling and side walls influence the balance, imaging and overall sonic quality at the listening position. Experiment with speaker placement to determine which location offers the best overall sound.

It is imperative that the T-1 or T-1/R cabinets are positioned so that the tweeters face toward the inside, as shown in the illustration below. If the tweeters are not placed properly, there will be a great reduction in imaging, sound staging and overall performance of the speaker system.



**NOTE:** Tweeters are on the inside when the left and right front speakers are properly placed as shown above.

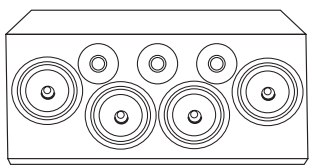
As a general guide, use the room layout diagram shown on the next page and follow the descriptions when setting up a home theater system. Some speakers shown in the room layout diagram may not be applicable to your individual system.

**Front Main Speakers**

As a starting point, place your left and right front speakers at least 15 inches from the wall and 7-feet apart from each other. The distance from the listening position to each speaker should be close to the distance that separates the two main speakers. Angling the speakers inward towards the listening position may give a more spacious and realistic sound stage.

**Center Channel Speaker**

The Center Channel Speaker should be placed between both left and right front main speakers. Often this positioning dictates placing the speaker either directly above or below a television monitor or screen. If using an RBH Sound Signature Series speaker, the speaker may be used in a horizontal (lying down) or vertical position. If using a T-1 or T-1/R as the center channel positioned below or equal in height of the Main T-1s, the tweeters must face up as shown in the illustration below.



**NOTE:** The speaker is positioned with the tweeters on top.

# Setup Suggestions (continued)

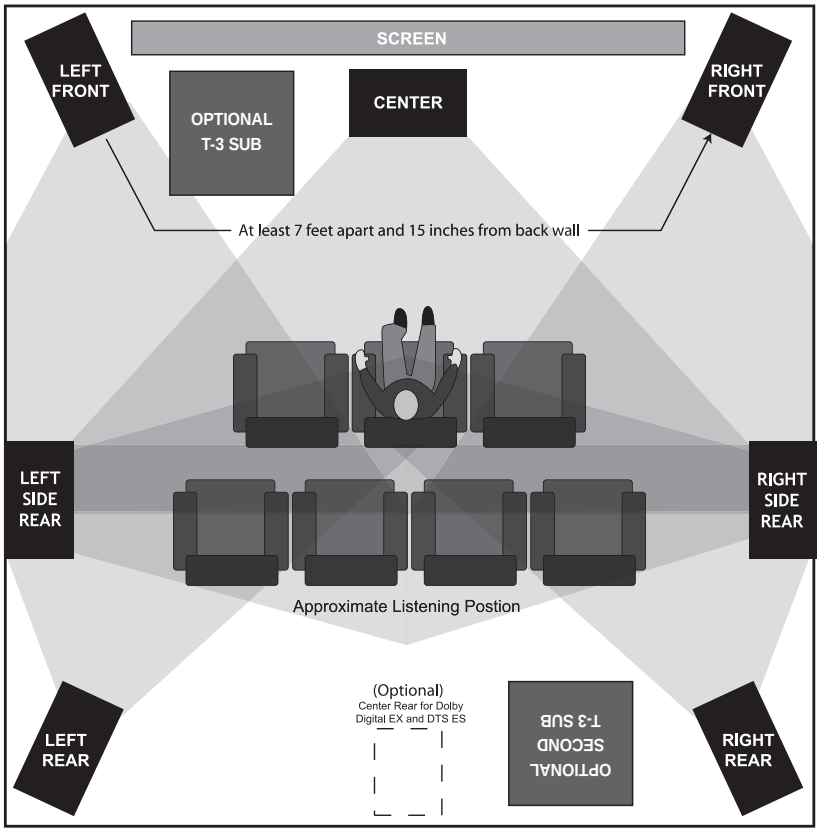
**Surround Speakers**
The Surround Speakers may be placed either above, behind or to the sides of the listening position. The listening position should be centered between the surround speakers. For best performance, you may want to experiment with angling the surround speakers either towards or away from the listening position.

**Subwoofer**
In a T-2 or T-2/R configuration, the subwoofer generally sits below the T-1 or T-1/R, connected by the clamping bracket. As mentioned previously, in a T-3 or T-3/R configuration, the second set of subwoofers can be mounted either above the T-1 or T-1/R, connected by a second set of clamping brackets, or placed elsewhere in the room. Connection of the subwoofer is done by speaker wire, not by audio interconnect.

When configured as a T-2P, T-2P/R, T-3P or T-3P/R, an RBH Sound SA-400 subwoofer amplifier is used to power each subwoofer. The SA-400 is a mono block subwoofer amplifier. This amplifier is designed to power one 1010-SEN or 1010-SEN/R at a time, which is why two SA-400 amplifiers complete a T-2P or T-2P/R system and four SA-400 amplifiers complete a T-3P or T-3P/R system. See page 4 for system configurations. For proper instructions on the setup and operation of the SA-400 subwoofer amplifier, please refer to the owners manual included with the SA-400.

**Warning:** Be sure to REMOVE speaker terminal bi-amp clips COMPLETELY when bi-amping or bi-wiring.

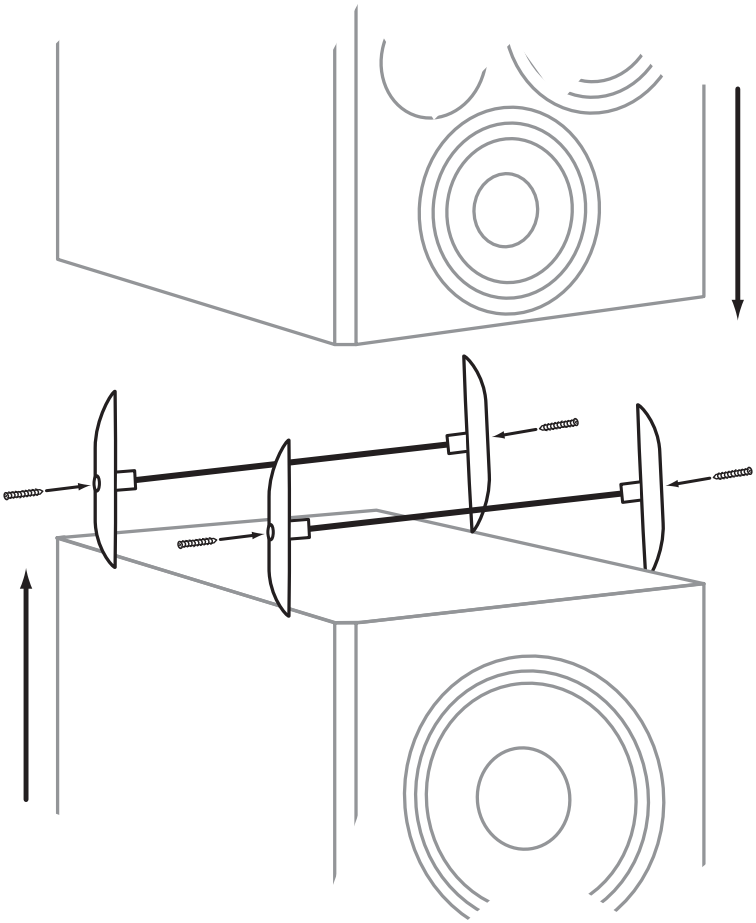
# Setup Suggestions (continued)




NOTE: There are several different surround formats available. Dolby Pro-Logic, Pro-Logic II, Dolby Digital and DTS generally have a 5 speaker plus subwoofer requirement. Dolby Digital EX and DTS ES add a center rear speaker. Please consult your audio/video professional to determine which system is best for you and how many speakers you will require.

## Clamping Bracket

The clamping brackets provided with the T-2, T-2/R, T-3 or T-3/R systems, consists of (4) end pieces, (4) hex head bolts and (2) round rods. To install, attach an end piece to each end of the rod with the screws and place in between the two cabinets from side to side (not front to back). Two of these are required between each speaker. As the bolts are tightened, pressure will be created holding the top and bottom sections firmly together, see the illustration below.



**NOTE:** Both speakers must be in place before tightening down the bolts.

# Specifications

| Model | T-1 | T-2 |
|---|---|---|
| **Speaker Type** | Modular | Modular Tower |
| **Frequency Response:** | 45Hz – 20kHz ±3dB | 20Hz – 20kHz ±3dB |
| **Sensitivity:** | 91dB (2.83V @ 1M) | 92dB (2.83V @ 1M) |
| **Recommended Power:** | 100-500 Watts | 100-1000 Watts* |
| **Woofer:** | (4) 6½" (165mm) Aluminum | (2) 10" (254mm) Aluminum<br>(4) 6½" (165mm) Aluminum |
| **Tweeter:** | (3) 1" (25mm) Silk Dome | (3) 1" (25mm) Silk Dome |
| **Impedance:** | 4 Ohms | 4 Ohms |
| **Crossover Frequencies:** | 2500 Hz | 2500 Hz |
| **Crossover:** | 24dB/Octave | 24dB/Octave |
| **Dimensions:** | Width: 13¼" (337mm)<br>Height: 30" (762mm)<br>Depth: 18" (457mm) | Width: 13¼" (337mm)<br>Height: 61¼" (1556mm)<br>Depth: 18" (457mm) |
| **Finish:** | 30 different real hardwood finishes | 30 different real hardwood finishes |
| **Weight:** | 75 lbs. (34.02 Kg.) | 140 lbs. (63.50 Kg.) non-powered |

| Model | T-3 | 1010-SEN |
|---|---|---|
| **Speaker Type** | Modular Tower | Non-powered Subwoofer |
| **Frequency Response:** | 20Hz – 20kHz ±3dB | 24Hz – 180Hz ±3dB |
| **Sensitivity:** | 92dB (2.83V @ 1M) | 90dB (2.83V @ 1M) |
| **Recommended Power:** | 100-1300 Watts* | 200-400 Watts |
| **Woofer:** | (4) 10" (254mm) Aluminum<br>(4) 6½" (165mm) Aluminum | (2) 10" (254mm) Aluminum |
| **Tweeter:** | (3) 1" (25mm) Silk Dome | N/A |
| **Impedance:** | 4 Ohms | 4 Ohms |
| **Crossover Frequencies:** | 2500Hz | N/A |
| **Crossover:** | 24dB/Octave | N/A |
| **Dimensions:** | Width: 13¼" (337mm)<br>Height: 91¾" (2330mm)<br>Depth: 18" (457mm) | Width: 13¼" (337mm)<br>Height: 30" (762mm)<br>Depth: 18" (457mm) |
| **Finish:** | 30 different real hardwood finishes | 30 different real hardwood finishes |
| **Weight:** | 205 lbs. (92.99 Kg.) non-powered | 63 lbs. (28.58 Kg.) non-powered |

*For recommended power specifications on the SA-400 included with the T-2P and T-3P see the owner's SA-400 manual.

# Specifications

| Model | T-1/R | T-2/R |
|---|---|---|
| Speaker Type | Modular | Modular Tower |
| Frequency Response: | 45Hz – 20kHz ±3dB | 20Hz – 20kHz ±3dB |
| Sensitivity: | 91dB (2.83V @ 1M) | 92dB (2.83V @ 1M) |
| Recommended Power: | 100-500 Watts | 300-1000 Watts* |
| Woofer: | (4) 6½" (165mm) Reference Aluminum | (2) 10" (254mm) Reference Aluminum<br>(4) 6½" (165mm) Reference Aluminum |
| Tweeter: | (3) 1.1" (27mm) Reference Silk Dome | (3) 1.1" (27mm) Reference Silk Dome |
| Impedance: | 4 Ohms | 4 Ohms |
| Crossover Frequencies: | 2500 Hz | 2500 Hz |
| Crossover: | 24dB/Octave | 24dB/Octave |
| Dimensions: | Width: 13¼" (337mm)<br>Height: 30" (762mm)<br>Depth: 18" (457mm) | Width: 13¼" (337mm)<br>Height: 61¼" (1556mm)<br>Depth: 18" (457mm) |
| Finish: | 30 different real hardwood finishes | 30 different real hardwood finishes |
| Weight: | 78 lbs. (35.38 Kg.) | 156 lbs. (70.76 Kg.) |

| Model | T-3/R | 1010-SEN/R |
|---|---|---|
| Speaker Type | Modular Tower | Non-powered Subwoofer |
| Frequency Response: | 20Hz – 20kHz ±3dB | 20Hz – 180Hz ±3dB |
| Sensitivity: | 91dB (2.83V @ 1M) | 90dB (2.83V @ 1M) |
| Recommended Power: | 500-1300 Watts* | 200-400 Watts |
| Woofer: | (4) 10" (254mm) Reference Aluminum<br>(4) 6½" (165mm) Reference Aluminum | (2) 10" (254mm) Reference Aluminum |
| Tweeter: | (3) 1.1" (27mm) Reference Silk Dome | N/A |
| Impedance: | 4 Ohms | 4 Ohms |
| Crossover Frequencies: | 2500Hz | N/A |
| Crossover: | 24dB/Octave | N/A |
| Dimensions: | Width: 13¼" (337mm)<br>Height: 91¾" (2330mm)<br>Depth: 18" (457mm) | Width: 13¼" (337mm)<br>Height: 30" (762mm)<br>Depth: 198" (457mm) |
| Finish: | 30 different real hardwood finishes | 30 different real hardwood finishes |
| Weight: | 234 lbs. (106.14 Kg.) | 78 lbs. (35.83 Kg.) |

*For recommended power specifications on the SA-400 included with the T-2P/R and T-3P/R see the owner's SA-400 manual.

# Troubleshooting

| Situation: | Probable Cause: | Solution: |
|---|---|---|
| No sound from speakers | Speaker wire not connected | Make sure wire is connected at both the speaker and the amplifier observing proper polarity |
| | Speaker selector on amplifier is not on | Activate proper selector on amplifier |
| No sound from one speaker | Balance control on receiver or pre-amp is not centered | Place balance control in the center |
| | Speaker wire not securely connected | Check all connections at amplifier and speakers |
| Only the woofers or tweeter are playing. | Bi-amp straps are not intact | Make certain gold bi-amp straps are in place and tightened down. |
| Very little bass and/or imaging | Speakers are wired out of phase | Check entire system for proper polarity and make adjustments as necessary |

# Warranty

Your RBH Sound T System speaker is covered by a limited warranty against defects in materials and workmanship for a period of (5) five years, and subwoofer amplifiers (1) one year from the original date of purchase. This warranty is provided by the authorized RBH Sound dealer where the speaker was purchased. Warranty repair will be performed only when your purchase receipt is presented as proof of ownership and date of purchase. Defective parts will be repaired or replaced without charge by your dealer's store or the location designated by your dealer authorized to service RBH Sound products. Charges for unauthorized service and transportation cost are not reimbursable under this warranty. This warranty becomes void if the product has been damaged by alteration, misuse or neglect. RBH Sound assumes no liability for property damage or any other incidental or consequential damage whatsoever which may result from the failure of this product. Any and all warranties of merchantability and fitness implied by law are limited to the duration of this express warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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