

Shinjitsu Hiro Manual Legacy Model



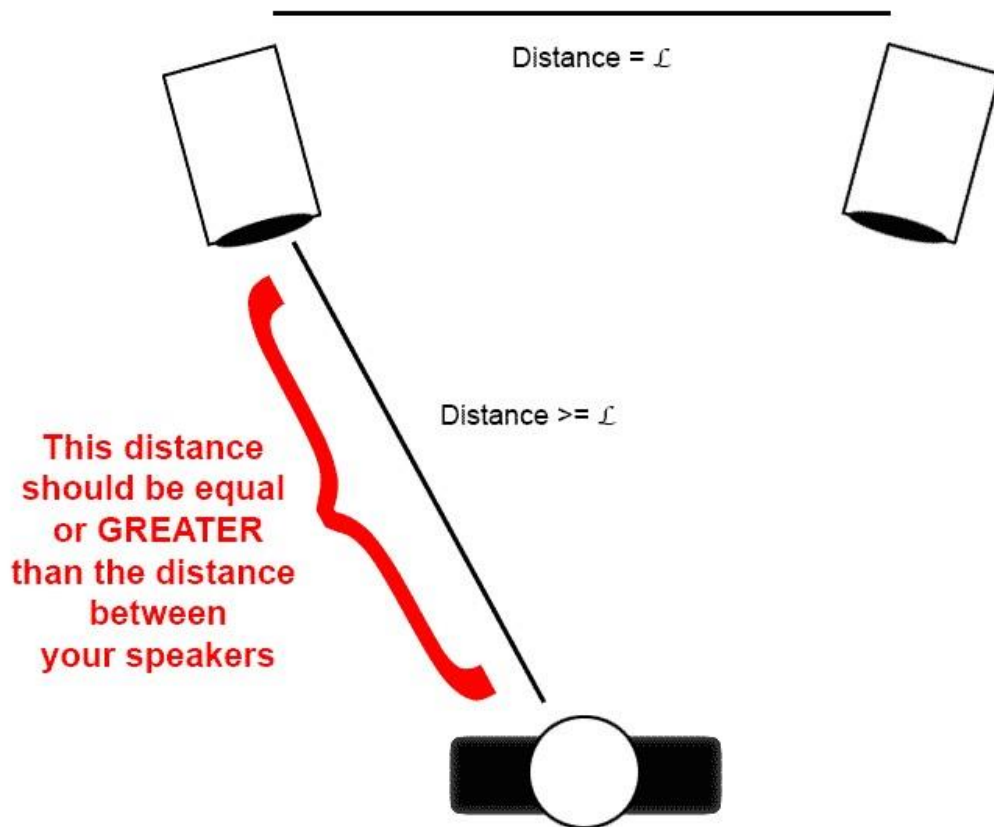
TABLE OF CONTENTS

<u>PAGE 2</u>	<u>PLACEMENT</u>
<u>PAGE 3</u>	<u>ROOM SIZE</u>
<u>PAGE 4</u>	<u>TOE IN</u>
<u>PAGE 5</u>	<u>RAKE/TILT</u>
<u>PAGE 6</u>	<u>SPEAKER HEIGHT</u>
<u>PAGE 7</u>	<u>CROSSOVER</u>
<u>PAGE 8</u>	<u>BI WIRING</u>
<u>PAGE 9</u>	<u>BACK PLATE</u>
<u>PAGE 10</u>	<u>ATTENUATION RESISTOR</u>
<u>PAGE 11</u>	<u>CLEANING</u>
<u>PAGE 12</u>	<u>SPECIFICATIONS</u>

Placement:

Speakers should be placed equidistance from side wall, if possible, with at least 5 feet between them and ideally 24 inches or more from wall. Stands od 16 inches are recommended although floor placement tilted back creates deeper bass.

Speaker should toe in approximately 15 degrees or having the main drivers placed just outside your ears.

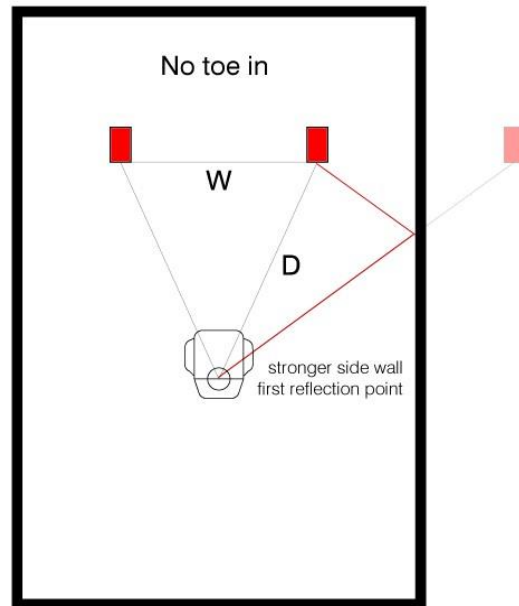
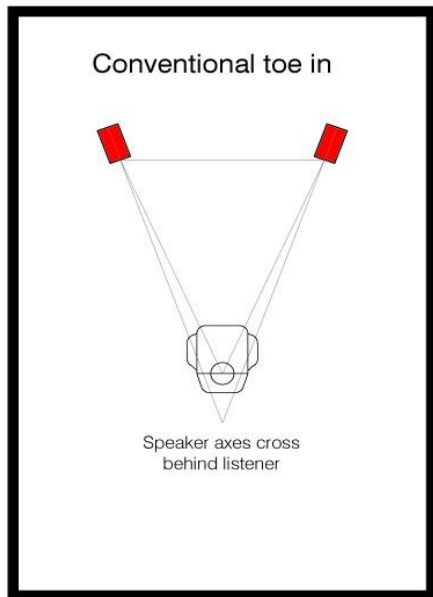


Room Size:

The ideal room should be rectangular or square with equal distribution of furniture. Of course, most rooms do not fall into this category so some balance adjustments or wall treatments may be needed. Speakers should be placed at least 2 feet from the back wall to minimize wall reflections and to present a deep soundstage. Bass impact and depth can be adjusted using back wall distances with closer to the back wall maximizing bass output. Bass boominess can be tamed by pulling the speakers farther out into the room. In severe cases when back wall placement must be less than 1 foot a small amount of wool or Dacron stuffing can be placed into the horn exit.

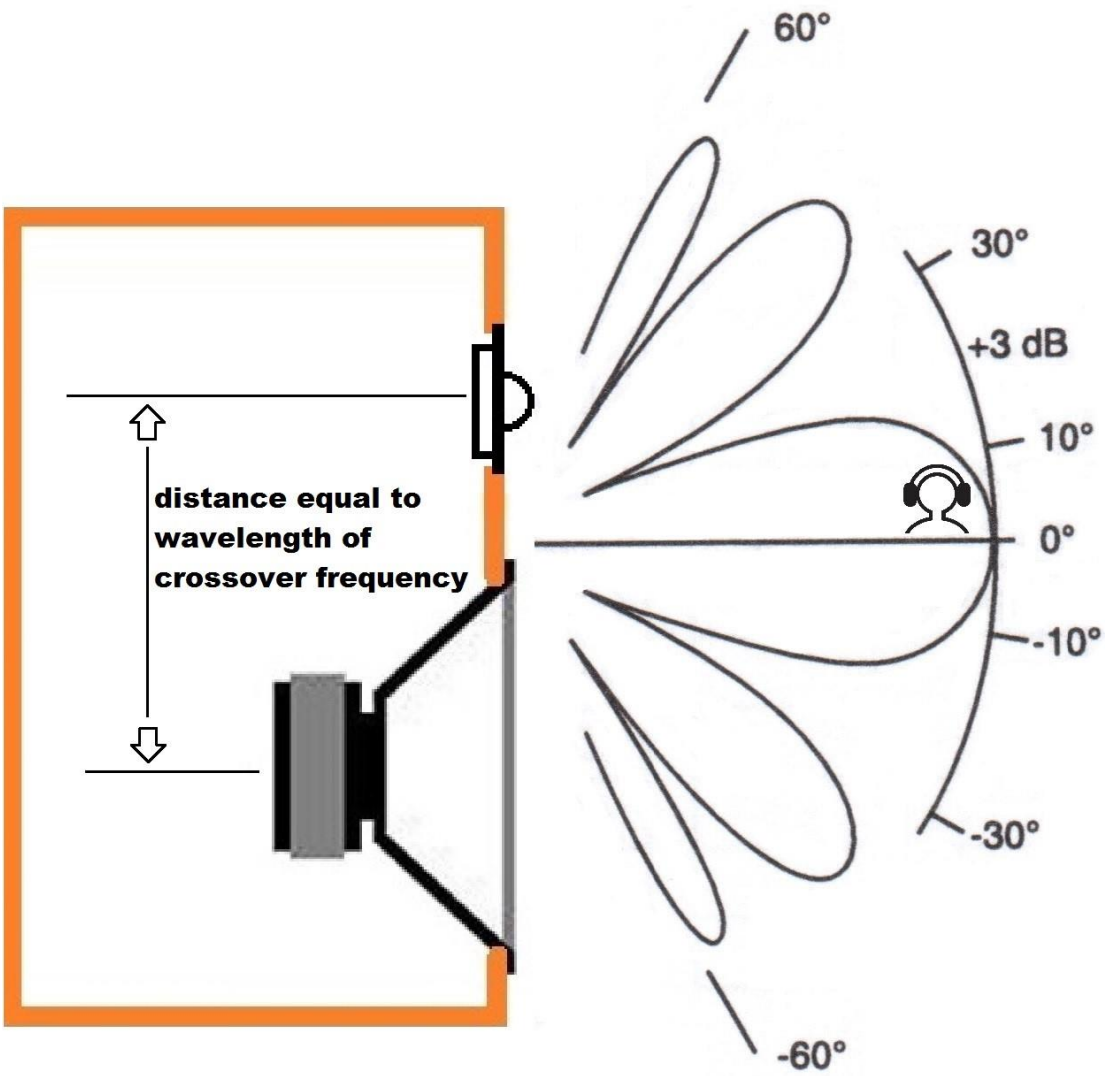
Toe In:

Speaker toe in can be defined as: pointing a loudspeaker inward toward the listener rather than aiming it straight ahead. Toeing-in the speakers can reduce the apparent size of the sound stage but allows more precise image definition. When toed-in, the speakers provide a more focused and sharply delineated soundstage. Excessive toe in can produce an overly narrow sound stage lacking in spaciousness and causing beaming of high frequencies.



Rake or Tilt:

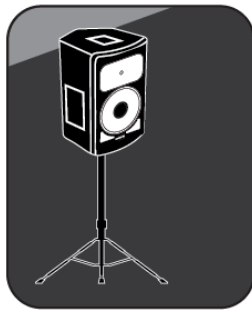
Speaker rake or tilt can affect how the high frequency balance is delivered. Too much tilt back can beam the high frequencies above your ears resulting in decreased highs and prominent midrange. Too little tilt back can do the same. Ideally tilt should be adjusted using wooden blocks under the speaker front or by purchasing out Shinjitsu Audio Plinth. Tilt should be from 10 degrees to 15 degrees. This tilt will affect the polar response of the speaker as shown below:



2 way system with 2nd order crossover

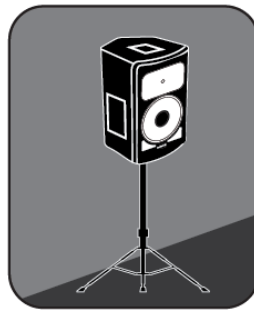
Speaker Height:

These speakers are designed to be floor standers. They must be placed on the floor to produce adequate bass reinforcement. Severe loss of bass will occur if they are placed onto speaker stands. Stereo imaging can be adjusted by using tilt back and back wall placement.



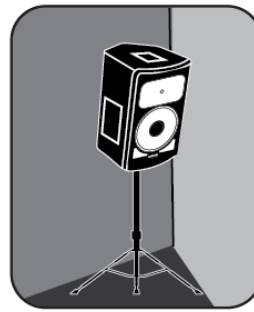
Flat

No nearby walls
No increased bass response



+6 dB

One nearby wall
+6 dB bass boost



+12 dB

Two nearby walls
+12 dB bass boost



+18 dB

Three nearby walls
+18 dB bass boost

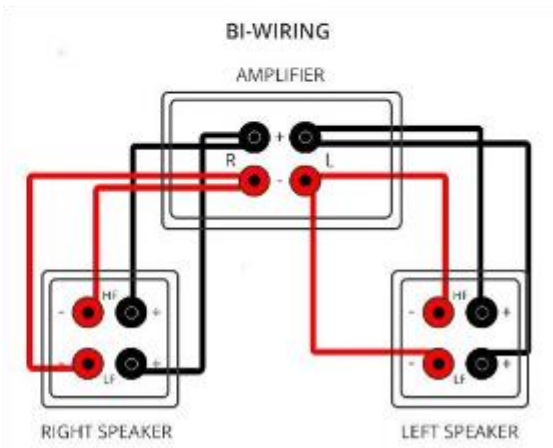
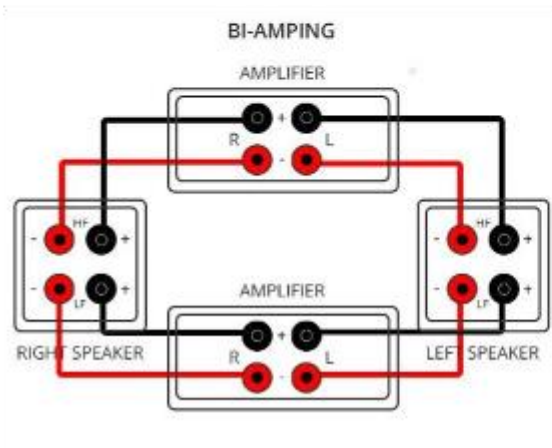
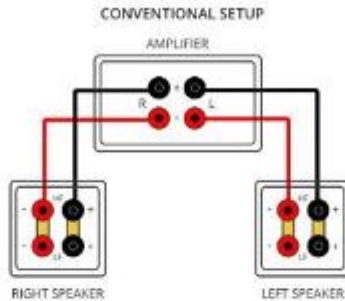
Crossover:

This speaker utilizes a second order crossover for the bass and first order for the high. There is but one coil at 1800 Hz and one capacitor Mundorf Cap on the high frequency driver the bass frequencies. They are both high quality components. If you desire the capacitor is easily accessible via the back plate and is not soldered into place. This can be exchanged with similar value and rating of a non-polarized film type of your choice if you desire. The coil is secured in place and should not be tampered with a sit is of enough gauge and quality that further improvements by exchanging it is pointless.

Bi Wiring and Bi Amping:

These speakers can be wired in one of three ways:

- 1) Conventional wiring style: The supplied jumpers are placed between the high frequency terminals and low frequency terminal Plus and Minus (or Red and black). One set of speaker wires go to the respective R and L amplifiers.
- 2) Bi Wiring Style: One set of wires go from the high frequency terminals and one set from the low frequency terminals to a common L or R terminal on one amplifier.
- 3) Bi Amp Style: One set of wires go from the high frequency terminals to either the R or L terminals on one amplifier set of speaker wires go from the low frequency terminals to another amplifier L or R terminals. See illustration below:



Back Plate:

The speaker back plate is configured to provide three sets of terminals:

- 1) High Frequency terminals - Plus and Minus (Red and Black)
- 2) Attenuation resistor – polarity is not important
- 3) Low Frequency Terminals – Plus and Minus (Red and Black)

Connect the terminals to your amplifier(S) as indicated in the section titled Bi Wire and Bi Amp. If using conventional single amplifier set up per channel use wire jumpers between both Plus terminals and both Minus terminals. THE RESISTOR TERMINALS REMAIN SEPARATE. These are used to attenuate the Air Motion Transformer high frequencies.



Attenuation Resistor #1

The speaker is supplied with a high frequency attenuation resistor accessible via the back-plate terminals. It is available for you to set the high frequency balance to suit your tastes and room. Lower values of resistor increase the high frequencies and higher values of resistors decrease the high frequencies. Bass be seemed to be enhanced as well with higher values of resistors. The supplied resistor is placed across the attenuation terminals.

Attenuation Resistor #2

The horn driver attachments are as follows: Black wire to the right terminal as seen from the FRONT of the speaker. The red wire is attached to the Left terminal.

Just behind the terminal lies the attenuation resistor # 2. This is a fixed value and can be changed. Larger values increase treble and smaller values decrease it.

Horn placement:

The horn assembly should be placed securely on top of the cabinet with the mouth of the horn facing forward. The lip of the horn should be located to line up with the front of the cabinet. Moving the horn forward and back on the cabinet top will subtly change the high and midrange frequency response.



Cleaning and Maintenance:

Dirt and smudges may be wiped off with a microfiber cloth dampened with glass cleaner. Do not spray cleaner on the horns or drivers. These will be damaged.

Specifications:

- Minimum Wattage required – variable depending on room size and musical tastes but should be at least 8 watts.
- Maximum Wattage: unlimited amplifier wattage but should not exceed 30 watts **continuous** which will achieve a SPL (loudness) of > 103 db which is quite loud in most rooms.
- Maximum SPL as tested: 103 db.
- Frequency Response: 32Hz to > 20 KHz +3 or -3 db.
- Frequency response graph at 3 meters using Omni Mic

Frequency response at 1 meter distance from speaker and on 16-inch stands.

