

# Genesis

## Genesis 350 System Owner's Manual

**Set up the speakers.** A good starting position for the Genesis 350's is about one third the way into the room as measured from the wall behind the loudspeakers. You want to sit approximately two thirds the way in the room, again as measured from the rear wall. Generally speaking, the speakers should fire into the long dimension of the room.

Measure the distance between the tweeters on each panel. **Make sure that the tweeters are on the inside edge speaker.** Both tweeter arrays should be in the center. Start with approximately six to eight feet apart (two and three quarter meters) if your room dimensions will allow.

**Hook up the woofers.** Included with your Genesis 350's there is a set of large cables used to connect the woofers. Each end of the cable is clearly marked, "amplifier" or "speaker". Connect these to the appropriate end of your Genesis subwoofer amplifier, and the rear of the woofer cabinet. It does not matter which connector is attached to which woofer as long as the channels are correct.



***One note: When you connect the subwoofer outputs pay close attention to the way our connector works. The connector is called a Neutrik, it only goes in one way. You cannot put it in wrong. However, you can fail to put it in all the way. When you look at the plug, one side has writing on it and an arrow. This is the right direction. Push the plug in, and twist it clockwise, and then turn the locking ring or wait for the finger lock to "click" in place (depending on the type of connector***



*supplied with your system) to keep it there. By looking carefully, it will be obvious to you how it works.*

Connect the input of the woofer amplifier to the output of your preamplifier. Choose either balanced or unbalanced for inputs. If your preamplifier has only one set of balanced outputs and one set of unbalanced (RCA) type outputs, choose your first preference of connection for the amplifier that is driving the midrange tweeter panels of your speaker. Use the remaining set of outputs to feed the subwoofer amplifier.

At this point, you can turn on the woofer amplifier. Using the **remote control**, turn on the subwoofer amplifier. Adjust the phase to 40 with the button marked "phase" on the remote control. Next, adjust the low pass filter (how high the woofer goes). Set this to 85 using the button marked "low pass" (on the remote control). Use the button marked "volume" to adjust to 20 to start with. The volume will always flash to identify itself. Make sure the woofers all work by playing some music. If, for some reason, one of the woofers does not work - check the plug of the Neutrik connector. Making sure they are connected properly usually solves any problems.

**Note:** The Genesis remote control has two modes of operation: one for the woofer amplifier of your new 350's and the other for use with the Genesis Digital Lens. To activate the different modes, use the button marked "mode".

Press the mode button and note the color of the light on the remote control itself. The color matches the written function on the remote. Green indicates Digital Lens operation, red indicates subwoofer amplifier operation.

Once you have activated a color (selected a mode), it is not necessary to press the mode button again unless you wish to change your selection.

## **Memory**

The remote control has two buttons on the lower portion of the device marked "memory 1" and "memory 2". These controls will memorize the settings you have selected. To memorize a setting, point the remote control at the amplifier. Press the memory 1 or memory 2 button and hold down for 2 seconds. After 2 seconds, the reading will flash and your new settings will have been memorized. To recall the memorized setting, press the appropriate memory button once.

You may want to memorize two different settings to match your recording's bass level closely, or you may want to use one bass setting for music and yet another for video.

Next, use a high quality speaker cable to attach to the midrange tweeter connectors. Hook up your power amplifier. The top connector is + (plus) and the bottom is - (minus).

You will notice two controls on the back of the crossover panel (located on the rear of the speaker). The left hand knob is a volume control for the rear tweeters. Turning this control clockwise will increase the level of the rear tweeters. Use this control if you need a bit more treble or to increase the apparent space of the soundstage. Start with this control at the one o'clock position. The control on the right side is a three position switch used to adjust the midrange. Start at position one and then advance to position two. Position one will sound fuller in the lower midrange while position two will sound leaner.

At this point, you are ready to play the system.

### **Roughing the system in**

We suggest that you start with a single vocal with instrumental accompaniment because the sound of the human voice is more easily recognizable than many instruments and is the least complex sound to deal with.

### **Begin with the bass level**

Turn the volume control of the subwoofer amplifier up or down until the voice sounds correct. Concentrate on the mid bass regions (as opposed to the very low bass in your recording) to achieve a natural blend. The voice and the music accompaniment should sound as if it were cut from one cloth, not separate.

Leave the low pass filter alone, for the moment, as it should remain set at approximately 85 Hz. This control will be addressed later.

If your vocal selection is a good recording (like a Chesky label or Reference Recording or Sheffield) the performer should appear to come from **behind** the loudspeakers and be at the appropriate height for a standing person. If it is not there are several remedies which this paper will address.

1. If the vocal appears to be larger than life, you should first check the system volume. Is it a volume that would be appropriate for someone actually singing in your room? If there is too much volume the artist will appear too big and the opposite is true for too little volume. If the volume is set correctly and the image is still too big, toe the woofers in a slight amount or place them closer together and re-listen. Repeat this process till you have it right.
2. If the voice is too low in height, turn the midrange control to the next highest position and the image of the voice will move upward slightly.
3. If you are not getting enough front to back depth (not appearing behind the speaker sufficiently) pull the speaker **away** from the wall a little bit at a time. If you do not have them pulled far enough away, you may not have enough front to back depth. Find the best compromise for your room, your tastes and your space requirements

4. If you are not getting proper focus on the voice, you may place the left and right speakers closer together until you have a properly defined center image. If the speakers are too far apart you will lose the side image and if they are too close together you will have too small a center stage. We recommend you begin with six to seven feet apart (two and three quarter meters) as measured from tweeter to tweeter.

When properly set up very little sound should appear to come directly from the speaker, instead, the sound stage should extend far beyond the left and right edge of the loudspeakers and they should have tremendous front to back depth. When the recording is close miked (when the instrument or performer is very close to the recording microphone) the music may appear to come directly from the loudspeaker. This is normal. Typically, however, the sound should appear to be detached from the loudspeakers.

*A simple rule of thumb to follow is that focus will be achieved by placing the speakers closer together or farther apart, and front to back depth can be adjusted by the distance from the wall behind the loudspeaker.*

#### **Further adjustments**

If the voice sounds "thin" or does not have enough "chest" to its sound, turn the woofers amplifier's volume up till it does, or at this point, you may want to experiment with increasing or decreasing the low pass filter control. This control will raise or lower the frequency cutoff point of the woofer. If you find that the sound is "thin" or lacking in mid bass and that **turning the volume of the woofer amplifier up to "thicken" the sound creates too much low bass**, this is a good indication that you may want to turn the low pass filter up instead. This will extend the upper bass regions without affecting the low bass level.

Next, set the woofers using more than just a voice. Select some music that you know to have good **deep** bass. Using the volume control on the servo amplifier's remote control, set the woofers for a **natural** and powerful bass sound. Use a symphonic piece of music if you can, or use a natural bass instrument for your guide. Try to make it sound real. You may have to return to the vocal to make sure you have not gone too far in one direction.

If, at this point, it does not have enough mid bass, turn the low pass number to a higher position or, alternately, position the speakers slightly closer together in order to achieve better mid bass coupling between the speakers. If it sounds too "fat" turn the low pass control down or adjust the volume. This can also be accomplished with the midrange control on the rear of the speakers. At this point it is suggested to use the low pass filter control until you get to the refinement stage.

## Low bass

With the speakers positioned in the recommended placement low bass in the room should not be a problem.

Should you have too much bass, simply turn the volume down on the remote control. Too little, and the opposite will apply.

In some problematic rooms a resonance may develop at one or two frequencies that is unnatural to the music. By moving the speakers closer to the rear wall or farther from the rear wall, the resonance may be reduced at the listeners position. There are no absolute rules concerning problematic rooms, so do not be afraid to experiment with best woofer placement.

## Phase Control

We suggested in the beginning of this manual to set the phase forty degrees. Now that you have roughed the system in, you may want to experiment with different phase angles.

Using the remote control you can adjust the woofer's phase angle in five degree increments.

The changes are subtle and they usually affect the imaging and soundstage. Listen carefully to the positioning (in acoustic space) of the orchestral players as you change the phase control. You may notice small shifts in their apparent relationship to the other members of the orchestra. Do not expect them to actually move. Expect minute changes in the soundstage, the apparent width of the stage, your ability to distinguish individual players etc. If you reach a phase shift of ninety degrees you have probably gone too far.

## The Refinement stage

After following the rough setup guide above your speakers should sound great. However, it is always a good idea to put the finishing touch on your system. To that end we offer some of our experiences.

**Note: One rule of thumb you should always keep in mind. Make one change at a time! Do not, for instance, change position of the speakers and make an adjustment to the amplifier all at once. Make each of these changes separately and note the difference - by listening - with each adjustment.** One of the biggest mistakes we find customers making is too many changes at once. Make one change, then listen.

1. A common problem we find with many setups is a tendency to separate the speakers too far from each other. This gives an unnaturally wide soundstage **between**

the two speakers, and creates problems beyond the unnatural width of the center stage. The key problem is a lack of soundstage information **beyond** the left and right sides of the speakers. Another is improper focus of instruments and voices which is typically "corrected" by the user with too much toe in. Yet another problem is a lack of mid bass energy. In order for the appropriate amount of mid bass energy to be present, the speakers should be close enough together to achieve proper "coupling" of the midrange ribbon driver. Coupling is desirable in the lower frequencies and simply means that the left and right drivers "work together" as opposed to working separately.

In order to achieve what the speaker is capable of we suggest you focus your efforts on a proper **balance** of soundstage elements that includes information beyond the left and right sides of the speakers, front to back depth well behind the speaker, excellent focus of instruments and voices with proper vertical information and mid bass fill.

A Genesis loudspeaker system correctly set up, can and should provide a soundstage that is wall to wall and with pinpoint focus, the speakers disappearing completely on a recording containing such information.

2. If you find that the sound is not spacious enough or you are not getting enough front to back depth, pull the speaker away from the wall (towards the listening position). This is typically preferable to separating the two speakers too far and will almost always give you better depth and soundstage information. A word of caution, however, if you move the speakers too far from the wall behind the speakers you may lose focus

3. If you find there isn't enough deep bass, your first remedy is the volume control on the woofer amplifier. This has several limitations. First, turned up too high, you may get some distortion on very low frequencies. Secondly, you may make the mid bass produced by the top of the woofer out of proportion with the mid bass produced by the bottom of the midrange ribbon. This would tend to sound "boomy" in the mid bass regions.

A good rule of thumb is to first set the volume control of the subwoofer for proper midbass rather than low bass. The theory is, if the midbass is correct, then the low bass should be very close to correct. If the midbass is proper and the low bass is still not right, here are some other suggestions.

Push the speakers back towards the rear wall. This will increase the coupling of the woofers to the room. Do this procedure in small increments (approximately one inch at a time) and return often to the recordings you have used to adjust the front to back depth and soundstage properties of your system. It is easy, yet unproductive, to go too far in one direction (and if you move the speakers too far from the rear wall you may lose low bass extension).

A good balance between proper low bass extension and a deep and spacious soundstage needs to be established to optimize your new speaker's performance.

## Room Treatment

No room is perfect. To optimize your sonic presentation it may be helpful to treat your room. Here are some guidelines;

1. This loudspeaker is a dipole and therefore there is sound coming from both the front and the back of the speaker. How the wall behind the loudspeaker is treated or not treated is important. Generally speaking, the Genesis loudspeakers prefer a live wall behind the speaker and a dead wall behind the listener. By these terms we mean the amount of reflection of sound. A typical wall of glass or, brick, cement or drywall material is a reflective surface. A heavily curtained or sound proofed wall would be considered a "dead wall" or a non reflective wall. A normal thin curtain across a window causes only a small amount of absorption.

2. Because the speaker is a dipole it is less sensitive to the side walls. However, as a rule of thumb, it is a good idea to keep the speaker as far away from the side walls as is practical. With this in mind, it may be helpful to add some damping material or diffuser panels to the point of first reflection. This is a point on the side walls between the listener and the loudspeaker. It is where the sound from the loudspeaker first hits the side wall, then bounces to the listener. This reflection is undesirable because it is slightly delayed from the original sound. This point on the side wall can be easily determined with the help of a second person and a mirror.

Sitting in your listening position have an assistant hold a mirror up on the side wall. Move the mirror along the wall until you can see the tweeter. This is the point of first reflection. A diffuser (see your dealer), an absorptive material or even a piece of furniture can help break up this point of first reflection.

## Mastering the refinements of the system

Fine tuning an audio system is an art that will take time and patience. It can be one of the more rewarding learning experiences you will have in the pursuit of music and its enjoyment.

One of the best pieces of advice we can offer is that you take advantage of the ear's ability to identify similarities in sound. This ability is useful in fine tuning your system because if every recording you listen to has a similarity of sound (too much or too little of a certain frequency for instance) then you can be fairly certain that you have yet to perfect your setup. Keep at it and remember to enjoy your music as you work on perfecting your setup.

If you have any questions, feel free to contact us at Genesis.

**Note: Should your woofer amplifier unexpectedly turn off and you are unable to turn it back on, you have overheated the amplifier. It will take up to thirty minutes for the amplifier**

**to turn back on. Be patient. The causes for this are poor ventilation or too much volume. If the amplifier is well ventilated (do not place the woofer amplifier in a cabinet) then you have the volume control turned up too high. Refer to the section on increasing the low frequency response of your speakers without turning up the volume control.**

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