

## **READ THIS FIRST**

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Genesis loudspeakers in general are heavy and slippery. This is due to the fine veneer, and high gloss finishes that we put on the speakers to make them beautiful and an object of art. They have a luxurious feel as well as an elegant look.

The cabinet is solidly made of high-quality mdf and/or composite material. Transducers have large magnetic assemblies and the crossovers use large, high grade components. All this results in a very heavy object for its size.

Due to the weight, and also to the waxy finish, the loudspeaker may be slippery and difficult to handle. We always recommend a minimum of two people to unpack, move them around, and set them up.

Your speakers will come wrapped in a 100% cotton “sock” inside a double-corrugated cardboard carton. Examine the carton for shipping damage. Dented corners are an indication of something having gone wrong during shipping.

Enlist a friend to help you unpack and set-up the loudspeaker. Not only is it safer, it is more fun than doing it yourself.

Lift the speaker in its sock out of the shipping carton. Do NOT just grab the sock to lift the loudspeaker. The sock may tear! Be careful that you do not inadvertently put a finger through a driver.

Collapse the shipping carton, and store it in a safe, dry place together with the sock and the foam inserts. You will need this if you sell the speakers in the future, or need to ship the speakers.

Read this owner’s manual, and then get started.

# Owners Manual and Set-up Guide:

## Genesis 7.1 Petite Loudspeaker

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## A Message from Genesis

Congratulations! You are now the owner of one of the finest loudspeakers in the world. The Genesis 7.1 Petite (G7.1p) features the world's first solid titanium cone mid-woofer, and shares technologies developed for our flagship Genesis 1.1.

The G7.1p is designed to be as flexible as possible. It can be used as a pair of audiophile stereo loudspeakers or, in a multi-channel system, can also be used as main left/right speakers, or as surround or rear channels.

So that it will fit into the décor of any home, the cabinet design is a combination of acoustic, furniture, interior design and architectural principles. Care was taken in the selection of fine furniture-quality natural wood veneer finishes, and high-gloss "Italian" or automotive finish.

Sound structural engineering principles have been applied to make the G7.1p cabinet rigid and well damped. All construction is of  $\frac{3}{4}$  inch MDF and panels have been "tongue and grooved" to ensure that the cabinet is the best environment on which to mount the transducers. This results in extremely low cabinet coloration, and excellent soundstaging and imaging. The proportions are also designed to be visually pleasing and elegant.

Please read this Owners Manual and Set-up Guide to get the maximum enjoyment out of your purchase. Also, check out our website at [www.genesisloudspeakers.com](http://www.genesisloudspeakers.com) for the latest updates, tips & tricks, and support for our owners.

Please write the serial number and purchase details of your Genesis 7.1c here for future reference.

Purchased at: \_\_\_\_\_ Date: \_\_\_\_\_

## 1 A Quick Start Set-up Guide

Now that you have your new Genesis 7.1 Petite (G7.1p), we realize that you can't wait to hook it up and start playing! However, please read this quick set-up guide (even if your dealer is setting it up for you) before you proceed.

### 1.1 Unpacking

Your loudspeakers will come to you in two shipping cartons weighing over 28 lbs (12.7 kgs) each. Care must be taken when moving the carton around, and taking the speaker out of the box. While the speaker is small, it is also slippery and heavy.

We will **not** be held liable for damage to either the speakers or your backs during unpacking and setting up. Be careful as you may inadvertently damage the drivers if the cabinet slips and you grab at it and put a finger into the woofers. Do not try to lift the cabinet by the shield (it is not a handle!) or by grabbing the woofers as handles.

### 1.2 Placement

As a stereo pair of speakers, a good starting position for your G7.1p is at least 18 inches (45cm) into the room as measured from the front wall (the wall you look at as you are seated listening to the speakers) to the back of the speakers. Place the speakers vertically on a stand that is at least 20 inches high, and about five feet (1.5 metres) apart. Toe the speakers in very slightly towards the listeners – by about 3 to 5 degrees – no more.

You will want to sit seven to ten feet (2.5 to 3.5 metres) away from the speakers. When sitting further away, you should place the speakers further apart. When sitting nearer the speakers, move the speakers closer together.

If you are using the G7.1p as surround or rear speakers, and you are hanging them on the wall, you will need a qualified installer to mount them on very strong brackets. The speakers weigh over 24 pounds (10.9 kgs) each, and can cause death or severe injury if it falls on someone's head!

### 1.3 Connections

The speakers should be connected directly to the speaker-level output of your power amplifiers using high quality speaker cables and the 5-way binding posts.

The high-level thru-put binding posts are for connecting to a subwoofer. We recommend the Genesis ServoSub™ 4/8 as the perfect complement to this speaker. The correct cable for connecting a loudspeaker to a ServoSub is an interconnect cable, and not a loudspeaker cable.

The ServoSub has a high-impedance input, and the speaker and power amplifier has a low-impedance output. A computer-networking CAT5 cable can be used as this bass jumper cable if a good interconnect cable with spades or banana plugs is not available.

#### **1.4 Adjustments**

Don't be too worried by the knob and switches on the back of the G7.1p. Set the tweeter level knob and the bass contour knob to the 12 o'clock position.

If you have at least 12 inches (30cm) of space between the back of the speaker and the rear wall, the rear tweeter should be left ON. Otherwise, turn the rear tweeter off with the tweeter defeat switch on the back panel.

That is a good place to start. The G7.1p will sound great, straight out of the box. As you play your system for the next hundred hours or so, the speaker will settle down and break in.

Once you familiarize yourself with its performance, putting a little bit of additional effort into tuning the speaker properly for your system (which includes the room), will give you greater long-term enjoyment and benefits.

## 2 Setting up as Stereo Pair

### 2.1 Positioning

Used as a stereo pair, the G7.1p should be placed vertically at least 18 inches (0.45m) into the room as measured from the front wall (the wall you look at as you are seated listening to the speakers), to the back of the speaker. They should be placed on good, solid speaker stands about 18 to 24 inches (60cm) high.

Start with the speakers five feet (1.5m) apart with the tweeters placed closest together, and angled in (toed-in) towards the listener by about 3 degrees. You will want to sit 7 to 10 feet (2.5 to 3.5 metres) away from the speakers (if you have the space). We will experiment with moving the speakers around later.

As these speakers are dipolar in the high frequencies, they are pretty room-friendly and you are free to move the speakers closer to, or further away from the front and side walls. We do recommend, however, that you give the speakers a little bit of breathing space behind them, so don't push them up tight against the wall.

If you have the speakers too close to the front wall, you will find that the image depth is not as good - the soundstage becomes a little two-dimensional. If you have the space to move the speakers away from the wall, do so. You will be rewarded with the deep, broad soundstage that this loudspeaker is capable of. You should be able to "see" the soundstage behind, as well as in front of, the loudspeakers. The sound stage will also extend outside the left and right sides of the speakers when they are properly set-up.

### 2.2 Loudspeaker Controls

#### 2.2.1 Tweeter Control

The knob marked TWEETER on the plate on the back of the speaker tailors the high-frequency response of the G7.1p. It is a subtle control, but can make a great difference in gaining that last bit of additional performance in tuning your speakers for the room in which you are using them. It can turn your system from very good to exceptional, so take the time to work through this process.

Turning this control clockwise will increase the level of the front tweeter. Use this control if you need a bit more treble, or to increase the apparent space of the soundstage. Too high a tweeter level, and you can feel that crashing cymbals are leaping out at you, and nylon stringed guitars sound steely.

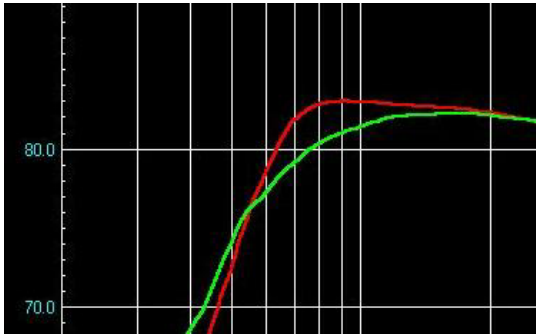


Start with this control at the 12 o'clock position. There is about a  $\pm$  one dB range for this control.

### 2.2.2 Bass Contour

The bass contour knob is unique to Genesis. It is a purely passive control that lets you tune the bass performance of the G7.1p into your system, and your room. As you rotate the knob clockwise, it will give you

more bass, but your amplifier will have to be more capable of delivering more of current into a lower impedance load. As you rotate the knob counter-clockwise, the bass of the system rolls off slower, but becomes more extended.



Effect of Bass Contour Control

See the figure to the left: the red curve shows the bass contour knob rotated fully clockwise (full up), and the green curve shows it rotated fully anti-clockwise (full down).

The effect is subtle, affecting the response by some 3dB. With the knob rotated fully clockwise, the impedance of the loudspeaker goes down to 2.7 ohms at 62Hz. With the bass contour full down, the impedance minimum is 5.5 ohms at 52Hz.

### 2.2.3 Tweeter Defeat

The optimal way to use these speakers as a stereo pair is to leave the rear tweeters on, and run them as dipole and at least 18-inches from the front wall. However, in some cases, this may not be possible.

Should the speakers have to be placed with their backs less than 12 inches from the wall, the rear tweeters should be turned off.

## 2.3 Tuning the system

Music is the best way to begin your set-up procedure. We suggest that video sources be used only after you have set-up the system to properly reproduce music. There is no “perfect” setting for the G7.1p. Every listening room is different, and we recommend that you take the time to carefully tune the system for the environment in which it is placed.

Your Genesis loudspeakers should sound great straight out of the box. If you don't like the sound, several hundred hours of breaking-in will not change the sound of your speakers, although it may break-in your ears!

## 2.4 One Change at a Time

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 tweeter all at once. Make each of these changes separately and note the difference - by listening with each adjustment - then make the next change.

## 2.5 Imaging and Soundstage

We suggest that you start with a single vocal with simple instrumental accompaniment because the sound of the human voice is more easily recognizable than many instruments and is a less complex sound to deal with. Use a good recording that you know has atmosphere and low bass content.

The performer should appear to be positioned behind the loudspeakers and be at the appropriate height for a standing person. If it is not, there are several remedies that will address this shortfall:

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, place the speakers closer together and re-listen. Place the speakers no less than 5 feet apart. If the image is still too big, toe the speakers in a slight amount.

Conversely, if the image is too small, move the speakers apart. The speakers should be no more than eight feet apart. Repeat this process until you have it right.

The wider apart you have the speakers, relative to your seating position, the more you will have to toe the speakers in. However, this may result in "audiophile-titis". You get a huge soundstage, but only a tiny sweet spot and you have to sit exactly in the center. Also, when the speakers are very far apart, you may have to play them louder before you can enjoy a realistic soundstage. The images are more diffuse, and can seem larger than life.

If you have the speakers 18 inches into the room, and you are not getting enough front to back depth (the singer not appearing behind the speaker enough), pull the speakers away from the front wall a little bit at a time. However, slightly more than 1/3 of the way into the room is about as far as you want to go. Pulling them halfway into the middle of the room is unlikely to help.

Find the best compromise for your room, your tastes and your space requirements. If you are not getting proper focus on the voice, you may



angle the left and right speaker up to about 10 to 15 degrees (toe-in) towards your listening position until you have a properly defined center image. If the speakers are too far apart, the mid-bass will de-couple and you will lose the side image. If they are too close together you will have too small and congested a center stage.

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 rear wall. Further, as the system “breaks in”, the depth and width of the soundstage will increase and so will the “smoothness” of the sound.

## **2.6 Defining the Soundstage**

A common problem 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. It focuses the soundstage in between the two speakers, and you lose the “space” and “ambience” of the musical performance.

If you find that the sound is not spacious enough, or you are not getting enough front to back depth, pull the speakers away from the front wall. This is typically preferable to separating the speakers too far, and will almost always give you better depth and soundstage information. A word of caution though: If you move the speakers too far from the front wall you may lose the focus of the image.

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, with pinpoint focus; the speakers disappearing completely on a recording containing such information.

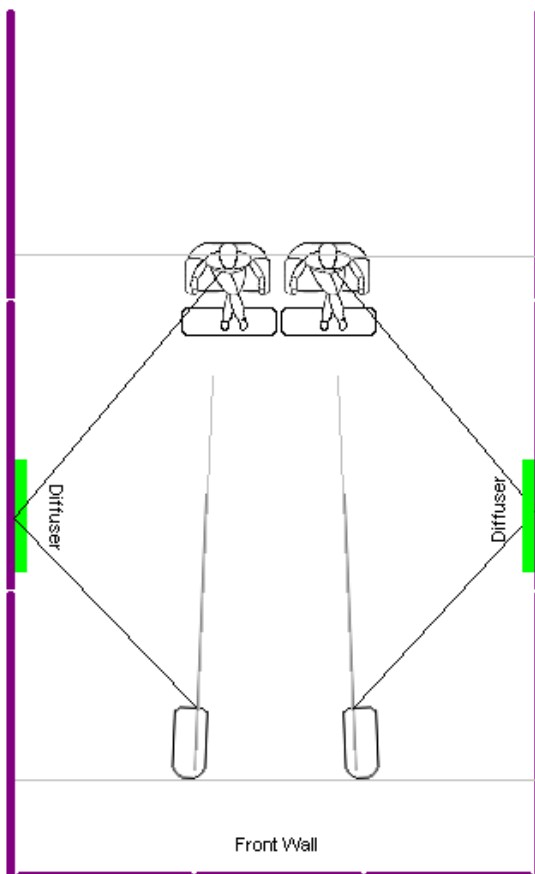
With the G7.1p, adding a ServoSub or two will result in the walls of the room melting away. Ambience of large acoustic spaces is defined by low-bass, and the ServoSub adds that critical element when listening to performances recorded in large venues.

## 2.7 Room Treatment

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

**Front walls.** This loudspeaker is a dipole and therefore, there is sound coming from both the front and back of the speaker. How the front wall (the wall you face while listening), is treated or not treated is important. Generally speaking, the Genesis loudspeakers prefer a live (hard reflective) front wall to a dead (soft absorbent) front wall.

By these terms, we mean the amount of reflection of sound. A typical wall of glass, 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.



**Sidewalls.** Because the speaker is a dipole, it is less sensitive to the sidewalls. However, as a rule of thumb it is a good idea to keep the speaker as far away from the sidewalls as is practical. In some rooms, it may be helpful to add some damping material or diffuser panels to the point of first reflection. This is a point on the sidewalls between the listener and the loudspeaker. It is where the sound from the loudspeaker first hits the sidewall, then bounces to the listener. This reflection is undesirable because it is slightly delayed from the original sound. This point on the sidewall 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 sidewall. Move the mirror until you can see the tweeter. This is the point of first reflection. A diffuser (see your audio dealer), an absorptive material, a bookcase, or even a

piece of furniture can help break up this point of first reflection.

**Rear wall.** In many cases it will be unnecessary to do anything with the wall behind your listening position. However, you may want to experiment with diffusers or absorbers behind you for best sound. Absorption behind the listener is usually beneficial.

## 2.8 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.

In some problematic rooms a resonance may develop, at one or more frequencies, that is unnatural to the music. By moving the speakers closer to the front wall or farther from the front wall, the resonance may be reduced at the listener's position. There are no absolute rules concerning problematic rooms, so do not be afraid to experiment with speaker placement to determine the best position of the speakers in your room.

One of the best pieces of advice we can offer is that you take advantage of your 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 set-up. Keep at it, and remember to enjoy your music as you work on perfecting your set-up!

If you have any questions, feel free to contact us at Genesis. Our website is the first place you can look to for more information, but you are welcome to either send us an email, or just give us a call!

## 3 Setting up: Multi-channel

### 3.1 Positioning as Main Left/Right Channel

When positioning the G7.1p as the main left and right channels of a multi-channel, the same principles as positioning for a stereo system apply. This will ensure that your system can be used for two-channel as well as for multi-channel sources.

However, the inclusion of a screen between the speakers may mean that the speakers have to be put much further apart than ideal. In this case, you can toe the speakers in a little more. However, if the primary source of entertainment is multi-channel, more often than not the center channel will “fill in” the soundstage hole caused by the screen.

On the home theatre processor, the speaker should be set to “SMALL”. The G7.1p plays to approximately 65Hz. If a ServoSub is used to support the low frequency extension of G7.1p using the speaker throughputs, set the speaker setting to “LARGE”.

### 3.2 Positioning for Center Channel

While the G7.1c is the better partner for the G7.1p as a center channel, the G7.1p can be used if budget is really tight. A good starting position is for the G7.1p to be placed about 20 inches from the floor, and angled upwards by 3 to 5 degrees. This is assuming that the speaker doesn't block the screen in this position.

Use a good quality stand that is solidly built and as rigid as possible. The Genesis ServoSub™ 4/8 is a unique subwoofer that complements the G7.1p to turn it into a full-range absolute fidelity™ system, and also makes a perfect stand for the G7.1p.

An alternative is to place the speaker upside-down (tweeter down) above the television set, and angle it downwards by 3 to 5 degrees. In either case, do not point the speaker directly at the head of the listener, but either over her head, or at her chest.

As these speakers are dipolar with a rear-firing tweeter, there should be at least 12 inches (30cm) of space between the back of the speaker and the wall. If this space is not available, turn the rear tweeter off with the tweeter defeat switch.

### 3.3 Positioning for Surround Channel

The G7.1p can also be used as a surround channel either mounted on the wall, or on high stands. When they are used close to the wall, turn the rear tweeters off with the tweeter defeat switch.

## 4 The Technology used

### 4.1 Dipolar Configuration

What a lot of people don't realize is that the room is as big (if not bigger), a part of their music system as are the loudspeakers. At Genesis, we strive to get the loudspeakers and the room to work well together and hence, design loudspeakers that interact with the room and have enough of adjustment to make them work with most rooms in the world.

All rooms have floors, ceilings and sidewalls that distort sound because of lateral, early-arriving reflections. We aim to suppress undesirable contribution by reflected sound from these four surfaces (which is why a lot of people put sound absorbers or diffusers at the first reflection point of the room). In order to do that with a majority of rooms, we make our loudspeakers dipolar.

Dipoles radiate the same, but out-of-phase, waveform from the front and rear in "push/pull" fashion. Thus, the sound waves from the front and back of the speakers cancel out as they radiate from the sides and tops of the speakers which means that there is minimum radiation of sound to the sidewalls of the room.

The G7.1p uses the wall behind the speaker to give more depth to the soundstage and "air" to the speaker without detail robbing room reflections from the sidewalls. Hence, it has the advantages of omnidirectional speakers, without the disadvantages.

With fewer spurious reflections to confuse your hearing, the program source emerges more clearly. Imaging is stable, sharply focused, deeper and spacious. Transients are clearer and sharper.

### 4.2 The Transducers

The transducers in the 2-way G7.1p are all proprietary Genesis-designed drivers manufactured to our exacting standards:

#### 4.2.1 The Genesis Ribbon Tweeter

Reviewers in the audiophile press have often remarked that the Genesis circular ribbon tweeter is the world's best. It is a one inch circular planar ribbon design crafted from an extremely thin membrane of Kapton® with a photo-etched aluminium "voice coil" that is a mere 0.0005 inch thick. The entire radiating structure has less mass than the air in front of it! That is why it will accurately reproduce frequencies beyond 36 kHz.

The result of this design is a driver that has a rapid and uniform response to high frequencies and has the speed of the best

ribbon/electrostatic designs, without the high distortion and poor dispersion that is typically associated with them.

The G7.1p uses two of these tweeters per channel. One is front-firing and the other rear-firing; wired to the crossover out of phase to the front tweeter, creating a dipole.

#### **4.2.2 Titanium Mid-Woofer**

We sometimes say that the midrange is a window into the mind of a composer or a singer. And indeed, the midrange is where the “magic” is in a well-recorded musical event.

The G7.1p uses a Genesis-designed proprietary 6 inch solid titanium-coned transducer to cover this critical frequency spectrum. Manufactured out of one of the lightest and stiffest materials known, this low mass cone driver is one of the best midrange transducers ever made, with nearly instantaneous transient response, enabling the G7.1p to sound lifelike and effortless.

The stiffness of the titanium cone also allows Genesis to use this as a woofer – hence, mid-woofer. It retains its low distortion, even on long throw application needed in delivering the lower frequencies. Hence, the solid titanium cone allows Genesis to develop a driver that is exemplary in the midrange, as well as deliver the heft and impact of a woofer.

### **4.3 Crossover**

We believe that the crossover is the brain of the loudspeaker. In order to manage and maximize the performance of the extensive complement of transducers used in Genesis loudspeakers, we spend more money on the crossover than many other manufacturers put in their entire speaker.

Each crossover is designed by computer modelling plus years of knowledge and experience. The inductors are custom designed and made for Genesis with OFC copper windings. The capacitors used are also custom made for Genesis, using high-quality polypropylene-film and tin-foil.

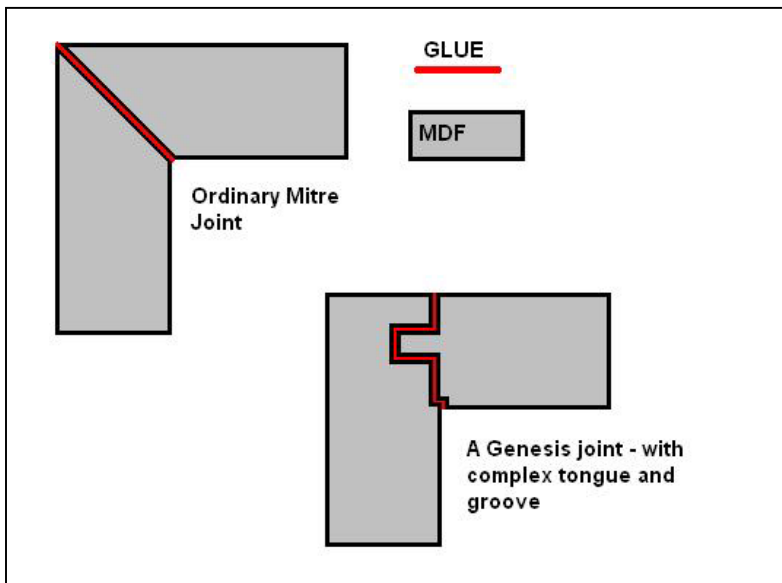
More importantly, the crossovers are designed with many, many hours of music listening and constant refining, tuning and tweaking of the circuit. Out of this comes the “magic” that is a Genesis-designed loudspeaker system.

### **4.4 Vibration-free Cabinet**

The cabinet was designed for aesthetics, but with an obsession to sonic quality, vibration control, structural strength and rigidity.

In some parts of the cabinet where vibration would have been the greatest, 1 ½ inches (36mm) of multi-layer bonded MDF was used to provide damping, structural integrity and a rigid platform for the drivers to be located.

Incidentally, MDF was chosen as the material of choice for its damping properties and its consistency in hardness, density and rigidity. It would actually have been cheaper and easier to make the cabinet of solid wood, but that would have been a compromise.



mdf would break apart first.

Genesis designed a unique tongue and groove joint in order to improve the structural rigidity and vibration behaviour of the cabinet.

Crystalline glue that dissolves into the mdf was chosen to ensure that the interfaces between two panel pieces become as one. This results in the entire enclosure behaving as a single unit, with seemingly no discontinuity in material.

This results in a joint so strong that when you try to rip the joint apart, it isn't the joint that would break. The

## 5 Specifications

- Frequency Response: 55Hz to 36kHz,  $\pm$  3dB
- Sensitivity: 86 dB, 1 watt 1 meter
- Min/Max Power (Tube): 45/200 watts per side
- Min/Max Power (Solid State): 60/400 watts per side
- Input Impedance: 6 ohms (Nominal)
- HF Transducers: Two Genesis 1" Circular Ribbon Tweeters (front & rear)
- Mid/LF Transducers: One Genesis 6" Titanium Cone
- Controls: Front Tweeter level, Rear Tweeter Defeat, Bass Contour
- Inputs: High-level with 5-way binding posts
- Throughputs: High-level with 5-way binding posts
- Dimensions: H 17 " x W 8 " x D 12"
- Weight: 24 lbs (10.9 kg)
- Finishes: Rosewood or Olive Burl shield with European Maple body; Standard and custom high gloss automotive paints