OWNER'S MANUAL

8200F & 8300F

" EVOLUTION IN PROGRESS FOR THE PLEASURE OF MUSIC"

Congratulations on your choice of a Genesis Technologies loudspeaker.

The product you have just purchased is a result of many years of work.

Indeed, it has been a labor of love. The love of music and love of the art and science of musical reproduction.

It is our sincere belief and, in fact, our personal commitment to you that this "musical instrument" purchased from Genesis will provide years of enjoyment.

All Genesis products carry our personal assurance that it is the finest unit that we know how to make.

Genesis and indeed all our dealers, will make every effort to ensure your satisfaction with this purchase and any future Genesis Technologies' product you may decide to invest in.

Should you have any questions, with respect to the quality of the product or the level of service from your dealer, we would like to know about it.

Good Listening!

Arnie Nudell
President

Paul McGowan
Executive Vice President

THE TECHNOLOGY BEHIND YOUR LOUDSPEAKER

The enclosure

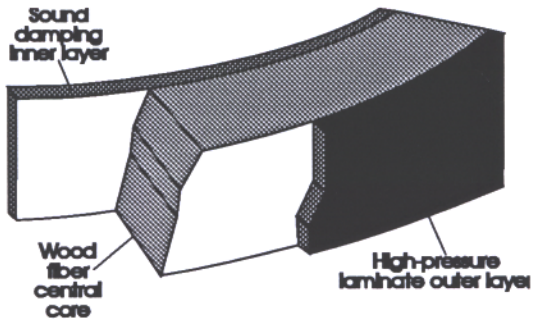
All Genesis loudspeakers have a common style of cylindrical enclosure as standard.

This circular shape is central to the infrastructure of our design.

Like the architectural simplicity of an arch, support is distributed over the entire curvature of the structure.

This design results in a consistently rigid structure that is absolutely immune to back pressure flexing.

The enclosure walls are made of a special tri-laminated material.



A central wood fiber laminate core is sandwiched between an inner damping layer and an outer layer.

The inner layer is a special composite sound damping material developed for vibration suppression in jet aircraft.

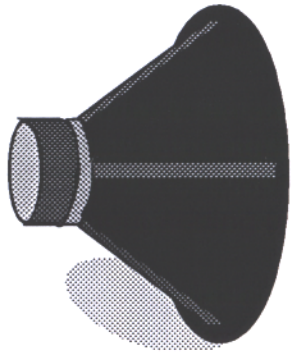
The outer layer is comprised of a special high pressure laminate. Together, the resonant characteristics of the three layers tend to offset one another for an extremely stiff, exceptionally strong combination that's virtually inert to vibration and resonances.

The drivers

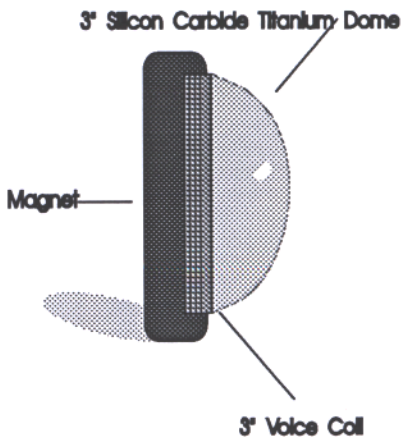
All Genesis woofers are injection molded Kevlar, in a base of polypropylene. These proprietary drivers are found only in Genesis Technologies loudspeakers.

Kevlar is an extremely lightweight material with high tensile strength. It adds a superior degree of rigidly to the excellent damping qualities of polypropylene without adding unnecessary weight.

The overall characteristics of this diaphragm material enable the woofer to respond quickly and accurately to transients without adding coloration or distortion in the process.



The Genesis midrange driver is also unique. It uses a large 3" voice coil attached to a 3" Titanium silicon carbide dome.



This technology has created one of the lightest and stiffest materials known to science.

This design eliminates breakup modes through the entire middle frequency range. The large, lightweight dome provides tremendous dispersion and dynamic range while retaining its coherent musical quality.

The high frequency driver, or tweeter, used in all Genesis full range loudspeakers is a proprietary planar design featuring a circular and flat membrane. This incredibly lightweight membrane is actually lower in mass than the air in front of it.

The circular ribbon tweeter extends dispersion evenly over the entire front hemisphere,
horizontally, vertically and all points in between.

The advantages of this tweeter will be obvious the first time you hear it. What you'll notice is the speed of the best ribbon/electrostatic designs without the high distortion and poor dispersion that is commonly associated with them.

Practically speaking, it enables the system to accurately image the airy quality and spaciousness of delicate musical passages. Once properly set up, your new Genesis loudspeakers will produce highs in a manner most Audiophiles have never had the pleasure of enjoying.

The crossover

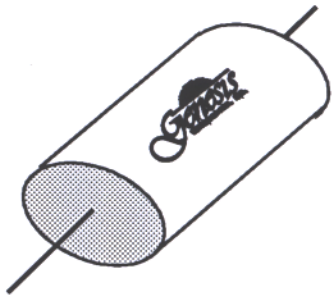
Genesis crossovers are the result of extensive computer modeling. Their designs are quite unique and have taken years to perfect.

The 8200F and 8300F, for instance, have unusually deep and non-resonant bass due to a unique anti-resonance circuit that effectively cancels the speaker enclosure resonance normally associated with all sealed and ported designs.

Every component was carefully chosen for its sonic qualities. Each resistor, coil, and capacitor was extensively listen tested.

Even the phase coherent filter slope of the tweeter has been designed with our own proprietary capacitive element, developed after months of listening and research.

The sonic advantage obtained with this unique polypropylene element and an off the shelf film capacitor is stunning. This capacitor is found in the tweeter circuit of all Genesis loudspeaker products.



WHAT YOU WILL NEED TO GET STARTED

Genesis loudspeakers are no more difficult to hook up than any other loudspeaker.

However, to realize the full sonic benefits of your new Genesis loudspeakers, it is important to pay as much attention as possible to the quality of the electronics that are driving it, the cables that are connecting it, their placement in the room etc..

This section will deal first with the basics of what you need to correctly operate the system, and finally some suggestion on how you can maximize its performance through the use of the appropriate accessories.

Cables

All loudspeakers must be connected through the use of speaker wire. There are varying grades of speaker wire available from pennies a foot to many dollars per foot.

Do cables sound different?

The answer is generally *yes.*

Genesis not only recommends the use of high quality speaker cables, but we can assure you that they can make a significant sonic improvement in your system.

Bi-wiring

The 8200F and 8300F have bi-wiring (or bi-amping) capabilities. You may choose to take advantage of this feature, or decide not to, and just use the supplied jumpers.

Bi-wiring will be explained in greater detail in the body of the instruction manual, but briefly it involves the use of one set of speaker cables for the bass and another set for the tweeter and midranges.

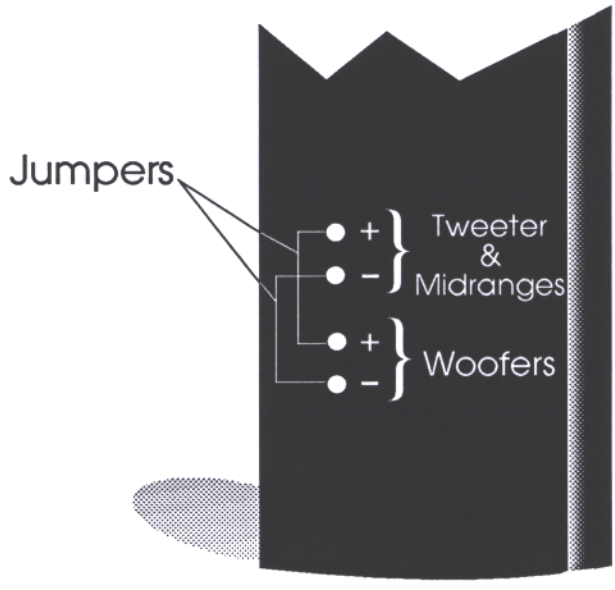
You should consider the bi-wiring option because there are sonic benefits to separating the cables' duties with respect to different frequencies.

You will notice on the back of the loudspeaker that there are four terminals instead of two.

This is where you will hook up the two sets of cables.

If you plan to bi-wire your loudspeakers, we recommend that you experiment with different cables. Some cables are great for bass performance, but aren't quite as good on the top end and vice-versa.

One of the more obvious advantages of bi-wiring is the optimization of cable performance, or of amplifier performance in the case of bi-amping.



Electronics

The quality of your electronics and source material will have a direct affect on how your new Genesis loudspeakers will sound.

Choose your electronics, DAC, phono cartridges, and cables based on their inherent accuracy, not for tone controls to tune your system to the room. The room can be tuned with speaker placement, commercial diffusers (optional), furniture, and with the controls on the back of the speaker.

While most receivers and amplifiers are probably adequate to power Genesis speakers to adequate volume levels, the sonic quality of your amplifier is ***very*** important.

We recommend the use of no less than 100 watts rms for the 8200F and 8300F. Use of a smaller than recommended amplifier may noticeably affect sound pressure levels.

Do electronics sound different? Genesis supports the notion that there is **indeed** a major difference in sound quality among amplifiers, preamplifiers and source material reproducers such as CD players, tuners and turntables.

Tubes vs. transistors, big vs. small and so on are all important issues, and our purpose here is to inform you of how we feel about the matter, and that ultimately we highly recommend you visit your dealer for a demonstration of the these differences. We think it will be well worth your while.

HOOKING UP THE 8200F AND 8300F

Your Genesis loudspeakers are easy to hook up if you follow these instructions.

Referring to the label on the rear of each of the speakers, you will see that there are four terminals (2 red and 2 Black), and one or two level controls. The 8200F has a level control for the tweeter, while the 8300F has one for the tweeter and one for the midrange.

The reason that there are four terminals instead of two is the loudspeakers' ability to be bi-wired and bi-amped.

The two sets of terminals operate different sets of drivers. The upper set feeds the tweeter (and the midrange in the 8300F.) The lower set feeds the woofer.

If you are not going to bi-wire/bi-amp the loudspeaker, use the enclosed jumpers to connect both red terminals together, and both black terminals together.

If you single wire the system, using the supplied jumpers, it is best to connect the output of your amplifier to the tweeter/midrange terminals (the upper set.) Although a minor point, it will sound slightly better this way.

If you are NOT going to bi-wire;

First, use the jumpers to connect the two red terminals together, and then use the other set to tie the two black terminals together.
Next....

Connect the red terminal of your loudspeaker to the red (or +) binding post on your power amplifier. Connect the black terminal of the loudspeaker to the black (ground or -) binding post on your power amplifier.

Repeat this process for the other speaker/channel. ***Be absolutely certain that you connect these up properly or your speakers will be out of phase.***

If you are using a tube amplifier, the nominal impedance of the speakers is 4 ohms. You should use the 4 ohm output terminals on the amplifier.

If you ARE going to bi-wire;

Remove the jumper wires so that you have four separate terminals on the back of the loudspeakers. You will have two red terminals and two black terminals.

You will use two sets of cables. Connect one set of cables to the **upper** red and black terminal set. The red terminal is on top and the black is just below it. The upper pair is your tweeter/midrange input. Place the cable that will give you best high frequency performance on these terminals.

Connect the second set of cables to the **lower** red and black terminal set. These terminals are oriented the same way: red on the top, and black on the bottom. This lower set of terminals will feed the woofer. Use the cable that will give you best bass performance here.

After you have connected the cables to the speaker, you will have four loose ends to attach to your amplifier. Take the two wires you connected up to the speaker's red terminals and attach them together on the amplifier's red outputs (+). Take the two wires you connected to the speaker's black terminals and attach them together at the power amplifier's (or receiver) black (-) terminals.

Repeat this process for the other speaker/channel.

If you are going to Bi-amp

This is essentially the same procedure as bi-wiring, with respect to connecting the speakers, however the amplifier connections are different.

Refer to the section above on attaching one set of speaker wires to the tweeter/midrange terminals, and another set of speaker cables to the woofer terminals.

You will now need two power amplifiers. One for the tweeter/midrange, and one for the woofer. The amplifier's gains should be matched as closely as possible. A lower wattage amplifier for the higher frequencies is acceptable, and sometimes desirable, as the tweeter and midrange use less power than the woofer.

Connect the tweeter/midrange cables to the amplifier you have chosen for the higher frequencies, and the woofer cables up to a second amplifier.

The inputs of both the tweeter amplifier and the woofer amplifier must be connected to the same output of your preamplifier. Many preamplifiers provide dual main outputs for this purpose.

Do not use an external crossover to feed your amplifiers. The only crossover you need is inside the loudspeaker.

Conditioning your room

No room is perfect, and all of them can use some help. Correcting your room's problems can be a major project, but there are a few easy things you can do to simplify that process.

One of the first places to look to make sure that your room is properly treated is at the point of first reflection on the wall. The sound will be reflected back to your listening position slightly out of time with the direct sound (because the reflected sound takes longer to arrive).

Short of using an appropriate deadening panel or diffuser at this point on the wall, you can employ a piece of furniture to help break up the reflections: a chair, table, anything that will get in the way of the sound at that point.

There are, of course, second and third reflections that occur at different places along the wall, but the first reflection is the most important to try to eliminate.

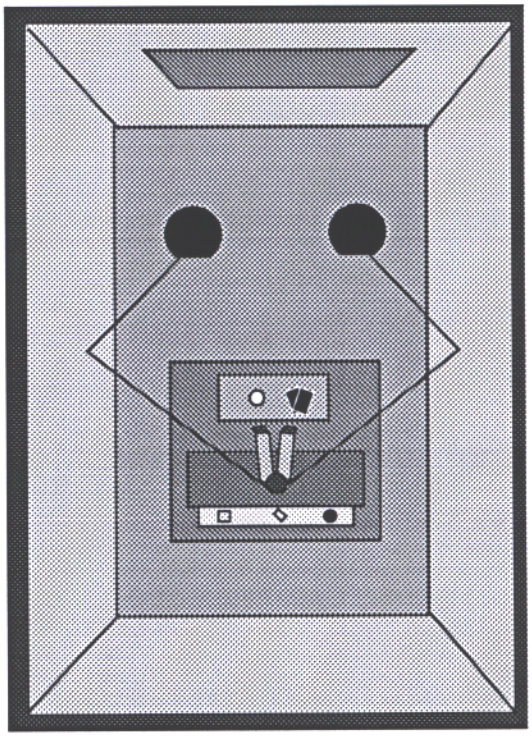
TIP

If you want to find the exact reflection point, here is a neat trick you can use.

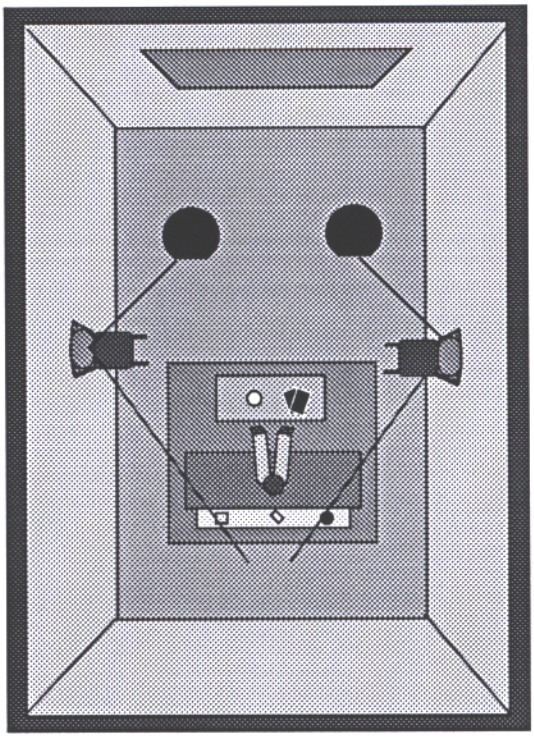
Place a small hand mirror along the part of the wall you suspect is where the first reflection hits. Sit in your listening position and have someone adjust the mirror so that you can see the loudspeaker. At this point the placement of the mirror represents the point of first reflection.

Place a chair or any piece of furniture at the point of first reflection to help diffuse the reflected sound.

First Reflection



Corrected with furniture



SPEAKER PLACEMENT IN YOUR ROOM

Once you have decided what you can do to "treat" your room for best sound, the next consideration is the placement of your loudspeakers in your room. It can have a dramatic effect on how the system eventually sounds.

At Genesis, we understand all too well that **practical** considerations can get in the way of the ultimate speaker position.

Our recommendation is that you try your best to get as close to optimum as possible, and then fine tune the placement in by listening and making minute changes.

Where do you start?

With the rule of thirds.

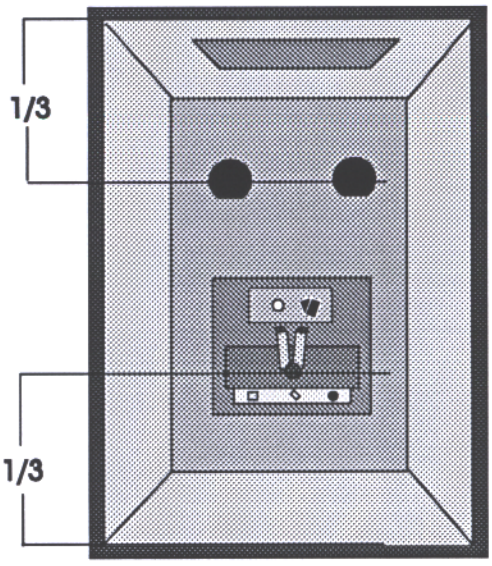
This simple formula says that you should mentally break your room up into thirds. The couch or listening area would be in one of the sections, the speakers in another as the illustration shows.

The speakers should, therefore, be placed a third of the room away from the wall.

As previously mentioned, it may be impractical to achieve this, so what's important is distance from the rear wall.

Certainly Genesis speakers are nowhere near as critical about proximity to the rear wall as most bipolar speakers (speakers with drivers on the front and the back), but for optimal imaging they should be as far away from the rear wall as practical.

The rule of thirds



After you've roughed it in

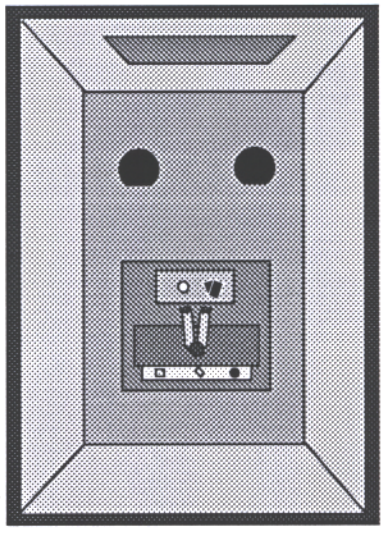
Now that you have laid out your listening area with the rule of thirds in mind, it will be necessary to start refining the process.

There is one very important factor to bear in mind with the Genesis 8200F and 8300F.

DO NOT TOE THEM IN.

Make very sure that the speakers are parallel to you as you sit in your listening position. This is quite important if you are to achieve the optimum imaging capabilities that are possible with a Genesis loudspeaker.

Note: Most loudspeakers are designed to be acoustically flat on axis. Only when you sit directly in front of one speaker (rather than between them as you would with a stereo pair) will it sound properly. To correct for this problem we normally toe the speakers in, or point them at our listening position, so that we have good center fill. The downside of this is that it hampers the image to the left and right of the speaker. To compensate for this situation Genesis loudspeakers have a slightly rising top end, on axis, but perfectly flat off axis (where you sit.) This allows you to keep the speakers perfectly parallel to you, which gives you both center fill and the remarkable side image that all Genesis loudspeakers are capable of producing.

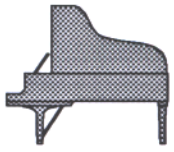


The illustration shows how the setup should look. Parallel, not toed in.

Once your loudspeakers are connected....

Now that you have correctly positioned your loudspeakers, it's time to sit and listen and tweak.

Place all of the level controls in the middle (twelve o'clock) position for now. We'll play with these controls later.



Put on some music with which you are familiar. It is preferable to use listening material with natural instruments. For instance, many people more easily recognize the "true" sound of a piano or male or female voice.

Listen for proper imaging, tonal balance, and musical sound.

The parameters you can vary are: the distance between the left and right loudspeakers, the distance to you, the distance from the rear wall, and the controls in the back.

What does good imaging sound like?

First, and foremost, the loudspeakers should disappear. By that we mean that as little sound as possible should appear to come directly from the speaker. A seamless field of music should appear from **behind** the loudspeakers.

The center image should be palpable, as if there were an imaginary third and center loudspeaker producing the middle image.

The sound should not be confined within the inner bounds of the two loudspeakers. Rather, depending on the source material, there should be an image that appears beyond the outer edges of the two loudspeakers.

Note: *If you are not getting an image that is spacious and appears to come from **behind** the speakers, they are probably too close to the rear wall.*

The rear controls

If you have the Genesis 8200F loudspeakers, there is one level control on the back of the speakers: a tweeter control. If you have the Genesis 8300F, there is a tweeter control and a midrange control. Genesis provides this feature on all its models because of two fairly straightforward facts: ***all rooms are not the same, and all drivers cannot be made to match exactly.***

Other speakers in this class do not give you this flexibility and ask you to tune your system only with speaker placement, speaker cables and interconnects, etc. This is a compromise you do not have to make with Genesis loudspeakers. After spending some time and gaining some familiarity with these controls you will be able to achieve a very accurate sonic balance in your listening room.

Adjusting the controls

Start with the knobs of the three controls in the twelve o'clock position on both speakers. Play music that you are familiar with and that has an ability to create an image. Try to keep the two speaker controls as even as possible, but don't be afraid if they wind up slightly different. **This turns out to be more the rule than the exception.**

We suggest that you make small changes, and take your time. Differences in drivers tend to be in the range of +/- .5 db. It has been our experience that once you have the controls close to correct, even very minute differences in the knob's position can make a large change in the way the speaker images.

Generally speaking, if the speaker is too bright, turn down the tweeter control (counterclockwise.) If you want it to be brighter, turn it up (clockwise.) In the case of the 8300F, if you want the image to be further back, turn down the midrange control. If you want it closer, turn the midrange control up.

If you can make the speaker disappear, and the image appears to come from behind the loudspeaker, and sound is clearly heard to the left of the left speaker and to the right of the right speaker, then you have done a good job of setting them up and adjusting the controls.

USING A SERVO SUBWOOFER

The Genesis Servo 10 and Servo 12

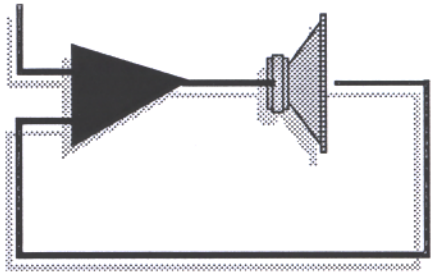
Both Genesis subwoofers are self amplified and servo controlled through the use of a new accelerometer.

The 10 inch subwoofer is powered by a 150 watt amplifier and the 12 inch subwoofer is powered by a 275 watt amplifier.

The response of each of the subwoofers is controllable by an extremely flexible crossover unit that features both high pass and low pass adjustable filters, a volume control and a phase control to help place your subwoofer in the room.

The Genesis servo bass system is a feedback controlled, closed loop device.

An active accelerometer continuously measures the instantaneous acceleration of the cone, and converts this information into an electrical signal which is then compared to the original input signal.



Differences are always found, and the correction circuitry continuously corrects the difficulties.

This dynamically corrects for the mass of the woofer's moving piston.....effectively rendering it as zero mass. The servo system also linearizes the frequency response to be anechoically flat down to any desired low frequency extension. In addition, the driver's distortion is lowered by a factor of 10 (20 dB) in the Genesis servo system.

Sonically, all you hear is the precise servo woofer since the enclosure is acoustically inert. A servo bass system of this nature produces clean, natural and powerful bass in any room.

Adding a Genesis servo subwoofer is simple for several reasons, the most important of which is that you don't have to change the your Genesis loudspeakers to accommodate it. You simply hook up one, two, four, six, or even eight subwoofers and you're in business. (The new Genesis Servostak allows you to stack the Servo 12 subwoofers)

This makes the Genesis servo subwoofer/Genesis loudspeaker system somewhat unique. Typically you must roll off the bottom of the upper speaker to accommodate the subwoofer. This, unfortunately, compromises the performance of the upper loudspeaker. We feel that the better solution is the one we have chosen. In that system we leave the upper speakers full range, and through the use of an extensive crossover (built into the subwoofer) we tailor the subwoofer to match the upper speaker.

Hooking up the subwoofer

Connection is rather simple, but you do have a few choices to make. First choice is mono or stereo. If you only have one subwoofer then you have mono, and if you have two or multiples of two, you have stereo. Your second choice is high level or low level.

If you have a receiver or integrated amplifier, high level is probably the best choice. If you have a separate preamplifier, then the choice is yours although we recommend the preamp's output if it has two. Therefore, **with a separate preamplifier we suggest that you use the low level inputs if the cable is less than 10 feet long.**

To be fair, many people believe that even with separate components you should use the high level inputs for the blending of sonics. If the question nags at you, we recommend you try both and see which one works the best for this particular situation.

Connecting your subwoofer

Once you have made the appropriate choices as given above, it is time to connect the subwoofer(s) up. Please refer to the installation instructions in the owner's manual that comes with your subwoofer.

Integrating your subwoofer with the Genesis 8200Fand 8300F

First choice to make is placement. Fortunately, because of the phase control on the subwoofers, you have a great deal of flexibility.

If you are using a mono set-up, the subwoofer can be placed between the two loudspeakers. However, we suggest that it be placed on one side or the other as it may produce better bass from the side than it does from placing it in the middle.

The reason you can choose either the middle or side positions are that bass frequencies will still appear to come from the middle channel or wherever they are supposed to be, even when the subwoofer is placed over to the side. This is because of the long wave lengths that are produced by the subwoofer.

If you are using a stereo set-up, placement is not critical but generally place one to the left (outside of the left speaker), and one to the outside (right) of the right speaker. If two are used, our recommendation is to slightly toe them in for best performance (point them at your listening position).

Be very careful (if you are using a stereo setup) that the left and right signals are going to the appropriate subwoofer(s).

The subwoofer controls

Level control. This controls the volume of the subwoofer and is typically set at 3 or 4. You will adjust this control for more or less bass.

Phase control. This control will be the most valuable control you have for integrating the loudspeakers and subwoofer together. It changes the relative phase of the subwoofer from 0 to 180 degrees. This is typically set at 30 degrees to start with.

Low pass. This controls how high the subwoofer goes. We suggest you start around 40 to 50 Hz.

High pass. This controls how low the subwoofer goes. We suggest you start with the lowest setting each has to offer.

The subwoofer controls are explained in greater detail in your subwoofer's owner's manual.

Adjusting the phase control

As mentioned before, this control may well be the most valuable feature of the subwoofer, with respect to achieving a seamless blend between the Genesis loudspeakers and the subwoofer. Start with the control at 30 degrees phase.

Position the subwoofers for best bass in the room, and adjust the level and crossover controls to where they sound best.

Using a source with good bass, such as a bowed or plucked double bass, listen carefully for a seamless integration of the subwoofer and the loudspeaker.

If the two seem slightly disjointed, the next step is to turn the phase control clockwise. You should hear, when you play the same cut over again, that the presentation is more coherent.

Keep making minute adjustments to this control until the subwoofer and the speakers sound like one unit, rather than separate entities.

Hint: the further the subwoofers are physically behind the loudspeakers, the more you will have to turn the phase control knob toward 180 degrees in order to blend the two sounds together.

The control offers a maximum phase change of 180 degrees.

BREAKING IN YOUR LOUDSPEAKERS

While it is absolutely true that all audio products need some break-in time, it is also true that the product should always sound good out of the box. Certainly, after a reasonable period of break-in, a component will usually sound better. The point is that break-in will not make an initially poor product excellent.

With loudspeakers it is important to exercise the surrounds and the spiders of each driver so that they more closely reach their ultimate compliance. Additionally, the electrical components of the crossover must undergo some break-in in order for components like capacitors to reach their electrical equilibrium.

There are various methods for breaking in loudspeakers, and the methodology is your choice. Since your Genesis Loudspeakers will sound good "out of the box," one can immediately enjoy music through your new system, and with normal listening, your loudspeakers will be "broken in" in about a week. The fact is that as you enjoy listening to music, the sound will actually improve! Highs will become smoother and better defined, depth and width of the soundfield will become more palpable, and focus will increase.

If you do not want to listen other than under optimal conditions, the following procedure can be performed before you listen to music. Set your CD player to repeat and play (at a reasonably loud level) a loud rock and roll CD. Let it play continuously for about 24 hours. This will ensure fast break-in. (Stay with friends, and be sure to warn your neighbors!)

CARE AND CLEANING OF YOUR GENESIS LOUDSPEAKER

If the finish of your Genesis Technologies loudspeaker is a beautiful piano black, you can care for it in several different ways. Being careful not to spray onto the drivers, it is permissible to use standard spray-on products like "Pledge," and spray on waxes are also a possibility.

To truly beautify and protect your new loudspeakers, a coat of fine car wax is most highly recommended. Products like "McGuires" car waxes are perfect.

If the finish of your loudspeakers is rosewood, spray-on products like "Pledge" are fine, but *do not* use the spray-on wax products, or the "McGuires".

Taking proper care of your new speakers will ensure that they will always take care of your listening needs, and that your investment will be protected for years to come.

Good Listening!