

# Firewall

## POWER CONDITIONING UNIT

**The Firewall** represents the epitome of the LessLoss Skin-filtering technology. In traditional filtering networks, very high frequency noise circumvents capacitors and coils. Without using such traditional filtering elements, **the Firewall** is a direct enhancement to the unique filtering technology employed in the LessLoss DFPC Signature power cord. In addition, the incorporation of high tech acoustical damping technologies results in a product which achieves a sublime level of performance for the most demanding audiophile.

### FEATURES

- Based on LessLoss **FlowFlux Skin-filtering** technology
- Equates to approximately 100 DFPC Signatures wired in parallel
- Advanced vibration control: Panzerholz, Carbon Fiber, and anodized aluminum casing
- Three absolutely symmetrical feet for perfect mating to any mounting surface
- Single anti-vibration input and output
- No caps ▪ no inductors
- No resistors ▪ no fuses ▪ no diodes
- Dimensions: 35x11x11.3 cm (13.8x4.3x4.4 inches)

### RESULTS

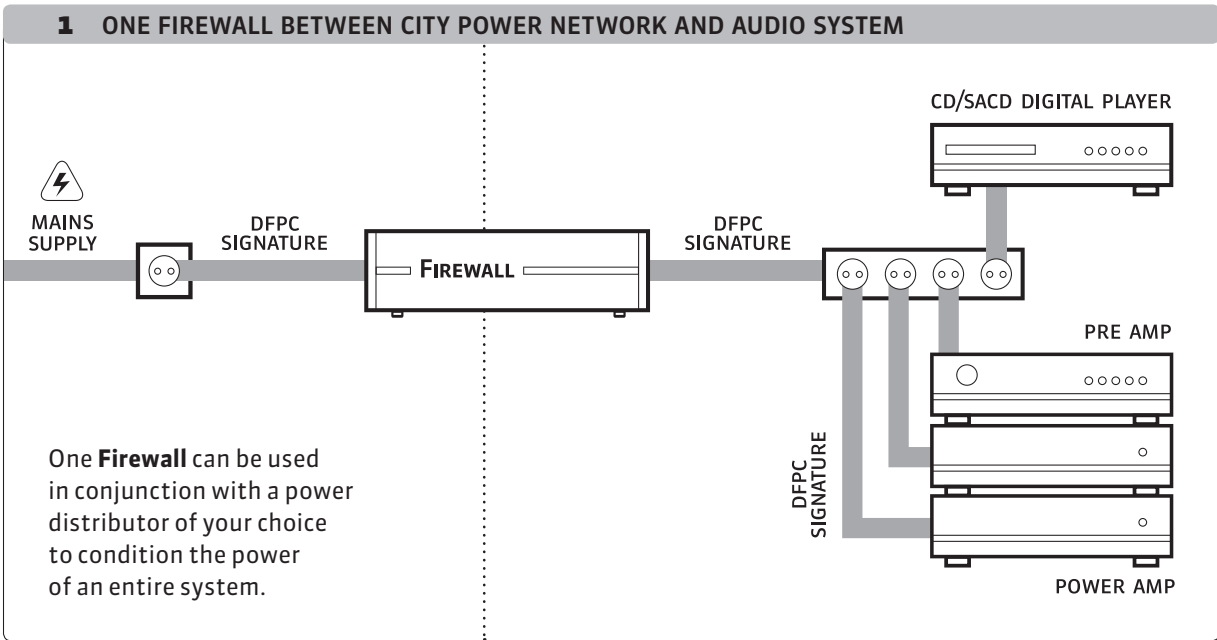
- The ultimate power we can produce
- No hint of 'digititis'
- Relaxed, natural, and fluid sound
- Dynamic to the lowest bass



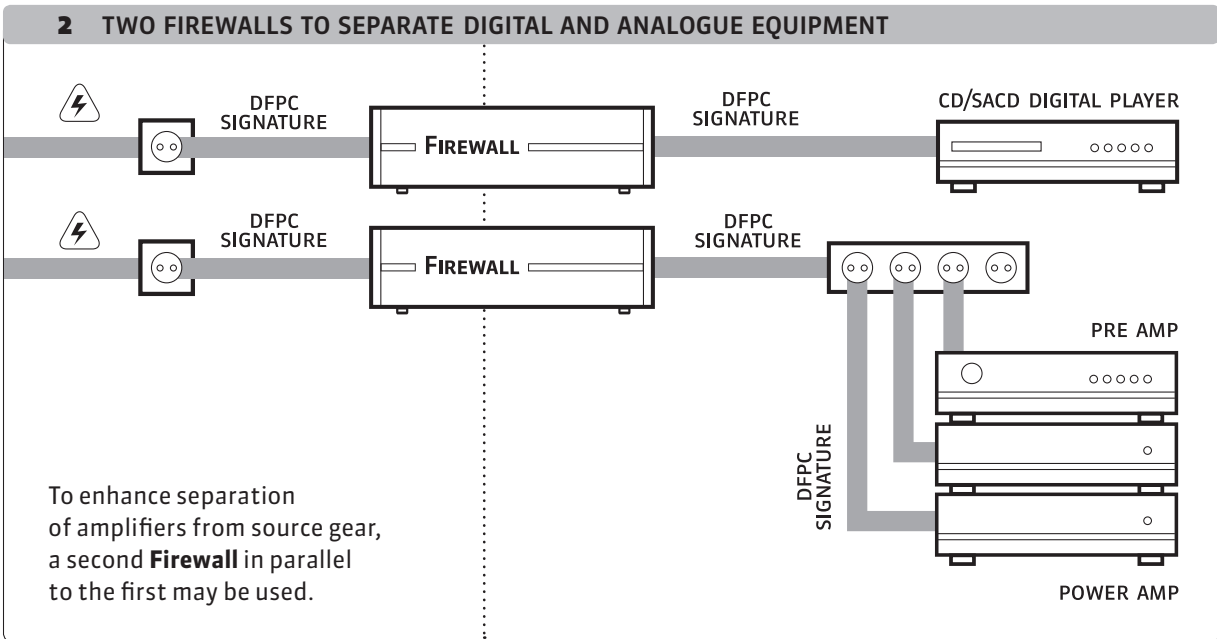
“ *LessLoss has delivered a triumph.* — SOUNDSTAGE! NETWORK

## System configuration Four examples

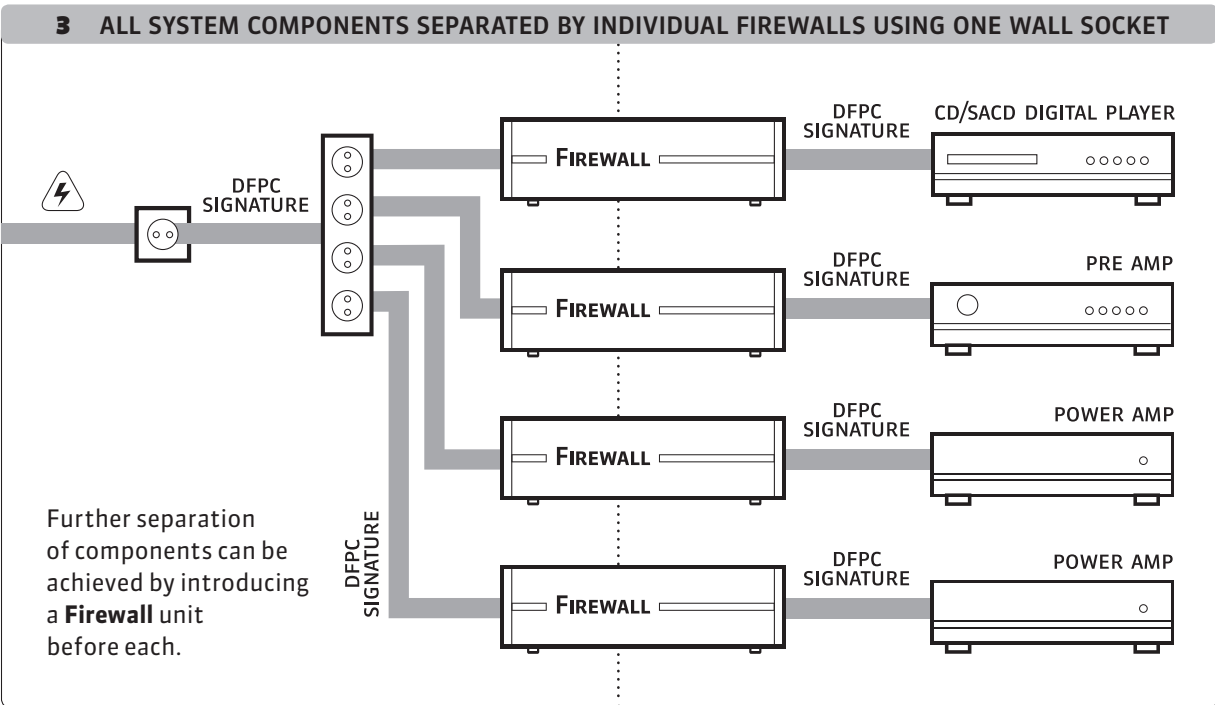
**The Firewall** is a direct enhancement to the DFPC Signature power cable. Just as the DFPC Signature is a highly effective upgrade to the DFPC Original, the Firewall is the upgrade for use with the DFPC Signature. **The Firewall** has one output, from which the power may be fed directly to individual components, or to a distribution unit first.



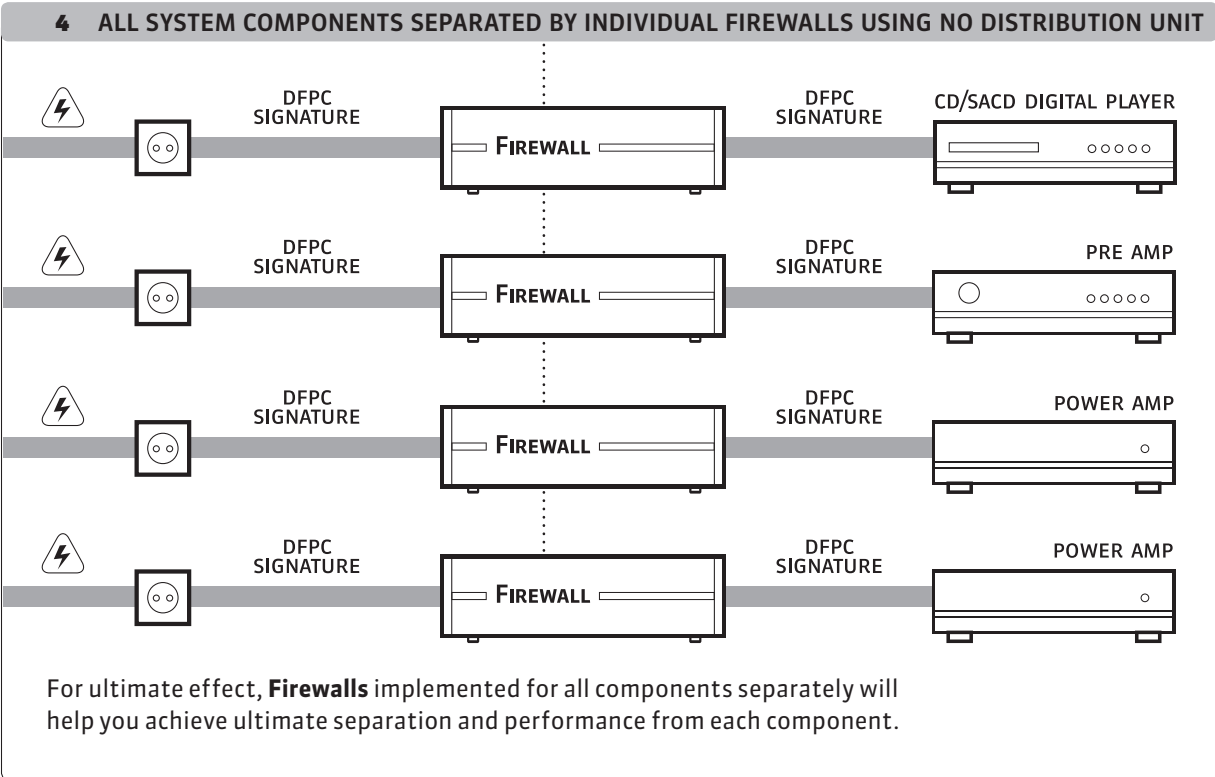
In the above example, a distribution unit is required. **The Firewall** has no current limit other than the 15 Ampere rating of the sockets themselves. This is plenty for an entire audio system. Recommended distribution units are ones that have no internal fuses or contain any filtering elements, such as capacitors, chokes or transformers, regardless whether these are wired in parallel or in series.



**The Firewall** is an excellent component isolator. The filtering provided to the power of a system can equally well be used to provide isolation of noise from one piece of equipment to another. Typically, digital source gear tends to be the most noisy to the rest of the gear in the system sharing the same power line. To separate these, two Firewalls are recommended, and they will both filter in both power flow directions, bringing the system's performance to a new level.

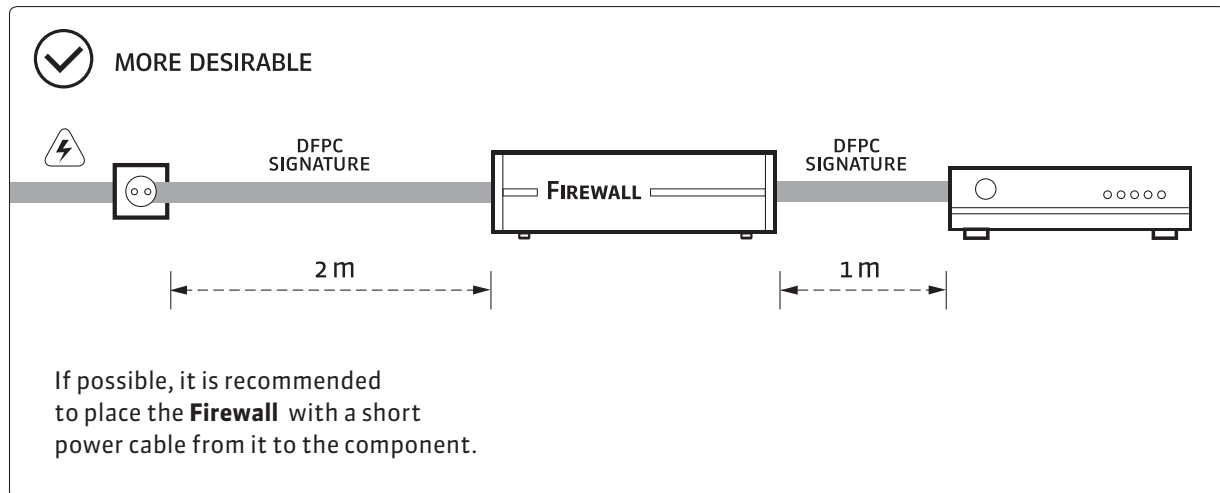
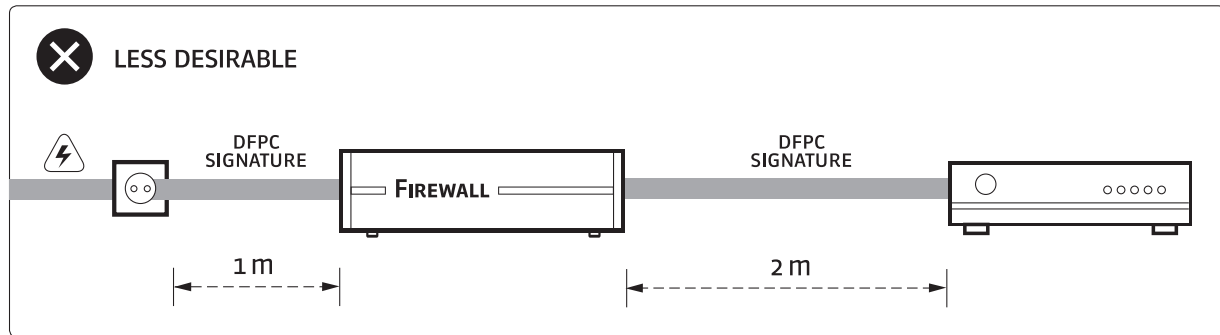


All audio system components today contain fuses of their own. For best dynamic performance, it is recommended to choose a high quality distribution unit which does not contain fuses of its own.



## System Configuration Tips

Maximum results can be attained by taking care to minimize the length of the power cables coming from the **Firewall** up to the various devices they will be powering. Even though the DFPC Signature power cord is an effective filter in and of itself, it still applies that for high end audio, we wish to keep the **Firewall** power conditioner as close to its ultimately subjected gear as practically possible.



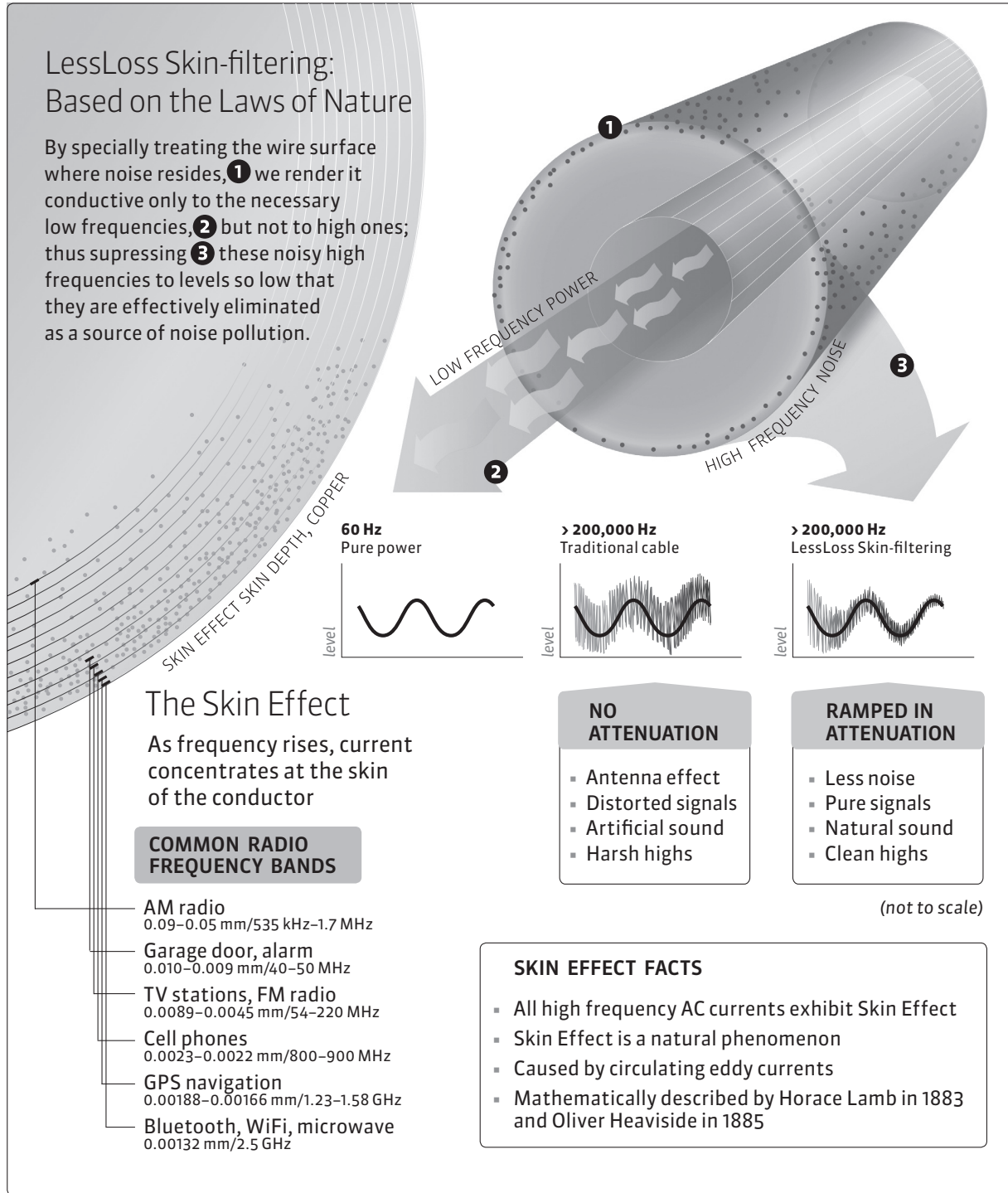
## DFPC Original vs. DFPC Signature

Users of the DFPC Original are first urged to upgrade to the DFPC Signature in order to achieve best results with the **Firewall**. Although the **Firewall** will raise the level of quality in the system regardless of the power cable used, it is recommended to first explore and experience the higher quality provided by the DFPC Signature. For further suggestions, please write to Louis Motek.

# The principle How it works

## LessLoss Skin-filtering: Based on the Laws of Nature

By specially treating the wire surface where noise resides, **1** we render it conductive only to the necessary low frequencies, **2** but not to high ones; thus suppressing **3** these noisy high frequencies to levels so low that they are effectively eliminated as a source of noise pollution.



## Skin-effect Passive filtering

The LessLoss **Firewall** represents the epitome of our tried and tested Skin-filtering method. The very core idea is simple and follows directly from the rules of electromagnetic signal flow as nature has prescribed: the higher the frequency, the closer to the outer-most surface of the conductor the signal will be. Knowing this, we developed an elegant method of dealing with high frequency noisiness in the power line. This is the Skin-filtering method upon which our Dynamic Filtering Power Cables (DFPC) are based. Users the world over attest to their supremacy when compared to exotic rivals bearing price tags sometimes even five times as weighty.

## Concept Development

For us, unique solutions which truly address each elusive core of each problem are what make LessLoss products desirable. We always confront our own guesswork and back everything we theoreticize about with prolonged listening tests. Thus, our theories are distilled into valuable solutions which agree through repeated demonstration to the intellectual lineage of our hunches. Along this long path of sincere trials, we encounter so many important discoveries that their proper sorting out and compilation into working prototypes can take years. This is our passion, and our driving force when delivering to you only the most mature, the most tried and tested, the absolutely best solutions that we can deliver. Then we can say we are proud to offer these great achievements to you in the form of mature products.

## Inside the Firewall A handmade filter

Electrically, the **Firewall** power conditioner is the schematic equivalent of some 100 of our Dynamic Filtering Power Cables wired in parallel. Furthermore, these specially treated wires are protected from mutual vibration. This is an important feature of the **Firewall** — the inability for it to act as microphone. Because of the care which goes into each hand-made module, the user receives a device which is much more than a typical filter. This is a unique product, a unique solution, which is neither a capacitor nor an inductor. The elegant nature of the solution reveals itself audibly in a manner similar to that of the DFPC Signature, albeit in an enhanced way: first, as an obviously lowered noise floor, and then, over time, in an ever-growing and blooming naturalness of sound quality. The natural dynamics of music are free to flow without being modified by the noisiness of the power source.

## High tech materials In balance

The case is made of a combination of high tech materials, chosen and carefully balanced for their effect upon the resulting sound quality. Among these are carbon fibre, anodized aluminum, and Panzerholz. Panzerholz is a high tech natural wood product manufactured in Germany.

It is known for its extremely high density (it sinks in water), its high strength (similar to the strength of aluminum), and that only a relatively thin layer of it is required to stop a bullet in its tracks. This unique elasto-mechanical performance is related to its acoustical damping characteristic, which is among the very best of any material in existence. This is shown in our test on the next page. These characteristics make it one of the best choices available today for a high performance product such as the **Firewall**.

## Tankwood Casing

Panzerholz (also known as Tankwood) is extremely highly compressed Beechwood layers. It is compressed to a ratio of about 2:1, under the influence of high temperature and moisture. The individual layers of wood, under such circumstances, are thus fused together once again to form a new type of natural wood. In this way, the original cellulose wood compounds form new chemical bonds amongst the neighboring layers; thus, a new type of wood is born: Panzerholz. This unique material is used in Formula 1 racing cars as an excellent vibration damping substitute for aluminum, which tends to exhibit ringing. Panzerholz's high density also aids in its use as a Neutron shield in nuclear research. We have found the results by using Panzerholz as our no-compromise audiophile casing material to be extraordinary in terms of musicality, natural tone richness, and authenticity of tonal color. The vibration theories are correct: nothing must vibrate in a good audiophile system except the electrons themselves, and the speaker diaphragms. Apparently this requirement goes all the way down to the molecular level. Indeed, at the molecular level, perhaps even more effectiveness can be achieved. In the air, our ear is sensitive to vibrations on the level of only a few diameters of an atom. In electronics, where delicate source signals are then amplified thousands of times so that they drive physically vibrating speakers, the smallest undesired microvibrations resulting from microphonic effects have a profound effect on the quality of what we ultimately hear on the macro level.

Precision milling of the dense Panzerholz enclosure, the dark anodized Aluminum faceplates, and the carbon fiber housing, together with beautifully organic and graceful design present the **Firewall** as a sculpture worthy of any shelf of any sound system. The **Firewall** is a beautiful piece, a one-input, one-output performance booster for the already effective DFPC Signature. Where the Signature leaves off, the **Firewall** takes over. The **Firewall** can be used in a variety of ways in a variety of systems. We have created it as a modular unit to be extended by the DFPC Signature, to maximize usability and ease of incorporation into any system's space requirements. Each client chooses their accompanying cable lengths, because no prized system can be deemed "standard."

Read on about our acoustical tests which reveal the virtues of Panzerholz when compared to aluminum.