

"Welcome to our May newsletter. Another cold Winter has passed us by and the Spring's bursting with technology news. Here is the latest insight into our fun and exciting industry. Thank you for your continued support."

You Probably Need a Firmware Update!

In the last few years, we have noticed a trend in Home Electronics. Most manufacturers have added capacity to "update" equipment in the owner's home.

These "Firmware Updates" allow access to new features or improved performance without having to replace or even disturb the component. With cable or satellite set top boxes, upgrades are accomplished behind the scenes, without anyone required on site. The cable or satellite signal transmits the updates, which are typically completed in the middle of the night, avoiding conflict with day to day use.

We have on occasion noted that an update will cause a set top box to "lock up" soon after receiving new firmware.

Many of you have probably been through a "reboot" with your cable or satellite box. Once the reboot is complete, the lock up is eliminated and full operation returns. Even though this process can be distressing, the overall effect is positive. A better picture and more reliable performance are typical improvements noted after automated upgrades.

Many other home electronic categories have options for upgrading firmware. Blu-ray Players, Surround Processors, Flat Panel Televisions, Video Processors and more all have "on-site" update potential.

Most Blu-ray players can be enhanced by

inserting an "update disc" either sent from the manufacturer or downloaded and "burned" at home. These discs automatically complete the process and then eject.

Some newer Blu-ray models have network connections allowing updates via the Internet. One of Sony's latest Blu-ray players even includes a Wireless Internet connection and can update its firmware if a "WIFI" signal is nearby.

This would seem to be the future for all home electronics; having a permanent connection to the Internet, allowing upgrades as needed for the life of the device. Easily accessible software upgrades probably mean longer useful life for everyone's home electronics! Overall, this seems like a nice improvement.

It should be noted that some Blu-ray players will not play a few of the latest movie releases until upgraded. So, it is pretty important to check for new firmware.

Let us help! We are familiar with the update process for many of the brands and categories of products on the market. Give us a call.
651.777.5444

More Speakers!

Think 7 channels is enough for surround sound? Dolby Labs and Tom Holman at Audyssey don't.

Dolby just introduced Pro Logic 2z with 2 additional front "height" channels. Designated to be installed above front right and left speakers, Audyssey takes it a step further with DSX. They add height channels, plus two additional speakers to the side and forward of right and left speakers. 11 channel surround!!

The emphasis with both new concepts is on

“front of the room” effects. In fact, both systems can be used with 2 or 4 rear channel systems. More realistic envelopment is the final result with either system.

Of course, Supercalibrations would love to sell and install more speakers. :-)

Processors providing the additional signals will be on the market later this summer.

We look forward to testing out both systems and providing an update on their performance in the next newsletter.

I Have Heard the Future of Amplifier Design and It is Good!

Similar to loudspeakers, amplifier design has not changed radically over many decades. The continued popularity of “Vacuum Tube” amplifiers would be testimony to the lack of innovation in this category.

Modern amplifier designers strive to keep distortion low while transforming weak output from a CD or DVD player to levels hundreds or even thousands of times higher. We recently installed a stereo amplifier with 1200 watts per channel. Hooked up to four 15” woofers, the combination can easily simulate an earthquake!

Currently, even low cost amplifier designs have extremely low distortion levels. Unfortunately however, these ubiquitous devices are not extremely efficient. Much of the energy absorbed from the electrical outlet escapes as heat, dissipating into the room or cabinet where the amp is located. With their toaster like glow, tube amplifiers actually help keep the furnace off during use!

Transistor amplifiers run cooler than tube types, but can still quickly convert an equipment cabinet into an oven. Hot equipment has a predictably short life expectancy.

A couple of years ago, I was exposed to an unusual new science for amplifiers called “Class D”. Not really a “Digital” design, but sometimes described as such. Sony was an early developer of “Class D” products, including the technology in a few low cost devices. I was taken aback with the smooth, high end sound quality of these reasonably priced 7 channel amplifier/processors. Sony lost interest in “Class D”. I suspect they were just a little ahead of their time.

We are now experimenting with UCD amplifier technology from Holland. These “D” amps sound fabulous and run extremely cool. At full output they barely get warm.

On a technical note, Class D amps function in a similar fashion to radio station transmitters. The audio signal with a frequency response from 20 to 20,000hz (the human voice is between 300 and 3000hz) is mixed with a much higher frequency signal, around 400,000hz.

To make a long story short, the combined signal is “easier” to amplify. Before arriving at the speakers, the 400,000hz carrier is stripped off and all that is left is a pristine high output audio signal. Super low distortion!!

Class D when properly implemented (UCD is as good as Class D gets!) has very few drawbacks.

When “D” amplifiers are combined with the DSP loudspeaker systems (see next article), the results are very close to “state of the art” in sound reproduction. I predict more and more amplifiers using this innovative technology in the very near future. Cooler, better sounding amplifiers! Yeah!!

Give us a call and we will demonstrate what "Class D" is all about.

I Have Heard the Future of Loudspeaker Design and It is Good!

In years past, loudspeaker design has been more of an art than a science.

The process usually starts with the proper mix of high quality components (woofers, tweeters etc..) followed by constructing an acoustically accurate cabinet. Once the cabinet is complete, the components are installed.

Finally, a long period of evaluation occurs utilizing test equipment complete with attached microphones, but almost always allows time for listening to a variety of music. That's the fun part!

A lesser known, but critical component in loudspeaker design is the crossover. In a 2 way form, these internally mounted circuit boards separate the full range sound coming from an amplifier into a high frequency output for a tweeter and a low frequency version for the woofer.

Considerable sonic improvements can be achieved by fine tuning the capacitors and coils found in a typical passive crossover. Even inherent distortions of the woofer or tweeter can be compensated for by adding specific "correction" parts to the crossover layout. Lots of Work!

When everyone is satisfied with the performance, the final design is put into production and finally up for sale.

Unfortunately, more than not, what a owner may hear when they set up their new purchase at home, is not so much the smooth, clear sound of a highly engineered loudspeaker, but the bright uneven sound of their room. The echoes and reverberations of the room overwhelm the intrinsic quality of the loudspeaker!

I found this to be the case with my first loudspeaker purchase in 1973. I ended up replacing my amplifier a couple of times before realizing the room was the real culprit. Getting a room to sound better is not an easy task, especially if the "acoustic treatment" has to meet any standard aesthetic criteria. Or putting it another way, keeping the interior designer of the house from screaming in horror. :-)

Recently, we have been experimenting with a different approach to loudspeaker design. Again, we start with great components and an appropriate cabinet. In this method however, we use an electronic crossover. Installed before the amplifiers, (2 amplifiers are required for each two-way loudspeaker) electronic crossovers produce less distortion and are less complex, but are somewhat more expensive than the previously discussed passive designs.

Next we apply computer based technology called "Digital Signal Processing". I discussed "Audyssey" DSP equalization in a recent newsletter. In a simple automated fashion, Audyssey not only smooths the response of the loudspeaker to match a specified "target curve" but compensates for poor room acoustics at the same time. This product is magical in its ability to improve almost any loudspeaker and room combination.

No decorator "buzz kill" either! Unseemly acoustical treatment is not required for great results.

The sound quality I am getting at home (again the fun listening part!) has been well beyond expectations. Even when placing the loudspeakers in less than perfect locations, the sound remains close to ideal. I can't wait to try this design in a full 7 or 11 channel home theater! In my humble opinion, these loudspeakers sound as good or better than much more expensive products.

I am confident that the future will bring more and more DSP based loudspeaker designs. I have a pair ready for demonstration. Give me a call for an appointment. Hear the future now!! 651.777.5444

I hope this gives everyone some insight into current home electronic trends. We actually find it to be great fun and hope it shows in our work. We also know that most of our business comes from referrals. If you give us a referral that generates new business, we have a new program that provides a few perks to your home entertainment system. They make a nice reward for giving us a recommendation.

We would like to thank everyone for their continued support. We promise to stay committed to being the best in the business.

I will (as usual) be available as much as possible. So, if you have any questions, feel free to call me anytime. My mobile phone is 612.868.6129. Many problems are usually resolved quickly and easily over the phone.

I'm always available for further discussion and thanks again for all of your business!

Dallas

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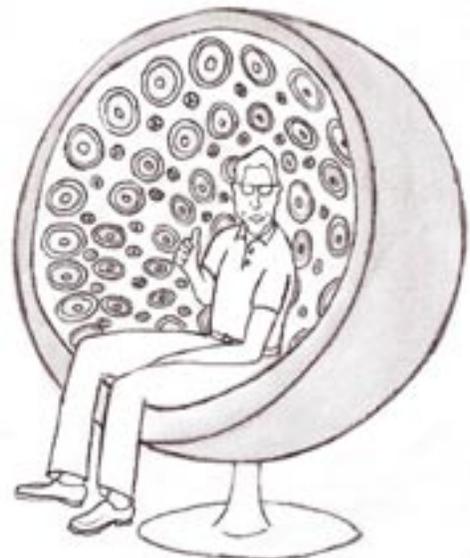
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Installers Wanted

*****We are looking to add experienced Installers to our growing company. Feel free to give us a call if you know someone who may be interested.*****



Dallas experiments with Sphere-Surround