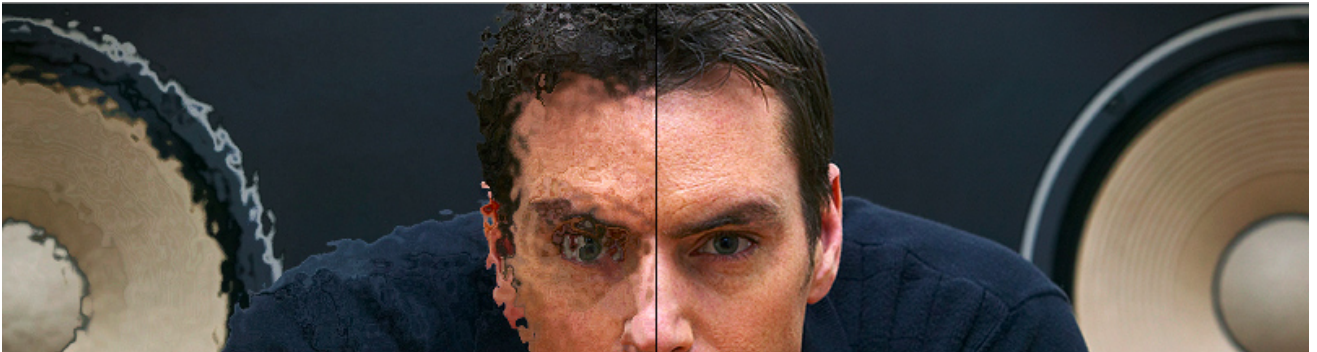




SOUND ADVICE Vol. 30, August, 31st 2007

Announcing a major breakthrough in sound equalization

Audyssey corrects sound distortion caused by room acoustics, so you hear sound as intended, in every seat, automatically.



All rooms distort sound

A good loudspeaker is designed to deliver sound without distortion or coloration. But when speakers are placed in a room, things change. Walls, furniture, and other objects reflect and absorb the sound from your speakers, creating complex distortions, specific to your room, which could not be predicted by the loudspeaker designer.

Until now

Audyssey MultEQ removes sound distortion by equalizing your sound system for every seat in your listening room. MultEQ is the first viable solution to acoustic problems for anyone who appreciates great sound, available in consumer products or from professional installers.

A whole new sound experience— in every seat

MultEQ is the first technology to properly measure sound information throughout your listening area, then combine this information to accurately represent the acoustical problems in the room. Based on these measurements, MultEQ calculates an equalization solution that corrects for both time and frequency response problems in every seat. The MultEQ solution results in a listening experience unlike anything you have heard before.



For any enquiries you can reach The Soundsmiths at: info@thesoundsmiths.com or call

Mob.: + 91-98925SOUND(76863) – Veeru

Mob.: + 91-9820513978 – Aditya



SOUND ADVICE Vol. 30, August, 31st 2007

From people who know about sound

Some of the most knowledgeable experts and researchers in the world of audio, including Chris Kyriakakis and Tomlinson Holman, inventor and namesake of THX, reside at the University of Southern California (USC) Integrated Media Systems Center. Funded by the National Science Foundation, they set out to create technology to remove the negative effects of room acoustics that degrade sound from all audio systems. After five years of dedicated research, the team developed a solution that is now changing the way listeners enjoy sound in their homes and cars: [Audyssey MultEQ](#).



About MultEQ



How does MultEQ work?

Three easy steps:

- 1) Hook up the microphone, place it in the middle of the listening area, push a button, wait quietly while MultEQ pings each speaker with a special signal.
- 2) Move the microphone to up to 8 (32 in the Pro version) positions and wait for the speakers to be pinged again.
- 3) MultEQ calculates a room correction solution for each channel. Done. Total time elapsed about 8 minutes. Then the fun starts. Turn it on and be amazed how your system sounds.

What makes MultEQ work when so many others have tried to solve this problem for decades?

Two things:

- 1) The way it measures your room
- 2) By correcting both time and frequency problems

For any enquiries you can reach The Soundsmiths at: info@thesoundsmiths.com or call

Mob.: + 91-98925SOUND(76863) – Veeru

Mob.: + 91-9820513978 – Aditya



SOUND ADVICE Vol. 30, August, 31st 2007

Measurement:

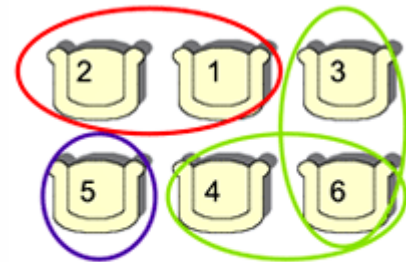
There are two types of systems out there today:

- 1) Those that attempt to correct for only one seat in the room. This typically makes other seats in the room sound worse because a single measurement does not provide an accurate representation of the problems of the entire room.
- 2) Some EQ systems do try to correct for multiple positions. They simply average the measurement results that they gather. Averaging tends to smooth out common acoustical problems, and therefore doesn't fix them. For example, if there is a peak at 200 Hz in one seat and a dip at 200 Hz in another seat (typical room), then the two measurements average each other out and there is no correction attempted.

In either case, these systems only attempt to correct frequency response problems and not time domain problems and this leaves a big part of the problem unsolved.

How does MultEQ measure your room differently?

MultEQ looks at patterns in the time domain responses and classifies them into clusters based on the similarities in those patterns, typically in 3-5 groups. A representative response is created from each cluster, and a final response is then created from grouping the representatives. That response is then used to create the EQ filter. It is a complicated process that is based on the complex mathematics of pattern recognition and fuzzy logic. But there is nothing fuzzy about the results. If you want to know more, we offer copies of selected publications we have written for technical conferences.



Unique measurement and calculation system makes great sound possible.

Time and Frequency correction:

- 1) The time domain is where many of the problems reside. Parametric and graphic equalizers can only correct for the frequency response and do so in a very coarse manner because they have limited resolution (bands).
- 2) Further, whether they have fixed or adjustable bands it does not matter because bands cause phase problems that most people hear as “ringing” or “smearing.” This is why, after thirty plus years of trying this method most people don't like the results and turn it off.

For any enquiries you can reach The Soundsmiths at: info@thesoundsmiths.com or call

Mob.: + 91-98925SOUND(76863) – Veeru

Mob.: + 91-9820513978 – Aditya



SOUND ADVICE Vol. 30, August, 31st 2007

How does MultEQ address time and frequency problems?

MultEQ filters start in the time domain. They are not just a few parametric bands. Instead they use several hundred points to represent the room response in both the frequency and time domains.

The trick is to use enough filter points to get the needed resolution, but not so many that it overwhelms the processor inside the audio component. So, we came up with a way to reduce the number of points without sacrificing accuracy and a way to provide more filter power at lower frequencies where it is needed the most. MultEQ can correct 8 channels by using only a fraction of a single DSP chip. This gives you the best of both worlds: time and frequency correction. Result—room correction that works for the first time ever.

What about calibrating my system?

In addition to all of our very complex EQ work, we also do the simple things really well. During step 1 above, MultEQ checks the absolute polarity of your system and tells you if any speakers are out of polarity (the + - wiring problem), measures the acoustical distance (within a 1/4 inch) to each speaker and sets the proper level trims for all channels including the subwoofer. Finally, it finds the optimum crossover frequency between each satellite channel and the subwoofer(s) and provides that information to the bass management system.

For any enquiries you can reach The SoundSmiths at: info@thesoundsmiths.com or call

Mob.: + 91-98925SOUND(76863) – Veeru

Mob.: + 91-9820513978 – Aditya



SOUND ADVICE Vol. 30, August, 31st 2007

The Audyssey Sound Equalizer

The ultimate home theater component

With the Audyssey Sound Equalizer, you can integrate the Audyssey MultEQ room correction technology - into your home theater separates system.



[Click for Reviews](#)

Instant impact on new or existing home theater systems

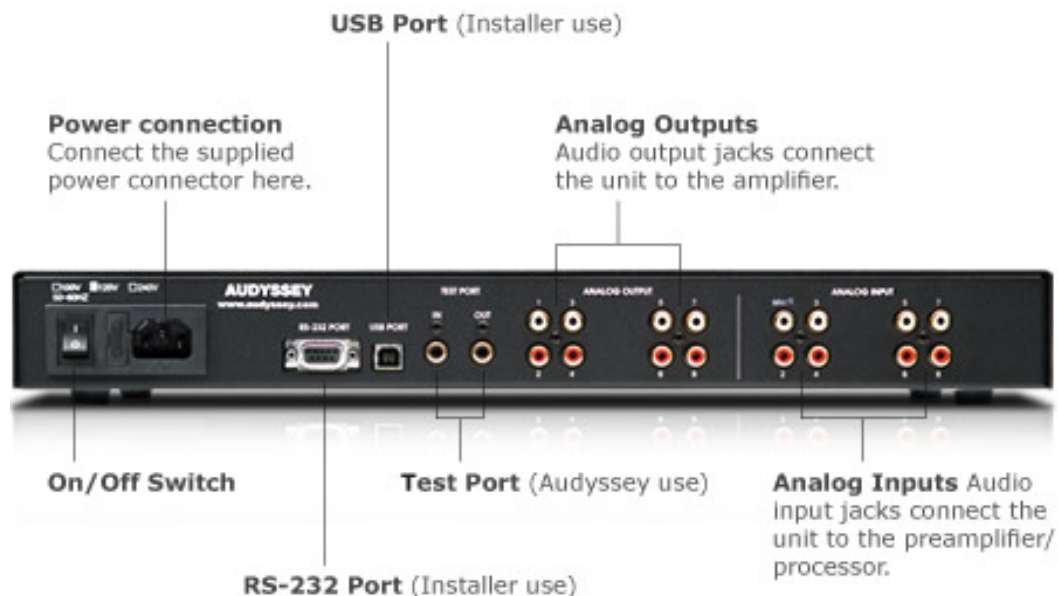
The Sound Equalizer connects to the main outputs of most home theater processors.

Multi-zone calibration—Improves sound in up to four separate rooms

The Sound Equalizer can be configured for up to 8 channels in a single room or in multiple rooms. For instance, if the main listening room has a 5.1 system, then another room with a 2.0 system can be calibrated separately. Four 2.0 channel rooms can be set up or any configuration up to 8 channels.

Low Frequency Correction

MultEQ Pro contains the latest low frequency calibration method available from Audyssey. This method features a frequency response and phase alignment method to avoid the potential suckout in the blend between the subwoofer and the satellites. It also uses a very high resolution room correction filter for the subwoofer channel.



For any enquiries you can reach The Soundsmiths at: info@thesoundsmiths.com or call
Mob.: + 91-98925SOUND(76863) – Veeru Mob.: + 91-9820513978 – Aditya