

## The State of the Audio Industry

By Barry Vogel- CEO of ALTI LLC (Audio & Loudspeaker Technologies International)



In a world with super-sized high-definition state of the art displays, it always seems as though audio takes a back seat. Being in the industry, it astounds me that the advances in technology and the science of sound doesn't seem to get the attention it deserves.



Eminence



Resonado

ALTI is a loudspeaker-centric association that encompasses electro-acoustic drivers and the surrounding signal path. That expanded focus beyond drivers alone began about 5 years ago and is a part of the story. It is new technologies, new loudspeaker formats and materials, DSP and related signal manipulation, MEMS microphones, and more that should rightfully share the spotlight with the other communication formats.

2020 saw the world come apart for many of us on a personal and business level. 2020 also proved the resilience of people and business. In the midst of the global pandemic, car audio sales spiked. Home audio sales spiked. Audio home build projects spiked. Headphone sales spiked. In fact, many segments of the driver industry saw double digit growth with the exception of the Pro-sound segment. No live entertainment venues means no business. Indeed, many manufacturers focused solely in the Pro segment have suffered. The good news is that as I write this article, the Pro-sound industry is showing signs of life with new product introductions, increased advertising, and signs that live sound venues will be returning soon.

This article will share the views of several ALTI Advisory Board Members that will encompass a look back and a look forward. Contributors include:

- Vanessa Rene from Ferrotec
- Alfred Svobodnik from Mvoid
- Andrew Bellavia from Knowles
- Jeff Stahl from Parts Express and Dayton Audio
- Brian Myers from Parts Express and Dayton Audio
- Ronald Seebarran from Stetron
- Mike Klasco from Menlo Scientific

When one brings up the subject of loudspeakers, an image of the basket, the magnet, and the cone generally comes to mind. The inherent challenges such as weight, size, air space required, and frequency limitations are being challenged by innovations in materials and the very physics used in design. Just take a look at companies like Resonado, Tectonic, and Dinaburg Technologies are challenging the way sound is produced, and how these drivers can be utilized. Greater flexibility in speaker placement will be achieved through improvements in off axis response and extended frequency ranges. All happening right now.

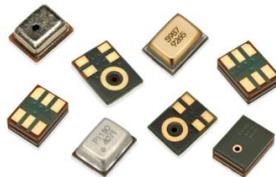


MISCO



JBL

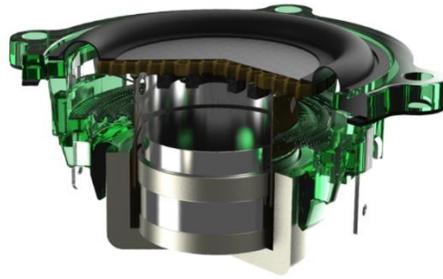
Headphones and earbuds were hot categories before the pandemic. That improved as people were stuck at home with nowhere to go. While Pro headsets have suffered as has the entire Pro category, consumer headset sales have been very strong, and will continue to be. The technology advances discussed elsewhere in this article combined with DSP acoustic manipulation have made for incredible sound experience from tiny drivers.



Knowles MEMS Microphones

Andrew Bellavia of Knowles offered that their MEMS technologies have made very small microphones work incredibly well in Amazon Echo devices and many other applications. Smart

home manufacturers are constantly upgrading the audio interface in mics and speakers. Voice control IoT is taking off as devices proliferate and prices continue to fall. In the earphone market, premium sound drivers formerly found in professional in-ear monitors are migrating into lower priced consumer models as HD audio takes off. Look for balanced armature drivers to impact the landscape in many micro-speaker applications as the quality of reproduction continues to improve.



Tectonic



Dinaburg Technology

One of the areas that have benefited from the pandemic lockdown is in virtual meetings. We tend to think in terms of the video part of that equation, and certainly High-Definition cameras and lighting have benefited from the explosion of Zoom calls, Skype, webinars and more. What is often overlooked is that upgrades to microphones and headsets have also seen large gains. Some combination of virtual and in-person meetings are here to stay and will continue to fuel the evolution in how, when, and where we meet in the future.

Vanessa Rene of Ferrotec believes that this trend will be accelerated by a population shift away from metro areas to more suburban and even rural areas as workers and employers re-evaluate the importance of a physical presence in the office. Working from home will necessitate better and higher quality A/V connections and equipment. What happens to that commercial office space that now has many empty offices? Perhaps virtual meeting and production studios? Improvements in bandwidth and dependability is an immediate need, as will improving source audio-visual production values overall. This will continue to present opportunities for audio manufacturers and perhaps an expanded opportunity in the Pro segment as companies seek better, higher quality meetings and presentations.

In the home and portable audio segment; People staying at home = Sales! Home theater from soundbars to upgraded speaker systems have benefited, as pointed out by Parts Expresses Jeff Stahl; speaker kits and related electronics have done very well and that is continuing even as America begins a path back to “normalcy”.

Alfred Svobodnik of Mvoid believes that the greatest challenge and opportunities in the next year or more will be to keep up! The pause in 2020 made for new product delays. Now they will have to catch up as chip shortages and transportation issues continue. As car sales pick up

globally, the challenge to create a better in-car experience will continue to create opportunity. As autonomous cars begin to take hold, cars will become mobile offices, extensions of our living rooms, multi-zone audio-visual “rooms”, and more. Hands-free audio has much room for improvement and will continue to create opportunities for developers seeking seamless communications from home to car to office.

Areas that might not come to mind right away are audio and video becoming common in exercise equipment, which has been an opportunity at Stetron says Ron Seebarran, and in medical equipment. Haptic feedback on vending machines provided by versions of “Exciters” have created excellent business opportunities at Parts Express according to Brian Myers.

Virtual Reality will present opportunities for the audio industry, says Alfred Svobodnik. VR will represent growth opportunities as the technology matures and becomes a more widely adopted, 3D audio will become a vital component of the VR experience. There is a need for the audio to “follow” the movements of the user’s head.

Mike Klasco of Menlo Scientific added; MEMS earphones and micro-speakers will proliferate because of size and weight advantages, but also because of using a semiconductor instead of a magnet. Car audio will continue dynamic growth as the vehicle environment evolves. Look for speakers primarily in “A”, “B”, “C” pillars, sun visors, and headrests, and the use of “bass shakers” to enhance the experience with smaller, lighter speaker arrays. 2021 will see slimmer yet higher performance speaker technologies from Resonado, Dinaburg, Trulli, and others while Klippel's KCS linearizing processing in Nuvoton's smartamps will compensate for smaller but higher excursion designs keep distortion down. He also sees great opportunities in upgraded soundbars with simplified connections and control. The challenge, he said, is how to sell a better audio experience when even Best Buy is removing their sound demo rooms? Klasco believes that the custom installation market may be the best hope for growing demand for better sound quality.

Look for major boost in Pro Audio loudspeakers, cabinets, and cabling as live performances launch again in the second half of 2021. Jeff Stahl said that Parts Express is already seeing increased interest and activity in drivers and cabinet kits, and he expects that to accelerate fairly quickly as the world begins to “opens up”. Possibly the only cautionary issue is supply. Baskets, magnets, and soft parts that come from China have had delivery delays and transportation issues. Most believe that these issues are temporary and will begin to subside in the second half of the year. Many Pro manufacturers are announcing and releasing new products right now which speaks to the optimism in the market. New introductions from MISCO, Eminence and others are in the marketplace right now and more to come.

In closing; Enjoy those big video monitors and all to that Hi-Res imagery. But remember that without an equally Hi-Res, high quality audio performance, the consumer is only getting half of the experience. Imagine going to a movie theater with that huge image and having the sound come from a couple of 6” drivers on either side of the screen. The Audio Industry is a dynamic

and exciting place to be. Career opportunities are everywhere, and there is a shortage of engineers to keep moving the industry forward. Get involved and stay engaged. Audio is a cornerstone of communication, and always will be.