



Harman Luxury Update - February

Coronavirus Impact

By Dave Tovissi, Vice President and General Manager

The impact of the coronavirus is far reaching. As the world continues to get updates from the Far East regarding the coronavirus and the impact it is having on the people living and working in many of the provinces of China, this virus is having a much broader impact on our industry, as well. We, like many other suppliers, are facing disruptions in the supply of components and metalwork made in China. Over 50% of all the world's electronics components come from China.



It is not just a production problem. Even when the parts are available, there is no one available to pick them and ship them to us. Couple that with the fact that many airlines and other logistics partners have suspended service to and from China and you have an almost perfect storm. The impact of this interruption in Chinese supplies will depend on how long the quarantine lasts there and the amount of current inventory that is available once people start back at work. Even products assembled in the USA, like Mark Levinson, are suffering an impact due to the disruption of parts. Our much anticipated No.5101 Digital Audio Player is being delayed due to this virus.

We do have a contingency plan in place. While we continue to work with our sub-suppliers to get updates on their production schedule, we stand committed to offer YOU a comparable product, at a similar or higher value, as a substitute for a product that is being delayed, to help you deliver products on time and on budget to your customers. Contact your Harman Luxury Audio sales manager for details on availability and substitution options on impacted products.

Should you be worried about the virus being spread by receiving products from China? The answer is NO. Harman and our sub-suppliers have implemented safeguards to prevent this virus from spreading. Below are the controls we have put in place to safeguard our personnel and the products we are manufacturing.

Production controls:

- All production/test lab floors, machines, tools, fixtures, jigs, test equipment and workbenches must be 100% cleaned by sanitizing fluids before start of work
- All persons must be checked for temperature before entering the shop-floor/production line.
- All persons must wear rubber gloves and cleaned with sanitizing fluids before making contact with product during the assembly, test and packaging
- All bare units must be 100% cleaned by using qualified brand of sanitizing fluids before packaging.



What's New

JBL Synthesis Product Advisory Council at ISE 2020

By Jim Garrett, Senior Director, Product Strategy & Planning

The JBL Synthesis brand represents the absolute state-of-the-art for multichannel immersive surround audio systems. When it comes to product development, keeping the brand at the forefront of performance requires constant research and innovation. To help us ensure we are on the right track, we are enlisting our dealer and distributor partners in a series of product advisory councils where we discuss upcoming products and future concepts in an open forum format. The first of these sessions was recently held in conjunction with the 2020 Integrated Systems Europe trade show held in Amsterdam, Netherlands during the second week of February.



In addition to myself, Harman attendees included key leaders from our business unit: Dave Tovissi (VP & GM), Nick Clarke (Sr. Dir., Electronics Engineering), Kevin Voecks (Acoustic

Technologies Manager, JBL Synthesis), Dan Vandenberg (Sr. Global Product Line Manager), and Scott Campbell (Dir. Sales, EMEA Region). Seven attendees represented five of our top JBL Synthesis distributors for the EMEA region, giving us a direct line of communication with our customer front lines.

The timing of this first product advisory council coincides with the largest custom integration show in Europe: ISE, where our JBL Synthesis brand is kicking off the new decade with host of new products and a wealth of new dealer training. Our session began with a quick recap of where we came from and what JBL Synthesis as a brand means: a collection of products designed and engineered to work together as a calibrated system. We've recently announced five new electronics models as part of our continuing efforts to deliver the most advanced systems available. These include two new 16-channel surround processors (SDP-65 and SDP-55), our first (and the market's first) 16-channel AVR (SDR-35), and two Class G power amplifiers (SDA-7120 and SDA-2200). When you add in the existing 16-32-channel expandable surround processor (SDP-75) and our two high power amplifiers (SDA-8300 and SDA-4600), there are eight models with which to configure an immersive surround system along with our six SCL and SSW loudspeakers.

From this point of level-setting, we jumped into a preview of new JBL Synthesis products that will be coming later this year. These include five new models that will be announced at CEDIA this fall. Attendees got to see early images and hear the details on these exciting products and how they will work in conjunction with existing products to expand the system capabilities for JBL Synthesis customers. For us, it was a chance to ask key questions and get critical customer feedback to be able to finalize details at this stage of development. It's a great chance to make sure there are not any details we may have overlooked during the early stages of design. If there are, we can course correct and make those adjustments before it is too late.

The next part of the discussion focused around future concepts for electronics, loudspeakers, and things that are products, but neither electronics nor loudspeakers per se. We brought to the table a number of concepts and ideas that haven't been fully fleshed out yet into viable projects. As a group, we discussed the pros and cons of each one and either refined them into something useful, or determined they didn't belong as part of a JBL Synthesis solution. This is time very well spent as the collaborative nature means that we are working hand-in-hand with our customers on determining how to maximize our mutual success with JBL Synthesis solutions. The conversation then flowed into concepts that the attendees brought to us that we had not yet discussed. This is a great way for customers to have a direct line of communication with our product development team and share concepts that we may not have even been thinking about. For us as a team, the future concepts discussion is a highlight of the product advisory council session. This is what gets the product team's blood flowing!

Part of any successful product plan has to be a strategy for how to teach and train on it. And that is where we went for our last segment of the session. Our business unit has been investing heavily in training for 2020. (By now you hopefully have already signed up for our e-learning and taken some of the first modules on JBL Synthesis. A link to the login can be found on the home page of this online newsletter.) With the advanced and ever-evolving nature of immersive audio systems, there is much we can all learn together. Kevin Voecks is helping to lead that charge for us along with our global head of training, Chris Robinson. This year we are rolling out a number of new initiatives including the aforementioned e-learning, intensive multi-day workshops in the Northridge facility, and an expansion of our in-person training with roadshows to bring the

training to regional customers. We are also working on a new dealer certification program with two-way benefits that will roll out later this year.

And with that, we wrapped up our first product advisory council session. For all parties, this was a resounding success. As a dealer/distributor partner, it is the chance for your voice to be heard. For us as the development team, it is a chance to get an extra set of eyes on our work. For all of us, it is a chance to work together to maximize the opportunities we have with this unique brand. We will be adding additional sessions to the calendar throughout the year. The next one is taking place in the U.S. region in the second quarter of this year.

What's New

Say Hello to our New Senior Global Product Line Manager, Dan Vandenberg



It's exciting when we bring in new talent from outside to fortify the Luxury Audio product development team. Meet Dan Vandenberg, our new Sr. GPLM for Revel, JBL Premium & JBL Synthesis loudspeakers. In his new role, Dan will drive the development of new industry leading products using the breadth of technologies and expertise available to him at Harman.

Dan is an audio product guy, through and through. As a kid, he wasn't allowed to touch his father's B&O system after he "played the platter" on the turntable. He took every piece of audio gear in the house apart to see how it worked. And then, as a teenager, he got bit hard by the car audio bug — perhaps the ground-pounding bass, or perhaps the high-end integration did him in. In any event, that started him on a lifelong mission to create those powerful experiences that bring you closer to your music, and connects you to the artist emotionally.

He went off to Vanderbilt and graduated with degrees in Electrical Engineering and Biomedical Engineering. He followed his passion to Pioneer, then Jensen and Rockford Fosgate, always focusing on products that render music with authority. After 25 years in the business, he has finally seen the light and has come to the Luxury Audio side. Finally, an opportunity to develop product that he has lusted after all these years!

You can expect to see Dan's influence on new products launching later this year and next. Look for him to reach out to the market often to understand what our customers want, what our dealers demand and where the industry is heading.



Dealer Profile

CAV Intelligent AV System

Multiple locations in China and other countries

At the Harman Luxury Audio Group, we consider ourselves fortunate to work with the best dealer partners in the consumer audio industry. This month, the folks at CAV in China tell us a little about their company in their own words

CAV is a large-scale AV system integrator and service provider in mainland China. We provide AV products, space planning, acoustic environment design, and the world's leading sound quality management system – all with the goal of delivering consumers the ultimate in technical service.

As a leading brand in production and sales of high-end home theater devices, CAV has earned a substantial number of loyal customers in China over nearly 27 years of being in business. CAV's AV products first attracted wide attention in 1993. Over the next 26 years, CAV developed a reputation for innovation, which was a big key to its success. Today, CAV's accolades have them recognized all over the world.

Company Philosophy

Providing excellence for those who seek it.

We employ a forward-looking approach to our services. In our ultimate pursuit of bringing a high-quality listening and viewing experience to every single customer, we need to always be exploring the higher realm of sound. With comprehensive and careful consideration of consumer demand, CAV provides not only a series of professional AV products but also a lifestyle that fits the spiritual needs. We feel a solemn responsibility to have our solutions reproduce the impassioned creation of artists in a manner that would make them proud.



Development of Audio Industry

The Chinese audio product market has developed rapidly in recent years. China has developed into a major producer and exporter of audio devices. Since 2007 the total value output of China's electronic audio products has more than doubled, from 167.8 billion yuan, to 344.8 billion yuan in 2019.

With the rising consumption of young people and the continued launch of more smart products, the total output value of consumer electronic audio products is expected to keep growing even more rapidly in the future.

Company's Awareness of the Importance of Training

We have an excellent service team. As a well-known professional audio brand in China, CAV

always prioritizes team cultivation. In addition to multiple technical trainings per year and the month of national touring training of technologists, CAV actively organizes its staff to participate in industry-related educational opportunities and get relevant professional certifications such as the HAA-THX home theater senior integration engineer certification and Smart Home Senior Engineer certification. Our goal is an industry-leading and first-class service team with comprehensive talents and independent problem-solving skills.

Date of Establishment, Staff Number, Development, Store Number and Relationship with Harman

Established in 1993, CAV Intelligent AV System has sales networks in more than ten countries, and hundreds of franchised stores and experience centers in China, with nearly 30 hectares of production base and nearly 1,000 production, office and sales personnel.

Choosing the best peers is the core strategy of CAV to maintain long-term competitiveness. In 2016, CAV established a strategic partnership with Arcam. Since partnering with Arcam, their engineering team has visited CAV on many occasions to facilitate joint research and development, and technical training. The AVR390 is an example of a cooperative product between CAV and ARCAM that provides a high-quality listening experience with leading edge decoding ability.

Team Introduction

CAV's expert, hands-on team has all the skills and qualifications to create a world-class home theater for you.

Acoustic and aesthetic design team

Relying on the experts of Institute of Acoustics, Tsinghua University and led by a Master of Architectural Acoustics, the team consists of acoustic virtuosos, senior interior decoration designers, and engineers responsible for the planning and design of every home theater project.

AV system design team

Led by the first THX certified senior engineer in Shenzhen with more than 20 years of experience in the AV industry, the team consists of AV system engineers, responsible for planning and design of your home theater project.

Construction, installation and supervision team

The construction, installation and supervision team is led by another veteran professional with more than 20 years of experience, including specifically more than 10 years of experience in luxury mansion home theater projects.

Intelligent AV system center control design team

The experienced engineering team specializing in intelligent center control provides the customized design that makes your ultimate home theater experience unique to you.



Tech Talk

Introducing the Lexicon SL-1 and SoundSteer Technology

By Kevin Kent – Field Technical Trainer

At first glance, the untraditional hourglass shape of the Lexicon SL-1 speaker system catches one's eye. However, this intriguing design is not purely aesthetic but is essential to the SoundSteer technology that truly distinguishes it from your ordinary loudspeaker. This technology allows the user to control the shape of the speaker's radiation and aim the sound to create a "sweet spot" almost anywhere in the room. This not only allows freeing the sound from room influences by eliminating reflections, but also allows users to place speakers and listeners freely without compromising imaging.



The SL-1 delivers the unique beam-forming ability using an array of 32 drivers plus a subwoofer per speaker. Twenty-three discrete amplifiers control the behavior of the drivers in a single

tower to reproduce sound in three primary listening modes; Beam Forming (Direction), Beam Forming (Direction + Width), and Omnidirectional (360-degree sound).



The mobile app, SoundSteer, allows a user to control the size and position of the listening sweet spot in real time to optimize the listening experience to suit your individual needs. User defined presets allow you to save your configuration. The application also provides tone control via Bass and Treble adjustments.

With the speaker placed 20" away from the nearest wall or boundary, the narrow radiation control can extend to below 80Hz. Because bass frequencies are inherently omnidirectional, the shape and size of your room will greatly affect the quality and uniformity of the low frequency response at the listening area. In order to compensate for this problem Lexicon has provided a Bass Calibration function. To use this feature, you can simply connect a USB microphone (sold separately) to the smart phone running the SoundSteer app and after a series of guided measurements the result is optimized bass response for your listening area.

Under the hood, signal processing is done in a single dedicated audio 7-core DSP with an impressive 975 MIPS (millions of instructions per second) of processing power at 96kHz. For each of the 23 channels, very long FIR filters are applied up to 1024th order controlling phase response at all different angles. The technology, as explained by Principal Embedded DSP Engineer, John Combs, is similar to phased array radar systems controlling a radar beam. Woofer channels are also doing beamforming, creating a bass cardioid pattern, two performing in parallel in front and two in parallel in the back. The cast aluminum base serves as a subwoofer cabinet while also being the primary heatsink to maintain cooling for the entire system.

Lexicon's DSP Innovations

As a brand, Lexicon is widely known for breakthrough innovations in DSP (digital signal processing) engineering. The renowned Lexicon 480L Digital Effects System (circa 1986) continues to reside at the center of legendary recording studios across the globe, helping shape the spatial effects of thousands of chart-topping tracks to this day. Lexicon's spatial effects for both stereo and surround sound were subsequently introduced to the home consumer market in 1988 in multichannel surround processors featuring panoramic, ambient and surround controls which continue today. The legacy continues in the SL-1 with simple elegance and an all-in-one approach, replacing the need for superfluous outboard audio components. Wireless playback is available via Google Chromecast, Bluetooth, as well as wireless connection to the SLC-1 Controller Hub for legacy connections such as HDMI ARC, digital audio via optical in and analog.

The Lexicon SL-1 is now shipping. A complete SoundSteer loudspeaker system consists of two SL-1 loudspeakers and one SLC-1 Wireless Controller Hub.

For more information, contact your Harman Luxury Audio sales rep.

Solutions Center

Global Customer Support: Teamwork Creates the Personal Touch

By Mike Sumner, Field Support Engineer

In keeping up with the high level of quality and excellence standards expected of Harman Luxury Audio brands, we have assembled a Global Customer Support Team for Harman Luxury Audio led by our Customer Support Manager, Stefan Happe. Our team is comprised of technically trained Field Support Engineers with more than 50 years of combined Harman experience. These longtime Harman family members take a unique and personal approach to each and every individual inquiry that comes through our pipeline to support our customer base of: dealers, service centers, distributors, and, of course, end-users.



We firmly believe in upholding a standard of excellence, both pre-sale and post-sale, as our customers are the most important force behind the continued success of our brands.

The personal service journey begins bright and early every morning as our team combs through our CRM system on a first come, first serve basis, via multiple 24/7/365 email inboxes; CSupport@Harman.com for U.S. and LuxurySupport@Harman.com for EMEA.

Combined, we work together as a Global Customer Support Team to address any support requests that concern our Harman Luxury Audio product brands in the field. This could be anything from fault finding/troubleshooting to wanting to purchase parts.

One of the key assets our Global Customer Support Team is able to leverage in our service mission is an internal database with more than 30 years of product service documentation and accumulated wisdom of the Luxury Audio business unit's brightest minds.

In certain scenarios, particularly with brand new products or legacy products from decades past, we are able to physically interface with our accessible Product Engineering teams in Cambridge (UK), Northridge, CA. and Shelton, CT. This means that some of the answers we are able to

provide are quite literally verbatim from the chief designer or principal engineer that designed the product!

Another of our unique resources is the 'Lux Lab,' consisting of modern home entertainment equipment set up in a realistic use case. This has proven invaluable when it comes to replicating detailed customer issues reported from the field.

Our goal at the Global Customer Support Team is to always deliver complete customer satisfaction to every dealer, distributor, service center and end-user by finding the best and correct resolution to their need. This reflects the quality and excellence standards recognized of Harman Luxury Audio brands and one that sets us apart from our competitors. Collaboration and communication is the key to accomplishing that goal.

On behalf of our global team I would like to close by saying:

It is an honor and privilege that we serve you daily. We encourage you to continue to communicate with us so we can continue to improve and evolve into further quality and excellence standards, recognized with the Mark Levinson, Revel, JBL Synthesis, Lexicon and Arcam brands.

Thank you for contacting Customer Support and have a great day!

Solutions Center

Self-help Advice for Owners of Mark Levinson Electronics

Dale Seidlitz, Manager of Global Quality

In Modern Hi-Fi equipment has moved on a long way over the years and is generally very reliable, giving many years of uninterrupted use with little or no service or maintenance required.

There is, however, one thing that end-users may encounter with their Mark Levinson equipment and that is replacing the accessible mains fuse. By carrying out this simple self-help task, your system will be back up and playing music much faster than if the unit is returned to a dealer or service center.

While a simple task, there are some key points to bear in mind:

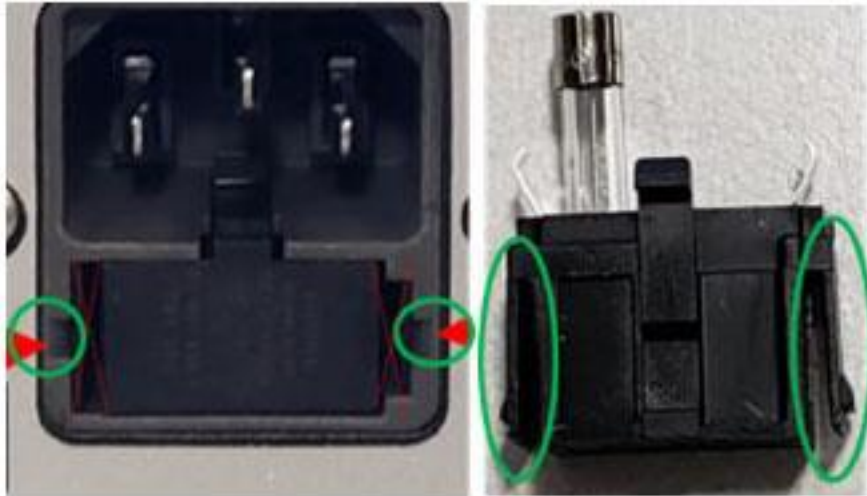
- ONLY outside-accessible fuses can be changed.



- The fuse value and type are shown on the rear of the unit. The replacement fuse **MUST** be of the same type and value. If in doubt, please contact customer support and they will advise and if required send out the correct replacement fuses.
- If the replacement fuse also fails, further advice must be sought, as it may indicate a deeper problem.
- Care must be taken so as not to damage the fuse-holder and we will cover that next...

To change the AC mains fuse, we recommend a very small flat-head screwdriver for this work. It does **NOT** take a lot of pressure or force to pull the fuse holder out.

Pop the fuse holder out of the AC inlet module by pressing down gently on the tabs circled in the green area, shown below and slowly pull back the holder. You might have to unclip alternate sides a couple of times, but once loose, the force from the fuse spring will push it out for you (see graphic below).



If you need a fuse, we have provided the fuse part numbers for you for easy reference. The type of fuse is listed on the back of the unit next to the fuse holder.



From the Audio Files

Home Theater of the Decade

The AVS Forum recently announced its inaugural winner of the Home Theater of the Decade award – chosen from all of the winners of its Home Theater of the Month award.

The winner? The Hahn Theater by Keith Yates Design!

This accolade should come as no big surprise as the Hahn Theater is loaded with Harman Luxury Audio and JBL Professional products, including Mark Levinson No.531H and No.533H amplifiers, JBL Synthesis SDA-4600 and SDA-8300 amplifiers, JBL Pro M2 monitors, and JBL Pro AC28/26 main front side surrounds, JBL Pro 8340A side and rears, and JBL Pro SCS-8 top/ceilings.

The timing of this award being announced couldn't possibly be better, as JBL Synthesis has released a whole suite of products for 2020 to deliver your clients their turnkey solution to the ultimate home theater experience.

There's more to come in 2020 as well, so continue to watch this space!