

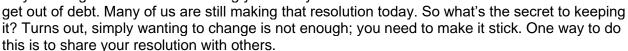
# **Harman Luxury Update - January**

# New Year's Resolutions

By Dave Tovissi, Vice President and General Manager

When did ringing in the New Year become such a big deal? Turns out, it isn't just a marketing scheme of modern Americans. Some 4,000 years ago, Babylonians rang in their new year with an 11-day festival in March. In 46 B.C., Roman emperor Julius Caesar had moved the first day of the year to Jan. 1 in honor of the Roman god of beginnings, Janus.

The origin of making New Year's resolutions traces back to the Babylonians, who reportedly made promises to their gods in hopes they'd earn good favor in the coming year. They often resolved to





When you keep resolutions a secret, no one is going to check up on you. You're only accountable to yourself. That is why I want to share my New Year's Resolutions with all of you and I expect you all to hold me and my team accountable to them.

### Resolution #1

Become a better partner to our customers and our suppliers. In order to build best-in-class products, we need to work more closely with our partners. We need to explore new materials

and new methods to improve the performance of the products we make. That means we need to meet more often. Last year our team decided to invest in Dealer Councils. This year we will be holding several Dealer Councils to closer align your product needs with our technologies and engineering assets.

Our first Dealer Council will occur during ISE 2020 in Amsterdam. With Harman's investments in immersive audio, our first dealer council will be with JBL Synthesis dealers and distributors. We currently have room for a couple more participants for the February 13th at 8:00 AM in Amsterdam. If you are planning to attend ISE and want to be a part of this inaugural session, please contact Scott.Campbell@harman.com .

In March, we will hold another JBL Synthesis Dealer Council at the Northridge Campus. For those of you who aren't going to ISE, you will still have another opportunity to meet with the team developing our future products and services under the JBL Synthesis brand.

Our commitment doesn't stop with customers. I have asked that my team visit with our Tier 1 suppliers in the first four months of 2020. These visits will allow us to review performance metrics attainment in 2019 and to allow the many companies involved the opportunity to share roadmaps and opportunities to be more innovative and quicker to market.

### Resolution #2

Improve the way we bring new products to market. Last year our team was very focused on making sure that we delivered more new products than ever to the marketplace. However, not all those product introductions were accompanied with a detailed plan on how to get our customers ready for them. By reviewing our business unit's processes to bring a new product to market, I realized we were lacking in a couple of very important deliverables.

One of those deliverables is education. I am proud to say that Chris Robinson and his team have launched Harman University, our eLearning initiative, to help address this need. In the New Year, we pledge to have product training available before the products go into mass production. That means that our product development team now needs to work with our training team to determine the best way to launch new products. I have told the team that I will not approve any new product concept or invest in any engineering costs if the product managers have not built in enough time and resources to create the launch and follow-up training deliverables. That means that Chris Robinson and our partners at Training Allies will be hard at work in 2020 to meet your current and future training needs.

We ask for your help to help us achieve our 2020 resolutions. Shortly I will be sharing another survey in which you will be asked to rate Harman compared to your other suppliers. I look forward to receiving the 360° feedback from all of our customers.

By the way, I also want to share my personal 2020 resolution. I call it my "20 in 20 resolution." I resolve that I will lose 20 lbs. in 2020. For the record, I weighed in at 232 pounds on January 1st. The holidays were not good to me for calorie intake prevention. I know I will feel better and be a better leader for the business if I lose some weight and I ask for all your help and encouragement as I work to achieve this resolution.

Happy New Year!



# What's New

# Harman Luxury Audio at CES: Kicking Off the New Decade in Style

By Jim Garrett, Senior Director, Product Strategy & Planning

IJanuary marks not only the end of the restful holiday season, but also the start of the New Year, and in this case a shiny new decade full of promise of the great things yet to come. What better way to kick things off than our annual industry gathering in Las Vegas? This year again saw Harman take over the Hard Rock Hotel and Casino with an amazing showcase of new products and technologies, and a host of activities focused around how we can grow our business together with our customers. It is a unique opportunity for us as in addition to our regular customers and audio press, we see a very high level of traffic from customers from other parts of the Harman enterprise. We love seeing their reactions as they get exposed to —



often for the very first time – what is truly possible in the world of high-performance solutions. For those of you who made it out to see us – thank you. And for those who couldn't be there, read on for a recap of what we had at the show and what made all of those CES attendees so enthused about our Luxury Audio brands.

Our new **JBL Conceal Series** invisible loudspeakers represent the ability to truly make an audio system disappear – and that is exactly what we did. Upon entering the very first demo room of our area, guests were treated to a clean interior devoid of any obvious audio or video equipment. What they heard was great sounding audio coming seemingly from the walls themselves.

With the amplification and source equipment hidden away in a cabinet, and the 65-inch Samsung "The Frame" television in "art mode", there was nothing to detract from the white leather love seat and the images of the upscale interior and exterior views on the sides of the room. It's a look that almost everyone desires – great sound that is heard and not seen. There were a number of comments along the lines of "I wish I had known about this before I remodeled my room", and we even had one major home builder come through who has already committed to a roll out of the product in their new homes for 2020. We are excited about the new JBL Conceal Series and what it can do for you and your customers. Shipments are expected to begin in the second quarter of 2020.

The next stop on the tour was the **JBL Synthesis** immersive audio experience featuring 16-channels of high performance sound. Our new SDP-55 processor was the foundation of this room, with a full complement of SDA amplifiers, SCL loudspeakers, and SSW subwoofers. The 9.1.6-channel configuration showed off the capabilities of the latest Dolby and DTS audio formats and how the system can simply melt away, transporting you straight into the movie. The SDP-55 and its leading edge technology was bestowed the honor of a 2020 CES Innovations Award for the High Performance Audio category. And during the show, the SDP-55 processor along with its first-to-market sibling – the SDR-35 sixteen channel AVR – won a Best of CES award from Mark Henninger and the team at AVS Forum! The combination of these compelling new electronics packaged with our revolutionary SCL and SSW in-wall loudspeakers made for a fantastic sounding room that was big draw for attendees of the Harman exhibit. The SDP-55 and SDR-35 are on their way to the warehouse now and are products you will certainly want to have in your showroom for this year.

While our multi-channel audio systems are mighty impressive, it was the next room that really took things back to our roots as the makers of the finest hi-fi products. The focus of the room was on **Mark Levinson electronics** and the first public demonstrations of the new **Revel Beryllium flagship model F328Be**. Source players included a No.515MC turntable and the forthcoming No.5101 SACD streaming audio player. The No.5101 allowed us to demonstrate high-resolution streaming audio via the use of our MusicLife app. This is a great solution that aggregates your streaming and local content and delivers all of your favorite music in the highest quality possible, all controlled right from your mobile device. The No.5101 also won a 2020 CES Innovations Award for the High Performance Audio category – marking at least four straight years with a win for Mark Levinson. These two fantastic source players fed into a No.5805 being used as a preamplifier, itself driving a pair of No.536 monaural amplifiers.

The loudspeakers in this room were the new Revel F328Be – being shown in a future limited production Signature Edition with a unique high-gloss red painted finish. These speakers command attention visually and acoustically. The sound of this system was a treat for the ears whether it was listening to the Beatles on vinyl or streaming our favorite demo cuts in high-res audio from Qobuz. The effortless dynamics, truly full-range bass extension, and exacting details were breathtaking. The F328Be in a choice of the four standard finishes is on its way to the warehouse now, and the No.5101 will be available in second quarter.

As great as the sound was in the Mark Levinson / Revel room, we used the last room to prove that a great sounding system doesn't have to break the bank. This room was home to two amazing new **JBL loudspeakers**: the flagship of the HDI Series HDI-3800 floorstander, and the all-new L82 Classic bookshelf making its world debut. These two products represent a bit of a yin and yang in the world of JBL loudspeakers.

The **HDI-3800** is host to wealth of patented JBL technologies including a formidable new compression driver mated to a High-Definition Imaging horn and a sound quality that is simply extraordinary. The entire package is dressed in a modern design with a choice of three contemporary finishes.

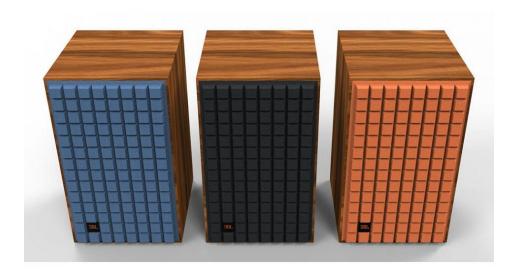
The **L82** Classic leans decidedly in the opposite direction with a retro-style directly taken from its big brother – the L100 Classic. It's a timeless design that is instantly recognizable. The L82 Classic is everything you love about the L100 Classic, but in a smaller and more affordable package. Powering this room was the new Arcam SA30 integrated amplifier with a matching CDS50 SACD streaming audio player as its companion. The SA30 is a product without equal on the market. It combines our stunning Class G amplifier quality with high-res streaming capabilities, Dirac Live room correction, HDMI eARC audio, and plenty more. It is destined to become the best-selling Arcam integrated amplifier. The SA30 and the JBL HDI Series are both arriving at the warehouse now, while the L82 Classic will be available at the start of the second quarter.

Beyond the four main demo rooms, we had plenty more new products to show off in our Luxury Audio space including the world debut of the new **Mark Levinson No.5105MC turntable**. This was part of a selection of Mark Levinson 500 Series and 5000 Series components on display beneath a prestigious wall of awards these products have generated. The No.5105 turntable becomes the second source player for the 5000 Series and the fourth model overall. (We're not done yet either...stay tuned for more at Munich!) The No.5105 is sure to be a hit with its standout design, precision craftsmanship, and remarkable performance. It will begin shipping in the second quarter of this year.

And let's talk about even more awards. The Revel display wall was a trophy case for the Performa Beryllium Series with all five models in front of a backdrop of the key awards they have collectively garnered. Just as a reminder, the F228Be won seven Product of the Year honors in 2019 including *Stereophile* Loudspeaker of the Year and Joint Component of the Year! The M126Be has won back-to-back 2018 and 2019 loudspeaker of the year awards too. As we state in our ads, the Performa Beryllium models set a new standard for performance.

Our JBL L100 and L82 Classic loudspeakers were shown against a backdrop of the iconic Maxell "Blown Away" ad and flanked by recent testimonials from the likes of Lenny Kravitz and the Foo Fighters' Taylor Hawkins. The L100 Classic continued to find itself on more "best of" lists as we closed out the end of 2019, and we fully expect that new L82 Classic will follow in those big footsteps. Last but certainly not least, the complete new JBL HDI Series was on display with each model shown in both the Walnut stain wood veneer and striking new Gray Oak stain wood veneer finishes. (It is unique and really attractive on these models!) Dollar for dollar, you'll be hard pressed to find anything near this level of performance and design – a combination that is sure to land these babies on a number of recommended component lists for 2020. These HDI products are going to be hot this year and you will want to be a part of the action!

In all, we had a great show this year and have kicked off the decade in style with a wealth of new products and a refreshed energy! Be sure to connect with your sales representative and make sure you are in on the momentum that is going to propel us to even greater heights in 2020! And with that, it's off to the next show. See you in Amsterdam for the Integrated Systems Europe 2020 show in just a few short weeks!



# What's New

# JBL L82: A Brand New Classic

By Torsten Sporn, Senior Marketing Specialist

What At CES 2020, the Harman Luxury Audio group announced the addition of a brand new loudspeaker to its Classic series. Based on the JBL L100 Classic loudspeaker introduced in 2018, the new L82 Classic's 8-inch, 2-way system design is more compact, but still delivers a premium hi-fi sound experience and an attractive aesthetic that appeals to both retro and modern sensibilities.

Packaged and sold as mirror-image pairs, the L82 Classic loudspeakers feature a 1-inch titanium dome tweeter with acoustic lens waveguide and front-panel HF Level attenuator. The tweeter is the same as used in the larger L100 Classic. The system's 8-inch cast frame white poly cone woofer delivers a full, natural sound with bass-reflex tuning via a front-firing Slipstream™ port.

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The L82 Classic loudspeakers present an attractive, retro design with vintage JBL styling including an iconic Quadrex foam grille in a choice of three colors — black, orange, or blue — all with a black and bronze JBL logo. The enclosures are finished in a genuine, satin walnut wood veneer and can be positioned vertically or horizontally.

Accessories for the JBL L82 Classic loudspeakers include the JS-80 floor stands (sold as a pair), to elevate and angle the enclosures to a correct tweeter height and to direct high frequencies to ear level. Additional retro Quadrex foam grille packs (black, orange, or blue) are also available to easily fit the speakers into any decor.

The L82 Classic has a US retail price of \$2,500 per pair, while the JS-80 floor stands are \$250.00 per pair and additional grille colors are \$199.00 per pair. Availability begins second quarter of 2020.

Learn more about JBL speakers at <a href="mailto:iblsynthesis.com/products/loudspeakers/">iblsynthesis.com/products/loudspeakers/</a>.



# **Dealer Profile**

# Harman Store

527 Madison Ave. New York, New York 10022

Harman Director of Retail Jamie Feuss

# **Key Statistics and Information**

Opened: 2013

Harman Brands Supported: Arcam, JBL Synthesis, Lexicon, Mark Levinson, Revel

At the Harman Luxury Audio Group, we consider ourselves fortunate to work with the best dealer partners in the consumer audio industry. Moreover, we strive to provide the best possible audio experience to a consumer that knows what pristine sound reproduction represents. This month, we sat down with Jamie Feuss, Harman Director of Retail, to chat about the Harman Store in New York and the role it plays in delivering the Luxury Audio experience to consumers and more.

### Tell us about your team.

Andre Taylor is the Store Manager. Ed Struzziero is one of two Assistant Managers. His focus and passion are "all things luxury hi-end." He worked for years as a Factory Rep for many brands in New England as well as directly with customers as I did for the former Boston-based chain Tweeter Home Entertainment. Justin Marino is our second Assistant Manager. Our entire team (five more Audio Consultants) has been to Northridge and graduated from our Harman Luxury Academy trainings. They can talk about and demonstrate all of our portable audio, head-phone, sound-bars and smart-audio products as well as provide great speaker demos in our downstairs Luxury Audio Space.

My role as Director of Retail for Harman is to keep helping the team with the latest demo tools and store infrastructure, provide training around the brands and products. I also get to collaborate and figure out how to demo and display our products and how to design our stores! I am lucky as I love music and have found a group of people who are also into music and movies. We push each other to learn more about our products and the competition, and can share that knowledge and passion with people who visit.

### Specific to Luxury Audio, what are your mission and vision at the store?

We want to expose people to better sound. We Love to provide Wow moments with the Store Synthesis Theater and the JBL Everest and Synthesis Speaker line. Our mission is to inform visitors of who Sidney Harman was and relate the brand stories of JBL, Mark Levinson, Revel, Lexicon and Arcam.



We can provide store tours for dealers and their clients, and show off some of our key Professional brands as well. We have hosted trainings, events, music performances, new product roll-outs and periodically show luxury vehicles in store with our branded audio. It's fun to point out to people that they could drive to a concert listening to our stuff, get to the concert and hear our stuff from artists who often use our products in recording studios and then get back home to listen to music with our products. It's an eco-system we can show in the store.

### What does Luxury Audio mean to you?

It really just means better! Sound is life-like, the performers are there in the room and you hear it all – vocals, instruments and all the Bass! The experience of listening still gives me goosebumps. Clearly, it also means build quality and longevity, and today with all of our more modern tools and research of measuring sound, luxury means this R&D and build quality are second to none.

## What do you want people to know about the Harman Store?

That it's a fantastic place to experience Luxury Audio. Besides the Synthesis Theater Space where we demo our best surround processor (JBL SDP-75), we also have an acoustically treated stereo sound-room with the Revel Performa Beryllium series and Mark Levinson products for comparative listening.

We love to play our Revel Salon2's to people off the street and show them through a few short demos how truly amazing stereo sound can be with the right equipment. The contrast between listening through headphones and a smart phone with blue-tooth is stark, and we try to explain it all with as little jargon as possible. In addition we show the JBL Everest's on the ground floor where everyone can see and hear them when they walk into the store. We also have the JBL K2 speakers with automotive grade Ferrari-Red finish set-up in the lower level. We can stream hi-res audio to all of our speakers to provide not only great sound but maximum choice for people to hear their favorite music like they never have before. Taylor Swift on the Everests sounds fantastic!

### Any final thoughts or things you want our readers to know about the store?

Yes! As part of an ongoing commitment to improve our guest experiences, we are going to be renovating the Harman Store this year. If you're looking for a demo or just to pay us a visit, call the store number at **(212) 822-2777** and ask for me, Andre or Ed. We want to make sure your visit isn't impacted by the renovations.

Also, we want to reiterate, at the store we work WITH our Harman dealer partners, not in competition with them. We don't ship or install abroad. This means that when we meet people from around the country and around the world who want our stuff, we look for dealers in their area to introduce them to.

Thanks to Jamie for taking the time to tell us more about the Harman Store and what is truly a great visitor experience. Continue to watch this space each month for more profiles on our Luxury Audio dealer partners.

# **Tech Talk**

# **Amp Class**

By Nick Clarke - Senior Director, Global Engineering

### What is DANTE?

An audio power amplifier is designed to drive loudspeakers. To do this it needs to deliver lots of volts and lots of current, usually simultaneously, to a low impedance load across a wide range of frequencies, from below 20Hz up to perhaps 40-50kHz, with no audible distortion. For a nominal 100W rms amplifier delivering a sine wave, the peak output voltage needs to exceed +/- 40V for an 8 ohm resistive load and the peak current +/- 5 Amps. In practice much



more current may be needed to drive real loudspeakers whose impedance dips well below 8 ohms at some frequencies; in the above example +/- 8 amps would be a typical requirement. To drive today's 4-8 ohm loads at 100W this should be increased to +/- 12 amps or more. In real life the power supply rails will need to be closer to +/- 50V rather than the theoretical minimum of +/- 40V in order to account for in-circuit losses.

Such high powers mean that a great deal of heat is typically dissipated in the amplifier itself, especially in the output stage. This is expensive, requiring physically large arrays of output transistors, massive heatsinks and a suitably rated power transformer. So efficiency matters, because more efficient amplifiers generate less waste heat and save both money and energy consumption. As we shall see, the various classes of amplifiers shown below vary widely in terms of their efficiency, complexity, cost and fidelity. An amplifier designer will seek to arrive at the best compromise of these for the market requirement

### Class A

The simplest audio amplifiers are single-ended and Class A; that is they make use of just one output transistor which is always conducting, irrespective of the output signal waveform. Class A has good to excellent linearity (and thus high fidelity / low distortion) but very low efficiency. It is almost never used in a power amplifier's output stages but is ideal for the input and high level driver stages of a power amplifier.

There are some examples of push-pull Class A in the consumer market (Krell, Sugden etc). These use pairs of complementary (opposite polarity) output transistors which at low signal levels pass all the current necessary to drive an attached loudspeaker at full rated power. For the 100W/8ohm example above this would mean the output stage transistors would be biased at 2.5A. With supply voltages of at least +/- 40V the output stages dissipate 200 Watts when delivering no output to the loudspeaker – and that is for just one channel!

It is easy to see why such designs are limited to relatively low maximum power (20 - 50) Watts rms per channel, run hot and are extremely expensive.

### Class B

In a push-pull Class B amplifier each output transistor only conducts for one half (180 degrees) of the signal waveform. When there is no signal neither transistor is conducting – the exact opposite of the Class A amplifier above. The top NPN transistor passes only the positive parts of the signal, leaving the bottom PNP transistor turned off. Conversely the bottom transistor only conducts for the negative parts of the signal, leaving the top transistor turned off. Class B amplifiers are much more efficient than Class A amplifiers but they have high distortion due to gross non-linearities at the crossover point, which is where the two transistors transition from on to off. This form of distortion – called crossover distortion – is extremely unpleasant to the ear and thus no commercial amplifier designs use pure Class B.



### Class AB

A combination of Class A and Class B, the Class AB amplifier has a much higher efficiency than Class A but much less distortion than Class B. This is done by biasing both transistors to conduct a little at and near to zero signal output – the point where Class B amplifiers introduce gross non-linearities.

They then transition to Class B for larger signal currents. For any given amplifier design there will be an optimum bias current which minimises (but does not fully eliminate) crossover distortion. A typical bias current is 50mA; thus the quiescent dissipation in our 100W output stage is 80V x 50mA = 4 Watts, just 2% of the Class A example above. Most commercial power amplifiers are Class AB designs.

In practice the bias current can drift away from the optimum with time, temperature and signal level and this increases the remaining crossover distortion. Much ingenuity has been devoted to trying to improve this, with varying degrees of success. One good approach is to turn off the non-conducting transistor much more slowly than in normal designs using a mix of positive and negative feedback in the output stage so that it can operate in near Class A up to about 10W output. This is used to good effect in the Arcam AVR10 (shown here), AVR600 and AVR750 AV amplifiers as well as the new A49, P49 and A39 stereo amplifiers.

### Class D

Class D amplifiers use a different technique in which the output transistors (usually MOSFETs) are rapidly switched on and off at a far higher frequency than the highest audio signal that needs to be reproduced. The audio signal is used to modulate or vary the time ratio of the on and off signals – hence the alternative name for Class D, Pulse Width Modulation or PWM. The lowpass-filtered average of this output waveform corresponds to the actual required audio waveform. Note this is still ultimately an analogue amplifier – the term digital amplifier is often used for Class D but is simply incorrect.

The advantage of Class D is its high efficiency (80-90%) because the output transistors are either turned fully on or fully off during operation. Its quiescent power consumption is comparable with a Class AB amplifier. Disadvantages include the need for expensive output filters plus some degree of electromagnetic radiation/interference from the amplifier and speaker cables, due the high switching frequencies. In general its sound quality is not as good as a decent class AB amplifier, although the gap is narrowing for the best Class D designer.

### Class G & H

These terms refer to amplifier classes where, in the interests of higher efficiency than Class AB, the output stage's supply voltages are varied according to the signal level. This is because music's peak to mean amplitude ratio is quite high – typically 3 to 1 – so the full power supply voltage is only rarely needed. If the 100W output stage above is usually only run at say +/- 20V rather than +/- 40V (the theoretical minimum value) then it will on average run much cooler when playing music.

Of course extra power supplies are now needed but this cost can be largely offset by the lower heat dissipation (and smaller size) of the whole system.

The terms G and H are often confused – here we use the term Class G to refer to amplifiers that have two (or more) pairs of supply rails available to the output transistors. These can be either switched hard at a given signal level or softly, whereby the higher rails as presented to the output stage are modulated according to the output signal level. This follows the output waveform up and down to keep a small constant voltage of about 5V across the output transistors at high signal levels. The latter technique is used in Arcam's Class G designs (AVR600/750, A39/A49/P49) because it significantly increases the maximum current delivery available to drive the loudspeakers when compared with other methods.

Class H amplifiers use just one power supply to the output stages which can be changed either in discrete levels or continuously. It requires more complex circuitry to predict and control the supply voltage and comes into its own for the compact very high power amplifiers used in professional touring PA rigs.



# **Tech Talk**

# Arcam Next Gen AVRs Establish a New Benchmark in Innovation

By Nick Clarke - Senior Director, Global Engineering

Despite the massive rise of soundbars, which have effectively eliminated the entry level AVR market, it has never been a more exciting time to be in the premium AVR market. With increasing channel counts, eARC and growing DSP horsepower allowing for the enhancement of 3D immersive audio formats, the feature count found on these products are steadily growing, giving end-users amazing flexibility. This is very well summarised in this <a href="Residential Systems">Residential Systems</a> article (https://www.residentialsystems.com/features/home-theater/tech-showcase-av-receivers-2019), which features two Harman Luxury Audio AVRs in their Tech Showcase (Arcam AVR30 and JBL Synthesis SDR35.

As the article shows, the Arcam AVR30 is at the very leading edge of features, which required the use of the very latest in advanced technologies. This includes the introduction of a brand new DSP, which is one of the most powerful available in the audio space. Added to that is an equally complex network streaming solution that also provides the link for the system to the outside world for Over-The Air (OTA) updates. Even the full colour front panel TFT requires its own computer to run it, so for example the text scrolling is smooth when showing a longer track name. In short, these units contain not just one computer with millions of lines of code, but six

computers, each with millions of lines of code, that all need to talk to each other perfectly. Add to that the infinite complexity that comes with the AVR being the heart of a complex system, with no two systems every being exactly identical and the scope of the task of making these leading-edge devices starts to become clear.

From conception to launch it has taken nearly two years to release our newest platform of AVRs. During that two years we faced new product requirements. There were new CODECs from Dolby and Dirac Live Bass Management was announced to the market. Neither of these features were part of the original specification. We also decided that we needed to make it easy for our products to be enhanced through OTA. This will allow the products the addition of Dirac EQ, as well as support for IMAX Enhanced and Auro-3D

### Transparency is Key

In the first ever issue of this newsletter, we made the promise of transparency with our customers. With many millions of lines of software code being written and technology innovation occurring during the manufacturing of our new platform, we recognise that some of the initial AVR production reached some of you with software bugs. We apologise for the additional steps required by some of our dealers to update the software manually to allow for future OTA.

We are working non-stop to repair any software glitches. We have made a number of software releases already to address the most serious shortcomings and will continue to do so. Our newest software release, 0v95, can be found at <a href="https://www.arcam.co.uk/">www.arcam.co.uk/</a> on the specific product page for your model (e.g. <a href="https://www.arcam.co.uk/products,av-receiver,AV-Receiver,AVR30.htm">www.arcam.co.uk/products,av-receiver,AV-Receiver,AVR30.htm</a>). With this release we repaired many of the issues reported to us from the field; full details are in the release notes in the download package.

We will continue to develop leading edge products and technologies and will continue to improve our support for our customers – with a product as advanced as an AVR, it really is no less complex (in some ways more so) than the computing device that you are no doubt reading this on. As a Harman Dealer or Distributor, we ask that you inform your customers on the importance of updating the software/firmware before they set-up their product for the first time. That very important piece of information is called out in our user manuals, but we also realise that many customers do not fully read the manual. Please help us educate customers on the importance to have the product connected to the network for OTA updates, or update via USB. We also encourage you to provide detailed information of any concerns you may have with these new products. The fastest route to a solution is to describe accurately the issue – if it is possible to be reproduced, it can be fixed.

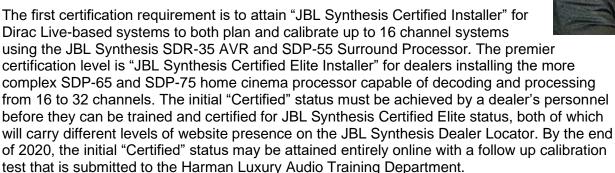
Thanks.

# **Training Tips**

# JBL Synthesis Certification Workshops

By Chris Robinson – Manager, Global Training and Kevin Voecks, Senior Manager, Acoustic Technologies

The Harman Luxury Audio is launching JBL Synthesis Workshops for 2020 to train dealers to properly design and install two levels of JBL Synthesis systems, from smaller room systems to the most configurable large room/high channel count systems. All JBL Synthesis dealers must have technical and sales personnel certified in 2020 to remain Authorized JBL Synthesis dealers. Online e-learning modules, accessible on the Harman Luxury Audio e-learning site, are required before attending a workshop. Utilizing e-learning in this manner enables utilization of the workshop time for more hands-on training and practice. Post-workshop e-learning modules provide testing for final certification.



Implementing quality JBL Synthesis systems involves much more than hardware set up and calibration. The first three E-learning modules provide essential information regarding the variety of components that make up the new JBL Synthesis systems. Additional modules provide training on speaker placement, amplifier programming and Dante network training. Each e-learning module must be passed before one can receive "Certified" status. Workshop time will reinforce e-learning and focus more time on actual Dirac Live hands-on use and practice.

**"Elite" certification** is designed for a dealer's personnel to learn more about designing higher channel-count systems based on the SDP-75 and SDP-65 processors, and becoming fluent in these highly configurable products. Elite certification assures that a dealer's personnel are qualified for high-level system design and the set up and use of optimizer-based systems, including the use of additional tools used in these sophisticated systems.

Most JBL Synthesis Certified Elite Dealers will utilize factory-trained and certified 3rd-party calibrators on these high profile systems, or may opt for remote calibration from the Harman Luxury Audio Northridge office.





### Sessions for the first half of 2020:

Session 1

March 10 and 11: Certified Training March 12 and 13: Elite Training

Session 2

May 5 and 6: Certified Training May 7 and 8: Elite Training

Session 3

June 23 and 24: Certified Training June 25 and 26: Elite Training

Certification workshops are held in our Northridge facilities. Some geographic "Certified" trainings will be held on a regional basis, although all "Elite" training will take place in Northridge. Please contact your regional sales manager for a dealer application form to reserve a spot in one or both of the workshops.

To begin your Certification, please take the available courses on our e-learning LMS site at https://harmanuniversity.talentlms.com/index .



# From the Audio Files

# Revel Concerta2 F35 Makes What HiFi? Best Floorstanding Speakers List

The Harman Luxury Audio Group is pleased to announce that our products have added a couple more awards to their already impressive tally.

Prestigious audiophile magazine *HiFi News & Record Review* designated both the Mark Levinson N°5805 and Revel PerformaBe F228Be as "Outstanding Products."

The N°5805 may be a relative newcomer to the luxury audio integrated amp scene, but people sure have taken notice. In particular, HiFi News noted the amplifier's impressive performance even when challenged by Hiroshi Fukamizu's "Everything for Drums," and Mahler's Symphony No. 7.



Don't take our word for it. Read the entire review here.

Regarding the F228Be, *HiFi News* had complimentary things to say about everything from the soundstage to the finish, but we took particular joy in their sentiment that "there are times when these loudspeakers are just breathtaking." Click <u>here</u> to read the entire review.

These award-winning products are in stock and available for purchase. Contact your Harman Luxury Audio sales rep to get them into your showrooms.

Learn more about Revel at revelspeakers.com. For more on Mark Levinson, visit marklevinson.com.