

Harman Luxury Update - July

Survey Says...

By Dave Tovissi, VP & GM - Luxury Audio

A couple of months ago a survey was sent out to help us determine how we rated against other suppliers with your businesses. I did that for a couple of reasons. First, I wanted to validate or correct some of the assumptions I was starting to form during my first 90 days at Harman. The second reason was for us to have a benchmark of where we actually rated so we could determine if the initiatives we set forth after the survey were improving our ratings with you. Before it was sent out, I was forewarned that surveys often do not have enough active participants to validate the results and that I should not expect many additional comments to the questions I was asking.



So I am pleased to report that many of our dealers did take the time to complete the survey and that most of them also took the time to provide us with additional comments to help clarify their ratings. If you haven't yet provided us with your ratings, don't worry. You can still complete the survey at surveymonkey.com/r/99DLR7K.

For those of you who took the time to rate us, I thank you for doing so and for helping us build a better company to serve you and your customers. We did in fact have a high percentage of dealers complete the survey, and most of you did share your comments regarding the reason you rated us the way you did. With those results we have been able to create process improvement plans and new initiatives to support your businesses.

The results of this survey have been shared with every stakeholder in our company. In summary, Harman received a "Better than most" rating in many of your completed surveys. However, we were told that several areas within our company needed to improve to become "Best in class" in all aspects of your business. We are focused on becoming "Best in class" and have taken your feedback to heart and have already made immediate changes to address your concerns. We prioritized which concerns we would address first and developed action plans and stakeholders to implement the improvement plans.

Here are the areas of the company we prioritized to address first:

- **Provide better and more frequent communications with our dealers.**
That feedback prompted the creation of this newsletter and evaluations of our team's activities.
- **Provide a better way for our dealers to order and track their product shipments.**
That feedback allowed us to fast track our initiative to create a web-based dealer portal. This portal will be fully functional next month and we will pilot it first in the US before rolling it out across the rest of the globe. We will share more information next month regarding our portal initiatives.
- **Provide a higher level of quality control.**
This area was actually being addressed before I arrived at Harman, but we added more individuals and processes to speed up the improvement plan. In this edition of the newsletter you will hear from Dale Seidlitz, our Global Quality Control Manager, explaining his role and the activities put in place to improve the process.
- **Provide better customer support to our dealers and their customers.**
We are not only hiring more people to support your business, but we have been purchasing more spare parts and creating better processes to address service matters.
- **Provide more frequent and better training.**
We are excited to announce that we have hired Training Allies to help create an e-learning platform and Chris Robinson has already been holding more WebEx trainings.

In future newsletters we will be updating you all on other initiatives that have been implemented based on your feedback from the survey. Stay tuned and stay connected with Harman through these monthly communications.

What's New

Our Latest Update on Tariffs

As you may be aware, discussions between the US and China resulted in the positive outcome of no new tariffs in place as of July 1, 2019. There had been the possibility of 25% duties on certain items manufactured in China, including speakers, soundbars, headphones, Bluetooth devices and voice-activated electronics. We are happy to share the good news that so far no new tariffs are in effect, and will continue to monitor the situation. Should anything change in the coming months, we will inform you immediately. In the meantime, we will continue to evaluate opportunities to offset the impact of potential tariffs applicable to the consumer electronics category.

Some products currently impacted include:

List	Duty Rate	Effective Date	Impact for Harman*
List 1	25%	July 6, 2018	raw materials
List 2	25%	August 23, 2018	raw materials, surround processors, mixer consoles and amps
List 3	10% in 2018; 25% from May 10, 2019	September 24, 2018	Amplifiers, headunits, raw materials
List 4	Up to 25% (TBD)	On hold	Speakers, headphones, microphones, soundbars

We greatly appreciate your business. Should you have any questions, please contact your Harman sales rep.



What's New

JBL Synthesis SSW-2 Subwoofer

JBL Synthesis loudspeaker systems take control of your emotions and don't let go. Part of the JBL Synthesis Subwoofer series, the SSW-2 is an ultra-high performance passive subwoofer acoustically designed to complement any of the JBL Synthesis Custom Loudspeakers (SCL Series) as part of a complete JBL Synthesis solution.

The SSW-2 features dual 12-inch cast-frame, composite cone woofers, each with massive four-inch voice coils for total system power handling of 1200W RMS. Cabinet tuning is via dual front-firing tuned ports featuring JBL's patented Slipstream™ contouring for incredibly low-noise performance. The robust enclosure is constructed from minimum one-inch MDF with extensive internal v-bracing, and includes a steel-frame, magnetically attached cloth grille. The configuration of the enclosure allows it to be positioned vertically or horizontally for tremendous placement flexibility in applications including built-in, behind a screen, or in-room.

The [JBL Synthesis SSW-2](#) retails for \$3,500.

More on JBL Synthesis systems: www.jblsynthesis.com. And be sure to visit us at CEDIA for exciting news regarding JBL Synthesis, your turnkey solution for the ultimate in home theater.

Dealer Profile

Peter Tyson

Carlisle, Newcastle and Workington, United Kingdom

Executive Team

Founder Peter Tyson

CXO Paul Tyson

Director David Tyson

Director Janet Tyson

Key Statistics & Information

Employees 50

Harman Brands Supported Arcam, JBL

We recently spoke with Matt Tyson of Peter Tyson, one of the UK's premier HiFi and audio dealers. Here's what Matt had to tell us...

How did Peter Tyson's start up?

The business was formed in 1966 when my father, Peter Tyson, who was a TV engineer, built up a business from repairing and reselling televisions. The business then expanded into selling televisions, VHS, white goods and other appliances. In 1981, the business branched into Hifi and Arcam was one of the first brands to this portfolio along with other well-known British Brands. Most of our business is online; we sold our first product online in 2000, so we have a wealth of experience in the ever-changing retail environment. We also have 2 outlets; 1 big superstore in Shaddongate where the head office is based, and a shop in Newcastle – both of these stores have a full Dolby Atmos theatres featuring an Arcam AVR.

How many people are in the team?

We have 50 people across the business but 10 of those are Hifi specialists who are experts in the brands. Most people have never heard of Hifi, so having dedicated experts to this category is one of our unique selling points. Because we sell a range of products for the home, we expand the opportunity for Hifi to be introduced to new consumers, allowing Tyson's to cross-sell hi-fi products.

Thoughts on the importance of training?

Training is massive to Tyson's, especially for our 'brand' experts. We have at least 2 training sessions a month with the manufacturers of the products we sell, and we take training opportunities at manufacturer premises whenever we can. Arcam has always been great for providing training, and the quality of training has always been good. The training we get for our in-house brand experts really sets us apart from the competition which again, provides one of our unique selling points.

What do you like most about the products and which ranges do you see as the key products?

We have been a retailer for Arcam and other well-established British brands such as Linn, Naim and Marantz for over 30 years. From the Harman Luxury Audio brands we have recently added some of the JBL Loudspeakers lines.

Arcam's AVR's are one of our key hi-fi products, is it our go-to brand for home cinema. The AVR's are a cut above anyone else's – high performance, simple to use, simple to set up and install. This is why we feature them in both of our theatres. The JBL L100's are a great addition to our product ranges with their unique styling – they have a great story and sound great – we are also trying out some of the other Harman Luxury Audio ranges'.

How do you think the audio industry is currently doing?

I think the industry faces many challenges because music is now predominantly streamed, but it's also consumed more than ever which provides a great opportunity for the industry to deliver new products and services. We consistently invest in our business to keep up with the changing environment to provide the best products and service to our customers.

Many of us at Tyson's have a passion for Hifi – my first Hifi product was 20 years ago, I bought an Arcam Delta 290 along with the matching CD player – we have been in the hi-fi business for over 30 years which is rare to see, this gives us great knowledge and experience in the industry.”

What is Peter Tyson's mission?

Our mission is to deliver a fantastic service at a competitive price. We are focused on providing the best service and experience to our customers. We are a forward-thinking company with a level of experience and knowledge that puts us in a unique position to provide the highest level of customer care. We not only have a great online and retail store presence, but we also have dedicated teams who can deliver and install products too.

As an example of our forward-thinking ethos, we hold many events in our superstore to promote products and engage our consumers. We recently held an event that featured a celebrity chef and, we have hosted many movie nights!”

Any final comments?

To summarise, we are a loud and proud Arcam dealer, and we think there are some really interesting products coming up for the brand which we are excited for. The JBL L100's are a great addition to our portfolio and provide an excellent match to the Arcam 2 channel Hi-fi products. We have a great relationship with the team at Arcam, the support from the team has always been great, and we look forward to the new product launches and further training opportunities.

You can learn more about Peter Tyson on their website at petertyson.co.uk



Tech Talk

Dirac Live Hints and Tips

**By James Todd – Technical Trainer,
Harman Luxury Audio Group EMEA**



Dirac Live is an immensely powerful tool for getting the most out of an audio system with Arcam and Lexicon AV products. However, it is not an automated process – and it is all the more powerful and useful as a result. This means that anyone attempting to optimise with Dirac Live has the opportunity to make it worse! This is a set of tips that will help you avoid the most common mistakes when implementing Dirac Live.

1. System design and installation

Dirac is capable of improving the performance of all loudspeakers, including those that may not be in ideal locations. However, a system with loudspeakers in sonically ideal locations will still sound better when giving Dirac less to correct. We recommend the Dolby Atmos setup guide (available from the Arcam and Lexicon websites) be consulted as part of any system design. With or without Dirac, a correctly positioned speaker will always sound better than an incorrectly positioned one. So make sure a system is capable of sounding good before Dirac.

2. Tools

There is a selection of items you must have to complete Dirac Live optimisation:

- i) A PC or Mac computer. It will need to have Windows 10 or MacOS High Sierra/Mojave for the latest versions of Dirac Live.
- ii) A microphone stand. A high quality measurement microphone is supplied with Arcam and Lexicon AV products but you will want microphone stand, ideally with a boom, to hold the microphone steady and free of contact with furniture.
- iii) A spare router. This is important for those who offer Dirac Live optimisation as a service. If you don't know the network, don't get bogged down in trying to fix communication errors between the Dirac Live software and the Arcam or Lexicon AV product. Instead, get out your own router that you have used before and, most importantly, you know works!
- iv) Two ears and a brain. Engage both to evaluate what Dirac has measured, how to make suitable adjustments and analyse the result with your ears.

3. Software updates

Before adjusting any settings or starting Dirac Live software, make sure the Arcam or Lexicon AV product is operating the latest software. Visit the Arcam or Lexicon websites to find the latest versions. The latest version might still need to be loaded onto brand new products. The final part of any software update to an Arcam or Lexicon AV product is to factory reset the device. This will erase all settings and Dirac profiles loaded, so it is advisable to complete the software update as the first task. Visit live.dirac.com/download to get the latest version of Dirac Live.

4. AV product settings

There are some settings within the Arcam and Lexicon products which are vital for Dirac to function correctly:

- i) Enable and disable all loudspeaker channels as appropriate; otherwise, Dirac will attempt to optimise loudspeakers that are not present, or not optimise channels that are.
- ii) Within the General settings of the product, the Control must be set to "IP." If not, the product will not respond to commands sent by the Dirac Live software.

5. Microphone selection and calibration file

On the face of it, this might seem a simple step but it's important to get right. Get this bit wrong and the whole process from here is in error and will make the optimisation sound worse. The things to watch out for here are:

- i) Ensure you select the microphone you intend to use and not the microphone built into your laptop. If you are not sure, disconnect the microphone you want to use and watch it disappear from the list. Reconnect it and select the newly appeared icon in the list (unlike the old versions of Dirac Live, the latest versions allow for the microphone to be hot-pluggable, meaning they can be disconnected and reconnected without needing to restart the program).
- ii) Make sure you have the correct calibration file for the microphone you are using. 3rd party microphones will have a calibration file available to download from the manufacturer's website. The calibration file for the microphone in the box is included in a bundle of downloads from each product's respective webpage. If you are using the black USB stick microphone we supply, please use Arcam_AVRMicCal2 or Lexicon_AVRMicCal2. You will find another calibration file included within the same directory of the download. This is for the original puck microphone with USB adaptor which we no longer supply.

6. Volume calibration

This step in Dirac is about setting the levels for measurements. It does not define the gains applied to each channel after calibration. There is a 4-step process for correctly setting the volume levels without spending hours endlessly tweaking:

- i) Position the microphone in the Main position. If you are not sure where this is, consult the Measurement Arrangements in the next step. The main position is always in the head position of the centre seat in the room with the microphone pointed straight up at the ceiling.
- ii) Observe the level meter next to the Mic Gain adjustment. If you can't see it, you likely have a lovely quiet room. If you can see it, make efforts to reduce noise by turning off projectors and air-conditioning. If there is background noise that you cannot control (sustained noise and not occasional) you can compensate by reducing the Mic Gain gently until the level meter disappears at the bottom (the dB reading will remain). You should not be playing pink noise out of any channel for this step.
- iii) Next, play the pink noise in each loudspeaker and raise the master output when you find the next quietest channel. Your reference is the quietest loudspeaker. Raise the Master Output until the level from the quietest channel measures close to, but below the 100% mark on the Mic Gain level meter. When the test tone stops you will be left with a level mark for that channel. This will be somewhere between -13dB and -16dB.

iv) At this point, all the other channels are showing a higher output level than the quietest channel used for reference. You should now reduce the output for those channels one by one. You should not be adjusting the Master Output or the Mic Gain at this point. If you have played a test tone out of each speaker already, a level mark will have been left so you do not need to play the tone again. You can reduce the channel level and Dirac Live will give a visual feedback. However, it is more accurate to do this with the pink noise playing. Do not be concerned with matching the measured level exactly. Dirac Live measures within 0.1dB but you only need to ensure that all the levels are within +/- 0.5dB. Dirac Live will measure the output levels for setting gains during the measurement process.

7. Measurement arrangements

There are several things to bear in mind when considering your measurement positions, and these might help you select between the measurement arrangements:

- i) Never measure within 18" (45cm) of a boundary (wall).
- ii) Keep all measurements a minimum of 12" (30cm) apart.
- iii) Remove any objects (chairs or other furniture, including yourself) from the line of sight between the measurement microphone and all the loudspeakers (don't worry about this for subwoofers).
- iv) The more measurements, the better the result.
- v) Don't take measurements of seats/areas that are not important or relevant to the cinematic experience. Keep measurements focused around the best seats in the house.

8. Taking measurements

To get the best measurements, consider the following:

- i) Keep the room quiet. You should already have turned off sources of background noise (projectors, AC etc.) at the volume calibration step. Ensure that the measurements are taken without background noise from other sources – particularly doors being opened and closed, and conversations in adjacent rooms. The microphone will pick this up.
- ii) Ensure the microphone is oriented straight upwards for each measurement and that the microphone is securely fixed in position with the microphone stand.
- iii) Don't be afraid to abort and re-measure positions where interruptions occur.
- iv) Get a longer USB cable for USB measurement microphones where required. Longer cables do not affect measurement performance except for the general cable length limits of USB 2.0.

9. Filter design

After you have taken all your measurements, it is time to create your optimisation. This is achieved by manipulating a target curve. The target curve is the output you want Dirac to achieve, and Dirac will achieve your target by creating mixed-phase filters in the background. Beyond taking erroneous measurements, this is where it can all go wrong and so you will need to engage your brain! Consider the following tips:

i) Know what you are looking at. Dirac Live presents the results of the measurements with an average output by frequency. The speaker will govern at what point the low frequency output starts to roll off as frequency descends, but otherwise the measured response below 300-500Hz is almost entirely dictated by the room. Above 300-500Hz, the measured response is very much that of the loudspeaker. Here you might be able to spot some patterns associated with the tuning of some speakers. Overlaid on this graph is the target curve which you will manipulate to create the chosen optimisation for your system.

ii) Load the Harman Target. The Harman target curves are included in the download bundle with the microphone calibration files from the Arcam and Lexicon websites.

a. These targets have been developed as part of Harman's wider research into the science of sound and verified through subjective and objective listening tests by trained and untrained listener groups in double blind tests (neither the test operator nor the subject knows what they are listening to – all samples are hidden behind acoustically transparent drapes). These targets are proven to offer optimum sonic performance and can be deployed across all loudspeakers, with modified versions available for subwoofers and limited range loudspeakers.

iii) Use the same target for all loudspeakers where relevant (the exception is going to be the subwoofer). You should never set a different target for loudspeaker pairs – this is why they are grouped as pairs by default. You can, however, drag and drop loudspeakers from one group to another within Dirac Live to treat more loudspeakers with the same target. Equally, you can save and reload a target onto additional groups of loudspeakers. If all the speakers are the same, give them all the same target. It will sound better and save time.

iv) Focus on adjusting the low frequency and high frequency roll off. If you are using the Harman target curve, there is very little that you need to change, but you should always pay attention to the low frequency and high frequency extremes. Never ask Dirac to add output beyond the loudspeakers' measured capability; this will only add distortion and can damage speakers and amplifiers (shown below in red).

10. Dirac is amazing, but has limits

Dirac Live filters are delivered within the DSP of the AV product and at most can add 8dB. It is not wise to use all this gain as it can be detrimental to sound quality. On the flip side, Dirac can reduce output endlessly. Large peaks in the measured response can easily be flattened for much smoother sound but large troughs in the measured output are much harder to correct. You should insert a "notch" into the target curve to reduce the gain that Dirac Live will attempt to add at that frequency. You can verify the effect of the target by checking the "corrected" box on the right hand side column (under the channel groups). This will show you the expected corrected response that Dirac will achieve. If the trough is significant in size, Dirac may not be able to fully correct it anyway.

11. The Top Tip – practice makes perfect

There is no better understanding than that gained from experience so where possible, undertake a Dirac optimisation as frequently as possible. Those who regularly optimise systems with Dirac in a variety of different rooms will be better at getting the best results.

Training Tips

Luxury Audio to Launch E-Learning Site this Fall

By Chris Robinson, Manager, Global Training



Dealer Training is a key requirement for our dealers to sell and support the wide range of the HARMAN Luxury Audio Group's products and systems. With five brands and an increasingly knowledgeable consumer, it becomes a challenge to support our dealers' informational needs solely with training academies, Web-Ex sessions and in-field training. As a result, we are teaming with Training Allies to supplement our existing programs with a customized online university that's user-friendly and optimized for our dealer partners' learning needs. This tool will provide easy access to valuable information and resources to more effectively sell and install Mark Levinson, Arcam, JBL Synthesis, Lexicon and Revel products and systems.

There are multiple applications for our new E-learning program. First, all of our training programs and resources will be hosted on a new Luxury Audio Learning Management Systems (LMS) site, providing 24/7 access to training materials for our dealer partners in the USA and around the globe. A dealer can just register and then have access to newly developed training modules, videos and an archive of previously used materials.

New narrated training modules are already in development. Subject content will be designed for an engaging, interactive experience that is broken into brief timeframes (less than 10 mins each). We want our dealers to have access to informative to easily have a conversation with a customer and help show value and the unique benefits of our products and systems.

E-learning modules will also simplify the technical elements to make the content more digestible, while still addressing "deep end" topics for those hungry for details. Non-technical but equally vital aspects such as selling tips and presentation methods will also help our partners elevate their sales strategies.

In addition to E-Learning modules, we will post video content from our Training Academies in which the industry greats that lead our acoustic research and engineering groups share their wisdom. We'll also share installation resource information from specialized workshops, and lastly, information on future training events.

We're confident that E-learning will make it easier than ever to present and sell Harman Luxury products more effectively.

Solutions Center

Harman's Quality Improvement Plan



By Dale Seidlitz, Manager of Global Quality

At Harman, we've always had a commitment to outstanding quality. But if you're not constantly striving to improve, are you really doing all you can in that commitment? Even if perfection may seem unrealistic, if that isn't your ultimate goal in quality assurance, are you aiming high enough? As the Manager of Global Quality, I won't be satisfied until we get there.

In the meantime, as long as customer concerns exist, our goal is to achieve full understanding of the reported quality issue within the first 48 hours of learning about it. This requires the acquisition and understanding of a tremendous amount of information.

- Does the reported issue affect one unit, or multiple?
- Is it an unprecedented concern or has it happened before?
- Is the concern limited to a particular country or region, or is it potentially global?
- Is it user error or mechanical?
- What are the symptoms?
- When does the problem occur?
- Is it possible to photograph or take video of the issue?

The list goes on, and there is no such thing as too much data when it comes to resolving and preventing future occurrences of a quality concern.

Once we have all available data, we hope to reach the conclusion that the concern is easily addressed and corrected directly with the user. Regardless of whether the issue is minor or more severe, any time a concern is brought to our attention we immediately initiate our stringent corrective action protocol. Here's an example. We received reports that a brand sticker was coming off of one of our models of bookshelf speaker. Right away, Customer Service was provided brand new stickers to send free of charge to any customer who reported the problem. Simultaneously, the Quality team alongside manufacturing immediately began evaluating the entire production process to learn and understand the cause of the issue. Was it the speaker's finish? Was the speaker not cleaned properly before the sticker was applied? Was it the quality of the adhesive? After an extensive testing process, it was determined that the issue was indeed the use of a subpar adhesive, which was subsequently and immediately eliminated from use.

Even seemingly simple problems get exhaustively researched. Let's say someone purchased a new AVR and the remote was missing from the box. They call customer service, get excellent care taken of them and a new remote expedited to their home. Problem solved, right? Well, this instance is solved, but why did it happen? Human error is rarely if ever accepted as the root cause of a problem. A symptom, sure. But a manufacturing process failure is virtually always related to work methods, machines used, insufficient manpower, training, or testing. Yes, we

addressed the immediate concern of getting a replacement remote shipped to the customer, but how many other units are affected? To how many countries could affected units have been shipped? Do we have enough replacement remote controls to send to customers should the problem not be isolated to the one unit? These are the questions we have to answer while also taking the corrective actions necessary to avoid this issue being repeated.

All reported quality errors are treated seriously and entered into a system where we track them by type, frequency, repeatability, geography, and product. This type of attention to detail allows to get real time quality data on the performance of our Luxury Audio products, as well as the necessary knowledge to track predictive trending to proactively eliminate potential issues before they happen.

Luxury should be synonymous with quality and as the Manager of Global Quality, my commitment to you is that in Harman Luxury Audio, it always will be.

From the Audio Files

Mark Levinson No.5805 Integrated Amplifier

Stereophile

June 20, 2019

The Mark Levinson No.5805 is featured on *Stereophile* magazine's front cover. According to reviewer Jim Austin, the No.5805 is "the very model of a modern integrated amplifier," and combines "high performance and build quality with a price tag that's moderate by hi-fi standards."

<https://www.stereophile.com/content/mark-levinson-no5805-integrated-amplifier>

