

Magico - March 11, 2014

Created on Tuesday, 11 March 2014 18:04

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Magico 2014 Introduction

The last time the SoundStage! Network visited Magico was when Jeff Fritz and Pete Roth visited in March, 2011. Back then Magico was located in a 5000 sq. ft. Berkeley, California, facility, which was mainly used for design and assembly, since the company sourced most of its loudspeaker parts from vendors.



Since 2011 the company has grown considerably and has moved to a 40,000 sq. ft. factory in Hayward, California. Not surprisingly, its production capabilities have increased commensurately -- this new building is now home to a full machine shop housing five CNC machines, which make the bulk of the parts for Magico's current generation of loudspeakers.



Company founder and president, Alon Wolf, stands proudly at the front door of his new headquarters.



The view of the lobby from Alon Wolf's office door. Some parts for the Ultimate III loudspeaker can be seen laid out in the middle due to full production of other speakers taking place in the main assembly area. The Ultimate III is Magico's top-of-the-line loudspeaker; it's a five-way, horn-based system that retails for \$600,000 per pair.



On the right side of the lobby (as you enter through the building's main door) is a display of some of the magazine covers that have featured Magico's products over the years.



Toward the rear of the lobby are five S5 loudspeakers and the entranceway to the "Magico museum."



At one end of the "museum" are the current-generation S1 (far left) and S5 (second from left) speakers, while on the right side are the previous-generation Mini (right), V2 (second from right), and V3 (third from right) speakers.



On the opposite side of the room are the current-generation Q5 (far left), S1 (far right), S3 (second from right), and Q1 (third and fourth from right) speakers. Between the Q5 and Q1s are the internal structures of the Q5 and Q1.



On the rear wall of the "museum" are some of the awards the company has received over the years. To date, Magico has received seven Grand Prix awards from *Stereo Sound*, the most prestigious magazine in the Far East, as well as . . .



. . . four SoundStage! Network Product of the Year awards. The latest SoundStage! Network award was for the S5 loudspeaker.



Alon Wolf at his desk.



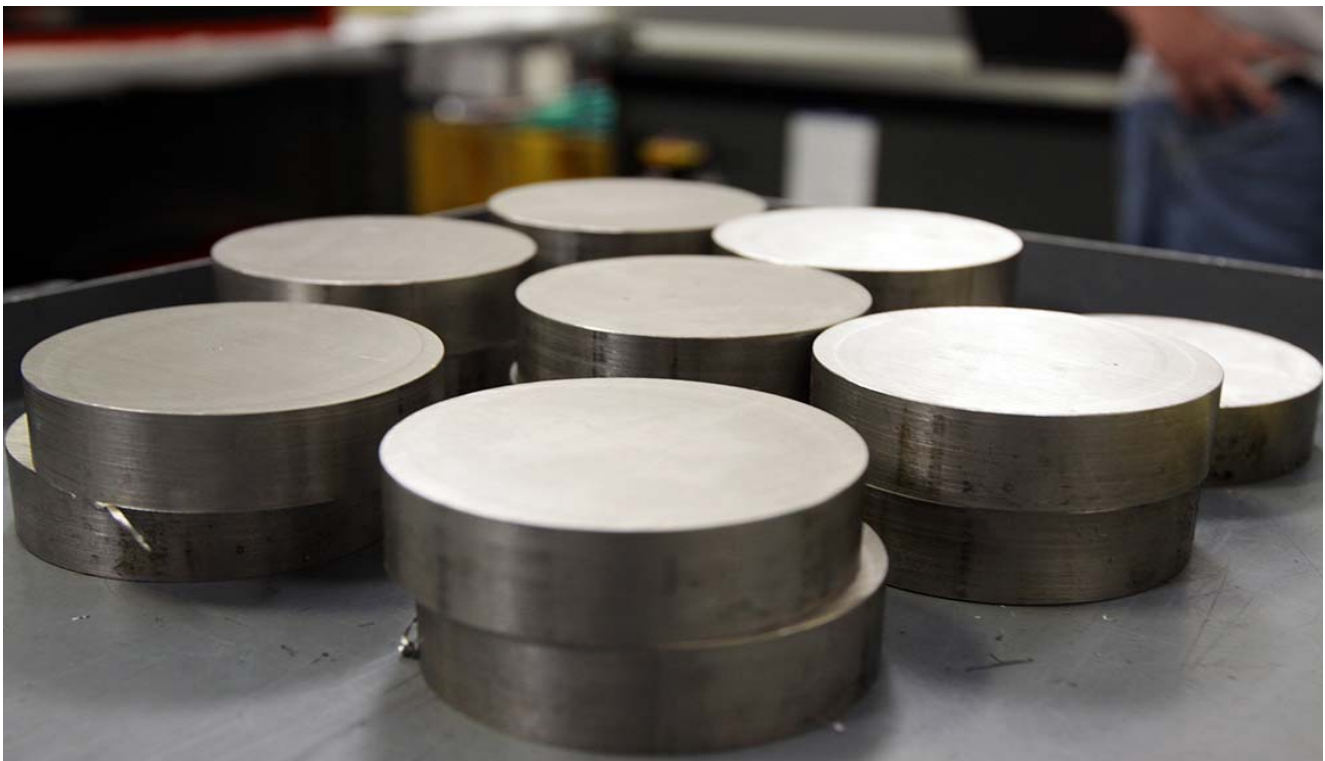
Besides high-end audio, Alon's other passion is high-end photography. Alon is never one to skimp on quality, regardless of what it might cost him. His preferred shooting tool is a Phase One medium-format camera.

Metalwork at Magico

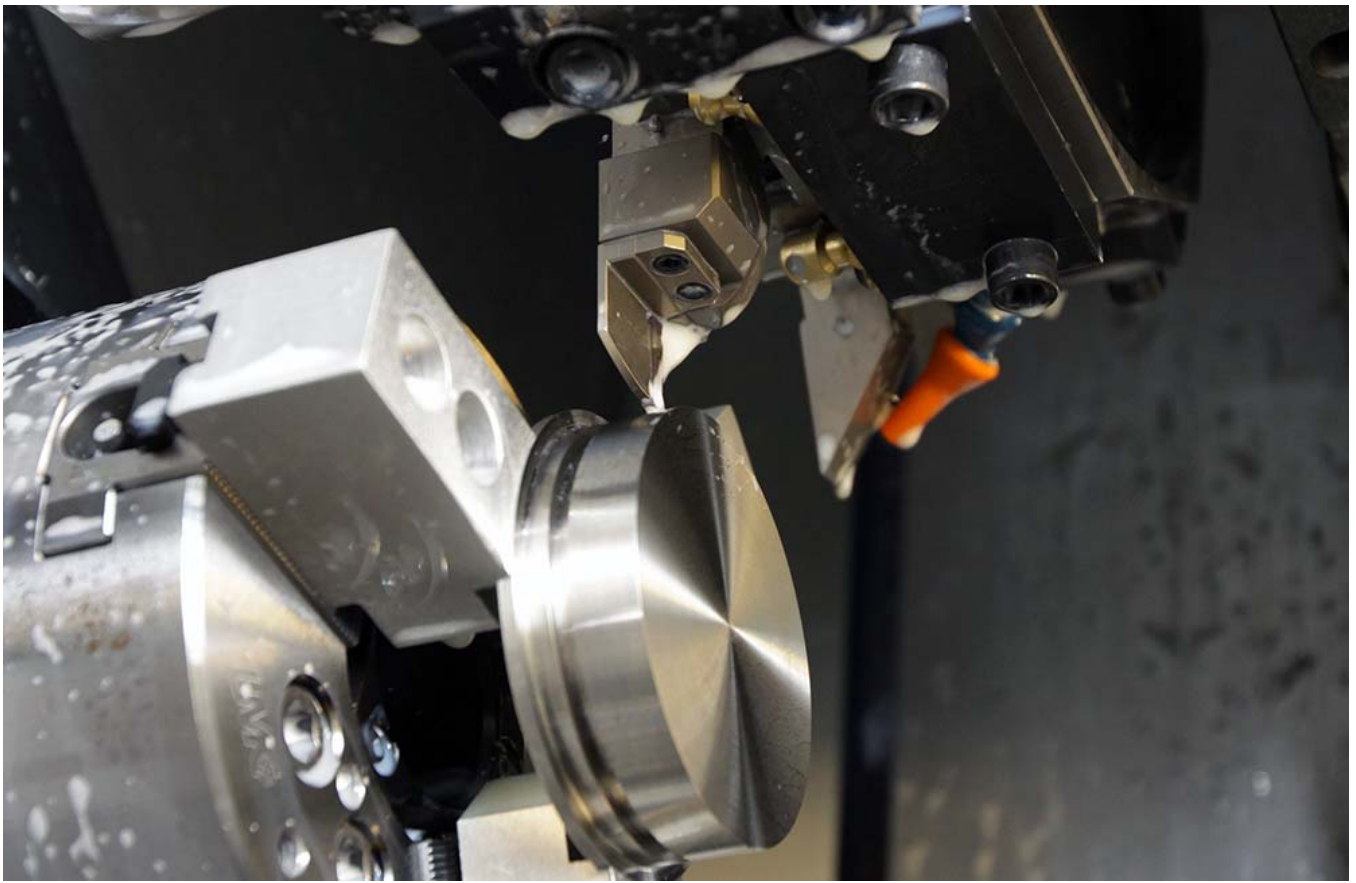
Magico made its previous generation of loudspeaker cabinets using combinations of metal and wood, whereas Magico's current-generation models are all made of metal. Not surprisingly . . .



. . . Magico's new facility is home to an impressive machine shop housing five multi-axis CNC machines.



Magico manufactures most of the loudspeaker parts in-house. This photo shows the raw "pucks" for a portion of a Q7 footer.



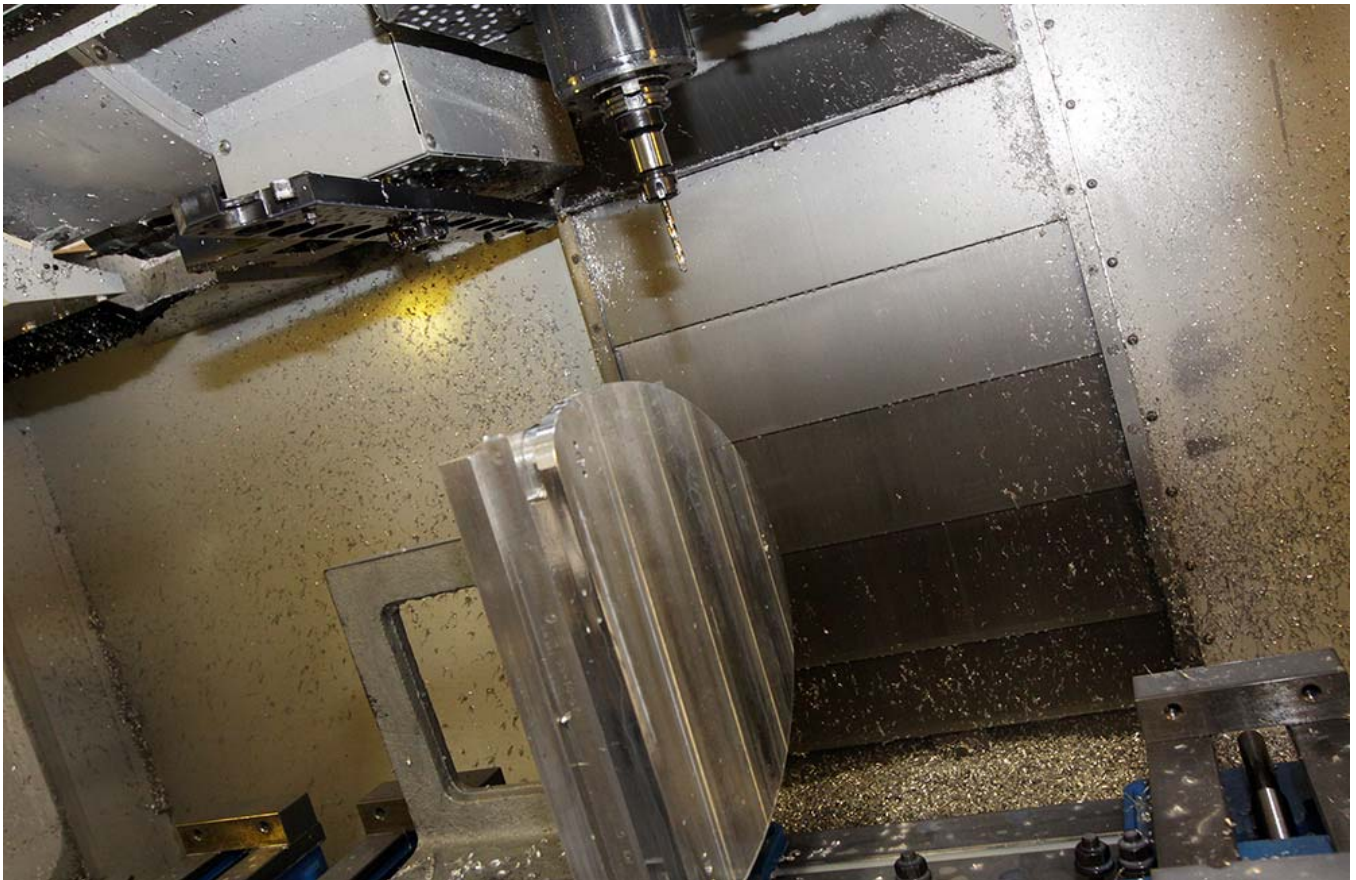
The pucks are then transformed to footers in the CNC lathe.



The top portion of the finished Q7 footers.



The machined S5 top plates shown in the photo above . . .



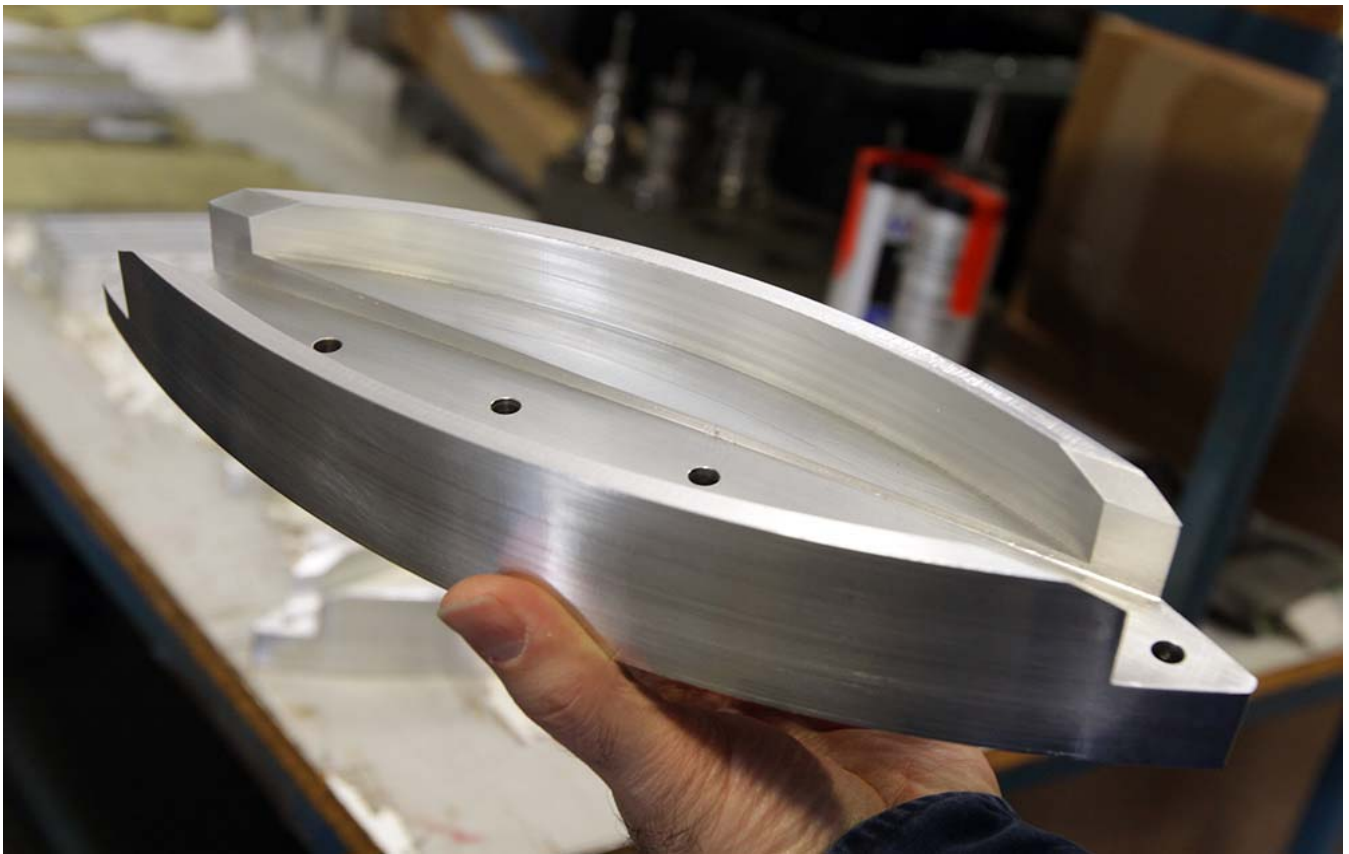
. . . start out looking far less finished.



Toward the end of finishing, bolt holes are drilled and then tapped.



The completed S5 top plate ready for final finishing.



The termination piece for the Ultimate III's rear rails.



Like the S5 top plate, a cabinet wall for a QSub 15 . . .



... starts out completely unfinished, but is transformed in the CNC machine.



This much metalwork creates a lot of waste material, but ...



... all the metal filings are gathered, grouped, and recycled.

Magico Parts Inventory and Inspection

With Magico's increased manufacturing capabilities, maintaining an adequate parts inventory is of paramount importance to meet consumer demand in a timely fashion. As a result, a large portion of the factory space is dedicated to inventory and inspection to ensure that defect-free parts are on hand when they're needed.



Alon Wolf points to the vast quantity of parts kept on hand for speaker assembly. Magico manufactures most of the parts in-house.



Magico's S-series cabinet extrusions are fabricated in the US and are . . .



. . . individually inspected in order to verify that they meet the company's tight tolerances before they are sent for finishing and then assembly.



Parts for the Q-series footers.



The dampers for the QPod isolators.



Magico's production process involves working in "rack batches." On this rack are the parts for four pairs of S1 loudspeakers in a variety of finishes.



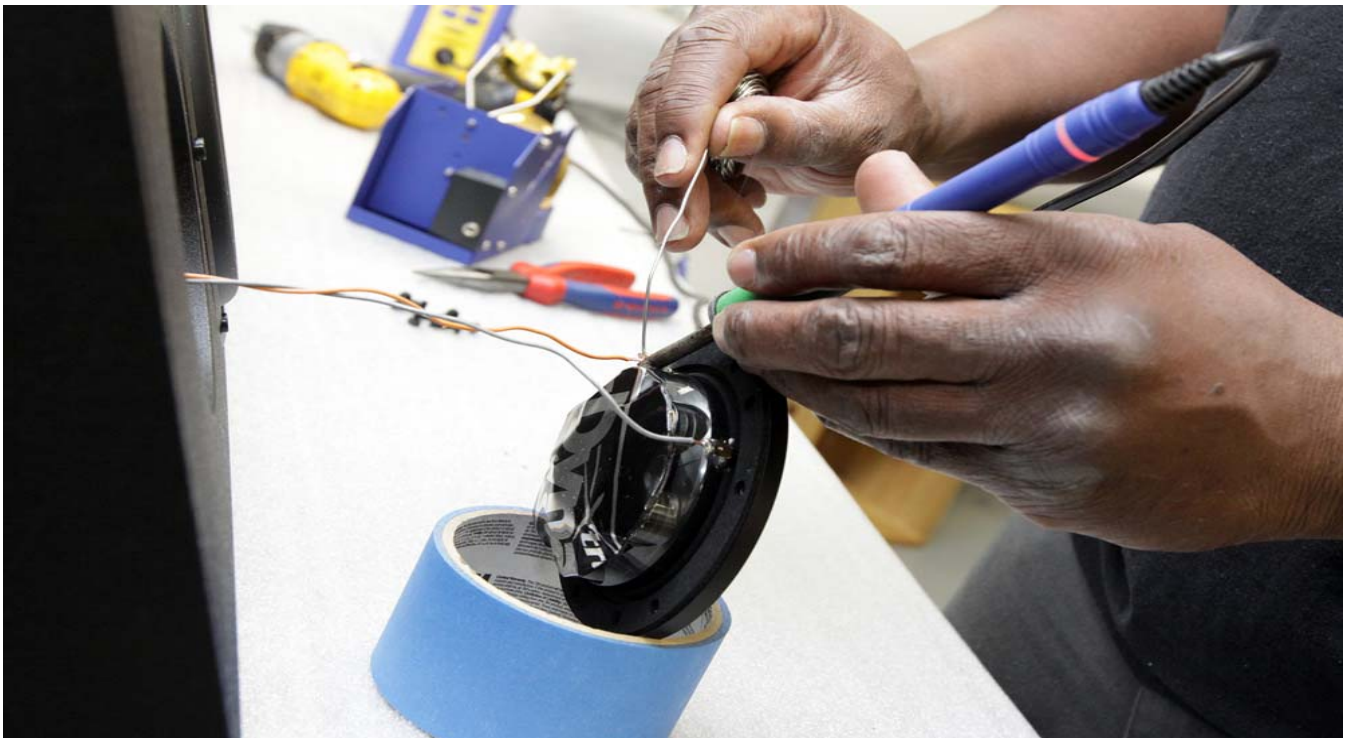
The parts for two pairs of S3s are being taken to the assembly area.

Magico's Assembly Area

Magico's sales and manufacturing capabilities have increased markedly in the last few years, so it's no surprise that the assembly area for all the models they have now has expanded greatly as well. Currently, every . . .



. . . Magico speaker, from the entry-level S1 to the top-of-the-line Ultimate III, is assembled in this space.



Soldering the wires for an S3 tweeter.



Connecting an S3 woofer.



Attaching the front baffle to a Q5 speaker is a two-man job.



The front baffle must be carefully lifted, then . . .



. . . turned vertically and inserted into the metal guide rods that are built into the cabinet.



Once the front baffle is fully inserted, it's secured with rear-baffle bolts that thread into the rods. The amount of material that goes into every Magico speaker is impressive, but so too is the amount of labor.

Magico's Multistage Quality Control

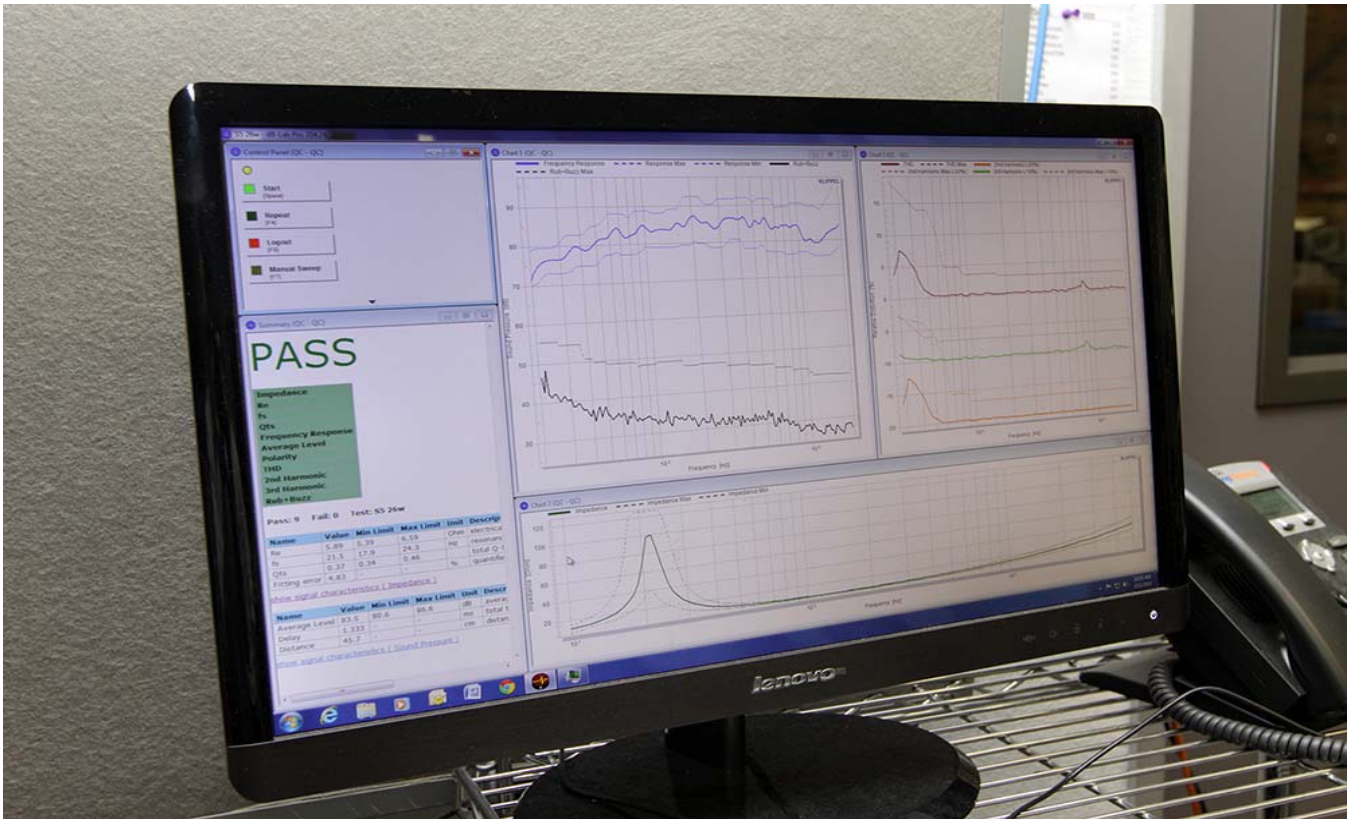
One of the things we're very aware of at the SoundStage! Network is quality control (we're also very critical when we see that it's lacking). Great quality-control measures are vital because they ensure that the consumer gets the product he or she paid for, and nothing less. I was personally pleased to see that Magico employs topflight quality-control procedures not just at one stage of production, but at several stages.



Prior to assembly, drive units are . . .



... mounted in appropriate enclosures and ...



... measured and then verified against references before being forwarded on. Magico uses a Klippel-based system for all acoustic and electrical testing, which is important -- Klippel's testing systems are considered to be the best in the industry.



Immediately following assembly, all speakers are burned in for at least 24 hours to determine if defects crept in during any of the previous processes.



Acoustic measurements follow the burn-in period. Each speaker is measured and then verified against a reference.



The final stage of testing is a visual one -- an inspector examines every square inch of the cabinet to determine if there are any flaws in the finished product before it's packed up and shipped.

Magico's Listening Room

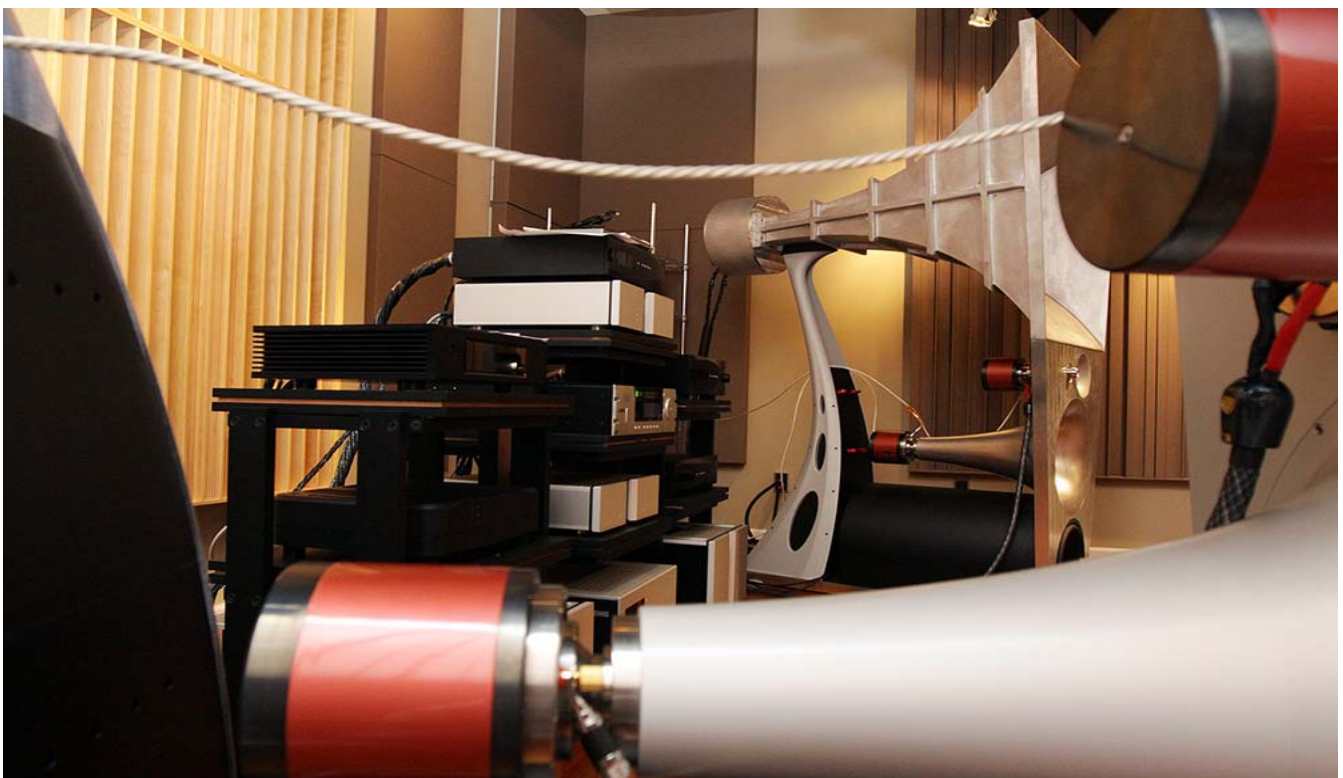
According to Magico's Alon Wolf, "There's no company in North America with a listening room as elaborate as ours." Frankly, he might be right -- we've visited many North American companies, and fewer than a handful have had a purpose-built listening room that's as big as Magico's (it measures 33'L x 22'W x 13'H) or as well constructed.



Wolf describes the listening space as a "separate room within a hard-shell structure," which allows it to be fully isolated from the rest of the building. The room also contains numerous acoustical enhancements, including diffusers on all walls and the ceiling.



The top-of-the-line Ultimate IIIs (shown), which are priced at \$600,000 per pair in the United States, were in the last stages of development when I visited. The Ultimate III is a five-way design comprising four horn-based drivers (tweeter, upper midrange, lower midrange, and upper bass) and one non-horn-loaded woofer. The Ultimate III is fully active, and all crossover manipulation is done in the digital domain. According to Alon Wolf, "It's the ultimate statement of what a horn-based loudspeaker can be."



Magico uses a wide assortment of electronics and cabling for all of its testing.



The Ultimate III uses a horn-loaded tweeter (right) that weighs about 50 pounds and is said to have a sensitivity of 110dB. To the tweeter's left is the upper-midrange driver's horn.

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