Love of Music Leads to New Business Venture

An Interview with Nancy Moon of MOON Amplification

MOON Amplification is a family-owned company, bearing Nancy's maiden name of Moon.

By
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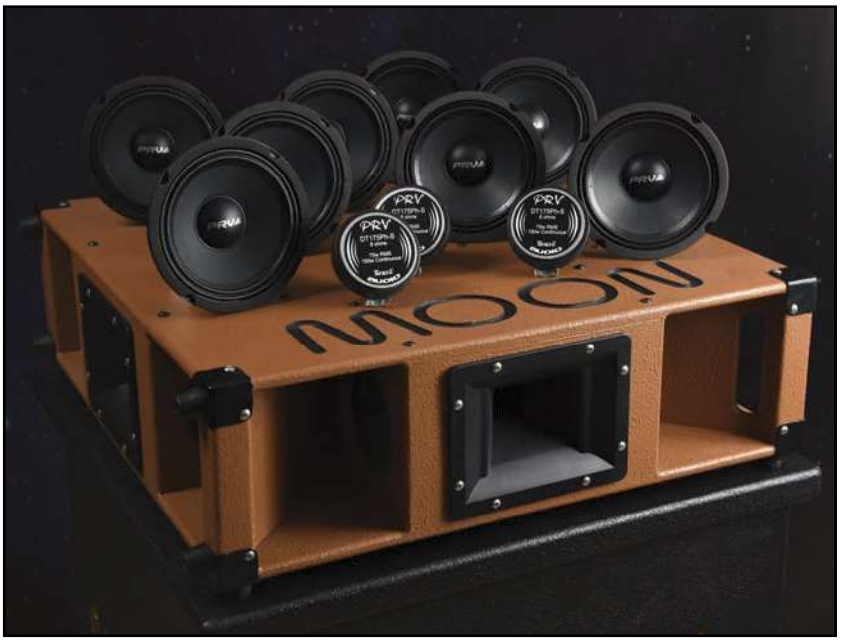
SHANNON BECKER: Tell us a little about your background. How did you become interested in the audio field?

NANCY MOON: My interest in the audio field was driven by an immediate need to solve a long-standing problem. I enjoyed listening to my husband play the keyboard. When my husband started using stereo headphones to try to get a better acoustical effect from the rotary speaker simulator in the organ, I found that I missed hearing the live music in the house.

It was at this point that I looked into purchasing a rotary speaker for my husband. But because of the cabinet size, low volume, and mechanical parts, I believed with some research and thought that this design could be updated using the latest technology available.



skamp contains drivers from the Brazilian company PRV Audio.

SHANNON: Why start your company, MOON Amplification (www.moonamp.com)?

NANCY: While looking for information on rotating speakers, I found that many forum members expressed the same interest in finding an existing portable product for live performance. I believe there is a market for an updated quality rotating speaker in a young, sexy, cool design with portability and reliability.

SHANNON: Is it a family run company? Who is involved and what are their roles?

NANCY: MOON Amplification is a family-owned company, bearing my maiden name Moon. As

inventor and president, I worked on the cabinet design as well as defining basics of what was needed to accomplish moving the sound around the room. Roy Davis, my husband and vice president, is the engineer who implemented many of the different engineering disciplines. My son, Charles Stone, works with social media and marketing. Other family members work in production.

SHANNON: What was your first product?

NANCY: Our first product was the ORBITED speaker, which we call "skamp." We use the word ORBIT to emphasize that the sound created moves around in a circle, not just turns on an axis. The model name skamp was chosen to emphasize high energy and portability, while taking advantage of the amplifier within it. We owned a wonderful SK keyboard and were building amps, it seemed logical. And with the dictionary meaning of the noun "scamp," it was perfect. The skamp weighs only 45.5 lbs, one-third of the weight of mechanical rotating speakers.

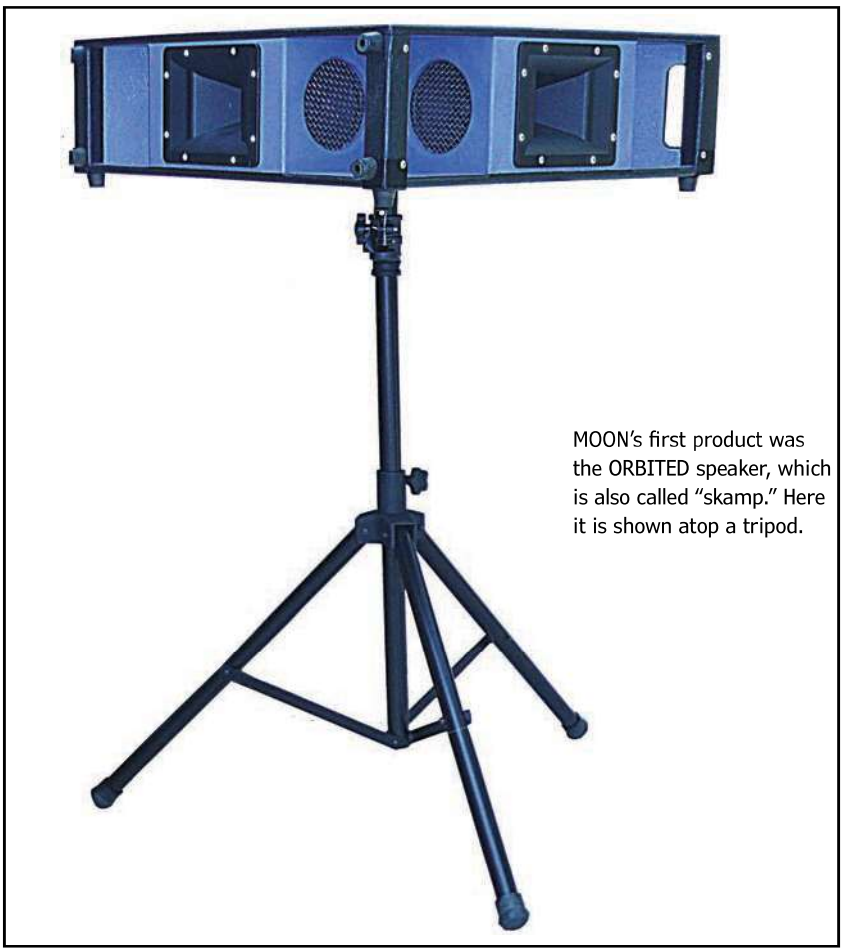
A unique advantage is that a clean piano and ORBITED organ can be played at the same time, using full power for both because the ORBITED spatial effect and the stationary left/right channels share the same amplifiers and speakers.

A highly efficient 36 V, 9.7 A switch-mode power supply, four 100 W RMS Class-D amplifiers, eight efficient neodymium speakers, and four compression horns make the skamp as loud as a guitar amplifier. There is a separate high-impedance guitar tube preamp for the ORBITED channel.

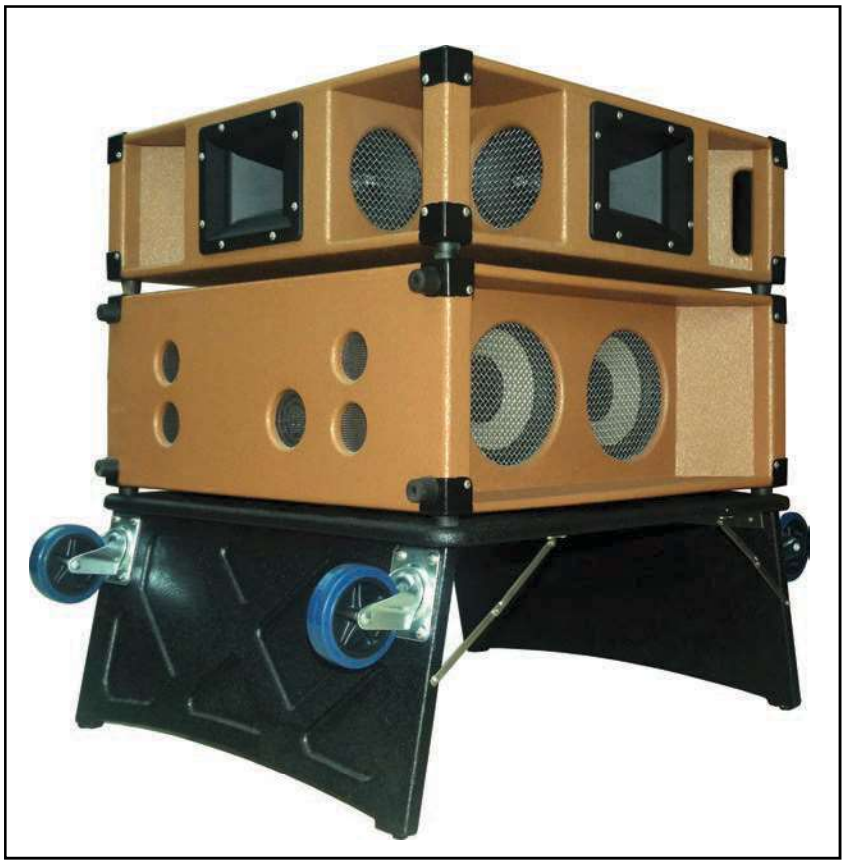
We use drivers from PRV Audio, of Brazil, because of our cabinet configuration and performance needs. The drivers had to be efficient and able handle high power, while fitting in a very constrained mechanical design. And because we needed the cabinet to be light and portable, neodymium magnets were a must.

Since there are eight mid-bass 6.5" divers plus four horns in a cabinet that is 25" × 25" × 7.5" tall, the selection of reasonably priced drivers in this size with high-power handling is limited. The compression horn driver had to cover down to 800 Hz and drivers that would fit in this space and handle high power are difficult to find. I spent a lot of time looking for drivers with the right combination of performance, weight, and price.

SHANNON: Tell us more about the technology behind the skamp.



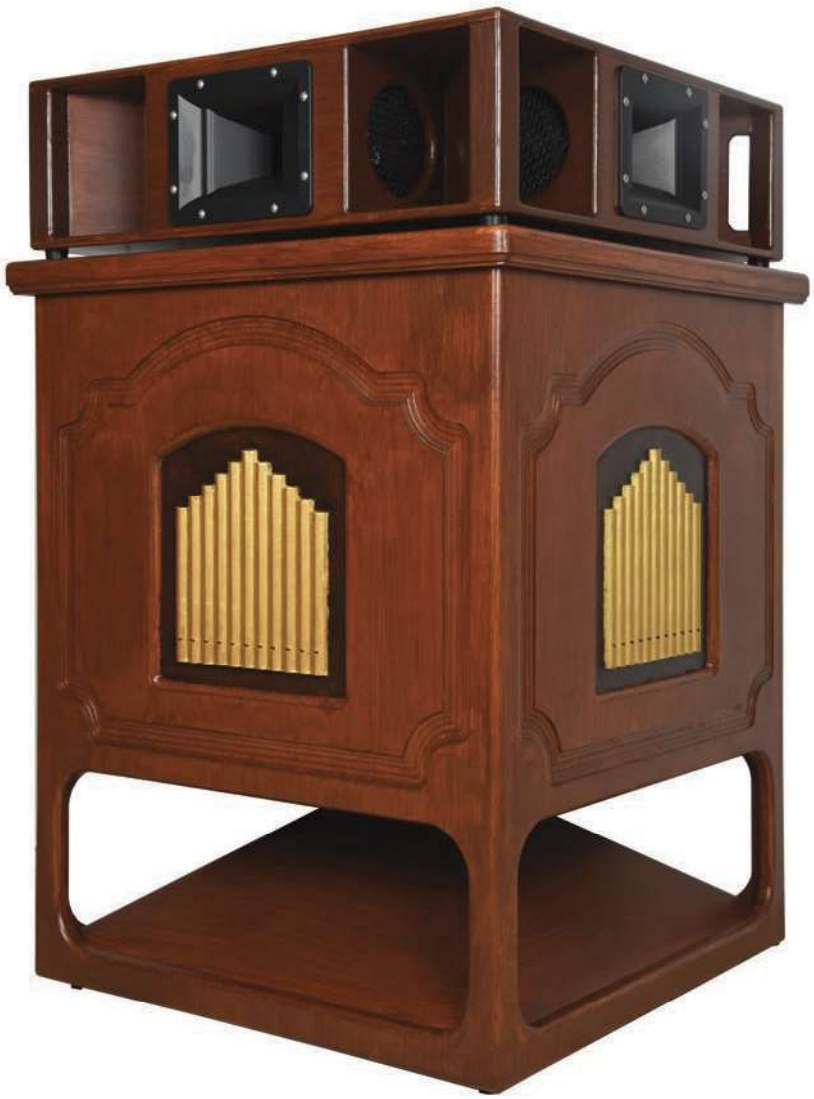
MOON's first product was the ORBITED speaker, which is also called "skamp." Here it is shown atop a tripod.



skamp is set on a deployed bassLite brown kartStand.

NANCY: With the electronically ORBITED skamp speaker, our patented technology has accomplished what was impossible. The skamp updates the 70-year-old mechanical rotating speaker, using a unique and critical acoustic design of the speaker cabinet as well as digital signal processing to literally move sound around the room.

skamp produces an acoustic spatial effect of the horn (treble) and bass rotors that literally interacts with the room, which is impossible to do with a simulator. Our engineering background came into play to solve mechanical design as well as electrical, software, DSP coding, and acoustic wave proprogation problems.



This is a Baroque subBass in wood grain with gold pipes. The wood grain skamp is on top.

Because the skamp cabinet produces the sound of both rotors, it can be played with or without a subwoofer cabinet—depending on how much bass you want. We also offer the skamp mixer/kontroller that puts all the knobs and inputs jacks close to the player with just a single cable.

SHANNON: How was design process? Do you have an engineering background?

NANCY: I spent a lot of time analyzing and researching how a mechanical rotating speaker really worked. I discovered the Doppler effect is only a part of it. The challenge was how to eliminate the mechanical parts and still have the nuances of the acoustic effect.

My professional background is technical writing. Roy is an electrical engineer with an audio engineering background. For many years, we both worked at Fortune 500 high-tech companies. In fact, we first met and worked together on the same project at one of those companies.

SHANNON: Please tell us a little about your other products and your customer base?

NANCY: I found that musicians who are interested in my product play live gigs and really want portability with ease of setup. And they want it loud! We offer bass cabinets in three sizes, depending on how much bass and portability is wanted.

We have the bassLite at 51 lbs, 350 WRMS through four 8" drivers. We use ferrite drivers because have not found neodymium drivers that give us the quality bass we want.

The next step up is our bigBass, which weighs 55.5 lbs, 500 W RMS with a 15" neodymium driver and 3" voice coil. A down-firing front-loaded horn can be added with the kartStand when the side flaps are unfolded. The kartStand is used for easy transport and height utility for the skamp, bassLite, and bigBass.

Our subBase is styled to be a piece of furniture. We even offer one with a carved organ pipe motif. An opening at the bottom makes the cabinet look like it is on legs and a pyramid at the bottom increases the subwoofer's bass efficiency. It has 500 W RMS, a 15" ferrite driver, and a 4" voice coil.

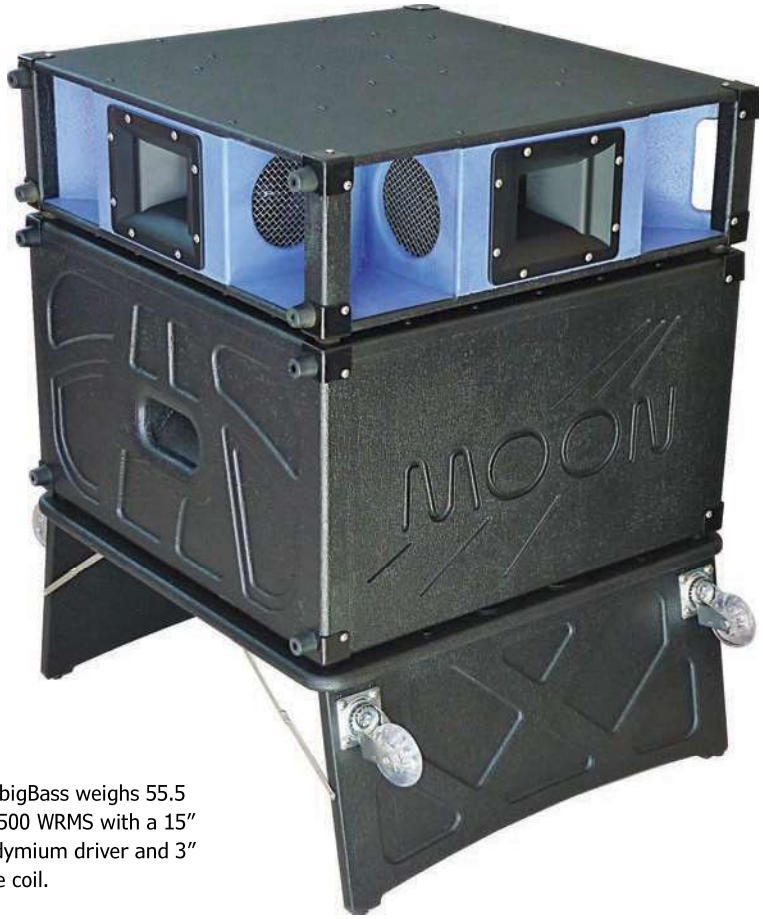
SHANNON: How do you determine which speakers are best to use with the different instruments?

NANCY: The skamp is for small to medium venues such as a party or bar venue. Don't be fooled by

the small size. Our artist Christopher Keyes plays at a 600-seat church each Sunday, using a skamp and bigBass alongside drum and guitar players. The pastor asked Chris to "please turn it down." We were all tickled at that request.

SHANNON: What's next for MOON Amplification?

NANCY: We are exhibiting the skamp and our bass cabinets at the January NAMM 2017 (Booth# 1077, downstairs in Hall E) with all the other cool new technology exhibits. Next, we will finish the builds and beta testing of our Super skamp line based on larger horns and speakers. Further down the line, we are planning the Provado line with digital interfaces and the ability to stack any number of cabinets all spinning the sound around the room in synchrony.



The bigBass weighs 55.5 lbs, 500 WRMS with a 15" neodymium driver and 3" voice coil.