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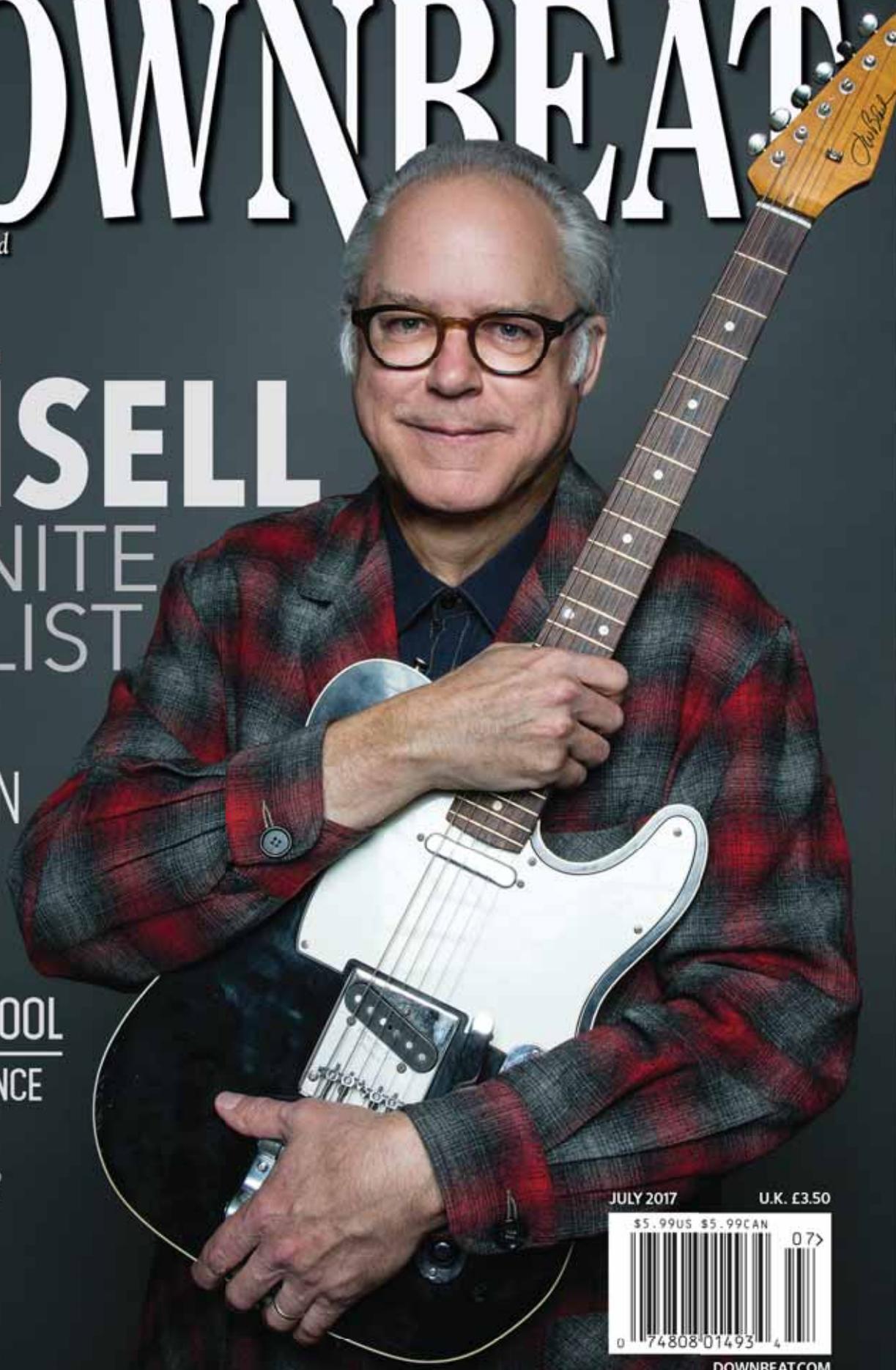
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By Keith Baumann

EVIVING THE PAST,

Guitar Amps in the Modern Age

The idea of electronically amplifying a musical instrument is a notion that has been around for more than 100 years, and through the decades advances in technology have carried the guitar from the intimacy of a front parlor serenade to the high-decibel power of an arena rock concert. At the heart of this journey lies the amplifier, which has been as much a factor in defining the guitar's evolutionary path as the instrument itself. With the original intent of simply offering a means to increase volume, the amplifier became so much more, impacting popular music in ways that its early designers could never imagine.

As the amplifier's undeniable influence on guitarists began to actually shape new musical styles and enhance creativity, manufacturers responded with new designs to meet the needs of the rapidly changing landscape. Today, advances in technology continue to open the doors to a universe of possibilities that are taking guitar amplification down entirely new and uncharted roads. Indeed, the amp market is at a pinnacle with a dizzying array of choices available to the musician. With options including vacuum tube, solid-state, compact, pedalboard and digital modeling, it can be an overwhelming task for the guitarist trying to navigate these deep waters. In taking a closer look at the current state of the guitar amplifier market, DownBeat spoke with several of today's innovative builders to learn more about what they do and why they do it.

BOUTIQUE AMPLIFIERS

Early amplifiers appeared in the 1920s and typically suffered from poor sound due to the use of a radio horn speaker. The cone speaker introduced in 1925 along with the advent of AC powered amps (which could run off of standard household current) paved the way for the first commercially viable instrument amps. Based on radio broadcast circuitry, several manufacturers began to offer amps in the 1930s, largely driven by the Hawaiian steel guitar craze. These early amps were typically low wattage (no more than 15 watts), but in the mid-1950s Leo Fender changed all that by introducing models that were larger and more powerful, allowing them to produce clearer sound at higher volumes. He also began to add effects such as tremolo and reverb to his amps. Marshall and Vox followed in the 1960s, and together these three companies established the blueprint and set the standard for nearly all other guitar amps to come. These amps were designed specifically to output a clean signal, and the distortion that occurred at high volume—initially considered to be a shortcoming—appealed to certain guitarists. The rest, as they say, is history.

With the demand for vintage amps growing and the supply limited, prices for these classic units have skyrocketed. This fact, along with an overall decline in quality among many big-name manufacturers resulting from increased



Carr Impala



Alessandro Italian Greyhound

DEFINING THE FUTURE

pressure to reduce costs and outsource manufacturing, presented an opportunity for skilled craftsmen to enter the market and produce high-quality handmade amps. These “boutique” builders, as they have come to be known, employ many of the same circuit designs and hand-wiring techniques originally utilized in the '50s and '60s to produce some of the world's most sought-after guitar amps.

Steve Carr of Carr Amplifiers (carramps.com) has been building vacuum tube amps since 1998. Like many of his peers, Carr's experience as a guitar player has played a key role in his business. He hand-builds several models of amps and points out that he is not a “clone” builder. “Vintage amps are pointers for me, not final destinations,” he declared. To Carr, it is

critical that his amps stand up to his personal standards as well as those of his staff. “As players here, we are also our own customers,” he said. Carr is a true artisan and points out that his amps are not “built on paper”; he begins with only a basic outline, constantly tweaking and adapting his designs along the way. In describing the sound of his amps, Carr uses words like clarity, warmth and responsiveness. In addition to a strong focus on quality and consistency, Carr feels that the esthetics of his amps are extremely important, and all his cabinets, hand-crafted in-house, are works of art in themselves.

When comparing his amps to vintage models, Carr said that his original creations are more versatile and more reliable than older amps. He noted that there will always be a demand for tube amps, and his business has remained steady for the past 20 years. He also noted that younger players

seem to be gravitating toward vintage and boutique amps these days and that the increasing scarcity of vintage amps is helping fuel the demand for his products. In his view, boutique amps appeal to a narrow and somewhat exclusive market, but as a small company, Carr Amplifiers is at the optimum size to survive any market fluctuations.

George Alessandro, owner of Alessandro High End Products (alessandro-products.com) has had a lifelong passion for vintage amps and began his career as a repairman before building his first amp and later founding his company in the mid-1990s. Alessandro offers a select line of hand-wired vacuum tube amps, which include the Italian Greyhound model, targeted specifically toward the jazz player. As a builder he strives to re-create the magic of vintage circuitry and then expand on it by using modern audiophile-grade components. “Amps are musical instruments that should inspire the player and eliminate



Quilter MicroPro Mach 2

Vox MV50

Henriksen JazzAmp



Custom Tones Ethos pedalboard amps



BluGuitar Amp 1

the roadblocks,” he said. He adds that to build one, “It takes a musical ear as well as a technical brain.” He does not consider himself a “clone” builder and describes his basic philosophy as starting with everything that vintage amps are capable of and then moving forward from there. Alessandro’s amps utilize a separate head and cabinet design and can be purchased as a matching set with both amp and speaker enclosed in hand-built cabinets made from beautifully figured exotic woods.

Alessandro said he senses that younger players today are relying more on the pedalboard for tone and not the amp, and he suggests that this has perhaps lowered the bar for overall amplifier quality among many manufacturers. He insists, though, that nothing will ever completely replace the demand for vintage amps, since they offer a comfort and nostalgia to players that can never be replicated. And he acknowledges that a quality modern amp can definitely be more functional than older models. In speaking of his own designs, Alessandro said, “Where most vintage amps begin to break up, ours start to add.”

COMPACT AMPLIFIERS

Considering an unwavering popularity that has spanned 70 years, it’s interesting to learn that vacuum tube amp design and construction has remained surprisingly consistent since the 1950s. There was, however, a significant split in the road fueled by the introduction of the transistor that inspired a new wave of solid-state amps in the 1960s. With the hope of being a less expensive and more reliable alternative to vacuum tubes, these early attempts fell short in terms of sound quality and dependability. Although solid-state amps never actually succeeded in edging out vacuum tubes, there were some success stories, particularly in the jazz market with companies like Roland and Polytone.

Solid-state amps had a rocky start and may still suffer from a negative connotation among some players today, but the technology is definitely coming of age. In particular, it has played an integral role in the development of another emerging trend in guitar amplification: miniaturization. The introduction and refinement of the highly efficient Class D amplifier and switch-mode power supply coupled with the decreasing size of electronic components have made it possible to construct high-power devices that are extremely compact and lightweight.

Pat Quilter, chief product architect at Quilter Labs LLC (quilterlabs.com), entered the audio market in 1967 and eventually founded the Quilter Sound Co., which later became QSC. With decades of experience building solid-state power amps, Quilter decided to finally pursue his longtime dream of starting a company to design and build amps for guitar and bass that would completely obliterate the limits of solid-state technology. Quilters Labs was launched in 2011 and soon after released its MicroPro combo amp. The company now offers a complete line of amp heads and combos including the MicroPro Mach 2, which packs an amazing 200 watts of power into an extremely compact and lightweight package.

Besides the obvious benefits of its small size, Quilter points out that he is the first to “crack the solid-state code” and is able to design products that sound and behave just like a boutique tube amp. “We are making the new collectibles of tomorrow, the classics of the future,” he said. Quilter is yet another advocate of the theory that shrinking stages are driving demand for portable rigs. And he notes that the longstanding reputation of solid state as a cold, sterile technology is a hurdle that he continues to face.

Henriksen Amplifiers (henriksenamplifiers.com) is a company that has been firmly rooted in the jazz market ever since its founder, Bud Henriksen, a jazz guitarist himself, created the company’s original JazzAmp, which was actually designed around a Sadowsky Jim Hall model archtop guitar. Now headed up by Bud’s son, Peter Henriksen, the company currently offers its flagship combo model in both 10-inch and 12-inch speaker configurations. Henriksen makes it clear that the

company is focused on building high-quality, no-compromise amps for the working jazz musician. "We engineer with our ears first," he proclaims, noting that the company prides itself on its ability to deliver clear, uncolored sound and power in a small package. Henriksen hand-builds each amp and points out that unlike many others in this market, his amps do not use a Class D amplifier and feature the more traditional A/B analog power. In his opinion, "Class D has limitations for sound, and there is definitely a 'feel' difference." He claims that improvements in digital reverb, plus advancements in speaker design, have helped Henriksen Amplifiers achieve its goals.

Henriksen reports that the demand for his product is growing rapidly. He sees more players starting out younger, advancing more quickly and receiving more exposure to jazz through the Internet. Henriksen also points out that the Internet has played a crucial role in empowering small companies like his. Like many others, he believes that gigs in general are getting smaller and will continue to require smaller gear.

The Vox (voxamps.com) name is well known among musicians, and its AC series of tube amps built in the 1960s have reached legendary status among vintage connoisseurs. Today, the company puts out a robust line of guitars, effects and amps that cater to a wide variety of customers. Recently, Vox has taken a serious step into the compact amp market with its new MV50, a 50-watt, 1-pound Class D head that features Nutube, which according to R&D Manager Dave Clarke, "is the biggest development in tube technology since the 1960s." A complete re-visioning of the vacuum tube, Nutube was developed by Korg (parent company of Vox) and is exclusive to the company's product line. Its extremely small size allows it to be placed into the preamp stage of the MV50 and offer guitarists authentic analog tube tone. According to Clarke, the MV50 has been extremely well received in the market. He feels that among guitarists, the large heavy iron mentality of the past is long gone and high-wattage amps are not needed in today's market.

PEDALBOARD AMPLIFIERS

With technology rapidly advancing and considering that we live in a world where walking around with a powerful computer in our pockets is practically an everyday necessity, it's no surprise that guitar amp designers have continued to push the boundaries of what is possible. One of the latest trends in amplification is the pedalboard amp, which breaks new ground in terms of size and functionality. As the term implies, these ultra-compact amps are designed to fit right onto your pedal rig and offer guitarists the ability to plug directly into a speaker

cabinet or P.A. system.

Major changes in the entertainment industry and the economy have resulted in smaller gigs and smaller stages. Gone are the days when bands could carry large amplifier stacks on the road with them. The reality is that in today's gigging world, there is simply no need for an amp capable of filling an entire room with sound. In addition, with the trend toward in-ear monitoring, and as the industry continues to move toward a "silent stage" approach, large cabinets can actually become a hindrance. Pedalboard amps provide guitarists with complete control

over their sound, since they no longer have to rely on the great unknown of backline amps.

As a touring musician, Thomas Blug, CEO, founder and designer at BluGuitar (bluguitar.com/english) understood the need for a portable solution for guitarists, and with a background in both amplifier and sound design, he was the perfect person to build one. Blug envisioned an opportunity to deliver the old-school analog tube tone he loves so much in a completely new format that musicians could carry on the road. The result was the Amp 1, a 100-watt, 2-pound amp released in 2015 that is small enough to

NS

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mount directly onto a pedalboard. The Amp 1 utilizes Class D technology in the power stage driven by a special design circuit that uses a small subminiature vacuum tube that Blug calls Nanotube. Blug describes it as “no-compromise sound quality with a real feel that is so close to an actual old-school tube amp.”

Squarely aimed at the touring musician, the four-channel Amp 1 gives guitarists total control over their sound without the hassle of having to wrestle with backline equipment night after night. Blug feels there is a growing demand for his product, but admits that market acceptance

It's more apparent than ever that the amplifier market is exploding with options.

and education present a challenge. He also points out that although technology will continue to offer the opportunity to design smaller amps, user functionality will ultimately define the limits of what is practical.

Rob Hall, technical creator/designer at Custom Tones LLC (customtonesinc.com), has been obsessed with great tone ever since he heard his first Dumble guitar amp at a Larry Carlton concert. Hall, a guitarist with a strong interest and background in electronics (BSEE), had built several of his own amps prior to founding Custom Tones. He credits the Internet with allowing him to share his design concepts with guitarists around the world, which led to the Ethos line of guitar amplifiers, released in 2008. The Ethos pedalboard amps are available in three variations: Ethos Overdrive, Ethos Clean II and Ethos Clean Fusion II, offering guitarists the option of selecting the particular model that best suits their style. At the heart of the Ethos is a Class D power amp running at 30 watts and an all-analog solid-state preamp. The amp can be connected to a cabinet and/or fed directly to a P.A. using onboard speaker simulation. Hall has translated the tube amp experience into a solid-state product that can offer boutique vacuum tube tone to the average player.

Hall is confident that the demand for pedalboard amps and compact gear in general is on the rise. “It takes a paradigm shift to accept these, and younger players have a

better acceptance of new technology, while older players, who may have stronger reservations, are realizing that their ‘lugging’ days are over and will eventually be won over by the convenience factor,” he says.

MODELING AMPLIFIERS

Amplifier modeling has been around since the mid-1990s, when Line 6 released its first product. In this process, a guitar's signal is converted into a digital format and passed through a microprocessor, where software algorithms alter its tonal characteristics in order to simulate the sounds of various amp models and speaker cabinets. The benefits of this technology are obvious, and modeling can theoretically offer guitarists access to many of the world's greatest amps at the flip of a switch. Since it's a software-based technology, modeling can be integrated directly into an amp, presented as a separate outboard unit, or even offered as a software-only package to run on a computer.

Although it was extremely well received by the recording industry, modeling has been rather slow in gaining acceptance in the world of live performance. However, advances in the technology, along with opportunities created by new demands arising from today's rapidly changing musical environment, are beginning to bring modeling more into the mainstream. In a world of shrinking stages and smaller gigs, the ability to travel with this level of power and versatility literally thrown over your shoulder is starting to gain some serious traction.

Cliff Chase, founder and president/CEO of Fractal Audio Systems (fractalaudio.com), will tell you right off that his modeling technology is absolutely capable of replicating the sound of a tube amp. He explains that remaining doubts about modeling are due to an apples-to-oranges comparison: amp models are typically paired with speaker models specifically designed to reproduce the sound of a close-miked guitar speaker, rather than the sound a guitarist hears when listening to an amp at a familiar distance. In this configuration, “Modeling will sound right to the front of house but may not to the player,” he says. “Many musicians do not get the paradigm.” This misunderstanding, coupled with the fact that early modeling products were under-powered, generates a negative bias in the market, in his opinion. Chase has always felt that modeling technology had serious potential and, believing it could be done much better, launched Fractal



Audio Systems in 2006 and released his original Axe-FX product. Fractal now offers the AX8 floorboard unit and Axe-FX II XL rack unit, which feature amp modeling, speaker cabinet simulation and multi-effects.

Chase is confident that modeling technology is here to stay and will continue to gain acceptance in the marketplace. Digital processors are now powerful enough to handle the task easily, and modeling is perfectly suited to the rising trend of in-ear monitors and silent stages. Judging by Fractal's impressive list of professional endorsers, a wide range of guitarists, composers and musical directors seem to agree.

Christoph Kemper, CEO of Kemper Amps (kemper-amps.com), entered the guitar market with a strong background in synthesizers and established a solid reputation with his Access Virus product. A desire to develop something specifically for guitar players inspired him to found Kemper Amps in 2010 and create the Kemper Profiler, a groundbreaking digital guitar amp that takes this technology to a new level by providing the ability to sonically measure any amp and generate a custom profile for it. This is a radical departure from the typical scenario in which the user is limited to the onboard profiles that ship with modeling devices.

According to Thomas Wendt, official spokesman for Kemper, "Christoph did not want guitarists to be stuck with an engineer's idea of what an amp sounds like." The profiling process is quick and easy, with the Profiler sending a series of calibration tones to the amp and receiving the audio signal from a microphone placed on the cabinet.

Once a profile is created, it can be easily compared side by side with the original amp signal and tweaked as needed. Wendt insists that the Profiler is capable of producing sounds that are indistinguishable from the original amp signal, and he notes that its convenience will save a lot of time and effort in the studio and on the road.

AMP RENAISSANCE

It's more apparent than ever that the amplifier market is exploding with options. Although there are obvious differences of opinion among the sources we spoke with, most share a common belief that rapid changes in the music business, combined with a new generation of young players, have created enormous opportunities in the guitar amplification market. And no matter how advanced the technology may become, these experts all agree that fascination with the old stuff will never fade away.

This is an especially interesting time to be a guitar player. With amp innovations coming at us from all directions, it's exciting to know that there will always be those who cling to the past, those who revive it and those who bravely carve out entirely new paths into the future. **DB**

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