



THE SPIRIT OF ART IN TECHNOLOGY™



Randall Smith,
Designer & President

Guitarists ...We're Lucky!

For our craft we have a pioneer of possibilities working every single day to invent tools that elevate our art form. For 25 years I have had the privilege of working alongside a mad-scientist that is more than a little responsible for the rise of guitar to its current spot in music. Randall Smith has an ear for tone, a passion for tube technology, a vision for building high performance amps and an unwavering devotion to redefining what we think of as amplified guitar.

Every day I am amazed at the energy, perseverance and commitment Randy still has after 38 years of well-earned success. While most would be basking in the light of past achievements, Randy is cutting tape and breathing solder in search of the next magic sound. At shows I watch others sign autographs, while he is at home signing off on board revisions so he could make sure customers get the latest improvements. I'm bewildered by competitors winning awards in print for re-issuing mediocre versions of their own products from yesteryear, while Randy is inventing ways to footswitch power sections! I guess it's the way that those who truly contribute, are too busy doing what they do, to be out there getting credit for their work.

For inventing High Gain, Channel Switching and the many revolutionary features (see page 10) we now take for granted as commonplace, Randy should be thanked. But for all his many contributions, none more than this...listening to us guitarists!

(Continued on Page 6)



Doug West (AKA "Tone Boy")
...testing a "proto" out in the real world

"Visitors to our shop always ask how I got started. I've been asked so many times, the guys told me to write it down. So here it is:"

***Music is in my blood.
And building vacuum tube
amplifiers has become
my personal art.***

My earliest memories are musical. I can still remember lying in my crib and hearing my dad play his tenor sax. He had a hotel dance band and a radio show for a couple of years after the War. He was also first chair

clarinet in the Oakland Symphony so there was a lot of music in the house, live music. My sister was five years older than me and a good piano student so I remember hearing her practice all the Beethoven, Mozart and Chopin piano sonatas. Those great melodies and harmonies affected my

mood as some pieces were haunting and others sunny and uplifting. **I think my brain was processing music long before words began to make sense!** My first experience with the mystical quality of musical instruments included the funky smell of my dad's open sax case



My Dad weaving his tonal magic in his Forties Dance Band.

and the magic that filled the house whenever he played. Years later, my mother even said, "He wooed me with his tone" remarking on how they met and fell in love.

When my father began teaching me clarinet—which he insisted came before sax or flute, he had me

play one note for days until I had pretty well mastered it before he'd show me the next one. What he was really teaching was how to hear tone, listening to all the separate elements and bringing them together to make a musical sound. Of course that's vital now when voicing an amplifier.



Princeton Boogie®

1969

*First high-power, 1x12 combo.
The pioneering wolf in sheep's clothing
that started it all.*



130 Bass & 130 Lead Heads

1971

*First Mesa bass and Boogie
guitar amps that were built entirely
from scratch.*



Around the time Leo built his first amps, a Canadian guy named Ernie, who worked for my father, introduced me to tubes. That was the era, way before stereo, when hi-fi was a new concept and something you had to build yourself. He had a studio quality turntable with a futuristic tone arm all mounted to a slab of exotic hardwood, and supported by four old beer cans ... Hamms, as I recall. He gave me some of his older pieces, hand-built on the kitchen table, which I experimented with until I was 11 or 12.

Then, at this impressionable age, I met Stan Stillson, a guy whose business was building industrial control systems in his garage shop. (His father had invented the Stillson wrench.) His son Dave, a little older than me, was into building hi-fi and ham radio gear as a hobby. I originally went to his father as part of a Boy Scout merit badge, which I thought would be real easy. Was I ever wrong!

The requirement for the badge seemed simple: Carve Three Items. Well, when I took

my carvings over, I started worrying as soon as the guy opened the door. He was a Marine Combat veteran and looked like Clint Eastwood on a bad day ... tough as nails. I handed him my carvings and he gave me this look. He said, "Follow me." We crossed his shop floor. "This is a band saw," he said, turning it on. Then he stacked my three carvings in a pile, and ran them through - first one way, then the other. He looked right at me as he tossed the pieces into the trash. "That's what I think of your projects. And that's what I think of you."

See, his theory was that **when a person makes something, he is leaving behind an artifact that records his values at that time.** He knew I hadn't put much effort into the carvings and he wasn't about to offer any false praise to "build up my self-esteem". No, they weren't very good and I was busted. But, severely humbled, I hung around. It seems like I was in his shop for weeks,

carving things, learning how to handle and sharpen his tools and how to work in a serious shop with a real craftsman. At that time he was building a control console for the Nautilus, the first nuclear submarine. Right in his garage shop. That's how heavy he was. Anyway, the things he built just floored me, they were so cool. They exuded artistry, far beyond their primary, functional purpose and inspired me to want to do the same. From then on his son and I spent all our time in the old man's shop, learning to hand-build amplifiers, transmitters and modulators from scratch. All using vacuum tubes.

A few years later my interests turned to cars, girls and rock 'n roll and by mid-Sixties, I was playing drums in a band while going to university in Berkeley. One night on a gig, my friend Dave Kessner's Sunn 200 amp went up in smoke. Next day, I offered to fix it for him because we didn't have two nickels between us. He looked real worried but finally consented when I assured him I 'would do no harm'. Anyway, with the experience from Stan's shop, the burned-up amp was pretty



Snakeskin Mark I Boogie®

1972

The first cascading preamp and the transitional link that offered vintage and modern high-gain performance. Still built today!



Mark II-A

1980

First modern, channel-switching amplifier with separate Rhythm and high-gain Lead modes. The foundation of modern guitar amps.



THE SPIRIT OF ART IN TECHNOLOGY™

Along the way sounds we take for granted as classics, grew from the iconic circuits Randy was creating. From the singing Mark I voice of Carlos Santana and Larry Carlton in the '70s. To the Mark II B and C sounds of the STONES and METALLICA in the '80s. Through the crushing Recto sounds of SOUNDGARDEN and LIMP BIZKIT in the '90s. Up to today's thick wall of gain used by the FOO FIGHTERS and LINKIN' PARK. Over the last three decades, the records of importance in rock n' roll have both featured and closely followed the release of the pioneering circuits that made these guitar sounds possible.

Hopefully this catalog will give you an inside view of an amazing talent and of a devotion to our art form that is truly remarkable. Here's a musician that doesn't even get to enjoy first hand, the world of tone he creates (Randy plays many instruments, but not guitar) and yet he puts this quest for new guitar sounds above all else.

So if you play guitar and haven't yet experienced the magic that happens when you plug in to an amp that is an instrument...get it together! You wouldn't paint with sticks, would you? There are amazing brushes these days. So don't limit your playing with just an amp. Take advantage of the times you live in. We're lucky one guy's obsession bears the fruit of such amazing possibilities for our expression. Discovering Boogies has definitely shaped my music and given me the freedom to take my playing beyond what I thought I could do. I sincerely wish the same for you. From the thousands of us you've helped,

Thanks Randy!

easy to fix. A day later, Kessner suggested we open a music store together. "What do we know about running a music store?" I asked. He said, "I'll run the front and you can fix stuff in the back." ...which turned out to be the meat locker of an old Chinese grocery store. He was right about the demand: everyone was playing in bands in the SF Bay Area back then. I felt a huge responsibility to do things right because in no time our customers at Prune Music included the heavies of the SF scene: Big Brother, the Grateful Dead, Jefferson Airplane, The Sons, Quicksilver, Santana, Steve Miller and hundreds more you've never heard of.

Around 1969 we wanted to play a prank on Barry Melton of Country Joe and the Fish. So I took his little Fender Princeton amp which, stock, puts out about twelve watts and has a ten-inch speaker. I cut up the chassis to fit big transformers and entirely rebuilt it using the

famous 4-10 Tweed Bassman circuit. After careful measurement, I cut out the speaker board and squeaked in a twelve-inch JBL D-120, the hot speaker back then. When I finished building it, I took it out to the front of the store to get a good play test and who do you think happened to be hanging out right then? Carlos Santana. He just wailed through that little amp until people were blocking the sidewalk. When he stopped playing he turned and said, "Shit man. That little thing really Boogies!" Word spread fast and before long there were over a hundred little Princeton/Boogies appearing on Bay Area Stages

including the Fillmore and Winterland ...all of them built up a dirt path in a mountain shack I had converted from an old dog kennel.

So...what's MESA? The Bay Area was running out of Princetons to modify and I needed to augment my paltry income from the music store so I moonlighted a couple other gigs. One was jacking up several of the old country houses in West Marin, digging footings and pouring concrete foundations underneath, starting with my own. That old house was so near falling down that one end was 18 inches lower than the other!

My other gig was rebuilding old Mercedes-Benz engines in a two-story garage/studio I had built with wood trucked down directly from the saw mills. (The truck was so overloaded we had to drive five



D-180 Rack Mount Bass Amp

1982

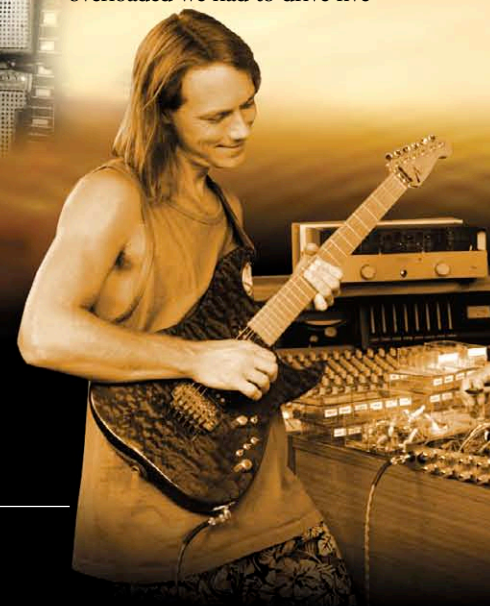
First high-power, rack-mount bass amp featuring dynamic "Dual Differential" driver circuitry.



Mark II-B

1982

Improved Lead overdrive circuitry with "cascade" configuration and first ever effects loop.



miles through a pear orchard to avoid the Highway Patrol weight station!) I had grown up with a little Austin-Healey Sprite, which is very 'character building' in the sense that it forces ingenuity ... just to make it home! It required an engine rebuild every couple of years so when I got an old Mercedes with a blown engine, I wasn't afraid to give it a try. And that started an 'old Mercedes' trend amongst my friends. Those engines were an inspiration and the difference between them and the British motors was shocking. It was yet another lesson in the virtues of "getting it right".

Anyway, I needed an official sounding name to buy amp parts, pistons from Mercedes and ready-mix trucks full of concrete. "Mesa Engineering" (a name I made up on the spot) seemed familiar and professional sounding. One day my Marin

County country bliss was interrupted by a tough looking but friendly stranger from the 'hoods of Oakland who showed up on my back porch. He'd heard the Princeton/Boogies and wanted an amp. He was a bass player —but he still wanted me to build him an amp



Randy & Carlos jammin' in the 70's

and I sorely needed the 300 green dollars he was literally stuffing in my shirt pocket. He

wouldn't take no for an answer. So the first Mesa amp was a snakeskin bass amp made for 'the inimitable' Patrick Burke, a great guy who became such a good friend, I later traded him my half ownership in Prune Music for a guitar! The fact that this total stranger was trusting me with the astonishing sum of \$300. inspired me to promise I would build him the best bass amp ever. Thirty years and countless gigs later, that Mesa 450 still has tone. The first Mesa guitar amp I scratch built was a Boogie® 130 Lead Head, also snakeskin, which English rocker Dave Mason took on the spot when I showed up at a Winterland sound check.

Even with the success of those dozen or so snakeskin heads, **I was still hearing a tone in my mind, more like a sax, with harmonic richness and long sustain.** For years guitar players had been complaining about the limitations of their amplifiers – amps that now would be considered hot vintage prizes.

The main complaint was that 'loudness' and 'drive characteristics' were inseparable. There was only the one volume control and thus there was no way to get the amps to break up and sound loud without actually having to be loud. Some players were having Master volumes added to their amps. That was a mod I didn't offer because it didn't really do much. There just wasn't enough gain in the standard Fender circuit. Everyone had that complaint, especially Santana. Even with his jacked up Princeton, he couldn't get enough sustain. I guess we were both after the same elusive sound.

Then as a result of a pre-amp project I was building for Lee Michaels to drive his new monster Crown DC 300 power amps, I stumbled onto the Holy Grail. I didn't know how much signal the Crowns needed to drive them so I thought I'd cover my bases by adding an extra complete stage of tube gain to the basic



M-180 & M-190 Mono tube rack power

1983

The "Dual Differential" driver circuitry in high-power, rack mount packages for guitar.

"From the moment I plugged into the C+ in 1984, I knew it was the sound I was searching for. The sound shaped a new level of riff. Captain Crunch meant more than just cereal now!" James Hetfield



Mark II-C+

1983

Legendary sounds from "dual cascading" lead stage and so sought-after today that they command three times their original cost.





THE SPIRIT OF ART IN TECHNOLOGY™

DOUG WEST, aka "Tone Boy"

Doug thinks he's lucky, no...I'm the one who's had the good fortune to get up with another guy as crazy devoted to the pursuit of tone as I am. He's the one with the patience to sit there hour after day after week (and sometimes for months) working on a sound, while I'm working on the circuit. I'm telling the truth when I joke about him having the entire resources of Mesa/Boogie® to indulge his guitar fantasies. But he's worth it.



He can play like an angel...or play like a devil. How else can you explain products ranging from Mark IV's clean sound to the Rectifier's heinous modern crunch. He's the only player I know who's basically mastered all styles of guitar and can play any one of them with burning conviction. But there's more. To do the job he's got to be able to start playing or stop on a dime while I make adjustments to the electronics. And he's got to be able to repeat phrases accurately, over and over, so we can decide if we're going forward—or backwards—in development.

We tend to hear things much the same way and have developed a specialized vocabulary to describe the sounds. But there's another element, equally vital, and that's how an amp feels to play. I know how important that is on sax but not being a guitar player myself, Doug's input is crucial. Just to give you an example, our work developing Dyna-Watt led to a patented circuit that actually makes the guitar feel easier to play. I've never met a rock star who could do all this plus stay focused and repeat the same lick!

Doug also has the primary responsibility for road testing amps on the gig and in the studio. Of course we value the opinions of others, but none are as clear and precise as Doug when it comes to evaluating musical performance. And because he's been so involved in the R&D process from the initial concept to the final useage, Doug is the perfect guy to write our outstanding Owner's Manuals. Not only are they informative and thorough, they are actually enjoyable to read, another Mesa first!

Don't get the wrong impression, we try to have a good time but R&D is mostly tedious and hard work. But when Doug freaks out and goes off on a monumental burst of amazing guitar playing, I know for sure we've closed in on something magic. Something you – and guitarists the world over will find inspiring.

pre-amp architecture, adding three variable Gain controls at critical points in the circuit. When we hooked it up in Lee's studio, it didn't work at first because we mistakenly plugged the speakers directly into the pre-amp. We kept turning up the three gain controls because we could hear a little faint sound. Then, when we plugged it in right, Lee hit a big power chord and practically blew both our bodies through the back wall! We looked at each other with big grins and got down to adjusting those Gain controls. It was monstrous! You could dial in previously un-heard of amounts of gain with the first two controls, while adjusting the loudness level with the third control. It was huge sounding and it

would sustain forever. That was the beginning of high-gain cascading pre-amp architecture. This wasn't an incremental increase of 50 or even 100 percent, this was an increase of 50 *times* the normal gain of an amplifier and an entirely new realm of performance.



*The Original Home of Tone.
The Doghouse Workshop in Lagunitas.
Crescent moons on door are remnants from the original Princeton baffle boards, having been cut out to hold 12" speakers.*

I knew at the time this was a real breakthrough and I couldn't wait to build up a Boogie size 100 watt combo for Santana using four 6L6s. I was pretty sure it would do just what he'd been searching for. And it came together just in time for his great Abraxas album which introduced this new high-gain sound to the world and started putting that mountain studio on the map as the Home of Tone®.

At first, I was hand-building all parts of these early Boogies by myself including silk-screening the control panels and etching copper printed circuit boards in a hot acid bath. I formed and punched the sheet metal chassis and built and finished the cabinets all with skills I had learned back in the ex-Marine's shop. As demand grew, I enlisted the help of my wife and some neighbors. Mike Bendinelli who, at the time was painting the ceiling, was put to work on power supply boards and twenty-five years later remains the keeper of the archives (mostly in his head) and the best restorer of those early amps. Back then it was a true cottage industry with various friends doing sub assemblies all right there in the mountains of West Marin. At one point I was returning from my daily exercise which comprised walking up the mountain behind the house with the dogs. As I came back down through the redwoods, I could see the girls sitting on the deck, stuffing circuit boards in the sun with

Keith Richards with an early Mark series combo. Over the years, the Stones have bought 42 Boogies!



Quad™ & Studio Preamps

1986

Quad & Studio Preamps revolutionized LA rack scene and intro'd tuned recording outs. Mark III. First tri-modal amp offering clean, crunch, and Boogie lead.



Strategy® 400 Stereo & Simul 295™

1987-8

Strategy 400 Stereo & Simul 295 completed rack revolution, trimming size for stereo to 4 spaces. Twelve cylinder Bass 400 still going strong today.



their tops off. I just stood there for a couple of minutes realizing that I had achieved the perfect gig (for me at least!) and I told myself never to stray too far from the contented, productive and creative feeling of those happy times.

By the time we moved Mesa out, that mountain “house” had grown into a 4,000 square foot mini-industrial zone with a wood shop, electronics shop, loading dock, two offices and several full time employees. Before we left there, we were exporting to 39 foreign countries. I want to stop right now and give thanks to everyone involved. And that certainly includes all the musicians who trusted us with their cash and their tone. Thank You All So Much! **In total we built around 3,000 Mark I Boogies in that house.**

Looking back, I guess we were the first “boutique” amp company, though I never thought of it that way. Now, 30 years and 30 miles from that original Tone Shack,

we’re still hand-building Mark I’s and quite a few other models.

We’re no longer the latest underground boutique darling but we’re still pioneering the frontiers of tone. And we’ve barely changed the way we design and build our amplifiers. What changes we have made are all based on my years of experience as the designer and builder. And every little thing is calculated for one purpose only: To Hand-Craft A Better All-Tube Amplifier. Each chassis is still entirely hand-wired, checked out, teched-out and as always, bashed repeatedly with a hammer while turned full up. Then there is a play test, followed by a 24-hour burn-in, another electronic check, installation into a cabinet and a final play test given by a different musician then a last inspection before packing. Every Mesa/Boogie® from the most expensive to the least uses the identical top grade materials and assembly techniques. Every Mesa/Boogie including all

the cabinets, is entirely made in our one location here in Petaluma, California where we’ve been since 1980.

These days a lot of big name amp manufacturers choose to have their products built out-of-country, and that’s OK with us. We look to a couple of our favorite icons and take heart: a Ferrari wouldn’t be the same if it were made in China. And closer to home, Harleys deserve to be made in Milwaukee, not Mexico, because they – like us – are American.

I promise we won’t let our increased visibility spoil us. We’ve been approached with many offers over the years and could have sold out. **But this is what we do, and we love doing it.** Our goals remain unchanged from day one: Build the best musical amplifiers possible, and treat each of you as we ourselves would wish to be treated. We want every musician we serve to become a life-long member of the Mesa/Boogie family.

JIM ASCHOW, Vice President

Where do I begin? There aren’t enough hats made to cover all the jobs Jim does. He’s like a Conductor –with a wry smile and a distant calm– orchestrating the furious pace of supplying the guitar world with high performance amplifiers. This is no easy gig. In fact no one before him was even able to do it...we’d burn ‘em right out! And yet, he makes it look easy.



Because Jimmy is Mesa/Boogie. He literally grew up here. Over 20 years ago and right out of high

school, he started sanding cabinets and soon was covering for his older co-workers when they were too burnt from their gigs the night before. Now, as Vice President and General Manager, Jim Aschow basically runs the joint and enables me to focus on my real passion, product design.

That’s how it is here at Mesa/Boogie: We work more like a band than a company, and Jim’s a great coach helping each member of team Boogie discover their own level of contribution. And Jim does way more than manage, he’s a fine craftsman and designer in his own right. Not only does he create the myriad of production fixtures that enable us to maintain our precise quality, he also works throughout our plant with the people using them. Remember, every Mesa/Boogie is hand-built and requires a high level of expertise to emerge from our shop as an instrument you’ll treasure for years. This kind of tightly knit groove means there’s no room for bureaucracy to come between us and your tone.

And Jim doesn’t stop when the sun goes down. In his “spare” time, he’s our chief cabinet designer constantly elevating our existing designs as well as creating many new ones. Check out Jimmy’s 4x12 TQ...in fact all of the Three Quarter Back and Recto cabinets. And if you play bass, explore the entire line of Powerhouse® enclosures. Working closely with the speaker manufacturer to create custom bass drivers, Jim spearheaded that entire line from the elementary components to the final finished enclosure. And that includes tricky hardware and features such as the patented Track-Lok™ heavy-duty caster mounting and the Tilt n’ Roll™ transport system.

So behind every Mesa/Boogie stands a man of quiet passion, intense focus and deep integrity. I’m honored and deeply thankful knowing that Jim maintains the same depth of commitment that I have, as he carries out the responsibility of insuring that each and every Mesa/Boogie lives up to my original vision.



Mark IV

1989

Voted Amp of the Year three times in Europe and still one of our most popular models, includes fabled II-C Lead sound.



Dual Calibers™

1990

The Dual Calibers: DC-3, DC-5, DC-10. Starting in 1984 with the Studio .22 and evolving through the DCs to today’s award-winning, three-mode F-Series amplifiers.