

# the ToneQuest Report™

The Player's Guide to Ultimate Tone



## Bakos Amp Works PLUS 45 Custom



Those of you that have been with us for a while are already familiar with Jeff Bakos and *Bakos Ampworks*. Frankly, we would have a hard time doing what we do here without Jeff's presence, just a few clicks west of Ponce de Leon Ave. After 15 years or so repairing, restoring amps, engineering recording sessions in his studio next door, and weathering the '80s and much of the '90s as a working bass player in a variety of bands, his enthusiasm for great tone remains undiminished.

In his spare time, when one of his customers expresses interest, Jeff has recently been building his own take on a tube-rectified *Marshall JTM45*. The character of the early *JTM45* amps is a little more forgiving and less aggressive than the *plexi* and *metal panel* models, and this is accurately captured in the *Plus 45*. Like the *Blankenship*, the voice of the *Bakos* is rich, round, full and exceptionally musical, enhanced with thoughtful features developed after years repairing and tweaking hundreds of vintage *Marshall* amps. Jeff also built



a custom version of the *Plus 45* using the preamp section of a *Gibson GA40* with interesting results, and both models are reviewed here. While skeptics won't resist suggesting that we may be incapable of objectively reviewing an amp built by someone with whom we have an ongoing relationship (a member of our advisory board who also fixes our amps), we'll assume you are better than that. Nothing gets reviewed here that doesn't earn the ink. We asked Jeff to describe how the *Plus 45* was conceived, and our review follows....

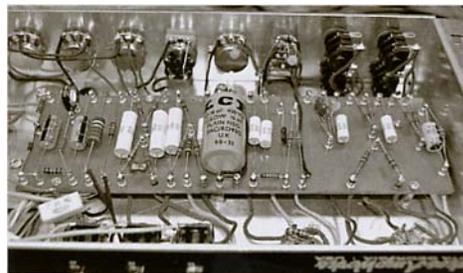
**JB:** What I wanted to do was build a more versatile version of a tube-rectified 45 watt *Marshall*. I experimented with a lot of different capacitors, tubes, transformers and front panel control features, and I would up choosing to include a

switchable master volume and a tone mid-boost.

**TQR:** But you didn't use the early *Marshall* master volume circuit....

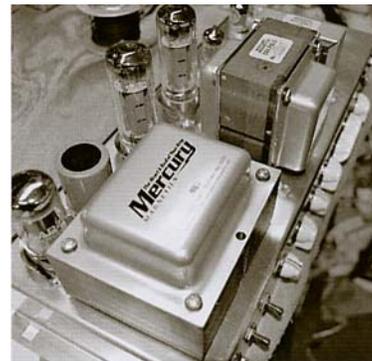
**JB:** No, I used the version that is found in *Orange* amps and *Matchless* that works from the phase inverter. It's an easy one to bypass, and it sounds good until you get below 3-4 on the volume control.

**TQR:** What were you chasing tone-wise?



**JB:** Well, originally *Marshall* used KT66s, and having played a lot of *Marshall*s, I thought the tone was better with EL34s. They seem to

produce a better bass response without being too woofy, and the EL34s have some sparkle in the top end that the KT66s lack. And the *Mercury Magnetics* transformers selected operate at higher plate voltages that give you more headroom, cleaner tones, and even a cleaner kind of distortion. And unlike many of the early *Marshall*s, the tone controls really work in the way they exert an audible effect on EQ rather than everything being so notched in the mids. The old *Marshall* inputs were either super bright or too bassy, so I played around with the cap values on the inputs to make them more usable and versatile. It's a combination of higher plate voltages, the output tranny design, EL34s, the master volume mod, and tweaking the cap values for each channel so that you aren't stuck with the original dull and super bright tones in the two original channels. I also use *Sozo* caps, and to em



they have a very vintage sound. It's the sum of the parts.... I also changed the pot value for the presence control, and I added a push/pull midrange boost. It's a very pedal friendly amp, too, because it has a lot of headroom.

**TQR:** What types of tubes did you choose?

**JB:** *Svetlana* EL34s, a Chinese (*Ruby*) 5AR4 and a couple of



EI12AX7s and a JJ. The *Svetlanas* have a nice midrange character where some of the others sounded a little flat.

**TQR: And speakers?**

**JB:** The *Avatar Hellatone* G12H 70<sup>th</sup> Anniversary seems to be really good for the combos. Great low end and very balanced and round.

**TQR: And then you began experimenting with Mark Johnson's amp, who plays busted up slide in mostly smaller venues, and the stock Plus 45 was too clean....**

**JB:** Yeah, I toyed with the idea of building a front end using 5879 preamp tubes similar to a *Gibson GA40*. It sounds really good – it has a lot of high gain and it gets there really quick. It's dynamically very responsive, and of course, far more powerful than the original *GA40*... you can hear the 5879 sound with lots of gain, but with more headroom behind it.



**TQR: If someone asked for a Plus 45, but with a higher or lower threshold of clean headroom, can you do that? How flexible can you be?**

**JB:** This *Bassman* circuit does give you some room to work with different rectifiers and cap values, but it's already the cleaner side of a vintage *Marshall*, which makes it very pedal friendly, and the gain is there when you need it – you're just not stuck or locked with it.

**TQR: What's next? You've mentioned building a black-face Deluxe and the Gibson GA40.**

**JB:** Well, I own a lot of amps and I'm inspired by them all in different ways, but yeah... what to build? Given the parts availability we have today with chassis, cabinets and transformers, building classic designs and modifying them to taste is where it's at. I'm open to building whatever people want on a custom basis as time permits.

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The "stock" version of the *Plus 45* (no *GA40* preamp section) reveals a strong amp with much more headroom and articulation than you'd normally associate with an early *Marshall* design. Features include two individually voiced channels, master volume, treble, mid, bass, presence and mid-boost. Channel 1 (bright) played with a *Strat* at moderate volume levels is almost *Fender*-clean, but stops well short of sound-

ing too thin or sharp. What it does add is a sparkly, tactile quality to the treble tones that you'll never squeeze from a vintage *Marshall*... with the mid-boost on, the tone becomes thicker with a subtle increase in sustain, yet string definition and note separation remain clear and undiminished. Channel 2 is chunkier, but nothing like the dull and bassy 2<sup>nd</sup> channel in a 4-input vintage *Marshall*. You'll use this one liberally without jumping it with the bright channel.

The *Plus 45* willingly responds to stronger pickups like humbuckers, *Tele* bridge and P90s with a formidable presence that dwarfs more modestly powered amplifiers, producing rock solid lows, fat and politely forward mids, and a smooth treble character that hangs tough in complex chords and single



string solos. Best of all, it's easy to move from clean tones at an audible stage volume to varied levels of distortion and sustain intensity from the volume control on your guitar – channel switching not required. If you don't require and can't handle a 45 watt amp, we understand, but nothing hangs fire like big iron, and the *Plus 45* fills a room with thundering tone that cannot be rendered from 20 watts. In fact, it reminds us more than a little of the tube-rectified 1961 blonde *Bassman* 6G6 reviewed in the April 2007 issue of *TQR*. The master volume nimbly attenuates volume from settings above 10 o'clock with a tone that is slightly thinner than the natural overdriven sound of the amp at the lower settings, but the results are good and definitely usable, with none of the weak, fizziness you may have experienced with other master volume circuits.

The *Plus 45* with *GA40* preamp section is an entirely different beast, with a lower threshold of clean headroom and much faster ramp-up into a hot meltdown compliments of the dual 5879 preamps tubes. Basically, it sounds like a 45 watt *GA40* that naturally mates well with single coils. With more powerful humbuckers, we had to pull a large part of the bass EQ out of the signal lest we blow up our precious *Celestion Alnico* gold speakers (or so it seemed). The *GA40* version of the *Plus 45* is no plaything – a serious appliance for players who want to make a lasting impression. Jeff can voice this amp for more or less bass and treble response based on your preferences, band like the original *Plus 45*, you can choose between a head, 1x12 or 2x12 combo.

