

# the ToneQuest Report™

The Player's Guide to Ultimate Tone



## The Art of Dreaming

*“Things don’t change. You change your way of looking, that’s all.” — Don Juan*



No one has ever succeeded in deciphering the infinite variations manifested by the human mind — how we inhabit the same world, yet perceive and react to every moment in our lives in such profoundly different ways.

Society, education and culture provide filters intended to shape how we view the world, but each human being remains different and unique for reasons that remain a mystery. And so it goes with music and musicians.... Why do some players find their voice in a Stratocaster, while others can’t imagine playing anything but a big-ass hollow body? This is “me,” and that isn’t, but for someone else it is. Most of us hear target sounds in our head that drives our selection of instruments and gear — a sound that may change with each song, while a weekend blues player might simply wish to refine a single, signature tone in the style of Jimmie Vaughan or Albert or B.B. King. The point is, we often know where we want to go, but the shortest path to our destination isn’t always so clear. To make things more interesting, some players just want to be dropped off at the right address in the *Quest for Tone*, preferring to find something that works with no tweaks



or modifications as quickly as possible, while others view the *Quest* as a journey with no defined beginning or end. To them, anything is possible until proven otherwise, they enjoy exploring new sounds, and their “failures” are often as illuminating as their successes.

We learned this lesson once again with an amp that we had initially written off, only to discover four years later that it could become one of the most extraordinary guitar ampli-

fiers we have ever owned or reviewed. What changed? Well, with the lucid, unerring clarity of hindsight, we had to dream it first, thinking of terms of possibilities — what could be, rather than focusing solely on what was missing....

### Fender '57 Twin

The 25 watt Twin originally debuted in 1952 as the first amp with separate bass and treble controls. By 1955, the model 5E8 Twin had been upgraded to 50 watts, featuring two 5U4G rectifiers — another Fender first in guitar amplification — dual 6L6s, bass, treble and Fender’s presence control, a new fixed bias **power transformer**, choke, and extra gain stage and second negative feedback loop, and the new “narrow



panel” cabinet with speakers mounted in each corner. In the next circuit revision (1956–57 model 5E8A), a ground switch was added and the treble tone circuit was removed from the negative feedback loop. Leo Fender couldn’t play a lick on the guitar, but he obviously never stopped thinking about how to improve the sound and performance of his

amplifiers, as evidenced by the nearly constant revisions and refinements of Fender circuits.



The mighty “high power” 80 watt Twin model 5F8 appeared in 1958 with four 5881s, a short-lived 83 mercury vapor rectifier that

would be replaced by a single GZ34 rectifier (model 5F8-A), and a new “Middle” control added to the normal bright volume, bass, treble and presence controls. For many collectors and players who can afford them, the high powered Twin ranks with the 5F6-A Bassman as the most toneful, desirable, rare and costly Fender amps ever built.

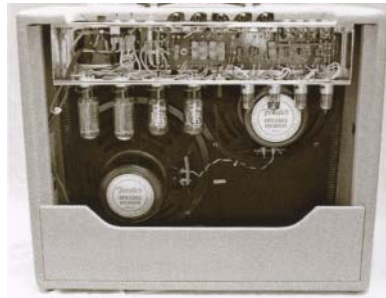
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With a deft nod to the company's rich history, Fender introduced a faithfully conceived, hand-wired version of the '57 5E8-A Twin in 2004, wisely sidestepping the incredibly loud 5F8-A 80 watt version. Unless your name is Keith, where would you play it? Like many players and gear enthusiasts, we wasted no time grabbing a '57 Twin off the floor at *Midtown Music*, anxious to develop a review article soon after its introduction, but the '57 Twin left us utterly unimpressed and disappointed. We had antici-

ipated a lush, rich, throaty, singing, exquisitely vocal tone from the Twin, and what we heard was a clanging, brittle, thin, and rather one-dimensional amplifier with an irritating voice. Granted, our high expectations may have contributed to the depth of our disappointment, but we have heard enough great Fender amps to know this was not one of them. Rather than wasting a page or two burning down the Twin in print, we decided to just return it and move on — there were plenty of great amps that remained to be explored and reviewed without ranting on about the Twin. Well, there are no mistakes.

Over the next year or so we received several calls from readers asking why we hadn't reviewed the Twin as we had indicated in the "coming in future issues" column on the back cover of *TQR* (discontinued when we realized certain other mags were watching our planned editorial calendar a bit too closely). Further discussion revealed that these same readers had



already bought the '57 Twin, and they wanted to know how they might "warm up" the sound of their amp. *Really?* We kicked around the idea of changing tubes, and that perhaps the speakers needed to break in, but that's as far as it

went. Aside from seeing Eric Clapton playing the reissue Twin every other year or so when he came through Atlanta, and at the final Cream show in New York, the Twin remained largely forgotten until August of 2008.

Perhaps we were inspired by Peter Frampton's *Fingerprints* CD — much of it recorded with a tweed Twin, but for some reason we began thinking of the hand-wired '57 Twin again in late summer of 2008 — how disappointing it had been — but more importantly, how good might it be *made* to



sound? An eBay search revealed that barely used Twins were selling for \$1300–1500. Within a few days we had found one that had been played but a few hours and put back in the box (*that* resonated with us), and we bought it for \$1500 shipped.

The Twin arrived in mint condition in the original box with all documentation, and as we unpacked it we felt no little sympathy for the former owner, having bought our share of disappointments in the past. A swing and a miss is far better than having never swung at all.... We plugged into the Twin and everything we remembered about the first one filled the room as if it were yesterday. The amp sounded raw, tight, sharp, one-dimensional and remarkably uninteresting. It didn't breathe, and a rainbow of warm and essential frequencies seemed distant, muted and removed. If you can imagine a big, powerful amp still sounding small, this one did. The more we played it, the Twin's boxy, shrill tone became, as it had the first time — irritating — so much so that it was actually a relief to shut it off. We had expected this, of course — that had been the whole point in buying the Twin in the first place, but this time we had a dream of something better to follow.



We first turned our attention to the most obvious areas for improvement — tubes and speakers. Fender had chosen Groove Tubes 12AX7s, 6L6GEs, and dual Electro-Harmonix 5U4GBs — solid, reliable choices for a production amp, tone perhaps being secondary to durability and price. You can't fault Fender or any other amp builder for the sound of current production tubes, but were we to replace the tubes in the Twin today with new tubes, we'd use reissue Tung Sol 5881s and 12AX7s. We went all out, biasing the Twin for a matched pair of blackplate RCA



6L6s, with GE and RCA 12AX7s, and we tested both GE and RCA NOS 5U4s. Since new old stock RCA 6L6s cost as much as some small amps these days, we also tried a pair of NOS JAN Philips small-bottle 6L6WGBs, which are still available and reasonably priced at [www.kcanostubes.com](http://www.kcanostubes.com). Unlike

the original the '57 Twin is equipped with a very convenient and necessary bias pot. As you can guess, the NOS tubes produced an audible improvement, with the power tubes contributing the most significant change. The RCAs were predictably musical and rich, with a smoother treble tone than the full cymbal crash treble we'd heard before, and harmonics were clearer, deeper and more distinct with a 3-dimensional shimmer. However, the Philips 6L6WGBs



significantly beefed up the mid and bass frequencies, smoothed treble with a silky and less dominant edge, and essentially repositioned the brightness of the Twin inside chords rather than brashly dominating everything we played. It sounded like an

entirely different amp. The preamp tubes subtly color the tone in the normal and bright channels, and they affect the threshold at which clean tones began to thicken with sustain. Identical but different tubes produced varying results. If you have an assortment of great old preamp tubes, it pays to try them all in different sockets to see which sound best.

We also acquired and experimented with lower gain NOS 12AY7s, which would have been original equipment in the '57 Twin along with the 12AX7 for the phase inverter. These tubes extended clean headroom, and remember... Leo Fender was constantly trying to eliminate the distortion that became so desirable in the '60s.



The 5U4s turned out to be a curiosity. We didn't care for the NOS pair of GEs at all — they made the amp sound stiff and in an odd way, and less lively. The RCAs were an improvement, sounding more fluid and airy, but we also liked the EH5U4s, which are, as Mike Kropotkin reminded us, not true 5U4s at all. The EHs just seemed to push the amp a little harder, where the RCAs were more subtle and reserved, as you would expect a tweed circuit to behave.

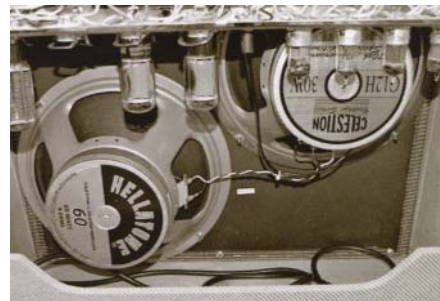
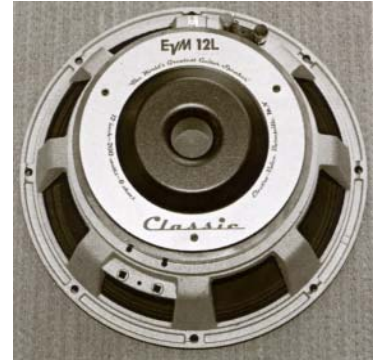


Perhaps the best way to describe the difference is that the EHs introduced a slightly more forward and aggressive, punchy feel. It's quite possible that you'll be perfectly

happy leaving them in the amp. You can also pull one of the 5U4s to achieve distortion aster, at lower volume.

With our new old tubes sorted out, we turned to the speakers — specially designed by Weber and built by Eminence in the image of the classic '50s Jensen Alnico "P" series. Having played through many reconed vintage P12N and P15Ns, we had initially viewed these speakers with a little skepticism during our first tumble with the '57 Twin, so we had no qualms about pulling them. However, we also repeatedly re-installed them during our experiments with various tubes and replacement speakers to be absolutely sure where we were headed. In 1957, the 5E8-A Twin was originally

equipped with Jensen P12Qs, and thanks to Greg Talley, we had access to two pairs of vintage, unreconed Jensen P12Qs dating to 1962 and 1964. In fairness to Fender, Weber and Eminence, the bright character of the original P12Qs probably wouldn't be the first choice of many players today. Yes, the old speakers are musical and richly detailed with incredibly clean, pure treble tones, but they also clearly lacked the warmth, bass response and balance of many popular speakers made today in the U.S. and England. We don't fault Fender for their efforts in resurrecting a vintage Jensen speaker, but in our opinion, the diminished bass response, thin, strident treble tones, and muted voice just don't meet our expectations in 2008. Like rusted bridge saddles on a new relic Tele or Stratocaster that can be adjusted, there can be a point of diminishing return in an effort to strictly duplicate "vintage" tone or the visible effects of time.



Even with our NOS tubes installed, the bright channel in the Twin *is* bright, and the presence control sharpens the tone even further. This weighed heavily in the choice of

replacement speakers we considered. We also acquired a Hosa "Y" patch cable that enables us to plug into both the normal and bright channels and mix to taste — recommended.

At 45 watts or so, the Twin is capable of reaching comparatively "high" volume levels, but perceived volume and the associated pain-avoidance reflex many of us feel when thinking about powerful amps is deceptive. As Joe Bonamassa recently pointed out, dialing in the mids can mean the difference between a relatively tame amp sounding brutally hurtful, and a higher powered amp seeming much less so.

This is also where your choice of speakers can play a significant role.... If you're craving maximum power, volume and distortion-free tone with all frequencies present and accounted for, EVs will do that, while admittedly adding an



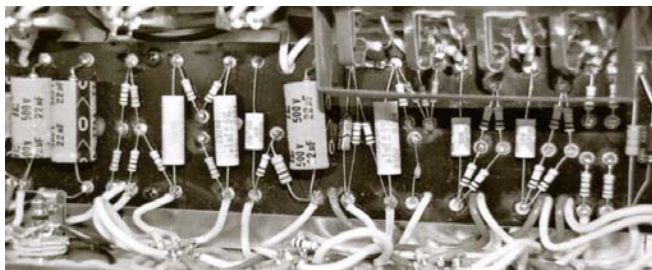


extra 20 pounds to the baffleboard. That's not where we wanted to go, but we did mount one EV in the Twin with the other speakers as an evaluation pro-

gressed, and the results were impressive *if that's the sound you're chasing*. SRV freaks should stop burning through over-wound Strat pickups and just throw down the scratch for a couple of EV Classics. For our personal taste, we knew we wanted to fatten up the voice of the Twin with stronger bass and midrange — treble was not going to be a problem. At 45 watts, we also wanted to use speakers that would neither produce maximum volume, or the kind of faster speaker distortion you would get from two 25 watt speakers. The beauty of the Twin is that the notes retain a captivating clarity even as the amp spills into an overdriven tone at 5–6 on the volume control.



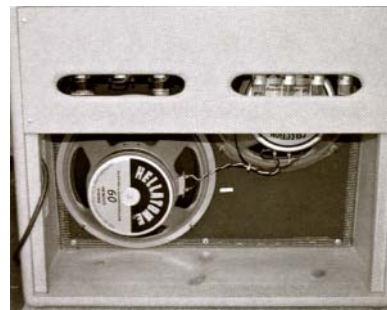
Experimenting with combinations that included 70 watt Jensen Mod, Alnico Jet, Warehouse Veteran 30, Eminence Man 'o War, Red Fang, Cannabis Rex and Screaming Eagle, we turned to a pair of Celestion G12H30s, followed by one G12H30 paired with Celestion Vintage 30 (Hellatone 60). While we could easily recommend several excellent combinations of the various speakers referenced there, we ultimately settled on the Vintage 30 and the G12H30 for their robust lows, rich midrange, and plenty of smooth and musical high end to complement the Twin's bright channel, without sounding too sharp or dominant with a wide range of guitars and pickups. The '57 Twin now sounded exceptionally good — warm, full and bright, with a thick, trebly vocal quality that in our experience elegantly reflects the way vintage tweed amps of



this era were voiced, as demonstrated by our '58 Tremolux. But our work would not be complete without considering the circuit and components....

Fender designers faithfully followed the original schematic and layout for the '57 Twin, **turning to Mercury Magnetics for the all-important transformers and choke. Among custom builders, there are many ardent fans of Mercury**, while others have worked with manufacturers like Heyboer and Hammond for years. Each company has their followers, and

the same can be said for the capacitors used today in building amplifiers. In the booteek world, you'll often see Sprague, F&T or Solen electrolytic caps. Fender chose to use Illinois electronics, in part, we assume, because their smaller size enables them to actually fit on the board as originally designed (leaving room for the added bias pot), while the big, blue Spragues used by many custom amp builders will not. Jeff Bakos agreed that it's largely a moot point — he likes the Illinois caps and uses them frequently for repairs. You'll find them in Sampson-era Matchless amps as well. Fender chose Xicon polypropylene coupling caps for the Twin, and when it comes to coupling capacitors, you'll find lots of conflicting opinions. Some people *luv* SBE Orange Drop polypropylene film caps — others prefer German F&Ts, or the foil and polyester film replica “mustard caps” by Sozo. Jeff suggested that we replace the Xicons in the Twin with metalized polyester 150M “Mallory” caps — a very popular replacement in Fender amps that many believe imparts a smoother, warmer tone than, say... Orange Drops. We agree. Whatever you choose,



be prepared for delayed gratification. There is a break-in period with all signal-carrying components, and new coupling caps can require as much as 50–100 hours before they are effectively burned-in. We burned in the Twin for 48 hours after replac-

ing the caps, and while the full effect may yet to be realized, we do hear a subtle smoothing effect from the Mallory 150s that is less grainy and metallic than the Xicons.

What's left in our optimization of the '57 Twin? Not much. We run ours with one rectifier more often than not, and it is undoubtedly one of the most toneful, character-laden and inspiring amps we have owned or reviewed in these pages. Warmer with more organic mids than a typical blackface, brighter than the brown-era amps, yet less aggressive, loud, trebly and in-your-face than a blonde Bassman, the Twin creates its own beautiful space played clean or cranked into singing sustain and round, woody distortion. Even pushed hard, the sound of the Twin remains uniquely clear and defined, and it is also a very pedal-friendly amp for fans of boost and overdrive effects.

As much as we disliked the Twin “out of the box,” we now enthusiastically embraced it with the same conviction. With the exception of a tube clamp breaking and a somewhat flimsy leather handle for a 60-pound amp that we replaced, the workmanship and fine detail found in the Twin is clearly comparable to any booteek tweed, with an artfully applied, lacquered tweed covering, solid pine cabinet, stout plywood baffleboard and precisely hand-wired circuit. All the Twin really needs is... reverb. Well, here ya go....