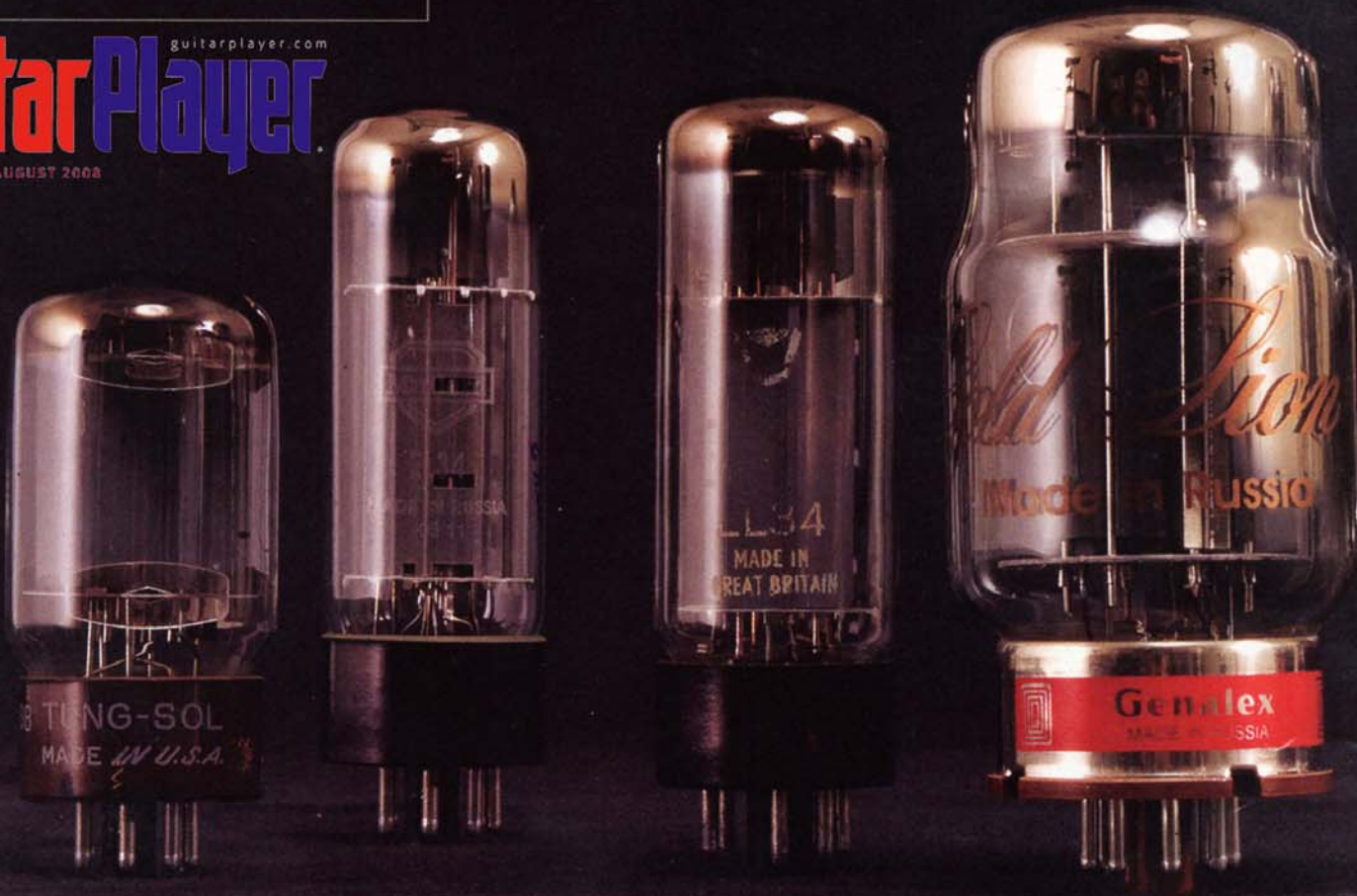


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Reissue Vs. Vintage

Power Tubes

TESTED BY ART THOMPSON

EVEN IF YOU KNOW ZIP ABOUT TUBES, SIMPLY TOSSING AROUND THE names Mullard, Genalex, and Tung-Sol will have most filament heads thinking you're one of their clan. Reason? Those companies were responsible for some of the most hallowed tubes of all time, including the EL34, 5881, and KT66 and KT88 power valves used in some of the most celebrated vintage amps by Fender, Marshall, Hiwatt, Orange, and others. All good things come to an end, though, and when the western countries finally stopped making tubes in the 1980s, factories in China, Russia, and the former Yugoslavia took up the slack and continued to produce most of the major tube types used in guitar and hi-fi amps.

Mike Matthews of New Sensor and Electro-Harmonix has been a major player in the tube business since the late 1980s. Following his purchase of the Reflektor plant in Saratov, Russia, in 1998, Matthews has overseen the introduction of a huge variety of tubes to the music and hi-fi markets. His most recent debuts have included Russian-made versions of the Genalex KT66 and Gold Lion KT88, Mullard EL34, and the Tung-Sol 5881, 6550, and 6L6GC. These tubes look almost exactly like their vintage counterparts and are said to replicate their signature sounds as well. To find out for ourselves, we tested the new EL34, 5881, KT66, and KT88 against the genuine vintage



tubes—some of which were supplied to us by Charlie Kittle-son at Vacuum Tube Valley (vacuumtube.com), which offers one of the largest selections of new and NOS (new old stock) tubes on the Web.

We did our comparative listening using two single-ended class A amps—a Cornford Carrera combo and a THD Uni-Valve, which was run through either a Bag End S-12B 1x12 cab or a Dr. Z Best 2x12. Because these amps can digest any of the popular octal-base output tubes (the Carrera is also switchable for 9-pin EL84s) without rebiasing, they are ideal for anyone who wants to explore the sonic qualities of various tubes in a lower power amplifier. The

Uni-Valve is particularly suited to this task thanks to its removable metal cover, which makes it super easy to access the tubes and built-in Hot Plate output attenuator. The guitars we used for this test included a Fender Stratocaster, a Gibson '68 Black Beauty Les Paul reissue, and a PRS SC 245. Amp-to-guitar connections were courtesy of an Accusound Silver Studio Pro cable.

GENALEX KT66

Introduced in the mid 1950s by the Marconi-Osram Valve Company, which marketed tubes under the Genalex name, the KT66 was Europe's version of the American 6L6GC. A highly prized



A Russian-made KT88 (left) and an original U.K.-made gold Lion.

tube in guitar and hi-fi circles, the KT66 dwarfs the 6L6, and has a big sound to match. It was used in Marshall's famous Bluesbreaker combo of 1965-'66, though Marshall subsequently changed to the more readily available EL34.



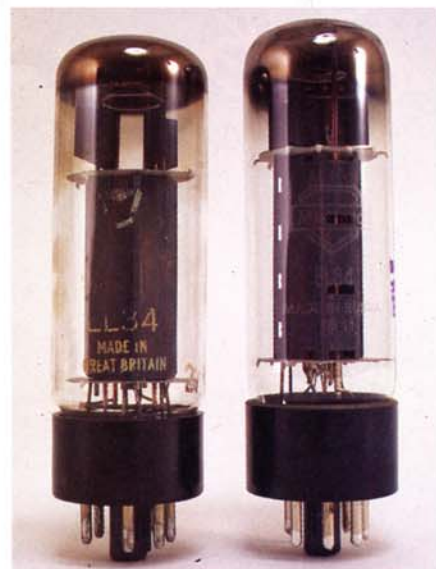
The British-made, early '60s Genalex KT66 (left) and its new Russian-made counterpart.

The original KT66 is a very sought-after tube that will currently run you around \$600 for a NOS matched pair. The very affordable reissue Genalex KT66 (\$99 street, matched pair) duplicates the large clear bottle of the U.K.-made tube, as well as its brown base, gold-ink lettering with prancing lion logo, gold-plated screen, and huge plate structure.

Our early '60s KT66 sounded big and brawny, with extended lows and a very rich and detailed set of mids and highs. The reissue Genalex KT66 nailed much of the oldie's demeanor, delivering an almost identical sense of presentation and focus, and never drifting into the ragged zone when pushed into distortion. As with the original, the new KT66's overdrive voice is throatier and more British-sounding than a 6L6's, and it responds beautifully to changes in picking and volume dynamics. It's easy to see why this robust-sounding tube remains so popular with savvy musicians, and with such a good-sounding reissue available at a fraction of what a set of NOS KT66s would cost, it's an attractive replacement for any 6L6 amp that has enough cabinet space to accommodate the KT's tall bottle. We can't vouch for the long-term reliability of the new KT66—the superbly made original is a tough act to follow in that regard—but tonally speaking, the new tube hits the mark.

GENALEX GOLD LION KT88

Introduced in 1957, the KT88 was Europe's answer to the mighty Tung-Sol 6550. Conservatively rated at 40 watts with 600 volts on the plates, the KT88 was initially used by such hi-fi makers as Dynaco, Leak, McIntosh, and Harmon-Kardon. However, it was in the 200-watt Marshall Major of 1968—which



East meets West—an original Mullard EL34 (left) and a new Russian-made version.

used four KT88s running at 650 volts—that this burly beam pentode became legendary among guitar players. The original KT88 is a masterpiece of audio technology, and a matched NOS pair can now run as much as \$1,000. Much less expensive reissue KT88s have been produced in Chinese, Russian, and Slovakian factories for years, but with New Sensor's release of the Genalex Gold Lion KT88 (\$140 street, matched pair) we now have a version that purportedly duplicates not only the awesome look of the original, but also its internal details, including the gold-plated grid wire, carbonized screen grids, and tri-alloy-clad plate structure.

Given the KT88's reputation for power and headroom, you might think it would sound somewhat stiff when overdriven. Not so. Our NOS vintage example from the late '50s sounded great when driven into distortion, yielding an absolutely badass tone that displayed extended bass, awesome midrange complexity, and beautiful high-end presentation. This aggressive-sounding tube also cleaned up very nicely at lower guitar levels, producing a crisp, shimmering tone with gorgeous note detail and exceptional string-to-string clarity. The reissue Gold Lion copped most of the essential elements of the original's bold sound, but differed by being brasher on the top and displaying a harder-edged response overall. It still packs a very muscular distortion sound and has yards of headroom, but it was not quite as refined as the original Gold Lion. The new tube may soften up with some use, however, and we'll be certainly eager to see how well it holds up when installed in some of the high-voltage amps that use it.



The massive plate structure of the NOS Genalex KT66 is a thing to behold.

MULLARD EL34

Founded by Capt. S.R. Mullard in 1920, the Mullard Company of England is known for making fine-sounding and extremely rugged tubes—one of the most famous being the EL34, which it introduced in 1953. Designed to be a low-cost tube that could deliver 40 watts from a push-pull pair, the EL34 offered easy drive characteristics (allowing amplifier manufacturers to use it with a minimal-parts-count driver/splitter), high sensitivity, and a skinny glass envelope that saved chassis space. Early EL34s could outperform the venerable 6L6 and almost match the potent 6550. Mullard listed the EL34 as able handle 650 volts on the plates with a dissipation of 25 watts, and hi-fi amplifier makers Dynaco, Eico, Fisher, and Marantz were among the first to deploy it. The EL34 really came into its own, however, when Marshall adopted it in 1965 for the JTM-45. Hiwatt, Orange, and Laney also jumped on the EL34 bandwagon, further helping it achieve its status as the tube that powered rock and roll in the '60s and '70s. The EL34's wicked distortion qualities have been attributed to its less rigid internal structure, as well as to the fact that the vacuum wasn't drawn as "hard" (a time-consuming process) on the EL34 as it was on the 6550 and similar tubes.

The reissue Mullard EL34 (\$39 street, matched pair) had its work cut out going up against a 70's-era Mullard from U.K. Blackburn production. The original sounded very well balanced, with a muscular midrange, great top-end bite, a tight set of lows, and awesome dynamic response. This tube loves to distort, yet it would pull right back to elicit a lovely shimmer when given less guitar signal. An old Mullard EL34 is about as perfect as it gets for classic rock and metal tones, and it was good to hear the reissue delivering a close replication of that sound. The vintage tube definitely sounded a little more gushing overall—like you're hearing more of *everything*—but the new tube cops the vibe well enough that you could save your vintage EL34s for recording and use the reissues for gigs. The new tube may face some stress challenges when used in a high-voltage vintage Marshall—but given the current cost of around \$400 for a matched pair of NOS vintage Mullards, you'll certainly feel a lot less financially stressed when comes time to re-tube.

TUNG-SOL 5881

Credited with making the first successful electric headlamp for automobiles in 1907, Tung-Sol went on to invent the flashing turn signal and dual-beam headlamps before turning its attention to electronics in the 1920s. Tung-Sol tubes featured the finest chemistry and metallurgy available, and the company's rigid quality control standards and manufacturing processes resulted in extremely high-grade tubes—the most famous being the powerhouse 6550, which was introduced in 1955. The earlier 5881 (introduced in 1952) sported a squat glass envelope and was designed to be a compact replacement for the 6L6, with improved electrical and mechanical ruggedness. The 5881 offered

tremendous overload capability and could deliver 23 watts with 360 volts on the plates. Huge numbers were used in the autopilot servo amplifiers of such military aircraft as the Boeing B-52, while more than a few found their way into hi-fi amps by Bell, Bogen, Heathkit, Fisher, and many others. Fender's famous tweed Bassman, Pro-Amp (6G5-A), and Twin-Amp (5F8 and 5F8-A) also came factory equipped with Tung-Sol 5881s.

We compared the new Tung-Sol 5881 (\$49 street, matched pair) against a '50s-era 5881 with "JAN" (Joint Army Navy) stamped on its brown base. Tung-Sols have a unique look, and though the oldie's partly italicized "MADE IN USA" is replaced by "MADE IN RUSSIA" on the new version, the Reflektor folks did a great job of nailing the cool visual aspects of this classic tube. Our original 5881 delivers a punchy sound with a signature twanginess that sets it apart from similar tubes. It's not particularly bass-y, but its bright, sinewy distortion is excellent for Texas-style blues, and it cleans up nicely without losing its unique timbre when you turn down. The new 5881 sounded essentially the same as our '50s model, though it was a bit louder and punchier, and a tad less twangy. You pay for what you get, though, as a matched pair of NOS Eisenhower-era Tung-Sols will currently set you back around \$275 (which actually isn't bad considering they'll probably last forever), so kudos to Mike Matthews for bringing this classic back at such an affordable price. ■



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