

Test Reports 6V6GT types OCTOBER 2005

INTRODUCTION:

Object of the test

To evaluate the sound quality and reliability of the new batch of 6V6GT types and compare against the best new old stock types for use in guitar applications.

Equipment used

Fender Princeton 2 reverb fitted with Jensen P12R.

T.A.D silencer power attenuator.

Pedals: Butler tube driver, Butler blues driver, Reissue Ibanez TS808 tube screamer. MXR Zakk Wylde overdrive.

1973 Fender Stratocaster. 1981 Yamaha SA 2000S, 1993 Gibson Les Paul Standard. 1990's Fender Telecaster with Texas specials.

HOW WE TESTED:

All valves were put through a controlled burn in process at high working plate voltages at 500 volt plate and screen. The valves were then tested with 6 changes in grid bias with each stage monitored so that each valve tested had the same anode current and transconductance. We checked heater continuity both hot and cold and tested cathode heater insulation and gas. The valves that got through were then tested and matched at two different bias settings to ensure conformity on a digital tester on anode current and transconductance. The digital tester has an accuracy of plus or minus 1 m/a.

6V6GT/AZDAM/PHILIPS:

Here is another NOS treasure that is modeled on the RCA 6V6GT. It was made by Philips and distributed in Europe under the Azdam brand name.

The bass response was warm and round. The mids slightly recessed. The treble was well forward and bright. This valve was the only item which rivaled the American Philips 6V6GT for top end response. Under fully overdriven conditions the bass and upper mid compressed slightly, this lost that classic Princeton twang. The treble also started to get a little harder and rough round the edges. This proved to be an excellent blues/rock valve.



6V6GT/G.E.1953:

The first thing that hits you with the G.E is its big soundstage which fills the room. This indeed was the biggest of all the items tested. The bass is rich, warm and fat great for thundering power chords. The midrange was very smooth buy well forward in the mix. This really worked well with the Yamaha SA200S. It made runs full bodied and creamy when pushed into overdrive. The valve breaks up slightly later than the R.C.A but still retains that mid forwardness when pushed. Under full distortion the balance of the valve changed with the top end losing some of its brightness. This valve is ideal in the new American custom amps by Top Hat Victoria, as it will remove some of the top end hardness that these amps produce. The G.E is a really excellent rock and blues valve.

6V6GT/MAZDA:

The 1950'S Mazda are one of my favourite 6V6GT OF ALL TIME. In these tests they sounded as good now as they did then. The sound stage is huge, detailed and well balanced. They have a raw drive and punch that made the amp sing.

The amp sounded huge, not a small 1 x 12 combo. It showed less bass than the G.E or R.C.A. The treble was clear with no fizz in all test applications whether clean, distorted or run really hard. They produced a more pronounced top end response under full overload conditions. Lead runs were more dominant with the top three strings really cutting through but never hard or harsh. In overdriven mode the valve has a real aggressive kick. Great for rock and blues as riffing was fat and musical. This is still very hard to beat for all types of music.



6V6GT/PHILIPS:

The Philips is the military version of the Philips/Sylvania valve used by Fender in the mid 1970's. This valve really does have a bright and clean sound. The treble was so far forward that it changed the balance of the valve, so you could not call the valve well balanced. This did not change under fully overdriven conditions and remained a feature, which I happen to like. Bass is warm but not as deep or as well extended as some of the others. The midrange has punch with power chords showing plenty of treble

detail.

Single note runs and phrases were clear with only minimal blurring.

The treble clarity was where this valve really excels, it was smooth detailed and clear.

Under full saturation the valve never lost its control or balance. The Philips 6V6GT had the best clean sound out of any valves tested. It will satisfy the most demanding player.



6V6GT/PHILIPS

6V6GT/RCA:

The R.C.A is considered to be one of the best 6V6GT of all time. Many consider it to be the reference against which all others are judged, as they handle every type of music with great authority. The bass was big with perfect balance and definition between top, middle and bottom. The valve has a classic early breakup which is sooner than the Mazda or the G.E. This break up is a soft clip, so it adds just a hint of distortion early on. This distortion is also very musical giving body and grit to lead runs. When overdriven hard it remains smooth and in control sounding full and rich with plenty of detail, quite rightly a classic reference.



6V6GT/RCA

6V6GT/SYLVANIA:

The Sylvania produced a rich clear top end response. The bass a little light but was warm and well rounded. The valve was really too warm for my liking and lacked a little punch. In overdriven mode the valve was more forward in the mid but did not become harsh even when run at its limits. The valve had great sustain and was very musical, it did everything really well and handled power chords in a very musical way.



6V6GT/SYLVANIA

6V6GT/TUNG-SOL RUSSIA:

The Tung-sol is exactly the same valve as the Sovtek EH. Made in the same reflector factory. The valves gave exactly the same performance as the Sovtek 6V6GT -EH.

6V6GTB/TAD:

The T.A.D 6V6GTB is the latest update of the Chinese design that has been around for some years. In normal operation the valve sounds OK but has a real tendency to push the sound through the midrange. In this mode the valve was smooth and warm. When overdriven the midrange forwardness did dominate the sound. This resulted in an unclear and undefined sound. The treble did go fizzy, though this did not go hard like the Sovtek 6V6GT-EH. Power chords were soft and they were lost in a ball of compression.

If you take the other two current production 6V6GT by Sovtek and JJ/tesla this comes in a poor third.

6V6GT-EH/SOVTEK:

The Sovtek Electro harmonix 6V6GT has been with us now for five years. This was the reason that many companies started making 6V6GT powered amps as there was a supply of good sounding valves available. Modeled on the 1950's R.C.A it shares some of the RCA sound character. The bass is large and really warm and packs a nice punch.

The mids a little recessed with the top end smooth and clear. When the signal was pushed into clipping the mids became blurred, which will not please some, but sounds great for rock. The valve sounds clear and crisp at the top end and only under very extreme overload conditions starts to sound a little ragged. The first real 6V6gt to be produced since the 1960's this sets the standard for current production.



6V6GT-EH/SOVTEK

6V6GTS/JJTESLA:

This new valve from the respected JJ/Tesla factory has been available now for just under two years. The valve has very large anode plates and looks like a mini version of a 6L6GC. The bass is warm and well extended, chords slammed, broken chords sung and the treble was clean and clear. The overall balance was perfect, rivaling New Old Stock classics such as the RCA. The separation between the bass and mid was superb and this did not change how ever hard the valve was pushed. When overdriven this valve played all the aces, the midrange became sweeter and sounded sonically pure. Bass and mids

stayed rock solid and treble became slightly forward. Chords sounded big full and vibrant. At this point I thought that I had installed NOS 6V6GT. Single note runs had enough bite to make the point. The distortion was fat and the amp sound was really cooking when the JJ were run hard. The JJ is a really fabulous sounding 6V6GT.



6V6GT/CV511/BRIMAR:

The Brimar 6V6GT is a brown base long life military version of the standard Brimar. It is possibly why Mullard never really made any dent in the U.K government market. This valve dominated the U.K market and it is very easy to see why. This sounds like a Mullard EL34 in a 6V6GT bottle. All the sound qualities that you would wish for are displayed in this valve. Deep and well extended bass. The mid range gave that classic rock and roll crunch. No loss of definition when the amp was saturated, indeed the valve produced rich harmonics. The top was not as bright as the Philips but was silky smooth. Under full overload conditions this item rocked, chords chugged sustain was endless. Its killer woman tone with deep pulsing sustain was the best of the tests. This valve was a real joy to listen to, it simply begs you to carry on playing. This valve was a real contender for the top position.

6V6GT/STANDARD/RCA:

This brown based long life military R.C.A put in a top performance.

The balance is excellent with more leanness in the midrange. This makes the distortion not quite as fat, with a little less sustain than the black base RCA 6V6TA. This is still in the top league as the top end response was crystal clear under all conditions.

This begs to be overdriven and worked well with all devices. Bass was amongst the biggest and deepest of the group. Nice crisp distortion with superb balance. This valve did everything superbly and can be fully recommended.



CONCLUSION:

In our last test reports the top performances were taken by the classic New Old Stock valves from R.C.A, Mazda and STANDARD/R.C.A. Again the reports of 2005 were dominated by the NOS items but there were a few surprises.

We now have a good choice of dependable and reliable 6V6GT valves available. The JJ/Tesla, Sovtek and TAD are now competing for the new growing market in 6V6GT powered amps. So that is why we have seen increased consistency and quality of the product.

The clear winner of the current production 6V6GT was the JJ/Tesla. This came as a total surprise to me, because the Sovtek item is so good, and yet there is still a huge void between the two valves. If the JJs were NOS the

price would be sky high.

This is a truly remarkable valve but still does not quite match the best of the NOS valves. The Sovtek 6V6GT-EH was in second place leaving the T.A.D to take third.

In the NOS stakes its a really close run thing, but the R.C.A held onto its top spot by virtue of its attention to detail. For second place it was a real three horse race, with the Mazda being close to the RCA but with later breakup. The G.E for that larger than life sound or the Brimar 6V6GT for immense woman tone. In our last test reports I did not have the benefit of using a power attenuator, so knowing what the Brimar valve sounds like fully cranked, I decided to go for the Brimar 6V6GT in second place. Third went to the French Mazda with the G.E 6V6GT in the fourth place.

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