

## Test Reports 6550/ KT88 October 2005

### INTRODUCTION:

Object of the test

To evaluate the sound quality and reliability of the new batch of 6550/KT88 and compare against the best new old stock types for use both audio and guitar and bass applications.

Equipment used- guitar and bass

Ampeg 1972 S.V.T head, Ampeg 1988 LTD edition S.V.T head , Ampeg 1990's S.V.T 2 pre amp and S.V.T 300 power amp run through Ampeg 4 x 10 and 8 x 10 cabinets. Marshall 100 watt super lead run through a Marshall 1936 cabinet with G12H Celestions.

1974 Fender Precision Bass, 1977 Musicman Stingray, 1982 Musicman cutlass 2, 1983 Zemaitis fretless custom. 1973 Fender Stratocaster. 1981 Yamaha SA 2000S, 1993 Gibson Les paul Standard.

Equipment used- 6550/KT88 audio

Thorens TD 124 mk 2 SME 3009/Shure, World Audio design integrated 6550 amplifier,

Tascam CD 450, JBL 4430 studio monitors, Tannoy DTM 12 studio monitors, Tannoy 12 inch monitor golds in Lancaster cabinets, Tannoy 10 inch monitor golds.

### HOW WE TESTED:

All valves were put through a controlled burn in process at high working plate voltages in an Ampeg S.V.T.

The valves then where 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 get through are then tested

and matched at two different bias setting to ensure conformity on a digital tester on anode current and transconductane. The digital tester has an accuracy of plus or minus 1 m/a.

#### 6550A/G.E:

The G.E 6550A has become one of the great classic valves that really define the sound.

The punch and fluidness in the bass and that classic Ampeg growl was there in abundance. The bass has plenty of detail in the audio department with mids well balanced. The W.A.D sounded fantastic due to its placement of instruments and the only tube to rival the G.E was the Svetlana 6550C/winged C In bass guitar applications the sound just cuts, with a stingray the sound was full of life with no hardness. The P bass mid honk was crystal clear with a clean top end. The G.E soundstage was huge making the amps sound powerful.

This differences where, however, a little less apparent in the ampeg S.V.T 2P & S.V.T 300 Set up. The sound was more refined but less dynamic than in the original S.V.T.



#### 6550A/STR HARMA:

The Harma 6550A -STR is based on the famous Tung-sol design. The valve has a proven track record for reliability since 1998. The valve produced a rich warm bass sound which was full and detailed. The mids were forward with a slight blurring of detail. The top end was open with a little hardness. When pushed in the Marshall the distortion was not as smooth as some others in the test and could have tendency to be a little harsh

The valve performed excellently in the

ampegs, the classic growl with top end attack with either P. bass or Stingray was superb. The valves soundstage was larger than some other 6550 tested. The valve excelled in all the S.V.T set ups giving G.E type sound at a very competitive price.



#### 6550A-C TAD/RT886:

Here is one of the new generations of Chinese power valves. This valve proves that the Chinese item has seen major improvements over recent years and we can report no problems over the test period. The valve does not, however, have a track record like the other valves tested so we can form no opinion on consistency.

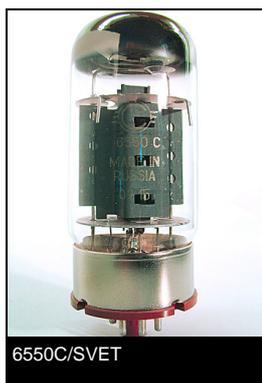
The showed a nice warm bass which was softer than the Sovteks or the Svets and in the Marshall showed an early break up. The top end was rather thin and a little grainy and really did not lend itself to audio applications that well due to the lack of overall detail. The midrange was a little dry and the valve did not really have the up front in your face sound of the Sovtek or the refinement of the Svetlana/winged C 6550C.



#### 6550C/SVET:

The Original Svetlana 6550C which is not to be confused with the recent Sovtek/ Reflector marketed version. The original Svetlana 6550C has become the industry standard for sound quality and reliability since our last tests in 2000. The bass response is very detailed and fluid. Bass runs on the bass guitar were clearest of all tested 6550. Switching from different basses did not lose the P bass growl or the Stingrays bottom end thump. The valve was also extremely smooth with a relaxed presentation.

The Svetlana has a very refined treble which gave plenty of detail on cymbals and pop for funk bass. In the distorted test in the Marshall it gave nice break up with plenty of balance with no loss in the treble department. The valve has also shown tremendous consistency from units tested from 1998 to 2004 which has not been equaled by any other valve manufacturer.



6550C/SVET

### 6550-EH/SOVTEK:

The 6550 EH has been in the market place for a few years and comes in a very nice coke bottle type glass envelope. The bass response was well extended with musical detail and bass runs easily and accurately displayed. The valve also had a very large soundstage which made the sound sparkle and kick into life. The midrange was a little recessed which made this area sound a little flat. Treble was plentiful without being hard or bright. The valve also worked well for both guitar and bass. In guitar applications the valve had enough clarity and a nice distorted tone to please a rock or blues player. It also made the trademark Stingray and Precision sounds easily obtainable.



6550-EH/SOVTEK

### 6550WE:

The Sovtek 6550 WE has been around now for over 6 years and has a proven reliability record. The valve has a warm bass response with a tendency to sound a little top end heavy. In audio the bass was a little muddled and it lacked some of the slam that the original Svet 6550C displayed. The mid range was a little over blown and a touch hard. The top end hardness was most noticeable on the Tannoy DTM which did become tiring after only short periods of listening. In the Ampeg, however, the Sovtek 6550 did come into its own. The growl and top end punch with a Stingray or Precision was superb. This made getting classic Ampeg bass sounds easy. The valve also has a nice mid blurring which made it a nice choice for guitarists when used in the Marshall.

### KT88 EH/SOVTEK:

The Sovtek EH KT88 owes its design to the original G.E.C and Sovtek have paid close attention to detail. The Smoothness of this valve is excellent. Gone are the hard mids and the over bright top end of the earlier Sovteks. Bass is deep and fluid. These improvements do make this an excellent audio tube. The tube is very controlled in the mid, this lends it to sounding a little dry. When pushed in the Marshall it did not sound as fat as the JJ or the Svetlana/winged C KT88.



KT88 EH/SOVTEK

### KT88/GEC:

Since our last reports The G.E.C KT88 has become more expensive and harder to find. It is also a shame that for musical control, detail and dynamics nothing was really that close. The mid range warm and detail especially on vocals was stunning. The ampeg s sounded bigger with the sound filling the room and pushing at the walls. This was great but at the KT88 market price now this is out of the reach of most of us. The valve distorted latter than the JJ or Svetlana in the Marshall but when it did it produced the fattest tone of all. A true reference that deserves its place in history.



KT88/GEC

### KT88/SVET:

The original Svetlana has been with us since its development for McIntosh in the States some years ago. This valve established itself as the industry leader and is the one to beat out of the current production KT88. In the World audio design amplifier the music just flows. Perfectly balanced with very deep bass extension. Treble was sweet and easy on the ear. A well recorded CD or record sounded detailed and powerful. In the Ampeg the deep bass gripped the sound giving plenty of punch and low end output. The only downside that I could find is

that the Ampeg growl was not as easy to get as it was from the Sovtek or the Harma 6550.



### KT88/TESLA:

The JJ KT88 has been around now for a good 7 years and has an excellent reliability record. It produces a nice warm bass response with plenty of depth and detail. The bass was very tight and clear. This worked equally well in the W.A.D for audio and the ampegs for bass guitar. The classic ampeg growl was not as pronounced as with the G.E.

The JJ is superbly balanced with the mids sitting in the correct position and providing plenty of detail. When pushed in the Marshall the JJ had a superb creamy distortion. This was where the JJ real excelled. In audio it was a joy to listen to which made listening to music both relaxing and enjoyable.



### KT90/EH:

The KT90 was developed by the E.I factory and was basically a modified 6KG6 Sweep Tube. Many of the earlier E.I versions are not compatible electrically with the 6550/KT88 types. The Sovtek KT90 is compatible and goes full on for the audio market.

The results with this valve was excellent both in performance and electrically. In audio the bass was full, detailed and had plenty of

weight. The balance was perfect everything in place and in the right amounts.

Music was enjoyable with bass synth parts through the JBL gave out concert hall punch.

In the Marshall when run into distortion the valve was not as fat as the Svetlana/ winged C or JJ/KT88. This leaves the sound a little one dimensional in this area. Top end was clear with no harshness. The classic ampeg growl was not as prominent as with some other valves tested. Bass was very deep with more punch than most of the other 6550 and was only beaten by the G.EC KT88 and the winged C KT88 AND 6550C.

## CONCLUSION:

You are reading this test report 5 years on from our last full blown test. The main two things that have changed has been we now have a good choice of dependable and reliable valves available. We also now have a number of manufactures competing so have seen increased consistency and quality of the product.

The G.E 6550A is still the valve to beat and still the industry reference for classic ampeg growl with pumping bass. The midrange attack is what gives this valve is prized tone. The right amount of dynamics when pushed with no harshness when slapped.

The benefits are diminished in the modern S.V.T as they simply do not sound the same as the vintage point to point S.V.T. So considering the price difference you must pay close attention to your amps capabilities in order to get value for money.

The Svetlana aka winged c 6550C was the clear winner. The valve did everything perfectly and had deep and fluid bass and was very musical. It excelled in all applications and I found it a little more relaxed than the G.E 6550A in the World audio design amplifier. No other Current production 6550 had the clarity or the refinement of the winged

C/Svetlana. It gripped musical passages with great authority and gave a new meaning to deep bass. It performed well under distorted condition giving a nice break up. It was only second to the JJ/Tesla KT88 in this department.

The runner up was a really close run thing as it was very application dependant.

For example, if snarling cutting Ampeg S.V.T growl is what you want with plenty of midrange attack or you simply wish to spice up the sound of the later production S.V.T.

Then the Harma 6550 –STR or the Sovtek 6550WE will fit the bill and out perform the other 6550. The Harma being the more refined of the two but the Sovtek 6550WE having a real cutting top, which I love.

The best performer in the Marshall under distorted conditions for smooth overdrive was the JJ/Tesla KT88. This was the only department the winged C /Svetlana was out performed. The JJ is well balanced but does not have the attack of the Harma or the Sovtek.

In audio terms The GEC KT88 did show what a detailed mid range is all about. Female vocals and acoustic guitar was really stunning. No other valve even touched upon The G.E.C quality here. Two valves, however, did show above the pack. The Svetlana/ winged C KT88 and the Sovtek/ Electro Harmonix KT90. These two valves overall performance in all the application pushed the JJ/Tesla KT88 into 3rd place.

The Sovtek/ Electro Harmonix KT90 is a really great new valve and one of the best things to come out of the reflector factory. The bass response is outstanding it is balanced, full on and very detailed. As a new audio valve I cannot fault this valve it was a real joy to listen too. Led Zeppelin with John Bonham great drum work came alive.

This was best on the JBL 4430 monitors. These valves worked very well in the World Audio Design 6550 amplifier and a credit to its designer Mr. Andy grove.

The overall winner of the KT88 section goes to the Svetlana Winged C KT88. This is only as it was better the Marshall under distorted conditions and in the audio section was a little more refined. It must also be said that the 6550C and KT88 from Svetlana both performed almost identically. The new Sovtek EH KT90 does run these a very close 2nd