

EL34 Test Report

INTRODUCTION:

OBJECT OF THE TEST

The aim of the test was to evaluate current production EL34 against New Old stock items. This to enable the working Musician to select the most suitable and reliable Valve for the relevant style of Music.

The emphasis was placed on current production items which should be easily attainable. The quality of current production EL34 has greatly improved since the start of the decade. The reference valve used was the Mullard EL34 and the same applies now as did at the start of the decade. If you want the ultimate tone, simply buy the Mullard.

EQUIPMENT USED

The amplifiers used were: Marshall 100 super lead & 100 super bass into 4 x 12 cab loaded with Celestion Vintage 30's. Guitars used where a 1973 Fender Stratocaster, 1980 Yamaha SA 2000S semi acoustic and a 1980 Gibson Les Paul Standard.

The tests where carried out to provide in real working and playing situations how the valves performed.

Valves were selected for low microphony, low noise and similar gain characteristics with the Mullard EL34 used as the reference. The pleasing thing is that the standard of the current EL34 is far superior to those that were available at the beginning of the decade. But if you want ultimate tone, the advice is still the same -just buy the Mullards.



HOW WE TESTED:

EL34/ MULLARD SINGLE GETTER

The Mullard provided crisp ringing sustain and huge tight bottom end with clarity which was unrivalled in this test. The Mullard has it all. The valves sounded huge with wide imaging and detail. When the valve was pushed hard it sounded ferocious with cutting bite, it meant business. Power chords rocked the very foundations and when the valve was saturated it never lost control. In history not many valves can claim the mantle of best audio valve and best guitar valve. The Mullard still reigns supreme.

EL34WXT/SOVTEK

The WXT is an upgraded Russian valve which replaces the EL34G & EL34G plus. The manufactures claim a unique grid block design which improves electron flow and gives the valve higher output, which they claim is 6% higher than the competition.

The valve has a rating of 25 watts plate dissipation and is a vast improvement on its predecessors.

It has a higher anode current draw and higher gain and is very stable. In reliability terms, again the valve has stood the test on the road in countless Marshall amps.

In our high plate volt test of 12 hours at 500 vdc plate & screen all 24 PCs tested come through with no problems.

The valve has good bottom end response which is nice a tight.

The valve does not have a big sound stage like the Mullard but instead a one dimensional focus which is great for lead work as it pushes the sound right out. When saturated, the distortion had a fuzzy element to it which is great for grunge.

Top end response can go a little grainy and get hard on the ear but generally

nice top end chime.

I can recommend this valve for use in all applications.

EL34/SVETLANA

The Svetlana is the valve which is used by many o.e.m manufactures with its' biggest U.K user being Marshall.

Svetlana claim its' special plate material gives it the best performance under overload conditions.

Reliability is not a problem as this has stood the test of time. In our endurance test all valves came through with flying colours. The thing that really impressed me was that the readings did not change. They have defiantly got the ageing process sorted out.

The valve has a more liner performance than the Sovtek and the bass response was better defined . The sound stage was also bigger than the Sovtek gave it more of the trad British rock sound in the Marshall.

The valve was very well balanced with the midrange in correct focus. The top end was smooth and crisp.

Great valve which again can be thoroughly recommended.

EL34/E34L S.T.R HARMA

The Harma is a specially tested/selected valve which is of European manufacture. The valve has the widest frequency response and the highest plate dissipation (30 watts) of the valves tested.

The valve has a number of features such as gold wound grids and heavy grade glass which makes this a rugged valve for road use.

The bass response is big and bold with the valve being very well balanced. The tone was bright and slightly forward sounding. The sound stage was big Mullard style. Reliability wise these are rock solid and have been road tested by Ben Matthew's of British rock band Thunder on our behalf over the past two

years. The mid response is clear and sweet. When driven hard the valve never loses control with rich distortion blasting through. I really love the top end response which makes a Marshall sing and is easy on the ear. This is the best current production made EL34 bar none.

EL34/E.I YUGO

These yugo valves failed the endurance test at an alarming rate. Red spots, instability and one valve was showing signs of arcing. Of the ones that did come through (7 PCs out of 12) the valves were drawing of up to 10 m/a less than when we started. Therefore these would need a burn in process before matching.

The valve lacked the bottom end response of the Mullard, Sovtek, Svetlana and Harma. It was light and woolly by comparison. The valve had a nice top end response which was not harsh and easy on the ear. The midrange response was very recessed and very fuzzy when pushed.

Overall this valve is not as good as the Sovtek or Svetlana if you want the classic rock sound. Indeed we were not impressed at all as the valve just was not in the same league as the others. Reliability and electrical construction was of a poor standard. Avoid these.

EL34/6CA7 E.I YUGO

This valve showed the same trait as its' slimmer brother. These ones were supposed to specially tested. This may have been done at 250 vdc plate and screen which is totally pointless when considering use in guitar amps. It simply does not like moderate plate voltage. So much for the testing. In the UK many hi-fi companies fit these. All we can say is that customers actually ring us and thank us when they replace the valves with the Harma, Sovtek or Svetlana. Some customer has also found these unreliable and unstable when they have used them in kit amps.

The sound stage is nice and big with the

valve sounding clean and detailed at low volume. When pushed hard it simple seemed to go muddy and loose control.

This resulted in a horrible nazel compression. Indeed the distortion seemed more like a 6L6 than an EL34.

I think for low voltage hi-fi valve this might be o.k as its worst results where when it was pushed into clipping. I would not use this valve for guitar amps therefore we cannot recommend it.

EL34/CHINESE

The Chinese valves have a bad name for reliability, being electrically inconsistent and of poor build quality.

Some dealers are saying that they have improved and so we thought we try them. The result, they are as poor as they ever where. These are the only valves to have ever blown more than one fuse on my test rig. When you find some that work they have absolutely no top end, sound dull and unrefined.

All I can say is that the box and the printing is possibly worth more than the valve it self. Don't bother with these.

CONCLUSION:

The general standard of EL34 has certainly increased since our first tests which were carried out at the start of the decade.

The battle ground comes down to three valves all of which have their own virtues. The Three valves are the Sovtek, Svetlana & the JJ/Tesla with other valve manufactures not being able to currently compete.

The best sounding valve is the JJ/TESLA which we sell the selected Harma S.T.R version. This I found the closest to the Mullard in sound quality and soundstage.

The Svetlana valve also has great Mullard bottom end but is not as involving or as forceful as the Tesla.

The Sovteks are great blues valves which overdrive nicely and push out nice

fierce solos. They can sound grainy at the top end but I don't mind that , after all it is rock and roll.

The Mullard is still king of the pile followed by the Siemens in the top rankings. The gap is definitely getting closer, however I do not feel this valve will ever be bettered. The prices will continue to rise so if you require the ultimate then it will pay you to buy now. If you do not wish to break the bank then the Harma/JJ Tesla, Sovteks and Svetlana are all good choices which you can try until you find your favourite.