

THD Tube Substitution

Tube Substitution in THD UniValve and BiValve guitar amp heads (pre Flexi-50).

Andy recommended me (Gilroy Guitars) to try the following tubes in either THD UniValve or BiValve:

1	12AT7	RCA
2	12AT7	Sylvania
3	12AX7	Sylvania
4	12AU7	Sylvania
5	5814	GE
6	6L6G	Sylvania
7	EL84	Amperex
8	6550	SED
9	KT66	Valve Arts
10	KT88	JJ
11	KT88	JJ Blue

Peter, (In reply to a query re 6K6 in BiValve)

We have never had a problem with longevity on 6K6 tubes in UniValves at LoV. We have not tried them in BiValve-30s as much, but I would think that you just had a bum 6K6. These are US-made NOS 6K6 tubes we are talking about, aren't they? GE, Sylvania, RCA, Tung-Sol, etc...

As for the current 6L6 offerings, the Winged C is nice, but a bit hard-sounding. Still, I like it better than the others you mentioned (Ruby, JJ, and a Chinese 'CokeBottle').

The only other one that I like of the currently-produced 6L6s is the good old wafer-based 5881 from Sovtek. It's a good, solid 6L6, and not very expensive at all.

Also, you should consider getting some of the Chinese or Eastern-European KT66s on the market. Avoid the Russian ones.

[As for the 25L6, 35L6 and 50L6 tubes, they are like little 6L6s, except that they require 25VAC, 35VAC and 50VAC respectively in the filament circuit, as opposed to the 6.3VAC that the 6L6 uses and that all of our amplifiers supply, thus they are not appropriate for use in our amplifiers].

Andy Marshall

The following is an extract from: www.univalve.net

Posts from what was then hundreds of contributors – that forum is no longer online.

1) from DavidB (March, 2003):

The UniValve (UV) excels at overdriven power tube tones. Here are a few tubes to try that do that well and don't cost a lot.

Output Tubes

for -- Overdriven EL34/Marshall sound: the Ei small bottle EL34 (available from <http://www.dougstubes.com/> or eBay sources) or the EH/Sovtek EL34 (available from many sources).

-- Overdriven KT66/Marshall sound: Shuguang/Valve Arts KT66 (available from numerous sources). [note: this tube will not fit under the standard UV/BV cover...THD makes a taller cover, however – standard issue since approx mid 2004.]

-- Overdriven big bottle 5881/6L6 American sound: the Tung Sol 5881 (buy one used on eBay) or the EH/Sovtek 6L6WXT (available from numerous sources).

-- Overdriven small bottle 6V6 American sound: Sylvania or Mazda grey glass 6V6GTs from the 1950s are still available at reasonable prices (for example, <http://www.kcanostubes.com/6V6GT.html>).

-- Overdriven small bottle EL84 British sound: I think other tube types sound better overdriven in the UV than your typical EL84. That said, of current production offerings, the EH/Sovtek EL84 sounds best to me in the UV, with a throaty overdriven sound similar to an EL34. The JJ is another current production alternative, with a more refined and more typically EL84 sound. In NOS, I like Amperex Bugle Boy (Holland) and Valvo (Germany) for their thick and rich

overdriven sound. [moderator: I seem to be one of the few that like EL84s. With this in mind, I'd suggest the Telefunken, which I've found for under \$20 (used).] **NB – EL84's require THD Yellow Jacket YJUni.**

-- Overdriven low volume sound: the Visseaux 6K6GT (sweet) or RCA 6G6G (tough). Try Phil Hands, a private seller in Canada (tubestation3@rogers.com).

Preamp tubes:

-- A current production Ei EG 12AX7/ECC83 and a NOS GE 5751 (any era, any plate color). Available from various sources. [moderator: Although it doesn't sound as good as the Ei Gold (mentioned above), the JJ Tesla 12AX7/ECC83 is a good choice if you want to "darken" the amp.]

-- A NOS Mullard 12AT7/CV4024/M8162/6201/ECC81. Available from various sources.

-- A NOS GE 12AY7/6072. Available from various sources.

-- A NOS Mullard, RCA or GE 12AU7/CV4003/5963/6189/5814/ECC82. Lots of folks on this board like putting this lower gain tube in the driver tube position. Available from various sources.

2) from Lyle Caldwell (Feb, 2003)

Note: no pricey NOS tubes here, though NOS will be even better. This is "tonal variety on a budget".

[moderator: Lyle is giving examples of how to achieve certain amp tones (Fender Deluxe Reverb and Twin, Marshall JTM45, Vox), using current production tubes]

Various Deluxes: EH 6V6GTs into an open-backed 1x12 (preferably) or 2x12, loaded with appropriate speakers (not Greenbacks). Which Deluxe [Tweed, Blackface or Silverface] varies with the Attitude knob and the preamp tubes. I'm very happy with the Ei ECC83s/12AX7s with single coils, but sometimes with humbuckers a 12AT7 or similar lower-gain tube helps.

JTM45/Bluesbreaker: Ei ECC83s and Shuagang KT66 [note: this tube does not fit under the standard UV/BV cover...requires optional THD "tall" cover – now standard issue] into closed back 4x12 or open/closed/ported-backed 2x12 (I like the Weber P12Bs).

Change the KT66 for a good EL34 and you can do Plexi sounds. But this demands a closed-back cab, preferably 4x12. Note: run High Voltage for Page (Jimmy), Low Voltage for EVH. [EH and Ei are probably the best of the EL34s]

Twin: lower gain preamp tubes and the new EH 6L6s. Open-backed 2x12.

Vox: ECC83s and JJ/Tesla EL84 with short Yellowjacket. Open-backed 2x12.

So, for the guy wondering "how many tubes":

2 ECC83s and maybe 2 lower-gain preamp tubes. [moderator: for preamp tubes, I'd say it's essential to have a 12AT7 and a 12AU7-type (esp 5814 or 5963) in addition to a nice 12AX7/ECC83 or two]

1 EL84/YJ

1 EL34

1 KT66

1 6L6

1 6V6

This could be pared down to just the following if budget is tight:

2 ECC83s (lower the Attitude and adjust the Treble when less gain is needed)

1 EL84/YJ

1 EL34 (can also handle some KT66 sounds)

1 6L6 (can also do KT66 a bit, and with a darker sound in low voltage mode, can emulate a 6V6)

An open-backed or ported 2x12 will cover a lot of territory, though it's best to have a few different enclosures with different speakers.

Note that these setups get these results with my guitars and hands. I use low-output pickups (8.7 on my loudest humbucker, most guitars have even lower output single coils) and don't have the pickups close to the strings. I use .010s and .011s. If you are running Tone Zones or EMGs with .009s, your mileage will vary.

Further note: It takes a bit of time to get a handle on the interaction between the "EQ" controls and the Attitude control. They are very interactive, and different guitar/tube/speaker combinations will have different sweet spots. What I've started doing is having both Treble and Attitude set at noon, then turning down Treble while turning up Attitude until I get the mojo goin on, then I adjust Bass as needed.

My own (DavidB - univalve.net) "addendum":

I agree with both that the Ei Gold 12AX7 is the best choice. However, for UniValve owners, the JJ Tesla ECC83 is a viable option, given it's darkness and the brightness of the UV. I like it ok in my BiValve in certain situations as well.

I thought the Sovtek 5751 was a decent tube. although there are still affordable NOS versions (esp any GE) that are better.

As mentioned, I am a big fan of EL84s (moreso in my BiValve than when I had a UniValve), and the Telefunken is the hands-down winner here...of current production, the JJ Tesla is nice, and breaks up MUCH sooner than the Tele.

I have only audtioned three EL34s: Mullard, EH, and Svetlana. The Mullard is best for overdrive, but the EH is a nice alternative with more headroom...I found the Svet to be too brash...

Within the 6550 family, there seems to be a close race between the Sovtek and Svetlana KT88, with the Svet winning by a hair. DavidB has also posted positively regarding the Ei KT90...and it seems the new EH "big bottle" 6CA7-- although NOT a 6550 variant,-- sounds very good and should satisfy 6550 folks.

RE: a current production 6L6...I don't think either of these posts mentioned (I don't think it was out yet) the new Groove Tubes GT-6L6GE, which is fashioned after the wonderful, original GE ('though not an exact reproduction) as it is built using much of the "old school" GE tooling. The NOS GE and this current production tube seem to be in similar price ranges (the original GE can fluctuate), but most would agree that with NOS supplies dwindling this is a positive move toward the future re: tube amps...

See - New THD Forums at:

<http://www.thegearpage.net/board/showthread.php?t=822349>

and out of that has come the THD specific forum:

<http://forum.univalve.dreamhosters.com/index.php>

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