The JVM Forum Mod Catalogue

Moderators: jim renolds, jimsreynolds, Jackie, Andy

Jackie
World Tour

Re: The JVM Forum Mod Catalogue

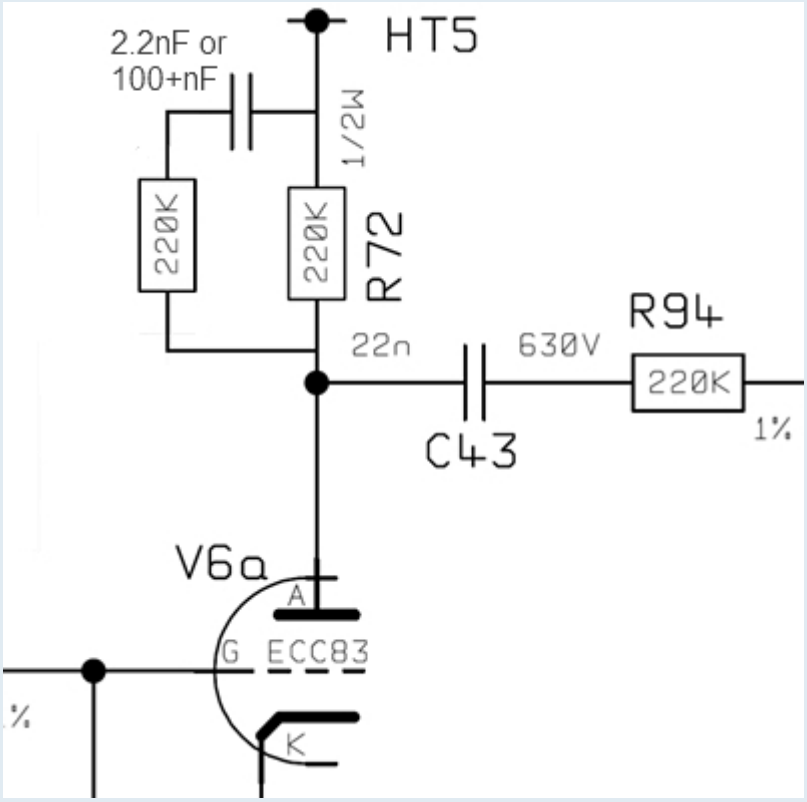
Wed Dec 07, 2011 2:55 pm

Compression reduction mod

Switchable: no (is possible though not recommended)
Affects: OD Orange/Red modes
Parts list:
- 220kohm resistor
- 2.2nF cap * 1

***

How to perform the mod:
- Solder a 220k resistor in parallel with R72
- (OPTIONAL: Solder a 220k resistor in parallel with R75**)
- put a 2.2nF cap in series with the piggy-backed 220k*



Explanations/opinions:

> **Casey_Butt wrote:**
>
> > **windsurf51 wrote:**
> > Interesting mod , but regarding dynamic and response ,i'm not sure i understand.... is there a real difference between R72/R75 reduced with higher gain, and stock values with lower gain?
>
> It won't be identical, but similar. Reducing R72 to 100k would be similar to simply decreasing the channel gain in the OD1/2 Orange and Red modes (because the second tube stage is only used in those modes), so I think that's an easy way to reign in some of the gain on those stages. After the second stage the signal that's fed into the third stage is so high that's it's going to cause massive clipping anyway, the signal out of that stage and into the fourth will be even stronger, so decreasing R75 will drop the signal coming out of the preamp but the last stage will still clip and compress to hell.
>
> When you use a larger plate resistor the tube produces more gain; that can make it seem less dynamic because the stage is so sensitive that almost any touch of the strings results in a strong signal out of the amp. With less stage gain it takes a harder string strike to get a powerful output because the voltage doesn't increase as rapidly through the stage and soft strikes can sound "soft" out of the amp. It's kind of like turning the gain on a mic up all the way - every little sound is "loud" so you lose the ability to make "quiet" sounds - it's like everything is on "10" regardless of how loudly or softly you speak. It's kind of similar with very large plate resistors ...everything seems to go to "10" so easily that you lose some of the ability to play softly.
>
> So increasing the plate resistors is a way of getting more gain and sensitivity out of a preamp, but past a certain point it may seem like everything out of the guitar, soft and loud, is just railed to "10" out of the amp. Likewise, decreasing the plate resistors can reduce that tendency for everything to seemed "railed" and you get a broader dynamic range of soft to loud. The trade-off is that with smaller plate resistors the tubes drop out of the clipping/compressing range more quickly as the notes decay and you don't seem to get as much sustain and "evenness".

> **Casey_Butt wrote:**
> As for using the cap in series with the 220k parallel resistor, it's basically so you can have the stock OD1/2 Orange and Red characteristics on the low strings, but the 110k mod on the higher notes. I found the amp lost some of that raw "metal" aggression on the wound strings with 110k on the V6a plate but liked the smoothness and fullness to the high notes with 110k, so this was a "solution" to get both.

**

> **Casey_Butt wrote:**
> I said [that R75 is redundant] in that thread mainly because I was talking about making a JVM as "vintage" as possible. If you're using Crunch Green a lot and want that lower gain, in and out of clipping vibe, then dropping R75 to 100k is the purist thing to do.
>
> Doesn't do much and in most circumstances you wouldn't notice the difference. It's only really useful IMO if you're going for maximum sensitivity in terms of using guitar volume and pick attack to tip in and out of clipping. In the higher gain channels/modes it doesn't make a difference because that tube is going to be clipping hard anyway. I think there's only a possible benefit in Crunch Green or Orange because the overall gain is lower... but possibly not, it's a "touch" thing.

> **S&M Freddy wrote:**
> Gave the 'Compression Mod' a good work out at rehearsal tonight and it totally hits the spot. I am a happy Man. We are working up Slither and Big Foot at the moment and it sounded pefect for both!

> **Cron wrote:**
> Today i lowered the plate resistors R75 and R72 to half their value (soldered a 220k resistor in parralel to each). I am very happy with the result, in fact i cannot understand how anyone would not like it (just turn your bass and resonance up very slightly (1 notch or less) and up your gain a notch or so.

> The jvm still has gobs of gain, but the ODs sound more open. That results in me not trying to achieve "openness" by upping the presence or treble and i end up with a sound thats less harsh and just better in every way. IMHO, YMMV.

> **ach91 wrote:**
> Yeah I tried a 220K in parallel with both last night since I had some 220K resistors laying around. I remembered instantly why I had 100K resistors for R72 and R75 on my original board. The amp has more dynamics and more high end bark.

Possible downsides:
- slightly more high end (may or may not be desirable)

Notes:
The stock value of R72 is 220kohms.

*The lower the the resistor value, the more the compression is reduced.

> **Cron wrote:**
> I do urge you guys to re eq your amp after these mods. In my case the eq and gain settings started looking more normal (bass on 4 instead of 3 on OD 2). I generally run my treble low (5 or lower) with my presence higher (6-8) which gets rid of of some of the annoying high mids but still has enough tops. (im using vintage 30's)

For details, see this thread.

> **Tonemeister wrote:**
> there is sooo much that the JVM can be...

GUITARS:
Modded Epiphone Goth Explorer w/BKP Nailbombs; Jackson KVMG Pro; Yamaha SG2000; Gibson SG '61 Reissue; Squier Classic Vibe Tele; Yamaha LLX6A
AMPS&CABS:
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ENGL Savage 120 mk I; Marshall 1960A cab w/V30; Yamaha THR10v2
FX:
BOSS GT-6, Keeley-modded Dunlop Crybaby Wah
MISC:
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Jackie
World Tour

Re: The JVM Forum Mod Catalogue

Fri Dec 09, 2011 3:42 am

Low-Mid boost mod

Switchable: yes
Affects: all channels
Parts list:
- 1uF capacitor
***
How to perform the mod:
- Solder a 1uF cap across C52.

Explanations/opinions

> **Casey_Butt wrote:**
> Increasing the value of C52 lowers the frequency at which the first gain stage starts boosting the gain. Anything over a total of about 4.3uF or so boosts all the audible guitar frequencies, whereas the stock 1uF cap starts the boost at 205 Hz. 0.68uF would move that up to 301 Hz.

> **windsurf51 wrote:**
> i did this mod with 1µF across C52 and it seems pretty good ! there's more body on every channel , its really a must have !!
>
> I 'll try other values to see how it sounds, but with 1µF the difference is noticeable , but just enough , i can feel more low mids, and thicker sound , with bridge pickup it is very appreciable

> **Andy wrote:**
> C52 a-la-Casey is great and fattens up everything - BUT make it switchable because at high volumes it chomps too much of the headroom i.e. mushes the show - or is it the speakers ...
>
> On the Clean channel it's enough to make you consider taking up jazz with a semi acoustic as a profession ... (needs jazz smiley) haha
>
> Od1 green with CaseyC52 in is my favourite channel though [smiley-shreds]

Possible downsides:
May cause undesirable decrease in headroom at high volumes.

Notes:
This only one way of boosting low mids on the JVM, there are a lot of other ways.

There are variations based on which channels are affected and how dramatically. See reference thread for details.

For details, see this thread.

> **Tonemeister wrote:**
> there is sooo much that the JVM can be...

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Jackie
World Tour

Re: The JVM Forum Mod Catalogue

Tue Feb 28, 2012 5:26 pm

Larger footswitch LEDs mod

IMPORTANT: THIS MOD IS INTENDED FOR THOSE WHO USE THE FOOTSWITCH IN "SWITCH STORE MODE" ONLY

This mod has a lot of visual info and description, so instead of re-uploading everything, here's a link to the original thread, where all the instructions and pics are.

> **Tonemeister wrote:**
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Jackie
World Tour

Re: The JVM Forum Mod Catalogue

Mon Apr 01, 2013 5:38 pm

Resonance tweak mod

Switchable: yes
Affects: all channels
Parts list:
- 4.7n polyester capacitor (or other value depending on desired frequency)
***
How to perform the mod:
- Change C11 in the tubeboard from 10n to 4.7n

Explanations/opinions

> **jensbrix wrote:**
> With a 10n, the resonance knob controls frequencies from around 160 hZ and down. With a 4.7n in place, it starts working from 320 hZ.

> **jensbrix wrote:**
> Instead of the resonance knob only adding oomph, it adds some low end character, that I like alot. And if you don't like it, you can always dial it out with the knob.

> **jensbrix wrote:**
> You can also limit the boost for very low frequencies, by putting a 470k or 1M in parallel with c11

> **JBlackout wrote:**
> i tried your mod and like it [smilie=gt-happyup.gif] [smilie=headbang.gif]

Possible downsides:
None

Notes:

> **jensbrix wrote:**
> You can also limit the boost for very low frequencies, by putting a 470k or 1M in parallel with c11

> **jensbrix wrote:**
>
> > **GuitarDog wrote:**
> >
> > > **jensbrix wrote:**
> > > I was too lazy to take out the board, so i just snipped the cap and soldered a new one to the legs, and its fine.

> A couple question for you:
>
> 1. I looked at C11 and it is a small off-white surface mount cap. How did you get under it to clip it and save some lead length or did you cut the cap apart in pieces leaving the legs behind? Any tricks to doing this?
>
> 2. Will it matter if I us a 4.7 nF ceramic radial cap instead of the original style.
>
> Thanks,

1. My clippers could easily squeeze under the cap, and snip it off while leaving some lead to solder on. I guess you could cut the cap apart, but that'll probably make a big mess :)

2. I have always used poly caps for this. I don't think there's a problem in using a ceramic, I doubt that anyone can hear a difference, especially when it's in the NFB circuit, so go ahead and try it out :)

For more details, see this thread.

> **Tonemeister wrote:**
> there is sooo much that the JVM can be...

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Jackie
World Tour

Re: The JVM Forum Mod Catalogue

Fri Sep 27, 2013 6:29 am

PI Boost mod

Switchable: can be made switchable
Affects: All channels/modes (the mod is mostly useful if using the amp with MV and CV on more or less 10 - see explanations)
Parts list:
- 330k resistor
- 270k resistor
- jumper wire
- OPTIONAL: 33k resistor (at least 2W)

***

How to perform the mod:
- Change R99 to 330k
- Change R20 to 270k
- Put a jumper across R21.
- **OPTIONAL: increase R52 to 33k to increase the effect of the mod

MOD VARIANT: Switchable

If you want to put it on a switch use:

- 3PDT switch

- 510k (1/4W) in parallel with R99
- 390k (1/4W) in parallel with R20
- a short in parallel with R21

Explanations/opinions:

> **Casey_Butt wrote:**
> The JVM knocks down the signal coming out of the tone stacks so that it doesn't hit the power amp as hard as do the traditional Marshalls (1959, 2203, etc). This, along with more negative feedback in stock form, makes it harder to overdrive the power tubes

> **Casey_Butt wrote:**
> The wet/dry control will volume swell in the middle, however. You can still set it at whatever mix level you like, but the knob won't behave linearly as it did before. Full wet and full dry will be normal.

> **Casey_Butt wrote:**
> **At full volume, the stronger signal is getting the PI to break up (which will happen even more if you increase R52 to 33k, which knocks the PI HT voltage down closer to 2203 levels)

> **Casey_Butt wrote:**
>
> > **Spacerocker wrote:**
> > Just a thought - how is this concept any different from turning the master volume up?
>
> After the tone stacks the JVM signal is knocked down in order to send it through the effects loop (otherwise your pedals/effects would overload badly). Then, after the signal comes back in via the effects loop return, it's boosted back up to a level appropriate to send to the power amp (with the master volumes being right before the power amp to allow you to turn the level down again). In stock form, the JVM doesn't boost the signal back up as far as it would be in a 1959 or 2203 - it's about 8dB short.
>
> Where that matters is, if you want to use the JVM like a non-master head - say in Crunch Green mode going for an authentic Plexi type amp. In that case, you'd max the channel and master volumes and use the gain control as your volume control (which is how a non-master head works). In the case of the stock JVM it still wouldn't quite get there because even with everything maxed your signal would still be 8 dB short going into the phase inverter. The mod adjusts that.
>
> But you're correct that if you don't have the master volume cranked then it doesn't really matter because you're not hitting the power amp with the full power signal anyway. I mentioned cranking the channel volumes and using the JVM as a non-master head but to do that you also have to have the master volume maxed as well (I absent-mindedly neglected to say that), and use the gain control as the overall volume control.

> **Tonemeister wrote:**
> So I did the mod last night and threw it on a switch so I can go back and forth...
>
> F^&k me.... I love it. /.../ I crancked the bitch... it sounds absolutely fantastic.
>
> Highly recommended mod.

> **Andy wrote:**
> I have cranked mine, everything louder than everything else , its something every JVM owner should do at least once ! beware though it can change your religion 

Possible downsides:
(see notes)
The FX Loop mix control does not behave the same as it did stock.

The mod is useful mostly if you intend to use your JVM as a non-master head (CV and MV dimed).

The stock value of R99 is 1M. The stock value of R20 is 820k. The stock value of R21 is 220k.

Notes:

> **Casey_Butt wrote:**
> The wet/dry control will volume swell in the middle, however. You can still set it at whatever mix level you like, but the knob won't behave linearly as it did before. Full wet and full dry will be normal.

> **Casey_Butt wrote:**
> Well, it only really matters if you want to use the JVM with the channel volumes cranked... like a non-master head. If that's your thing then the JVM simply can't get there without this type of mod because it just doesn't let you drive the PI/power tubes hard enough. For people who are trying to get the Plexi type response out of the JVM in Crunch Green with the channel volume dimed, it isn't going to happen without the signal hitting the power amp boosted up to levels like an actual 1959. That's what this does.

For details, see this thread.

> **Tonemeister wrote:**
> there is sooo much that the JVM can be...

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Jackie
World Tour

Re: The JVM Forum Mod Catalogue

Fri Sep 27, 2013 6:29 am

If you know of a modification that you think deserves a place in the mod catalogue, PM me with the relevant info or reference thread and I will add it.

> **Tonemeister wrote:**
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Andy
Administrator

Re: The JVM Forum Mod Catalogue

Mon Jun 19, 2017 10:34 am

Gain Knob Bright Cap Mod to HJS Values

Author : bitsleftover
reason for mod: Addresses issue of "tone is too thin at lower gain settings" on non HJS JVM's

Link to topic discussion

PCB - front PCB only

One little niggle I had with my JVM is that I always used too much gain just to fatten up my tone. I always found that if I reduce my gain, my tone got too bright.

After quite a bit of trial and error I stumbled upon the HJS schematic and noticed it uses a capacitor and resistor in series. I decided to give those values a try and hey presto! My gain knobs now behave exactly as I want them to. To my ear, when I gradually reduce my gain setting from 10 towards 0, there is a linear sweep. My tone doesnt get too bright nor overly dark. I now feel I can dial in the amount of gain I want without sacrificing tone.

This wont be for everyone, but I've herd a few people complaining of the same issue as me recently, so maybe this will save someone a bit of trial and error.

Like I say, it wont be for everyone, but if you are one of the guys who says their tone is too thin at lower gain settings it might just put a smile on your face!

Doing the mod

Its a relatively easy mod since the caps are on the front PCB. (the one with the controls mounted)
If you dont like it, its an easy one to reverse (if you keep the caps and label which is which).

Just drop your old cap straight back in. (Whilst muttering "That Bitsleftover's full of shit!" to yourself) Haha.
Cheers, and enjoy.
Mick

Parts list : 470k 0.6w resistor , 470pf capacitor

To do the mod, simply remove the bright cap for the channel(s) you wish to mod :

note that the number scheme changes depending on whether you're modding a JVM4 or JVM2 series amp

JVM4 Crunch C231
JVM4 OD1 C205
JVM4 OD2 C225
JVM2 Clean/Crunch C21
JVM2 OD C31

Then solder one leg of a 470pf capacitor (a ceramic disc one is fine) into one hole. Solder one leg of a 470k resistor into the other hole (0.6w). Twist together and solder the 2 remaining legs. Insulate with heat shrink or similar and your done. (All usual high voltage precautions necessary obviously)

Comments

bitsleftover "Its a very simple mod and one that goes against a few of the Mod Catalogue Mods (1959 crunch eg) But to me it has transformed how I use each of my modes."

okgb
Club Circuit

ONLINE

Re: The JVM Forum Mod Catalogue

Sat Jun 24, 2017 5:02 pm

I did this mod to my od channels and it was " just what the doctor ordered ! "
it gave me control over the brightness instead of having an edge of inherent brightness all the time
this was with unmodified od2 and 2203 modified od1 ,
I did fender blackface and plexi mods to my clean and crunch channel , and didn't feel the need for the gain cap mod on these
so didn't try them there

Amps JVM 410H [too many mods to mention] '73 50w lead, 70's vibrochamp , mesa mkIII U.S. Vox pacemaker
Rock , pop rock & Blues style's mainly played
Gtr's Musicanman " Luke " wolfgang [carved top w pearly gates] Hondo lazer , Warmoth strat
Fx t.c. 2290 , Lexicon tc verb
Pedals tbone plexi , t.c. chorus , various handmade & usual suspects t.s. , zen , CB wah .....

UEF
Beginner
Beginner

Re: The JVM Forum Mod Catalogue

Wed Sep 05, 2018 8:58 am

Could someone please describe the AFD mod? :)

Andy
Administrator

Re: The JVM Forum Mod Catalogue

Wed Sep 05, 2018 9:37 am

Various mods here on jvmforum.com describe modifications to a JVM to add characteristics that make it sound like a Marshall AFD amplifier - which was originally used by Slash of guns N' Roses for the Appetite for destruction album.

https://en.wikipedia.org/wiki/Appetite_for_Destruction

viewtopic.php?f=7&t=7187&start=90&hilit=afd+mod

|----- if this forum helped you, pls donate to keep it alive -----|
::: JVM410 head,modded:- Hammond 5H choke, 2 tubes pulled, 37.5mv bias :: Caseys Mods :- Plexi cap, -ve feedback, Dual Rectifier, Blackface, 1 wire Randy Rhoads, Plexi, Metaled Out ModPI Boost, OD Channel Gain Reduction Mod
::: AFD100, DSL100W head (no C83), Fender Champ 12
::: 1960AV 2xgreenbacks 2xG12H30, homemade 2x12 cab 2x Celestion Golds (100W)
::: Gibson Les Paul Standard, Dimarzio SD bridge Pup,Standard neck Pup.
::: Tokai Strat with Dimarzio SD, Epi SG-400 Iommi, Hondo Les Paul, Alhambra Acoustic fishman Pup
::: PodXTLive, Vox V848 Clyde McCoy Wah Wah,

It's better to fail in Originality than to succeed in Imitation ...

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