Subject: Peavey noise problem
Posted by Paul C. on Sun, 22 Jan 2006 02:09:23 GMT
View Forum Message <> Reply to Message

Email from my brother, guitarist, and long time sideman:Two things to mention, first, I guess you read that Wilson Pickett had died. I am sure his Obit. is available on the web.The main reason I am writing is that something weird soundwise is going on with my Peavey amp. It is producing a tone like a ring modulator distortion. Here is what I have done to try to isolate the problem. First, you should know that it is a trans tube amp, meaning it has a solid-state pre-amp (trans) and a 4-tube power amp. As you know, for I think it is the B class of tubes, they work in pairs, outside and inside pairs. I took one set out and then the other, same bad tone either way, so it does not seem to be in the tubes in the power amp, though it could be two bad tubes at the same time, one on the inside and one on the outside. Another thing I tried, thinking the distortion was from a bad speaker, say a bad voice coil problem, was to use my 2-10 speakers instead of the amps 2-12s. Same bad tone. To see if the problem is from the pre-amp instead of the power amp, I took the pre-amp out from the Peavey and put it into the power amp in on my Carvin. Beautiful tone. My understanding is there is not much to a power amp besides the tubes, just a rectifier of some type (trans or tube) and transformer(s) – this thing has two big power transformers. My Carvin is working fine, but I would like to get this thing back to working right. I do have all the specs and circuit schematic. Do you think it is the rectifier?----I explained to my brother, one transformer is power, the other is output.Any suggestions on the "ring modulator" tone?Sorry about cross posting, also posted in the Tube Amp section.

Subject: Re: Peavey noise problem
Posted by Paul C. on Sun, 22 Jan 2006 02:29:14 GMT
View Forum Message <> Reply to Message

He says the chassis has only four 6L6 tubes. The rectifier is solid state.

Subject: Re: Peavey noise problem
Posted by Thermionic on Sun, 22 Jan 2006 06:56:56 GMT
View Forum Message <> Reply to Message

Wow, definitely an oscillation in the power stage. Sometimes, this is caused by a bad first filter capacitor in the power supply. Interestingly enough, it'll not hum, but instead oscillate in many cases. Old Fenders are bad about this. Of course, if the power tubes are absolutely kaput, they can do some funny stuff, regardless of what socket they're plugged into or whether you pull a pair of them.Your brother expressed that the tubes are set up in outside and inside push pull pairs. A note here for future reference, should the need arise: some amps are different. The first two tubes of the four are one pair operating together in in-phase, and the third and fourth are operating

together in inverted-phase versus the first pair. So, if you pull One and Three, Two and Four, One and Four, or Two and Three, it's still operating push pull. In layman's terms, the first two are "pushing" while the third and fourth are "pulling" on one AC signal half-cycle. Do be aware that when you pull out one pair of the power tubes in a parallel push pull amplifier such as this one, you change the load on the tubes. This can cause all kinds of strange occurences in itself. It could also be a bad output transformer. Has the amplifier been on without a speaker load connected? Push pull tube amplifiers are not nearly as bad to be damaged by this as single ended tube amplifiers, but it can and has happened before. Yet another problem that is rare but has happened is the small value capacitor in parallel with the feedback resistor, if this amp has one. Some guitar amps do, but most don't. If this cap shorts, the amplifier will get 100% full strength, full bandwidth negative feedback to the phase inverter, which will cause horrid oscillations that range from a ring modulator type of sound to a high-pitched screech. There's also a very small value cap that jumpers between the in-phase and inverted-phase outputs of the long tailed pair phase inverter in some amps. If it shorts, the amp will oscillate like crazy and will put out almost no volume. I've never seen a Peavey that had one, though. Mostly, old Marshalls have them.Dirty or tarnished shorting contacts in the "Preamp Out" or "Power Amp In" jacks can cause oscillations in the following stage. I once saw an old Carvin get a poor ground and oscillate wildly. To fix this, take a .30 caliber brass rifle bore cleaning brush and scrub the bore of the jack out real well, then a .30 caliber bore swab (the bushy, fuzzy ones), and then spray some DeoxIt or contact cleaner in it. Be careful, some contact cleaners will damage chassis finishes and attack some plastics. With some types of shorting jacks, the chassis must be removed and the exposed jack contacts cleaned with 1000 grit sandpaper. Most all jacks put in guitar amps are open types and allow this. In other words, there are a thousand things it could be! What model is the amplifier? I'll grab a schematic and take a look at it, and we'll go from there.Thermionic

---

Subject: Re: Peavey noise problem
Posted by Paul C. on Sun, 22 Jan 2006 07:17:46 GMT
View Forum Message <> Reply to Message

He wrote me that he has the schematic, which helps. I'll get him to post here directly.Hey, he knows what a ring modulator is, too!Just so's you know, I do know my way around a soldering iron... just have no experience with tube amps. All of my gear is solid state. So, I am sure with some guidance I can fix this.I don't know if he still has my Dad's Peavey Heritage or another amp. Dad used the Heritage with his pedal steel until age just got to him, could not move the amp around without help. Hey, he's 87 and still plays.

Subject: Re: Peavey noise problem
Posted by Morris C. on Sun, 22 Jan 2006 15:22:38 GMT
View Forum Message <> Reply to Message

Thermionics,Thanks alot. THe amp I have is a Peavey Heritage VTX. I have the schematic, but

unfortunately, it is too large to get a good, completescan on my 10"x15" scanner. I also have the manual, but that is easy to get from Peavey at http://www.peavey.com/search.cfm?c=3&lang=&term=Heritage+VTX+The manual is not much help, though, as far as what type of rectifier. It would help if I could read schematics! It would help if my arms were longer, too. I appreciate your help.Morris C.

Subject: Re: Peavey noise problem
Posted by harry4265 on Sat, 15 Jul 2006 07:14:49 GMT
View Forum Message <> Reply to Message

it must have a dodgy fault with it, i find that shamefull

Subject: Re: Peavey noise problem
Posted by Paul C. on Sat, 15 Jul 2006 12:42:37 GMT
View Forum Message <> Reply to Message

I am sorry, I forgot to update this. Found the problem, a bad capacitor as suggested by one of the posters above. Working well now.

Subject: Re: Peavey noise problem
Posted by Paul C. on Sun, 06 Aug 2006 17:26:30 GMT
View Forum Message <> Reply to Message

Turned out to be a bad cap. Replaced it and it is working well now.
