Subject: Re: Peavey noise problem
Posted by Thermionic on Sun, 22 Jan 2006 06:56:56 GMT
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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