Subject: Re: Thank You!
Posted by martinleewin on Tue, 20 Jul 2004 03:11:15 GMT
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Hi again Wayne, Hello Brian & good to see this forum on its feet!Brian seems quite up on the Marshall iron and doesn't mind publishing useful data for those who might need it. I, too, recently saw Brian's site earlier while researching an upcoming amp project. I found a Bell Carillon PA amp pushing two 6CA7's (USA version of EL34) to 75 woppers. Hmmmmm.... Anyway;To answer simply, typical Vintage guitar amp bandwidth is only about 60 Hz to 6kHz. Most vintage amp makers would buy the cheapest output iron that got the job done and High Fidelity was not on the spec sheet. They are generally stronger reluctance cores that naturally add harmonic and intermod distortion. Some would add more secondary windings for more 5-10% more numerical (salesman watts) output at the further expense of highs. Construction varies a lot and some of the flimsiest looking little OPT's will sound the coolest (because they are so nonlinear). Modern era tube designs are becoming more full range. Boutique manufacturers can afford to put higher quality components with the prices they can get. Some (actually do) go for wider bandwidth and more controlled distortion characteristics! Most higher fidelity design goes toward Fenderish clean tones as one would expect. Sometimes the faster impulse response alone while using limited BW speakers is enough to give more bite and growl. Brighter and deeper 12" speakers are becoming popular as they are more buildable and adopted for modern playing styles. Some boutique makers are gravitating to smaller drivers with more high end. Triple and quad 8" driver combo models are appearing.Classic plexi era Marshalls, in fact, initially came with 5881 or 6L6 output tubes before settling on the rightously grainy EL34 powerplant. Clean tubes--just not "chimey" enough it seems. Plexis will play with relatively little preamp and output stage distortion, before onset of clipping, but nobody cares for their "clean" sound-- preferring to run LOUD enough to get OT distortion. "Chimey" is mostly upper mid emphasis with a touch of highish sparkle which is tough to characterize spectrally. I suspect there is some low order IMD from light tube bias that accounts for the old sparkle in Leo's eyes. Marshalls sound too brittle with light tube bias. Increasing negative feedback to compensate makes an overdriven sound problematic. What is a poor player to do?An ultralinear Marshall Silver Jubilee 75 watter? I know, Jim never made one-- I think he should have. My "Slasher 75" experiment will see if a Marshall design can sound as good clean as it will sound distorted. It will have the option to run ultralinear (min thd/imd), pentode (max power), or triode (max thd). Then I can try different tube types and biases. I settled on the 2550 series preamp topology because it has plenty o' gain to spare for preamp tube drive, a much richer EQ and pretty decent (compared to JCM series) solid state diode clip circuitry modules. Besides, any fool can build a decent 50W or 100W Marshall clone if they got good iron-- eh, Brian? This Slasher (any association with famous endorsers is, of course, purely intentional and legal up to a point... hey it could be that GnR guy, it could be Freddy K.?) will add footswitch capability to the rhythm circuit crunch in addition to the lead boost. A few more tweaks to allow level control between rhythm/lead boost, a master volume After the phase splitter and... the generally accepted shortcomings of a very nice guitar amp should be tweaked away. Even if this amp can't do all the tricks it will be the only one on my block no matter where I travel. Now I will have to build that ultimate Fender guitar to test the Slasher. My Les Paul, even with split tap humbuckers, won't play clean for very long. Just got a pretty TeleMex body on ebay. I will start the articles soon for the Projects section of wizard-labs.com for any interested voyeurs. I am open to suggestions for improvement.Over but not out, Martin W.