

## TECH TALK

by Mike Bendinelli



### POWER TUBE MAINTENANCE

Usually what happens when a power tube fails is that the tube shorts out and it starts running cherry-red if you look at it. Also, there'll be a marked increase in hum, like 10-15 dB of 60-cycle hum will come up, because when it shorts out the bias goes way down and the tube starts drawing tons of extra current which causes hum from the power supply. You'll hear a difference in sound too; typically it's gonna

be louder and it's gonna squeal and feedback. At this point the tube is going into burnout, using up a week's worth of its life every 30 seconds as it sits there and roasts, and it's gone in a matter of minutes! Then it will most likely blow the fuse.

Once a power tube has seen most of its "good life" (and had too many jolts and bangs) it's much more prone to fail suddenly while you're playing. If you don't want to risk tube failure, and if you want the amp to sound good, you should replace the power tubes at least once a year if you play 2 to 4 days a week. If you play 5 or 6 nights a week (and especially if you play really loud and push the amp hard), you'll hear a difference by replacing the tubes after 6 months. Power tubes gradually start to sound flat, like guitar strings, they lose their punch and sparkle. They may still put out their full power, and they may look fine if you power-test them on a scope, but they don't have headroom, they don't have the "dynamicness". So, if you know the tubes are somewhere in that period of time (6-12 months old) and the amp just ain't sounding lively, it may be time to replace those tubes.

Last but not least, never pull a power tube out of its socket by the glass part of the tube. Always spread tube retaining clips away from the base of the tube and ease the tube out of its socket with a smooth back and forth motion.