
Subject: 65 Fender Twin reissue removing 2 power tubes
Posted by [Doug McCowen](#) on Sun, 28 Jan 2007 17:30:05 GMT
[View Forum Message](#) <> [Reply to Message](#)

I have read articles about removing 2 of the 4 6L6 power tubes will make the amp not so loud and make it break up earlier (less head room). My questions are by removing 2 of the 6L6's: Does it cause any damage or harm the amp in anyway? Does it actually lower the power (wattage)? Does the amp break up earlier? Does it make it more like a Deluxe Reverb?

Subject: Re: 65 Fender Twin reissue removing 2 power tubes
Posted by [Thermionic](#) on Wed, 31 Jan 2007 16:37:10 GMT
[View Forum Message](#) <> [Reply to Message](#)

Does it cause any damage or harm the amp in anyway? I'd say no, or rather "it shouldn't." But, I don't know what the filter capacitor voltage rating is in the reissue Twin, and removing two 6L6s will definitely increase the power rail voltage by a mile. It *could* exceed the voltage rating of the filter caps, especially when the amp is cranked up and the power tubes' signal voltage swing is tacked on top of the nominal DC voltage. Another point is that since the amp operates in Class AB operating class, the average current draw roughly doubles at full power versus the current draw at idle. Add to that the increased voltage from pulling two 6L6s and the two remaining ones may be overheated when the amp is cranked. Does it actually lower the power (wattage)? Yes, by 50% (-3dB). Does the amp break up earlier? Yes and no (more on that in the next answer). The bias voltage and operating points of the 6L6s are the same (save for the increased plate voltage), and the signal voltage going to them remains the same. With all other things remaining constant, halving the power lowers the volume by 3dB which will make it *seem* like it's breaking up earlier. But, not everything remains constant (next answer). Does it make it more like a Deluxe Reverb? No, although the blackface Deluxe and Twin are actually the same identical circuit except for the power tubes. Ditto for the blackface Bandmaster, Vibrolux, Vibroverb, Super, and Tremolux, which are identical circuits except for a few very minor changes between them. The difference lies in the power tubes, the output transformers, the speakers, and power supply rectification method. In your case, pulling two power tubes still leaves you with the same output transformer, so it'll sound different from an amplifier using an output transformer that was designed for two power tubes. The two remaining 6L6GCs will see 1/4 the impedance load they did with all four installed, which will make the amp sound more raw, ragged, and distorted across the board, from idle to full power. OTOH, an otherwise identical amplifier using two 6L6GCs and a transformer designed for them that presents the same load as yours does with four 6L6GCs would sound practically identical. Thermionic