

---

Subject: 6S45Pi diff pair input signal headroom  
Posted by [PakProtector](#) on Fri, 20 May 2005 12:55:29 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Hey-Hey!!!,If you arrange a common cathode differential pair for phase splitting, one grid will be grounded, and signal will be applied to the other. With the -2V of cathode-grid bias on them, the input headroom will be twice that assuming a few idealizations( like perfectly linear valves ). apply a 1V signal ( say a DC voltage ) and the cathode voltage will increase by 0.5V There will be a +/-  $\mu/2$  plate voltage change on the anodes( the input section will go - and the grounded section will go + ). The anode-anode voltage change will be  $\mu$ \*input voltage. Accounting for nonlinearities, most of which cause 2nd order distortion, the actual headroom will be slightly different. regards, Douglas

---