

---

Subject: Re: Loadlines

Posted by [Damir](#) on Tue, 05 Sep 2006 13:09:38 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Hi, I'm back... Load lines - simplified:-the OP you chose (say, 200V/50mA/-30V - with respect to max Ia and Pa values) "determines" your "optimal" load (yes, this is your primary impedance - simplified). The AC current can "swing" from quiescent value (Iaq=50mA) to the double value, max. 100mA, and from "quiescent" Ug value (-30V from Ua/Ia/Ug diagram for 6EM7-2) to the Ug=0V, max. peak in class A1.-draw the line through our "O" point (200V/50mA/-30V) and through another point, "A" (Ia=100mA, Ug=0V, and we read Ua=63V)-point "B" can be another "extreme", (about 292V/16mA/-60V)-our Ra, or primary load is (from Ohm`s Law)  $R_a = U_a / I_a$ , or "voltage swing" divided with "current swing", or:  $R_a = (U_{aB} - U_{aA}) / (I_{aB} - I_{aA}) = (292-63)/(0,1-0,016) = 2,7$  kOhms-of course, you can just "extend" your line to the apsis and ordinate, to simplify Ra graphical finding, where Ia=0 and Ua=0, and you have  $R_a = 335/0,125 = 2k7$ -there`s a more, we want a symmetrical swing "around" your "O" point (min. distortion)...more horizontal LL is closer to this goal (increasing of the "minimal" Ra=2k7) on the less power "expense"-for more, see this two messages:<http://audioroundtable.com/GroupBuild/messages/1111.html><http://audioroundtable.com/GroupBuild/messages/1113.html>

---