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Subject: negative feedback in Cathode follower amplifier output stages

Posted by [Manualblock](#) on Sun, 19 Sep 2004 00:25:09 GMT

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Must beg the indulgence of our resident electronics guru's. In my post earlier concerning feedback in cathode follower output stages I claimed out of ignorance that the by-pass capacitor in parallel with the cathode resistor caused a feedback loop. Please excuse my ignorance but it seems that the cap actually removes the feedback applied through the cathode by the resistor. Referring to chap. 5.02 of the Tube Audio Design book, it states, "The cathode follower applies 100% negative voltage feedback by virtue of its configuration. The voltage controlling the tube is that between the grid and the cathode. The input voltage is applied between the grid and ground. The net voltage controlling the tube is therefore the grid voltage minus the cathode voltage. This is how you add the output voltage to the input voltage without a separate feedback loop.  $E_g$  is the input  $i_p R_k$  is the output. The latter is subtracted from the former because the feedback is negative." He goes on to state, "If you desire no feedback, then you can bypass  $R_k$  with a capacitor, effectively taking it out of the circuit." Goes to show how a little knowledge is a dangerous thing, so I guess I am a dangerous thing. Thanks, J.R.

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