Subject: Re: Fixed Bias v. Cathode Bias
Posted by Wayne Parham on Sun, 17 Jul 2005 16:31:03 GMT
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I think he probably means the tube is biased so that it conducts a lot at idle. If you set idle current past 50% of saturation, you're kind of shooting yourself in the foot but up to that point there is some room to play with biasing.Class A circuits have the active component always conducting, never cutoff even at idle. Class B is push-pull where each device is set for zero idle current, so that it only begins to conduct on its half cycle. Class AB is a push-pull configuration that sets each active device quiescent current above zero, so each device conducts through the crossover region. It prevents switching spikes and reduces distortion. So Class A is conductive all the time, Class B is cutoff at opposite half cycles and Class AB is somewhere in between.The whole idea of single-ended circuits is to set the active element in the middle of its linear range, basically right at its 50% current point at idle. Then the input will swing current above and below that, with maximum output being near the point where the device is completely saturated on the positive side and completely cutoff on the negative. If the idle current is too far off 50% either way, you'll hit one of the limits considerably before the other one, wasting some of the dynamic range potential.