Subject: Re: Fixed Bias v. Cathode Bias
Posted by Thermionic on Mon, 18 Jul 2005 14:34:27 GMT
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Howdy manualblock,Glad we said something that rang a bell! I really liked Wayne's analogy that current is only there with a load, and to disregard it when dealing with potential. It's like a water pipe. There is *always* pressure (voltage) in it. But, there is no flow (current) until you open the tap. Herein is a good analogy of how inductors and capacitors work as well.Think of a capacitor as a small pipe with a piston and a one-way release valve in it, holding a high pressure on it's internal contents. When the pressure in the system it's connected to drops, the one-way valve opens. It's able to help maintain the pressure (voltage) in the system, even if the main high pressure pump were turned on and off quickly several times.An inductor is like a garden hose reel with LOTS of hose on it. When you turn the water off at the spigot, it still flows from the nozzle for a long time. There is a large volume (current) stored within it, and when the nozzle is opened the volume is constant, even if you were to turn the spigot on and off quickly several times.Capacitors and inductors are "mirror image" components, they do the exact opposite things.Capacitors:Store voltage in an electrical fieldBlock DC and pass ACResist any change in DC voltage across themInductors:Store current in a magnetic fieldPass DC and block ACResist any change in DC current through them Thermionic