Subject: Re: may i know your whole box dimension?
Posted by Adrian Mack on Thu, 25 Dec 2003 10:14:56 GMT
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Hey AdkinsThe towers I'm doing is a 3-way design having a tweeter horn, midrange horn, and direct radiator 15" bass reflex to cover the midbass/bass. My particular one uses JBL 2225H's for the midbass/bass - thats a 15" woofer. Since my system has a subwoofer, I've tuned the cabinets to give about a 70Hz cutoff where it crosses to my 18" 18LW1400 subwoofer in a 300L vented box with small amount of electronic EQ which takes care of the subbass down to about 20Hz in my room. Certainly, its possible to tune a 15" to have a cutoff of 25Hz or even less. Cabinet size will be your main enemy here though, its pretty typical that 15" woofers with output this low are going to be rather large. It may or may not be a problem for you. JBL 2235H is an excellent choice for bottom octave operation. Where you set your crossover points will completely be determined by what your drivers are capable of, things to consider are distortion and bandwidth of each subsystem. My particular one has crossover points at 300Hz and 2Khz - but that only works for my configuration. You'll likely use a setup pretty different from mine, so your crossover points will likely need to be changed. Electronic crossovers used in pro sound are fine too, if the filter type and points suit your application. I'm not using SET amps on mine, I need all the output I can get! I love to listen to music at high levels, and I like the sound of SS amps and other high-powered amps. I admit I've never heard any tube amp before ever, but I also feel that they wouldn't suit my needs. Just beware though that not all drivers are suited to SET amps - drivers which produce a lot of back EMF typically need an amp with good current sourcing/sinking ability, which means having a high damping factor, so tube amps are out of the question (they have high output impedance, inversely related to damping factor which would be low). As a guideline, its drivers with high impedance peaks at resonance which are not suited to SET amps. Wayne likes to draw the boarder at about 50ohms, anything below 50ohms impedance peak is likely to perform well on a SET amp, but anything above isn't, although it isn't a strictly 50ohms, its an approximation. Some tube amps behave differently from other tube amps too, so you may find that on some it'll work fine but it won't on others. If you do run a SET amp on a driver which produces large amounts of back EMF, the cone will be rather uncontrolled and you'll also notice a large lack of bass output in the bottom octave, motor strength is a function of current too and the amplifier needs to be able to source and sink the current or it won't be controlled. It's part of motor damping. Also SS amp's and other such high powered amps perform more like a constant voltage source so the load impedance of the driver doesn't have much effect on performance, but a tube amp act like it has a voltage divider and the cone goes crazy. External dimensions for my cabinet is 46" high, 18" deep and 20" high, that is rounded to the nearest inch. Adrian