Subject: Re: 511B Upgrade Worthwhile?
Posted by AstroSonic on Mon, 16 Jun 2003 21:58:18 GMT
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The Altec 511B horn is like a good vintage tube amplifier. If run stock, it sounds quite good and in some ways, better than most current gear. But, given a fundamentally good design, it can be upgraded relatively easily, to a very high level of performance. The 511B sounds very good if run stock, and many horn enthusiest like it that way. But with a little effort, it can be made to perform at a very high level. The worth of these modifications is really up to you, and depends on how much you value the improvement. If you enjoy tweeking your system and appreciate the improvements to the sound, or you picked your components after considerable auditioning, then you will probably appreciate the improvements that modification of the 511B's will yield.I suggest you listen to them stock for a while, then if you find room for improvement, start down the (slippery!) upgrade path. Beware that the upgrade path often spreads to the rest of your sound system. To get a start, run a search for '511B' at this site. This site is rich in 511B lore. You will basically find that the 511B's principal faults are related to its metal construction. It rings due to excitation by the sound it is reproducing. The ringing saps energy from the sound signal, and releases it as a resonant decay. The delayed release of energy fills in the silence between the notes causing a loss of resolution and microdynamics. The energy is released at new resonant frequencies that interact with the sound the horn is reproducing and imparts a grainy, opaque quality to the sound. The horn has a structurally complex shape. Different sections vibrate/resonate at different frequencies and with different magnitudes (Q's). There are many upgrades that can be made and many ways to order them. Some just take a leap and place the horn in a box that is then filled with sand and sealed. I suspect this works very well. Others paint the entire outer surface of the horn with a sand/paint mixture, which I have been told works very well also. These I think of as relatively complete, one step solutions. Others, like myself have taken a stepped approach. The sequence goes something like this:1) Destress the horn structure by cutting and damping the vanes. Most feel that this step yields a LARGE return in sound quality, and many stop here, quite satisfied.2) Attach a wood frame to the mounting flange.3) Damp the horn exterior surface with some kind of damping material. I used Dynamax Xtreme, constrained layer damping material. I did #3 in steps, the latest of which was to add a second layer of Dynamat to the small part of the horn between the flange where the driver is mounted and where the horn begins its rapid horizontal expansion. I suggest that you start #3 by playing music through the horn and checking it (by touch) for vibration/resonant ringing. You will find different areas respond to different frequency ranges and vibrate at different frequency ranges. I ended up covering all the external surfaces (including the 'lips' - very worthwhile!))except the large mounting flanges. I screwed a wood frame to them (improved midrange resolution and dynamics). Apply the damping material a section at a time. Listen for the change/improvement with each step. Or...you may just want to cover the whole thing at once and enjoy. To my ears, damping, after cutting the vanes, made considerable improvements in resolution, dynamics, sound staging and overall naturalness. Night and day difference...no. Obvious major improvement...yes. I also know that some of these improvements are not as audible through systems with average grade amplification, cabling and sources. Also, people value different aspects of the sound differently. Only you can decide if the improvements are worthwhile. If you are unsure, take a step and see. If you like what you hear, try another. None of these steps caused a degradation to the sound (to my ears). The Dynamat sticks very well to the metal of the horn. I have not tried to take a large piece off, but small pieces come off fairly easily with patience. Some spots of damping material will be left. They can be removed with acetone. The Dynamat is easy to use although not as

easy as the advertisements say.I say go for it! Try a step and see if you like what you hear.Regards,AstroSonic