Posted by Wayne Parham on Sat, 27 Oct 2007 01:48:29 GMT
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Please do post pics of the build and write your impressions. It is helpful to hear reports from others because everyone has a different perspective. I've tried to make notes of the things I've learned, and also things from guys in the shop and other DIY builders. These things trickle into posts and get recorded for others. So please write your impressions here and post pics.Let me give you a quick check list of things to watch for:1. Build the motor chamber first.2. Draw on the side panels where the motor chamber and each flare panel will go.3. Lay one side piece on the ground and assemble the horn on its side, starting with the motor chamber and going out from there.4. Remember that in the end, you will have to match the side panel, cooling plug, motor and motor chamber. They all have to be aligned within about 1/16" or the cooling plugs won't meet the motor. So be careful with each step.5. Use PVC sheet material for a gasket for the access panel. It is available as shower pan material.6. Lightly sand the paint off the pole piece inside the vent with fine grit metal finishing sandpaper. Don't go crazy, because you just want to remove the thin layer of paint and make a good heat path from pole piece to cooling plug. 7. Use silicon heat conductive grease between the access panel and cooling plug, and also between the motor pole piece and plug.8. After the drivers are installed, measure the driver polarity on each side before attaching the access panels. Use a 1.5v or 9v battery, connecting battery (+) to speakon (1+) and (2+) and battery (-) to speakon (1-) and (2-). Touch the cones and feel for cone motion. When the battery is connected, the cone on both drivers should move towards the throat hole. One moves inward and the other moves outward, each towards the throat hole.The cooling plug alignment is the hardest part of a DIY build. The CNC cut panels make this much easier because all the panels fit with dado grooves. When the horn is assembled, all the parts are aligned. When doing it from scratch, you must make sure that alignment is right each step of the way.The cooling plug must be installed with conductive grease or it will not work properly. It should be a snug fit, not so tight that you have to pound it in but not so loose that there is play. If it is tight, you may have an alignment problem or you may have excess material in the vent. Do not turn down the plug to make it loose, as this will make it ineffective. It must be a snug fit for proper heat transfer.Prototype construction photosProduction construction photosCooling plug driver preparation