Augmented Chassis Ground

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Tech Tip – Augmented Chassis Ground

This upgrade is one that is very important and rarely ever done. A typical vehicle chassis is capable of properly passing up to about 100 amps of current. Since there is typically nothing in the vehicle that draws more than that amount of current, there is often no need to worry about this. However, when running a very high power mobile audio system that exceeds 1000 watts it often becomes necessary to assist the vehicle chassis to ensure a proper ground. It is very easy to do and can be done in the first stage of wiring up a mobile audio system to ensure that grounding will not be an issue. There is really only one step to this:

1. Install a ground wire from chassis back to battery

Essentially, you are connecting a new return ground from the back of the vehicle to the grounding point in the front of the vehicle (in parallel with the chassis itself). As noted above, this really makes sense whenever you install a system capable of about 1000 watts or more. Since systems of this magnitude require a primary wire larger than 4 AWG, using a 4 AWG to augment (assist) the chassis is a great idea.

We would recommend that you use at least a 4 AWG wire and bolt it to the same spot on the chassis where your amplifiers are grounded and run this wire back to the negative battery post or to the point that the battery is grounded to the chassis. This will lower the resistance of the ground considerably for better current flow through the entire system. You should also consider upgrading the “Big 3” for even better performance.