

## 2016 Trans Am Technical Advisory 6 (rev)



To: Trans-Am Participants  
From: Kirk Ready Trans-Am Technical Services Director  
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Date: April 6, 2016



Regarding: **TA2 AEM ECU WIRING REQUIREMENTS**

**NOTE: Wiring Diagrams have corrections made to alternator charge wire and battery disconnect switch**

While attending TA2 events last year and at the Sebring kick-off race AEM saw some major flaws with the way several cars were being wired. There were three major areas of concern that were witnessed.

1. Ground circuits were inadequate. Examples included Battery to Chassis, Battery to Engine and Engine to Chassis grounds.
2. Some of the 12v Power Distribution and Master Kill Switches had amperage current rating below what is required.
3. Alternator "charge" wire was grossly undersized for charge currents seen on EFI race engines.

Poor grounds or undersized wire will result in less than desired results (cooked or melted wires, undercharging the battery, lower than targeted fuel pressure, cooked or melted Master Kill Switches, no-start conditions, poor injector performance, excessive EMI impacting 05v, cam and crank or sensor signals). So, to reduce the chances of seeing any of these issues AEM is offering directions for the major power and ground circuits that are easy to follow and have netted positive results.

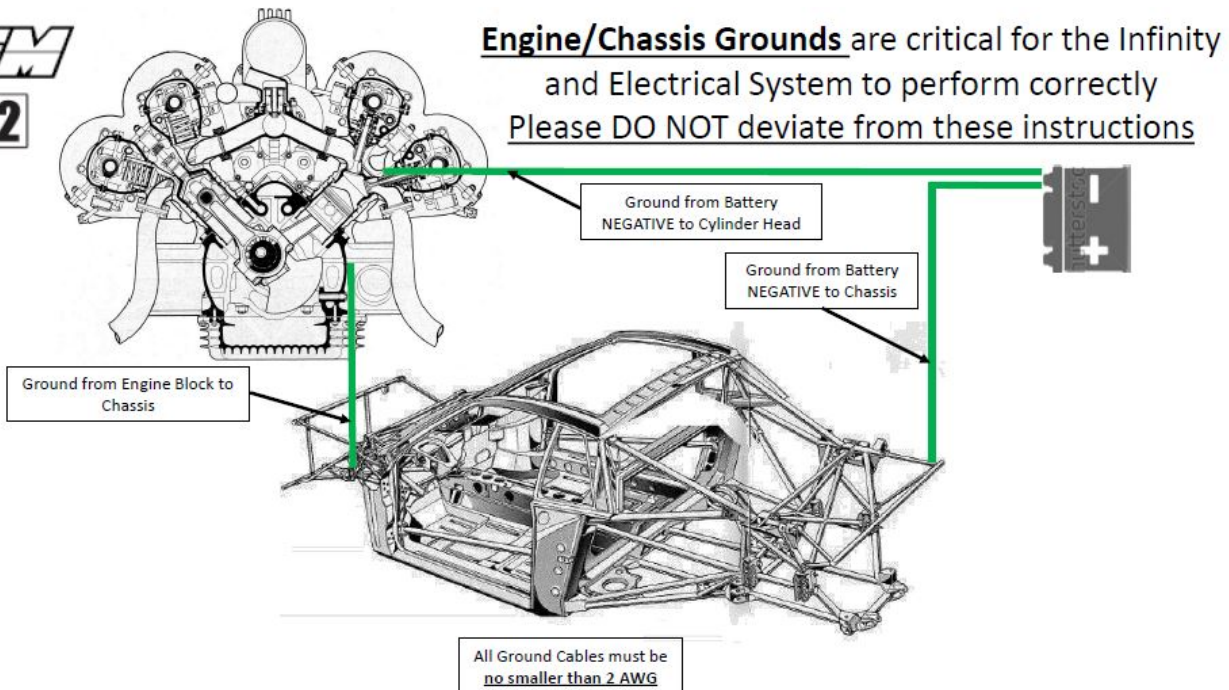
The following wiring diagrams are a requirement for Power and Ground circuits and wire sizing to ensure that all race vehicle systems perform properly.

**Please contact AEM directly with any questions on these recommendations:**

**Paul St. Clair**  
**AEM Performance Electronics**  
**Technical Sales**  
**2205 126<sup>th</sup> Street, Unit A :: Hawthorne :: CA :: 90250**  
**(310) 484-2322 X 275 :: [www.AEMelectronics.com](http://www.AEMelectronics.com)**

***For more information contact Kirk Ready, Technical Services Director***

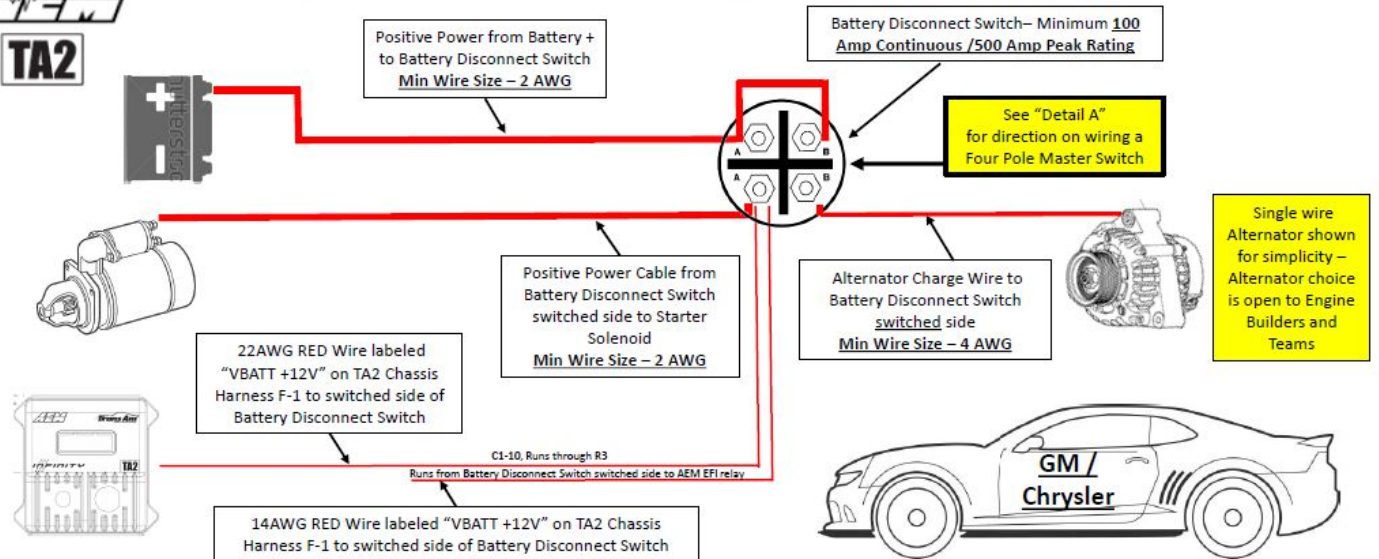
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A good cable choice is: <http://4xspower.com/shop/xp-flex-0-awg-cable/xp-flex-black-10-cable/>

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**GM / Chrysler** - 12v Positive Power distribution is critical for the Infinity ECU and Electrical Systems to perform correctly  
Please DO NOT deviate from the recommended wire sizing



A good **Alternator** to Battery Disconnect Switch cable choice is:  
<http://4xspower.com/shop/xp-flex-4-awg-cable/xp-flex-red-4awg-cable/>

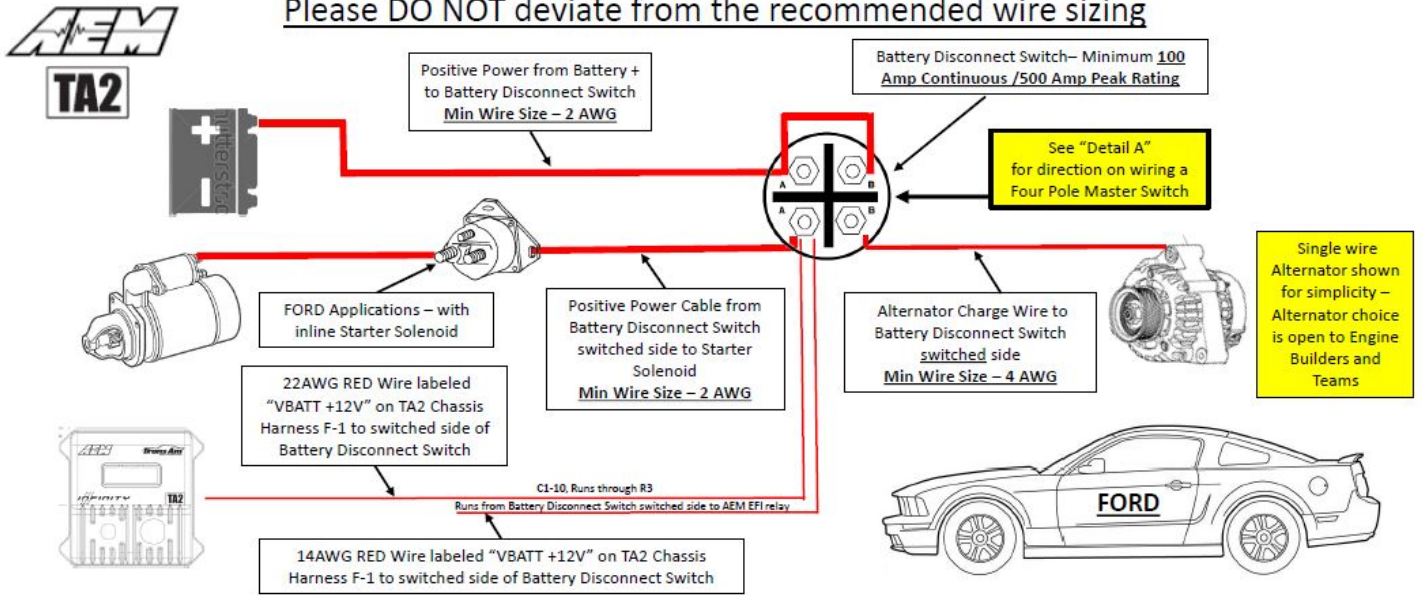
A good **Battery** to Battery Disconnect Switch and Battery Disconnect Switch to **Starter** cable choice is:  
<http://4xspower.com/shop/xp-flex-2-awg-cable/xp-flex-red-2awg-cable/>

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**FORD** - 12v Positive Power distribution is critical for the Infinity ECU and Electrical System to perform correctly  
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A good **Alternator** to Battery Disconnect Switch cable choice is:  
<http://4xspower.com/shop/xp-flex-4-awg-cable/xp-flex-red-4awg-cable/>

A good **Battery** to Battery Disconnect Switch and Battery Disconnect Switch to **Starter** cable choice is:  
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### – Detail A –

Recommended wiring for Four Pole Battery Disconnect Switch

*Four Pole Master Battery Disconnect - Courtesy of Longacre Racing Products*

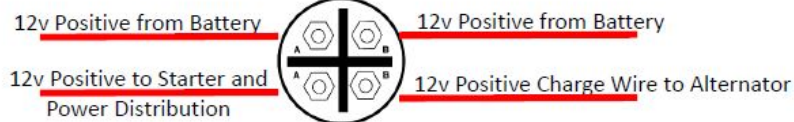
**\*\*Correct** Four Pole Battery Disconnect Switch – PN# 45782  
 (Or similar)  
 125A Alternator Circuit  
 175A Battery Circuit



Example



**Incorrect** Four Pole Battery Disconnect Switch - PN# 45780  
 20A Alternator Circuit  
 175A Battery Circuit



**\*\*PLEASE** Follow Manufacturer Installation Instructions for Battery Disconnect Switch and Alternator

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