



PERFORMANCE ELECTRONICS

30-2216

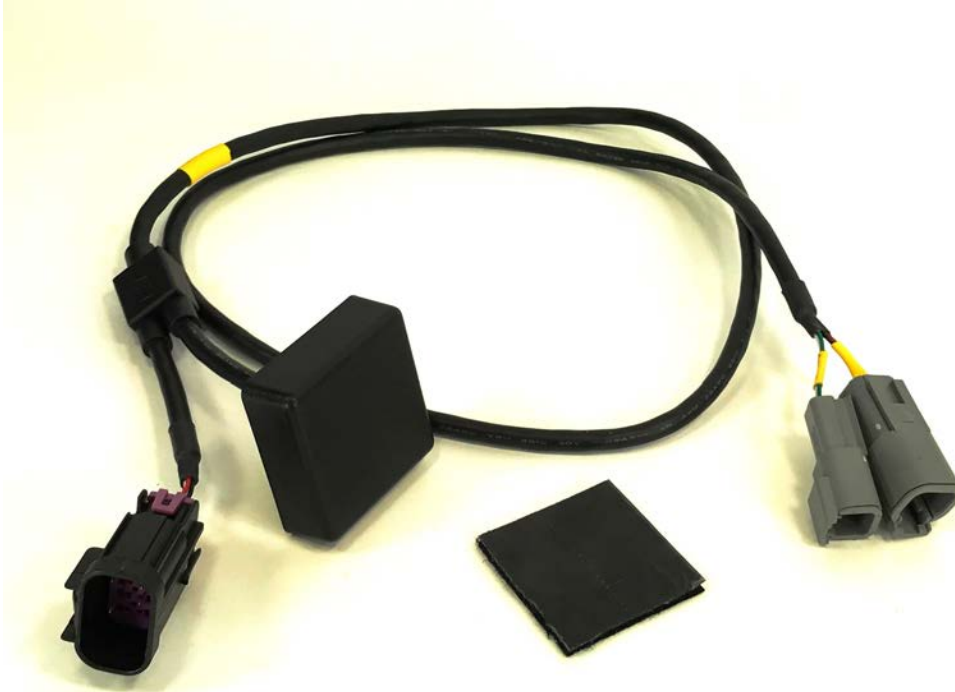
Polaris RZR XPT

CD-7 Plug & Play Harness Kit

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Kit Contents

- CD-7 PnP RZR XPT Harness W/ Voltage Module
- User Instructions



Important Application Notes

-Plug and Play for RZR XPT with SAE J1939 CAN Protocol

Introduction

This CD-7 Plug and Play Kit for Polaris RZR vehicles consists of a plug and play harness and layouts designed specifically for the RZR. The harness plugs into the vehicle's diagnostic port and requires no additional wiring in order to display all the channels transmitted over the vehicle's factory CAN data stream. The CD-7 can be paired with an AEM Vehicle Dynamics Module (VDM) or AEM GPS Module as well as other AEMnet enabled products or third party CAN devices to receive and display additional data.

Parts and Accessories (Sold Separately)	
AEM Vehicle Dynamics Module	30-2206
AEM GPS Module	30-2207
AEMnet Extension Cable 2 FT	30-3606
AEMnet Extension Cable 5 FT	30-3607
AEMnet Extension Cable 10 FT	30-3608
AEM Inline UEGO Controller	30-0310

Harness Installation Instructions

Step 1.

Remove the front hood by twisting the highlighted knobs below and lifting up.



Step 2.

Locate the diagnostic connector (square) and grommet (circle) show below.



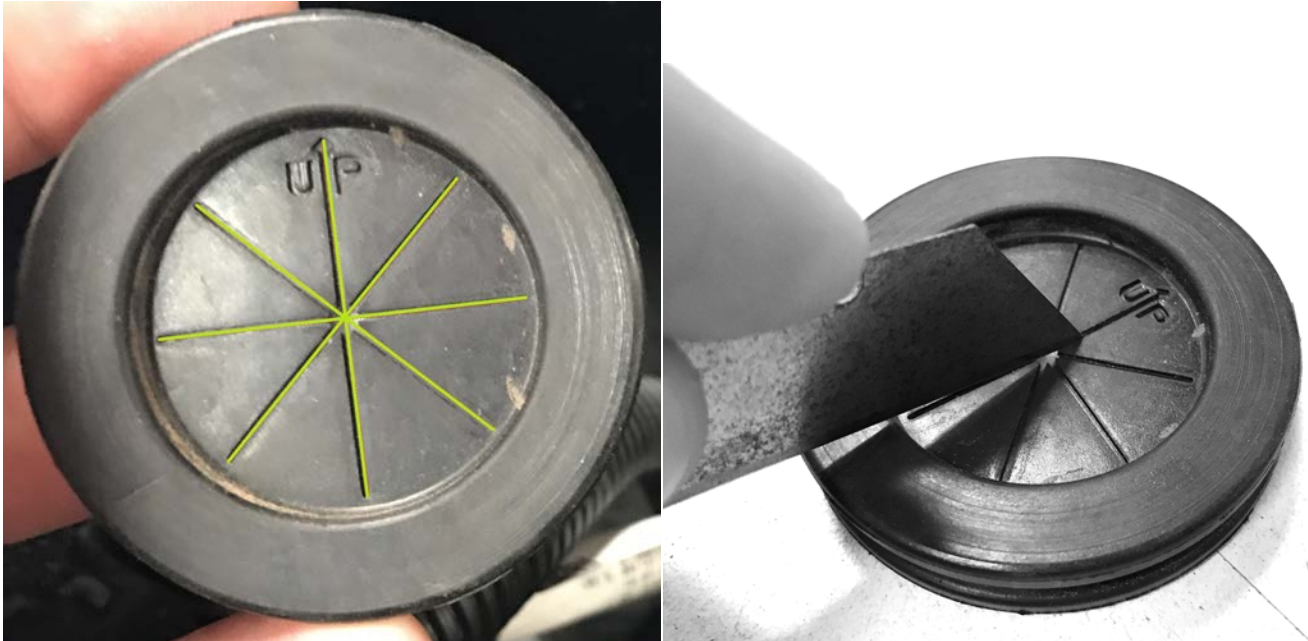
Step 3.

Remove the diagnostic connector from dust cap and then remove the rubber grommet.



Step 4.

Carefully cut the grommet along the existing striations, as highlighted below.

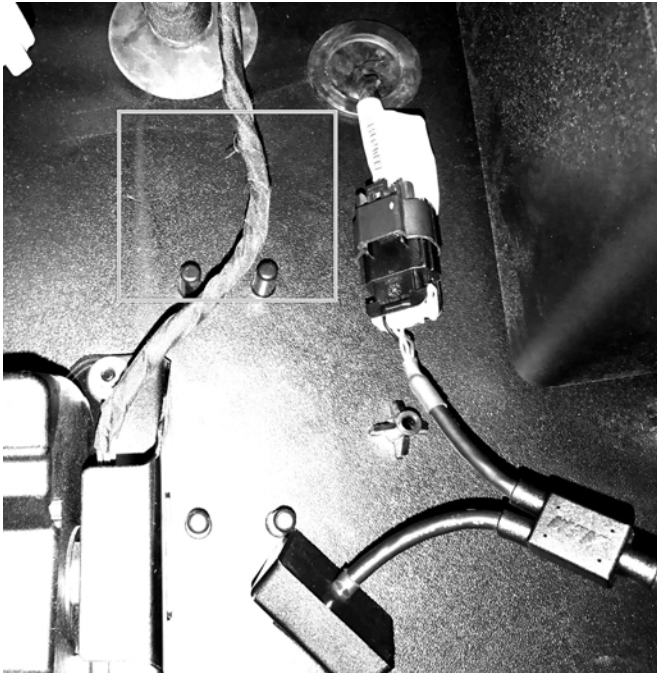


Step 5.

Install the grommet back in its original position and push the diagnostic connector through the grommet.

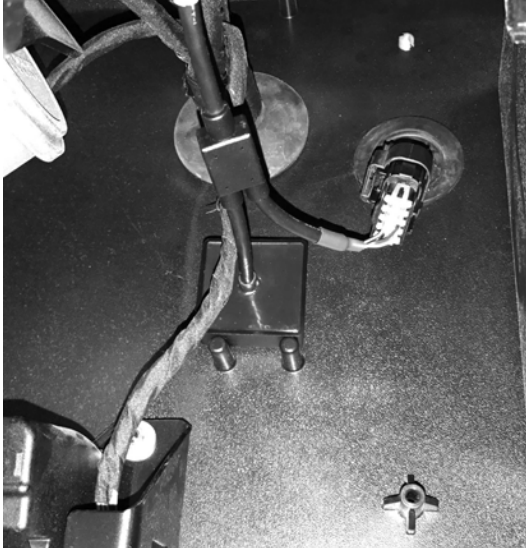
**Step 6.**

Connect the dash adapter harness to the RZR diagnostic connector on the inside of the vehicle. Clean and dry the area inside the box shown below so the adhesive for the voltage module will stick.



Step 7.

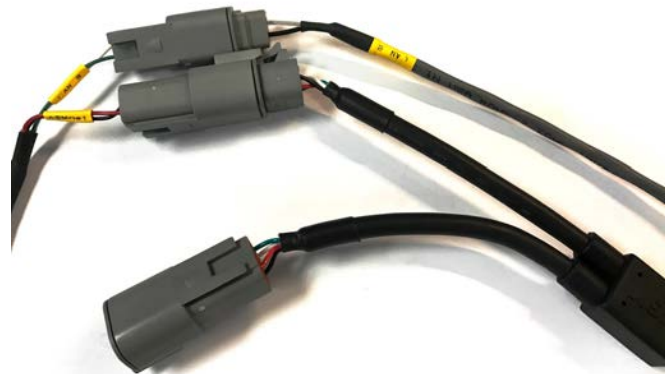
Peel back the adhesive liner and stick the velcro square to the voltage module. Next, remove the liner from the other side and stick the voltage module to the area you cleaned in step 6. Press firmly for a few seconds to insure adhesion. Carefully route the adapter harness to the dash harness. Be sure it will not interfere with the gas or brake pedals.

**Step 8.**

Install hood and lock it in place.

Step 9.

Connect AEMnet and CAN 2 connectors on the adapter harness to the corresponding connectors on the AEM dash harness, as shown below.



Layout Installation Instructions

Launch Dash Design software and open appropriate RZR specific layout file. Go File>Open... and navigate to My Documents\AEM\DashDesign\Setups\App Specific\RZR. If folder can not be found please download the newest release of AEM dash design software. Race layouts utilize the VDM's or GPS Module's GPS input for lap timing and a lap time tracking page with predictive lap timing function is provided. Adventurer layouts utilize the GPS data for navigational use and include a live compass heading graphic as well as latitude, longitude and elevation data. Select from following files:

US (PSI, °F, MPH)	
XPT Factory Turbo	
With AEM VDM - Race	RZR XPT VDM RACE US.aemcd7
With AEM VDM - Adventurer	RZR XPT VDM ADV US.aemcd7
Without VDM	RZR XPT US.aemcd7
XP Factory Non-Turbo	
With AEM VDM - Race	RZR XP VDM RACE US.aemcd7
With AEM VDM - Adventurer	RZR XP VDM ADV US.aemcd7
Without VDM	RZR XP US.aemcd7

SI (BAR, °C, KPH)	
XPT Factory Turbo	
With AEM VDM - Race	RZR XPT VDM RACE SI.aemcd7
With AEM VDM - Adventurer	RZR XPT VDM ADV SI.aemcd7
Without VDM	RZR XPT SI.aemcd7
XP Factory Non-Turbo	
With AEM VDM - Race	RZR XP VDM RACE SI.aemcd7
With AEM VDM - Adventurer	RZR XP VDM ADV SI.aemcd7
Without VDM	RZR XP SI.aemcd7

With desired layout file open, connect the USB cable between the dash and PC. Connection status will change to green "AEM CD-7 connected". To load layout onto dash go File>Upload to Display... or use Ctrl+U keyboard shortcut. Wait until layout is fully loaded – do not unplug USB cable until connection status displays green "Upload complete, OK to disconnect". Layout is now loaded onto dash.

Displayable Channels

The following channels are captured from the vehicles CAN data stream and available for display:

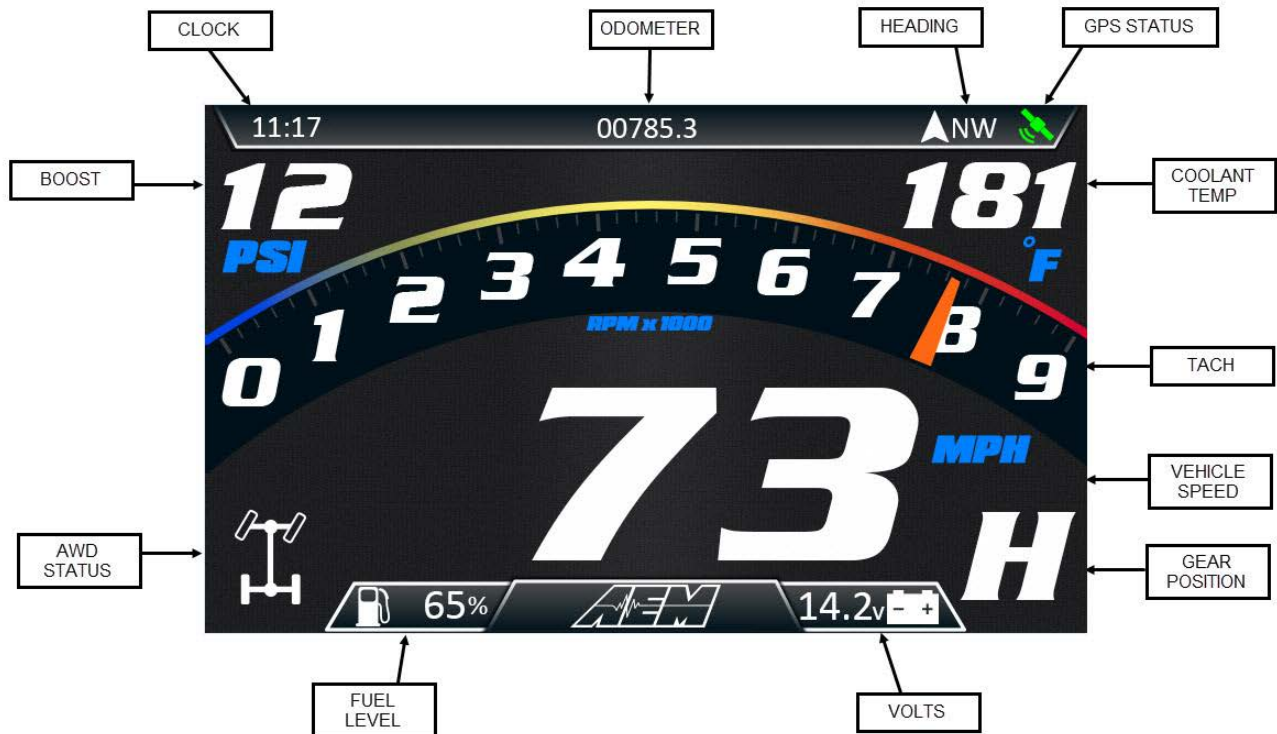
- Engine Speed
- Boost Pressure*
- Throttle Position
- Throttle Position
- Coolant Temp
- Battery Volts**
- Vehicle Speed
- Fuel Level
- Gear Shifter Position
- AWD Status
- MIL Status
- Fuel Economy Instantaneous
- Fuel Economy Average
- Fuel Consumption Rate

*Factory turbo only

**Voltage data provided by module built into RZR dash install harness

Layout Configuration

Page 1



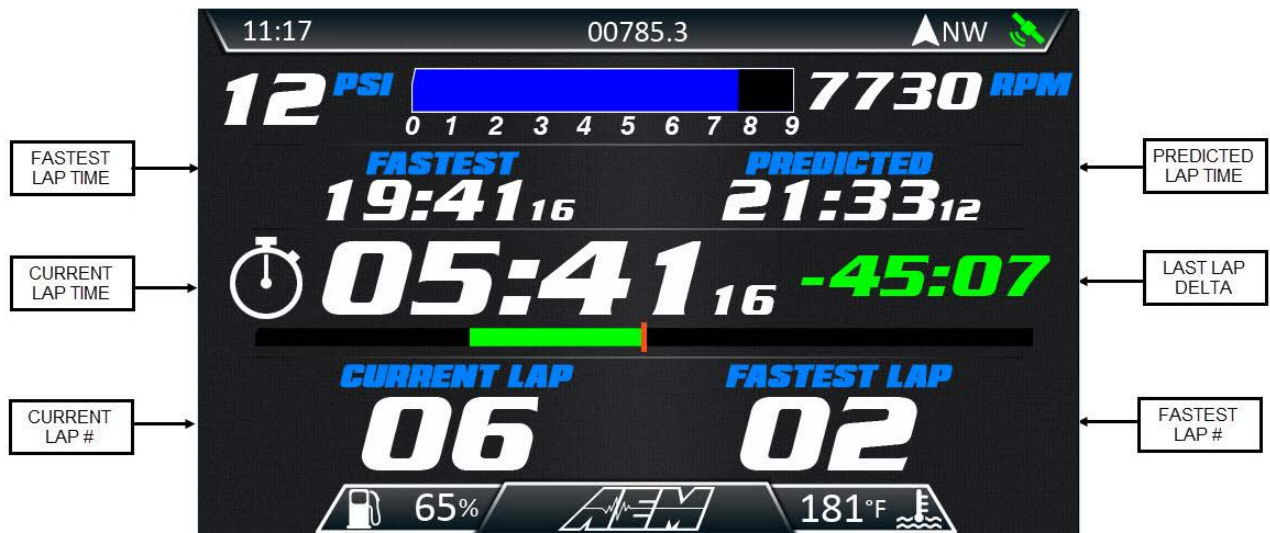
LAYOUT PAGE 1

- Clock – Uses dash’s internal clock. Configurable for 12 or 24 hour.
- Odometer – Non-resettable odometer. Increments in tenths of a mile. Based on speed from Vehicle Speed Sensor.
- Heading – VDM only. Ordinal course over ground compass direction.
- GPS Status – Green = Valid Fix; Red = No Fix
- Coolant Temp – Coolant temp from engine’s coolant temp sensor. Turns red when temp >210°F. See also LEDs - Amber LED.
- Tach – Dynamic Needle Gauge. Floating needle over bitmap background image.
- Vehicle Speed – Vehicle speed in miles per hour from Vehicle Speed Sensor.
- Gear Position – Gear shifter position. P R N L H.

- Volts – Battery voltage. Battery icon turns red when battery voltage alarm triggered due to low voltage. See also LEDs - Amber LED. Note that voltage reading is transmitted onto CAN data stream by the module built into the RZR dash install harness.
- Fuel Level – Fuel level increments in percent. Gas icon turns red when fuel level <10%. See also LEDs - Amber LED.
- AWD Status – Status of AWD engagement.
- Boost – Gauged boost pressure in PSI.

Page 2-Same as Page 1 with the addition of a numeric tach read out.

Page 3-Race Layout



RACE LAYOUT

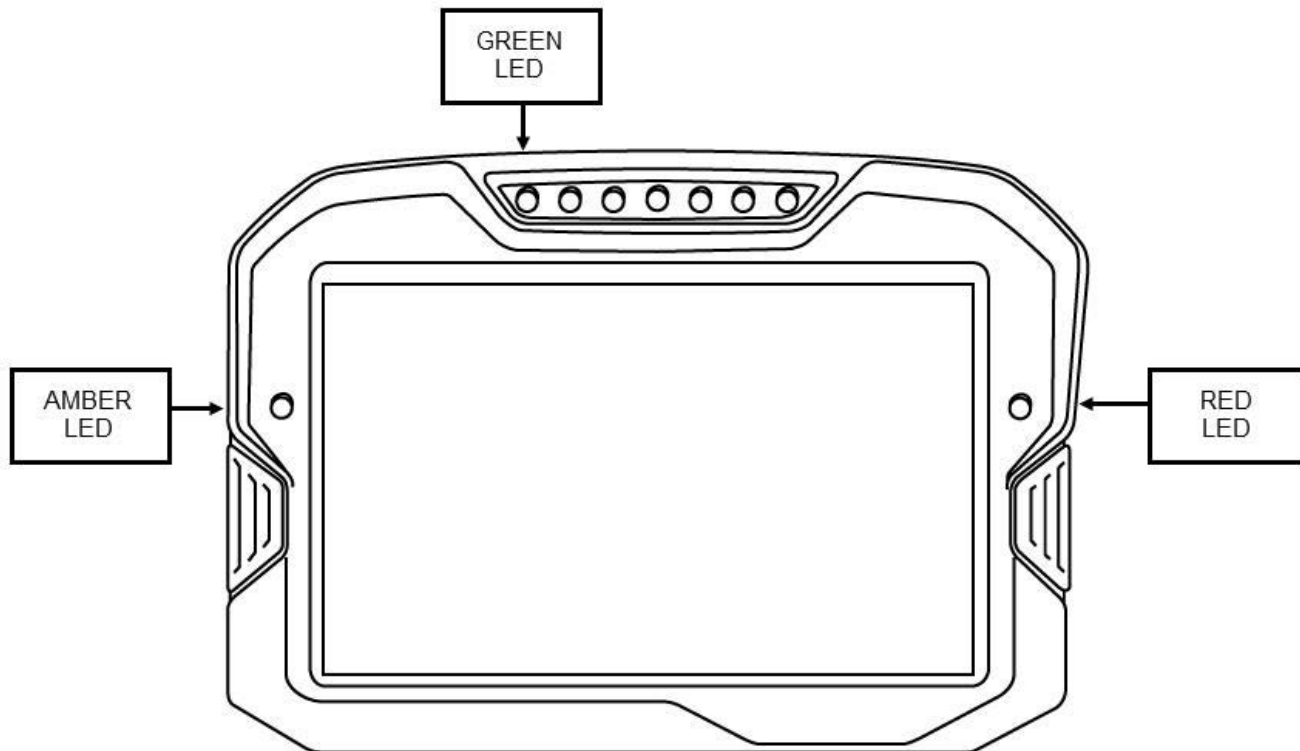
- Current Lap Time – Current lap time counter.
- Fastest Lap Time – Displays time of the fastest lap completed.
- Predicted Lap Time – Displays the predicted lap time of the current lap based on progress through GPS mapped lap.
- Last Lap Delta – Displays time difference between the most recently completed lap and the previous lap.
- Fastest Lap # - Displays the number of the fastest completed lap.
- Current Lap # - Displays the current lap number.

PAGE 3-Adventurer Layout



ADVENTURER LAYOUT

LEDs



LED DESCRIPTIONS

- Amber LED – Controlled by output LED Left Amber which is configured as an Alarm. Alarm will trigger if either Warning FuelLevel, Warning ECUBatteryVoltage or Warning CoolantTemp 210 are on (=1). Each warning input channel can be individually adjusted to suit different triggering conditions.
- Red LED – Controlled by output LED Right Red which is configured as an Alarm. Alarm will trigger if IndicatorMILState is on (=1).
- Green LED – Controlled by output LED Green which is configured as an Alarm. Alarm will trigger if GearPosnCalculated equals 8270 which is raw bit value for “N” for neutral. LED is configured in Setup>Shift Lights and LEDs; LED 1-Green is assigned to LED Green output.

Additional Information

- Splash Screen – Initial start-up time can be reduced by adjusting the Splash Screen on time. For quickest start up, set to zero.
- Logging – Logging channels have already been pre-selected and setup to start logging based on output named EngineRunning which is true (=1) when engine speed is >500. CD-7L (5501) required.

12 Month Limited Warranty

Advanced Engine Management Inc. warrants to the consumer that all AEM High Performance products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12-month warranty period will be repaired or replaced at AEM's option, when determined by AEM that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12-month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM within 30 days of the date the RMA is issued.

UEGO oxygen sensors are considered wear items and are not covered under warranty.

Please note that before AEM can issue an RMA for any electronic product, it is first necessary for the installer or end user to contact the EMS tech line at 1-800-423-0046 to discuss the problem. Most issues can be resolved over the phone. Under no circumstances should a system be returned or a RMA requested before the above process transpires.

AEM will not be responsible for electronic products that are installed incorrectly, installed in a non-approved application, misused, or tampered with.

Any AEM electronics product can be returned for repair if it is out of the warranty period. There is a minimum charge of \$50.00 for inspection and diagnosis of AEM electronic parts. Parts used in the repair of AEM electronic components will be extra. AEM will provide an estimate of repairs and receive written or electronic authorization before repairs are made to the product.