

## **EFS-AVL68**

## **INSTALLATION MANUAL**





# Thank you for purchasing the EchoMaster EFS-AVL68

With EFS-AVL68, your mobile assets are in good hands. This 3 wire standard asset tracker will add GPS tracking and asset manager to fleet equipment, passenger vehicles, off-road vehicles and more. Please ensure you read and understand all aspects of the manual before installing or using the EchoMaster products.

## WHAT'S INCLUDED:

- EFS-AVL68 Module
- Manual





## **FEATURES**

- Autonomous over-the-air firmware updates
- Driver behavior detection to alert for harsh driving
- Internal Cellular and GPS antennas
- Accelerometer
- Low power conservation mode to protect your vehicle's battery life
- 2 output triggers and 1 input
- Asset battery level monitoring

## **REQUIRED TOOLS**

- Screwdriver set
- Wire cutters
- Wire strippers
- Terminal crimper
- Digital Multimeter
- Electrical Tape
- Soldering iron

## PRIOR TO INSTALLATION



**IMPORTANT:** Prior to installation, please note the serial number located on the device.

Visit: ActivateMyEchoMaster.com Click: Activate Asset Tracking

Enter your device's information, and select your software plan. A member of M2M in Motion will be in touch to complete your setup.



EFS-AVL68

## **INSTALLATION GUIDE**

## STEP 1:

#### **INSTALLATION PREPARATION INSTRUCTION**

The EFS-AVL68 unit will need to be installed inside of the asset in an area where it will not get wet or damaged. Mount the module in a location that has a clear view of the sky with no metal objects between the device and the sky.

Note: Metallic objects between the GPS unit and the satellites will degrade the signal and reduce the overall performance.

## **STEP 2:**

#### **INSTALLATION**

#### **Main Power**

Connect the **RED** wire to (+) 12 Volt constant power, or directly to the asset's battery.

#### **Ignition Wire**

Connect the **BROWN** ignition wire to a power source that has power when the asset is turned on and running.

If the asset you are installing on does not have an ignition source available, you can connect the **BROWN** ignition wire directly to the vehicle's battery.

**Note:** the asset will always report in the application as it is on with no ignition state updates.



#### **Chassis Ground**

Connect the **BLACK** (-) Input wire to a solid chassis ground uninhibited by paint or rust; do not use any floating grounds from the vehicle's electrical system. Always connect the ground wire directly to the asset's chassis and secure the connection with a factory bolt or aftermarket self-tapping screw.

#### I/O input and output function

The EFS-AVL68 has two configurable outputs that can be used to trigger an SPDT automotive relay to trigger items like horns or light flash.

| Pin Location | Wire Color  | Function                       |  |  |  |
|--------------|-------------|--------------------------------|--|--|--|
| 2            | Orange      | Output number 1 (-)            |  |  |  |
| 4            | Red         | Battery power (+12 Volts)      |  |  |  |
| 5            | Black       | Chassis ground (-)             |  |  |  |
| 8            | Brown/White | Output number 2 (-)            |  |  |  |
| 18           | Brown       | Ignition power or (+12V input) |  |  |  |

| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
|----|----|----|----|----|----|----|----|----|----|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

**Note:** Outputs are low power and require a relay if used; if not it may result in damage to the device. The output will also need to be set up by M2M in Motion.



## **STEP 3:**

#### **TESTING THE EFS-AVL68**

After installing the EFS-AVL68, move the asset outside and start the vehicle. Let it run for five minutes allowing time for the GPS receiver to receive a good signal from the GPS satellites.

#### **Confirming the LED Lights**

- 1. The EFS-AVL68 has LEDs located on the top of the module: Flash RED at start-up Flash GREEN when its location is received
- 2. Log into The EM Fleet solutions website and confirm the vehicle location.

**Note:** The vehicle must be outside with an unobstructed view of the sky for its first location to be set in the application.

## **STEP 4:**

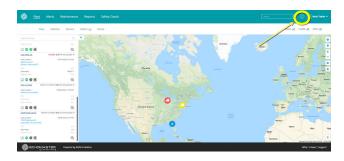
#### ADD THE ASSET TO YOUR WEBSITE APPLICATION

1. Log in to emfleetmonitor.com

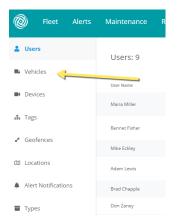




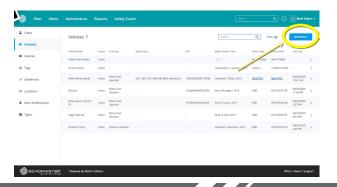
2. Click the settings gear in the upper right corner



3. Select "Vehicles" from the left menu



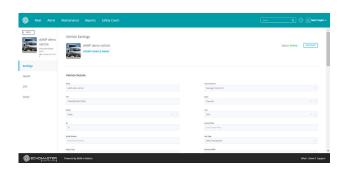
4. Select "Add Vehicle" from the upper right corner



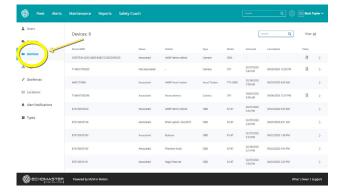




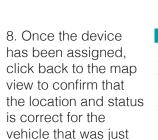
5. Fill out the vehicle's information and save



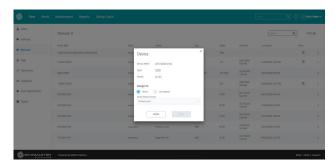
6. Select "Devices" from the left menu



7. In the list of devices, find the device you just installed. Click the ">" symbol on the right side to open that device, and assign it to the vehicle you just added.



set up.









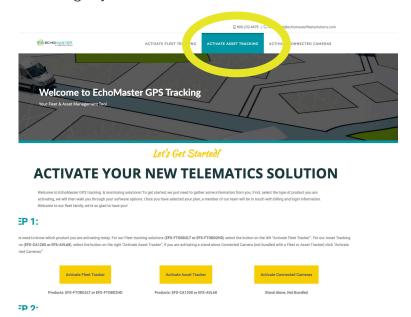
#### **Specification Chart**

| Operating Voltage | 8V to 24V                       |  |  |  |  |
|-------------------|---------------------------------|--|--|--|--|
| Battery           | 300mAh Li-ion polymer           |  |  |  |  |
| Current Capacity  | 110uA sleep mode,30mA<br>Active |  |  |  |  |
| Size              | 2.55 in x 1.92 in x 1.02 in     |  |  |  |  |
| Band Operation    | Dual band UMTS/HSDPA            |  |  |  |  |
| Host Protocol     | AT commands, UDP                |  |  |  |  |
| Certifications    | PTCRB                           |  |  |  |  |

## **IMPORTANT!**

To access your GPS device on the emfleetmonitor.com you must first register your device at ActivateMyEchoMaster.com.

You will be asked for the devices serial number, and you will select your software options. A team member from our software partner M2M in Motion will reach out to once the application is received to get you started







#### Phone - 866-931-8021

E-Mail – support@aampglobal.com



**EchoMasterFleetSolutions.com**