Installation of GPS Tracking Device with Internal Antenna

Overview

This installation guide is our most popular as the majority of our GPS devices have internal antennas. This document serves as a walkthrough on how to successfully install and troubleshoot GPS devices that have an internal antenna.

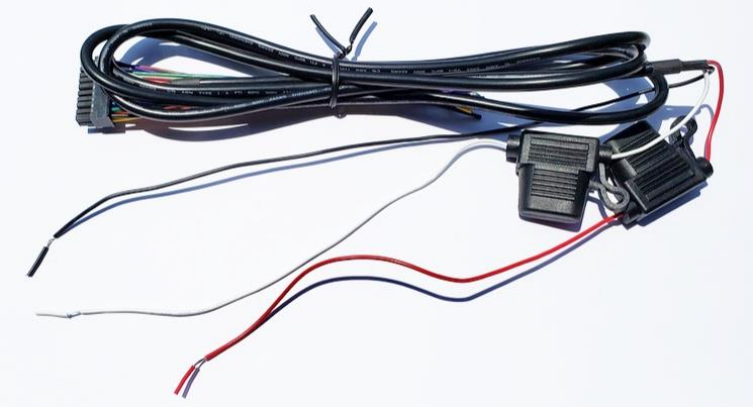
Power Harness

Our power harness is sufficient for basic 3 wire installation.

Red Wire ➔ Constant 12 Volt Power Source

Black Wire ➔ Ground

White Wire ➔ Vehicle Ignition

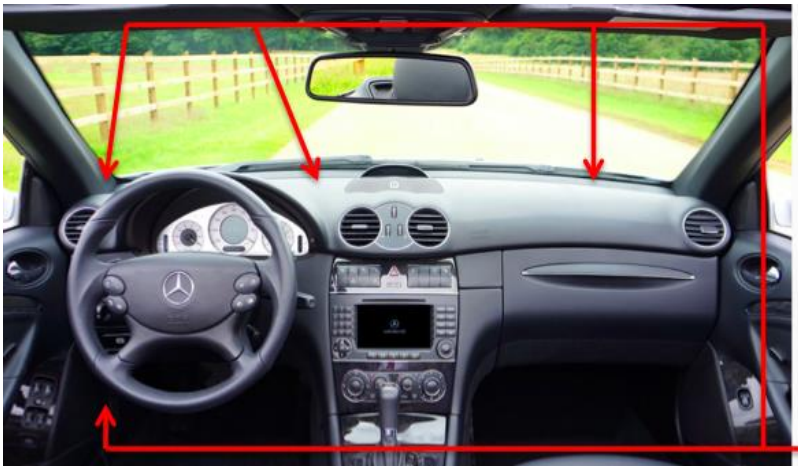


NOTE: It is imperative that device(s) are connected to a reliable constant power source. Device(s) not connected properly will under-perform

Installation Steps:

Step 1) Locate the spot where the GPS device will be mounted. The typical location of the unit is under or on top of the dashboard of the vehicle. This device is equipped with a very sensitive GPS receiver and cellular antenna inside the unit. The device should be secured in a location where the top has line of sight to the sky with no metallic obstruction. Most vehicle interiors today consist of fiberglass, plastics and other nonmetallic materials making device placement quite easy under the dash. In many cases the device will operate well if mounted vertically or at other angles. The unit should be secured and prevented from sliding when the vehicle is in motion. The unit should be mounted in the interior of the vehicle and not on the exterior or within the engine compartment.

*This device is not weather resistant or waterproof.



Step 2) Locate the constant 12 Volt Power Source, ignition and ground connections. Our GPS is shipped with a power harness, which has a 3 amp fuse attached. Possible sources for power harness installation are the main fuse block panel or the point where the vehicle charging circuit are connected to the 12 volt system.

Step 3) Connect the ground wire to ground, the red wire to a constant 12v + power source and the ignition line to an ignition source or to constant power. The device will power on once power (+12VDC) is connected to both the red and white wires and the black wire has ground.

*Always use care when routing the power harness and fuse to prevent possible pinch points or excessive heat.
*Plug the 20-pin Molex connector into the GPS. The GPS is connected directly to the vehicle's 12 volt system. There is no on or off switch on the unit.

Step 4) Place the device where it will be mounted. Watch the red LED light on the unit. After approximately 5 minutes, the red LED light should stop flashing. If it does not, you may need to reposition the device to get a better signal. See "Green & Red LED Light" reference and "Red Light Error Codes" below for more information.

Step 5) Once the red LED light has stopped flashing, secure the device in position. If your vehicle is not reporting once GPS is connected, drive the vehicle for at least 5 miles. Our GPS units need to have a fix of at least 4 satellites upon initial activation.

Step 6) Login with your username and password at http://www.easitrack.net. Your vehicle should be live and reporting on the map. Your installation is now complete.

Note: If the vehicle ignition cannot be located or used, you may connect the white wire and red wire together to a constant power source. The unit will then interpret the ignition of the vehicle based upon the voltage change when the engine is running versus not running. If you do choose to connect this way, you must contact Easitrack Technical Support, and let a Technical Support Team Member know the GPS Unit ID Number that is connected this way. A GPS parameter will need changed, which can be done remotely.

Green & Red Light Reference

The green and red LED lights are intended to troubleshoot installations. Below is a summary of their behavior.

Green LED

When the ignition is first turned on the unit will power up. The green LED will show solid for approximately 30 seconds (there may be some brief flickers initially while the processor initializes). At no other time should the green LED remain on solid for such a long period.

After 30 seconds the green LED will start to flash at the following rates:

- Slow with ignition off
- Fast with ignition on
- Rapidly when ignition is on and when white and red wires are tied together (ignition being interpreted by vehicle voltage)
- Very short blip once every 3 seconds when napping (ignition is off)

Red LED

The red LED flashes 2-digit codes.

- The first digit tells you what general area is having a problem (hardware, modem, GPS, etc.).

The second digit gives specific error information

Since there can be more than one error condition the GPS unit rotates through the error codes (for example if GPS is tracking no satellites and the modem is not registered).

NOTE: it is normal for the red LED light to flash when the unit first powers up for up to 5 minutes.

Red Light Error Codes

1 – X error codes: unit specific errors

1-2 Low supply voltage. This could be caused by a true low voltage condition

1-3 Data usage provision issue. Contact EasiTrack for support

2 – X error codes: Modem related error codes

2-1 Modem module fault. Contact EasiTrack at for support.

2-2 No SIM. Contact EasiTrack for support

2-3 No signal. For GPS units with external antennas - check that the cellular antenna is correctly connected. If the problem persists contact EasiTrack for support –

2-4 Network not found. This can occur from time to time based upon unit location and cellular service. Contact EasiTrack for support if this condition persists or is interrupting service.

2-5 Last data session failed. This means that an attempt to establish a data session failed. This could be simply due to network loading, temporary network outage, or poor radio coverage. This failure will occasionally happen in a working unit, but if the problem is persistent and interrupts service then contact EasiTrack for support.

2-6 Cellular service is not available. -

3 – X error codes: GPS related error codes

3-1 GPS module fault. Contact EasiTrack for support.

3-2 GPS antenna fault. Contact EasiTrack for support

3-3 GPS not tracking any satellites. Check that the GPS antenna has a clear, unobstructed view of the sky, and has been operating for at least 5 minutes. Check that the GPS antenna is facing the correct way up.

3-4 GPS no fix (< 3 satellites). If the antenna has only partial view of sky due to the position of the vehicle (under a cover, close proximity to a building) then try to move the vehicle to ensure that it will be able to make fixes when standing in the open. If the vehicle has a full view of the sky and the error condition persists then try to reposition the GPS antenna to get les obstructed view of the sky.

3-5 GPS has no time. The GPS receiver sets its internal clock from the satellite signals. If the GPS receiver has no time then it has never seen a single satellite since the device has powered up.

**Please contact support for any further assistance at (888) 744-6449 or support@easitrack.com