Vehicle Tracking and Recovery System

GPS-D4 Installation Instructions

The process of installing the GPS-D4 tracking system involves:

- ✔**1 Writing the tracking unit Serial Number (S/N) and the Vehicle Identification Number (VIN) onto the activation card included in the kit.**
- ✔**2 Determining the best location for the unit (because the cellular antenna is built-in)**
- ✔**3 Installing optional GPS satellite receiving antenna**
- ✔**4 Making all necessary wiring connections**
- ✔**5 Placing the vehicle outside and powering up the GPS-D4 tracking unit**
- ✔**6 Checking the GPS-D4 tracking unit's indicator light**
- ✔**7 Calling 800-307-0680 to activate and test the unit**
- ✔**8 Completing the installation**

STEP 1

Record the information on the service activation card

Write the serial number (S/N) of the GPS-D4 module on the activation card which is included in the tracking unit kit. This information will be needed by the installer, when the service center is called to establish temporary service and to perform the over-the-air installation check. It is then very important that the service activation card be given to the end user / purchaser, as they will need it to establish their service account.

The S/N is found on a label on the tracking unit control module, and on the package.

The VIN is seen through the lower corner of the vehicle's driver-side windshield, on a small plate on the dash.
For non- passenger car and truck vehicle applications, provide the machine's serial number instead.

STEP 2

Determine the tracking unit's control module mounting location

Determine a permanent mounting location for the GPS-D4 control module, inside the vehicle, free from moisture, and not too easily seen or accessible. Usually the best mounting location is up and behind the driver's side dash.

Keep in mind when choosing a location that the module itself contains a cellular antenna which receives and transmits data from and to the service website. It also contains the GPS receiver antenna for calculating its position. Therefore the module should be mounted as high as possible behind the dash, and it also should not be placed against or close to any of the vehicle's existing electronics. It should be installed with as much horizon-to-horizon "view" of the sky as possible. The GPS antenna can receive satellite signals through plastic, vinyl, fiberglass and glass (unless the glass has a metal content or metal based tint), but it cannot receive signals if it's mounted behind or too close to metal parts or structure of the vehicle.
While most modern electronics are designed with shielding which protects them from radio frequency (RF) signals, caution should be excecised when placing the GPS-D4 module. Avoid placing it too close to existing electronics modules in the vehicle. The same holds true for vehicle wiring harnesses; try to avoid placing the GPS-D4 module directly on wiring harneses, and keep the module above other harnesses, instead of below them.

Nylon tie straps may be used to secure the control module to supporting plastic dash structure or to heating, air condition and ventilation (HVAC) ducts. Avoid the metal structure of the vehicle, and orient the module to be flat and level as much as possible, with its top facing up (the top of the module has the large slotted screw). Be sure that testing is performed with the module in its final mounting location to ensure operation of the internal antennas.

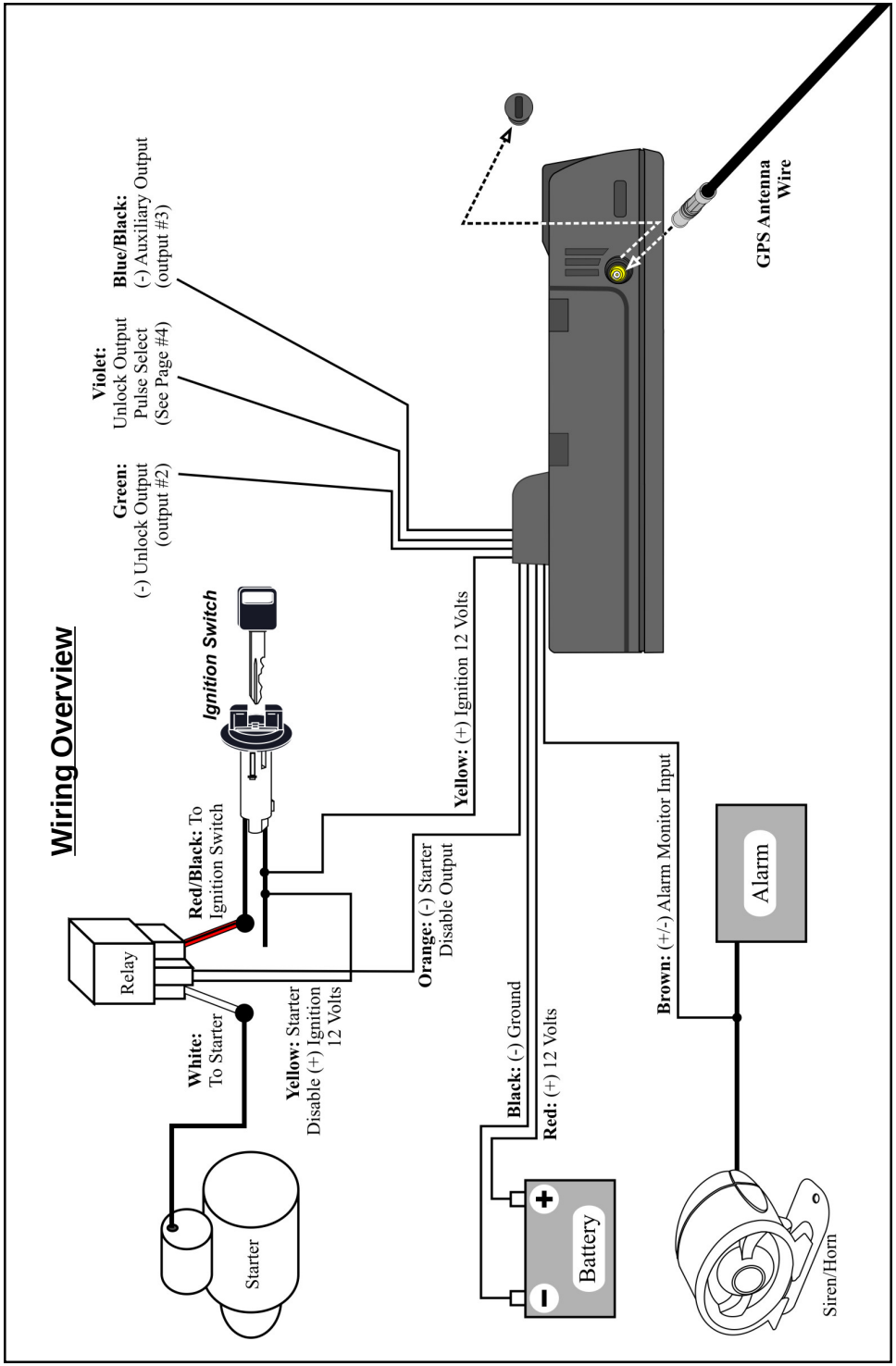
STEP 3

Installing the *optional* external GPS Antenna

A single separate GPS antenna is available for purchase in situations where there is minimal room to mount the module in an ideal position to receive signals from the GPS satellites. It should be installed in a hidden location, with as much horizon-to-horizon "view" of the sky as possible. The GPS antenna can receive satellite signals through plastic, vinyl, fiberglass and glass (unless the glass has a metal content), but it cannot receive signals if it's mounted behind or too close to metal parts or structure of the vehicle.

A good location for the GPS antenna, like the control module, is high behind the dash, just beneath its top padding. One of the very best locations is above the instrument cluster; in most vehicles the instrument cluster trim bezel is removeable, allowing easy access to this area. Do ensure that the GPS antenna is at least 5" from the tracking unit control module. The GPS antenna should be given the best available location, and have the least amount of material over it as possible. The GPS antenna can not be mounted directly beneath metal, and avoid mounting it close to metal such as the "A" pillars or firewall.

Use a double-sided adhesive pad or nylon tie-straps to mount the antenna. Carefully route the antenna's coaxial cable to the GPS-D4 control module.



Activating the tracking unit (cont'd)

This phone call to the network service center takes only a few minutes, and it is very important. The service center representative will activate the tracking unit, and perform a system check.

Save the activation card; it must be given to the end-user purchaser.

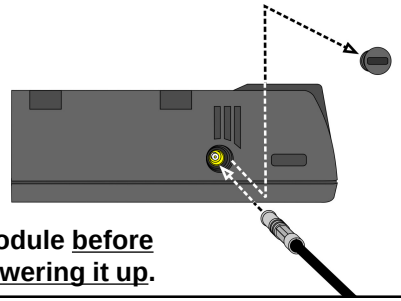
STEP 8

Completing the installation

After concluding the call with the service center, the installation may be completed by securely mounting the tracking unit control module, and reassembling any vehicle parts.

Important!!! Be sure that the end-user customer is given the activation card, with the written tracking unit S/N and vehicle's VIN.

Locate the threaded sealing plug, on the side of the tracking unit control module. Use a slotted screwdriver to unscrew and remove this plug, and then firmly push the GPS antenna connector onto the exposed antenna jack. See the drawing.



Be sure that the GPS antenna is connected to the tracking unit control module before powering it up.

STEP 4

Wiring Connections

Identify and Separate the Needed Wiring

The GPS-D4 has 8 wires total in a 14 pin molex connector. You should test and confirm all of the needed vehicle's wires before making any connections. All wiring should be carefully routed, secured and hidden. Be careful not to route any wiring near moving vehicle components or components that may generate excessive heat. **Make all wiring connections before plugging the molex connector into the module.**

Black ground wire (required)

The Black wire is the tracking unit's ground wire; it should be connected directly to the metal structure of the vehicle.

Strip the end of the Black wire and crimp on the supplied ring terminal. Route this wire to a good grounding point, like an existing bolt in structural metal, and securely ground the Black wire.

Orange starter disable output wire & starter disable relay (output #1)

The Orange wire is a latching negative output that is connected to the starter interrupt relay socket provided in the kit.

a) Locate and confirm the identity of the vehicle's starter wire. It is usually located in the ignition switch harness. Cut it. Using the supplied butt connectors, connect the starter disable socket's Red/Black wire to the side of the cut starter wire that goes to the ignition switch. It will test +12 volts when the key is in the start position. Connect the starter disable socket's White wire to the remaining side of the cut starter wire.

b) Connect the starter interrupt socket's Orange wire to the Orange wire in the module's main harness.

c) Connect the starter interrupt socket's Yellow wire to a ignition +12 volt circuit in the vehicle. This can be found at the ignition switch harness and the proper circuit will test for +12 volts only when the ignition key is in the run and start positions.

Wiring Connections (cont'd)

Green door unlock pulsed output wire (output #2)

The Green wire is a negative pulse output typically used for unlocking the vehicle's doors. It can be configured for either a 3.5 second single pulse or for two .8 second pulses. This is determined by the system's violet wire (discussed later in this section).

The connection of the Green wire will vary depending on the type of door locking system present in the vehicle. You must determine what type of locking system the vehicle has prior to making any connections. It may require a relay or a vehicle specific interface module.

Violet door unlock pulse selection input wire

The Violet wire determines whether the Green unlock output wire provides a single 3.5 second negative pulse or two .8 second negative pulses.

For the Green wire to send a single 3.5 second pulse, connect the Violet wire to a constant +12 volt supply. For the Green wire to send two .8 second pulses, connect the Violet wire to chassis ground.

Blue/Black auxiliary output wire (output #3)

The Blue/Black wire is a 1 second negative pulse output typically used for add-on accessories like remote start.

The connection of the Blue/Black wire will vary depending on the function it is being used for. Typically, it is connected to the activation wire of the accessory module.

Brown alarm monitor input wire

The Brown wire is an input that detects pulses or constant input from an alarm system's siren or horn honk output. It is polarity learning and will work with positive or negative inputs. It will learn the siren/horn wire's rest state (alarm not sounding) when the module is powered up. If a wiring change needs to be made to the Brown wire, disconnect the module's molex connector first.

Connect the Brown wire directly to the siren or horn honk output from the vehicle's alarm system. When connecting to and OEM alarm's horn output, make sure you connect to a circuit that tests properly when the alarm is sounding. The steering wheel's horn button circuit may or may not be connected to the alarm's horn output.

Yellow ignition +12 volt input wire (required)

The Yellow wire is used to monitor the engine's on/off state.

Connect the Yellow wire to a ignition +12 volt circuit in the vehicle. This can be found at the ignition switch harness and the proper circuit will test for +12 volts only when the ignition key is in the run and start positions.

Red constant power wire (required)

The Red wire is connected to the vehicle's constant (+) power. Constant power must be (+) 12 Volts; the connection point must remain powered regardless of the ignition key position.

a) Route the module's Red wire to a good constant power source- the battery power wire in the ignition switch wiring harness is recommended.

b) **Remove the 5 Amp fuse from the Red wire's fuse holder**. Use the supplied terminal to connect the end of the Red wire to a (+) constant battery power source in the vehicle, such as the constant power feed wire of the ignition switch harness. **ALWAYS test and verify that the target wire has power is in the key "off" and "on" positions!!!**

!!! IMPORTANT - Do not re-insert the supplied 5 Amp fuse until instructed to!

STEP 5

Place the vehicle outside, running

Having the **vehicle outside** in the open (with a clear view of the sky) and with the **engine running** allows for quickest initial GPS satellite lock, and it will also ensure the best cellular connection. These conditions are needed for a fast and successful unit activation and subsequent system test (which occur in Step 7 and Step 8 respectively).

Power up the tracking unit

The 14 pin molex connector can be plugged into the module, and then the previously removed fuse may now be inserted into the fuse holder on the tracking unit's Red wire.

STEP 6

Check the indicator light

After powering up the module, locate the LED indicator light on the corner of the GPS-D4 control module. **The LED should light Green** (which confirms that the unit is powered)**.**

Keep the vehicle with the installed tracking unit outside for at least 5 minutes. During this period, or, within a short time of powering the unit up, the indicator light will change from from a rapid flashing to a slower flash pattern.

STEP 7

Activating the tracking unit

The installer must call 800-307-0680

before releasing the vehicle to the end-user customer. Have the activation card on hand, on which the unit S/N and vehicle VIN were written.