

GENACIS Express Hardware Installation

CSI Doc. 101556-001

Service Vehicle Hardware Installation

The following instructions explain how to install a GENACIS Express unit and associated hardware. Read and understand these instructions before attempting an installation. Exercise caution during the installation to prevent problems. If you have questions, call ComSonics technical support at 800-336-9681.

1. Remove any unneeded equipment previously installed.

A previous installation may exist in the vehicle. If the installation did not use equivalent hardware, the wiring harness and antenna will not be compatible with the present installation. Remove the existing equipment and wiring harness. If an internal antenna was used, remove it also. Permanently mounted antennas, such as through-hole roof antennas, can remain in place. Coil and secure the antenna leads, but do not cut them. Tag the removed equipment, indicating the removal date, your name, the vehicle it was removed from and the reason for removal.

2. Locate suitable constant 12V, ignition, and ground connection points.

Do not connect the power cable to the unit at this time. Connect the power cable to the connection points. The power cable is 6 feet in length. Select appropriate connection and unit mounting locations. Connect the **RED** lead to a constant 12V source, the **WHITE** lead to a switched ignition source, and the **BLACK** lead to a good chassis ground. It is important to verify the connections as powering point locations may vary between vehicles. The fuse block is a typical power location.

Note: The GENACIS Express power cable is supplied with 3 Amp protection fuses. If a fuse replacement is required, a 5 Amp value may be substituted.

To connect into the vehicle fuse block, the supplied mini fuse clips are recommended.



Place the clip on the battery/switched end of the host fuse. This method maintains normal vehicle operation in the event of a power malfunction in the GENACIS Express. A clip must be soldered to each power wire for a reliable connection. Alternately, a crimp type mating connector can be installed on each power wire and used with the fuse clip if sufficient space is available in the fuse block area.

3. Locate a suitable mounting location for the GENACIS Express unit.

Note: Before the final installation, record the serial number of the unit, the vehicle number, and the installation location, if required, on the appropriate forms. Install the unit in a protected location, but still be accessible for viewing the status indicators and accessing the cable connections. Typical mounting locations are; under the dash, under or behind a seat, or on the separator wall.

4. Locate a suitable mounting point for the GPS/Cell antenna.

The GPS/Cell combination antenna can be mounted on the dash. The antenna module must be oriented with the top side up. Place the antenna as far forward as possible for optimum operation. Route the antenna cable in a protected area to prevent it from being damaged or becoming a personnel safety hazard.

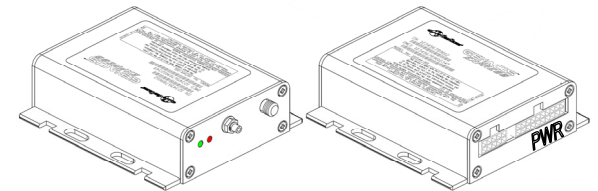
Important: When installing the antenna module, be careful to avoid leaving fingerprints on the prepared surfaces or the adhesive pad. Finger print oil will prevent a suitable bond.

Select a flat smooth surface to mount the antenna as the adhesive pad may not remain securely attached to a rough or curved surface. Before mounting the antenna, clean the bottom surface of the antenna module and the mounting location on the dash with the supplied alcohol pads. Allow the alcohol to dry before mounting. Remove the backing from one side of the adhesive pad and place it on the bottom of the antenna. Press the adhesive pad firmly to the antenna. Remove the backing from the other side of the adhesive pad and press the antenna firmly in place on the dash. Hold the antenna in place for at least 10 seconds. **Note:** Alternative mounting methods may be required.

Warning: Radios, phones and other hardware may interfere with GPS reception.

5. Connect the antenna cables to the GENACIS Express unit.

Connect the GPS and Cell antenna cables finger tight to the unit. **Caution:** Over tightening the connections may cause damage to the internal components.



GENACIS Express End Panel Views

Caution: Do not use lock-tight, anti-tampering compound or any other adhesive on any hardware that connects to the GENACIS Express system performance may be adversely affected.

6. Connect the power connector to the GENACIS Express unit.

Plug the power harness connector into the PWR connector on the unit. The connector is keyed and can only be inserted one way. Do not force it into place.

7. Test the installation.

Turn the ignition on. The GENACIS Express unit has a 10 second de-bounce period before ignition sense occurs. As the unit powers up, the green LED flashes once a second for approximately 30 seconds. After the initialization completes, the green LED flashes about 3 times a second. The following table lists the significance of the green LED flash patterns.

Pattern	Description
once a second, continuous for 30 seconds	Device is booting
Fast 3 times a second	Ignition on, power on
Slow once a second	Ignition off, power on
Off	No power

Green LED Flash Patterns

The red LED flashes error patterns until a communications connection is made and a GPS lock is obtained. The GPS/Cell antenna must receive an unobstructed GPS signal. If necessary, move the vehicle to a location where it can obtain a clear view of the sky. Verify that with the ignition on, the green LED flashes approximately once per second and that the red LED is off. It may take several minutes for the unit to completely initialize and the red LED to stop flashing.

Test the unit installation a few times to verify proper operation. After the red LED turns off from the initial power up in the previous step, turn the ignition off. The green LED slows down to flash once a second with the ignition off, wait 30 seconds, and turn the ignition back on. Now the green LED starts flashing 3 times a second with the ignition on.

Repeat the ignition on/ignition off procedure several times ensuring the LED power up sequence is correct.

Refer to the following table for the significance of red flash patterns. Typically, patterns flash fast for the first digit and slow for the second digit. If more than one error exists, the flash patterns rotate. Contact ComSonics for assistance on patterns not listed.

Normally, error patterns flash for several minutes when the GENACIS Express unit is first powered on. If an error condition exists longer than 10 minutes, turn off the vehicle ignition and disconnect the power harness for at least 20 seconds. Then reconnect the harness and restart the vehicle. If the error condition still exists after 10 minutes, contact ComSonics Technical Support.

Pattern	Description
Off	No faults detected.
1-1	License key issue
1-2	Memory management problem
1-3	Allocated data usage exhausted
2-1	Modem module fault
2-2	Internal memory failure
2-3	No cellular signal
2-4	Network not found
2-5	Last data session failed
2-6	GPRS not attached or CDMA data not available
3-1	GPS module fault
3-2	GPS antenna fault
3-3	GPS not tracking any satellites
3-4	GPS no fix (less than 3 satellites)
3-5	GPS has no time
4-2	Data transfer failure

Red LED Flash Patterns

8. Complete the Installation.

After the installation is verified to be working properly, complete mounting the GENACIS Express and replace any removed panels and hardware. Ensure the cables are securely mounted and not kinked.

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