

GENACIS

Hardware Installation

CSI Doc. 101559-001 Rev. A

Service Vehicle Hardware Installation

The following instructions explain how to install a GENACIS 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, contact ComSonics technical support. See contact information on other side.

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 9 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 power cable is supplied with 3 Amp protection fuses. If a fuse replacement is required, a 5 Amp value may be used.

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 unit. 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.

Note: Before the final installation, record the identifier numbers from the unit, the vehicle number, and the installation location. The GENACIS unit has a bar code label with GNX-10 in small letters and another with the ComSonics logo. The GNX-10 number is entered on the vehicle info page of the workstation application. The ComSonics number is used for factory identification.

Install the unit in a protected location, but maintain a view of the status indicators and access to 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 is preferably to be mounted on the dash. The antenna module must be oriented with the top side up. Place the antenna far forward where it can obtain a clear view of the sky. Windshield stickers may reduce antenna performance. 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. Install the leakage monopole antenna.

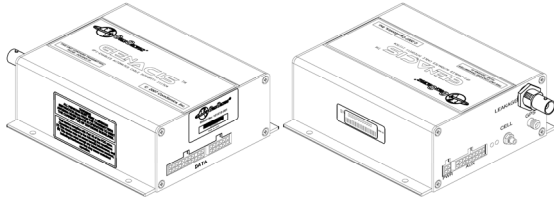
Select a position for the leakage antenna near the center of the vehicle roof and away from nearby metallic objects, such as other antennas, booms, or ladders. For the magnetic mount antenna, place it on a flat roof surface. Route the antenna cable flat to the roof to the point where it enters the vehicle. For the permanent mount antenna, follow the instructions supplied with the antenna. Use caution to prevent damage to the cable. Coil excess cable in a loose loop inside the vehicle. Secure the cable as needed.

Periodically remove the magnetic monopole antenna to clean dust and grit from the vehicle surface and the bottom of the antenna to reduce abrasion to the vehicle finish.

6. Connect the antenna cables.

Connect the leakage monopole, GPS and Cell antenna cables finger tight to the unit.

Warning: Over tightening the connections may cause damage to the internal components.



GENACIS Unit

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

7. Connect the power harness connector.

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

8. Test the installation.

Turn the ignition on. The GENACIS unit has a 10 second delay 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.

Normally, error patterns flash for several minutes when the GENACIS 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.

Technical Support Contact Information

Phone: 1-800-336-9681 or 1-540-434-5965
Monday - Friday 8:00 a.m. - 5:00 p.m. Eastern
email: tech-support@comsonics.com.

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

9. Complete the Installation.

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

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