

Installation Manual for the FMS2000

Part Number FMS002



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1. SCOPE

This document describes the mechanical and electrical installation requirements for the FMS2000 unit including the GPS/900 MHz dual antenna. This document applies to FMS2000 system part number FMS002.

2. APPLICATION

This document is to be used only by professional truck and automotive electrical device installers for the purpose of installing the FMS2000 system.

3.0 ELECTRICAL REQUIREMENTS

3.1 Voltage and Current Requirements for the FMS2000

The FMS unit is designed to operate from nominal +12 volt DC automotive power systems. It will operate normally across a range of 7 to 25 volts. Typical current input is 0.215 amps, with a maximum current of 0.3 amps when maximum input voltage and current loads are applied.

The FMS unit should be connected to a fused circuit from the vehicle master fuse panel. This will prevent melted wires or fire in case of a pinched wire that occurs before the FMS unit's input connector.

3.2. Installation Wiring for the FMS2000

Use a minimum of 20 AWG wire to connect the FMS Mobile unit to +12 volt DC vehicle power systems. Do not exceed a wire length of more than 25 feet. Use good installation practices, which protect the wire from sharp metal edges or anything that could abrade or cut through the wire insulation and cause a short.

3.3. LED INDICATOR

The LED indicators are a single dual-color LED comprised of RED and GREEN. Since the GREEN is always on, when RED is on the resultant color is ORANGE.

Color	State	Power On	Tracking GPS	Mobile Unit Location	Storing Data	Downloading Data
None	Off	N	N	n/a	N	N
GREEN	Solid	Y	N	n/a	N	N
ORANGE	Solid	Y	Y	n/a	N	N
ORANGE	Blink	Y	n/a	Home	N	Y
ORANGE	Blink	Y	Y	Away	Y	N

4. MECHANICAL REQUIREMENTS

4.1. Mounting Requirements for the FMS2000

The FMS2000 is not environmentally sealed. The installer must select a suitable location protected from excessive dust and liquids, such as drink spills, rain, road spray, or washing equipment. Keep in mind constraints on lengths for power and antenna cabling.

The FMS2000 enclosure has a front and rear panel with two mounting holes each. The unit should be mounted securely using star washers or captive nuts to ensure against it vibrating loose. Axiom recommends rechecking the mounting screws or bolts as part of an annual periodic maintenance schedule.

4.2. Mounting Requirements for the Dual Antenna

The dual antenna (GPS/900 MHz) is environmentally sealed. Dust or water, such as rain, road spray, or washing equipment does not effect it.

NOTE
Snow or ice accumulation can significantly attenuate GPS signal strength at the antenna. Bear this in mind when choosing the antenna site.

The dual antenna requires a 9-inch diameter minimum metal ground plane for best performance. This is easily achieved by mounting it on a metal vehicle roof or trunk lid. If a metal plane is not used the antenna will still work but the range performance can be greatly reduced. The antenna should not be mounted inside the vehicle as this will greatly reduce both the GPS and 900 MHz signal strength and may result in unreliable operation.

The dual antenna comes with 5 meters of RG174 type cable for both the GPS and 900 MHz antennas terminated with SMA type connectors. Care must be taken to match the GPS and Cell radio cables to the identified connectors on the FMS front panel.

5. FCC Certification, Instructions to the User

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide

reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC relations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without approval of manufacturer could void the user's authority to operate this equipment.