MobiApps m200 Installation Guide

May 2009

List of Equipment

This section lists the equipment required to install the m200. The complete equipment kit includes the following:

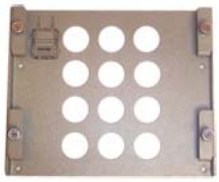
- m200 Dual-Mode Telematics Platform
- Mounting bracket
- Power cable
- GPS antenna
- GSM antenna
- Satellite antenna

No Serviceable Parts

Note: The m200 contains no user serviceable parts and therefore must be returned to the manufacturer for service. The SIM card must be supplied to MobiApps during manufacturing. Opening the case will void the warranty. The only part with a finite life is the internal lead battery, with an expected life of 3 years.

m200 Placement Rules and Recommendations

Care must be taken to ensure that the supplied cable can reach from the m200 to the power supply and the ignition switch (if used).

Device	Image	Description
m200		The m200 contains the satellite data communications transceiver, GPS receiver, GSM transceiver, application processor and internal backup battery.
Mounting Bracket		The mounting bracket holds the m200 to a flat mounting surface.
Power Cable		The power cable is 3 feet (90 cm) in length. At one end, the cable connects to the ignition switch and the main power source. The terminal end connects to the 20-pin connector on the m200 unit.

Power Supply Requirements

Connection Requirements

The main battery / power source cables should be connected to a 12V or 24V power source, if not hooked up directly to the vehicle's battery terminals. Maximum continuous power dissipation is 120 mA at 12 V. While the unit is transmitting, power consumption may momentarily peak at 2 A.

Recommended Core Wire

16 AWG or thicker gauge wire is recommended for connecting to the power harness leads.

m200 Physical Dimensions

The diagram below illustrates the physical dimensions of the m200.

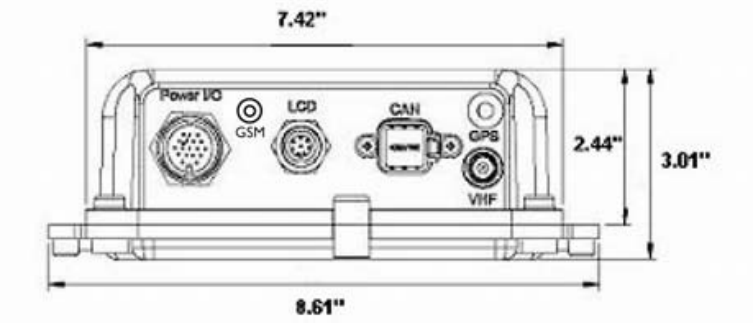


Figure 1: m200 Connector View

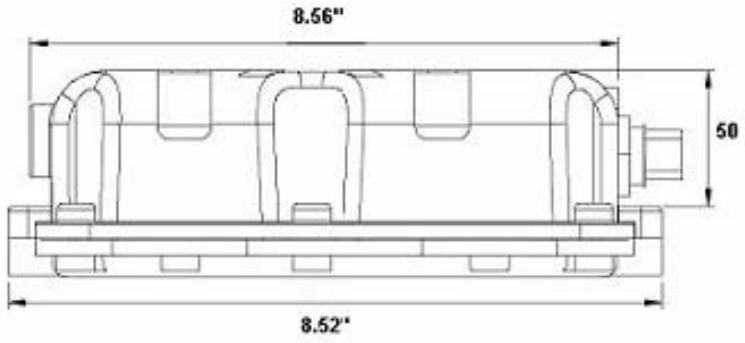


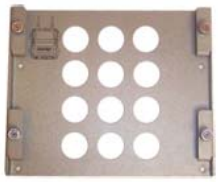
Figure 2: m200 Side View

Installing the m200

In this section, you will learn how to install the m200 unit and its components. Please read the detailed instructions before beginning the installation.

Caution! Do not mount the m200 near a magnetic field, battery chargers, battery isolators, generators or electric motors.

Install the m200 Mounting Bracket



The m200 mounting bracket provided with this installation kit is used to attach the m200 to the vehicle. The bracket provides easy mounting and dismounting of the unit.

Note: The mounting bracket must be installed on a flat surface. Otherwise, if screwed down hard, the mounting bracket can flex, preventing the four fasteners from lining up with the mating holes in the m200. Spacers should be placed below the mounting bracket to prevent flexing. A mounting kit can be ordered from MobiApps.

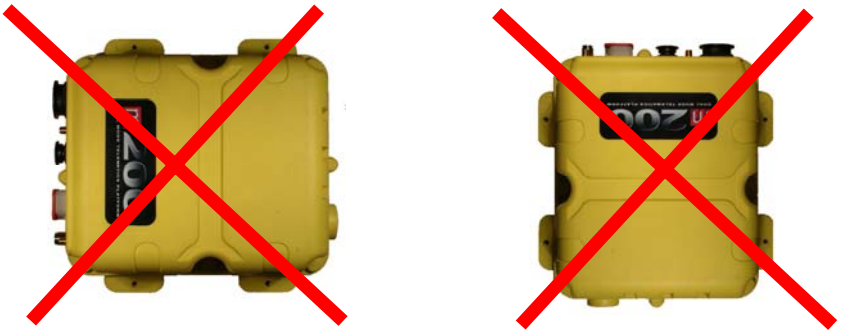
Orientation of the m200

The m200 can be installed in three different ways:

Caution! On the opposite side where the connectors are placed, there is safety vent for battery out-gassing. The m200 MUST be oriented so that the vent is on the upper half of the box. This allows the light and potentially explosive hydrogen gas to escape. Placing the vent downwards can cause the gas to accumulate inside the m200.

Vent must face upwards.

Caution! The m200 should not be installed in the manner illustrated below with the vent on the bottom.



Tip: The m200 may need to be serviced and it should therefore be placed in a location where it is easy to dismount.

Placing the m200

After you have fixed the mounting bracket, you need to insert the m200 into the mounting bracket. Push the m200 against the mounting bracket and slide down.

After you have placed the m200 into the mounting bracket, tighten all thumbscrews. This can be accomplished more easily with a screwdriver.

Step By Step Installation Instructions

1. Find a good location to mount the m200, making sure that all cables will comfortably reach the m200. Keep the m200 at least 12 inches (30 cm) from any magnetic fields or electric motors. Mount the bracket on a flat surface using the bracket as a template. Mount the m200 in an easily accessible area for any future upgrades.

2. Mount the satellite antenna in such a way that it has an unobstructed view of the sky and is at least 3 feet (1 meter) away from any other antenna or radar.

3. Mount the GPS receiver in a location with a 360-degree view of the sky.

4. Run and connect the fused red wire either to the positive terminal on the main battery (or battery bank) or to a distribution / power panel. Run and connect the yellow ground wire.

5. Run and connect the red / green wire to the positive terminal of the ignition switch. The red / green wire can also be connected to a main switch for all electronics or a switch dedicated for the m200.

6. Run the satellite antenna, GPS antenna and GSM antenna cables to the m200.

7. Connect the satellite, GPS and GSM antennas to the m200. Take careful note of the reverse polarity SMA connecter used for the GSM antenna.

Optional Satellite Antenna Diagnostics

Note: This test would require that you have access to an SWR meter. An SWR meter is not included with the system.

Ensure the antenna cables have been run throughout the vehicle and the satellite antenna has been connected to the mount. Identify the TNC connector where it would connect to the m200

A. Connect SWR analyzer to TNC connector at the end of the satellite antenna cable.

B. Turn on SWR analyzer.

C. Set dial to 138 MHz. Verify SWR gauge reading is less than 3.

D. Set dial halfway between 148 - 150 MHz. Verify SWR gauge reading is less than 3.

8. Connect the power cable to the 20-pin male receptacle only after the batteries are installed in the vehicle.

Warning! Whenever the power cable is connected to the m200, the system will be ON. In order to prevent draining the m200's internal battery, do not connect the Power Cable until it is connected to a vehicle battery.