AMPIRE

FLEET200

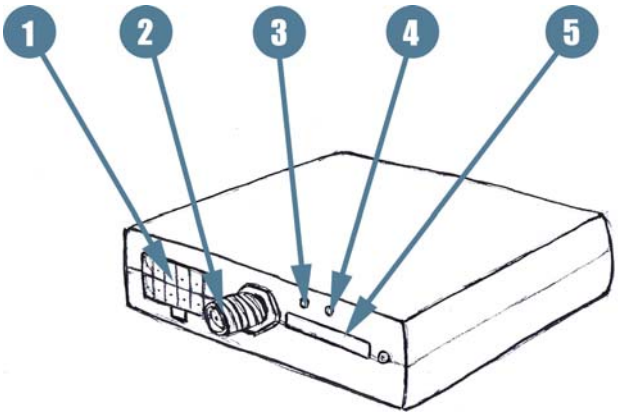
Contents

I. Introduction – basic information

The vehicle unit FLEET200 already contains activated SIM card. Each unit is always paired with a specific vehicle - you can find information label with license plate of the vehicle on the box.

Information lable

Warning:
Do not remove the SIM card from the vehicle unit!

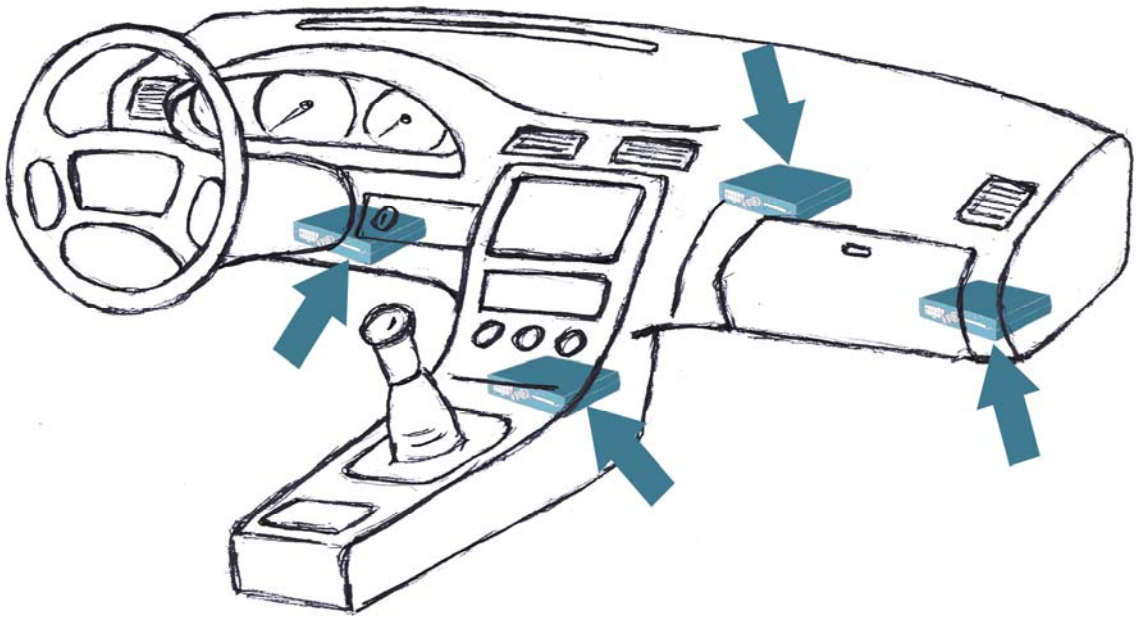


Description of the unit FLEET200
1 ..... wiring harness connector
2 ..... RF connector of the GPS antenna
3 ..... red LED - GSM status
4 ..... green LED - GPS status
5 ..... SIM card holder

II. Installation into a vehicle

1. Placement of the unit

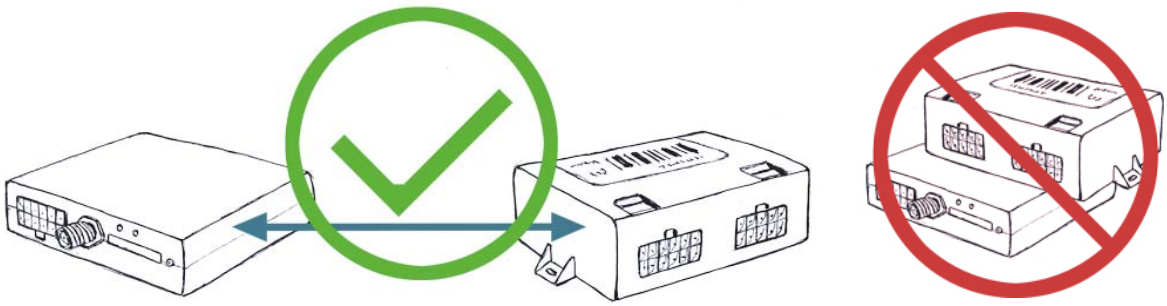
Pay special attention to selection of a suitable place for installing the unit. We recommend using the free space under the vehicle dashboard.



Examples of suitable places for installing the vehicle unit.

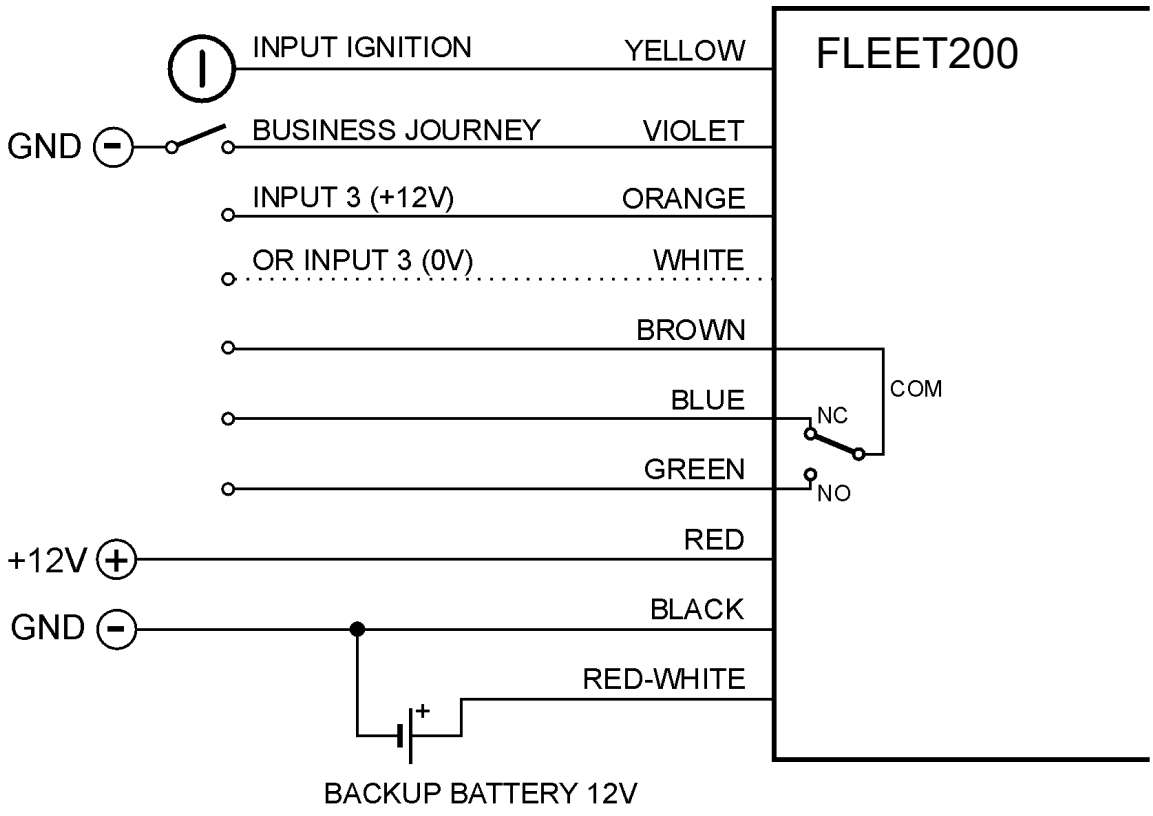
IMPORTANT

The vehicle unit mustn't be placed in close proximity to the **solid metal structures** (the vehicle unit has integrated GSM antenna) or in close proximity of other devices with **increased electromagnetic radiation** (e.g. control units, electric motors, power relays, servo-drives etc.).



2. Connecting the cable harness

While connecting wires to the vehicle wiring the wiring harness has to be disconnected from the vehicle unit.
Basic installation is done via three wires (black, red and yellow).
Other wires are being used for specific features of the vehicle unit.



The wiring diagram of the unit FLEET200

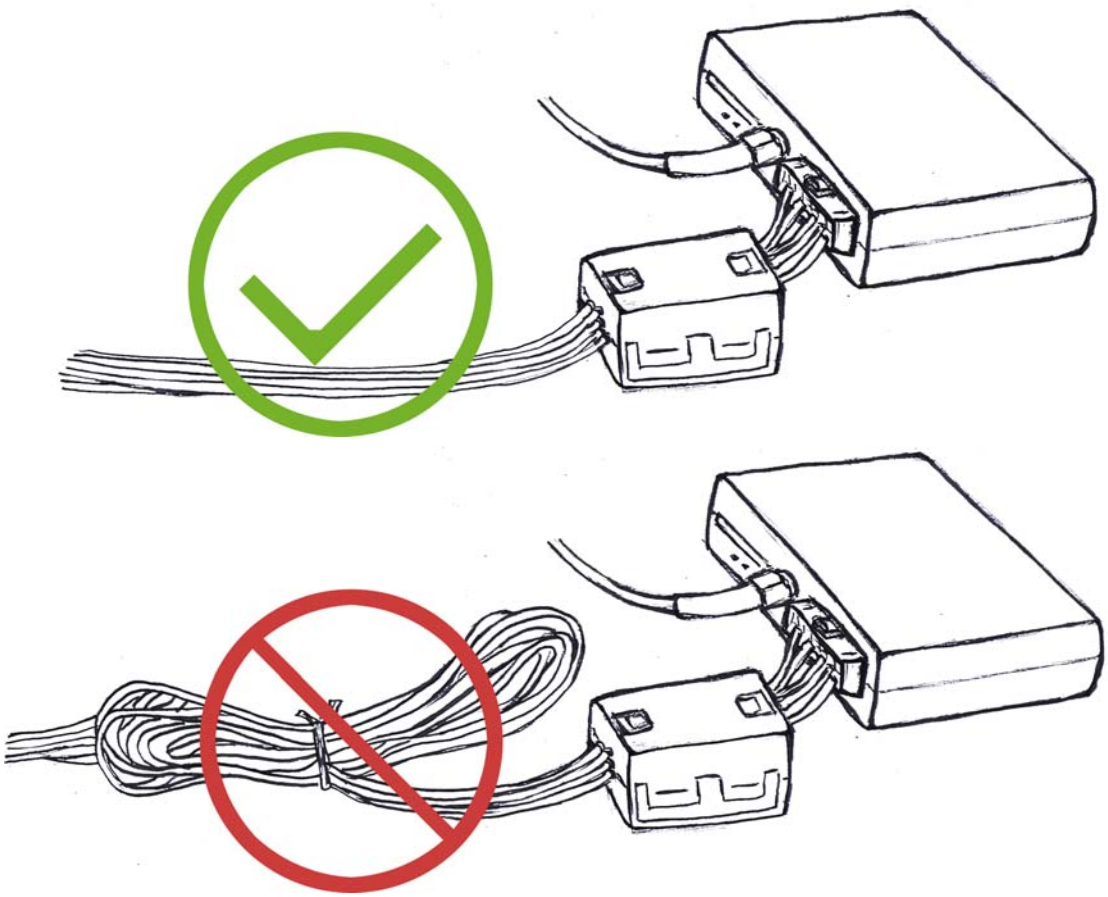
IMPORTANT

The vehicle unit has to be connected via red wire to the **constant power supply without current limit** (circle 30). Protect this connection by a 5A fuse.

Grounding (black wire) must be done in the **shortest possible distance** from the car battery's negative pole.

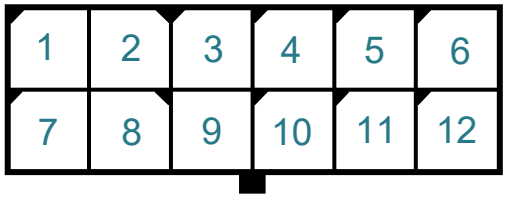
Signal for ignition status (yellow wire) should be derived from the power supply at **circuit 15.**

Individual **wires** of the wiring harness **must be reduced** to the absolutely necessary length. **Cut the unused wires at the connector** and **insulate** their ends.



Description of the vehicle unit FLEET200 connector

Pin 1	Brown	Switching relay – common contact (COM)
Pin 2	Green	Switching relay – opened contact (Normal Open)
Pin 3	Purple	Input – business journey switch
Pin 4	White	Input - INPUT 3 (activation GND)
Pin 5	Yellow	Input – ignition
Pin 6	Orange	Input - INPUT 3 (activation +12V)
Pin 9	Blue	Switching relay – closed contact (Normal Close)
Pin 10	2x black	Vehicle frame –12V backup battery
Pin 11	Red	+ 12V
Pin 12	Red-white	+ 12V backup battery



View into the vehicle unit's connector

2.1 Input – IGNITION (connection of this input is compulsory)

This input is used for monitoring the condition of the vehicle's ignition. With the ignition ON (vehicle engine running) there must be always signal +12V on this input.

IMPORTANT

Signal for ignition status (yellow wire) should be derived from the power supply at the **circuit 15.**

2.2 Input – BUSINESS JOURNEY

Via switch connected to this input the driver sets type of journey (closed switch indicates business journey, opened switch indicates private journey).
Place the switch to an easily accessible and clear space from the driver's perspective (e.g. a vehicle dashboard) in a pre-drilled hole. Connect the switch between vehicle frame (-) and purple wire.

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IMPORTANT

In case the journey switch will **not be used in the vehicle** it is necessary, for permanent identification of business journeys in the system, to **ground the purple wire**.

Grounding of the purple wire must be done in the **shortest possible distance** from the negative pole of the car battery.

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2.3 Input – INPUT 3

This input is being used as an information input that monitors the status of the device in the vehicle (e.g. switching of cooling equipment, switching of beacon etc.). Depending on the type of output from monitored devices use either white or orange wire.

White wire (pin 4) - activation of the input is done by a signal 0V with a length of more than 0.8s
Orange wire (pin 6) - activation of the input is done by a signal +12V with a length of more than 0.8s

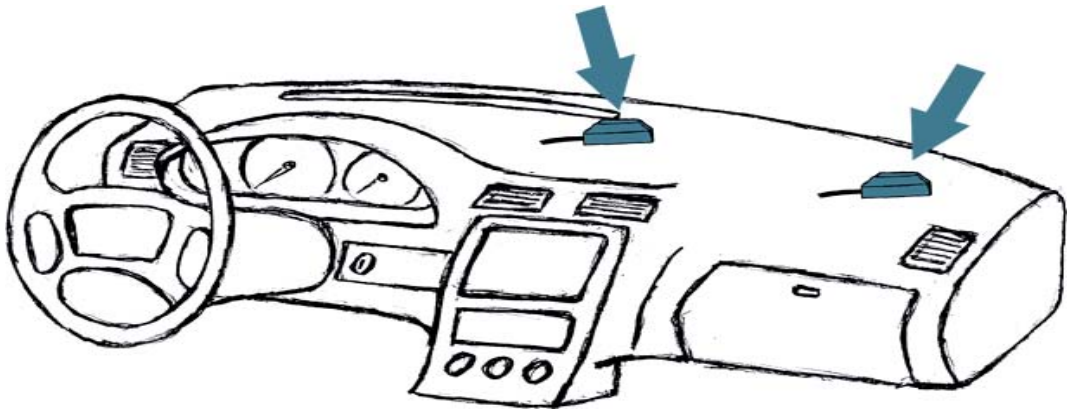
2.4 Output (switching relay)

The relay is used for example for controlling external heating, sirens, warning lights etc. with a maximum load 12V / DC 5A.

Note:
In the case you would like to control devices with higher current load use the auxiliary relay which has the appropriate technical parameters.

3. Mounting the GPS antenna

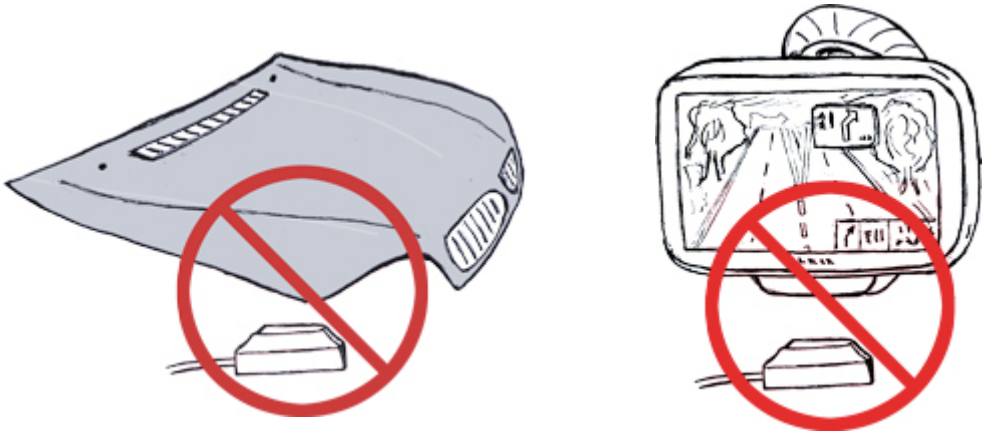
Pay higher attention to selection of a suitable place for installation of the GPS antenna. The location and orientation of the GPS antenna has a major impact on the accuracy of vehicle positioning. Suitable location for the GPS antenna is directly underneath the dashboard.



IMPORTANT

Ensure **horizontal position** of the GPS antenna and its correct **orientation**.

GPS antenna should not be placed under or in close proximity to the **massive metal structures** or in close proximity of other **GPS devices** and **antennas**.



Firmly fix the GPS antenna (e.g. double sided adhesive tape) to make sure it will not change its position during operation.

Note:
In case the vehicle is equipped with metallized windshield (heated windshield is not a problem for GPS signal reception) it is necessary to place the GPS antenna, for example, into the side mirror, front plastic bumper or other location where its view to the sky won't be shielded.

4. Activation of the unit

a) Connect RF connector of the GPS antenna and wiring harness connector to the vehicle unit.

Note:
After connecting the wiring harness the unit is not yet activated (it is still turned off).

b) **Start the vehicle** and wait for approx. 2 minutes (during this time the units initializes itself). LEDs located on the front panel of the vehicle unit indicates current state.

Target status of LED indication:
Red LED (GSM) is blinking every 3 seconds - the unit is connected to GSM network.
Green LED (GPS) is blinking every 3 seconds - the unit is receiving GPS data.

Red LED – indicates GSM status	
LED blinking quickly (1x per second)	The unit is connecting to GSM network
LED blinking slowly (1x per 3 seconds)	The unit is connected to GSM network
LED is not blinking	The unit is switched OFF
Green LED – indicates GPS status	
LED blinking quickly (1x per second)	The unit is trying to receive GPS data
LED blinking slowly (1x per 3 seconds)	The unit receives actual GPS data
LED is not blinking	GPS module is switched OFF

IMPORTANT

After activation of the vehicle unit:

1. **Turn the vehicle's ignition off** (red LED blinks).
2. **Wait approx. 5 minutes** and check if the unit is still under power supply (red LED must be blinking).

This procedure verifies that the chosen circuit, for supplying power to the vehicle unit, is **not time limited** and does not cause the unit shutdown - **perform the test without connected backup battery.**

5. Connecting the backup battery (optional accessory)

The backup battery allows localization of the vehicle even with the car battery disconnected. The backup battery is connected through a wiring harness - **black** (-12V) and **red-white** (+12V) wires equipped with FASTON connector. The backup battery is being automatically recharged through the vehicle unit.

Note:
The lifespan of the backup battery is 3 years and after this period it should be replaced.

6. Fixation of the individual components

Firmly fix the vehicle unit, backup battery and wiring harness at the designated place under the dashboard. For the fixation use double-sided adhesive tape and plastic cable tie.

III. Attachments

The wiring diagram of installation of the vehicle unit FLEET200 into a vehicle with onboard voltage 24V.