

MEMS Receiver Installation

These instructions relate to the installation of the Michelin Earthmover Management System (MEMS) Receiver identified by the part numbers **RV2-01** and **RV2-01-FCC**.

IMPORTANT

NOTE: This system must be installed by experienced professional installers who are familiar with radio frequency (RF) equipment operation as well as local building and safety codes. Failure to do so may void the Product Warranty, as well as expose the end user to legal and/or financial liabilities. The device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Any changes or modifications of equipment not expressly approved by the manufacturer could void the user's authority to operate the equipment and the company's warranty.

WHAT YOU WILL NEED

Supplied by Michelin:

- MEMS Receiver
- Power cable
- Antenna with 10M cable
- Antenna with 5M cable (Driver's side) Identified with red ring on antenna
- Thermal cut-out
- Panduit flexible conduit (15M supplied)

Supplied by the MEMS real time interface provider:

- Interface cable for mine management system

Local supply

- Vehicle wiring connectors conforming to local regulations. Cable clips
- Suitable self tapping or other screws to secure the MEMS Receiver to the vehicle

Tools

- Wireman's / Electricians tools
- Electric drill

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RECEIVER INSTALLATION

- The MEMS Receiver should be mounted in an environment that is suitable for electronic equipment; inside the cab of the vehicle.
- Secure the MEMS Receiver using the four mounting points that will be found at the ends of the steel brackets.
- Access to the front panel is required for service and other operations.
- Do NOT mount the MEMS Receiver where it is in the path of air from cab heaters.
- The MEMS Receiver is designed to operate from 24 volts DC with a negative ground.
- A connection is required to the Mine Management System; this will normally be provided by your Mine Management System supplier.
- There are no user serviceable components inside the MEMS Receiver and there is no need to open it.

CABLE CONNECTIONS

1. 'Antenna A and B'

The MEMS Receiver uses two antennas; one mounted each side of the vehicle.

Keep the antenna feeder cables as clear as possible from other cables, particularly radio telephone antenna feeders. Do not extend the MEMS Receiver feeder cable unless absolutely necessary. Your local Michelin agent will have experience with mounting antennas on various types of vehicle and can provide advice.

Secure the antenna with the 10M cable vertically, on the railings on right side of the vehicle. Route the antenna cable to the MEMS Receiver antenna socket labelled Antenna 'A'. The cable should be kept clear of hot components (Exhausts, regenerative break units etc.) and protected from impact and abrasion using the Panduit conduit which is supplied. Mount the antenna so that they have as good a view of the wheels as possible and are as clear of metallic obstructions as possible. (See the photograph.)

Secure the antenna with the 5 M (red ring) cable vertically, on the railings on the left (driver's side) of the vehicle. Route the cable to the Antenna 'B' port of the receiver taking the same precautions as with the other cable.



When power is turned OFF the RED LED will stay illuminated for several hours, then become illuminated intermittently and finally switch OFF.

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2. 'Power' Connections

Connect the vehicle power to the receiver using the supplied cable which should be plugged into the left hand connection on the MEMS Receiver which is labelled POWER



The MEMS Receiver power supply should be controlled by the vehicle's ignition switch and MUST be protected by the thermal cut out that is provided. The standard of wiring must be no less than that adopted by the truck manufacturer and must conform to relevant national standards. The cut out should be in series with the positive (brown) wire and mounted close to the supply source so that it provides protection if the power cable becomes damaged and the live wire becomes shorted to the chassis.

Cable colour code: Brown +24V DC
 White 0V
 Green Engine sense (+24V nominal when engine is running)

If the engine sense connection is not made, cut the end of the green wire so that no strands are visible and apply a short length of good quality insulating tape to prevent accidental connection.

Turn ON the power to the receiver. The RED 'Power' LED will illuminate after 3 seconds, the receiver will become active and the internal battery will start to charge. When transmissions from the TAGS in the tyres are received the GREEN or AMBER lights will flash briefly. The RED LED will remain illuminated for some time after the truck power is disconnected.

3. 'Communications' Connection

The cable providing communications to the mine management system should be connected to the 'Communications' socket. This cable will be provided by the MEMS real time interface provider.

4. 'Service Connection'

This connector is used by Michelin maintenance engineers and should remain covered by the metal cap provided.