MÜLLER ELEKTRONIK
A TRIMBLE COMPANY

Installation and Operating Instructions

DGPS Receiver A101

Version: V6.20191001

3030246900-02-EN

Read and follow these instructions. Keep these instructions in a safe place for later reference. Please note that there might be a more recent version of these instructions on the homepage.

Company details

Document

Installation and Operating Instructions
Product: DGPS Receiver A101
Document number: 3030246900-02-EN
Original instructions
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1 For your safety

1.1 Basic safety instructions

Please read the following safety instructions carefully before using the product for the first time.

- Do not make any unauthorized modifications to the product. Unauthorized modifications or use may impair safety and reduce the service life or operability of the unit. Modifications are considered unauthorized if they are not described in the product documentation.
- Comply with road traffic rules. Stop the vehicle before operating the receiver or connected components.

1.2 Intended use

The product is intended for accurate positioning of agricultural vehicles.

The product is only intended for use in the agricultural sector. The manufacturer shall not be held responsible for any other use of the system.

The operating instructions form part of the product. The product may only be used in accordance with these operating instructions.

The manufacturer cannot be held liable for any personal injury or property damage resulting from such non-compliance. All risk arising from improper use lies with the user.

1.3 Layout and meaning of warnings

All safety instructions found in these Operating Instructions are composed in accordance with the following pattern:

	**⚠ WARNING**
	This signal word identifies medium-risk hazards, which could potentially cause death or serious physical injury, if not avoided.

	**⚠ CAUTION**
	This signal word identifies hazards that could potentially cause minor or moderate physical injury or damage to property, if not avoided.

NOTICE
This signal word identifies hazards that could potentially cause damage to property, if not avoided.

There are some actions that need to be performed in several steps. If there is a risk involved in carrying out any of these steps, a safety warning appears in the instructions themselves.

Safety instructions always directly precede the step involving risk and can be identified by their bold font type and a signal word.

Example

1. **NOTICE! This is a notice. It warns that there is a risk involved in the next step.**
2. Step involving risk.

1.4 Disposal

When it has reached the end of its service life, please dispose of this product as electronic scrap in accordance with all applicable waste management laws.

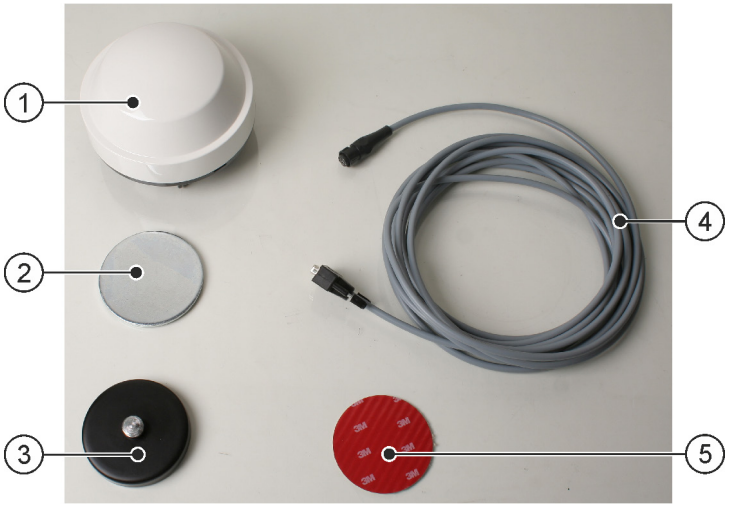
1.5 Cleaning

Do **not** clean the product with a high pressure cleaner to prevent moisture from entering the connector.

2 Product description

2.1 About the GPS receiver

The DGPS receiver is used to determine the exact position of a vehicle during field work.



1	GPS receiver A101	4	Connector cable A different cable may be provided.
2	Metal plate	5	Adhesive plate
3	Magnetic pedestal		

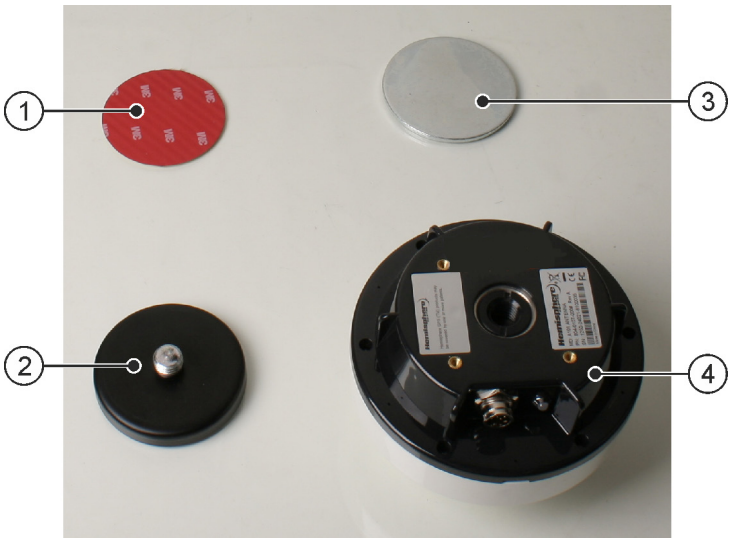
2.2 Meaning of the LED lights

The DGPS receiver has a status LED, which shows the quality of the connection:

- Red: DGPS receiver is connected to the terminal, but is unable to receive a GPS signal.
- Orange: DGPS receiver can receive GPS signals, but has no differential signal. Its accuracy is very low, and cannot be used for precision farming.
- Green: DGPS receiver can receive GPS signals and the differential signal.

3 Mounting and configuration

3.1 Mounting the GPS receiver



Mounting accessories

1	Adhesive plate	3	Metal plate
2	Magnetic pedestal	4	DGPS receiver A101

DGPS receiver on the roof of a tractor

⚠ CAUTION

Crushing hazard due to very powerful magnet

The magnetic pedestal of the GPS receiver incorporates a very powerful magnet.

- Never place your fingers between the magnetic pedestal of the GPS receiver and a metal surface.
- Hold the GPS receiver firmly in your hands, but do not place your fingers under the magnetic pedestal.

NOTICE

The receiver needs an open view of the sky.

- Mount the receiver on the roof of the vehicle cab.
- Avoid shadowing the receiver's view of the sky.

Procedure

1. Find a suitable place on the vehicle roof. This place should be as far to the front as possible and in the middle of the vehicle.
2. Use alcohol to clean the place where you will mount the DGPS receiver.
3. Stick the provided 3M double-sided adhesive tape onto the clean surface.
4. Clean the provided metal plate.
5. Remove the protective paper from the 3M adhesive plate and bond the metal plate onto this.
6. Screw the magnetic pedestal onto the DGPS receiver.
7. Place the DGPS receiver with the magnetic pedestal onto the metal plate.

3.2 Connecting the GPS receiver to a terminal

NOTICE

Terminal connector supplying power
Potential damage to the terminal from a short-circuit.

- Switch the terminal off before plugging in or removing the connector.

Procedure

This is how you connect the DGPS receiver to a terminal:

1. Switch off the terminal.
2. Guide the cable of the GPS receiver into the vehicle cab.
3. Find the appropriate RS232 connection on the terminal. Refer to the operating instructions for the terminal to find out which connection this is. For the majority of terminals from Müller-Elektronik, this is going to be **port C**.
4. During initial start-up it can take approx. 30 minutes until the DGPS receiver has reception. At subsequent start-ups it will only take approx. 1-2 minutes.

3.3 Configuring the GPS receiver

The DGPS receiver can be configured differently for various terminals.

To find out about which parameters you must configure and how, read the operating instructions for the terminal and the applications which will use the DGPS receiver.

4 Technical specifications

Properties

Operating voltage	7 - 36V DC
Current consumption	249mA at 12V DC
Power input	< 3W at 12 V DC
GPS standard	NMEA 0183

Configuration

Frequencies	5 Hz (GPGGA, GPVTG)
	1 Hz (GPGSA, GPZDA)
Transmission rate	19200 baud
Data bits	8
Parity	No
Stop bits	1
Flow control	None

5 List of accessories

Complete package - DGPS receiver with cable for WAAS and EGNOS

Item number	Item name
3030246900	DGPS receiver A101 for WAAS and EGNOS Connector cable to the terminal: 6m
3030246901	DGPS receiver A101 for WAAS and EGNOS Connector cable to the terminal: 12m
3030246905	DGPS receiver A101 for WAAS and EGNOS Connector cable to the steering job computer

GPS receiver with no connector cable

Item number	Item name
3130246900	DGPS receiver A101 for WAAS and EGNOS
3130246905	DGPS receiver A101 with no cable for the steering job computer

Connector cable

Item number	Item name
31302462	Connector cable to the terminal: 6m
31302468	Connector cable to the terminal: 12m
31302464	Connector cable from A101 to the steering job computer
31302457	Connector cable to the terminal: 6m, with a cable for transferring the GPS speed signal. e.g. for a spray nozzle
31302451	Connector cable to the terminal, with a cable for connection to the steering job computer and a cable for transferring the GPS speed signal. e.g. for a spray nozzle
31302459	Y-adapter cable for parallel connection to two terminals for cable 31302462 or 31302468.
31300557	Dust protection cap for the connector cable