

THE GNSS REPEATER TECHNOLOGY EXPERT



ROGER™ GNSS-L1G1GA-EU/-UK/-US

Repeater

Installation instructions

Time2Act™

This document provides the basic installation instructions. For further technical information and troubleshooting refer to the ROGER™ GNSS-L1G1GA-67 User Manual.

IMPORTANT!

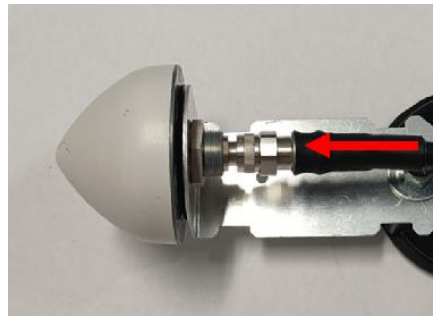
Read carefully the contents of this manual before assembly or operation of this product.

Only qualified company/person can install this product. This product shall not be installed or used without necessary link budget calculations.

Please check, apply and fulfil the radio licensing regulations and directives of the use of GNSS repeaters in your country from your regulator.

General outdoor antenna installation instructions

1. Assembly the antenna mount and install it to suitable place. Secure it with screws or U mount.
2. Install (screw) the antenna to the mount.
3. If using self-made coaxial cable install a TNC-male connector to end of the coaxial cable as instructed in the connector installation instructions.



4. Connect the cable to the antenna.

An example of completely installed antenna: Left one is GNSS-ESM-T and right one GNSS-ANT-L-MOUNT-T.



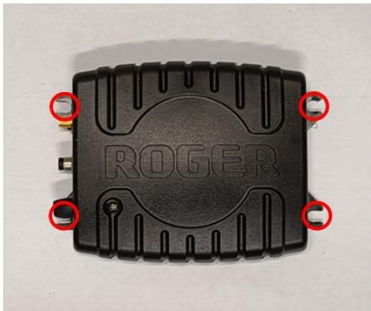
Coaxial cable

Mind the dimensions rules each cable manufacturer defines for bending the coax cable when installing!

After the outdoor antenna is installed, the coaxial cable shall be installed from outdoor antenna to planned repeater location. Coaxial cable should be short as practically is possible. Cut the cable to suitable length and install the connectors. Do not leave excess cable windings. Excess cable windings cause unnecessary losses which can cause the system does not to perform.

ROGER™ GNSS-L1G1GA repeater installation

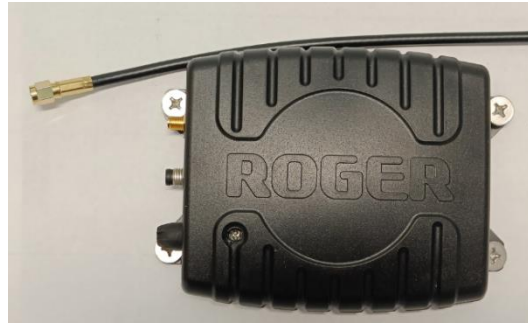
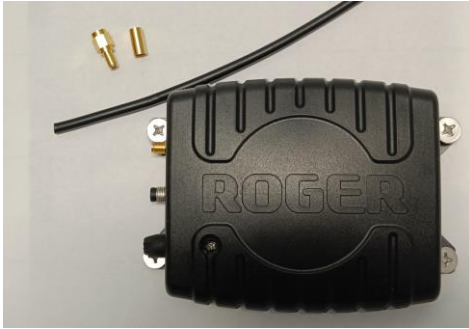
1. Secure the repeater to the mounting place with screws or bolts from four screw holes on the edges of the repeater.



2. Cut the coaxial cable from the outdoor antenna to correct length or use fixed length ready-made cables bought from a cable supplier.



3. Install a TNC-male connector to end of the coaxial cable as instructed in the connector installation instructions. Or use fixed length ready-made cables bought from a cable supplier.



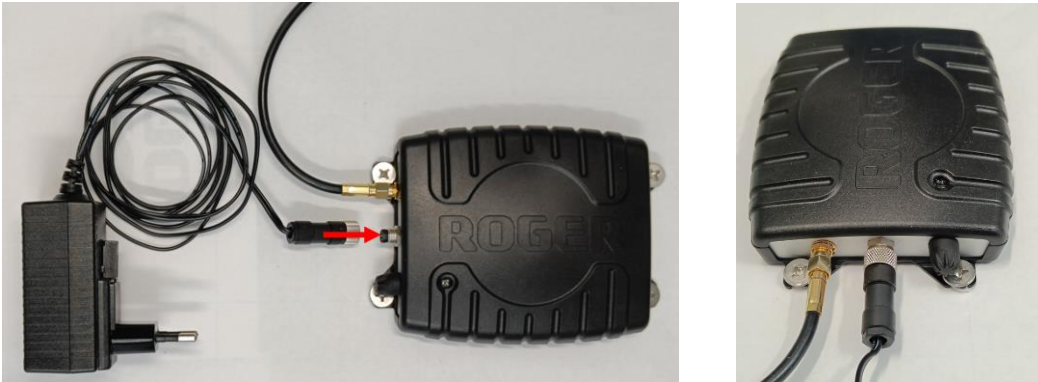
4. Connect the antenna cable. Cable should be cut to fit as in part 2. Do not leave excess cable coils!



5. Adjust both gain knobs to minimum (fully counterclockwise).



6. Connect the M8 power plug.



7. Insert the power source to the AC socket. Green light should be started to blink.



First time adjustments

Switch the power on and the indicator LED will flash green for between two and three seconds during the start-up phase.

Turn the control knob in order to set the gain. A higher gain increases the coverage of the GNSS signal. Watch for the LED flashing to red and green, this means the maximum power has been reached.



Turning the knob too far clockwise will result in the LED turning red, indicating the gain setting is too high.



Constant green light indicates proper gain setting. Turning the knob too far counterclockwise will result in the green LED to blink indicating too low gain setting.



The indications of the status LEDs are:

CONSTANT GREEN:

The transmitter is working correctly, no further adjustment is required.

CONSTANT RED/GREEN:

The transmitter is working at its maximum output and the gain should be reduced slightly until a constant green is achieved.

CONSTANT RED:

The Transmitter has detected an error or interfering signal. One reason may be that the external antenna is picking up the signal from the transmitter and a feedback oscillation is occurring; it is strongly advised not to locate the external antenna and repeater too close together.

It may be that the power is set too high; decrease the gain on the repeater slightly.

Another common reason is that there is an interference source close to the receiving antenna. Locating the antenna, repeater and associated cables as far away from existing wiring, machinery and pipework will normally avoid this situation.

Troubleshooting guide:

Problem: No LED indication

Solution: Check power supply and connection.

Problem: Red light is on.

Solution: The gain setting is too high. Turn the control knob counterclockwise to decrease the gain until the green LED is lit.

Problem: Green light flashing around 5 times per second, red light is off.

Solution: Transmitted signal level is too low. Turn the control knob clockwise to increase the gain. In normal operation, only the green LED is continually on. In all other cases please check the antenna connections at both ends before making any gain adjustments.



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