60325 NL-3330

60326 NL-3331

60327 NL-3332

Navilock GALILEO GLONASS GPS
NL-3330 / NL-3331 / NL-3332 MTK MT3333 Multi GNSS serial M8
Receiver 0.5 m
Manual (60325 60326 60327)

1. Introduction

The NL-3330 / NL-3331 / NL-3332 are serial multi-GNSS receiver with internal antenna and MT3333 GNSS chipset.
The waterproof M8 screw connection allows the adaptation to many different interfaces with different plugs by means of various optional connection cables.
The flanged thread on the NL-3331 / NL-3332 allows secure and waterproof attachment, e.g. on a vehicle roof.
The magnetic and non-slip bottom of the NL-3330 allows temporary attachment e.g. on a vehicle roof.

1.1. Package content*

1x Navilock NL-3330 / NL-3331 / NL-3332
1x 8cm CD ROM incl. manual

*Make sure before commissioning that all components of the delivery are included in the package. If anything is missing or damaged, please immediately contact your dealer.

Important Health and Safety

If you use this product, you should take the following precautions to avoid possible legal liabilities and damages. Follow all product safety and operating instructions and keep them in a safe place. Observe all warnings in the manual and on the product. To avoid injury, electric shock, fire, and damage to the equipment, observe the following precautions.

Electrical safety

This product is intended for use with current via USB or PS/2. Other usage may be dangerous and will invalidate any approval given to this product.

NOTE: RECYCLE OR DISPOSE USED BATTERIES OR BATTERY CELLS ACCORDING TO THE LOCAL REGULATIONS OR THE ENCLOSED INSTRUCTIONS.

SAFETY PRECAUTIONS FOR DIRECT SUNLIGHT

Make sure that the product is kept away from excessive moisture and extreme temperatures. Allow the unit, the battery or the battery cells are not over a longer period of time in a vehicle or in places where can increase the temperature to 60 ° C (140 ° F) (a car dashboard, window sill, or behind a glass pane that is exposed to direct sunlight or strong ultraviolet light). The device or the vehicle may be damaged and the batteries or rechargeable batteries become overheated.

Damage Requiring Service

Disconnect in the following cases, the product from the power supply, remove the battery, and contact an authorized service technician or the dealer:
If liquid has been spilled into the product or an object has fallen.
The product has been dropped or damaged.
There are noticeable signs of overheating.
The product does not operate normally when the operating instructions.

Avoid using your device after a dramatic change in temperature

If you expose rapid changes in temperature and / or humidity ranges, condensation may occur inside the unit. To avoid damaging the device, allow sufficient time for the moisture to evaporate before using the device.

NOTE:

If you move the unit from a cold to a warm or from a warm to a cold environment, allow the device to acclimate to room temperature before turning it on.

1.2. Optional waterproof adapter and connection cables

The three M8 GNSS receivers are equipped with a serial RS-232 interface. This is provided by the specially developed waterproof M8 plug. Optional adapter cables, with waterproof M8 jack, offer a wide range of interfaces:

62933	GNSS Connection cable M8 > 2,5 mm stereo plug 3 pin Plug 90° LVTTL (3,3 V) Naviloc
62893	GNSS Connection cable M8 > 2,5 mm stereo plug 3 pin Plug 90° TTL (5V) Navilock
62935	GNSS Connection cable M8 > 2,5 mm stereo plug 4 pin Plug 90° LVTTL (3,3 V) Naviloc
62888	GNSS Connection cable M8 > 2,5 mm stereo plug 4 pin Plug 90° TTL (5V) Navilock
62936	GNSS Connection cable M8 > 3,5 mm stereo plug 3 pin Plug 90° LVTTL (3,3 V) Naviloc
62894	GNSS Connection cable M8 > 3,5 mm stereo plug 3 pin Plug 90° TTL (5V) Navilock
62937	GNSS Connection cable M8 > 3,5 mm stereo plug 4 pin Plug 90° LVTTL (3,3 V) Naviloc
62887	GNSS Connection cable M8 > 3,5 mm stereo plug 4 pin Plug 90° TTL (5V) Navilock
62875	GNSS Connection cable M8 > DB9 jack RS232 Navilock
62941	GNSS Connection cable M8 > Micro-B USB OTG Plug Navilock
62942	GNSS Connection cable M8 > Micro-Fit 4pin RS-232 Navilock
62943	GNSS Connection cable M8 > mini-B USB Plug Navilock
62938	GNSS Connection cable M8 > open wire LVTTL (3,3 V) PPS Navilock
62892	GNSS Connection cable M8 > open wire TTL (5V) PPS Navilock
62939	GNSS Connection cable M8 > PIN Header jack LVTTL (3,3 V) PPS Navilock
62891	GNSS Connection cable M8 > PIN Header jack TTL (5V) PPS Navilock
62934	GNSS Connection cable M8 > RJ11 Plug RS-232 Navilock
62890	GNSS Connection cable M8 > RJ45 Plug RS-232 Navilock
62940	GNSS Connection cable M8 > Type-C Plug USB Navilock
62970	GNSS Connection cable M8 > Type-A Plug USB Navilock
62971	GNSS Extension cable M8 Plug > M8 jack 1 m Navilock
62972	GNSS Extension cable M8 Plug > M8 jack 2 m Navilock
62973	GNSS Extension cable M8 Plug > M8 jack 3 m Navilock
62974	GNSS Extension cable M8 Plug > M8 jack 5 m Navilock
62975	GNSS Extension cable M8 Plug > M8 jack 10 m Navilock

By means of various M8 extension cables it is possible to extend the cable length of each receiver as desired waterproof.

The M8 adapter cables > all types of TTL work with ASIX ZT3221LEEY.
The M8 adapter cables> all types of USB work with Prolific PL2303SA.

2. Starting operation

2.1. Example with cable 62970 GNSS connection cable M8> Type-A plug USB Navilock

Connect the M8 plug to the M8 jack. Connect the USB A plug to your PC or similar. at. The Windows operating system automatically loads the corresponding driver of the Prolific chip set in the cable. If the automatic loading of the driver does not work, download the driver from the Prolific website:
http://www.prolific.com.tw/US/ShowProduct.aspx?pcid=41&showlevel=0017-0037-0041 and install it.

3. LED

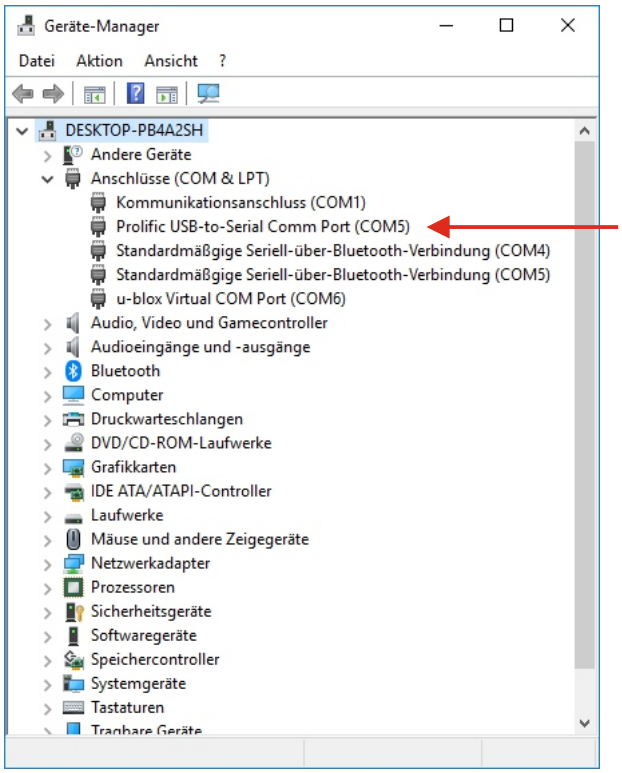
Only the NL-3330 has an status LED for checking the functional states.
Green LED on: USB connected on
Green LED flashes: GNSS Satfix

4. Application Environment

The receivers NL-3330, NL-3331 and NL-3332 can be used in all conceivable operating systems, depending on the cable used.

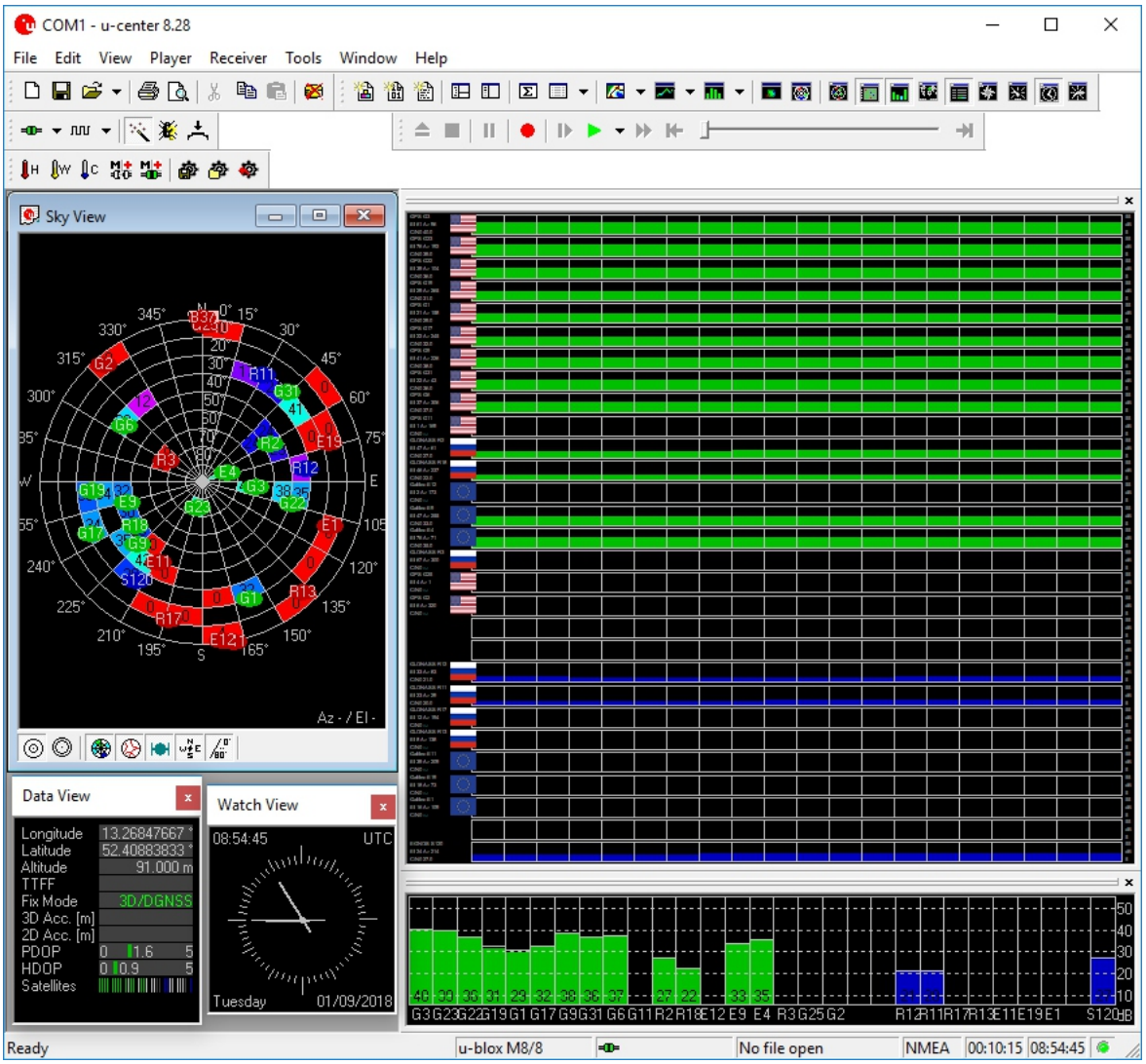
5. Function test

Connect your GNSS receiver to a notebook or tablet.
Then determine which comm port your receiver is connected to. You will need this information to set up your receiver in your navigation software.



5.1 Function test with u-blox program u-center

Install the program after downloading from the u-blox website https://www.u-blox.com/en/u-center-download-windows. Start the program with administrator rights, set the comm port and the transmission speed. For questions about the u-center, please consult the u-blox online manual https://www.u-blox.com/sites/default/files/u-center_UserGuide_%28UBX-13005250%29.pdf



Explosion on contact with fire!

Do not permanently expose the receiver to temperatures above 60°C (140°F).

6. Possible sources of error and their elimination

6.1. You still don’t get a satfix.

The NL-3330 / NL-3331 / NL-3332 needs up to 20 minutes for its first satfix on another continent. To get a satfix the view to the sky must be unobstructed. Move the NL-3330 / NL-3331 / NL-3332 as far as possible from the wall. A house wall reflects the signal strongly and contributes to the satfix time delay.

6.2. Your PC doesn't support the auto start function, and doesn't start the CD-ROM automatically. Please check under http://msdn2.microsoft.com/en-us/library/Aa969329.aspx.

6.4. The NL-8022MP came in touch with jet water (water jet from a shower head or strong rain when it was mounted on a car roof). Do not connect the receiver with the notebook etc. under any circumstances, because it will otherwise be completely and irreparably destroyed. Return the receiver to our support center, mentioning "water damage". The support center will disassemble the receiver, dry it and check ist functionality.

The Navilock repair center tries to be as obliging as possible, so please tell us the real reason for the defect. During the error analysis, we can generally detect if the cause for the defect was an external cause, water damage, fall, over-voltage or the wrong handling of the unit.

Failures are often the result of little causes. It is not always necessary to exchange the product immediately, because this will not solve the cause of the failure if it is not a GNSS hardware problem.

Before visiting your dealer, please contact the Navilock support center. They will try to help you quickly and without further ado, so that the circumstances of an exchange, which might in any case be unnecessary, are avoided.
In this case, please write down a detailed description of the error, add this information to your end device and the software used in this device, as well as the operation environment (operating system, service pack version, CPU type, storage size, hard disk drive and interface etc.), and send an e-mail to support@navilock.de.
A support member will look into your problem and work out a solution.

We hope your Navilock product brings you fun and enjoyment!

7. Specifications

Chipset vendor/type:	MediaTek MT3333 GALILEO GLONASS GPS	
Cannels:	33 tracking, 99 acquisition	
Sensitivity:	-165 dBm	
Frequency:	GALILEO:	E1, 1575.4200 Mhz
	GPS:	L1, 1575,4200 MHz
	GLONASS:	G1, 1602.5625 -1615.5000 MHz
Target precisions:		
Position horizontal:	GPS/SBAS/QZSS+GLONASS: 2.5 m CEP	
Time:	1 micro second syncronized with GPS time	
Speed:	0.1m/s	
Date:	WGS-84	
Protocol:	NMEA-0183 V3.01 GGA, GSA, GSV, RMC, VTG	
Detection rates:		
Cold start:	34 s average	
Hot start:	1 s average	
Reacquisition:	1 s average	
Update rate:	1 - 10 Hz	
Data transfer rate:	9.6 Kbps	
Dynamic prerequisites:		
Acceleration limit:	smaller than 4 g	
Heigth limit:	18000 m	
Speed limit:	515 m/s	
Performance:		
Power supply:	5 V	
Current:	ca. 50 mA tracking	
Connectors:	1 x M8 male waterproof	
Cable gauge:	28 AWG power and data line	
Operatring temperature:	-20°C ~ 60°C	
Dimensions:		
(LxBxH) 60325:	ca. 73.50 x 43.00 x 24.50 mm	
(ØxH without thread) 60326 60327:	ca. 62.00 x 21.00 mm	
Weight:	ca. 86 g	

8. Zertifikate

CE

9. Warranty period

Your GNSS receiver will be repaired free of charge within the legal warranty period, unless it was damaged due to external cases, humidity dropping or other damages due to improper usage.
Your dealer is always ready to help you. Please send your unit for repairs directly to:

Navilock Repair Center
Beeskowdamm 13/15
D-14167 Berlin-Zehlendorf

Postage must always be paid by the client.

Please add a proof of purchase and a detailed error description. Time based error, meaning how often an error occurs, must be expressly mentioned.

For logistic reasons, we cannot accept returned packages without the postage being paid by the client.

10. Support

For additional support questions, please contact our support center:
support@navilock.de / www.navilock.com or by telephone: +49 30 84716503*.
You can also call the Service Hotline at the following hours: Mo – Fr.: 9:00 – 16:30.
* You will be charged a connection fee for a telephone call to Germany/Berlin, in accordance with the connection fee overview of your telephone service provider. Callers from Germany, who subscribed to a national telephone flat-rate service and can call nation-wide fixed-telephone numbers free of charge, can call us without incurring additional charges.
You can also find current product information on our homepage. www.navilock.com.

11. Final provision

The information and data contained in this manual may be changed without prior notice.
Errors and misprints reserved.

12. Copyright

13. Brands of third parties

Conformity declaration

Please download the Declaration of Conformity from http://www.navilock.de/support/ in the conformity area.

WEEE note

The WEEE (Waste Electrical and Electronic Equipment) directive, which came into force on 13 February 2003, lead to a comprehensive change in the disposal of used electric products. It is the main purpose of this directive to avoid electric waste products (WEEE), while simultaneously promoting the re-usage, recycling and other forms of reconditioning in order to reduce the amount of waste. The WEEE logo on the product and the package shows that the product should not be disposed of with regular garbage. You are responsible for disposing all used electric and electronic devices at the corresponding collection sites. The separate collection and meaningful re-usage of electronic waste helps to deal with natural resources more economically. In addition, re-using electronic waste contributes to the preservation of the environment and human health. Additional information regarding the disposal of electric and electronic devices, their re-usage and the collection sites can be found at your local authorities, disposal companies,specialist shops and the manufacturer of the product.

RoHS conformity

This product meets the requirements of directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003, concerning the limited usage of dangerous substances in electric and electronic devices (RoHS) and its amendments. This product complies with the directive 2011/65/EU from January 3rd 2013.

EU Import:

Tragant Handels- und Beteiligungs GmbH Beeskowdamm 13/15, 14167 Berlin, Germany

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