

11. Technical details

Electrical data	
Frequency	L1, 1575.42 MHz
C/A Code	1.023 MHz chip rate
Channels	20 channels
Sensitivity	-159dBm
Current dissipation	80 mA

Precision	
Horizontal position	10 m 2D RMS (SA off)
WAAS activated	5 m 2D RMS (SA off)
Time	1 microsecond synchronized with GPS time
Speed	0.1 m/s 95% (SA off)

Date	
Date	WGS-84

Acquisition rate	
Hot start	1 s average (with ephemeris and almanac)
Warm start	38 s average (with almanac but without ephemeris)
Cold start	42 s average (neither almanac nor ephemeris)
Reacquisition	0.1 s average (recovery time after interruption)

Protocols	
GPS output data	NMEA 0183 protocol. Supports: GGA, GSA, GSV, RMC, VTG, GLL (VTG and GLL optional)
GPS transfer rate	4800 bps

Dynamic requirements	
Acceleration	Below 4 g
Altitude	18000 m (60000 feet) max.
Speed	515 m/s (1000 knots) max.

12. Safety notes

When driving the navigation system must not be operated by the driver. Use your navigation system according to traffic regulations and do not endanger others with its use. If you have to calculate a new route, please stop your vehicle at the soonest opportunity and only then operate your navigation system.

13. Warranty period

Your receiver will be repaired free of charge during the warranty period of 24 month, provided the damage was not caused by external impact, moisture, fall or improper use.

14. Support

If you have further questions, please contact our customer support:
support@navilock.de / www.navilock.de or phone 0700 NAVILOCK (0700 628 456 25).

You can contact our service hotline during the following times:
Mon. – Fri: 9:00am – 17:30 pm charge 0,12/min*

*A connection fee applies according to fee schedule of Deutsche Telekom AG or your local telephone provider.

You can find current product information on our homepage: www.navilock.de

15. Final clause

Information and data contained in this manual are subject to change without notice in advance. Errors and misprints excepted.

16. Copyright

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User manual (61423-a)

PDA GPS Receiver NL-303P



1. Description

The NL-303P PDA GPS receiver has a special serial port. Connected with the optional Navilock cable the NL-303P turns your PDA into a navigation system or GPS supported route planner. With the Navilock USB cable you can use the NL-303P also with your notebook.

2. Specifications

- GPS Receiver with 6-pin Navilock connector plug (cable optional)
- Ideal for position fixing and route guidance
- Position indication possible with optional map software
- Sirf Star III/LP low power chipset
- Processes signals from up to 20 satellites simultaneously
- Protocols NMEA 0183, GGA, GSA, GSV, RMC, (optional VTG, GLL)
- Device has a magnetic bottom and is anti-slip
- Waterproof housing
- Internal supersensitive active GPS antenna
- TIFF (time to first fix) function, i.e. extremely short time to first satellite fix
- LED indicator for GPS status
- Cold start approx. 42 seconds / warm start approx. 38 seconds / hot start approx. 1 second
- New positioning within 0.1 seconds
- Cable length: 165 cm
- Dimensions: Diameter 53 mm, height 19,2mm

3. NL-303P connection ports

- a. 6-pin Navilock connector plug

4. NL-303P LED status indicator

- b. Status-LED

LED off

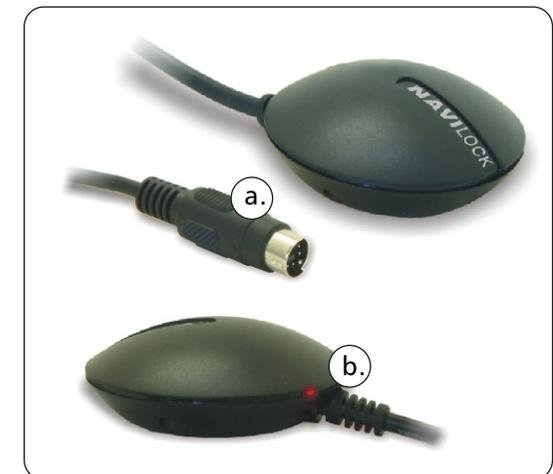
Receiver is off

LED on

Receiver is searching for signal

LED flashes

Receiver has at least one connection



5. System requirements

- PDA (Navilock PDA connection cable needed), or notebook with USB port (Navilock PDA connection cable needed)
- Approx. 1 MB for driver
- Operating system: Win CE, Palm OS and Pocket PC compatible or Win 98/98SE/ME/2000/XP and Linux

6. Package content*

- USB GPS Receiver NL-303P
- User manual
- CD with driver and test program

*Make sure that product package contains all items before operation. If any item is missing or damaged, then please contact your dealer immediately.

7. Hardware Installation

For using the NL-303P with a PDA you will need the appropriate connection cable (not included). Before installing the software, please connect your PDA to your PC or notebook.

Notice: For all software applications you must have the standard Microsoft ActiveSync tool installed on your PDA to enable data transfer between PDA and PC/notebook.

8. Driver installation

Most PDA's do not need a driver to install the NL-303P on your PDA. On our homepage www.navilock.de you can find the drivers for special PDA's (e.g. Toshiba).

9. Software installation

1. Put the driver CD into your CD-ROM drive and start the program "GPSinfo.exe".
2. Follow the installation instructions on the screen.
3. Click "**Finish**" to complete the installation.
4. After successful installation on your PC or notebook the program "GPS Information" is installed on your PDA automatically.

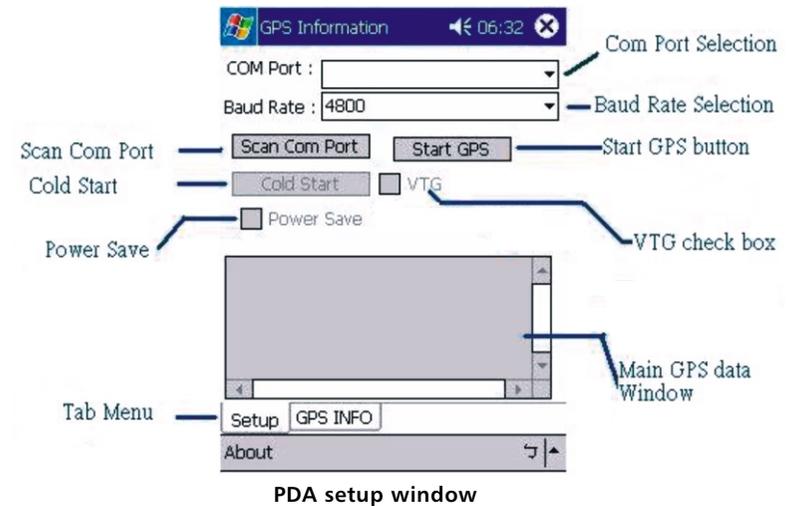
10. Function test

You can test the functionality of your NL-303P with the program "GPS Information". You can check if enough satellites can be received to fix your position.

1. Connect the NL-303P with your PDA using the optional PDA connection cable. For optimal reception position your NL-303P with the top side in line of sight to the sky.
2. Start the program "GPS Information" on your PDA with the following settings:

- Scan Com Port** - To search all data transfer ports for a GPS receiver
- Cold Start** - Starts the GPS receiver cold
- Power Save** - Mark this field to activate the "power save mode"/delete the mark to deactivate the "power save mode". (This function is only available when a GPS device has been found.)
- Tab Menu** - Choose between the windows "Setup" and "GPSINFO"
- Com Port Selection** - Choose the data transfer port that has been configured for the GPS receiver. Sometimes you might have to check several different ports in order to find the correct one.
- Baud Rate Selection** - Choose a suitable transfer rate. Please set the transfer rate to 4800.

- Start GPS button** - Switch GPS device on or off
- VTG check box** - Some navigation software needs the VTG data output. If this is the case, mark this field to activate the VTG function.
- Main GPS data Window** - Shows the data received by the GPS receiver.



3. Switch to the graphic display by clicking "GPS Info". This window shows all satellites in range, their signal strength as well as your position.
4. All satellites in range are shown. Depending on their signal strength they are circled in three different colors (red, blue and green).

Notice: If you connect your NL-303P with Navilock USB cable (optional) to your notebook, first install the driver and the program "GPS Information" from the CD, as described under 9. In this case also perform the function test (see 10). Set the correct COM port for your NL-303P with the automatic search function "Scan Com Port" or manually with "COM Port Selection".

