



blue PiraT2 GPS logging User Guide

Version 2.4.1 / 16.09.2016



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3 Overview

This user guide describes the feature of the license **GPS logging** for the data loggers **blue PiraT2** of Telemotive AG.

This user guide describes the configuration and usage of this feature. The general configuration is described in the user guides of the used data logger as well as the Telemotive System Client, which is valid together.

The client software was only tested with Microsoft® Windows® 7.

This document refers to **firmware version 02.04.01** and the **Telemotive System Client** from **version 2.4.1**. Some features depending on model and feature license or may not be available in older versions.

Software updates and user guides for other, optional, licensed enhancements are available in the Telemotive ServiceCenter. *(Please find the address under Contact at the last page.)*

To ensure the most reliable operation of your system as possible, please make sure to use always current firmware and software versions.

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4 System requirements

Control Unit

A Windows based Laptop or PC is needed to configure the devices of Telemotive AG by **Telemotive System Client**. It also allows to save the recorded data and to use them offline later.

Telemotive System Client

The software client is used for configuring the data logger as well as downloading the recorded data or convert these into your needed file format. An firmware update can be performed by the **Telemotive System Client** too to ensure that your devices are always up to date.

blue PiraT2

The communication between bus systems and control units is monitored and relevant data can be recorded very precisely with the data logger of Telemotive AG. The collected data are stored to the logger and can be downloaded via Ethernet to a PC.

The **blue PiraT2** is our top-class all-in-one data logger. Seven models cover a wide range of interfaces.

Extension

The blue PiraT2 can be extended by an internal GPS/Wi-Fi module.

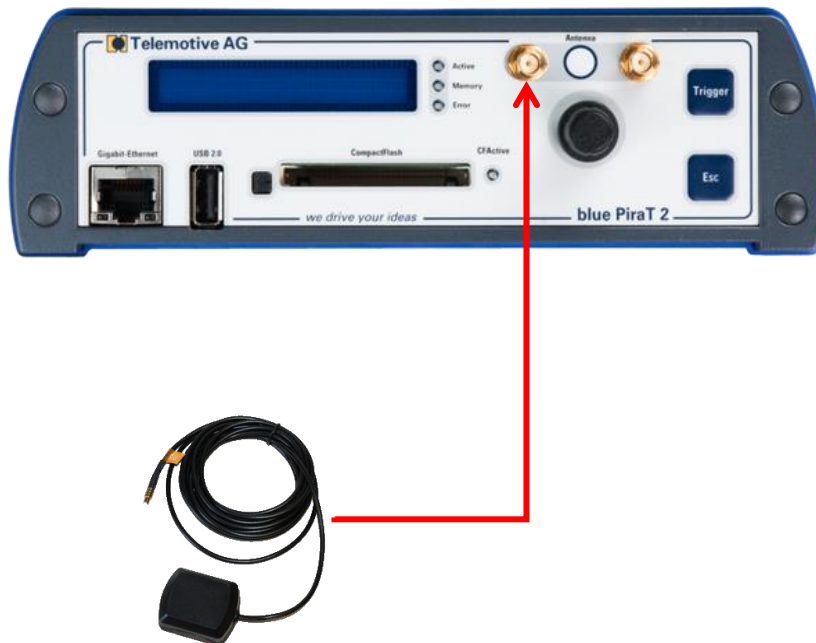
License

For the additional feature **GPS** (Global Positioning System) **logging** an installed license is required. Settings for licensed features can be performed with a valid license only.

If you need a license for your logger, please contact our sales department (please find the address under contact at the last page).

If you want to use the **GPS logging** feature for tracking GPS data you have to connect the passive GPS antenna to the front connector of the blue PiraT2.

ATTENTION: The connector has to be bolt only by hand, NOT with any tools!



4.1 Further manuals

Beside this user guide we offer the main manuals for our client as well as for the different data logger generations in our ServiceCenter at <https://sc.telemotive.de/bluepirat>.

User manual for the Telemotive System Client

https://sc.telemotive.de/4/uploads/media/TelemotiveSystemClient_UserManual.pdf

User manual for blue PiraT2 / blue PiraT2 5E

https://www.telemotive.de/4/uploads/media/blue_PiraT2_UserManual.pdf

User manual for blue PiraT Mini

https://www.telemotive.de/4/uploads/media/blue_PiraT_Mini_UserManual.pdf

User manual for Remote Control Touch

https://sc.telemotive.de/4/uploads/media/RCTouch_UserGuide.pdf

User manual for blue PiraT Remote

https://sc.telemotive.de/4/uploads/media/blue_PiraT_Remote_UserGuide.pdf

For having an easy access if necessary, the most important manuals are linked in the client under the menu item **[Help]** and are reachable easily from there.

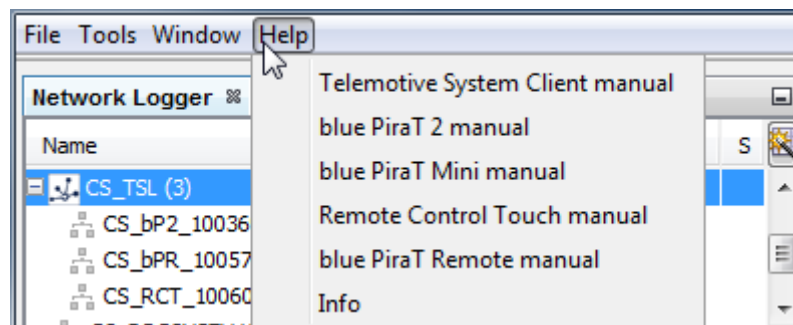


Figure 4.1: links to the manuals

Our licensed enhancements have own manuals which are stored in the ServiceCenter too. You will find a list of these enhancements in the user manuals in the chapter **Additional features by optional licenses**.

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5 Configuring

At first connect the data logger to your computer and start the Telemotive System Client.

Click on the application **[Open configuration]** in the Telemotive System Client. Expand the folder **[General]** in the window on the right. In the sub category **[GPS]** you can activate or deactivate logging of GPS data via a checkbox.

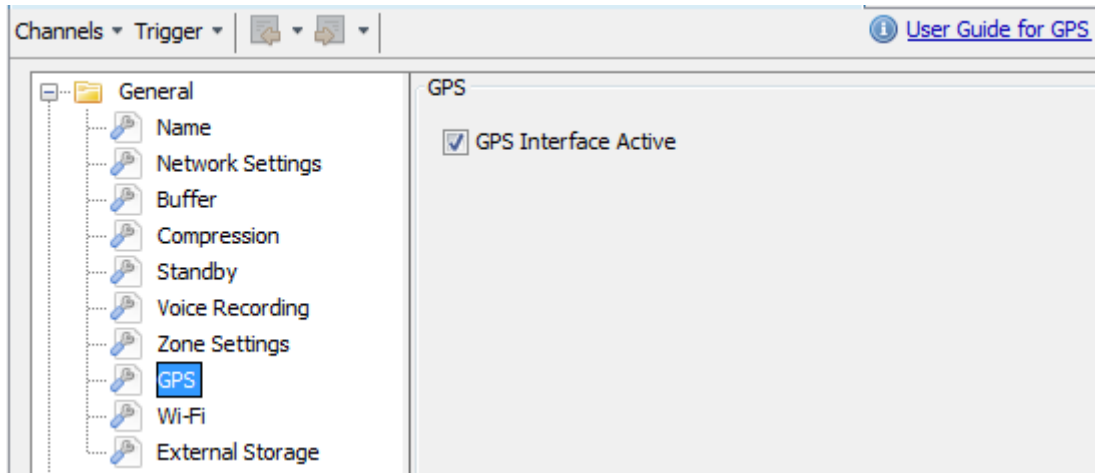


Figure 5.1: Activating the GPS interface

The complete data logger configuration can be managed by the following buttons:

Button	Effect
Default configuration	resets all settings back to factory defaults Changes are only local! To apply changes on the device use the [Write to logger] button.
Load from file...	loads all settings from a file
Save as file...	saves all settings to a file
Write to logger	writes all settings back to the data logger Changes are applied immediately. Exceptions are displayed by the client and the device can be restarted directly.

Complete the configuration by clicking **[Write to logger]**.

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6 Downloading and converting the data

This chapter describes the data download only for GPS data. For more information about download and converting data please have a look at the **User manual for the Telemotive System Client**.

Step 1

Connect the data logger to your computer and start the Telemotive System Client.

Step 2

Select the corresponding data logger in the window "Network Logger" and click either the button:

- **[Download data] (3)**, to generate an offline data set from the logger's data, or
- **[Convert data] (4)**, to convert an offline data set or directly the logger's data to another format.

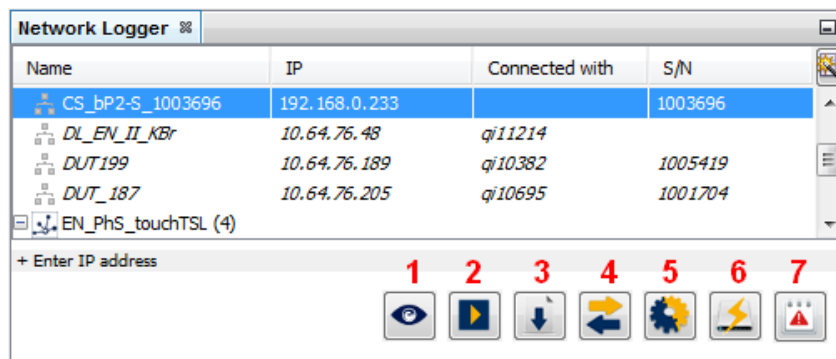
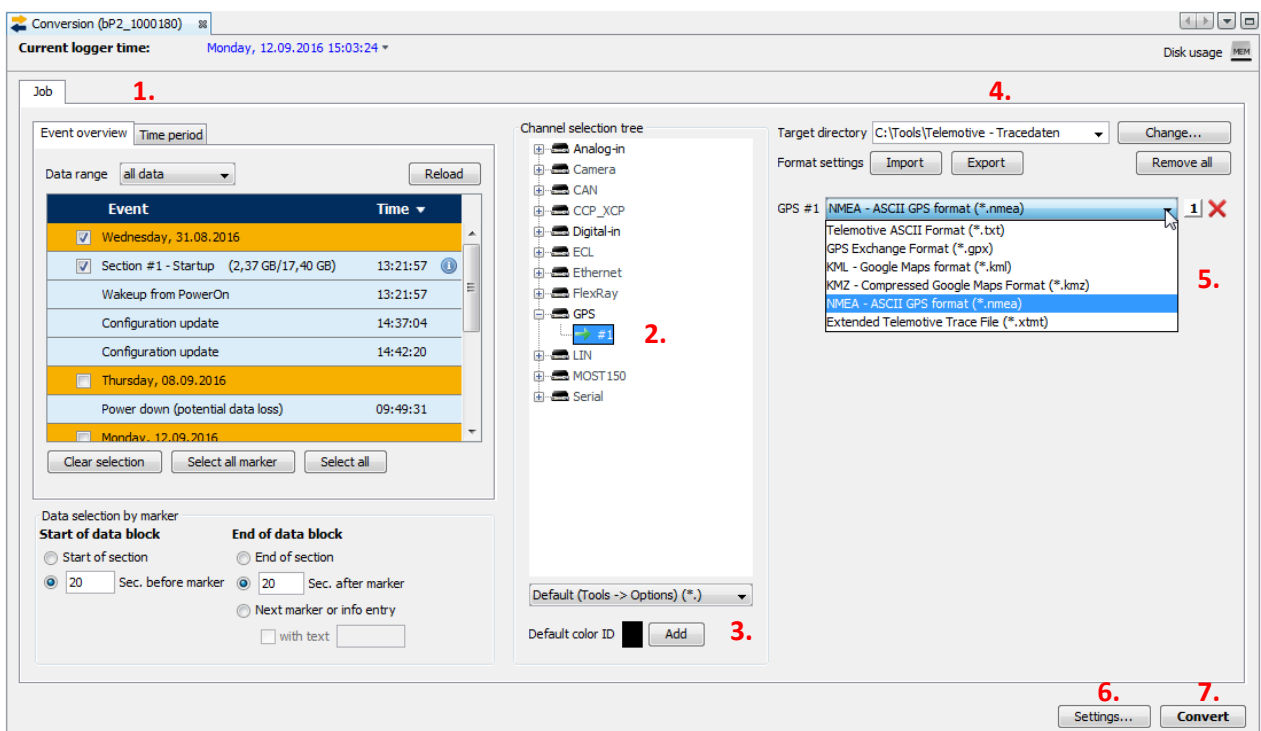


Figure 6.1: Telemotive System Client

Step 3

Convert the GPS data as follows.



1. Select the data to be converted in the “Event overview” or in the “Time period”.
2. Select the GPS channel.
3. Click **[Add]** or double-click the GPS channel.
4. Select a target directory.
5. Select the format, to which you want to convert the GPS data.
6. Click **[Settings...]**, to define the timestamp of the converted data:
 - Use satellite time stamp
 - Use logger time stamp

Note:

The use of satellite time stamp is only available when you convert into the file formats GPS Exchange, KML – Google Maps and KMZ – Compressed Google Maps.

Due to the possibility of converting several signals into one file this option is not available in the other conversion formats so that the GPS signals refer to the time stamps of the other signals in the converted file. Therefore in this case the logger time stamp is used during conversion.

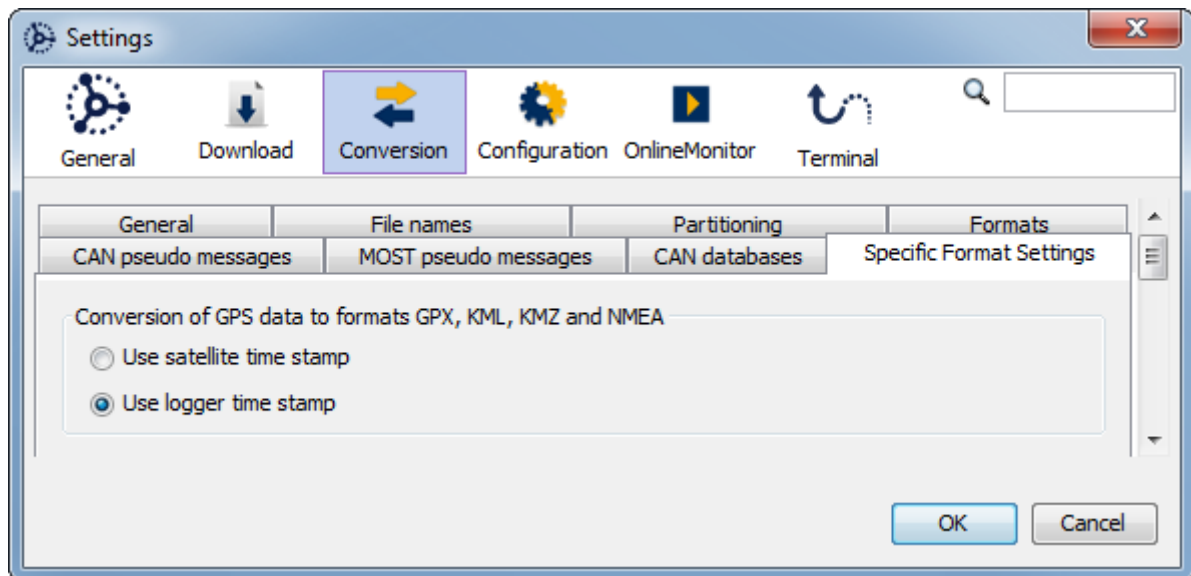


Figure 4.1: Specific format settings

Step 4

Press the **[Convert]** button **(7.)** to start the conversion of the selected GPS data into the selected format.

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7 Additional information

NMEA format → have a look at

http://en.wikipedia.org/wiki/NMEA_0183

GPS Exchange format → have a look at

http://en.wikipedia.org/wiki/GPS_eXchange_Format

KML/KMZ standard → have a look at

http://en.wikipedia.org/wiki/Keyhole_Markup_Language

<https://developers.google.com/kml/documentation/kmzarchives>

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8 Abbreviations

Kürzel / abbreviation	Bedeutung / meaning
blue PiraT	P rocessing I nformation R ecording A nalyzing T ool
bP	blue PiraT
bP2	blue PiraT2
bP2 5E	blue PiraT2 5E
bPMini	blue PiraT Mini
RC Touch	R emote C ontrol T ouch
bP Remote	blue PiraT Remote
A2L	A SAM M CD-2 M C L anguage
AE	A utomotive E lectronics
ACK	A C K nowledged
CAN	C ontroller A rea N etwork
CCP	C AN C alibration P rotocol
CF	C ompact F lash
CRO	C ommand R eceive O bject
DAQ	D ata A cquisition
DTO	D ata T ransmission O bject
ECL	E lectrical C ontrol L ine
ECU	E lectronic C ontrol U nit
FIBEX	F ield B us E xchange F ormat
FW	F irmware
GMT	G reenwich M ean T ime
INCA	I N T egrated C alibration and A pplication T ool
LAN	L ocal A rea N etwork = Netzwerk
LIN	L ocal I nterconnect N etwork
MAC	M edia A ccess C ontrol
MCD	M easure C alibrate D iagnose
MDX	M eta D ata E Xchange F ormat
MEP	M OST E thernet P acket
MOST	M edia O riented S ystems T ransport (www.mostnet.de)
ODT	O bject D escriptor T able
ODX	O pen D ata E Xchange
OEM	O riginal E quipment M anufacturer

PHY	PHY sical Bus Connect
PW	Pass wort
RX	Re ceiver Data
SD	Secure Digital
SFTP	Secure File Transfer Protocol
SHA	Secure Hash
SSL	Secure Sockets Layer
TCP/IP	Transmission Control Protocol/ Internet Protocol
TLS	Transport Layer Security
TMP	Telemotive Packetformat
TSL	Telemotive System Link
UDP	User Datagram Protocol
USB	Universal Serial Bus
UTC	Universal Time, Coordinated
Wi-Fi	Wireless Fidelity
WLAN	Wireless Local Area Network
XCP	Universal Measurement and Calibration Protocol

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