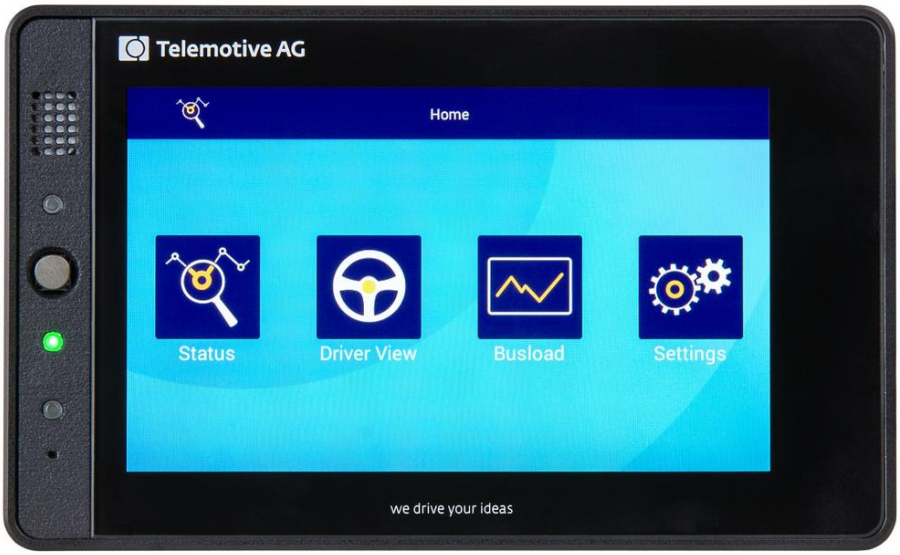
Telemotive AG

Remote Control Touch
User Guide

Version 2.3.1 / 10.03.2016



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3 Overview

This user guide describes the administration of the **Remote Control Touch**, the surface of the installed software and its operation.

The configuration of the Remote Control Touch was only tested with Microsoft® Windows® 7.

This document refers to **blue PiraT Mini** firmware version 02.03.01 and the **Telemotive System Client** version 2.3.1. Some features depend 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. *(You will find the address under* Contact*).*

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 Laptop or a PC is used to configure the devices by a software client. It also allows to save the recorded data and to use them offline.

blue PiraT2 / blue PiraT Mini
The **blue PiraT Mini** is the newest and very small datalogger which was developed by Telemotive AG. The **blue PiraT2** is his preceding model with enhanced features.

The communication of bus systems and control units are monitored and relevant data can be recorded very precisely with the data loggers of the Telemotive AG. The collected data are stored on the data logger and can be downloaded via Ethernet and, e.g., analyzed on a test computer.

Telemotive System Client
The software client is needed to configure the device and later to download or convert the recorded data.

4.1 Further manuals

Beside this user guide the Telemotive AG offers the main manuals for the client as well as for the different data logger generations in its 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

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 Remote Control Touch

This chapter describes the position and function of the Remote Control Touch components, the Remote Control Touch accessories and the installation of hard- and software.

The Remote Control Touch is the remote control and external display device for the blue PiraT Mini and blue PiraT2 data loggers or a TSL network.

The Remote Control Touch allows you to:

- display bus load, status and memory of available interfaces,
- display date and time,
- trigger functionkeys,
- display set markers,
- adjust backlight and volume,
- set triggers,
- record and play voice notes.

Familiarize yourself with its components to operate the Remote Control Touch correctly.

5.1 Position of components

5.1.1 Top view

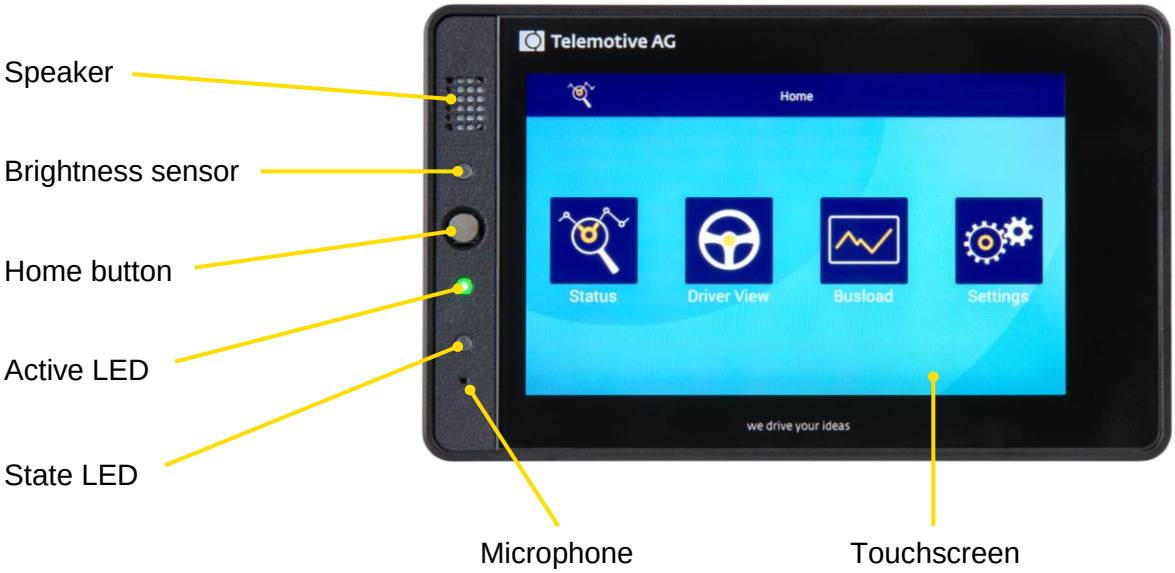

Figure 5.1: Top view with components

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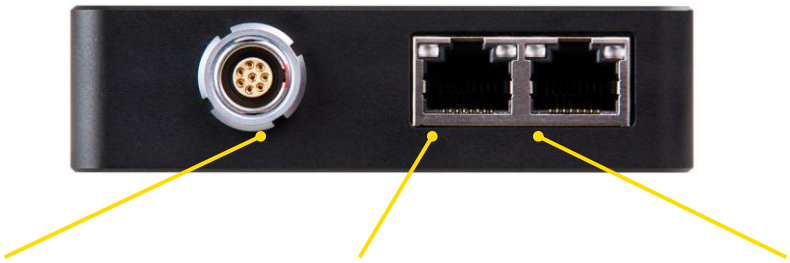
5.1.2 Side view, from the right



1 8-pol LEMO socket 2 Gbit Ethernet (RJ45) 3 Gbit Ethernet (RJ45)

Figure 5.2: Side view, from the right with components

5.1.3 Rear side

4 Mini USB 2.0 5 4-pol audio jack plug stereo out/microphone (3.5 mm) OMTP

Figure 5.3: Rear side view with components

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5.2 Functionality of components

Functionality of the components is impaired by certain conditions such as moisture, darkness, heat or cold, mechanical action, dirt or similar. Observe therefore the points described in chapter 8 Maintenance provisions and safety regulations.

5.2.1 Ports

The ports are used to connect the Remote Control Touch, for example with the power supply (see section 5.4.1).

Port		Cable	Connection with …
No.	Designation		
1	8-pol LEMO socket	Power cable with LEMO connector to banana plug	Power source
2 3	Gbit Ethernet (RJ45)	Gbit Ethernet cable	Client computer or data logger
4	Mini USB 2.0	Micro USB connecting cable	USB devices
5	4-pol audio jack plug stereo out/microphone (3.5 mm) OMTP	3.5" jack/audio cable	Microphone, speaker, headset, etc.

Table 5.1: Available connections

5.2.2 Brightness sensor

The brightness sensor helps adjust the screen's backlight depending on the ambient light. It serves only the automatic regulation and is permanently active.

5.2.3 Home button

The Home button is used to:

- switch the device on or off,
- wake up the device from sleep mode,
- reset the device to default settings and
- switch between applications.

5.2.4 Speaker

The speaker is used to play voice notes. Its volume is adjustable.

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5.2.5 LEDs

Activity and operating state of the Remote Control Touch are indicated by the LEDs.

Activity / operating state	Behavior	
	Active LED	**State LED**
device goes to standby	green pulsing	not lighted
in error mode	green light	red light
in operation	green light	not lighted
powered off	not lighted	not lighted
press Home button	brief light-up	not lighted
record voice note	brief light-up	red pulsing, four times, then not lighted
reset device	green light	red flashing, two times, then not lighted
set trigger	brief light-up	not lighted
switch off device	green pulsing	not lighted
switch on device	green flashing	not lighted
update firmware	green light	red light
wake up device	brief light-up	brief light-up

Table 5.2: LED behavior

5.2.6 Microphone

The microphone is used to record voice notes on triggers. The voice recording is audible up to a vehicle speed of 130 km/h.

5.2.7 Touchscreen

The screen is used to operate the Remote Control Touch. Only use the tip of the finger to operate it. The brightness is adjustable.

5.3 Accessories

The Remote Control Touch is supplied with an Ethernet cable (length: ~ 6 m) and a power cable with LEMO connector to banana plug (length: ~ 6 m).

Additional accessories are available for purchase. The following accessories are compatible with the Remote Control Touch:

- mounting bracket
- various adapter cables

Please contact our sales department for more information about the accessories.
The relevant manuals for these enhancements can be found in the Telemotive ServiceCenter.

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5.4 Installation

The Remote Control Touch requires a connection to the power supply and one to the client computer. Then the Remote Control Touch can be used in standalone mode.

In order to make full use of all functions of the Remote Control Touch, a connection to at least one blue PiraT data logger is required. This creates a **T**elemotive **S**ystem **L**ink (**TSL**).

Find more information about client and TSL in the **User manual for the Telemotive System Client**.

5.4.1 Cable connection

Note:
Connect the Remote Control Touch only with devices of Telemotive AG (blue PiraT, Remote Control).

5.4.1.1 With power supply

Note:
Make sure that the Remote Control Touch is switched off before connecting it with a power supply or disconnecting it.

The power connection of the Remote Control Touch is similar to that of the Remote Control Voice. They are NOT identical. We therefore recommend to use the device-specific cable.

A power cable with LEMO connector to banana plug is required for the connection of the Remote Control Touch to the power supply.

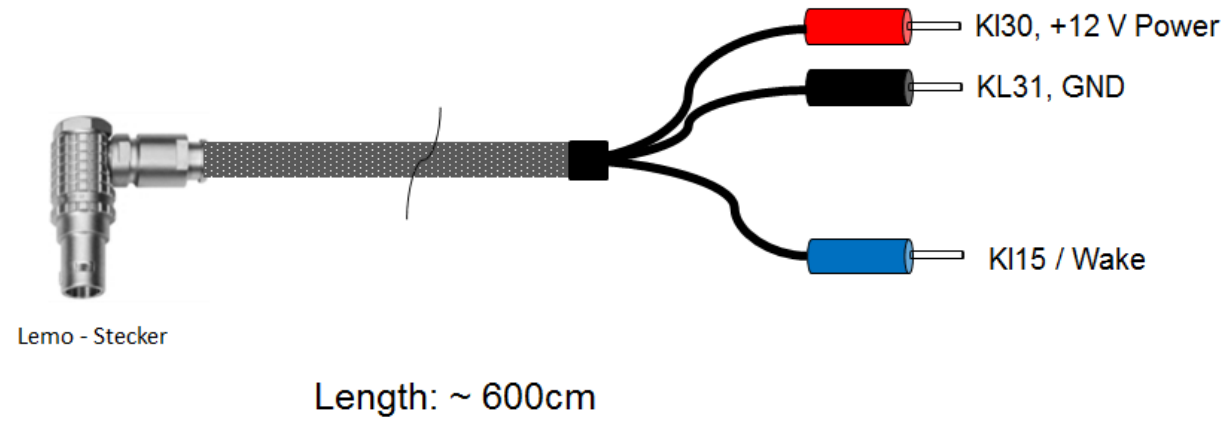

Figure 5.4: Power cable with LEMO connector to banana plug

Plug the LEMO connector into the Remote Control Touch and the banana plug into the power supply (**red/Vbat /+/Clamp 30** and **black/GND/-/Clamp 31**).

5.4.1.2 In the network

The Remote Control Touch has two Ethernet ports. The loggers to be controlled are connected directly via Ethernet to the Remote Control Touch. These loggers must establish a TSL network

with the Remote Control Touch in order for the Remote Control Touch to recognize them. The client computer can be connected to a free Ethernet port of the TSL chain.

Figure 5.5: TSL network with one bPMini, one Remote Control Touch and one bP2 (e.g.)

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5.4.2 Telemotive System Client

Note: When delivered, the Remote Control Touch is configured as a DHCP server.

Open your internet browser.
Enter the IP address of the Remote Control Touch in the address bar. (IP factory setting: 192.168.0.233)
Press the **[Enter]** key.

- The computer connects to the device.
- The TSL Client Portal opens.

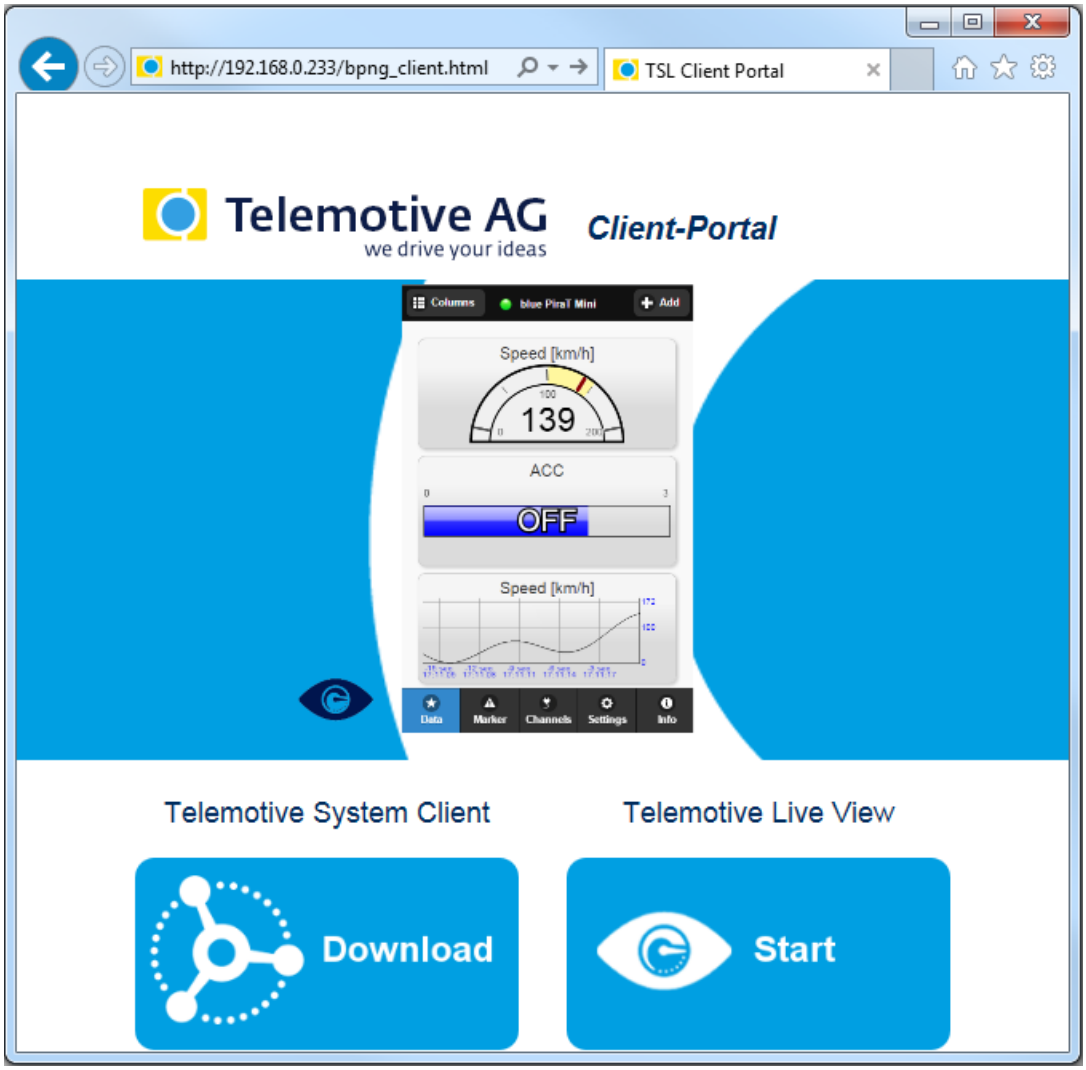

Figure 5.6: TSL Client Portal

Note:
Your network connection must be set to “Obtain IP address automatically”.

Click **[Download]**, to download the Telemotive System Client directly from the device.

Follow these steps, depending on your browser:

Browser	Proceeding
Internet Explorer	Click **[Save]**, to locally save the file on your system. Click **[Accomplish]**.
Mozilla Firefox	Click **[Save file]**, to locally save the file on your system. Click the arrow on the right top of the browser menu and select the downloaded application in the appearing context menu.

In the dialog that opens select the desired software language from the dropdown menu.
Click **[OK]**.

Follow the instructions in the next dialog and select an installation directory.
Click **[Install]**.

- Telemotive System Client is installed.
- Shortcut to “Telemotive System Client” appears on the desktop and in the start menu.

Figure 5.7: Shortcut to Telemotive System Client

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5.5 Connecting the Remote Control Touch with a data logger

5.5.1 Configure the network settings

The Remote Control Touch and a data logger are configured as **DHCP-Server** by default. They both got the **IP address 192.168.0.233**. There are three different ways to connect this two devices.

1. Set up the data logger as DHCP-Server and the RCT as DHCP-Client
2. Set up the data logger as DHCP-Client and the RCT as DHCP-Server
3. Set up both devices as DHCP-Client

You can read in the **Telemotive System Client manual (Network settings)** how to set up the network settings. You can find the manual in the Client under **[Help]**.

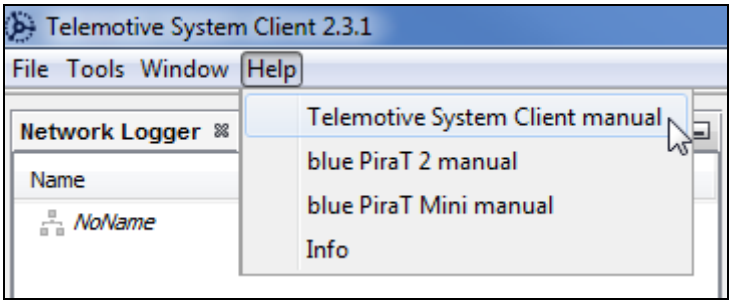

Figure 5.8: Opening the Telemotive System Client manual

In our example we configured the Remote Control Touch as DHCP-Client and connected it with the data logger **(see chapter 5.4.1.2)**. In the next picture you can see the two devices in the client. The device with the IP address 192.168.0.233 is the data logger, because it is set up as DHCP-Server. In the **Telemotive System Client manual (Name)** you can see how to give names for the devices. This might be helpful for better clarity.

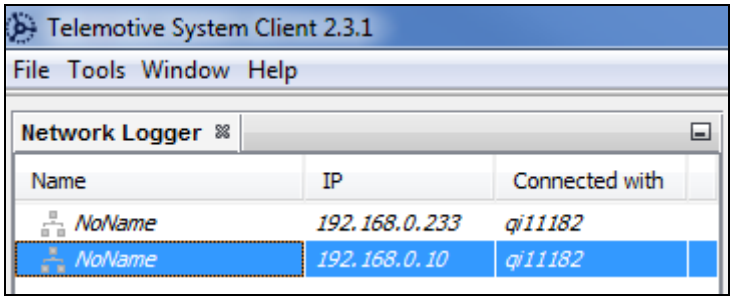

Figure 5.9: Viewing the devices in the client

5.5.2 Activating Telemotive System Link (TSL)

To use the RCT, you have to activate TSL at **both** devices. You can activate it by clicking **[TSL active]** like you can see in the following picture. In the **Telemotive System Client manual (Establishing and configuring a TSL network)** you can find more details about TSL.

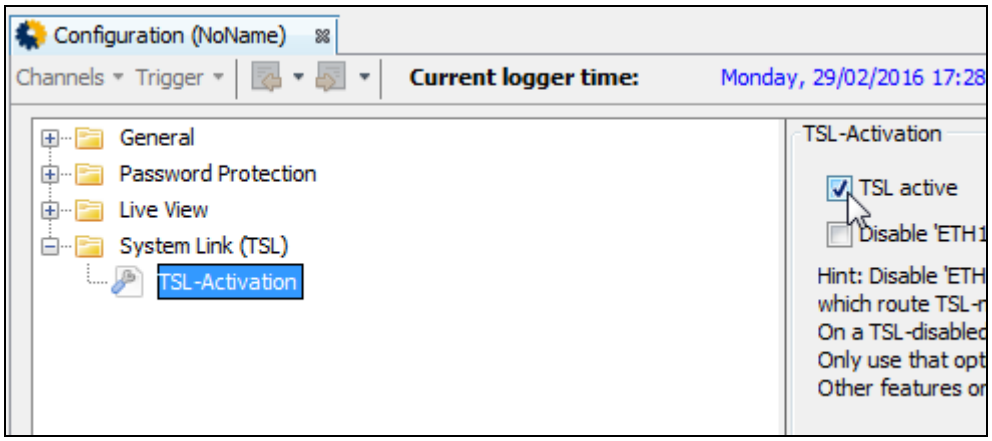

Figure 5.10: Activating TSL

If TSL is active at both devices, they are shown as TSL compound in the client. You can use the RCT with the data logger now.

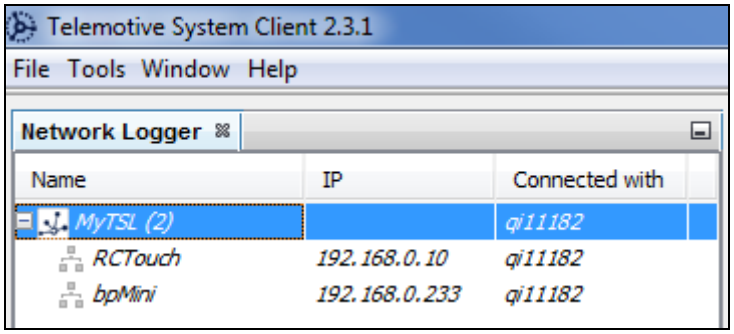

Figure 5.11: Representation of the TSL compound in the client

5.6 Resetting the network settings

Note:
Due to a wrong network setting it may be impossible to reach the data logger any more. In this case the network configuration can be resetted by a long press on the [ON / Trigger] button to default settings: => DHCP server with IP 192.168.0.233.

Switch off the device

Press the home button.

- Active-LED and State-LED are blinking once. Active-LED is blinking green.

Press and hold the home button for about 20 sec. until the state LED is blinking 2 times.

- State-LED is blinking 2 times
- Active-LED is lightning green.
- Remote Control Touch loads the default configuration.

Tipp on **[Accept]**.

- The warning popup disappears.
- Active-LED is blinking green.
- The display shows the launcher with a progress bar.
- A warning popup is shown.

Tipp on **[Accept]**.

- The warning popup disappears.

The Remote Control Touch is ready when:

- The view **[Overview]** is shown on the display and
- Active-LED is lightning green.

Afterwards the data logger can be reached again by using a direct connection with a PC/Laptop.

You'll find more information in the **Telemotive System Client** manual

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6 Surface

This chapter describes the application setup and the layout of the individual views as well as the displays contained.

The Remote Control Touch software is very user-friendly thanks to its graphic surface and the clear outline.

Figure 6.1 shows the outline of the application in <Home> view and four applications. The application views contain minimum one tab. For the applications Driver View and Settings, the number and naming of the tabs is set.

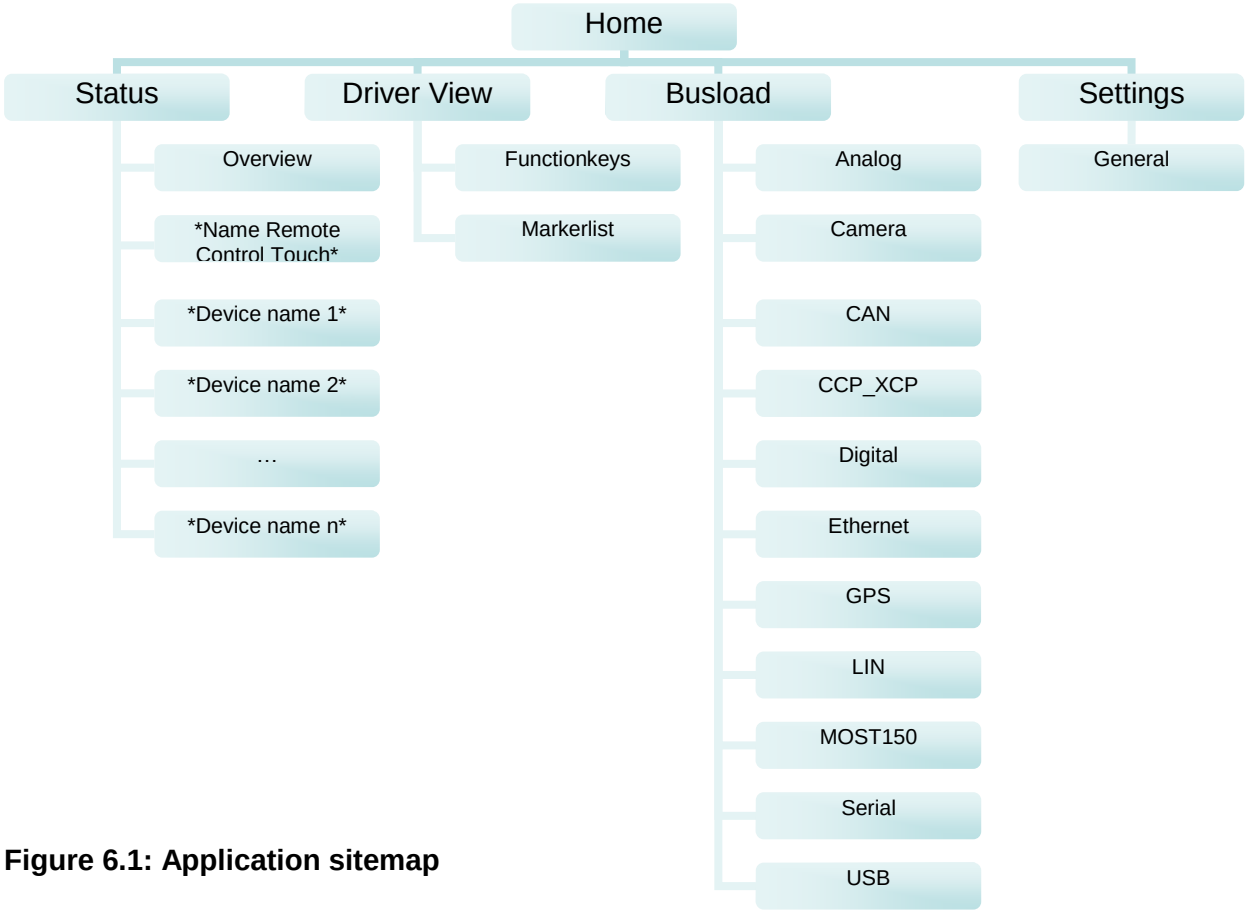

Figure 6.1: Application sitemap

Note: "n" stands for any number of devices

When an application is launched for the first time after switching on, the uppermost tab is shown. The next time you launch the application, the tab last opened is shown, except for the application Busload.

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6.1 Layout of the views

All views consist of a window and a dark blue frame.
As the window contents vary depending on the view, they are described in more detail in the following sections of this chapter.
The dark blue frame contains in all views a header bar on top and, with the exception of the <Home> view, a tab bar at the bottom.

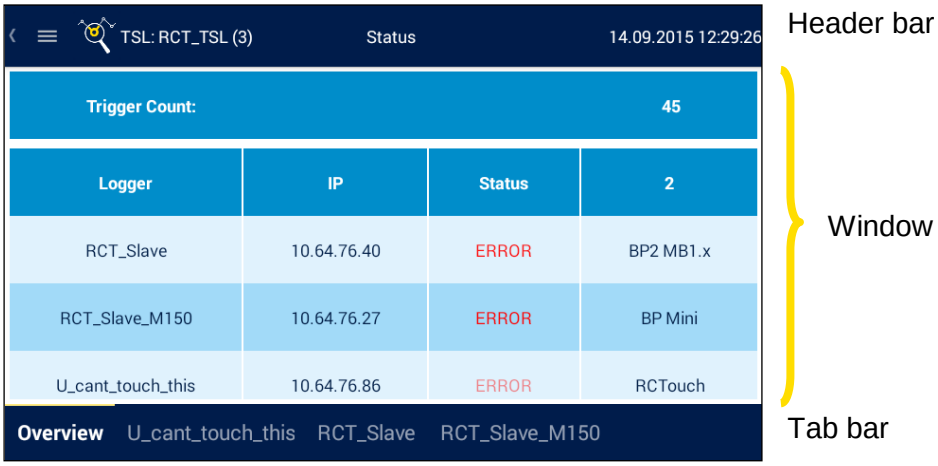

Figure 6.2: Components of the application views

6.1.1 Header bar

In each view the header bar contains:

- the designation of the current view and

- date and time of the device or the TSL network.

Depending on the operating mode, two representations are possible in the top left corner of the <Home> view:

1. If you operate the device in standalone mode, the Telemotive logo and the device name are shown.
2. If you operate the device in the TSL network, the TSL logo and the TSL name are shown.

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In the application views, the header bar contains on the left:

- the button respectively for the side menu,
- the icon of the current application (see section 6.2) and

- the device name in standalone mode or
  “TSL: *name of the TSL* (*number of TSL members*)” in the TSL network.

6.1.2 Tab bar

In the application views, the tab bar contains minimum one tab. The tabs serve as shortcuts to the individual tab sheets. Inactive tabs contain the name of the tab sheet in blue letters, active tabs in white and bold. The active tab is further characterized by a narrow bright yellow margin above.

6.2 Applications

An icon has been set for each of the four applications to find them more easily. In the <Home> view and the side menu these icons serve as shortcuts to the applications and on the tab sheets they serve for orientation.

Icon	Name	Function
	Status	Display of information on the connected devices
	Driver View	Management of the functionkeys, markers and voice notes
	Busload	Display of all available buses and their channels
	Settings	Adjustment of backlight and volume of the Remote Control Touch

Table 6.1: Application overview

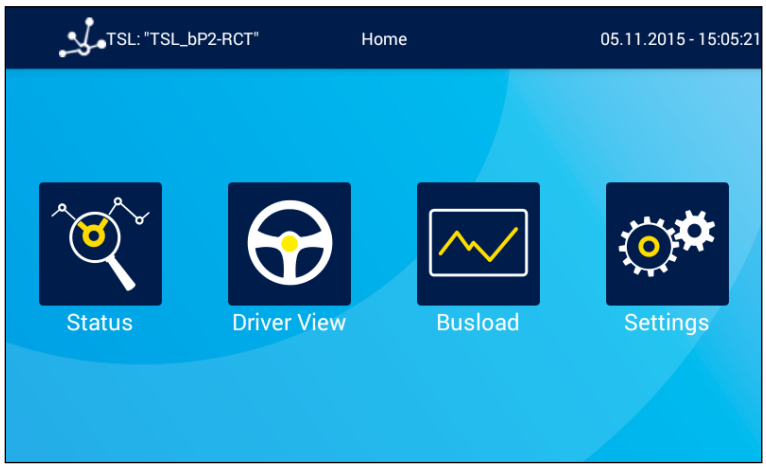

Figure 6.3: Home view

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6.3 Tab sheets

In the applications Driver View and Settings, the number and naming of the tab sheets is set.

The application Busload contains one tab sheet for each available interface of the connected loggers, with the exception of **[GPS]** and **[MOST150]**. The tab sheets are named after the respective bus interface.
If multiple loggers with active GPS resp. MOST150 are connected, each GPS resp. MOST interface is assigned a tab sheet.

The application Status contains minimum two tab sheets:

- the tab sheet **[Overview]** and
- the tab sheet of the Remote Control Touch with the name assigned in the Telemotive System Client.

If more devices in a TSL network are cable-connected with the Remote Control Touch, each device is assigned a tab sheet named after it.

6.3.1 Overview

The window of the tab sheet **[Overview]** contains, apart from the trigger counter at <Trigger Count>, a tabular overview of all connected devices and the Remote Control Touch with the following displays:

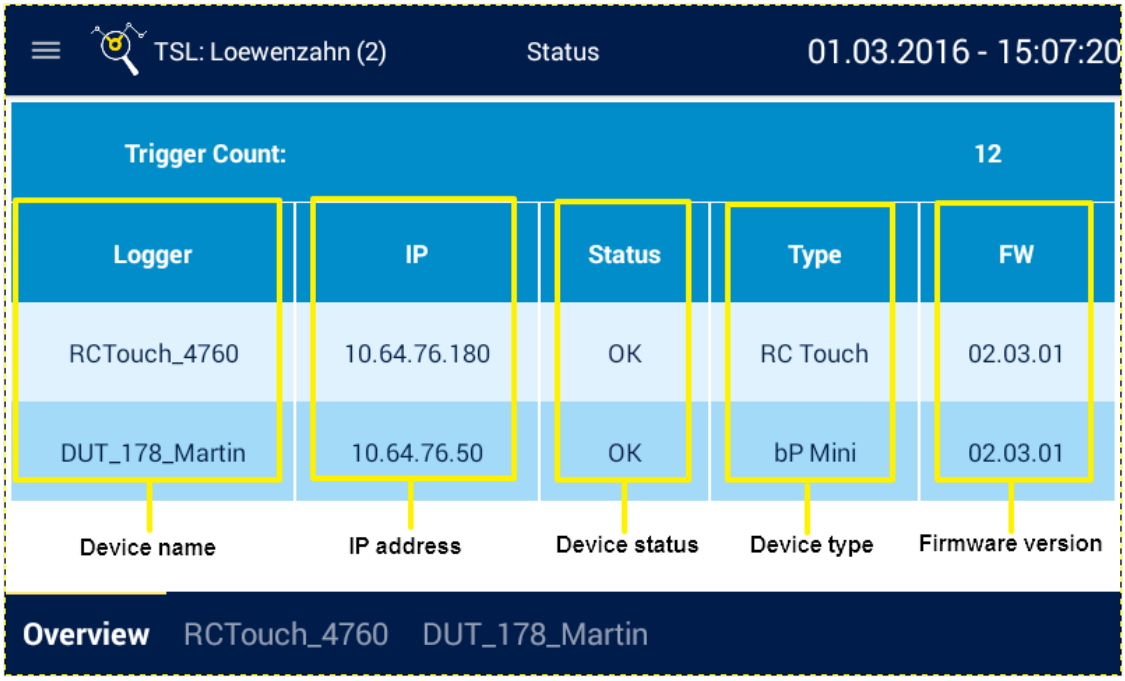

Figure 6.4: Tab sheet “Overview”

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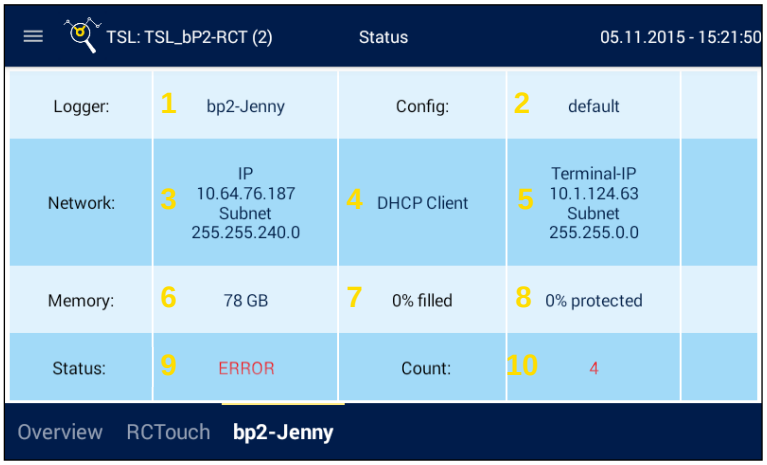
6.3.2 *Device name n*

Note: "n" stands for any number of devices

Each device listed on the tab sheet **[Overview]** can be viewed separately on the respectively named tab sheet.

The window of these tab sheets, with the exception of the Remote Control Touch window, contains the following displays:



1 Device name
2 Configuration name
3 IP address and subnet mask
4 DHCP mode
5 Terminal IP address and subnet mask
6 Storage capacity
7 Memory percentage filled
8 Memory percentage protected
9 Device status
10 Error count

Figure 6.5: Tab sheet "*Device name n*"

Note:
The Remote Control Touch has no internal memory. The memory percentage filled and protected are therefore not shown on its tab sheet.

6.3.3 Functionkeys

The window of the tab sheet **[Functionkeys]** contains two buttons on the left and ten functionkeys on the right. The functionkeys can be assigned "complex triggers" (see **User manual for the Telemotive System Client**). The name of the complex trigger is shown as text on the key.

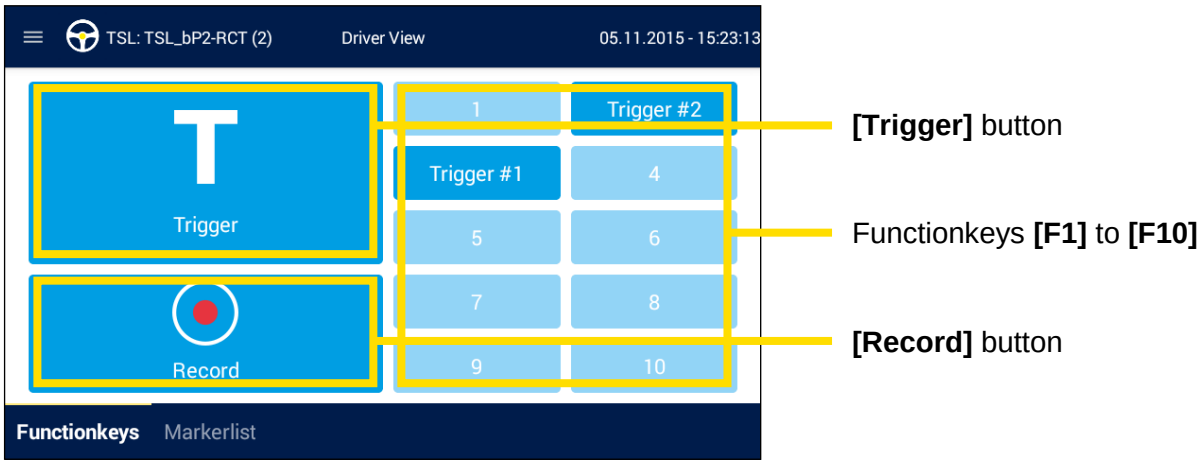


Figure 6.6: Tab sheet "Functionkeys"

6.3.4 Markerlist

The window of the tab sheet **[Markerlist]** contains two buttons on the left and a list of set markers on the right. The markers are sorted by index and indicate date and time of the setting. A trigger that was set using the **[Record]** button contains a voice note. This is indicated by the button in the marker entry.

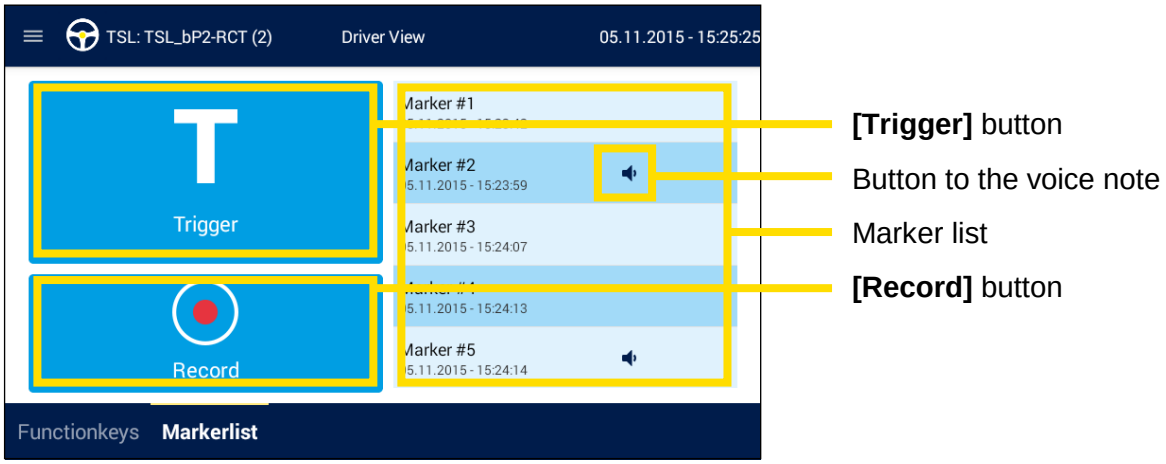


Figure 6.7: Tab sheet "Markerlist"

6.3.5 CAN/Serial/LIN/Ethernet/Camera/CCP_XCP

Each of these tab sheets contains a tabular overview of all channels of the respective bus with the following displays (here using the example of the tab sheet **[CAN]**):

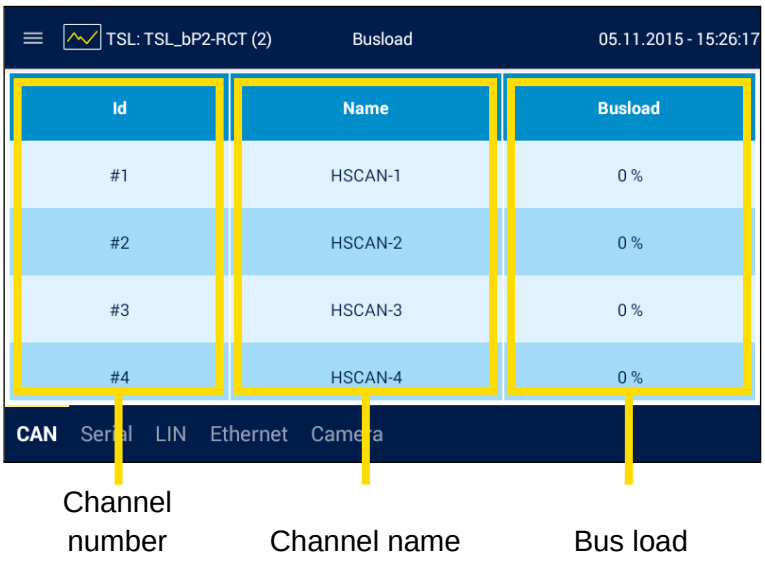


Figure 6.8: Tab sheet "CAN"

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6.3.6 MOST150

Each connected logger that receives MOST150 messages generates its own tab sheet **[MOST150]** with the following displays:

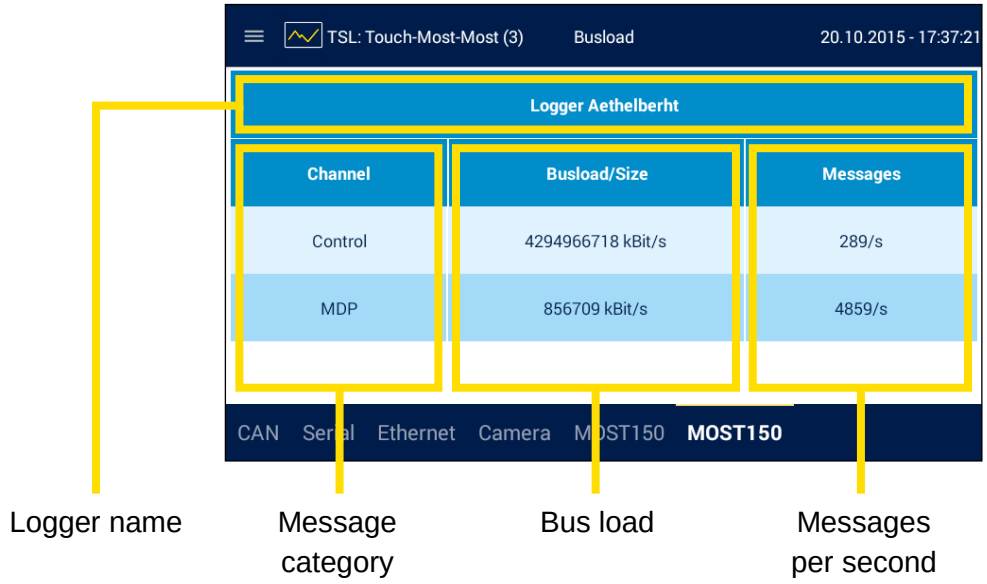

Figure 6.9: Tab sheet “MOST150”

If the window contains only the display of “Light off”, the cable is incorrectly connected or no MOST data is sent and the bus is inactive.

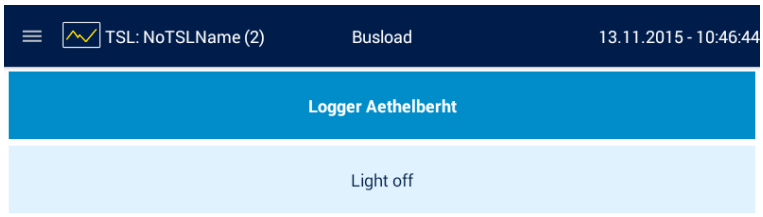

Figure 6.10: Tab sheet “MOST150”: Light off

6.3.7 GPS

Each connected logger that receives GPS data generates its own tab sheet **[GPS]** with the following displays:

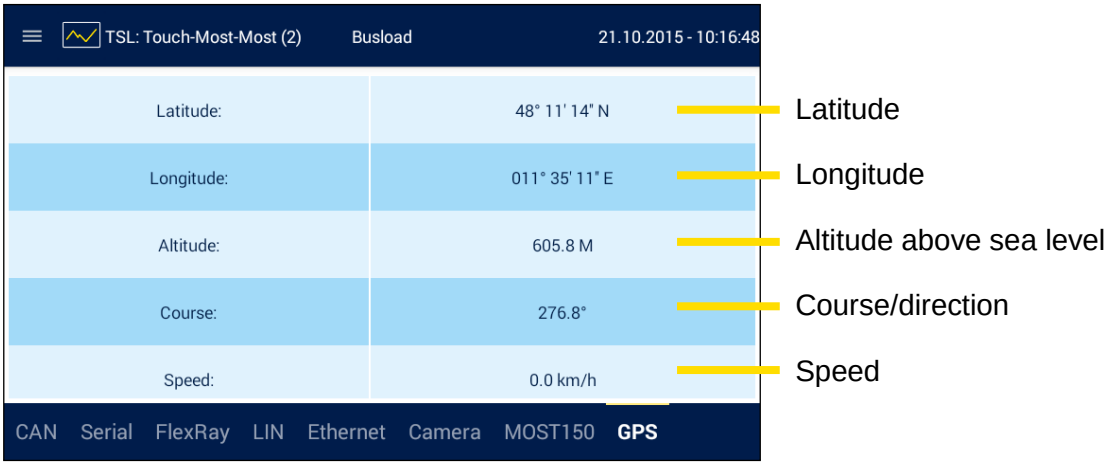

Figure 6.11: Tab sheet “GPS”

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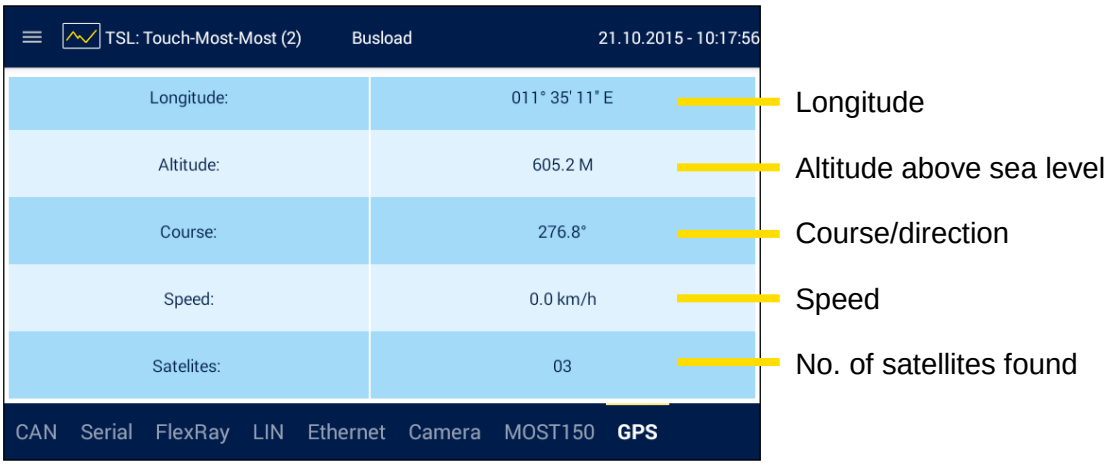


Figure 6.12: Tab sheet “GPS” – continuation

If the window contains only the display of “No GPS signal”, this may be for at least one of the following reasons:

- The GPS connection is disabled.
- The GPS receiver is not connected.
- No satellite or too few satellites were found (minimum 3).

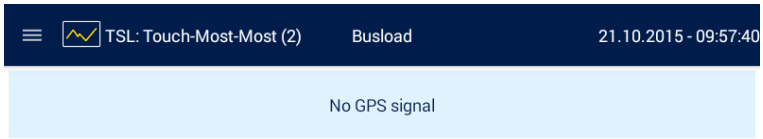
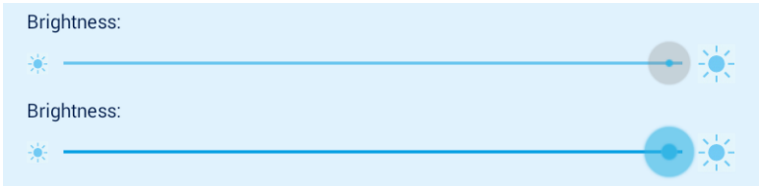


Figure 6.13: Tab sheet “GPS”: No GPS signal

6.3.8 General

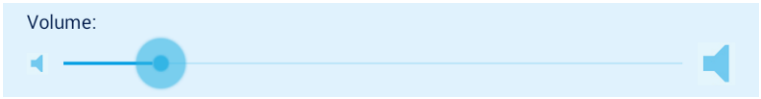
The window of the tab sheet **[General]** contains a total of five control elements:

1. Brightness scale with brightness slider



2. ON/OFF button

3. Volume scale with volume slider



4. and 5. Intern/Extern button

To adjust a button, tap on the button or in the gray boundary.
To adjust a slider, swipe it to or tap on the desired position on the brightness scale.

More information on the operation is provided in chapter 7.

Refer to the following table for the meaning of the individual control elements.

Operating element	Meaning
Brightness scale with brightness slider	Depending on the position of the slider on the scale, if the **[OFF]** button is visible, the backlight is: • dimmed (left) or • intensified (right).
[ON] button	Brightness is automatically adjusted. Brightness scale with brightness slider is inactive.
[OFF] button	Brightness is adjusted according to the position of the brightness slider on the brightness scale. Brightness scale with brightness slider is active.
Volume scale with volume slider	Depending on the position of the slider on the scale, the volume is: • decreased (left) or • increased (right).
[Intern] button	Remote Control Touch internal hardware is actuated. Acoustic signals are played back through the speaker and recorded through the microphone (see section 5.1.1).
[Extern] button	External hardware of the connected accessories is actuated.

Table 6.2: Operating elements of the tab sheet "General"

Note:
The quality of playback and recording acoustic signals depends on the actuated hardware.

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6.4 Displays

The displays of the Remote Control Touch are similar to those of the data loggers. An overview to their meanings is provided in the following table. You can find the view that contains the display via the cross reference in the column “See”.

Display	Meaning	See
Bus load	indicates the degree with which the bus is busy with data transfer	6.3.5 6.3.6
DHCP mode	can be configured under General → Network settings indicates whether the device functions as a server or a client or whether DHCP was disabled	6.3.2
Error count	indicates the number of active errors (can be viewed in the bug reporter) when the status is ERROR or WARNING	6.3.2
Device name	can be configured under General → Name provides orientation in the application and is part of the trace file's file name	6.1.1 6.3.1 6.3.2
Device status	see Table 6.4: Device status messages	6.3.1 6.3.2
Device type	see Table 6.5: Device types	6.3.1
Memory percentage protected	can be configured under General → Buffer indicates the percentage of the memory capacity that is protected	6.3.2
IP address	indicates the IP address of the device	6.3.1 6.3.2
Channel name	can be configured under *Bus* → *Bus #...* → Name provides orientation in the application and is part of the trace file's file name	6.3.5
Channel number	serves as index for sorting the channel lists is obtained from the configuration in the Telemotive System Client	6.3.5
Configuration name	can be configured under General → Name indicates the name of the configuration on the device	6.3.2
Logger name	can be configured under General → Name helps mapping logger-specific tabs	6.3.6
Markerlist	contains the markers of the set triggers sorted by index Each marker is specified by the time (date and time) the trigger was set. The  button is used to play the voice note.	6.3.4
Message category	see Table 6.6: Message categories	6.3.6
Storage capacity	depends on the internal memory Since the Remote Control Touch does not have internal memory, the tab shows “0 GB”.	6.3.2
Subnet mask	indicates the subnet mask of the connected device	6.3.2
Memory percentage filled	indicates the percentage of the memory capacity that is filled	6.3.2

Table 6.3: Displays overview

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The device status may display the following messages:

Message	Form	Meaning	Data recording
ERROR	red flashing	device in error mode	jeopardized
FWUPDATE	dark blue flashing	logger firmware is updated	stopped
MEMORY	dark blue flashing	lack of memory capacity	jeopardized
OK	dark blue	normal operation	normal
RING	dark blue flashing	logger in ring buffer mode	normal
WARNING	dark blue flashing	jeopardized operation	normal

Table 6.4: Device status messages

More information on the device status in provided in the user guides of the data loggers, section 10.5 Memory space and level.

The following types of devices exist:

Message	Type
RCTouch	Remote Control Touch
BP Mini	blue PiraT Mini
BP2 MB1.x	blue PiraT2
BP2 MB2.x	blue PiraT2 5E

Table 6.5: Device types

In MOST150 the following categories of messages exist:

<table>
<tr><th>Category</th><th>Meaning</th></tr>
<tr><td>Control</td><td>Control data; for the passing of control messages; transmits up to 384 data byte</td></tr>
<tr><td>MDP</td><td>MOST Data Packet; transmits up to 1524 data byte</td></tr>
<tr><td>MEP</td><td>MOST Ethernet Packet; for the passing of Ethernet messages; transmits up to 1506 data byte</td></tr>
<tr><td>Streaming Channel/Channels</td><td>Synchronous data range; transmits up to 372 data byte
<table>
<tr><th>Channel</th><th>Busload/Size</th><th>Messages</th></tr>
<tr><td>*Number of streaming channels* Streaming Channels</td><td>*Bus load in bytes* B</td><td>(remains empty)</td></tr>
</table>
With only one streaming channel, the display under “Channel” is restricted to “Streaming Channel”.</td></tr>
</table>

Table 6.6: Message categories

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6.5 Other views

Other views include:

- views that appear due to the configuration of a connected logger,
- views that can only be closed via the Remote Control Touch and/or
- views that appear outside the application.

6.5.1 AlertDialog

Precondition	none
Timing	Internal communication has failed.
Options	close popup

To close the popup, tap on **[OK]**. Then repeat the last command.

6.5.2 FW-Update

Precondition	none
Timing	Remote Control Touch firmware is updated.
Options	none

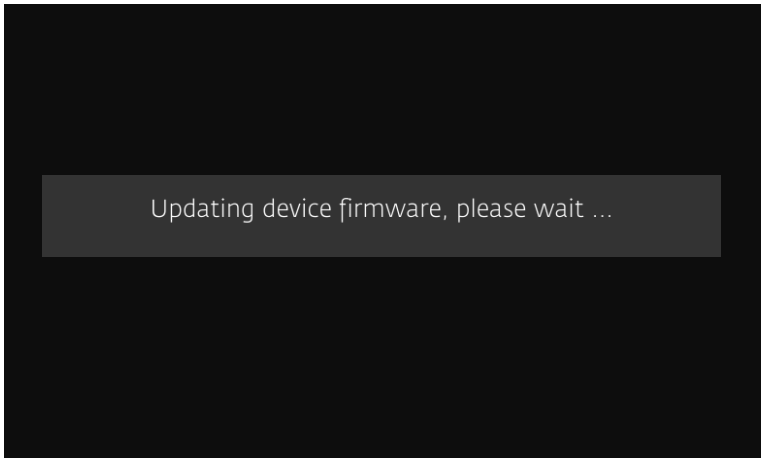

Figure 6.14: FW-Update view

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6.5.3 Launcher

Precondition	none
Timing	Remote Control Touch is switched on. (before the application)
Options	close popup

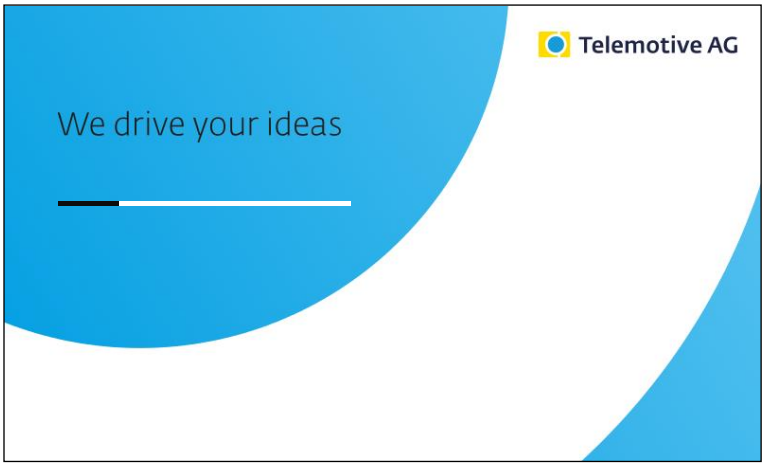

Figure 6.15: Launcher view

Within the view “Launcher” a safety message in a popup appears after a short time (see section 8.3).

To close the popup and use the application, tap on **[Accept]**.

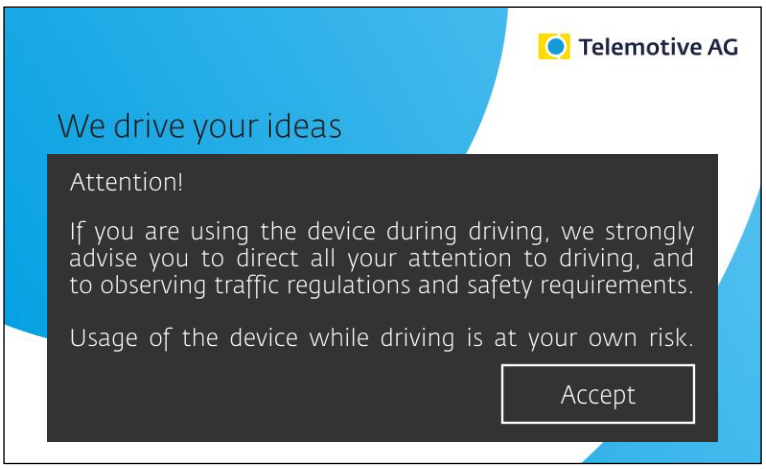

Figure 6.16: Popup in Launcher view

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6.5.4 RC Monitor

Precondition	Optional **Remote Control Monitor** license is installed. An application is open.
Timing	Complex trigger configured to the <Action> **[Display Remote Control Monitor]** is actuated. (see section 7.11)
Options	set trigger, close view

The view is constantly updated and depends on the configuration in the Telemotive System Client.

More information on this feature is provided in the **Remote Control Monitor** user guide.

To close the view, press the Home button or tap on **[Close]**.

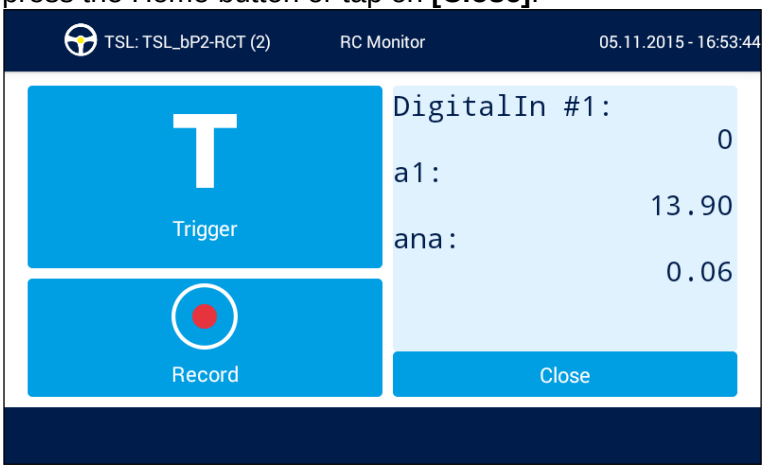

Figure 6.17: Window “RC Monitor”

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6.5.5 RC Text

Precondition	An application is open.
Timing	Complex trigger configured to the <Action> **[Display notification on Remote Control]** is actuated. (see section 7.11)
Options	set trigger, close view

The view is not updated and depends on the configuration in the Telemotive System Client.

To close the view, press the Home button or tap on **[Close]**.

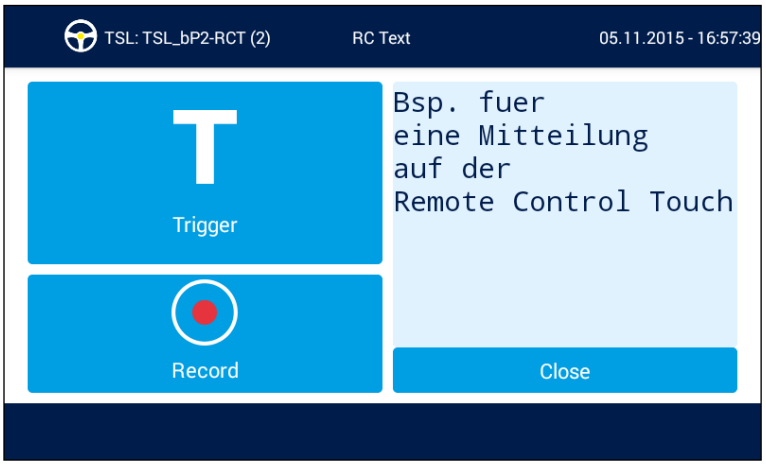

Figure 6.18: Window “RC Text”

6.5.6 Standby

Precondition	none
Timing	Remote Control Touch is switched off or not used for an extended period. (after the application)
Options	none

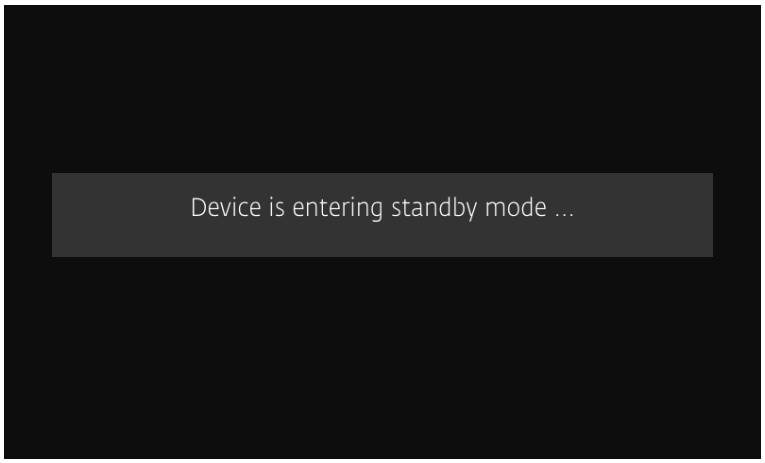

Figure 6.19: Standby view

To exit the standby mode, press the Home button or tap on the screen.

6.6 Restrictions in standalone mode

6.6.1 Remote Control Touch applications

In standalone mode the Remote Control Touch is not connected to any data logger. Some functions are therefore not available.

- The application  Status remains unaffected.
- The application  Busload is inactive.
- The application  Driver View is inactive.
- The application  Settings remains unaffected.

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6.6.2 Telemotive System Client applications

The Telemotive System Client also provides less functionality than for a device integrated in the TSL network.

In the TSL network all six applications are available via the connected data logger(s):

1. Online Monitor
2. Download data
3. Convert data
4. Open configuration
5. Update firmware
6. Open bug report

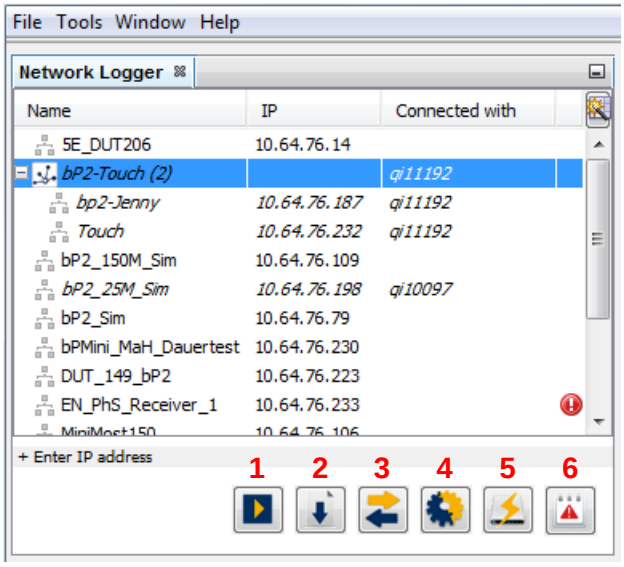

Figure 6.20: Tab “Network Logger” in the TSL network

Find more information about the Telemotive System Client applications in a TSL network in the **User manual for the Telemotive System Client**, chapter 9.

In standalone mode the following applications are available:

4. Open configuration
5. Update firmware
6. Open bug report

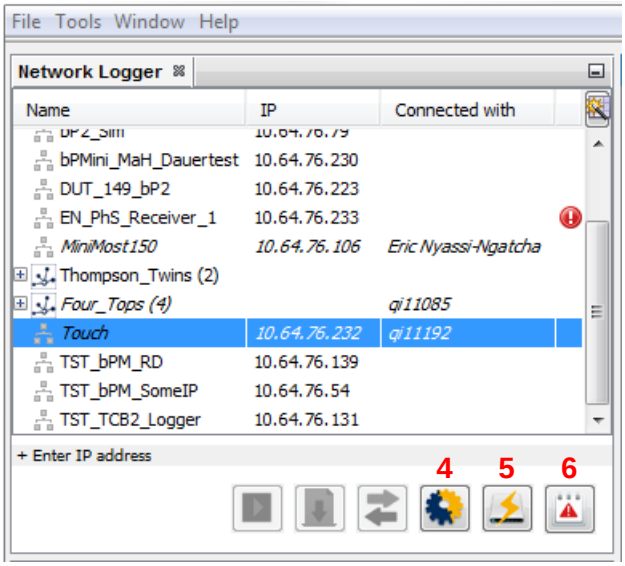

Figure 6.21: Tab “Network Logger” in standalone mode

The applications **[Update firmware]** **(5)** and **[Open bug report]** **(6)** provide the same functional range in both modes. Find the applications descriptions in the **User manual for the Telemotive System Client**, chapters 15 and 16.

The application **[Open configuration]** **(4)** provides less categories in the configuration tree (e.g., **[General]**) and less sub-items (e.g., **[Name]**) than for a device integrated in the TSL network.

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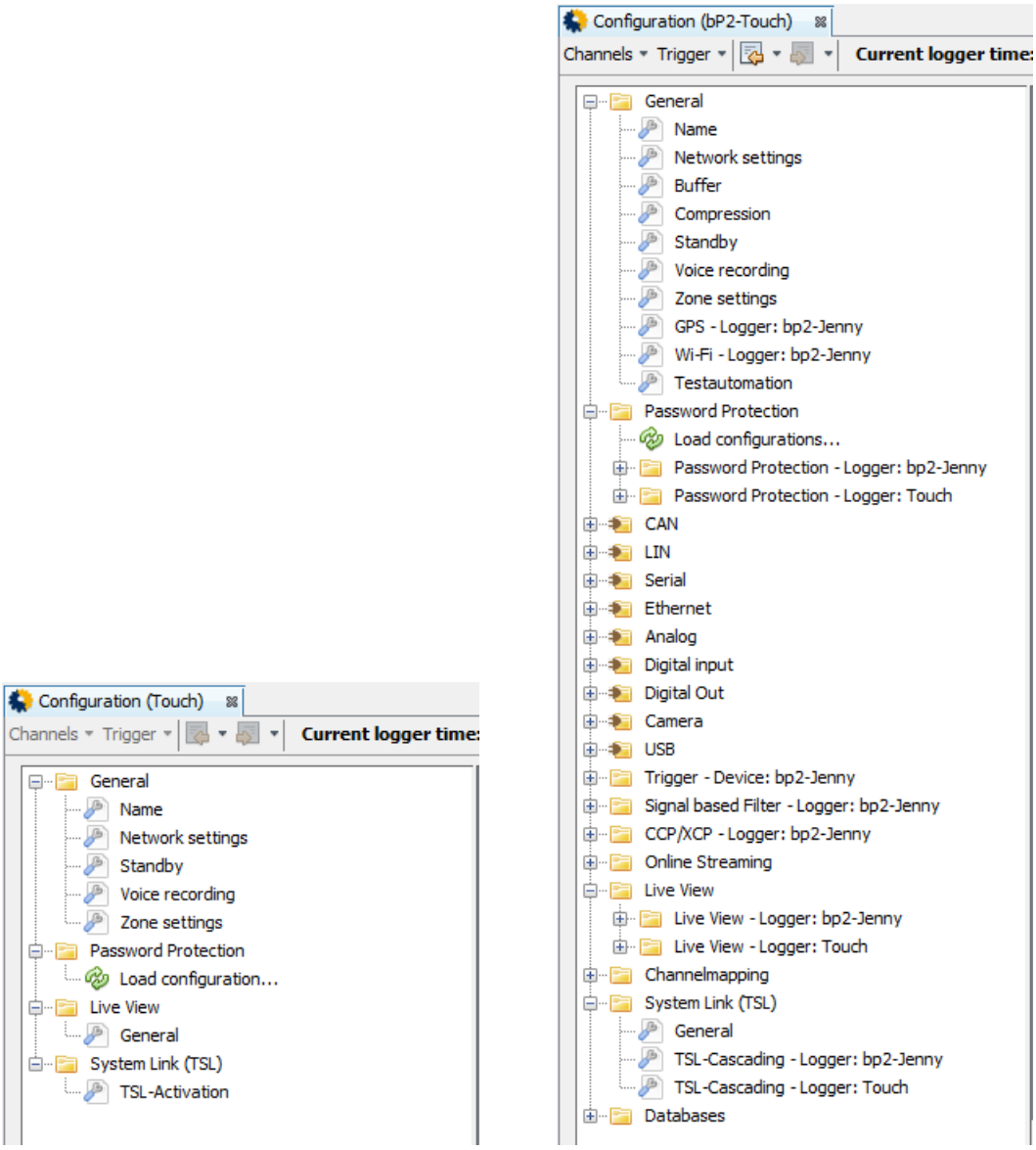

Figure 6.22: Configuration trees: Standalone mode (left) – TSL (right)

Find more information about components of the configuration tree in the **User manual for the Telemotive System Client**, chapters 8 and 11.

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7 Operation

Important:
Only use the tip of the finger to operate the Remote Control Touch.

This chapter describes instructions that are possible using the Remote Control Touch.

Functionality of the components is impaired by certain conditions such as moisture, darkness, heat or cold, mechanical action, dirt or similar. Observe therefore the points described in chapter 8 Maintenance provisions and safety regulations.

7.1 Actuating functionkey

Navigate to the tab sheet **[Functionkeys]** in the application  Driver View.

Tap on the desired functionkey that was previously assigned with a “complex trigger”, see section 7.11.

- The Remote Control Touch responds according to the <Action> that was set in the configuration for the <Event> **[Key Stroke]** using a functionkey as <Key>.

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7.2 Adjusting backlight

Navigate to the tab sheet **[General]** in the application  Settings.

7.2.1 Automatic adjustment

If you want the brightness of the screen to adjust automatically, tap on the gray **[OFF]** button under <Auto Brightness>.

- Brightness is automatically adjusted.
- The blue **[ON]** button is active.
- Brightness scale with brightness slider is inactive.

7.2.2 Manual adjustment

If you want to adjust the brightness of the screen manually, tap on the blue **[ON]** button under <Auto Brightness>.

- The gray **[OFF]** button is active.
- Brightness scale with brightness slider is active.

Swipe the brightness slider to the desired position or
tap on the desired position on the brightness scale.

- Brightness is set according to adjustment.
- A brief fade-in indicates the new brightness value set in percent.

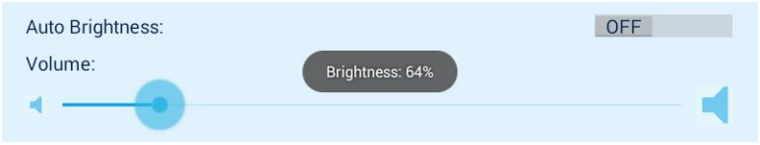

Figure 7.1: Fade-in after adjusting the brightness

7.3 Adjusting volume

Note:
A tone is produced to simulate the newly set volume. If you set the volume to "Volume: 0%", the Remote Control Touch is mute. Its acoustic signals are inaudible.

Navigate to the tab sheet **[General]** in the application  Settings.

Swipe the volume slider to the desired position or
tap on the desired position on the volume scale.

- A change in volume is indicated by a tone and at the same time it simulates the newly set volume.
- A brief fade-in indicates the new volume value set in percent.

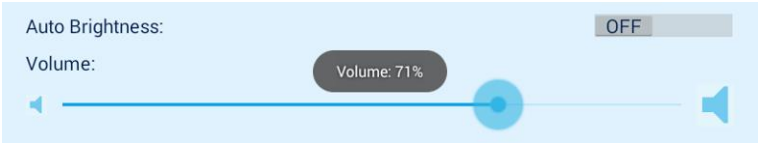

Figure 7.2: Fade-in after adjusting the volume

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7.4 Changing application

To reach another application, you have two options:

1. Press the Home button …
   - Active LED lights up briefly.
   - <Home> view appears.
2. Open the side menu (see section 7.6) …

and tap on the icon of the desired application.

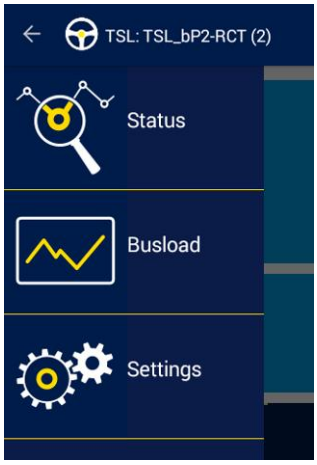
7.5 Changing tab sheet

To reach other tab sheets within an application, tap in the tab bar on the tab of the desired tab sheet.

- Selected tab sheet appears.

To reach tab sheets in other applications, switch to the application of the desired tab sheet first (see section 7.4) and continue to proceed as just described.

7.6 Opening and closing side menu



To open the side menu, you have two options:

1. Tap on the ☰ button.
2. Swipe from the left edge of the screen to the right.

To close the side menu, you have three options:

1. Tap in the window of the tab sheet.
2. Tap on the ← button.
3. Swipe from the right to the left edge of the screen.

Figure 7.3: Example side menu

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7.7 Playing voice note

Note:
If you do not hear an acoustic signal, increase the volume (see section 7.3).

The quality of the recording and playback is dependent on the <Speaker> and <Microphone> settings on the tab sheet [General] (see section 6.3.8).

Navigate to the tab sheet **[Markerlist]** in the application Driver View.

Tap on the button in the marker entry.

- Voice note of the marker is played.
- The following duration display complements the marker entry.

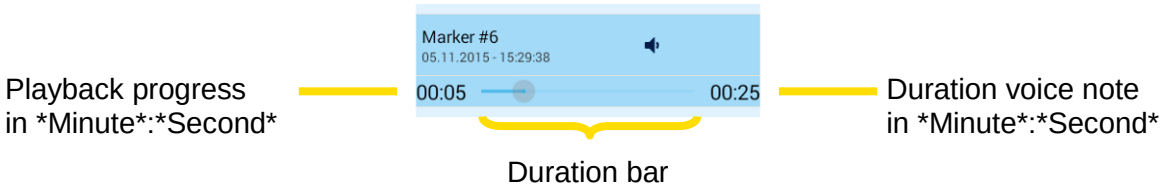

Figure 7.4: Voice note duration display

If you tap on a second button while the voice note is played, the playback is stopped and the second voice note is played.

If you want to stop playing the voice note prematurely, tap on the button again.

The duration display disappears when the playback of the voice note has ended.

7.8 Scrolling through applications

If the application contains more than one tab sheet, you have the option to scroll.

Note:

In the application Driver View, there is a risk of setting unwanted triggers when scrolling through. You should therefore use the tab bar to change the tab sheet.

Swipe the tab sheet horizontally:

- to the left The tab sheet adjacent to the right appears.
- to the right The tab sheet adjacent to the left appears.

If there is no tab sheet adjacent to the left or right, this is indicated by a gray margin on the left respectively right edge of the screen.

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7.9 Scrolling through tab bar

If the tabs exceed the width of the tab bar, you have the option to scroll.

Swipe the tab buttons horizontally:

- to the left Tabs adjacent to the right appear.
- to the right Tabs adjacent to the left appear.

If there is no tab adjacent to the left or right, the tab bar turns gray on the left respectively right edge of the screen.

7.10 Scrolling through tab sheet

If the window exceeds the height of the tab sheet, you have the option to scroll.

Swipe the tab sheet vertically:

- upwards Window is scrolled down.
- downwards Window is scrolled up.

If the window reached the very top or bottom, this is indicated by a gray margin on the top respectively bottom of the screen.

7.11 Setting and deleting complex triggers

Find more information on complex triggers in the **User manual for the Telemotive System Client**, section 8.13.

Launch the Telemotive System Client by double-clicking the shortcut “Telemotive System Client” on the desktop or in the start menu.

Select the desired TSL in the window <Network Logger>.

- Selected line is highlighted blue.

Click on the application  **[Open configuration]**.

- The tab <Configuration> opens with the configuration tree on the left.

Click the **[+]** button in front of the folder **[Trigger – Device: *Logger name*]** in the configuration tree or double-click on the folder itself.

- Trigger folder is expanded.

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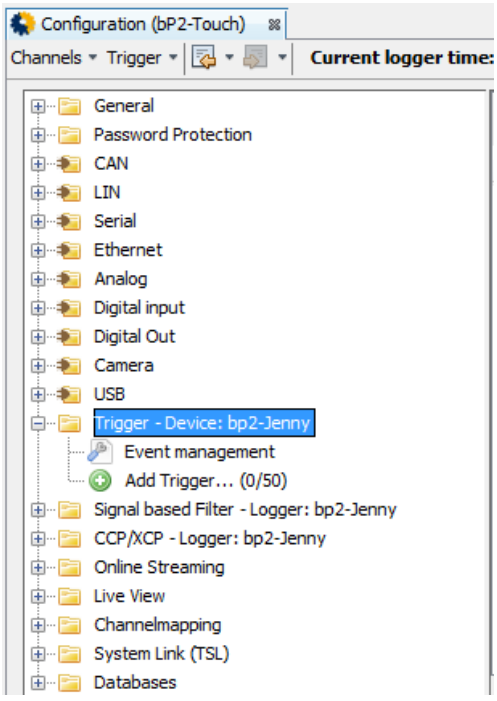

Figure 7.5: Expanding trigger folder

Note:
Triggers are configured per device. Events only trigger actions on the source device. TSL-wide events are not supported.

Double-click on **[Add Trigger… (…)]**.

- New trigger is generated and displayed in the configuration tree (e.g., Trigger #1).
- The window <Trigger> opens.

Note:
If the trigger configuration is not complete, this is indicated by a red symbol with exclamation mark at the trigger in the configuration tree and at the affected areas in the window <Trigger>.

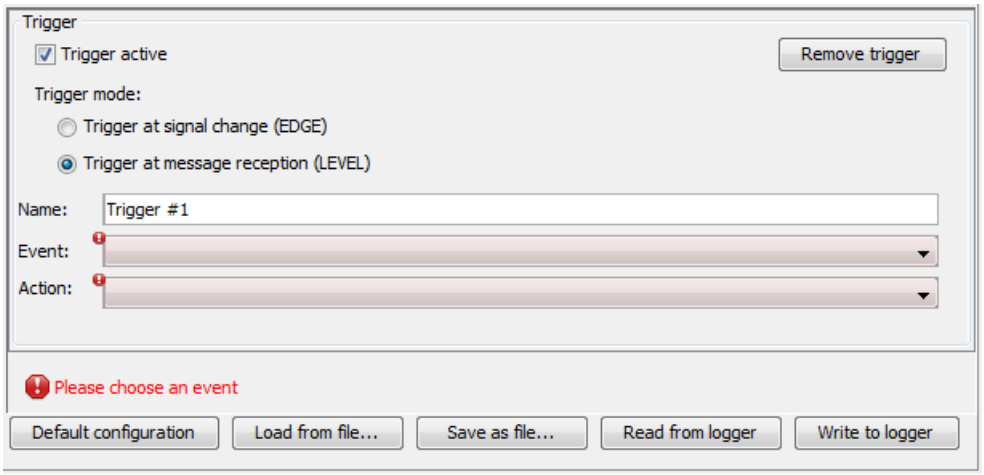

Figure 7.6: Notice message for missing settings

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Enable the checkbox **Trigger active**.
Select the desired <Trigger Mode>.
Enter a name for the trigger in the <Name> field.
Select the desired <Event> from the dropdown menu.
Edit the event-specific settings.
Select the desired <Action> from the dropdown menu.

Note:
It is possible to create more than one trigger with the same <Event>. However, their <Action>s must not be mutually exclusive. This would be the case if [Display …] were configured at least twice. If you clicked on [Write to logger], in this case a popup with an error message would appear.

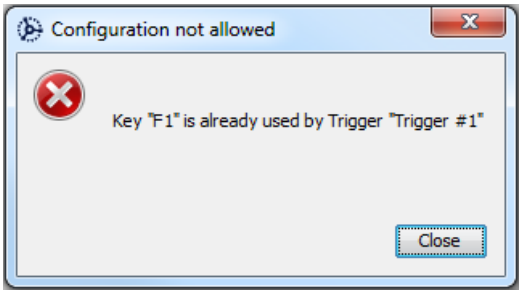

Figure 7.7: Error message due to unauthorized configuration

Edit the action-specific settings.
Click on **[Write to logger]**.

- Configuration is transferred to the logger.

Note:
If you select [Key Stroke] as the <Event> using a functionkey as <Key>, the trigger appears on the tab sheet [Functionkeys] on the selected functionkey with the specified name for the trigger.
If you assign more than one trigger to a functionkey, up to two triggers are displayed. Beyond that, the display is limited to [MULTIACTION].

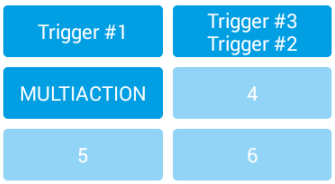

Figure 7.8: Functionkeys with complex triggers

To delete a complex trigger, you have two options:

1. Click on the **[Remove trigger]** button in the window <Trigger> …
2. Open the context menu of the trigger to be deleted with a right-click. Click on **[Delete Trigger]** …

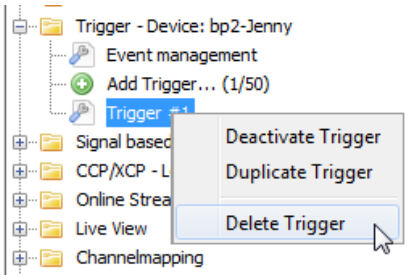

Figure 7.9: Context menu of a trigger

and click on **[Write to logger]**.

- Configuration is transferred to the logger.
- Trigger is deleted and disappears from the configuration tree.

Note:
If you delete a trigger that is actuated by the <Event> [Key stroke] with a functionkey as <Key>, it disappears from the tab sheet [Functionkeys].

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7.12 Setting triggers

Navigate to a tab sheet in the application  Driver View.

7.12.1 Trigger with voice note

Note:
The quality of the recording and playback is dependent on the settings of <Speaker> and <Microphone> on the tab sheet [General] (see section 6.3.8).

Tap on **[Record]** to set a trigger with voice note on the connected devices.

- Sound recording starts. Recording length is indicated on the button with "Recording… ellapsed time: *Hour*:*Minute*:*Second*".
- A fade-in tells you under which index and timing (date and time) the trigger was set.
- Marker appears on the tab sheet **[Markerlist]**.

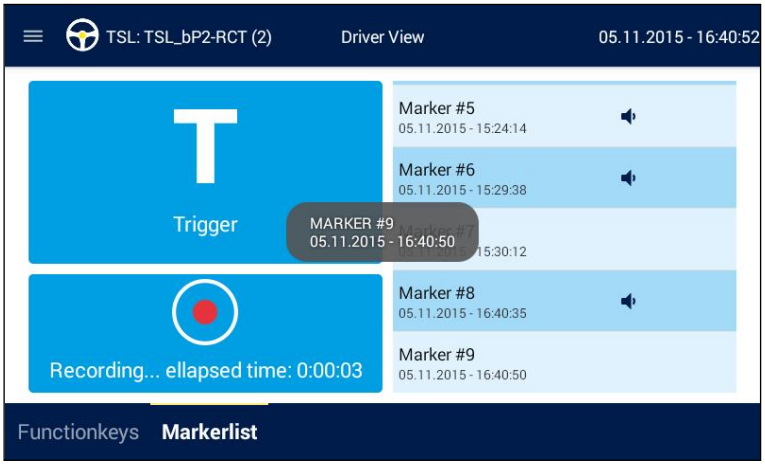

Figure 7.10: Voice note recording starts

To stop the recording, tap on **[Record]** again or
wait until the <Max. recording length> configured in the Telemotive System Client elapses.

- Two brief fade-ins appear one after the other:
  - "Stopped recording!" Sound recording is stopped.
  - "Uploaded record!" Sound recording is uploaded.
- button appears in the Marker entry.

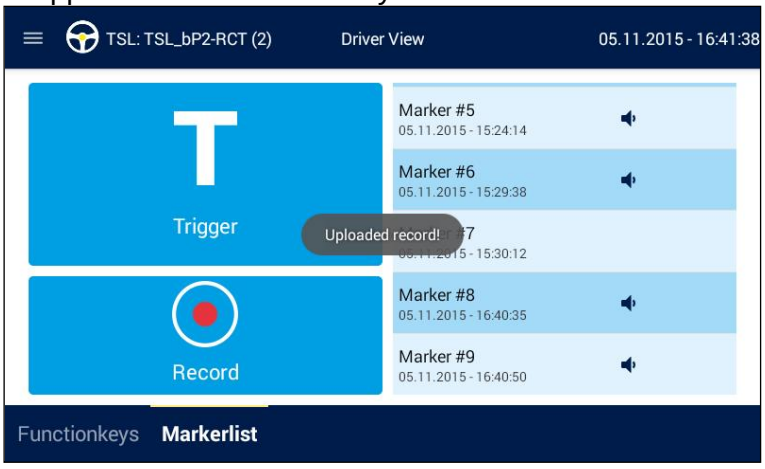

Figure 7.11: Voice note recording stops

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7.12.2 Trigger without voice note

Note:
Setting a trigger without voice note is confirmed acoustically. If you do not hear an acoustic signal, increase the volume (see section 7.3).

Tap on **[Trigger]** to set a trigger on the connected devices.

- A tone sequence indicates that a marker was set.
- A brief fade-in tells you under which index and timing (date and time) the trigger was set.
- Marker appears on the tab sheet **[Markerlist]**.

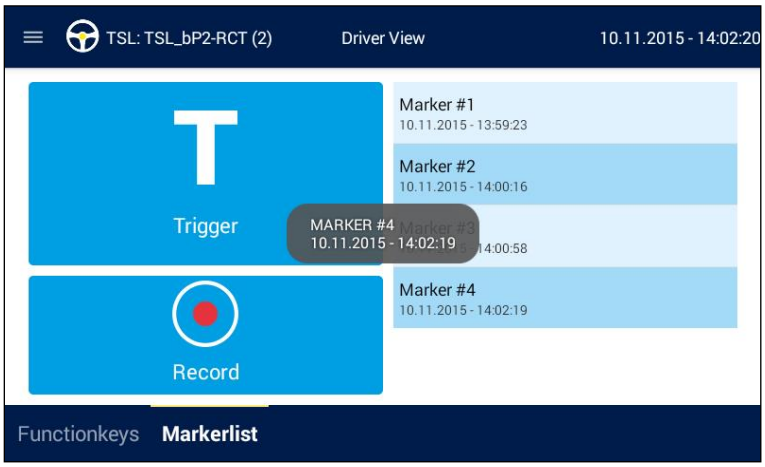

Figure 7.12: Marker set

7.13 Switching the device off

Press and hold the Home button until the Active LED pulses green.

- Active LED pulses green.
- View “Standby” appears on the screen.

The Remote Control Touch is switched off when:

- the view “Standby” disappears and
- the Active LED goes out.

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7.14 Switching the device on

Press the Home button.

- Active LED and State LED light up briefly. Active LED then flashes green.
- View “Launcher” with advancing progress bar appears on the screen.
- Popup with warning appears.

Tap on **[Accept]**.

- Popup with warning disappears.

The Remote Control Touch is switched on when:

- the tab sheet **[Overview]** appears and
- the Active LED lights green.

7.15 Updating firmware

Find more information on firmware update in the **User manual for the Telemotive System Client**, chapter 15.

Note:
Only update the Remote Control Touch firmware with the vehicle at standstill.
In the TSL network, the data logger does not record any data during the update.

Launch the Telemotive System Client by double-clicking the shortcut “Telemotive System Client” on the desktop or in the start menu.

Select the Remote Control Touch in the window <Network Logger>.

- Selected line is highlighted blue.

Click on the application  **[Update firmware]**.

- The tab <Firmware- / Licenses update> opens.

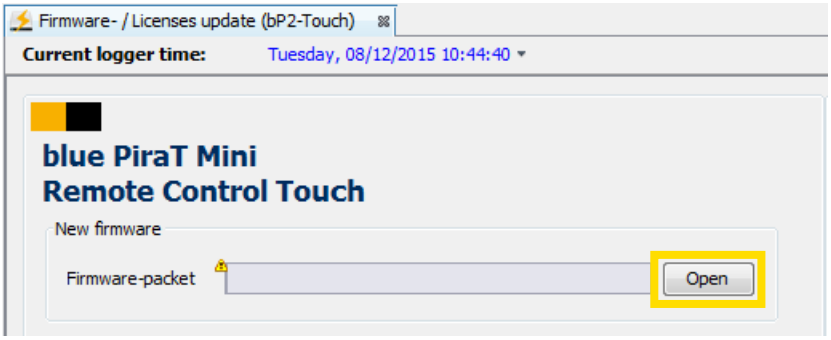

Figure 7.13: Tab “Firmware- / Licenses update”

Note:
If you operate the device in the TSL network, apply the following steps on all TSL members.

Under <New firmware> click on **[Open]**.

- Dialog opens.

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Select the desired firmware.
Click on **[Open]**.

Note:
For the Remote Control Touch you need the same firmware as for the blue PiraT Mini.

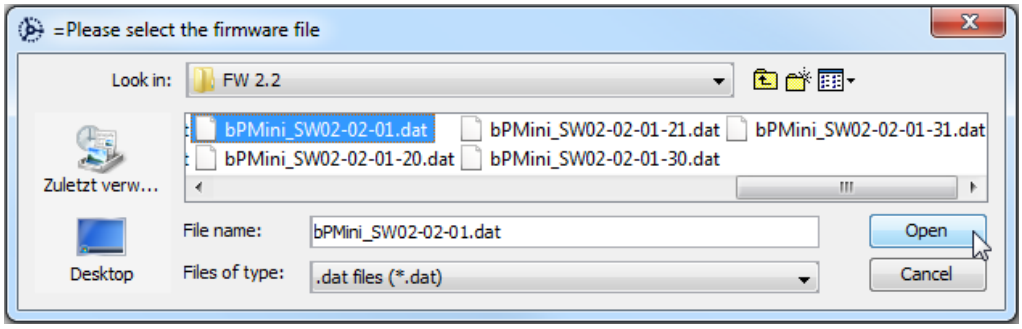

Figure 7.14: Opening firmware-packet

- Selected firmware appears in the display field.

Figure 7.15: Valid firmware-packet

Note:
If you select an invalid firmware-packet, the following notice message appears and the [Update firmware…] button remains inactive.

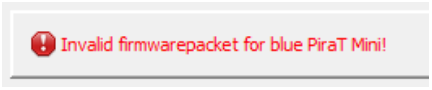

Figure 7.16: Notice message for invalid firmware-packet

Click on **[Update firmware…]**.

- Firmware file is verified.
- Dialog opens.

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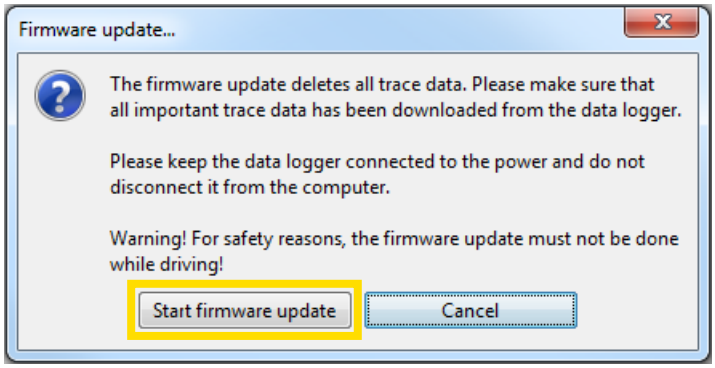

Figure 7.17: Notice message before firmware update

Follow the dialog instructions.
Click on **[Start firmware update]**.

- View “FW-Update” appears.
- State LED lights red.
- Dialog opens.

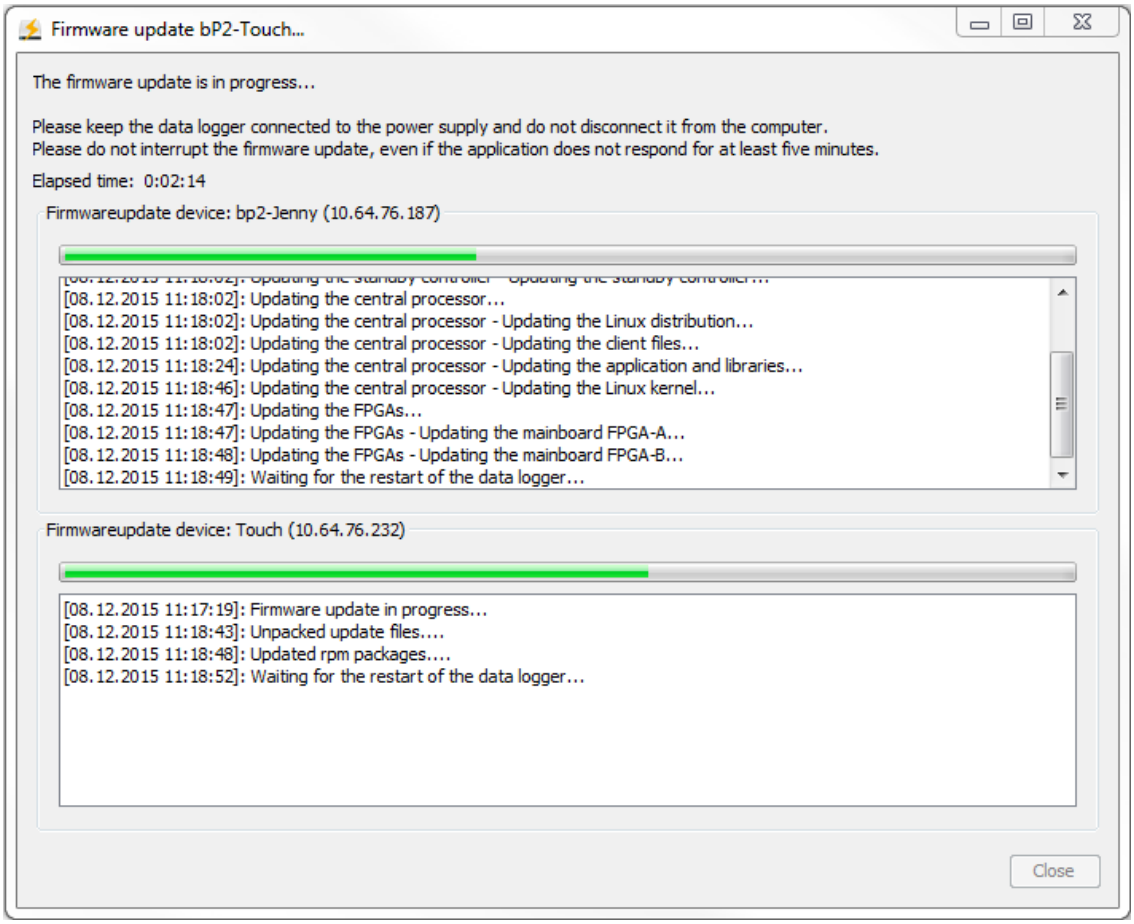

Figure 7.18: Advancing firmware update

The firmware is updated when:

- the view “FW-Update” disappears,
- the State LED goes out and
- the **[Close]** button is active.

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8 Maintenance provisions and safety regulations

Note according to standard EN55011:2009
The device is used in an industrial environment. Due to the occurring, conducted as well as radiated disturbances it possibly can be difficult to ensure electromagnetic compatibility in other environments.

Cleaning
The device may only be cleaned with a clean cloth slightly dampened with water. Other cleaning agents such as gasoline, alcohol, etc., may not be used.

Maintenance
The device is maintenance-free. The case must not be opened by the customer. Unauthorized modifications will void the warranty.
In case of failure, the customer may change the fuse on the cable set or fuses accessible from outside only. The fuse may only be replaced with a fuse of the same type and nominal current rating.

Storage
The device may only be stored within a temperature range of - 40 °F to + 185 °F.

Disposal
Disposal of the device must be in accordance with the statutory regulations.

8.1 Operating conditions

8.1.1 Temperature

The device must not be operated outside the specified temperature range. Adequate ventilation must be ensured. The device must not be placed too close to walls or other devices. The device must not be stacked with other components on each other unless proper ventilation is ensured and the device is to be operated at an ambient temperature of more than 77 °F.

8.1.2 Condensation

The device must not be switched on immediately when brought from cold ambient conditions into a room with normal ambient conditions.

8.1.3 Environment

The device must not be used outdoors or in adverse ambient conditions such as moisture, high humidity or dust. Operation of the device is further not allowed in an environment with flammable or explosive gases.

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8.1.4 Mechanical action

Altitude: - 300 to + 5500 m	
Shaking at 2 ms sine half-wave	300 G
Vibration sine wave	3 G (10 – 50 Hz) 2.5 G (50 – 2000 Hz) 2 G (200 – 5000 Hz)

Out of operation environment

Altitude: - 300 to + 12000 m	
Shaking at 1 ms sine half-wave	800 G
Vibration sine wave	up to 5 G (10 – 500 Hz)

8.2 Assembly

8.2.1 Cable sets

When inserting the cable sets only little force may be applied. The pins should be checked for correct alignment if increased resistance is felt during insertion of the cable set.

Only original Telemotive components may be used. Other components such as special cable sets must be prepared in strict accordance with the connector pin assignment in the operating instructions, always providing for a spare fuse in the cable set.

Clamp 15 (KL 15) serves as an external wake-up input. It can be used to wake up the device in case of edge change. KL 15 requires a voltage range of 0 to 30 V.
Two pins each designated Clamp 30 (KL 30) and Clamp 31 (KL 31) are interconnected for the power supply of the device.
Important:
A short circuit between KL 30 and KL 31 directly at the plug results in destruction of the device.
The maximum value of the power supply must not exceed 30 V. In case of overvoltage the device can be destroyed and the warranty will be voided.

8.2.2 Mounting

The device must only be mounted in the six axes.
In laboratory set-ups and especially in the vehicle the device must be mounted so that it is secured against falling, slipping and skidding.

8.2.3 Positioning of antenna

When the device is operated in a car, the antennas to be connected to the device must not be located outside the vehicle.

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8.3 Proper operation

- The Remote Control Touch must exclusively be operated with the Telemotive AG application.
- The application is only compatible with Telemotive System Client.
- Connection with third-party devices is at your own risk.
- Its use while driving is at your own risk.
  If you are using the device while driving, we strongly recommend to focus your attention on the road traffic and the safety regulations according to local road traffic regulations. (see Figure 6.16: Popup in Launcher view)

Any use other than described results in damage to the product. It also involves risks such as short circuit, fire, electric shock, etc. The entire product may not be modified or adapted.

9 Data sheet

General data	
Supply voltage	13.8 V
Power unit voltage	5 to 30 V (the logger requires > 7 V at system startup)
Supply voltage reverse-connect protection	yes
Short circuit proof	yes
Operating current (typ.)	350 mA (@ 13.8 V)
Operating current (max.)	< 1000 mA (@ 13.8 V)
Power consumption in standby	< 1 mA
EMC	according to CE
ESD	4 kV contact discharge 8 kV air discharge
CE label	TBD
Operating temperature	- 4 °F to + 158 °F
Storage temperature	- 40 °F to + 185 °F
Weight (approx.)	410 g
Power management	
Startup time from standby to full operation	35 s
Wake-up capability	LS-CAN, KL 15, trigger button
Case	
Dimensions (approx.)	5.91" x 3.62" x 0.98" (150 x 92 x 25 mm)
Operating elements	Home button
State/Active LEDs	yes
Connections	
Side view, from the right	8-pol LEMO socket: Power supply, 1x LS-CAN 2x Gbit Ethernet (RJ45)
Rear side	4-pol audio jack plug stereo out/microphone (3.5 mm) OMTP Mini USB 2.0
Screen	
Size	5"
Resolution	800 x 480
Colors	16.7 million
Luminance	700 cd/m²
Touch function	Resistive, multi-touch

Table 9.1: Data sheet

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10 Abbreviations

Abbreviation	Meaning
blue PiraT	**P**rocessing **I**nformation **R**ecording **A**nalyzing **T**ool
bP	**b**lue **P**iraT
bP2	**b**lue **P**iraT**2**
bP2 HW2.x	**b**lue **P**iraT**2** Hardware 2.x
bPMini	**b**lue **P**iraT Mini
TSL	**T**elemotive **S**ystem **L**ink
TSC	**T**elemotive **S**ystem **C**lient
CAN	**C**ontroller **A**rea **N**etwork
LIN	**L**ocal **I**nterconnect **N**etwork
MOST	**M**edia **O**riented **S**ystems **T**ransport (www.mostnet.de)
ECL	**E**lectrical **C**ontrol **L**ine
MEP	**M**OST **E**thernet **P**acket
USB	**U**niversal **S**erial **B**us
CF	**C**ompact **F**lash
SD	**S**ecure **D**igital
LAN	**L**ocal **A**rea **N**etwork = Netzwerk
FW	**F**irm**w**are
PW	**P**ass**w**ort
SFTP	**S**ecure **F**ile **T**ransfer **P**rotocol
SHA	**S**ecure **Ha**sh
SSL	**S**ecure **S**ockets **L**ayer
TLS	**T**ransport **L**ayer **S**ecurity
TMP	**T**ele**m**otive **P**acketformat
UTC	**U**niversal **T**ime, **C**oordinated
GMT	**G**reenwich **M**ean **T**ime

Table 10.1: Abbreviations

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13 Contact

Telemotive AG

Office München
Frankfurter Ring 115a
80807 München

Tel.: +49 89 357186-0
Fax.: +49 89 357186-520
E-Mail: info@telemotive.de
Web: www.telemotive.de

Sales
Tel.: +49 89 357186-550
Fax.: +49 89 357186-520
E-Mail: sales@telemotive.de

Support
Tel.: +49 89 357186-518
E-Mail: productsupport@telemotive.de
ServiceCenter: https://sc.telemotive.de/bluepirat