



# BLUEPIRAT

BY MAGNA





















## Remote Control Touch User Manual / 01.01.2020

Version 3.4.3

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# 1 LICENSE AGREEMENT

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## 2 PRODUCT LIABILITY

The General Terms and Conditions of Sale and Delivery of MAGNA Telemotive GmbH can be found on our website ([www.telemotive.de](http://www.telemotive.de)) under imprint.



### 3 Overview

This user guide describes the administration of the

- Remote Control Touch
- BLUEPIRAT Remote

of MAGNA Telemotive GmbH.

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 System Client, which is valid for all devices.

This document refers to **firmware version 03.04.03** and the **System Client** from **version 3.4.3**. 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 our Service Center. (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.

**Please note these important instructions about the handling of devices of MAGNA Telemotive GmbH!**

There's a linux system running on the devices and sometimes when the device has a dirty shutdown due to a power break down or unplugging the power supply, the system is corrupt from this time. You know this situation from a PC, when you switch it off some times it maybe will not work any more or show you some mistakes.

In most cases this issue is caught up and repaired by the linux system we use, but sometimes it can happen that the system on the logger is damaged and there's no access to the device any more.

We are optimizing the handling of corrupted systems permanently and are integrating some new enhancements regarding this kind of issues with every new release to save the system. But we can't make the system for 100% save against these influences.

**So please use always the provided mechanism for shutting down the device or the implemented standby function in which the device shutting down when no traffic is detected any more in an adjustable time.**

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## 4 System requirements

### Control Unit

A Windows based Laptop or PC will be used to configure the devices by **System Client**. It also allows to save the recorded data and to use them offline later.

### 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 **System Client** too to ensure that your devices are always up to date.

### BLUEPIRAT2 / BLUEPIRAT2 5E / BLUEPIRAT Mini

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

The **BLUEPIRAT2** is our top-class all-in-one data logger. Seven models cover a wide range of interfaces.

Additionally, the **BLUEPIRAT2 5E** offers improved power management and power backup, five integrated Ethernet ports and super-fast start-up behavior. The BLUEPIRAT2 can be flexibly expanded via [System Link \(TSL\)](#).

The **BLUEPIRAT Mini** is smallest data logger in the world with an outstanding functional scope. It offers a wide range of interfaces, stable temperature behavior, very low energy consumption, four GBit Ethernet ports, and much more. Different BLUEPIRAT Mini can be flexibly expanded to one cluster and therefore handled very easily by using [System Link](#).

### Remote Control Touch

Operate your BLUEPIRAT Mini or BLUEPIRAT2 data loggers safely and comfortably from the driver's or passenger seat. Via System Link our new remote control becomes part of your logger network. One remote control can handle all connected loggers.

### BLUEPIRAT Remote

While Remote Control Touch is just a control unit for handling unique devices or a TSL network, the BLUEPIRAT Remote additional has logger functionality by offering internal storage and some interfaces.

### License

For some additional features 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).

## 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 System Client

[https://sc.telemotive.de/4/uploads/media/TelemotiveSystemClient\\_UserManual.pdf](https://sc.telemotive.de/4/uploads/media/TelemotiveSystemClient_UserManual.pdf)

### User manual for BLUEPIRAT2 / BLUEPIRAT2 5E

[https://www.telemotive.de/4/uploads/media/blue\\_PiraT2\\_UserManual.pdf](https://www.telemotive.de/4/uploads/media/blue_PiraT2_UserManual.pdf)

### User manual for BLUEPIRAT Mini

[https://www.telemotive.de/4/uploads/media/blue\\_PiraT\\_Mini\\_UserManual.pdf](https://www.telemotive.de/4/uploads/media/blue_PiraT_Mini_UserManual.pdf)

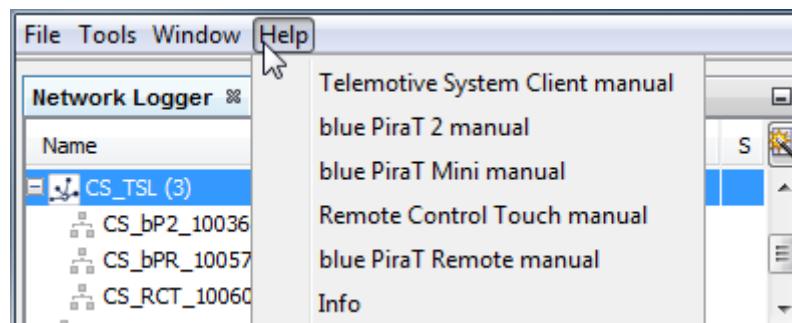
### User manual for Remote Control Touch

[https://sc.telemotive.de/4/uploads/media/RCTouch\\_UserGuide.pdf](https://sc.telemotive.de/4/uploads/media/RCTouch_UserGuide.pdf)

### User manual for BLUEPIRAT Remote

[https://sc.telemotive.de/4/uploads/media/blue\\_PiraT\\_Remote\\_UserGuide.pdf](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**.

## 4.2 Additional features by optional licenses

Additional features can be activated by purchasing and installing licenses. Licenses can be ordered at our sales team. You find the user guides for these additional features in the Service-Center. Currently the following licensed features are available.

Feature	Description
<b>Camera Link</b>	video recording via video server or network cameras
<b>WLAN</b>	supporting wireless LAN (802.11, 802.11a, 802.11n), (802.11ac from FW 02.04.01)
<b>GPS logging</b>	tracking of GPS data <i>(in the moment BLUEPIRAT2 Ver. 1.x only)</i>
<b>Measurements with CCP</b>	CAN Calibration Protocol
<b>Measurements with XCP</b>	Universal Measurement and Calibration Protocol  Currently the functionality for Ethernet (XCP on Ethernet) and the CAN-bus (XCP on CAN) are available.
<b>MOST150 Streaming</b>	logging MOST150 synchronous/isochronous data
<b>MLBevo</b>	The license <b>Connected-Gateway MLBevo</b> enables the recording of data of the ATOP control unit MLBevo via USB to the Telemotive data logger and convert these data with the System Client. <i>(from FW 02.03.01)</i>
<b>Download Terminal</b>	Download Terminal allows an automatization of configured tasks for a defined group of devices. <i>(from FW 02.03.01)</i>
<b>Test automatisation</b>	Interface for connecting to test automation tools. At the moment, the sending of CAN messages is supported. <i>(from FW 02.04.01)</i>
<b>Cellular network</b>	Allows the logger to send status messages over cellular network.  <i>(from FW 03.01.01)</i>

**Table 4.1: Additional features by optional licenses**

## 4.3 Firmware Care

MAGNA Telemotive GmbH invests a great amount in the further development of its products.

For this we regularly provide new functions and enhancements via firmware and client releases.

### Basic conditions

As part of the " Service Product Firmware Care ", new software and firmware versions are made available for download for a limited period of time. This service is available for 12 months from the date of purchasing the **BLUEPIRAT Rapid**. This period can be extended.

For details, please contact your sales partner (see contact at the end of the manual for addresses).

### Affected products

- **BLUEPIRAT Mini**
- **BLUEPIRAT2 5E**
- **BLUEPIRAT2**
- **BLUEPIRAT Remote**
- **Remote Control Touch**
- **BLUEPIRAT Rapid**

### Note:

**Enhancements are only possible in current firmware releases.**

### Attention:

**Please note that updates to main firmware versions (03.00.01 / 04.00.01) need a special update license and can't be flashed to a device without this license.**

To buy these licenses please contact our sales department under [TMO.Sales@magna.com](mailto:TMO.Sales@magna.com) (please find the complete address under Contact on the last page).

## 5 Remote Control Touch / BLUEPIRAT Remote – hardware

This chapter describes the hardware of the **Remote Control Touch** and **BLUEPIRAT Remote**. The position and function of all interfaces, the accessories and the installation of hard- and software are explained.

The **Remote Control Touch** is the remote control and external display device for the BLUEPIRAT Mini and BLUEPIRAT2 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.

The **BLUEPIRAT Remote** has additional some interfaces and internal storage for logging data and can therefore be used as stand alone device.

### 5.1 Position of connectors and operating elements

#### 5.1.1 Top view

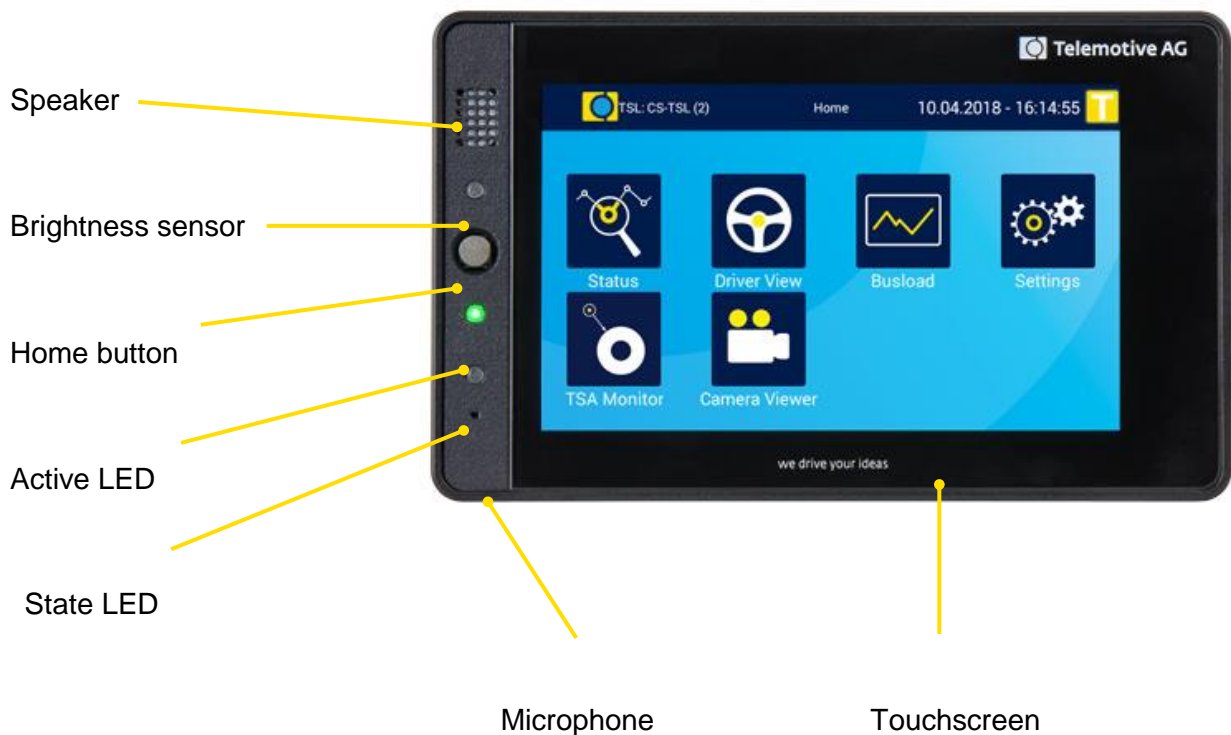
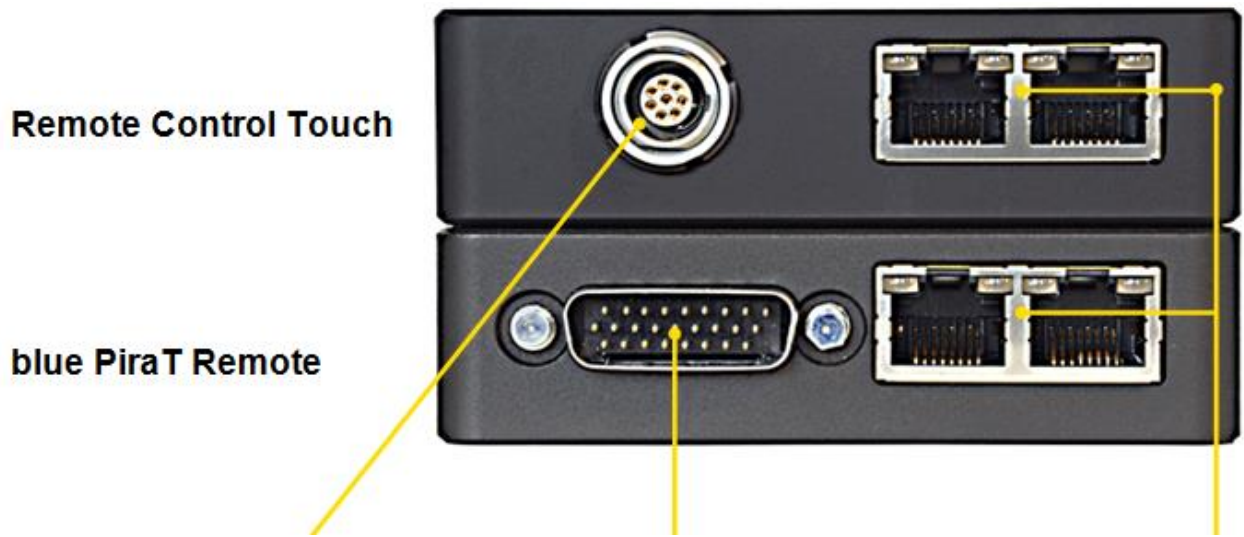


Figure 5.1: Top view with operating elements

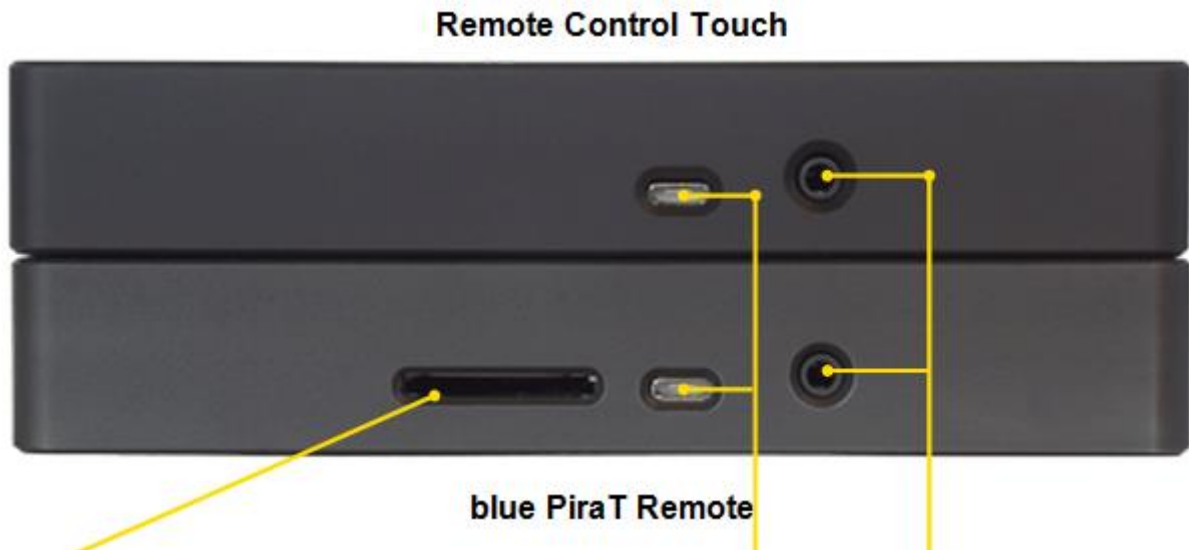
### 5.1.2 Side view, from the right



- 1 8-pol LEMO socket (RCT)    2 26 pol SUB-D (bPR)    3 2x Gbit Ethernet (RJ45)

Figure 5.2: Side view, from the right with connectors

### 5.1.3 Rear side



- 4 SD card slot    5 Micro-USB    6 4-pol audio jack plug  
 stereo out/microphone (3.5 mm)  
 OMTP

Figure 5.3: Rear side view with connectors

## 5.2 Functionality of connectors and operating elements

The functionality of connectors and operating elements 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, safety regulations.

### 5.2.1 Ports

The ports are used to connecting the devices, for example with the power supply.

Port		Cable	Connection with ...
No.	Designation		
1	8-pol LEMO socket (RCTouch only)	Power cable with LEMO connector to banana plug	Power source
2	26 pol SUB-D (bP Remote only)		Power source interfaces
3	2x Gbit Ethernet (RJ45)	Gbit Ethernet cable	Client computer or data logger
4	SD card slot (bP Remote only)		Logging data
5	Micro-USB 2.0	Micro-USB connecting cable	USB devices
6	4-pol audio jack plug stereo out/microphone (3.5 mm) OMTP  (CTIA does NOT work!)	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, for switching the display if necessary.

#### 5.2.2.1 Night mode

If the environment is too dark, the devices automatically switches into night mode. In this view, the surface is displayed in modified colors, so that the driver is not blinded. The night mode will be activated if you drive into a tunnel for example.

### 5.2.3 Home button

The Home button is used to:

- switching the device on or off,
- switching to the **[Home]** screen

## 5.2.4 Speaker

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

## 5.2.5 LEDs

Activity and operating state of the **Remote Control Touch** and **BLUEPIRAT Remote** 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, as long as recording
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
external medium detected (only BLUEPIRAT Re- mote)	green light	red flashing
External medium full	green light	red pulsing

Table 5.2: LED behavior

## 5.2.6 Microphone

The microphone is used to record voice notes on triggers. The quality of the voice recording depends on the ambient environment .

## 5.2.7 Touchscreen

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



## 5.2.8 Micro-USB port

The Micro-USB port can be used in the host-mode.

It can be used for logging data to an external storage (BLUEPIRAT Remote only!) or for connecting a GPS, mobile phone or Wi-Fi module to the logger. Wi-Fi can be used to get access to the logger over the client or to use the feature **Live View**.

### 5.2.8.1 USB storage (at BLUEPIRAT Remote only):

The USB storage has to be formatted in the FAT32, NTFS or ext4 file format. You could connect USB flash drives and external hard drive up to a maximal supply current of 500 mA. External power supplies must not be connected to the hard disk.

If the USB memory is pulled in the operational state, the following problems exists:

- The logger is in an undefined state and will not record any data. Only after rebooting the device behaves as expected.
- The data on the USB memory can then be unreadable when it is removed during a write operation.

If you turn off the BLUEPIRAT Remote with the **[ON / Trigger]** button, you have 5 seconds to remove the medium before the logger can be reawakened.

#### Note:

**MAGNA Telemotive GmbH recommends the testing of every external storage before using it in a measurement. We suggest that especially USB devices with USB 3.0 are sometimes not recognized by the system.**

## 5.2.9 SD card slot (BLUEPIRAT Remote only)

The **BLUEPIRAT Remote** offers the possibility to store data parallel to a removable media as SD card or USB device. The configuration of this feature is described in the System Client user guide.

### Requirements:

Size	At least 4 GB (or a partition at least with this size)
Free memory	At least 3 GB for the circular buffer (only for parallel recording)
File system	FAT32, NTFS or ext4
Write protection	unlocked

The following SD cards have been tested with the Telemotive data loggers and released for use:

Manufacturer	Description	Size	Type
SanDisk	Extreme PRO	64 GB	SDXC
Transcend	Ultimate Speed	16 GB	SDHC
Transcend	Ultimate Speed	32 GB	SDHC
Transcend	Ultimate Speed	64 GB	SDXC
Kingston	SDA3	16 GB	SDHC
Kingston	SD10VG2	32 GB	SDHC
Intenso	3431470	32 GB	SDHC
Intenso	3431490 Professional	64 GB	SDXC
Hama	Class 10 45 Mbps	16 GB	SDHC
Hama	Class 10 45 Mbps	64 GB	SDXC
Extrememory	Performance Class 6	16 GB	SDHC
Extrememory	HyPerformance Class 10	32 GB	SDHC
SanDisk	Extreme	32 GB	SDHC

**Table 5.3: Compatible SD cards**

**If the removable media is detected by the logger, the red State LED starts flashing.**

A write-protected SD memory card will be indicated by the permanent illumination of the red STATE LED.

In addition, the write protection will be highlighted in the network logger window of the System Client with a red labelled exclamation mark and an entry in the bug report "FC\_MS\_READ\_ONLY" with a corresponding note.

Then shut down the bP Mini, unlock the SD card, reinsert it and reboot the device.

**Attention:**

**Removing the SD card without prior shutdown may result in the loss of all recorded data.**

If the SD card is pulled in the operational state, the following problems exist:

- The logger is in an undefined state and will not record any data. Only after rebooting the device behaves as expected.
- The data on the SD card can then be unreadable when the SD card is removed during a write operation.

If you turn off the BLUEPIRAT Remote with the **[ON / Trigger]** button, you have 5 seconds to remove the disk before the logger can be reawakened.

Please find more hints for using the SD card in the manual of the System Client.

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## 5.3 Accessories

The **Remote Control Touch** is supplied with a power cable with LEMO connector to banana plug (length: ~ 1,5 m).

The **BLUEPIRAT Remote** is connected by a 26-pol SUB-D connector to the device and has the cables for the available interfaces integrated in the cable set.

Additional accessories are available for purchase. The following accessories are compatible:

- mounting bracket
- various adapter cables

Please contact our sales department for more information about the accessories.

## 5.4 Installation

The **Remote Control Touch** and **BLUEPIRAT Remote** require a connection to the power supply and one to the client computer.

In order to make full use of all functions of the Remote Control Touch, a connection to at least one BLUEPIRAT data logger is required. This creates a **System Link (TSL)**.

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

### 5.4.1 Cable connection

**Note:**

**Connect the Remote Control Touch and BLUEPIRAT Remote only with devices of MAGNA Telemotive GmbH (BLUEPIRAT2, BLUEPIRAT Mini, Remote Control).**

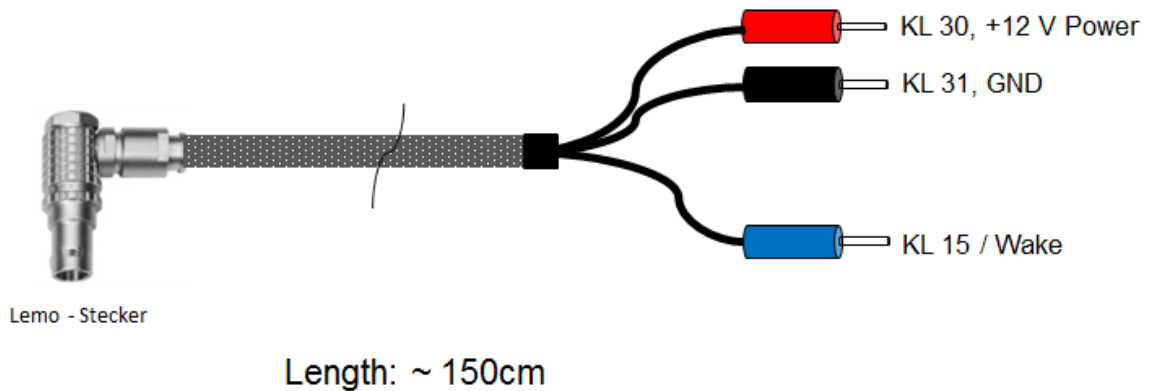
**Note:**

**Make sure that the devices are switched off before disconnecting it from power supply.**

### 5.4.1.1 Power supply for Remote Control Touch

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.

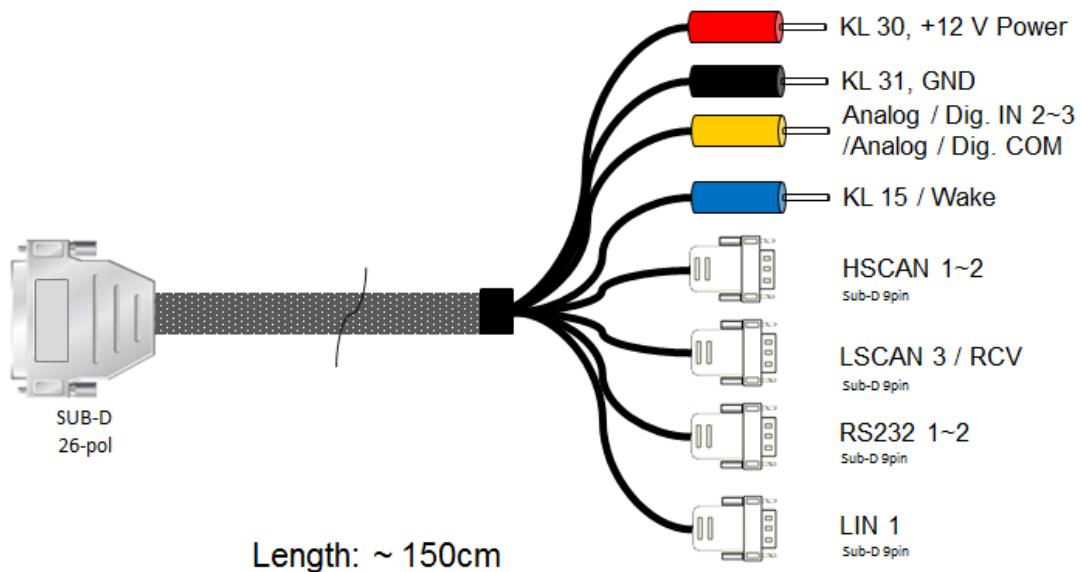


**Figure 5.4: Power cable with LEMO connector to banana plug**

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 Power supply including cable set for BLUEPIRAT Remote

A cable set with 26-pol SUB-D connector to banana plug is required for the connection of the **BLUEPIRAT Remote** to the power supply.



**Figure 5.5: Power cable with 26-pol SUB-D connector to banana plug**

Plug the 26-pol SUB-D connector into the **BLUEPIRAT Remote** and the banana plug into the power supply (**red/Vbat /+/Clamp 30** and **black/GND/-/Clamp 31**).

### 5.4.1.3 In the network

The **Remote Control Touch / BLUEPIRAT Remote** has two Ethernet ports. The loggers to be controlled are connected directly via Ethernet. These loggers must establish a TSL network with the Remote Control Touch / BLUEPIRAT Remote in order to be recognized. The client computer can be connected to a free Ethernet port of the TSL chain.

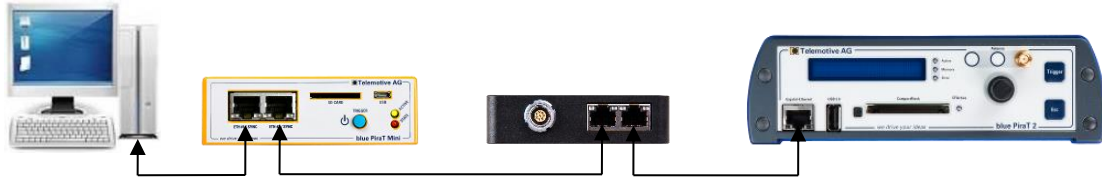


Figure 5.6: TSL network with one bPMini, one RCT and one bp2 (e.g.)

## 5.5 System Client

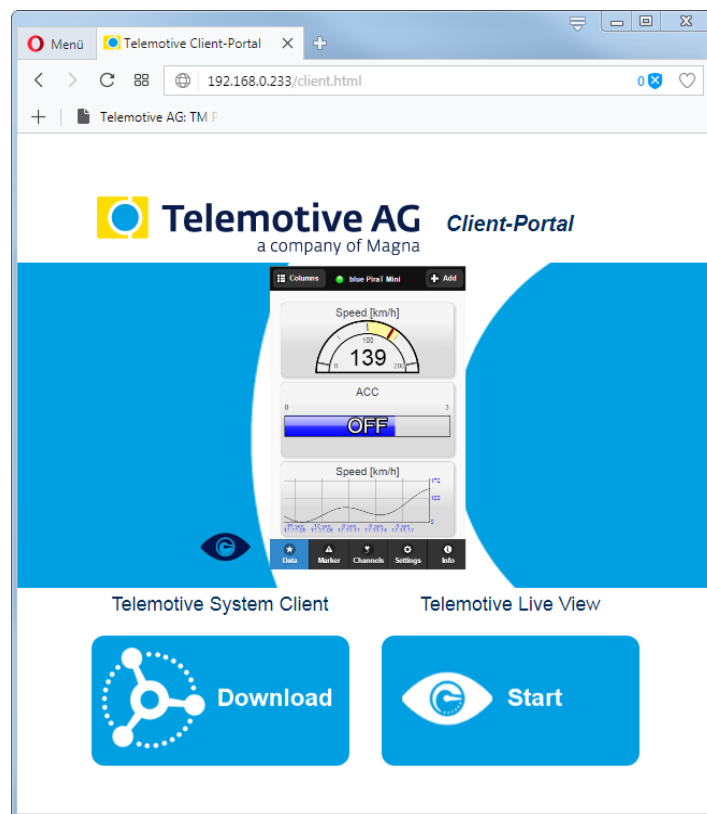
**Note:** When delivered, the Remote Control Touch / BLUEPIRAT Remote is configured as Automatic DHCP configuration for TSL with IP 192.168.0.233.

Open your internet browser.

Enter the IP address of the Remote Control Touch / BLUEPIRAT Remote 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 5.7: Client Portal**

**Note:**

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

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

Follow these steps, depending on your browser:

Browser	Proceeding
<b>Internet Explorer</b>	Click <b>[Save]</b> , to locally save the file on your system. Click <b>[Accomplish]</b> .
<b>Mozilla Firefox</b>	Click <b>[Save file]</b> , 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]**.

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



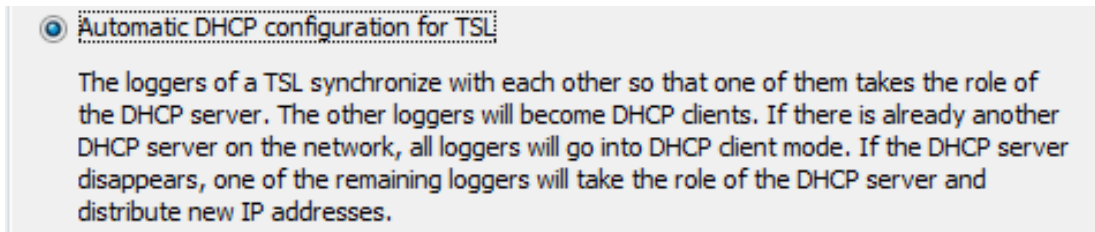
**Figure 5.8: Shortcut to System Client**



## 5.6 Connecting the RCTouch / bP Remote with a data logger

### 5.6.1 Configure the network settings

All Telemotive devices are configured as **Automatic DHCP configuration for TSL with IP 192.168.0.233** by default:



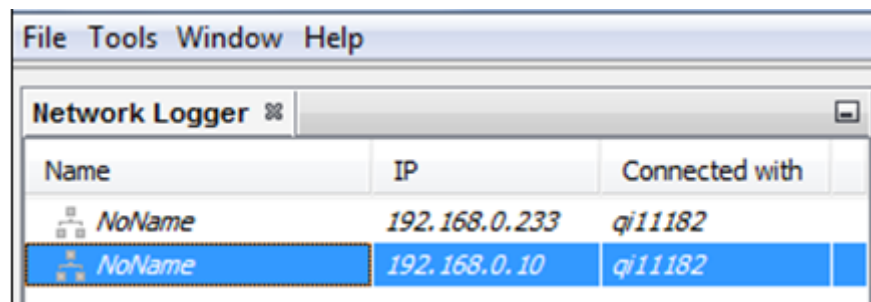
**Figure 5.9: Automatic DHCP configuration for TSL**

So the Network settings have NOT to be modified!

If your environment needs other network settings. You can modify them by yourself.

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

In our example we configured the **Remote Control Touch / BLUEPIRAT Remote** 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 **System Client manual (Name)** you can see how to give names for the devices. This might be helpful for better clarity.



Name	IP	Connected with
NoName	192.168.0.233	qi11182
NoName	192.168.0.10	qi11182

**Figure 5.10: Viewing the devices in the client**

## 5.6.2 Activating System Link (TSL)

In the delivery status and as default values TSL is just activated!

But for sure you can modify these settings at these devices by yourself:

You can activate it by clicking **[TSL active]** like you can see in the following picture. In the **System Client manual (Establishing and configuring a TSL network)** you can find more details about TSL.

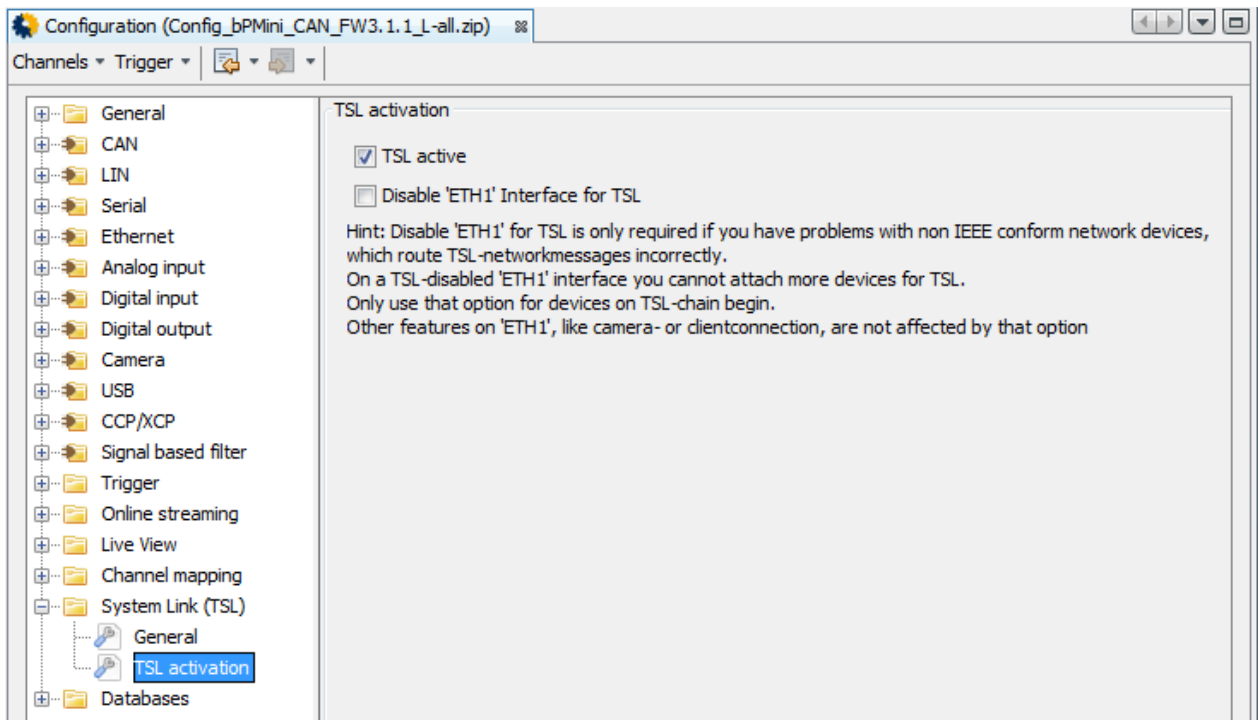


Figure 5.11: Activating TSL

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

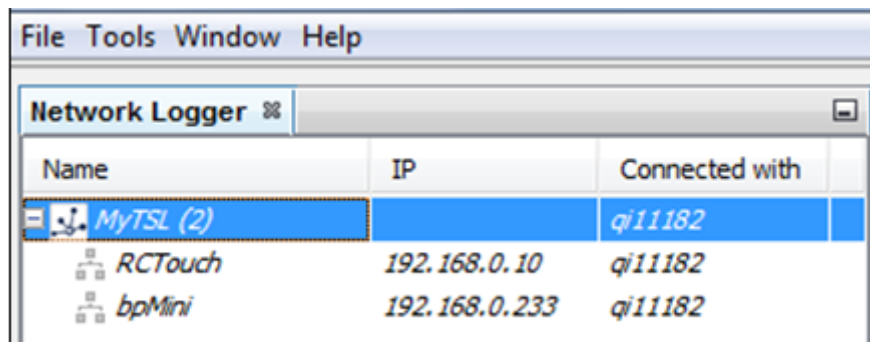


Figure 5.12: Representation of the TSL cluster in the client

## 5.7 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: => Automatic DHCP configuration for TSL 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.
- The network settings will be set back to default

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 / BLUEPIRAT Remote is ready when:

- The view **[Driver view]** 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 **System Client** manual

## 5.8 Wake up the Remote Control Touch over KI 15

In order to start the Remote Control Touch in a TSL network with the other devices, it can be waked up via KL 15.

We recommend the following configuration:

- On a device which is woken up via a data bus, the Initial value is set to 1 on a digital Output e.g. for **DigitalOut #2**. This means that it becomes active as soon as the logger starts up.



Figure 5.13: Setting DigitalOut #2 to 1

- **The DIG OUT #2 socket** of the logger is connected directly to the **KI 15 connector** of the **Remote Control Touch** and wakes it up.
- **KI 15** on the Remote Control Touch is configured to **[Wakeup on clamp 15]**.

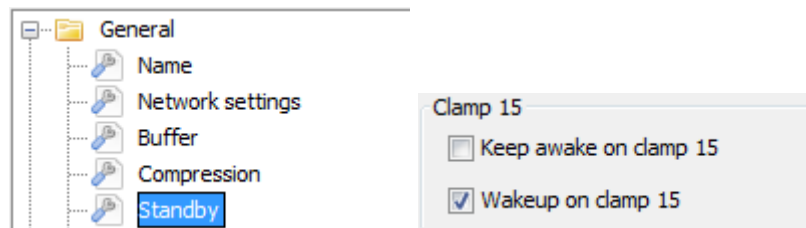


Figure 5.5.14: Wakeup on clamp 15

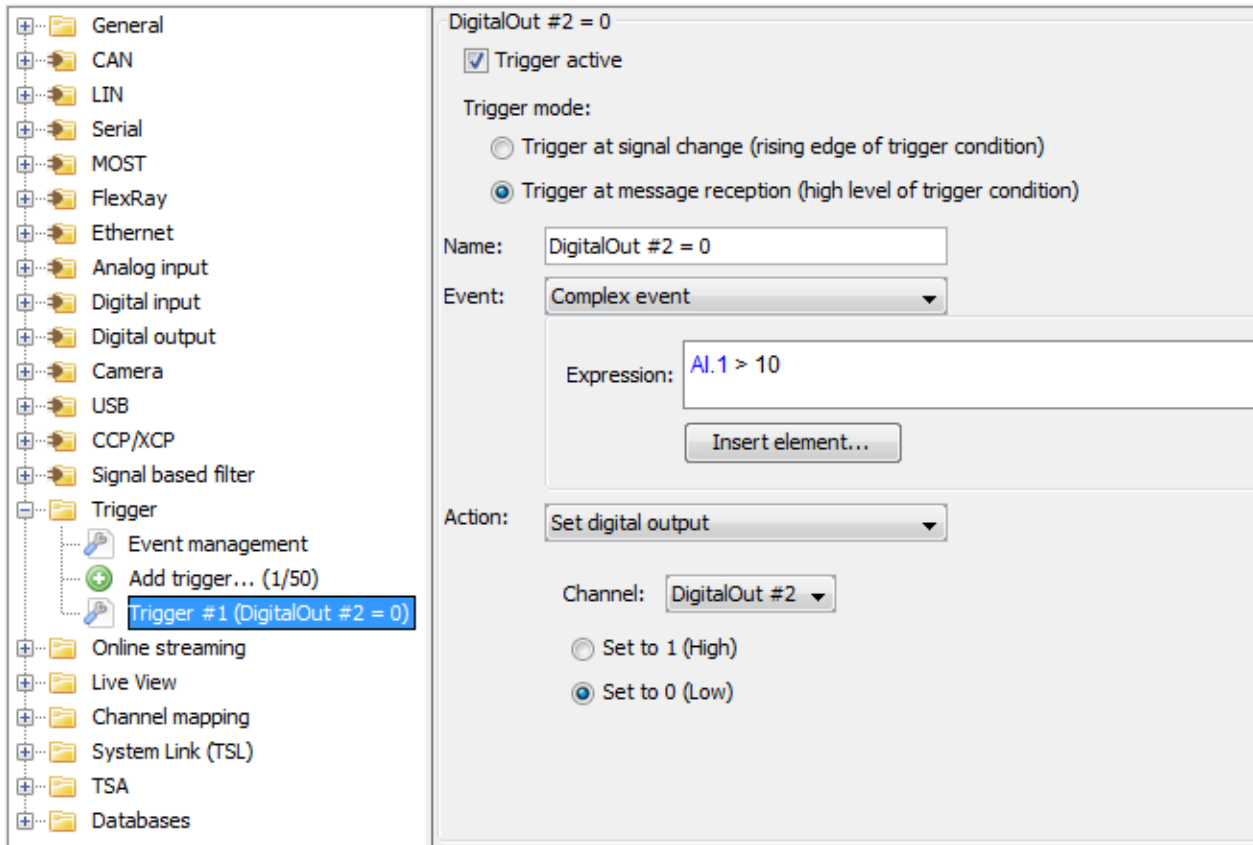
As long as a participant of the TSL network receives data via a channel for which [Keep awake on busload] is activated the TSL devices hold each other awake, therefore the option **[Keep awake on clamp 15]** should be deactivated here!

### 5.8.1 Configuration before firmware version 03.02.01

The possibility of configuring clamp 15 was implemented in firmware version 03.02.01 first, therefore a bypass solution is necessary for older firmware versions, since the connection is not permanently kept awake with clamp 15.

To do this, **DigitalOut #2** is set to **0** on the logger via a **complex trigger** as when the logger is started.

- New Trigger => [x] Trigger at message reception
- Complex event => Expression:  $AI.1 > 10$
- Action: [set digital output] => Channel: DigitalOut #2 => Set to 0 (low)

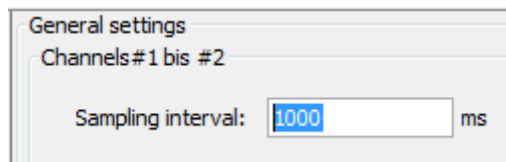


**Figure 5.15: Resetting DigitalOut #2 to 0**

Since **Analog #1** only measures the internal voltage, the event occurs as soon as the logger starts up and the voltage rises above 10 V ( $AI1 > 10$ ). The triggers are only processed after a certain boot time of the logger, so that the signal at KL 15 is enough to wake up the Remote Control Touch before it is set to 0 again via the trigger, so that the devices are not kept permanently awake.

**Attention: The sampling rate of the analog input must be set to 1000 ms or higher, otherwise the permanent queries via the trigger will cause a heavy load on the system!**

Configuration => Analog input => General settings



**Figure 5.16: Sampling interval of Analog input #1**

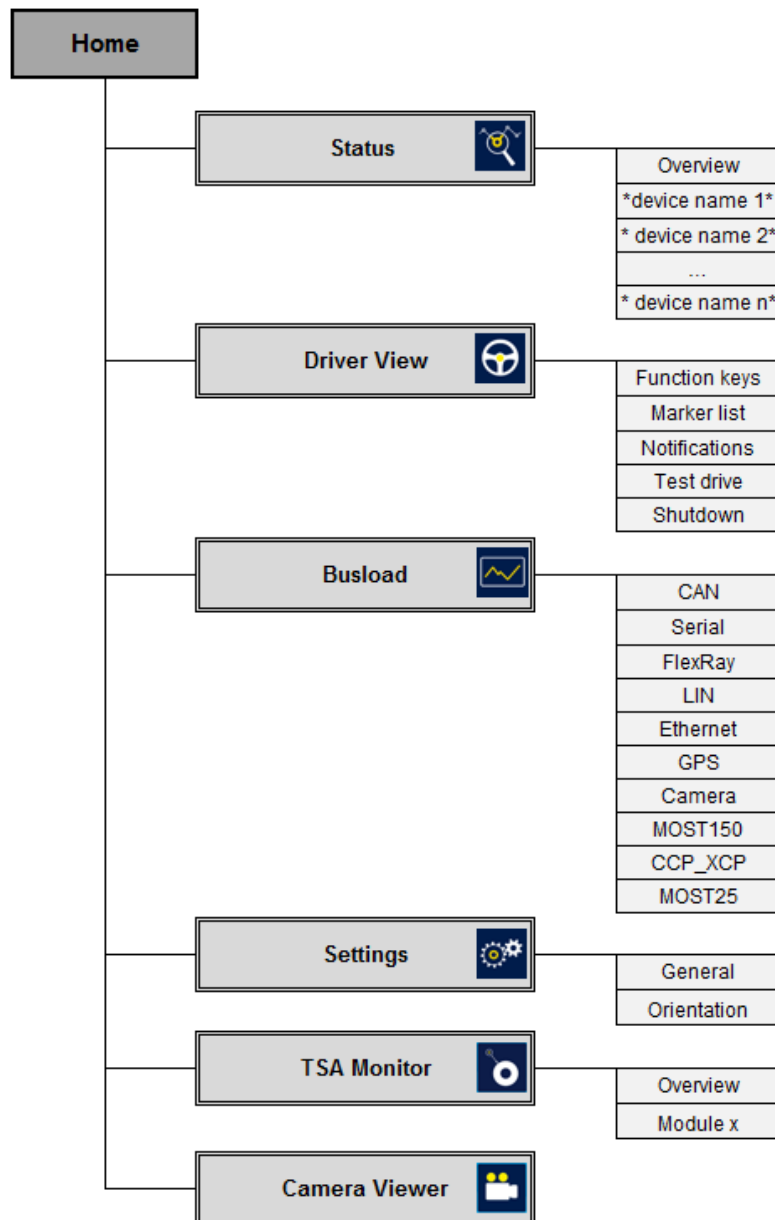
**This workaround solution with the trigger is no longer necessary from firmware version 03.02.01!**

## 6 User Interface

This chapter describes the application setup and the layout of the individual views as well as the windows inside.

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

The next figure 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.

## 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.

The screenshot shows the application interface with three main components labeled:

- Header bar:** Contains a menu icon, the text "TSL: TSL\_2\_4 (4)", the status "Status", the date and time "29.06.2016 - 10:36:22", and a yellow trigger button with a white 'T'.
- Window:** A table with a blue header and white rows. The header row contains "Trigger Count: 8". The table has columns for "Logger", "IP", "Status", "Type", and "FW". The data rows are:
 

Logger	IP	Status	Type	FW
RCT_2_4	192.168.0.90	OK	RC Touch	02.04.00.180
bP2_WLAN	192.168.0.233	OK	bP2	02.04.00.180
bPMini_LIN_DUT193	192.168.0.89	OK	bP Mini	02.04.00.180
- Tab bar:** Located at the bottom, it contains several tabs: "Overview", "RCT\_2\_4", "bP2\_WLAN", "bPMini\_LIN\_DUT193", and "bPMini\_FlexRay\_DUT".

Figure 6.2: Components of the application views

### 6.1.1 Header bar

The header bar contains in each view:

- the labeling of the current view and



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



- a trigger button



In the <Home> view:



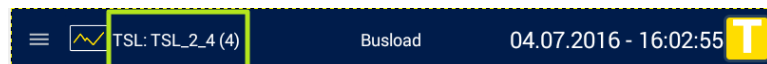
Is located to the left of the Telemotive logo.

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.



### 6.1.1.1 Warning messages

Here you see some samples of warnings, which are displayed on the top of the display.

When the available memory runs out of free capacity, a yellow warning is shown at the header bar at a filling level of 75 %.



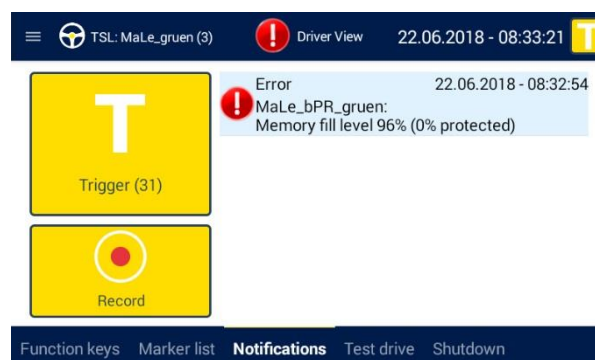
From a filling level of 95 % the header bar shows a red error icon.



New trace data are still recorded, when the circular buffer is active but older data will be deleted part by part. For more information about the **circular buffer** please look at the manual of the System Client.




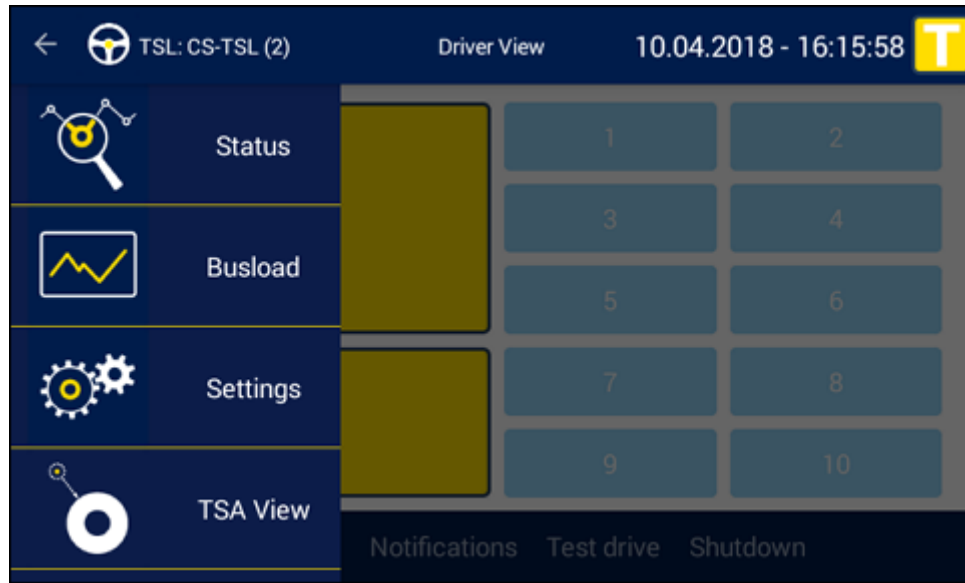
The warning is usually linked directly to the page on which the warning is then described in detail. If you tap on the title bar at the top in this example, the display changes directly to **[Driver View] => [Notifications]**, where a warning about the filling level of a TSL member is displayed.





## 6.1.2 Side menu

Over the button  on the left of the header bar you can access the other applications.



**Figure 6.3: Unfolded page menu**

- The side menu is closed by the following actions:
- Tap the arrow on the top left in the header bar
- Tap in the unfolded side menu
- Tap the area to the right of the unfolded side menu

## 6.1.3 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.

**CAN** Serial LIN Ethernet Camera

## 6.2 Applications |

An icon has been set for each of the applications to start 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.

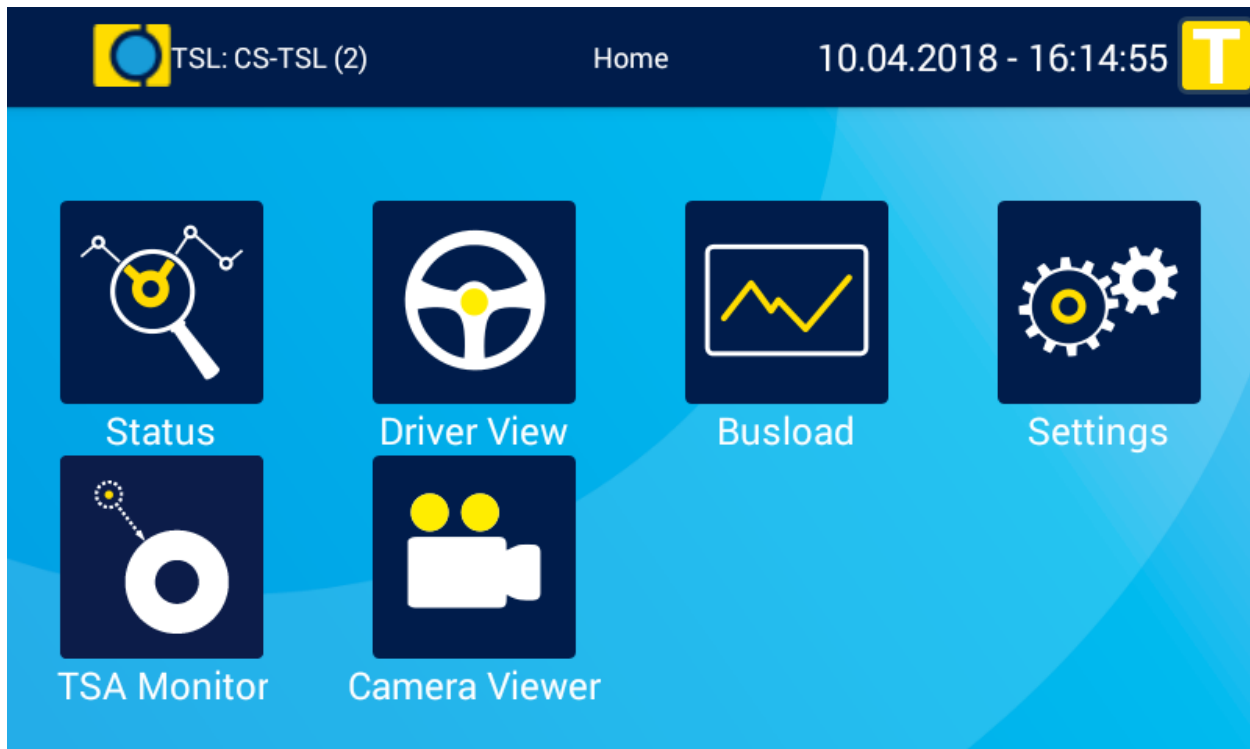


Figure 6.4: Home view







Icon	Name	Function
	Status	Display of information on the connected devices
	Driver View	Management of the function keys, markers and voice notes
	Busload	Display of all available buses and their channels
	Settings	Adjustment of backlight and volume
	TSA Monitor	Display of TSA modules <i>(from Release 3.2.1 Enh. 10869)</i>
	Camera Viewer	Live view of an connected camera <i>(from Release 3.2.1 Enh.932)</i>

Table 6.1: Application overview

## 6.2.1 The application [Status] |



Display of information on the connected devices

The application **Status** contains minimum two tab sheets: the tab sheet **[Overview]** and the tab sheet of the Remote Control Touch / BLUEPI-RAT Remote with the name assigned in the System Client.

If more devices in a TSL network are connected, each device is assigned a tab sheet named after it.

### 6.2.1.1 Status - Overview

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

Trigger Count: 3				
Logger	IP	Status	Type	FW
RCT	10.64.76.204	OK	RC Touch	02.04.00.190
bPMini_MOST150	10.64.76.173	OK	bP Mini	02.04.00.190

Gerätename      IP-Adresse      Gerätstatus      Gerätetyp      Firmwareversion

**Overview**   RCT   bPMini\_MOST150

Figure 6.5: Tab sheet “Overview”

### 6.2.1.2 Status - \*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.

- 1 Device name
- 2 Configuration name

TSL: CS_TSL (3)		Status	03.08.2016 - 10:11:15		T
Logger:	1 CS_bPR_1005740	Config:	2 default		
Network:	3 IP 192.168.0.233 Subnet 255.255.255.0	4 DHCP Server	5 Terminal-IP 10.1.215.80 Subnet 255.255.0.0		
Memory:	6 9 GB	7 4% filled	8 <1% protected		
Status:	9 OK		10		
Overview CS_bPR_1005740 CS_bP2_1003696 CS_RCT_1006009					

- 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

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

**Figure 6.6: 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.**

TSL: MaLe_blaue (2)		Status	26.10.2017 - 14:05:17		T
Logger:	bPM_LIN_MaLe_3_2_1	Config:	default		
Network:	IP 10.23.224.176 Subnet 255.255.240.0	TSL IP autoconf	Terminal-IP 10.1.205.17 Subnet 255.255.0.0		
Memory:	51 GB	100% filled	<1% protected		
Status:	RING				
Overview bPM_LIN_MaLe_3_2_1 MaLe_RCT_blaue					

**Figure 6.7: Device status with error message when memory runs out of space**

## 6.2.2 The application [Driver View] |



Management of the function keys, markers and voice notes

The application **Driver View** is used for setting triggers, recording voice notes or pressing the function keys. Further functions are overviews of existing markers and hints, administration of test drives and shutdown the TSL network.

### 6.2.2.1 Driver View – Function keys

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

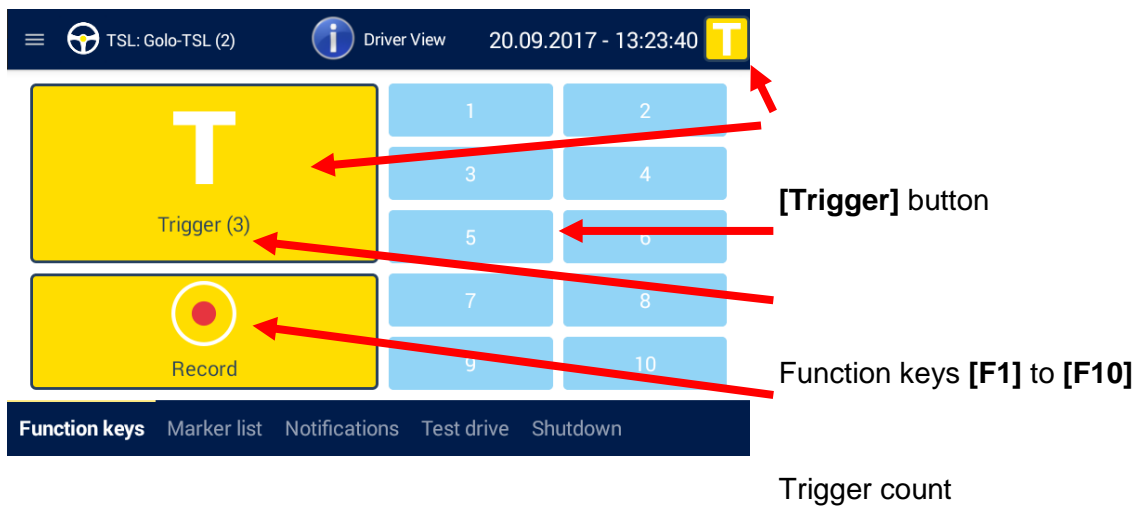

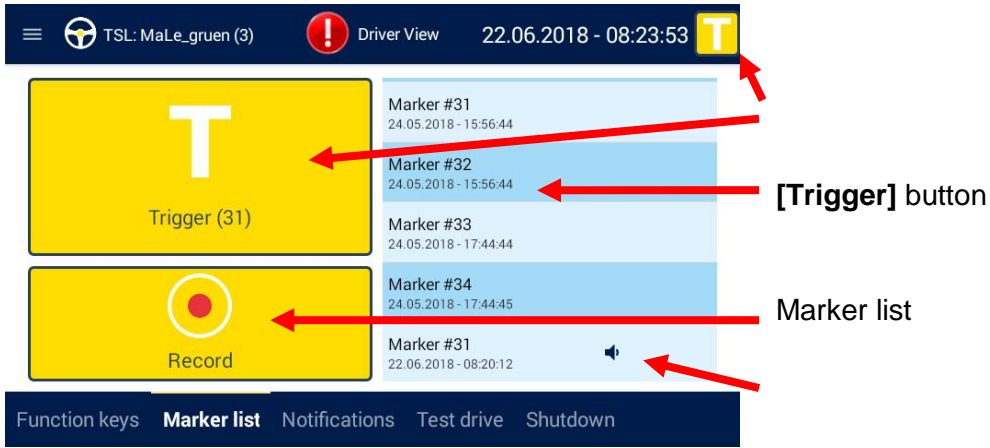


Figure 6.8: Tab sheet “Function keys”

### 6.2.2.2 Driver View – Marker list

The window of the tab sheet **[Marker list]** 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.



**[Trigger]** button

Marker list

**[Record]** button

Button to the voice note

**Figure 6.9: Tab sheet “Marker list”**

### 6.2.2.3 Driver View – Notifications

The tab **[Notifications]** shows on the left side again the Trigger- and Record-button and on the right side some notifications. These can be as well actions which are initialised by the client as warnings and errors of the devices.

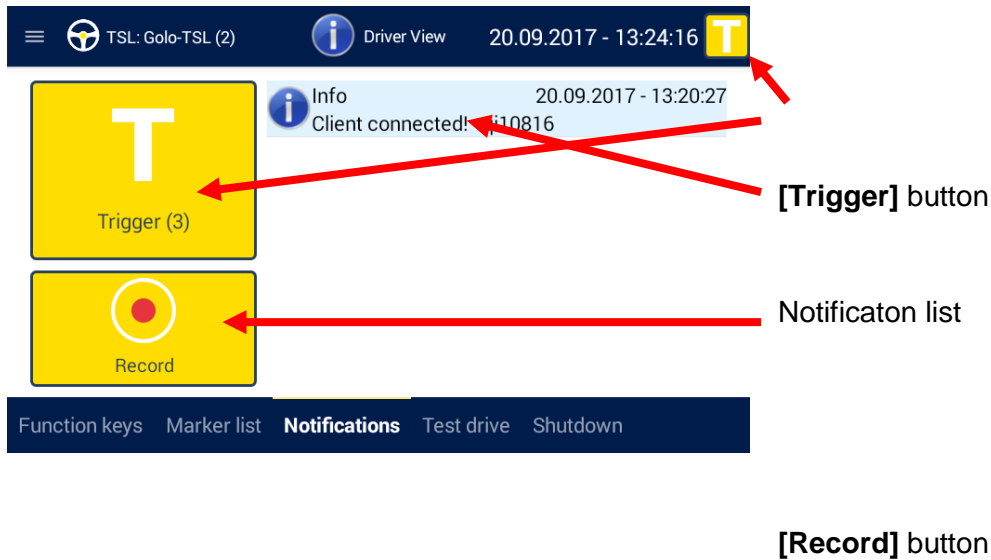


Figure 6.10: Tab sheet “Notifications”

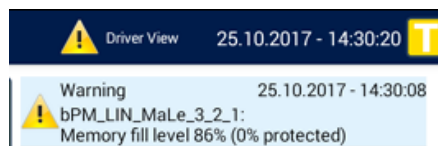


Figure 6.11: Tab sheet “Notifications”: Memory fill level from 75 %

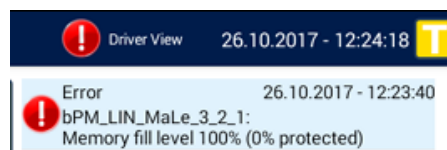


Figure 6.12: Tab sheet “Notifications”: Memory fill level from 95 %

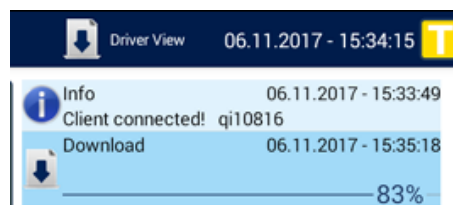


Figure 6.13: Tab sheet “Notifications”: Download

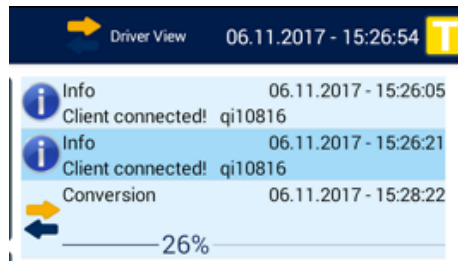


Figure 6.14: Tab sheet “Notifications”: Conversion

### 6.2.2.4 Driver View – Test drive

On the tab [Test drive] you can start test drives which can be analysed separately by the System Client.

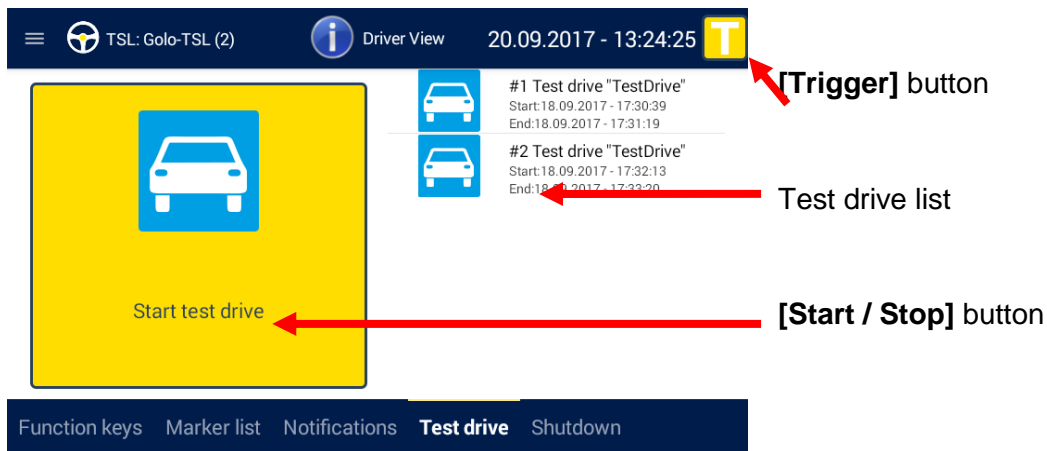


Figure 6.15: Tab sheet “Test drive”

After pressing [Start Test Drive] a new page appears where the settings for the test drive can be set.

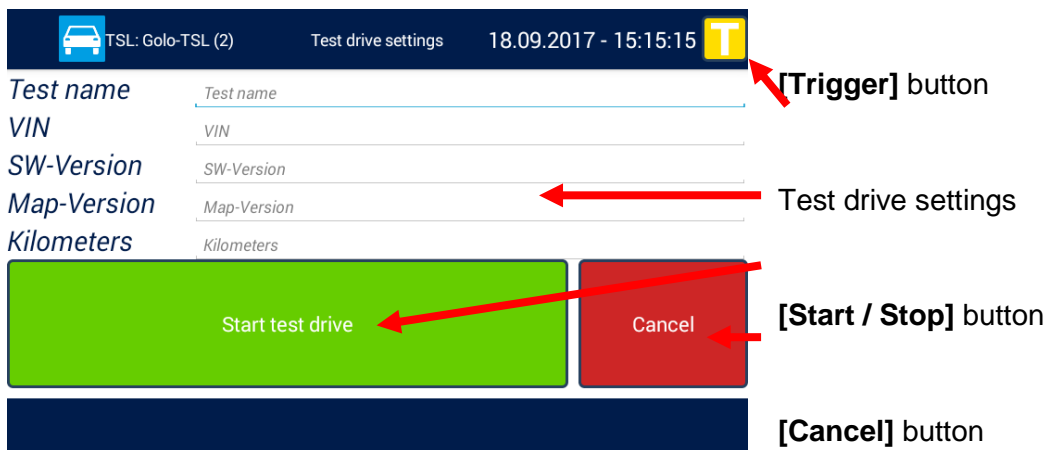
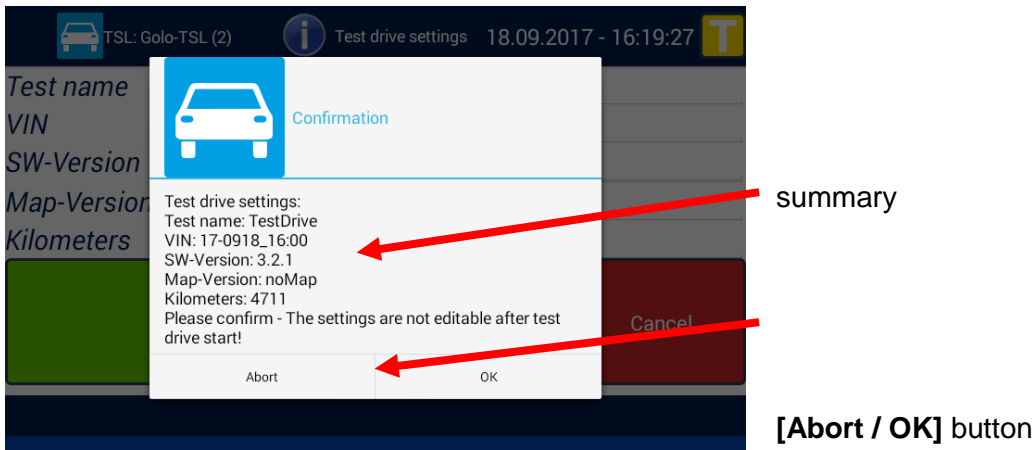


Figure 6.16: Tab sheet “Test drive settings”

If all needed details are entered, the site can be left by the green button [Start Test Drive] to reach an overview, where the test drive can be started with [OK], or cancelled with [Cancel].

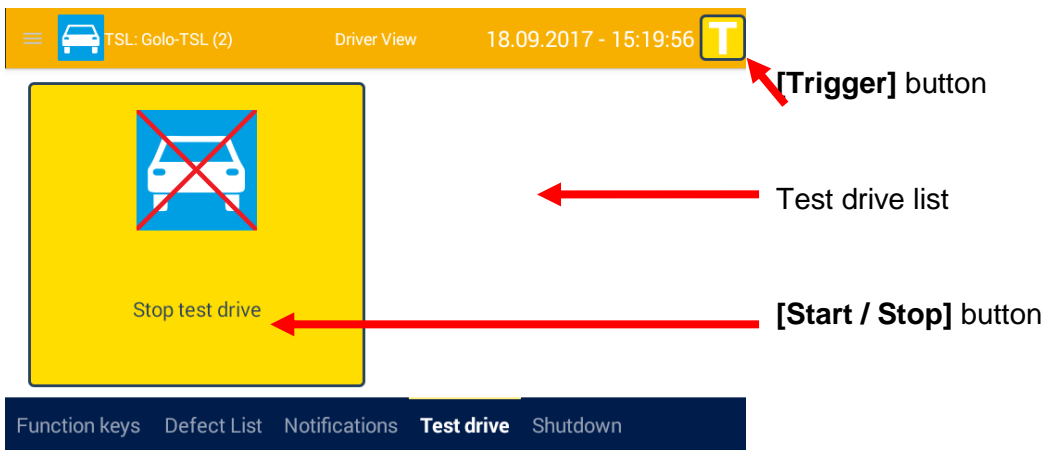




**Figure 6.17: Test drive settings “Confirmation”**

When the test drive is running, the recording can be stopped by the button **[Stop test drive]**. The test drive is even active, when the TSL cluster goes into standby in the meantime.

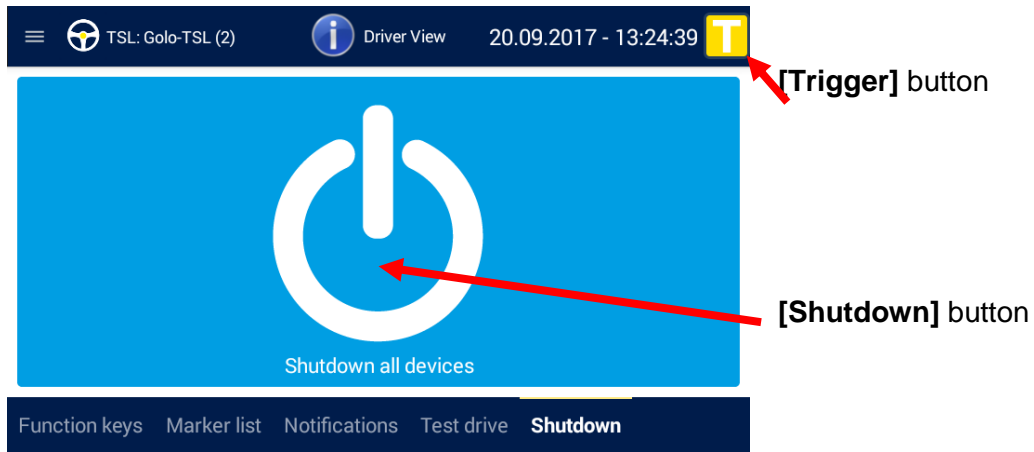
During a test drive, the title bar is orange and indicates permanently that a test drive is active.



**Figure 6.18: “Stop test drive”**

### 6.2.2.5 Driver View – Shutdown

The whole TSL cluster can be shut down at once, with the button on the tab **[Shutdown]**



**Figure 6.19: Tab sheet “Shutdown”**

### 6.2.3 The application [Busload] |



Display of all available buses and their channels

The application **Busload** contains one combined tab sheet for each available interface of the connected loggers. The tab sheets are named after the respective bus interface.

If multiple loggers with active GPS / MOST25 / MOST150 are connected, each GPS resp. MOST interface is assigned a tab sheet.

#### 6.2.3.1 Busload - 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]**):

Id	Name	Busload
#1	HSCAN-1	0 %
#2	HSCAN-2	0 %
#3	HSCAN-3	0 %
#4	HSCAN-4	0 %

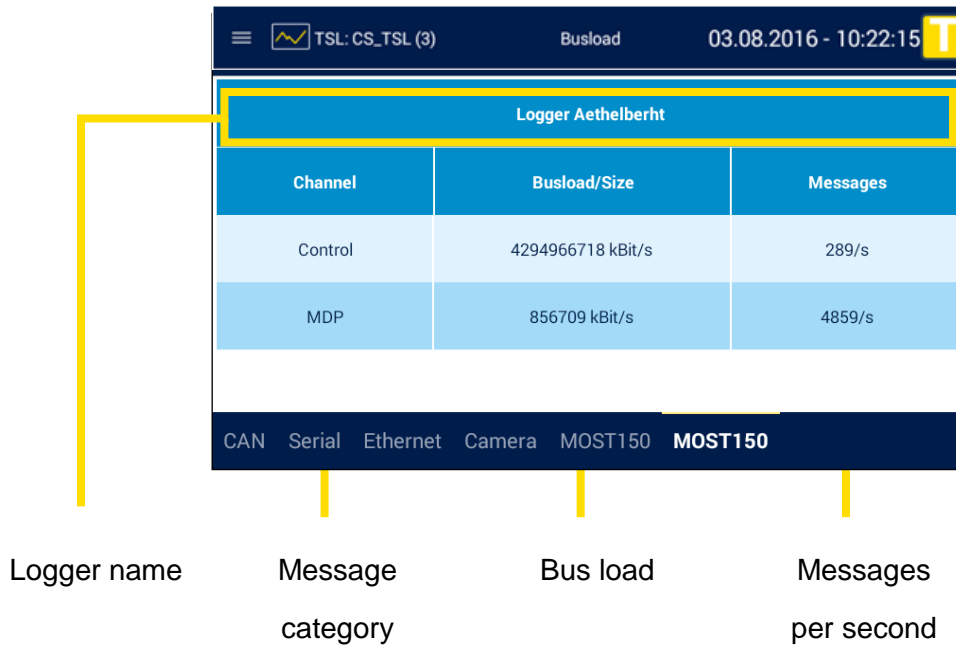
Navigation bar: CAN | Serial | FlexRay | LIN | Ethernet | Camera | MOST150

Labels: Channel number, Channel name, Bus load

Figure 6.20: Tab sheet “CAN”

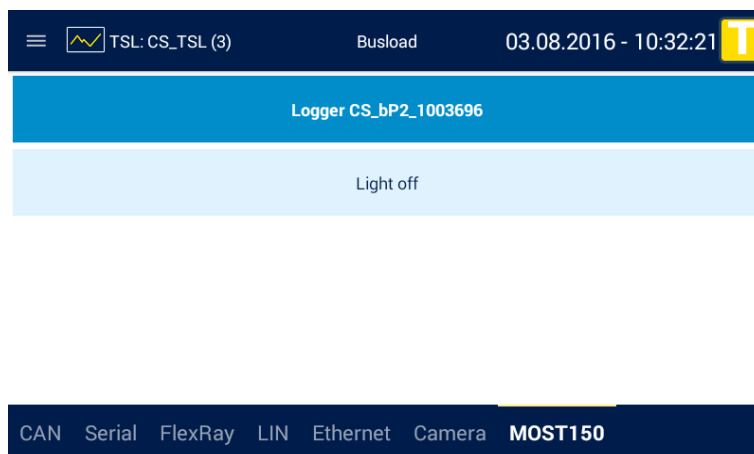
### 6.2.3.2 Busload - MOST150

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



**Figure 6.21: 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 6.22: Tab sheet “MOST150”: Light off**

In MOST150 the following categories of messages exist:

Category	Meaning						
<b>Control</b>	Control data; for the passing of control messages; transmits up to 384 data byte						
<b>MDP</b>	MOST Data Packet; transmits up to 1524 data byte						
<b>MEP</b>	MOST Ethernet Packet; for the passing of Ethernet messages; transmits up to 1506 data byte						
<b>Streaming Channel/Channels</b>	Synchronous data range; transmits up to 372 data byte						
	<table border="1"> <thead> <tr> <th>Channel</th> <th>Busload/Size</th> <th>Messages</th> </tr> </thead> <tbody> <tr> <td>*Number of streaming channels* Streaming Channels</td> <td>*Bus load in bytes* B</td> <td>(remains empty)</td> </tr> </tbody> </table>	Channel	Busload/Size	Messages	*Number of streaming channels* Streaming Channels	*Bus load in bytes* B	(remains empty)
	Channel	Busload/Size	Messages				
*Number of streaming channels* Streaming Channels	*Bus load in bytes* B	(remains empty)					
With only one streaming channel, the display under “Channel” is restricted to “Streaming Channel”.							

Table 6.2: Message categories

### 6.2.3.3 Busload - GPS

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

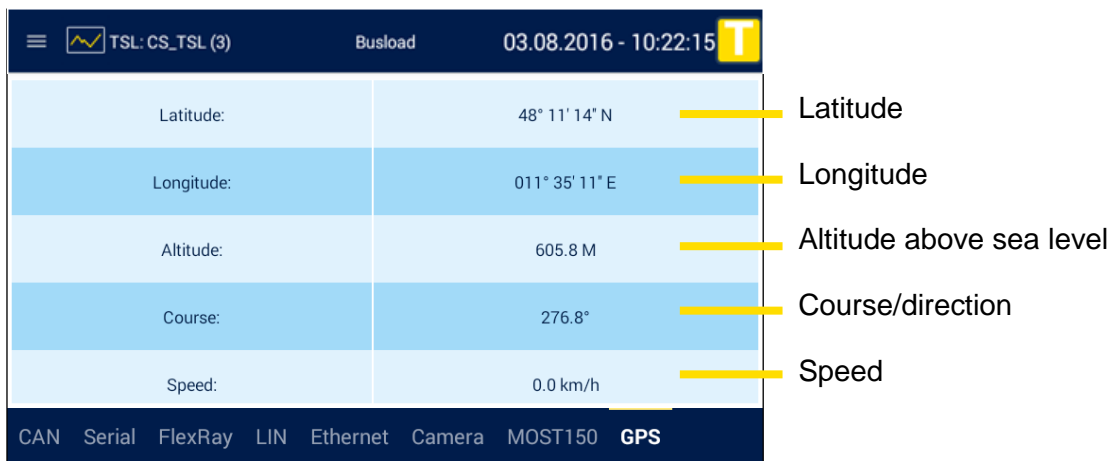
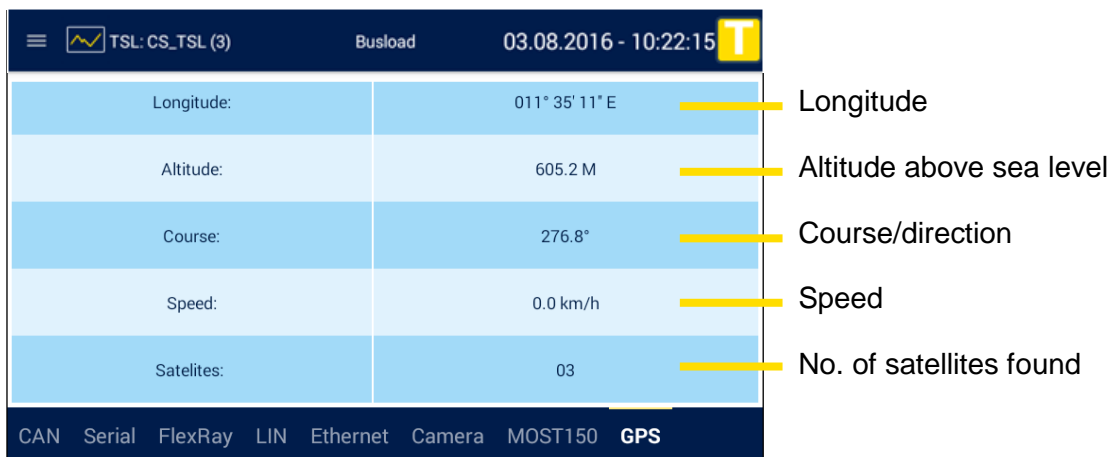


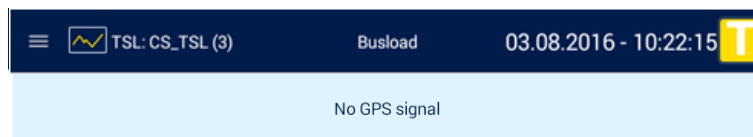
Figure 6.23: Tab sheet “GPS”



**Figure 6.24: Tab sheet “GPS” – continuation**

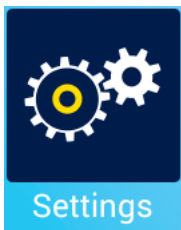
If the window contains only the display of “No GPS signal”, this may be for at least one of the following reasons:

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



**Figure 6.25: Tab sheet “GPS”: No GPS signal**

### 6.2.4 The application [Settings] |



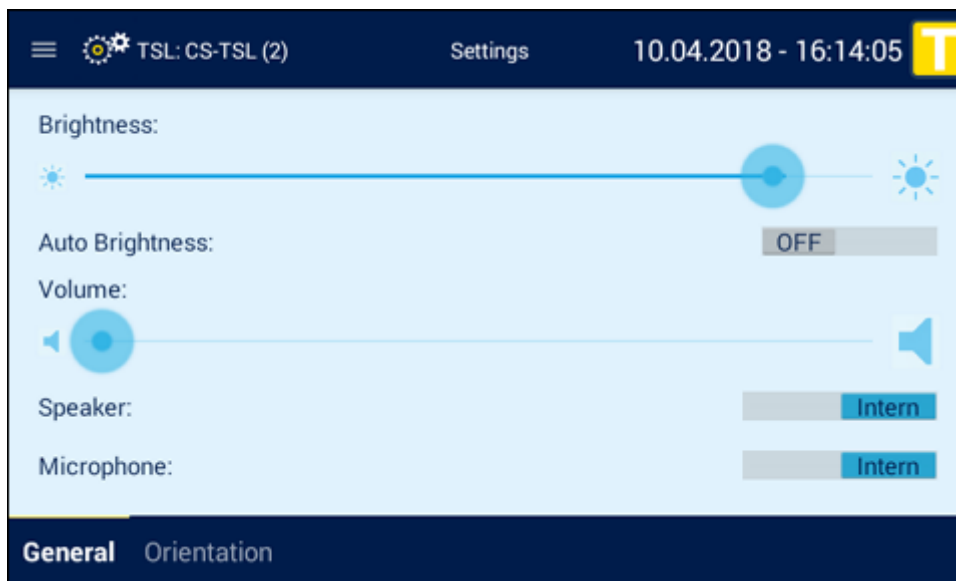
Adjustment of backlight and volume

The application **Settings** can be used for adjusting the brightness of the display as well as the volume of the audio playback. The interfaces of microphone and loudspeaker can be defined here too.

Via Settings, the display can be rotated by 180° too.

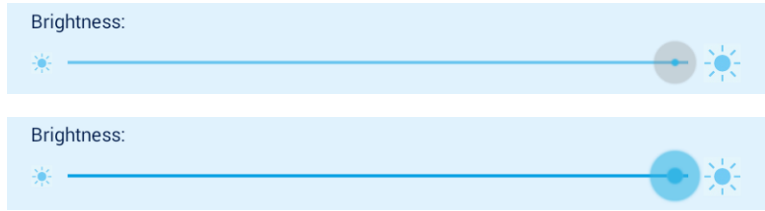
#### 6.2.4.1 Settings - General

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



**Figure 6.26: The view [Settings] => [General]**

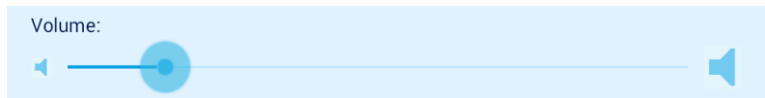
1. Brightness scale with brightness slider



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
<b>Brightness scale with brightness slider</b>	Depending on the position of the slider on the scale, if the <b>[OFF]</b> button is visible, the backlight is: <ul style="list-style-type: none"> <li>• dimmed (left) or</li> <li>• intensified (right).</li> </ul>
<b>[ON] button</b>	Brightness is automatically adjusted. Brightness scale with brightness slider is inactive.
<b>[OFF] button</b>	Brightness is adjusted according to the position of the brightness slider on the brightness scale. Brightness scale with brightness slider is active.
<b>Volume scale with volume slider</b>	Depending on the position of the slider on the scale, the volume is: <ul style="list-style-type: none"> <li>• decreased (left) or</li> <li>• increased (right).</li> </ul>
<b>[Intern] button</b>	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).
<b>[Extern] button</b>	External hardware of the connected accessories is actuated.

**Table 6.3: Operating elements of the tab sheet “General”**

**Note:**

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



### 6.2.4.2 Settings – Orientation

Sometimes it makes sense during installation to mount the cables in a certain direction. In order to install the device more flexibly in this case, the display can be rotated by 180 °.

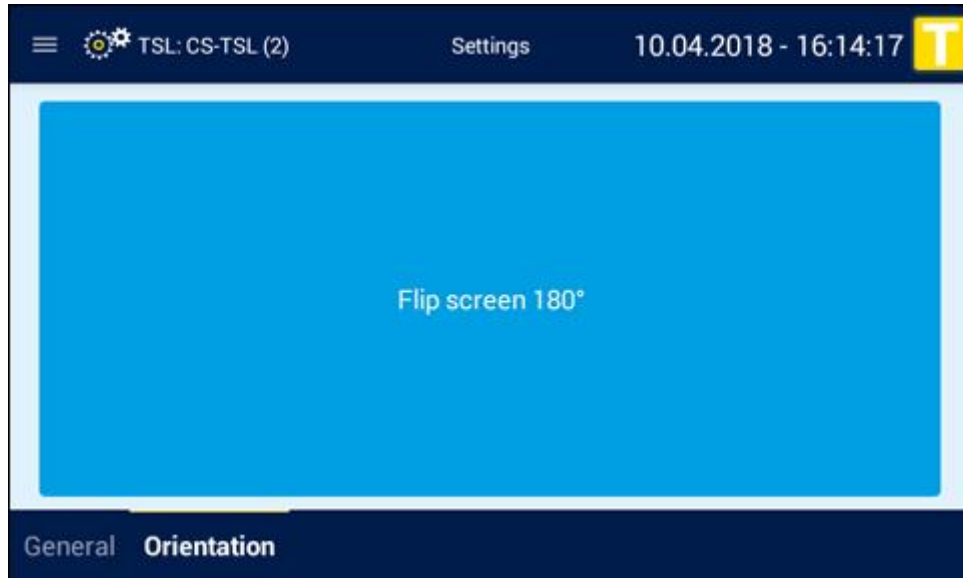


Figure 6.27: The view [Settings] => [Orientation]

The screen will rotate after pushing the big blue button [Flip screen 180].



Figure 6.28: Screen flipped at 180°

## 6.2.5 The application [TSA Monitor] |



Display of TSA modules

Since release 3.4.1 the RCTouch | BLUEPIRAT Remote offers the ability to show installed TSA Modules with the application **TSA Monitor**.

You'll find more information about TSA in the manual of the System Client.



Figure 6.29: Overview of installed TSA modules

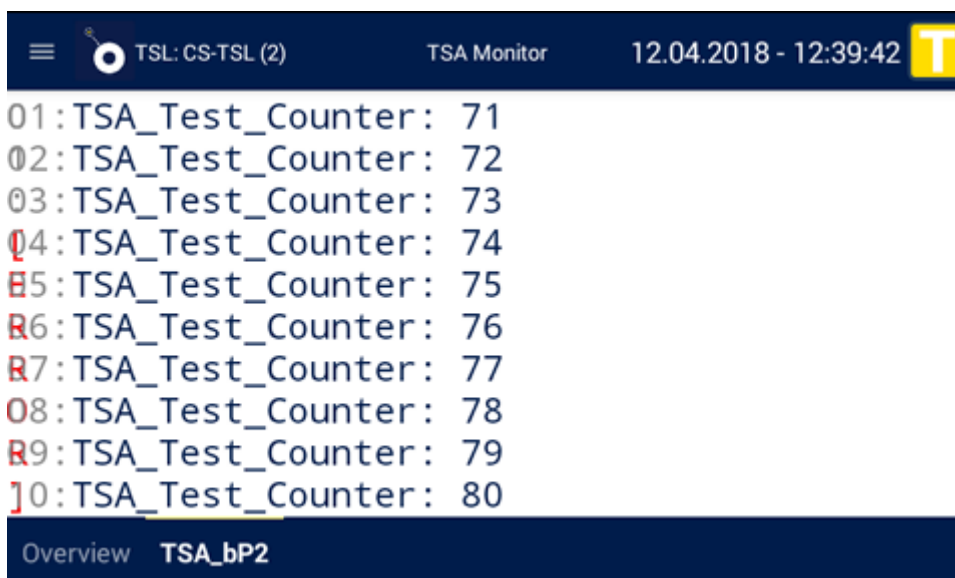


Figure 6.30: details of an installed TSA module

## 6.2.6 The application [Camera Viewer] |



Live view of an connected camera

The application **Camera Viewer** shows a liveview from all available cameras in the TSL cluster.

From firmware release 3.2.1, the live images of connected cameras can be shown on the display too.

This feature is implemented for:

- Mounting and adjusting the camera in a vehicle

Showing the video data permanently is in theory possible but not recommended cause this will generate too much traffic between the devices and can disturb the TLS network.

To see the pictures from the cameras open the **[Camera Viewer]** application from the **[Home]** screen and the configured cameras are displayed there in a list.

**Note: This overview shows all configured cameras, independent if the camera is just connected or not.**

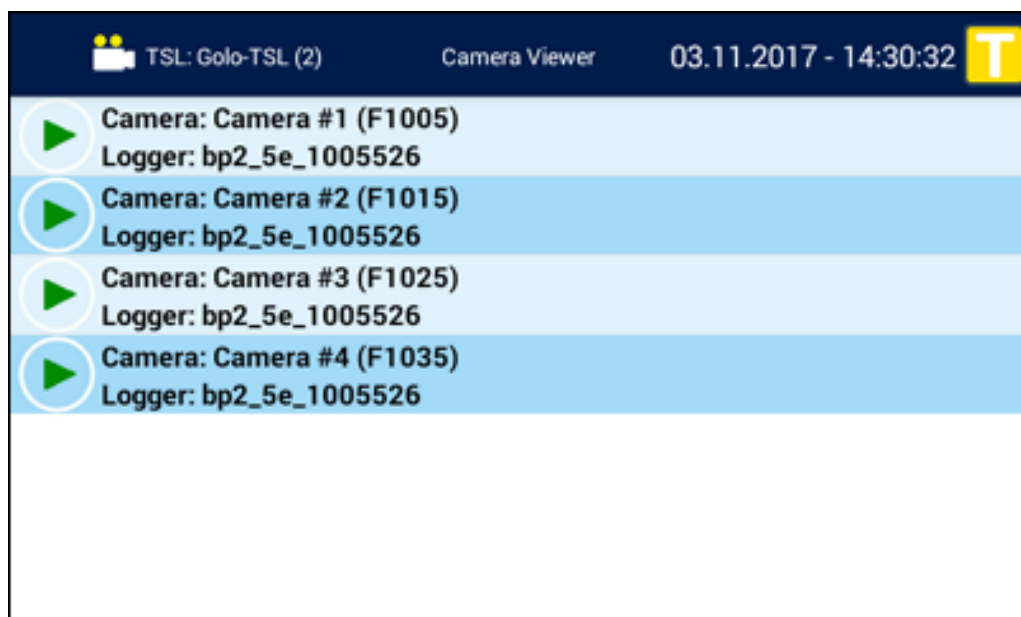


Figure 6.31: Camera Viewer: Camera overview

If you tip on one of the cameras in the list, the pictures of this camera are displayed. The example shows 4 pictures from different cameras which are connected to an Axis F44.

F1005-E | 113° | 1080p

F1015 | 53° - 108° | 1080p | Vario focus



F1025 | 92° | 1080p

F1035 | 194° | 1080p




Figure 6.32: Camera Viewer: Axis F44 and pictures of 4 different cameras

## 6.3 Display

The display of the **Remote Control Touch / BLUEPIRAT Remote** is 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
<b>Bus load</b>	indicates the degree with which the bus is busy with data transfer	6.2.2.3 6.2.3.2
<b>DHCP mode</b>	can be configured under General → Network settings  indicates whether the device functions as a server or a client or whether DHCP was disabled	<b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>Error count</b>	indicates the number of active errors (can be viewed in the bug reporter) when the status is ERROR or WARNING	<b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>Device name</b>	can be configured under General → Name  provides orientation in the application and is part of the trace file's file name	6.1.1 6.2.1 <b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>Device status</b>	see Table 6.5: Device status messages	6.2.1 <b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>Device type</b>	see Status - Overview	6.2.1.1
<b>Memory percentage protected</b>	can be configured under General → Buffer  indicates the percentage of the memory capacity that is protected	<b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>IP address</b>	indicates the IP address of the device	6.2.1 <b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>Channel name</b>	can be configured under *Bus* → *Bus #...* → Name  provides orientation in the application and is part of the trace file's file name	6.2.2.3
<b>Channel number</b>	serves as index for sorting the channel lists  is obtained from the configuration in the System Client	6.2.2.3
<b>Configuration name</b>	can be configured under General → Name	<b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>

	indicates the name of the configuration on the device	
<b>Logger name</b>	can be configured under General → Name  helps mapping logger-specific tabs	6.2.3.2
<b>Markerlist</b>	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.	6.2.2.2
<b>Message category</b>	see Table 6.2: Message categories	6.2.3.2
<b>Storage capacity</b>	depends on the internal memory  Since the Remote Control Touch does not have internal memory, the tab shows "0 GB".	<b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>Subnet mask</b>	indicates the subnet mask of the connected device	<b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>
<b>Memory percentage filled</b>	indicates the percentage of the memory capacity that is filled	<b>Fehler! Verweisquelle konnte nicht gefunden werden.</b>

**Table 6.4: Displays overview**

### 6.3.1 Device status

The device status may display the following messages:

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

**Table 6.5: Device status messages**

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

#### 6.3.1.1 Memory full

If the memory of a connected logger is full, this will be displayed as a flashing [MEMORY] in the Status / Overview

If the memory of a connected logger full, this will display a flashing [MEMORY] appears in the Status / Overview display.

Trigger Count:		26		
Logger	IP	Status	Type	FW
bPMini_LIN_193	192.168.0.89	OK	bP Mini	02.04.00.190
bPMini_FR_201	192.168.0.88	MEMORY	bP Mini	02.04.00.190
bPMini MOST150	192.168.0.91	OK	bP Mini	02.04.00.190

Overview RCT bP2 bPMini\_LIN\_193 **bPMini\_FR\_201** bPMini\_MOST150

**Figure 6.33: Memory full note in the Status / overview display**

When you tap the bottom tab bar on the logger with the "Memory" status, the detailed view of the logger opens. In this view the two flashing cells [100% filled] and [Memory], serve as an indication for the full memory.

Logger:	bPMini_FR_201	Config:	default
Network:	IP 192.168.0.88 Subnet 255.255.255.0	DHCP Client	Terminal-IP 10.1.191.179 Subnet 255.255.0.0
Memory:	50 GB	100% filled	100% protected
Status:	MEMORY		

Overview RCT bP2 bPMini\_LIN\_193 **bPMini\_FR\_201** bPMini\_MOST150

**Figure 6.34: Memory full-status in the detail view**

## 6.4 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.

### 6.4.1 AlertDialog

<b>Precondition</b>	none
<b>Timing</b>	Internal communication has failed.
<b>Options</b>	close popup

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

### 6.4.2 FW-Update

<b>Precondition</b>	none
<b>Timing</b>	Remote Control Touch / BLUEPIRAT Remote firmware is updated.
<b>Options</b>	none

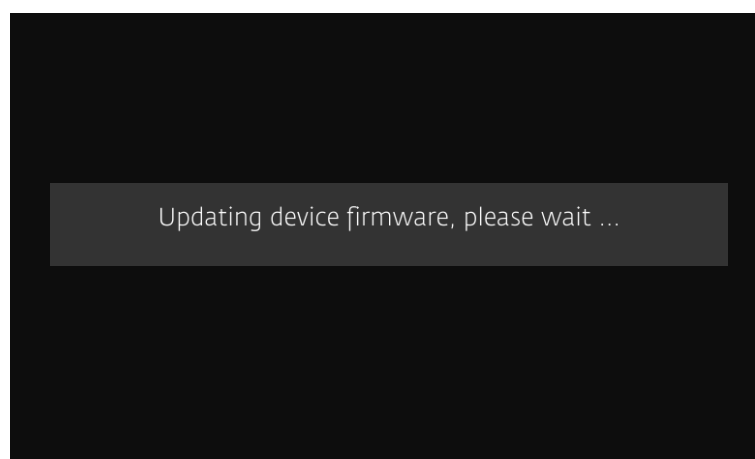
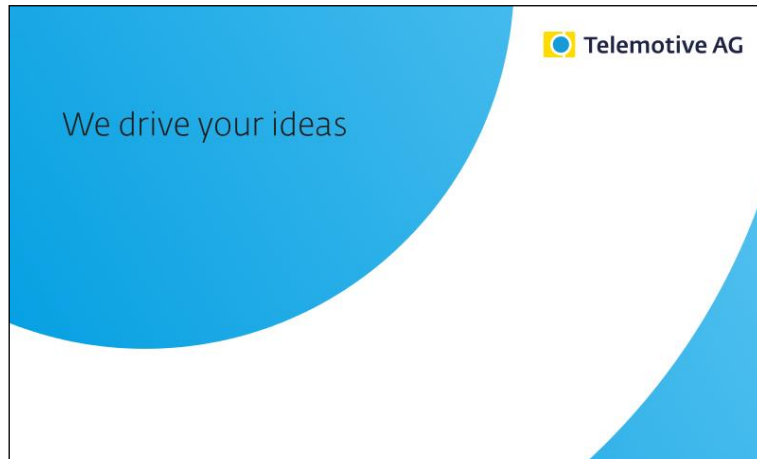


Figure 6.35: FW-Update view



### 6.4.3 Launcher

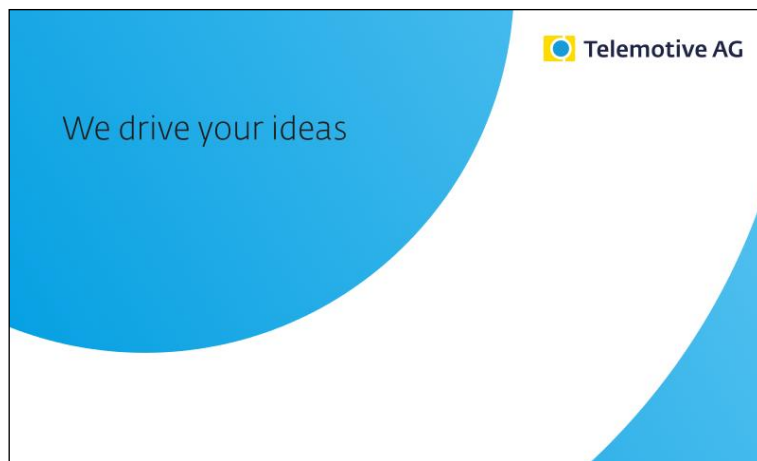
<b>Precondition</b>	none
<b>Timing</b>	Remote Control Touch / BLUEPIRAT Remote is switched on. (before the application)
<b>Options</b>	close popup



**Figure 6.36: Launcher view**

Within the view “Launcher” a safety message in a popup appears after a short time (see section **Fehler! Verweisquelle konnte nicht gefunden werden.**).

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



**Figure 6.37: Popup in Launcher view**

### 6.4.4 RC Monitor

<b>Precondition</b>	Remote Control Monitor is configured An application is open.
<b>Timing</b>	Complex trigger configured to the <Action> <b>[Display Remote Control Monitor]</b> is actuated. (see section <b>Fehler! Verweisquelle konnte nicht gefunden werden.</b> )
<b>Options</b>	set trigger, close view

The view is constantly updated and depends on its configuration in the System Client, whose manual also describes the feature in detail.

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

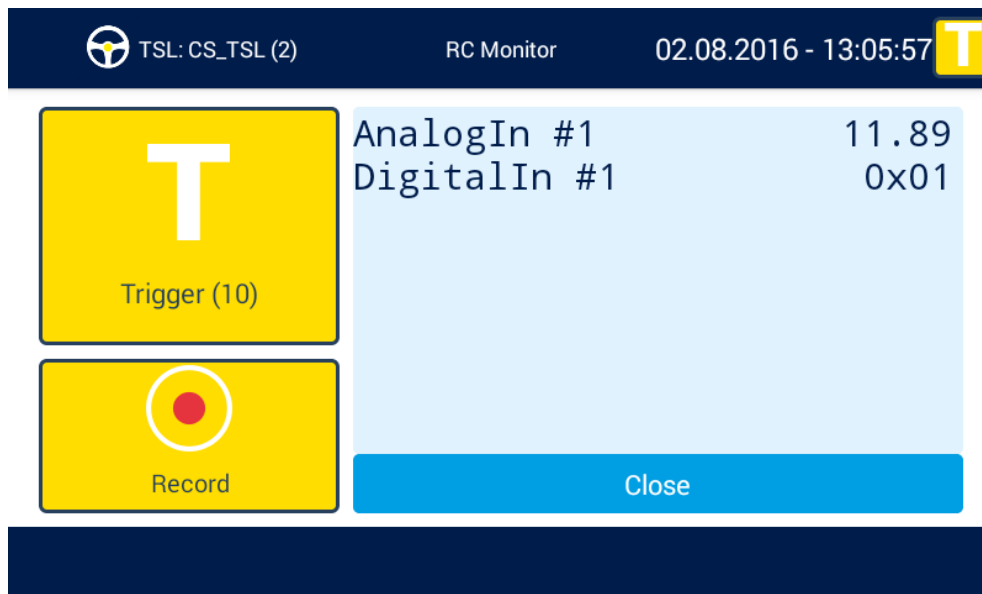


Figure 6.38: Window “RC Monitor”

## 6.4.5 RC Text

<b>Precondition</b>	An application is open.
<b>Timing</b>	Complex trigger configured to the <Action> <b>[Display notification on Remote Control]</b> is actuated. (see section <b>Fehler! Verweisquelle konnte nicht gefunden werden.</b> )
<b>Options</b>	set trigger, close view

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

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

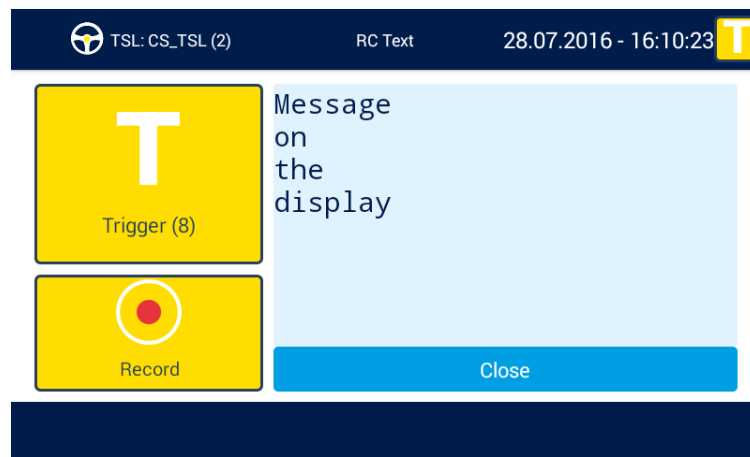


Figure 6.39: Window “RC Text”

## 6.4.6 Standby

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

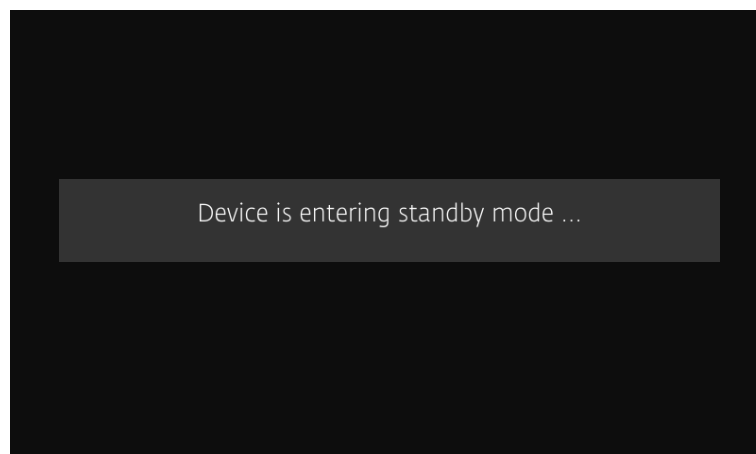


Figure 6.40: Standby view







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

## 6.5 Restrictions of the RC Touch in stand-alone mode

The **BLUEPIRAT Remote** can be configured by the System Client like every other data logger of Telemotive. For **Remote Control Touch** the following restrictions are valid:

### 6.5.1 Remote Control Touch applications

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

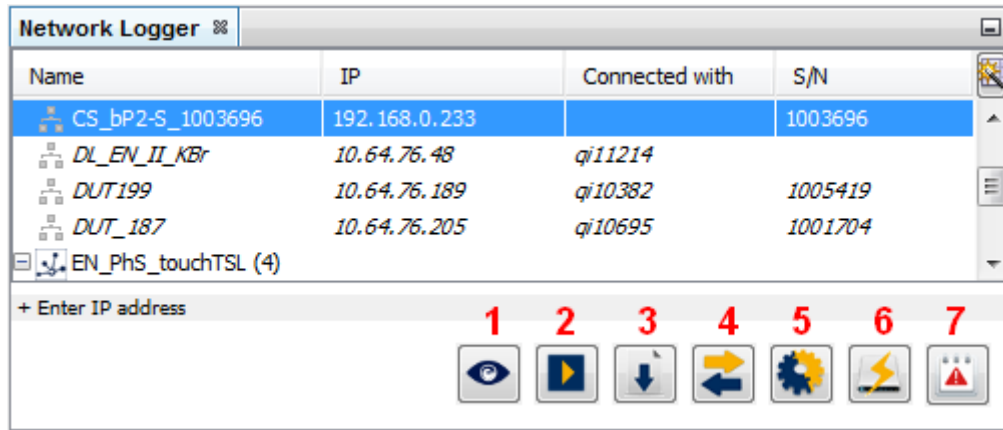
- The application  Status remains unaffected.
- The application  Busload is inactive.
- The application  Driver View is inactive.
- The application  Settings remains unaffected.
- The application TSA Monitor  is inactive.
- The application **Camera Viewer**  is inactive.

### 6.5.2 System Client applications

The System Client also provides less functionality for **Remote Control Touch** than for a data logger.

For a data logger all seven applications are available:

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

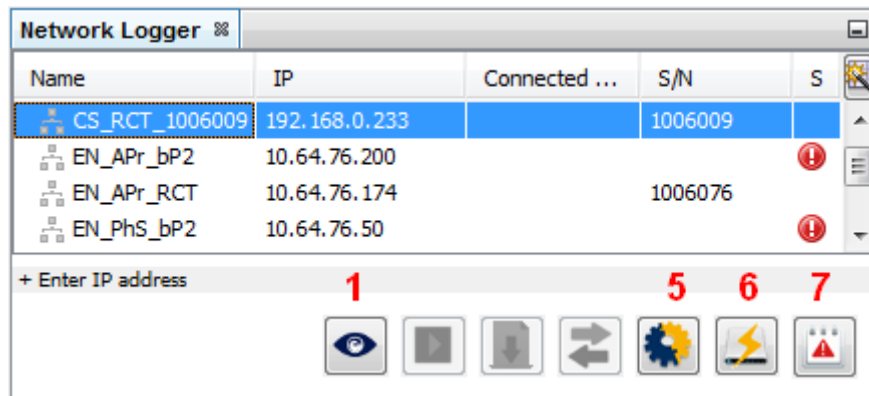


**Figure 6.41: Available applications for a data logger**

Find more information about the System Client applications in the **User manual for the System Client**.

In standalone mode only the following applications are available:

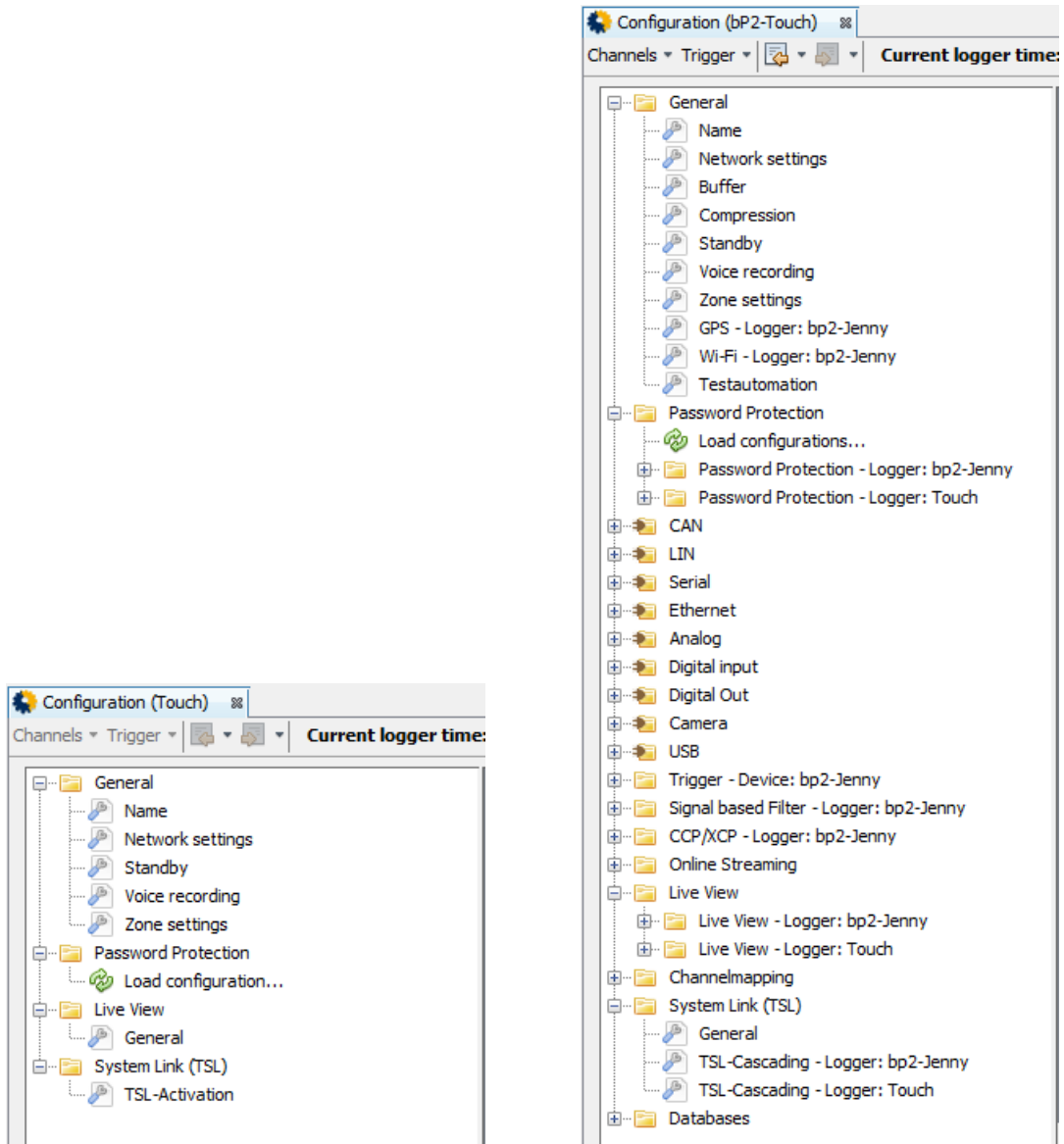
1. Live View
5. Open configuration
6. Update firmware
7. Open bug report



**Figure 6.42: Tab “Network Logger” in standalone mode**

The applications **[Update firmware] (6)** and **[Open bug report] (7)** provide the same functional range in both modes. Find the applications descriptions in the **User manual for the System Client**.

The application **[Open configuration] (5)** 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.



**Figure 6.43: Configuration trees: Standalone mode (left) – TSL (right)**

Find more information about components of the configuration tree in the **User manual for the System Client**.

## 7 Operation

### Important:

**Only use the tip of the finger to operate the Remote Control Touch / BLUEPIRAT Remote.**

This chapter describes instructions that are possible using the devices.

### 7.1 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.

### 7.2 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.

### 7.3 Scrolling through applications

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

### Note:





## 7.6.2 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.

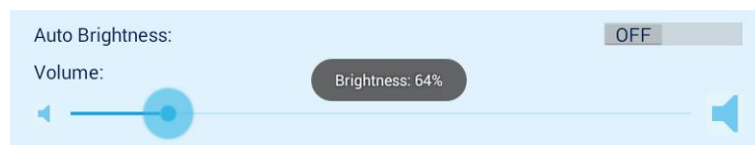


Figure 7.1: Fade-in after adjusting the brightness

## 7.7 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 switched off.**

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.

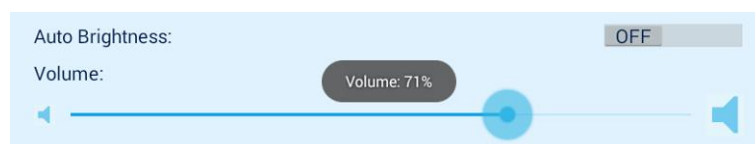


Figure 7.2: Fade-in after adjusting the volume

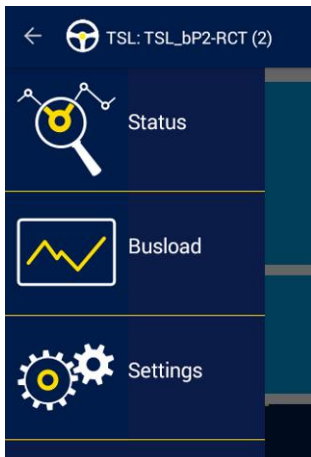
## 7.8 Changing tab sheet

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.

## 7.9 Opening and closing side menu



To open the side menu, you have two options:

10. Tap on the  button.
11. Swipe from the left edge of the screen to the right.

To close the side menu, you have three options:


12. Tap in the window of the tab sheet.
13. Tap on the  button.
14. Swipe from the right to the left edge of the screen.

Figure 7.3: Example side menu

## 7.10 Setting marker / /

There is a global trigger button for setting marker in all views of the Remote Control Touch in the top right corner. In the following example, you can see the Busload view.

Id	Name	Busload
#1	BODY-CAN-1	OFF
#2	FA-CAN	OFF
#3	A-CAN	OFF
#4	SF-CAN	OFF

**Figure 7.4: Busload view with global trigger button**


You can set a marker by tapping the yellow trigger button. After you have set a marker, you can see a small grey popup including the marker number, the date and the time of the marker.

Id	Name	Busload
#1	BODY-CAN-1	OFF
#2	FA-CAN	OFF
#3	A-CAN	OFF
#4	SF-CAN	OFF

**Figure 7.5: Marker popup in the Busload view**

### 7.10.1 Marker with voice note



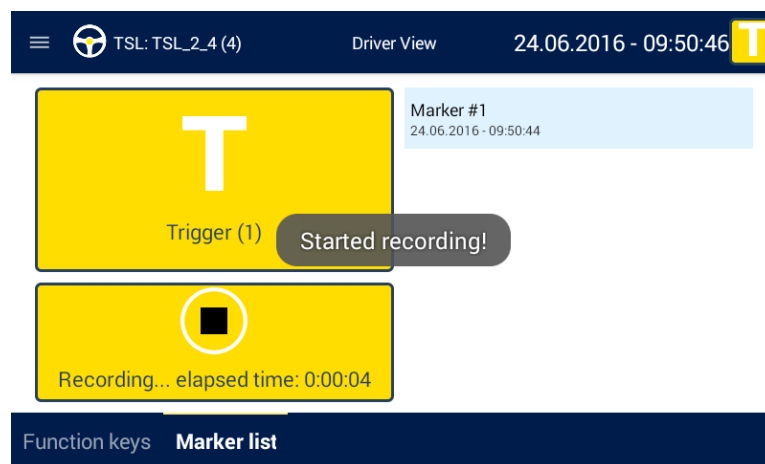
Navigate to one of the tab sheets **[Function keys]** / **[Marker list]** / **[Notifications]** in the application Driver View .

#### Note:

The quality of the recording and playback is dependent on the settings of <Speaker> and <Microphone> on the tab sheet **[General]** (see section 6.2.4).

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

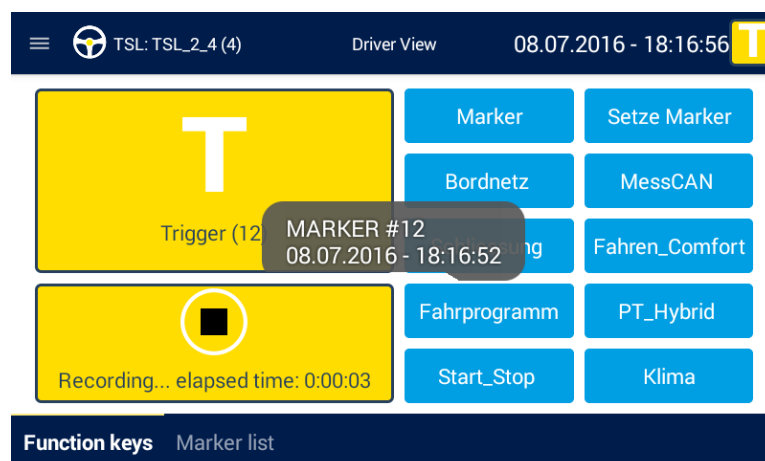
- Sound recording starts. Recording length is indicated on the button with "Recording... elapsed time: \*hour\*:\*minute\*:\*second\*".



**Figure 7.6: Voice note recording starts**

- A fade-in tells you under which index and timing (date and time) the marker was set.
- Marker appears on the tab sheet **[Markerlist]**.
- The red status LED flashes during recording

After you have started a record, you can see a small grey popup including the marker number, the date and the time of the marker. The marker appears in the tab **[Marker list]**. While you are recording a message, the red state-LED is pulsating.



**Figure 7.7: Voice note recording starts**



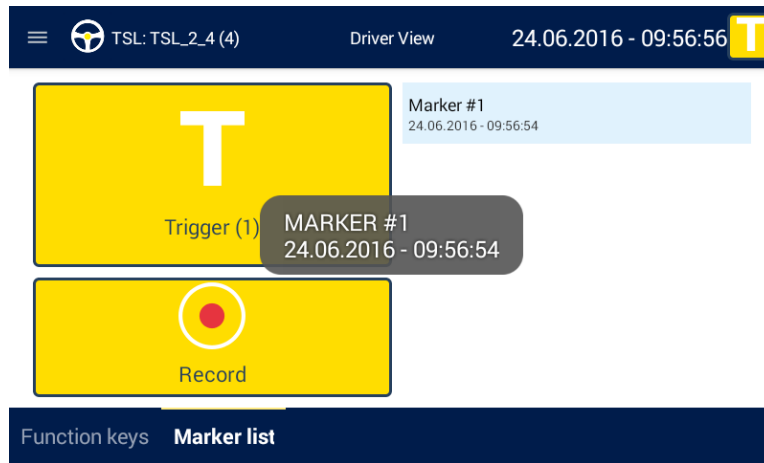


Figure 7.9: Marker set



- 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.

## 7.14            Updating firmware

Find more information on firmware update in the **User manual for the System Client**.

### Note:

**Only update the Remote Control Touch / BLUEPIRAT Remote firmware with the vehicle at standstill.**

**In the TSL network, the data logger does not record any data during the update.**

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

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

- Selected line is highlighted blue.

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

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



**Figure 7.11: 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]**.

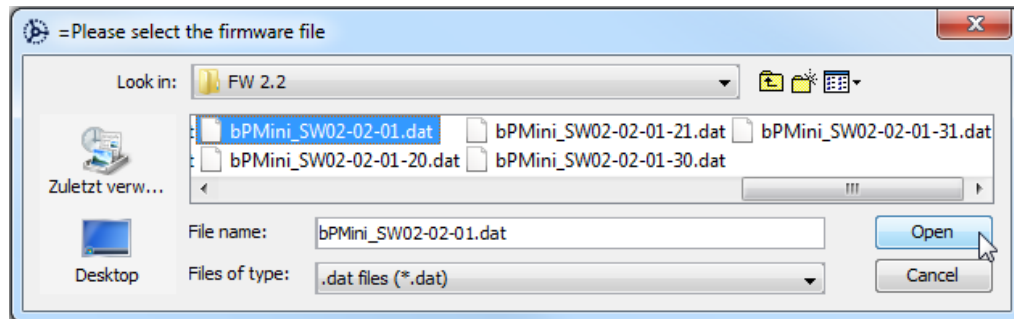
- Dialog opens.



Select the desired firmware, click on **[Open]**.

**Note:**

For the Remote Control Touch as well as BLUEPIRAT Remote you need the same firmware as for the BLUEPIRAT Mini.



**Figure 7.12: Opening firmware-packet**

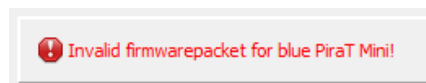
- Selected firmware appears in the display field.



**Figure 7.13: Valid firmware-packet**

**Note:**

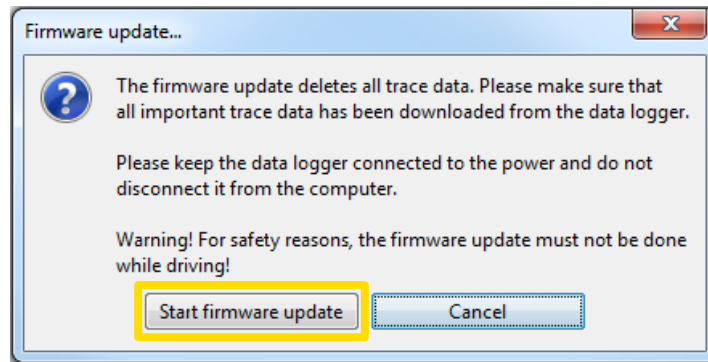
If you select an invalid firmware-packet, the following notice message appears and the **[Update firmware...]** button remains inactive.



**Figure 7.14: Notice message for invalid firmware-packet**

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

- Firmware file is verified.
- Dialog opens.

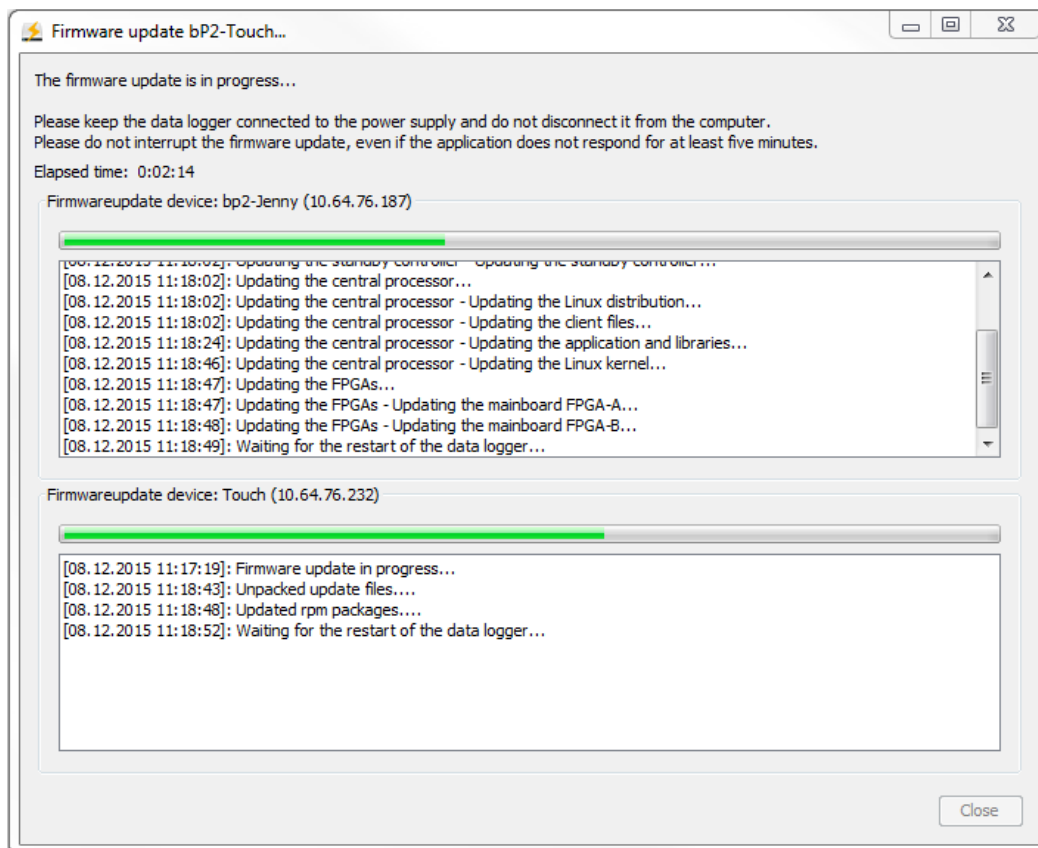


**Figure 7.15: Notice message before firmware update**

Follow the dialog instructions.

Click on **[Start firmware update]**.

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



**Figure 7.16: Advancing firmware update**

The firmware is updated when:

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

## 8 Maintenance provisions, safety regulations and Regulatory Information

### Note according to standard EN55011:2009

The device is used in an industrial environment. Due to occurring, grid-bound as well as radiated disturbances, it might possibly be difficult to ensure compliance with electromagnetic compatibility in other environments. The cable length shall not exceed 3 meters.

### 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.

### Fuse

In case of failure, the customer may change the fuse of 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.

### Disposal

Disposal of the unit, must be in accordance with the statutory laws and regulations.

### Instruction on installation

Assembly of the device shall only take place in all three specified axes.

### Operational temperature

Operation of the device shall only be performed within the temperature range specified in the data sheet (see chapter 9 and 10).

All tests to determine the valid operational temperature are performed under laboratory conditions. In real operation deviating temperatures can occur. Internal cut-off mechanisms exist, that prevent impermissible heating of the device's components.

A sufficient ventilation is to be taken into consideration. The unit and other components shall not be stacked atop each other provided that there is no adequate cooling ensured and the device shall be used in ambient temperatures exceeding +25°C.

**During operation under unfavorable circumstances case temperatures that exceed +70°C can occur, as the metal case contributes directly for the passive cooling of the unit. At elevated ambient temperatures the case shall not be touched due to risk of injury. Operation of the device is only permissible in industrial premises with restricted access.**

### Storage conditions

The device may only be stored within a temperature range of - 20 °C to + 85 °C.

### Condensation

During condensation the unit must not be activated. For this purpose appropriate waiting periods must be taken into consideration.

**Environmental conditions**

The unit must not be used in outdoor areas or unfavorable environmental conditions such as moisture, high air humidity or dust. Furthermore it is forbidden to operate the device in flammable or explosive atmospheres. The maximum power supply voltage must not exceed +30V. Overvoltage can destroy the device and voids the warranty.

**Cable sets**

When inserting the cable sets in the usual case, only a slight force is required. At an increased mechanical resistance during insertion of the cable set, the correct alignment of the pins should be checked.

Special cable sets are to be manufactured strictly according to the sheet of the instruction manual containing the pin assignment, whereby an extra fuse provided on the cable set must be considered. The connectors specified in the instruction manual should be used.

The cable sets' temperature range is restricted to -20°C to +70°C due to the banana plugs.

**Only valid for the power supply connection of the BLUEPIRAT Remote:**

Two pairs of pins of the 26-pin sub-d connector serve as a terminal part of an electrical interconnection between the unit and the power source. Each pair of related pins is assigned to only one type of electrical potential, that means an interconnection to positive electrical potential (Klemme 30/Clamp 30) for one related pair and the negative one (Klemme 31/Clamp 31) for the other matching pair.

However a conductive connection of one related pair of pins with two different electrical polarities results in short circuiting and destruction of the device in case of a missing suitable fuse.

**Mounting**

In laboratory setups and automobiles the units must be attached in such a way, that it is ensured against dropping, slipping and skidding.

**Positioning of the antenna**

While operating the device in an automobile, the connected antennas must not be located outside of the vehicle.

**Replacing the battery**

A lithium button cell is located within the device, which must be only replaced by MAGNA Telemotive GmbH.

**Mechanical exposure**

+++++ Environment during operation +++++  
 Height: -300 to 5500 m

+++++ Environment out of service +++++  
 Height -300 to 12000 m

**Proper operation**

The remote control touch must exclusively be utilized with the application of MAGNA Telemotive GmbH.

- The application is solely compatible with System Client
- Wiring with third-party units is conducted at your own risk
- In 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 6.37: 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.

## 8.1 Regulatory Information only for the Remote Control Touch



MAGNA Telemotive GmbH

Remote Control Touch

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### In relation to § 15.21 Information to user:

Caution:

Changes or modifications to the device, which are not expressly permitted in the operating instructions, could void the user's authority to operate the equipment.

### In relation to § 15.27 Special accessories:

To comply with the necessary regulations, the device must be used with S/FTP (Screened Foiled Twisted Pair) ethernet cables with category 7 or at least 6A and with the power cables provided by the MAGNA Telemotive GmbH.

## 9 Data sheet Remote Control Touch

<b>General data</b>	
Supply voltage	13.8 V
Power unit voltage	7 V to 28 V for system startup 5 V to 29 V operating voltage Deviation +/-8%
Supply voltage reverse-connect protection	yes
Short circuit proof	yes
Operating current (typ.)	350 mA (@ 13.8 V)
Operating current (max.)	< 2000 mA (@ 13.8 V)
Power consumption in standby	< 1 mA
Operating temperature	- 20 °C to + 60 °C
Storage temperature	- 20 °C to + 85 °C
Weight (approx.)	415 g
<b>Power management</b>	
Startup time from standby to full operation	35 s
Wake-up capability	KL 15, trigger button
<b>Case</b>	
Dimensions (approx.)	5.91" x 3.62" x 0.98" (150 x 92 x 25 mm)
Operating elements	Home button
State/Active LEDs	<b>STATE, ACTIVE</b>
<b>Connections</b>	
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 Micro USB 2.0
<b>Screen</b>	
Size	5"
Resolution	800 x 480
Colors	16.7 million
Luminance	700 cd/m <sup>2</sup>
Touch function	Resistive, multi-touch

**Table 9.1: Data sheet Remote Control Touch**

## 10 Data sheet BLUEPIRAT Remote

<b>General data</b>	
Nominal power supply voltage	13.8 V
Power supply voltage	7 V to 28 V for system startup 5 V to 29 V operating voltage Deviation +/-8%
Reverse polarity protection of the supply voltage	Yes
Resistance to short-circuiting	Yes
Power consumption / operating (typ.)	400 mA (@ 13.8 V)
Power consumption / operating (peak.)	< 2000 mA (@ 13.8 V)
Power consumption / standby	< 1 mA
Operating temperature	- 20 °C to + 60 °C
Storage temperature	- 20 °C to + 85 °C
Weight (ca.)	415 g
<b>Power Management</b>	
Startup time from standby to full operation	< 35 s
Start of logging - starting from standby	CAN, LIN, Serial, Analog, Digital < 200 ms
Standby Mode	Configurable time without bus load
Wake	HS-CAN, LS-CAN, LIN, Serial, KL 15, [ON / Trigger] button
Data loss by power loss	If the device is switched off due to sudden power loss, up to 60 sec. of data may be lost.
<b>Case</b>	
Size (ca.)	5.91" x 3.62" x 0.98" (150 x 92 x 25 mm)
Operating controls	Push-button to start and shut down data logger and to set markers
LEDs (STATE, ACTIVE)	<b>STATE, ACTIVE</b>
<b>Connectors</b>	
side connectors	2x Gbit Ethernet  SUB-D 26-pol: Power supply, 2x HS-CAN, 1x LS-CAN, 1x LIN, 2x Serial, 2x Analog In, 2x Digital In
Rear connectors	4-pol audio jack plug stereo out/microphone (3.5 mm) OMTP  Micro USB 2.0  SD card
<b>Screen</b>	
Size	5"

Resolution	800 x 480
Colors	16.7 million
Luminance	700 cd/m <sup>2</sup>
Touch function	Resistive, multi-touch

<b>Data recording</b>	
<b>Storage type (internal)</b>	10 GB flash
<b>Storage type (external)</b>	USB flash drive
	SD card
<b>Recording modes</b>	Normal, ring buffer
<b>Timestamp accuracy</b>	1 µs
<b>CAN recording</b>	
<b>Channel</b>	2 High Speed, 1 Low Speed
<b>Baud rate</b>	Up to 1000000 Baud at HS-CAN up to 125000 Baud at LS-CAN
<b>Transceiver</b>	TJA1041A, TJA1055T
<b>Filter</b>	CAN ID filter
<b>Status recording</b>	Error frames
<b>Serial recording</b>	
<b>Type</b>	RS232
<b>Channel</b>	2
<b>Baud rate</b>	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 Baud
<b>Data bits</b>	5,6,7,8
<b>Stop bits</b>	1,1.5,2
<b>Parity</b>	None, odd, even
<b>LIN recording</b>	
<b>Channel</b>	1
<b>Baud rate</b>	1200, 2400, 4800, 9600, 10400, 19200, 20000 Baud
<b>Transceiver</b>	TJA1021
<b>Ethernet recording</b>	
<b>Port</b>	2
<b>Speed</b>	2x 1 Gbit/s Protocol logging / 1 Gbit/s SPY-Mode)
<b>Recording</b>	GNLog, Raw, UTF8, UDP, DLT (optional), EsoTrace (optional)
<b>Analog recording</b>	
<b>Channel</b>	1x Ubat (internal), 2x external
<b>Range of measurement</b>	Channel 1: 0V bis + 30V Channel 2/3: 0V bis + 20V
<b>Resolution</b>	8 mV



<b>Accuracy</b>	3 % 0 -16V 4 % 16 – 20 / 32V
<b>Sampling interval</b>	1 ms to 100 s
<b>Digital input</b>	
<b>Channel</b>	1x Ubat (internal), 2x external (physically identical with analog input)
<b>Switching threshold</b>	7 V $\pm$ 0.2 V
<b>Sampling interval</b>	1 ms to 100 s

**Table 10.1: Data sheet BLUEPIRAT Remote**

# 11 Pin assignments and harnesses

## 11.1 Pinout of Remote Control Touch connector

As against to the Remote Control Voice, where the whole communication was send over this cable, the **Remote Control Touch** only uses this cable for power.

Lumberg KV81-8 Pin (RCTouch)	Lemo Pin (cabel)	Bananaplug Pin	Signal
8	8	blue	KL 15 (wake)
6	7	black	KL 31 (ground, -)
7	2	red	KL 30 (power, +)

Ta-

ble 11.1: Contacts of the angeled Lemo plug

### 11.1.1 Contacts of the Remote Control Touch connection

This drawing shows the pinout of the **Remote Control Touch** cable.

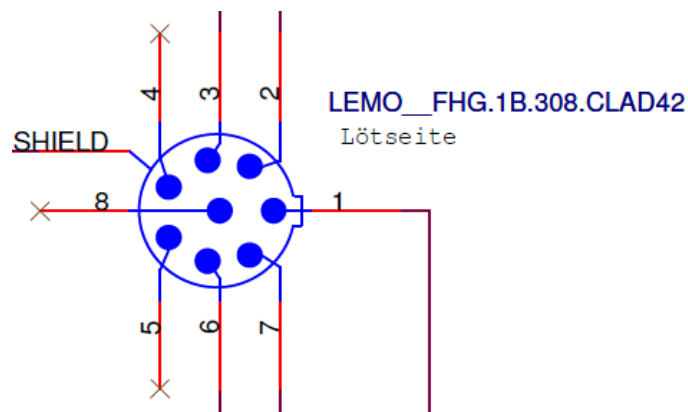


Figure 11.1: Pins of the angeled LEMO plug (FGH.1B.308.CLAD42) at the cable

## 11.2 Pinout of BLUEPIRAT Remote connector

@ Logger		comment / depiction /	@ Vehicle interface	
SUB-D	Signal	signal name	Type	Pin
44-pol				
1	KL15	wake up from KL 15	banana plug <b>blue</b>	1
2	HSCAN_L_0	High Speed CAN #01 LOW	DSUB-9 / male	2
3	HSCAN_H_0	High Speed CAN #01 HIGH	DSUB-9 / male	7
4	HSCAN_L_1	High Speed CAN #02 LOW	DSUB-9 / male	2
5	HSCAN_H_1	High Speed CAN #02 HIGH	DSUB-9 / male	7
6	LSCAN_L_0	Low Speed CAN #03LOW	DSUB-9 / male	2
7	LSCAN_H_0	Low Speed CAN #03 HIGH	DSUB-9 / male	7
8	n.c.			
9	KL31	power supply (-)	banana plug <b>black</b>	1
10	KL31	power supply (-)	combined with #9	1
11	n.c.			
12	n.c.			
13	n.c.			
14	n.c.			
15	n.c.			
16	n.c.			
17	KL30 & -[Fuse 5 A]-	power supply (+)	banana plug <b>red</b>	1
18	KL30	power supply (+)	combined with #17	1
19	KFZ ANA / DIG COM	Analog / Dig. Interface ground	banana plug <b>yellow</b>	1
20	KFZ ANA IN 0	Analog / Dig. Interface #2 IN	banana plug <b>yellow</b>	1
21	KFZ ANA IN 1	Analog / Dig. Interface #3 IN	banana plug <b>yellow</b>	1
22	KFZ V24 RX 1	Serial I RS232 #2 RX	DSUB-9 / male	2
23	KFZ V24 TX 1	Serial RS232 #2 TX	DSUB-9 / male	3
24	KFZ V24 RX 0	Serial RS232 #1 RX	DSUB-9 / male	2
25	KFZ V24 TX 0	Serial RS232 #1 TX	DSUB-9 / male	3
26	LIN 0	LIN 1	DSUB-9 / male	7

**Table 11.2: Contacts of the 26-pol SUB-D plug of BLUEPIRAT Remote**

## 11.3 RJ45 Ethernet connector

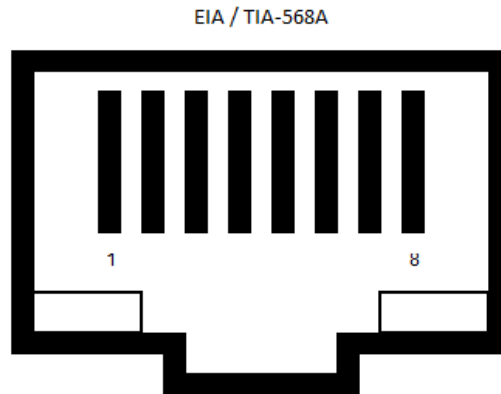


Figure 11.2: Pinout of RJ45 Ethernet connectors

Pin	Signal
1	TX1+
2	TX1-
3	TX2+
4	TX3+
5	TX3-
6	TX2-
7	TX4+
8	TX4-

Table 15.10: Pinout of the RJ45 connectors

## 12 Abbreviations

Kürzel / abbreviation	Bedeutung / meaning
<b>BLUEPIRAT</b>	Processing Information Recording Analyzing Tool
<b>bP</b>	<b>BLUEPIRAT</b>
<b>bP2</b>	<b>BLUEPIRAT2</b>
<b>bP2 5E</b>	<b>BLUEPIRAT2 5E</b>
<b>bPMini</b>	<b>BLUEPIRAT Mini</b>
<b>RCT</b>	Remote Control Touch
<b>bPR</b>	<b>BLUEPIRAT Remote</b>
<b>A2L</b>	ASAM MCD-2 MC Language

<b>AE</b>	<b>A</b> utomotive <b>E</b> lectronics
<b>ACK</b>	<b>ACK</b> nowledged
<b>CAN</b>	<b>C</b> ontroller <b>A</b> rea <b>N</b> etwork
<b>CCP</b>	<b>CAN</b> <b>C</b> alibration <b>P</b> rotocol
<b>CF</b>	<b>C</b> ompact <b>F</b> lash
<b>CRO</b>	<b>C</b> ommand <b>R</b> eceive <b>O</b> bject
<b>DAQ</b>	<b>D</b> ata <b>A</b> cquisition
<b>DTO</b>	<b>D</b> ata <b>T</b> ransmission <b>O</b> bject
<b>ECL</b>	<b>E</b> lectrical <b>C</b> ontrol <b>L</b> ine
<b>ECU</b>	<b>E</b> lectronic <b>C</b> ontrol <b>U</b> nit
<b>FIBEX</b>	<b>F</b> ield <b>B</b> us <b>E</b> xchange Format
<b>FW</b>	<b>F</b> irmware
<b>GMT</b>	<b>G</b> reenwich <b>M</b> ean <b>T</b> ime
<b>INCA</b>	<b>I</b> Ntegrated <b>C</b> alibration and <b>A</b> pplication Tool
<b>LAN</b>	<b>L</b> ocal <b>A</b> rea <b>N</b> etwork = Netzwerk
<b>LIN</b>	<b>L</b> ocal <b>I</b> nterconnect <b>N</b> etwork
<b>MAC</b>	<b>M</b> edia <b>A</b> ccess <b>C</b> ontrol
<b>MCD</b>	<b>M</b> easure <b>C</b> alibrate <b>D</b> iagnose
<b>MDX</b>	<b>M</b> eta <b>D</b> ata <b>E</b> Xchange Format
<b>MEP</b>	<b>M</b> OST <b>E</b> thernet <b>P</b> acket
<b>MOST</b>	<b>M</b> edia <b>O</b> riented <b>S</b> ystems <b>T</b> ransport ( <a href="http://www.mostnet.de">www.mostnet.de</a> )
<b>ODT</b>	<b>O</b> bject <b>D</b> escriptor <b>T</b> able
<b>ODX</b>	<b>O</b> pen <b>D</b> ata <b>E</b> Xchange
<b>OEM</b>	<b>O</b> riginal <b>E</b> quipment <b>M</b> anufacturer
<b>PHY</b>	<b>PHYS</b> ical Bus Connect
<b>PW</b>	<b>P</b> asswort
<b>RX</b>	<b>R</b> eceiver <b>D</b> ata

<b>SD</b>	<b>Secure Digital</b>
<b>SFTP</b>	<b>Secure File Transfer Protocol</b>
<b>SHA</b>	<b>Secure Hash</b>
<b>SSL</b>	<b>Secure Sockets Layer</b>
<b>TCP/IP</b>	<b>Transmission Control Protocol/Internet Protocol</b>
<b>TLS</b>	<b>Transport Layer Security</b>
<b>TMP</b>	<b>Telemotive Packetformat</b>
<b>TSC</b>	<b>Telemotive System Client</b>
<b>TSL</b>	<b>Telemotive System Link</b>
<b>UDP</b>	<b>User Datagram Protocol</b>
<b>USB</b>	<b>Universal Serial Bus</b>
<b>UTC</b>	<b>Universal Time, Coordinated</b>
<b>Wi-Fi</b>	<b>Wireless Fidelity</b>
<b>WLAN</b>	<b>Wireless Local Area Network</b>
<b>XCP</b>	<b>Universal Measurement and Calibration Protocol</b>

**Table 12.1: Abbreviations**

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## 15 Version history

Version	Änderung	Datum

**Table 15.1: Version history**

## 16 Contact



DRIVING **EXCELLENCE.**  
INSPIRING **INNOVATION.**

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