

*MKP Parts*

*A supplier of stature!*

# Tacho2Safe

User Guide



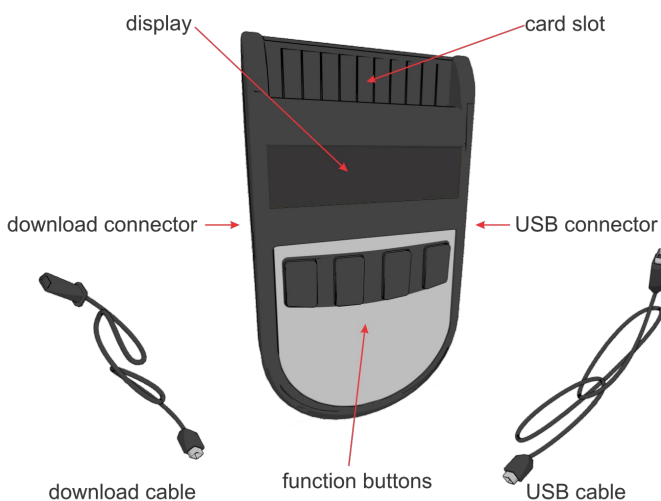
### 1. General characteristics

Tacho2Safe is an all in one download device. Compatible with all type of Digital Tachograph unit and encompassing fast download speeds from either the built in card reader or directly from the tachograph unit using the supplied download cable.

Features:

- compatible with all types of digital tachograph
- integrated USB NiMH battery charger
- up to 500 card downloads with a single AA battery
- internal storage for up to 3,000 individual card readings
- useful on screen reminder for your next card reading and vehicle download, helping you stay legal
- bright OLED display, making it easy to see your data any time of day
- can be used with 3rd party tachograph analysis software

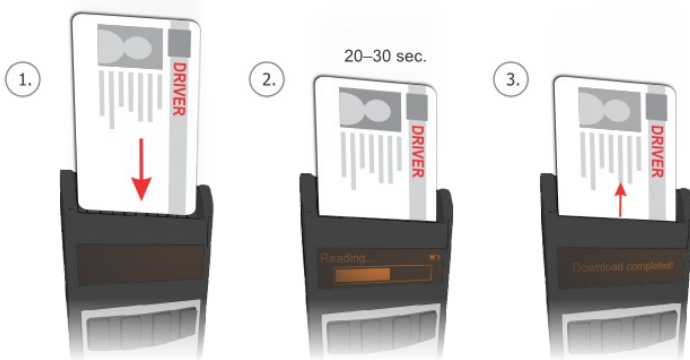
### 2. Elements of Tacho2Safe device



## 3. Device functions

### 3.1 Primary functions

#### 3.1.1 Driver card download



In order to make a driver card download with the device you have to insert the driver card into the card slot of the device in the way shown in picture.

After a short period of time the download process will start automatically. A large progress bar will show the current progress of download. A regular card download takes about 30 seconds depending on card type.

More download can be made one time, the device will store them into a separate file and they can be imported later to the TachoSafe Lite PC application or they can be copied to your computer.

Card download is also possible when the device is connected to USB port of your PC. Insert your card and press a button. After download the device will restart in USB mode and the downloaded file can be processed.

**Important:**

You don't need to connect any cables to the device.

During card download the device operates from battery.

## 3.1.2 Downloading data from the digital tachograph

Before you start doing anything, insert a company card (service card) into the tachograph. If we use a service card then a PIN code will be required.

Just as soon as the tachograph has recognized the card you can connect it to the Tacho2Safe device.



After a short period of time the download of overview data will start automatically. A large progress bar will show the current progress of download.

After Overview data download a simple menu will appear. By pressing **F1**, **F2**, **F3** and **F4** buttons you can select between tachograph download methods.

**F1** Download data selected with TachoSafe Lite application

**F2** Select data records to download from tachograph

**F3** Download the entire content of digital tachograph.

**F4** Driver card download through digital tachograph. This function is active only if a driver card is inserted together with company/service card.

After pressing one from **F1**, **F3**, **F4** buttons the corresponding download function will start. In case if no button was pressed after start-up, after 10 seconds the device will automatically start **F1** download function.

By pressing **F2** you can choose which records to download. Function buttons can have different functions in sub menus, their functions are shown in lower part of display.



ss of selections is shown on following flowchart.

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When all settings are done the device will show the download period and download will automatically begin. A large progress bar will show the current progress of download.

The download time depends on the period selected and can vary from few minutes to several hours.

***Important!***

The data from the digital tachograph can be downloaded only when a company/service card is inserted into the tachograph.

### 3.1.3 USB mass storage function

The Tacho2Safe device is recognized by the PC as a standard Mass Storage device like a pen drive. By accessing it the user can manage its downloads, install the application or read the files/documents stored in the device internal memory.

Tachograph and Driver card downloads are stored in the file system inside the internal memory of device. Each download is stored in a separate file. All file types accepted around Europe are supported by the device.

## **3.2 Secondary functions**

### **3.2.1 USB NiMH battery charger**

The Tacho2Safe device was designed in that way to operate from regular AA batteries and from AA type NiMH accumulators. In order to simplify the usage of equipment a NiMH battery charger function was implemented inside the device.

Charger function will activate only after permission of user if a low level of accumulator was detected during device start up, when it is connected to the computer.

By pressing **F4** button the device will start to charge the inserted battery. Pressing **F1** button you can ignore battery charging and just start the device in Mass Storage mode.

#### **Meaning of different battery symbols:**

Filling battery symbol shows the current level of battery.

Full blinking battery symbol shows the end of charging.

A blinking half charged battery means wrong type or bad battery.

#### ***Important!***

Charge only NiMH type batteries, other type of batteries are not supported. Charger function will slow down the file operation between device and PC.

## 3.2.2 Download warnings

The device will automatically alert the user about the status of previous downloads. This function will activate after driver card / tachograph download or after connecting to USB.

If you press **F1** you will ignore this warning and go forward, by pressing **F4** the list of expired downloads will be shown. In order to see all drivers / vehicles with expired download you have to press **F3** button. To exit from list you have to press **F4** button.

By pressing **F1** on a driver or vehicle the record will be erased from the device internal database.

**Important!** Function can be enabled or disabled from settings menu.

## 3.2.3 Card warnings

The device will automatically alert the user about the status of downloaded card. Function will be activated after a card download.

If the currently downloaded card will expire in the following 90 days or it is already expired a warning message is shown on display.

**Important!** Function can be enabled or disabled from settings menu.

## 3.2.4 Download list

Inside the LOG directory the device will create a LIST.TXT file which contains a list of downloaded cards, tachographs along with the download date and with the next download date. This list can be seen at any time by the user when the device is connected to the computer.

## 4. Device setup



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In order to enter into device setup a smart card has to be inserted into smart card slot in inverse way (chip outside).

By pressing **F1**, **F2**, **F3** and **F4** buttons the following settings can be modified:

**Tachograph download**, **Time and date**, **Device settings** and **Device language**.

Function buttons can have different functions in sub menus, their functions are shown in lower part of display.

## **4.1 F1-Tachograph download**

You can select between the records to download. The progress of selections is shown on following flowchart.

## **4.2 F2-Time and date**

By pressing function buttons you can set the device time and date.



## **4.3 F3-Device settings**

Device settings can be modified from this menu.

## **4.4 F4-Device language**

The language of device can be changed from this menu. Multiple languages are supported by the device. You can navigate between available languages and select the appropriate one. The available languages are stored in the file system of device.

File format of **Card / Tachograph download** is automatically selected according to selected language. The selected format can also be changed in **Device settings** menu.

## 5. Troubleshooting

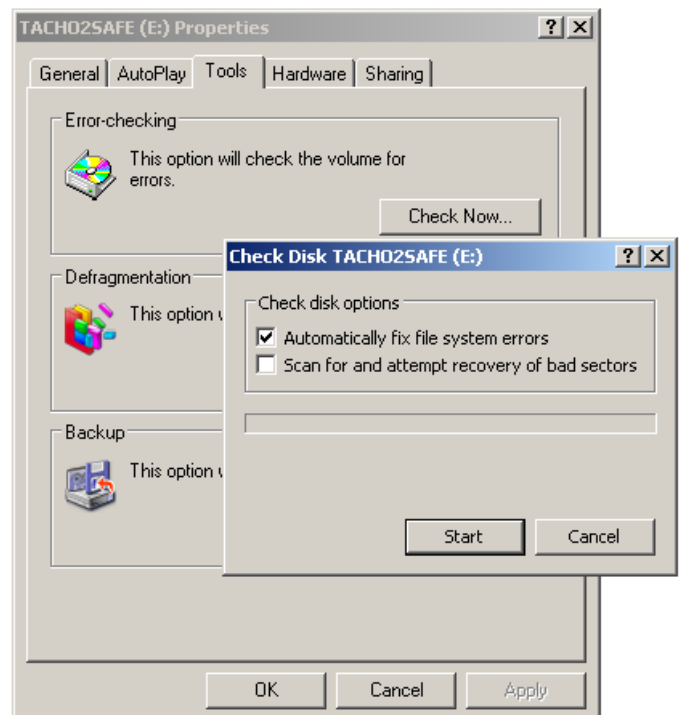
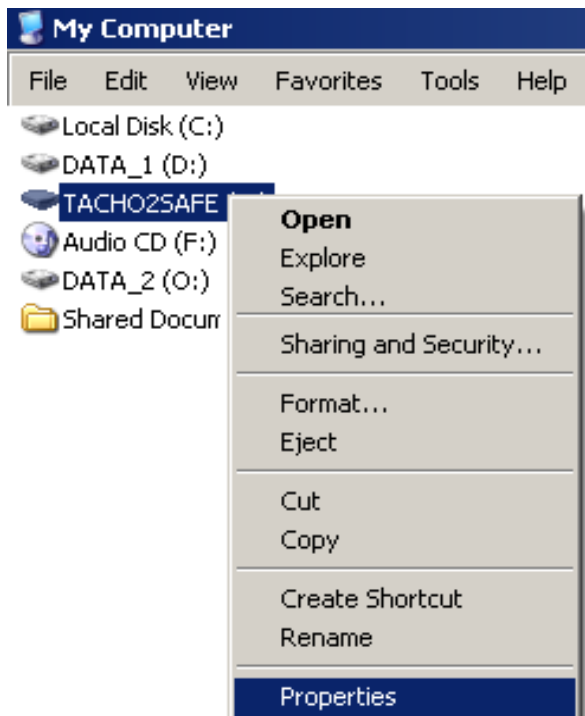
Problem detected	Possible reasons	Solution
File system error	<b>File system error</b>	<ol style="list-style-type: none"> <li>1. Check file system integrity. See chapter 5.1</li> <li>2. Format the disk using <b>FAT</b> or <b>FAT16</b> file system. See chapter 5.2</li> </ol>
	<b>Low battery</b>	<ol style="list-style-type: none"> <li>1. Replace or recharge your battery.</li> </ol>
	<b>Memory card error</b>	<ol style="list-style-type: none"> <li>1. Return the device to nearest service/distributor.</li> </ol>
Can not download driver card	<b>Card not inserted properly</b>	<ol style="list-style-type: none"> <li>1. Check if the card was inserted in right way into card slot.</li> <li>2. Check the integrity of your card / chip on card.</li> </ol>
	<b>Battery low</b>	<ol style="list-style-type: none"> <li>1. Replace the battery</li> </ol>
	<b>Card reader error</b>	<ol style="list-style-type: none"> <li>1. Return the device to nearest service/distributor.</li> </ol>
Can not download digital tachograph	<b>Company card missing</b>	<ol style="list-style-type: none"> <li>1. Check if company/service card was inserted properly into the digital tachograph.</li> <li>2. Check the validity of your company/service card</li> <li>3. Check the integrity of your card / chip on card.</li> </ol>
	<b>Download cable not connected properly</b>	<ol style="list-style-type: none"> <li>1. Reconnect the download cable</li> <li>2. Check the integrity of cable.</li> <li>3. Check the integrity of download connectors.</li> </ol>
	<b>Download cable broken</b>	<ol style="list-style-type: none"> <li>1. Check the integrity of cable.</li> <li>2. Try with another cable.</li> <li>3. Buy a new download cable.</li> </ol>
	<b>Internal error</b>	<ol style="list-style-type: none"> <li>1. Return the device to nearest service/distributor.</li> </ol>

Problem detected	Possible reasons	Solution
Computer can not recognize the device	<b>File system error</b>	<ol style="list-style-type: none"> <li>1. Check file system integrity. See chapter 5.1</li> <li>2. Format the disk using <b>FAT</b> or <b>FAT16</b> file system. See chapter 5.2</li> </ol>
	<b>USB cable not connected properly</b>	1. Reconnect the <b>USB</b> cable
	<b>USB cable broken</b>	1. Try a new <b>mini USB</b> cable
	<b>Memory card error</b>	1. Return the device to nearest service/distributor.
	<b>Internal error</b>	1. Return the device to nearest service/distributor.

## 5.1 Scan disk under windows

Using **Windows Disk Error checking tool** you can correct most of possible file system errors.

On images below you can follow the progress of file system checking.



## 5.2 Format disk under windows

In worst cases the file system of device can be repaired with format.

### Important!

**Formatting will erase ALL data from disk! Please take care to make the right disk selection and right settings in order to don't lose any of your important data.**

The image shows a Windows XP desktop environment. The 'My Computer' window is open, displaying several drives: Local Disk (C:), DATA\_1 (D:), TACHO2SAFE (E:), Audio CD (F:), DATA\_2 (O:), and Shared Documents. A right-click context menu is open over the TACHO2SAFE (E:) drive, with 'Format...' selected. To the right, the 'Format TACHO2SAFE (E:)' dialog box is open, showing the following settings: Capacity: 921 MB; File system: FAT; Allocation unit size: Default allocation size; Volume label: TACHO2SAFE; Format options: Quick Format, Enable Compression, and Create an MS-DOS startup disk (all unchecked). At the bottom of the dialog are 'Start' and 'Close' buttons. In the foreground, a smaller 'Format TACHO2SAFE (E:)' dialog box is open, displaying a yellow warning icon and the text: 'WARNING: Formatting will erase ALL data on this disk. To format the disk, click OK. To quit, click CANCEL.' It has 'OK' and 'Cancel' buttons.