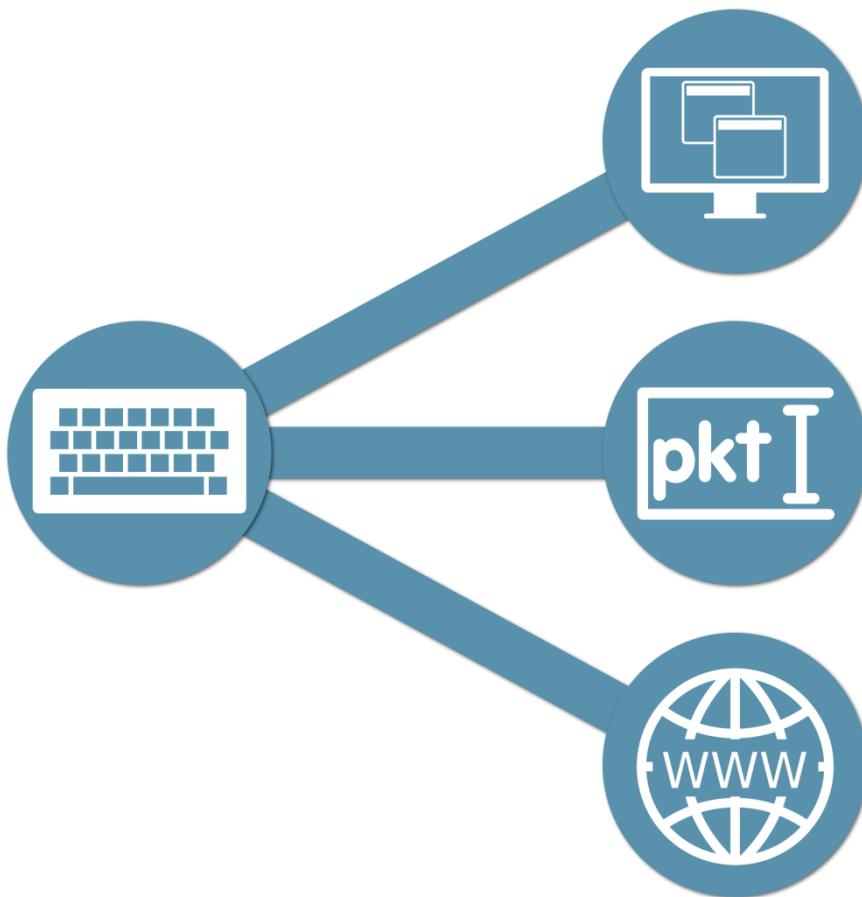# MapMyKey (Windows®)

Mapper Software for PrehKeyTec USB-Devices

USER MANUAL

AUTHOR: THOMAS MEUSERT

Content

1. Description

1.1. Difference: WinProgrammer & MapMyKey

Basically, there are two tools to program a PrehKeyTec keyboard:

WinProgrammer.exe   MapMyKey.exe

When programming with the WinProgrammer, the configuration is always stored directly in the keyboard itself.

That means:
If you configure your keyboard with the WinProgrammer, the keyboard can be used at any workstation (PC).

By contrast, when configuring with MapMyKey, the configuration of the keyboard is stored directly on the workstation (PC) on which the MapMyKey software is running.

That means:
If you configure your keyboard with MapMyKey, the keyboard can only be used at the workstation (PC) where it was configured.

Conclusion:

Thus, the basic difference between the two tools is that the intelligence in the configuration via WinProgrammer is in the keyboard, while the configuration by MapMyKey in the workstation (PC).

1.2. How MapMyKey works

MapMyKey is a configuration tool for PrehKeyTec devices. The software runs mainly in the background and automatically starts by default after Windows® user logon.
Only the keys, which are assigned with a so-called "POS-Key", can be configured with MapMyKey.
If these are not yet programmed on the keyboard, this can be done with the WinProgrammer.

1.2.3. What is a "POS Key"?

If a key is assigned a "POS-Key" via WinProgrammer, it will send "invisible" key-codes to the PC when the key is pressed.
Thus, a "POS key" is an "invisible" key code for the system.

Unlike the Windows® system, MapMyKey recognizes these POS keys.
Each key that is assigned a POS key can now be assigned any functions with the Mapper. These configurations are stored in files (* .pmap).
If a button assigned with a POS key is pressed and configured in the file opened with the mapper (* .pmap), MapMyKey translates the received POS key into the correspondingly configured function.

Incidentally, the same also works with the data from modules such as OCR, MSR, barcode and keylock.

1.3. Advantage of MapMyKey

Due to the functional principle of MapMyKey described above, there is a decisive advantage:

Since the intelligence, or the implementation of key presses in the desired actions, takes place on the PC, not only the keys / modules certain actions can be assigned, but these actions are also made dependent on certain processes.

For example, an action can be assigned to a specific process. If you press the corresponding key, the action is only executed if the corresponding process has the focus.

Example:
If an action is assigned the "notepad" process, it will only be executed if the user is in a window of the text editor, in other windows, such as Word, Excel, etc., this button is ignored.

2. Hardware Requirements

MapMyKey can only be used with USB devices from PrehKeyTec.
These include the ML2 (A) and PKT4000 document readers as well as all programmable USB keyboards.

IMPORTANT:
The keypads must be assigned POS Keys. If this is not the case, this can be done with the tool WinProgrammer.exe.
This can be downloaded from our homepage at:
https://www.prehkeytec.com/support/keyboards/

3. System Requirements

Your system needs the following requirements and installed components to run MapMyKey:

Windows® 7 (x86/x64) (or higher)

Microsoft® .NET Framework 4.0
    Download: https://www.microsoft.com/de-de/download/details.aspx?id=17718

Microsoft® Visual C++ 2010 Redistributable Package
    Download (x86): http://www.microsoft.com/en-us/download/details.aspx?id=5555
    Download (x64): http://www.microsoft.com/en-us/download/details.aspx?id=14632

4. Installation

To install MapMyKey, run '**MapMyKey Setup V*.exe**' with administrator privileges and follow the instructions in the installation.

During the installation, various templates are installed in addition to the software. Furthermore the MapMyKey´s file type '*.**pmap'** will be registered, which can be recognized by the following file icon:

5. Uninstall

To uninstall MapMyKey, go to **Control Panel**, **Programs and Features** and uninstall the '**MapMyKey**' component.

6. Using the software

6.1. Create a new file

To create a new MapMyKey file, on the ‚**File**‘ menu, click ‚**New**‘.

Choose a standard template, or select your custom WinProgrammer file (* .mwf) that you previously created with the WinProgrammer tool and loaded into your PrehKeyTec keyboard.

The WinProgrammer is the programming tool for PrehKeyTec devices and can be downloaded from the following link:

https://www.prehkeytec.com/support/keyboards/

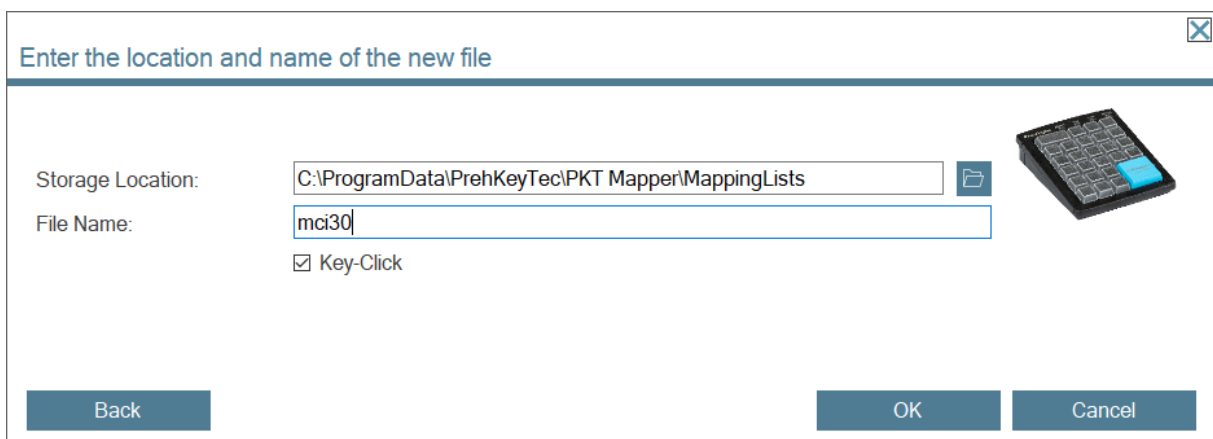Choose a standard template, or select your custom WinProgrammer file.
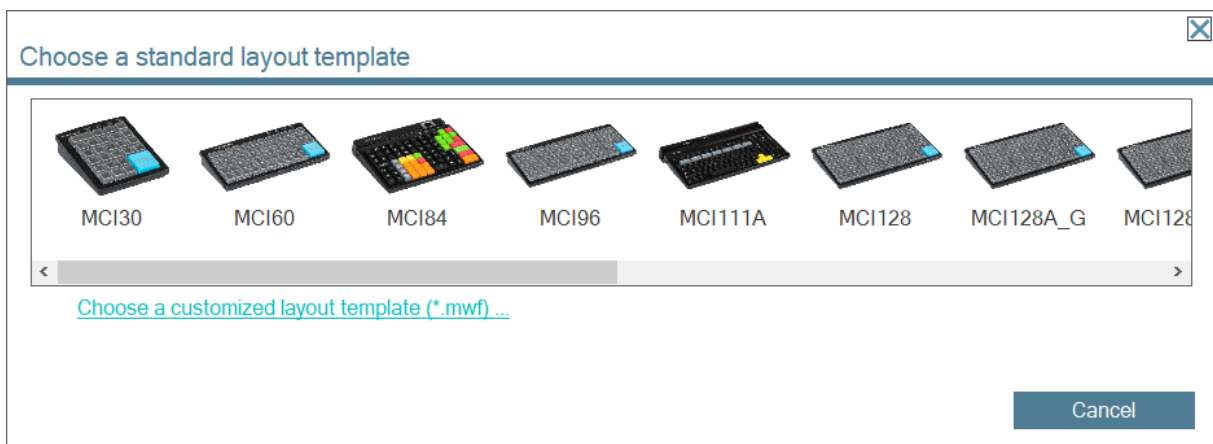
Next, specify the location and file name under which to save the new MapMyKey file.

In addition, the checkbox "**Key-Click**" can additionally be used to set whether the keypad acknowledges the pressing of the keys with a short beep tone.

After clicking on "**OK**" the new MapMyKey file will be generated and opened.
This can take a moment.

6.2. Open an existing File

If you want to open an existing MapMyKey file (* .pmap), on the ‚**File**' menu, click ‚**Open**' and select the file you want to open.

You can also open one of the recently opened files in the ‚**File → Recent Files**' menu or simply drag a MapMyKey file into the window of MapMyKey.

6.3. Automatic device detection

If the function ‚**Device Detection**' is activated in the ‚**Settings**' menu, MapMyKey recognizes the currently connected devices automatically and you can now directly create a new file with the corresponding template file.
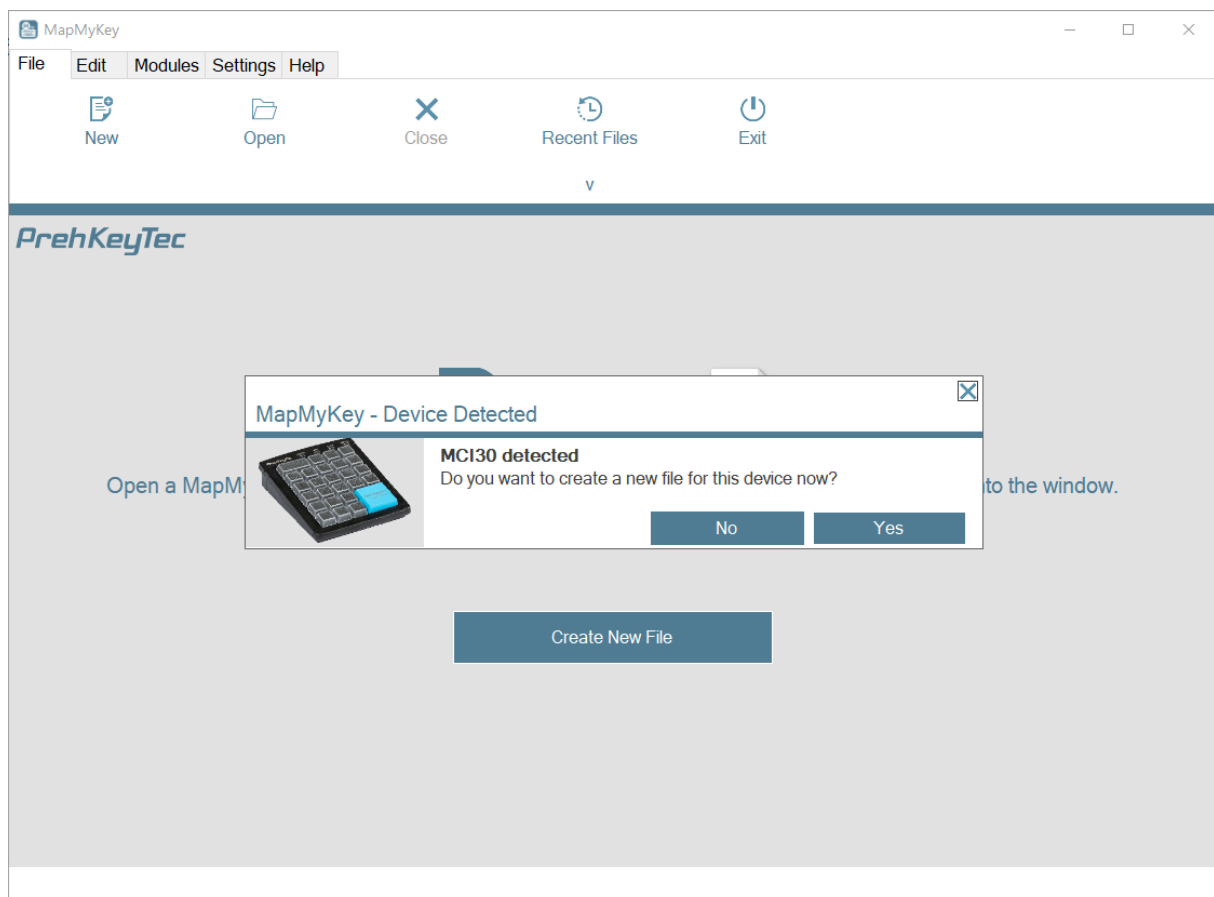
6.4. Close File

To close the opened MapMyKey file, click on ‚**Close**' in the ‚**File**' menu.
The mapping stops automatically after closing the file.

6.5. Exit or minimize MapMyKey

To stop MapMyKey, click on ‚**Exit**' in the ‚**File**' menu.

If MapMyKey is closed, no mapping takes place.
If MapMyKey should continue to run in the background, then only minimize the window of
MapMyKey.

The application disappears into the background and can be brought to the foreground via the
MapMyKey icon in the notification area of the taskbar.

6.6. Change Language

To change the language of the user interface, click on the desired language in the '**Settings'** menu.
For the change to take effect, MapMyKey must be restarted.
This happens automatically if desired.

6.7. Autostart settings

By default, MapMyKey launches automatically after logging in with your user on the Windows®
system.

In addition, after the autostart, the last opened file is automatically reopened and the window of the
MapMyKey is minimized.

These settings can be changed at any time via the '**Settings**' menu.

6.8. Display

After opening a MapMyKey file, it will be displayed as in the following window.
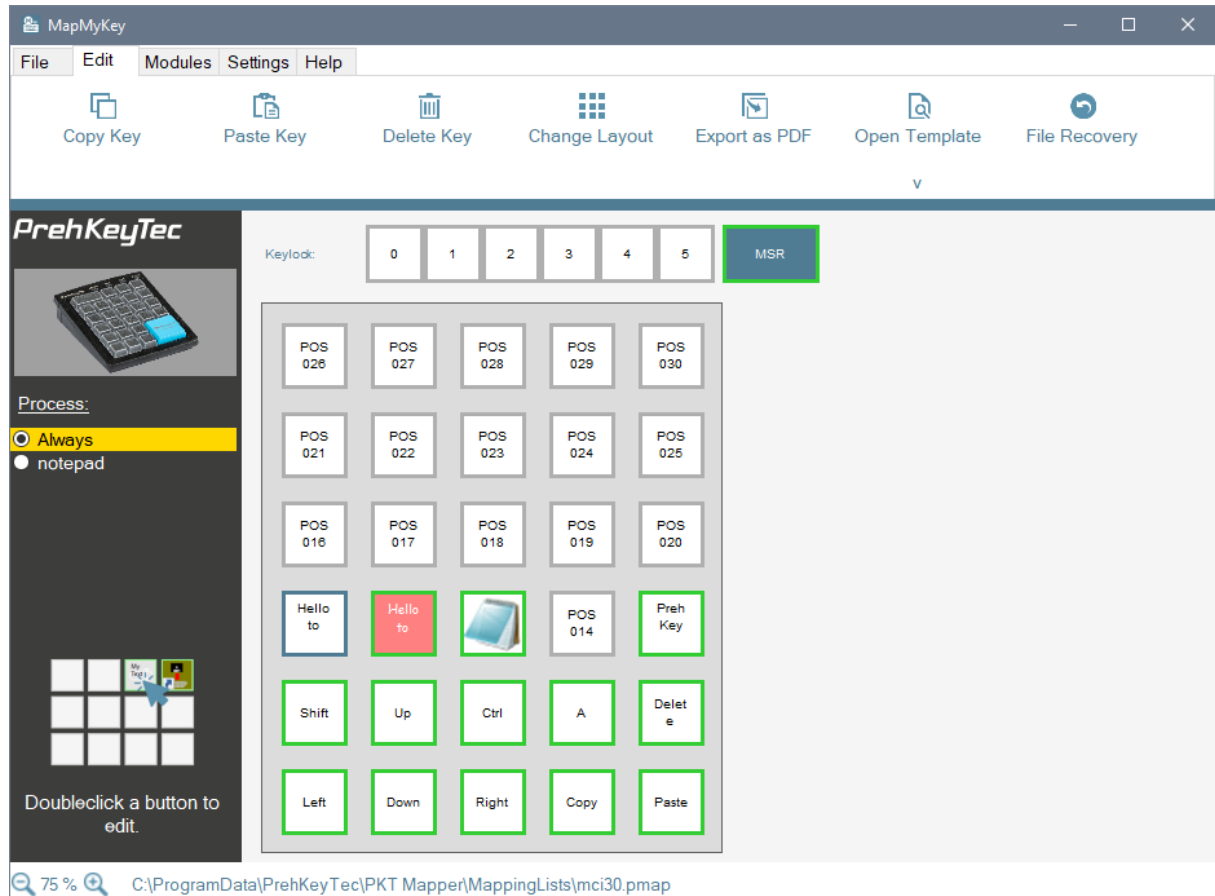
In addition to the keyboard layout, various modules are also displayed. These can be found directly above the keyboard. It may happen that modules that are not installed in your keyboard are displayed. It may also be the case that modules installed in your keyboard are not displayed.

If this is the case, the corresponding modules can be added or removed at any time in the menu '**Modules**'.

When removing a module but also all functions of the module are irrevocably deleted.
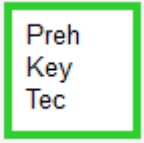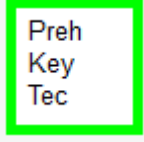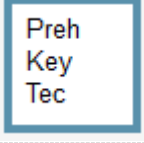
If the display of the keyboard is too small or too large for the window, the display can be reduced or enlarged in the status bar, or with the combination **CTRL + mouse** wheel.

6.8.1. Process Layer

A key can have any number of functions. It is crucial which process currently has the focus.

If a button is assigned a function for a certain process, this automatically appears in the list on the left after saving.

In the main view, the functions of all buttons are shown as follows:

	Key can not be used because no POS key is programmed on it.
	The button is not assigned any functions.
	Button is highlighted. The button is not assigned any functions.
Preh Key Tec	The button is assigned a function for the process selected in the left column.
Preh Key Tec	Button is highlighted. The button is assigned a function for the process selected in the left column.
Preh Key Tec	The button is **not** assigned a function for the process selected in the left column, but for a different process.
Preh Key Tec	Button is highlighted. The button is **not** assigned a function for the process selected in the left column, but for a different process.

6.8.2. Rename/Delete Process

With the help of the two buttons in the left column of the main view, a process for all buttons can be globally renamed, or the functions for a process on all buttons can be deleted.

6.9.　Assign function (key / keylock)

By double-clicking on the key or the keylock position, the following window opens in which you can edit the functions of the key / keylock.
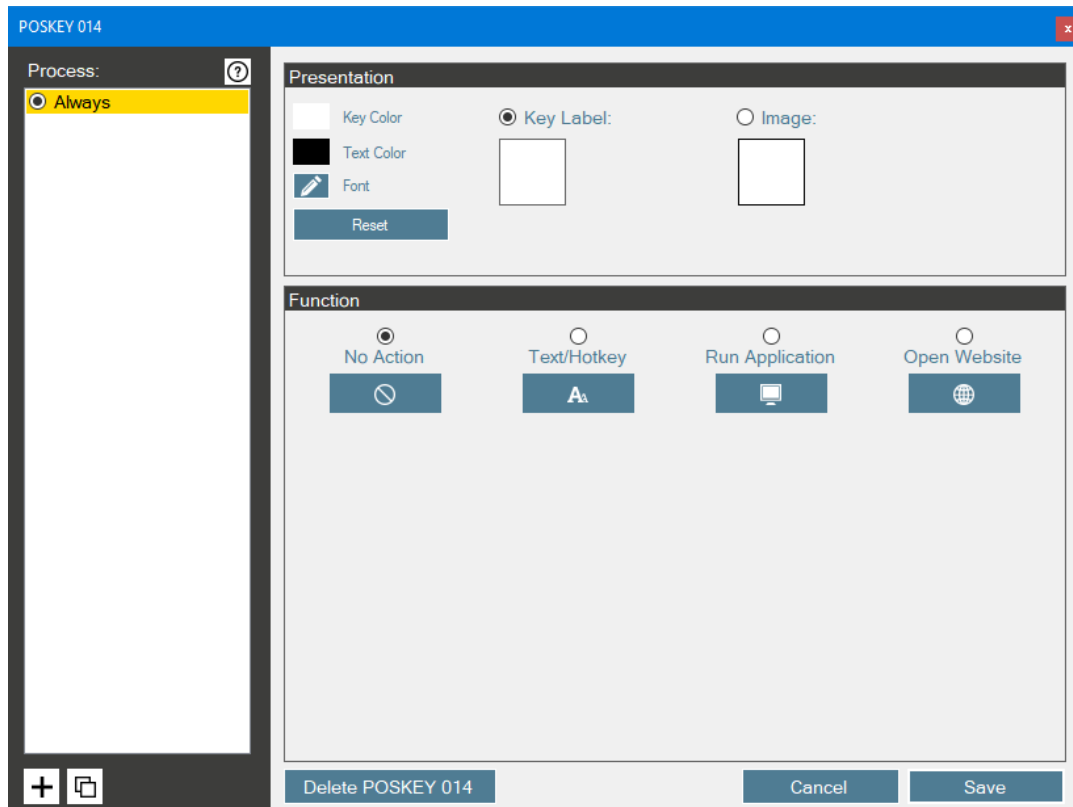
The representation of the key can be edited in the '**Presentation**' box. The key can be labeled either with a text or with a picture.
In addition, the font as well as the text and background color of the key can be changed.

A key can have any number of functions. It is crucial which process currently has the focus.

By default, the function of a key is performed independently of the focused process. To do this, select '**Always**' in the left-hand column.
This can not be renamed or deleted.

The label of the key applies equally to all functions of the key.

If you want to add a function for a certain, not yet existing, process, click on the button '**+**' on the bottom left.
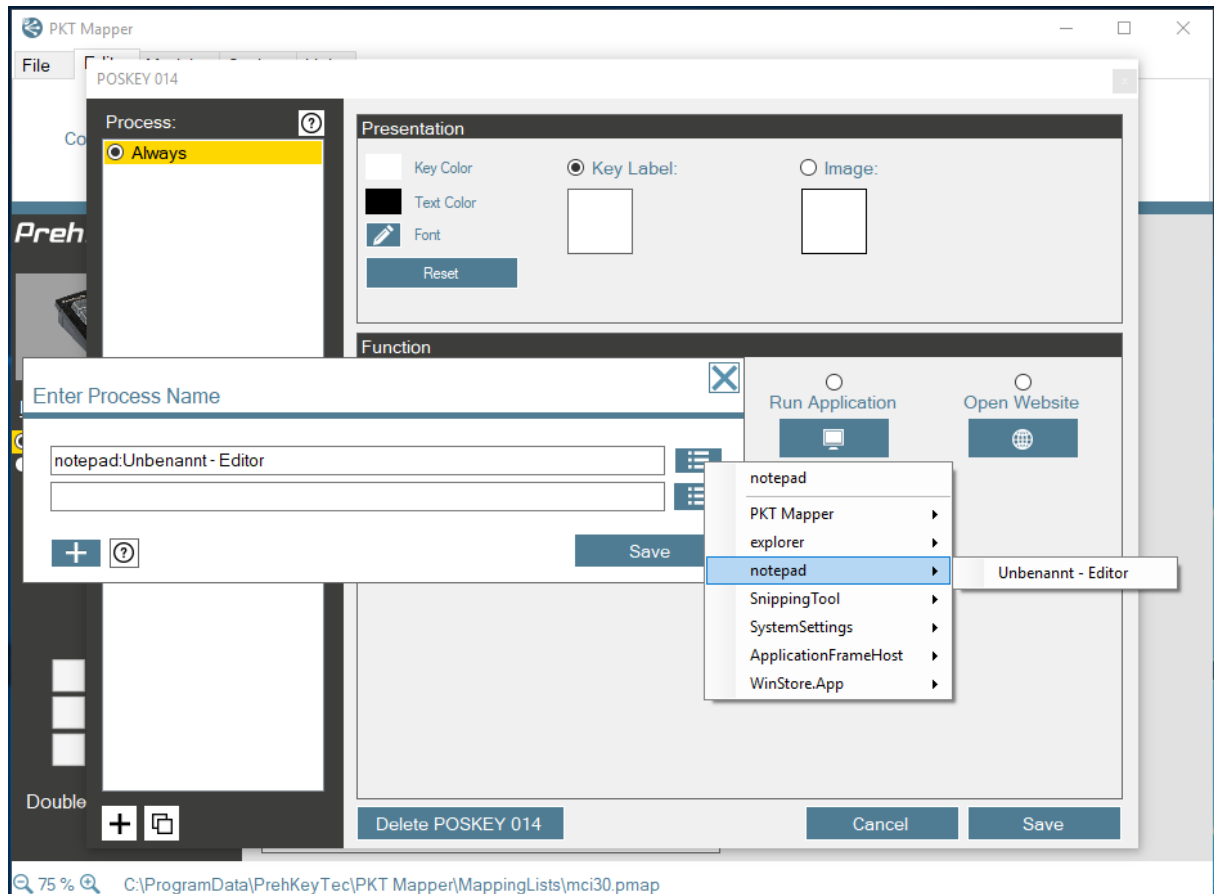
Enter a process name to which you want to restrict the function.

Would you also limit the function next to the process to a certain window title of the process, add the window title with a '**:**' separated in the process name.

The button next to the text box lists all existing processes, as well as all open processes and window titles. With a click on the desired process / window title, it is transferred to the text box.

When pressing the key, only the function whose window title is contained in the title of the window which has the current input focus is executed. Otherwise, no action is taken. Similarly, the case does not matter. Several title parts can be enumerated by further separations with a ':'.

In addition, by clicking on '**+**' several process levels can be created simultaneously.

After clicking on '**Save**' the new layer will be added and selected.

Now this can be configured.
Similarly, a window title can be **renamed**, **copied**, or **deleted**.
But this has only impact on the selected key.
The window titles of all other buttons remain unchanged.

If one of the following three functions is assigned to a process, the lower checkbox '**Bring window to foreground**' can be used to bring the window of the selected process to the foreground before the function is executed.

6.9.1. Function: Text/Hotkey

This function outputs text and / or keyboard shortcuts when the selected key is pressed.
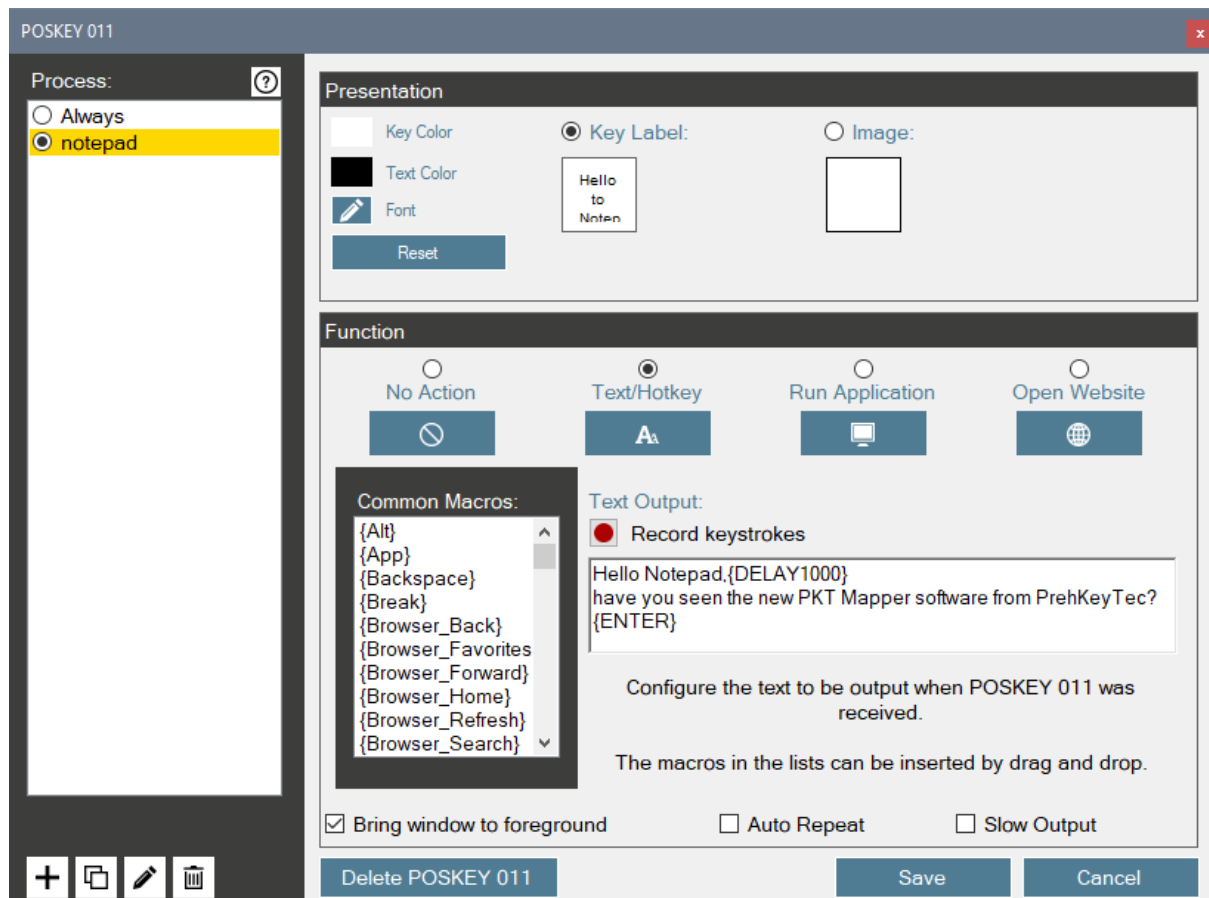
You can either enter the text output manually or drag and drop various standard macros and combine. The well-known spelling from the WinProgrammer applies here.

You can also use the button "**Record keystrokes**" to easily record the desired key combination and enter it in the text box.

Another click on the button (or in the POS key window) ends the recording and, if desired, creates a new process layer in which the keystrokes were recorded.

By default, a POS key is only executed once when pressed. If you want the key to be kept pressed while pressed, you can activate the checkbox "**Auto Repeat**".

Sometimes it is necessary to output a text sequence or a shortcut a little more slowly.
To do this, activate the checkbox "**Slow Output**".

6.9.2.   Function: Run Application

This function executes an application when the selected key is pressed.
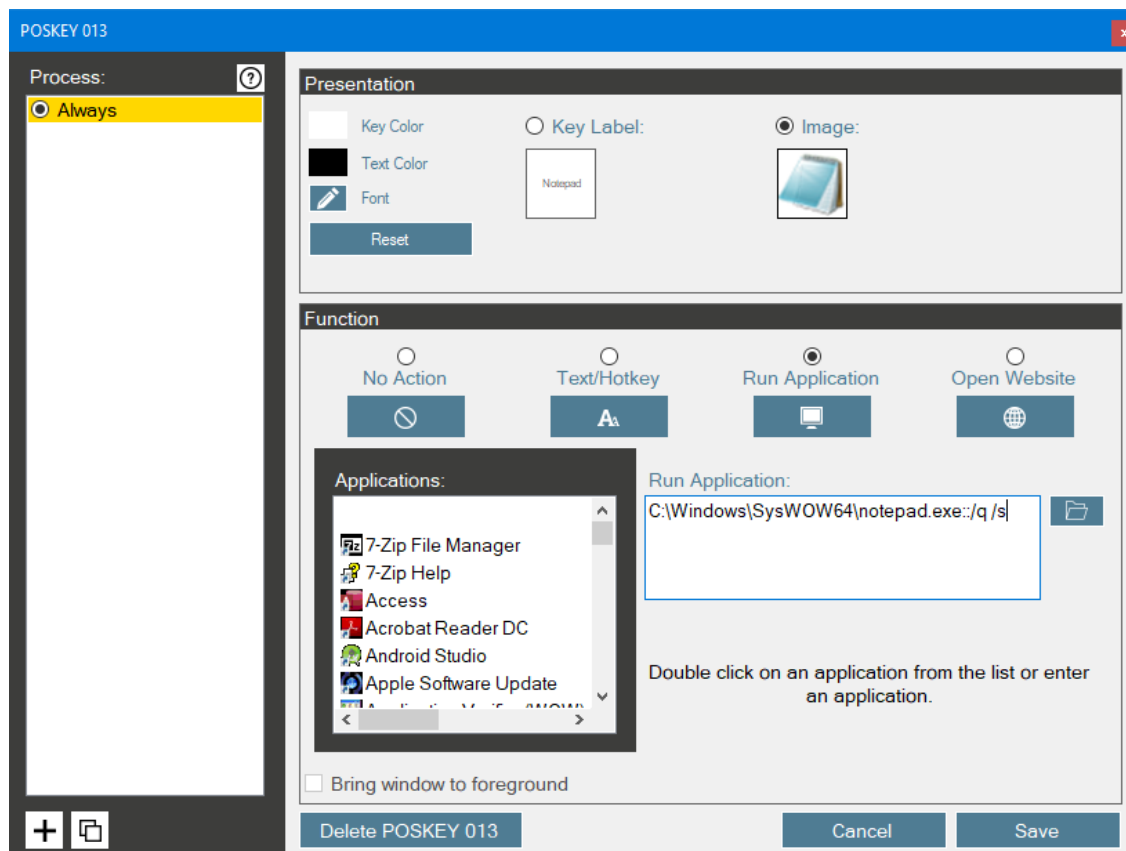
You can manually enter the full path, double-click an application from the list, or search for an application.

If parameters are to be passed to the application, they can be appended after the '**::**' after the complete program path.

6.9.3. Function: Open Website

This function opens a web page in the browser when the selected key is pressed.
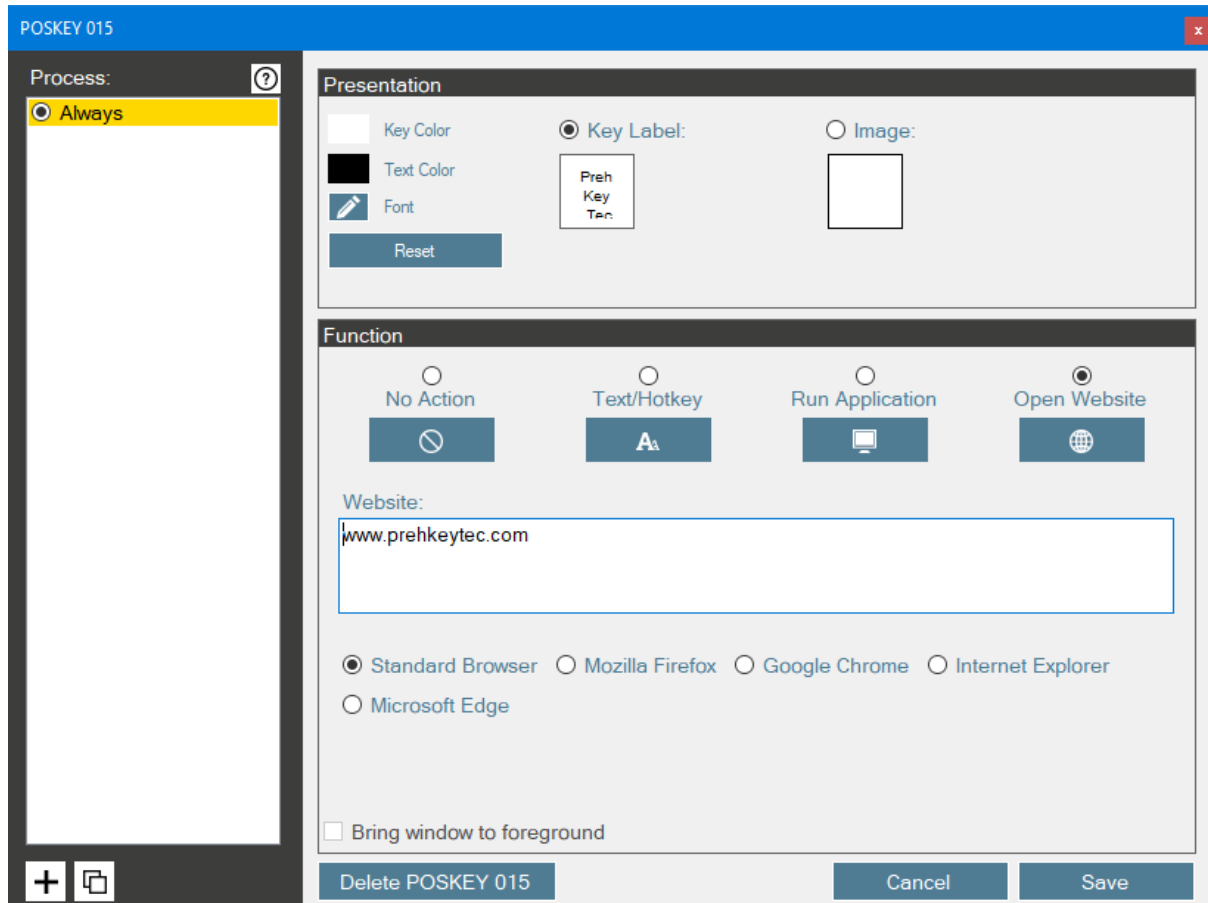
To do this, manually enter the complete URL or insert it.

You can also choose to open the URL in the default browser or in a specific installed browser.

6.9.4. Save changes

If you want to save all changes to the key, click '**Save**'.

When saving, all window titles to which no action has been assigned are automatically deleted by the key.

6.9.5. Delete all functions

If you want to delete the complete key (all functions and the label of the key), just click on '**Delete POSKEY XXX**'.

The functions of the key are irrevocably deleted.

6.10.   Assign function (MSR/OCR/Barcode)

By clicking on a module button ('**MSR**', '**OCR**', '**Barcode**'), one of the following windows opens in which you can edit the function of the module.

With the modules one either has the possibility of outputting the data on receipt as keystrokes or of storing the data in a file.

As with the keyboard output of the keys, one can either enter the output text manually or insert and combine various standard and module macros by drag and drop.

Upon receipt of module data, the special macros inserted in the '**Text Output**' field will be replaced by the corresponding received data.

6.10.1. Output as keystrokes
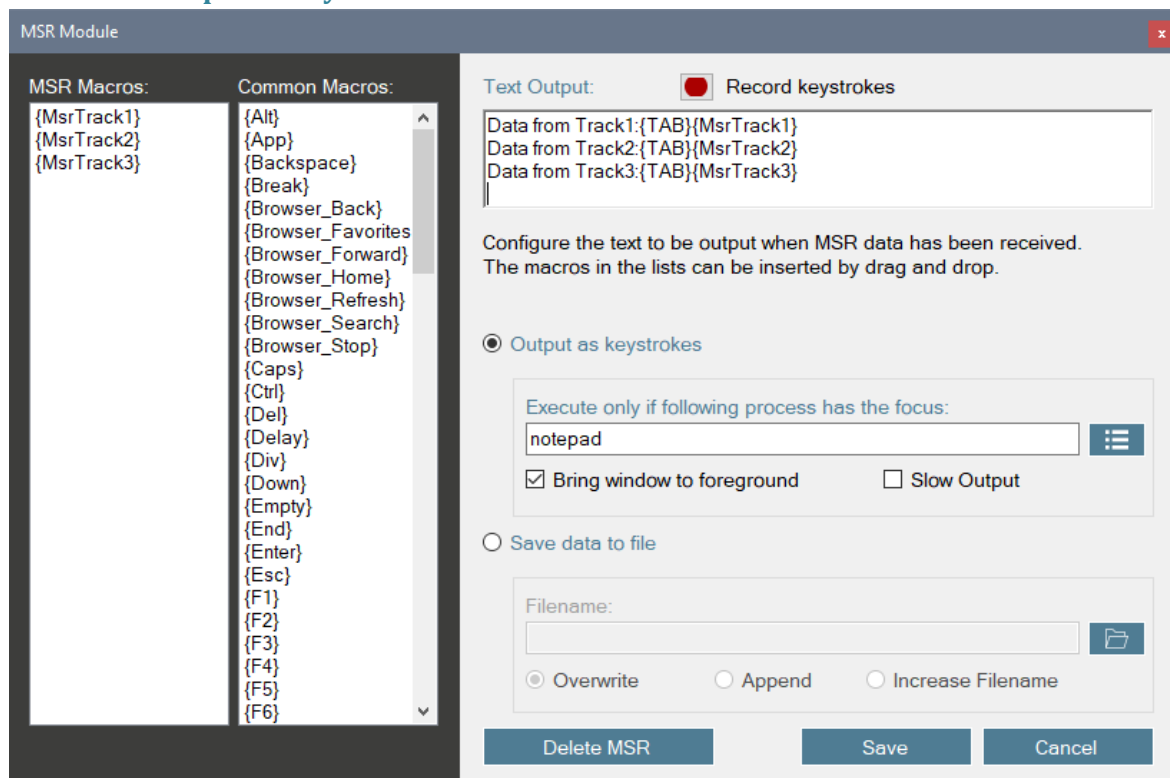
The keyboard output can be restricted to a specific process. Likewise, the checkbox '**Bring window to foreground**' can also be used that the window of the selected process is brought to the foreground before the configured text is output as keystrokes when the module data is received.

The Record Keystrokes feature works like the keys.

Keyboard output can also be slowed down here with the "**Slow Output**" checkbox activated.

6.10.2. Save data to file
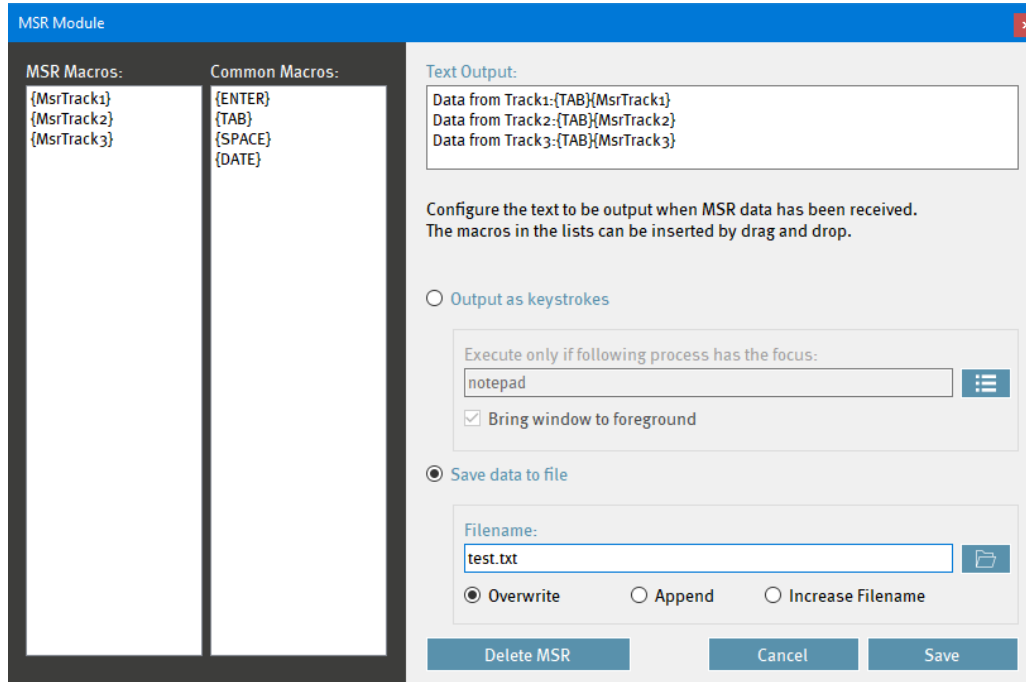
Enter a complete file path including the name and file extension into which the configured text should be saved upon receipt of the module data.

You can also choose between the following options:

'**Overwrite**'
Receiving new module data overwrites the specified file.

'**Append**'
When new module data is received, the new text is appended to the contents of the specified file.

'**Increase Filename**'
When receiving new module data, a new file is created, with the specified file name being incremented.
Example: "Barcode**1**.txt", "Barcode**2**.txt", "Barcode**3**.txt", etc.

The Record Keystrokes feature is not available here.

6.10.3. Save changes
If you want to save all changes to the key, click '**Save**'.

6.10.4. Delete module function
If you want to delete the module function, just click on '**Delete XXX**'.

The function of the module is irrevocably deleted.

6.11.   Change layout template (*.mwf)

It is possible that you change your MWF file using WinProgrammer because, e. G. to move a key, change the size of a key, etc.

In this case, you do not have to duplicate the work and move the functions in your MapMyKey file as well.

You can simply select the changed WinProgrammer file (* .mwf) via the menu '**Edit → Change Layout**'.

The layout will then be updated in the MapMyKey file. The functions are all retained and may be moved to the new key positions automatically.

6.12.   Activate / deactivate key tones afterwards

In order to subsequently deactivate / activate the key tones, use the previously described function "Change layout template ".

There, when selecting the layout template, the key tones can be deactivated / activated with the checkbox. (Just like when creating a new file)

6.13.   Open another file as a template

If you have already created a MapMyKey file and would like to use keys created in it in your new file, you can open this file as a template.

Simply click on '**Open Template**' in the '**Edit**' menu and select the desired file.
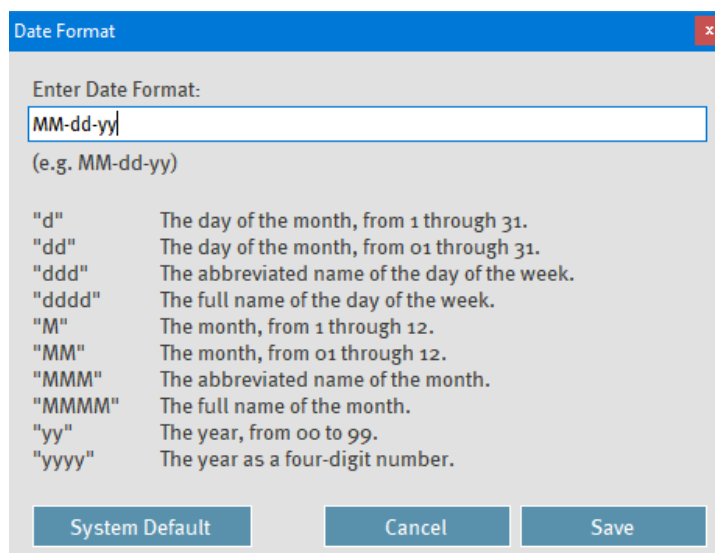
This will now be opened in a separate window. From there you can drag and drop the desired buttons to the desired position of your new file.

6.14.   Change Date Format

For text output and modules, there are certain macros that output a date.
For this, the desired output format can be specified.
In the '**Settings**' menu, click on '**Change Date Format**' and enter your desired date format in the following window.

Date Format

Enter Date Format:

MM-dd-yy

(e.g. MM-dd-yy)

"d"	The day of the month, from 1 through 31.
"dd"	The day of the month, from 01 through 31.
"ddd"	The abbreviated name of the day of the week.
"dddd"	The full name of the day of the week.
"M"	The month, from 1 through 12.
"MM"	The month, from 01 through 12.
"MMM"	The abbreviated name of the month.
"MMMM"	The full name of the month.
"yy"	The year, from 00 to 99.
"yyyy"	The year as a four-digit number.

System Default   Cancel   Save

6.15. Export key labels as PDF

Another feature of MapMyKey is that you can easily export the labels of all buttons that have a function to a PDF file.

In the PDF file, the keys are sorted by key size. You can now easily print, cut and label the keys on your keyboard.

This function can be found in the menu 'Edit → Export as PDF'.
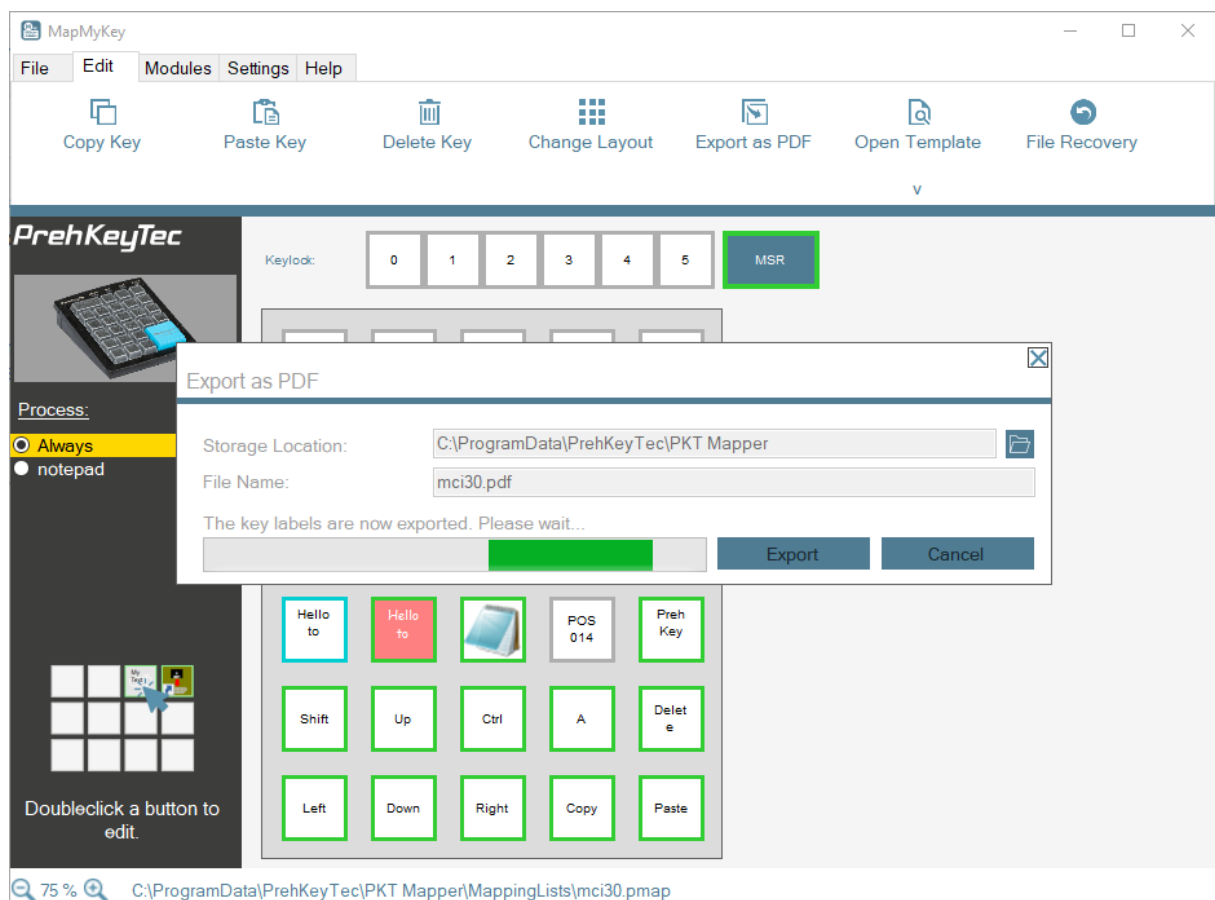
6.16. Check for updates

MapMyKey checks if a new software update is available and displays it in the status bar. This check can be deactivated in the menu "Help→Check for updates".

6.17. File Recovery/Undo

MapMyKey saves every change made after opening a file. To undo a change, you can restore the desired state of the change under "**Edit→File Recovery**".

Click on the arrow at the end of the corresponding line to restore the desired state.
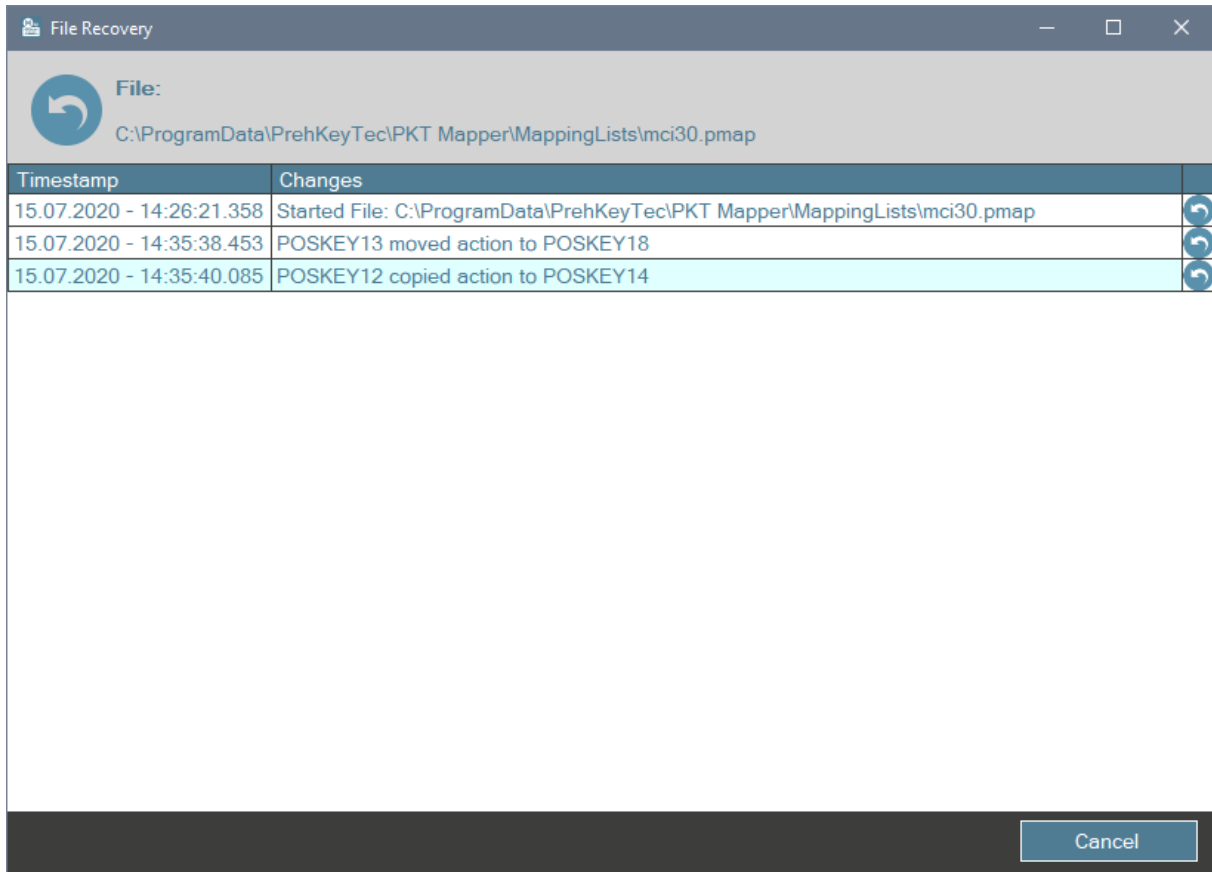
7. Settings.xml

All settings that are changed in the mapper are saved in the following XML file:

%APPDATA%\PrehKeyTec\PKT Mapper\Settings.xml

In addition, there can be made a few more settings that optimize the behavior of MapMyKey:

```xml
<POSKeyMapper>
  <SETTINGS>
   <SET>
    <MasterSettingsFile></MasterSettingsFile>
    <Autostart>FALSE</Autostart>
    <OpenLastFile>TRUE</OpenLastFile>
    <DeviceDetection>TRUE</DeviceDetection>
    <CheckUpdates>FALSE</CheckUpdates>
    <OpenFile>C:\ProgramData\PrehKeyTec\PKT Mapper\MappingLists\mci30.pmap</OpenFile>
    <LogFile></LogFile>
    <LogLevel>15</LogLevel>
    <LogFileAppend>FALSE</LogFileAppend>
    <Language>de</Language>
    <DateFormat>MM-dd-yy</DateFormat>
    <IntercharacterDelay>0</IntercharacterDelay>
    <IntercharacterDelaySlow>20</IntercharacterDelaySlow>
    <IntermacroDelay>0</IntermacroDelay>
    <IntermacroDelaySlow>100</IntermacroDelaySlow>
    <AutoRepeatDelay>15</AutoRepeatDelay>
    <AutoRepeatFirstDelay>250</AutoRepeatFirstDelay>
    <FileHistoryEntries>30</FileHistoryEntries>
   </SET>
  </SETTINGS>
</POSKeyMapper>
```

Property	Description	Values
Autostart	Activates / deactivates the automatic start of the mapper after Windows® user logon	TRUE/FALSE
OpenLastFile	Activates / deactivates the automatic opening of the last used file when starting the mapper	TRUE/FALSE
OpenFile	Full path of the file for the OpenLastFile option	Full path of the file
DeviceDetection	Activates / deactivates automatic device discovery	TRUE/FALSE
CheckUpdates	Activates / deactivates the automatic search for software updates	TRUE/FALSE
Language	Language of the MapMyKey user interface	de/en
DateFormat	Global date format	Date format
IntercharacterDelay	Text output: Delay between the output of each character (Default)	Delay in ms
IntercharacterDelaySlow	Text output: Delay between the output of each character (Slow Output)	Delay in ms
IntermacroDelay	Shortcuts: Delay between the output of each macro (Default)	Delay in ms
IntermacroDelaySlow	Shortcuts: Delay between the output of each macro (Slow Output)	Delay in ms
AutoRepeatFirstDelay	Auto Repeat: Delay after key press until the beginning of the auto repeat	Delay in ms
AutoRepeatDelay	Auto Repeat: Frequency of the Auto Repeat	Frequency in ms
LogFile	Full path of the log file	Full path of the file
LogLevel	Height of the log level.	
LogFileAppend	Specifies whether the log file is overwritten on startup	TRUE/FALSE
MasterSettingsFile	Parent Settings.xml file for client mode	Full path of the file
FileHistoryEntries	Number of maximum backups to restore	Number

8. Macros

8.1. Standard Macros

Macros	Description + Annotations
{ALT}	Alt key
{APP}	GUI (Win) application key
{BACKSPACE}	Backspace key - abbreviation: {BS}
{BREAK}	Break key (= CTRL + Pause)
{BROWSER_HOME}	WWW Home
{BROWSER_SEARCH}	WWW Search
{BROWSER_FAVORITES}	WWW Favorites
{BROWSER_REFRESH}	WWW Refresh
{BROWSER_STOP}	WWW Stop
{BROWSER_FORWARD}	WWW Forward
{BROWSER_BACK}	WWW Back
{CAPS}	CAPS-Lock
{CTRL}	Ctrl key
{DATE}	Insert current Date (global format)
{DATEyyyyddMM}	Insert current Date (user defined format)
{DEL}	DEL key (numeric keypad)
{DELAY}	0.5 sec output delay
{DELAY1000}	User defined output delay in milliseconds (e.g. 1000ms)
{DIV}	Division key on numeric keypad
{DOWN}	Moves cursor down
{END}	End key
{ENTER}	ENTER key
{ESC}	ESC key
{EMPTY}	No action dummy
{F1}	Function key F1 … F24
{HOME}	Home key
{INS}	Insert key
{LAUNCH_MAIL}	Mail
{LAUNCH_MEDIA}	Media Select
{LEFT}	Cursor left
{LALT}	(left) Alt key
{LWIN}	Left GUI (Win) key
{LCTRL}	(left) Ctrl key
{LSHIFT}	(Left) Shift key
{MEDIA_PLAY_PAUSE}	Media Play/Pause
{MEDIA_STOP}	Media Stop
{MEDIA_PREV}	Scan previous Track
{MEDIA_NEXT}	Scan next Track

{MINUS}	Minus key (Numeric block)
{MUL}	Multiplication key (Numeric block)
{N.}	Delete / Dot key (Numeric block)
{N0}	Numerical block keys 0 … 9
{NUMLOCK}	NumLock key
{PAUSE}	Pause key
{PGDN}	Page Down
{PGUP}	Page Up
{PLUS}	Plus key (Numeric block)
{RCTRL}	Right Ctrl key
{RETURN}	RETURN key
{RIGHT}	Cursor right
{RSHIFT}	Right Shift key
{RWIN}	Right GUI (Win) key
{SCROLL-LOCK}	ScrollLock key
{SHIFT}	Shift key
{SLEEP}	System Sleep
{SPACE}	Space Bar (in a string, this macro must be used at the end of a line)
{TAB}	Tab key
{TIME}	Insert current time (format: HH:mm)
{UP}	Cursor up
{VOLUME_MUTE}	Mute
{VOLUME_DOWN}	Volume Down
{VOLUME_UP}	Volume Up

8.2. MSR Macros

Macros	Description + Annotations
{MsrTrack1}	Data of MSR track 1
{MsrTrack2}	Data of MSR track 2
{MsrTrack3}	Data of MSR track 3

8.3. Barcode Macros

Macros	Description + Annotations
{BarcodeType}	Barcode type
{Barcode}	Barcode data

8.4. OCR Macros

Macros	Description + Annotations
{Type}	Passport type
{Code}	Country code
{PassportNo}	Passport number
{Surname}	Surname
{Givenname}	Givenname
{Nationality}	Nationality
{NationalityCode}	Nationality 3-Letter-Code
{DateOfBirth}	Date of birth
{DateOfExpiry}	Date of expiry
{Sex}	Sex
{OptionalData1}	Optional data 1
{OptionalData2}	Optional data 2
{MRZline1}	MRZ line 1
{MRZline2}	MRZ line 2
{MRZline3}	MRZ line 3

For the macros "**Surname** / **Givenname** / **Nationality** / **OptionalData**" you can also select the output in uppercase / lowercase letters by appending U/L/N as following:

Lowercase: e.g.: {Givenname**L**} → „thomas norbert"
Uppercase: e.g.: {Givenname**U**} → „THOMAS NORBERT"
Standard: e.g.: {Givenname**N**} → „Thomas Norbert"

If nothing is specified, the data is always output as it is contained in the MRZ.

In addition, multiple first and last names can be output individually by selecting the respective name in the macro as follows:
(This can also be combined with the upper / lower case described above)

First surname: {Givenname**[0]**} → „THOMAS"
Second surname: {Givenname**[1]**L} → „norbert"

If the selected name does not exist, nothing is output.

9. Sample Files

During installation, a few sample files are copied to the folder C:\ProgramData\PrehKeyTec\PKT Mapper\MappingLists\.

The sample files are read-only and can be opened as a copy.
By default, the '**File → Open**' menu provides access to the location of the sample files.

10.   Support

PrehKeyTec Support
Scheinbergweg 10
97638 Mellrichstadt
Germany Phone: +49 9776 7046 0
Support: +49 9776 7046 222
Fax: +49 9776 7046 199
Email: support@prehkeytec.de