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# ECT MOUSE



E C T



# **ECTmouse User's Manual**



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# About ECTmouse

**ECTmouse (EyeComTec Mouse)** is an application which emulates cursor movements and mouse button clicks and can be used on any computer keyboard. This program is in the field of assistive technologies, giving the possibility of working effectively with a personal computer to those with limited physical abilities.

**ECTmouse** easily enables any of the mouse actions listed below:

- Vertical, horizontal, and diagonal cursor movements;
- Clicks and double clicks;
- Pressing and releasing of individual buttons;
- Vertical scrolling.

Clicks and actions are emulated for right, left, or middle mouse buttons.

This program is designed to suit various groups of users with limited motor functions, and can be successfully applied in such cases:

- Insufficient hand or arm mobility;
- Impaired fine motor skills, when the user cannot aim the mouse, click on icons, or select any areas of the desktop due to their movements being too strong, quick, or intense;
- Tremors: when the user cannot click on icons due to making uncontrolled shifts of the cursor;
- Hand pains during work with a mouse, as a result of carpal tunnel syndrome, osteoarthritis, various neurological diseases, different types of injuries, and prolonged computer work;
- Diseases causing temperature exchange problems. In such cases, the user's fingertips are too cold, which cause additional difficulties during touchpad operation.

People without any limits in their motor functions can also use the **ECTmouse**. The most common circumstances and situations are listed below:

- Malfunctions of mouse or laptop touchpad;
- Continuing to work while the physical wireless mouse is charging;
- To add a middle mouse button and scrolling functions when working with a touchpad, which doesn't support such functions, or in case of a two-buttoned mouse operation;
- In cases when it is necessary to obtain precise cursor positioning (up to one pixel) to complete various operations and tasks.

**The ECTmouse** is equipped with an easy and understandable interface and a full set of customization options. Each mouse action can be assigned to any desired key on the keyboard, allowing the user to configure the program for their personal needs and goals. The mouse emulation can be started or paused at any moment in time, using the main menu of the program or a hot key.

The user can easily change the mouse step (shift in pixels) of the cursor during program operation by using hotkeys on the keyboard, thus there is no need to stop the mouse emulation or open the settings panel.

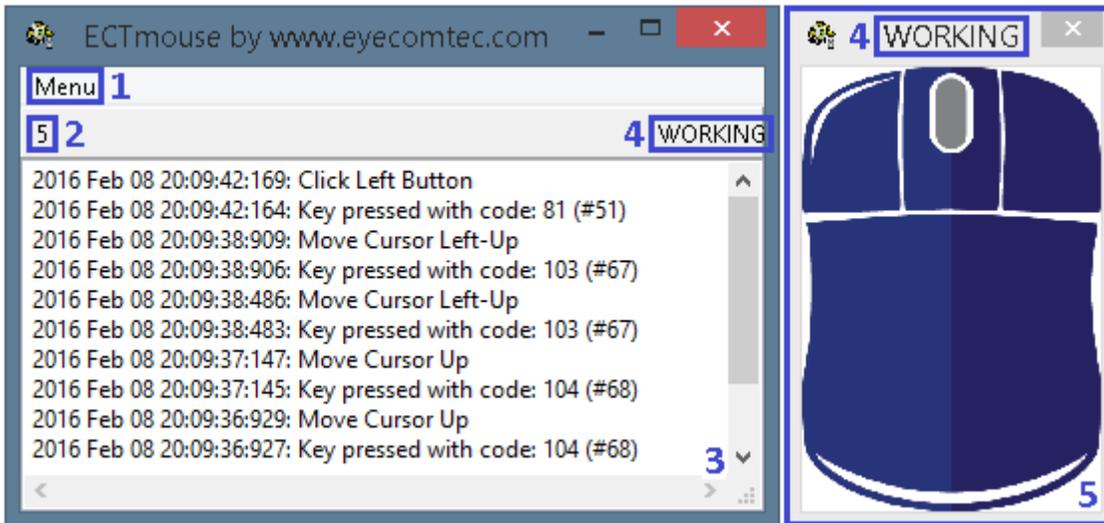
**The ECTmouse** can also limit the cursor movement area by defining a rectangular area of any desired size. The angles and measurements of this rectangle can be set in the settings window of the program.

All the actions performed during the emulation process are saved into a log, which is shown in the main window of the program. The number of events in the log can be selected through the settings panel of the program.

The **ECTmouse** provides the user with a convenient configuration process. All settings are divided into groups, allowing the user to change all the parameters quickly and easily. Keyboard key codes, which correspond to various mouse actions, can be set manually or automatically by pressing desired keys. The program has several language settings, allowing the majority of users to work with **ECTmouse** in their native language.

The program is portable, so it does not require installation, and can be executed from any external media storage. It also supports the fast export and import of user profiles, allowing users to instantly switch between various **ECTmouse** profile settings.

The main interface of the program is shown in figure 1:



(Fig. 1. Main interface of the program: 1 – main menu; 2 – counter of actions performed; 3 – detailed log field; 4 – current emulation indicator; 5 – current mouse state window)

The main window of the **ECTmouse** contains the main menu button, a key counter showing the number of actions performed, and a log field with detailed information about the emulated actions. Every time that the emulator is enabled, the user will see a blinking 'WORKING' indicator to the right from the counter, which shows that the program is in operation.

The log contains the date and time of an action, the key code of the physical button being pressed in decimal and hexadecimal encoding, and the corresponding action of the mouse button being emulated. The newest events appear on top of the list.

In order to ensure correct program operation, the user first has to assign each mouse action to their desired keys on their physical keyboard, as well as a comfortable cursor speed (shift step size). The user can also limit the desktop area for cursor movement (the cursor will not be allowed to leave this area).

# Main advantages of ECTmouse

The **ECTmouse** application has many key advantages when compared with similar program products from other developers, namely:

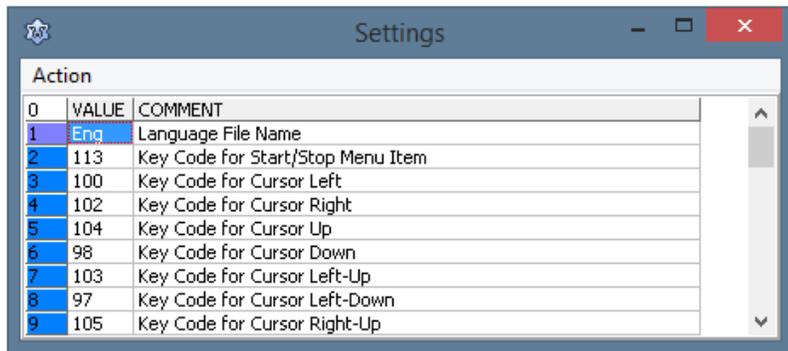
- Flexible configuration. Any possible actions which can be performed by the mouse (cursor movement, click, double click, holding and releasing keys, scrolling) can be assigned with any key of the keyboard;
- Variable cursor movement speed (shift step in pixels) 'on the fly', without any need to stop the emulation;
- The possibility of limiting cursor movement area and setting different modes of movements within it;
- The program supports unlimited user profiles, with quick import and export in just a couple of clicks. When several users work with one computer, each can have their personal settings profile, with convenient keyboard configuration;
- The 'current mouse state window', enables users to check if the emulation is enabled or disabled and check which mouse buttons are being pressed at the present moment;
- Portability: the program doesn't require any installation and can be executed from any external storage device;
- Localization support, allowing users to work with the program in their native language and learn faster;
- A convenient and simple operation log with several settings.

All these features make the **ECTmouse** a very functional and easy to use mouse emulator.

# ECTmouse initial launch: Getting Started.

In order to perform the initial set-up of the program, the user needs to perform several actions, which are listed below:

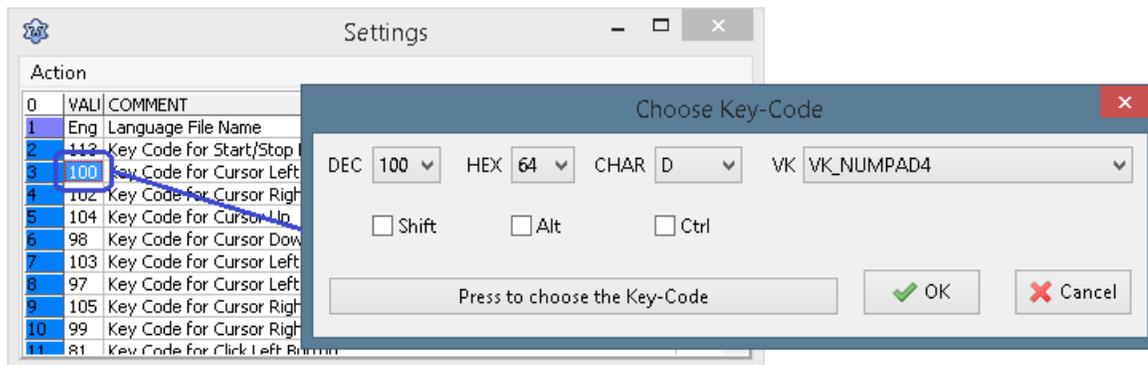
1. Launch the **ECTmouse** application.
2. Open the settings panel of the program by choosing '**Settings**' – '**Show Settings Form**' item of the main menu, or by using the **F3 hot key** (see fig. 2).



(Fig. 2. **ECTmouse** settings panel))

3. Select the keyboard keys which will correspond to cursor movements (parameters 3-10).
4. Select the cursor shift step in pixels (parameter 40), as well as the amount by which the cursor shift step can be quickly increased or decreased (parameter 41).
5. Select the keyboard keys which will emulate a single click of the mouse (parameters 11-13), a double click of the mouse (parameters 14-16), the press and hold of a button (parameters 17-19), and the release of a mouse button (parameters 20-22). The same keyboard keys can be used to emulate the hold or release actions of mouse buttons.
6. Assign the keys which will emulate mouse scrolling: up (parameter 23) and down (parameter 24).

The selection of the key is performed by entering its decimal key code into a corresponding field. However, there is an easier way to do that. If the user double clicks with left mouse button on the value field, it will open an additional window with extended settings (see fig. 3).



(Fig. 3. Selecting keys for various mouse actions)

In the new window, the user may select one of these values:

- Specify decimal encoding of a key (DEC field);
- Specify hexadecimal encoding (HEX field);
- Specify a symbol (CHAR field);
- Specify a virtual symbol code (VK field).

If necessary, the user may also add one or several control keys (Ctrl, Alt or Shift) to any selected code (except for the key to start and stop the emulation process – parameter 2). To do so, the user needs to check the desired items (Shift, Alt, Ctrl) in the 'Choose Key-Code' window. Control keys can be extremely useful while working on a laptop or keyboard that lacks the numeric pad.

The user does not have to enter the key code manually all the time. Users can simply click on the '**Press to choose the Key-Code**' button. The button's text will be changed to '**Waiting for button to be pressed...**' (Fig. 4). Following this, the user can press any desired key of the keyboard, and the code fields will be filled in automatically.



(Fig. 4. Waiting for key stroke in order to select ASCII-code)

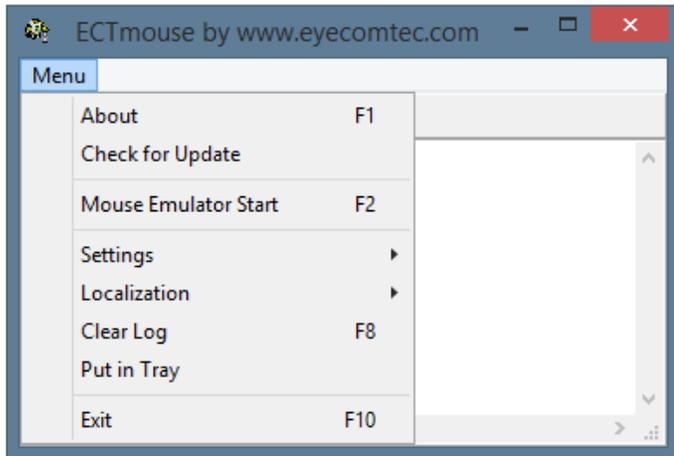
If it is necessary, the user can also set separate keys to change the fixed value of the shift step: decrease (parameter 32), and increase (parameter 33), as well as for double reduction or enlargement of its (parameters 30-31). The cursor movement limitation area can be set with parameters 50-53.

More detailed information about all the available settings can be found in the 'Settings and additional parameters of **ECTmouse**' chapter of this manual.

When the configuration of the program is complete and all key emulated actions are set, the user may begin to work with the **ECTmouse**. In order to start the emulation, the user can choose the '**Mouse Emulator Start**' item of the menu or by pressing the **F2** hot key.

# Main menu and functionality of ECTmouse

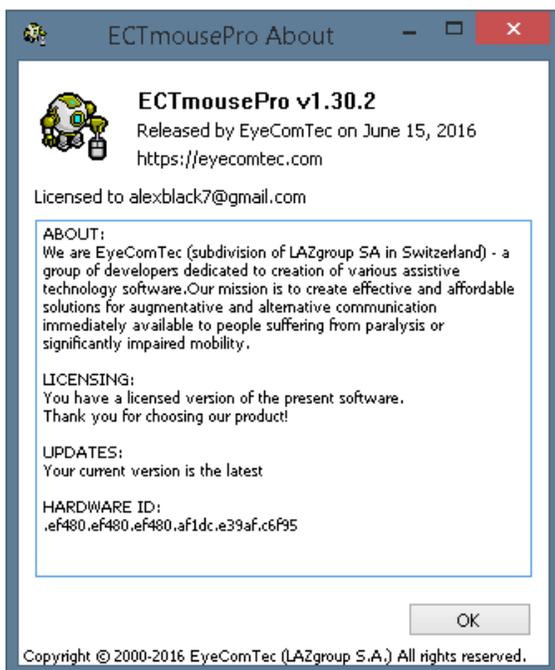
By using the main menu of **ECTmouse**, the user can open the settings panel of the program, start or pause the mouse emulation process, import and export a user profile, or restore the factory settings. The user can also set one of the available interface languages, clear the log, and minimize program windows to the system tray of the operation system. The most important functions are assigned with corresponding hot keys, to make operation of the program easier and more efficient. The main menu is shown in figure 5.



(Fig. 5. Main menu of the program)

Let's look at the menu items in more detail.

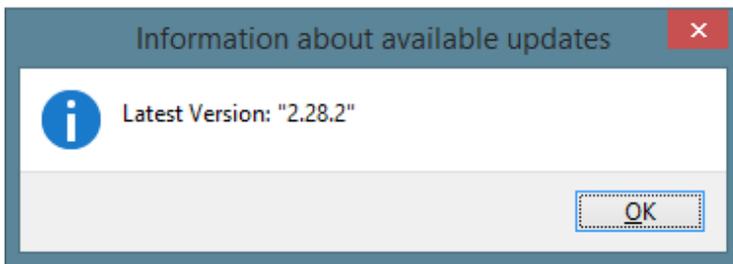
'**About**' **F1**-button. By using this item, the user can open an informational window of the program, which contains information about the developer, contact details and useful links, as well as information about the current version of **ECTmouse** (see fig. 6).



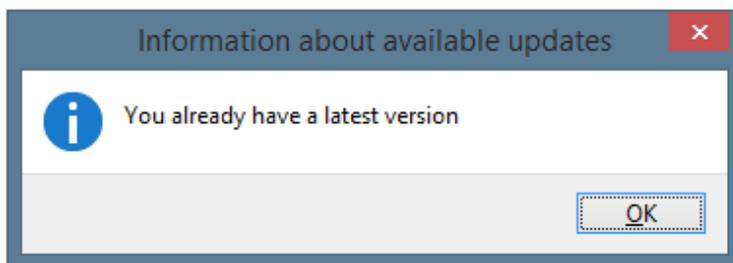
(Fig. 6. The informational window of the program)

'**Mouse Emulator Start**', '**Mouse Emulator Stop**', **F2**-button. This menu item allows the user to start or stop the emulation process, in which all mouse actions (cursor movements, clicks and scrolling) can be performed using any keyboard. By default, the **F2** hot key is assigned to this function, but it can be changed by using item 2 of the program settings panel.

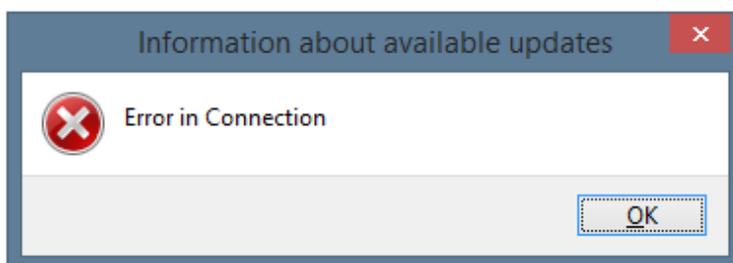
'**Check for Update**'. This button allows a user to check whether an updated version of the program is available. If the application finds a more recent version, it will display a window with information about the latest version number (see fig. 7). Users will also be notified if they already have the latest version installed (see fig. 8). In case of some connection errors, when it is impossible to connect to the server (e.g. no internet connection, our servers are temporarily down or the networking activity for our application is blocked by a firewall), the program will show a 'Connection Error' message (see fig. 9).



(Fig. 7. Checking for updates)



(Fig. 8. Latest version is already installed)



(Fig. 9. Program is unable to check for availability of updates)

'**Clear Log**', **F8**-button. This allows the user to erase all information about performed actions and events from the log field of the main window of **ECTmouse**. After making changes to settings and restarting the emulation, the user can select this feature in order to refresh the main window of the program without any need to restart the application itself. The actions counter is not affected by this feature.

'Put In Tray'. This item of the menu allows the user to hide the program window from the desktop of the operation system. The user can restore the window by clicking on the icon of **ECTmouse** in the system tray (see fig. 10). When the main window is hidden, the user cannot execute some actions with the hot keys (except for keys which are used for the mouse emulation itself). This mode is suitable for situations when the initial configuration of **ECTmouse** is complete and the user needs to free up space on the desktop of their operation system for other applications.

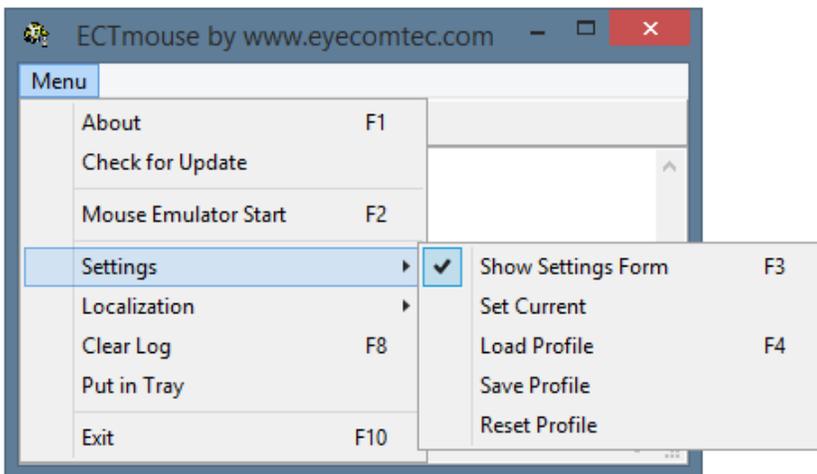


(Fig. 10. Icon of the program in system tray)

'Exit', **F10-button**. Stops the emulation process and closes **ECTmouse** application.

### 'Settings' submenu

By using an additional menu item called 'Settings' (see Fig. 11), the user can open the settings panel to change the parameters of the ECTmouse operation, and import or export user profiles, as well as to restore default settings of the program.



(Fig. 11. 'Settings' submenu)

'Show Settings Form', **F3-button**. The **ECTmouse** settings panel contains around 40 changeable parameters. There are separate settings available for emulation of any action of left, right, or middle mouse buttons, limits of the cursor's movement area, and so on. More detailed information can be found in the 'Settings and additional parameters of **ECTmouse**' chapter of this manual.

'Set Current'. This item allows the user to apply all changes which were made in the settings window of the program in order to make them effective.

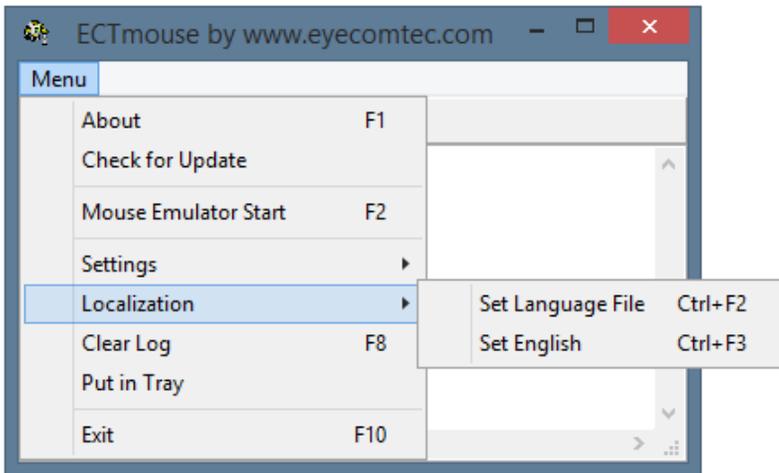
'Load Profile', **F4-button**. This menu item allows the user to choose and load any previously saved user profiles which contains all the information about the keyboard settings and windows location of **ECTmouse**.

'Save Profile'. This menu item allows the user to save all the settings of the program into one separate user profile. It contains all the keyboard codes assigned to emulated mouse actions, cursor shift step size and

coordinates of the bounding area, which limits cursor movements. Positions of the main window, informational window, and the settings panel are also saved in this file. This can be useful in cases when several people are using one copy of the program at a different time. Each person can have their own keyboard preferences and emulation settings. The user can also quickly transfer all their program settings if it is necessary to launch **ECTmouse** on any other computer.

'**Reset Profile**'. Returns all the settings to their default values, including windows positions.

## 'Localization' submenu



(Fig. 12. 'Localization' submenu)

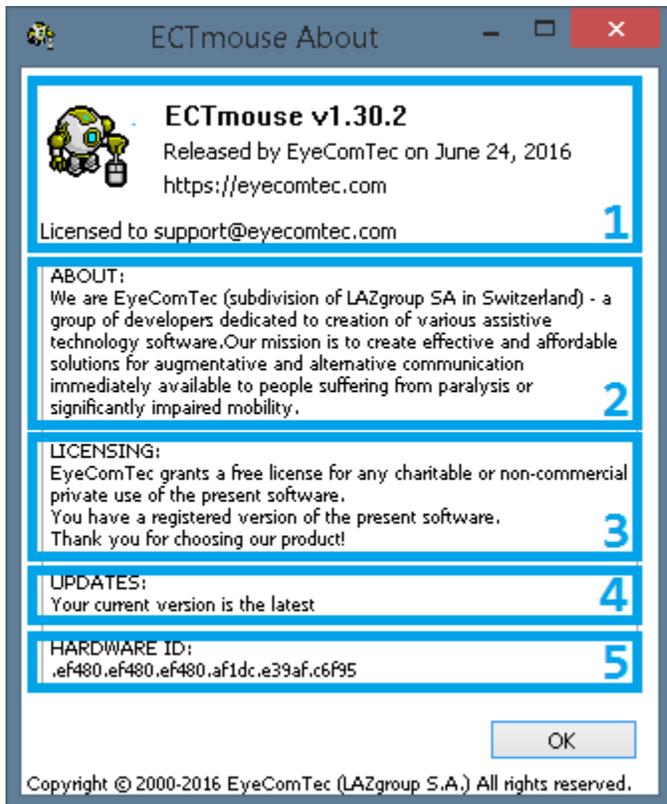
Additional comfort and ease of use is provided by several localizations of the program (translations of the interface into various languages).

'**Set Language File**', **Ctrl+F2**. By using this item of the menu, the user will see a standard operating system dialog, which will allow the selection of one of the localization files with a \*.lng extension. Languages can also be selected through the menu item #1 of the program settings panel.

'**Set English**', **Ctrl+F3**. This allows the user to instantly change the interface language of **ECTmouse** to English, without showing any additional windows.

# 'About' window

When launching a non-activated copy of EyeComTec programs (ECTcamera, ECTtracker, ECTkeyboard, ECTmouse, ECTlistener and ECTmorse), the user will see the **About** window, which contains additional blocks of information (see fig. 13).

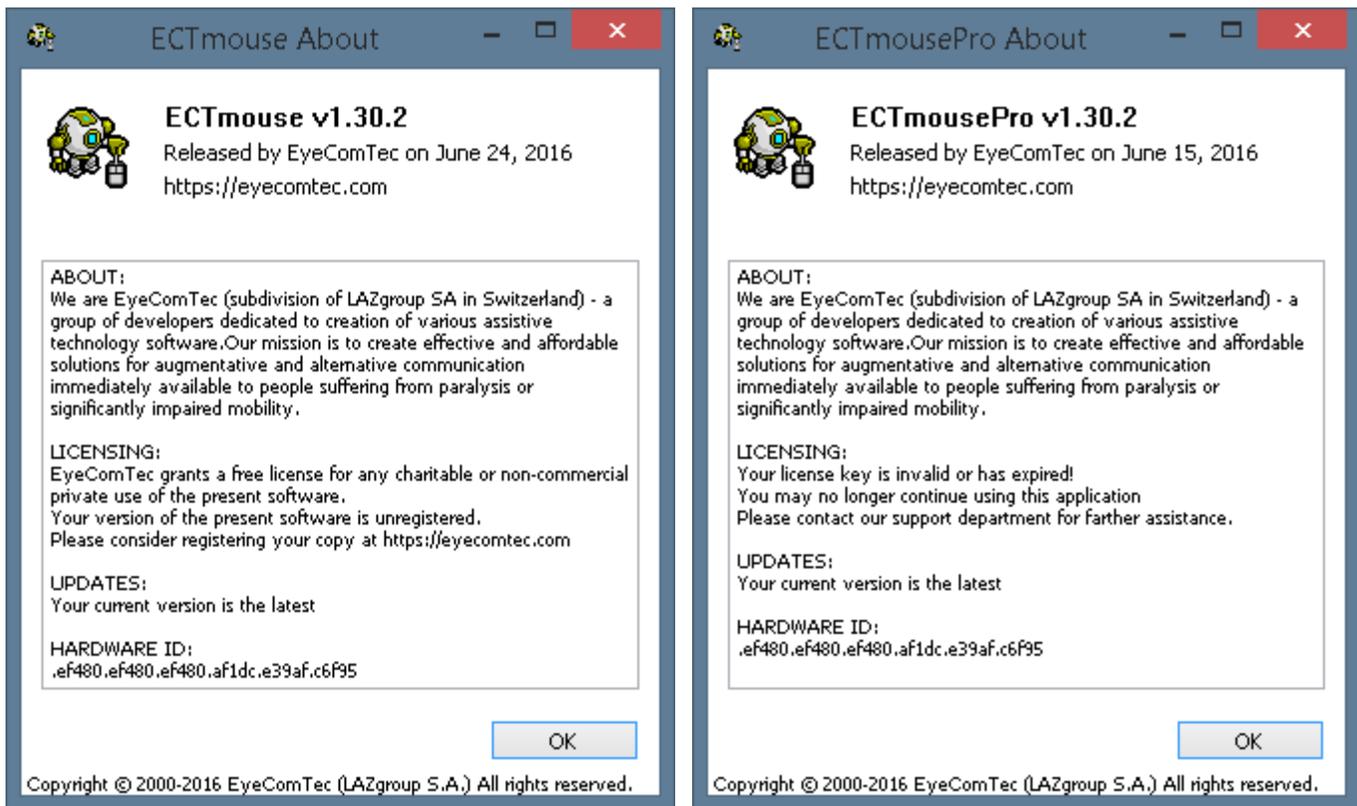


(Fig. 13. An updated About window of the **ECTmouse** program)

On the image above, various information blocks are marked with numbers:

1. The number and the date of the release, the company's website address. For activated versions, this block also includes an e-mail address of the user registered to this copy of the program.
2. The **About** section, which contains the information about the EyeComTec Company.
3. The **Licensing** section, which indicates the license type of the current copy of the program (paid commercial or free non-commercial license);
4. The **Updates** section, which shows if there's an updated version of the program on the developer's website);
5. The **Hardware ID** section, which indicates the hardware code of the computer used to launch the program.

The appearance of the **About** window is different for paid commercial programs (Pro version) and free versions for non-commercial use (see fig. 14).



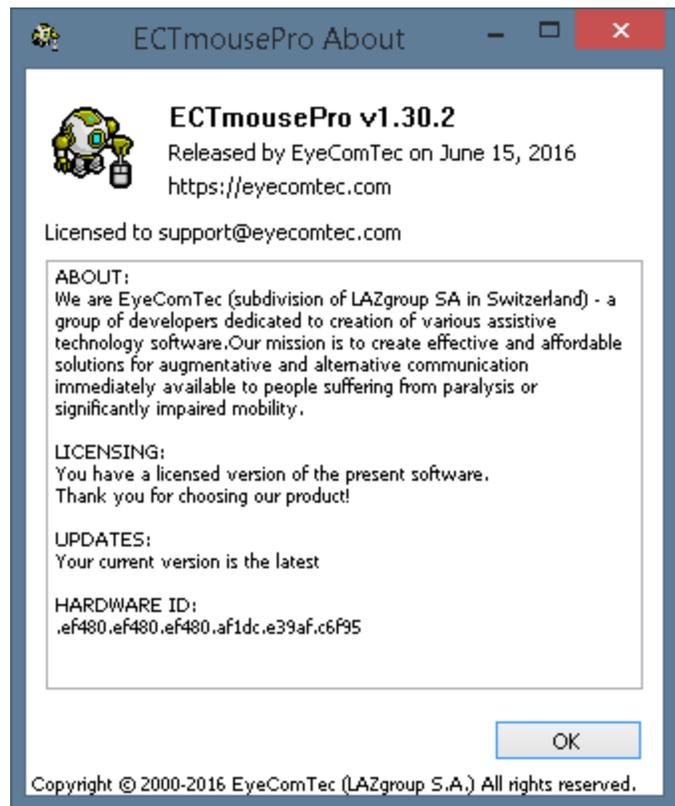
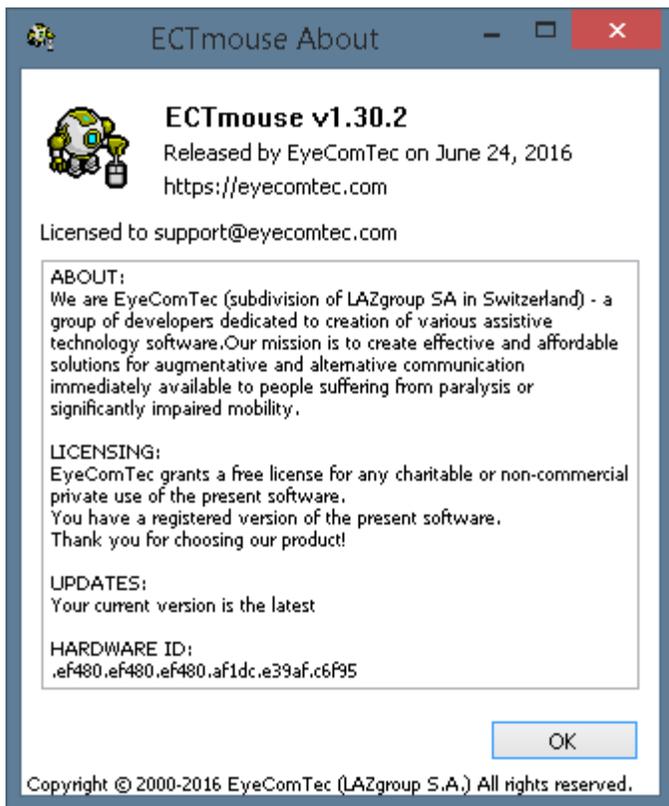
(Fig. 14. The About window for non-activated versions of the program. Left: free license for non-commercial use; Right: paid commercial license)

The user will see the main window of the program after pressing the **OK** button and closing the **About** window in a program with the free type of the license. The non-activated version of the program with a commercial license will not be launched until the user purchases (or prolongs if the license expired) a license and creates a new key file in the program's folder.

All the programs with free licenses are intended for people with a real physical need for assistive technologies from the EyeComTec Company. The registration process is not compulsory in such cases, but the company kindly recommends that our customers do register in order to gain the full benefits e.g. updates and customer support. Free versions of our software products can also be used by non-commercial and charitable organizations. These organizations must register for a licence.

Registration on the company's website and the following activation of the program are compulsory for Pro versions of software.

After completing the activation, the **About** window will not be shown during every launch of the program. The user can open it by using the **About** menu item, or by pressing the **F1** hot key (see fig. 15). There is sometimes a short delay when opening the **About** window, as every time it is opened, the program will check for updates on the EyeComTec website.



(Fig. 15. The About window for activated versions of the program. Left: free license for non-commercial use; Right: paid commercial license)

# Settings and additional parameters of ECTmouse

ECTmouse provides the user with almost 40 configurable parameters. These can be accessed through 'Settings' – 'Show Settings Form' menu item, or by selecting the **F3** hot key.

All the parameters are divided into categories and are highlighted with different colors in order to provide more comfort:

2-24 (light blue group) – Key codes for all possible mouse actions and localization settings;

30-41 (dark blue group) – Cursor shift step size (speed); values of shift step increasing or decreasing, key codes to increase or decrease the shift step;

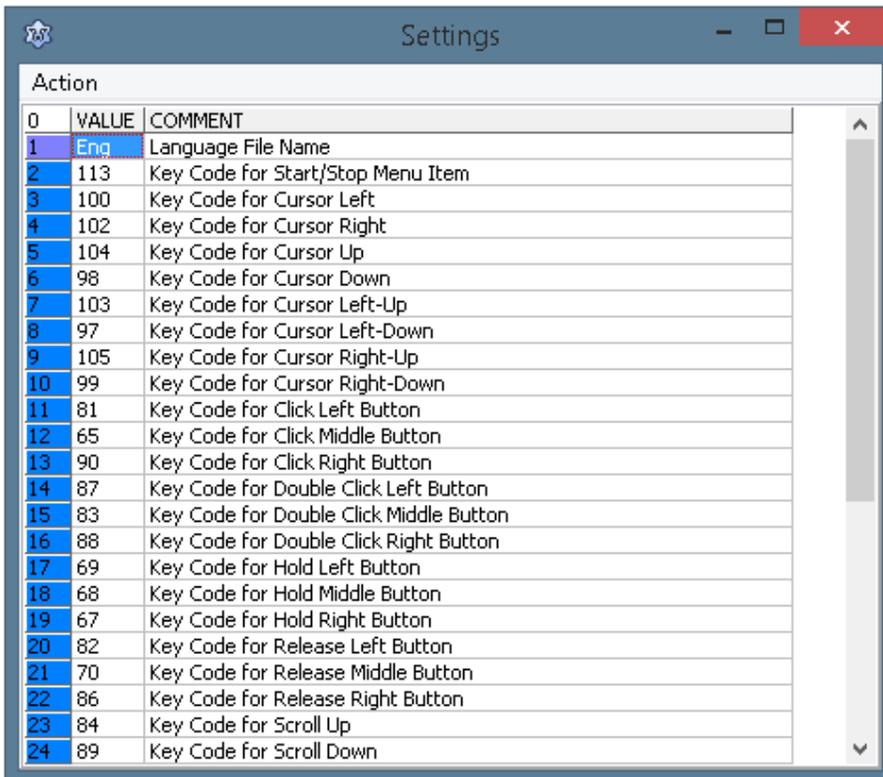
42-45 (green group) – Program log settings: time and date format, type of events to save, maximum amount of log rows in the main window of the program, name of the external log-file;

**PRO** 46 – Suppression of keystrokes;

**PRO** 50-54 (red group) – Coordinates of the cursor's bounding area; action of the cursor when it reaches any border;

57-65 – Current Mouse State Window parameters and application notifications settings.

Let's take a closer look at these parameters.



The screenshot shows a window titled 'Settings' with a table of parameters. The table has three columns: 'Action', 'VALUE', and 'COMMENT'. The rows are numbered 0 to 24. Row 0 is the header. Rows 1-24 are highlighted in light blue. The 'VALUE' column contains numerical values, and the 'COMMENT' column contains descriptions of the parameters.

Action	VALUE	COMMENT
1	Eng	Language File Name
2	113	Key Code for Start/Stop Menu Item
3	100	Key Code for Cursor Left
4	102	Key Code for Cursor Right
5	104	Key Code for Cursor Up
6	98	Key Code for Cursor Down
7	103	Key Code for Cursor Left-Up
8	97	Key Code for Cursor Left-Down
9	105	Key Code for Cursor Right-Up
10	99	Key Code for Cursor Right-Down
11	81	Key Code for Click Left Button
12	65	Key Code for Click Middle Button
13	90	Key Code for Click Right Button
14	87	Key Code for Double Click Left Button
15	83	Key Code for Double Click Middle Button
16	88	Key Code for Double Click Right Button
17	69	Key Code for Hold Left Button
18	68	Key Code for Hold Middle Button
19	67	Key Code for Hold Right Button
20	82	Key Code for Release Left Button
21	70	Key Code for Release Middle Button
22	86	Key Code for Release Right Button
23	84	Key Code for Scroll Up
24	89	Key Code for Scroll Down

(Fig. 16. ECTmouse settings panel, parameters 1-24)

1 – **Language File Name.** This parameter allows the user to change the interface language of the program. The default language is Eng (English). The user can set this value manually by entering it or by double clicking on the field and choosing any desired language file in the dialog box of the operating system.

2 – **Key Code for Start/Stop Menu Item.** This parameter allows the user to set a hot key, which will start or stop the mouse emulation process. The default value is 113, which corresponds to the **F2** key. However, the user can set this to any other button. All changes will be shown in the main window of the **ECTmouse**.

Parameters 3-10 are intended to control mouse cursor movements with the keyboard. The cursor can move horizontally, vertically, or diagonally.

3 – **Key Code for Cursor Left.** Default value – 100 (key **4** on the numeric keypad).

4 – **Key Code for Cursor Right.** Default value – 102 (key **6** on the numeric keypad).

5 – **Key Code for Cursor Up.** Default value – 104 (key **8** on the numeric keypad).

6 – **Key Code for Cursor Down.** Default value – 98 (key **2** on the numeric keypad).

7 – **Key Code for Cursor Left-Up.** Default value – 103 (key **7** on the numeric keypad).

8 – **Key Code for Cursor Left-Down.** Default value – 97 (key **1** on the numeric keypad).

9 – **Key Code for Cursor Right-Up.** Default value – 105 (key **9** on the numeric keypad).

10 – **Key Code for Cursor Right-Down.** Default value – 99 (key **3** on the numeric keypad).

Parameters 11-13 control single mouse click key codes:

11 – **Key Code for Click Left Button.** Default value – 81 (key **Q**).

12 – **Key Code for Click Middle Button.** Default value – 65 (key **A**).

13 – **Key Code for Click Right Button.** Default value – 90 (key **Z**).

Parameters 14-16 control double mouse click key codes.

14 – **Key Code for Double Click Left Button.** Default value – 87 (key **W**).

15 – **Key Code for Double Click Middle Button.** Default value – 83 (key **S**).

16 – **Key Code for Double Click Right Button.** Default value – 88 (key **X**).

Parameters 17-19 – set key codes for pressing and holding mouse buttons.

Parameters 20-22 – key codes for mouse button release.

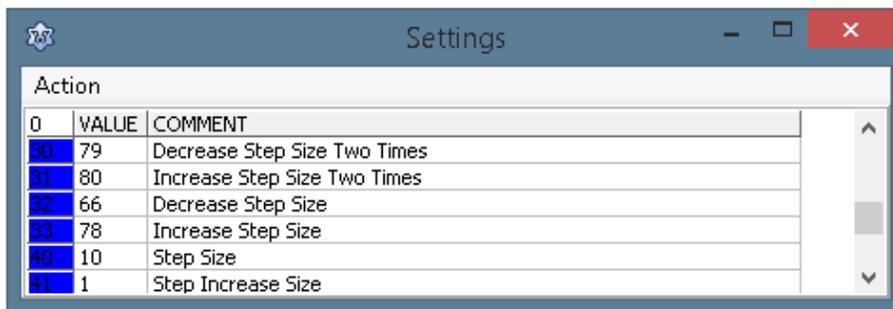
17 – **Key Code for Hold Left Button.** Default value – 69 (key **E**).

18 – **Key Code for Hold Middle Button.** Default value – 68 (key **D**).

- 19 – **Key Code for Hold Right Button**. Default value – 67 (key **C**).
- 20 – **Key Code for Release Left Button**. Default value – 82 (key **E**).
- 21 – **Key Code for Release Middle Button**. Default value – 70 (key **D**).
- 22 – **Key Code for Release Right Button**. Default value – 86 (key **C**).

Parameters 23-24 set key codes for emulation of scrolling the mouse wheel up and down.

- 23 – **Key Code for Scroll Up**. Default value – 84 (key **T**).
- 24 – **Key Code for Scroll Down**. Default value – 89 (key **Y**).



(Fig.17. **ECTmouse** settings panel, parameters 30-41)

Parameters 30-33 make it possible to set key codes, which will increase or decrease the mouse cursor shift step (cursor speed).

**PRO** 30 – **Decrease Step Size Twofold**. Default value – 79 (key **O**).

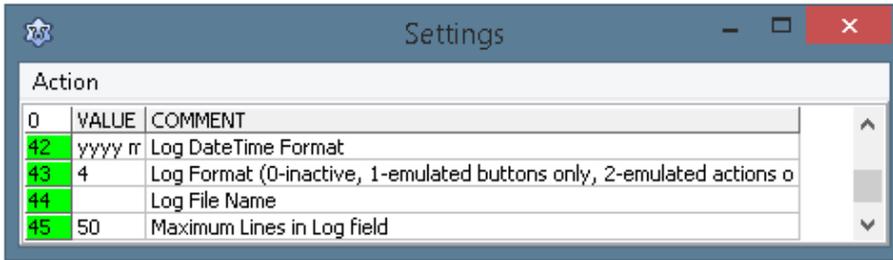
**PRO** 31 – **Increase Step Size Twofold**. Default value – 80 (key **P**).

32 – **Decrease Step Size**. Default value – 66 (key **B**).

33 – **Increase Step Size**. Default value – 66 (key **N**).

40 – **Step Size**. This allows the user to set a precise value of the mouse cursor shift in pixels. When the emulation is active, this action can be performed by using key codes predefined in parameters 30-33 of the program settings panel. The default value is 10 pixels.

41 – **Step Increase Size**. This determines the value by which the cursor shift step will be increased or decreased. This increase or decrease is set by predefined keys in parameters 32-33 of the program settings panel. This parameter can be changed only through the settings panel of the **ECTmouse**. The default value of this field is 1 pixel.



(Fig. 18. **ECTmouse** settings panel, parameters 42-45)

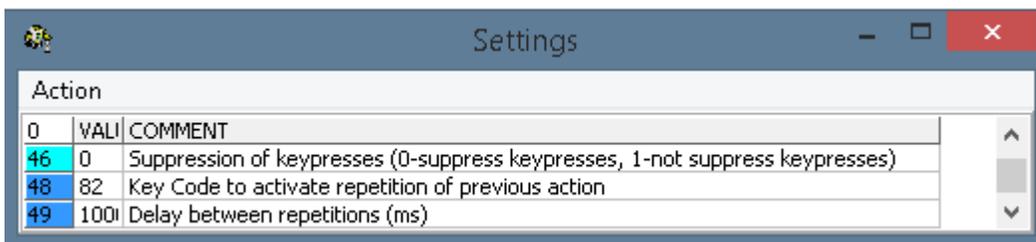
**42 – Log Date Time Format** (Date and time format of the log). This parameter allows the user to choose any desired format of the date and time to be shown in the main window of the program and written to the external file. Default value – yyyy mmm dd hh:nn:ss:zzz (year, month, day, hour, minutes, seconds, thousands of seconds). The user can simplify this value, e.g. leaving only hh:nn:ss. In this case, the program log will show only exact time of mouse action emulation with accuracy to a second.

**PRO 43 – Log Format** (Format of the log). This field allows the user to select a data type to be saved in the log for each action performed by user. This parameter can be set to one of the following values:

0. Don't save any actions to the log;
1. Save information only about keystrokes which are used for the emulation of various mouse actions in the emulation mode;
2. Save information only about actions performed in the emulation mode (cursor movement, mouse button clicks, scrolling etc.);
3. Save information about keystrokes which are used for the emulation of various mouse actions in the emulation mode together with all the actions performed. This format combines two previous formats of the log;
4. Show information about all keystrokes and actions. This format allows the saving of all pressed keys independently of their role in the emulation. This mode is the most comprehensive and can be used during initial setting and debugging of ECTmouse.

**PRO 44 – Log File Name** (Setting a file name for saving log-data). By using this parameter, the user can save all the information about keystrokes and emulated actions to an external file. The file format has the same form as the main window of the program. If the user sets a full path name to such a file (e.g. E:\results.txt), the file will be created there. In the case that the folder is protected from writing, or there is a file with the same name, which is already protected from changes, the program will not save any information there. If the user enters only the file name (e.g. results.txt), this file will be created in the folder where the executable file of **ECTmouse** is located.

**45 – Maximum Lines Count of Log.** This parameter sets the maximum number of rows in the program log field. The default value is 50.



(Fig. 19. **ECTmouse** settings panel, parameters 46-49)

**PRO 46 – Suppression of keystrokes.** Key suppression is used in cases when the user needs to block key codes in recognition of the emulation mode, leaving only the mouse working. The default value is 0 (keystrokes are suppressed). If the user sets this parameter to 1, keystrokes will no longer be suppressed, and pressed keyboard keys will be processed by the active application window (e.g.: pressing 'Q' will not only emulate the click of the left mouse button, but will also print the corresponding letter in the active application).

**PRO 48 – Key Code to activate repetition of previous action** This parameter allows the user to set a repetition key code, by pressing it the program will begin to repeat the previously emulated action. For example, if the user pressed the button that moved a mouse cursor to the right, by pressing the repetition key the cursor will continue moving to the right (step-by-step) until some different action is executed. The time delay between repetitions can be set with parameter 49. The following feature may significantly simplify some repetitive actions: moving the mouse pointer to the other side of the desktop, scrolling lengthy document, perform non-complicated repetitive tasks within some 3rd party applications. Default value - 82 (key R).

**PRO 49 – Delay between repetitions (ms)** This parameter defines a time interval between repetitions of an action activated with a button determined in parameter 48. The default value of this parameter is 1000 milliseconds (1 second).

Parameters 50-53 allow the user to set a bounding area for the mouse cursor.

**PRO 50 – Left Coord of Lock Rect** (Left coordinate of the bounding area). Default value – 0.

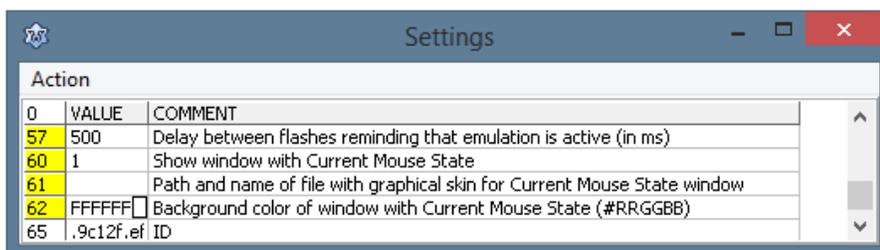
**PRO 51 – Top Coord of Lock Rect** (Top coordinate of the bounding area). Default value – 0.

**PRO 52 – Right Coord of Lock Rect** (Right coordinate of the bounding area). Default value – 800.

**PRO 53 – Bottom Coord of Lock Rect** (Bottom coordinate of the bounding area). Default value – 600.

**PRO 54 – Behavior of Cursor at the Edge of Lock Rect** (Behavior of the cursor when it reaches any border of the bounding area). This parameter may have several values:

0. No limits, so the cursor can move all over the desktop (bounding is disabled);
1. All movements are limited with a rectangular area, corner coordinates set with parameters 50-53;
2. All movements are still limited with a rectangular area, but the cursor will appear on the opposite side when it reaches any border of the bounding area); Value 2 can be convenient for users who are constantly working with elements located close to the borders of the bounding area and on both sides of it. It is much easier to move the cursor to the opposite side immediately, instead of moving it all around the desktop.

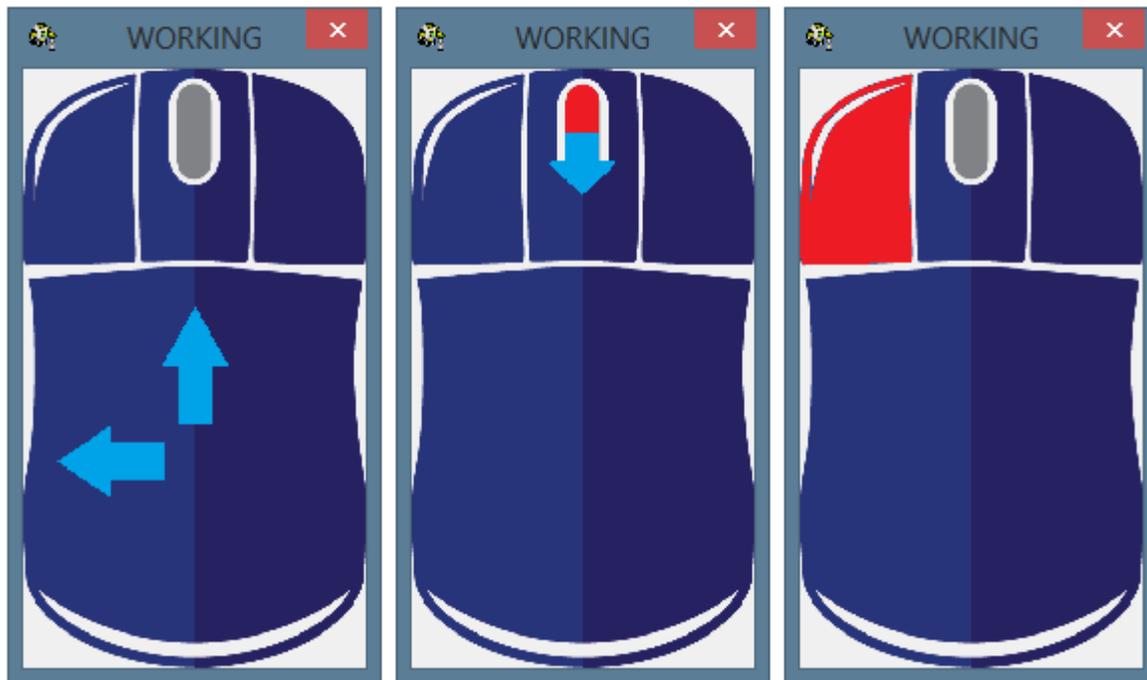


(Fig. 20. **ECTmouse** settings panel, parameters 57-65)

**57 – Delay between flashes to remind the user that the emulation is active (in ms).** Every time the emulation is enabled, the header of the Current Mouse State window as well as the main window of ECTmouse indicates its current status with a blinking message. This parameter allows a user to change the frequency of such blinking. The default value of this parameter is 500 milliseconds.

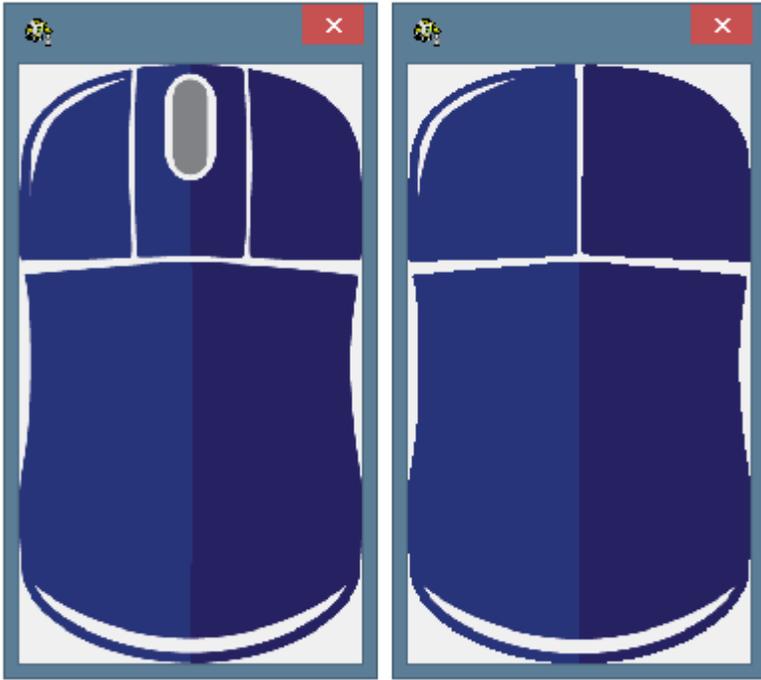
**60 – Show window with Current Mouse State** (this shows a special window with a computer mouse indicator). This parameter can have two values: 0 and 1. 0 values hide the window with current mouse state visual emulation, while 1 shows the window. The default value of this parameter is 1 (the window showing the current mouse state is visible).

The window with the current mouse state clearly indicates all the emulated mouse actions, i.e. it shows which button is pressed, which movement of the cursor is made or when any other action is performed (see fig. 18).



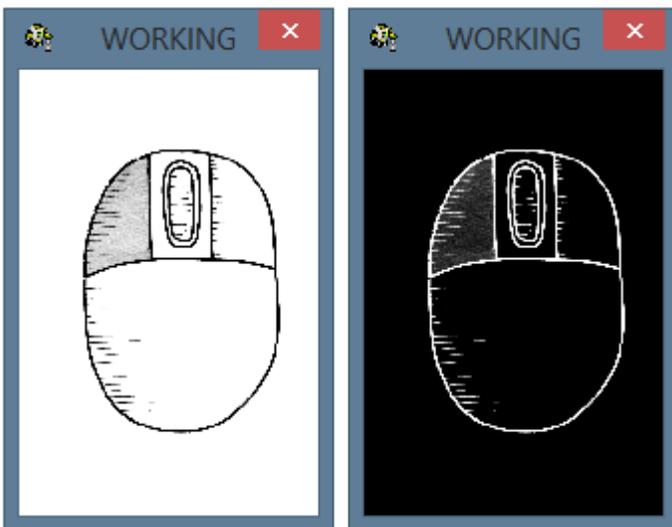
(Fig. 21. The window with current mouse state)

**61 – Path and name of file with graphical skin for Current Mouse State window** (indicates a full path to a file with a skin). Current Mouse State window supports several graphic themes i.e. skins (see fig. 19). This parameter allows a user to set a full path and a file name of the skin for the Current Mouse State window.



(Fig. 22. Various skins for computer mouse with or without a scrolling wheel)

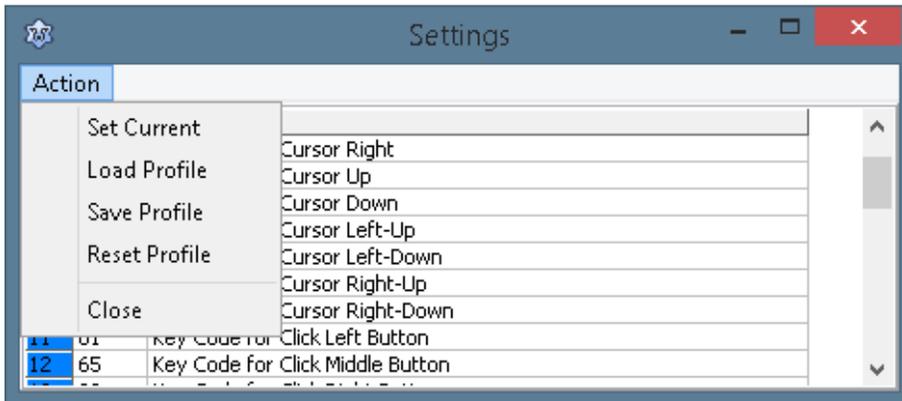
62 – **Background color of window with Current Mouse State (#RRGGBB)**. This parameter allows changing a color of the background for the current mouse state window. The default value is set to FFFFFFF (white background). The background color should be set in accordance with the mouse skin selected, in order for the image to stay contrasting and transparent. Examples of different skins and backgrounds can be seen on figure 20.



(Fig. 23. Examples of different skins and background colors)

65 – **ID**. This parameter contains the unique hardware identification code of the system where the application was launched. This parameter is required for the activation process.

The **ECTmouse** settings panel has its own **'Action'** menu (see fig. 21). **'Set Current'**, **'Load Profile'**, **'Save Profile'**, **'Reset Profile'** copy the functionality of the **'Settings'** submenu of the main window of the program. This duplication of functionality was designed to provide the user with maximum comfort.



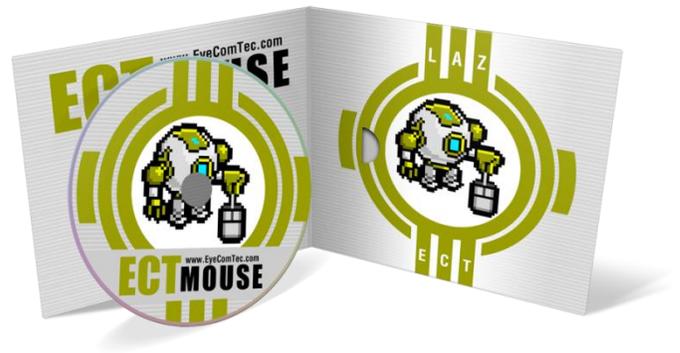
(Fig. 24. Additional menu of settings panel)

The **'Close'** item of the menu allows the user to exit the settings panel of the program without saving any changed parameters.

# Downloads

The latest version of ECTmouse can be downloaded directly from our site:

<https://eyecomtec.com/ECTmouse.zip>



# Registration and activation of EyeComTec software products

In order to complete the registration process, it's required to fill in a short form, which contains contact information and reasons to use assistive technologies.

- [The registration form for private users \(non-commercial use\). For people having a physical need for our products\\*](#)
- [The registration form for medical companies \(commercial and non-commercial organizations: hospitals, rehabilitation centers and doctors\)\\*\\*](#)
- [The registration form for commercial customers from non-medical fields \(involved in the processes of production, assembling, quality control and manufacturing\)\\*\\*](#)

\* The registration is not obligatory for private users, however, it's still recommended.

\*\* The registration is obligatory for any legal entities and commercial customers.

**Attention!** Free licenses for EyeComTec software products may be issued for customers with a real physical need of assistive technologies of this type (to get more information, please check the '**Free license**' section of the '**License agreement**' chapter). The more information is provided about a disease that caused full or partial loss of mobility, the higher the chances of getting approval and receiving a free license for EyeComTec products. All the information received from customers is thoroughly checked by our staff, thus all application forms with no information about the disease of the patient (C1 and C2) will be rejected.

The registration form contains several blocks with various questions:

- A. Information about the patient: the full name, an e-mail address, a phone number, a country and a city of residence;
- B. Information about an assistant or a caregiver of the patient: a full name, an e-mail address and a phone number;
- C. Information about the disease or situation that caused reduced mobility. It's recommended to use the C2 field to provide some additional information (e.g. possible reasons of the disease, current state of the patient, chances for rehabilitation and so on);
- D. Additional information: the date of birth of the patient, sex, native language (if the patient knows any other language, it can be indicated in the D3 field);
- E. In this section the customer has to select one or several EyeComTec program products required for the patient;
- F. Feedback section. In case the customer had already used EyeComTec program products, he or she is offered the chance to evaluate their usability. The customer can also indicate how they first heard about the EyeComTec Company, as well as provide us with any other information that is considered important according to the user.

It's recommended to fill in all the fields of the form.

## Registration verification

After submitting all the information into the registration form and providing all required data, the customer will receive a verification request to the e-mail address that was indicated on the registration form.

**Attention!** It's required to confirm this verification request; otherwise the registration process will be stopped.

After completing the verification process, the EyeComTec staff will check the completeness and accuracy of the provided information. After that, the customer will receive a serial number for the required software to the e-mail address that was indicated on the registration form.

## Serial number activation and key obtaining

It's required to activate the received serial number. In order to do that, the user has to follow the following link: <https://eyecomtec.com/25-Activation>.

A page with the activation form will be opened. The user has to indicate:

- User Name – the full name of the user (this name can be different than the name of the serial number owner);
- User E-Mail – an email address, which will be used to link the license;
- Serial Number – the serial number that was received by the e-mail address indicated during the registration process;
- Hardware ID – a hardware code, which can be obtained directly in the program.

**Attention!** *It's really important to indicate a correct and working main e-mail address, because all technical support will be provided exclusively to this address. We kindly recommend you to check all the provided information. Mistakes in the e-mail address can be changed only once and such a change will be considered as a hardware change (in order to get more information, please check the '**License hardware linking**' section).*

**Attention!** *In case an expected email from EyeComTec hasn't arrived within a reasonable period of time (usually up to 48 hours), it is recommended that users check their 'Spam' folder, as the email might have been directed there in error.*

**Attention!** *Only Latin symbols can be used in order to fill this form in (A...Z, a...z)! All non-Latin symbols will be automatically filtered. E.g. the user has to write '**Strasse**' instead of '**Straße**', or '**Michele**' instead of '**Michèle**' and so on.*

In versions of programs that were published starting from July 2016, the hardware code can be found in the **About** window, within the **Hardware ID** section.

**Attention!** *The user has to check the hardware code by launching the program only on the very same computer and hard disk partition where the user is going to launch the program in future. If the user performs the activation on one computer, but wants to work on another, all program copies will work as non-registered applications and won't be considered as properly licensed software!*

After filling in all the fields of the activation form, the user has to press the button to submit the information. A new page with a key code will appear. An email containing this code will also be sent to the e-mail address that was indicated during the registration process. The user has to copy this code and save it to the folder of the program. The name of the key file has to be the same as the name of the main file of the program with the .key extension (e.g. the key for the **ECTkeyboard** application has to be saved as ECTkeyboard.key).

In versions of programs that were published starting from July 2016, the user has a more convenient way of key adding. The user can just copy the key code (including the following symbols '=== '), paste it into a text

field of the About window and press OK. The program will automatically save the key file in its folder. After that, the user has to restart the program.

**Attention!** *If there is an old key in the program folder, it's going to be removed and replaced with the new one. A copy of the old key will be saved as a backup file with the .bak extension. The name of this file will contain the name of the program and the date and time of saving in the YYYYMMDD-HHMMSS format (e.g. ECTkeyboard.key\_20160615-130722.bak).*

The registration of the user and program activation processes are considered as completed at this stage.

## **License hardware linking**

A free license for a program is valid for 1 year from the moment of activation. The user has the possibility of re-activating the license in case of a hardware or hard disk failure. Such re-activation can be done only once. To do that, the user has to contact the technical support of the EyeComTec Company, indicating the reason of the required license re-activation. The user can also contact technical support in order to change mistakes in the e-mail address that was indicated during the activation of the program, however, in that case the user won't be able to re-activate the program in case of a hardware failure. In both cases, such requests will be processed by the company's staff on a first-come first-served basis.

In case the user is trying to activate one serial number on a different computer, an error window is going to be shown.

The EyeComTec Company issues various types of software licenses. Depending on the license type, there can be the following options of the software use:

1. A license is linked to the serial number of the C: partition of a hard disk, the processor identification number, the computer name and the user name. This license has the strictest type of license hardware linking. It doesn't support the transfer of the program not only to any other computer, but even to a different partition of a hard disk. This type of license is offered for all patients who have a real physical need for EyeComTec assistive technologies.
2. A license is linked to the serial number of a hard disk and the processor identification number. This license type allows the user to transfer the program to any partition of the hard disk in the boundaries of only one computer.
3. A license is linked to the serial number of the storage device that was used during activation process. This option allows the user to link a program to a portable storage device and use it on various computers.
4. A partner license. In that case, the license is not linked to any computer parameters. Such programs will be considered and work as properly licensed on any equipment. There's no need to re-activate it. EyeComTec issues this type of license only for partners who are responsible for the safety of the license key and can guarantee impossibility of its compromising.

# License agreement

## General terms

This license agreement establishes substantive provisions, as well as describes the permitted and prohibited ways of use of the software developed by EyeComTec. The licensee has the right to use software products of EyeComTec only under the conditions described in this License Agreement.

All the software and all related intellectual assets (copyrights, algorithms, source code and technical documentation) are fully owned by the EyeComTec (LAZgroup SA) company. EyeComTec can provide a free exclusive and non-transferable license to any entities which are involved in charity or non-profit activities. In order to use software for commercial purposes, such a company has to contact EyeComTec directly and purchase a license. Any commercial use (with pecuniary interest) of the software developed by EyeComTec without license is strictly prohibited.

During the determination of the conditions and restrictions of use, the copyright holder provided all the information on a limited warranty basis as well as provided the rejection of any liability. This project is totally voluntary, and the parent company is not liable for any issued support packs or updates in front of those users who use software products of EyeComTec free of charge.

All users are obligated to observe and follow the requirements of this License Agreement.

## Restrictions on use

The end user is not allowed to use or permit the use of EyeComTec software products in any manner that may affect their functionality, including: modification of program binary source code, or participation in any operation that aimed at reverse engineering (decompilation) of software for personal or professional gain.

Also, the end user of the software under no circumstances has the right to change copyright information or use the names of software products in an inappropriate manner in order to obtain financial or material benefits. The user has no right to change, make copies of, sell, sublicense, advertise or distribute EyeComTec software products in any manner that is not allowed by this license agreement. As a charitable gesture from the company, all users are allowed to share EyeComTec software product installation packages amongst themselves and with other people.

Upon receipt of the license, the user does not receive any right to own copies of the software, and the copyright holder may prohibit subsequent sales.

All licensees have no right to re-pack the software and distribute it by including the software in a huge variety of installation packages that contain malicious programs or advertisement in any form.

## User registration

The registration of EyeComTec program products is mandatory for commercial customers and legal entities. Programs can be purchased directly from EyeComTec, as well as from partner companies. When the customer completes payment for software products, the company sends separate serial numbers for each copy of the purchased software. In case there are advanced versions available, the customer also receives links to download such versions.

Those users who have a physical need for EyeComTec assistive technologies can also complete the registration process. In that case, they can receive license keys for free versions of programs (to get more information, please check the '**Free license**' section of the '**License agreement**' chapter).

Private users can work with published versions of EyeComTec programs without registration or obtaining a license key. But in that case, such customers won't be able to use the technical support of the company. Furthermore, the 'About' window with various information will be shown during every launch of the program, offering the user to complete the registration process.

EyeComTec can issue free licenses for private or charity non-commercial use. Such companies are required to complete the registration process and indicate information about the planned use of the program products (field of use, aims and goals).

Any commercial use of published software without obtaining a license will be considered as an infringement of the User Agreement (to get more information, please check the '**Restrictions on use**' and '**Paid commercial license**' sections of the '**License agreement**' chapter).

User registration is the easy and safe way to provide feedback between the development company and consumers: patients and medical centers.

Collection of such statistical data is extremely important for EyeComTec, because it allows the company to get detailed information about the needs of specific users, and improve the software in accordance with these needs. The program complex is developed continuously and many features of current versions were invented due to feedback from users.

In addition, a database of contacts allows for informing patients promptly about new and yet unpublished software products and updates of the EyeComTec program complex. Furthermore, users are able to receive information on the functionality of basic and advanced versions in a timely manner.

## Differentiation of commercial and noncommercial licenses

### 1. Noncommercial License

#### 1.A. Noncommercial license for clients with physical needs.

(this type of license does not apply to customers, who are undergoing a paid rehabilitation course – see section 2.2, paragraph A)

EyeComTec software products are provided free of charge to all people who are experiencing a physical need in the use of such a category of programs. This group of people includes all those patients who suffer from various forms of paralysis or other muscular activity restrictions. All software products are free for non-

commercial use. E.g. when the patient uses our software for text typing, he or she is not obligated to purchase a commercial license.

#### 1. B. Noncommercial license for charitable organizations.

Charity companies and rehabilitation centers can use all EyeComTec software products free of charge if they provide their services to patients on a free basis.

### **2. Paid commercial License**

#### 2.A. Commercial license for paid clinics and rehabilitation centers.

A commercial license for program products of EyeComTec is necessary in any case of paid services provided by medical companies or rehabilitation centers. Such a commercial license is required for each separate copy of the program in use. Only one copy of each licensed program may run at the same period of time.

All the assistants and third-party specialists who provide paid services to their patients and involve EyeComTec software products in their work are also obligated to purchase a commercial license.

In any case where the user is undergoing paid treatment, involved in a rehabilitation program in a commercial institution or uses the paid services of any third-party medical specialist, he or she is not allowed to use a personal non-commercial license. The user is strictly not allowed to use any EyeComTec software product to communicate directly with any paid healthcare specialist or representative of a commercial establishment. In such cases, the rehabilitation facility or attending specialist are obligated to use and provide to the patient their own commercially licensed copy of the software. This restriction extends over the entire period of treatment or rehabilitation of the patient.

#### 2.B. Commercial license for software integrators and resellers.

All the companies and experienced specialists who provide paid services for the installation and integration of EyeComTec software products to third parties, as well as maintenance and technical support for such programs, are obligated to purchase a commercial license. The sale of software products to customers with a physical need of them is strictly prohibited (see section 2.1, paragraph A).

#### 2.C. Commercial license for extended program versions that are intended to use in a non-medical environment.

The EyeComTec Company developed extended versions of their programs (in particular, ECTtracker), which are successfully used in factories, shops, automated assembly lines and quality control systems. Such program versions are distributed on individual licenses and are not intended for public distribution. In order to get the full information about features of programs, a full quotation including price of purchase and support, as well as the cost of specialist training, please contact the EyeComTec Company.

Furthermore, our company developed various additional applications that can significantly enhance the functionality of our programs. When such applications are in use with extended versions of our programs, they can be used for additional automation of analyzing and controlling manufacturing processes.

Specialists from the EyeComTec Company are ready to create an individual system that is best suited for your needs. The system is going to be created on software modules that were created taking into account all the distinctive features of the processes.