

L A Z

ECT www.EyeComTec.com MOUSE



E C T



ECTmouse User Guide



About ECTmouse

ECTmouse (EyeComTec Mouse) is an application which emulates cursor movement and mouse button clicks by using any keyboard. This program is part of the assistive technologies complex and works effectively with a personal computer for those with limited physical abilities.

ECTmouse performs any of the mouse actions listed below:

- vertical, horizontal, and diagonal cursor movements;
- clicks and double clicks;
- separate pressing and release of buttons;
- vertical scrolling.

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

This program fits 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 can't aim, click icons, or any areas of the desktop due to too strong, quick, or intense movements;
- tremors, when the user can't click on icons due to 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 work at the computer;
- diseases, which cause temperature exchange problems. In such cases fingertips of the user are too cold, which causes some additional problems during touchpad operation.

Any person without any limits in motor functions can also use **ECTmouse**. The most common cases and situations are listed below:

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

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

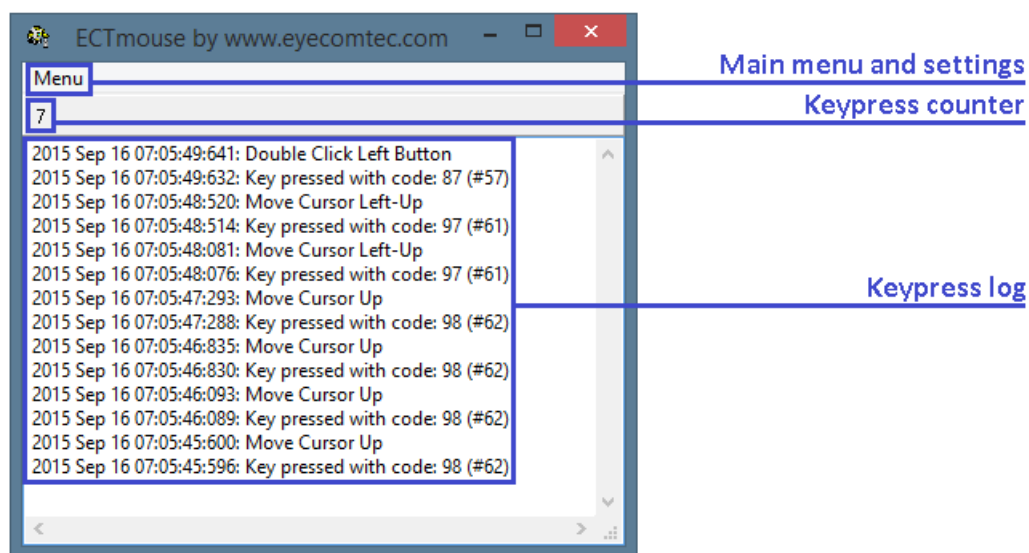
The user can easily change the mouse step (shift in pixels) of the cursor during program operation by using hotkeys on the keyboard. There's no need to stop mouse emulation or open the settings panel.

All 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.

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

The program is portable, so it doesn't require installation, and it can be executed from any external media storage. It also supports fast export and imports of user profiles, which allows users to switch between various **ECTmouse** setting profiles in just a couple of seconds.

The main interface of the program is shown on figure 1.



(Fig. 1. Main interface of the program)

The main window of **ECTmouse** contains the menu button, key counter, and a field with information about performed actions. The log contains the date and time of an action, key code in the decimal and hexadecimal encoding, and a corresponding action of the mouse button. New events are shown above older events, which move down with each new action.

In order to provide correct program operation, the user has to set mouse actions for keys of the keyboard, as well as any desired cursor shift step.

Main advantages of ECTmouse

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

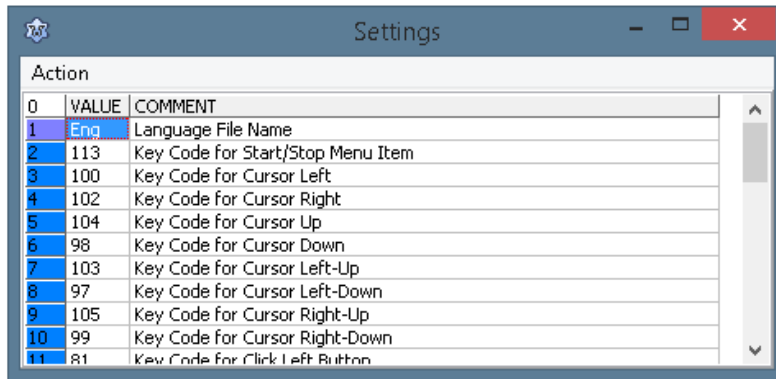
- flexible configuration. Any possible actions which can be performed by the mouse (cursor movement, click, double click, holding and release of a key, scrolling) can be assigned with any key of the keyboard;
- variable cursor movement speed (shift step in pixels) "on the fly", without any need to stop emulation;
- supports unlimited user profiles with fast 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 key code configuration;
- portability – the program doesn't require any installation and can be executed from any external storage device;
- localization support, which allows users to work with the program in their native language and learn faster;
- convenient and easy program log with several settings.

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

ECTmouse initial launch. Starting work

In order to perform the initial setting of the program, the user has to perform several actions which are listed below:

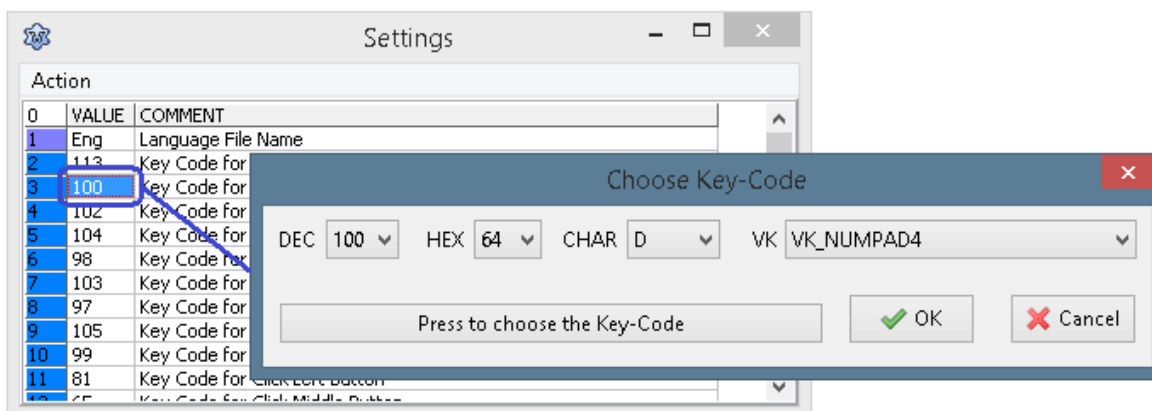
1. Launch the **ECTmouse** application.
2. Open the settings panel of the program by choosing «Settings» – «Show Settings Form» item of the main menu, or by using the **F3 hot key** (see fig. 2).



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

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

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

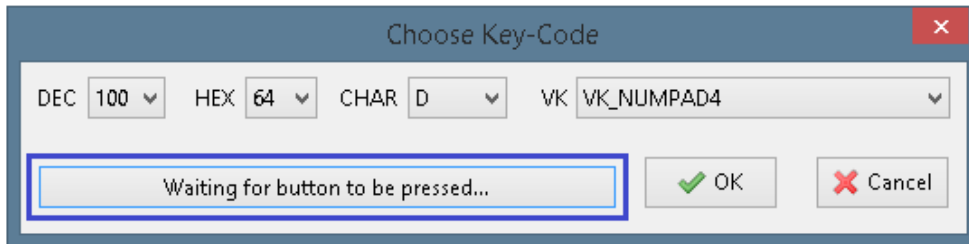


(Fig. 3. Selecting keys for various mouse actions)

The user needs to select one of the values in this window:

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

You don't have to enter key code manually all the time. The user can simply press the “**Press to choose the Key-Code**” button. The button's text will be changed to “**Waiting for button to be pressed...**” (fig. 4). After this, the user can press any desired key of the keyboard, while the code fields will be filled in automatically.



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

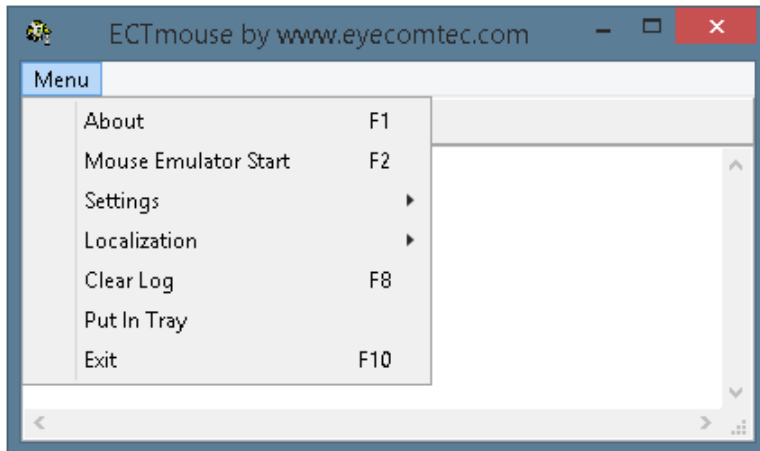
If it's necessary, the user can also set separate keys to change shift step by the fixed value: decrease (parameter 32), and increase (parameter 33), as well as for double reduction or enlargement of it (parameters 30-31).

More detailed information about all 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 can continue with operation of the program. In order to start emulation, the user can choose the «**Mouse Emulator Start**» item of the menu or by selecting the **F2 hot key**.

Main menu and functionality of ECTmouse

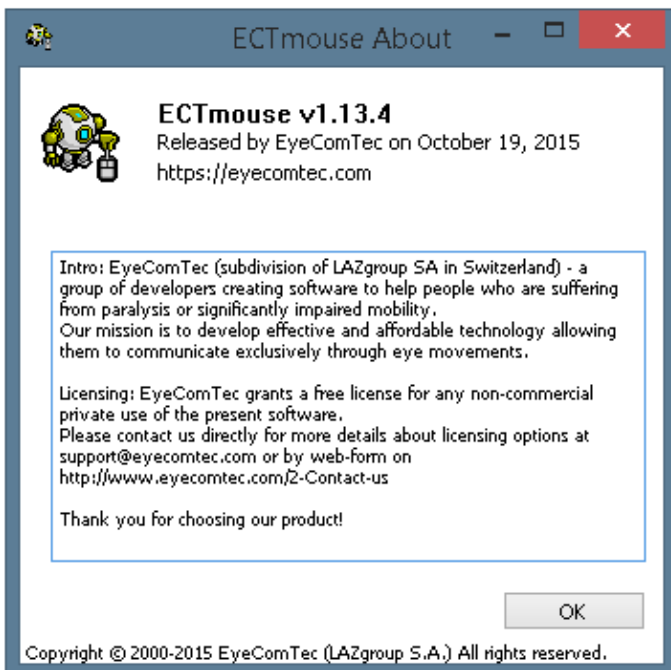
By using the main menu of **ECTmouse**, the user can open the settings panel of the program, start or pause the mouse emulation procedure, import or export a user profile, and restore factory settings. The user can also set one of the available interface languages, clear the log, and minimize program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

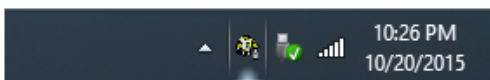


(Fig. 6. The informational, window of the program)

«**Mouse Emulator Start**», «**Mouse Emulator Stop**», **F2-button**. This menu item allows the user to start or stop the emulation process, which can perform all mouse actions (cursor movements, clicks, and scrolling) 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.

«**Clear Log**», **F8-button**. This allows the user to erase all information about performed actions and events from the main window of **ECTmouse**. After performing settings changes and restarting 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 operation system's tray (see fig. 7). When the main window is hidden, the user cannot execute various actions with hot keys. This mode is suitable for situations when initial configuration of **ECTmouse** is complete and the user needs to free space on the desktop of the operation system for other applications.

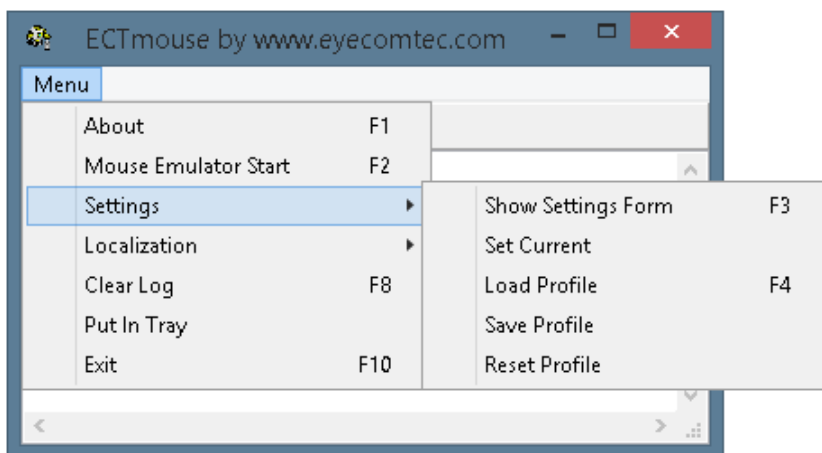


(Fig. 7. Icon of the program in system tray)

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

«Settings» submenu

By using an additional menu item called «Settings» (see fig. 7), the user can open the settings panel to change parameters of ECTmouse operation, and import or export user profiles, as well as the ability to restore default settings of the program.



(Fig. 8. «Settings» submenu)

«**Show Settings Form**», **F3-button**. The **ECTmouse** settings panel contains a little less than 40 changeable parameters. There are separate settings available for emulation of any action of left, right, or middle mouse buttons. You can find more detailed information in the "Settings and additional parameters of **ECTmouse**" chapter of this manual.

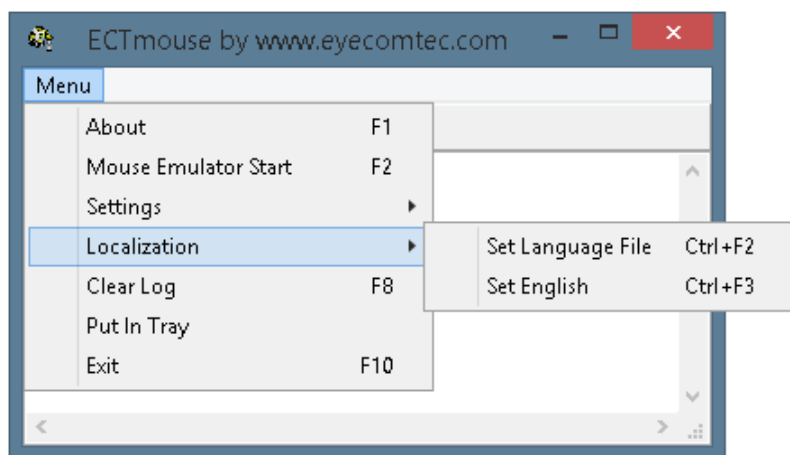
«**Set Current**». This item allows the user to apply all changes which were made in the settings window of the program in order to make them effective.

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

«**Save Profile**». This menu item allows the user to save all settings of the program into one separate user profile. This can be useful in case when several people are using one copy of the program at a different time, and each of them have their own keyboard preferences and emulation settings. Such files also contain parameters such as cursor shift step and. Positions of the main window, informational window, and the settings panel are also saved in this file. The user can also transfer all the settings of the program if it's necessary to launch it on any other computer.

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

«Localization» submenu



(Fig. 9. «Localization» submenu)

Additional comfort and ease of use are provided by several localizations of the program (translations of the interface into various languages). Currently we offer Russian and English versions of the interface.

«**Set Language File**». By using this item of the menu, the user will see a standard dialog of the operating system, which will allow them to choose one of the localization files with a *.lng extension. Language can also be selected through the menu item #1 of the program settings panel.

«**Set English**». Allows the user to change interface language of **ECTmouse** to English in just a couple of seconds, without showing any additional windows.

Settings and additional parameters of ECTmouse

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

All parameters are divided into categories and are highlighted in order to provide more comfort:

1 – Current localization;

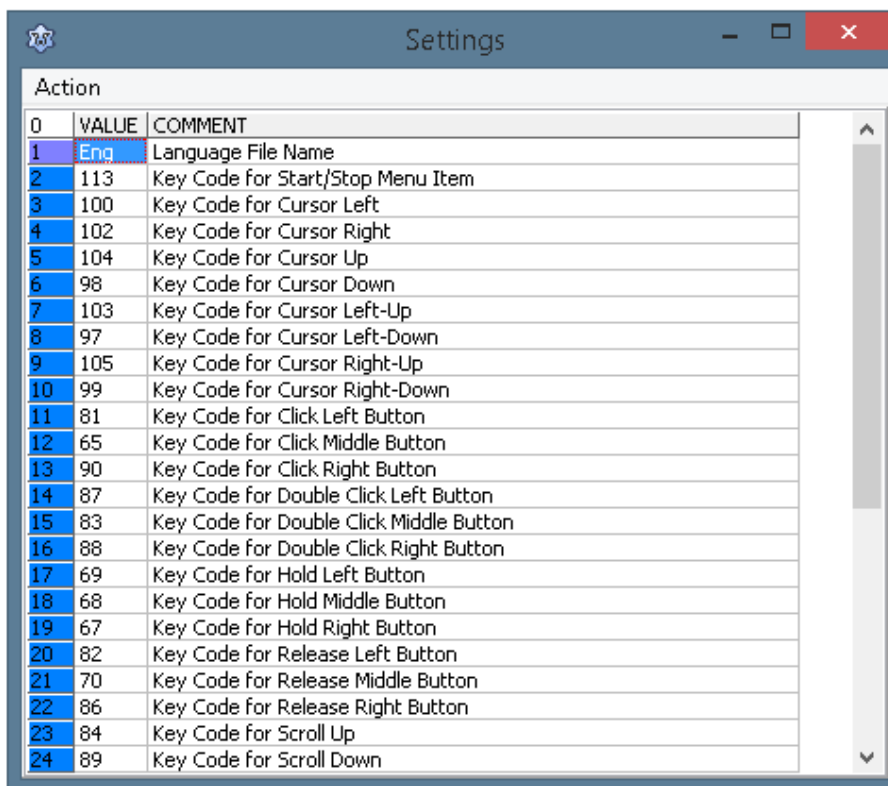
21-24 (light blue group) – key codes for all possible mouse actions;

32-41 (dark blue group)– cursor shift step; 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;

46 – suppression of keystrokes;

Let's take a closer look at these parameters.



(Fig. 10. 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 choose 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 actions 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 **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 of 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 **R**).

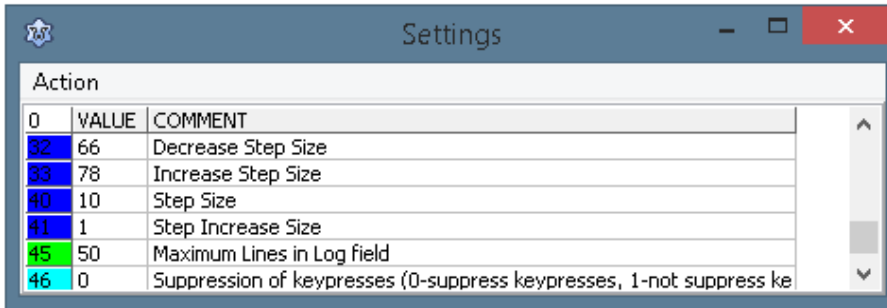
21 – **Key Code for Release Middle Button.** Default value – 70 (key **F**).

22 – **Key Code for Release Right Button.** Default value – 86 (key **V**).

Parameters 23-24 set key codes for scrolling (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. 11. **ECTmouse** settings panel, parameters 32-46)

Parameters 32-33 make it possible to set key codes, which will increase or decrease the mouse cursor shift step.

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

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

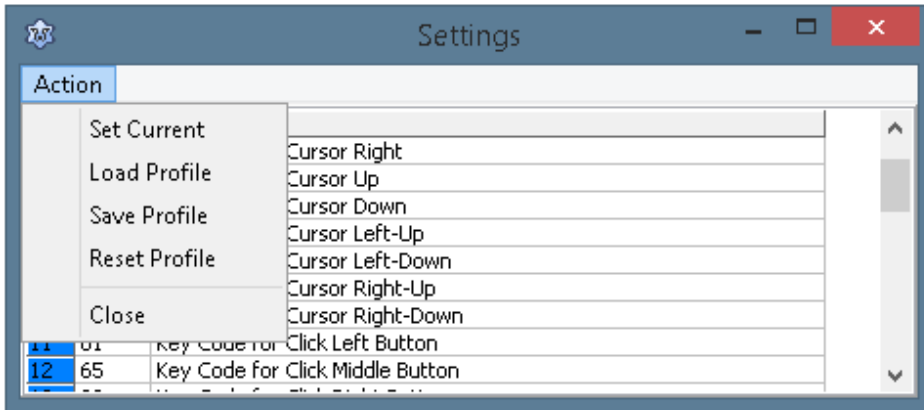
40 – **Step Size.** Allows the user to set a precise value of the mouse cursor shift in pixels. When emulation is active, this action can be performed by using key codes, predefined in parameters 30-33 of the program settings panel. The default value is 10 pixels.

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

45 – **Maximum Lines Count of Log.** This parameter controls the amount of rows of the program log.

46 – **Suppression of keypresses.** Key suppression is used in cases when the user needs to block key codes recognition in 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 the program will not only emulate mouse actions, but also all the pressed keys of the keyboard.

The **ECTmouse** settings panel has its own «**Action**» menu (see fig. 12). «**Set Current**», «**Load Profile**», «**Save Profile**», «**Reset Profile**» copy the functionality of the «**Settings**» submenu of the main window of the program. This double functionality was created in order to provide maximum user comfort.



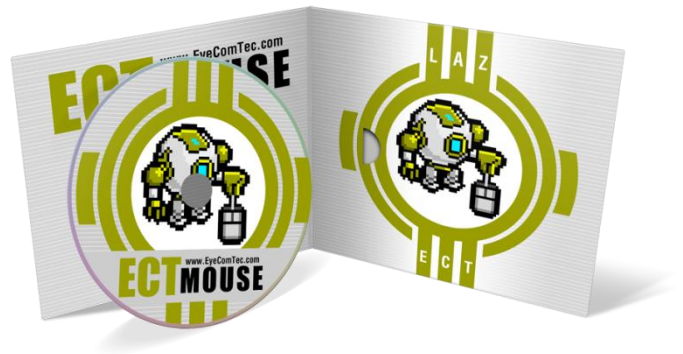
(Fig. 12. Additional menu of settings panel)

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

Updates

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

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



Licensing 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 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 free exclusive and non-transferable license to any entities which are involved into charity or non-profit activities. In order to use the software for commercial purposes, such companies have to contact us 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 the rejection of any liability. This project is 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 the 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 the program binary source code and participation in any operation that is aimed at reverse engineering (decompilation) of software for personal or professional gain.

Additionally, 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, sell, sublicense, advertise or distribute EyeComTec software products in any manner, which is not allowed by this license agreement. As a charitable gesture from the company, all users are allowed to share EyeComTec software products installation packages among 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 various installation packages that contain malicious programs or advertisement of any form.

Registration of users

User registration is the easiest and safest way to provide feedback between the development company and its consumers: patients and medical centers. During startup of the non-registered program, the user will see a web-browser window with the present registration page.

- [Registration Form for Private non-commercial client \(people with physical needs to use our products\)*](#)
- [Registration Form for Medical organizations \(commercial and charitable non-profit: hospitals, rehabilitation centers, doctors\)**](#)
- [Registration Form for Commercial non-medical clients \(involved in manufacturing, assembly, control, production lines\)**](#)

** Registration is voluntary for private non-commercial customers, but nevertheless desirable.*

*** Registration is mandatory for legal entities and commercial clients.*

Collection of such statistical data is extremely important for EyeComTec because it allows detailed information about the needs of specific users to be obtained, and it also improves the software in accordance with user needs. Program complex is developed continuously and many features of the current version were created due to feedback from users.

Registration opens the opportunity to participate in a loyalty program for commercial entities. The loyalty program starts immediately after registration is complete. Participation in the loyalty program gives users access to current and extended versions of the software on more favorable terms, as well as providing significant discounts.

Additionally the database of contacts allows EyeComTec to inform patients promptly about new and 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 license

1. Noncommercial License

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

(this type of license does not apply to customers who are undergoing paid rehabilitation courses)

EyeComTec software products are provided free of charge to all users who are experiencing physical need and are in use of such category of programs. This group of people includes all those who suffer from various forms of paralysis or other muscular activity restrictions. All software products are free for non-commercial use, for example when the patient uses our software for text typing, they are 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.

Commercial licenses for program products of EyeComTec is necessary in any case of paid services provision 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 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 when the user is on paid treatment, involved in rehabilitation program in commercial institution, or uses paid services of any third-party medical specialist, they are prohibited to use personal non-commercial license ECT software. The user is strictly prohibited to use any EyeComTec software products 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 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. Selling of software products to customers with physical needs is strictly prohibited (see section 2.1, paragraph A).

2.C. Commercial license for extended program versions, which are intended to use in non-medical environments.

The EyeComTec Company develops 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 full information about features of programs, full quotation including price of purchase and support, as well as cost of specialists training, please contact the EyeComTec Company.

Furthermore, our company develops various additional applications which 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 individual systems which are most suitable to your needs. The system will be created on software modules which were created, taking into account all the distinctive features of the processes.