

# EYECOMTEC

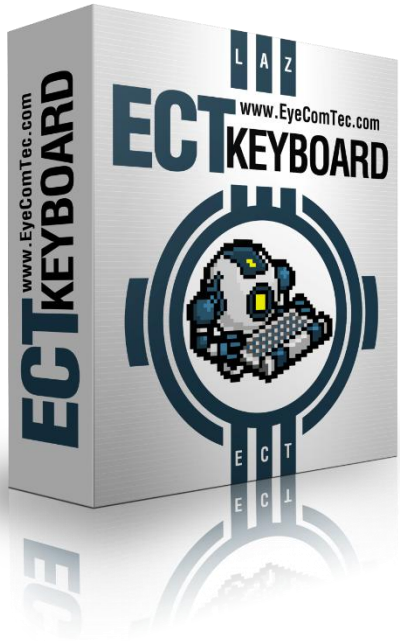


LAZgroup SA



# ECTkeyboard application description

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ECTkeyboard – an application, which is included in the assistive software complex developed by EyeComTec ([www.eyecomtec.com](http://www.eyecomtec.com)). ECTkeyboard is a virtual keyboard (symbol matrix), where users can select letters, numbers, or various commands by pressing a single key. This application can also be used in conjunction with eye-tracking devices, allowing users to select symbols from a matrix by changing direction of sight.

The main idea behind ECTkeyboard is to provide paralyzed patients and those with significant motor activity problems with a solution and possibility for communication.

The application is completely portable and doesn't require installation, allowing users to launch it from any external storage device. Unlimited user profiles, as well as the possibility to switch them "on the fly", allows to use ECTkeyboard in various medical and rehabilitation centers. This application is incredibly convenient, thus a patient can use it freely in a couple of minutes after the very first use.

Users can change its interface layout to create a convenient atmosphere. Users can change the number of rows and columns in the matrix of symbols and change cell order, as well as colors and various fonts of all elements of the application. It's also possible to select a large font and set a high contrast color scheme, which makes this application comfortable and easy for those who are visually impaired. Users can also enable sound confirmation of highlighted letters or symbols.

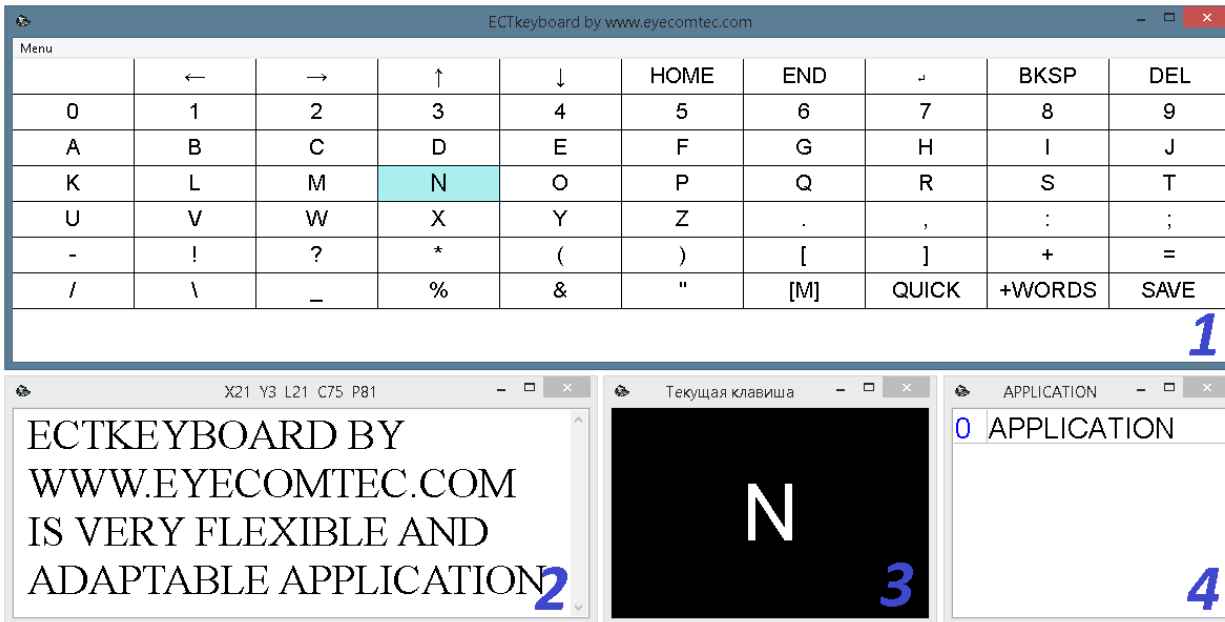
Another great and unique feature of ECTkeyboard is its variable speed of symbols iteration. During the first period, when users begin to get used to the application, low speed of iteration can allow the user to understand the interface and remember all letter and symbol positions. High speed can be useful for those who already know the application and can use it for fast text typing.

This application includes a frequently used words vocabulary, which allows users to increase their typing speed. Words, which contain a high number of letters, can be simply chosen from a list, instead of typing them letter by letter. Users can always add new words to the vocabulary, for example names, locations, and so on.

ECTkeyboard can also be used by those without any physical problems. Our application is a simple and convenient virtual keyboard, which can easily send any text to a third party application, or it can be immediately saved as a text file.

This application is very flexible and has an abundance of settings, for instance users can change more than 120 parameters: colors and fonts of the interface, all forms position, speed of selection and de-selection of symbols, progress bar size and position, and many others. All mentioned features allow users to perform an optimal ECTkeyboard settings procedure and create a perfect environment for each user.

Main interface of the application:



1. The main window of the application, for instance the virtual keyboard with letters, numbers, symbols, cursor movement arrows and some additional commands.
2. The text output form, which contains typed text. ECTkeyboard allows users to type volumetric text at a fairly fast speed.
3. A window with a thumbnail of any currently selected symbol. Users can select type, size, and color of fonts, as well as background colors, in order to create convenient user experience.
4. The window for fast word selection. When a user types several letters, this window will show all words which start with these symbols

# Main features and advantages of ECTkeyboard

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ECTkeyboard is a compact and convenient application which has an incredibly flexible setting procedure. It has many advantages compared to other applications of the same field:

- unlimited user profile support with fast loading and switching speed. This approach allows various users of one personal computer to create unique interface settings and keyboard layouts.
- Ten different data input modes (two modes support eye-tracking devices). This feature makes ECTkeyboard useful for patients with various physical conditions.
- convenient interface, with variable symbols order, keys size, and other visual parameters.
- special operation modes for visually impaired users or those with distortions of color perception. The application allows use of its special high contrast color scheme and large fonts, as well as the window with the selected letter or symbol thumbnail. Furthermore, ECTkeyboard can be used by completely blind patients due to its special feature, which confirms all letters with voice.
- special graphical icons with letters or numbers can be great for those patients who doesn't speak the localization language or can't read.
- fast entry mode with the vocabulary of frequently used words allows users to avoid long entries symbol by symbol, increasing total speed of program operation and text typing.
- possibility to create a vocabulary for names, locations, and special words which can't be found in standard vocabularies.
- users can implement special commands, allowing patients to change keyboard layouts, enable\disable sound confirmation, and use various additional options and tools right from the main window of the application, without any need to call an assistant and perform additional setting procedures.
- various localization support, for instance users can choose their native language for the interface. Fast entry vocabularies are also completed for several languages.
- incredibly flexible setting procedure, for instance users can change more than 120 parameters, which allows functionality and interface of the application to change in order to create a comfortable atmosphere for each specific user.
- modularity of the application. Users can change colors and fonts for each window, hiding or showing them if necessary.
- possibility to transfer any typed text to any third party application, for instance text editor, internet browser, chat window, and so on.
- typed text can be automatically saved after a predefined period of time.
- small size and real portability of the application, which allows ECTkeyboard to run from any external storage device.
- low technical requirements of computing resources.

Thus, we can confidently say that ECTkeyboard is one of the most advanced and functional virtual keyboards in the field of assistive technologies today.

Settings

Action	VALUES	LABELS
0	5	Number
1	6	Number
2	150	Width
3	80	Height
4	1	Space b
5	1	Space b
6	1	Size of l
7	Times New Roman	Button
8	KeyboardKeys.txt	Keyboa
9	-	-
10	FFFFFF	Keyboa
11	FFFFFF	Keyboa
12	000000	Keyboa
13	18	Keyboa
14	000000	Keyboa
15	-	-
16	AAFFFF	Keyboa
17	AAEEEE	Keyboa
18	000000	Keyboa
19	22	Keyboa
20	110000	Keyboa
21	-	-
22	FFFFAA	Keyboa
23	0000FF	Keyboa
24	FFFFFF	Keyboa
25	24	Keyboa
26	000011	Keyboa
27	-	-
28	000000	Keyboa
29	0000DD	Keyboa
30	FFFFFF	Keyboa
31	26	Keyboa
32	FFFFFF	Keyboa
33	13#32#83#40#	Button
34	300	Column
35	300	Row cy
36	1000	Minimu
37	2000	Maximu

ECTkeyboard by www.eyecomtec.com

Menu

←	→	↑	↓	HOME	END	↵	BKSP	DEL	[M]
0	1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z	.	,	:	
-	!	?	*	[	]	(	)	+	=

79%

X38 Y3 L38 C131 P135

WWW.EYECOMTEC.COM IS PROUD TO  
PRESENT YOU THE ECTKEYBOARD!  
ASSISTIVE TECHNOLOGY THAT ALLOWS  
TYPING TEXTS BY PRESSING SINGLE BUTTON


ECTkeyboard by www.eyecomtec.com

Menu

About	F1	
Settings		Show Settings Form
Selector Modes		Load Profile
Localisation		Set Current
Show Output-Form	F5	Load from File
Mouse	F6	Save to File
Exit		Reset to Default

A	B	C	D	E
K	L	M	N	O

ECTkeyboard About



**ECTkeyboard v31.2.2**  
Released by EyeComTec on July 18, 2015  
<https://eyecomtec.com>

Intro: EyeComTec (subdivision of LAZgroup SA in Switzerland) - a group of developers creating software to help people who are suffering from paralysis or significantly impaired mobility. Our mission is to develop effective and affordable technology allowing them to communicate exclusively through eye movements.

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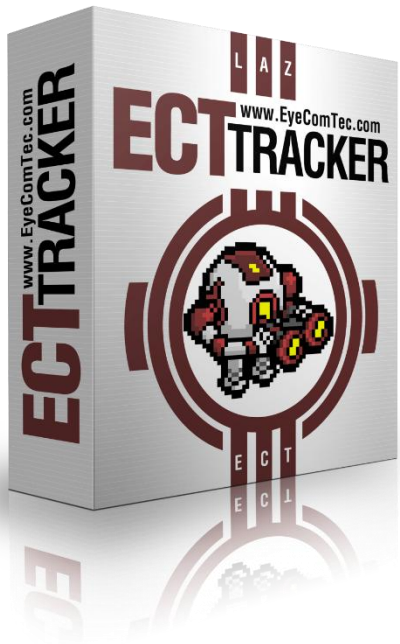
Thank you for choosing our product!

OK

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# ECTtracker application description

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ECTtracker (EyeComTec Tracker) is an eye-tracking software which identifies visible actions performed by the user. It is mainly used to monitor the state of the user's eyes (open or closed) but can also track the eyebrows or mouth. This software can be used in conjunction with different video capturing applications for web cameras or other devices connected to a PC (e.g. ECTcamera, Skype, Media Player Classic). ECTtracker compares different states of the user's eyes with assigned key codes, which can be further transmitted to any receiving application (ECTmorse, ECTkeyboard and many others).

Software is extremely flexible and adjustable, as well as portable, and can be personalized for use for any specific user and the performance of a computer. In fact, ECTtracker is an alternative to smart computer vision realization.

Unlike many others similar in functionality programs, ECTtracker analyzes images using a special Matrix of Samples, which is unique for any specific user and environment (camera position, illumination, etc.). The program can be used by fully paralyzed patients and those who suffer from some form of impaired mobility. ECTtracker provides assured tracking of visible activity, even for those patients with physical damages of their face, injuries, burns and other post-operative/accidental states.

The software is fully customizable. The user can set an image recognition structure, matching levels between images and samples, video processing speed (in frames per second), idle time for cases when there's no image, and there are also emulated key codes to be transmitted into third-party receiving applications. The software contains more than 45 different parameters, which can be used to change appearance and functionality of ECTtracker. Some parameters allow the user to lower computing requirements, providing stable work even on computers with low performance levels.

ECTtracker has convenient interface and reach functionality for proper and precise setting and debugging. Initial setting procedure is simple due to its auto-calibration feature. Furthermore, ECTtracker supports various localizations, allowing patients to use the software in their own language.

ECTtracker is a highly practical and convenient application due to its ability to adapt to the physical condition of the user, different environments and computer system resources. A flexible setting process and an unlimited amount of user accounts makes it possible to use the application in any case.

In order to provide a proper analysis of the image by program, it is necessary to first calibrate it and fill the Matrix of Samples. It is also necessary to change several parameters depending on the physical characteristics of the patient and performance of the computer. This is especially important during the first start of the application.

## Main features and advantages of ECTtracker

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ECTtracker has a number of significant advantages over other software solutions with similar functionality:

- adaptation of the program to specific needs and the physical condition of each individual user. ECTtracker can work with both fully paralyzed patients and patients with various disorders of motor activity;
- perfect trainability. The program allows you to work in any environment: camera position, lighting, and user position. ECTtracker tracks eye state by comparing it with saved samples, providing high quality of tracking and stable work;
- unlimited amount of configurations. The program makes it possible to save configurations into separate files and switch between them quickly when needed. The small size of such files allows ease of storing them on any portable device and share using e-mail;
- portability and small size of the program allows running it from any external media device. ECTtracker does not require installation and does not make changes to the registry of the operating system;
- rich customizability and average technical requirements. ECTtracker provides stable work, even on computers with low performance, due to high configurability of tracking algorithms and graphical user interface;
- localizations. The program supports various languages of interface, which provides high level of comfort and allows users to work using their own language;
- simple and intuitive interface allows users to quickly familiarize with the program and change all settings easily.

The main feature of ECTtracker is the adaptation to the physical abilities of the user. The program can be used by both fully paralyzed patients and those who suffer from uncontrollable muscular activity (tremors, tics, etc.). In case of contrast marker usage, ECTtracker provides excellent quality, even for those patients with physical damages to the face: wounds, burns, singed eyelashes, postoperative eye conditions, and so on. The program has the ability to change the matching level between analyzed images and samples, as well as offering a wide selection of structures and other parameters which allow the user to adjust ECTtracker for their specific needs and provides optimal tracking results.

The favorable difference of ECTtracker in comparison with similar software is its perfect trainability, which allows users in any state to work with the program. The tracking algorithm of ECTtracker works independently to the position of the user, lighting or technical parameters of the computer. Nowadays most algorithms are made to be universal and normally their analysis is based on finding light and dark areas of the image, while

ECTtracker allows creating a base of samples for tracking, which are unique for any user and environment (lighting or camera position). Such high level of trainability provides high quality of tracking in almost any case. ECTtracker keeps working, where other solutions fail (unable to identify human face or track eyes). As a result, the user can work with a virtual keyboard more confidently and faster, becoming less stressed at the same time. Furthermore, ECTtracker allows the user to enter symbols not only by eye blinking, but with any clearly visible movement or gesture. This feature can be used by patients suffering from most known types of physical disabilities.

All changes of settings performed by user can be saved as separate configuration files, making it possible to change such files "on the fly", allowing different users to work on the same machine. Recognition structures and personal settings are adjusted for specific needs of each user. The program allows creation of an unlimited amount of settings profiles, while small sizes of files allows ease of sending them through email or share in other ways.

Portability and the small size of the program allows ease of running ECTtracker from any external media device. ECTtracker does not require installation and does not make changes to the registry of the operating system.

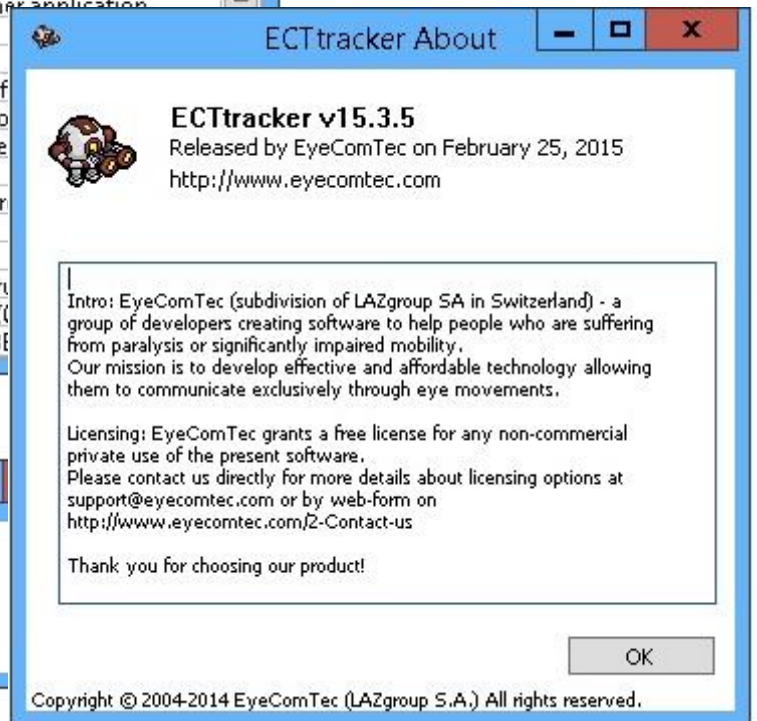
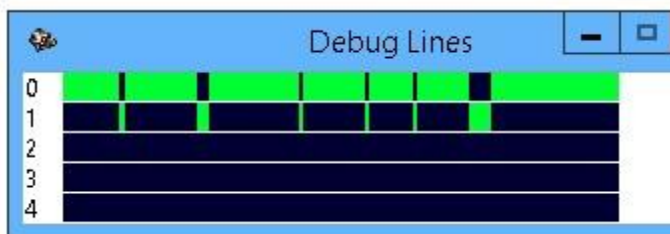
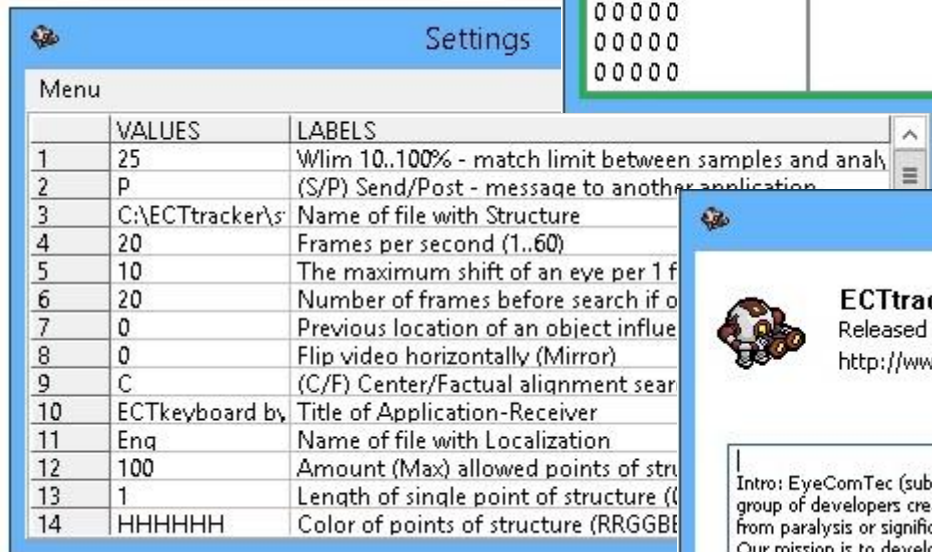
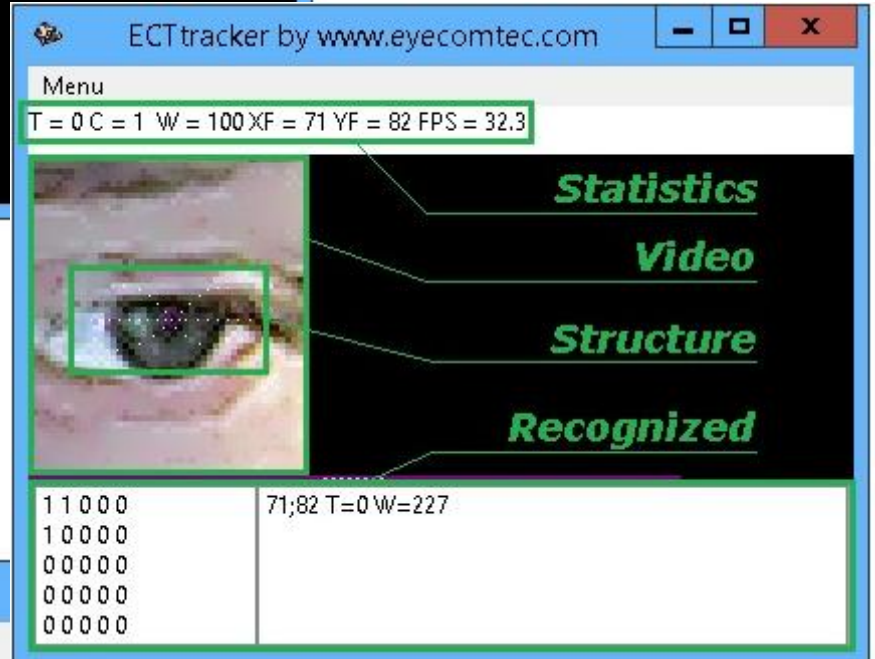
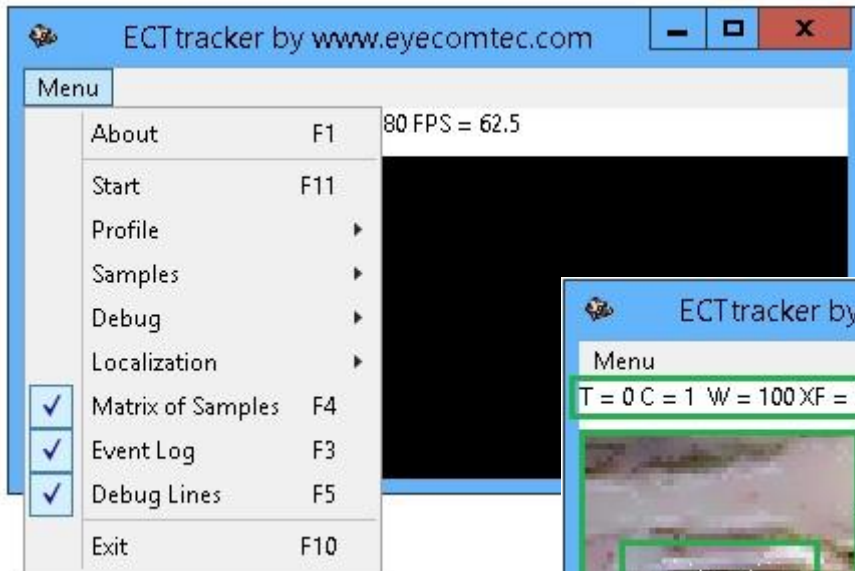
Information fields of the main window of the program, an additional debugging window and a detailed event log are handy features for fine-tuning. Simultaneously, all debugging elements can be disabled during normal operation of the program. The ability to reduce the amount of processed frames per second can reduce the load on the processor and other system resources of the computer. This allows adjusting ECTtracker for comfortable and smooth operation, even on computers with low performance.

A simple and user-friendly interface allows performing initial configurations quickly and begin working immediately with ECTtracker. All the basic functionality of the main menu is duplicated with "hot keys" for quick access. In addition, ECTtracker supports different localizations, allowing users to work with the program in their native language.

Configuration of ECTtracker does not take long. In case of change in light conditions or body position, the user can quickly create new samples for tracking by using the auto-calibration feature. There is no need to delete old samples, because the program allows an unlimited amount of settings profiles and several Matrix of Samples.

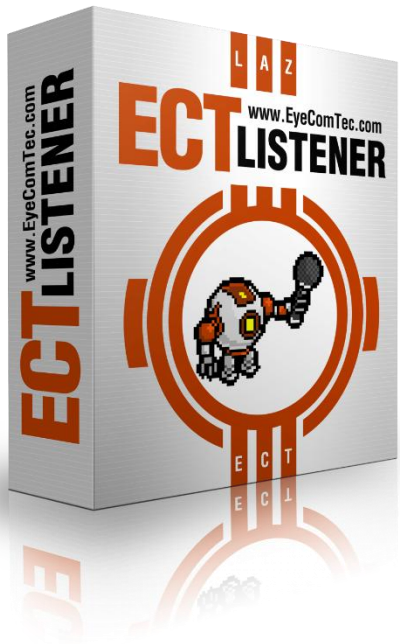
All these features provide extreme flexibility in configuration and operation of ECTtracker.





# ECTlistener application description

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ECTlistener software, created and developed by EyeComTec ([www.eyecomtec.com](http://www.eyecomtec.com)) is intended to analyze sound signals from any microphone. Depending on the length and volume of the signal, ECTlistener emulates key strokes and sends control codes to the receiving software.

The program was created for disabled people (paralyzed or those with extremely reduced mobility) and works in conjunction with other programs (e.g. ECTkeyboard symbol matrix).

By using a personal computer with a microphone and both ECTlistener and ECTkeyboard, patients can type text letter-by-letter by using individualized vocal prompts such as moans, loud breathing, sniffing and many other sounds. This allows them to communicate with their relatives, friends, service or medical staff.

Nowadays, there are many technical solutions that allow users to generate key strokes with different sounds, or inhalation or exhalation of air. However, all these solutions require special equipment and are not available for everyone at a reasonable price. Simultaneously, EyeComTec are developing ECTlistener as an easy, comfortable to use and affordable alternative for those solutions.

To start the program the user needs only a personal computer equipped with a microphone which are freely available in any electronic or computer shop. ECTlistener can even work on very old personal computers with low productivity, due to the program's low system requirements. Furthermore, fast export or import of all settings, the small size of the program and the ability to work without any installation, allows the user to execute ECTlistener from any removable device, for example, flash card, external hard drive etc.

The program is really customizable and has a user-friendly interface. Initial settings take only few minutes to operate and program is ready to work! ECTlistener is free for any private use, contains no advertising and supports many languages.

The user can utilize the program almost immediately after set-up – all the user needs is the ability to download a small archive with the program, and any personal computer or laptop with a microphone. All these features make ECTlistener an extremely affordable, practical and convenient solution for people with restricted mobility.

EyeComTec ([www.eyecomtec.com](http://www.eyecomtec.com)) creates software that allows people with reduced mobility to communicate with others. All program products created by the company are very flexible in personalization and settings, have simple and intuitive interface, and have low technical requirements. EyeComTec's main principle is to create affordable solutions available to everyone, based on personal computers and equipment such as webcams and microphones.

## Main features and advantages of ECTlistener

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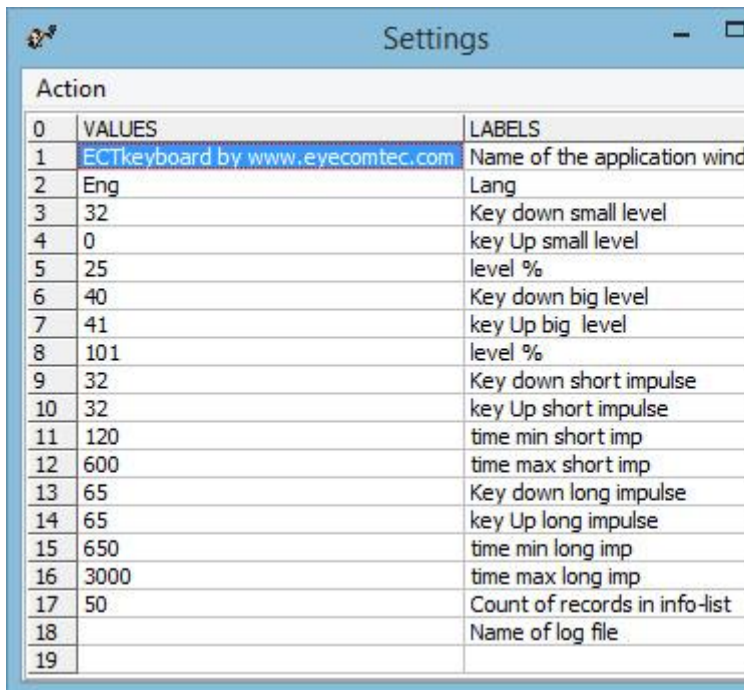
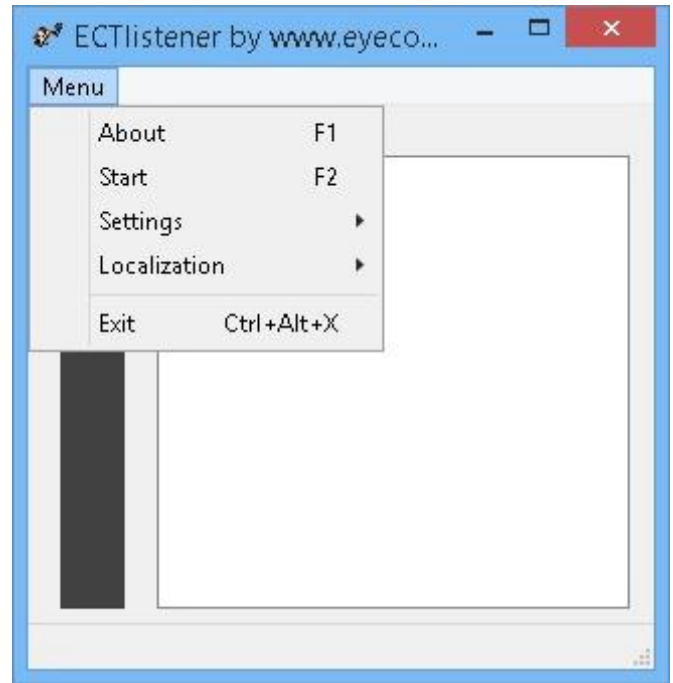
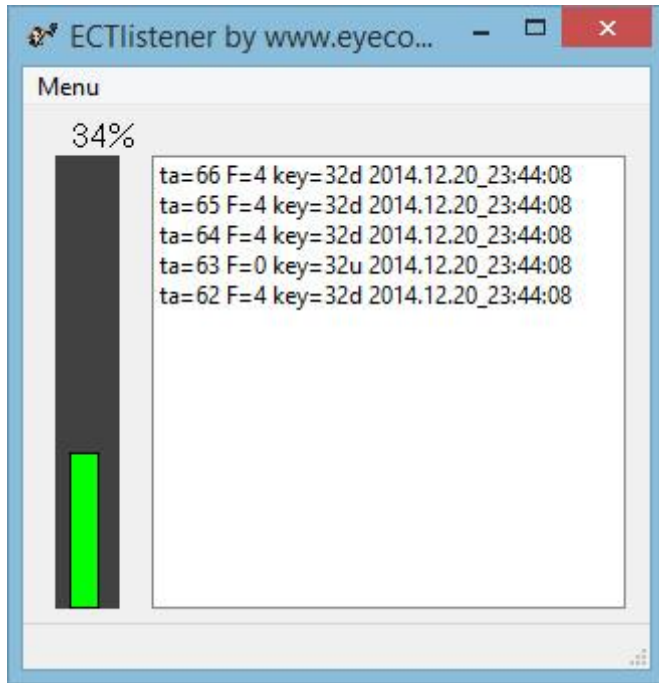
At the present moment, there are some similar solutions available on the market, which work with several symbol matrix using the user's ability to draw in the air. However, to EyeComTec's knowledge, all of these programs require special devices, such as those that control air-pressure during the user inhaling and exhaling.

The main advantage of ECTlistener is that it has the same level of effectiveness without the need for having any special (and expensive) equipment! All the user needs to operate the program is a standard microphone. This makes our solution to text-to-speech for users so easy and affordable. Alternative solutions are not freely available and can only be bought directly from a manufacturer, which means additional payments and delays for delivery. Since ECTlistener is a fully-functional software solution, the user can start to operate the program almost immediately after acquiring the software. If the user has any personal computer or laptop with a microphone, all they need is to download a small archive with the program and spend a couple of minutes for the initial set-up.

Here are some other benefits of the ECTlistener program:

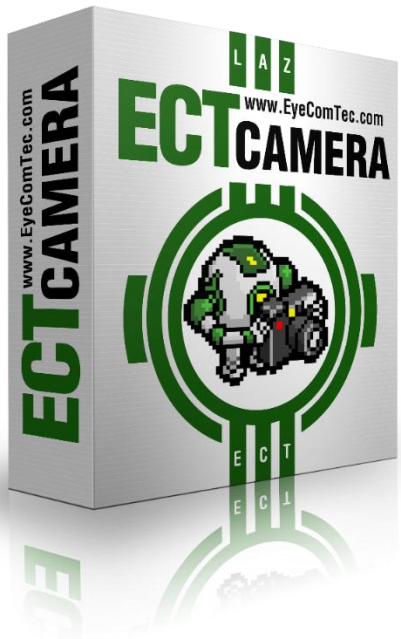
- Ease to configure. To start operating, the user just needs to change a few parameters and configure the microphone's location and sensitivity. After that, the user can start operating the program.
- User friendly interface. There are no excess protocols or debug modes in the program, and simultaneously, the user can observe all necessary parameters for correct operation.
- Portability and small size of the program. ECTlistener can be executed from any portable device and there are no installation or registry changes required.
- Low system requirements guarantee stable work of the program - even on computers with low productivity or with older models.
- Possibility of fast export or import of settings. This feature allows "hot key" changes of configuration files, making it possible to work with several different users (receiving applications).
- Different localizations. Independently to the user's native language, it is possible to use any desired language using the corresponding language file.
- Free of ads, spyware or any malicious third-party applications.
- The program is totally free for any non-commercial private use.

These benefits make EyeComTec's ECTlistener the most affordable and comfortable solution for people with seriously reduced mobility to communicate effectively with others with minimum expenses on equipment.



# ECTcamera application description

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ECTcamera (EyeComTec Camera) is a handy utility for working with a webcam or video capture external device connected to a PC or a laptop. ECTcamera has a simple user interface that allows you to scale the displayed image, save partial screen or full screen screenshots, supports a wide range of different devices and identifies them automatically. The camera resolution and other settings are fully customizable.

The program is portable and does not require installation, does not introduce any changes to the registry and is of a small size able to run on any computer connected to the portable storage devices.

Can operate with hot keys; ECTcamera is a fully customizable application: zoom, shift, main window size and position as well as screenshot compression can all be modified by user. Fine-tuning ECTcamera allows working with any third-party streaming processing applications.

ECTcamera can work with command line and support additional parameters, enabling the use of task schedulers and program managers to run the application on a schedule. This reduces the pressure on ram allowing ECTcamera to be supported even by low-end laptops. In addition, the application allows the creation of an unlimited number of configuration files allowing quickly switching between different ECTcamera settings; the latter is especially useful when working with multiple connected video devices or running the program on different computers.

The program is easy to use, quick to configure and intuitive to operate. The first ECTcamera setup takes less than a minute; the use of a saved configuration file will modify in few seconds the parameters of video output settings, the location of windows and the image shift value.

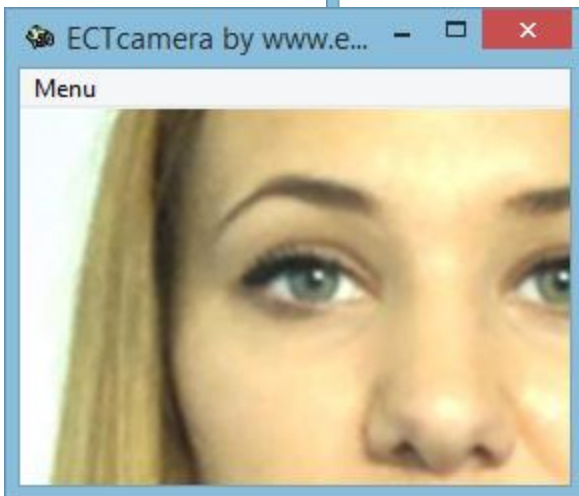
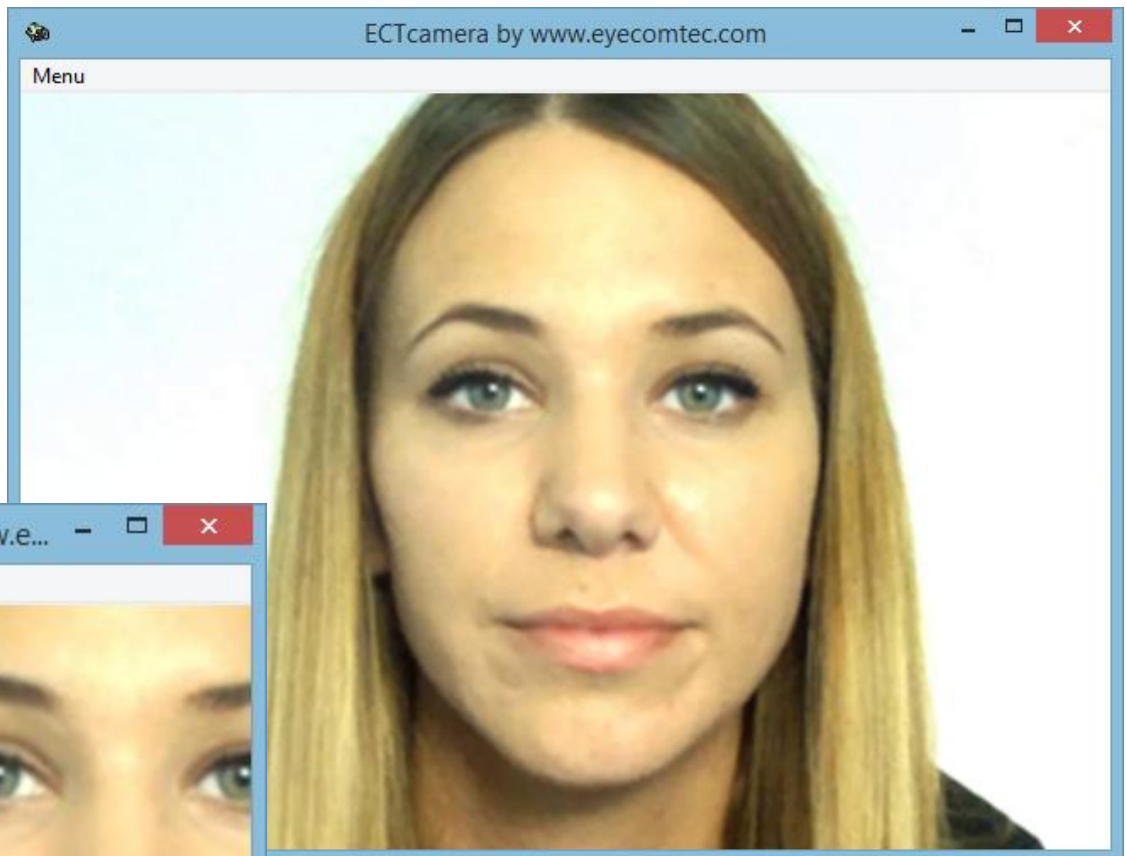
# Main features and advantages of ECTcamera

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In comparison with other similar programs out there, ECTcamera has many advantageous features that make it the better choice including:

- It's Free – Any private, non-commercial person with any sort of physical impairment may freely download and use our products. There is no need to purchase or order anything.
- Interface Localization – The user interface of ECTcamera currently supports all of the following languages: English, French, German, Italian, Spanish, Chinese, and Russian.
- Easy to Use and Powerful – The program gives the user all the tools they need without being bothered by redundant configurations. The user can work with video, save snapshots conveniently, and export and import their own settings.
- Work Quickly – The program supports and quickly identifies different types of video capturing devices and allows full control of all necessary functions with "hotkeys". At launch it takes just a few seconds to configure the program and start working.
- Portability – The program has a small file size, and does not require installation on your computer or that you make changes to the registry and file system. It works with any portable device connected to a computer, such as a flash drive.
- Image Scaling – An indispensable feature when working with cameras that don't support high definition and in any case where you need to enlarge an area of the displayed image.
- Launch from the Command Line -- ECTcamera will not constantly occupy the memory of the computer, so the program can be used with all types of schedulers and third-party software. It is possible to make the program launch by pressing specific keys or using trigger events.
- Supports an Unlimited Number of Configuration Files -- Switching between the configuration files is simple and fast. Each of these files stores all the necessary settings of the program – from the camera type and resolution, to the position and size of the program window. Furthermore, using separate configuration files allows switching quickly between different devices and using multiple cameras a quick and effortless process.

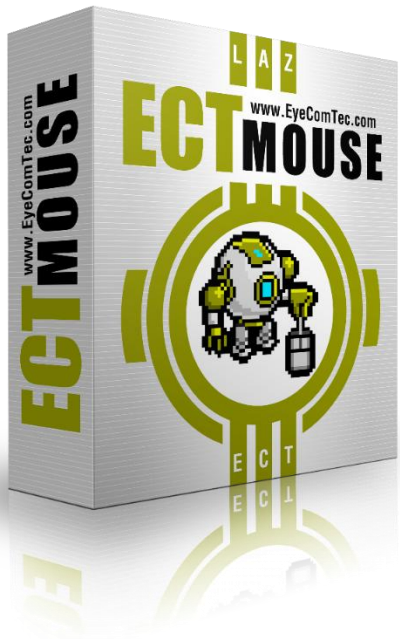
The combination of simplicity and functionality makes ECTcamera an extremely useful program that can find application in many fields.



Settings	
Action	VALUES
1	FaceTime Camera (Built-in)
2	Major Type: Video - Sub Type: YUY2 Format: Video
3	0
4	20
5	1
6	1
7	320
8	220
9	560
10	340
11	0
12	0
13	100
14	0
15	1
16	1
17	1
18	DD_MM_YYYY-HH_NN_SS-ZZZ
19	ECTcamera-*.jpg
20	1
21	0
22	0
23	Eng

# ECTmouse application description

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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. The user may also enable the program log export and save it to a separate file. To do that the user has to specify the file name in the parameter 44 of 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 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. The user can also set a zone on the desktop, within which the cursor will operate.

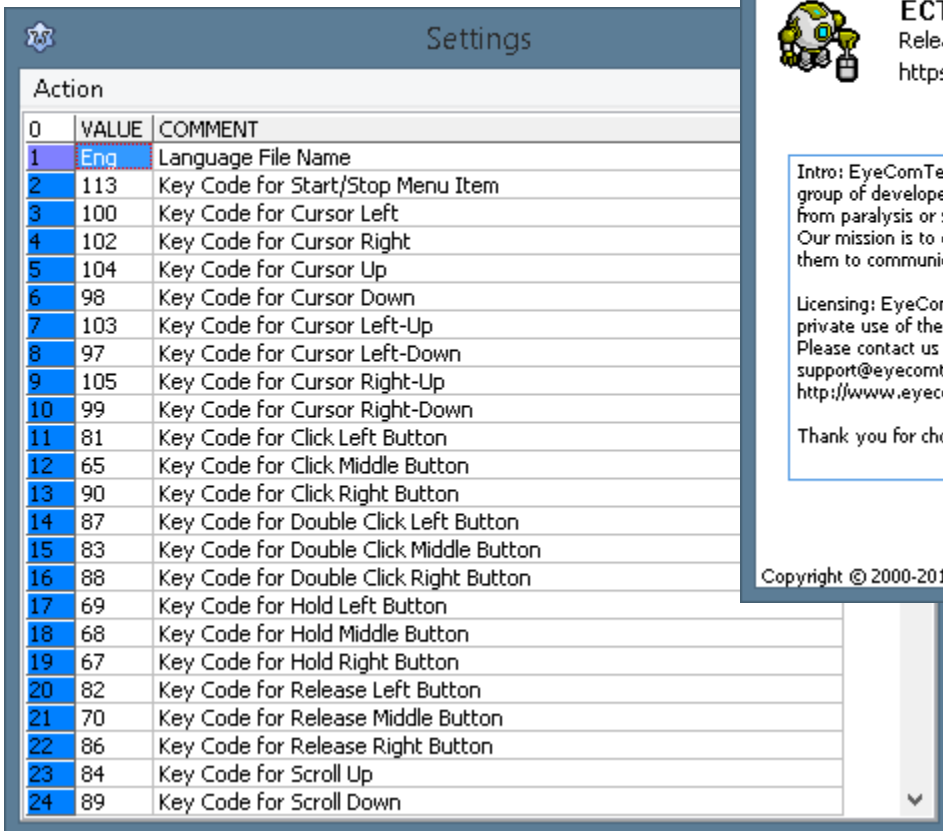
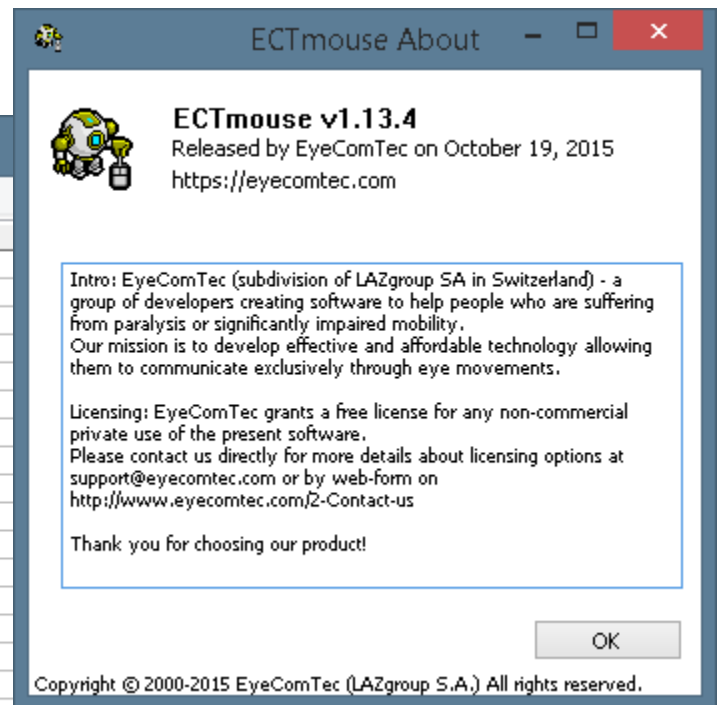
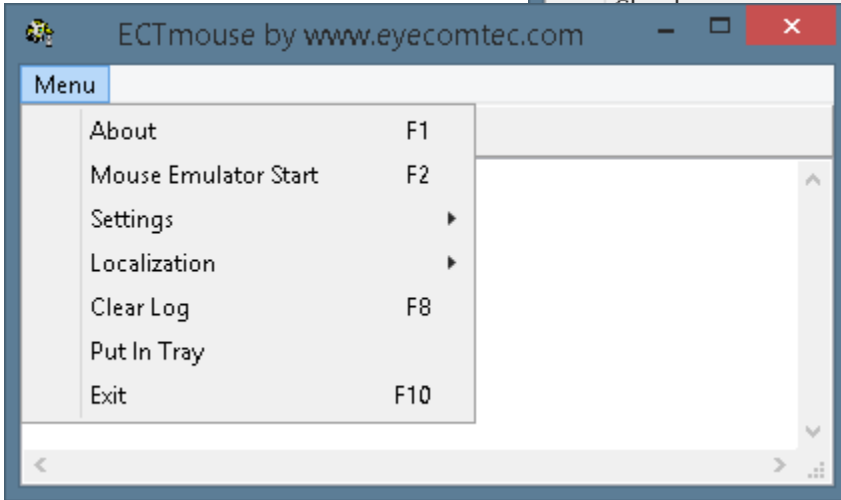
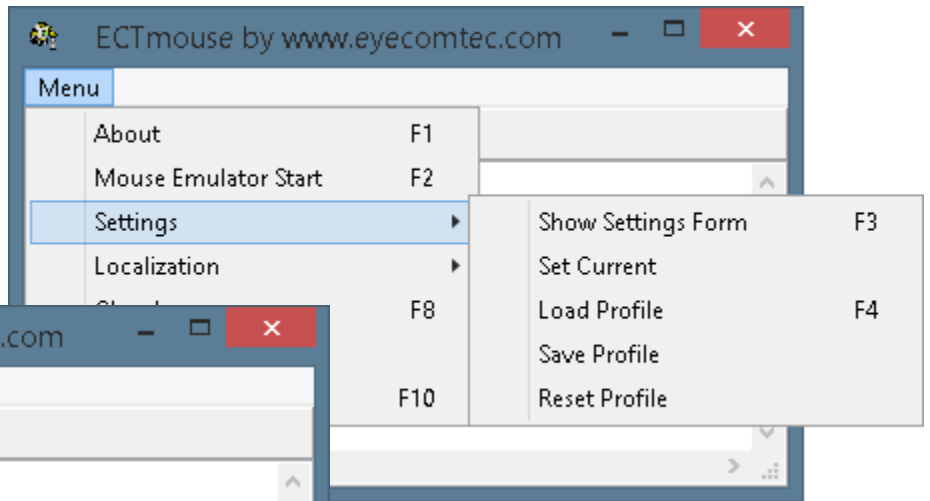
# Main features and advantages of ECTmouse

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

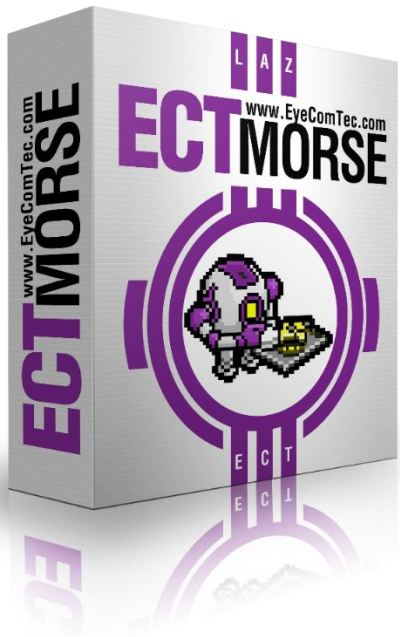
- flexible configuration. Any possible actions which can be performed by the mouse (cursor movement, click, double click, holding and release of a key, scrolling) can be assigned with any key of the keyboard;
- variable cursor movement speed (shift step in pixels) "on the fly", without any need to stop emulation;
- possibility to limit cursor movement zone and set various types of movements;
- 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.



# ECTmorse application description

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ECTmorse (EyeComTec Morse) is a program designed to emulate the Morse telegraph and help sufferers of various forms of paralysis and other disabilities by allowing them to type using the universal language of Morse code. The program may be used on nearly any PC or laptop because of its low system requirements. Even most older and low end computers should be able to run ECTmorse.

ECTmorse also has language options which add to the accessibility of the program to people of various demographics. The default language of the program is English.

ECTmorse is easy to use as well. All it takes is the pressing of a single key, and ECTmorse can enable the user access to any letter or symbol needed to type. The typed characters are displayed in the program. This ensures that the user may review their work and edit it to their individual needs.

Beyond the ease of use and language options, nearly every aspect of ECTmorse can be customized in order to better fit the needs of the user. This can include anything, such the key pressure time for writing dots and dashes allowing the user to write at their own pace or even fully customizable characters. Work can be saved to a time stamped file, allowing the user to see the evolution of the piece that is currently being typed over time. In addition to changing the settings, the user can use hotkeys to increase the efficiency of the program. These are just a few of the many customization options available in the program that can be found in the user guide and site for ECTmorse.

ECTmorse is incredibly portable. There are no complicated installation processes, so even the most novice of computer users can run and use the program. Start up is really simple and only requires that the user starts the program. The settings may be chosen by the user, then saved to a file. The user may have a plethora of settings files, and thus have the ability to choose the file that best suits a given situation, allowing the user to type more quickly and efficiently.

# Main features and advantages of ECTmorse

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ECTmorse (EyeComTec Morse) has many features that give it an edge over the competition. Some of these include:

- **Price.** ECTmorse is completely free to download and use for non-commercial purposes. Individual users don't need to pay for a thing.
- **Accessibility.** ECTmorse has incredibly low system requirements, so even a low end PC or laptop can run the program.
- **Portability.** ECTmorse can be kept in an external storage device like a flash drive or SD card. It can run off of that storage device without any kind of installation needed. This also means that even novice computer users can run and use the program.
- **Versatility.** ECTmorse is fully customizable. Every aspect of the program can be changed to fit the needs of the user, and all of the changes can be saved to a file and reloaded later. Even the Morse dictionary file can be expanded to include custom codes that create special symbols, even Egyptian hieroglyphs. This gives the user the option of having multiple settings files for any given occasion.
- **Usability.** ECTmorse is easy to use. A single key is all that is required to operate the program. As the user types, the characters appear in the program and allow the user to save their progress and edit the text that has been written.

All of these features make ECTmorse able to compete with the expensive software in the market while still remaining free for those who truly need it, making it the best choice when compared with similar software.

