



# User's Guide

## KeyCobra™ Flash PS/2

**4 MB**

with USB Download Accelerator



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Check <http://www.KeyCobra.com/> for the latest version of this document.



## Introduction

### *The KeyCobra™ Flash PS/2*

The KeyCobra™ Flash PS/2 is a powerful hardware keylogger with a huge 4 MB internal flash disk, organized into an advanced file system. All text data typed on the PS/2 keyboard will be captured and stored on the internal flash drive in a special file. Recorded text data may be retrieved and analyzed on any other computer. The standard playback mode is a text menu, generated by the hardware keylogger in any text editor (such as *Notepad*). The USB Download Accelerator allows super fast data retrieve from the keylogger using the USB port. The device is 100% transparent for computer operation and no software or drivers are required for operation.

### *Features*

- Huge memory capacity (4 MB – 2,000,000 keystroke/1,000 pages), organized as a flash file system
- Advanced text menu for viewing recorded keystroke data, includes Net Detective, Phrase Search, Key Filtering, Unplug Counter and more!
- Super fast memory contents retrieve (125 kB/s) with the USB Download Accelerator (included with device)
- Transparent to computer operation, undetectable for security scanners
- No software or drivers required, Windows & Linux compatible
- Quick and easy national keyboard layout support
- Ultra compact and discrete, only 1.9" (48 mm) long



## ***Applications***

### Employers:

- Monitor acceptable internet usage
- Monitor employee productivity
- Detect unauthorized access attempts
- Backup typed text
- Collect computer usage statistics

### Parents:

- Monitor your family's computer activity
- Protect your child from on-line hazards and predators
- Observe WWW, E-mail, and chat usage
- Save a copy of written documents

### Investigators:

- Monitor remote computers
- Retrieve unknown passwords, operating system independent
- Collect computer-related evidence
- Detect unauthorized use of computer equipment

## ***Requirements***

- Computer with PS/2 keyboard
- USB 1.1 or 2.0 port for using the USB Download Accelerator



## Record Mode

Installation of the KeyCobra™ Flash PS/2 in record mode is quick and easy. Simply plug it in between the PS/2 keyboard and the PS/2 port (purple color). No software or drivers are required to operate in record mode. The KeyCobra™ Flash PS/2 will start recording all data typed on the keyboard to the internal flash disk. Once recording starts, new data will be appended to the end of the log file (see section Playback Mode). The device is completely transparent for operation of the computer.



Disconnect your PS/2 keyboard from the keyboard port (purple color) at the computer rear panel.

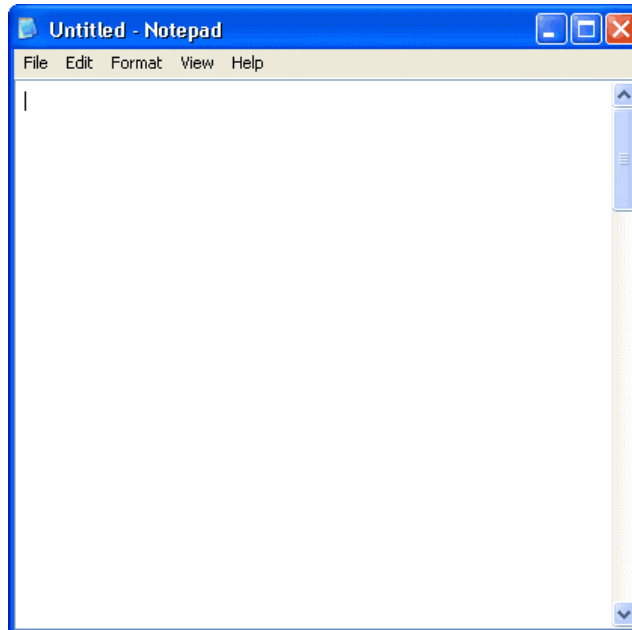


Connect the KeyCobra™ Flash PS/2 between the keyboard and the PS/2 port. Keystroke logging will start automatically on power-up.



## Playback Mode (Text Menu)

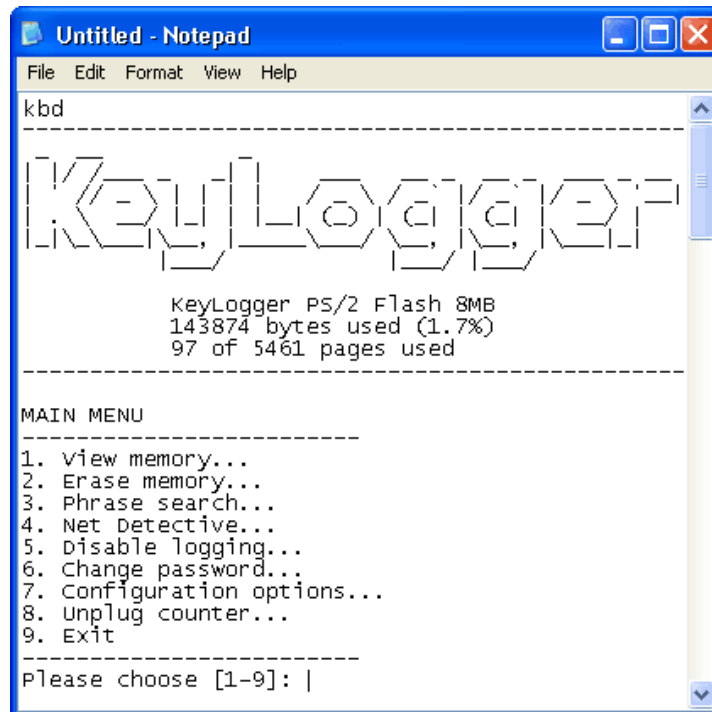
Once data has been captured, it may be retrieved on any other computer by invoking a text-menu. The hardware keylogger and PS/2 keyboard should be connected in the same way, as in record mode. A text editor is required, such as *Notepad*. Run the text editor and make it the active application.



Each device has a built-in 3-key combination (by default K, B, D). Press these 3 magic keys simultaneously to trigger the text-menu.



The KeyCobra™ Flash PS/2 responds by simulating the PS/2 keyboard and will display a text-menu in the editor window.



Note: do not change the active application while in text-menu mode.

The displayed main menu shows a summary of memory usage in bytes and pages. The text menu offers a variety of view, search, and configuration options. Use the digit keys to surf around the menu. Below is a brief description of the main menu options.

**MAIN MENU**

-----

- |                             |   |
|-----------------------------|---|
| 1. View memory...           | ▶ View logged data from internal memory |
| 2. Erase memory...          | ▶ Erase memory log file                 |
| 3. String search...         | ▶ Search memory log for phrase          |
| 4. Net Detective...         | ▶ Search for Web & E-mail addresses     |
| 5. Disable logging...       | ▶ Disable/enable logging                |
| 6. Change password...       | ▶ Change 3-key password for menu access |
| 7. Configuration options... | ▶ Advanced configuration options        |
| 8. Unplug counter...        | ▶ Menu access detector (unplug counter) |
| 9. Exit                     | ▶ Exit menu, return to record mode      |

-----

Please choose [1-9]:



### **1. View memory...**

This menu allows viewing the memory log file on a page basis. Log file pages are displayed in the text editor after selecting the start page (first, last, or manually selected page). The memory will be displayed with regard to the currently enabled national keyboard layout. Special keys are displayed using brackets, i.e. [Ent], [Esc]. To gain fast access to the entire log file, use the USB Download Accelerator.

Note: moving the PS/2 mouse during data retrieve will decrease transmission speed. Do not change the active application while retrieving data.

### **2. Erase memory...**

Use the erase menu to delete the log file. Due to the huge memory capacity, the internal flash disk has to be erased very rarely (typically once every few years). This can also be done in flash drive mode using the USB Download Accelerator.

### **3. String search...**

Use this menu to search the log file for a particular phrase. Phrase length is 3-16 characters. The conducted search is case-insensitive. The log file will be searched with regard to the enabled national layout. Results are displayed in local context and with occurrence page number.

Note: do not use any editing keys (arrows, backspace, delete etc.) while entering the search string.

### **4. Net Detective...**

Use Net Detective to search for WWW, E-mail, and FTP addresses within the log file. This is an extended phrase search.

### **5. Disable/enable logging...**

Use this menu to disable or enable keystroke logging in record mode. Text menu functionality will not be affected.



## 6. Change password...

Allows changing the default 3-key combination for triggering the text menu. Only letter keys are allowed. The sequence in which password characters are entered does not matter. The new password will be stored to the internal flash disk. Please memorize or note the new password, otherwise text menu access will not be possible!

## 7. Configuration options...

Enters the configuration sub-menu. Configuration options include:

- Special key logging. Changing the special key log level results in logging of only text, logging text and function keys, or logging text and all special keys. Logging all keys is not recommended due to large memory usage and difficult log file analysis.
- Keystroke generation speed. Enable slow keystroke speed when your computer cannot acknowledge and display characters from the keylogger fast enough. This will result in a system beep and distorted menu display. If you have a fast system, it is possible to increase keystroke generation speed for faster menu displaying.
- USB mode. This option allows to disable or enable the USB Flash Drive functionality through the USB Download Accelerator.
- IME mode. This option allows to enable or disable a special logging mode intended for use with systems with an IME editor, such as Japanese, Chinese, Korean, etc. If IME mode is enabled, the layout is discarded and every key pressed is logged using a normalized character sequence. Data logged in IME mode can be further processed with an external software text converter.

The configuration sub-menu also allows restoring the default configuration. Configuration data is stored in a special file on the internal flash disk.

## 8. Unplug counter...

Displays the unplug counter status, a value increased each time the keylogger is powered-up, and reset after each menu access. This tool will help you determine, how many times the computer was powered up and if the keylogger was unplugged during computer usage. If the text menu is invoked each time you use the computer, this value should always show zero. A different value indicates the computer was used without your knowledge, or the keylogger was detached at least once.





## 9. Exit

Exit from text menu and return to record mode. Settings will be stored. Be sure to exit playback mode using a menu option, otherwise the keylogger will remain in text menu mode.

Note: the menu is exited automatically after 5 minutes of keyboard inactivity.

Sub-menus offer more options. Most sub-menus are self-explanatory.

### VIEW MEMORY

-----

- |                             |  |
|-----------------------------|--|
| 1. Start from first page    | ▶ Start viewing from first memory page |
| 2. Start from last page     | ▶ Start viewing from last memory page  |
| 3. Start from selected page | ▶ Start viewing from selected page     |
| 4. Main menu                | ▶ Return to main menu                  |
| 5. Exit                     | ▶ Exit menu, return to record mode     |

-----

Please choose [1-5]:

### VIEW MEMORY

-----

- |                          |                                    |
|--------------------------|------------------------------------|
| 1. Next page             | ▶ Jump to next memory page         |
| 2. Previous page         | ▶ Jump to previous memory page     |
| 3. Jump to selected page | ▶ Jump to selected page            |
| 4. Main menu             | ▶ Return to main menu              |
| 5. Exit                  | ▶ Exit menu, return to record mode |

-----

Please choose [1-5]:

### ERASE MEMORY

-----

- |  |                        |
|--|------------------------|
| 1. Proceed - recorded data will be lost! | ▶ Proceed with erasing |
| 2. Cancel                                | ▶ Return to main menu  |

-----

Please choose [1-2]:



NET DETECTIVE

- 1. WWW addresses
  - 2. E-mail addresses
  - 3. FTP addresses
  - 4. Main menu
  - 5. Exit
- ▶ Search memory for WWW addresses
  - ▶ Search memory for E-mail addresses
  - ▶ Search memory for FTP addresses
  - ▶ Return to main menu
  - ▶ Exit menu, return to record mode

Please choose [1-5]:

CONFIGURATION OPTIONS

- 1. Special key logging
  - 2. Keystroke generation speed
  - 3. Set USB mode
  - 4. Set IME mode
  - 5. Restore defaults
  - 6. Main menu
  - 7. Exit
- ▶ Configure special key logging
  - ▶ Change keystroke speed
  - ▶ Enable/disable USB mode
  - ▶ Enable/disable IME mode
  - ▶ Restore default settings
  - ▶ Return to main menu
  - ▶ Exit menu, return to record mode

Please choose [1-5]:



## Using the USB Download Accelerator

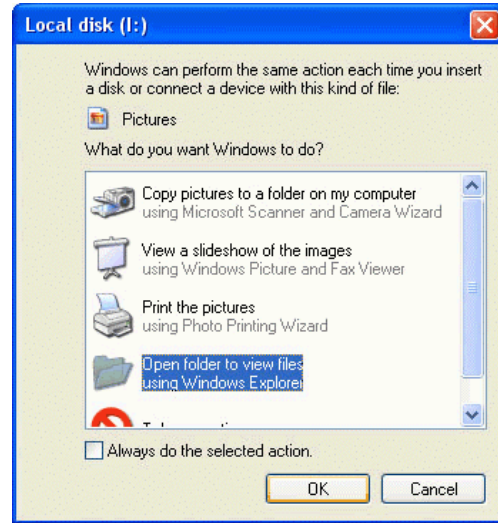
The USB Download Accelerator provides an alternative data retrieve method to the text menu. The USB Download Accelerator allows super-fast retrieve of the entire data log file by switching to flash drive mode. A USB 1.1 or 2.0 port is required.



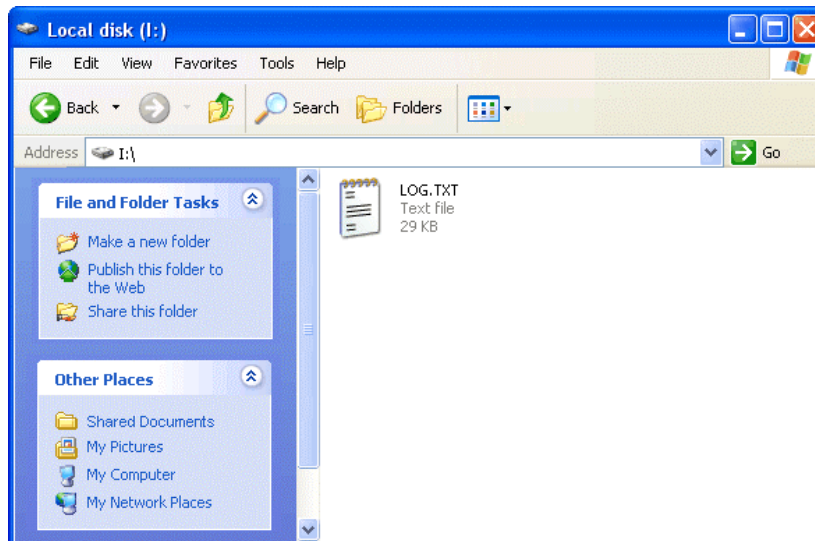
Connect the KeyCobra™ Flash PS/2 to any free USB port, using the provided USB Download Accelerator. Do not connect the PS/2 keyboard to the hardware keylogger.



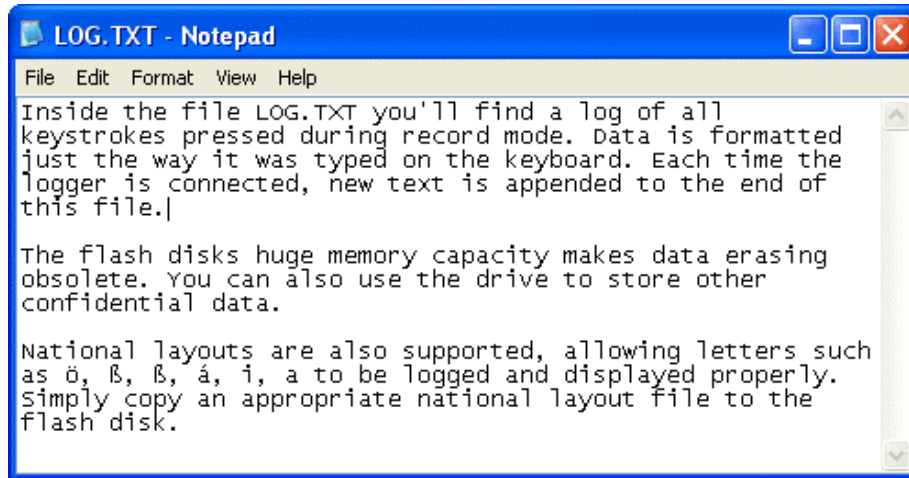
After a few seconds, the hardware keylogger will automatically respond as a USB mass storage device. The operating system will use the standard built-in mass storage driver (*MS Windows XP* in the following examples).



Depending on the drive letters available, the device will be visible as a new drive, for example I:. Use the system file manager to browse this disk (for example *Explorer*).



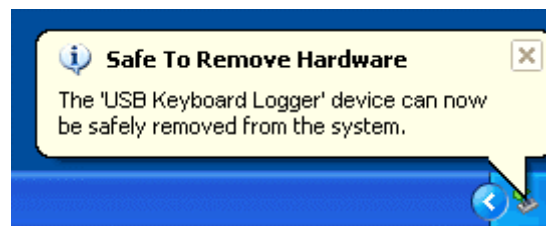
By default, the flash disk will contain the file LOG.TXT, containing all data captured in record mode. This file is a text log formatted in the same way as data would appear on the screen in text menu playback mode. Use any text editor to view the file LOG.TXT (for example *Notepad*). The flash drive root folder will also contain a configuration file named CONFIG.TXT, and an optional layout file named LAYOUT.TXT (see National Keyboard Options section).



The log file may be copied to the hard drive, or examined directly from the keylogger. Fast USB data transfer allows browsing the entire file within seconds. Erasing and editing the file LOG.TXT is obsolete, because the flash disk has a huge memory capacity, worth of over one year of intensive typing. For typical keyboard usage, this is enough for several years of operation in record mode. After viewing the log file, use the standard system disk removal procedure. For *MS Windows*, left-click on the *Safe Removal* icon in the system tray and select the appropriate drive.



The system should respond with disconnecting the flash disk. Connect the KeyCobra™ Flash PS/2 in the PS/2 port to resume operation in record mode.





Note: To safely remove the flash disk, it cannot be simultaneously used by any other application.

Note: During the first switch to flash drive mode, the operating system can ask for drivers. In such case choose automatic driver installation (usually default option). On systems without built-in USB Mass Storage drivers, the driver has to be manually downloaded and installed:

- MS DOS, MS Windows 95/98/NT and earlier do not feature USB Mass Storage drivers. Please try a third party generic mass storage driver, for example:  
<http://www.technical-assistance.co.uk/kb/usbmsd98.php>
- Apple Computer's Mac OS supports USB Mass Storage by means of optional drivers from OS 8.5.1. OS 9 and OS X support USB mass storage natively.
- Linux support for USB Mass Storage has begun in kernel version 2.4, although 2.2 has been back-patched to support it.
- Solaris Operating Environment supports USB Mass Storage devices as well since the 2.8 release and up.
- NetBSD supports USB Mass Storage devices since the 1.5 release and up.



## National Keyboard Options

It is possible to enable a national layout for language-adapted keyboards, such as French, German etc. This will allow national characters to get logged properly (including those with Alt Gr), such as ö, æ, ß, ó etc. The following example demonstrates the advantages of applying the German national layout.

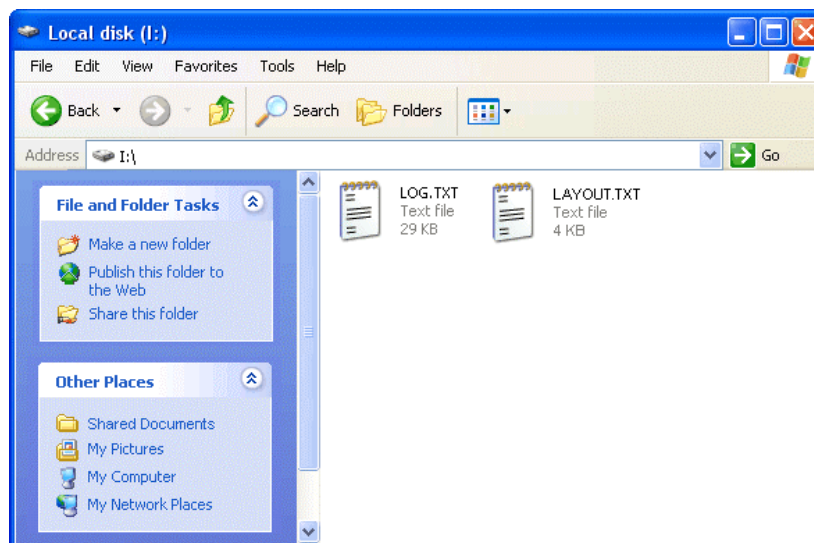
Text logged without layout

*KeyLogger (PS/2 & USB)*

Text logged with layout

*Kezlogger )PS-2 / USB=*

To enable a national layout, the appropriate layout file named LAYOUT.TXT must be placed on the flash disks root folder. The file must be copied in flash drive mode using the USB Download Accelerator, because there is no access to the flash disk in record mode. Layout files may be obtained from the CD-ROM attached with the device or from the KeyCobra™ website <http://www.KeyCobra.com/>. The flash disks main folder should contain the file LAYOUT.TXT and the standard log file LOG.TXT.



To enable the layout safely remove the flash disk. On record mode initiation, the layout file will be loaded automatically.



## Specifications

**Power supply** – 4.5 V – 5.5 V DC (drawn from the PS/2 or USB port)

**Power consumption** – 65 mA (0.33 W)

**Maximum burst log speed** - 500 byte/s (approx.)

**Maximum continuous log speed** - 100 byte/s (approx.)

**Memory capacity** – 4 MB

**Data retention** - 100 years

**USB download speed** – 125 kB/s

**Body dimensions inc. PS/2 connectors (L x W x H)** -  
48 mm x 15 mm x 15 mm (1.9" x 0.6" x 0.6")



All KeyCobra™ products come with 1 year warranty against manufacturer defects. Defect products must be shipped by the customer. All warranty repairs and delivery to the customer will be paid by KeyCobra™.





## Troubleshooting

The KeyCobra™ Flash PS/2 will not work for the following hardware configurations:

1. USB keyboards (even with PS/2 adapters)
2. Non-PS/2 compatible keyboards
3. Internal notebook keyboards
4. Keyboards with coded transmission (requiring drivers)
5. Some types of wireless keyboards and KVM switches ([consult us](#) first)

### *The keyboard does not respond in record mode*

The keyboard PS/2 connector or the keylogger PS/2 connector is not inserted firmly. Please check the connection with the PS/2 keyboard (purple color plug) and PS/2 port (purple color socket).

### *The keylogger does not respond to the 3-key combination*

Please check the following:

1. Is the keylogger inserted between the PS/2 keyboard and the PS/2 (purple color) port?
2. Is your 3-key combination correct?
3. Are you pressing the 3 keys simultaneously? The 3-key combination will not be accepted if pressed sequentially.
4. Do you have a text editor active (such as *Notepad*)?
5. Have you enabled the correct national keyboard layout?
6. Check flash drive mode with the USB Download Accelerator. Check if the log file and configuration file exist and are readable.



### ***The menu is not displayed properly***

Please check the following:

1. Do you have a slow PC? Switch to slow keystroke generation speed.
2. Are you using a standard text editor? Is it the active application? Switch to a simple text editor (such as *Notepad*).
3. Have you enabled the correct national layout?
4. Are you moving the PS/2 mouse during transmission? Do not use the PS/2 mouse while in text mode.

### ***Problems with logging national characters***

Please check if you have downloaded the correct layout file and copied it to the flash disk root directory? If not, please check the National Keyboard Options section.

### ***The USB Download Accelerator does not work***

Please check the following:

1. Does your computer have a working USB 1.1 or 2.0 port?
2. Is the USB Download Accelerator inserted firmly between the keylogger and the USB port?
3. Have you left the keyboard connected to the keylogger? Disconnect the keyboard.
4. Does your operating system have built-in USB Mass Storage drivers? Older systems (for example Windows 95/98/NT) require installation of a universal mass storage driver. Please check the Using the USB Download Accelerator section.
5. Are you giving the device enough time to install? Flash disk installation can take up to 30 seconds, especially during first-time installation.



### ***Problems with detecting the PS/2 keyboard during system startup***

Some systems try to enumerate the keylogger as a USB device before initializing the keyboard. In certain cases on such systems, the keylogger may attempt to switch to Flash Drive mode, disabling the PS/2 keyboard. A simple solution to this problem is to disable USB mode through the configurations options in the text menu.

### ***I've checked everything, nothing helps!***

If you are still experiencing problems, please do the following:

1. Check if the problem appears on a different keyboard.
2. Check if the problem appears on a different computer.
3. Contact us ([KeyCobra@KeyCobra.com](mailto:KeyCobra@KeyCobra.com), <http://www.KeyCobra.com/>). Please supply us all necessary information (keyboard model and manufacturer, OS type and version, and a short description of the problem).



## Special Key List

[Esc]	-	Escape	[Prn]	-	Print Screen
[F1]	-	F1	[End]	-	End
[F2]	-	F2	[Scr]	-	Scroll Lock
[F3]	-	F3	[Up]	-	Up
[F4]	-	F4	[Dwn]	-	Down
[F5]	-	F5	[Lft]	-	Left
[F6]	-	F6	[Rgh]	-	Right
[F7]	-	F7	[Num]	-	Num Lock
[F8]	-	F8	[-N]	-	- (num)
[F9]	-	F9	[+N]	-	+ (num)
[F10]	-	F10	[.N]	-	. / Delete (num)
[F11]	-	F11	[/N]	-	/ (num)
[F12]	-	F12	[*N]	-	* (num)
[Ctl]	-	Control	[0N]	-	0 / Insert (num)
[Alt]	-	Alt	[1N]	-	1 / End (num)
[Ins]	-	Insert	[2N]	-	2 / Down (num)
[Hom]	-	Home	[3N]	-	3 / Page Down (num)
[PUp]	-	Page Up	[4N]	-	4 / Left(num)
[PDn]	-	Page Down	[5N]	-	5 (num)
[Del]	-	Delete	[6N]	-	6 / Right (num)
[Win]	-	Win	[7N]	-	7 / Home (num)
[Aps]	-	Apps	[8N]	-	8 / Up (num)
[Cap]	-	Caps Lock	[9N]	-	9 / Page Up (num)
[Ent]	-	Enter	[Pwr]	-	Power
[Bck]	-	Backspace	[Slp]	-	Sleep
[Tab]	-	Tab	[Wke]	-	Wake



## Legal Disclaimer

KeyCobra™ does not take responsibility for any damage, harm or legal actions caused by misuse of its products. The user should follow the guidelines contained in this document, otherwise no liability will be assumed. It is the user's responsibility to obey all effective laws in his/her country, which may prohibit usage of KeyCobra™ products. Please also consider, that not knowing the law does not allow to not obey it. A good example is the U.S. Department of Justice Letter on Keystroke Monitoring and Login Banners, according to which a clear notice should be displayed, warning that user keystrokes may be logged. Please check with your legal representative for logging requirements in your country.

**For more information on KeyCobra™ products, visit our website:**

<http://www.KeyCobra.com/>

You should not use this device to intercept data you are not authorized to possess, especially passwords, banking data, confidential correspondence etc. Most countries recognize this as a crime. Please consult a legal representative for logging requirements in your country.



**Notes:**

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