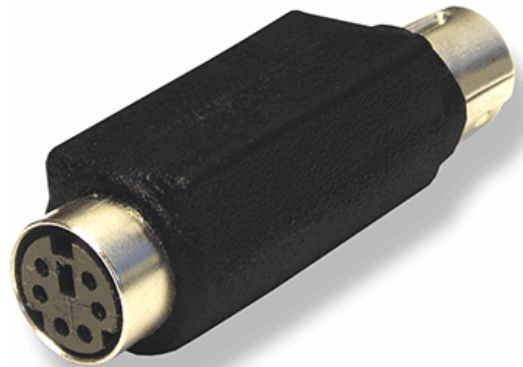


# User's Guide

## KeeLogger™ Classic

64 kB  
128 kB  
256 kB



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

## **Introduction**

### ***The KeeLogger™ Classic***

The KeeLogger™ Classic is an ultra-compact PS/2 hardware keylogger with 64 kB, 128 kB, or 256 kB of memory. All text data typed on the PS/2 keyboard will be recorded to internal non-volatile memory. Recorded text data may be retrieved and analyzed on any other computer. This is done using software provided with the device: KeeLog Downloader Lite (for quick and easy playback), or KeeLog Downloader 3.0 (for advanced analysis). The device is 100% transparent for computer operation and no software or drivers are required for keystroke recording.

### ***Features***

- Ultra compact and discrete, only 1.6" (41 mm) long
- Plug & Play install, no drivers required
- Retrieve & Analyze software provided
- Transparent to computer operation, undetectable for security scanners
- Quick and easy national keyboard layout support

## ***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***

- record mode - any computer with standard PS/2 keyboard
- playback mode - PC (min. Pentium 166 MHz) with Windows 9X/ME/XP/2000 and standard PS/2 keyboard

## Record Mode

Installing the hardware keylogger in record mode is extremely simple. Plug it in between the keyboard and the PS/2 connector on the PC rear panel. The keylogger will automatically start recording all data typed on the keyboard. Previous data will not be overwritten, because recording will continue from the last used memory location.

1. Find the PS/2 connector at the computer rear panel.

2. Disconnect the keyboard.

3. Connect the KeeLogger™ Classic in place of the keyboard.

4. Connect the PS/2 keyboard to the hardware keylogger. On computer power-up the device will self-activate.



Once the PC is powered, all data typed on the keyboard will automatically be recorded to the KeeLogger™ Classic internal memory. Logging will begin from last occupied position. Once the memory is full, logging will start over from the first memory position, in a circular way.

## Playback Mode

Once data has been acquired in record mode, you can transmit it to any other computer running Windows 9X/ME/XP/2000. There are two alternative applications for data retrieve and analysis:

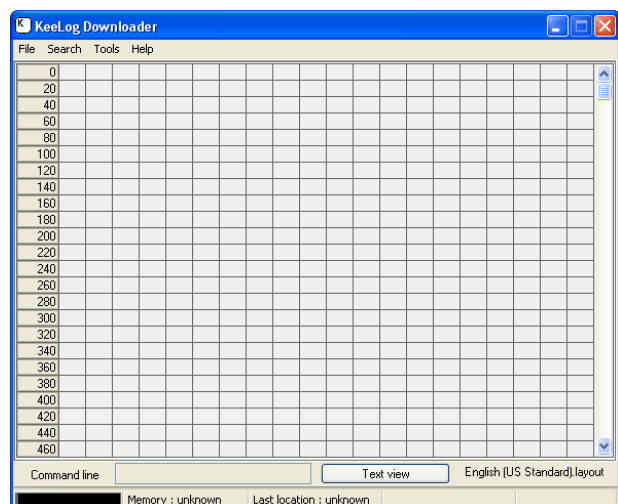
- **KeeLog Downloader Lite** - a simplified text-oriented application, quick and easy. Only standard mode is supported.
- **KeeLog Downloader 3.0** - the full download application with several modes of operation. Supports standard and Pro mode.

Both versions are available on the CD-ROM attached with the device, and at the KeeLog website (<http://www.keelog.com/>). Installation requires administrator privileges (Windows 2000/XP). It is recommended to install KeeLog Downloader Lite when using the device for the first time. The hardware keylogger should be connected in the same way as in record mode. To initiate data transmission, type in the special password provided with the keyboard logger and press Enter. You will see the data being transmitted and displayed in the application main window.

The images below summarize the data playback process.

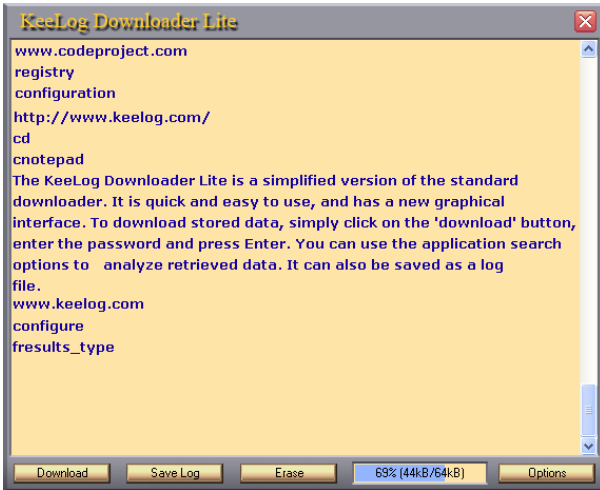


*KeeLog Downloader Lite*

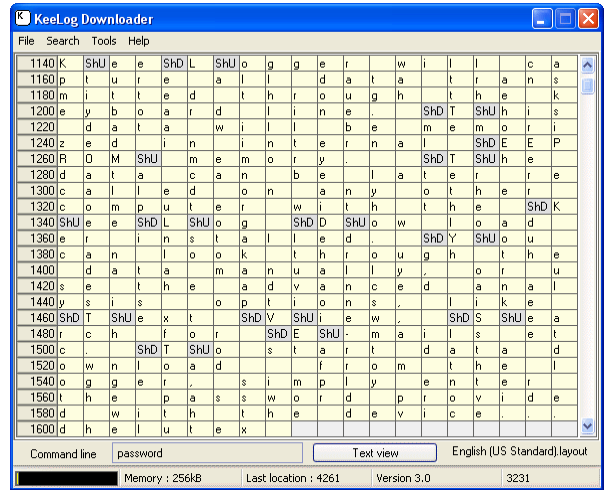


*KeeLog Downloader 3.0*

Type in the password supplied with the device and press Enter. Data download from the keyboard logger will occur automatically. Transmission can be stopped at any time by pressing a key.

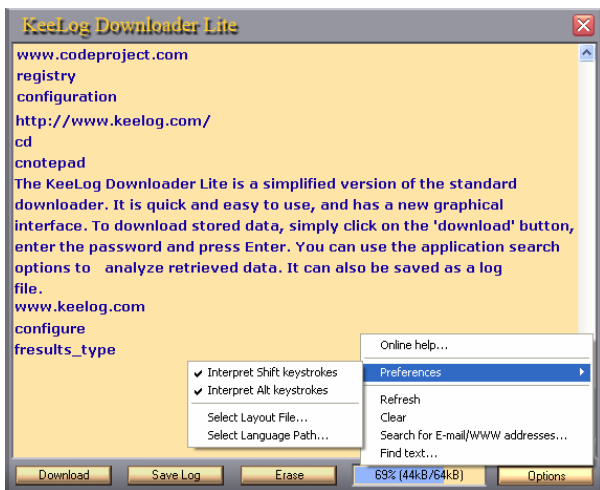


KeeLog Downloader Lite

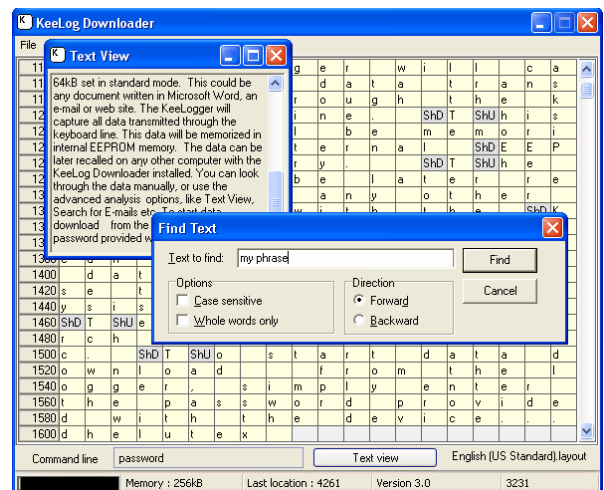


KeeLog Downloader 3.0

Data can now be analyzed. You can use the applications automatic search options and save the log file.



KeeLog Downloader Lite

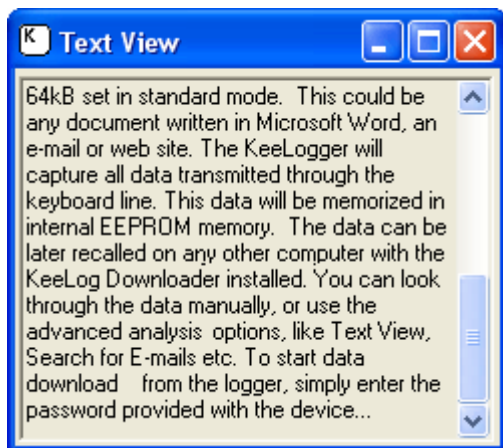
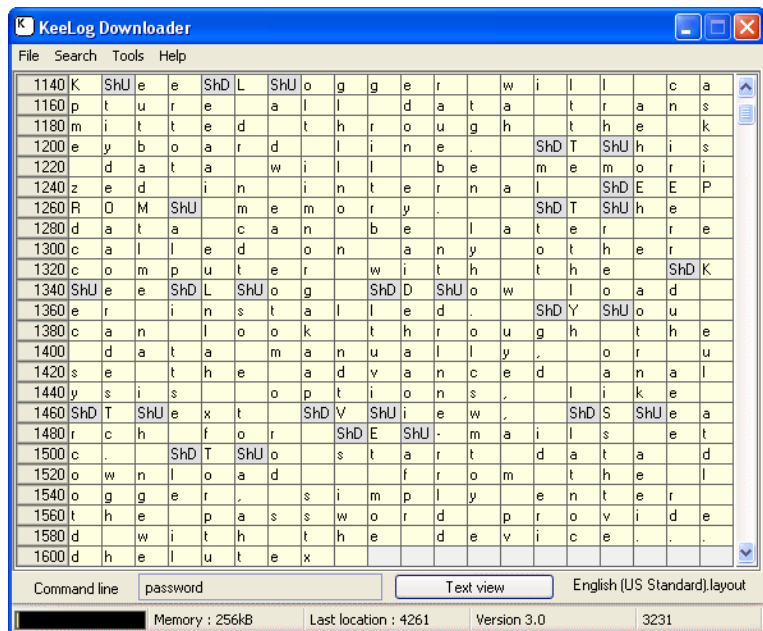


KeeLog Downloader 3.0

The download process described above is only for the KeeLogger™ Classic set in standard mode. For enhanced mode operation, see the section Advanced Data Analysis (Pro mode).

## Quick Data Analysis

Data transmission from the keyboard logger to the computer can take up to 20 minutes. However, you don't have to wait this long, as download can be finished at any time by pressing any key. This is usually the case, as the most recent data (usually the most interesting data too) is transmitted first. The longer you wait during transmission, the older the retrieved memory locations will be. When download is finished, you will be able to see raw data in the KeeLog Downloader main window. This window will contain keystroke data retrieved from the internal memory. Data may be analyzed manually by scrolling the window contents.



If using KeeLog Downloader 3.0, the default data representation is a table, filled by keystroke data. An easier way for analyzing captured data is text mode:

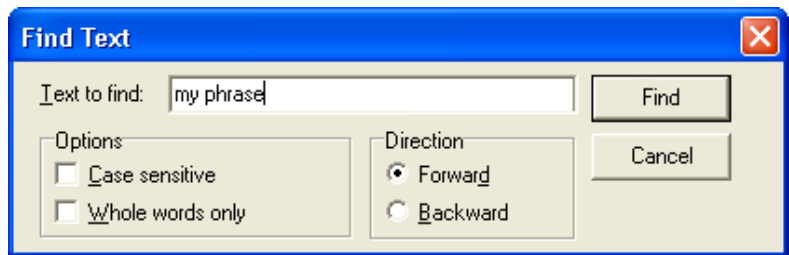
**Tools->View as Text**, or press the button **Text View**.

This will show all typed and downloaded data as text, discarding special keys. You can save this data to a text file in form of a table or in text form with:

**File->Save as Table...** or **File->Save as Text...**

Another useful option is phrase search (**Search->Find text...**). This option will scan through downloaded data discarding special characters. This option is often used to quickly scan through the entire data log for phrases

entered in record mode. KeeLog Downloader 3.0 also allows to quickly jump around the downloaded data. This includes jumping to the first and last memory location, as well as the first and last downloaded character. Use the options in the search menu (**Search->Jump to...**).



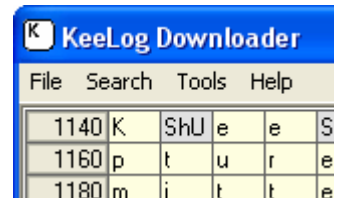
## Mode Toggling

The KeeLogger™ Classic is shipped in standard mode. Switching to Pro mode will allow enhanced logging functionality, turning the device into an advanced PS/2 bus analyzer. In Pro mode special keys are recorded, such as Escape, F1...F12, Alt, Control, etc. Every PS/2 event is logged, including key-strokes, key-releases, and control characters. To switch to Pro mode, enter the supplied password and press Space. Once done, every data byte sent down the keyboard PS/2 line will be logged. Pro mode is not supported by KeeLog Downloader Lite.

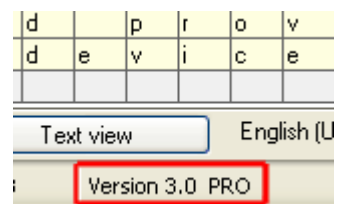
1. Plug the keylogger between the keyboard connector and the keyboard socket.



2. To switch to Pro mode - run the KeeLog Downloader 3.0 application, enter the supplied password, and press Space.



3. The logger will respond by sending a confirmation packet to the PC. The current mode is displayed in the KeeLog Downloader 3.0 status bar along with the device version.



Repeat the described procedure to switch back to standard mode.

It is highly recommended to erase the memory after mode toggling. The standard data format is not compatible with Pro data format, therefore memory areas occupied by both should not be mixed. See the section Memory Erasing.

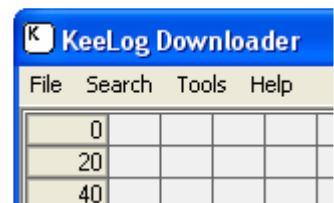
## Advanced Data Analysis (Pro Mode)

The KeeLogger™ Classic operating in Pro mode will log every data byte sent down the PS/2 keyboard bus. This data can be later downloaded and analyzed by the KeeLog Downloader 3.0 application. It also provides information about every keyboard event in exact sequence, such as keys pressed, keys released, and control data.

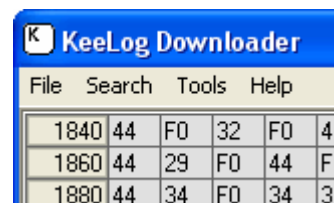
1. Plug the logger between the keyboard connector and the keyboard socket.



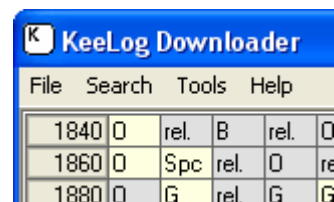
2. Run the KeeLog Downloader 3.0 application, and type the password followed by Enter.



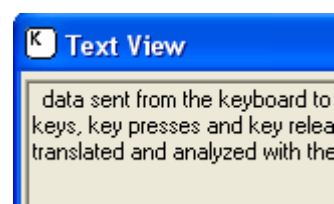
3. Wait for the data transfer to end automatically, or press any key to terminate data download.



4. Data can be saved, or translated. To translate click on **Tools->Translate Raw Data**. The translated data will show every event that took place on the keyboard line.

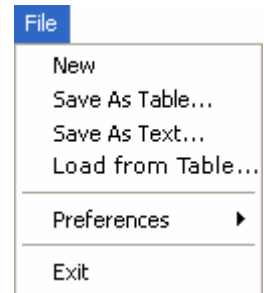


5. Data can be further examined in the same way, as in standard mode. See section KeeLog Downloader 3.0 Features.



## KeeLog Downloader 3.0 features

### Menu File



**New** - reset program statistics, prepare for new download

**Save as Table...** - save downloaded data to a text file in form of a table (similar to the main application table)

**Save as Text...** - save downloaded data to a text file in text form (similar to the text view window)

**Load from Table...** - load previously downloaded data from a table file

**Preferences** - application preferences

**Interpret Shift keystrokes** - enable interpretation of Shifts (recommended)

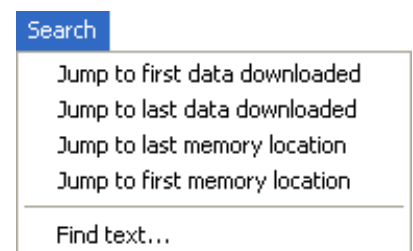
**Interpret Alt keystrokes** - enable interpretation of Alt Gr (recommended for national keyboard layouts)

**Select Layout File...** - select keyboard layout for national keyboards

**Select Language Path...** - select path with alternate application language files

**Exit** - exit application

### Menu Search



**Jump to first data downloaded** - move table cursor to first downloaded character

**Jump to last data downloaded** - move table cursor to last downloaded character

**Jump to last memory location** - move table cursor to last location in KeeLogger™ internal memory

**Jump to first memory location** - move table cursor to first location in KeeLogger™ internal memory

**Find text...** - initiate text search dialog

### Menu Tools

**View as text** – view downloaded data in the text window, discarding special characters

**Translate raw data** - convert keyboard bus data to text format (Pro mode only)

**Special key list** – view list of keystroke abbreviations recognized by KeeLogger™ Classic

**Command list** - view list of keyboard commands for KeeLogger™ Classic

**Search for E-mail/WWW addresses** - search text data for E-mail and WWW addresses

#### Tools

View as text...  
Translate raw data  
Special key list...  
Command list...  
Search for E-mail/WWW addresses...

### Menu Help

**KeeLog Downloader help...** - initiate application help system

**About KeeLog Downloader...** - display program information

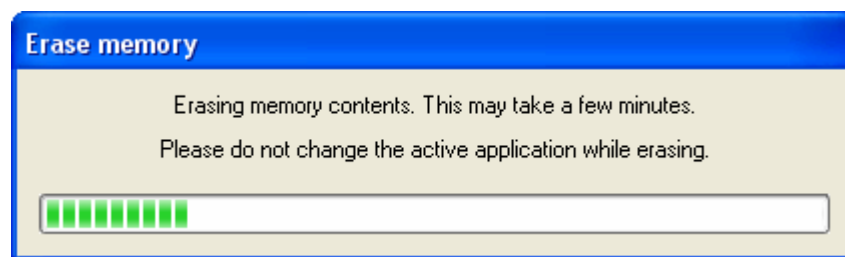
#### Help

KeeLog Downloader help...  
About KeeLog Downloader...

## Memory Erasing

There is no actual need for memory erasing in the KeeLogger™ Classic, as the memory buffer works in a circular mode. This means, that once memory is full, logging will automatically start over from the first location. However, a special erase option exists, allowing complete hardware cleaning of the internal memory chip.

To initiate memory contents erasing, connect the KeeLogger™ Classic to the PC (as in record mode) and run KeeLog Downloader 3.0 or KeeLog Downloader Lite. Type in the password supplied with the device, followed by Backspace. This will initiate memory cleaning, indicated on the computer by a special dialog. Do not disturb the computer while erasing.



Memory erasing will take typically a few minutes (around 5 minutes for the 64 kB version). After the erasing process finishes, the hardware keylogger will return to its initial state. Deleted data cannot be retrieved from the keyboard logger.

## 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, select the keyboard layout which was used during data acquisition.

KeeLog Downloader Lite:

**Options->Preferences->Select Layout File**

KeeLog Downloader 3.0

**File->Preferences->Select Layout File**

## Command Summary

password + <Enter> -> start download

password + <Backspace> -> erase memory

password + <Space> -> toggle mode (Standard/Pro mode)

## Specifications

### Power supply

3.3 V-5.5 V DC (drawn from the PS/2 port)

### Power consumption

25 mA (0.13 W)

### Download speed

1 kB/10s (approx.)

### Maximum burst log speed

500 byte/s (approx.)

### Maximum continuous log speed

100 byte/s (approx.)

### Dimensions (L x W x H)

41 mm x 11 mm x 11 mm  
(1.6" x 0.4" x 0.4")



### Memory capacity

64kB, 128kB, 256kB

### Data retention

100 years

### Input/output

PS/2 compatible keyboard

All KeeLog 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 KeeLog.

## **Troubleshooting**

The KeeLogger™ Classic 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)

### ***Errors occur during KeeLog Downloader installation***

Windows 9X/NT/Me/2000/XP with administrator privileges and approx. 2MB of free disk space is required to install KeeLog Downloader 3.0/KeeLog Downloader Lite.

### ***The computer hangs when download is initiated***

Try the following in the order specified:

1. Close all other applications besides KeeLog Downloader 3.0.
2. Make sure KeeLog Downloader is the active application.
3. Don't disturb the computer during transmission.

If still you have problems with the download process, your system probably doesn't meet minimal requirements (Pentium 166 MHz) or too many background processes are active. Try the same on a faster PC.

### ***Data download from the keylogger does not start***

Make sure you have done the following steps:

1. Install the KeeLog Downloader 3.0 application.
2. Connect the hardware keylogger.
3. Connect the keyboard to the keylogger.
4. Run the KeeLog Downloader 3.0 application.
5. Type in the 8-character password to the application command line and press Enter (do not use upper case letters or the numeric keypad).

This should start data download. You will see the data filling in the application main table. If this still didn't initiate data transmission:

1. Check if you have selected the correct national keyboard layout (File->Preferences->Select Layout File...).
2. Check if Caps Lock isn't active.
3. Check if the device sits firmly in the PS/2 socket.
4. Check if you are pressing Enter after the password.
5. Check other features: memory erasing, mode toggling.
6. Check if you have the correct password (do not use upper case letters or the numeric keypad).
7. If using a non-standard keyboard, for example German (QWERTZ) or French (AZERTY), translate your password to standard keyboard layout (QWERTY).
8. Disable any other applications running on your system.
9. Restart KeeLog Downloader.

If you still don't see the transmission process, open a text editor (such as *Notepad*), enter the password and press Enter. If download starts, then you probably have an invalid version of the KeeLog Downloader, or it is not the active application.

### ***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).

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

Please check if you have selected the correct national keyboard layout. If not, please read the National Keyboard Options section.

### ***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 ([keelog@keelog.com](mailto:keelog@keelog.com), <http://www.keelog.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

### Standard mode

Cap	-	Caps Lock	2 N	-	2 / Down (numeric)
Ent	-	Enter	3 N	-	3 / Page Down (numeric)
Bck	-	Backspace	4 N	-	4 / Left (numeric)
Num	-	Num Lock	5 N	-	5 (numeric)
ShD	-	Shift pressed	6 N	-	6 / Right (numeric)
ShU	-	Shift released	7 N	-	7 / Home (numeric)
1 N	-	1 / End (numeric)	8 N	-	8 / Up (numeric)
			9 N	-	9 / Page Up (numeric)
			0 N	-	0 / Insert (numeric)
			. N	-	. / Delete (numeric)

### Pro mode

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	Cap	-	Caps Lock
F8	-	F8	Ent	-	Enter
F9	-	F9	Bck	-	Backspace
F10	-	F10	Num	-	Num Lock
F11	-	F11	Tab	-	Tabulator
F12	-	F12	LSh	-	Left Shift
LCn	-	Left Control	RSh	-	Right Shift
RCn	-	Right Control	Spc	-	Space
LAl	-	Left Alt	- N	-	- (num)
RAI	-	Right Alt	+ N	-	+ (num)
Ins	-	Insert	EnN	-	Enter (num)
Hom	-	Home	. N	-	. / Delete (num)
PUp	-	Page Up	/ N	-	/ (num)
PDn	-	Page Down	* N	-	* (num)
Del	-	Delete	0 N	-	0 / Insert (num)
Pwr	-	Power	1 N	-	1 / End (num)
Slp	-	Sleep	2 N	-	2 / Down (num)
Wke	-	Wake	3 N	-	3 / Page Down (num)
Lwn	-	Left Win	4 N	-	4 / Left (num)
Rwn	-	Right Win	5 N	-	5 (num)
Aps	-	Apps	6 N	-	6 / Right (num)
			7 N	-	7 / Home (num)
			8 N	-	8 / Up (num)
			9 N	-	9 / Page Up (num)

## **Legal Disclaimer**

KeeLog 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 KeeLog 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 KeeLog products, visit our website:**

<http://www.keelog.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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**KeeLog**

Lekcyjna 42  
PL 51-169 Wroclaw  
Poland

<http://www.keelog.com/>  
[keelog@keelog.com](mailto:keelog@keelog.com)

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