Hot Virtual Keyboard

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1   Introducing Hot Virtual Keyboard

Hot Virtual Keyboard makes previous-generation on-screen keyboards look ancient. Type faster with configurable gestures, launch programs, browse the Internet, and run programmable macros with any of the 70 keyboards included with Hot Virtual Keyboard. The new virtual on-screen keyboard employs advanced typing techniques used in modern mobile phones and communicators, including word auto-complete allowing you to choose the right word with a single click after entering just one or two letters.
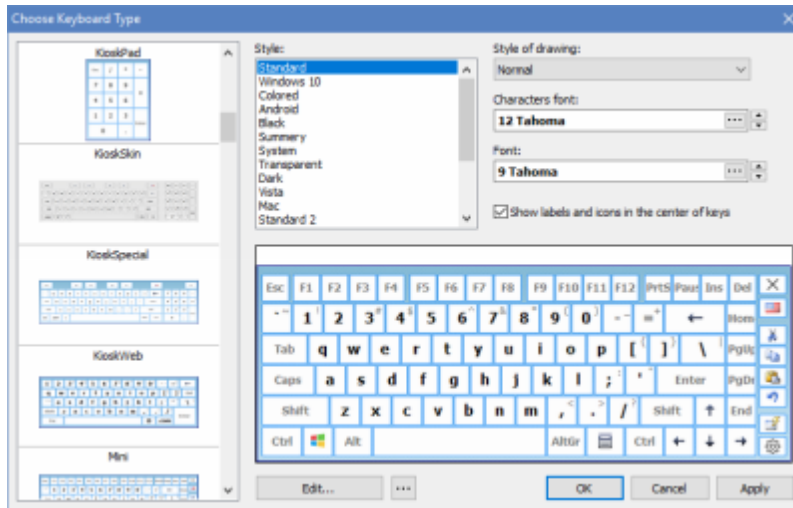
Users of Tablet PC, UMPC, Panel PC, Car PC and similar touch-screen devices will find Hot Virtual Keyboard indispensable. Use a mouse, touchpad or fingers for on-screen typing. With Hot Virtual Keyboard, you can type faster and more conveniently than by using built-in Windows On-Screen Keyboard. Use gestures for quickly performing repeat operations such as shifting the case of the letters, specify applications to hide Hot Virtual Keyboard from, and set your own hotkeys to launch programs or Web sites, run macros, and perform operations such as copy and paste.

The new virtual onscreen keyboard replaces Windows built-in Touch Keyboard with a much more advanced alternative. It's just as useful and as compatible as the native application. Supporting all languages and all installed keyboard layouts, Hot Virtual Keyboard is a truly international tool. Supplying over 70 pre-defined keyboard skins, the virtual on-screen keyboard allows you to create, customize and configure a unique new keyboard to your personal liking. Adjust colors and gamma, assign unique sounds to groups of keys, set shape of the keys and choose your own background.

Using a virtual on-screen keyboard does not have to be a hassle. Try Hot Virtual Keyboard, and you'll never go back!

2   How to buy Hot Virtual Keyboard

Hot Virtual Keyboard is distributed as Shareware. If you like Hot Virtual Keyboard and decide to keep it, you will need to purchase a registration key. The trial version becomes registered when you enter the Registration Key on your computer.

You can purchase the Registration Key on-line either by credit card, PayPal, bank transfer or check.

For more information, please visit https://hot-virtual-keyboard.com/buy/

For detailed information on how to purchase and register Hot Virtual Keyboard, please read the following topics carefully:

License Agreement
Order online

3 How to use Hot Virtual Keyboard

Are you new to Hot Virtual Keyboard? Read Using the on-screen keyboard first!

That topic explains how to use virtual keyboard.

Do you have any questions? Read FAQ first.

If you have any problems with Hot Virtual Keyboard, please read Frequently Asked Questions.

3.1 Using the on-screen keyboard

The on-screen keyboard lets you enter text using a touchscreen, a mouse, or any other pointing device. Unlike a physical keyboard, the on-screen keyboard changes labels on its keys depending on the current input layout (language), which allows you to type without having a localized keyboard.

The on-screen keyboard also provides additional settings to help you enter text more quickly: **Text Suggestions**, **Gestures**, **Typing Aid**, **Show alternate characters or symbols**, and more.

The **icons of shortcut keys** used in Windows and in the current application are displayed on the keys of the on-screen keyboard. If you hover the mouse over a key with an icon, you can see a hint describing the shortcut's purpose. This way, you can quickly learn keyboard shortcuts, which will help you work much faster and easier.
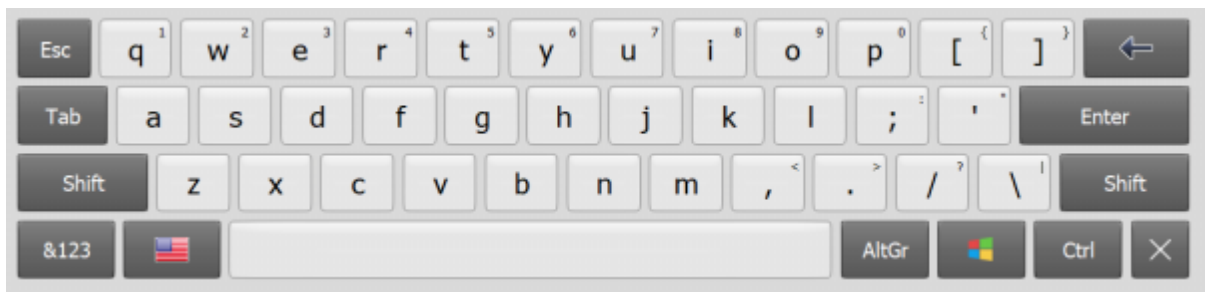
You can forcibly show or hide the on-screen keyboard by pressing the corresponding keyboard shortcut (by default, **Apps**), or by selecting the **On-Screen Keyboard** item in the application's context menu.

For more details on configuring the appearance and behavior of the on-screen keyboard, see the **On-Screen Keyboard** section.

Tips and tricks

- You can use the Floating Window or the Floating Icon to quickly show or hide the on-screen keyboard.
- If you right-click a key on the on-screen keyboard, the upper case will be used for entering the character.
- If you click a key on the on-screen keyboard with the middle mouse button, the application will emulate a key press in combination with **Ctrl** key.
- You can manually create files with shortcut icons for applications used in your everyday work. If you create such file for an application frequently used in your company and copy it to several workstations, you will considerably increase the efficiency of the employees. For more details,

see the **Editing shortcut icons** section.

- When the on-screen keyboard is used with a touchscreen, the arrow keys work as a D-pad.

See Also

How to install another language and keyboard layout

3.2   Keyboard shortcuts settings

A **keyboard shortcut** (also known as **accelerator key**, **shortcut key**, **hot key**, **hotkey**, **key binding**, **key combo**, etc.) is a combination of keys that you need to press simultaneously to perform a certain action.

Keyboard shortcuts are added, deleted, and edited in the **Keyboard Shortcuts Settings** window. You can open it in several ways:

1. Click the Hot Virtual Keyboard icon in the system tray.
2. Right-click the Hot Virtual Keyboard icon in the system tray to open the application's context menu. Then select the **Keyboard Shortcuts Settings** item in that menu.
3. Press the keyboard shortcut that opens the Keyboard Shortcuts Settings window (by default, **Win+CapsLock**).
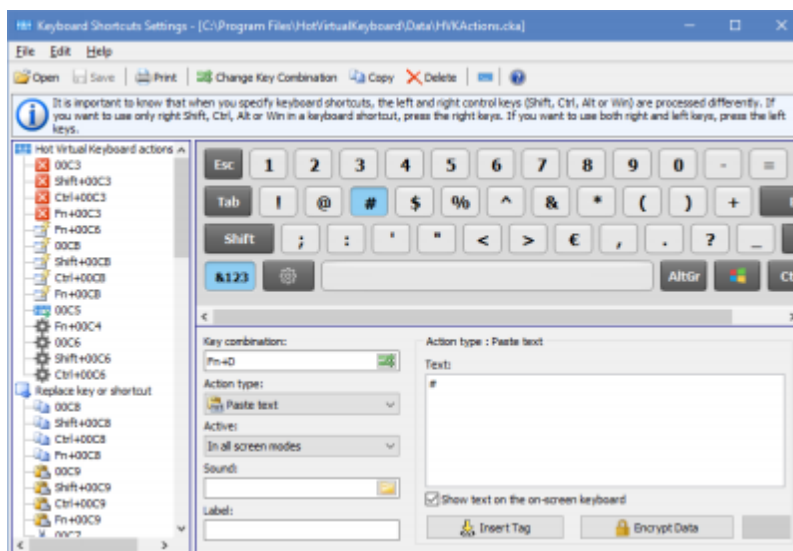
NEXT STEP: Specify the keyboard shortcut to be used. There are two ways to do it:

1. Switch to the **Key combination** field and press the desired key combination.
2. Use the mouse pointer to select the keys for the combination on the on-screen keyboard.

NEXT STEP: Use the **Action** field to select the type of the action to be performed when you press the specified shortcut key.

You can use the **Active** field to specify display modes the specified action should work in. For instance, you can disable the Win keys and enable additional shortcut macros (see Play a keystroke macro section) in full-screen mode. This way, you can apply special settings when playing a computer game.

LAST STEP: Specify advanced parameters for the selected action. See the list of all actions, their parameters and usage examples in the Action types section.

Tips and tricks

- All active keyboard shortcuts are shown on the on-screen keyboard. For more details, see the [Using the on-screen keyboard](#) section.
- If you assign a **label** for an action, this label will be displayed on the on-screen keyboard and in the hint instead of the action description.
- When you are specifying keyboard shortcuts, the left and right control keys (Shift, Ctrl, Alt, or Win) are processed differently. To use only the right Shift, Ctrl, Alt, or Win key in a keyboard shortcut, press the respective right key. To use both right and left keys, press the respective left key.
- To **delete** an earlier specified keyboard shortcut, select **(None)** in the **Action type** field.
- When specifying a keyboard shortcut, you can use almost **any keys** or key combinations, including NumLock, CapsLock, and Alt+Tab. However, the following keys and key combinations cannot be used: Sleep, WakeUp, Power, F-Lock, and Ctrl+Alt+Del.
- To **print** the list of keyboard shortcuts, select the **Print List** item on the **File** menu.
- If you create **several files** with different keyboard shortcut configurations, you will be able to switch between them at any time (for instance, to use a separate set of keyboard shortcuts for particular applications). You can specify and use a keyboard shortcut for switching between the files.
- You can add a set of keyboard shortcuts from another file. To do it, select the **Add from File...** item on the **File** menu, and then select the file with the keyboard shortcut set.
- You can add a set of **standard** keyboard shortcuts to your file. To do it, open the **Settings** dialog box, switch to the **Keyboard Shortcuts** section, and click the **Add...** button. You can also remove an existing set of standard keyboard shortcuts from your file by clicking the **Remove...** button in the same section.
- To use one set of keyboard shortcuts in **workgroups**, save the file containing this set to a network resource, and configure it to be used on each workstation.

3.3 Customizing the keyboard type

You can customize the size of the on-screen keyboard, as well as the arrangement, appearance, and size of its keys.
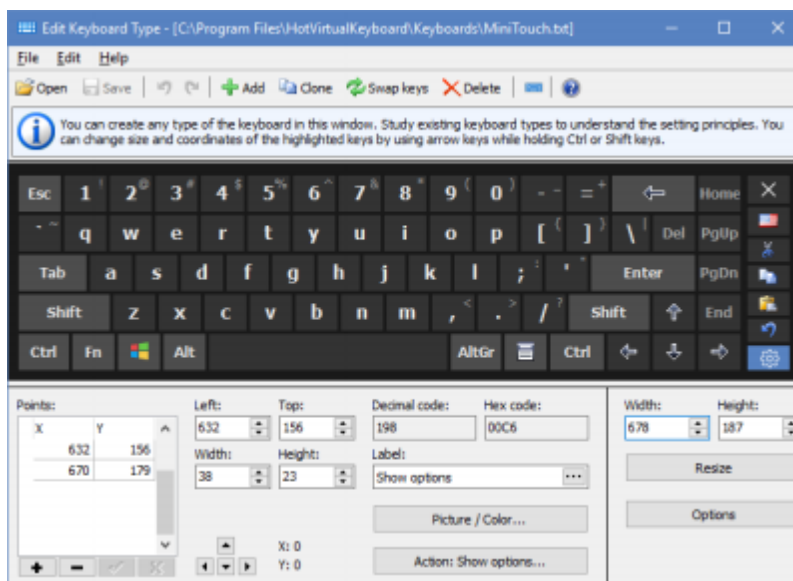
To edit the on-screen keyboard, open the **Settings** dialog box, select the **On-Screen Keyboard** item, and then click the **Edit...** button. By default, the current keyboard type will be opened. To edit another keyboard type, click the **File** menu, and then click **Open**.

When editing the keyboard, you can use two types of virtual keys:

- **Square** keys are used by default. Specify only two points for them: the upper-left corner and the lower-right corner. You can use the **Width** and **Height** fields for such keys.
- **Keys consisting of lines** can take any shape. To configure them, use the **Points** table to specify all points that should be joined by lines, one by one. The last line will be automatically drawn between the first and last points. If necessary, you can use lines to draw a circle or oval. Look at how the **Enter** key is specified on the standard keyboard. Actually, it is one key, though displayed as two keys. The point [-1, -1] means that the points of one key end and the points of the next key start.

You can specify all parameters for the keys via the fields in the lower part of the window.
When editing the keyboard, you can use the following features:

- Use the mouse pointer to select **several** keys at once by holding down the **Shift** key.
- Use the arrow keys to **resize** one or more selected keys by holding down the **Shift** key.
- Use the arrow keys to **change the position** of one or more selected keys by holding down the **Ctrl** key.
- Change any **label**. The new label will be displayed on the keys instead of the standard label or character. For instance, you can assign the "Customers" label to the F2 key. You can also change the font of the text or use special characters.

Assigning an image to any key of the on-screen keyboard
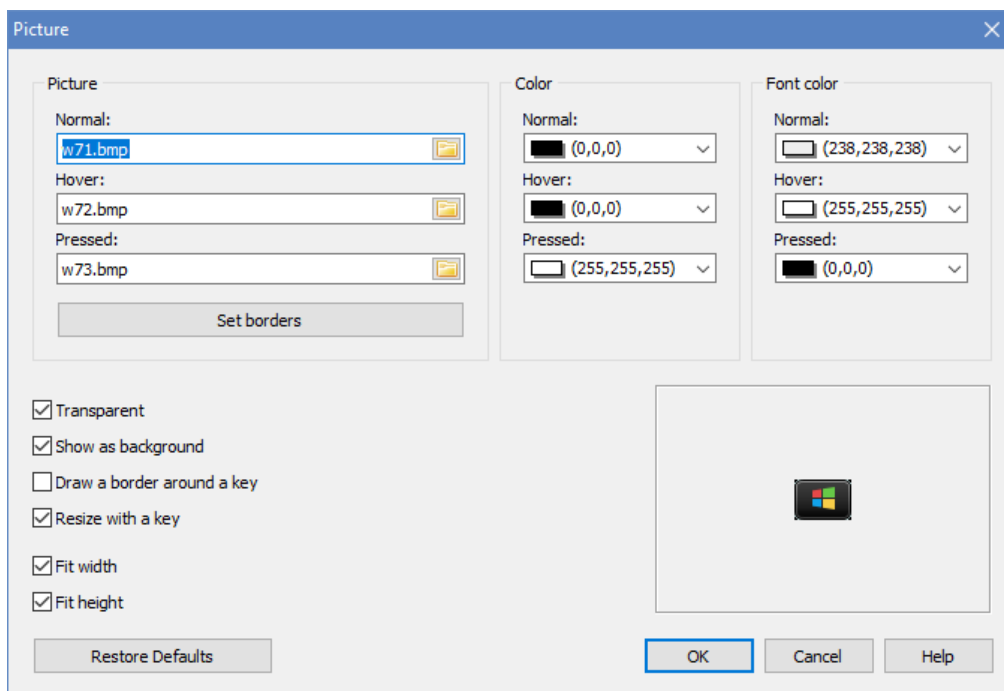
Picture (*Normal*, *Hover*, *Pressed*)

You can assign an image to each key state, or use the same image for all key states.
- *Normal* – The key in its normal state
- *Hover* – The highlighted key, when the mouse pointer hovers over it
- *Pressed* – The key when pressed

Set borders

You can set borders for the picture on the key. When the application resizes the picture, the borders will not change.

Color (*Normal, Hover, Pressed*)

A key fill color, which is used only if the **Picture** setting is not used.

Font color (*Normal, Hover, Pressed*)

You can specify the font to be used for each key state. Font colors can be set even if no images are assigned to keys in the previous fields. If you keep the default setting, the application will use the color values from the theme's settings.

Transparent

To let the key behind the image show through the image background, select the **Transparent** check box. To make the image background opaque, unselect the **Transparent** check box.
Note: The **Transparent** property works only for images in the **Bitmap** format.

Show as background

If this option is on, key labels and hotkey icons will be rendered on top of the key image. Otherwise labels and icons will not be shown on the key.

Draw a border around a key

This option comes in handy if the image completely replaces the default style of the key. For example, see the *SkinMulticolor* keyboard.

Resize with a key

If this option is on, the image will be resized when the key size changes.

Fit width, Fit height

If this option is on, the width and/or height of the image will always be equal to the width and height of the key it was assigned to, respectively.

Additional keyboard settings

If you select this keyboard, Hot Virtual Keyboard will change the specified settings:

- Change the Fit width option regardless of the application's settings
- Change the Lock aspect ratio option regardless of the application's settings
- Always move the keyboard to the lower edge of the screen
- Always display labels and icons in the center of keys
- Always transparent keyboard background
- Fixed font size for all key labels (if empty, use the one from the application's settings)
- **Dividing points** – This option is used when the keyboard size changes. The keyboard splits along the specified points, and the keys slide in opposite directions.

States:

■ **- Don't change**
☐ **- Turn off**
☑ **- Turn on**

Tips and tricks

- You can use the image or photo of a keyboard to edit a new on-screen keyboard according to it.

To do it, select the **Add Background** command on the **Edit** menu sand open the necessary image file. After configuring the keyboard, you can remove the image by selecting the **Clear Background** command on the **Edit** menu.

- It might be easier to create a new keyboard if you use an existing one as a basis. To do it, select the keyboard that looks mostly like yours, and save it under a different name by selecting the **Save As...** command on the **File** menu.
- Right-click the on-screen keyboard while editing it to add another point with the cursor coordinates to the currently edited key.
- When configuring complicated keys, it might be easier to use a **txt** file containing the entire information about the keyboard. Keyboard files are stored in the **Keyboards** subfolder.
- All modified keyboard **txt** files are stored in the **Application Data** folder. You can see the full path in the caption of the **Edit Keyboard Type** window (for example, "C:\Documents and Settings\UserName\Application Data\ComfortSoftware\HotVirtualKeyboard\Keyboards\"). You can move files from this folder to the **Keyboard** subfolder of the application installation folder.
- To delete an existing keyboard type, delete the file with its description from the **Keyboards** subfolder.
- To create **a few keys with the same action assigned to them**, add the point [-1, -1] to the points list. This special point means that the points of one key end and the points of the next key start. Some on-screen keyboards have two space bars or two **Enter** keys created using this method.

See Also

How to install another language and keyboard layout

3.4   Text tags

These types of tags are used if you have configured the Paste Text action.

Tag types

- **Insert the current date and/or time (the <DATETIME format> tag)** – Inserts date and time in the specified format (see the format list).
- **Press keys (the <KEY shortcut> tag)** – Keystrokes will be emulated inside the text (see the key identifier list). Use + (the plus sign) to specify a keyboard combination. You can specify a key code in the hexadecimal format by using $ (the dollar sign). For instance, $20 is Space, and $1B is Escape. Sample keyboard combinations:
    - <KEY WIN+R>regedit<KEY Enter> – Start the registry editor.
    - Login<KEY TAB>password<KEY ENTER> – Enter the login and the password.
- **Select random text from a list (the <SOMEOF>...</SOMEOF> tag)** – Select random text from the lists enclosed in the **<CS>** and **</CS>** tags. You can embed these macros. Simple examples:
    - <SOMEOF><CS>1</CS><CS>2</CS></SOMEOF> – Inserts "1" or "2".
    - <SOMEOF><CS>hi<SOMEOF><CS>1</CS><CS>2</CS></SOMEOF></CS> <CS>bye<SOMEOF><CS>1</CS><CS>2</CS></SOMEOF></CS></SOMEOF> – Inserts "hi1", "hi2", "bye1", or "bye2".
- **Show popup menu (the <POPUP>...</POPUP> tag)** – Select text from the lists enclosed in the **<CS>** and **</CS>** tags. You can embed these macros. Simple example: <POPUP><CS>Hi</CS><CS>Hello</CS></POPUP> – Inserts "Hi" or "Hello".
- **Insert text from a file (the <FILE filename> tag)** – Insert text from the specified file (if exists) into the specified position.
- **Insert the selected text (the <SELECTION> tag)** – Insert the text currently selected in the active application.

- **Insert the clipboard content (the <CLIPBOARD> tag)** – Insert the text from the clipboard.
- **Execute JavaScript function (the <SCRIPT> tag)** – This tag allows you to perform various functions from your JavaScript, for example:

  ```
  <SCRIPT>
  <FILE>Common.js</FILE>
  <FUNCTION>DoublingSlashes</FUNCTION>
  <PARAM><SELECTION></PARAM>
  </SCRIPT>.
  ```

Note: You can specify the position of the text cursor after the text is pasted by placing | (the pipe character) there.

3.5   Editing shortcut icons

Shortcut icons are displayed on the on-screen keyboard. A separate set of shortcut icons is displayed for each application.

Since applications use different mechanisms for storing shortcut icons, it is impossible to detect them automatically. So the Comfort Software Group uses its own sets of shortcut icons for each application. You can configure shortcut icons for any application (or Windows).

To edit shortcut icons, open the **Settings** dialog box, select the **Shortcut Icons** item, and click the **Edit shortcut icons** button.

By default, the Win* icon file is edited. To edit a different icon file, click the **File** menu, and then click **Open**.

Start the application you want to create icons for and select the name of its executable file in the **File name** drop-down menu. After that, the **Main window class name** and **Application name** fields will be filled in automatically.
The **File name** and **Main window class name** fields are used to determine which application is active. You can specify both fields or only one of them.
The **Application name** field is used for information about a specific application. Enter your details (for example, "Awesome App by John Doe (john@doe.com)").

To add a new icon, specify the keyboard shortcut in the **Key combination** field, or select it on the on-screen keyboard.
After that, you can add the icon in the following ways: load it from a file, capture the screen, or paste an image from the clipboard. If you add an icon by capturing the screen, fill all the area that you do not need with the **Fuchsia** color, and select that color in the **Transparent color** field. To see if the icon is good, try selecting another style (for instance, black).
Finally, you can specify a hint to be displayed when you hover the mouse pointer over the key with the icon on the on-screen keyboard. You can use only one language, preferably English.

Note: All files with sets of shortcut icons are stored in the *Icons* subfolder.

4   Settings

When developing Hot Virtual Keyboard, we tried to keep the number of additional settings to a minimum and left only those that are truly necessary.

To open the Settings dialog box, right-click the Hot Virtual Keyboard icon in the system tray and select the **All Settings** item in the context menu.
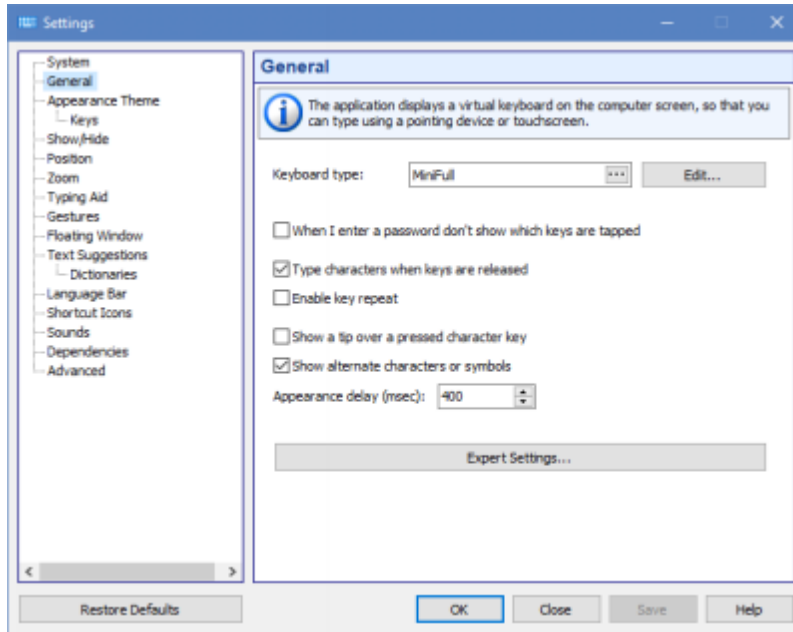
4.1 System

The system settings define the interaction between Hot Virtual Keyboard and Windows.

Language

The language of the Hot Virtual Keyboard user interface. To change the language of the on-screen keyboard, install another language or keyboard layout in your system.

Run Hot Virtual Keyboard at Windows startup

If you check this checkbox, Hot Virtual Keyboard will be automatically launched when the system is started.

Show keyboard on logon screen

If you check this checkbox, the on-screen keyboard will be shown before any user logs into the system. A separate instance of the application, possibly with different settings, will be launched for that on-screen keyboard (see FAQ for developers section).

Disable system touch keyboard and handwriting panel

You can turn off the system Touch Keyboard that appears when you use a touchscreen. **Note:** Windows 7 and above.

Show the Hot Virtual Keyboard toolbar in the taskbar

Checking this checkbox will add the application's toolbar with one button onto the taskbar. You can use this button to launch the on-screen keyboard.

Set high priority for Hot Virtual Keyboard

Check this checkbox if any features of Hot Virtual Keyboard are unstable on your system.

Hide the Hot Virtual Keyboard icon in the system tray

If this checkbox is checked, the application's icon will not be shown in the system tray.

Add to the Windows context menu

Checking this checkbox will add the **Assign Keyboard Shortcut** item to the Windows context menu. You can select that item to assign shortcut keys for quick access to applications, documents, and other files.

4.2   General

The application displays a virtual keyboard on the computer screen, so that you can type using a pointing device or touchscreen.

Keyboard type

You can select a keyboard type. Each keyboard can have its own arrangement of keys. A special style has been defined for some keyboards. To edit any keyboard, select it and click the **Edit...** button. The keyboard layout changes depending on the current input language. You don't have to create your own keyboard for each language.

When I enter a password don't show which keys are tapped

If this checkbox is checked, key pressing will not be shown on the on-screen keyboard when the focus is on a password entry field. The Text Suggestions window also will not be shown.

Type characters when keys are released

If this checkbox is checked, characters will be typed when you raise your finger from the surface of a touchscreen or release the mouse button. Otherwise characters will be typed as you touch or click a key, just like with a regular keyboard. This option is especially useful in combination with the settings below.
Note: This feature doesn't work if the **Enable key repeat** option is on.

Enable key repeat

When a key is pressed and held, the keyboard types and continues to type the appropriate symbol at regular intervals until the key is released. This is the common behavior for a hardware keyboard. So you can use the on-screen keyboard for playing games on your mobile PC with a touch-screen. If you turn it on, the **Gestures** and **Type characters when keys are released** features will not work.

Show a tip over a pressed character key

If this checkbox is checked, pressing a key will cause a small window with an enlarged version of the corresponding character to pop up. This option is especially useful in combination with the previous option.

Show alternate characters or symbols

With this option on, Hot Virtual Keyboard will show alternate characters when you press and hold a key. The selected character will be entered when you release the key.
You can edit the list of alternate characters by editing the *AlternateSymbols.txt* file in the *Data* subfolder.
Note: This feature doesn't work if the **Enable key repeat** option is on.

Appearance delay (msec)

The delay between the pressing of a key and the appearing of the list of alternate characters.

Expert Settings

Show while holding down the key

Check this checkbox to show the keyboard when you hold down one of the selected keys: Shift, Ctrl, Alt, or Win.

Appearance delay (msec)

The delay between the pressing of a control key and the appearing of the on-screen keyboard.

Repeat delay (msec)

The amount of time that elapses before a character repeats when you hold down a key.

Repeat rate (characters per second)

The speed at which a character is repeated when you hold down a key.

Mouse pointer

There are three mouse pointer types that you can use: Standard (Arrow), Hand, or Invisible.

Show key characters in the UPPER CASE

If this option is on, key characters will be displayed in the upper case regardless of the state of the Shift and CapsLock keys.

4.3   Appearance Theme

By using a theme, you can change a wide range of visual elements, including colors, drawing styles, fonts, etc.

Style

A color scheme.
To edit any color scheme, select it and click the **Edit...** button (a new **Custom** scheme will be created). To edit a color, click the object and choose a color. You can assign an image to each key state, or use the same image for all key states.
Key states:

- *Normal* – The key in its normal state
- *Hover* – The highlighted key, when the mouse pointer hovers over it
- *Pressed* – The key when pressed

Style of drawing

This style can be *Normal*, *Gradient*, or *Tube Gradient*.

Native style of the window

Checking this checkbox will instruct the application to use the native Windows style.

Rounded corners

Check this checkbox to make the application use the rounded style. If you do it, the rounding of windows' corners and buttons will be turned on.

Common opacity

You can adjust the opacity of the on-screen keyboard.

Background picture

You can select an image file (for example, a photo) to be used for the background. To remove the background image, simply clear the filename in the text field.

Characters font

The font for characters displayed on the on-screen keyboard.

Font

The font for labels displayed on the on-screen keyboard.

Icon

The icon for the on-screen keyboard in the system tray, the toolbar, the [floating window, and floating icon](#).

4.4   Keys

Use these settings to adjust the look of keys and their labels. You can change the appearance of any key in the keyboard editing mode.

Show labels and icons in the center of keys

This option comes in handy if you use only one input language.

Show keyboard layout by default

The layout or language that is used to display key names in the upper-left corner.

Show symbols accessible via Shift when Shift is not pressed and font is not large

If the key size and font allows, all numerical keys will contain characters that are typed in combination with the Shift key.

Show symbols accessible via Ctrl and Shift+Ctrl

This option lets you display the characters that become available when you press Ctrl or Ctrl+Shift. As a rule, such key combinations are not used for text entry.

Color finger areas

You can highlight keys to learn touch typing. The keys will be highlighted in a different color for each finger.

Labels on system keys depend on the currently selected input language

You can change the labels displayed on these keys: Backspace, Tab, Enter, Shift, Ctrl, Alt, AltGr, Pause, Esc, PgUp, PgDn, End, Home, Arrows, PrtScr, Ins, Del, Apps, Win, Caps Lock, Num Lock, and Scroll Lock.

Show the state of Caps Lock, Num Lock and Scroll Lock keys

This option lets you display these keys as pressed if the respective mode is on (that is, if the respective indicator is lit on the physical keyboard).

4.5   Show/Hide

Show the on-screen keyboard when the text cursor is visible

If this checkbox is checked, the on-screen keyboard will appear when the text cursor is placed in a

text field. Some applications draw the text cursor in their own way and do not provide information about its state. In this case, you can open the keyboard by pressing a hotkey or clicking the keyboard icon. You can also install a Browser Extension.

Show only when you click or tap a text box

If this checkbox is checked, the on-screen keyboard will appear when you click or tap a text box. If you activated application and the text cursor is visible, the keyboard will be hidden until you click a text box.

Extensions

You can install a browser extension to make the on-screen keyboard appear when the cursor is placed inside a text field. The extension will add keyboard-related information to the browser caption, and the application will monitor the caption for changes.

Hide the on-screen keyboard when typing on a physical keyboard

If you check this checkbox, the on-screen keyboard will disappear when you press a key on a physical keyboard; the on-screen keyboard will appear again when you touch the touchscreen, or call the on-screen keyboard by pressing a hotkey or clicking the keyboard icon.
This setting also hides the keyboard when you attach "Cover Keyboard". If your attachable keyboard doesn't hide the on-screen keyboard, please contact our support team.

Three finger tap on your touchscreen: Show/Hide

Three finger tap on your touchscreen will toggle the visibility of the on-screen keyboard. This feature doesn't work in some applications. **Note:** Windows 8 and above.

Animate the launch of the on-screen keyboard

When the keyboard is started, it will appear on the screen by sliding up or down from under the specified screen border. When the keyboard is closed, it will slide under the specified border.

Auto hide

This option lets you hide the keyboard after the time specified in the **Disappearance delay** field expires.

Disappearance delay (msec)

The delay between the last pressing of any key and the disappearing of the on-screen keyboard.

End state

The on-screen keyboard can be transparent but not hidden totally. For example, you can set 5% opacity as the end state.

4.6   Position

Using these settings, you can specify the location of the on-screen keyboard.

Lock

Prevents the keyboard from moving.

Show the on-screen keyboard next to the text entry area when possible

Some applications draw the text cursor in their own way and do not provide information about its position (these are Firefox, OpenOffice, CorelDRAW, etc.). In this case, the keyboard will be shown in the bottom of screen.
Note: This feature doesn't work when you set the **Docking** option.

Move the on-screen keyboard to a screen border

When the on-screen keyboard appears, it will be automatically moved to the specified screen border (even if it had been moved elsewhere). If the user moves the keyboard to any location on the screen, it will remain at that location until disappears.

Docking

You can dock the keyboard at the top or bottom of the screen. If you dock the keyboard, the available desktop space will be reduced. Other applications' windows and desktop icons will be rearranged to adjust to the change.

Changes the position of the active window, Changes the size of the active window

If the active window is under the keyboard, Hot Virtual Keyboard moves it in view.

Touch with two fingers to move

To move the on-screen keyboard, touch it with two fingers, and then move in the same direction.
Note: Windows 7 and above.

4.7   Zoom

You can zoom in to get a close-up view of your keyboard, or zoom out to see more of the desktop. This feature lets you change the keyboard size without editing it.

Fit width

You can automatically scale the on-screen keyboard to match the screen width. This feature is useful if you frequently switch the screen between the portrait and landscape modes.

Width

The keyboard width scaling ratio. You can resize the keyboard window in the usual manner, by dragging its edge with the mouse.

Fit height

You can automatically scale the on-screen keyboard to match the screen height. If this option is used together with **Fit width**, the keyboard will fit the screen size.

Height

The keyboard height scaling ratio.

Lock aspect ratio

If this ratio is locked, the keyboard's width will be scaled in the same proportion as its height (and vice versa, the height will be scaled in the same proportion as the width).

Lock window size

You can prevent the keyboard from resizing.

Pinch or stretch to zoom when using a touchscreen

To zoom in or out, touch the on-screen keyboard with two fingers, and then move the fingers toward

each other (pinch) or away from each other (stretch). **Note:** Windows 7 and above.

4.8   Typing Aid

Additional settings for comfortable typing.

Double taping the space bar will insert a period followed by a space

You can insert a period followed by a space by pressing the space bar twice.

Capitalize the first letter of each sentence

If one of the specified characters is entered, the Shift key will be pressed automatically.

Delete a space before

If any of the characters on the list is entered and there are any spaces before that character, the spaces will be removed.

Add a space after

If any of the characters on the list is entered, a space will be added after that character.

Add a space before

If any of the characters on the list is entered and there is no space before that character, a space will be added before it.

Use all uppercase letters when I double-tap Shift

The keyboard holds the Shift key when you double-click the Shift key. It will stay down until pressed again.

Hold down Shift, Ctrl, Alt and Win key until pressed again

If a key is pressed for the first time, it will stay down until pressed again.

Enable AutoClick

If you hover the mouse over a key, it will be pressed automatically with the specified interval between key presses. This feature may be useful for persons with certain disabilities.

AutoClick delay (msec)

The time that passes before a mouse click is done at the mouse pointer's current position.

4.9   Gestures

Gestures support (to quickly enter capital letters, spaces, etc.) with adjustable sensitivity:
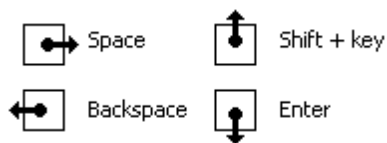
If you check the **Use gestures** checkbox, characters will be entered when you raise your finger from the surface of a touchscreen or release the mouse button. Otherwise characters will be entered as you type,

just like when you use a regular keyboard.

You can use a mouse or your fingers to perform a gesture:

- **Touchscreen:** Touch the screen with one finger and move a short distance.
- **Mouse:** Mouse gestures work by holding the left mouse button, moving the mouse a certain direction, then letting go of the button.

You can modify actions for each swipe type, or disable only some of them by selecting the **(None)** item.

Note: This feature doesn't work if the **Enable key repeat** option is on.

You can specify gestures for any of the following actions:

- Press any key
- Press a key with the Shift key
- Delete word to left
- Delete word to right
- Ctrl+Home shortcut
- Ctrl+End shortcut
- Ctrl+Z shortcut (Undo)
- Move the on-screen keyboard to a screen border
- Close the on-screen keyboard
- Text Suggestions on/off
- Move the caret left one word
- Move the caret right one word
- Switch the input language or layout
- Show settings

4.10 Floating Window

There are two different windows that you can use to open the on-screen keyboard.

The first window, which can be placed anywhere on the screen, allows you to show or hide the on-screen keyboard.

The second window is displayed as an icon located next to the text cursor. If there is no text cursor on the screen, this window will not be shown.

You can resize any of these windows, adjust their transparency, or make them automatically disappear when the keyboard is displayed on the screen.

Auto hide

You can hide these windows when the on-screen keyboard is visible, and show them when the keyboard is hidden.

Transparent background

Show icon and label only.

Show the floating icon for the on-screen keyboard next to the text cursor

You can make a floating icon appear automatically when you tap a screen location where you want to insert your text. To open the on-screen keyboard, tap the floating icon.
Some applications draw the text cursor in their own way and do not provide information about its position. (These are Firefox, Google Chrome, OpenOffice, CorelDRAW, etc.) In this case, the floating icon will not be shown.

Note: You can change the settings of the floating window via its context menu.

4.11 Text Suggestions

As soon as you have typed a sufficient number of valid characters to equal or exceed the **Minimum Character Threshold**, the word list will be searched for all known words beginning with those characters. If any matching words are found, the Text Suggestions window will appear with those words; otherwise the window will not be displayed.
If you select any of the suggested words, it will be inserted into the text.

The order of words in the list depends on the statistics accumulated by Hot Virtual Keyboard. The application initially has predefined data on word frequency and word order for the most popular languages. These data are stored in the *Common* subfolder. When you type any text, Hot Virtual Keyboard memorizes the words that you use, so that later it can place the most frequently used ones in the beginning of the list. Which words are suggested also depends on the previously typed text.
Any new words, which are not available in the installed dictionaries, are saved to the "custom.dic" file. To edit that file, select the file in the list, and then click the **Edit...** button. When you finish editing the file, click the **Read/Refresh word list** button.
The word usage statistics is kept separately from other data. To clear the statistics, click the **Reset Statistics** button.

<u>**Installing Dictionaries**</u>

The Text Suggestions feature uses files with the "dic" extension (for example, "en.dic"). These files are stored in the **Data directory** folder. To download a file for your language, click the **Download...** button. You can also create your own file with a word list. The file can contain any words or numerical values.

Show as a set of buttons next to the on-screen keyboard

With this option turned on, when the on-screen keyboard is visible, words will be displayed as a set of buttons; otherwise words will be displayed as a vertical list.

Align text left

If this check box is checked, the words in the "Text suggestions" window are aligned to the left, otherwise they are centered.

Auto hide

With this option turned on, the Text Suggestions window will be automatically hidden if no matching words have been found. Otherwise you can resize the Text Suggestions window or move it anywhere on the screen.

Show, hide and move with the on-screen keyboard

Checking this checkbox will make the word list behave like part of the on-screen keyboard. Otherwise the word list will be displayed next to the text cursor.

Minimum character threshold

This value defines how many characters of a word you need to type before the Text Suggestions window appears.

Number of displayed words

This value defines how many words will be displayed in the Text Suggestions window.

Appearance delay (msec)

The delay between the typing of valid characters and the appearing of the Text Suggestions window.

Add a space after I choose a text suggestion

The application can automatically type a space after you use word completion. This option is very handy as you won't have to press the space bar after each word. When you don't want to add a space automatically, right-click on the word.

Do not show words with 1 character remaining

If this checkbox is checked, nearly finished words will not be shown.

Show numbers

You can display shortcuts on the left side of the Text Suggestions window. This option lets you paste a word by using a numeric key.

Confirm with key

If words are displayed as a vertical list, you can select a word using the arrow keys, and then use the specified key to paste the selected word. If words are arranged in a horizontal line, the first (leftmost) word will be inserted.

Dictionaries

Learn new words

If this checkbox is checked, commonly used words will be saved to the "custom.dic" file.
Note: The words that you enter are saved in the UTF-8 format.

Confirmation of the addition of words to the custom dictionary

With this option on, a confirmation window will be displayed for adding a new word to the "custom. dic" file.

Disappearance delay (msec)

When this time expires, the confirmation window for adding a new word will disappear.

Confirm with key

You can press this key to confirm the adding of a new word to the dictionary.

Data directory

The folder containing dictionaries and user statistics.

Dictionaries

The dictionaries are ASCII files that can be edited directly like any other plain text files.

Read/Refresh word list

Click this button after editing a dictionary.

Reset Statistics

This button clears the user statistics. If the **Show text suggestions as I type** option is on, the statistics will be collected at all times. The statistics cannot be viewed or edited by the user, but only cleared.

Tips and tricks

- To remove a word directly from the custom dictionary, highlight it in the word list and press the **Delete** key. For this method to work, the **Show as a set of buttons next to the on-screen keyboard** option must be turned off.
- To disable common statistics for different languages, delete the files from the *Common* subfolder.

4.12   Language Bar

Visible

If this checkbox is checked, the language bar will be shown.

Lock the language bar

You can prevent the language bar from moving.

Show, hide and move with the on-screen keyboard

Checking this checkbox will make the language bar behave like part of the on-screen keyboard.

Kind of the language bar

- Language flag
- Language flag with a name
- Vertical list of flags
- Horizontal list of flags
- List of flags with names
- Custom

Show label

You can display the "Switch the input language or layout" label next to the language flag in the custom view. The size of the flag depends on the size of the language bar: 16x16 or 32x32 pixels.

Opacity

You can adjust the transparency of the inactive language bar.

Note: You can change the settings of the Language bar via its context menu.

4.13   Shortcut Icons

Application shortcut icons shown on the on-screen keyboard can help you find the necessary shortcut.

Show Windows icons, Show active application icons, Show Hot Virtual Keyboard icons

These settings let you display the respective icons on the on-screen keyboard.

Show hints

You can show hints on the keyboard.

Show information about the availability of application shortcuts

If you check this checkbox, special marks will be shown in the lower-left corners of the keys on the on-screen keyboard. These marks indicate the availability of key combinations with control keys:

- Green – with Ctrl
- Yellow – with Ctrl+Shift
- Blue – with Alt
- Red – with Alt+Shift

See Also

Editing shortcut icons

4.14 Sounds

You can configure short sounds for different events, such as pressing a key on the on-screen keyboard. By default, sounds are turned on. You can turn them off via the application's context menu.

You can adjust the volume for the sounds. The application will apply that volume to all its sounds.

To select your own sound, click the **Browse...** button. You can use only **Wave** files.

4.15 Dependencies

Hot Virtual Keyboard changes the appearance of the on-screen keyboard and other things depending on which application is currently active.

How it works

If you switch to a particular application, Hot Virtual Keyboard will change the specified settings.
When you switch back to the previous application, Hot Virtual Keyboard will restore the original settings.

Each setting in the list changes depending on the selected mode:

■ **- Don't change the setting (use the setting defined in the Settings window)**
☐ **- Turn off the setting**
☑ **- Turn on the setting**

In addition to the settings in the list, you can change the look of the on-screen keyboard and the set of hotkeys for a selected application.

4.16 Advanced

Initial Setup Wizard...

Clicking this button will start the initial configuration wizard. If you use it to configure keyboard shortcuts, all earlier specified keyboard shortcuts will be preserved.

Num Lock state

This option lets you keep or change the NumLock state when Hot Virtual Keyboard is started.

Numeric keys on the keypad even if Num Lock is off

This option may be handy if you work on a laptop and use both its keyboard together and a standard keyboard connected to the laptop. If you turn NumLock on, some letter keys on the laptop keyboard will work as digital keys. If you turn NumLock off, you will be unable to use the NumPad keys on the standard keyboard to enter digits. By checking this checkbox, you can easily overcome the limitation imposed by the NumLock key.

Save to File...

Click this button to save all settings to the INI file.

Load from File...

Click this button to load all settings from the INI file. You can also load settings from the INI file by using the /RESTORE command line parameter.

5   Action types

To use Hot Virtual Keyboard more effectively, please familiarize yourself with the predefined action types.

You can assign a specific sound to each action.
If you assign a **label** for an action, this label will be displayed on the on-screen keyboard and in the hint instead of the action description.

5.1   Hot Virtual Keyboard actions

You can use this group of actions to configure shortcut keys for the Hot Virtual Keyboard features.

Close keyboard

Close the on-screen keyboard window.

Show the keyboard shortcuts settings window

Opens the keyboard shortcuts settings window. For more details, see the Keyboard shortcuts settings section.

Toggle the visibility of the on-screen keyboard

Shows or hides the on-screen keyboard. For more details, see the Using the on-screen keyboard section.

Activate the next keyboard type

Loads the next keyboard from the list of keyboards. To configure that list, click the **Set the List of Keyboards** button.

Show settings

Opens the application's **Settings** window.

Text Suggestions on/off

Enables or disables the Text Suggestions feature. For more details, see the Text Suggestions section.

5.2   Replace key or shortcut

You can assign an action of this type to a key combination, though it is mostly used to replace a key combination by a single key.

Usage examples

- You can create keys on the on-screen keyboard for frequently used actions: **Ctrl+C** (Copy), **Ctrl+V** (Paste), **Ctrl+Z** (Undo), etc.
- You can remove function keys (**F1**, **F2**, etc.) from the on-screen keyboard, and use key

combinations (**Fn+1**, **Fn+2**, etc.) instead.

- You can emulate a mouse click by pressing a key (for example, set the **AltGr** key as **Right Button**).
- You can turn your regular keyboard into a **multimedia keyboard** by configuring shortcut keys to behave as the keys unavailable on your keyboard: SEARCH, FAVORITES, HOME, NEXT_TRACK, PREV_TRACK, STOP, PLAY_PAUSE, etc.

5.3   Play a keystroke macro

A keystroke macro is a sequence of keystrokes or key combinations. Just specify once which keys should be pressed, and Hot Virtual Keyboard will duly repeat these keystrokes as many times as needed.

You can use the actions of this type to:

- Create keyboard shortcuts practically for any actions. One keyboard shortcut can replace the need to press several keys.
- Fill out forms.
- Enter your username and password.
- Quickly print a predefined number of document copies.
- And much more. If you frequently do the same routine operation, think about automating it. Keep in mind that practically any action can be done without using the mouse.

To start recording a macro, click the **Record** button.
To stop recording the macro, press the **Pause** key, or click the **Record** icon in the system tray.

When you are recording a macro, all your keyboard actions are saved to a table with the following fields:

- **Delay** before the next action.
- **Event type** – whether the key is pressed down or released.
- **Key** code.
- The sign that the key is an **extended** one.

You can edit a previously recoded macro, or create a new macro without recording it. To do it, click the **Edit** button.

Having recorded a macro, you can specify advanced parameters defining how it will be played:

- Play speed.
- The number of repetitions.
- The name of the process that should be activated before starting the macro. For example, you can make the window of Windows Media Player active before the macro is played. If Windows Media Player is not running at the moment, the macro will not be played.

You can **stop playing** the macro anytime. Just press the **Pause** or **Esc** key, or click the **Playback** icon in the system tray.

5.4   Paste text

You can use the Paste Text action to:

- Create a separate key on the on-screen keyboard for any character or text string, such as @ or ".com".
- Quickly paste frequently used text fragments: greetings, cliches, email addresses, URLs, logins, and passwords.

- Quickly fill in web forms and registration dialog boxes.
- Type special characters that are difficult to enter using the regular keyboard.

Tips and tricks

- You can **protect** your data with strong 448-bit Blowfish **encryption**.
- All text is saved in the Unicode format, so you can use any characters.
- You can add various **tags** to the text. See how to use tags in the Text tags section.
- You can specify the position of the text cursor after the text is pasted by placing | (the pipe character) there.

5.5   Run a program; open a document or folder

You can use actions of this type to:

- Quickly start your favorite applications.
- Open frequently used folders and drives: My Documents, CD/DVD drive, etc.
- Open frequently used documents and network drives.
- Hide a file from your boss or kids, leaving access to it only via a keyboard shortcut.
- Clear your desktop from a pile of shortcuts, as now you can use the on-screen keyboard instead.

Program, folder or document Name

You can specify one or more programs in a separate line.
You can also run a program with additional parameters. **For example:** "C:\Program Files\Internet Explorer\iexplore.exe" -nohome
You can use <SELECTION> and <CLIPBOARD> tags for actions. **For example:** C:\voice.exe <SELECTION>

Start in folder

Enter the start-in folder for the program here. If you use the **Add...** button to find a program or document that you want to open with this action, the **Start-in folder** field will be filled automatically with the folder where the selected file is located.

Turn on the **Switch to the already launched program** option, and you will no longer need to check whether this program is already running or not.

Note: Select the **Add to the Windows context menu** check box in the Hot Virtual Keyboard settings, and you will be able to assign a shortcut key by right-clicking the shortcut of the program you are interested in and selecting the **Assign Keyboard Shortcut** item in the context menu.

5.6   Open one or several Internet resources

You can use actions of this type to:

- Open one or more websites that you visit every day (news, weather, forums, entertainment, etc.) with a single keystroke.
- Quickly open your favorite search engine: www.google.com, www.yahoo.com, etc.
- Create new email messages with the specified "To:" address. Just enter a string like *mailto: support@google.com* in the **Open URL** field.
- Quickly open the page of your corporate server.

You can use <SELECTION> and <CLIPBOARD> tags for actions. **For example:** https://translate. google.com/#fr/en/<SELECTION>

5.7   Connect/Disconnect from a network

Using this action type, you can easily set up a dial-up or ADSL connection.

After establishing a connection, you can close it anytime by pressing the same hotkey again.

Note: The connection must be already defined in "Windows Networking."

5.8   Audio control

You can configure shortcut keys for controlling the **sound volume** of the default device: **turn it up, turn it down, mute, or unmute**. Whenever you perform any of these actions, a slider (like that on a TV screen) will be displayed in the lower part of the screen.

Audio devices in Windows are the ones that you can use to play or record audio. This means that each time you listen to your favorite songs or talk on the microphone, you are using audio devices. When you listen to music (or any sound that comes from your computer), you are using the playback functionality that lets you hear the sounds in your speakers or headphones. An audio device can also record sounds coming from your microphone (for example, your voice) or from your computer (for example, the sounds produced by your playback device), thus providing the recording functionality.
Use these actions to change the default device: **Change the default playback device** and **Change the default recording device**.

5.9   Monitor control

You can configure shortcut keys for controlling your display: to turn your monitor on or off, to start a screen saver, or to open the *Display Settings* window.

5.10   Window control

You can specify keyboard shortcuts for any of the following actions:

- Minimize the active window
- Maximize/Restore the active window
- Close the active window or application
- Hide the active window or application
- Show the last hidden window
- Minimize the active window to the system tray
- Set the active window to be always on top (on/off)
- Terminate the active program

You can find the list of hidden windows in the context menu of Hot Virtual Keyboard. To show a hidden window, select its name in that list.

If you want some applications to keep running without being shown on the screen (for example, computer games), you can easily hide their windows.

Note: Some applications cannot be hidden because of their complex window structure. Instead of the window that you can see, only their service window is hidden.

5.11 Perform a system action

You can specify keyboard shortcuts for any of the following actions:

- Open the "Safely Remove Hardware" window
- Open Control Panel (Control Panel contains links to most of the tools used to configure various aspects of Windows)
- Open the "Date and Time" window
- Open the "Internet Properties" window
- Map network drive
- Disconnect network drive
- Empty recycle bin

5.12 Change the language or case

Using this group of actions, you can change the language, layout, or letter case of text.

You can specify keyboard shortcuts for any of the following actions:

- Change the input language or layout of the last typed characters
- Change the input language or layout of the selected text
- Switch the input language or layout
- Change language, layout or case
- Change the input language or layout to specified
- Change all the selected text to UPPER CASE
- Change all the selected text to lower case
- Change all the selected text to iNVERT cASE
- Change all the selected text to Sentence case.
- Capitalize Each Word of the selected text
- Use the specified input language or layout while holding down the key
- Change the input language or layout of the last typed word
- Change the input language or layout of the two lastly typed words
- Change the input language or layout of the three lastly typed words

5.13 Lock/Restart/Shutdown

You can specify keyboard shortcuts for any of the following actions:

- Lock this computer
- Log off
- Restart the computer
- Sleep
- Hibernate
- Shut down the computer
- Show the shut down dialog

5.14 Block key or shortcut

This action type allows you to block any key or key combination.

Usage examples

- You can block any key combinations: **Alt+Tab**, **Alt+F4**, **Alt+Esc**, **Ctrl+Shift+Esc**, **Ctrl+Shift**, etc.
- You can block the **Left Win** and **Right Win** keys in computer games running in full-screen mode.

- You can block any keys, such as **CapsLock**, **Insert**, or **NumLock**. At the same time, you can check the **Enable combinations with other keys** checkbox to be able to use the features of the blocked keys:
  - **Shift+CapsLock** will be used instead of **CapsLock**.
  - **Shift+NumLock** will be used instead of **NumLock**.
  - **Shift+Ins** will paste text from the clipboard.

6   Development

How to show, close, fade, or move the on-screen keyboard

How to restrict access

How to activate different keyboards

FAQ for developers

Command line parameters

6.1   How to show, close, fade, or move the on-screen keyboard

You can use Windows Messages to manipulate the on-screen keyboard.

Like this:

```
WM_CSKEYBOARD = WM_USER + 192;
WM_CSKEYBOARDMOVE = WM_USER + 193;
WM_CSKEYBOARDRESIZE = WM_USER + 197;

// to show keyboard
PostMessage(FindWindow('TFirstForm', 'hvkFirstForm'), WM_CSKEYBOARD, 1, 0);

// to close keyboard
PostMessage(FindWindow('TFirstForm', 'hvkFirstForm'), WM_CSKEYBOARD, 2, 0);

// to fade keyboard
PostMessage(FindWindow('TFirstForm', 'hvkFirstForm'), WM_CSKEYBOARD, 3, 0);

// to toggle (show/hide) keyboard
PostMessage(FindWindow('TFirstForm', 'hvkFirstForm'), WM_CSKEYBOARD, 4, 0);

// to move keyboard (Left, Top - new position)
PostMessage(FindWindow('TFirstForm', 'hvkFirstForm'), WM_CSKEYBOARDMOVE, Left, Top);

// to resize keyboard
PostMessage(FindWindow('TFirstForm', 'hvkFirstForm'), WM_CSKEYBOARDRESIZE, Width, Height);
```

⊟ **Visual Basic Sample Code**
```
Private Const WM_CSKEYBOARD = WM_USER + 192
Private Const WM_CSKEYBOARDMOVE = WM_USER + 193
Private Const WM_CSKEYBOARDRESIZE = WM_USER + 197

Declare Function FindWindow Lib "user32" Alias "FindWindowA" (ByVal lpClassName As S

'Code to show keyboard
Dim hWnd As Long
hWnd = FindWindow("TFirstForm", "hvkFirstForm")
```

```
PostMessage hWnd, WM_CSKEYBOARD, 1, 0

'Code to close keyboard
Dim hWnd As Long
hWnd = FindWindow("TFirstForm", "hvkFirstForm")
PostMessage hWnd, WM_CSKEYBOARD, 2, 0

'Code to move keyboard
Dim hWnd As Long
hWnd = FindWindow("TFirstForm", "hvkFirstForm")
PostMessage hWnd, WM_CSKEYBOARDMOVE, 0, 0

'Code to resize keyboard
Dim hWnd As Long
hWnd = FindWindow("TFirstForm", "hvkFirstForm")
PostMessage hWnd, WM_CSKEYBOARDMOVE, Width, Height
```

C# Sample Code

```csharp
using System;
using System.Windows.Forms;
using System.Runtime.InteropServices;

public const Int32 WM_USER = 1024;
public const Int32 WM_CSKEYBOARD = WM_USER + 192;
public const Int32 WM_CSKEYBOARDMOVE = WM_USER + 193;
public const Int32 WM_CSKEYBOARDRESIZE = WM_USER + 197;

[DllImport("user32.dll", EntryPoint = "FindWindow")]
private static extern Int32 FindWindow(string _ClassName, string _WindowName);

[DllImport("User32.DLL")]
public static extern Boolean PostMessage(Int32 hWnd, Int32 Msg, Int32 wParam, Int32


Int32 hWnd = FindWindow("TFirstForm", "hvkFirstForm");
PostMessage(hWnd, WM_CSKEYBOARD, 1, 0 ); // Show
PostMessage(hWnd, WM_CSKEYBOARD, 2, 0); // Hide
PostMessage(hWnd, WM_CSKEYBOARDMOVE, 0, 0); // Move to 0, 0
PostMessage(hWnd, WM_CSKEYBOARDRESIZE, 600, 300); // Resize to 600, 300
```

Visual Basic 2008 (VB.NET) Sample Code

```vbnet
Const WM_CSKEYBOARD = &H400 + 192
Const WM_CSKEYBOARDMOVE = &H400 + 193
Const WM_CSKEYBOARDRESIZE = &H400 + 197

Declare Function FindWindow Lib "user32" Alias "FindWindowA" (ByVal lpClassName As S
Declare Function PostMessage Lib "user32" Alias "PostMessageA" (ByVal hwnd As Intege

'Open/show the Hot Virtual Keyboard
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs
    Dim hWnd As Integer
    hWnd = FindWindow("TFirstForm", "hvkFirstForm")
    PostMessage(hWnd, WM_CSKEYBOARD, 1, 0)
End Sub

'Close the Hot Virtual Keyboard
Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs
    Dim hWnd As Integer
    hWnd = FindWindow("TFirstForm", "hvkFirstForm")
    PostMessage(hWnd, WM_CSKEYBOARD, 2, 0)
End Sub

'Move the Hot Virtual Keyboard; Move it first then show it
Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As System.EventArgs
```

```
      Dim hWnd As Integer
      hWnd = FindWindow("TFirstForm", "hvkFirstForm")
      PostMessage(hWnd, WM_CSKEYBOARDMOVE, 200, 200)
      PostMessage(hWnd, WM_CSKEYBOARD, 1, 0)
  End Sub


  'Toggle the Hot Virtual Keyboard
  Private Sub Button4_Click(ByVal sender As System.Object, ByVal e As System.EventArgs
      Dim hWnd As Integer
      hWnd = FindWindow("TFirstForm", "hvkFirstForm")
      PostMessage(hWnd, WM_CSKEYBOARD, 4, 0)
  End Sub


  'Fade the Hot Virtual Keyboard
  Private Sub Button5_Click(ByVal sender As System.Object, ByVal e As System.EventArgs
      Dim hWnd As Integer
      hWnd = FindWindow("TFirstForm", "hvkFirstForm")
      PostMessage(hWnd, WM_CSKEYBOARD, 3, 0)
  End Sub


  'Change the keyboard type and show it
  Private Sub Button6_Click(ByVal sender As System.Object, ByVal e As System.EventArgs
      'Change the Registry entry for the required keyboard
      My.Computer.Registry.SetValue("HKEY_CURRENT_USER\Software\ComfortSoftware\hvk",
      'Open the keyboard
      Dim hWnd As Integer
      hWnd = FindWindow("TFirstForm", "hvkFirstForm")
      PostMessage(hWnd, WM_CSKEYBOARD, 1, 0)
  End Sub


  'Change to another keyboard type and show it
  Private Sub Button7_Click(ByVal sender As System.Object, ByVal e As System.EventArgs
      'Change the Registry entry for the required keyboard
      My.Computer.Registry.SetValue("HKEY_CURRENT_USER\Software\ComfortSoftware\hvk",
      'Open the keyboard
      Dim hWnd As Integer
      hWnd = FindWindow("TFirstForm", "hvkFirstForm")
      PostMessage(hWnd, WM_CSKEYBOARD, 1, 0)
  End Sub
```

C++ (CLR syntax) Sample Code

```cpp
using namespace System::Runtime::InteropServices;
using namespace System::Security::Permissions;
using namespace Microsoft::Win32;

const System::UInt32 WM_USER = 1024;
const System::UInt32 WM_CSKEYBOARD = WM_USER + 192;
const System::UInt32 WM_CSKEYBOARDMOVE = WM_USER + 193;

[DllImport("user32.dll")]
extern IntPtr FindWindow(String^ lpClassName, String^ lpWindowName);
[DllImport("user32.dll")]
extern IntPtr PostMessage(System::IntPtr hWnd, System::UInt32 Msg, int wParam, int l
[assembly:RegistryPermissionAttribute(SecurityAction::RequestMinimum, All = "HKEY_CU


....blah blah blah you normal code...


void button1_Click(System::Object^  sender, System::EventArgs^  e)
{
    // Open/show the Hot Virtual Keyboard
    IntPtr hWnd;
    hWnd = FindWindow("TFirstForm", "hvkFirstForm");
```

```
        PostMessage(hWnd, WM_CSKEYBOARD, 1, 0);
    }
    void button2_Click(System::Object^  sender, System::EventArgs^  e)
    {
            // close the Hot Virtual Keyboard
        IntPtr hWnd;
        hWnd = FindWindow("TFirstForm", "hvkFirstForm");
        PostMessage(hWnd, WM_CSKEYBOARD, 2, 0);
    }
    void button3_Click(System::Object^  sender, System::EventArgs^  e)
    {
        //Move the Hot Virtual Keyboard; Move it first then show it
        IntPtr hWnd;
        hWnd = FindWindow("TFirstForm", "hvkFirstForm");
        PostMessage(hWnd, WM_CSKEYBOARDMOVE, 200, 200);
        PostMessage(hWnd, WM_CSKEYBOARD, 1, 0);
    }
    void button4_Click(System::Object^  sender, System::EventArgs^  e)
    {
        //Toggle the Hot Virtual Keyboard
        IntPtr hWnd;
        hWnd = FindWindow("TFirstForm", "hvkFirstForm");
        PostMessage(hWnd, WM_CSKEYBOARD, 4, 0);
    }
    void button5_Click(System::Object^  sender, System::EventArgs^  e)
    {
        //Fade the Hot Virtual Keyboard
        IntPtr hWnd;
        hWnd = FindWindow("TFirstForm", "hvkFirstForm");
        PostMessage(hWnd, WM_CSKEYBOARD, 3, 0);
    }
    void button6_Click(System::Object^  sender, System::EventArgs^  e)
    {
        //Change the keyboard type and show it
        System::Object ^kname="NumPad";

        //Change the Registry entry for the required keyboard

        RegistryKey ^key= Registry::CurrentUser->OpenSubKey ( "Software\\ComfortSoftware
        key->SetValue("KeyboardName",kname);

        //Open the keyboard
        IntPtr hWnd;
        hWnd = FindWindow("TFirstForm", "hvkFirstForm");
        PostMessage(hWnd, WM_CSKEYBOARD, 1, 0);
    }
```

Java Sample Code

```
/*
 * This file is heavily based on Jawin: <a href="http://jawinproject.sourceforge.net
 *
 * assumes ComfortSoftware keyboard is loaded...
 *
 */

package client.keyboard;

import java.io.ByteArrayInputStream;
import java.io.IOException;

import org.jawin.COMException;
import org.jawin.FuncPtr;
import org.jawin.ReturnFlags;
import org.jawin.io.LittleEndianInputStream;
```

```java
import org.jawin.io.LittleEndianOutputStream;
import org.jawin.io.NakedByteStream;

public class ComfortSoftwareKeyboard {

    protected static final String COMFORT_SOFTWARE_WINDOW_NAME = "hvkFirstForm";
    protected static final String COMFORT_SOFTWARE_CLASS_NAME = "TFirstForm";

    protected static final int WM_USER = 1024;
    protected static final int WM_CSKEYBOARD = WM_USER + 192;
    protected static final int WM_CSKEYBOARDMOVE = WM_USER + 193;

    protected static final Call FIND_WINDOW = new Call("USER32.DLL", "FindWindowW",
    protected static final Call POST_MESSAGE = new Call("USER32.DLL", "PostMessageW"

    private static ComfortSoftwareKeyboard INSTANCE = new ComfortSoftwareKeyboard();

    public static ComfortSoftwareKeyboard getInstance() {
        return INSTANCE;
    }

    protected int getWindowHandle() throws COMException, IOException {
        FuncPtr findWindow = null;
        findWindow = new FuncPtr(FIND_WINDOW.getDllName(), FIND_WINDOW.getFunctionNa
        NakedByteStream bs = new NakedByteStream();
        LittleEndianOutputStream leo = new LittleEndianOutputStream(bs);
        leo.writeStringUnicode(COMFORT_SOFTWARE_CLASS_NAME);
        leo.writeStringUnicode(COMFORT_SOFTWARE_WINDOW_NAME);
        byte[] b = findWindow.invoke(FIND_WINDOW.getParameterDescription(), FIND_WIN
                ReturnFlags.CHECK_FALSE);
        LittleEndianInputStream leis = new LittleEndianInputStream(
                new ByteArrayInputStream(b));
        int l = leis.readInt();
        findWindow.close();
        return l;
    }

    public int move(int x, int y) throws COMException, IOException {
        int hWnd = getWindowHandle();

        FuncPtr postMessage = null;
        postMessage = new FuncPtr(POST_MESSAGE.getDllName(), POST_MESSAGE.getFunctic
        NakedByteStream bs = new NakedByteStream();
        LittleEndianOutputStream leo = new LittleEndianOutputStream(bs);

        leo.writeInt(hWnd);
        leo.writeInt(WM_CSKEYBOARDMOVE);
        leo.writeInt(x);
        leo.writeInt(y);

        byte[] b = postMessage.invoke(POST_MESSAGE.getParameterDescription(), POST_M
                ReturnFlags.CHECK_FALSE);
        LittleEndianInputStream leis = new LittleEndianInputStream(
                new ByteArrayInputStream(b));
        int l = leis.readInt();
        postMessage.close();
        return l;
    }

    public int setVisible(boolean visible) throws COMException, IOException {
        int hWnd = getWindowHandle();

        FuncPtr postMessage = null;
        postMessage = new FuncPtr(POST_MESSAGE.getDllName(), POST_MESSAGE.getFunctic
        NakedByteStream bs = new NakedByteStream();
```

```java
            LittleEndianOutputStream leo = new LittleEndianOutputStream(bs);

            leo.writeInt(hWnd);
            leo.writeInt(WM_CSKEYBOARD);
            leo.writeInt(visible ? 1 : 2);
            leo.writeInt(0);

            byte[] b = postMessage.invoke(POST_MESSAGE.getParameterDescription(), POST_M
                    ReturnFlags.CHECK_FALSE);
            LittleEndianInputStream leis = new LittleEndianInputStream(
                    new ByteArrayInputStream(b));
            int l = leis.readInt();
            postMessage.close();
            return l;
        }

    public static void main(String[] args) throws Exception {
        try {
            ComfortSoftwareKeyboard keyboard = ComfortSoftwareKeyboard.getInstance()
            keyboard.setVisible(true);
            Thread.sleep(1000);
            keyboard.setVisible(false);
            Thread.sleep(1000);
            keyboard.setVisible(true);
            for (int i = 0; i < 100;i++) {
                keyboard.move(i, i);
            }
        } catch (COMException e) {
        } finally {
        }
    }
}

class Call {
    private int stackSize;
    private String functionName;
    private String parameterDescription;
    private String dllName;

    public Call(String dllName, String functionName, String parameterDescription, in
        this.stackSize = stackSize;
        this.functionName = functionName;
        this.parameterDescription = parameterDescription;
        this.dllName = dllName;
    }
    public int getStackSize() {return stackSize;}
    public String getFunctionName() {return functionName;}
    public String getParameterDescription() {return parameterDescription;}
    public String getDllName() {return dllName;}
}
```

If you can't use Windows Messages then download and try these files:
http://hot-virtual-keyboard.com/files/ShowKB.exe
http://hot-virtual-keyboard.com/files/HideKB.exe
http://hot-virtual-keyboard.com/files/ToggleKB.exe
http://hot-virtual-keyboard.com/files/MoveTopKB.exe
http://hot-virtual-keyboard.com/files/MoveBottomKB.exe
http://hot-virtual-keyboard.com/files/MoveLeftKB.exe
http://hot-virtual-keyboard.com/files/MoveRightKB.exe
http://hot-virtual-keyboard.com/files/MoveKB.exe (Command line format: MoveKB.exe Left Top)
http://hot-virtual-keyboard.com/files/SetNameKB.exe (Command line format: SetNameKB.exe
KeyboardName)

If you are writing kiosk software using HTML, you can use the special JavaScript functions to control the on-screen keyboard.

With JavaScript, you can show, hide, or move the keyboard. Just use the special JavaScript functions to add keyboard-related information to the browser caption, and the application will monitor the caption for changes.

Download the file with JavaScript functions and examples from here: http://hot-virtual-keyboard.com/commander.html

6.2 How to lock all settings

Developers can lock all settings to prevent the end user from change them.

1. Open the HKEY_CURRENT_USER\Software\ComfortSoftware\hvk registry key, add a DWORD parameter named **AccessDenied**, and set its value to **1**.
2. Restart the application.

Note: You can easily set the value of the AccessDenied parameter by using the following files from the application installation folder: *AccessAllowed.reg* and *AccessDenied.reg*

Note: If you want to be able to close, move, and zoom the on-screen keyboard, set the value of the **AccessDenied** parameter to **2**.

See Also

Command line parameters

6.3 How to activate different keyboards

You can specify different types of on-screen keyboards to be displayed. Please use any of the following methods.

Method 1

Change the **KeyboardName** registry parameter at HKEY_CURRENT_USER\Software\ComfortSoftware\hvk from your software.

If the on-screen keyboard is visible, send the Windows message PostMessage(FindWindow ('TFirstForm', 'hvkFirstForm'), WM_CSKEYBOARD, 1, 0), and our application will reload the on-screen keyboard.

Method 2

Download this file: http://hot-virtual-keyboard.com/files/SetNameKB.exe

Command line format: SetNameKB.exe KeyboardName

For example: SetNameKB.exe Mini

Method 3

Use this code:

```
char KeyboardName[80];
COPYDATASTRUCT MyCDS;
```

```
KeyboardName = "Standard";

// Fill the COPYDATA structure
MyCDS.dwData = 1; // function identifier
MyCDS.cbData = sizeof(KeyboardName); // size of data
MyCDS.lpData = &KeyboardName; // data structure

// Call function, passing data in &MyCDS
HWND hwDispatch = FindWindow( "TFirstForm", "hvkFirstForm" );
if( hwDispatch != NULL )
  SendMessage( hwDispatch,
    WM_COPYDATA,
    (WPARAM)(HWND) NULL,
    (LPARAM) (LPVOID) &MyCDS );
```

6.4   FAQ for developers

How can I include the on-screen keyboard into my own installer?

1) Copy the following set of files to the end users' computers:
hvk.exe
hvkcm.exe
hvkcm64.exe
hvkh.dll
hvkh64.dll
bass.dll
COptions.exe
Keyboards – the folder containing on-screen keyboards (one text file per keyboard)
Lang – the folder with the application's interface translated into different languages
Skins – the folder with skin images
Background – (optional) the folder containing images for the keyboard background
Icons – (optional) the folder containing shortcut icons for different applications
Sound – (optional) the folder containing Wav files
hvkDeskBand.dll, hvkDeskBand64.dll – (optional) the DLL files for displaying the application's toolbar in the taskbar
Common – (optional) the folder containing predefined data on word frequency and word order for the most popular languages
*.dic – Text Suggestions dictionaries. The folder for storing these dictionaries is specified in the **Data directory** field in the **Dictionaries** section of the application's settings. If you prefer, you can move dictionary files to the application installation folder.

2) If you turned on the displaying of the on-screen keyboard prior to the system login:
Backup.ini – the pre-login settings file for the on-screen keyboard (Data folder)
You also need to copy the following four files to the *Windows\system32* system folder: runcosk.exe, CsCredentialLogon.dll, CsCredentialLogon64.dll, and cskeyboardlogon.dll

3) If you have configured special shortcuts, you also need to copy the file for them to the same folder as on the source computer. You can find the full path and filename in the title of the Keyboard Shortcuts Settings window.

4) To transfer the application's settings, do the following:
Save the settings to a file. To do that, click the **Save to File...** button in the **Advanced** section of the **Settings** window.
After copying the ini-file to the end user's computer, start **hvk.exe** with the /RESTORE parameter.
Command format: hvk.exe /RESTORE "file name"
For example: hvk.exe /RESTORE "C:\Program Files\HotVirtualKeyboard\Settings.ini"

How can I switch between several on-screen keyboards?

Add a key to each on-screen keyboard (in the Edit Keyboard Type window), and then assign the Activate the next keyboard type action to that key in the Keyboard Shortcuts Settings window. If you assign a keyboard switch action to the key, a button for configuring the list of switchable keyboards will be displayed.

How can I create a key with the ".com" text?

The easiest way to add special keys is by using the Edit Keyboard Type window.
1. Add a key to the on-screen keyboard via the Edit Keyboard Type window. You can use unassigned keys defined by a hexadecimal code (for instance, 00D9).
2. Select the key and press the **Action...** button. In the new Keyboard Shortcuts Settings window, assign the **Paste text** action to that key. Enter your text (in this case, ".com") into the **Text** field. Set the **Show text on the on-screen keyboard** checkbox under the **Text** field as desired.
After configuring these settings, save them and close the window.

Can I configure the pre-login on-screen keyboard to be different from the regular one, used after the login?

The settings of the on-screen keyboard for entering the login password are stored in the *Backup.ini* file, located in the application installation folder (in the *Data* subfolder). When you change the application's settings in the Settings window, they are saved in the *Backup.ini* file (and in the registry).
If you don't want the *Backup.ini* file to change, make it "Read-only."

How can I paint keyboard keys in different colors?

Select the necessary key in the Edit Keyboard Type window, click the **Picture / Color...** button, and then specify the color for each state in the **Color** fields.

How can I change keyboard parameters from my program?

Our application's settings are stored in the HKEY_CURRENT_USER\Software\ComfortSoftware\hvk registry key.
If your software changes any of these settings in the system registry, our application will need to load them again. It can be done by sending a windows message containing the WM_USER + 196 code to our application:

```
WM_CSRELOADOPTIONS = WM_USER + 196;
PostMessage(FindWindow('TFirstForm', 'hvkFirstForm'), WM_CSRELOADOPTIONS, 0, 0);
```

This command allows you to do the following:
- Change the interface language (labels on system keys) according to the current input language
- Change the keyboard transparency
- Change the keyboard size
- Temporarily disable the **Show the on-screen keyboard when the text cursor is visible** option
- Temporarily disable the Text Suggestions feature
- Change the limitation on access to our application's settings without reloading the program

---

How can I transfer your application's settings and data to another computer?

Sorry, you cannot do it in one click.
You will have to do the following:

---

1. Save the general settings: **All Settings** –> **Advanced** –> **Save to File...**
2. Save the keyboard file (the name of the file and its full path can be found in the caption of the Edit Keyboard Type window).
3. Save the hotkey settings file (you can find its name and full path in the title of the Keyboard Shortcuts Settings window).
4. Restore all these data on the target computer.

The application doesn't start and shows an error message each time I try to run it!

1. Our application works on Windows 2000 or above only. Sorry, but Windows 95, Windows 98 and Windows CE are not supported.
2. Maybe some of the application's components have not been installed. Please try reinstalling the application.
3. Make sure to install the application to the *Program Files* folder. It's a security-related requirement for new operating systems.

6.5   Command line parameters

Hot Virtual Keyboard (hvk.exe) accepts optional command line parameters. These parameters can be useful for developers and for calling our application from other software.

/HELP and /?

Displays the list of valid command line parameters in a message box.

/CLOSE

Closes a previously launched instance of the application.

/SHOWKEYBOARD

Forcibly shows the on-screen keyboard when the application is launched. Normally, the on-screen keyboard is shown only if it was visible the last time the application was closed.

/HIDEKEYBOARD

Starts the application with the on-screen keyboard hidden. Normally, the on-screen keyboard is shown if it was visible the last time the application was closed.

/COMMON

Starts the application with the same settings for all users.
This parameter instructs the application to save its settings to the following registry key:
HKEY_LOCAL_MACHINE\SOFTWARE\ComfortSoftware\hvk
Normally, they are saved to this registry key:
HKEY_CURRENT_USER\SOFTWARE\ComfortSoftware\hvk

/INIFILE

Instructs the application to save and read its settings from the INI file. Normally, the settings are stored in the registry.
The settings will be stored to the *Backup.ini* file located in the application installation folder (in the *Data* subfolder).
How to use:
Save your settings to "*C:\Program Files\HotVirtualKeyboard\Data\Backup.ini*" file, and launch "**hvk. exe /INIFILE**". In this case, the application saves and reads the settings from the *Backup.ini* file.

/OPTIONS

Opens the application settings window.

/CHANGELANGUAGE <code>

Changes the current system language.
For example: "C:\Program Files\HotVirtualKeyboard\hvk.exe" /CHANGELANGUAGE 0409

/RESTORE

Instructs the application to load settings from the INI file specified in the command line. If another instance of the application is already running, the settings from the INI file will be loaded into it. You can save the settings to the INI file by opening the **Settings** window and switching to the **Advanced** section.
For example: "C:\Program Files\HotVirtualKeyboard\hvk.exe" /RESTORE "C:\Program Files\HotVirtualKeyboard\Settings.ini"

/M <num>

Launches several instances of the program, where *<num>* is the number of instances to be launched. Each instance will have its own settings. By default, you can launch one instance only.

/TURNON and /TURNOFF

Completely turn the application on or off. Use the /SHOWKEYBOARD or /HIDEKEYBOARD parameter to show or hide the on-screen keyboard.

/ACTION <hotkey>

Launches the action assigned to the specified hotkey.
For example: "C:\Program Files\HotVirtualKeyboard\hvk.exe" /ACTION Win+K

/SAFEMODE

Launches the application in safe mode. Some features of the application will be disabled.

/DEBUG

Instructs the application to create the *Log.txt* file in the application folder (in the *Data* subfolder). The log file will contain details about the application's activity, which can be a helpful debugging aid.
The information contained in the log file is technical in nature and therefore not intended to be understandable by end users.
If a file with the specified name already exists in the application folder, it will be overwritten.

/EVENTLOG

Instructs the application to create different log files for every startup. See the *Data* subfolder in the application folder.
You can also add the DWORD parameter EventLog=1 in the registry to do the same.

/REMOTECONTROLMODE

Enables the special mode for remote control devices. In this mode, you can use the arrow keys to move around the keyboard, and use **Enter** key to press the currently selected key.

7   Other issues

FAQ – Frequently asked questions

Please read this topic if you have a problem with registering or using Hot Virtual Keyboard.

License Agreement

Hot Virtual Keyboard End User License Agreement.

Contact information

Comfort Software Group contact details.

7.1 FAQ - Frequently asked questions

Hot Virtual Keyboard usage issues

Q: Your application doesn't react to any key combinations at all.

A: Maybe that's because another hotkey manager is running? Otherwise, please make sure that Hot Virtual Keyboard is turned on.

Q: If I run Setup Wizard again, will it delete all my previously created actions?

A: No, it will not. All your actions will be preserved. Setup Wizard will simply add more shortcuts to your set.

Q: Can I deactivate a key on my keyboard?

A: Yes, you can. Just create an action with the Block key or shortcut action type.

Q: How can I install another language and keyboard layout?

A: Follow these steps:
1. In the Windows Start menu, click *Start*, and then click *Control Panel*.
2. Double-click *Regional and Language Options*.
3. Click the *Languages* tab, and then click *Details* under "Text Services and Input Languages."
4. Click *Add* under "Installed Services," then click the language that you want to add, and then select the keyboard layout that you want to use for that language.

Q: How can I transfer the application's settings and data to another computer?

A: Sorry, you cannot do it in one click. You will have to do the following:
1. Save the general settings: **Parameters** –> **Advanced** –> **Save to File...**
2. Save the hotkey settings file (you can find its name and full path in the title of the Keyboard Shortcuts Settings window).
3. Restore all these data on the target computer.

Q: The application doesn't start and shows an error message each time I try to run it!

A: Please check this:
1. Maybe some of the application's components have not been installed. Please try reinstalling the application.
2. Make sure to install the application to the *Program Files* folder. It's a security-related requirement for new operating systems.

Q: Can I use the Sleep key in a shortcut?

A: No, you cannot. The **Wake**, **Sleep**, and **Power** keys cannot be used as a hotkey or part of a key combination for any action.

Q: Can I use Hot Virtual Keyboard on a network, so that all users can get the same results for key presses?

A: Yes. You can place your actions file on a network resource and open it on any workstation.

Q: Does Hot Virtual Keyboard support a "send email" action type?

A: Yes, it does. Create the **Run program** action and enter "mailto:" followed by the recipient's email address.

Q: Can I use "Open URL" for FTP or Telnet?

A: Yes, you can. When creating an action, enter an URL like *ftp://ftp.mycompany.com* or *telnet://mycompany.com* in the **Open URL** text field.

Registration issues

Q: How to check if your software product is registered?

A: To see the application's registration status, select **About Hot Virtual Keyboard** in its context menu.

7.2 License Agreement

HOT VIRTUAL KEYBOARD LICENSE AGREEMENT FOR USE AND DISTRIBUTION

Last updated November, 2017

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7.3   Contact information

Web-site: https://hotvirtualkeyboard.com/

User support: support@hotvirtualkeyboard.com

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