

CalliGrapher® 7

USER'S GUIDE

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Welcome

This award-winning application uses proprietary CalliGrapher technology to bring you unprecedented recognition accuracy and ease of use to your Microsoft Windows® powered portable device. CalliGrapher 7 recognizes all handwriting, be it

cursive

printed

or

mixed

Additionally, you can enter equations such as

32.6 + 74 =

for use with CalliGrapher's RiteCalc™, the calculator that works with your natural handwriting.

CalliGrapher 7 employs advanced fuzzy logic and neural net techniques that allow it to recognize your handwriting with unparalleled accuracy and speed. In addition to recognizing letters, numbers, and words, CalliGrapher recognizes common symbols and various control 'gestures' (explained later in this manual). CalliGrapher also includes PenCommander, which allows a user to perform many common tasks using simple handwritten commands. The new version of CalliGrapher provides support for multiple configurations, which can store such parameters as recognition options, keyboard layout, custom keyboard layout, letter shapes, and ink options; customizable soft keyboard; customizable toolbar; reduced memory footprint; improved ink flow and recognition; and others.

Many Windows Microsoft powered devices have small, cramped keyboards or no keyboard at all. CalliGrapher frees you from the constraints imposed by these devices and unleashes their power.

Please visit our Web site at <http://www.phatware.com> to get the latest news on CalliGrapher and other PhatWare products.

Before Getting Started

Conventions

This manual uses several notational conventions to present information of special importance.

NOTE: Notes highlight helpful and important things to keep in mind. These include things like tips and tricks, shortcuts, and hints.

Lists of items, points to consider, or procedures that do not need to be performed in a specific order appear in bullet format:

- ❖ Item 1
- ❖ Item 2

Procedures that must be followed in a specific order appear in numbered steps:

1. Perform this step first
2. Perform this step second

Specific keyboard keys are depicted in square brackets and are capitalized, for example: [ESC]. If more than one key should be pressed simultaneously, the notation appears as [KEY1]+[KEY2], for example [ALT]+[F4].

Buttons and knobs are depicted in round brackets and are capitalized and italicized, for example: {*RESET*}.

NOTE: The notation [tap] signifies a stylus or finger tapping a touch screen.

Screen prompts are displayed in bold Courier font, for example: **start**

Items you must type appear in standard Courier font, for example:
cd\letters\business\legal [ENTER]

Manual Layout

This manual is laid out as follows:

- ❖ Part One - Getting Started: This part details the CalliGrapher features, system requirements, and installation process.
- ❖ Part Two - CalliGrapher Tutorials: Many people prefer to learn by doing. This part includes a few tutorials to help you get up and running with CalliGrapher quickly. Once you have finished the tutorials, you will want to read the reference chapters, which explain all of CalliGrapher's many features. Of course, you may also choose to read the rest of the manual first and do the tutorials later.

- ❖ Part Three - CalliGrapher Reference: This part provides detailed instructions on using the CalliGrapher functions
- ❖ Part Four - Customizing CalliGrapher: Instructions on customizing CalliGrapher to suit your individual needs and preferences.
- ❖ Part Five - PenCommander Reference: This chapter explains how to create custom PenCommands.

Part One: Getting Started

This chapter details the CalliGrapher 7 features, system requirements, and installation process.

CalliGrapher Features

CalliGrapher is a powerful handwriting recognition engine. Some of its advanced features include:

- ❖ Natural handwriting recognition: CalliGrapher recognizes print, cursive, and mixed script as well as arbitrary symbol strings and control 'gestures'.
- ❖ Immediate usability: Unlike many handwriting recognition programs, CalliGrapher is ready to run right out of the box with no training required. You can, however, customize CalliGrapher to your personal handwriting style, thereby increasing CalliGrapher's already superb accuracy and speed.
- ❖ Built-in dictionary: CalliGrapher recognizes words from its integrated dictionaries. This includes a main English dictionary containing approximately 100,000 words and a custom user dictionary. CalliGrapher also recognizes non-vocabulary words like personal names, geographical names, and arbitrary handwritten symbol strings.
- ❖ CalliGrapher Configuration Manager: Use the Configuration Manager to change various CalliGrapher settings and to create and edit recognition profiles. You can switch between recognition configurations by using the Configuration gesture or tapping the Configuration button in the CalliGrapher toolbar.
- ❖ CalliGrapher Full Keyboard: This virtual keyboard gives you all the functionality of a built-in keyboard when you cannot access the keyboard on your mobile device, or even when your mobile device has no keyboard at all.
- ❖ Customizable keyboard: You can choose any characters, punctuation signs, or navigation buttons to appear on a 24-key customizable keyboard.
- ❖ RiteCalc handwriting calculator: Simply write an equation, and let RiteCalc do the math.
- ❖ Extensive correction interface: By pointing out CalliGrapher's mistakes, you can improve its performance.
- ❖ Spell Checker: This feature works with practically any application for Microsoft Windows-powered mobile devices.
- ❖ Customizable Toolbar: Choose from 36 buttons to appear on the 10-button CalliGrapher toolbar.
- ❖ PenCommander: Write a word and draw a circle around it to launch an automated script (PenCommand). Using PenCommands, you can perform a wide spectrum of tasks from simple text substitutions and launching applications to calling a function from any system or user-defined DLL. You may use many pre-defined PenCommands that are included with CalliGrapher and may also define your own in order to automate frequent tasks and create new functionality for your mobile device.

- ❖ Multiple Language Support: In addition to **English**, CalliGrapher supports handwriting recognition in **Danish, Dutch, French, German, Italian, Norwegian, Portuguese** (Brazilian and European), **Spanish, and Swedish**. Language Packs are sold separately. To order any or all of the Language Packs, go to our Web site at <http://www.phatware.com>.

NOTE: If you would like to have CalliGrapher support another Western European language in the future, email us at info@phatware.com.

System Requirements

CalliGrapher requires the following minimum configuration:

- ◆ Microsoft Windows-powered Pocket PC 2000, Pocket PC 2002, Pocket PC 2002 Phone Edition, Pocket PC 2003/2003SE, and Pocket PC 2003/2003SE Phone Edition.

Note: CalliGrapher 7 does **not** support older models of Pocket PCs (a.k.a. Palm-Size PCs) and Handheld PCs, such as Jornada 720. CalliGrapher 6 will continue to support Handheld PCs.

- ◆ Microsoft Windows CE 3.0 or later.
- ◆ Approximately 2.8MB of the free storage space on the device.
- ◆ Windows-powered desktop PC or laptop with ActiveSync 3.7 or later is required for installation
 - If you do not have a PC with ActiveSync 3.7 or later installed, you can download CalliGrapher as a .cab file and install it directly on your mobile device. Visit PhatWare's download page at <http://www.phatware.com/index-download.html>

Please note that the above represents minimum requirements only. CalliGrapher performs better on systems exceeding the listed requirements.

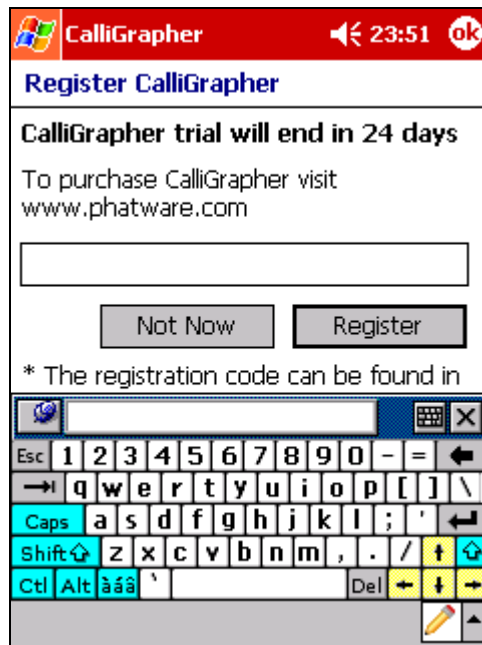
NOTE: If using the new antialiasing feature, it will work reliably on Pocket PC with XScale 300MHz or faster. Not recommended for slower devices.

Installing CalliGrapher

1. Connect your mobile device to your host PC and establish a partnership using Microsoft ActiveSync.
2. Remove any previous version of CalliGrapher from your Pocket PC. CalliGrapher will not install if it detects an older version present on your Pocket PC.
3. If you've downloaded CalliGrapher from the Internet as a single executable installation file (`calligrapher7.exe`), run this file.
4. If you've downloaded CalliGrapher from the Internet as a zip file, unzip the archive into a temporary folder on your desktop computer and run the `setup.exe` program.
5. Follow the on-screen installation instructions to install CalliGrapher.
6. Reset your mobile device when installation is completed.

Registering CalliGrapher

When you run CalliGrapher for the first time the **Register CalliGrapher** dialog box will appear (see picture below). If you have already purchased CalliGrapher, please enter the *registration code** into the edit field and tap the **Register** button. If you downloaded a 30-day free trial version of CalliGrapher 7, just tap the **Not Now** button. While using the CalliGrapher in the trial mode, this dialog box will appear every time you start CalliGrapher until you enter the registration code. After the trial period expires, CalliGrapher will no longer work and you will be able to access the **Register CalliGrapher** dialog box only, until you enter the valid registration code.





Register CalliGrapher dialog box

* The registration code is located in the purchasing confirmation email, which is automatically sent to you, only when you purchase the product. If you have purchased CalliGrapher in a retail box, the registration code can be found on the CD-ROM cover. The Registration code is a case-sensitive alphanumeric string with no spaces inside. If you have problems finding the registration code, please contact PhatWare technical support.

If you have downloaded and used the trial version of CalliGrapher and then decided to purchase it, you do not need to download or reinstall CalliGrapher. After you receive your registration code, restart CalliGrapher and when the Register CalliGrapher dialog box appears, enter the code in the space provided and tap the **Register** button.

Important! It is imperative that you keep the *CalliGrapher Registration Code* in a safe place. You will need it for future product upgrades and to contact product technical support. We strongly recommend filling out and submitting the **Product Registration Form** on our web site at <http://www.phatware.com/register/> to ensure that you are registered with PhatWare Corp.

Launching CalliGrapher

The easiest way to launch CalliGrapher is to select CalliGrapher from the list of input methods. Tap the  arrow in the right-bottom corner of the screen and select CalliGrapher from the popup menu. Alternatively you can launch CalliGrapher by going to **Start>Programs> CalliGrapher** and tapping the **CalliGrapher** icon. The pen  icon appears in the Windows taskbar. Tapping the icon activates CalliGrapher and opens the customizable toolbar.



You can customize the icons that appear in the toolbar. For more information, please refer to the *Customizing CalliGrapher* section, below.

Removing CalliGrapher

1. Disconnect the mobile device from the Desktop PC (if connected).
2. From the Start menu, choose the Settings item, then under the System tab, tap on Remove Programs.
3. When the Remove Programs dialog box appears, locate the PhatWare CalliGrapher entry in the list box.
4. Tap on it to select it.
5. Tap the Remove button to remove the CalliGrapher application.
6. Reset your mobile device to finish the uninstallation.

Tips to increase the recognition quality

- ❖ You will have the best recognition quality when using the **default letter shape settings**. Disabling too many shapes will **decrease** the recognition quality. There is only one reason to disable a certain shape of a certain letter, which is if calligrapher recognizes this letter incorrectly because you wrote its shape similar to another letter. For example, if your "o" is recognized as "u", you can try to disable some shapes for "o" or for "u", or for both. However, if you disable too many shapes you will decrease the recognition quality.
- ❖ When you click on the selected shape in the Letter Shape Selector it will redraw the letter showing the direction in which you should move your pen. The **direction** of the pen strokes is as important as the shape.
- ❖ Try to write bigger characters. The minimum recommended size of your handwritten characters should be equivalent to size 16 (or bigger) of the Tahoma font. (To get an idea how big it is, run Pocket Word, select the Tahoma size 16 font and write "*something*").
- ❖ Upper case characters should be at least twice as big (or bigger) as the lower case characters.

Part Two: CalliGrapher Tutorials

These tutorials cover a few of the most common ways in which people use CalliGrapher. To use them, simply turn on your mobile device and follow along! Be sure to read the rest of the manual for complete details on how CalliGrapher works once you are finished with the tutorials.

NOTE: The tutorials in this manual are designed to be generic. CalliGrapher will function with practically any text editing software.

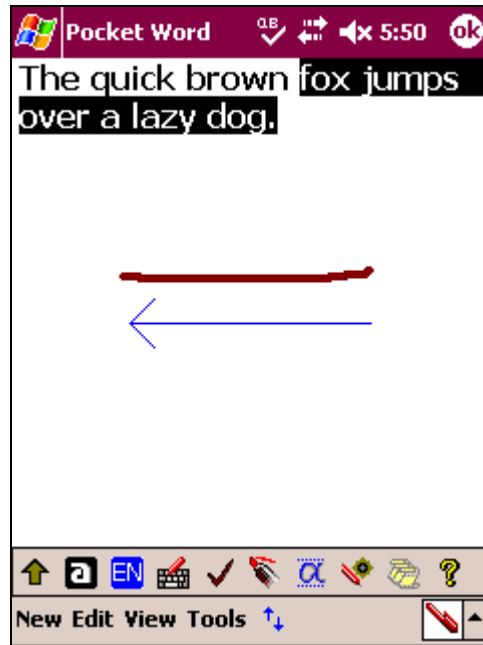
Tutorial One: The Basics

This tutorial introduces you to some of CalliGrapher's basic features. Simply follow the steps outlined below to experiment and see for yourself some of the many things you can do using CalliGrapher:

1. Launch both your text editing application and CalliGrapher on your mobile device.
2. Make sure the pen icon is highlighted (tap it if necessary) and write the following on your screen. Try to write a bit more neatly than normal, and use larger letters until you get used to how the program responds to your input. This will not affect CalliGrapher's accuracy; rather, it will help introduce you to the program. Write *The quick brown fox jumps over a lazy dog.*



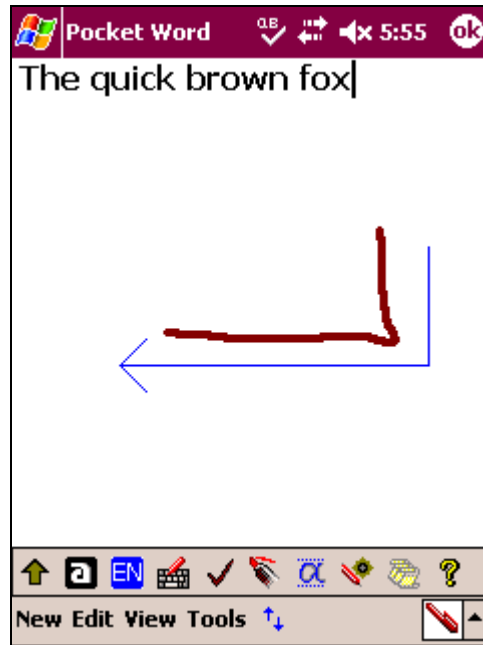
3. Select **jumps over a lazy dog** and use the Backspace gesture as shown below.



4. The selected text is erased.



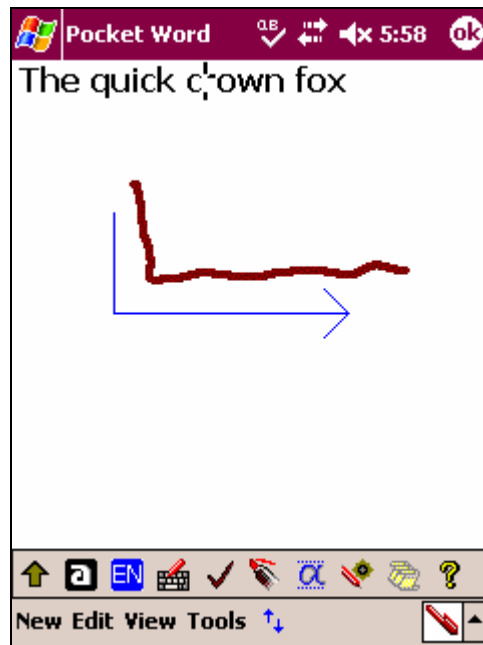
5. Now, insert a carriage return (equivalent to pressing [ENTER]) by using the Return gesture. Make sure that the horizontal part of the gesture is at least twice as long as the vertical part.



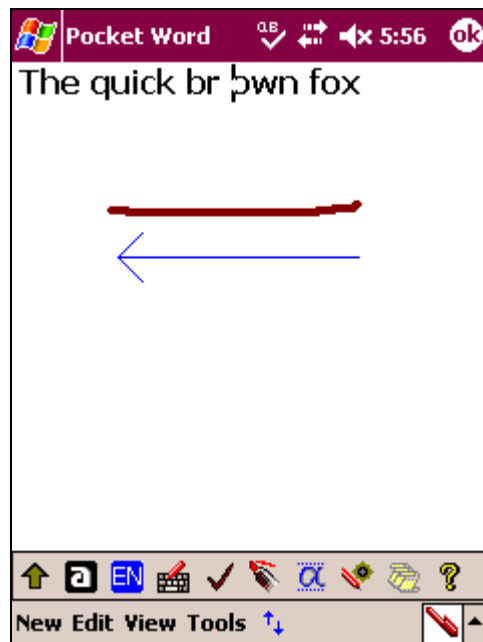
- Note that the cursor moves down one line.



- Now use the Erase gesture (straight line from right to left) to erase the carriage return and move back to the top line.
- Tap the word **br**own between the **r** and the **o** to position the cursor, and use the Space gesture. The space gets inserted.



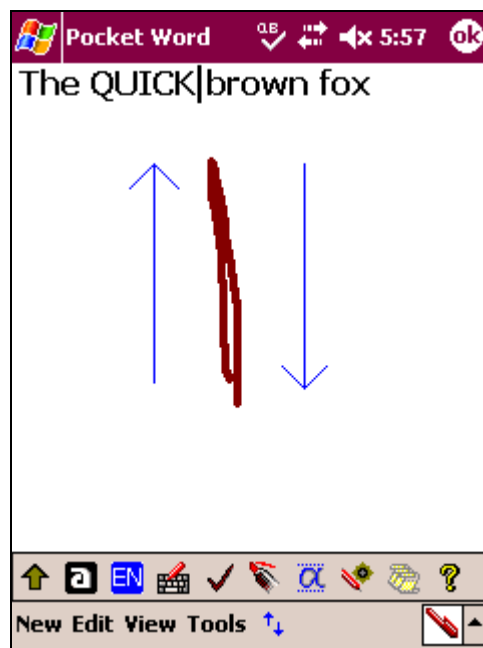
9. The space is added.



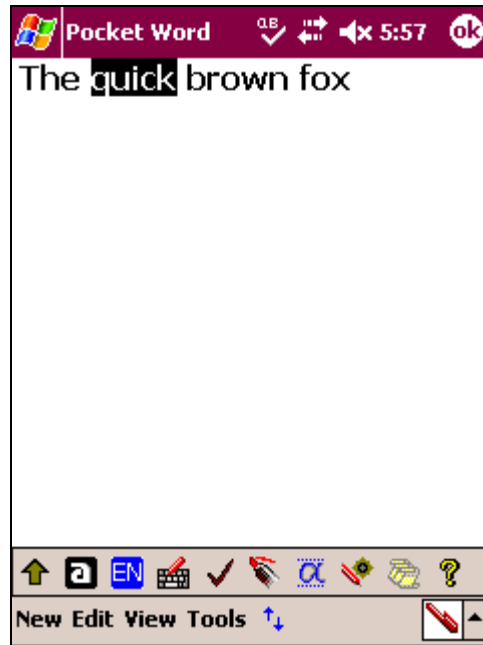
10. Use the Erase gesture to remove the space.
11. Select the word **quick** and use the Case Change gesture.



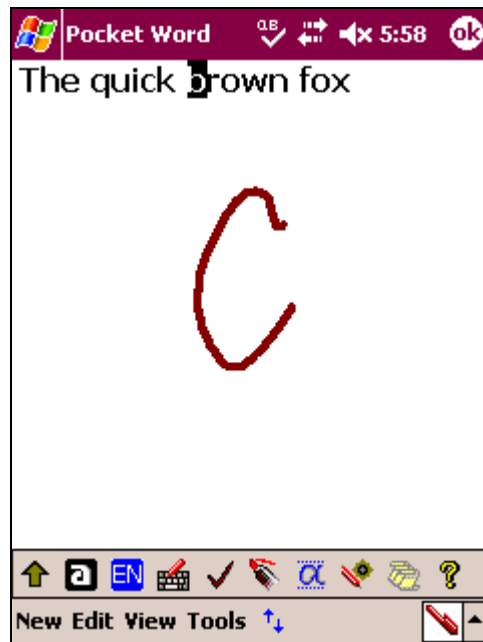
12. This turns the word `quick` to `QUICK`.
13. To undo the previous action, use the Undo gesture.



14. The word reverts to lower case.



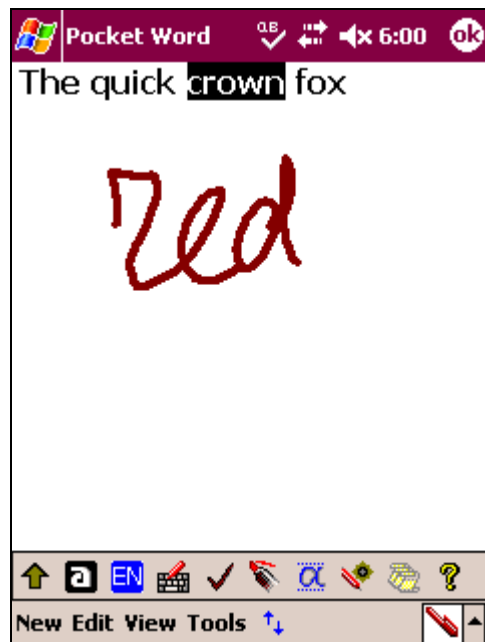
15. You may use your stylus to change individual letters. For example, highlight the letter **b** in **brown** and write the letter **c**.



16. The word changes.



17. You may also select and replace entire words. For example:



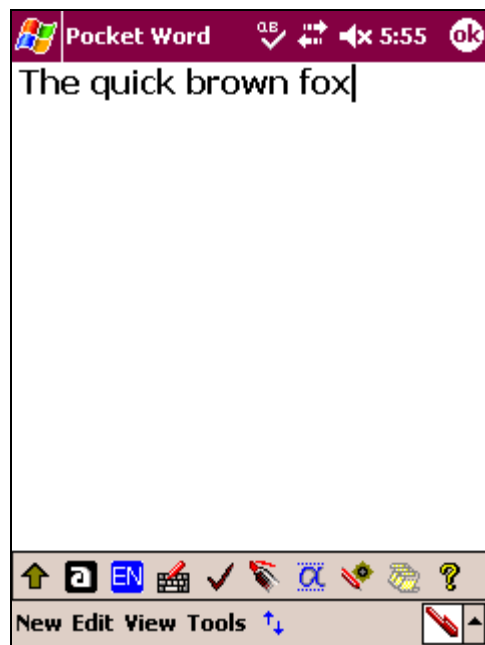
18. This produces the following result:



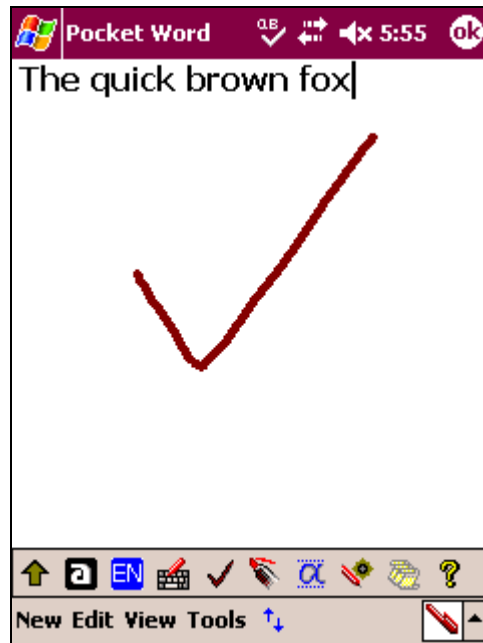
Tutorial Two: Correcting Text

What if you make a mistake while writing? No problem. CalliGrapher allows you to correct mistakes quickly and easily as shown in this tutorial:

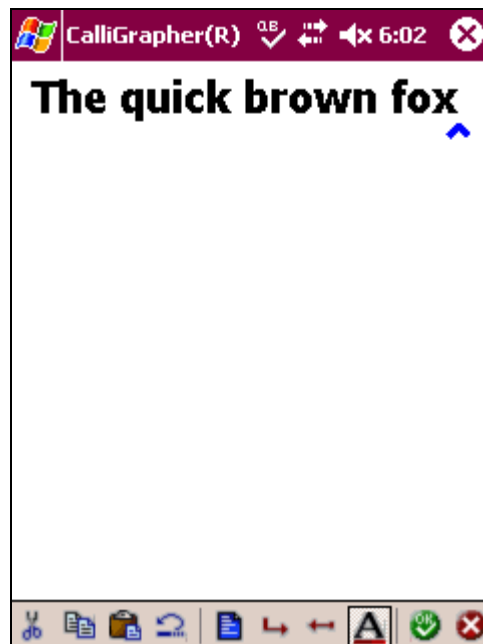
1. Launch both your text editing application and CalliGrapher on your mobile device.
2. Write "The quick brown fox". If CalliGrapher recognizes the above text correctly, keep writing until it mis-recognizes a word, for example:



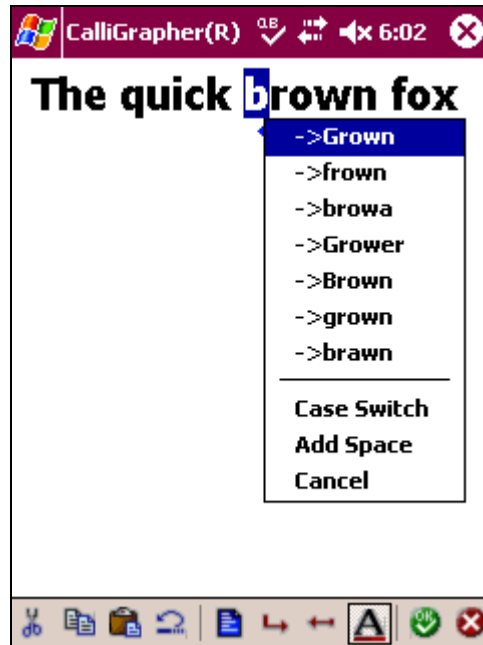
- Highlight the sentence and use the Correction gesture to launch the Correction Window. Be sure to enter the gesture correctly (move the stroke from left to right and make the gesture large, with the right leg much higher than the left one as shown below).



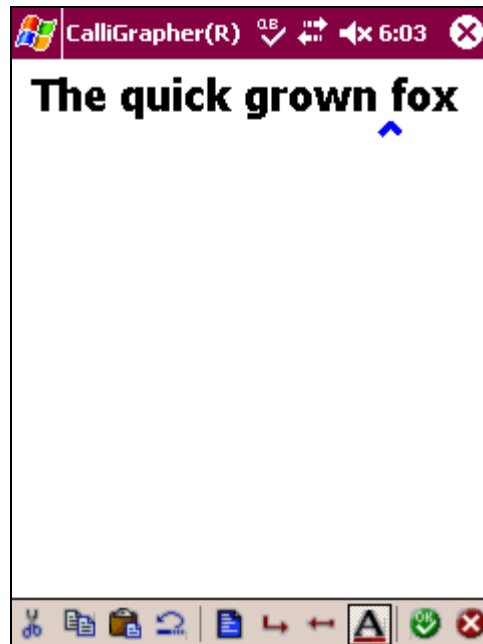
- The Correction Window appears.



- Tap the word **br**own and note that a caret appears where you tapped; this is where changes will occur. Either tap the caret or double-tap the selected word to bring up a list of suggested replacements.



6. If the correct word is in the list (in this case **grown**), select it to make your changes.
7. If the correct word is not in the list, simply correct the misspelled word manually by highlighting the incorrect letter and writing the correct letter.



8. Tap **OK** once you are finished making changes.



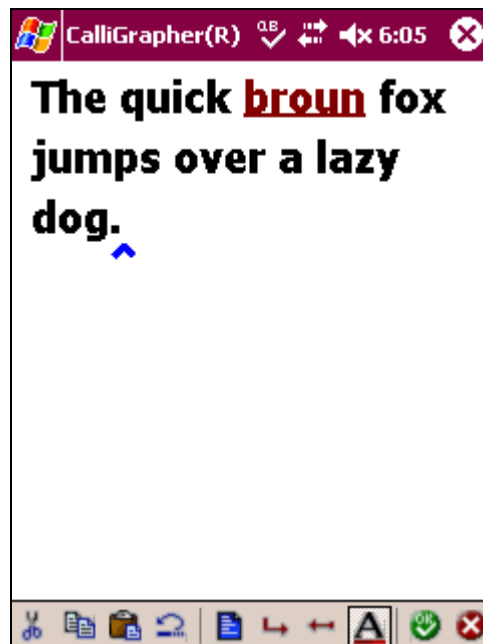
Tutorial Four: Beyond the Basics

Our fox from the previous tutorials is not done yet. In this tutorial, you learn more about CalliGrapher's 'gestures' and spell-checking capabilities.

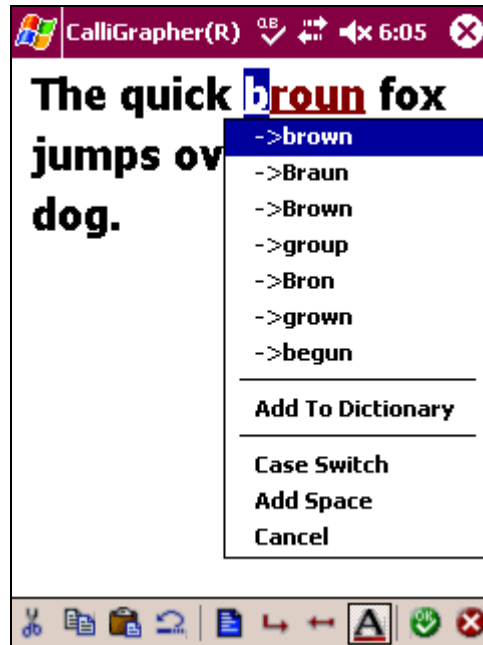
1. Launch both your text editing application and CalliGrapher on your mobile device (or simply continue from the previous tutorial).
2. Write or type the following sentence: The quick broun fox jumps over a lazy dog. *The misspelling is intentional.*
3. Use the Correction gesture.



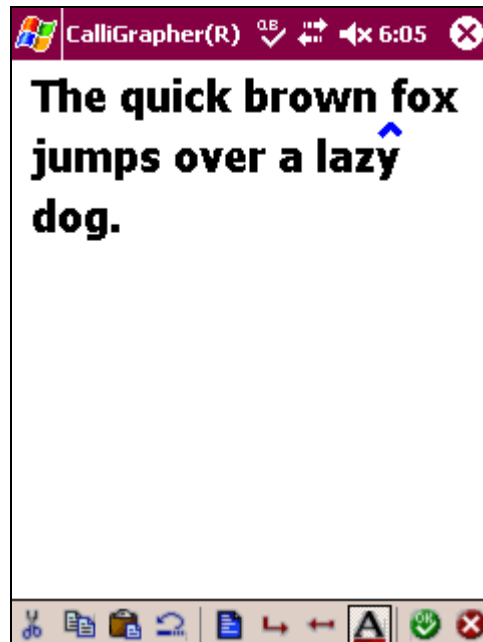
4. Because you have no text selected, the entire sentence will transfer to the Correction window.



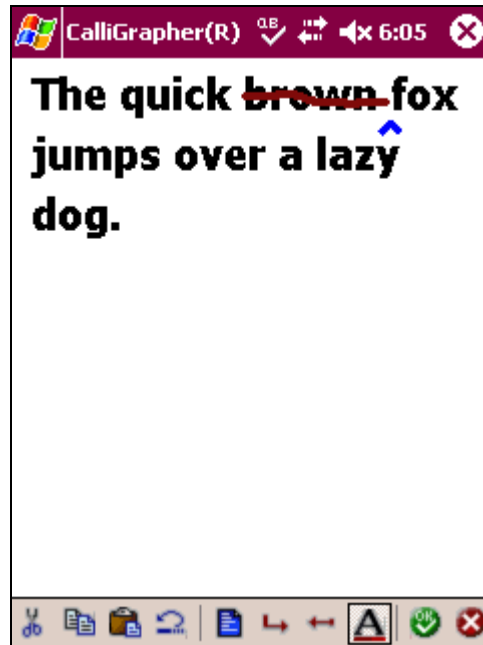
5. Double-tap the misspelled word (or tap the caret) to bring up the list of suggested replacements.



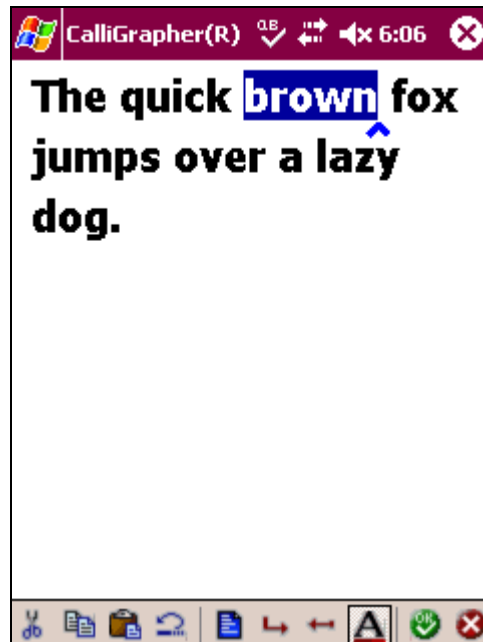
6. Select the desired word, which replaces the word in your sentence.



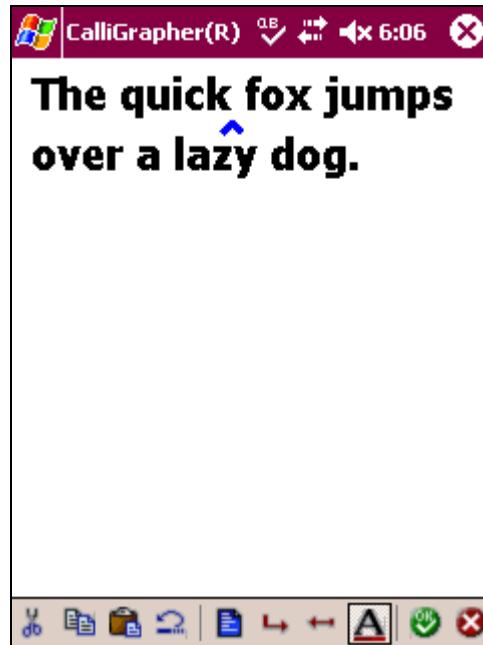
7. Select the word **brown** by drawing a single line across it from left to right and holding for a moment.



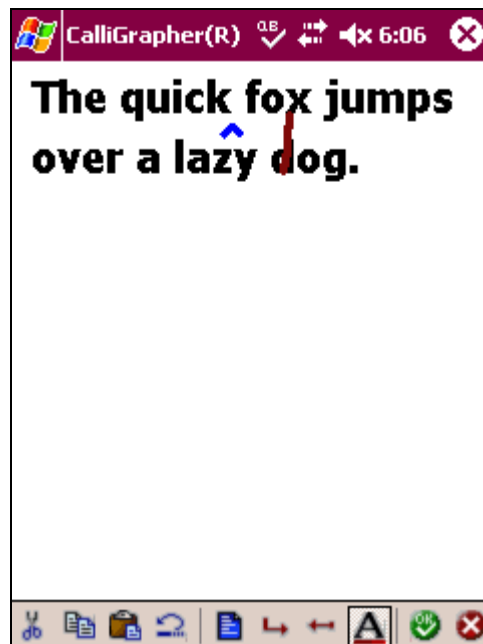
8. The word brown is selected.



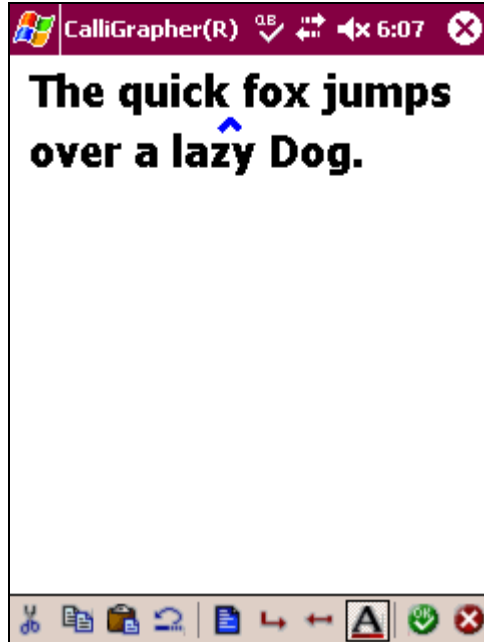
9. Now erase the word by drawing a single line from right to left. The result appears below:



10. To capitalize a letter, draw a single vertical line from the base of the letter whose case you wish to change to the top.



11. The result is as follows:



12. To close the Correction window and accept the edits, tap **ok**. Tap **x** to close the Correction window and reject your edits.

Tutorial Five: PenCommander

PenCommander technology adds a whole new dimension to CalliGrapher by allowing you to perform a wide variety of simple and complex tasks simply by writing them. No more tapping through endless menus and icons! This tutorial introduces you to some of the many things you can do using PenCommands:

1. Enter some text in a document, then write the word `all` and draw a circle around it.



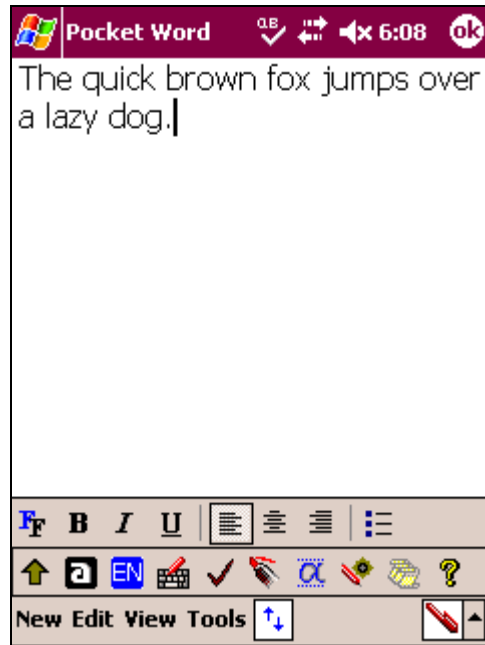
- The text is selected. Now write `cut` and draw a circle around it.



- The text is cut from the current document and placed in the Windows clipboard. To restore it, simply write `paste` and circle it.



- The text reappears:



Please refer to the sections *CalliGrapher Reference* and *PenCommander Reference*, below, for complete information on how PenCommander can revolutionize the way you use your PDA.

Part Three: CalliGrapher Reference
















This part explains how to use CalliGrapher's many features and how to customize the software to suit your individual needs and preferences.

















CalliGrapher Toolbar

CalliGrapher has a customizable toolbar that appears in the CalliGrapher panel. The default icons appear below.



The toolbar page of the CalliGrapher Settings dialog box allows you to select the buttons that should appear in the toolbar. You can choose 10 out of 36 possible buttons to be displayed; the table below lists the available buttons.

	Show/hide the CalliGrapher keyboard. Please refer to the <i>CalliGrapher Keyboard</i> section below.
	Show/hide the custom keyboard. Please refer to the <i>CalliGrapher Keyboard</i> section below.
	Open Configuration Manager. Allows you to change many settings such as adding and editing multiple configurations, each able to use a different recognition engine, dictionary, keyboard, ink color and ink width. You can also change other usability options, customize the toolbar, enable/disable orientation and recognition modes.
	Run PhatPad.
	Run PenCommander. Launches the PenCommand Editor. Please refer to the <i>PenCommander Reference</i> section below.
	Open Letter Shape Selector. Please refer to the <i>Letter Shape Selector</i> section below.
	Open the Correction Window to correct the selected text. Please refer to the <i>Correcting Text</i> section below.
	Open the Correction Window to correct all text. Please refer to the <i>Correcting Text</i> section below.
	Undo
	Cut
	Copy
	Paste
	Select all
	Insert tabulation
	Insert space

	Insert line feed
	Backspace
	Change case
	Create PenCommander command from the selected text.
	Turn CalliGrapher sounds on/off
	Turn recognition on/off
	Turn PenCommander on/off
	Select Recognition mode. There are four recognition modes available: Normal (a): Supports all kinds of writing (default) Capitals (A): Converts all writing to upper case Numeric (12): Only recognizes digits, punctuation, and selected letters (such as AM, PM, etc.) Internet (@): Will not insert any spaces, which is useful when writing an internet or email address.
	Select writing orientation. The arrow points perpendicular to the currently selected writing direction. You may choose from six possible orientations. NOTE: To enhance recognition accuracy, be sure to write and gesture in the selected direction.
	Select configuration. If more than one configuration is available, displays the list of configurations. If only two configurations are installed, will toggle between both. The configuration icon identifies the currently selected configuration.
	Show CalliGrapher Help
	Close CalliGrapher
	Escape key
	Delete key
	Navigation keys
	Run PenCommand (or display popup menu with the selected PenCommands)

You may enable or disable the CalliGrapher Toolbar using the **General** tab within the CalliGrapher Settings dialog.

CalliGrapher Keyboard

CalliGrapher includes a soft keyboard, which provides all of the functionality of a hardware keyboard.

There are two ways to open the CalliGrapher keyboard:

- ❖ Tap the Keyboard icon in the toolbar

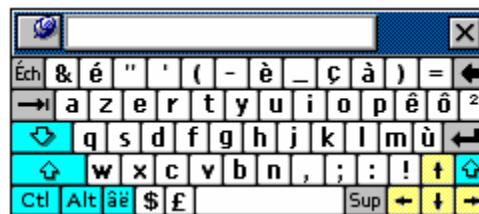
- ❖ Draw the Quick Correct gesture when no text is selected to open the Custom Keyboard.

If the CalliGrapher keyboard was invoked by tapping the Keyboard icon, the following CalliGrapher Keyboard appears:



You can drag the keyboard to anywhere on the screen. Simply tap the key of your choice. It will have the same effect as typing the same key using a built-in keyboard. If you are typing words, you will see a list of suggestions appear in the pull-down window at the top of the keyboard (if this option is selected in the *CalliGrapher Configuration* dialog box). This can help save time when typing common words.

If you change the CalliGrapher configuration while the keyboard is visible, the keyboard will automatically change to the layout selected for the new configuration. Shown below is the French keyboard:



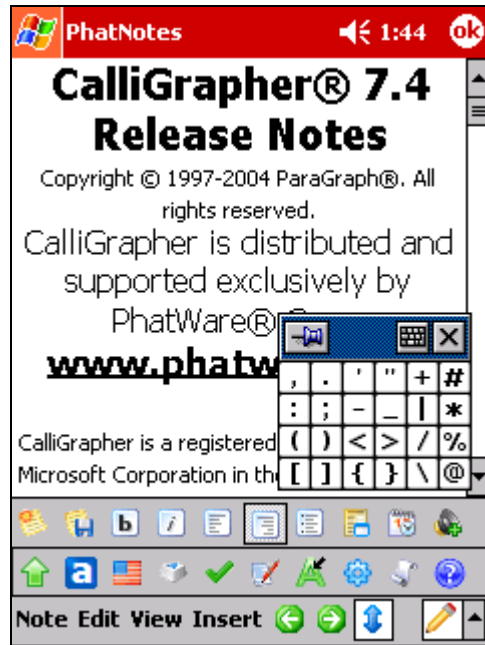
The keyboard disappears once you select a punctuation symbol unless you use the **Pin** button in the upper left corner to make it stay.

The special function keys (light blue) remain pressed until you press another key, with the exception of the Caps key, which remains pressed until you toggle it off.

This allows you to use other functions. For example, you could tap [ALT], which remains pressed, followed by [F] ([ALT] pops up after you press [F]).

You can perform standard calculations using the CalliGrapher Keyboard. Type in a mathematical expression followed by the equal sign (=) and see the result appear in the suggestion window (e.g. $23+7*8=$). To enter the result into the document, simply tap inside the suggestion window. Please refer to the *RiteCalc* section below for more details about the functions and limitations of the calculator feature.

In addition to entering text or numbers, you may need to use the CalliGrapher Custom Keyboard to add a punctuation symbol to text that has been already written. To open the Custom Keyboard use the Quick Correct gesture (please refer to the *Quick Correct Gesture* section below) with no text selected, or tap on the Custom Keyboard icon in the toolbar.




The topmost row of the Custom Keyboard window is not customizable and shows the following three buttons (from left to right):

- ❖ Pin button: The keyboard disappears once you tap a symbol button unless you use the **Pin** button to make it stay.
- ❖ The Keyboard button opens the full keyboard.
- ❖ Tapping the Close button in the upper right corner closes the CalliGrapher Custom Keyboard. Upon reopening, the keyboard will remember its last position.

Creating and Editing Text

When in Recognition Mode, CalliGrapher interprets your drawing on the screen as handwriting. CalliGrapher recognizes the handwriting and sends the results to the currently active application window. Single and double taps will still work, meaning you can access menus, icons, and windows while in Recognition Mode. When CalliGrapher is in Recognition Mode, the pen icon in the Windows taskbar is highlighted and the Input Method selector button is depressed.

Use one of the following methods to enter Recognition Mode:

- ❖ If CalliGrapher is not running, select **CalliGrapher** from the Input Method selector popup menu. Tap the Input Method button if CalliGrapher is selected as a current method but the button is not depressed and recognition mode is disabled.
- ❖ When on the Today screen and CalliGrapher is already running, tap the pen icon  in the Windows taskbar.
- ❖ Tap **CalliGrapher** in the Programs Dialog found in the Start menu.

You may select text while in Recognition Mode by following the instructions contained in the *Selecting Text* section below.

In addition to its remarkable recognition capabilities, CalliGrapher features some advanced editing tools.

Selecting Text

In Recognition mode CalliGrapher attempts to recognize any pen input as handwriting. Therefore, you need special means of telling CalliGrapher that you plan to select or drag text. There are two ways to do this:

- ❖ Tap and hold the stylus still for a moment until you hear a sound. At the sound, CalliGrapher suspends recognition activities, and your stylus may be used as usual. Drag the line across the text you wish to select, in the same way as you would with the Eraser tool.
- ❖ Draw a line across the desired text and then hold the pen or mouse for a moment. The desired block will be highlighted, and the line you have drawn to select the text will disappear.

Control Gestures

You may edit text either in the active application's window, or in CalliGrapher's own Correction Window. For information on using the Correction Window, please refer to the *Correction Window* section below.

To edit text in the active application's window, use control 'gestures', which are specially shaped strokes that signal CalliGrapher to perform the appropriate edit function.

You may use gestures for common operations such as [ENTER], [SPACE], and [BACKSPACE]. Many gestures are positional, meaning that their location on the screen determines the text affected by the gesture. If, however, the starting point of the gesture does not correspond to a specific place in a paragraph of the text, the desired action will be applied at the current cursor location.

You do not need to draw the arrows that appear on the gesture depictions below. They merely serve to illustrate the end point of the particular gesture. Gray arrows next to a gesture depict the proper method of drawing the gesture.

Return Gesture



This gesture is the functional equivalent of pressing [ENTER]. This action occurs at the current cursor location.

Space Gesture



This gesture is the functional equivalent of pressing [SPACE]. This action occurs at the current cursor location.

Tab Gesture



This gesture is the functional equivalent of pressing [TAB]. This action occurs at the current cursor location.

Backspace Gesture



Draw the line from right to left. This gesture is the functional equivalent of pressing [BACKSPACE].

Correct Gesture



This gesture only works outside the CalliGrapher Correction Window. It opens the Correction Window and copies the selected text into it. Holding the pen or mouse for a moment at the end of the gesture copies the entire document into the Correction Window. This operation is particularly useful for spell checking documents.

For more information on correcting text, please refer to the *Correcting Text* section, below.

Quick Correct Gesture



Use this gesture to:

- ❖ Add a selected word to the dictionary
- ❖ Open the Correction Window (see the following section)
- ❖ If no text is selected, the Quick Correct gesture opens the CalliGrapher Keyboard in punctuation layout (see above).

Case Change Gesture



Use this gesture over any letter in the Correction Window to change its case. Begin the gesture over the desired letter or symbol, and draw it straight upward.

In other applications, this gesture changes the case of a selected word or block of text. It can also be used to change the case of the letter immediately after the cursor.

Configuration Gesture



This gesture changes the active configuration. If CalliGrapher has only one configuration, the gesture has no effect. If two configurations exist, the gesture toggles between the configurations. In case of more than two configurations, the gesture either selects a configuration that is next in the list or displays the drop-down menu if the corresponding option is selected in CalliGrapher settings.

Undo Gesture



Undoes the previous action. It is the equivalent of pressing [CTRL]+[Z] in most Windows applications.

Copy Gesture



Copies selected text to the Windows clipboard while leaving the original text in place. It is the equivalent of pressing [CTRL]+[C] in most Windows applications.

Cut Gesture



This gesture removes selected text from the current application and places it in the Windows clipboard. It is the equivalent of pressing [CTRL]+[X] in most Windows applications.

Paste Gesture



This gesture copies text previously placed in the Windows clipboard into the current application while leaving the text available in the clipboard for repeat pasting, if desired. It is the equivalent of pressing [CTRL]+[V] in most Windows applications.

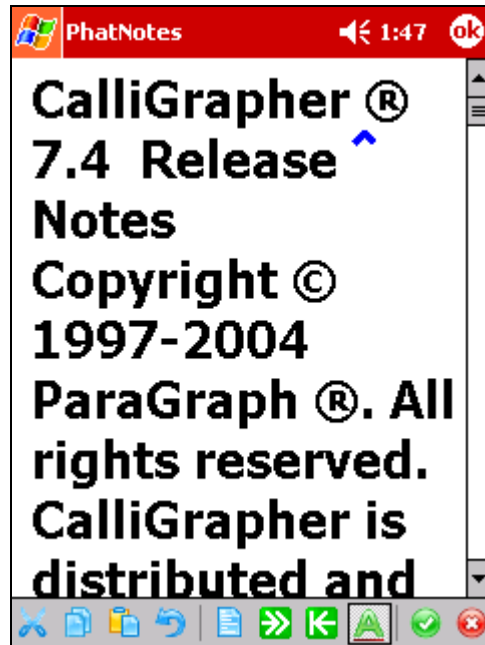
Correcting Text

CalliGrapher provides convenient means for text correction both in its own Correction Window and directly in other applications' windows. Use the 'Correct' gesture to copy selected text and 'Correct All' to copy all document text to the Correction Window.











The Correction Window allows you to use positional gestures, add or remove text, and directly overwrite letters.

Correction Window

When invoked, the Correction Window appears (see picture below) with your selected text copied into it.



The Correction Window toolbar has several buttons that aid you in correcting your text:

	Cut
	Copy
	Paste
	Undo/Redo: Tapping this button alternates between undoing and redoing the previous action.
	Select All: Highlights all the words and letters in the Correction Window.
	Spacebar: Inserts a space at the cursor position.
	Backspace: Deletes a character to the left of the cursor position.
	Spell-checker: Highlights all words that do not appear in CalliGrapher's internal dictionaries. This is useful for spell checking and finding non-standard terms and jargon.
	Record Changes (OK): When you are finished correcting the selected text, tapping this button places the corrected text back into your document and closes the Correction Window.
	Close Correction Window (Cancel): Click this button to close the Correction Window. You will lose all changes.

Overwriting Text

You may correct words by writing the correct letter directly on top of the misspelling, as shown below:

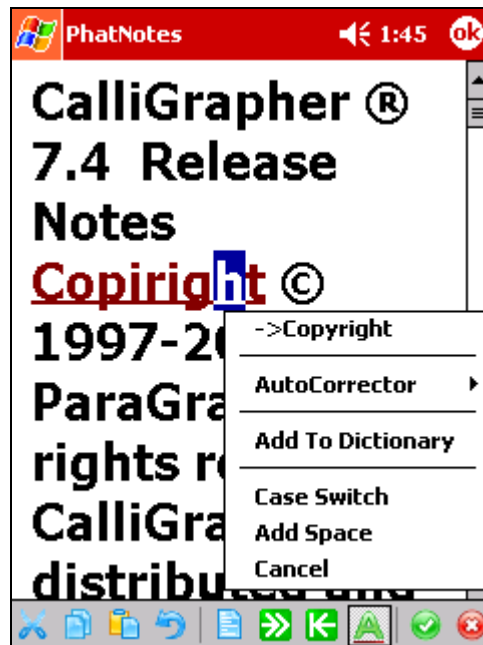
Corvrect Word before correction

Corvrect Overwriting the misspelling

Correct Corrected word

Correction Window Pop-Up Menus

The Correction Window contains different types of context menus. Tapping the cursor when text is not selected brings up the Word menu. A single tap on the cursor on a word that is selected brings up the Selected Text menu. Double-clicking on an empty area brings up the Non-Text Menu.



Word Menu

- ❖ **Alternative Words:** This part of the menu lists recognition alternatives or words suggested by the spell-checker.
- ❖ **AutoCorrector:** You can add a word from the list of suggested alternatives to the Auto Corrector list found in the Configuration Manager. See the *Auto Corrector* section below.

- ❖ **Add To Dictionary**: Adds the current word to the user dictionary. This menu item displays when the currently selected word is absent from both the user and main dictionaries.
- ❖ **Case Switch**: changes capitalization of the selected character
- ❖ **Add Space**: adds a space in front of the selected character

Selected Text Menu

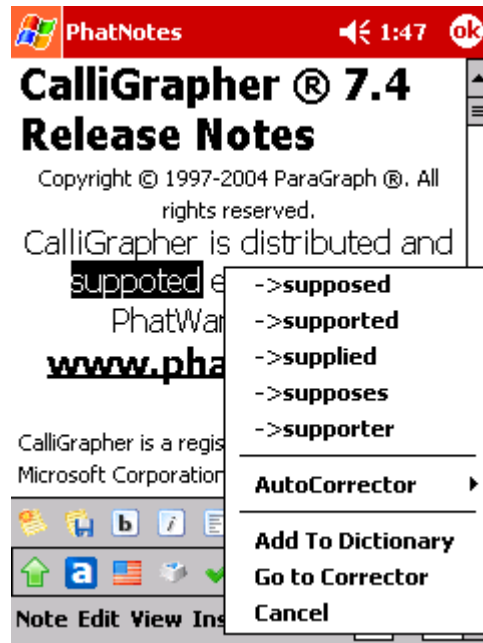
- ❖ **Delete Selected**: removes selected text and replaces it with a space
- ❖ **Replace Selected with Space**: inserts a space in place of the selected text
- ❖ **Case Switch**: changes the capitalization of the whole selection
- ❖ **Copy Selected**: copies the selected text to the clipboard
- ❖ **Paste**: inserts the clipboard contents in place of the selection

Non-text Menu

- ❖ **Erase All**: clears the Correction Window
- ❖ **Undo/Redo**: restores text to its state before current correction
- ❖ **Copy All**: copies contents of the Correction Window to the clipboard
- ❖ **Paste**: inserts clipboard contents in the Correction Window

Adding Words to the User Dictionary

If a word is properly spelled but not found in the main or user dictionaries, you may add the word to the user dictionary by selecting the word and using the Quick Correct gesture. In this case the CalliGrapher pop-up menu will have an **Add to Dictionary** option. Choose it and the selected word will be added to the dictionary. (If the word is already in the dictionary, this menu item will **not** appear.) You can also go to the Correction Window or add a new word to the Auto Corrector Word List this menu. See the *Auto Corrector* section below.



Using the Spell Checker

To spell check part of a document, select the desired text and draw the Correct gesture to launch the Correction Window containing your selected text. Make sure that the **Highlight Non-dictionary Words** button is active. Words not in the CalliGrapher dictionaries appear highlighted and underlined. Make the required corrections and then press the **Record Changes** button (described in the *Correction Window* section above) to insert the corrected text back into the document.

To spell check the whole document, draw the Correct All gesture or tap on the **Correct All Text** button to bring all the text in the document to the Correction Window.

RiteCalc

RiteCalc seamlessly integrates a basic calculator into CalliGrapher's recognition functions. When using Recognition Mode, simply enter a formula as a single sentence with the syntax:

<operand1> <operation> <operand2>...=

where <operand1> and <operand2> are numbers, and <operation> is the function being performed. You may use multiple terms with the above syntax in one formula (nested operations enclosed in brackets are not allowed). Valid operands include any whole or decimal number, with up to two digits after the decimal point and seven digits before it.

RiteCalc calculates the result using the standard mathematical hierarchy: multiplication before division before addition before subtraction. For example $2*3+5=$ will yield 11 ($2*3=6$, $6+5=11$).

Valid operations are:

- ❖ Addition: +
- ❖ Subtraction: -
- ❖ Multiplication: * or x.
- ❖ Division: /, :, or ÷

To use RiteCalc, simply write or type an equation using the CalliGrapher keyboard:

$$32.6 + 74 =$$

The text will appear in your application as:

32.6+74= 106.60

PenCommander

PenCommander technology allows you to perform many functions (PenCommands) such as editing or inserting text, opening applications, and virtually any function by simply writing a word command and drawing a circle around it. Please refer to the table below for a list of pre-recorded PenCommands included with CalliGrapher 7.

In addition to the pre-recorded PenCommand commands, you may create your own. These may be simple or complex. Please refer to the *Part Five: PenCommander Reference* section below for details on creating your own PenCommands.

You may also embed the Text Only PenCommands (see table below) in your writing, just as you do with control gestures.

List of CalliGrapher PenCommands

The following table lists the PenCommands included with CalliGrapher 7. They are supplied mostly as samples to become the basis for your own set of PenCommands.

NOTE: Some of the provided PenCommands may not work in some text fields and applications.

PenCommand Name	Function
Text Substitution PenCommands	
addr	Types in a sample address.
btw	Types in " <i>by the way</i> ".
e	€

PenCommand Name	Function
sign	Inserts sample signature information.
smile	: -)
sinc	Types " <i>Sincerely Yours</i> ", current date and time.
Internet Support	
com	Types http://www..com and sets the cursor between the dots.
edu	Types http://www..edu and sets the cursor between the dots.
ftp	Types ftp://ftp.
ie	Starts Pocket Internet Explorer application.
mail	Starts Inbox (Pocket Outlook Mail) application.
msg	Starts MSN Messenger application on Pocket PC 2002.
org	Types http://www..org and sets the cursor between the dots.
www	Types http://www.
Date and Time	
date	Types in the current date using the current locale settings.
time	Types in the current time using the current locale settings.
Text Edit PenCommands	
all	Select all.
bold	Changes the style of the selected text to bold ([CTRL]+[B]). <i>Not supported by Pocket Word on Pocket PCs.</i>
copy	Copies the selected text to clipboard([CTRL]+[C]).
cut	Cuts the selected text to clipboard ([CTRL]+[X]).
find	Finds text [CTRL]+[F].
ital	Changes the style of the selected text to <i>italic</i> ([CTRL]+[I]). <i>Not supported by Pocket Word on Pocket PCs.</i>
paste	Pastes data from the clipboard ([CTRL]+[V]).

PenCommand Name	Function
stat	Displays statistics of the selected text.
under	Changes the style of the selected text to <u>underline</u> ([CTRL]+[U]). <i>Not supported by Pocket Word on Pocket PCs.</i>
undo	Undo ([ALT]+[BKSP]). <i>Not on pocket PCs.</i>
Application Launch PenCommands	
calc	Starts Windows Calculator program.
cln	Starts Calendar application.
ex	Starts Pocket Excel application.
read	Starts Microsoft Reader application.
run	Prompts you for a program name, then runs that program.
sol	Starts Solitaire game.
task	Starts Tasks application.
word	Starts Pocket Word application.
CalliGrapher-related PenCommands	
clip	Places clipboard contents into string #9.
cor	Opens the Correction Window (equivalent to the Correct gesture).
lss	Starts Letter Shape Selector.
key	Show/hide CalliGrapher keyboard.
ck	Show/hide CalliGrapher Custom keyboard.
tb	Show/hide CalliGrapher toolbar.
opt	Opens the CalliGrapher Options dialog.
spell	Selects all text and opens the Correction Window.
RecMode	If a numeric parameter is used, selects the specified recognition mode (0 - Normal, 1 - Capital, 2 - Numeric, 3- Internet). If used without a parameter, selects the next recognition mode.

PenCommand Name	Function
RecDir	If a numeric parameter is used, selects the specified writing direction. If used without a parameter, selects the next recognition direction.
cfg	Selects the specified configuration, or if a configuration name is not present, selects the next configuration in the list.
ScrMode	<p>Changes the screen orientation. If a numeric parameter is used, selects the specified orientation (0 - Portrait mode, 1 - Right-handed landscape mode, 2 - Upside-down portrait mode, 3 - Left-handed landscape mode), otherwise rotates the screen 90 degrees clockwise.</p> <p>This command is only supported on the latest models of Pocket PC 2003 that natively support landscape mode. Some older devices also could be upgraded to the latest version of the Microsoft Windows Mobile software that supports screen rotation. If you are not sure whether your Pocket PC supports landscape mode, contact the manufacturer of the device.</p>
Math functions (brings up a math function window with the result)	
pow	Brings N to the power of P, where N is the first number in the selected text and P is the second one.
root	Calculates the square root of N, where N is the number in the selected text.

Part Four: Customizing CalliGrapher

This section describes how to set CalliGrapher to suit your individual needs and preferences. There are several ways to customize CalliGrapher: Input Settings and the Configuration Manager, from which you can set multiple CalliGrapher configurations and other CalliGrapher Settings such as customizing your toolbar and enabling/disabling your orientations and recognition modes.

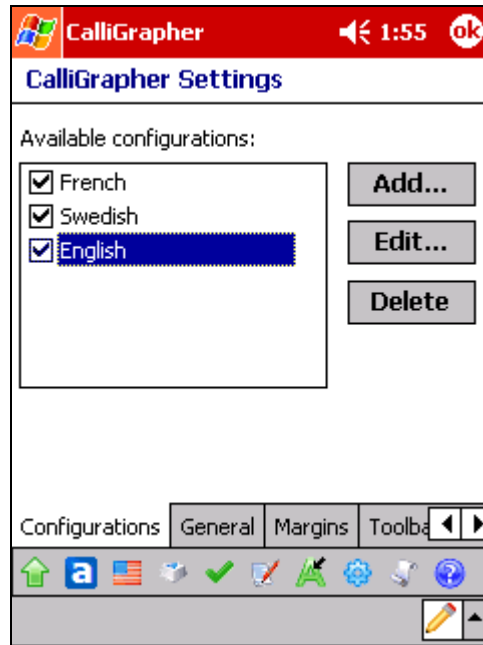
Configuration Manager

To open the Configuration Manager, either tap on the **Configuration Manager** icon from with the **Start/Programs** dialog or with CalliGrapher running, tap on the **Configuration Manager** icon in the toolbar. You can also tap on the **Options** menu item, and then tap on the **Options** button with **CalliGrapher** set as the Input method. The **CalliGrapher Settings** window appears. It has the following tabs:

- ❖ **Configurations:** Allows you to create, modify, and delete multiple CalliGrapher configurations. For each configuration you are able to customize your writing recognition settings, dictionaries, keyboard, and line thickness and color.
- ❖ **General:** General CalliGrapher options tab.
- ❖ **Margins:** Allows you to set CalliGrapher recognition margins (in pixels).
- ❖ **Toolbar:** Allows you to customize the toolbar to gain quick access to your most commonly used commands.
- ❖ **Buttons:** Allows you to assign PenCommands to Pocket PC hardware buttons.
- ❖ **Advanced:** This tab allows you to enable and disable various handwriting orientations and recognition modes.
- ❖ **About:** Provides information about your installed CalliGrapher version.

Configurations Tab

The **Configurations Tab** shows your current configurations. From this tab you can add, edit or delete the configurations.



To add a new configuration, tap on the **Add** button. The **New Configuration** window appears. From here you can type or write a new configuration name and use default configuration settings for your new configuration, or copy settings from an existing configuration.



Calligrapher Configuration

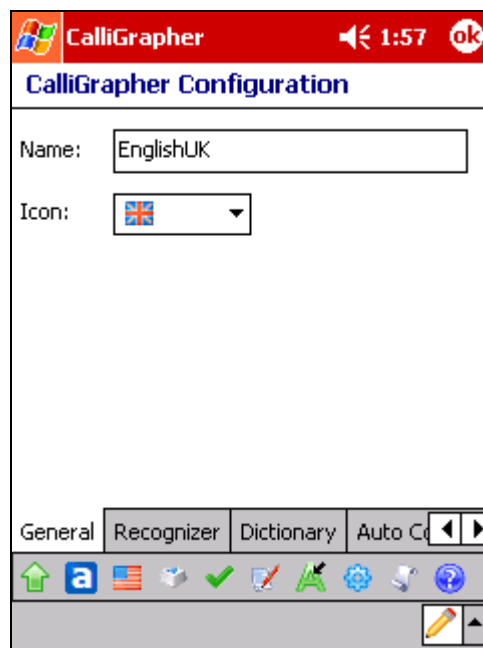
To edit an existing configuration, tap the **Edit** button. This will bring up the **CalliGrapher Configuration** window, consisting of the following tabs:

- ❖ General: Change the configuration name and its corresponding icon.
- ❖ Recognizer: Select the recognition engine and customizes the way CalliGrapher recognizes your writing.
- ❖ Dictionary: Select main and user dictionaries to be used by recognizer and spell checker when this configuration is selected.
- ❖ Auto Corrector: Enables the auto corrector feature. You can also add words to the auto corrector list.
- ❖ Keyboard: Select the layout of the main keyboard and select the keys to use for the Custom Keyboard.
- ❖ Ink: Customize the line thickness and color.

The following section describes each tab in detail.

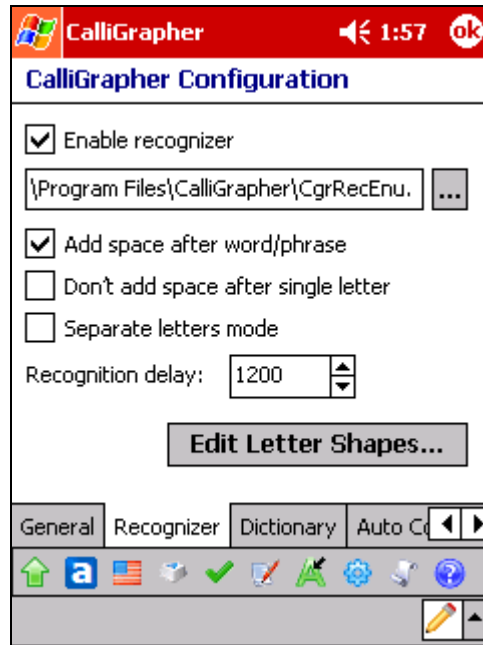
General Tab

From here you can change the name of the configuration and select the corresponding icon from the drop down menu. Once this configuration is saved, you can easily activate the configuration by selecting this icon from the toolbar.



Recognizer Tab

The Recognizer tab allows you to customize how CalliGrapher recognizes your handwriting. The recognizer is the software module that actually recognizes your handwriting. By selecting different recognizers, you can customize the way CalliGrapher recognizes your writing. For example, if you write in different languages, you may wish to have different recognizers available for use. Contact PhatWare to learn about the availability of different recognizers.

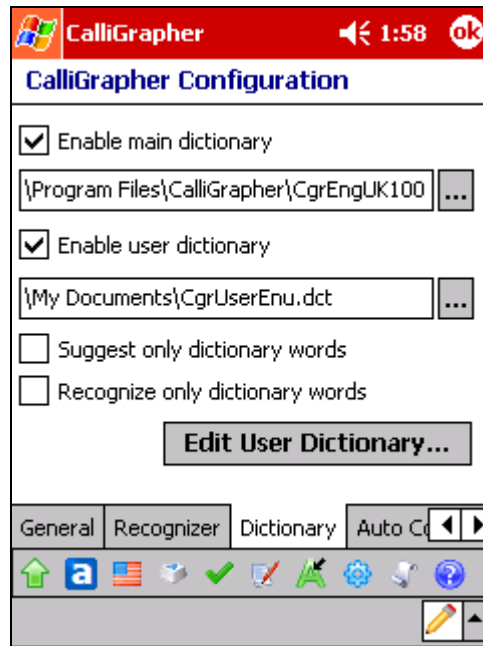


- ❖ **Enable recognizer:** Check this box to enable the recognizer, and clear it to disable. You may select different recognizers by either typing in the full path or tapping the **Browse (...)** button and using the standard Windows interface to locate your desired recognizer.
- ❖ **Add space after word/phrase:** tells CalliGrapher to insert a space after each recognized word or fragment.
- ❖ **Don't add space after single letter:** check this box if you do not want to add a space after a single letter. This box is disabled if the *Add space after word/phrase* options is not checked.
- ❖ **Separate letters mode:** This mode forces the recognizer to recognize only words written in separate letters. Connected letters will not be recognized if writing in script.
- ❖ **Recognition delay:** This option determines how long CalliGrapher should wait for you to cross your 't's and dot your 'i's before sending ink to recognition. If CalliGrapher recognizes your handwriting into typed text too quickly, it might be confusing because your writing might disappear even before you finished writing a single word. Also, you would not have enough time to write multi-stroke letters (such as crossing the letter 't'). Therefore, setting an appropriate delay allows you to write comfortably. We recommend shortening the recognition delay as you become proficient with CalliGrapher.
- ❖ Click on the **Edit Letter Shapes** button to go to the **Shape Selector**. For more information on how to use the Shape Selector, see the *Shape Selector* section below.

Dictionary Tab

While CalliGrapher is running, it may use up to two dictionaries to increase recognition accuracy. Dictionaries are files that store lists of words. Thus, the dictionaries help the recognizer software transform your handwriting into typed text. The main dictionary is part of the CalliGrapher package and contains tens of thousands of frequently used words. If you write in different languages, you may wish to use a main dictionary customized to

the language(s) you use. Please contact PhatWare Corp. to find out what main dictionaries are available.



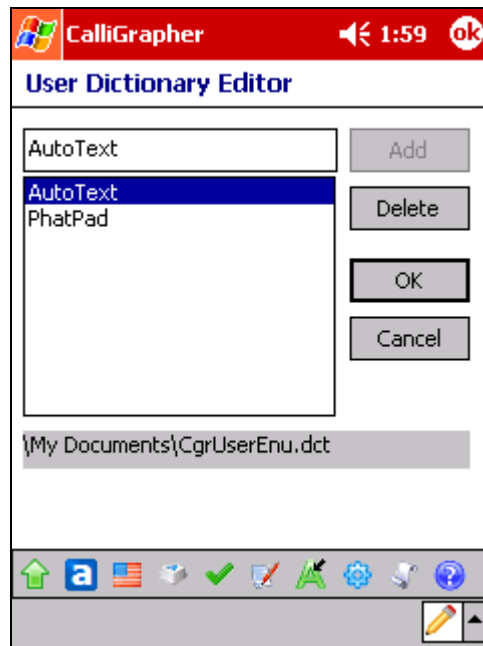
You may select any valid CalliGrapher dictionary file as the main dictionary. At this time, PhatWare Corp. is the only source of main dictionary files. Note that you cannot edit dictionaries supplied with CalliGrapher.

- ❖ **Enable Main Dictionary:** The **Main Dictionary** box enables the main dictionary. You may select different main dictionaries either by typing in the full path to the desired main dictionary, or by tapping **Browse** and using the standard Windows interface to locate your desired main dictionary.
- ❖ **Enable User Dictionary:** The **User Dictionary** box enables the user dictionary. The User Dictionary performs the same function as main dictionaries. However, the user dictionary is fully created and maintained by the user. You may select different user dictionaries either by typing in the full path to the desired main dictionary, or by tapping **Browse (...)** button and using the standard Windows interface to locate your desired user dictionary. The default location of the user dictionary is in the **My Documents** folder.

NOTE: To create a new user dictionary, you must enter the desired name for the new dictionary.

- ❖ **Suggest only dictionary words:** This mode will only make suggestions that are in the currently active dictionary(s).
- ❖ **Recognize only dictionary words:** This mode will only allow your handwriting to be interpreted as words found in the currently active dictionary(s). If a user writes a word that is not in the dictionary it will be substituted with the closest dictionary word.
- ❖ The **Edit User Dictionary** Button allows you to convert lists of words into custom dictionaries for use with CalliGrapher. It may be also used for converting user dictionaries created by the previous version of CalliGrapher to the new format.

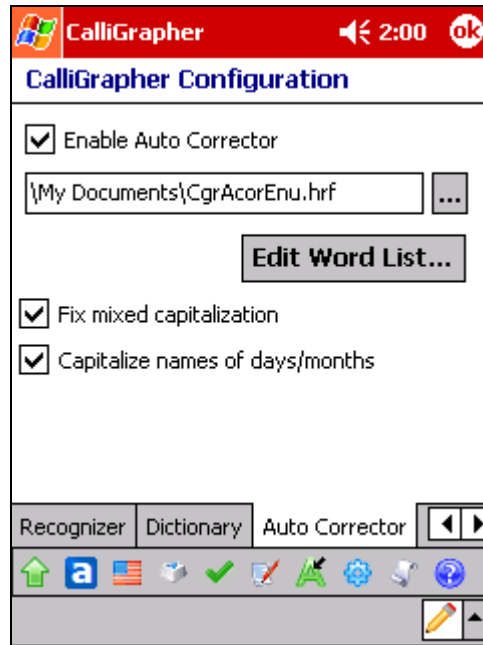
Tapping the button allows you to edit the user dictionary via the following window:



To add a word, type it in the field on the top of the window and tap **Add**. To remove a word, select it from in list of words in the bottom field and tap **Delete**. Save your changes by tapping **OK**, or ignore them by tapping **Cancel**.

Auto Corrector Tab

The **Auto Corrector** feature improves quality of handwriting recognition by automatically replacing an incorrectly recognized or misspelled word with a specified alternative. Auto Corrector searches its word list for each recognized word and, if found, replaces it with the specified alternative (*Replace With*) word. Additionally, you can add new words to the Auto Corrector word list using the **Quick Correct** popup menu if Auto Corrector is enabled. See the *Correction Window Pop-Up Menu* section above.

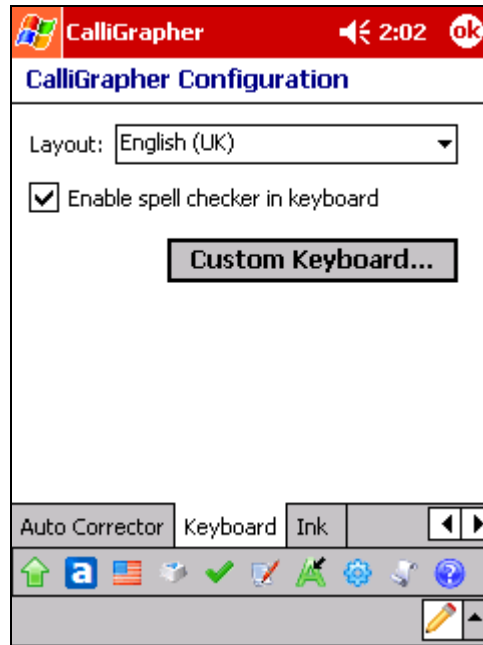


Use this dialog box to modify Auto Corrector settings.

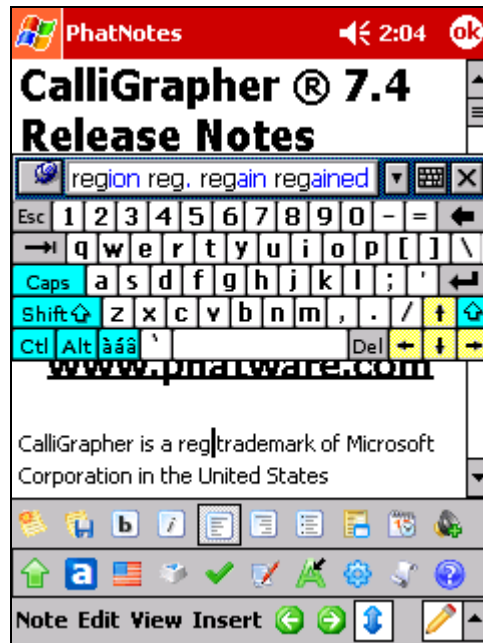
- ❖ Enable Auto Corrector: Check this box to enable Auto Corrector.
- ❖ Enter the desired name for the Auto Corrector word list into the provided space. Tap on the [...] button to browse for an existing file. If the specified file does not exist, CalliGrapher Configuration Manager will prompt if you want to create a new file when you tap OK.
- ❖ Tap the **Edit Word List** button to view/modify the Auto Corrector word list. See the *Auto Corrector* section below.
- ❖ Fix mixed capitalization: Check this box to fix words with mixed capitalization.
- ❖ Capitalize names of days/month: Check this option if you want to always capitalize names of days and month (*English language only*).

Keyboard Tab

Use the Layout drop-down box to choose between 13 pre-defined keyboard configuration layouts for 11 Western European languages.



Checking the **Enable spell checker in keyboard** box allows a list of suggested words to appear in a small window above the keyboard as you type.



Tapping on the **Custom Keyboard** Button brings you to the **CalliGrapher Keyboard Editor** window. Tap on a character in the list of available characters and drag it onto the keyboard shown at the top of the dialog. You can also select a button in the layout and drag it to a different position - when you release the pen the two buttons will swap positions.



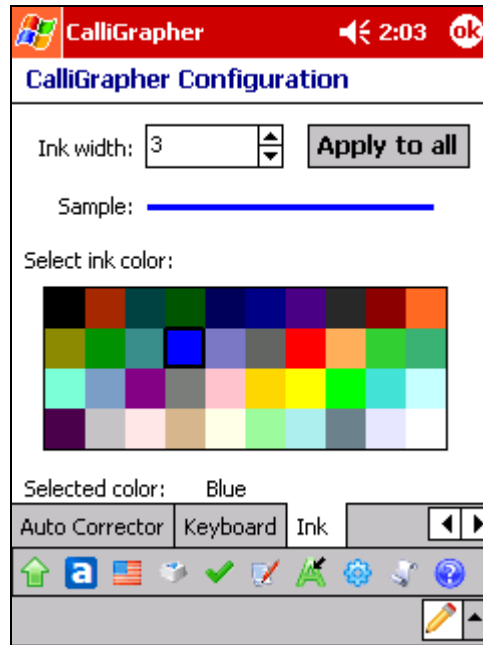
This may help you in situations in which you are having difficulties because of incorrect recognition of certain characters. The custom keyboard can be easily accessed with pen gesture or from the toolbar.

Tap the **Apply to all** button if you want to use the same custom keyboard layout for all the configurations.

Tap the **Reset** button to revert back to the default custom keyboard.

Ink Tab

The Ink tab allows you to assign custom properties to your CalliGrapher Recognition mode electronic 'ink'.

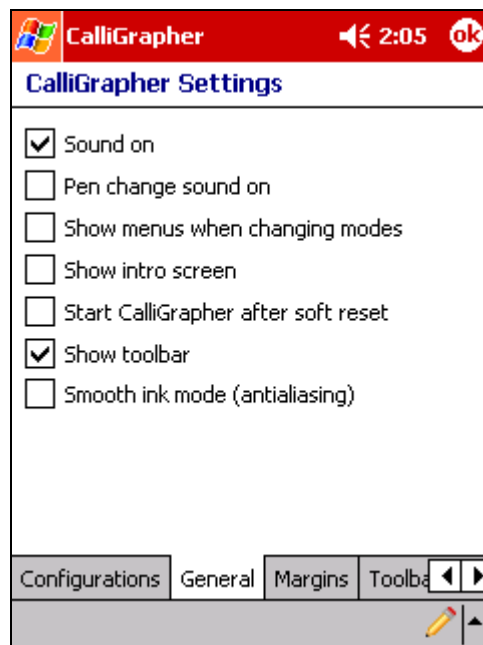


Tap the up and down arrows in the **Ink width** field to select the desired width of your electronic 'Ink'.




By tapping an **Ink Color** you can select the desired color of the ink.

Tap the **Apply to All** button to apply ink settings to all the existing configurations.

General Tab



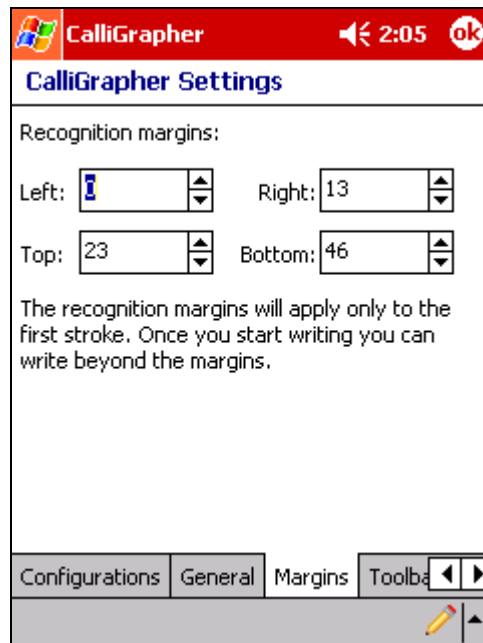
The General tab contains check boxes for various options:

- ❖ Sound on/Pen change sound on: Controls CalliGrapher sounds.
- ❖ Show menus when changing modes: Allows a list of menu options to appear when tapping on the *Screen Orientation* , *Recognition Mode* , or *Configuration*  icons.
- ❖ Show intro screen: Allows the appearance of the Introduction Screen at CalliGrapher startup.
- ❖ Start CalliGrapher after soft reset: If checked, CalliGrapher will be started and set as the default input method after you reboot your device.
- ❖ Show toolbar: This option controls the display of the CalliGrapher toolbar when CalliGrapher is active.
- ❖ Smooth ink mode (antialiasing): Allows for a smoother appearance to your handwriting.

Note: This feature requires additional CPU power and works reliably on Pocket PC with XScale 300MHz or faster. Not recommended for slower devices.

Margins Tab

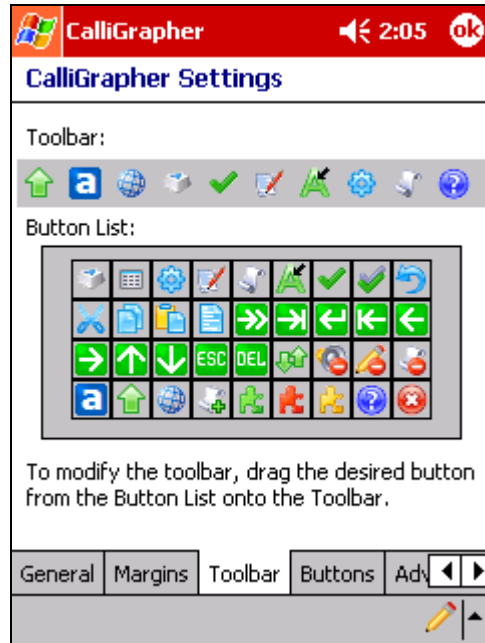
The **Margins Tab** allows you to set left, right, top, and bottom margins. If you start moving pen outside the specified margins CalliGrapher will ignore pen movements. However, after you begin writing within the margins, you can continue writing anywhere on the Pocket PC screen.






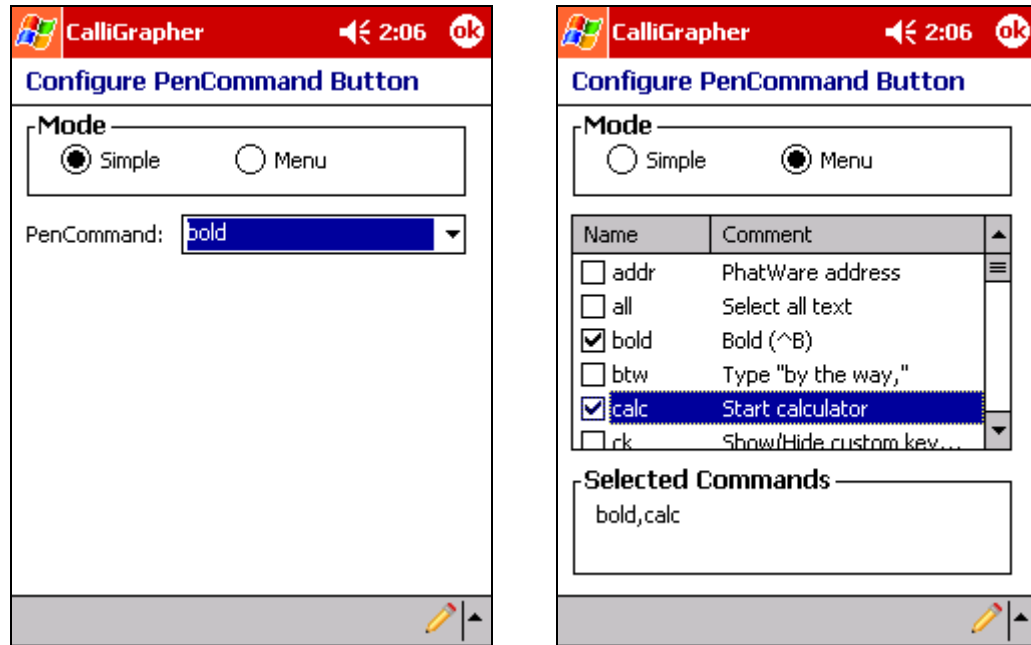
Toolbar Tab

The **Toolbar Editor** window allows you to customize CalliGrapher Toolbar. To modify the toolbar just tap on a button in the list of available buttons and drag it onto the toolbar at

the top of the dialog. The description of the button you selected will appear below the toolbar. When you release the pen over a button, the button will be replaced by the one you were dragging.



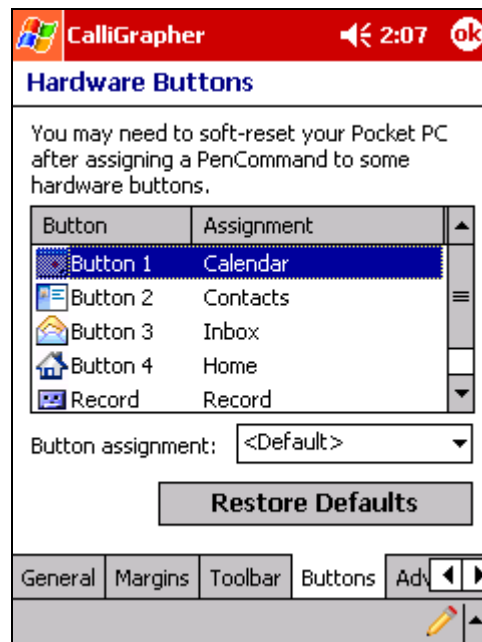
The three PenCommand buttons (  ) require you to specify additional parameters before they can be used. When you select one of the three PenCommand buttons the **Configure** button appears at the bottom of the available buttons list. Tap the button to display the Configure PenCommand Button dialog where you can select one or more PenCommands for the button, either in *simple* or *menu* mode.



Buttons Tab

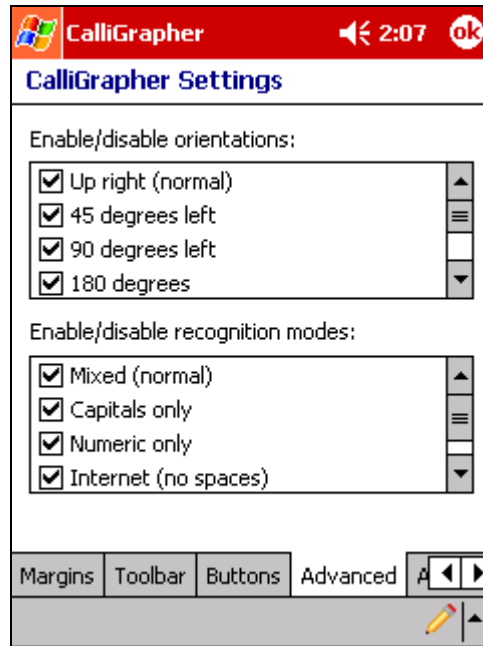
The Hardware Buttons page allows you to assign your favorite PenCommands to the hardware buttons. To assign a PenCommand to a button, select the button in the list and then select the command from the **Button** assignment drop-down box. Select <Default> to restore the original action of the button. Tap the **Restore Defaults** button to reset all the hardware buttons to their default actions.

Note: On some devices the changes made to the hardware buttons configuration may become active only after a soft reset.



Advanced Tab

This window allows you to disable the screen orientations and recognition modes that you never use by deselecting the corresponding checkbox. When disabled, the modes do **not** appear in the modes menus and they also get skipped when cycling through by pressing mode buttons on the toolbar.

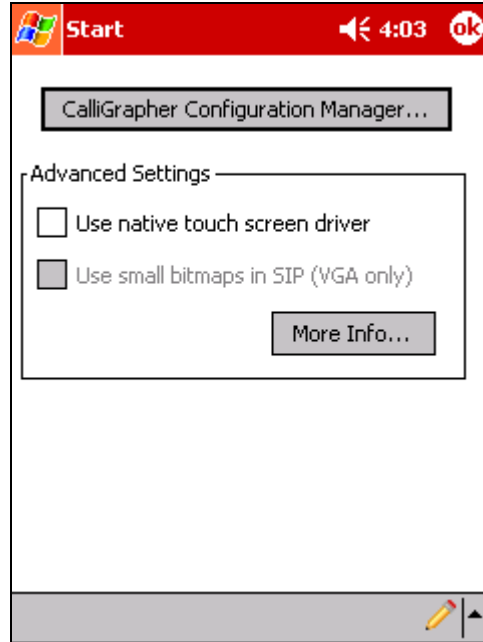


About Tab

This window shows information on your currently loaded version of CalliGrapher.

Compatibility Settings

To address possible compatibility issues with third-party applications that use many system resources, CalliGrapher provides two new options accessible via the Control Panel. Select the **Start/Settings** menu command on your Pocket PC, switch to the **System** tab, and tap the CalliGrapher icon. The CalliGrapher **Advanced Settings** dialog box will appear (see below).



Use native touch screen driver

Note: If this option is disabled, the native Pocket PC touch screen driver is not compatible with CalliGrapher.

If you are experiencing any compatibility issues with CalliGrapher's touch screen driver, you can use the native Pocket PC touch screen driver instead. To switch to the native driver, check the **Use native touch screen driver** box, then soft-reset your Pocket PC. To switch back to the CalliGrapher touch screen driver, uncheck this box.

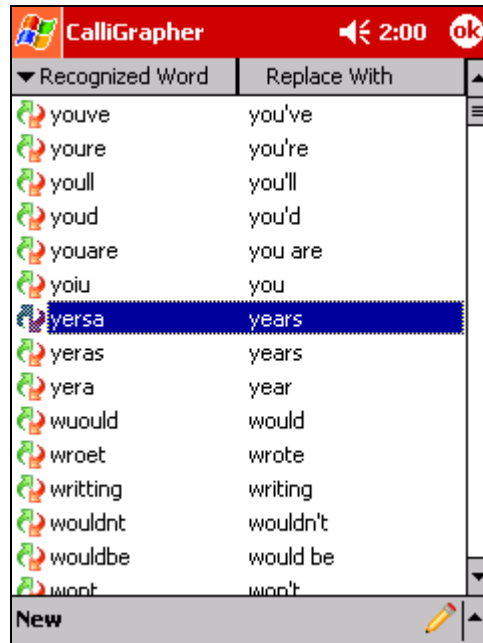
Use small bitmaps in SIP (VGA only)

Note: This option is available only on Pocket PC devices with full-VGA screens.

By default CalliGrapher uses hi-resolution bitmaps in the input panel (SIP) toolbar on full-VGA Pocket PC devices. Pocket PC system modules such as Blue Tooth, Wi-Fi, Today Screen plug-ins, all input methods including CalliGrapher, etc., are running in the workspace of the same system process. If you have too many system modules enabled at the same time (especially if you use third-party today-screen plug-ins that are known to utilize significant GDI resources), the system process might hit its limit, and some modules will fail to load (note that it is a system hard-coded limit and it does not depend on the available memory). You can reduce the size of system resources required by CalliGrapher's SIP by checking the **Use small bitmaps in SIP** box.

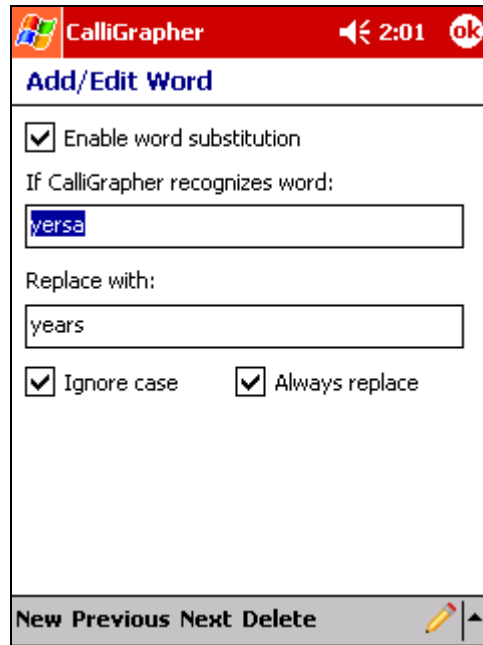
Auto Corrector

You can modify the Auto Corrector list found in the Configuration Manager. From the CalliGrapher Configuration Window, go to Auto Corrector Tab and tap the Edit Word List button. See the *Auto Corrector Tab* section above.



To add a new word

- ❖ In the Auto Corrector Word List window, tap New in the toolbar.
- ❖ In the Add/Edit Word dialog box, enter the If CalliGrapher recognizes word and the Replace with words in the provided spaces. Both words can be up to 40 characters long.
- ❖ To add another word tap New in the toolbar again or tap OK when finished.



To edit an existing word

- ❖ Double-tap on the desired word in the Auto Corrector Word List.
- ❖ Make any necessary modifications in the **Add/Edit Word** dialog box.
- ❖ Tap **Previous** or **Next** to browse the Word List, or tap **OK** when finished.

To delete a word

- ❖ Double-tap on the desired word in the Auto Corrector Word List.
- ❖ Choose the **Delete** toolbar menu in the **Add/Edit Word** dialog box.
- ❖ Confirm the deletion when prompted.
- ❖ Alternatively, you can temporarily disable unwanted word replacement, by unchecking the **Enable word substitution** box.

To add a new word using the Quick Correct menu

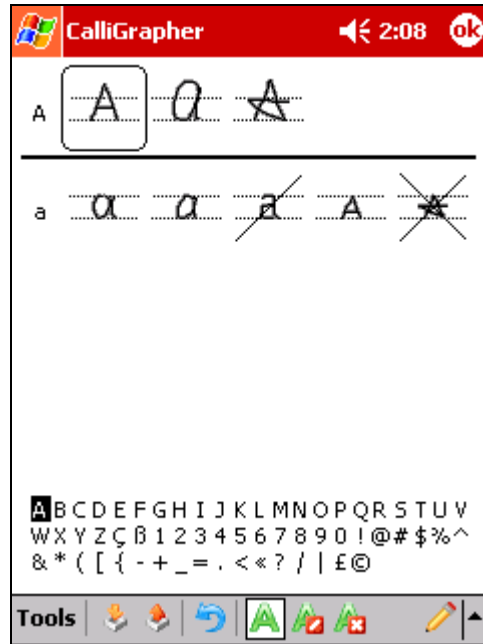
Alternately, you can add a new word directly from the **Quick Correct** menu. See the *Correction Window Pop-Up Menu* section above.

- ❖ Select the incorrectly recognized word in the text document and use the Quick Correct gesture (down and up stroke; see the *Quick Correct Gesture* section above for more information) to bring up the popup menu with possible alternatives.
- ❖ If you find a correct alternative in the menu, you can select it to replace the selected word in the text document.
- ❖ If you want to add the replacement word to the **Auto Corrector** word list, select the desired alternative from the **Auto Corrector** submenu. If CalliGrapher's recognition




engine returns the same word again, it will be replaced with the specified alternative while handwriting is converted to the digital text.

Shape Selector

The Shape Selector allows you to tailor CalliGrapher recognition to suit your unique writing style. This helps to improve both the speed and accuracy of recognition. You are able to modify shapes separately for each installed language.



You can access the Shape Selector by tapping on the **Configuration Manager** icon in the toolbar, then tapping the **Edit** button for your desired configuration, then going to the **Recognizer** tab and tapping on the **Edit Letter Shapes** button. To edit letter shapes for the currently selected configuration, you can tap the Letter Shape Selector button on the toolbar or use the */s* pen command.

The Shape Selector screen presents various means of writing numbers, letters, and common symbols. For each letter, number, or symbol, tap each possible variation to see the animated writing pattern and check the appropriate icon in the toolbar to tell CalliGrapher if you use that variation **Often** , **Rarely** , or **Never** . You may tap the letter, number, or symbol you wish to customize, or you may use the scroll arrows to move through the list. Close Letter Shape Selector when finished. Your settings are automatically saved.

You can export and import current writing profiles to and from files using **Tools>Import** and **Tools>Export** menu items or tapping on either icon in the toolbar. The writing profile files have .lss extensions.

If you accidentally enter erroneous settings, you can tap **Tools>Use Original Settings** or the toolbar icon to restore the factory defaults.

Letter shape settings are stored separately for each configuration. Depending on the language of the recognition engine, letter shapes may appear differently.

Part Five: PenCommander Reference

PenCommander allows you to launch pre-recorded, user-defined commands (PenCommands). PenCommander features are available only while CalliGrapher is in Recognition mode.

What is a PenCommand?

A PenCommand is a sequence of instructions that are performed when a command is called. Each PenCommand has a name. The name can be any sequence of ASCII symbols up to 11 symbols. It cannot start with '#' or '*'. Examples of correct PenCommand names include: "select", "address", "sel", "phones", "spell", "date", "news", "mail", and "a23". Incorrect names include: "my_home_address" (too long), "#account" (starts with '#'), and "**test" (starts with '*'). PenCommand Names are case insensitive. For example, "BTW", "Btw" or "btw" are all recognized as the same name.

There are various categories of elementary instructions that can be used to build PenCommands. For example, "type predefined text", "start program", "delay execution", "call user defined function", "open CalliGrapher's menu" etc.

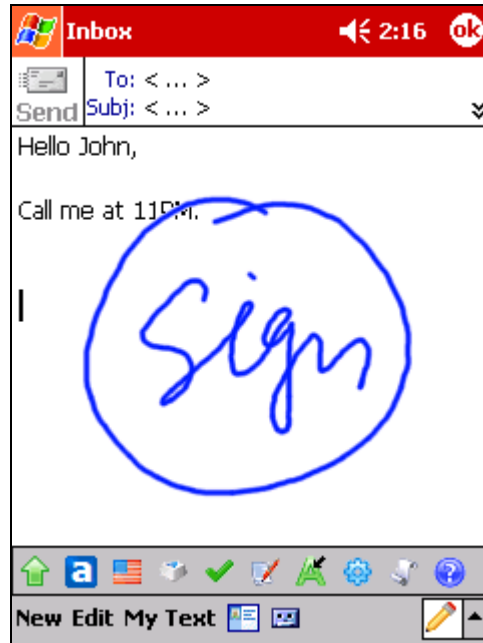
Examples of PenCommands:

- ❖ Add name, address, and phone number to the current text of a document;
- ❖ Insert special symbol (e.g. ©, ®, ¥, ™...) to the text;
- ❖ Select all text in the current document and copy it to the clipboard;
- ❖ Open a spreadsheet file, e.g. "PHONES.XLS";
- ❖ Create a new mail message;
- ❖ Open "System" item in Control Panel;
- ❖ Print the current document;

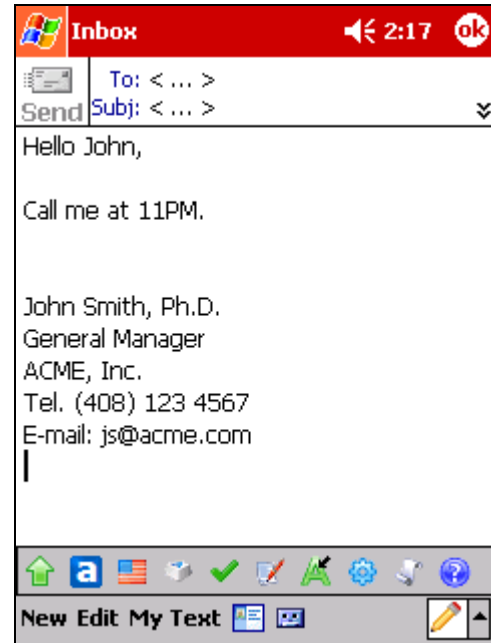
PenCommands are written in PenCommander Script. A simplified form of PenCommand is a "Text Only" command. To create and edit Text Only PenCommands, you do not need to know the scripting language. It is highly recommended that you confine yourself to Text Only PenCommands at the first stage.

Launching PenCommands

Make sure the CalliGrapher is in Recognition Mode. To launch a PenCommand, write and encircle its name:



PenCommand



Result

PenCommander execution process

PenCommander interprets instructions from the definitions of its commands one by one until the end of the definition. Some instructions can return a non-success return code (e.g. "Load library", "Ask variable" etc.), in which case the execution of a PenCommand interrupts and the error handler instruction is performed (if defined).

Text Only PenCommands

The simplest form of PenCommand enters a predefined or user-defined text into the current document. Such commands are called "Text Only" PenCommands. The predefined text can contain any printable symbols as well as tabulations and new-line symbols.

Following are some examples of Text Only PenCommands:

PenCommand "sign"

```
Name:
      sign
Comment:
      // My signature
Text:
```

```
John Smith
Vice President & General Manager
AnySoft Inc.
Tel. (408) 555-1212
E-mail: john@anysoft.com
```

PenCommand "addr"

```
Name:
      addr
Comment:
      // my address
Text:
      1234 Stevens Creek Blvd.,
      Cupertino, CA 95014
```

PenCommand: "sinc"

```
Name:
      sinc
Comment:
      // sincerely yours
Text:
      Sincerely yours,
      John Smith
```

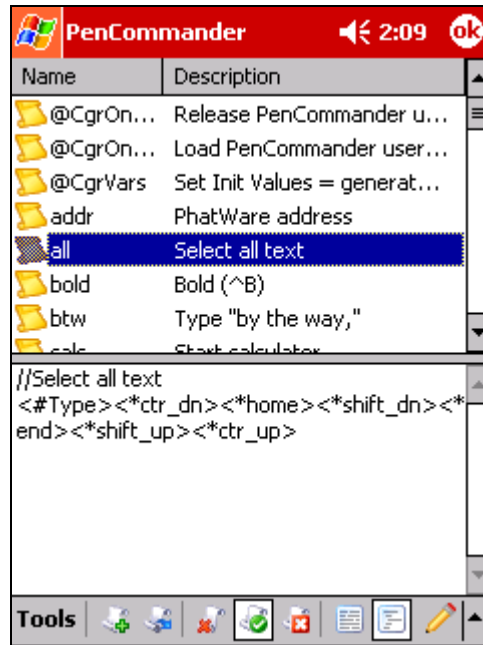
You do not need to know the PenCommander script language to create and edit Text Only PenCommands. The PenCommander Editor has a dedicated Text Only Mode to build such commands, as described below.

Building PenCommands

All information about existing PenCommands is stored in the file PENMACROS.MCR, which is located in the CalliGrapher folder. PenCommander Editor is the program that allows you to edit this file by altering, adding or deleting PenCommands.








Starting the PenCommander Editor

To start PenCommander Editor, either tap on the **PenCommander** icon from with the **Start/Programs** dialog, or with CalliGrapher running tap on the **PenCommander** icon in the toolbar, or run the *PenCmd.exe* application. The PenCommander Editor dialog box will appear:



PenCommander Editor Dialog box

PenCommander Editor Buttons

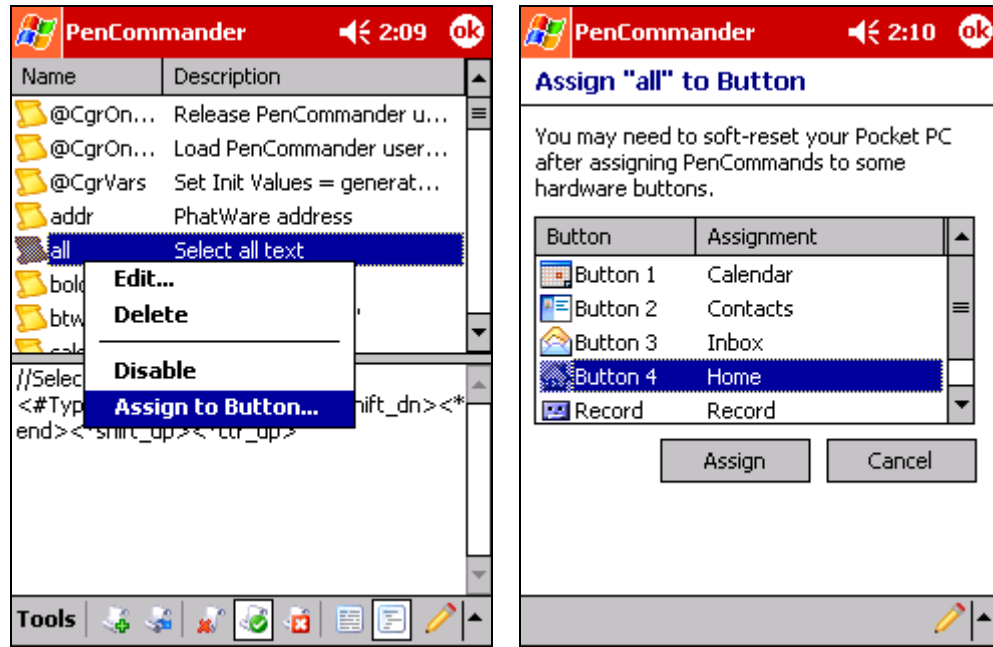
- ❖ Tap  to create a new PenCommand. Depending on the mode selected you will be presented with either PenCommander Text Editor dialog or PenCommander Script Editor dialog.
- ❖ Click on a PenCommand name to select it and then tap  to change it.
- ❖ Tap  to delete the selected command.
- ❖ Tap  to view text-only commands (text mode)
- ❖ Tap  to view all the commands (advanced mode)
- ❖ Tap  to enable or  to disable the selected command.

From the Tools menu you can perform the following:

- ❖ Save: Saves all your PenCommand changes
- ❖ Export: Saves a list of PenCommands to a .MCR file
- ❖ Import: Loads a list of PenCommands from a .MCR file

Assigning PenCommands to Hardware Buttons

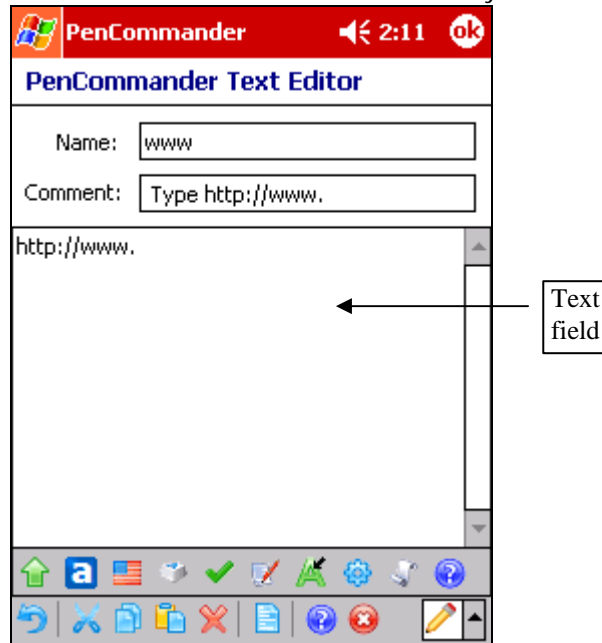
If you tap and hold on a PenCommand in the list, the popup menu appears that allows you to edit, delete, enable (or disable) the command. **Assign to Button** command of the popup menu displays the dialog box that allows you to associate the selected PenCommand with a hardware button.



Select a hardware button in the list. Tap the **Assign** button to assign the PenCommand to the selected hardware button. If the PenCommand is already assigned to the selected button, the **Reset** button allows you to restore the original action of the hardware button.

Building Text Only PenCommands

The following dialog box will appear as the result of tapping the **New PenCommand** or **Edit PenCommand** buttons in Text Only Mode:











When you edit a PenCommand in *Text Only* mode you can modify its name (which you will write to execute the PenCommand), add an optional short description, which is for your reference only, and text that will be inserted into a document when you execute the PenCommand.

Note: All symbols you enter in the text field will be pasted in the target document, including carriage returns, spaces and tabulation.



You can enter new line symbols to the **Text** field by pressing **Enter** and tabulations by pressing [CTRL]+[TAB].

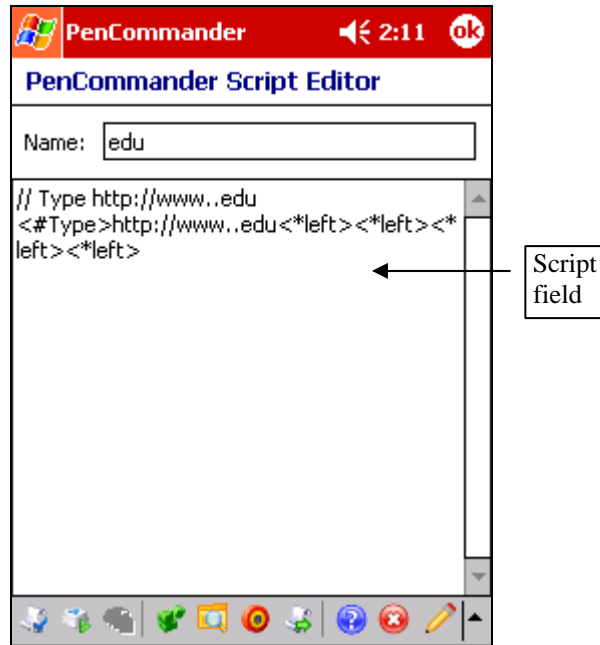
When you are done editing, press *OK* to save the PenCommand and return to the previous screen.

Text Editor Toolbar Buttons

- ❖  - Undo
- ❖  - Cut
- ❖  - Copy
- ❖  - Paste
- ❖  - Select all
- ❖  - Delete selected text
- ❖  - Show Help
- ❖  - Close dialog box without saving changes

Building Script Pen Commands (Advanced Mode)









The following dialog box will appear as the result of tapping the **New PenCommand**  or **Edit PenCommand**  buttons in the *Advanced Mode*:




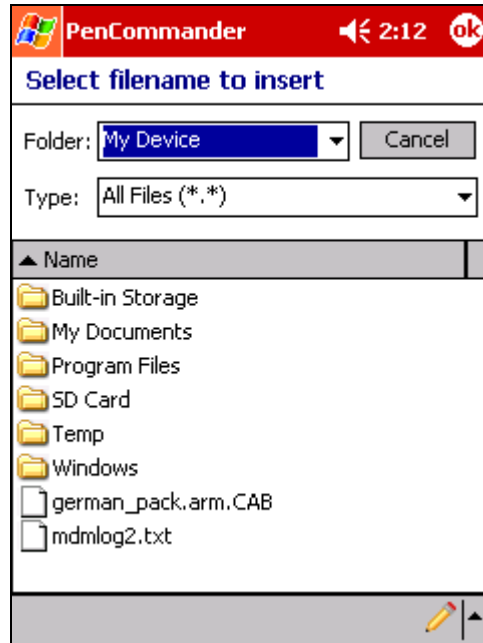
In *Advanced Mode*, the PenCommander Script Editor dialog allows you write PenCommand scripts in addition to just typing text.

When you are done editing, press *OK* to save the PenCommand and return to the previous screen. After you finished editing/creating your PenCommand, you can try it on writing its name and encircling it.

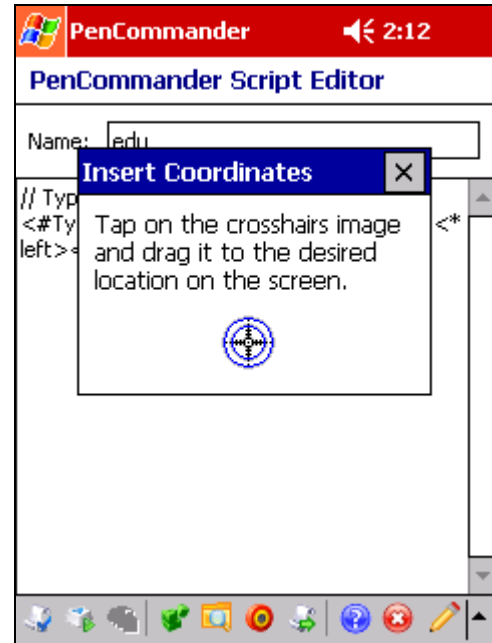
Toolbar Buttons

- ❖  - Check syntax
- ❖  - Activate recording of the keystrokes you make on the keyboard. Keystrokes are inserted in your PenCommands at the current caret position.
- ❖  - Stop recording
- ❖  - Insert keyword. This button provides you with menus of useful commands, special symbols and existing PenCommands, which may be included in your PenCommand script. This simplifies entry of PenCommand script statements and eliminates the need to memorize the script language commands.
- ❖  - Browse for a desired file and insert the full pathname
- ❖  - Insert coordinates of a screen point. Just tap it with the pen and drag to some location on the screen. When you lift the pen, screen coordinates of the last position of your pen will be inserted in the PenCommand script. This is useful if you wish to emulate mouse clicks from your PenCommand (e.g. simulate click on the Windows 'Start' button).
- ❖  - Insert PenCommand
- ❖  - Show context-sensitive Help

- ❖  - Close dialog box without saving changes




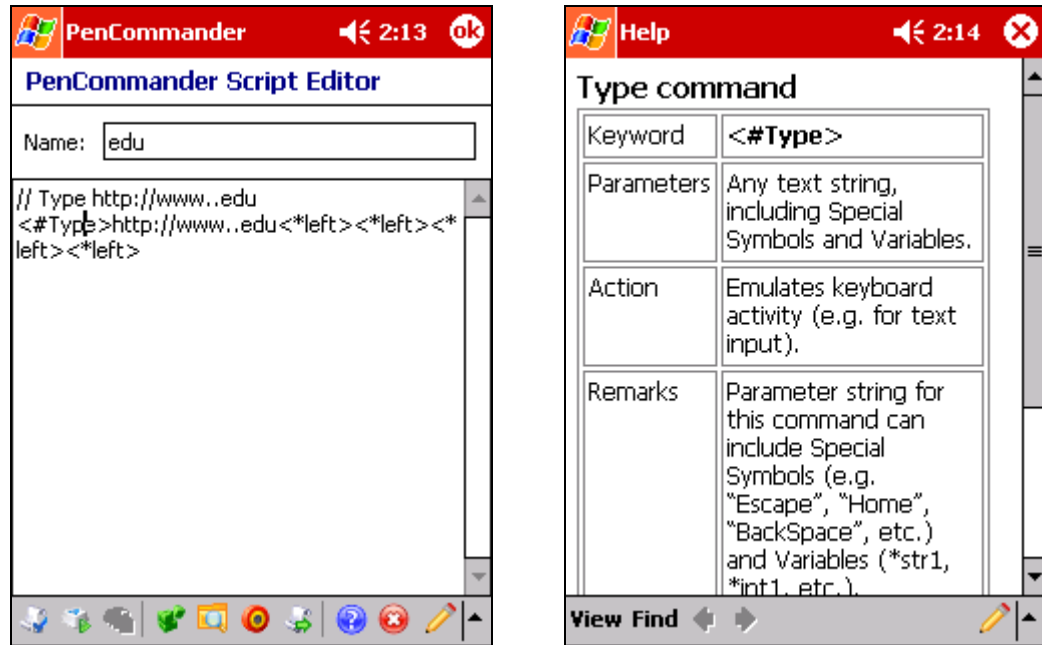
Insert filename example.



Insert Coordinates example

Accessing context-sensitive help

You can access the *PenCommander Scripting Language* reference directly from the PenCommander Script Editor. To view help information for a specific special symbol, variable or command, place the cursor on the desired keyword, then tap the  button. The Help window will appear displaying the information about the selected keyword. If the selected word is not a PenCommander keyword, the default help information about the PenCommander Script Editor dialog box will appear. See images below for examples.



PenCommander Script Language

PenCommand Definition (extension) describes the sequence of instructions comprising the command. Its format:

```
<CommandID_1>[Parameters1] <CommandID_2>[Parameters2] ...
<CommandID_N>[ParametersN]
Command_X - command identifier ( e.g. "#type", "#start", "#delay")
ParametersX - parameter string, which consists of ASCII text and special
symbols;
<>- angular brackets are part of script syntax for commands and special
symbols ;
[ ] - square brackets mean optional element;
```

Command ID and special symbol names are case insensitive.

Examples of single-instruction PenCommand Definitions include:

```
<#start>pword "\My Documents\phones.doc"      (start Pocket Word Application
with \My Documents\phones.doc file);
```

```
<#type>Sincerely yours,<*return><*tab>John      (type "Sincerely yours,",
then type "John" on new line after tabulation).
```

The last example includes two special symbols <*tab> and <*return>.

New line symbols (CR-LF) in script text are ignored, you can use them anywhere to make text more easy readable, e.g. the example above can be written this way:

```
<#type>Sincerely yours,<*return>
<*tab>John
```

To insert the symbol "<" into the parameter string, write "<<", for example:

```
<#type>sometimes 1<2                (type "sometimes 1<2")
```

Some examples of more complex PenCommand definitions:

```
<#macro>all (call PenCommand with name "all";
<#delay>1000 then make delay for 1 sec.;
<#corr> then open CalliGrapher's Corrector Window);
```

```
<#askstr>Enter program file name: (ask program name through dialog and place
answer to string <#start><*str> then execute program with name from the
string variable)
```

The last example uses "string variable". Variables will be discussed in the next section.

Variables

There are some internal variables, which can be used in the parameter area of a PenCommand script:

- ❖ 10 text strings up to 256 symbols length (<*str0>-<*str9>)
- ❖ 10 one character symbols (<*symb0>-<*symb9>)
- ❖ 10 integers (<*int0>-<*int9>)

You can omit index digit 0 (e.g. <*str> is equal to <*str0>). Examples of variables usage include:

```
<#macro><*str>(perform PenCommand with name from string0);
```

```
<#type>Sincerely yours,<*return><*str8> (type "Sincerely yours,", then type
string8 content on the next line).
```

```
<#Start>"C:\Program Files\Apps\<*str3>.exe" (start program with name from
string3, which is located in C:\Program Files\Apps\ folder);
```

Commands for variables manipulation:

```
<#SetStr>, <#SetSymb>, <#SetInt> (set value to appropriate variable);
```

```
<#AskStr>, <#AskSymb>, <#AskInt> (show dialog box to ask variable value);
```

Special Symbols

Special symbols to use in <#Type> command only.

```
<*ctr_dn>      - Press [CTRL]
<*ctr_up>      - Release [CTRL]
<*alt_dn>      - Press [ALT]
<*alt_up>      - Release [ALT]
<*shift_dn>    - Press [SHIFT]
<*shift_up>    - Release [SHIFT]
<*bksp>       - Type [BACKSPACE]
<*tab>        - Type [TAB]
<*return>     - Type [ENTER]
<*right>      - Type [RT ARROW]
<*left>       - Type [LEFT ARROW]
<*down>       - Type [DN ARROW]
<*up>         - Type [UP ARROW]
```

```

<*home>      - Type [HOME]
<*end>       - Type [END]
<*pgdn>      - Type [PG DN]
<*pgup>      - Type [PG UP]
<*esc>       - Type [ESC]

```

Examples:

```

<#type><*ctr_dn>z<*ctr_up> (Type [CTRL]+[Z])

<#type>Sincerely yours,<*return>John      (Type "Sincerely yours," + new
line + "John")

```

Commands

This section lists available commands:

General commands

Comment

- ❖ Keyword: <#>
- ❖ Parameters: Any text string (symbol '<' should be doubled)
- ❖ Action: None.

There is another form of Comment-command: you can place double slash "//" in the beginning of line. In this case whole following line will be treated as comment, for example:

```

<#> This is the comment.
// PenCommand to place the address

```

Type

- ❖ Keyword: <#Type>
- ❖ Parameters: Any text string, including Special Symbols and Variables.
- ❖ Action: Emulates keyboard activity (e.g. for text input).
- ❖ Remarks: Parameter string for this command can include Special Symbols (e.g. "Escape", "Home", "BackSpace" etc).

Examples:

```

<#type>John Smith type "John Smith")

<#type><*str> (type String0
variable)

<#Type> My address:<*return> (type "My Address: 1234 California
Street,<*return> 1234 California Street, Cupertino, CA 5014<*return>
Cupertino, CA 95014")

<#Type><*ctr_dn>c<*ctr_up> (type Ctr+C)

<#Type><*alt_dn>f<*alt_up>o {type Alt+F and then type 'o')}

```

```
<#Type><*alt_dn>T<*alt_up><*down><*down><*return> (type Alt+T ; then twice
'cursor down'; then 'Entr')
```

Execute program (Open file)

- ❖ Keyword: <#Start>
- ❖ Parameters: Path to the file to open or execute + [optional parameter string for starting program]
- ❖ Action: Start program
- ❖ Remarks: If file name includes spaces - use quotes. Program parameters should be separated from program name by the space symbol.

For example:

```
<#Start>c:\windows\notepad.exe (start Notepad.exe)

<#Start>notepad (start Notepad.exe)

<#Start>notepad "C:\My Documents\phones.txt" (start Notepad.exe and open
"C:\My Documents\phones.txt" file)

<#Start>"C:\My Documents\test.txt" (open "C:\My Documents\test.txt" file
(non-CE))

<#Start>pxl \LoanCalculator.pxl (Open LoanCalculator.pxl in Pocket Excel)
```

Execute PenCommand

- ❖ Keyword: <#Macro>
- ❖ Parameters: Name of the PenCommand to execute.
- ❖ Action: Execute a PenCommand.
- ❖ Remarks: The next PenCommand will be processed after this step of execution. Not more than 10 PenCommand execution levels can be nested. No recursion is allowed.

For example:

```
<#Macro>all (perform the PenCommand 'all')

<#Macro><*str3> (perform the PenCommand with its name taken from the
variable String3)
```

Delay

- ❖ Keyword: <#Delay>
- ❖ Parameters: Time interval for delay (in milliseconds)
- ❖ Action: Pauses the script execution for a specified time
- ❖ Remarks: This command usually is used to give the system some time to perform the previously asked action before performing the next script command (e.g. wait after <#start> command).

For example:

```
<#Delay>1000 (wait 1 second)
```

Rotate Screen

- ❖ Keyword: <#ScrMode>
- ❖ Parameters:
 - 0 - Portrait mode
 - 1 - Right-handed landscape mode
 - 2 - Upside-down portrait mode
 - 3 - Left-handed landscape mode
 - none - rotate to the next mode
- ❖ Action: Rotates Pocket PC screen to a certain position.
- ❖ Remarks: This command is only supported on the latest models of Pocket PC 2003 that natively support landscape mode. Some older devices also could be upgraded to the latest version of the Microsoft Windows Mobile software that supports screen rotation. If you are not sure whether your Pocket PC supports landscape mode, contact the manufacturer of the device.

For example:

```
<#ScrMode>                (rotate to the next mode)
```

Show Message Box

- ❖ Keyword: <#ShowMsg>
- ❖ Parameters: Text to show in the message box.
- ❖ Action: Shows Message Box with the given text.
- ❖ Remarks: You can use symbol sequence '\n' to force the new line in the message.

For example:

```
<#showmsg>Ready to go.
<#showmsg>Error while performing the PenCommand <*str7>.
```

Set Error Handler

- ❖ Keyword: <#DoIfErr>
- ❖ Parameters: Name of a PenCommand to execute.
- ❖ Action: Save name of a PenCommand as the error handler name.
- ❖ Remarks: This command sets the PenCommand name as an error handler. If the subsequent instructions in current the PenCommand definition return an error code (e.g. <#LoadLib> could not load user library), then the error handler PenCommand will be executed (if defined). This setting is good only for the PenCommands currently being executed and has no effect upon the nesting ones.

For example:

```
<# DoIfErr >%loaderr (Set error handler PenCommand name to "%loaderr"
<#LoadLib>mylib.dll Load library0 "mylib.dll"

<# DoIfErr >%caller Set error handler PenCommands name to "%callerr"
<#CallLib>myfunc Call user defined
procedure "MyFunc" from library0
```

```
<# DoIfErr > Turn of error handling (no handling defined)
<#FreeLib> Free Library0 )
```

Variable Manipulation Commands

Set String Variable

- ❖ Keyword: <#SetStr0> - <#SetStr9>
- ❖ Parameters: String to place to the string variable
- ❖ Action: Set the appropriate string variable to given value.
- ❖ Remarks: Variable index 0 can be omitted.

For examples

```
<#SetStr>John Smith (Set String0 to the value "John Smith ")
<#SetStr4><*str3>\myfile.txt (Set String4 to the concatenation String3 and
"\myfile.txt" to string4).
```

Set Symbol Variable

- ❖ Keyword: <#SetSymb0> - <#SetSymb9>
- ❖ Parameters: Character to place to the symbol variable
- ❖ Action: Set the appropriate symbol variable to given value.
- ❖ Remarks: Variable index 0 can be omitted. Only the first symbol from Parameters area is using.

For example:

```
<#SetSymb> ™ (Set Symbol0 to '™')
<#SetSymb2>N (Set Symbol2 to 'N')
```

Set Integer Variable

- ❖ Keyword: <#SetInt0> - <#SetInt9>
- ❖ Parameters: Number to place to the integer variable
- ❖ Action: Set the appropriate integer variable to given value.
- ❖ Remarks: Variable index 0 can be omitted.

For example:

```
<#SetInt>1000 (Set Integer0 variable to 1000)
```

Ask String Variable

- ❖ Keyword: <#AskSymb0> - <#AskSymb9>
- ❖ Parameters: Title text to show in the dialog box.
- ❖ Action: Show dialog box for string value input. Set the appropriate string variable to given value.

- ❖ Remarks: Variable index 0 can be omitted. Current value of variable will be shown in the input field of dialog box.

For example:

```
<#AskStr4>Please enter program file name:
```

Ask Symbol Variable

- ❖ Keyword: <#AskSymb0> - <#AskSymb9>
- ❖ Parameters: Title text to show in the dialog box.
- ❖ Action: Show dialog box for symbol value input. Set the appropriate symbol variable to given value.
- ❖ Remarks: Variable index 0 can be omitted. Current value of variable will be shown in the input field of dialog box.

For example:

```
<#SetSymb4>k (Set default value - "k"
<#AskSymb4>Enter first letter for searching:          Place result to Symbol4
variable).
```

Ask Integer Variable

- ❖ Keyword: <#AskInt0> - <#AskInt9>
- ❖ Parameters: Title text to show in the dialog box.
- ❖ Action: Show dialog box for integer value input. Set the appropriate integer variable to given value.
- ❖ Remarks: Variable index 0 can be omitted. Current value of variable will be shown in the input field of dialog box.

For example:

```
<#AskInt2>Please, Enter Zoom Percent: (Place result to Integer0 variable)
```

User-Defined Procedure Commands.

Load User Library (DLL file)

- ❖ Keyword: <#LoadLib0> - <# LoadLib9>
- ❖ Parameters: Path to user dll-file to load.
- ❖ Action: Loads dll-file.
- ❖ Remarks: Library index 0 can be omitted. If file name includes spaces - use quotes.

For example:

```
<#LoadLib>\mylib.dll
<#LoadLib>"\my documents\mylib.dll"
```



```
<#LoadLib><*str8>
```

Free User Library

- ❖ **Keyword:** <#FreeLib0> - <#FreeLib9>
- ❖ **Parameters:** Ignored.
- ❖ **Action:** Frees dll-file.
- ❖ **Remarks:** Library index 0 can be omitted.

For example:

```
<#LoadLib>
<#LoadLib3>
```

Call Procedure from User Library

- ❖ **Keyword:** <#CallLib0> - <#CallLib9>
- ❖ **Parameters:** Calling procedure name [optional parameters string for procedure].
- ❖ **Action:** Calls user defined procedure from proper DLL-file.
- ❖ **Remarks:** Library index 0 can be omitted. Procedure name and parameters string must be separated by the space symbol. User defined procedure has access to internal PenCommand variables and can change them.

For example:

```
typedef TCHAR MCR_STRINGS_TYPE[10][256];
typedef TCHAR MCR_SYMBS_TYPE[10];
typedef INT MCR_INTS_TYPE[10];
typedef _declspec(dllexport) BOOL UserProcName
(MCR_STRINGS_TYPE *pStrings,
 MCR_SYMBS_TYPE *pSymb,
 MCR_INTS_TYPE *pInts,
 TCHAR *pParmStr,
 LPARAM lParam);
```

Parameters *pStrings*, *pSymb*, *pInts* are the pointers to arrays of PenCommand variables. The variables may be read or changed by the function.

Parameter *pParmStr* points to optional parameters string.

Parameter *lParam* is reserved, currently not used.

Result: non-zero for OK.

Sample user-defined procedure

PenCommand Name: TIME

```
// PenCommand for typing the current Time
<#LoadLib>D:\Cgr98\macrousr.dll (Load User Library)
<#CallLib>UsrPutTimeToStr 5 0 (Call user defined function UsrPutTimeToStr,
which puts current time in American style to String5 variable)
<#FreeLib> (Free User Library)
<#Type> <*str5> (type String5 content)
```

User-defined function text:

```

_declspec(dllexport) BOOL UsrPutTimeToStr(
MCR_STRINGS_TYPE *pStrings,
MCR_SYMS_TYPE *pSyms,
MCR_INTS_TYPE *pInts,
TCHAR *pParmStr,
LPARAM lParam)
{
    int    iStrNum = 0; //target string number
    int    iFormat = 0; //time format (0-American; non-0 - European)
    SYSTEMTIME st;      //struct for GetLocalTime()

    //read target string number and time format type
    if(pParmStr==0 ||
        _stscanf(pParmStr, TEXT("%d %d"), &iStrNum, &iFormat)<1 ||
        iStrNum<0 || iStrNum>9)
        return FALSE;

    GetLocalTime(&st);

    if(iFormat==0)
    { //American time format
        TCHAR AmPm;
        int    iHour;
        if(st.wHour>=12)
            AmPm = 'P';
        else
            AmPm = 'A';
        if((iHour=st.wHour%12)==0)
            iHour = 12;
        wsprintf((*pStrings)[iStrNum], "%d:%02d %cM.", iHour,
(int)st.wMinute, AmPm);
    }
    else
    { //European time format
        wsprintf((*pStrings)[iStrNum], "%d:%02d", (int)st.wHour,
(int)st.wMinute);
    }

    return TRUE;
}

```

A full source code of the macrousr.dll can be download form PhatWare's web site at <http://www.phatware.com/calligrapher/cgrreskit.html>.

Mouse commands

Click Mouse Button command

- ❖ **Keyword:** <#BtnClick>
- ❖ **Parameters:** Two integer values separated by comma that specify X and Y mouse coordinates relative to the upper-left corner of the screen in pixels.
- ❖ **Action:** Emulates a single left mouse button click at the specified coordinates.
- ❖ **Remarks:** This command can be used to emulate a left button down command at the specified location. The keyword should be followed by 2 integer values which specify X and Y coordinates relative to the upper-left corner of the screen. The mouse click message is posted in the foreground window.

Double-click Mouse Button command

- ❖ Keyword: <#DbClick>
- ❖ Parameters: Two integer values separated by comma that specify X and Y mouse coordinates relative to the upper-left corner of the screen in pixels.
- ❖ Action: Emulates a left mouse button double-click at the specified coordinates.
- ❖ Remarks: This command can be used to emulate a left button double-click command at the specified location. The keyword should be followed by 2 integer values which specify X and Y coordinates relative to the upper-left corner of the screen. The mouse double-click message is posted in the foreground window.

Press Mouse Button command

- ❖ Keyword: <#BtnPress>
- ❖ Parameters: Two integer values separated by a comma that specify X and Y mouse coordinates in pixels relative to the upper-left corner of the screen.
- ❖ Action: Emulates a left mouse button down command at the specified coordinates.
- ❖ Remarks: This command can be used to emulate a left button down command at the specified location. The keyword should be followed by 2 integer values which specify X and Y coordinates relative to the upper-left corner of the screen. The mouse button down message is posted to the foreground window.

Release Mouse Button command

- ❖ Keyword: <#BtnRlse>
- ❖ Parameters: Two integer values separated by a comma that specify X and Y mouse coordinates in pixels relative to the upper-left corner of the screen.
- ❖ Action: Emulates a left mouse button release (up) command at the specified coordinates.
- ❖ Remarks: This command can be used to emulate a left button up command at the specified location. The keyword should be followed by 2 integer values which specify X and Y coordinates relative to the upper-left corner of the screen. The mouse button up message is posted to the foreground window.

CalliGrapher commands

Show/Hide CalliGrapher keyboard

- ❖ Keyword: <#Kbrd>
- ❖ Parameters: Ignored.
- ❖ Action: Toggles the display state of the CalliGrapher soft keyboard.

For example:

<#Kbrd>

Show/Hide CalliGrapher Custom keyboard

- ❖ Keyword: <#CustKbrd>
- ❖ Parameters: Ignored.
- ❖ Action: Toggles the display state of the CalliGrapher Custom keyboard.

For example:

```
<#CustKbrd>
```

Show/Hide CalliGrapher toolbar

- ❖ Keyword: <#Toolbar>
- ❖ Parameters: Ignored.
- ❖ Action: Toggles the display state of the CalliGrapher toolbar.

For example:

```
<#Toolbar>
```

Show CalliGrapher Options

- ❖ Keyword: <#Options>
- ❖ Parameters: Ignored.
- ❖ Action: Shows CalliGrapher Options Dialog Box.

For example:

```
<#Options>
```

Show CalliGrapher Corrector Window

- ❖ Keyword: <#Corr>
- ❖ Parameters: Ignored.
- ❖ Action: Opens CalliGrapher Corrector Window.
- ❖ Remarks: This command has the same result as "Correct"-gesture in CalliGrapher.

For example:

```
<#Corr>
```

Start Letter Shape Selector

- ❖ Keyword: <#Shape>
- ❖ Parameters: Ignored.
- ❖ Action: Starts CalliGrapher Letter Shape Selector program.

For example:

```
<#Shape>
```

Start PhatPad

- ❖ Keyword: <#PhatPad>
- ❖ Parameters: Ignored.
- ❖ Action: Starts the PhatPad application (if installed).

For example:

```
<#PhatPad>
```

Set Recognition Mode

- ❖ Keyword: <#ScrMode>
- ❖ Parameters:
 - 0 - Normal mode
 - 1 - Capitals mode
 - 2 - Numeric mode
 - 3 - Internet mode
 - none - selects next recognition mode
- ❖ Action: Changes CalliGrapher recognition mode (mixed, capital, numeric, internet).

For example:

```
<#ScrMode>          (switch to the next recognition mode)
```

Set Recognition Direction

- ❖ Keyword: <#RecDir>
- ❖ Parameters:
 - 0 - Normal orientation
 - 1 - Device turned right 45 degrees
 - 2 - Device turned right 90 degrees
 - 3 - Device turned 180 degrees
 - 4 - Device turned left 90 degrees
 - 5 - Device turned left 45 degrees
 - none - selects next direction
- ❖ Action: Changes CalliGrapher recognition direction (screen orientation).

For example:

```
<#RecDir>          (changes to the next recognition direction)
```

Select CalliGrapher Configuration

- ❖ Keyword: <#Cfg>
- ❖ Parameters:
 - Configuration name
 - (if name is not given the next configuration is selected)
- ❖ Action: Switches active CalliGrapher configuration.

For example:

```
<#Cfg> English    (switch to the "English" configuration)
```

Script Samples.

Below are a few useful samples of PenCommand definitions:

Select all text (for Word)

PenCommand name: ALL

```
// Select all text (Ctrl+A)
// this PenCommand works in Word
<#type><*ctr_dn>a<*ctr_up>
```

You can easily implement some [CTRL]+... PenCommands, such as Copy ([CTRL]+[C]), Cut ([CTRL]+[X]), Undo ([CTRL]+[Z]), Paste ([CTRL]+[V]) etc.

Select all text (for most text edit apps)

PenCommand name: ALL

```
//Select all text
<#Type><*ctr_dn><*home><*shift_dn><*end><*shift_up><*ctr_up>
```

Open Corrector Window

PenCommand name: SPELL

```
// Open Corrector Window for all current document
// first: select all text (see the PenCommand in sample2)
<#Macro>all
// then open corrector window
<#corr>
```

Open Favorite Internet WEB page

PenCommand name: WEB

```
// Open CalliGrapher WEB page
<#Start>iexplorer http://www.phatware.com/
```

Open CalliGrapher Help

PenCommand name: CHELP

```
// Open CalliGrapher help
<#Start>iexplorer \windows\calligrapher.htm
```

Call PenCommander Editor

PenCommand name: CHELP

```
// Call PenCommander Editor
<#Start>"\program files\calligrapher\pencmd.exe"
```

Open Inbox

PenCommand name: INBOX

```
//open inbox
<#Start>pMail
```

Open Pocket Excel Spreadsheet

PenCommand name: LOAN

```
// Call Loan Calculator
<#Start>pxl "My Documents\LoanCalculator.pxl"
```

Place the '™' Symbol into Text

PenCommand name: TM

```
// Place the '™' symbol into text.
<#Type>™
```

CalliGrapher Reserved PenCommands

There are three PenCommand names, which are reserved for CalliGrapher usage:

- ❖ @CgrOnInit
- ❖ @CgrOnClose
- ❖ @CgrVars

@CgrOnInit.

@CgrOnInit is executed (if present) by CalliGrapher while PenCommander PenCommands are loading to the system. You can place any commands within this PenCommand that you wish executed at that time.

For example:

```
//do it on init
<#ShowMsg>PenCommander is ready
<#loadlib3>"\Program Files\myfolder\usrmacro.dll"
```

@CgrOnClose.

@CgrOnClose is executed (if present) by CalliGrapher while closing PenCommander. You can place any commands within this PenCommand that you wish executed at that time.

For example:

```
//do it on close macros
<#ShowMsg>PenCommander is off
<#FreeLib3>"\Program Files\myfolder\usrmacro.dll"
```

@CgrVars.

This PenCommand is automatically generated by CalliGrapher when PenCommander is closing. It allows to CalliGrapher to save and restore variable values. Do not correct this PenCommand manually.