PenOffice™ 2.6

OWNER'S MANUAL

PenOffice

PenOffice 2.6 is developed, distributed and supported exclusively by PhatWare® Corp.
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Welcome

This powerful software unleashes the full set of PenOffice functionality, including the award winning Calligrapher® handwriting recognition technology. PenOffice 2.6 recognizes all handwriting, be it

cursive ,

printed ,

or

mixed .

Additionally, you can enter equations such as

$$32.6 + 74 =$$

for use with PenOffice's RiteCalc – the calculator that works based on your natural handwriting. As you can see, the PenOffice applications let you interact with your computer on your terms, not the computer's!

PenOffice's CalliGrapher component employs advanced fuzzy logic techniques that allowing it to recognize your handwriting with unparalleled accuracy and speed. In addition to recognizing letters, numbers, and words, PenOffice's CalliGrapher component recognizes arbitrary signals and various control 'gestures' (explained later in this manual).

PenOffice frees you from the constraints and unnatural motions of your keyboard. Using a digitizing tablet, you can sit back, relax, and let your thoughts flow into your computer as naturally and easily as writing on a piece of paper.

Please visit our Web site at http://www.phatware.com to get the latest news on PenOffice, the entire family of PhatWare products, and other PhatWare products.

Please feel free to contact us with your questions and comments by emailing us at support@phatware.com.

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] may appear in this document. It 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:

❖ Getting Started: This chapter details the PenOffice installation process and describes the layout of this manual.

❖ PenOffice Reference: This chapter provides instructions on using the basic PenOffice functions including the PenCommander macro functionality.

❖ Customizing PenOffice: You can tailor PenOffice to your personal requirements by following the instructions in this chapter.

❖ PenCommander Reference: This chapter explains how to create custom PenCommands.

Part One: Getting Started

This chapter details the PenOffice 2.6 features, system requirements, and installation process.

PenOffice Features

PenOffice is a combination of a powerful handwriting recognition engine and applications, which allow you to extend the core PenOffice functions. This combination includes:

❖ Natural handwriting recognition: CalliGrapher component of PenOffice recognizes print, cursive, and mixed script as well as arbitrary symbols and control 'gestures'.

❖ Immediate usability: Unlike many handwriting recognition programs, the CalliGrapher component of PenOffice is ready to run right out of the box with no training required. You can, however, customize PenOffice to your personal handwriting style, thereby increasing PenOffice's already superb accuracy and speed.

❖ Built-in dictionary: The CalliGrapher component of PenOffice recognizes words from its integrated dictionaries. This includes a main dictionary containing approximately 100,000 words and a custom user dictionary. PenOffice also recognizes non-vocabulary words like personal names, geographical names, and arbitrary handwritten symbol strings.

❖ On Screen drawing: This feature allows you to use your screen as a virtual ScratchPad. You may save and e-mail drawings. You can also write while in drawing mode and have PenOffice convert your handwriting into typed text at a later time (deferred recognition).

❖ Microsoft Word markup: Using PenOffice, you can mark up Microsoft Word documents and forward your edits to others. PenOffice supports Microsoft Word 97, Word 2000 and Word XP.

❖ PenCommander: PenCommander is a new feature in PenOffice 2.6, which allows you to launch pre-recorded, user-defined commands (PenCommands). To execute a PenCommand simply write a word command and draw a circle around it. PenCommander features are available only while PenOffice is in Recognition mode.

❖ Spell checker: This feature works with practically any application for Microsoft Windows.

❖ ScratchPad: ScratchPad provides you with the electronic equivalent of 'sticky notes'.

❖ RiteCalc handwriting calculator: Simply write an equation, and let RiteCalc do the math.

❖ Extensive correction interface: By pointing out PenOffice's mistakes, you can improve its performance.

❖ Expandable Architecture: Look for future applications that will take advantage of PenOffice's powerful capabilities to further enhance your computing experience.

❖ Multiple Language Support: Supports handwriting recognition in English, French, German, Italian, Spanish, Dutch, Swedish, and Portuguese (European and Brazilian).

System Requirements

PenOffice requires the following minimum configuration:

❖ Personal or Multimedia computer with Pentium Pro 200MHz processor or higher (Pentium III/350MHz or faster is recommended).

❖ Windows NT 4.0 Workstation or Server with Service Pack 6 or later, Windows 98 or later including Windows ME, Windows 2000, and Windows XP Professional and Home editions.

❖ 19MB of free disk space for full installation, an additional 12MB required for temporary files during installation.

❖ 64 MB of memory to use on Windows 98/ME

❖ 128 MB of memory to use on Windows NT 4.0/2000/XP

❖ VGA with 16 bit minimum resolution.

❖ Microsoft Mouse or compatible pointing device.

❖ Graphics tablet system* such as WACOM Intuos™ is strongly recommended.

❖ CD-ROM (required to install application if purchased on CD-ROM).

❖ Internet Browser such as Microsoft Internet Explorer 5.0 or later is recommended to retrieve the latest product information from PhatWare's web site.

* PenOffice currently supports **Wintab** interface.

NOTE: This version of PenOffice works under PenWindows, but it is not optimized for it. It uses mouse moves rather than precise screen coordinates for the ink trajectory.

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

Uninstalling older versions of PenOffice

1. Choose Settings / Control Panel menu item from the Start menu to run Control Panel.

2. Double-click on **Add/Remove** program icon.

3. In the **Add/Remove Program** Properties dialog box, select the **PenOffice** entry in the **Programs** list box and press **Change/Remove** button.

4. In the **InstallShield Wizard** dialog box, select the **Remove** option and click the **Next** button.

5. Follow the on-screen instructions to complete uninstallation.

Installing PenOffice

As with any software installation, it is recommended that you close all open applications and backup your data prior to beginning the PenOffice setup process.

Important: You must uninstall any previous version of PenOffice before installing this version.

1. Download and copy PenOffice installation program (**PenOffice26M.exe** for the multilingual version, or **PenOffice26E.exe** for the English-only version) into a temporary directory onto your Desktop PC.

2. Run the installation program on the Desktop PC.
   Note: You must have administrator user rights to install PenOffice on Windows NT 4.0, Windows 2000 or Windows XP.

3. Follow the on-screen installation instructions to install PenOffice.

4. If you do not have a registration code, enter **TRIAL** into the **Registration Code** when the setup application prompts for user information. When you receive the registration code, you will be able to register PenOffice without reinstalling it. See the next section for details.

Registering PenOffice

If you have not registered PenOffice during installation, you can do so later without reinstalling PenOffice. To register PenOffice, choose the Register PenOffice menu item from the PenOffice popup menu (if you do not have this menu item, it means that PenOffice is already registered). The **Register PenOffice** dialog box will appear. If you have already purchased PenOffice, please enter the *registration code** into the edit field and click on the **OK** button. While using PenOffice in trial mode, this dialog box will appear every time you start PenOffice until you enter the registration code. After the trial period expires, PenOffice will no longer work and you will be able to access the **Register PenOffice** dialog box only, until you enter the valid registration code.

* The registration code is located in the purchasing confirmation email, which is automatically emailed to you, only when you purchase the product. If you have purchased PenOffice 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, which has the following format **XXXX-XXX-XXXXXXXXX**. If you have problems finding the registration code please contact PhatWare technical support by sending email to support@phatware.com.

Important! It is imperative that you keep the **PenOffice 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 PenOffice

To launch PenOffice, click **Start>Programs>PenOffice21**. The pen , marker , and MS Word Markup mode icons appear in the notification area of the Windows taskbar.
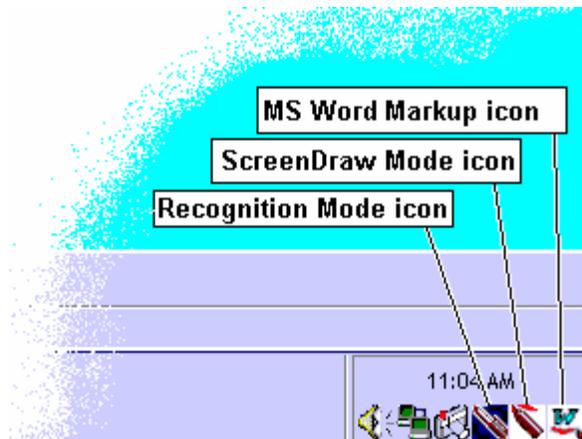
NOTE: In the above example, the Recognition (pen) icon is shaded, while the Screen Draw (marker) and MS Word Markup icons are not. Shaded icons denote active PenOffice modes. Thus, in the above example, PenOffice is in Recognition mode. For a full explanation of the various PenOffice modes, please refer to the section *PenOffice Modes,* below.

Taskbar Icons

PenOffice icons in the Windows taskbar notification area indicate the currently selected PenOffice mode and allow you to access the PenOffice Main Menu. Single clicking an icon toggles the selected mode on and off. Right clicking any PenOffice icon launches the PenOffice Main Menu.

Please refer to the sections *PenOffice Main Menu* and *PenOffice Modes*, below.

You can customize the icons that appear in the Windows taskbar notification area. For more information, please refer to the section *Customizing PenOffice*, below.

Part Two: PenOffice Reference

This chapter explains how to use PenOffice's many features.

PenOffice Main Menu

Access the PenOffice Main Menu by right-clicking any of the taskbar icons. The PenOffice Main Menu appears as follows:
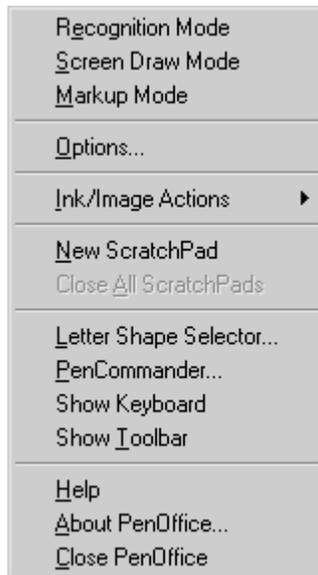
The Main Menu contains the following items:

❖ <u>Mode switches (Recognition, ScreenDraw, Markup)</u>: Check the appropriate mode to toggle it on and off. Note that you can only use MarkUp mode when MS Word is open and active. Please refer to the section *PenOffice Modes,* below, for complete information on using the various PenOffice modes.

❖ <u>Options</u>: Click here to open the PenOffice Options Dialog. For more information, please refer to the section *PenOffice Options*, below.

❖ <u>Ink/Image Actions</u>: Clicking here opens the Ink/Image Actions Menu. Please refer to the section *Ink/Image Actions Menu*, below, for more information.

❖ <u>New ScratchPad</u>: Creates a new PenOffice ScratchPad. Please refer to the section *ScratchPad*, below.

❖ <u>Close all ScratchPads</u>: Closes all open ScratchPads. Please refer to the section *ScratchPad*, below.

❖ <u>Letter Shape Selector</u>: This option allows you to tailor PenOffice to better recognize your unique handwriting. Please refer to the section *Letter Shape Selector*, below, for more information.

❖ <u>PenCommander</u>: Opens the PenCommander Dialog, allowing you to create and execute complex script commands with a stroke of a pen. Please refer to the section *PenCommander Reference*, below.

❖ <u>Show Keyboard</u>: Opens a soft keyboard, which provides all of the functionality of a hardware keyboard. If you change languages with the keyboard visible, the keyboard will automatically change to the selected language. Please refer to the section *PenOffice Keyboard*, below.

❖ <u>Show Toolbar</u>: Opens the PenOffice Toolbar, which is a convenient method for controlling application modes and selecting different drawing/markup tools. Please refer to the section *PenOffice Toolbar*, below.

❖ <u>Help</u>: Opens PenOffice Help.

❖ <u>About PenOffice</u>: Opens the About PenOffice Dialog.

❖ <u>Close PenOffice</u>: Closes the PenOffice applications.

PenOffice Keyboard

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

There are three ways to open the keyboard:

❖ Select **Show Keyboard** from the Main Menu.

❖ Draw the Quick Correct gesture when no text is selected, then click on the keyboard icon.

❖ Click on the Keyboard icon in the taskbar.

Please refer to the section *Icons Tab*, below, for information on enabling the Keyboard Icon.
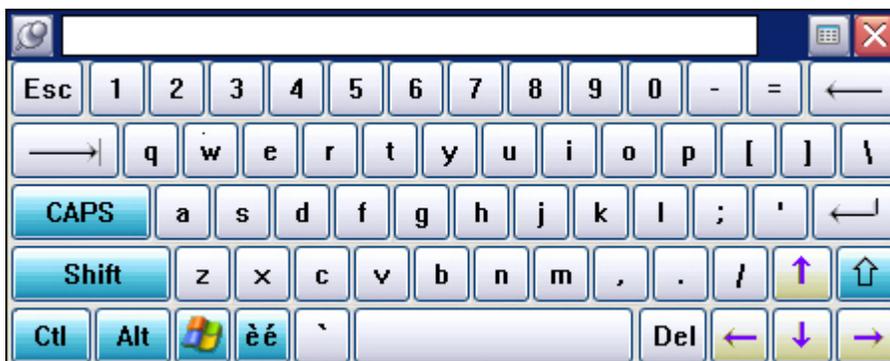
You can drag the keyboard to anywhere on the screen. Simply select the key of your choice. It will have the same effect as typing the same key using a built-in keyboard.

If you are typing words, you will see a list of suggestions appear in the pull-down window on the top of the keyboard as shown below. Just click on the word you want. You can also

click on the ⊡ to see a menu item of suggested words. This can help save time when typing common words.

The keyboard disappears once you type one character, unless you use the **Pin** button in the upper left corner to make it stay. The **Keyboard** button opens the Punctuation layout keyboard (see below).

If you change languages with the keyboard visible, the keyboard will automatically change to the selected language. Shown below is the French keyboard:

You can perform standard calculations using the 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=). 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 Keyboard to add a punctuation symbol to text that has been already written. To simplify this frequent operation, use the Quick Correct gesture (please refer to the *Quick Correct Gesture* section, below) with no text selected to open the Keyboard in Punctuation layout.

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 **Keyboard** button opens the full keyboard.

You can also customize this keyboard. See the *Keyboard* section, below.

In either layout, clicking the **Exit** button in the upper right corner closes the Keyboard. Upon reopening, the keyboard will remember its last position.

PenOffice Modes

PenOffice operates in one of four possible modes:

❖ Recognition Mode

❖ Screen Draw Mode

❖ Microsoft Word Markup Mode

❖ Off

Recognition Mode

When in Recognition Mode, PenOffice interprets your drawing on the screen as handwriting. PenOffice recognizes the handwriting and sends the results to the currently active application window. Single and double mouse clicks will still work, meaning you can access menus, icons, and windows while in Recognition Mode. When PenOffice is in Recognition mode, the pen icon in the Windows taskbar will appear shaded.

Use one of the following three methods to enter Recognition Mode:

❖ Select Recognition Mode from the PenOffice Main Menu.

❖ Click the pen icon in the Windows taskbar notification area.

❖ Use the PenOffice Toolbar

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

Screen Draw Mode

Screen Draw mode allows you to draw pictures, text, or a mix of pictures and text directly on your screen. PenOffice does not recognize strokes input in Screen Draw mode as text. This mode has many uses; for example, you could draw a quick pictorial diagram with text describing the drawing. You may also write on your screen and have PenOffice recognize your text later, as opposed the real-time recognition offered by Recognition Mode. For more information, please refer to the section *Deferred Recognition*, below.

When PenOffice is in Screen Draw mode, the marker icon in the Windows taskbar will appear shaded. Activate Screen Draw mode using any of three methods:

❖ Select Screen Draw Mode from the PenOffice Main Menu.

❖ Click the marker icon ✎ in the Windows taskbar.

❖   Use the PenOffice Toolbar.

When first switching to Screen Draw mode, the screen will appear frozen and grayed out until you define the drawing area by using the Selection tool.

NOTE: The Selection tool is automatically selected when you enter Screen Draw mode.

Click and drag to select a rectangular drawing area. Once the drawing area is selected, the Selection tool changes to the default drawing tool. You may change the drawing tool and change colors by using the PenOffice Toolbar. Please refer to the sections *PenOffice Toolbar* and *PenOffice Tools*, below, for more information.

Once you are finished drawing, you may save or email the file in PenOffice Ink, Windows BMP, or JPEG format; or recognize the drawing as text and paste the text into the Windows Clipboard. Do this by clicking the right mouse or side pen button as appropriate, selecting your desired option, and following the on-screen prompts. Alternatively, you can open the PenOffice Main Menu and click **Ink/Image Actions**. Please refer to the section *Ink/Image Actions Menu*, below, for more information.

MS Word Markup Mode

This mode is particularly useful for people who review documentation, especially when several people need to review a document and/or when reviewed documents need to be shared among several people before finalizing the document. MS Word Markup mode allows substantial savings in time that would otherwise be spent copying and disseminating hard copy documents. When PenOffice is in MS Word Markup mode, the markup icon in the Windows taskbar will appear shaded.
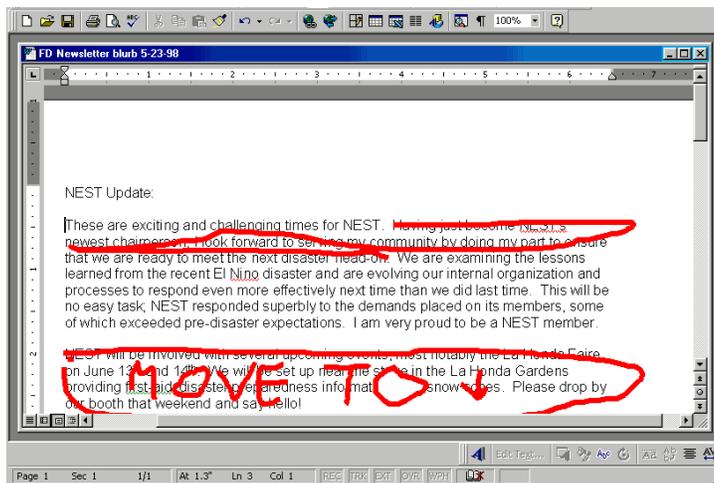
To enter MS Word Markup mode, you must first launch MS Word and have it running as the active (foreground) application. Then, open the document you wish to mark up. Lastly, use one of the following three methods to activate MS Word Markup mode:

❖ Select MS Word Markup mode from the PenOffice Main Menu.

❖ Click the markup icon 🔣 in the Windows taskbar notification area.

❖ Use the PenOffice Toolbar.

Once MS Word Markup mode is active, simply mark up the electronic document just as you would a hard copy of the same document. By doing this, you are essentially creating a drawing that, after a short pause, will be transferred to and embedded within the Word document.

Off Mode

To turn off either Recognition or Markup Mode:

❖ Unselect Recognition or MS Word Markup mode from the PenOffice Main Menu.

❖ Click the pen icon 🖊 or markup icon 🔣 in the Windows taskbar notification area to toggle it off.

To turn off the ScreenDraw Mode:

❖ Click on the ScreenDraw icon on the PenOffice Toolbar.

❖ Press the escape key.

When none of the PenOffice icons in the Windows taskbar notification area are in the selected state, e.g. they do not appear shaded, PenOffice is suspended. While suspended, PenOffice does not process mouse or pen activity. Use this feature when running applications requiring mouse or pen input such as CAD or drawing applications.

PenOffice Toolbar

The PenOffice Toolbar provides a convenient graphical means of controlling application modes and selecting different drawing and markup tools. Access the PenOffice Toolbar by opening the PenOffice Main Menu and clicking **Show Toolbar**.
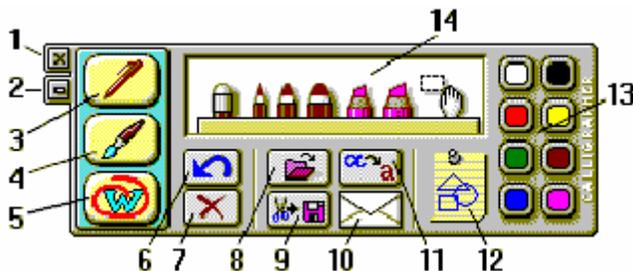
The PenOffice Main Menu is a convenient means of controlling application modes and selecting different drawing/markup tools. The PenOffice Main Menu contains numerous buttons and tools:

❖ <u>Close Toolbar (1)</u>: Click here to close the PenOffice Toolbar.

❖ <u>Main Menu (2)</u>: Click to open the PenOffice Main Menu.

❖ Recognition Mode (3): Clicking this button enables PenOffice's Recognition Mode. Please refer to the section *PenOffice Modes*, above, for more information.

❖ Screen Draw Mode (4): This button enables PenOffice's Screen Draw Mode. Please refer to the section *PenOffice Modes*, above, for more information.

❖ Microsoft Word Markup Mode (5): This button enables PenOffice's MS Word Markup Mode. Please refer to the section *PenOffice Modes*, above, for more information.

NOTE: When buttons 3, 4, and 5 are all off, PenOffice is inactive.

❖ Delete Last Stroke (6): Deletes the last stroke drawn.

❖ Erase All (7): Clears all ink from the screen.

❖ Open Ink (8): Clicking this button allows you to access and load stored PenOffice Ink files.

❖ Save Ink/Image (9): This button allows you to save ink notes as PenOffice Ink, Windows BMP or a JPG file. If you save screen ink as a Windows BMP or JPG file, you will be unable to access it using PenOffice.

❖ Mail Ink/Image (10): You may email PenOffice Ink or Windows BMP files.

❖ Recognize Ink to Clipboard (11): Clicking this button causes PenOffice to recognize handwritten notes from either the Screen Draw or ScratchPad window to the Windows Clipboard for pasting into a word processing application.

❖ New ScratchPad (12): Click this button to create a new ScratchPad that functions like an electronic 'sticky note'.

❖ Color Palette(13): This area defines the color of the currently selected pen or tool. This feature is especially helpful since it allows you to select colors that will contrast with your existing desktop wallpaper and/or application workspaces.

❖ Tools Palette (14): This allows you to choose from among the various available PenOffice tools. Please refer to the section *PenOffice Tools*, below, for more information.

PenOffice Tools
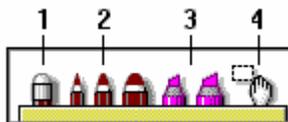
The PenOffice tools are your direct means of using PenOffice. These tools are:

❖ Eraser (1): The Eraser tool removes previously drawn strokes. To use the Eraser, select it from the PenOffice Toolbar and drag it across a stroke to delete that stroke. The Eraser only appears if PenOffice is in ScreenDraw mode or if a ScratchPad is active.

❖ Pencils (2): Use pencils for writing and drawing. You may select three pencils of varying widths by selecting the desired pencil from the PenOffice Toolbar. Pencils are opaque, meaning they completely overwrite other strokes/objects.

❖ Markers (3): Like pencils, markers are used for writing and drawing. You may select two markers of different widths by selecting the desired marker from the PenOffice Toolbar. Markers are translucent, e.g. you can see other strokes and objects underneath marker strokes. Markers are the electronic equivalent of 'highlighter pens'.

❖ Selection Tool (4): Click and drag to select the desired stroke(s), which may then be saved or emailed. The Selection Tool only appears if PenOffice is in ScreenDraw mode.

Deferred Recognition

Deferred recognition allows you to transform notes previously created in Screen Draw mode or by using PenOffice ScratchPads into text. This option does not recognize sketches, pictures, or other non-text items, and thus should only be used to recognize text.

Some examples of using deferred recognition include:

❖ You enter Screen Draw mode and hurriedly jot down some text, such as notes of a conversation. Later, when you have time, you can convert your handwriting into typed text for use in MS Word or other application that uses text.

❖ While on the phone, you use a ScratchPad to take down a name and number. After hanging up, you can use deferred recognition to convert your handwriting into typed text for placement in your contact management application.

❖ Someone sends you a raw PenOffice Ink file for review. You like what you see, and decide to convert it into typed text.

Please refer to the sections *Screen Draw Mode*, above, and *ScratchPad*, below, for information on using the Deferred Recognition feature.

Ink/Image Actions Menu

Open the Ink/Image Actions Menu by clicking **Ink/Image Actions** from the PenOffice Main Menu.

```
Clear Ink
Save InkNote
Mail InkNote
Open InkNote
Recognize to Clipboard

Save ScratchPad Image...
Mail ScratchPad Image...
```
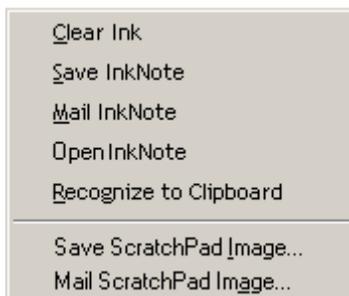
The Ink/Image Action Menu allows you to perform the following actions:

❖ Clear Ink: removes all ink from the screen

❖ Save Ink Note: saves the screen ink as a PenOffice Ink file

❖ Mail Ink Note: emails the screen ink as a PenOffice Ink file

❖ <u>Open Ink Note</u>: loads a previously saved PenOffice Ink file.

❖ <u>Recognize to Clipboard</u>: Recognizes screen ink and copies ASCII text to the Windows Clipboard. Please refer to the section Deferred Recognition, above.

❖ <u>Save ScratchPad Image</u>: saves the present ScratchPad as a Windows BMP or JPEG file.

❖ <u>Mail ScratchPad Image</u>: emails the present ScratchPad as a Windows JPEG or executable file. Please refer to the *General Tab* section, below, for more information.

Editing Text

In addition to its remarkable recognition capabilities, the Recognition Mode of PenOffice features some advanced editing tools.

Selecting Text

Because Recognition Mode tries to recognize all strokes as handwriting, you must modify the stroke to select and drag text. There are two ways to do this:

❖ Tap and hold the mouse or pen still for a moment until you hear a sound. At the sound, PenOffice suspends recognition activities, and your mouse or pen may be used as usual.

❖ Draw a line across the desired text, then hold the pen or mouse for a moment until you hear a sound. The desired block will be highlighted, and the stroke you used to select the text will disappear.

Control Gestures

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

Editing text in the active application's window is accomplished using control 'gestures', e.g. specially shaped strokes that signal PenOffice to perform the appropriate edit function.

You may use gestures for common operations such as `[ENTER]`, `[SPACE]`, and `[BACKSPACE]`. You may also embed certain gestures (Space, Tab, and Enter) within your writing. For example,
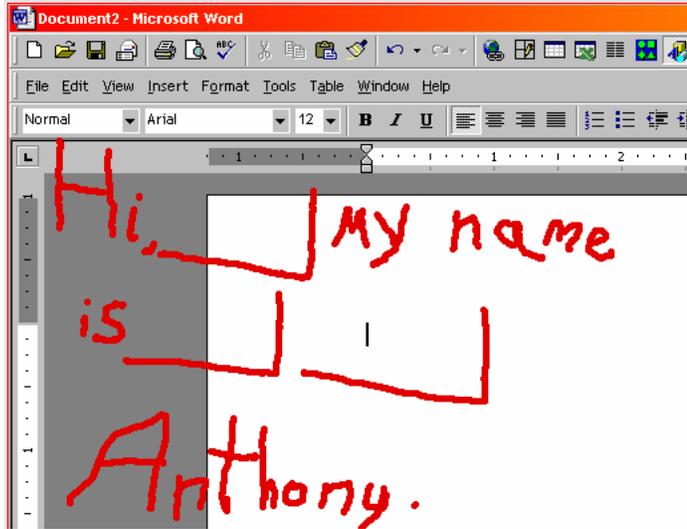
becomes
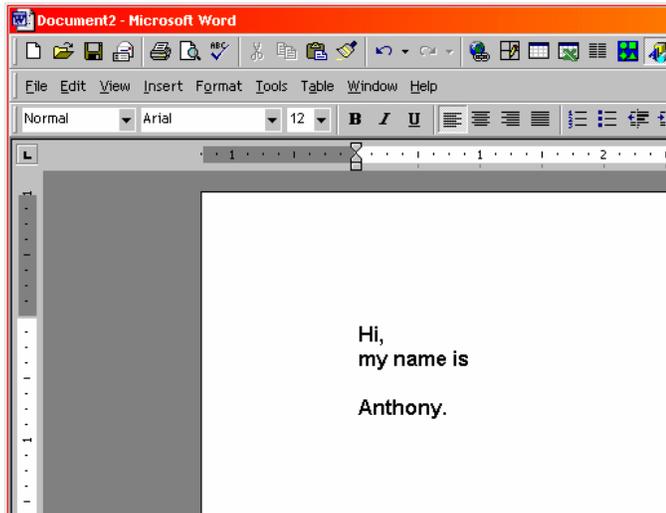
NOTE: You do not need to draw the arrows that appear on the gesture depictions below. They merely serve to illustrate the end point of the particular gesture. Gray arrows next to a gesture depict the proper method of using the gesture.

Return Gesture

This gesture is the functional equivalent of pressing [ENTER]. Its effective point is the starting point.

NOTE: Outside of the Correction Window, the effective point is denoted by the cursor.

Space Gesture

This gesture is the functional equivalent of pressing `[SPACE]`. Its effective point is the starting point.

Tab Gesture

This gesture is the functional equivalent of pressing `[TAB]`. Its effective point is the starting point.

Backspace Gesture

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

Correction Gesture

This gesture only works outside the PenOffice Correction window. It opens the Correction window with the selected text. This operation is particularly useful for spell checking documents.

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

Quick Correct Gesture

Use this gesture to bring up a menu of suggested replacements for the currently selected word or to obtain a list of punctuation to insert in the cursor location if no text is selected.

Case Change Gesture

Use this gesture over any letter in the Correction window to change its case. Begin the gesture immediately above 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.

Language Gesture

Displays the list of languages available. If only two languages available, will automatically toggle between both without displaying a language list.

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

You may correct text using the Correction window. Use the Correction gesture to bring up the Correction window. Using the Correction gesture copies selected text to the Correction window. Please refer to the section *Correction Gesture*, above, for more information on using the Correction gesture.

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

NOTE: The effective point of a gesture is shown by the ▲.

Correction Window

When invoked, the Correction window appears with your selected text copied into it. The Correction window has several buttons that aid you in correcting your text:

Delete Selection Button

This button deletes the selected text.

Undo/Redo Button

Clicking this button alternates between undoing and redoing the previous action.

Highlight Non-Dictionary Words Button

Highlight all words that do not appear in PenOffice's internal dictionaries by clicking this button. This is useful for spell-checking and finding non-standard terms and jargon.

Maximize/Restore Button

This button alternates the Correction window between maximized (full screen) and window (partial screen).

Record Changes Button

When you are finished correcting the selected text, clicking this button places the corrected text back into your document.

Overwriting Text

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

Word before correction

Overwriting the misspelling

Corrected word

Using PenOffice's Built-in Dictionaries

Instead of overwriting misspellings, you may right-click any word in the Correction window and see a list of suggested alternatives for the selected word. Additionally, if the selected word is properly spelled but not found in the built-in PenOffice dictionaries, you may add the word to the user dictionary. To do this, place the cursor on the word you wish to add and click on the cursor to open a pop-up menu. Click **Add to dictionary**, and the word will be added to the user dictionary.

Using 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. Words not in the PenOffice

dictionaries appear underlined. Make the required corrections, then press the Record button to insert the corrected text back into the document.

Correction Options

Selecting a word in the Correction window and right clicking opens the Selected Text menu. This allows you to delete the selection, replace the selection with a space character, change the case, copy the selection to the Windows Clipboard, or paste text from the Windows Clipboard into the Correction window, thereby replacing the selection. The Selected Text menu can be used in place of control gestures.

Clicking directly on the cursor opens a punctuation menu. Select your desired punctuation and it will be inserted at the cursor.

Right clicking in the space following the last word of the selected text launches a menu allowing you the options of erasing all text, undoing/redoing the previous action, copying the text to the Windows Clipboard, or pasting text from the Clipboard into the Correction window after the selected text. This menu is an alternative to using the Correction window buttons, described in the section *Correction Window*, above.

PenOffice Additional Features

PenOffice includes two special features that add enhanced functionality and ease of use. These features are ScratchPad and RiteCalc, both of which are described below.

ScratchPad

ScratchPads are the equivalent of yellow 'sticky notes'. You may use them to jot down notes, draw sketches, etc. You may then store or mail them as either PenOffice Ink files, Windows BMP files, or JPEG files.

To create a new ScratchPad, you may either click New ScratchPad from the PenOffice Main Menu, or click the New ScratchPad button in the PenOffice Toolbar.

You may use the icons in the top right corner of the ScratchPad to open the PenOffice Options Menu, maximize it, minimize it, or close the ScratchPad.

While working with a ScratchPad or when you are finished, open the ScratchPad Menu by clicking the icon in the top left corner of the ScratchPad.

ScratchPad Menu

Clicking the icon in the top left corner of a ScratchPad opens the ScratchPad Menu.
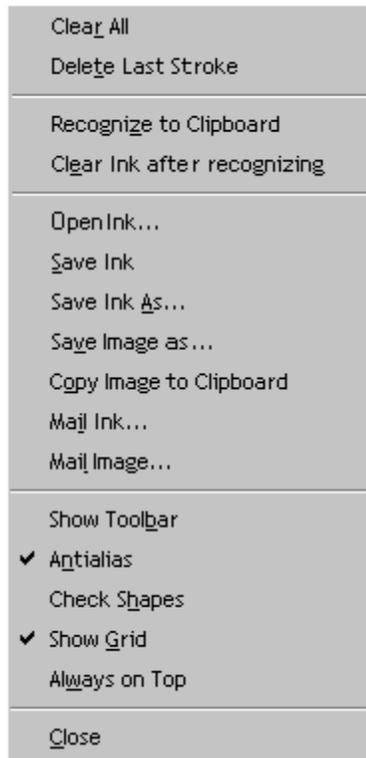
The ScratchPad Menu contains the following controls:

❖ Clear All: deletes all ink on the ScratchPad

❖ Delete Last Stroke: deletes the last stroke placed on the ScratchPad

❖ Recognize to Clipboard: recognizes ink files as handwriting, and copies ASCII text to the Windows Clipboard.

❖ Clear Ink after recognizing: a toggle that recognizes ink as handwriting, and copies ASCII text to the Windows Clipboard, then clears the ink from the ScratchPad

❖ Open Ink: loads a previously saved PenOffice Ink file

❖ Save Ink: saves the current ScratchPad contents as a PenOffice Ink file using either the PenOffice default filename or the previously saved name

❖ Save Ink As: opens a dialog allowing you to choose a filename for saving your Ink file

❖ Save Image as: saves the current ScratchPad contents as either a Windows BMP or JPEG image file

❖ Copy Image to Clipboard: places the ScratchPad contents into the Windows Clipboard, where you may paste it into other applications

❖ Mail Ink: saves the current ScratchPad contents to a PenOffice Ink file as an attachment to a new email message

❖ Mail Image: saves the current ScratchPad contents to a Windows BMP or executable file as an attachment to a new email message

NOTE: You must be running Microsoft Outlook and have it set as the default mail client for Mail Ink and Mail Image to function properly.

❖ Show Toolbar: opens the PenOffice Toolbar. Refer to the section *PenOffice Toolbar*, above, for more information.

❖ Antialiasing: smoothes the edges of your strokes

NOTE: You must be in High Color or True Color mode for Antialiasing to function properly.

❖ Check Shapes: a toggle that smoothes drawn shapes into simple geometric shapes. Refer to the section *ScratchPad Shape Checker*, below, for more information.

❖ Show Grid: Checking this option toggles ruled lines on and off on your ScratchPad.

❖ Always On Top: If this option is checked, the ScratchPad will remain on top of all other open windows.

❖ Close: Closes the ScratchPad.

ScratchPad Shape Checker

Checking the Check Shapes box in the ScratchPad Menu causes PenOffice to examine your drawing to see if you are drawing geometric shapes. If you are, PenOffice automatically smoothes your drawn shapes, as shown in the following example:
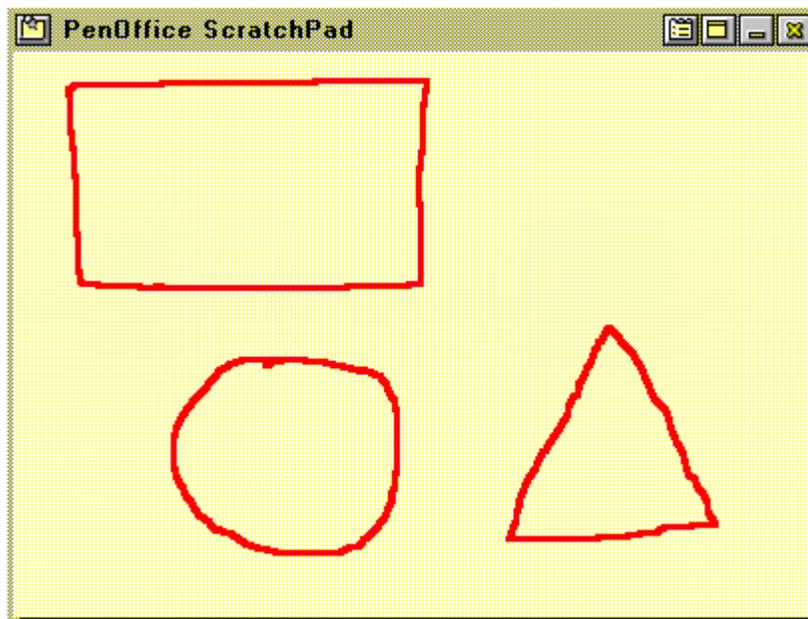
becomes
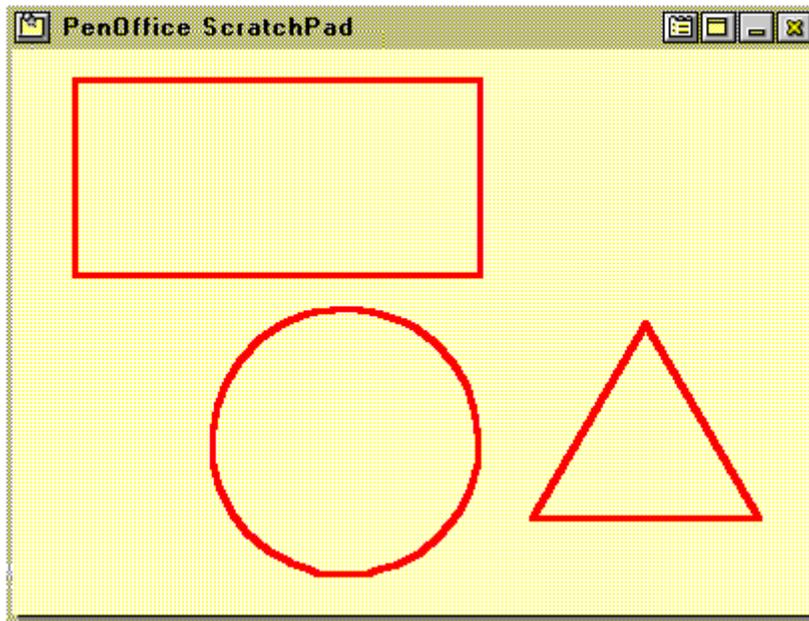
RiteCalc

RiteCalc seamlessly integrates a basic calculator into PenOffice'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. Valid operands include any whole or decimal number.

Valid operations are:

❖   Addition: +

❖   Subtraction: -

❖   Multiplication: * or x.

❖   Division: /, :, or ÷

For example:
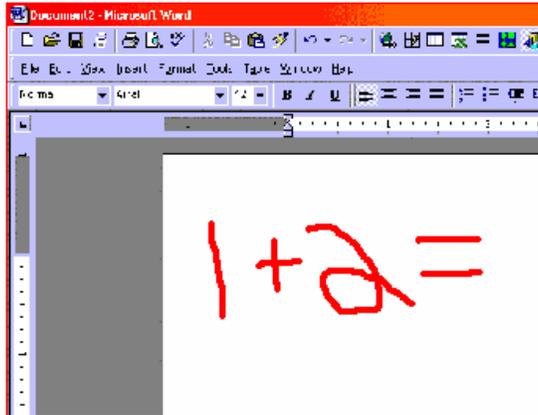
becomes:
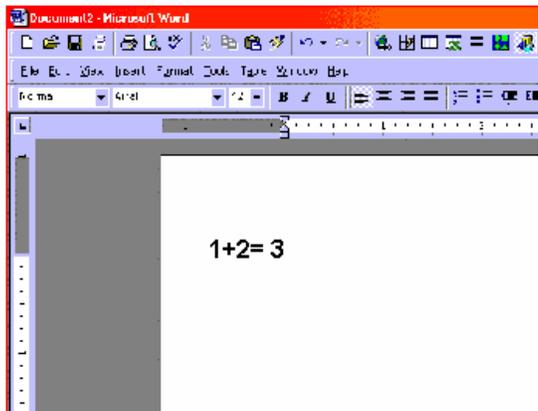
PenCommander

PenCommander technology allows you to create and use macros. Macros allow you to perform many functions such as editing, opening applications, automatically inserting text, or virtually any function by simply writing a command and drawing a circle around it. Please refer to the table below for a list of macros included with PenOffice 2.6.

In addition to the pre-recorded macros, you may create your own macros. These may be simple or complex. Later portions of this section discuss creating simple macros. Please refer to the section *PenCommander Reference*, below, for complete information on creating your own commands.

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

Simple PenCommander Example

This section provides a brief example of basic editing using macros:

1. Using the previous example, simply write all and draw a circle around it.
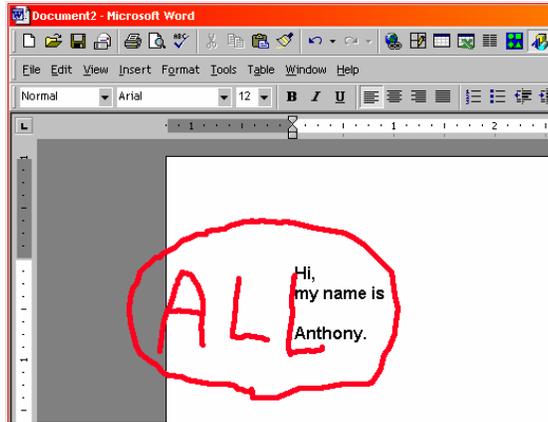
2.   The text is selected. Now write cut and draw a circle around it.
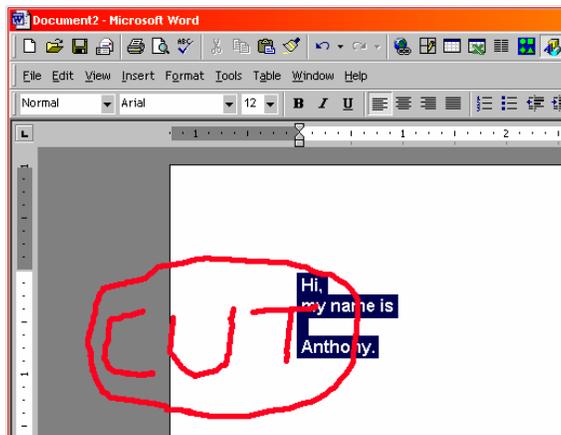
3.   The text is cut from the current document and placed in the Windows Clipboard. To restore it, simply write paste and circle it.
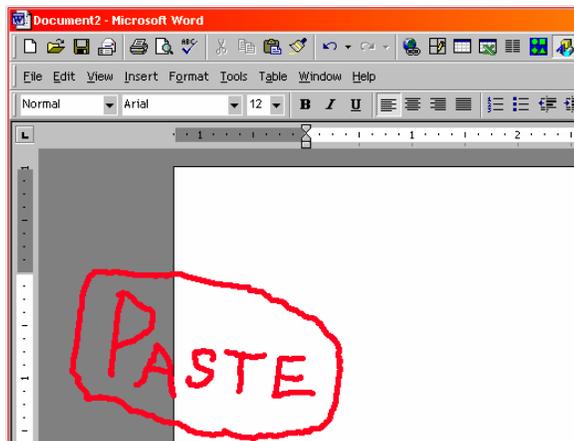
4.   The text reappears
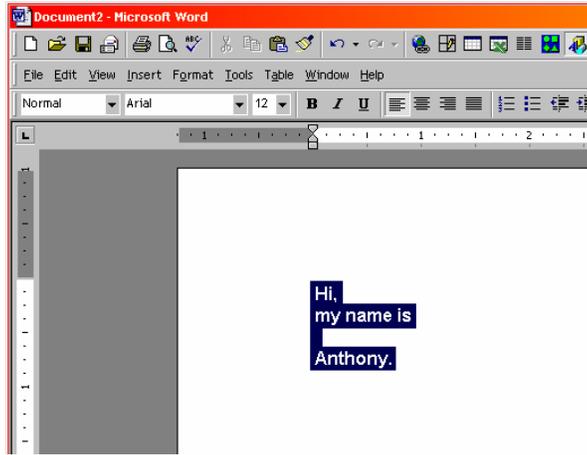
List of PenOffice PenCommands

Following is the list of PenCommands included with PenOffice 2.6:

PenCommand Name	Function
Text Only PenCommands	
Sign	adds your signature file
BTW	'by the way'
Smile	☺
TM	™
Type PenCommands (non-text only)	
Time	adds the current time
Date	adds the current date
Sinc	'Sincerely Yours' + date and time
Edit PenCommands	
All	select all
Copy	copy selected ([CTRL]+[C])
Cut	cut selected ([CTRL]+[X])

PenCommand Name	Function
Paste	paste selected ([CTRL]+[V])
Undo	undo ([CTRL]+[Z])
Bold	bold/unbold toggle ([CTRL]+[B] in MS Word)
Italic	italic/normal toggle ([CTRL]+[I] in MS Word)
General PenCommands	
Print	print ([CTRL]+[P])
Help	help ([F1])
Start/Open File PenCommands	
Macro	start the Pen Macros editor
Pad	start MS WordPad
Ctr	opens the Windows Control Panel
Run	prompts you for a program name, then runs that program
Internet PenCommands	
Forum	opens the Forum Web page
Maps	opens http://maps.yahoo.com, allowing you to find directions to a given address
Search	opens http://www.yahoo.com, an Internet search engine
Stock	opens http://www.finance.yahoo.com, where you can find up-to-date stock quotes
PenOffice-related PenCommands	
Spell	selects all text and opens the Correction Window
Cor	opens the Correction Window (equivalent to the Correct gesture)

PenCommand Name	Function
Opt	opens the PenOffice Options dialog
Menu	opens the PenOffice Main Menu
Shape	starts Letter Shape Selector
Bar	shows/hides the PenOffice Toolbar

NOTE: While all of the above macros are useful by themselves, they can also serve as templates for creating your own macros. Please refer to the section *Building PenCommands*, below.

Part Three: Customizing PenOffice

PenOffice Options

To customize PenOffice, open the PenOffice Main Menu and select **Options**. The PenOffice Options window appears. It has six tabs:

❖ General: This tab sets some general options for PenOffice.

The following sections describe each tab in detail.

The PenOffice Options window has four buttons on the bottom that appear at all times:

❖ Language: This tab allows you to select a language, keyboard, recognition engine, and dictionaries.

❖ Icons: Select the icons you wish displayed in the Windows Taskbar notification area.

❖ Ink: Customize the line thickness and color.

❖ Notes: This tab allows you to customize how and where ScratchPad notes are saved.

❖ Recognizer: Customize the way PenOffice recognizes your writing.

It also has four buttons:

❖ Apply: Saves changes, but without exiting the PenOffice Options window.

❖ Set Default: This button restores factory default PenOffice options.

❖ OK: Saves changes and exits the PenOffice Options window.

❖ Cancel: Discards changes and exits the PenOffice Options window.

General Tab

The General tab allows you to customize other PenOffice features.
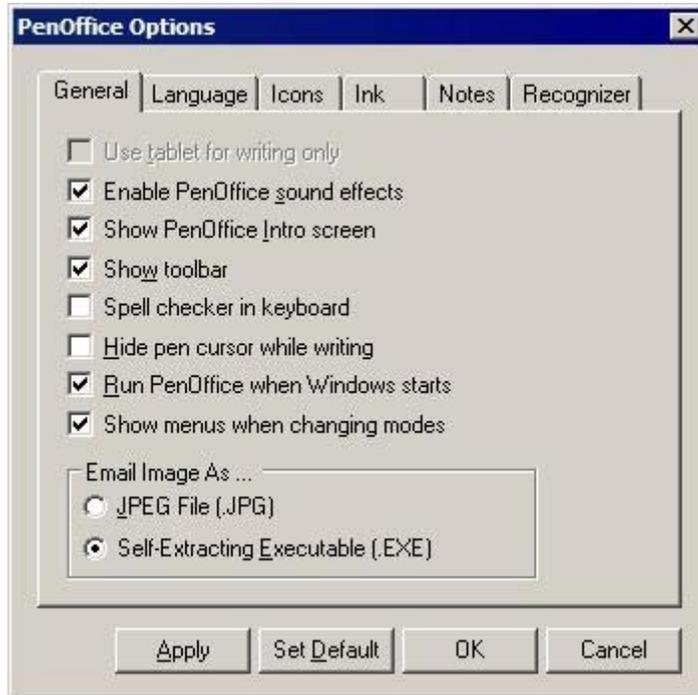
Check or clear the following boxes to toggle the listed features on and off:

❖ **Use Tablet For Writing Only**: Checking this box causes PenOffice to only recognize handwriting entered using a recognized digital tablet. Clearing it allows you to use other input devices such as a mouse to input handwritten text. This option is disabled if no recognized WinTab compliant digital tablet is connected to your computer.

❖ **Enable PenOffice Sound Effects**: Toggles PenOffice sounds on and off.

❖ **Show PenOffice Intro Screen**: Toggles the PenOffice splash screen on and off when you start PenOffice.

❖ **Show Toolbar**: Toggles displaying the PenOffice Toolbar upon startup on and off.

❖ **Spell Checker in Keyboard:** Allows a list of suggested words to appear in the pull-down window on the top of the keyboard.

❖ **Hide Pen Cursor While Writing**: Toggles between displaying the Pen Cursor while writing in any of the three modes.

❖ **Run PenOffice when Windows starts:** Allows the automatic running of PenOffice at startup.

❖ **Show menus when changing modes:** Allows a list of menu options to appear when clicking on the *Recognition Selector* icon (see the *Icons* section, below)

❖ **Email Image As**: allows you to choose between mailing a picture as a JPEG attachment or as a BMP sent as an executable attachment. If mailed as an executable, the attached file will be opened in the PenOffice Viewer, whereupon it can be saved as a BMP in uncompressed form.

Language Tab
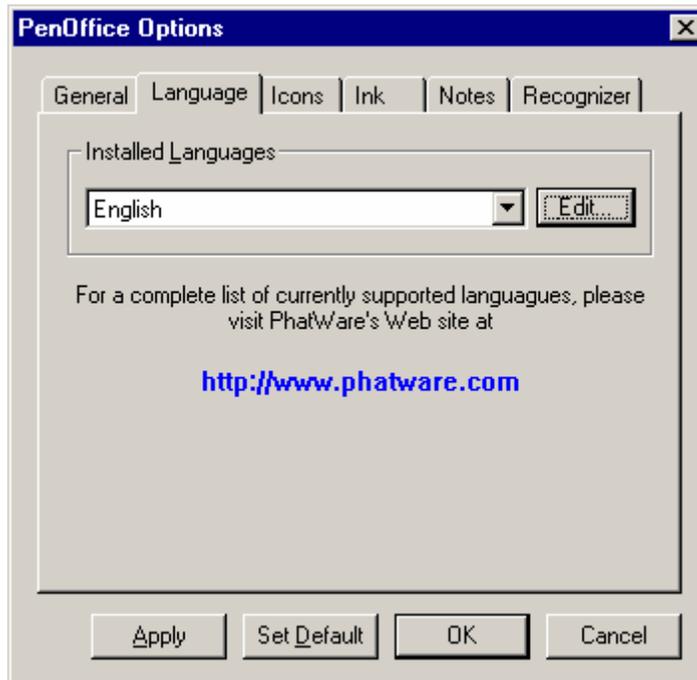
This tab allows you to select and enable or disable your keyboard, recognizer, and dictionaries for each language installed. It also allows you to customize your Punctuation Layout keyboard. Choose the language from the drop-down menu, then click on the **Edit** button to make changes your language configuration.
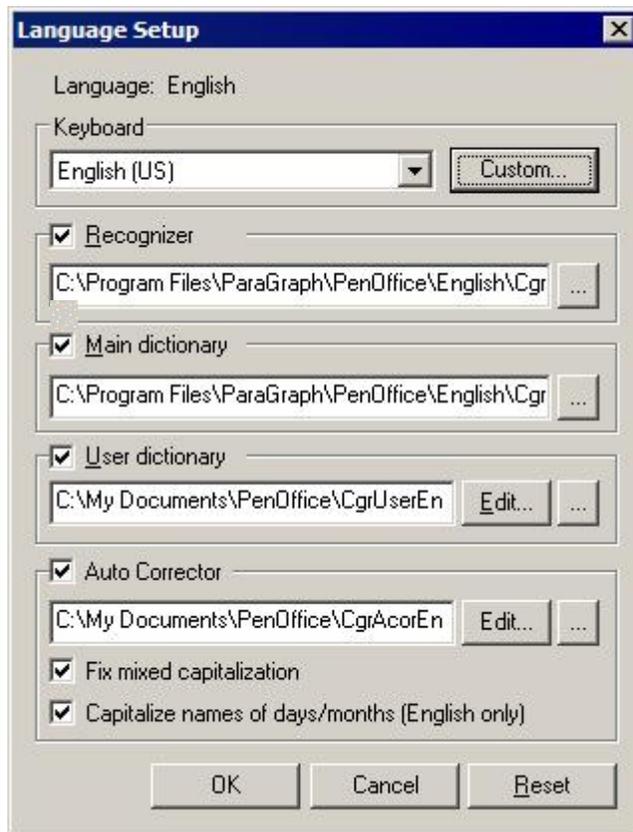
Keyboard

You may select a different keyboard by either by using the drop-down menu to select another language

By clicking the **Custom** button, the **Keyboard Editor** dialog appears. From here you can create your own custom Punctuation Layout keyboard. Drag a button from the **Available Buttons** pane over a button in the **Custom Keyboard** pane you want to replace.

Click **OK** to make the changes for *only* your currently selected language. Click **Apply to all** to make the changes for *all* installed languages. Click **Reset** to return the keyboard to its default settings.

See the *PenOffice Keyboard* section for more information.
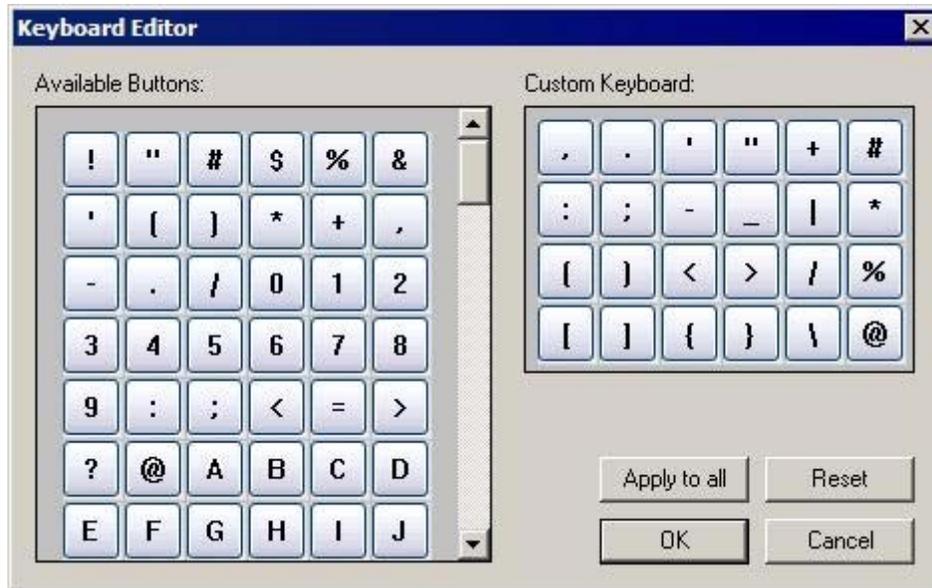
Recognizer

The recognizer is the software module that actually recognizes your handwriting. By selecting different recognizers, you can customize the way PenOffice 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.

Check the **Recognizer** box to enable the recognizer, and clear it to disable. You may select different recognizers either by typing in the full path to the desired recognizer, or by clicking **Browse** and using the standard Windows interface to locate your desired recognizer.

Main Dictionary

PenOffice allows you to use up to two dictionaries. Dictionaries are files that store lists of recognized words. Thus, the dictionaries help the recognizer software transform your handwriting into typed text. The main dictionary comes as part of the PenOffice package and contains 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 to find out what main dictionaries are available.

You may select any valid PenOffice dictionary file as the main dictionary. Thus, you may create a custom dictionary (see the next section *User Dictionary*, below) and use that dictionary instead of the standard PenOffice dictionaries. Note that you cannot edit dictionaries while they are being used as main dictionaries.

Check the **Main Dictionary** box to enable the main dictionary, and clear it to disable. You may select different main dictionaries either by typing in the full path to the desired main dictionary, or by clicking **Browse** and using the standard Windows interface to locate your desired main dictionary.

User Dictionary

The user dictionary performs the same function as main dictionaries, however the user dictionary is fully created and maintained by the user.

Check the **User Dictionary** box to enable the user dictionary, and clear it to disable. You may select different user dictionaries either by typing in the full path to the desired main dictionary, or by clicking **Browse** and using the standard Windows interface to locate your desired user dictionary.

Clicking the Edit button allows you to enter new words into your user dictionary.

Auto Corrector

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.

Check the **Auto Corrector** box to enable the auto corrector feature, and clear it to disable. You may select a different auto corrector file either by typing in the full path to the desired file, or by clicking **Browse** and using the standard Windows interface to locate your desired user auto corrector file.

Clicking the **Edit** button allows you to view and modify the Auto Corrector list.

Click **New** to add a new word to the list. Double-click on an existing word to edit the selected word. In the **Add/Edit Word** dialog box, enter the **If PenOffice recognizes word** and the **Replace it** with words in the provided spaces. Both words can be up to 40 characters long.
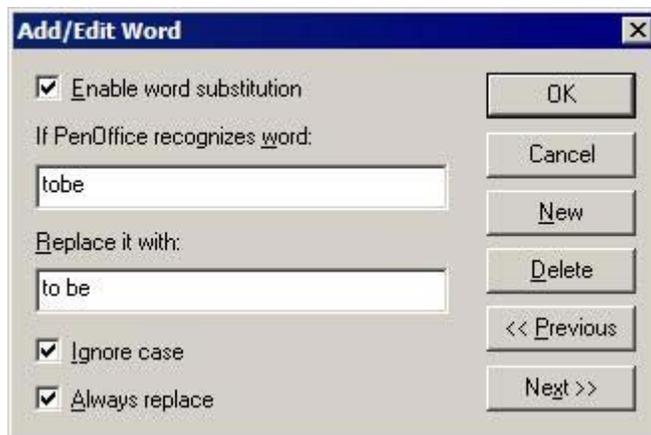
Fix mixed capitalization

This option automatically fixes capitalization errors. Check the box to enable and clear it to disable.

Capitalize names of days/months

This option automatically capitalizes days and months if you are using the English dictionary. Check the box to enable and clear it to disable.

Icons Tab

The Icons tab allows you to choose which PenOffice icons appear in the Windows Taskbar notification area.
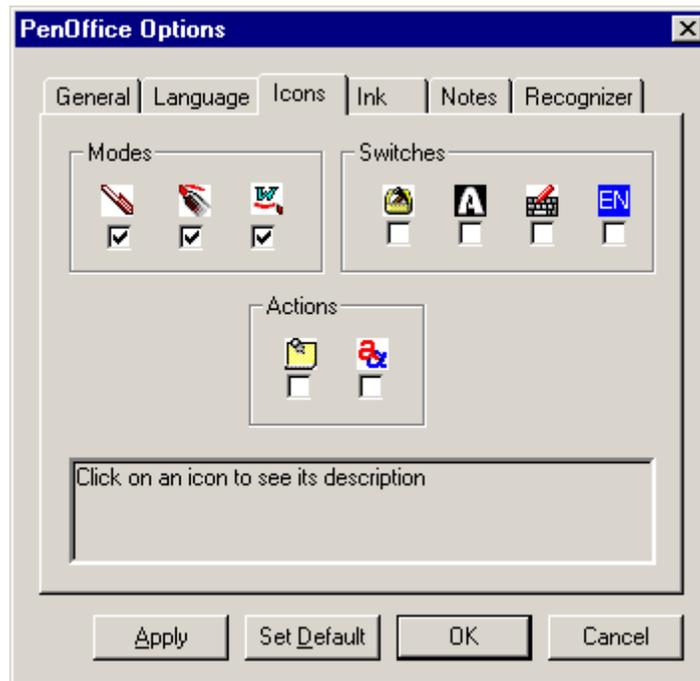
Modes Icons

Check or clear the desired boxes to toggle displaying the Recognition Mode (pen), Screen Draw Mode (marker) icon, and the MS Word Markup Mode (underlined Word logo) icons on and off.

Switches Icons

Check or clear the desired boxes to toggle displaying the Toolbar, the Normal/Capital/Numeric Recognition Selector, the OnScreen Keyboard, and the language selected.

Actions Icons

Check or clear the desired boxes to toggle displaying the ScratchPad and Letter Shapes Selector icons on and off.

Ink Tab

The Ink tab allows you to assign custom properties to your PenOffice 'ink'.
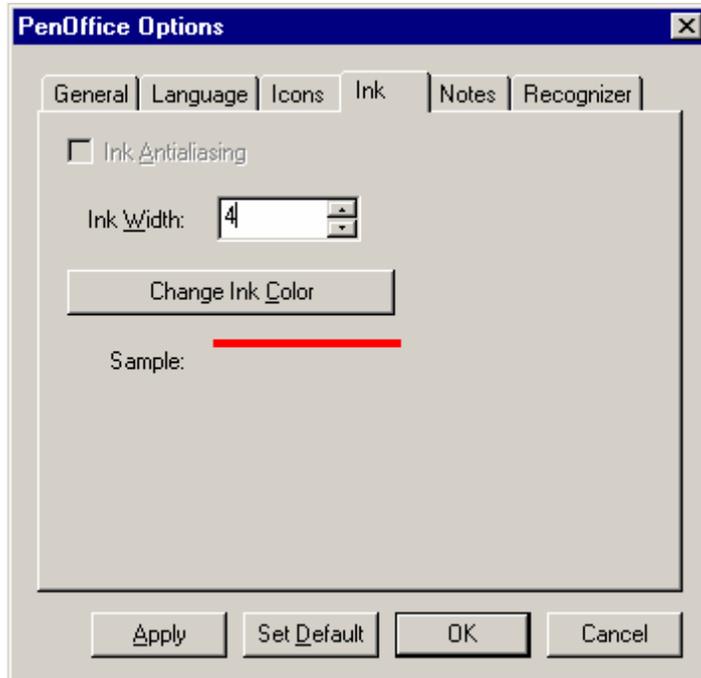
Check or clear the **Ink Antialiasing** box to toggle antialiasing on and off. This feature smoothes the edges of your lines by reducing jagged or sharp edges.

NOTE: You must be in High Color or True Color mode for the Ink Antialiasing to be available.

Click the up and down arrows in the **Ink Width** field to select the desired width of your electronic 'Ink'. By clicking **Change Ink Color** and using the standard Windows interface, you may select your desired ink color.

Notes Tab

The Notes Tab allows you to customize how and where notes (ScratchPads) are saved as the default.
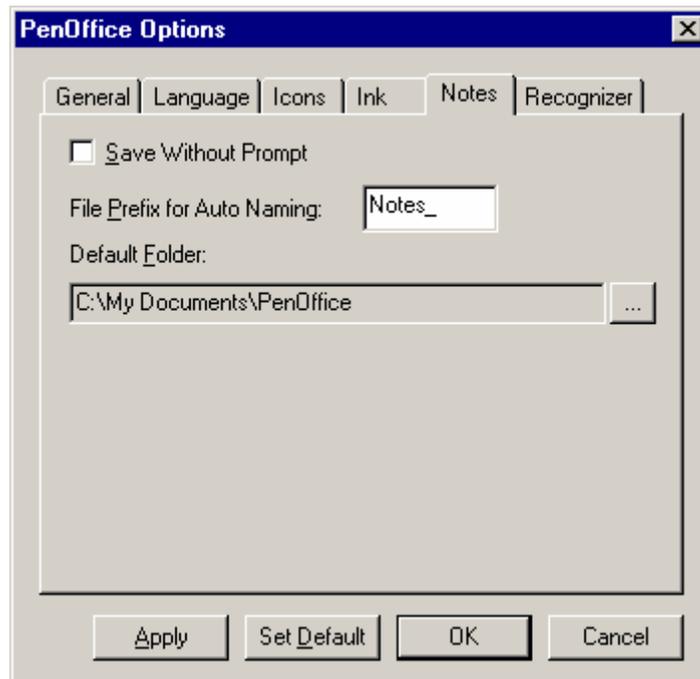
Check or clear the **Save without prompt** box to toggle the save prompt function on and off. When enabled, your ScratchPads save automatically. When cleared, you are prompted to save your ScratchPads. The automatic file name consists of the assigned prefix and a date/time stamp.

By assigning standard prefixes to saved ScratchPad files, you can tell these files at a glance. You may either leave the default selection, or type a new one in the **File Prefix for Auto Naming** field.

Select the default folder where you wish to place saved ScratchPad notes by clicking **Browse** and making your selection.

Recognizer Tab

The Recognizer tab allows you to customize how PenOffice recognizes your handwriting.

Check or clear the following boxes to toggle their functions on and off:

❖ **Add space after word/phrase**: Tells PenOffice to insert a space after each recognized word or fragment.

❖ **Don't add space after a single letter**: Tells PenOffice **not** to insert a space after an individual letter.

❖ **Separate letters mode**: This mode recognizes individual letters instead of words. If you never connect your letters, select it to make recognition faster.

❖ **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).

The **Speed/Quality** slider allows you to customize how you wish PenOffice to trade off in speed versus quality of recognition. Moving the slider towards the speed end of the spectrum makes PenOffice recognize your handwriting very quickly, however it may contain more errors since you may not have time to finish your letters before PenOffice attempts to recognize them. Moving the slider to the quality end of the spectrum makes PenOffice very accurate, but at a cost in time. The default slider position is usually acceptable for most applications, providing excellent accuracy with a reasonable delay.

Recognition Delay is the time, in milliseconds, the recognizer will wait for you to complete a word before inserting the result. As you gain experience with PenOffice, try reducing the timeout to speed up the recognition.

Letter Shape Selector

The Letter Shape Selector allows you to tailor PenOffice's recognition to suit your unique writing style. This helps improve both the speed and accuracy of recognition.
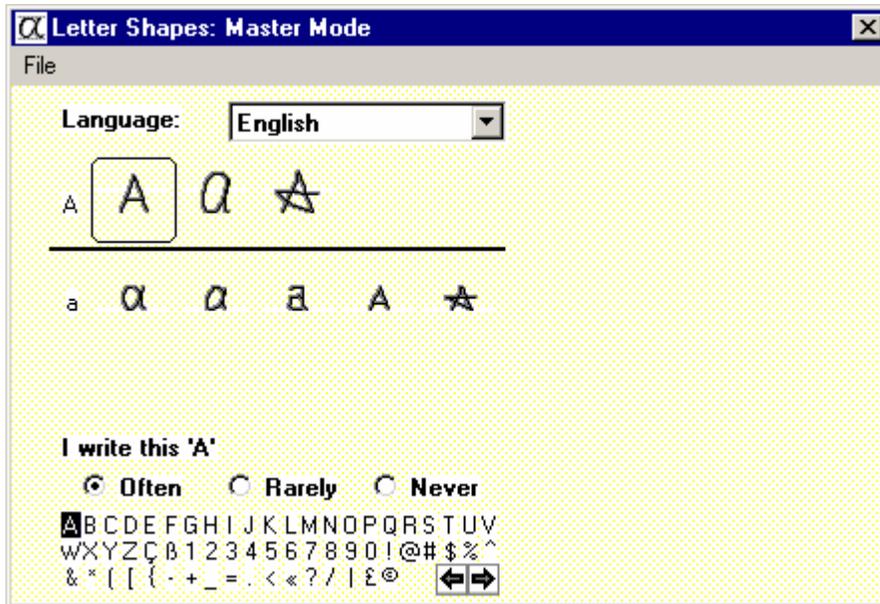
You may access Letter Shape Selector either from the PenOffice Toolbar or Start Menu inside the Pen Office Tools Menu.

The Letter Shape Selector screen presents various means of writing numbers, letters, and common symbols. For each letter, number, or symbol, click each possible variation and check the appropriate box to tell PenOffice if you use that variation **Often**, **Rarely**, or **Never**. You may click 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.

To select another language, click on the drop down menu and select your desired language.

The Letter Shapes Selector Menu

Clicking **File** opens the Letter Shapes Selector Menu.

```
Import ...
Export ...
✔ Master
  Guest
  Use Original Settings
  About Letter Shapes...
  Close        Ctr+W
```

the Letter Shapes Selector Menu has the following functions:

- ❖ **Import**: Loads a pre-defined letter shapes template. This is useful when using international versions of PenOffice, or when you need to load specialized letter templates.

- ❖ **Export**: Saves your current settings to a file

- ❖ **Master/Guest**: Each profile allows you to share each template between two users

- ❖ **Use Original Settings**: Restores factory default settings for the current profile, which is useful if you make a mistake while creating or modifying a template.

- ❖ **About Letter Shapes Selector**: displays version information

- ❖ **Close**: exits Letter Shapes Selector

Part Four: PenCommander Reference

PenCommander allows you to launch pre-recorded, user-defined commands (PenCommands). PenCommander features are available only while PenOffice 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 **in**sensitive. 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 PenOffice'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 the "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 until you are more familiar with PenCommander.

Launching PenCommands

Make sure PenOffice 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 a 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 PenOffice 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, select **PenCommander** in the PenOffice Main Menu or go to the START menu and select **PenCommander** in the PenOffice Tools menu. The PenCommander Editor dialog box will appear:
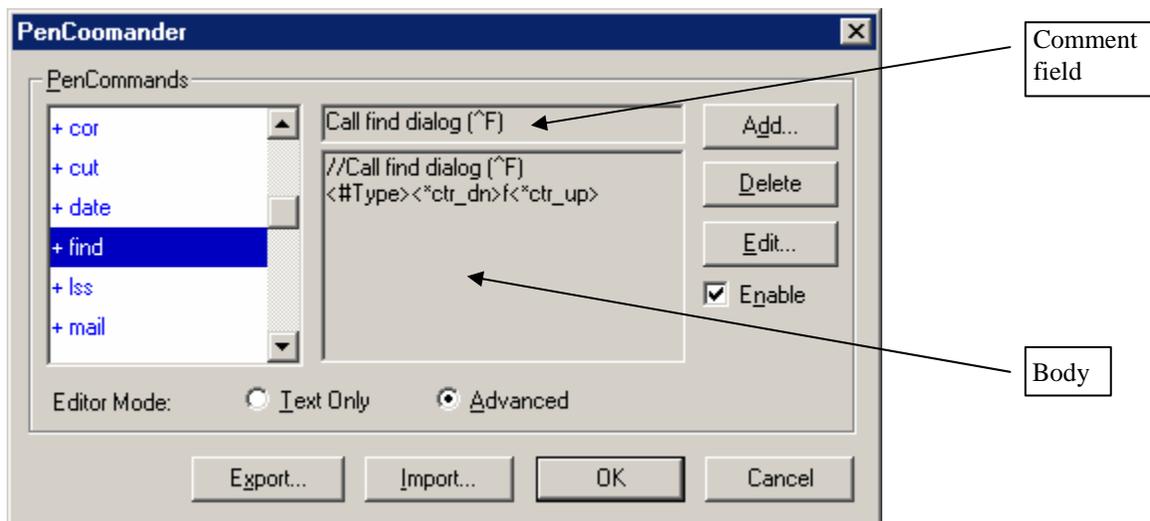
PenCommander Editor dialog box

PenCommander Editor Buttons

❖ <u>A</u>dd: add new PenCommand

❖ <u>Delete</u>: delete selected PenCommand

❖ <u>Edit</u>: edit selected PenCommand

❖ <u>Enable</u>: enables/disables selected PenCommand (as indicated by prefix '+' or '~' before the Name of a PenCommand)

❖ <u>Text only mode/Advanced mode</u>: toggles between PenCommander Text Editor and PenCommander Script Editor

❖ <u>Export</u>: save list of PenCommands to a .MCR file

❖ <u>Import</u>: load list of PenCommands from a .MCR file

PenCommander Editor Fields

❖ <u>PenCommands</u>: list of PenCommands

❖ <u>Comment</u>: user defined comment

❖ <u>Body</u>: text or script of the PenCommand definition (Handheld PC only).

Building Text Only PenCommands

The following dialog box will appear as the result of clicking the **Add** or **Edit** buttons or anywhere inside the **Comment** or **Body** fields in Text Only Mode:

❖ <u>OK</u>: add/update PenCommand;

❖ <u>Cancel</u>: cancel.

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

Building Script Pen Commands

The following dialog box will appear as the result of clicking the **Add** or **Edit** buttons or anywhere inside the **Comment** or **Body** fields in the Advanced Mode:
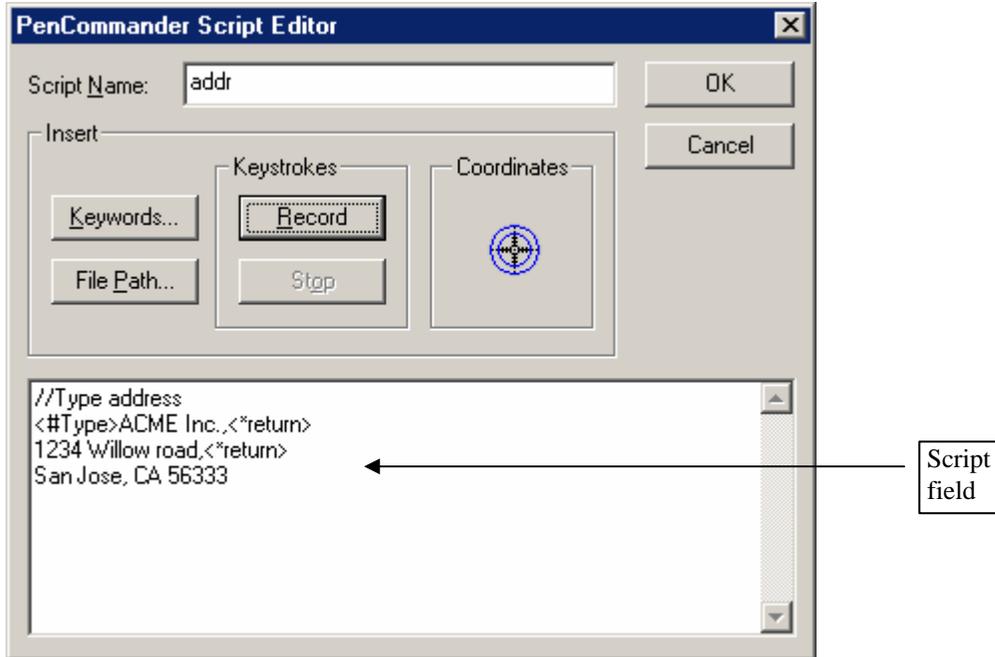
❖ **Keywords**: insert Commands, Special Symbols, or PenCommand Name keywords into the script.
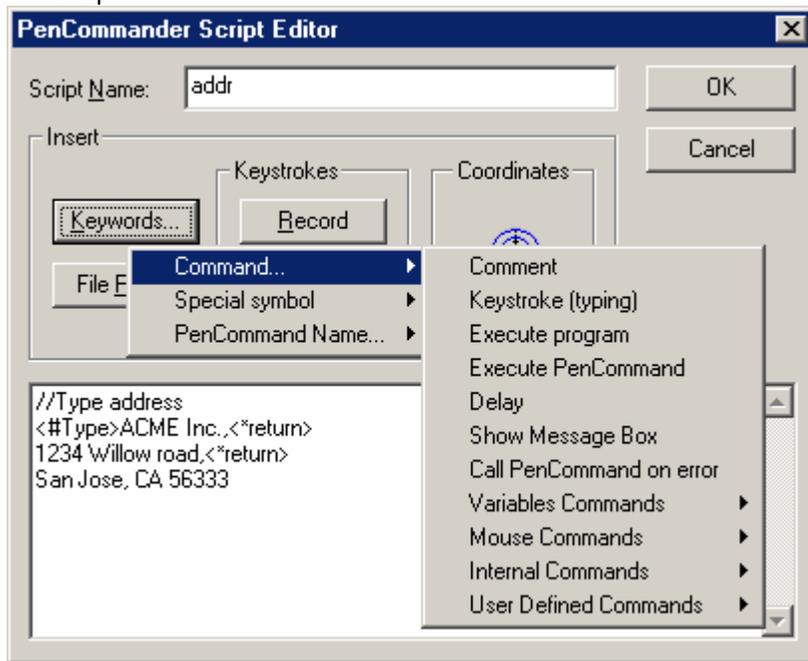
Command menu example
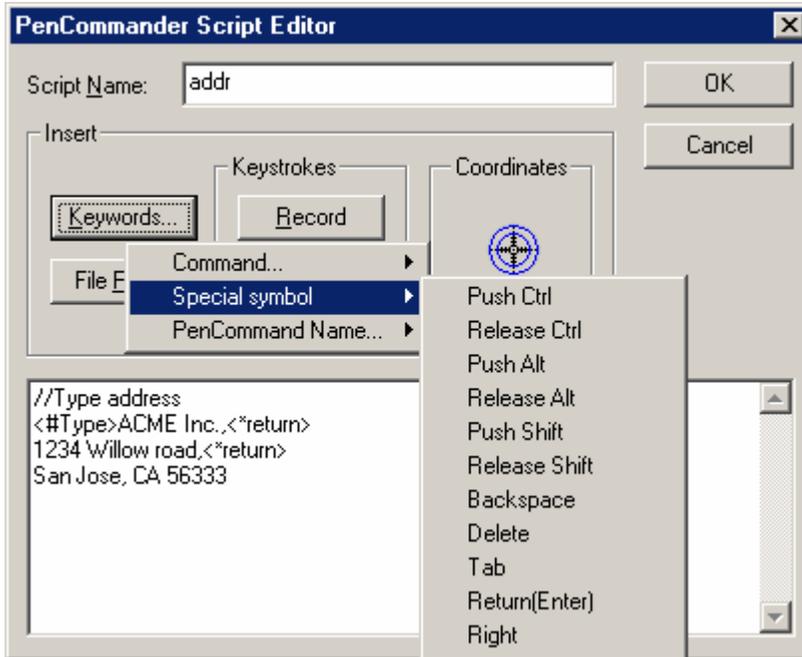
Special symbol menu example.
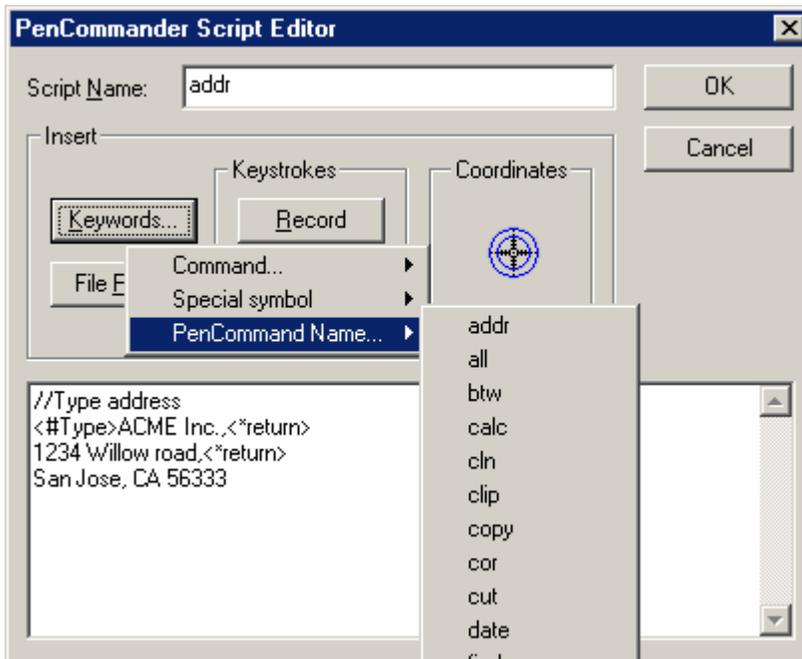
PenCommand Name menu example.

- ❖ **File Path**: inserts the full path of a desired file.

- ❖ **Record**: Activates the recording of the keystrokes made on the keyboard.

- ❖ **Stop**: Stops the recording.

- ❖ **Coordinates**: Allows you to record screen position. Tap on the crosshairs with the pen and drag it to some location on the screen. When you lift the pen, screen coordinates of

the last pen position will be inserted in the script. This is useful if you wish to emulate mouse clicks from your PenCommand.

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 PenOffice'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

- ❖ <u>Keyword</u>: <#Macro>

- ❖ <u>Parameters</u>: Name of the PenCommand to execute.

- ❖ <u>Action</u>: Execute a PenCommand.

- ❖ <u>Remarks</u>: 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)
```

Make a Delay

- ❖ <u>Keyword</u>: <#Delay>

- ❖ <u>Parameters</u>: Time interval for delay (in milliseconds)

- ❖ <u>Action</u>: Make a delay

- ❖ <u>Remarks</u>: 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)
```

Show Message Box

- ❖ <u>Keyword</u>: <#ShowMsg>

- ❖ <u>Parameters</u>: Text to show in the message box.

- ❖ <u>Action</u>: Shows Message Box with the given text.

- ❖ <u>Remarks</u>: 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

- ❖ <u>Keyword</u>: <#DoIfErr>

❖ <u>Parameters</u>: Name of a PenCommand to execute.

❖ <u>Action</u>: Save name of a PenCommand as the error handler name.

❖ <u>Remarks</u>: 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), than 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

❖ <u>Keyword</u>: <#SetStr0> - <#SetStr9>

❖ <u>Parameters</u>: String to place to the string variable

❖ <u>Action</u>: Set the appropriate string variable to given value.

❖ <u>Remarks</u>: 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

❖ <u>Keyword</u>: <#SetSymb0> - <#SetSymb9>

❖ <u>Parameters</u>: Character to place to the symbol variable

❖ <u>Action</u>: Set the appropriate symbol variable to given value.

❖ <u>Remarks</u>: 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

- ❖ <u>Keyword</u>: <#SetInt0> - <#SetInt9>

- ❖ <u>Parameters</u>: Number to place to the integer variable

- ❖ <u>Action</u>: Set the appropriate integer variable to given value.

- ❖ <u>Remarks</u>: Variable index 0 can be omitted.

For example:

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

Ask String Variable

- ❖ <u>Keyword</u>: <#AskSymb0> - <#AskSymb9>

- ❖ <u>Parameters</u>: Title text to show in the dialog box.

- ❖ <u>Action</u>: Show dialog box for string value input. Set the appropriate string variable to given value.

- ❖ <u>Remarks</u>: 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

- ❖ <u>Keyword</u>: <#AskSymb0> - <#AskSymb9>

- ❖ <u>Parameters</u>: Title text to show in the dialog box.

- ❖ <u>Action</u>: Show dialog box for symbol value input. Set the appropriate symbol variable to given value.

- ❖ <u>Remarks</u>: 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

- ❖ <u>Keyword</u>: <#AskInt0> - <#AskInt9>

- ❖ <u>Parameters</u>: Title text to show in the dialog box.

- ❖ <u>Action</u>: Show dialog box for integer value input. Set the appropriate integer variable to given value.

- ❖ <u>Remarks</u>: 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)

- ❖ <u>Keyword</u>: <#LoadLib0> - <# LoadLib9>

- ❖ <u>Parameters</u>: Path to user dll-file to load.

- ❖ <u>Action</u>: Loads dll-file.

- ❖ <u>Remarks</u>: 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

- ❖ <u>Keyword</u>: <#FreeLib0> - <#FreeLib9>

- ❖ <u>Parameters</u>: Ignored.

- ❖ <u>Action</u>: Frees dll-file.

- ❖ <u>Remarks</u>: Library index 0 can be omitted.

For example:

```
<#LoadLib>
```

```
<#LoadLib3>
```

Call Procedure from User Library

- ❖ <u>Keyword</u>: <#CallLib0> - <#CallLib9>

- ❖ <u>Parameters</u>: Calling procedure name [optional parameters string for procedure].

- ❖ <u>Action</u>: Calls user defined procedure from proper dll-file.

- ❖ <u>Remarks</u>: 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 *pSymbs,
    MCR_INTS_TYPE *pInts,
    TCHAR *pParmStr,
    LPARAM lParam);
```

Parameters *pStrings, pSymbs, 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_SYMBS_TYPE *pSymbs,
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/download.html.

PenOffice commands

Show PenOffice Menu

- ❖ <u>Keyword</u>: <#Menu>
- ❖ <u>Parameters</u>: Ignored.
- ❖ <u>Action</u>: Shows PenOffice Main Menu.

For example:

<#Menu>

Show PenOffice Options

- ❖ <u>Keyword</u>: <#Options>
- ❖ <u>Parameters</u>: Ignored.
- ❖ <u>Action</u>: Shows PenOffice Options Dialog Box.

For example:

<#Options>

Show PenOffice Corrector Window

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

For example:

<#Corr>

Start Letter Shape Selector

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

For example:

<#Shape>

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 easy 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 PenOffice WEB page
<#Start>iexplorer http://www.phatware.com/
```

Open PenOffice Help

PenCommand name: CHELP

```
// Open PenOffice help
<#Start>iexplorer \windows\penoffice.htm
```

Call PenCommander Editor

PenCommand name: CHELP

```
// Call PenCommander Editor
<#Start>"\program files\penoffice\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>™
```

PenOffice Reserved PenCommands

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

- ❖ @CgrOnInit

- ❖ @CgrOnClose

- ❖ @CgrVars

@CgrOnInit.

@CgrOnInit is executed (if present) by PenOffice while PenCommander PenCommands are loading into 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 PenOffice 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 PenOffice when PenCommander is closing. It allows to PenOffice to save and restore variable values. Do not correct this PenCommand manually.