

# **JAWS 9 for Windows**

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# **JAWS 9 for Windows (2000/XP/Vista)**

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## **Publisher:**

Freedom Scientific  
Blind/Low Vision Group  
11800 31st Court North  
St. Petersburg, FL 33716-1805  
(800) 336-5658  
<http://www.freedomscientific.com>

## **Retail Cost:**

\$ 895 for JAWS Standard  
\$ 1095 for JAWS Professional  
\$ 1295 for JAWS Professional and Remote Access  
\$ 200 (approximately) for Software Maintenance Agreement

## **System Requirements:**

To use JAWS for Windows, version 9, you need:

1. A personal computer that will run the XP Home/Vista Home for JAWS Standard Edition, or the Microsoft Windows 2000/XP Pro/Vista to run JAWS Professional Edition.
2. A 2000/XP/Vista compatible sound card.
3. 200MB of available hard disk space required.
4. Video card supporting 1024x768 screen resolution and 32-bit color.

As with most systems, the faster the processor and the more memory your computer has the better the performance of your computer and our product.

JFW 9 for Windows is a 32-bit program and will not work in the Windows 3.1x, Windows 95/98/Me environment. JAWS supports Microsoft Word under 2000/XP/Vista. For system requirements for Microsoft Word, refer to the Microsoft Word documentation. For Web access, MS Internet Explorer (IE) 6 and higher or Mozilla Firefox should be used.

## **Description:**

JAWS for Windows is a screen reader that uses the numeric keypad for its basic reading functions. A number of interactive hot key commands are available to change settings easily; these generally are prefixed by the Insert key and then a letter, number or function key from the alpha side of the keyboard.

There are two particularly strong features in JAWS which help the user: Verbosity Level and Help.

1. There are three levels of verbal assistance provided to the user: a lot (beginner), some (intermediate) and little (advanced). The default full verbosity level is very informative for the new user.
2. The extensive help functions in JAWS for Windows are well developed. The on-line help for JAWS is rich, and there is included an additional level of help: context-sensitive help.

Extensive information about the Windows environment is included with the JAWS documentation. A developed scripting language also comes with JAWS so that advanced users may configure JAWS for unique applications or customize an existing application configuration.

## **Network Support**

JFW is network enabled. For those with multi-user licenses, a single network enabled copy of JFW can now be installed on a server computer and be run from multiple computers by a variety of users. This means that any user can go to any computer on the network, activate and use JFW with his or her personal preferences preserved.

**Note:** Network enabling requires a network authorization key.

## **Windows XP and "Classic" Theme**

One of the changes that Microsoft made in Windows 2000 and Windows XP is in the "Standard Windows" appearance-setting scheme (there is no classic theme for Vista). It is possible to correct this by changing back to the original settings, which are now found in the "Windows Classic" scheme. See the note below for details on how to change this setting.

1. Select My Computer from the desktop and go to the Control Panel.
2. Choose Display and then Ctrl Tab to the Appearance tab.
3. Select "Windows Classic" in the Scheme dialog.

## **Virtual PC Cursor**

The Virtual PC cursor was introduced in JAWS for Windows version 3.31. The intended functionality is to mimic the PC cursor in its ability to navigate and view HTML documents using the same keystrokes and commands used while working in a word processing program.

Since there is no cursor or insertion point in an HTML document such as a Web page or HTML Help window, JAWS for Windows allows visually impaired computer users to navigate HTML documents as though there is a cursor or insertion point. This means that editing commands such as selecting, copying, and pasting text are also available when using the Virtual PC cursor.

The Virtual PC cursor is activated automatically whenever the application focus is brought into an HTML document such as a Web page or HTML Help window. Many e-mail programs support the ability to create HTML e-mail messages and view messages sent in HTML format as well.

### **Skip Repeated Text on New Web Pages**

Many Web sites contain common text on all of their pages. When this option is checked, JAWS positions the Virtual PC cursor on the new text of the newly loaded Web page.

### **Screen Track Virtual Cursor**

When this option is checked, the screen will track the Virtual PC cursor. This is necessary if MAGic is being used, or if a sighted user needs to follow along visually. The default is ON.

### **Say Link Type**

There are numerous types of links. When this option is checked, JAWS announces the link type during Say All and when navigating with the Virtual PC cursor.

### **Identify "Same Page" Links**

Links can point to other places on the currently loaded page. When this option is checked, JAWS will announce such links as "Same Page links."

### **Lines Per Page**

This option determines how many lines constitute a page when the Virtual PC cursor is active. The default value is 24.

### **Maximum Line Length**

This option determines how many characters constitute a line when the Virtual PC cursor is active. The default value is 150.

**Text Block Length**

The Move To Next Non-Link Text script uses this option. JAWS will move to the next block of contiguous characters that are at least the number of the value set here. The default value is 25. This is how JAWS searches for body text to read.

**Graphic Verbosity**

This option determines the verbosity in which JAWS speaks non-linked graphics on Web pages. The choices are No Graphics, Tagged Graphics, and All Graphics. The default setting is Tagged Graphics.

**Graphic Link Verbosity**

This option determines the verbosity in which JAWS speaks linked graphics on Web pages. The choices are: No Graphic Links, Tagged Graphic Links, and All Graphic Links. The default setting is All Graphic Links.

**Image Map Link Verbosity**

This option determines the verbosity in which JAWS speaks image map links on Web pages. The choices are: No Image Map Links, Tagged Image Map Links, and All Image Map Links. The default setting is All Image Map Links.

**New Frame Indication**

This option determines the way in which JAWS indicates the user has moved from one frame to another on Web pages. The choices are No Indication, Say Frame Name at Beginning and End, and Say New Frame When Entering. The default setting is Say Frame Name at Beginning and End.

**JAWS Cursor Restriction Feature**

The JAWS cursor has 3 separate levels related to where it can move on the computer screen. In previous versions of JAWS the movement of this cursor was restricted to either the current or parent window with focus when navigational keys were used.

Now, in addition to the previous restriction options, the JAWS cursor can also be set to move freely throughout the entire screen area. Each time Insert R is pressed when the JAWS cursor on, the next level of restriction is spoken and moves the status to that level.

**Application Window Restriction**

When the JAWS or Invisible Cursor are within the Parent Window with focus, the cursor will not move outside the Parent window when using standard navigation keys such as Page Up Page Down, Home, End, or Arrow keys. This is the default selection.

**Current Window Restriction**

When put in this mode, the JAWS or Invisible Cursor are restricted to the current window that they are in at that moment. This is useful to restrict movement and reading to a control such as a list box without having to hear other information

outside of that specific control. The cursor will not move outside the Window with standard navigation keys such as Page Up, Page Down, Home, End, or Arrow Keys.

### **Unrestricted**

In this new Unrestricted Mode, with the JAWS or invisible cursor active, the user can freely roam the entire screen regardless of the number of Windows open or how they appear on the screen. Using this mode, the user can easily browse the screen line by line and get an understanding of everything available on the screen.

### **Tables Navigation Support for Many Applications**

There are new navigation keys to be used when in a table. These commands read the contents of the cell, along with the associated row and column headings. The same keystrokes can be used to navigate tables in Microsoft Access databases, Excel, Internet Explorer 5, PowerPoint, and Word, and in Corel QuattroPro and WordPerfect.

Use the following navigational keys when working inside a table, spreadsheet or database:

#### **Say Cell use Alt Ctrl Num Pad 5.**

Reads the row and column coordinates, followed by the cell contents and then the appropriate row and column headings.

**Note:** Because of this new function for Alt Ctrl Num Pad 5, the read current paragraph command has been changed to Ctrl Num Pad 5 is now used to read the current paragraph.

#### **Next Cell use Alt Ctrl Right Arrow.**

Moves the focus to the next cell in the same row and then announces the column heading followed by cell contents and then the column number.

#### **Prior Cell use Alt Ctrl Left Arrow.**

Moves the focus to the previous cell in the same row and then announces the column heading followed by cell contents and then the column number.

#### **Down Cell use Alt Ctrl Down Arrow.**

Moves the focus to the cell below the current cell and reads the row heading followed by cell contents and then the row number.

#### **Up Cell use Alt Ctrl Up Arrow.**

Moves the focus to the cell above the current cell and then announces the row heading followed by cell contents and then the row number.

**Note:** For all of these tables keystrokes: in a verbosity setting higher than beginner the new row number will not be heard.

**Note:** If there is no cell available in the direction the user is trying to move, JAWS will state that the bottom or top of column or the end or beginning of a row has been reached.

**First Cell In Table use Alt Ctrl Home.**

Moves to first cell in current table and reads row and column coordinates followed by contents of the cell.

**Last Cell In Table use Alt Ctrl End.**

Moves to the last cell in current table and reads row and column coordinates followed by contents of the cell.

## **Internet Explorer Support**

JAWS 9 continues its ability to read the web with support for Internet Explorer 6.0 and 7. Many of the features introduced in Internet Explorer 5.5 continue with identical key commands and functionality in IE 6 and 7. Listed below are the major features that users may be familiar with using.

**Screen follows the Virtual PC Cursor**

The screen will now scroll to track the location of the Virtual PC cursor.

**Persistence of Settings in List of Links**

If the user filters or organizes their list in the Link List dialog, this setting will remain until they change it or exit JFW. The default setting that ships with JFW is All Links in Tab Order.

**Improvements to Links List**

The Links List Dialog status line has been changed. The status line no longer contains the display filter or the sort order, as these are easily accessible by tabbing around the dialog. The status line contains the URL for selected link. This enables the user to determine which of several links with the same text name they want to activate or move to, i.e., which "Click Here" is the right one to select

**Graphic Announcement Toggle**

The user now has the ability to turn off the announcement of graphics that are not links. The user is able to toggle this through the HTML Settings Dialog in the Configuration Manager. The choices are: No Graphics, Tagged Graphics, and All Graphics. The default setting is All Graphics.

**ALT Text and Screen Text Toggle**

Often, the ALT Text of links on a Web page is different from the text shown on the screen. Depending on the Web page, either can be more descriptive. The user now has the choice to select which of these they would like JFW to seek as the primary text to speak.



If the user selects Screen Text, JFW will use the screen text if it exists, otherwise, it will use the ALT Text. If neither exists it will use the URL.

If the user selects ALT Text, JFW will always use the ALT Text, if available, otherwise, it will revert to the screen text. If neither exists it will use the URL.

The user is able to toggle this temporarily through the Verbosity dialog, or permanently through the HTML Settings dialog in the Configuration Manager.

## **MS Word Support**

### **AutoText Entries**

AutoText entries are commonly used entries that Word displays as a Tool Tip when entering text into a document. To announce the AutoText screen-tips, it is necessary to turn on the tool tips under the verbosity menu in the Word Configuration Manager.

### **Tracking Changes to Documents**

The Track Changes feature can now be used to announce the revision type and author when the cursor moves into modified text. It also lets the user know when the cursor has moved out of modified text; it also is possible to bring up an entire list of revisions from which to select.

### **Check Spelling and Grammar As You Type**

JAWS now announces a misspelled word or grammatical error as the user is typing. It also is possible to bring up a list of spelling or grammar errors in the document and scroll up or down the list to select and move directly to the one desired.

### **Form Fields**

JAWS now detects form fields such as text boxes, drop-down menus and check boxes. JFW will automatically detect the form field prompt if it is to the left or above but if using the JAWS cursor to locate it, it can be anywhere.

### **Tables**

In addition to the new keystrokes to help navigate in tables and spreadsheets, there is also the added ability for JFW to detect tables and their row and column titles.

### **More Verbosity Dialog Support**

There are several other options that are now supported by JFW. These options are selected using the Verbosity dialog. Included are the following:

- Detect Style Changes
- Borders and Pictures Detection
- Reading WordArt text tag
- Reading Bullets in a list entry
- JAWS and Invisible Cursor Context Detection

### **Screen Sensitive Help Enhancements**

Screen Sensitive Help has been adjusted and enhanced to tell the user about:

Header/footer pane

The footnote/endnote pane

The comments pane

The document summary

Number of sections and information about the current section

The number of objects in the drawing

Current table cell width and height in points.

### **Insertion Point Information Announcement**

The Insert-F command has been modified. When pressed once it gives font, style, paragraph and outline information for the character to the right of the insertion point or for the selected text. When pressed twice, it gives font and style information for the insertion pointer, i.e., what the format of new characters typed would be.

Say Line and Column

Say Line and Column now gets the information from the Object model rather than the status line so it will work even with no status line visible.

### **Say Window Prompt And Text**

Spelling errors, grammatical errors, fields, form fields, borders, etc. are now included in addition to the cell content and coordinates when using Insert Tab. When announcing bordered regions, this keystroke will only announce the border and text of the immediate region, unlike the Border keystroke, which will describe each bordered region, starting from the current one and working outward.

### **Working in Outline View**

Commands are now available to support the promoting and demoting of a heading to different style levels in Outline View. JFW announces the new level in the PC cursor mode.

### **Other Word Enhancements**

JFW users can now use several Word advanced features such as Mail Merge and Proofreading.

Some Toolbar items are now available, including; Data Source Form, Insert Table, Insert Column, and Insert Microsoft Excel Spreadsheet.

Improved functions in tables include Say Line in table cells when markers or other symbols are displayed on the screen and Braille will now track in Tables using Alt Control Arrow keys.

In Beginner Verbosity, JFW will automatically select an item in List Views when using Backspace or Enter.

More effective searches in document text are now achieved with JFW using Find Next, because JFW will now read the next occurrence in context.

Find Back and Forward in the Accept or Reject Changes dialog now reads the next revision and the sentence containing the revision. JFW will also read the selected revision and context.

The Spellchecker in Word speaks the next error using added JAWS functionality.

## **MS Excel**

In addition to the new table navigation keystrokes, several other features have been added to JFW to support Excel.

JAWS now contains keystrokes that will allow you to read only the portion of the spreadsheet that is visible on the screen. If Title reading is enabled, pressing these keystrokes will read the appropriate title cells followed by the visible cells' contents.

### **INSERT+UP ARROW.**

This will allow you to read the visible row.

### **INSERT+HOME.**

This command will the visible row to the current cell.

### **INSERT+PAGE UP.**

This command will read the visible row from the current cell.

### **INSERT+CTRL+UP ARROW.**

This command will read the visible column.

### **INSERT+CTRL+HOME.**

This command will read the visible column to the current cell.

### **INSERT+CTRL+PAGE UP.**

This command will read the visible column from the current cell.

In addition to the default Read Selected Range, which reads cell coordinates and all selected cells, users can read the first and last cell by setting the verbosity setting to **"Read First and Last Cell in Selection Only."**

JFW keystroke Insert-F now identifies four kinds of underline styles instead of just stating if underlining is on or off.

**Insert Num Row 5 and Insert F** (when the color has been changed from the default) will now correctly identify the cell's text color as selected in the Font Color menu.

Using **Ctrl Left and Ctrl Right Arrows** while editing a cell (i.e., after pressing F2) will now correctly read the prior and next word in the cell.

JFW now automatically selects a file listed in the Open or Save As listviews when JFW is set at Beginner Verbosity.

Screen Sensitive Help in the worksheet has been enhanced to announce the number of worksheets in the current workbook. Ctrl Page Up or Down and Ctrl Shift S can be used to move between other sheets.

## **PowerPoint Support**

With the Internet and the Microsoft PowerPoint presentation graphics program, it is possible to develop and deliver presentations for the Web as well as for meetings. In PowerPoint, many familiar features have been enhanced to make presentation development and delivery, online or otherwise, easier.

The main PowerPoint screen, which is called the "Normal View," is divided into three panes, each pane serving a different function. This lets the user switch between a variety of tasks quickly and easily. The first pane is called "Slide View" and shows the current slide. The next pane, called "Notes Page View," provides space for the user to add any personal notes that refer to the slide currently being shown. The last pane, called "Outline View", shows the text that appears in the current slide. As text is added directly into the slide, it automatically appears in the outline view. Alternatively, any changes made to the text in the outline view are automatically reflected in the slide view. Pressing the function key F6 toggles through these panes..

JFW now easily reads OLE charts and objects Excel and other spreadsheets, or .BMP files from the Paint program. Bring any of these objects into focus from the top level by tabbing to them and pressing Enter. Go back to the top level by pressing Esc, at which point it is possible to tab to other objects on the slide.

New functionality has been added that helps the user determine the amount of text that can easily fit into a particular slide in PowerPoint. JFW does this by alerting the user that there has been too much text put into a placeholder. This feature is called Text Overflow Detection. Screen Sensitive Help will also provide the information when Insert F1 is pressed. JFW can also announce the approximate number of lines that are left based on the font size that was used in the last line typed. This detection is on by default and will help prevent too much information being put on one slide, which results in the slide looking cluttered.

There is also an Object Overlap Detection feature that has been added as another Verbosity item. This detects when objects on the slide overlap and is also on by default.

JFW will now speak the Slides from Files and Custom Animations dialogs in PowerPoint.

In PowerPoint 2003, users can now use cut and paste keystrokes to rearrange slides in the Slide Sorter View.

Continuing in JAWS is the ability to use the virtual cursor to navigate a PowerPoint slideshow. JAWS uses the virtual cursor to navigate the slide show after you press F5.

If you are on a bullet point and press either a routing button on the braille display or you press **NUM PAD SLASH** to press the left mouse button, the visible pointer will be routed to the end of the current bullet point. You may then use **INSERT+F** to report font information for that bullet point.

A keystroke has been continued in JAWS which enables the user to read the speaker's notes in normal or Slide Show views: **Ctrl Shift N**.

JFW now automatically selects a file listed in the Open or Save As listviews when JFW is set at Beginner Verbosity.

The keystroke Control Shift F is no longer used to toggle Format and Text announcements. Instead, the user should select the Verbosity dialog using Insert V and select Format and Text Announcement to On.

When using **INSERT+V**, the dialog now tells you the state of each item as you move through the list of application specific settings.

Pressing the F6 key will toggle through each of the three PowerPoint panes in the "Normal View" (i.e., which are called the "Slide View", "Notes Page View", and "Outline View").

## **Microsoft Access**

Subforms and main forms are now identified when Tab or Ctrl Tab is used to navigate them.

When typing text, which is auto-completed, such as when entering text in a lookup field or macro entry, JFW will now automatically read the completed text.

When adding controls to a form or report with the Select Toolbox Control command, a label control is now automatically created along with the selected control.

When listing form controls, JFW now shows the disabled and visible status.

When doing a Backspace or Enter in the Open or Save As listviews in these dialogs, if a folder or file is not selected, at beginner verbosity, JFW will automatically select an item.

## Adobe Acrobat and Reader

PDF documents are designed to preserve the structure and content of a document, which allows users to share information without concern for alterations to the original document. JAWS provides functionality to read PDF documents either through the internet or on the computer using Adobe Acrobat 5 or higher or Adobe Reader 5 or higher. Reading a PDF document is accomplished using the Virtual PC Cursor in a manner similar to that of reading the web. However, not all PDF documents are accessible using JAWS. It is necessary the author properly formats a PDF document in order to incorporate the necessary usability features designed to interface with JAWS.

Below are the JAWS specific keystrokes for navigating a PDF document:

<u>Description</u>	<u>Keystroke</u>
Forms Mode	ENTER
Virtual Cursor On	NUM PAD PLUS
Virtual Find	CTRL+F
Links List	INSERT+F7
Next Page	CTRL+PAGE DOWN
Previous Page	CTRL+PAGE UP
Go to Page	CTRL+SHIFT+N
Go to First Page	CTRL+SHIFT+PAGE UP
Go to Last Page	CTRL+SHIFT+PAGE DOWN

## JFW Support of the MAGic Keyboard

Functionality has been added to allow both MAGic and JFW to work together. This is especially helpful for users who use both MAGic and JFW together for the majority of their computer work.

During installation of MAGic, users are given the option to add the MAGic Keyboard Layout to JAWS. Then to run the two programs together, MAGic users simply select to use the JFW tracking engine using the Tracking Engine option on the Preference menu. The next time MAGic is run, JFW automatically begins speaking. Along with this, the user can select the MAGic Keyboard Layout in place of the JFW Default or Laptop Keyboard Layout. This setting is found in the JAWS Options Menu under Basics.

When using the MAGic Keyboard Layout, when a JFW keystroke is used that has an equivalent in MAGic, the MAGic keystroke takes precedence.

For example, in JFW the keystroke Ctrl Shift C is used by JAWS when in several popular applications; in Access it is used to create a relationship and in PowerPoint it is used to read a table, column by column. When the MAGic user presses Ctrl Shift C it "Centers the Mouse in View," or more simply, moves the mouse pointer to the middle of the active view so that the magnification user can more easily find it.

## **Changes in the JFW User Interface**

### **In the Options Menu, Run JAWS From System Tray**

This feature removes JAWS from the list of items on the taskbar, which saves time when Alt Tab is used to move through the list of active programs. JAWS can still be accessed quickly using Insert J.

### **Options, Keyboard Addition**

If a custom keyboard layout has been created, it will appear along with the traditional laptop and desktop layouts in the Options Menu, Basics submenu.

### **Voices Menu**

The tab order in the Voice dialogs has been changed to place the Voice pitch after the selection of the Voice Person.

### **Help Menu**

Quick Reference has been changed to Keyboard Commands to include the keyboard commands that appear on the quick reference cards shipped with JFW, as well as a comprehensive listing of all the default keystrokes that ship with JFW as well as many basic Windows keystrokes.

### **New Configuration Manager Settings**

#### **Set Options, Text Processing**

##### **Reading Dates**

There are new options in the Configuration Manager that allow the user to select how the date will be spoken. It is now possible to have the option of having numeric dates spoken.

##### **Reading Dollars**

There are new options in the Configuration Manager under Text Processing that allow the user to select how numbers preceded by a dollar sign are spoken. Check Speak Dollars to have numbers with the dollar sign in front of them expressed in dollars and cents. For example: \$45.22 would be spoken as, "45 dollars and 22 cents."

## **Java Accessibility Bridge**

Support For Java Applets And Java Applications Supported by Sun Microsystems  
SWING Classes (Via The Java Access Bridge)

JFW provides access to programs supported by the Sun Microsystems Java Accessibility Bridge. This requires the user to install the Bridge as well as Sun's Java Virtual Machine. This version of JFW will work with the jdk1.1.8 virtual machine, the Java Runtime Environment distributed with jdk1.1.8, the jdk1.2.2 (Java2) Virtual Machine, the Java Runtime Environment distributed with jdk1.2.2, and the Java Web browser plug-ins for jdk1.1.8 and jdk1.2.2. No other Java VM is automatically supported in this version of JFW.

When in a Java application, press Ctrl Insert V twice quickly to hear the Java VM and AccessBridge version information.

JavaScript, a commonly used extension to HTML, is in no way (other than in name) related to the Java programming language. JavaScript is used by Web developers to dynamically change the HTML displayed on a Web page. Wherever possible, JFW reads the changes made by JavaScript to the user.

Many older Java applets and stand-alone applications, probably representing the majority of those currently available, were written with the AWT classes. Programs written with classes, the new standard from Sun Microsystems, work the Swing seamlessly with the Accessibility Bridge and are expected to constitute the majority of new Java development.

As of this writing, there are over two hundred programs available that are written with the Swing classes, which automatically speak with JFW 4.0 and later.

## **Basic Commands**

### **Working with Context Sensitive Help**

JAWS has a powerful on-demand Help feature that provides verbal information and/or instructions for a current task. At any time:

1. use Insert F1 to hear screen sensitive help-useful for learning windows.
2. use Insert F1,F1 to bring up application-specific help window in major applications: e.g., Word.
3. use Insert H to hear JFW hot key commands and/or context-sensitive, application-specific help.
4. use Insert W to hear Windows keyboard commands.

### **Working with Keyboard Help Mode**

JAWS supports a user-exploration mode. This function, called the Keyboard Help Mode, is toggled on by Insert-One (from the number row on the alpha portion of the keyboard). When this function is turned on, all letter keys echo their identity, and all



command sets, e.g., Insert V, do not actually perform a function, but instead are identified and their function described. This mode is toggled off by entering Insert-1.

### **Laptop Keyboard Layout**

JAWS included a full Laptop keyboard layout substituting the CAPS LOCK key in many commands that used to use the ALT key or INSERT. This makes it far easier to quickly access all JAWS features - without moving your hands off those typing keys.

### **About the JAWS Interface**

JAWS uses the numeric keypad as its keyboard base for special reading commands. JAWS now supports three main cursors:

1. PC Cursor
2. JAWS Cursor
3. Virtual Cursor

The PC cursor is directly linked to system and application operations as well as basic keyboard operations. To activate the PC cursor, press Numpad Plus. To activate the JAWS cursor, press Numpad Minus. Only one can be active at any one time.

The JAWS cursor is directly linked to the Microsoft Windows mouse pointer. Like the mouse pointer, it is possible to move around windows with the JAWS cursor while the PC cursor remains at its current location. Likewise, the JAWS cursor stays stationary when the PC cursor moves and remains in a fixed location until activated. As in the case of the mouse pointer the JAWS cursor is not affected when you type.

It is possible to toggle between the two cursors, and it is also possible to route one cursor to the other cursor. Insert Minus routes JAWS to the PC cursor. Insert Plus routes the PC cursor to the JAWS cursor.

The virtual cursor is not visible on the screen but it has been designed to perform smart automatic reading of areas. Unless turned off, this cursor is automatically on when working in Internet Explorer. Because of this new virtual cursor, JAWS is now able to accurately read columnar text on web pages, and can also discriminate between unrelated text like links and body text.

Interactive reading is also possible by using the standard arrow keys. There are two types of commands in JAWS: the majority are reading commands issued from the numeric keypad, but there also are interactive settings commands issued from the alpha keyboard.

### **How JAWS Settings are Managed**

Basic screen reader settings such as voice pitch and rate, type of keyboard announcement, etc., are accessible through a menu bar in the JAWS Settings

Window. Use Insert J to bring up the JAWS application window. (Although many functions available through the menus can be configured by hot key commands.) There are five menu options:

1. Options (use to have JAWS start first, to change from full to laptop keyboard, to exit the JAWS program, or use to change speech rate)
2. Utilities (to access program managers, e.g., Configuration Manager Keyboard Manager, Dictionary Manager, Script Manager-for advanced use)
3. Language (use to change languages, if installed, or to change synthesizers, or select "no speech")
4. Help (This is an excellent source of information about JAWS: keyboard commands; specialized help for major applications; a "What's New" section especially useful when installing and using an upgrade to current version.)

### **Refreshing the Screen**

Sometimes JAWS does not seem to read properly, and when this is suspected, refreshing the screen display with the JAWS command Insert Escape will usually restore normal reading function.

### **How to Open a Menu**

1. Tap the Alt key and then tap the first letter of the menu option. Once the Alt key has been tapped, it is possible to arrow across through the main menu options.
2. Move down in the menu with the Down arrow key.
3. Tap the Enter key after hearing the desired topic announced to open its settings box.

### **Interactive Hot keys from the Alpha Number Row**

#### **Insert-1**

Toggles the keyboard help on or off.

#### **Insert-2**

Toggles through the keyboard echo function: characters, words, or none.

#### **Insert-3**

Use this before entering an application command that is identical to a JAWS command; JAWS will ignore the command.

#### **Insert-4**

Toggles to standard or active graphics mode. Use active graphics mode if JAWS does not read all tool bar buttons.

**Insert-5**

Reads color of text at cursor.

**Insert-6**

Hot key to bring up the Configuration Manager.

**Insert-7**

An advanced command to work with types of window classes.

**Insert-8**

Brings up Keyboard Manager, an advanced component. The Keyboard Manager allows you to create application specific key map files.

**Insert-9**

Brings up Frame Manager, an advanced component.

**Insert-Zero**

Brings up JAWS Script Manager, an advanced component.

**Interactive Hot Keys from the Alpha Keyboard****Insert B**

Read all of dialog box in Tab order. This allows the user to understand what is in a dialog box before attempting to Tab through its topic area.

**Insert C**

In some applications will read word in context (e.g., spell check).

**Insert D**

Brings up Dictionary Manager.

**Insert F**

Identify font name, size and attribute of text at active cursor.

**Control Insert F**

Brings up JAWS Find dialog.

**Insert H**

Context-sensitive hot key application-specific help is verbalized.

**Insert E**

In a dialog box or special window, announces what button will be selected if Enter is tapped.

**Insert J**

Bring JAWS window forward. If JAWS is minimized, this will maximize the window; if JAWS is open but covered, this will bring the window forward.

**Insert R**

Restrict action of JAWS cursor. If this is turned on, JAWS will read only in the active child window. When restriction is toggled off, JAWS cursor can read anywhere on screen display.

**Insert S**

Toggle through screen echo settings.

**Insert T**

Read title bar of window.

**Insert V**

Brings up Adjust JAWS Verbosity list box. Tapping the Space Bar toggles through verbosity levels of selected item in list box. Specific verbosity levels may be set for user verbosity preference, style change detection, context detection, screen echo, typing echo, say all by, punctuation level, format and attribute changes speak, graphics verbosity, ANSI character verbosity, braille verbosity, and mute synthesizer.

**Insert W**

Speaks general Windows help.

**Insert X**

Say frame at cursor; says the text in the frame that the cursor is in.

**Insert F4**

Unload JAWS.

**Insert F6**

Minimize all applications on the desktop.

**Speech Pad Minus**

Turn on JAWS Cursor.

**Speech Pad Plus**

Turn on PC Cursor. The PC cursor tracks the insertion point or the highlighted selection cursor.

**Insert Up Arrow**

Read Current Line.

**Up Arrow**

Read Prior Line.

**Down Arrow**

Read Next Line.

**Left Arrow**

Read Prior Character.

**JAWS Cursor**

Speak Prior Character.

**PC Cursor**

Select prior icon, select prior menu item, or move insertion point to the prior character.

**Right Arrow**

Read Next Character.

**JAWS Cursor** Speak next character.

**PC Cursor** Select next icon, select next menu item, or move insertion point to the next character.

**Speech Pad 5**

Read Current Character.

**Insert Left Arrow**

Read Prior Word.

**Insert Right Arrow**

Read Next word.

**Insert Speech Pad 5**

Read Current Word.

**Insert Speech Pad 5**

(pressed twice within a half second) Spell Current Word.

**Page Up**

Move Up One Screen or to Top of Window.

**JAWS Cursor** Move to top of active application or child window depending on the setting for JAWS cursor restriction.

**PC Cursor** Move insertion point up one screen.

**Page Down**

Move Down One Screen or to Bottom of Window.

**JAWS Cursor** Move to bottom of active application or child window depending on the setting for JAWS cursor restriction.

**PC Cursor** Move insertion point down one screen.

**End**

Move to the End.

**JAWS Cursor** Move to the end of text on the current line or to the last graphics on current line.

**PC Cursor** Performs the End function for the application. For example, it could move the insertion point to the end of text on the current line or to the last item in a list box.

**Home**

Move to the Beginning.

**JAWS Cursor** Move to the beginning of text on the line or to the first graphics on the line.

**PC Cursor** Performs the Home function for the application. For example, it could move the insertion point to the beginning of text on the current line or to the first item in a list box.

**Insert Home**

Speak From the Left Edge of the Window to the Cursor.

**Insert Page Up**

Speak From the Cursor to the Right Edge of the Window.

**Insert End**

Read Top Line of Window.

**Insert Page Down**

Read Bottom Line of Window.

**Insert Delete**

Speak the Coordinates of the Active Cursor.

**Insert Minus**

Route (move) the JAWS Cursor to the Location of the PC Cursor.

**Insert Plus**

Route (move) the PC Cursor to the Location of the JAWS Cursor. This moves the insertion point or selection cursor to the location of the JAWS cursor and is equivalent to a single click of the left mouse button.

**Insert Escape**

Refresh Screen.

**Delete**

Delete character at cursor; does not announce character deleted; instead announces the new character at the cursor.

**Alt Delete**

Announce active cursor position (in pixels).

**Insert Delete**

Announce PC cursor position in row and column position.

**Alt Insert**

Toggle between insert and overwrite editing modes.

**Alt Down Arrow**

Read dialog prompt.

**Insert 3 (from alpha)**

Pass next command through to application.

**Plus**

Invoke PC cursor.

**Minus**

Invoke JAWS cursor.

**Minus (tapped twice)**

Invoke invisible cursor from either PC or JAWS Cursor.

**Additional Interactive Commands****Insert F11**

Say Taskbar.

**Insert F12**

Say System Tray.

**Control Shift H**

Say hotkey for current control focus.

**Insert Control Down Arrow**

Say Help window.

**Insert Shift Down Arrow**

Say selected text.

**Insert Tab**

Say window prompt and text.

**Insert E**

Say default button of dialog box.

**Intermediate Use:****How to Hear All Dialog Options in Settings Box**

1. Hold down the Insert key and tap the B key. JAWS will announce the entire contents of the box in the order that the Tab key will take. Current settings are not announced.

**How to Navigate with Tab Key through a Dialog Box**

1. Tap the Tab key to navigate forward through options.
2. Shift Tab will navigate backward through options.
3. JAWS will announce each topic box and its current setting.
4. Use the Arrow keys to move up and down within the topic box to hear other possible settings. Each setting is automatically selected as it is read and automatically de-selected if the arrow is moved off the selection.
5. Once the right setting for the topic is selected, resume with the Tab key to move to the next topic box.
6. If a scroll bar is announced in a dialog box, the Right and Left arrows will move the scroll bar selector point. For example, a scrollbar is used to set speech rates and volume.
7. A check box can be selected or de-selected by tapping the Spacebar.



8. Use of Insert F1 may bring up additional information about a dialog box element.

### **Selecting Text**

Use standard Microsoft Word keystrokes to select text:

Shift Right Arrow	select character
Control Shift Right Arrow	select word
Shift End	select line
Shift Down Arrow	select next line

### **Example:**

1. Type one or two sentences so that text appears on two lines.
2. Make sure the PC cursor is active by tapping the Insert Del key to check status.
3. Move the cursor to the beginning of the first line of text.
4. Hold down the Shift key and tap the End key to select text to end of line. The text will be read.
5. Still holding down the Shift key, tap the Down arrow key to select the next line of text. The text will be read.
6. Text can be de-selected by tapping the Slash(/) key on the numeric keypad.
7. To re-read selected text: Insert Shift Down Arrow

### **Copying Selected Text to Another Position in a Document**

1. Enter Control C to copy selected text to the clipboard.
2. Move the cursor to another position in the open document.
3. Enter Control V to place the copied text.

### **Deleting Selected Text**

Once text has been selected, enter Control X.

### **Moving Selected Text to Another Position in a Document**

When text has been cut, move cursor to new position in document and enter Control V.

## **Formatting Text once it has been selected**

The following keyboard shortcuts will format selected text:

Control B	Bold
Control U	Underline
Control Shift Z	Remove formatting and return text to normal

## **Advanced Use:**

### **How to use the JAWS cursor like a Mouse Pointer**

The JAWS cursor can be used like a mouse pointer with the mouse keys that are described below. To move the Mouse Pointer, use speech pad keys:

#### **Slash (/)**

Single Left Mouse Click on speech pad. This selects the item at the JAWS cursor.

#### **Slash (/) Twice in a second**

Double Left Mouse Click. This chooses the item at the JAWS cursor.

#### **Insert Slash (/)**

Drag an Object on the Desktop. Use the JAWS cursor to point to the object, press Insert and then Slash (/) to lock the mouse pointer on the object, then use arrow keys to drag it. Press Insert Slash (/) to release the drag command.

#### **Asterisk**

Right Mouse Click on speech pad. Restricting Movement of the JAWS Cursor

#### **Insert R**

Turn JAWS Cursor Restriction On or Off.

If several application windows are on the desktop, it is possible for them to overlap or totally cover one another. This means that parts of several windows could be visible around the active application window. The PC cursor stays within the active window, which means it will not read information from the surrounding windows. The JAWS cursor also stays within the active window.

The restriction setting does not affect the movement of the PC cursor. When restriction is turned on, the JAWS cursor is restricted to the active section of the screen where it is currently located. If it is in a dialog box when restriction is turned on, it can only read the active dialog option. When using the JAWS cursor restriction, in order to ensure that the cursor is being restricted to the proper section of the desktop, it is best to do the following:

1. Route the JAWS cursor to the location of the PC cursor with Insert Minus.
2. Turn on JAWS cursor restriction with Insert R.

### **How to use the JAWS Configuration Manager**

The Configuration Manager contains a Set Options menu. When you choose a Set Options menu item, a dialog opens. The Configuration Manager includes the following menu options: User, Text Processing, Window Classes, Graphics and Symbols, Cursor, Keyboard, Braille, and Advanced. These dialogs enable you to configure your applications to your own specifications. Use the hotkey Insert (alpha keyboard) 6, or

1. Press Insert J to activate the JAWS application.
2. Press Alt U to open the Utility menu item.
3. Press C to open to Configuration Manager.

### **Settings Handled by the Configuration Manager**

Use the command for context-sensitive help, Insert F1, when the focus is on an element in a configuration dialog, JAWS will speak a help message regarding the nature of the element (e.g., typing interrupt), its function, and its default setting.

### **User Options**

These include typing echo, screen echo, verbosity level, typing interrupt, reading interrupt, key repeat and Insert key mode.

### **Text Processing**

These include punctuation mode, filter repeat characters, number processing, list item, mixed case processing, dictionary processing, speak window type first, speak window state first.

### **Graphics and Symbols**

These include graphic verbosity, ANSI character verbosity, graphic dimensions, graphics mode toggle.

## **Advanced Options**

Among these options is found the "go-to-sleep" checkbox. This can be used to silence JAWS in a particular application. To silence JAWS in a particular application, open the application itself, with JAWS running; open the Configuration Manager and select the go-to-sleep option from the Advanced menu. Save the change. Now, if JAWS is loaded and this application loads in, JAWS will not speak in the application at all, but will in all others.

There are other main types of options, but they relate to advanced use.

### **How to use the JAWS Keyboard Manager**

The Keyboard Manager controls the assignment of keystrokes to JAWS activities. It is important to understand a little about scripts before learning about Keyboard Manager. All JAWS activities assigned to keystrokes are scripts. A script is a small computer program that controls how JAWS reacts and what you hear. To open Keyboard Manager, use Insert (alpha keyboard) 8, or

1. Press Insert J to activate the JAWS application.
2. Press Alt U to open the Utility menu item.
3. Press K to open the Keyboard Manager.

### **How to use the JAWS Dictionary Manager**

This application allows you to alter the JAWS Dictionary. The JAWS Dictionary is a collection of files that stores all the correctly pronounced words. The Dictionary Manager is the tool that enables you to manage your own JAWS Dictionary files. Press Insert D to start the Dictionary Manager and add words to you dictionary.

Use the Dictionary Manager to alter words for specific applications or all your applications. To save changes changes to all applications, save the changes to the default.jcf file.

1. Press Insert J to activate the JAWS application.
2. Press Alt U to open the Utility menu item.
3. Press K to open the Keyboard Manager.

### **How to use the JAWS Frame Manager**

You can use Frame Manager to create and work with frames. Frames are boundaries on a screen for which you define a JAWS action. Use a frame to define an area of the window or screen to be spoken automatically.

1. Use a frame to define an area of the window or screen to be spoken when a keystroke is pressed.
2. Use a frame to define an area of the window or screen for JAWS to ignore.
3. Use a frame to define an area of the window or screen for JAWS to treat differently than other areas.

### **To open Frame Manager, use Insert 9, or**

1. Press Insert J to activate the JAWS application window.

2. Press Alt U to open the Utility menu item.
3. Press F to open the Frame Manager.

### **How to use the JAWS Script Manager (for advanced users)**

Small script files are created, edited and compiled with Script Manager. A script is a small computer program that controls how JAWS reacts and what you hear. For example, when Insert 5 is pressed, the SayWord script runs. In addition to just saying the current word, it also checks to see if Insert 5 has been pressed twice, in which case it spells the word. Groups of scripts are stored in the script files. There are two basic types of script files: default and application. The default script files contain those scripts and other things that are always available. Application script files contain scripts and other things that are only available when a particular application program is running.

1. Press Insert J to activate the JAWS application.
2. Press Alt U to open the Utility menu item.
3. Press S to open the Script Manager.

### **Pricing:**

For extensive information about pricing, site licenses and software maintenance agreements (SMA), use this web address:

[http://www.freedomscientific.com/fs\\_products/purchase.asp](http://www.freedomscientific.com/fs_products/purchase.asp)

### **Network Authorization**

Due to the complexity and time necessary to install JAWS on a network, this information is covered in the ACT-ICT training and not during the general JAWS training.

## Web Resources

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### **APH Talking Typing For Windows**

[http://www.aph.org/products/tt\\_bro.html](http://www.aph.org/products/tt_bro.html)

### **Freedom Scientific – JAWS**

[http://www.freedomscientific.com/fs\\_products/JAWS\\_HQ.asp](http://www.freedomscientific.com/fs_products/JAWS_HQ.asp)

### **JAWS Tutorials**

<http://atto.buffalo.edu/registered/Tutorials/jaws/index.php>

### **JAWS Wikipedia**

[http://en.wikipedia.org/wiki/Job\\_Access\\_With\\_Speech](http://en.wikipedia.org/wiki/Job_Access_With_Speech)

### **Windows XP Keyboard Shortcut Commands**

<http://support.microsoft.com/default.aspx?scid=kb;en-us;301583>

### **Windows Vista Keyboard Shortcut Commands**

<http://windowshelp.microsoft.com/windows/en-us/help/2503b91d-d780-4c80-8f08-2f48878dc5661033.msp>

### **Keyboard Commands for Applications**

<http://web.onetel.com/~fromthekeyboard/>