





What Is Calculator?

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## What Is Calculator?

The Windows Calculator has a Standard view and a Scientific view. To change views, use the commands on the View menu.

In the Standard view, you can:

- Enter simple calculations.

- Use Calculator with the Clipboard.

- Store calculations in memory.

In the Scientific view, you can:

- Perform all standard calculator functions.

- Perform statistical functions and advanced statistical functions.

- Convert values to other number systems.

- Perform other advanced functions.

You cannot change the size of the Calculator window. However, you can reduce Calculator to an icon so that it is readily available.

When you quit Calculator, it remembers which view of Calculator you were using--Standard or Scientific. The next time you start Calculator, the view that you last used appears.

Related Topics

## **Concepts**

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## Standard View

The first time you start Calculator, the Standard view appears.

Calculator is easiest to use with the mouse--just point to a Calculator button and click the mouse. If you don't have a mouse, each Calculator button has a corresponding key or combination of keys. For simple calculations, you can use the numbers and basic operators on your keyboard or numeric keypad. (You must press NUM LOCK before you can use the numeric keypad.)

Related Procedures

**editing buttons**

Buttons for changing the numbers in the display. For example, choose Back to correct a few digits or choose CE to clear the entire number. If you want to restart a calculation, choose C to clear the entire calculation.



**Calculator display**

Area where numbers you enter are shown.

**basic mathematical operators**

Used in performing calculations with numbers you have entered. The operators add (+), subtract (-), multiply (\*), divide (/), and total (=).

**memory buttons**

Buttons for storing values for future use.

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## Scientific View

In Scientific view, Calculator can perform simple, standard mathematical functions or statistical and number-base functions.

The rest of the keys are advanced operators and functions.

Related Procedures

### **numbers system buttons**

Buttons for calculating in the binary, octal, and hexadecimal number systems as well as the decimal system that we ordinarily use. The three options that appear in the right number-base box depend on the option you select in the left number-base box.

**statistical buttons**

Used in statistical calculations, such as averages and standard deviations.

**memory buttons**

Used in storing values for future use. The memory functions work the same way as in Standard view.



## **Procedures**

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## Calculator's Memory

Calculator has its own memory for storing values for future calculations. The following illustration shows the buttons that work with Calculator's memory:

## Calculator's Statistical Functions

In addition to doing simple calculations, Calculator in Scientific view does statistical calculations such as averages and standard deviations.

To perform a statistical calculation, choose Sta. The Statistics Box will appear:

You will need to move the Statistics Box to a position where you can easily work with the numbers and statistical functions you want to use. Then enter the values and choose the statistical function buttons you want.

Related Procedure









## Copy Command

Copies a value onto the Clipboard.

Since the Clipboard treats a value as text, you can copy values in any number system. Use this command when you want to copy a value from Calculator and paste it into an application that uses the Windows Clipboard.

Related Procedure



## Paste Command

Pastes a value from the Clipboard to Calculator's display, or performs a Calculator function.

Calculator interprets each character in the Clipboard as if the character were entered on the keyboard. When you paste from the Clipboard, Calculator interprets some characters as key sequences or function keys:

| <b>Character</b> | <b>Meaning in Pasted Text</b>  |
|------------------|--|
| c                | Clear any value stored in memory. Equivalent to CTRL+C.  |
| e                | Allow the entry of scientific notation numbers in Decimal mode. This character can optionally be followed by a plus (+) or minus (-) to indicate the sign of the exponent. If no sign is present, then + is assumed.<br>Specify the number "E" in Hexadecimal mode.                                |
| m                | Store the displayed value in memory. Equivalent to CTRL+M.   |
| p                | Add the value that is displayed to any value in memory. Equivalent to CTRL+P.  |
| q                | Clear the current calculation. Equivalent to the ESC key and the C button.   |
| r                | Display the value stored in memory. The value also remains in memory. Equivalent to CTRL+R.  |
| :                | Cause Calculator to interpret a letter as part of a control key sequence if the colon is placed before a letter. For example, :A is equivalent to CTRL+A.<br>Cause Calculator to interpret a number as a function key if the colon is placed before a number. For example, :4 is equivalent to F4. |
| \                | Same as the Data key, which is normally assigned to the INS key.   |

Related Procedure

## Scientific Command

Switches to Scientific view.

Use the Scientific Calculator to make advanced calculations, including statistical functions, number base functions, and other advanced functions.

Related Procedure



## Standard Command


Switches to Standard view.

Use the Standard Calculator to make simple calculations, including basic mathematical functions and memory functions.

Related Procedure



-  Basic Functions
-  Using Calculator Buttons

 Basic Functions

[Switching Views](#)


[Entering Calculations](#)



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 Using Calculator Buttons

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## Switching Views

### **To switch views:**

Choose Scientific or Standard from the View menu.

Keyboard Procedure



## Entering Calculations

You can easily use Calculator with the mouse--just point to a Calculator button and click the mouse button. You can enter a simple calculation in both Standard and Scientific views.

### **To enter a calculation:**

- 1 Enter the first number in the calculation.
- 2 Click the operator.
- 3 Enter the next number in the calculation.

If you make a mistake, click the Back button to correct a few digits. Or click the CE button to clear the entire number.

- 4 Enter any remaining numbers and operators.
- 5 Click the Equals (=) button.

If you make a mistake, click the C button to clear the entire calculation.

[Related Procedures](#)

[Keyboard Procedure](#)

## **Procedures**

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## Using Calculator with the Clipboard

Using the Clipboard, Calculator can supply calculated results to other applications and perform Calculator functions with values supplied by other applications. You can use Calculator with any application with which you can use the Clipboard.

### **To copy the value in Calculator's display onto the Clipboard:**

Choose Copy from the Edit menu.

When you copy a value from Calculator to the Clipboard, the Clipboard regards the value as a piece of text. It does not distinguish between text and numbers.

### **To paste a character sequence from the Clipboard to Calculator's display:**

- 1 Select a number system to paste into if you're using Scientific view.
- 2 Choose Paste from the Edit menu.

Calculator interprets most characters in the Clipboard as if the character were entered on the keyboard. When you paste from the Clipboard, Calculator interprets some characters as key sequences or function keys.

| <b>Character</b> | <b>Meaning in Pasted Text</b>  |
|------------------|--|
| c                | Clear any value stored in memory. Equivalent to CTRL+C.  |
| e                | Allow the entry of scientific notation numbers in Decimal mode. This character can optionally be followed by a plus (+) or minus (-) to indicate the sign of the exponent. If no sign is present, then + is assumed.<br>Specify the number "E" in Hexadecimal mode.                                |
| m                | Store the displayed value in memory. Equivalent to CTRL+M.   |
| p                | Add the value that is displayed to any value in memory. Equivalent to CTRL+P.  |
| q                | Clear the current calculation. Equivalent to the ESC key and the C button.   |
| r                | Display the value stored in memory. The value also remains in memory. Equivalent to CTRL+R.  |
| :                | Cause Calculator to interpret a letter as part of a control key sequence if the colon is placed before a letter. For example, :A is equivalent to CTRL+A.<br>Cause Calculator to interpret a number as a function key if the colon is placed before a number. For example, :4 is equivalent to F4. |
| \                | Same as the Data key, which is normally assigned to the INS key.   |

Related Procedures

Keyboard Procedure

## **Procedures**

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**hint**

You can use Copy to transfer a number in any number system from the Scientific view into another Windows application or accessory.


## Using Statistical Functions

In Scientific view, Calculator does statistical calculations such as averages and standard deviations.

### **To perform a statistical calculation:**

- 1 Click the Sta button.

The Statistics Box appears.

Click  for an example of how to use the Statistics Box buttons.

- 2 Drag the Statistics Box away from the Calculator window.

- 3 Click the Calculator buttons to enter the first value in the calculation.

The focus returns to Calculator, and the value appears in the display area.

- 4 Click the Dat button to enter the value in the Statistics Box.

- 5 Enter any other numbers in the calculation, clicking the Dat button each time to enter the number in the Statistics Box.

You can enter as many numbers as your computer's memory allows.

- 6 Click the button for the statistical functions you want to use in the the calculation--Ave (average), Sum (total), or s (standard deviation).

The result of the calculation appears in Calculator's display.

- 7 Choose Close from the Control menu to remove the Statistics Box.

[Related Procedure](#)

[Keyboard Procedure](#)

**example**

The Statistics Box buttons are used in the following ways:

| <b>Click</b> | <b>To</b>   |
|--------------|---|
| RET          | Switch to the main Calculator window and retain the Statistics Box entries.             |
| LOAD         | Change the number in Calculator's display to the selected number in the Statistics Box. |
| CD           | Delete the selected number from the Statistics Box.                                     |
| CAD          | Delete all numbers from the Statistics Box.   |


## Converting Values to Other Number Systems

In Scientific view, Calculator can work in the decimal, binary, octal, and hexadecimal number systems. It can convert most values that you are currently working with to any of the other available number systems.

### **To convert a value:**

- 1 Enter a value.

Calculator accepts only values that are valid for the number system.

Click  for examples of values that are valid for various number systems.

- 2 Click the button for the number system you want to convert to--hexadecimal (Hex), decimal (Dec), octal (Oct), or binary (Bin).
- 3 Select the unit of measurement in which to display the result.

When converting to hexadecimal, octal, or binary numbers, you can choose Dword, Word, or Byte.

When converting to decimal, you can choose Deg, Rad, or Grad for use in trigonometric functions.

If you convert a decimal number containing decimal places to another number system, Calculator shortens the number to its integer. Numbers converted from the hexadecimal, octal, or binary number systems to the decimal system also appear as integers.

[Related Procedure](#)

[Keyboard Procedure](#)



**example**

If you are working in the hexadecimal number system, B is a valid entry, but if you are working in the decimal number system, B is not.

The following is a list of the valid ranges for converting numbers:

| <b>Number System</b> | <b>Range</b>                                      |
|----------------------|---|
| Hexadecimal          | -231-1 to 231-1                                   |
| Decimal              | -9.999999999999999e-307 to 9.999999999999999e+307 |
| Octal                | -231-1 to 231-1                                   |
| Binary               | -231-1 to 231-1                                   |

## Quitting Calculator

### **To exit Calculator:**

Double-click the Control-menu button.

Any values in the display or in memory are lost when you exit Calculator.

Keyboard Procedure

## Using Standard Functions

To use Calculator's standard functions, click the following buttons or press the keyboard equivalents:

| <u>To</u>  | <u>Click</u> | <u>Press</u>  |
|--|--------------|---------------|
| Add.   | +            | +             |
| Subtract.  | -            | -             |
| Multiply.  | *            | *             |
| Divide.  | /            | /             |
| Change the sign of the displayed number.   | +/-          | F9            |
| Insert a decimal point in the displayed number. The period is the standard setting for a decimal separator. Use Control Panel to change the decimal separator. | .            | . or ,        |
| Calculate percentages.   | %            | %             |
| Perform any operation between the previous two numbers. Choose again to repeat the last operation.   | =            | = or ENTER    |
| Calculate the reciprocal of the displayed number.  | 1/x          | r             |
| Delete the rightmost digit of the displayed number.  | Back         | BACKSPACE     |
| Delete the rightmost digit of the displayed number.  |              | LEFT<br>ARROW |
| Clear the current calculation.   | C            | ESC           |
| Clear the displayed number.  | CE           | DEL           |
| Add the display value to any value already in memory.  | M+           | CTRL+P        |
| Clear any value stored in memory.  | MC           | CTRL+C        |
| Recall the value stored in memory. The value remains in memory.  | MR           | CTRL+R        |
| Store the displayed value in memory.   | MS           | CTRL+M        |
| Calculate the square root of the displayed value.  | sqrt         | @             |

Related Procedures

## **Procedures**

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## Using Memory Functions

To use Calculator's memory functions, click the following buttons or press the keyboard equivalents:

| <u>To</u>  | <u>Click</u> | <u>Press</u> |
|--|--------------|--------------|
| Store the displayed value in memory                    | MS           | CTRL+<br>M   |
| Add the displayed value to any value already in memory | M+           | CTRL+<br>P   |
| Recall the value stored in memory                      | MR           | CTRL+<br>R   |
| Clear any value stored in memory                       | MC           | CTRL+<br>C   |

When you store a value in memory, the letter M appears in the box below the display area. If you store a zero in memory or if you add a value to memory that results in a value of zero, the letter M disappears. If you store a second value in memory, it replaces the current value in memory.

Related Procedure

## Using Number Base Functions

To use the advanced number-base functions in Scientific view, click the following buttons or press the keyboard equivalents:

| <b>To</b>  | <b>Click</b> | <b>Press</b> |
|--|--------------|--------------|
| Convert to the binary number system                          | Bin          | F8           |
| Display the lower 8 bits of the current number               | Byte         | F4           |
| Convert to the decimal number system                         | Dec          | F6           |
| Display the full 32-bit representation of the current number | Dword        | F2           |
| Convert to the hexadecimal number system                     | Hex          | F5           |
| Convert to the octal number system                           | Oct          | F7           |
| Display the lower 16 bits of the current number              | Word         | F3           |

Related Procedures

## **Procedures**

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## Using Advanced Operators

To use the advanced operator functions in Scientific view, click the following buttons or press the keyboard equivalents:

| <b>To</b>  | <b>Click</b> | <b>Press</b> |
|--|--------------|--------------|
| Start a new level of parentheses. The current level appears below the display. The maximum number of levels is 25. | (            | (            |
| Close the current level of parentheses.  | )            | )            |
| Calculate bitwise AND.   | And          | &            |
| Display the integer portion of a decimal value.<br>Inv+Int displays the fractional portion of a decimal value.     | Int          | ;            |
| Shift left. Inv+Lsh to shift right. This operation is binary.  | Lsh          | <            |
| Display the modulus, or remainder, of x/y.   | Mod          | %            |
| Calculate bitwise inverse.   | Not          | ~            |
| Calculate bitwise OR.  | Or           |              |
| Calculate bitwise exclusive OR.  | Xor          | ^            |

Related Procedures



## **Procedures**

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## Using Advanced Statistical Functions

To use the advanced statistical functions in Scientific view, click the following buttons or press the keyboard equivalents:

| <b>To</b>  | <b>Click</b> | <b>Press</b> |
|--|--------------|--------------|
| Calculate the mean of the values displayed in the Statistics Box. Inv+Ave calculates the mean of the squares.                                      | Ave          | CTRL+<br>A   |
| Enter the displayed number in the Statistics Box.  | Dat          | INS          |
| Calculate the standard deviation with the population parameter as n-1. Inv+s calculates the standard deviation with the population parameter as n. | s            | CTRL+<br>D   |
| Activate the Statistics Box and the Ave, Sum, s, and Dat buttons.  | Sta          | CTRL+<br>S   |
| Calculate the sum of values in the Statistics Box. Inv+Sum calculates the sum of the squares.  | Sum          | CTRL+<br>T   |

Related Procedures

## **Procedures**

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## Using Other Advanced Functions

To use the advanced functions in Scientific view, click the following buttons or press the keyboard equivalents:

| <b>To</b>  | <b>Click</b> | <b>Press</b> |
|--|--------------|--------------|
| Calculate the cosine of the displayed number. Inv+cos calculates the arc cosine. Hyp+cos calculates the hyperbolic cosine. Inv+Hyp+cos calculates the arc hyperbolic cosine.   | cos          | o            |
| Set trigonometric input for degrees. Use this function in decimal mode.  | Deg          | F2           |
| Convert the displayed number to degree-minute-second format. Calculator assumes the displayed number is in degrees. Inv+dms converts the displayed number to degrees. Calculator assumes the displayed number is in degree-minute-second format. | dms          | m            |
| Allow entry of scientific notation numbers. The exponent has an upper limit of +307. You can continue to enter numbers as long as you do not use keys other than 0-9. Exp can only be used with the decimal number system.                       | Exp          | x            |
| Turn scientific notation on and off. Numbers greater than $10^{15}$ are always displayed exponentially. F-E can only be used with the decimal number system.   | F-E          | v            |
| Set trigonometric input for gradients when in Decimal mode.  | Grad         | F4           |
| Set the hyperbolic function for sin, cos, and tan. The different functions automatically turn off the hyperbolic function after a calculation is completed.  | Hyp          | h            |
| Set the inverse function for sin, cos, tan, PI, $x^y$ , $x^2$ , $x^3$ , In, log, Ave, Sum, and s. The different functions automatically turn off the inverse function after a calculation is completed.  | Inv          | i            |
| Calculate natural (base e) logarithm. Inv+In calculates e raised to the xth power, where x is the current number.  | In           | n            |
| Calculate common (base 10) logarithm. Inv+log calculates 10 raised to the xth power.   | log          | l            |
| Calculate factorial of the displayed number.   | n!           | !            |
| Display the value of PI (3.1415...). Inv+PI displays $2 * PI$ (6.28...).   | PI           | p            |
| Set trigonometric input for radians when in Decimal mode.  | Rad          | F3           |
| Calculate the sine of the displayed number. Inv+sin calculates the arcsine. Hyp+sin calculates   | sin          | s            |

the hyperbolic sine. Inv+Hyp+sin calculates the arc hyperbolic sine.

Calculate the tangent of the displayed number. tan t  
Inv+tan calculates the arctangent. Hyp+tan  
calculates the hyperbolic tangent. Inv+Hyp+tan  
calculates the arc hyperbolic tangent.

Compute x raised to the yth power. Inv+x^y y  
calculates the yth root of x.

Square the displayed number. Inv+x^2 calculates  
the square root. x^2 @

Cube the displayed number. Inv+x^3 calculates  
the cube root. x^3 #

Related Procedures

## **Procedures**

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Topics



## Topics

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## Standard Functions

| <u>To</u>  | <u>Press</u>  |
|--|---------------|
| Add.   | +             |
| Subtract.  | -             |
| Multiply.  | *             |
| Divide.  | /             |
| Change the sign of the displayed number.   | F9            |
| Insert a decimal point in the displayed number. The period is the standard setting for a decimal separator. Use Control Panel to change the decimal separator. | . or ,        |
| Calculate percentages.   | %             |
| Perform any operation between the previous two numbers. Choose again to repeat the last operation.   | = or ENTER    |
| Calculate the reciprocal of the displayed number.  | r             |
| Delete the rightmost digit of the displayed number.  | BACKSPACE     |
| Delete the rightmost digit of the displayed number.  | LEFT<br>ARROW |
| Clear the current calculation.   | ESC           |
| Clear the displayed number.  | DEL           |
| Add the display value to any value already in memory.  | CTRL+P        |
| Clear any value stored in memory.  | CTRL+C        |
| Recall the value stored in memory. The value remains in memory.  | CTRL+R        |
| Store the displayed value in memory.   | CTRL+M        |
| Calculate the square root of the displayed value.  | @             |

Related Procedures

## **Procedures**

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## Memory Functions

| <u>To</u>  | <u>Press</u> |
|--|--------------|
| Store the displayed value in memory                    | CTRL+<br>M   |
| Add the displayed value to any value already in memory | CTRL+<br>P   |
| Recall the value stored in memory                      | CTRL+<br>R   |
| Clear any value stored in memory                       | CTRL+<br>C   |

When you store a value in memory, the letter M appears in the box below the display area. If you store a zero in memory or if you add a value to memory that results in a value of zero, the letter M disappears. If you store a second value in memory, it replaces the current value in memory.

Related Procedure

## Number Base Functions

| <b>To</b>  | <b>Press</b> |
|--|--------------|
| Convert to the binary number system                          | F8           |
| Display the lower 8 bits of the current number               | F4           |
| Convert to the decimal number system                         | F6           |
| Display the full 32-bit representation of the current number | F2           |
| Convert to the hexadecimal number system                     | F5           |
| Convert to the octal number system                           | F7           |
| Display the lower 16 bits of the current number              | F3           |

Related Keys

## **Keys**

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## Advanced Operators

| <u>To</u>  | <u>Press</u> |
|--|--------------|
| Start a new level of parentheses. The current level appears below the display. The maximum number of levels is 25. | (            |
| Close the current level of parentheses.  | )            |
| Calculate bitwise AND.   | &            |
| Display the integer portion of a decimal value.<br>Inv+Int displays the fractional portion of a decimal value.     | ;            |
| Shift left. Inv+Lsh to shift right. This operation is binary.  | <            |
| Display the modulus, or remainder, of x/y.   | %            |
| Calculate bitwise inverse.   | ~            |
| Calculate bitwise OR.  |              |
| Calculate bitwise exclusive OR.  | ^            |

Related Keys

## **Keys**

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## Advanced Statistical Functions

| <b>To</b>  | <b>Press</b> |
|--|--------------|
| Calculate the mean of the values displayed in the Statistics Box. Inv+Ave calculates the mean of the squares.                                      | CTRL+<br>A   |
| Enter the displayed number in the Statistics Box.  | INS          |
| Calculate the standard deviation with the population parameter as n-1. Inv+s calculates the standard deviation with the population parameter as n. | CTRL+<br>D   |
| Activate the Statistics Box and the Ave, Sum, s, and Dat buttons.  | CTRL+<br>S   |
| Calculate the sum of values in the Statistics Box. Inv+Sum calculates the sum of the squares.  | CTRL+<br>T   |

Related Keys

## **Keys**

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## Other Advanced Functions

| <b>To</b>  | <b>Press</b> |
|--|--------------|
| Calculate the cosine of the displayed number. Inv+cos calculates the arc cosine. Hyp+cos calculates the hyperbolic cosine. Inv+Hyp+cos calculates the arc hyperbolic cosine.   | o            |
| Set trigonometric input for degrees. Use this function in decimal mode.  | F2           |
| Convert the displayed number to degree-minute-second format. Calculator assumes the displayed number is in degrees. Inv+dms converts the displayed number to degrees. Calculator assumes the displayed number is in degree-minute-second format. | m            |
| Allow entry of scientific notation numbers. The exponent has an upper limit of +307. You can continue to enter numbers as long as you do not use keys other than 0-9. Exp can only be used with the decimal number system.                       | x            |
| Turn scientific notation on and off. Numbers greater than $10^{15}$ are always displayed exponentially. F-E can only be used with the decimal number system.   | v            |
| Set trigonometric input for gradients when in Decimal mode.  | F4           |
| Set the hyperbolic function for sin, cos, and tan. The different functions automatically turn off the hyperbolic function after a calculation is completed.  | h            |
| Set the inverse function for sin, cos, tan, PI, $x^y$ , $x^2$ , $x^3$ , ln, log, Ave, Sum, and s. The different functions automatically turn off the inverse function after a calculation is completed.  | i            |
| Calculate natural (base e) logarithm. Inv+ln calculates e raised to the xth power, where x is the current number.  | n            |
| Calculate common (base 10) logarithm. Inv+log calculates 10 raised to the xth power.   | l            |
| Calculate factorial of the displayed number.   | !            |
| Display the value of PI (3.1415...). Inv+PI displays 2 * PI (6.28...).   | p            |
| Set trigonometric input for radians when in Decimal mode.  | F3           |
| Calculate the sine of the displayed number. Inv+sin calculates the arcsine. Hyp+sin calculates the hyperbolic sine. Inv+Hyp+sin calculates the arc hyperbolic sine.  | s            |
| Calculate the tangent of the displayed number. Inv+tan calculates the arctangent. Hyp+tan  | t            |

calculates the hyperbolic tangent. Inv+Hyp+tan  
calculates the arc hyperbolic tangent.

Compute  $x$  raised to the  $y$ th power. Inv+ $x^y$        $y$   
calculates the  $y$ th root of  $x$ .

Square the displayed number. Inv+ $x^2$  calculates the      @  
square root.

Cube the displayed number. Inv+ $x^3$  calculates the      #  
cube root.

Related Keys

## Keys

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## Basic Functions

## Basic Functions

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## Keyboard: Switching Views

### **To switch Calculators:**

- 1 Press ALT and then V.
- 2 Press S (Scientific) or T (Standard).

Mouse Procedure

## Keyboard: Entering Calculations

### **To enter a calculation:**

- 1 Press NUM LOCK and type the first number you want on the numeric keypad.  
Or type the number on the keyboard.
- 2 Choose the operator.
- 3 Type the next number in the calculation.
- 4 Enter any remaining numbers and operators.
- 5 Press ENTER or EQUALS (=).

[Related Keys](#)

[Mouse Procedure](#)

## **Keys**

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## Keyboard: Using Calculator with the Clipboard

### **To copy the value in Calculator's display onto the Clipboard:**

- 1 Press ALT and then E.
- 2 Press C.

### **To paste a character sequence from the Clipboard to Calculator's display:**

- 1 Choose a number system to paste into if you're using Scientific view.
- 2 Press ALT and then E.
- 3 Press P.

[Related Topics](#)

[Mouse Procedure](#)

**Keys**

[Number Base Functions](#)

[Standard Functions](#)

**Procedure**

[Converting Values to Other Number Systems](#)

## Keyboard: Using Statistical Functions

### To perform a statistical calculation:

- 1 Press CTRL+S.
- 2 Press ALT+R.
- 3 Press ALT+F6 to switch to the Statistics Box.  
Choose      for an example of how to use the Statistics Box buttons.
- 4 Press ALT+TAB, and then ENTER. Then use the arrow keys to move the Statistics Box away from the Calculator window, and press ENTER.
- 5 Press ALT+R.
- 6 Type the first number in the calculation.
- 7 Press INS to enter the value in the Statistics Box.
- 8 Type any other numbers in the calculation, pressing INS each time to enter the number in the Statistics Box.
- 9 Press CTRL+A to choose an average and show the result in Calculator's display.  
Or press CTRL+T to choose a total.  
Or press CTRL+D to choose the standard deviation.
- 10 Press ALT+F6 to switch to the Statistics Box.
- 11 Press ALT+F4 to close the Statistics Box.

Related Keys

Mouse Procedure

The Statistics Box keys are used in the following ways:

| <b>Press</b>     | <b>To</b>   |
|------------------|---|
| ALT+F6           | Switch between the Statistics Box and the Calculator window.                            |
| ALT+R            | Switch to the main Calculator window and retain the Statistics Box entries.             |
| UP or DOWN ARROW | Select a number.  |
| ALT+L            | Change the number in Calculator's display to the selected number in the Statistics Box. |
| ALT+C            | Delete the selected number from the Statistics Box.                                     |
| ALT+A            | Delete all numbers from the Statistics Box.   |

## Keyboard: Converting Values to Other Number Systems

### To convert a value:

- 1 Type the number you want to convert.
- 2 Press F5 (hexadecimal), F6 (decimal), F7 (octal), or F8 (binary).
- 3 Choose the unit of measurement in which to display the result if you're converting to the hexadecimal, octal, or binary number system.

| <b>Press</b> | <b>To</b>   |
|--------------|---|
| F4 (Byte)    | Display the lower 8 bits of the current number.               |
| F2 (Dword)   | Display the full 32-bit representation of the current number. |
| F3 (Word)    | Display the lower 16 bits of the current number.              |

[Related Keys](#)

[Mouse Procedure](#)



## Keyboard: Quitting Calculator

### **To exit Calculator:**

Press ALT+F4.

Mouse Procedure



Calculator Quick Looks

Calculator Quick Looks

[Calculator](#)

[Scientific Calculator](#)





**Calculator**

Features both a standard calculator and a scientific calculator. The standard calculator allows you to do simple calculations and store them in memory. The scientific calculator allows you to do advanced scientific and statistical calculations.

**application Control-menu**



**title bar**

Contains the title of the application running in the window, in this case Calculator.

Drag the title bar to move an application window on the screen.

**Minimize button**

Click the Minimize button to shrink the Calculator window to an icon.

**Edit menu**

**View menu**

**Help menu**

**menu bar**

Contains the names of all the Calculator menus.

Click a menu name to display the menu commands.

**display**

Shows the values that have been entered in a calculation or that are a result of a calculation.

### **editing buttons**

Used to make corrections in the display. The buttons have the following functions:

| <b>Click</b> | <b>To</b> |
|--------------|-----------|
|--------------|-----------|

---

|      |   |
|------|---|
| Back | Delete the rightmost digit of the displayed number. |
|------|---|

|   |                                |
|---|--------------------------------|
| C | Clear the current calculation. |
|---|--------------------------------|

|    |                             |
|----|-----------------------------|
| CE | Clear the displayed number. |
|----|-----------------------------|



**memory display**

Indicates a value is stored in memory. An M appears.

**memory buttons**

Used for working with values stored in memory. The following describes the function of each button:

MR displays any value stored in memory.

MC clears the value stored in memory.

MS stores the currently displayed value in memory.

M+ adds the current value to any value already in memory.

**numeric buttons**

Used to enter numerical values in calculations. The "+/-" button changes the sign of the displayed number. The "." button inserts a decimal point.

Click a button to display the value.

### **operator buttons**

Used to perform calculations. The following describes the function of each operator:

| <b>Click</b> | <b>To</b>   |
|--------------|---|
| +            | Add.  |
| -            | Subtract.   |
| *            | Multiply.   |
| /            | Divide.   |
| %            | Calculate percentages.                            |
| =            | Carry out the operation.                          |
| 1/x          | Calculate the reciprocal of the displayed number. |
| sqrt         | Calculate the square root.                        |

**title bar**

Contains the title of the application running in the window, in this case Calculator.

Drag the title bar to move an application window on the screen.

**Edit menu**

**View menu**

**Help menu**



**menu bar**

Contains the names of all the Calculator menus.

Click a menu name to display the menu commands.

**number base buttons**

Used to change to the hexadecimal (Hex), decimal (Dec), octal (Oct), and binary (Bin) number systems.

The number system you choose on the left determines which options are available on the right. For example, in the decimal number system, you can choose Deg, Rad, or Grad for use in trigonometric functions.

Click an option button on the left to change the number system.

### **editing buttons**

Used to make corrections in the display. The buttons have the following functions:

| <b>Click</b> | <b>To</b> |
|--------------|-----------|
|--------------|-----------|

---

|      |   |
|------|---|
| Back | Delete the rightmost digit of the displayed number. |
|------|---|

|   |                                |
|---|--------------------------------|
| C | Clear the current calculation. |
|---|--------------------------------|

|    |                             |
|----|-----------------------------|
| CE | Clear the displayed number. |
|----|-----------------------------|

## Hyp and Inv buttons

Used in performing the following trigonometric and other functions:

| <b>Click</b> | <b>To</b> |
|--------------|-----------|
|--------------|-----------|

---

|     |   |
|-----|---|
| Hyp | Set the hyperbolic function for sin, cos, and tan. The different functions automatically turn off the hyperbolic function after a calculation is completed. |
|-----|---|

|     |   |
|-----|---|
| Inv | Set the inverse function for sin, cos, tan, PI, $x^y$ , $x^2$ , $x^3$ , ln, log, Ave, Sum, and s. The different functions automatically turn off the inverse function after a calculation is completed. |
|-----|---|

**statistical display**

Indicates the Statistics Box is open. You choose the Sta button to open the box, and "stat" appears in the display.

**memory display**

Indicates a value is stored in memory. An M appears.

**parenthetical display**

Shows the current level of parentheses. The maximum number of levels is 25.

### **advanced statistical buttons**

Used to perform statistical functions such as averages and standard deviations. The buttons have the following functions:

| <b>Click</b> | <b>To</b>   |
|--------------|---|
| Ave          | Calculate the mean of the values displayed in the Statistics Box.         |
| Dat          | Enter the displayed number in the Statistics Box.                         |
| s            | Calculate the standard deviation with the population parameter as $n-1$ . |
| Sta          | Activate the Statistics Box and the Ave, Sum, s, and Dat buttons.         |
| Sum          | Calculate the sum of values in the Statistics Box.                        |



### advanced function buttons

Used to perform the following trigonometric and other advanced functions:

| <b>Click</b> | <b>To</b>  |
|--------------|--|
| cos          | Calculate the cosine of the displayed number.                |
| dms          | Convert the displayed number to degree-minute-second format. |
| Exp          | Allow entry of scientific notation numbers.                  |
| F-E          | Turn scientific notation on and off.                         |
| In           | Calculate natural (base e) logarithm.                        |
| log          | Calculate common (base 10) logarithm.                        |
| n!           | Calculate factorial of the displayed number.                 |
| PI           | Display the value of PI (3.1415...).                         |
| sin          | Calculate the sine of the displayed number.                  |
| tan          | Calculate the tangent of the displayed number.               |
| x^y          | Compute x raised to the yth power.                           |
| x^2          | Square the displayed number.                                 |
| x^3          | Cube the displayed number.                                   |
| 1/x          | Calculate the reciprocal of the displayed number.            |

## **parentheses buttons**

Use to perform the following functions:

| <b>Click</b> | <b>To</b> |
|--------------|-----------|
|--------------|-----------|

---

- |   |   |
|---|---|
| ( | Start a new level of parentheses.       |
| ) | Close the current level of parentheses. |

**numeric buttons**

Used to enter numerical values in calculations. The "+/-" button changes the sign of the displayed number. The "." button inserts a decimal point.

Click a button to display the value.

### **basic operator buttons**

Used to perform calculations. The following describes the function of each operator:

| <b>Click</b> | <b>To</b>                |
|--------------|--------------------------|
| +            | Add.                     |
| -            | Subtract.                |
| *            | Multiply.                |
| /            | Divide.                  |
| =            | Carry out the operation. |

### **advanced operator buttons**

Used to perform the following advanced functions:

| <b>Click</b> | <b>To</b>                                       |
|--------------|---|
| And          | Calculate bitwise AND.                          |
| Int          | Display the integer portion of a decimal value. |
| Lsh          | Shift left. Inv+Lsh to shift right.             |
| Mod          | Display the modulus, or remainder, of x/y.      |
| Not          | Calculate bitwise inverse.                      |
| Or           | Calculate bitwise OR.                           |
| Xor          | Calculate bitwise exclusive OR.                 |

**letter buttons**

Used to enter letters in the hexadecimal number system.

Click the button to enter the value in the display.

**application window**

The main window for an application, in this case the Calculator window. It contains the application's menu bar and main workspace. The Calculator application window contains the buttons and display boxes used in calculations.

**application icon**

Represents a running application. An application icon appears after you minimize an application.

Double-click an application icon to restore it to a window.



**desktop**

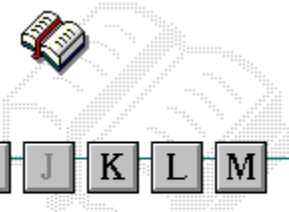
The background on which windows, icons, and dialog boxes appear.

Double-click anywhere on the desktop to start Task List.



# Windows Glossary

Click a button or term.



- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- L
- M
- N
- O
- P
- Q
- R
- S
- T
- U
- V
- W
- X
- Y
- Z

## Windows Glossary

Click a button or term.



[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#)

[N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

### A

[386 enhanced mode](#)

[active](#)

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[application](#)

[application icon](#)

[application window](#)

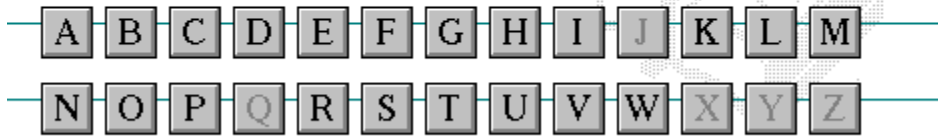
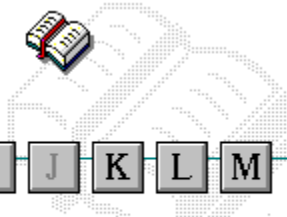
[arrow keys](#)

[associate](#)

[AUTOEXEC.BAT](#)

## Windows Glossary

Click a button or term.



### B

[<< button](#)

[>> button](#)

[Back button](#)

[base-level synthesizer](#)

[batch file](#)

[baud rate](#)

[bitmap](#)

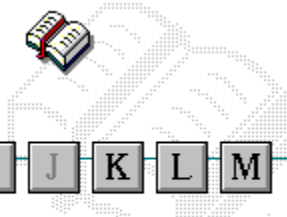
[branch](#)

[browse](#)

[byte](#)

# Windows Glossary

Click a button or term.



[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#)

[N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

## C

[cascading menu](#)

[CD-ROM](#)

[channel](#)

[check box](#)

[choose](#)

[Clipboard](#)

[close](#)

[collapse](#)

[command](#)

[command button](#)

[command line](#)

[complementary color](#)

[compound device](#)

[CONFIG.SYS](#)

[Contents button](#)

[Control menu](#)

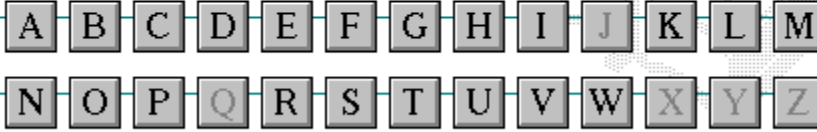
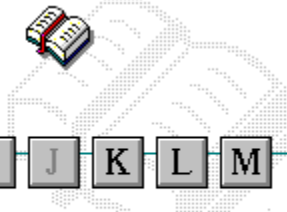
[Control-menu box](#)

[conventional memory](#)

[cutout](#)

# Windows Glossary

Click a button or term.



## D

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[device contention](#)

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[dialog box](#)

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[display box](#)

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[document window](#)

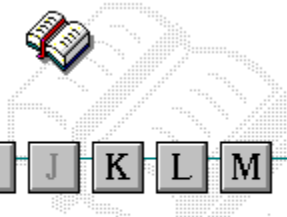
[DOS](#)

[drag](#)

[drop-down list box](#)

## Windows Glossary

Click a button or term.



A B C D E F G H I J K L M

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E

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[extended memory](#)

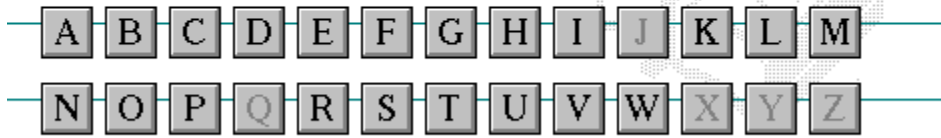
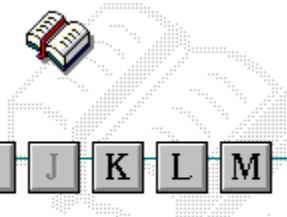
[extended synthesizer](#)

[extension](#)



## Windows Glossary

Click a button or term.



F

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[file information line](#)

[flow control](#)

[font](#)

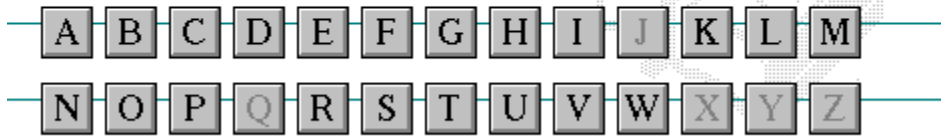
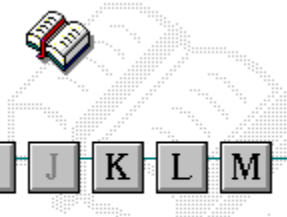
[font size](#)

[format](#)

[full-screen application](#)

## Windows Glossary

Click a button or term.



### G

General MIDI Mode standard

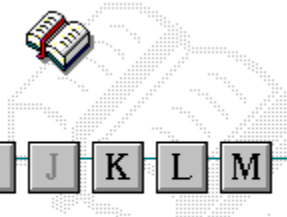
group

group icon

group window

## Windows Glossary

Click a button or term.



A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

H

[History button](#)

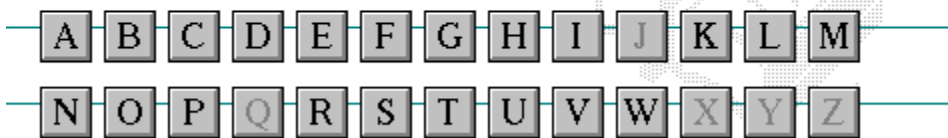
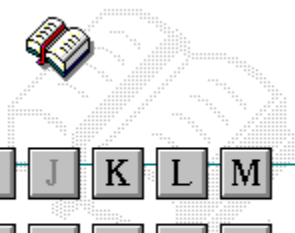
[hotspot](#)

[hue](#)

[HyperGuide button bar](#)

## Windows Glossary

Click a button or term.



### I

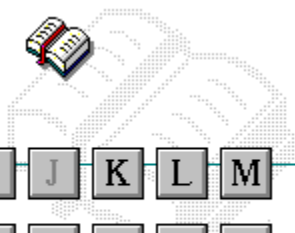
[icon](#)

[insertion point](#)

[International MIDI Association](#)

## Windows Glossary

Click a button or term.



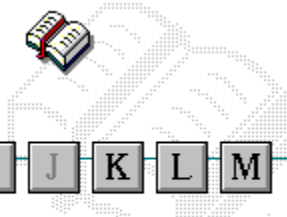
|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

J

No defined terms.

## Windows Glossary

Click a button or term.



A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

K

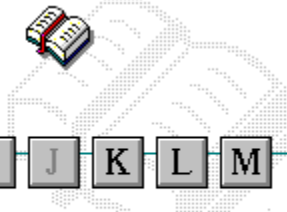
[keymaps](#)

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## Windows Glossary

Click a button or term.



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L

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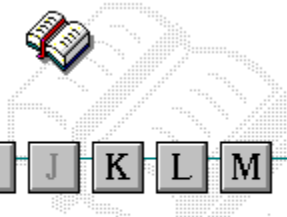
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[luminosity](#)

## Windows Glossary

Click a button or term.



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[MIDI Manufacturer's Association \(MMA\)](#)

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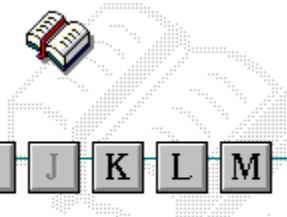
[Multimedia PC](#)

[multitasking](#)



## Windows Glossary

Click a button or term.



A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

N

[network printer](#)

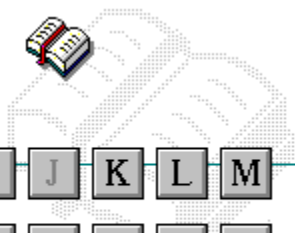
[network queue](#)

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[non-Windows application](#)

## Windows Glossary

Click a button or term.



|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

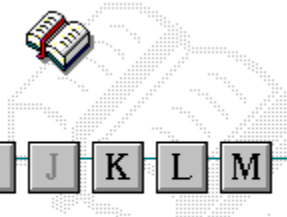
### O

[open](#)

[option button](#)

# Windows Glossary

Click a button or term.



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## P

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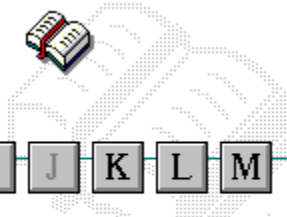
[program information file \(PIF\)](#)

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[program item icon](#)

## Windows Glossary

Click a button or term.



A B C D E F G H I J K L M

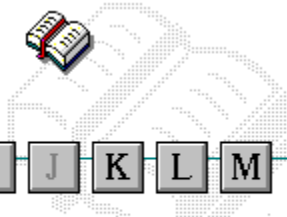
N O P Q R S T U V W X Y Z

Q

No defined terms.

## Windows Glossary

Click a button or term.



A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

### R

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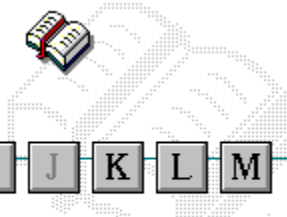
[real mode](#)

[Restore button](#)

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# Windows Glossary

Click a button or term.



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## S

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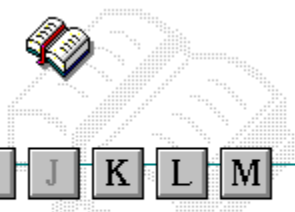
[status bar](#)

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## Windows Glossary

Click a button or term.



A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

### T

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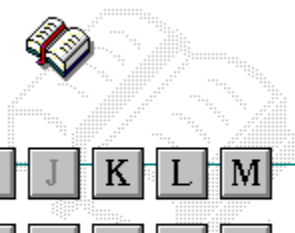
[title bar](#)

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## Windows Glossary

Click a button or term.



|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

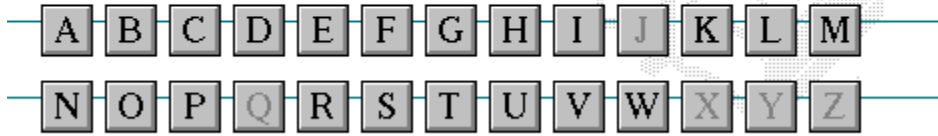
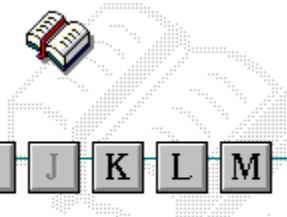
U

Up button



## Windows Glossary

Click a button or term.



### V

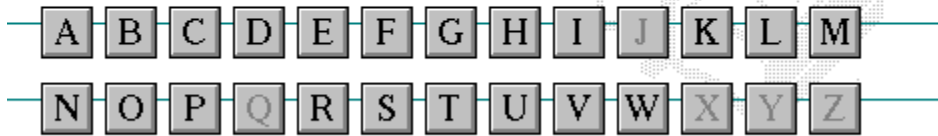
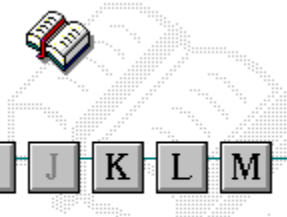
[vector font](#)

[virtual memory](#)

[volume label](#)

## Windows Glossary

Click a button or term.



### W

[waveform](#)

[WAVE format](#)

[wildcard characters](#)

[window](#)

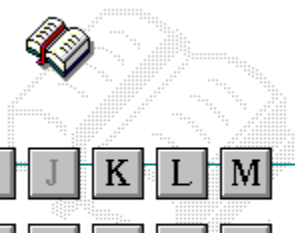
[window border](#)

[Windows application](#)

[wrap](#)

## Windows Glossary

Click a button or term.



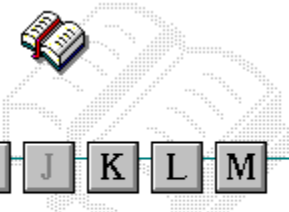
|   |   |   |   |   |   |   |   |   |   |   |   |   |
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| A | B | C | D | E | F | G | H | I | J | K | L | M |
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X

No defined terms.

# Windows Glossary

Click a button or term.



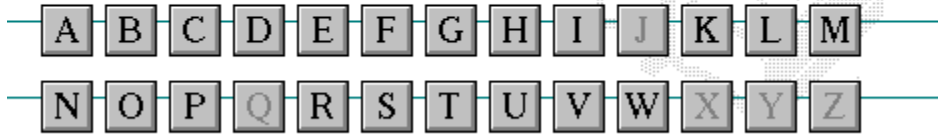
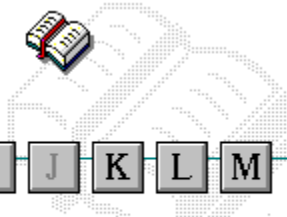
|   |   |   |   |   |   |   |   |   |   |   |   |   |
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| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

Y

No defined terms.

## Windows Glossary

Click a button or term.



Z

No defined terms.

**386 enhanced mode**

Provides access to the virtual memory capabilities of the Intel 80386 processor. With virtual memory capabilities, Windows applications can use more memory than is physically available. Enhanced mode also allows for multitasking of non-Windows applications.

**active**

Describes the selected window or icon that you are currently working with. Windows always applies the next keystroke or command you choose to the active window. If a window is active, it appears in front of all other windows on the desktop, and its title bar changes color to differentiate it visually from other windows. If an icon is made active, its Control menu appears.

Inactive is the opposite of active and describes windows or icons on the desktop that are not selected.

**active printer**

An installed printer that has been assigned to a printer port using Setup or Control Panel. More than one printer can be set up to work on a single port, but only one can be active, since only one printer can be physically connected to the port at a time.

An inactive printer is an installed printer that is not currently connected to the printer port.



**animation**

The display of a series of graphic images, simulating motion. You can play animation files (for example, files with the.MMM extension) with the Media Player accessory. Animations are also called movies.

**application**

A computer program used for a particular kind of work, such as word processing. This term is often used interchangeably with "program."

**application icon**



Alarm Clock

An icon that represents an application that is running.

**application window**

The main window for an application. It contains the application's menu bar and main workspace. An application window may contain multiple document windows.

**arrow keys**

The four arrow keys on your computer keyboard. These keys move the cursor or pointer on your screen to locations you choose. Each arrow key moves the cursor or pointer in the direction of the arrow on the key. Each arrow key is named for the direction in which arrow points: UP ARROW, DOWN ARROW, LEFT ARROW, and RIGHT ARROW.

**associate**

To assign files that have the same extension to a program. When you choose a file with the specified extension, the associated application runs with the file loaded.

**AUTOEXEC.BAT**

Batch file that lists MS-DOS commands. MS-DOS automatically carries out the commands in your AUTOEXEC.BAT file when you turn on your computer. The file is located in the root directory of your first hard disk, which is usually drive C.

Typically, an AUTOEXEC.BAT file starts memory-resident utilities such as a network and sets up environment variables that are used later by applications. In addition, your AUTOEXEC.BAT file might set your MS-DOS prompt or start pop-up programs such as Borland's SideKick.

**<< button**



Displays the previous topic in a series of topics, until you reach the first topic in the series. Then the button is dimmed. Use this button when you want to backtrack through topics the way they are organized in HyperGuide.



**>> button**



Displays the next topic in a series of topics, until you reach the last topic in the series. Then the button is dimmed. Use this button to move from topic to topic in the recommended order.

**Back button**

Displays the last topic you viewed. HyperGuide moves back one topic at a time, in the order in which you viewed them.

**base-level synthesizer**

One of the two types of synthesizers accommodated by Windows.

MIDI files authored for Windows include two versions of a song: one version for base-level synthesizers and another version for extended synthesizers. The distinctions between base-level and extended synthesizers are based on the number of instruments and notes the synthesizer can play.

**batch file**

A file that runs a sequence, or "batch," of commands when you type its filename. All filenames of batch files end with the extension .BAT, even though you don't have to type this extension to run the batch file.

**baud rate**

Signalling speed measured by the number of signals per second.

**bitmap**



An image stored as an array of bits.

**branch**



A segment of the Directory Tree, representing a directory and any subdirectories it contains.

**browse**

To look through files and directories. In some dialog boxes, the Browse button shows a list of files and directories from which you can choose.



**byte**

The amount of memory space (normally 8 bits) that a computer needs to represent a single character or word.

## **cascading menu**



A menu that opens from a command on another menu.

**CD-ROM**

Compact Disc-Read Only Memory. An optical data-storage technology that allows large quantities of data (such as animations, images, music, and sound) to be stored on a compact disc similar to discs used by the music industry.

**channel**

MIDI uses channels to send messages to individual devices within a MIDI setup. There are 16 MIDI channel numbers. Devices in a MIDI setup can be directed to respond only to messages marked with a channel number specific to the device.

**check box**



A small square box that appears in dialog boxes and can be selected or cleared. When the check box is selected, an X appears in the box.

**choose**

To use key combinations or your mouse to carry out a command in Windows. You often choose a command after you have selected an item or made it active.

## **Clipboard**



A temporary storage area in memory, used to transfer information. You can cut or copy information onto the Clipboard and then paste it into another document or application.

**close**

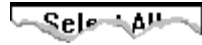
To reduce a document window or application window to an icon or, in some cases, to remove it from the desktop. You close a window by double-clicking the Control-menu box or choosing the Close command from the Control menu. When closing an application window, you can choose to save or abandon changes to the current document before you close it.



**collapse**

To hide a level of directory information in the Directory Tree window. When you first start File Manager, all directories but the root directory are collapsed.

**command**



A word or phrase, usually found in a menu, that you choose to carry out an action.

**command button**

A button in a dialog box that carries out or cancels the selected action. Two common command buttons are OK and Cancel. The button that carries out the action will often have a label that describes it (for example, Open, Create, Install). Another dialog box appears when you choose a command followed by ellipses.

**command line**

Information given to MS-DOS that specifies a command and all the pertinent information to carry it out. For example, to start Windows, you type **win** at the MS-DOS prompt.

**complementary color**

The color exactly opposite a color on the RGB color wheel. For example, the complementary color of blue is yellow.

**compound device**

Devices, such as the waveform audio driver, that have an associated file and require a filename specification when opened.

**CONFIG.SYS**

A file that defines device drivers and specifies your MS-DOS configuration. For example, a typical CONFIG.SYS file might specify the location of the MS-DOS file COMMAND.COM, define an extended memory manager, and specify how many files an application can have open at once. MS-DOS runs the commands in the CONFIG.SYS file each time you turn on your computer. Your CONFIG.SYS file is located in the root directory of your first hard disk, which is usually drive C.

**Contents button**



Displays the HyperGuide contents.



## Control menu

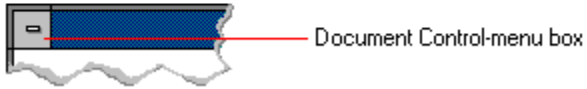


The menu in the upper-left corner of a window. The Control menu appears on every application that runs in a window and on some non-Windows applications. Document windows, icons, and some dialog boxes also have Control menus.

Control menu commands move, change the size of, and close windows. You can also switch to Task List by using the Control menu. For non-Windows applications, Control menu commands transfer information and perform other functions, depending on the application.

### Control-menu box

The box located in the upper-left corner of a window. Clicking the Control-menu box opens the Control menu for the window.



**conventional memory**

The first 640K of memory that MS-DOS uses to run applications. Most computers have at least 256K of conventional memory and can accommodate up to 640K of conventional memory.

**cutout**



A portion of a Paintbrush drawing you select with the Scissors or Pick tool.

**data bits**

The bits in each package of data sent between two computers during telecommunication. Most characters are transmitted in 7 or 8 data bits.

**default button**

The command button in some dialog boxes that is automatically selected or chosen by Windows as the most logical or safest choice. The default button has a bold border, indicating that it will be chosen if you press ENTER. You can override a default button by choosing Cancel or another command button.

**default printer**

The printer that Windows applications automatically use when you choose the Print command. You can have only one default printer, which must also be the active printer on the port. The printer you use most often should be made the default printer.

**desktop**

The background of your screen, on which windows, icons, and dialog boxes appear.



**desktop pattern**

A geometric pattern that appears across your desktop. You can design your own pattern or choose one of the patterns provided by Windows.

**destination directory**

The directory to which you intend to copy or move one or more files.

**device contention**

When several applications simultaneously request use of a peripheral device, such as a printer or modem.

Windows automatically handles device contention when all the applications are Windows applications. When one of the applications is a non-Windows application, however, the conflict is handled according to the options you select in the 386 Enhanced dialog box. This dialog box appears when you choose the 386 Enhanced icon in Control Panel.

**device driver**

Tells Windows how to control a piece of hardware. Using Control Panel, you can install device drivers for your:

- Display (monitor)
- Keyboard
- Mouse
- Network

**dialog box**

A rectangular box that either requests or provides information. Many dialog boxes present options that you must choose from before Windows can carry out a command. Some dialog boxes present warnings or explain why a command can't be completed.

## **directory path**



The directions to a directory or file within your system.

In the illustration, C:\ART stands for the ART directory on drive C. Any commands you use affect the files and subdirectories in this directory.

When you want to specify a file, make sure the filename follows the directory path.

## Directory Tree



A graphic display of a disk's directory structure. The directories on the disk are shown as branching from the disk's root directory.

**Directory Tree window**



A File Manager window that shows the complete branching structure of the selected disk drive.



**directory window**



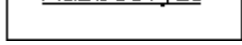
A File Manager window that lists the contents of a specific directory. The directory window shows all the files and subdirectories contained in the directory.

**disk-drive icon**



An icon in the Directory Tree window of File Manager that represents a disk drive on your system. Different icons depict floppy disk drives, hard disk drives, RAM drives, CD-ROM drives, and network disk drives.

**display box**



A display box is not an option, but a type of text box that shows an example of another option you have selected, in this case a sample of the 10 pt, underlined, Helvetica font.

**document**

Whatever you create with an application, including information you enter, edit, view, or save. A document can be a business report, a spreadsheet, a picture, and so on.

**document file** 

Files that are associated with an application. You can start an application and open the associated file by choosing a document file icon.

**document window**

A window inside an application window. Each document window contains a single document or other data file. There can be more than one document window inside an application window.

**DOS**

Disk Operating System, typically known as MS-DOS (Microsoft) or PC-DOS (IBM). This is the underlying software that must exist for your PC to operate.

**drag**

A mouse move. You drag a Windows element by pointing to it, holding down the mouse button, and sliding the mouse from one spot on the surface of your desk to another and releasing the mouse button.



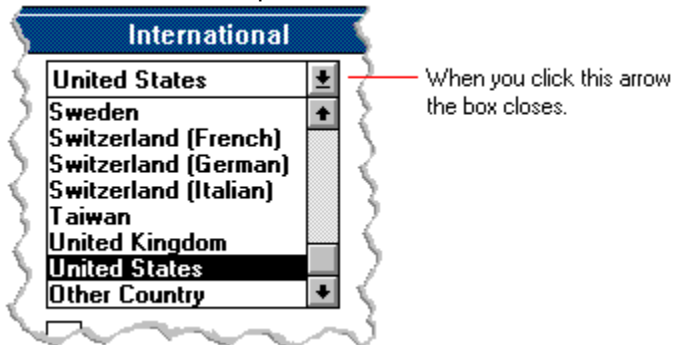
### drop-down list box

A list box that opens and closes in dialog boxes.

Before you open a drop-down list box, it looks like this:



After the list box is open, it looks like this:



**NOTE:** When the list is longer than the box, scroll bars are provided.

**error checking**

A method for validating transmissions.

**expand**

To show hidden directory levels in the Directory Tree. With File Manager, you can expand a single directory level, one branch of the Directory Tree, or all branches at once.

**expanded memory**

Memory in addition to conventional memory that is available to applications. It is allocated in 16K blocks. Windows makes use of expanded memory only if the /r switch is used at startup. Windows running in 386 enhanced mode simulates expanded memory for the applications that need it. Windows running in standard mode or 386 enhanced mode allows applications to use expanded memory, but does not use expanded memory itself in managing applications.

**extended memory**

Memory in addition to conventional memory that is not readily accessible to MS-DOS or MS-DOS applications. Extended memory cannot be used on 8086 and 8088 computers. Windows running in standard mode or 386 enhanced mode uses extended memory to manage and run applications.

**extended synthesizer**

One of the two types of synthesizers accommodated by Windows.

MIDI files authored for Windows include two versions of a song: one version for base-level synthesizers and another version for extended synthesizers. The distinctions between base-level and extended synthesizers are based on the number of instruments and notes the synthesizer can play.

**extension**


Part of a file or directory name that appears after a period and provides additional information. It usually indicates the type of file or directory. For example, program files have default extensions of .COM or .EXE .

Many applications include a default extension automatically when you save a file the first time. For example, Notepad adds a .TXT extension to all filenames unless you specify otherwise.

**file**

A document or application that has been given a name. All documents are stored as files in Windows.



**file information line** Write - REPORT.TXT 12% of 101K 12:08 AM 2-6-91

Information specific to each file in a print queue. The information can include these details:

- The file's position in the queue or a printer icon if the file is printing.
- The title of the print job assigned by the application (if your network software supports this).
- What percentage of the file has printed so far.
- The size of the file in kilobytes (if the Print File Size command on the View menu is selected).
- The time and date you sent the file to Print Manager (if the Time/Date Sent command on the View menu is selected).

If you are connected to a network printer, the printer queue information line shows the network server connection. Any detailed information the network can provide appears in the message box at the upper-right corner of the Print Manager window. Networks can provide varying degrees of detailed information.

**flow control**

The method for controlling the flow of information.

**font** Water **Water** *Water* Water Water

A graphic design applied to all numerals, symbols, and characters in the alphabet. A font usually comes in different sizes and provides different styles, such as bold, italic, and underlining for emphasizing text.

**font size**

The height of a printed character, measured in points. One inch equals 72 points. For example, 12-point Helv is 12 points high.

**Helv**

---

Helv 8 ABCDEFGHIJKL

Helv 10 ABCDEFGHIJKL

Helv 12 ABCDEFGHIJKL

**Helv 14 ABCDEFGHIJKL**

The font and font size you use determine the amount of text that fits on one page.

**format**

(1) The appearance of text on the pages of a document. (2) To prepare a disk so it can hold information. Formatting a disk erases all information that was previously on it.

**full-screen application**

A non-Windows application that uses the entire screen--rather than a window--to run in the Windows environment.

**General MIDI Mode standard**

A MIDI specification controlled by the MIDI Manufacturers Association (MMA). The purpose of this specification is to enable MIDI file authors to create files that sound the same across a variety of different synthesizers.

**group**

A collection of applications within Program Manager. Grouping your applications makes them easier to find.



**group icon** 

A group window you have reduced to an icon in Program Manager.

**group window**

A window that displays the items in a group within Program Manager. These items can be applications, files associated with applications, or a combination of both.

**History button**

Displays a list of the HyperGuide topics you have viewed. Use this button to revisit any of the last 40 HyperGuide topics you have viewed. The most recent topic appears first.

**hotspot**

Text, graphics, or parts of graphics that provide links to other HyperGuide topics or more information about the current topic.

Whether text or graphics, the pointer changes to the shape of a hand whenever it is over a hotspot. If you click a hotspot that is linked to another topic, that topic will appear in the HyperGuide window. If the hotspot is linked to more information, HyperGuide displays the information in a popup window on top of the HyperGuide window.

**hue**

The position of a color along the color spectrum.

## HyperGuide button bar



Contains the HyperGuide buttons you use to move among topics and contents screens. It is located near the top of the HyperGuide window.

**icon**

A graphic representation of a disk drive, directory, group, application, document, and so on. You can restore an application icon to a window when you want to use the application.

**insertion point** |

The place where text will be inserted when you type. The insertion point usually appears as a flashing vertical bar in an application's window or in a dialog box. The text you type appears to the left of the insertion point, which moves to the right as you type.



**International MIDI Association (IMA)**

The non-profit MIDI organization that circulates information about the MIDI specification.

**keymaps**

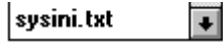
Percussion instruments are key-based--each note plays a different percussion instrument. Keymaps translate MIDI key values to ensure the proper percussion instruments are used to play MIDI files. All MIDI files for Windows are authored using standard key assignments based on the General MIDI Mode standard.

**keyword**

Words in the HyperGuide Search dialog box that are associated with topics. Each application's documentation has its own keyword list, including the glossary words in HyperGuide. You select from the list of keywords or type a keyword to see the list of topics associated with that keyword.

**kilobyte**

The measurement used for the size of a computer's memory, where 1 kilobyte (K) = 1,024 bytes.

**list box**

A box within a dialog box that lists available choices--for example, the list of all available files in a directory. If all the choices don't fit in the box, there will be a vertical scroll bar to the right of the list box. In some list boxes, you can select more than one item.

**local printer**

A printer that is directly connected to your printer by a cable.

|| 2 Calendar - SCHEDULE.CAL 6K 12:10AM 2-6-91 ||

### local queue

Lists the files that you directed to any active printer connected to your computer. The computer and printers are connected locally by a cable.

When Print Manager starts printing on a local printer, its icon appears at the bottom of your screen. If you restore the icon to a window, you see the print queue for any active printer connected to your computer. You can use the Print Manager window to check the status of files in the print queue or to interrupt or cancel a print job.

**luminosity**

The brightness of the color on a scale from black to white.



**maximize**

To enlarge a window to its maximum size by using the Maximize button or the Maximize command.

**Maximize button**

The small button at the upper-right corner of a window that contains an Up arrow. Mouse users can click the Maximize button to enlarge a window to its maximum size. Keyboard users can use the Maximize command on the Control menu.

**Media Control Interface (MCI)**

A standard control interface for multimedia devices and files. MCI allows a multimedia application to easily control a variety of multimedia devices and files.

**memory**

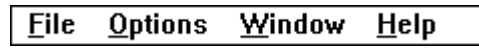
The space in a computer where information is stored while you are working with it. Most PCs have a small amount of read-only memory (ROM), containing the built-in programs that start the operation of the computer when it is turned on, and a large amount of random-access memory (RAM) for users' programs and data.

menu

✓ **Minimize on Use**

A list of available commands in an application window. Menu names appear in the menu bar near the top of the window. The Control menu, represented by the Control-menu box at the left end of the title bar, is common to all Windows applications. You use a command on a menu by selecting the menu name, then choosing the command you want.

**menu bar**



The horizontal bar containing the names of an application's menus. It appears just under the title bar.

**menu command**



A word or phrase in a menu that you choose to carry out an action, such as copying a file.

**menu name**

The name for a particular menu that appears in the menu bar and opens a menu when you choose it.



**menu title**

A word or phrase in the menu bar that identifies a group of commands. Selecting the menu title causes the title to be highlighted and its menu of commands to appear below it.

**MIDI**

Musical Instrument Digital Interface. MIDI sets a communications standard for transferring data between musical instruments and associated devices.

**MIDI file**

A file format for storing MIDI songs. In Windows, MIDI files have a .MID filename extension.

**MIDI Mapper**

A Control Panel option that lets you create and edit MIDI setup maps. Windows uses these maps to translate and redirect MIDI data.

**MIDI Sequencer**

Software that creates or plays songs stored as MIDI files. When a sequencer plays MIDI files, it sends MIDI data from the file to a MIDI synthesizer that produces the sounds. Windows provides a MIDI sequencer to play MIDI files.

**MIDI Manufacturer's Association (MMA)**

A collective organization composed of MIDI instrument manufacturers and MIDI software companies. The MMA works with the MIDI Standards Committee to maintain the MIDI specification.

**minimize**

To reduce a window to an icon using the Minimize button or the Minimize command. The document or application remains open (or running), and can be the active application or document.

**Minimize button**

The small button at the upper-right corner of a window that contains a Down arrow. Mouse users can click the Minimize button to reduce a window to an icon. Keyboard users can use the Minimize command on the Control menu.



**movie file**

A multimedia data file (for example, a file with the .MMM extension). You can play movie files with the Media Player accessory. Movie files are also called animations.

**MSCDEX**

Microsoft Compact Disc Extensions. MSCDEX is software that makes CD-ROM drives appear to DOS as network drives. You must have MSCDEX installed on your computer for the CD-ROM drive to work.

**multimedia extensions**

Additional features added to Windows version 3.0 that enable your computer to run animations, play sound and MIDI files, and display high-quality images.

## **Multimedia PC**

Multimedia personal computer. A multimedia computer satisfies a minimum set of hardware/software requirements necessary for multimedia computing. The requirements include:

- An 80286/386/486 microprocessor running at 10MHz or faster
- 2MB or more of RAM
- 30MB or larger hard disk
- VGA display
- A digital audio subsystem
- A CD-ROM drive
- Systems software compatible with Microsoft Windows version 3.0 with multimedia extensions

**multitasking**

The ability of a single computer to perform several tasks simultaneously.

Multitasking makes it possible to print one document while editing another, or to perform lengthy computations while you work on something else.

**network printer**

A printer that is accessible to your computer only through a network.

**network queue**

Lists the files on the network server if you are using a network printer.

**network server**

A computer on a network that provides a particular service to other computers. For example, a disk server manages a large file server, and a print server manages a printer.



**non-Windows application**

An application that was not designed to run in Windows. Generally, non-Windows applications do not conform to Windows user-interface standards.

**open**

To display the contents of a directory or file in a window, or to enlarge an icon to a window.

**option button**



A small round button that appears in a dialog box and is used to select an option. Within a group of related option buttons, you can select only one button.

**palette**

Defines the colors used in a bitmap image. Every device independent bitmap (DIB) has an associated color palette.

**parity**

The method of detecting errors in data transmission.

**patch**

A specific sound created by a synthesizer. A synthesizer plays notes using sounds defined as patches.

**patchmaps**

A patch is a specific sound created by a synthesizer. A synthesizer plays notes using sounds defined as patches. Patchmaps translate MIDI patch changes to ensure the proper instruments are used to play MIDI files. All MIDI files for Windows are authored using standard patch assignments based on the General MIDI Mode standard.

**pathname**

The directions to a directory or file within your system. For example, C:\WINDOWS3\APPTS\JUNE.CAL is the pathname of the JUNE.CAL file in the APPTS subdirectory in the WINDOWS3 directory on drive C.



**picture elements**

The smallest graphics unit on the screen. Also known as pels.

**pixels**

The smallest graphic units on the screen. Also known as picture elements (pels).

**playlist**

A list of compact disc titles and tracks that determines the order in which the tracks on the disc are played. Playlists are only used in Music Box.

Use the Program button to assign or edit titles, and to change the playlist.

## pointer



In Windows, the shape of the pointer indicates its function.



For selecting Windows items, scrolling, resizing windows, and moving windows and dialog boxes with your mouse. This is the pointer you will see most often.



For choosing a HyperGuide hotspot.



For selecting text with your mouse.



For changing the size of a window with your mouse.



For changing the location or size of a window with your keyboard.



For indicating the application is processing your request.

## port

A connection on a computer where you plug in a cable that carries data to a device.

LPT ports are parallel ports. COM ports are serial ports. EPT is a port used for certain printers, such as the IBM Personal Pageprinter. You can use the EPT port only if you have installed a special card in your computer.

Multimedia PCs also have a port for a MIDI sequencer.

**print options**

Printer-specific settings such as page orientation--portrait or landscape--or the manner in which paper feeds through the printer. These options vary from printer to printer.

**printer-driver file**

A file that gives Windows important information about how to control your printer, including details about printer features and the printing interface, descriptions of fonts (such as sizes and styles), character translations, and control sequences the printer uses to achieve various formats. Windows has printer-driver files for most commonly used printers.

**printer font**

A series of dots connected by lines that can be scaled to different sizes. Another name for printer fonts is vector (or stroke) fonts. Plotters typically use vector fonts.

**printer queue information line****PCL/HP LaserJet on LPT1 [Printing]**

Indicates the following:

- The name of the printer.
- Where the printer connects to your computer.
- The current status of the printer.



**program file** 

A file that contains information that controls an application. In File Manager, each program file is represented by an icon. You can start the application by choosing the icon. Filenames for program files can have these extensions: .EXE, .COM, .PIF, and .BAT.

**program information file (PIF)**

A file that provides important information that Windows needs to run a non-Windows application. PIFs contain information such as the name of the file, a startup directory, whether the program writes directly to the screen or to memory, and multitasking options for applications running in 386 enhanced mode.

**program item**   ▪

A program file or associated document represented by an icon in Program Manager. The program item provides the instructions Windows needs to start an application and open a document (if specified) when you choose the icon.

**program item icon**

An icon representing an application you can start or an associated document you can open from a group in Program Manager. The program item provides the instructions Windows needs to start an application and open a document (if specified) when you choose the icon.

**RGB components**

The amount of each of the three primary colors--red, green, and blue--present in a color. Every color and pattern is made by varying the three primary colors. This is true even in monochrome (black and white) mode. For instance, white is made by mixing together 255 parts of red, 255 parts of green, and 255 parts of blue. Black, on the other hand, is 0 red, 0 green, and 0 blue.

**read-only**

Describes a file or CD-ROM disc that can only be opened and read. You cannot edit a read-only file or CD-ROM disc and save your changes.

**real mode**

An operating mode that Windows runs in to provide maximum compatibility with versions of Windows applications released prior to Windows version 3.0. Real mode is the only mode available for computers with less than 1 MB of extended memory.

**Restore button**

The small button at the upper-right corner of a window that contains both an Up arrow and a Down arrow. The Restore button appears only after you have enlarged a window to its maximum size. Mouse users can click the Restore button to return the window to its previous size. Keyboard users can use the Restore command on the Control menu.



**root directory**

The main directory on a disk. The root directory is created at the first level when you format a disk. The symbol used to indicate the root directory of a disk is the backslash (\). For example, the root directory for drive C is noted as C:\.

**sample**

A piece of waveform data represented by a single numerical value. You convert sound into digital form by taking samples of the sound at specific time intervals and converting them to numeric values.

**saturation**

The purity of a hue, moving from gray to the pure color.

**scaled font size**

A font size that approximates a specified font size for use on the screen. Windows scales larger font sizes when a size that is available for the printer is not available for the screen. Scaled fonts may look slightly different from unscaled fonts. When you choose a smaller font size that is available for the printer but not for the screen, Windows substitutes the correct size from a precision-drawn font that resembles the selected font as closely as possible.

## screen font

A font that duplicates a printer font on your screen.



If you choose a printer font that does not have a corresponding screen font, Windows substitutes a screen font that closely resembles the printer font. The substitute font duplicates the line lengths and page breaks of the font you selected.

When you purchase extra fonts from a printer or font manufacturer, ask about the availability of screen fonts to match.

**screen saver**

An image or pattern that is shown on your computer screen during periods of inactivity. Screen savers hide information currently on the screen; by changing patterns they can also save wear on the electronics in the display.

**scroll arrow**

An arrow on either end of a scroll bar that is used to scroll through the contents of a window or list box. Clicking a scroll arrow moves the contents one line. Holding down a scroll arrow scrolls the contents continuously.

Scroll arrows also control the playing of media in some applications, such as Media Player and Sound Recorder.

**scroll bar**

A bar that appears at the right and/or bottom edge of a window whose contents aren't completely visible. Each scroll bar contains two scroll arrows and a scroll box, which allow you to scroll within the window or list box.

A scroll bar is also used to control playing of media in some applications, such as Media Player and Sound Recorder.



**scroll box**

The square or rectangular box within a scroll bar that indicates your relative position within a document or list box. Mouse users can drag the scroll box up or down quickly through long documents.

A scroll box is also used to control playing of media in some applications, such as Media Player and Sound Recorder.

**Search button**

Displays the keywords you can use to search for topics. Use this button to look for topics related to a keyword.

**select**

To mark an item by highlighting it with key combinations or with a mouse. Selecting does not initiate an action. After selecting an item, you choose the action that affects or involves the item. For example, you can select text and then choose the Copy command to copy the text onto the Clipboard.

**selection cursor**

The marking device that shows where you are in a window, menu, or dialog box and what you have selected. The selection cursor appears as a dotted box around the text in a dialog box option.

**serial ports**

Ports used by your system, named COM1, COM2, and so on. Serial ports are typically used for connecting modems, mouse devices, and some kinds of printers.

**shortcut key**

A key or key combination, available for some commands, that you can press to carry out a command without first selecting a menu. The shortcut key for a command is listed to the right of the command name on the menu.

**shrink**

To reduce a window to an icon using the Minimize button or the Minimize command. The document or application remains open (or running), and can be the active application or document.

**simple device**

Devices, such as audio compact-disc players, that don't have an associated file and can be opened without a filename specification.



**solid color**

A color directly supported by your display.

**source directory**

The directory containing the file or files you intend to copy or move.

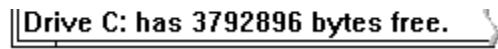
**spin box**



A spin box shows one item in a range of possible choices. Clicking the Up or Down arrow to the right of the entry lets you "spin" through the available choices until your choice appears in the display rectangle.

**standard mode**

The normal operating mode for running Windows. This mode provides access to extended memory. In standard mode, you can also switch among non-Windows applications.

**status bar**A screenshot of a status bar from a file explorer window. The text 'Drive C: has 3792896 bytes free.' is displayed in a bold, black font. The text is enclosed in a thin black rectangular border that has a slight shadow effect on the right side, giving it a three-dimensional appearance. The background of the status bar is white.

A line of information located at the top or bottom of a window. For example, in a directory window the status bar tells how many files are selected, how much disk space they occupy, and the total number of files in the directory. In the Directory Tree window, the status bar shows the number of bytes available on the disk and the total disk capacity. Not all windows have a status bar.

**stop bits**

The timing unit between characters.

Stop bits are not actually bits; they determine the time between transmitted characters.

**synthesizer**

An electronic instrument able to make music and sounds by creating its own audio waveforms and sending them out to an audio system. A synthesizer can play back MIDI files.

**Task List**

A window that shows all the applications you have running so you can switch among them. You can open the Task List window by choosing Switch To from the Control Menu or by pressing CTRL+ESC.



**text box**      **Filename:**

A box within a dialog box where you type the information needed to carry out a command. When the dialog box appears, the text box may be blank or may contain text.

**text file**

A file containing only plain text, numbers or symbols. The text in a text file is uniform and does not contain any formatting, such as bold, underline, or different fonts and font sizes. A text file usually consists of characters coded from the ASCII character set.

The advantage of a text file is that it can be transferred to almost any text editor or word processor. Also, MS-DOS and Windows use text files, such as AUTOEXEC.BAT, CONFIG.SYS, and WIN.INI.

**title**

Another name for a software application written to run on a Multimedia PC.

**title bar**

The horizontal bar at the top of a window that contains the title of the window or dialog box. On many windows, the title bar also contains the Control-menu box and Maximize and Minimize buttons.

**topic**

The level in the HyperGuide hierarchy at which you see information in the main window. This information can be in the form of a Quick Look graphic, an explanation of a command, a conceptual overview, a procedure, or a table of keys. Information in pop-up windows and contents screens are not considered topics.

**track**

A sequence of sound on a CD disc, which usually corresponds to a song.

**Up button**



Moves up one level in the HyperGuide hierarchy.

**vector fonts**

A series of dots connected by lines that can be scaled to different sizes.



**virtual memory**

A memory management system used by Windows running in 386 enhanced mode, which allows Windows to behave as if there were more memory than is actually present in the system. Virtual memory equals the amount of free RAM plus the amount of disk space allocated to a swap file that Windows uses to simulate additional RAM.

**volume label**

The name you give a disk by using the Label command. Disk labels are optional. You see this information in File Manager only if you assigned a label to your disk. You can change or add a disk label through File Manager.

**WAVE format**

Microsoft's format for digitized waveform files. These files have a .WAV extension.

**waveform**

A sound waveform displays variances in air pressure over time. An audio signal waveform displays variances in voltage over time.

**wildcard characters**

Two MS-DOS characters you can substitute for all or part of a file or directory name when you want to find similarly-named files or want one command to affect a number of files or directories.

An asterisk (\*) substitutes for all characters. A question mark (?) substitutes for a single character.

For example, this entry covers all files with a .DOC extension in the current directory:

**\*.DOC**

And this entry covers everything named with FY, three other characters, and the extension .90:

**FY???.90**

**window**

A rectangular area on your screen in which you view an application or document. You can open, close, and move windows, and change the size of most windows. You can open several windows on the desktop at the same time and you can shrink windows to icons or enlarge them to fill the entire desktop.

**window border**

The outside edge of a window. You can lengthen or shorten each border. You can also change the width of the border with Control Panel's Desktop command.

**Windows application**

An application that was designed for Windows and will not run without Windows. All Windows applications follow the same conventions for arrangement of menus, style of dialog boxes, use of the keyboard and mouse, and so on.



**wrap**

The automatic movement of the insertion point from the end of one line to the beginning of the next line as you type. When text wraps, you do not need to press ENTER at the end of each line in a paragraph.



