



# ***fx-ES PLUS Emulator***

## ***User's Guide***



CASIO Worldwide Education Website

<http://edu.casio.com>

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# Introduction

- fx-ES PLUS Emulator is software that emulates operation of a CASIO scientific calculator.
- You also can display the LCD of the calculator in a separate window, which can be zoomed as required.
- An image of the LCD can be captured (copied to the Windows clipboard).
- You can display key operations, copy them, and paste them into other applications.

## ***Important!***

If you use a projector to project screen images, do not project onto a blackboard. Doing so can make the fx-ES PLUS Emulator screen difficult to see.

## ■ Using This Manual

- This manual covers the operation of the software on your computer. It does not cover the actual operation of your computer. The procedures in this manual assume that you are already familiar with the following standard computer operations.

- Menu operations using the mouse, including: clicking, double-clicking, dragging, etc.
- Text input using the keyboard
- Icon operations, general window operations, etc.

If you are not familiar with these types of operations, refer to the user documentation for your computer.

- The screen shots shown in this manual are all from the English version of Windows® XP.
- Note that the actual appearance of the screen display by this software depends on your computer system setup and on the operating system you are using.
- Display examples shown in this User's Guide are intended for illustrative purposes only. The actual text and values that appear on display may differ from the examples shown in this User's Guide.

## ■ System Requirements

Operating Systems:	Windows XP Home Edition, Windows XP Professional (32-bit), Windows Vista® (32-bit), Windows 7 (32-bit/64-bit), Windows 8 (32-bit/64-bit) Your hardware configuration needs higher than functionalities that operating system recommends.
Computer:	IBM PC/AT or compatible computer Computer with one of the Windows operating systems pre-installed (Excluding computers with an upgraded operating system and self-built computers.)
Disk Space:	300 MB for installation and uninstall
Note:	Actual requirements and product functionality may vary based on your system configuration and operating system.
Other:	Video adapter and display must support resolution of XGA (1024×768) or higher, 16-bit or higher system color. CD-ROM drive. Adobe® Reader® 6.0 or later.

### **Note**

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- Note that trademark <sup>™</sup> and registered trademark <sup>®</sup> are not used within the text of this user's guide.

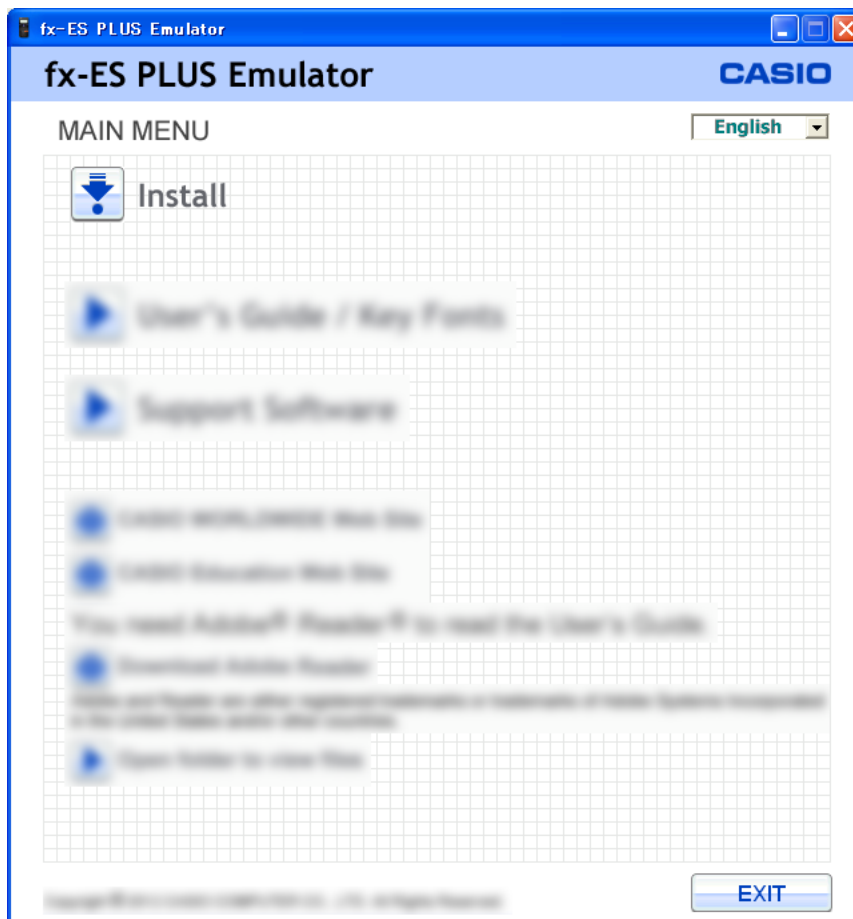
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# 1. Installing and Uninstalling fx-ES PLUS Emulator

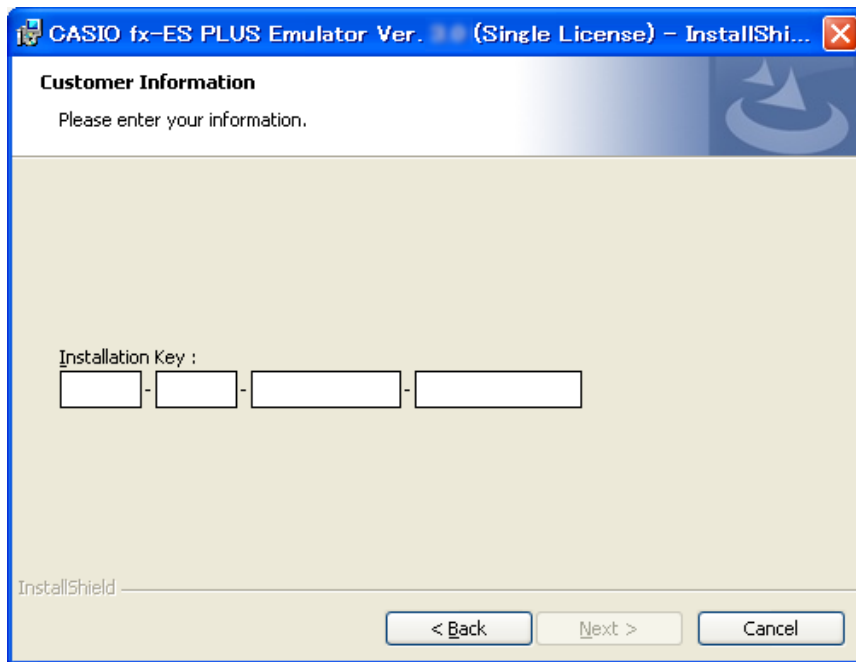
## To install fx-ES PLUS Emulator

1. Place the CD-ROM into your computer's CD-ROM drive.
  - This will display a screen like the one shown below automatically.

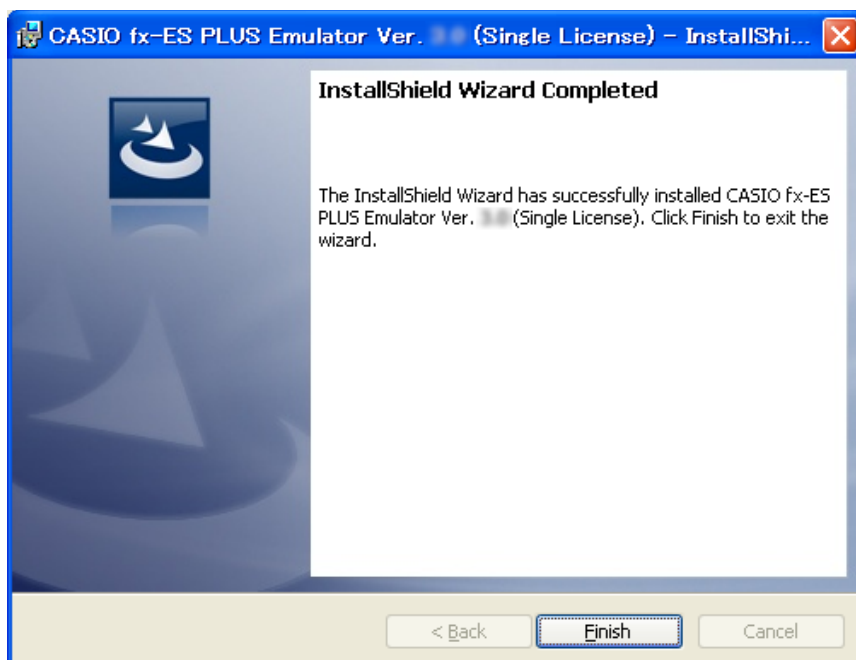


2. Click "Install". Perform operations as instructed by the text that appears on the screen.
  - A language selection dialog box will appear at the beginning of the installation procedure. The user's guide language version that is installed will be for the language you select. If there is no user's guide version for the language you select, an English language version user's guide will be installed. Note that in the case of models intended for markets in Germany, France, Vietnam, and Japan, the installed user's guide will be in the language for the target country regardless of the language you select on the language selection dialog box.

- On the next screen that appears, enter the alphanumeric key that is located on the software's Installkey sticker for "Installation Key".



3. The dialog box shown below will appear when installation is complete.



4. Click the [Finish] button.
- This completes installation.

**Note**

- Installing the software will put a “fx-ES PLUS Emulator” shortcut icon on your Windows desktop.



- Installation also installs a key font (ES03.TTF, ES04.TTF, etc.).

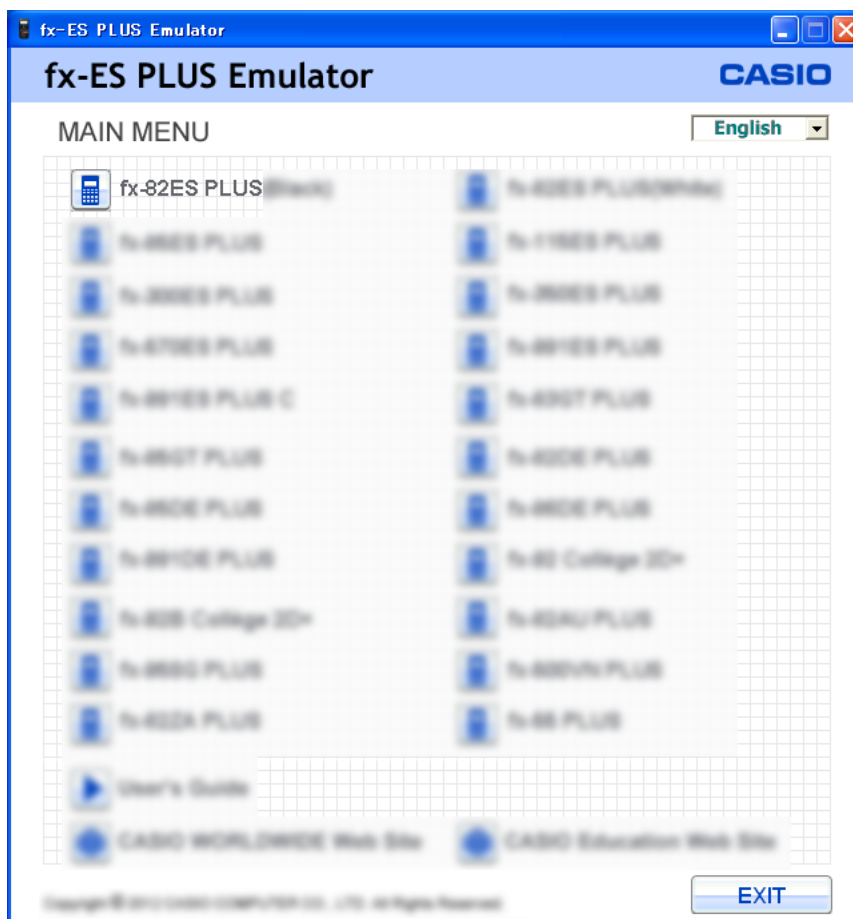
**To uninstall fx-ES PLUS Emulator**

1. Display the Windows Control Panel.
2. Click [Add or Remove Programs].
3. On the list of applications that appears, select “CASIO fx-ES PLUS Emulator Ver. \*\*”.
4. Click the [Remove] button.
5. Click the [Yes] button.
  - This completes the uninstall operation.
  - Note that the above operation does not uninstall the key font (ES03.TTF, ES04.TTF, etc.).

## 2. Using fx-ES PLUS Emulator

### To start up the emulator

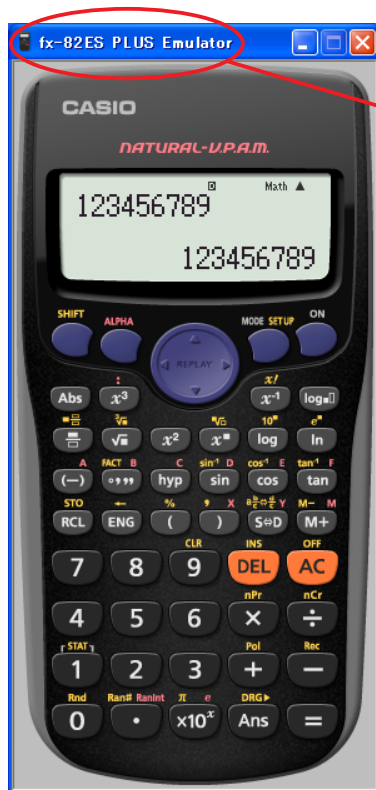
1. On your computer's desktop, double-click "fx-ES PLUS Emulator" icon.
  - You could also start up the application by clicking [Start] - [Program] - [CASIO] - [fx-ES PLUS Emulator] - [fx-ES PLUS Emulator].





2. Select the calculator model you want to start up its emulator.

Example: Clicking “fx-82ES PLUS” will start up the fx-82ES PLUS Emulator.



The calculator model name will appear in the title bar.

Example:  
fx-82ES PLUS Emulator

## ■ Emulator Operations

- To operate the virtual calculator on your computer screen, “press” its buttons by clicking them.
- You also can perform the following key operations on your computer keyboard.

	A	B	C
Computer Keyboard	Calculator Key		
TAB			
Space			
F1	(fx-92 Collège 2D+: )		
F2			
F3			
F4			
Home			
Enter			
Delete	(fx-92 Collège 2D+: )		
Back Space	(fx-92 Collège 2D+: )		
↓ ↑ → ←			
^			
(			
)			
+ - * /			
. (Period) , (Comma)	 (fx-92 Collège 2D+, fx-82DE PLUS, fx-85DE PLUS, fx-86DE PLUS, fx-991DE PLUS: )		
0 — 9	—		
X			
Y			
%			
=			
Ctrl+C	Screen Capture		

A: Calculators other than those in B and C below.

B: fx-92 Collège 2D+, fx-92B Collège 2D+

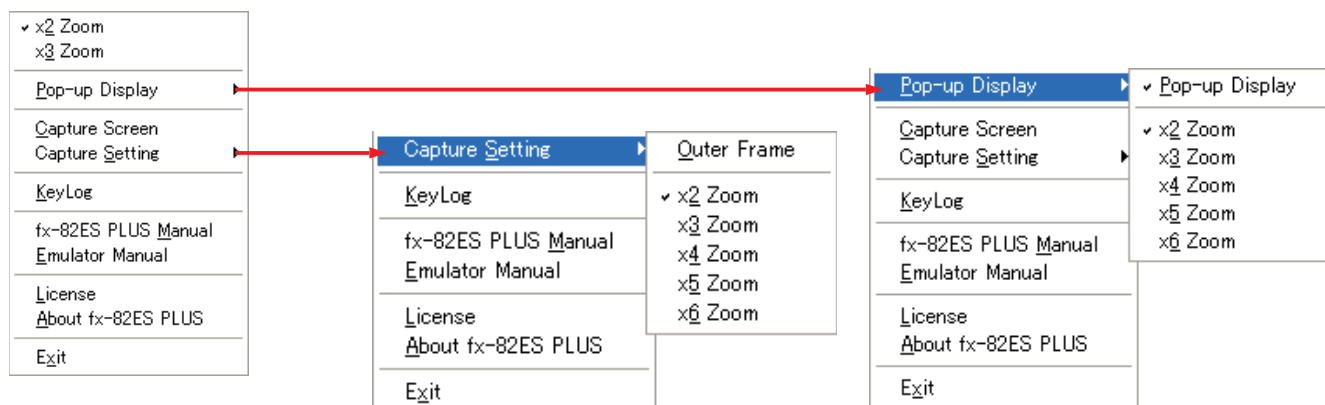
C: fx-55 PLUS

### Note

- The calculation speed of the emulators depends on the speed of your computer, and will be different from the calculating speed of the actual calculator.

## ■ Emulator Shortcut Menus

- Right-clicking your mouse while the mouse pointer is located on the emulator will display a shortcut menu.



Menu Item	Submenu Item	Description
×2 Zoom		Makes the emulator image double the size of the actual calculator.* <sup>1</sup> (initial default)
×3 Zoom		Makes the emulator image triple the size of the actual calculator.
Pop-up Display	Pop-up Display	When selected (indicated by a check mark), displays the calculator LCD as a separate window.
	×2 Zoom	Makes the LCD window double normal size. (initial default)
	×3 Zoom	Makes the LCD window triple normal size.
	×4 Zoom	Makes the LCD window four times normal size.
	×5 Zoom	Makes the LCD window five times normal size.
	×6 Zoom	Makes the LCD window six times normal size.
Capture Screen		Captures the calculator LCD image to the Windows clipboard.
Capture Setting	Outer Frame	When selected (indicated by a check mark), the calculator LCD image is captured and a boundary is put around it.
	×2 Zoom	LCD image is captured at double its normal size. (initial default)
	×3 Zoom	LCD image is captured at triple its normal size.
	×4 Zoom	LCD image is captured at four times its normal size.
	×5 Zoom	LCD image is captured at five times its normal size.
	×6 Zoom	LCD image is captured at six times its normal size.
KeyLog		Starts key logging.

Menu Item	Submenu Item	Description
fx-**** Manual		Displays a calculator User's Guide.
Emulator Manual		Displays the fx-ES PLUS Emulator User's Guide.
License		Displays the end user license agreement (EULA).
About fx-****		Displays version information.
Exit		Exits the emulator.

\*1 Each dot of the actual calculator LCD corresponds to one pixel on the computer screen. In the case of double size, one dot corresponds to  $2 \times 2$  pixels.

### Note

- While the calculator LCD is displayed as a separate window, right-clicking the LCD also will display the shortcut menu.

## To change the size of the emulator

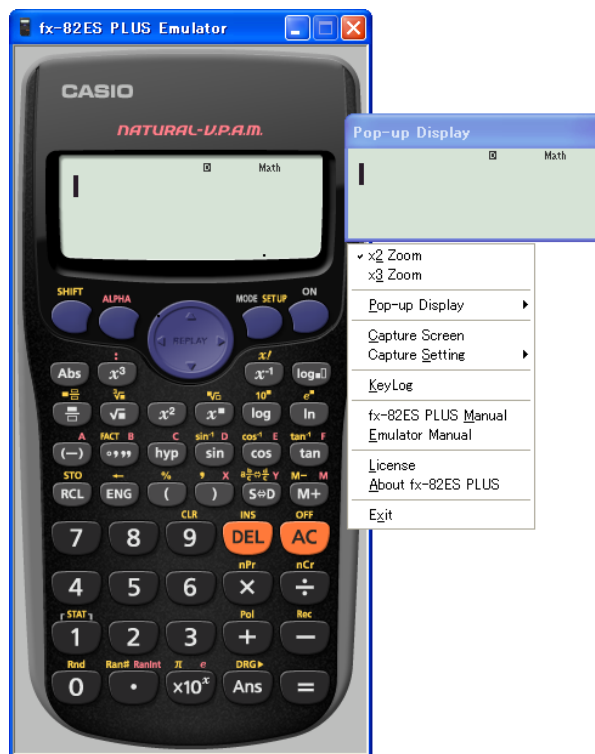
1. Display the shortcut menu.

2. Select "×2 Zoom" or "×3 Zoom".

To display this size:	Select this command:
Double the actual calculator size • One LCD dot corresponds to $2 \times 2$ pixels.	×2 Zoom
Triple the actual calculator size • One LCD dot corresponds to $3 \times 3$ pixels.	×3 Zoom

## To display the LCD as a separate window

1. Display the shortcut menu.
2. Select “Pop-up Display” to display a sub-menu.
3. Select “Pop-up Display” to display the LCD as a separate window.
  - A check mark will be next to “Pop-up Display” on the sub-menu while the LCD is displayed as a separate window.
  - To close the separate window, select “Pop-up Display” again.



## To change the LCD window size

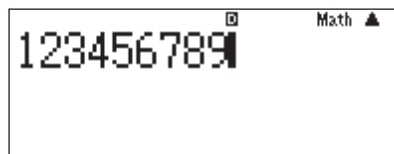
1. Display the shortcut menu.
2. Select “Pop-up Display” to display a sub-menu.
3. Select one of the zoom commands from “x2 Zoom” through “x6 Zoom” to change the size of the LCD window.
  - The currently selected window size will have “✚” next to it.

## To capture the calculator LCD image to the Windows clipboard

1. Display the shortcut menu.
2. Select “Capture Screen” to capture an image of the LCD.
  - You can also use Ctrl+C in place of the above two steps to capture the LCD image.

## To specify a frame around the LCD image

1. Display the shortcut menu.
2. Select “Capture Setting” to display a sub-menu.
3. Select “Outer Frame”.
  - To remove the boundary from the LCD image, select “Outer Frame” again.



With boundary



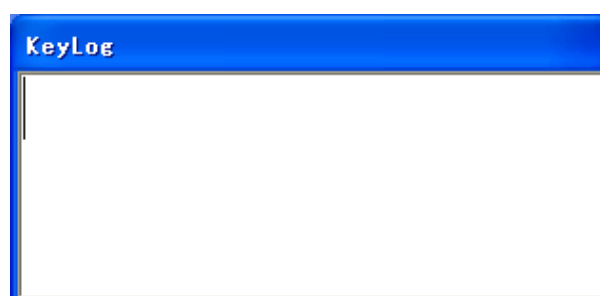
Without boundary

## To specify the zoom factor for the captured LCD image

1. Display the shortcut menu.
2. Select “Capture Setting” to display a sub-menu.
3. Select a setting from “×2 Zoom” through “×6 Zoom” to specify the zoom factor.
  - The currently selected zoom factor size will have “▼” next to it.

## To use Key Log

1. Display the shortcut menu.
2. Select “KeyLog”.
  - This will display the Key Log window.

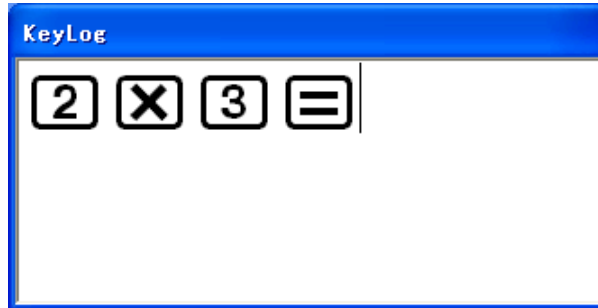


**Note**

- Note that Key Log cannot be accessed unless the key font (ES03.TTF, ES04.TTF, etc.) is installed.
- Exiting the emulator will exit Key Log.

**To display key operations performed on the emulator**

Performing emulator operations will cause the keys that are used to appear on the Key Log window.

**Note**

- Up to 1,500 keys can be displayed at one time.
- Do not perform the key operation Alt+X while the Key Log window is displayed. Doing so may cause improper display of the Key Log window. Should you perform the Alt+X operation, close the Key Log window and then reopen it. Note, however, that closing the window will cause any displayed key operations to be cleared.

**To copy keys displayed by Key Log**

1. On the Key Log window, drag the mouse pointer across the keys you want to select.
2. Right click the Key Log window.
  - This will display a shortcut menu.
3. Select "Copy".
  - This will copy the keys to the Windows clipboard.
  - You can also use Ctrl+C in place of steps 2 and 3 to copy.

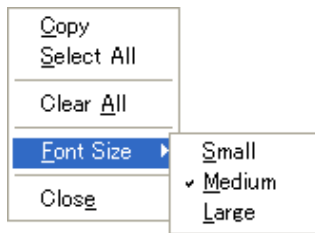
**To paste keys to another application**

1. Start up the other application.
2. In the other application, perform the appropriate paste operation.

**Note**

- Depending on the data format (Rich Text, HTML, text, etc.) that is in effect where you are pasting, the keys may be pasted using the key font or they may be pasted as a text string.

## ■ Key Log Window Shortcut Menu



Menu Item	Submenu Item	Description
Copy		Copies the selected keys.
Select All		Selects all keys.
Clear All		Clears all of the keys from the window.
Font Size	Small	Sets the font size to small size.
	Medium	Sets the font size to medium size.
	Large	Sets the font size to large size.
Close		Closes the key log window.

### To exit the emulator

1. Display the shortcut menu.
2. On the shortcut menu, select [Exit].
3. On the Menu screen that appears, click [EXIT].

#### **Note**

- The settings listed below are saved whenever you exit the emulator. If you are using the emulator while logged on as a GUEST user, however, these settings will return to their initial defaults.
  - Calculator memory contents
  - Window position
  - Emulator zoom factor
  - LCD separate window setting
  - Capture zoom and boundary settings



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