# *fx-ES PLUS Emulator*

## *User's Guide*

CASIO Worldwide Education Website

# http://edu.casio.com

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# CASIO ®

# Introduction

- fx-ES PLUS Emulator is software that emulates operation of a scientific calculator.
  It displays an image of one of the following CASIO scientific calculators on your computer screen.

  | | | |
  |---|---|---|
  | fx-82ES PLUS | fx-85ES PLUS | fx-350ES PLUS |
  | fx-82AU PLUS | | |
  | fx-86DE PLUS | | |
  | fx-92 Collège 2D+ | fx-92B Collège 2D+ | |
  | fx-95SG PLUS | | |
  | fx-500VN PLUS | | |

- 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® 2000 Professional, Windows® XP Home Edition, Windows® XP Professional (32-bit), Windows Vista® (32-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:     200 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*

- Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

- Company and product names used herein are trademarks of their respective owners.

# Contents

# 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, however, that regardless of the language you select, user's guide language versions for the following models are available for the noted languages only: fx-500VN PLUS: Vietnamese, fx-86DE PLUS: German, fx-92 Collège 2D+: French.

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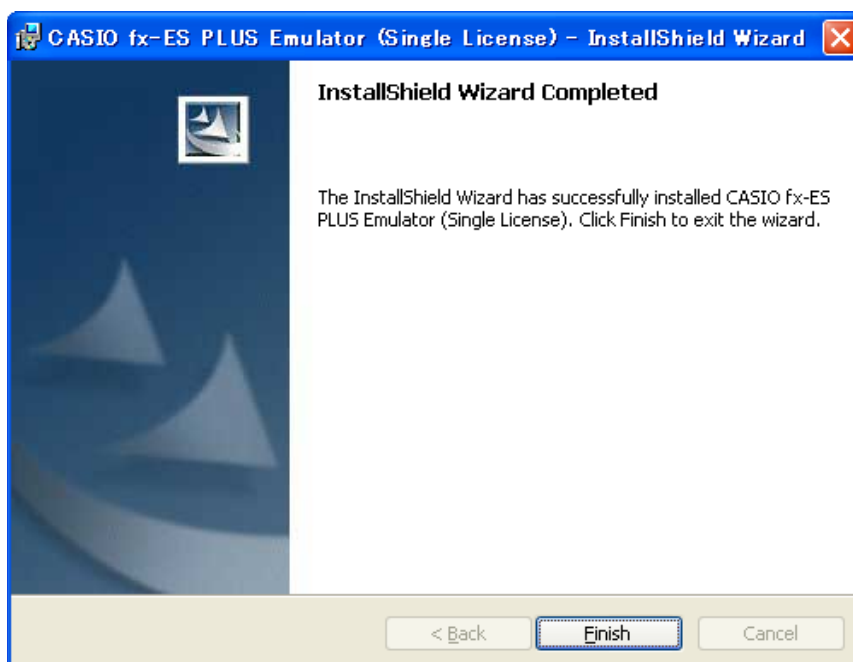


*4.* Click the [Finish] button.

- The fx-ES PLUS Emulator Menu screen will appear after installation is complete.
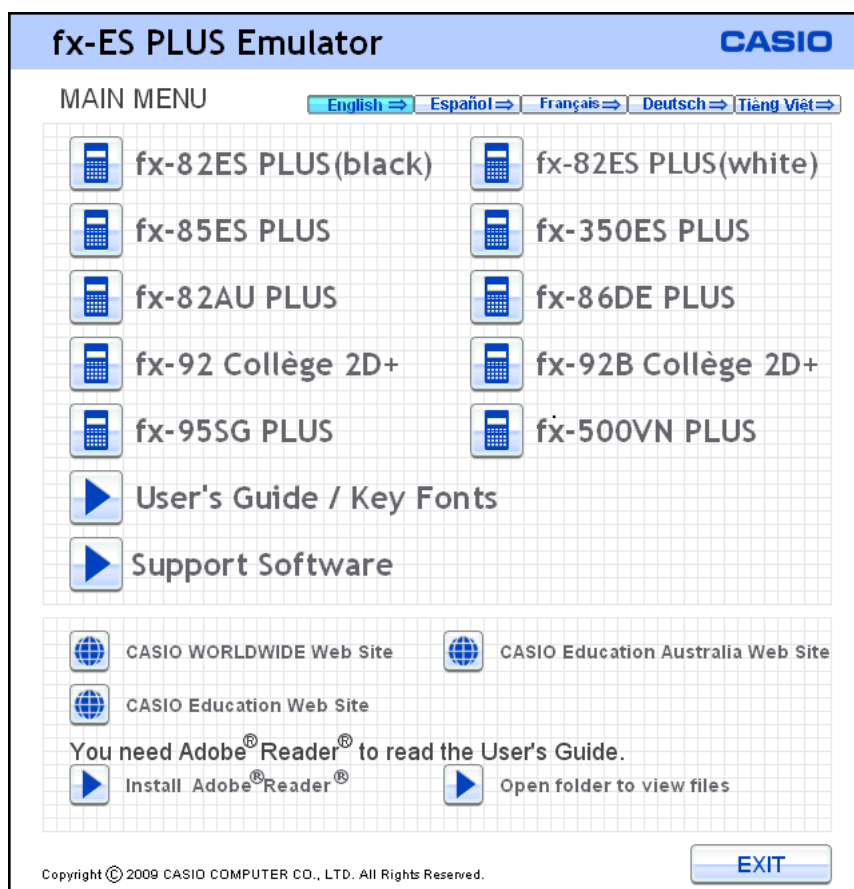


*5.* Click [EXIT].

***Note***

• Installation also installs a key font (Font File ES03.TTF).

• You could start up the emulator after step 4, if you like.

• If the fx-ES PLUS Emulator Menu screen does not appear in step 4, clicking "Click here if a jump is not performed automatically after installation is complete." will display it.

## 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".

*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 (Font File ES03.TTF).
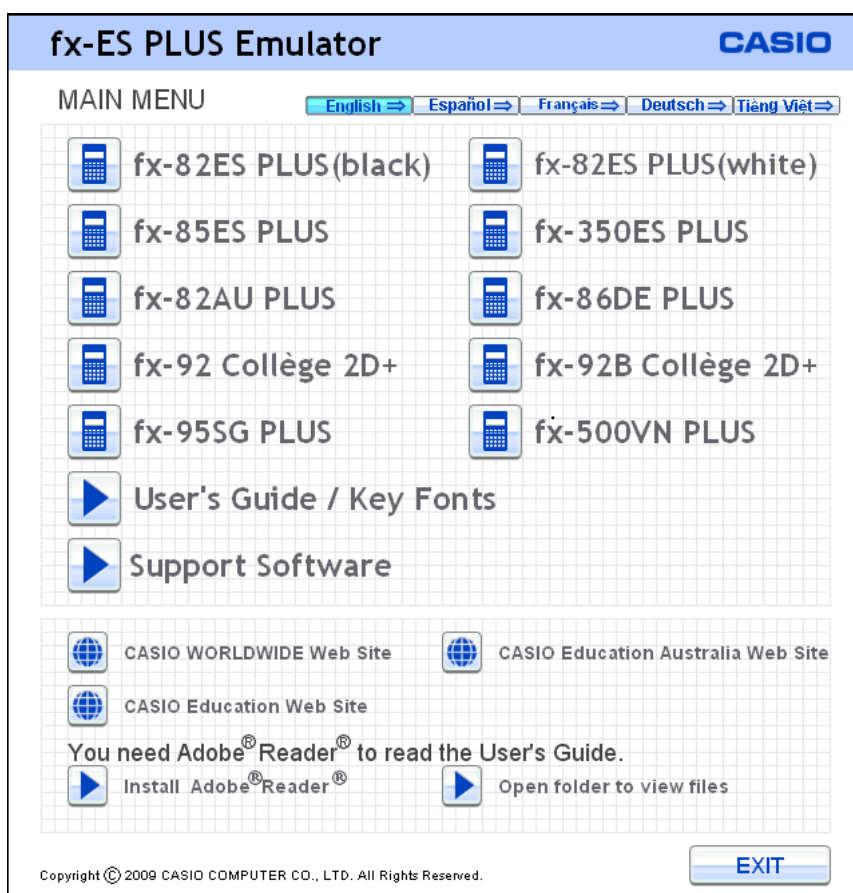
# 2. Using fx-ES PLUS Emulator

***Important!***

fx-ES PLUS Emulator will not start up unless its CD-ROM is in the CD-ROM drive of your computer.

## To start up the emulator

*1.* Place the bundled CD-ROM into your computer's CD-ROM drive.

• This will cause fx-ES PLUS Emulator to start up automatically and display its Menu screen.



**If fx-ES PLUS Emulator does not start up automatically...**

If fx-ES PLUS Emulator does not start up automatically when you set the CD-ROM into your computer's CD-ROM drive or if you start up your computer with the CD-ROM already in the drive, navigate to the Window's "My Computer" window and double-click "CD-ROM Drive". This will start up fx-ES PLUS Emulator.

If fx-ES PLUS Emulator still does not start up, navigate to the CD-ROM and double-click "fxESPLUS.exe".

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

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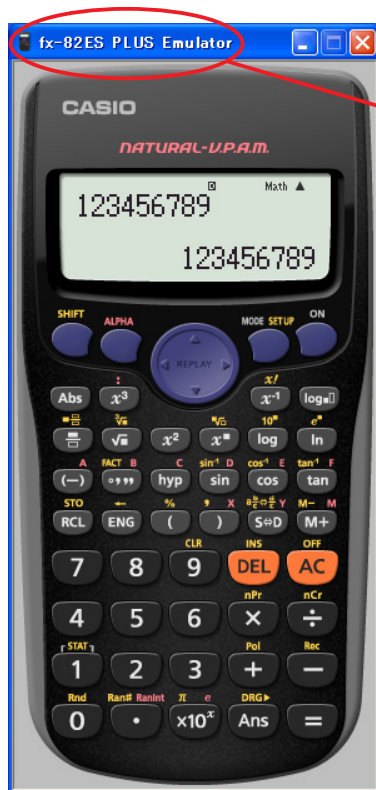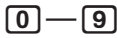


The calculator model name will appear in the title bar.

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.

| | fx-82ES PLUS<br>fx-85ES PLUS<br>fx-350ES PLUS<br>fx-82AU PLUS<br>fx-86DE PLUS<br>fx-95SG PLUS<br>fx-500VN PLUS | fx-92 Collège 2D+<br>fx-92B Collège 2D+ |
|---|---|---|
| Computer Keyboard | Calculator Key | |
| TAB | AC | |
| Space | AC | |
| F1 | SHIFT (fx-92 Collège 2D+: SECONDE ) | |
| F2 | ALPHA | |
| F3 | MODE | |
| F4 | ON | |
| Home | MODE | |
| Enter | = | EXE |
| Delete | DEL (fx-92 Collège 2D+: SUPPR ) | |
| Back Space | DEL (fx-92 Collège 2D+: SUPPR ) | |
| ↓ ↑ → ← | ▼ ▲ ▶ ◀ | |
| ^ | $x^{\blacksquare}$ | |
| ( | ( | |
| ) | ) | |
| +−*/ | + − × ÷ | |
| . (Period) , (Comma) | · (fx-92 Collège 2D+: , ) | |
| 0 — 9 | 0 — 9 | |
| X | | X |
| Y | | Y |
| % | | % |
| = | | = |
| Ctrl+C | Screen Capture | |

## *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.
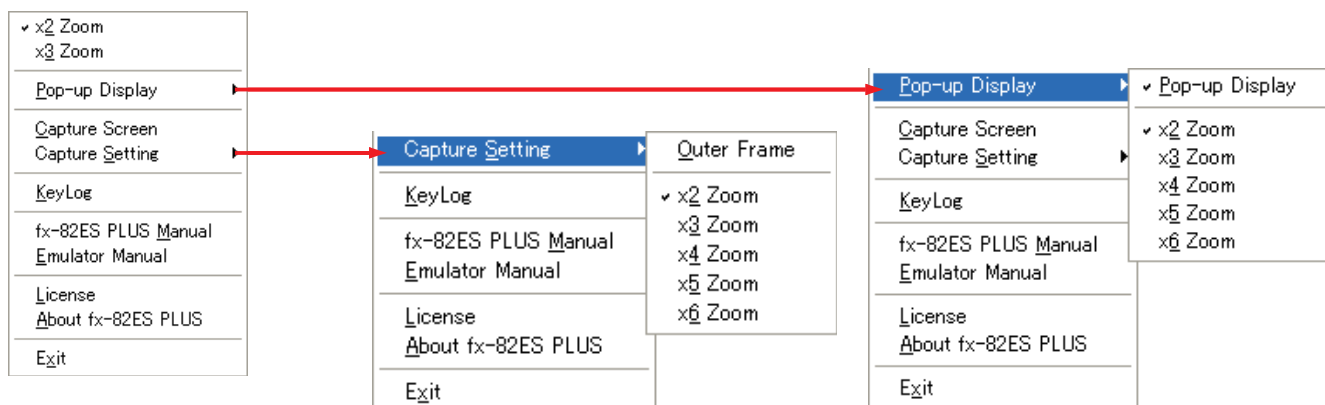


| Menu Item | Submenu Item | Description |
|---|---|---|
| ×2 Zoom | | Makes the emulator image double the size of the actual calculator.[1] (initial default) |
| ×3 Zoom | | Makes the emulator image triple the size of the actual calculator. |
| Pop-up Display | Pop-up Display | When selected (indicated 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.
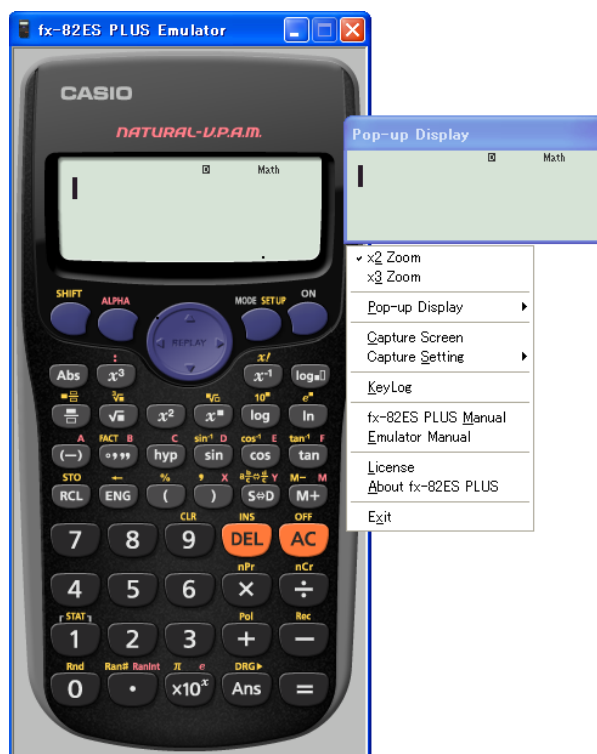
## To change the size of the emulator

*1.* Display the shortcut menu.

*2.* Select "×2 Zoom" or "×3 Zoom".

| To display this size: | Select this command: |
|---|---|
| Double the actual calculator size<br>• One LCD dot corresponds to $2 \times 2$ pixels. | ×2 Zoom |
| Triple the actual calculator size<br>• 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 "×2 Zoom" through "×6 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.

123456789    Math ▲          123456789    Math ▲
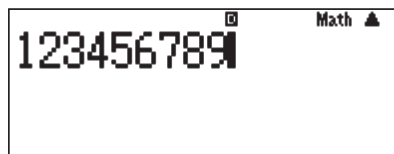
     With boundary              Without boundary

## 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".
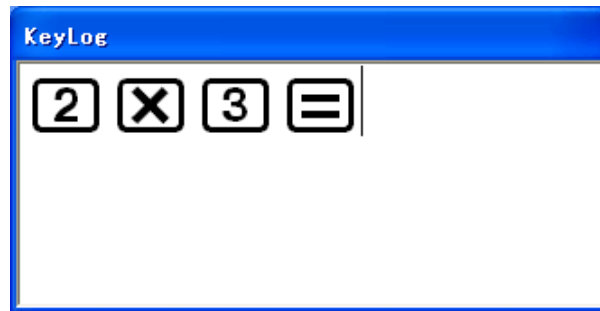   • This will display the Key Log window.
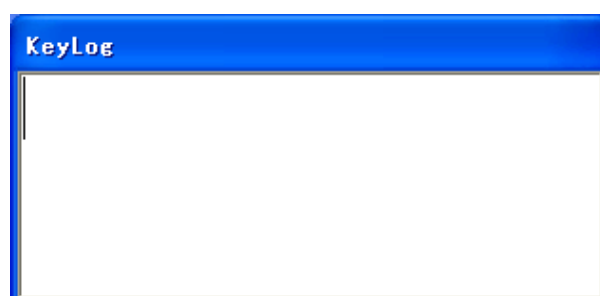
KeyLog

### Note

- Note that Key Log cannot be accessed unless the key font (ES03.TTF) 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
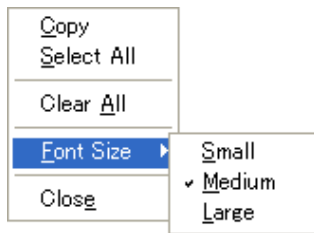


| Menu Item | Submenu Item | Description |
|-----------|--------------|-------------|
| Copy | | Copies the selected keys. |
| Select All | | Selects all keys. |
| Clear All | | Clears all of the keys from the window. |
| Font Size | Small | Sets the font size to small size. |
| | Medium | Sets the font 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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