

TI-SmartView™ CE Emulator Software for the TI-84 Plus Family

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Introduction to TI-SmartView™ CE Software

The TI-SmartView™ CE software allows you to display a TI graphing calculator for your entire classroom. Two workspaces are included to help enhance your classroom presentations.



Calculator Emulator Workspace

Allows you to:



Display a Full Emulator View or a Key Pad with Large Display Screen View. With optional views to open or close.



- Key Press History
 - Displays images of keys pressed so students can follow along with the keys pressed.



- View^{3™}
 - Teacher controlled update of up to three additional emulated screens such as Graph, Table and Equation for multiple representations.
- Calculate and Graph
 - Same experience as on physical graphing calculator.*
- Drag and Drop any emulated screen to your class presentation software.**
 - Build out your lessons with screens created during your class.
- Press emulator keys using a Remote Key Pad!
 - Run SmartPad™ CE App*** on your TI-84 Plus CE connected to the computer with your USB cable. When the TI-SmartView™ CF window is in focus on your computer, your calculator becomes a Remote Key Pad.



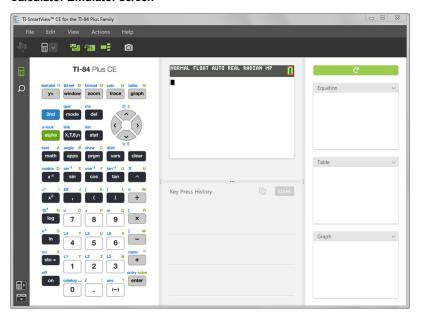
- Launch a separate Screen Capture Window
 - Capture and save emulator screens as computer

files similar to TI Connect™ CE Screen Capture which captures screens from the graphing calculator.

- *Data Collection using Vernier EasyData™ App on the emulator is not supported at this time.
- **Software such as Microsoft™ Office or other presentation software supported.
- ***SmartPad™ CE App for TI-84 Plus CE is available to load to your calculator at education.ti.com/downloads.

Note: The Large Display Screen is not touch enabled. Use emulator keys as on the calculator.

Calculator Emulator screen



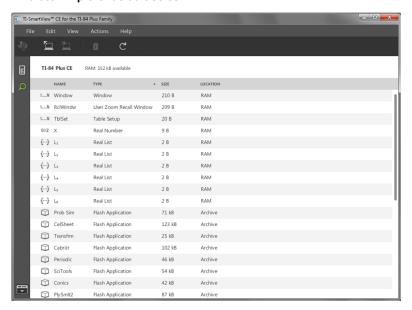


Emulator Explorer Workspace

Allows you to:

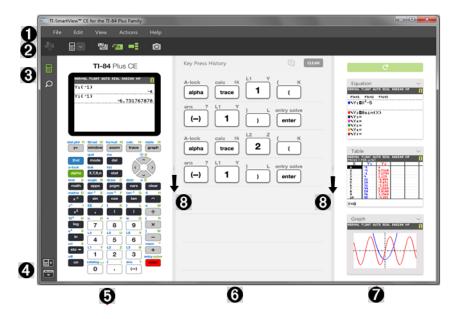
- Add single or multiple files to the emulator to set up for your classes:
 - Drag selected calculator files and/or your images (jpg, png, etc.) from your computer to your emulator for quick emulator setup even during class instruction.
- Save files from the emulator to save or share to your students calculators:
 - Drag selected calculator files to your computer to save files from a class presentation.
 - Tip: Once files are saved to your computer, you can drag those files to multiple connected student calculators using TI Connect™ CE Calculator Explorer for classroom sharing. TI Connect™ CE is free at education.ti.com/downloads.

Emulator Explorer default screen



Using the TI-SmartView™ CE Calculator Emulator Workspace

The TI-SmartView™ CE Calculator Emulator workspace contains tools you can use to input calculations, plot variables, and display graphs, tables, and lists.



Parts of the TI-SmartView™ CE Software Window



File Edit View Actions Help

Menu Bar - Use these menus to perform all emulator functions, including:

- File file management
- Actions such as screen capture
- Edit include copy key as font
- Help Help and links
- View change the displays

Note: You can complete most of the actions in these menus by clicking icons in the toolbar.





Toolbar- Use these toolbar icons to:

- Select a different calculator model
- Toggle displays of Large Display Screen, Key Press History on or off, and. View^{3™}
- Capture current emulator screen
- Workspace Panel Use this panel to navigate between the Calculator Emulator workspace and the Emulator Explorer workspace.
- A Choose Emulator and Tool Bar Positions
 - Emulator position Left/Right to switch between left and right hand display of the graphing calculator screen. This is convenient when projecting an Interactive White Board.
 - Tool Bar Top/Bottom - to toggle the tool bar between the top and the bottom of the screen. This is convenient when projecting an Interactive White Board

Note: You can change the visual layout and/or position of elements to optimize access especially when using an Interactive White Board.

Ø

Emulator Panel - Use this panel to use the full emulator or the emulator key pad only view.

6 Large Display Screen Panel/Key Press History Panel - Use this panel to display a large version of the calculator screen and/or to display key press history.

You have the following display options:

- Large Display Screen only
 Key Press History only
- Large Display Screen + Key

 Press History
 Hide panel
- **7** View³™ Panel Use this panel to show three additional screens

simultaneously. (This panel is hidden by default. Click to show the View³™ Panel.)

You can select any three of the following screens:

- EquationListWindow(Y= editor)(Stat List editor)
- Table Stat Plot [Blank]
- Graph
- Resize Panels Click and drag the vertical bar at the side of a panel to resize it.

Using the TI-SmartView™ CE Emulator Keyboard

The mouse takes the place the place of your finger pressing keys on the computer keyboard.

Click the keys on the TI-SmartView™ CE emulator as you would press the keys on the graphing calculator.

- Click the arrow keys on the emulator keyboard to move the cursor to the desired setting.
- 2. Click enter to select it.

You must first place the keyboard in its alpha typing mode to type text using the computer keyboard.

By default, the graphing calculator keyboard is in its normal mode, in which keys are simply shortcuts to graphing calculator keys.

For example, pressing [A] on your computer keyboard is the same as clicking

on the graphing calculator. In this mode, you cannot enter the letters A through Z on the graphing calculator screen by typing these letters on your computer keyboard.

A-lock

To enter a letter or other alpha character, first click calculator keyboard (or press [F7] on your computer keyboard) to put the graphing calculator in alpha mode. For example, typing [F7][A] on your computer keyboard enters an A on the graphing calculator screen. After you type the character, the keyboard returns to its normal mode.

You can lock the alpha key to type more than one character in succession.

To lock the alpha key:

Click alpha on the graphing calculator keyboard or press [F6][F7] on your computer keyboard.

To return to the normal mode:

A-lock

Click or press [F7].

In alpha typing mode, pressing [0] through [9] on your computer keyboard act as shortcuts to the alpha functions associated with these keys on the graphing calculator keyboard. Pressing [1] enters Y (the alpha character associated with 1) on the graphing calculator screen. To type a number, be sure the keyboard is not in the alpha typing mode. These keys do enter the digits 0 through 9 in the normal mode.

You can hold down an arrow key to scroll the cursor continuously.

When you use an arrow key to move the cursor, you can hold down the key to scroll the cursor continuously, instead of having to press the key repeatedly. In the key press history and in a script, the icon for a repeating arrow key has a

clock symbol attached to it.

Pressing an arrow key multiple times in a row displays an arrow with a repeat counter.

When you press an arrow key multiple times in a row, one arrow key is

displayed in the key press history; this arrow key has a number attached to it that shows the number of times the arrow key was pressed.

Tip: When tracing along graphs or using Cabri™ Jr App to draw geometric shapes, the computer keyboard arrows may give you smoother continual action as opposed to using a mouse to click on the emulator arrows.

Dragging and Dropping a Screen to Another Application

You can drag and drop and paste any Tl-SmartView™ CE screen into another application.

The TI-SmartView™ CE screens that you can drag and paste include the following:

- The screen above the keyboard in the Emulator Panel
- Large Screen
- View^{3™} panel screens

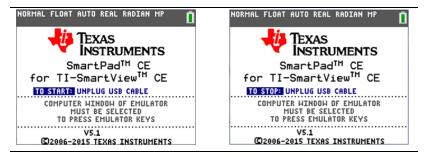
Note: You an drag a View^{3™} screen into Screen Capture and use Screen Capture as a history of important screens during a class session.

Saved or unsaved screen captures

Connecting a Calculator as a Remote Key Pad

The SmartPad™ CE App is available for the TI-84 Plus CE. To use the TI-84 Plus CE as a remote keypad for TI-SmartView™ CE:

- Load the SmartPad™ CE App on your TI-84 Plus CE.
- 2. Connect your TI-84 Plus CE to your computer using a USB Computer cable which came with your calculator.
- Launch TI-SmartView™ CE. Make sure the TI-SmartView™ CE window is in 3. focus by clicking on the TI-SmartView™ CE window.
- 4. Run SmartPad™ CE App on your TI-84 Plus CE. Press [apps] and select SmartPad™ CE from the Apps menu. Read the information on the splash screen.



- 5. Press keys on the calculator key pad.
- 6. Disconnect USB cable from calculator to stop the App and remote key pad feature.
- 7. Reconnecting the USB cable and running the App again may be needed if the remote key pad connectivity is no longer responding.

Notes:

- SmartPad™ CE App running on the TI-84 Plus CE will remotely press emulator keys for the TI-84 Plus CE, TI-84 Plus C and TI-84 Plus emulators in TI-SmartView™ CE.
- TI-SmartView™ CE does not support any other version of SmartPad™ App running on the TI-84 Plus or TI-83 Plus.
- The TI-84 Plus CE running the SmartPad™ CE App will not display the calculations or graphs. The calculator becomes a remote USB key pad for the emulator only.

- The TI-84 Plus CE will remain a remote key pad when the TI-SmartView™ CE window is in focus. Click on the TI-SmartView window prior to pressing keys on the calculator.
- The TI SilverLink cable is not supported in TI-SmartView™ CE.

Connecting the Graphing Calculator to the Computer

You must use the USB Computer Cable that comes with your TI-84 Plus or TI-84 Plus CE graphing calculator. Other TI Connectivity Cables are not supported. If you need to purchase a cable, go to education.ti.com/go/en.



Emulator Link Menu - No Send/Receive

The Link feature, ` \u00f3 on the emulators is disabled. To link files between a connected calculator and an emulator, please use Calculator Explorer in TI Connect™ CE and Emulator Explorer in TI-SmartView™ CE.

Drag calculator or emulator files to the computer first when transferring between Emulator Explorer in TI-SmartView™ CE and Calculator Explorer in TI Connect™ CF.

Data Collection using Vernier EasyData™ App

Data Collection using Vernier EasyData™ App on the emulator is not supported at this time.

TI-SilverLink cable

The TI SilverLink cable is not supported in TI-SmartView™ CE.

Bringing a calculator out of a TEST MODE setting

TI-SmartView™ CE will not transfer a file to a connected calculator. Please send files between two calculators or use TI Connect™ CE to send a file to a calculator in TEST MODE to disable the TEST MODE.

Resetting the Emulator

To reset the emulator:

- Click Actions.
- 2. Click Reset Emulator.
- 3. Click Restore.



Resetting the emulator:

- Overwrites the current emulator state
- Returns the TI-SmartView™ CE Software to the factory-default setting
- Clears key press history

Choosing a Display Option

You can customize your display to show or hide optional panels and change the type of information displayed in each one. By default, the TI-SmartView™ CE software displays the calculator emulator workspace in Large Display Screen.

Displaying the Calculator Screen

- 1. to view the calculator screen above the keyboard in the Emulator Panel.
- TI-84 Plus CE
- 2. again to show the Key Pad + Large Display Screen.



Choosing an Emulator Type

Click the down arrow on to choose an emulator type.



Each emulator type displays its relevant calculator model.



Changing the Calculator Faceplate

To change the faceplate:

- 1. Click View.
- Hover over Calculator Faceplate. 2.
- 3. Click on a calculator faceplate name.







Showing or Hiding the Key Press History

Click to show or hide key press history.

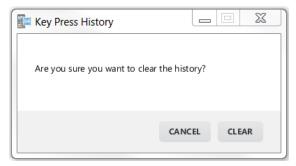
Click **CLEAR** in the panel next to Key Press History to clear the history.



Click here and drag to resize the Key Press History panel.

0 Click here to clear the Key Press History.

When you press clear, you will see this information box:



Copying the Key Press History to Another Application

You can copy all or only a selected portion of the key press history to another

application such as a word processor. You can copy the key graphics they are shown in the key press history panel, or you can copy the key presses as font text characters 5-6

Note: When you copy keys as font text characters, those characters use the TI84PlusCEKeys font. This font is installed on your computer automatically when you install the TI- SmartView™ CE software.

Copying Keys as Graphics or Font Characters

1. Select the key(s) you want to copy. To select keys in the Key Press History Panel, use one of the following

methods:

Key		Method
-	A single key:	Click on a key.
-	Multiple keys:	Click on a key. Press and hold Ctrl on your computer keyboard. Click other keys to select multiple keys.
-	Multiple keys in a sequence:	Click on a key. Press and hold Shift on your computer keyboard. Press another key. Note : This allows you to select those two keys plus all of the keys in between them.
-	All keys:	Click on a key. Right click. Click Select All .

Note: This is what a key looks like before and after you select it.

Before: After:



- 2. Right-click the selected key(s).
- 3. Click Copy (to copy keys as graphics).

-or-

Click Copy As Font (to copy keys as font characters). 5 - 6

- 4. Switch to another application.
- 5. Paste the keys at the appropriate location.

Note:

You can also drag the selected keys as graphics to the other application.

- You can re-size the key graphics after you paste them into a new application.
- In some applications, the characters pasted as a font may be shown in the font that is in effect at that location, so they may not look anything like graphing calculator keys. If necessary, apply the TI84PlusCEKeys font to the characters. See the help file for the destination application you are using for details on how to apply a font to the characters.

Displaying the View^{3™} Panel

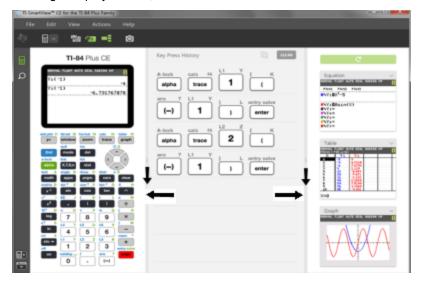
- to display the View^{3™} panel. 1.
- 2. Click the title bar of each screen to choose from these display options:
 - Equation Window List (Y= (Stat List editor) editor)
 - Table Stat Plot [Blank]
 - Graph
- Click the green teacher controlled update button in the View^{3™} panel to 3. refresh the View^{3™} screens. This updates the view for your students during investigations.



4. View content in the selected screens, or repeat step 2 to change the screen type.

Changing the Size of the TI-SmartView™ CE Screen

Click and drag the edge of a panel to change the size of the Emulator Panel, the Large Display Screen, or the View^{3™} Panel.



Note: All of these are left/right actions except the Key Press History which is pull up or down to size.

Emulator and Toolbar positions



Emulator position Left/Right - to switch between left and right hand display of the graphing calculator screen. This is convenient when projecting an Interactive White Board.



Tool Bar Top/Bottom - to toggle the tool bar between the top and the bottom of the screen. This is convenient when projecting an Interactive White Board.

Always in Front

Select this option in the View Menu to keep the TI-SmartView™ CE windows in front of any other computer software window open. Similar to having the calculator sitting on your desk on top of your papers! Position the window on your computer desktop where it is best to remain "Always in Front."

To turn off "Always in Front," deselect the menu item in the View menu. There is no toolbar icon for this feature and no indicator other than the menu check mark when active.

Notes:

The TI-SmartView™ CE Emulator Workspace window and Screen Capture windows will both be "Always in Front" and toggle in front depending on their position.

"Always in Front." is not recommended when in full screen since all other windows will be behind the full screen of TI-SmartView™ CE.

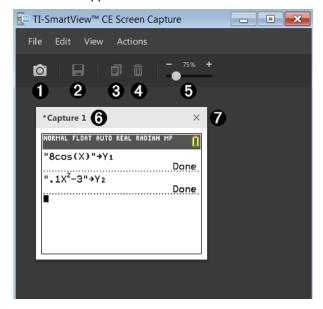
Using Screen Capture

You can capture the current graphing calculator screens using the Tl-SmartView™ CE screen capture tool.

To use screen capture:

Click on the toolbar.

This window appears:



Parts of the Screen Capture Window

0	Capture	Click here to take an emulator screen capture. Actions > Capture Screen Note: A border is automatically added to each image when you capture it, but you can remove the border by clicking View > Hide Screen Capture Borders. (If you have multiple images, this removes the border from every image.)		
		With screen capture you can:		
		capture up to 44 screens at a time, (to capture additional images, delete images from the Screen Capture window)		
		 automatically store screen captures in memory until you close the main TI-SmartView™ CE window. 		
		Closing Screen Capture gives a prompt to save your screen captures. You can start a new Screen Capture session during a TI-SmartView™ CE session.		
0	Save	Click here to save selected screen captures. File > Save As		
③	Сору	Click here to copy selected screen captures to the clipboard. Edit > Copy		
4	Delete	Click here to delete selected screen captures. Edit > Delete		
•	Resize	Slide the dot along the bar to adjust the current screen capture preview size. View > Scale Screen Captures Note: Screens save at the percentage in		

		view.
0	Rename	Rename a screen capture by highlighting the title and typing in a new name.
0	View	View screen captures here.

Dragging and Dropping a Screen to Another Application

You can drag and drop and paste any Tl-SmartView™ CE screen into another application.

The TI-SmartView™ CE screens that you can drag and paste include the following:

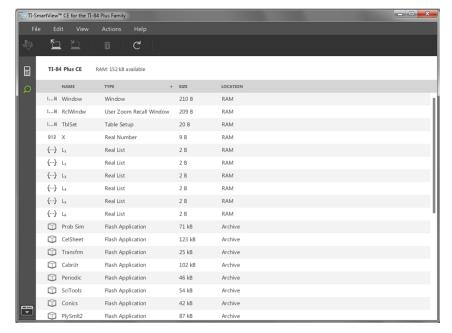
- The screen above the keyboard in the Emulator Panel
- Large Screen
- View^{3™} panel screens

Note: You an drag a View^{3™} screen into Screen Capture and use Screen Capture as a history of important screens during a class session.

Saved or unsaved screen captures

Using TI-SmartView™ CE Emulator Explorer Workspace

Emulator Explorer workspace allows you to manage emulator files, add content from your computer to your emulator, and send selected content to your computer.



Parts of the TI-SmartView™ Emulator Explorer main window



- Add calculator files from computer to emulator.
- Send selected calculator files to computer.
- Delete selected calculator files.
- A Refresh the view of the emulator's contents.

Note: When changing the workspace to Emulator Explorer, refresh the view of the emulator files to update any changes made in the emulator.

Copying Emulator Files to the Computer

You can copy most data, files, and programs from your emulator to your computer as a backup, to send to others, or to free up emulator memory.

To copy a file from the emulator to the computer

- Click on the file name to select it.
- 2.

-or-

Drag and drop the file into a folder on your computer or onto your desktop.

To copy a file from the computer to the emulator

- 1
- 2. Navigate to the desired calculator file on your computer.

Note: You can also drag your images (.jpg, .png, etc.) to convert to emulator/calculator Background Images as well.

Click on the file to select it. 3.

Click Open. 4.

Deleting Emulator Files

You can delete data, files, and programs from your emulator.

To delete files from the emulator

- Click on the file name to select it.

Refreshing the View of Emulator Files

After you send, receive, and delete files, you will need to refresh your screen to see which files are currently available.

If you create a file on the emulator and return to the Emulator Explorer workspace, please refresh the emulator files to see your newly created files.

To refresh emulator files

Computer Keyboard Shortcuts

You can use your computer keyboard to press a key instead of pressing that key on the TI-SmartView™ CE keyboard image.

For example:

If you want to enter the "log" function on the emulator keypad, use the table below to find the computer key to press.



Press [N] on your computer keyboard (and notice that the emulator key upper left is the alpha letter N.)

Ή				
stat plot f1	window	format f3	trace f4	graph f5
[F1]	[F2]	[F3]	[F4]	[F5]
2nd [F6]	quit mode [Shift] + [m]	ins del [Delete]	< [-]	
A-lock alpha [F7]	link X,T,\text{\$\text{\$\text{\$X\$}},T\text{\$\exititt{\$\text{\$\text{\$\text{\$\text{\$\}}}\$}}\$}}}}}}}}} \text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{	stat [Shift] + [s]	***	(>)
test A	angle B	draw C	distr	
math	apps	prgm	vars	clear
[A]	[B]	[C]	[shift] + [v]	[Backspace]
x-1 [D]	sin ⁻¹ E sin [E]	cos F	tan G G G G G G G G G G G G G G G G G G G	π H [Shift] + [^]
x ²	, [,]	(K (() [Shift] + [(]) [Shift] + [)]	• M
10 X N log [N]	7	8	9	[R X [Shift] + [*]
e ^X S In [S]	4 [4]	5	6 [6]	
rcl X sto → [X]	1 Y	2 [2]	3 [3]	mem " + [Shift] + [+]
off on [Shift]+[~]	Catalog C	[.]	ans ? (-) [Shift] + [-]	entry solve enter [Enter]

Compatibility with Graphing Calculators

Please refer to the TI-84 Plus CE Getting Started Guide for compatibility with graphing calculators.

Note: In general, TI-84 Plus CE graphing calculator files are compatible with other TI-84 Plus and TI-83 Plus models.

Apps, Operating Systems and some data files with unsupported numeric types do not share between models.

TI-Basic programs may need to be modified to correctly display on the high resolution color screen models.

General Information

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