

Chapter 1

GETTING TO KNOW YOUR TI-84 PLUS SILVER EDITION

Chapter Check-In

- Getting acquainted with the TI-84 Plus Silver Edition Keys
- Learning how to edit expressions and adjust your mode settings
- Establishing communication between two graphing calculators

In this chapter, I take you through the basics of your TI-84 Plus Silver Edition. In addition to learning how to turn your graphing calculator on and off, you also learn some quick editing tricks and how to configure your mode settings to suit your needs.

Turning Your TI-84 Plus Silver Edition On and Off

Prior to turning on your TI-84 Plus Silver Edition, you need to remove the battery cover located on the back of the graphing calculator and install four AAA batteries.

To turn on your TI-84 Plus Silver Edition, press **[ON]**.



If you had previously turned off your TI-84 Plus Silver Edition by pressing **[2nd][OFF]**, it will display the home screen as it was when you last used it. You might see a message box reminding you to **PRESS ALPHA F1–F4 TO LOCATE SHORTCUT MENUS**.

To turn off your TI-84 Plus Silver Edition, press **[2nd][OFF]**.



All settings and memory contents are retained by **Constant Memory™**.

To prolong the life of the batteries, your graphing calculator has an **Automatic Power Down™** (APD) feature that turns off your TI-84 Plus Silver Edition automatically after about 5 minutes without any activity. If this should happen to you, just press **[ON]** to continue working where you left off.

Using the $\boxed{2\text{nd}}$ and $\boxed{\text{ALPHA}}$ Keys

The secondary function associated with each key appears in blue above the key. When you press the $\boxed{2\text{nd}}$ key, the character, abbreviation, or word printed above the other keys becomes active for the next keystroke. For example, when you press $\boxed{2\text{nd}}$ and then $\boxed{x^{-1}}$, the MATRIX menu comes up.

The $\boxed{\text{ALPHA}}$ key allows you to access the green letters A through Z located above many of the keys. The $\boxed{\text{ALPHA}}$ key also allows you to access the shortcut menus associated with the 2.53MP Operating System. For example, press $\boxed{\text{ALPHA}}\boxed{F1}$ to access the FRAC shortcut menu. The other shortcut menus are $\boxed{\text{ALPHA}}\boxed{F2}$ (FUNC), $\boxed{\text{ALPHA}}\boxed{F3}$ (MTRX), and $\boxed{\text{ALPHA}}\boxed{F4}$ (YVAR).

Finally, the key sequence $\boxed{\text{ALPHA}}\boxed{\text{SOLVE}}$ is used to solve equations with the **Solver** feature. The **Solver** feature is found in the MATH submenu.

Adjusting the Display

You can adjust the contrast (or darkness) of the screen by following these steps.









1. Press and release the $\boxed{2\text{nd}}$ key.
2. Press and hold $\boxed{\blacktriangle}$ to darken the screen or press and hold $\boxed{\blacktriangledown}$ to lighten the screen.



A number located in the top right corner of the screen indicates the contrast level. If you need to set this number to 7 or higher, then you want to replace the batteries soon. Concurrent with this, you'll also probably notice a low battery message when you turn on the graphing calculator.

Using the TI-84 Plus Silver Edition Edit Keys

Your TI-84 Plus Silver Edition is designed to allow you to quickly enter, edit, and execute expressions and commands. Here's a list of several keystrokes and their associated results.

-  or : Moves the cursor to the right and left within an expression.
-  or : Moves the cursor through MathPrint™ expressions such as stacked fractions and integrals. These keys also allow you to access the history.
-  : Moves the cursor to the beginning of an expression.
-  : Moves the cursor to the end of an expression.

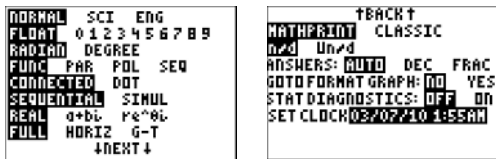
- **[ENTER]**: Executes an instruction and/or expression.
- **[2nd][INS]**: Changes the cursor to an underline () and inserts characters in front of the underline cursor. Press the direction arrow keys or **[2nd][INS]** to exit insert mode.
- **[ALPHA]**: Changes the cursor to **Ⓐ**, indicating that the next keystroke will insert a letter, provide access to the [F1]–[F4] shortcut menus, or execute the Solver feature (**[ALPHA][SOLVE]**).
- **[ALPHA][A-LOCK]**: Sets the graphing calculator in alpha-lock mode. This is a good option if you need to type several letters in succession. To exit alpha-lock, press **[ALPHA]**.

Adjusting the Mode Settings

Your TI-84 Plus Silver Edition mode settings control how your graphing calculator displays and interprets numbers and graphs. The **Constant Memory** feature preserves your current mode settings even when you turn off the TI-84 Plus Silver Edition.

Press **[MODE]** to access the mode settings on your TI-84 Plus Silver Edition, as shown in the two screen images in Figure 1-1. The current mode settings for your graphing calculator will appear highlighted.

Figure 1-1 The mode settings window.



Each row of the mode settings window relates to a different type of setting. For example, the second row allows you to specify the number of decimal digits to display in an answer. FLOAT displays all significant digits of a number up to a maximum of ten. The numerical settings to the right of FLOAT lock in the number of decimal digits to display for all results. Keep in mind that numeric values stored to your graphing calculator memory are always unrounded, regardless of the numeric display setting of your handheld.



The factory default mode settings are those located on the leftmost side of the mode settings screen.

Here are the steps to change the mode settings.

1. Press \blacktriangledown or \blacktriangle to move to the line of the setting you want.
2. Press \blacktriangleright or \blacktriangleleft to move the cursor to the setting you want.
3. Press $\boxed{\text{ENTER}}$.

Here's a brief description of each mode setting.

- **NORMAL SCI ENG:** Numeric notation
- **FLOAT 0123456789:** Number of decimal places
- **RADIAN DEGREE:** Unit of angle measure
- **FUNC PAR POL SEQ:** Function, Parametric, Polar, or Sequence graphing mode
- **CONNECTED DOT:** Whether to connect graph points or plot graphs as discrete points
- **SEQUENTIAL SIMUL:** Whether to plot graphs one at a time or simultaneously
- **REAL $a + bi$ re θi :** Real, rectangular complex, or Polar complex
- **FULL HORIZ G-T:** Full screen or your choice of two different split-screen modes
- **MATHPRINT CLASSIC:** Switch between MathPrint and Classic mode
- **n/d Un/d:** Display fractions in improper format or in mixed fraction format
- **ANSWERS: AUTO DEC FRAC:** Set the form of answers. The AUTO form gives answers in fraction form if the input was a fraction and decimal form if the input was a decimal.

- **GOTO FORMAT GRAPH: NO YES:** Select YES to go to the graph format menu.
- **STAT DIAGNOSTICS: OFF ON:** Turn on or off the statistical diagnostics.

Linking Graphing Calculators

You can send a variety of items from one graphing calculator to another, including programs, Apps, matrices, pictures — even the operating system itself. In this section, I show you how to send a program. You can be assured, however, that you can use the steps I outline here for just about any transfer.

Your TI-84 Plus Silver Edition comes with a USB Unit-to-Unit cable that is used to establish communication between two TI-84 Plus (or TI-84 Plus Silver Edition) graphing calculators. You also have the option of using the I/O port (located on the top left edge of your handheld) to communicate with another TI-84 Plus Silver Edition, as well as other TI products such as the TI-83 family of graphing calculators or a CBL 2™ (for data collection purposes).

Here, I tell you how to set up communication between two TI-84 Plus Silver Edition calculators using the USB Unit-to-Unit cable.

Follow these steps to connect the two graphing calculators.

1. **Locate the USB port on the top right edge of the graphing calculator and firmly insert either end of the USB Unit-to-Unit cable into the USB port.**
2. **Repeat Step 1 with the other graphing calculator.**



So that I don't forget, I always position the sending graphing calculator on the left and the receiving graphing calculator on the right.



A file created with the 2.53MP Operating System that contains new features (such as stacked fractions) will not transfer to an earlier operating system. To check your operating system, press $\boxed{2\text{nd}}[\text{MEM}]$ and select **1>About**.

Now it's time to send a program from one handheld to another. I am sending a program called **SLOPEFLD**, which is a very handy program related to the study of Calculus. Here are the steps to follow.

1. **On the receiving calculator, press $\boxed{2\text{nd}}[\text{LINK}]$ to access the LINK menu.**

2. Press \blacktriangleright to view the LINK RECEIVE menu and press ENTER to select Receive. The word **Waiting...** appears on the screen.
3. On the sending calculator, press 2nd [LINK] to access the LINK SEND menu.
4. Press 3 to select Pgrm... A list of all programs that reside on the sending handheld appears.
5. Use the \blacktriangle / \blacktriangledown keys to position the \blacktriangleright symbol next to the program you want to send and press ENTER to select it. Notice the \blacksquare symbol located next to the selected program, as shown in Figure 1-2a.
6. Press \blacktriangleright to access the TRANSMIT menu and press ENTER to select Transmit. After a few moments, the transfer completes as indicated by the screen shown in Figure 1-2b.

Figure 1-2 Sending a program from one TI-84 Plus Silver Edition to another.



(a)



(b)

If the item you are sending already resides on the receiving graphing calculator, you will be prompted to **Rename** the item (thus preserving the original), **Overwrite** the item, **Omit**, or **Quit**.



Use similar steps to send other items from one graphing calculator to another, such as a matrix or an App. You also have the option to mark and send multiple items.