

## TI-84 Plus Quick Start

The TI-84 Plus is an easy-to-use graphing calculator that provides function graphing and data plotting as well as function and data analysis.

**Note:** In this document, TI-84 Plus refers to TI-84 Plus Edition graphing calculator.

### Turning Power On and Off

- To turn on the TI-84 Plus, press **[2ND]** **[ON]**.
- To turn off the TI-84 Plus, press **[2ND]** **[OFF]**.
- All settings and memory contents are retained by Constant Memory™ function.

### Using the **[2ND]** Key

The second function of each key is printed above the key in the same color as the **[2ND]** key. Some secondary keys enter a symbol or a function (such as  $\sqrt{\quad}$ ,  $\text{[SIN]}$ ). Others display menus and editors.

- Press **[2ND]** **[ANGLE]** to view the **ANGLE** menu.

### Using the **[ALPHA]** Key

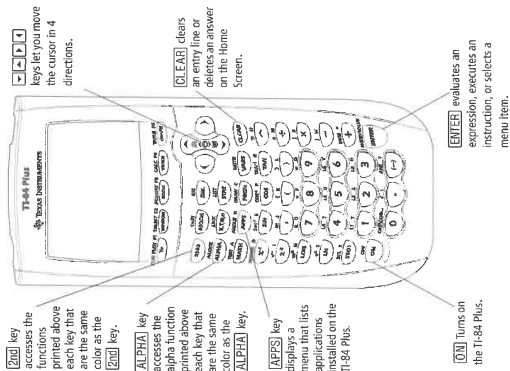
Many keys also have a third function. These functions are printed above the keys in the same color as the **[ALPHA]** key. The third functions enter alpha characters, special symbols, and access **SOLVE**:

- Press **[ALPHA]** **4** to enter **T**.
- Press **[2ND]** **[A-LOCK]** to lock the alpha key in the on position and enter several alpha characters.
- Press **[ALPHA]** **[SOLVE]** to solve equations entered in the **Solver**... command. **Solve** is found in the **[MATH]** menu.

### Adjusting the Display

- To change your display contrast:
  - Press **[2ND]** **[ $\Delta$ ]** or **[ $\square$ ]** repeatedly to darken or lighten the screen to various contrast levels.

## TI-84 Plus Keys



## Using Mode Settings

Mode settings control how numbers and graphs are displayed. Settings are retained when you turn off the calculator.

- Press **[MODE]** to access the mode setting screen.
- Press **[ $\leftarrow$ ]** or **[ $\rightarrow$ ]** to move the cursor to the line, press **[ $\downarrow$ ]** and **[ $\uparrow$ ]** to move the cursor to the settings you want, and press **[ENTER]**.

Some mode settings are shown in the following table with the default settings highlighted:

Setting	Result
<b>Normal</b> Sci Eng	Numeric notation.
<b>Float</b> 0123456789	Number of decimal places.
<b>Radian</b> Degree	Unit of angle measure.
<b>Func</b> Par Pol Seq	Type of graphing.
<b>Connected</b> Dot	Graph points connect or display as dots.
<b>Sequential</b> Simul	Graphs draw in sequence or simultaneously.
<b>Real</b> a+bi re $\theta$ /i	Real, rectangular complex, or polar complex.
<b>Full</b> Horiz G-T	Full, horizontal, and Graph-Table split screen modes.
<b>MathPrint™</b> Classic	Display input/output in textbook type display or in one line.
<b>niD</b> UniD	Display as a simple fraction/integer number.

**Note:** When using instructions this document, most screens are displayed using the default mode setting.

## Using the Home Screen

The Home Screen is the primary screen of the TI-84 Plus. You can enter instructions and evaluate expressions from this screen (where the answers are also displayed). Return to the Home Screen from any other screen, by pressing **[2ND]** **[QUIT]**.

### Entering an Expression

An expression on your TI-84 Plus consists of numbers, operators, variables, and functions. You can type an expression using the keypad and then evaluate it to a single answer.

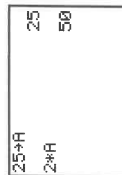


- Press **[6]** **[+]** **[2]**.
- Press **[ENTER]** to see the answer.

**Note:** You can change any expression on your screen by using the backspace **[ $\square$ ]** key, the delete **[DEL]** key, or the insert **[2ND]** **[INS]** keys.

### Storing a Value

Your graphing calculator allows you to store numerical values. You can recall them from memory using variable names.



- Press **[25]** **[+]** **[ALPHA]** **[H]**.
- Press **[ENTER]**.
- Press **[2]** **[\*]** **[ALPHA]** **[H]**.
- Press **[ENTER]**.

## Using Menus

You can access many functions and instructions on the Home Screen by selecting from a menu. To select an item:

- Press the number/letter shown to the left of the menu, or - or -
- Use the cursor arrows keys  $\leftarrow$  or  $\rightarrow$  to highlight a menu item and press **ENTER**.

Some menus close automatically. You can also press **2nd** **[OUT]** to exit.

The following example shows how to select from a **MATH** menu:

- Press **MATH**.
- Press **4** or  $\leftarrow$  or  $\rightarrow$  or **ENTER**.
- Press **2** or **7** or **ENTER**.



## Using the CATALOG

CATALOG is an alphabetic list of all functions and instructions. Some of these items are also available on keys and menus. To insert an item:

- Position the cursor where you want to insert the item.
- Press **2nd** **[CATALOG]**.
- Press  $\leftarrow$  or  $\rightarrow$  to move the  $\blacktriangleright$  indicator to the function or instruction.
- Press **ENTER**. Your selection is pasted on the Home Screen.

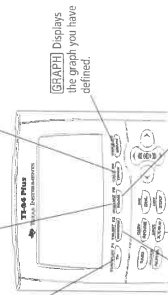
**Note:** Use the Catalog Help App for syntax help. Run this application from the **2nd** **[F2]** menu.

## Graphing Keys

**Y=** Displays the Y= Editor, where you can change the graph format, name functions or expressions to graph.

**2nd** **[FORMAT]** Lets you change the graph format settings.

**TRACE** Lets you move the cursor along the graphed function using  $\leftarrow$  and  $\rightarrow$ .



**GRAPH** Displays the graph you have defined.

**ZOOM** Lets you quickly adjust the window to a pre-defined setting.

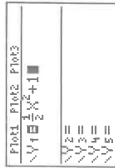
**WINDOW** Lets you set the viewing window to produce the best display of your graph.

**X** (in Function mode)  
**0** (in Polar mode)  
**n** (in sequence mode)

## Graphing a Function

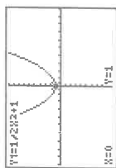
Use the **Y=** editor to enter a function and display the graph.

- Press **Y=**. If **Y1** is not empty, press **2nd** **[CLEAR]**.
- Press **1** **[ALPHA]** **[F1]** **2** **[ALPHA]** **[F2]** **1**.



- Press **GRAPH**.
- Press **TRACE** and use the arrow key to trace along the curve.
- Press **2nd** **[OUT]** to leave the screen.

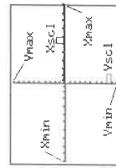
**Note:** Default window settings are  $-10 < x < 10$  and  $-10 < y < 10$ .



## Setting the Graphing Window

To obtain the best view of the graph, you may need to change the boundaries of the window.

- Open the editor by pressing **WINDOW**.
- Move the cursor to highlight the value you want to change.
- Type a value or an expression. Press **CLEAR** to clear the old value.
- Press **2nd** **[OUT]** to leave the screen.



**Note:** **Xmin**, **Xmax**, **Ymin**, **Ymax**, **Xsc1**, and **Ysc1** represent the X and Y maximums and minimums and the X and Y scales.

## Using Zoom

The TI-84 Plus has pre-defined window settings that let you quickly adjust the graph window to a pre-determined level of magnification and scale. To display this menu, press the **ZOOM** key:

- ZBox**: Lets you draw a box (using the cursor pad) to define the viewing window.
- Zoom In**: After you position the cursor and press **ENTER**, magnifies the graph around the cursor.
- Zoom Out**: After you position the cursor and press **ENTER**, displays more of the graph.
- ZDecimal**: Sets the change in X and Y to increments of 0.1 when you use **TRACE**.
- ZSquare**: Adjusts the viewing window so that X and Y dimensions are equal.
- ZStandard**: Sets the standard (default) window variables.
- ZTrig**: Sets the built-in trigonometry window variables.
- ZInteger**: After you position the cursor and press **ENTER**, sets the change in X and Y to whole number increments.
- ZoomStat**: Sets the values for currently defined statistical lists.
- ZoomFit**: Fits **Ymin** and **Ymax** between **Xmin** and **Xmax**.
- ZQuadrant 1**: Only displays Quadrant 1.
- ZFrac**: Sets the graphing window to support tracing in fractional elements.