



hp calculators

HP 10BII Display and Operating Modes

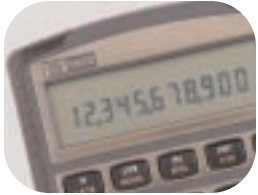
What You're Looking at and What it Tells You

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Adjusting the Display Contrast

If the display is too faint or too dark when you view it from a comfortable angle, you can adjust the contrast as follows: With the power on, press and hold down the **ON** key, then press **+** or **-** to improve the contrast.

The Numbers You See

As you may know, the display may be showing you only part of the number it contains. And you can select how many decimal places of each number you want to see: You press **DISP** then the desired number of places. (For example, to set 3 decimal places, you'd press **DISP** 3; for 8 places, press **DISP** 8; for no places, press **DISP** 0.) But always bear in mind that the display is rounding only your *view* of the number, not the value itself. The HP 10BII carries **12** digits internally on all values, *regardless how many it is showing you*. But you can view these digits at any time.

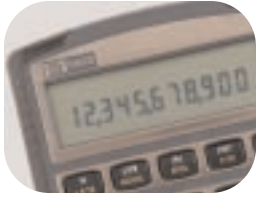
Try this: First, set 4 decimal places, by pressing **DISP** 4. Then key in some number with a lot of decimal places, say 1.2345678 (Type **1.2345678**.)

At this point, the calculator doesn't know if you've finished typing your entry yet. (Notice that while you're actually keying in a number, the display will "slide open"—regardless of its setting—so that you can see exactly what you're keying in.) So now do something with that number, simply for the sake of this example, to tell the machine that you've finished keying it in. Say, store (copy) it somewhere—doesn't matter where: **STO** 1 Now look at the copy left in the display: **1.2346**

Is that right? Is that really what you keyed in (and just stored a copy of)?

Sure it is. The display window has simply closed down to 4 decimal places, as you requested. Doubt this? Press **DISP** 6....

Now you see more of the true value sitting in the display. And **DISP** 9 will show you the complete formatted number.



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There are couple of other number formats you should know about, too—just in case.

Try this: Key in some large value, say 2.345678, and press   9

2.345678E9_ What is that?

That is scientific notation—another way to represent numbers, particularly very large or small values. You would say this number, “2.345678 times ten to the ninth power.” (A very small number would have a negative power.)

You’ll see a more familiar display if you finish the entry process by doing something—say, store this value:   0. (Of course, if the number had been another few orders of magnitude larger, say, 2.345678×10^{12} , the machine would not be able to use standard notation at all to represent it—not enough digits in the display—so it would be expressed in scientific notation even after storage.)

Keeping the large number from the above example, do one more....

Try this: Press  . What happens? **23.456.789.000,00**

Answer: Your decimal point will change from a period to a comma (and the thousands/ millions/ billions separators will become periods).

Why? What is this? This is “European notation.” In the U.S., the decimal places are separated from the integer portion of a number by a period; and the thousands, millions, billions, etc (every three places to the left) are marked off by commas. It’s the reverse in Europe and much of the rest of the world.

In any event, to switch back, just repeat the procedure.



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Other Machine Modes and Their Annunciators

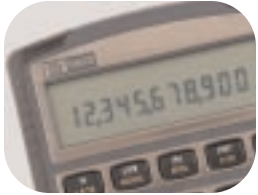
Annunciators are those little messages appearing in the display below the number itself. You've already seen a couple of them (discussed above): The two shift annunciators, **SHIFT** and **STAT**, tell you, respectively when the gold or purple shift modes are in effect—i.e. when you've pressed one of those shift keys—so that the next key pressed will operate its gold- or purple-lettered function.

But there are other modes you should know about too—and the HP 10BII tells you about these, too, with annunciators of their own.

First, keep an eye out for the **low battery** annunciator. It's a little battery symbol (🔋) that will appear in the lower part of the display when your battery is low. After this signal first appears, you still have a little time—but not much—to change the batteries before the power runs completely out and loses the calculations and/or programs you have stored. Use only lithium batteries, as your manual recommends—but never rechargeable batteries.

Also, whenever you're doing TVM Calculations, be aware of the **payment mode** annunciator, which looks like this: **BEGIN** This means that the PMT amount in any loan will be applied at the beginning of the corresponding period (a little unusual), rather than at the end (more conventional). To set this mode, you press  **BEG/END**. To clear this mode (i.e. revert to the more common END mode—where loan payments occur at the end of each period), just press  **BEG/END** again.

Be sure to read [Time Value of Money \(TVM\) Basics](#) and [Mortgage/Loan Basics](#) for more about this mode and how it affects your calculations!



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The **PEND** annunciator signals that there is an operation *pending*. In other words, you need to key in another value to complete the calculation. For example, if you're adding 5+3, you would begin with the keystrokes $\boxed{5}$, then $\boxed{+}$. At that point, the machine knows that it still needs another number to complete the addition computation, so it tells you that the operation is pending.

The **INPUT** annunciator signals that you have pressed the $\boxed{\text{INPUT}}$ key to separate entered two values—and the machine is now expecting the second value. For example, if you're accumulating data points for two-variable statistics, you key in the x-value, then press $\boxed{\text{INPUT}}$, then key in the y-value, then press $\boxed{\Sigma+}$.

Also there's an **AMORT** annunciator that appears when the calculator is doing amortization calculations for you. See [Amortization](#) for much more about this.

Also there's a **C-FLOW** annunciator that appears when you are keying in cash flow groups. See [Discounted Cash Flow \(DCF\) Basics](#) for much more about this.

Finally, there's an **ERROR** annunciator that tells you when some calculation result or process is invalid or impossible. See the "Errors and Other Messages" section of [Frequently Asked Questions](#) for more details on the various sorts of errors that are possible.