

HOW TO USE YOUR CELESTICOMP V

CELESTICOMP V uses the "run only" Sharp PC1270 pocket computer. Its programs are in a ROM cartridge that fits in the back. The cartridge can be removed and replaced with other cartridges, either ROM or RAM. By installing another cartridge with another program you can easily convert to an entirely different purpose. With no cartridge installed it will not operate at all, not even as a simple calculator.

The ROM cartridge furnished by Celesticomp will not lose its programs even if the battery fails or the cartridge is removed. The Celesticomp cartridge has 32K ROM for the programs and 8K RAM to hold the data you input and the results of computations. The data in RAM will be lost on battery failure or if you remove the cartridge. That would be merely inconvenient since it is easy to re-enter the data and recompute. Batteries are reliable and durable and there is seldom a need to remove the cartridge so this may never happen to you.

The keys on the right side look just like those of a simple calculator, and can be used for simple computations when you are not running a program. A wheel on the right controls the display contrast.

Look at the left side of your CELESTICOMP V. The YES and NO keys are used to answer prompts that end in "?Y/N." If there is no "?Y/N" on the screen they have no effect. The ENTER key does two things: It steps the program forward when the program has stopped to display information, and it enters the numbers you key in response to a prompt that ends with a question mark. (Note that you do not key ENTER after the YES and NO keys. They enter themselves automatically.)

Further left you find a bank of eight keys in two lines of four. These are the Program Start keys. Above each is a very abbreviated clue to its program.

If you don't fully understand the above don't worry. Learn by doing is the motto here. Soon you'll learn by running a program. But first a few rules:

1. EAST IS LEAST. Because it rhymes it's easy to remember that you must always precede East Longitude, East Magnetic Variation, and East Compass Deviation with a minus sign.
2. South is down. South latitude must be preceded by the minus sign.
3. Answers are displayed in the same way. South latitude, east longitude, variation, and deviation are preceded by the minus sign.
4. Latitude and longitude are entered and displayed in degrees, minutes, and tenths of minutes. For example latitude south 23 degrees, 4 and 3/10ths minute is entered and displayed as -23.043. The same applies to sextant altitude. (It's always positive.)

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5. Time is always entered in the 24 hour clock with minutes and seconds to the right of the decimal: 1:06:02 PM enters as 13.0602.

6. Erase mistakes with the C-CE key and correct them before you key ENTER.

7. Prompts have question marks and must be answered YES, NO, ENTER, or by entering a number.

9. Body numbers for the planets, moon, Aries, unknown star, starlist, and sun's upper limb are preceded by a minus sign.

10. Always enter a FIX TIME. (See page 4.)

11. If you enter a FIX TIME or SHOTTIME greater than 24 Celesticomp returns to the prompt until you enter a value less than 24.

Now try a simple program. What is the shortest distance and course between Tokyo at 35.323N/139.48E and San Francisco at 37.425N/ 123.006W? To find out you'll run the great circle course planning program. The left column called "KEY" tells which keys to press. The center column "SEE" shows what you will see on the screen. The right column, "COMMENT", is for explanation.

With power on:

KEY	SEE	COMMENT
PLAN	GR CIR?Y/N	YES starts the great circle program.
YES	DP LAT0.00?	
	<i>The prompt shows the current departure latitude To approve ENTER. To change key in the new value. As you do the old marches off stage.</i>	
	LAT0.000?35.323	
ENTER	DP LON0.000?	
	<i>When you ENTERed the program accepted the new value and brought up the next prompt.</i>	
	0.000?-139.48	
ENTER	DS LAT0.000?	
	0.000?37.425	
ENTER	DS LON0.000?	
123.006	LON0.0000?123.006	
ENTER	REVIEW DATA?Y/N	
	<i>YES takes you back to the first data input and runs you through the input routine again. But this time it shows the numbers you just keyed in.</i>	
YES	DP LAT?35.323	
	<i>If the values are OK key ENTER. To change you key in the correct number and ENTER that. Usually it's just a matter of ENTER ENTER ENTER ENTER until REVIEW DATA?Y/N comes up. If data is OK say NO to REVIEW DATA and the computation begins.</i>	