

# HP 82106A Memory Module for the HP-41C

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To meet your expanded programming and data storage needs, Hewlett-Packard has designed the HP 82106A Memory Module. Once plugged into the HP-41C each HP 82106A Memory Module provides an additional 64 registers of program memory or data storage registers, or any combination. You can add up to four memory modules to your HP-41C system, providing you with a whopping 319 registers (that's 1000 to 2000 lines of program memory).

As in the internal memory of the HP-41C, the plug-in memory can be allocated in any combination between program memory and data storage. All of the additional memory, like the internal memory of the HP-41C, is Continuous Memory. As long as the memory module is plugged into the HP-41C, its contents are preserved for your later use, even while the HP-41C is turned off.

When you first plug in memory modules and then turn the HP-41C on, the registers in those modules become allocated as data storage registers. Remember that data storage registers  $R_{(100)}$  through  $R_{(319)}$  are addressed indirectly (refer to section 13 in the *HP-41C Owner's Handbook and Programming Guide*).

## CAUTION

Always turn the HP-41C off before inserting or removing any plug-in extensions or accessories. Failure to turn the HP-41C off could damage both the calculator and the accessory.

Here are the initial allocation and the possible maximum allocations of HP-41C registers and how each additional memory module increases those allocations. Refer to the information about **SIZE** (on the next page) if you wish to change the allocation.

<b>Memory</b>	<b>Maximum Data Storage Registers</b>	<b>Initial Register Allocation Data Storage</b>	<b>Program Memory</b>	<b>Maximum Program Memory Registers</b>
Initial Configuration	63	17	46	63 (445 bytes)
+1 Memory Module	127	81	46	127 (893 bytes)
+2 Memory Modules	191	145	46	191 (1341 bytes)
+3 Memory Modules	255	209	46	255 (1789 bytes)
+4 Memory Modules	319	273	46	319 (2237 bytes)

To change the allocation of data storage registers and program memory, you simply execute the **SIZE** function and specify the desired number of data storage registers (000 through 319). The remainder of the registers are allocated as program memory. (Refer to section 5 or 7 in the *HP-41C Owner's Handbook and Programming Guide* for more information about the **SIZE** function.)

### To Insert Memory Modules:

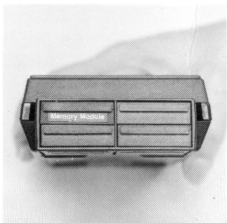
1. Turn the HP-41C off! Failure to turn the calculator off could damage both the module and the calculator.



2. Remove the port covers. Remember to save the port covers; they should be inserted into the empty ports when no extensions are inserted.



3. With the memory module lable positioned as shown, insert the module firmly into port 1. Port numbers are also shown on the back of the calculator.



4. If you have additional memory modules to insert, insert the second module into port number 2, the third module into port number 3, and the fourth module into port number 4. Be sure to place port covers over unused ports.
5. Turn the calculator on and set the allocation of data storage registers and program memory registers using the **SIZE** function. **SIZE** uses a three-digit number that you specify to determine the number of data storage registers. The remainder of the registers are allocated to program memory.

To be used properly, memory modules must be inserted into the ports as specified. Memory modules must be inserted into the ports in the port's numeric order, from port 1 to port 4. Do not insert modules out of order. For example, if you insert a memory module into port 1 and then one into port 3, there will be a gap of 64 registers in memory.

### To Remove Memory Modules:

When you are removing memory modules, you must be sure that you have enough data storage registers allocated to account for the registers you are removing. Failure to do so will result in the clearing of the entire calculator and the **MEMORY LOST** display.

1. Allocate the proper number of registers to data storage using **SIZE** .
  - If you wish to remove 1 module, execute **SIZE** 064.
  - If you wish to remove 2 modules, execute **SIZE** 128.
  - If you wish to remove 3 modules, execute **SIZE** 192.
  - If you wish to remove 4 modules, execute **SIZE** 256.

2. Turn the HP-41C off! Failure to do so could damage both the calculator and the module.



3. Beginning with the highest numbered port containing a memory module, grasp the module handle and pull it out as shown.



4. Place a port cap into the empty port.



Always remove modules beginning with the highest numbered port. For example, if you have memory modules in ports 1, 2, and 3, and you wish to remove one module, remove the module in port 3. Removing a module from a lower numbered port will leave a gap of 64 registers in memory.

## **Mixing Memory Modules and Application Modules**

Any time you wish to insert other extensions (such as the HP 82104A Card Reader, or the HP 82143 Printer) any memory modules used must be in lower numbered ports.

When you are using both memory modules and application modules, the memory modules must always be inserted into the lower numbered ports and application module into any port after the last memory module.

When mixing memory and application modules, the HP-41C allows you to leave gaps in the port sequence. For example, you can plug a memory module into port 1 and an application module into port 4, leaving ports 2 and 3 empty.