

Memory Upgrade Installation HP 9000 Models 216, 217, 220, 226, 236, 237, 310, & 320

HP Documentation

HP 9000 Series 200 Owner's Guide
HP 9000 Model 310 & 320 Owner's Guide

System Shutdown

Perform an orderly shutdown of the operating system. Reference the Owner's Guide for detailed instructions.
Disconnect the system power cable.

Card Orientation

Place the memory card in front of you with the gold fingers closest to you and the two red handles furthest from you.

Setting Rockers 1-4

Rockers 1-4 are used to specify the address space that the memory card will occupy. The following steps can be used to determine how to set these rockers.

(1) Remove all the add-on memory cards from the machine

(2) Arrange the add-on memory cards that you plan to install in your machine in order of size. Place the 8MB cards first, then the 4MB cards, then the 2MB cards, then the 1MB cards, and then the 0.25MB cards. Remember that 8MBs is the maximum amount of memory that can be installed in your machine.

(3) Calculate the address of the first card (the card with the most megabytes) by subtracting the size of the card from 16. For example, if the first card is a 4MB card then the address would be 12 ($16-4=12$).

(4) If the card is a memory then use the card address value as an index into Table 1 to determine the settings for rockers 1-4. If the card is a HP 98256 (0.25MB card) then use the card address value as an index into Table 2 to determine the HP 98256 switch settings. If the card is from a different 3rd party memory company then refer to their instructions for setting the card to the card address value.

(5) If all cards have been configured, continue to the next section. Otherwise, calculate the address for the next card by subtracting the size of the card from the address of the card you just configured. For example, if the first card was a 4MB card set to address 12 then a 2MB card would be set to address 10 ($12-2=10$). Now go back to step 4.

Setting Rockers 5 & 6

Rockers 5 & 6 are used to specify the amount of memory on the memory card. The valid settings are as follows:

#5	#6	Configuration
"0"	"0"	1 Megabyte
"0"	"1"	2 Megabyte
"1"	"0"	4 Megabyte
"1"	"1"	8 Megabyte

The memory card is shipped with this switch set to specify the amount of memory on the card. The setting of this switch would be modified only if you subsequently increase the amount of memory on the card.

Setting Rockers 7 & 8

Always set rockers 7 & 8 to "1".

FastMem Installation

After the switches on all the add-on cards have been set, the add-on memory cards can be plugged into any available slots. Be sure that the computer power is off before removing or adding any cards. If you have any problems installing the memory card please call Newport Digital.

Newport Digital

14731 Franklin Ave, Tustin, CA 92780

714 730-3644 (Fax) 714 730-3951

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HP 216 Memory Switch

If you are installing memory cards in a HP-216 then you must modify the HP-216 memory address switch. This switch is located on the processor board below the two-slot card cage of the HP-216. The memory address switch is the furthest back of the three 8 position switches. If you are installing 8 megabytes, position #7 of this switch must be depressed on the 'closed' side of the switch. Otherwise, you must treat the memory on the processor card just like a HP 98256 card (with positions #7 & #8 depressed on the 'open' side). Please refer to the HP-216 installation notes or call Newport Digital for more detailed instructions.

Tables 1 - Base Address Table for the ND FastMem

<u>Card Address</u>	<u>#1</u>	<u>#2</u>	<u>#3</u>	<u>#4</u>
15	"1"	"1"	"1"	"1"
14	"1"	"1"	"1"	"0"
13	"1"	"1"	"0"	"1"
12	"1"	"1"	"0"	"0"
11	"1"	"0"	"1"	"1"
10	"1"	"0"	"1"	"0"
9	"1"	"0"	"0"	"1"
8	"1"	"0"	"0"	"0"

Tables 2 - Base Address Table for the HP 98256A

<u>Card Address</u>	<u>#1</u>	<u>#2</u>	<u>#3</u>	<u>#4</u>	<u>#5</u>	<u>#6</u>
15.75	"1"	"1"	"1"	"1"	"1"	"1"
15.50	"1"	"1"	"1"	"1"	"1"	"0"
15.25	"1"	"1"	"1"	"1"	"0"	"1"
15.00	"1"	"1"	"1"	"1"	"0"	"0"
14.75	"1"	"1"	"1"	"0"	"1"	"1"
14.50	"1"	"1"	"1"	"0"	"1"	"0"
14.25	"1"	"1"	"1"	"0"	"0"	"1"
14.00	"1"	"1"	"1"	"0"	"0"	"0"
13.75	"1"	"1"	"0"	"1"	"1"	"1"
13.50	"1"	"1"	"0"	"1"	"1"	"0"
13.25	"1"	"1"	"0"	"1"	"0"	"1"
13.00	"1"	"1"	"0"	"1"	"0"	"0"
12.75	"1"	"1"	"0"	"0"	"1"	"1"
12.50	"1"	"1"	"0"	"0"	"1"	"0"
12.25	"1"	"1"	"0"	"0"	"0"	"1"
12.00	"1"	"1"	"0"	"0"	"0"	"0"
11.75	"1"	"0"	"1"	"1"	"1"	"1"
11.50	"1"	"0"	"1"	"1"	"1"	"0"
11.25	"1"	"0"	"1"	"1"	"0"	"1"
11.00	"1"	"0"	"1"	"1"	"0"	"0"
10.75	"1"	"0"	"1"	"0"	"1"	"1"
10.50	"1"	"0"	"1"	"0"	"1"	"0"
10.25	"1"	"0"	"1"	"0"	"0"	"1"
10.00	"1"	"0"	"1"	"0"	"0"	"0"
9.75	"1"	"0"	"0"	"1"	"1"	"1"
9.50	"1"	"0"	"0"	"1"	"1"	"0"
9.25	"1"	"0"	"0"	"1"	"0"	"1"
9.00	"1"	"0"	"0"	"1"	"0"	"0"
8.75	"1"	"0"	"0"	"0"	"1"	"1"
8.50	"1"	"0"	"0"	"0"	"1"	"0"
8.25	"1"	"0"	"0"	"0"	"0"	"1"
8.00	"1"	"0"	"0"	"0"	"0"	"0"

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