HP 3000 Computer System

HP 3000 Series 40/44 Computer Systems Memory Add-On Installation Manual

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All pages are original issue.

PRINTING HISTORY

New editions are complete revisions of the manual. Update packages, which are issued between editions, contain additional and replacement pages to be merged into the manual by the customer. The date of the title page of the manual changes only when a new edition is published. When an edition is reprinted, all the prior updates to the edition are incorporated.

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This manual describes how to add memory to an existing HP 3000 Series 40 or Series 44 computer system. The procedure is divided into two parts, one for the Series 40 and one for the Series 44.

Series 40 Memory Add-On Procedure

1. The system should be backed up by the system operator prior to beginning the memory add-on installation.

2. Perform an MPE shutdown.

3. Turn off the processor Power Switch.

4. Remove flat ribbon cable from across the memory controller and memory array boards (J-1 connector).

5. Determine the number of 1/4 Mbyte and/or 1 Mbyte boards to be used.

6. Refer to table 1 and locate the row that corresponds to the configuration determined in step 5.

7. Install the memory arrays as indicated in table 1. It may be necessary to move existing arrays to obtain the desired configuration.

8. Set the thumbwheel settings on the memory arrays as indicated in table 1.

9. Install the flat ribbon cable accross the memory comtroller and memory array boards (J-1 connector).

10. Turn the processor power switch ON and run "PRMDIAG" (located on the DUS tape).

11. Coolstart or cold load the system from the back-up media, re-configuring for the added memory. Do a sysdump to create new back-up media with the new memory configuration on it.

MEMORY ARRAY COUNT		CONNECTOR LENGTH	TOTAL MEMORY	CARD CAGE Memory Arrays				Controller
1 Mb	256 Kb	(Slots)	(Mb)	A1	A2	A3	A4	A5
0	1	5	0.25	¼ 0				 A
0	2	5	0.50	¼ 0	¼ 1			 A
0	3	5	0.75	¼ 0	¼ 1	¼ 2		 A
0	4	5	1.00	¼ 0	¼ 1	¼ 2	¼ 3	 A
1	0	5	1.00	1 0				 A
1	2	5	1.50	1 0	¼ 4	¼ 5		 A
2	0	5	2.0	1 0	1 1			 A

← Memory Size (Mb)
← Thumbwheel/Switch Setting

Table 1.   Series 40 Memory configurations

Series 44 Memory Add-On Procedure

1. The system should be backed up by the system operator prior
    to beginning the memory add-on installation.

2. Perform an MPE shutdown.

3. Turn off the processor Power Switch.

4. Determine the number of 1/4 Mbyte and/or 1 Mbyte boards to be
    used.

5. Refer to table 2 and locate the row that corresponds to the
    configuration determined in step 4.

Note: To install additional memory in the second card cage of an
        existing system, there must either be a memory controller
        in Slot E8 of the second card cage or one must be instal-
        led prior to adding memory modules.

6. Remove flat ribbon cable from across the memory controller
    and memory array boards (J-1 connector) in the card cage
    where additional memory is to be installed.

7. Remove the memory controller(s) and set the slide switch (S2)
    near P4 as indicated in table 2. Replace the memory control-
    ler(s) in the correct slots(s).

8. In the first card cage, determine which slot corresponds to
    the left end of the ribbon connector being used. Beginning
    with this slot, fill the card cage with the memory arrays
    from left to right as indicated in table 1. It may be neces-
    sary to move existing memory arrays to acheive the desired
    configuration.

Note: Table 2 shows the slot assignments for the maximum ribbon
        connector length. If you are using a 6 slot ribbon con-
        nector in the first card cage, place the leftmost memory
        array in slot A4.

9. If table 2 indicates that no memory is to be installed in the
    second card cage, skip to step 11.

10. To install memory in the second card cage, determine which
    slot corresponds to the right end of the ribbon connector to
    be used. Beginning with this slot, add memory as indicated
    in table 2, filling to the left.

Note: Table 2 shows the slot assignments for the maximum ribbon
        connector length.   If you are using a 6 slot ribbon con-
        nector in the second card cage, place the rightmost memory
        array in slot E13.

11. Set the thumbwheel switches of all memory arrays as indicated
    in table 2. Check the settings carefully!

12. Install the flat ribbon cable accross the memory controller
    and memory array boards (J-1 connector).

13. Turn the processor power switch ON and run "PRMDIAG" (located
    on the DUS tape).

14. Coolstart or cold load the system from the back-up media, re-
    configuring for the added memory. Do a sysdump to create new
    back-up media with the new memory configuration on it.

MEMORY ARRAY COUNT		CONNECTOR LENGTHS (Slots)		TOTAL MEMORY	CARD CAGE 1 — Memory Arrays								Controller Switch Setting	CARD CAGE 2 — Controller Switch Setting	Memory Arrays							
1 Mb	256 Kb	CARD CAGE 1	CARD CAGE 2	(Mb)	A1	A2	A3	A4	A5	A6	A7	A8	A9	E8	E9	E10	E11	E12	E13	E14	E15	E16
0	4	6 or 9	—	1.0	¼/0	¼/1	¼/2	¼/3					A	—								
0	6	9	—	1.5	¼/0	¼/1	¼/2	¼/3	¼/4	¼/5			A	—								
0	8	9	—	2.0	¼/0	¼/1	¼/2	¼/3	¼/4	¼/5	¼/6	¼/7	A	—								
0	10	9	6 or 9	2.5	¼/0	¼/1	¼/2	¼/3	¼/4	¼/5	¼/6	¼/7	A	B							¼/1	¼/0
0	12	9	6 or 9	3.0	¼/0	¼/1	¼/2	¼/3	¼/4	¼/5	¼/6	¼/7	A	B					¼/3	¼/2	¼/1	¼/0
0	14	9	9	3.5	¼/0	¼/1	¼/2	¼/3	¼/4	¼/5	¼/6	¼/7	A	B			¼/5	¼/4	¼/3	¼/2	¼/1	¼/0
0	16	9	9	4.0	¼/0	¼/1	¼/2	¼/3	¼/4	¼/5	¼/6	¼/7	A	B	¼/7	¼/6	¼/5	¼/4	¼/3	¼/2	¼/1	¼/0
1	0	6	—	1.0				1/0					A	—								
1	2	6 or 9	—	1.5	1/0	¼/4	¼/5						A	—								
1	4	6 or 9	—	2.0	1/0	¼/4	¼/5	¼/6	¼/7				A	—								
1	6	6 or 9	6 or 9	2.5	1/0	¼/4	¼/5	¼/6	¼/7				A	B							¼/1	¼/0
1	8	6 or 9	6 or 9	3.0	1/0	¼/4	¼/5	¼/6	¼/7				A	B					¼/3	¼/2	¼/1	¼/0
1	10	6 or 9	6 or 9	3.5	1/0	¼/4	¼/5	¼/6	¼/7				A	B			¼/5	¼/4	¼/3	¼/2	¼/1	¼/0
1	12	6 or 9	9	4.0	1/0	¼/4	¼/5	¼/6	¼/7				A	B	¼/7	¼/6	¼/5	¼/4	¼/3	¼/2	¼/1	¼/0
2	0	6 or 9	—	2.0	1/0	1/1							A	—								
2	2	6 or 9	6 or 9	2.5	1/0	1/1							A	B							¼/1	¼/0
2	4	6 or 9	6 or 9	3.0	1/0	1/1							A	B					¼/3	¼/2	¼/1	¼/0
2	6	6 or 9	9	3.5	1/0	1/1							A	B			¼/5	¼/4	¼/3	¼/2	¼/1	¼/0
2	8	6 or 9	9	4.0	1/0	1/1							A	B	¼/7	¼/6	¼/5	¼/4	¼/3	¼/2	¼/1	¼/0
3	0	6 or 9	—	3.0	1/0	1/1	1/2						M	—								
3	2	6 or 9	6 or 9	3.5	1/0	1/1							A	B						¼/5	¼/4	1/2
3	4	6 or 9	6 or 9	4.0	1/0	1/1							A	B				¼/7	¼/6	¼/5	¼/4	1/2
4	0	6 or 9	—	4.0	1/0	1/1	1/2	1/3					M	—								

Table 2. Series 44 Memory Configurations

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