

Installing the Memory Upgrade Kits

Model 281xSA

Model 331xSA

Model 5310A/SA

Model 5510-06

Part No. 201292-A
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Introduction

This booklet contains instructions on upgrading memory on the following Bay Networks® products:

- Model 2813SA
- Model 2814SA
- Model 3313SA
- Model 3314SA
- Model 5310A
- Model 5310SA
- Model 5510-06

This guide describes how to replace the single in-line memory modules (SIMMs) that have the dynamic random access memory (DRAM) on these products with a SIMM that has additional memory capacity.

Topics Covered

This booklet covers the following topics:

- Upgrade kits ([page -3](#))
- Locating the SIMM on the board ([page -6](#))
 - Model 281xSA ([page -6](#))
 - Models 3313SA and 3314SA ([page -8](#))
 - Model 5310A/SA ([page -11](#))
 - Model 5510 ([page -12](#))
- Replacing the SIMM ([page -13](#))
- Setting the jumpers ([page -18](#))
 - Model 281xSA ([page -18](#))
 - Model 331xSA ([page -19](#))
 - Model 5310A/SA ([page -21](#))
 - Model 5510 ([page -24](#))

Upgrade Kits

The Bay Networks order number for the Agent 2.0 Upgrade Kit for Models 2813SA, 2814SA, 3313SA, 3314SA, which upgrades the memory for these models, is AB1011005. The order number for the Agent 2.0 Upgrade Kit for Models 5310A, 5310SA, 5510-06, which upgrades the memory for these models, is AD1011009.

The Model 281xSA is shipped with 2 megabytes (MB) of DRAM in the form of one SIMM on the printed circuit board; the board supports the installation of as much as 8 MB of memory. This guide describes how to replace the DRAM with one 4 MB SIMM. The Bay Networks order number for the memory upgrade kit that upgrades the Model 281xSA is AB1011005.

The Model 331xSA ships with 2 MB of DRAM in the form of one SIMM on the network management module (NMM); the NMM supports the installation of as much as 8 MB of memory. This guide describes how to replace the DRAM with one 4 MB SIMM. The Bay Networks order number for the memory upgrade kit that upgrades the Model 331xSA is AB1011005.

The Model 5310A/SA ships with 2 MB of DRAM on two SIMMs (DRAM0 and DRAM1) on the NMM. Each model supports the installation of as much as 16 MB of memory. This guide describes how to replace one DRAM with an 8 MB SIMM. The Bay Networks order number for the kit that upgrades memory for the Model 5310A/SA is AD1011009.

The Model 5510-06 ships with 4 MB of DRAM on two SIMMs (DRAM0 and DRAM1) and supports as much as 16 MB of memory. This guide describes how to replace one DRAM with an 8 MB SIMM. The Bay Networks order number for the kit that upgrades the Model 5310A/SA is AD1011009.



Caution: Only qualified technicians should install this equipment.

Place all printed circuit boards on an antistatic mat until you are ready to install them. If you do not have an antistatic mat, wear a discharge leash to free yourself of static before touching any of the printed circuit boards or free yourself of static by touching a grounded metal object before handling a printed circuit board.

Each of the two memory kits (AB1011005 and AD1011009) contains a SIMM module (4 MB and 8 MB, respectively) plus a sticky label ([Figure 1](#)). The label with the AB1011005 memory upgrade kit says 4M SIMM, and the label with the AD1011009 memory upgrade kit says 8M SIMM. Affix the appropriate label to the front of the NMM you are upgrading, and you will know how much memory is installed by looking at the front of the NMM without pulling it out of the chassis.

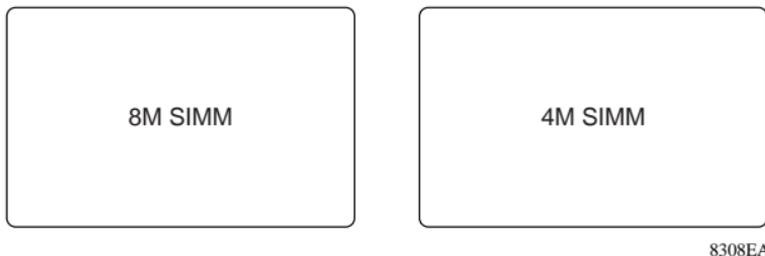


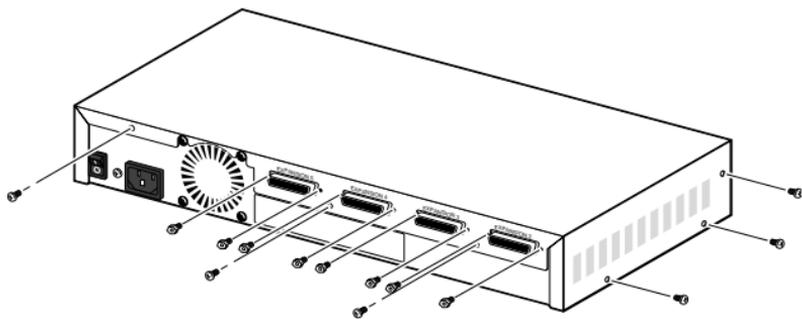
Figure 1. Memory Labels

Locating the SIMM on the Board

Model 281xSA

To gain access to the SIMM socket on the Model 281xSA, you must remove the cover from the hub. To remove the cover, follow these steps:

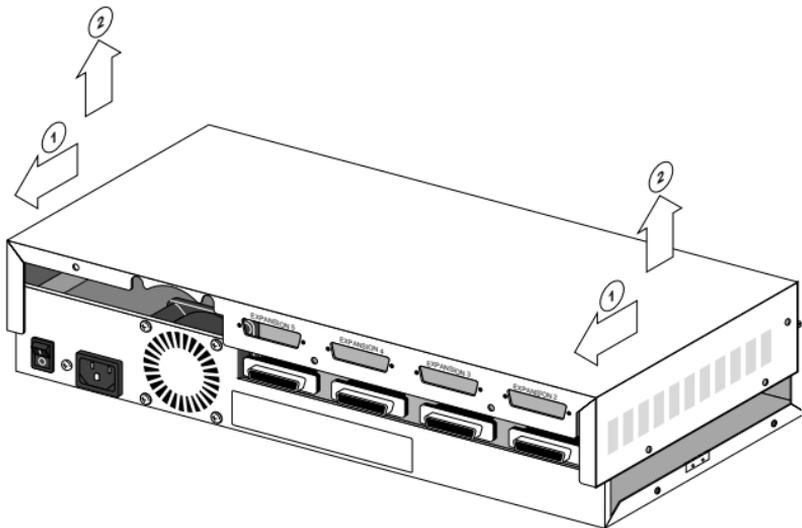
1. Using a #1 Phillips screwdriver, remove 3 screws from each side and 6 screws from the rear of the hub ([Figure 2](#)).



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Figure 2. Cover Retaining Screws on the Model 281xSA Hub

2. Holding the sides of the cover, slide the cover toward the rear of the hub approximately 1/2 inch ([Figure 3](#)).

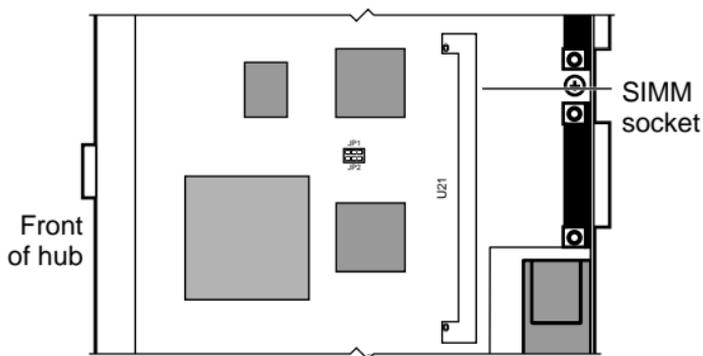


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Figure 3. Removing the Hub Cover on a Model 281xSA Hub

- 3. Lift the cover straight up and remove it from the hub. Set the cover aside.**

The DRAM SIMM on the Model 281xSA is installed in a SIMM socket labeled U21 on the printed circuit board ([Figure 4](#)).



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Figure 4. SIMM Location on the Model 281xSA

You will be installing the 4 MB SIMM that comes with the upgrade kit.

Model 3313SA and Model 3314SA

The DRAM SIMM that makes up the NMM memory subsystem for the Model 331xSA resides in the U13 SIMM socket on the printed circuit board ([Figure 5](#) and [Figure 6](#)).

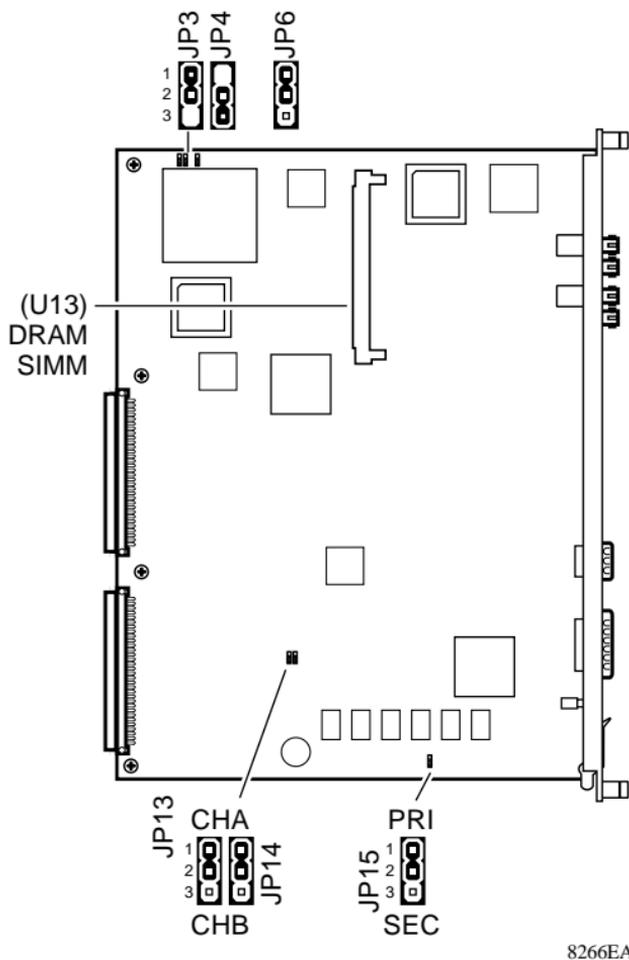


Figure 5. SIMM Location on the Model 3313SA

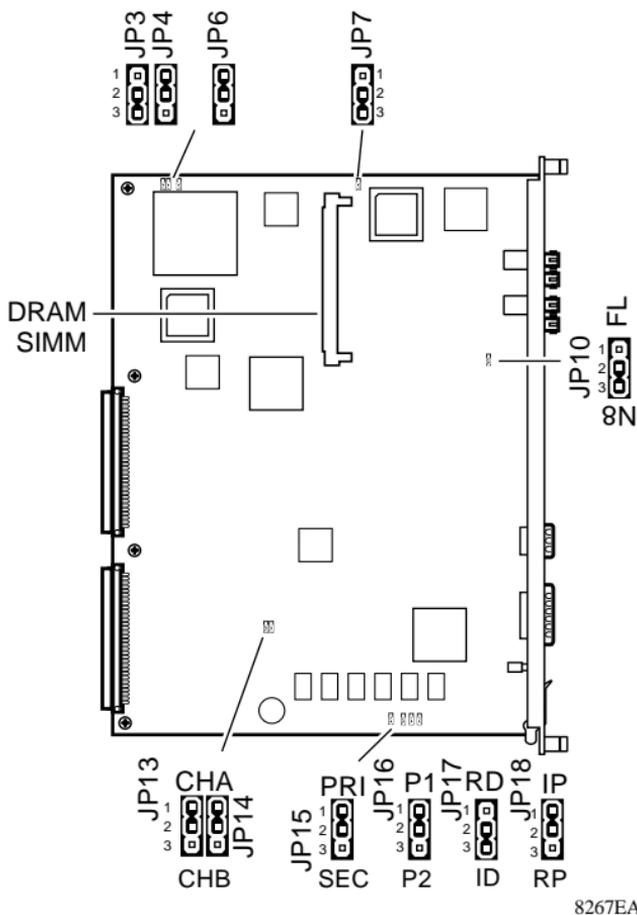


Figure 6. SIMM Location on the Model 3314SA

You will be installing the 4 MB SIMM that comes with the upgrade kit.

Model 5310A/SA

[Figure 7](#) shows the location of the SIMM sockets (DRAM0 and DRAM1) and the related switches on the Model 5310A/SA NMM printed circuit board.

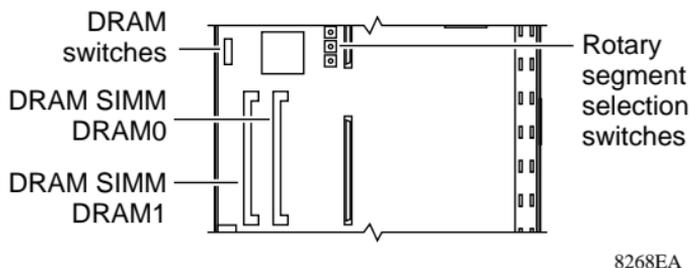


Figure 7. SIMM Location on the Model 5310A/SA



Caution: The replacement SIMM in your memory upgrade kit must be inserted into socket DRAM0 in the Model 5310A/SA.

You will be installing the 8 MB SIMM that comes with the upgrade kit.

Model 5510

The DRAM SIMMs that make up the NMM memory subsystem on the Model 5510 are installed in two SIMM sockets (DRAM0 and DRAM1) on the NMM printed circuit board ([Figure 8](#)).

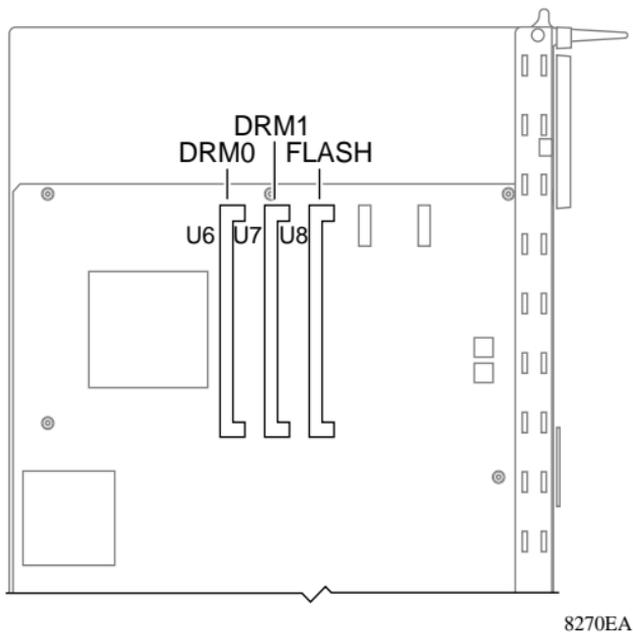


Figure 8. SIMM Location on the Model 5510



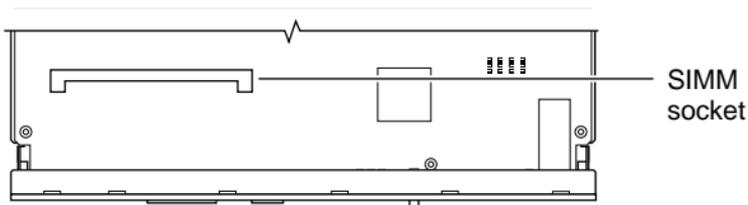
Caution: The replacement SIMM in your memory upgrade kit must be inserted into socket DRAM0 in the Model 5510.

You will be installing the 8 MB SIMM that comes with the upgrade kit.

Replacing the SIMM

To replace a SIMM, follow these steps:

1. Lay the NMM on a level work surface ([Figure 9](#)).



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Figure 9. NMM with One SIMM Socket

2. Locate the SIMM socket.

This socket is a “tilt-down” socket, which means a SIMM is inserted into the empty socket at an angle and then is tilted down to its locked horizontal position.

3. Remove the existing SIMM from the socket by pulling the side tabs gently outward on the spring latch at each end of the SIMM (Figure 10).

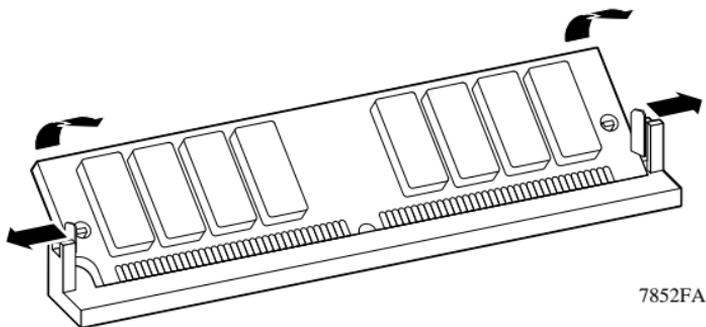
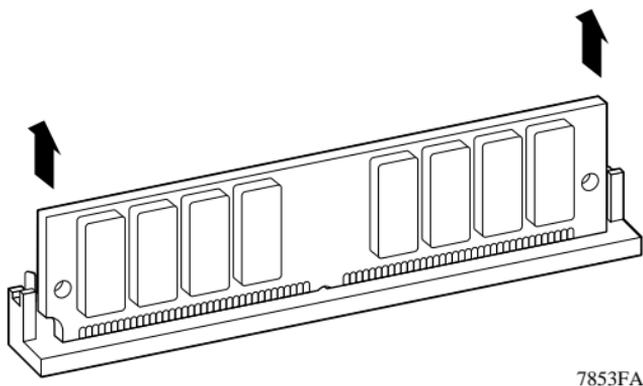


Figure 10. Releasing Existing SIMM

When you release the SIMM from the spring latches, the SIMM ejects from the locking studs and can be easily removed ([Figure 11](#)).



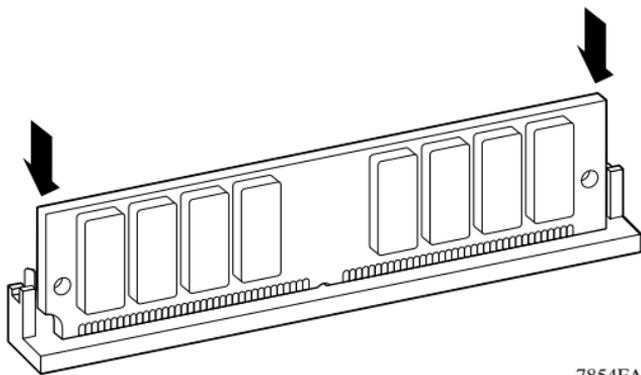
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Figure 11. Removing Existing SIMM

4. Rotate the SIMM upward and lift it out of the socket.

Note the location and orientation of the SIMM guide notch on the left end of the SIMM. When you install the replacement SIMM, the guide notch must match the position and alignment of the SIMM you removed.

5. Place the original SIMM in an antistatic bag, or set it on an antistatic mat.
6. Install the replacement SIMM by holding the SIMM by its top corners, with the guide notch facing toward the bottom edge of the NMM.
7. Align the SIMM directly above the socket and lower it gently into the socket.
8. Push the SIMM down gently to seat it firmly in the socket ([Figure 12](#)).



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Figure 12. Installing the Replacement SIMM

- 9. Tilt the SIMM into its locked position. You may hear a “click” as the spring latches engage the ends of the SIMM.**



Caution: You may feel a slight resistance as the SIMM comes to its locked position. If the SIMM does not lock, do not force it. Remove the SIMM, reinsert it, wiggle it gently as you press it into the socket, and try to tilt it into its locked position. It is very easy to damage the SIMM socket by forcing a SIMM into its locked position.

Setting the Jumpers

Model 281xSA

When you have finished installing the new SIMM on the Model 281xSA, you must set the DRAM configuration jumpers (as shown in [Figure 13](#)) for 4 MB of memory to:

- JP1 to 2-3
- JP2 to 1-2

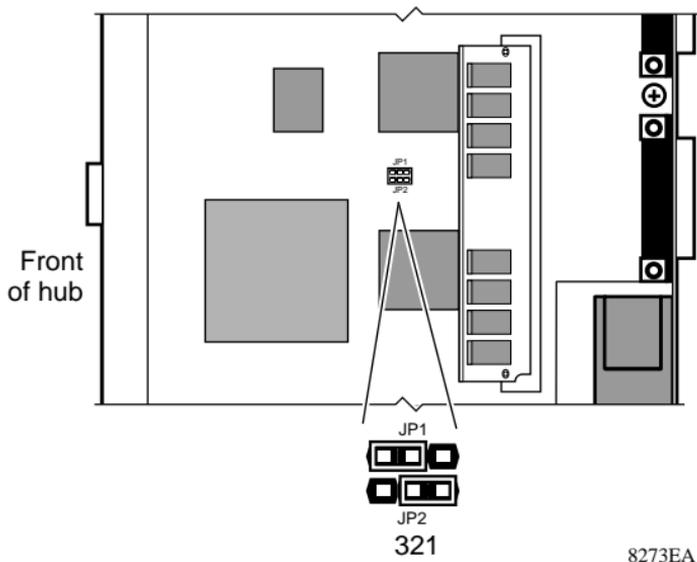


Figure 13. DRAM Jumpers on the Model 281xSA



Note: The NMM self-tests include an optional, exhaustive DRAM self-test. This test is turned off by default. You should turn this test on to check the newly installed memory. For information on activating this self-test, see Chapter 3, “Setting the Boot Configuration,” in *Using the Model 281xSA Ethernet Hub* (Bay Networks part number 893-743-A).

Model 331xSA

Set the DRAM configuration jumpers on the Model 331xSA (as shown in [Figure 14](#)) for 4 MB of memory to:

- JP3 to 1-2
- JP4 to 2-3

Change only JP3 and JP4 to configure the DRAM. The other jumpers are used to set other configurations for the Model 331xSA.

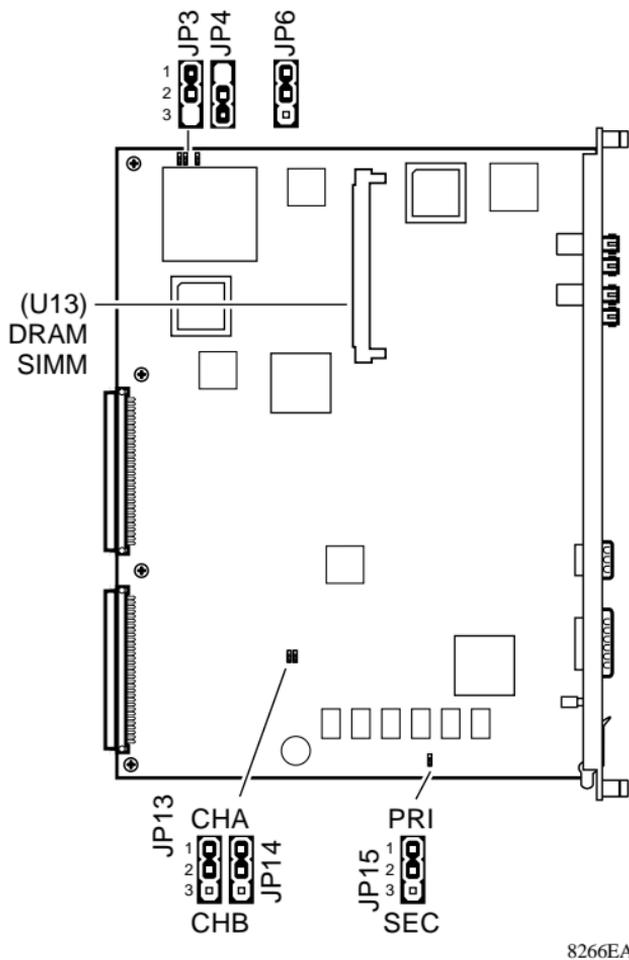


Figure 14. Jumpers on the Model 331xSA



Note: The NMM self-tests include an optional, exhaustive DRAM self-test. This test is turned off by default. You should turn this test on to check the newly installed memory. For information on activating this self-test, see Chapter 3, “Setting the Boot Configuration,” in *Using the Model 331xSA Ethernet Network Management Module* (Bay Networks part number 893-744-A).

Model 5310A/SA

After installing the new SIMM, you must set the DRAM configuration switch for 8 MB in the DRAM0 socket for the Model 5310A/SA. You use the block of switches labeled SW4 ([Figure 15](#)) to set the memory configuration for the Model 5310A/SA NMM.

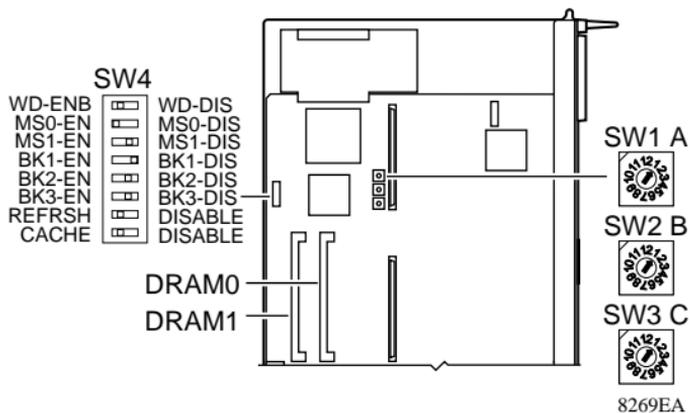


Figure 15. Jumpers on the Model 5310A/SA

After installing the new SIMM, set the following switches on the Model 5310A/SA to the following positions for the 8 MB SIMM in the DRAM0 socket:

- MS0-EN/MS0-DIS: Set to MS0-EN.
- BK1-EN/BK1-DIS: Set to BK1-EN.

- BK2-EN/BK2-DIS and BK3-EN/BK3-DIS:
 - If only 1 SIMM is installed, set these switches to BK2-DIS and BK3-DIS.
 - If 2 SIMMs are installed, always set switch to BK2-EN. For socket DRM1:
 - 1 MB or 4 MB SIMMs, set switch to BK3-DIS.
 - 2 MB or 8 MB SIMMs, set switch to BK3-EN.



Note: The NMM self-tests include an optional, exhaustive DRAM self-test. This test is turned off by default. You should turn this test on to check the newly installed memory. For information on activating this self-test, see Chapter 3, “Configuring the Model 5310A/SA NMMs,” in *Using the Model 5310A/SA Ethernet Network Management Modules* (Bay Networks part number 893-600-C).

Model 5510

You use the switches on the switch block labeled SW2 (Figure 16) to set the memory configuration for the Model 5510 NMM.

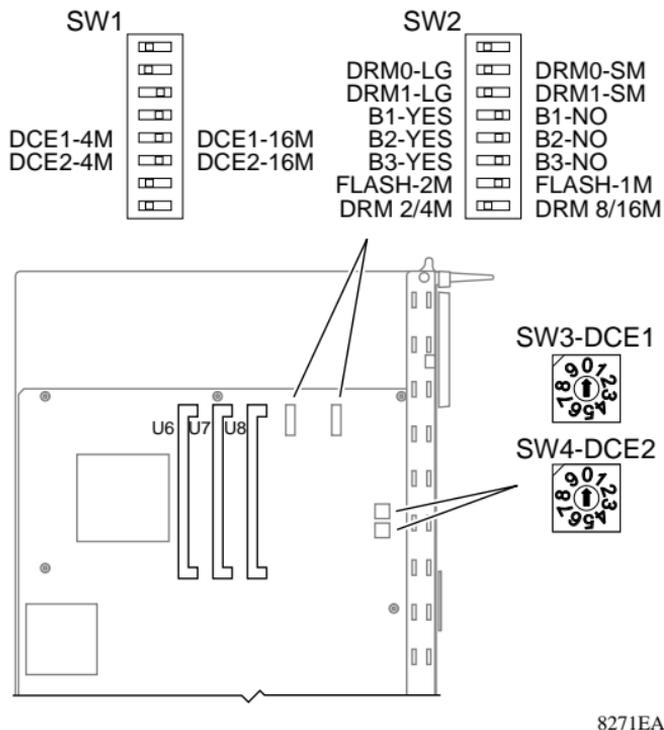


Figure 16. Switch Blocks on the Model 5510

After installing the new SIMM, set the following switches on the Model 5510 to the following positions for the 8 MB SIMM in the DRAM0 socket:

- DRM0-LG/DRAM0-SM: Set to DRM0-LG.
- B1-YES/B1-NO: Set to B1-YES.
- B2-YES/B2-NO and B3-YES/B3-NO:
 - If only 1 SIMM is installed, set these switches to B2-NO and B3-NO.
 - If 2 SIMMs are installed, always set B2-YES. For socket DRM1:
 - 1 MB or 4 MB SIMMs, set switch B3-NO.
 - 2 MB or 8 MB SIMMs, set switch B3-YES.
- DRM 2/4M-DRAM 8/16M: Set to DRM 8/16M.



Caution: If no SIMM is installed in DRM1, set switches B2 and B3 to NO; otherwise, the NMM may experience memory problems.



Note: The NMM self-test diagnostics include an optional, exhaustive self-test of the system DRAM. You should turn this test on to check the newly installed memory. For information on activating this self-test, see Chapter 4, “Configuring the Model 5510 NMM,” in *Using the Model 5510 Token Ring Network Management Module* (Bay Networks part number 893-601-B).
