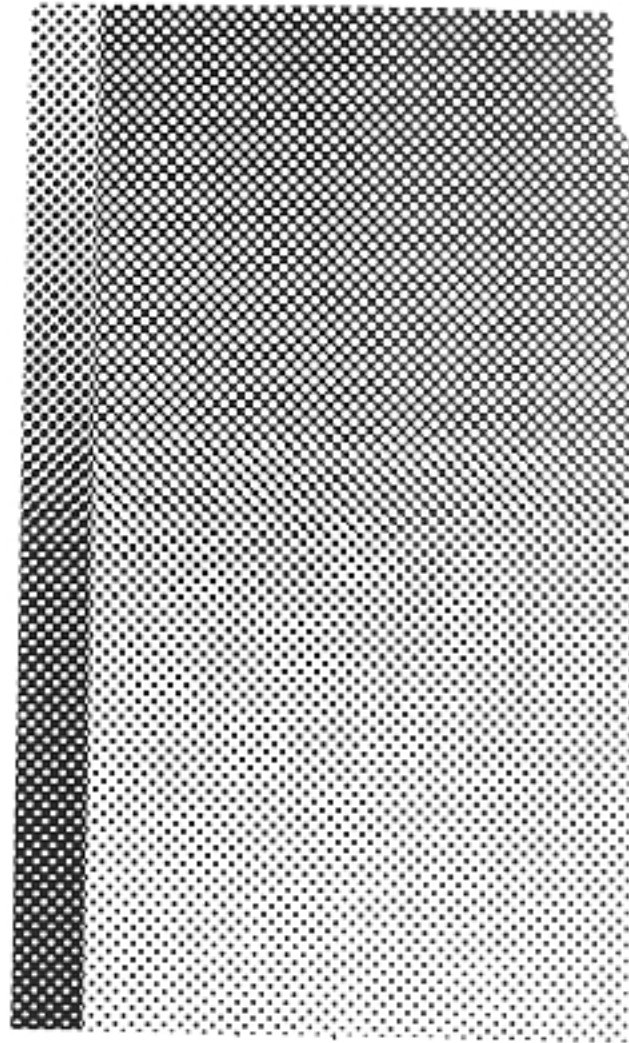




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**AT&T UNIX® PC**

**EIA/RAM Combo Board**  
Installation Guide



Certified to comply with Class B limits. Part 15 of FCC Rules. See instructions if interference to radio operation is suspected.

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A

Expansion Memory Locations

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## Installation of EIA/RAM Combo Expansion Boards

This AT&T UNIX PC Installation Guide tells you how to install any of the following expansion options:

- o 0.5MB RAM Expansion Board (no EIA ports)
- o 2.0MB Expansion Board (no EIA ports)
- o 0.5MB EIA/RAM Combo Board
- \*o 1.0MB EIA/RAM Combo Board
- \*o 1.5MB EIA/RAM Combo Board
- o 0.5MB RAM chip set
- o Two 0.5MB RAM chip sets
- o Dual EIA Port Board (no RAM)

\*Before installing these boards in your system, you must insert the ICs included in the RAM chip sets in their proper locations on the boards according to the following procedures. If you are installing any of the other boards, which do not require insertion of additional ICs, follow the instructions in the installation section in this manual.

Once you have installed the EIA/RAM Combo Board turn to "Setting Up Expansion Ports" in the Owner's Manual.

### Pinouts for RS-232 Ports J1 and J2 on Combo Cards

J1 & J2

Pin	Signal
2	-----TX
3	-----RX
4	-----RTS
5	-----CTS
6	-----
7	-----GND
8	-----CD
20	-----DTR
24	-----CLK OUT
15	-----TXCK
17	-----RXCK

**Required Tools**

- o Small Phillips-head screwdriver (3/16") for removal and replacement of expansion slot covers (Xcelite model X-101 or Xst-101 or equivalent).
- o Chip insertion/removal tool. This is required for relocation and installation of RAM chips on the 1.0 and 1.5 EIA/RAM Combo board.
- o Pliers (for RAM only boards).

**Expansion Memory Installation**

The IC insertion/removal tool is required to install the expansion memory chip set.

For the 1MB Combo board, you will have to first relocate memory ICs installed at the factory. See Table 1 for jumper and memory population.

Table 1. Jumper and IC Locations

RAM	W1	W2	W3	Rows Populated with ICs
0.0	OFF	OFF	OFF	NONE
0.5	OFF	ON	ON	5 & 6
1.0	ON	OFF	ON	7 through 10
1.5	ON	ON	OFF	5 through 10

The additional memory ICs must be installed in specified sections of the memory expansion board. To install the memory ICs, carefully follow the guidelines in the remainder of this document:

**Caution**

Before handling the expansion board or the memory chip set, ground yourself by touching an electrically grounded metal surface. A static charge could damage the memory. Always avoid touching the printed side of the board. Keep one hand on a metal surface (for example, the base of the UNIX PC) while installing the memory IC set.

The memory ICs must be properly oriented when they are installed. The notch in the IC must point towards the flat connector located on the edge of the expansion board. Do not assume that the printing on the top of the module will orient it correctly. See Figures 1 and 2 for proper orientation of the memory ICs.

When installing the additional memory ICs, work on a clean, flat surface that will support the expansion board while you are pressing the ICs into place.

**One MB Combo**

- 1 To install the memory chip set for 1.0MB first determine the locations where the jumper(s) and the ICs must be placed (see Table 1 and Figure 1).

**Caution**

Jumper locations and pins on the ICs must not be bent. Jumpers and ICs must be positioned carefully and then pressed firmly into place.

- 2 Carefully remove the jumper at W2 and place it in jumper position W1.

Note

- There are 20 ICs in the chip set. Store the two extra ICs in a safe place for use as spares.
- 6 Install these 18 ICs in locations 9A through 9K and 10A through 10K.
  - 7 Install the expansion board as described in the installation section of this manual.

One and one half MB Combo

- 1 To install the memory chip set for 1.5MB first determine the locations where the jumper(s) and the ICs must be placed (see Table 1 and Figure 2).
- 2 Leave the jumper at W2 and move the jumper from W3 to W1.
- 3 Remove the 36 additional ICs from their packaging. Inspect the ICs and ensure that their pins are straight.

Note

- There are 20 ICs in each chip set. Store the four extra ICs in a safe place for use as spares.
- 4 Install these ICs in locations 7A through 7K, 8A through 8K, 9A through 9K and 10A through 10K.
  - 5 Install the expansion board as described in the installation section of this manual.

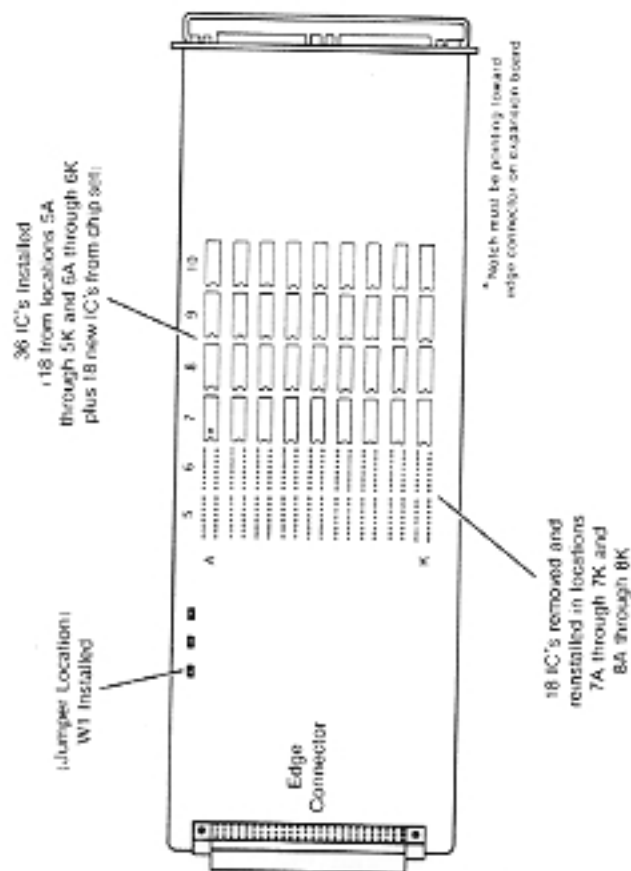


Figure 1 One MB Expansion IC Installation Location

- 3 With the IC removal tool, remove the memory IC's located at 5A through 5K and 6A through 6K on the expansion board.
- 4 Reinstall these ICs in locations 7A through 7K and 8A through 8K respectively.
- 5 Remove 18 additional ICs from their packaging. Inspect the ICs and ensure that their pins are straight.

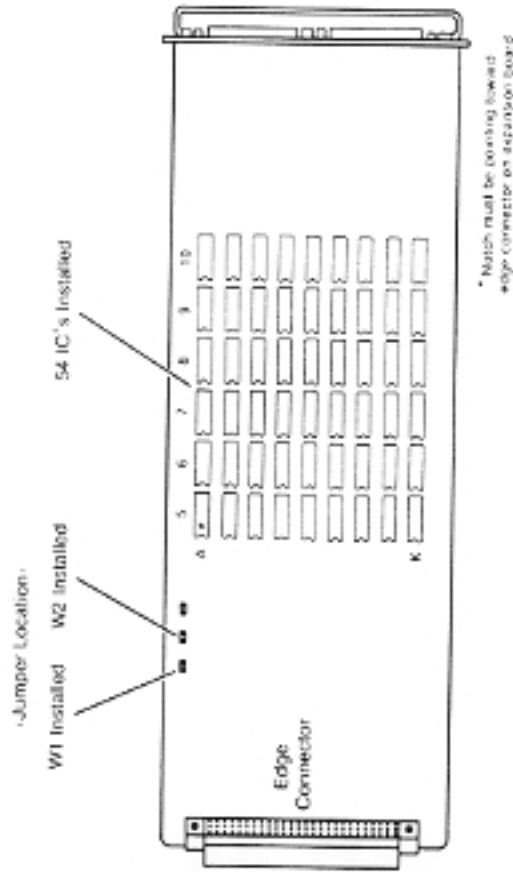


Figure 2 One and One Half MB Expansion IC Location

**Installing an Expansion Board**

The location information given in Appendix A must be followed carefully when installing expansion boards into the UNIX PC. Select the expansion slots you are going to use before continuing with this procedure.

Also, if there are expansion boards already installed on your UNIX PC, you may have to relocate them according to Appendix A. For expansion board removal follow the expansion board removal procedures in this manual.

**The Expansion Slots**

The UNIX PC has three expansion slots in the back of the system. Each slot is covered by a metal plate located on the rear of the unit (see Figure 3). They are numbered as 1, 2, and 3 from left to right as viewed from the rear of the machine.

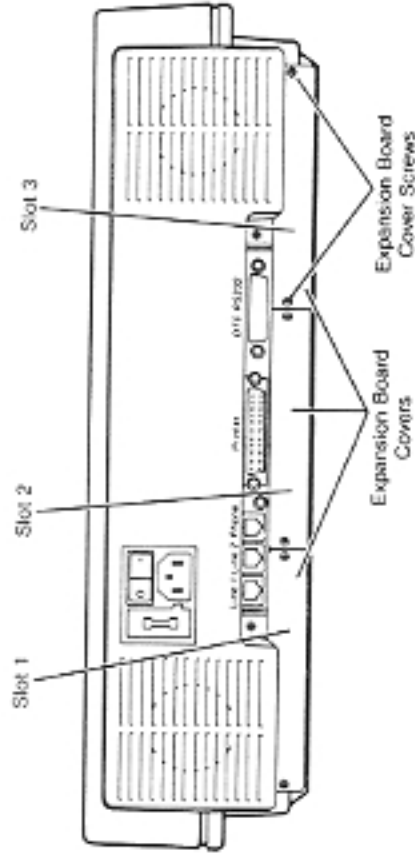


Figure 3 Rear View of UNIX PC

The only tool needed to install an expansion board is a small Phillips-head screwdriver with a blade diameter of about 3/16" (Xcelite model X-101 or XST-101 are examples).

- 1 Before you begin the installation procedure, close all open windows except the Office. Select [Shutdown] from the Office command menu, press <Enter>, wait for Ready to turn power Off, press return to reboot message and then turn the UNIX PC off.  
 Since RAM boards are static sensitive, it is a good idea to leave the PC plugged in so the equipment is continually grounded.
- 2 Remove the two screws from the cover(s) of the expansion slot(s) you have selected. (Be careful not to strip the screws.) The covers come off easily. Retain the covers and screws; you will use the screws to hold the Combo boards in place. For other boards, covers and screws will be replaced at the end of installation.