OVERVIEW

The first part of this chapter discusses the SB3SETUP program, a package intended to simplify installation of SB-III for the user. The second part details the procedure for installing your module in your system.

3.2 THE SB3SETUP PROGRAM

The SB3SETUP program was designed to help you quickly and easily install the SB-III module into your system. The remaining chapters are additional reference material in case you need more information.

1. Remove SB-III from the package and place it on the tabletop beside your computer where you may examine it easily.

2. If you have purchased additional memory for your SB-III, install the memory on the board and/or daughterboard, as applicable. See Appendix C, INSTALLING DRAMS ON SB-III.

3. Turn on power to your computer and boot it normally.

4. Place the SB-III diskette into Drive A and type SB3SETUP at the A> prompt. (You must have at least 128K of memory to run SB3SETUP.) Press return.

5. Answer the questions and follow the prompts as they appear on the screen. The questions are:

   - How many vertical columns of RAM will be on this card?

     Enter the number (1-8) of vertical columns of RAM chips on the SB-III. The black rectangles in the illustration below form one vertical column.

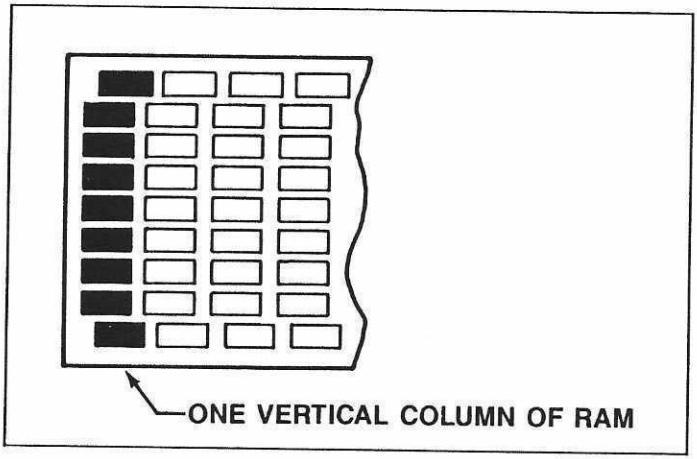

Figure 3-1. RAM Memory Banks

- Do you want SB-III to detect RAM parity errors? Y/N

  Parity errors are errors in communication between your computer and other devices (such as SB-III). Normally, enter Y to this question unless you have a computer that cannot respond to expansion board parity errors (e.g., an AT&T 6300).

- Will you be using the Custom Password feature?

  If you wish SB-III to require entry of a password each time power is turned on to your computer, enter Y. If not, enter N. (See also "SB3MENU Option 1, Password Definition," in Section Five, SB3MENU OPTIONS, if you need additional information.)

- Is SB-III ROM address of (address) acceptable?

  SB-III's ROM needs 32K of address space. The SB3SETUP program has searched your address area and is recommending the best address. Answer Y unless you have some specific reason to set up another address.

- Is the SB-III information listed below correct? Y/N

  The screen displays the responses you have given. Review the information. If it is correct, press Y. If any of the information is incorrect, press N and answer the questions again.

7. Make the necessary adjustments in the DIP switch and shorting plug settings on SB-III, as displayed by the next screen. (See Appendix A, SB-III SWITCH AND JUMPER SETTINGS, if you need additional information.)

   Press any key to go to the next screen.

8. Make certain the RAM is installed on your board and/or daughterboard as illustrated by the final screen.

3.3 SB-III INSTALLATION

After the adjustments have been made according to the SB3SETUP program, SB-III can be installed into the computer.

Without the daughterboard, SB-III can be used in any of the available full-length expansion slots on the PC system board. However, if the daughterboard is installed, select a slot which can accommodate the width of the entire unit.

Complete the following steps to insert the board.

1. Turn the PC off and unplug the power cord. (Inserting or removing the SB-III board with the power on could result in damage to the board or to the computer.)

2. Remove the cover from the computer. See Figure 3-2.

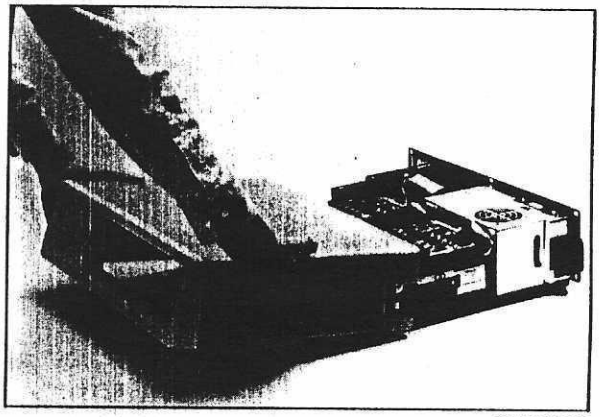

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Figure 3-2. Removing the System Unit Cover.

3. If adding SB-III will increase your system memory (e.g., from 256K to 640K), you may need to reset the DIP switches on your computer's system board for 640K. See your owner's manual for instructions on doing so.

SB-III SWITCH AND JUMPER SETTINGS

A.1 OVERVIEW

This appendix contains all the switch and jumper settings that you will need in order to prepare your module for your system. The information is organized as follows:

Subsection	Title
A.2	SB-III Switch Settings
A.3	Setting the SB-III DIP Switches
A.4	Functions of DIP Switches
A.5	Setting up the SB-III Ports
A.6	Using the RS-232C Configuration Jumpers

A.2 SB-III SWITCH SETTINGS

NOTE

Designs of DIP switches vary. Your SB-III may have either of the following types of switches.

Slide Type

The word "ON" is printed on top of the switch. To turn it on, slide the switch over so the knob is toward the side that says "ON".

Rocker Type

The word "OPEN" is printed on top of the switch. To turn the switch on, press down (with a pin or a small screwdriver) on the side of the switch opposite the side that says "OPEN".

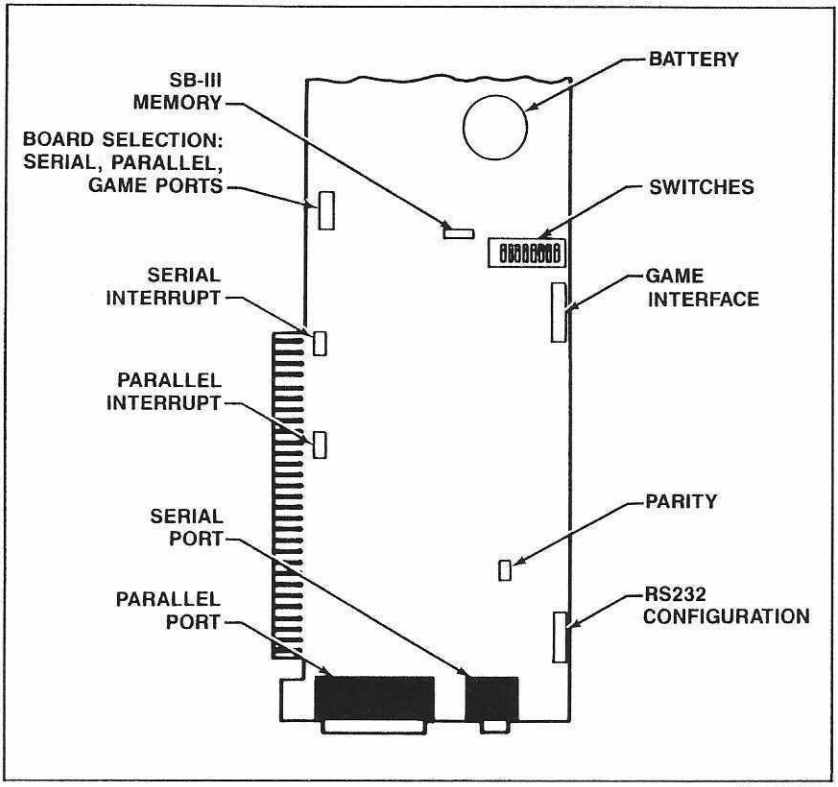

Figure A-2. SB-III Switch and Jumper Locations

A.3 SETTING THE SB-III DIP SWITCHES

See Figure A-2 for the location of the DIP switches. Figure A-3 shows the functions of the switches:

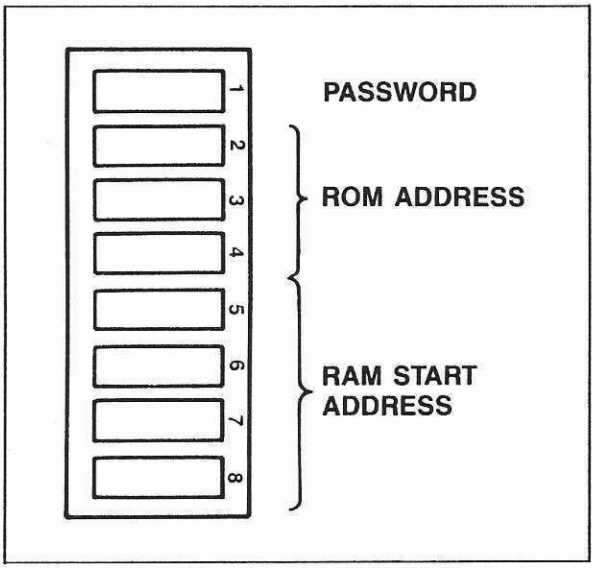

Figure A-3. Functions of DIP switches

A.4 FUNCTIONS OF DIP SWITCHES

A.4.1 Switch 1 - Password Enable

Switch 1 is the password enable switch; Off is password disabled, On is password enabled.

A.4.2 Switches 2 through 4 - ROM Address Select

These switches are used to select the address for SB-III's ROM, which contains, among other things, the built-in diagnostics. The switch settings are:

SW 2	SW 3	SW 4	Address
Off	Off	Off	Disabled
Off	Off	On	A000H
Off	On	On	C800H
On	Off	Off	D000H
On	Off	On	D800H
On	On	Off	E000H
On	On	On	E800H

A.4.3 Switches 5 through 8 - System RAM Start Address

SB-III's RAM must be assigned a starting address; this address is based upon the amount of memory you already have in your computer before installing SB-III. The switch settings are:

Memory already in computer	(Hex)	SW 5	SW 6	SW 7	SW 8
64K	(1000H)	Off	Off	Off	On
128K	(2000H)	Off	Off	On	Off
192K	(3000H)	Off	Off	On	On
256K	(4000H)	Off	On	Off	Off
320K	(5000H)	Off	On	Off	On
384K	(6000H)	Off	On	On	Off
448K	(7000H)	Off	On	On	On
512K	(8000H)	On	Off	Off	Off
576K	(9000H)	On	Off	Off	On
640K		Off	Off	Off	Off

A.5 SETTING UP THE SB-III PORTS

This section presents the directions for setting up the SB-III serial port, parallel port, and game port interface. (More detailed information about the ports is included in Appendix B, TECHNICAL INFORMATION.)

A.5.1 Setting Up the SB-III Serial Port

SB-III has one serial port which can be used for a serial printer, modem, mouse, or other device which uses an RS-232C interface.

PCs allow up to two serial ports, COM1 and COM2. SB-III's port is factory set as COM1, but it can be set as COM2, or disabled.

The "Board/Port Select" and the "Serial Interrupt" jumpers are used to select the COM1 or COM2 setting. (See Figure A-2.)

A.5.1.1 Serial Port Setting for COM1

The COM1 (factory default) setting is illustrated in Figure A-4.

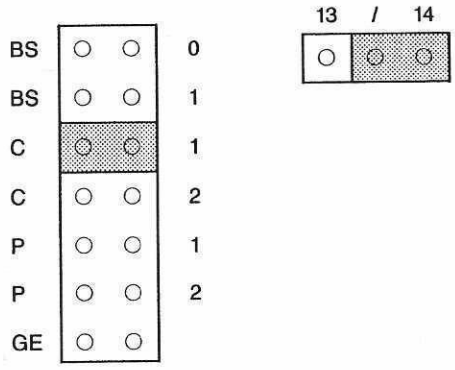

Figure A-4. COM1 Jumper Setting

A.5.1.2 Serial Port Setting for COM2

If your PC already has one serial port, move the shorting plugs from their factory settings and set them to COM2, as shown in Figure A-5.

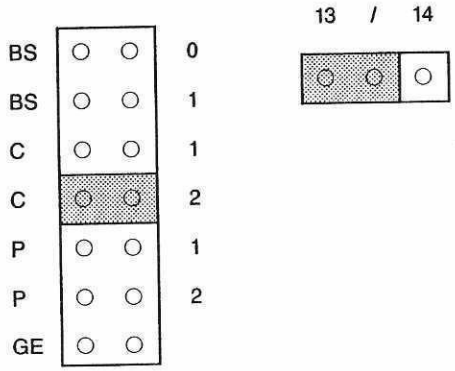

Figure A-5. COM2 Jumper Setting

A.5.1.3 Disabling the Serial Port

If the serial port is to be disabled, remove the shorting plugs from the serial port jumpers. (Attach one side of each shorting plug to one of the pins, so it will be there when you need it.)

A.5.1.4 Serial Port Cable

Use a serial adapter cable with a 9-Pin communications connector (female) and a 25-pin communications connector (male). (See Appendix B, TECHNICAL INFORMATION, for more information regarding the connector specifications.)

A.5.2 Setting Up the SB-III Parallel Port

SB-III has one parallel port for a parallel printer. The parallel port on SB-III is factory set to respond as LPT1. It may also be set to LPT2.

The following table shows how device numbers are assigned according to what parallel ports are available in the system. If LPT1 is already assigned, you must use LPT2 for the SB-III port.

Number of Parallel Ports installed	Hex Address 3BC	378	278
1	LPT1	—	—
	—	LPT1	—
	—	—	LPT1
2	LPT1	LPT2	—
	LPT1	—	LPT2
	—	LPT1	LPT2

The Board/Port Select and Parallel Interrupt jumpers are used to select the LPT1 or LPT2 setting. (See Figure A-2 at the beginning of this section for the locations of these jumpers.)

The settings shown in this section are for computers which do not already have multiple parallel ports. If you have any trouble getting your SB-III parallel port to respond, run the SB3SETUP program on the SB-III diskette. (Refer to Section Three, SB-III INSTALLATION.) It will determine whether your parallel port addresses are occupied. If so, you will have to disable the SB-III parallel port (leave the shorting plug off the P1/P2 pins) or rearrange your computer's setup. (the addresses which may be used for parallel ports are: 3BC, 378, and 278).

A.5.2.1 Parallel Port Setting for LPT1

The parallel port LPT1 settings are illustrated in Figure A-6.

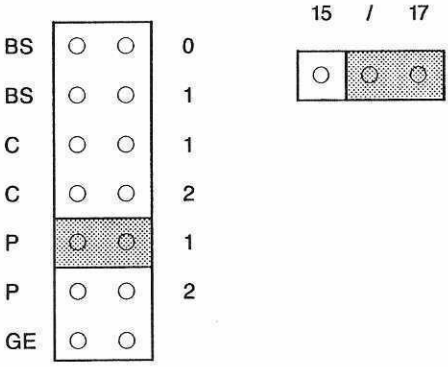

Figure A-6. LPT1 Jumper Setting

A.5.2.2 Parallel Port Setting for LPT2

If the PC already has one parallel port for LPT1, set the shorting plugs for LPT2, as shown in Figure A-7.

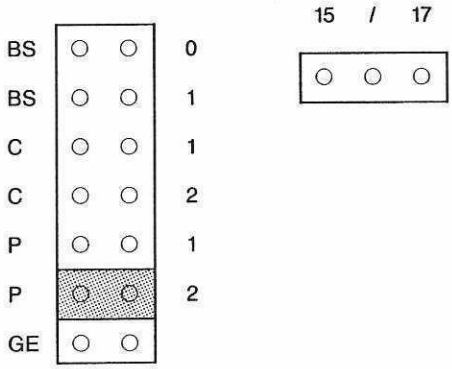

Figure A-7. LPT2 Jumper Setting

A.5.2.3 Disabling the Parallel Port

If the parallel port is to be disabled, remove the SB-III shorting plugs. (Attach one side of each shorting plug to one of the pins, so it will be there when you need it.)

A.5.3 Setting Up a Game Port on SB-III

SB-III has a Game Port Interface for attaching an IBM compatible game port.

See the illustration at the beginning of this section for the location of the Board/Port Select jumpers and the Game Port Interface.

To use the game port interface, place a shorting plug on the pins marked "GE" on the Board/Port Select jumpers, as illustrated in Figure A-8.

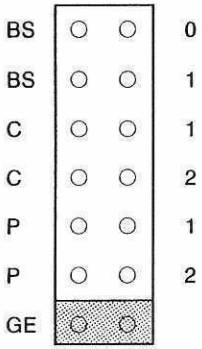

Figure A-8. Jumper Setting to Enable Game Port

Then, plug the game port cable (obtained from your local dealer) onto the game port interface connector.

A.6 USING THE RS-232C CONFIGURATION JUMPERS

See Appendix B, TECHNICAL INFORMATION, regarding SB-III Ports for more information on using these jumpers.

A.6.1 SB-III Memory Jumpers

See Figure A-2 at the beginning of this section for the location of these jumpers.

The SB-III Memory jumpers are used to set the amount of memory installed on the SB-III board.

If your SB-III has only one row of DRAMs, place a shorting plug on the lower pin, marked "256," and the center pin.

If your SB-III has two rows of DRAMs, place a shorting plug on the upper pin, marked "512," and the center pin.

If your SB-III has more than two rows of memory installed, do not place any shorting plug on these pins.

A.6.2 Parity Jumpers

See Figure A-2 at the beginning of this section for the location of these pins.

If you wish parity errors to be detected, place a shorting plug on these pins.

If you do not wish parity errors to be detected, do not place a shorting plug on these pins.

B.3 SERIAL PORT RS-232C CONFIGURATION BLOCK

The RS-232C Configuration Block is located along the upper edge of SB-III near the mounting bracket. In the factory-default configuration, the shorting plugs on the RS-232C Configuration Block are set at positions DS (DSR), CD (DCD), and CT (CT S). In this configuration, RS-232C inputs are not disturbed as they come into SB-III. Driving the inputs is left up to whatever device is being used.

If you are using a device which does not drive RS-232C inputs, you must force the DSR, DCD, and CTS inputs true. To do so, move each of the three shorting plugs to the blank position to the left of each default position.

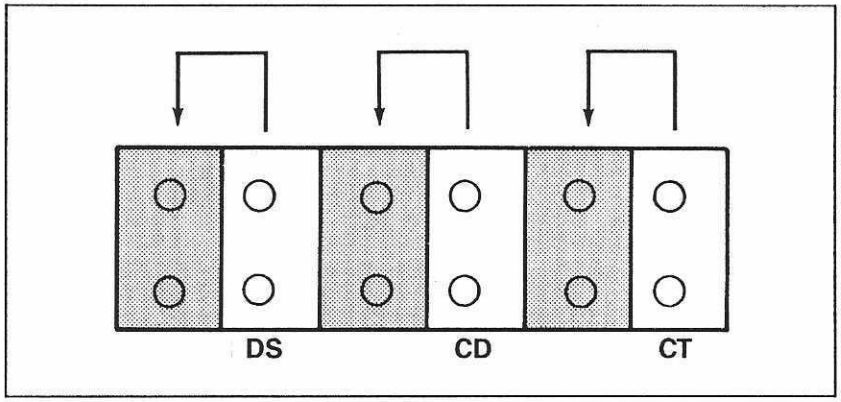

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Figure B-2. RS-232C Shorting Plugs in Forced-true Position