

Setting up your Epson PC AX2e doesn't take long – and once it's done, you'll be ready to start. This guide takes you, step-by-step, through the setting up process.

# PC AX2e

*...setting up*

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The Epson PC AX2e is a versatile micro-computer that supports a wide range of peripheral equipment. The built-in features include:

- 1 Mbyte of on-board RAM memory
- a 1.2 Mbyte 5.25" diskette drive
- a parallel printer port and RS-232C serial port
- a diskette drive controller
- a PS/2™ compatible mouse port
- 115 or 230 VAC switchable power supply
- a real-time clock and battery backed-up CMOS RAM.

The Epson PC AX2e also features:

- DOS 4
- selectable CPU speeds of 8 or 12 MHz.
- an enhanced 101/102 key keyboard
- an 80287 numeric coprocessor socket
- a power-on password function.

The expansion options currently available for the Epson PC AX2e include:

- the Epson VGA adapter
- SIMM modules to add up to 4 Mbytes of on-board memory
- 360 Kbyte and 1.2 Mbyte 5.25" diskette drives
- 720 Kbyte and 1.44 Mbyte 3.5" diskette drives
- 40 or 100 Mbyte hard-disk drives with built-in controllers.

Check with your Epson dealer from time to time to find out what options are available. You can also use most of the option cards designed for the IBM® PC and AT®; your dealer can advise you on compatibility.

### ***About this guide***

This guide provides the necessary information on how to set up your Epson PC AX2e, how to connect optional equipment and how to install DOS 4 on your computer. We recommend that you follow the setup procedure in the order listed below:

- 1 Read the section called **Preparation** in this guide.
- 2 After you decide where to locate your system, read the section called **Setting up** and connect your peripheral devices.
- 3 Read the section called **Getting started**. It contains details of settings you must make before turning on the computer and the procedure for installing DOS 4.

If you encounter words that are unfamiliar, you can find a list of terms in *DOS 4 ...in action*.



# ***Preparation***

## Arranging the system

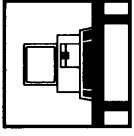
Inspect each part of the system as you unpack it. If anything is missing or looks damaged consult your Epson dealer. Keep the packing materials; they have been carefully designed to provide the best protection possible, and you should use them whenever you need to relocate or ship your system.

An important part of setting up your system is deciding where to locate it and how to arrange it. Whether you use your computer at home or in the office, choose a convenient location and allow plenty of space so that you can work comfortably.

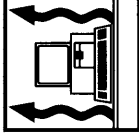
You should be able to place the main unit horizontally with the video monitor on top and the keyboard directly in front. The printer should then be located to one side, so that the data and power cables do not get in the way of the paper.

### *The environment*

Before you begin connecting the system components, be sure that the location you have chosen meets the following conditions:



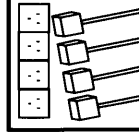
Choose a surface for your system that is sturdy enough to support the weight of all its components. Surfaces like carpeted floors attract static electricity which can erase data from your disks and cause problems in the computer's circuitry. They also interfere with proper ventilation.



Air must be able to circulate freely over and under the system as well as behind it. Clear at least four inches behind the computer for proper ventilation, and do not place anything other than a monitor on top of the main unit.



It is important to protect your computer from extremes in temperature, humidity, dust, and smoke. Avoid direct sunlight or any other type of heat source, and do not use your computer in damp areas. Dust and smoke are especially damaging to disks and disk drives.



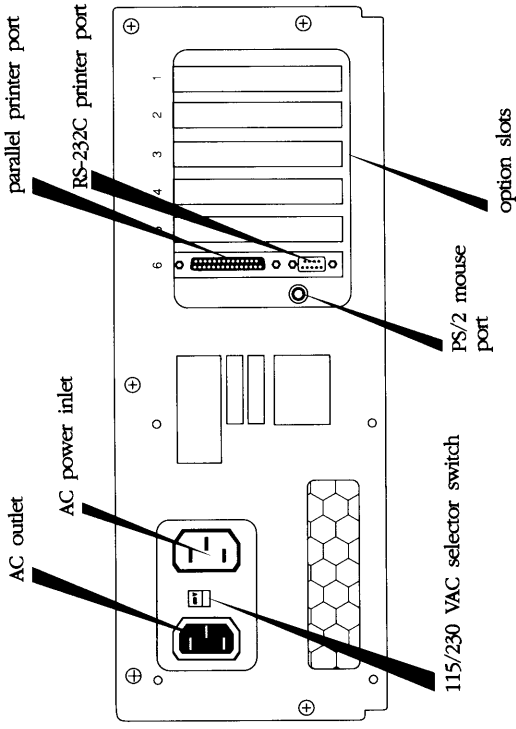
Connect the equipment to properly earthed sockets. Use separate outlets for each component including the computer main unit, the video monitor, and other peripheral devices. Avoid using outlets on the same circuit as powerful machine tools or heating systems which regularly switch on and off.



Keep your computer away from any electrical device, such as a loudspeaker, that can generate an electromagnetic field. A telephone can cause trouble, especially if you keep your disks right next to it.

## The rear panel

Before you start connecting up your system, look at the rear panel to familiarize yourself with the positions of the switches and connectors.



A switched auxiliary power outlet (120 Watts maximum).

The power cord connects to the main unit here.

Allows you to connect a PS/2-compatible mouse.

Allows you to connect an external device that uses a parallel interface, such as a printer or plotter.

Allows you to connect an external device with a serial interface, such as a modem or another computer.

The Epson PC AX2e has slots for five option cards of your choice. You can use these slots to add devices such as a video adapter or a modem.

Allows you to select either 115 or 230 VAC input for the power supply. This switch is already set to the correct position for your country.

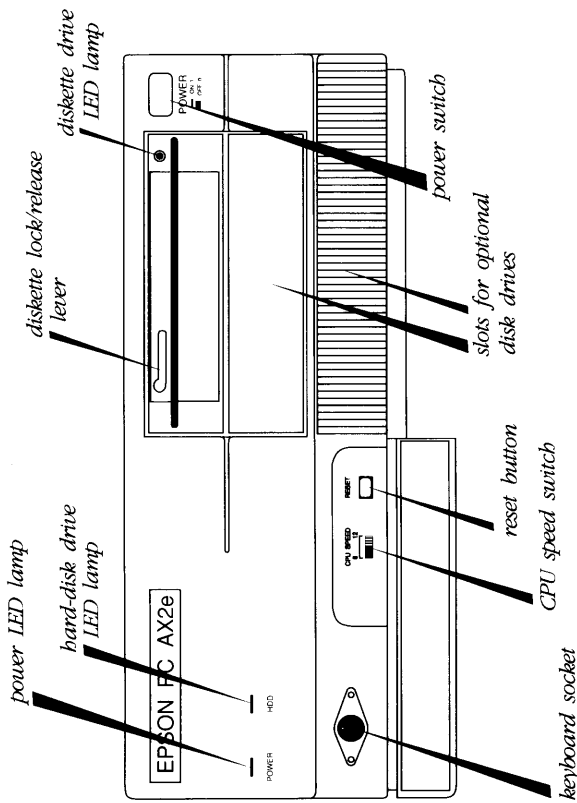
*Caution*

Do not connect the power cable until all external devices are connected. Once you connect the power cable, always be sure that the power switch is OFF when you connect or disconnect any external devices.



## The front panel

When you have finished looking at the rear panel, turn the main unit around to face you. The components on the front panel are shown below, with the cover open to show the switches and sockets. To open the cover, gently press the cover inward and then release it. The cover pops open and downward.



A light to indicate that the power is ON. The colour of the lamp changes according to the CPU speed you select. The colours and their respective speeds are:

colour	CPU speed (MHz)
red	8
green	12

A light to indicate that the hard-disk drive is being accessed.

Rotate the lever anti-clockwise to insert a new diskette or to eject one that is already in the drive. Rotate the lever clockwise to lock a newly inserted diskette in place.

A light to indicate that the diskette drive is being accessed.

Turns the power to the main unit ON and OFF.

A 360 Kbyte, 720 Kbyte, 1.2 Mbyte or 1.44 Mbyte diskette drive, or a 40 or 100 Mbyte hard-disk unit can be fitted in these positions. Two slots can be used for a full-height drive.

Resets the computer. See page 47 for resetting instructions.

Allows you to select an 8 or 12 MHz CPU speed. A higher setting allows your applications software to work faster.

The keyboard cable plugs into the main unit here.

### ***Removing the disk-protector sheet***

When the computer is packed at the factory, a cardboard sheet is inserted in the slot of the diskette drive to protect the recording heads.

Remove the protective sheets before making any cable connections. For the 1.2 Mbyte drive, rotate the lock/release lever anti-clockwise until the sheet pops out. Carefully pull out the sheet and save it along with the other packing materials.

You should always replace the protective sheet when the computer is moved, even if you are only carrying it to another part of the room.

## Safety precautions

These safety rules will help you avoid accidental damage to the computer or injury to yourself. You should:

- never unplug cables from the computer while the power switch is ON
- never turn the computer OFF when a diskette is turning in a diskette drive or while one of the drive select lamps is on. This will certainly cause data to be lost and may make the whole diskette unusable. The same can happen to hard-disk drives and even more data can be destroyed
- always wait at least five seconds after switching the power OFF before switching it ON again. Turning OFF and ON rapidly can damage the computer's circuitry
- always turn off the power, disconnect the mains power cord and wait for a few minutes before removing the cover from the computer
- discharge any static electricity from your body before touching any parts or connectors inside the computer
- never attempt to dismantle any part of the computer. You should only open the case to fit or remove option cards. If there appears to be a hardware problem that cannot be solved after reading the troubleshooting section in the *PC AX2e ...owner's handbook*, or if you wish to install a 80287<sup>™</sup> numerical co-processor, consult your Epson dealer.



***Setting up***

If your video adapter has not been installed by your dealer, or you need to install a new video adapter, refer to the instructions on installing options in the *PC AX2e ...owner's handbook*.

It is safe to place the video monitor on top of the main unit. The top of the main unit is not designed to support heavier objects.

Turn the main unit so that the back is facing you and place the monitor on top so that you can get access to all connectors.

The exact procedure to connect the monitor to the video adapter varies for each monitor/adapter combination. You should check the instruction booklets that came with the monitor and video adapter. Some hints are provided below.

- 1** Before connecting any cables, make sure that the power switches to both the main unit and the monitor are switched OFF.
- 2** Connect one end of the video cable to your monitor. Some monitors have one end of the cable permanently attached.

3 For VGA monitors, connect the other end of the video cable to the fifteen-pin connector on the video adapter.

For monochrome or RGB colour monitors, connect the other end of the video cable to the nine-pin connector on the video adapter.

For a composite video colour monitor, connect the other end of the video cable to the phono connector on the video adapter.

4 Plug the monitor power cable into a separate electrical outlet from the main unit or into the AC outlet at the rear of the main unit. If you use the AC outlet, make sure the monitor's power requirement does not exceed 120 Watts.

There is a switch on most multi-scan monitors that allows you to select two types of video signal input – analog or TTL. Check the instruction booklets that came with the monitor and video adapter for the correct type of input for your monitor/adaptor combination. For Epson VGA monitors, you must select **analog**.

The keyboard provided with the Epson PC AX2e is produced in a number of different layouts for different countries. All versions function in the same way and can be defined to produce the characters used in many different countries. There is more information on using international keyboards in *DOS 4... getting more*.

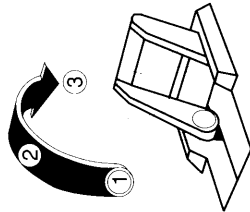
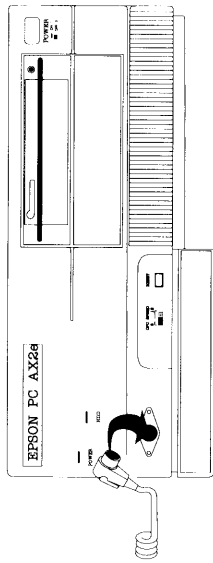
### Setting up the keyboard

Once the main unit and monitor are connected, turn the system round to face you, ready to connect the keyboard. The keyboard cable is coiled like a telephone cord, with the connector on one end. Open the panel at the bottom of the front panel and insert the keyboard connector with the cable emerging to the left of the main unit.

Do not force the connector, but make sure it is all the way in. Gently push the cable into the retaining clip and close the cover.





To disconnect the keyboard, open the cover, lift the tab on the connector and pull it straight away from the machine. Do **not** disconnect the keyboard by pulling directly on the cable.

You can use the keyboard at three different angles. You can lay it flat on a desk or use the adjustable legs to tilt the keyboard. To adjust the keyboard legs, turn the keyboard over and lift the legs upward until they lock into place. You can change the angle by moving the legs to an alternate position.



## Using the keyboard

The operating system you use determines how the keyboard operates. This table shows how the most important keys operate with DOS 4. For details, see the section on using the keyboard in the *DOS 4...in action*.

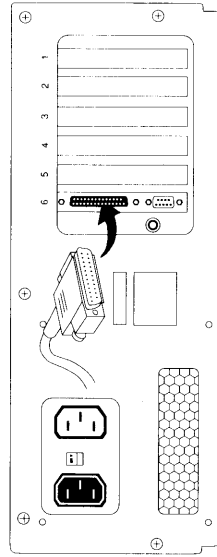
key	purpose
	ends a line of keyboard input; shown as <b>Enter</b> in these guides
	used with the main character keys to input upper case characters or the upper symbol on the key
<b>Caps Lock</b>	locks/unlocks the characters A - Z into upper case
	moves the cursor a set number of spaces to the right
	moves the cursor one character to the left, deleting it
<b>PrintSc</b>	prints out the current screen display on your printer
<b>Pause</b>	halts the current operation until you press a key
<b>Ctrl</b>	used with other keys to perform special functions, for example, special editing functions in DOS 4
<b>Alt</b>	used with the numeric key pad to display characters not otherwise available; also used with function keys in the DOS SHELL
<b>Num Lock</b>	selects the function of the numeric/cursor keys

The Epson PC AX2e is equipped with serial and parallel interfaces as standard features. The connectors used are compatible with those on an IBM PC AT, but are not the same as the connectors used on many computers, so make sure you have the right cables before making a connection. In particular, the parallel connector on the Epson PC AX2e is a DB-25 socket of the same type as the RS-232C serial port on many other computers.

### **Parallel interface**

All Epson desktop printers and plotters are available with a parallel interface. To connect your printer go through the following steps.

- 1 Place the printer in a convenient position next to your system, so that the power and data cables do not interfere with the paper.
- 2 Before connecting any cables, make sure that the power switches to both the main unit and the monitor are switched OFF.
- 3 One end of the printer cable has a 25-pin male D-connector. Connect this end to the larger socket on the multi-function card. If the plug has retaining screws, tighten them with a small screwdriver.

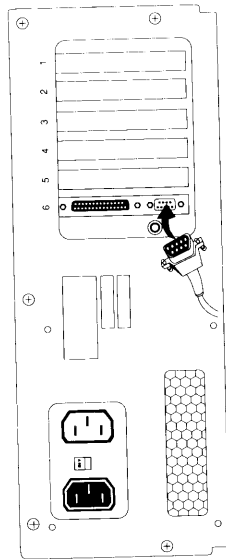


- 4 Connect the other end of the cable to the printer. Secure the cable by pressing the squeeze locks at each side of the printer port into the tabs on the plug.
- 5 Finally, connect the printer's power cable to a separate electrical outlet.

### **Serial interface**

If you have equipment such as a printer or a modem that has a serial interface, connect it to the 25-pin male D-connector on the multi-function card. To make the connection, follow the steps above for connecting a parallel device.

The RS-232C serial port needs to be configured properly in order for it to function correctly. In addition, printer output may need to be redirected to the serial port (COM1:) instead of the parallel port. Refer to *DOS 4 ... getting more* for instructions on how to set up a serial printer for use with DOS 4.



### ***Using Epson printers with the PC AX2e***

The Epson PC AX2e uses a special character set (like that of the IBM PC AT) which assigns graphics and international characters to some of the character codes. In many cases, if you try to print these characters on a standard printer, you get italic characters instead. All Epson printers support this character set as a standard feature; ask your dealer for details.

### ***Optional interfaces***

The built-in serial and parallel ports are usually used as the primary ports. If you install an optional parallel or serial interface, be sure to set it up as a secondary port so that it does not interfere with the built-in ports. You set up the optional interface using jumpers or DIP switches on the card or a special program. Refer to the interface manual for details. You change the settings of the built-in ports using the Setup program described in the *PC AX2e...owner's handbook*.

### ***Internal modem***

If you install an internal modem in your Epson PC AX2e, set the jumpers or DIP switches on the modem to allow you to operate on the secondary communications line (COM2). You will also need to instruct your communications program of the proper line settings. Refer to the modem user's guide for details.

***Getting started***

Depending on the options you fit to the system, you may need to set:

- the CPU speed switch
- CMOS RAM with the SETUP utility
- jumper connectors inside the main unit.

### ***CPU speed switch***

The CPU speed switch is hidden behind the cover on the front panel. To open the panel, gently press inward on it and release it. The cover pops open and downward.

In general, you will always want to select the fastest speed (12 MHz). However, some applications software and optional hardware may require you to select a slower speed. You can also control the CPU speed with the Autospeed feature, described in the *PC AX2e ... owner's handbook*.

## A word about CMOS RAM

The Epson PC AX2e has a feature known as **CMOS RAM** (pronounced *see-moss ram*). This is a special type of computer memory which is backed up by a battery so that its contents are not lost each time you turn off the computer. The Epson PC AX2e uses this CMOS RAM to store certain system configuration information which the system uses when it starts up.

When you first start up the system, you may need to set up the contents of CMOS RAM. This is described in the section starting on page 31.

You know that you need to set up the contents of the CMOS RAM when you turn on the computer and see an error message along with instructions to run the SETUP utility.

## A word about jumpers

Some of the circuit boards inside the computer have small, removable connectors called **jumpers** that you can move to physically change the way the system operates. Unless you install a hard-disk controller board or option cards with extra parallel and serial ports, you should never need to alter the position of any of the jumpers.

To check under which situations you might need to change the position of jumpers, refer to the *PC AX2e ...owner's handbook*.

Once you have connected the monitor, keyboard and peripheral devices to the main unit, it is ready to be powered up. Insert the power cable into the power inlet socket on the rear panel and plug the other end into an electrical outlet.

Before you finally turn on the computer, make sure you have read the safety rules on page 15. Also, if you are not familiar with the care and handling of diskettes, refer to the section on using diskettes in the *PC AX2e ...owner's handbook*.

First turn on the monitor to warm it up. Turn on the power switch, before inserting a diskette. You should never turn on the computer with a diskette in a diskette drive, as the diskette may be damaged. The power indicator LED lights up, and the cooling fan inside the main unit starts. The computer then begins by performing an internal self-diagnostic test. When it finishes testing you see:

If your system is not configured correctly, the next message you see is:

Do **not** press the **F1** key. Go to the section starting on page 31.

If your Epson dealer has prepared your system, you then see something like:

This is the first screen of the new DOS SHELL interface, which is described in detail in *DOS 4 ...in action*.



The final step is to set the current date and time.

press **F3**

type **DATE** and then press **Enter**

if the date is not correct, type the date, separating each value with a dash (–)

type **TIME** and then press **Enter**

if the time is not correct, type the time, separating each value with a colon (:)

This last message is the DOS command prompt – the place where you enter all DOS commands. You can now go on to the beginning of *DOS 4 ...in action* where you can begin to learn how to use the DOS SHELL program.

When you first start up your Epson PC AX2e and you see a message telling you to run SETUP (page 28), you will need to load DOS 4 from the Reference diskette. This diskette contains the SETUP program that you must run to make sure your system is set up correctly and that the computer knows exactly what hardware is installed.

place the Reference diskette in the upper diskette drive and lock it into place with the lock/release lever

press **F1**

### ***Starting the setup procedures***

The SETUP program starts automatically. You see a screen similar to this:

Accepting the default values will usually be perfectly alright. However, there are certain settings that SETUP cannot make, for example the correct time and date. If you have installed a hard-disk drive that does not use the built-in hard-disk interface, (that is, one that has a separate hard-disk controller), you may need to set the type yourself.

press **Enter**

After a few seconds you see the main setup menu:

press **Enter** to leave the menu

’;

You can find a guide to the keys you can use at the bottom of every SETUP screen.



The first page of the configuration settings is displayed:  
press **[PgDn]** to display the second page of configuration settings:  
check that the time and date settings for the real-time clock are correct  
press **[PgDn]** to display the third page of configuration settings:  
check that the hard-disk settings are correct  
If all of the configuration settings are correct:  
press **[↓]** twice to move the cursor to **\*\* EXIT AND SAVE \*\***  
press **[Enter]**  
Now go to the section on ending the setup procedures on page 36.

### ***Making changes***

If a configuration setting is incorrect:  
make sure that the cursor is on **Change settings**  
press **[Enter]** to display the main menu again

### ***Setting the real-time clock***

The computer automatically keeps track of the time and date using a battery-backed, real-time clock – even while the computer is turned off. Many software packages display the time and date held in the clock, but they cannot make permanent changes to the time and date settings.  
Use the **Real-time clock** option or the DOS TIME and DATE commands if you need to change the time and date permanently, for example to accommodate seasonal adjustments, such as daylight saving time. The computer automatically adjusts for leap years. Note that even

though DOS and your applications may use a different format, the real-time clock uses a 24-hour time format to store the time.

To change the current time and date in the clock:

press  to move the cursor to **Real-time clock**

You see the time and date displayed like this:

press

The cursor moves to **Time**. To set the time:

press

enter the time in the exact form shown in the box, using two digits for each part; the computer automatically inserts the colons (:)

when you have finished entering the time, press

Check that the new time is correct. If you enter an invalid time, the computer beeps and the time does not change.

To set the date:

press  to move the cursor to **Date** and press

enter the date in the exact form shown in the box, using two digits for the day and the month; the computer automatically inserts the dashes (-) when you have finished entering the date. press

Check that the new date is correct. If you enter an invalid date, the computer beeps, and the date does not change.

When you have set the time and date:

press  to return to the main menu and to save your changes

### To set the hard-disk drive type

SETUP can automatically set the correct hard-disk type for drives that use the built-in hard-disk interface. If you are using a hard-disk that uses a separate hard-disk controller, you may need to set the correct drive type. Refer to the hard-disk user's guide and to the *PC AX2e ...owner's handbook* for the correct drive type number to set.

press  to move the cursor to **Hard-disk drive** and press

The settings for two hard-disk drives are displayed.

press

The cursor moves to the setting for Drive 1. To change this setting:

press

To disable the hard-disk drive:

move the cursor to **None**

To change the type:

press

xxx is the drive type for your hard-disk drive.

press  to move the cursor to **Drive 2**

repeat the procedure for this drive.

press  to move the cursor to **Change settings**

press  to move the cursor to **\*\* SAVE SETTINGS \*\***

press  to return to the main menu and to save your changes

### ***Ending the setup procedures***

Once you have checked the system details, you must make the changes permanent.

press  to move the cursor to **Exit** and press

The program then displays the first page of the configuration settings so that you can check the settings before they are placed in CMOS RAM.

If one of the settings listed is incorrect:

press  to return to the main menu and correct it

If the settings are correct:

press  to move to **\*\* EXIT AND SAVE \*\***, and press

If the computer displays a setup error message, run the setup procedure again and check all your settings.

If there are no setup error messages:

type **0**  to exit to DOS

remove the Reference diskette and replace it in its protective envelope

### ***Checking the hard-disk status***

You need to test whether the hard disk has already been set up.

type **DIR C:** and press

If you see a list of files, dates and times, then the hard disk is ready to use straight away. You can now refer to *DOS 4 ...in action* to learn how to use the DOS SHELL program.

If the disk has not been prepared other than factory testing and formatting, you see an error message:

This does not mean that there is a problem with the drive; it simply means that you need to follow the instructions in the next section on setting up DOS 4 on your hard disk.

The diskettes that came with your Epson PC AX2e contain an installation program that automatically sets up DOS 4 on your computer. There are some choices you have to make during the installation program, for example, you have to tell the program the type of printer you are using.

You will need one blank diskette: if drive A is a 5.25 inch diskette drive, you will need one 360 Kbyte diskette, if it is a 3.5 inch drive you will need one 720 KByte diskette. Before you start, label the blank diskette "SELECT COPY". The diskette does not have to be formatted.

To start the installation program:

put the *Install* diskette in drive A

hold down  ,  and press

Follow the instructions as they appear on screen. The first choice you are asked to make is on the **Specify Function and Workspace** screen.

press  to move the cursor to:

press

The **Select Country and Keyboard** screen is displayed.

press  to move the cursor to:

press

The **Country Selection** screen is displayed.

press  to move the cursor to the correct country and press

The **Keyboard Selection** screen is displayed.

use  and  to move the cursor to the correct keyboard (the layout of each keyboard is given in *DOS 4 ...getting more*)

press

The **Select Installation Drive** screen is displayed. You are installing DOS on your hard disk (drive C) so:

press

The **Specify DOS Location** screen is displayed. The default settings are fine, so:

press

Now you are asked to specify the number of printers you have connected to the Epson PC AX2e.

type the number of printers and press

The **Printer Selection** screen for the first printer is displayed.

use  to move the cursor to the type of printer you have connected; for Epson printers, select either:

**or**

press

move the cursor to the printer port to which you have connected the printer and press

If you want to refer to a serial printer as a parallel printer, do not select anything here. The redirection of parallel printer output is described in *DOS 4 ...getting more*.

continue to select the type of printer and the printer port for each printer you have connected

The **MS-DOS Shell Option** screen is now displayed. The DOS shell is a menu-driven user interface for DOS commands.

press  to move the cursor to:

press

The **Installation Options** screen is now displayed. The configuration defined by SELECT will be fine. If you want to modify the configuration you can do this when you have installed DOS 4; details are given in *DOS 4 ...getting more*.

make sure the cursor is on option 1 and press

The installation program now prompts you to label the blank SELECT COPY diskette. You have already done this, so:

press

The Installation program now formats and copies files to the SELECT COPY diskette. Follow the instructions about inserting diskettes displayed on the screen.

When the SELECT COPY diskette is complete, the **Partition Fixed Disk** screen is displayed. The partition sizes defined by SELECT are fine, so:

make sure the cursor is on:

press

After a few seconds you are asked to restart the computer:

press  ,  and  at the same time

The computer restarts.

follow the instructions on changing diskettes

The installation program then sets up (formats) the hard disk. The percentage of hard disk formatted is shown at the top of the screen.

When the program comes across an unusable area on the hard disk (a bad "allocation unit") it attempts to recover it so that DOS can use the area. If your hard disk contains many of these unusable areas, formatting may take a while.

When the hard disk is formatted:

follow the instructions on changing diskettes

When the installation program tells you the DOS 4 installation is complete:

press **Ctrl**, **Alt** and **Del** at the same time

The computer restarts and DOS is loaded from the hard disk. The first screen you see is the **Start Programs** screen of the DOS 4 Shell.

## Copying the Epson utilities

The Reference diskette contains several utilities created by Epson that help you use the Epson PC AX2e and DOS 4 more effectively. You need to copy the utilities to the hard disk.

On the **Start Programs** screen:  
press **F3**

The DOS command prompt is displayed:

insert the Reference diskette in drive A

type the following, pressing **Enter** at the end of each line:

```
COPY A:\HDSIT.*  
COPY A:\ROMBIOS.COM  
COPY A:\EEMM286.SYS  
COPY A:\STARTEMM.EXE
```

DOS 4 is now set up on your hard disk. You should now go to *DOS 4 ...in action* to learn about DOS 4 and the DOS 4 SHELL.

### ***Setting up a mouse***

The PC AX2e mouse port is compatible with the IBM PS/2 mouse port. This means that you can attach any mouse that is designed for use with the PS/2.

Before you can use your mouse with the DOS SHELL program, you need to install the special software (called a **driver**) that was packaged with your mouse. The procedure that you need to follow depends on the type of mouse, and is described in the mouse user's guide.

***Further information***

## ***If things go wrong***

You should not encounter any serious difficulties with the Epson PC AX2e but if anything out of the ordinary does happen, refer to the troubleshooting section in the *PC AX2e ...owner's handbook* for advice. The detailed procedures should help you to resolve most problems yourself.

### ***DOS 4 installation problems***

If you have problems with the DOS 4 installation procedure or feel you have made an inappropriate setup selection, you can always start the procedure over from the beginning (see page 38).

### ***DOS command help***

You can always get help on how to use DOS commands by using the Epson HELP utility. You use this utility from the DOS command prompt, and it is described in detail in *DOS 4 ...in action*.

## Resetting the computer

It may occasionally be necessary to reset the computer, either to load a different operating system or because a program has failed and the computer does not respond to the keyboard. However, resetting the computer causes all of the data in the memory to be lost, so if you have a problem, you should only reset the computer as a last resort. There are three ways to reset; use them in this order:

- 1 Press **Ctrl** and **Alt** together with the **Del** key at the right of the keyboard. The display screen goes blank for a moment and the system reloads from the hard disk. If this does not work, move to step two.
- 2 Press the reset button under the cover on the front panel. This has the same effect as the first method, but works even when the keyboard is not responding. If the system or hardware still does not seem to be working properly, move to step three.
- 3 Remove all diskettes from their drives and turn the computer off. Wait for at least five seconds and then turn the system on again.

### Caution

Some applications perform housekeeping procedures when you leave them properly. If you reset the computer in the middle of the application, the procedures are not performed, and you may lose data. **Never** leave an application by resetting the computer.

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