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Archimedes

PC EMULATOR

INSTALLATION LEAFLET

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1 INTRODUCTION

THE PC EMULATOR INSTALLATION LEAFLET

This leaflet explains how to use the PC Emulator and lists a few of the more commonly used MS-DOS commands. It is not a complete MS-DOS user guide. These can be purchased from any good book shop. Some suggested titles appear in *Appendix A - bibliography.*

The PC Emulator is designed to turn a 1Mbyte (or greater) Archimedes computer into a system similar to that of an IBM PC or clone. It consists of two major parts:

- an 8088 processor emulator
- a PC environment emulator.

The distinction between the two is hidden. The minimum amount of memory necessary to use the emulator is 1Mbyte. This gives you sufficient RAM for MS-DOS, applications and data. On a larger system the amount of memory available increases to the maximum of 640K. The version of MS-DOS supplied is version 3.

CONVENTIONS USED IN THIS GUIDE

The following conventions are applied throughout this guide:

- Specific keys to press are denoted as Delete, Ctrl, etc.
- Text you type on the keyboard and text that is displayed on the screen appears as follows:

```
PRINT "Hello"
```

- After entering any text, press ↵ to tell the computer that you have completed the line and that you want the computer to act upon it.

2 INSTALLATION

To use the PC Emulator, you require at least a 1Mbyte Archimedes computer. This can be a 310 or an upgraded 305 or a 400-series system. To maximise the PC RAM available, the Archimedes can be re-configured by typing the following:

```
*configure screensize 10
*configure fontsize 0
*configure spritesize 0
*configure RMAsize 0
```

However, the system will run in the default configuration. (For details about system configuration see the *Archimedes user guide*.)

The PC Emulator comprises the following two disks:

- the PC Emulator disk
- the MS-DOS Boot Disk.

Insert the Emulator disk into drive 0 and press Shift Break. The disk spins and a counter indicates the available memory. After a while the following message appears:

```
Acorn PC Emulator, (c) Acorn 1987

Insert MSDOS Boot Disk and press any key
```

Replace the Emulator disk with the MS-DOS Boot Disk and press the space bar. MS-DOS boots itself in and prompts you for the date and time. These are taken from the system's real-time clock and should be correct if your system is set up properly. Pressing ↵ at the date and time prompts ensures that the system uses the real-time clock values.

The MS-DOS copyright message then appears, which is followed by the system prompt:

```
A>
```

The PC Emulator and MS-DOS are now installed and the system is ready to be used.

3 MS-DOS COMMAND SUMMARY

Below is a list of the most commonly used MS-DOS commands with a brief description.

CHDIR

CHDIR (or CD) is used to change the current directory. For example:

```
A>CHDIR A:\LETTERS
```

changes the current directory to the directory LETTERS on drive A. The following example:

```
A>CD B:\BILLS\GAS
```

changes the current directory to the directory GAS in the directory BILLS on drive B.

CHKDSK

CHKDSK is used to check that a disk is correctly set up. It displays the total amount of space on the disk, the amount of space remaining and the number of files stored. In addition to this, CHKDSK displays the amount of memory that the emulator is using and the amount that is free for applications.

CLS

CLS is used to clear the screen.

COPY

COPY is used to copy files or directories between drives on the system. For example:

```
A>COPY B:TEST.COM
```

copies TEST.COM from drive A to drive B, while:

```
A>COPY B:\LETTERS B:\BILLS
```

copies the contents of the directory LETTERS on drive B to the directory BILLS on drive B.

DATE

DATE returns the system date and prompts for a new date to be entered. Note that the date format is American ie MM/DD/YY. If you do not wish to change the date, just press [↵].

DIR

DIR is used to catalogue the current directory. DIR on its own lists the files one per line. The following example:

```
DIR B: /W
```

lists the files on drive B, five per line.

ERASE

ERASE allows you to delete files or directories from a disk (a shortened form is DEL). For example:

```
A>ERASE *.COM
```

erases all files with the .COM extension, while:

```
A>ERASE B:\TEST
```

erases all files in the TEST directory on drive B.

FORMAT

FORMAT is used to prepare new blank disks to store data and programs on. For example:

```
A>FORMAT B:
```

formats the disk in drive B. You will be prompted to insert the new disk before formatting starts.

MKDIR

MKDIR (or MD) is used to create new directories on the disk. For example:

```
A>MKDIR \BILLS
```

creates a directory called BILLS from the current directory, while:

```
A>MD B:\TEST
```

creates a directory called TEST from the root on drive B.

RMDIR

RMDIR deletes a directory from the disk. The directory must be empty before it can be deleted. For example:

```
A>RMDIR LETTERS
```

deletes the directory called LETTERS on the current drive (A).

TIME

TIME returns the system time and prompts for a new time to be entered. If you do not wish to change the time, just press ↵.

TYPE

TYPE allows you to display the contents of a text file on the screen. For example:

```
A>TYPE B:MYFILE.DOC
```

displays the contents of MYFILE.DOC on drive B.

4 HARD DISK USAGE

If your Archimedes is equipped with a hard disk it is possible to use this with the PC Emulator. A partition is created on the hard disk which is then exclusively used for MS-DOS files. The partition size is 10Mbytes so there must be at least this amount free on your hard disk.

The installation procedure is as follows:

Put your PC Emulator disk into the floppy drive and type:

```
*harddisk
```

This is a small BASIC program which creates a new directory on your hard disk called PC. The partition is created in this directory and the emulator software is copied here from the floppy.

Type:

```
*DIR :4
```

to select drive 4 (the hard disk), followed by:

```
*PC.Emulate
```

This starts up the emulator from the hard disk. You are prompted for the MS-DOS Boot Disk and MS-DOS is loaded. The partition now exists but it has to be formatted. This is done using two MS-DOS programs, `FDISK` and `HDINSTAL`, in the following way. Type:

```
FDISK
```

and enter the number 1 to `Create a DOS Partition`. When asked whether you wish to use all the fixed disk, answer `YES`. Once the partition has been created you have to re-boot the MS-DOS system. The Boot Disk should still be in the drive so press any key. To format the disk and copy the MS-DOS system files type:

```
HDINSTAL
```

You now have a complete MS-DOS system installed on your hard disk. From now on, you do not need the floppy disks. To run the emulator type:

```
*DIR :4
```

followed by:

```
*PC.Emulate
```

At the `Insert MS-DOS Boot Disk` prompt, do not put any floppy disk in the drive, just press the space bar. MS-DOS will be booted from the hard disk.

You can use drive C (the hard disk) in the same way as drives A or B.

APPENDIX A - BIBLIOGRAPHY

For further information concerning MS-DOS, you may find the following books of interest:

ABC's of MS-DOS by A R Miller, published by Sybex.

IBM PC: An introduction to the operating system, BASIC programming and application by L J Goldstein, published by Prentice-Hall.

IBM PC-DOS handbook by R A King, published by Sybex.

The power of running PC/DOS: Includes versions 3.2 by C Siechert and C Wood, published by Management Information Source.

Understanding MS-DOS by K O'Day, published by Sams.