1 PRODUCT FAMILIARISATION

The ASeries A2200 ShareMate is an Intelligent Peripheral Sharing Device (PSD) allowing six computers to share one or two printers automatically. The ShareMate is a very fast device and has been designed to work with laser printers and the WINDOWS software environment.

The main features of the A2200 ShareMate are as follows:

- All the Computer and Printer ports on the ShareMate use the standard RJ-45 socket connector. This connector has been wired according to the cabling standard known as the Premises Distribution System (PDS).
- An ASeries A516 DataMate is connected to each port on the ShareMate, allowing each Computer and Printer to be up to 300 metres away from the ShareMate. This removes the restriction of the ShareMate needing to be located next to a particular printer. The ShareMate may be located anywhere, in a computer room or next to the office administrator, it is totally flexible.
- The ShareMate uses the standard flat 8-wire cable to connect the Computer or Printer via the DataMates. Cabling becomes both simple and inexpensive.
- The ShareMate may have up to 8Mb of buffer memory using industry standard SIMMs. There are two SIMM sockets available in the ShareMate and it will accept any combination of 256K, 1Mb or 4Mb SIMMs - no switches to set just plug in and use.
- When two printers are connected to the ShareMate they can operate simultaneously. All Computers and Printers in the ShareMate can be active at the same time and the buffer performs a totally dynamic allocation on a first come first served basis.
- The ShareMate and DataMate operate at a speed of 460,000 bits per second. This allows fast transfer of data, especially when graphics data from WINDOWS is being printed.
- The ShareMate will generate a set of reports which are useful for setup verification and finding problems with cables.
- The ShareMate has its own COMMAND set. This allows the advanced user to control the ShareMate directly from a computer program.
- The ShareMate has been designed for ease of use and top performance in a WINDOWS environment using laser printers.
- The ShareMate is a quality manufactured product designed to give trouble free operation.

2 PRODUCT OVERVIEW

Front Indicators

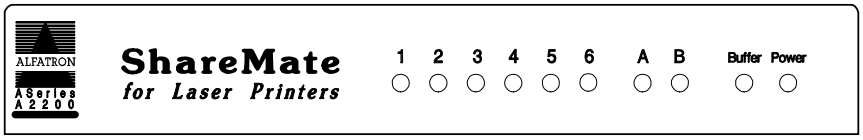

Figure 2-1 A2200 ShareMate - Front View

The front of the ShareMate has 10 indicator Light Emitting Diodes (LEDs) which provide dynamic visual information during the operation of the unit.

The LEDs numbered '1' to '6' represent the six possible computers attached to the ShareMate. The LED will flash each time the ShareMate receives data from the computer connected to that port.

The LEDs labelled 'A' and 'B' represent the two possible printers attached to the ShareMate. The LED will flash each time data is being sent to that printer from the ShareMate.

The LED labelled 'Buffer' will flash only when the ShareMate buffer is full and cannot receive any more data. If this occurs on a regular basis then it indicates that the ShareMate may need more buffer memory for this application.

The LED labeled 'Power' remains on when the ShareMate is ready to use.

Rear Panel

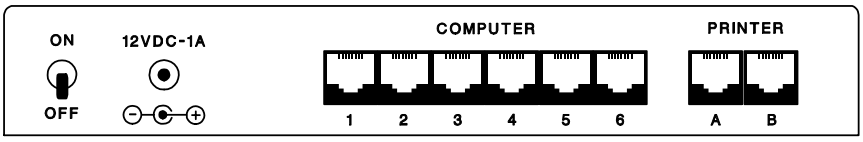

Figure 2-2 A2200 ShareMate - Back View

The rear of the ShareMate, Figure 2-2, shows the On/Off Switch and Power Entry Socket to the left of the unit.

The six RJ-45 sockets '1' through '6', labelled 'Computer', are the Computer ports. A Computer is connected to each port using a DataMate 516-C.

The two RJ-45 sockets 'A' and 'B', labelled 'Printer', are the Printer ports. A Printer is connected to each port using a DataMate 516-P.

All A516 DataMates may be up to 300 metres away from the A2200 ShareMate.

3 GENERAL INSTALLATION

Step 1

- Connect a DataMate A516-C to the parallel port of your computer.
- Connect a straight through pin-to-pin RJ-45 cable between the DataMate A516-C and any Computer port at the rear of the ShareMate as shown in the following diagram:

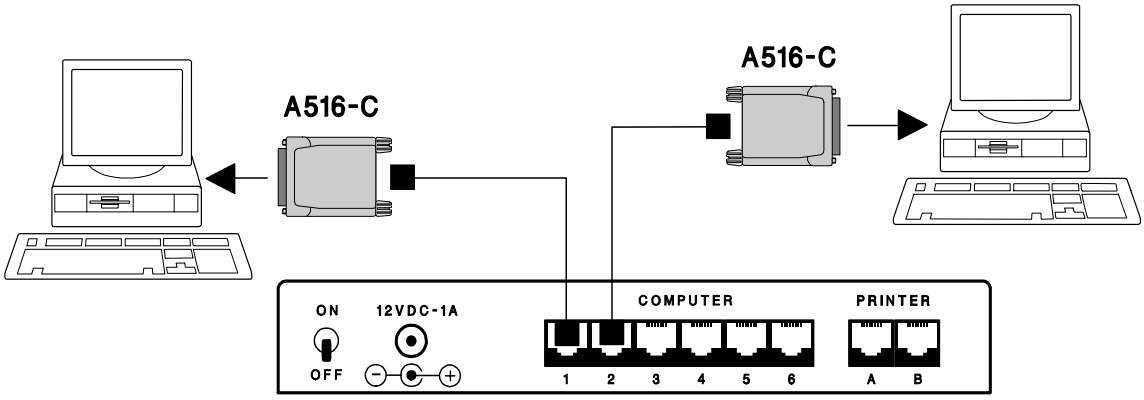

Diagram 3-1 - Connecting a Computer to the ShareMate

Step 2

- Connect a DataMate A516-P to the parallel port of your printer.
- Connect a straight through pin-to-pin RJ-45 cable between the DataMate A516-P and a Printer port at the rear of the ShareMate as shown in the following diagram:

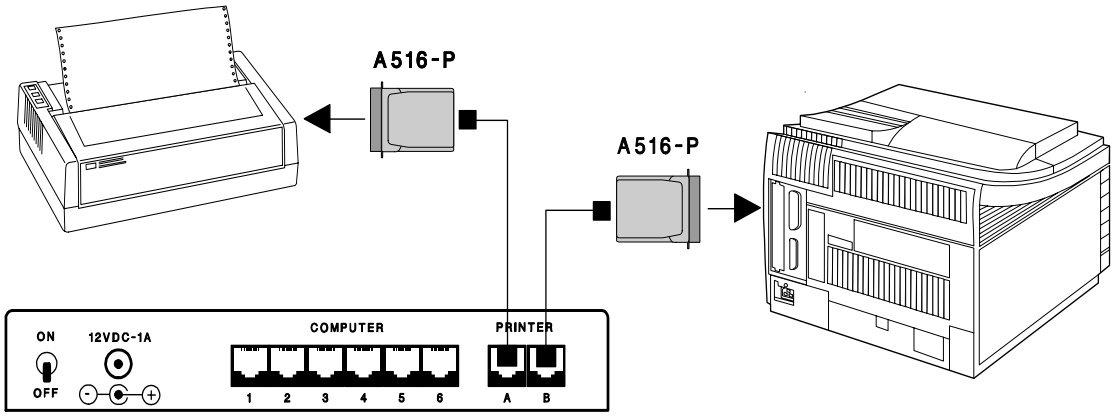

Diagram 3-2 - Connecting a Printer to the ShareMate

4 INSTALLATION FOR ONE PRINTER

When connecting only one printer to the ShareMate the installation is simple. Connect the computers to the ShareMate as shown in Section 3 but when connecting the printer make sure that it is connected to Printer port 'A' of the ShareMate.

The six Computer ports are all directed to Printer port 'A' as the factory default. Once everything is connected simply power on the equipment and start sharing the printer, the ShareMate will take care of the rest.

5 INSTALLATION FOR TWO PRINTERS

When connecting two printers to the ShareMate, install the computers and printers as shown in Section 3. Once the hardware installation is complete it is necessary to install the ShareMate software on each of the computers that share the printers.

The purpose of the ShareMate Control Software is simply to allow you to print to either printer 'A' or printer 'B'. The Control Software is shipped on a DOS format 3.5" disk with files for the WINDOWS and DOS environments.

ShareMate Control Software

Please read the ‘README.TXT’ file in the root directory of the disk as it explains the contents of the disk.

The disk contains two directories. The '\dos' directory contains all files for the DOS user and the '\windows' directory contains all files for the WINDOWS user.

5.1 DOS INSTALLATION

The '\dos' directory contains a file called ‘READ_DOS.TXT’, please read this file for instructions on how to install the DOS software onto your hard disk.

Following installation of the software you will have four Commands to use with the ShareMate:- CONNECT, TIMEOUT, DELJOB and REPORT. These Commands are explained below:

CONNECT - Selecting Printer A or B

To select Printer A or B in DOS simply use the CONNECT Command. From the DOS prompt type 'CONNECT A' to select Printer A or 'CONNECT B' to select Printer B.

Please note that if the two printers are different then you must select the correct printer driver from within the application software.

TIMEOUT - Changing Timeout Values

The A2200 ShareMate uses a time interval (Timeout) to distinguish between different print jobs. For the majority of cases the factory 'Timeout' of 20 seconds will be fine. In special cases where, for example, a CAD application takes a long time to make calculations before sending more print data, then the 'Timeout' value may need to be changed to 40 seconds. In this CAD example above, to change the 'Timeout' value for all the Computer ports of the ShareMate simply type 'TIMEOUT 40' at the DOS prompt. The allowable values of the 'Timeout' Command are 5, 10, 20 and 40.

DELJOB - Deleting Print Jobs

There may be times when you have a large print job stored in the buffer of the A2200 ShareMate and decide that you do not want to print it. This is easily deleted as long as you send the DELJOB Command from the same computer that sent the original print job. This Command will delete all print jobs sent from this computer to the A2200 ShareMate but will not affect print jobs sent from all the other computers.

To delete your print jobs simply type 'DELJOB' at the DOS prompt.

REPORT - Producing a Status Report

The A2200 ShareMate Status Report consists of three separate reports. The Setup Report is the one which tells you how the A2200 ShareMate is configured. This may be useful if you wish to confirm that your 'Timeout' values have been changed. The other two reports are used for diagnostic purposes. The I/O Error Report, for example, is useful for detecting problems with cables connected to the A2200 ShareMate.

To produce a report on Printer 'A' simply type 'REPORT A' at the DOS prompt.

5.2 WINDOWS INSTALLATION

The '\windows' directory contains a file called ‘READ_WIN.TXT’, please read this file for instructions on how to install the WINDOWS software onto your hard disk.

Selecting Printer A or B

After you double click the A2200 Control Icon, printers A and B will be shown in the Control Software window. Simply select the appropriate printer and click the CONNECT box once, your printer selection is complete.

Within the Control Software window you may also name your printers. For example, you may have a 'Laser' printer on port A and a 'Matrix' printer on B. To change the printer name simply click the EDIT box in the Control Software window and type in the new name.

Changing Timeout Values

The factory pre-set 'Timeout' value is 20 seconds. This is adequate for nearly all situations in Windows. If, for some reason, you need to change this value then install the DOS software and use the TIMEOUT Command from DOS.

In nearly all cases you will not need to change the Timeout Value.

Deleting Print Jobs

You may delete all print jobs, sent from your computer, which are stored in the A2200 ShareMate buffer. To do this simply click the DELETE box once. A warning will be issued and you may choose to proceed with the delete or cancel.

Producing a Status Report

An A2200 ShareMate Status Report may be produced directly from the Control Software Window. To do this, click the top left hand corner box once to produce a menu. From this menu click the 'Produce Setup Report...' item and the report will be generated.

6 CABLE INFORMATION

Cabling to an A2200 ShareMate is very simple because all the cables between the A2200 ShareMate and the A516 DataMates are the same.

The cable is a standard flat 8-wire cable with an RJ-45 connector at each end. The RJ-45 connectors are assembled in a straight through or pin-to-pin configuration. Only 4 wires are used for communications and they conform to the Premises Distribution System (PDS) standard. The pins used on the RJ-45 connector are 1,2,3 and 6. The diagram below shows the standard cable:

Figure 6-1 - A2200 ShareMate to A516 DataMate Cable

The A516 DataMate will operate at full speed over a distance of up to 300 metres from the A2200 ShareMate.

7 A2200 ShareMate COMMANDs

Overview

A2200 ShareMate COMMANDs allow you to perform various functions directly from your computer. These COMMANDs are being automatically sent for you each time you use the A2200 ShareMate DOS or WINDOWS Control Software.

There may be occasions when you would like to control the A2200 ShareMate directly via Batch Files or from a computer program. To do this you must use the A2200 ShareMate COMMANDs. These COMMANDs may be sent to the A2200 ShareMate using the rules described below.

Rules for COMMANDs

- each COMMAND and its Parameters must be sent in UPPER CASE ASCII.
- each COMMAND may contain none, one or more Parameters.
- each COMMAND and Parameter must be separated by only ONE space. Some special COMMANDs do not have a space.
- each COMMAND must be preceded by a 'Lead-in' sequence e.g. "@Z@".
- each COMMAND must be terminated by the ";" (semi-colon) character.

Using COMMANDs

While the A2200 ShareMate is receiving and sending data to various printers it is reading this data looking for valid A2200 ShareMate COMMANDs.

When it finds a valid COMMAND it will strip it from the incoming data and perform the action requested. If the A2200 ShareMate finds that the COMMAND is not valid, i.e. an error was detected in the COMMAND syntax @Z@ ....., then it is passed through as normal data.The normal data string is not affected in any way.

COMMANDs are normally created into individual DOS Batch files. Using this method, a COMMAND set may be sent to the A2200 ShareMate to perform various functions and then normal printer sharing resumed.

The following example demonstrates how to set the 'Timeout' value to 1 minute:

```
@Z@ TIMEOUT 1M;
```

Command: **CONNECT**

Format: @Z@ CONNECT [C_1] P_2;

Parameter: [C_1] is an optional 'Computer' port number, range 1 to 6.
P_2 is the 'Printer' port number, range 1 or 2.

Description: Make a connection from a Computer to a particular Printer port. When two parameters are used, the connection will be made from 'C_1' to 'P_2'. When only the 'P_2' parameter is used then the connection is made for the PC sending the COMMAND to 'P_2'.

Example 1: @Z@ CONNECT 2;

This will connect the PC sending this COMMAND to the A2200 ShareMate 'Printer B'.

Example 2: @Z@ CONNECT 4 1;

The PC connected to 'Computer 4' of the A2200 ShareMate will now send all its print data to 'Printer A'.

Command: **PRINTREPORT**

Format: @Z@ PRINTREPORT P_1;

Parameter: P_1 is the 'Printer' port number, range 7 or 8.

Description: Print a copy of the A2200 ShareMare Reports to the designated printer. This will output the Setup, Scratch-Pad and I/O Error Reports from the A2200 ShareMate.

Example 1: @Z@ PRINTREPORT 8;

This will produce the A2200 ShareMate Reports on 'Printer B'.

Command: **TIMEOUT**

Format: @Z@ TIMEOUT <value>;

Parameter: <value> is a timeout value from 5 seconds to 60 minutes taken from the following table:

5S	=	5 seconds
10S	=	10 seconds
20S	=	20 seconds
30S	=	30 seconds
40S	=	40 seconds
50S	=	50 seconds
1M	=	1 Minute
2M	=	2 minutes
5M	=	5 minutes
10M	=	10 minutes
20M	=	20 minutes
30M	=	30 minutes
40M	=	40 minutes
60M	=	60 minutes

Description: Set a new 'Timeout' value for all the Computer ports of the A2200 ShareMate.

Example 1: @Z@ TIMEOUT 20S;

This will set the 'Timeout' to 20 seconds for each computer connected to the A2200 ShareMate.

Command: **DELETE**

Format: @Z@ DELETE;

Description: This will delete all the data stored in the A2200 ShareMate buffer which has been sent by the PC issuing the 'Delete' COMMAND. No other data in the buffer will be affected.

Example 1: @Z@ DELETE;

The PC which sends this COMMAND will have all its data deleted from the A2200 ShareMate buffer.

8 A2200 ShareMate REPORTs

The A2200 ShareMate can generate reports showing various aspects of the setup and performance of the unit. The reports are generated from the DOS and WINDOWS software, refer to Section 5. The three reports generated are as follows:

Setup Report

This shows the current setup of the A2200 ShareMate and may be used to confirm the settings of individual ports.

Scratch-Pad Report

This shows any changes made to the A2200 Setup since power up.

I/O Error Report

The A2200 ShareMate keeps a record of any problems which occurred with communication between itself and all the A516 DataMates. This report can be useful for detecting problems with cabling.

9 SIMM BUFFER MEMORY

The A2200 ShareMate is shipped from the factory with 256K of buffer memory installed. This memory is supplied via a standard 30-pin 256K Single In-line Memory Module (SIMM).

The A2200 ShareMate has two SIMM sockets, one of which is occupied by the factory shipped 256K SIMM. The other socket is free and will accept either a 256K, 1Mb or 4Mb SIMM.

Any combination of SIMMs may be installed into the ShareMate but considerable care should be taken when installing SIMMs. Please follow these simple SIMM handling guidelines to reduce the chance of any damage from static electricity:

- Touch the surface of the anti-static bag supplied with the SIMM and while handling the SIMM, frequently touch bare metal or the anti-static bag.
- Avoid moving about the work area to prevent the generation of static electricity.
- Handle the SIMM carefully at all times. Avoid flexing the SIMM or touching the metal pads.

Once the SIMMs are installed the A2200 ShareMate is ready for use, there are no configuration settings required - buffer memory detection is automatic.

10 SPECIFICATIONS

CPU:	64180 Microprocessor
Computer Ports:	RS-422 operating at 460,000 bps Configured as Input RJ-45 Socket using pins 1, 2, 3 and 6
Printer Ports:	RS-422 operating at 460,000 bps Configured as Ouput RJ-45 Socket using pins 1, 2, 3 and 6
LED Indicators:	Computer ports 1 to 6 (Green) Printer ports A and B (Green) Buffer Full (Red) Power On (Yellow)
Power Supply:	12V (1A) DC Power Adapter Fuse & Reverse polarity protection Plug jack - 5.5mm outer/2.5mm inner Outer Negative 
Dimensions:	208mm x 163mm x 31mm
Weight:	965 grams
Operating Temperature:	0° to 40° C
Storage Temperature:	-20° to 70° C

All specifications subject to change without notice