Hardware Installation Manual
P 3500 / P 3800

Data
System

PHILIPS

Hardware Installation Manual
P 3500 / P 3800

PHILIPS

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REFERENCE TO OTHER MANUALS:

This manual should be used together with the SOFTWARE INSTALLATION MANUAL F58H.

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CHAPTER 1   GENERAL

1 GENERAL

1.1 INTRODUCTION

The P3500/P3800 sytem are multi-microcomputer systems. Both the hardware and software are based on international industry standards. The P3500 system combines the advantages of personal computers with the wider possibilities of larger business computers. With the P3500/P3800 system, small companies can enter the world of office automation.

The P3500 is a small and compact system. The system can be configured for minimum one and maximum four workstations. Because of the modularity of the system it is very easy to extend a once installed system. The multi-processor architecture makes the system very powerful. Every workstation can access its own tasks on a dedicated processor in the system cabinet. All the common tasks are processed by a central processor, called the "master".

Dependent on the number of connected workstations a number of printers can be connected to the system. Printers may be connected as well for shared use by all the workstations as for local use by one workstation only. The use of standard V.24-interface of peripherals allows the connection of almost any type of peripheral station.

The P3800 system has the same structure as the P3500, and can be seen as the powerful brother of the P3500. This system can support upto 8 workstations and has a wider range of disk capacity. A backup device can be installed in the system cabinet.

STRUCTURE

Each user uses its own processor in the system cabinet. This processor is called a "SLAVE" processor. Common tasks such as disk and shared printer handling are executed by a "MASTER" processor.
The Master processor is always available, the number of Slave processor boards is mostly equal to the number of workstations.

On every processor board (Master and Slave) two interfaces are available for connection of peripherals.
On a Slave Board, one of these interfaces is always used to connect the workstation. The other interface can be used to connect a local printer.
Shared printers must be connected to the Master processor, so maximum two can be connected to the interfaces of the Master board.
Several types of these processor boards are available, operating with either 8-bit or 16-bit processors.

One board of the system (the SESCO board) is used to control the disk units. This board has one external interface for the connection of extension cabinets.

On some older P3500 systems the disk control is realized with two boards, called FLEXCO and SASI/AD. In these configuration maximum 3 workstations can be connected because one of the Slave processor locations is used by the Flexco board. Another restriction is the number of 16-bit processors in a P3500 system.

It is also possible to insert a Slave board in the system cabinet to which no workstation is connected. This board(s) can be used as Batch processor, to execute specific jobs for other users.
An application of this is the DC-NODE in which this additional processor acts as a DC-SERVER for other users.

1.2 CONFIGURATIONS

1.2.1 VERSIONS

1.2.1.1 VERSIONS P3500 SYSTEMS

The P3500 system is available in two basic versions:

- A system cabinet including two flexible disk drives (640KB).

- A system cabinet including one flexible- and one fixed disk drive (640KB + 5MR or 10MB or 20MB).

Independent of the type of system cabinet the user can choose for the following configurations:

- The number of workstations (minimum 1, maximum 4).
- The number of shared printers (maximum 2).
- The number of local printers (maximum equal to number of workstations)
- An 8" flexible disk extension cabinet.
- A 10 MB fixed disk extension cabinet.
- A tape streamer extension cabinet.

1.2.1.2 VERSIONS P3800 SYSTEMS

The P3800 system is available in a number of versions:

Old Cabinets:

P3800-03	P3800-04
640KB Flexible Drive	640KB Flexible Drive
60MB PRIAM Disk	10MB Fixed Disk
Streamer Tape 8"ff	Streamer Tape 8"ff
	Opt. 2nd 10MB FXD

Due to the low number of systems this version is not included in this manual.

Slimline Cabinets:

P3800-05	P3800-06	P3800-07
640KB MFD (slim)	640KB MFD (slim)	640KB MFD (slim)
10MB Fixed Disk	20MB Fixed Disk	40MB Fixed Disk
Optional:	Optional:	Streamer Tape 5.25"ff
Streamer Tape 5.25"ff	Streamer Tape 5.25"ff	Optional:
2nd 10MB FXD	2nd 20MB FXD	2nd 40MB FXD

Independent of the type of system cabinet the user can choose for the following configurations:

- The number of workstations (minimum 1, maximum 8).
- The number of shared printers (maximum 2).
- The number of local printers (maximum equal to number of workstations)
- An 8" flexible disk extension cabinet.
- A fixed disk extension cabinet (10, 20 or 40MB).

1.2.2 CONFIGURATION EXAMPLES

P3500 SYSTEM CABINET WITH TWO FLEXIBLE DISK DRIVES CONFIGURED WITH:

- 1 Workstation (VDU + Keyboard)
- 1 Shared Printer
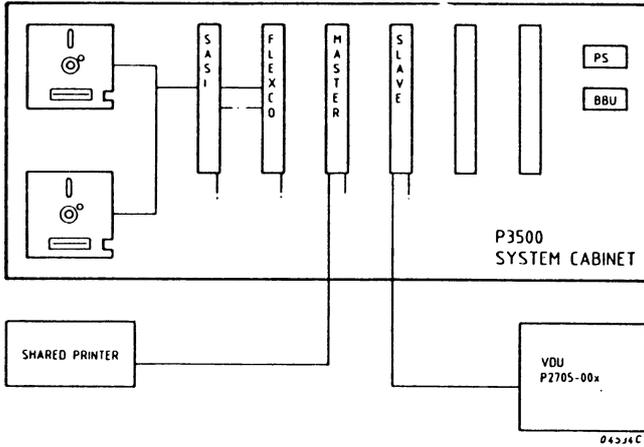
Figure 1.1 DUAL FLEXIBLE DISK SYSTEM P3500

P3500/P3800 SYSTEM CABINET WITH ONE FLEXIBLE AND ONE FIXED DISK DRIVE CONFIGURED
WITH:

- 3 Workstations (VDU + Keyboard)
- 1 Shared printer
- 1 Local printer
- 1 Batch processor
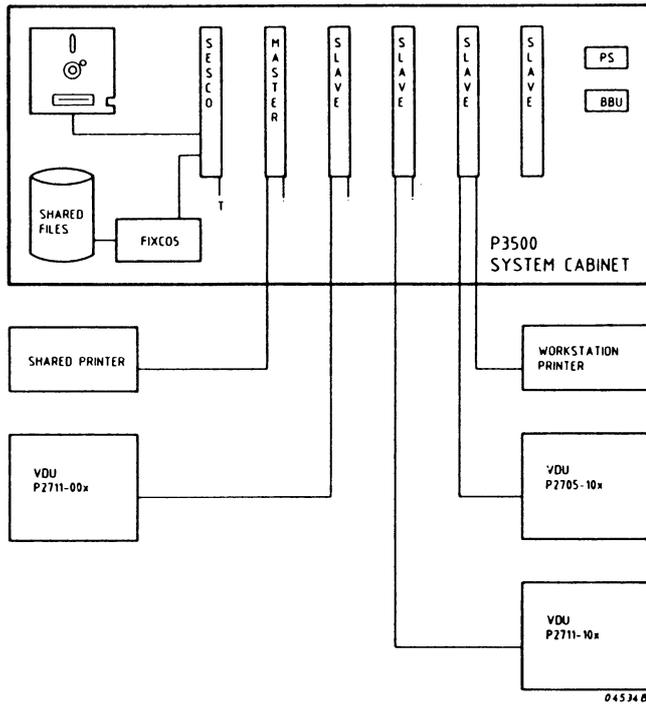
Figure 1.2   FIXED DISK SYSTEM

1.3 REQUIREMENTS

1.3.1 ELECTRICAL REQUIREMENTS

Each of the P3000 cabinets require a separate mains source of 220 Volts at 50 Hertz.
It is recommended that the System Cabinet is connected to a "clean" mains supply. That means that the system is connected to a separate single phase supply cable from the main distribution point in the building.
For correct operation, Extension Cabinets must be connected at least to the same phase, preferably also to the same power terminal as the System Cabinet is.
Power terminals must be easily accessible because the cabinets are not equipped with a mains switch.

1.3.2 ENVIRONMENTAL CONDITIONS

It is essential that static is kept to an absolute minimum, it can cause not only discomfort to personnel in the form of minor shocks, but can also corrupt data on magnetic carriers.
The two main reasons for static charge are:

- A too low relative humidity (winter)
- Choice of carpeting (man made fibres)

Practical experience has shown that maintaining the room humidity between 40 and 60% and the correct choice of floor covering reduce the danger of static discharge to a minimum.
The electrical resistance of the floor (RA and ROT) should be min.1 x 10^6 and max.1 x 10^9, measured according to DIN 54345 at a temperature of 21 °C and a relative humidity of 30 %.
The optimum room temperature for man and machine is between +18°C and + 24°C.
Direct sunlight onto the equipment should be avoided.

1.3.3 LOCATION RESTRICTIONS

The System Cabinet and Extension cabinets should not be "boxed in" as there must be a free air flow. Nothing must be placed on top of the cabinets which inhibits the air flow.
Take care of sufficient room at all sides of the cabinets to allow service access, minimal 10 cm and 25 cm at top side.
The front side of the system cabinet must be freely accessible.

The printers should be located in such a way that a free run of paper is guaranteed. Keep at least 50 cm free at rear and top, 10 cm at the sides. The front should be freely accessible.
The general printer can either be situated on a table or can be free- standing on a pedestal.

Normal office light is sufficient when working at VDUs.
The VDU screen should be offset from the light source, and placed as far as possible from direct sunlight.
Do not adjust the VDU to maximum contrast, this improves readability.
The next figure shows the optimum positioning of the workstation based on ergonomic figures:
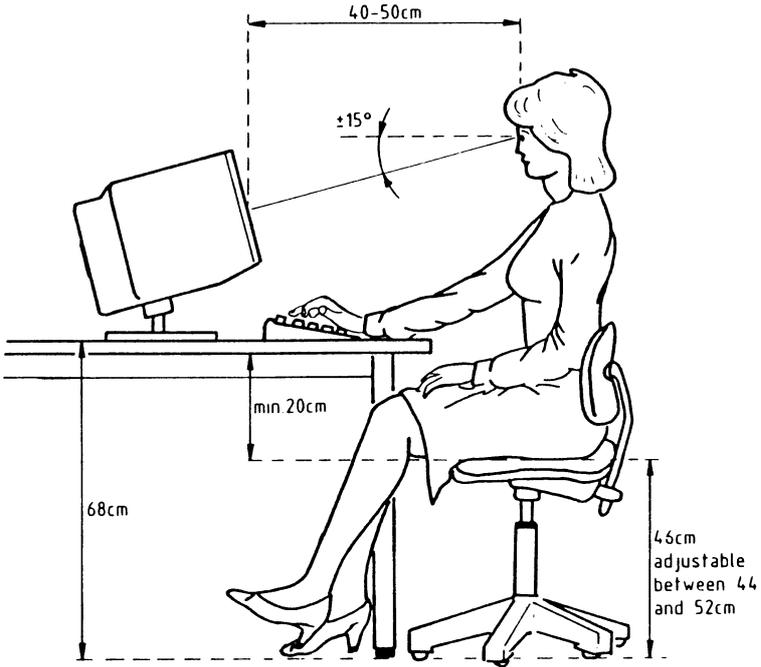
Figure 1.3 LOCATION OF WORKSTATIONS

1.4 TECHNICAL DATA

1.4.1 TECHNICAL DATA SYSTEM CABINETS

1.4.1.1 TECHNICAL DATA SYSTEM CABINET P3500

PERFORMANCE DATA

- PMU 80-1
  - Z-80A Microprocessor, 4 MHz
  - 64KB Random Access Memory
  - 8KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- PMU 80-3
  - Z-80B Microprocessor, 6 MHz
  - 64KB Random Access Memory
  - 8KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- PMU 186
  - IAPX 80186 Microprocessor, 8 MHz
  - 256KB Random Access Memory
  - 16KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- PMU 88S-1
  - 8088 Microprocessor, 8 MHz
  - 128KB or 256KB Random Access Memory
  - 16KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- Flexible Disk Drives

  - Double Sided, Double Density, 96 TPI, 5.25" Flexible Discs
  - Formatted Capacity   : 640 Kbyte
  - Average Access Time : 253 ms

- Fixed Disk Drive

  - 5.25" Fixed Disk(s) : ST506   or ST412   or RO202E
  - Formatted Capacity   : 5 Mbyte or 10 Mbyte or 20Mbyte
  - Average Access Time : 98 ms   or 98 ms   or 93 ms

POWER REQUIREMENTS

- Voltage   : 100-127 VAC or 200-240 VAC (± 10%)
- Frequency   : 60 or 50 Hz (± 2%)
- Consumption   : 120 W max.

PHYSICAL DATA

- Dimensions
  - height: 230 mm
  - width : 475 mm
  - depth : 300 mm
- Weight : 18 kg

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-35°C
- Relative Humidity   : 20-80 %

1.4.1.2 TECHNICAL DATA SYSTEM CABINET P3800

PERFORMANCE DATA

- PMU 80-1
  - Z-80A Microprocessor, 4 MHz
  - 64KB Random Access Memory
  - 8KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- PMU 80-3
  - Z-80B Microprocessor, 6 MHz
  - 64KB Random Access Memory
  - 8KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- PMU 186
  - IAPX 80186 Microprocessor, 8 MHz
  - 256KB Random Access Memory
  - 16KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- PMU 88S-1
  - 8088 Microprocessor, 8 MHz
  - 128KB or 256KB Random Access Memory
  - 16KB Read Only Memory
  - Two RS 232-C / V.24 Interfaces

- Flexible Disk Drive (X3134)

  - Double Sided, Double Density, 96 TPI, 5.25" Flexible Disks
  - Formatted Capacity : 640 Kbyte
  - Average Access Time : 195 ms

- Fixed Disk Drives

	RO202	RO202E	RO204
- 5.25" Fixed Disk	: RO202	RO202E	RO204
- Formatted Capacity	: 10 Mbyte	20 Mbyte	40 Mbyte
- Average Access Time	: 93 ms	93 ms	63 ms

POWER REQUIREMENTS

- Voltage   : 100-127 VAC or 200-240 VAC (± 10%)
- Frequency   : 60 or 50 Hz (± 2%)
- Consumption : 500 W max.

PHYSICAL DATA

- Dimensions
  - height: 650 mm
  - width : 240 mm
  - depth : 770 mm
- Weight :   60 kg

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-40°C
- Relative Humidity   : 20-80 %

1.4.2 TECHNICAL DATA WORKSTATIONS

1.4.2.1 TECHNICAL DATA KEYBOARD P2841

PERFORMANCE DATA

- N-key Rollover
- Sculptured keys
- Low profile
- Numeric / cursor movement pad
- 7 programmable indicators
- 14 pre-programmable function keys
- 11 user programmable function keys

PHYSICAL DATA

- Dimensions
  - height   :   20 mm at front row
                    43 mm at rear edge
  - depth   : 215 mm
  - width   : 457 mm
- Weight   :   3 kg

1.4.2.2 TECHNICAL DATA VDU P2711

PERFORMANCE DATA

- Televideo compatible
- 15" screen, amber or green phosphor
- 24 lines of 80 or 132 characters plus one status/user line
- Character set
  - alpha-numeric upper/lower case, national versions
  - restricted graphics
- Attributes:
  - high/low intensity
  - blinking and blanking
  - underlining
  - inversion
- Refresh frequency : 50 Hz
- Character matrix : 9 dots/15 scan lines or 8 dots/15 scan lines
- Optional swivel stand

PHYSICAL DATA

- Dimensions
  - height   : 321 mm
  - depth   : 300 mm
  - width   : 375 mm
- Weight   : 15 kg

POWER REQUIREMENTS

- Voltage   : 100-120 or
                  200-240 VAC ($\pm$ 10%)
- Frequency   : 60 or 50 Hz ($\pm$ 2%)
- Consumption   : 50 W max.

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-35 °C
- Relative Humidity   : 20-80 %
- Absolute Humidity   : 20 g/m^3

1.4.2.3 TECHNICAL DATA VDU P2705

PERFORMANCE DATA

- Televideo compatable
- 12" screen, amber or green hosphor
- 24 line of 80 characters plus one status/user line
- Character set
  - alpha-numeric upper/lower case, national versions
- Attributes:
- High/low intensity or inversion (strap selectable)
- Refresh frequency : 50Hz

PHYSICAL DATA

- Dimensions
  - height   : 290 mm
  - depth   : 320 mm
  - width   : 360 mm
- Weight   :   9 kg

POWER REQUIREMENTS

- Voltage   : 115/120/ or
                 220-240 VAC (± 10%)
- Frequency   : 60 or 50 Hz (± 2%)
- Consumption : 45 W

ENVIRONMENTAL CONDITIONS

- Dimensions
  - height   : 290 mm
  - depth   : 320 mm
  - width   : 360 mm
- Weight   :   9 kg

1.4.3 TECHNICAL DATA PRINTERS

1.4.3.1 TECHNICAL DATA GENERAL PRINTERS P2932/33/34

PERFORMANCE DATA

- Dot matrix   : P2932-   9 x 9 or 18 x 25
                  P2933/34- 9 x 9 or 18 x25 or 18 x 50 or 36 x 50

- Print speed   : Depending on font, typical 120 char/s at 12 cpi

- Pitch   : P2932   - 10 or 12 cpi
                  P2933/34 - 10, 12 or 15 cpi

- Print width   : P2932/33 - 340 mm max.
                  P2934   - 400 mm max.

- Line spacing : adjustable from 1 upto 48 lpi

- Character set : national versions, upper/lower case,
                  various styles especially for P2933/34

- Form handling:
  - adaptable to various continuous form sizes
  - optional automatic sheet handler, front feed and/or tractor
    feed
- Optional noise shield and pedestal

PHYSICAL DATA

- Dimensions   P2932   P2933   P2934   Pedestal

  - height   : 185 mm   185 mm   198 mm   596 mm
  - depth   : 445 mm   445 mm   518 mm
  - width   : 520 mm   520 mm   636 mm
- Weight   : 15 kg   16.4 kg   20.4 kg   20 kg

POWER REQUIREMENTS

- Voltage   : 100-120 or
                  200-240 VAC (± 10%)
- Frequency   : 60 or 50 Hz (± 2%)
- Consumption
  - P2932/33   : 120 W max.
  - P2934   : 160 W max.

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-35 °C
- Relative Humidity   : 20-80 %
- Absolute Humidity   : 20 g/m 3

1.4.3.2 TECHNICAL DATA MATRIX PRINTER P2123

PERFORMANCE DATA

- Dot matrix   : 9 x 9
- Print speed : 80 char/s , line feed 200 ms
- Pitch   : 10 or 12 c.p.i.
- Print width : 254 mm max.
- Line spacing : 6 l.p.i or programmable
- Character set: national versions, upper/lower case, graphics
- Type style   : normal, condensed, enlarged characters
- Form handling: tractor feed

PHYSICAL DATA

- Dimensions
  - height   : 107 mm
  - depth   : 305 mm
  - width   : 374 mm
- Weight   : 5.5 kg

POWER REQUIREMENTS

- Voltage   : 115/220 or
                 240 VAC ($\pm$ 10%)
- Frequency   : 60 or 50 Hz ($\pm$ 2%)
- Consumption : 100 W max.

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-35 °C
- Relative Humidity   : 20-80 %
- Absolute Humidity   : 20 g/m^3

1.4.3.3 TECHNICAL DATA DAISY WHEEL PRINTER P5360

PERFORMANCE DATA

- Print Speed   : 40 char/s , line feed 940 ms
- Print Width   : 406 mm
- Line Spacing : 6 l.p.i or programmable
- Font   : DIABLO, Qume
- Form Handling: tractor feed, front feed
- Sheet Feeder : optional
- Copies   : 2 + original
- Inkribbon   : Cassette (black)

POWER REQUIREMENTS

- Voltage   :180-254   or
                  90-127   VAC
- Frequency   : 50 or 60 Hz (± 2%)
- Consumption   : 160 W max.

PHYSICAL DATA

-Dimensions
  - height   : 154 mm
  - depth   : 405 mm
  - width   : 574 mm
- Weight   : 14 kg

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-35 °C
- Relative Humidity   : 20-80 %
- Absolute Humidity   : 20 g/m^3

1.4.3.4 TECHNICAL DATA MATRIX PRINTERS P2908/09

PERFORMANCE DATA

- Dot Matrix   : 11 x 9
- Print Speed   : 160 char/s
- Pitch   : 10 char/inch, programmable
- Print Width
  - P2908   : 114-216 mm friction feed
                        241-254 mm tractor feed
  - P2909   : 184-366 mm friction feed
                      : 102-406 mm tractor feed
- Line Spacing   : programmable
- Character Set   : national versions, upper/lower case, dot graphics
- Type Style   : normal, condensed, enlarged, double strike
- Form Handling   : friction feed, tractor feed

POWER REQUIREMENTS

- Voltage   : 220V or 240V AC (±10%)
- Frequency   : 49.5 - 60.5 Hz
- Consumption   : 70 W max.

PHYSICAL DATA

- Dimensions,

	P2908		P2909	
- height	: 100	mm	150	mm
- depth	: 347	mm	354	mm
- width	: 420	mm	594	mm
- Weight	: 7,5	kg	10.5	kg

ENVIRONMENTAL CONDITIONS

- Ambient Temperature : 5-35°C
- Relative Humidity   : 10-80%
  Absolute Humidity   : 20 g/m^3

1.4.4 TECHNICAL DATA EXTENSION CABINETS

1.4.4.1 TECHNICAL DATA EXTENSION CABINET P3012-30/33

PERFORMANCE DATA

- 5.25" Fixed Disk(s)
  - Formatted Capacity : 10 Mbyte (P3012-30) or
  - Formatted Capacity : 5 MByte (P3012-33)
  - Average Access Time : 98 ms

- Streamer Tape (P3012-41

- Formatted Capacity   : 20   Mbyte
- Tape Speed   : 50   Inch/s
- Start/Stop Time   : 300   ms
- Transfer Rate   : 86,7 Kbytes/s

POWER REQUIREMENTS

- Voltage   : 100-127 or 200-240 VAC (±10%)
- Frequency   : 60 or 50 Hz (± 2%)
- Consumption : 120 W max.

PHYSICAL DATA

- Dimensions
  - height   : 230 mm
  - depth   : 475 mm
  - width   : 300 mm
- Weight   : 15 kg

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-35°C
- Relative Humidity   : 20-80%
- Absolute Humidity   : 20g/m^3

1.4.4.2 TECHNICAL DATA FLEXIBLE DISK EXTENSION P2621

PERFORMANCE DATA

- Data Capacity   : 140 KB (TurboDOS), 246 KB (IBM Data)
- Average Access time :   96 ms

POWER REQUIREMENTS

- Voltage   : 100-127 or
                  200-240 VAC (± 10%)
- Frequency   : 60 or 50 Hz (± 2%)
- Consumption   : 120 W max.

PHYSICAL DATA

- Dimensions
  - height: 285   mm
  - width : 270   mm
  - depth : 513   mm
- Weight : 21.5 kg

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 10-38 °C
- Relative Humidity   : 20-80 %
- Absolute Humidity   : 20 g/m^3

1.4.4.3 TECHNICAL DATA EXTENSION CABINET P3013-12

PERFORMANCE DATA

- Formatted Capacity : 20   Mbytes
- Tape Speed   : 90   Inch/s
- Start/Stop Time   : 300   ms
- Transfer Rate   : 86,7 Kbytes/s

PHYSICAL DATA   .

- Dimensions
  - height   : 335.6 mm
  - depth   : 114.3 mm
  - width   : 217.2 mm
- Weight   : 15   kg

POWER REQUIREMENTS

- Voltage   : 100-127 or 200-240 VAC
- Frequency   : 60 or 50 Hz (± 2%)
- Consumption   : 100 W max.

ENVIRONMENTAL CONDITIONS

- Ambient Temperature   : 5-45°C
- Relative Humidity   : 20-80%
- Absolute Humidity   : 20g/m^3

1.5 EXTERNAL INTERFACE CABLES

1.5.1 CABLE TYPE 1

SYSTEM CABINET   TYPE 1   WORKSTATION
SEEN FROM WIRING SIDE

PCB

13

YELLOW
PINK
GREY
WHITE

GREEN
BROWN

a   b

PCB

13

PINK
YELLOW

GREY
WHITE

GREEN
BROWN

05189A

a   b

		DCE		DTE
(b7)	PINK	102	L	102 (b7)
(b2)	BROWN	103	TxD	103 (b2)
(b3)	GREEN	104	RxD	104 (b3)
(b5)	WHITE	106	CTS	106 (b5)
(b6)	GREY	107	DSR	107 (b6)
(a7)	YELLOW	108	DTR	108 (a7)

5M   8702 300 00004
15M   8702 300 00011

1.5.2 CABLE TYPE 2

SYSTEM CABINET   TYPE 2
SEEN FROM WIRING SIDE

PCB

13

YELLOW
PINK
GREY
WHITE

GREEN
BROWN

1

a   b

PRINTER

1   14

SHIELD
BROWN
GREEN

WHITE
GREY
PINK
YELLOW

13   25

05189B

		DCE		DTE
			PUC SHIELD	101 (1)
(b7)	PINK	102	L	102 (7)
(b2)	BROWN	103	TxD	103 (2)
(b3)	GREEN	104	RxD	104 (3)
(b5)	WHITE	106	CTS	106 (5)
(b6)	GREY	107	DSR	107 (6)
(a7)	YELLOW	108	DTR	108 (20)

5M   8702 300 00003
15M   8702 300 00015

1.5.3 CABLE TYPE 3

SYSTEM CABINET

PCB

TYPE 3
SEEN FROM WIRING SIDE

MODEM


```
13          WHITE-BLUE
            BROWN-RED
            WHITE-PINK
            BLACK
            GREY-PINK
            BROWN-BLUE
            WHITE-GREEN
            YELLOW-BROWN
            GREY-BROWN
            WHITE
            YELLOW
            PINK
            RED
1           GREY
            BROWN
            WHITE-GREY
        a b
```

```
                WHITE-GREY
                BROWN
                GREY
                SHIELD
                RED
                PINK
                YELLOW
                WHITE
                GREY-BROWN
                YELLOW-BROWN
                WHITE-GREEN
                BROWN-BLUE
                GREY-PINK
                BLACK
                WHITE-PINK
                BROWN-RED
                WHITE-BLUE
```
05189C

ALL OTHER PINS ALSO 1 1
CONNECTED BUT NOT REQUIRED

SM 8702 300 00008

		DTE		DCE	
(b7)	YELLOW-BROWN	102	SHIELD / L	101	(1)
(b2)	RED	103	TxD	103	(2)
(b3)	PINK	104	RxD	104	(3)
(b4)	YELLOW	105	RTS	105	(4)
(b5)	WHITE	106	CTS	106	(5)
(b6)	GREY-BROWN	107	DSR	107	(6)
(a7)	BROWN-BLUE	108	DTR	108	(20)
(b7)	WHITE-GREEN	109	DCD	109	(8)
(a10)	WHITE-PINK	111	DRS	111	(23)
(a11)	BROWN-RED	113	TSET	113	(24)
(a2)	GREEN	114	TSET	114	(15)
(a4)	BROWN	115	RSET	115	(17)
(a9)	BLACK	125	CIN	125	(22)
(a8)	GREY-PINK	140	RL	140	(21)
(a5)	WHITE-GREY	141	LL	141	(18)
(a12)	WHITE-BLUE	142	TI	142	(25)

1.5.4 CABLE TYPE 5

P3000 SIDE

TTA SIDE


```
            13
            PINK
            YELLOW
            GREY
            GREEN
            BROWN
            1
        a b
```

```
            13
            GREY
            YELLOW
            PINK
            BROWN
            GREEN
            1
        a b
```
05350 B

		DTE		DTE	
YELLOW	(b7)	102	GND	102	(b7)
BROWN	(b2)	103	TxD	103	(b2)
GREEN	(b3)	104	RxD	104	(b3)
	(b4)	105	RTS	105	(b4)
	(b5)	106	CTS	106	(b5)
	(b6)	107	DSR	107	(b6)
	(a7)	108	DTR	108	(a7)
	(b8)	109	DCD	109	(b8)
PINK	(a11)	113	TxC(H)	113	(a11)
GREY	(a2)	114	TxC	114	(a2)
	(a4)	115	RxC	115	(a4)

SM 8700 300 00019
15M 8700 300 00021

1.5.5 CABLE TYPE 6

SYSTEM CABINET

TYPE 6
SEEN FROM WIRING SIDE

PRINTER

PINK
WHITE
YELLOW
BROWN
GREEN

SHIELD
BROWN
GREEN
WHITE
YELLOW
PINK

05189D

		DTE				DTE	
			SHIELD		101	(1)	
(b7)	PINK	102			102	(7)	
(b2)	GREEN	103	TxD		103	(2)	
(b3)	BROWN	104	RxD		104	(3)	
(b5)	YELLOW	106	CTS		106	(5)	
(b6)		107	DSR		107	(6)	
(a7)	WHITE	108	DTR		108	(20)	
(b8)		109	DCD		109	(8)	

SM 8702 300 00013
15M : 8702 300 00014

1.5.6 CABLE TYPE 10

BROWN-GREEN
VIOLET
PINK
GREY
WHITE-GREEN
BLUE
WHITE
GREY-PINK
GREEN
YELLOW
RED-BLUE
BROWN
RED

BROWN
RED-BLUE
YELLOW
BLACK
GREEN
GREY-PINK
WHITE
BLUE
WHITE-GREEN
GREY
PINK
VIOLET
BROWN-GREEN
RED

05350 D

		DTE		DCE	
b2	GREEN		T(A)	2	
a1	YELLOW		T(B)	9	
b3	GREY-PINK		C(A)	3	
a2	RED-BLUE		C(B)	10	
b4	WHITE		R(A)	4	
a3	BROWN		R(B)	11	
b5	BLUE		I(A)	5	
a4	RED		I(B)	12	
b6	WHITE-GREEN		S(A)	6	
a5	BROWN-GREEN		S(B)	13	
b7	GREY		B(A)	7	
a6	VIOLET		B(B)	14	
b8	PINK		GROUND	8	
			SHIELD	1	

15M 8700 300 00017

```
           13
        25          WHITE-BLUE                              WHITE-GREY
                    BROWN-RED                               BROWN
                    WHITE-PINK                              GREY              1
                    BLACK                                   SHIELD           14
                    GREY-PINK                               RED
                    BROWN-BLUE                              PINK
                    WHITE-GREEN                             YELLOW
                    YELLOW-BROWN                            WHITE
                    GREY-BROWN                              GREY-BROWN
                    WHITE                                   YELLOW-BROWN
                    YELLOW                                  WHITE-GREEN
                    PINK                                    BROWN-BLUE
                    RED                                     GREY-PINK
        14          SHIELD                                  BLACK
            1       GREY                                    WHITE-PINK
                    BROWN                                   BROWN-RED
                    WHITE-GREY                              WHITE-BLUE
                                                                     13
                                                            05350 A
```

DTE   DCE

(1)		101	SHIELD	101	(1)
(7)	YELLOW-BROWN	102	L	102	(7)
(2)	RED	103	TxD	103	(2)
(3)	PINK	104	RxD	104	(3)
(4)	YELLOW	105	RTS	105	(4)
(5)	WHITE	106	CTS	106	(5)
(6)	GREY-BROWN	107	DSR	107	(6)
(20)	BROWN-BLUE	108	DTR	108	(20)
(8)	WHITE-GREEN	109	DCD	109	(8)
(23)	WHITE-PINK	111	DRS	111	(23)
(24)	BROWN-RED	113	TSET	113	(24)
(15)	GREEN	114	TSET	114	(15)
(17)	BROWN	115	RSET	115	(17)
(22)	BLACK	125	CIN	125	(22)
(21)	GREY-PINK	140	RL	140	(21)
(18)	WHITE-GREY	141	LL	141	(18)
(25)	WHITE-BLUE	142	TI	142	(25)

1SM   8709 100 49997

CHAPTER 2   .   SYSTEM CABINET

2 SYSTEM CABINETS

2.1 SYSTEM CABINET P3500

2.1.1 UNPACKING P3500

To avoid transport damage, the system cabinet is packed in a double box. Apart from careful removal of the system cabinet (mind the operator panel lamps) no special action has to be taken. Prevent shocks to the system cabinet.

2.1.2 REMOVAL OF COVERS P3500

Follow the next procedure to remove the cover:

- Press the sides of the plastic rear cover (1) and lift the cover according to the diagram.

- Remove the two screws (2) at rear side of system cabinet.

- Loosen the two bolts (3) on under side of system cabinet.

- Slide the cover gently forwards, do not harm the internal wiring.

Follow this procedure in reverse order to replace the cover.
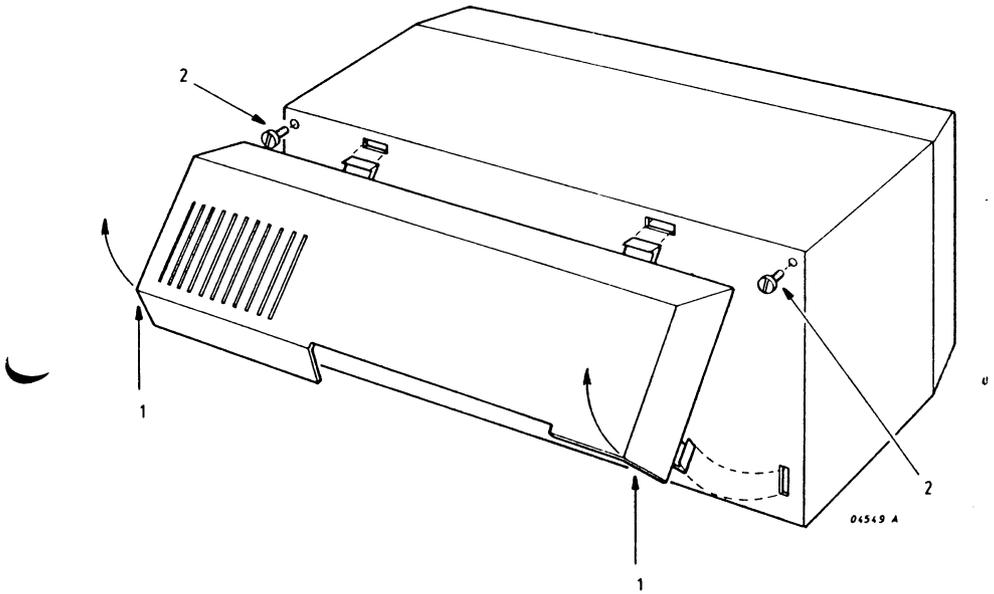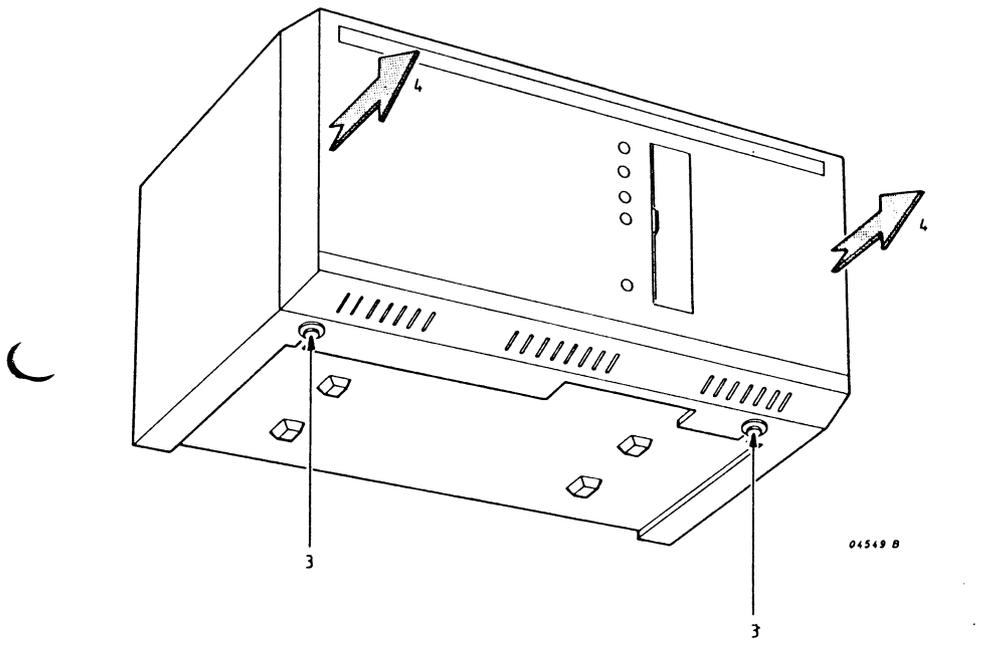
Figure 2.1 REMOVAL OF COVERS

2.1.3 INSTALLATION OF PROCESSOR BOARDS P3500

The Processor boards are delivered in separate boxes and have to be inserted in a slot of the system cabinet. The particular slots are indicated by a sticker at the front side of the mounting frame.

There are no differences between the Slave boards. The numbering of 1 to 4 is used to define which software is to be loaded in which Slave number. This is essential when during software configuration a difference is made between the slaves, e.g. one slave with a local printer.

In some older P3500 systems with FLEXCO and SASI-AD boards it is not possible to install a fourth Slave board. In these cases the FLEXCO and SASI-AD boards must be replaced by a SESCO board.

The maximum number of processor boards to be installed in the system, and the position of these boards is given in the table below:

	P3500 DUAL MFD					P3500 MFD+FXD			
Pos. M	S1	S2	S3	S4	Pos. M	S1	S2	S3	S4
PMU 80-3	80-1	80-1	80-3	80-1	MPU 80-3	80-1	80-1	80-3	80-1
80-3	80-1	186	80-1	80-1	80-3	80-1	186	80-1	--
80-3	--	186	186	80-3	80-3	--	186	186	--
80-3	80-1	186	186	80-1	80-3	--	186	88S	--
80-3	88S	88S	88S	88S	80-3	88S	88S	88S	--
80-3	80-1	186	88S	88S	80-3	--	88S	88S	80-3
80-3	--	186	88S	80-3					
80-3	88S	88S	88S	80-3					

Notes: This table gives the maximum load of a system. For configurations with a PMU 80-1 master the same table can be used, with the restriction that no PMU 80-3 DC-Node is permitted.
The slave positions with a PMU 80-3 may also be a PMU 80-1.

Figure 2.2 LOCATOR OF SYSTEM CABINET   2-5

FXD control board

battery

slave 2
slave 1
slave 3
master
slave 4 *
pcb SESCO *

power supply
pcb WS 120
hour counter

pcb MFI-SBS

battery on switch
mains fuse

pcb PSU M2

fan

pcb XEBEC (S1410)
FXD motor board

FXD

MFD

operator panel

back panel
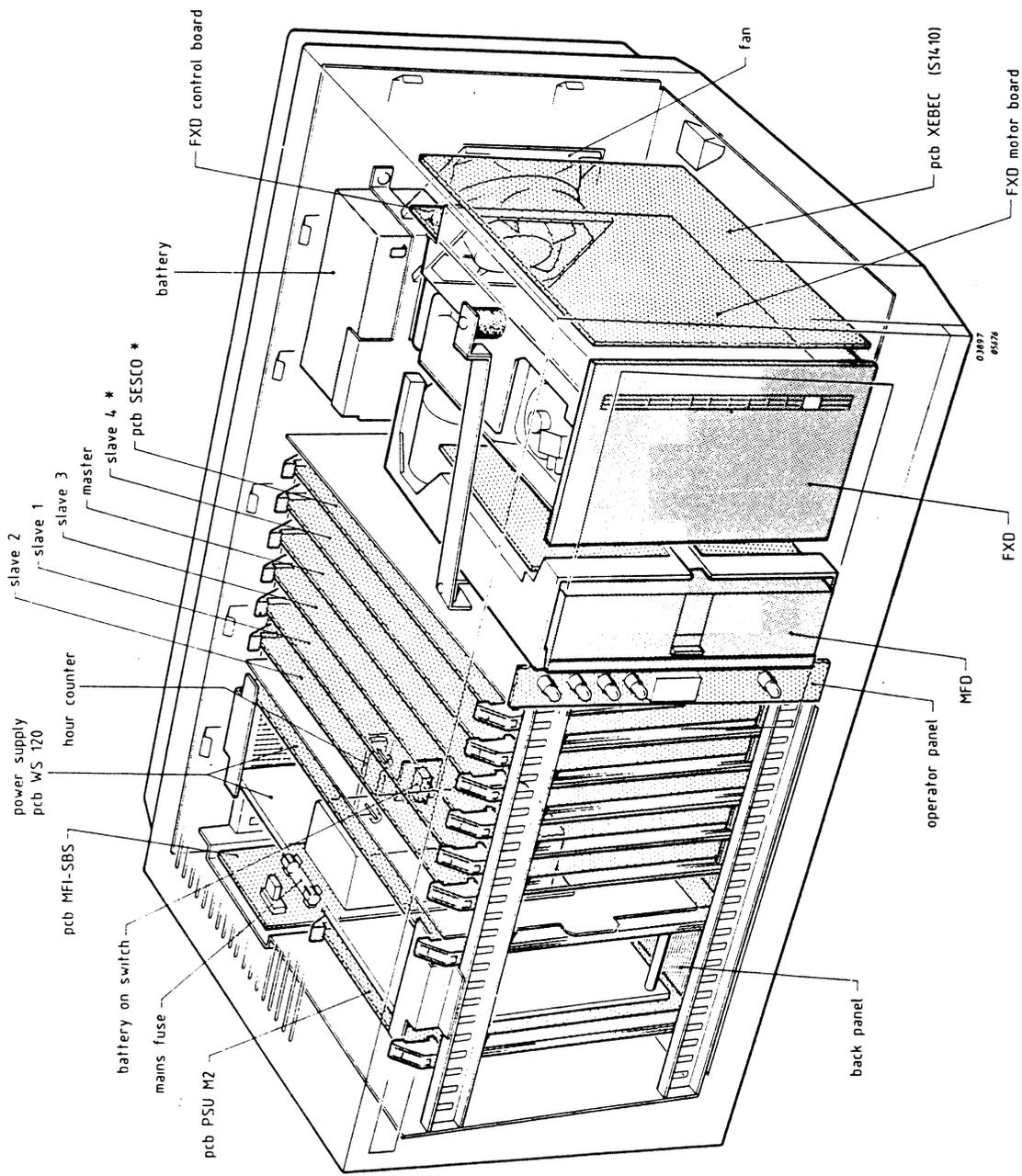
*) Before release 2
the pcb PMU80 slave 4 position
is occupied by pcb FLEXCO
and the pcb SASI-AD position is
occupied by pcb SASI-AD

P3500 HWI

8504

2.1.4 STRAP SETTING P3500

On some boards it is possible to make some interconnections, by inserting a
jumper or strap at certain locations.
The section Strap Setting explains under which conditions a strap should be
placed.
For the strapping of the Processor Boards we refer to section 2.3.

2.1.4.1 BACKPANEL STRAP SETTING (SEE FIG. 2.3)

The board at the bottom of the system cabinet, on to which the other boards are
plugged, is called the Backpanel. Strap setting depends on the configuration of
the system as follows:

Strap   Function of setting

1   Closed when battery backup not installed.
            Open   when battery backup installed.

2   Closed when battery backup not installed.
            Open   when battery backup installed.

3   Closed when battery backup not installed.
            Open   when battery backup installed.

4   Always open.

5   Closed when Slave 4 not installed.
            Open   when Slave 4 installed.

6   Pin 1-2 always open
            Pin 2-3 always closed

7   Pin 1-2 always open
            Pin 2-3 always closed

8   Pin 1-2 always closed
            Pin 2-3 always open
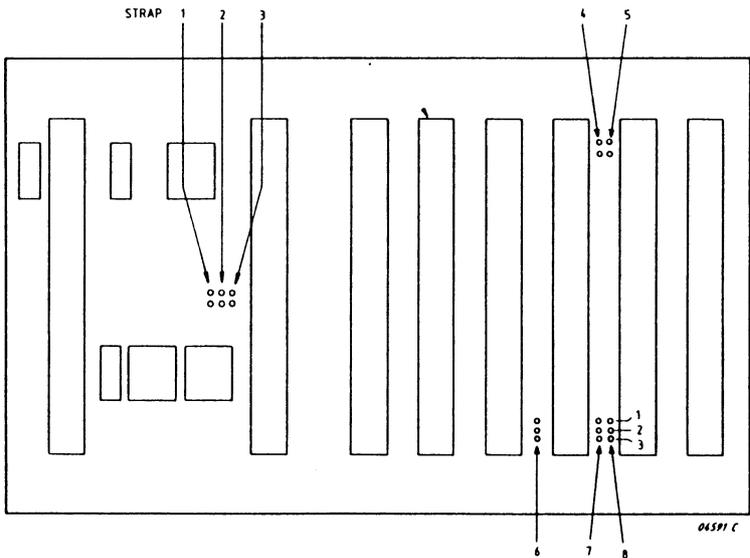
Figure 2.3 BACKPANEL STRAP LOCATIONS

2.1.4.2 POWER SUPPLY STRAP SETTING

On the power supply unit PSU WS-120, there are two straps, located near to the mains connector of the unit. Check correct strapsetting before the system is connected to the mains supply.

Strap	Setting
LOC/REM	REMote in system cabinet
115/230	115 for Mains Voltage between 110 and 120 Volts. 230 for Mains Voltage between 220 and 240 Volts.

On the filter board MFI-SBS are two straps located near the mains connector:

Strap	Setting
W1	Closed in system cabinet.
W2	Open.

2.1.5 CONNECTION OF BATTERY

The P3500 system cabinet can contain a re-chargeable battery to maintain memory contents at power break down.

It is possible that the battery is not yet connected at a new machine to prevent unloading during transport.
The location of the battery can be found in Fig. 2.2.

- Connect the blue wire (-) to the upper connector of the battery.
- Connect the red wire (+) to the lower connector of the battery.

N.B. The + wire may be brown in some instances.

2.2 SYSTEM CABINET P3800

2.2.1 UNPACKING P3800

Apart from careful removal of the cabinet no special action has to be taken. Prevent shocks of the system cabinet.

2.2.2 REMOVAL OF COVERS P3800

Rear Cover   : Press and turn screws on the rear panel.

Side Cover   : Press and turn screws on the side panel.

Top Cover   : Remove Rear Cover.
               Slide Top Cover backwards.
               Lift Top Cover

Front Cover : Remove Rear Cover.
               Slide Top Cover backwards.
               Loosen screws (on top) that fix Front Cover to frame.

2.2.3 INSTALLATION OF PROCESSOR BOARDS P3800

Processor boards are delivered in separate boxes. They have to be inserted in a slot of the cabinet. The particular slots are indicated by a sticker at the mounting frame.

Before inserting the boards first check the strapsetting of the processors (section 2.3) and the backpanel strapping.

Place the Slave boards always in the slots with the lowest slave number, to prevent problems during Software Installation.

If an 8/16 bit system has to be installed IPL must be done from a 16-bit processor (PMU 186 or PMU 88S-1).

2.2.4 INSTALLATION OF POWER SUPPLY

The power supply units PSU-B2 and PSU-M3 are delivered in separate boxes.
Secure the power supply units at the positions as indicated in figure 2.4. .

X3134
OP-SL
ARCHIVE (5920)
SAC
TAPCO-Q-2
PMU

05572

VT

SESCO-1
PSU-B2
LFF-8A
PSU-M3
05573

BATTERY
FIXCO5
5.25" FXD RODIME
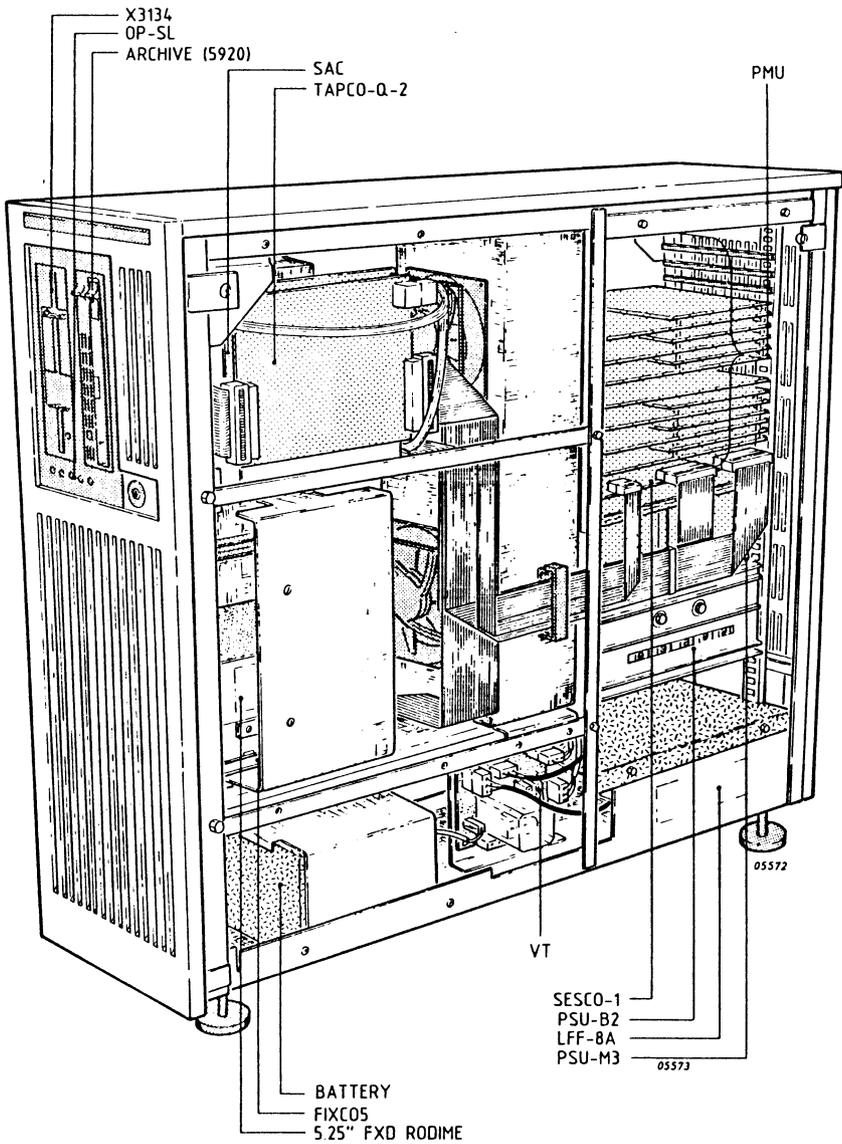
Figure 2.4 LOCATOR P3800

2.2.5 INSTALLATION OF SECOND FIXED DISK DRIVE

This option consists of two kits:

- The Disk Drive Unit 10,20 or 40 Mbyte:
    P3411 - FXD 10 MB for P3800-05
  P3414 - FXD 20 MB for P3800-06
  P3416 - FXD 40 MB for P3800-07
  P3810-005 mounting accessoires to upgrade the P3800 system.

The next procedure is used to install the Drive:

- Remove covers.
- Disconnect cable connectors from operator panel and remove the slot cover.
- Mount the two guide strips on the FXD Drive.
- Check the strapsetting of the 2nd FXD.
- Insert the FXD Drive into the upper guide rail of the frame.
- Connect the power, data and control cables as indicated in figure 2.5.
- Connect the grouding wyre to the second FXD and to the frame.

2.2.6 INSTALLATION OF STREAMER TAPE DRIVE

This option consists of four kits:

- The Streamer Tape Drive   P5347
- The Controller TAPCO-Q2   P3000-31
- The Archive Formatter SAC   P3000-30
- The Upgrade Parts Kit   P3810-004

The next procedure is used to install the Tape Drive:

- Remove covers.
- Disconnect cable connectors from operator panel and remove the slot cover.
- Bend one of the two flatcables thus that you can connect it from TAPCO-Q2 to the SAC Controller. Connect this cable to the SAC Controller Jl connector (fig.2.5 P).
- Connect the other flatcable to the SAC controller J3 connector. (fig. 2.5 Q).
- Mount the SAC Controller to the mechanism plate.
- Connect the cable on connector Jl to the TAPCO-Q2 and mount also this controller to the mechanism plate.
- Connect the power cable to the SAC and TAPCO-Q2 (fig.2.5 R).
- Connect existing SASI Cable to the TAPCO-Q2. (fig. 2.5 S)
- Mount the TAPE DRIVE to the mechanism plate and mount this complete unit into the mainframe.
- Connect the cable on connector J3 of the SAC to the STREAMER TAPE DRIVE. (fig.2.5 Q).
- Connect the power cable to the DRIVE and to the backpanel PBP-SSL.
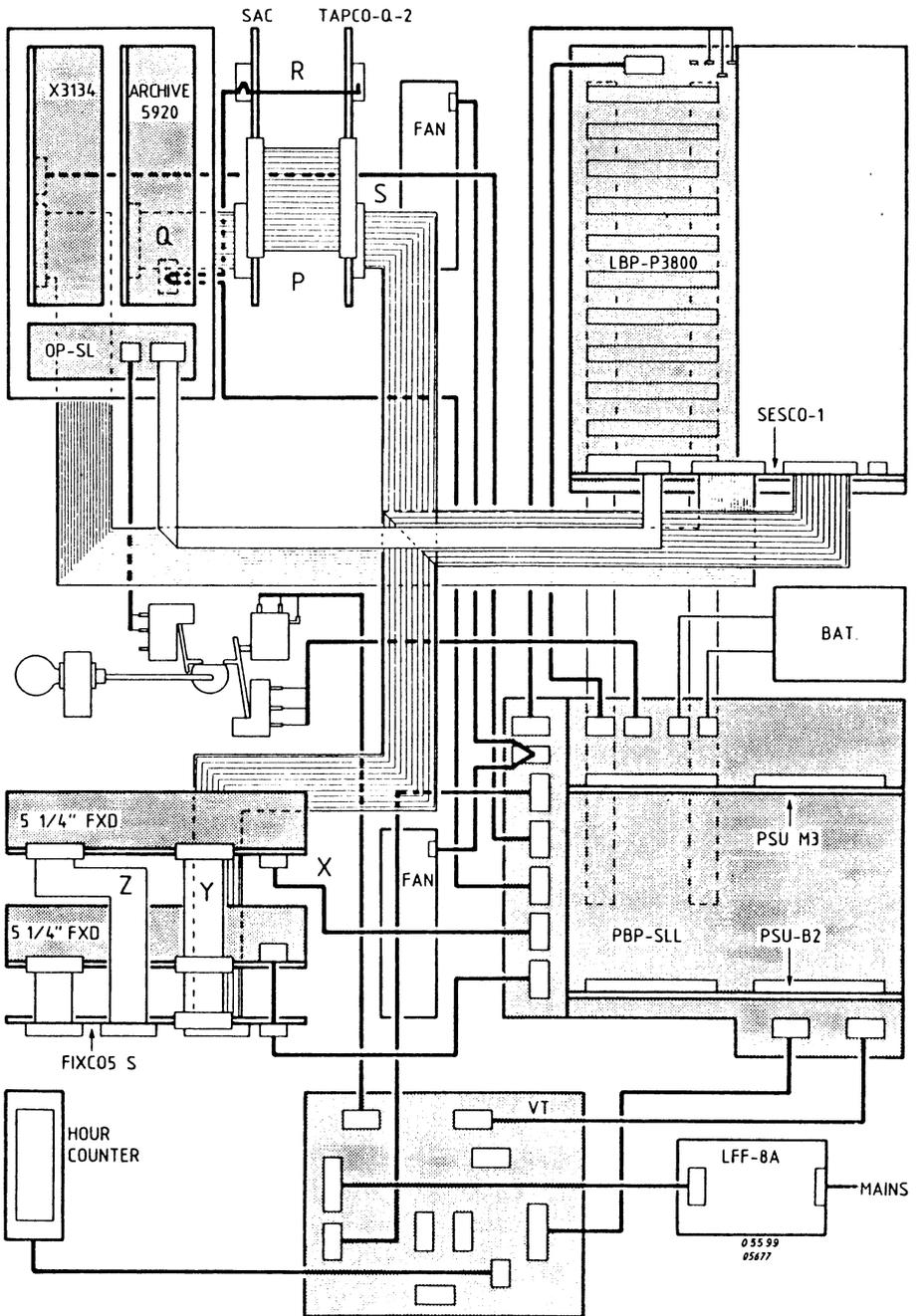
Figure 2.5 INSTALLATION OF OPTIONS

2.2.7 STRAP SETTING P·3800

On some boards it is possible to make some interconnections, by inserting a jumper or strap at certain locations.
The section Strap Setting explains under which conditions a strap should be placed.

2.2.7.1 STRAP SETTING BACKPANEL LBP-P3800

The board that interconnects the processor boards and the disk controller, is called the Blackpanel. Strapsetting depends on the configuartions of the system as follows:

Strap	Setting
ʹ 1	Not available.
2	Closed when slave 5 not installed. Open when slave 5 installted.
3	Closed when slave 2 not installed. Open when slave 2 installted.
4	Closed when slave 6 not installed. Open when slave 6 installted. .
5	Closed when slave 3 not installed. Open when slave 3 installted.
6	Closed when slave 7 not installed. Open when slave 7 installted.
7	Open
8	Closed when slave 8 not installed. Open when slave 8 installted.
9	Closed when slave 4 not installed. Open when slave 4 installted.
10	Closed when slave 9 not installed. Open when slave 9 installted.
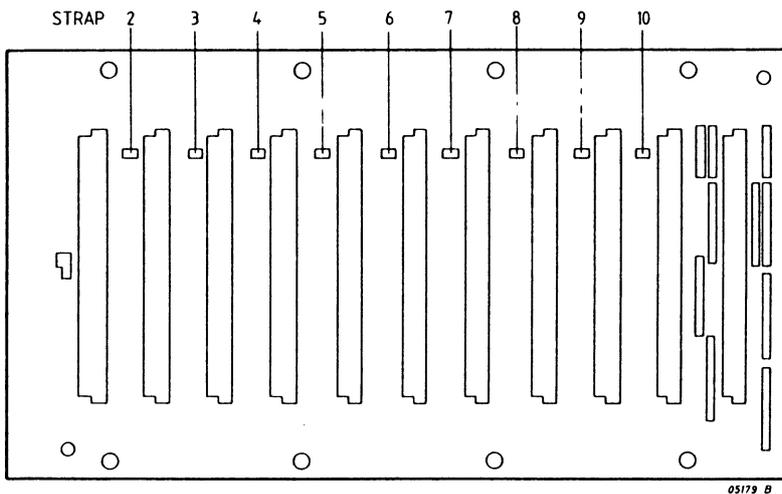
Figure 2.6   STRAP SETTING BACKPANEL P3800

2.2.7.2 STRAP SETTING POWER SUPPLY P3800

* Filter Board LFF-8A

Strap	Setting
W1/W2	W1 closed: (default) connection logic ground/protective ground.

* PSU-M3

Strap	Setting
230/115	Mains Supply, 115 closed for mains voltage between 110 and 120V. 230 closed for mains voltage between 220 and 240V.
LOC/REM	Power On, REM closed for remote power on.
B1/REM	Power Supply Configuration, REM closed: battery backup power supply.
RSLN	Upper pins closed: no source RSLN.
PWFNP	Upper pins closed: no source PWFNP.

* PSU-B2

Strap	Setting
115/230	Mains Supply, 115 closed for mains voltage between 110 and 120V. 230 closed for mains voltage between 220 and 240V.
REM/LOC	Power On, LOC closed: for remote power on.

2.3 STRAP SETTING PROCESSOR BOARDS P3500/P3800

2.3.1 STRAP SETTING PMU 80-1, PMU 80-1A

Strap	Setting
1	Closed.
2	Closed.
3	Closed.
4	Master: open (no remote power on Channel B). Slave : closed (remote power on via B, CT108).
5	2-3 closed: Channel A External Transmit Clock. 1-2 closed: Internal Transmit Clock (default).
6	2-3 closed: Channel A External Receive Clock. 1-2 closed: Internal Receive Clock (default).
7	Open.
8	Closed.
9	Closed: remote power on via Channel A, CT125. Open : no remote power on via Channel A (default).
10	Closed: remote power on via Channel A, CT109. Open : no remote power on via Channel A (default).
SW1	On : Channel A, CT108 active (default). Off: Channel A, CT108 inactive.
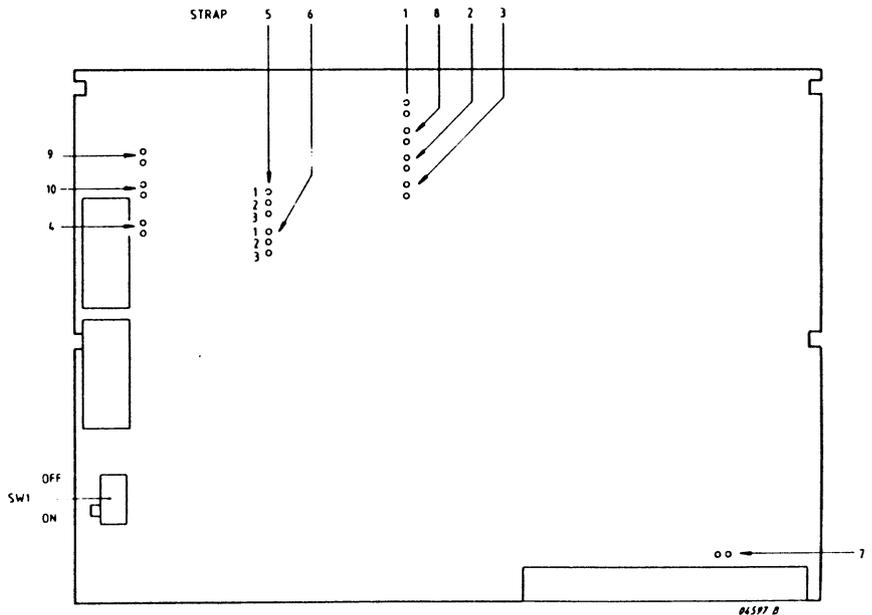
Figure 2.7   STRAP SETTING PMU 80-1

2.3.2 STRAP SETTING PMU 80-3

Strap	Setting
W1	1-2 closed
W2	1-2 closed
W3	open
W4	2-3 closed
W5	closed
W6	closed
W7	closed
W17	closed
W18	closed
W19	open
W20	open
W21	open: no remote power on at channel A (default)
	1-2 closed: RPON via CT125
	2-3 closed: RPON via CT109
W22	1-2 closed: Channel A External Transmit Timing
	2-3 closed: CT113 from baudrate gen. (default)
W23	1-2 closed: Channel A External Receive Clock
	2-3 closed: Internal Receive/Transmit Clock (default)

V.24 INTERFACE CHANNEL B STRAPPED FOR DCE (DEFAULT)

Strap	Setting
W8	closed
W9	closed
W10	closed
W11	closed
W12	closed
W13	closed
W14	slave : 2-3 closed (remote power on)
	master: open (no remote power on)
W15	1-2 closed
W16	slave : 1-2 closed (int. power off)
	master: open (no int.)

V.24 INTERFACE CHANNEL B STRAPPED FOR DTE

Strap	Setting
W8/W9	1-1 closed
	2-2 closed
W10/W11	1-1 closed
	2-2 closed
W12/W13	1-1 closed
	2-2 closed
W14	slave : 1-2 closed (remote power on)
	master: open (no remote power on)
W15	2-3 closed
W16	slave : 2-3 closed (interrupt power off)
	master: open (no interruppt power off).
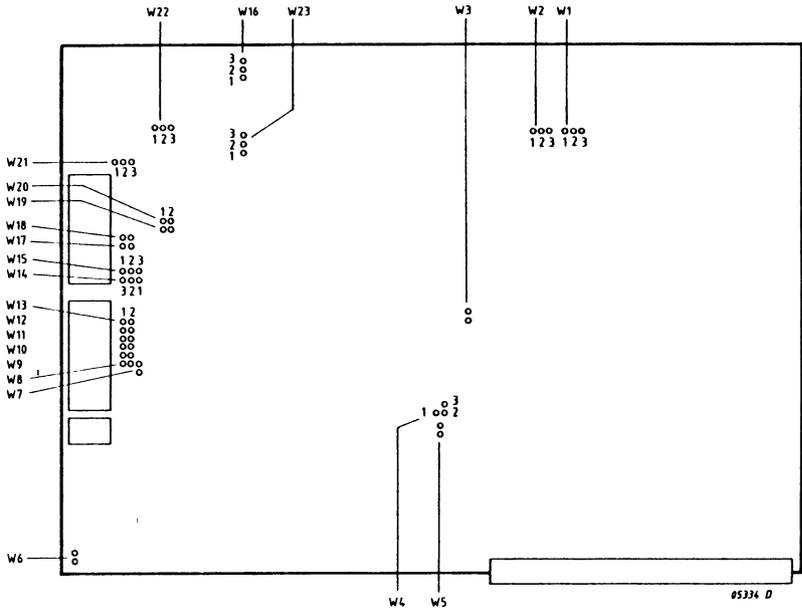
Figure 2.8 STRAP SETTING PMU 80-3

2.3.3 STRAP SETTING PMU 186

Strap	Setting
W1	closed
W2	open
W3	closed
W4	open
W5	open
W6	open
W7	closed
W8	open
W9	1-2 closed: Channel A External Transmit Clock
	2-3 closed: Internal Receive/Transmit Clock (default)
W10	1-2 closed
W21	1-2 closed: Channel A CT113 from baudrate gen. (default)
	2-3 closed: Channel A External Transmit Timing
W23	open: no remote power on Channel A
	1-2 closed: RPON via CT109
	2-3 closed: RPON via CT125
W24	closed
W25	closed
W26	bus-master: closed (memory write to EMM-bus)
	bus-slave : open (no memory write to EMM-bus)

V.24 INTERFACE CHANNEL B STRAPPED FOR DCE (DEFAULT)

W11	slave : 1-2 closed (remote power on)
	master: open (no remote power on)
W12	closed
W13	closed
W14	closed
W15	closed
W16	closed
W17	closed
W18	closed
W22	slave: 2-3 closed (interrupt power off, via CT108)
	master: open (no interrupt power off).

V.24 INTERFACE CHANNEL B STRAPPED FOR DTE

W11	slave : 2-3 closed (remote power on)
	master: open (no remote power on)

V.24 INTERFACE CHANNEL B STRAPPED FOR DTE

W12	2-3 closed
W13/W14	1-1 closed
	2-2 closed
W15/W16	1-1 closed
	2-2 closed
W17/18	1-1 closed
	2-2 closed
W19/W20	1-1 closed
	2-2 closed
W22	slave : 1-2 closed (interrupt power off, via CT109)
	master: open (no interrupt power off).

Figure 2.9   STRAP SETTING PMU 186

2.3.4 PMU 88S-1

Strap	Setting
W1	open
W2	closed
W3	2-3 closed
W12/W13	1-1 closed
	2-2 closed
W14	open
W15	open
W16	open: no remote power on on Channel A (default)
	1-2 closed: RPON via CT125
	2-3 closed: RPON via CT109
W28	2-3 closed: Channel A External Transmit Timing
	1-2 closed: CT113 from baudrate gen. (default)
W29	2-3 closed: Channel A External Receive Clock
	1-2 closed: Internal Receive/Transmit Clock (default)

V.24 INTERFACE CHANNEL B STRAPPED FOR DCE (DEFAULT)

W17	closed
W18	closed
W19	closed
W20	closed
W21	closed
W22	closed
W23	1-2 closed
W24	1-2 closed
W25	2-3 closed
W26	slave : 1-2 closed (interrupt power off)
	master: open (no interrupt power off)
W27	master: 2-3 closed (remote power on)
	slave : open (no remote power on)

V.24 INTERFACE CHANNEL B STRAPPED FOR DTE

W17/W18	1-1 closed
	2-2 closed
W19/W20	1-1 closed
	2-2 closed
W21/W22	1-1 closed
	2-2 closed
W23	2-3 closed
W26	slave : 2-3 closed (interrupt power off)
	master: open (no interrupt power off)
W27	slave : 1-2 closed (remote power on)
	master: open (no remote power on)

PCB PMU88S-1CPV
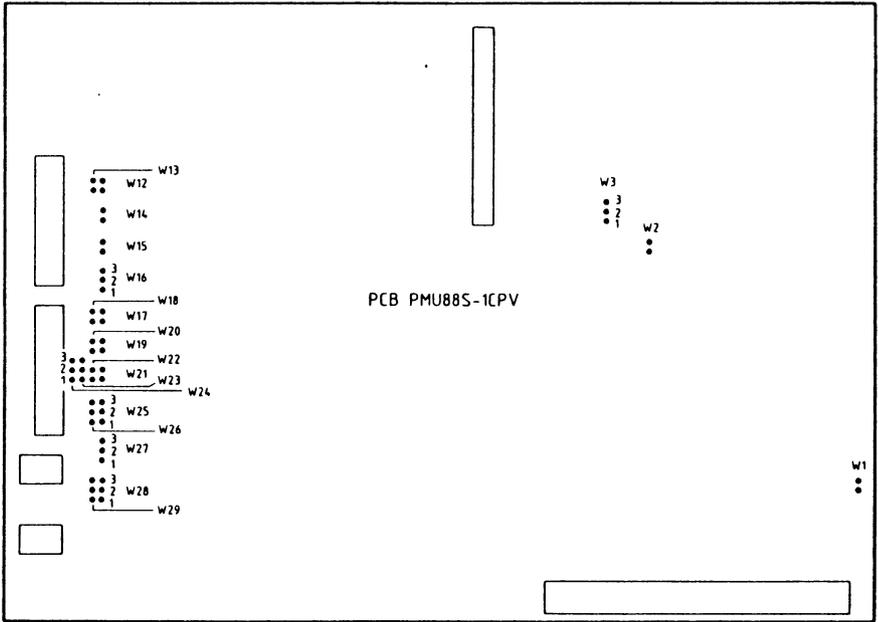
05576 B

Figure 2.10   STRAP SETTING PMU 88S

2.4 EXTERNAL INTERFACES P3500/P3800

All processor boards have two interfaces of the V.24 type.
The upper connector is the "A" Channel,
The lower connector is the "B" Channel.

The "A" connector is a full V.24 interface, the "B" channel has limited
features. This connector is normally strapped as "DCE" interface for direct
connection of V.24 peripherals. On some processors this interface can also be
strapped as "DTE" interface to allow simple asynchronous modem connections.

The SESCO board is supplied with the standard "Small Computer System Interface",
EXT SCSI, to connect Extension Cabinets.
In some older P3500 systems this interface is supplied by the SASI-AD board.

The interface connections used are of the type PUC. (Philips Universal
Connector). These so-called PUCs consist of two parts: The metal strain relief
and the connector part (Berg).

Warning:

- Under no circumstances must the interface cable be connected or disconnected
  while the power is on.
- To prevent damage of interface circuits on the boards, the metal strain relief
  should be connected first, then the connector part. Disconnect in the reverse
  order.

For the interconnection of Workstations, Printers, Extension Cabinets and
Communications to these connectors we refer to the particular chapters in this
manual.

For a description of the interface cables we refer to section 1.5.

Figure 2.11 and 2.12 give the location of the processor boards and their
interfaces.
Figure 2.13 and 2.14 give the connector layouts of the interface connectors.

SESCO SLAVE 4 MASTER SLAVE 3 SLAVE 1 SLAVE 2

EXT
SCSI

A A A A A

B B B B B

04688 C
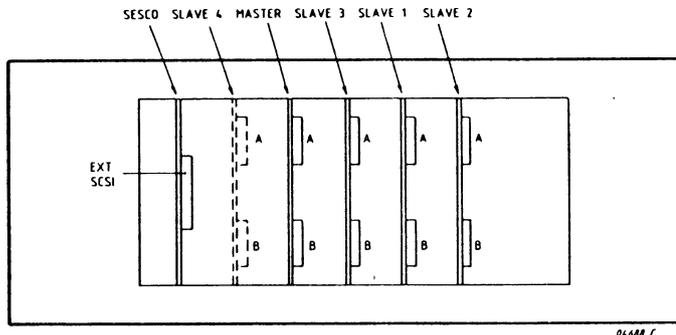
Figure 2.11 INTERFACES P3500 (TOP VIEW)

A   B

SLAVE 1
5
2
6
3
7
MASTER
8
4
RESERVED
EXT SCSI

05506 B
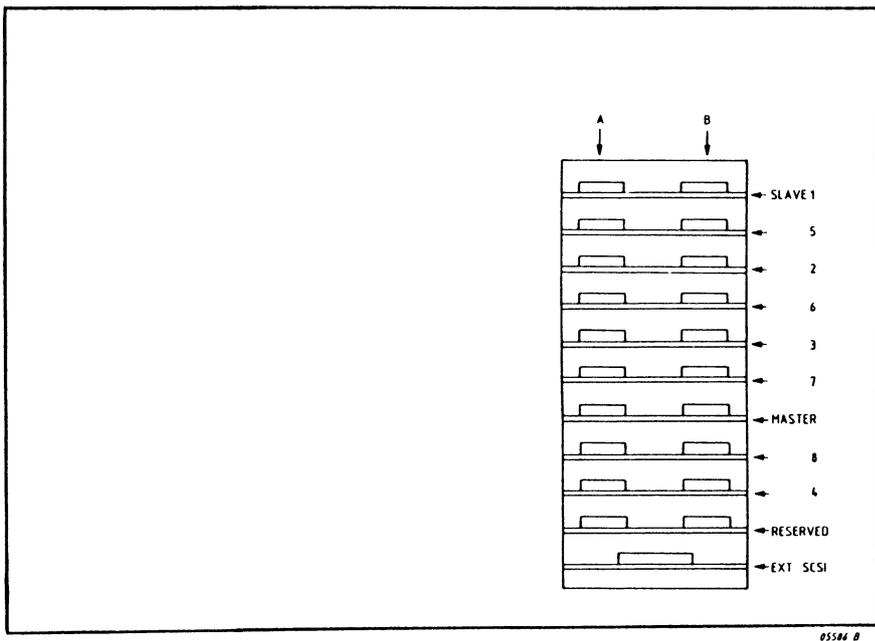
Figure 2.12 INTERFACES P3800 (SIDE VIEW)

CONNECTOR A V.24 INTERFACE DTE				CONNECTOR B V.24 INTERFACE DCE				CONNECTOR B V.24 INTERFACE DTE		
	a	b			a	b			a	b
1				1				1		
2	A114 TXC	A103 TXD		2		B103 RXD		2		B103 TXD
3		A104 RXD		3		B104 TXD		3		B104 RXD
4	A115 RXC	A105 RTS		4				4		B105 RTS
5	A141 LL	A105 CTS		5		B106 DTR		5		B106 CTS
6		A107 DSR		6		B107 DSR		6		B107 DSR
7	A108.2 DTR	A12 GND		7	B108.2 DTR	B102 GND		7	A108.2 DTR	B102 GND
8	A140 RL	A109 DCD		8				8		B109 DCD
9	A125 CIN			9				9		
10	A111 DSRS			10				10		
11	A113 TXC (M)			11				11		
12	A142 TI			12				12		
13		///////		13		///////		13		///////

Figure 2.13   SERIAL INTERFACE CONNECTORS

CONNECTOR EXT. SCSI
SASI-BUS EXTERNAL

	a	b
1	NDB0	0V
2	NDB1	0V
3	NDB2	0V
4	NDB3	0V
5	NDB4	0V
6	NDB5	0V
7	NDB6	0V
8	NDB7	0V
9		0V
10		0V
11		0V
12		0V
13		0V
14		0V
15		0V
16	NATN	0V
17		0V
18	NBSY	0V
19	NACK	0V
20	NRST	0V
21	NMSG	0V
22	NSEL	0V
23	NCD	0V
24	NREQ	0V
25	NIO	////////

Figure 2.14 SCSI INTERFACE CONNECTOR

CHAPTER 3   WORKSTATIONS

3 WORKSTATIONS

Two types of workstations are available for the P3500 system, the VDU P2711 with Keyboard P2841 and the VDU P2705 using the same keyboard P2841.

3.1 KEYBOARD P2841

3.1.1 UNPACKING

The Keyboard is packed in a separate box, to avoid damage during transport action. Unpacking does not require special actions.

3.1.2 CONNECTION OF KEYBOARD P2841

The Keyboard is equipped with a flexible cable which is at keyboard side fixed via a special strain relief.
For the connection at terminal side please refer to section 3.2 for P2711 and section 3.3. for P2705.

3.2 VDU P2711

3.2.1 UNPACKING

To avoid transport damage the VDU is packed in a double box. Be very careful when unpacking and handling the VDU, rough handling can cause the tube to implode.

3.2.2 REMOVAL OF COVER

Follow the next procedure to remove the rear cover, other covers cannot be removed:

- Press the rear cover slightly upwards (A) and pull the down side of the cover slightly out (B).

  Now you can shift the cover downwards and remove it.

- Disconnect the ground connection (C), mounted at the inner side of the rear cover .

Follow this procedure in reverse order to replace the cover.

04563 C
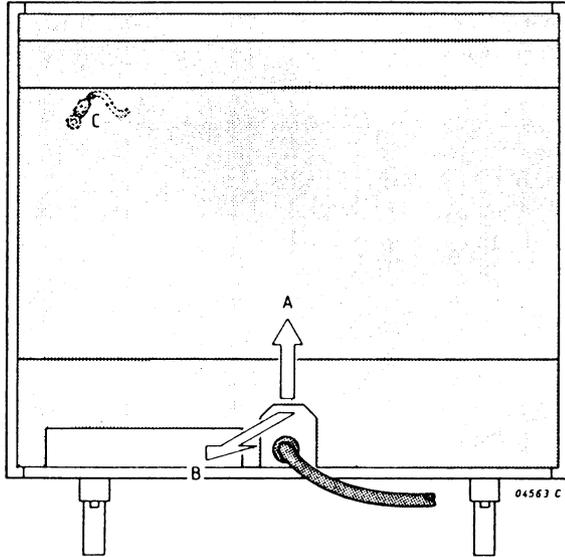
Figure 3.1   COVER REMOVAL P2711

3.2.3 POWER SUPPLY STRAP SETTING

On the power supply unit PSU WS-120 two straps are located, near to the mains connector of the unit. Check correct strap setting before the system is connected to the mains supply.

Strap	Setting
LOC/REM	LOCal in workstation cabinet
115/230	115 for Mains voltage between 110 and 120 Volts. 230 for Mains voltage between 220 and 240 Volts.

On the power supply unit PSU WS-50 only the strap W1 (115 / 230)is mounted.

On the filter board MFI-SBS or MFI-DIMO are two straps located near the mains connector:

Strap	Setting
W1	Open.
W2	Open.

3.2.4 KEYBOARD CONNECTIONS

The keyboard P2841 is connected to the VDU via the 5-pin DIN CONNECTOR, located at the rear of the workstation (figure 3.2).
In some older types the keyboard is equipped with a PUC-connector.
In this case the keyboard should be mounted directly to the PCB of the VDU, to the connector marked "KB". Take care of correct mounting of this connector, the cable connector is bigger than the board connector (figure 3.3.)

3.2.5 MOUNTING OF SWIVEL STAND P2710-006

Follow the next procedure to mount the optional Swivel stand :

- Unpack the several parts of swivel stand P2710-006.

- Place the VDU top-side down at a flat and soft surface.

- Fix the mounting bracket with the four screws.

- Mount the stand to the mounting brackets with the fixing materials.

- Use the Special Tool Swivel stand to fix the stand. This tool can be ordered at your National Sales Organization.
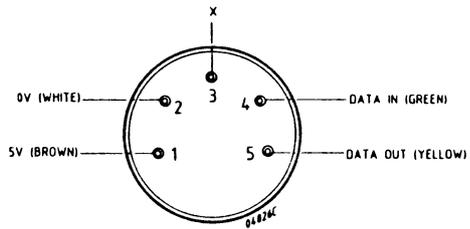
Figure 3.2 KEYBOARD CONNECTOR (DIN)
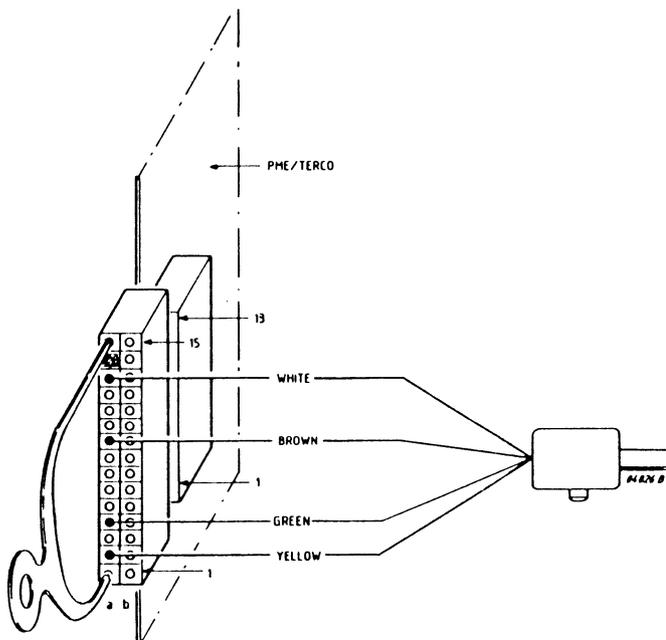
Figure 3.3 KEYBOARD CONNECTOR (PUC)

3.2.6 TEST OF WORKSTATION P2711

Directly after power-on of the P2711 workstation, a test, called "inside test"
is executed, before the workstation is released .
The lamps L1 to L4 of the keyboard P2841 will be illumunated in sequence, until
a particular error is found. If no error is found the test is terminated and
the workstation is placed on line, indicated by the On-line lamp.
If no lamp is lit, it may be that the keyboard is incorrectly connected.

3.2.7 SETUP P2711

The P2711 workstation contains a number of features which are preset for use
with the P3000. Some of these features should not be altered; where this is the
case, the description of that feature tells you so. Other features may be
hanged to suit your manner of working, or the requirements of a program which
you intend to run.

The SET-UP features are described in the TurboDOS Operator Reference Manual F2H.

3.3 VDU P2705

3.3.1 UNPACKING

The VDU P2705 is packed in a special box to avoid transport damage. The box
contains also a separate foot, three mounting screws and the mains cable.
Be very careful unpacking and handling the VDU; rough handling could cause the
tube to implode.

3.3.2 REMOVAL COVER

Follow exactly the next procedure to remove the covers of the VDU. Refer to
figure 3.5 and 3.6.

- Remove the two Phillips screws. (A)

- Remove the ornamental front (B) as indicated in figure 3.5. Starting from one
  of the corners, the two corner sides are pushed outwards while at the same
  time the corner is pulled to the front. Repeating this procedure for another
  corner will release the ornamental front.

- Remove the top cover by lifting the rear side. (C)

Use the above procedure in reverse sequence to replace the covers, the ornamen-
tal front can be pushed simply back in place when the cover is being replaced.

(A)

A

B

04564 B

(B)

04564 C

ORNAMENTAL
FRONT

04564 D

(C)
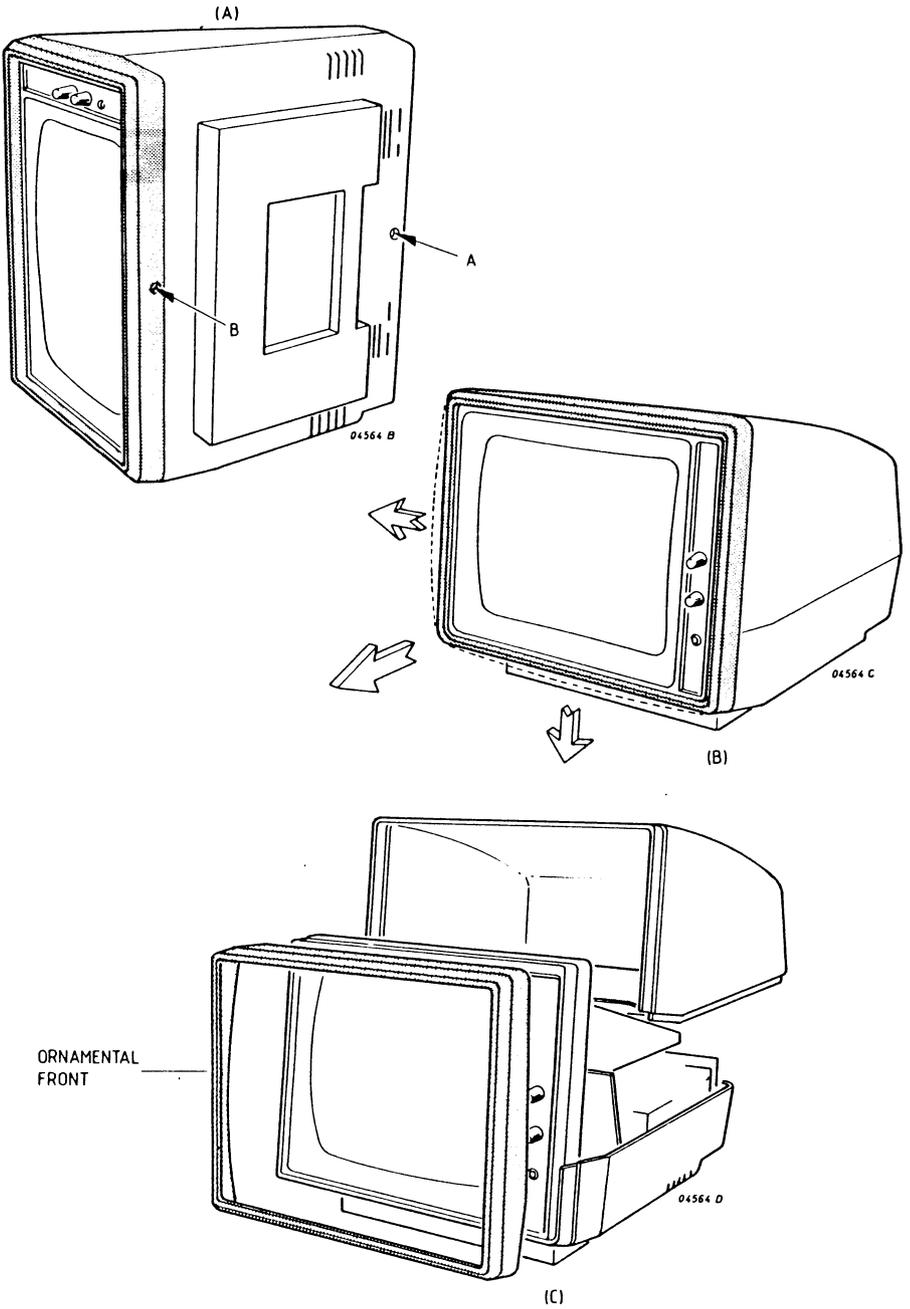
Figure 3.5 COVER REMOVAL P2705

3.3.3 KEYBOARD CONNECTION

When the top cover is removed the Logic board of the P2705 is visible. On this logic board two connectors are found, indicated with the labels "Computer" and "Keyboard".

The keyboard P2841 should be connected to the connector marked "Keyboard". Take care of correct mounting of this connector, the cable connector is bigger than the board connector (Fig.3.3).

Lead the cables first through the cable slot of the cover.

The interface connections used are of the type PUC (Philips Universal Connector). This PUC consists of two parts: The metal strain relief and the connector part (Berg).

Warning :
- Under no circumstance must the interface cables be connected or disconnected while the power is on.
- To prevent damage of interface circuits on the boards, the metal strain relief should be connected first, then the connector part. Disconnect in reverse order.

In the later versions of the P2705, the covers do not need to be removed in order to install the interface cables.
The keyboard is in this case equipped with a "DIN" connector (Figure 3.7)
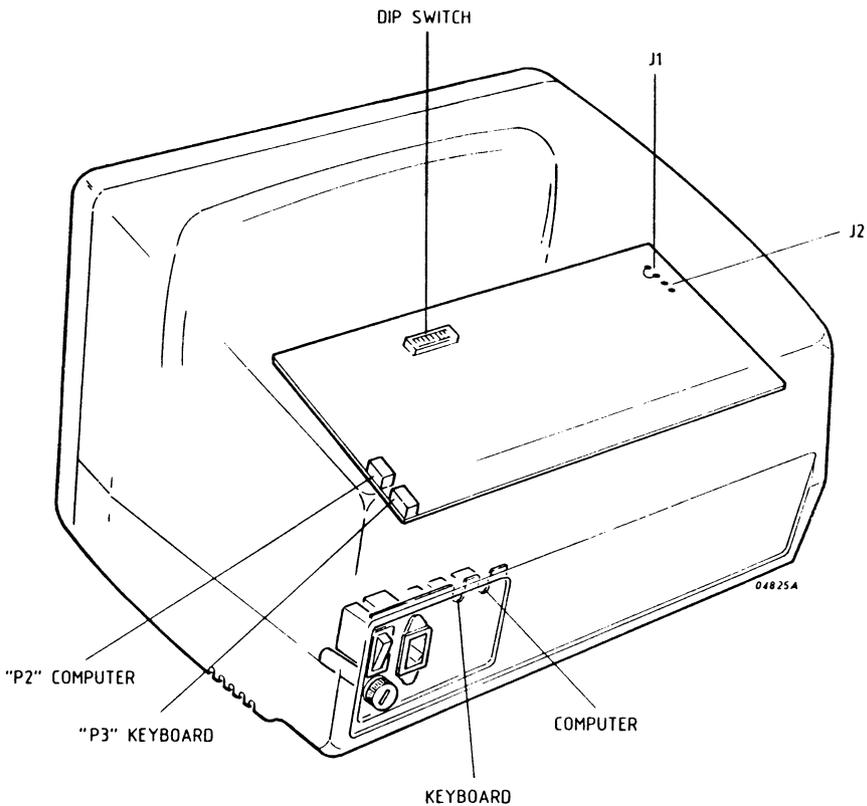
Figure 3.6 LOCATOR P2705
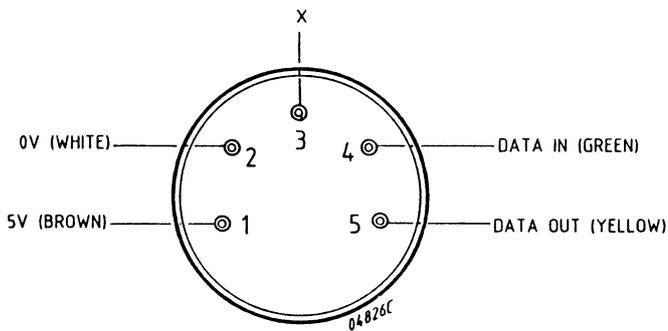
Figure 3.7 KEYBOARD CONNECTOR

3.3.4 SETUP P2705

3.3.4.1 INTRODUCTION

The P2705 workstation allows a user to alter some of its characteristics in Setup Mode. Some other features may be altered by changing some switches inside the case. Since this must be done with the power off, these "hard-strapped" features are described first.

When power is applied to the P2705, its working characteristics are determined by the settings of the "hard-strapped" features and by the default settings in Setup Mode. These default settings cannot be changed; they are built into the workstation. The actual settings can be changed in Setup Mode.

3.3.4.2 HARD-STRAPPED FEATURES

- COMMUNICATION SPEED

The desired communication speed is selected by a group of three DIP switches:

Baud Rate	1	2	3
300	-	-	-
600	ON	-	-
1200	-	ON	-
2400	ON	ON	-
4800	-	-	ON
9600 *	ON	-	ON
19200	X	ON	ON

(X means either ON or OFF; - means OFF)

The value set at the factory is 9600 baud, as indicated by the asterisk.

The baud rate applies to both sending and receiving of data.

NATIONAL VERSION

The desired national version for both the keyboard and the screen is selected by a group of DIP switches:

National Version	5	6	7	8
GERMA	-	-	-	-
UK *	ON	-	-	-
FRANC	-	ON	-	-
SPAIN	ON	ON	-	-
ITALY	-	-	ON	-
SWEDN	ON	-	ON	-
DENMK	-	ON	ON	-
PORTU	ON	ON	ON	-
SWI G	-	-	-	ON
USA	ON	-	-	ON
FINLD	-	ON	-	ON
NETHL	ON	ON	-	ON
NORWY	-	-	ON	ON
SWI F	ON	-	ON	ON

(where - means OFF)

The value set at the factory is UK, as indicated by the asterisk.

Note that the screen representations of characters are identical for:
    UK   and NETHL
    DENMK and NORWY
    SWI G and SWI F.

The national version in use may be changed using the function Set National Version.

CHARACTER ATTRIBUTE

The P2705 recognizes only one character attribute, which has the name "Half-Intensity". A jumper may be used to change the representation of this attribute; it may be either:

J1 IN   half-intensity   ] see figure 3.6
J2 IN   inverse video.   ]

3.3.4.3 SETUP P2705

ENTERING SETUP MODE

To enter Setup Mode, just press the SETUP key (for P2705-00X) or CTRL-SET UP (P2705-10X).

The following menu appears on the screen; the former contents are erased (lost).

The values shown indicate the values after power on. Press either the 0 key or the 1 key, as shown opposite each feature, to select the new value or to leave the value unchanged. The cursor skips automatically to the next item in the menu.

When you have done this for all items in the menu, press any key to exit from Setup Mode. You cannot do this until all items have been selected. Note that he displays of the SPEED and VERSION are for information only.

Note: If you enter Setup Mode while the keyboard is locked, the "LOCK" indicator is reset and the keyboard input buffer and the transmit buffer are cleared.

SETUP FEATURES

- ONLINE/LOCAL

   May be 0 (ONLINE) or 1 (LOCAL). If 0, all characters typed on the keyboard are sent to the host. Only characters received from the host are interpreted and if necessary displayed on the screen.

   If 1, all characters typed on the keyboard are interpreted by the workstation and if necessary displayed on the screen. The workstation is logically disconnected from the host; no data is sent from or received by the workstation.
   After changing this feature the former screen contents are lost.

- AUTO REPEAT

   May be 0 or 1. If 1, pressing any key (except CTRL, SHIFT, DOUBLE SHIFT, CURSOR LOCK, CAPS LOCK, SETUP and RETURN) and holding it down causes the key, after a delay of about a second, to "repeat" until you release it.

- KEYCLICK

   May be 0 or 1. If 1, whenever you press a key there is a little "bip" of sound.

```
P2705 CONFIGURATION                    8701 308 701XX

ONLINE/LOCAL (0,1)                     0

AUTO REPEAT OFF/ON (0,1)               1

KEYCLICK OFF/ON (0,1)                  0

SPEED:                                 9600B

VERSION:                               GB

Strike any key to exit.
```

Figure 3.8 P2705 SETUP SCREEN DISPLAY

3.4 WORKSTATION INTERCONNECTIONS

A workstation is normally connected to the Channel B interface of a slave processor board.
For the older workstation the PUC Cable type 1 should be used for this connection. In this case the cover of the VDU must be removed and the cable should be connected to the board connector marked "system".
For the newer workstations cable type 2, equipped with a Cannon connector, may be used and there is no need to remove the cover of the VDU. When the processor board is strapped for "DTE" cable type 6 can be used to interconnect the workstation to the system.

Release 3/4 software supports also the connection of remote workstations. Although normally Channel A is used for this remote connection it is also possible to use Channel B when strapping as "DTE" is possible on the processor board. Cable type 3 is in this case used as system side and cable type 11 at workstation side.

For the connection of a hardcopy or workstation printer to a P2711 VDU we refer to the printer interconnections described in section 4.4. The printer must be connected to the connector marked "AUX".
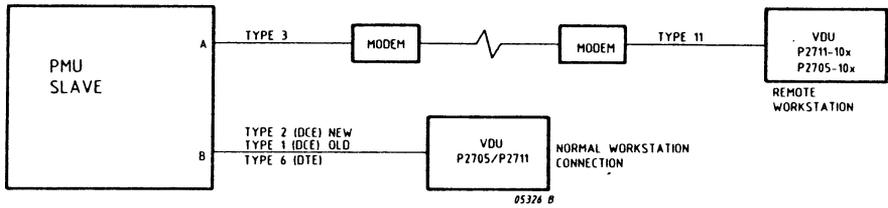
Figure 3.9 WORKSTATION CONNECTIONS
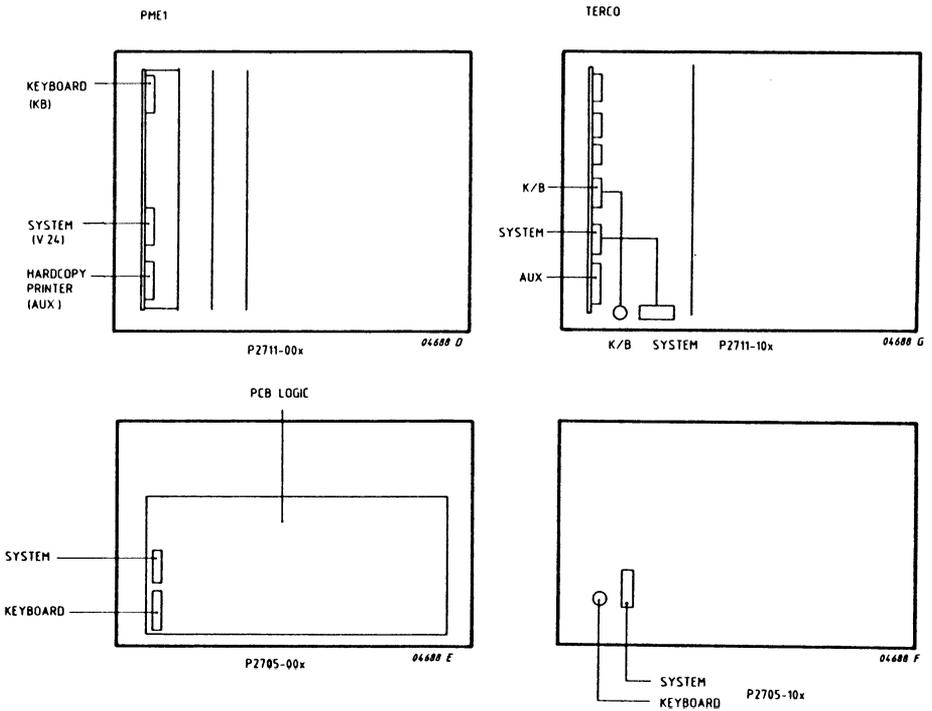
Figure 3.10 CONNECTOR LOCATIONS

CHAPTER   4   PRINTERS

LIST OF ILLUSTRATIONS

4 PRINTERS

The installation procedure of the printers is described in the Instruction
Manuals, supplied with the printers.
This section describes only the relevant information to connect the printers to
the P3500 system.
For the connection at system side and the cable type to be used, refer to
section 2.6 .

4.1 GENERAL PRINTERS P2932, P2933, P2934

4.1.1 INSTALLATION

Together with the general printer an Operator Manual is delivered which
describes the installation procedure. Directions for use are also included in
this manual. A separate Programming Manual is available, describing the
software interface of the printers.

The interface cable should be connected to the "Cannon" connector at the rear
of the printer.

4.1.2 SWITCH SETTING

A number of small switches, accessible after removal of the front panel cover,
must be set according to the P3500 interface.
The standard P3500 system uses a code of 8 bits, no parity check and a speed of
9600 BPS .

The following tables list the meaning and default setting of the dip switches.

Only the latest version of these switches is given in this manual. Please refer
to the indicator labels inside the front cover for the layout of your operator
panel.

Switch "closed" is marked as black spot at the printer, switch "open" as white
spot.

INTERFACE PARAMETER

Switch	Setting	Meaning
1	Open	DTR Protocol
2	Closed	No auto-status report
3	Open	No parity bit
4	Open	8 Databits
5	Closed	No parity check
6	Open	]
7	Open	] 9600 B.P.S.
8	Open	]

PRINT PARAMETER

Switch	Setting	Meaning
1	Open	]
2	Closed	]National Version
3	Open	]is GB
4	Open	]
5	Open	Manual Feed
	Closed	ASSH-Hopper 1
6	Open	Left Margin 1
	Closed	Left Margin 8
7	Open	Normal Speed
	Closed	High Speed
8	------	Not Used

OPTION 1

Switch	Setting	Meaning
1	------	Not Used
2	Open	Auto LF OFF
	Closed	ON
3	Open	Auto CR OFF
	Closed	ON
4	Open	P2932 (GP150)
	Closed	P2933/34 (GP300)
5	Open	P2932/33 (340mm)
	Closed	P2934 (400mm)
6	Open	P2933/34 (18 Needles)
	Closed	P2932 (9 Needles)
7	------	Not Used
8	Open	Paper Run Check NO
	Closed	YES

OPTION 2

These switches are Factory Installed

1 to 4		Needle Correction
5 to 7		Not Used
8	Open	Copy Switch DISABLE
	Closed	ENABLE

4.2 MATRIX PRINTER P2123

4.2.1 INSTALLATION

The printer is delivered with an "Operation Manual" , which includes installation procedures, directions for use and programming data.

Connect the interface cable to the "Cannon" connector at the rear of the printer, mounted to the Serial board (fig.4.1).

4.2.2 SWITCH SETTING

After removal of the cover, the Serial board can be removed according to figure 1.20. Two switches are now visible at the Main board. The setting of these switches and the dip switch at the serial board for the P3500 is described below.

DIP SWITCH 1

Switch	Setting	Meaning
1	On	--------------------
2	On	No LF at CR
3	On	No LF at Buffer Full
4	Off	CAN is valid
5	On	DEL is not used
6	On	Buzzer sounds on error
7	Off	Graphic character set
8	On	Printer always selected

DIP SWITCH 2

Switch	Setting	Meaning
1	Off	National version GB
2	Off	National version GB
3	Off	No Autofeed external
4	Off	No TRS-80 mode

SERIAL BOARD

Switch	Setting	Meaning
1	On	9600 B.P.S.
2	Off	8 Databits
3	Off	9600 B.P.S.
4	Off	9600 B.P.S.
5	--	Not used
6	Off	No parity check
7	Off	9600 B.P.S.
8	--	Not used
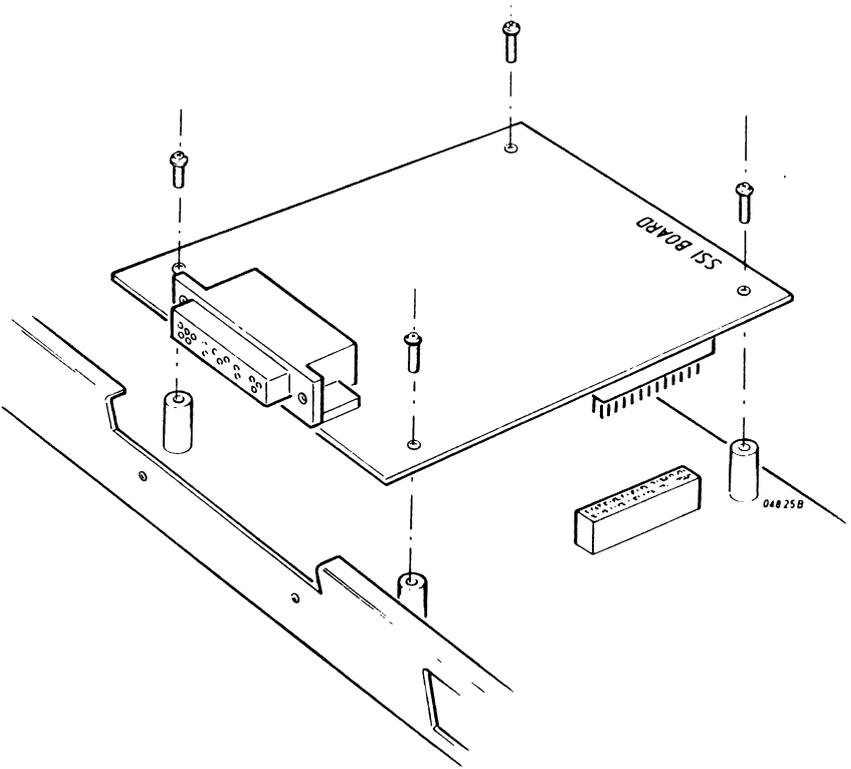
Figure 4.1 SERIAL BOARD P2123

4.3 DAISY WHEEL PRINTÉR P5360

4.3.1 INSTALLATION

The printer is delivered with a "User Manual". Both installation and programming
are described in this manual.

Connect the P3500 printer interface cable to the "Cannon" connector of the
printer.

4.3.2 SWITCH SETTING

When the cover of the printer is removed , two green switches are visible on top
of the printer. The left hand switch consists of 8 switches, the right hand
switch consist, of ten switches.

In normal circumstances the printer should be set to 8 databits, no parity
check and 2400   B.P.S.
The setting of the dip switches for P3500 is described below.

LEFT-HAND SWITCH

Switch	Setting	Meaning
401	Open	2400 B.P.S
402	Open	2400 B.P.S.
403	Open	8 Databits
404	Closed	No parity check
405	Open	No parity check
406	Open	2 stop bits
407	----	Not used for DTR Protocol
408	Open	2400 B.P.S.

RIGHT-HAND SWITCH

Switch	Setting	Meaning
411	Open	Serial mode
412	Open	Only CR at code 0D Hex.
413	Closed	Auto space off
414	Open	10 Characters/Inch
	Closed	12 Characters/Inch
415	----	Proportional space option only
416	Closed	Data 1, Formfeed 1" if open] data
417	Closed	Data 2, Formfeed 2" if open] 1 + 2 +
418	Open	Data 4, Formfeed 4" if open] 4 + 8 =
419	Open	Data 8, Formfeed 8" if open] Feed
420	Open	Low Hammer Impact
	Closed	High Hammer Impact

4.3.3 USE OF PRINT.WHEELS

The P3500 system is adjusted for use of an ASCII print wheel.
When other print wheels are used it may happen that the character at the
keyboard is not equal to the printed character. The next figure gives the
relation to the keyboard characters and the printed characters for various print
wheels.

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10			
	23H	40H	5BH	5CH	5DH	60H	7BH	7CH	7DH	7EH	3CH	3EH	5EH	27H
Keyboard:	£	Ə	[	\	]	`	{	|	}	~	<	>	.	'
Printwheel														
- ASCII:	♭	@	[	\	]	`	{	|	}	~	<	>	^	'
- ESA:	♭	¿	´	|	.	`	§	ß	£	~	^	¨	•	'
- Bilingual:	♭	@	[	½	]	°	ç	|	¾	´	`	¨	^	'
- DK/N:	♭	§	Æ	Ø	Å	`	æ	ø	å	¨	<	>	^	'

Figure 4.2 PRINT WHEEL CHARACTERS

4.4 MATRIX PRINTER P2908/P2909

4.4.1 INSTALLATION

The printer is delivered with an "Operation Manual", which includes installation procedures, directions for use and programming data.

Connect the interface cable to the "Cannon" connector at the rear of the printer.

4.4.2 SWITCH SETTING

Remove the small cover at the right hand top side of the printer as indicated in figure 4.3. Two switches are now visible at the Main board. The setting of these switches and the dip switch at the serial board for the P3500 is described below.

DIP SWITCH 1

SWITCH	SETTING	MEANING
1	* Off	PICA at Power on
	On	CONDENSED at Power On
2	* Off	Zero Font 0
	On	Zero Font 0
3	* Off	Paper End Detector Valid
	On	Paper End Detector Invalid
4	* Off	Input Buffer Invalid
	On	Input Buffer Valid
5	* Off	PICA at Power On
	On	EMPHASIZED at Power On
6,7,8	* On,On,On	USA
	On,On,Off	FRANCE
	On,Off,On	GERMANY
	* On,Off,Off	UNITED KINGDOM
	Off,On,On	DENMARK
	Off,On,Off	SWEDEN
	Off,Off,On	ITALY
	Off,Off,Off	SPAIN

DIP SWITCH 2

SWITCH	SETTING	MEANING
1	On	Select In
2	On	Buzzer Valid
3	On	1 Inch Skip-Over Active
	* Off	No Skip-Over
4	On	Automatic Line Feed
	* Off	No Automatic Line Feed

SERIAL BOARD

SWITCH	SETTING	MEANING
2	On	Word Length 7 bit
	* Off	Word Length 8 bit
5	On	Parity Even
	* Off	Parity Odd
6	On	Parity Enabled
	* Off	Parity Disabled
8	On	Serial Interface Selected
	* Off	Parallel Interface
1,3,4,7	on,on,on,off	110 bps
	on,off,on,off	300 bps
	on,off,off,on	600 bps
	on,off,off,off	1200 bps
	off,on,on,off	2400 bps
	off,on,off,on	4800 bps
	off,on,off,off	9600 bps
	off,off,on,on	19200 bps

Switch access cover
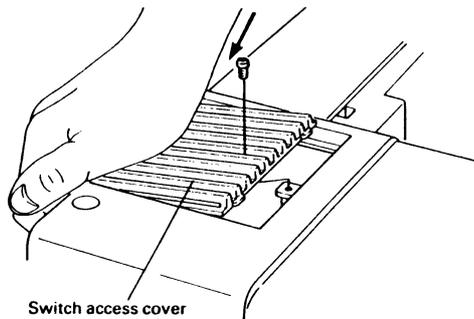
Figure 4.3 REMOVAL OF SWITCH COVER P2908

4.5 PRINTER INTERCONNECTIONS

SHARED PRINTERS

A shared printer is connected to the master board. Both channel A and B interfaces can be used. Commonly the channels are assigned as follows:

- to connect 1 shared printer, use channel "B"
- to connect 2 shared printers, use channel "A" and "B"

LOCAL PRINTERS

A local printer is connected to a slave processor, normally channel "A" because the workstation is normally assigned to channel "B".

If the workstation is connected remote, using channel "A", the printer can be assigned to channel "B".

REMOTE PRINTERS

Both Shared and Local printers can also be connected remotely, via a modem link. Normally channel "A" is used for this remote connection, but also channel "B" can be used when the processor board can be strapped to "DTE" operation.

WORKSTATION PRINTERS

A Local printer can be connected also directly to the workstation P2711-10X. This workstation may be connected directly to the system or remotely via a modem link. The workstation should be SET-UP to use the CCTXX line protocol.
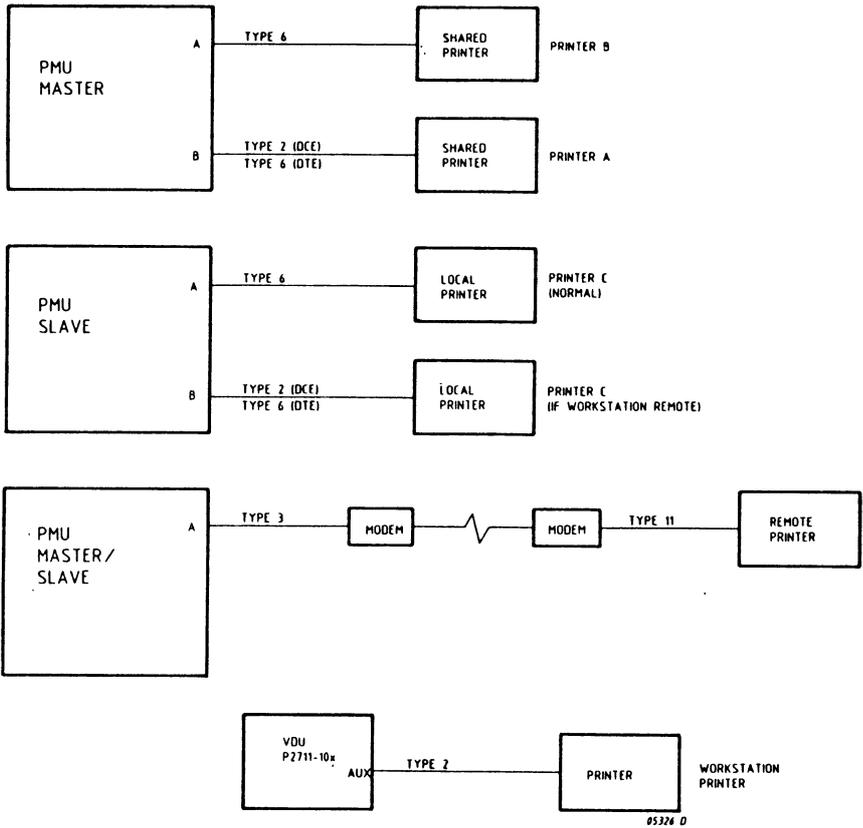
Figure 4.4 PRINTER CONNECTIONS

CHAPTER   5   EXTENSION CABINETS

LIST OF ILLUSTRATIONS

5 EXTENSION CABINETS ·

5.1 FIXED DISK EXTENSION CABINET P3012-30/P3012-33

5.1.1 UNPACKING P3012-30/33

The Extension Cabinet is packed in a special double box, to avoid transport damage. Rough handling can cause problem with the fixed disc unit.

5.1.2 REMOVAL OF COVERS P3012-30/33

Use the next procedure to remove the cover of the cabinet.

- Press the sides of the plastic rear cover (1) and lift the cover according to the diagram.

- Remove the two screws (2) at rear side of the cabinet.

- Loosen the two bolds (3) at down side of system cabinet.

- Slide the cover gently to the front side, do not harm the internal wiring.

Follow this procedure in reverse sequence to replace the cover.
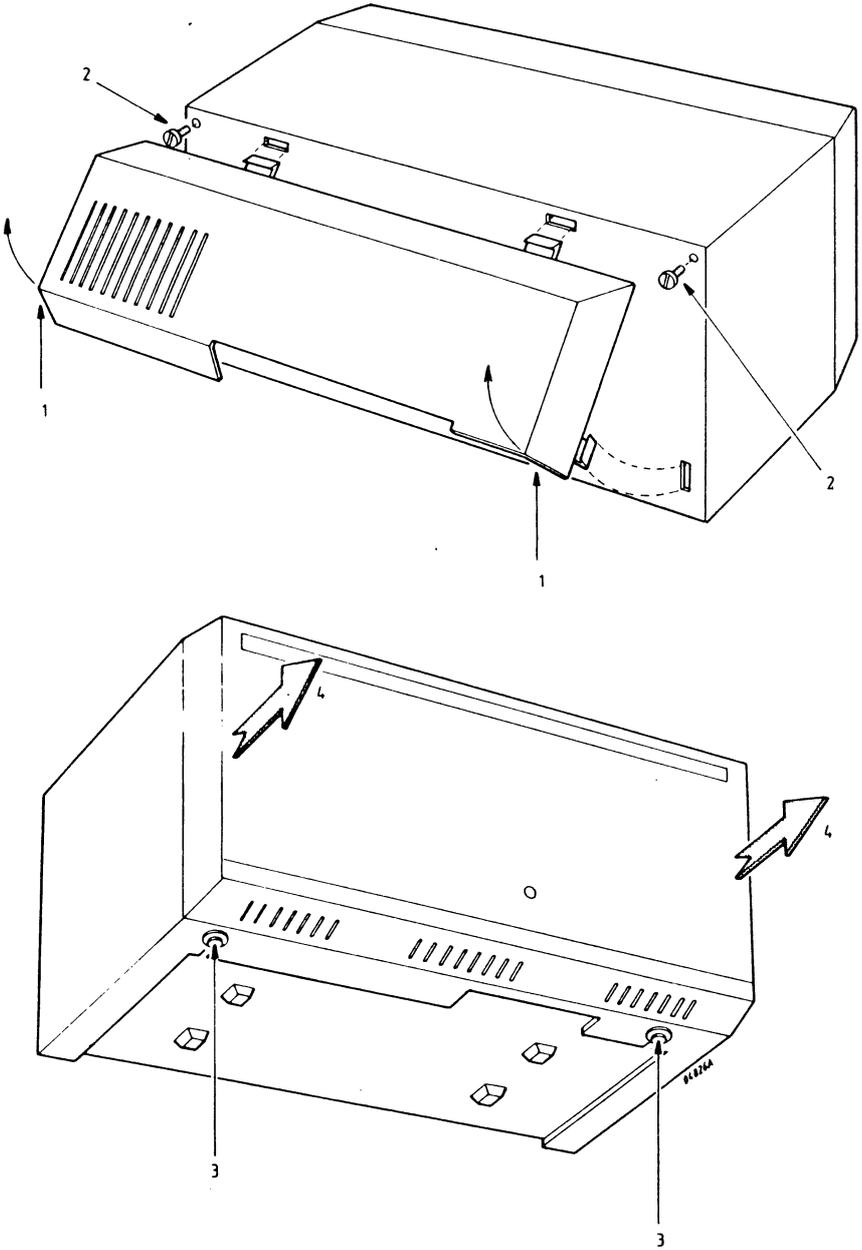
Figure 5.1 REMOVAL OF COVERS P3012

5.1.3 INSTALLATION P3012-30/33

Figure 5.2 shows the location of boards in the extension cabinet. The disk extension cable should be connected to the SAS-EX board.

- The Disk Interface Cable is connected to the rear side connector of the SAS-EX board.

- The interface cable to other extension cabinet(s) is connected to the connector at the center of the SAS-EX board.

- When no more extension cabinets are connected, a Terminator Board is connected to the middle connector of the last SAS-EX board. This terminator is a small board containing a resistor network and a connector.

Connect first the metal strain relief, then the cable connector. Disconnect in reverse order.

power supply
pcb WS 120

pcb MFI-SBS

pcb SAS-EX

mains fuse

FXD control board

fan

backpanel

pcb XEBEC S1410

pcb PON

04598
04599

FXD
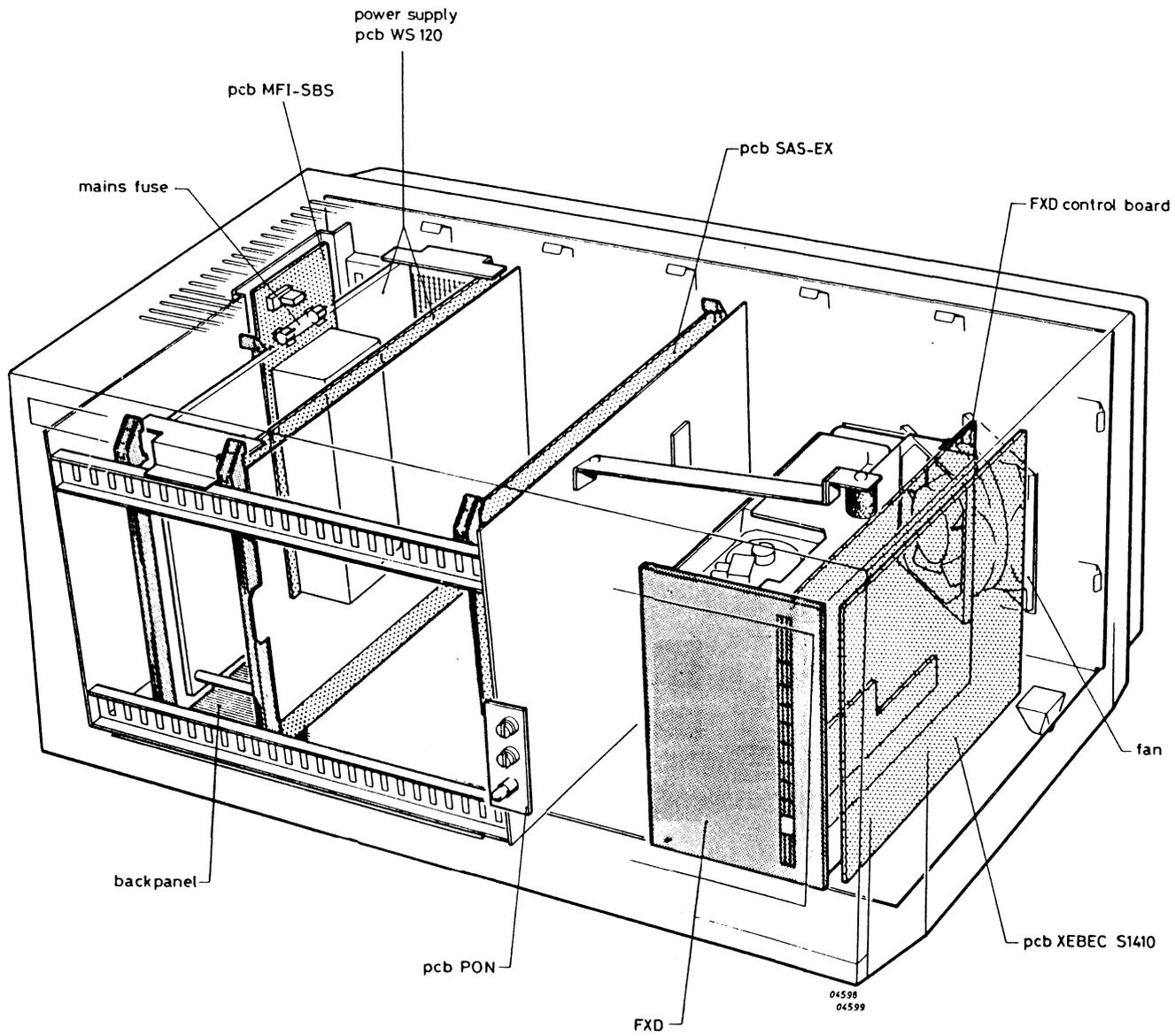
Figure 5.2 LOCATOR OF EXTENSION
CABINET P3012-30/33

5.2 FLEXIBLE DISK EXTENSION CABINET P2621

5.2.1 REMOVAL OF COVER

Follow the next procedure to remove the top cover of the extension cabinet.

- Remove the two plastic screw covers at the top side of the cabinet.

- Unscrew the two nuts.

- Lift the cover from the cabinet.

Use this procedure in reverse sequence to replace the cover.

SCREW COVERS

04547 C
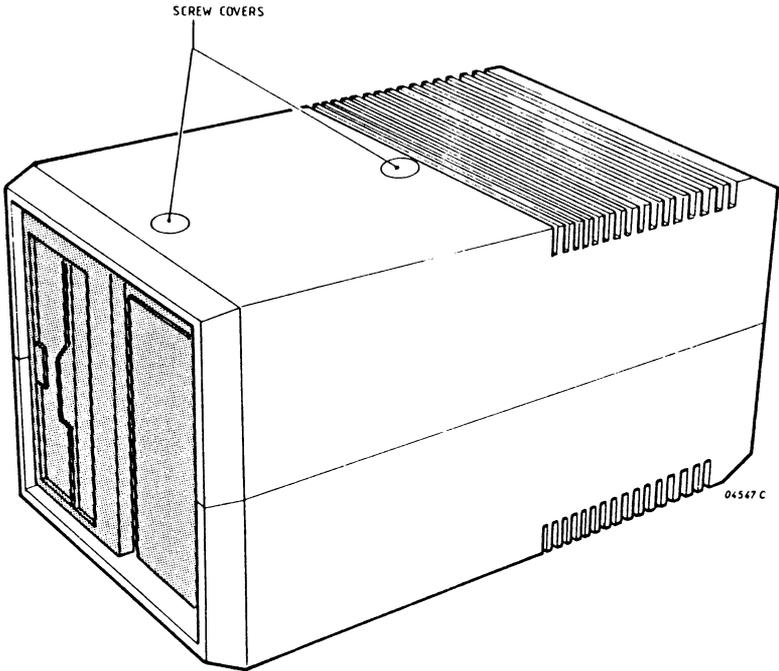
Figure 5.3 REMOVAL COVER EXTENSION CABINET P2621

5.2.2 INSTALLATION P2621

The next figure shows the location of boards in the extension cabinet.
The interface cable should be connected to the SAS-EX board.

Use the following procedure to connect the interface cable:

- Remove the top cover of cabinet.

- Connect the metal strain relief of the cable to the metal strip at the rear
  side of the cabinet.

- Connect the cable connector to the rear connector of the SAS-EX board.

- Check if a Terminator Board is placed at the middle connector of the SAS-EX
  board.

- Replace the cover of the cabinet.

It is advised to connect the P2621 as the last extension, if more than one
extension is to be connected.

8 INCH FDD
PCB PSU WS 120E
PCB XEBEC S1401

04564A
04565A

MAINSFUSE
MAINSFILTER
PCB RS
MAINS POWER TRANSFORMER
BACK PANEL DSK
PCB SASEX
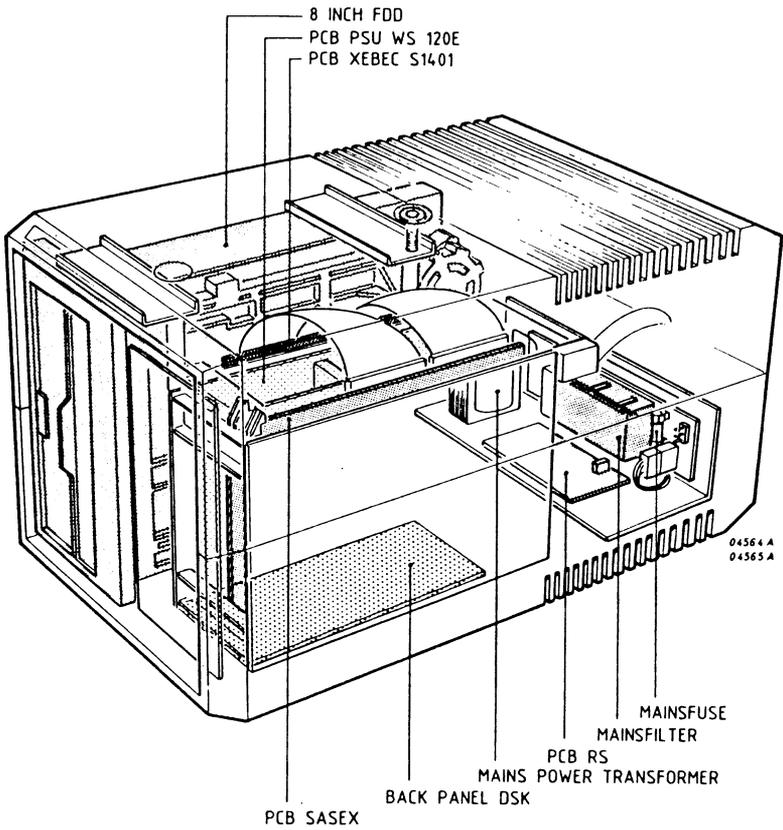
Figure 5.4 LOCATOR OF EXTENSION CABINET P2621

5.3 DISK/TAPE EXTENSION CABINET P3012-41

This extension includes a 5"ff Streamer Tape Unit and an optional Fixed Disk Drive of either 10, 20 or 40 Mbyte.

5.3.1 UNPACKING P3012-41

The Extension Cabinet is packed in a special double box, to avoid transport damage. Rough handling can cause problems with the fixed disk unit.

5.3.2 REMOVAL COVER P3012-41

Use the next procedure to remove the cover of the cabinet.

- Press the sides of the plastic rear cover (1) and lift the cover according to the diagram.
- Remove the two screws (2) at rear side of system cabinet.
- Loosen the two bolds (3) at down side of system cabinet.
- Slide the cover gently to the front side, do not harm the internal wiring.

Follow this procedure in reverse sequence to replace the cover.
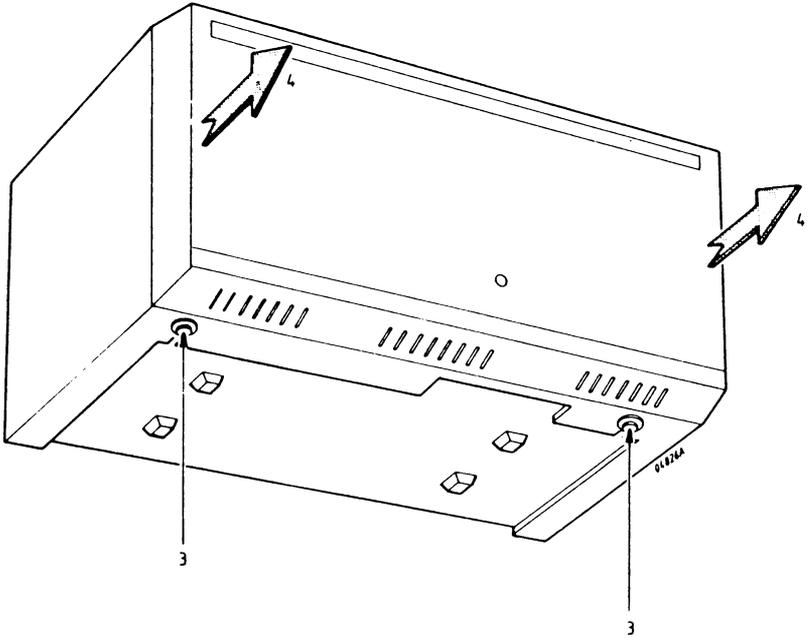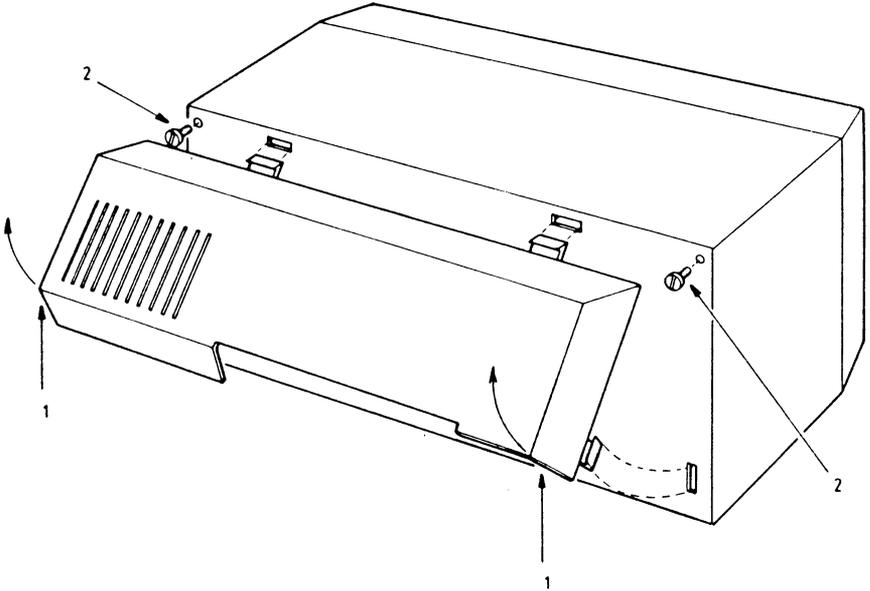
Figure 5.5 REMOVAL OF COVERS P3012

5.3.3 INSTALLATION P3012-41

Figure 5.6 shows the location of boards in the extension cabinet. The disk extension cable should be connected to the SAS-EX board.

- The Disk Interface Cable from the system cabinet is connected to the rear side connector of the SAS-EX board.
- The interface cable to other extension cabinet(s) is connected to the connector at the center of the SAS-EX board.
- When no more extension cabinets are connected, a Terminator Board is connected to the middle connector of the last SAS-EX board. This terminator is a small board containing a resistor network and a connector.

Connect first the metal strain relief, then the cable connector.

MFI-SBS   PSU WS120   TAPCO-Q-2   SAS-EX   SAC   STREAMER TAPE ARCHIVE 5920L   FXD RODIME 202 or RODIME 202E or RODIME 204

05586A
05678

FIXCO 5
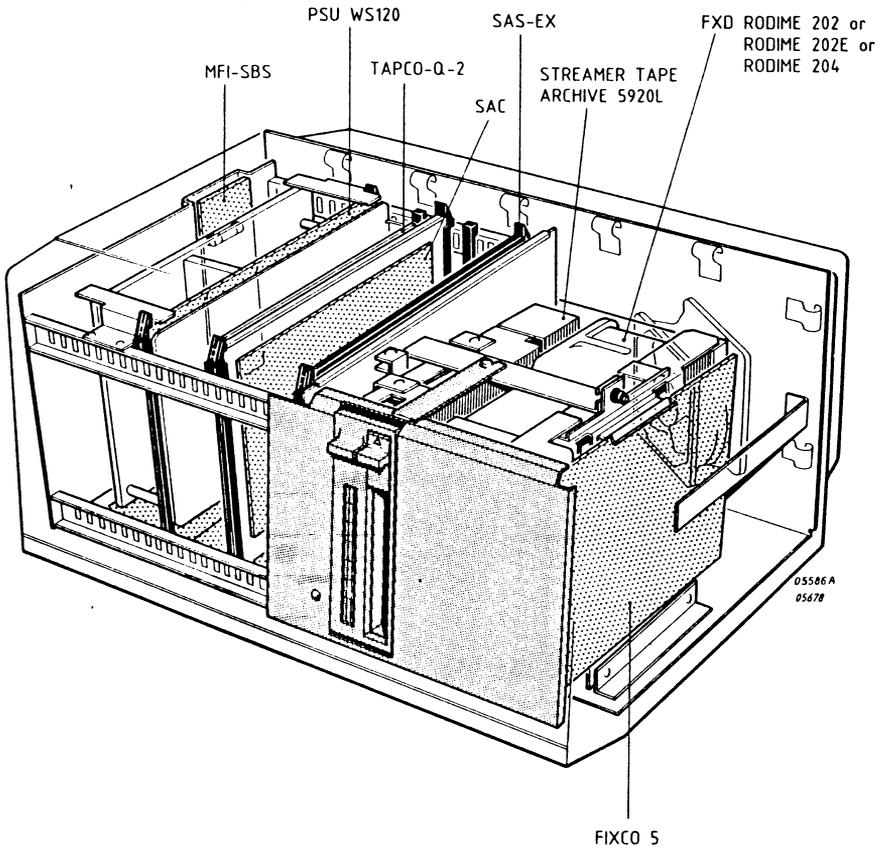
Figure 5.6   LOCATOR OF EXTENSION CABINET P3012-41

5.4 STREAMER TAPE EXTENSION CABINET P3013

This cabinet includes an 8" TAPE STREAMER DRIVE to backup upto 20 Mbyte per tape.

5.4.1 REMOVAL COVER P3013

Follow the next procedure to remove the cover of the extension cabinet.

- Remove the two plastic screw covers at the top side of the cabinet.
- Unscrew the two nuts.
- Lift the cover from the cabinet.

Use this procedure in reverse sequence to replace the cover.

SCREW COVERS

04547 C
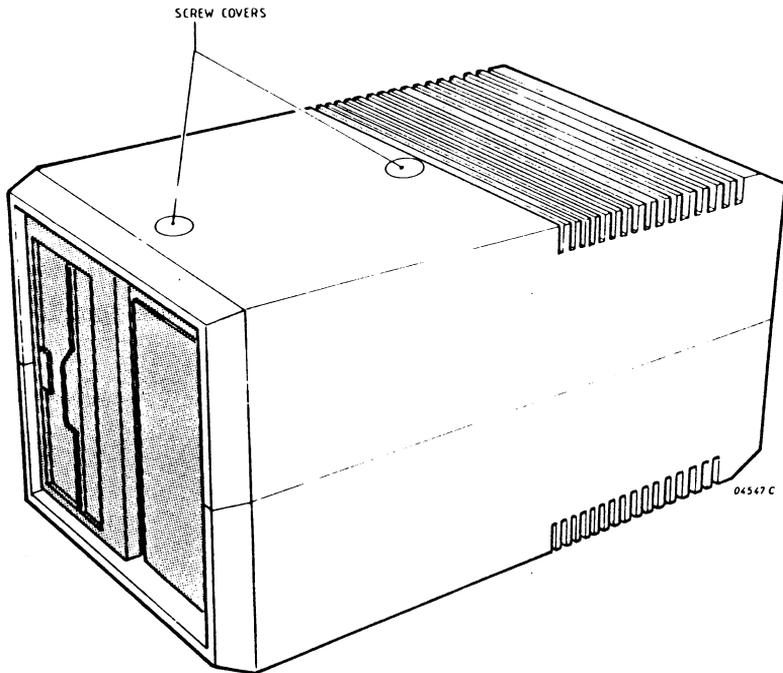
Figure 5.7   REMOVAL COVER EXTENSION CABINET P3013

5.4.2 INSTALLATION P3013

Figure 5-8 shows the location of boards in the extension cabinet. The disk interface cable should be connected to the SAS-EX board.

Follow the next procedure to connect the interface cable:

- Remove the top cover of the extension cabinet.
- The Disk Interface Cable from the system cabinet must be connected to the rear side connector of the SAS-EX board.
- The interface cable to other extension cabinet(s) is connected to the connector at the center of the SAS-EX board.
- When no more extension cabinets are connected, a Terminator Board is connected to the middle connector of the last SAS-EX board. This terminator is a small board containing a resistor network and a connector.

)nnect first the metal strain relief, then the cable connector.
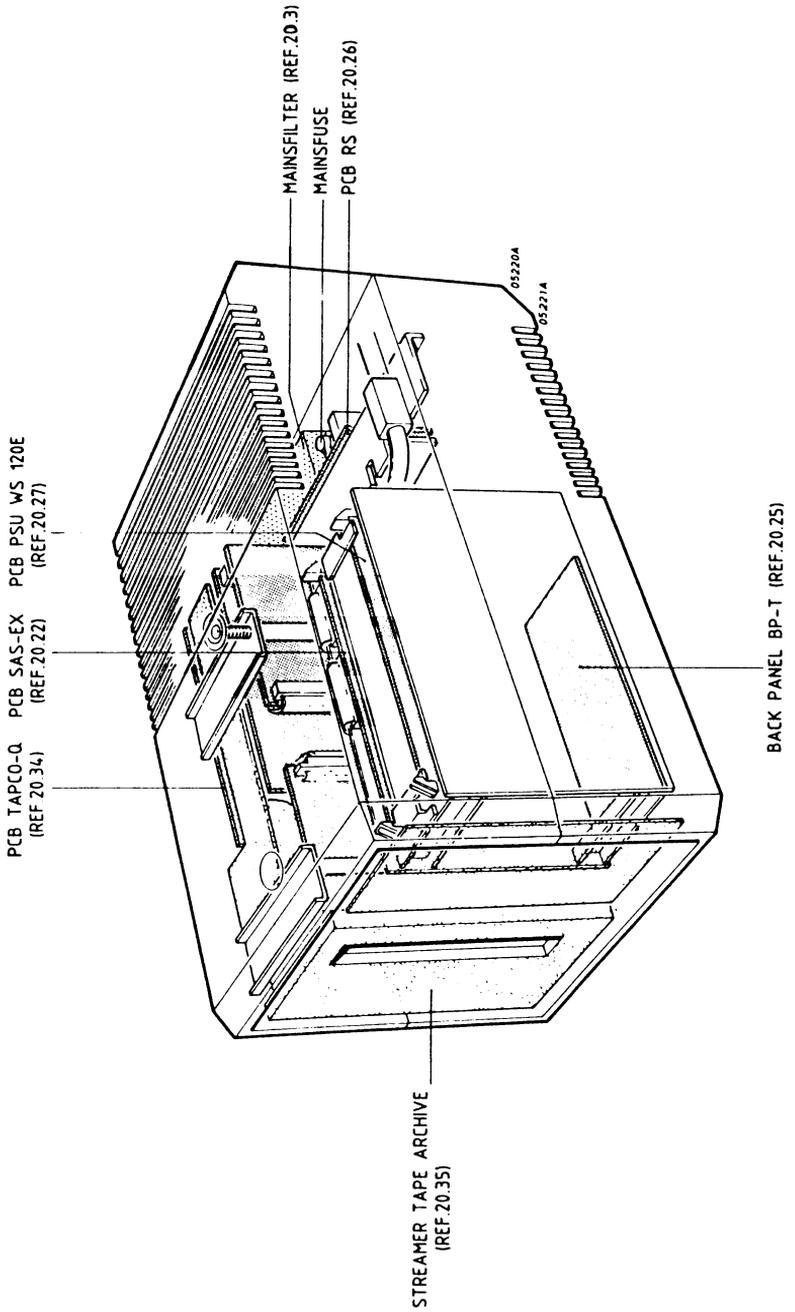
Figure 5.8 LOCATOR OF EXTENSION CABINET P3013

5.5 EXTENSION CABINET INTERCONNECTIONS

Extension cabinets have to be connected to the board with the "EXT   SCSI"
interface (See figure 2.5).
Use the following procedure to connect the FIRST extension cabinet:

- Connect the metal strain relief of the extension cable to the metal strip of
  the system cabinet.
- Connect the 50 pin Berg connector to the board.

A second extension cabinet should be connected to the first extension, and so on
(see figure 5.9).

FLEX   INT

EXT

PCB
SESCO

CUA 7

PCB
XEBEC

FXD

MFD 1

P3500 SYSTEM CABINET

— SCSI (SASI) INTERFACE CABLE

CUA 6

PCB
XEBEC

FXD

PCB
SASEX

P3012 EXTENSION CABINET

— SCSI (SASI) INTERFACE CABLE.

CUA 2

PCB
XEBEC

FDD 8 INCH

PCB
SASEX

P2621 EXTENSION CABINET

04547 A

FIXED P3500 - TWO EXTENSIONS

TERMINATOR
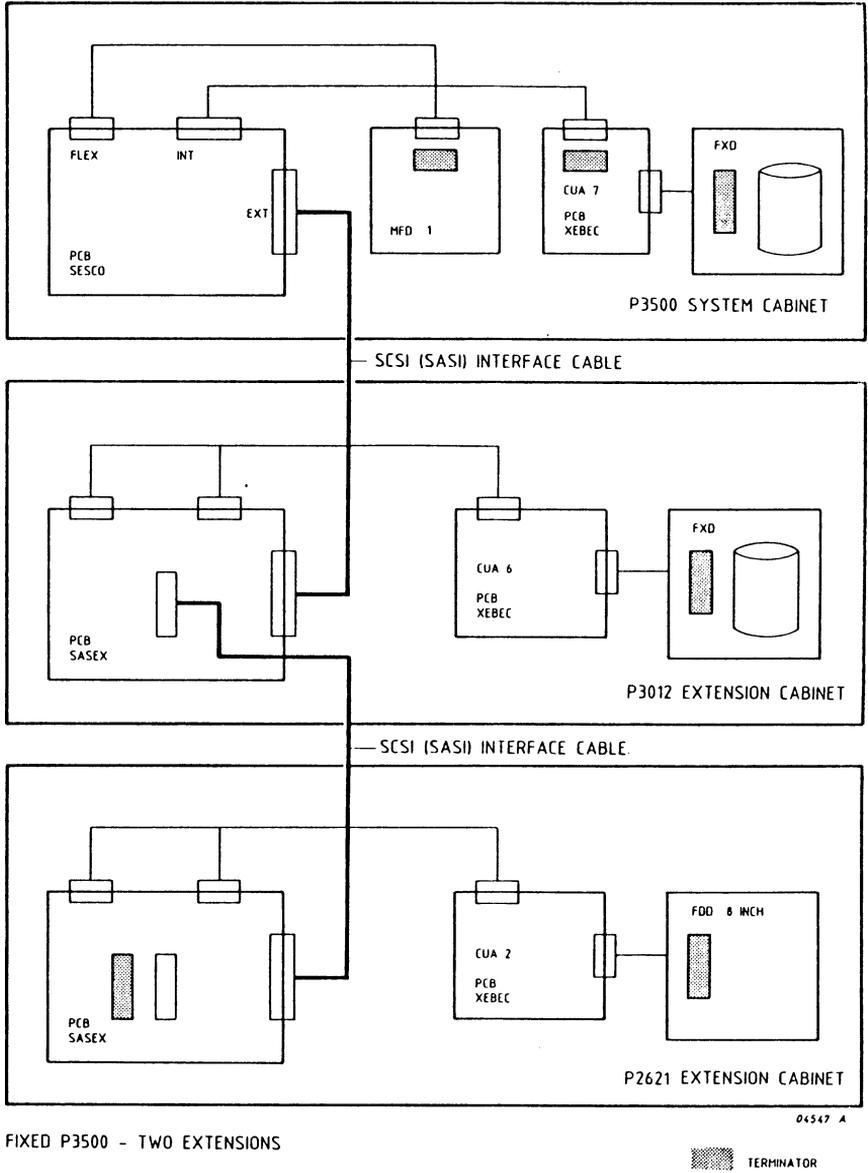
Figure 5.9 INTERCONNECTION OF EXTENSION CABINETS

CHAPTER 6   DATA COMMUNICATION

6 DATA COMMUNICATION

6.1 GENERAL

The P3500/P3800 systems support a wide range of DC-packages. In general one of the next methods is used.

STAND ALONE

These applications are executed on a Slave processor. The DC-link is connected to the Slave board.

DCM

In this situation an extra Processor board is added to the system, called DC NODE. This board functions as a DC server for applications running on other slaves. The DC-link is connected to the DC-node.
These applications are executed on a slave.

6.2 INTERCONNECTIONS

Channel A of the processor boards (Slave or DC Node) offer a full V.24 Interface. The boards can be strapped to operate on either asynchronous or synchronous modem links.
Cable type 3 interfaces the channel A interface to the modem connector.

A special situation appears with the Teletex Mailing System. In this case a number of DC Tasks are performed by an additional cabinet, the Teletex Adaptor X3710.
Cable type 5 connects the DC Node to the TTA, the TTA is connected via cable type 10 to the Data Network.
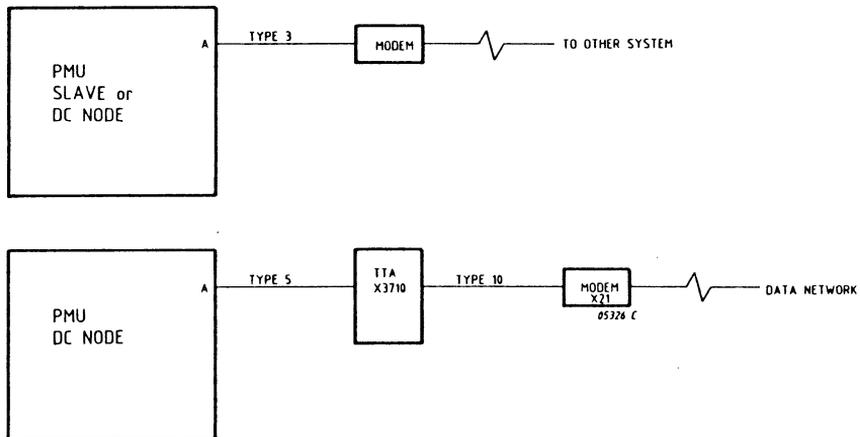
Figure 6.1 DC INTERCONNECTIONS