

Sun-4 Handbook



Sun Internal ONLY



The *Sun-4 Handbook* describes and illustrates the Sun-4 and Sun-4e products for service providers who service these products after the End of Support Life in April 1997.

End of Support Life is the end of Sun's commitment to support the product. Sun may help customers locate alternative sources for support on a case-by-case basis if ongoing support is needed beyond 5 years. Spares availability after End of Support Life may be limited and repair service will be at Sun's discretion.

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DC Power

Power Supplies

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OEM Product Power Supplies

- [811-1027 -- Fujitsu](#)
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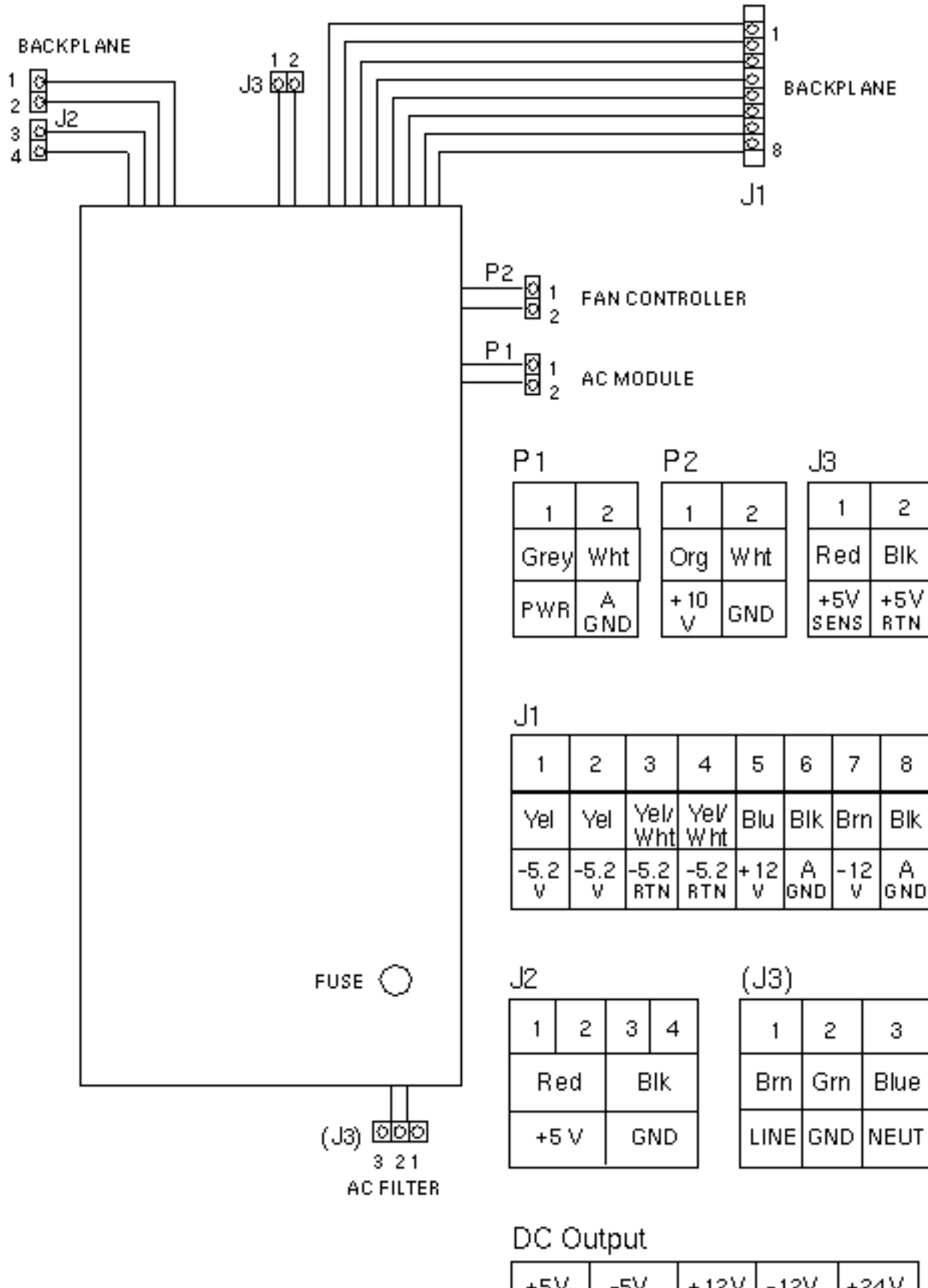
Last updated: March 14, 1997

[Comments and Suggestions](#) 

Brown 300-1020

575 Watt Power Supply

Sun-4/150/350
300-1020



TUV	TUV	T1EV	T1EV	T2EV
100A	8.0A	3.0A	1.5A	1.5A

Fuse

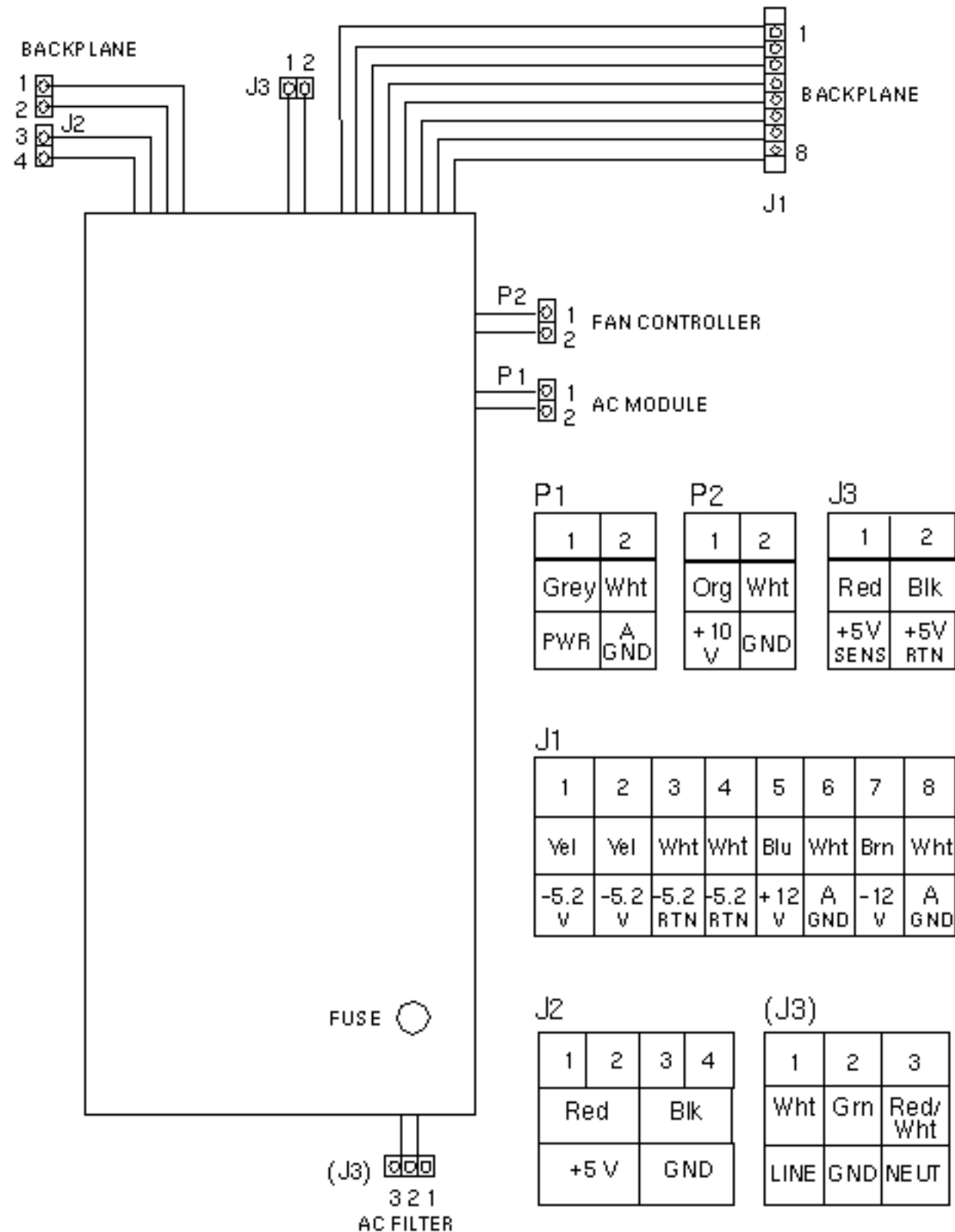
10 Amps @ 250 Volts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuji PEX445-30 575 Watt Power Supply

Sun-4/150/350
300-1020



DC Output

DC Outputs

+5V	-5V	+12V	-12V	+24V
100A	8.0A	3.0A	1.5A	1.5A

Fuse

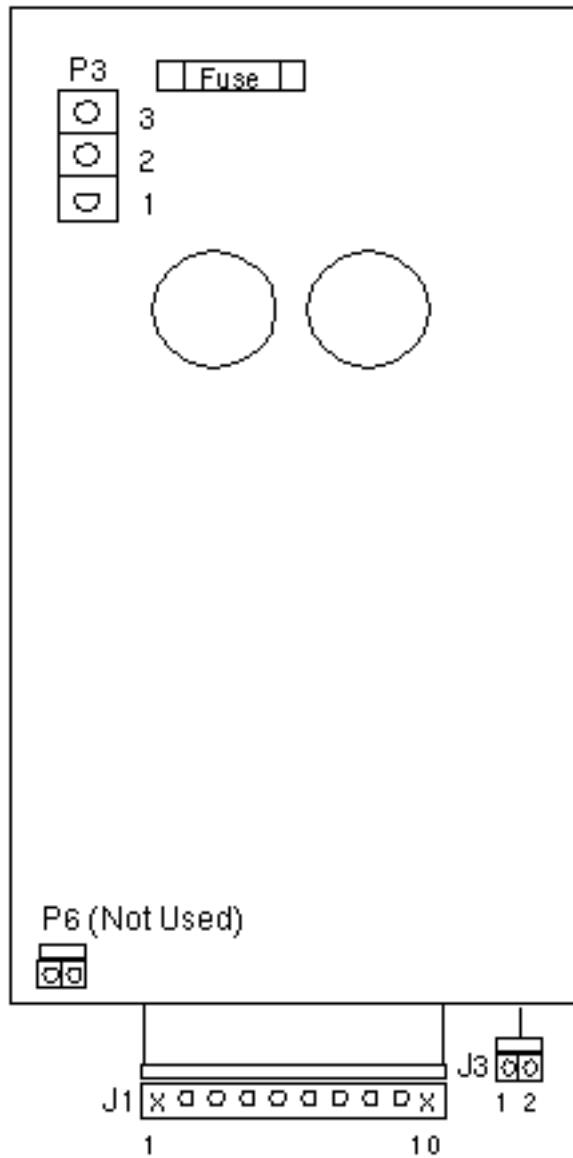
15 Amps @ 250 Volts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Summit CS0325-9001 325 Watt Power Supply

Sun-4/110/310
300-1022



P3

1	2	3
Wht	Grn	Blk
NEUT	GND	GND

P1

1	2
Grey	Wht/ Blk
PWR	GND

J2

1	2	3	4
Red	Red	Blk	Blk
+5V	+5V	GND	GND

J4

1	2
Org	Wht/ Blk
PWR	GND

J3

1	2
Grey	Wht/ Blk
PWR	GND

J1

1	2	3	4	5	6	7	8	9	10
-	Yel	Yel	Wht/ Yel	Wht/ Yel	Blu	Wht/ Blk	Brn	Wht/ Blk	-
N/A	-5.2 V	-5.2 V	-5.2 RTN	-5.2 RTN	+12 V	GND	-12 V	GND	N/A

DC Output

+5V	-5V	+12V	-12V
...

6.0A	8.0A	3.0A	1.5A
------	------	------	------

Fuse

7 Amps @ 250 Volts

Note

Wait at least two minutes after power down or power outage before turning power ON to allow the unit to reset.

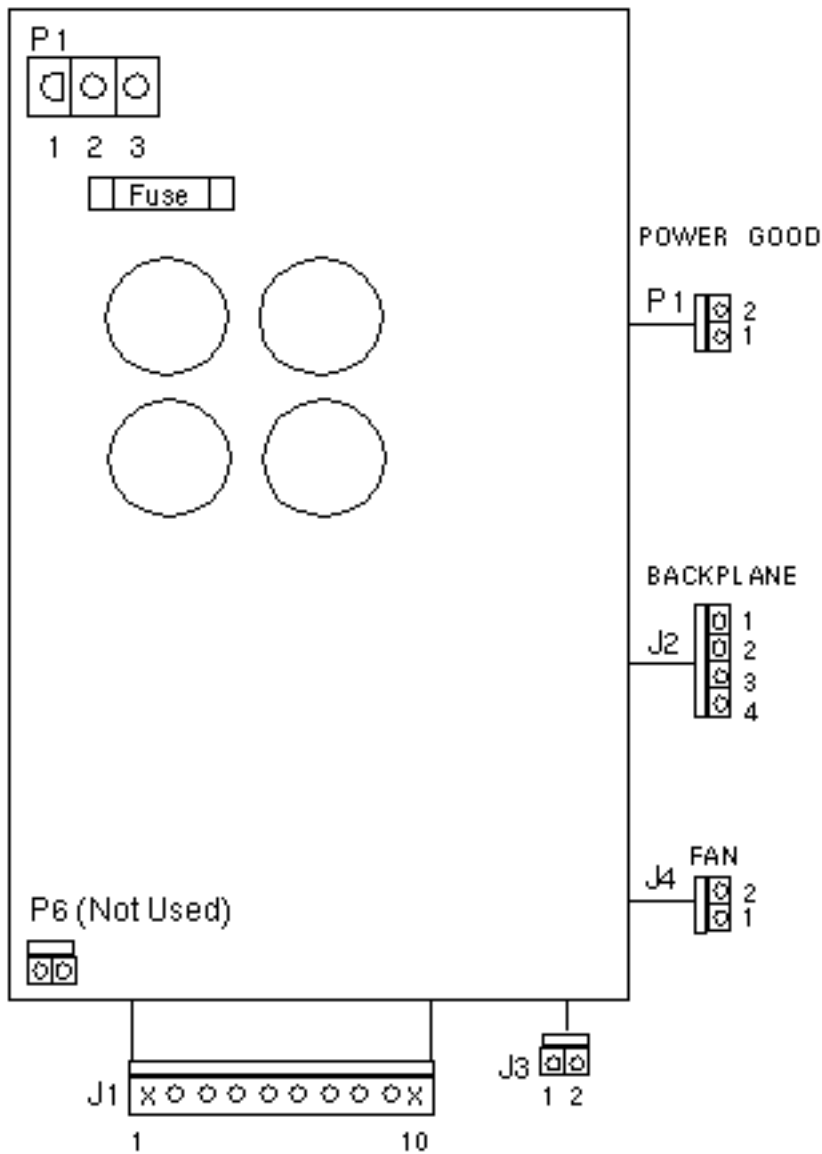
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Brown PS41

325 Watt Power Supply

Sun-4/110/310
300-1022



P3

1	2	3
Wht	Grn	Blk
NEUT	GND	GND

P1

1	2
Grey	Wht/Blk
PWR	GND

J2

1	2	3	4
Red	Red	Blk	Blk
+5V	+5V	GND	GND

J4

1	2
Org	Wht/Blk
PWR	GND

J3

1	2
Grey	Wht/Blk
PWR	GND

DC Output

+5V	-5V	+12V	-12V
60A	8.0A	3.0A	1.5A

J1

1	2	3	4	5	6	7	8	9	10
-	Yel	Yel	Wht/Yel	Wht/Yel	Blu	Wht/Blk	Brn	Wht/Blk	-
N/A	-5.2V	-5.2V	-5.2RTN	-5.2RTN	+12V	GND	-12V	GND	N/A

Fuse:

7 Amps @ 250 Volts

Note

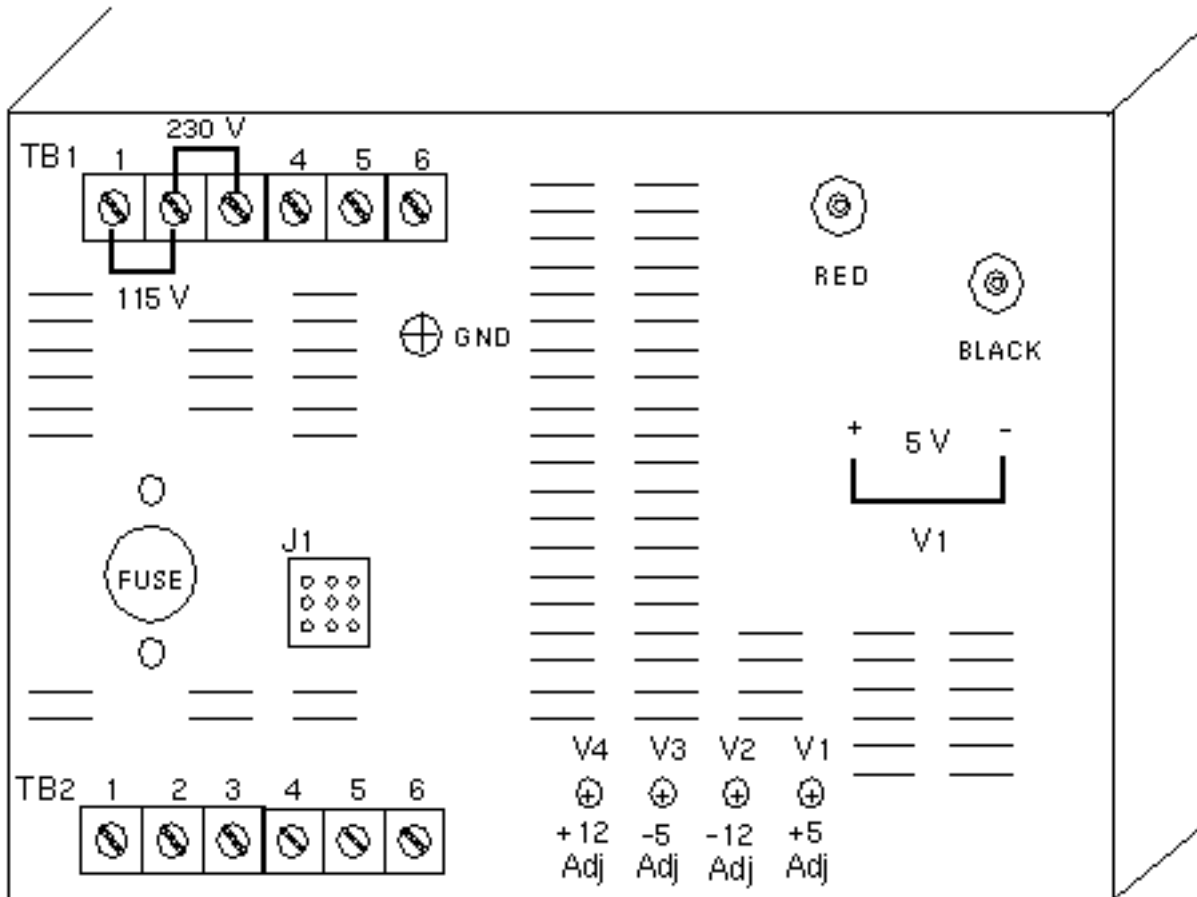
Wait at least two minutes after power down or power outage before turning power ON to allow the unit to reset.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuji PEX391 850 Watt Power Supply

Sun-4/260/280/360/380
300-1024



TB1

1	2	3	4	5	6
			Wht	Blk	
115V STRAP	220 V STRAP		NEUT	LINE	NOT USED

TB2

1	2	3	4	5	6
Blu	Blk	Blk	Yel	Blk	Brn
+12 (+)	+12 (-)	-5 (+)	-5 (-)	-12 (+)	-12 (-)
V4		V3		V2	

DC Output

+5V	-5V	+12V	-12V
120A	10.0A	15.0A	5.0A

Fuse

30 Amps @ 250 Volts

Note

The Fuji 300-1024 is the same as the Fuji 300-1016.

Last updated: December 2, 1996

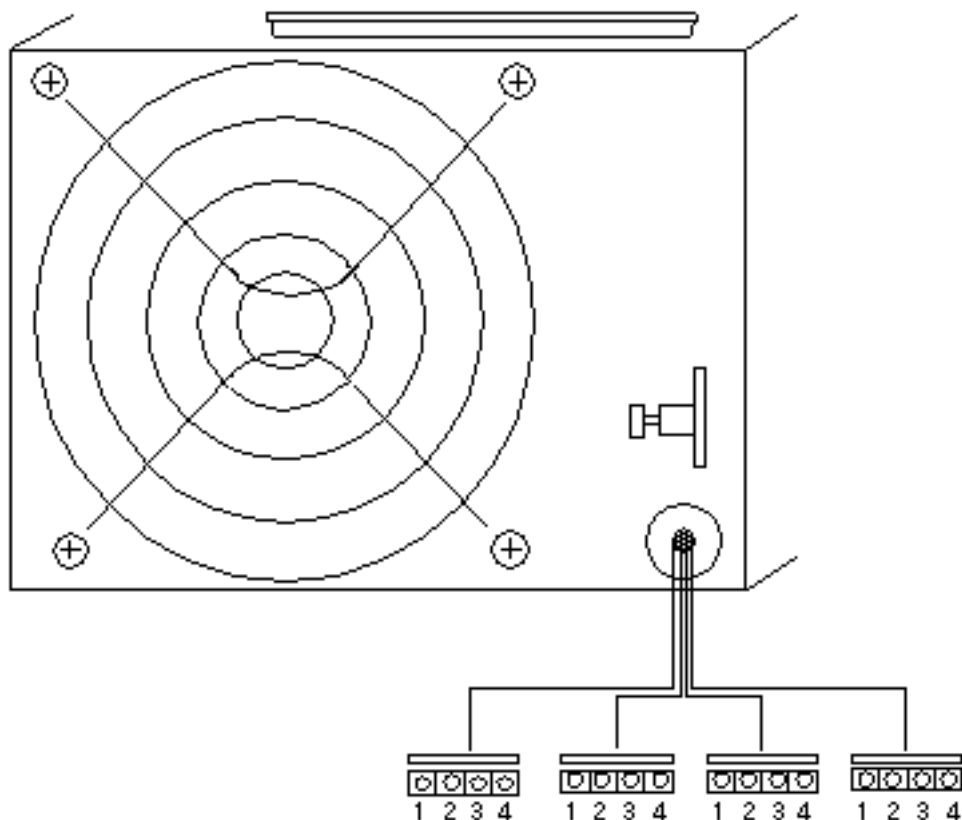
[Comments and Suggestions](#) 

Delta DPS-118AB 120 Watt Power Supply

Options 526 / 527 / 530 / 539 / 561 / 563 / 565

Options 566 / RR126 / RR128 / RR129 / RREXP

300-1031



Connector Pinout

1	2	3	4
+12V	GND	GND	+5V

AC Current Input

100-120V	200-240V
3.0A	1.5A

DC Output

+5V	+12V
8A	6.5A

Fuses

4 Amps @ 250 Volts

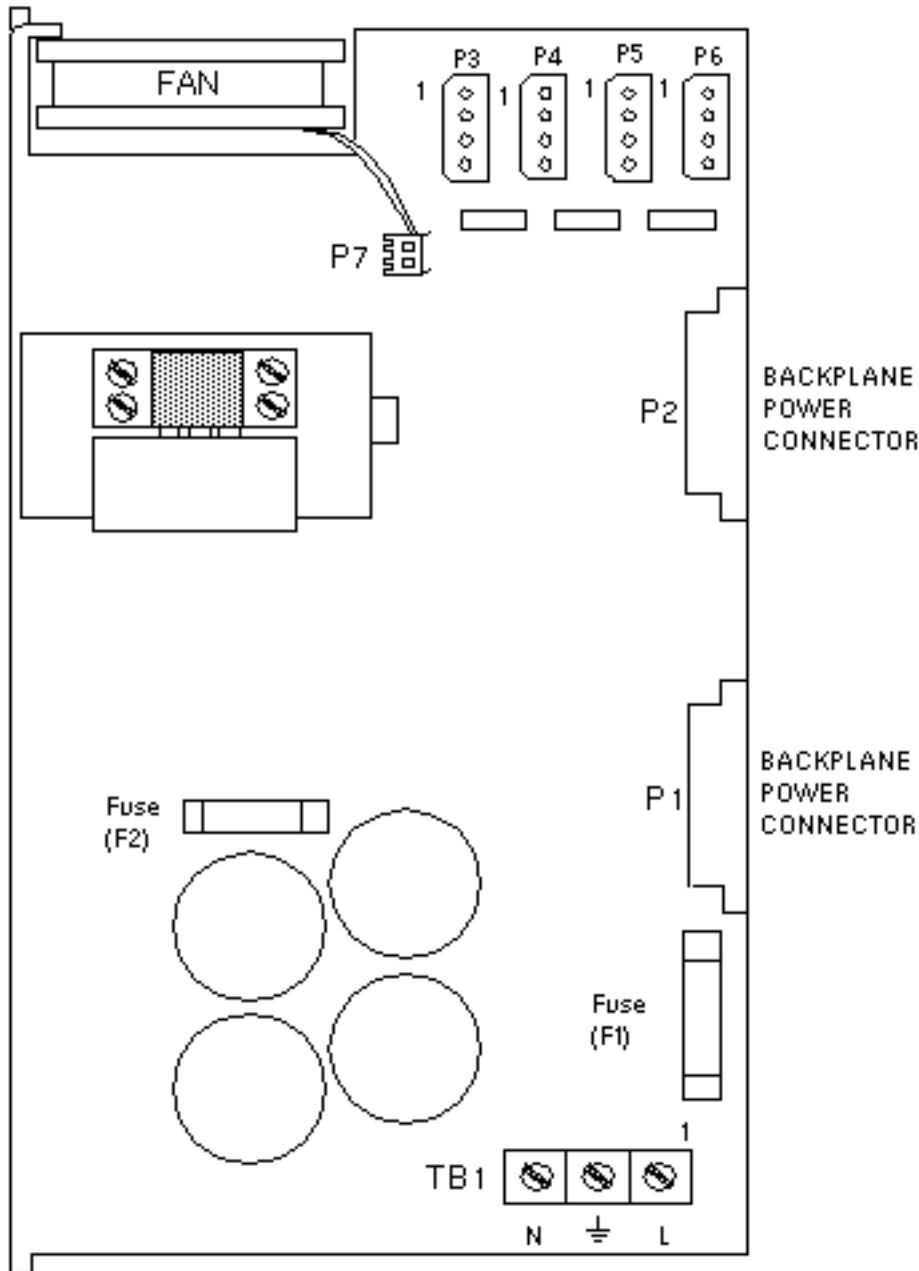
3 Amps @ 250 Volts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Boschert XL520-3625 520 Watt Power Supply

Sun-4/330
300-1034



TB1

1	2	3
Brn	Grn	Wht
LINE	GND	NEUT

P3 P4 P5 P6

1	2	3	4
Red	Blk	Blk	Org
+5V	GND	GND	12V

DC Output

+5	-5.2	+12 Analog	-12	+12 Motor
70	4	1.5	0.5	10.5

Fuses

F1 = 20 Amps @ 250 volts

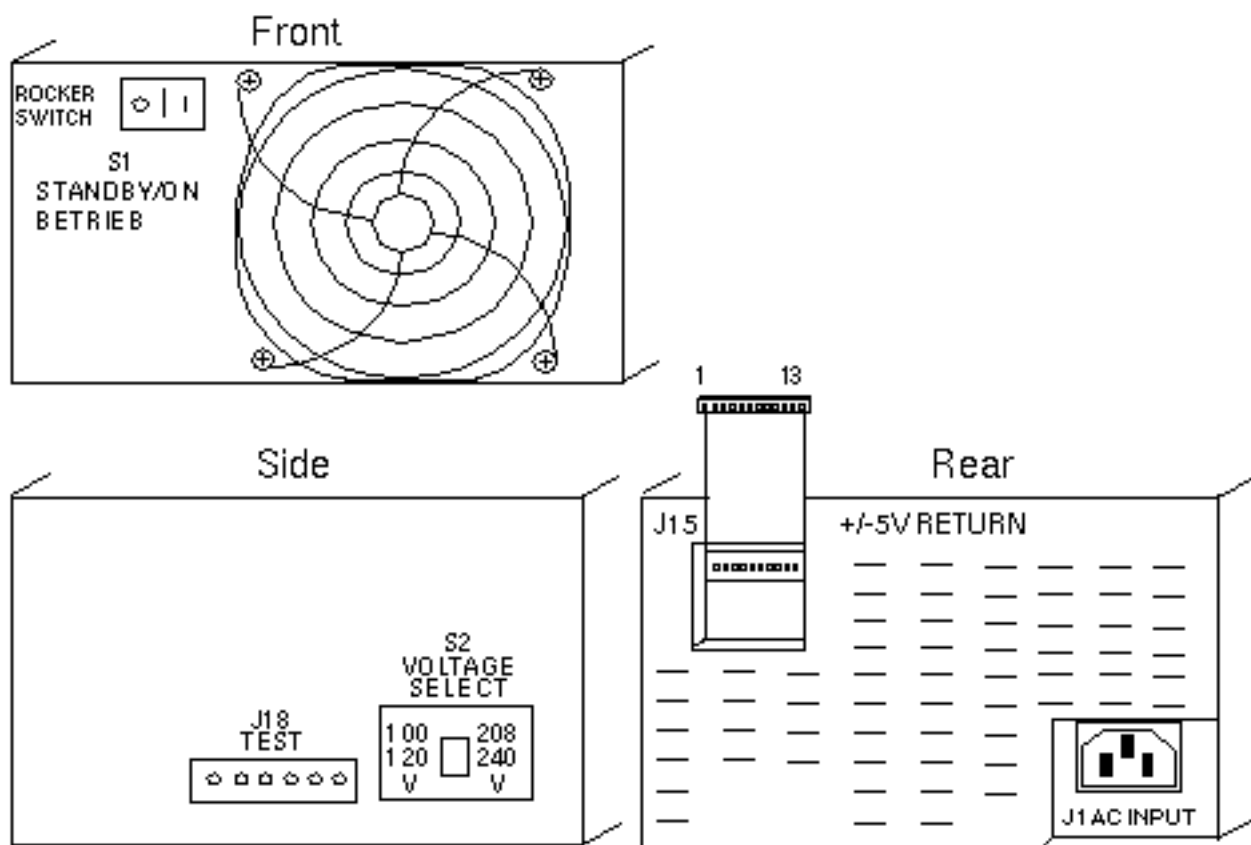
F2 = 10 Amps @ 250 volts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Seagate 45070622 205 Watt Power Supply

Seagate 97209-12G Disk Drive Options 706 / 707 / 709 / 710 300-1041



J15

1	2	3	4	5	6	7	8	9	10	11	12	13
+5V	+5V	GND	GND	-5V	-5V	-12V	+PWR OK	NC	+24V RTN	+24V RTN	+24V	+24V

DC Output

+5V	-5.1V	-12V	+24V
7.0A	4.25A	0.35A	6.0A

Fuse

Soldered at F 100, 8 Amps @ 250 Volts

Notes

205 Watt Power Supply 300-1041

Supports one Seagate 97209-12G 3MB/Sec IPI Disk Drive.

Does NOT Support the Seagate 97229-11G 6MB/Sec IPI Disk Drive.

215 Watt Power Supply 300-1074

Supports one Seagate 97209-12G 3MB/Sec IPI Disk Drives.

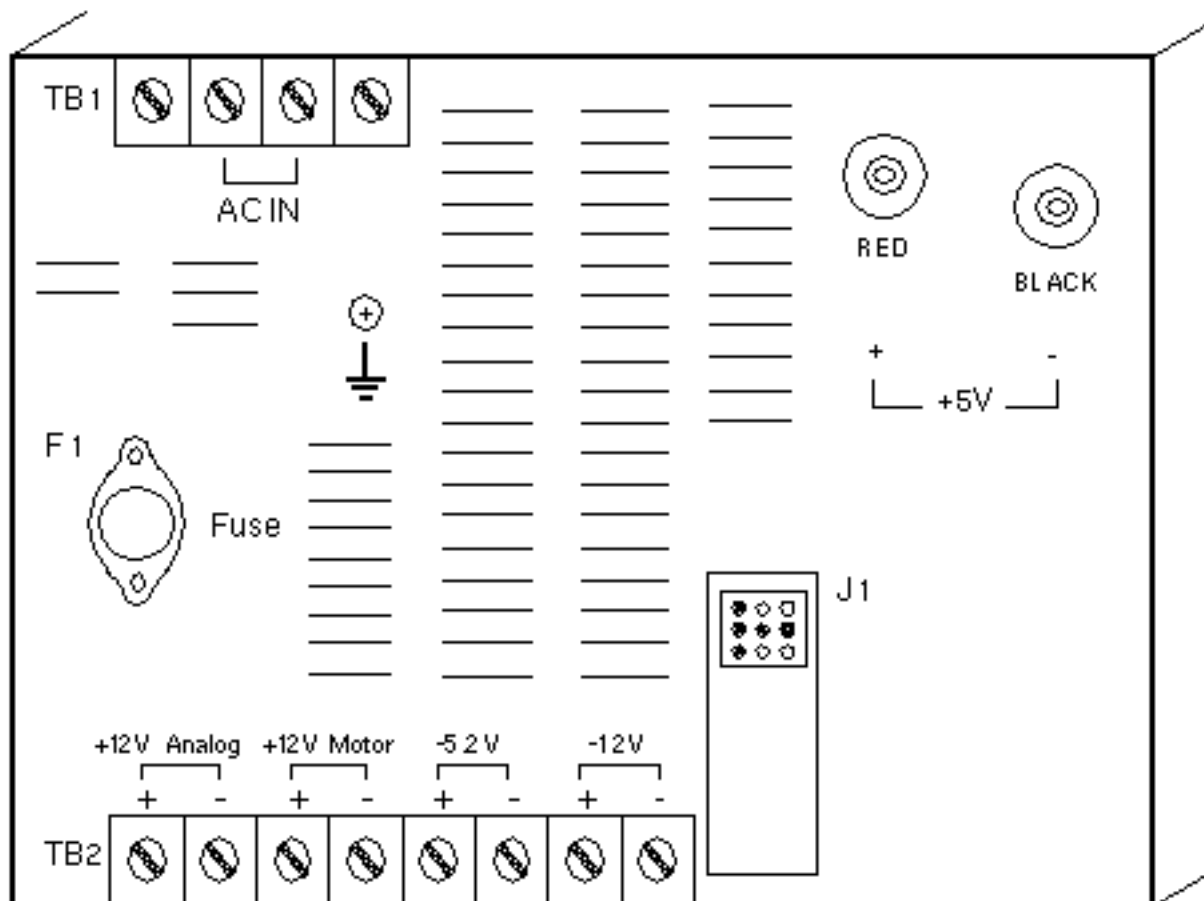
Supports one Seagate 97229-11G 6MB/Sec IPI Disk Drives.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuji PEX479-30 925 Watt Power Supply

Sun-4/260/280/360/380
300-1043



TB1

AC IN	
Blk	Wht
LINE	NEUT

TB2

+12 ANALOG		+12 MOTOR						WIRE HARNESS
+12V (+)	+12V (-)	+12V (+)	+12V (-)	-5.2 (+)	-5.2 (-)	-12V (+)	-12V (-)	Use 530-1578 and the wire harness listed below
Blu	Blk	Blu	Blk	Blk	Wht	Blk	Brn	
P8	P10	P9 P19	P11	P17	P7	P16 P20	P6	530-1581 160 Chassis
P9 P4	P5 P3	P16	P17 P7	P12	P10	P13	P8	530-1580 180 Chassis

Terminal Lugs

+5V (+)	+5V (-)
Red	Blk

DC Output

+5	-5.2	+12 Analog	-12	+12 Motor
150A	15A	15A	10A	10A

Fuse

Littelfuse 30A 250V BLN 30

Note

Use wire harnesses 530-1578 and 530-1580 for the 80/280/380/480 chassis. Use wire harnesses 530-1578 and 530-1581 for the 160/260/360/460 chassis.

Last updated: December 2, 1996

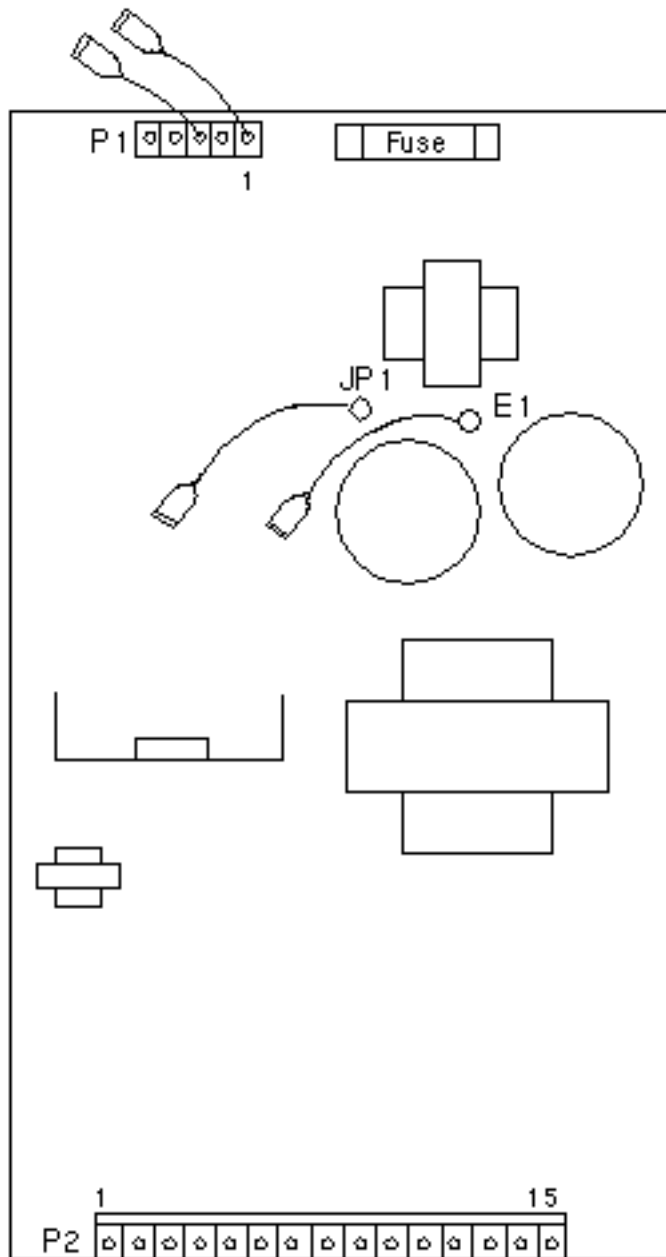
[Comments and Suggestions](#) 

Boschert XL121-3630 130 Watt Power Supply

Options 501 / 503 / 504 / 505 / 506 / 507

Options 509 / 510 / 511 / 514 / 516

300-1045



DC Output

+5V	+12V
4.0	5.2A

P1

1	2	3	4	5
Brn	—	Blu	—	—
LINE	NEUT	GND		

P2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Blk	Blu	Blu	Blu	Blu	Blk	Blk	Blk	Blk	Blk	Blk	—	Red	Red	Red
RTN	+12 V	+12 V	+12 V	+12 V	RTN	RTN	RTN	RTN	RTN	RTN	N/C	+5V	+5V	5V

Fuse

5 Amps @ 250 Volts

Note

Use Power Harness, 530-1432-01, for this power supply.

Last updated: December 2, 1996

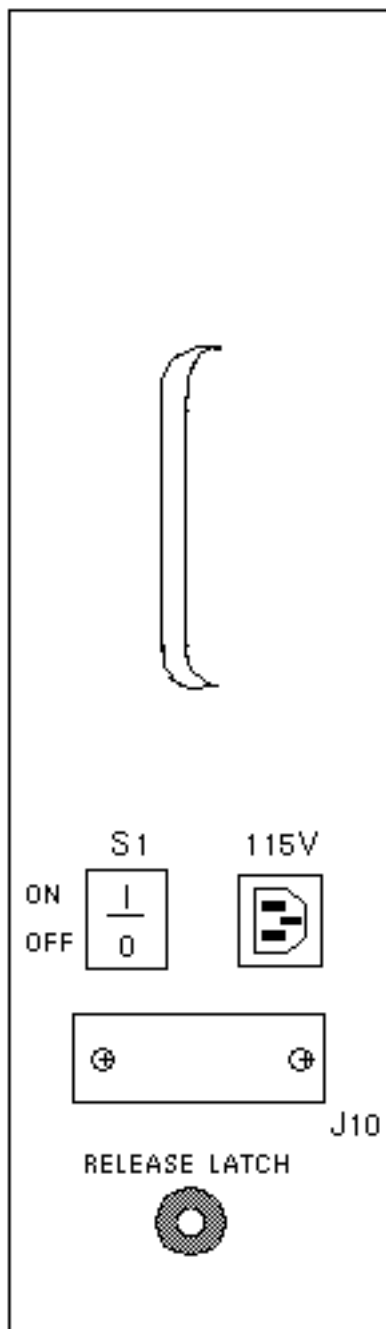
[Comments and Suggestions](#) 

Zytec 22903110 925 Watt Power Supply

Sun-4/370/470

Options 509 / 510 / 511 / 514 / 516

300-1047



DC OUTPUT	REGULATION	FULL LOAD
+5	150 Amps	145.0 Amps
-5.2	15 Amps	10.0 Amps
+12 analog	15 Amps	2.0 Amps

+12 motor	15 Amps	6.3 Amps
-12	10 Amps	4.0 Amps

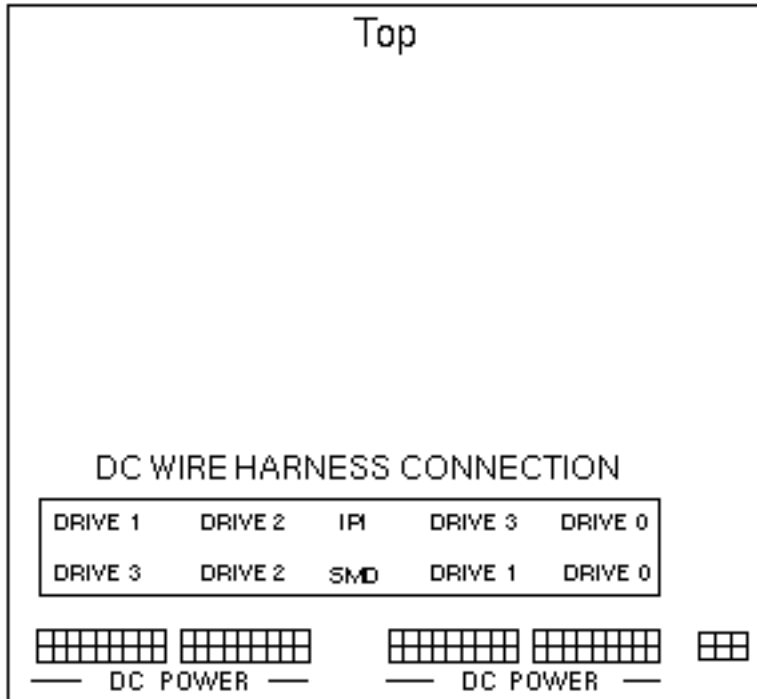
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuji PEX527-30

820 Watt Power Supply

Options 733 / 734
300-1052



STANDBY/ON
POWER

+5V	GND	GND	-5V		-12V	GND		
Red	Blk	Blk	Yel	NC	Brn	Blk	NC	NC
1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
Red	NC	NC	Yel	NC		Blk	Org	Org
+5V			-5V			GND	+24	+24

Gry	Wht/ Brn	Wht/ Red
1	2	3
4	5	6
Wht/ Org	Blk	Blk

DC Output

+5Vdc	-5.1Vdc	-12Vdc	+24Vdc
7.0A x2	7.0A x2	7.0A x2	7.0A x2

Fuse

20 Amps @ 250 Volts

Notes

820 Watt Power Supply 300-1052-02

Supports four CDC 9720-688 Disk Drives.

Supports four Fujitsu M2372K Disk Drives.

820 Watt Power Supply 300-1052-03

Supports four CDC 9720-688 Disk Drives.

Does not support the Fujitsu M2372K Disk Drive.

Supports two Seagate 97209-12G 3MB/Sec IPI Disk Drives.

Does not Support Seagate 97229-11G 6MB/Sec IPI Disk Drives.

820 Watt Power Supply 300-1052-04

Supports four CDC 9720-688 Disk Drives.

Does not support the Fujitsu M2372K Disk Drive.

Supports four Seagate 97209-12G 3MB/Sec IPI Disk Drives.

Does not Support Seagate 97229-11G 6MB/Sec IPI Disk Drives.

820 Watt Power Supply 300-1052-05

Supports four CDC 9720-688 Disk Drives.

Supports four Fujitsu M2372K Disk Drives.

Does not Support Seagate 97209-12G 3MB/Sec IPI Disk Drives.

Does not Support Seagate 97229-11G 6MB/Sec IPI Disk Drives.

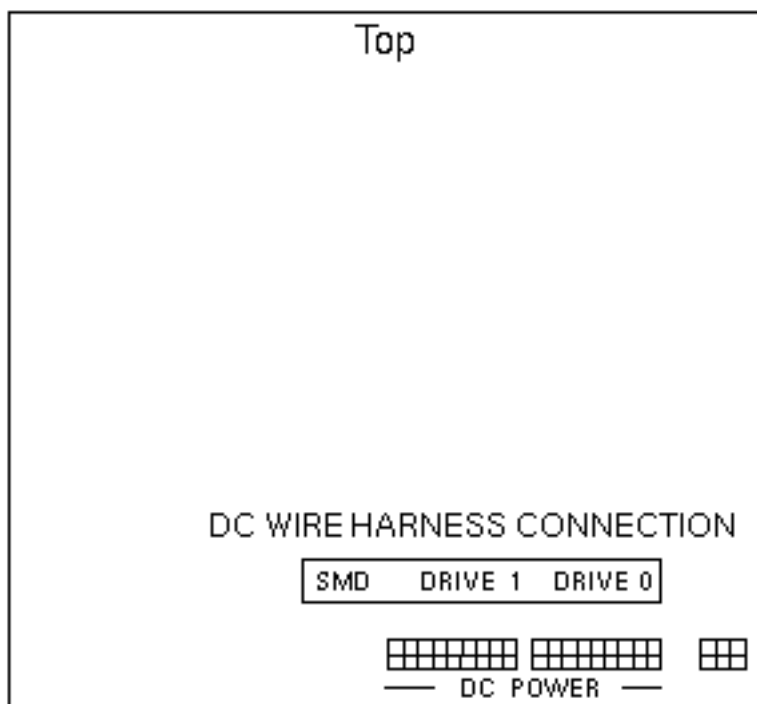
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuji PEX527-40

410 Watt Power Supply

Options 731 / 732
300-1056



+5V	GND	GND	-5V		-12V	GND		
Red	Blk	Blk	Yel	NC	Brn	Blk	NC	NC
1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
Red	NC	NC	Yel	NC		Blk	Org	Org
+12V			-5V			GND	+24	+24

Gry	Wht/ Brn	Wht/ Red
1	2	3
4	5	6
Wht/ Org	Blk	Blk

DC Output

+5Vdc	-5.1Vdc	-12Vdc	+24Vdc
7.0A	7.0A	7.0A	7.0A

Fuse

20 Amps @ 250 Volts

Notes

410 Watt Power Supply 300-1056-02

Supports two CDC 9720-688 Disk Drives.

Supports two Fujitsu M2372K Disk Drives.

410 Watt Power Supply 300-1056-03

Supports two CDC 9720-688 Disk Drives.

Does not support the Fujitsu M2372K Disk Drive.

410 Watt Power Supply 300-1056-04

Supports two CDC 9720-688 Disk Drives.

Does not support the Fujitsu M2372K Disk Drive.

410 Watt Power Supply 300-1056-05

Supports two CDC 9720-688 Disk Drives.

Supports two Fujitsu M2372K Disk Drives.

Last updated: December 2, 1996

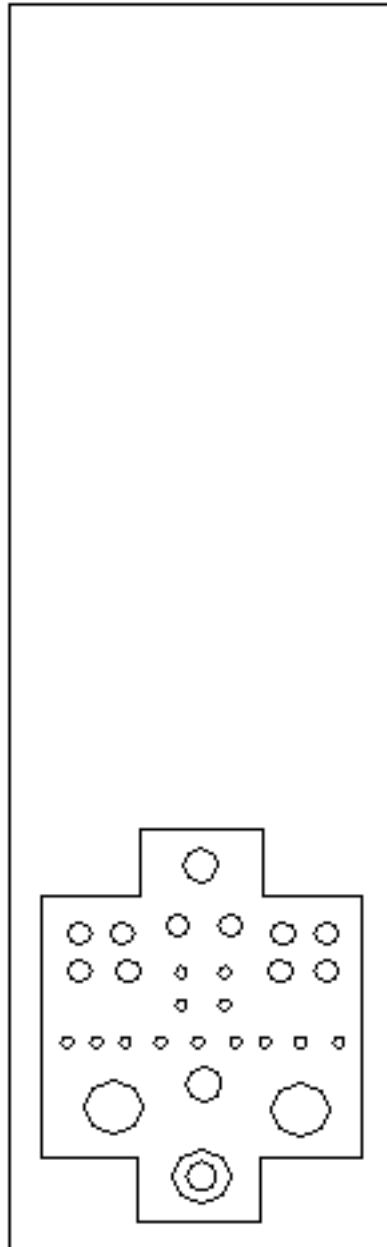
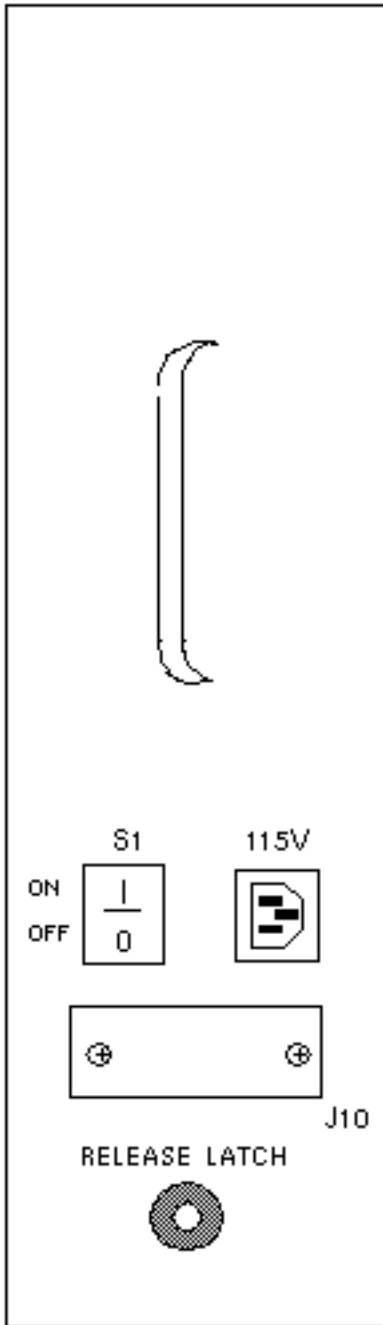
[Comments and Suggestions](#) 

Zytec 22907400 1200 Watt Power Supply

Sun-4/390/490

SS690

300-1065



DC OUTPUT	REGULATION	FULL LOAD
+5	10-200 Amps	200.0 Amps
-5.2	0.4-15 Amps	10.0 Amps
+12 analog	0-10 Amps	2.0 Amps

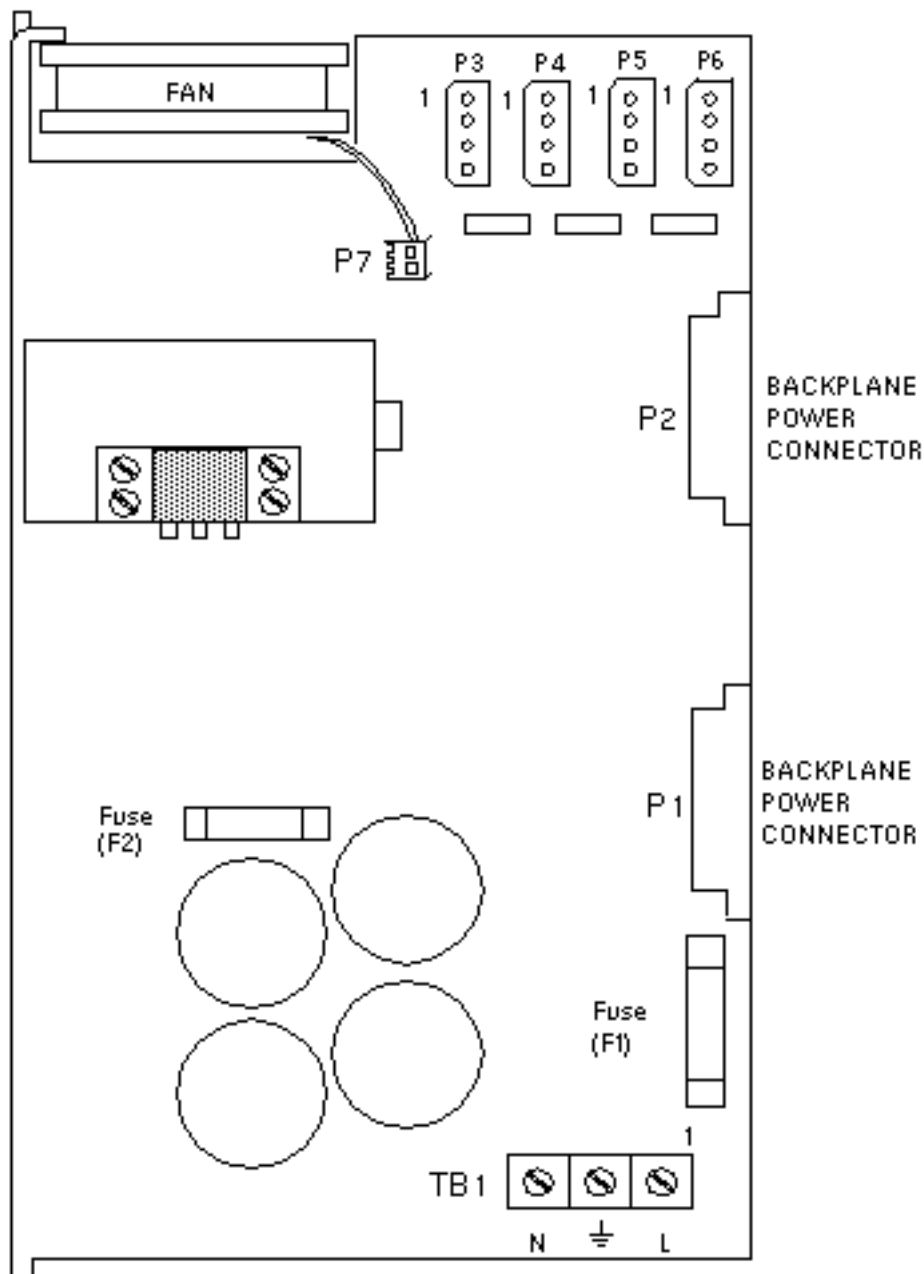
+12 motor	4-15 Amps	6.3 Amps
-12	0-5 Amps	4.0 Amps

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Boschert XL520-3625 520 Watt Power Supply

Sun-4/330 / SS630
300-1072



TB1

1	2	3
Brn	Grn	Wht
LINE	GND	NEUT

P3	P4	P5	P6
1	2	3	4
Red	Blk	Blk	Org
+5V	GND	GND	12V

DC Output

+5	-5.2	+12 Analog	-12	+12 Motor
62	4.5	3.0	2.0	10.5

Fuses

F1 = 20 Amps @ 250 Volts

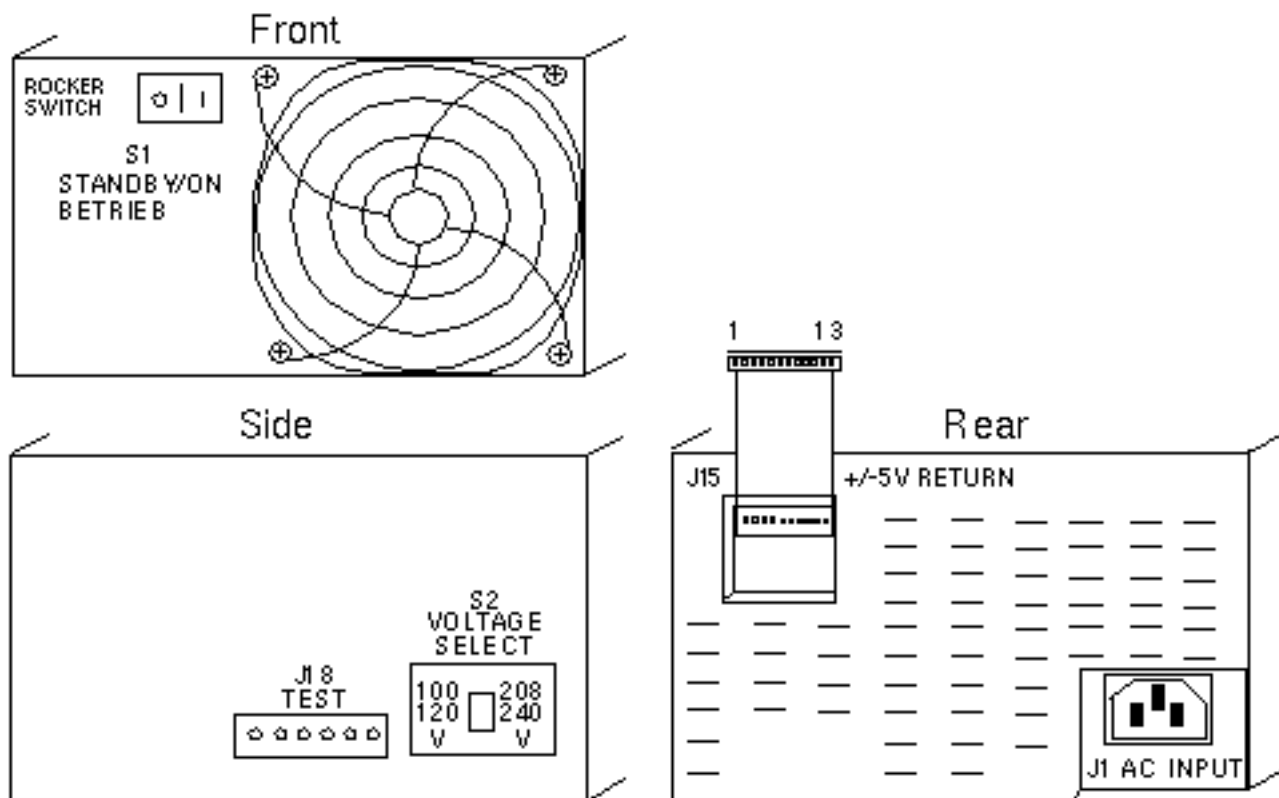
F2 = 10 Amps @ 250 Volts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Seagate 45070625 215 Watt Power Supply

Seagate 97209-12G / Seagate 97229-11G
Options 706 / 707 / 709 / 710 / 716 / 717 / 719 / 720
300-1074



J15

1	2	3	4	5	6	7	8	9	10	11	12	13
+5V	+5V	GND	GND	-5V	-5V	-12V	+PWR OK	NC	+24V RTN	+24V RTN	+24V	+24V

DC Output

+5V	-5.1V	-12V	+24V
7.0A	6.25A	0.35A	6.0A

Fuse

At F 100, 8 Amps, 250 Volts, LittleFuse, 312-008

Notes

205 Watt Power Supply 300-1041

Supports one Seagate 97209-12G 3MB/Sec IPI Disk Drive.

Does NOT Support the Seagate 97229-11G 6MB/Sec IPI Disk Drive.

215 Watt Power Supply 300-1074

Supports one Seagate 97209-12G 3MB/Sec IPI Disk Drives.

Supports one Seagate 97229-11G 6MB/Sec IPI Disk Drives.

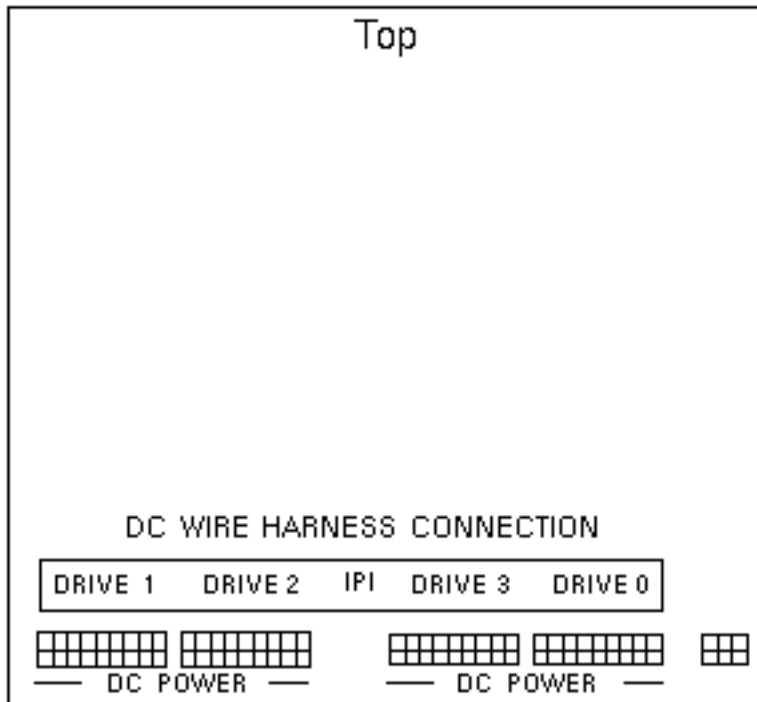
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuji PEX527-31

840 Watt Power Supply

Options 741 / 742 / 743 / 744
300-1075



+5V	GND	GND	-5V		-12V	GND		
Red	Blk	Blk	Yel	NC	Brn	Blk	NC	NC
1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
Red	NC	NC	Yel	NC		Blk	Org	Org
+5V			-5V			GND	+24	+24

Gry	Wht/ Brn	Wht/ Red
1	2	3
4	5	6
Wht/ Org	Blk	Blk

DC Output

+5V	-5.1V	-12V	+24V
28A	25A	1.4A	28A

Fuse

20 Amps @ 250 Volts

Notes

840 Watt Power Supply 300-1075

Supports four Seagate 97209-12G 3MB/Sec IPI Disk Drives.

Supports four Seagate 97229-11G 6MB/Sec IPI Disk Drives.

Does not support Fujitsu M2372K Disk Drives.

Does not support CDC 9720-688 Disk Drives.

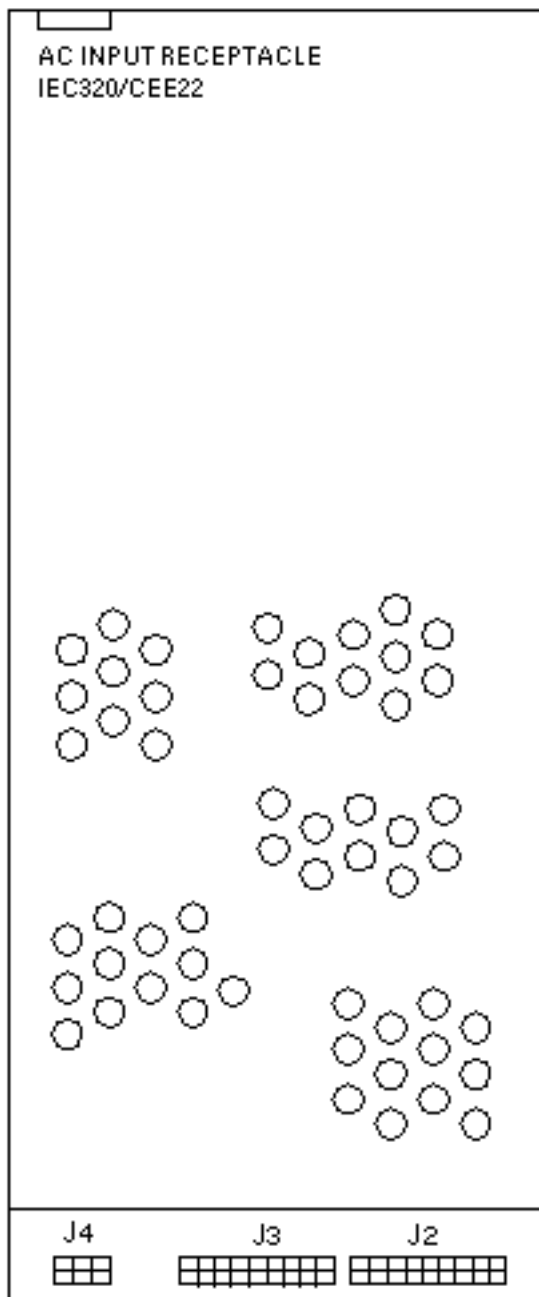
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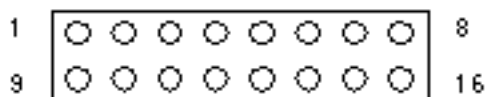
Zytec 22914300

268 Watt Power Supply

Options 726 / 727
300-1085

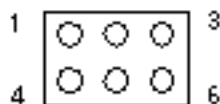


J2 J3



PIN	COLOR	VOLTAGE
1	Red	+5
2	Red	+5
3	Black	Gnd
4	Black	Gnd
5	Black	Gnd
6	Black	Gnd
7	Blue	+12
8	Blue	+12
9	Red	+5
10	Red	+5
11	Black	Gnd
12	Black	Gnd
13	Black	Gnd
14	Black	Gnd
15	Blue	+12
16	Blue	+12

J4



PIN	COLOR	VOLTAGE
1	Blue	+12
2	Blue	+12
3	Red	+5
4	Black	Gnd
5	Black	Gnd
6	Black	Gnd

DC Output

+5.1Vdc	+12Vdc	+12Vdc
8.0A x2	7.0A x2	1.5A



Fuse

10 Amps @ 250 Volts

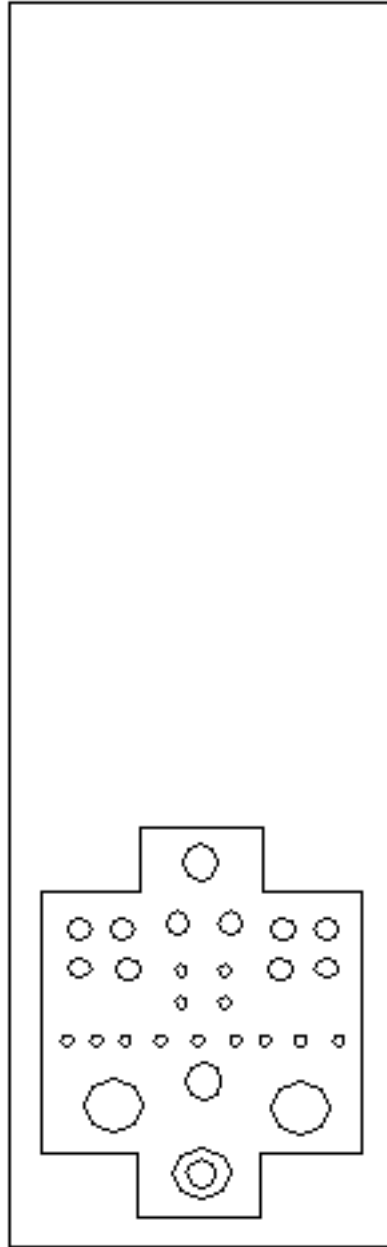
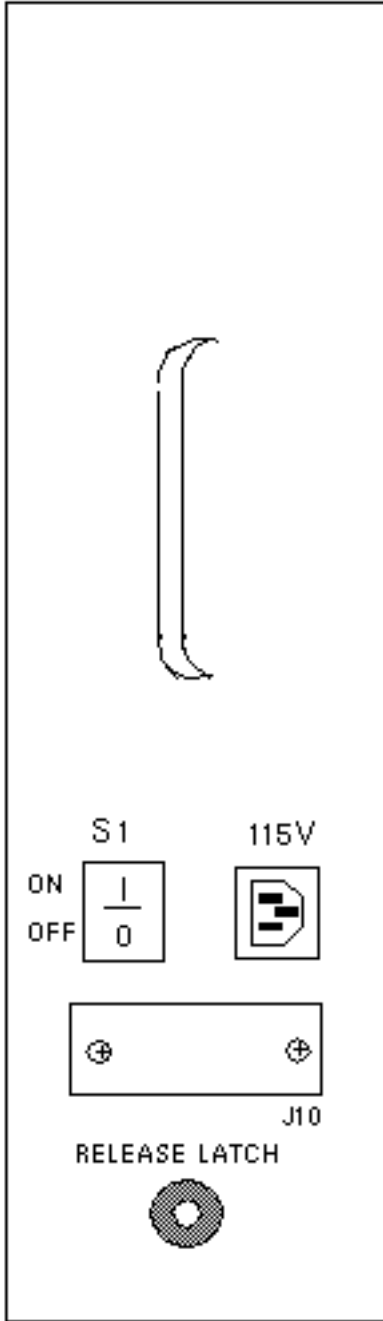
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuji PEX526-30

925 Watt Power Supply

Sun-4/370/470
300-1089



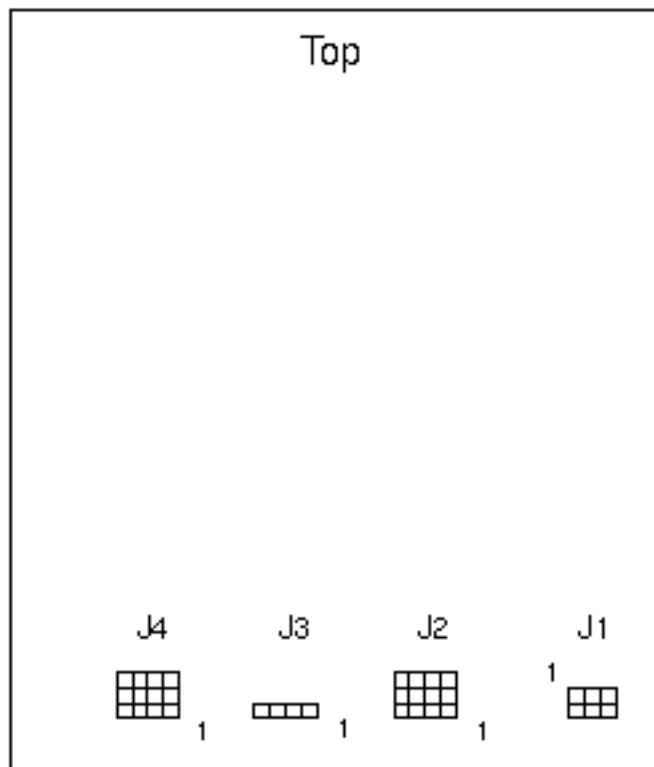
DC OUTPUT	REGULATION	FULL LOAD
+5	150 Amps	145.0 Amps
-5.2	15 Amps	10.0 Amps
+12 analog	15 Amps	2.0 Amps
+12 motor	15 Amps	6.3 Amps
-12	10 Amps	4.0 Amps

Last updated: December 2, 1996

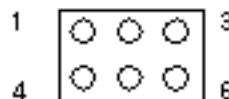
[Comments and Suggestions](#) 

Fuji PEX614-30 820 Watt Power Supply

Options 750 / 754 / 756
300-1091

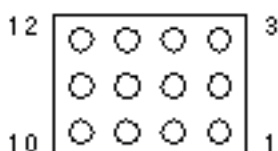


J1 Switch Power



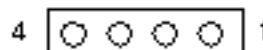
PIN	COLOR
1	Grey
2	White/Brown
3	White/Red
4	White/Orange
5	Black
6	Black

J2 J4 Peripheral Tray Power



PIN	COLOR	VOLTAGE
1	Red	+5
2	Red	+5
3	Red	+5
4	Black	Gnd
5	Black	Gnd
6	Black	Gnd
7	Black	Gnd
8	Black	Gnd
9	Black	Gnd
10	Blue	+12
11	Blue	+12
12	Blue	+12

J3 DC Fan Power



PIN	COLOR	VOLTAGE
1	Red	+12
2	Red	+12
3	Black	Gnd
4	Black	Gnd

DC Output

+5.1Vdc	+12.2Vdc	+12.2Vdc
15A x 2	15A x 2	1.65A

Fuse

Littelfuse BLN 20

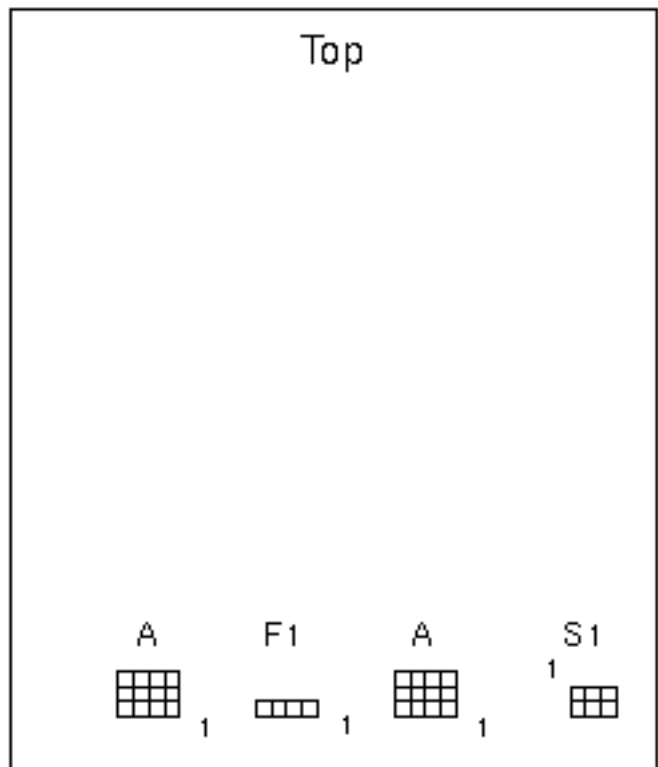
Last updated: December 2, 1996

[Comments and Suggestions](#) 

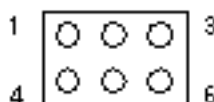
Fuji PEX614-31

800 Watt Power Supply

Options 750 / 754 / 756 / 762 / 763 / 764
300-1106

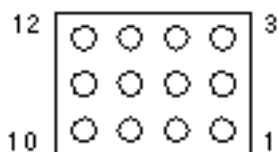


S1 Switch Power



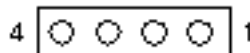
PIN	COLOR
1	Grey
2	White/Brown
3	White/Red
4	White/Orange
5	Black
6	Black

A B Peripheral Tray Power



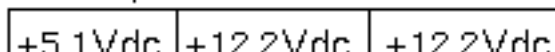
PIN	COLOR	VOLTAGE
1	Red	+5
2	Red	+5
3	Red	+5
4	Black	GND
5	Black	GND
6	Black	GND
7	Black	GND
8	Black	GND
9	Black	GND
10	Blue	+12
11	Blue	+12
12	Blue	+12

F1 DC Fan Power



PIN	COLOR	VOLTAGE
1	Red	+12
2	Red	+12
3	Black	Gnd
4	Black	Gnd

DC Output



12	Blue	+12
----	------	-----

15A x 2	15A x 2	1.65A
---------	---------	-------

Fuse

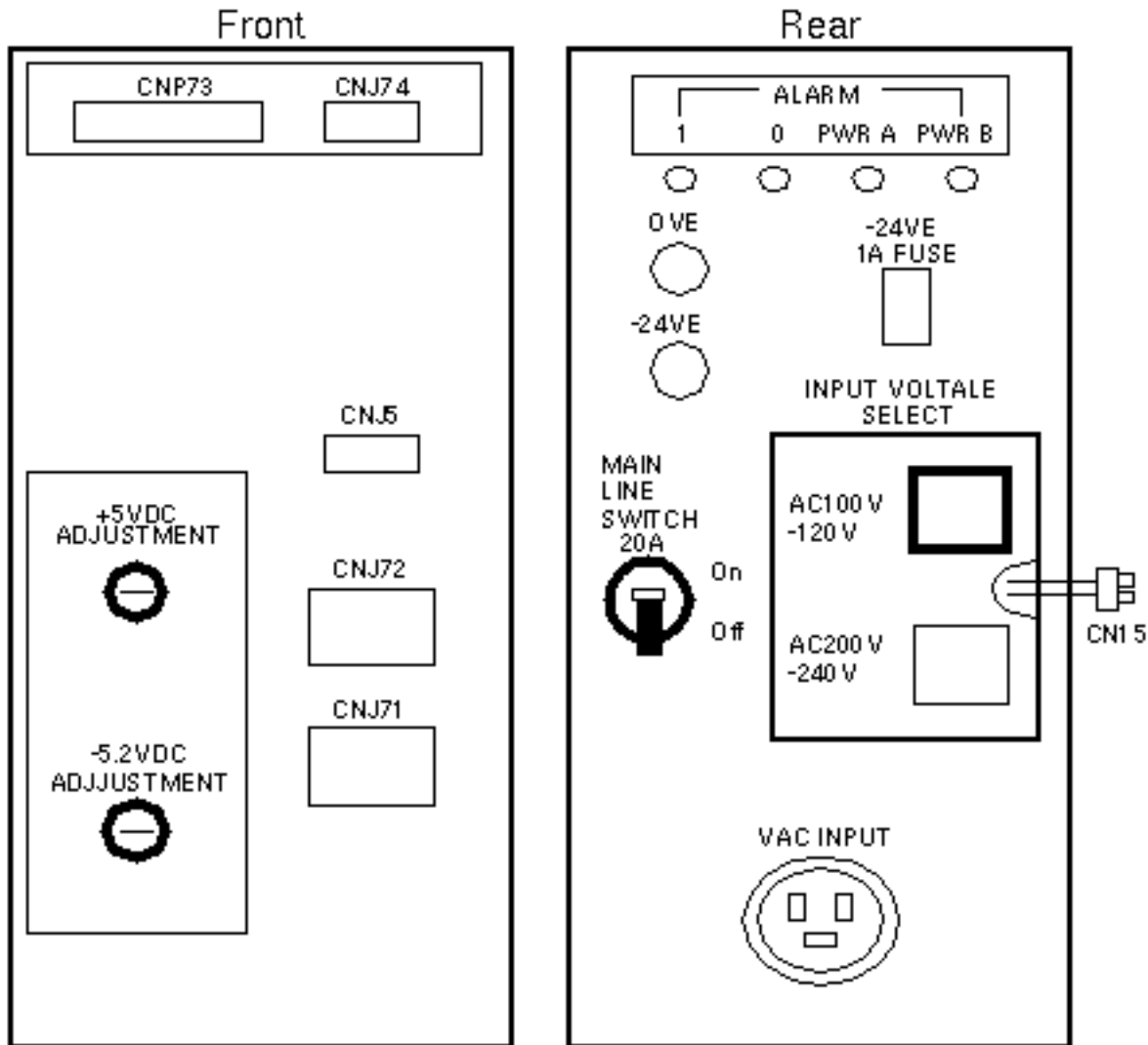
Littelfuse BLN 20

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fujitsu M2444AC Power Supply A-1

Options 78 / 675
811-1027



Alarm Panel LEDs

ALARM LEDs				INDICATES
1	0	PWR	PWR	
ON				Fan 1 is failing
ON	ON			High temperature in power amplifier of servo circuit
				Fan 2 is failing
		ON		Over-power/over-current in +5, -6, +12 Vdc circuits
			ON	Over-power/over-current in -5.2, +24, -24 Vdc circuits

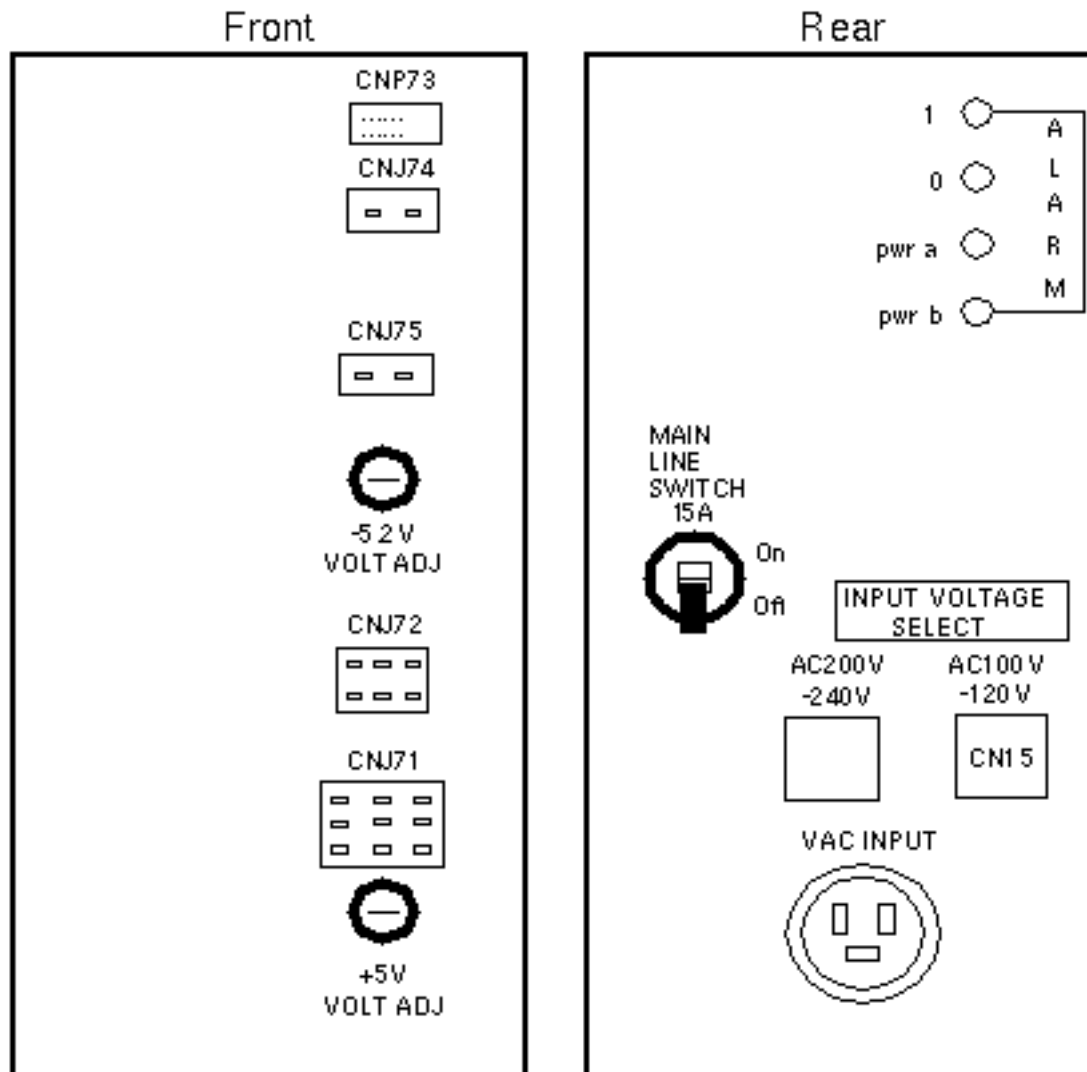
DC Output

+5V | -5.2V | -6V | +12V | +24V | -24V

24	5A	1A	1A	4.8A	6A
----	----	----	----	------	----

Fujitsu M2444AC Power Supply A-2

Options 78 / 675
811-1027



Alarm Panel LEDs

ALARM LEDs				INDICATES
1	0	PWR	PWR	
ON				Fan 1 is failing
ON	ON			High temperature in power amplifier of servo circuit
				Fan 2 is failing
		ON		Over-power/over-current in +5, -6, +12 Vdc circuits
			ON	Over-power/over-current in -5.2, +24, -24 Vdc circuits



DC Output

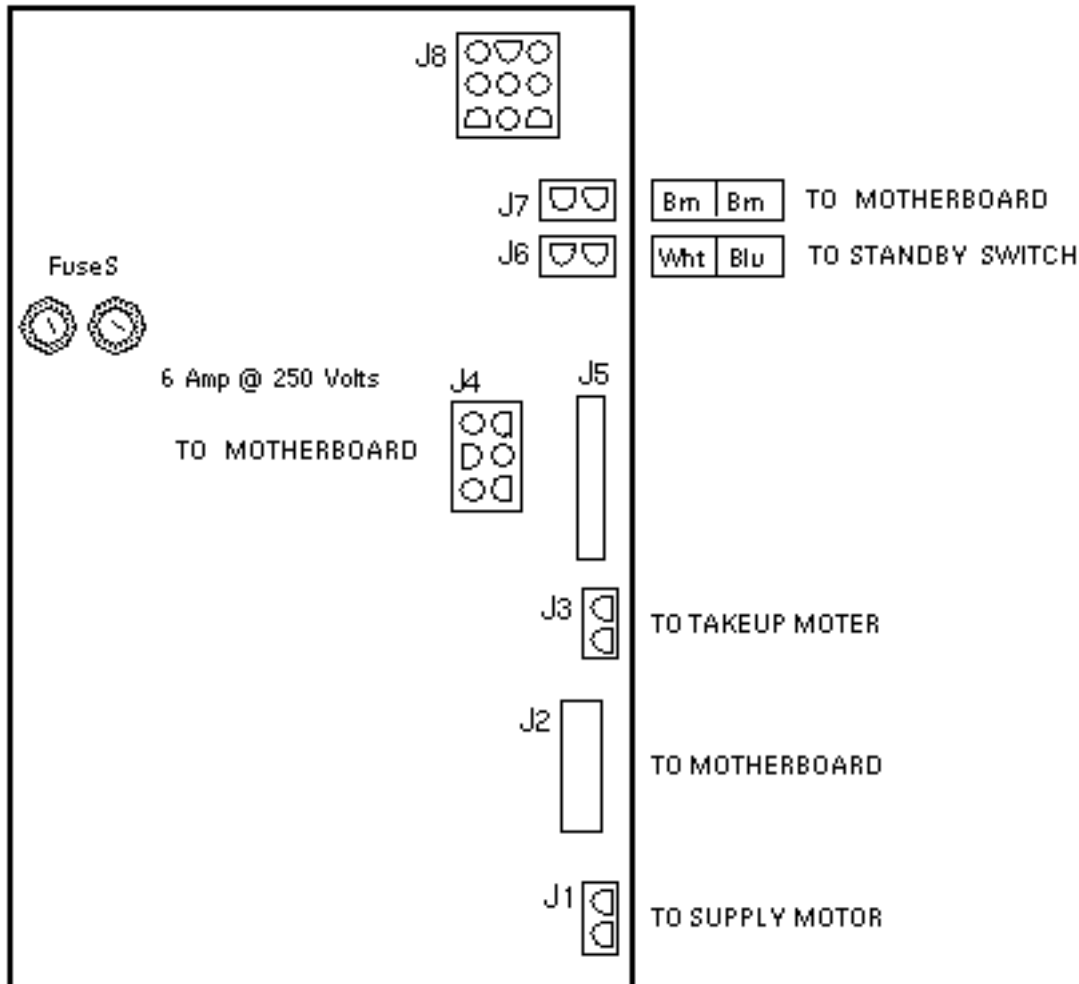
+5V	-5.2V	-6V	+12V	+24V	-24V
24	5A	1A	1A	4.8A	6A

Last updated: December 2, 1996

[Comments and Suggestions](#) 

HP 88780 Power/Motor Drive Power Supply

Options 680 / 682 / 683 / 684
811-1242



HP BOARD LABEL = 07980-66535

Note

Use 6 Amp fuse 140-1021-01.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

AC Power

AC Power Sequencer

[Remote and Local Bus Connectors](#)

[Power Requirements](#)

[300-1011 -- Pulizzi Engineering -- 115V](#)

[370-1027 -- Pulizzi Engineering -- 230V](#)

[370-1155 -- Pulizzi Engineering -- 230V](#)

[370-1126 -- Pulizzi Engineering -- 240V](#)

[370-1156 -- Pulizzi Engineering -- 240V](#)

[370-1155-02 -- Sherwood Enterprises -- 230V](#)

[300-1263 -- Sherwood Enterprises -- 230V](#)

[370-1156-03 -- Sherwood Enterprises -- 240V](#)

[300-1264 -- Sherwood Enterprises -- 240V](#)

Last updated: February 6, 1997

[Comments and Suggestions](#) 

AC Power Sequencer

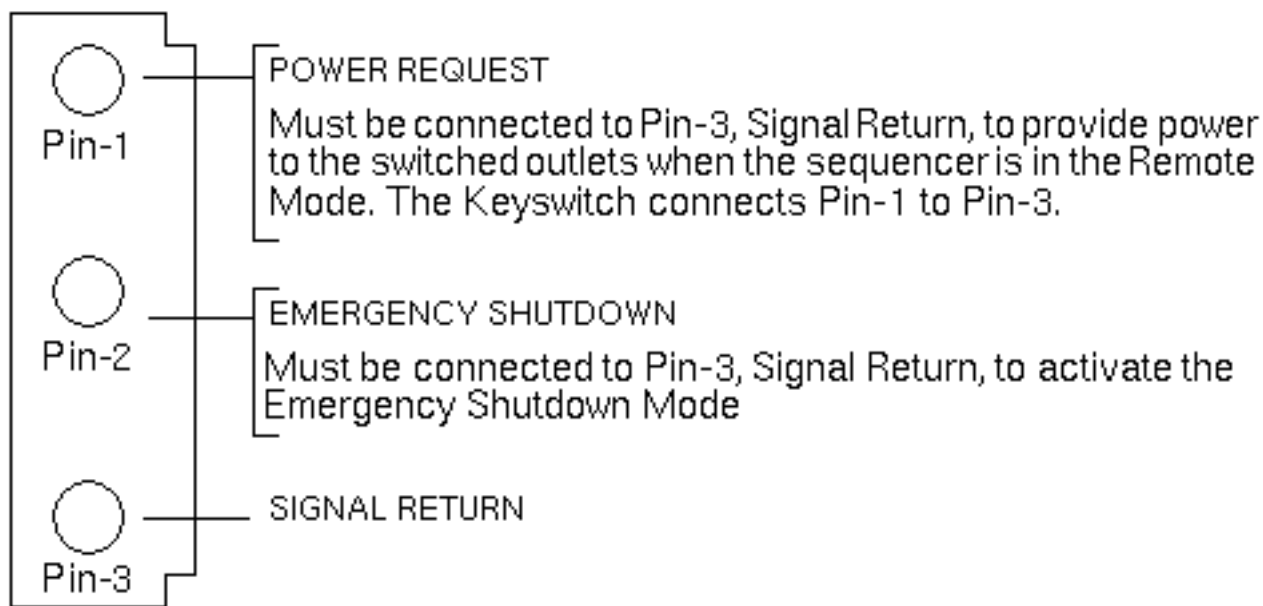
Remote and Local Bus Connectors

300-1011 / 300-1263 / 300-1264

370-1126 / 370-1127 / 370-1155 / 370-1156

Remote I/O Connectors J6, J7, J8, and J9

A parallel circuit connects J6, J7, J8, and J9. Inputs to the Remote I/O Connectors are activated by mechanical toggle, key switch, transistor, integrated circuit, or thermoswitch with a normal open configuration.



CONNECTOR	PART NUMBER	USED WITH	PART NUMBER
Female	AMP 1-480304-0	Socket Terminals	AMP 60619-1
Male	AMP 1-480305-0	Contact Pins	AMP 60620-1

Cable Description

Use 3-conductor, #22 AWG stranded wire.

Remote - OFF - Local Switch

POSITION	DESCRIPTION
REMOTE	AC output of the Switched 1 and Switched 2 outlets is enabled when the breaker is ON and the Power Request is connected to Signal Return on the Remote I/O Connectors.
OFF	The AC output of the Switched 1 and Switched 2 outlets is disabled.

LOCAL

The AC output of the Switched 1 and Switched 2 outlets is enabled when the Circuit Breaker is ON.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

AC Sequencer Power Requirements

300-1011 / 300-1027 / 300-1263

300-1264 / 370-1126 / 370-1155 / 370-1156

Operating Range

Nominal Voltage: 208, 220, 230, or 240 Volts AC

Operating Voltage: Single Phase 180-264 Volts AC

Frequency: 48-63 Hz

Current: 24 A maximum

AC Power Plug

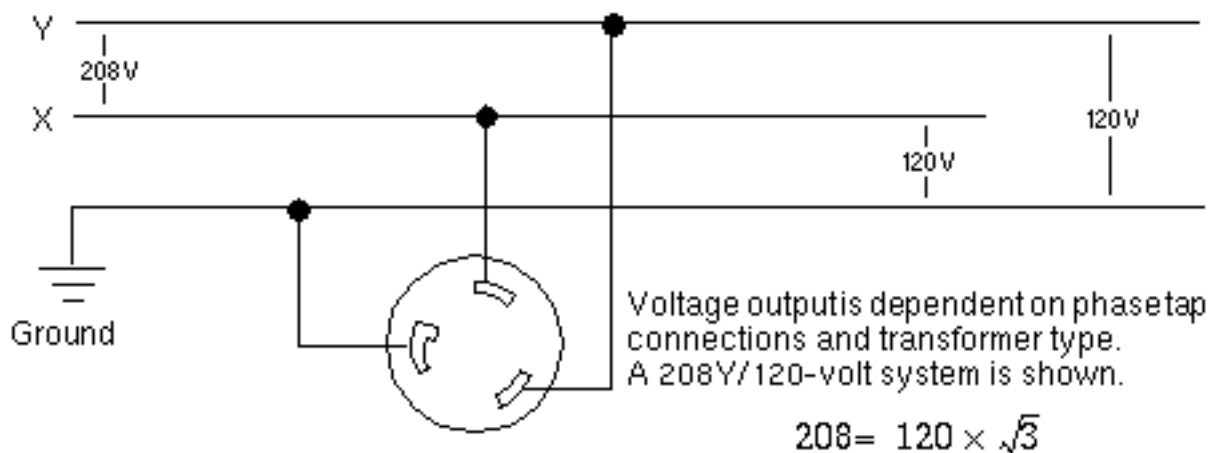
The 230VAC power plug is a NEMA L6-30P. The 240VAC power plug is a Blue, 32A, IEC 309, with Ground at the 6-hour position.

230V Sequencer AC Power Cord

A 12 AWG Type SJO flexible cord rated at 25A when connected to utilization equipment with 2 current carrying conductors is used. Refer to Article 400-5 of the US National Electrical Code.

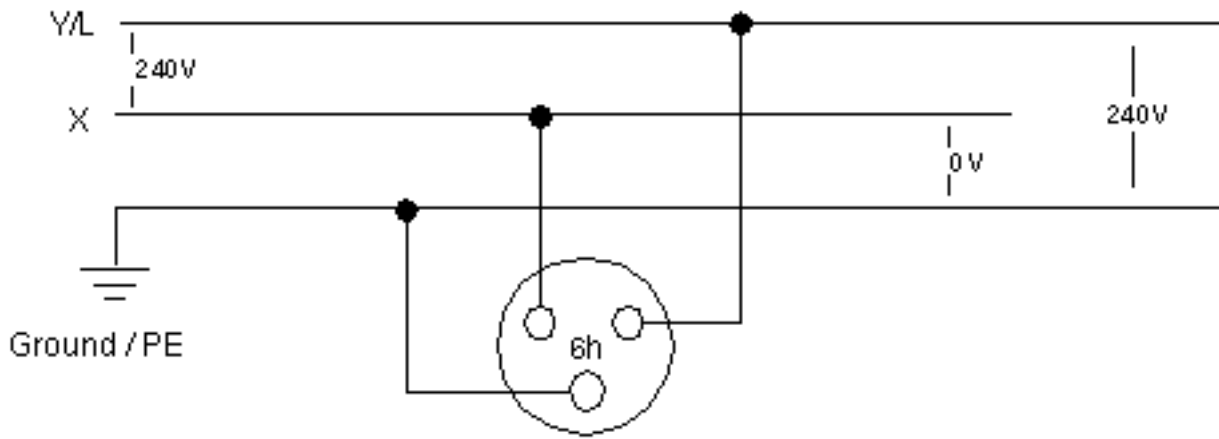
NEMA L6-30R / ANSI C73.75 230 Volt Power Receptacle

30 Amp, 250V, 2-pole, 3-wire, Single Phase, Grounded



IEC 309 240 Volt Power Receptacle

32 Amp, 240V, 2-pole, 3-wire, Single Phase, Grounded



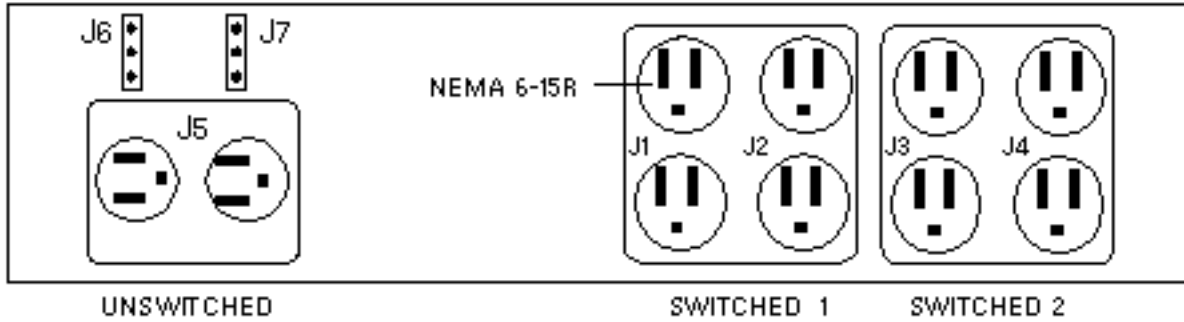
Last updated: December 2, 1996

[Comments and Suggestions](#) 

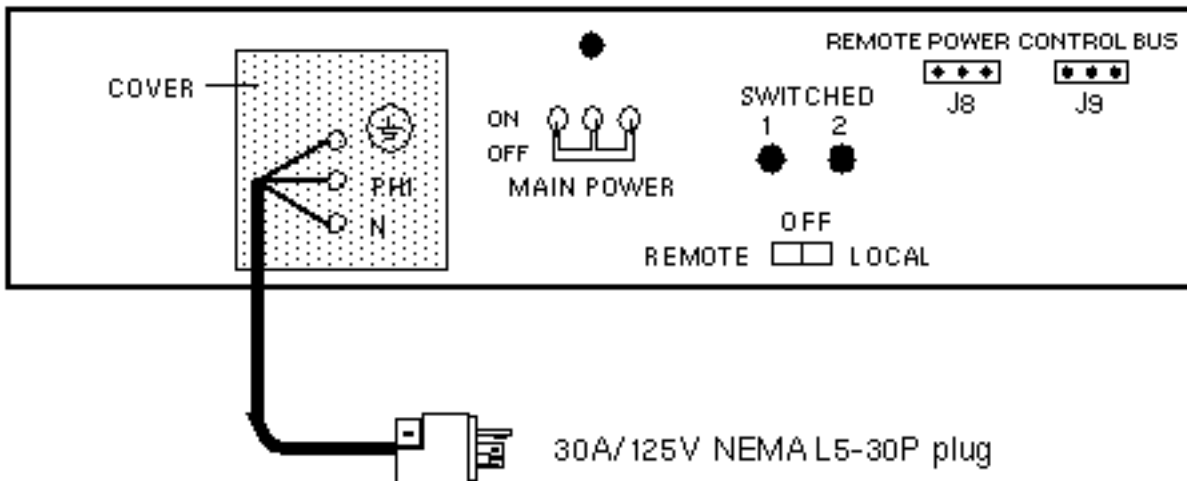
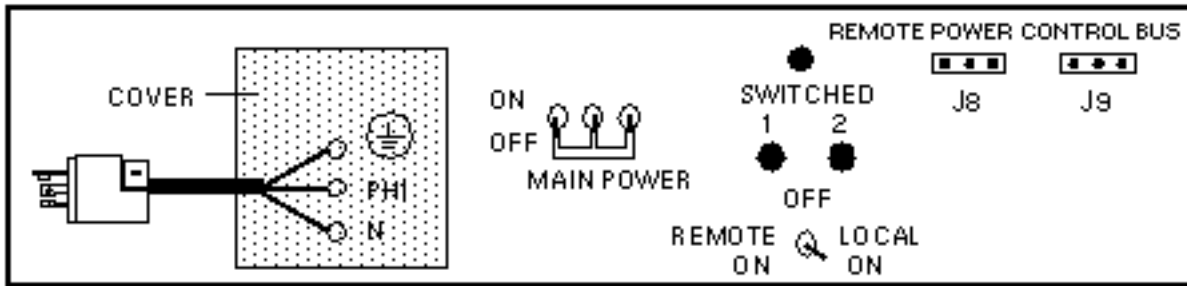
115 Volt AC Power Sequencer 300-1011

Pulizzi Engineering PC874

Outlet Side



Control Side



Notes

1. Requires AC outlet NEMA L5-30R, 30A, 125V.
2. Any conversion to the Data Center Cabinet, including replacement of the AC Power Plug or AC Power Sequencer, voids all safety agency approvals.
3. The Switched 2 output comes on after a 5 second delay.

References

1. *Installation Manual for the Sun Full-height Rack System*, 800-1555.
 2. *Installation Manual for Sun Rackmountable Fileservers*, 800-1556.
 3. *Sun Full-Height Rack System Installation Manual*, 800-1677.
 4. *Sun Rackmountable Fileservers Installation Manual*, 800-1676.
 5. *Sun 900 Mbyte Disk Drive Installation Manual*, 800-1036.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

230 Volt AC Power Sequencer

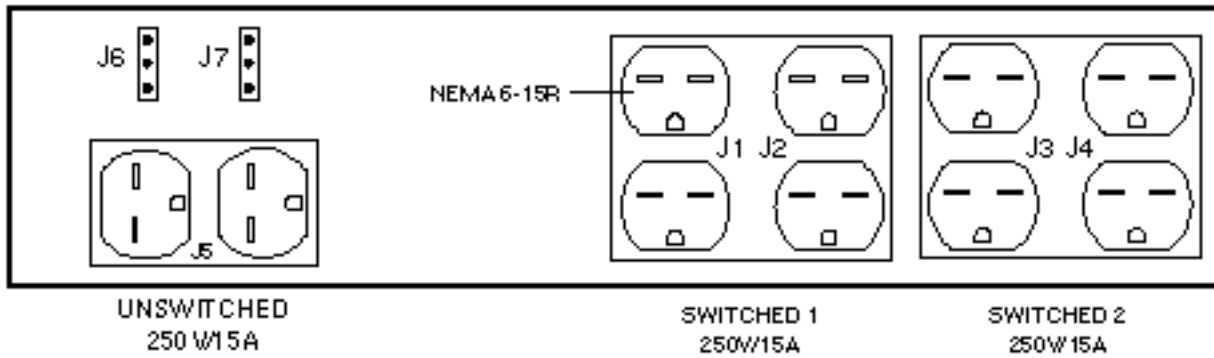
370-1027

370-1155

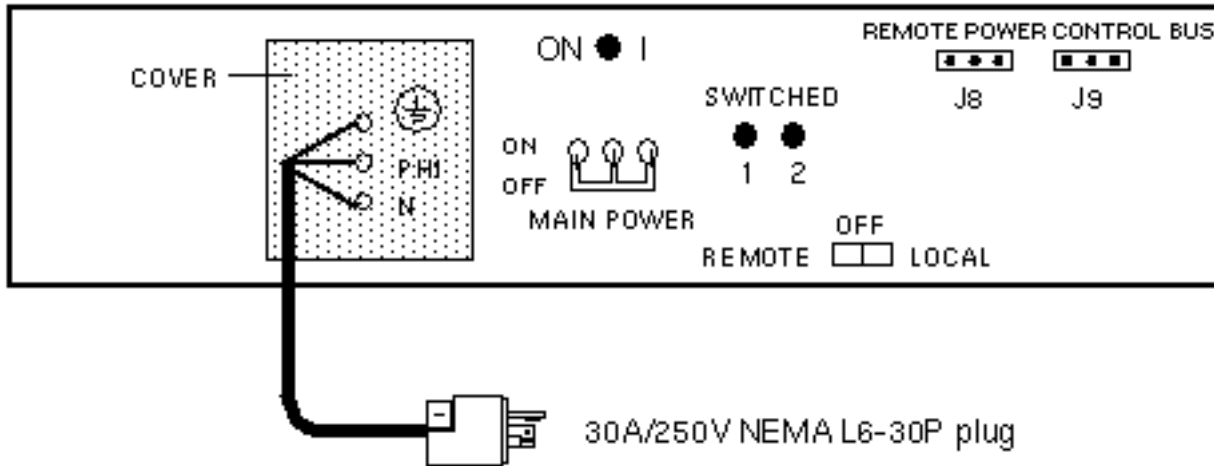
Pulizzi Engineering
PC874

Pulizzi Engineering
PC874

Outlet Side



Control Side



Notes

1. Requires AC outlet NEMA L6-30R, 30A, 250V.
2. Any conversion to the Data Center Cabinet, including replacement of the AC Power Plug or AC Power Sequencer, voids all safety agency approvals.
3. The Switched 2 output of 370-1127 comes on after a 5-second delay.
4. The Switched 2 output of 370-1155 comes on after a 20 sec delay.

References

1. *Sun Full-Height Rack System Installation Manual*, 800-1677.
 2. *Sun Rackmountable Fileservers Installation Manual*, 800-1676.
 3. *Sun 900 Mbyte Disk Drive Installation Manual*, 800-1036.
 4. *Sun 56-inch Data Center Cabinet and Data Center Expansion Cabinet Installation Manual*, 800-3242.
 5. *Sun 56-inch Expansion Cabinet Installation Manual*, 800-5936-18.
 6. *Sun 56-inch Cabinet Service Manual*, 800-6371-17.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

240 Volt AC Power Sequencer

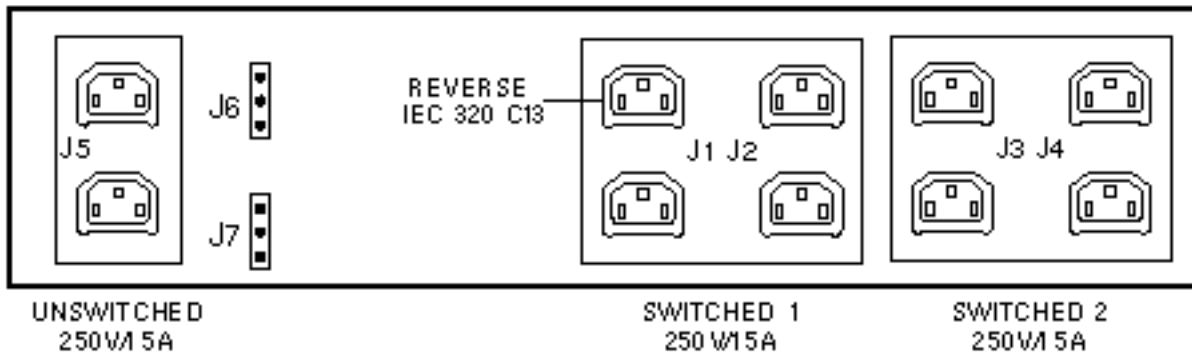
370-1126

370-1156

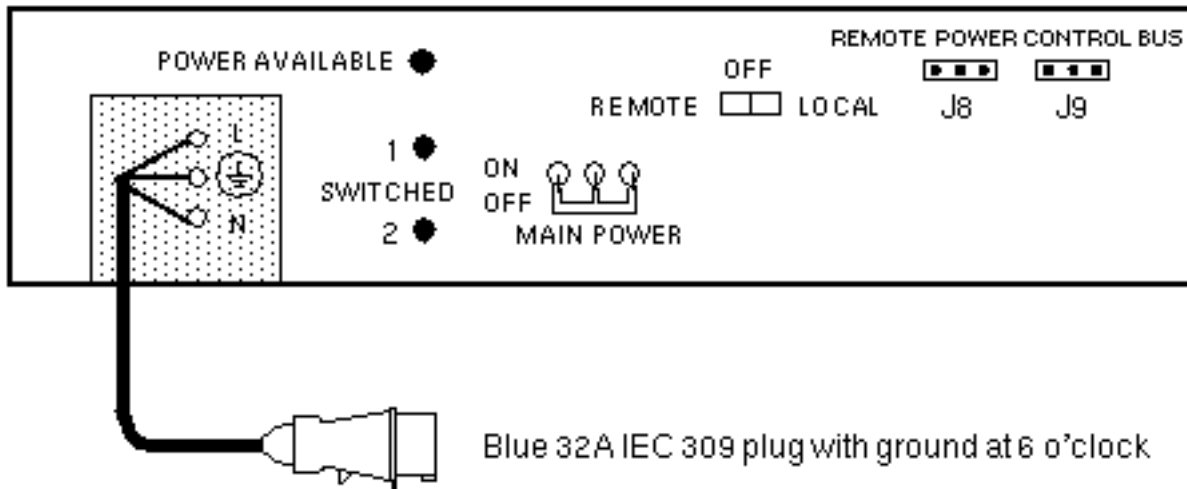
Pulizzi Engineering
PC874

Pulizzi Engineering
PC874

Outlet Side



Control Side



Notes

1. Requires a Blue, IEC 309, 2-Pole, 3-Wire, 32A, 250V AC receptacle.
2. Any conversion to the Data Center Cabinet, including replacement of the AC Power Plug or AC Power Sequencer, voids all safety agency approvals.
3. The AC Power Cord is internally wired to the AC Line Filter.
4. The Switched 2 output of 370-1126 comes on after a 5-second delay.
5. The Switched 2 output of 370-1156 comes on after a 20-second delay.

References

1. *Sun Full-Height Rack System Installation Manual*, 800-1677.
 2. *Sun Rackmountable Fileservers Installation Manual*, 800-1676.
 3. *Sun 900 Mbyte Disk Drive Installation Manual*, 800-1036.
 4. *Sun 56-inch Data Center Cabinet and Data Center Expansion Cabinet Installation Manual*, 800-3242.
 5. *Sun 56-inch Expansion Cabinet Installation Manual*, 800-5936-18.
 6. *Sun 56-inch Expansion Cabinet Service Manual*, 800-6371-17.
-

Last updated: December 2, 1996

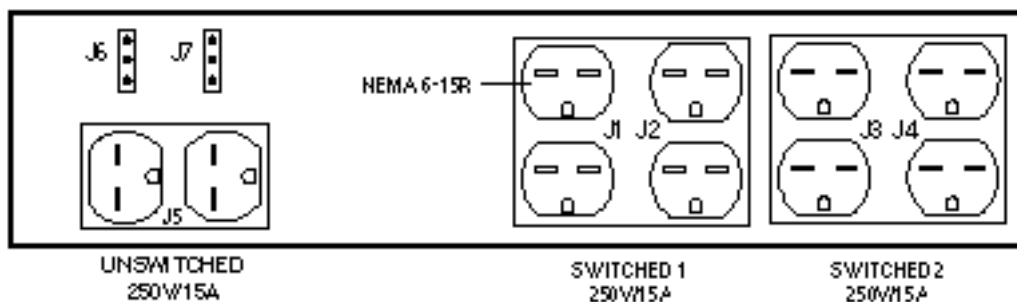
[Comments and Suggestions](#) 

230 Volt AC Power Sequencer

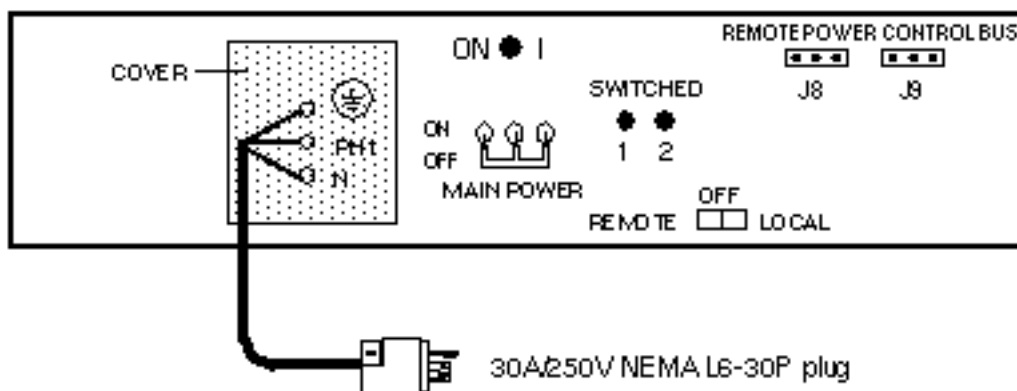
370-1155-02

Sherwood Enterprises

Outlet Side



Control Side



Notes

1. Requires AC outlet NEMA L6-30R, 30A, 250V.
2. Any conversion to the Data Center Cabinet, including replacement of the AC Power Plug or AC Power Sequencer, voids all safety agency approvals.
3. The Switched 2 output comes on after a 20-second delay.

References

1. *Sun Full-Height Rack System Installation Manual*, 800-1677.
2. *Sun Rackmountable Fileservers Installation Manual*, 800-1676.
3. *Sun 900 Mbyte Disk Drive Installation Manual*, 800-1036.
4. *Sun 56-inch Data Center Cabinet and Data Center Expansion Cabinet Installation Manual*, 800-3242.

5. *Sun 56-inch Expansion Cabinet Installation Manual*, 800-5936-18.

6. *Sun 56-inch Expansion Cabinet Service Manual*, 800-6371-17.

Last updated: December 2, 1996

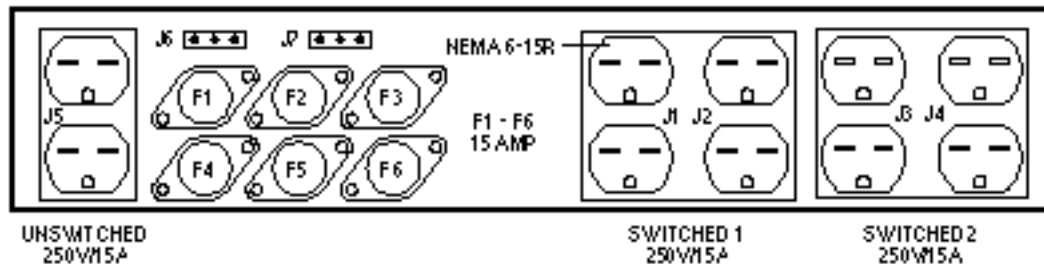
[Comments and Suggestions](#) 

230 Volt AC Power Sequencer

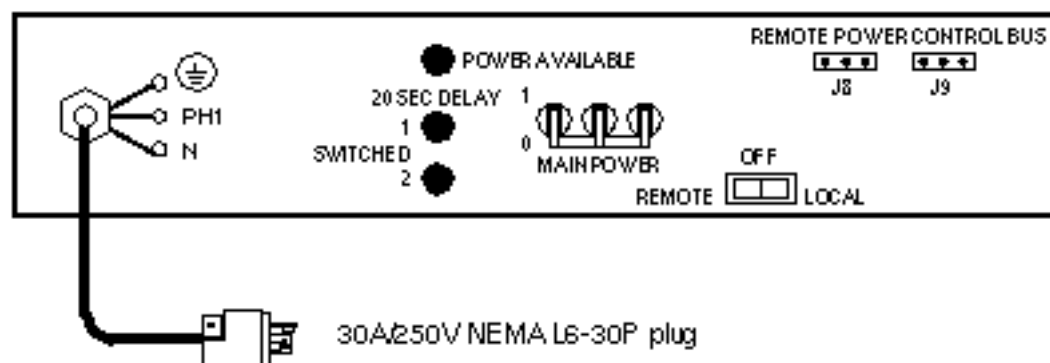
300-1263

Sherwood Enterprises

Outlet Side



Control Side



Notes

1. Requires AC outlet NEMA L6-30R, 30A, 250V.
2. Any conversion to the Data Center Cabinet, including replacement of the AC Power Plug or AC Power Sequencer, voids all safety agency approvals.
3. The Switched 2 output comes on after a 20 second delay.
4. The 300-1263 replaced 370-1155-02 in February 1996.

References

1. *Sun 56-inch Expansion Cabinet Installation Manual*, 800-5936-18.
2. *Sun 56-inch Expansion Cabinet Service Manual*, 800-6371-17.

Last updated: December 2, 1996

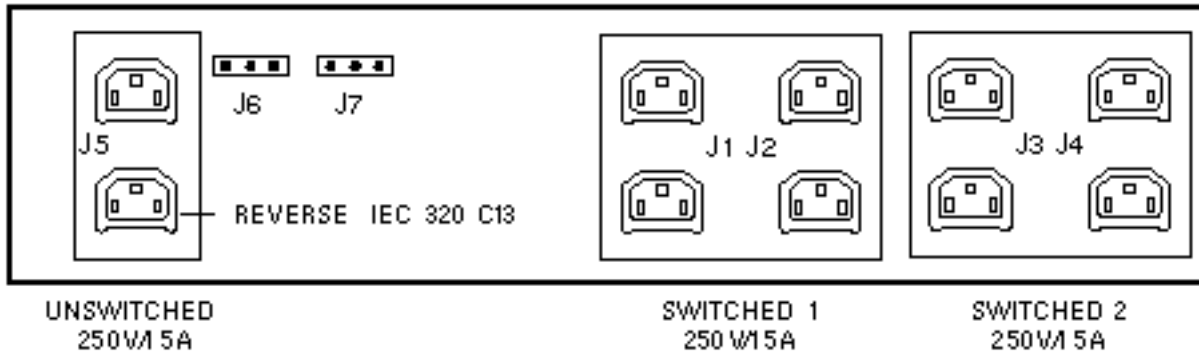
[Comments and Suggestions](#) 

240 Volt AC Power Sequencer

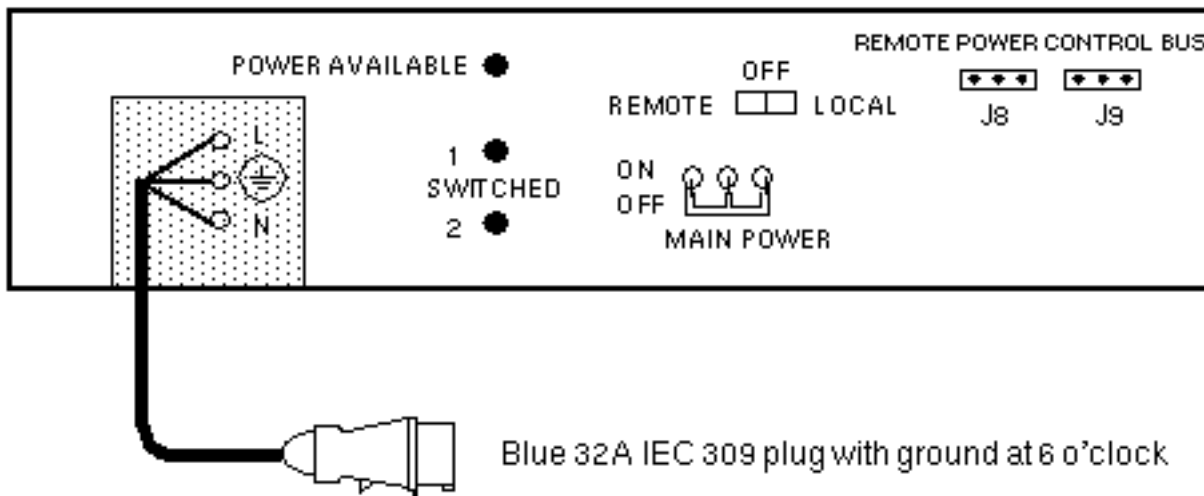
370-1156-03

Sherwood Enterprises

Outlet Side



Control Side



Notes

1. Requires a Blue, IEC 309, 2-Pole, 3-Wire, 32A, 250V AC receptacle.
2. Any conversion to the Data Center Cabinet, including replacement of the AC Power Plug or AC Power Sequencer, voids all safety agency approvals.
3. The AC Power Cord is internally wired to the AC Line Filter.
4. The Switched 2 output comes on after a 20 second delay.

References

1. *Sun Full-Height Rack System Installation Manual*, 800-1677.
 2. *Sun Rackmountable Fileservers Installation Manual*, 800-1676.
 3. *Sun 900 Mbyte Disk Drive Installation Manual*, 800-1036.
 4. *Sun 56-inch Data Center Cabinet and Data Center Expansion Cabinet Installation Manual*, 800-3242.
 5. *Sun 56-inch Expansion Cabinet Installation Manual*, 800-5936-18.
 6. *Sun 56-inch Expansion Cabinet Service Manual*, 800-6371-17.
-

Last updated: December 2, 1996

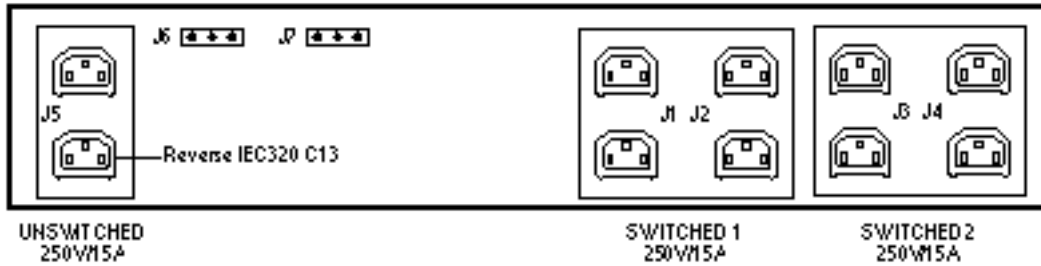
[Comments and Suggestions](#) 

240 Volt AC Power Sequencer

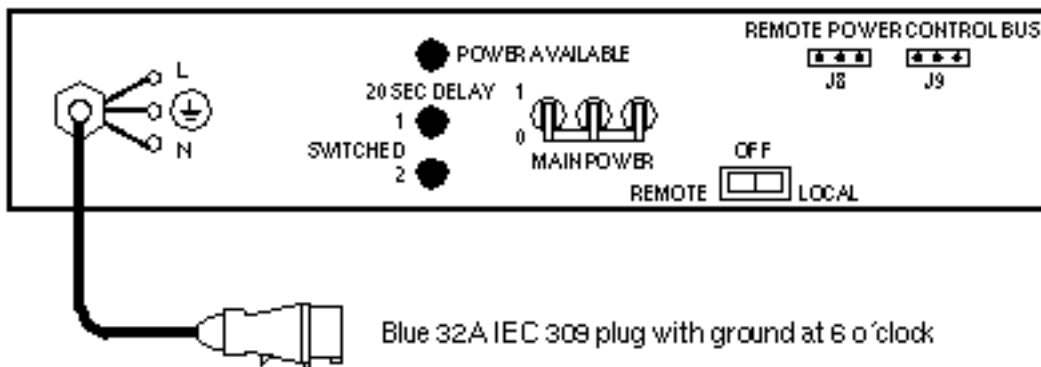
300-1264

Sherwood Enterprises

Outlet Side



Control Side



Notes

1. Requires a Blue, IEC 309, 2-Pole, 3-Wire, 32A, 250V AC receptacle.
2. Any conversion to the Data Center Cabinet, including replacement of the AC Power Plug or AC Power Sequencer, voids all safety agency approvals.
3. The Switched 2 output comes on after a 20 second delay.
4. The 300-1264 replaced 370-1156-03 in February 1996.

References

1. *Sun 56-inch Expansion Cabinet Installation Manual*, 800-5936-18.
2. *Sun 56-inch Expansion Cabinet Service Manual*, 800-6371-17.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Power - Introduction

[AC Power Cords](#)

[Fuses](#)

[Wire Harnesses](#)

[Sun 5-Slot Office Pedestal Wiring Diagram](#)

[Sun 12-Slot Office Pedestal Wiring Diagram](#)

[Sun 16-Slot Logic Enclosure Wiring Diagram](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

AC Power Cords

PART #	DESCRIPTION	USAGE
180-1010	IEC 320 - Reverse IEC 320, Coiled (obs)	Acc Pwr
180-1117	IEC 320 - Reverse IEC 320	Acc Pwr
180-1097	IEC 320 - NEMA 5-15, 15A/125V	USA
180-1125	IEC 320 - pigtail, 6A/250V	Acc Pwr
180-1126	IEC 320 - NEMA 6-15, 10A/250V (obs)	V3 Sequencer
180-1142	IEC 320 - NEMA 5-15, 15A/125V	USA
180-1146	IEC 320 - NEMA 5-15, 10A/125V	USA
180-1176	IEC 320 - BS 1363, 10A/250V (obs)	UK
180-1177	IEC 320 - CEE 7/7, 10A/250V (obs)	France
180-1177	IEC 320 - CEE 7/7, 10A/250V (obs)	Germany
180-1177	IEC 320 - CEE 7/7, 10A/250V (obs)	Sweden
180-1178	IEC 320 - SEV 1011, 10A/250V (obs)	France
180-1178	IEC 320 - SEV 1011, 10A/250V (obs)	Germany
180-1178	IEC 320 - SEV 1011, 10A/250V (obs)	Switzerland
180-1179	IEC 320 - NEMA 5-15, 10A/250V	USA
180-1179	IEC 320 - NEMA 5-15, 10A/250V	Japan
180-1183	Y IEC 320 - NEMA 6-15, 10A/250V	V3 Sequencer
180-1184	Y IEC 320 - Reverse IEC 320, 10A/250V	V4 Sequencer
180-1189	IEC 320 - NEMA 6-15, 10A/250V	V3 Sequencer
180-1190	IEC 320 - Reverse IEC 320, 10A/250V	V4 Sequencer
180-1234	IEC 320 - 107/10-1973, 10A/250V (obs)	Denmark
180-1235	IEC 320 - CEI 23-16/VII, 10A/250V (obs)	Italy
180-1236	IEC 320 - AS 3112, 10A/250V (obs)	Australia
180-1683	IEC 320 - Reverse IEC 320, 10A/250V, 1.5M	V4 Sequencer
180-1688	IEC 320 - Reverse IEC 320, 10A/250V, 2.5M	V4 Sequencer
180-1732	90° IEC 320 - 90° Reverse IEC 320, .75M	E150 Internal
530-1343	IEC 320 - Reverse IEC 320, 10A/250V	V4 Sequencer
530-1351	IEC 320 - NEMA 6-15, 10A/250V	V3 Sequencer
530-1370	IEC 320 - NEMA 5-15, 15A/125V, Grey	USA
530-1371	IEC 320 - Reverse IEC 320, 15A/125V, Grey	PBox Acc Pwr
530-1410	IEC 320 - CEE 7/7, 6A/250V, Grey	Europe
530-1411	IEC 320 - BS 1363, Grey	UK
530-1583	IEC 320 - SEV 1011, 10A/250V, Grey	Switzerland
530-1584	IEC 320 - CEI 23-16/VII, 10A/250V, Grey	Italy
530-1585	IEC 320 - 107/10-1973, 10A/250V, Grey	Denmark
530-1586	IEC 320 - AS 3112, 10A/250V, Grey	Australia
530-1604	IEC 320 - CEE 7/7, 10A/250V, Grey	S. America

530-1657	90° IEC 320 - NEMA 5-15, 10A/125V, Grey	USA
530-1663	90° IEC 320 - CEE 7/7, 10A/250V, Grey	France
530-1663	90° IEC 320 - CEE 7/7, 10A/250V, Grey	Germany
530-1664	90° IEC 320 - SEV 1011, 10A/250V, Grey	France
530-1664	90° IEC 320 - SEV 1011, 10A/250V, Grey	Germany
530-1664	90° IEC 320 - SEV 1011, 10A/250V, Grey	Switzerland
530-1665	90° IEC 320 - CEI 23-16/VII, 10A/250V, Grey	Italy
530-1666	90° IEC 320 - 107/10-1973, 10A/250V, Grey	Denmark
530-1667	90° IEC 320 - AS 3112, 10A/250V, Grey	Australia
530-1668	90° IEC 320 - CEE 7/7, 10A/250V, Grey	S. America
530-1671	90° IEC 320 - BS 1363, 6A/250V, Grey	UK
530-1817	IEC 320 - CEE 7/7, 10A/250V	France
530-1817	IEC 320 - CEE 7/7, 10A/250V	Germany
530-1817	IEC 320 - CEE 7/7, 10A/250V	Sweden
530-1818	IEC 320 - SEV 1011, 6A/250V	France
530-1818	IEC 320 - SEV 1011, 6A/250V	Germany
530-1818	IEC 320 - SEV 1011, 6A/250V	Switzerland
530-1819	IEC 320 - 107/10-1973, 10A/250V	Denmark
530-1820	IEC 320 - CEI 23-16/VII, 10A/250V	Italy
530-1821	IEC 320 - BS 1363, 10A/250V	UK
530-1822	IEC 320 - AS 3112, 10A/250V	Australia
530-2073	Type C7 - BS1363A, 5A/250V	UK
530-2074	Type C7 - CEE 7/7, 2.5A/250V	Europe
530-2075	Type C7 - SAA/2, 7.5A/250V	Australia
530-2076	Type C7 -NEMA 1-15, 15A/125V	USA
530-2122	Type C7 - JIS-C 8303	Japan
530-2160	IEC320 C19 to IEC320 C20, 610 mm	SC2000
530-2188	IEC320 C19 to IEC320 C20, 1050 mm	SC2000
530-2197	IEC320 C13 to AMP Mate-N-Lok	E5000/E6000
530-2197	IEC320 C13 to AMP Mate-N-Lok	Option 956
530-2213	IEC320 C19 to IEC320 C20, 2500 mm	E5000/E6000
530-2264	AMP Mate-N-Lok to Y IEC320 C13	E5000/E6000
530-2264	AMP Mate-N-Lok to Y IEC320 C13	Option 956
530-2265	Han 6HsB to NEMA L6-30P, Option 3800	E5000/E6000
530-2265	Han 6HsB to NEMA L6-30P, Option 3800	Option 956
530-2266	Han 6HsB to Blue 32A IEC309, Option 3848	E5000/E6000
530-2266	Han 6HsB to Blue 32A IEC309, Option 3848	Option 956
530-2301	IEC320 C13 to Blue 32A IEC309, Option 389	Danish E4000



Warning

The Schuko CEE 7/7 plug is not grounded if used with the Danish Afsnit 107 electrical outlet.



NEMA
5-15P



NEMA
6-15P



CEE 7/VII



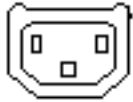
AS3112



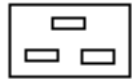
DEMKO
107/10



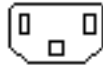
JIS 8303



Reverse
IEC320



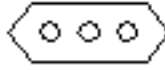
IEC320
C19



IEC320
C13



SEV 1011



CEI 23-16/VII



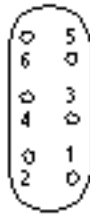
BS 1363



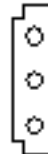
IEC309



NEMA L6-30P



Han 6HsB



Mate-N-Lok

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Fuses

FUSE	SIZE	SUN PART #	VENDOR	PART #
1/16A	.25 x 1.25"	140-1004	Littelfuse	312.062
1/16A	.25 x 1.25"	140-1004	Bussman	AGC 1/16
1/8A	.25 x 1.25"	140-1003	Littelfuse	312.125
1/8A	.25 x 1.25"	140-1003	Bussman	AGC 1/8
1/2A	.25 x 1.25"	140-1012	Littelfuse	313.500
3/4A	PICO II	140-1024	Littelfuse	255.750
3/4A	.145 x .30"	140-1024	Bussman	GFA 3/4
3/4A	.25 x 1.25"	140-1044	Littelfuse	312 .750
1A	.25 x 1.25"	140-1040	Littelfuse	313 001
1A	Microfuse	140-1027	Littelfuse	273 001
1A	.25 x 1.25"	140-1040	Littelfuse	313 001
1A	.25 x 1.25"	140-8500	Bussman	AGC-1
1A	.25 x 1.25"	140-8500	Littelfuse	314 001
1.5A	Microfuse	150-1162	Littelfuse	273 01.5
1.5A	Microfuse	150-1383	Littelfuse	273 01.5
1.5A	5 x 20mm	150-1208	SOC	MT4-1.51
1.5A	.25 x 1.25"	140-1042	Littelfuse	313 01.5
1.6A	.25 x 1.25"	140-1022	Littelfuse	312 01.6
1.6A	.25 x 1.25"	140-1022	BEL	3AG1.6
1.6A	.25 x 1.25"	140-1022	Pwr Dynam ics	19340 1.6A
1.6A	.25 x 1.25"	140-1022	Bussman	AGC 1.6A
1.6A	5 x 20mm	150-1215	Schurter	034.3119
1.6A	5 x 20mm	150-1215	Littelfuse	218 01.6
2A	.25 x 1.25"	140-1005	Littelfuse	312 002
2A	.25 x 1.25"	140-1005	Bussman	AGC 2
2A	PICO II	140-1028	Littelfuse	252 002
2A	5 x 20mm	140-1034	Bussman	GDC-2
2A	5 x 20mm	140-1034	Littelfuse	218 002
2A	Microfuse	150-1174	Littelfuse	273 002
2A	.25 x 1.25"	150-1191	MGC	MGC 0002
2A	.25 x 1.25"	150-1191	Littelfuse	312 002
2A	.25 x 1.25"	140-1048	Littelfuse	313 002
2A	.25 x 1.25"	140-1048	Bussman	MDA 2
2.5A	.25 x 1.25"	140-1000	Littelfuse	313 02.5
2.5A	.25 x 1.25"	140-1000	Bussman	MDA 2 1/2
2.5A	.25 x 1.25"	140-1008	Littelfuse	313 003
2.5A	.25 x 1.25"	140-1008	Bussman	MDA 2 1/2

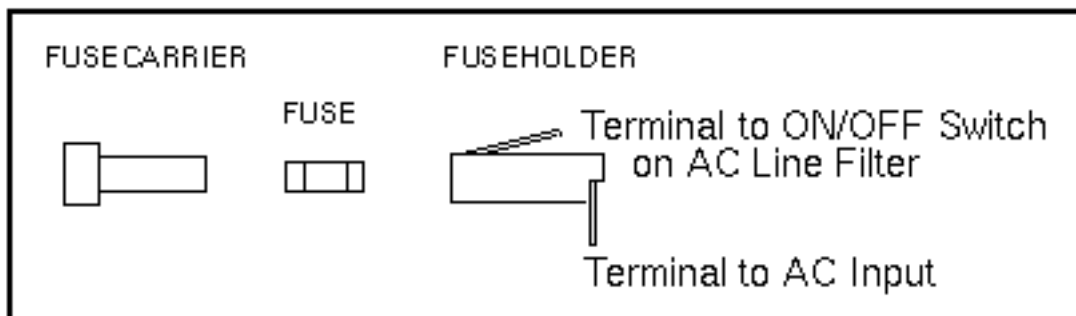
3A	.25 x 1.25"	150-1034	Littelfuse	313 003
3A	PICO II	140-1038	Littelfuse	252 003
3A	.145 x .30"	140-1038	Bussman	A3XRAD
3A	.25 x 1.25"	150-1034	Bussman	MDA-3
3A	.25 x 1.25"	140-1039	Littelfuse	312 003
3A	Microfuse	150-1698	Littelfuse	273 003
3A	Microfuse	150-1698	Bussman	GMW-3
3.15A	5 x 20mm	140-1002	Bussman	GDC 3.15
3.15A	5 x 20mm	140-1002	Littelfuse	218 315
4A	5 x 20mm	140-1031	Schurter	FST 034.3123
4A	5 x 20mm	140-1031	Littelfuse	218 004
4A	.25 x 1.25"	140-1001	Littelfuse	318 004
4A	.25 x 1.25"	140-1001	Bussman	AGC4AMP
4A	.25 x 1.25"	140-1007	Littelfuse	312 004
4A	.25 x 1.25"	140-1007	Bussman	MTH 4
4A	.25 x 1.25"	140-1020	Littelfuse	313 004
4A	.25 x 1.25"	140-1020	BEL	3SB4
4A	.25 x 1.25"	140-1020	Pwr Dynamics	19341-4A
4A	.5 x 20mm	140-1043	Littelfuse	217 004
4A	.25 x 1.25"	150-1033	Littelfuse	313 004
4A	.25 x 1.25"	150-1033	Bussman	MDA 4A,250V
5A	.25 x 1.25"	140-1010	Littelfuse	313 005
5A	.25 x 1.25"	140-1010	Bussman	MDA (5 AMP)
5A	5 x 20mm	140-1025	Schurter	034.3914
5A	5 x 20mm	140-1025	BEL	5MT5
5A	5 x 20mm	140-1025	Littelfuse	218 005
5A	5 x 20mm	140-1029	Schurter	034.3124
5A	5 x 20mm	140-1029	Littelfuse	218 005
5A	.25 x 1.25"	140-1041	Littelfuse	312 005
6A	5 x 20mm	140-1009	Littelfuse	212 06.3
6A	5 x 20mm	140-1009	Bussman	GMA 6
6A	.25 x 1.25"	140-1011	Littelfuse	314 006
6A	.25 x 1.25"	140-1011	Bussman	ABC 6A 250V
6A	.25 x 1.25"	140-1021	Littelfuse	312 006
6A	.25 x 1.25"	140-1021	Bussman	MTH-6A
6A	.25 x 1.25"	140-1021	Pwr Dynamics	19340-6A
6A	.25 x 1.25"	140-1026	Bussman	250(MSL)
6A	5 x 20mm	150-0473	Pnl Compnt	341524
6A	5 x 20mm	150-0473	Littelfuse	213 006
6.3A	5 x 20mm	140-1030	Schurter	FST 034.3125
6.3A	5 x 20mm	140-1030	Littelfuse	218 063

7A	.25 x 1.25"	150-1258	Littelfuse	313 007
7A	.25 x 1.25"	150-1258	Bussman	MDQ-7
8A	.25 x 1.25"	140-1006	Littelfuse	314 008
8A	.25 x 1.25"	140-1006	Bussman	MTH 8
8A	5 x 20mm	150-2246	Littelfuse	217 008
8A	5 x 20mm	150-2246	Schurter	034.1525
10A	.25 x 1.25"	140-1017	Littelfuse	326 010
10A	.25 x 1.25"	140-1017	Pwr Dynamics	19341-10A
10A	.25 x 1.25"	140-1051	Littelfuse	314 010
10A	.25 x 1.25"	140-1051	Bussman	ABC-10A
10A	0.46 x 1.5"	140-1152	Littelfuse	KLK-R 10A
12A	.25 x 1.25"	140-8000	Bussman	ABC-12
12A	.25 x 1.25"	140-8000	Littelfuse	314.012
15A	.25 x 1.25"	140-1019	Littelfuse	314 015
15A	.25 x 1.25"	140-1019	Bussman	ABC-15A
15A	.25 x 1.25"	140-1035	Littelfuse	314 015
15A	.25 x 1.25"	140-1035	Bussman	ABC-15A
15A	0.46 x 1.5"	140-1154	Littelfuse	CCM-R 15A
15A	0.46 x 1.5"	140-1154	Bussman	LP-CC-15
15A	Nano ²	150-2330	Littelfuse	451 015
15A	PICO II	150-2398	Littelfuse	251 015
15A	0.46 x 1.5"	150-xxxx	Littelfuse	CCMR 15A
30A	Autofuse	None	Littelfuse	257030

Fuseholder and Fusecarrier

Follow these instructions to avoid electrical shock hazard when wiring the type of fuseholder illustrated below.

1. Connect the AC Input to the Terminal on the end of the Fuse holder.
2. Connect the Terminal on the side of the Fuseholder to the AC Line Filter or AC Switch.

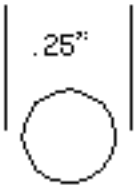
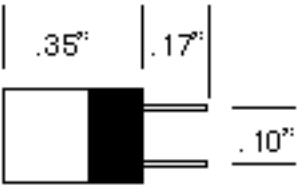


DESCRIPTION	SUN PART #	VENDOR	PART #
Carrier, Domestic	150-1042	Schurter	FEK 031.1666
Carrier, International	150-1051	Schurter	031.1663

Holder, In Line 22-14AWG	140-1023	AMP	552844-1
Holder, In Line 22-14AWG	140-1023	Littelfuse	155 020U
Holder, UL/CSA/VDE	150-1041	Schurter	FEU 031.1693
Holder, R/A for PIG-TAIL	150-1163	Littelfuse	281 007
Holder, R/A for PIG-TAIL	150-1163	Pwr Dynam ic	19557
Holder, 20A,250V,UL	150-1177	Schurter	FEU031.1673
Microfuse Holder	150-1179	Littelfuse	282 002
Microfuse Holder	150-1179	Littelfuse	282 008
Holder	150-1024	Littelfuse	345 001
Holder, Faston Type	150-1026	Littelfuse	571 007
Holder, Faston Type	150-1026	Bussman	HPF
Holder, Quick Connect	150-1029	Bussman	HTA-HH
Holder, Quick Connect	150-1029	Littelfuse	342 858
Field Engineers Fuse Kit	555-1126	Sun	555-1126

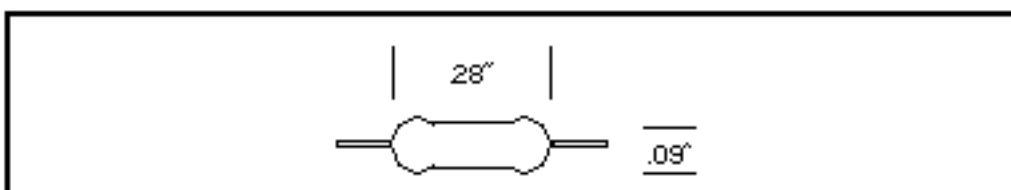
Subminiature Microfuses

Subminiature microfuses are used on many Sun Printed Circuit Boards. Subminiature microfuses are field replaceable.

	AMPS	PART NUMBER
	1.0	140-1027-01
	1.5	150-1162-01
	1.5	150-1383-01
	2.0	150-1174-01
	3.0	150-1698-01

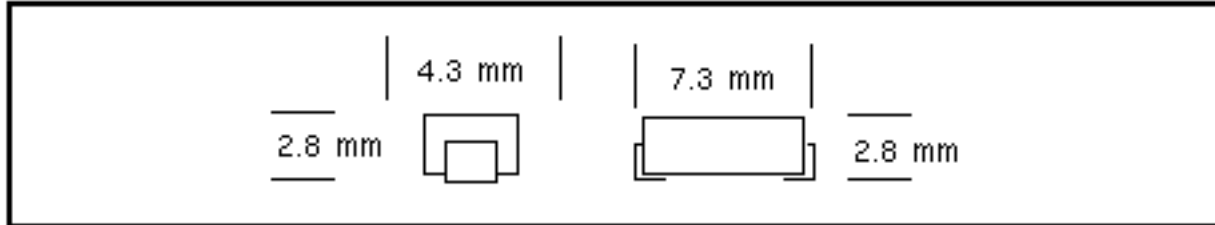
PICO II Fuses

PICO II fuses are used on Printed Circuit Boards and Peripheral devices such as Tape and Disk Drives. PICO II fuses are not field replaceable because they are soldered in place.



PTCs

Positive Temperature Coefficient (PTC) thermistors are resistors with a high positive temperature coefficient of resistance. The PTC is used as a self-resetting fuse in overload applications. When an overload current flows through a PTC, there is a specific time period before the PTC heats up to its high-resistance state and starts limiting the current. PTCs are not field replaceable because they are soldered in place.



Last updated: December 2, 1996

[Comments and Suggestions](#) 

Wire Harnesses

Wire Harness Color Codes

The most common wire insulation colors used on Sun AC and DC wire harnesses are shown in the charts below. Not all products conform to these color codes.

AC Wire Harnesses

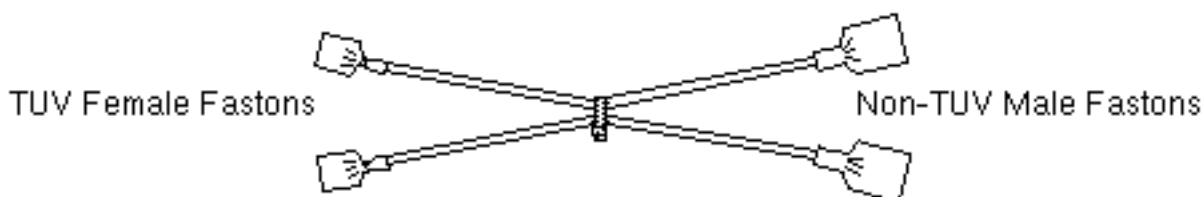
Color	Abbreviation	Description
Green	Grn	AC Ground
Black	Blk	AC Line (Hot)
Green/Yellow	Grn/Yel	AC Ground
Blue	Blu	AC Neutral
Brown	Brn	AC Line (Hot)

DC Wire Harnesses

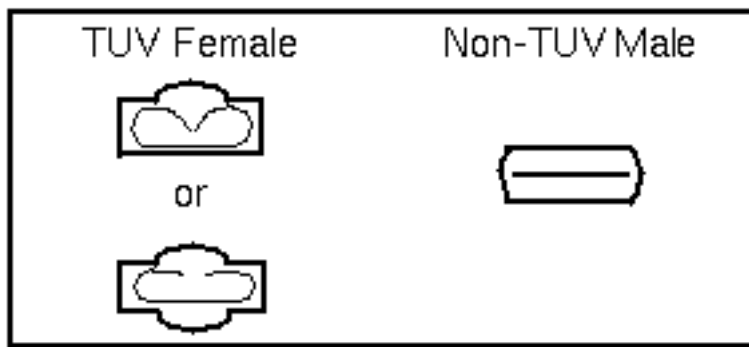
Color	Abbreviation	Description
White	Wht	-5Vdc
Yellow	Yel	-5.2Vdc
Blue	Blu	+12Vdc
Brown	Brn	-12Vdc
Red	Red	+5Vdc
Orange	Org	+24Vdc
Orange	Org	+12Vdc (4/330)

Adapter Harness

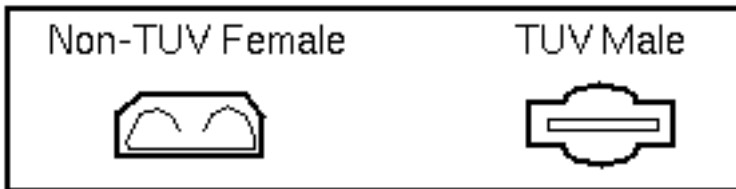
Adapter Harness 811-9015-01 connects non-TUV approved fastons on AC and DC wire harnesses to TUV approved fastons that were cut into production in February 1987. One end of the adapter harness has TUV approved female fastons. The other end of the adapter harness has non-TUV male fastons.



A TUV female faston attaches to a non-TUV male faston.



A non-TUV female faston does not attach to a TUV male faston. Use adapter harness 811-9015-01.



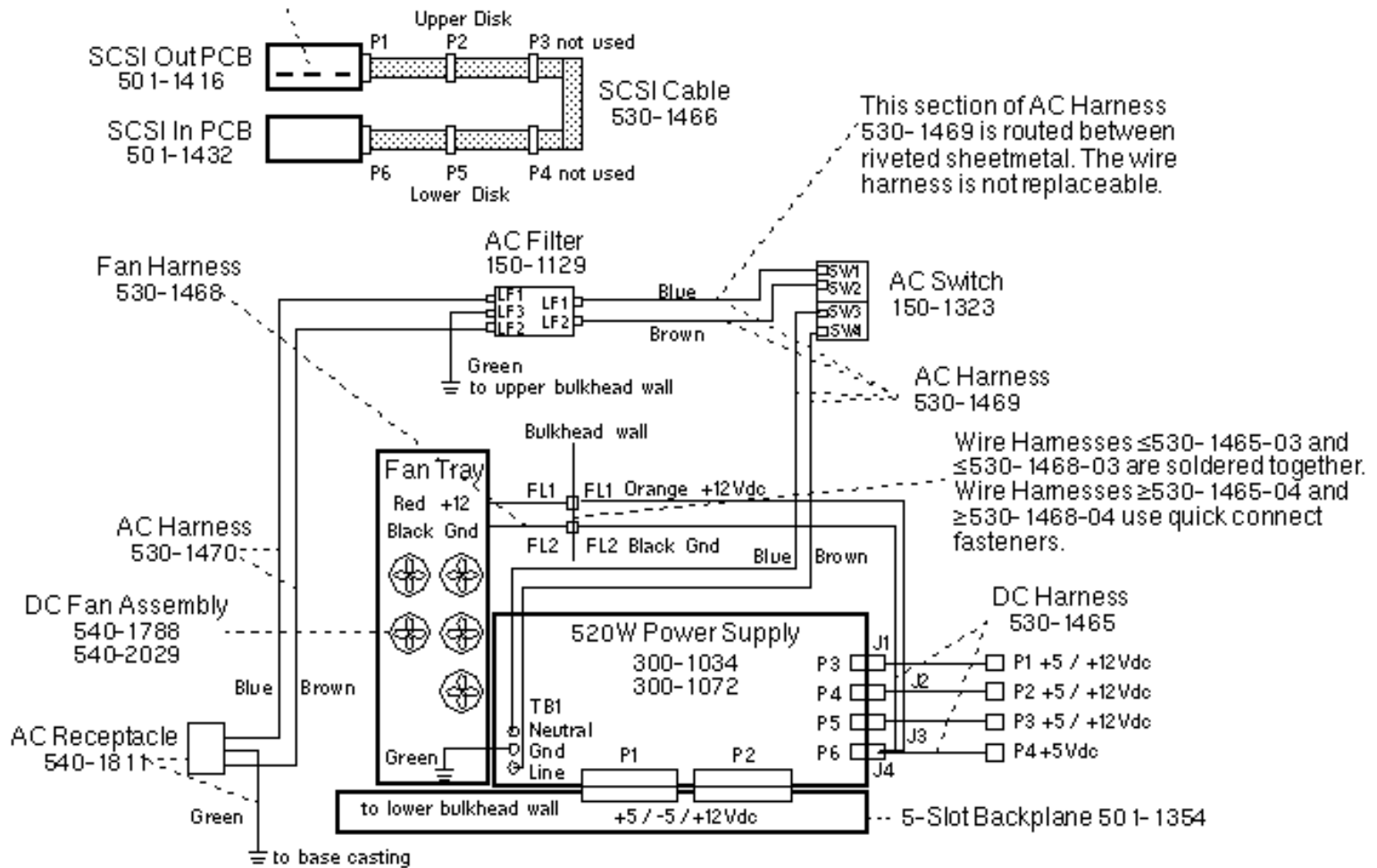
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun 5-Slot Office Pedestal Wiring Diagram

Sun-4/330 and SPARCserver 630MP

Install three 120-1608-01 Resistor Packs or use an external Terminator



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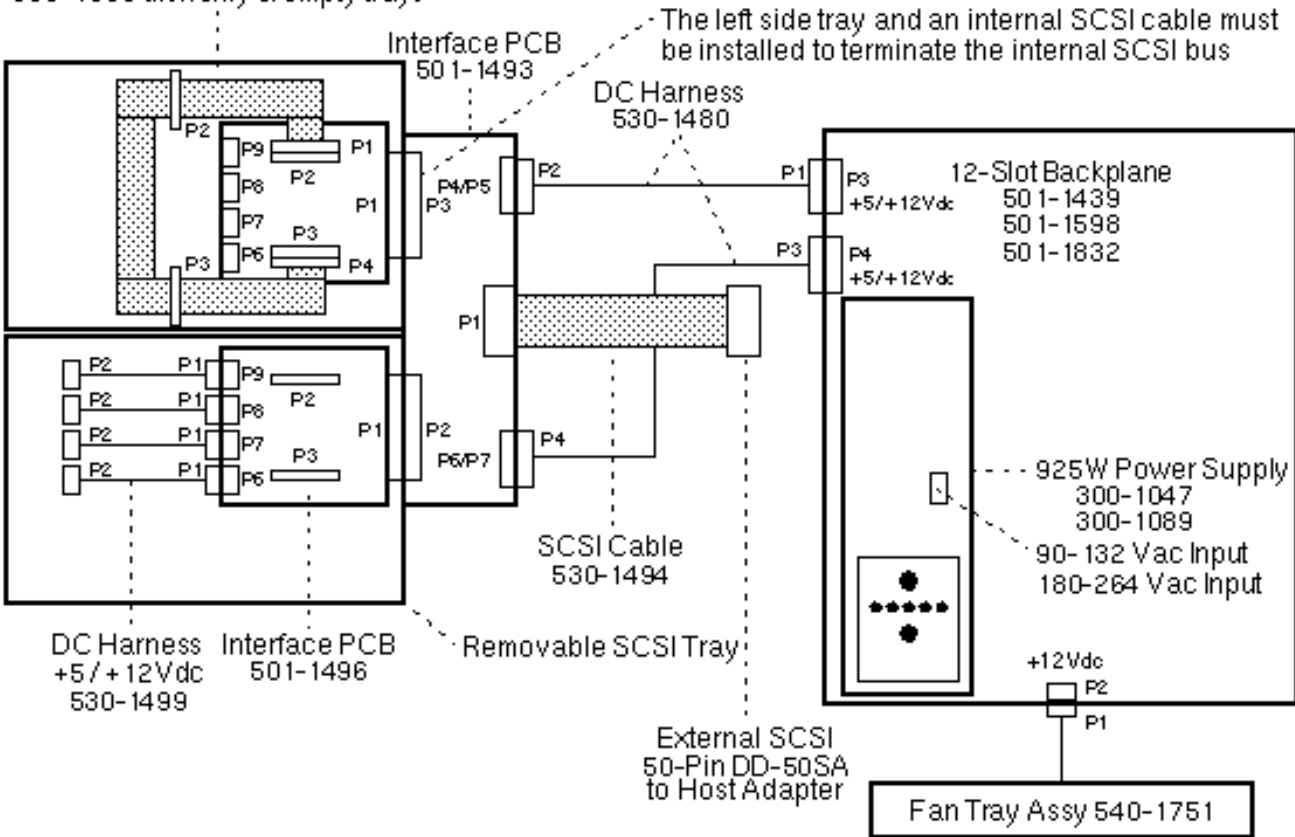
[Comments and Suggestions](#) 

Sun 12-Slot Office Pedestal Wiring Diagram

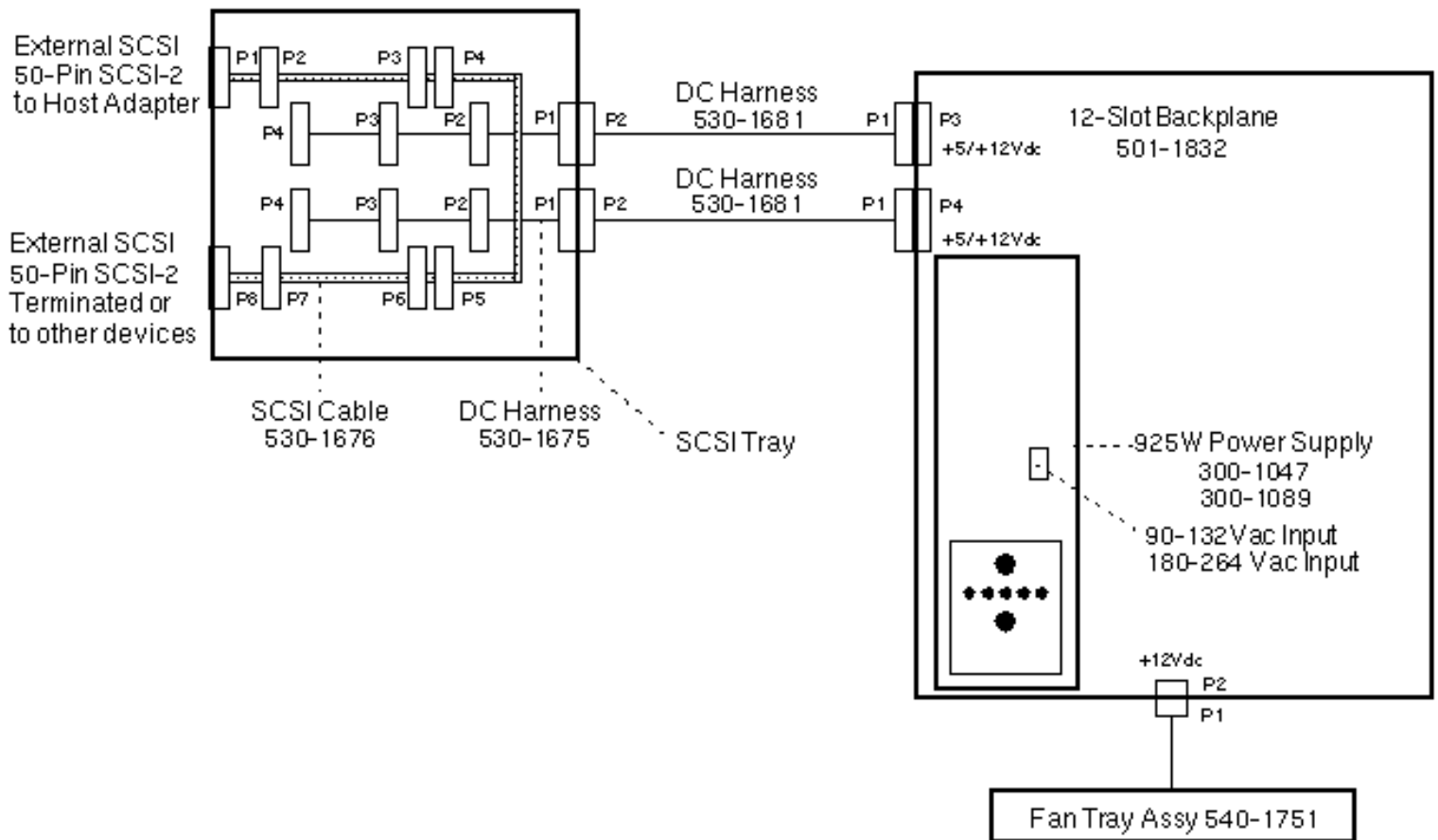
Sun-3/470, Sun-4/370, and Sun-4/470 shipped prior to August 1991

Internal SCSI Cable

- 530- 1498 tape only & tape with disk trays
- 530- 1729 tape only & tape with disk trays
- 530- 1500 disk only & empty trays



Sun-4/470 and SPARCserver 670MP shipped after August 1991

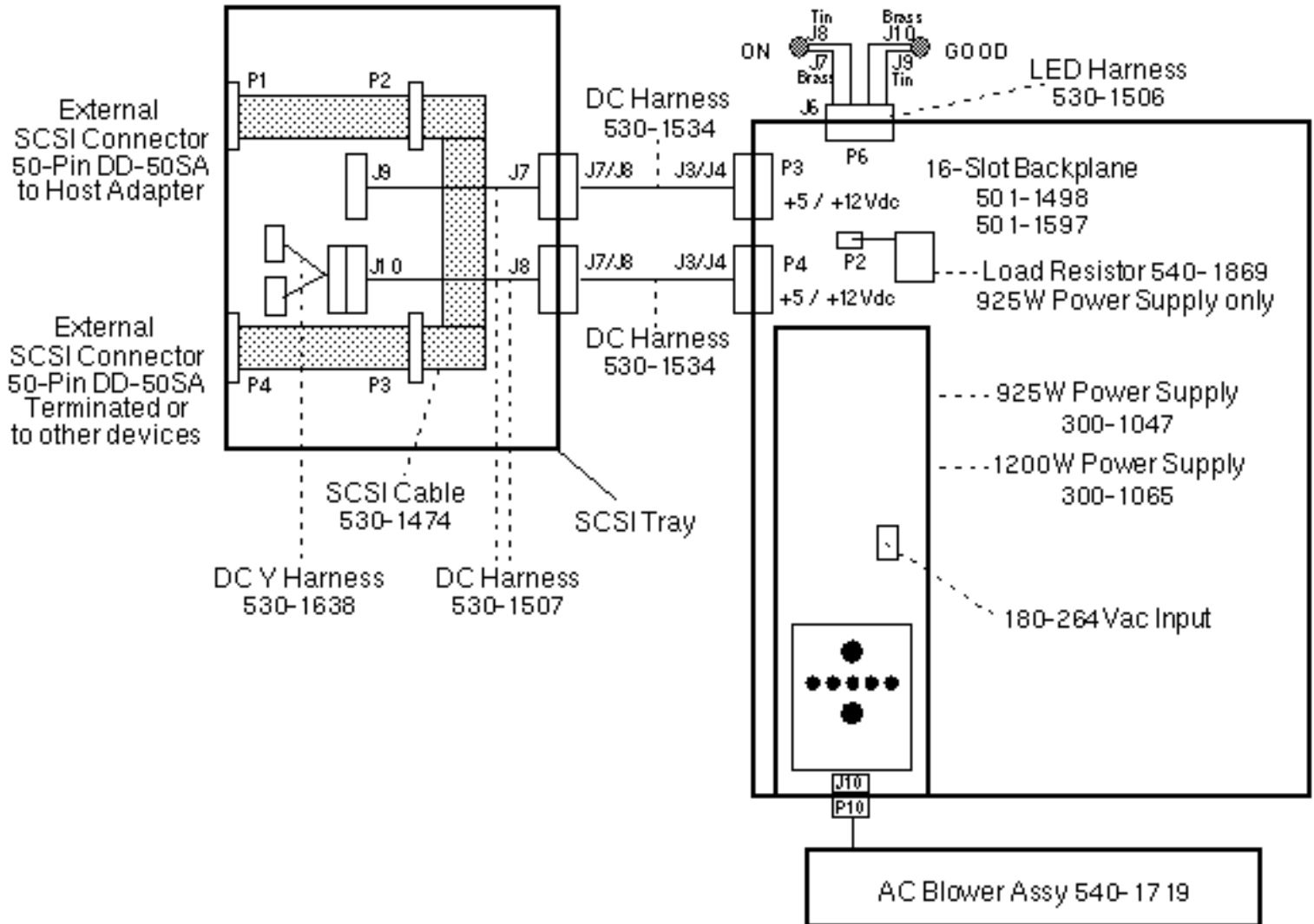


Last updated: December 2, 1996

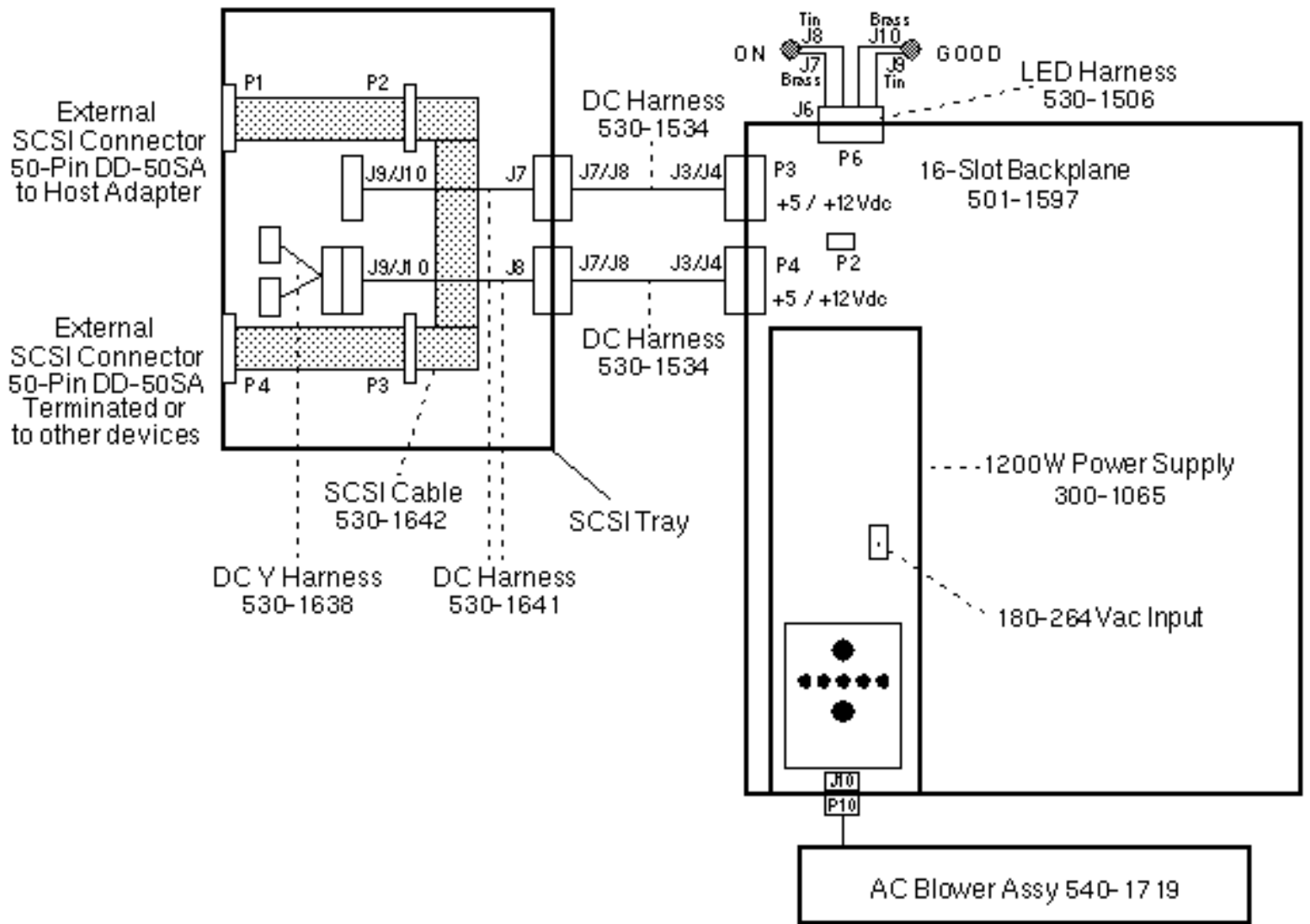
[Comments and Suggestions](#) 

Sun 16-Slot Logic Enclosure Wiring Diagram

Sun-4/390 shipped prior to April 1990



Sun-4/390, Sun-4/490, and SPARCserver 690MP shipped after April 1990



Last updated: December 2, 1996

[Comments and Suggestions](#) 

Diagnostics

[Self-Test Diagnostic](#)

[Diagnostic Executive](#)

[1.2 Diagnostic Executive \(Sun-4\)](#)

[1.2 Diagnostic Executive \(Sun-4s\)](#)

[1.6 Diagnostic Executive \(Sun-4c\)](#)

[Sun Diagnostics 3.2](#)

[Loopback Connectors](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Self-Test Diagnostic

The CPU Self-Test runs in either the Normal or Diag mode. Set the CPU DIAG/NORM switch to DIAG or set the diag-switch? NVRAM parameter to true to enable the Diag mode.

In the Normal mode, the CPU runs through a basic set of tests and reports errors on the diagnostic LEDs. Refer to the appropriate Field Service Manual and the Troubleshooting Section of this Handbook for self-test LED error code information.

When the CPU is set to the Diag mode, the self-tests are more extensive than in the Normal mode and include a complete memory check. Connect an ASCII terminal to port A to display the self-test output when the system is in Diag mode. Use full duplex, 9600 baud, XON/XOFF, 8bits/1 stop bit, and no parity with a null modem type cable.

On Sun-4 systems, enter "x" at the PROM Monitor prompt to display the Extended Diagnostics menu. At the prompt select a test for execution. To return to the PROM Monitor, enter "q".

Some tests were removed from the 2.8 EPROM in November 1988 to make room for more boot and display device drivers. With the 2.8 EPROM, boot path tests are executed directly from the PROM Monitor prompt using the command:

```
>b*device()
```

On systems with the Open Boot PROM, use the help command to display a list and description of available tests.

```
ok help diag
```

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Diagnostic Executive

The Diagnostic Executive (Exec) provides a single, unified diagnostic environment with one user interface. The diagnostic tests reside in individual programs that work through the Exec platform. The platform provides a consistent interface and multitasking capabilities. Some features are:

Multiple Consoles

The Exec can run from any control terminal. This may be a monitor, serial port, or a remote console.

Error Logging

The Exec provides the ability to capture error messages into a logfile. The logfile may reside on a local disk or on a server.

Script Execution

Command scripts can be used to drive the menus without further user input.

Remote Execution

The Exec has the ability to perform remote diagnostics over a modem connected to a Serial Port or over Ethernet.

Due to the complexity of the Exec, individual tests will not be discussed here. Refer to the Sun Diagnostic Executive User Manuals for additional information. Tables of Contents for the Exec are included in this section.

Loopback connectors are required for some tests. The loopback connectors are described at the end of this section.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

1.2 Diagnostic Executive

Sun-4

Table of Contents

NAME	FILE (DECIMAL)	DESCRIPTION
tpboot.sun4	0	Enables boot from tape
Copyright	1	Textfile containing copyright notice
toc	2	Contains list of contents of tape
extract_exec	3	Script to copy diagnostics to disk
Copyright	4	Textfile containing copyright notice
exec4	5	Diag Exec for Sun-4 architecture
diags4	6	Diagnostic Menu and File names
cg6.4exec	7	P4 Low-Eng Graphics Accelerator
cg8.4.exec	8	P4 24-Bit Frame Buffer Board Diagnostic
cg9.4.exec	9	VME 24-Bit Frame Buffer Board Diagnostic
color4.exec	10	Generic VME Color Board Diagnostic
cpcache4.exec	11	4300 CPU Cache Diagnostic
cpu4.exe	12	CPU Board Diagnostic
eeptool4.exec	13	EEPROM programming tool
ether4.exec	14	Ethernet Diagnostic
ether2.4.exec	15	2nd Ethernet Diagnostic
execetest4.exec	16	Exec Verification Suite
fddi4.exec	17	FDDI Board Diagnostic
fpu4.exec	18	Floating Point Unit Diagnostic
gp1.4.exec	19	Graphics Processor1/Graphics Buffer Diag
gp2.4.exec	20	Graphics Processor2 Diagnostic
hsi4.exec	21	High Speed Serial Board Diagnostic
ipi4.exec	22	IPI Disk Subsystem Diagnostic
kb4.exec	23	Sun Keyboard Diagnostic
mcp4.exec	24	Sun ALM2/MCP Board Diagnostic
mem4.exec	25	Sun Memory Diagnostic
mouse4.exec	26	Sun Mouse Diagnostic
mti4.exec	27	Sun MTI/ALM Board Diagnostic
scsisub4.exec	28	Sun SCSI Subsystem Diagnostic
espscsi.exec	29	4300 Extended SCSI Diagnostic
smd4.exec	30	Sun SMD Diagnostic
taac4.exec	31	TAAC-1 Diagnostic

tape4.exec	32	Pertec 1/2-inch Tape Diagnostic
video4.exec	33	Sun Video Circuit Diagnostic
vidmon4.exec	34	Sun Video Monitor Diagnostic
vme4.exec	35	Sun VME Diagnostic
netcon4	36	Network Console Program
logfile	37	Error Log File
eccmem4.diag	38 (0x27)	Standalone ECC Memory Diagnostic
cache4.diag	39 (0x28)	Standalone Cache Memory Diagnostic
Copyright	40	Textfile containing copyright notice

Last updated: December 2, 1996

[Comments and Suggestions](#) 

1.2 Diagnostic Executive - Sun-4s

SPARCsystems 300/400

Table of Contents

NAME	FILE	DESCRIPTION
tpboot.sun4	0	Enables boot from tape
Copyright	1	Textfile containing copyright notice
toc	2	Contains list of contents of tape
extract_exec	3	Script to copy diagnostics to disk
Copyright	4	Textfile containing copyright notice
exec4	5	Diag Exec for Sun-4s architecture
diags4	6	Diagnostic Menu and File names
cpu4.exe	7	CPU Board Diagnostic
mem4.exec	8	Memory Diagnostic
cpcache4_300.exec	9	4300 Cache Diagnostic
cpcache4_400.exec	10	4400 Cache Diagnostic
iocache4.exec	11	4400 I/O Cache Diagnostic
video4.exec	12	Video Circuit Diagnostic
kb4.exec	13	Keyboard Diagnostic
mouse4.exec	14	Mouse Diagnostic
cg6.4exec	15	P4 Low-Eng Graphics Accelerator
cg8.4.exec	16	P4 24-Bit Frame Buffer Board Diagnostic
cg9.4.exec	17	VME 24-Bit Frame Buffer Board Diagnostic
color4.exec	18	Generic VME Color Board Diagnostic
eeptool4.exec	19	EEPROM programming tool
espscsi.exec	20	4300 CPU Extended SCSI Diagnostic
ether2.4.exec	21	Ethernet II Board Diagnostic
ether4.exec	22	Sun Ethernet Diagnostic
exectest4.exec	23	Exec Verification Suite
fddi4.exec	24	FDDI Board Diagnostic
fpu4.exec	25	Floating Point Diagnostic
gpl.4.exec	26	Graphics Processor1/Graphics Buffer Diag
gp2.4.exec	27	Graphics Processor2 Diagnostic
hsi4.exec	28	High Speed Serial Board Diagnostic
ipi4.exec	29	IPI Disk Subsystem Diagnostic
mcp4.exec	30	Sun ALM2/MCP Board Diagnostic
mti4.exec	31	Sun MTI/ALM Board Diagnostic
scsisub4.exec	32	Sun SCSI Subsystem Diagnostic

smd4.exec	33	Sun SMD Diagnostic
taac4.exec	34	TAAC Diagnostic
tape4.exec	35	Tape Diagnostic
vme4.exec	36	VME Diagnostic
netcon4	37	NETCON
logfile	38	LOGFILE
eccmem4.diag	39	ECC Memory Diagnostic
cache4.diag	40	Cache Diagnostic
Copyright	41	Textfile containing copyright notice

Reference

SunDiagnostic Executive User's Guide Addenda, 800-3493-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

1.6 Diagnostic Executive

Sun-4c

Table of Contents

NAME	DESCRIPTION
exec4c	Diag Exec for Sun-4c architecture
diags4c	Diagnostic Menu and File names
cache4c.exec	Cache Memory Diagnostic
cpu4c.exec	CPU Board Diagnostic
bantam4c.exec	SBus FDDI Diagnostic
codec4c.exec	SBus ISDN Diagnostic
dbri4c.exec	SBus ISDN Diagnostic
ether4c.exec	Ethernet II Board Diagnostic
fdc4c.exec	Floppy Disk Controller Diagnostic
fpu4c.exec	Floating Point Unit Diagnostic
kbm4c.exec	Keyboard Diagnostic
mem4c.exec	Memory Diagnostic
scsi4c.exec	SCSI Subsystem Diagnostic
cg6.4c.exec	CG6 Diagnostic
video4c.exec	Video Diagnostic
spif4c.exec	Serial Parallel Controller Diagnostic
bipro4c.exec	SPARCprinter Board Diagnostic
sunpc4c.exec	SunPC Board Diagnostic
vfc4c.exec	Video Frame Capture Diagnostic
hsis4c.exec	HSI/S Diagnostic
token4c.exec	Token Ring Diagnostic
cg12.4c.exec	CG12 Video Diagnostic
n/a	TAR image of executables
n/a	TAR image of Development Platform

Notes

1. The 1.6 Diagnostic Executive supports the Sun-4/20, Sun-4/25, Sun-4/40, Sun-4/50, Sun-4/60, Sun-4/65, and Sun-4/75.
2. The 1.6 Diagnostic Executive supports the Sun-4/15, Sun-4/30, and SPARCstation 10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun Diagnostics 3.2

Featuring: MPDiag and SunDiagnostic Executive 2.2

SS600MP / SS10 / SS1000 /SC2000

MPDiag tests the following components and functions:

- Audio
- Ethernet
- FPU
- Interrupts and Traps
- MBus Module
- Memory
- MMU/IOMMU
- MP Cache
- MP Memory
- Serial Ports

SunDiagnostic Executive 2.2 includes the following tests:

- CPU Diagnostic
- CG6 Frame Buffer Diagnostic
- EEPROM Editing Tool
- Ethernet Diagnostic
- Floating Point Unit Diagnostic
- Keyboard Diagnostic
- IPI Diagnostic
- MCP Diagnostic
- Memory Diagnostic
- Mouse Diagnostic
- Prestoserve Diagnostic
- SCSI Diagnostic
- SBus TRI/S Diagnostic
- SBus HSI/S Diagnostic
- SBus FDDI/S Diagnostic
- SBus SPC/S Diagnostic
- SBus SPARCprinter Diagnostic
- Video Frame Buffer Diagnostic

Notes

1. Sun Diagnostics 3.2 was released in July 1993.
 2. This is the last field release of the SunDiagnostic Executive.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Loopback Connectors

RS-232/RS-423

PART #	SYSTEM BOARDS	CONNECT PINS
540-1281-01	CPU,SCSI, and ALM	2-3 4-5 6-20
540-1558-01	CPU, SCSI, ALM, ALM-2, MCP, and SPC/S	2-3 4-5 6-8-20 17-24

RS-449

PART #	SYSTEM BOARDS	CONNECT PINS
540-1559-01	MCP	4-6 7-9 8-17 22-24 25-27 11-12-13 29-30-31 35-26

Parallel Port

PART #	SYSTEM BOARDS	CONNECT PINS
540-1560-01	ALM-2	1-10 12-2-4-6-8 13-3-5-7-9
501-1196-01	IPC	5-15 6-13 7-12 8-10 9-11

SBus Printer Board

PART #	DESCRIPTION
530-1683-01	Parallel Port to Video Port Loopback Cable

SBus High Speed Serial Interface (HSI/S)

PART #	DESCRIPTION
370-1381-01	96-Pin High-Density Loopback Connector
530-1430-01	RS-449 Loopback Test Plug

SBus Serial Parallel Controller (SPC)

PART #	DESCRIPTION
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370-1366-01	96-Pin High-Density Loopback Connector
540-1558-01	RS-232/RS-423 Loopback Test Plug

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[Comments and Suggestions](#) 

Disk

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SunOS 4.x SCSI Targets

Sun-4/330 on SunOS 4.x

SCSI DEVICE	TARGET ID	UNIX ID	BOOT ID
1st Internal Disk	3	sd6	sd(0,18,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
1st Internal Tape	4	st0	st(0,0,0)
1st External Tape	4	st0	st(0,0,0)
2nd External Tape	5	st1	st(0,28,0)
CD-ROM	6	sr0	st(0,30,1)

Sun-4/370/470 and Sun-3/470 on SunOS 4.x

SCSI DEVICE	TARGET ID	UNIX ID	BOOT ID
1st Internal Disk	0	sd0	sd(0,0,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
3rd Internal Disk	2	sd4	sd(0,10,0)
4th Internal Disk	3	sd6	sd(0,18,0)
1st Internal Tape	4	st0	st(0,0,0)
2nd Internal Tape	5	st1	st(0,28,0)
CD-ROM	6	sr0*	st(0,30,1)

* The Sun 4300 CPU requires EPROM 3.0.2 to boot from CD-ROM.

The Sun 4400 CPU requires EPROM 3.0 to boot from CD-ROM

Sun-4/390/490 on SunOS 4.0.3

SCSI DEVICE	HOST ADAPTER	TARGET ID	UNIX ID	BOOT ID
1st Tape	1st SCSI	4	st0	st(0,0,0)
2nd Tape	1st SCSI	5	st1	st(0,28,0)
CD-ROM	1st SCSI	6	sr0*	st(0,30,1)
1st Tape	2nd SCSI	4	st2	st(1,0,0)
2nd Tape	2nd SCSI	5	st3	st(1,28,0)

* The Sun 4300 CPU requires EPROM 3.0.2 to boot from CD-ROM.

The Sun 4400 CPU requires EPROM 3.0 to boot from CD-ROM

Sun-4/390/490 on SunOS 4.1 PSR A

SCSI DEVICE	HOST ADAPTER	TARGET ID	UNIX ID	BOOT ID
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1st Tape	1st SCSI	4	st0	st(0,0,0)
2nd Tape	1st SCSI	5	st1	st(0,28,0)
3rd Tape	1st SCSI	3	st2	st(0,18,0)
4th Tape	1st SCSI	2	st3	st(0,10,0)
CD-ROM	1st SCSI	6	sr0*	st(0,30,1)
1st Tape	2nd SCSI	4	st2	st(1,0,0)
2nd Tape	2nd SCSI	5	st3	st(1,28,0)
3rd Tape	2nd SCSI	3	st6	st(1,18,0)
4th Tape	2nd SCSI	2	st7	st(1,10,0)

* The Sun 4300 CPU requires EPROM 3.0.2 to boot from CD-ROM.

The Sun 4400 CPU requires EPROM 3.0 to boot from CD-ROM

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Solaris 2.1 and 2.2 SCSI Targets

Solaris 2.1 and 2.2 allow any SCSI device to be assigned any Target number. This chart shows the default target numbers for sd and st devices that are symbolic links from /dev (SunOS 4.x) to /devices (Solaris 2.x).

SCSI HOST	DIFFERENTIAL SCSI DISK DRIVE		CD-ROM
	DISK DRIVE	TAPE DRIVE	
0	0 - 3	4 - 5	6
1	7 - 10	11 - 12	13
2	14 - 17	18 - 19	20
3	21 - 24	25 - 26	27
4	28 - 31	32 - 33	34
5	35 - 38	39 - 40	41
6	42 - 45	46 - 47	48
7	49 - 52	53 - 54	55
8	56 - 59	60 - 61	62
9	63 - 66	67 - 68	69
10	70 - 73	74 - 75	76
11	77 - 80	81 - 82	83
12	84 - 87	88 - 89	90
13	91 - 94	95 - 96	97
14	98 - 101	102 - 103	104
15	105 - 108	109 - 110	111
16	112 - 115	116 - 117	118
17	119 - 122	123 - 124	125
18	126 - 129	130 - 131	132
19	133 - 136	137 - 138	139
20	140 - 143	144 - 145	146
21	147 - 150	151 - 152	153
22	154 - 157	158 - 159	160
23	161 - 164	165 - 166	167
24	168 - 171	172 - 173	174
25	175 - 178	179 - 180	181
26	182 - 185	186 - 187	188
27	189 - 192	193 - 194	195
28	196 - 199	200 - 201	202
29	203 - 206	207 - 208	209
30	210 - 213	214 - 215	216
31	217 - 220	221 - 222	223
32	224 - 227	228 - 229	230

33	231 - 234	235 - 236	237
34	238 - 241	242 - 243	244
35	245 - 248	249 - 250	251
36	252 - 255	256 - 257	258
37	259 - 262	263 - 264	265
38	266 - 269	270 - 271	272
39	273 - 276	277 - 278	279

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Solaris 2.3 SCSI Targets

Solaris 2.3 allows any SCSI device to be assigned any Target number. This chart shows the default target numbers for sd and st devices that are symbolic links from /dev (SunOS 4.x) to /devices (Solaris 2.x).

SCSI HOST	WIDE SCSI DISK DRIVE		CD-ROM
	DISK DRIVE	TAPE DRIVE	
0	0 - 14	4 - 5	14
1	15 - 29	19 - 20	21
2	30 - 44	34 - 35	36
3	45 - 59	49 - 50	51
4	60 - 74	64 - 65	66
5	75 - 89	79 - 80	81
6	90 - 104	94 - 95	96
7	105 - 119	109 - 110	111
8	120 - 134	124 - 125	126
9	135 - 149	139 - 140	141
10	150 - 164	154 - 155	156
11	165 - 179	169 - 170	171
12	180 - 194	184 - 185	186
13	195 - 209	199 - 200	201
14	210 - 224	214 - 215	216
15	225 - 239	229 - 230	231
16	240 - 254	244 - 245	246
17	255 - 269	259 - 260	261
18	270 - 284	274 - 275	276
19	285 - 299	289 - 290	291
20	300 - 314	304 - 305	306
21	315 - 329	319 - 320	321
22	330 - 344	334 - 335	336
23	345 - 359	349 - 350	351
24	360 - 374	364 - 365	366
25	375 - 389	379 - 380	381
26	390 - 404	394 - 395	396
27	405 - 419	409 - 410	411
28	420 - 434	424 - 425	426
29	435 - 449	439 - 440	441
30	450 - 464	454 - 455	456
31	465 - 479	469 - 470	471
32	480 - 494	484 - 485	486

33	495 - 509	499 - 500	501
34	510 - 524	514 - 515	516
35	525 - 539	529 - 530	531
36	540 - 554	544 - 545	546
37	555 - 569	559 - 560	561
38	570 - 584	574 - 575	576
39	585 - 599	589 - 590	591

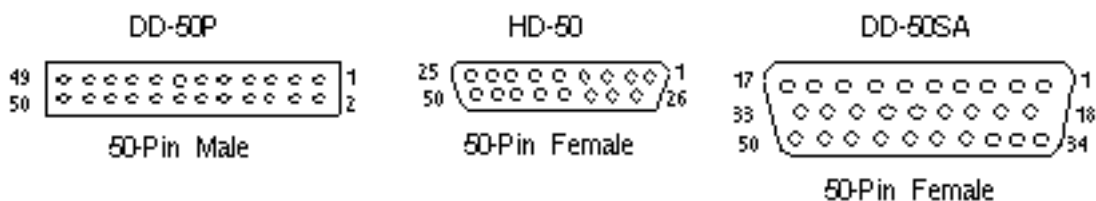
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Single-ended 8-bit SCSI Pinouts

SIGNAL	DD-50P	HD-50	DD-50SA	HD-68	SIGNAL	DD-50P	HD-50	DD-50SA	HD-68
-DB(0)	2	26	34	40	GND	1	1	1	6
-DB(1)	4	27	2	41	GND	3	2	18	7
-DB(2)	6	28	19	42	GND	5	3	35	8
-DB(3)	8	29	36	43	GND	7	4	3	9
-DB(4)	10	30	4	44	GND	9	5	20	10
-DB(5)	12	31	21	45	GND	11	6	37	11
-DB(6)	14	32	38	46	GND	13	7	5	12
-DB(7)	16	33	6	47	GND	15	8	22	13
-DB(P)	18	34	23	48	GND	17	9	39	14
GND	20	35	40	49	GND	19	10	7	15
GND	22	36	8	50	GND	21	11	24	16
GND	24	37 Res	25	51 Opn	GND	23	12 Res	41	17 Opn
TPWR	26	38	42	52	GND	25	13 Opn	9	18 Opn
GND	28	39 Res	10	53	GND	27	14 Res	26	19
GND	30	40	27	54	GND	29	15	43	20
-ATN	32	41	44	55	GND	31	16	11	21
GND	34	42	12	56	GND	33	17	28	22
BSY	36	43	29	57	GND	35	18	45	23
-ACK	38	44	46	58	GND	37	19	13	24
-RST	40	45	14	59	GND	39	20	30	25
-MSG	42	46	31	60	GND	41	21	47	26
-SEL	44	47	48	61	GND	43	22	15	27
-C/D	46	48	16	62	GND	45	23	32	28
-REQ	48	49	33	63	GND	47	24	49	29
-I/O	50	50	50	64	GND	49	25	17	30

Connector Types



Notes

1. On HD50 cables, Pins 12, 14, 37, and 39 are reserved and Pin 13 is open.
 2. On HD50 to HD68 cables, Pins 1, 2, 3, 4, 5, 17, 18, 31, 32, 33, 34, 35, 36, 37, 38, 39, 51, 65, 66, 67, and 68 are open.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Media Defect Management

Embedded SCSI Disk Drives

The FORMAT UNIT command formats the media so that all data blocks can be accessed. The following lists are used during the defect management process.

Primary, or Manufacturer's, Defect List (P list)

The P list supplied by the manufacturer is resident on the disk drive. The initiator can reference this list with the READ DEFECT DATA command. The initiator cannot change or erase the Primary list.

Certification Defect List (C list)

The C list is the position information of defective data blocks detected during data block verification after initialization when the FORMAT UNIT command is issued. These defects are added to the Grown list.

Data Defect List (D list)

The D list is the defect position information transferred from the initiator upon execution of the FORMAT UNIT command. These defects are added to the Grown list.

Grown Defect List (G list)

The G list includes defects identified to, or by, the drive. It does not include the P list. These defects are classified as flaws appearing after the media is formatted. The initiator may request that the current G list be used during formatting, or that the current G list be erased and a new list begun. Entries to the G list include:

1. Defects provided to the drive in D lists during previous FORMAT UNIT commands.
2. Drive C list defects detected during previous FORMAT UNIT commands.
3. Defects appended by successful completion of the REASSIGN BLOCKS command.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SCSI Option Bit

SCSI Option Bit Setting

Use the following procedure to determine the SCSI option bit setting under Solaris 2.x:

```
# adb -k /kernel/unix /dev/mem (Solaris 2.0 - 2.4)
```

```
# adb -k /dev/ksyms /dev/mem (Solaris 2.5)
```

```
scsi_options/X
```

```
$q
```

SCSI Option Bits

Disconnect/Reconnect	0x008
Linked Commands	0x010
Synchronous Transfer	0x020
Parity	0x040
Tagged Queuing	0x080
Fast SCSI	0x100
Wide SCSI	0x200
Fast 20	0x400

Tagged Queuing

Tagged Queuing allows a disk to receive more than one command at a time and to perform the commands in an order that reduces disk latency in many applications. Tagged Queuing is implemented in Solaris 2.1.

Some SCSI disk drives may not properly implement Tagged Queuing. Disable Tagged Queuing in the driver to prevent unrecoverable failures. Add the following to the `/etc/system` file under Solaris 2.x:

```
set scsi_options=0x178
```

Wide SCSI

To enable Wide SCSI under Solaris 2.3, add the following to the `/etc/system` file:

```
set scsi_options=0x3f8
```

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SCSI Sense Keys

KEY	DESCRIPTION
0	NO SENSE There is no specific sense key information to be reported for the designated logical unit. This would be the case for a successful command or a command that received CHECK CONDITION or COMMAND TERMINATED status because one of the filemark, EOM, or ILI bits is set to one.
1	RECOVERED DATA The last command completed successfully with some recovery action performed by the target. Details may be determined by examining the additional sense bytes and the information field.
2	NOT READY The logical unit addressed cannot be accessed. Operator intervention may be required to correct this condition.
3	MEDIUM ERROR The command terminated with a non-recovered error condition that was probably caused by a flaw in the medium or an error in the recorded data. This sense key may also be returned if the target is unable to distinguish between a flaw in the medium and a specific hardware failure (sense key 4).
4	HARDWARE ERROR The target detected a non-recoverable hardware failure while performing the command or during self test.
5	ILLEGAL REQUEST There was an illegal parameter in the command descriptor block or in the additional parameters supplied as data for some commands. If the target detects an invalid parameter in the command descriptor block, then it shall terminate the command without altering the medium. If the target detects an invalid parameter in the additional parameters supplied as data, then the target may have already altered the medium. This sense key may also indicate that an invalid IDENTIFY message was received.
6	UNIT ATTENTION The removable medium may have been changed or the target has been reset.
7	DATA PROTECT A command that reads or writes the medium was attempted on a block that is protected from this operation.
8	BLANK CHECK A write-once device or a sequential-access device encountered blank medium or format-defined end-of-data indication while reading or a write-once device encountered.
9	Vendor Specific This key is available for reporting vendor specific conditions.
a	COPY ABORTED A COPY, COMPARE, or COPY AND VERIFY command was aborted due to an error condition on the source device, the destination device, or both.
b	ABORTED COMMAND The target aborted the command. The initiator may be able to recover by trying the command again.

c	HARDWARE ERROR The target detected a non-recoverable hardware failure while performing the command or during self test.
d	VOLUME OVERFLOW A buffered peripheral device has reached the end-of-partition and data may remain in the buffer that has not been written to the medium.
e	MISCOMPARE The source data did not match the data read from the medium.
f	Reserved

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SCSI Sense Codes

BYTE		DESCRIPTION
12	-	Additional Sense Code (ASC)
-	13	Additional Sense Code Qualifier (ASCQ)
00	00	No additional sense information
00	01	Filemark detected
00	02	End of partition/medium detected
00	03	Setmark detected
00	04	Begining-of-Partition/Medium detected
00	05	End of data detected
00	11	Audio play operation in progress
00	12	Audio play operation paused
00	13	Audio play operation successfully completed
00	14	Audio play operation stopped due to error
00	15	No current audio status to return
01	00	No index/sector signal
02	00	No seek complete
03	00	Peripheral device write fault
03	01	No write current
03	02	Excessive write errors
04	00	Logical unit not ready, cause not reportable
04	01	Logical unit is in progress of becoming ready
04	02	Logical unit not ready, initiating command required
04	03	Logical unit not ready, manual intervention required
04	04	Logical unit not ready, format in progress
05	00	Logical unit does not respond to selection
06	00	No reference position found
07	00	Multiple peripheral devices selected
08	00	Logical unit communication failure
08	01	Logical unit communication time out
08	02	Logical unit communication parity error
09	00	Track following error
09	01	Tracking servo failure
09	02	Focus servo failure
09	03	Spindle servo failure
0a	00	Error log overflow
0c	00	Write error
0c	01	Write error recovered with auto reallocation
0c	02	Write error - auto reallocation failed

10	00	ID CRC or ECC error
11	00	Unrecovered read error
11	01	Read retries exhausted
11	02	Error log too long to correct
11	03	Multiple read errors
11	04	Unrecovered read error - auto reallocate failed
11	05	L-EC uncorrectable error
11	06	CIRC unrecovered error
11	07	Data resynchronization error
11	08	Incomplete block read
11	09	No gap found
11	0a	Miscorrected error
12	00	Address mark not found for ID field
13	00	Address mark not found for data field
14	00	Recorded entity not found
14	01	Record not found
15	00	Random positioning error
15	01	Mechanical positioning error
15	02	Positioning error detected by read of medium
16	00	Data synchronization mark error
17	00	Recovered data with no error correction applied
17	01	Recovered data with retries
17	02	Recovered data with positive head offset
17	03	Recovered data with negative head offset
17	04	Recovered data with retries and/or CIRC applied
17	05	Recovered data using previous sector
17	06	Recovered data without ECC - Data auto-reallocated
18	00	Recovered data with error correction applied
18	01	Recovered data with error correction & retries applied
18	02	Recovered data with ECC and/or retries
18	03	Recovered data with CIRC
18	04	Recovered data with LEC
19	00	Defect list error
19	01	Defect list not available
19	02	Defect list error in primary list
19	03	Defect list error in grown list
1a	00	Parameter list length error
1b	00	Synchronous data transfer error
1c	00	Defect list not found
1c	01	Primary defect list not found
1c	02	Grown defect list not found

1d	00	Miscompare during verify operation
1e	00	Recovered ID with ECC correction
20	00	Invalid command operation code
21	00	Logical block address out of range
21	01	Invalid element address
22	00	Illegal function for device type
24	00	Invalid field in CDB
25	00	Logical unit not supported
26	00	Invalid field in parameter list
26	01	Parameter not supported
26	02	Parameter value invalid
26	03	Threshold parameters not supported
27	00	Write protected
28	00	Not ready to ready transition
28	01	Import / Export element accessed
29	00	Power-On, reset, or bus device reset occurred
2a	00	Parameters changed
2a	01	Mode parameters changed
2a	02	Log parameters changed
2b	00	Copy cannot execute since host cannot disconnect
2c	00	Command sequence error
2c	01	Too many windows specified
2c	02	Invalid combination of windows specified
2d	00	Overwrite error on update in place
2f	00	Commands cleared by another initiator
30	00	Incompatible medium installed
30	01	Cannot read medium - unknown format
30	02	Cannot read medium - incompatible format
30	03	Cleaning cartridge installed
31	00	Medium format corrupted
31	01	Format command failure
32	00	No defect spare location available
32	01	Defect list update failure
33	00	Tape length error
36	00	Ribbon/Ink/Toner failure
37	00	Rounded parameter
39	00	Saving parameters not supported
3a	00	Medium not present
3b	00	Sequential positioning error
3b	01	Tape position error at beginning of medium
3b	02	Tape position error at end of medium

3b	03	Tape or electronic vertical forms unit not ready
3b	04	Slew failure
3b	05	Paper jam
3b	06	Failed to sense top of form
3b	07	Failed to sense bottom of form
3b	08	Reposition error
3b	09	Read past end of medium
3b	0a	Read past beginning of medium
3b	0b	Position past end of medium
3b	0c	Position past beginning of medium
3b	0d	Medium destination element full
3b	0e	Medium source element empty
3d	00	Invalid bits in identify message
3e	00	Logical unit has not self configured yet
3f	00	Target operating conditions have changed
3f	01	Microcode has been changed
3f	02	Changed operating definition
3f	03	Inquiry data has changed
40	nn	Diagnostic failure on component nn (80h-ffh)
41	00	Data path failure
42	00	Power-On or Self-Test failure
43	00	Message error
44	00	Internal target failure
45	00	Select/Reselect failure
46	00	Unsuccessful soft reset
47	00	SCSI parity error
48	00	Initiator detected error message received
49	00	Invalid message error
4a	00	Command phase error
4b	00	Data phase error
4c	00	Logical unit failed self configuration
4e	00	Overlapped commands attempted
50	00	Write append error
50	01	Write append position error
50	02	Position error related to timing
51	00	Erase failure
52	00	Cartridge fault
53	00	Media load/eject failed
53	01	Unload tape failure
53	02	Medium removal prevented
54	00	SCSI to host system interface failure

55	00	System resource failure
57	00	Unable to recover table-of-contents
58	00	Generation does not exist
59	00	Updated block read
5a	00	Operator request or state change input
5a	01	Operator medium removal request
5a	02	Operator selected write protect
5a	03	Operator selected write permit
5b	00	Log exception
5b	01	Threshold condition met
5b	02	Log counter at maximum
5b	03	Log list codes exhausted
5c	00	RPL status change
5c	01	Spindles synchronized
5c	02	Spindles not synchronized
60	00	Lamp failure
61	01	Unable to acquire video
61	02	Out of focus
62	00	Scan head positioning error
63	00	End of user area encountered on this track
64	00	Illegal mode for this track
80	80	Vendor unique ASC and ASCQ
through		
ff	ff	Vendor unique ASC and ASCQ

Last updated: December 2, 1996

[Comments and Suggestions](#) 

1.3GB IPI Disk Drive

Physical and Logical Geometry

The 1.3GB IPI Disk Drive uses Zone Bit Recording (ZBR). The outer tracks have a higher bit density than the inner tracks.

The defect list for the 1.3GB IPI Disk Drive is in physical block number. Errors reported under the operating system format utility are in logical block number. Block numbers converted to cylinder/head/sector by the **show** command, are in logical block number.

The **analyze** command performs the conversion from logical to physical block when a defect is detected.

The **repair** command does not perform the conversion from a logical block number to a physical block number. Do not enter the logical block when using the **repair** command.

To add a defect to the defect list, first convert the logical block number to a physical block number. Then, use the **add** command to enter the physical block number into the defect list. Do not enter the logical block number when using the **add** command.

Use the Disk Drive Logical Geometry chart to find Zone, First Block in Zone, First Cylinder in Zone, Cylinder Size of Zone, and Track Size of Zone.

Example: error reported on block 1000000.

LBN = 1000000
 Zone = 2
 First Block in Zone 2 = 929526
 First Cylinder in Zone 2 = 701
 Cylinder Size of Zone 2 = 1292
 Track Size of Zone 2 = 76

1.3GB IPI Disk Drive Logical Geometry

ZONE	FIRST CYL	LAST CYL	FIRST BLOCK	FIRST C/H/S	LAST BLOCK	LAST C/H/S	TRK SIZE	CYL SIZE
0	0	625	0	0/0/0	830075	625/16/77	78	1326
1	626	700	830076	626/0/0	929525	700/16/77	78	1326
2	701	800	929526	701/0/0	1058725	798/7/31	76	1292
3	801	925	1058726	798/7/32	1215975	917/0/33	74	1258
4	926	1050	1215976	917/0/34	1368975	1032/6/75	72	1224
5	1051	1175	1368976	1032/6/76	1521975	1147/13/39	72	1224
6	1176	1300	1521976	1147/13/40	1670725	1259/16/43	70	1190
7	1301	1400	1670726	1259/16/44	1786325	1347/2/47	68	1156
8	1401	1500	1786326	1347/2/48	1898525	1431/13/5	66	1122
9	1501	1600	1898526	1431/13/6	2007325	1513/13/73	64	1088

10	1601	1800	2007326	1513/13/74	2218125	1672/13/39	62	1054
11	1801	1900	2218126	1672/13/40	2320125	1749/12/15	60	1020
12	1901	2000	2320126	1749/12/16	2418725	1824/1/23	58	986
13	2001	2100	2418726	1824/1/24	2512769	1894/16/77	58	986

1.3GB IPI Disk Drive Physical Geometry

ZONE	FIRST CYL	LAST CYL	BYTES / TRACK	SECTORS	BYTES/ SECTORS	CDT 2
0	0	625	50399	40	1230	46
1	626	700	49559	40	1226	45
2	701	800	48719	39	1225	44
3	801	925	47039	38	1221	43
4	926	1050	46199	37	1220	42
5	1051	1175	45359	37	1219	41
6	1176	1300	43679	36	1212	40
7	1301	1400	42839	35	2111	39
8	1401	1500	41159	34	1210	38
9	1501	1600	40319	33	1206	37
10	1601	1800	38639	32	1201	35
11	1801	1900	37799	31	1201	35
12	1901	2000	36959	30	1197	34
13	2001	2100	36119	30	1196	33

Longhand Conversion of Physical to Logical Block

LBN - First Block = LB

$$1000000 - 929526 = 70474$$

To find the Physical Cylinder

$$\text{First Cylinder} + (\text{LB} \div \text{Cylinder Size in blocks}) = \text{Pcylinder}$$

$$701 + (70474 \div 1292) = 755 \text{ (discard the remainder)}$$

To find the Physical Head

$$(\text{LB} \% \text{ Cylinder size}) \div \text{Track Size} = \text{Phead}$$

$$(70474 \% 1292) \div 76 = \text{Phead}$$

$$\begin{array}{r} 54 \\ 1292 \overline{)70474} \\ \underline{6460} \\ 5874 \\ \underline{5168} \\ 706 \end{array}$$

$$706 \div 76 = 9 \text{ (discard the remainder)}$$

To find the Physical Sector

$$\text{LB} \% \text{ Track Size} = \text{Psector}$$

$$70474 \% 76 = \text{Psector}$$

$$\begin{array}{r} 927 \\ 76 \overline{)70474} \\ \underline{684} \\ 207 \\ \underline{152} \\ 554 \\ \underline{532} \\ 22 \end{array}$$

$$70474 \% 76 = 22$$

The function of the Modulus Operator % is to give the remainder of the first value divided by the second value.

Calculator Conversion of Physical to Logical Block

$$\text{LBN} - \text{First Block} = \text{LB}$$

$$1000000 - 929526 = 70474$$

To find the Physical Cylinder

$$\text{First Cylinder} + (\text{LB} \div \text{Cylinder Size in blocks}) = \text{Pcylinder}$$

$$701 + (70474 \div 1292) = \text{Pcylinder}$$

$$701 + (54.54644) = 755.54644$$

$$755 = \text{Pcylinder} \text{ (} 0.54644 = \text{Pcylinder remainder)}$$

To find the Physical Head

$$(\text{Pcylinder remainder} \times \text{Cylinder size}) \div \text{Track Size} = \text{Phead}$$

$$(0.54644 \times 1292) \div 76 = \text{Phead}$$

$$(706.00048) \div 76 = 9.28948$$

$$9 = \text{Phead} (0.28948 = \text{Phead remainder})$$

To find the Physical Sector

$$\text{Phead remainder} \times \text{Track Size} = \text{Psector}$$

$$0.28948 \times 76 = \text{Psector}$$

$$0.28948 \times 76 = 22.00048$$

$$22 = \text{Psector}$$

Logical block 1000000 is located at physical cylinder 755, head 9, sector 22. Add the physical block number to the defect list.

The **show** command reports that logical block 1000000 is located at logical cylinder 754, head 2, sector 40. Do not add the logical block number to the defect list.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

ISP-80 Disk Controller

Self-Test Error Codes

LED 7 lights to indicate a failed self-test

7	LEDs	0	SYSTEMACTIVITY					
○	○	○	○	○	○	●	○	EPRom Checksum Test
○	○	○	○	○	○	●	●	LED Register Test
○	○	○	○	○	○	●	○	SCC Port A Register Test
○	○	○	○	○	○	●	○	SCC Port B Register Test
○	○	○	○	○	○	●	●	SCC Port A Internal Loopback Test
○	○	○	○	○	○	●	●	SCC Port B Internal Loopback Test
○	○	○	○	○	○	●	○	Exec RAM Inverse Test
○	○	○	○	○	○	●	○	Exec RAM Address Test
○	○	○	○	○	○	●	○	Exec RAM 3-Pattern Test
○	○	○	○	○	○	●	○	Exec RAM March Test
○	○	○	○	○	○	●	○	Exec RAM Byte Alignment Test
○	○	○	○	○	○	○	○	CIO Register Test
○	○	○	○	○	○	○	○	Read-Ahead Buffer Inverse Test
○	○	○	○	○	○	○	○	Read-Ahead Buffer Address Test
○	○	○	○	○	○	○	○	Read-Ahead Buffer 3-Pattern Test
○	○	○	○	○	○	○	○	Read-Ahead Buffer March Test
○	○	○	○	○	○	○	○	VME Register Test
○	○	○	○	○	○	○	○	IPI LCA Configuration Test
○	○	○	○	○	○	○	○	IPI Register Test
○	○	○	○	○	○	○	○	IPI DMA Loopback Test
○	○	○	○	○	○	○	○	IPI Quick Command Sequence Loopback Test
○	○	○	○	○	○	○	○	IPI Bus Control Sequence Loopback Test
○	○	○	○	○	○	○	○	Bus Error Interrupt Test
○	○	○	○	○	○	○	○	Address Error Interrupt Test
○	○	○	○	○	○	○	○	SCC Interrupt Test
○	○	○	○	○	○	○	○	CIO Interrupt Test
○	○	○	○	○	○	○	○	Read-Ahead Buffer Parity Error Interrupt Test

○ ○ ● ○ ○ ○ ● ●	IPI Interrupt Test
○ ○ ● ○ ○ ● ○ ○	Diagnostic Engineering Monitor (DEMON)

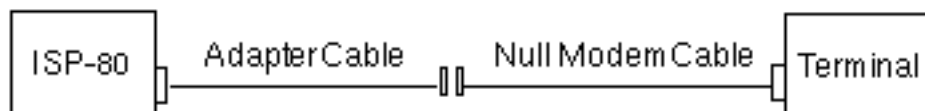
Diagnostic Engineering Monitor

The Diagnostic Engineering Monitor (DEMON) is entered when the Diag/Norm switch is in the Diag position.

POSITION	SYSTEM ACTIVITY
DIAG	Enters DEMON mode when Self-test is completed.

Self-test output is monitored by connecting the ISP-80 controller to a terminal set to 9600 baud, 8 data bits, no parity, and 1 stop bit. The ISP-80 Controller serial port is a 25-pin, dual in-line, header-type connector.

Since Sun does not make a cable that connects the ISP-80 controller and a terminal, use an adapter cable and a null modem cable.



Adapter Cable

Examples of Sun cables that can be used as adapter cables are:

530-1178-01 (ALM-1, RS-232)

530-1179-01 (ALM-1, RS-232)

530-1312-02 (ALM-2, Printer)

530-1313-01 (MCP, RS-232)

Sun SMD data cables cannot be used as the adapter cable because they do not have Pin 2.

Null Modem Cable

The null modem cable must have Pins 2 and 3 crossed and Pin-7 straight. Laserwriter Cable 530-1172-03 is an example of this type of cable.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

CPU

Sun-4 Architecture

[Sun 4100](#)

[Sun 4200](#)

[Sun 4300](#)

[Sun 4300 Address Decoding](#)

[Sun 4400](#)

Interrupt Levels

[Sun-4 / Sun-4c / Sun-4m](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun 4100

Self-Test Error Codes

● = ON 0 LEDs ○ = OFF 7	SYSTEM ACTIVITY	PROBLEM BOARD
● ● ● ● ● ● ● ●	A reset sets LEDs to this state	CPU or PROMs bad or +5V low
● ○ ○ ○ ○ ○ ○ ○	Test 0x01 checks PROM checksum	CPU Board (Boot PROM)
○ ● ○ ○ ○ ○ ○ ○	Test 0x02 checks the context register	CPU Board
● ● ○ ○ ○ ○ ○ ○	Test 0x03 performs segment Map tests	CPU Board
○ ○ ● ○ ○ ○ ○ ○	Test 0x04 checks page Map RAM	CPU Board
● ○ ● ○ ○ ○ ○ ○	Test 0x05 performs software traps tests	CPU Board (MMU)
○ ● ● ○ ○ ○ ○ ○	Test 0x06 performs interrupt register test	CPU Board (MMU)
● ● ● ○ ○ ○ ○ ○	Test 0x07 performs software interrupts tests	CPU Board (IU)
○ ○ ○ ● ○ ○ ○ ○	Test 0x08 performs TOD clock interrupt test	CPU Board
● ○ ○ ● ○ ○ ○ ○	Test 0x09 checks video memory	CPU Board
○ ● ○ ● ○ ○ ○ ○	Test 0x0A performs P4 color Map test	P4 Board
● ● ○ ● ○ ○ ○ ○	Test 0x0B runs limited main Memory tests	CPU Board
○ ○ ● ● ○ ○ ○ ○	Test 0x0C performs MMU read/write tests	CPU Board
● ○ ● ● ○ ○ ○ ○	Test 0x0D=MMU write to protected page test	CPU Board (MMU)
○ ● ● ● ○ ○ ○ ○	Test 0x0E performs MMU read invalid page test	CPU Board (MMU)
● ● ● ● ○ ○ ○ ○	Test 0x0F performs MMU write invalid page tests	CPU Board (MMU)
○ ○ ○ ○ ● ○ ○ ○	Test 0x10 performs main Memory space control time-outs	CPU Board (MMU)
● ○ ○ ○ ● ○ ○ ○	Test 0x11 performs range and size error tests	CPU Board
○ ● ○ ○ ● ○ ○ ○	Test 0x12 performs parity circuit test	CPU Board
● ● ○ ○ ● ○ ○ ○	Test 0x13 tests cache tag memory	CPU Board

memory

0	LEDs	7	SYSTEM ACTIVITY	PROBLEM BOARD
○ ○ ● ○ ● ○ ○ ○			Test 0x14 performs SCSI/DMA tests	CPU Board
● ○ ● ○ ● ○ ○ ○			Test 0x15 runs main Memory tests	CPU Board
○ ○ ○ ○ ○ ○ ○ ●			Self-tests have found an Error	CPU Board
○ ○ ○ ○ ○ ○ ● ○			An exception class error is found	CPU Board
○ ○ ○ ○ ○ ● ○ ○			Self-tests done, UNIX in boot state (LED is blinking)	CPU Board

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun 4200

Self-Test Error Codes

0	LEDs	7	SYSTEM ACTIVITY	PROBLEM BOARD
● ● ● ● ● ● ● ●			A reset sets LEDs to this state	CPU or PROMs bad or +5VDC is low
● ○ ○ ○ ○ ○ ○ ○			Test 0x01 checks PROM checksum	CPU Board (Boot PROM)
○ ● ○ ○ ○ ○ ○ ○			Test 0x02 checks UDVMA enable register	CPU Board
● ● ○ ○ ○ ○ ○ ○			Test 0x03 checks UDVMA Map	CPU Board
○ ○ ● ○ ○ ○ ○ ○			Test 0x04 checks the context Register	CPU Board (MMU)
● ○ ● ○ ○ ○ ○ ○			Test 0x05 performs Segment Map RAM	CPU Board (MMU)
○ ● ● ○ ○ ○ ○ ○			Test 0x06 checks page Map RAM	CPU Board (MMU)
● ● ● ○ ○ ○ ○ ○			Test 0x07 performs Software traps test	CPU Board
○ ○ ○ ● ○ ○ ○ ○			Test 0x08 performs interrupt Register test	CPU Board
● ○ ○ ● ○ ○ ○ ○			Test 0x09 performs Software Interrupts test	CPU Board
○ ● ○ ● ○ ○ ○ ○			Test 0x0A performs TOD clock interrupt test	CPU Board
● ● ○ ● ○ ○ ○ ○			Test 0x0B checks Video Memory	CPU Board
○ ○ ● ● ○ ○ ○ ○			Test 0x0C performs limited main Memory tests	CPU or Memory Board
● ○ ● ● ○ ○ ○ ○			Test 0x0D performs MMU read/write tests	CPU Board (MMU)
○ ● ● ● ○ ○ ○ ○			Test 0x0E performs MMU write to protected page test	CPU Board (MMU)
● ● ● ● ○ ○ ○ ○			Test 0x0F performs MMU read invalid page tests	CPU Board (MMU)
○ ○ ○ ○ ● ○ ○ ○			Test 0x10 performs MMU write invalid page test	CPU Board (MMU)
● ○ ○ ○ ● ○ ○ ○			Test 0x11 performs main Memory timeout test	CPU Board
○ ● ○ ○ ● ○ ○ ○			Test 0x12 performs control space timeout test	CPU Board
● ● ○ ○ ● ○ ○ ○			Test 0x13 performs range error test	CPU Board

0	LEDs	7	SYSTEM ACTIVITY	PROBLEM BOARD						
○	○	●	○	○	○	○	○	○	Test 0x14 performs size error test	CPU Board
●	○	●	○	●	○	○	○	○	Test 0x15 test ECC circuits	Memory Board
○	●	●	○	●	○	○	○	○	Test 0x16 tests cache tag Memory	CPU Board
●	●	●	○	●	○	○	○	○	Test 0x17 tests cache data Memory	CPU Board
○	○	○	●	●	○	○	○	○	Test 0x18 is cache write/read hit/miss verify test	CPU Board
●	○	○	●	●	○	○	○	○	Test 0x19 is cache write/read/flush verify test	CPU Board
○	●	○	●	●	○	○	○	○	Test 0x1A runs main Memory tests	Memory Board
○	○	○	○	○	○	○	○	●	Self-tests have found an error	CPU or Memory Board
○	○	○	○	○	○	○	○	●	An exception class error is found	CPU or Memory Board
○	○	○	○	○	○	●	○	○	Self-tests done, UNIX in boot state (LED is blinking)	CPU or Memory Board

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[Comments and Suggestions](#) 

Sun 4300

Self-Test Error Codes

7	LEDs	0	SYSTEM ACTIVITY
○ ○ ○ ○ ○ ○ ○ ○ ○			LED Loop Test
○ ○ ○ ○ ○ ○ ○ ○ ●			Initialize SCC UART
○ ○ ○ ○ ○ ○ ○ ● ○			"BOOT PROM Selftest" Message
○ ○ ○ ○ ○ ○ ○ ● ●			EPROM Checksum Test
○ ○ ○ ○ ○ ● ○ ○ ○			Context Register Read-Write Test
○ ○ ○ ○ ○ ● ○ ●			Segment Map Tests
○ ○ ○ ○ ○ ● ● ○			Page Map Tests
○ ○ ○ ○ ○ ● ● ●			Software Traps Test
○ ○ ○ ○ ● ○ ○ ○ ○			Interrupt Tests (Software and Register)
○ ○ ○ ○ ● ○ ○ ●			TOD Interrupt Test
○ ○ ○ ○ ● ○ ● ○			Video Memory Tests
○ ○ ○ ○ ● ○ ● ●			Main Memory Tests
○ ○ ○ ○ ● ● ○ ○ ○			MMU Read Access/Modified Bits Test
○ ○ ○ ○ ● ● ○ ●			MMU Write Access/Modified Bits Test
○ ○ ○ ○ ● ● ● ○			MMU Write to Write=Protected Page Test
○ ○ ○ ○ ● ● ● ●			MMU Read Not-Writeable Invalid Page Test
○ ○ ○ ● ○ ○ ○ ○ ○			MMU Read Writeable Invalid Page Test
○ ○ ○ ● ○ ○ ○ ●			MMU Write Not-Writeable Invalid Page Test
○ ○ ○ ● ○ ○ ● ○			MMU Write Writeable InvalidPage Test
○ ○ ○ ● ○ ○ ● ●			Main Memory Timeout Test
○ ○ ○ ● ○ ● ○ ○ ○			Control Space Timeout Test
○ ○ ○ ● ○ ● ○ ●			Range Error Test
○ ○ ○ ● ○ ● ● ○			Size Error Test
○ ○ ○ ● ○ ● ● ●			Parity Memory Test
○ ○ ○ ● ● ○ ○ ○ ○			CPU Cache Tag RAM Tests
○ ○ ○ ● ● ○ ○ ●			CPU Cache Data RAM Tests
○ ○ ○ ● ● ○ ● ○			CPU Cache Functional Tests
○ ○ ○ ● ● ○ ● ●			VME Loopback Tests
○ ○ ○ ● ● ● ○ ○ ○			IOC Tag RAM Tests
○ ○ ○ ● ● ● ○ ●			IOC Data RAM Tests
○ ○ ○ ● ● ● ○ ●			IOC Functional Tests

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[Comments and Suggestions](#) 

Sun 4300 Address Decoding

The physical address and the byte in error are used to determine a failing SIMM module. Socket locations are silkscreened on the component side of the CPU and 3U Memory Boards, and on the solder side of the 9U Memory Board. This section includes examples of errors and charts for the Sun 4300 CPU, 3U Memory Boards and 9U Memory Boards.

Error Examples

CPU Switch In NORM Position

Parity Error detected on byte 0

(Physical address 0x01000000) with PC 0xFFE90048

Parity Error detected on byte 2

The location of the failing SIMM module is U1702.

CPU Switch In DIAG Position

error: at 0x000FFF8, expect 0x5A972C5a, obs 0x5AFE2C5 (looping)

Physical Address: 0x010FFFF8

(3U expansion memory) Expansion board #1 SIMM in Error: U0802

(9U expansion memory) SIMM in Error: U1702

The location of the failing SIMM module is U1702.

Unexpected parity_memory_error at PC 0xffea1d4c.

Memory Error Address Register: 0x000ffffc. Instruction: d2030000.

Memory Error Control Register: 0x00000054.

Physical address: 0x004ffffc.

CPU board SIMM in Error: U1306

error: at addr 0x000ffffc, expect 0x000ffffc, obs0x00000002.(looping)

Physical address: 0x004ffffc.

The location of the failing SIMM module is U1306.

Sun-4300 CPU Board Memory Addressing

ADDRESS (Dec)	ADDRESS (Hex)	BANK	BYTE	SOCKET
0-4MB	000000-3fffff	0	0	U1300
0-4MB	000000-3fffff	0	1	U1301
0-4MB	000000-3fffff	0	2	U1302
0-4MB	000000-3fffff	0	3	U1303
4-8MB	000000-7fffff	1	0	U1304
4-8MB	000000-7fffff	1	0	U1305
4-8MB	000000-7fffff	1	1	U1306

4-8MB	000000-7fffff	1	1	U1307
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Sun 4300 Address Decoding

1st 3U Memory Board Addressing

ADDRESS (Dec)	ADDRESS (Hex)	BANK	BYTE	SOCKET
8-12MB	800000-bfffff	0	0	U1600
8-12MB	800000-bfffff	0	1	U1601
8-12MB	800000-bfffff	0	2	U1602
8-12MB	800000-bfffff	0	3	U1603
12-16MB	c00000-ffffff	1	0	U1604
12-16MB	c00000-ffffff	1	1	U1605
12-16MB	c00000-ffffff	1	2	U1606
12-16MB	c00000-ffffff	1	3	U1607
16-20MB	1000000-13fffff	2	0	U1700
16-20MB	1000000-13fffff	2	1	U1701
16-20MB	1000000-13fffff	2	2	U1702
16-20MB	1000000-13fffff	2	3	U1703
20-24MB	1400000-17fffff	3	0	U1704
20-24MB	1400000-17fffff	3	1	U1705
20-24MB	1400000-17fffff	3	2	U1706
20-24MB	1400000-17fffff	3	3	U1707

2nd 3U Memory Board Addressing

ADDRESS (Dec)	ADDRESS (Hex)	BANK	BYTE	SOCKET
24-28MB	1800000-1bfffff	0	0	U1600
24-28MB	1800000-1bfffff	0	1	U1601
24-28MB	1800000-1bfffff	0	2	U1602
24-28MB	1800000-1bfffff	0	3	U1603
28-32MB	1c00000-1ffffff	1	0	U1604
28-32MB	1c00000-1ffffff	1	1	U1605
28-32MB	1c00000-1ffffff	1	2	U1606
28-32MB	1c00000-1ffffff	1	3	U1607
32-36MB	2000000-23fffff	2	0	U1700
32-36MB	2000000-23fffff	2	1	U1701
32-36MB	2000000-23fffff	2	2	U1702
32-36MB	2000000-23fffff	2	3	U1703
36-40MB	2400000-27fffff	3	0	U1704
36-40MB	2400000-27fffff	3	1	U1705

36-40MB	2400000-27fffff	3	2	U1706
36-40MB	2400000-27fffff	3	3	U1707

1st 24 Mbytes of 9U Memory Board Addressing

ADDRESS (Dec)	ADDRESS (Hex)	BANK	BYTE	SOCKET
8-12MB	800000-bfffff	0L	0	U1600
8-12MB	800000-bfffff	0L	1	U1601
8-12MB	800000-bfffff	0L	2	U1602
8-12MB	800000-bfffff	0L	3	U1603
12-16MB	c00000-ffffff	0H	0	U1604
12-16MB	c00000-ffffff	0H	1	U1605
12-16MB	c00000-ffffff	0H	2	U1606
12-16MB	c00000-ffffff	0H	3	U1607
16-20MB	1000000-13fffff	1L	0	U1700
16-20MB	1000000-13fffff	1L	1	U1701
16-20MB	1000000-13fffff	1L	2	U1702
16-20MB	1000000-13fffff	1L	3	U1703
20-24MB	1400000-17fffff	1H	0	U1704
20-24MB	1400000-17fffff	1H	1	U1705
20-24MB	1400000-17fffff	1H	2	U1706
20-24MB	1400000-17fffff	1H	3	U1707
24-28MB	1800000-1bfffff	2L	0	U1800
24-28MB	1800000-1bfffff	2L	1	U1801
24-28MB	1800000-1bfffff	2L	2	U1802
24-28MB	1800000-1bfffff	2L	3	U1803
28-32MB	1c00000-1fffff	2H	0	U1804
28-32MB	1c00000-1fffff	2H	1	U1805
28-32MB	1c00000-1fffff	2H	2	U1806
28-32MB	1c00000-1fffff	2H	3	U1807

2nd 24 Mbytes of 9U Memory Board Addressing

ADDRESS (Dec)	ADDRESS (Hex)	BANK	BYTE	SOCKET
32-36MB	2000000-23fffff	3L	0	U1900
32-36MB	2000000-23fffff	3L	1	U1901
32-36MB	2000000-23fffff	3L	2	U1902
32-36MB	2000000-23fffff	3L	3	U1903
36-40MB	2400000-27fffff	3H	0	U1904
36-40MB	2400000-27fffff	3H	1	U1905
36-40MB	2400000-27fffff	3H	2	U1906

36-40MB	2400000-27fffff	3H	3	U1907
40-44MB	2800000-2bfffff	4L	0	U2000
40-44MB	2800000-2bfffff	4L	1	U2001
40-44MB	2800000-2bfffff	4L	2	U2002
40-44MB	2800000-2bfffff	4L	3	U2003
44-48MB	2c00000-2ffffff	4H	0	U2004
44-48MB	2c00000-2ffffff	4H	1	U2005
44-48MB	2c00000-2ffffff	4H	2	U2006
44-48MB	2c00000-2ffffff	4H	3	U2007
48-52MB	3000000-33fffff	5L	0	U2100
48-52MB	3000000-33fffff	5L	1	U2101
48-52MB	3000000-33fffff	5L	2	U2102
48-52MB	3000000-33fffff	5L	3	U2103
52-56MB	3400000-1ffffff	5H	0	U2104
52-56MB	3400000-1ffffff	5H	1	U2105
52-56MB	3400000-1ffffff	5H	2	U2106
52-56MB	3400000-1ffffff	5H	3	U2107

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun 4400

Self-Test Error Codes

0	LEDs	7	SYSTEM ACTIVITY	PROBLEM BOARD					
●	○	○	○	○	○	○	○	LED Loop Test(Walking LEDs)	CPU Board
○	○	○	○	○	○	○	○	SCC Write-Read Test	CPU Board
●	○	○	○	○	○	○	○	Initialize SCC UART	CPU Board
○	●	○	○	○	○	○	○	'Boot PROM Selftest' Message	CPU Board (Boot PROM)
●	●	○	○	○	○	○	○	EPROM Checksum Test	CPU Board
○	○	●	○	○	○	○	○	Context Register Write-Read Test	CPU Board (MMU)
●	○	●	○	○	○	○	○	Region Map Test(s)	CPU Board
○	●	●	○	○	○	○	○	Segment Map Test(s)	CPU Board (MMU)
●	●	●	○	○	○	○	○	Page Map Test(s)	CPU Board (MMU)
○	○	○	●	○	○	○	○	Software Traps Test	CPU Board
●	○	○	●	○	○	○	○	Interrupts Register Test	CPU Board
○	●	○	●	○	○	○	○	Software Interrupts Test	CPU Board
●	●	○	●	○	○	○	○	Bus Error Register Test	CPU Board
○	○	●	●	○	○	○	○	MIC Registers Write-Write-Read Test	CPU Board
●	○	●	●	○	○	○	○	MIN Registers Write-Write-Read Test	CPU Board
○	●	●	●	○	○	○	○	MIC Trace Test	CPU Board
●	●	●	●	○	○	○	○	TOD Interrupt Test	CPU Board
○	○	○	○	●	○	○	○	Video Memory Test	CPU Board
●	○	○	○	●	○	○	○	Limited Main Memory Test(s)	Memory Board
○	●	○	○	●	○	○	○	EEPROM Test(s)	CPU Board (MMU)
●	●	○	○	●	○	○	○	MMU Read/Write Test(s)	CPU Board (MMU)
○	○	●	○	●	○	○	○	Timeout Test(s)	CPU Board
●	○	●	○	●	○	○	○	Size Error Test	CPU Board
○	●	●	○	●	○	○	○	ECC Memory Test(s)	Memory Board
●	●	●	○	●	○	○	○	CPU Cache Tag RAM Test(s)	CPU Board
○	○	○	○	●	●	○	○	CPU Cache Data RAM Test(s)	CPU Board
●	○	○	○	●	●	○	○	CPU Cache Read/Write Hit-Miss Test(s)	CPU Board (CC gate array)
○	●	○	○	●	●	○	○	Block Copy Test(s)	CPU Board
●	●	○	○	●	●	○	○	VME Loopback Test	CPU Board
○	○	●	●	●	○	○	○	IOC Tag RAM Test(s)	CPU Board
●	○	●	●	●	○	○	○	IOC Data RAM Test(s)	CPU Board
○	●	●	●	●	○	○	○	IOC Functional Tests Read/Write/Flush	CPU Board

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[Comments and Suggestions](#) 

Interrupt Levels

SPARC	Sun-4	Sun-4c	Sun-4m
Level 1	SW1	SW1	SW1
Level 2	VME1	SBus2	SW2, VME1, SBus1
Level 3	VME2	SBus3, SCSI	SW3, VME2, SBus2
Level 4	SW4, SCSI	SW4	SW4, On-board SCSI
Level 5	VME3	SBus4, Ethernet	SW5, VME3, SBus3
Level 6	SW6, Ethernet	SW6	SW6, On-board Ethernet
Level 7	VME4	SBus5, Video	SW7, VME4, SBus4
Level 8	Video	SBus6	SW8, On-board Video
Level 9	VME5	SBus7	SW9, VME5, SBus5
Level 10	System C/T	System C/T	SW10, System C/T
Level 11	VME6	Floppy	SW11, VME6, SBus6, Floppy
Level 12	KBD/MS/SCC	KBD/MS/SCC	SW12, KBD/MS/SCC
Level 13	VME7	Audio	SW13, VME7, SBus7, Audio
Level 14	Kernel C/T	Kernel C/T	SW14, Kernel C/T
Level 15	Memory Error	Async Mem Error	SW15, Async Errors

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[Comments and Suggestions](#) 

Printer

Connector Pinouts

[SBus Printer Card](#)

[SPARCprinter](#)

Printers

[LaserWriter II](#)

[SPARCprinter](#)

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Connector Pinouts

SBus Printer Card 501-1540 Video Port
 SBus Printer Card 501-1910 Video Port
 20-Pin to 25-Pin Cable 370-1365
 20-Pin Hi-Density Female

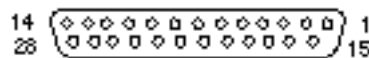
Board Connector



PIN	SIGNAL	PIN	SIGNAL
1	VCLK+	11	VCLK-
2	LSYNC+	12	LSYNC-
3	STATUS+	13	STATUS-
4	PSYNC+	14	PSYNC-
5	Do not use	15	Do not use
6	Do not use	16	Do not use
7	Do not use	17	Do not use
8	CBUSY-	18	CBUSY+
9	CMD+	19	CMD-
10	VDATA+	20	VDATA-

SBus Printer Card 501-1540 Parallel Port
 SBus Printer Card 501-1910 Parallel Port
 28-Pin to 28-Pin Cable 530-1694
 28-Pin to 36-Pin Cable 530-1680
 28-Pin Hi-Density Female

Board Connector



PIN	SIGNAL	PIN	SIGNAL
1	DATA 0	15	Do not use
2	DATA 1	16	Do not use
3	DATA 2	17	Do not use
4	DATA 3	18	Do not use
5	DATA 4	19	Do not use
6	DATA 5	20	GND
7	DATA 6	21	GND
8	DATA 7	22	Do not use
9	GND	23	GND
10	DS	24	GND
11	BUSY	25	ACK
12	RESET	26	OUT/IN
13	AFXT	27	PE
14	SELECT	28	ERROR

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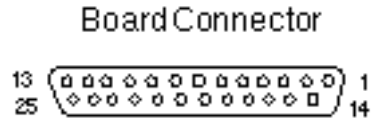
[Comments and Suggestions](#) 

Connector Pinouts

SPARCprinter

20-Pin to 25-Pin Cable 370-1365

25-Pin Female D-Sub



PIN	SIGNAL	PIN	SIGNAL
1	VCLK+	14	VDATA+
5	LSYNC+	18	LSYNC-
7	STATUS+	20	LSYNC-
11	PSYNC+	24	PSYNC-
23	CBUSY-	13	CBUSY+
9	CMD+	22	CMD-
3	VDATA+	16	VDATA-

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[Comments and Suggestions](#) 

LaserWriter II

LW-1	LW-2	LW-3
115V LaserWriter	240V LaserWriter	115V LaserWriter A4 Paper Tray

PART #	DESCRIPTION
365-1040	LaserWriter II Assembly, A4 Paper Tray (240V)
370-1189	■ LaserWriter II Print Engine (240V)
370-1196	■ NT Controller PCA
536-1003	■ AC Power Cord (240V)
350-1015	■ A4 Paper Tray Assembly
330-1162	■ A4 Paper Tray Base
330-1163	■ A4 Paper Tray Top
365-1041	LaserWriter II Assembly, Letter/Legal Paper Tray (115V)
370-1188	■ LaserWriter II Print Engine (115V)
370-1196	■ NT Controller PCA
536-1002	■ AC Power Cord (115V)
350-1014	■ Letter/Legal Paper Tray Assembly
330-1160	■ Letter/Legal Paper Tray Base
330-1161	■ Letter/Legal Paper Tray Top
365-1067	LaserWriter II Assembly, A4 Paper Tray (115V)
370-1188	■ LaserWriter II Print Engine (115V)
370-1196	■ NT Controller PCA
536-1002	■ AC Power Cord (115V)
350-1015	■ A4 Paper Tray Assembly
330-1162	■ A4 Paper Tray Base
330-1163	■ A4 Paper Tray Top
150-1279	LaserWriter II Toner Cartridge
530-1172	LaserWriter Cable, DB-25 Male to DB-25 Male
530-1433	LaserWriter Cable, DB-25 Male to DB-25 Female

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SPARCprinter

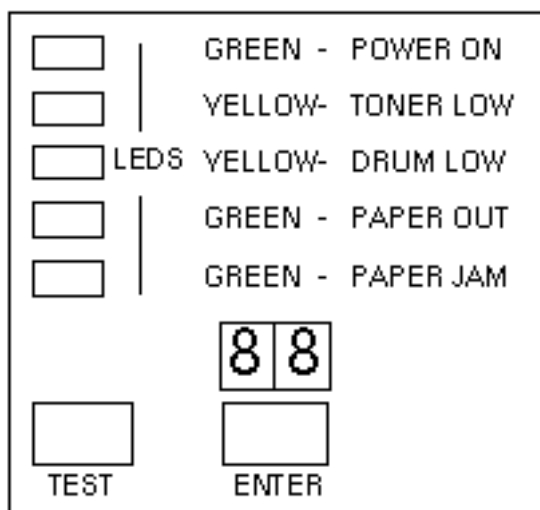
Option SPRN-400 Xerox 4030

PART #	DESCRIPTION
365-1089	SPARCprinter (115V & 240V)
365-1124	Toner Cartridge ¹
365-1125	Drum Cartridge ²
365-1126	Universal Paper Tray
365-1127	B4 Paper Tray
370-1365	Video Port Cable, Video Port to SPARCprinter
410-1017	Reusable Field Service Transit Case
501-1540	SBus Printer Board
530-1680	Parallel Port Cable
530-1683	Loopback Test Cable, Parallel Port to Video Port
530-1694	Test Cable, Video Port to Video Port
811-1345	Front Cover
811-1316	Corotron Assembly
811-1687	Fuser Wick 94E95090 (available from SunExpress)

1. The life of the Toner Cartridge is 8000 pages. A J5 error code indicates a low toner condition. Reset the display when a new Toner Cartridge is installed.
 - a. Turn the AC power OFF.
 - b. Replace the Toner Cartridge.
 - c. Turn the AC power ON.
 - d. Press the Reset button located next to the power switch.
2. The life of the Drum Cartridge is 20,000 pages. Reset the print counter when a new Drum Cartridge is installed.
 - a. Turn the AC power OFF.
 - b. Install a new Drum Cartridge.
 - b. Press and hold the Reset button located next to the power switch.
 - c. Turn the AC power ON.
 - d. Release the Reset button.

Do not reset the print counter unless a new Drum Cartridge is installed. Resetting the print counter without replacing the Drum Cartridge causes mechanical damage to the SPARCprinter when the toner sump fills.

SPARCprinter Operator Panel



TEST and ENTER are hidden from view

SPARCprinter IOT Test Print

1. Switch the printer OFF.
2. Press and hold TEST.
3. Switch the printer ON.
4. Release TEST. 00 is displayed. The printer must warm-up for approximately one minute in order to print a test page.
5. Press ENTER to start printing the IOT test print. The display indicates the number of test pages printed.
6. Press ENTER to stop printing the IOT test print.
7. Switch the printer OFF to exit the IOT Test Print Mode.

Reference

SPARCprinter Service Guide, 800-5044-10.

SPARCprinter Input Component Tests

1. Switch the printer OFF.
2. Press and hold ENTER.
3. Switch the printer ON.
4. Release ENTER. The Operator Panel displays 02.
5. Press ENTER to select the Input Component Tests. The Operator Panel displays 00.
6. The following input components can be tested: Fuser Exit Sensor, Toner Cartridge Switch, Paper Size Sensors, Drum Cartridge Switch, Paper Tray Empty Sensors, Manual Bypass Feature Switch, Reset Switch, Interlock Switch, and Test Switch. The input component is functional if the value displayed in the Operator Panel increases when the component is activated.
7. Switch the printer OFF to exit the Sensor Check Diagnostics

SPARCprinter Output Component Tests

1. Switch the printer OFF.
2. Press and hold ENTER.
3. Switch the printer ON.
4. Press TEST until the desired diagnostic test number is displayed in the Operator Panel. The following output components can be tested:

Component	Test Code
Print Counter	30
Upper Feed Clutch	80
Lower Feed Clutch	81
Registration Clutch	82
Upper Turn Roll Clutch	84
Lower Turn Roll Clutch	84
Main Motor & Erase Lamp	90
HVPS	90

5. Press ENTER to test the component.
6. Switch the printer OFF to exit the Sensor Check Diagnostics.

SPARCprinter NVRAM Parameters

1. Switch the printer OFF.
2. Press and hold TEST and ENTER.
3. Switch the printer ON.
4. Release TEST.
5. Release ENTER when the display shows 03.
6. The NVRAM parameter and value are displayed.
7. Press ENTER to change a value.
8. Press TEST to store a new value.
9. Press TEST to display the next parameter.
10. Switch the printer OFF to exit the NVRAM Parameters.

Function	Address	Content
Processing Direction	0	xx ¹
Scanning Direction	1	xx ²
IOT Test Print	2	NA ³
Fuser Temperature	3	xx ⁴
Laser Power	4	xx ⁴
Resolution	5	xx ⁴
Video Mode	6	xx ⁴

Configuration	7	xx ³
Paper matrix	8	xx ⁴
Console Type	9	xx ⁴

1. Processing Direction controls the top and bottom page margin. Each increment from 0 to F adjusts the margin 0.5 mm.
2. Scanning Direction controls the left and right page margin. Each increment from 0 to 8 adjusts the margin 0.5 mm.
3. Press ENTER to print one test page.
4. Do NOT change these factory settings.

SPARCprinter Error Codes

RAP	DESCRIPTION
C3	No paper tray is detected.
C5	The paper tray is empty.
C9	A paper tray print was requested when there is paper in the manual feed tray.
E1	A paper jam at the infeed roller has occurred.
E4	A paper jam at the outfeed roller has occurred.
E5	The top cover is open.
J2	No drum cartridge is detected.
J3	No toner cartridge is detected.
J4	The drum cartridge has reached end of life.
J5	The toner cartridge is empty.
P1	The fuser has shut down
U1	The main motor speed dropped below normal during a print cycle.
U2	Laser Failure
U4	Fuser Failure

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Monitor

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[12-inch Color LCD](#)

[14-inch Color CRT](#)

[14-inch Color Entry-Level CRT](#)

[14-inch Monochrome LCD](#)

[15-inch Color CRT](#)

[15-inch Monochrome CRT](#)

[16-inch Color CRT](#)

[16-inch Premium Color CRT](#)

[16-inch Mid-Range Color CRT](#)

[17-inch Premium Color CRT](#)

[17-inch Entry-Level Color CRT](#)

[17-inch Greyscale CRT](#)

[19-inch Color CRT](#)

[19-inch Premium Color CRT](#)

[19-inch Greyscale CRT](#)

[19-inch Greyscale CRT with OCLI](#)

[19-inch Monochrome CRT](#)

[19-inch Monochrome CRT with OCLI](#)

[19-inch Hi-Resolution CRT](#)

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[20-inch Premium Color CRT](#)

[20-inch Premium Greyscale CRT](#)

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[Comments and Suggestions](#) 

Monitor and Image Size

Monitor size is the diagonal dimension of the CRT or the diagonal dimension of the CRT phosphor coating.

The image size of monitors may not be reflected in the monitor size listed in sales documents or price lists.

Image size is the horizontal and vertical dimension of the active display. The image size, or active display, is smaller than the CRT, Bezel, and Margin.

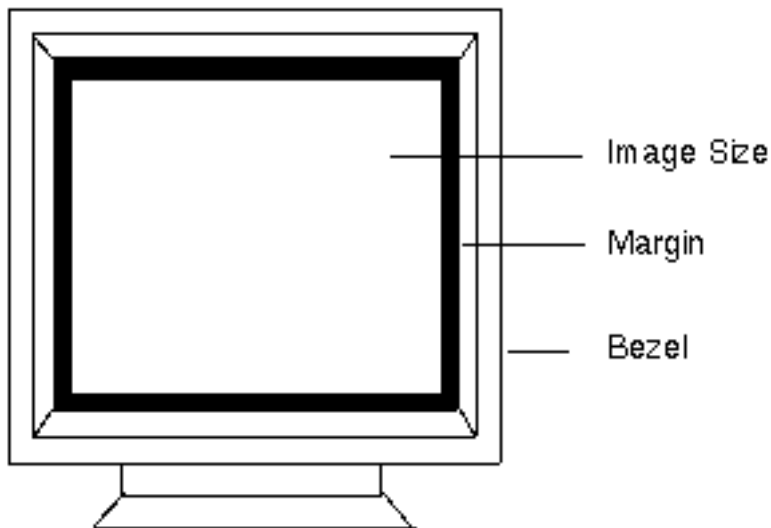
Sun Monitor Engineering Specifications define the horizontal and vertical dimensions of the image size shown in this section. The diagonal dimensions shown in this section are calculated from the horizontal and vertical dimensions and do not take into account CRT curvature.

The dimensions of the 19" Premium Color CRT are:

CRT Size: 20-inch diagonal (19" Phosphor Coating)

Bezel Size: 360 mm H x 283 mm V x 457 mm (17.99") D

Image Size: 350 mm H x 270 mm V x 442 mm (17.40") D

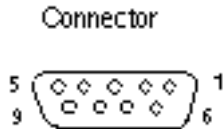


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[Comments and Suggestions](#) 

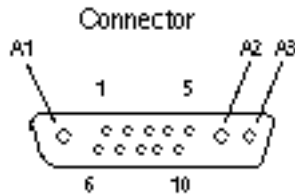
Connector Pinouts

Monochrome CRT
9-Pin Female D-Sub



PIN	SIGNAL	PIN	SIGNAL
1	VIDEO+	6	VIDEO-
2	GND	7	GND
3	HSYNC	8	GND
4	VSYNC	9	GND
5	Not used		

Color CRT DB13W3

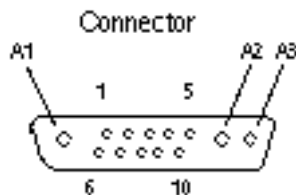


PIN	SIGNAL	PIN	SIGNAL
1	Monitor specific	8	SENSE1
2	Monitor specific	9	SENSE0
3	SENSE2	10	CRTN
4	SRTN	A1	Red
5	CSYNC	A2	Green
6	Monitor specific	A3	Blue
7	Monitor specific		

Pins 1, 2, 6, and 7 are GND on the SBus GX+.

Pin-2 is VSYNC and Pin-6 is HSYNC on the SBus CG3.

Greyscale CRT DB13W3



PIN	SIGNAL	PIN	SIGNAL
1	Monitor specific	8	SENSE1
2	Monitor specific	9	SENSE0
3	SENSE2	10	CRTN
4	SRTN	A1	Not used
5	CSYNC	A2	Green
6	Monitor specific	A3	Not used

7 Monitor specific



PIN	SIGNAL	PIN	SIGNAL
1	Red	9	Not used
2	Green	10	Sync Gnd
3	Blue	11	Gnd
4	Not used	12	DDC Data
5	Not used	13	Hsync
6	Red Gnd	14	Hsync
7	Green Gnd	15	DDC Clock
8	Blue Gnd		

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Video Cables

PART #	DESCRIPTION
530-0492	Color CRT Cable, 4.6M, 1xBNC to 1xBNC
530-1138	Color CRT Cable, 4.6M, 4xBNC to 4xBNC
530-1307	Color CRT Cable, 4.6M, 4xBNC to 4xBNC
530-1362	Color CRT Cable, 1.2M, 4xBNC to 4xBNC
530-1415	Color CRT Cable, 50 cm, 4xBNC to 4xBNC
530-1440	Color CRT Cable, 1.2M, DB13W3 to DB13W3
530-1446	Color CRT Video Adapter Cable, 4xBNC to DB13W3
530-1509	Color CRT Cable, 4.6M, DB13W3 to DB13W3
530-1839	Color CRT Cable, 1.0M, 90° DB13W3 to DB13W3, 75 Ohm
530-1840	Color CRT Cable, 4.0M, 90° DB13W3 to DB13W3, 75 Ohm
530-1870	Color CRT Cable, 1.2M, DB13W3 to DB13W3, 75 Ohm
530-1898	Color CRT Cable, 4.5M, DB13W3 to DB13W3, 75 Ohm
530-2020	Color CRT Ext Cable, 3.0M, DB13W3M to DB13W3F, 75 Ohm
530-2357	Color CRT Video Adapter Cable, HD15M to DB13W3
530-1308	Greyscale CRT Cable, 4.6M, 2xBNC to 2xBNC
530-1363	Greyscale CRT Cable, 1.2M, 2xBNC to 2xBNC
530-1511	Greyscale CRT Video Adapter Cable, 2xBNC to DB13W3
530-1041	TTL Monochrome Cable, DB-9 to DB-9 (Sun-2/150U)
530-1109	CRT Monochrome Cable, 75 cm, DB-9 to DB-9
530-1125	TTL Monochrome Cable, 4.6M, DB-9 to DB-9
530-1133	CRT Monochrome Cable, 4.6M, DB-9 to DB-9
530-1242	CRT Monochrome Cable, 75 cm, DB-9 to DB-9
530-1336	CRT Monochrome Cable, 4.6M, DB-9 to DB-9
530-1359	CRT Monochrome Cable, 1.2M, DB-9 to DB-9

Last updated: December 2, 1996

[Comments and Suggestions](#) 

12-inch Color LCD

Image Size:

239 mm Horizontal

179 mm Vertical

299 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Data Clock
1024 x 768	51.9KHz	67.2Hz	27MHz*

PART #	DESCRIPTION
540-2452	12" Color LCD

* The effective Pixel Rate for the 27.000MHz Data Clock is 54.000MHz.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

14-inch Color CRT

Image Size:

244 mm Horizontal

183 mm Vertical

305 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1024 x 768	53.6KHz	66Hz	70.4MHz

PART #	DESCRIPTION
	Seiko CM1421-03
360-1033	15V Monitor, FCC-A, 4xBNC
530-1370	Power Cord, IEC 320/CEE 22 to NEMA 5-15, USA
	Seiko CM1421-33
360-1034	240V Monitor, FCC-A, 4xBNC
530-1583	Power Cord, IEC 320/CEE 22 to SEV 1011-24507, Swiss
530-1410	Power Cord, IEC 320/CEE 22 to CEE 7-VII, Europe
530-1411	Power Cord, IEC 320/CEE 22 to BS1363, UK
360-1035	115V Monitor, FCC-B, 4xBNC (obsolete)
530-1370	Power Cord, IEC 320/CEE 22 to NEMA 5-15, USA
360-1036	240V Monitor, FC-B, 4xBNC (obsolete)
530-1583	Power Cord, IEC 320/CEE 22 to SEV 1011-24507, Swiss
530-1410	Power Cord, IEC 320/CEE 22 to CEE 7-VII, Europe
530-1411	Power Cord, IEC 320/CEE 22 to BS1363, UK

BNC Adapter 530-1446 DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	Not used	A3	Blue
7	Not used		

S2 is grounded. The Sense Code is 3.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

14-inch Entry-Level Color CRT

Image Size:

255 mm Horizontal

191 mm Vertical

319 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
800 x 600	46.875KHz	75.000Hz	49.50MHz
1024 x 768	48.363KHz	60.004Hz	65.00MHz

PART #	DESCRIPTION
	Samsung CQB4157L , .28 mm Dot-Pitch
365-1350	115V/240V Monitor, SVGA, HD-15
365-1351	115V/240V OEM Monitor, SVGA, HD-15

HD15 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Red	9	Not used
2	Green	10	Sync Gnd
3	Blue	11	Gnd
4	Not used	12	DDC Data
5	Not used	13	Hsync
6	Red Gnd	14	Vsync
7	Green Gnd	15	DDC Clock
8	Blue Gnd		

Last updated: December 2, 1996

[Comments and Suggestions](#) 

14-inch Monochrome LCD

Image Size:

274 mm Horizontal

214 mm Vertical

347 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Data Clock
1152 x 900	64.5KHz	60.2Hz	4.9MHz *

PART #	DESCRIPTION
540-2453	14" Monochrome LCD

* The effective Pixel Rate for the 4.9091MHz Data Clock is 78.5456MHz.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

15-inch Color CRT

Image Size:

262 mm Horizontal

200 mm Vertical

329 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.94MHz

PART #	DESCRIPTION
	Hitachi HM-4115-D-BA
360-1015	115V/240V Monitor, 4xBNC
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Hitachi HM-4115-D-BA
360-1020	240V Monitor, 4xBN
150-1051	Fusecarrier
140-1034	Fuse, 2A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail

BNC Adapter 530-1446 DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	Not used	A3	Blue
7	Not used		

S2 is grounded. The Sense Code is 3.

15-inch Color CRT

Image Size:

260 mm Horizontal

195 mm Vertical

325 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.5MHz
1024 x 768	62.0KHz	77Hz	84.37MHz

PART #	DESCRIPTION
	Nokia 449A101, .28 mm Dot-Pitch
365-1286	115V/240V Monitor, DB13W3, FCC-B/VCCI-2, ELF/VLF with non-removable 1.2M Video Cable
	Nokia 449A101, .28 mm Dot-Pitch
365-1327	115V/240V Monitor, DB13W3, FCC-B/VCCI-2, ELF/VLF, Energy Star, with non-removable 1.2M Video Cable

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Connected to Pin-10	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	Not used	A3	Blue
7	Connected to Pin-10		

S0, S1, and S2 are grounded. The Sense Code is 0.

Note

The monitor synchronizes horizontally from 30KHz to 62KHz and vertically from 48Hz to 100Hz.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

15-inch Monochrome CRT

Image Size:

250 mm Horizontal

187 mm Vertical

312 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1024 x 768	63.96KHz	76Hz	85.96MHz

PART #	DESCRIPTION
360-1026	115V Monitor, DB9
530-1372	Power Cord, IEC 320/CEE 22 to NEMA 5-15, USA
360-1038	240V Monitor, DB9
530-1583	Power Cord, IEC 320/CEE 22 to SEV 1011-24507, Swiss
530-1410	Power Cord, IEC 320/CEE 22 to CEE 7-VII, Europe
530-1411	Power Cord, IEC 320/CEE 22 to BS1363, UK

Last updated: December 2, 1996

[Comments and Suggestions](#) 

16-inch Color CRT

Image Size:

295 mm Horizontal

230 mm Vertical

374 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.94MHz

PART #	DESCRIPTION
365-1020	115V Sony P2 GDM-1604-15 Monitor, 4xBNC
150-1225	Fuse, 4A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1022	240V Sony P2 GDM-1604-40 Monitor, 4xBNC
150-1226	Fuse, 3.15A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
365-1063	115V Sony P2 GDM-1604B-15 Monitor, DB13W3
150-1225	Fuse, 4A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1064	240V Sony P2 GDM-1604B-40 Monitor, DB13W3
150-1226	Fuse, 3.15A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
365-1079	115V Sony P2 GDM-1604A-15 Monitor, DB13W3, FCC-A
150-1225	Fuse, 4A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1080	240V Sony P2 GDM-1604A-40 Monitor, DB13W3, FCC-A
150-1226	Fuse, 3.15A
365-1092	115V Sony P2 GDM-1604B-15 Monitor, DB13W3, FCC-B
150-1225	Fuse, 4A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1093	240V Sony P2 GDM-1604B-40 Monitor, DB13W3, FCC-B
150-1226	Fuse, 3.15A

	Philips/Fimi C1764
	SPARCstation IPC Option LPC
365-1143	115V Monitor, DB13W3, FCC-B/VCCI-2
	Philips/Fimi C1764
	SPARCstation IPC Option LPC
365-1146	240V Monitor, DB13W3, FCC-B/VCCI-2

Notes

1. S0 and S1 are grounded. The Sense Code is 4.
2. DB13W3 Pins 1, 2, 6, and 7 are not used.

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Connected to Pin-10	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	Not used	A3	Blue
7	Connected to Pin-10		

S2 is grounded. The Sense Code is 3.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

16-inch Premium Color CRT

Image Size:

295 mm Horizontal

230 mm Vertical

374 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
944 x 736	70.8KHz	84Hz	92.94MHz *
1076 x 824	71.7KHz	76Hz	105.5MHz **
1152 x 900	61.8KHz	66Hz	92.94MHz
1152 x 900	71.7KHz	76Hz	105.5MHz

PART #	DESCRIPTION
	Sony P3 GDM-1662, .31 mm Dot-Pitch
365-1096	115V/240V Monitor, DB13W3, FCC-A/VCCI-1 (not used)
	Sony P3 GDM-1662 or GDM-1662B, .31 mm Dot-Pitch
365-1107	115V/240V OEM Monitor, DB13W3, FCC-B/VCCI-2
365-1113	115V/240V Monitor, DB13W3, FCC-B/VCCI-2
	Sony P3 GDM-1662B, .31 mm Dot-Pitch
365-1130	115V/240V Monitor, DB13W3, FCC-B/VCCI-2, VLF
365-1147	115V/240V Southern Hemisphere Monitor, DB13W3, VLF
	Sony P3 GDM-1662B, .31 mm Dot-Pitch with Video Cable 530-1870
365-1159	115V/240V Monitor, DB13W3, FCC-B/VCCI-2, VLF
365-1161	115V/240V S. Hemisphere Monitor, DB13W3, VLF
365-1289	115V/240V OEM Monitor, DB13W3, VLF

* The Mode III (1024 x 800 @ 84) Overscan Mode user area is 944 x 736.

** The Mode II (1152 x 900 @ 76) Overscan Mode user area is 1076 x 824.

Notes

1. S0 is grounded. The Sense Code is 6.
2. DB13W3 Pins 1, 2, 6, and 7 are not used.
3. The overscan mode is not supported at 66Hz vertical refresh.
4. The Frame Buffer revisions listed below do not decode the monitor sense code. Video is not displayed upon power-up until the video cable is removed and reconnected.

P4 CG6, 501-1505-03 and below

P4 CG6, 501-1532-09 and below

SBus CG6, 501-1481-04 and below

SBus CG6 501-1645-03 and below.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

16-inch Mid-Range Color CRT

Image Size:

95 mm Horizontal

226 mm Vertical

371 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.94MHz
1024 x 768	62.0KHz	77Hz	84.37MHz

PART #	DESCRIPTION
365-1151	Sony CPD-1790 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, with non-removable 1.2M Video Cable
365-1164	115V/240V S. Hemisphere Monitor, DB13W3, FCC-B/VCCI-2, with non-removable 1.2M Video Cable
365-1165	115V/240V European Monitor, DB13W3, FCC-B/VCCI-2, Swedish MPR-2, with non-removable 1.2M Video Cable
365-1166	115V/240V OEM Monitor, DB13W3, FCC-B/VCCI-2, with non-removable 1.2M Video Cable

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense 1
2	Not used	9	Sense 0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	Not used	A3	Blue
7	Not used		

S2 is grounded.

The Sense Code is 3.

SS4 Compatibility Matrix ¹

MODEL	PART #	COMPATIBLE
Xterm 1	>=501-2540-03	Yes
Xterm 1	>=501-3025-02	Yes
70MHz	>=501-2861-02	Yes

70MHz	>=501-3002-02	Yes
85MHz	>=501-2549-03	Yes
85MHz	>=501-2928-02	Yes
110MHz	>=501-3008-03	Yes
110MHz	501-3109-xx	Yes ²
110MHz	501-3134-xx	Yes ²

Notes:

1. If the SPARCstation 4 tcx frame buffer outputs sync on green, the board is not compatible with the 16-inch monitor. The monitor can not remove sync from the green output. Sync on green causes a higher than normal green output level. Refer to BugID 1218690.
 2. Jumper J0501 on the SS4 CPU enables or disables sync on green.
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Last updated: December 2, 1996

[Comments and Suggestions](#) 

17-inch Premium Color CRT

Image Size:

300 mm Horizontal

234 mm Vertical

380 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	71.81KHz	76.14Hz	108MHz
1280 x 1024	81.13KHz	76.11Hz	135MHz

PART #	DESCRIPTION
365-1316	Sony N1 GDM-17E10, .26 mm Dot-Pitch 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, with non-removable 1.2M Video Cable
365-1319	Sony N1 GDM-17E10, .26 mm Dot-Pitch 115V/240V OEM Monitor, DB13W3, FCC-B/VCC1-2 with non-removable 1.2 Video Cable
365-1321	Sony N1 GDM-17E10, .26 mm Dot-Pitch 115V/240V Southern Hemisphere Monitor, DB13W3, FCC-B/VCC1-2 with non-removable 1.2 Video Cable

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	RS232 clock in put	8	Sense1
2	RS232 data in	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	RS232 data out	A3	Blue
7	Not used		

S0 is grounded. The Sense Code is 5.

17-inch Premium Color CRT

Image Size:

300 mm Horizontal

225 mm Vertical

375 mm Diagonal

Image Size:

293 mm Horizontal

234 mm Vertical

375 mm Diagonal

PART #	DESCRIPTION
365-1338	Sony N2 GDM17E20, .26 mm Dot-Pitch 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, with non-removable 1.2M Video Cable
365-1339	Sony N2 GDM17E20, .26 mm Dot-Pitch 115V/240V OEM Monitor, DB13W3, FCC-B/VCC1-2 with non-removable 1.2 Video Cable
365-1341	Sony N2 GDM17E20, .26 mm Dot-Pitch 115V/240V Southern Hemisphere Monitor, DB13W3, FCC-B/VCC1-2 with non-removable 1.2 Video Cable

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	SCL clock input for DDC1/2B	8	Sense1
2	+5Vdc from DDC framebuffer	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	SDA bi-directional serial data	A3	Blue
7	Sense3/Vsync		

S0 and S3 are grounded. The Sense Code is 6.

Pin-5 is Hsync if Vsync is present on Pin-7.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

17-inch Entry-Level Color CRT

Image Size:

300 mm Horizontal

225 mm Vertical

375 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	94.5MHz
1024 x 768	62.0KHz	77Hz	84.3MHz

PART #	DESCRIPTION
365-1343	Nokia, .28 mm Dot-Pitch 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, with non-removable 1.2M Video Cable
365-1345	Nokia, .28 mm Dot-Pitch 115V/240V OEM Monitor, DB13W3, FCC-B/VCCI-2, with non-removable 1.2M Video Cable

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense 1
2	Not used	9	Sense 0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	Not used	A3	Blue
7	S3/Vsync		

S0, S1, and S2 are grounded.

The Sense Code is 0.

Pin-7 is not connected on monitors marked DEV08773.

SS4 Compatibility Matrix ¹

MODEL	PART#	COMPATIBLE
Xterm 1	>=501-2540-03	Yes
Xterm 1	>=501-3025-02	Yes
70MHz	>=501-2861-02	Yes
70MHz	>=501-3002-02	Yes
85MHz	>=501-2549-03	Yes

85MHz	>=501-2928-02	Yes
110MHz	>=501-3008-03	Yes
110MHz	501-3109-xx	Yes ²
110MHz	501-3134-xx	Yes ²

Notes

1. If the SPARCstation 4 tcx frame buffer outputs sync on green, the board is not compatible with the 17-inch monitor. The monitor can not remove sync from the green output. Sync on green causes a higher than normal green output level. Refer to BugID 1218690.
 2. Jumper J0501 on the SS4 CPU enables or disables sync on green.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

17-inch Greyscale CRT

Image Size:

295 mm Horizontal

230 mm Vertical

374 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.94MHz

PART #	DESCRIPTION
365-1055	Zenith 17SMM1 90-240V Monitor, DB13W3
365-1094	Zenith 17SMM1 90-240V Monitor, DB13W3, FCC-B/VCCI-2

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Not used
5	Csync	A2	Green
6	Not used	A3	Not used
7	Not used		

S2 is grounded. The Sense Code is 3.

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
914 x 690	70.8KHz	84Hz	92.94MHz *
1024 x 780	71.7KHz	76Hz	105.5MHz **
1024 x 800	70.8KHz	84Hz	92.94MHz
1152 x 900	71.7KHz	76Hz	105.5MHz

PART #	DESCRIPTION
365-1100	Zenith 17SMM4-A 115V/240V Monitor, DB13W3, FCC-B/VCCI-2
365-1109	Zenith 17SMM4-B 115V/240V OEM Monitor, DB13W3, FCC-B/VCCI-2

365-1157	Zenith 17SMM4-A 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, with Video Cable 530-1870
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* The Mode III (1024 x 800 @ 84) Overscan Mode user area is 914 x 690.

** The Mode II (1152 x 900 @ 76) Overscan Mode user area is 1024 x 780.

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Not used
5	Csync	A2	Green
6	Not used	A3	Not used
7	Not used		

S2 is grounded. The Sense Code is 3.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Color CRT

Image Size:

255 mm Horizontal

280 mm Vertical

452 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.94MHz

PART #	DESCRIPTION
540-1094	Hitachi HM-4619 , .31 mm Dot-Pitch 115V Monitor, 4xBNC, Metal Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
360-1008	19" Monitor
365-1000	Ikegami DM-2050 , .31 mm Dot-Pitch Hitachi HM-4119-S-AA-0 , .31 mm Dot-Pitch Totoku CH-20U-64 , .31 mm Dot-Pitch 115V Monitor, 4xBNC, 395x535 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1006	Hitachi HM-4119-S-AA-0 , .31 mm Dot-Pitch 240V Monitor, 4xBNC, 395x535 mm Base
140-1034	Fuse, 2A
150-1051	Fusecarrier
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
365-1056	Hitachi HM-4119-S-AA-0 , .31 mm Dot-Pitch 115V Monitor, 4xBNC, 409x409 mm Base
140-1022	Fuse, 1.6A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1054	240V Monitor, 4xBNC, 409x409 mm Base
140-1034	Fuse, 2A
150-1051	Fusecarrier
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
365-1073	Hitachi HM-4119-S-DA-0L , .31 mm Dot-Pitch 115V/240V Monitor, DB13W3, FCC-A, 409x409 mm Base
365-1038	Sony P2 GDM-1955A15 , .31 mm Dot-Pitch 115V Monitor, 4xBNC
150-1225	Fuse, 4A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15

365-1039	Sony P2 GDM-1955A40 , .31 mm Dot-Pitch 240V Monitor, 4xBNC
150-1226	Fuse, 3.15A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
365-1065	Sony P2 GDM-1955A15 , .31 mm Dot-Pitch 115V Monitor, DB13W3
150-1225	Fuse, 4A
365-1066	Sony P2 GDM-1955A40 , .31 mm Dot-Pitch 240V Monitor, DB13W3
150-1226	Fuse, 3.15A
365-1081	Sony P2 GDM-1955A15 , .31 mm Dot-Pitch 115V Monitor, DB13W3, FCC-A/VCCI-1
150-1225	Fuse, 4A
365-1082	Sony P2 GDM-1955A40 , .31 mm Dot-Pitch 240V Monitor, DB13W3, FCC-A/VCCI-1
150-1226	Fuse, 3.15A

Notes

1. S2 is grounded. The Sense Code is 3.
2. DB13W3 Pins 1, 2, 6, and 7 are not used.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Premium Color CRT

Image Size:

350 mm Horizontal

270 mm Vertical

442 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1076 x 824	71.7KHz	76Hz	105.5MHz *
1152 x 900	61.8KHz	66Hz	92.94MHz
1152 x 900	71.7KHz	76Hz	105.5MHz
1280 x 1024	71.7KHz	67Hz	117MHz

PART #	DESCRIPTION
	Sony P3 GDM-1962 , .31 mm Dot-Pitch
365-1095	115V/240V Monitor, DB13W3, FCC-A/VCCI-1
365-1106	115V/240V OEM Monitor, DB13W3, FCC-A/VCCI-1 (obsolete)
	Sony P3 GDM-1962B , .31 mm Dot-Pitch
365-1112	115V/240V Monitor, DB13W3, FCC-B/VCCI-2, VLF
365-1148	115V/240V Southern Hemisphere Monitor, DB13W3, VLF
365-1153	115V/240V European Monitor, DB13W3, FCC-B/VCCI-2, Swedish MPR-2, with Video Cable 530-1870
	Sony P3 GDM-1962B with Video Cable 530-1870
365-1160	115V/240V Monitor, DB13W3, VLF
365-1162	115V/240V S. Hemisphere Monitor, DB13W3, VLF
365-1288	115V/240V OEM Monitor, DB13W3, FCC-B/VCCI-2, VLF

* The Mode II (1152 x 900 @ 76) Overscan Mode user area is 1076 x 824.

Notes

1. S0 and S1 are grounded. The Sense Code is 4.
2. DB13W3 Pins 1, 2, 6, and 7 are not used.
3. The overscan mode is not supported at 66Hz vertical refresh.
4. CG6 <=501-1505-03, <=501-1532-09, <=501-1481-04 or <=501-1645-03 do not decode the monitor sense code. No video is displayed when power is applied until the video cable is removed and reconnected.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Greyscale CRT

Image Size:

350 mm Horizontal

273 mm Vertical

443 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.94MHz

PART #	DESCRIPTION
540-1343	115V Monitor, 2xBNC, 395x535 mm Base
540-1514	115V Monitor, 2xBNC, 395x535 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
540-1567	240V Monitor, 2xBNC, 395x535 mm Base
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Philips M19P114A/6161 or M19P114A/S102/6102
365-1010	115V Monitor, 2xBNC, 395x535 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15, USA
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1009	240V Monitor, 2xBNC, 395x535 mm Base
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Philips M19P114A/616120
365-1053	115V Monitor, 2xBNC, 409x409 mm Base
140-1022	Fuse, 1.6A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1046	240V Monitor, 2xBNC, 409x409 mm Base
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Philips M19P114A/6127/20
365-1071	115V/240V Monitor, DB13W3, FCC-A, 409x409 mm Base

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency

1152 x 900	71.7KHz	76Hz	105.5Mhz
1076 x 824	71.7KHz	76Hz	105.5MHz *

PART #	DESCRIPTION
365-1099	Philips M20P110A/710320 115V/240V Monitor, DB13W3, FCC-B/VCCI-2
365-1108	Philips M20P110A/710320 115V/240V OEM Monitor, DB13W3, FCC-B/VCCI-2
365-1140	Philips M20P110A/7132 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, VLF
365-1154	Philips M20P110A/7132 or Capetronics DM8200 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, VLF, with Video Cable 530-1870

* The Mode II (1152 x 900 @ 76) Overscan Mode user area is 1076 x 824.

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Not used
5	Csync	A2	Green
6	Not used	A3	Not used
7	Not used		

S0 and S1 are grounded. The Sense Code is 4.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Greyscale CRT with OCLI

Image Size:

350 mm Horizontal

273 mm Vertical

443 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	92.94MHz

PART #	DESCRIPTION
	Philips M19P114T/6103
365-1008	240V Monitor, 2xBNC, 395x535 mm Base
150-1051	Fusecarrier
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
365-1052	240V Monitor, 2xBNC, 409x409 mm Base
150-1051	Fusecarrier
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail

BNC Adapter 530-1511 DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Not used
5	Csync	A2	Green
6	Not used	A3	Not used
7	Not used		

S2 is grounded in Adapter 530-1511.

The Sense Code is 3.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Monochrome CRT

Image Size:

350 mm Horizontal

273 mm Vertical

443 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	100MHz

PART #	DESCRIPTION
540-1062	Moniterm VR1000L20 or Philips M19P114A/6102 115V Monitor, DB9, without Base (3/50 dimple top)
360-1010	19" Monochrome Monitor
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1144	Moniterm VR1000L20 or Philips M19P114A/6102 115V Monitor, DB9, 409x409 mm Base
540-1893	409x409 mm Base Conversion Assembly
540-1062	115V Monitor, DB9, without Base (3/50 dimple top)
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
540-1562	Moniterm VR1000L20 or Philips M19P114A/6102 240V Monitor, DB9, 395x535 mm Base
150-1051	Fusecarrier
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
540-1240	Moniterm VR1000L20 or Philips M19P114A/6102 115V Monitor, DB9, 395x535 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1145	Moniterm VR1000L20 or Philips M19P114A/6102 115V Monitor, DB9, 409x409 mm Base
540-1893	409x409 mm Base Conversion Assembly
540-1240	115V Monitor, DB9, 395x535 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1016	Elston DM60-19A0-A104 Philips M19P114A/6118/10 115V Monitor, DB9, 395x535 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15

	Elston DM60-19A0-09-A104
365-1014	240V Monitor, DB9, 395x535 mm Base
150-1051	Fusecarrier
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Philips M19P114A/612420
365-1051	115V Monitor, DB9, 409x409 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Philips M19P114A/6128/20
365-1043	240V Monitor, DB9, 409x409 mm Base
150-1051	Fusecarrier
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Philips M19P114A/6128/20
365-1086	115V/240V Monitor, DB9, FCC-A/VCCI-1

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Monochrome CRT with OCLI

Image Size:

350 mm Horizontal

273 mm Vertical

443 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	61.8KHz	66Hz	100MHz

PART #	DESCRIPTION
	Philips M19P114A/6115
540-1358	115V Monitor (360-1023), DB9, without Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Philips M19P114A/6115
540-1565	240V Monitor, DB9, 395x535 mm Base
150-1051	Fusecarrier
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Philips M19P114A/6115
540-1357	115V Monitor (360-1023), DB9, 395x535 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Philips M19P114A/6119
365-1013	115V Monitor, DB9, 395x535 mm Base
365-1044	115V Monitor, DB9, 409x409 mm Base
140-1022	Fuse, 1.6A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Philips M19P114A/6120
365-1011	240V Monitor, DB9, 395x535 mm Base
365-1045	240V Monitor, DB9, 409x409 mm Base
150-1051	Fusecarrier
150-1215	Fuse, 1.6A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Philips M19P114A/6128/20
365-1087	115V Monitor, DB9, 409x409 mm Base, FCC-a/VCCI-1

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Hi-Resolution CRT

Image Size:

355 mm Horizontal

279 mm Vertical

452 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1600 x 1280	89.3KHz	67Hz	200MHz

PART #	DESCRIPTION
	Motorola L7101S-Y01
540-1427	115V Monitor, DB9, 395x535 mm Base
360-1014	19-inch Monitor
140-1002	Fuse, 3.15A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Motorola L7201S-Y01 or Displaytek L720IS-Y01
540-1571	240V Monitor, DB9, 395x535 mm Base
150-1208	Fuse, 1.5A
150-1051	Fusecarrier
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Motorola L7201S-Y01 or Displaytek L720IS-Y01
365-1005	115V Monitor, DB9, 395x535 mm Base
140-1002	Fuse, 3.15A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Motorola L7211S-Y01
365-1007	240V Monitor, DB9, 395x535 mm Base
365-1050	240V Monitor, DB9, 409x409 mm Base
365-1128	240V Monitor, DB9, 409x409 mm Base, FCC-A/VCCI-1
150-1208	Fuse, 1.5A
150-1051	Fusecarrier
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
	Motorola L7201S-Y01
365-1047	115V Monitor, DB9, 409x409 mm Base
365-1123	115V Monitor, DB9, 409x409 mm Base, FCC-A/VCCI-1
140-1002	Fuse, 3.15A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15

Last updated: December 2, 1996

[Comments and Suggestions](#) 

19-inch Hi-Resolution CRT with OCLI

Image Size:

355 mm Horizontal

279 mm Vertical

452 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1600 x 1280	89.3KHz	67Hz	200MHz

PART #	DESCRIPTION
	Motorola L7201S-Y01K
365-1004	115V Monitor, DB9, 395x535 mm Base
140-1002	Fuse, 3.15A
180-1097	Power Cord, IEC 320/CEE 22 to NEMA 5-15, USA
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
	Motorola L7211S-Y01K
365-1003	240V Monitor, DB9, 395x535 mm Base
150-1051	Fusecarrier
150-1208	Fuse, 1.5A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail
365-1048	115V Monitor, DB9, 409x409 mm Base
140-1002	Fuse, 3.15A
180-1146	Power Cord, IEC 320/CEE 22 to NEMA 5-15
365-1049	240V Monitor, DB9, 409x409 mm Base
150-1051	Fusecarrier
150-1208	Fuse, 1.5A
180-1125	Power Cord, IEC 320/CEE 22 to pigtail

Last updated: December 2, 1996

[Comments and Suggestions](#) 

20-inch Premium Color CRT

Image Size:

350 mm Horizontal

270 mm Vertical

442 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1076 x 824	71.7KHz	76Hz	108MHz *
1196 x 938	81.1KHz	76Hz	135MHz **
1152 x 900	61.8KHz	66Hz	94.5MHz
1152 x 900	71.8KHz	76Hz	108MHz
1280 x 1024	71.8KHz	67Hz	118MHz
1280 x 1024	81.1KHz	76Hz	135MHz

PART #	DESCRIPTION
Sony P4 GDM-20D10, .31 mm Dot-Pitch	
365-1167	115V/240V Monitor, DB13W3, FCC-B/VCCI-2, MPR 1990:10 with non-removable 1.2M Video Cable
365-1313	115V/240V OEM Monitor, DB13W3, FCC-B/VCCI-2, MPR 1990:10 with non-removable 1.2M Video Cable
365-1317	115V/240V Southern Hemisphere Monitor, DB13W3, FCC-B/VCCI-2, MPR 1990:10 with 1.2M Video Cable
365-1330	115V/240V Monitor, DB13W3, FCC-B/VCCI-2, MPR 1990:10 with non-removable 1.2M Video Cable
365-1322	115V/240V Sony P4 Korean Monitor, DB13W3, Energy Star, with non-removable 1.2M Video Cable
365-1324	115V/240V Sony P4 Monitor, DB13W3, Energy Star, with non-removable 1.2M Video Cable
365-1325	115V/240V Sony P4 S. Hemisphere Monitor, DB13W3, Energy Star, with non-removable 1.2M Video Cable
365-1326	115V/240V Sony P4 OEM Monitor, DB13W3, Energy Star, with non-removable 1.2M Video Cable
370-1576	Remote Control
370-1705	Remote Control without Logo
none	CR2025 3V Battery, 20 mm diameter x 2.5 mm height

* The Mode II (1152 x 900 @ 76) Overscan Mode user area is 1076 x 824.

** The Mode I (1280 x 1024 @ 135) Overscan Mode user area is 1196 x 938.

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	RS232 clock in put	8	Sense1

2	RS232 data in	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green
6	RS232 data out	A3	Blue

S0 and S1 are grounded. The Sense Code is 4.
Pin-7 is not used.

20-inch Premium Color CRT

Image Size:

350 mm Horizontal
270 mm Vertical
442 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
960 x 680	81.13KHz	112.37Hz	101MHz
1152 x 900	71.81KHz	76.14Hz	108MHz
1152 x 900	61.84KHz	66.00Hz	94.5MHz
1280 x 1024	81.13KHz	76.11Hz	135MHz
1280 x 1024	71.67KHz	66.67Hz	118MHz

PART#	DESCRIPTION
Sony N2, .31 mm Dot-Pitch	
365-1335	115V/240V Monitor, DB13W3, FCC-B, Energy Star with non-removable 1.2M Video Cable
365-1337	115V/240V OEM Monitor, DB13W3, FCC-B, Energy Star with non-removable 1.2M Video Cable
365-1340	115V/240V Southern Hemisphere Monitor, DB13W3, FCC-B, Energy Star with non-removable 1.2M Video Cable
365-1342	115V/240V Korean Monitor, DB13W3, FCC-B, Energy Star with non-removable 1.2M Video Cable

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	SCL DDC clock in put	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Red
5	Csync	A2	Green

6	SDA serial data I/O	A3	Blue
7	Vsync		

S0 and S1 are grounded. The Sense Code is 4.
Pin-5 is Hsync if Vsync is present on Pin-7.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

20-inch Premium Greyscale CRT

Image Size:

350 mm Horizontal

273 mm Vertical

443 mm Diagonal

Pixel Resolution	Horizontal Frequency	Vertical Frequency	Pixel Frequency
1152 x 900	71.8KHz	76Hz	105.5MHz
1280 x 1024	81.1KHz	76Hz	135MHz

PART #	DESCRIPTION
365-1168	Zenith 20S5 115V/240V Monitor, DB13W3, FCC-B/VCCI-2, MPR 1990:10 with non-removable 1.2M video cable
365-1320	Zenith 20S5 115V/240V Southern Hemisphere Monitor, DB13W3, FCC-B/VCCI-2, MPR 1990:10 with non-removable 1.2M video cable

DB13W3 Connector

PIN	SIGNAL	PIN	SIGNAL
1	Not used	8	Sense1
2	Not used	9	Sense0
3	Sense2	10	Cgnd
4	Sgnd	A1	Not used
5	Csync	A2	Green
6	Not used	A3	Not used
7	Not used		

S1 and S2 are grounded. The Sense Code is 6.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Input Device

[SunButtons](#)

[SunDials](#)

[Type-3 Keyboard](#)

[Type-3 Optical Mouse](#)

[Type-3 to Type-4 Spares Kit](#)

[Type-4 Keyboard](#)

[Type-5 Keyboard](#)

[Type-5c Keyboard](#)

[Type 101A Keyboard](#)

[Type-4 Optical Mouse](#)

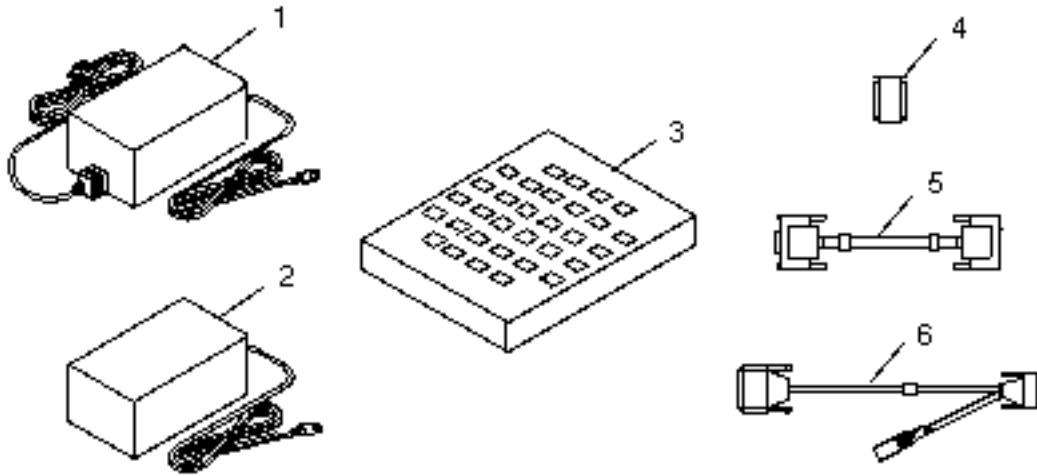
[Type-5 Optical Mouse](#)

Last updated: December 2, 1996

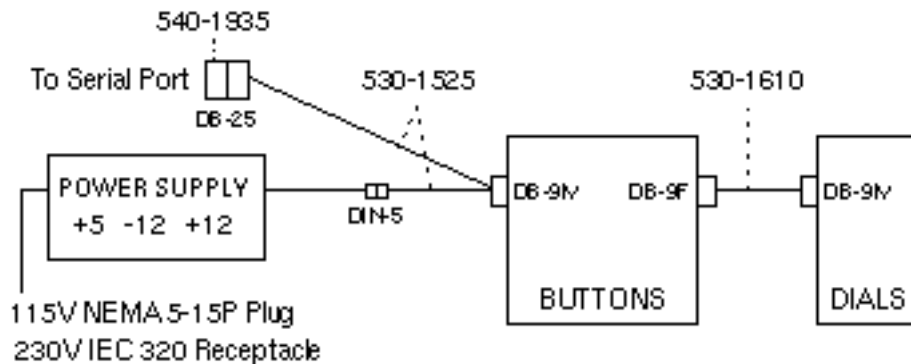
[Comments and Suggestions](#) 

SunButtons

Option 180



Wiring Diagram



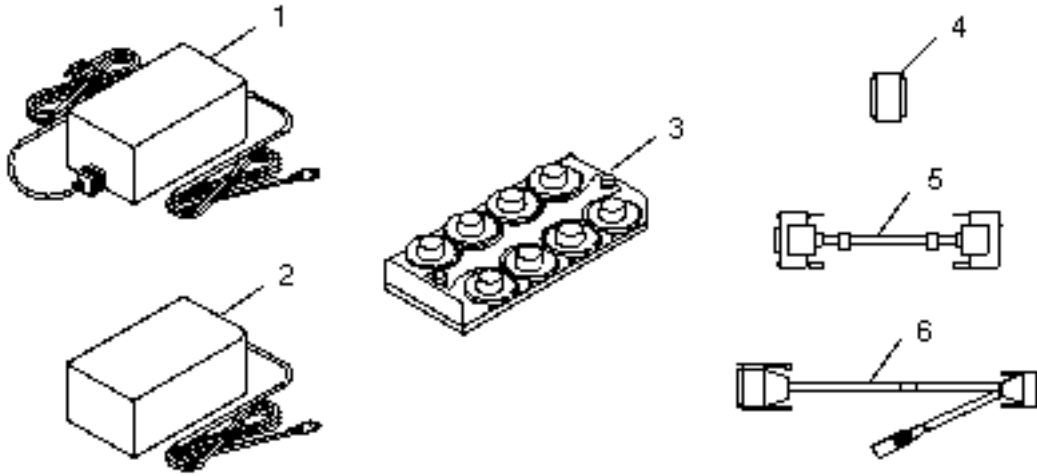
CODE	PART #	DESCRIPTION
-	595-1865	230V SunButtons Assembly
-	595-1884	115V SunButtons Assembly
1	300-1053	■ 115V Power Supply
2	300-1054	■ 230V Power Supply
3	370-1291	■ SunButtons Box
4	540-1935	■ RFI Filter, DB-25
5	530-1610	■ DB-9M to DB-9F Cable, 600 mm
6	530-1525	■ DB-9 to DB-15 to DIN-5 Cable, 2.0M
NS	180-1125	■ 230V AC Power Cord (obsolete)
NS	260-3861	■ Overlay Template

Last updated: December 2, 1996

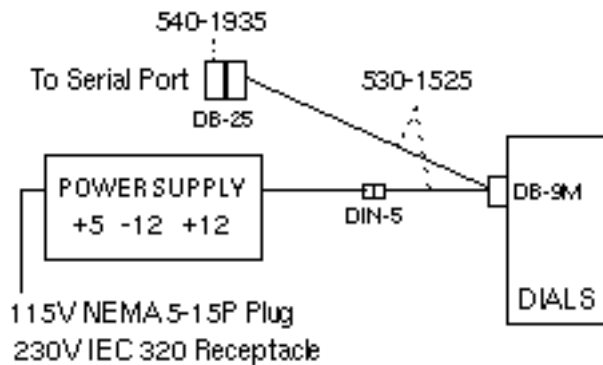
[Comments and Suggestions](#) 

SunDials

Option 190



Wiring Diagram



	PART #	DESCRIPTION
-	595-1737	115V SunDials Assembly
-	595-1773	230V SunDials Assembly
1	300-1053	■ 115V Power Supply
2	300-1054	■ 230V Power Supply
3	370-1223	■ Dialbox and Bale
4	540-1935	■ RFI Filter, DB-25
5	530-1610	■ DB-9M to DB-9F Cable, 600 mm
6	530-1525	■ DB-9 to DB-15 to DIN-5 Cable, 2.0M
NS	180-1125	■ 230V AC Power Cord (obsolete)
NS	260-3257	■ Overlay Template

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-3 Keyboard

PART #	DESCRIPTION
370-1063	Type-3 Keyboard, DB-15 (obsolete)
370-1095	Type-3 Keyboard, DB-15
530-1526	Type-3 Keyboard Adapter Cable, DB-15 to Mini-Din

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-3 Optical Mouse

PART #	DESCRIPTION
370-1058	M3 Mouse and Pad, RJ11 (obsolete)
370-1091	M3 Mouse and Pad, RJ11 (obsolete)
365-1042	M4 Mouse and Pad, RJ11
370-1169	■ M4 Mouse, 200 CPI, RJ11
370-1171	■ M4 Mouse Pad, 200 CPI, 0.062", 228.6 x 196.9 mm (obs)
370-1215	■ M4 Mouse Pad, 200 CPI, 0.032", 228.6 x 196.9 mm (obs)
370-1368	■ M4 Mouse Pad, 200 CPI, 0.032", 177.8 x 196.9 mm

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-3 to Type-4 Spares Kit

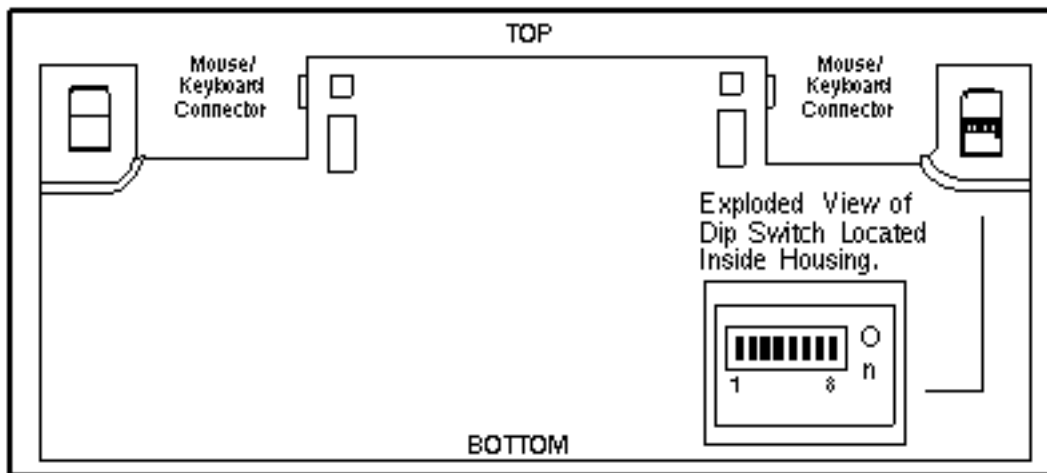
PART #	DESCRIPTION
560-1501	Type 3 Keyboard/Mouse to Type 4 Keyboard/Mouse Kit
320-1005	■ Type-4 Keyboard, Mini-Din, US
370-1170	■ M4 200 CPI Mouse, Mini-Din
370-1368	■ M4 Mouse Pad, 200 CPI, 0.032", 177.8 x 196.9 mm
530-1443	■ Keyboard Cable, Mini-Din to Mini Din, 4.6M
530-1479	■ Keyboard Cable, DB-15 to Mini Din, 4.6M

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-4 Keyboard

Underside of Keyboard



DESCRIPTION	DIP SWITCH								CODE
	1	2	3	4	5	6	7	8	
Sun-3/4 w ≥ 4.0 or 386i	Off	-	-	-	-	-	-	-	-
Sun-3 w ≤ 3.5	On	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	00
Belgium/French	-	-	-	-	-	-	On	-	02
French Canadian	-	-	-	-	-	-	On	On	03
Danish	-	-	-	-	-	On	-	-	04
German	-	-	-	-	-	On	-	On	05
Italian	-	-	-	-	-	On	On	-	06
Dutch	-	-	-	-	-	On	On	On	07
Norwegian	-	-	-	-	On	-	-	-	08
Portuguese	-	-	-	-	On	-	-	On	09
Spanish	-	-	-	-	On	-	On	-	0A
Swedish/Finnish	-	-	-	-	On	-	On	On	0B
Swiss/French	-	-	-	-	On	On	-	-	0C
Swiss/German	-	-	-	-	On	On	-	On	0D
United Kingdom	-	-	-	-	On	On	On	-	0E

Power

0.2 Amps @ +5Vdc
11.5 Watts

PART #	DESCRIPTION
320-1002	Type-4 Keyboard, Mini-Din, US (obsolete)
320-1005	Type-4 Keyboard, Mini-Din, US
320-1006	Type-4 Keyboard, Mini-Din, German

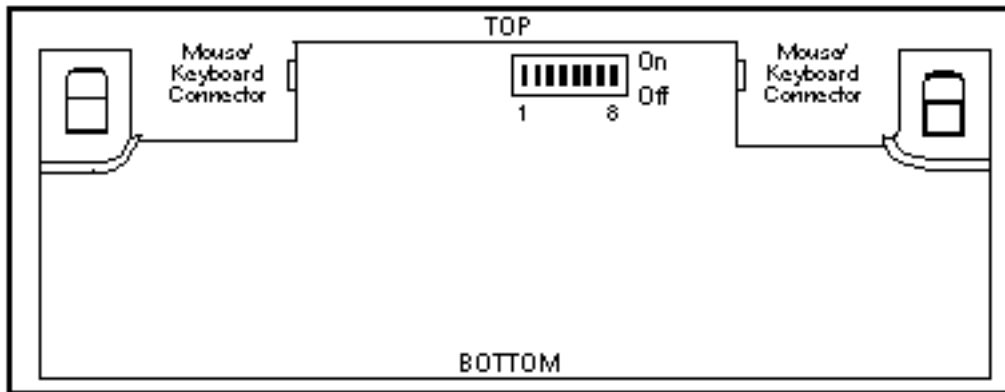
320-1007	Type-4 Keyboard, Mini-Din, Swiss German
320-1008	Type-4 Keyboard, Mini-Din, Belgium and France
320-1009	Type-4 Keyboard, Mini-Din, UK
320-1010	Type-4 Keyboard, Mini-Din, Swiss French
320-1011	Type-4 Keyboard, Mini-Din, Netherlands
320-1012	Type-4 Keyboard, Mini-Din, Sweden and Denmark
320-1013	Type-4 Keyboard, Mini-Din, Denmark
320-1014	Type-4 Keyboard, Mini-Din, Norway
320-1015	Type-4 Keyboard, Mini-Din, Italy
320-1016	Type-4 Keyboard, Mini-Din, Spanish
320-1017	Type-4 Keyboard, Mini-Din, Portugal
320-1018	Type-4 Keyboard, Mini-Din, French Canadian
530-1442	Keyboard Cable, Mini-Din to Mini Din, 2.0M
530-1443	Keyboard Cable, Mini-Din to Mini Din, 4.6M
530-1478	Keyboard Cable, DB-15 to Mini Din, 2.0M
530-1479	Keyboard Cable, DB-15 to Mini Din, 4.6M
530-1366	Sun386i Color and Keyboard Cable, DB21W4 to 4xBNC
530-1383	Sun386i Monochrome & Keyboard Cable, DB21W4 to DB9
530-1621	Sun386i Color & Keyboard Cable, DB21W4 to DB13W3

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-5 Keyboard

Underside of Keyboard



DESCRIPTION	DIP SWITCH								CODE
	1	2	3	4	5	6	7	8	
US	-	-	On	-	-	-	-	On	21
US/Unix	-	-	On	-	-	-	On	-	22
French	-	-	On	-	-	-	On	On	23
Danish	-	-	On	-	-	On	-	-	24
German	-	-	On	-	-	On	-	On	25
Italian	-	-	On	-	-	On	On	-	26
Dutch	-	-	On	-	-	On	On	On	27
Norwegian	-	-	On	-	On	-	-	-	28
Portuguese	-	-	On	-	On	-	-	On	29
Spanish	-	-	On	-	On	-	On	-	2a
Swedish/Finnish	-	-	On	-	On	-	On	On	2b
Swiss/French	-	-	On	-	On	On	-	-	2c
Swiss/German	-	-	On	-	On	On	-	On	2d
UK	-	-	On	-	On	On	On	-	2e
Korean	-	-	On	-	On	On	On	On	2f
Taiwanese	-	-	On	On	-	-	-	-	30
Nihon-go	-	-	On	On	-	-	-	On	31
French Canadian	-	-	On	On	-	-	On	-	32

Power

0.3 Amps @ +5Vdc
15.0 Watts

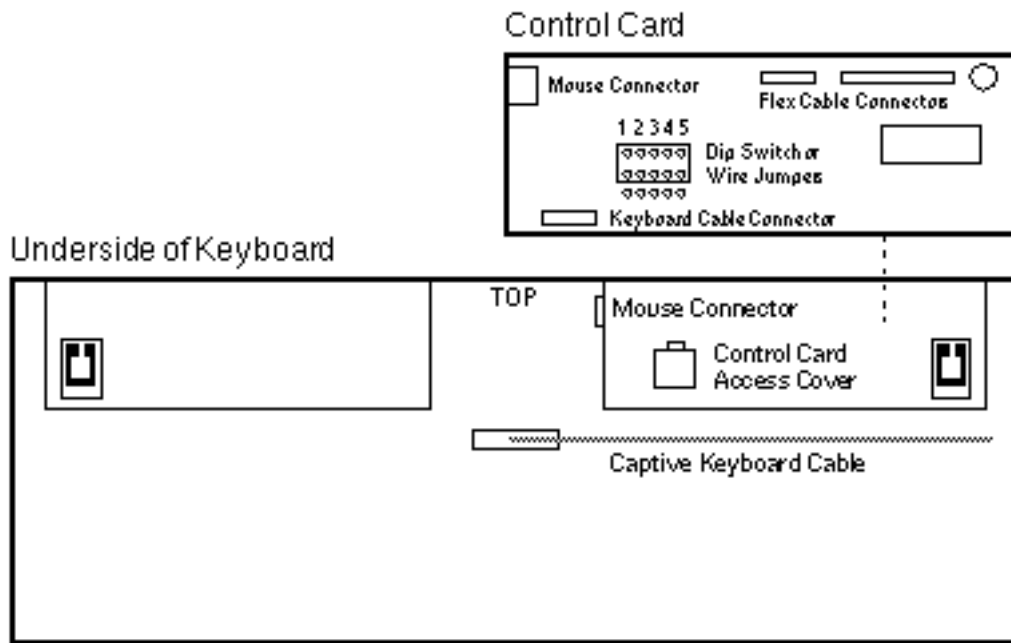
PART #	DESCRIPTION
320-1072	Type-5 Keyboard, Mini-Din, US
320-1073	Type-5 Keyboard, Mini-Din, US/UNIX
320-1074	Type-5 Keyboard, Mini-Din, French

320-1075	Type-5 Keyboard, Mini-Din, Danish
320-1076	Type-5 Keyboard, Mini-Din, German
320-1077	Type-5 Keyboard, Mini-Din, Italian
320-1078	Type-5 Keyboard, Mini-Din, Netherlands/Dutch
320-1079	Type-5 Keyboard, Mini-Din, Norwegian
320-1080	Type-5 Keyboard, Mini-Din, Portuguese
320-1081	Type-5 Keyboard, Mini-Din, Spanish
320-1082	Type-5 Keyboard, Mini-Din, Swedish
320-1083	Type-5 Keyboard, Mini-Din, Swiss/French
320-1084	Type-5 Keyboard, Mini-Din, Swiss/German
320-1085	Type-5 Keyboard, Mini-Din, UK
320-1086	Type-5 Keyboard, Mini-Din, Korean
320-1087	Type-5 Keyboard, Mini-Din, Taiwanese
320-1088	Type-5 Keyboard, Mini-Din, Nihon-go
320-1089	Type-5 Keyboard, Mini-Din, Finnish
320-1090	Type-5 Keyboard, Mini-Din, US without Sun Logo
320-1091	Type-5 Keyboard, Mini-Din, US/UNIX without Sun Logo
320-1092	Type-5 Keyboard, Mini-Din, Nihon-go without Sun Logo
320-1193	Type-5 Keyboard, Mini-Din, French Canadian
530-1442	Keyboard Cable, Mini-Din to Mini Din, 2.0M
530-1443	Keyboard Cable, Mini-Din to Mini Din, 4.6M
530-2123	Keyboard Cable, Mini-Din to Mini Din, 1.5M
530-1478	Keyboard Cable, DB-15 to Mini Din, 2.0M
530-1479	Keyboard Cable, DB-15 to Mini Din, 4.6M

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-5c Keyboard



DESCRIPTION	WIRE JUMPER					HEX CODE
	JS1	JS2	JS3	JS4	JS5	
US	-	-	-	-	In	21
US/Unix	-	-	-	In	-	22
Japanese	In	-	-	-	In	31

DESCRIPTION	DIP SWITCH					HEX CODE
	1	2	3	4	5	
French	-	-	-	On	On	23
Danish	-	-	On	-	-	24
German	-	-	On	-	On	25
Italian	-	-	On	On	-	26
Dutch	-	-	On	On	On	27
Norwegian	-	On	-	-	-	28
Portuguese	-	On	-	-	On	29
Spanish	-	On	-	On	-	2a
Swedish/Finnish	-	On	-	On	On	2b
Swiss/French	-	On	On	-	-	2c
Swiss/German	-	On	On	-	On	2d
UK	-	On	On	On	-	2e
Korean	-	On	On	On	On	2f
Taiwanese	On	-	-	-	-	30
French Canadian	On	On	On	On	On	3f

PART #	DESCRIPTION
320-1233	Type-5c Keyboard, 2M Cable, Mini-Din, US

320-1234	Type-5c Keyboard, 2M Cable, Mini-Din, US/UNIX
320-1252	Type-5c Keyboard, 2M Cable, Mini-Din, French
320-1236	Type-5c Keyboard, 2M Cable, Mini-Din, Danish
320-1237	Type-5c Keyboard, 2M Cable, Mini-Din, German
320-1238	Type-5c Keyboard, 2M Cable, Mini-Din, Italian
320-1239	Type-5c Keyboard, 2M Cable, Mini-Din, Netherlands/ Dutch
320-1240	Type-5c Keyboard, 2M Cable, Mini-Din, Norwegian
320-1241	Type-5c Keyboard, 2M Cable, Mini-Din, Portuguese
320-1242	Type-5c Keyboard, 2M Cable, Mini-Din, Spanish
320-1243	Type-5c Keyboard, 2M Cable, Mini-Din, Swedish
320-1245	Type-5c Keyboard, 2M Cable, Mini-Din, Swiss/French
320-1246	Type-5c Keyboard, 2M Cable, Mini-Din, Swiss/German
320-1247	Type-5c Keyboard, 2M Cable, Mini-Din, UK
320-1248	Type-5c Keyboard, 2M Cable, Mini-Din, Korean
320-1249	Type-5c Keyboard, 2M Cable, Mini-Din, Taiwanese
320-1253	Type-5c Keyboard, 2M Cable, Mini-Din, Nihon-go
320-1244	Type-5c Keyboard, 2M Cable, Mini-Din, Finnish
320-1235	Type-5c Keyboard, 2M Cable, Mini-Din, US/UNIX w/o Logo
320-1250	Type-5c Keyboard, 2M Cable, Mini-Din, Nihon-go w/o Logo
320-1251	Type-5c Keyboard, 2M Cable, Mini-Din, French Canadian
370-2002	Type-5 Keyboard Cable Adapter, F-to-F Mini-Din
530-2154	Keyboard Extension Cable, M-to-F Mini-Din, 2.7M

Note

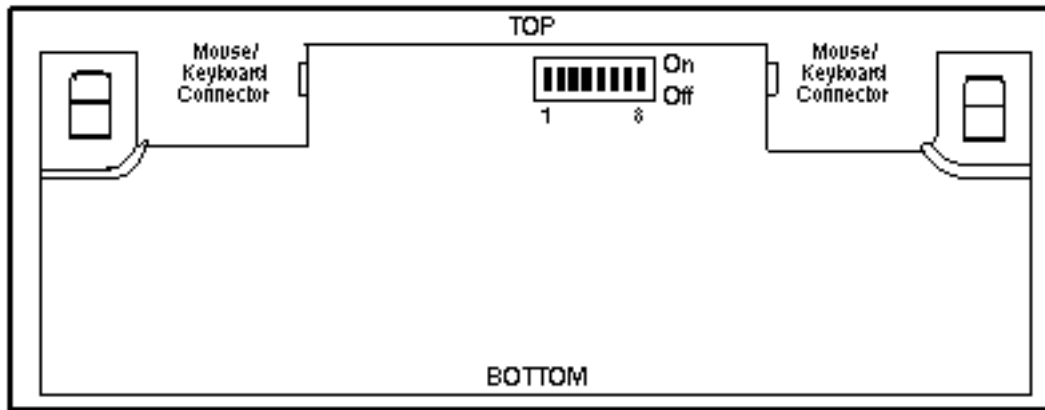
The French-Canadian Type-5c Keyboard requires Solaris 2.4. Earlier versions of Solaris are not supported and no patches are available.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-101A Keyboard

Underside of Keyboard

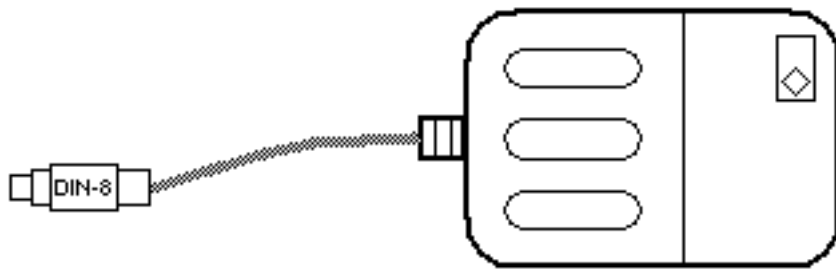


PART #	DESCRIPTION
320-1070	Type 101A Keyboard, Mini-Din
530-1442	Keyboard Cable, Mini-Din to Mini Din, 2.0M
530-1443	Keyboard Cable, Mini-Din to Mini Din, 4.6M
530-1478	Keyboard Cable, DB-15 to Mini Din, 2.0M
530-1479	Keyboard Cable, DB-15 to Mini Din, 4.6M

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-4 Optical Mouse

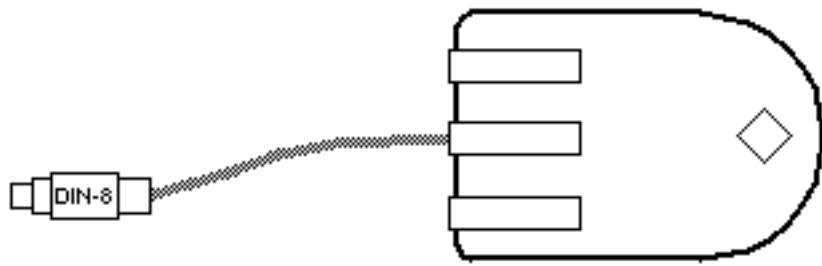


PART #	DESCRIPTION
370-1161	M4 200 CPI Mouse and Pad, Mini-Din (unreleased, obs)
365-1059	M4 200 CPI Mouse and Pad, Mini-Din
370-1170	■ M4 200 CPI Mouse, Mini-Din
370-1215	■ M4 Mouse Pad, 200 CPI, 0.032", 228.6 x 196.9 mm (obs)
370-1368	■ M4 Mouse Pad, 200 CPI, 0.032", 177.8 x 196.9 mm

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Type-5 Optical Mouse



PART #	DESCRIPTION
f370-1398	Type-5 Mouse and Pad, Mini-Din
370-1398	■ Type-5 Mouse, 300 CPI, Mini-Din
370-1399	■ Type-5 Mouse Pad, 300 CPI, 196.6 x 178.0 mm
370-1664	Type-5 Mouse without Sun Logo, 300 CPI, Mini-Din
370-1663	Type-5 Mouse Pad without Sun Logo, 300 CPI

Notes

1. The Type-5 Mouse replaced the Type-4 Mouse in October 1993.
2. The Compact 1 Mouse replaced the Type-5 Mouse in August 1995.

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[Comments and Suggestions](#) 

Board

IDPROM

Boot PROM

[Sun-4 Architecture](#)

CPU

[Sun-4 Architecture](#)

Memory

[Sun-4 SIMMs / Sun-4c SIMMs](#)

Video

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SCSI

[Multibus / VMEbus](#)

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IDPROM

The IDPROM address space provides system information including Machine Type, Serial Number, Ethernet Address, and Manufacturing Date. This information may be stored in an IDPROM, NVRAM, or EEPROM. The 32 Bytes of IDPROM content are shown below.

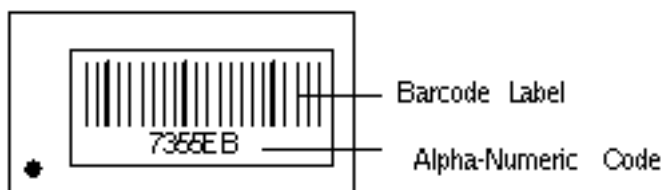
BYTE	FIELD	SIZE
1	Format	1 Byte
2	Machine Type	1 Byte
3	Ethernet Address	6 Bytes
4	Date	4 Bytes
5	Serial Number	3 Bytes
6	Checksum	1 Byte
7	Reserved	16 Bytes

The Machine Type and Serial Number are combined to create the Hostid. Licensed software may use the Hostid.

Prior to the SPARCstation 10, the Machine Type was used by the operating system to identify the architecture and the architecture implementation.

Beginning with the SPARCstation 10, systems are not assigned a unique Machine Type. The device tree in the Open Boot PROM provides the system characteristics to the operating system. The high-order bit of the Machine Type is set to 1. The lower 7 bits of the Machine Type and Serial Number fields are used at Sun's discretion.

The alpha-numeric code on the NVRAM barcode label can be used by Sun to create a duplicate NVRAM. Provide this information when ordering a replacement NVRAM.



IDPROMs, NVRAMs, and EEPROMs are not interchangeable.

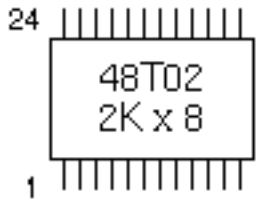
Programmed components that have a unique machine type are not interchangeable. For example, a new NVRAM is required when an SS2 (55xxxxxx) is upgraded to an SS20 (72xxxxxx).

Different component types are not interchangeable between systems. For example, a new NVRAM is required when an SS4 is upgraded (48T08) to an Ultra 1 Model 140 (48T59).

The 48T08 and 48T18 have the same pin count as the 48T59 but they are not pin compatible with the 48T59.

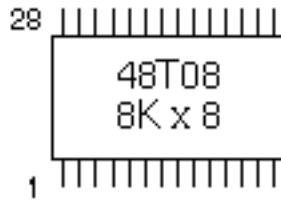
The NVRAM also contains a Time of Day clock. Accuracy of the clock is typically +/- 1 minute per month at 25°C. The 32,768Hz oscillator is tested not to exceed +/- 1.53 minutes per month (35PPM) error rate at 25°C.

NVRAM Component Types



MK48T02
100-1628-01 150ns
Consumption life \cong 3.3yrs
TOPHAT battery

M48T02
100-1628-01 150ns
Consumption life \cong 3.7yr
CAPHAT battery

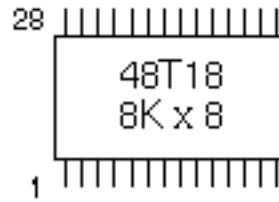


MK48T08
100-2822-01 150ns
Consumption life \cong 10yr
TOPHAT battery

M48T08
100-2822-02 100/150ns
Consumption life \cong 11yr
CAPHAT battery

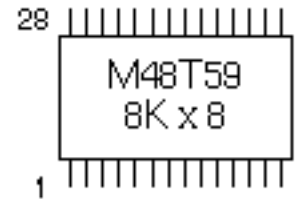
MK48T08
100-3528-01 100ns
Consumption life \cong 10yr
TOPHAT battery

M48T08
100-4195-01 150ns
Consumption life \cong 11yr
CAPHAT battery



MK48T18
100-3923-01 150ns
Consumption life \cong 10yr
TOPHAT battery

M48T18
100-4196-01 150ns
Consumption life \cong 11yr
CAPHAT battery

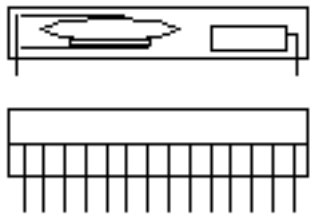


M48T59
100-4318-01 70ns
Consumption life \cong 7yr
CAPHAT battery

M48T59
100-4007-01 70ns
Consumption life \cong 7yr
CAPHAT battery

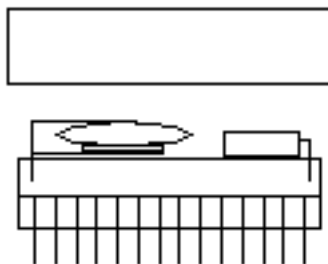
NVRAM Battery Types

TOPHAT Battery



This design combines a battery and crystal TOPHAT with the integrated circuit. The TOPHAT is soldered to the integrated circuit and sealed with epoxy during assembly.

CAPHAT Battery



In the CAPHAT design, the battery and crystal are individually soldered to the integrated circuit. The part is then inserted into an epoxy filled CAPHAT.

ARCH	SYSTEM	HOSTID	COMPONENT TYPE	PART #	SOCKET

Sun-4	4/260/280	2100xxxx	IDPROM	520-1532	U1901
	4/110/150	22xxxxxx	IDPROM	520-1638	U805
	4/3xx	23xxxxxx	IDPROM	523-2136	U2202
	4/3xx	None	48T02 NVRAM	100-1628	U2200
	4/470/490	24xxxxxx	IDPROM	525-1100	U1404
	4/470/490	None	48T02 NVRAM	100-1628	U3505
Sun-4c	SS1	51xxxxxx	48T02 NVRAM	525-1032	U089
	SS IPC	52xxxxxx	48T02 NVRAM	525-1084	U0901
	SS1+	53xxxxxx	48T02 NVRAM	525-1109	U089
	SS SLC	54xxxxxx	48T02 NVRAM	520-2749	U1011
	SS ELC	56xxxxxx	48T02 NVRAM	525-1188	U0813
	SS IPX	57xxxxxx	48T02 NVRAM	525-1180	U0512
	SS2	55xxxxxx	48T02 NVRAM	525-1112	U0512
	4E	61xxxxxx	48T02 NVRAM	523-8151	U1101
Sun-4m	SPARCclassic X	80xxxxxx	48T08 NVRAM	525-1343	U0707
	SPARCclassic	80xxxxxx	48T08 NVRAM	525-1203	U0707
	SS LX	80xxxxxx	48T08 NVRAM	525-1203	U0707
	SPARC Xterm 1	80xxxxxx	48T08 NVRAM	525-1391	U1605
	SS4	80xxxxxx	48T08 NVRAM	525-1391	U1605
	SS5	80xxxxxx	48T08 NVRAM	525-1369	U1506
	SS10	72xxxxxx	48T08 NVRAM	525-1184	U1004
	SS10SX	72xxxxxx	48T08 NVRAM	525-1184	U1004
	SS20	72xxxxxx	48T18 NVRAM	525-1378	U1004
	SS600MP	71xxxxxx	48T08 NVRAM	525-1181	U2701
	SS Voyager	80xxxxxx	48T08 NVRAM	525-1373	U1506
JavaStation	80xxxxxx	48T08 NVRAM	525-1657	U1505	
Sun-4d	SS1000/1000E	80xxxxxx	EEPROM	100-2922	U0209
	SS1000/1000E	80xxxxxx	48T08 NVRAM	100-3528	U1007
	SS1000/1000E	80xxxxxx	48T08 NVRAM	100-4195	U1007
	SC2000/2000E	80xxxxxx	EEPROM	100-2922	U0203
	SC2000/2000E	80xxxxxx	48T08 NVRAM	100-2822	U1205
	SC2000/2000E	80xxxxxx	48T08 NVRAM	100-4195	U1205
Sun-4u	A11	80xxxxxx	48T59 NVRAM	525-1430	U2006
	A12	80xxxxxx	48T59 NVRAM	525-1430	U2006
	A14	80xxxxxx	48T59 NVRAM	525-1417	U2006
		80xxxxxx Hex Serial# (3 bytes) Machine-type (1 byte)			

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Boot PROM

Sun-4 Architecture

Sun-4100 / Sun-4200 / Sun-4300

Sun-4/110/150				
U601	U602	U603	U604	Revision
520-1651-03	520-1652-03	520-1653-03	520-1654-03	1.3
520-1651-04	520-1652-04	520-1653-04	520-1654-04	1.4
520-1651-06	520-1652-06	520-1653-06	520-1654-06	1.6
520-1651-07	520-1652-07	520-1653-07	520-1654-07	1.7
520-1651-08	520-1652-08	520-1653-08	520-1654-08	1.8
520-1651-09	520-1652-09	520-1653-09	520-1654-09	2.8.1
525-1651-10	525-1652-10	525-1653-10	525-1654-10	3.0
525-1651-11	525-1652-11	525-1653-11	525-1654-11	3.0.1
525-1651-12	525-1652-12	525-1653-12	525-1654-12	3.0.2
595-1964-xx	Boot PROM Kit			
Sun-4/260/280				
U2004	U2003	U2002	U2001	Revision
520-1504-01	520-1505-01	520-1506-01	520-1507-01	0.68
520-1504-02	520-1505-02	520-1506-02	520-1507-02	1.0
520-1504-03	520-1505-03	520-1506-03	520-1507-03	1.1
520-1504-04	520-1505-04	520-1506-04	520-1507-04	1.3
520-1504-05	520-1505-05	520-1506-05	520-1507-05	1.7
520-1504-06	520-1505-06	520-1506-06	520-1507-06	2.8
525-1071-01	525-1074-01	525-1075-01	525-1076-01	2.8.4
525-1071-02	525-1074-02	525-1075-02	525-1076-02	3.0
595-1965-xx	Sun 4200 Boot PROM Kit			
Sun-4/310/350/360/370/380/390				
U2100	U2103	U2102	U2101	Revision
525-1035-04	525-1036-04	525-1037-04	525-1038-04	1.1
525-1035-05	525-1036-05	525-1037-05	525-1038-05	3.0
525-1035-06	525-1036-06	525-1037-06	525-1038-06	3.0.1
525-1035-07	525-1036-07	525-1037-07	525-1038-07	3.0.2
525-1035-08	525-1036-08	525-1037-08	525-1038-08	3.0.3
525-1035-09	525-1036-09	525-1037-09	525-1038-09	4.1.1
595-1961-xx	Sun 4300 Boot PROM Kit			

Sun-4/470/490				
U3504	U3503	U3502	U3501	Revision
525-1103-01	525-1104-01	525-1105-01	525-1106-01	0.1.d
525-1103-02	525-1104-02	525-1105-02	525-1106-02	0.2.c
525-1103-03	525-1104-03	525-1105-03	525-1106-03	3.0
525-1103-04	525-1104-04	525-1105-04	525-1106-04	4.0
525-1103-06	525-1104-06	525-1105-06	525-1106-06	4.1.1
595-2123-xx	Sun 4400 Boot PROM Kit			

Last updated: December 2, 1996

[Comments and Suggestions](#) 

CPU

Sun-4 Architecture

Sun 4100 / Sun 4200 / Sun 4300 / Sun 4400

PART #	DESCRIPTION
501-1199	8MB Sun 4100 CPU (270-1199-03) without FPC
501-1512	8MB Sun 4100 CPU (270-1199-04) without FPC
501-1656	8MB Sun 4100 CPU (270-1199-07) without FPC
501-1237	8MB Sun 4100 CPU (270-1199-03) with FPC4 or FPC6
501-1513	8MB Sun 4100 CPU (270-1199-04) with FPC4 or FPC6
501-1657	8MB Sun 4100 CPU (270-1199-07) with FPC6
501-1462	16MB Sun 4100 CPU (270-1199-03) without FPC
501-1514	16MB Sun 4100 CPU (270-1199-04) without FPC
501-1658	16MB Sun 4100 CPU (270-1199-07) without FPC
501-1463	16MB Sun 4100 CPU (270-1199-03) with FPC4 or FPC6
501-1515	16MB Sun 4100 CPU (270-1199-04) with FPC4 or FPC6
501-1659	16MB Sun 4100 CPU (270-1199-07) with FPC6
501-1464	32MB Sun 4100 CPU (270-1199-03) without FPC
501-1516	32MB Sun 4100 CPU (270-1199-04) without FPC
501-1660	32MB Sun 4100 CPU (270-1199-07) without FPC
501-1465	32MB Sun 4100 CPU (270-1199-03) with FPC4 or FPC6
501-1517	32MB Sun 4100 CPU (270-1199-04) with FPC4 or FPC6
501-1661	32MB Sun 4100 CPU (270-1199-07) with FPC6
501-1129	0MB Sun 4200 CPU with FPC4 (obsolete)
501-1274	0MB Sun 4200 CPU with FPC4 or FPC6, 1-Slot Backpanel
501-1491	0MB Sun 4200 CPU with FPU-2, 2-Slot Backpanel
501-1522	0MB Sun 4200 CPU with FPC4 or FPC6, 2-Slot Backpanel
SPARCstation 330, SPARCstation 370, SPARCserver 390	
501-1316	8MB Sun 4300 CPU with 1MB SIMMs
501-1742	32MB Sun 4300 CPU with 4MB SIMMs
SPARCstation 470, SPARCserver 490	
501-1381	0MB Sun 4400 CPU
501-1899	0MB Sun 4400 CPU

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Memory

Sun-4 SIMMs

PART #	DESCRIPTION
501-1314	256KB, 256KB x 9-Bit SIMM, Sun 4100
501-1544	1MB, 1Mbit x 9-Bit SIMM, Sun 4300
501-1408	1MB, 1Mbit x 9-Bit SIMM, Sun-3/80 and Sun-4/60/65/300
501-1466	1MB, 1Mbit x 9-Bit SIMM, Sun 4100
501-1544	1MB, 1Mbit x 9-Bit SIMM, Sun 4300
501-1565	1MB, 1Mbit x 9-Bit SIMM, Sun 4300
501-1682	4MB, 1Mbit x 9-Bit SIMM, Sun 4300
501-1739	4MB, 1Mbit x 9-Bit SIMM, Sun-4/40/60/65/75/300

Sun 4300 / Sun 4400 / Sun-4/E

PART #	DESCRIPTION
501-1436	8MB Sun-4/330 Parity Memory with 1MB SIMMs
501-1723	8MB Sun-4/330 Parity Memory with 1MB SIMMs
501-1711	16MB Sun-4/330 Parity Memory with 1MB SIMMs
501-1317	16MB Sun-4/330 Parity Memory with 1MB SIMMs
501-1704	32MB Sun-4/330 Parity Memory with 4MB SIMMs
501-1755	32MB Sun-4/330 Parity Memory with 4MB SIMMs
501-1564	8MB Sun 4300 Memory, with 1MB SIMMs
501-1563	24MB Sun 4300 Memory with 1MB SIMMs
501-1703	32MB Sun 4300 Memory with 4MB SIMMs
501-1495	48MB Sun 4300 Memory with 1MB SIMMs
501-1333	32MB Sun 4400 ECC Memory
501-1721	128MB Sun 4400 ECC Memory
501-8036	16MB Sun-4/E ECC Memory
501-8042	4MB Sun-4/E ECC Memory
501-8060	0MB Sun-4/E Combo Memory and 2-Slot SBus Expansion

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Video

P4 Bus

PART #	DESCRIPTION
501-1247	MG3 ECL Frame Buffer, DB-9
501-1248	CG4 Color Frame Buffer, BNC
501-1371	CG8 Color Frame Buffer, BNC
501-1402	MG4 ECL/Analog Frame Buffer, DB-9/DB13W3
501-1518	CG8 Color Frame Buffer, DB13W3
	GX Graphics Option
501-1374	CG6 Color Frame Buffer, DB13W3
501-1505	CG6 Color Frame Buffer, DB13W3
501-1532	CG6 Color Frame Buffer, DB13W3

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Video

VMEbus

PART #	DESCRIPTION
501-1014	CG2 Color Frame Buffer
540-1126	CG2 Color Frame Buffer (obsolete)
599-1165	CG2 Color Frame Buffer (obsolete)
501-1089	CG3 Double Buffered Color Frame Buffer
501-1116	CG3 Color Frame Buffer
501-1319	CG3 Double Buffered Color Frame Buffer, 1024x1024
501-1267	CG5 Color Frame Buffer
501-1055	GP Graphics Processor
501-1139	GP+ Graphics Processor Plus
501-1268	GP2 Graphics Processor Two
501-1058	GB Graphics Buffer
501-8020	Sun-3/E Monochrome Frame Buffer
501-8029	Sun-3/E Color Frame Buffer
501-1383	TAAC-1 Application Accelerator
501-1447	TAAC-1 Application Accelerator
	CXP Graphics Option
501-1116	CG3 Color Frame Buffer
501-1139	GP+ Graphics Processor Plus
501-1268	GP2 Graphics Processor Two
	GXP Graphics Option
501-1434	CG9 24-bit Color Frame Buffer
501-1268	GP2 Graphics Processor Two
	VX and MVX Graphics Options
501-1537	Visualization Accelerator Pixel Processor
501-1538	Visualization Accelerator Super Frame Buffer
501-1596	Pixel Processor to Super Frame Buffer Connector
340-2468	VX and MVX Frontplane EMI Cover
340-2469	VX Frontplane EMI Cover

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Video

Cables

PART #	DESCRIPTION
530-0492	Color Cable, 4.6M, 1xBNC to 1xBNC
530-1138	Color Cable, 4.6M, 4xBNC to 4xBNC
530-1307	Color Cable, 4.6M, 4xBNC to 4xBNC
530-1362	Color Cable, 1.2M, 4xBNC to 4xBNC
530-1415	Color Cable, 50 cm, 4xBNC to 4xBNC
530-1440	Color Cable, 1.2M, DB13W3 to DB13W3
530-1446	Color Adapter Cable, 4xBNC to DB13W3
530-1509	Color Cable, 4.6M, DB13W3 to DB13W3
530-1839	Color Cable, 1.0M, 90_ DB13W3 to DB13W3, 75 Ohm
530-1840	Color Cable, 4.0M, 90_ DB13W3 to DB13W3, 75 Ohm
530-1870	Color Cable, 1.2M, DB13W3 to DB13W3, 75 Ohm
530-1898	Color Cable, 4.5M, DB13W3 to DB13W3, 75 Ohm
530-2020	Color Extension Cable, 3.0M, DB13W3M to DB13W3F, 75 Ohm
530-1308	Greyscale Cable, 4.6M, 2xBNC to 2xBNC
530-1363	Greyscale Cable, 1.2M, 2xBNC to 2xBNC
530-1511	Greyscale Adapter Cable, 2xBNC to DB13W3
530-1041	TTL Monochrome Cable, DB-9 to DB-9, Sun-2/150U
530-1109	ECL Monochrome Cable, 0.75M, DB-9 to DB-9
530-1125	TTL Monochrome Cable, 4.6M, DB-9 to DB-9
530-1133	ECL Monochrome Cable, 4.6M, DB-9 to DB-9
530-1242	ECL Monochrome Cable, 0.75M, DB-9 to DB-9
530-1336	ECL Monochrome Cable, 4.6M, DB-9 to DB-9
530-1359	ECL Monochrome Cable, 1.2M, DB-9 to DB-9

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SCSI

Multibus / VMEbus

PART #	DESCRIPTION
501-1006	Sun-2 Multibus SCSI Host Adapter
501-1045	Sun-2 VMEbus SCSI Host Adapter
501-1120	Sun-3 VMEbus SCSI Host Adapter (obsolete)
501-1236	Sun-3 VMEbus SCSI Host Adapter
501-8027	Sun-3/E VMEbus SCSI Host Adapter
501-1147	Sun-2/50 SCSI Host Adapter Assembly, External SCSI
501-1045	■ Sun-2 VMEbus SCSI Host Adapter
501-1079	■ Sun-2/50 0mb Memory Expansion Board
501-1149	Sun-2 SCSI Host Adapter Assembly, Internal SCSI
501-1045	■ Sun-2 SCSI Host Adapter
270-1059	■ VME 3x2 Adapter FAB with P2 Rows A&C
501-1138	Sun-2 SCSI Host Adapter Assembly, External SCSI
501-1045	■ Sun-2 SCSI Host Adapter
270-1138	■ VME 3x2 Adapter FAB without P2 Rows A&C
501-1167	Sun-2 SCSI Host Adapter Assembly, External SCSI
501-1045	■ Sun-2 SCSI Host Adapter
270-1059	■ VME 3x2 Adapter FAB with P2 Rows A&C
501-1170	Sun-3 SCSI Host Adapter Assembly, Internal SCSI
501-1236	■ Sun-3 SCSI Host Adapter
270-1059	■ VME 3x2 Adapter FAB with P2 Rows A&C
501-1217	Sun-3 SCSI Host Adapter Assembly, External SCSI
501-1236	■ Sun-3 SCSI Host Adapter
270-1138	■ VME 3x2 Adapter FAB without P2 Rows A&C

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SCSI

Single-Ended 8-Bit SCSI Cables

PART #	DESCRIPTION
530-1185	External Cable, DD-50SA to DD-50SA, Ribbon, 1.0M (obs)
530-1186	External Cable, DD-50SA to DD-50SA, Ribbon, 5.0M (obs)
530-1249	External Cable, DD-50SA to DD-50SA, 1.0M
530-1250	External Cable, DD-50SA to DD-50SA, 3.0M
530-1334	External Cable, DD-50SA to DD-50SA, 2.5M
530-1365	External Cable, DD-50SA to DD-50SA, 41 cm
530-1435	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M
530-1593	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
530-1792	External Cable, 50-Pin SCSI-2 to DD-50SA w Ferrites, 2.0M
530-1829	External Cable, 50-Pin SCSI-2 to DD-50SA w Ferrites, 1.0M
530-1434	External SCSI-2 Cable, 50-Pin to 50-Pin, 45 cm
530-1508	External SCSI-2 Cable, 50-Pin to 50-Pin, 80 cm
530-1793	External SCSI-2 Cable, 50-Pin to 50-Pin w Ferrites, 80 cm
530-1836	External SCSI-2 Cable, 50-Pin to 50-Pin w Ferrites, 2.0M
530-1852	External SCSI-2 Cable, 50-Pin to 50-Pin w Ferrites, 4.0M,
530-2055	Ext SCSI-2 Cable, 50-Pin to 90_ 50-Pin w Ferrites, 1.12M
530-2056	Ext SCSI-2 Cable, 50-Pin to 90_ 50-Pin w Ferrites, 1.65M
530-1501	External Cable, DD-50SA to Centronics, 2.0M
530-1502	External Cable, Centronics to Centronics, 1.5M
530-1503	External Cable, 50-Pin SCSI-2 to Centronics, 2.0M
530-1568	External Cable, DD-50SA to Centronics, 4.0M
530-1900	External Cable, 50-Pin SCSI-2 to Centronics, 4.0M
150-1346	External Passive Terminator, 50-Pin SCSI-2
150-1407	External Passive Terminator, 50-Pin Centronics
150-1785	External Active Terminator, 50-Pin SCSI-2
150-2283	External Forced Perfect Terminator, 50-Pin SCSI-2
530-1381	External Passive Terminator, 50-Pin DD-50SA

Last updated: December 2, 1996

[Comments and Suggestions](#) 

IPI

ISP-80

PART #	DESCRIPTION
501-1539	ISP-80 IPI-2 DIsk Controller
501-1855	ISP-80 IPI-2 DIsk Controller
530-1487	■ IPI Command Cable, 8.0M (obsolete)
530-1488	■ IPI Command Cable, 1.0M
530-1489	■ IPI "W" Command Cable (not released)
530-1518	■ IPI Command Cable, 2.0M (obsolete)
530-1536	■ IPI Command Cable, 0.45M
530-1788	■ IPI Command Cable, 2.0M
530-1789	■ IPI Command Cable, 8.0M

ISP-80 Firmware

U0501	U0502	U0503	DESCRIPTION
525-1023-01	525-1024-01	525-1025-01	Engineering release
525-1023-01	525-1024-02	525-1025-02	Bug fixes
525-1023-01	525-1024-03	525-1025-03	Bug fixes
525-1023-01	525-1024-04	525-1025-04	Bug fixes
525-1023-01	525-1024-05	525-1025-05	Bug fixes
525-1023-01	525-1024-06	525-1025-06	Bug fixes
525-1023-05	525-1024-07	525-1025-07	6MB/Sec support
525-1023-05	525-1024-08	525-1025-08	Prestoserve support
525-1023-05	525-1024-09	525-1025-09	Dual Port support
525-1023-05	525-1024-10	525-1025-10	Dual Port/Timeout fixes

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Communication

Ethernet Accessories

PART #	DESCRIPTION
130-1240	BNC Female to N-series Male Option TA-M
130-1241	BNC Male Terminator Option TT-M
130-1242	BNC "T",F,M,F Option TTC
130-1243	BNC Barrel, Double Female Option TBC
130-1244	BNC Terminator, Female Option TT-F
130-1245	BNC Female to N-series Female Option TA-F
370-0288	3Com 3c400 Controller (obsolete)
370-0331	3Com 3c100 Transceiver (obsolete)
370-0363	15-meter Ethernet Coax Cable (obsolete)
370-0364	15-meter Transceiver Drop Cable (obsolete)
370-0368	N-series Male Terminator Option ETR
370-0549	N-series Connector
370-1071	3Com 3C101/102 Transceiver (370-1071-01) (obsolete)
370-1071	3Com 3C106 Transceiver (370-1071-02)
370-1072	Vampire Tap Block, AMP 228752-1
370-1073	N-series Tap Block, 3Com 3C139
370-1074	BNC Tap Block, 3Com 3C139A
370-1075	Vampire Tap Tool Option ETH-TAP-TOOL
530-1241	15-meter Transceiver Drop Cable
530-1253	15-meter Thin Ethernet Cable Option TS-15M
530-1254	15-meter Ethernet Coax Cable Option ECX
530-1280	5-meter Thin Ethernet Cable Option TS-5M
530-1519	Adapter Cable, 250 mm
530-1696	Adapter Cable, Sun-4/20, 2.0M
xxx-xxxx	If the customer uses the AMP type attachment, an N-series female terminator (not available from Sun), is needed to terminate the coaxial cable. ----AMP -----***----- Male End <----Terminator

PART #	DESCRIPTION
	Option TAP
370-1071	■ 3Com 3C106 Transceiver
370-1072	■ Vampire Tap Block, AMP 228752-1
530-1241	■ 15-meter Transceiver Drop Cable

Option INLINE

- 370-1071 ■ 3Com 3C106 Transceiver
- 370-1072 ■ Vampire Tap Block, AMP 228752-1
- 530-1241 ■ 15-meter Transceiver Drop Cable
- 530-1254 ■ 15-meter Ethernet Coax Cable Option ECX

Option Thin

- 370-1071 ■ 3Com 3C106 Transceiver
- 370-1072 ■ Vampire Tap Block, AMP 228752-1
- 530-1241 ■ 15-meter Transceiver Drop Cable
- 530-1253 ■ 15-meter Thin Ethernet Cable Option TS-15M

Twisted Pair Ethernet Cables

- 530-1871 530-1871-xx, Category 3, RJ45 to RJ45, 4M
- 530-1871 530-1871-04, Category 5, RJ45 to RJ45, 4M
- 530-2093 Shielded RJ45 to RJ45, 4M
- 530-2149 Category 5, Back-to-Back, RJ45 to RJ45, 1.0M
- 530-2150 Category 5, Back-to-Back, RJ45 to RJ45, 5.0M

SPARCcluster 1 Ethernet Cables

- 530-2027 520-2027-01 Category 3 System Rack Cable
- 530-2027 520-2027-02 Category 5 System Rack Cable
- 530-2105 520-2105-01 Category 3 Expansion Rack Cable
- 530-2105 520-2105-02 Category 5 Expansion Rack Cable

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Communication

VMEbus

Ethernet / FDDI / Network CoProcessor

PART #	DESCRIPTION
501-8027	Sun-3/E SCSI/Ethernet Controller
501-1153	Sun-2 Ethernet Controller Assembly
501-1004	■ Sun-2 Multibus Ethernet Controller
530-1173	■ Ethernet Cable, Ethernet Controller to Backpanel
501-1584	Sun-3/E Ethernet Controller Assembly
501-8027	■ Sun-3/E Ethernet Controller
530-1607	■ Ethernet Cable, Ethernet Controller to Backpanel
501-1276	SunLight FDDI
537-1000	■ Fiber Optical Cable, 15M
370-1396	Sun Network CoProcessor (Interphase NC400, obsolete)
370-1421	Sun Network CoProcessor
501-1920	Sun Network CoProcessor (unreleased part, not available)

ALM / ALM-2

PART #	DESCRIPTION
501-1157	16-Channel Asynchronous Line Multiplexer (ALM)
370-1040	■ Systech MTI-1600 Board Set
370-1047	■ Systech MTI-1600 Controller Board
370-1048	■ Systech MTI-1600 USART Board
370-1097	■ Systech MTI-1650B Board Set
370-1099	■ Systech MTI-1650B Controller Board
370-1100	■ Systech MTI-1650B USART Board
530-1251	■ Cable, Systech Controller to Systech USART
530-1252	■ Cable, Systech MTI-1600/1650B to Backpanel
530-1255	■ DC Power Cable
540-1281	■ RS-232 Loopback Test Plug (obsolete)
540-1558	■ RS-232 Loopback Test Plug
501-1165	16-Channel Asynchronous Line Multiplexer (ALM)
370-1096	■ Systech MTI-1650A Board Set
370-1099	■ Systech MTI-1650B Controller Board
811-1100	■ 16-Channel USART Panel
530-1276	■ RS-232 Cable, Systech MTI-1650A to Backpanel
530-1281	■ DC Power Cable, ALM to Backpanel
530-1295	■ DC Power Cable, ALM to USART Panel
540-1281	■ RS-232 Loopback Test Plug (obsolete)
540-1558	■ RS-232 Loopback Test Plug

501-1203	16-Channel Asynchronous Line Multiplexer-2 (ALM-2)
530-1312	■ Internal Parallel Port Cable, 14.5 cm
530-1315	■ Internal Cable, 50-Pin, 11.5 cm
340-1569	■ Rack Mounting Bracket
340-1587	■ Wall Mounting Bracket
340-1914	■ Rack Mounting Bracket, Short, 56" Rack
340-1915	■ Rack Mounting Bracket, Long, 56" Rack
530-1334	■ Cable, ALM-2 to DCA, 2.4M
540-1526	■ DCA Assembly
540-1558	■ RS-232 Loopback Test Plug
540-1560	■ Parallel Port Loopback Test Plug

MCP / HSI / Channel Adapter

PART #	DESCRIPTION
501-1221	SunLink Multiprotocol Communications Processor (MCP)
530-1313	■ Internal RS-232 Cable, 17.5 cm
530-1314	■ Internal RS-449 Cable, 17.5 cm
540-1558	■ RS-232 Loopback Test Plug
540-1559	■ RS-449 Loopback Test Plug
501-1338	SunLink High-Speed Serial Interface (HSI)
530-1425	■ V.35 Cable, HSI to DSU, 2.9M
530-1426	■ V.35 Loopback Test Plug
530-1430	■ RS-449 Loopback Test Plug
370-1128	SunLink Channel Adapter (do not use, see FCO A0003-1)
501-1460	SunLink Channel Adapter
530-1134	■ Loopback Test Cable
370-1135	■ Bus Terminator
370-1136	■ Tag Terminator
370-1129	■ Tag and Bus In Cable, 8' (do not use -01, -02, or -03)
370-1130	■ Tag and Bus Out Cable, 8' (do not use -01, -02, or -03)
370-1131	■ Tag and Bus Out Cable, 5' (obsolete)
370-1132	■ Tag and Bus In Cable, 5' (obsolete)
530-1364	■ RS-232 Diagnostic Port Cable, 20'

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[Comments and Suggestions](#) 

Backplanes and I/O Boards

PART #	DESCRIPTION
501-1092	12-Slot VMEbus Backplane, (obsolete)
501-1117	12-Slot VMEbus Backplane, Pressfit
501-1127	3-Slot VMEbus Backplane, Pressfit
501-1128	6-Slot VMEbus Backplane, Pressfit
501-1354	5-Slot VMEbus Backplane, Pressfit
501-1439	12-Slot Backplane, 9 VMEbus Slots, Pressfit (obsolete)
501-1498	16-Slot Backplane, 13 VMEbus Slots, Pressfit (obsolete)
501-1597	16-Slot Backplane, 13 VMEbus Slots, Pressfit, Fused
501-1598	12-Slot Backplane, 9 VMEbus Slots, Pressfit
501-1832	12-Slot Backplane, 9 VMEbus Slots, Pressfit with cutout

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Miscellaneous

Boards

PART #	DESCRIPTION
501-1154	VMEbus to Multibus Adapter Assembly, Blank Backpanel
501-1191	VME 3x2 Adapter Assembly, without P2 A&C, Option 160B
501-1220	VME 3x2 Adapter Assembly, without P2 A&C
501-1269	VME 3x2 Adapter Assembly, with P2 A&C, Option 160A
501-1384	Sun 4100 FPU2
501-1387	Sun 4200 FPU2
501-1454	Sun-4/60 FPU
501-1666	VME 3x2 Adapter Assembly, with P2 A&C
540-1108	VME 3x2 Adapter Assembly (obsolete)
540-1250	VMEbus to Multibus Adapter Assembly (obsolete)
501-1125	SunIPC without 80287
501-1214	SunIPC with 80287
501-1196	■ Parallel Port Loopback Test Plug
370-1125	■ Floppy Drive Cable, SunIPC to Floppy Drive

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Miscellaneous

Board Hardware

PART #	DESCRIPTION
130-0272	2-Pin Shunt, 0.10" Pin Spacing, 0.025" Pin Diameter
130-2190	2-Pin Shunt, 2.0 mm Pin Spacing, 0.50 mm Pin Diameter
240-1287	Hex Screw, M2.5 0.45 x 16 mm
240-1288	Hex Screw, M2.5 0.45 x 10 mm
340-1407	Air Restrictor, 9U Cardcage
340-1818	Rear Panel, MG4 Analog/ECL Frame Buffer
540-1433	Single Slot Filler Panel, 9U Cardcage
540-1809	Rear Panel Assembly, P4 Video, Sun 4300/4400 CPU
150-1192	■ Tape (required, not included)
240-1426	■ M3 Nut
240-1571	■ #4-40 Jackscrew
330-1099	■ Insulator (required, not included)
340-1601	■ Filler Panel, 9-Pin Connector
340-1602	■ Filler Panel, 25-Pin Connector
340-1605	■ BNC Filler Panel, Internal
340-1611	■ BNC Filler Panel, External
330-1099	P4 Video Insulator, Sun 4300/4400 CPU
150-1192	Tape, P4 Video Insulator, Sun 4300/4400 CPU
560-1183	Spring Finger Insulation Kit
330-1100	■ Insulator Shield
150-1022	Lithium Battery, 3.0Vdc
150-1164	Silver Oxide Battery, 1.55Vdc
150-1022	Lithium Battery, 3.0Vdc

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[Comments and Suggestions](#) 

Miscellaneous Options

Option 955

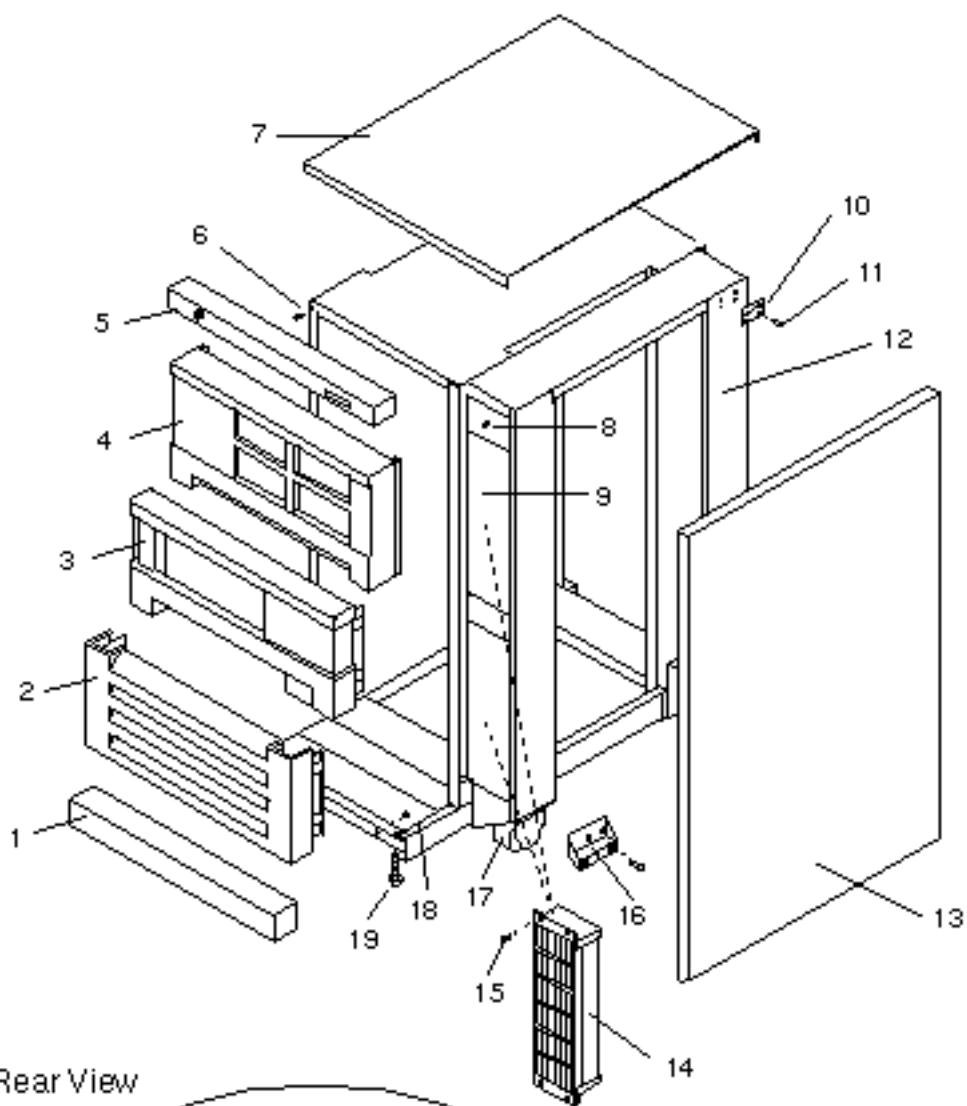
[56-inch Expansion Cabinet](#)

Option 960

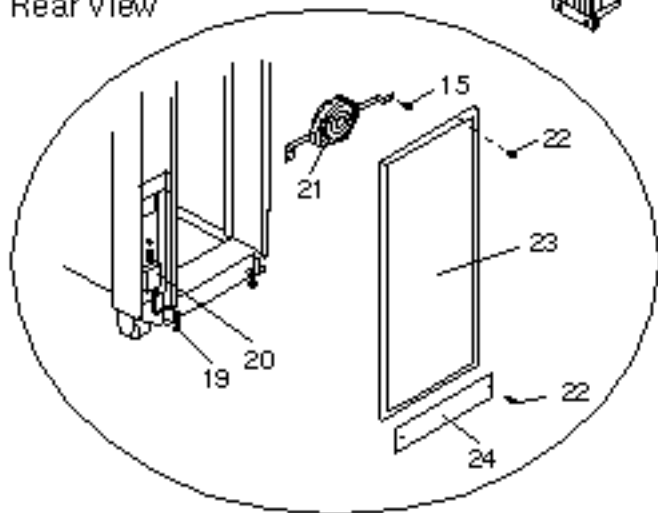
[76-inch Expansion Cabinet](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

955**56-inch Expansion Cabinet**

Rear View



CODE	PART #	DESCRIPTION
1	340-1884	Anti-Tilt Panel
2	540-1857	Vented Panel Assembly

3	540-1947	1/2" Tape Panel Assembly with Cutout
4	540-2252	Front Panel with 4 Tape Drive Cutouts
5	540-1859	Cap Panel Assembly
6	240-1630	#6-32 Ballstud
7	340-1840	Top Panel
8	540-2393	Keyswitch Assembly (replaced 540-1285)
9	340-1913	Filler Panel, 5.2" x 19"
10	340-1885	Side Restraint Bracket, Upper
11	240-1372	M4 0.7 x 10 mm Screw
12	540-1718	Frame Assembly
13	340-1848	Side Panel
14	370-1983	230/240V Blower
15	240-1953	#10-32 x 1/2" Screw (replaced 240-1207)
16	340-1886	Side Restraint Bracket, Lower
17	240-1717	Caster (replaced 370-1210)
18	240-1373	M4 0.7 Kepnut
19	230-1418	Leveler Foot (replaced 230-1181)
20	300-1263	230V Power Sequencer (replaced 370-1155)
20	300-1264	240V Power Sequencer (replaced 370-1156)
21	540-1929	230V Fan Assembly ¹
21	540-1930	240V Fan Assembly ¹
22	240-1655	#10-32 x 3/4" Screw
23	340-1845	Rear Panel
24	340-2047	Kick Panel
NS	230-1166	Cable Tie 5.5", Reusable
NS	230-1170	Cable Tie 10", Reusable
NS	340-2138	Ballast, 30 lbs
NS	530-1303	Remote Keyswitch Cable
	800-6371	<i>56-inch Data Center Exp Cabinet Service Manual</i>

1. The Fans are not installed in Expansion Cabinets built after June 1993 unless a Front Load Tape Drive is ordered as a factory installed option. The Fans were replaced by Blower 370-1983 in July 1995.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

960**76-inch Expansion Cabinet**

PART #	DESCRIPTION
180-1149	32Amp IEC-309 AC Receptacle (240V)
300-1011	AC Power Sequencer (115V)
300-1263	AC Power Sequencer (230V)
300-1264	AC Power Sequencer (240V)
340-0530	19" Logic Enclosure Support Rail Bracket (obsolete)
340-1283	19" Logic Enclosure Support Rail Assembly (obsolete)
340-1284	Keyswitch Panel, 7" x 19" (obsolete)
340-1285	Panel, 7" x 19"
340-1286	Panel, 3.5" x 19"
340-1287	Panel, 24.5" x 19"
340-1441	Keyswitch Panel, 1.5" x 19"
340-1442	Tape Drive Filler Panel, 1.5" x 19"
340-1485	19" Logic Enclosure Filler Panel, xxx x 19"
340-1487	Rear Panel with Cable Cutout, 22.7" x 19"
340-1489	Panel, 1.5 x 19"
340-1490	Panel, 10.5" x 19"
340-1522	19" Logic Enclosure Support Rail (obsolete)
340-1554	Panel, 19.6" x 19"
340-1595	Perforated Panel, 20" x 19"
340-1597	Panel, 5.25 x 19"
340-1662	892MB Disk Drive Front Panel
340-1700	Front Panel, 3.5" x 19" x 40 mm
340-1701	Front Panel, 10.5" x 19" x 40 mm
340-1715	Filler Panel for 340-1662
370-1027	AC Power Sequencer (230V) (obsolete)
370-1045	Blower Assembly
370-1053	76" Rack with Rear Door
370-1105	76" Rack without Rear Door
370-1126	AC Power Sequencer (240V) (obsolete)
370-1155	AC Power Sequencer (230V)
370-1156	AC Power Sequencer (240V)
530-1298	AC Power Cord, Fan Assembly (115V)
530-1303	Keyswitch Cable, 2.75M
530-1328	AC Power Cord, Fan Assembly (230V)
530-1343	AC Power Cord, 19" Logic Enclosure (240V)

530-1344	AC Power Cord, Fan Assembly (240V)
530-1346	AC Power Cord, Fujitsu M2444AC Tape Drive (240V)
530-1347	AC Power Cord, Fujitsu M2361A Disk Drive (240V)
530-1348	AC Power Cord, Fujitsu M2444AC Tape Drive (230V)
530-1349	AC Power Cord, Fujitsu M2361A Disk Drive (230V)
530-1350	AC Power Cord, CDC 92181 Tape Drive (230V)
530-1351	AC Power Cord, 19" Logic Enclosure (230V)
540-1285	Keyswitch Assembly
540-1428	AC Fan Assembly (115V)
340-1491	Fan Bracket
370-0550	AC Fan (115V)
540-1503	AC Fan Assembly (230V)
340-1491	Fan Bracket
370-1124	AC Fan (230V)
540-1568	AC Fan Assembly (240V)
340-1491	Fan Bracket
370-1124	AC Fan (240V)
540-1585	19" Logic Enclosure Support Rail Assembly
340-1583	19" Logic Enclosure Support Rail Bracket
340-1584	19" Logic Enclosure Support Rail
560-1113	19" Logic Enclosure Mounting Hardware Kit

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[Comments and Suggestions](#) 

Removable Media Options

Options 558 / 559

[Desktop SunCD Pack](#)

Option 660

[150MB Tape Desktop Backup Pack](#)

Options 680 / 682 / 683 / 684 / 685

[Front-Load 1/2" Tape Drive](#)

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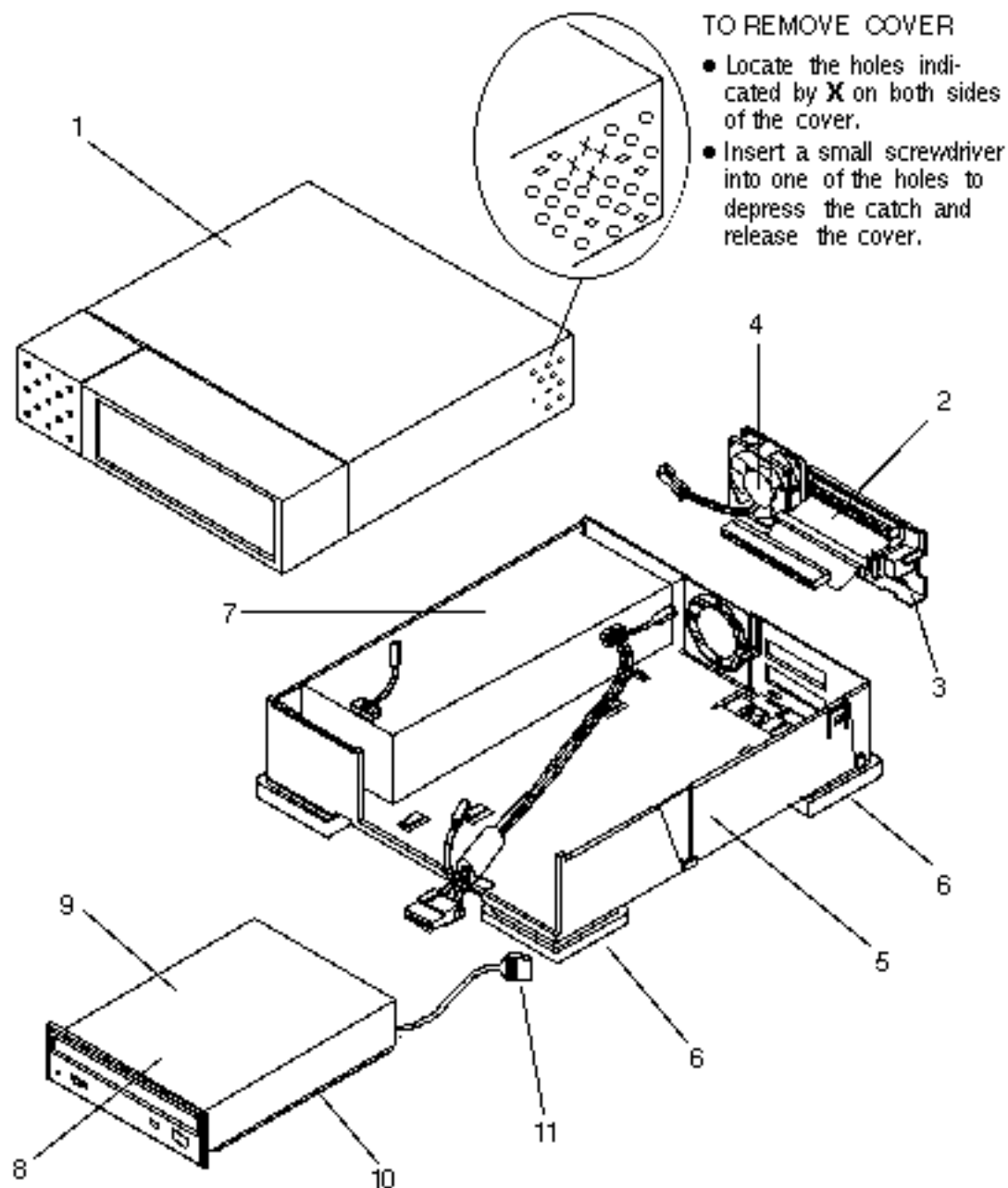
[Comments and Suggestions](#) 

558**559**

SunCD CD-ROM

SunCD CD-ROM

Desktop SunCD Pack



CODE	PART #	DESCRIPTION
1	540-1778	Cover Assembly, Tape and CD-ROM
2	540-1978	Fan/SCSI Connector/Address Select FRU Assembly
3	150-1557	■ Address Select Switch (obsolete)
3	150-2049	■ Address Select Switch
4	540-1802	■ Fan Assembly
NS	150-1174	■ 2A Subminiature Fuse
NS	340-2839	■ Fan EMI Gasket

5	540-1773	Base Assembly
6	330-1214	■ Rubber Foot
7	300-1037	35 Watt Power Supply (obsolete) ¹
7	300-1090	35 Watt Power Supply (obsolete)
7	300-1105	44 Watt Power Supply
8	540-1931	SunCD CD-ROM Assembly
9	370-1312	■ Sony CDU-8012 CD-ROM
10	340-1967	■ Drive Bracket
11	530-1454	■ Address Select Switch Cable, 5.25"
11	530-1825	■ Address Select Switch Cable, 8.5"
NS	240-1141	■ #6-32 x 1/4" Screw
NS	150-1346	External Terminator, 50-Pin SCSI-2
NS	150-1785	External Active Terminator, 50-Pin SCSI-2
NS	530-1434	External Cable, 50-Pin SCSI-2 to SCSI-2, 45 cm
NS	530-1435	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M
NS	530-1508	External Cable, 50-Pin SCSI-2 to SCSI-2, 80 cm
NS	530-1593	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
NS	530-1792	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M
NS	530-1793	External Cable, 50-Pin SCSI-2 to SCSI-2, 80 cm
NS	530-1829	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
NS	530-1836	External Cable, 50-Pin SCSI-2 to SCSI-2, 2.0M
NS	530-1852	External Cable, 50-Pin SCSI-2 to SCSI-2, 4.0M
NS	555-1154	Caddy 3-Pack
NS	370-1316	■ Caddy
NS	800-4895	<i>Desktop Storage Pack Field Service Manual</i>

1. Power Supply 300-1037 does not have IEC950 or UL1950 approval. Do NOT install 300-1037 into options manufactured after March 1991.

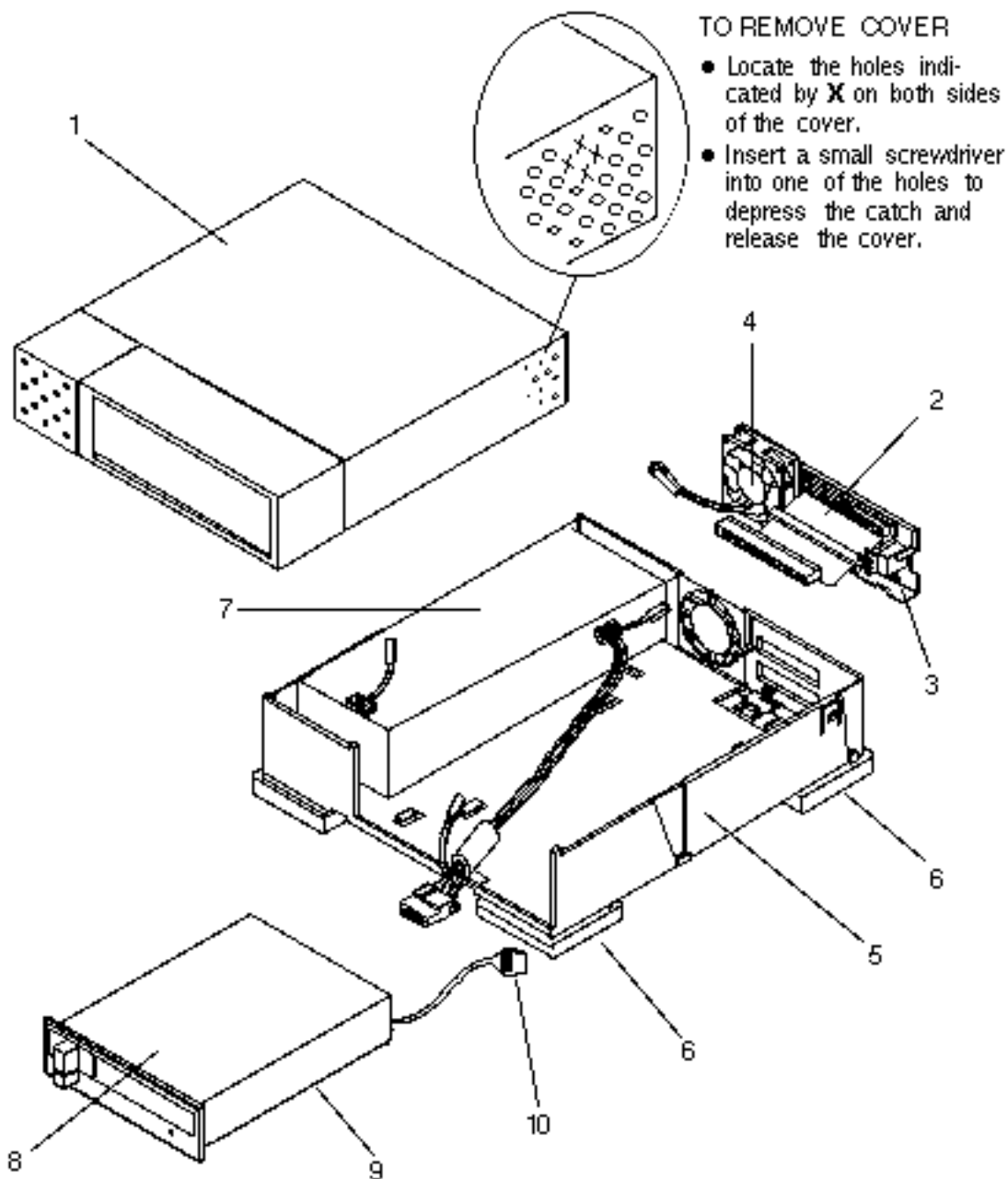
Last updated: December 2, 1996

[Comments and Suggestions](#) 

660

150MB Tape

Desktop Backup Pack



CODE	PART #	DESCRIPTION
1	540-1778	Tape Drive Cover Assembly
2	540-1776	Fan/SCSI Connector/Address Select Assy (obs)
3	150-1338	■ Address Select Switch (obsolete)
4	540-1802	■ Fan Assembly
NS	150-1174	■ 2A Subminiature Fuse

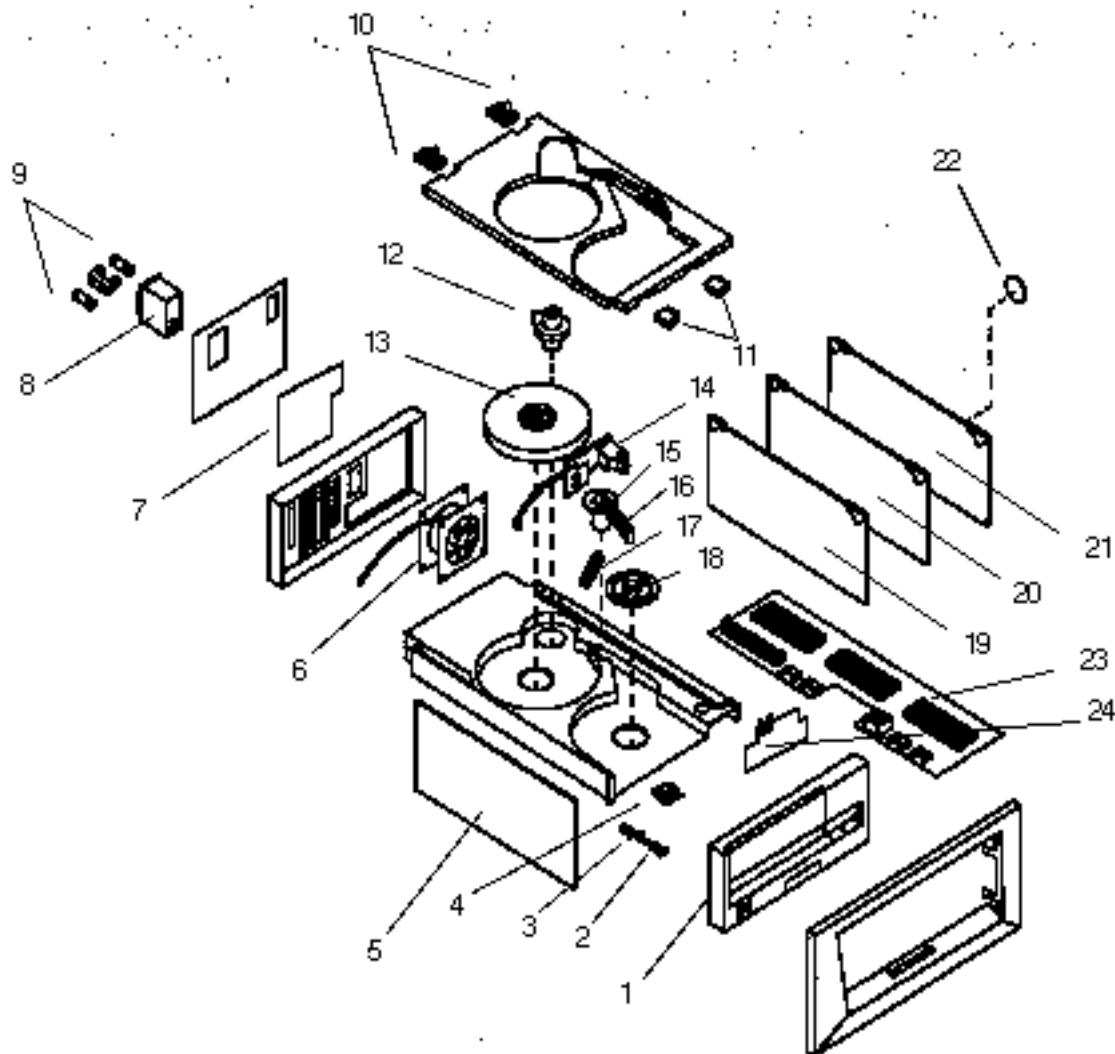
2	540-1978	Fan/SCSI Connector/Address Select Assembly
3	150-1557	■ Address Select Switch (obsolete)
3	150-2049	■ Address Select Switch
4	540-1802	■ Fan Assembly
NS	150-1174	■ 2A Subminiature Fuse
NS	340-2839	■ Fan EMI Gasket
5	540-1773	Base Assembly
6	330-1214	■ Rubber Foot
7	300-1037	35 Watt Power Supply (obsolete) ¹
7	300-1090	35 Watt Power Supply (obsolete)
7	300-1105	44 Watt Power Supply
8	370-1218	150MB Tape Drive, QIC-150, Archive 2150S
9	340-1967	Tape Drive Bracket
10	530-1454	Address Select Switch Cable, 5.25"
10	530-1825	Address Select Switch Cable, 8.5"
NS	240-1141	#6-32 x 1/4" Screw
NS	150-1346	External Terminator, 50-Pin SCSI-2
NS	150-1785	External Active Terminator, 50-Pin SCSI-2
NS	530-1434	External Cable, 50-Pin, SCSI-2 to SCSI-2, 45 cm
NS	530-1508	External Cable, SCSI-2 to SCSI-2, 80 cm
NS	530-1793	External Cable, 50-Pin SCSI-2 to SCSI-2, 80 cm
NS	530-1836	External Cable, 50-Pin SCSI-2 to SCSI-2, 2.0M
NS	530-1852	External Cable, 50-Pin SCSI-2 to SCSI-2, 4.0M
NS	800-4895	<i>Desktop Storage Pack Field Service Manual</i>

1. Power Supply 300-1037 does not have IEC950 or UL1950 approval. Do NOT install 300-1037 into options manufactured after March 1991.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

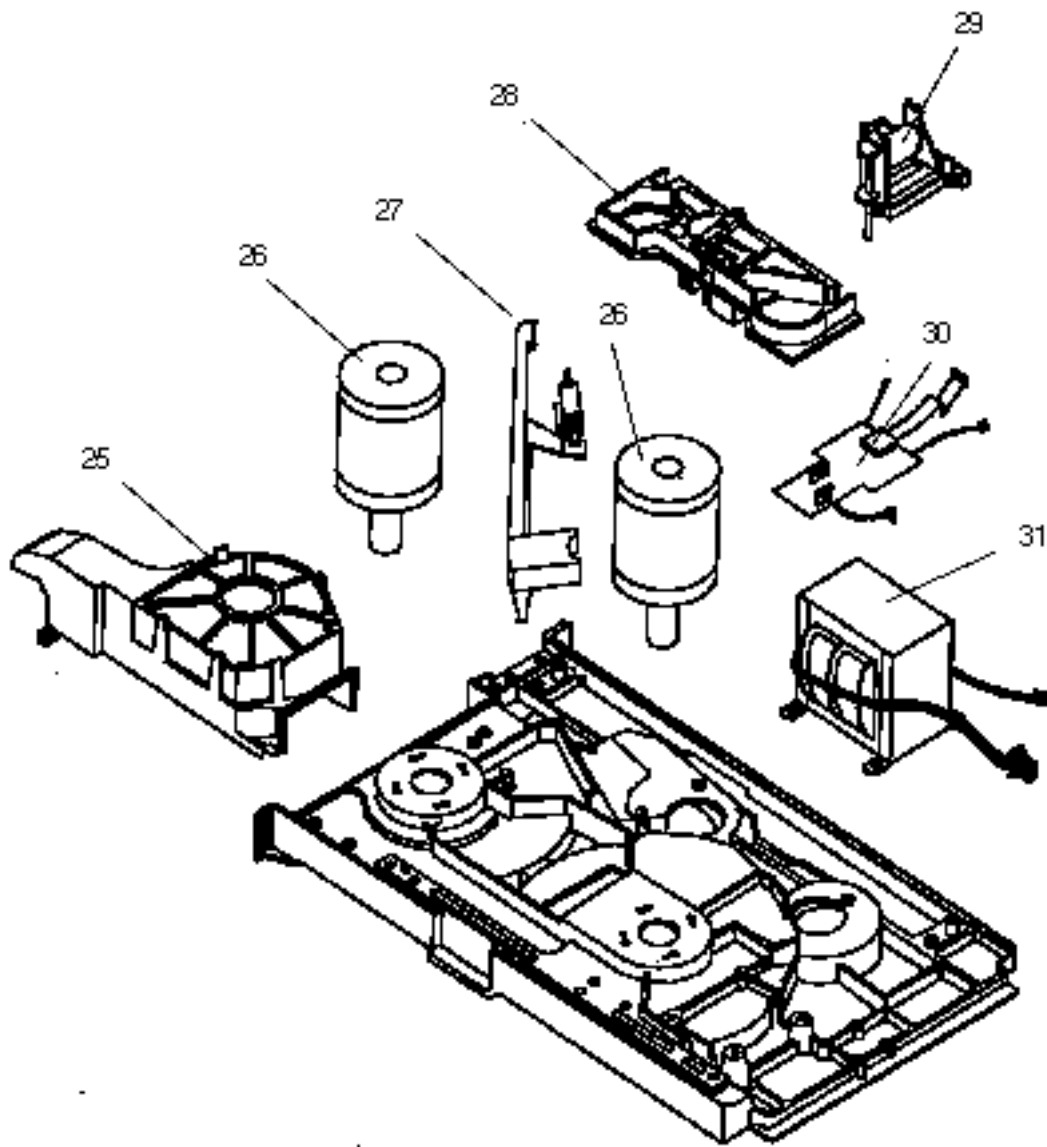
680	682	683	684	685
TableTop	56" Rack	56" Exp Rack 1st Tape	56" Exp Rack 2nd Tape	SC2000 56" Exp Rack



CODE	SUN PART#	HP PART#	DESCRIPTION
1	811-1236	88780-67707	Front Bezel Assembly ¹
1	811-1236	88780-68207	Front Bezel Assembly ²
2	811-1210	07980-44111	Power Switch Button
3	811-1227	07980-61616	Power Switch Assembly
4	811-1228	07980-65000	Door Latch Assembly
5	811-1242	07980-69025	Power/Motor Drive Board
6	811-1245	07980-60043	Fan
7	811-1241	88780-69015	Single Ended I/O Board
8	811-1229	07980-67919	Power Module
9	140-1011	None	6.0A Fuse, .25x1.25" (115V)
9	140-1002	None	3.15A Fuse, 5x20 mm (240V)
9	140-1039	None	3.0A Fuse, .25x1.25" (230V)

10	811-1235	3110-0178	Cover Hinge
11	811-1231	1390-0776	Cover Latch
12	811-1215	07980-60041	Speed Sensor Assembly
13	811-1218	07980-60052	Takeup Hub Assembly, Plastic
13	811-1218	07980-60152	Takeup Hub Assembly, Aluminum
14	811-1214	07980-60040	EOT/BOT Sensor Assembly
15	811-1216	07980-60045	Arm Buffer Assembly
16	811-1209	07980-21701	Buffer Arm Bearing (Roller Guide)
17	811-1233	1460-2180	Buffer Spring
18	811-1219	07980-60053	Supply Hub Assembly
19	370-1276	07980-66531	Read/Write/Format Board
20	370-1277	07980-66503	Drive Controller Board
21	370-1279	07980-66514	Data Buffer Board, 512KB Buffer ³
21	370-1279	07980-66534	Data Buffer Board, 1MB Buffer ³
22	811-1232	1420-0314	3V Lithium Battery ³
23	811-1211	07980-60000	Mother Board PCA
24	811-1212	07980-60008	Display (Front Panel PCA)

1. The latch release swings out to the right.
2. The latch release pulls straight out.
3. The battery is not replaceable on Data Buffer Boards manufactured after approximately January 1990.



CODE	SUN PART#	HP PART#	DESCRIPTION
25	811-1230	07980-86500	Blower Motor
26	811-1217	07980-60050	Takeup/Supply Reel Motor
27	811-1226	07980-60144	Hub Lock Assembly
28	811-1238	07980-60042	Head Plate Assembly
29	811-1237	07980-60051	Tape Displacement Unit
30	811-1213	07980-60009	Tape Sensor Assembly
31	811-1292	9100-4637	Transformer
NS	811-1220	07980-60062	Speed Sensor Cable
NS	811-1221	07980-60064	Front Panel Cable
NS	811-1222	07980-60067	Interface Cable
NS	811-1223	07980-60070	Cable Harness
NS	811-1224	07980-60071	Read Head Cable
NS	811-1225	07980-60072	Write Head Cable
NS	811-1234	3101-2923	Door Microswitch
NS	811-1240	07980-60065	Motor Control Cable
NS	811-1243	88780-60290	Firmware Kit (obsolete)

NS	811-1243	88780-60082	Firmware Kit (not qualified)
NS	811-1243	88780-6018 2	Firmware Kit ¹
NS	811-1244	07980-60048	NRZI Speed Sensor

1. Firmware Kit 88780-60182 includes Drive Controller firmware level 6.76, Buffer firmware level 6.77, and SCSI firmware level 6.62.

PART #	DESCRIPTION
180-1097	5V Power Cord, IEC 320/CEE 22 to NEMA 5-15P
180-1189	230V Power Cord, IEC 320/CEE 22 to NEMA 6-15P
180-1190	240V Power Cord, IEC 320/CEE 22 to Reverse IEC 320
230-1166	Tie Wrap, 5.5"
230-1177	Cable Tie Clip
240-1207	10-32 x 1/2" Screw
250-1018	Rubber Stop Bumper
260-4191	Logo
330-1312	Shipping Bracket, 56" Rack (obsolete)
340-1868	Shipping Bracket, 56" Rack (obsolete)
340-2185	Shipping Bracket, 56" Rack (obsolete)
340-2220	Shipping Bracket, 56" Rack (obsolete)
340-2288	Shipping Bracket, Outer Side, 56" Rack
340-2289	Shipping Bracket, Inner Side, 56" Rack
370-1254	Slide Rails
530-1501	Data Cable, DD-50SA to Centronics, 2.0M
530-1502	Data Cable, Centronics to Centronics, 1.5M,
530-1503	Data Cable, 50-Pin SCSI-2 to Centronics, 2.0M
530-1568	Data Cable, DD-50SA to Centronics, 4.0M
530-1900	Data Cable, 50-Pin SCSI-2 to Centronics, 4.0M
599-1684	115V Tabletop Tape Drive Assembly
599-1685	240V Tabletop Tape Drive Assembly
140-1011	6.0A Fuse, .25x1.25" (115V)
140-1002	3.15A Fuse, 5x20 mm (240V)
150-1407	SCSI Terminator, Centronics
530-1501	Data Cable, DD-50SA to Centronics, 2.0M
540-1821	Tabletop Tape Drive without Fuse and Labels
540-1897	230V Rackmount Tape Drive Assembly
540-1898	240V Rackmount Tape Drive Assembly
140-1002	3.15A Fuse, 5x20 mm (240V)
140-1039	3.0A Fuse, .25x1.25" (230V)
150-1407	SCSI Terminator, Centronics

530-1501	Data Cable, DD-50SA to Centronics, 2.0M
540-1823	Rackmount Tape Drive without Fuse and Labels

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[Comments and Suggestions](#) 

Disk Options

Options 526 / 527 / 530 / 539

[327MB Disk External Storage Module](#)

Options 561 / 563 / 565 / 566

[669MB Disk External Storage Module](#)

Options 706 / 707 / 709 / 710

[1.2GB IPI-2 Disk Subsystem](#)

Options 716 / 717 / 719 / 720

[911MB IPI-2 Disk Subsystem](#)

Options 726 / 727 / 728

[1.3GB IPI-2 Disk Subsystem](#)

Options 741A / 742A / 743A / 744A / 745A

[1.2GB IPI Disk Expansion Pedestal](#)

Options 741L / 742L / 743L / 744L / 745L

[911MB IPI Disk Expansion Pedestal](#)

Options 750 / 754 / 756

[1.3GB SCSI Expansion Pedestal](#)

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[Comments and Suggestions](#) 

526	527	530	539
327MB Disk	327MB Disk Expansion	Two 327MB Disks	327MB Disk 150MB Tape

External Storage and External Expansion Modules

PART #	DESCRIPTION
150-1556	SCSI ID Select Switch
300-1031	120 Watt Power Supply
330-1146	Disk Drive Mounting Bracket
330-1158	Disk Drive Removal Handle
350-1006	Top Cover
350-1010	Left Side Cover
350-1011	Front Bezel
350-1013	Right Side Cover
350-1117	Rear Bezel
370-1203	DC6150 QIC-150 1/4" Tape Cartridge
370-1246	150MB Tape Drive, Full-Height, QIC-150
530-1249	External SCSI Cable, DD-50SA to DD-50SA, 1.0M
530-1250	External SCSI Cable, DD-50SA to DD-50SA, 3.0M
530-1334	External SCSI Cable, DD-50SA to DD-50SA, 2.5M
530-1365	External SCSI Cable, DD-50SA to DD-50SA, 41 cm
530-1381	External Terminator, 50-Pin DD-50SA
530-1409	Internal SCSI Ribbon Cable (obsolete)
530-1435	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M
530-1593	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
530-1792	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M, Ferrites
530-1829	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M, Ferrites
530-1461	1/4" Tape Drive SCSI Adapter Cable
530-1618	Internal SCSI Cable, 95 cm
530-1659	SCSI ID Select Switch Cable
555-1005	327MB SCSI Disk Drive FRU Assembly
330-1146	■ Mounting Bracket
330-1158	■ Drive Removal Handle
370-1153	■ 327MB Disk Drive, Imprimis/CDC 77777107
570-1042	Full-Height Peripheral Front Filler Panel
814-5036	<i>Replacing Components of Sun ESM & EEM Storage Units</i>

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[Comments and Suggestions](#) 

561	563	565	566
669MB Disk	Two 669MB Disks	669MB Disks 150MB Tape	669MB Disk 2.3GB Tape

External Storage and External Expansion Module

PART #	DESCRIPTION
150-1556	SCSI ID Select Switch
300-1031	120 Watt Power Supply
330-1146	Disk Drive Mounting Bracket
330-1158	Disk Drive Removal Handle
340-2359	Disk Drive Mounting Bracket, Right
340-2360	Disk Drive Mounting Bracket, Left
350-1006	Top Cover
350-1010	Left Side Cover
350-1011	Front Bezel
350-1013	Right Side Cover
350-1117	Rear Bezel
370-1203	DC6150 QIC-150 1/4" Tape Cartridge
370-1246	150MB Tape Drive, Full-Height, QIC-150
370-1297	2.3GB 8 mm Tape Drive, Full-height
370-1298	8 mm Tape Cartridge
370-1318	8 mm Cleaning Cartridge
370-1319	669MB Disk Drive, Micropolis 1588-15 with Bezel
370-1319	669MB Disk Drive, Maxtor XT-8760S with Bezel ¹
370-1326	669MB Disk Drive, Micropolis 1588-15 without Bezel
370-1326	669MB Disk Drive, Maxtor XT-8760S without Bezel ¹
530-1249	External SCSI Cable, DD-50SA to DD-50SA, 1.0M
530-1250	External SCSI Cable, DD-50SA to DD-50SA, 3.0M
530-1334	External SCSI Cable, DD-50SA to DD-50SA, 2.5M
530-1365	External SCSI Cable, DD-50SA to DD-50SA, 41 cm
530-1381	External Terminator, 50-Pin DD-50SA
530-1435	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M
530-1593	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
530-1792	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M, Ferrites
530-1829	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M, Ferrites
530-1461	1/4" Tape Drive SCSI Adapter Cable
530-1618	Internal SCSI Cable, 95 cm

530-1659	Address Select Switch Cable, 2.54 mm Pin Spacing
570-1042	Full-Height Peripheral Front Filler Panel
814-5036	<i>Replacing Components of Sun ESM and EEM Storage Units</i>

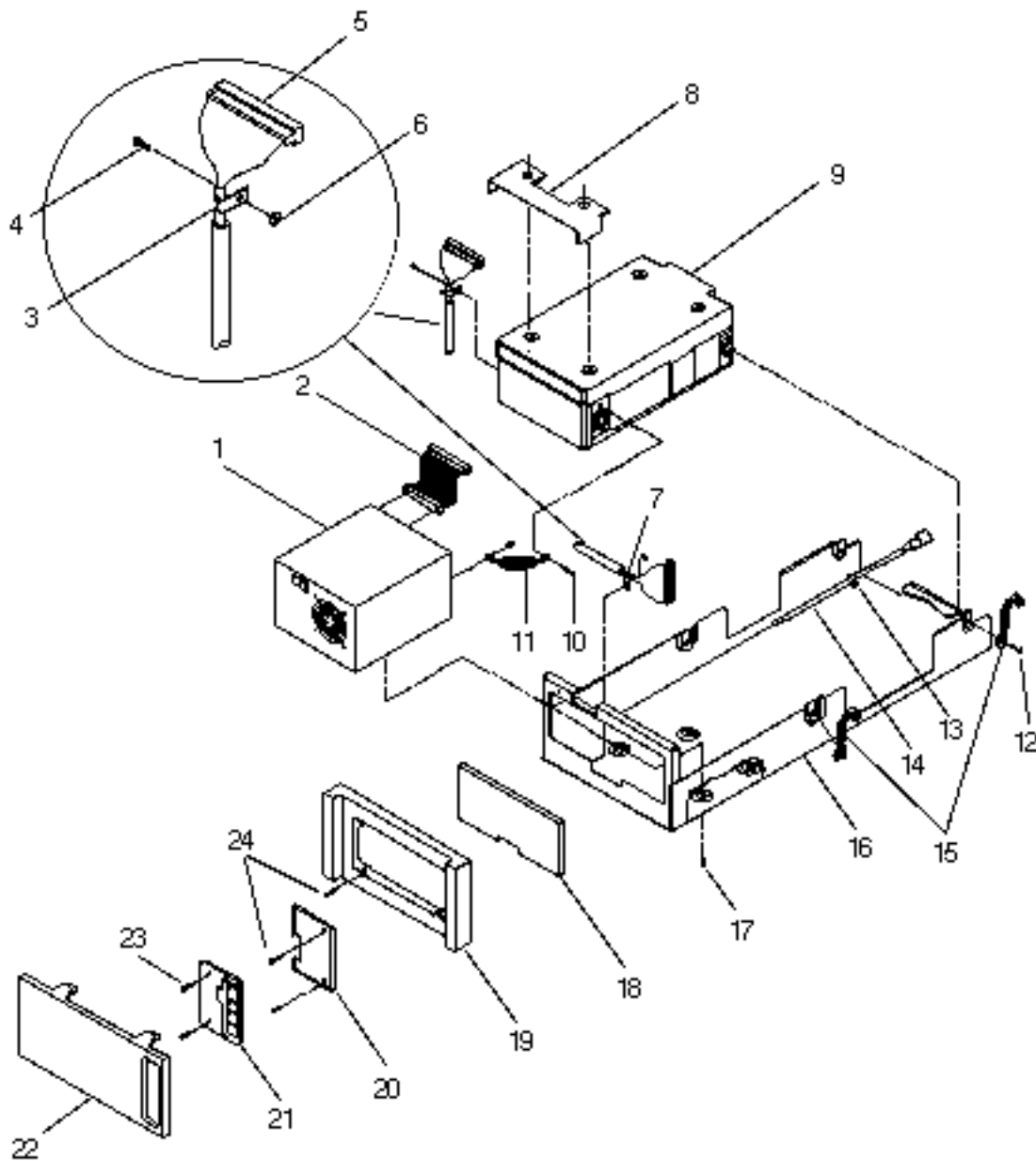
1. The Maxtor drive does not fit into the lower drive position of External Storage Modules manufactured prior to October 1990. Remove the vertical stop block with 10-Inch End Cutter, 250-1074-01.
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[Comments and Suggestions](#) 

706	707	709	710
1.2GB Disk	2.1.2GB Disks	4 1.2GB Disks	8 1.2GB Disks

1.2GB IPI-2 Disk Subsystem



CODE	PART #	DESCRIPTION
	540-1770	IPI Drive, Power Supply, and Tray Assembly
1	300-1041	205W Power Supply
2	370-1263	DC Harness
3	240-1603	Cable Clamp
4	240-1185	#6-32 x 1/4" Screw
5	370-1262	Operator Panel Harness
6	240-1035	Lock Washer, #6
7	240-1602	Cable Clamp

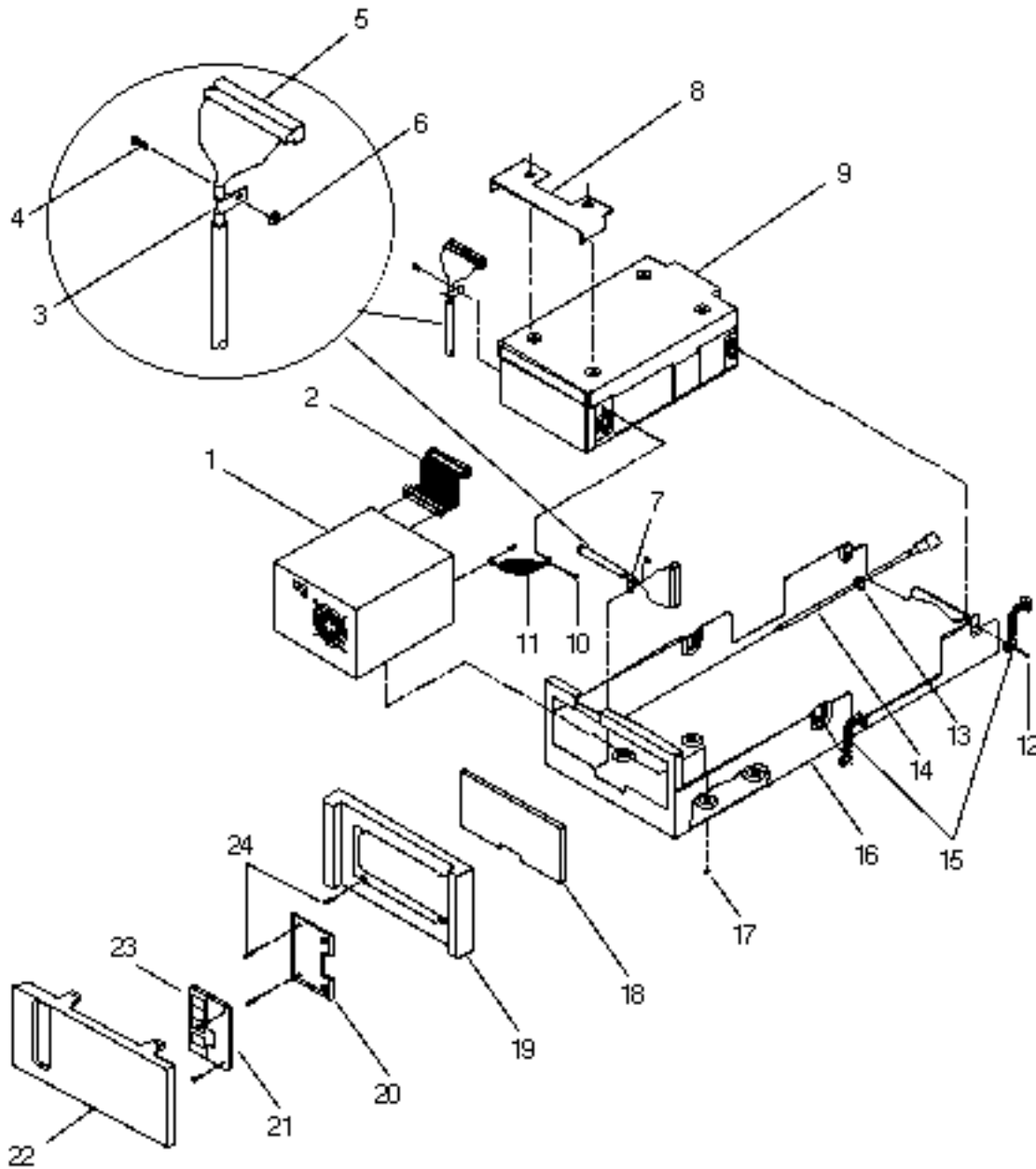
8	370-1350	Air Baffle
9	370-1187	1.2GB Disk, Seagate 97209-12G, PA8R2
10	240-1185	#6-32 x 1/4" Screw (use 7/64" Hex Screwdriver)
11	250-1013	Ground Strap
12	240-1186	#6-32 x 3/8" Screw
13	240-1595	Power Cord Clamp
14	180-1185	AC Power Cord, 572 mm
15	250-1023	Ground Strap
16	340-1854	Tray
17	240-1185	#6-32 x 1/4" Screw (use 7/64" Hex Screwdriver)
18	250-1016	Filter
19	330-1224	Operator Panel Mounting Bracket
20	330-1226	Operator Panel Shield
21	370-1221	Operator Panel
22	330-1225	Operator Panel Cover
23	240-1601	#6-32 x 1/4" Screw (use 2 mm Hex Screwdriver)
24	240-1596	#6-32 x 7/8" Screw (use 7/64" Hex Screwdriver)
NS	180-1183	AC Power Cord, 'Y' (230V)
NS	180-1184	AC Power Cord, 'Y' (240V)
NS	340-1853	Dual Drive Tray (obsolete)
NS	340-1855	Tray Slide, Right (obsolete)
NS	340-1856	Tray Slide, Left (obsolete)
NS	340-1891	Tray Spacer
NS	340-2296	Dual Drive Tray
NS	370-1220	IPI Drive Terminator
NS	530-1351	AC Power Cord (230V)
NS	530-1343	AC Power Cord (240V)
NS	530-1487	IPI Drive I/O Cable, 8.0M (obsolete)
NS	530-1488	IPI Drive I/O Cable, 1.0M
NS	530-1518	IPI Drive I/O Cable, 2.0M (obsolete)
NS	530-1536	IPI Drive I/O Cable, 450 mm
NS	530-1788	IPI Drive I/O Cable, 2.0M
NS	530-1789	IPI Drive I/O Cable, 8.0M
NS	None	#6-32 x 1/4" Screw (use T15 Torx Screwdriver)
NS	370-1330	Connector Assembly (use 7/64" Hex Screwdriver)

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[Comments and Suggestions](#) 

716	717	719	720
911MB Disk	2 911MB Disks	4 911MB Disks	8 911MB Disks

911MB IPI-2 Disk Subsystem



CODE	PART #	DESCRIPTION
	540-2005	IPI Drive, Power Supply, and Tray Assembly
1	300-1074	215 Watt Power Supply
2	370-1263	DC Harness
3	240-1603	Cable Clamp
4	240-1185	#6-32 x 1/4" Screw
5	370-1262	Operator Panel Harness
6	240-1035	#6 Lock Washer
7	240-1602	Cable Clamp

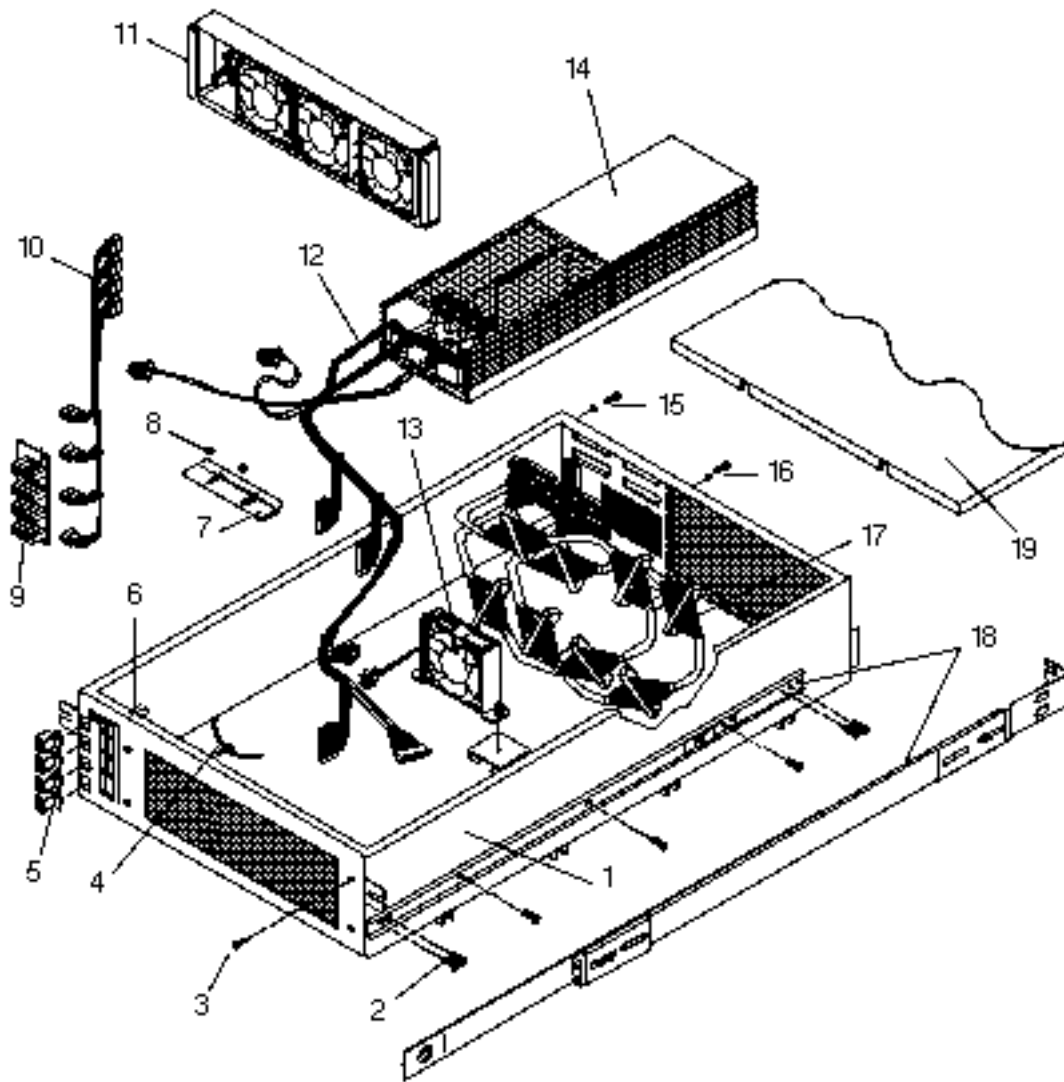
8	370-1350	Air Baffle
9	370-1351	911MB Disk, Seagate 97229-11G, PA8Y2
10	240-1185	#6-32 x 1/4" Screw (use 7/64" Hex Screwdriver)
11	250-1013	Ground Strap
12	240-1186	#6-32 x 3/8" Screw
13	240-1595	Power Cord Clamp
14	180-1185	AC Power Cord, 572 mm
15	250-1023	Ground Strap
16	340-1854	Tray
17	240-1185	#6-32 x 1/4" Screw (use 7/64" Hex Screwdriver)
18	250-1016	Filter
19	330-1224	Operator Panel Mounting Bracket
20	330-1226	Operator Panel Shield
21	370-1355	Operator Panel
22	330-1225	Operator Panel Cover
23	240-1601	#6-32 x 1/4" Screw (use 2 mm Hex Screwdriver)
24	240-1596	#6-32 x 7/8" Screw (use 7/64" Hex Screwdriver)
NS	180-1183	AC Power Cord, 'Y' (230V)
NS	180-1184	AC Power Cord, 'Y' (240V)
NS	340-1853	Dual Drive Tray (obsolete)
NS	340-1855	Tray Slide, Right (obsolete)
NS	340-1856	Tray Slide, Left (obsolete)
NS	340-1891	Tray Spacer
NS	340-2296	Dual Drive Tray
NS	370-1220	IPI-2 Disk Terminator
NS	530-1351	AC Power Cord (230V)
NS	530-1343	AC Power Cord (240V)
NS	530-1487	IPI Drive I/O Cable, 8.0M (obsolete)
NS	530-1488	IPI Drive I/O Cable, 1.0M
NS	530-1518	IPI Drive I/O Cable, 2.0M (obsolete)
NS	530-1536	IPI Drive I/O Cable, 450 mm
NS	530-1788	IPI Drive I/O Cable, 2.0M
NS	530-1789	IPI Drive I/O Cable, 8.0M
NS	None	#6-32 x 1/4" Screw (use T15 Torx Screwdriver)
NS	370-1330	Connector Assembly (use 7/64" Hex Screwdriver)

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[Comments and Suggestions](#) 

726	727	728
2 1.3GB Disks 1 Tray	4 1.3GB Disks 1 Tray	1.3GB Disk

1.3GB IPI-2 Disk Subsystem



CODE	PART #	DESCRIPTION
1	340-2461	Chassis Enclosure
2	None	#8-32 x 1/4" Pan Head Screw, Slide Rail to Chassis
3	240-1372	M4 0.7 x 10 mm Screw
4	230-1170	10" Tiestrap
5	150-1557	Address Select Switch
6	230-1256	Nylon Standoff, M4 x 25 mm
7	340-2466	Power Supply Mounting Bracket
8	240-1373	M4 Nut
9	501-1827	Remote LED Display Panel
10	530-1768	Address Select Switch Cable

11	540-2125	3-Fan Tray Assembly, 45 CFM
12	530-1764	DC Wire Harness
13	540-2126	DC Fan Assembly, 45 CFM
14	300-1085	268 Watt Power Supply
14	300-1096	269 Watt Power Supply
15	130-1080	Jack Socket
16	240-1872	Jackscrew
17	530-1753	Internal IPI I/O Cable
18	370-1385	-01 Slide Rail Set, Inner 651.2 mm, Outer 742.7 mm
18	370-1385	-03 Slide Rail Set, Inner 717.3 mm, Outer 742.7 mm
19	340-2465	Chassis Cover
NS	None	Cross-Drilled Top Cover Screw, M4 0.7 x 10 mm
NS	None	Top Cover Screw Retaining Clip
NS	240-1207	#10-32 x 1/2" Screw, Slide Rail to Rack
NS	370-1220	IPI Terminator
NS	530-1343	AC Power Cord, 240V
NS	530-1351	AC Power Cord, 230V
NS	530-1487	External IPI I/O Cable, 8.0M (obsolete) ¹
NS	530-1518	External IPI I/O Cable, 2.0M (obsolete) ¹
NS	530-1536	External IPI I/O Cable, 45 cm
NS	530-1788	External IPI I/O Cable, 2.0M
NS	530-1789	External IPI I/O Cable, 8.0M
NS	540-2127	1.3GB Disk Drive FRU
NS	370-1378	■ 1.3GB Disk Drive, Seagate 975002-005, PA4F2
NS	340-2464	■ Disk Drive Mounting Bracket
NS	330-1400	■ Disk Drive Handle
NS	240-1185	■ #6-32 x 1/4" Screw, Disk Drive to Bracket
	800-6676	<i>1.3GB Tray and Disk Drive Install/Service Manual</i>

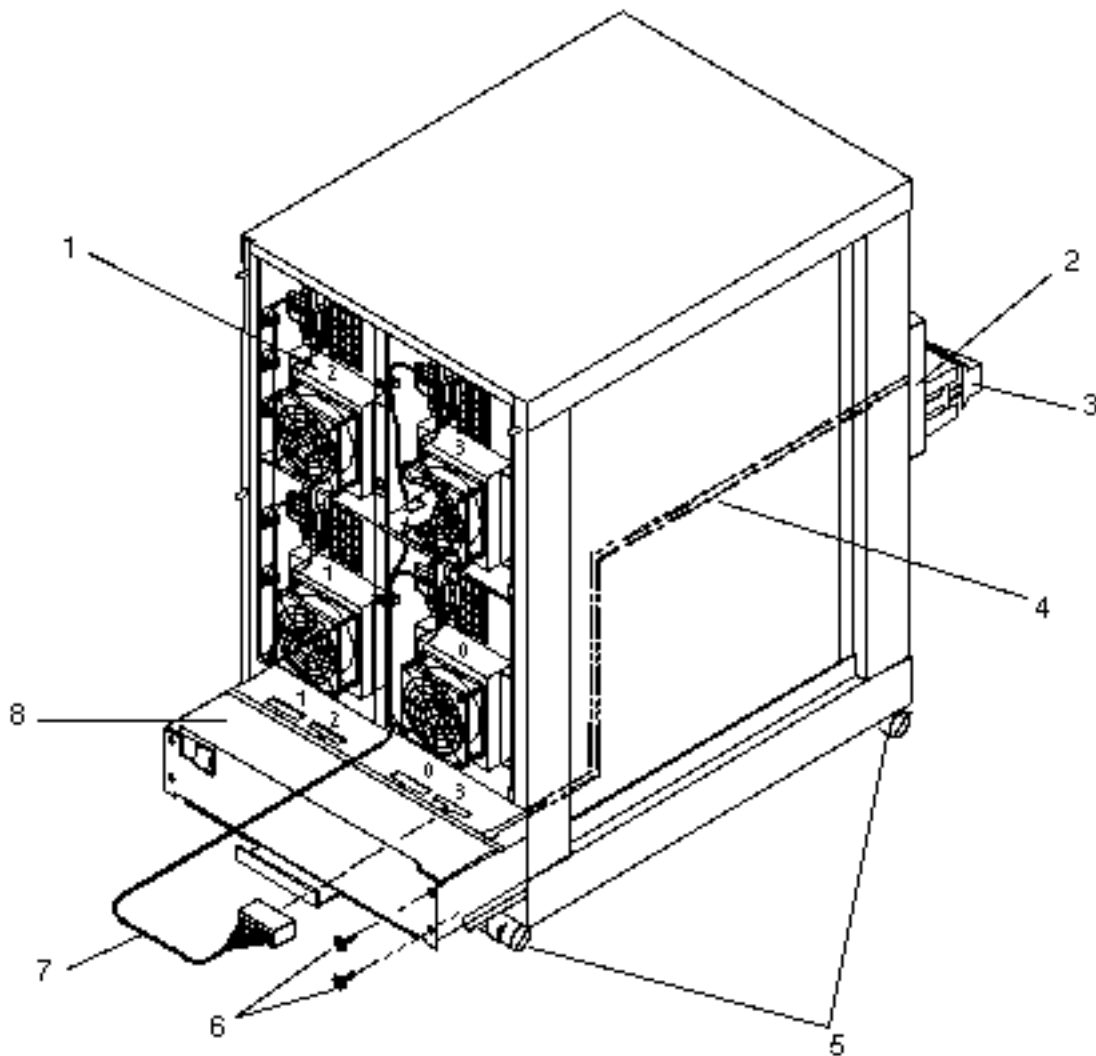
1. IPI Cables without toroids, 530-1518 and 530-1487, can be used with the Sun-4/490.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

741A	742A	743A	745A	744A
1.2GB Disk	2 1.2GB Disks	3 1.2GB Disks	4 1.2GB Disks	1.2 GB Disk Standalone

Sun Expansion Pedestal



CODE	PART #	DESCRIPTION
NS	340-2188	Rear Panel without Cables
NS	340-2208	■ Filler Panel
1	540-1926	IPI8-1000 3MB/Sec Disk Drive FRU Assembly
NS	370-1314	■ 1.2GB Disk Drive, Seagate 97209-12G, PA8R2 1
NS	340-2300	■ Disk Mounting Cradle
NS	180-1486	■ Front Ground Strap
NS	240-1207	■ #10-32 x 1/2" Drive Mounting Screw
NS	250-1070	■ Rear Ground Strap
NS	340-1898	Top Cover
NS	330-1192	Disk Bezel Insert
NS	540-1749	Rear Bumper Assembly
NS	540-1846	Side Panel Assembly

NS	540-1847	Rear Bezel Assembly
NS	540-1939	Front Panel and Bumper Assembly
NS	530-1487	IPI Drive I/O Cable, 8.0M (obsolete)
NS	530-1488	IPI Drive I/O Cable, 1.0M
NS	530-1518	IPI Drive I/O Cable, 2.0M (obsolete)
NS	530-1536	IPI Drive I/O Cable, 450 mm
NS	530-1788	IPI Drive I/O Cable, 2.0M
NS	530-1789	IPI Drive I/O Cable, 8.0M
NS	370-1220	IPI Drive Terminator
2	540-1765	LED/Switch Assembly
NS	340-2050	■ Switch Panel
NS	501-1531	■ LED/Switch PCB
3	540-1748	Remote Switch Assembly
NS	330-1212	■ Switch
NS	330-1213	■ Push Block
NS	340-1936	■ Switch Housing
4	530-1495	LED/Switch DC Harness
5	340-2129	Caster
6	240-1372	M4 0.7 x 10 mm Screw
7	530-1544	DC Harness
8	300-1052	820W Power Supply (obsolete) ²
8	300-1075	840W Power Supply
NS	530-1619	System Grounding Cable, 2.0M
NS	340-2262	Cable Restraint Bracket
NS	230-0203	4" Tiestrap
NS	230-1188	6" Tiestrap, Snap-in
NS	800-3257	<i>Sun Expansion Pedestal Field Service Manual</i>

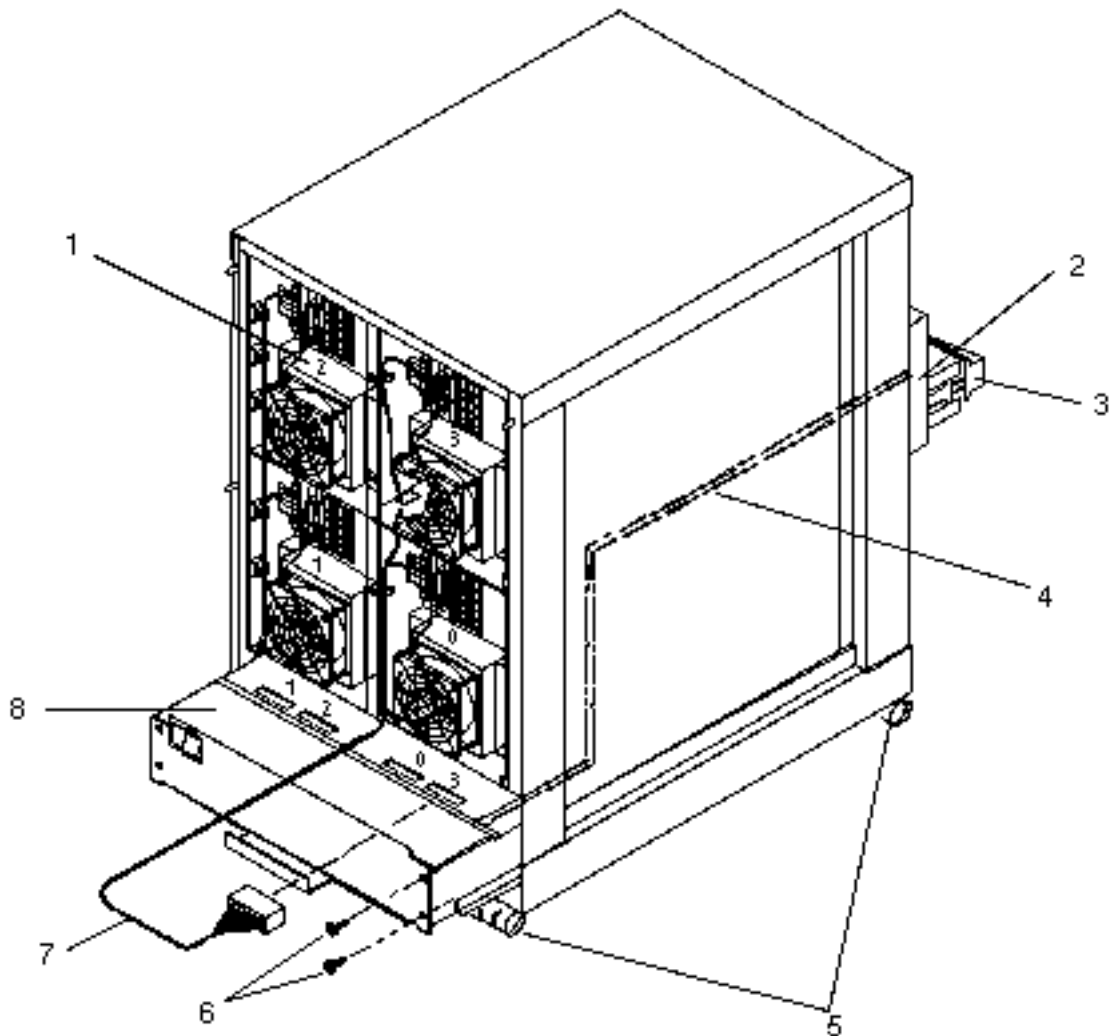
1. Do NOT install Disk Drive 370-1187 in the Sun Expansion Pedestal
2. Power Supply 300-1052-05 does not support the 1.2GB Disk Drive.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

741L	742L	743L	744L	745L
911MB Disk	2 911MB Disks	3 911MB Disks	4 911MB Disks	911MB Disk Standalone

Sun Expansion Pedestal



CODE	PART #	DESCRIPTION
NS	340-2188	Rear Panel without Cables
NS	340-2208	■ Filler Panel
1	540-2008	IPI8-1000/2HP 6MB/Sec Disk Drive FRU Assembly
NS	370-1352	■ 911MB Disk Drive, Seagate 97209-11G, PA8Y2 ¹
NS	340-2300	■ Disk Mounting Cradle
NS	180-1486	■ Front Ground Strap
NS	240-1207	■ #10-32 x 1/2" Drive Mounting Screw
NS	250-1070	■ Rear Ground Strap
NS	340-1898	Top Cover
NS	330-1192	Disk Bezel Insert
NS	540-1749	Rear Bumper Assembly
NS	540-1846	Side Panel Assembly

NS	540-1847	Rear Bezel Assembly
NS	540-1939	Front Panel and Bumper Assembly
NS	530-1487	IPI Drive I/O Cable, 8.0M
NS	530-1488	IPI Drive I/O Cable, 1.0M
NS	530-1518	IPI Drive I/O Cable, 2.0M
NS	530-1536	IPI Drive I/O Cable, 450 mm
NS	530-1788	IPI Drive I/O Cable, 2.0M
NS	530-1789	IPI Drive I/O Cable, 8.0M
NS	370-1220	IPI Drive Terminator
2	540-1765	LED/Switch Assembly
NS	340-2050	■ Switch Panel
NS	501-1531	■ LED/Switch PCB
3	540-1748	Remote Switch Assembly
NS	330-1212	■ Switch
NS	330-1213	■ Push Block
NS	340-1936	■ Switch Housing
4	530-1495	LED/Switch DC Harness
5	340-2129	Caster
6	240-1372	M4 0.7 x 10 mm Screw
7	530-1544	DC Harness
8	300-1075	840W Power Supply ²
NS	530-1619	System Grounding Cable, 2.0M
NS	340-2262	Cable Restraint Bracket
NS	230-0203	4" Tiestrap
NS	230-1188	6" Tiestrap, Snap-in
NS	800-3257	<i>Sun Expansion Pedestal Field Service Manual</i>

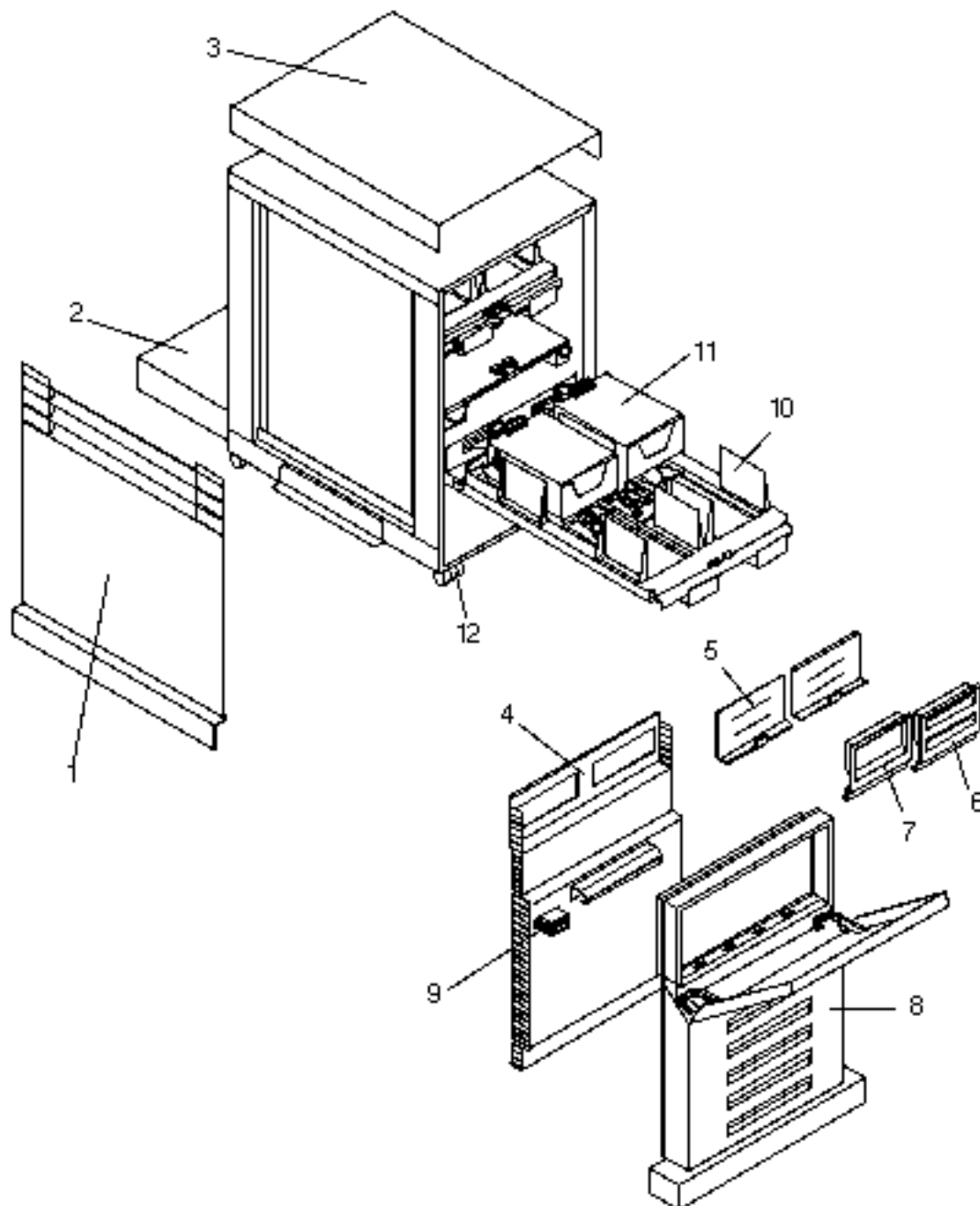
1. Do NOT install Disk Drive 370-1351 in the Sun Expansion Pedestal.
2. Power Supply 300-1052 does not support the 911MB Disk Drive.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

750	754	756
2 1.3GB Disks 1 Tray	4 1.3GB Disks 8 mm Tape	2 1.3GB Disks Expansion Tray

SCSI Expansion Pedestal



CODE	PART #	DESCRIPTION
1	540-1846	Side Cover
2	300-1091	800 Watt Power Supply
2	300-1106	800 Watt Power Supply
3	340-1898	Top Cover
4	340-2534	Front EMI Cover, without Switch Assembly
5	340-2292	Blank EMI Cover Filler Panel

6	330-1192	Blank Bezel Insert
7	330-1210	Front Bezel Half-Height Insert
7	330-1284	Front Bezel Full-Height Insert
8	540-1939	Front Bezel Assembly
NS	240-0558	■ Miniball Receptacle
NS	240-0557	■ Miniball Fastener
9	540-1765	LED/Switch Assembly
NS	501-1531	■ LED/Switch PCB
NS	540-2136	■ Remote Switch Assembly
NS	330-1373	■ Switch
NS	340-2491	■ Switch Bracket
10	340-2444	Peripheral Mounting Bracket
11	370-1377	1.3GB Disk Drive, Seagate 976002-012, PA4E1
11	370-1377	1.3GB Expansion Disk Drive, Option 572
12	340-2129	Caster
NS	150-1785	External Active Terminator, 50-Pin SCSI-2
NS	340-2535	Rear EMI Cover
NS	340-2543	Rear EMI Cover Filler Panel
NS	370-1297	2.3GB 8 mm Tape Drive, Full-Height, Option 802
NS	370-1347	SunCD CD-ROM, Half-Height, Option 559
NS	530-1619	System Grounding Cable, 2.0M
NS	530-1675	Peripheral Tray DC Harness
NS	530-1676	Internal SCSI Cable, 1670 mm
NS	530-1793	External Cable, 50-Pin SCSI-2, 80 cm, Ferrites
NS	530-1811	DC Harness, Power Supply to Right Side
NS	530-1824	LED/Switch DC Harness, Power Supply to Switch
NS	530-1836	External Cable, 50-Pin SCSI-2, 2.0M, Ferrites
NS	530-1841	DC Harness, Power Supply to Fans and Left Side
NS	530-1842	CD-ROM Grounding Cable
NS	530-1852	External Cable, 50-Pin SCSI-2, 4.0M, Ferrites
NS	540-1749	Rear Bumper
NS	540-1847	Rear Bezel
NS	540-2157	Three Fan Assembly, 45 CFM each
	800-6402	<i>Sun SCSI Expansion Pedestal Service Manual</i>
	800-7286	<i>Sun SCSI Expansion Pedestal Service Manual</i>

Last updated: December 2, 1996

[Comments and Suggestions](#) 

System

Sun-4 Architecture

[Sun-4/110/310](#)

[Sun-4/150/350](#)

[Sun-4/260/360](#)

[Sun-4/280/380](#)

[Sun-4/330](#)

[Sun-4/370/470](#)

[Sun-4/390/490](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/110/310

3-Slot VMEbus Logic Enclosure

PART #	DESCRIPTION
140-1019	Fuse, 15A (115V)
140-1030	Fuse, 6.3A (240V)
150-1042	Fusecarrier (115V)
150-1051	Fusecarrier (240V)
180-1010	AC Power Cord, Coiled, AC Output Receptacle to Monitor
180-1097	AC Power Cord (115V)
180-1117	AC Power Cord, AC Output Receptacle to Monitor
180-1125	AC Power Cord (240V)
240-1368	M6 1.0 x 16 mm Screw, Side Cover
260-4443	Sun-4/310 Logo
300-1022	325 Watt Power Supply, Summit (replaced by 300-1093)
300-1022	325 Watt Power Supply, Brown (obsolete)
300-1093	325 Watt Power Supply, Summit
330-1067	End Panel, 42 cm X 11 cm
330-1069	Front Bezel
330-1071	Side Panel, 42 cm X 59 cm
330-1089	Side Panel Screw Cover
330-1144	Backplane Shield
340-1545	Air Filter Assembly
370-1106	AC Switch and Fuse (obsolete)
370-1178	AC Switch, Fuse, and Filter Assembly /TD>
501-1127	3-Slot VMEbus Backplane, Pressfit
540-1384	DC Fan Tray and Power Supply Module Assembly (115V)
540-1418	Power Supply Module Assembly (115V)
540-1419	DC Fan Tray Assembly, 4 Fans
501-1193	■ Fan Controller PCB
540-1455	■ DC Fan Assembly, 26 CFM
540-1535	3-Slot Foot Assembly
540-1541	Power Supply Module Assembly (240V)
540-1542	DC Fan Tray and Power Supply Module Assembly (240V)
800-2126	<i>Field Service Manual for the Sun 3-Slot Logic Enclosure</i>

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/150/350

6-Slot VMEbus Logic Enclosure

PART #	DESCRIPTION
140-1019	Fuse, 15A (115V)
140-1030	Fuse, 6.3A (240V)
150-1042	Fusecarrier (115V)
150-1051	Fusecarrier (240V)
150-1217	AC Line Filter (obsolete) ¹
180-1010	AC Power Cord, Coiled, AC Output Receptacle to Monitor
180-1097	AC Power Cord (115V)
180-1117	AC Power Cord, AC Output Receptacle to Monitor
180-1125	AC Power Cord (240V)
240-1368	M6 1.0 x 16 mm Screw, Side Cover
330-1068	End Panel, 42 cm X 17 cm
330-1070	Front Bezel
330-1071	Side Panel, 42 cm X 59 cm
330-1089	Side Panel Screw Cover
330-1143	Backplane Shield
340-1547	Air Filter Assembly
370-1106	AC Switch and Fuse (obsolete) ¹
370-1178	AC Switch, Fuse, and Filter Assembly ¹
501-1128	6-Slot VMEbus Backplane
530-1352	AC Harness, AC Switch to Line Filter (obsolete) ¹
530-1353	AC Harness, Line Filter to Power Supply (obsolete) ¹
540-1381	DC Fan Tray and Power Supply Module Assembly (115V)
540-1409	DC Fan Tray Assembly
501-1233	■ Fan Controller PCB
540-1471	■ DC Fan Assembly, 60 CFM
540-1410	Power Supply Module Assembly (115V)
300-1020	■ 575 Watt Power Supply
340-1454	■ Power Supply Cover
540-1475	6-Slot Foot Assembly
800-1944	<i>Field Service Manual for the Sun 6-Slot Logic Enclosure</i>

1. When AC Switch 370-1106 is replaced with AC Switch 370-1178, remove AC Line Filter 150-1217, AC Wire Harness 530-1352, and AC Wire Harness 530-1353.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/260/360

12-Slot VMEbus Logic Enclosure

PART #	DESCRIPTION
140-1019	Fuse, 15A (115V)
140-1030	Fuse, 6.3A (240V)
150-1018	AC Power Switch, Illuminated (obsolete)
150-1216	AC Power Switch, Non-Illuminated
150-1041	Fuse Holder (115V)
150-1042	Fusecarrier (115V)
150-1051	Fuse Carrier (240V)
150-1129	AC Line Filter
180-1097	AC Power Cord (115V)
180-1125	AC Power Cord (240V)
240-1048	Caster
260-4442	Sun-4/360 Logo
330-1066	Front Bezel
330-1076	Backplane Cable Shield
340-1138	Top Cover
340-1261	Side Panel, Right
340-1262	Side Panel, Left
370-1086	12-Slot Cardcage
501-1092	12-Slot VMEbus Backplane, Pressfit (obsolete)
501-1117	12-Slot VMEbus Backplane, Pressfit
530-1134	SCSI Bus Cable, Backplane to SCSI Tray
530-1135	DC Harness, Power Supply DC Harness to SCSI Tray
530-1230	AC Receptacle
530-1231	AC Harness, AC Receptacle to AC Filter
530-1207	AC Harness, AC Filter to Fuse to Switch to Power Supply
800-1525	<i>Field Service Manual for the Sun-3/260 Workstation</i>

Fan Assemblies

PART #	DESCRIPTION
540-1510	DC Fan Assembly, 71 CFM, Upper Chassis
530-1171	DC Harness, Power Supply Harness to Upper Fans (obs)
530-1322	DC Harness, Power Supply Harness to Upper Fans

540-1555	6-Fan Tray Assembly (obsolete)
540-1510	■ DC Fan Assembly, 71 CFM
530-1357	■ DC Harness, Fan Tray
540-1581	6-Fan Tray Assembly, Low Profile, No Fingerguards (obs)
540-1510	■ DC Fan Assembly, 71 CFM
530-1357	■ DC Harness, Fan Tray
540-1584	6-Fan Tray Assembly, Low Profile, Individual Fingerguards
540-1572	■ DC Fan Assembly, 71 CFM, Low Profile
530-1357	■ DC Harness, Fan Tray
540-1596	6-Fan Tray Assembly, Low Profile, Full Screen
540-1572	■ DC Fan Assembly, 71 CFM, Low Profile
530-1357	■ DC Harness, Fan Tray

Power Supplies

PART #	DESCRIPTION
300-1024	850 Watt Power Supply, Fuji Electrochemical
530-1206	DC Harness, +5Vdc
530-1201	DC Harness, +5Vdc, -5Vdc, +12Vdc, -12Vdc (obsolete)
530-1324	DC Harness, +5Vdc, -5Vdc, +12Vdc, -12Vdc
300-1043	925 Watt Power Supply, Fuji Electrochemical
530-1578	DC Harness, +5Vdc
530-1581	DC Harness, +5Vdc, -5Vdc, +12Vdc, -12Vdc

Tape and Disk Drive Options

PART #	DESCRIPTION
370-1011	Sysgen SC4000 Tape Controller
370-1037	45/60MB 1/4" Tape Drive, Wangtech 5099EG11 (obsolete)
370-1112	45/60MB 1/4" Tape Drive, QIC-11/24, Wangtech 5099EG11
370-1112	45/60MB 1/4" Tape Drive, QIC-11/24, Archive 5945L-2
530-1141	Tape Command Cable, Sysgen SC4000 to Tape Drive
370-1061	Emulex MT02 Tape Controller
370-1235	Emulex MT02 Tape Controller
370-1076	45/60MB 1/4" Tape Drive, Wangtech 5099EN24 (obsolete)
370-1103	45/60MB 1/4" Tape Drive, QIC-11/24, Wangtech 5099EN24
370-1103	45/60MB 1/4" Tape Drive, QIC-11/24, Archive 5945C
530-1141	Tape Command Cable, Emulex MT02 to Tape Drive

370-1010	Adaptec ACB-4000 SCSI Disk Controller
370-1034	71MB Disk Drive, Micropolis 1325
370-1034	71MB Disk Drive, Fujitsu M2243AS
530-1134	SCSI Bus Cable, Backplane to SCSI Tray
530-1135	DC Harness, Power Supply DC Harness to SCSI Tray
530-1142	Disk Data Cable, 39 cm, LUN 0
530-1145	Disk Data Cable, 62 cm, LUN 1
530-1157	Disk Command Cable, Dual Disk
370-0552	Emulex MD21 SCSI Disk Controller
370-1236	Emulex MD21 SCSI Disk Controller
370-0551	141MB Disk Drive, Micropolis 1355
370-0551	141MB Disk Drive, Toshiba MK156
370-1133	327MB Disk Drive, Micropolis 1558-15
530-1134	SCSI Bus Cable, Backplane to SCSI Tray
530-1135	DC Harness, Power Supply DC Harness to SCSI Tray
530-1142	Disk Data Cable, 39 cm, LUN 0
530-1145	Disk Data Cable, 62 cm, LUN 1
530-1157	Disk Command Cable, Dual Disk

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/280/380

12-Slot VMEbus Logic Enclosure

PART #	DESCRIPTION
140-1019	Fuse, 15A (115V)
140-1026	Fuse, 6A (230V)
140-1030	Fuse, 6.3A (240V)
150-1018	AC Power Switch, Illuminated (obsolete)
150-1216	AC Power Switch, Non-Illuminated
150-1041	Fuse Holder (115V)
150-1042	Fusecarrier (115V)
150-1051	Fuse Carrier (240V)
150-1129	AC Line Filter
180-1097	AC Power Cord (115V)
260-4441	Sun-4/380 Logo
330-1076	Backplane Cable Shield
340-1283	Cardcage Mounting Bracket Assembly (obsolete)
340-1583	■ Front and Rear Angle Bracket
340-1584	■ Side Angle Bracket
340-1685	Front EMI Cover
340-1686	Front EMI Cover
370-1086	12-Slot Cardcage
501-1092	12-Slot VMEbus Backplane, Pressfit (obsolete)
501-1117	12-Slot VMEbus Backplane, Pressfit
530-1230	AC Receptacle Assembly
530-1257	AC Harness, AC Receptacle to AC Filter
530-1258	AC Harness, AC Filter to Fuse to Switch to Power Supply
530-1260	Indicator Lamp, 12Vdc (obsolete)
530-1343	AC Power Cord (240V)
530-1351	AC Power Cord (230V)
540-1366	Fan Tray Assembly, 4 Fans
530-1259	■ DC Harness, Fan Tray (obsolete)
530-1321	■ DC Harness, Fan Tray
540-1129	■ DC Fan Assembly, 88 CFM (obsolete)
540-1509	■ DC Fan Assembly, 88 CFM
540-1508	Indicator Lamp, 12Vdc
540-1585	Cardcage Mounting Bracket Assembly

Power Supplies

PART #	DESCRIPTION
300-1024	850 Watt Power Supply, Fuji Electrochemical
530-1206	DC Harness, +5Vdc (obsolete)
530-1340	DC Harness, +5Vdc
530-1222	DC Harness, +5Vdc, -5Vdc, +12Vdc, -12Vdc (obsolete)
530-1320	DC Harness, +5Vdc, -5Vdc, +12Vdc, -12Vdc
300-1043	925 Watt Power Supply, Fuji Electrochemical
530-1578	DC Harness, +5Vdc
530-1580	DC Harness, +5Vdc, -5Vdc, +12Vdc, -12Vdc

1/4" Tape Drive Option

PART #	DESCRIPTION
230-1007	Plastic Standoff, 1.0 cm
370-1061	Emulex MT02 Tape Controller
370-1235	Emulex MT02 Tape Controller
370-1076	45/60MB 1/4" Tape Drive, Wangtech 5099EN24 (obsolete)
370-1103	45/60MB 1/4" Tape Drive, QIC-11/24, Wangtech 5099EN24
370-1103	45/60MB 1/4" Tape Drive, QIC-11/24, Archive 5945C
370-1235	Emulex MT02 Tape Controller
530-1249	SCSI Bus Cable, SCSI Host Adapter to SCSI Tray
530-1277	DC Harness, Emulex MT02 to Tape Drive
140-1010	■ Fuse, 5A, +5Vdc
530-1278	SCSI Bus Cable, Rear Panel to Emulex MT02
530-1279	Tape Command Cable, Emulex MT02 to Tape Drive
813-1016	<i>Installation and Service Manual for the Sun-3/180 Tape Drive Option</i>

76-inch Data Center Cabinet

PART #	DESCRIPTION
180-1149	32Amp IEC-309 AC Receptacle (240V)
300-1011	AC Power Sequencer (115V)
300-1263	AC Power Sequencer (230V)
300-1264	AC Power Sequencer (240V)
340-0530	19" Logic Enclosure Support Rail Bracket (obsolete)
340-1283	19" Logic Enclosure Support Rail Assembly (obsolete)
340-1284	Keyswitch Panel, 7" x 19" (obsolete)
340-1285	Panel, 7" x 19"
340-1286	Panel, 3.5" x 19"

340-1287	Panel, 24.5" x 19"
340-1441	Keyswitch Panel, 1.5" x 19"
340-1442	Tape Drive Filler Panel, 1.5" x 19"
340-1485	19" Logic Enclosure Filler Panel, xxx x 19"
340-1487	Rear Panel with Cable Cutout, 22.7" x 19"
340-1489	Panel, 1.5 x 19"
340-1490	Panel, 10.5" x 19"
340-1522	19" Logic Enclosure Support Rail (obsolete)
340-1554	Panel, 19.6" x 19"
340-1595	Perforated Panel, 20" x 19"
340-1597	Panel, 5.25 x 19"
340-1662	892MB Disk Drive Front Panel
340-1700	Front Panel, 3.5" x 19" x 40 mm
340-1701	Front Panel, 10.5" x 19" x 40 mm
340-1715	Filler Panel for 340-1662
370-1027	AC Power Sequencer (230V) (obsolete)
370-1045	Blower Assembly
370-1053	76" Rack with Rear Door
370-1105	76" Rack without Rear Door
370-1126	AC Power Sequencer (240V) (obsolete)
370-1155	AC Power Sequencer (230V) (obsolete)
370-1156	AC Power Sequencer (240V) (obsolete)
530-1298	AC Power Cord, Fan Assembly (115V)
530-1303	Keyswitch Cable, 2.75M
530-1328	AC Power Cord, Fan Assembly (230V)
530-1343	AC Power Cord, 19" Logic Enclosure (240V)
530-1344	AC Power Cord, Fan Assembly (240V)
530-1346	AC Power Cord, Fujitsu M2444AC Tape Drive (240V)
530-1347	AC Power Cord, Fujitsu M2361A Disk Drive (240V)
530-1348	AC Power Cord, Fujitsu M2444AC Tape Drive (230V)
530-1349	AC Power Cord, Fujitsu M2361A Disk Drive (230V)
530-1350	AC Power Cord, CDC 92181 Tape Drive (230V)
530-1351	AC Power Cord, 19" Logic Enclosure (230V)
540-1285	Keyswitch Assembly
540-1428	AC Fan Assembly (115V)
340-1491	Fan Bracket
370-0550	AC Fan (115V)
540-1503	AC Fan Assembly (230V)
340-1491	Fan Bracket
370-1124	AC Fan (230V)
540-1568	AC Fan Assembly (240V)

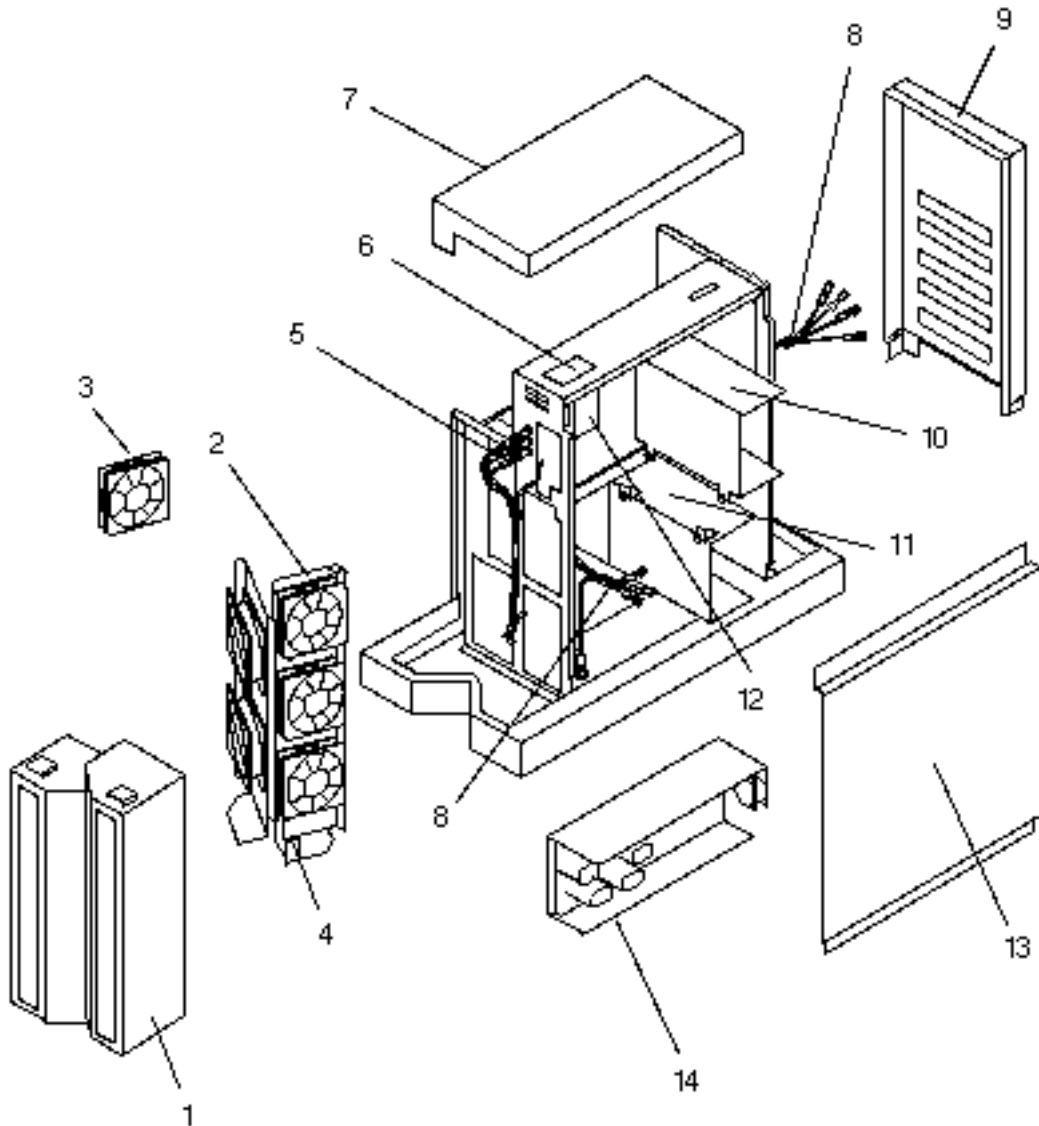
340-1491	Fan Bracket
370-1124	AC Fan (240V)
540-1585	19" Logic Enclosure Support Rail Assembly
340-1583	19" Logic Enclosure Support Rail Bracket
340-1584	19" Logic Enclosure Support Rail
560-1113	19" Logic Enclosure Mounting Hardware Kit

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/330

5-Slot VMEbus Logic Enclosure



CODE	PART #	DESCRIPTION
NS	260-3617	SPARCstation 330 Logo
NS	260-3818	SPARCserver 330 Logo
1	330-1178	Rear Cover
NS	330-1180	Cable Retainers
2	540-1760	Fan and Bracket Assembly
NS	530-1465	DC Harness, Power Supply to Peripherals & Fans ¹
NS	530-1468	■ Fan Harness ¹
3	540-2029	■ Fan Assembly, Variable Speed, 105 CFM
3	540-1788	■ Fan Assembly, 100 CFM (obsolete)
4	540-1811	■ AC Receptacle
5	530-1470	AC Input Harness

6	340-1772	SCSI Terminator Access Panel
NS	501-1432	■ SCSI IN Terminator PCB
NS	501-1416	■ SCSI OUT Terminator PCB
NS	120-1608	■ 220/330 Terminator
7	540-1789	Top Cover Assembly
8	530-1469	AC Harness, Internal ²
9	540-1787	Front Cover Assembly
NS	340-2500	■ Front Cover Air Baffle
10	540-1758	Upper Drive Tray Assembly (obsolete) ³
NS	340-1783	■ Drive Tray
10	540-2133	Upper Drive Tray Assembly
NS	340-2497	■ Drive Tray
11	540-1757	Lower Drive Tray Assembly (obsolete) ³
NS	340-1782	■ Drive Tray
11	540-2132	Lower Drive Tray Assembly
NS	340-2498	■ Drive Tray
12	150-1129	AC Line Filter
13	340-1792	Left Cover
14	300-1034	520 Watt Power Supply (obsolete)
NS	150-1323	AC On/Off Switch
NS	150-1346	External Terminator, 50-Pin SCSI-2
NS	150-1785	External Active Terminator, 50-Pin SCSI-2
NS	240-1605	Caster Ball
NS	330-1180	Cable Retainers
NS	340-1676	3U Top Cover
NS	340-1677	6U Filler Panel
NS	340-1784	6U Side Cover
NS	340-1793	Right Cover
NS	340-1800	Half-Height Tape Filler Panel
NS	370-1205	150MB Tape Drive, Half-Height, QIC-150
NS	370-1206	150MB Tape Drive, Full-Height, QIC-150
NS	370-1230	327MB Disk Drive, Imprimis/CDC 77777126
NS	370-1319	669MB Disk, Micropolis 1588-15
NS	370-1319	669MB Disk, Maxtor XT-8760
NS	501-1354	5-Slot VMEbus Backplane, Pressfit
NS	530-1434	External SCSI Cable, 50-Pin SCSI-2, 45 cm (obs)
NS	530-1466	Internal SCSI Cable
NS	530-1826	External SCSI Cable, 50-Pin SCSI-2, 45 cm, Ferrites
NS	540-1800	Caster Plate and Stud

1. Wire harnesses <=530-1465-03 and <=530-1468-02 are not field repairable or replaceable. These lower revisions are soldered together. Replace both harnesses upon failure. Wire harnesses >=530-1465-04 and >=530-1468-03 are pluggable.

2. Wire harness 530-1469 is not field repairable or replaceable.
 3. The 1.3GB SCSI Disk does not fit into Tray 540-1757 or 540-1758.
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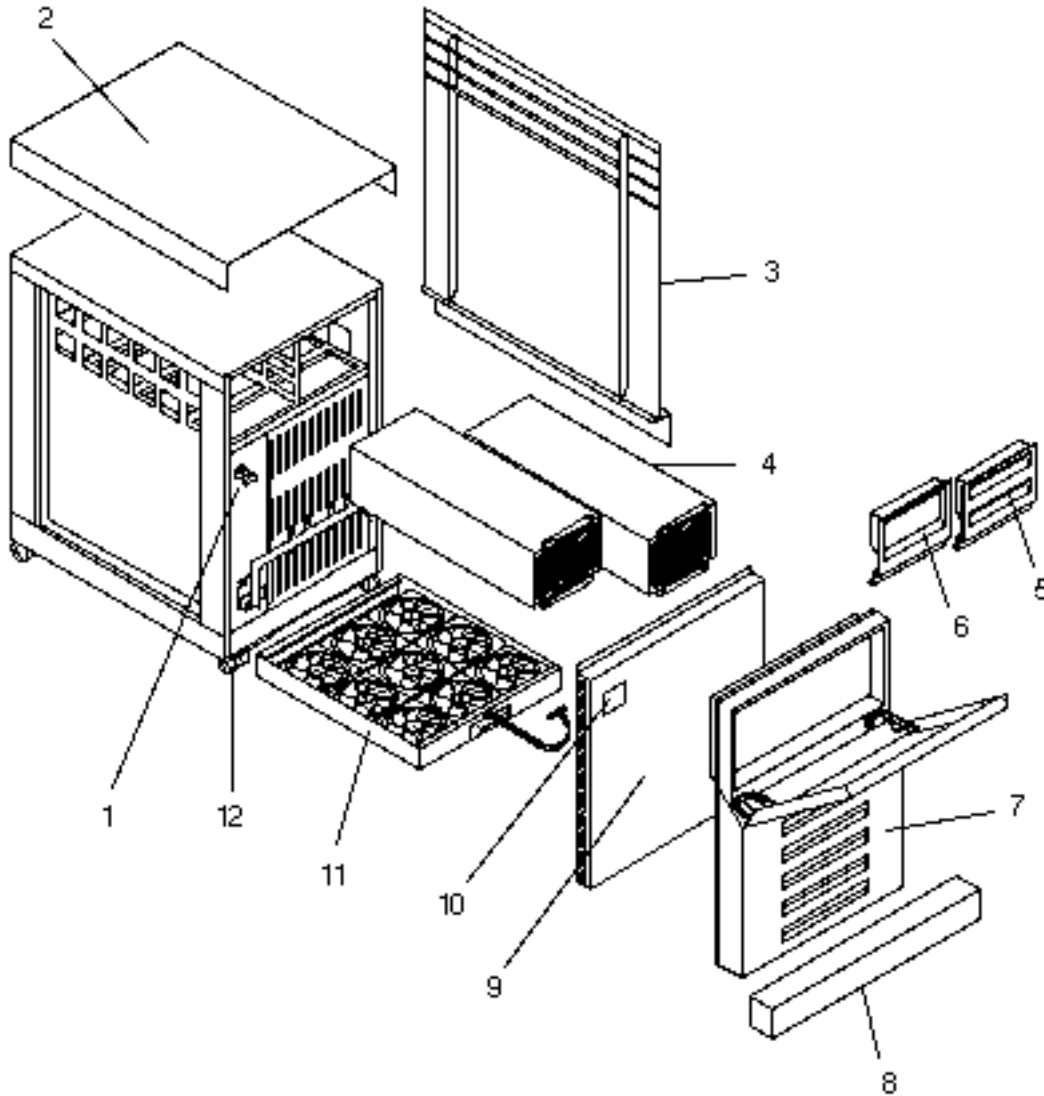
Last updated: December 2, 1996

[Comments and Suggestions](#) 

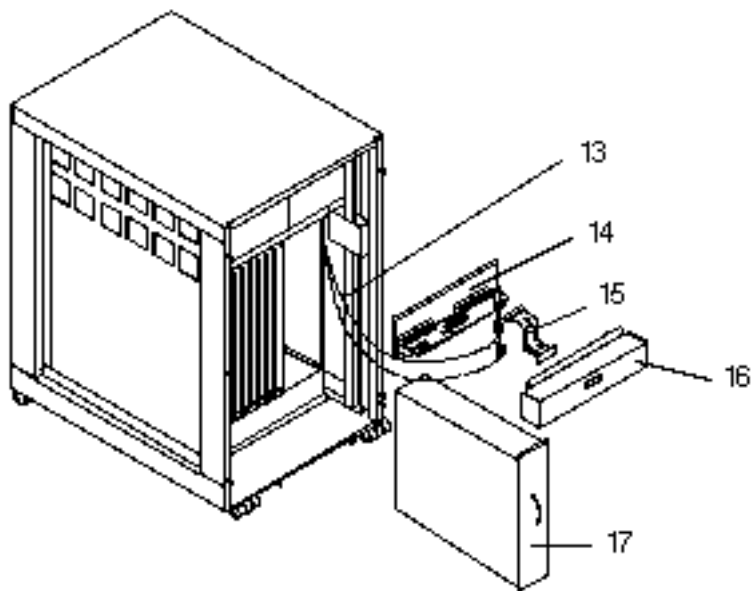
Sun-4/370/470

12-Slot VMEbus Logic Enclosure

Front View



Rear View



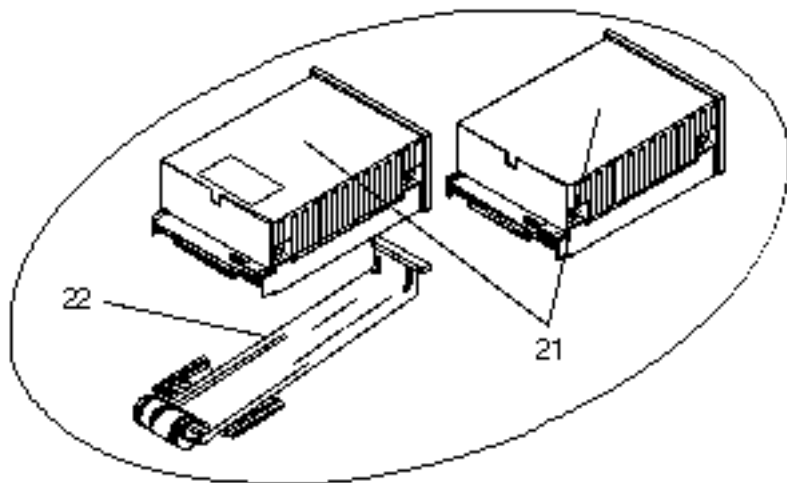
CODE	PART #	DESCRIPTION
1	501-1439	12-Slot Backplane, Pressfit (obsolete) ¹
1	501-1598	12-Slot Backplane, Pressfit
1	501-1832	12-Slot Backplane, Pressfit with DC Harness Cutout
2	340-1898	Top Cover
3	340-1877	Side Cover (obsolete)
3	540-1846	Side Cover
4		Refer to Codes 18-24
5	330-1192	Front Bezel Blank Insert
6	330-1210	Front Bezel Half-Height Insert
6	330-1284	Front Bezel Full-Height Insert
NS	340-2249	SCSI Tray Full-Height Bezel
NS	340-1901	SCSI Tray Half-Height Bezel
7	540-1731	Front Bezel Assembly (obsolete)
8	540-1849	Front Bumper (obsolete)
7 & 8	540-1731	Front Bezel and Bumper Assembly
NS	240-0558	■ Miniball Receptacle
NS	240-0557	■ Miniball Fastener
9	340-1871	Front EMI Shield, without Switch Assembly
10	540-1748	Switch Assembly (obsolete)
NS	330-1212	■ Plastic Remote Switch (obsolete)
NS	330-1213	■ Plastic Remote Switch Block (obsolete)
NS	340-1936	■ Remote Switch Housing (obsolete)
10	540-2136	Switch Assembly
NS	330-1373	■ Switch
NS	340-2491	■ Switch Mounting Bracket

11	540-1751	Fan Tray Assembly, 9 Fans ²
NS	530-1482	■ Fan Tray DC Harness for Fan 540-1732
NS	540-1732	■ DC Fan Assembly, 150 CFM
NS	530-1640	■ Fan Tray DC Harness for Fan 370-1732
NS	370-1732	■ DC Fan Assembly, 150 CFM
NS	370-1214	■ DC Fan Assembly with connector, 150 CFM
12	240-8503	Caster (obsolete)

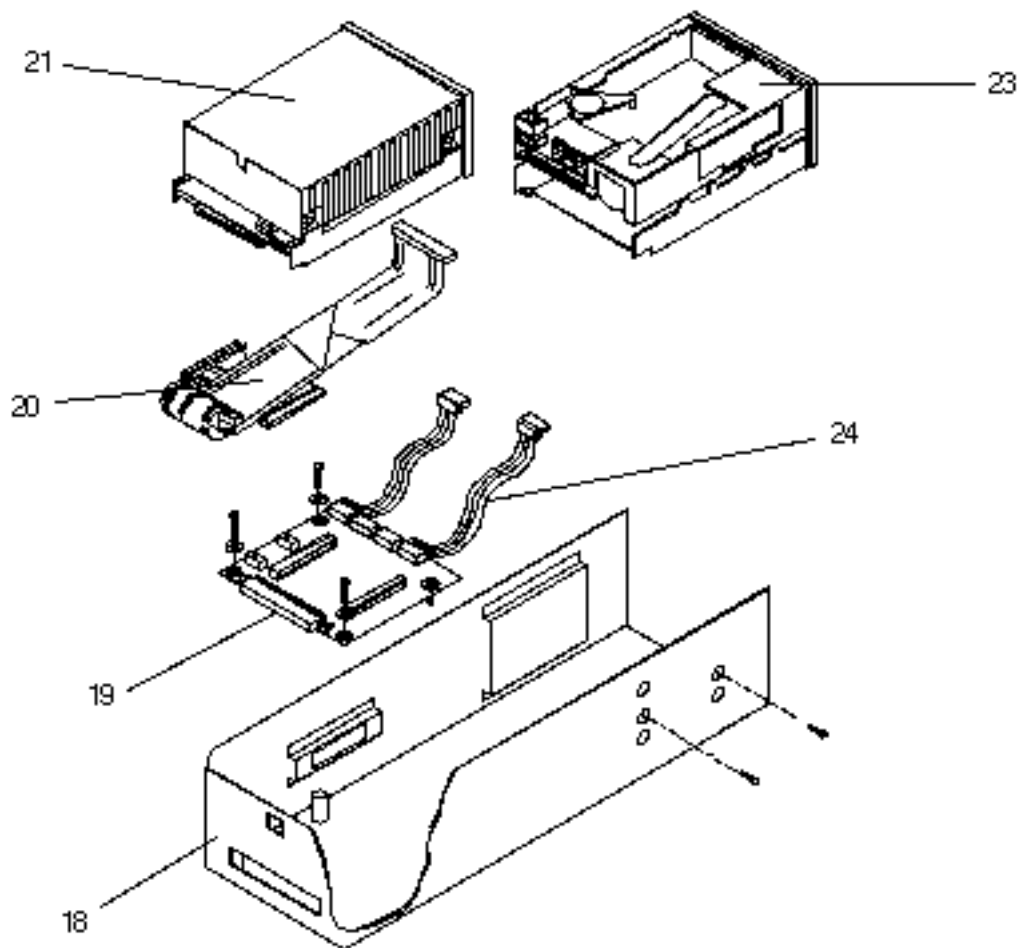
1. The Sun 4400 CPU is not supported in the 501-1439 Backplane.
2. The Fans are removable from 540-1751-04 and 540-1751-05 to allow access to the fan tray screen during routine preventive maintenance. The fans are not removable from 540-1751-02 or 540-1751-03.

Peripheral Tray

Dual Disk Drives



Disk Drive and Tape Drive



12-Slot VMEbus Logic Enclosure - Continued

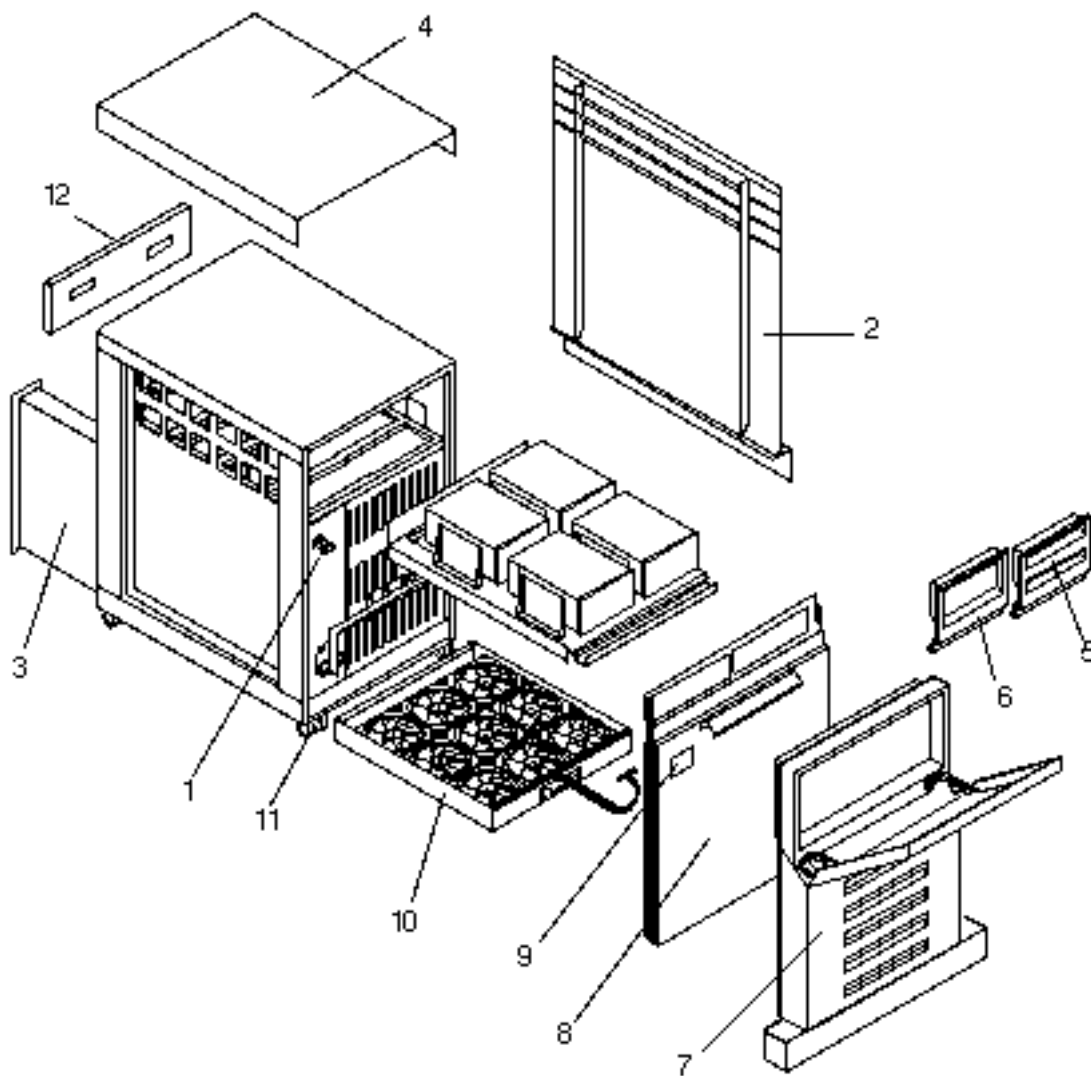
CODE	PART #	DESCRIPTION
NS	260-3719	Sun-4/370 Logo
NS	340-1878	Rear Bezel (obsolete)
NS	540-1848	Rear Bezel
NS	540-1749	Rear Bumper
13	530-1480	Backplane to Interface PCB DC Harness
14	501-1493	Interface PCB (SCSI Bus and DC Power)
NS	140-1019	■ 15 Amp Fuse
15	530-1494	SCSI Bus Internal Command Cable, 25.4 cm
16	340-1892	SCSI PCB Cover
17	300-1047	925 Watt Power Supply
17	300-1089	925 Watt Power Supply
18	340-1903	Peripheral Tray Base
19	501-1496	Peripheral Tray Interface PCB
20	530-1498	Internal SCSI Bus Cable, 1.2M (obsolete) ¹
20	530-1729	Internal SCSI Bus Cable, 1.2M ¹
21	370-1230	327MB Disk Drive, Imprimis/CDC 77777126
21	370-1319	669MB Disk Drive, Micropolis 1588-15
21	370-1319	669MB Disk Drive, Maxtor XT-8760S

22	530-1500	Internal SCSI Bus Cable, 1.2M ²
23	370-1206	150MB Tape Drive, Full-Height, QIC-150
23	370-1247	45/60MB Tape with MT02, Full-Height, QIC-11/24
23	370-1297	2.3GB 8 mm Tape Drive, Full-Height
23	370-1205	150MB Tape Drive, Half-Height, QIC-150
23	370-1347	644MB CD-ROM, Half-Height
24	530-1499	Peripheral Tray DC Harness
NS	530-1638	DC "Y" Harness, Half-Height Peripherals
NS	530-1249	External SCSI Cable, DD-50SA to DD-50SA, 1.0M
NS	530-1593	Ext Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M (obs)
NS	530-1829	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
	800-3255	<i>12-Slot Office Pedestal Field Service Manual</i>

1. Tape only and Disk with Tape trays use Internal Cable 530-1498 or 530-1729.
2. Disk only, Dual Disk, and Empty trays use Internal Cable 530-1500.

Sun-4/470

12-Slot VMEbus Logic Enclosure



CODE	PART #	DESCRIPTION
1	501-1832	12-Slot Backplane, Pressfit with DC Harness Cutout
2	540-1846	Side Cover
3	300-1089	925 Watt Power Supply
4	340-1898	Top Cover
5	330-1192	Blank Bezel Insert
6	330-1210	Front Bezel Half-Height Insert
6	330-1284	Front Bezel Full-Height Insert
7	540-1939	Front Bezel Assembly
NS	240-0558	● Miniball Receptacle
NS	240-0557	● Miniball Fastener
8	340-2291	Front EMI Cover, without Switch Assembly
NS	340-2292	Blank EMI Cover Filler Panel
NS	340-2444	Peripheral Mounting Bracket
9	540-2136	Switch Assembly
NS	330-1373	● Switch
NS	340-2491	● Switch Mounting Bracket

10	540-1751	Fan Tray Assembly, 9 Fans ¹
NS	370-1214	■ DC Fan Assembly with Connector, 150 CFM
NS	530-1640	■ Fan Tray DC Harness for Fan 370-1732
NS	370-1732	■ DC Fan Assembly, 150 CFM
11	340-2129	Caster
12	340-2293	Rear EMI Cover
NS	150-1785	External Active Terminator, 50-Pin SCSI-2
NS	260-3615	SPARCstation 470 Logo
NS	260-3616	SPARCserver 470 Logo
NS	530-1676	Internal SCSI Bus Cable
NS	370-1319	669MB Disk Drive, Micropolis 1588-15
NS	370-1319	669MB Disk Drive, Maxtor XT-8760S
NS	370-1205	150MB Tape Drive, Half-Height, QIC-150
NS	370-1206	150MB Tape Drive, Full-Height, QIC-150
NS	370-1297	2.3GB 8 mm Tape Drive, Full-Height
NS	370-1347	644MB CD-ROM, Half-Height
NS	370-1377	1.3GB Disk Drive, Seagate 976002-012/ST41600N
NS	530-1675	Peripheral Tray DC Harness
NS	530-1842	Grounding Cable, CD-ROM, 12.7 cm
NS	530-1829	SCSI Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
NS	540-1848	Rear Bezel
NS	540-1749	Rear Bumper
	800-3255	<i>12-Slot Office Pedestal Field Service Manual</i>

1. The Fans are removable from 540-1751-04 and 540-1751-05 to allow access to the fan tray screen during routine preventive maintenance.

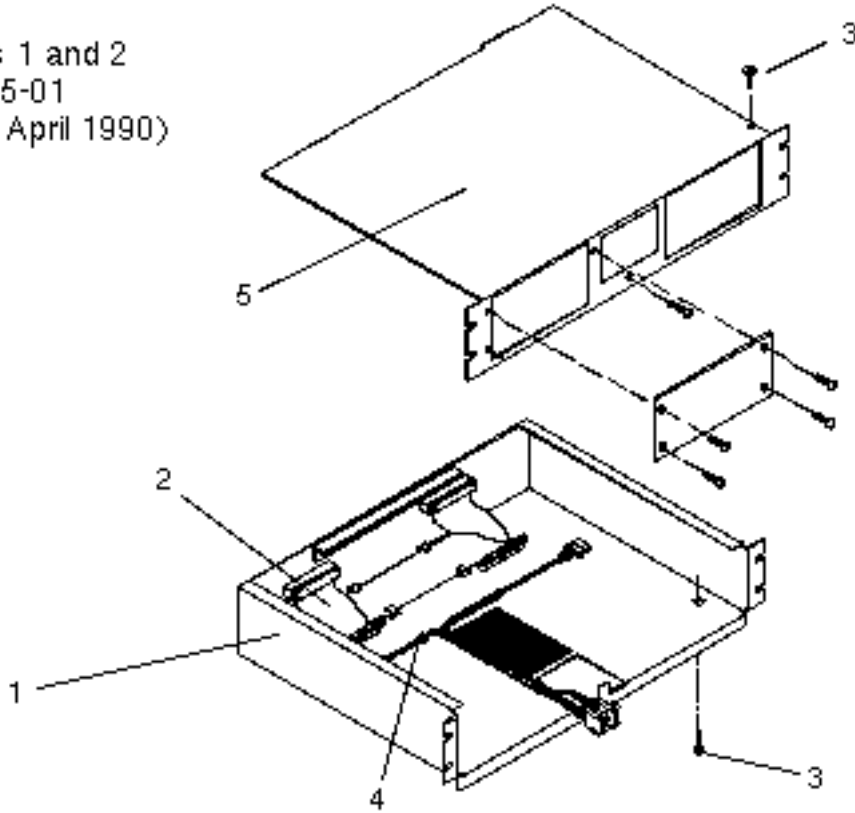
Last updated: December 2, 1996

[Comments and Suggestions](#) 

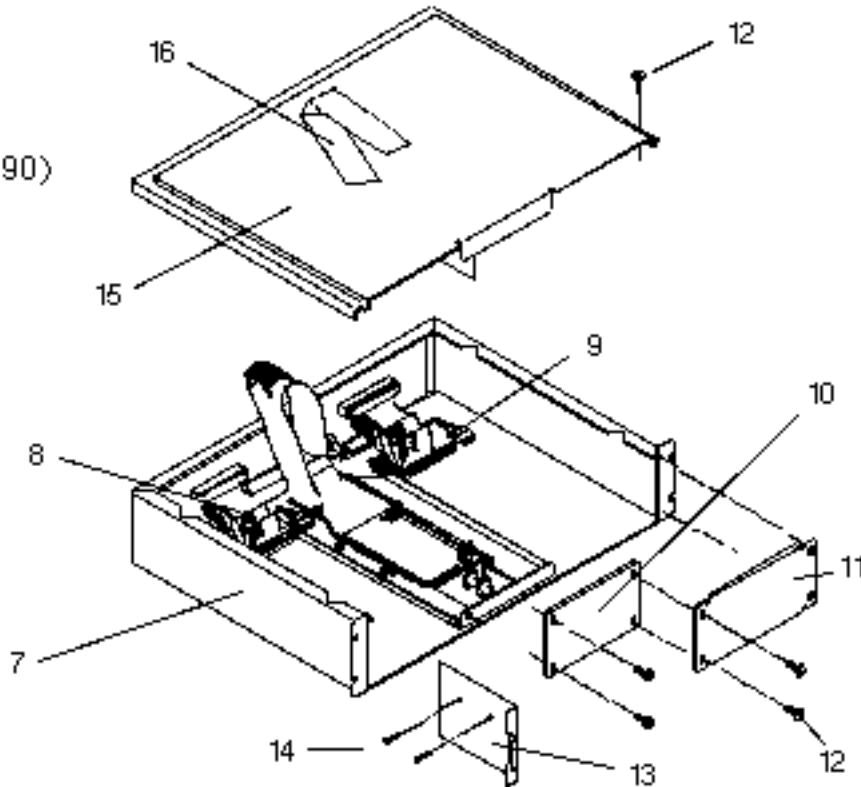
Sun-4/390/490

SCSI Peripheral Trays

Versions 1 and 2
540-1865-01
(Prior to April 1990)



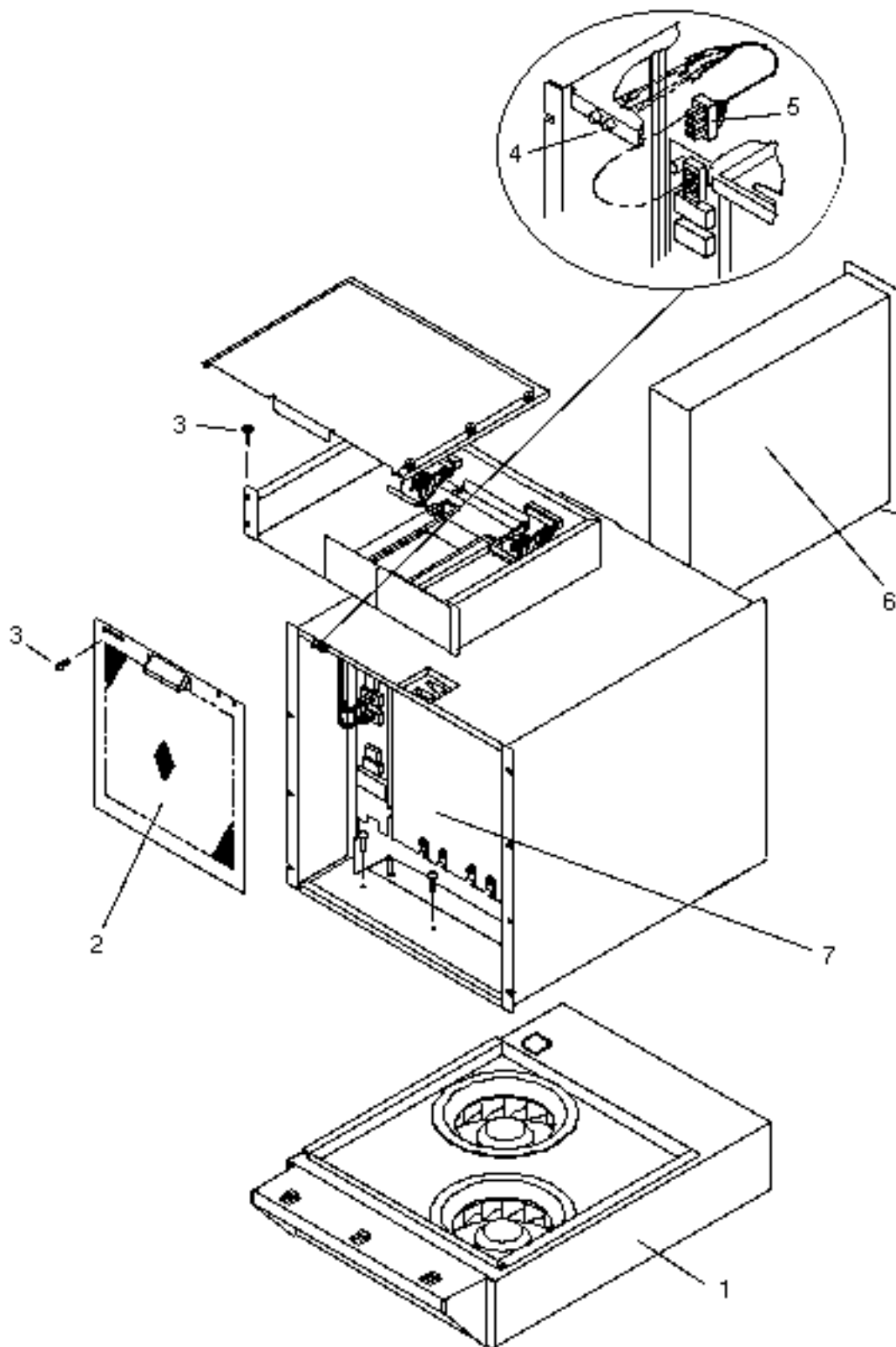
Version 3
540-1865-02
(After April 1990)



CODE	PART #	DESCRIPTION

1	540-1865	SCSI Tray, Versions 1 and 2 (Shipped before 4/90)
2	340-2000	■ SCSI Tray
2	530-1474	■ SCSI Bus Cable, 73 cm, Internal
3	240-1202	■ #6-32 x 5/8" Peripheral Mounting Screw
4	530-1507	■ SCSI Power Cable, Internal
5	340-1832	■ SCSI Tray Top Cover
6	340-1999	■ Peripheral Cover Plate
7	540-1865	SCSI Tray, Version 3 (Shipped after 4/90)
7	340-2143	■ SCSI Tray
8	530-1642	■ SCSI Bus Cable, 180 cm
9	530-1641	■ SCSI Power Cable, Internal
NS	530-1638	■ DC Power "Y" Cable, 15 cm
10	340-2145	■ Front Plate
11	340-2146	■ Full-Height Peripheral Blank Plate
11	340-2305	■ Half-Height Peripheral Blank Plate
12	240-1372	■ M4 0.7 x 10 mm Screw
13	340-2148	■ Peripheral Mounting Bracket
14	240-0258	■ #6-32 x 3/8" Peripheral Mounting Screw
15	340-2144	■ SCSI Tray Top Cover
16	240-0646	■ Cable Clamp
NS	370-1205	150MB Tape Drive, Half-Height, QIC-150
NS	370-1206	150MB Tape Drive, Full-Height, QIC-150
NS	370-1297	2.3GB 8 mm Tape Drive, Full-Height
NS	370-1347	644MB CD-ROM, Half-Height
NS	530-1381	External Terminator, 50-Pin DD-50SA
NS	530-1435	Ext Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M (obs)
NS	530-1593	Ext Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M (obs)
NS	530-1508	Ext Cable, 50-Pin SCSI-2 to SCSI-2, 80 cm (obs)
NS	530-1501	External Cable, 50-Pin SCSI-2 to Centronics, 2.0M
NS	530-1502	External Cable, Centronics to Centronics, 1.5
NS	530-1568	External Cable, 50-Pin SCSI-2 to Centronics, 4.0M
NS	530-1792	External Cable, 50-Pin SCSI-2 to DD-50SA, 2.0M
NS	530-1793	External Cable, 50-Pin SCSI-2 to SCSI-2, 80 cm
NS	530-1829	External Cable, 50-Pin SCSI-2 to DD-50SA, 1.0M
NS	530-1842	Grounding Cable, CD-ROM, 12.7 cm

16-Slot VMEbus Logic Enclosure

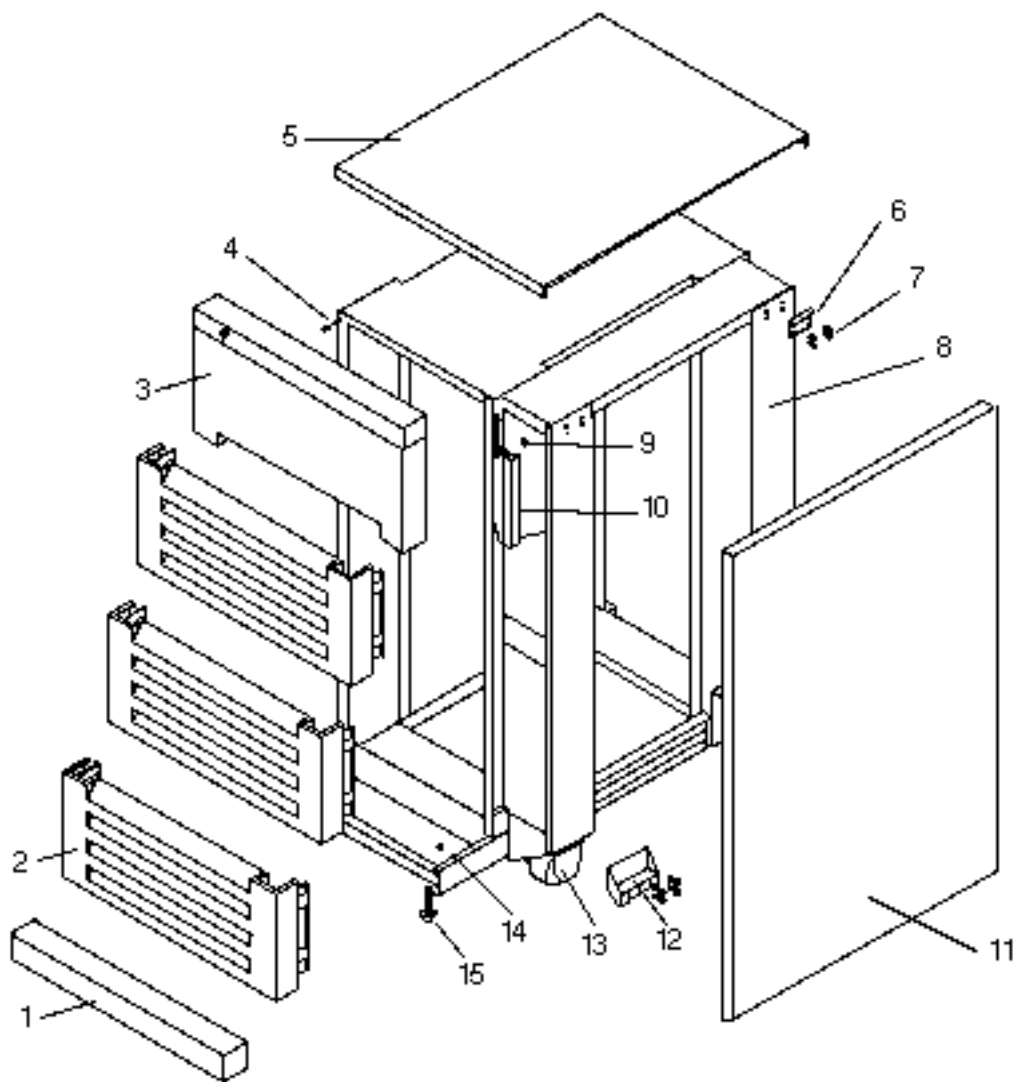


CODE	PART #	DESCRIPTION
1	540-1719	Blower Assembly, 2 Blowers
	540-1840	■ Centrifugal Fan Assembly
	530-1560	■ Cable, 32.5 cm, Fan to Terminal
	530-1561	■ Cable, 86.5 cm, AC Input to Terminal
	150-1393	■ Capacitor
	240-1614	■ Terminal Block
2	340-1833	Front RFI Shield
3	240-1372	M4 0.7 x 10 mm Screw

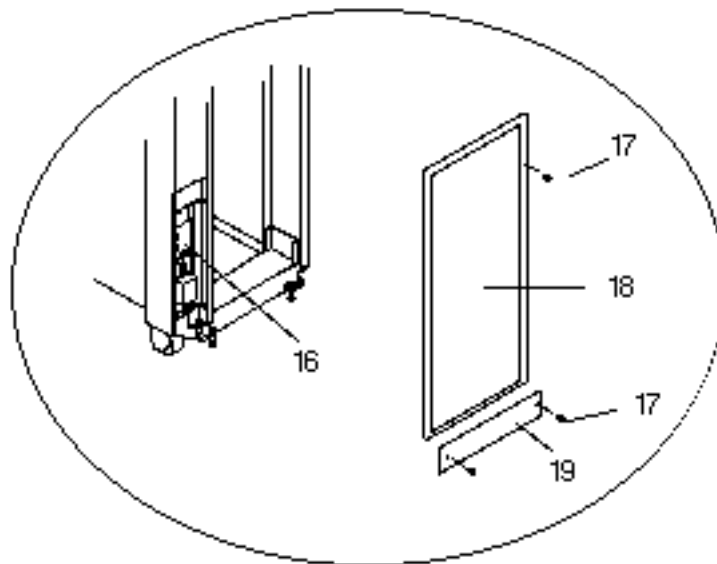
4	150-1397	Indicator LED
5	530-1506	Indicator LED Cable
6	300-1065	1200 Watt Power Supply
6	300-1047	925 Watt Power Supply (obsolete)
7	501-1498	16-slot Backplane, Pressfit (obsolete)
7	501-1597	16-slot Backplane, Pressfit
NS	540-1869	Load Resistor Assembly (obsolete) ¹
NS	180-1189	Power Cord (230V)
NS	180-1190	Power Cord (240V)
NS	230-0203	Cable Tie, 4"
NS	240-0146	Cable Clamp
NS	260-3618	SPARCserver 390 Logo
NS	260-3619	SPARCserver 490 Logo
NS	530-1534	SCSI Power Cable
	800-3265	<i>Sun 16-Slot Logic Enclosure Field Service Manual</i>
	800-3259	<i>56-Inch Data Center Cabinet Service Manual</i>

1. The Load Resistor Assembly is only required with the 925 Watt Power Supply.

56-inch Data Center Cabinet



Rear View



CODE	PART #	DESCRIPTION
1	340-1884	Anti-Tilt Panel
2	540-1857	Vented Panel Assembly
3	540-1858	Upper Panel Assembly, 1/2" and 1/4" Tape, Hinged
4	240-1630	#6-32 Ballstud
5	340-1840	Top Panel
6	340-1885	Side Restraint Bracket, Upper
7	240-1372	M4 0.7 x 10 mm Sem Screw

8	540-1718	Frame Assembly
9	540-2393	Keypad Assembly (replaced 540-1285)
10	340-1881	Hinge Bracket
11	340-1848	Side Panel
12	340-1886	Side Restraint Bracket, Lower
13	240-1717	Caster (replaced 370-1210)
14	240-1373	M4 0.7 Kepnut
15	230-1418	Leveler Foot (replaced 230-1181)
16	370-1155	230V Power Sequencer (obsolete)
16	370-1156	240V Power Sequencer (obsolete)
16	300-1263	230V Power Sequencer
16	300-1264	240V Power Sequencer
17	240-1655	#10-32 x 3/4" Screw
18	340-1845	Rear Panel
19	340-2047	Kick Panel
NS	230-1166	Cable Tie 5.5", Reusable
NS	230-1170	Cable Tie 10", Reusable
NS	230-1177	Snap In Clip
NS	240-1738	3/8 x 16 x 4.0 Bolt
NS	240-1739	3/8" x 16 x 7.0 Bolt
NS	240-1748	3/8" x 16 x 4.0 Bolt
NS	340-1835	16-slot Chassis Support Rail, Left
NS	340-1913	Filler Panel, 5.2" x 19"
NS	340-2057	16-slot Chassis Support Rail, Right
NS	340-2138	Ballast, 30 lbs
NS	530-1303	Remote Keypad Cable
NS	800-3259	<i>56-inch Data Center Cabinet Service Manual</i>

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[Comments and Suggestions](#) 

Parts Breakdown

This section contains illustrations, part numbers, and descriptions of Sun Systems, Options, Boards, Input Devices, Monitors, and Printers.

Options such as processor modules, SIMMs, and SBus cards are not included in Volume II. Internal system peripheral options are not included in the Disk, Removable Media, or Miscellaneous chapters.

Parts listed as (obsolete) or (obs) are no longer used to build new systems. Obsolete parts may be replaced with newer part numbers and may not be available.

This manual provides a list of part numbers used to assemble the system or option. Many of the part numbers listed are not normally available as spare parts or as field replaceable service spares, also referred to as Field Replaceable Units, or FRUs.

Spare parts available for purchase are listed in the *SunSpares Price List*. A list of valid FRU part numbers and part substitutions is available to Sun service and support personnel from SunService logistics.

Standard Configurations and Standard Options supported by Sun Microsystems are documented in the End User Price List, Reseller Price List, Hardware Configuration Guides, Product Brochures, and Hardware Installation Manuals.

Abbreviations

Abbreviations used in this section are described below.

Assy	Assembly
NS	Not shown
Obs	Obsolete
Dis	Disqualified
w	With
w/o	Without
■	Indicates the part is used in an assembly
FRU	Field Replaceable Unit

Class Codes

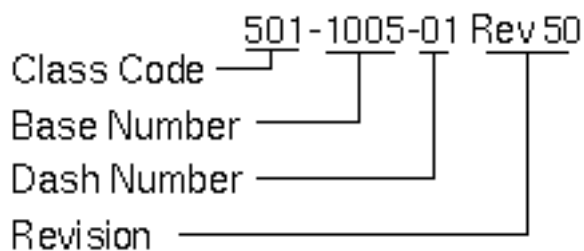
The first three digits of a Sun part number are the class code. Representative class codes are listed below.

CLASS CODE	DESCRIPTION
270-xxxx-xx	PCB Fabrication
300-xxxx-xx	Power Supply
330-xxxx-xx	Plastic Part
340-xxxx-xx	Sheet Metal Part
365-xxxx-xx	Monitor Assembly

370-xxxx-xx	OEM Part
500-xxxx-xx	Untested PCB
501-xxxx-xx	Tested PCB
520-xxxx-xx	Programmed IC
525-xxxx-xx	Programmed IC
530-xxxx-xx	Cable
540-xxxx-xx	Assembly
555-xxxx-xx	FRU Assembly
560-xxxx-xx	Shipping Kit
570-xxxx-xx	Electro Mechanical Assembly
595-xxxx-xx	Top Level Option Assembly
596-xxxx-xx	Configured Option Assembly
600-xxxx-xx	Top Level System Assembly
700-xxxx-xx	Software Tape
704-xxxx-xx	Software CD-ROM
790-xxxx-xx	Software Tape and Manual
794-xxxx-xx	Software CD-ROM and Manual
800-xxxx-xx	Sun Manual
801-xxxx-xx	Sun Manual
802-xxxx-xx	Sun Manual
804-xxxx-xx	CD-ROM Insert
807-xxxx-xx	FCO Kit
813-xxxx-xx	Configuration Manual
825-xxxx-xx	Manual Set
855-xxxx-xx	Manual Set
950-xxxx-xx	Engineering Specification

Part Numbers

Sun part numbers consist of nine numerical digits separated with dashes (-) into three components; Class Code, Base Number, and Dash Number. A revision number or letter is used with each part number.



Class Codes identify similar parts.

Base Numbers are assigned sequentially. A higher base number does not necessarily indicate a new or improved part.

Higher/Lower Base Number Examples

PART #	DESCRIPTION	RELEASE DATE
300-1281	SC2000 Power Supply	3/28/95
300-1286	SC2000 Power Supply	9/19/94
501-2925	SM71 SuperSPARC 2.4.5	9/28/95
501-2940	SM71 SuperSPARC 2.3	6/05/95
501-3001	SM71 SuperSPARC 2.4.3	8/14/95
501-2324	SS20 CPU	1/10/94
501-2924	SS20 CPU	9/14/95
501-2961	SS20 CPU*	7/12/95

* 501-2961 is a screened and re-labeled 501-2324.

Dash Numbers are used to identify changes made to the part that affect form, fit, or function.

Revision Numbers are used to identify changes made to the part that do not affect form, fit, or function.

System Serial Number

The system serial number contains four fields of information:

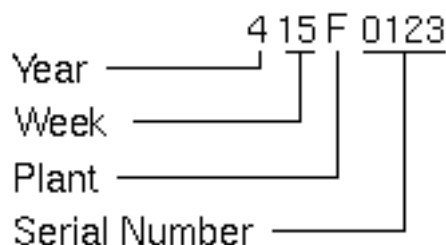
Year - year of manufacturer

Week - week of manufacturer

Plant - manufacturing location

Serial number - numeric or alphanumeric serial number

Example:



Plant Code

CODE	LOCATION
C	Mountain View Building 4, California
F	Milpitas Building 4, California
G	Westford, Massachusetts
H	Singapore (Sun-3 Shoebox)
K	Milpitas Building 5, California
L	Milpitas Building 7, California (Specials Engineering)
M	Linlithgow, Scotland
N	Japan
P	Billerica, Massachusetts

R	Japan (used by Fuji Xerox)
T	Milpitas, California (Re-Manufacturing)

Tools

PART #	DESCRIPTION
250-1028	Field Engineer Toolkit (Jensen JTK-679-1)
250-1024	T9 Torx Screwdriver
250-1025	T7 Torx Screwdriver
250-1026	T25 Torx Blade
250-1017	#2 Pozidrive Blade
250-1029	3/32" Hexdriver Blade
250-1030	7/64" Hexdriver Blade
250-1031	14 mm Deep Socket
250-1032	T20 Torx Blade
250-1033	Blue Cordora Zipper Case
250-1034	3 1/8" Driver Handle
250-1035	4 1/8" Driver Handle
250-1036	1/4" Drive Spinner Handle
250-1037	5" Extension Blade
250-1038	#1 Phillips Blade
250-1039	#2 Phillips Blade
250-1040	1/4" Slotted Blade
250-1041	3/16" Slotted Blade
250-1042	Alignment Tool
250-1043	Alignment Tool
250-1044	4 1/2" Miniature Diagonal Cutter
250-1045	5.25" Diagonal Cutting Pliers
250-1046	6.5" Thin Needlenose Pliers
250-1047	4" Adjustable Wrench
250-1048	6" Adjustable Wrench
250-1049	Crimping Tool/Wire Stripper
250-1050	Fluke 75 Digital Multimeter
250-1051	1.27 mm Hexdriver Blade
250-1052	1.5 mm Hexdriver Blade
250-1053	2 mm Hexdriver Blade
250-1054	2.5 mm Hexdriver Blade
250-1055	3 mm Hexdriver Blade
250-1056	4 mm Hexdriver Blade
250-1057	5 mm Hexdriver Blade
250-1058	4 mm Nutdriver Blade

250-1059	4.5 mm Nutdriver Blade
250-1060	5 mm Nutdriver Blade
250-1061	5.5 mm Nutdriver Blade
250-1062	6 mm Nutdriver Blade
250-1063	7 mm Nutdriver Blade
250-1064	8 mm Nutdriver Blade
250-1065	9 mm Nutdriver Blade
250-1066	10 mm Nutdriver Blade
250-1067	11 mm Nutdriver Blade
250-1068	T15 Torx Blade

Power Screwdriver Kit

PART #	DESCRIPTION
250-1075	Cordless Power Screwdriver Kit (Jensen JTK-864)
250-1076	■ Two Speed Power Screwdriver
250-1077	■ Screwdriver Carrying Case
250-1078	■ Screwdriver Battery Charger, 115V
250-1079	■ Screwdriver Battery
250-1084	■ Power Screwdriver Xcelite Adapter

Vacuum Cleaner Kit

PART #	DESCRIPTION
250-1080	Vacuum Cleaner Kit (Jensen JTK-863)
250-1081	■ Vacuum Cleaner, 115V
250-1082	■ Vacuum Cleaner Filters (qty 6)
250-1083	■ Vacuum Cleaner Carrying Bag

Miscellaneous Tools

PART #	DESCRIPTION
240-1433	2 mm Hex Key
240-1716	AMP SIMM Extraction Tool (obsolete)
240-1718	EPROM Insertion Tool
240-1719	IC Extraction Tool
240-1822	Modified AMP SIMM Extraction Tool (obs)
240-1904	1/2" Open-End Wrench
250-1007	Disposable ESD Wrist Strap
250-1011	Slotted & 2 mm Hex Screwdriver

250-1072	1/2" x 1/2" Thin-Head Wrench for 56" Rack Levelers
250-1074	10-Inch End Cutter
250-1088	Sun ESD Mat with Sun Logo
330-1145	Disposable ESD Mat
330-1646	SS10 and SS20 SIMM Insertion Tool (order 560-1936)
330-1836	SS20 Fan Installation Tool
330-1852	SS Voyager Power Supply Extraction Tool
345-1131	SIMM Extraction Wire Tool (obsolete)
345-1132	SIMM Extraction Wire Tool (obsolete)
None	T8 Torx Blade (Xcelite 99-8XTD)
None	T10 Torx Blade (Xcelite 99-10XTD)
370-1906	90° L-Key T10 Torx
370-1907	90° L-Key T15 Torx
560-1763	SIMM Extraction Tool Kit
345-1184	<ul style="list-style-type: none"> ■ Machined SIMM Extraction Tool 345-1184-01 (obsolete) ■ Diecast SIMM Extraction Tool 345-1184-02

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[Comments and Suggestions](#) 

Slot Assignment

[Board Installation Notes](#)

[VMEbus Bus Grant and Interrupt Acknowledge](#)

[SCSI Host Adapter Assemblies](#)

Sun-4 Architecture

[Sun-4/110](#)

[Sun-4/150](#)

[Sun-4/260](#)

[Sun-4/280](#)

[Sun-4/310](#)

[Sun-4/330](#)

[Sun-4/350](#)

[Sun-4/360](#)

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[Sun-4/380](#)

[Sun-4/390](#)

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Board Installation Notes

Backplane Slot Assignment Charts

Each system chart lists the PCB slot assignments in order of descending priority. In the charts **A,B,C...** indicates the preferred location for a specific board. An **A** is the most preferred location. An **a** indicates that a board requires more than one slot if Memory, Frame Buffer, or other options are installed. Multiple capital letters (**AA, BBB...**) indicate a board requires more than one slot. Boards with multiple part numbers are shown with a footnote (Sun 3004 CPU 1) and are listed in tables after each grouping of slot assignment charts.

Installing VMEbus Boards

1. Refer to the Backplane Slot Assignment Charts to determine where to install additional boards.
2. Move boards in the cardcage as required.
3. Configure backplane jumpers for BG3 and IACK. The IACK jumper for the last slot is not present on some backplanes. It is not needed.

Removing VMEbus Boards

1. Refer to the Backplane Slot Assignment Charts to determine if other boards in the cardcage require repositioning.
2. Configure backplane jumpers for BG3 and IACK.
3. Install an air restrictor and the external filler panel in any unused slot.

Sun-3/260 and Sun-4/260

1. Do not install an air restrictor in Slot 2.
2. Do not install non-memory board options in Slots 2 through 5 using the standard left to right sequence. If possible, leave Slot 2 empty for system cooling.

Sun 4100 CPU

1. The Sun 4100 CPU does not have a VMEbus slave interface. VMEbus boards requiring a slave interface on the processor do not function with the Sun 4100 CPU (eg. Xylogics 451, Xylogics 472, Xylogics 7053).
2. The Sun 4100 CPU has 28-bits of physical address space. Bit 27 is replicated out to Bit 31 in A32D32 space.

Sun 4400 CPU

1. The Sun 4400 CPU requires 12-slot Backplane 501-1598 or 501-1382. The Sun 4400 CPU is not supported in the 501-1439 12-slot Backplane.
2. The Sun 4400 CPU requires 16-slot Backplane 501-1498-02 or 501-1597.

Sun 3200, 3400, and 4200 ECC Memory

1. **501-1092 or 501-1117 Backplanes.** Install the first Memory board in Slot 6. Install 220/270 Terminating Resistor 120-1613-01 at location F-34 or F-54 on the Memory board. Remove the Terminating Resistor from location F-34 or F-54 on Memory boards installed in Slots 2, 3, 4, and 5.
2. **501-1439, 501-1598, or 501-1832 Backplanes.** Install the first Memory board in Slot 1. Install 220/270 Terminating Resistor 120-1613-01 at location F-34 or F-54 on the Memory board. If placement results in Memory boards on both sides of the Sun 3400 CPU, remove the Terminating Resistor at location O-23 (U1411) on the CPU. Install Terminating Resistors on Memory boards in Slot 1 and Slot 7.
3. Remove Jumpers P10, P11, P12, and P13 from the 501-1598 Backplane when the Sun 3400 board set is installed.
4. Remove Jumpers P10, P11, P12, and P13 from the 501-1832 Backplane when the Sun 3400 board set is installed.

GP2

The GP2 does not function with the Sun-2 Color board, Sun-3 Color board, or the Graphics Buffer.

CG5 with GP+ or GP

1. The CG5 P2 bus must be disabled (SW3300-5, OFF).
2. The CG5 must be installed in slots that do not share the P2 bus with the GP or GP+. Signals provided by the CG5, but not used by the GP or GP+, may cause contention.

CG5 with GP2

1. The CG5 P2 bus must be enabled (SW3300-5, ON).
2. The CG5 must be installed in cardcage slots that share the P2 bus with the GP2.

CG5 without GP2

The CG5 P2 bus must be disabled (SW3300-5, OFF).

CG9 with GP2

1. The CG9 P2 bus must be enabled (SW3-1, OFF).
2. The CG9 must be installed in cardcage slots that share the P2 bus with the GP2.
3. This configuration is not supported with the TAAC-1.
4. The CG9 is not supported without the GP2.

TAAC-1

1. The TAAC-1 requires three slots. Install backplane jumpers BG3 and IACK in all three slots.
2. The TAAC-1 is not supported with the CG9 and GP2 GXP Graphics Options.

Xylogics 450 Disk Controller

1. Do not mix the Xylogics 450 with the Xylogics 7053.
2. Xylogics 450 is not supported with the 900MB Disk Drive, and cannot be mixed with the Xylogics 451 in any 900MB Disk Drive configuration.

Xylogics 7053 Disk Controller

1. Do not mix the Xylogics 7053 with the Xylogics 450.
2. Systems with Sun-2 SCSI, 501-1138, or Sun-3 SCSI, 501-1217, may mix a maximum of one Xylogics 451 and two Xylogics 7053s.
3. Systems with Sun-2 SCSI, 501-1167, may mix a maximum of one 451 and two 7053s.
4. Systems with Sun-2 SCSI, 501-1149, or Sun-3 SCSI, 501-1170, may mix a maximum of one Xylogics 451 and one Xylogics 7053.
5. The Sun-4/470 and Sun-4/490 may mix a maximum of one Xylogics 7053 and one ISP-80 IPI-2 controller.

ALM-1, ALM-2, and MCP

1. The ALM-2 and MCP share the same base address and interrupt vector.
2. The ALM-1 shares the same interrupt vector as the ALM-2 and MCP.
3. Because of the conflict with the interrupt vector, no more than four ALM-1, ALM-2, or MCP boards can be installed at the same time.
4. The ALM-1, ALM-2, or MCP boards must be installed in sequential address order, or a conflict with the interrupt vector may result.
5. The maximum combination of ALM-2 and MCP boards allowed is eight. When mixing ALM-2 and MCP, the MCP must be addressed as Boards 1, 2, 3, and 4.
6. The maximum number of MCP boards is four.
7. The maximum number of ALM-2 boards is eight.

BOARD	ALM-1 VECTOR	ALM-2 & MCP VECTOR
1	0x88	0x8b
2	0x89	0x8a
3	0x8a	0x89
4	0x8b	0x88
5	-	0xa0
6	-	0xa1
7	-	0xa2
8	-	0xa3

ALM-1 501-1157 (Pedestal Systems)

The ALM-1 must be installed in Slots 11 and 12. Install Backplane Jumpers BG3 and IACK in Slot 11. Remove Backplane Jumper BG3 from Slot 12.

MAPkit

1. The MAPkit requires two slots. Remove Backplane Jumpers BG3 and IACK from the slot that contains the MAPkit board nearest to Slot 1. Install Backplane Jumpers BG3 and IACK in the second slot.
2. The MAPkit data throughput rate may be affected if a Tape Controller or a Disk Controller is installed in an unused slot between the CPU and the MAPkit.

SunLink Channel Adapter

1. The SCA requires two slots. Remove Backplane Jumpers BG3 and IACK from both slots.
2. Installing a 1/2" Tape Controller or an SMD Controller in an unused slot between the CPU and the SCA option may affect the SCA data throughput rate.

12-Slot Office Pedestal Backplane 501-1382

A cutout in the upper left corner of the 501-1382 Backplane allows the DC Wire Harness to be routed from the rear of the Backplane to the front of the Peripheral Tray.

VME to Multibus Adapter Board

Use Adapter board subassembly 501-1054-04, Rev. A, or greater, to avoid signal contention on the P2 bus. This change was effective in September 1985 (ECO 1850).

SBus Expansion Subsystem Board

The SBus Expansion Subsystem Board does not use the VMEbus.

Systech MTI-800, MTI-850, MTI-1600, and MTI-1650

Tables A and B provide reference information for Systech boards packaged in kits.

Table A identifies the ALM boards in a Sun PCB kit. Columns 2, 3, and 4 provide the Sun PCB part number, a board description, and the Systech part number for individual boards within each set.

Table A

SUN PCB KIT P/N	SUN PCB P/N	DESCRIPTION	SYSTECH P/N
370-1039	370-1046	MTI-800: 8-Channel USARTPCB	65-201616-7
	370-1047	MTI-800/1600 Multiplex Controller PCB	65-200004-7
370-1040	370-1048	MTI-1600 : 16-Channel USART PCB	65-201516-6
	370-1047	MTI-800/1600 Multiplex Controller PCB	65-200004-7
370-1098	370-1102	MTI-850B : 8-Channel USART PCB	65-201606-6
	370-1099	MTI-850/1650 Multiple Controller PCB	65-201004-8
370-1097	370-1100	MTI-1650B : 16-Channel USART PCB	65-201506-5
	370-1099	MTI-850/1650 Multiple Controller PCB	65-201004-8
370-1096	811-1100	MTI-1650A : 16-Channel USART Rack-Mount Box	65-701005-4
	370-1099	MTI-850/1650 Multiple Controller PCB	65-201004-8

Table B describes the boards in a Sun VME assembly kit. This assembly contains an ALM board set, a VME-Multibus Adapter PCB, and frame. Column 1 lists the Sun VME assembly part number. Columns 2 and 3 provide the part numbers and a description of the ALM channel and the VME-Multibus Adapter PCB in the Sun VME assembly kit. Only three of the PCB kits from Chart A are used as VME options. Systech discontinued the 800/1600 series when the 850-1650 series was introduced. Replace the entire VME assembly upon failure of any component in these VME options.

Table B

SUN VME KIT P/N	SUN PCB KIT P/N	DESCRIPTION
501-1157-01	370-1040	MTI-1600 : 16-Channel ALM for VME systems (replaced by 370-1097)
	501-1054	VME-Multibus Adapter PCB
501-1157-02	370-1097	MTI-1650B : 16-Channel ALM for Desk-side systems
	501-1054	VME-Multibus Adapter PCB
501-1165	370-1096	MTI-1650A Controller
	501-1054	VME-Multibus Adapter PCB

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VMEbus Bus Grant and Interrupt Acknowledge

This chart shows how the Bus Grant In/Out and Interrupt Acknowledge In/Out signals are connected on the board. Wired signals are not used. Open signals are selected with backplane jumpers. Option signals are enabled on the board and on the backplane.

DESCRIPTION	BG0	BG1	BG2	BG3	IACK
4100 CPU	Wired	Wired	Wired	Open	Wired
4200 CPU	Wired	Wired	Wired	Open	Wired
4300 CPU	Wired	Wired	Wired	Open	Open
4400 CPU	Wired	Wired	Wired	Open	Wired
600MP CPU	Wired	Wired	Wired	Open	Open
CG2 Color	Wired	Wired	Wired	Wired	Open
CG3 Color	Wired	Wired	Wired	Wired	Open
CG5 Color	Wired	Wired	Wired	Wired	Open
CG9 Color	Wired	Wired	Wired	Wired	Open
GB	Wired	Wired	Wired	Wired	Wired
GP & GP+	Wired	Wired	Wired	Open	Open
GP2	Wired	Wired	Wired	Wired	Wired
TAAC-1	Wired	Wired	Wired	Wired	Open
VX	Open	Open	Open	Open	Open
MVX	Wired	Wired	Wired	Open	Open
3/E Mono	Wired	Wired	Wired	Wired	Wired
3/E Color	Wired	Wired	Wired	Wired	Wired
VME-Multibus	Wired	Wired	Wired	Open	Open
Xylogics 7053	Option	Option	Option	Option	Open
ISP-80 IPI-2	Open	Open	Open	Open	Open
Prestoserve	Wired	Wired	Wired	Wired	Wired
ALM-2	Wired	Wired	Wired	Wired	Open
MCP	Wired	Wired	Wired	Wired	Open
HSI	Wired	Wired	Wired	Wired	Open
Channel Adapter	Option	Option	Option	Option	
FDDI	Wired	Open	Open	Open	Open
SCSI-2	Option	Option	Option	Option	Open
SCSI-3	Wired	Wired	Wired	Open	Open
3/E SCSI	Wired	Wired	Wired	Wired	Open
IPC	Open	Open	Open	Open	Open

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SCSI Host Adapter Assemblies

1. Use the slot assignment charts for systems with the 501-1138 or 501-1217 SCSI Assembly if there is no SCSI Host Adapter installed in a Sun-3/180, Sun-3/280, or Sun-4/280.
2. Sun 3x2 Adapter, 501-1269, Option 160A, is connected to J2 Rows A and C. There is no external connector.
3. Sun 3x2 Adapter, 501-1191, Option 160B, is not connected to J2 Rows A and C. There is no external connector.
4. Sun 3x2 Adapter, 501-1220, has no connection to J2 Rows A and C and has an external 50-pin connector.
5. Sun 3x2 Adapter, 501-1666, is connected to J2 Rows A and C and has an external 50-pin connector. This adapter connects the Sun 4300 CPU to the internal SCSI subsystem of the Sun-4/360.
6. Sun-2 SCSI Host Adapter, 501-1167, has P2 bus connections and an external cable assembly. Do not substitute a 501-1236 Sun-3 SCSI for a 501-1045 Sun-2 SCSI in this adapter assembly.
7. Sun-3 SCSI Host Adapter, 501-1217, does not function with the SCSI subsystem in the Sun-3/160, Sun-3/260, or Sun-4/260. The SCSI subsystem interfaces through J2, Rows A and B, of the VMEbus connector. These signals are not connected on the 501-1217 assembly.

Sun VME 3x2 SCSI Host Adapter Assemblies

ASSY # w SCSI	INCLUDES SCSI #	INCLUDES BLANK ASSY #	P2 ROWS A + C	SCSI CONNECTION
501-1138	501-1045	500-1220	No	External
501-1149	501-1045	500-1269	Yes	Internal
501-1167	501-1045	500-1059	Yes	External
501-1170	501-1236	500-1269	Yes	Internal
501-1217	501-1236	500-1220	No	External

Sun 3x2 Adapter Assemblies

OPTION #	TESTED ASSY #	ADAPTER FAB #	P2 ROWS A + C	EXTERNAL CONNECTION
160A	501-1269	270-1059	Yes	No
160B	501-1191	270-1138	No	No
None	501-1220	270-1138	No	Yes
None	501-1666	270-1059	Yes	Yes

Memory Boards With SCSI

ASSY #	MEMORY BD #	DESCRIPTION	SCSI HOST
501-1147	501-1079	2/50 0MB	501-1045
501-1172	501-1121	3/75 0MB	501-1045

Memory Boards That Can Use A 501-1045 SCSI

MEMORY BD #	DESCRIPTION
501-1020	2/50 1MB
501-1046	2/50 2MB
501-1047	2/50 4MB
501-1067	2/50 3MB
501-1079	2/50 0MB
501-1111	3/75 2MB
501-1121	3/75 0MB
501-1122	3/75 4MB

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Sun-4/110

SHUNTS		BOARD	SLOT POSITION		
BG3	IACK		1	2	3
Out	Out	Sun 4100 CPU (1)	A	A	
In	Out	MCP			A
In	Out	ALM-2			A
In	Out	Color (2)			A
In	Out	HSI			A
Out	Out	Ethernet			A
Out	Out	FDDI			A
In	Out	IPC (3)			A

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for the Sun 4/110*, 813-2053-05.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Footnotes to Slot Assignments for Sun-4/110/150/260/280

NOTE #	PART #	BOARD
1	501-1199	Sun 4100 CPU (-03 FAB) 8MB w/o FPU
	501-1237	Sun 4100 CPU (-03 FAB) 8MB w FPU
	501-1462	Sun 4100 CPU (-03 FAB) 16MB w/o FPU
	501-1463	Sun 4100 CPU (-03 FAB) 16MB w FPU
	501-1464	Sun 4100 CPU (-03 FAB) 32MB w/o FPU
	501-1465	Sun 4100 CPU (-03 FAB) 32MB w FPU
	501-1512	Sun 4100 CPU (-04 FAB) 8MB w/o FPU
	501-1513	Sun 4100 CPU (-04 FAB) 8MB w FPU
	501-1514	Sun 4100 CPU (-04 FAB) 16MB w/o FPU
	501-1515	Sun 4100 CPU (-04 FAB) 16MB w FPU
	501-1516	Sun 4100 CPU (-04 FAB) 32MB w/o FPU
	501-1517	Sun 4100 CPU (-04 FAB) 32MB w FPU
	501-1656	Sun 4100 CPU (-07 FAB) 8MB w/o FPU
	501-1657	Sun 4100 CPU (-07 FAB) 8MB w FPU
	501-1658	Sun 4100 CPU (-07 FAB) 16MB w/o FPU
	501-1659	Sun 4100 CPU (-07 FAB) 16MB w FPU
	501-1660	Sun 4100 CPU (-07 FAB) 32MB w/o FPU
	501-1661	Sun 4100 CPU (-07 FAB) 32MB w FPU
	501-1247	MG3 P4 Mono Frame Buffer
	501-1248	CG4 P4 Color Frame Buffer
	501-1371	CG8 P4 24-Bit Color Frame Buffer
	501-1374	CG6 P4 Color Frame Buffer
	501-1518	CG8 P4 24-Bit Color Frame Buffer
	501-1532	CG6 P4 Color Frame Buffer
	501-1314	256KB SIMM Module
	501-1466	1MB SIMM Module

NOTE #	PART #	BOARD
2	501-1116	Sun-3 Color Frame Buffer
	501-1267	CG5 Color Frame Buffer
		The Sun-2 Color Board is not supported.

NOTE #	PART #	BOARD
3	501-1125	SunIPC without 80287
	501-1214	SunIPC with 80287

NOTE #	PART #	BOARD
4	501-1055	Graphics Processor
	501-1139	Graphics Processor +
	501-1268	Graphics Processor 2

NOTE #	PART #	BOARD
5	501-1383	TAAC-1 Application Accelerator
	501-1447	TAAC-1 Application Accelerator
NOTE #	PART #	BOARD
6	501-1102	8MB Memory
	501-1451	32MB Memory
	501-1254	32MB Memory
	501-1576	16MB Memory
NOTE #	PART #	BOARD
7	501-1149	Sun-2 SCSI Host Adapter Assembly
	501-1170	Sun-3 SCSI Host Adapter Assembly
NOTE #	PART #	BOARD
8	501-1155	Xylogics 472 Tape Controller Assy
		The 501-1156, CPC Tapemaster Tape Ctlr Assembly is not supported.
NOTE #	PART #	BOARD
9	501-1154	Xylogics 450 Disk Controller Assembly
	501-1166	Xylogics 451 Disk Controller Assembly
	501-1249	Xylogics 7053 Disk Controller
NOTE #	PART #	BOARD
10	501-1249	Xylogics 7053 Disk Controller
NOTE #	PART #	BOARD
11	501-1167	Sun-2 SCSI Host Adapter Assembly
NOTE #	PART #	BOARD
12	501-1138	Sun-2 SCSI Host Adapter Assembly
	501-1217	Sun-3 SCSI Host Adapter Assembly

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Sun-4/150

SHUNTS		BOARD	SLOT POSITION					
BG 3	IACK		1	2	3	4	5	6
Out	Out	Sun 4100 CPU (1)	A	A				
Out	Out	GP (4)					A	
In	In	GB						A
In	In	TAAC-1 (5)			A	B		
In	In					A	B	
In	In						A	B
In	Out	1st MCP		A	B	C	D	E
In	Out	2nd MCP			A	B	C	D
In	Out	1st ALM-2		A	B	C	D	E
In	Out	2nd ALM-2			A	B	C	D
In	Out	Color (2)			A	B	C	D
In	Out	CG5 with GP/GP+			A	B		
In	Out	CG5 with GP2						A
In	Out	CG9 Color						A
In	Out	1st HSI			A	B		C
In	Out	2nd HSI				A		B
Out	Out	Ethernet			A	B		C
Out	Out	FDDI			A	B		C
In	Out	1st IPC (3)			A	B		C
In	Out	2nd IPC (3)				A		

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for the Sun 4/150 Systems*, 813-2054-01.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/260

SHUNTS		BOARD	SLOT POSITION											
BG 3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4200 CPU	A											
In	In	1st Memory (6)					A							
In	In	2nd Memory (6)				A								
In	In	3rd Memory (6)			A									
In	In	4th Memory (6)		A										
Out	Out	GP (4)									A			
In	In	GB										A		
In	In	TAAC-1 (5)		E	F			D	C	B	A			
In	In				E	F			D	C	B	A		
In	In				E	F			D	C	B	A		
Out	Out	ALM-1										A	A	
Out	Out	SCSI (7)						A						
In	Out	1st MCP		A	B	C	D	E	F	G	H	I	J	
In	Out	2nd MCP			A	B	C	D	E	F	G	H	I	
In	Out	3rd MCP				A	B	C	D	E	F	G	H	
In	Out	4th MCP					A		C	D	E	F	G	
In	Out	1st ALM-2		A	B	C	D	E	F	G	H	I	J	
In	Out	2nd ALM-2			A	B	C	D	E	F	G	H	I	
In	Out	3rd ALM-2				A	B	C	D	E	F	G	H	
In	Out	4th ALM-2					A	B	C	D	E	F	G	
Out	Out	1st Channel Adapter		A	A	C	C	D	D	F	F	H	H	
Out	Out								D	E	E	G	G	
Out	Out	2nd Channel Adapter				A	A	B	B	D	D	F	F	
Out	Out								B	C	C	E	E	
Out	Out	1st MAPkit		A	B	C		D	E	F	G	H		
In	In				A	B	C		D	E	F	G	H	
Out	Out	2nd MAPkit				A		B	C	D	E	F		
In	In						A		B	C	D	E	F	
In	Out	1st HSI		D	A	B	C	E	F	G	H	I	J	
In	Out	2nd HSI		C		A	B	D	E	F	G	H	I	
Out	Out	Ethernet		D	A	B	C	E	F	G	H	I	J	
Out	Out	1st FDDI		D	A	B	C	E	F	G	H	I	J	
Out	Out	2nd FDDI		C		A	B	D	E	F	G	H	I	
In	Out	1st IPC (3)		A	B	C	D	E	F	G	H	I	J	
In	Out	2nd IPC (3)			A	B	C	D	E	F	G	H	I	
In	Out	3rd IPC (3)				A	B	C	D	E	F	G	H	

In	Out	4th IPC (3)					A		B	C	D	E	F	G
Out	Out	1st Tape Ctlr (8)							A	B	C	D	E	F
Out	Out	2nd Tape Ctlr (8)							A	B	C	D	E	
Out	Out	1st Disk Ctlr (9)							A	B	C	D	E	F
Out	Out	2nd Disk Ctlr (9)							A	B	C	D	E	
In	Out	Color (2)		J	A	B	C		D	E	F	G	H	I
In	Out	CG5 w GP/GP+		G	A	B	C		D	E	F			
In	Out	CG5 w GP2											A	B
In	Out	CG9 Color											A	B

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Sun-4/200 Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2037-05.

Sun-4/260 with Double-Height Backplane

SHUNTS		BOARD	SLOT POSITION											
BG 3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4200 CPU	A	A										
In	In	1st Memory (6)						A						
In	In	2nd Memory (6)					A							
In	In	3rd Memory (6)				A								
In	In	4th Memory (6)			A									
Out	Out	GP (4)										A		
In	In	GB											A	
In	In	TAAC-1 (5)			E				D	C	B	A		
In	In				E				D	C	B	A		
In	In					E			D	C	B	A		
Out	Out	ALM-1											A	A
Out	Out	SCSI (7)							A					
In	Out	1st MCP			A	B	C		D	E	F	G	H	I
In	Out	2nd MCP				A	B		C	D	E	F	G	H
In	Out	3rd MCP					A		B	C	D	E	F	G
In	Out	4th MCP							A	B	C	D	E	F
In	Out	1st ALM-2			A	B	C		D	E	F	G	H	I

In	Out	2nd ALM-2				A	B		C	D	E	F	G	H
In	Out	3rd ALM-2					A		B	C	D	E	F	G
In	Out	4th ALM-2							A	B	C	D	E	F
Out	Out	1st Channel			A	B			C	D	E	F	G	
Out	Out	Adapter				A	B			C	D	E	F	G
Out	Out	2nd Channel							A	B	C	D	E	
Out	Out	Adapter								A	B	C	D	E
Out	Out	1st MAPkit			A	B			C	D	E	F	G	
Out	In					A	B			C	D	E	F	G
Out	Out	2nd MAPkit							A	B	C	D	E	
Out	In									A	B	C	D	E
In	Out	1st HSI			A	B	C		D	E	F	G	H	I
In	Out	2nd HSI				A	B		C	D	E	F	G	H
Out	Out	Ethernet			A	B	C		D	E	F	G	H	I
Out	Out	1st FDDI			A	B	C		D	E	F	G	H	I
Out	Out	2nd FDDI				A	B		C	D	E	F	G	H
In	Out	1st IPC (3)			A	B	C		D	E	F	G	H	I
In	Out	2nd IPC (3)				A	B		C	D	E	F	G	H
In	Out	3rd IPC (3)					A		B	C	D	E	F	G
In	Out	4th IPC (3)							A	B	C	D	E	F
Out	Out	1st Tape Ctlr (8)							A	B	C	D	E	F
Out	Out	2nd Tape Ctlr (8)								A	B	C	D	E
Out	Out	1st Disk Ctlr (9)							A	B	C	D	E	F
Out	Out	2nd Disk Ctlr (9)								A	B	C	D	E
In	Out	Color (2)			A	B	C		D	E	F	G	H	I
In	Out	CG5 w GP/GP+			A	B	C		D	E	F			
In	Out	CG5 w GP2											A	B
In	Out	CG9 Color											A	B

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for Sun 4/200 Systems with Double-Height Backpanels*, 813-2071-05.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/280

with 501-1167 SCSI Host Adapter

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4200 CPU	A											
In	In	1st Memory (6)						A						
In	In	2nd Memory (6)		A										
In	In	3rd Memory (6)			A									
In	In	4th Memory (6)				A								
Out	Out	GP (4)										A		
In	In	GB											A	
In	In	TAAC-1 (5)		E	F				D	C	B	A		
In	In				E	F				D	C	B	A	
In	In				E	F				D	C	B	A	
Out	Out	1st ALM-1												A
Out	Out	2nd ALM-1											A	
Out	Out	3rd ALM-1										A		
Out	Out	SCSI (11)						A						
In	Out	1st MCP		A	B	C	D							
In	Out	2nd MCP			A	B	C			D				
In	Out	3rd MCP				A	B			C	D			
In	Out	4th MCP					A			B	C	D	E	F
In	Out	1st ALM-2		A	B	C	D			E	F	G	H	I
In	Out	2nd ALM-2			A	B	C			D	E	F	G	H
In	Out	3rd ALM-2				A	B			C	D	E	F	G
In	Out	4th ALM-2					A			B	C	D	E	F
Out	Out	1st Channel Adapter		A	B	C				D	E	F	G	
Out	Out				A	B	C				D	E	F	G
Out	Out	2nd Channel Adapter				A				B	C	D	E	
Out	Out						A				B	C	D	E
Out	Out	1st MAPkit		A	B	C				D	E	F	G	
In	In				A	B	C				D	E	F	G
Out	Out	2nd MAPkit				A				B	C	D	E	
In	In						A				B	C	D	E
In	Out	Color (2)		A	B	C	D			E	F	G	H	I
In	Out	CG5 w GP/GP+		A	B	C	D			E	F			
In	Out	CG5 w GP2											A	B
In	Out	CG9 Color											A	B

In	Out	1st HSI		A	B	C	D			E	F	G	H	I
In	Out	2nd HSI			A	B	C			D	E	F	G	H
Out	Out	Ethernet		A	B	C	D			E	F	G	H	I
Out	Out	1st FDDI		A	B	C	D			E	F	G	H	I
Out	Out	2nd FDDI			A	B	C			D	E	F	G	H
In	Out	1st IPC (3)		A	B	C	D			E	F	G	H	I
In	Out	2nd IPC (3)			A	B	C			D	E	F	G	H
In	Out	3rd IPC (3)				A	B			C	D	E	F	G
In	Out	4th IPC (3)					A			B	C	D	E	F
Out	Out	1st Tape Ctlr (8)								A	B	C	D	E
Out	Out	2nd Tape Ctlr (8)									A	B	C	D
Out	Out	1st Disk Ctlr (9)								A	B	C	D	E
Out	Out	2nd Disk Ctlr (9)									A	B	C	D
Out	Out	3rd Disk Ctlr (10)										A	B	C
Out	Out	4th Disk Ctlr (10)											A	B

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Sun-4/200 Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2037-05.

Sun-4/280

with Double-Height Backpanel with 501-1167 SCSI Host Adapter

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4200 CPU	A	A										
In	In	1st Memory (6)						A						
In	In	2nd Memory (6)		A										
In	In	3rd Memory (6)			A									
In	In	4th Memory (6)				A								
Out	Out	GP (4)										A		
In	In	GB											A	

In In In	In In In	TAAC-1 (5)			E	E	E		D	C	B	A		
Out	Out	1st ALM-1												A
Out	Out	2nd ALM-1											A	
Out	Out	3rd ALM-1										A		
Out	Out	SCSI (11)						A						
In	Out	1st MCP		A	B	C	D							
In	Out	2nd MCP			A	B	C			D				
In	Out	3rd MCP				A	B			C	D			
In	Out	4th MCP					A			B	C	D	E	F
In	Out	1st ALM-2		A	B	C	D			E	F	G	H	I
In	Out	2nd ALM-2			A	B	C			D	E	F	G	H
In	Out	3rd ALM-2				A	B			C	D	E	F	G
In	Out	4th ALM-2					A			B	C	D	E	F
Out Out	Out Out	1st Channel Adapter		A	B	C				D	E	F	G	
Out Out	Out Out	2nd Channel Adapter				A				B	C	D	E	
Out In	Out In	1st MAPkit		A	B	C				D	E	F	G	
Out In	Out In	2nd MAPkit				A				B	C	D	E	
In	Out	Color (2)			A	B	C		D	E	F	G	H	I
In	Out	CG5 w GP/GP+			A	B	C		D	E	F			
In	Out	CG5 w GP2											A	B
In	Out	CG9 Color											A	B
In	Out	1st HSI			A	B	C			D	E	F	G	H
In	Out	2nd HSI				A	B			C	D	E	F	G
Out	Out	Ethernet			A	B	C		D	E	F	G	H	I
Out	Out	1st FDDI			A	B	C			D	E	F	G	H
Out	Out	2nd FDDI				A	B			C	D	E	F	G
In	Out	1st IPC (3)			A	B	C		D	E	F	G	H	I
In	Out	2nd IPC (3)				A	B		C	D	E	F	G	H
In	Out	3rd IPC (3)					A		B	C	D	E	F	G
In	Out	4th IPC (3)							A	B	C	D	E	F
Out	Out	1st Tape Ctlr (8)							A	B	C	D	E	F
Out	Out	2nd Tape Ctlr (8)								A	B	C	D	E
Out	Out	1st Disk Ctlr (9)							A	B	C	D	E	F
Out	Out	2nd Disk Ctlr (9)								A	B	C	D	E
Out	Out	3rd Disk Ctlr (10)									A	B	C	D

Out	Out	4th Disk Ctlr (10)													A	B	C
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References

1. *Sun Systems ard cage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for Sun 4/200 Systems with Double-Height Backpanels*, 813-2071-05.

Sun-4/280

with 501-1138 or 501-1217 SCSI

SHUNTS		BOARD	SLOT POSITION															
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12				
Out	Out	Sun 4200 CPU	A															
In	In	1st Memory (6)						A										
In	In	2nd Memory (6)		A														
In	In	3rd Memory (6)			A													
In	In	4th Memory (6)				A												
Out	Out	GP (4)										A						
In	In	GB											A					
In	In	TAAC-1 (5)		E	F				D	C	B	A						
In	In				E	F				D	C	B	A					
In	In				E	F					D	C	B	A				
Out	Out	1st ALM-1															A	
Out	Out	2nd ALM-1															A	
Out	Out	3rd ALM-1											A					
In	Out	1st MCP		A	B	C	D											
In	Out	2nd MCP			A	B	C		D									
In	Out	3rd MCP				A	B		C	D								
In	Out	4th MCP					A		B	C	D							
In	Out	1st ALM-2		A	B	C	D		E	F	G	H	I	J				
In	Out	2nd ALM-2			A	B	C		D	E	F	G	H	I				
In	Out	3rd ALM-2				A	B		C	D	E	F	G	H				
In	Out	4th ALM-2					A		B	C	D	E	F	G				
Out	Out	1st Channel Adapter		A	B	C			C	D	E	F	G					
Out	Out				A	B	C			C	D	E	F	G				
Out	Out	2nd Channel Adapter				A			B	C	D	E	F					
Out	Out						A			B	C	D	E	F				

Out In	Out In	1st MAPkit		A	B	C			D	E	F	G	H	
				A	B	C			D	E	F	G	H	
Out In	Out In	2nd MAPkit				A			B	C	D	E	F	
						A			B	C	D	E	F	
In	Out	1st HSI		D	A	B	C		E	F	G	H	I	J
In	Out	2nd HSI		C		A	B		D	E	F	G	H	I
Out	Out	Ethernet		D	A	B	C		E	F	G	H	I	J
Out	Out	SCSI (12)		A	B	C	D		E	F	G	H	I	J
In	Out	Color (2)		A	B	C	D		E	F	G	H	I	J
In	Out	CG5 w GP/GP+		A	B	C	D		E	F	G			
In	Out	CG5 w GP2											A	B
In	Out	CG9 Color											A	B
In	Out	1st HSI		A	B	C	D		E	F	G	H	I	J
In	Out	2nd HSI			A	B	C		D	E	F	G	H	I
Out	Out	Ethernet		A	B	C	D		E	F	G	H	I	J
Out	Out	1st FDDI		A	B	C	D		E	F	G	H	I	J
Out	Out	2nd FDDI			A	B	C		D	E	F	G	H	I
In	Out	1st IPC (3)		A	B	C	D		E	F	G	H	I	J
In	Out	2nd IPC (3)			A	B	C		D	E	F	G	H	I
In	Out	3rd IPC (3)				A	B		C	D	E	F	G	H
In	Out	4th IPC (3)					A		B	C	D	E	F	G
Out	Out	1st Tape Ctlr (8)		A	B	C	D		E	F	G	H	I	J
Out	Out	2nd Tape Ctlr (8)			A	B	C		D	E	F	G	H	I
Out	Out	1st Disk Ctlr (9)		A	B	C	D		E	F	G	H	I	J
Out	Out	2nd Disk Ctlr (9)			A	B	C		D	E	F	G	H	I
Out	Out	3rd Disk Ctlr (10)				A	B		C	D	E	F	G	H
Out	Out	4th Disk Ctlr (10)					A		B	C	D	E	F	G

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Sun-4/200 Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2037-05.

Sun-4/280

with Double-Height Backpanel
with 501-1138 or 501-1217 SCSI

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4200 CPU	A	A										
In	In	1st Memory (6)						A						
In	In	2nd Memory (6)		A										
In	In	3rd Memory (6)			A									
In	In	4th Memory (6)				A								
Out	Out	GP (4)									A			
In	In	GB										A		
In	In	TAAC-1 (5)			E			D	C	B	A			
In	In					E			D	C	B	A		
In	In						E			D	C	B	A	
Out	Out	1st ALM-1												A
Out	Out	2nd ALM-1										A		
Out	Out	3rd ALM-1									A			
In	Out	1st MCP			A	B	C	D						
In	Out	2nd MCP				A	B	C	D					
In	Out	3rd MCP					A	B	C	D				
In	Out	4th MCP						A	B	C	D	E	F	
In	Out	1st ALM-2			A	B	C	D	E	F	G	H	I	
In	Out	2nd ALM-2				A	B	C	D	E	F	G	H	
In	Out	3rd ALM-2					A	B	C	D	E	F	G	
In	Out	4th ALM-2						A	B	C	D	E	F	
Out	Out	1st Channel Adapter			A	A			C	D	E	F	G	
Out	Out					B	B			C	D	E	F	G
Out	Out	2nd Channel Adapter							A	B	C	D	E	
Out	Out									A	B	C	D	E
Out	Out	1st MAPkit			A	B			C	D	E	F	G	
In	In					A	B			C	D	E	F	G
Out	Out	2nd MAPkit							A	B	C	D	E	
In	In									A	B	C	D	E
Out	Out	SCSI (12)			A	B	C	D	E	F	G	H	I	
In	Out	Color (2)			A	B	C	D	E	F	G	H	I	
In	Out	CG5 w GP/GP+			A	B	C	D	E	F				
In	Out	CG5 w GP2										A	B	

In	Out	CG9 Color											A	B
In	Out	1st HSI			A	B	C		D	E	F	G	H	I
In	Out	2nd HSI				A	B		C	D	E	F	G	H
Out	Out	Ethernet			A	B	C		D	E	F	G	H	I
Out	Out	1st FDDI			A	B	C		D	E	F	G	H	I
Out	Out	2nd FDDI				A	B		C	D	E	F	G	H
In	Out	1st IPC (3)			A	B	C		D	E	F	G	H	I
In	Out	2nd IPC (3)				A	B		C	D	E	F	G	H
In	Out	3rd IPC (3)					A		B	C	D	E	F	G
In	Out	4th IPC (3)							A	B	C	D	E	F
Out	Out	1st Tape Ctlr (8)			A	B	C		D	E	F	G	H	I
Out	Out	2nd Tape Ctlr (8)				A	B		C	D	E	F	G	H
Out	Out	1st Disk Ctlr (9)			A	B	C		D	E	F	G	H	I
Out	Out	2nd Disk Ctlr (9)				A	B		C	D	E	F	G	H
Out	Out	3rd Disk Ctlr (10)					A		B	C	D	E	F	G
Out	Out	4th Disk Ctlr (10)							A	B	C	D	E	F

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for Sun 4/200 Systems with Double-Height Backpanels*, 813-2071-05.

Sun-4/280

with 501-1138 or 501-1217 SCSI

Slots 7,8,9 reserved for non-Sun boards that use P2

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4200 CPU	A											
In	In	1st Memory (6)						A						
In	In	2nd Memory (6)		A										
In	In	3rd Memory (6)			A									
In	In	4th Memory (6)				A								
Out	Out	GP (4)										A		
In	In	GB											A	

In	In	TAAC-1 (5)		B	C						A		
In	In			B	C						A		
In	In			B	C							A	
Out	Out	1st ALM-1											A
Out	Out	2nd ALM-1									A		
Out	Out	3rd ALM-1								A			
In	Out	1st MCP		A	B	C	D						
In	Out	2nd MCP			A	B	C				D	E	F
In	Out	3rd MCP				A	B				C	D	E
In	Out	4th MCP					A				B	C	D
In	Out	1st ALM-2		A	B	C	D				E	F	G
In	Out	2nd ALM-2			A	B	C				D	E	F
In	Out	3rd ALM-2				A	B				C	D	E
In	Out	4th ALM-2					A				B	C	D
Out	Out	1st Channel Adapter		A	B	C					D	E	
Out	Out				A	B	C					D	E
Out	Out	2nd Channel Adapter				A					B	C	
Out	Out						A					B	C
Out	Out	1st MAPkit		A	B	C					D	E	
Out	Out				A	B	C					D	E
Out	Out	2nd MAPkit				A					B	C	
Out	Out						A					B	C
Out	In	SCSI (12)		A	B	C	D				E	F	G
In	Out	Color (2)		A	B	C	D				E	F	G
In	Out	CG5 w GP/GP+		A	B	C	D						
In	Out	CG5 w GP2										A	B
In	Out	CG9 Color										A	B
In	Out	1st HSI		A	B	C	D				E	F	G
In	Out	2nd HSI			A	B	C				D	E	F
Out	Out	Ethernet		A	B	C	D				E	F	G
Out	Out	1st FDDI		A	B	C	D				E	F	G
Out	Out	2nd FDDI			A	B	C				D	E	F
In	Out	1st IPC (3)		A	B	C	D				E	F	G
In	Out	2nd IPC (3)			A	B	C				D	E	F
In	Out	3rd IPC (3)				A					C	D	E
In	Out	4th IPC (3)					A				B	C	D
Out	Out	1st Tape Ctlr (8)		A	B	C	D				E	F	G
Out	Out	2nd Tape Ctlr (8)			A	B	C				D	E	F
Out	Out	1st Disk Ctlr (9)		A	B	C	D				E	F	G
Out	Out	2nd Disk Ctlr (9)			A	B	C				D	E	F
Out	Out	3rd Disk Ctlr (10)				A	B				C	D	E

Out	Out	4th Disk Ctlr (10)					A					B	C	D
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References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Sun-4/200 Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2037-05.

Sun-4/280

with Double-Height Backpanel with 501-1138 or 501-1217 SCSI

Slots 7,8,9 reserved for non-Sun boards that use P2

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4200 CPU	A	A										
In	In	1st Memory (6)						A						
In	In	2nd Memory (6)			A									
In	In	3rd Memory (6)				A								
In	In	4th Memory (6)					A							
Out	Out	GP (2)										A		
In	In	GB											A	
In	In	TAAC-1 (5)		B								A		
In	In				B								A	
In	In					B								A
Out	Out	1st ALM-1												A
Out	Out	2nd ALM-1											A	
Out	Out	3rd ALM-1										A		
In	Out	1st MCP			A	B	C					D	E	F
In	Out	2nd MCP				A	B					C	D	E
In	Out	3rd MCP					A					B	C	D
In	Out	4th MCP										A	B	C
In	Out	1st ALM-2			A	B	C					D	E	F
In	Out	2nd ALM-2				A	B					C	D	E
In	Out	3rd ALM-2					A					B	C	D
In	Out	4th ALM-2										A	B	C

Out	Out	1st Channel		A	B	C					D	E	
Out	Out	Adapter			A	B	C					D	E
Out	Out	2nd Channel				A					B	C	
Out	Out	Adapter					A					B	C
Out	Out	1st MAPkit			A	B					C	D	
In	In				A	B						C	D
Out	Out	2nd MAPkit									A	B	
In	In										A	B	
Out	Out	SCSI (12)			A	B	C				D	E	F
In	Out	Color (2)			A	B	C				D	E	F
In	Out	CG5 w GP/GP+			A	B	C						
In	Out	CG5 w GP2										A	B
In	Out	CG9 Color										A	B
In	Out	1st HSI			A	B	C				D	E	F
In	Out	2nd HSI				A	B				C	D	E
Out	Out	Ethernet			A	B	C				D	E	F
Out	Out	1st FDDI			A	B	C				D	E	F
Out	Out	2nd FDDI				A	B				C	D	E
In	Out	1st IPC (3)			A	B	C				D	E	F
In	Out	2nd IPC (3)				A	B				C	D	E
In	Out	3rd IPC (3)					A				B	C	D
In	Out	4th IPC (3)									A	B	C
Out	Out	1st Tape Ctlr (8)			A	B	C				D	E	F
Out	Out	2nd Tape Ctlr (8)				A	B				C	D	E
Out	Out	1st Disk Ctlr (9)			A	B	C				D	E	F
Out	Out	2nd Disk Ctlr (9)				A	B				C	D	E
Out	Out	3rd Disk Ctlr (10)					A				B	C	D
Out	Out	4th Disk Ctlr (10)									A	B	C

References

1. *Sun Systems Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2004-16.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for Sun 4/200 Systems with Double-Height Backpanels*, 813-2071-05.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/310

SHUNTS		BOARD	SLOT POSITION		
BG 3	IACK		1	2	3
Out	Out	Sun 4300 CPU (1)	A	A	
In	In	Memory (2)		A	B
In	Out	Color (3)		A	B
In	Out	1st MCP		A	B
In	Out	2nd MCP			A
In	Out	1st ALM-2		A	B
In	Out	2nd ALM-2			A
Out	Out	Ethernet (4)		B	A
In	Out	1st IPC (5)		B	A
In	Out	2nd IPC (5)		A	

Reference

SPARCsystem 350 and 310 Cardcage Slot Assignments and Backplane Configuration Procedures, 800-5722-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Footnotes to Slot Assignments for Sun-4/310/330/350/360/370/380/390

NOTE #	PART #	BOARD
1	501-1247	MG3 P4 Mono Frame Buffer
	501-1374	CG6 P4 Color Frame Buffer
	501-1402	MG4 P4 Mono Frame Buffer
	501-1443	CG4 P4 Color Frame Buffer
	501-1532	CG6 P4 Color Frame Buffer
	501-1316	8MB Sun 4300 CPU
	501-1408	1MB SIMM Module
	501-1466	1MB SIMM Module
	501-1544	1MB SIMM Module
	501-1565	1MB SIMM Module
	501-1697	1MB SIMM Module
	501-1742	32MB Sun 4300 CPU
	501-1682	4MB SIMM Module
	501-1739	4MB SIMM Module

NOTE #	PART #	BOARD
2	501-1495	48MB Memory Board
	501-1563	24MB Memory Board
	501-1564	8MB Memory Board
	501-1408	1MB SIMM Module
	501-1466	1MB SIMM Module
	501-1544	1MB SIMM Module
	501-1565	1MB SIMM Module
	501-1697	1MB SIMM Module
	501-1703	32MB Memory Board
	501-1682	4MB SIMM Module
501-1739	4MB SIMM Module	

NOTE #	PART #	BOARD
3	501-1116	Sun-3 Color Frame Buffer
	501-1267	CG5 Color Frame Buffer

NOTE #	PART #	BOARD
4	501-1153	Multibus Ethernet Controller Assembly

NOTE #	PART #	BOARD
5	501-1125	SunIPC w/o 80287
	501-1214	SunIPC w 80287

NOTE #	PART #	BOARD
6	501-1268	GP2
	501-1139	GP+

NOTE #	PART #	BOARD
7	501-1381	TAAC-1 Application Accelerator
	501-1447	TAAC-1 Application Accelerator

NOTE #	PART #	BOARD
8	501-1316	8MB Sun 4300 CPU
	501-1408	1MB SIMM Module
	501-1466	1MB SIMM Module
	501-1544	1MB SIMM Module
	501-1565	1MB SIMM Module
	501-1697	1MB SIMM Module

NOTE #	PART #	BOARD
9	501-1217	Sun-3 SCSI Host Adapter Assembly

NOTE #	PART #	BOARD
10	501-1436	8MB Memory Board
	501-1723	8MB Memory Board
	501-1317	16MB Memory Board
	501-1711	16MB Memory Board
	501-1408	1MB SIMM Module
	501-1466	1MB SIMM Module
	501-1544	1MB SIMM Module
	501-1565	1MB SIMM Module
	501-1697	1MB SIMM Module
	501-1704	32MB Memory Board
	501-1755	32MB Memory Board
	501-1682	4MB SIMM Module
	501-1739	4MB SIMM Module

NOTE #	PART #	BOARD
11	501-1666	Blank SCSI Adapter Assembly

NOTE #	PART #	BOARD
12	501-1155	Xylogics 472 Tape Controller Assembly

NOTE #	PART #	BOARD
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13	501-1166 501-1249	Xylogics 451 Disk Controller Assembly Xylogics 7053 Disk Controller
NOTE #	PART #	BOARD
14	501-1249	Xylogics 7053 Disk Controller
NOTE #	PART #	BOARD
15	501-1539 501-1855	ISP-80 IPI Disk Controller ISP-80 IPI Disk Controller

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/330

SHUNTS		BOARD	SLOT POSITION						
			9U			6U		3U	
BG3	IACK		1	2	3	4A	5A	4B	5B
Out	Out	Sun 4300 CPU (8)	A	a					
In	Out	1st MCP		B	A				
In	Out	2nd MCP		B	A				
In	Out	1st ALM-2		B	A				
In	Out	2nd ALM-2		B	A				
Out	Out	VX		B	A				
Out	Out	MVX			A				
Out	Out	GP (6)		A					
In	Out	Color (3)		B	A				
In	Out	1st HSI		B	A				
In	Out	2nd HSI			A				
Out	Out	Ethernet (4)		B	A				
In	Out	IPC		B	A				
Out	Out	SCSI (9)		B	A				
-	-	1st Memory (10)						A	B
-	-	2nd Memory (10)							A

References

1. *Sun-5 Slot Office Pedestal Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2068-11.
2. *Sun-3 SCSI Host Adapter Installation Manual*, 813-1015-11.
3. *Cardcage Slot Assignments and Backplane Configuration Procedures for the VX and MVX Accelerators*, 800-5426-06.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/350

SHUNTS		BOARD	SLOT POSITION					
BG3	IACK		1	2	3	4	5	6
Out	Out	Sun 4300 CPU (1)	A	A				
In	In	Memory (2)			A			
Out	Out	GP (6)					A	
Out	Out	CG9						A
In	In	TAAC-1 (7)			A	B		
In	In					A	B	
In	In						A	B
In	Out	1st MCP		E	A	B	C	D
In	Out	2nd MCP		D		A	B	C
In	Out	1st ALM-2		E	A	B	C	D
In	Out	2nd ALM-2		D		A	B	C
Out	Out	SunLink		D	A	B	C	
Out	Out	Channel Adapter			D	A	B	C
Out	Out	1st Mapkit		D	A	B	C	
In	In				D	A	B	C
Out	Out	2nd Mapkit		C		A	B	
In	In				C		A	B
In	Out	Color (3)		E	A	B	C	D
In	Out	CG5 w GP+		C	A	B		
In	Out	CG5 wGP2						A
Out	Out	Ethernet (4)		E	A	B	C	D
Out	Out	FDDI		E	A	B	C	D
In	Out	HSI		E	A	B	C	D
In	Out	1st IPC (5)		E	A	B	C	D
In	Out	2nd IPC (5)		D		A	B	C

References

SPARCsystem 350 and 310 Cardcage Slot Assignments and Backplane Configuration Procedures, 800-5722-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/360

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4300 CPU (1)	A	A										
In	In	Memory (2)			A	A								
Out	Out	GP (6)									A			
In	Out	CG9										A	A	
In	In	GB										A		
In	In	TAAC-1 (7)									A			
In	In												A	
In	In													A
Out	Out	ALM-1										A	A	
In	In	SCSI Adapter (11)						A						
In	Out	1st MCP		K	A	B	C	D	E	F	G	H	I	J
In	Out	2nd MCP		J		A	B	C	D	E	F	G	H	I
In	Out	3rd MCP		I			A	B	C	D	E	F	G	H
In	Out	4th MCP		H				A	B	C	D	E	F	G
In	Out	1st ALM-2		K	A	B	C	D	E	F	G	H	I	J
In	Out	2nd ALM-2		J		A	B	C	D	E	F	G	H	I
In	Out	3rd ALM-2		I			A	B	C	D	E	F	G	H
In	Out	4th ALM-2		H				A	B	C	D	E	F	G
Out	Out	1st Channel Adapter				A	B	C	D	E	F	G	H	
Out	Out						A	B	C	D	E	F	G	H
Out	Out	2nd Channel Adapter						A	B	C	D	E	F	
Out	Out	Ethernet (4)		E	A	B	C	D	F	G	H	I	J	K
Out	Out	1st Tape Ctlr (12)							A	B	C	D	E	F
Out	Out	2nd Tape Ctlr (12)								A	B	C	D	E
Out	Out	1st Disk Ctlr (13)							A	B	C	D	E	F
Out	Out	2nd Disk Ctlr (13)								A	B	C	D	E
In	Out	Color (3)		K	A	B	C	D	E	F	G	H	I	J
In	Out	CG5 w GP/GP+		H	A	B	C	D	E	F	G			
In	Out	CG5 w GP2											A	B

References

SPARCsystem 360 & SPARCserver 380 Cardcage Slot Assignments and Backplane Configuration Procedures, 813-2088-11.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/370

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4300 CPU (1)				A	a							
In	In	Memory (2)		A										
Out	Out	VX										A	B	C
Out	Out	MVX											A	B
In	Out	CG9											A	B
Out	Out	GP (6)										A		
In	In	GB											A	
In	In	TAAC-1 (7)					A	B	C	D	E	F		
In	In							A	B	C	D	E	F	
In	In								A	B	C	D	E	F
In	Out	1st MCP					A	B	C	D	E	F	G	H
In	Out	2nd MCP						A	B	C	D	E	F	G
In	Out	3rd MCP							A	B	C	D	E	F
In	Out	4th MCP								A	B	C	D	E
In	Out	1st ALM-2					A	B	C	D	E	F	G	H
In	Out	2nd ALM-2						A	B	C	D	E	F	G
In	Out	3rd ALM-2							A	B	C	D	E	F
In	Out	4th ALM-2								A	B	C	D	E
Out	Out	1st Channel Adapter					A	B	C	D	E	F	G	
Out	Out							A	B	C	D	E	F	G
Out	Out	2nd Channel Adapter							A	B	C	D	E	
Out	Out								A	B	C	D	E	
Out	Out	SCSI (9)					A	B	C	D	E	F	G	H
Out	Out	Ethernet (4)					A	B	C	D	E	F	G	H
Out	Out	1st Disk Ctlr (13)					A	B	C	D	E	F	G	H
Out	Out	2nd Disk Ctlr (13)						A	B	C	D	E	F	G
Out	Out	3rd Disk Ctlr (14)							A	B	C	D	E	F
Out	Out	4th Disk Ctlr (14)								A	B	C	D	E
In	Out	Color (3)					A	B	C	D	E	F	G	H
In	Out	CG5 w GP2											A	B
In	Out	CG5 w GP/GP+					A	B	C	D	E			
Out	Out	FDDI					A	B	C	D	E	F	G	H

References

1. SPARCsystem 370 Cardcage Slot Assignments and Backplane *Configuration Procedures*, 813-2079-11.
 2. *Sun-3 SCSI Hosts Adapter Installation Manual*, 813-1015-11.
 3. *Cardcage Slot Assignments and Backplane Configuration Procedures for the VX and MVX Accelerators*, 800-5426-06.
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Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/380

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4300 CPU (1)	A	a										
In	In	Memory (2)		A	a									
Out	Out	GP (6)									A			
In	Out	CG9										A	B	
In	In	GB										A		
In	In	TAAC-1 (7)									A			
In	In											A		
In	In												A	
Out	Out	1st ALM-1												A
Out	Out	2nd ALM-1											A	
Out	Out	3rd ALM-1									A			
In	Out	1st MCP		K	A	B	C	D	E	F	G	H	I	J
In	Out	2nd MCP		J		A	B	C	D	E	F	G	H	I
In	Out	3rd MCP		I			A	B	C	D	E	F	G	H
In	Out	4th MCP		H				A	B	C	D	E	F	G
In	Out	1st ALM-2		K	A	B	C	D	E	F	G	H	I	J
In	Out	2nd ALM-2		J		A	B	C	D	E	F	G	H	I
In	Out	3rd ALM-2		I			A	B	C	D	E	F	G	H
In	Out	4th ALM-2		H				A	B	C	D	E	F	G
Out	Out	1st Channel Adapter				A	B	C	D	E	F	G	H	
-	-						A	B	C	D	E	F	G	H
Out	Out	2nd Channel Adapter					A	B	C	D	E	F		
-	-						A	B	C	D	E	F		
In	Out	Color (3)		K	A	B	C	D	E	F	G	H	I	J
In	Out	CG5 w GP2											A	B
In	Out	CG5 w GP/GP+		H	A	B	C	D	E	F	G			
Out	Out	Ethernet (4)		E	A	B	C	D	F	G	H	I	J	K
Out	Out	1st Tape Ctlr (12)							A	B	C	D	E	F
Out	Out	2nd Tape Ctlr (12)								A	B	C	D	E
Out	Out	1st Disk Ctlr (13)							A	B	C	D	E	F
Out	Out	2nd Disk Ctlr (13)								A	B	C	D	E
Out	Out	3rd Disk Ctlr (14)									A	B	C	D
Out	Out	4th Disk Ctlr (14)										A	B	C

References

SPARCsystem 360 & SPARCserver 380 Cardcage Slot Assignments and Backplane Configuration Procedures, 813-2088-11.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/390

SHUNTS		BOARD	SLOT POSITION															
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Out	Out	4300 CPU (1)				A	a											
In	In	Memory (2)	A															
Out	Out	VX														A	B	C
Out	Out	MVX															A	B
Out	Out	GP2											B					
In	In	TAAC-1 (7)														A		
In	In																	A
In	In																	
In	Out	1st MCP						A	B	C	D	E	F	G	H	I	J	K
In	Out	2nd MCP							A	B	C	D	E	F	G	H	I	J
In	Out	3rd MCP								A	B	C	D	E	F	G	H	I
In	Out	4th MCP									A	B	C	D	E	F	G	H
In	Out	1st ALM-2						A	B	C	D	E	F	G	H	I	J	K
In	Out	2nd ALM-2							A	B	C	D	E	F	G	H	I	J
In	Out	3rd ALM-2								A	B	C	D	E	F	G	H	I
In	Out	4th ALM-2									A	B	C	D	E	F	G	H
In	Out	5th ALM-2										A	B	C	D	E	F	G
In	Out	6th ALM-2											A	B	C	D	E	F
In	Out	7th ALM-2												A	B	C	D	E
In	Out	8th ALM-2													A	B	C	D
Out	Out	1st Channel Adapter						A	B	C	D	E	F	G	H	I	J	
Out	Out									A	B	C	D	E	F	G	H	I
Out	Out	2nd Channel Adapter								A	B	C	D	E	F	G	H	
Out	Out											A	B	C	D	E	F	G
Out	Out	SCSI (9)						A	B	C	D	E	F	G	H	I	J	K
In	Out	1st HSI						A	B	C	D	E	F	G	H	I	J	K
In	Out	2nd HSI							A	B	C	D	E	F	G	H	I	J
Out	Out	Ethernet (4)						A	B	C	D	E	F	G	H	I	J	K
Out	Out	1st FDDI						A	B	C	D	E	F	G	H	I	J	K
Out	Out	2nd FDDI							A	B	C	D	E	F	G	H	I	J
In	Out	1st IPC (5)						A	B	C	D	E	F	G	H	I	J	K
In	Out	2nd IPC (5)							A	B	C	D	E	F	G	H	I	J
In	Out	3rd IPC (5)								A	B	C	D	E	F	G	H	I
In	Out	4th IPC (5)									A	B	C	D	E	F	G	H
Out	Out	1st IPI Ctlr (15)						A	B	C	D	E	F	G	H	I	J	K
Out	Out	2nd IPI Ctlr (15)							A	B	C	D	E	F	G	H	I	J

Out	Out	3rd IPI Ctlr (15)								A	B	C	D	E	F	G	H	I
Out	Out	4th IPI Ctlr (15)									A	B	C	D	E	F	G	H
In	Out	CG5						A	B	C	D	E	F	G	H	I	J	K
In	Out	CG5 w GP2													A	B		
In	Out	CG9													A	B		

References

1. *Sun SPARCserver 390 Card Cage Slot Assignments and Backplane Configuration Procedure*, 813-2067-10.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for the VX and MVX Accelerators*, 800-5426-06.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/470

SHUNTS		BOARD	SLOT POSITION											
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12
Out	Out	Sun 4400 CPU				A	a							
In	In	1st Memory (1)	A											
In	In	2nd Memory (1)						A						
In	In	3rd Memory (1)		A										
In	In	4th Memory (1)					A							
In	In	5th Memory (1)			A									
In	In	6th Memory (1)				A								
Out	Out	VX									A	B	C	
Out	Out	MVX										A	B	
Out	Out	GP2									A	B		
In	In	TAAC-1 (2)									A			
In	In												A	
In	In													
In	Out	1st MCP						A	B	C	D	E	F	G
In	Out	2nd MCP							A	B	C	D	E	F
In	Out	3rd MCP								A	B	C	D	E
In	Out	4th MCP									A	B	C	D
In	Out	1st ALM-2						A	B	C	D	E	F	G
In	Out	2nd ALM-2							A	B	C	D	E	F
In	Out	3rd ALM-2								A	B	C	D	E
In	Out	4th ALM-2									A	B	C	D
In	Out	5th ALM-2										A	B	C
In	Out	6th ALM-2											A	B
Out	Out	1st Channel						A	B	C	D	E	F	
Out	Out	Adapter							A	B	C	D	E	F
Out	Out	2nd Channel							A	B	C	D	E	
Out	Out	Adapter								A	B	C	D	E
Out	Out	1st SCSI (3)						A	B	C	D	E	F	G
Out	Out	2nd SCSI (3)							A	B	C	D	E	F
In	Out	1st HSI						A	B	C	D	E	F	G
In	Out	2nd HSI							A	B	C	D	E	F
Out	Out	1st Ethernet (4)						A	B	C	D	E	F	G
Out	Out	2nd Ethernet (4)							A	B	C	D	E	F
Out	Out	3rd Ethernet (4)								A	B	C	D	E
Out	Out	1st FDDI						A	B	C	D	E	F	G
Out	Out	2nd FDDI							A	B	C	D	E	F

Out	Out	1st NC400								A	B	C	D		
Out	Out	2nd NC400								A	B	C			
Out	Out	3rd NC400								A	B				
Out	Out	4th NC400									A				
Out	Out	1st SMD Ctlr (5)								A	B	C	D		
Out	Out	2nd SMD Ctlr (5)									A	B	C		
Out	Out	1st IPI Ctlr (6)								A	B	C	D		
Out	Out	2nd IPI Ctlr (6)									A	B	C		
Out	Out	3rd IPI Ctlr (6)										A	B		
Out	Out	4th IPI Ctlr (6)												A	
In	Out	CG5								A	B	C	D		
In	Out	CG5 w GP2										A	B		
In	Out	CG9										A	B		
In	In	Prestoserve								A	B	C	D	E	F

References

1. *Sun SPARCsystem 470 Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2102-14.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for the VX and MVX Accelerators*, 800-5426-06.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Footnotes to Slot Assignments for Sun-4/470/490

NOTE #	PART #	BOARD
1	501-1402	MG4 P4 Mono Frame Buffer
	501-1374	CG6 P4 Color Frame Buffer
	501-1532	CG6 P4 Color Frame Buffer
	501-1333	32MB ECC Memory
	501-1721	128MB ECC Memory
NOTE #	PART #	BOARD
2	501-1381	TAAC-1 Application Accelerator
	501-1447	TAAC-1 Application Accelerator
NOTE #	PART #	BOARD
3	501-1217	Sun-3 SCSI Host Adapter Assembly
NOTE #	PART #	BOARD
4	501-1584	Sun 3E Ethernet Controller Assembly
NOTE #	PART #	BOARD
5	501-1249	Xylogics 7053
NOTE #	PART #	BOARD
6	501-1539	ISP-80 IPI Disk Controller
	501-1855	ISP-80 IPI Disk Controller
NOTE #	PART #	BOARD
7	501-1155	Xylogics 472 Tape Controller Assembly

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[Comments and Suggestions](#) 

Sun-4/490

SHUNTS		BOARD	SLOT POSITION																
BG3	IACK		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Out	Out	Sun 4400 CPU				A	a												
In	In	1st Memory (1)	A																
In	In	2nd Memory (1)						A											
In	In	3rd Memory (1)		A															
In	In	4th Memory (1)						A											
In	In	5th Memory (1)			A														
In	In	6th Memory (1)						A											
Out	Out	VX														A	B	C	
Out	Out	MVX															A	B	
Out	Out	GP2												A	B				
In	In	TAAC-1 (2)														A			
In	In																	A	
In	In																		A
In	Out	1st MCP						A	B	C	D	E	F	G	H	I	J	K	
In	Out	2nd MCP							A	B	C	D	E	F	G	H	I	J	
In	Out	3rd MCP								A	B	C	D	E	F	G	H	I	
In	Out	4th MCP									A	B	C	D	E	F	G	H	
In	Out	1st ALM-2						A	B	C	D	E	F	G	H	I	J	K	
In	Out	2nd ALM-2							A	B	C	D	E	F	G	H	I	J	
In	Out	3rd ALM-2								A	B	C	D	E	F	G	H	I	
In	Out	4th ALM-2									A	B	C	D	E	F	G	H	
In	Out	5th ALM-2										A	B	C	D	E	F	G	
In	Out	6th ALM-2											A	B	C	D	E	F	
In	Out	7th ALM-2												A	B	C	D	E	
In	Out	8th ALM-2													A	B	C	D	
Out	Out	1st Channel Adapter						A	A	C	C	E	E	G	G	I	I		
-	-									B	B	D	D	F	F	H	H	J	J
Out	Out	2nd Channel Adapter							A	A	C	C	E	E	G	G	I	I	
-	-										B	B	D	D	F	F	H	H	
Out	Out	1st SCSI (3)						A	B	C	D	E	F	G	H	I	J	K	
Out	Out	2nd SCSI (3)							A	B	C	D	E	F	G	H	I	J	
Out	Out	Tape Ctr (7)						A	B	C	D	E	F	G	H	I	J	K	
In	Out	1st HSI						A	B	C	D	E	F	G	H	I	J	K	
In	Out	2nd HSI							A	B	C	D	E	F	G	H	I	J	
Out	Out	1st Ethernet (4)						A	B	C	D	E	F	G	H	I	J	K	
Out	Out	2nd Ethernet (4)							A	B	C	D	E	F	G	H	I	J	

Out	Out	3rd Ethernet (4)								A	B	C	D	E	F	G	H	I
Out	Out	1st FDDI						A	B	C	D	E	F	G	H	I	J	K
Out	Out	2nd FDDI						A	B	C	D	E	F	G	H	I	J	
Out	Out	1st NC400							A	B	C	D	E	F				
Out	Out	2nd NC400								A	B	C	D	E				
Out	Out	3rd NC400									A	B	C	D				
Out	Out	4th NC400										A	B	C				
Out	Out	5th NC400											A	B				
Out	Out	6th NC400												A				
Out	Out	1st IPI Ctlr (6)								A	B	C	D	E	F	G	H	
Out	Out	2nd IPI Ctlr (6)									A	B	C	D	E	F	G	
Out	Out	3rd IPI Ctlr (6)										A	B	C	D	E	F	
Out	Out	4th IPI Ctlr (6)											A	B	C	D	E	
Out	Out	5th IPI Ctlr (6)												A	B	C	D	
In	Out	CG5								A	B	C	D	E	F	G	H	
In	Out	CG5 w GP2												A	B			
In	Out	CG9												A	B			
Out	Out	1st SMD Ctlr (5)																A
Out	Out	2nd SMD Ctlr (5)													B	A		
Out	Out	3rd SMD Ctlr (5)												C	B	A		
Out	Out	4th SMD Ctlr (5)												D	C	B	A	
In	In	Prestoserve								A	B	C	D	E	F	G	H	I

References

1. *Sun SPARCserver 490 Cardcage Slot Assignments and Backplane Configuration Procedures*, 813-2087-14.
2. *Cardcage Slot Assignments and Backplane Configuration Procedures for the VX and MVX Accelerators*, 800-5426-06.

Last updated: December 2, 1996

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Backplane

[Backplane Information](#)

[Sun-4/110/310](#)

[Sun-4/150/350](#)

[Sun-4/260/280/360/380](#)

[Sun-4/370](#)

[Sun-4/370/470 / SS670MP](#)

[Sun-4/330 / SS630MP](#)

[Sun-4/390/490 / SS690MP](#)

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Backplane Information

This section contains bus signal charts and backplane layout illustrations.

VMEbus Backplane

Cardcage slot numbers are stamped, printed, or labeled on the sheet metal near the card ejectors. VMEbus backplane jumpers are silk-screened on the cardcage as Px00, Px01, Px02, Px03, and Px04 or Jx00, Jx01, Jx02, Jx03, and Jx04; where x represents the card slot number.

These jumpers control VMEbus signals BUS GRANT 0-3 IN (BG0-3IN) to BUS GRANT 0-3 OUT (BG0-3 OUT), and INTERRUPT ACKNOWLEDGE IN (IACKIN) to INTERRUPT ACKNOWLEDGE OUT (IACKOUT). The VMEbus signals are referred to as BG0, BG1, BG2, BG3, and IACK in this section.

LABEL	SIGNAL	ABBREVIATION
Jxx0 Pxx0	BUS GRANT 0	BG0
Jxx1 Pxx1	BUS GRANT 0	B01
Jxx2 Pxx2	BUS GRANT 0	BG2
Jxx3 Pxx3	BUS GRANT 0	BG3
Jxx4 Pxx4	INTERRUPT ACKNOWLEDGE	IACK

VMEbus Signals

The VMEbus consists of signals on J1/P1 Row A, J1/P1 Row B, J1/P1 Row C, and J2/P2 Row B.

P2 Bus Signals

The Sun P2 Bus consists of signals on J2/P2 Row A, J2/P2 Row C, and J3/P3 Row B.

VMEbus J1/P1 Pinouts

PIN	ROW A	ROW B	ROW C
1	D00	BBSY*	D08
2	D01	BCLR*	D09
3	D02	ACFAIL*	D10
4	D03	BG0IN*	D11
5	D04	BG0OUT*	D12
6	D05	BG1IN*	D13
7	D06	BG1OUT*	D14
8	D07	BG2IN*	D15
9	GND	BG2OUT*	GND

10	SYCLK	BG3IN*	SYSFAIL*
11	GND	BG3OUT*	BERR*
12	DS1*	BR0*	SYSRESET*
13	DS0*	BR1*	LWORD*
14	WRITE*	BR2*	AM5
15	GND	BR3*	A23
16	DTACK*	AM0	A22
17	GND	AM1	A21
18	AS*	AM2	A20
19	GND	AM3	A19
20	IACK*	GND	A18
21	IACKIN	SERCLK	A17
22	IACKOUT*	SERDAT	A16
23	AM4	GND	A15
24	A07	IRQ7*	A14
25	A06	IRQ6*	A13
26	A05	IRQ5*	A12
27	A04	IRQ4*	A11
28	A03	IRQ3*	A10
29	A02	IRQ2*	A09
30	A01	IRQ1*	A08
31	-12V	+5VSTDBY	+12V
32	+5V	+5V	+5V

VMEbus J2/P2 Pinouts

PIN	ROW A	ROW B	ROW C
1	User Defined	+5	User Defined
2	User Defined	GND	User Defined
3	User Defined	RESERVED	User Defined
4	User Defined	A24	User Defined
5	User Defined	A25	User Defined
6	User Defined	A26	User Defined
7	User Defined	A27	User Defined
8	User Defined	A28	User Defined
9	User Defined	A29	User Defined
10	User Defined	A30	User Defined
11	User Defined	A31	User Defined
12	User Defined	GND	User Defined
13	User Defined	+5	User Defined
14	User Defined	D16	User Defined

15	User Defined	D17	User Defined
16	User Defined	D18	User Defined
17	User Defined	D19	User Defined
18	User Defined	D20	User Defined
19	User Defined	D21	User Defined
20	User Defined	D22	User Defined
21	User Defined	D23	User Defined
22	User Defined	GND	User Defined
23	User Defined	D24	User Defined
24	User Defined	D25	User Defined
25	User Defined	D26	User Defined
26	User Defined	D27	User Defined
27	User Defined	D28	User Defined
28	User Defined	D29	User Defined
29	User Defined	D30	User Defined
30	User Defined	D31	User Defined
31	User Defined	GND	User Defined
32	User Defined	+5V	User Defined

VMEbus J3/P3 Pinouts

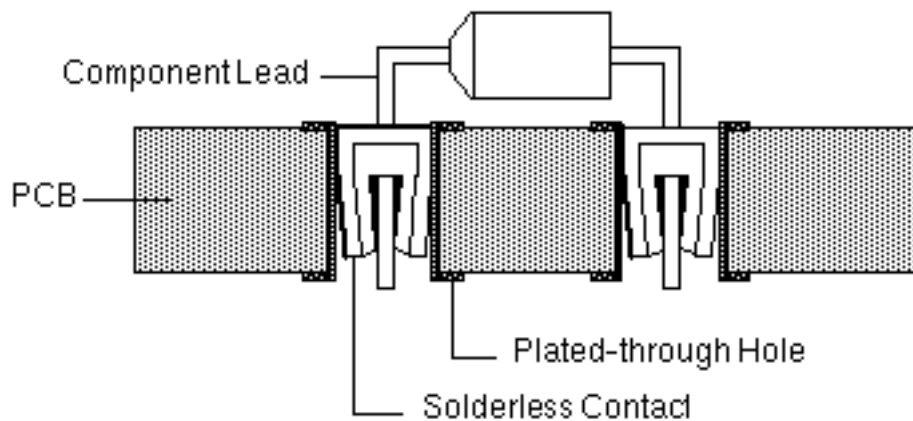
PIN	ROW A	ROW B	ROW C
1	+5V	User Defined	GND
2	+5V	User Defined	GND
3	+5V	User Defined	GND
4	+5V	User Defined	GND
5	+5V	User Defined	GND
6	+5V	User Defined	GND
7	+5V	User Defined	GND
8	+5V	User Defined	GND
9	+5V	User Defined	GND
10	+5V	User Defined	GND
11	+5V	User Defined	GND
12	+5V	User Defined	GND
13	+5V	User Defined	GND
14	+5V	User Defined	GND
15	+5V	User Defined	GND
16	+5V	User Defined	GND
17	+5V	User Defined	GND
18	+5V	User Defined	GND
19	+5V	User Defined	GND

20	+5V	User Defined	GND
21	+5V	User Defined	GND
22	+5V	User Defined	GND
23	+5V	User Defined	GND
24	+5V	User Defined	GND
25	+5V	User Defined	GND
26	+12V	User Defined	+12V
27	+12V	User Defined	+12V
28	-12V	User Defined	-12V
29	-12V	User Defined	-12V
30	-5V	User Defined	-5V
31	-5V	User Defined	-5V
32	-5V	User Defined	-5V

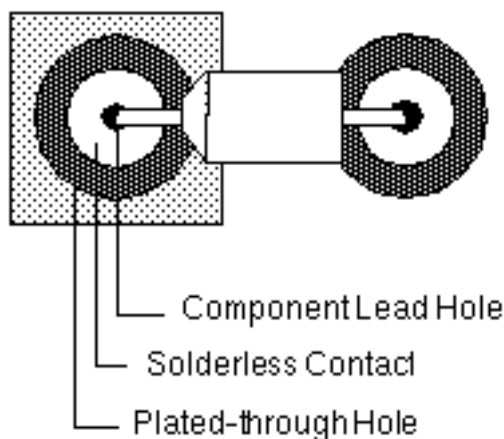
Pressfit Backplanes

Pressfit Backplane production began in June 1987. Solderless contacts are machine pressed into plated-through holes on printed circuit boards. Component leads installed into the solderless contacts are held in place by a tapered entry, multi-finger contact design.

Cross Sectional View



Overhead View of Solderless Contact



501-1354 5-Slot Backplane

Memory board options plug into connector J3, Slots 4 and 5, on the 501-1354 backplane. The Sun P2 bus connects Slots 1, 4, and 5 as shown below.

J102 Row A	Connects to J403 Row A and J503 Row A
J102 Row C	Connects to J403 Row C and J503 Row C
J103 Row B	Connects to J403 Row B and J503 Row B

Cardcage Slots 4 and 5 share a private bus that connects signals between J2/P2, Row A and J2/P2, Row C. These slots are used with 6U VMEbus boards.

The function of the backplane jumpers is shown below.

JUMPER	CONNECTS
P2xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 2
P3xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 3
P4xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 4

501-1439, 501-1598, and 501-1832 12-Slot Backplanes

The Sun P2 bus connects cardcage Slots 1 through 7 to each other, and cardcage Slots 10, 11, and 12 to each other.

In addition to the Sun P2 bus and the VMEbus, the 12-slot backplane has a private Internal bus that connects Slots 1, 2, and 3 as shown below.

J101 Row A	Connects to J201 Row A and J301 Row A
J101 Row B	Connects to J201 Row B and J301 Row B
J101 Row C	Connects to J201 Row C and J301 Row C
J102 Row B	Connects to J202 Row B and J302 Row B

J1/P1, Rows A, B, and C, on Slots 1, 2, and 3 are not connected to the VMEbus. Boards that use the VMEbus cannot be used in Slots 1, 2, or 3. J2/P2, Row B, is connected between Slots 1 through 7.

The 501-1439 Backplane terminates J2/P2, Row C, Pins 75 and 96 with a 40.2 Ohm resistor and a 47pf capacitor.

The 501-1598 and 501-1832 Backplanes terminate J2/P2, Row C, Pins 75 and 96 with a 200 Ohm resistor. Termination is jumper selectable.

The Sun 4400 CPU is not supported in the 501-1439 Backplane.

The function of the backplane jumpers is shown below.

JUMPER	CONNECTS
J4xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 4
J5xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 5
J6xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 6
J7xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 7
J8xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 8
J9xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 9
J10xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 10
J11xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 11
J12xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 12

501-1498 and 501-1597 16-Slot Backplanes

The Sun P2 bus connects cardcage Slots 1 through 7 to each other, cardcage Slots 11 and 12 to each other, and cardcage Slots 13, 14, and 15 to each other.

In addition to the Sun P2 bus and the VMEbus, the 16-slot backplane private internal bus connects Slots 1, 2, and 3 as shown below.

J101 Row A	Connects to J201 Row A and J301 Row A
J101 Row B	Connects to J201 Row B and J301 Row B
J101 Row C	Connects to J201 Row C and J301 Row C
J102 Row B	Connects to J202 Row B and J302 Row B

J1/P1 Rows A, B, and C on Slots 1, 2, and 3 are not connected to the VMEbus. Boards that use the VMEbus cannot be used in Slots 1, 2, or 3. J2/P2, Row B, is connected between Slots 1 through 7.

The 501-1498 Backplane must be 501-1498-02 or greater when used with the Sun 4400 CPU.

The function of the backplane jumpers is shown below.

JUMPER	CONNECTS
J2xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 2
J3xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 3
J4xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 4
J5xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 5
J6xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 6
J7xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 7

J8xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 8
J9xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 9
J10xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 10
J11xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 11
J12xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 12
J13xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 13
J14xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 14
J15xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 15
J16xx	BG0-3IN to BG0-3Out and IACKIN to IACKOUT on slot 16

Backplane Sun P2 or Private Bus Connection

Backplane slots that share an adjacent P2 bus are marked with the same letter in the charts below.

3-Slot VMEbus Backplane

501-1127

Slot	1	2	3
P2 Bus	A	A	A

5-Slot VMEbus Backplane

501-1354

Slot	1	2	3	4	5	6	7
P2 Bus	A	B	B	C	D	A	A

6-Slot VMEbus Backplane

501-1128

Slot	1	2	3	4	5	6
P2 Bus	A	A	A	A	B	B

12-Slot VMEbus Backplane

501-1092 and 501-1117

Slot	1	2	3	4	5	6	7	8	9	10	11	12
P2 Bus	A	A	A	A	A	A	B	C	D	E	E	E

12-Slot VMEbus Backplane

501-1439, 501-1598, and 501-1832

Slot	1	2	3	4	5	6	7	8	9	10	11	12
------	---	---	---	---	---	---	---	---	---	----	----	----

P2 Bus	A	A	A	A	A	A	A	B	C	D	D	D
--------	---	---	---	---	---	---	---	---	---	---	---	---

16-Slot VMEbus Backplane 501-1498 and 501-1597

Slot	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P2 Bus	A	A	A	A	A	A	A	B	C	D	E	E	F	F	F	G

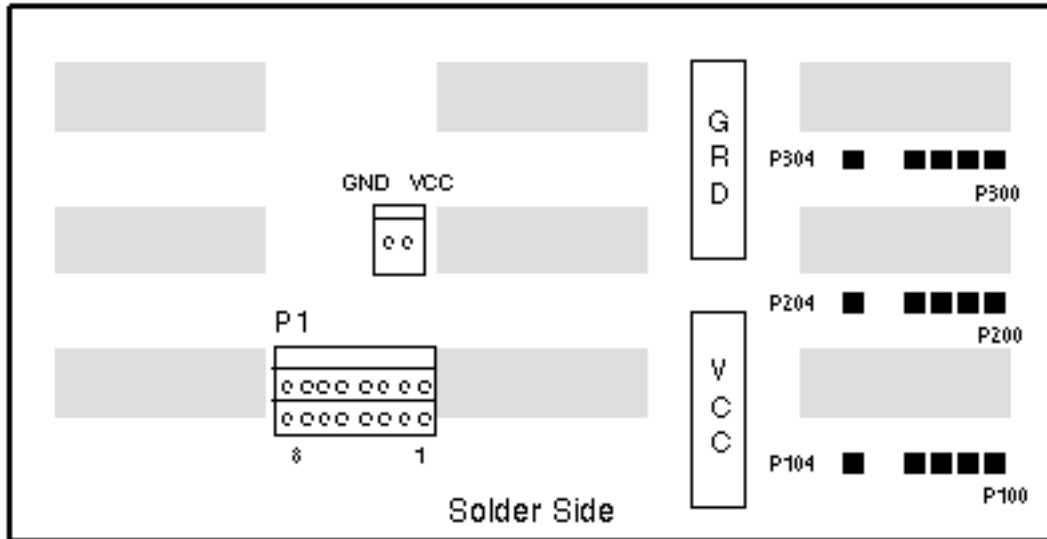
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/110/310

501-1127

Pressfit



Power:

1.3 Amps @ +5Vdc

6.5 Watts

P1 Power Pinouts

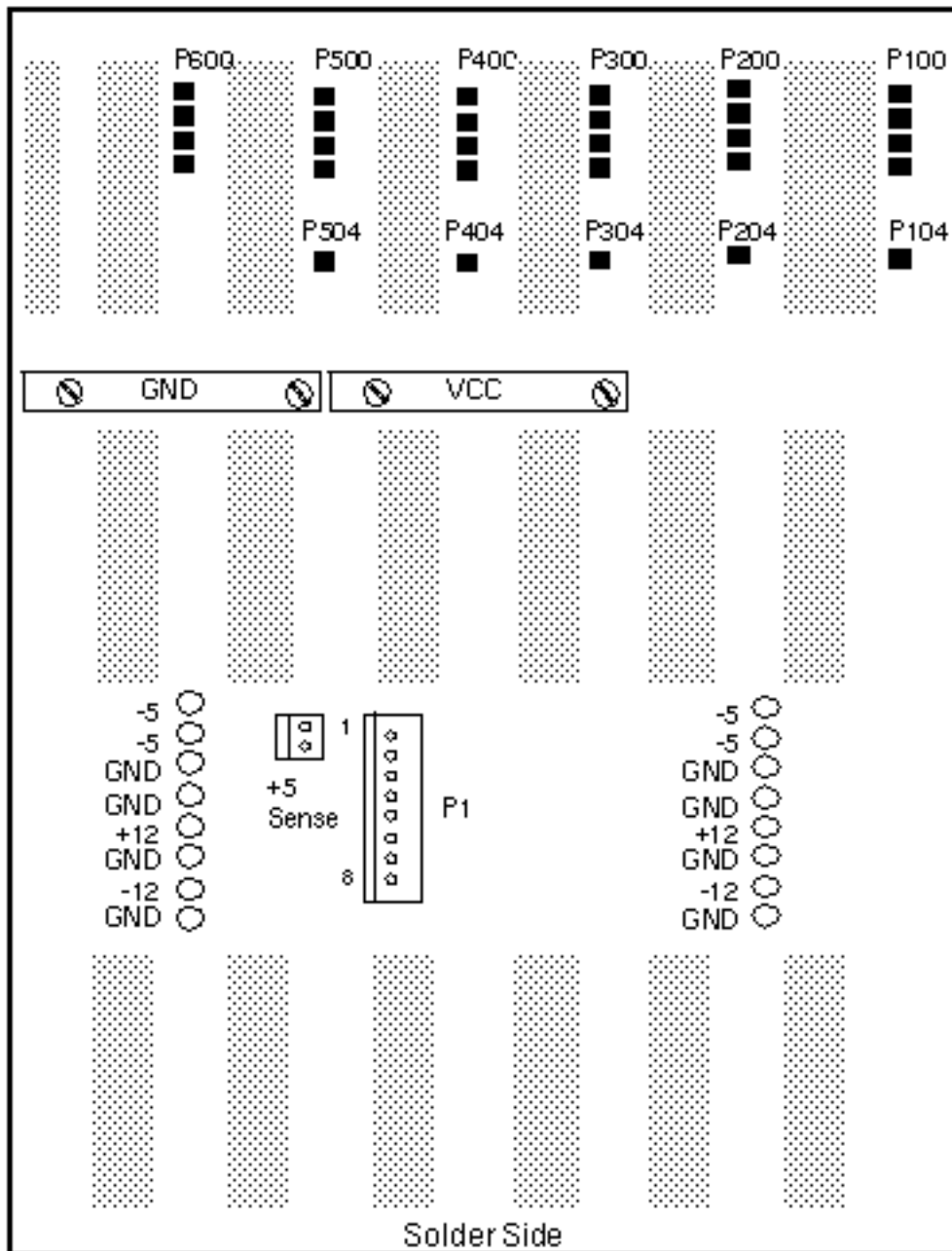
1-2	3-4	5	6	7	8
-5	GND	+12	GND	-12	GND

Last updated: December 2, 1996[Comments and Suggestions](#) 

Sun-4/150/350

501-1128

Pressfit



Power:

1.3 Amps @ +5Vdc

6.5 Watts

P1 Power Pinouts

1-2	3-4	5	6	7	8
-5	GND	+12	GND	-12	GND

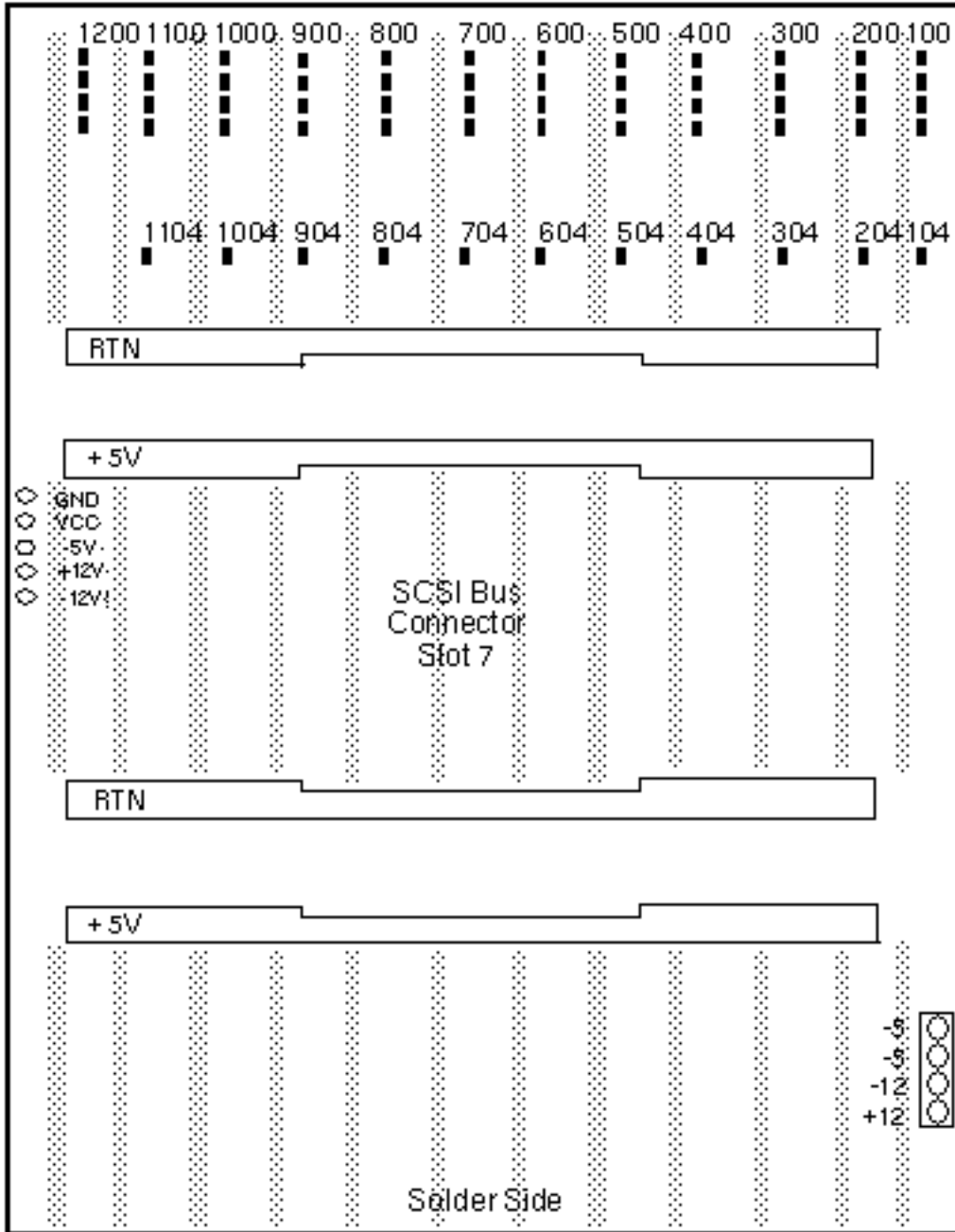
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/260/280/360/380

501-1092 501-1117

Pressfit



Power

1.3 Amps @ +5Vdc

6.5 Watts

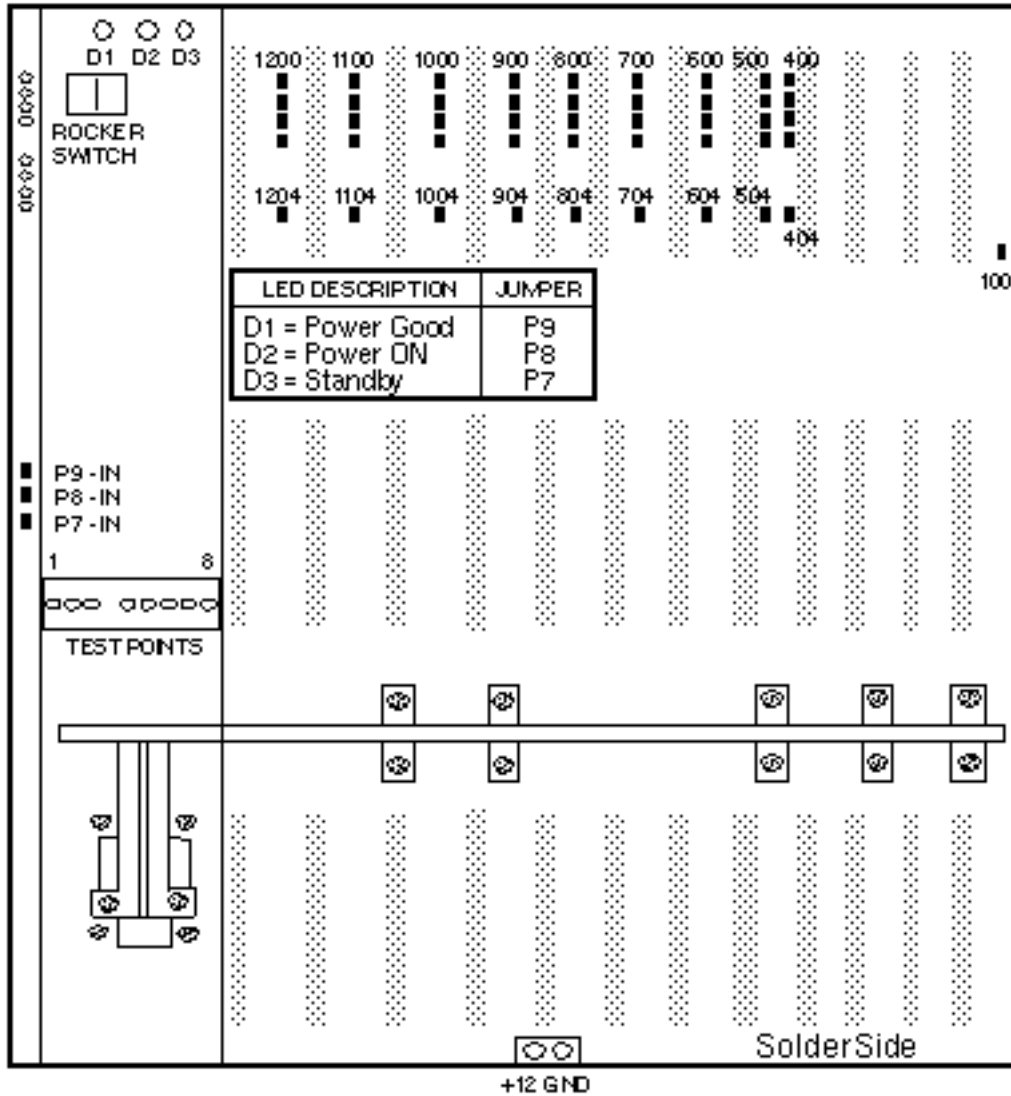
Last updated: December 2, 1996

[Comments and Suggestions](#) 

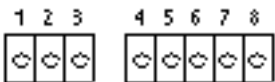
Sun-4/370

501-1439

Pressfit



Test Points Description



TEST POINT	DESCRIPTION	TEST POINT	DESCRIPTION
1	+5	5	+12
2	GND	6	-5.2
3	+12 Motor	7	Chassis ground
4	-12	8	Ground

Power

2.1 Amps @ +5Vdc

10.5 Watts

Note

The LED positions on the backplane and the descriptions molded into the front cover do not match.

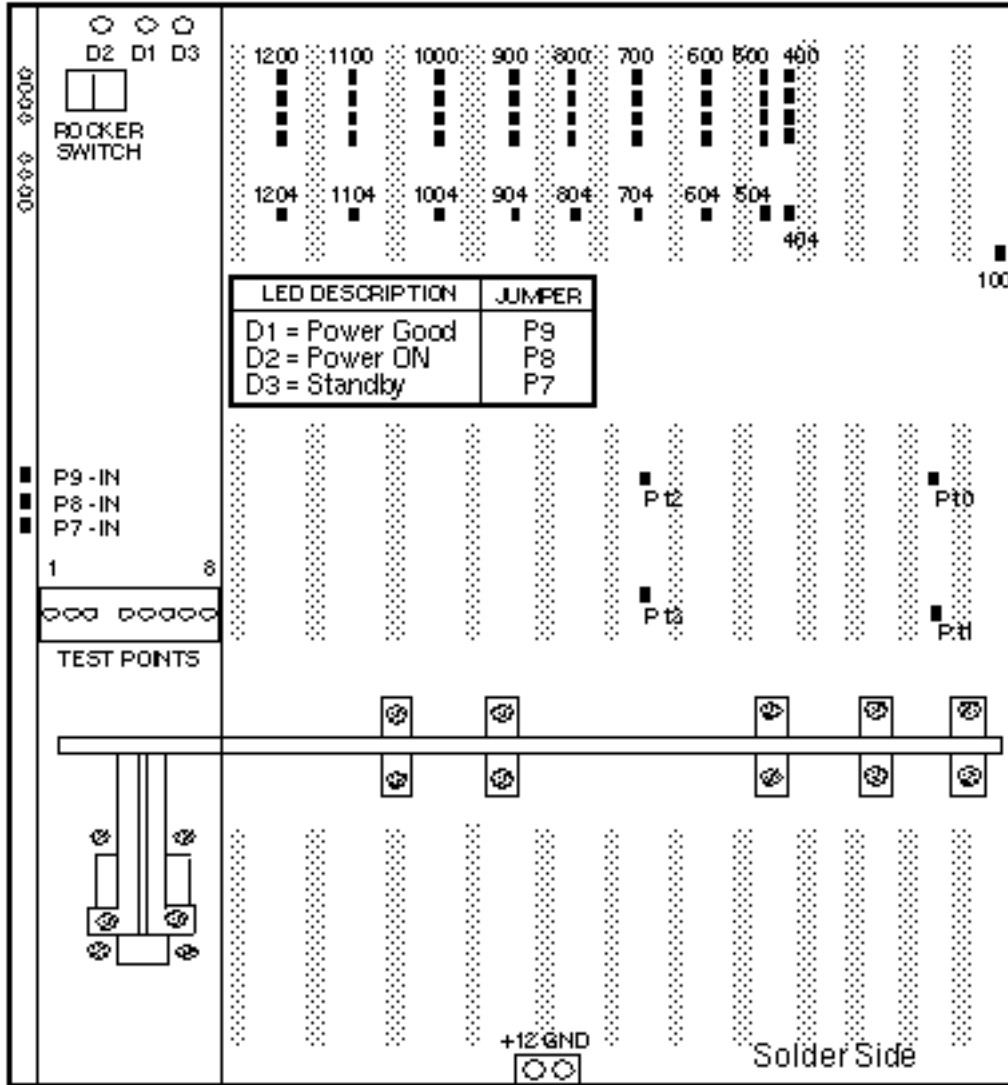
Last updated: December 2, 1996

[Comments and Suggestions](#) 

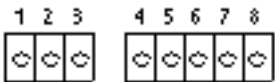
Sun-4/370/470 / SS670MP

501-1598

Pressfit



Test Points Description



TEST POINT	DESCRIPTION	TEST POINT	DESCRIPTION
1	+5	5	+12
2	GND	6	-5.2
3	+12 Motor	7	Chassis ground
4	-12	8	Ground

Power

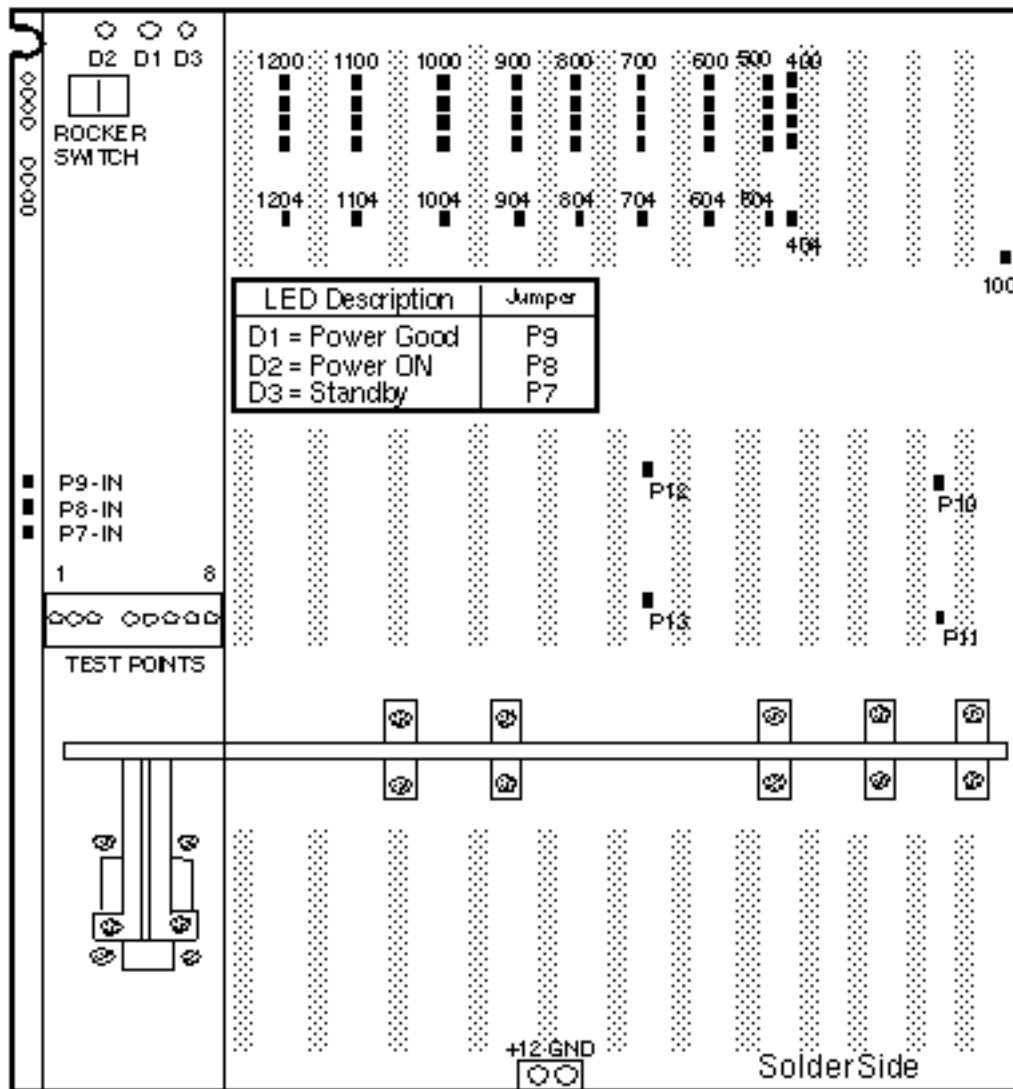
2.1 Amps @ +5Vdc

10.5 Watts

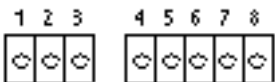
Sun-4/370/470 / SS670MP

501-1832

Pressfit



Test Points Description



TEST POINT	DESCRIPTION	TEST POINT	DESCRIPTION

1	+5	5	+12
2	GND	6	-5.2
3	+12 Motor	7	Chassis ground
4	-12	8	Ground

Power:

2.1 Amps @ +5Vdc

10.5 Watts

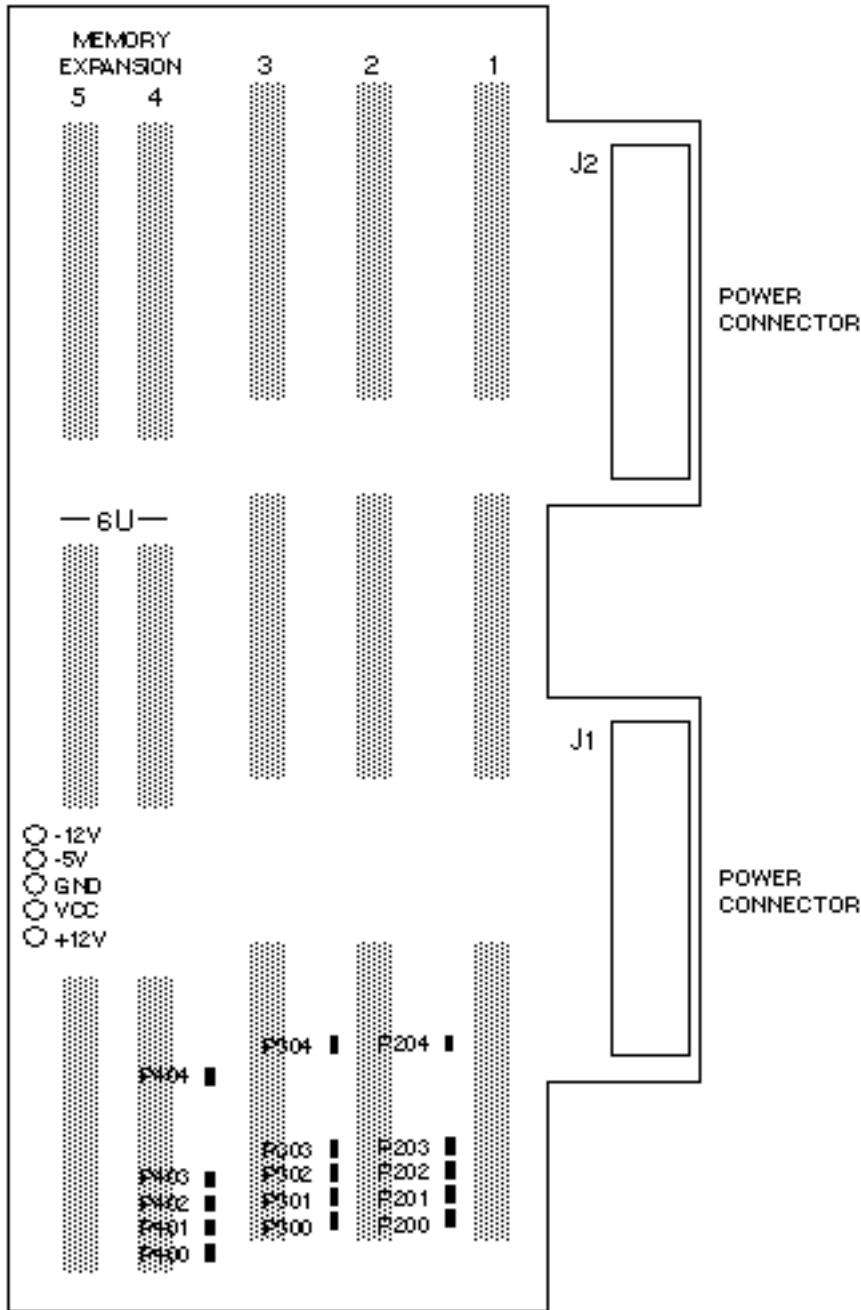
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/330 / SS630MP

501-1354

Pressfit



Power

2.0 Amps @ +5Vdc
10.0 Watts

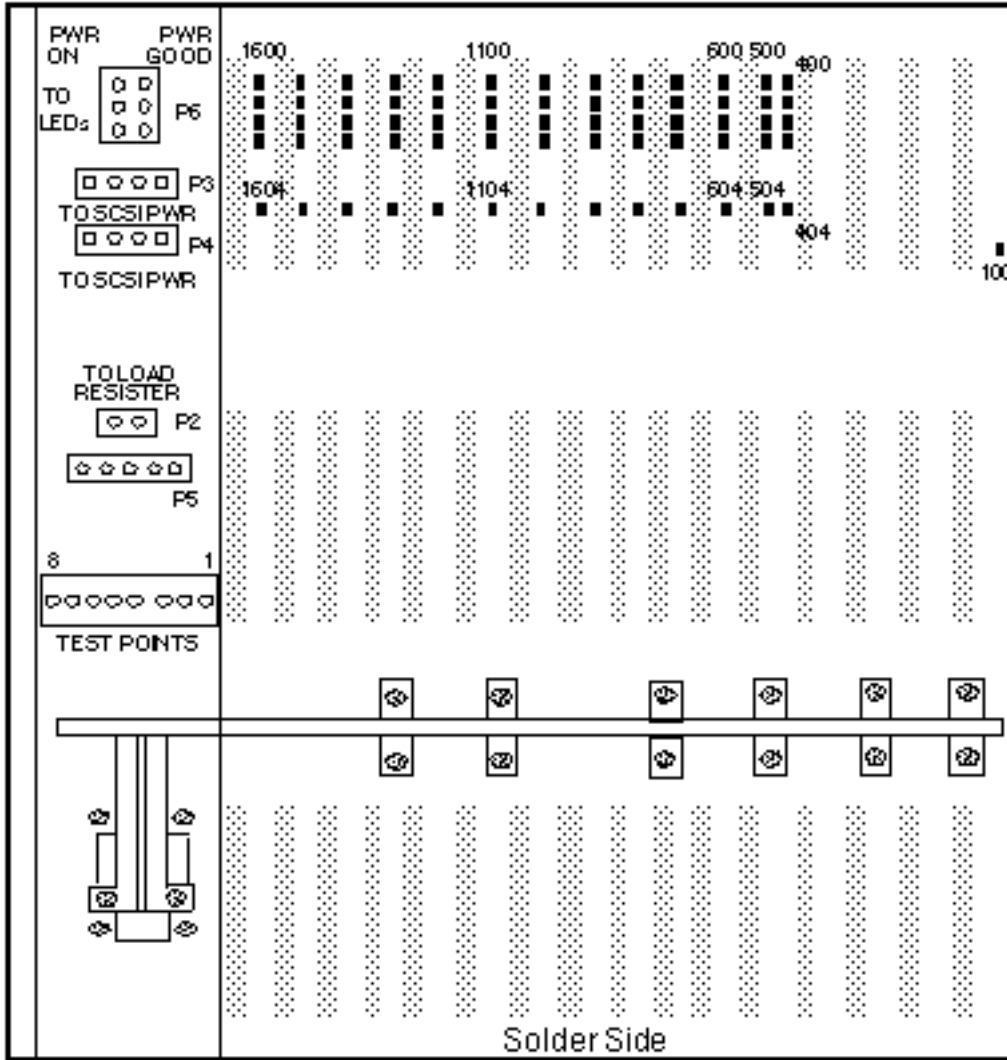
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/390/490 / SS690MP

501-1498

Pressfit



Test Points Description

8 7 6 5 4 3 2 1



TEST POINT	DESCRIPTION	TEST POINT	DESCRIPTION
1	+5	5	+12
2	GND	6	-5.2
3	+12 Motor	7	Chassis ground
4	-12	8	Ground

Power

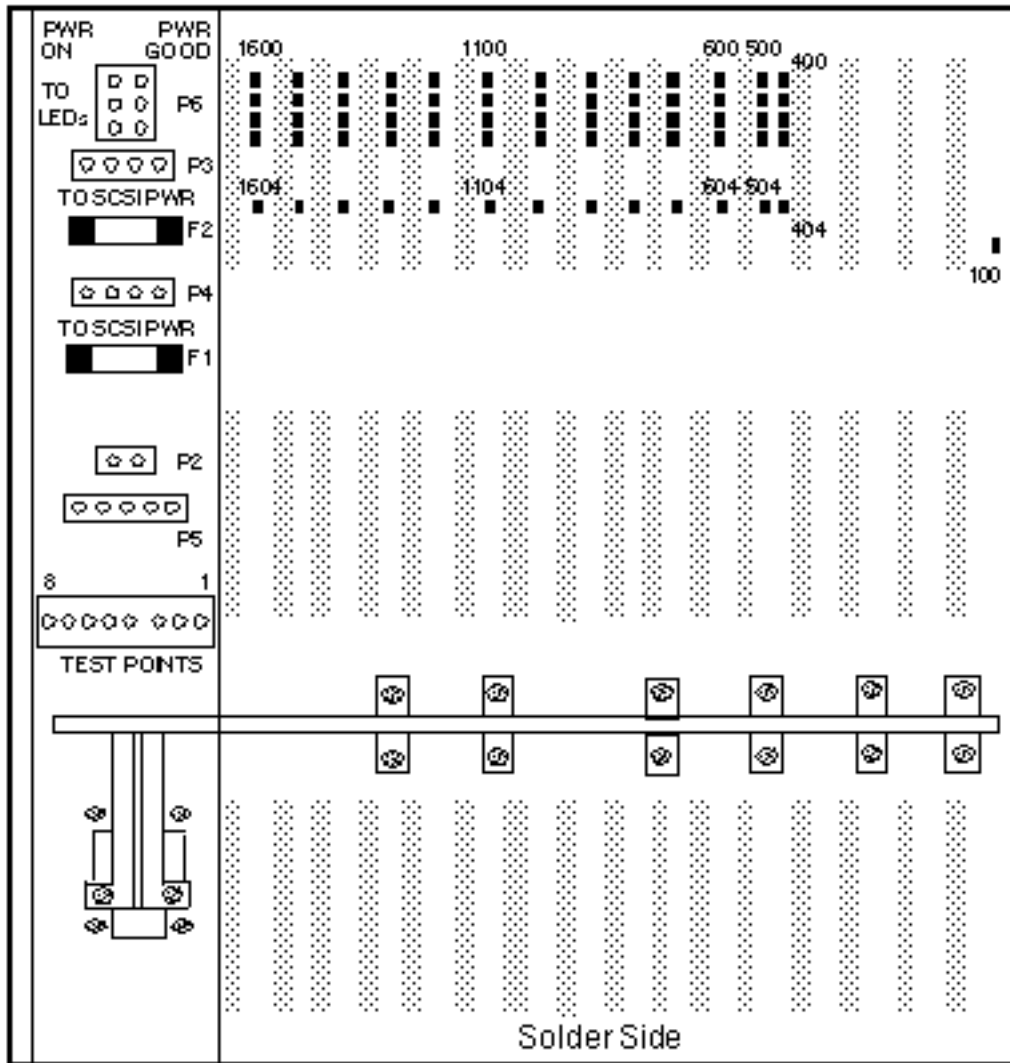
2.1 Amps @ +5Vdc

10.5 Watts

Sun-4/390/490 / SS690MP

501-1597

Pressfit



Test Points Description



TEST POINT	DESCRIPTION	TEST POINT	DESCRIPTION
1	+5	5	+12

2	GND	6	-5.2
3	+12 Motor	7	Chassis ground
4	-12	8	Ground

Power

2.1 Amps @ +5Vdc

10.5 Watts

Note

The Load Resistor is only used with the 925W power supply.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Miscellaneous

[Floating Point Unit-2 \(FPU2\)](#)

[SunIPC](#)

[6U to 9U VMEbus Adapter](#)

[VMEbus to Multibus Adapter](#)

Last updated: December 2, 1996

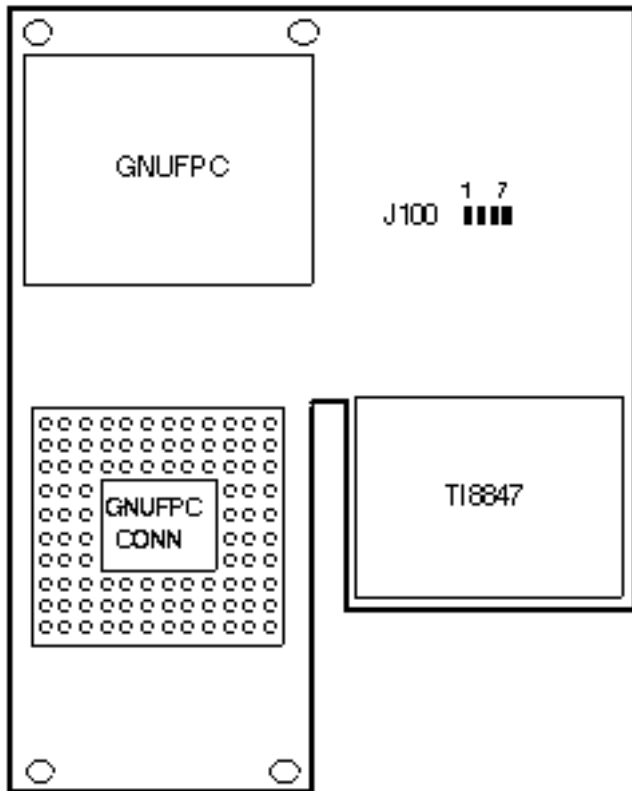
[Comments and Suggestions](#) 

Floating Point Unit-2 (FPU2)

Sun-4/110/150

Option 154

501-1384



4/110/150 Option Parts

Front Bracket	340-1743
Rear Bracket	340-2163
4-40 Screw	240-1196

J100 Jumper Settings

PINS	SETTING	DESCRIPTION
1-2	In	TI chip on board
3-4	In	No Tristate on all output
5-6	In	TI8847/TI8837
7-8	Out	Enable chaining mode

Notes

1. The 501-1384 FPU2 is supported only on CPU boards 501-1512, 501-1513, 501-1514, 501-1515, 501-1516, and 501-1517.
2. Remove the Weitek ALU (U202) and Multiplier (U201) from the 4/110/150CPU to install the FPU2.
3. Diagnostics fpurel and fptest for SunOS 4.0 and 4.0.1 are on the 1.0 FPU2 Patch Tape.

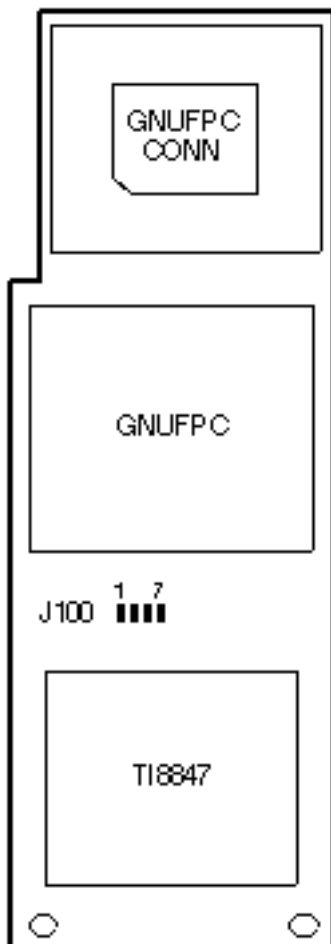
Reference

FPU-2 Installation Manual for Sun-4/100 Systems, 800-3067.

Floating Point Unit-2 (FPU2)

Sun-4/260/280

Option 154 501-1387



J100 Jumper Settings

PINS	SETTING	DESCRIPTION
1-2	In	TI chip on board
3-4	In	No Tristate on all output
5-6	In	TI8847/TI8837
7-8	Out	Enable chaining mode

Note

Diagnostics fpurel and fputest for SunOS 4.0 and 4.0.1 are on the 1.0 FPU2 Patch Tape.

Reference

FPU-2 Installation Manual for Sun-4/100 Systems, 800-3067.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

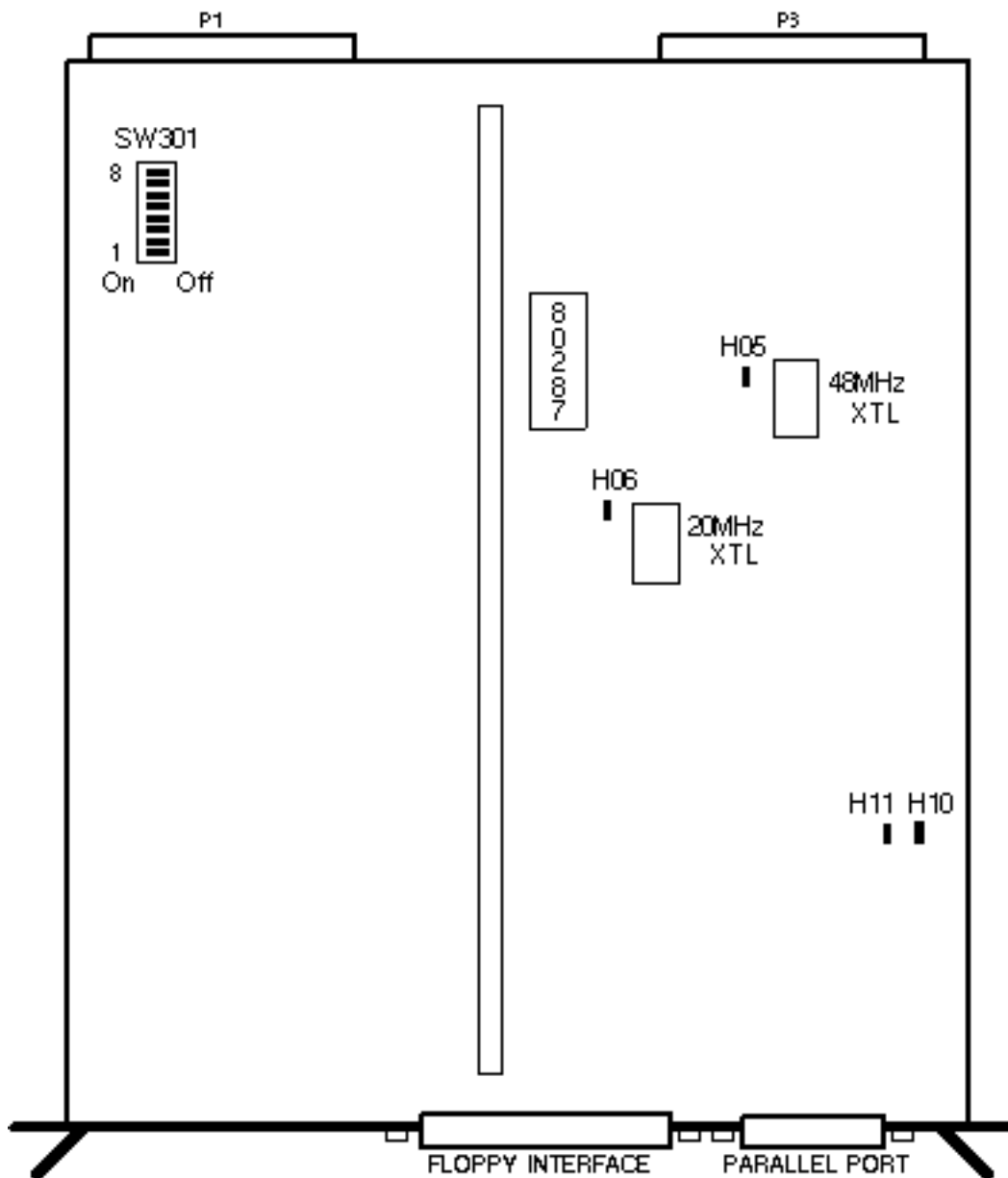
SunIPC

Sun-4/260/280/330/360/370/380/390

Options SUNIPC / SUNIPC-87

501-1125	501-1214
-----------------	-----------------

w/o 80287	w 80287
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Power:

5.6 Amps @ +5Vdc

28.0 Watts

Jumper and Switch Settings

JUMPER	SETTING	DESCRIPTION
H05 1-2	In	Enable 48MHz XTAL
H06 1-2	In	Enable 20 MHz XTAL
H10 1-2	Out In	For 501-1214 with 80287 For 501-1125 without 80287
H11 1-2	Out	Enable XTAL1

VME Address 380000; device pc0

SWITCH	SETTING	DESCRIPTION
SW3-1	On	A23
SW3-2	On	A22
SW3-3	Off	A21
SW3-4	Off	A20
SW3-5	Off	A19
SW3-6	On	A18
SW3-7	On	A17
SW3-8	On	A16

VME Address 3C0000; device pc2

SWITCH	SETTING	DESCRIPTION
SW3-1	On	A23
SW3-2	On	A22
SW3-3	Off	A21
SW3-4	Off	A20
SW3-5	Off	A19
SW3-6	Off	A18
SW3-7	On	A17
SW3-8	On	A16

VME Address 3A0000; device pc1

SWITCH	SETTING	DESCRIPTION

SW3-1	On	A23
SW3-2	On	A22
SW3-3	Off	A21
SW3-4	Off	A20
SW3-5	Off	A19
SW3-6	On	A18
SW3-7	Off	A17
SW3-8	On	A16

VME Address 3E0000; device pc3

SWITCH	SETTING	DESCRIPTION
SW3-1	On	A23
SW3-2	On	A22
SW3-3	Off	A21
SW3-4	Off	A20
SW3-5	Off	A19
SW3-6	Off	A18
SW3-7	Off	A17
SW3-8	On	A16

Notes

1. The Sun 3200 CPU must be \geq 501-1100-08 or \geq 501-1206-06.
 2. Boards with Aeroscientific FAB date code 8639 may randomly exhibit "interrupt level2" errors.
-

Last updated: December 2, 1996

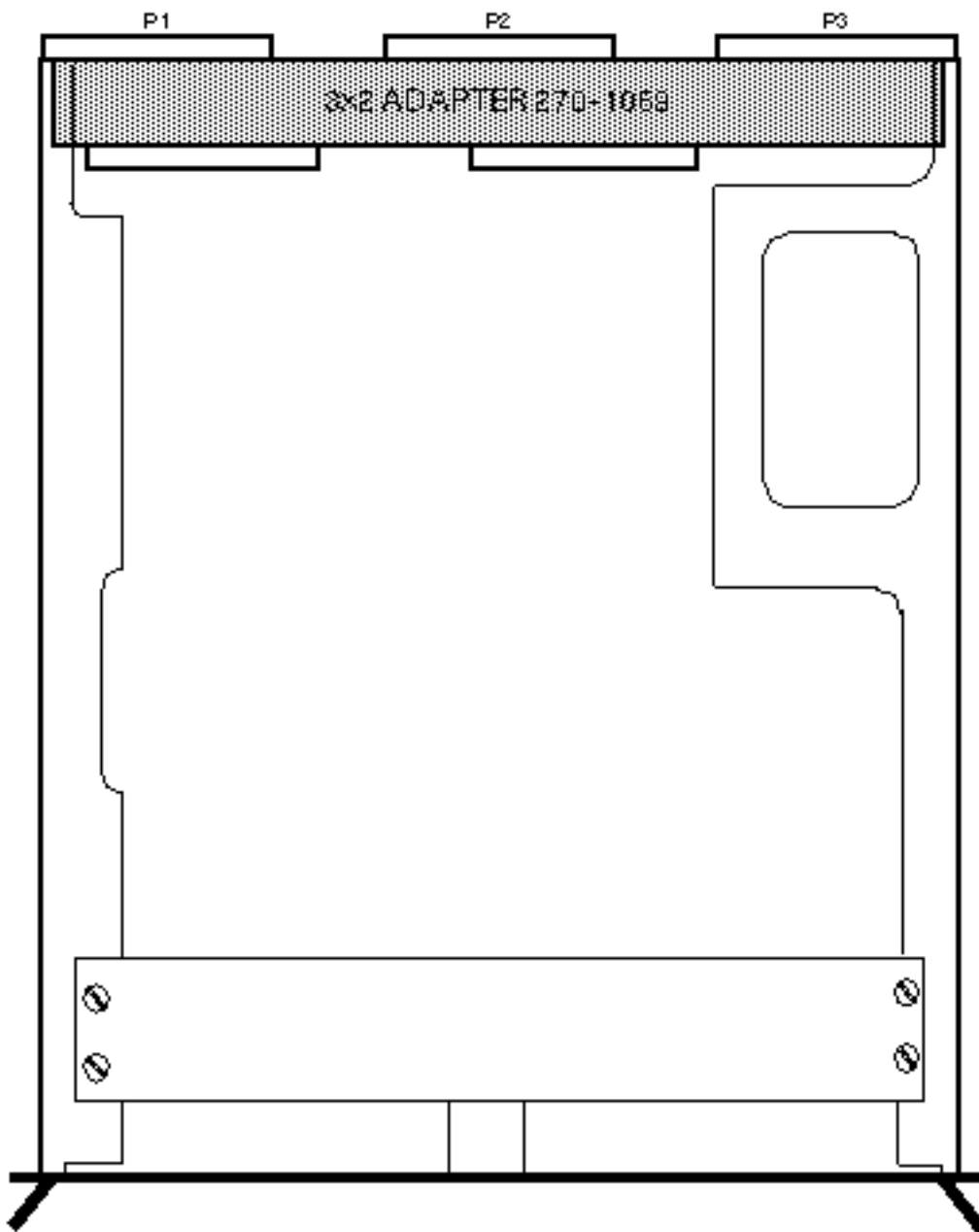
[Comments and Suggestions](#) 

6U to 9U VMEbus Adapter

Option 160A

501-1269

with P2A & P2C

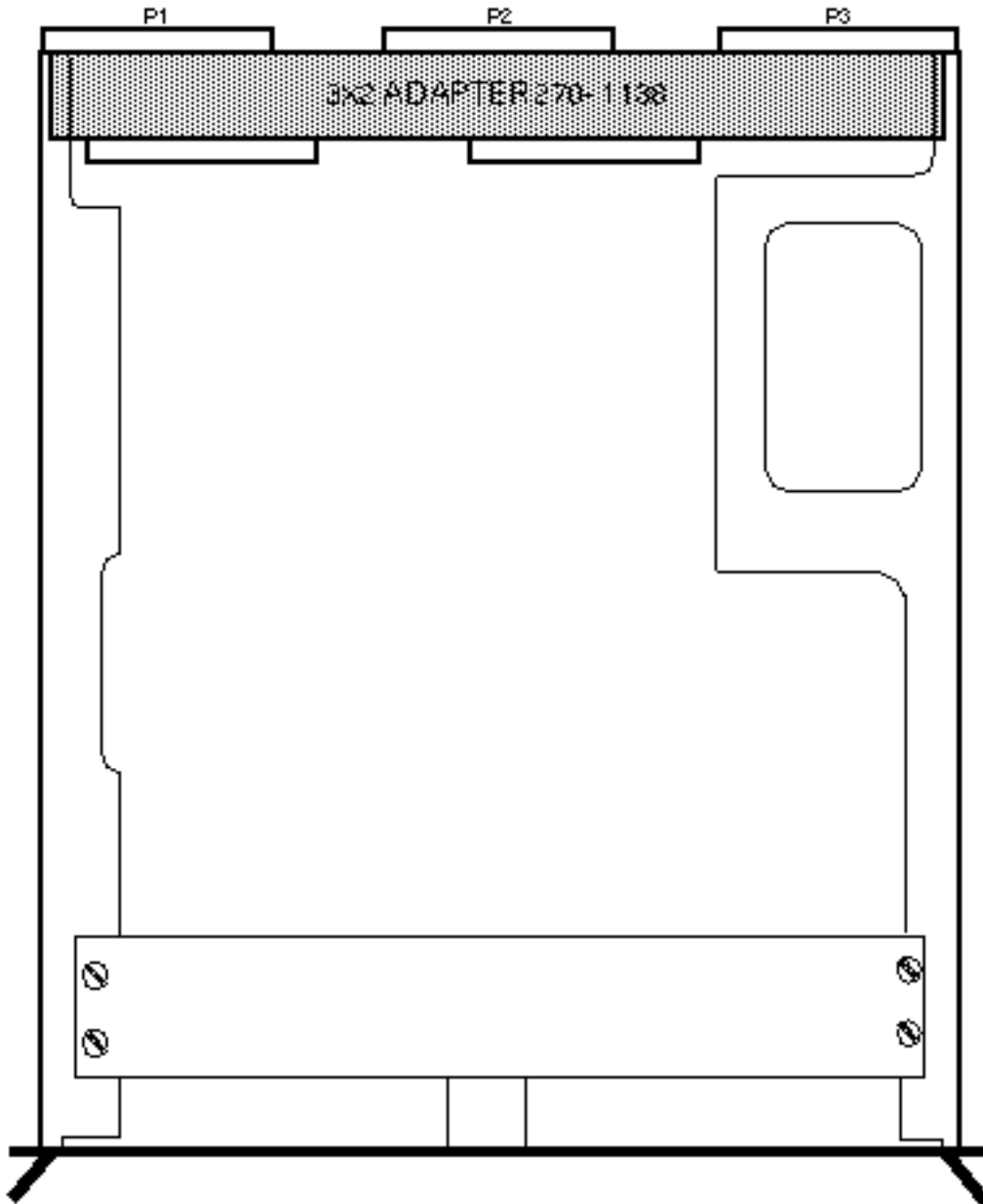


6U to 9U VMEbus Adapter

Option 160B

501-1191

without P2A & P2C



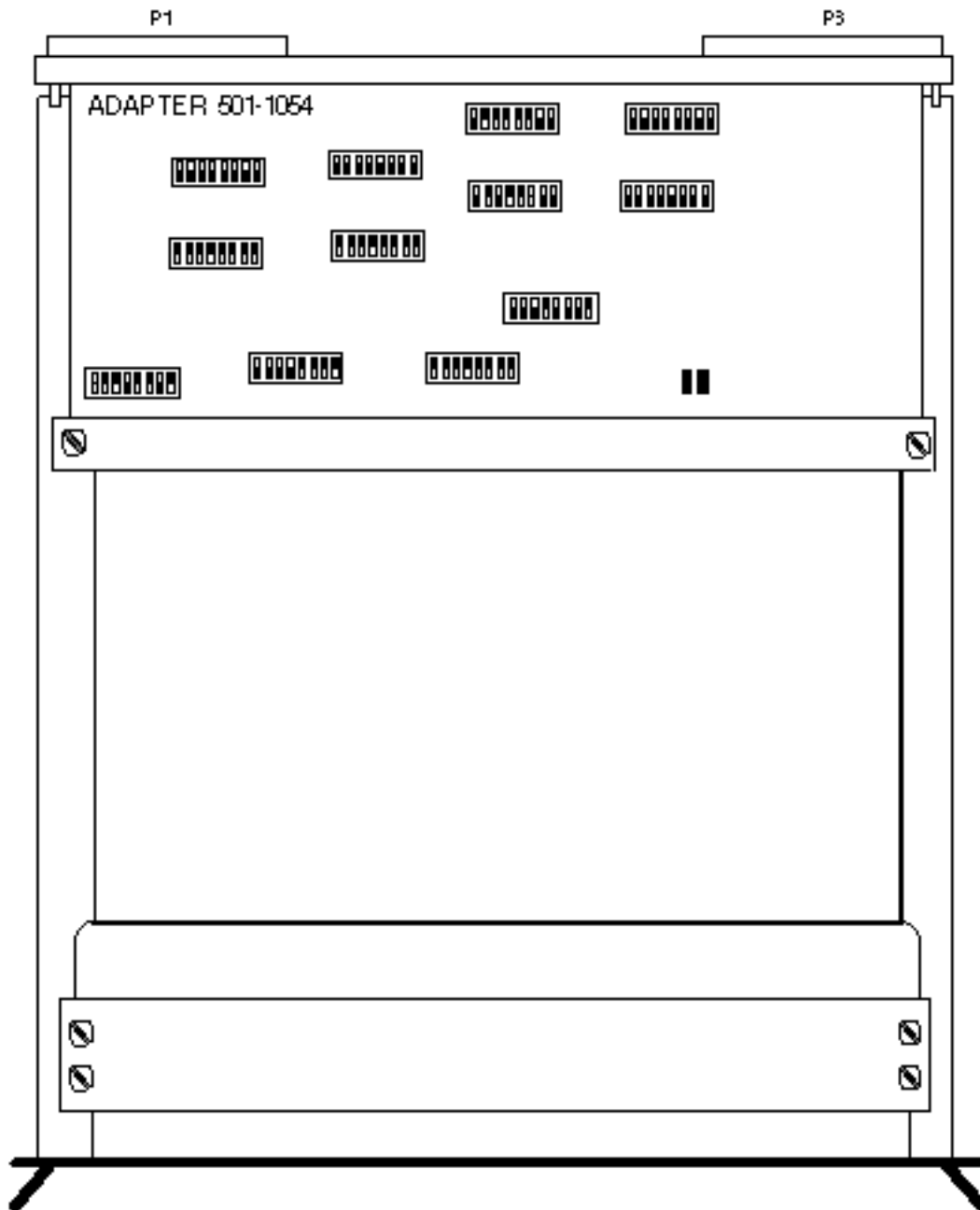
Last updated: December 2, 1996

[Comments and Suggestions](#) 

VMEbus to Multibus Adapter

Option 161

501-1054



Power:

2.0 Amps @ +5Vdc

10.0 Watts

Note:

There are no LED, switch, or cable openings in the backpanel.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Communication

Multibus

[Sun-2 Ethernet Controller](#)

[VMEbus to Multibus Adapter with Sun-2 Ethernet](#)

[Sun-3/E Ethernet Assembly](#)

[Systech MTI-800/1600 Controller](#)

[Systech MTI-850/1650 Controller](#)

[VMEbus to Multibus Adapter with MTI-1600](#)

[VMEbus to Multibus Adapter with MTI-1650](#)

[VMEbus to Multibus Adapter with MTI-1650A](#)

VMEbus

[MAPKIT](#)

[Asynchronous Line Multiplexor-2](#)

[Multiprotocol Communication Processor](#)

[SunLink Channel Adapter](#)

[High-speed Serial Interface \(HSI\)](#)

[FDDI/DX](#)

[Sun Network CoProcessor](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

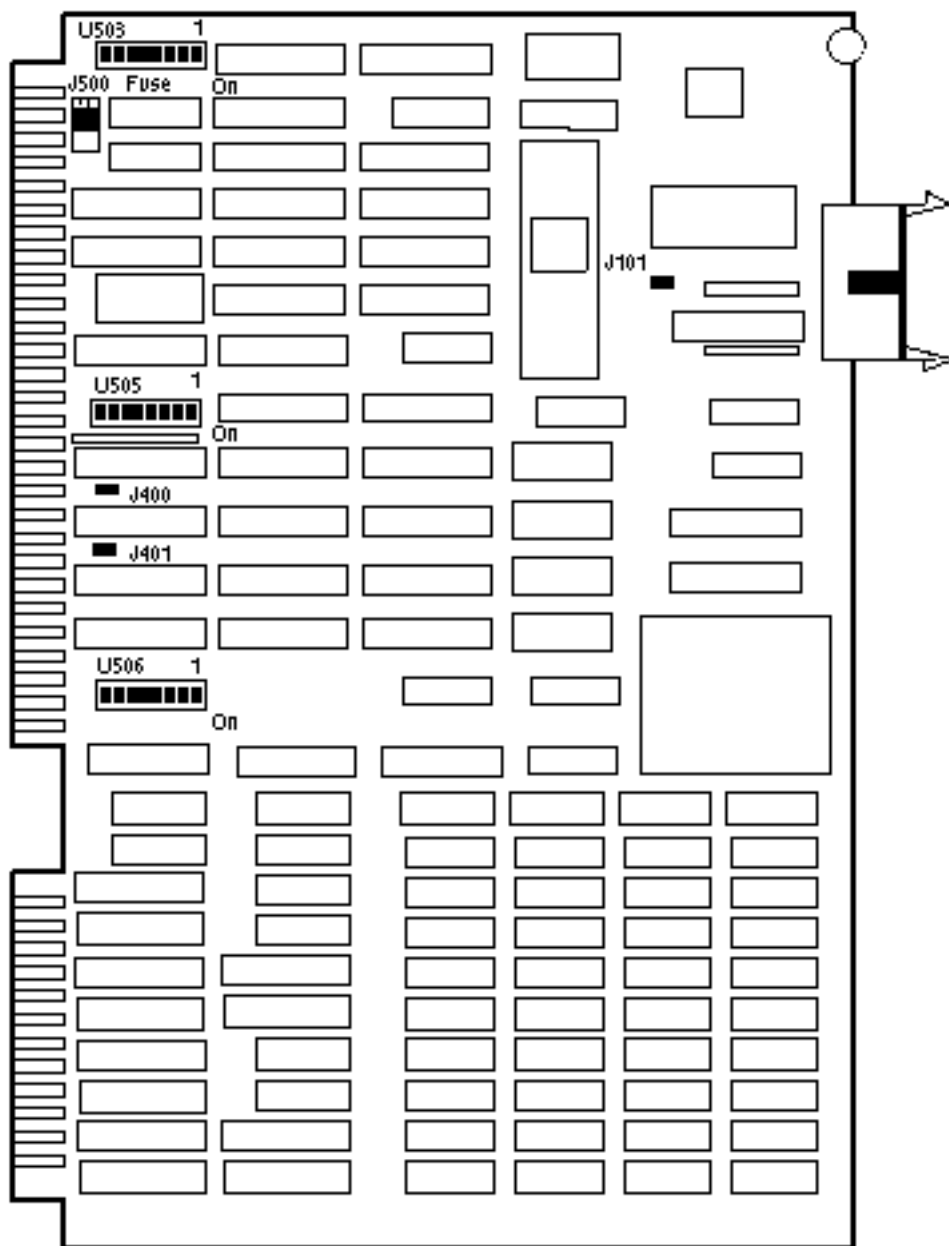
Sun-2 Ethernet Controller

Sun-4/110/150/260/280

Sun-4/310/330/350/360/370/380/390

Option 450

501-1004



Power:

6.0 Amps @ +5Vdc

0.5 Amps @ +12Vdc

36.0 Watts

Jumper and Switch Settings

JUMPER	PINS	SETTING	DESCRIPTION
J101	1-2	In	Level 1 Ethernet
	1-2	Out	Level 2 Ethernet
J400	1-2	Out	M.BIG Select
J401	1-2	Out	M.EXP Select
J500	1-2	Out	Interrupt level 0
	3-4	Out	Interrupt level 1
	5-6	Out	Interrupt level 2
	7-8	Hardwired	Interrupt level 3
	9-10	Out	Interrupt level 4
	11-12	Out	Interrupt level 5
	13-14	Out	Interrupt level 6
	15-16	Out	Interrupt level 7

Switch Settings for VMEbus Controller ie1

DIP SWITCH	1	2	3	4	5	6	7	8
U503	Off	Off	Off	On	Off	Off	Off	On
U505	Off	Off	On	Off	Off	Off	Off	Off
U506	Off	On	On	Off	Off	On	On	Off

Note:

The Sun-2 Ethernet Controller is not supported in Solaris >=2.2.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

VMEbus to Multibus Adapter

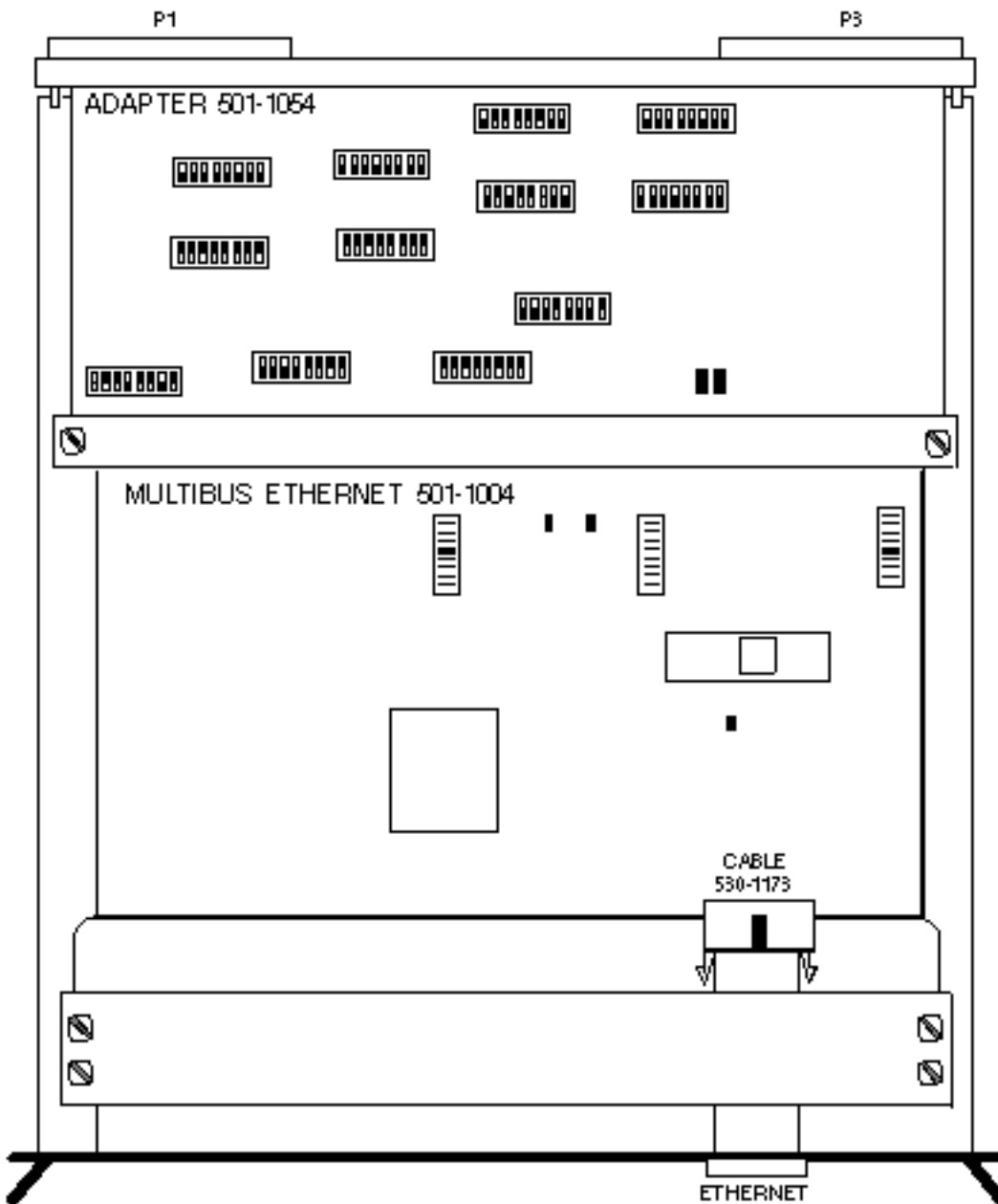
with Sun-2 Ethernet

Sun-4/110/150/260/280/310/330/350/360

Sun-4/370/380/390

Option 450

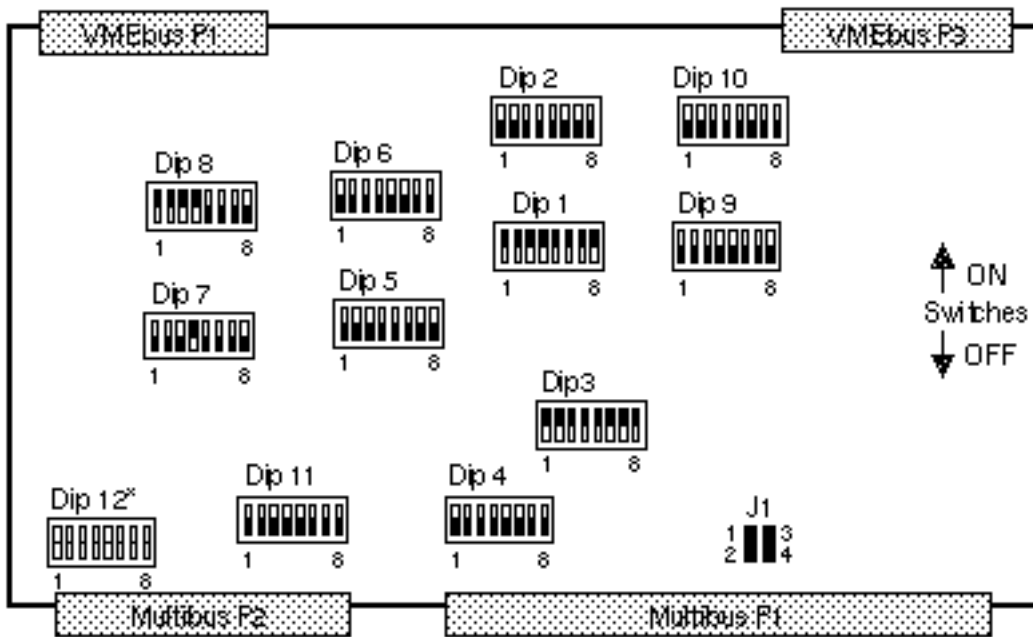
501-1153



Power:

5.8 Amps @ +5Vdc

29.0 Watts

**VME TO MULTIBUS ADAPTER BOARD SWITCH SETTINGS**

SWITCH	1	2	3	4	5	6	7	8	DESCRIPTION
U1	N/C	ON	ON	ON	ON	ON	ON	ON	I-O Address = 0x00
U2	N/C	OFF	OFF	OFF	OFF	OFF	OFF	OFF	I-O Space = No response
U3	ON	ON	ON	ON	ON	ON	ON	ON	I-O Address = 0x00
U4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	VME I-O Space = No response
U5	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	24-Bit Memory Address Space
U6	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	24-Bit Memory Block Size
U7	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	24-Bit Memory Address Space
U8	ON	ON	ON	ON	OFF	OFF	OFF	OFF	24-Bit Memory Block Size
U9	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	No connection
U10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	No connection
U11	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Sets Address Bits A23 - A20
U12*	OFF	ON	OFF	ON	OFF	OFF	OFF	ON	Interrupt Vector = 0x75
	OFF	OFF	ON	OFF	OFF	ON	ON	ON	Interrupt Vector = 0x1B
J1	PINS 1-2		IN	If BCLK is desired					
	PINS 3-4		IN	If CCLK is desired					

* For SunOS 3.0 and above, use 0x75. For SunOS below 3.0, use 0x1B.

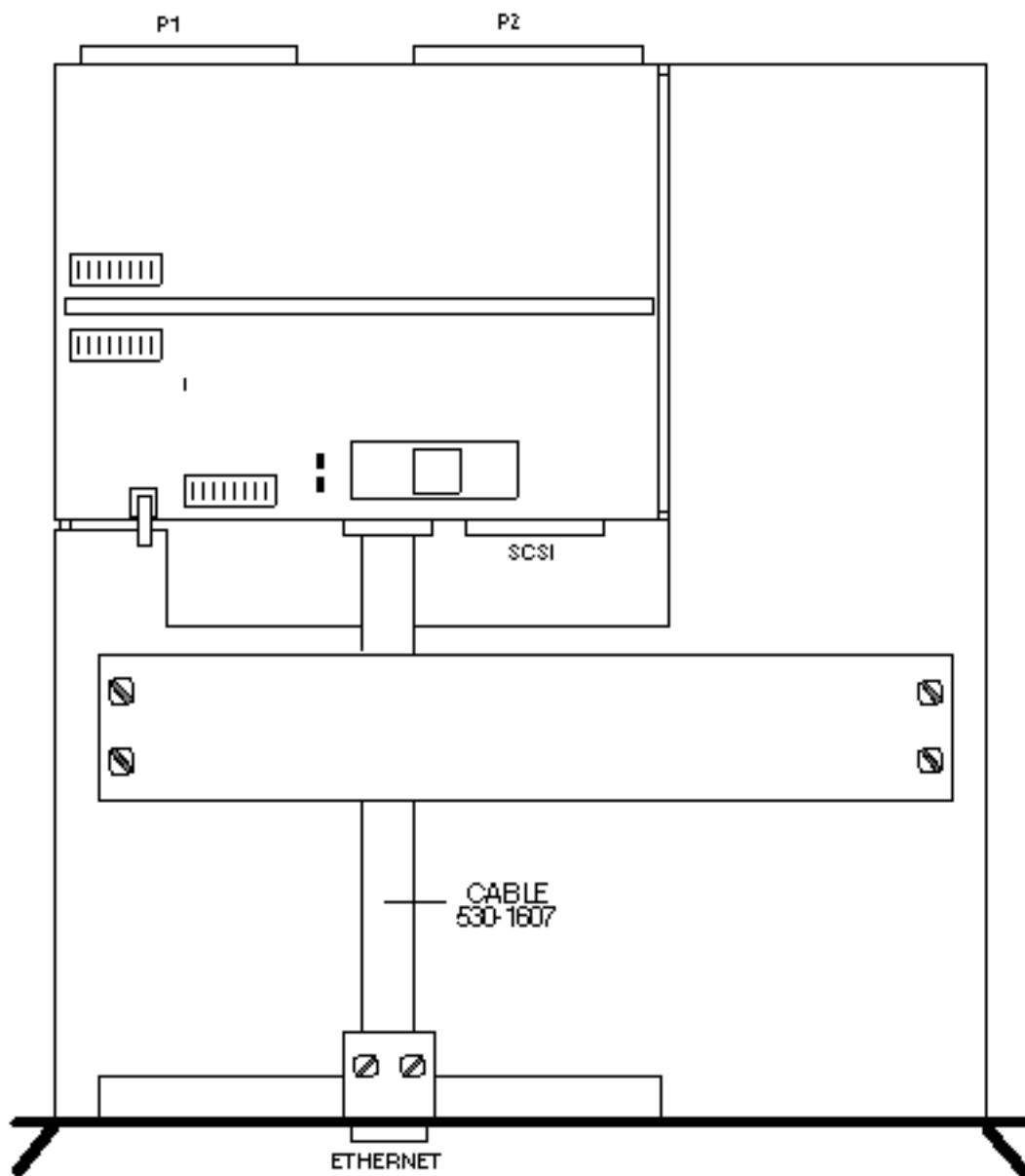
Last updated: December 2, 1996[Comments and Suggestions](#) 

Sun-3/E Ethernet Assembly

Sun-4/390/470/490

Option 452

501-1584



Power:

4.1 Amps @ +5Vdc

20.5 Watts

Notes

1. Board revision 501-8027-06 or 501-1584-01 is required for use in any SPARC CPU based system.
2. When used with the Sun-4400 CPU, 501-1381, the board revision must be $\geq 501-8027-07$ or the assembly must be $\geq 501-1584-02$.

Switch and Jumper Settings

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW0601	1-7	On	Not Supported
	1-7	Off	Enable Ethernet*
SW0201	1	Off	24/32-bit addressing
	2	Off/On	N/C
	3	*	A18 address decode
	4	*	A19 address decode
	5	*	A20 address decode
	6	Off	A21 address decode
	7	On	A22 address decode
	8	On	A23 address decode

*DIP Switch SW0201 settings for ie2, ie3, and ie

SW0201	SWITCH 3	SWITCH 4	SWITCH 5	ADDRESS
1st Board	On	On	Off	31ff02
2nd Board	Off	On	Off	35ff02
3rd Board	Off	Off	On	2dff02

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW0202	1	On	A24 address decode
SW0202	2	On	A25 address decode
SW0202	3	On	A26 address decode
SW0202	4	On	A27 address decode
SW0202	5	On	A28 address decode
SW0202	6	On	A29 address decode
SW0202	7	On	A30 address decode
SW0202	8	On	A31 address decode

JUMPER	PINS	SETTING	DESCRIPTION
J0201	1-2	In	Clock enable
J0601	1-2	In	Level 1 Ethernet
J0601	1-2	Out	Level 2 Ethernet
J0602	1-2	Out	VCC to Pin-7 disabled

Reference

Sun SunNet Ethernet/VME Controller Configuration Procedures, 813-2082-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

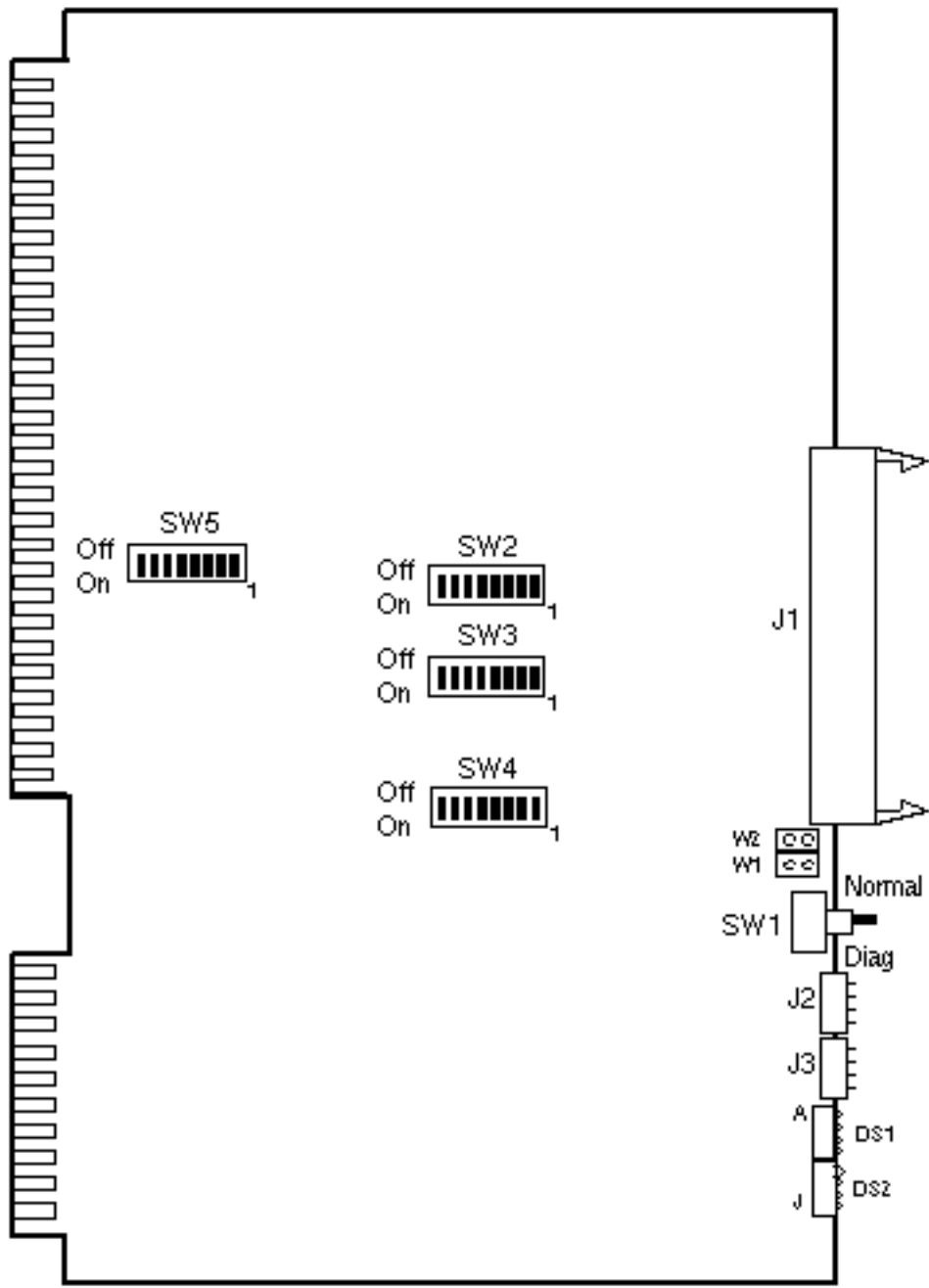
Systech MTI-800/1600 Controller

Asynchronous Line Multiplexer 1 (ALM-1)

Sun-4/260/280

Options 480 / 481

370-1047



Systech Part Number 65-200004-7

Switch Settings

mt0 Defaults

DIP	SWITCH	SETTING	DESCRIPTION
SW2	1	Off	Address select A15
	2	Off	Address select A14
	3	Off	Address select A13
	4	Off	Address select A12
	5	Off	Address select A11
	6	On	Address select A10
	7	On	Address select A9
	8	Off	Address select A8
SW3	1	Off	Address select A7
	2*	Off	Address select A6
	3*	On	Address select A5
	4	Off	Address select A4
	5	Off	Address select A3
	6	Off	Select 16-bit addresses
	7	Off	One stop bit
	8	On	One stop bit
SW4	1	Off	Odd parity
	2	Off	No parity
	3	On	8-bit characters
	4	On	8-bit characters
	5	On	9600 baud
	6	On	9600 baud
	7	On	9600 baud
	8	Off	9600 baud
SW5	1	Off	Interrupt level 0
	2	Off	Interrupt level 1
	3	Off	Interrupt level 2
	4	Off	Interrupt level 3
	5	On	Interrupt level 4
	6	Off	Interrupt level 5
	7	Off	Interrupt level 6
	8	Off	Interrupt level 7

* mti0 at 0x0620, Dip SW3, Switch-2, ON, Switch-3, ON

mti1 at 0x0640, Dip SW3, Switch-2, ON, Switch-3, OFF

mti2 at 0x0660, Dip SW3, Switch-2, ON, Switch-3, ON

Last updated: December 2, 1996

[Comments and Suggestions](#) 

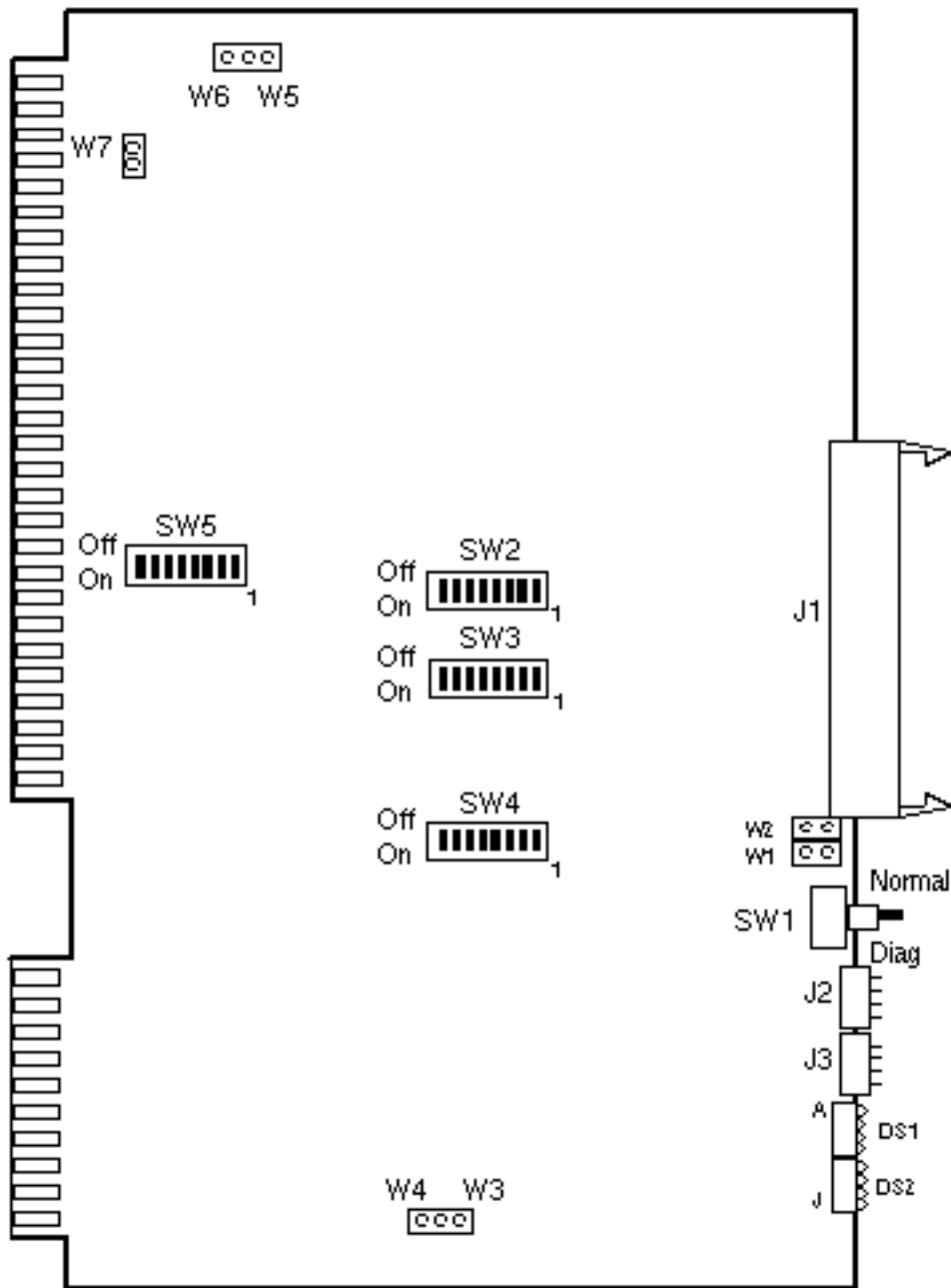
Systech MTI-850/1650 Controller

Asynchronous Line Multiplexer 1 (ALM-1)

Sun-4/260/280

Options 480 / 481

370-1099



Systech Part Number 65-201004-8

Switch Settings

mt0 Defaults

DIP	SWITCH	SETTING	DESCRIPTION
SW2	1	Off	Address select A15
	2	Off	Address select A14
	3	Off	Address select A13
	4	Off	Address select A12
	5	Off	Address select A11
	6	On	Address select A10
	7	On	Address select A9
	8	Off	Address select A8
SW3	1	Off	Address select A7
	2*	Off	Address select A6
	3*	On	Address select A5
	4	Off	Address select A4
	5	Off	Address select A3
	6	Off	Select 16-bit addresses
	7	Off	One stop bit
	8	On	One stop bit
SW4	1	Off	Odd parity
	2	Off	No parity
	3	On	8-bit characters
	4	On	8-bit characters
	5	On	9600 baud
	6	On	9600 baud
	7	On	9600 baud
	8	Off	9600 baud
SW5	1	Off	Interrupt level 0
	2	Off	Interrupt level 1
	3	Off	Interrupt level 2
	4	Off	Interrupt level 3
	5	On	Interrupt level 4
	6	Off	Interrupt level 5
	7	Off	Interrupt level 6
	8	Off	Interrupt level 7

* mti0 at 0x0620, Dip SW3, Switch-2, ON, Switch-3, ON

mti1 at 0x0640, Dip SW3, Switch-2, ON, Switch-3, OFF

mti2 at 0x0660, Dip SW3, Switch-2, ON, Switch-3, ON

SHUNT	SETTINGS	DESCRIPTION

W1	Out	+12Vdc routing to data cable disabled
W2	Out	-12Vdc routing to data cable disabled
W3	In	Normal transfer acknowledge delay
W4	Out	Extra 100 nsec delay during transfer acknowledge
W5	Out	Byte swap enable
W6	In	Byte swap disable
W7	In	Enable BPRO

References

1. *Sun-3/180 16-Channel Asynchronous Line Multiplexer Configuration Procedures*, 813-2008.
 2. *Asynchronous Line Multiplexer Configuration Procedures*, 813-2003.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

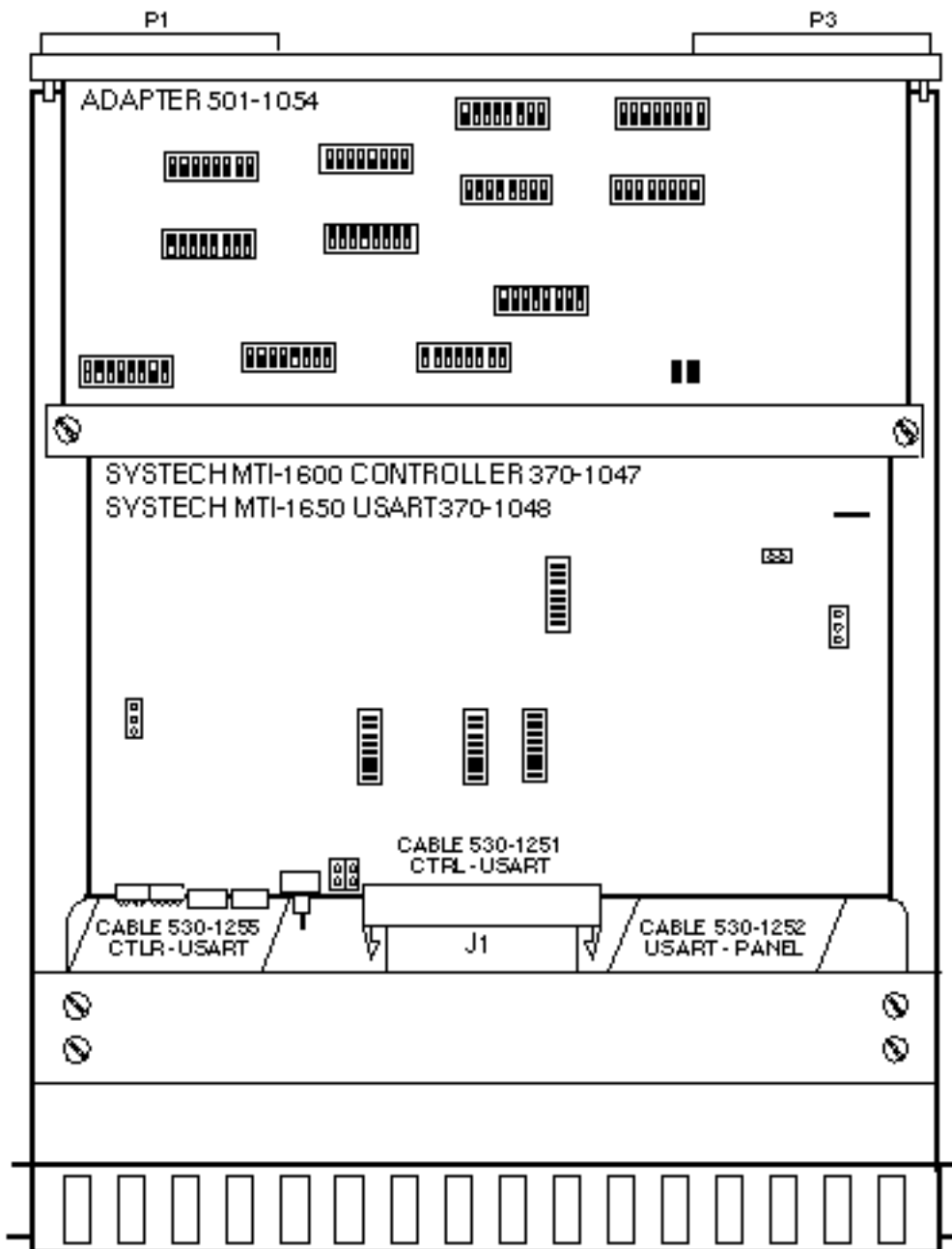
VMEbus to Multibus Adapter

with Systech MTI-1600

Sun-4/260/280

Option 481

501-1157-01



Power:

7.1 Amps @ +5Vdc

0.6 Amps @ +12Vdc

0.4 Amps @ -12Vdc

47.5 Watts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

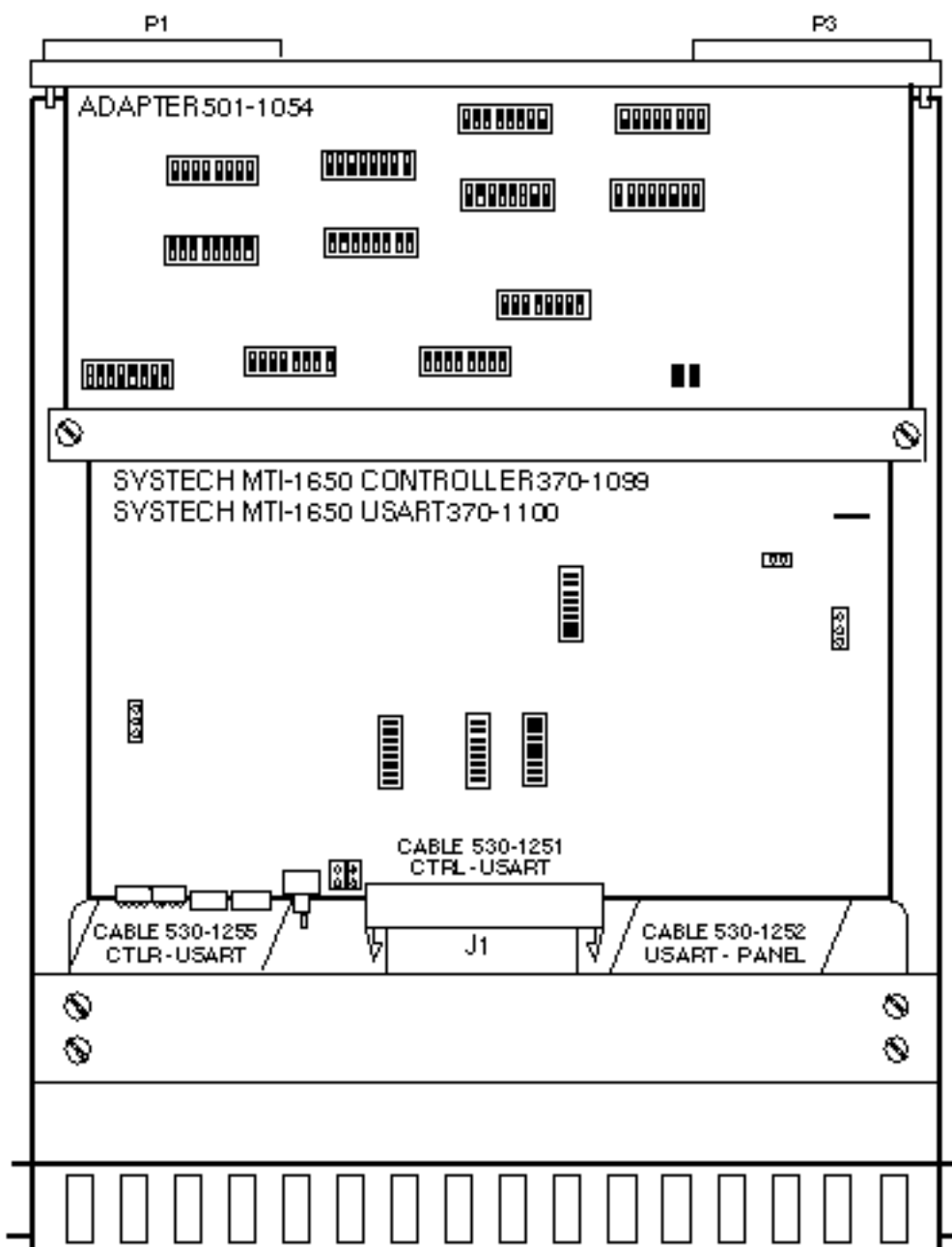
VMEbus to Multibus Adapter

with Systech MTI-1650

Sun-4/260/360

Option 481

501-1157-02



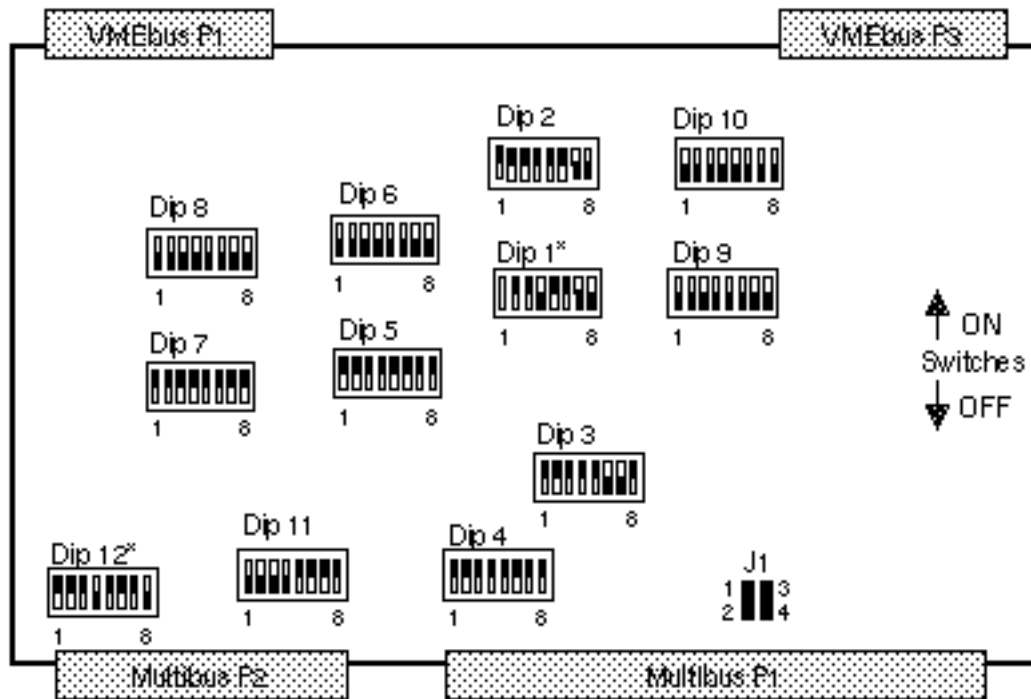
Power:

7.1 Amps @ +5Vdc

0.6 Amps @ +12Vdc

0.4 Amps @ -12Vdc

47.5 Watts

**VME TO MULTIBUS ADAPTER BOARD SWITCH SETTINGS**

SWITCH	1	2	3	4	5	6	7	8	DESCRIPTION
U1*	N/C	ON	ON	ON	ON	ON	OFF	OFF	I-O Address
U2	N/C	ON	ON	ON	ON	ON	OFF	OFF	I-O Space = 2
U3	ON	ON	ON	ON	ON	OFF	OFF	ON	I-O Address = 0xEE
U4	ON	ON	ON	ON	ON	OFF	OFF	ON	VME I-O Space
U5	ON	ON	ON	ON	ON	ON	ON	ON	24-Bit Memory Address Space
U6	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	24-Bit Memory Block Size
U7	ON	ON	ON	ON	ON	ON	ON	ON	24-Bit Memory Address Space
U8	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	24-Bit Memory Block Size
U9	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	No connection
U10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	No connection
U11	OFF	OFF	OFF	OFF	ON	ON	ON	ON	Sets Address Bits A23 - A20
U12*	ON	ON	ON	ON	OFF	ON	ON	OFF	Interrupt Vector
J1	PINS 1-2		IN	If BCLK is desired					
	PINS 3-4		IN	If CCLK is desired					

* mti1, U1, 2,4,5,6, ON, U12, 2,3,5,6,7, ON

mti2, U1, 2,5,6, ON, U12, 1,3,5,6,7, ON

Last updated: December 2, 1996

[Comments and Suggestions](#) 

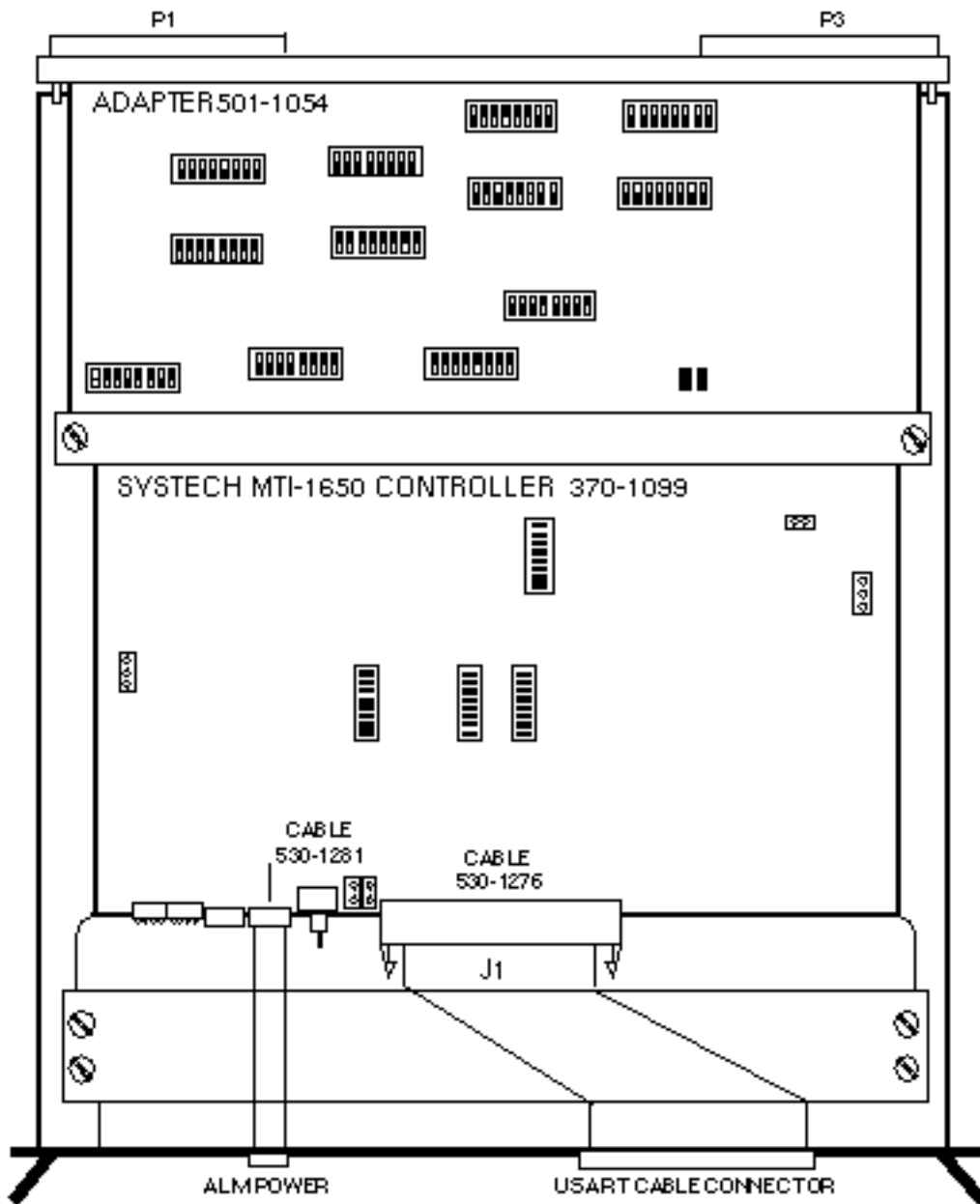
VMEbus to Multibus Adapter

with Systech MTI-1650A

Sun-4/260/280/360/380

Option 481

501-1165



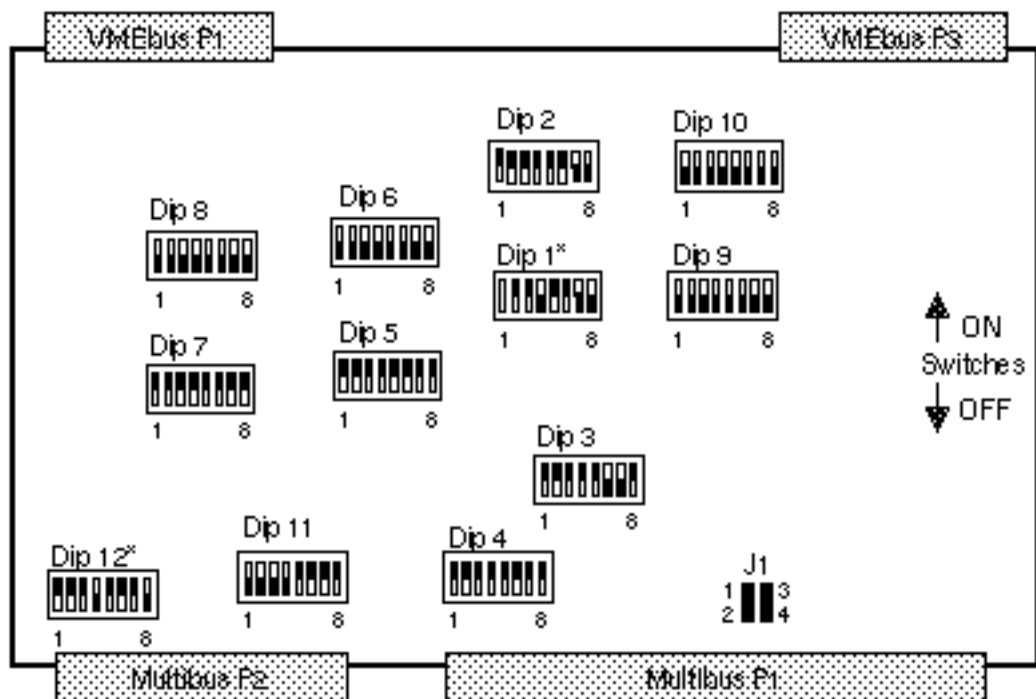
Power:

7.1 Amps @ +5Vdc

0.6 Amps @ +12Vdc

0.4 Amps @ -12Vdc

47.5 Watts



VME TO MULTIBUS ADAPTER BOARD SWITCH SETTINGS

SWITCH	1	2	3	4	5	6	7	8	DESCRIPTION
U1*	N/C	ON	ON	OFF	ON	ON	OFF	OFF	I-O Address
U2	N/C	ON	ON	ON	ON	ON	OFF	OFF	I-O Space = 2
U3	ON	ON	ON	ON	ON	OFF	OFF	ON	I-O Address = 0xEE
U4	ON	ON	ON	ON	ON	OFF	OFF	ON	VME I-O Space
U5	ON	ON	ON	ON	ON	ON	ON	ON	24-Bit Memory Address Space
U6	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	24-Bit Memory Block Size
U7	ON	ON	ON	ON	ON	ON	ON	ON	24-Bit Memory Address Space
U8	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	24-Bit Memory Block Size
U9	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	No connection
U10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	No connection
U11	OFF	OFF	OFF	OFF	ON	ON	ON	ON	Sets Address Bits A23 - A20
U12*	ON	ON	ON	OFF	ON	ON	ON	OFF	Interrupt Vector
J1	PINS 1-2		IN	If BCLK is desired					
	PINS 3-4		IN	If CCLK is desired					

* mti1, U1, 2,4,5,6, ON, U12, 2,3,5,6,7, ON

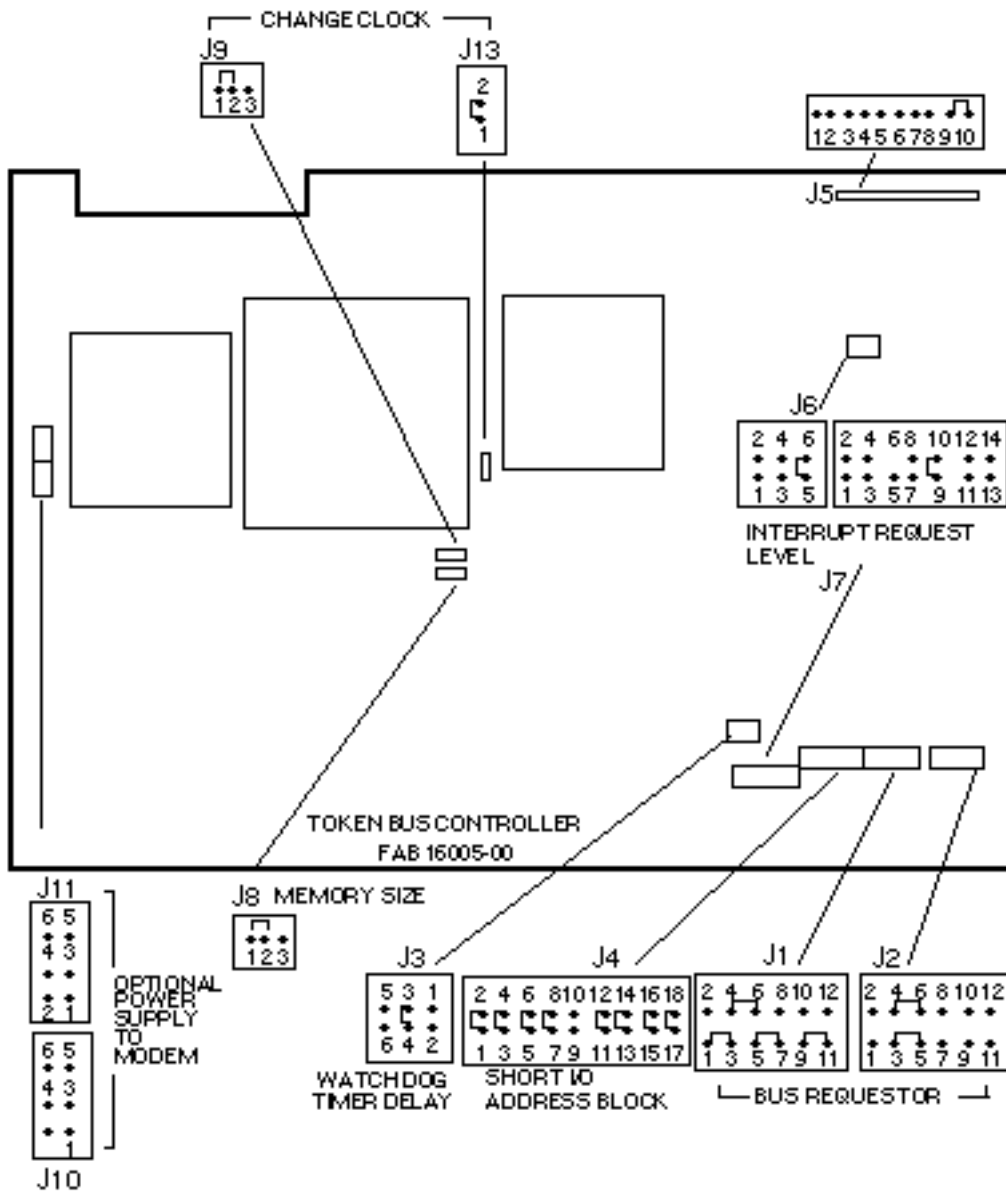
mti2, U1, 2,5,6, ON, U12, 1,3,5,6,7, ON

Last updated: December 2, 1996

[Comments and Suggestions](#)


MAPKIT

Sun-4/260/280/390
501-1202



Notes

1. Install the Token Bus Controller in the left slot of the adapter.
2. Install the Token Bus Modem in the right slot of the adapter.
3. The Token Bus Controller and Token Bus Modem are sold by INI.

Jumper Settings

JUMPER	PINS	VALUE	DESCRIPTION
J1	1-2 4-6 5-7 9-11	3	Bus request level
J2	3-5 4-6	3	Bus request level
J3	3-4	16 sec	Watchdog timer
J4	1-2 3-4 5-6 7-8 11-12 13-14	0x900	Short I/O address
J5	9-10	Bus Boot	Boot configuration
J6	5-6	3	VME host interrupt
J7	9-10	3	VME host interrupt
J8	1-2	512K	Memory size
J9	2-1	Normal	Clock parameters
J13	1-2	Normal	Clock parameters

Power:

4.9 Amps @ +5Vdc
 0.3 Amps @ +12Vdc
 0.1 Amps @ -12Vdc
 29.3 Watts

Reference:

Sun MAPkit Board Configuration Procedures, 813-2029.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

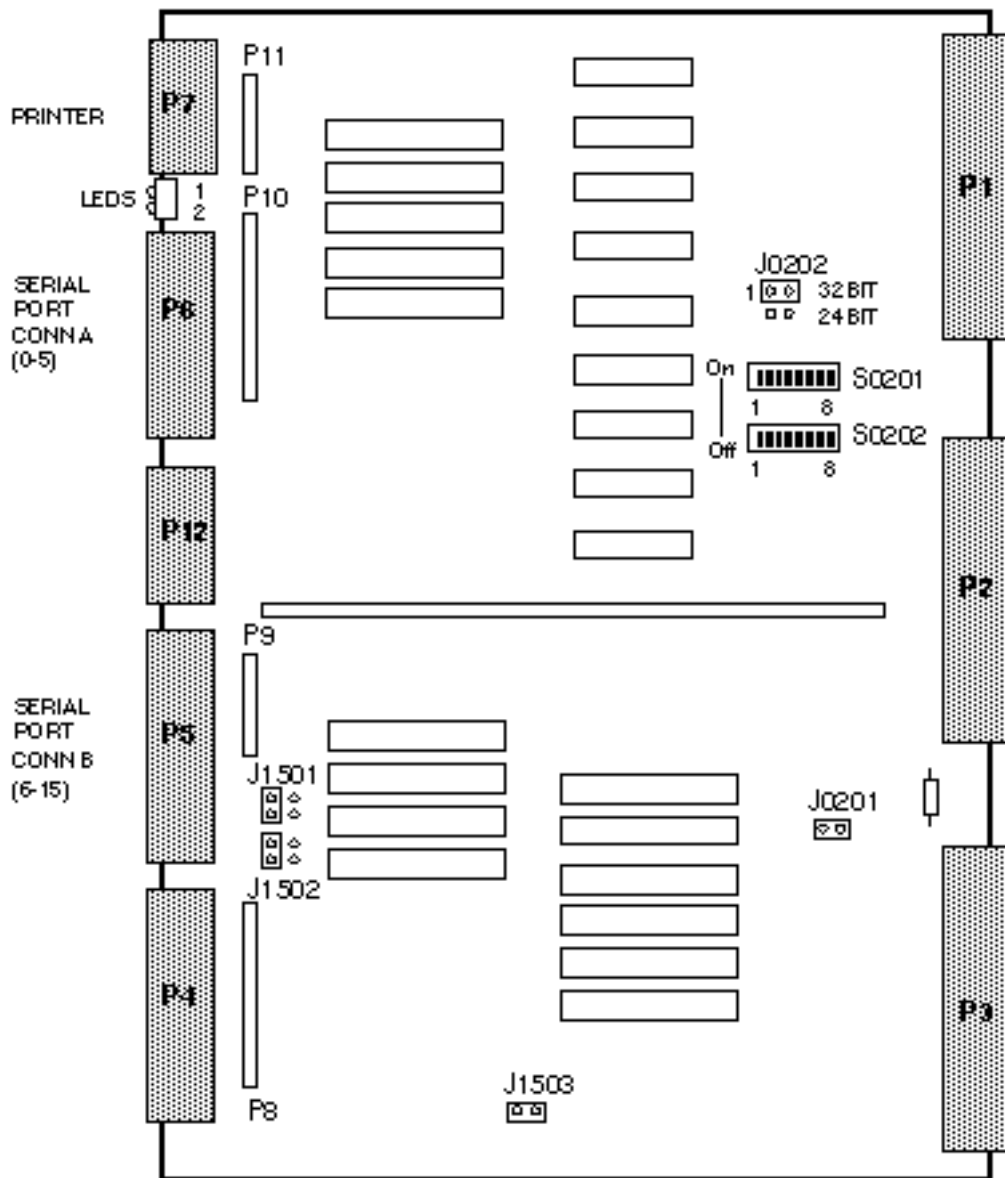
Asynchronous Line Multiplexor-2

Sun-4/110/150/260/280

Sun-4/310/330/350/360/370/380/390/470/490

SS600MP

501-1203



Power:

7.0 Amps @ +5Vdc

0.2 Amps @ -5Vdc

36.0 Watts

Jumper and Switch Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0201	1-2	In	Test jumper for oscillator
J0202	32 Bit	In	VME address bus size
J0202	24 Bit	Out	
J1501	RS-232	In	Enables RS-232 for ALM-2
J1501	RS-449	Out	Not used for ALM-2
J1502	RS-232	In	Enables RS-232 for ALM-2
J1502	RS-449	Out	Not used for ALM-2
J1503	1-2	In	Test jumper for oscillator

ADDRESS BIT	DIP SWITCH S0201								DIP SWITCH S0202							
	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
SWITCH and SETTING	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
mcp0 @ 0x01000000	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
mcp1 @ 0x01010000	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
mcp2 @ 0x01020000	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1
mcp3 @ 0x01030000	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1
mcp4 @ 0x02000000	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1
mcp5 @ 0x02010000	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1
mcp6 @ 0x02020000	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1
mcp7 @ 0x02030000	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1

0 = Off

1 = On

Notes

1. The Sun-3/110 and Sun 3004 CPU must be 501-1134-06, 501-1163-09, 501-1164-09, or greater. All 501-1208 and 501-1209 revisions are usable.
2. When four or more ALM-2 boards are installed in a system, the part number must be \geq 501-1203-05 because of the mechanical fit of the data cables.
3. An addressing conflict can occur between the ALM-2, MCP, and ALM-1. Refer to the VME Installation Notes in the Slot Assignments chapter.

Reference

Asynchronous Line Multiplexor-2 Configuration Procedures, 813-2042.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

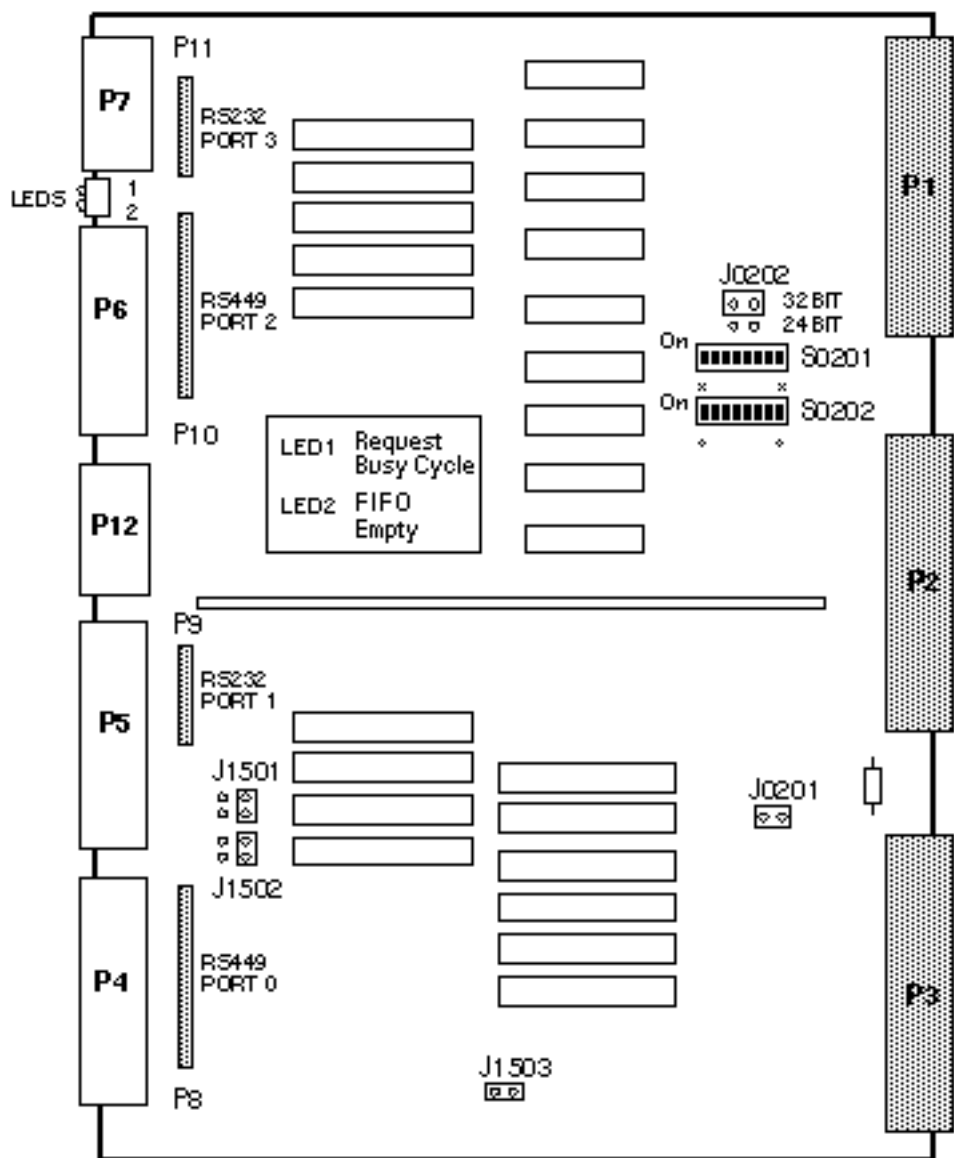
Multiprotocol Communication Processor

Sun-4/110/150/260/280

Sun-4/310/330/350/360/370/380/390/470/490

SS600MP

501-1221



Power:

7.0 Amps @ +5Vdc

0.2 Amps @ -5Vdc

36.0 Watts

Jumper and Switch Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0201	1-2	In	Test jumper for oscillator
J0202	32 Bit	In	VME address bus size
J0202	24 Bit	Out	
J1501	RS-232	Out	Not used for MCP
J1501	RS-449	In	Enables RS-449 Port 0
J1502	RS-232	Out	Not used for MCP
J1502	RS-449	In	Enables RS-449 Port 1
J1503	1-2	In	Test jumper for oscillator

ADDRESS BIT	DIP SWITCH S0201								DIP SWITCH S0202							
	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
SWITCH and SETTING	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
mcp0 @ 0x01000000	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
mcp1 @ 0x01010000	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
mcp2 @ 0x01020000	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1
mcp3 @ 0x01030000	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1

0 = Off

1 = On

Notes

1. The Sun-3/110 and Sun 3004 CPU must be 501-1134-06, 501-1163-09, 501-1164-09, or greater. All 501-1208 and 501-1209 revisions are usable.
2. The MCP is not supported in Solaris >=2.2.
3. An addressing conflict can occur between the MCP, ALM-1, and ALM-2. Refer to the VME Installation Notes in the Slot Assignment chapter.

Reference:

MCP Configuration Procedures, 813-2032.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SunLink Channel Adapter

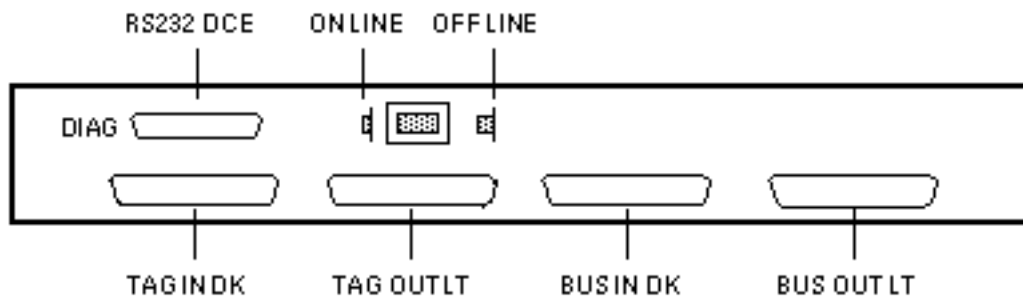
**Sun-4/260/280/350/360/370/380/390/470/490
SS670MP / SS690MP**

370-1128	501-1460
-----------------	-----------------

Board Set

Board Set

Backpanel and Connectors



Power:

8.6 Amps @ +5Vdc

43.0 Watts

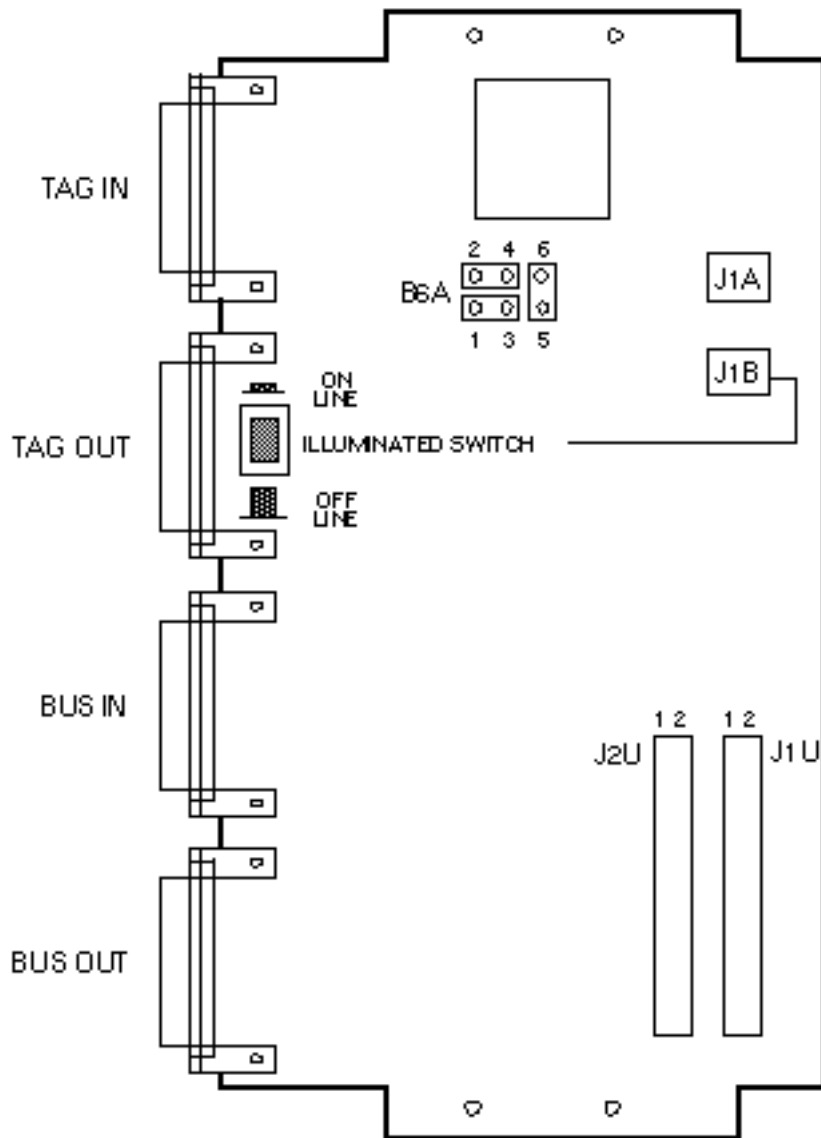
Notes

1. Replace 370-1128 with 501-1460. Refer to FCO A0003-1.
2. The Sun-3/110 and Sun 3004 CPU must be 501-1134-06, 501-1163-09, 501-1164-09, or greater. All 501-1208 and 501-1209 revisions are usable.
3. In Sun-3/2XX systems with multiple SCA boards, the CPU must be 501-1100-08, 501-1206-06, or greater.
4. The SunLink Channel Adapter must be \geq 501-1460-02 for use with the Sun 3400 CPU.
5. The Sun FDDI Board must be \geq 501-1276-02 for use with the SunLink Channel Adapter.
6. SunLink Release 7.0 Channel Gateway is required for use with the Sun 3400 CPU.
7. The Sun 3400 CPU must be \geq 501-1550-10 for use with the SunLink Channel Adapter.
8. The Sun 4200 CPU, 501-1274 must be \geq 501-1274-13 for use with the SunLink Channel Adapter.
9. The SunLink Channel Adapter is not supported in Solaris \geq 2.2.

Reference

SunLink Channel Adapter Configuration Procedures, 813-2040-10.

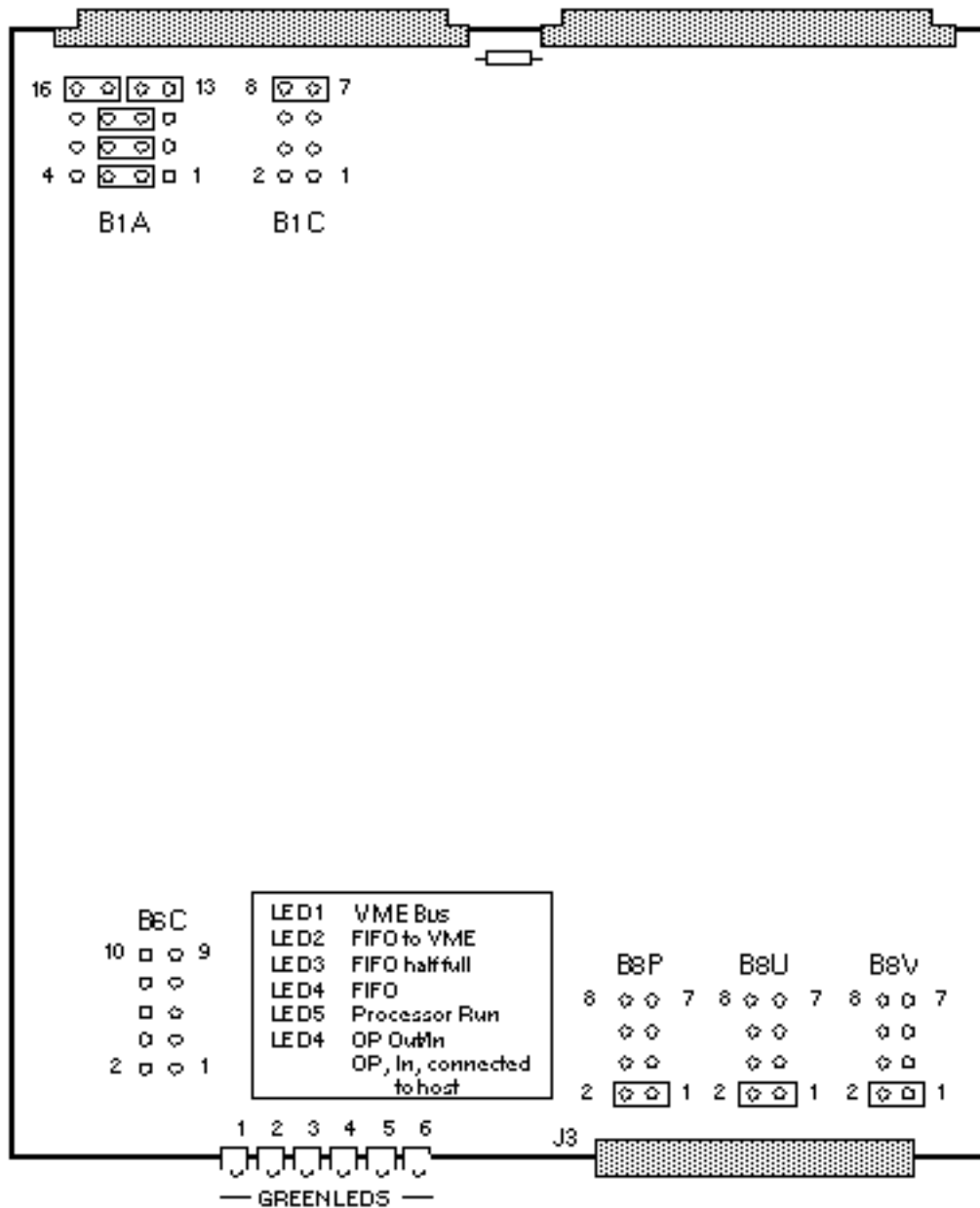
CIO Board



Jumper Settings

JUMPER	PINS	SETTINGS	DESCRIPTION												
B6A	1-3 2-4 5-6	<table border="1"> <tr><td>2</td><td>4</td><td>6</td></tr> <tr><td>□</td><td>□</td><td>□</td></tr> <tr><td>□</td><td>□</td><td>□</td></tr> <tr><td>1</td><td>3</td><td>5</td></tr> </table>	2	4	6	□	□	□	□	□	□	1	3	5	Channel to mainframe priority select Out/In (gives Select-Out) Factory setting
2	4	6													
□	□	□													
□	□	□													
1	3	5													
B6A	1-2 3-5 4-6	<table border="1"> <tr><td>2</td><td>4</td><td>6</td></tr> <tr><td>□</td><td>□</td><td>□</td></tr> <tr><td>□</td><td>□</td><td>□</td></tr> <tr><td>1</td><td>3</td><td>5</td></tr> </table>	2	4	6	□	□	□	□	□	□	1	3	5	Channel to mainframe priority select (gives Select-In)
2	4	6													
□	□	□													
□	□	□													
1	3	5													

IBD Board

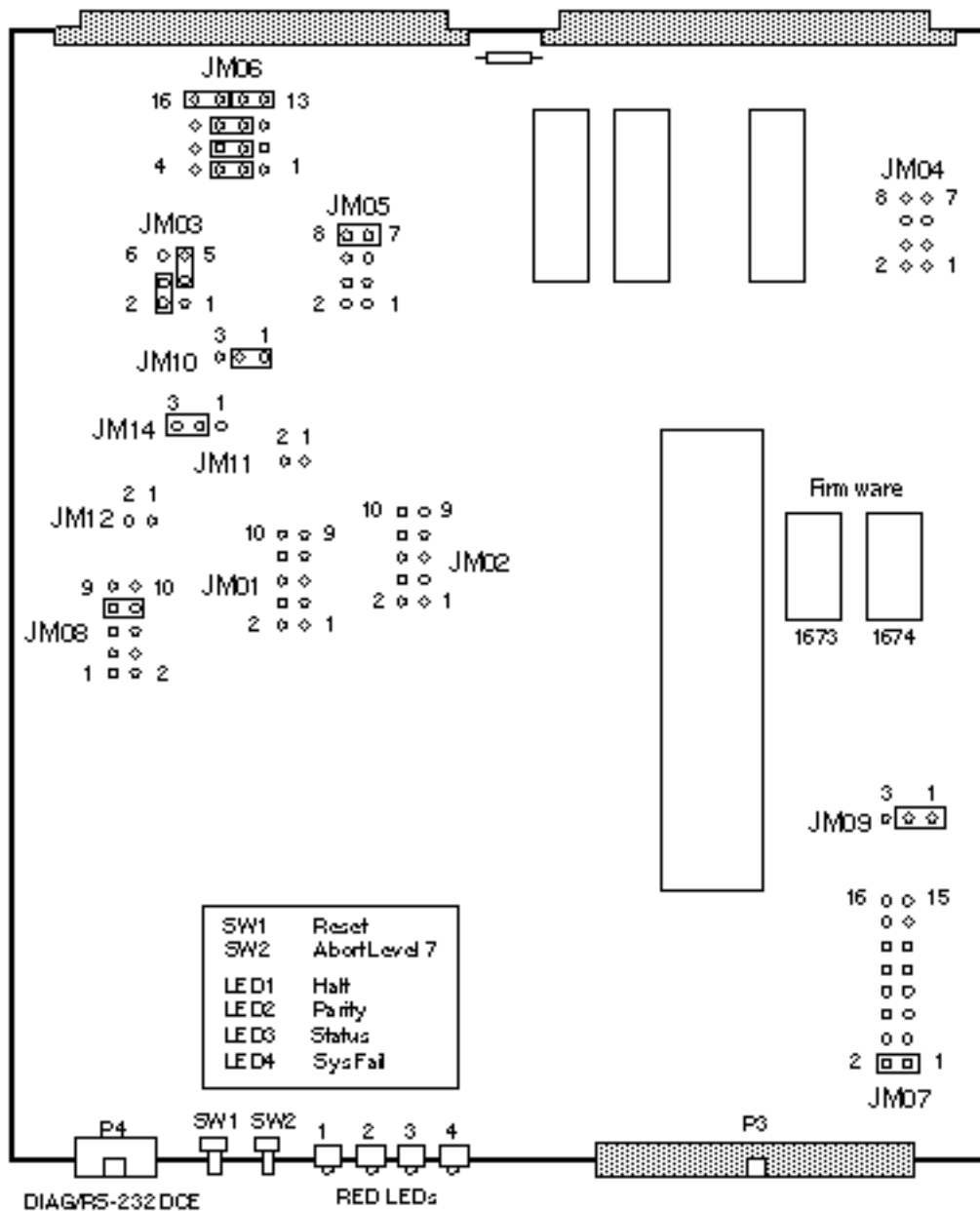


Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
B1C	7-8 Others	In Out	VME bus request level BR gives level 3
B1A	2-3 6-7 10-11 13-14 15-16	In In In In In	Bus grant In/Out BG0/BG3 gives level 3
B6C	All	Out	VME bus data transfer timeout

B8P	7-8 3-4 5-6 7-8	In Out Out Out	Local processor external bus page selection BS gives page 0
B8U	1-2 3-4 5-6 7-8	In Out Out Out	Interrupt acknowledge page selection IACK gives page 0
B8V	1-2 3-4 5-6 7-8	In Out Out Out	Interrupt request page selection IREQ gives page 0 and must be the same as IACK

LCP Board



Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
JM01	All	Out	VME BERR timeout 67.1 seconds
JM02	All	Out	VME LBERR timeout 107.4 seconds
JM03	2-4 3-5	In In	SYSRESET Out disabled SYSRESET In disabled
JM04	1-2* 3-4 5-6 7-8	Out* Out Out Out	1-2, Out, for 1st board (chat0) 1-2, In, for 2nd board (chat1)
JM05	1-2 3-4 5-6 7-8	Out Out Out In	Bus request level 0 Bus request level 1 Bus request level 2 Bus request level 3
JM06	2-3 6-7 10-11 13-14 15-16	In In In In In	Select bus grant 3
JM07	1-2	In	Local DTACK delay 100ns
JM08	1-2 3-4 5-6 7-8 9-10	Out Out Out In Out	Unclaimed grant timeout 262ms
JM09	1-2 2-3	In Out	EPROM size 128KB
JM10	1-2 2-3	In Out	Arbitration - release when done
JM11	1-2	Out	System controller function enabled
JM12	1-2	Out	VMEbus priority arbitration
JM14	1-2 2-3	Out In	Minimum address strobe 60ns

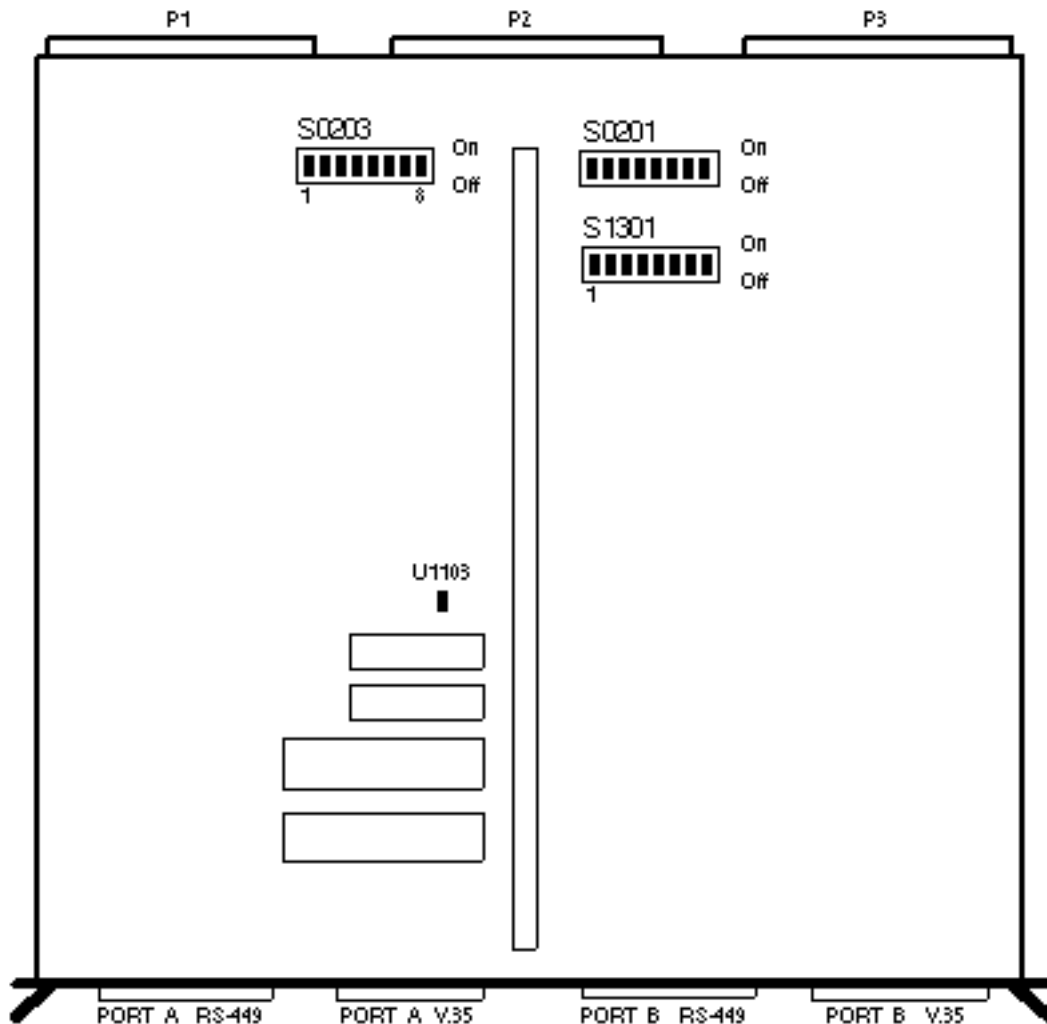
Last updated: December 2, 1996

[Comments and Suggestions](#) 

High-speed Serial Interface (HSI)

Sun-4/110/150/260/280/330/350/390/470/490

501-1338



Power:

5.3 Amps @ +5Vdc

0.3 Amps @ -5Vdc

28.1 Watts

Notes

1. SCSI-3 Host Adapter must be \geq 501-1120-07, \geq 501-1170-07, \geq 501-1217-04, or \geq 501-1236-03.
2. Sun-3/110 CPU must be \geq 501-1134-06.
3. Sun-3/140/150/160/180 CPU must be \geq 501-1074-22, \geq 501-1094-22, \geq 501-1163-09,

>=501-1164-09, or any revision of 501-1208.

4. The minimum operating system is SunOS 4.0.
5. The High-speed Serial Interface is not supported in Solaris >=2.2.

Reference

SunLink HSI Board Installation/Service Manual, 813-1046-10.

Switch and Jumper Settings

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW020*	1	Off	Base address select A24
	2	On	Base address select A25
	3	On	Base address select A26
	4	On	Base address select A27
	5	On	Base address select A28
	6	On	Base address select A29
	7	On	Base address select A30
	8	On	Base address select A31
SW0203*	1	On	Base address select A16
	2	On	Base address select A17
	3	On	Base address select A18
	4	On	Base address select A19
	5	On	Base address select A20
	6	Off	Base address select A21
	7	On	Base address select A22
	8	On	Base address select A23
SW1301	1	On	Interrupt level 1
	2	On	Interrupt level 2
	3	Off	Interrupt level 3
	4	On	Interrupt level 4
	5	On	Interrupt level 5
	6	On	Interrupt level 6
	7	On	Interrupt level 7
	8	On	Not used

* The first HSI address is 0x01200000.

* The second HSI address is 0x01400000.

** SW-6 is ON and SW-7 is OFF for a second HSI.

Jumper U1103

PINS	SETTING	DESCRIPTION
1-2	In	Clock enable

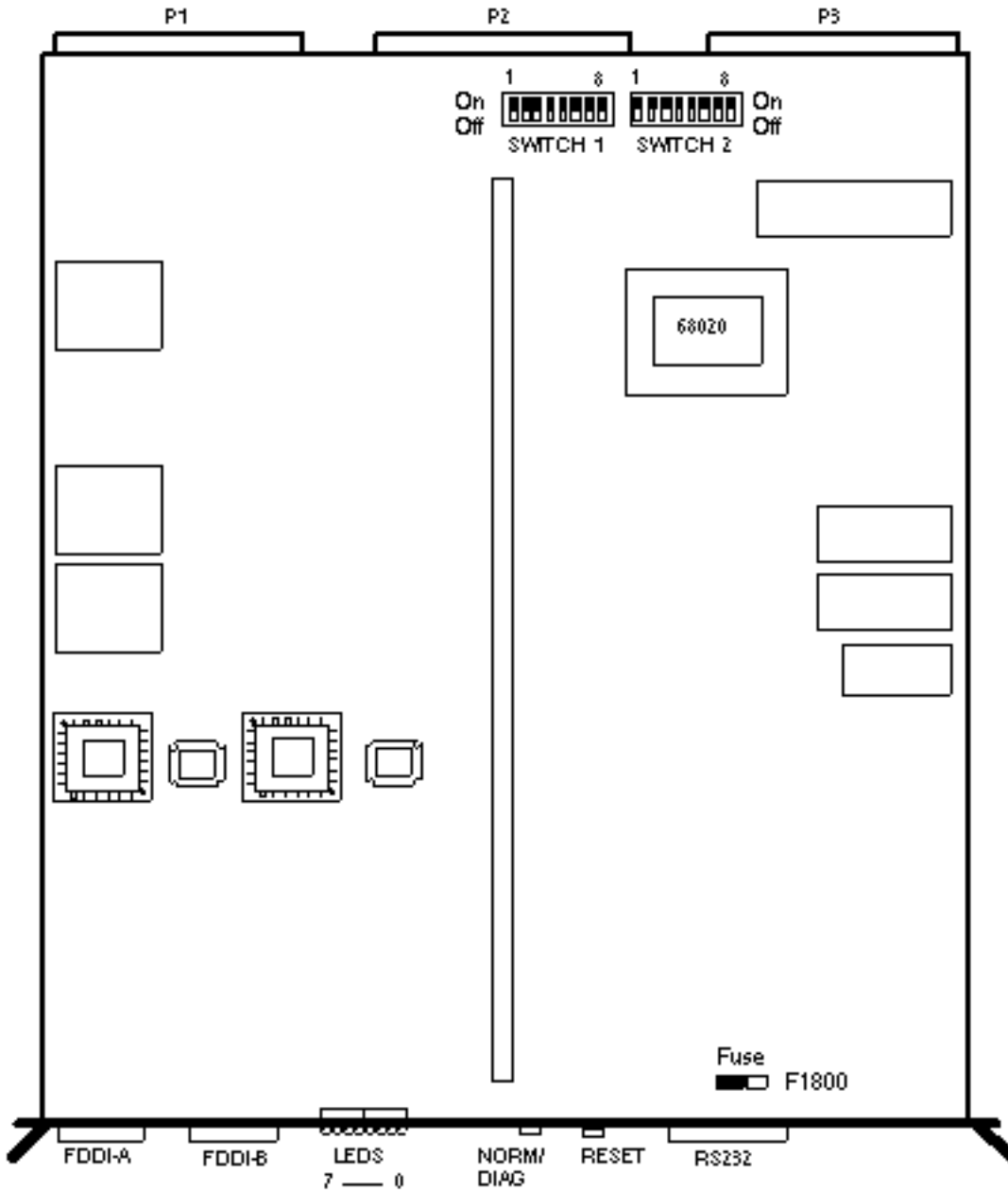
Last updated: December 2, 1996

[Comments and Suggestions](#) 

FDDI/DX

Sun-4/110/150/260/280/330/350/390/470/490
SS630MP / SS670MP / SS690MP

Option 461
501-1276



Power:

11.2 Amps @ +5Vdc

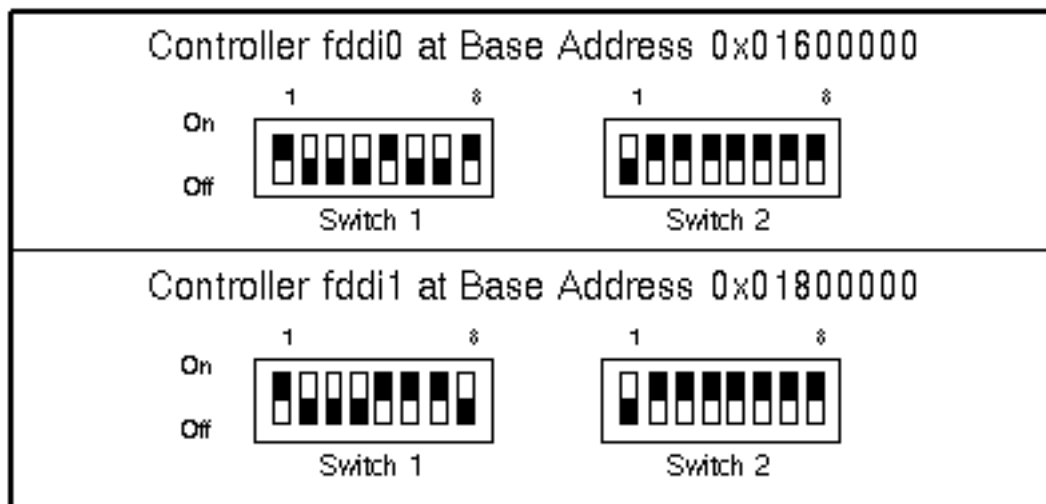
0.1 Amps @ -5Vdc

1.9 Amps @ +12Vdc

0.7 Amps @ -12Vdc

87.7 Watts

Switch Settings



Notes

1. Use 2A subminiature Fuse 150-1174.
2. The Sun 3004 CPU must be 501-1163-09, 501-1164-09 or greater. All 501-1208 revisions are usable.
3. 501-1276-02 or greater is required for use with the SunLink Channel Adapter board.
4. The Sun-4/330 requires Power Supply 300-1072.
5. Set the FDDI Controller Switch 1, Dip 1, to ON if the DMA uses 32-bit addresses. All Sun systems use 32-bit DMA.
6. Set the FDDI Controller Switch 1, Dip 1, to OFF if the DMA uses 24-bit addresses.

Release Notes

1. Diskless booting requires CPU EPROM 3.0 or greater.
2. The minimum operating system is SunOS 4.0.3.
3. The FDDI/DX is not supported in Solaris ≥ 2.2 .

Reference

SunLight FDDI Dual-Attach Controller Card Configuration and Installation Manual, 813-1053.

Last updated: December 2, 1996

Comments and Suggestions 

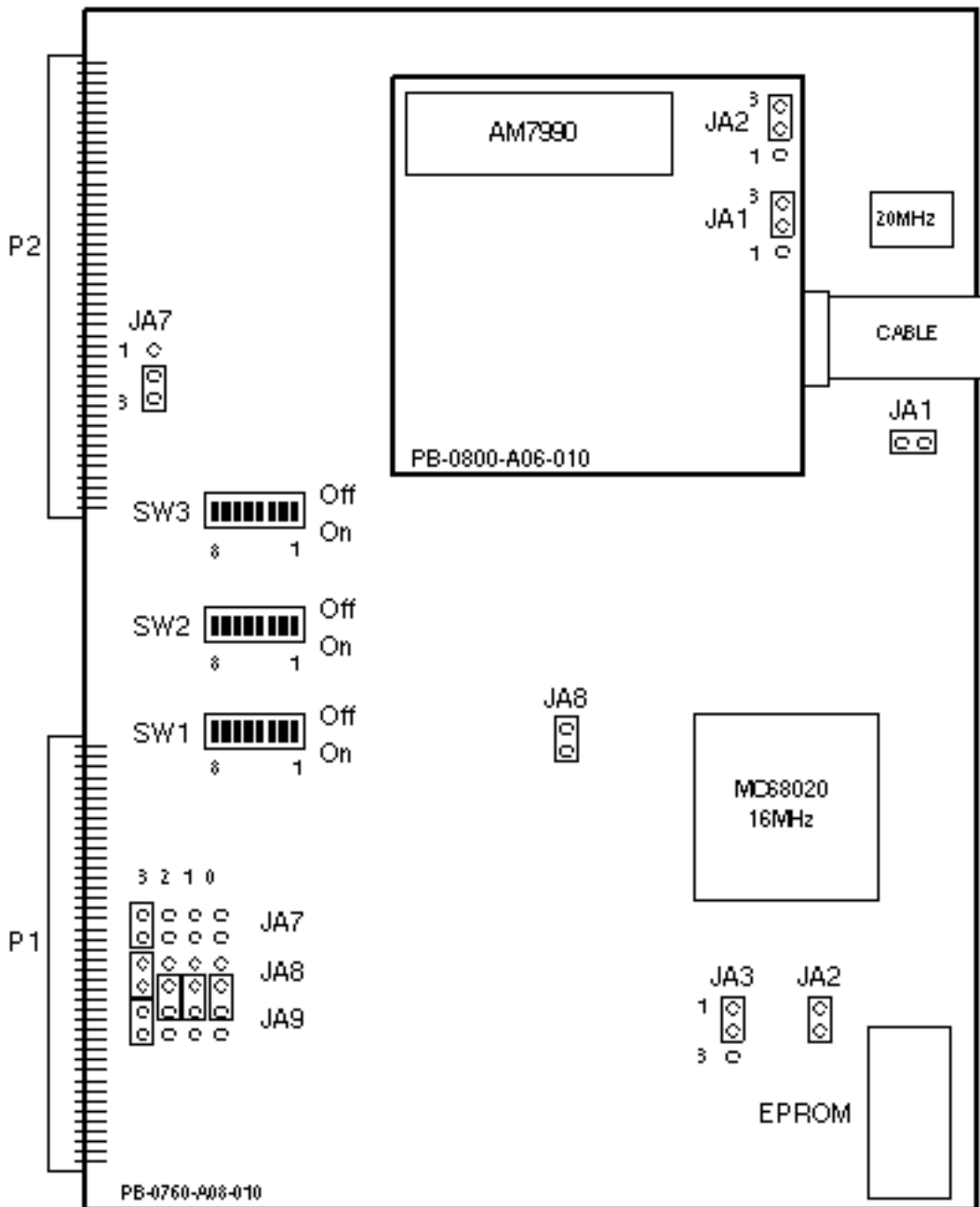
Sun Network CoProcessor

Sun-4/470/490

SS630MP / SS670MP / SS690MP

Option 176

370-1396 / 370-1421



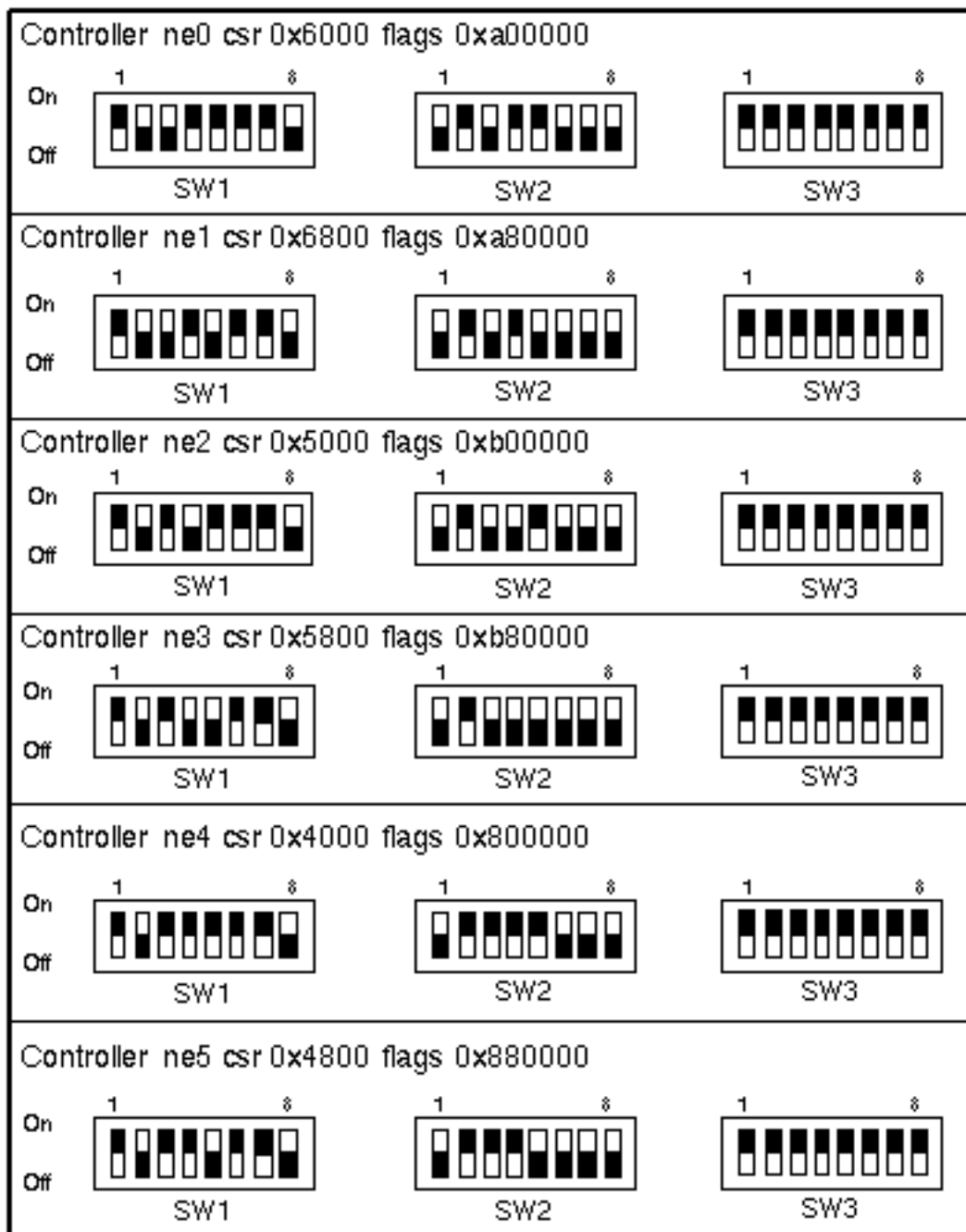
Power:

8.0 Amps @ +5Vdc

0.5 Amps

46.0 Watts




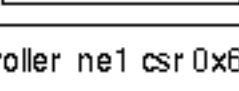
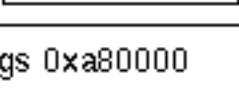
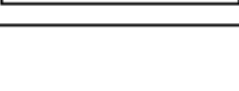



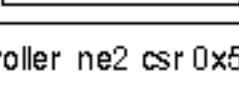
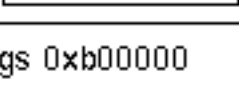




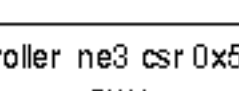
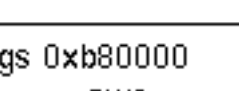




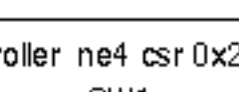
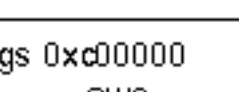
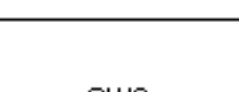



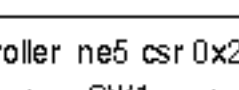
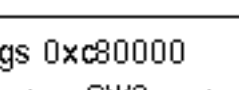
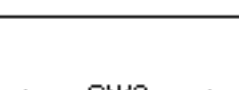



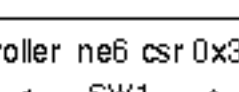
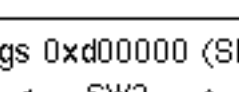
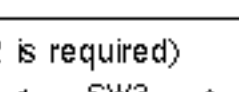



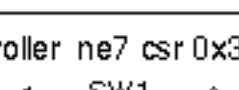
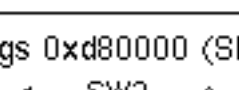
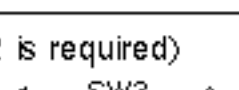

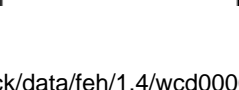
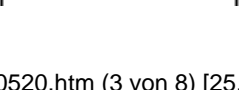



Interphase Release 1.4 Switch Settings



Address Switches and Address Bit Assignments

DIP SWITCH	1	2	3	4	5	6	7	8
SW1	A15	A14	A13	A12	A11	A10	A09	AM
SW2	A23	A22	A21	A20	A19	A18	A17	A16
SW3	A31	A30	A29	A28	A27	A26	A25	A24

SNC 1.0 and SNC 1.2 Switch Settings

<p>Controller ne0 csr 0x6000 flags 0xa00000</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>
<p>Controller ne1 csr 0x6800 flags 0xa80000</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>
<p>Controller ne2 csr 0x5000 flags 0xb00000</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>
<p>Controller ne3 csr 0x5800 flags 0xb80000</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>
<p>Controller ne4 csr 0x2000 flags 0xc00000</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>
<p>Controller ne5 csr 0x2800 flags 0xc80000</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>
<p>Controller ne6 csr 0x3000 flags 0xd00000 (SNC 1.2 is required)</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>
<p>Controller ne7 csr 0x3800 flags 0xd80000 (SNC 1.2 is required)</p> <p>On  SW1 ⌘  SW2 ⌘  SW3 ⌘</p> <p>Off  SW1 ⌘  SW2 ⌘  SW3 ⌘</p>



Notes

1. SNC 1.2 requires Sun 4400 CPU 501-1381-09 or 501-1899-01.
2. SNC 1.2 requires IPI Firmware 525-1023-05, 525-1024-10, and 525-1025-10. This firmware is installed on ISP-80 IPI Controller 501-1539-10 and 501-1855-04.
3. Under Interphase Release 1.4, the VME address space of the fifth NC400 and the Prestoserve board is at 0x800000. If both Prestoserve (*pr0*) and a fifth NC400 (*ne4*) are installed, change the address of *pr0* to 0xc00000 on the Prestoserve board and in the kernel.

When the Prestoserve is set to 0xc00000, the alternate 24-bit settings for the NC400 at 0xc00000 - 0xc7ffff and 0xc80000 - 0xcffffff cannot be used.

When the Prestoserve is set to 0xc00000, the address space 0xc00000 - 0xcffffff, reserved for large OEM/user devices, is used.

4. SunOS for the Sun 4400 reserves 1 Megabyte of DVMA space for VME32 peripheral devices. If the sum of DVMA space requested by VME32 devices is greater than 1 Megabyte, some peripherals will not run correctly.
 - 1 Network CoProcessor uses 192 Kilobytes of DVMA space
 - 2 Network CoProcessors use 320 Kilobytes of DVMA space
 - 3 Network CoProcessors use 320 Kilobytes of DVMA space
 - 4 Network CoProcessors use 320 Kilobytes of DVMA space
 - 5 Network CoProcessors use 400 Kilobytes of DVMA space
 - 6 Network CoProcessors use 480 Kilobytes of DVMA space
5. SunOS for the SS600MP reserves 6 Megabytes of DVMA space for VME32 peripheral devices. If the sum of DVMA space requested by VME32 devices is greater than 6 Megabytes, some peripherals will not run correctly. Each Network CoProcessor uses 416 Kilobytes of DVMA space.

Release Notes

1. Interphase Release 1.4 supports the Sun 4400 on SunOS 4.1.1.
2. SNC 1.0 supports the SS600MP on SunOS 4.1.2.
3. Patch 100639-01 supports the Sun 4400 on SunOS 4.1.2.
4. SNC 1.2 supports the Sun 4400 and SS600MP on SunOS 4.1.3.
5. The Sun Network CoProcessor is not supported in Solaris >=2.2.

References

1. NC300/NC400 Network CoProcessor Release 1.4 *Installation Manual*.
 2. *Sun Network CoProcessor 1.0 Installation Manual*, 800-6881-10.
 3. *Sun Network CoProcessor 1.2 Installation Manual*, 800-6881-11.
 4. *Sun Network CoProcessor 1.2 Product Note*, 801-5133-10.
 5. *Writing Device Drivers*, 800-3851-10.
-

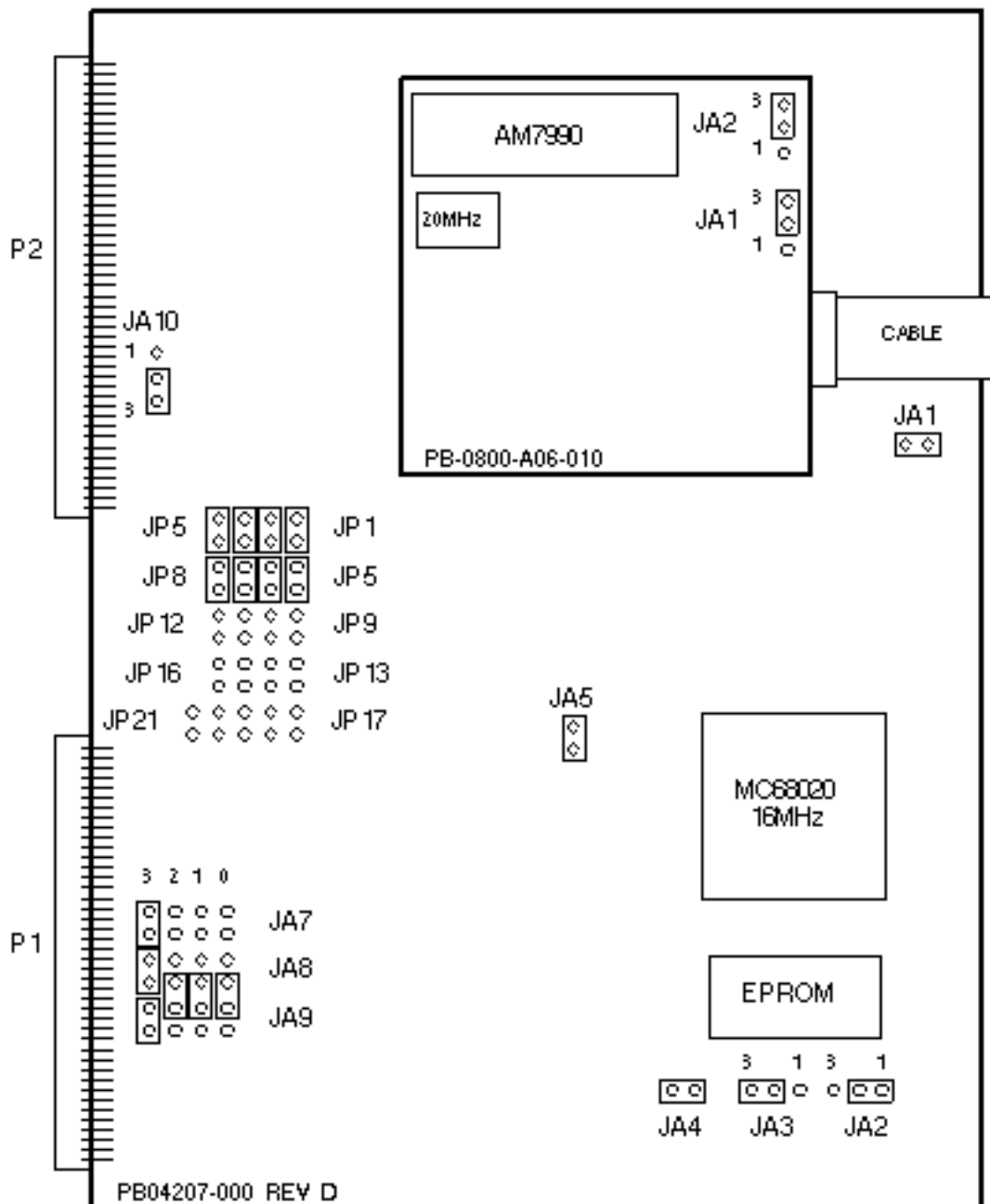
Sun Network CoProcessor

Sun-4/470/490

SS630MP / SS670MP / SS690MP

Option 176

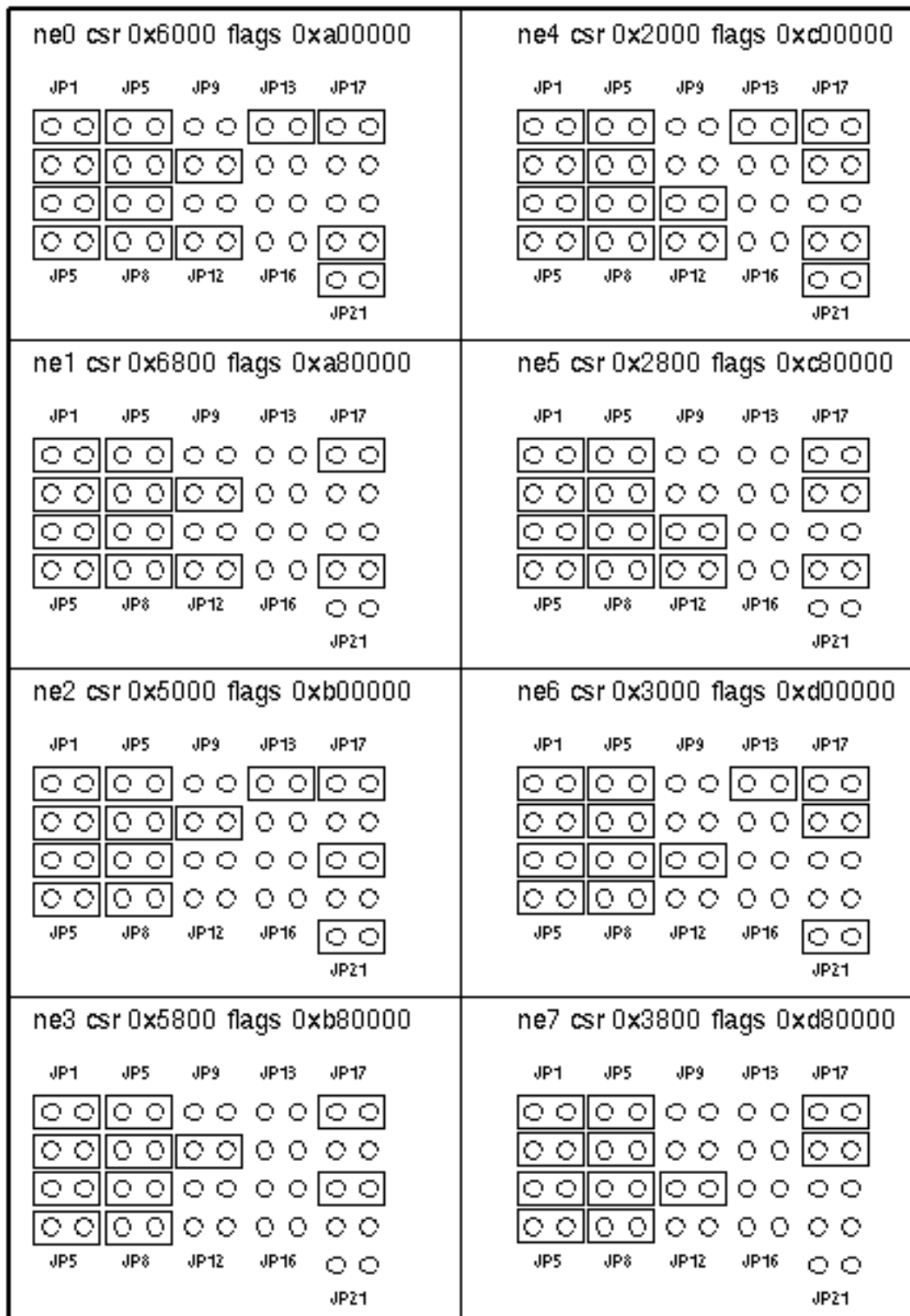
370-1696



Power:

- 8.0 Amps @ +5Vdc
- 0.5 Amps
- 46.0 Watts

SNC 1.2 Jumper Settings



Address Jumpers and Address Bit Assignments

JUMPER	JP1	JP2	JP3	JP4	JP5	JP6	JP7	JP8
ADDRESS BIT	A31	A30	A29	A28	A27	A26	A25	A24
JUMPER	JP9	JP10	JP11	JP12	JP13	JP14	JP15	JP16
ADDRESS BIT	A23	A22	A21	A20	A19	A18	A17	A16
JUMPER	JP17	JP18	JP19	JP20	JP21			

ADDRESS BIT	A15	A14	A13	A12	A11	
-------------	-----	-----	-----	-----	-----	--

Notes

1. SNC 1.2 requires Sun 4400 CPU 501-1381-09 or 501-1899-01.
2. SNC 1.2 requires IPI Firmware 525-1023-05, 525-1024-10, and 525-1025-10. This firmware is installed on ISP-80 IPI Controller 501-1539-10 and 501-1855-04.
3. SunOS for the Sun 4400 reserves 1 Megabyte of DVMA space for VME32 peripheral devices. If the sum of DVMA space requested by VME32 devices is greater than 1 Megabyte, some peripherals will not run correctly.
 - 1 Network CoProcessor uses 192 Kilobytes of DVMA space
 - 2 Network CoProcessors use 320 Kilobytes of DVMA space
 - 3 Network CoProcessors use 320 Kilobytes of DVMA space
 - 4 Network CoProcessors use 320 Kilobytes of DVMA space
 - 5 Network CoProcessors use 400 Kilobytes of DVMA space
 - 6 Network CoProcessors use 480 Kilobytes of DVMA space
4. SunOS for the SPARCserver 600MP reserves 6 Megabytes of DVMA space for VME32 peripheral devices. If the sum of DVMA space requested by VME32 devices is greater than 6 Megabytes, some peripherals will not run correctly. Each Network CoProcessor uses 416 Kilobytes of DVMA space.

Release Notes

1. SNC 1.0 supports the SS600MP on SunOS 4.1.2.
2. Patch 100639-01 supports the Sun 4400 on SunOS 4.1.2.
3. SNC 1.2 supports the Sun 4400 and SS600MP on SunOS 4.1.3.
4. The Sun Network CoProcessor is not supported in Solaris >=2.2.

References

1. *Sun Network CoProcessor 1.0 Installation Manual*, 800-6881-10.
2. *Sun Network CoProcessor 1.2 Installation Manual*, 800-6881-11.
3. *Sun Network CoProcessor 1.2 Product Note*, 801-5133-10.
4. *Writing Device Drivers*, 800-3851-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Removable Media

1/4" Tape Controller

[Emulex MT02](#)

CD-ROM Drives

[Sony CDU-8012 \(SunCD\)](#)

1/4" Tape Drives

[60MB](#)

[150MB](#)

8 mm Tape Drives

[2.3GB](#)

1/2" Tape Drive

[HP 88780 Front Load Tape Drive](#)

Last updated: December 2, 1996

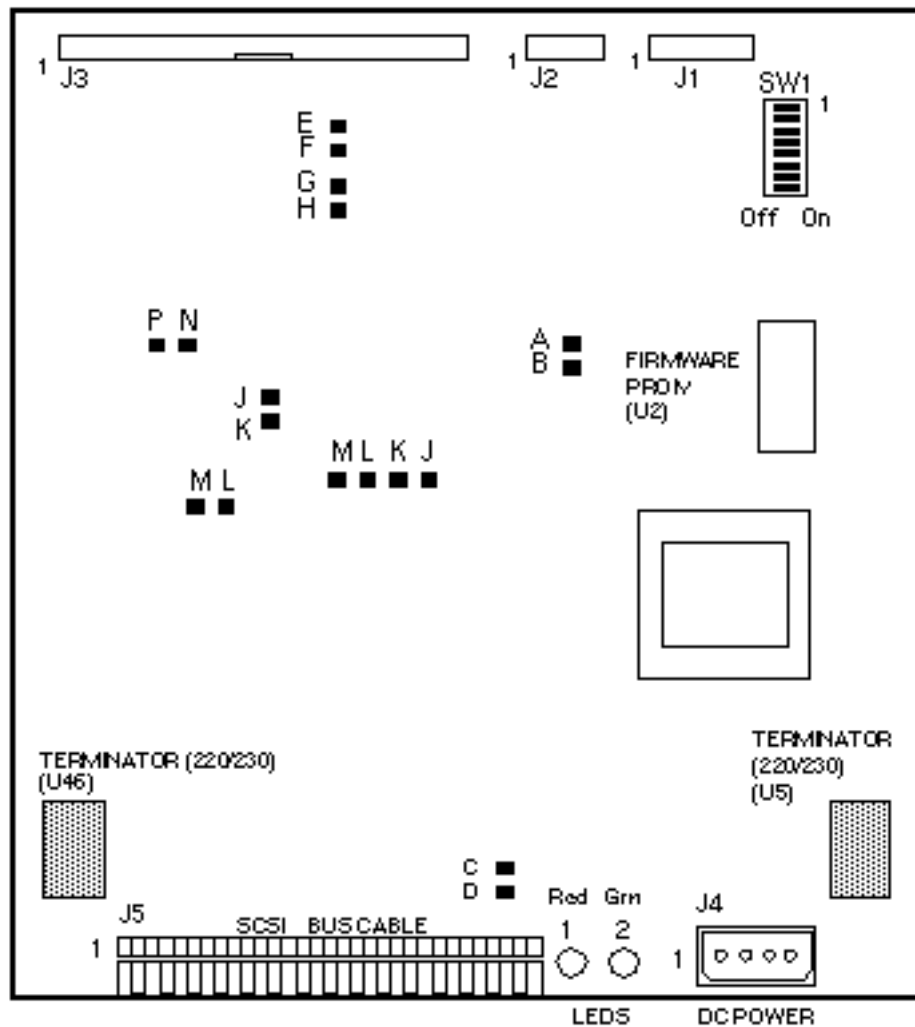
[Comments and Suggestions](#) 

Emulex MT02

Sun-4/260/280/360/380

Options 511 / 514 / 516

370-1061 / 370-1235



KEY	LED 1 (Green)	LED 2 (Red)	STATE
0 = Off	0	0	Power up reset clear
1 = On	1	1	Power up self-test passed

LED 1. Blinking, MT02 operating normally.

LED 2, ON, Do NOT remove the cartridge.

Power

1.5 Amps @ +5Vdc

0.04 Amps @ +12Vdc

8.0 Watts

Switch and Jumper Settings

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW1	1	Off	Bit 0
	2	Off	Bit 1
	3	On	Bit 2-SCSI device address 04
	4	Off	Not used
	5	On	Archive Drive (Scorpion)
	6	Off	
	5	On	Wangtek Drive (5000E)
	6	On	
	7	Off	Drive type
8*	Off	SCSI bus parity check	

* The Sun386i Tape assembly, 370-1179, includes the MT02 Controller and the Tape Drive. SW1, Switch 8, is ON for this application.

JUMPER	SETTING	DESCRIPTION
A-B*	In	EPROM Memory size select
C-D*	Out	
E-F*	In	Hi/Lo write current (Archive Drive)
	Out	Hi/Lo write current (Wangtek Drive)
G-H	Out	
J-K **	Out	
L-M**	Out	

* Jumpers A-B, C-D, and E-F are on the Emulex Rev. MW0210402 board. They are not on Rev. MT0210403 and MT0210103 boards. SW1, Switch 5 and Switch 6, control drive selection on the MT0210403 and MT0210203 boards.

**Jumpers J-K and L-M are in one of the locations shown on the board layout drawing.

Note

Terminators U5 and U46 must be installed for Sun-3/160 and Sun-3/180 Plus configurations. Remove these terminators when the board is used with all other Sun-3 and Sun-4 Mass Storage Subsystems.

References

1. *Sun-3 Emulex MT02 Controller Configuration Procedures*, 813-2011.
2. *60 Mbyte Streaming Tape Drive with SCSI Controller Configuration Procedures*, 814-1019.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sony CDU-8012 (SunCD)

Sun-4/330/370/390/470/490
SS600MP / SS1000 / SC2000

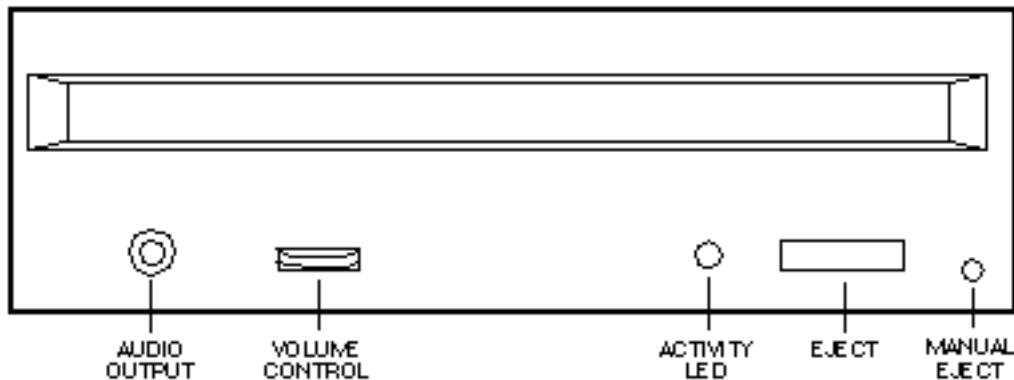
Options 558 / 559

370-1312 **370-1347**

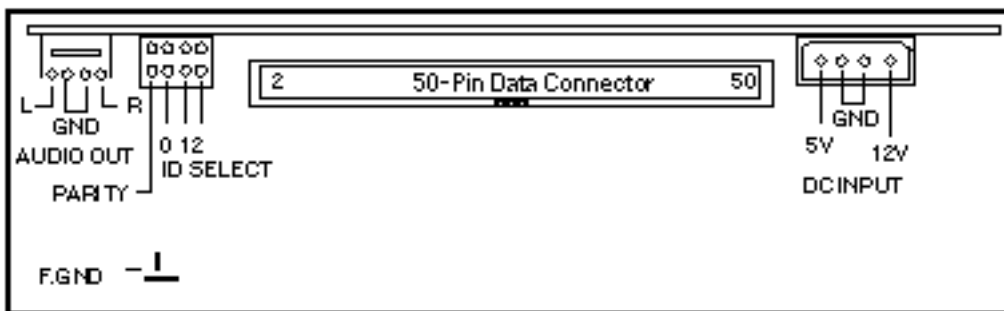
Lt Grey Bezel

Black Bezel

Front View



Rear View



In the Desktop SunCD Plus Pack, orient the Flex Cable as shown, and plug it into ID SELECT 0 1 2.



In the Multi-Tape Backup Tray and SC2000, orient the Cable as shown, and plug it into ID SELECT 0 1 2.

JUMPER	SETTING	DESCRIPTION
1, 2	In	SCSI ID 6
Parity	In	Enable parity

Power

0.5 Amps @ +5Vdc

0.5 Amps @ +12Vdc

8.5 Watts

Notes

1. The Sun CD-ROM requires 1.0 SunCD for SunOS 4.0.3c.
 2. Use 370-1347-03 when mounted on-end in the SS630MP.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

60MB 1/4" Tape Drive

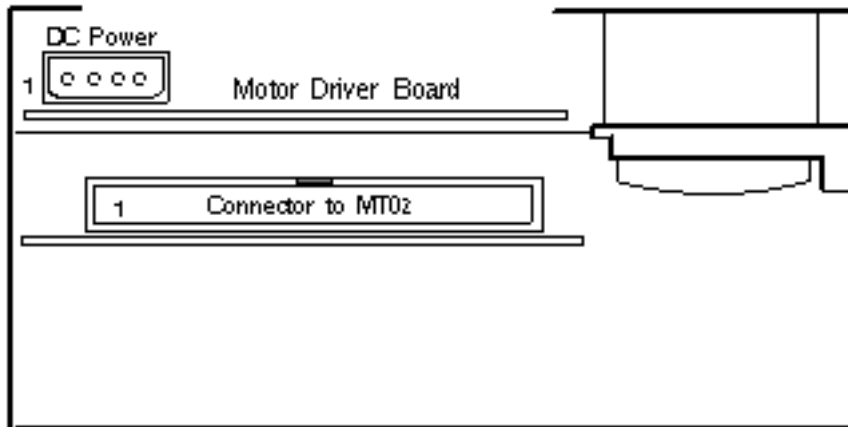
Sun-4/260/280/360/380

Options 515 / 514 / 516

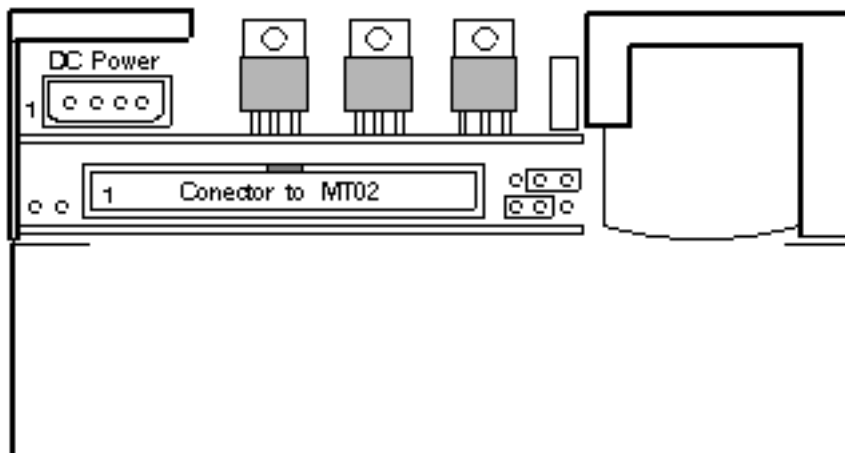
370-1076	370-1103
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Wangtech 5099EN24	Wangtech 5099EN24 Archive 5945C
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Rear View of Wangtech Model 5099EN24



Rear View of Archive Model 5945C



Power

1.0 Amps @ +5Vdc

1.9 Amps @ +12Vdc

27.8 Watts

Note

This tape drive is used with the Emulex MT02.

60MB 1/4" Tape Drive with Emulex MT02 Tape Controller

Sun-4/370

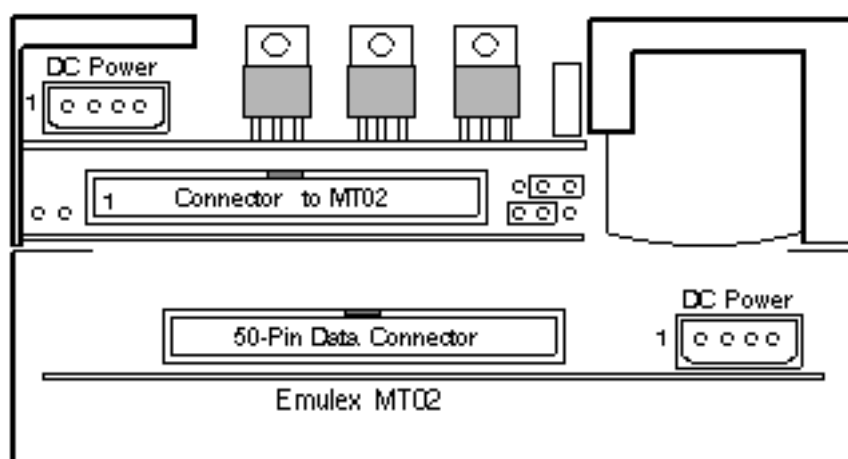
Options RR128 / RR129 / RREXP / RREXP-P7

370-1247	370-1179
-----------------	-----------------

Archive 5945S Full-Height Black Bezel

Archive 5945S Full-Height Lt Grey Bezel

Rear View



Emulex MT02 Tape Controller Switch Settings

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
------------	--------	---------	-------------

SW1	1 & 2 3	Off On	SCSI target 4 SCSI target 4
	1 & 3 2	On Off	SCSI target 5 SCSI target 5
	4 5 6 7	Off On Off Off	Not used Archive tape drive Archive tape drive Drive type
	8	On	Parity check ON for 370-1179
	8	Off	Parity check OFF for 370-1247

Reference

60MB Streaming Tape Drive with SCSI Controller Configuration Procedures, 814-1019.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

150MB 1/4" Tape Drive

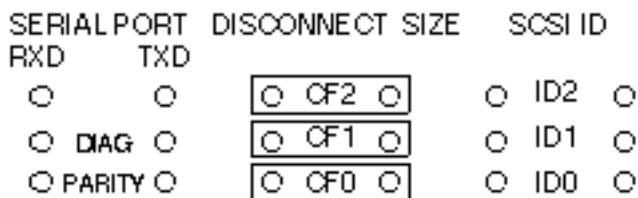
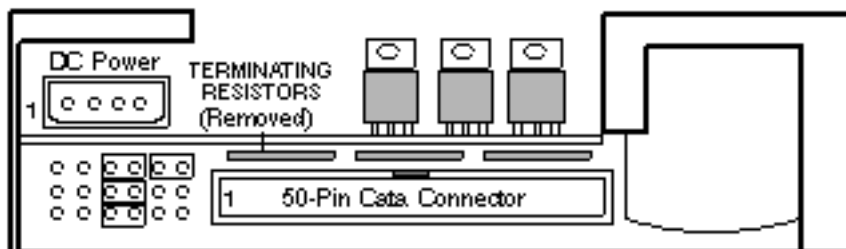
Sun-4/330/370/390/470/490

SS630MP / SS670MP / SS690MP / SC2000

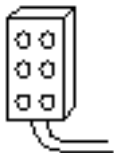
Options 539 / 565 / 660

370-1205	370-1206	370-1218	370-1246
Archive 2150S Half-Height Black Bezel	Archive 2150S Full-Height Black Bezel	Archive 2150S Half-Height Custom Bezel	Archive 2150S Full-Height Lt Grey Bezel

Rear View



Flex Cable



In the Desktop Tape Pack, remove the SCSI ID jumpers, orient the Flex Cable as shown, and plug it into the SCSI ID jumper block.

Address Select Switch Cable



In the External Storage Module, orient the Address Select Switch Cable as shown, and plug it into the SCSI ID jumper block.

Power

0.7 Amps @ +5Vdc

1.5 Amps @ +12Vdc

21.5 Watts

Jumper Settings

JUMPER	SETTING	DESCRIPTION	USAGE
RXD/TXD	Out	Serial Port	Not used
DIAG Parity	Out Out*	Normal/Diag Parity check	Not used Not used
CF2,CF1,CF 0	In	Disconnect Transfer Size	Size = 32K

JUMPER	TARGET 2	TARGET 3	TARGET 4	TARGET 5
ID2	Out	Out	In	In
ID1	In	In	Out	Out
ID0	Out	In	Out	In
1st SCSI	st3	st2	st0	st1
2nd SCSI	st7	st6	st2, st4	st3, st5

* IN for 370-1246

Note

The Cartridge Tape part number is 370-1203-01.

Reference

150MB 1/4-Inch Cartridge Tape Drive Configuration Manual for the 56-Inch Data Center Cabinet, 813-2076.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

2.3GB 8 mm Tape Drive

Sun-4/370/390/470/490
SS670MP / SS690MP

Options 566 / 802 / 804

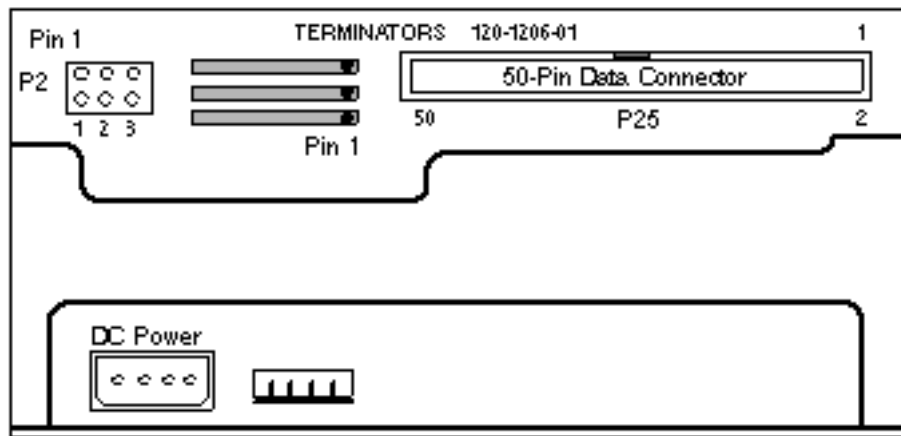
370-1297

370-1405

Exabyte EXB-8200
Black Bezel

Exabyte EXB-8200
Lt Grey Bezel

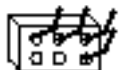
Rear View



Jumper P2

SCSI ID	(MSB) 1	2	(LSB) 3
4	In	Out	Out
5	In	Out	In
3	Out	In	In
2	Out	In	Out
1	Out	Out	In
0	Out	Out	Out

Address Select Switch Cable



In the Desktop Storage Module and External Storage Module, orient the Address Select Switch Cable as shown, and plug it into P2.

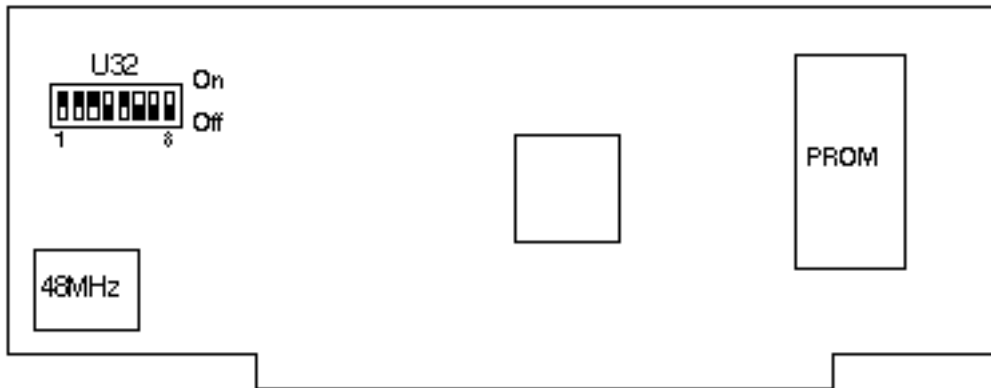
Power

4.0 Amps @ +5Vdc

1.2 Amps @ +12Vdc

34.4 Watts

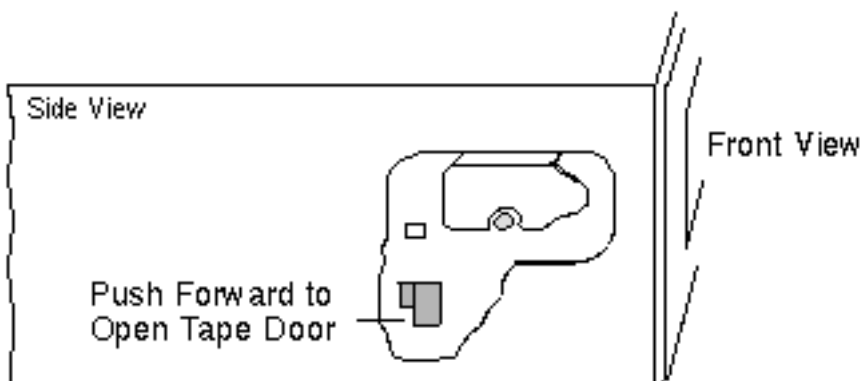
MX Card



Dip Switch U32

SWITCH	SETTING	DESCRIPTION
1	On	Bypass memory test
2	On	Enable parity checking
3	On	Even byte disconnect
4	Off	Report busy status
5	On	Variable block mode on power up
6	Off	No disconnect during data transfer
7	Off	Not used
8	Off	P6 cartridge type

Manual Eject Switch



Notes

1. The 112 Meter Tape part number is 370-1298-01.
2. The Cleaning Kit part number is 370-1318-01.

3. ECO WO_01575 enabled Parity checking on the MX card. Parity checking is disabled on drives shipped prior to December 1991.

References

Sun 2.3-Gbyte 8mm Tape Drive Configuration Procedures for 56-Inch Data Center Cabinets, 813-2081.

Last updated: December 2, 1996

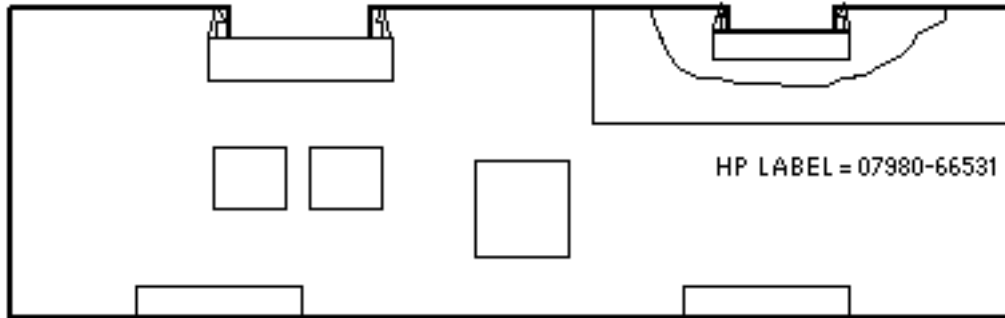
[Comments and Suggestions](#) 

HP 88780 Front Load Tape Drive

Options 680 / 682 / 683 / 684

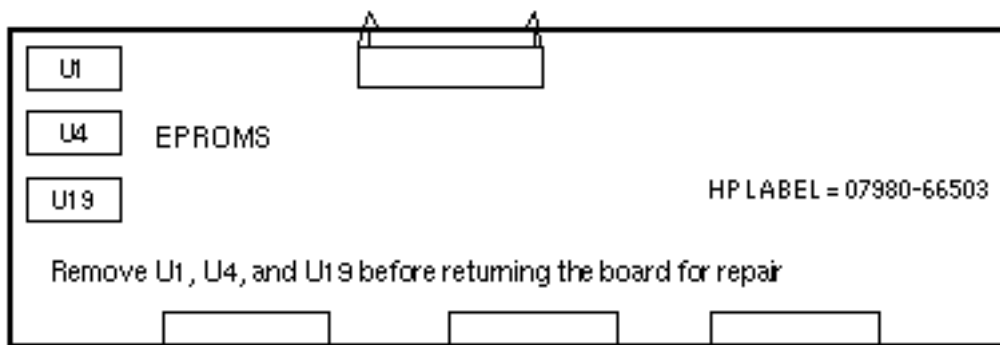
Read/Write/Format Board

370-1276



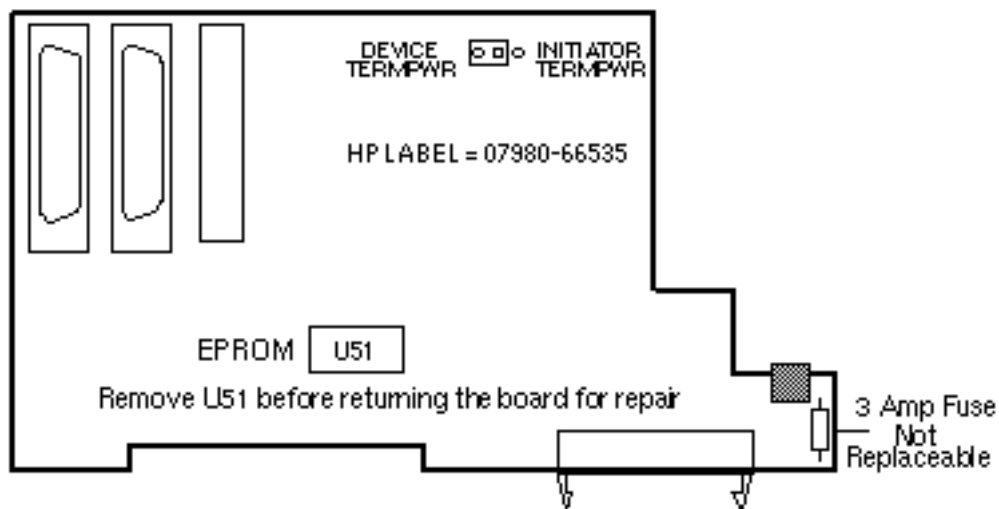
Drive Controller Board

370-1277

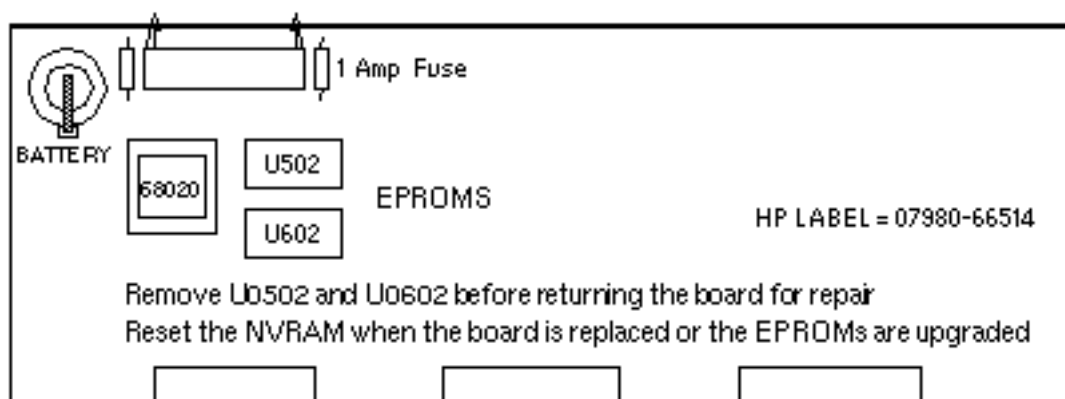


Single Ended I/O Board

811-1241

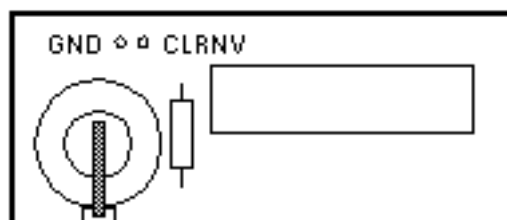


Data Buffer Board 370-1279



NVRAM Reset Procedure

1. Load a scratch tape.
2. Run TEST 150 to write a GCR ID to the scratch tape.
3. Run TEST 128 to store the NVRAM contents to the scratch tape.
4. Remove Power.
5. Install the new Data Buffer Board or new EPROMs.
6. Connect a jumper between locations GND and CLRNV.



7. Apply power. FAIL--0 is displayed when selftest is complete.
8. Remove Power.
9. Remove the jumper.
10. Apply Power.
11. Load the scratch tape.

12. Run TEST 129 to load NVRAM with the contents stored on tape.
13. Rewind to BOT.
14. Run TEST 99 to calibrate the read channel gain values.

Battery Notes

1. The battery part number is 150-1204-01 or 811-1232-01.
2. The battery is not replaceable on boards built after January 1990.

Reference

Sun Front-Load 1/2-Inch Tape Drive Field Service Manual, 800-3447.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SCSI Disk

Single Ended SCSI Disk Drives

[CDC 94171-327/344 \(327MB\)](#)

[Micropolis 1588-15 \(669MB\)](#)

[Maxtor XT-8760S \(669MB\)](#)

[Seagate ST41600N \(1.3GB\)](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

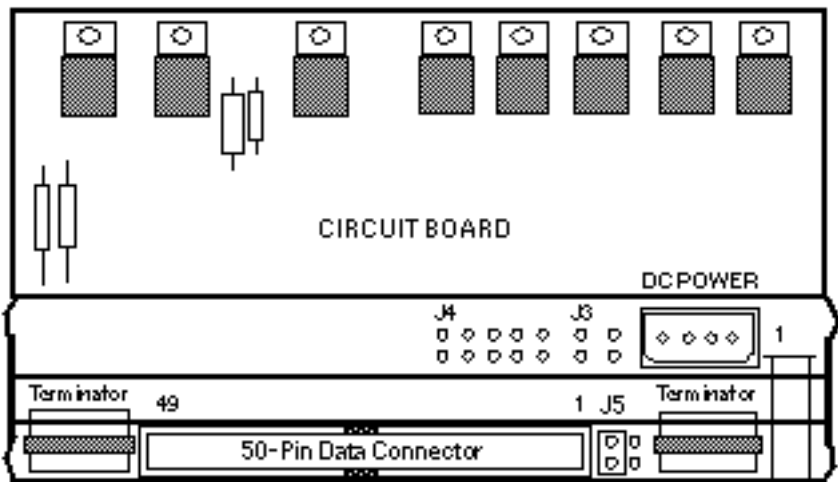
CDC 94171-327/344 (327MB)

**5 1/4" 3600 RPM Embedded SCSI
Sun-4/330/370/470**

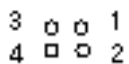
**Options RREXP-P7 / RR129 / RR134
Options 526 / 527 / 530 / 539**

555-1005	370-1153	370-1230
w Bracket w/o Bezel 77777107	w/o Bracket w/o Bezel 77777107 3 1/4" Height	w/o Bracket w Bezel 77777126 3 1/4" Height

End View



Ground Select Jumper J3



Drive Select and Option Select Jumper J4



In the External Storage Module, orient the Address Select Switch Cable as shown, and plug it into J4.

Terminator Power Source Select Jumper J5

3 1
4 2

Power

1.5 Amps @ +5Vdc

1.4 Amps @ +12Vdc

24.3 Watts

Jumper Settings

555-1005 and 370-1153 Only

J3

PIN	SETTING	DESCRIPTION
1-2	In	AC + DC ground connected to signal ground
3-4	In	AC + DC ground connected to chassis ground

J4

PIN	SETTING	DESCRIPTION
P	In	Parity enabled

J5

PIN	SETTING	DESCRIPTION
3-4	In	Terminator power from DC connector

370-1230 Only

J3

PIN	SETTING	DESCRIPTION
1-2	Out	AC + DC ground not connected to signal ground
3-4	Out	AC + DC ground not connected to chassis ground

J4

PIN	SETTING	DESCRIPTION
P	Out	Parity enabled

J5

PIN	SETTING	DESCRIPTION
3-4	In	Terminator power from DC connector

Address Jumper Settings

J4

PIN	SETTING	DESCRIPTION	TARGET
1, 2, 4	Out	Drive select	Target 0
1	In	Drive select	Target 1
2	In	Drive select	Target 2
1, 2	In	Drive select	Target 3

Notes

1. Remove the terminators from the underside of the drive.
2. Terminate the Sun386i with external terminator 530-1381.
3. Sun-3/470, Sun-4/370, and Sun-4/470 systems with dual option trays are terminated internally on the 501-1493 Interface PCB. The left side tray must be installed to terminate the SCSI bus.
4. Sun-4/370 and Sun-4/470 systems with a single option tray are terminated externally with terminator 150-1346.
5. Terminate the External Storage Module with terminators 530-1381 or 150-1785.
6. Terminate the Sun-4/330 on the SCSI-Out PCB with three 220/330 terminators, 120-1608-01.

Format Utility Notes

1. The 94171-327 has fewer cylinders than the 94171-344.
2. The SunOS 4.x **format** utility fails if the 94171-327 is used with the standard *format.dat* entry on any system other than a Sun386i.
3. Use the following *format.dat* entry for the 94171-327 on SunOS 4.x.

```
disk_type = "CDC Wren IV 94171-327" \
: ctlr = SCSI : fmt_time = 4 : cache = 0x11: trks_zone = 9 \
: asect = 3 : ncy1 = 1520 : acyl = 2 : pcy1 = 1549 : nhead = 9 \
: nsect = 46 : rpm = 3600 : bpt = 20833
```

4. Solaris 2.x includes an entry for the 94171-327 in *format.dat*. Remove the comment symbol "#" to use the entry.

References

1. *386i Field Service Manual*, 814-0002-10.
2. *327MB Embedded SCSI Configuration Procedures*, 814-1015-01.
3. *5 1/4-Inch Disk Drive Installation in the 12-Slot Office Pedestal Manual*, 813-1055-10.
4. *Sun 327 Mbyte SCSI Disk Configuration Manual*, 813-2048-03.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

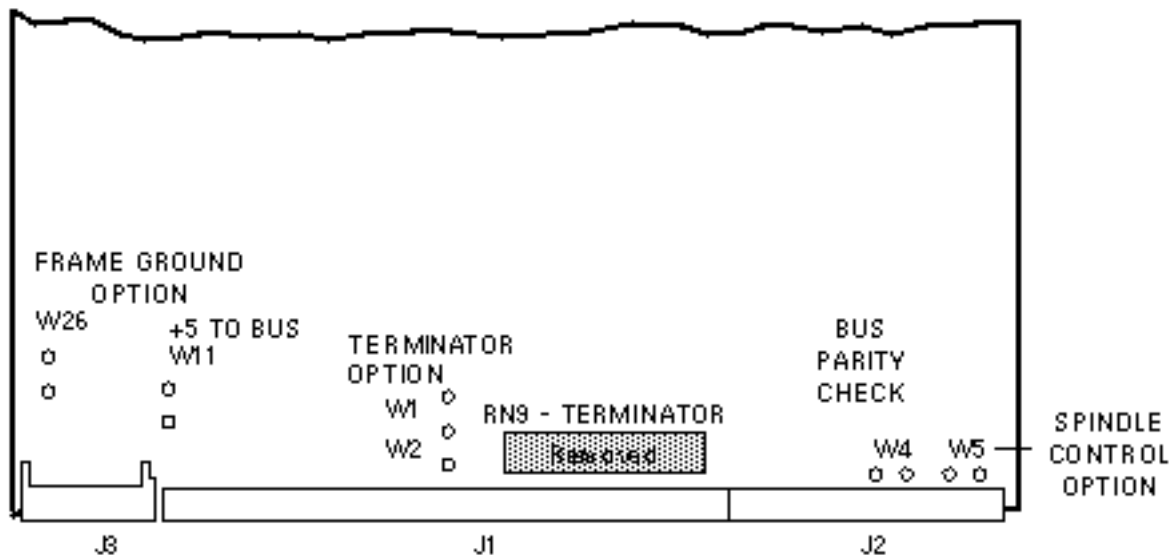
Micropolis 1588-15 (669MB)

5 1/4" 3600 RPM Single Ended SCSI Sun-4/330/370/470

Options 561 / 563 / 565 / 566

370-1319	370-1326	555-1151
FS0013-03-5	FS0019-01-6	FS0019-01-6
Black Bezel	No Bezel	No Bezel
Green LED	No LED	No LED
3 1/4" Height	3 1/4" Height	w Bracket

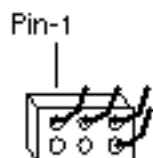
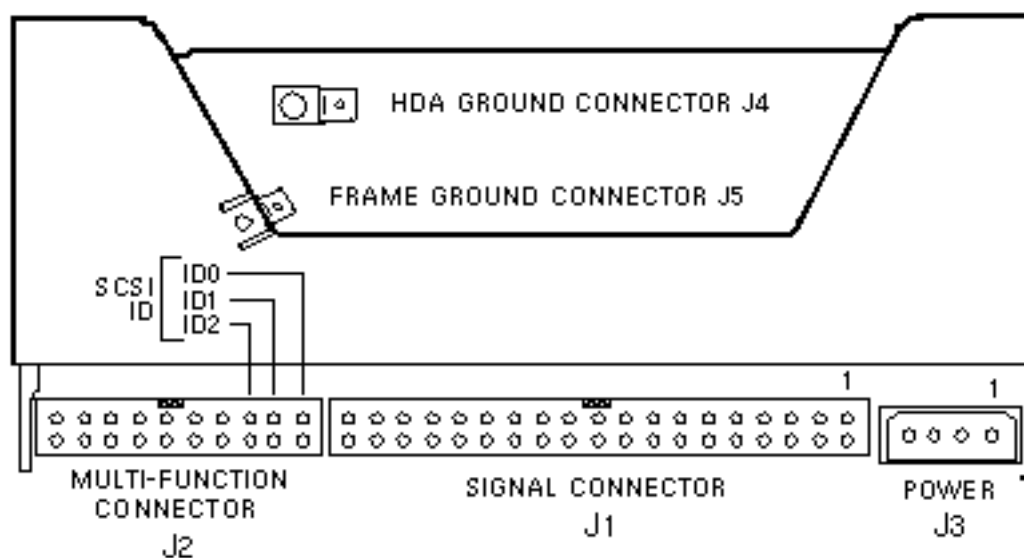
Bottom View



Note

All other jumpers on this board are set by the manufacturer. Do NOT change these settings.

End View



In the External Storage Module, orient Pin-1 of the Address Select Switch Cable with ID2 of J2.

Option Jumper Settings

JUMPER	SETTING	DESCRIPTION
W5	Out	Spindle starts at power on
W4	Out	Enable parity detection
W1	In	Drive provides internal terminator power
W2	Out	
W11	Out	
W28	Out	Frame ground not connected to logic ground

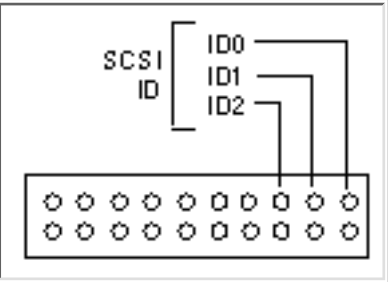
External Storage and Expansion Modules

JUMPER	SETTING	DESCRIPTION
W5	Out	Spindle starts at power on
W4	Out	Enable parity detection
W1	In	Drive provides internal terminator power
W2	Out	
W11	Out	
W28	In	Frame ground connected to logic ground

Address Jumper Settings

J2 Multi-function Connector

PIN	SETTING	DESCRIPTION
0,1, 2	Out	Target 0
0	In	Target 1
1	In	Target 2
0,1	In	Target 3



References

1. *5-1/4" SCSI Disk Drive Installation and Configuration for Sun Office Pedestals*, 813-2048-11.
2. *Revised Removal/Replacement Procedures for Sun ESM and EEM Storage Units*, 814-3044-01.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

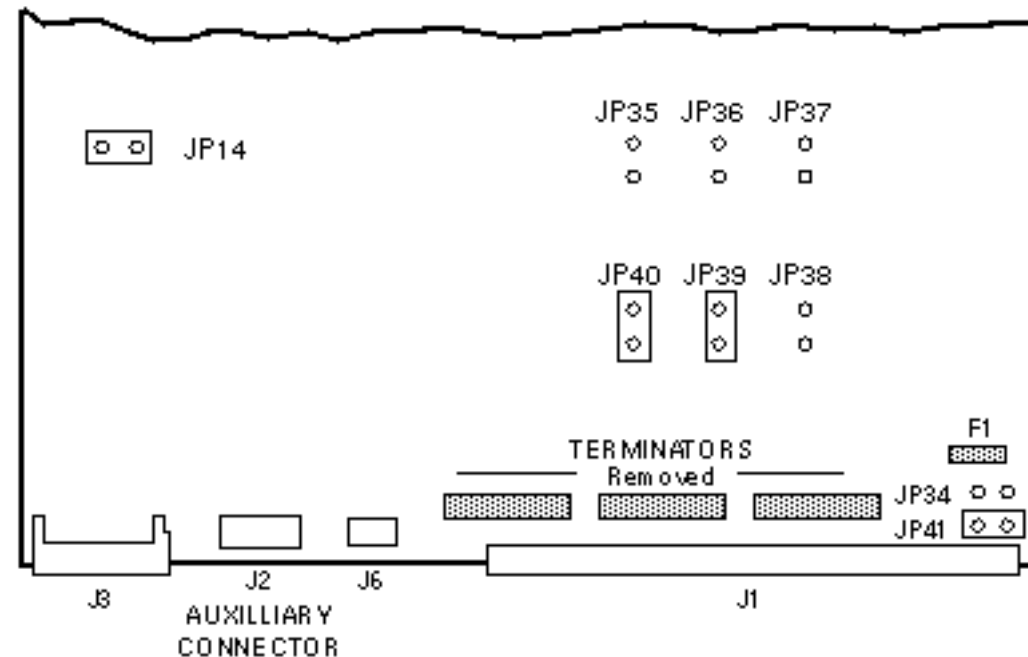
Maxtor XT-8760S (669MB)

5 1/4" 3600 RPM Single Ended SCSI
Sun-4/330/370/470

Options 561 / 563 / 565 / 566

370-1319	370-1326	555-1151
1098618-B	1098778-B	FS0019-01- 6
Black Bezel	No Bezel	No Bezel
Green LED	No LED	No LED
3 1/4" Height	3 1/4" Height	w Bracket

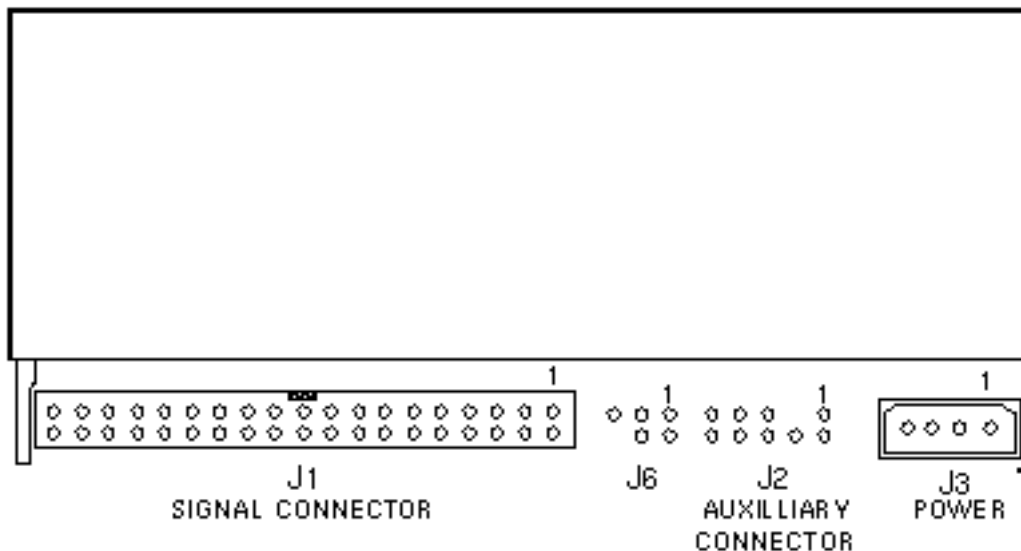
Bottom View



Note

All other jumpers on this board are set by the manufacturer. Do NOT change these settings.

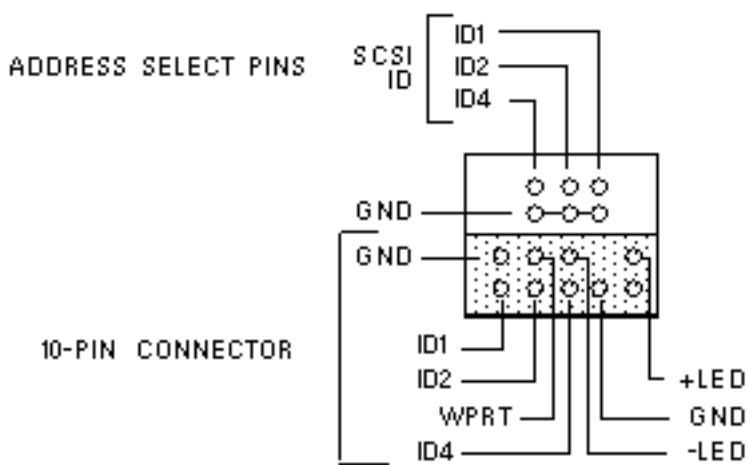
End View



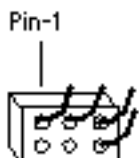
Address Description

The address is set on the J2 Adapter installed in the J2 Auxiliary connector, the Address Select switch on the External Storage Module, or on Jumpers JP35, JP36, and JP37. Set the address at only one location.

J2 Adapter Circuitry



External Storage Module



Orient Pin-1 of Address Select Switch Cable 530-1659 with ID4 on the J2 Adapter.

2.54 mm Cable

J2 Auxiliary Connector with Adapter 811-1682-01

JUMPER	SETTING	DESCRIPTION
1,2,4	Out	Target 0
1	In	Target 1
2	In	Target 2
1,2	In	Target 3

JP35, JP36, and JP37

JUMPER	SETTING	DESCRIPTION
JP35, JP36, JP37	Out	Target 0
JP35	In	Target 1
JP36	In	Target 2
JP35, JP36	In	Target 3

Option Jumper Settings

JUMPER	SETTING	DESCRIPTION
JP14	In	Spindle starts at power on
JP38	Out	No motor delay at power on
JP40	In	Enable parity detection
JP41	In	Drive provides internal terminator power
JP34	Out	Terminator power option

Notes

1. Drive address selection cannot be set on Auxiliary Connector J2 unless the adapter is installed.
2. The J2 Adapter must be installed in order for the ID Select Switch on the External Storage Module to function
3. The Maxtor drive does not fit into the lower drive position of External Storage Modules manufactured prior to October 1990. Remove the vertical stop block with 10-Inch End Cutter 250-1074-01.

References

1. *5-1/4" SCSI Disk Drive Installation and Configuration for Sun Office Pedestals*, 813-2048-11.
2. *Revised Removal/Replacement Procedures for Sun ESM and EEM Storage Units*, 814-3044-01.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Seagate ST41600N (1.3GB)

976002-012 Elite-1 Family

5 1/4" 5400 RPM Single Ended SCSI

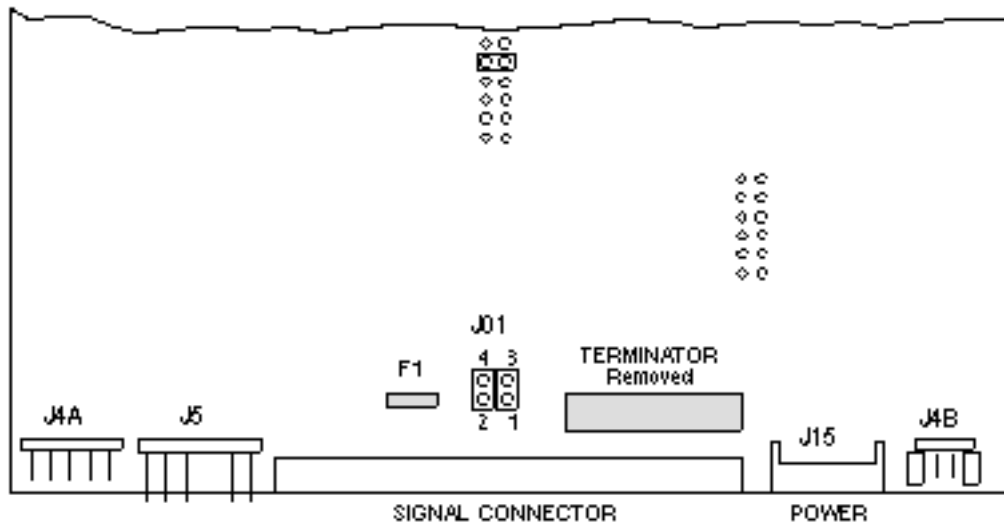
Sun-4/470 / SS630MP / SS670MP

Option 571

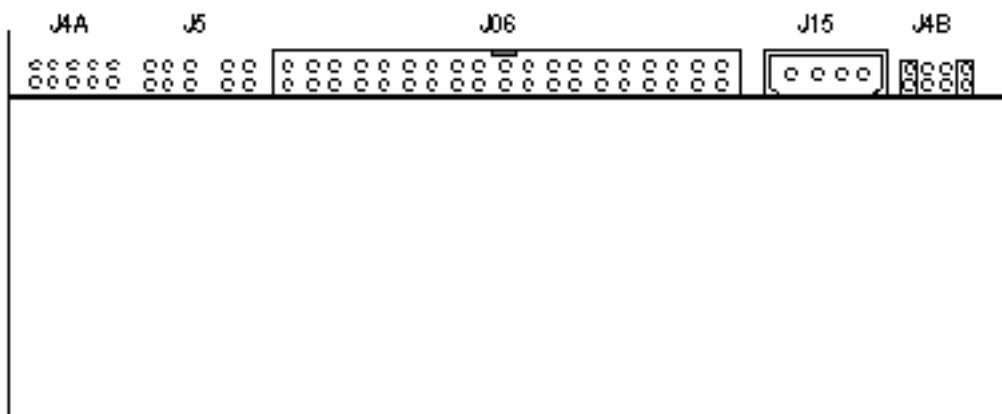
370-1377

3 1/4" Height

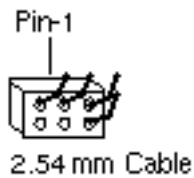
Top View



End View



In the Desktop Storage Module, orient Pin-1 of the Address Select Switch Cable with ID2 on J5. Remove all jumpers from J4A.



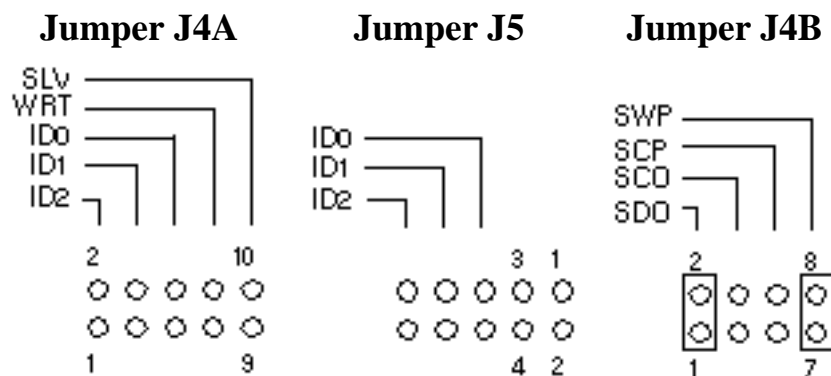
Power

2.4 Amps @ +5Vdc

2.1 Amps @ +12Vdc

37.2 Watts

Jumper Settings



J4A

JUMPER	SETTING	DESCRIPTION
ID0, ID1, ID 2	Out	Drive ID select, Target 0
ID0	In	Drive ID select, Target 1
ID1	In	Drive ID select, Target 2
ID0, ID1	In	Drive ID select, Target 3
WRT	Out	Write enabled
SLV	Out	Spindle sync master

J5*

JUMPER	SETTING	DESCRIPTION
ID0, ID1, ID 2	Out	Drive ID select, Target 0
ID0	In	Drive ID select, Target 1
ID1	In	Drive ID select, Target 2
ID0, ID1	In	Drive ID select, Target 3

* Factory configurations do not use shunts at Jumper J5.

J4B

JUMPER	SETTING	DESCRIPTION
SDO	In	Spinup Delay = 10sec x Target ID

SCO	Out	Spinup according to SD0 setting
SCP	Out	Parity enabled
SWP	In	Sweep cycle enabled

J01

JUMPER	SETTING	DESCRIPTION
1-2		The drive supplies TERMPWR to its own terminator. It does not supply TERMPWR to the SCSI bus.
2-4		The drive supplies no TERMPWR. The initiator supplies TERMPWR to the bus.
1-3 2-4	In In	The drive supplies TERMPWR for the external terminator at the end of the daisy chain. This option is recommended only for the last drive on a daisy chain.

Notes

1. The minimum operating system is SunOS 4.1.1.
2. SunOS 4.1.1 Sun-4c requires the *1.3GB Disk Drive Enhancement* (esp.o, sd.o, and format.dat).
3. SunOS 4.1.1 Rev B Sun-4c requires the *1.3GB Disk Drive Enhancement* (esp.o and sd.o).
4. SunOS 4.1.1 Sun-4 requires the *1.3GB Disk Drive Enhancement* (format.dat).
5. Jumper J4A uses 2 mm shunts. Jumper J5 can be configured using 2.54 mm shunt 130-0272. The Target ID is the Boolean OR of J4A and J5. Do NOT install shunts in both locations. Do NOT install shunts at J4A when the address select switch cable is installed.
6. The 1.3GB Disk Drive is not supported inside Sun 12-Slot Office Pedestals that use SCSI Interface PCBs 501-1493 and 501-1496.
7. The 1.3GB Disk Drive is not supported inside SCSI Peripheral Trays that use SCSI Interface PCB 501-1496.

References

1. *Desktop Storage Module Service Manual*, 800-6219-10.
2. *Desktop Storage Module Service Manual*, 800-7236-10.
3. *Sun SCSI Expansion Pedestal Service Manual*, 800-6402-11.
4. *Sun SCSI Expansion Pedestal Service Manual*, 800-7285-10.
5. *12-Slot Office Pedestal with Single Peripheral Tray*, 800-6497-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SCSI

ESDI

[Emulex MD21](#)

VMEbus

[Sun-2 SCSI Host Adapter](#)

[Blank SCSI Adapter Assembly](#)

[Sun-3 SCSI Host Adapter](#)

[Sun-3/E SCSI/Ethernet](#)

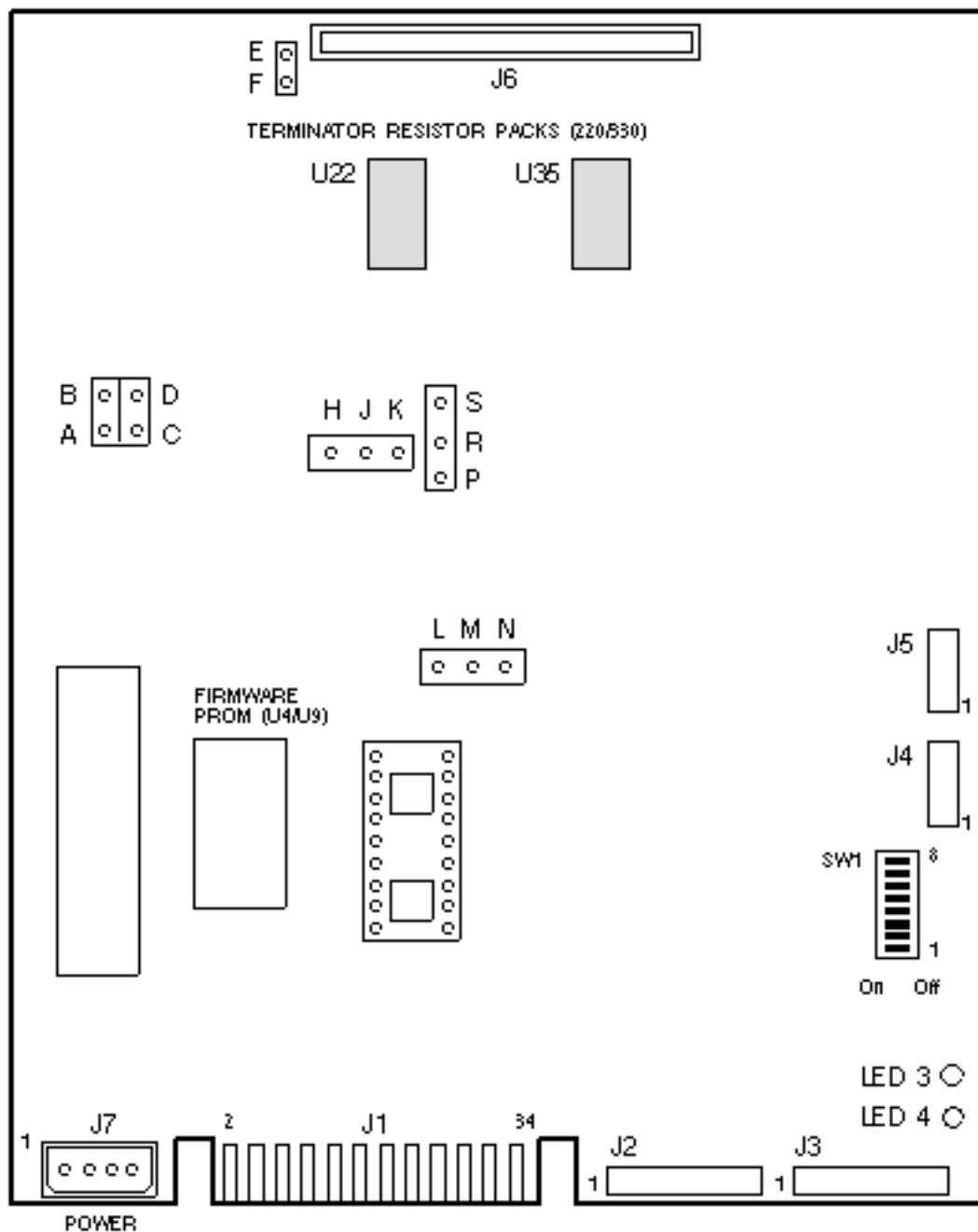
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Emulex MD21

Sun-4/260

Options 504 / 505 / 507 / 509 / 510 / 514 / 516 370-0552 / 370-1236



Power

1.6 Amps @ +5Vdc

8.0 Watts

Switch and Jumper Settings

DIP SWITCH	SETTING	DESCRIPTION
1	Off*	SCSI BUS ADDRESS/TARGET Bit 0-7
2	Off	
3	Off	
4	Off	Not used
5	Off	512 byte/sector
6	Off	Power on spin-up
7	Off	Soft errors reported
8	Off	Parity disabled

* For DeskTop Expansion Shoebox, Dip Switch 1 is ON for Target 1.

JUMPER	SETTING	DESCRIPTION
E, F*	Out	SCSI bus termination power option

* Jumpers E and F are not on Emulex Rev MD2110103.

Note

Install termination resistor packs on the last Tape/Disk Controller on the SCSI bus.

Reference

ESDI Disk Controller Configuration Procedures, 813-2022.

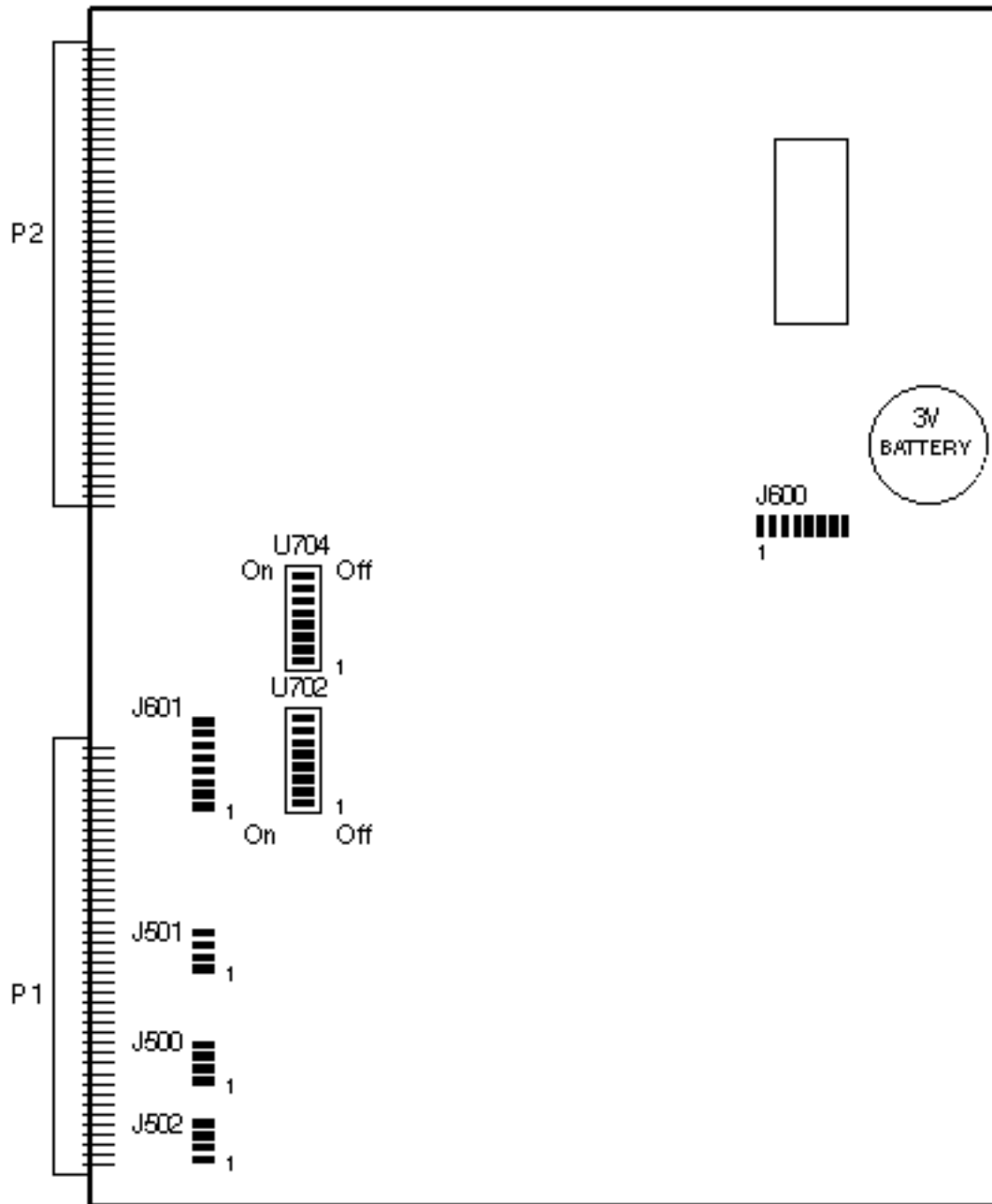
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-2 SCSI Host Adapter

Sun-4/260/280

501-1045



Power

2.8 Amps @ +5Vdc

14.0 Watts

Switch and Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J500	1-2	Out	Bus Grant 0 In
	3-4	Out	Bus Grant 1 In
	5-6	Out	Bus Grant 2 In
	7-8	In	Bus Grant 3 In
J501	1-2	In	Bus Request 0
	3-4	Out	Bus Request 1
	5-6	Out	Bus Request 2
	7-8	In	Bus Request 3
J502	1-2	Out	Bus Grant 0 In
	3-4	Out	Bus Grant 1 In
	5-6	Out	Bus Grant 2 In
	7-8	In	Bus Grant 3 In
J600 and J601	1-2	Out	Interrupt Level 0
	3-4	Out	Interrupt Level 1
	5-6	In	Interrupt Level 2
	7-8	Out	Interrupt Level 3
	9-10	Out	Interrupt Level 4
	11-12	Out	Interrupt Level 5
	13-14	Out	Interrupt Level 6
	15-16	Out	Interrupt Level 7

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
U702*	1-4	On/Off	Not connected
	5-8	On	A12 - A15
U704*	1-5	On	A16 - A20
	6	Off	A21
	7-8	On	A22 - A23

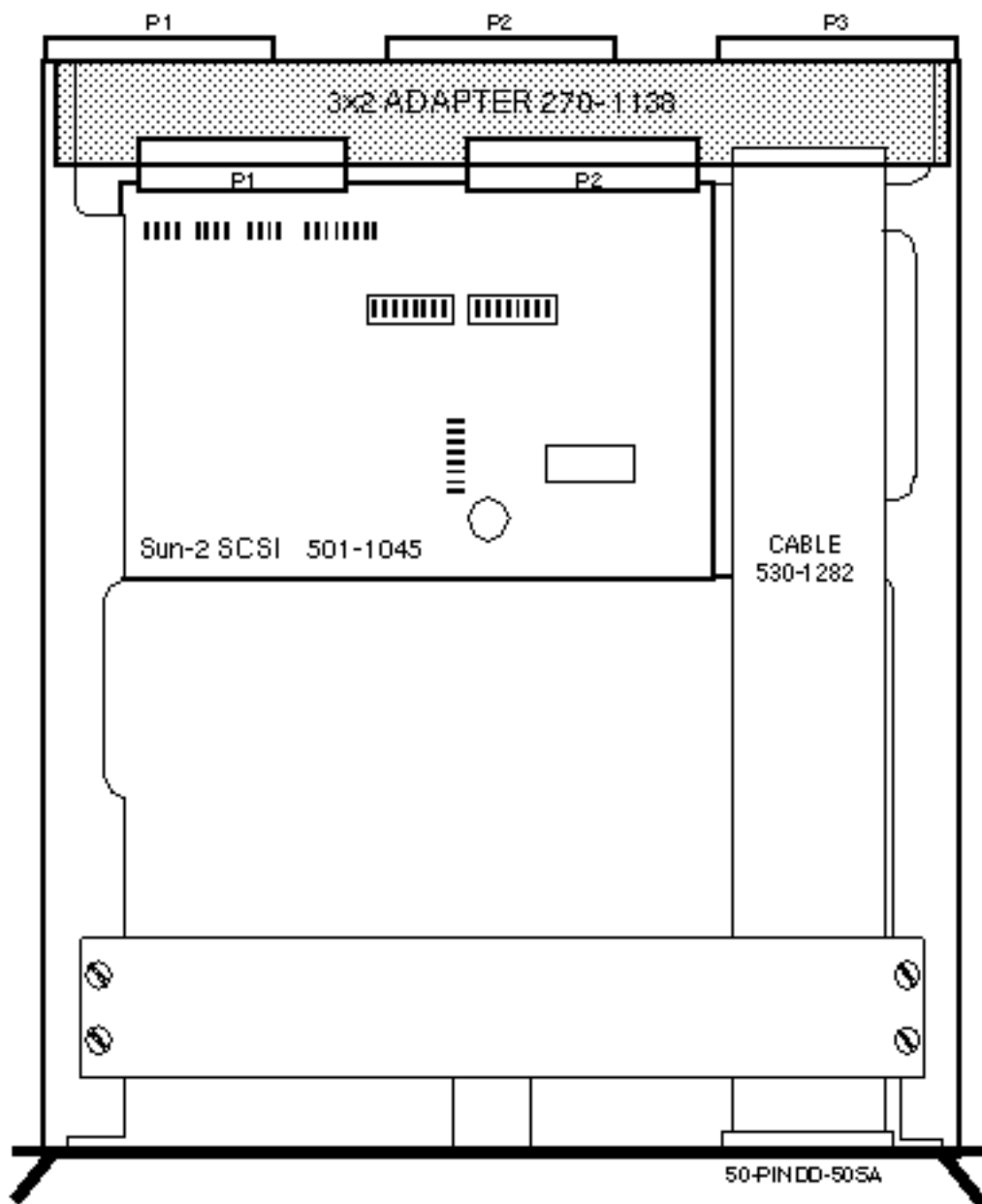
* U0702 and U0704 set the address to 0x200000 for the first SCSI

Sun-2 SCSI Host Adapter Assembly

Sun-4/280

501-1138

without P2A and P2C



Power

2.7 Amps @ +5Vdc

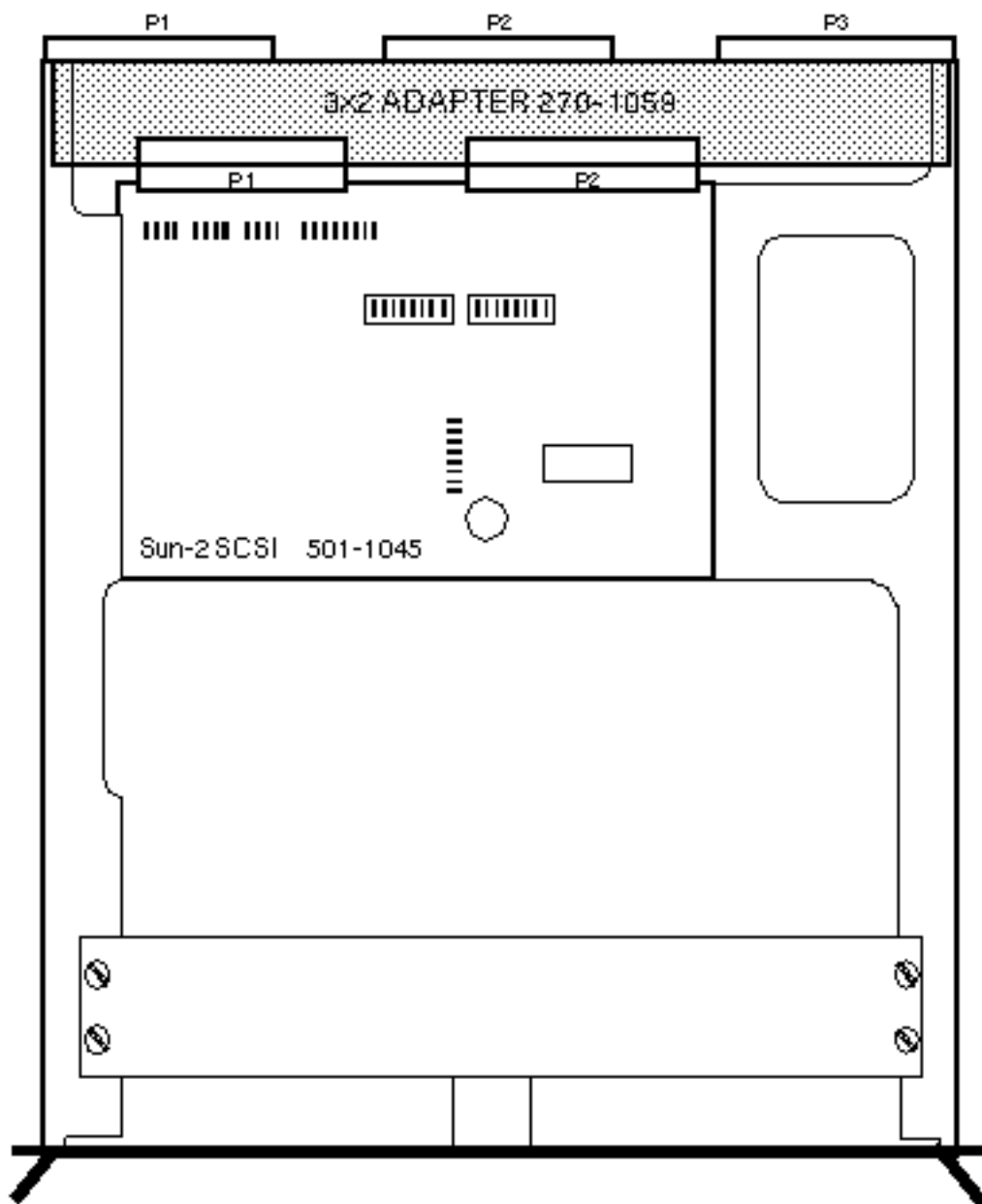
13.5 Watts

Sun-2 SCSI Host Adapter Assembly

Sun-4/260

501-1149

with P2A and P2C



Power

2.7 Amps @ +5Vdc

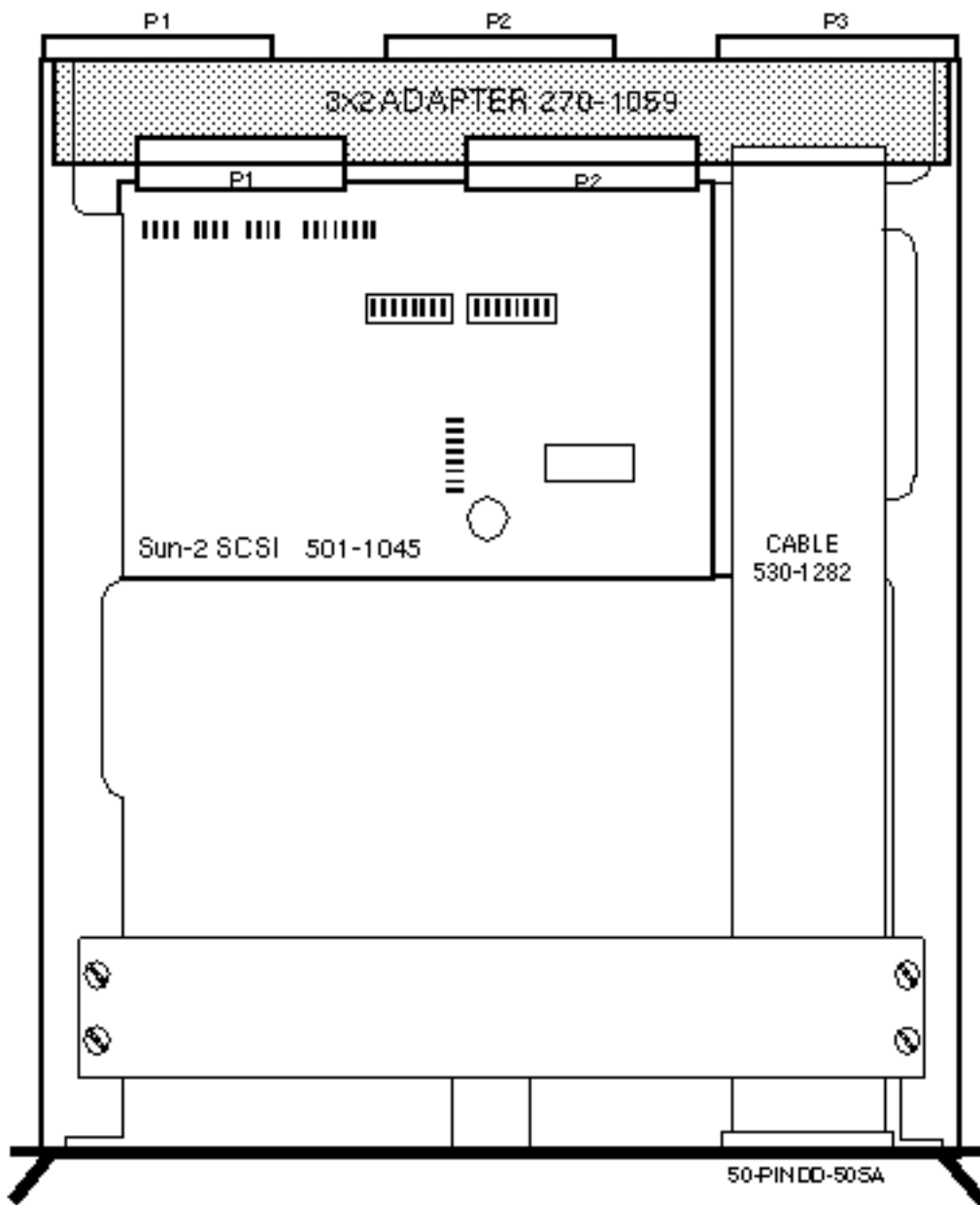
13.5 Watts

Sun-2 SCSI Host Adapter Assembly

Sun-4/280

501-1167

with P2A and P2C



Power

2.7 Amps @ +5Vdc

13.5 Watts

Last updated: December 2, 1996

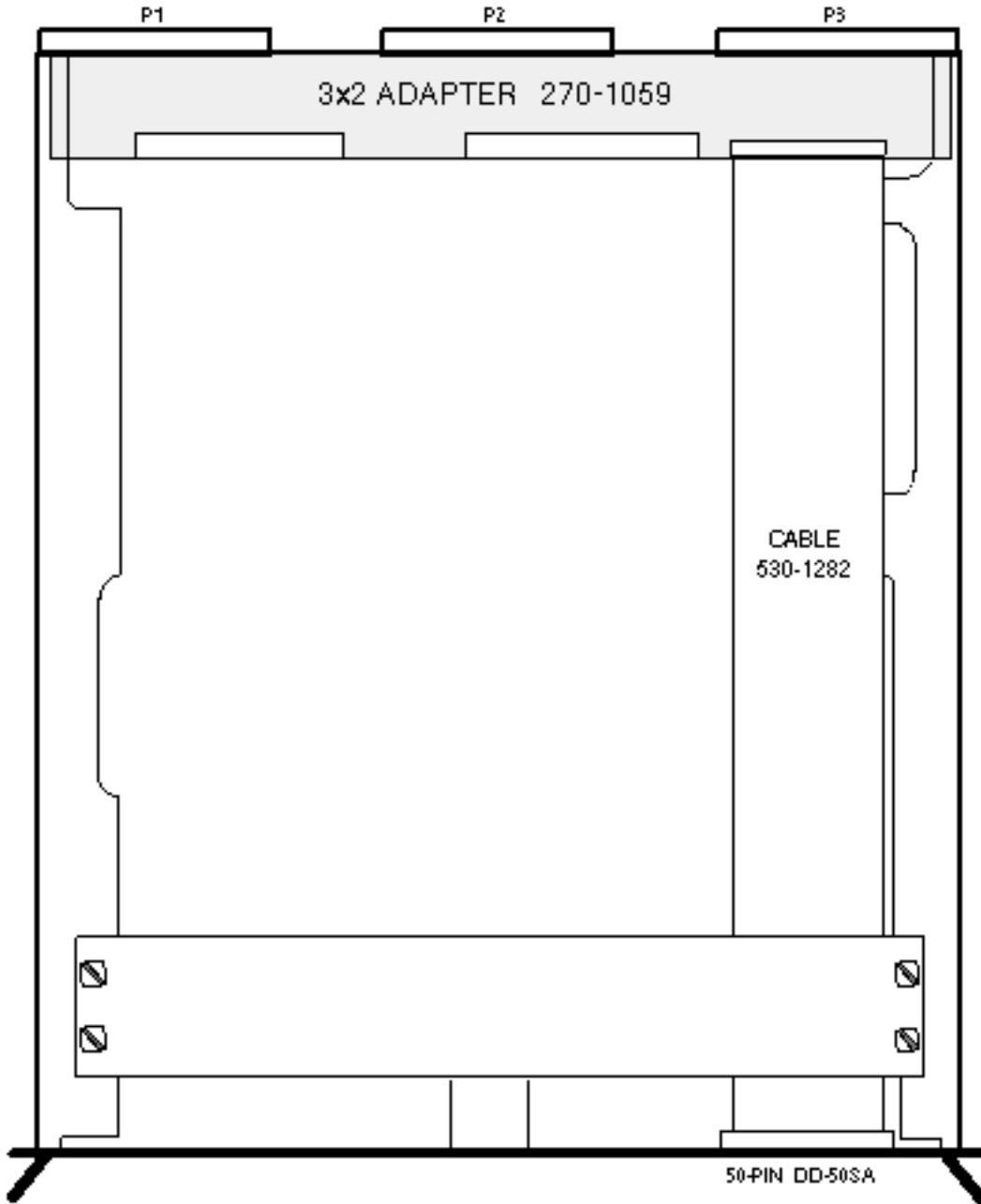
[Comments and Suggestions](#) 

Blank SCSI Adapter Assembly

Sun-4/360

501-1666

with P2A and P2C

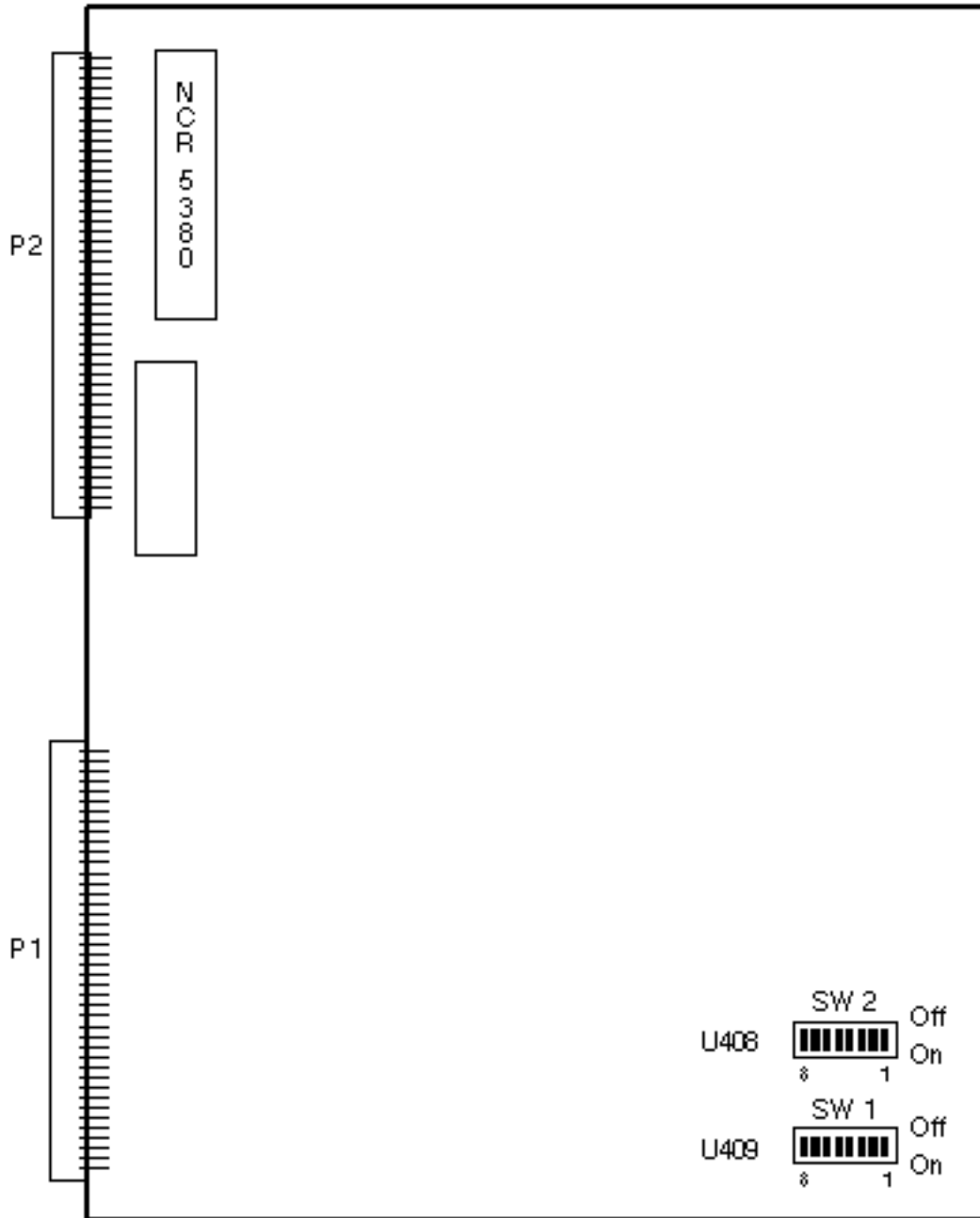


Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-3 SCSI Host Adapter

Sun-4/260/280/330/370/390/490
501-1236



Power

4.8 Amps @ +5Vdc

24.0 Watts

Switch Settings

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW1* U409	1	On	Address A23
	2	On	Address A22
	3	Off	Address A21
	4	On	Address A20
	5	On	Address A19
	6	On	Address A18
	7	On	Address A17
	8	On	Address A16
SW2* U408	1	On	Address A23
	2	On**	Address A22
	3	On	Address A21
	4	On	Address A20
	5	On	Address A19
	6	On/Off	Not Connected
	7	On/Off	Not Connected
	8	On/Off	Not Connected

*SW1 and SW2 set the address to 0X200000 for the first SCSI.

**SW2, Switch 2, OFF, sets the address to 0x204000 for the second SCSI.

Notes

1. Do NOT use the original release of this board, 501-1120-xx.
2. The Sun-3/1xx CPU must be 501-1074-22, 501-1094-22, 501-1134-06, 501-1163-09, 501-1164-09, or greater.
3. The Sun-3 SCSI must be \geq 501-1236-02, \geq 501-1170-06, or \geq 501-1217-03 when used with a SunLink Channel Adapter.
4. Set the base address as a second SCSI in Sun-4300 systems. The first SCSI Host Adapter is on the Sun 4300 CPU.
5. The Sun-3 SCSI must be \geq 501-1236-08 or \geq 501-1217-09 when used with the Sun-4400 CPU.
6. SCSI TERMPWR is provided on boards \geq 501-1236-08 and \geq 501-1217-09.

References

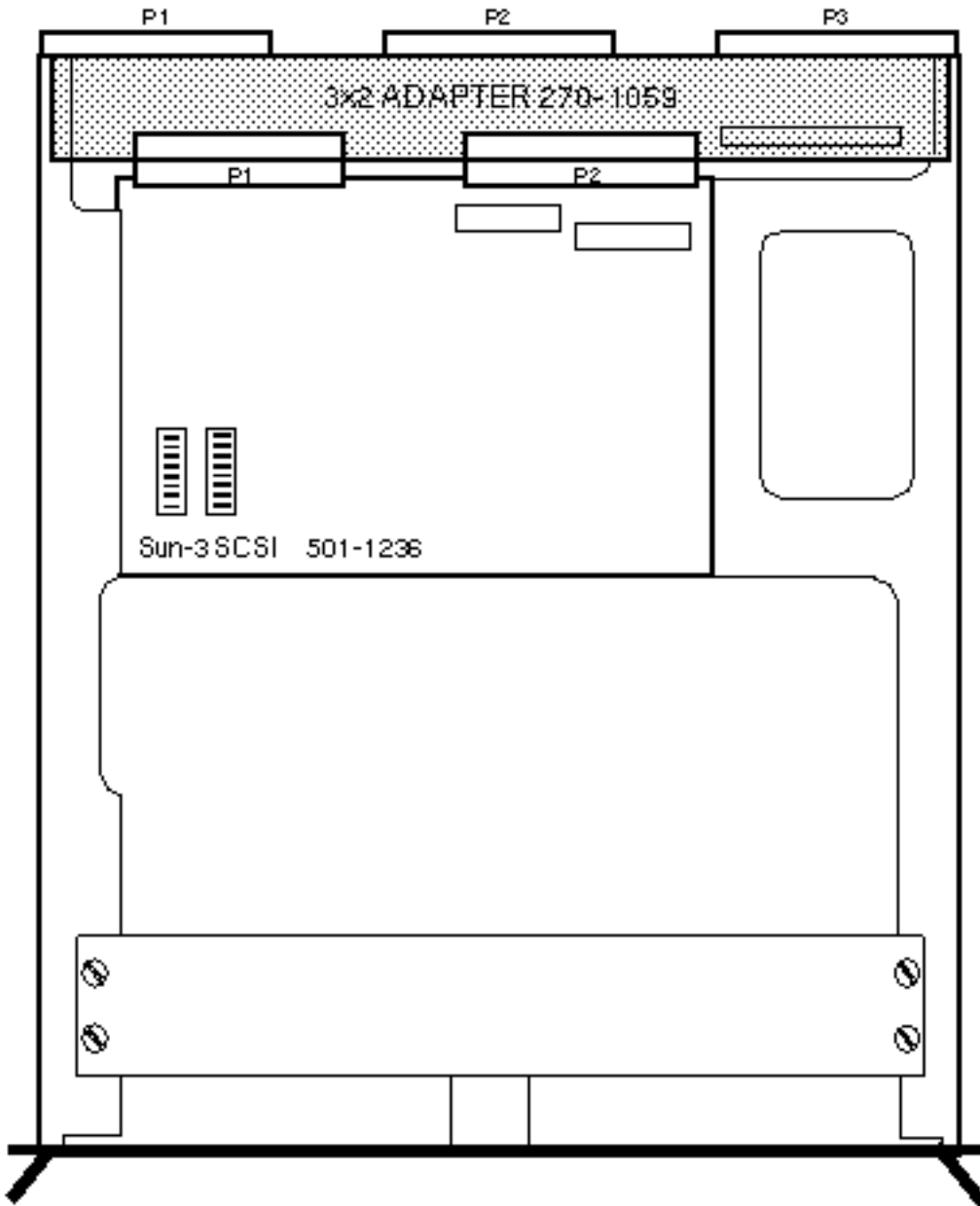
1. *Sun-3 SCSI Configuration Procedures*, 813-2007-01.
2. *Sun-3 SCSI Host Adapter Configuration Procedures*, 813-2077-11

Sun-3 SCSI Host Adapter Assembly

Sun-4/260

501-1170

with P2A and P2C



Power

4.8 Amps @ +5Vdc

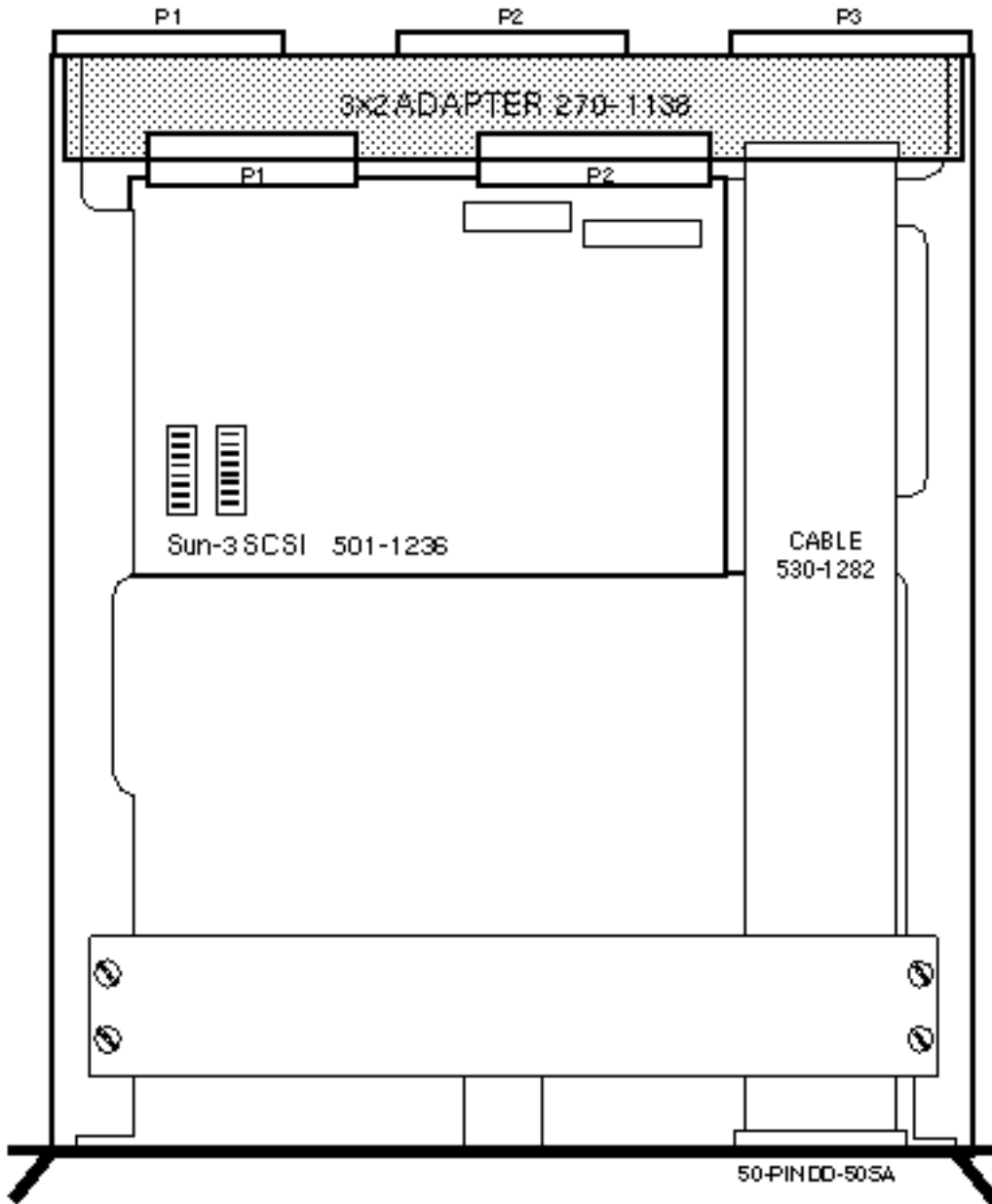
24.0 Watts

Sun-3 SCSI Host Adapter Assembly

Sun-4/280/330/370/390/470/490

501-1217

without P2A and P2C



Power

4.8 Amps @ +5Vdc

24.0 Watts

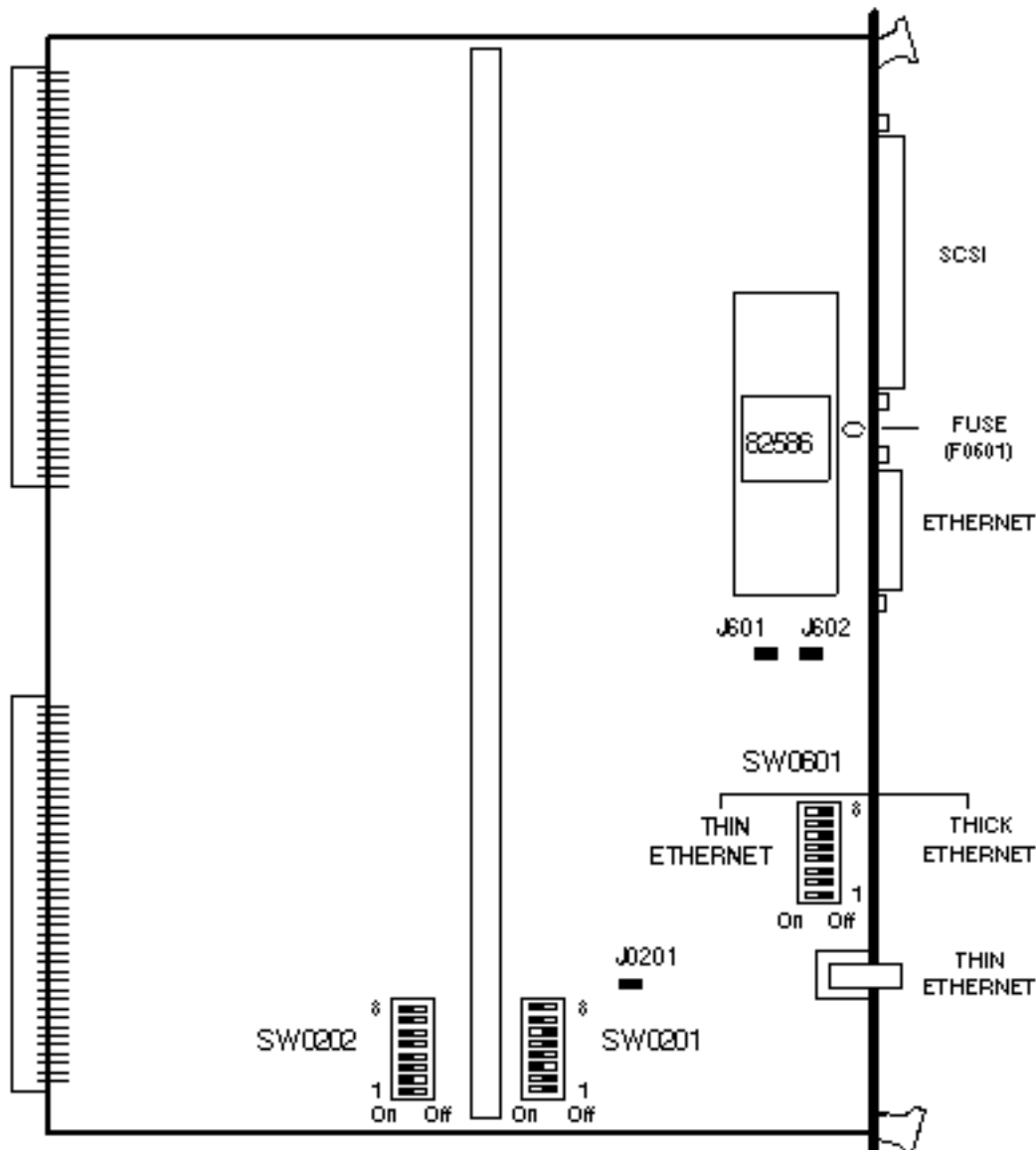
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-3/E SCSI/Ethernet

501-8027	501-1584
-----------------	-----------------

9U Assembly Ethernet Only



Power

4.1 Amps @ +5Vdc
20.5 Watts

Notes

1. Board revision 501-8027-06 or 501-1584-01 is required for use in any SPARC CPU based system.
2. The fuse is not replaceable.

3. When used with the Sun-4400 CPU, 501-1381, the board revision must be \geq 501-8027-07 or the assembly must be \geq 501-1584-02.
4. SCSI TERMPWR is provided on boards \geq 501-8027-07.

Reference

Sun SunNet Ethernet/VME Controller Configuration Procedures, 813-2082-10.

501-8027 Switch and Jumper Settings

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW0601	1-7	On	Enable Thin Ethernet
	1-7	Off	Enable Ethernet*

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW0201	1	Off	24/32-bit addressing
	2	Off/On	N/C
	3	*	A18 address decode
	4	*	A19 address decode
	5	*	A20 address decode
	6	Off	A21 address decode
	7	On	A22 address decode
	8	On	A23 address decode

* DIP Switch SW0201 settings for ie2, ie3, and ie4

SW0201	SWITCH 3	SWITCH 4	SWITCH 5	ADDRESS
1st Board	On	On	Off	31ff02
2nd Board	Off	On	Off	35ff02
3rd Board	Off	Off	On	2dff02

DIP SWITCH	SWITCH	SETTING	DESCRIPTION
SW0202	1	On	A24 address decode
	2	On	A25 address decode
	3	On	A26 address decode
	4	On	A27 address decode
	5	On	A28 address decode
	6	On	A29 address decode
	7	On	A30 address decode

JUMPER	PINS	SETTING	DESCRIPTION
J0201	1-2	In	Clock enable
J0601	1-2	In	Level 1 Ethernet
J0601	1-2	Out	Level 2 Ethernet
J0602	1-2	Out	VCC to Pin-7 disabled

Note: The SCSI base address under SunOS 3.5 diag is 31000.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

IPI

IPI Disk Controller

[ISP-80 / IPI-2](#)

IPI Disk Drives

[Seagate 97229-11G \(911MB\)](#)

[Seagate 97209-12G \(1.2GB\)](#)

[Seagate 975002-005 \(1.3GB\)](#)

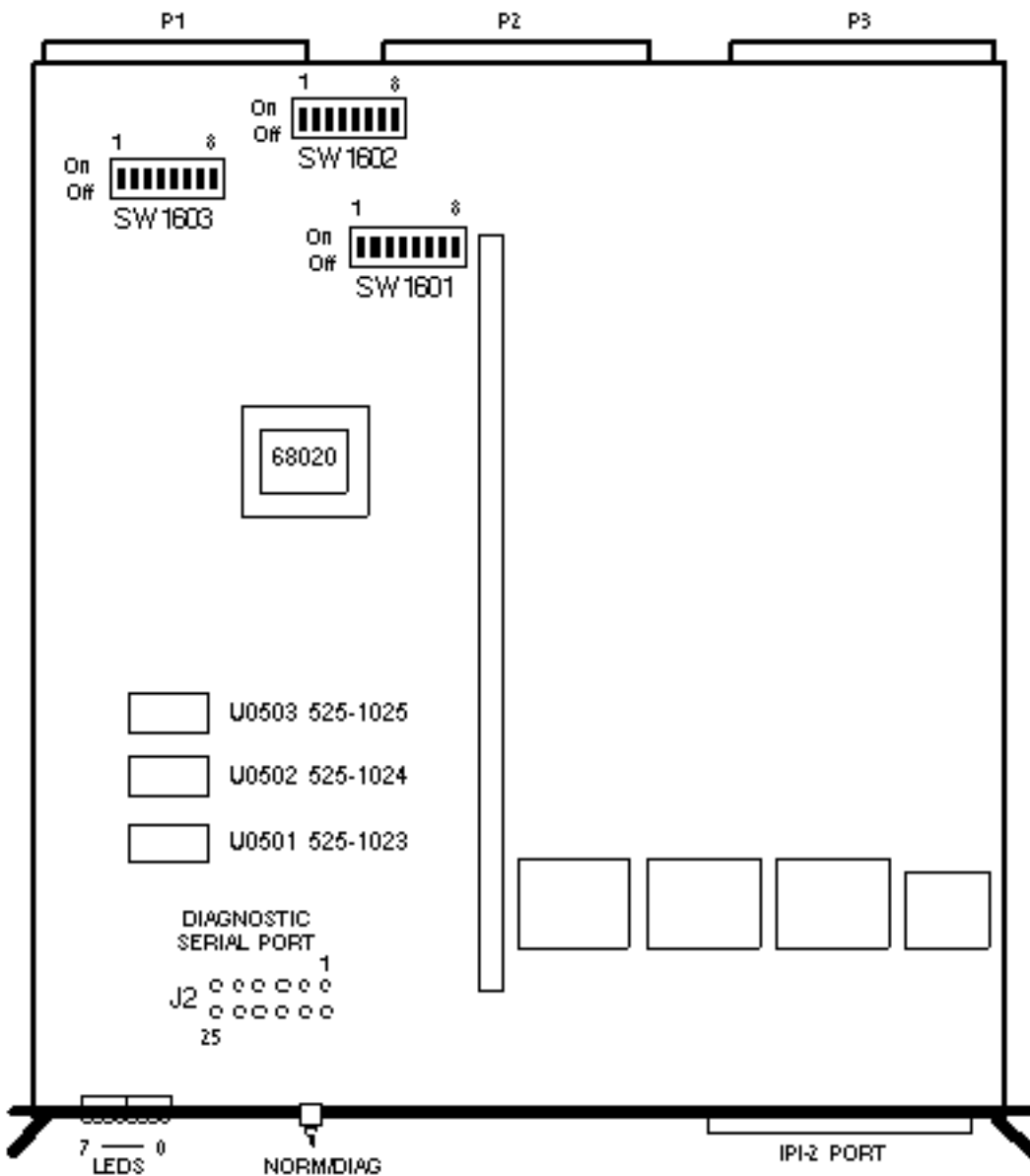
Last updated: December 2, 1996

[Comments and Suggestions](#) 

ISP-80 / IPI-2

Sun-4/390/470/490
SS670MP / SS690MP

Options 408 / 418
501-1539 / 501-1855



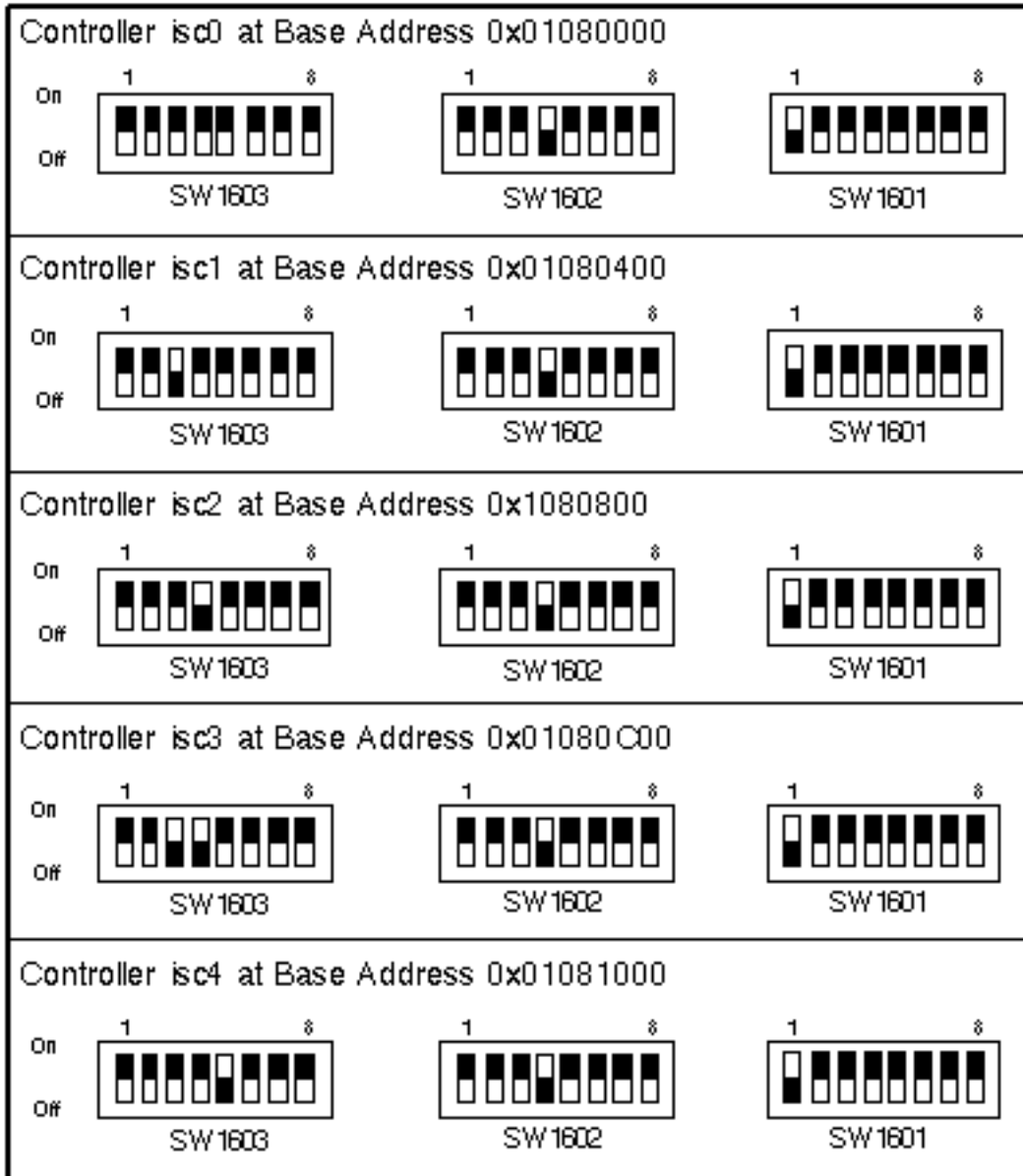
Power:

11.8 Amps @ +5Vdc
59.0 Watts

Base Address Select Switches

DIP SWITCH	1	2	3	4	5	6	7	8
SW1603	AM0	AM1	A10	A11	A12	A13	A14	A15
SW1602	A16	A17	A18	A19	A20	A21	A22	A23
SW1601	A24	A25	A26	A27	A28	A29	A30	A31

Switch and Jumper Settings



Note

Dip Switches 3, 4, and 5 of SW1603, select bits A10, A11, and A12 of the controller base address. These are the only switches changed to configure multiple controllers.

Jumper JM2

PINS	SETTING	DESCRIPTION
1-2	In	Enable UART clock

ISP-80 / IPI-2

A minimum ISP-80 firmware level is required to support these products.

PRODUCT	U0501	U0502	U0503
911MB Disk	525-1023-05	525-1024-07	525-1025-07
Prestoserve	525-1023-05	525-1024-08	525-1025-08
1.3GB Disk	525-1023-05	525-1024-08	525-1025-08
Dual Port	525-1023-05	525-1024-09	525-1025-09
SNC 1.2	525-1023-05	525-1024-10	525-1025-10

These ISP-80 part numbers have the firmware level required for the products listed.

PRODUCT	ISP-80	ISP-80
4400 CPU	501-1539-04	501-1855-01
911MB Disk	501-1539-05	501-1855-01
Prestoserve	501-1539-08	501-1855-02
1.3GB Disk	501-1539-09	501-1855-03
Dual Port	501-1539-09	501-1855-03
SNC 1.2	501-1539-10	501-1855-04
DP Bug fixes	501-1539-10	501-1855-04

Notes

1. Upgrade lower revision ISP-80 boards with firmware Option X2080A.
2. Do not install firmware Option X2080A on ISP-80 501-1539-06. An unused trace may cause a system reset. Replace the ISP-80.
3. Booting from an alternate controller (1, 2, 3, or 4) is not supported on the 4300 and 4400 systems. Refer to Bug ID 1027710.

References

1. *ISP-80 Disk Controller Configuration Procedures*, 813-2065-10.
2. *ISP-80 Disk Controller Installation and Configuration Procedures for the Sun 12-Slot Office Pedestal*, 813-1103-10.
3. *ISP-80 Disk Controller Installation and Configuration Procedures*, 813-1050-11.
4. *ISP-80 Disk Controller PROM Upgrade Manual*, 813-6089-11.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

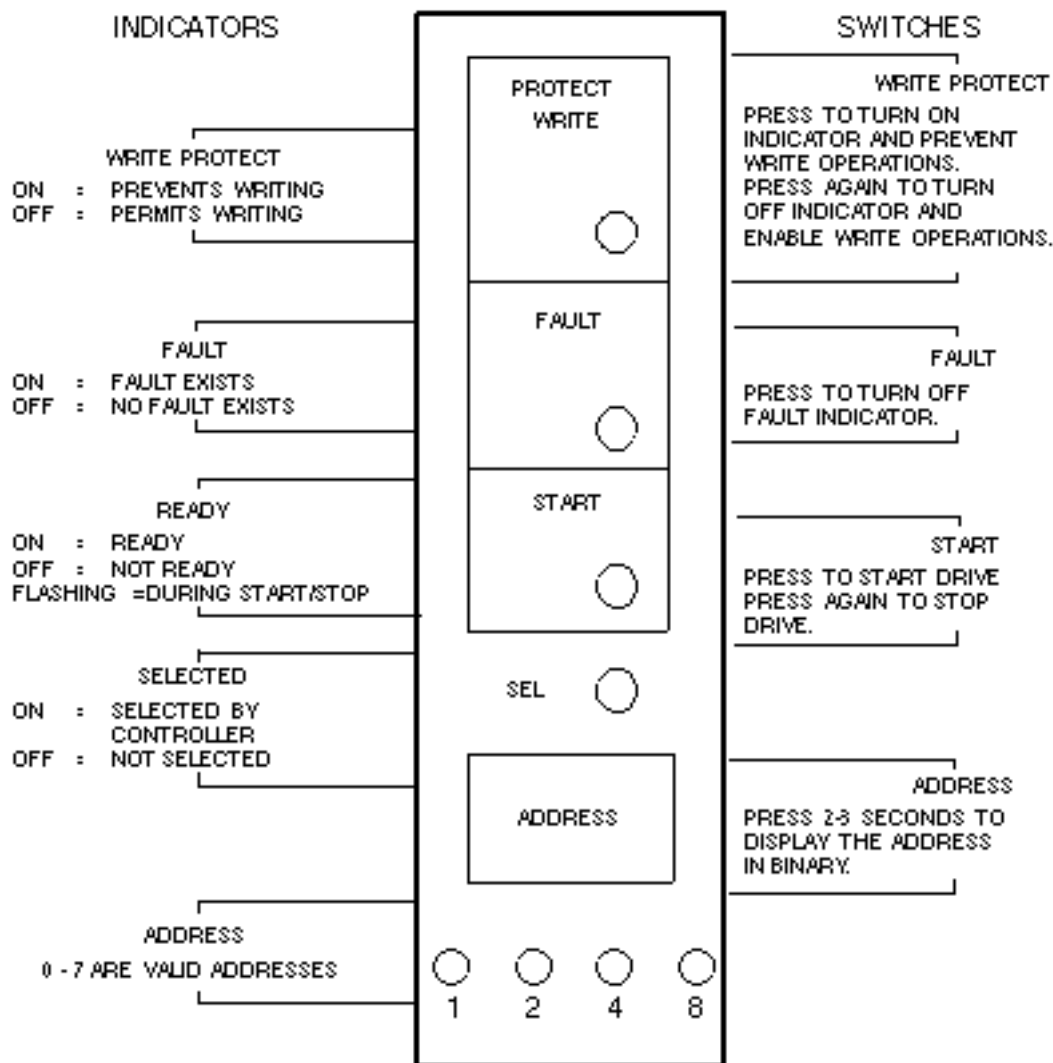
Seagate 97229-11G (911MB)

Equipment Number PA8Y2

8" 3600 RPM IPI-2 6MB/Sec

Options 716 / 717 / 719 / 720 / 741L / 742L / 743L / 744L / 745L

Operator Panel 370-1355



Note

Each drive power-on sequence is delayed for a time equal to five seconds times its address. For example, if the address is 3, the drive starts after a 15-second delay.

Disk Enclosure

370-1351	370-1352	540-2005	540-2008
Rackmount Disk w/o Power Supply w/o Tray	Pedestal Disk w/o Bracket	Rackmount Disk w Power Supply w Tray	Pedestal Disk w Bracket

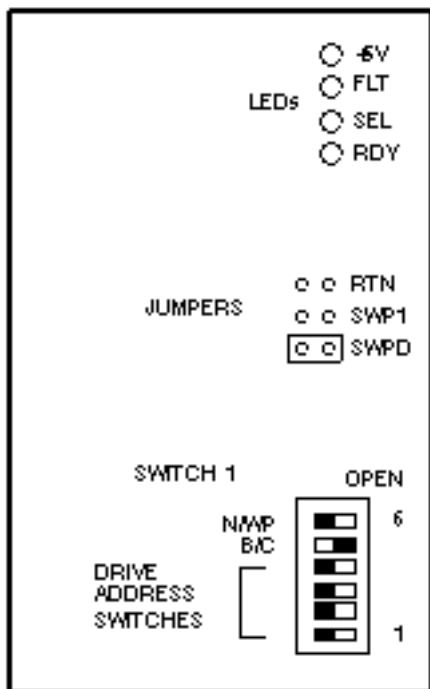
Control Board Dip Switch Settings

Dip Switch 1, Switches 1,2,3,4

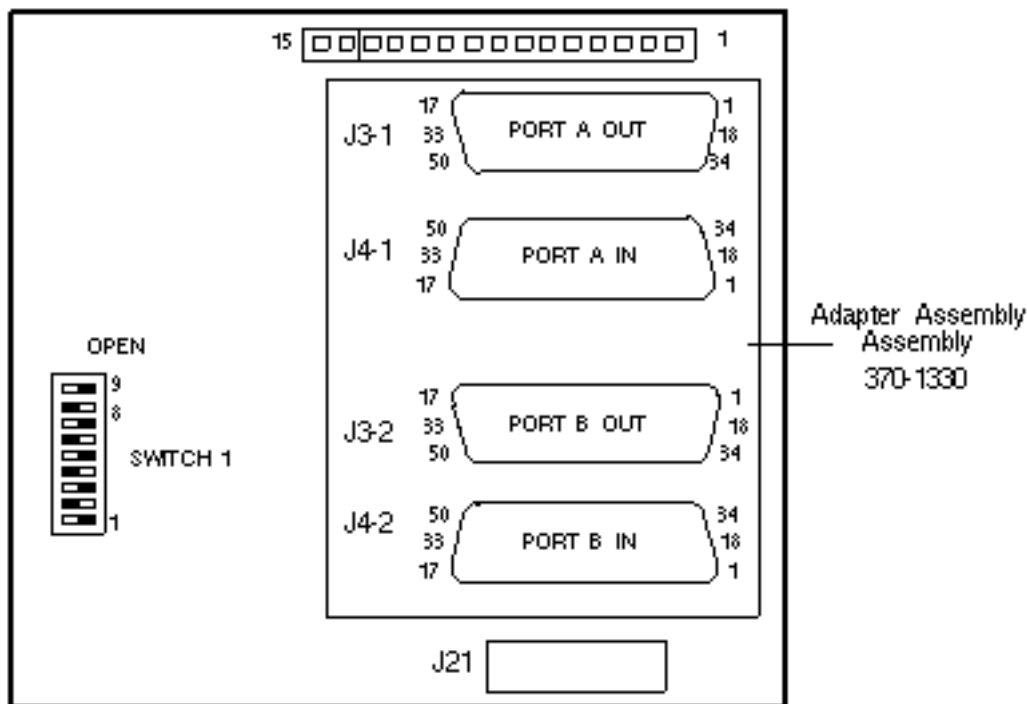
DRIVE	SWITCH 4	SWITCH 3	SWITCH 2	SWITCH 1
0	Closed	Closed	Closed	Closed
1	Closed	Closed	Closed	Open
2	Closed	Closed	Open	Closed
3	Closed	Closed	Open	Open
4	Closed	Open	Closed	Closed
5	Closed	Open	Closed	Open
6	Closed	Open	Open	Closed
7	Closed	Open	Open	Open

Dip Switch 1, Switches 5 and 6

SWITCH	DESCRIPTION
5	Not used
6	Open = Write protected Closed = Write enabled



I/O Board Rear View



Power Connector

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
+24	+24	+24	+24	+24	+24	N/C	PWR	-12	-5	-5	GND	GND	+5	+5
RTN				RTN	RTN		OK							

Dip Switch 1 Settings

SWITCH	SETTING	DESCRIPTION
1	Open	Drive starts when DC Power is applied
2	Closed	Disable Port B
3	Open	Enable Port A
4	Closed	Disable internal diagnostics

5	Open	1D 3	ID Microcode. Do Not Change
6	Closed	1D 2	"
7	Open	1D 1	"
8	Closed	1D 0	"
9	Open	Slave/Master spindle sync-slave	

Notes

1. The 911MB Disk requires minimum ISP-80 firmware 525-1023-05, 525-1024-07, and 525-1025-07.
2. ISP-80 501-1539-05 and 501-1855-01 contain the minimum firmware required by the 911MB Disk.
3. Upgrade lower revision ISP-80 Controller boards with Option X2080A.
4. Use terminator 370-1220-01 on the Port A/B Out connector.
5. Disable an unused port with the Port Enable/Disable switch.
6. Do not install a terminator on an unused port.
7. There are cooling vents on the cover of 911MB Drive 370-1351. Do not install this drive in the Sun Expansion Pedestal.
8. There are no cooling vents on the cover of 911MB Drive 370-1352. Do not install this drive in the Sun 56" Rack.
9. Power Supply 300-1052 does not support the 911MB Drive.
10. Use Power Supply 300-1075 in the Sun Expansion Pedestal.

References

1. *IPI8-1000/2HP Disk Drive Configuration and Installation Procedures for the Sun Expansion Pedestal*, 813-5377-11.
2. *PI8-1000 and IPI8-1000/2HP Disk Drive Configuration and Installation Procedures for the Sun 56-inch Cabinets*, 813-1109-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

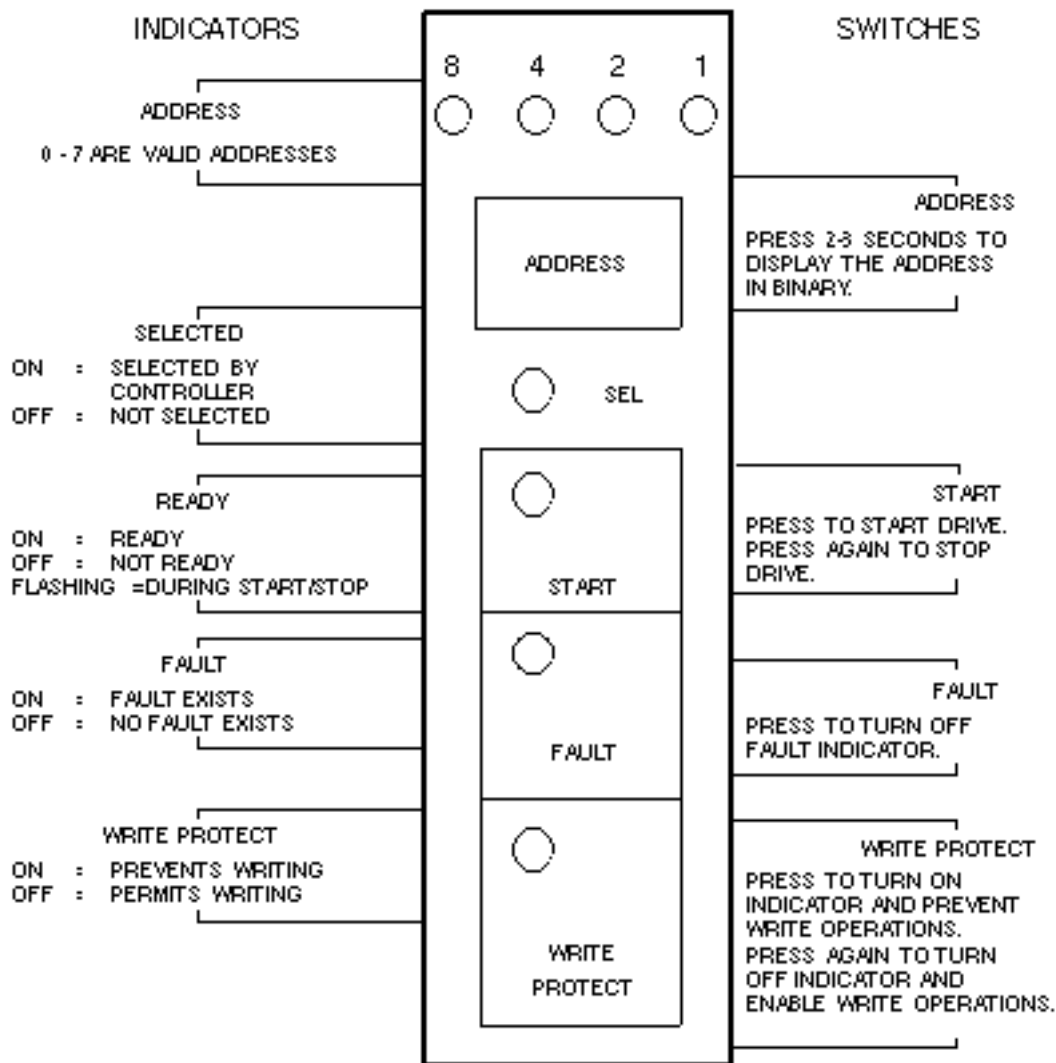
Seagate 97209-12G (1.2GB)

Equipment Number PA8R2

8" 3600 RPM IPI-2 3MB/Sec

Options 706 / 707 / 709 / 710 / 741A / 742A / 743A / 744A / 745A

Operator Panel 370-1221



Note

Each drive power on sequence is delayed for a time equal to five seconds times its address. For example, if the address is 3, the drive starts after a 15-second delay.

1.2GB Disk Enclosure

370-1187	370-1314	540-1770	540-1926
Rackmount Disk w/o Power Supply w/o Tray	Pedestal Disk w/o Bracket	Rackmount Disk w Power Supply w Tray	Pedestal Disk w Bracket

Control Board Dip Switch Settings

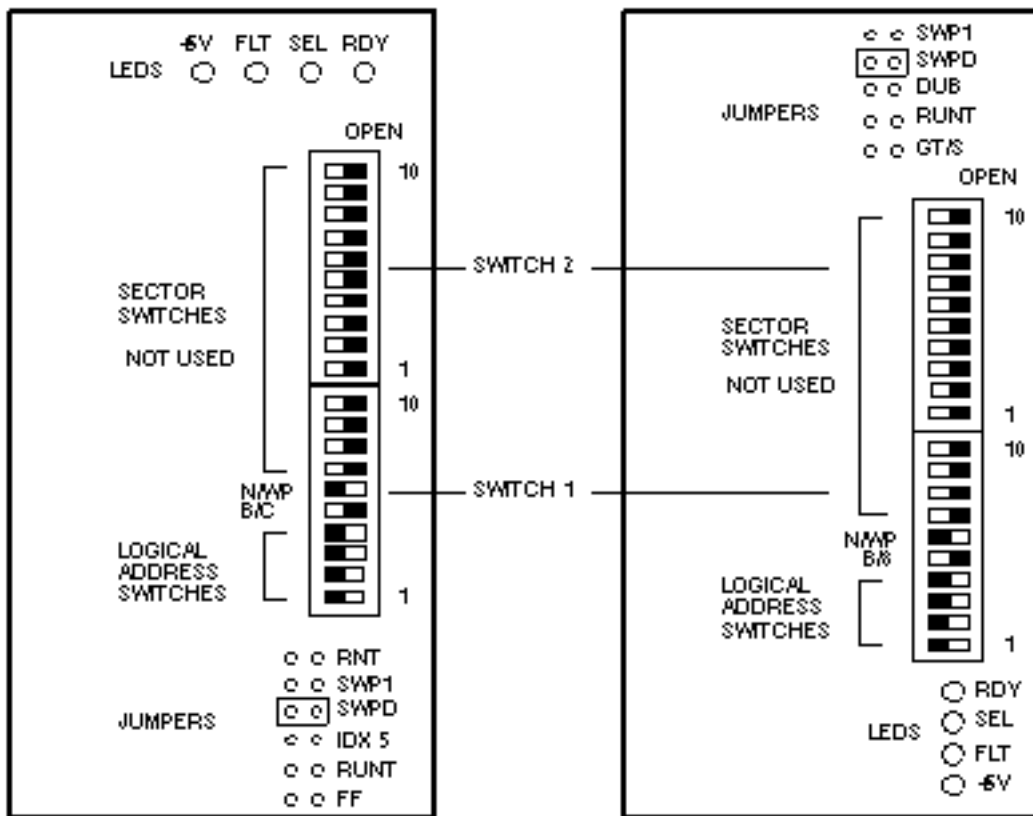
Dip Switch 1, Switches 1,2,3,4

DRIVE	SWITCH 4	SWITCH 3	SWITCH 2	SWITCH 1
0	Closed	Closed	Closed	Closed
1	Closed	Closed	Closed	Open
2	Closed	Closed	Open	Closed
3	Closed	Closed	Open	Open
4	Closed	Open	Closed	Closed
5	Closed	Open	Closed	Open
6	Closed	Open	Open	Closed
7	Closed	Open	Open	Open

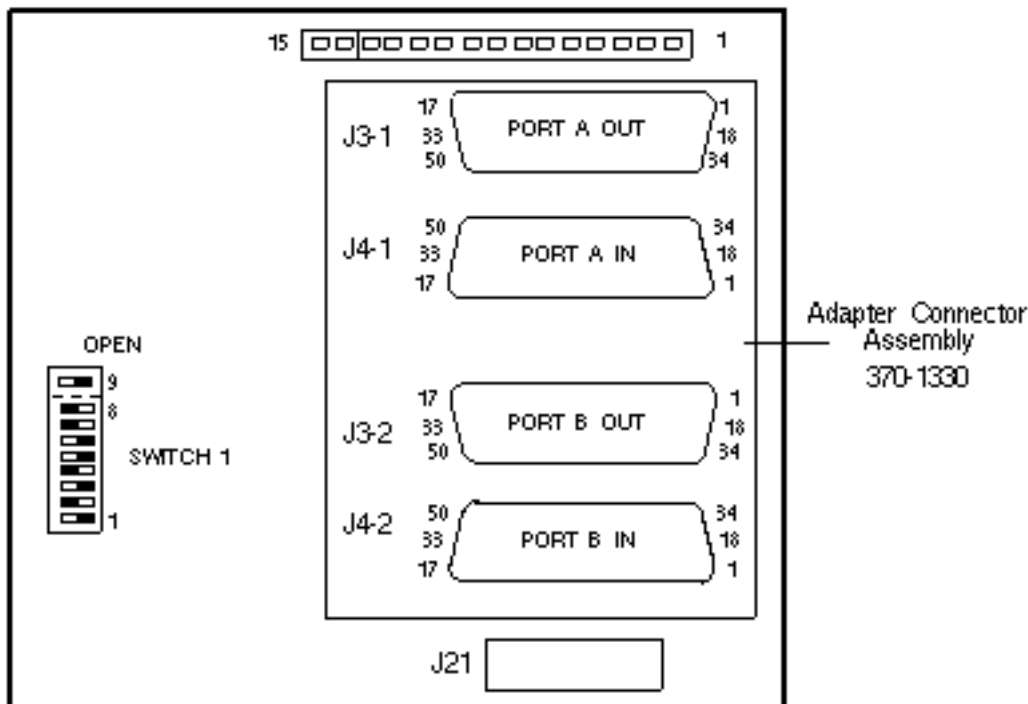
Dip Switch 1, Switches 5 and 6

SWITCH	DESCRIPTION
5	Not used
6	Open = Write protected Closed = Write enabled

Control Board Types



I/O Board Rear View



Power Connector

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
+24	+24	+24	+24	+24	+24	N/C	PWR	-12	-5	-5	GND	GND	+5	+5
RTN				RTN	RTN		OK							

Dip Switch 1 Settings

SWITCH	SETTING	DESCRIPTION

1	Open	Drive starts when DC Power is applied	
2	Closed	Disable Port B	
3	Open	Enable Port A	
4	Closed	Disable internal diagnostics	
5	Open	1D 3	ID Microcode. Do Not Change
6	Closed	1D 2	"
7	Open	1D 1	"
8	Closed	1D 0	"
9	Open	Slave/Master spindle sync-slave	

Notes

1. Use terminator 370-1220-01 on the Port A/B Out connector.
2. Disable an unused port with the Port Enable/Disable switch.
3. Do not install a terminator on an unused port.
4. Switch 9 is on I/O board LYBX. It is not on I/O board BXDX.
5. Do not install Disk Drive 370-1187 in the Sun Expansion Pedestal if there are cooling vents on the top cover.
6. Power Supply 300-1052-02 does not support 1.2GB Disk Drives.
7. Power Supply 300-1052-03 supports two 1.2GB Disk Drives. Power must be distributed between the two 410 Watt modules.
8. Power Supply 300-1052-04 supports four 1.2GB Disk Drives.
9. Power Supply 300-1052-05 does not support 1.2GB Disk Drives.
10. Use Power Supply 300-1075 in the Sun Expansion Pedestal.

References

1. *IPI8-1000/2HP Disk Drive Configuration and Installation Procedures or the Sun Expansion Pedestal*, 813-5377-11.
2. *IPI8-1000 and IPI8-1000/2HP Disk Drive Configuration and Installation Procedures for the Sun 56-inch Cabinets*, 813-1109-10.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Seagate 975002-005 (1.3GB)

Equipment Number PA4F2/ST41201K

5 1/4" / 5400 RPM / IPI-2 / 3.25-4.5MB/Sec

Sun-4/490 / SS690MP

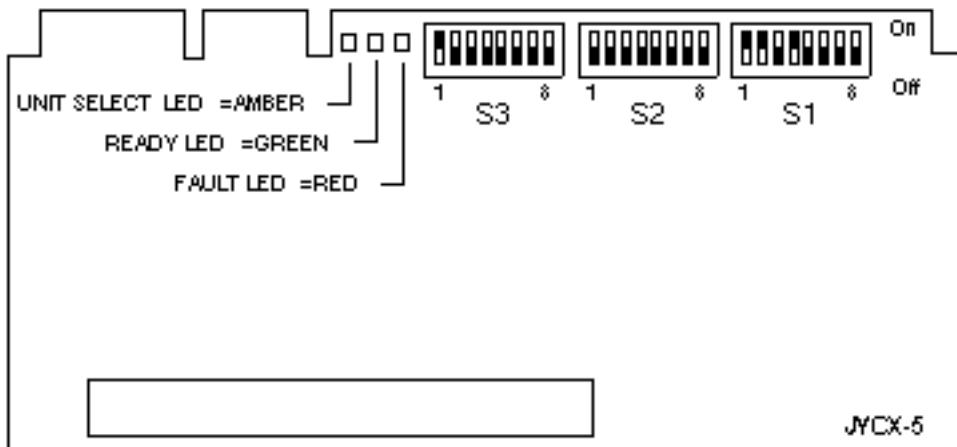
Options 726 / 727 / 728

370-1378	540-2127
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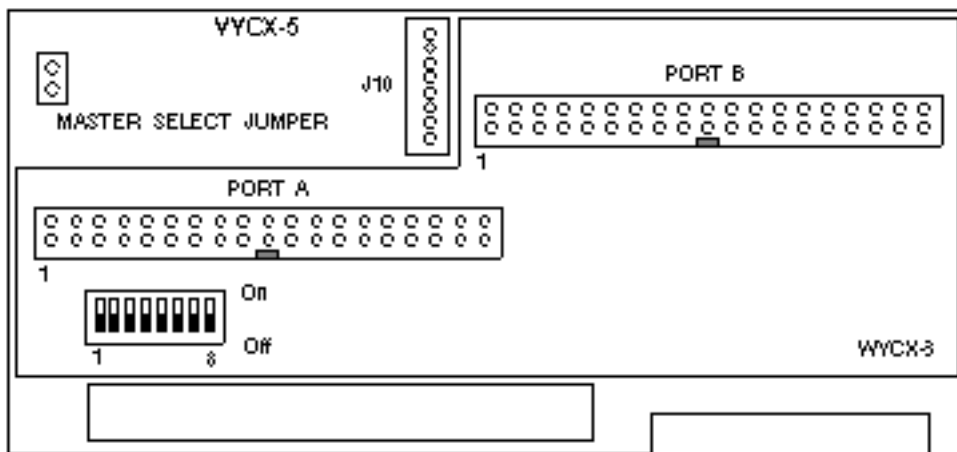
w/o Bracket 3 1/2" Height

FRU w Bracket

Servo Board



I/O Board and I/O Transceiver Board



Power:

2.7 Amps @ +5Vdc

2.0 Amps @ +12Vdc

37.5 Watts

Servo Board Switch Settings

S1

SWITCH	SETTING	DESCRIPTION
1	On	Enable sweep cycle
2	On	Controller-driven sweep cycle
3	Off	Manufacturing test switch
4	On	Write enable
5	Off	Unit select switch 0
6	Off	Unit select switch 1
7	Off	Unit select switch 2
8	Off	Unit select switch 3

S2

SWITCH	SETTING	DESCRIPTION
1	Off	Sector switch 2^8
2	Off	Sector switch 2^9
3	Off	Sector switch 2^{10}
4	Off	Sector switch 2^{11}
5	Off	Sector switch 2^{12}
6	Off	Sector switch 2^{13}
7	Off	Sector switch 2^{14}
8	Off	Runt sector switch

S3

SWITCH	SETTING	DESCRIPTION
1	On	Sector switch 2^0
2	Off	Sector switch 2^1
3	Off	Sector switch 2^2
4	Off	Sector switch 2^3
5	Off	Sector switch 2^4
6	Off	Sector switch 2^5
7	Off	Sector switch 2^6
8	Off	Sector switch 2^9

I/O Transceiver Board Switch Settings

SWITCH	SETTING	DESCRIPTION
1	Off	Spindle starts at power on
2	Off	Enable Port B
3	Off	Enable Port A
4	Off	Enable internal diagnostics
5	Off	Microcode ID3
6	Off	Microcode ID2
7	Off	Microcode ID1
8	Off	Microcode ID0

Notes

1. The minimum operating system is SunOS 4.1.1.
2. SunOS 4.1.1 and SunOS 4.1.1 Rev B require the *1.3GB Disk Drive Enhancement* (format.dat).
3. The 1.3GB Disk requires minimum ISP-80 firmware, 525-1023-05, 525-1024-09, and 525-1025-09.
4. ISP-80 501-1539-09 and 501-1855-03 contain the minimum firmware required by the 1.3GB Disk.
5. Upgrade lower revision ISP-80 Controller boards with Option X2080A.
6. IPI Cables without toroids, 530-1487 and 530-1518, can be used with the Sun-4/490.

Reference

Sun 1.3GB IPI Tray and Disk Drive Installation/Service Manual, 800-6676.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Graphics

VMEbus

- [GP Graphics Processor](#)
- [GP+ Graphics Processor Plus](#)
- [GP Graphics Buffer](#)
- [CG3 Sun 3160 Color Frame Buffer](#)
- [CG5 Color Frame Buffer](#)
- [GP2 Graphics Processor](#)
- [CG9 24-bit Color Frame Buffer](#)
- [TAAC-1 Application Accelerator](#)
- [VX and MVX Visualization Accelerators](#)
- [Sun-3/E Monochrome Frame Buffer](#)
- [Sun-3/E Color Frame Buffer](#)

P4 Bus

- [MG3 ECL Monochrome Frame Buffer](#)
- [MG4 Analog/ECL Frame Buffer](#)
- [CG4 Color Frame Buffer](#)
- [CG6 Color Frame Buffer](#)
- [CG8 24-bit Color Frame Buffer](#)

SBus

- [MG1 ECL Monochrome Frame Buffer](#)
- [MG2 Analog Frame Buffer](#)
- [CG3 Color Frame Buffer](#)

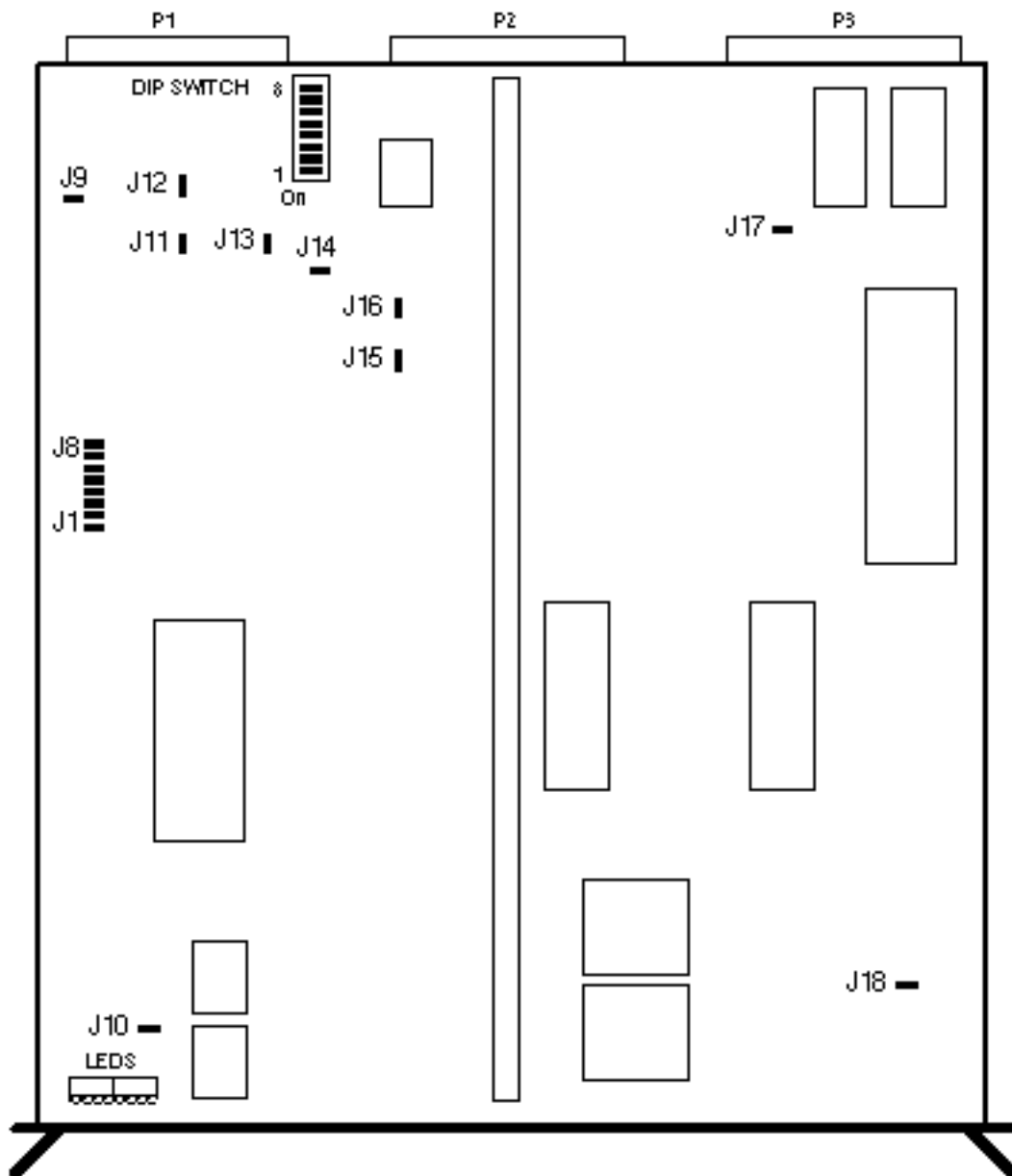
Last updated: December 2, 1996

[Comments and Suggestions](#) 

GP Graphics Processor

Sun-4/150/260/280/330/350/360/370/380

501-1055



UNIX ID: /dev/gpone0a-d

Power GP

16.4 Amps @ +5Vdc

82.0 Watts

Jumper and Switch Settings

JUMPER	SETTING	DESCRIPTION
J1	Out	GP board ID bit 3
J2	In	GP board ID bit 4
J3	In	GP board ID bit 2
J4	Out	GP board ID bit 5
J5	Out	GP board ID bit 1
J6	Out	GP board ID bit 6
J7	In if GB is installed	GP board ID bit 0
J8	Out	GP board ID bit 7
J9	Out*	GND test point
J10	Out*	GND test point
J11	Out*	PP halt test point
J12	Out*	VP halt test point
J13	Out*	Manual reset test point
J14	In	Main clock connect
J15	Out	VP free-running CLK test point
J16	Out	PP free-running CLK test point
J17	Out*	GND test point
J18	Out	GND test point

*Hardwired

DIP SWITCH	SETTING	DESCRIPTION
UR11-1	On	VME address bit 17
UR11-2	Off	VME address bit 16
UR11-3	On	VME address bit 23
UR11-4	On	VME address bit 22
UR11-5	Off	VME address bit 21
UR11-6	On	VME address bit 20
UR11-7	On	VME address bit 19
UR11-8	On	VME address bit 18

Notes

1. The Sun-2/160 Power Supply requires RC Network 540-1300-01.
2. The default base address is 0x210000.

Reference

Hardware Installation Manual for the Sun-2/130 and Sun-2/160, 800-1144.

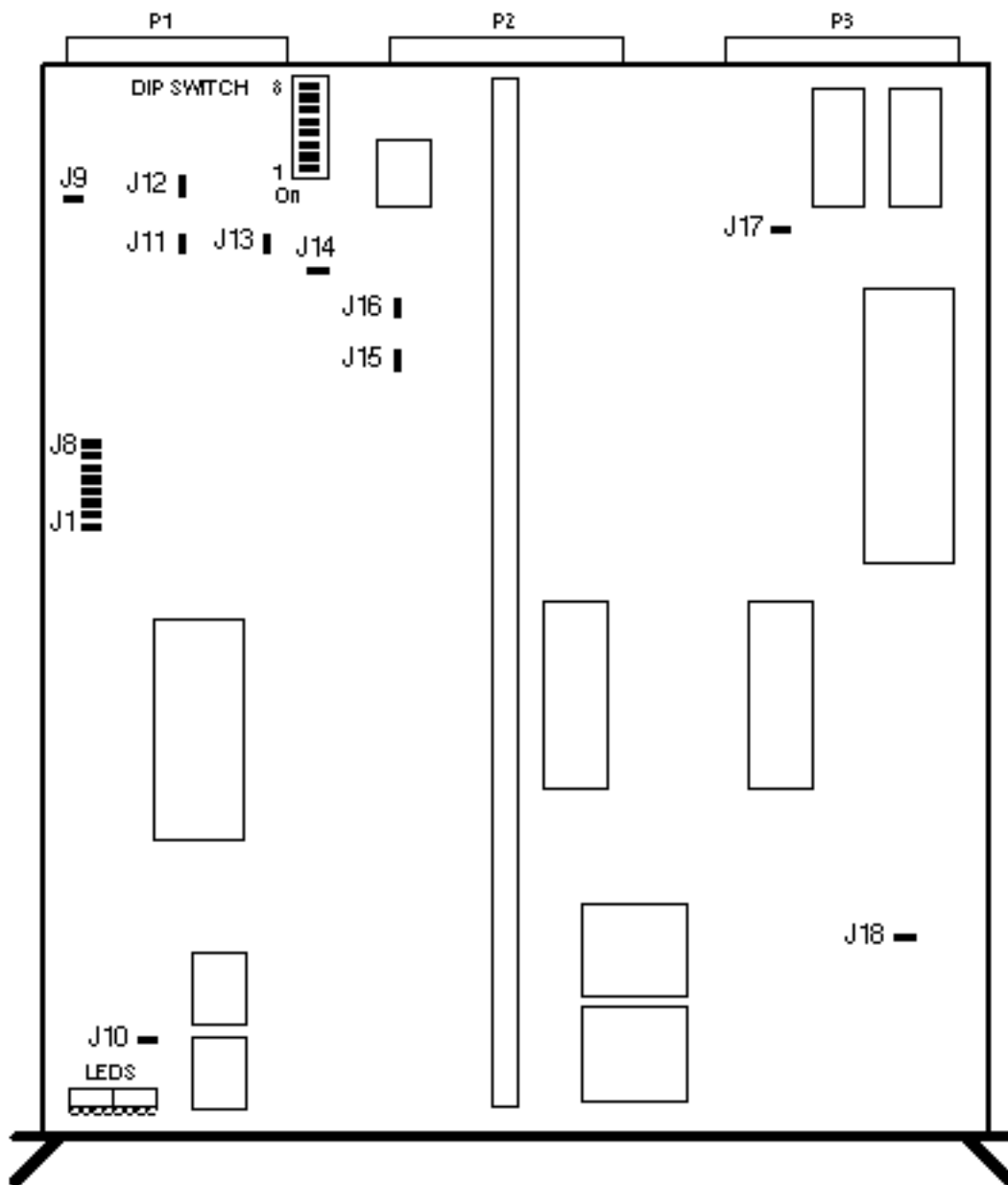
Last updated: December 2, 1996

[Comments and Suggestions](#) 

GP+ Graphics Processor Plus

Sun-4/150/260/280/330/350/360/370/380

501-1139



UNIX ID: /dev/gpone0a-d

Power GP+

14.6 Amps @ +5Vdc

73.0 Watts

Jumper and Switch Settings

JUMPER	SETTING	DESCRIPTION
J1	Out	GP board ID bit 3
J2	In	GP board ID bit 4
J3	In	GP board ID bit 2
J4	Out	GP board ID bit 5
J5	Out	GP board ID bit 1
J6	Out	GP board ID bit 6
J7	In if GB is installed	GP board ID bit 0
J8	Out	GP board ID bit 7
J9	Out*	Ground test point
J10	Out*	Ground test point
J11	Out*	PP halt test point
J12	Out*	VP halt test point
J13	Out*	Manual reset test point
J14	In	Main clock connect
J15	Out	VP free-running CLK test point
J16	Out	PP free-running CLK test point
J17	Out*	Ground test point
J18	Out	Ground test point

*Hardwired

DIP SWITCH	SETTING	DESCRIPTION
UR11-1	On	VME address bit 17
UR11-2	Off	VME address bit 16
UR11-3	On	VME address bit 23
UR11-4	On	VME address bit 22
UR11-5	Off	VME address bit 21
UR11-6	On	VME address bit 20
UR11-7	On	VME address bit 19
UR11-8	On	VME address bit 18

Notes

1. The Sun-2/160 Power Supply requires RC Network 540-1300-01.
2. The default base address is 0x210000.

Reference

Graphics Processor Plus Configuration Procedures, 813-2023.

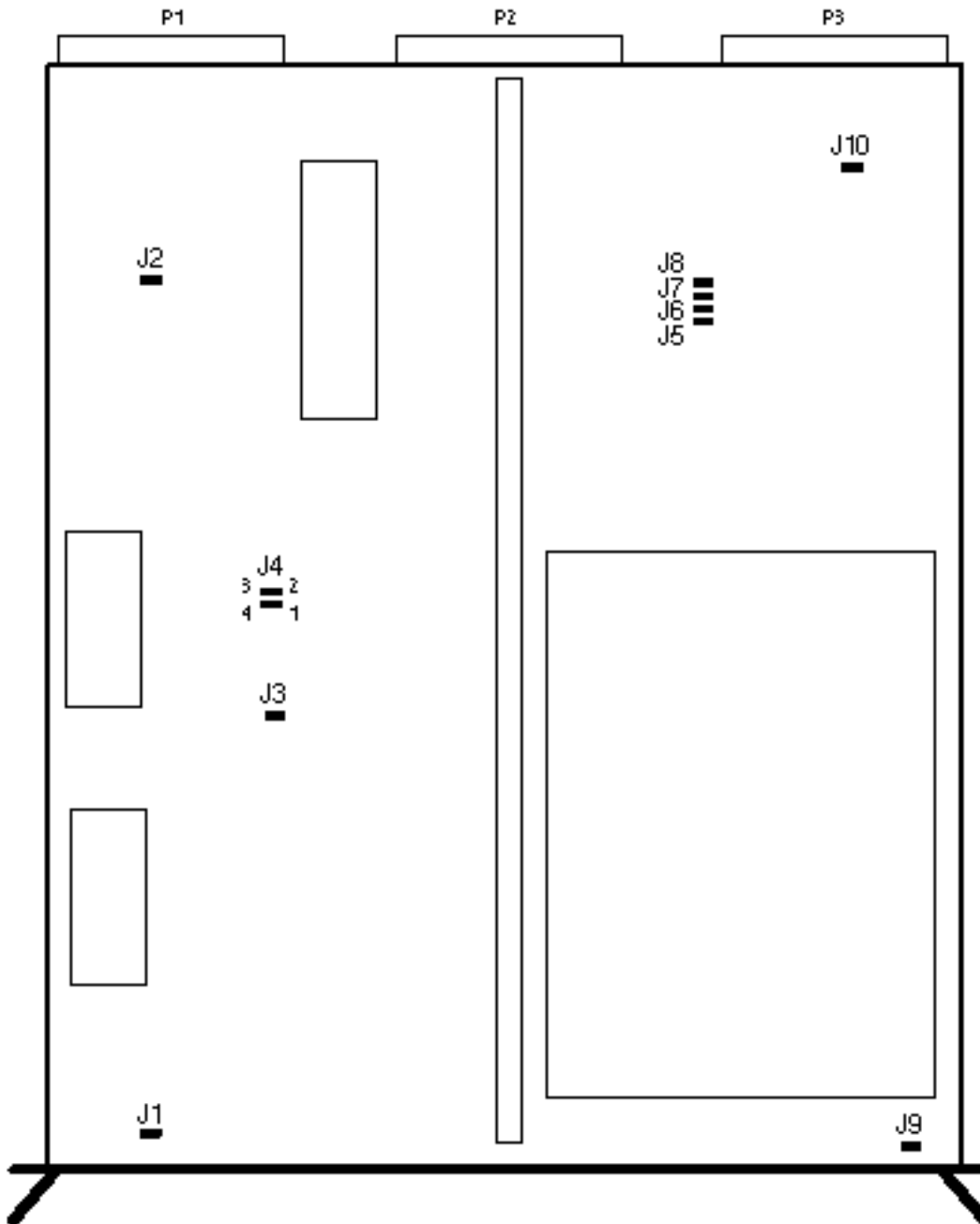
Last updated: December 2, 1996

[Comments and Suggestions](#) 

GP Graphics Buffer

Sun-4/150/260/280/360/370/380

501-1058



Power

2.1 Amps @ +5Vdc

10.5 Watts

Jumper and Switch Settings

JUMPER	SETTING	DESCRIPTION
J1	Out	Ground test point
J2	Out	Ground test point
J3	Out	Manual reset test point
J4 (2-3)	In	Graphics buffer = 2MB
J5	In/Out*	Refresh interval test point bit 0
J6	In/Out*	Refresh interval test point bit 1
J7	In/Out*	Refresh interval test point bit 2
J8	In/Out*	Refresh interval test point bit 2
J9	Out	Ground test point
J10	Out	Ground test point

*Hardwired

Notes

The Sun-2/160 Power Supply requires RC Network, 540-1300-01, (FCO 160-0002, Doc 807-0029).

Reference

Hardware Installation Manual for the Sun-2/130 and Sun-2/160, 800-1144.

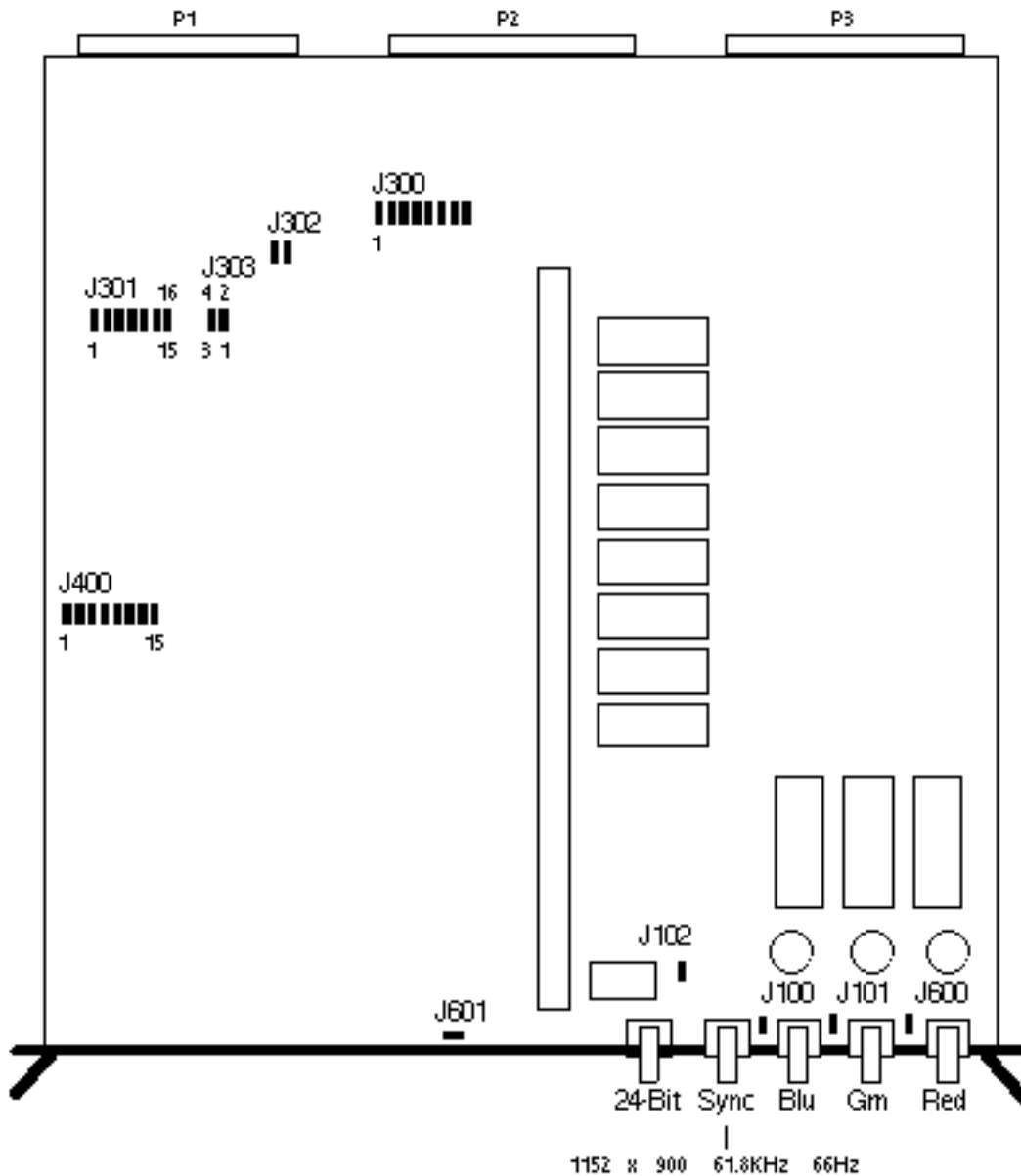
Last updated: December 2, 1996

[Comments and Suggestions](#) 

CG3 Sun 3160 Color Frame Buffer

Sun-4/110/150/260/280/310/330/350/360/370/380

501-1116	501-1089	501-1319
Single Buffered	Double Buffered*	1Kx1K



*Double buffering requires SunOS 3.5 (Sun-3) or SunOS 4.0 (Sun-4).

UNIX ID: /dev/cgtwo0

Power

501-1116	501-1319 and 501-1089
8.2 Amps @ +5Vdc	8.3 Amps @ +5Vdc

2.9 Amps @ -5Vdc	3.1 Amps @ -5Vdc
0.1 Amps @ +12Vdc	0.1 A mps @ +12Vdc
0.2 Amps @ -12Vdc	0.2 Amps @ -12Vcd
59.0 Watts	61.2 Watts

Jumper and Switch Settings

JUMPER	PINS	SETTING	DESCRIPTION
J100	All	-	Factory set
J101	All	-	Factory set
J102	1-2	In	
J300	1-16	Out	
J301	1-2	Out	Default address = 0x400000
	3-4	In/Out*	Default address = 0x400000
	3-4	Out	Default address = 0x400000
	3-4	Out	Default address = 0x400000
	9-10	In/Out*	Default address = 0x400000
	11-12	Out	Default address = 0x400000
	13-14	In/Out*	Default address = 0x400000
J302	1-2	Out	
	1-2	In	
	3-4	In/Out*	
J303	1-2	In/Out*	
	3-4	Out	
J400	1-2/J8	Out	Resolution = 1152 x 900
	1-2/J8	Out	Resolution = 1014 x 1024
	3-4/J9	Out	
	5-6/J10	Out	
	7-8/J11	Out	
	9-10/J12	Out	VME port and GP port
	11-12/J13	Out	VME port fast read CG3 <=501-1116-05
	11-12/J13	In	VME port fast read CG3 >=501-1116-06
	13-14/J14	Out	Reserved
15-16/J15	Out	Reserved	
J600	All	-	Factory set
J601	All	-	Factory set

*Hardwired

References

1. *Installation Notes for the GP2 and CG5 Boards*, 800-2330.
 2. *Sun-3 Color Board Configuration Procedures*, 813-2030.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

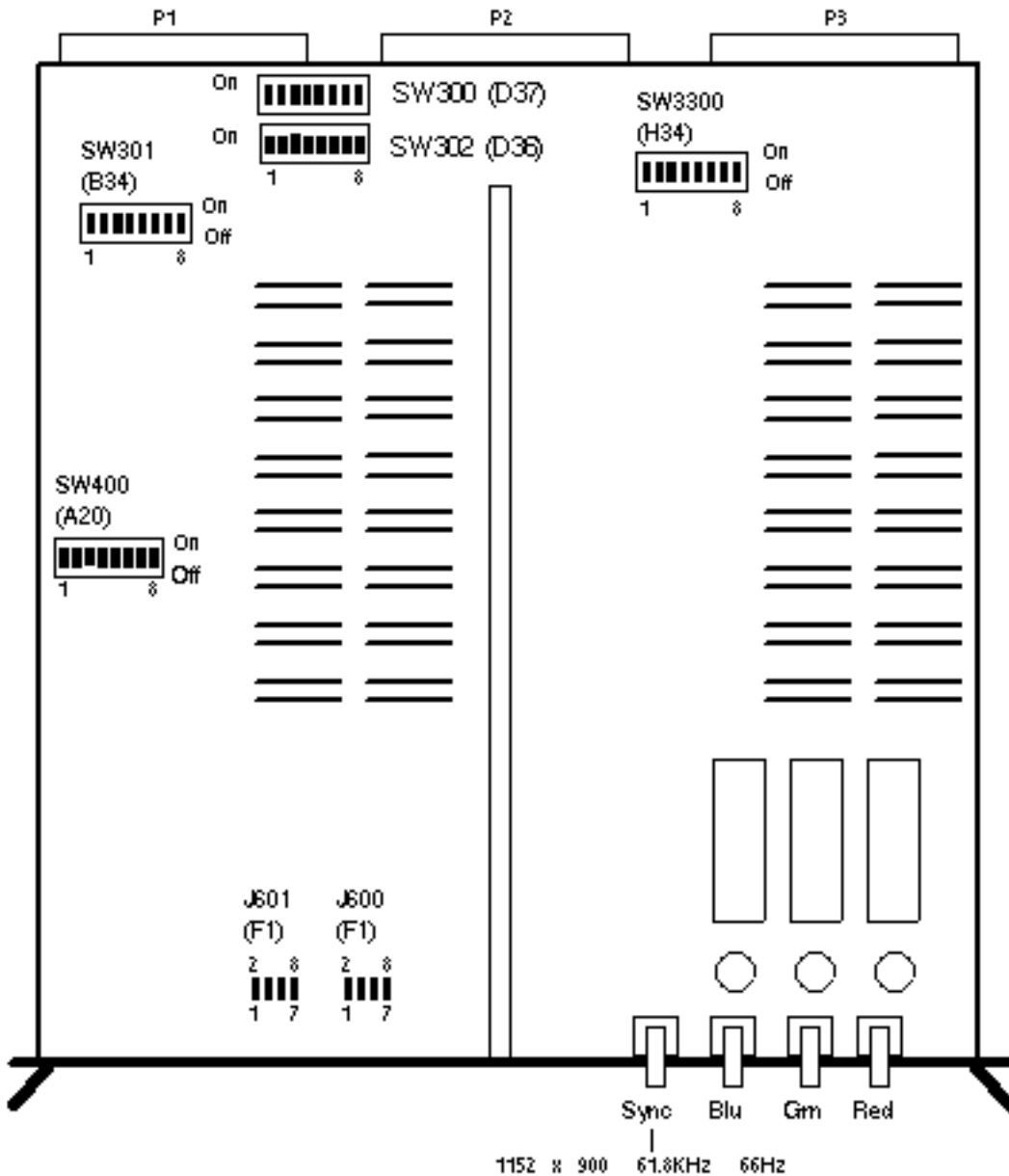
CG5 Color Frame Buffer

Sun-4/110/150/260/280

Sun-4/310/330/350/360/370/380/380

Sun-4/470/490

501-1267



UNIX ID: /dev/cgtwo0

Power

8.8 Amps @ +5Vdc

3.2 Amps @ -5Vdc

0.2 Amps @ +12Vdc

0.1 Amps @ -12Vdc

64.2 Watts

Switch Settings

SWITCH	SETTING	DESCRIPTION
SW300-1	Off	A24 address decode
SW300-2	Off	A25 address decode
SW300-3	Off	A26 address decode
SW300-4	Off	A27 address decode
SW300-5	Off	A28 address decode
SW300-6	Off	A29 address decode
SW300-7	Off	A30 address decode
SW300-8	Off	A31 address decode
SW301-1	Off	A22 address decode
SW301-2	On	A23 address decode
SW301-3	Off	AM4 decode
SW301-4	Off	AM5 decode
SW301-5	On	2MB H/L decode
SW301-6	Off	2/4MB, A21 decode
SW301-7	On	2/4MB, X.A21 decode
SW301-8	On	2/4MB, X.A21
SW302-1	On	Control space 2/4MB decode
SW302-2	Off	Control space 2/4MB decode
SW302-3	Off	24/32 bit address decode (24 bit)
SW302-4	On	24/32 bit address decode (24 bit)
SW302-5	N/C	Not used
SW302-6	N/C	Not used
SW302-7	N/C	Not used
SW302-8	N/C	Not used
SW400-1	Off	Status bit 08 (resolution)
SW400-2	Off	Status bit 09 (resolution)
SW400-3	Off	Status bit 10 (resolution)
SW400-4	Off	Status bit 11 (resolution)
SW400-5	On	Status bit 12 (extra registers)
SW400-6	On	Status bit 13 (fast RD)
SW400-7	Off	Status bit 14 (RFU)
SW400-8	Off	Status bit 15 (RFU)

SW3300-1	On	Selects board 0
SW3300-2	Off	Selects board 1
SW3300-3	Off	Selects board 2
SW3300-4	Off	Selects board 3
SW3300-5	Off	P2 Bus not enabled
SW3300-5	On	P2 Bus enabled - required if GP2 is installed
SW3300-6	Off	No connection
SW3300-7	Off	No connection
SW3300-8	Off	No connection

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J600	1-2	In	V reset
	3-4	Out	External vertical blank output to ground
	5-6	Out	External display buffer A output to
	7-8	Out	No connection
J601	1-2	In	Green sync
	3-4	Out	Green sync
	5-6	Out	Sync
	7-8	In	Sync

Notes

1. The Sun 4300 CPU must be 501-1316-03 for use with CG5.
2. The CG5 must be 501-1267-05 for use with the 501-1539 ISP-80 Disk Controller.

References

1. *Installation Notes for the GP2 and CG5 Boards*, 800-2330.
2. *Configuration Procedures for the GP2 and CG5 Boards*, 813-2059.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

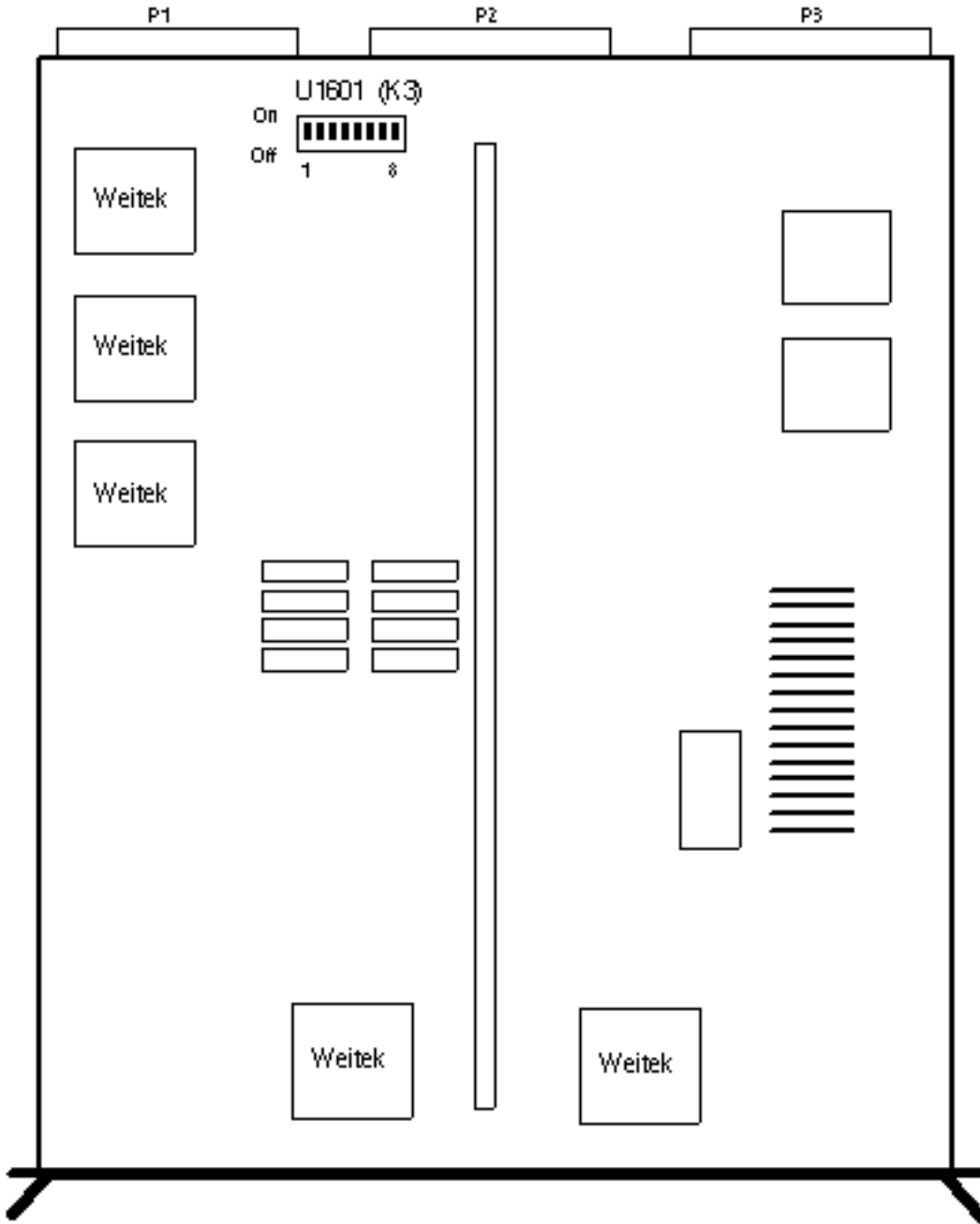
GP2 Graphics Processor

Sun-3/150/160/180/260/280/460/470/480

Sun-4/150/260/280/330/350/360/370/380

Sun-4/390/470/490

501-1268



UNIX ID: /dev/gpone0a-d

Power

12.1 Amps @ +5Vdc

60.5 Watts

Switch Settings

DIP SWITCH	SETTING	DESCRIPTION
U1601-1	Off	A18 address decode
U1601-2	On	A19 address decode
U1601-3	On	A20 address decode
U1601-4	Off	A21 address decode
U1601-5	On	A22 address decode
U1601-6	On	A23 address decode
U1601-7	On/Off	Not used
U1601-8	On/Off	Not used

Notes

1. The GP2 is used with the CG5 or CG9. Unbundled software is required for SunOS 3.5, 3.5.1, 3.5.2, Sys4-3.2, and Sys43.2.1. Unbundled software is not required for SunOS 4.0.
2. The GP2 must be 501-1268-07 for use with CG9.
3. The CG9 is not supported under OpenWindows Versions 2 or 3.

References

1. *Installation Notes for the GP2 and CG5 Boards*, 800-2330.
2. *Configuration Procedures for the GP2 and CG5 Boards*, 813-2059.

Last updated: December 2, 1996

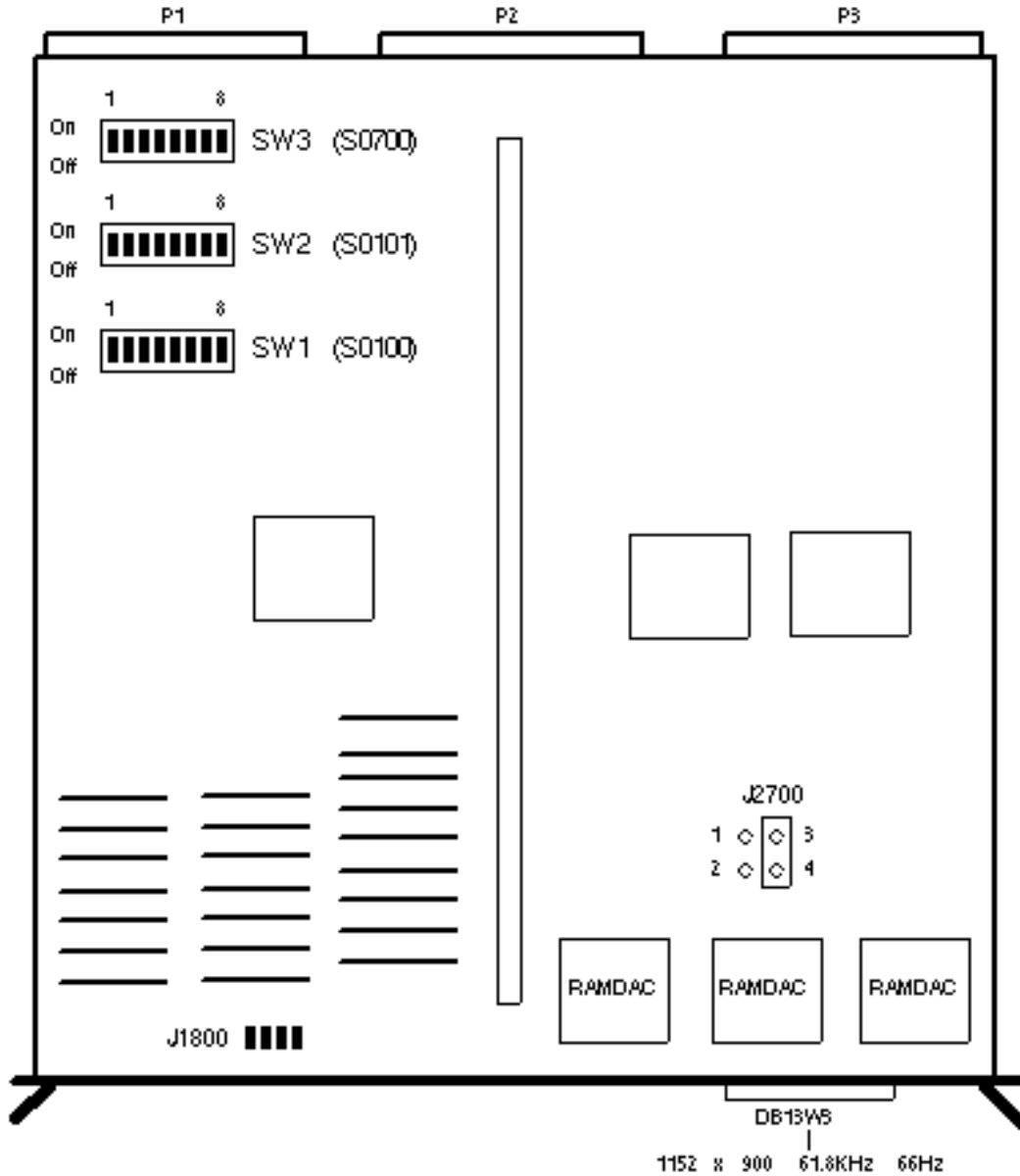
[Comments and Suggestions](#) 

CG9 24-bit Color Frame Buffer

Sun-3/260/460/470/480

Sun-4/150/260/280/330/350/360/370/380/390/470/490

501-1434



UNIX ID: /dev/cgnine0

Power

14.6 Amps @ +5Vdc

73.0 Watts

Notes

1. The GP2 must be 501-1268-07 when used with CG9.
2. The CG9 is not supported with the GP or GP+.
3. CG9 must be $\geq 501-1434-04$ for use with the Xylogics 7053.
4. The CG9 is not supported under OpenWindows Versions 2 or 3.

Jumper and Switch Settings

JUMPER	PINS	SETTING	DESCRIPTION
J1800	1-2	Out	Display
	3-4	Out	Video blank
	5-6	Out	N/C
	7-8	Out	N/C
J2700	1-2	Out	Sync or Green
	3-4	In	Normal operation sync

SW1 S0100

DIP	SETTING	DESCRIPTION
1	On	A24
2	On	A25
3	On	A26
4	Off	A27
5	On	A28
6	On	A29
7	On	A30
8	On	A31

SW2 S0101

DIP	SETTING	DESCRIPTION
1	On/Off	N/C
2	On/Off	N/C
3	On	Flag
4	On/Off	N/C
5	Off	A32 mode
6	On	AM4 switch
7	On	AM5 switch
8	On	A23 mode

SW3 S0700

DIP	SETTING	DESCRIPTION
1	Off	P2 Bus enable
2	Off	Selects board 3
3	Off	Selects board 2
4	Off	Selects board 1
5	On	Selects board 0
6	On	N/C
7	Off	N/C
8	On	N/C

Reference

Installation and Configuration Guide for the CG9 Color Frame Buffer, 800-3627.

Last updated: December 2, 1996

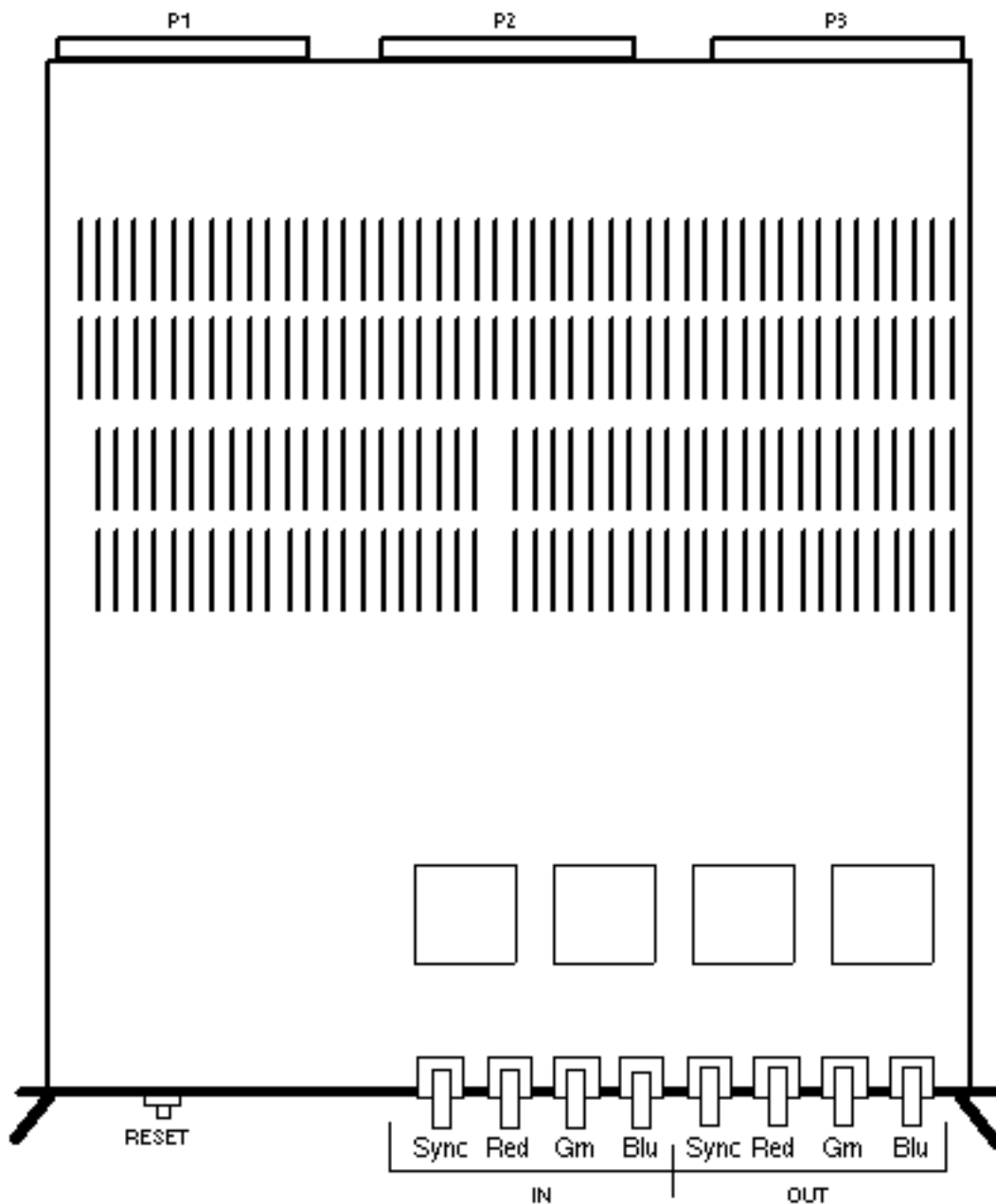
[Comments and Suggestions](#) 

TAAC-1 Application Accelerator

Sun-4/260/280/360/370/380/390/470/490

501-1383 / 501-1447

POP Board



UNIX ID: dev/taac0

Power

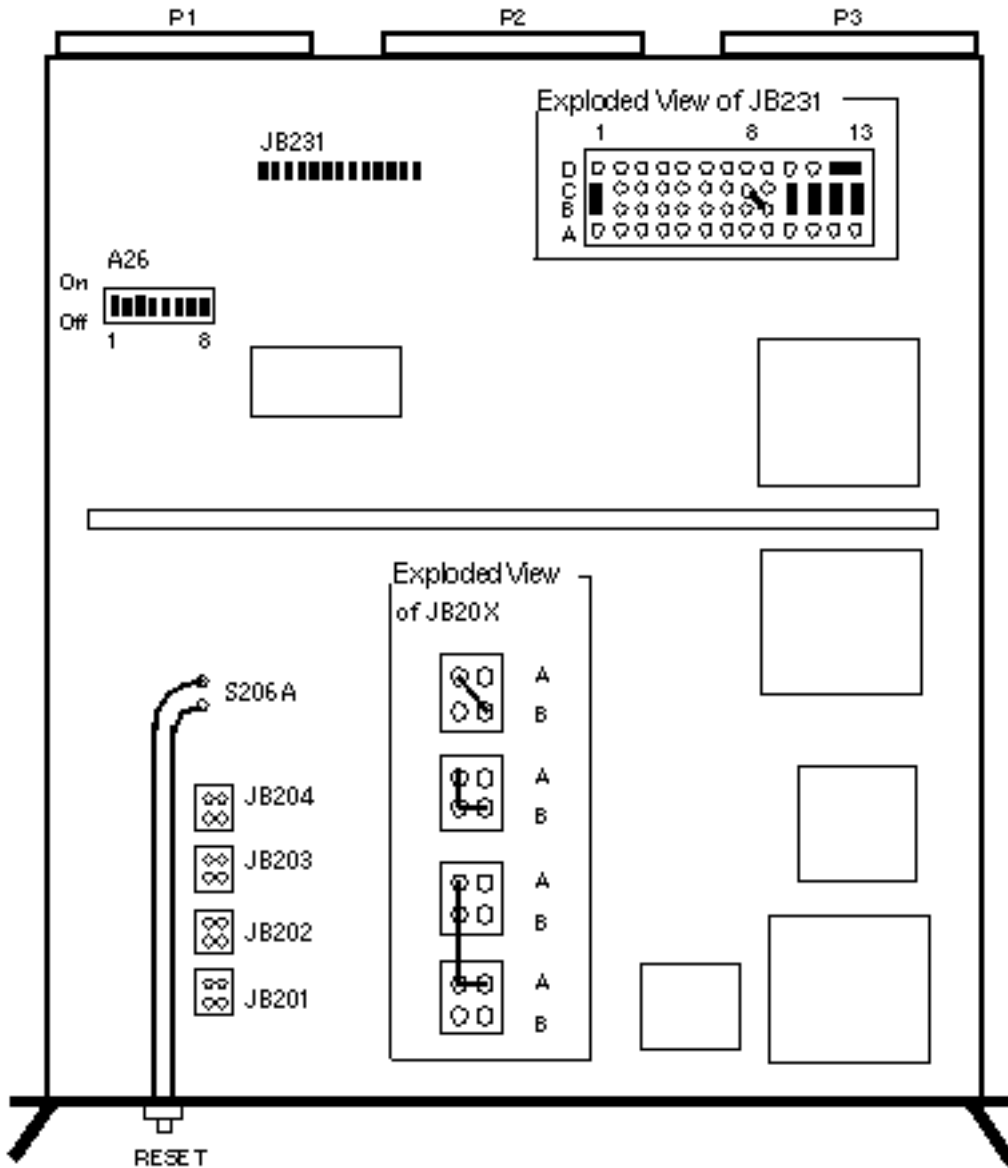
23.9 Amps @ +5Vdc

0.4 Amps @ -5Vdc

0.2 Amps @ +12Vdc

123.9 Watts

DFB Board



DFB Board Jumper and Switch Settings

Jumper JB231

ROW	SHUNTS	DESCRIPTION
1	B - C	

2-7*	Not Used	Base addressing
8	8C - 9B	BGIN
9	Empty	
10	B-C	VMBG IN/OUT 0
11	B-C	VMBG IN/OUT 1
12	B-C	VMBG IN/OUT 2
12	12D - 13D	Enable 50MHz CLK
13	B-C	VMBG IN/OUT 3

* Jumpers 2-7 are hardwired on board revisions without Switch A26. These boards are not marked with a Sun part number. Jumpers 2-7 are empty on board revisions with Switch A26.

Switch A26

SWITCH NUMBER	DEFAULT SETTING*	Sun 4/150**	VME ADDRESS
1**	On	On	Bit 25
2	On	On	Bit 26
3	Off	Off	Bit 27
4	On	Off	Bit 28
5	Off	Off	Bit 29
6	On	Off	Bit 30
7	On	Off	Bit 31

* Base address = 0x28000000

** Base address = 0xF8000000

Notes

1. Do not disassemble the two-board assembly.
2. The TAAC-1 is not supported with the Sun-2 Color Frame Buffer.
3. The TAAC-1 is not supported with the CG9 Color Frame Buffer.
4. Jumpers JB201-JB204 are hardwired for 16K x 4K RAM.
5. TAAC-1 is not supported under Solaris 2.x (SunOS 5.x).

Reference

Hardware Installation Manual for the Sun-2/130 and Sun-2/160, 800-1144.

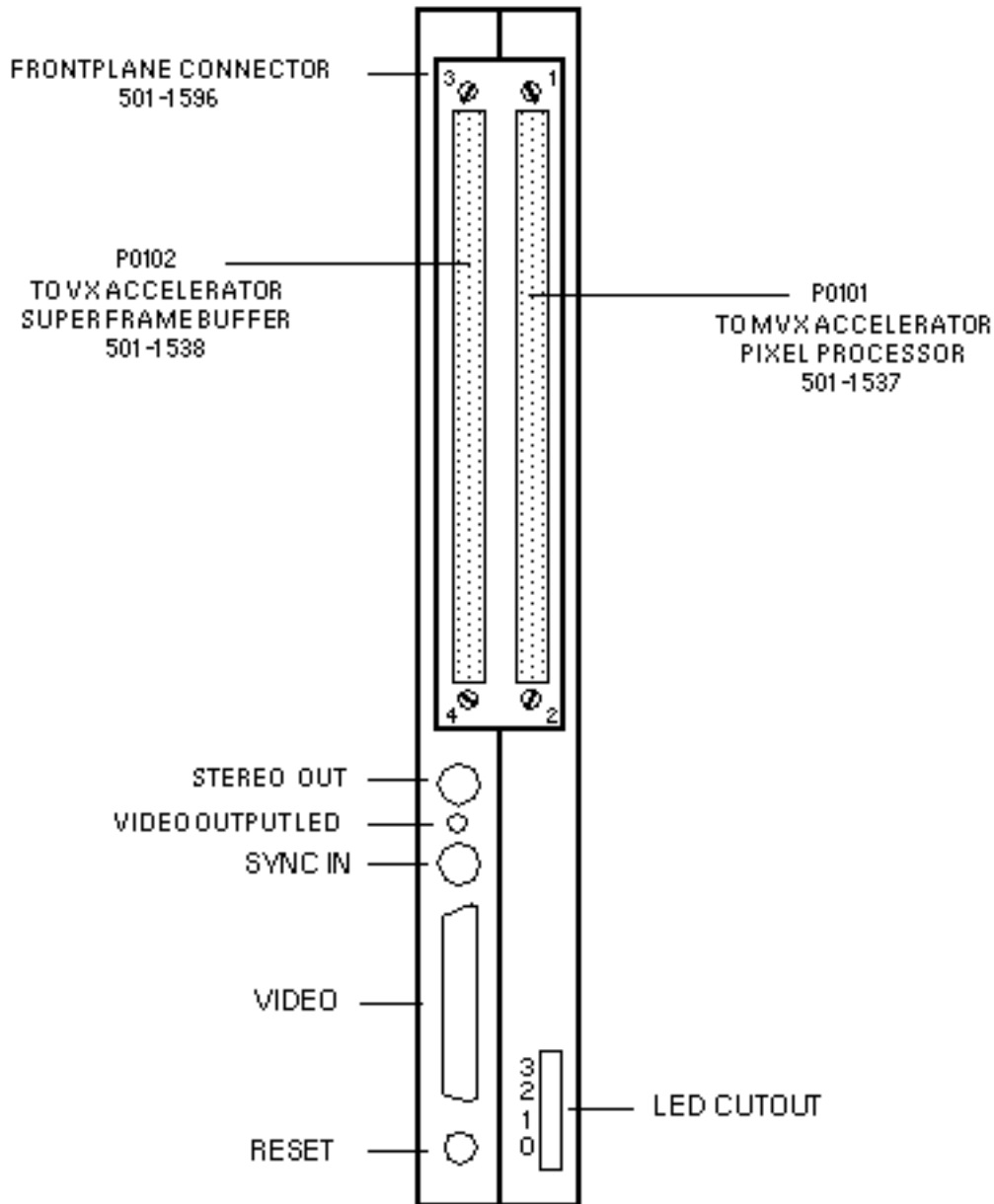
Last updated: December 2, 1996

[Comments and Suggestions](#) 

VX and MVX Visualization Accelerators

Board Set

501-1537 / 501-1538



Note

Tighten Frontplane Connector screws 1, 2, 3, and 4 in sequence, turning each screw no more than two turns at a time.

Notes

1. The minimum operating system is SunOS 4.1.1.
2. The final unbundled software release was SunVision 1.2.
3. The minimum operating system for SunVision 1.2 is SunOS 4.1.2.
4. SunVision 1.2 requires OpenWindows Version 3.
5. The Sun 4300 CPU and the Sun 4400 CPU require EPROM 4.1.1 when the VX is used as the system console.
6. Set the NVRAM locations to the values shown below when the VX is used as the system console.

LOCATION	SETTING
0x1f	12
0x60c	31
0x60d	40
0x60e	00
0x60f	00
0x610	fc
0x611	00
0x612	00
0x613	00

7. Do not use Frontplane Connector 501-1596-01. Use 501-1596-02.
8. The LEDs on the MVX are not used.

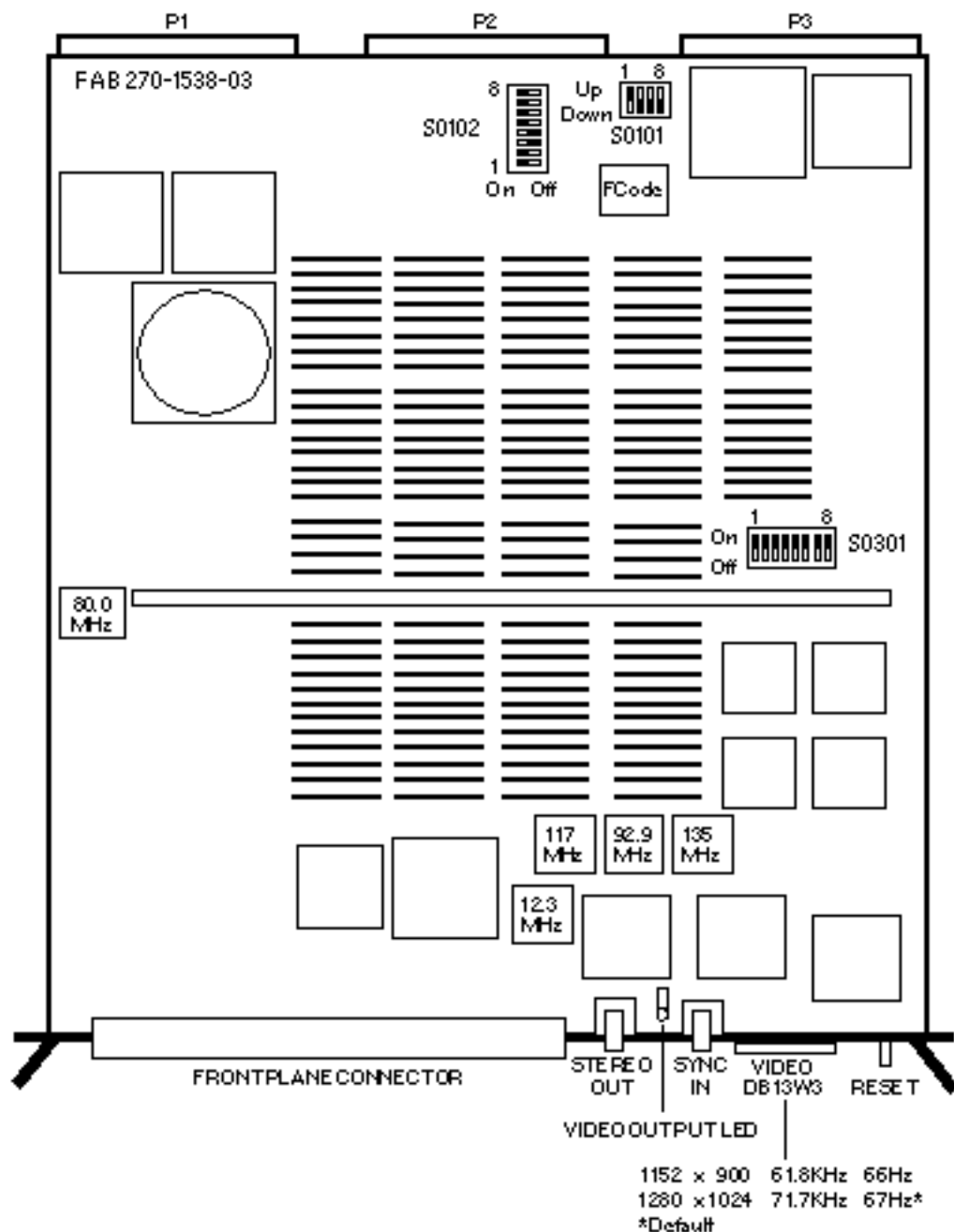
References

1. *Hardware Installation for the VX and MVX Visualization Accelerators*, 800-5424-10.
 2. *Software Installation for the VX and MVX Visualization Accelerators*, 800-6290-10.
-

Super Frame Buffer

Sun-4/330/370/390/470/490

501-1538



Power:

14.0 Amps @ +5Vdc

1.45 Amps @ -5Vdc

88.0 Watts

Switch Settings

Interrupt Request Switch S0101

SWITCH	SETTING	REQUEST BIT
1	Up	2
2	Down	1
3	Down	0
4	Up	VMRQ

VME Bus Address Switch S0102

SWITCH	SETTING	ADDRESS BIT
1	On	A31
2	On	A30
3	Off	A29
4	Off	A28
5	On	A27
6	On	A26
7	On	A25
8	On/Off	Not used

VX Bus Address Switch S0301

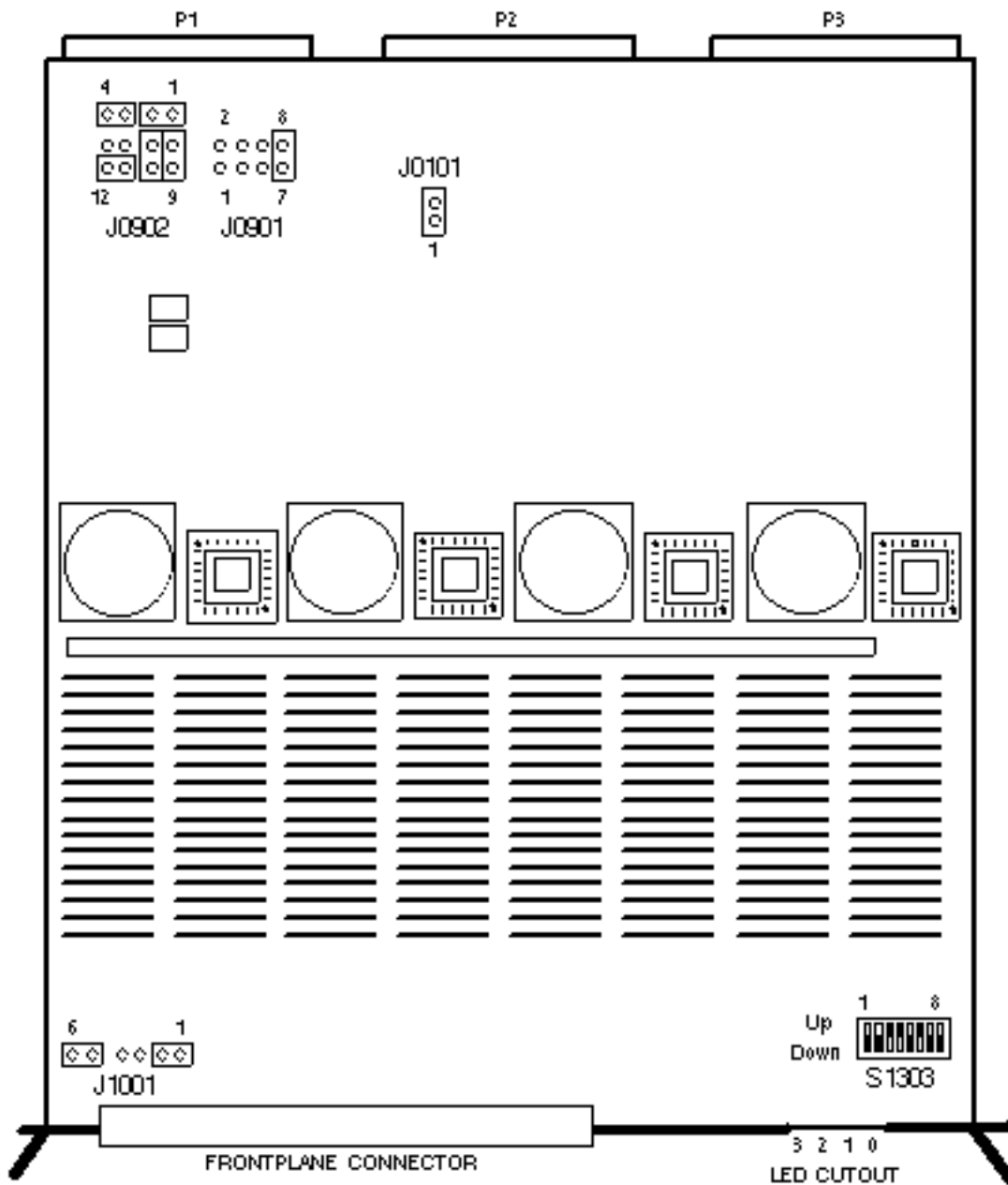
SWITCH	SETTING	ADDRESS BIT
1	On/Off	Not used
2	On/Off	Not used
3	On	A26
4	On	A27
5	On	A28
6	On	A29
7	On	A30
8	On	A31

MVX Visualization Accelerator

Sun-4/330/370/390/470/490

Pixel Processor

501-1537



Power:

14.0 Amps @ +5Vdc
70.0 Watts

Switch and Jumper Settings

Clock Jumper J0101

PIN	SETTING	DESCRIPTION
1-2	In	Enable 80MHz clock

Bus Request Jumper J0901

PIN	SETTING	DESCRIPTION
3-4	In	VME BUS REQUEST 1
5-6	Out	VME BUS REQUEST 2
7-8	In	VME BUS REQUEST 3

Bus Grant Jumper J0902

PIN	SETTING	DESCRIPTION
1-2	In	BG2 OUT - BG2 IN
3-4	In	BG1 OUT - BG1 IN
5-9	In	BGx OUT - BG3 OUT
6-10	In	BGx IN - BG3 IN
7	Out	BGx OUT
8	Out	BGx IN
11-12	In	BG0 OUT - BG0 IN

Bus Control and Arbitration Jumper J1001

PIN	SETTING	DESCRIPTION
1-2	In	VCC - CTRL
3	Out	GND
4	Out	VCC
5-6	In	GND - MODE

Base Address Switch S1303

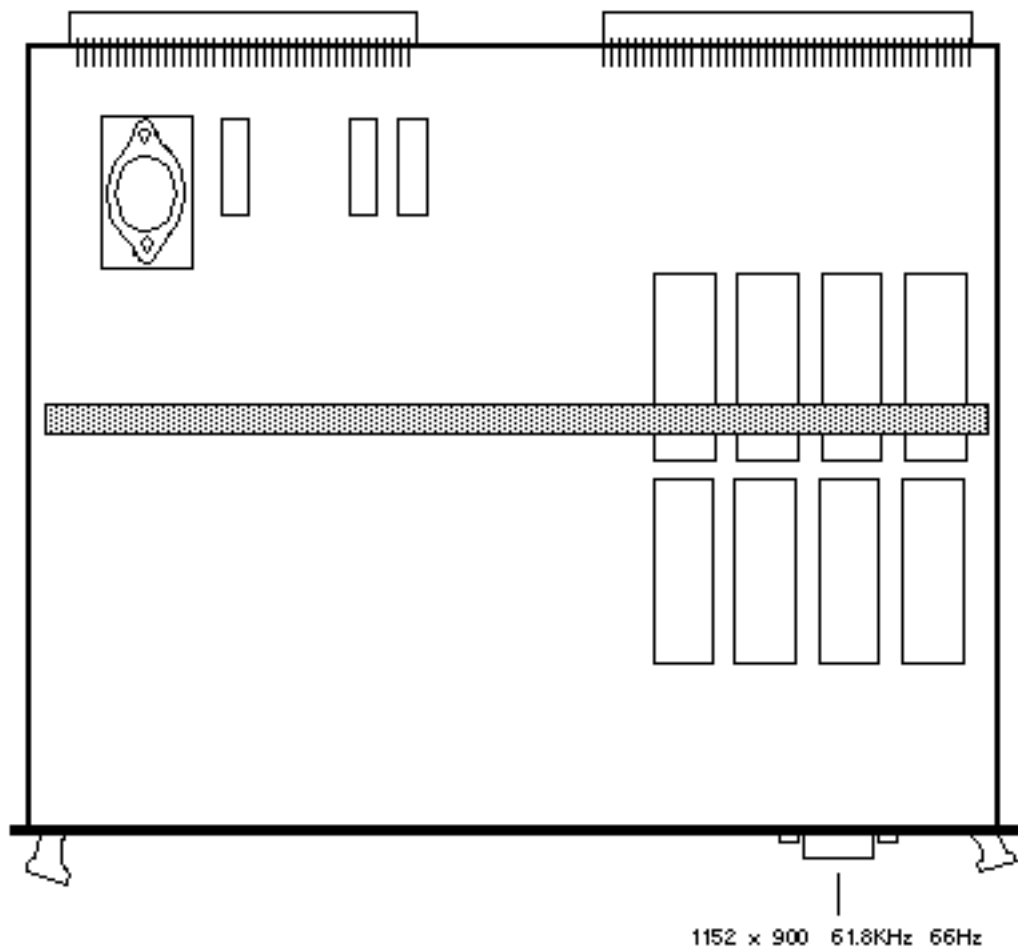
SWITCH	SETTING	ADDRESS BIT
1	Down	A31
2	Down	A30
3	Up	A29
4	Up	A28
5	Down	A27
6	Up	A26
7	Down	A25
8	Down/Up	Not used

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-3/E Monochrome Frame Buffer

501-8020



UNIX ID: /dev/bwtwo0

Power

3.0 Amps @ +5Vdc

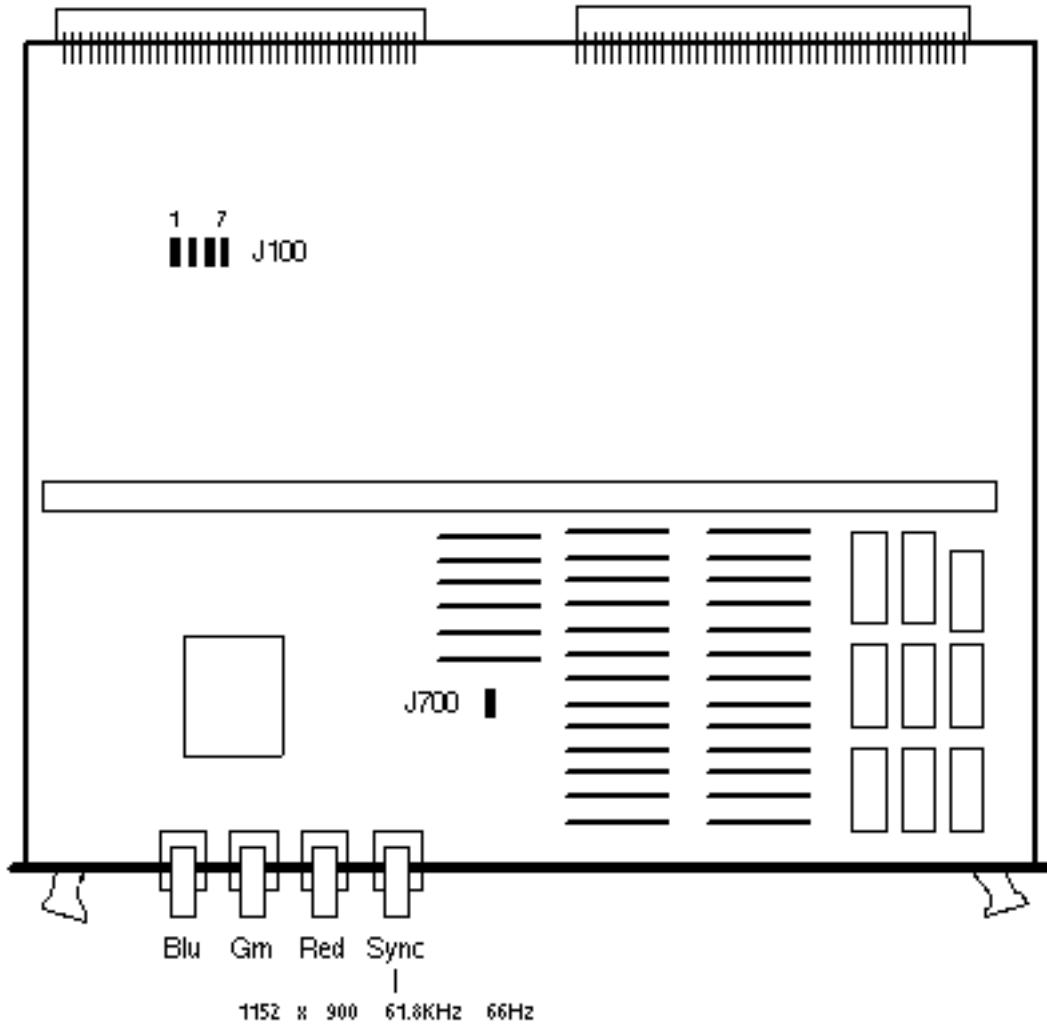
15.0 Watts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-3/E Color Frame Buffer

501-8029



Jumper J100 Settings

JUMPER	PINS	SETTING	DESCRIPTION
J100	1-2	In	Base address =FF400000
J100	3-4	Out	
J100	5-6	In	
J100	7-8	Out	

UNIX ID: /dev/cgtwo0

Power:

4.0 Amps @ +5Vdc

20.0 Watts

Notes

1. The Sun-3/E Color Frame Buffer requires a 3/E CPU, >=501-8028-07.
 2. This board requires SunOS 3.5 or greater.
-

Last updated: December 2, 1996

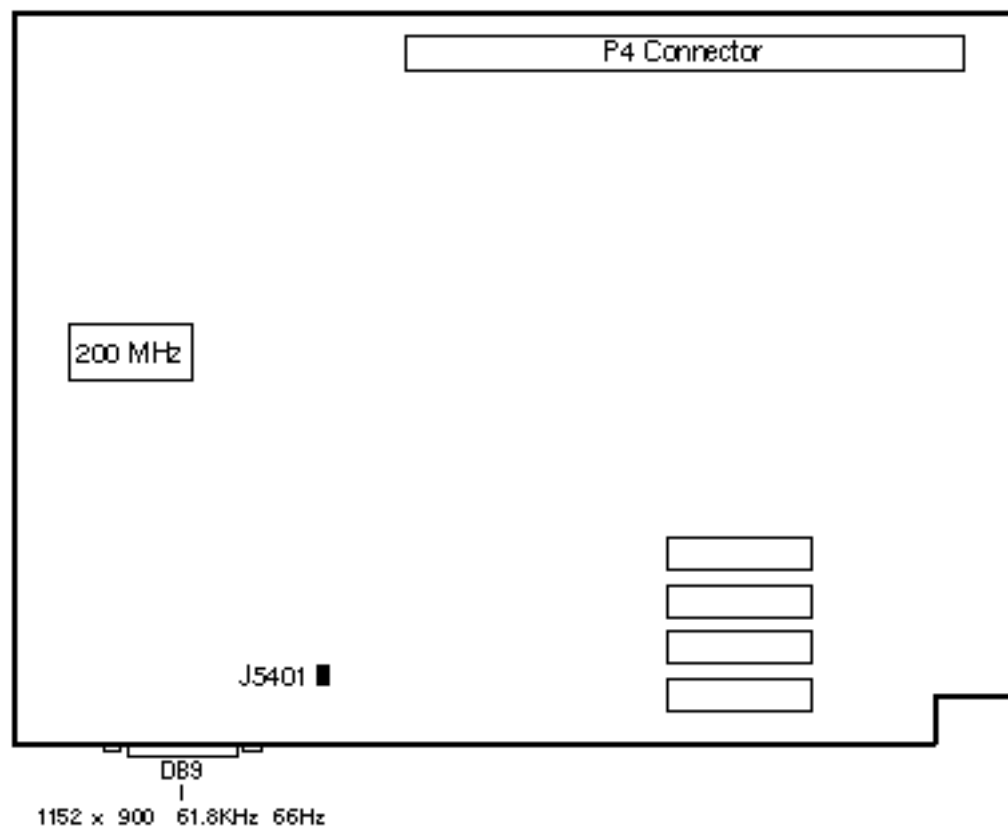
[Comments and Suggestions](#) 

MG3 ECL Monochrome Frame Buffer

Sun-4/110/150/310/330/350/370/390/470/490

501-1247	501-1637
-----------------	-----------------

w 3/80 Backpanel



Jumper J5401 Settings

JUMPER	PINS	SETTING	DESCRIPTION
J5401	1-2	Out	Monitor auto select
	1-2	In	Select 1600 x 1280 resolution
	1-2	Out	Select 1152 x 900 resolution

UNIX ID: /dev/bwtwo0

Power: 501-1247

0.8 Amps @ +5Vdc

1.2 Amps @ -5Vdc

10.0 Watts

Notes

1. Set EEPROM location 0x1f to 20.
 2. The auto-select feature requires cable 530-1336 or 530-1359.
 3. Hi Resolution Monitor 540-1427 must be Motorola revision T or greater for the auto-select feature to operate.
-

Last updated: December 2, 1996

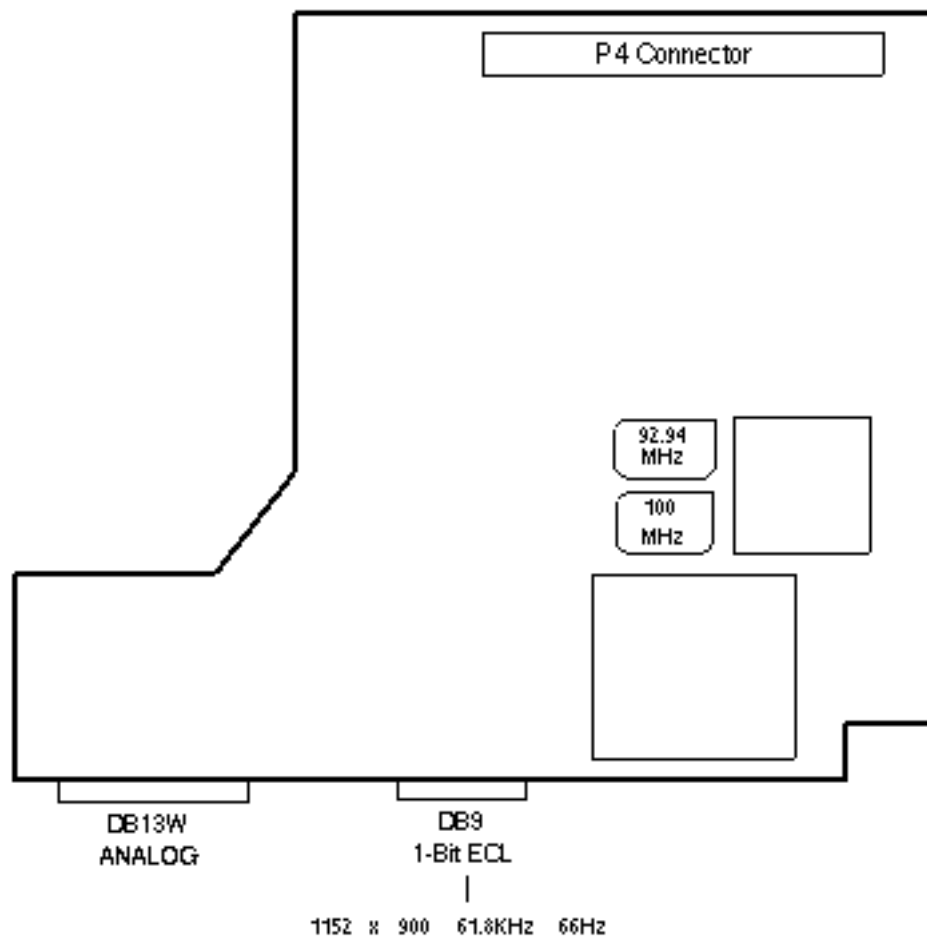
[Comments and Suggestions](#) 

MG4 Analog/ECL Frame Buffer

Sun-4/310/330/350/370/380/390/470/490

501-1402

w 3/80 Backpane



UNIX ID: /dev/bwtwo0

Power:

3.3 Amps @ +5Vdc

16.5 Watts

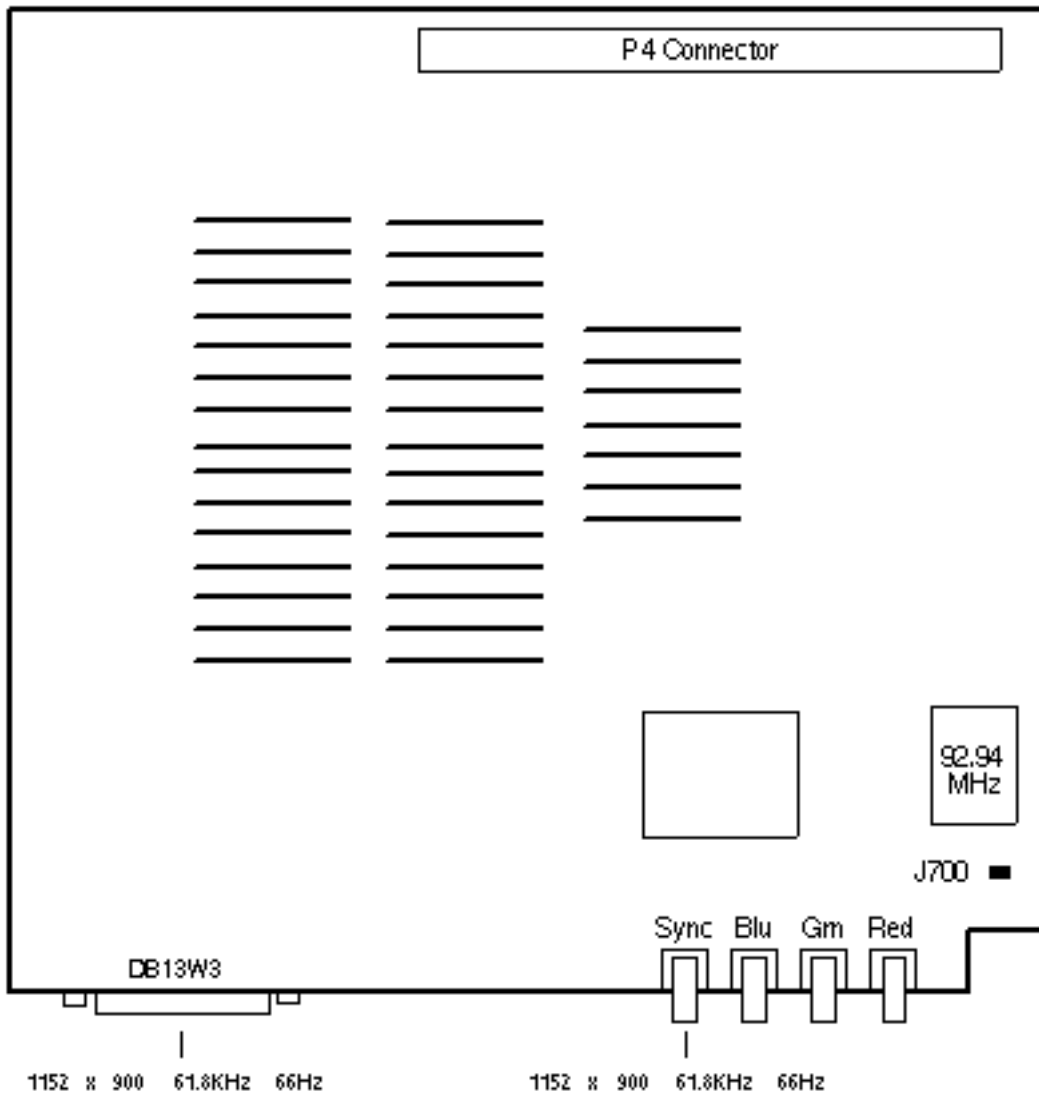
Last updated: December 2, 1996

[Comments and Suggestions](#) 

CG4 Color Frame Buffer

Sun-4/110/150/310/330/350/370/380/390/470/490

501-1248	501-1443
BNC	DB13W3 w 3/80 Backpanel



J700 Setting

PINS	SETTING	DESCRIPTION
1-2	In	Enable clock

UNIX ID: `dev/cgfour0` and `/dev/bwtwo1`

Power: 501-1443

3.8 Amps @ +5Vdc

19.0 Watts

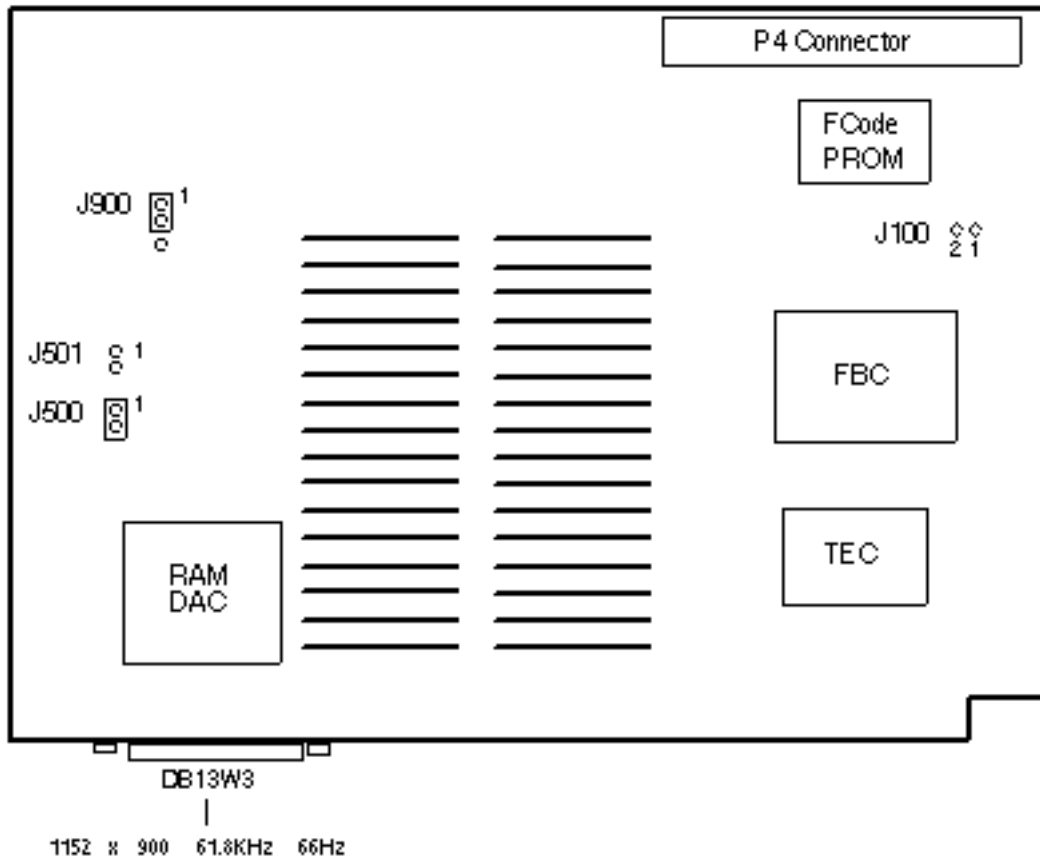
Last updated: December 2, 1996

[Comments and Suggestions](#) 

CG6 Color Frame Buffer

Sun-4/110/150/310/330/350/370/380/390/470/490

501-1374	501-1505	501-1532
	w 3/80 Backpane	



JUMPER	PINS	SETTING	DESCRIPTION
J100	1-2	Out	Monitor ID
J500	1-2	In	V.Y. CLK memory control
J501	1-2	Out	OSC 2 CLK
J900	2-3	In	1152 x 900 (on 270-1532 Fab)

UNIX ID: /dev/cgsix0

Power

501-1374	501-1505 and 501-1532
3.5 Amps @ +5Vdc 7.5 Watts	4.9 Amps @ +5Vdc 24.5 Watts

Notes

1. Sun-3/60, Sun-4100, and Sun-4300 CPU boards require EPROM Revision 3.0 or greater.
 2. Set CPU EEPROM location 0x1F to 0x20.
 3. The minimum operating system is SunOS 4.0.3.
-

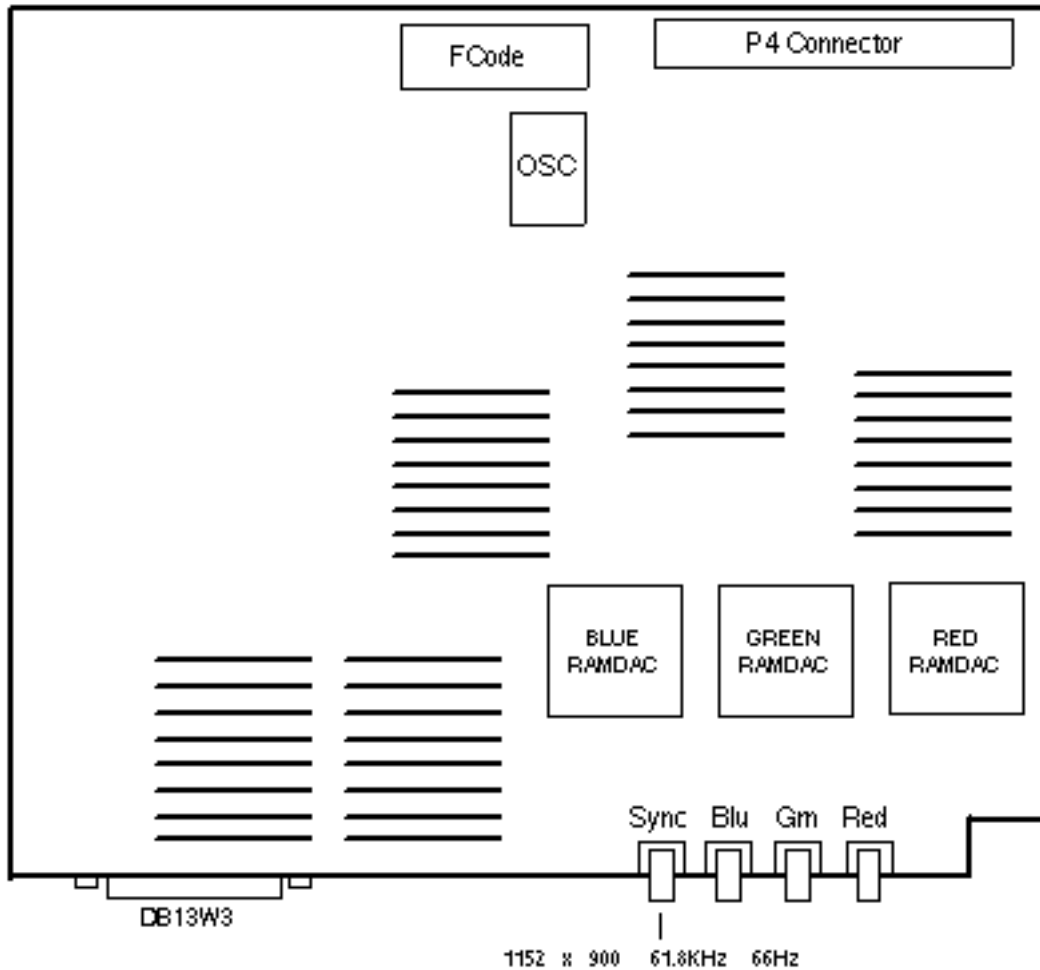
Last updated: December 2, 1996

[Comments and Suggestions](#) 

CG8 24-bit Color Frame Buffer

Sun-4/110/150

501-1371	501-1518	501-1577
BNC	DB13W3	w 3/80 Rear Panel DB13W3



UNIX ID: /dev/cgeight0

Power

501-1371 and 501-1518	501-1577
5.5 Amps @ +5Vdc 27.5 Watts	4.8 Amps @ +5Vdc 24.0 Watts

Notes

1. There are no jumpers or switches on this board.
 2. Set CPU EEPROM location 0x1F to 0x20.
 3. Requires SunOS 4.0 CG8 or 4.0.3 or greater.
 4. SunOS 4.0 CG8 is not upgradeable to 4.0.1.
 5. CG8 must be 501-1374-04 or greater for use with Sun 3400 and Sun 4300 CPU boards.
 6. The CG8 is not supported under OpenWindows Versions 2 or 3.
-

Last updated: December 2, 1996

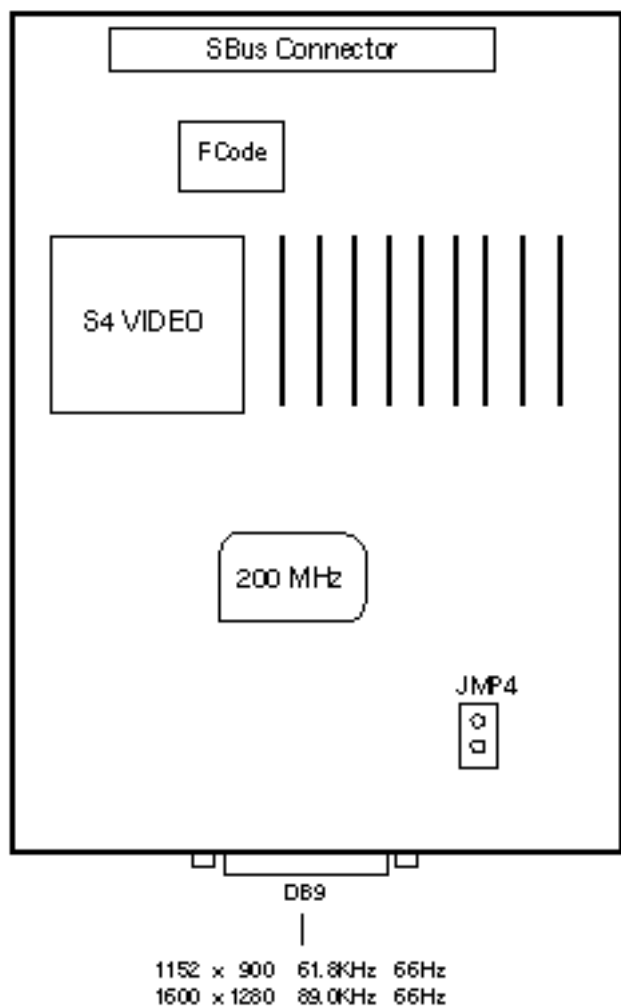
[Comments and Suggestions](#) 

MG1 ECL Monochrome Frame Buffer

Sun-4/15/30/40/50/60/65/75

Sun-4/E / SS10 / SS20 / SS600 / SC2000

501-1419	501-8043
	w 4/E Backpanel



Jumper JMP4

PINS	SETTING	DESCRIPTION
1-2	In	Select 1600 x 1280 resolution
1-2	Out	Select 1152 x 900 resolution
1-2	Out	Monitor auto select

UNIX ID: /dev/bwtwo0

Power:

1.3 Amps @ +5Vdc

6.5 Watts

Last updated: December 2, 1996

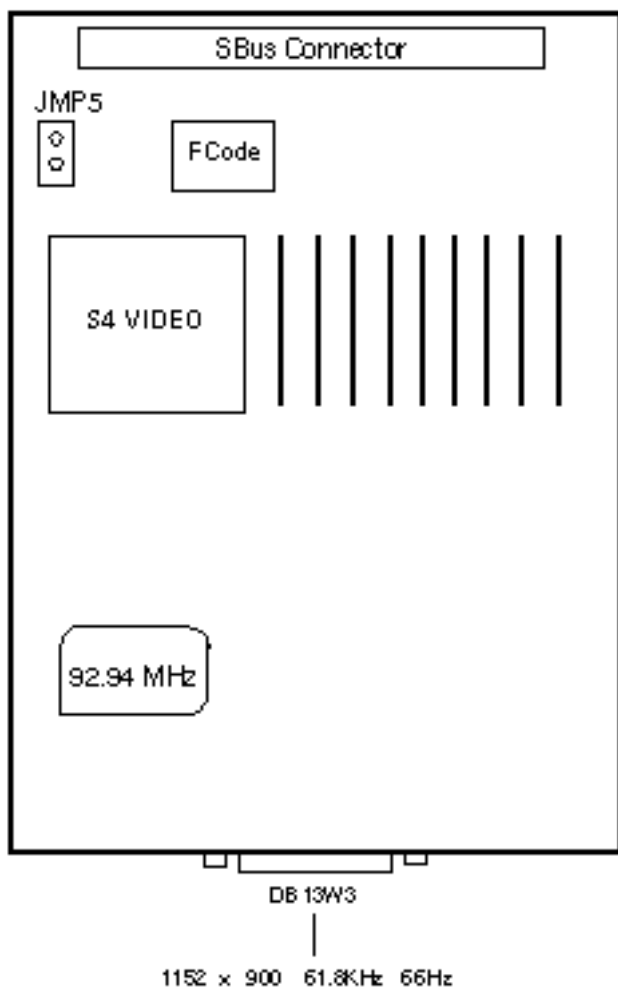
[Comments and Suggestions](#) 

MG2 Analog Frame Buffer

Sun-4/15/30/40/50/60/65/75

SS4 / SS5 / SS10 / SS20 / SS600

501-1455	501-8062
	w 4/E Backpane



Jumper JMP5

PINS	SETTING	DESCRIPTION
1-2	In	Select 27C256 EPROM
1-2	Out	Select 27C64 EPROM

UNIX ID: /dev/bwtwo0

Power:

0.4 Amps @ +5Vdc

2.0 Watts

Note

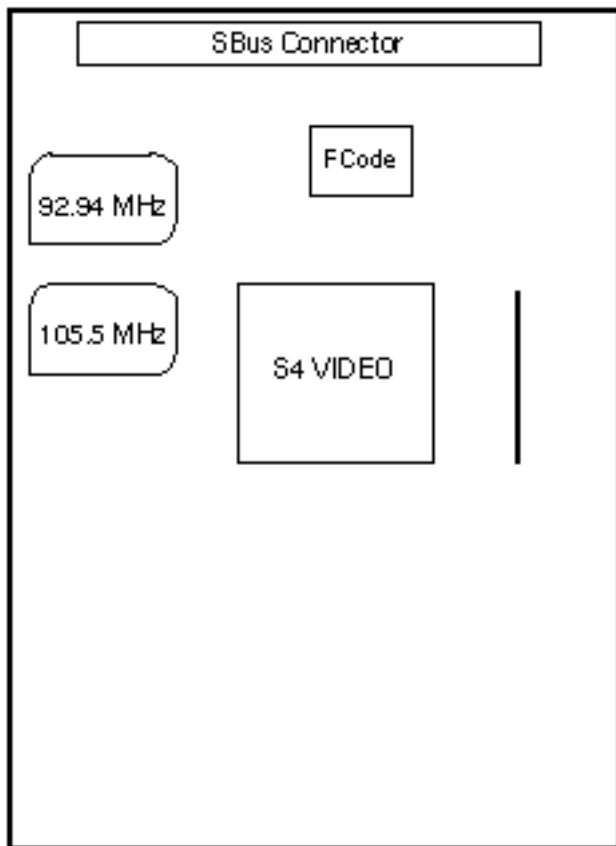
The MG2 Frame Buffer produces a 1-bit Analog output.

MG2 Analog Frame Buffer

Sun-4/15/30/40/50/60/65/75

SS4 / SS5 / SS10 / SS20 / SS600

501-1561	501-8077
	w 4/E Backpane



1152 x 900 61.8KHz 66Hz
1152 x 900 71.7KHz 76Hz*
*Default

UNIX ID: /dev/bwtwo0

Power:

0.3 Amps @ +5Vdc

1.6 Watts

Note

The MG2 Frame Buffer produces a 1-bit Analog output.

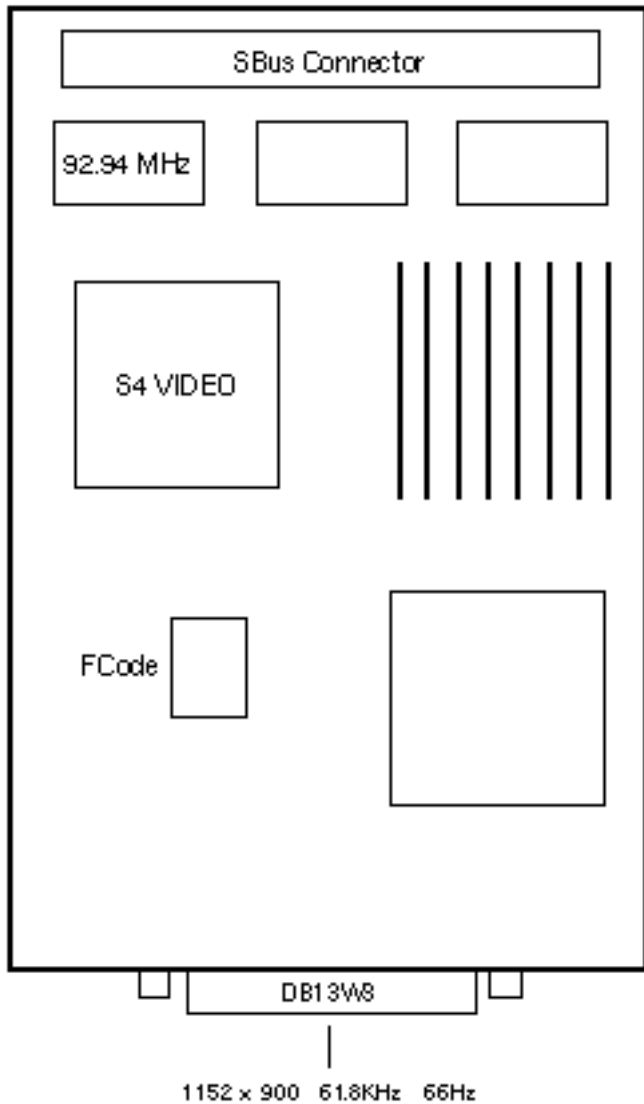
Last updated: December 2, 1996

[Comments and Suggestions](#) 

CG3 Color Frame Buffer

Sun-4/15/30/40/50/60/65/75
SS4 / SS5 / SS10 / SS20

501-1415	501-8044
FAB 270-1415	w 4/E Backpanel



UNIX ID: /dev/cgthree0

Power:

0.7 Amps @ +5Vdc
3.5 Watts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Memory

[SIMMs](#)

[Sun-4/260/280](#)

[Sun-4/330](#)

[Sun 4300](#)

[Sun 4400](#)

[Sun-4/E \(4MB\)](#)

[Sun-4/E \(16MB\)](#)

[Sun-4/E \(Combo\)](#)

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SIMMs

An **x** indicates the SIMM(s) was installed at the factory or included in a memory expansion option.

An **s** indicates the SIMM(s) was tested and is supported in other systems.

Sun-3, Sun-3x, and Sun386i

SIZE	SPEED	SIMM P/N	60	60LE	80	150	250
256KB	100ns	501-1349		x			
1MB	100ns	501-1239	x				
1MB	100ns	501-1346		x			
1MB	120ns	501-1375					x
1MB	100ns	501-1408			x		
1MB	100ns	501-1424				x	x
1MB	120ns	501-1510					x

Sun-4 and Sun-4c

											330	
											110	370
SIZE	SPEED	SIMM P/N	20	25	40	50	60	65	75	150	390	
256KB	80ns	501-1314								x		
1MB	100ns	501-1408					x	x			x	
1MB	100ns	501-1466								x	s	
1MB	100ns	501-1544									x	
1MB	100ns	501-1565									x	
1MB	80ns	501-1697			x			x			x	
4MB	100ns	501-1625			x		x	x				
4MB	100ns	501-1676	x									
4MB	80ns	501-1682									x*	
4MB	80ns	501-1698	x	s								
4MB	80ns	501-1739			x		x	x	x		x	
4MB	80ns	501-1812		x		x						
16MB	80ns	501-1915				x						
16MB	80ns	501-1822		x		x						

* The 501-1682 is not supported on the CPU in a Sun-4/330.

Sun-4m

SIZE	SPEED	SIMM P/N	4/10	4/15	4/30	SS4	SS5	SS10	SS20	SS600	Java
1MB	100ns	501-1466								S*	
1MB	100ns	501-1565								S*	
1MB	60ns	501-2289	X								
2MB	60ns	501-2433	X								
4MB	80ns	501-1682								S*	
4MB	80ns	501-1739								X	
4MB	60ns	501-1991	X	X	X						
4MB	80ns	501-2460								X	
4MB	60ns	501-4188									X
8MB	60ns	501-2470				X	X				
16MB	60ns	501-2059	X	X	X						
16MB	80ns	501-2060								X	
16MB	80ns	501-1785						X			
16MB	80ns	501-2273						X			
16MB	60ns	501-2479						X	X		
16MB	60ns	501-4216									X
32MB	60ns	501-2471				X	X				
32MB	60ns	501-2622							X		
64MB	80ns	501-1930						X			
64MB	60ns	501-2480						X	X		
64MB	60ns	501-2771							X **		

* The 501-1466, 501-1565, and 501-1682 SIMMs are supported on the SS600 Expansion Memory. They are not supported on the system board.

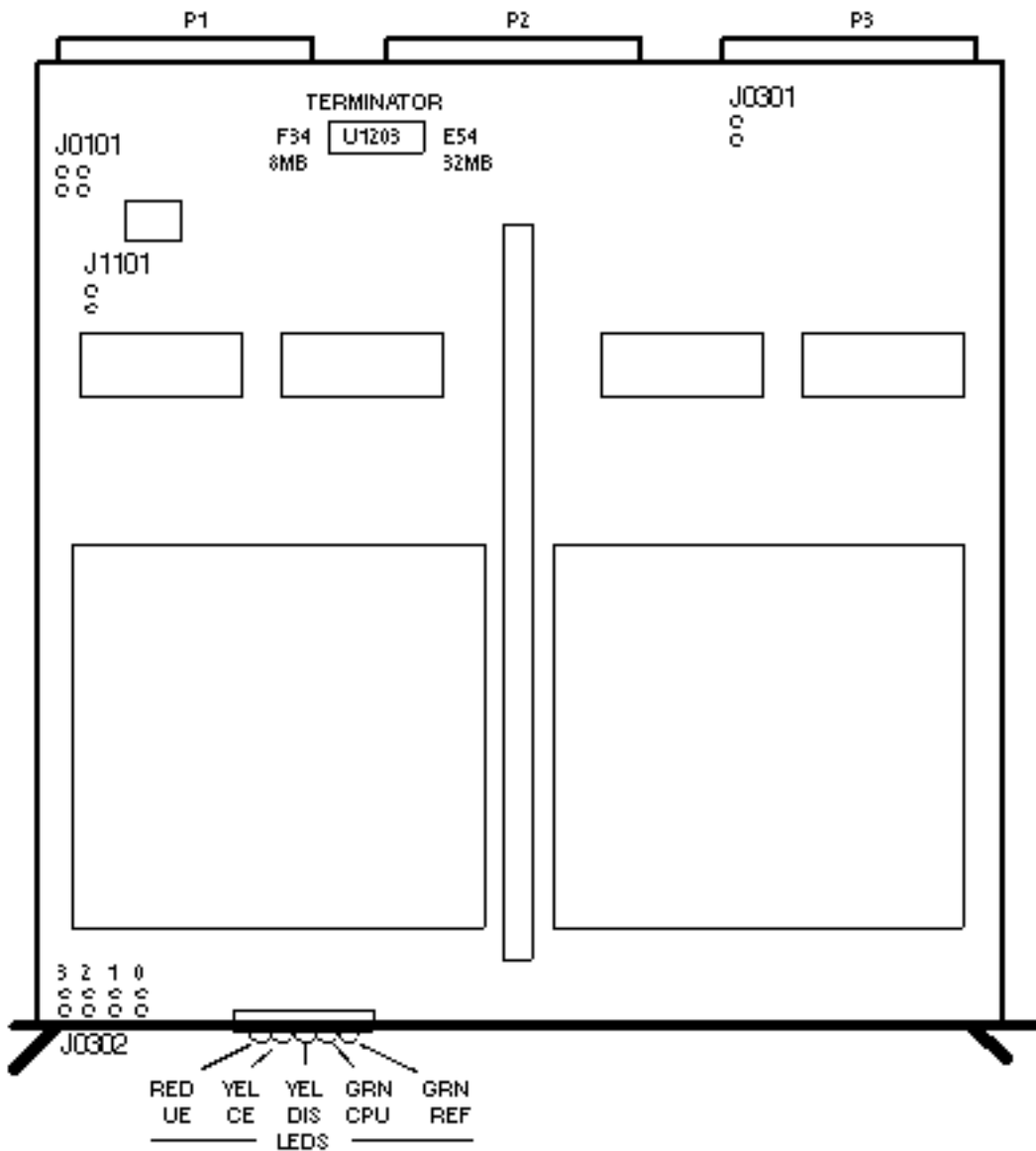
** The 501-2771 64MB SIMM is for Sun internal use only.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/260/280

501-1102	501-1254	501-1451	501-1576
8MB ECC	32MB ECC	32MB ECC	16MB ECC



Power

8MB	12.3 Amps @ +5Vdc 61.5 Watts
32MB	14.0 Amps @ +5Vdc 70.0 Watts

Memory Board LEDs

		STATUS	
LED	COLOR	INTERPRET ON	INTERPRET OFF
UE	Red	Uncorrectable error	No UE reported
CE	Yel	Correctable error	No CE reported
DIS	Yel	CPU access disabled	CPU access enabled
CPU	Grn	CPU accessing memory	No CPU accesses
REF	Grn	Refresh enabled	Refresh failure

Top

Bottom

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0101	1-2 3-4	Out Out	External clock
J1101	1-2	Out	Disable refresh
J0301	1-2	Out In	32MB configuration 16MB configuration
J0302	1 2 3 4	In In In In	1st memory board 2nd memory board 3rd memory board 4th memory board

Notes

1. The Sun 4200 CPU requires EPROM 3.0 or greater when more than two 16MB ECC memory boards are installed.
2. 501-1092 or 501-1117 Backplanes: Install a single memory board in Slot 6 with a 220/270 Terminator, 120-1613-01, installed at location U1203. Remove the terminator when expansion memory boards are installed in Slots 2, 3, 4, and 5.
3. 501-1439 or 501-1498 Backplanes: Install a 220/270 Terminator 120-1613-01, at location U1203 on the memory board in Slot 1. If placement results in memory boards on both sides of the CPU, remove the terminator at location U1411 on the Sun 3400 CPU, and install terminators on the memory boards in Slots 1 and 7.
4. The 8MB memory board must be \geq 501-1102-11 to use with the Sun 3400CPU, the FPA, and the FPA+.
5. The 501-1451 32MB board \geq 501-1451-03 to use with the 501-1576 6MB memory board.
6. Remove jumpers P10, P11, P12, and P13 from the 501-1598 and 501-1832 backplanes when the Sun 3400 board set is installed.

References

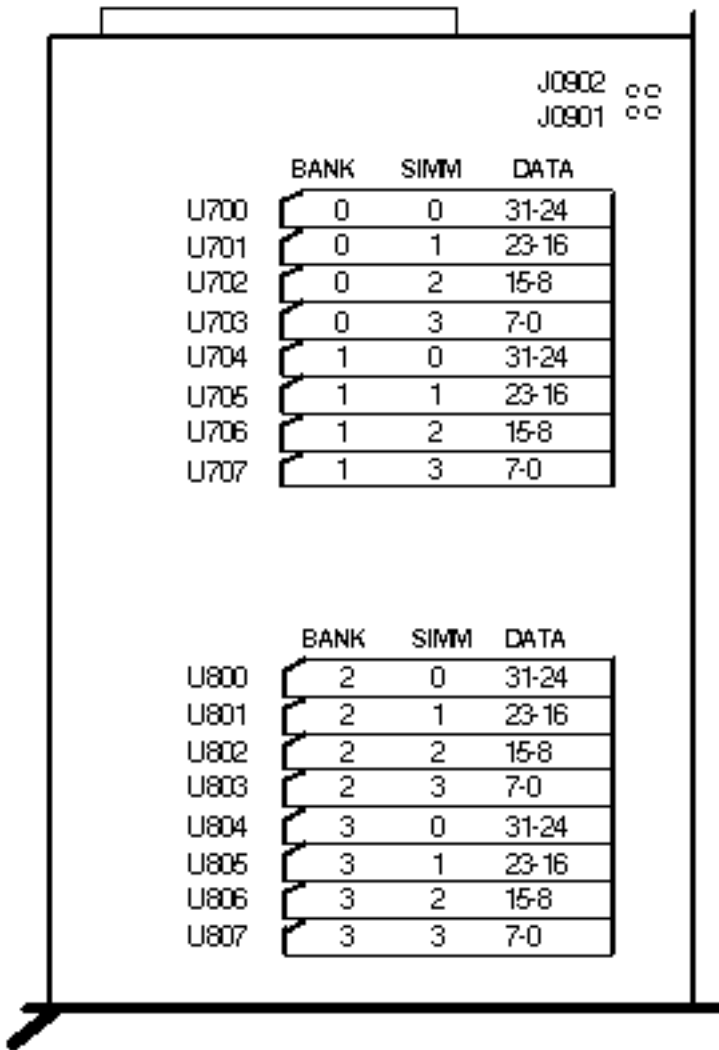
1. *Sun 501-1102 Memory Board Configuration Procedures*, 813-2018.
 2. *Installation Notes for the 32MB Memory Board*, 800-2123.
 3. *16 MB ECC Memory Board Installation and Configuration Manual*, 813-1066.
-

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/330

501-1723	501-1711	501-1755
501-1436	501-1317	501-1704
8MB Parity w 1MB SIMMS	16MB Parity w 1MB SIMMS	32MB Parity w 4MB SIMMS



Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0901	1-2	In Out	8 SIMMS installed 16 SIMMS installed
J0902	1-2	In Out	1MB SIMM 4MB SIMM

Power:

1.1 Amps @ +5Vdc

5.5 Watts

Note

The Sun-4/330 memory uses 1MB SIMM 501-1408, 501-1466, 501-1544, 501-1565, or 501-1697, or 4MB SIMM 501-1682.

Reference

Sun 4300 CPU and Memory Board Configuration Procedure, 813-2064.

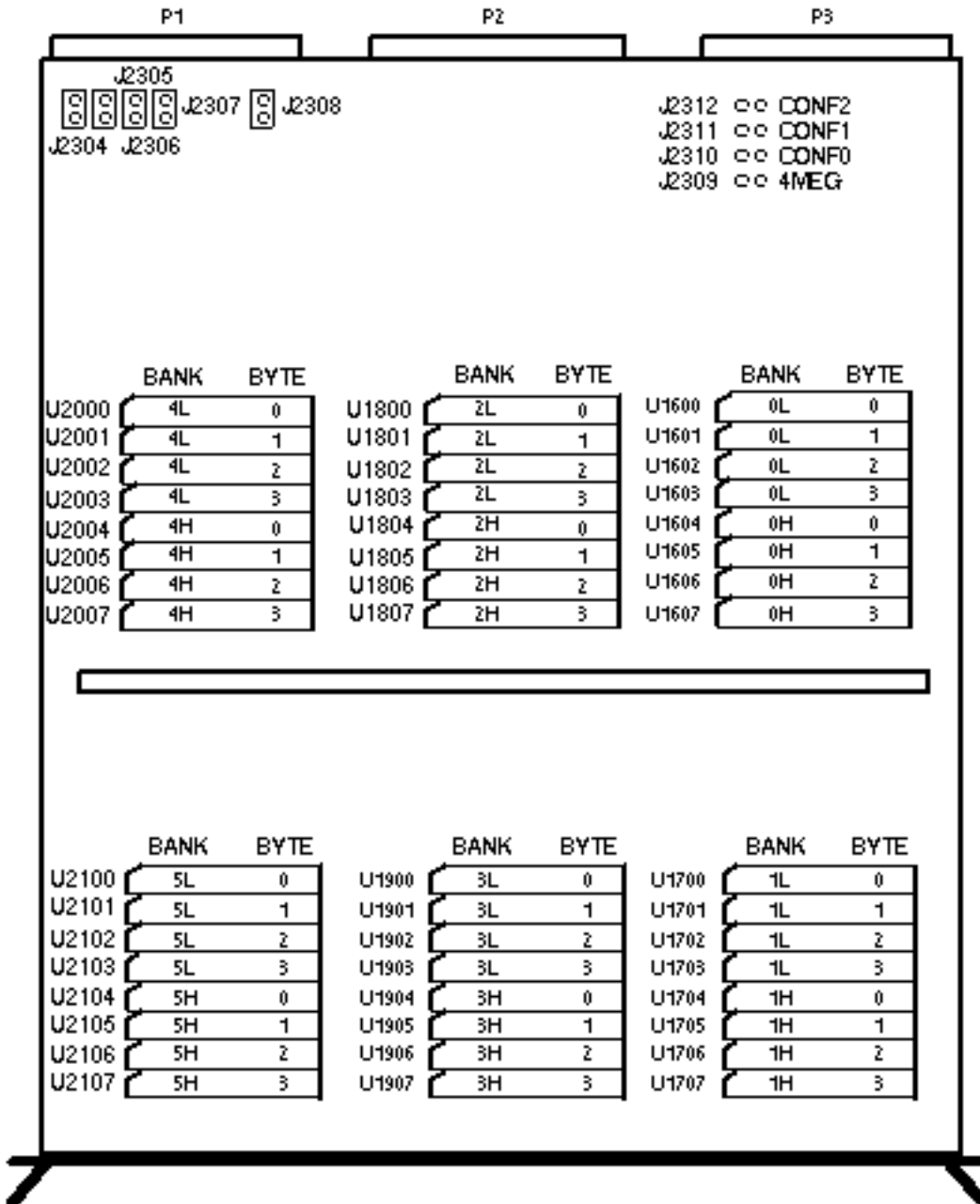
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun 4300

Sun-4/310/350/360/370/380/390

501-1563	501-1564	501-1495	501-1703
24MB Parity w 1MB SIMMs	8MB Parity w 1MB SIMMs	48MB Parity w 1MB SIMMs	32MB Parity w 4MB SIMMs



Note

Socket locations are silkscreened on the solder side of this board.

Reference

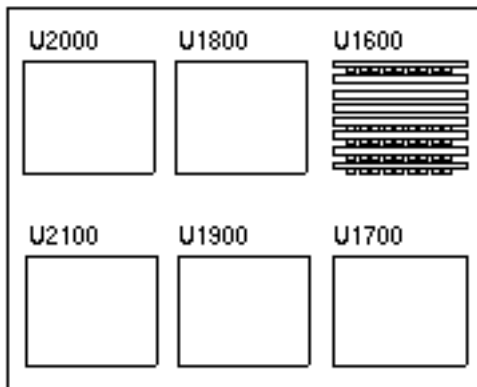
8 Mbyte, 24 Mbyte, and 48 Mbyte Parity Memory Board Installation and Configuration Manual, 800-3403.

Jumper Settings and Memory Configurations

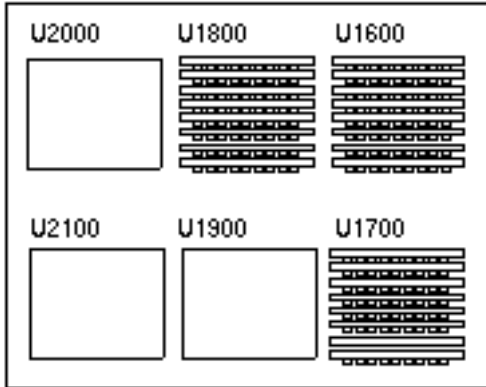
JUMPER	SETTING	DESCRIPTION
J2304	In	BGR0
J2305	In	BGR1
J2306	In	BGR2
J2307	In	BGR3
J2308	In	IACK

JUMPER	SETTING	SIMM MODULE
J2309/4MEG	Out	1MB SIMM
J2309/4MEG	In	4MB SIMM

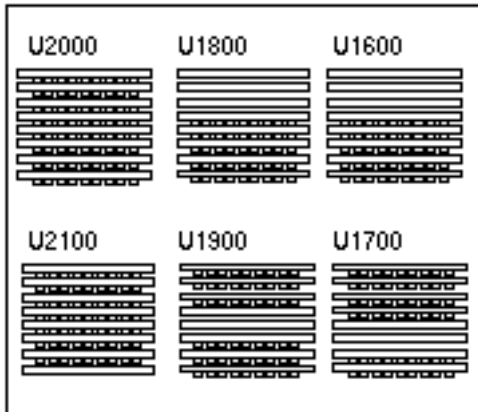
8 MB J2312 CONF2
 32 MB J2311 CONF1
 J2310 CONF0



24 MB J2312 CONF2
 96 MB J2311 CONF1
 J2310 CONF0



48 MB J2312 CONF2
 192 MB J2311 CONF1
 J2310 CONF0



Power

24MB	4.3 Amps @ +5Vdc 21.5 Watts
48MB	5.3 Amps @ +5Vdc 26.5 Watts

Last updated: December 2, 1996

[Comments and Suggestions](#) 

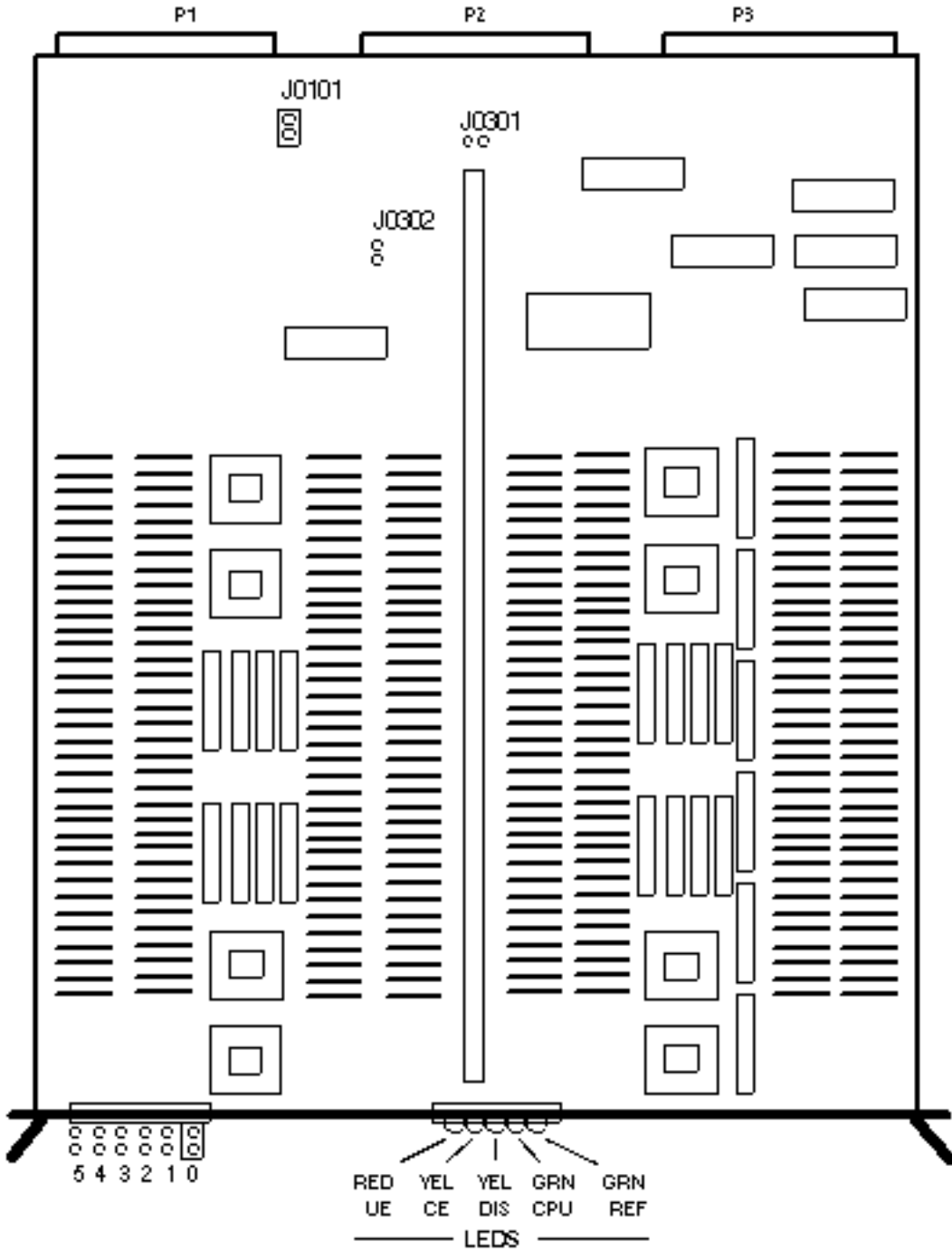
Sun 4400

Sun-4/470/490

501-1333	501-1721
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32MB ECC

128MB ECC



Power

32MB	15.6 Amps @ +5Vdc 78.0 Watts
128MB	13.7 Amps @ +5Vdc 68.5 Watts

LED Status and Jumper Settings

Memory Board LEDs

		STATUS		
LED	COLOR	INTERPRET ON	INTERPRET OFF	
Top Bottom	UE	Red	Uncorrectable error	Normal condition
	CE	Yel	Correctable error	Normal condition
	DIS	Yel	CPU access disabled	CPU access enabled
	CPU	Grn	CPU accesses (flickering) memory	No CPU access occurring
	REF	Grn	Refresh is working properly	Refresh failure. Board needs attention.

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0101	1-2	In	Enable SET.RDY
J0301	1-2	In	Set for 32MB board
J0302	1-2	Out	Set for 32MB board
J0301	1-2	Out	Set for 128MB board
J0302	1-2	In	Set for 128MB board
J0310	1-2	In	1st memory board
J0311	1-2	In	2nd memory board
J0312	1-2	In	3rd memory board
J0313	1-2	In	4th memory board
J0314	1-2	In	5th memory board
J0315	1-2	In	6th memory board

Notes

1. The Sun 4400 CPU requires EPROM 3.0 or greater to support the 128MB memory board.
2. SunOS 4.0.3 supports up to 256MB of memory.

3. SunOS 4.1 PSR A requires *4.1 PSR A Sun-4 PMEG Patch* to enable over 256MB of memory.
4. A Correctable Error on the sixth 128MB board turns on the CE LED and turns off error logging. Reset power to clear this condition.

Reference

32- and 128-Mbyte Memory Board Installation and Configuration Procedures, 800-3518.

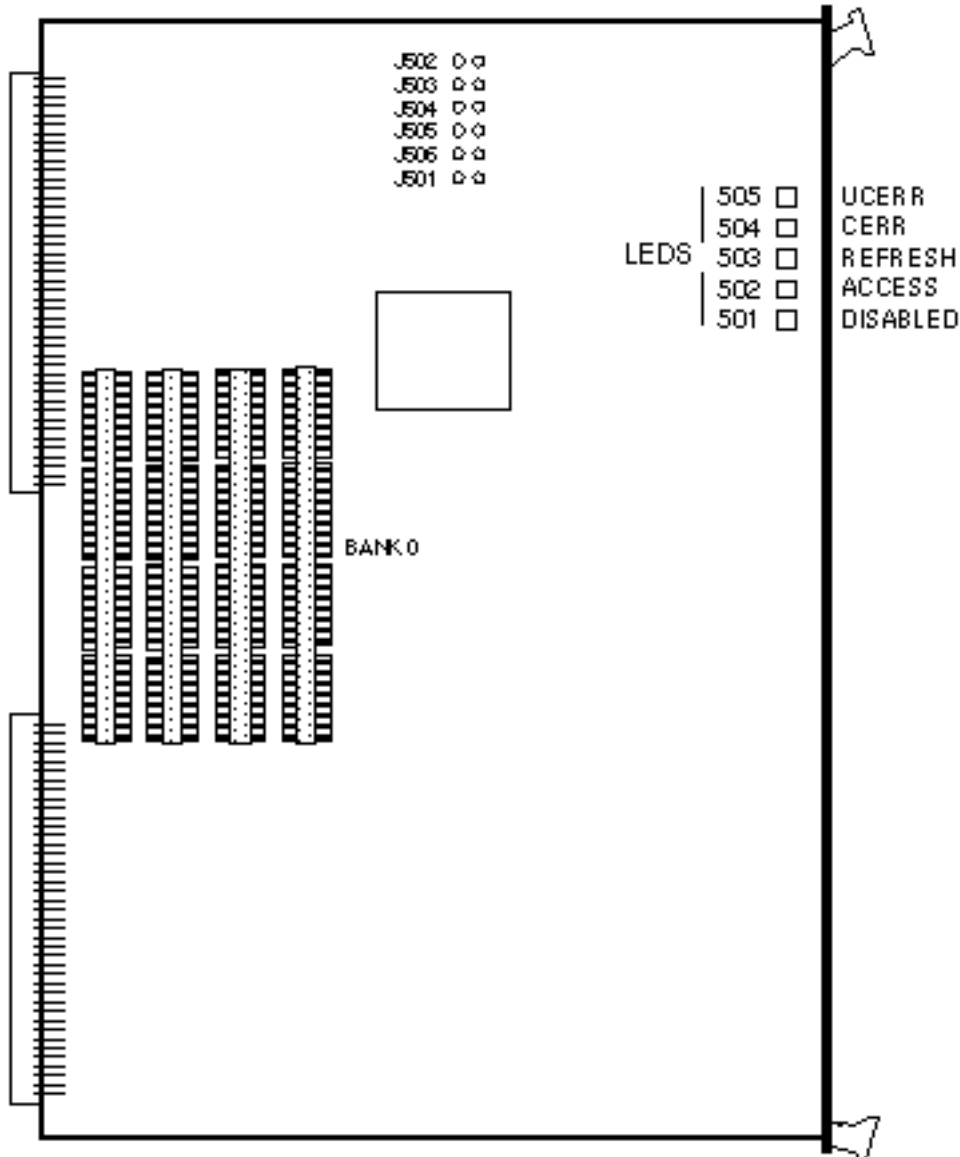
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/E

501-8042

4MB ECC



Jumper Descriptions

BOARD SIZE

Sets the memory size of the board.

BOARD ID

Determines where a memory board is mapped into the 256MByte space allocated for memory expansion.

HI/LOW MEM

IN maps the memory board into the lowest 256MBytes of CPU type 0 space.

OUT maps the memory board in the address range between 256MBytes and 512MBytes.

BD ID	LOW MEMORY	HIGH MEMORY
0	0x00000000 - 0x003fffff	or 0x10000000 - 0x103fffff
1	0x01000000 - 0x013fffff	or 0x11000000 - 0x113fffff
2	0x02000000 - 0x023fffff	or 0x12000000 - 0x123fffff
3	0x03000000 - 0x033fffff	or 0x13000000 - 0x133fffff

1M/4M DRAM

Specifies 1MByte or 4Mbyte DRAM modules.

Jumper Settings

Memory Mapped into the Upper 256MBytes of Type 0 Address Space

BOARD SIZE	BOARD ID	HI/LOW MEM	1/4MB DRAM	ADDRESS RANGE		
J0502	J0503	J0504	J0505	J0506	J0501	PHYSICAL ADDR RANGE
Out	Out	Out	Out	Out	Out	0x1000000 - 0x103fffff
Out	Out	Out	In	Out	Out	0x11000000 - 0x113fffff
Out	Out	In	Out	Out	Out	0x12000000 - 0x123fffff
Out	Out	In	In	Out	Out	0x13000000 - 0x133fffff

Memory Mapped into the Lower 256MBytes of Type 0 Address Space

BOARD SIZE	BOARD ID	HI/LOW MEM	1/4MB DRAM	ADDRESS RANGE		
J0502	J0503	J0504	J0505	J0506	J0501	PHYSICAL ADDR RANGE
Out	Out	Out	Out	In	Out	0x0000000 - 0x003fffff
Out	Out	Out	In	In	Out	0x01000000 - 0x013fffff
Out	Out	In	Out	In	Out	0x02000000 - 0x023fffff
Out	Out	In	In	In	Out	0x03000000 - 0x033fffff

Notes

1. For specific application dependent memory configurations refer to the *SPARCengine 1E ECC Memory Card User's Manual*, 800-8138.
2. The default configuration for Hi Mem/Low Mem is J0506, OUT.

Reference

SPARCengine 1E ECC Memory Card User's Manual, 800-8138.

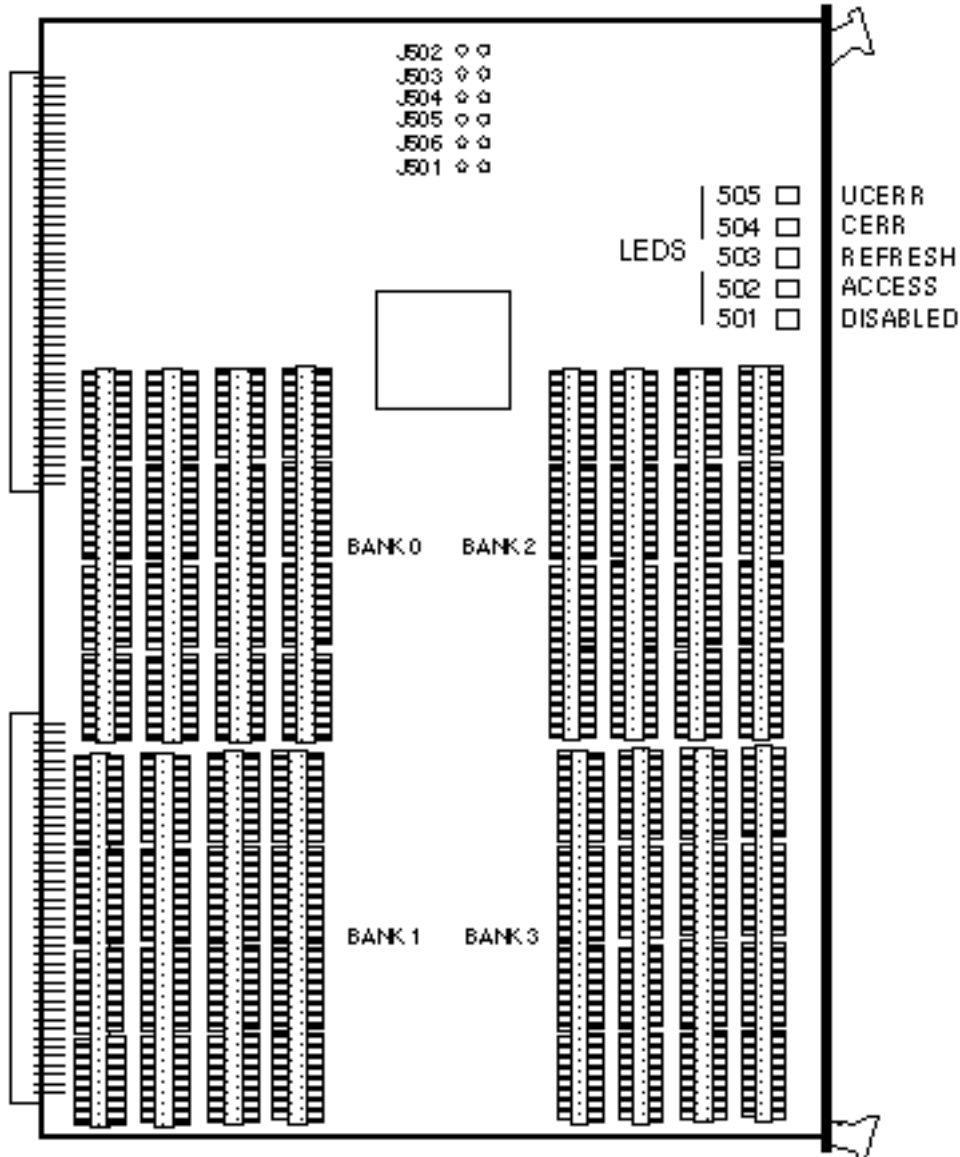
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/E

501-8036

16MB ECC



Jumper Descriptions

BOARD SIZE

Sets the memory size of the board.

BOARD ID

Determines where a memory board is mapped into the 256MByte space allocated for memory expansion.

HI/LOW MEM

IN maps the memory board into the lowest 256MBytes of CPU type 0 space.

OUT maps the memory board in the address range between 256MBytes and 512MBytes.

BD ID	LOW MEMORY	HIGH MEMORY
0	0x00000000 - 0x00ffffff or 0x10000000 - 0x10ffffff	
1	0x01000000 - 0x01ffffff or 0x11000000 - 0x11ffffff	
2	0x02000000 - 0x02ffffff or 0x12000000 - 0x12ffffff	
3	0x03000000 - 0x03ffffff or 0x13000000 - 0x13ffffff	

1M/4M DRAM

Specifies 1MByte or 4Mbyte DRAM modules.

Jumper Settings

Memory Mapped into the Upper 256MBytes of Type 0 Address Space

BOARD SIZE	BOARD ID	HI/LOW MEM	1/4MB DRAM	ADDRESS RANGE		
J0502	J0503	J0504	J0505	J0506	J0501	PHYSICAL ADDR RANGE
In	In	Out	Out	Out	Out	0x1000000 - 0x10ffffff
In	In	Out	In	Out	Out	0x11000000 - 0x11ffffff
In	In	In	Out	Out	Out	0x12000000 - 0x12ffffff
In	In	In	In	Out	Out	0x13000000 - 0x13ffffff

Memory Mapped into the Lower 256MBytes of Type 0 Address Space

BOARD SIZE	BOARD ID	HI/LOW MEM	1/4MB DRAM	ADDRESS RANGE		
J0502	J0503	J0504	J0505	J0506	J0501	PHYSICAL ADDR RANGE
In	In	Out	Out	In	Out	0x0000000 - 0x00ffffff
In	In	Out	In	In	Out	0x01000000 - 0x01ffffff
In	In	In	Out	In	Out	0x02000000 - 0x02ffffff
In	In	In	In	In	Out	0x03000000 - 0x03ffffff

Notes

1. For specific application dependent memory configurations refer to the *SPARCengine 1E ECC Memory Card User's Manual*, 800-8138.
2. The default configuration for Hi Mem/Low Mem is J0506, OUT.

Reference

SPARCengine 1E ECC Memory Card User's Manual, 800-8138.

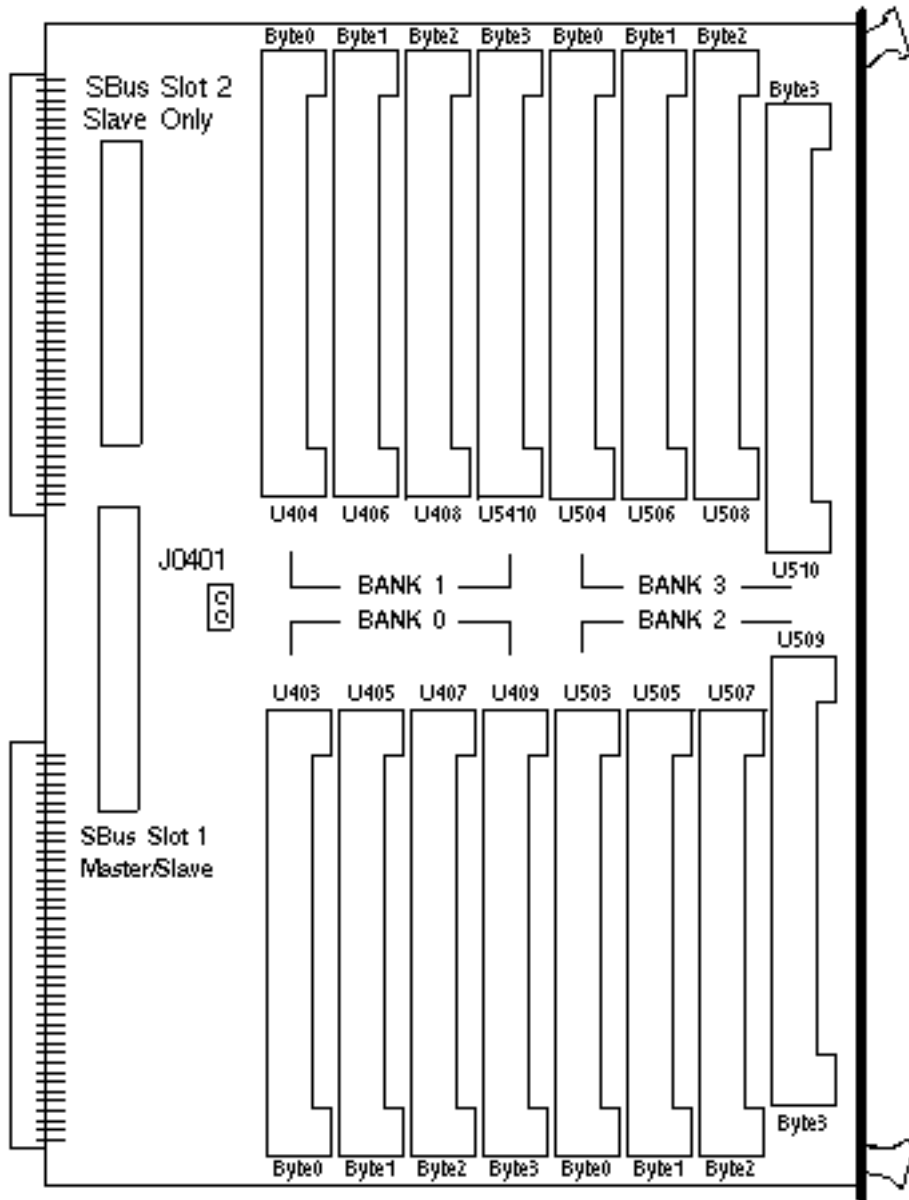
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun-4/E Combo

501-8060

OMB Parity



JUMPER	SETTING	DESCRIPTION
J0401	In	Enable Memory
	Out	Disable Memory

Note

SunOS 4.0.3e requires the *4.0.3e SRX Feature Tape* to support the Combo memory card.

Reference

SPARCengine 1E Combo Memory Card User's Manual, 800-8152.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

CPU

Sun-4 Architecture

[Sun 4100](#)

[Sun 4200](#)

[Sun 4300](#)

[Sun 4400](#)

Sun-4e Architecture

[SPARCengine 1 \(Sun-4/E\)](#)

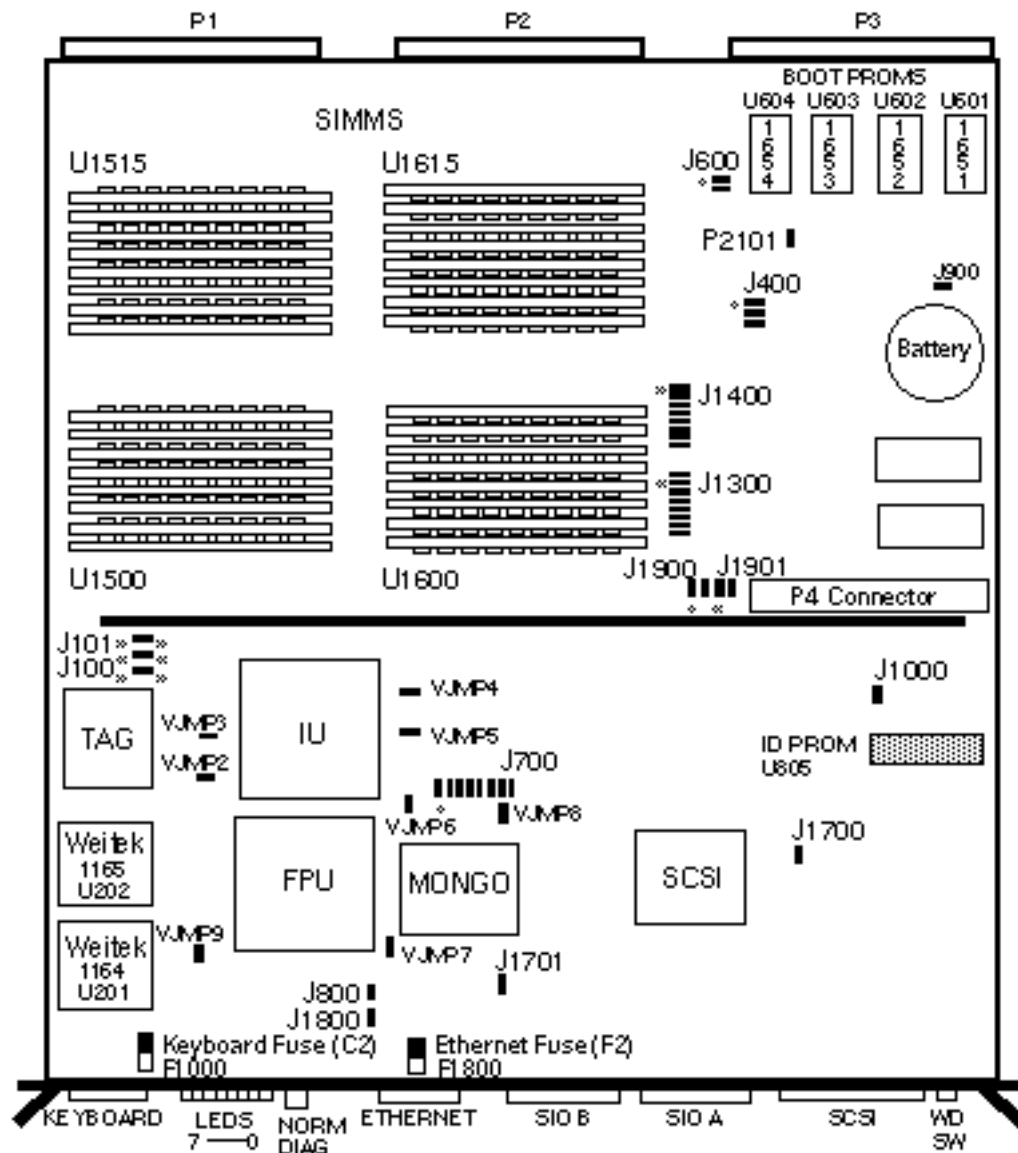
Last updated: December 2, 1996

[Comments and Suggestions](#) 

Sun 4100

Sun 4/110/150

501-1199	501-1237	501-1462
501-1512	501-1513	501-1514
8MB w/o FP	8MB w FPC	16MB w/o FPC
501-1463	501-1464	501-1465
501-1515	501-1516	501-1517
16MB w FPC	32MB w/o FPC	32MB w FPC



Power: with FPU

13.8 Amps @ +5Vdc

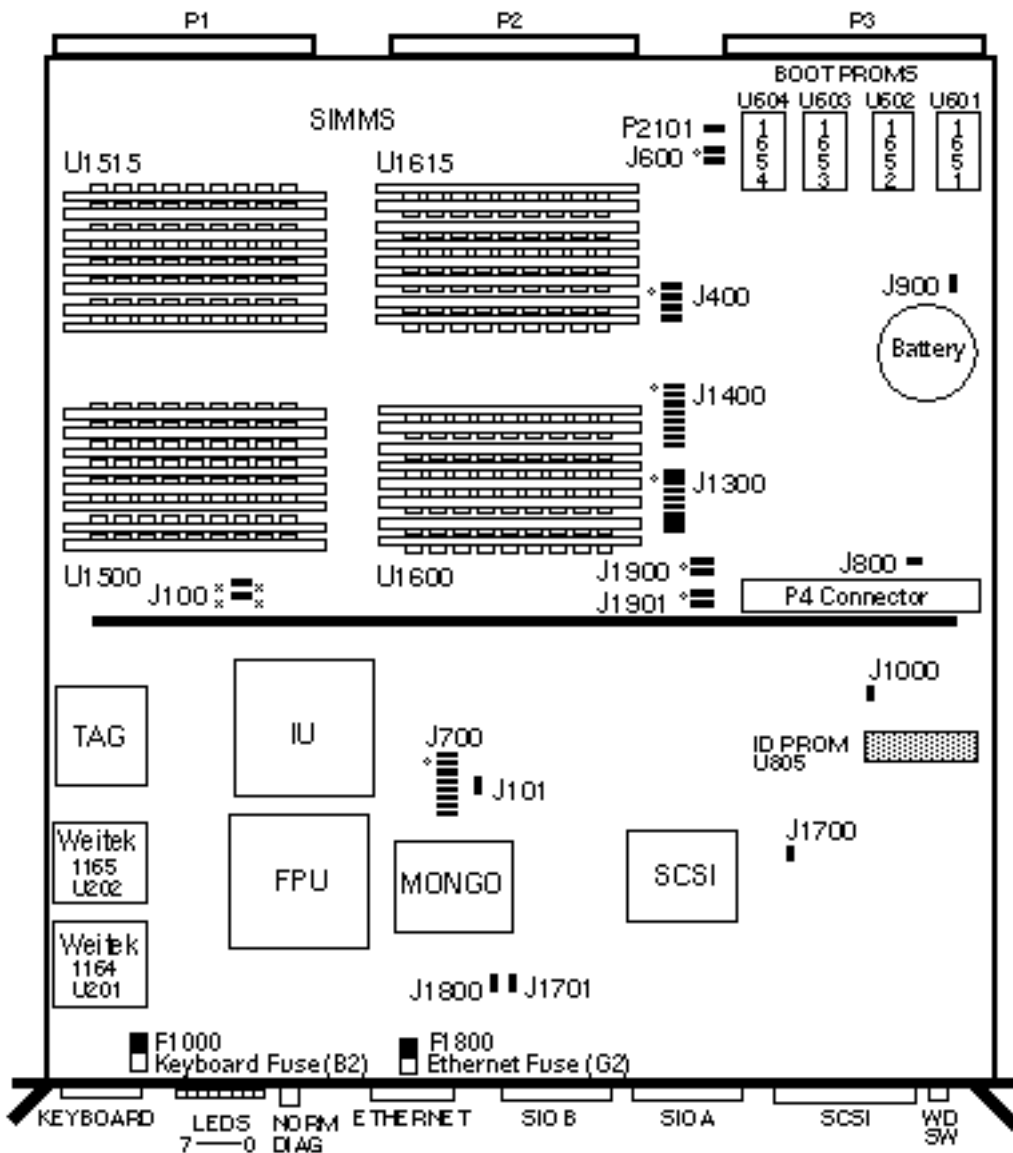
0.1 Amps @ -5Vdc

69.5 Watts

Sun 4100

Sun 4/110/150

501-1656	501-1657	501-1658
8MB w/o FPC	8MB w FPC 1	6MB w/o FPC 1
501-1659	501-1660	501-1661
6MB w FPC	32MB w/o FPC	32MB w FPC



Power: with FPU

13.8 Amps @ +5Vdc

0.1 Amps @ -5Vdc

69.5 Watts

**501-1199 / 501-1237 / 501-1462 / 501-1463 /
501-1464 / 501-1465
501-1512 / 501-1513 / 501-1514 / 501-1515 /
501-1516 / 501-1517
501-1656 / 501-1657 / 501-1658 / 501-1659 /
501-1660 / 501-1661**

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0101	1-2	In	Enable 57.1MHz clock
J0600	1-2 3-4	In Out	27512 Boot PROM 27256 Boot PROM
J700	1-2 3-4 5-6 7-8 9-10 11-12 13-14 15-16	In In In In In In In In	VME interrupt level 1 VME interrupt level 2 VME interrupt level 3 VME interrupt level 4 VME interrupt level 5 VME interrupt level 6 VME interrupt level 7 Not used
J800	1-2	Out	Force reset
J900	1-2	Out	In = Shorts 3V battery
J1000	1-2	In	Enable UART clock
J1700	1-2	In	Enable Ethernet clock
J1701	1-2	Out	Ethernet Level 2 (In = level 1)
J1800	1-2 1-2 1-2	Out Out In	Auto sense Ethernet* Force Thin Ethernet Force Thick Ethernet
J1900	1-2 3-4	Out In	CPU is VME requester only CPU is VME requester
J1901	1-2 3-4	Out In	CPU is VME reset slave CPU is VME reset master
P2101	1-2	In	Enable VME system clock

* Default setting. The auto sense feature requires ≥ 30 milliamps on the +12V return (example - DEC DELNI).

Notes

1. The Type-4 Keyboard requires CPU $\geq 501-1199-11$ or $\geq 501-1237-11$.
2. The 501-1384 FPU2 is supported on CPU boards 501-1512, 501-1513, 501-1514, 501-1515, 501-1516, and 501-1517.
3. The final software release for the Sun 4100 is Solaris 2.4.

J100 Cache Line and J400 Memory Strobe

MEMORY SIZE	8MB	16MB	20MB	32MB
SIMM SIZE	256KB	1MB	1MB/256KB	1MB
J100 Pin 1-2	In	Out	In	Out
J100 Pin 3-4	Out	In	Out	In
J400 Pin 1-2	Out	In	Out	In
J400 Pin 3-4	In	Out	Out	In
J400 Pin 5-6	In	In	In	Out

J1300 SIMM Addressing Mode

SIMM TYPE	MEMORY SIZE	8MB	16MB	20MB	32MB
		256KB	1MB	1MB/256KB	1MB
Same*	Pin 1-2	In	Out	Out	In
Different*	Pin 3-4	Out	In	In	Out
256KB	Pin 5-6	In	Out	In	Out
1MB	Pin 7-8	Out	In	Out	In
2MB	Pin 9-10	Out	Out	Out	Out
<32MB	Pin 11-12	In	In	In	Out
32MB	Pin 13-1	Out	Out	Out	In
Unused	Pin 15-16	Out	Out	Out	Out

J1400 SIMM Addressing Mode

SIMM TYPE	MEMORY SIZE	8MB	16MB	20MB	32MB
		256KB	1MB	1MB/256KB	1MB
Same*	Pin 1-2	In	Out	Out	In
Different*	Pin 3-4	Out	In	In	Out
256KB	Pin 5-6	In	Out	Out	Out
1MB	Pin 7-8	Out	In	In	In
2MB	Pin 9-10	Out	Out	Out	Out
<32MB	Pin 11-12	In	In	In	Out
32M	Pin 13-14	Out	Out	Out	In

Unused	Pin 15-16	Out	Out	Out	Out
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* Same/Different correspond to sets of 256KB or 1MB SIMMs

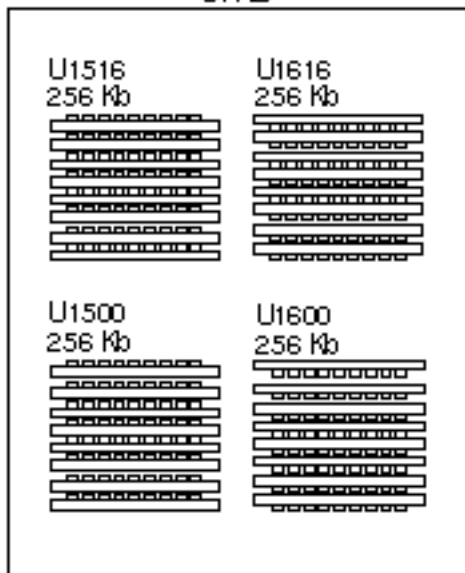
Sun 4100

SIMM Configurations

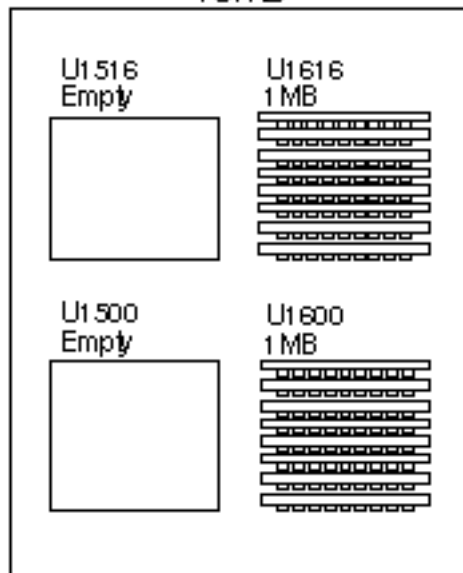
501-1314	501-1466
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256KB SIMM	1MB SIMM
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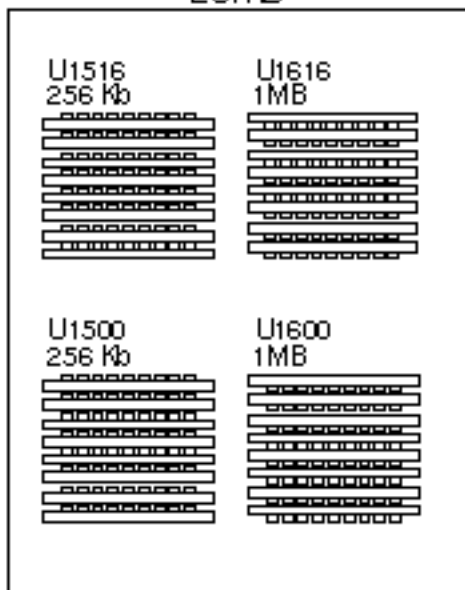
8MB



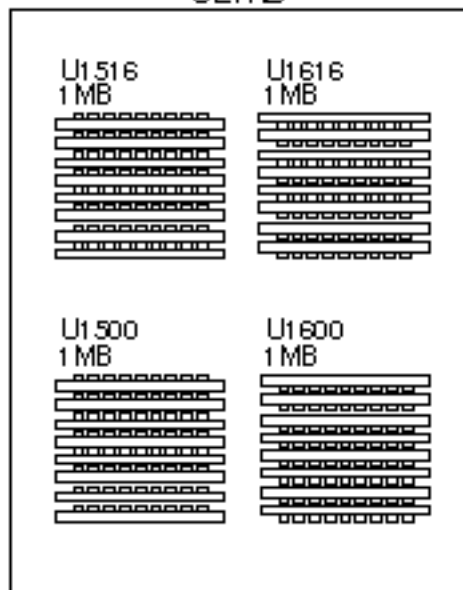
16MB



20MB



32MB



Reference

Sun 4100 Board Set Configuration Procedures, 813-2049.

Last updated: December 2, 1996

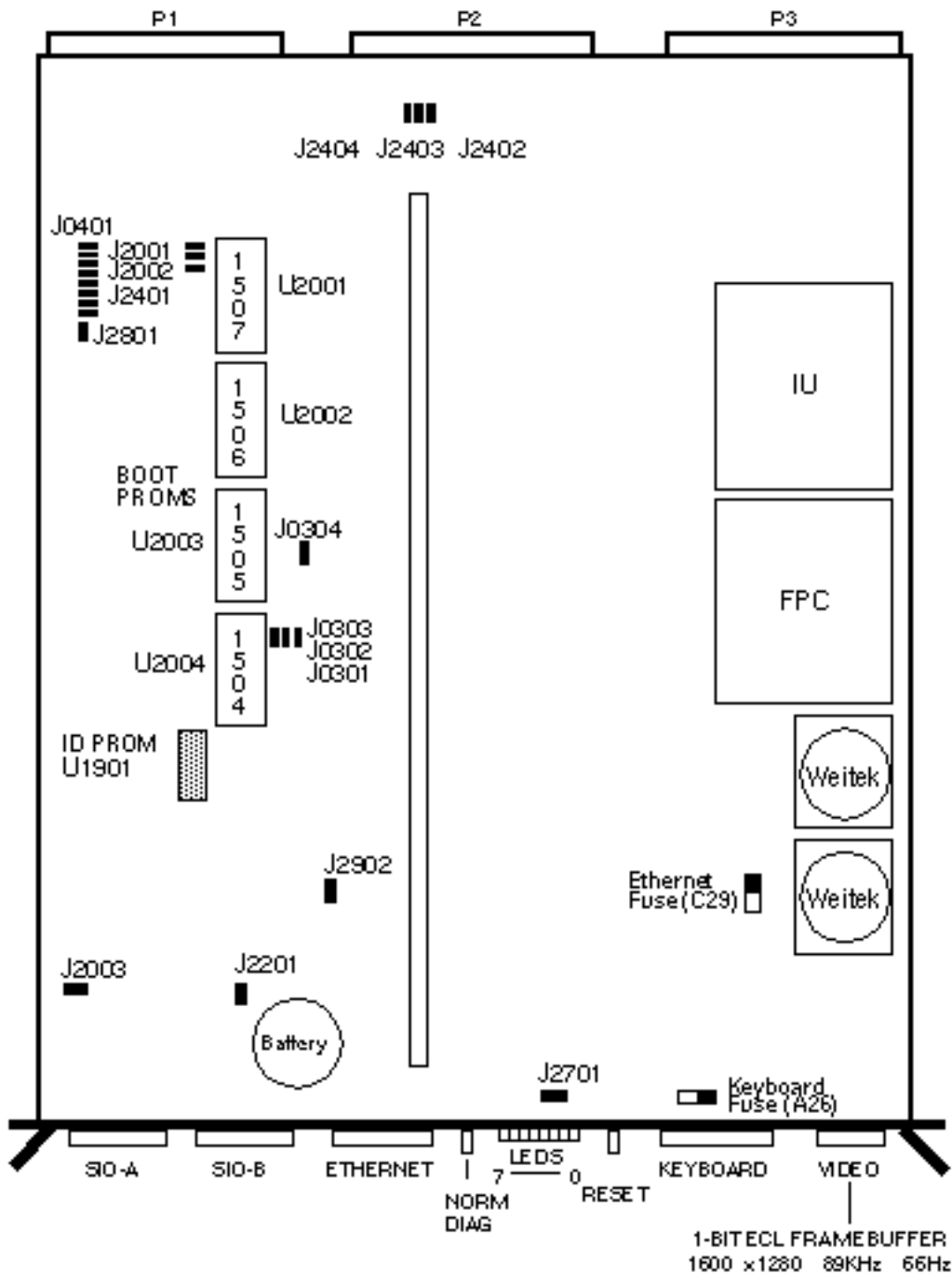
[Comments and Suggestions](#) 

Sun 4200

Sun-4/260/280

501-1274	501-1491	501-1522
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w FPC-6/4

w FPU-2
2-hi Backpanelw FPC-6/4
2-hi Backpanel

Power

17.2 Amps @ +5Vdc

1.3 Amps @ -5Vdc

0.4 Amps @ +12Vdc

98.0 Watts

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J2701	1-2	Out	Debug jumper
J2003	1-2	In	Connect 3V battery
J2201	1-2	In	SCC (UART)clock enable
J2902	1-2	Out	Enet Level 2 (IN for level 1)
J2404	1-2	Out	Null
J0304	1-2	In	Enable VME clock
J0303	1-2	In	16 MHz clock enable
J0302	1-2	In	46.153 MHz clock enable
J0301	1-2	Out	External clock
J2801	1-2	In	Enable system DVMA
J0401	1-2	In/Out	Null
	3-4	In	VME interrupt level 1
	5-6	In	VME interrupt level 2
	7-8	In	VME interrupt level 3
	9-10	In	VME interrupt level 4
	11-12	In	VME interrupt level 5
	13-14	In	VME interrupt level 6
	15-16	In	VME interrupt level 7
J2001	1-2	In	Select 27512 PROM
J2002	1-2	Out	Select 27256 PROM
J2401	1-2	Out	CPU is VME requester only
J2402	1-2	In	CPU is arbiter/requester
J2403	1-2	Out	CPU is reset slave
J2404	1-2	In	CPU is reset master

Notes

1. 501-1274 must be \geq 501-1274-12 to use with the Type-4 Keyboard.
2. 501-1274 must be \geq 501-1274-13 to use with the Xylogics 7053.
3. The Xylogics 7053 requires CPU EPROM 1.7 or greater.
4. Boot PROM 3.0 is required when more than two 16MB memory boards are used.
5. The final software release for the Sun 4200 is Solaris 2.4

Reference

Sun-4200 CPU Board Configuration Procedures, 813-2031.

Last updated: December 2, 1996

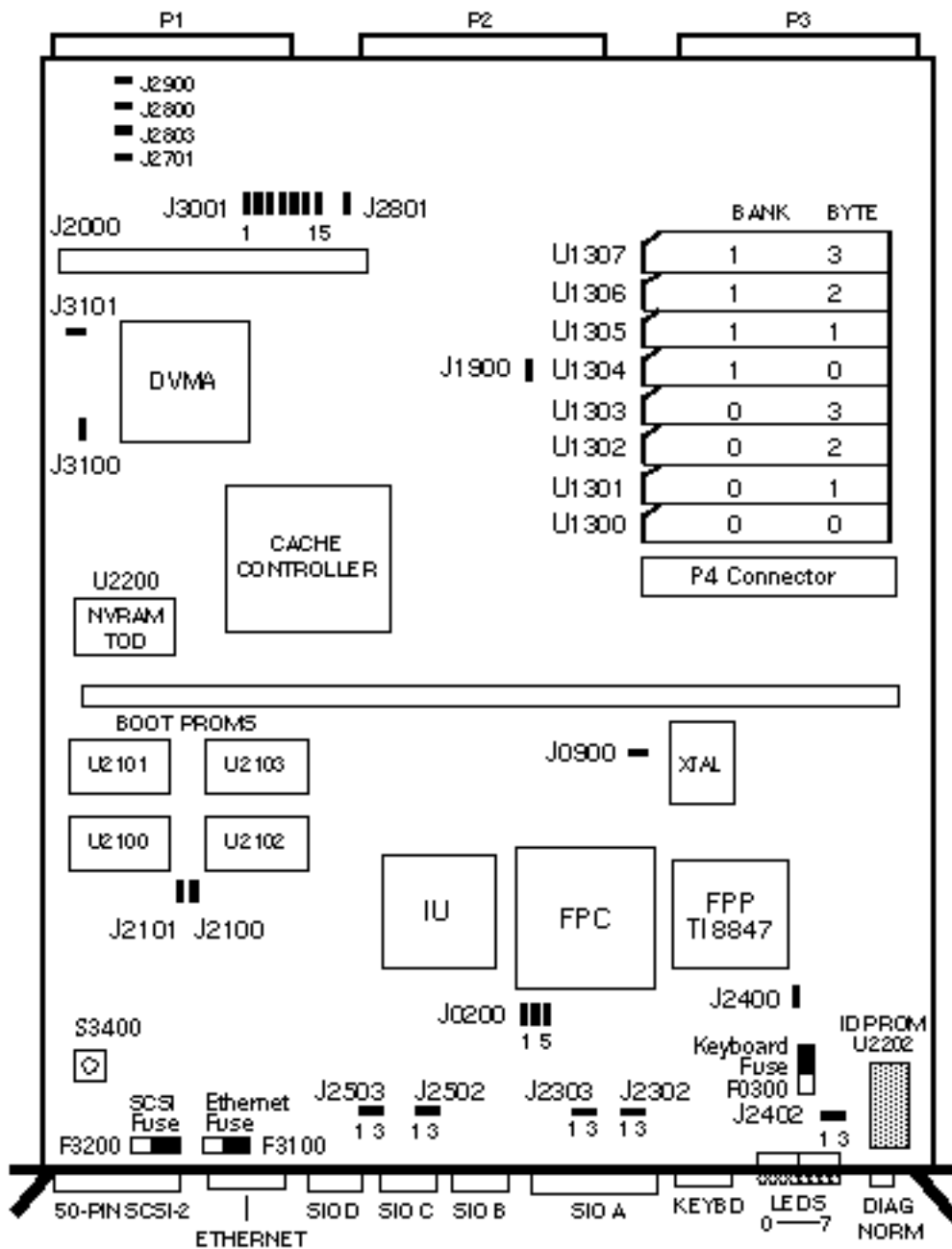
[Comments and Suggestions](#) 

Sun 4300

Sun-4/310/330/350/360/370/380/390

501-1316	501-1742
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8MB w 1MB SIMMS	32MB w 4MB SIMMS
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Power

17.5 Amps @ +5vdc

0.2 Amps @ +12vdc

0.2 Amps @ -12vdc

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0200	1-2	In	FPC normally low
	3-4	In	FPC normally low
	5-6	Out	FPC normally high
J0900	1-2	In	Enable Sysclock
J1900	1-2	In	CPU has 4MB SIMMs
	1-2	Out	CPU has 1MB SIMMs
J2100	1-2	In	Enable 27512 EPROM
J2101	In	Out	Enable 27256 EPROM
J2302	1-2	In	Set Ports A,B to RS-232 (+ 12V)
J2303	1-2	In	Set Ports A,B to RS-232 (- 12V)
J2302	2-3	In	Set Ports A,B to RS-423 (+ 5V)
J2303	2-3	In	Set Ports A,B to RS-423 (- 5V)
J2400	1-2	In	Enable serial port clock
J2402	1-2	Out	Mouse TD enabled (optional)
	2-3	In	Mouse TD grounded (default)
J2502	1-2	In	Set Ports C,D to RS-232 (+ 12V)
J2503	1-2	In	Set Ports C,D to RS-232 (- 12V)
J2502	2-3	In	Set Ports C,D to RS-423 (+ 5V)
J2503	2-3	In	Set Ports C,D to RS-423 (- 5V)
J2701	1-2	Out	Disable VME loopback
J2800	1-2	In	Enable VME reset Out
J2801	1-2	In	Enable VME arbiter
J2803	1-2	Out	Enable VME reset IN
J2900	1-2	In	Enable 16 MHz clock to backplane
J3001	1-2	In/Out	Not connected
	3-4	In	Enable VME interrupt level 1
	5-6	In	Enable VME interrupt level 2
	7-8	In	Enable VME interrupt level 3
	9-10	In	Enable VME interrupt level 4
	11-12	In	Enable VME interrupt level 5
	13-14	In	Enable VME interrupt level 6
	15-16	In	Enable VME interrupt level 7
J3100	1-2	In	Enable 32 MHz clock
J3101	1-2	In	Enable 48 MHz clock

Notes

1. Use 1MB SIMM 501-1408-01, 501-1466-01, 501-1544-01, 501-1565-01, or 501-1697-01.
2. Use 4MB SIMM 501-1682-01 or 501-1739-01.

3. 4MB SIMMs, Option X134A, are not supported on the Sun-4/330 CPU.
4. The Sun 4100 1MB SIMM, 501-1466, may be used in the Sun-4/310 and Sun-4/350 system upgrades.
5. Fuses F0300, F3100, and F3200 use 2 Amp Fuse 150-1174-01.
6. The CPU is set for Ethernet Level 2. Level 1 is not selectable.
7. CPU \geq 501-1316-04 is required for use with the ISP-80 and FDDI controllers and with LISP software.
8. CPU \geq 501-1316-03 is required for use with CG5.
9. Boot PROM 3.0 or greater is required to boot from the 60MB 1/4" tape drive in the Mass Storage Subsystem.
10. Boot PROM 3.0.1 or greater is required to boot from a tape drive on a second SCSI Host Adapter.
11. Boot PROM 3.0.3 or greater is required with 4MB SIMM modules.
12. Install Fused Shunt, 150-1669-01, at locations J2302, J2303, J2502, and J2503, to provide circuit protection to the M+ (+12Vdc) and M- (-12Vdc) inputs to the UC5170 Serial Port Line Driver.
13. The final software release for the Sun 4300 is Solaris 2.4.

Reference

Sun 4300 CPU Board Installation Notes, 800-3119.

Last updated: December 2, 1996

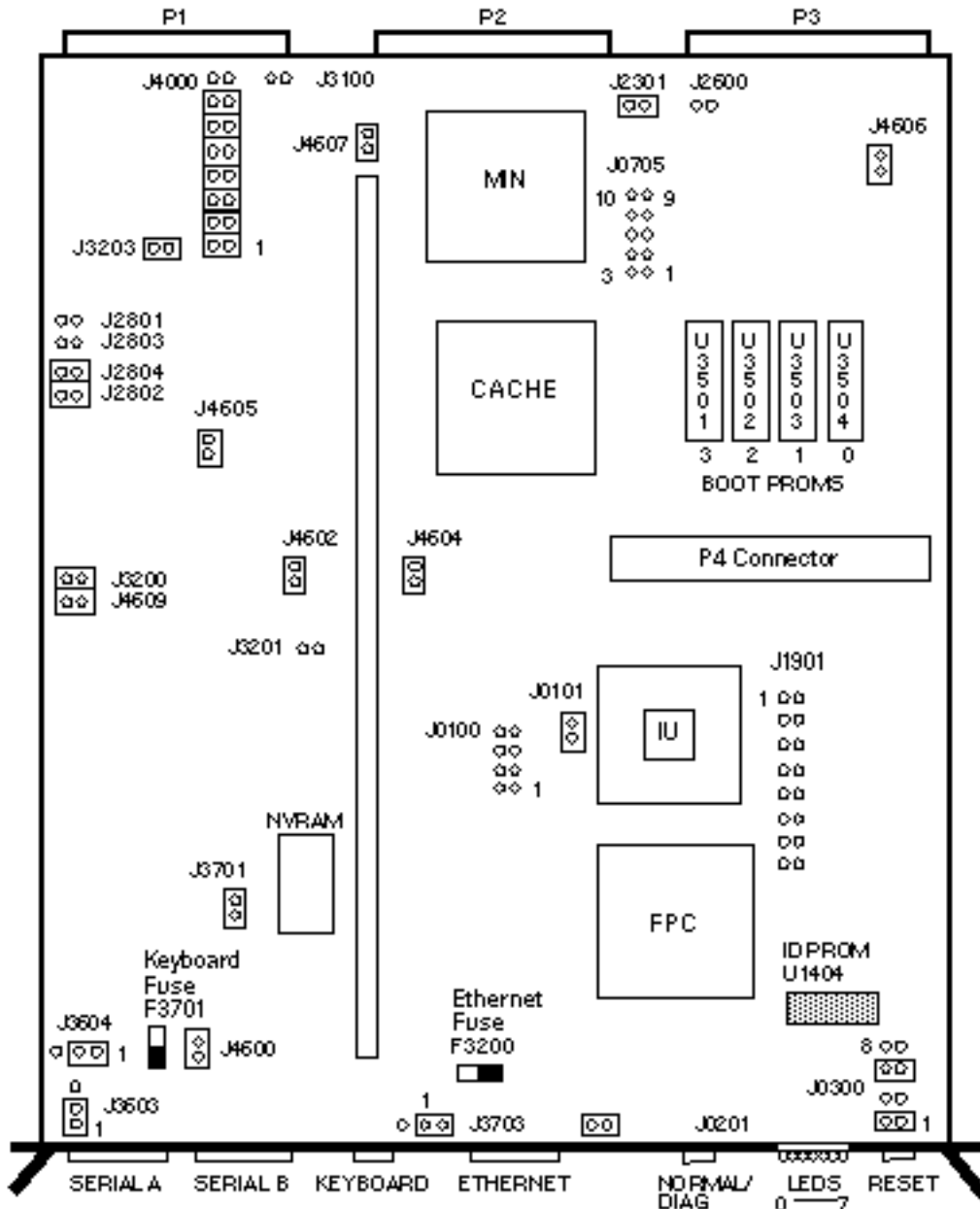
[Comments and Suggestions](#) 

Sun 4400

Sun-4/470/490

501-1381	501-1899
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OMB	OMB
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Power

28.7 Amps @ +5Vdc

0.1 Amps @ +12Vdc

0.1 Amps @ -12Vdc

145.9 Watts

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0100	1-10	Out	Used for debug
J0101	1-2	In	Used for ATE
J0201	1-2	In	Used for ATE
J0300	1-2	In	If FPC is present
	3-4	Out	If FPC is present
	5-6	In	Avoid a trap when I-Flush instruction is executed
	7-8	Out	FPC Chaining (only if FPC is present)
J0705	1-10	Out	Used for debug
J1901	1-36	Out	Used for debug
J2301	1-2	In	Enable system clock (33 MHz)
J2600	1-2	Out	Used for debug
J2801	1-2	Out	Disable VME arbiter
J2802	1-2	In	Enable VME arbiter
J2803	1-2	Out	Connect P1.SYSRST to VME.RST.IN
J2804	1-2	In	Connect VME.RST.OUT to P1.SYSRST
J3100	1-2	Out	VME loopback mode enabled
J3200	1-2	In	Provide 16 MHz Ethernet clock
J3201	1-2	Out	Enet Level 2 (IN for level 1)
J3203	1-2	In	Provide P1.SYSCLOCK
J3603	1-2	In	Select RS-423 (-5V)
	2-3	In	Select RS-232 (-12V)
J3604	1-2	In	Select RS-423 (+5V)
	2-3	In	Select RS-232 (+12V)
J3701	1-2	In	Provide 4.9152 MHz SCC clock
J3703	1-2	In	Mouse TD enabled (optional)
J3703	2-3	In	Mouse TD grounded (default)
J4000	1-2	In	VME IRQ1
	3-4	In	VME IRQ2
	5-6	In	VME IRQ3
	7-8	In	VME IRQ4
	9-10	In	VME IRQ5
	11-12	In	VME IRQ6
	13-14	In	VME IRQ7
	15-16	In/Out	Not connected
J4600	1-2	In	Used for ATE
J4602	1-2	In	Used for ATE
J4604	1-2	In	Used for ATE
J4605	1-2	In	Used for ATE
J4606	1-2	In	Used for ATE
J4607	1-2	In	Used for ATE
J4608	1-2	In	Used for ATE
J4609	1-2	In	Used for ATE

Notes

1. Install Fused Shunt 150-1669-01 at locations J3603 and J3604 to provide circuit protection to the M+ (+12Vdc) and M- (-12Vdc) inputs to the UC5170 Serial Port Line Driver.
2. The output of Pin-25 from the Serial Port on the 501-1381 CPU is -5Vdc. There is no output from Pin-25 on the 501-1899 CPU.
3. The 501-1381 CPU is not supported in Sun-4/470 serial numbers 136Kxxxx and greater. This chassis has two 50-pin SCSI-2 connectors on the rear EMI cover.
4. SNC 1.2 for Solaris 1.1 requires CPU 501-1381-09 or 501-1899-01.
5. The final software release for the Sun 4400 is Solaris 2.4.

Reference

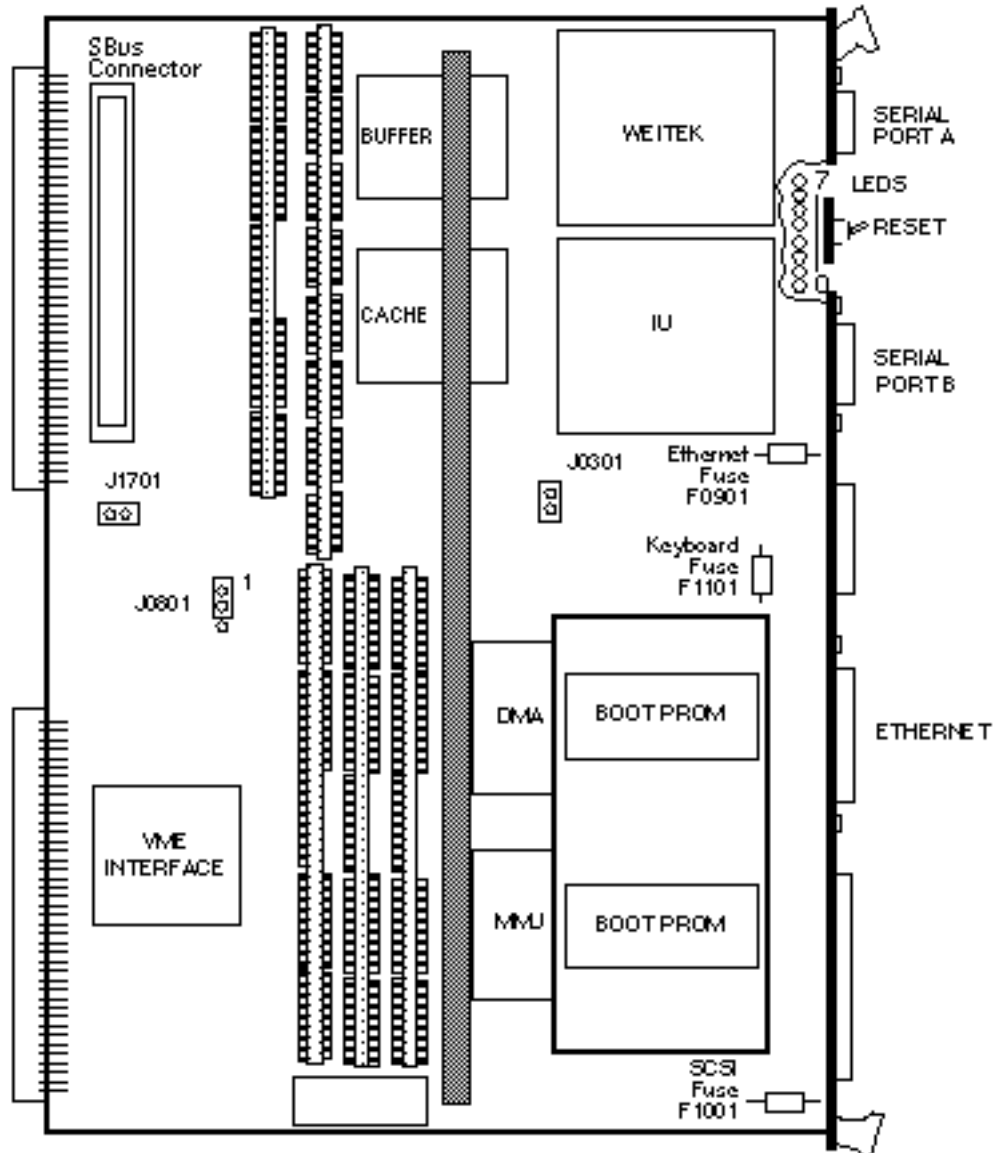
Sun 4400 Board Set Installation and Configuration Manual, 800-3269.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

SPARCengine 1 (Sun-4/E)

501-8035	501-8058	501-8064
4MB w Weitek	4MB w/o Weitek	16MB w Weitek



Power

5.0 Amps @ +5Vdc
 0.1 Amps @ +12Vdc
 0.1 Amps @ -12Vdc
 27.4 Watts

Jumper Settings

JUMPER	PINS	SETTING	DESCRIPTION
J0301	1-2	In	20MHz clock enable
J0801	1-2	In	Use 4MB parity memory (default)
	2-3	In	Disable 4MB parity memory
J1701	1-2	In	CPU is installed in VME slot 1

Notes

1. Boot PROM 1.4 does not support SunOS 4.1e.
2. Boot PROM 1.5 supports SunOS 4.1e.
3. Boot PROM 1.6 supports SunOS 4.1e.
4. Boot PROM 1.6 and EPROM daughter card 500-8013-05 are installed on CPU 501-8035-12.
5. Daughter Card 500-8013-05 is required if a customer supplied PROM is used with the 1.6 EPROM.
6. A customer supplied EPROM will not function on Daughter Card 500-8013-04, or lower, even if the 1.6 EPROM is installed.
7. The fuses are not field replaceable.
8. The final software release for the Sun-4/E is Solaris 2.4.

Reference

The SPARCengine 1E CPU Card User's Manual, 800-8137.

Last updated: December 2, 1996

[Comments and Suggestions](#) 

Configurations

Sun PROM Monitor Commands

Configurations

Handling Static Sensitive Devices

Electronic components on printed circuit boards can be damaged by static electricity. Always wear a grounding strap and use an antistatic mat when handling boards or components.

Reference Documentation

Standard Configurations and Standard Options supported by Sun Microsystems are documented in the End User Price List, Reseller Price List, Hardware Configuration Guides, Product Brochures, and Hardware Installation Manuals.

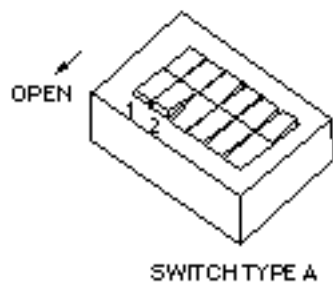
Abbreviations

Assy	Assembly
FRU	Field Replaceable Unit
w	With
w/o	Without

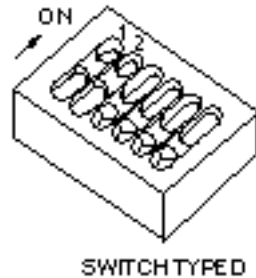
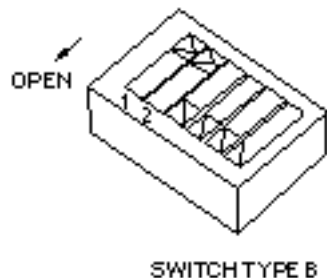
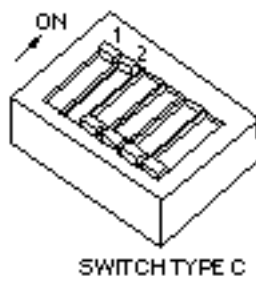
Dip Switches

Rocker and Slide type DIP Switches are used in Sun products. Turn on a Rocker-type switch by pressing down the end of the switch furthest from the OPEN lettering on the switch. Turn on a Slide-type switch by sliding the switch in the direction of the arrow on the switch. Switches 1 and 2 are shown in the ON position in these illustrations.

Rocker-type Switch



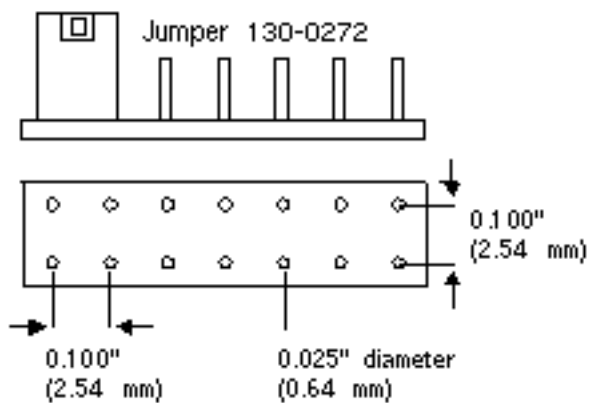
Slide-type Switch



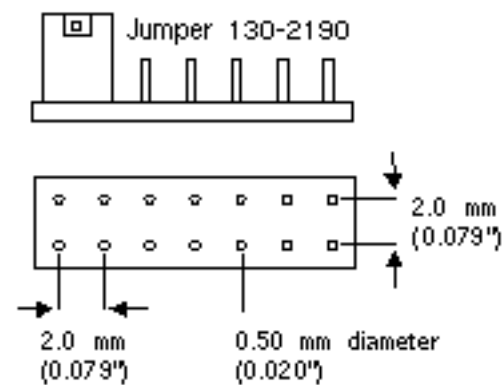
Jumpers

Jumpers are used to connect two pins of a Terminal Strip. Two sizes of jumpers are used: 0.100 inch and 2.0 millimeter.

0.100 inch Jumper



2.0 millimeter Jumper



Sun PROM Monitor Commands

To program the EEPROM or NVRAM using the Sun PROM Monitor, enter **q** followed by the hexadecimal address in the EEPROM or NVRAM to open and display the contents. Change the contents by typing in the new value followed by a carriage return. To exit, type a space and <CR>, or a "." and <CR>.

Common EEPROM or NVRAM Parameters

Location 0x14 [Installed Memory]

Amount of installed Memory in hexadecimal

Location 0x15 [Tested Memory]

Amount of memory to test during Power On Self-Test

Location 0x16 [Monitor Screen Size]

00 = 1152x900 (standard resolution)

12 = 1024x1024 (1Kx1K)

13 = 1600x1280 (high resolution) (see 0x50 & 0x51)

14 = 1440x1440

15 = 1024x768 (low resolution)

Location 0x17 [Watchdog Reset Action]

00 = Watchdog Reset returns to the PROM monitor

12 = Watchdog Reset causes a Power On Reset (default)

Location 0x18 [Operating System Boot Device]

00 = polls devices (default)

12 = use EEPROM/NVRAM specified boot device

Location 0x19 - 0x1a [SunOS Boot Device in ASCII]

xy	78	79
xd	78	64
sd	73	64
ie	69	65
id	69	64
gn	67	6e
le	6c	65

Location 0x1b, 0x1c, and 0x1d [Controller, Unit, Partition]

00	00	00 (default)
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Location 0x1f [Primary Terminal]

00 = Monochrome Frame Buffer

10 = Serial Port A

11 = Serial Port B

12 = VMEbus and Sun-3/60 P4 Color Frame Buffers

Configure locations 0x60c - 0x613 when VX and MVX Graphics Options are installed.

20 = P4 Color Frame Buffer

Location 0x20 [Power-Up Banner]

00 = Sun Banner

12 = Custom Banner

Location 0x21 [Keyboard Click]

00 = turns keyboard click OFF

12 = turns keyboard click ON (default)

Location 0x22 - 0x23 [Diagnostic Boot Device in ASCII]

xy	78	79
xd	78	64
sd	73	64
ie	69	65
id	69	64
gn	67	6e
le	6c	65

Location 0x24, 0x25, and 0x26 [Controller, Unit, Partition]

00	00	00 (default)
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Location 0x28 - 0x4f [Diagnostic Boot Path]

These 40 bytes represent the ASCII values for the desired diagnostic boot path.

Location 0x50 [Hi Res # Columns]

50 = 80 columns (standard display)

78 = 120 columns (full screen display)

Location 0x51 [Hi Res # Rows]

22 = 34 rows (standard display)

30 = 48 rows (full screen display)

Location 0x58 [Serial Port A Default Baud Rate]

00 = uses 9600 baud

12 = uses EEPROM/NVRAM defined baud rate

Location 0x59 - 0x5a [Serial Port A Baud Rate]

1200 baud	04	b0
4800 baud	12	c0
9600 baud	25	80

Location 0x5b [Serial Port A DTR/RTS]

00 = asserts DTR and RTS signals

12 = does not assert DTR and RTS signals

Location 0x60 [Serial Port B Default Baud Rate]

00 = uses 9600 baud

12 = uses EEPROM/NVRAM defined baud rate

In the diag position, port B is set to output at 1200 baud.

The setting of location 0x60 - 0x62 is ignored.

Location 0x61 - 0x62 [Serial Port B Baud Rate]

1200 baud	04	b0
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4800 baud	12	c0
9600 baud	25	80

Location 0x63 [Serial Port B DTR/RTS]

00 = asserts DTR and RTS signals

02 = does not assert DTR and RTS signals

Location 0x18f [LogoType]

00 = Sun

06 = 3D for CG6

12 = Custom

Location 0x492 [Password Mode Select]**Sun-3 and Sun-4 Boot PROM >= 2.7.1**

5E = fully secure mode

01 = command secure mode

All else = non-secure mode

Location 0x493-0x49a [Password Bytes]**Sun-3 and Sun-4 Boot PROM >= 2.7.1**

8 bytes of password in ASCII

If the PROM Rev level is 2.8, enter a @ character before each letter of the password. Enter one letter before each location, followed by <Return>. If the password is less than 8 letters, enter 00 in the remaining locations. The hexadecimal value of the letters can also be used to enter the password.

Location 0x60c - 0x60f [VX and MVX Options Boot Code]

31 40 00 00 = Use the VX/MVX as the system console

Location 0x610 - 0x613 [VX and MVX Options Bus Type]

FC 00 00 00 = Use the VX/MVX as the system console

References

1. *Sun Bootstrap PROM Security Features User's Guide for the Sun Workstation*, 800-8836.
2. *Sun Workstation Bootstrap PROM Security Features User's Guide*, 800-8843.
3. *Sun-3/80 Self-Tests and Monitor Commands*, 800-5027.
4. *SPARCsystem 300 Series Self-Tests and Monitor Commands*, 800-4950.
5. *SPARCsystem 400 Series Self-Tests and Monitor Commands*, 800-4833.
6. *PROM User's Manual*, 800-1736.
7. *EEPROM Users Guide for Sun-3, Sun-4, and SPARCsystems 300/400*, 800-3512.
8. *Boot PROM User's Guide*, 800-4852.

Last updated: December 2, 1996

[Comments and Suggestions](#) 