

## CD-ROM DRIVES

CD-ROM drives can only read prerecorded Compact Disks Compatible disks comply with the Philips/Sony standard and are listed below:

- CD-ROM data disks (Mode 1 and Mode 2)
- CD-ROM XA disks (Mode 2, Form 1 and Form 2)
- CD-ROM Audio disks
- CD-I (Mode 2, Form 1 and Form 2) and CD-I Ready
- CD Bridge and PhotoCD (single and multiple sessions).

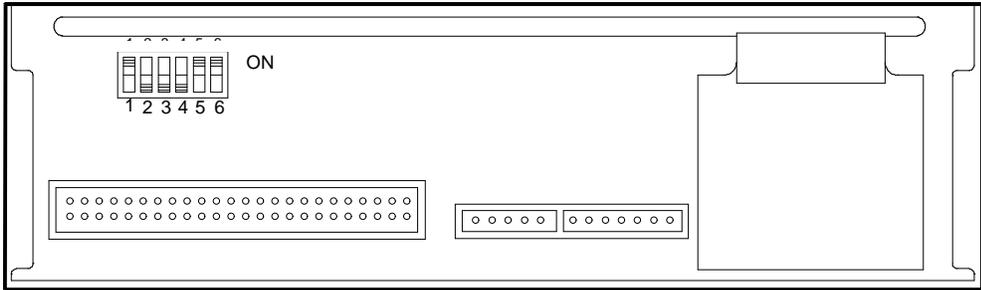
The disks to be used are contained in a caddy (appropriate protective support) which is inserted into the drive when the compact disk has to be read. The more recent CD-ROMs (from the Sony CDU 31A/33A) do not use the caddy and therefore the compact disk is inserted directly on the appropriate disk tray after pressing the Eject button.

### COMPATIBILITY

The compact disks to be used with CD-ROM drives are not compatible with WORM, EOD and MOD disks.

<b>INTEGRATED CD-ROM</b>	<b>SONY CDU 510-51</b>	<b>CDR 26-554</b>
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**DIP-SWITCH ON DRIVE**

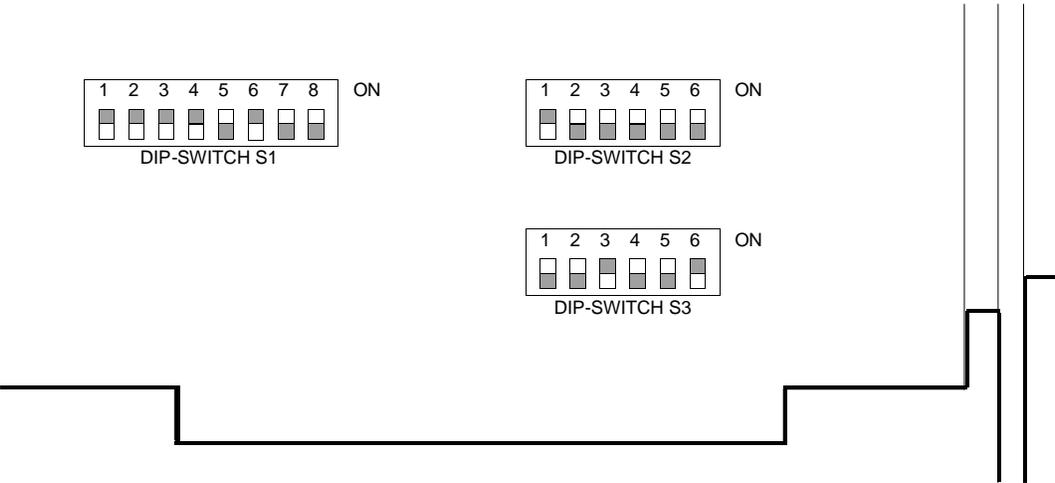


DIP-SWITCH				DRIVE ADDRESS SELECTION
1	2	3	4	
ON	OFF	OFF	OFF	Drive 0
OFF	ON	OFF	OFF	Drive 1
OFF	OFF	ON	OFF	Drive 2
OFF	OFF	OFF	ON	Drive 3

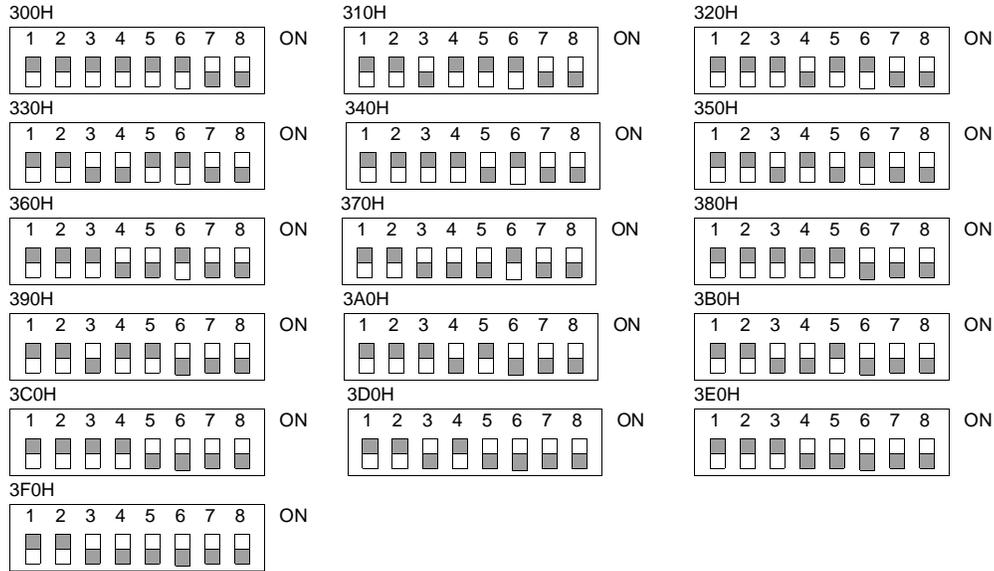
DIP SWITCH 5	OPERATING MODE SELECTION
ON	DRQ operating mode *
OFF	WAIT operating mode (only for some software applications)

DIP-SWITCH 6	TERMINATOR RESISTANCES
ON	The DIP-switch must always be ON on the last drive in the CD-ROM chain, on all the others is must be OFF. If there is only one drive the DIP-switch must be ON
OFF	

**DIP-SWITCH ON THE CDB 905 BOARD**



**DIP-SWITCH S1 FOR SELECTING THE I/O ADDRESS IN THE FORMAT XYZ**



**Note:** 340H address selection.

DIP-SWITCH S2	DESCRIPTION	SETTING
1 - IRQ2 2 - IRQ3 3 - IRQ4 4 - IRQ5	Set one of the four DIP-switches to OFF to select the IRQ interrupt level. The default selection is IRQ2.	ON OFF OFF OFF
5	Not used	OFF
6	The DRQ/WAIT signal of the drive may be read by IOCHRDY The signal is ignored	ON OFF *

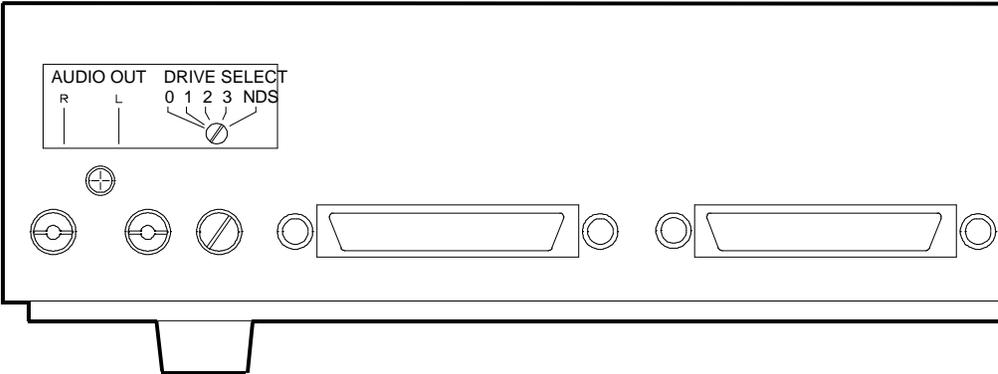
DIP-SWITCH S3	DESCRIPTION	SETTING
1 - DRQ1 2 - DRQ2 3 - DRQ3	Set one of the three DIP-switches to OFF to select the DMA/Request. The default selection is DRQ3	OFF OFF ON
4 - DACK1 5 - DACK2 6 - DACK3	Set one of the three DIP-switches to OFF to select the DMA/Acknowledge. The default selection is DACK3	OFF OFF ON

**Notes:** - Always select the same switch for DACK and DRQ.  
- The terminators must always be on the board.

<b>EXTERNAL CD-ROM</b>	<b>HITACHI CD 550</b>	<b>CDR 25-550</b>
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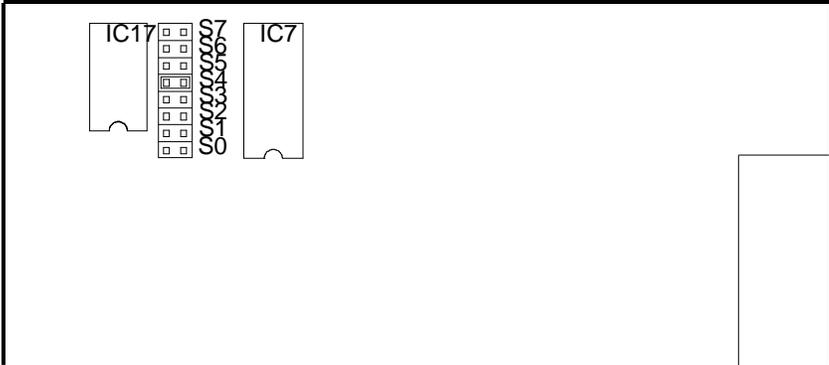
**DRIVE SELECTION**

Set the DRIVE SELECT switch on the back of the drive, as shown in the figure.



**Note:** NDS indicates single operating mode.

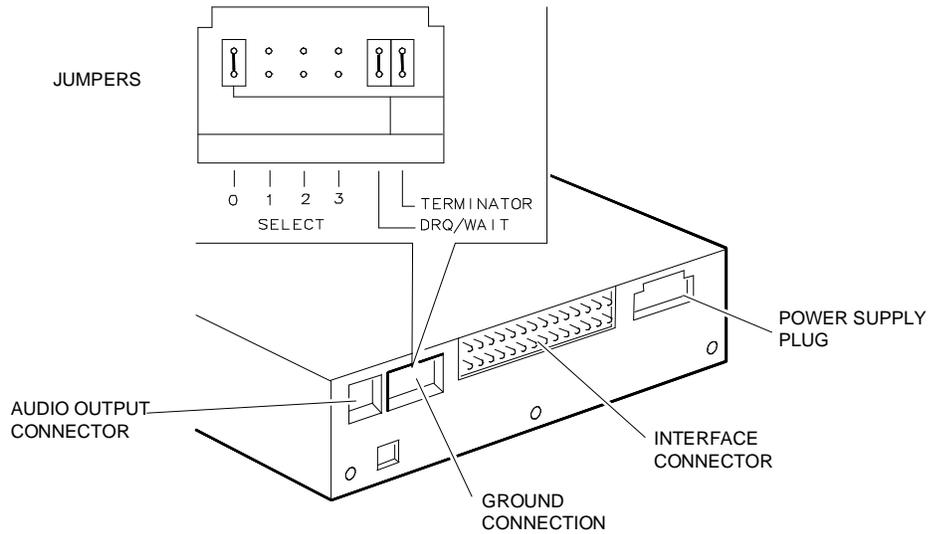
**JUMPERS ON BOARD IF-14A**



JUMPERS	I/O ADDRESS
S7	360
S6	340
S5	320
S4	300 *
S3	260
S2	240
S1	220
S0	200

<b>INTEGRATED CD-ROM</b>	<b>SONY CDU 531-51 SONY CDU 535-51</b>	<b>CDR 26-557</b>
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**JUMPERS ON THE DRIVE**

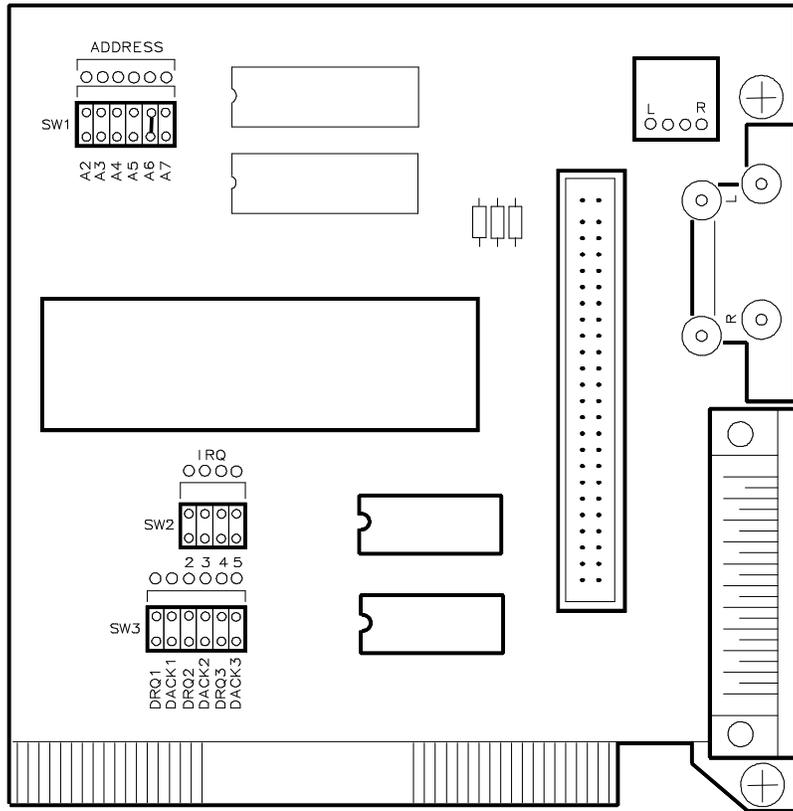


JUMPERS				DRIVE ADDRESS SELECTION
0	1	2	3	
ON	OFF	OFF	OFF	Drive 0
OFF	ON	OFF	OFF	Drive 1
OFF	OFF	ON	OFF	Drive 2
OFF	OFF	OFF	ON	Drive 3

DRQ/WAIT	OPERATING MODE SELECTION
ON	DRQ operating mode *
OFF	WAIT operating mode (only for some software applications)

TERMINATOR	TERMINATOR RESISTANCES
ON	The jumper must always be inserted (ON) on the last drive in the CD-ROM chain, on all the others is must be removed (OFF). If there is only one drive the jumper must be inserted (ON).
OFF	

**JUMPERS ON BOARD CDB 244 / CDB 242**



I/O ADDRESS	JUMPERS SW1					
	A2	A3	A4	A5	A6	A7
300 H	OFF	OFF	OFF	OFF	OFF	OFF
310 H	OFF	OFF	ON	OFF	OFF	OFF
320 H	OFF	OFF	OFF	ON	OFF	OFF
330 H	OFF	OFF	ON	ON	OFF	OFF
340 H *	OFF	OFF	OFF	OFF	ON	OFF
350 H	OFF	OFF	ON	OFF	ON	OFF
360 H	OFF	OFF	OFF	ON	ON	OFF
370 H	OFF	OFF	ON	ON	ON	OFF
380 H	OFF	OFF	OFF	OFF	OFF	ON
390 H	OFF	OFF	ON	OFF	OFF	ON

JUMPERS SW2	INTERRUPT LEVEL SELECTION	SETTING
2	Insert one of the four jumpers (ON) to selected the IRQ interrupt level. The default selection is 2.	ON
3		OFF
4		OFF
5		OFF

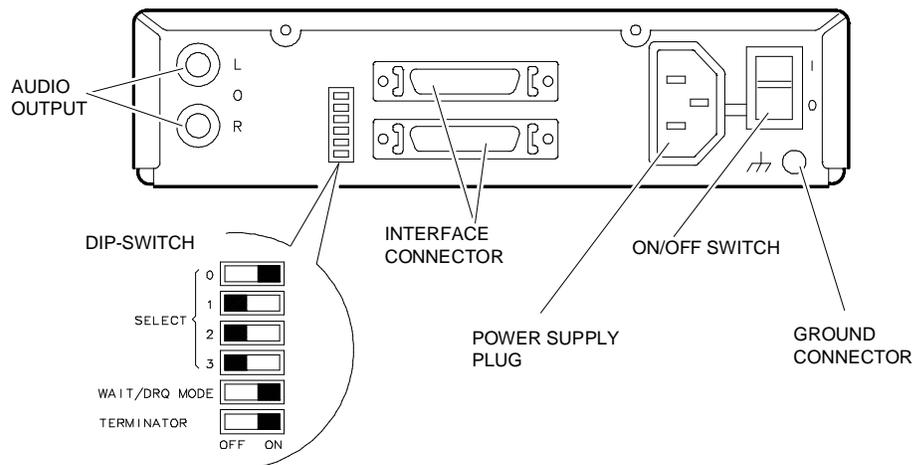
JUMPERS SW3	DMA CHANNEL SELECTION	SETTING
DRQ1 DRQ2 DRQ3	Insert one of the three jumpers (ON) for selecting the DMA/Request. The default selection is DRQ3	OFF OFF ON
DACK1 DACK2 DACK3	Insert one of the three jumpers (ON) to select the DMA/Acknowledge. The default selection is DACK3	OFF OFF ON

**Notes:** - Always select the same jumper for DACK and DRQ.  
- The terminators must always be on the board.

#### USER DISK EVOLUTION

DATE	REL.	CODE	MODIFICATION
	3.03	2690013Y (1.44 MB) 2690012U (1.2 MB)	
5/93	3.04	2690496C (1.44 MB) 2690497G (1.2 MB)	User Disk updated to solve the problems with Windows 3.1.

<b>EXTERNAL CD-ROM</b>	<b>SONY CDU 6201 SONY CDU 6205</b>	<b>CDR 26-550</b>
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<b>JUMPERS</b>				<b>DRIVE ADDRESS SELECTION</b>
<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	
ON	OFF	OFF	OFF	Drive 0
OFF	ON	OFF	OFF	Drive 1
OFF	OFF	ON	OFF	Drive 2
OFF	OFF	OFF	ON	Drive 3

<b>DRQ/WAIT</b>	<b>OPERATING MODE SELECTION</b>
ON	DRQ operating mode*
OFF	WAIT operating mode (only for some software applications)

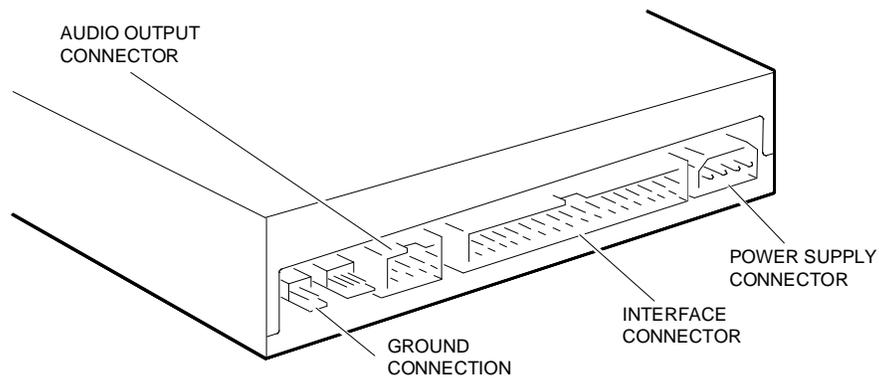
<b>TERMINATOR</b>	<b>TERMINATOR RESISTANCE</b>
ON	The jumper must always be inserted (ON) on the last drive in the CD-ROM chain, all the others must be removed (OFF). If there is only one drive the jumper must be inserted (ON).
OFF	

**Note:** The controller board is a CDB 242, whose jumpering is identical to the that of the CDB 244 of the CDU 531/535, so for a description of the jumpers, see the specific description.

**USER DISK EVOLUTION**

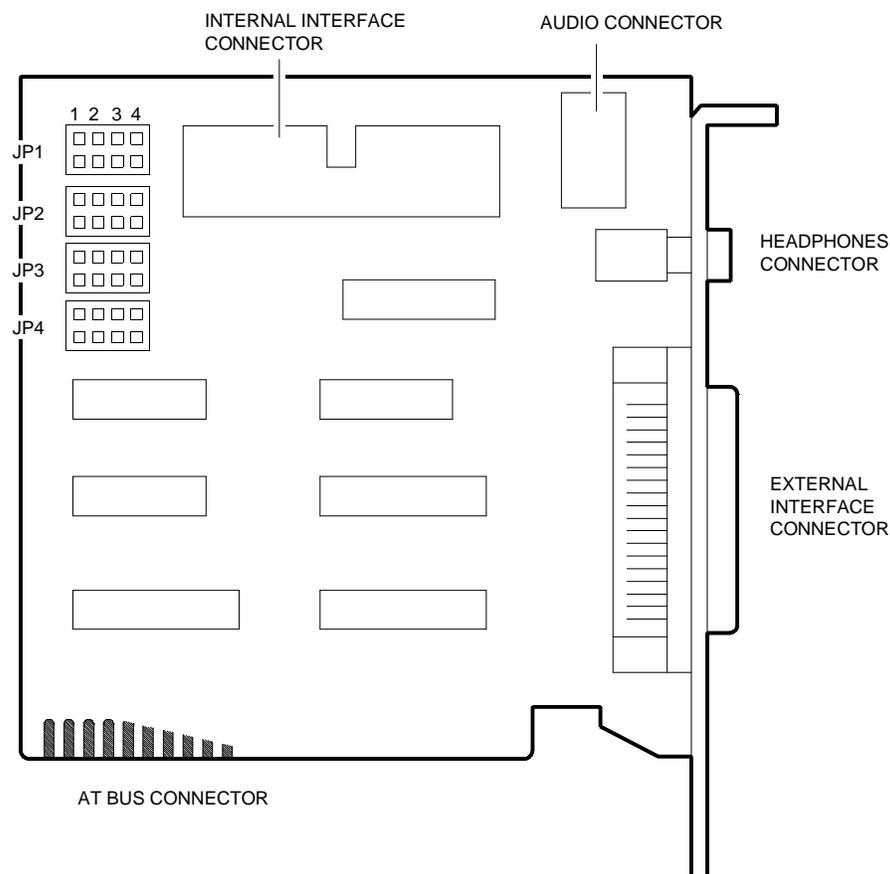
<b>DATE</b>	<b>REL.</b>	<b>CODE</b>	<b>MODIFICATION</b>
	3.03	2690013Y (1.44 MB) 2690012U (1.2 MB)	
8/93	3.04	2690496C (1.44 MB) 2690497G (1.2 MB)	User Disk updated to solve the problems with Windows 3.1 (the audio was not working).

<p><b>INTEGRATED CD-ROM</b></p>	<p><b>SONY CDU 31A</b> <b>SONY CDU 33A</b></p>	<p><b>CDU 31/A o B</b> <b>CDR 40-33/A o B</b></p>
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**Note:** *There are no jumpers to be set on the drive.*

**JUMPERS ON THE AT-BUS BOARD**



I/O ADDRESS	JUMPERS JP1			
	1	2	3	4
320 H	ON	ON	Not used	Not used
330 H	ON	OFF		
340 H *	OFF	ON		
360 H	OFF	OFF		

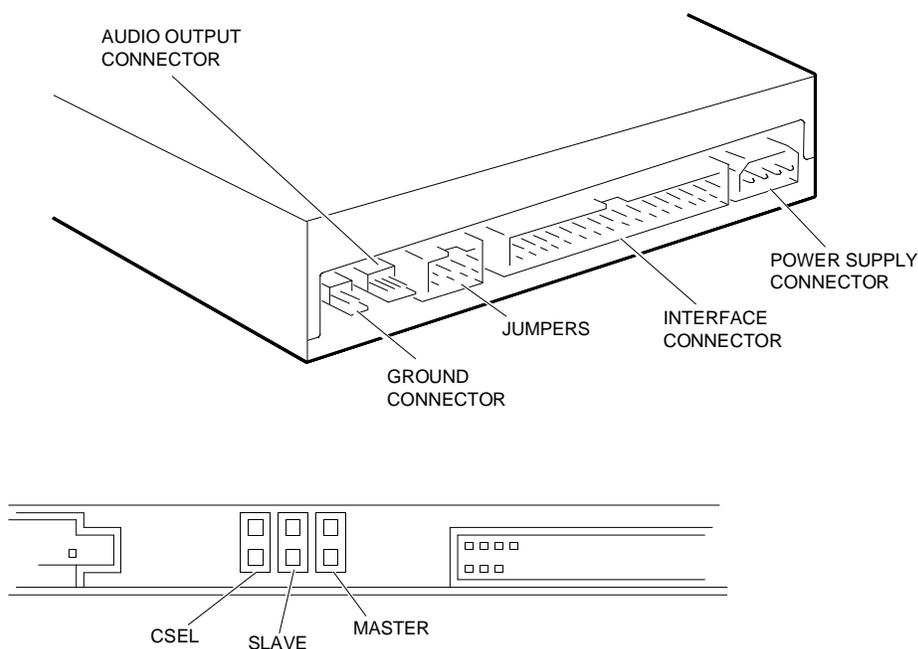
DMA CHANNEL	JUMPERS JP2				JUMPERS JP3			
	1	2	3	4	1	2	3	4
1	ON	OFF	OFF	Not used	ON	OFF	OFF	Not used
2	OFF	ON	OFF		OFF	ON	OFF	
3 *	OFF	OFF	ON		OFF	OFF	ON	

**Note:** Interrupt selection jumpers JP4 are not used since this board does not use interrupts.

### USER DISK EVOLUTION

DATE	REL.	CODE	MODIFICATION
	1.03	2690712Z	New User Disk.
9/94	1.04	2690865E	CDI-DIA.EXE can now be launched to test the CD-ROM drive connected either to the motherboard or to the Mozart audio board.

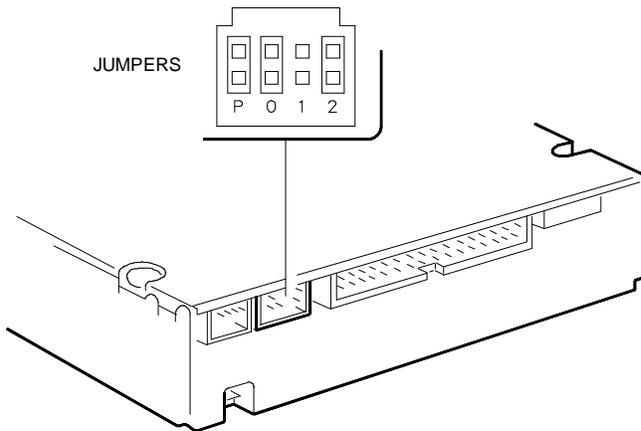
<b>INTEGRATED CD-ROM</b>	<b>SONY CDU 56D-01</b> <b>SONY CDU50E</b> <b>GOLDSTAR GCD-R520B</b> <b>SONY CDU76E-01</b> <b>SONY CDU77E</b> <b>PANASONIC CR-581-B/J</b> <b>GOLDSTAR GCD-R540B/C</b> <b>MITSUMI CRMC-FX400D</b> <b>MITSUMI CRMC-FX600S</b> <b>GOLDSTAR GCD-R560B</b> <b>GOLDSTAR GCD-R580B</b> <b>SONY CDU311-51</b> <b>GOLDSTAR CRD-8160B</b> <b>SONY CDU511-10</b>	<b>CDR50-2X</b> <b>CDR50-2X</b> <b>CDR50-2X</b> <b>CDR50-4X</b> <b>CDR50-4X</b> <b>CDR50-4X</b> <b>CDR50-4X</b> <b>CDR50-4X</b> <b>CDR50-4X</b> <b>CDR50-6X</b> <b>CDR50-6X</b> <b>CDR 50-8X</b> <b>CDR 50-8X</b> <b>CDR 61-16X</b> <b>CDR 61-16X</b>
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The default setting is MASTER.

If two CD-ROMs are installed, one must be jumpered as MASTER and the other as SLAVE. If the system supports the CSEL (Cable Select) signal, remove the jumper from the MASTER and SLAVE positions and insert it on CSEL.

<b>INTEGRATED SCSI CD-ROM</b>	<b>SONY CDU 541-51</b>	<b>CDR 5541</b>
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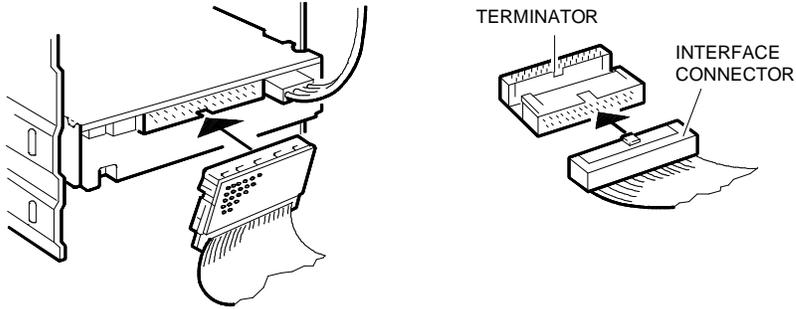


JUMPERS			SCSI ID SELECTION
0	1	2	
OFF	OFF	OFF	0
ON	OFF	OFF	1
OFF	ON	OFF	2
ON	ON	OFF	3
OFF	OFF	ON	4
ON	OFF	ON	5 (default)
OFF	ON	ON	6
ON	ON	ON	7

JUMPER P	SCSI BUS PARITY CHECK
ON	Parity check enabled *
OFF	Parity check disabled

**TERMINATION RESISTANCES**

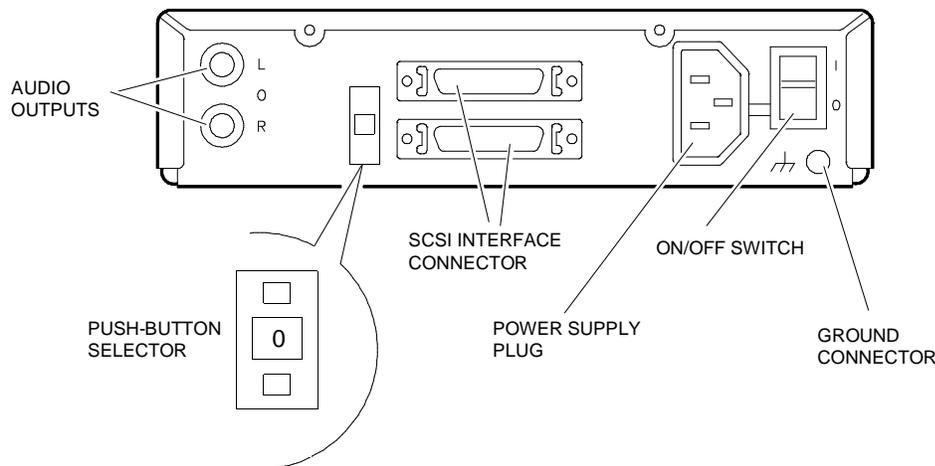
Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween.



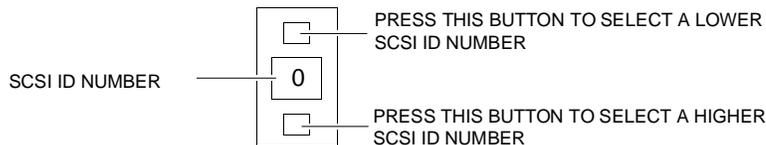
**USER DISK EVOLUTION**

<b>DATE</b>	<b>REL.</b>	<b>CODE</b>	<b>MODIFICATION</b>
	1.01		New User Disk.
5/93	2.00	2690486B (1.44 MB) 2690495Y (1.2 MB)	User Disk updated to solve the problem concerning the incorrect operation of the software driver in some Play applications under Windows.
9/93	2.21	2690601W (1.44 MB) 2690602A (1.2 MB)	User Disk updated so that it could work on LSX 5025 E systems.

<b>EXTERNAL SCSI CD-ROM</b>	<b>SONY CDU 6211</b>	<b>CDR 6211</b>
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The push-button ID selector allows you to choose the SCSI ID. Values from 0 to 7 can be selected.



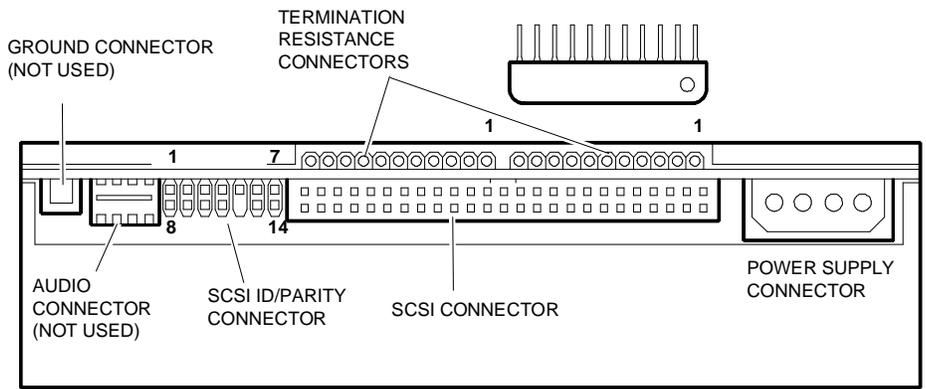
**Note:** Parity checking on the SCSI bus is always enabled.

### TERMINATION RESISTANCES

The interface terminator (connector with end resistances, provided in the kit), attaches directly to the free SCSI connector on the rear of the drive.

Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween.

<b>INTEGRATED SCSI CD-ROM</b>	<b>SONY CDU 561-51</b>	<b>CDR 40-561</b>
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SCSI ID/PARITY CONNECTOR		
PIN 1-8	Enables parity checking Disables parity checking	ON * OFF
PIN 5-12	Not used	OFF *
PIN 6-13	Media removal not allowed Media removal allowed	OFF ON *
PIN 7-14	Test mode Normal operation	ON OFF *

SCSI ID/PARITY CONNECTOR			
PIN 2-9	PIN 3-10	PIN 4-11	SCSI ID SELECTION
OFF	OFF	OFF	0
OFF	OFF	ON	1
OFF	ON	OFF	2
OFF	ON	ON	3
ON	OFF	OFF	4
ON	OFF	ON	5
ON	ON	OFF	6
ON	ON	ON	7

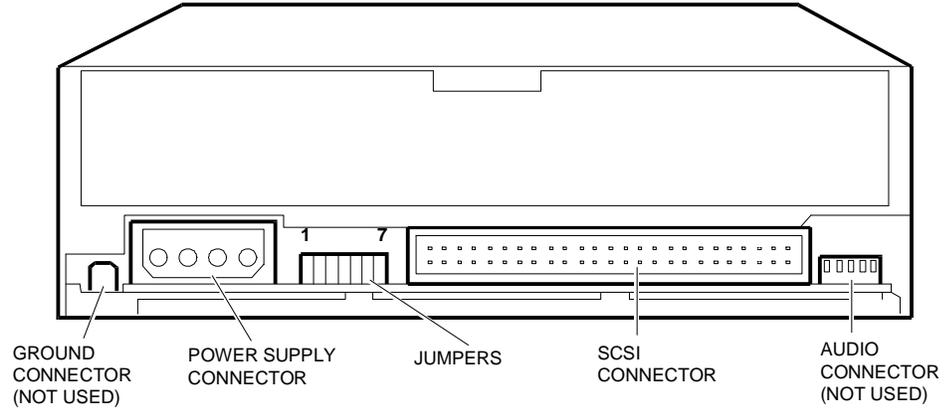
**TERMINATION RESISTANCES**

Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween. On some systems termination is made directly on the drive while on others it is made at the end of the SCSI cable.

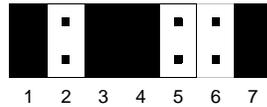
**USER DISK EVOLUTION**

<b>DATE</b>	<b>REL.</b>	<b>CODE</b>	<b>MODIFICATION</b>
	2.30	2690727X (1.44 MB)	New User Disk.
9/94	2.31	2690864A (1.44 MB)	User Disk updated to include the management of the controllers via the Arrow type E component.
	2.42		Link with SCSI Library 0.24 to support the DPT and PCI Dagger SCSI controllers

<b>INTEGRATED SCSI CD-ROM</b>	<b>PANASONIC CR-503-B</b>	<b>CDR TRAY 503</b>
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JUMPERS



JUMPERS			SCSI ID SELECTION
1	2	3	
OFF	OFF	OFF	0
ON	OFF	OFF	1
OFF	ON	OFF	2
ON	ON	OFF	3
OFF	OFF	ON	4
ON	OFF	ON	5
OFF	ON	ON	6
ON	ON	ON	7

JUMPER 4	PARITY CHECKING ON THE SCSI BUS
ON	Parity checking enabled *
OFF	Parity checking disabled

JUMPER 5	SECTOR CONFIGURATION
OFF	2048 bytes per sector *
ON	512 bytes per sector

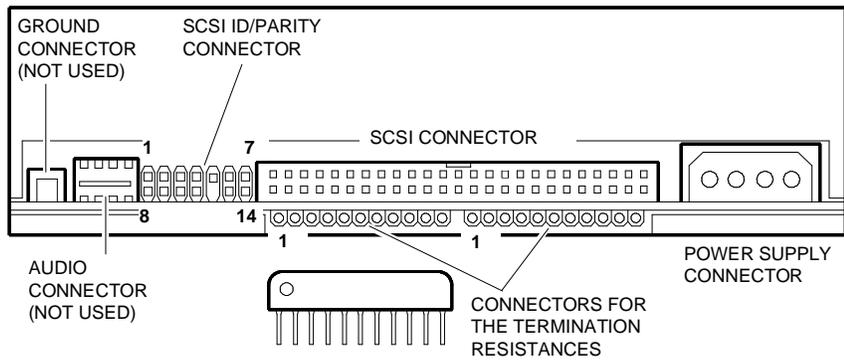
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<b>JUMPER 6</b>	<b>TERMINATOR ENABLE</b>
OFF	Terminators disabled
ON	Terminators enabled

**Note:** *The terminators on this drive cannot be removed, and can be enabled by means of jumper 6. Whether the terminators are enabled or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween. On some systems termination is made directly on the drive while on others it is made at the end of the SCSI cable.*

<b>JUMPER 7</b>	<b>TERMINATOR POWER SUPPLY</b>
ON	The drive provides power to the terminators *
OFF	The terminators are powered by the Terminator Power signal

<b>INTEGRATED SCSI CD-ROM</b>	<b>SONY CDU76S-01</b>	<b>CDR 4S-500</b>
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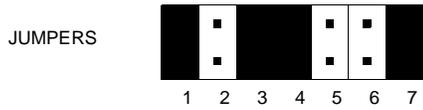
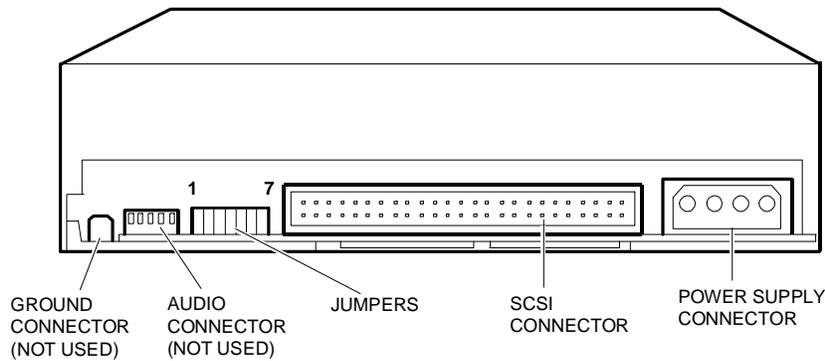
SCSI ID/PARITY CONNECTOR		
PINs 1-8	Parity checking enabled Parity checking disabled	ON * OFF
PINs 5-12	Not used	OFF *
PINs 6-13	Manual media removal using the Eject button disabled Manual media removal using the Eject button enabled	OFF ON *
PINs 7-14	Test mode Normal operation	ON OFF *

SCSI ID/PARITY CONNECTOR			
PINs 2-9	PINs 3-10	PINs 4-11	SCSI ID SELECTION
OFF	OFF	OFF	0
ON	OFF	OFF	1
OFF	ON	OFF	2
ON	ON	OFF	3
OFF	OFF	ON	4
ON	OFF	ON	5
OFF	ON	ON	6
ON	ON	ON	7

**Termination Resistances**

Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus), while the terminator must be removed from all the peripherals inbetween. On some systems termination is made directly on the drive while on others it is made at the end of the SCSI cable.

<b>INTEGRATED SCSI CD-ROM</b>	<b>PANASONIC CR-504-J</b>	<b>CDR 4S-500</b>
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JUMPERS			SCSI ID SELECTION
1	2	3	
OFF	OFF	OFF	0
ON	OFF	OFF	1
OFF	ON	OFF	2
ON	ON	OFF	3
OFF	OFF	ON	4
ON	OFF	ON	5
OFF	ON	ON	6
ON	ON	ON	7

JUMPER 4	PARITY CHECKING ON THE SCSI BUS
ON	Parity checking enabled *
OFF	Parity checking disabled

JUMPER 5	SECTOR CONFIGURATION
OFF	2048 bytes/sector *
ON	512 bytes/sector

JUMPER 6	TERMINATOR ENABLE
OFF	SCSI terminators disabled
ON	SCSI terminators enabled

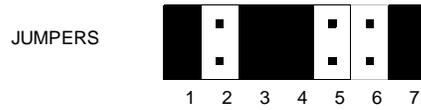
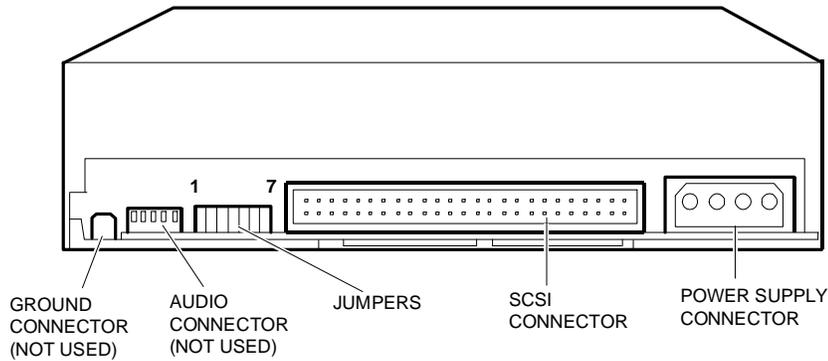
**Note:** The terminators cannot be removed from this drive and are enabled by jumper 6. Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus), while the terminator must be removed from all the peripherals inbetween. On some systems termination is made directly on the drive while on others it is made at the end of the SCSI cable.

JUMPER 7	TERMINATOR POWER SUPPLY
ON	The drive provides power to the terminators *
OFF	The terminators are powered by the Terminator Power signal

**INTEGRATED SCSI CD-ROM**

**PANASONIC CR-506-B**

**CDR 8S-500**



JUMPERS			SCSI ID SELECTION
1	2	3	
OFF	OFF	OFF	0
ON	OFF	OFF	1
OFF	ON	OFF	2
ON	ON	OFF	3
OFF	OFF	ON	4
ON	OFF	ON	5
OFF	ON	ON	6
ON	ON	ON	7

JUMPER 4	PARITY CHECKING ON THE SCSI BUS
ON	Parity checking enabled *
OFF	Parity checking disabled

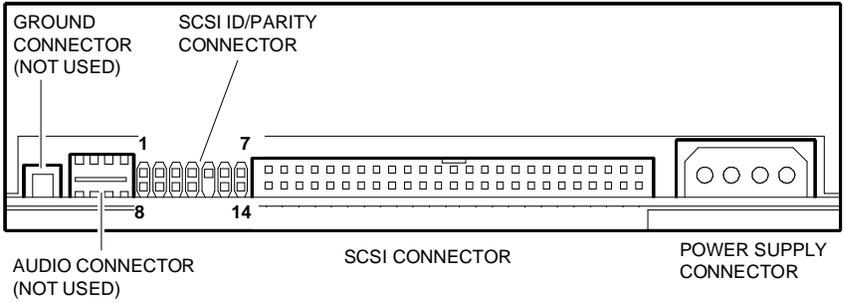
JUMPER 5	SECTOR CONFIGURATION
OFF	2048 bytes/sector *
ON	512 bytes/sector

JUMPER 6	TERMINATOR ENABLE
OFF	SCSI terminators disabled
ON	SCSI terminators enabled

**Note:** The terminators cannot be removed from this drive and are enabled by jumper 6. Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus), while the terminator must be removed from all the peripherals inbetween. On some systems termination is made directly on the drive while on others it is made at the end of the SCSI cable.

JUMPER 7	TERMINATOR POWER SUPPLY
ON	The drive provides power to the terminators *
OFF	The terminators are powered by the Terminator Power signal

<b>INTEGRATED SCSI CD-ROM</b>	<b>SONY CDU415-10</b>	<b>CDR 12S-500</b>
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<b>PINS 1-8 PARITY JUMPER</b>	<b>PARITY CHECKING ON THE SCSI BUS</b>
ON	Parity checking enabled (default)
OFF	Parity checking disabled

<b>JUMPERS</b>			<b>SCSI ID SELECTION</b>
<b>PINs 2-9 (SCSI ID0)</b>	<b>PINs 3-10 (SCSI ID1)</b>	<b>PINs 4-11 (SCSI ID2)</b>	
OFF	OFF	OFF	0
ON	OFF	OFF	1
OFF	ON	OFF	2
ON	ON	OFF	3
OFF	OFF	ON	4
ON	OFF	ON	5
OFF	ON	ON	6
ON	ON	ON	7

<b>PINS 5-12 TERMINATION JUMPER</b>	<b>TERMINATOR ENABLE</b>
ON	SCSI terminators enabled
OFF	SCSI terminators disabled

**Note:** Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus), while the terminator must be removed from all the peripherals inbetween. On some systems termination is made directly on the drive while on others it is made at the end of the SCSI cable.

<b>PINS 6-13 PREVENT/ALLOW JUMPER</b>	<b>MANUAL EJECT BUTTON ENABLE</b>
ON	Allow - Manual media eject enabled (Default)
OFF	Prevent - Manual media eject disabled; the tray can only be opened via software.

<b>PINS 7-14 TEST MODE JUMPER</b>	<b>TEST MODE ENABLE</b>
ON	Test mode
OFF	Normal operation (Default)

