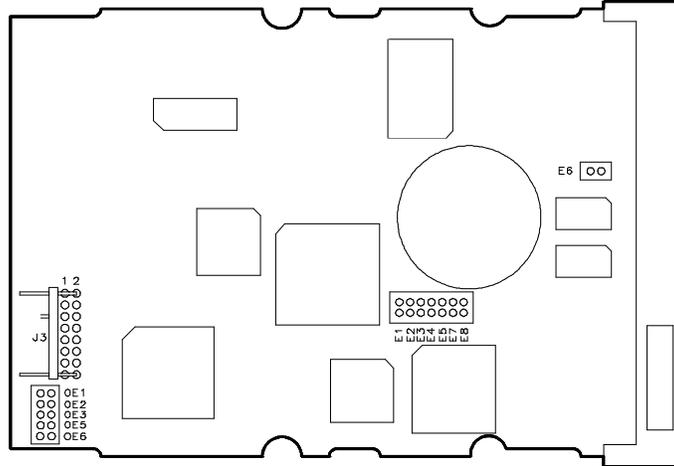


SCSI HARD DISK DRIVES

HDUs WITH DIFFERENTIAL SCSI NARROW INTERFACE

| | | |
|-------------------|---------------------------------|---------------|
| 525 MB HDU | CONNER CP30540D (Aegean) | SCSI-2 |
|-------------------|---------------------------------|---------------|



| ROTATION | CYLINDER | DISK | HEADS | RECORD. |
|----------|----------|------|-------|---------|
| 5400 RPM | | 3 | | RLL 1.7 |

9

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| OE1 | OE2 | OE3 | |
| 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 |

Note: For SCSI ID selection, use exclusively the jumper block OE-1-OE3 located on the front of the drive. Jumper block E1-E3 located on the side of the drive must not be used and therefore kept in the OFF position corresponding to a SCSI ID=0. The SCSI ID selected using both jumper blocks is the sum of the two values (for example, OE-1-OE3 ID = 2, E1-E3 ID = 2, the peripheral will have an ID of 4).

| JUMPER E4 | DRIVE MOTOR START |
|-----------|-----------------------------------|
| ON | Motor starts on the Start command |
| OFF | Motor starts at power-up * |

Note: On LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

| JUMPER E5, OE5 | RESERVED |
|-----------------------|-----------------------|
| OFF | Always OFF (reserved) |

| CONNECTOR E6 | CONNECTION TO REMOTE LED |
|---------------------|---|
| ON OFF | Possibility of connecting the drive to a remote LED Standard configuration * |

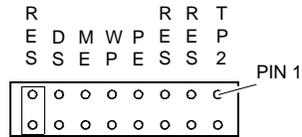
Note: Use only jumper E6 located near the interface connector and always keep jumper EO6 in the OFF position.

| JUMPER E7 | PARITY CHECKING ON THE SCSI BUS |
|------------------|---|
| ON OFF | Parity checking disabled Parity checking enabled * |

| JUMPER E8 | RESERVED |
|------------------|-----------------------|
| OFF | Always OFF (reserved) |

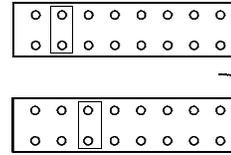
JUMPERS J2

Reserved
(jumper not installed)



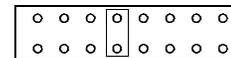
DSME

- OFFOFFThe motor starts at power on *
- OFFONThe motor starts with a Start command
- ONOFFThe motor of drive 0 starts at power on, that of drive 1 starts after 12 sec, that of drive 2 after 24 sec, etc.
- ONONII motore parte su comando di start

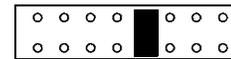


Note: On LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

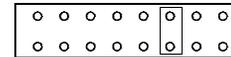
- ONThe drive is write protected
- OFFThe drive is not write protected *



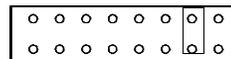
- ONParity checking enabled *
- OFFParity checking disabled



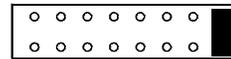
Reserved
(jumper not installed)



Reserved
(jumper not installed)



- ONThe drive provides power to pin 26 of the SCSI bus, Terminator Power signal, in order to power the external terminators. The differential drive does not have internal terminators.
- OFFThe external terminators are not powered.

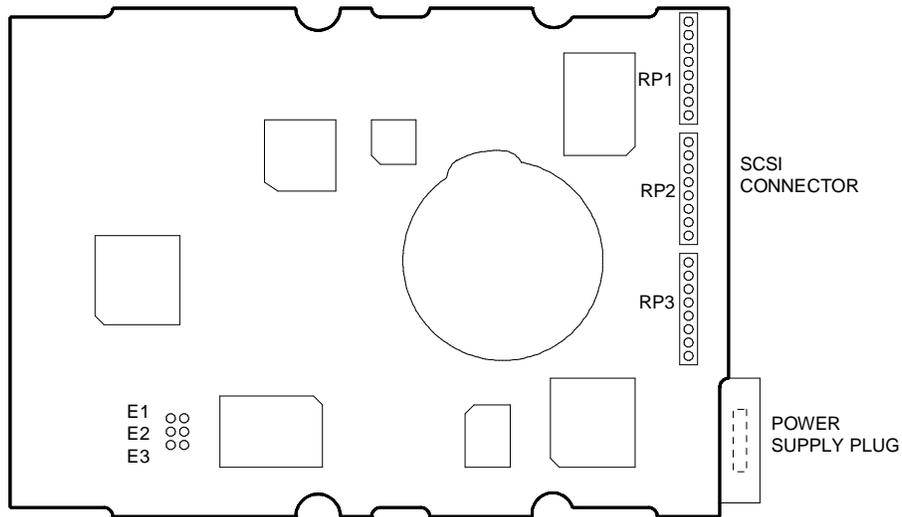


Note: Jumper block J5 is not used

| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 5411 RPM | 2611 | 10 | 19 | RLL 1.7 |

HDUs WITH SINGLE-ENDED SCSI NARROW INTERFACE

| | | |
|-------------------|------------------------------|-------------|
| 100 MB HDU | CONNER CP30100 (Hopi) | SCSI |
|-------------------|------------------------------|-------------|



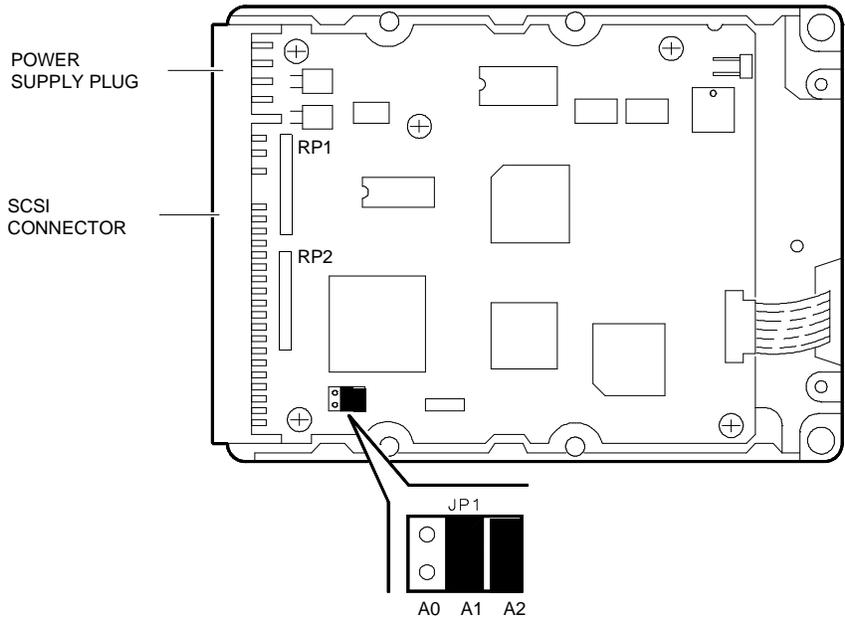
| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| | | | | RLL 2.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| E1 | E2 | E3 | |
| 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 RP1, RP2 AND RP3

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.

| | | |
|-------------------|------------------------|---------------|
| 120 MB HDU | QUANTUM ELS127S | SCSI-2 |
|-------------------|------------------------|---------------|



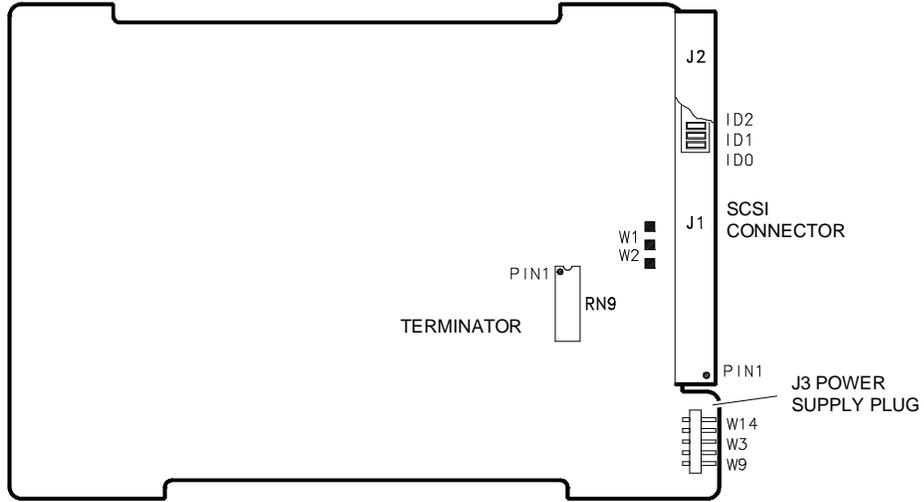
| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 3663 RPM | 1536 | 2 | 3 | RLL 1.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| A0 | A1 | A2 | |
| 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 RP1, RP2

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.

| | | |
|-------------------|--------------------------|-------------|
| 150 MB HDU | MICROPOLIS 1674-7 | SCSI |
|-------------------|--------------------------|-------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 3600 RPM | 1249 | 4 | 7 | RLL 2.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| ID0 | ID1 | ID2 | |
| 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 |

9

| JUMPERS | | POWER SUPPLY TO TERMINATORS |
|---------|-----|---|
| W1 | W2 | |
| ON | OFF | The drive provides the power supply for the terminators * |
| OFF | ON | The terminators are supplied by the Terminator Power signal |

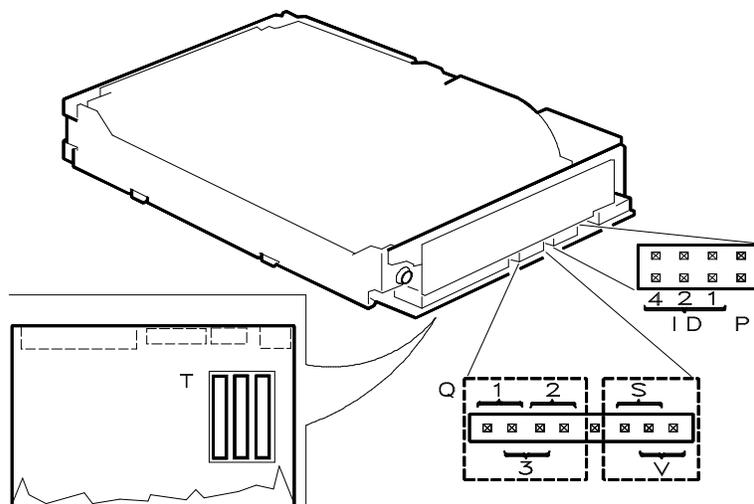
| JUMPER W3 | DRIVE MOTOR START |
|-----------|---|
| ON | The motor is started by a Start command |
| OFF | The motor starts at power up * |

| | |
|------------------|---|
| JUMPER W9 | PARITY CHECK ON SCSI BUS |
| ON OFF | Disables the parity check Enable the parity check* |

TERMINATION RESISTANCE RN9

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.

| | | |
|-------------------|---------------------------------|-------------|
| 150 MB HDU | SEAGATE WREN 5 94221-184 | SCSI |
|-------------------|---------------------------------|-------------|



| | | | | |
|-----------------|------------------|--------------|--------------|----------------|
| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
| | | | | RLL 2.7 |

| JUMPERS | | | SCSI ID SELECTION |
|----------------|----------|----------|--------------------------|
| 4 | 2 | 1 | |
| 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 |

| | |
|-----------------|---|
| JUMPER P | SCSI BUS PARITY CHECK |
| ON OFF | Enables the parity check * Disables the parity check |

| JUMPERS Q | | | POWER SUPPLY TO TERMINATORS |
|-----------|-----------|-----------|---|
| POS. 1 | POS. 2 | POS 3 | |
| ON OFF | ON OFF | OFF ON | The drives supply power to the terminators * The terminators are supplied by the Terminator Power signal |

| JUMPER V | DRIVE MOTOR START |
|-----------|--|
| ON OFF | The motor is started by a Start command The motor starts when powered up* |

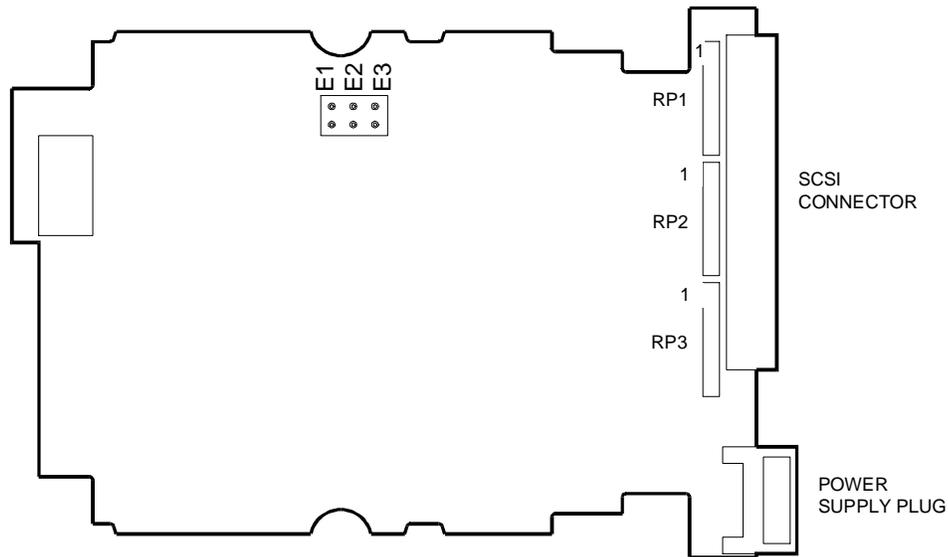
| JUMPER S | AUTO SEEK TEST ENABLING |
|-----------|---|
| ON OFF | Auto seek test enabled in continuous mode Auto seek test disabled (operating normally) * |

TERMINATION RESISTANCE T

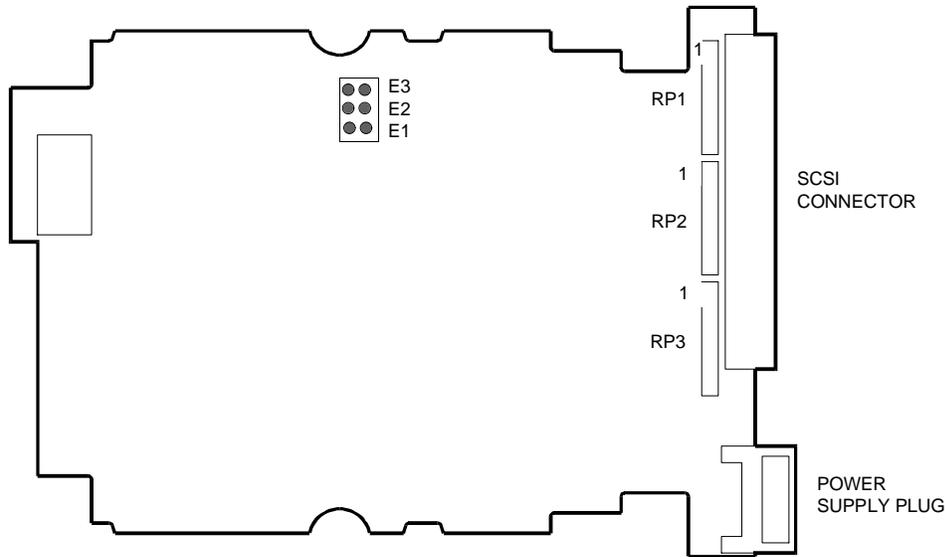
Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween.

| | | |
|-------------------|-------------------------------|-------------|
| 210 MB HDU | CONNER CP3200F (Rambo) | SCSI |
|-------------------|-------------------------------|-------------|

CONNER CP 3200F - Earlier Version



CONNER CP3200 MIG version



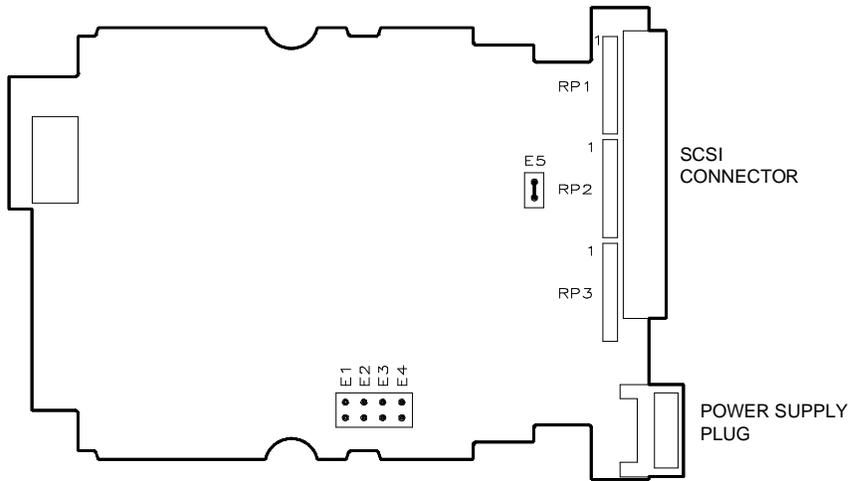
| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 3485 RPM | 1368 | 4 | 8 | RLL 2.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| E1 | E2 | E3 | |
| 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 RP1, RP2 AND RP3

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

| | | |
|-------------------|--------------------------------|---------------|
| 210 MB HDU | CONNER CP30200 (Cougar) | SCSI-2 |
|-------------------|--------------------------------|---------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 4500 RPM | | 2 | 4 | RLL 2.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| E1 | E2 | E3 | |
| 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 |

9

| JUMPER E4 | DRIVE MOTOR START |
|-----------|-------------------------------|
| ON | Motor starts on Start command |
| OFF | Motor starts at power-up * |

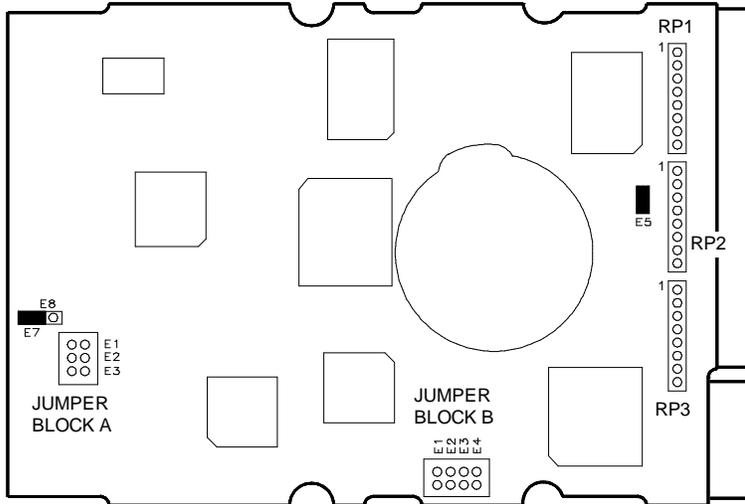
Note: On M6-850/860/880 and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

| JUMPER E5 | POWER TO TERMINATORS |
|-----------|--|
| ON | Drive provides the power supply for the terminators and to pin 26 SCSI (Term. Power) * |
| OFF | The terminators are powered by the Terminator power signal. |

TERMINATION RESISTANCES RP1, RP2 AND RP3

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

NEW PCBA 07680-005 WITH ID JUMPER ON FRONT



| JUMPERS | | JUMPERS, SCSI ID JUMPER BLOCK ENABLING |
|---------|----|---|
| E7 | E8 | |
| ON | ON | Enable ID selection jumpers on front (block A) * Enable ID selection jumpers on side (block B) |

Note: Use jumper block A exclusively for SCSI ID selection.

| JUMPERS (BLOCK A AND BLOCK B) | | | SCSI ID SELECTION |
|-------------------------------|-----|-----|-------------------|
| E1 | E2 | E3 | |
| 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 E4 | DRIVE MOTOR START |
|-----------|-------------------------------|
| ON | Motor starts on Start command |
| OFF | Motor starts at power-up * |

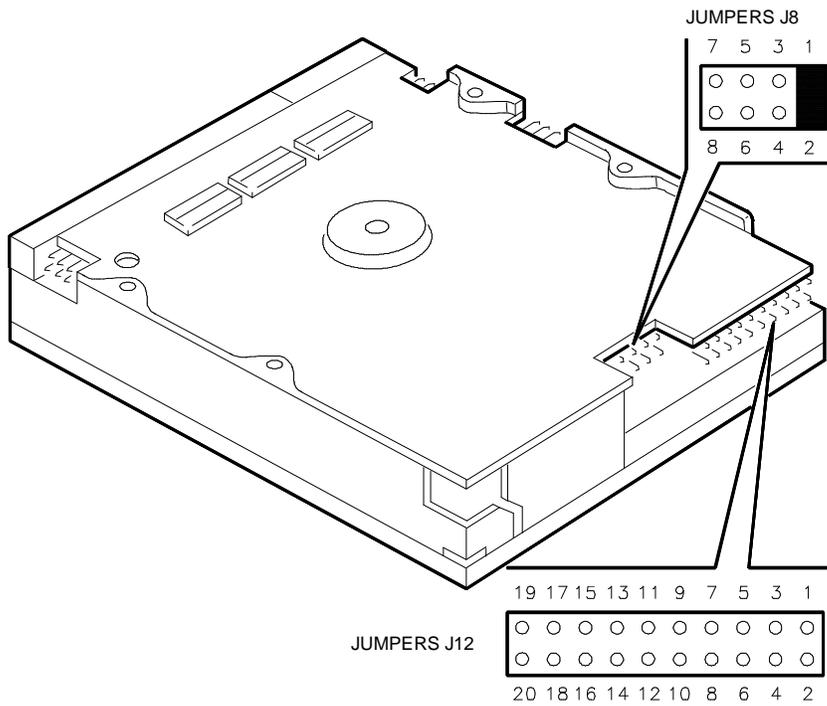
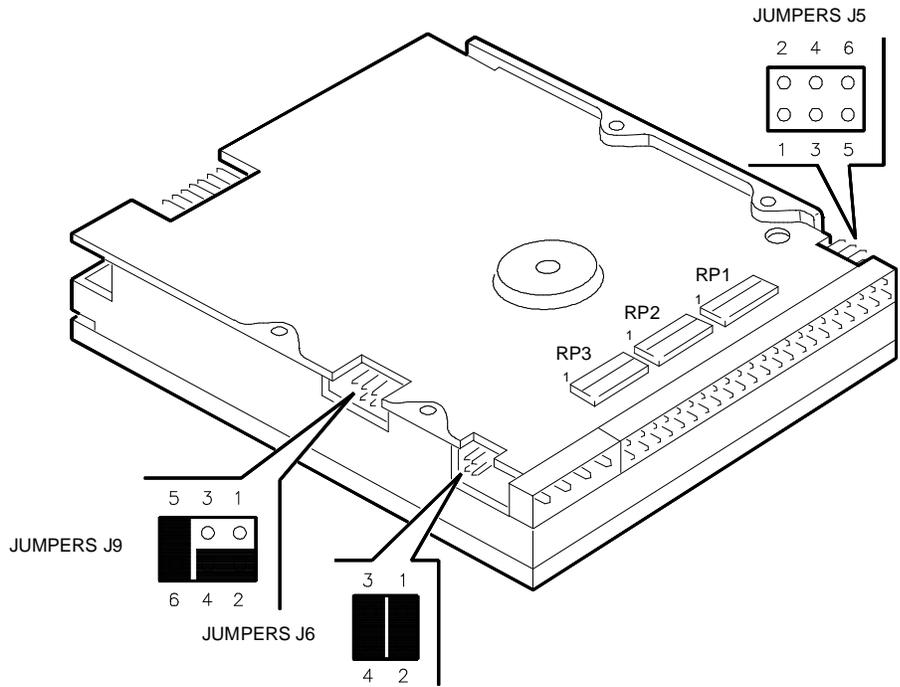
Note: On M6-850/860/880 and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

| JUMPER E5 | POWER TO TERMINATORS |
|-----------|--|
| ON | Drive provides the power supply for the terminators and to pin 26 SCSI (Term. Power) * |
| OFF | The terminators are powered by the Terminator power signal. |

TERMINATION RESISTANCES RP1, RP2 AND RP3

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

| | | |
|-------------------|------------------------|---------------|
| 210 MB HDU | SEAGATE ST3283N | SCSI-2 |
|-------------------|------------------------|---------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 4500 RPM | 1691 | 3 | 5 | RLL 1.7 |

| JUMPERS J5 AND J8 | | | SCSI ID SELECTION |
|-------------------|---------|---------|-------------------|
| PIN 5-6 | PIN 3-4 | PIN 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 |
| OFF | ON | ON | 6 |
| ON | ON | ON | 7 |

Note: For SCSI ID selection, use only jumper block J8 located at the front; jumper block J5 located at the side is therefore not used and must be set OFF. SCSI ID = 0. If the ID is selected on the two jumper blocks, the two selections are added (e.g. J5 ID = 2, J8 ID = 2, the peripheral ID will be 4)

| JUMPER J8 PIN 7-8 JUMPER J12 PIN 5-6 | DRIVE MOTOR SYNCHRONIZATION |
|---|---|
| ON OFF | The drive motor is synchronized by an external index signal Normal operation * |

| JUMPER J8 PIN 9-10 JUMPER J12 PIN 7-8 | REMOTE LED POWER SUPPLY |
|--|---|
| ON OFF | Power supplied to remote LED Remote LED not used * |

Note: Pins 11 to 20 of jumper block J8 are not used.

| JUMPERS J6 | | POWER TO TERMINATORS |
|------------------|----|---|
| PINS 1-2 | ON | Terminators powered by SCSI connector |
| PINS 1-3 | ON | Terminators powered by power supply connector |
| PINS 3-4 | ON | Terminators powered only to SCSI connector |
| PINS 1-2 and 3-4 | ON | Terminators powered by power supply connector and SCSI bus* |
| PINS 4-2 | ON | Terminators are not installed |

| JUMPERS J9 | | ACTIVE/PASSIVE TERMINATION |
|------------------|----|---|
| PINS 1-2 | ON | Enable active termination (2.85 V, 110 ohm) |
| PINS 2-4 and 5-6 | ON | Enable passive termination (standard 220/330 ohm) * |

| JUMPER J12 PIN 1-2 | SCSI BUS PARITY CHECKING |
|--------------------|--------------------------|
| ON | Enable parity checking * |
| OFF | Disable parity checking |

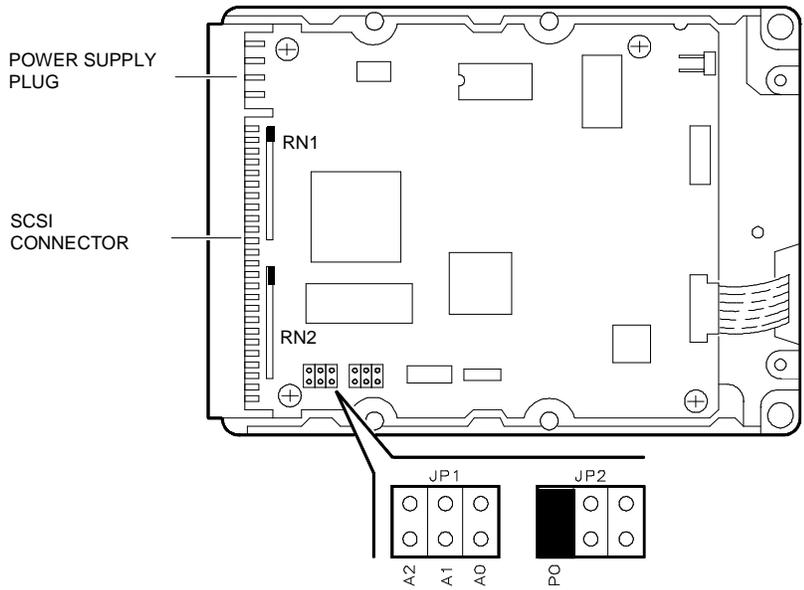
| JUMPER J12 PIN 3-4 | DRIVE MOTOR START |
|--------------------|---|
| ON | The motor is started by a Start command |
| OFF | The motor starts when powered up * |

Note: On M6-850/860/880 and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

TERMINATION RESISTANCES RP1, RP2 AND RP3

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

| | | |
|-------------------|----------------------------------|---------------|
| 270 MB HDU | QUANTUM LP270S (ProDrive) | SCSI-2 |
|-------------------|----------------------------------|---------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 4500 RPM | | 1 | 2 | RLL 1.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| A0 | A1 | A2 | |
| 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 |

9

| JUMPER P0 | DRIVE MOTOR START |
|-----------|---|
| OFF | The motor starts when powered up |
| ON | The motor is started by a Start command |

Note: On M6-850/860/880, SNX 1XX /E Systema and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

TERMINATION RESISTANCES RN1, RN2

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 (for example SNX 1xx) termination is made directly on the drive while on others (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

| JUMPER M | | CONNECTION TO GROUND |
|----------|----|--|
| POS. 1-2 | ON | Drive connected to ground (Signal Ground) |
| POS. 3-4 | ON | Drive connected to ground by means of chassis (Chassis Ground) |

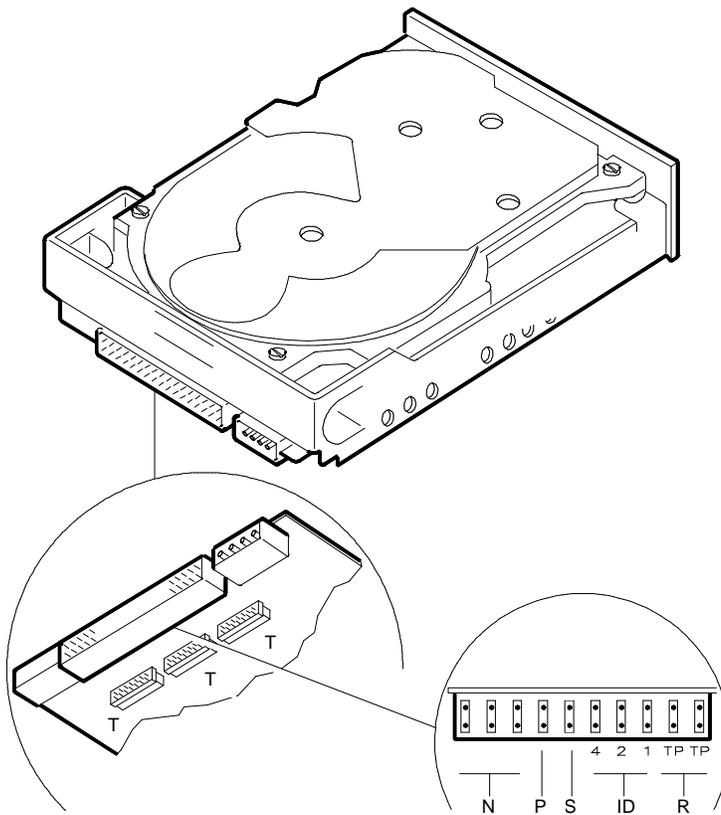
JUMPER R

- R  The terminators are supplied by the Terminator Power signal
- R  The drive supplies power to the terminators *
- R  No terminators

TERMINATION RESISTANCE T

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.

| | | |
|-------------------|-------------------------------|-------------|
| 320 MB HDU | SEAGATE WREN 6 ST2383N | SCSI |
|-------------------|-------------------------------|-------------|



9

| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| | | | | RLL 2.7 |

| JUMPERS ID | | | SCSI ID SELECTION |
|------------|-----|-----|-------------------|
| 4 | 2 | 1 | |
| 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 |

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

| JUMPER S | DRIVE MOTOR START |
|----------|---|
| ON | The motor is started by the Start command |
| OFF | The motor starts at power up * |

JUMPER R

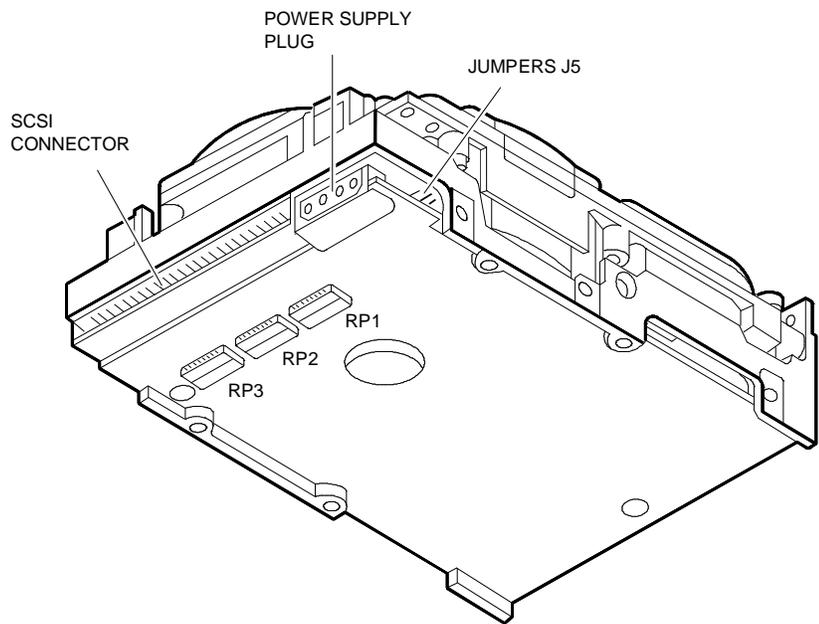
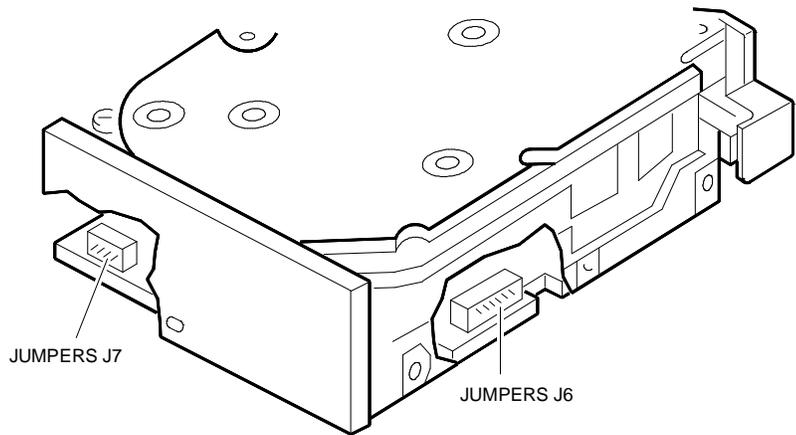
- R  Terminators receive current from pin 26 (Terminator Power) via a fuse
- R  Terminators receive current from pin 26 (Terminator Power) via a diode and a fuse
- R  The drive supplies power to the terminators *

TERMINATION RESISTANCE T

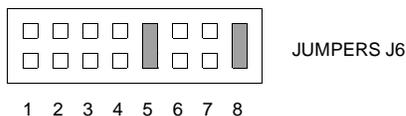
Whether terminators are present or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween.

Note: The N jumpers are reserved (only used in production).

| | | |
|--|--|--|
| <p>340 MB HDU 525 MB HDU</p> | <p>SEAGATE ST1401N SEAGATE ST1581N</p> | <p>SCSI-2 SCSI-2</p> |
|--|--|--|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|---------|----------|-----------|-------|-------|---------|
| ST1401N | 4412 RPM | 1113 | 5 | 9 | RLL 1.7 |
| ST1581N | 4412 RPM | 1476 | 5 | 9 | RLL 1.7 |



| JUMPERS J6 | | DRIVE MOTOR START-UP |
|------------|-----|--|
| 2 | 3 | |
| ON | OFF | The motor starts-up with a Start command. |
| OFF | ON | Delaying drive motor start-up: Drive with an ID=0 starts immediately Drive with an ID=1 starts after 16 seconds Drive with an ID=2 starts after 32 seconds Drive with an ID=3 starts after 48 seconds and so on up to the last drive. |
| OFF | OFF | The motor starts at power-up * |

Note: On LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

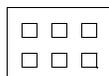
| JUMPER J6-4 | WRITE PROTECT ENABLE |
|-------------|------------------------------------|
| ON | The drive is write protected |
| OFF | The drive is not write protected * |

| JUMPER J6-5 | SCSI BUS PARITY CHECK |
|-------------|------------------------|
| ON | Enables parity check * |
| OFF | Disables parity check |

| JUMPERS J6 | | POWER SUPPLY TO THE TERMINATORS |
|------------|-----|---|
| 7 | 8 | |
| ON | OFF | The terminators are supplied by the Terminator Power signal |
| OFF | ON | The drive provides the power supply to the terminators * |
| | | If the jumper is inserted horizontally on the top row on pins 7 and 8, the terminators are powered by pin 26 of the SCSI bus. |

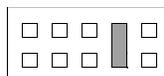
Note: Jumper J6-1 is used only at the factory.
Jumper J6-6 is reserved for future use.

JUMPERS J5



3 2 1

JUMPERS J7



3 2 1 4 5

Note: Jumper blocks J7 (1, 2, 3) and J5 (1, 2, 3) can both be used for SCSI ID selection. To avoid incorrect selections, do not use both jumper blocks simultaneously.

| JUMPERS J5 AND J7 | | | SCSI ID SELECTION |
|-------------------|-----|-----|-------------------|
| 3 | 2 | 1 | |
| 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 |

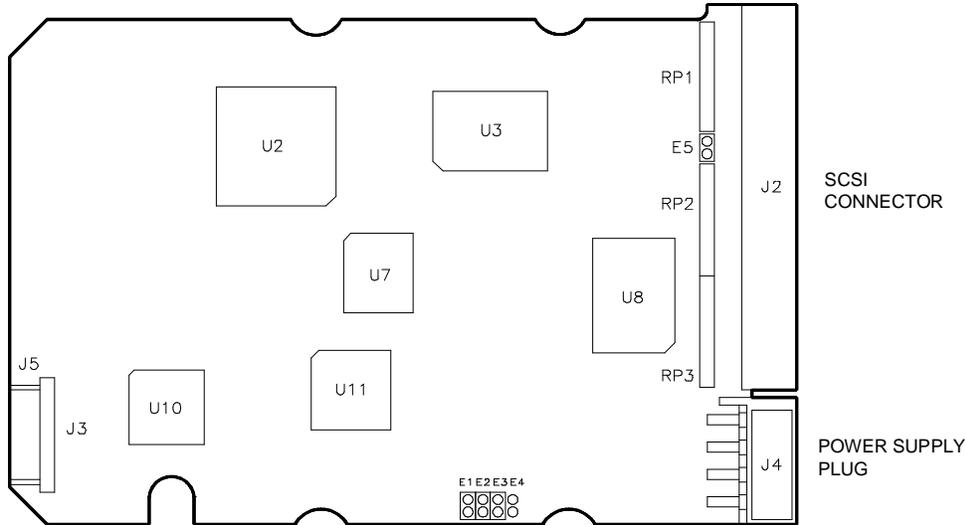
| JUMPER J7-4 | SYNCHRONIZATION |
|-------------|-----------------------------------|
| ON | Standard configuration * |
| OFF | Used for synchronization purposes |

| JUMPER J7-5 | CONNECTION TO A REMOTE LED |
|-------------|---|
| ON | Pin 10 of the SCSI connector connected to +5 V, pin 9 to ground |
| OFF | Standard configuration * |

TERMINATION RESISTANCES RP1, RP2 AND RP3

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

| | | |
|--|--|--|
| 340 MB HDU 340 MB HDU 510 MB HDU 525 MB HDU | CONNER CP3300 (Summit 1) CONNER CP3360 (Summit 2) CONNER CP3500 (Summit 1) CONNER CP3540 (Summit 2) | SCSI SCSI-2 SCSI SCSI-2 |
|--|--|--|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|--------|----------|-----------|-------|-------|---------|
| CP3300 | 4500 RPM | 1807 | 4 | 8 | RLL 2.7 |
| CP3360 | 4500 RPM | 1807 | 4 | 8 | RLL 2.7 |
| CP3500 | 4500 RPM | 1807 | 6 | 12 | RLL 2.7 |
| CP3540 | 4500 RPM | 1807 | 6 | 12 | RLL 2.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| E1 | E2 | E3 | |
| 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 |

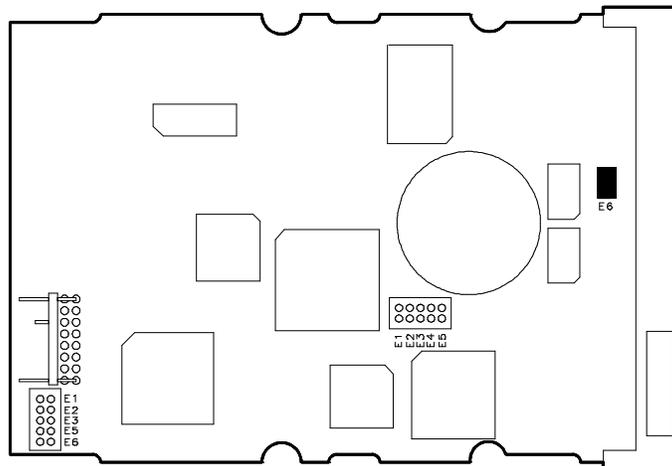
| JUMPER E4 | DRIVE MOTOR START-UP |
|-----------|---------------------------------------|
| OFF | The motor starts at power-up * |
| ON | The motor starts with a Start command |

| | |
|------------------|--|
| JUMPER E5 | POWER SUPPLY TO THE TERMINATORS |
| ON OFF | The terminators are supplied by the Terminator Power signal * The drive provides the power supply for the terminators |

TERMINATION RESISTANCES RP1, RP2 AND RP3

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.

| | | |
|----------------------------------|--|---------------|
| 340 MB HDU 525 MB HDU | CONNER CP30360 (Aegean) CONNER CP30540 (Aegean) | SCSI-2 |
|----------------------------------|--|---------------|



9

| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|---------|----------|-----------|-------|-------|---------|
| CP30360 | 5400 RPM | | 3 | | RLL 1.7 |
| CP30540 | 5400 RPM | | | | RLL 1.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| OE1 | OE2 | OE3 | |
| 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 |

Note: For SCSI ID selection, use only jumper block OE1-OE3 located at the front; jumper block E1-E3 located at the side is therefore not used and must be set OFF, SCSI ID = 0. If the ID is selected on the two jumper blocks, the two selections are summed (e.g. block OE1-OE3 ID = 2, block E1-E3 ID = 2, the peripheral ID will be 4).

| JUMPER E4 | DRIVE MOTOR START-UP |
|-----------|-------------------------------|
| ON | Motor starts on Start command |
| OFF | Motor starts at power-up * |

Note: On M6-850/860/880, SNX1XX /E Systema and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

| JUMPER E5 | TERMINATORS ENABLING |
|-----------|----------------------|
| ON | Terminators enabled |
| OFF | Terminators disabled |

Note: The terminators on this drive cannot be removed and consist of 2 soldered dual in-line chips, enabled by jumper E5.

Whether terminators are present or not depends on the configuration of the system SCSI channel.

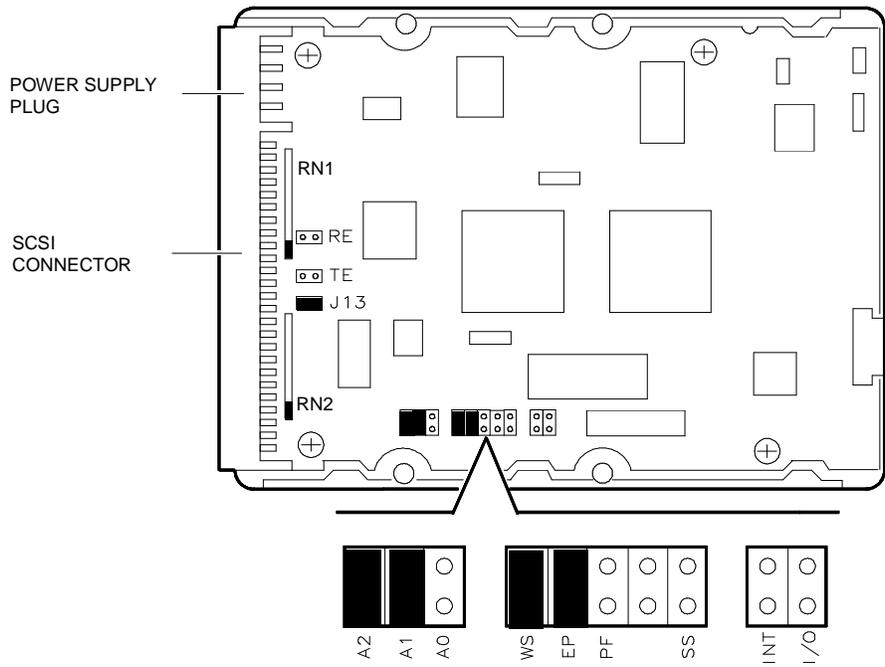
Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween. On some systems (for example SNX 1xx) termination is made directly on the drive while on others (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

To avoid making wrong selections, only use jumper OE5 and keep jumper E5 in the OFF position.

| JUMPER E6 | POWER TO TERMINATORS |
|-----------|---|
| ON | The drive powers the terminators * |
| OFF | The terminators are powered by the Terminators Power signal |

Note: Set only the E6 jumper near the interface connector and keep jumper OE6 in the OFF position.

| | | |
|-------------------|---------------------------|---------------|
| 525 MB HDU | QUANTUM EMPIRE 540 | SCSI-2 |
|-------------------|---------------------------|---------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 5400 RPM | 2874 | 2 | 4 | RLL 1.7 |

9

| JUMPERS | | | SCSI ID SELECTION |
|---------|-----|-----|-------------------|
| A0 | A1 | A2 | |
| 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 RE | DRIVE MOTOR START-UP |
|-----------|---|
| OFF * | Normal operation |
| ON | Allows the code to be copied into Flash EPROM |

| JUMPER TE | TERMINATORS ENABLING |
|-----------|--|
| OFF | Removable terminators RN1 and RN2 disabled |
| ON | Removable terminators RN1 and RN2 enabled |

Note: This drive has removable terminators consisting of two resistor packs RN1 and RN2. If these terminators are present on the drive, they are enabled by means of jumper TE. 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 (for example SNX 1xx) termination is made directly on the drive while on others (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.
To disable the terminators, remove jumper TE and remove the two resistor packs.

| JUMPER EP | PARITY CHECKING ENABLE |
|-----------|---|
| OFF | Disables parity checkin on the SCSI bus |
| ON * | Enables parity checking on the SCSI bus |

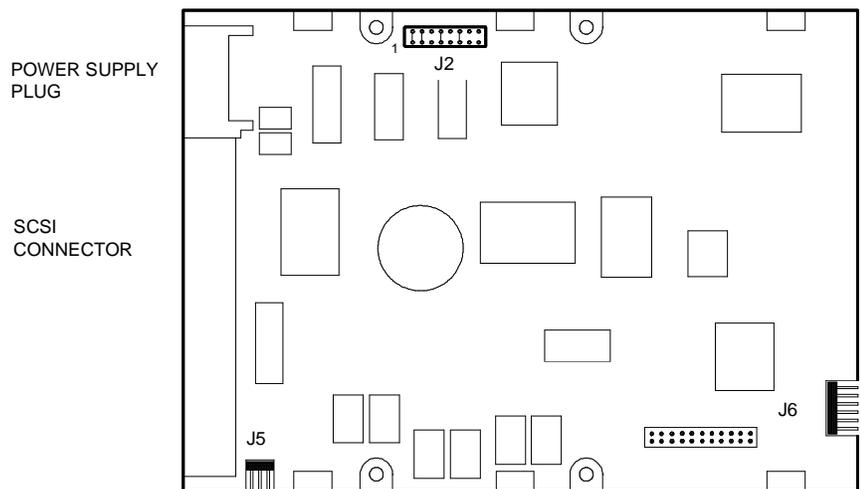
| JUMPER WS | DRIVE MOTOR START-UP |
|-----------|-------------------------------|
| OFF * | Motor starts at power-up |
| ON | Motor starts on Start command |

Note: On M6-850/860/880, SNX1XX /E Systema and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is beause the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

| JUMPER J13 | POWER TO TERMINATORS |
|------------|---|
| OFF | The terminators are powered by the Terminators Power signal |
| ON * | The drive powers the terminators |

Note: All other jumpers are reserved for factory tests and must therefore always be kept to the OFF position.

| | | |
|---|---|----------------------|
| <p>525 MB HDU 1.05 GB HDU 2.1 GB HDU</p> | <p>SEAGATE ST3620N SEAGATE ST31200N (Hawk 1LP) SEAGATE ST12400N (Hawk 2)</p> | <p>SCSI-2</p> |
|---|---|----------------------|

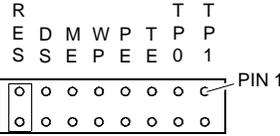


JUMPERS J6

| | S L R S E E A2 A1 A0 P D S | |
|---|----------------------------------|--|
| SCSI ID = 0 | | |
| SCSI ID = 1 | | |
| SCSI ID = 2 | | |
| SCSI ID = 3 | | |
| SCSI ID = 4 | | |
| SCSI ID = 5 | | |
| SCSI ID = 6 (Default) | | |
| SCSI ID = 7 | | |
| ONE enables drive motor synchronization * OFF disables drive motor synchronization | | |
| Pin used for connection to a remote LED (jumper not installed) | | |
| Reserved (jumper not installed) | | |

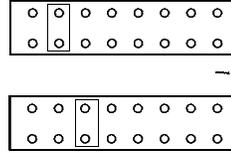
JUMPERS J2

Reserved
(jumper not installed)



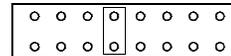
DSME

- OFFOFFThe motor starts at power on *
- OFFONThe motor starts with a Start command
- ONOFFThe motor of drive 0 starts at power on, that of drive 1 starts after 12 sec, that of drive 2 after 24 sec, etc.
- ONONThe motor starts with a Start command.

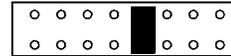


Note: On M6-850/860/880, SNX 1XX /E Systema and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

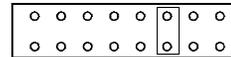
- ONThe drive is write protected
- OFFThe drive is not write protected *



- ONThe terminators are enabled *
- OFFParity checking is disabled



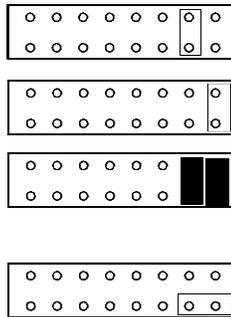
- ONTerminators enabled
- OFFTerminators disabled



Note: This drive has permanent terminators which are enabled by jumper TE. 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 (for example SNX 1xx) termination is made directly on the drive while on others (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

TP0TP1

- OFFOFFThe terminators are not powered
- ONOFFThe terminators are powered by the drive
- OFFONThe drive provides power to pin 26 of the SCSI bus (Terminator Power signal); the internal terminators are not powered.
- ONONThe terminators are powered by the drive, which also provides power to pin 26 of the SCSI bus (Terminator Power signal) *

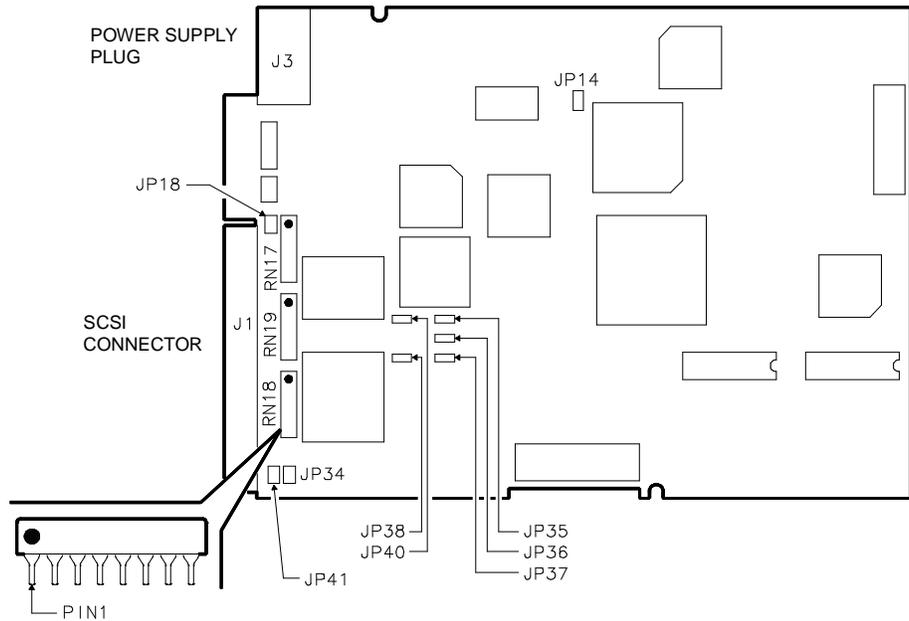


With the jumper installed horizontally, the terminators receive power from pin 26 of the SCSI bus (Terminator Power signal).
Jumper not installed.

Note: Jumper block J5 is not used.

| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|----------|-----------|-------|-------|---------|
| ST3620N | 5411 RPM | 2700 | 3 | 5 | RLL 1.7 |
| ST31200N | 5411 RPM | 2700 | 5 | 9 | RLL 1.7 |
| ST12400N | 5411 RPM | 2611 | 10 | 19 | RLL 1.7 |

| | | |
|-------------------|-----------------------|-------------|
| 650 MB HDU | MAXTOR XT8760S | SCSI |
|-------------------|-----------------------|-------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 3600 RPM | 1632 | 8 | 15 | RLL 2.7 |

| JUMPERS | | | SCSI ID SELECTION |
|---------|------|------|-------------------|
| JP35 | JP36 | JP37 | |
| 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 |

9

| JUMPERS | | POWER SUPPLY TO THE TERMINATORS |
|---------|------|--|
| JP41 | JP34 | |
| ON | OFF | The drive provides the power supply for the terminators * |
| OFF | ON | The terminators are supplied by the Terminator Power signal |
| ON | ON | The drive provides power to pin 26 of the SCSI bus (Term. Power) |

| JUMPERS | | DRIVE MOTOR START-UP |
|---------|--------|---|
| JP14 | JP38 | |
| ON | OFF/ON | The motor starts at power-on * |
| OFF | ON | The motor starts with the Start command |
| OFF | OFF | The motor starts in the ID sequence (11, 13 sec. delay per SCSI ID) |

| JUMPER JP18 | WRITE ENABLE |
|-------------|-----------------|
| ON | Write disabled |
| OFF | Write enabled * |

| JUMPER JP40 | SCSI BUS PARITY CHECK |
|-------------|------------------------|
| ON | Parity check enabled * |
| OFF | Parity check disabled |

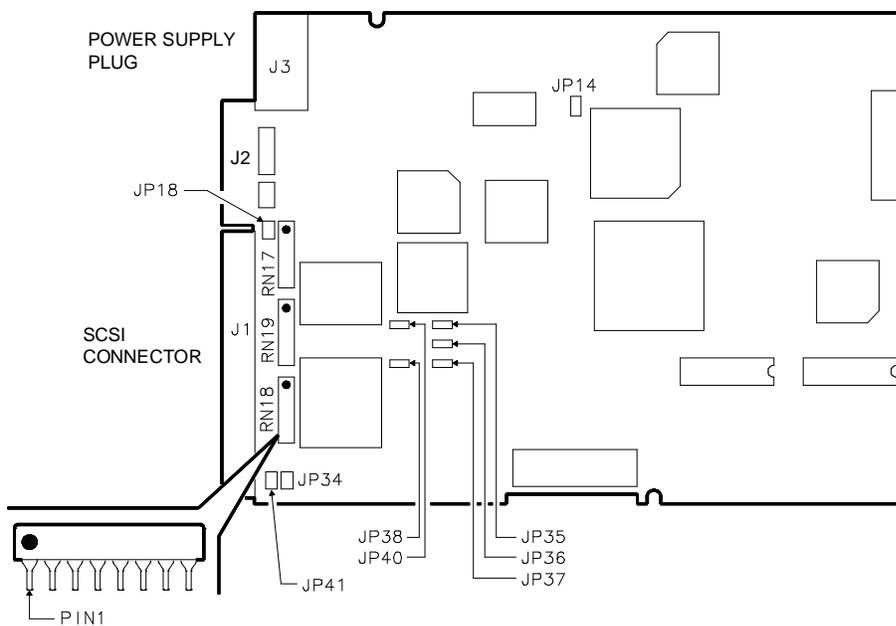
The following jumpers are not shown in the figure of the drive. Their setting was made at the factory and must not be changed.

| JUMPERS | JP10 | JP11 | JP15 | JP26 | JP32 | JP33 | JP39 | TXD-E19 |
|---------|------|------|------|------|------|------|------|---------|
| SETTING | ON | ON | OUT | OUT | ON | ON | ON | ON |

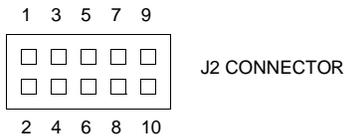
TERMINATION RESISTANCES RN17, RN18 AND RN19

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.

| 650 MB HDU | MAXTOR XT8760SH | SCSI |
|------------|-----------------|------|
|------------|-----------------|------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 3600 RPM | 1632 | 8 | 15 | RLL 2.7 |



| CONNECTOR J2 | | | SCSI ID SELECTION |
|--------------|---------|---------|-------------------|
| PIN 5-6 | PIN 3-4 | PIN 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 |
| OFF | ON | ON | 6 |
| ON | ON | ON | 7 |

Note: Pins 7-8 of connector J2 are not connected. Pins 9 and 10 correspond to Remote +LED and Remote -LED, respectively, and are both not used.

| JUMPERS | | POWER SUPPLY TO THE TERMINATORS |
|---------|------|--|
| JP41 | JP34 | |
| ON | OFF | The drive provides the power supply for the terminators * |
| OFF | ON | The terminators are supplied by the Terminator Power signal |
| ON | ON | The drive provides power to pin 26 of the SCSI bus (Term. Power) |

| JUMPERS | | DRIVE MOTOR START-UP |
|---------|--------|---|
| JP14 | JP38 | |
| ON | OFF/ON | The motor starts at power-up * |
| OFF | ON | The motor starts with a Start command |
| OFF | OFF | The motor starts according to the ID sequence (11, 13 sec. delay per SCSI ID) |

9

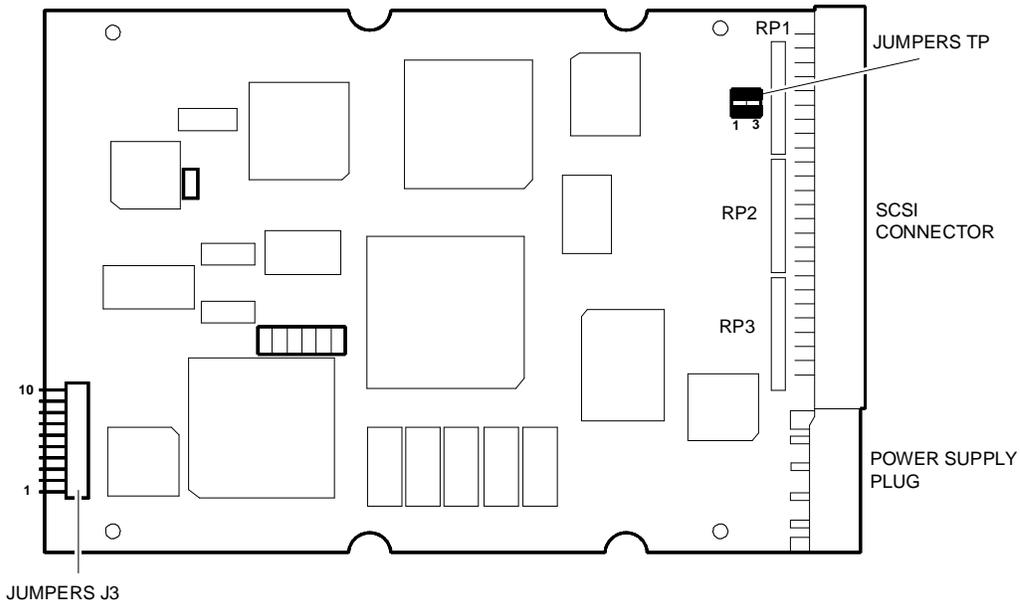
| JUMPER JP18 | WRITE ENABLE |
|-------------|-------------------------|
| ON | Write to disk disabled |
| OFF | Write to disk enabled * |

| JUMPER JP40 | SCSI BUS PARITY CHECK |
|-------------|------------------------|
| ON | Parity check enabled * |
| OFF | Parity check disabled |

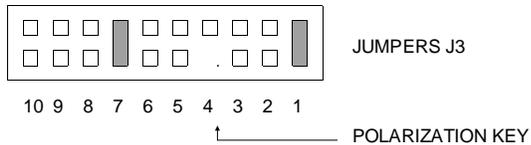
TERMINATION RESISTANCES RN17, RN18 AND RN19

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.

| | | |
|--------------------|------------------------|---------------|
| 1.05 GB HDU | DIGITAL DSP3105 | SCSI-2 |
|--------------------|------------------------|---------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 5400 RPM | | 7 | | RLL 1.7 |



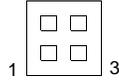
| JUMPERS J3 | | | SCSI ID SELECTION |
|------------|-----|-----|-------------------|
| 3 | 2 | 1 | |
| OFF | OFF | OFF | 0 |
| OFF | OFF | ON | 1 |
| OFF | ON | OFF | 2 |
| OFF | ON | ON | 3 |
| ON | OFF | OFF | 4 |
| ON | OFF | ON | 5 |
| ON | ON | OFF | 6 |
| ON | ON | ON | 7 |

| JUMPER J3 | DESCRIPTION |
|-----------|--|
| 4 5 | The pins in position 4 and 5 have the FLT_SINK and BSY_SINK signals respectively, which permit display on a remote console of the status of the FLT (fault) and BSY (busy) signals. This feature is not used and no jumpers are fitted in either of the positions. |

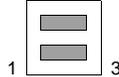
| JUMPER J3-7 | DRIVE MOTOR START |
|-------------|-----------------------------------|
| OFF | Motor starts on the Start command |
| ON | Motor starts at power-up * |

Note: On M6-850/860/880 and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

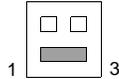
Note: The other position of the J3 jumpers are reserved and are in the OFF condition.



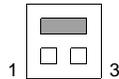
The terminators are not powered, either by the Terminator Power signal nor by the drive



The Terminal Power signal and drive provide power to the terminators. The drive also provides power to SCSI pin 26 (Term. Power) *



The terminators are powered by the drive *



The terminators are powered by the Terminator Power signal

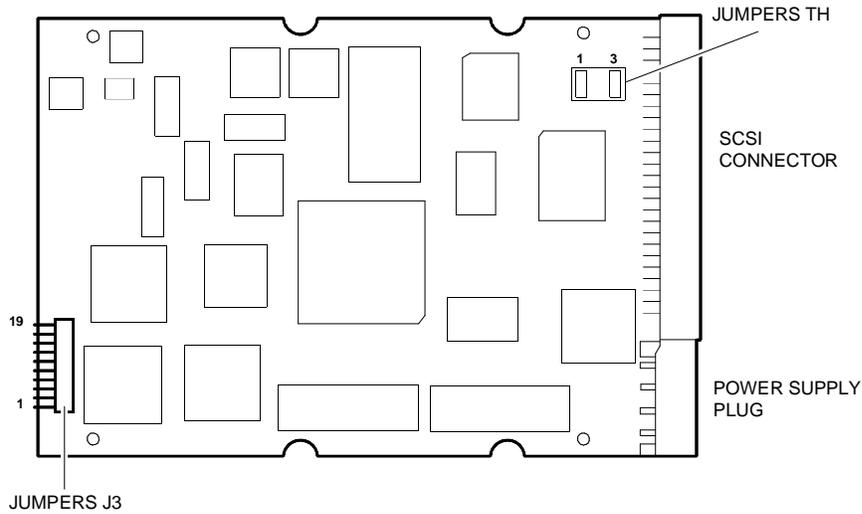
TERMINATION RESISTANCES RP1, RP2 AND RP3

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

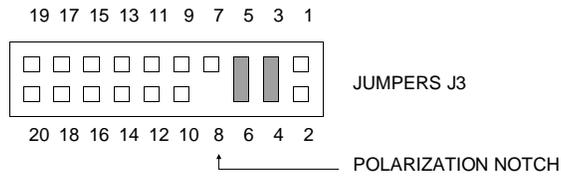
DIAGNOSTIC LED

Opposite the SCSI connector on the drive board, there are two LEDs: a green LED named BSY (busy) and an amber LED named FLT (fault). If the BSY LED is lit on, then the drive is executing an SCSI command whereas if the FLT LED is lit, then an error has occurred. Both LEDs blink briefly when the system is powered up.

| | | |
|--------------------|-------------------------|---------------|
| 1.05 GB HDU | DIGITAL DSP3107L | SCSI-2 |
|--------------------|-------------------------|---------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 5400 RPM | | 4 | | RLL 1.7 |



| JUMPERS J3 | | | SCSI ID SELECTION |
|------------|---------|---------|-------------------|
| PIN 5-6 | PIN 3-4 | PIN 1-2 | |
| 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 |

| JUMPER J3 PIN 13-14 | DRIVE MOTOR START |
|---------------------|-----------------------------------|
| OFF | Motor starts on the Start command |
| ON | Motor starts at power-up * |

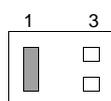
Note: On M6-850/860/880, SNX1XX/E Systema and LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

| JUMPER J3 | | | DESCRIPTION |
|-----------|-------|--------|---|
| PIN 7 | PIN 9 | PIN 11 | Signals FLT_OUT L and BSY_OUT L are on pins 7 and 9, respectively. When connected to pin 11 (+5 VDC OUT), these signals make it possible to view the status of the FLT (fault) and BSY (busy) LEDs on the remote console. Since this feature is not used there are no jumpers in these positions. |

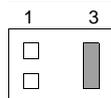
| JUMPER J3 PIN 19-20 | DRIVE MOTOR SYNCHRONIZATION |
|---------------------|---|
| OFF | Other drives with the drive motor synchronization feature can be connected to these two pins. Since this feature is not used, there are no jumpers on these pins. |

Note: The other position of the J3 jumpers are reserved and are in the OFF condition.

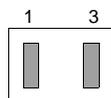
JUMPERS TH (Terminator Power Supply and Enable)



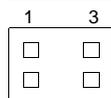
The drive provides the Terminator Power signal to the SCSI bus and the active terminators are disabled.



The drive does not provide the Terminator Power signal to the SCSI bus and the active terminators are enabled.



The drive provides the Terminator Power signal to the SCSI bus and the active terminators are enabled.



The drive does not provide the Terminator Power signal to the SCSI bus and the active terminators are disabled.

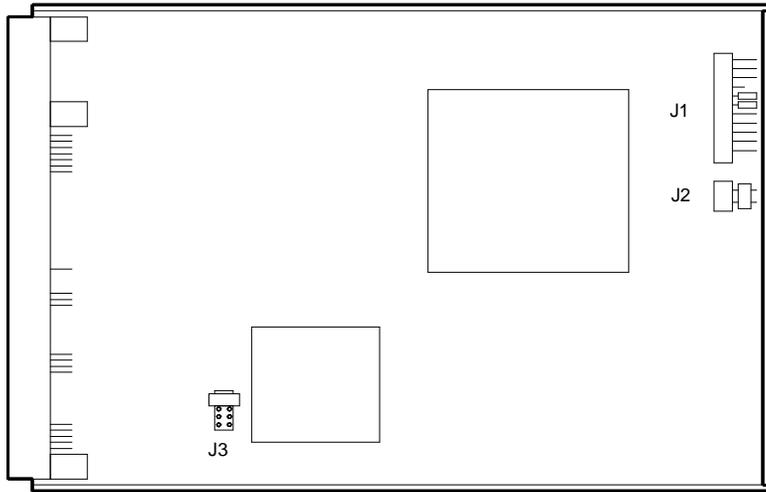
9

Note: This drive has permanent terminators which are enabled by means of jumper TH, pins 3-4. 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 (for example SNX 1xx) termination is made directly on the drive while on others (for example LSX 50xx) it is always made on the SCSI cable or on the disk support. As far as power to the terminators is concerned, the drive must provide the Terminator Power signal to the SCSI bus and therefore jumper TH must always be inserted on pins 1-2.

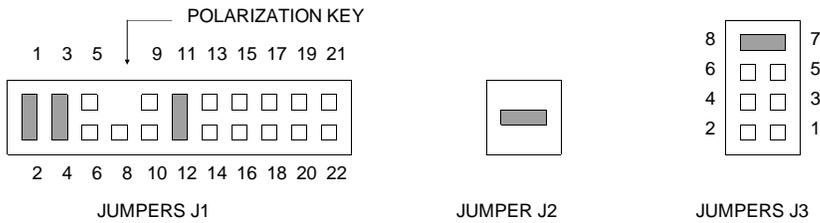
DIAGNOSTIC LEDs

There are two LEDs next to jumper J3: a green LED called BSY (busy) and an amber LED called (FLT (fault). The BSY LED comes on to indicate whenever the drive is running a SCSI command, while the FLT LED comes on to indicate that an error has occurred. Both LEDs flash briefly at power on.

| | | |
|--------------------|--------------------------|-------------|
| 1.05 GB HDU | IBM 0662 Mod. S12 | SCSI |
|--------------------|--------------------------|-------------|



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|------------------------------|-------|-------|---------|
| 5400 RPM | 3016 Notch 1 1120 Notch 2 | 3 | | RLL 1.7 |



| JUMPERS J1 | | | SCSI ID SELECTION |
|------------|---------|---------|-------------------|
| PIN 1-2 | PIN 3-4 | PIN 5-6 | |
| 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 |

| JUMPER J1 PIN 9-10 | DRIVE MOTOR START-UP |
|--------------------|-------------------------------------|
| OFF | Motor starts on the Start command * |
| ON | Motor starts at power-up |

Note: This drive will only be installed in M6-850/860/880 systems and therefore must be jumpered so the drive motor starts with the Start command instead of at power on.

| JUMPERS J1 PIN 11-12 | TERMINATOR ENABLED |
|----------------------|--|
| OFF | The terminators on the SCSI channel are disabled |
| ON | The terminators on the SCSI channel are enabled |

Note: This drive has permanent terminators consisting of two chips soldered on the board and which are enabled by means of jumper J1, pins 11-12. 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.

| JUMPERS J1 PIN 13-14 | SYNCHRONIZATION |
|----------------------|----------------------------|
| OFF | Synchronization disabled * |
| ON | Synchronization enabled |

| JUMPERS J1 PIN 15-16 | CONNECTION TO REMOTE LED |
|----------------------|---|
| ON | Pin 15 is connected to the cathode, pin 16 to the anode of the remote LED |
| OFF | Standard configuration * |

| JUMPERS J1 PIN 17-18 | WRITE PROTECT ENABLE |
|----------------------|------------------------------------|
| ON | The drive is write protected |
| OFF | The drive is not write protected * |

| JUMPERS J1 PIN 19-20 | DRIVE MOTOR START-UP DELAY |
|----------------------|---|
| ON | Sets a drive motor start-up automatic delay |
| OFF | Disables drive motor start-up delay * |

Note: The drive motor start-up delay is already determined by the BIOS when the motor starts with the Start command.

| JUMPERS J2 | TERMINATOR POWER SUPPLY |
|------------|--|
| OFF | The terminators are powered by the Terminal Power signal |
| ON | The drive provides power to the terminators * |

| JUMPERS J3 PIN 3-4 | UNIT ATTENTION |
|--------------------|---------------------------|
| ON | Enables Unit Attention |
| OFF | Disables Unit Attention * |

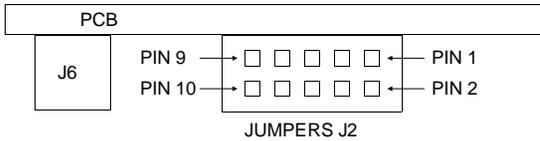
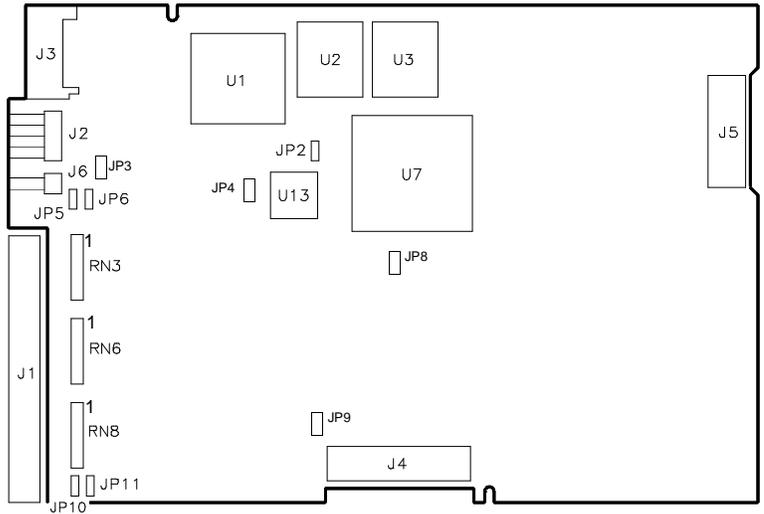
| JUMPERS J3 PIN 5-6 | SCSI BUS PARITY CHECK |
|--------------------|------------------------|
| OFF | Parity check enabled * |
| ON | Parity check disabled |

| JUMPERS J3 PIN 7-8 | SYNC. NEGOTIATIONS |
|--------------------|---|
| ON | The drive disables the request for sync transfers * |
| OFF | The drive enables the request for sync transfers |

Nota: Jumpers J1, pins 21-22, and J3, pins 1-2 are not used and are therefore in the OFF position.

| | | |
|-------------------|--------------------------------|-------------|
| 1.4 GB HDU | MAXTOR P1-17S (Panther) | SCSI |
|-------------------|--------------------------------|-------------|

BOARD 1027462



| ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|----------|-----------|-------|-------|---------|
| 3600 RPM | 1778 | 10 | 19 | RLL 1.7 |

| JUMPERS J2 | | | SCSI ID SELECTION |
|------------|---------|---------|-------------------|
| PIN 9-10 | PIN 7-8 | PIN 5-6 | |
| 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 J2 PIN 3-4 | SCSI BUS PARITY CHECK |
|-------------------|------------------------|
| OFF | Parity check enabled * |
| ON | Parity check disabled |

Note: Pins 1-2 of jumper J2 for remote LED connection are not used.

| JUMPER JP2 | WRITE PROTECT ENABLE |
|------------|------------------------------------|
| ON | The drive is write protected |
| OFF | The drive is not write protected * |

| JUMPERS | | SYNCHRONIZATION |
|---------|-----------|---|
| JP5 | JP6 | |
| ON | ON OFF | 150 Ohm terminator on the synchronized slave drive |
| OFF | | 150 Ohm terminator on the synchronized master drive Standard configuration * |

| JUMPERS | | POWER SUPPLY TO THE TERMINATORS |
|---------|------|---|
| JP10 | JP11 | |
| ON | OFF | The terminators are supplied by the Terminator Power signal |
| OFF | ON | The drive provides power supply to the terminators * |
| ON | ON | The drive provides power supply to pin 26 of the SCSI bus (Term. Power) |

Note: *The remaining jumpers must be set as follows:*

JP3 = OFF

JP4 = ON (position 1-2)

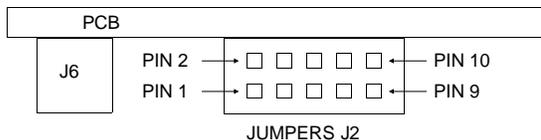
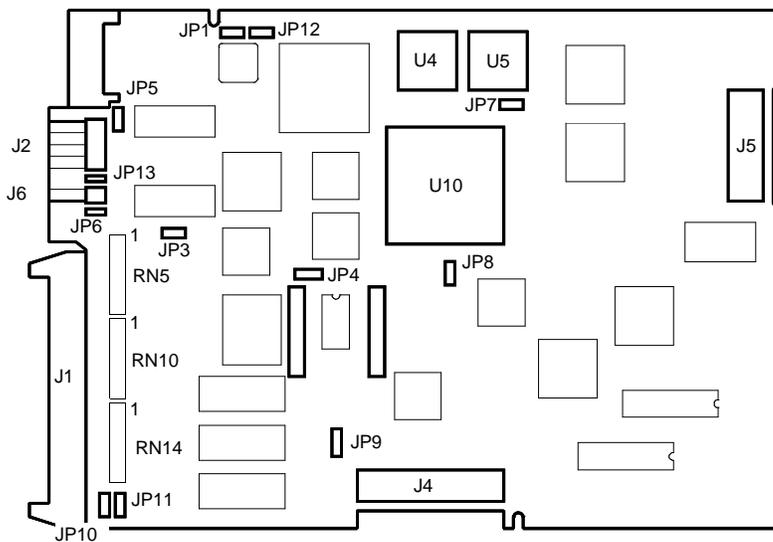
JP8 = ON (position 1-2)

JP9 = ON (position 1-2)

TERMINATION RESISTANCES RN3, RN6 AND RN8

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

BOARD 1027334 or 1027982



| JUMPERS J2 | | | SCSI ID SELECTION |
|------------|---------|---------|-------------------|
| PIN 5-6 | PIN 3-4 | PIN 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 |
| OFF | ON | ON | 6 |
| ON | ON | ON | 7 |

| JUMPER J2 PIN 7-8 | WRITE PROTECT ENABLE |
|-------------------|------------------------------------|
| ON | The drive is write protected |
| OFF | The drive is not write protected * |

Note: Pins 9-10 of jumper J2 for remote LED connection are not used

| JUMPERS | | SYNCHRONIZATION FEATURE |
|---------|-----|--|
| JP5 | JP6 | |
| ON | ON | Slave drive 150 ohm termination synchronized |
| OFF | OFF | Master drive 150 ohm termination synchronized. |
| | | Standard configuration * |

| JUMPERS | | POWER SUPPLY TO THE TERMINATORS |
|---------|------|--|
| JP10 | JP11 | |
| ON | OFF | The terminators are supplied by the Terminator Power signal |
| OFF | ON | The drive powers the terminators * |
| ON | ON | The drive provides power supply to SCSI bus pin 26 (Term. Power) |

| JUMPER JP13 | | WRITE PROTECT ENABLE |
|-------------|----|--------------------------|
| OFF | ON | Enable parity checking * |
| ON | ON | Disable parity checking |

| JUMPERS | | POWER SUPPLY TO THE TERMINATORS |
|---------|------|---|
| JP1 | JP12 | |
| OFF | OFF | Drive starts in accordance to ID sequence |
| OFF | ON | Drive starts with a delay of 11-13 sec. |
| ON | OFF | Drive starts after the Start command |
| ON | ON | Drive starts when powered * |

Note: On LSX 5025 E systems the drives can be jumpered so that the motor starts with the Start command instead of at power on. This is because the drives on these systems are enabled by a SCSI command with a BIOS-determined delay, to limit HDU absorptions at power-on.

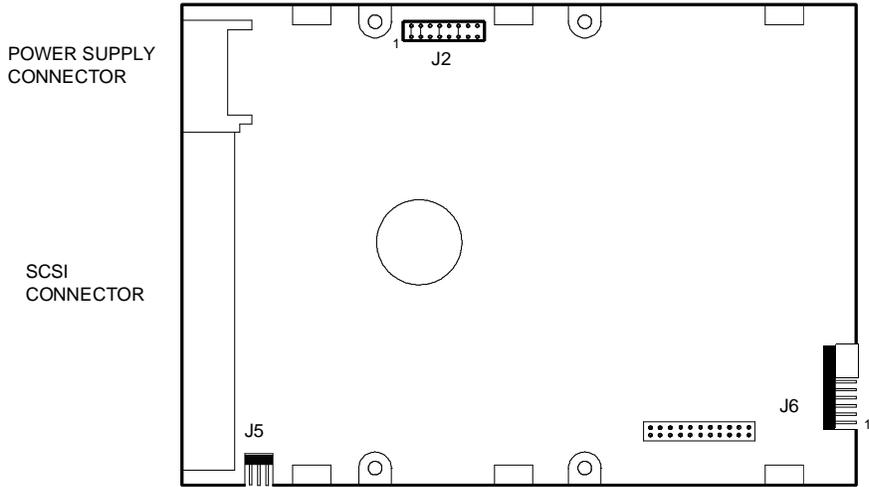
Note: The remaining jumpers must be set as follows:

- JP3 = OFF
- JP4 = ON (position 1-2)
- JP8 = ON (position 1-2)
- JP9 = ON (position 1-2)

TERMINATION RESISTANCES RN5, RN10 AND RN14

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 (for example LSX 50xx) it is always made on the SCSI cable or on the disk support.

| | | |
|---|---|----------------------|
| <p>1.05 GB HDU 2.1 GB HDU 4.2 GB HDU</p> | <p>SEAGATE ST31230N (Hawk 2LP) SEAGATE ST32430N (Hawk 2LP) SEAGATE ST15230N (Hawk 4)</p> | <p>SCSI-2</p> |
|---|---|----------------------|



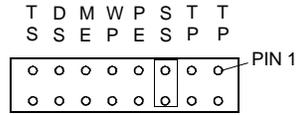
JUMPERS J6

| | Reserved | A 2 | A 1 | A 0 | E S | E D | E S | R L R P I N 1 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|---------------------------------|
| SCSI ID = 0 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SCSI ID = 1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SCSI ID = 2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SCSI ID = 3 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SCSI ID = 4 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SCSI ID = 5 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SCSI ID = 6 (Default) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SCSI ID = 7 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Reserved (jumper not inserted) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Pins used for remote LED connection (jumper not inserted) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Reserved (jumper not inserted) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

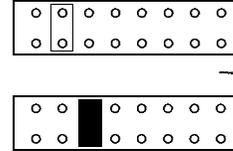
Note: The four reserved jumpers to the left of J6 are always set to OFF (not inserted) and are protected by a plastic cover which is fitted at the factory.

JUMPERS J2

Reserved
(jumper not inserted)

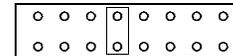


- DS ME**
- OFF OFF Motor starts at power on
 - OFF ON Motor starts upon reception of a start command *
 - ON OFF Motor or drive 0 starts at power on, of drive 1 after 12 sec., drive 2 after 24 sec. etc.
 - ON ON The motor starts upon reception of a start command

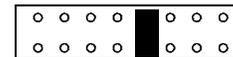


Note: On SNX 1xx/E Systema systems the drives must be jumpered so that the motors start upon reception of the Start command instead of at power on. In order to limit power absorption at power on by the HDUs on these systems, the drives will be enabled by a SCSI command with a BIOS set delay.

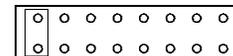
- ON Drive write protected
- OFF Drive not write protected *



- ON Parity checking enabled *
- OFF Parity checking disabled

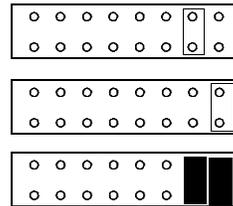


- ON Terminators enabled
- OFF Terminators disabled

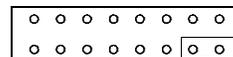


Note: The terminators cannot be removed from this drive and are enabled by jumper TE. Whether the terminators are enabled or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) while the terminator must be removed from all the peripherals inbetween. On some systems (for example SNX 1xx) termination is made directly on the drive while on other systems it is made at the end of the SCSI cable.

- TP TP**
- OFF OFF Terminators not powered
 - ON OFF Terminators powered by the drive
 - OFF ON Drive provides power supply to pin 26 of the SCSI bus (Terminator Power signal); the internal terminators are not powered
 - ON ON Terminators powered by the drive which also provides the power supply to pin 26 of the SCSI bus (Terminator Power signal) *



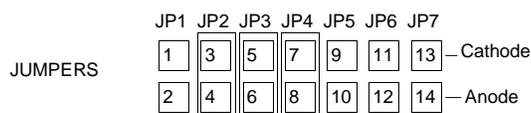
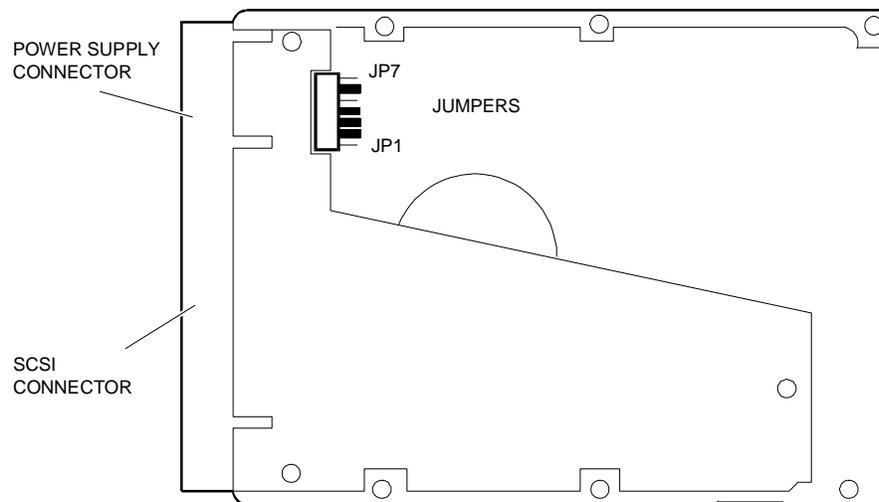
With the jumper inserted horizontally the terminators will receive power supply from pin 26 of the SCSI bus (Terminator Power signal). Jumper not inserted.



Note: Jumper block J5 is not used and therefore all the jumpers must be in the OFF position (not inserted).

| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | REGISTRATION |
|----------|----------|-----------|-------|-------|--------------|
| ST31230N | 5411 RPM | 3992 | 3 | 5 | RLL 1.7 |
| ST32430N | 5411 RPM | 3992 | 5 | 9 | RLL 1.7 |
| ST15230N | 5411 RPM | 3992 | 10 | 19 | RLL 1.7 |

| | | |
|--------------------|-----------------------|---------------|
| 1.05 GB HDU | IBM DPES-31080 | SCSI-2 |
|--------------------|-----------------------|---------------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|------------|----------|-----------|-------|-------|-----------|
| DPES-31080 | 5400 RPM | | 2 | 4 | PRML |

| JUMPERS | | | SCSI ID SELECTION |
|----------------|----------------|----------------|-------------------|
| JP1 (PINs 1-2) | JP2 (PINs 3-4) | JP3 (PINs 5-6) | |
| 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 JP4 (PINs 7-8) | DRIVE MOTOR START-UP |
|-----------------------|--|
| ON | The motor starts upon reception of a Start command * |
| OFF | The motor starts at power on |

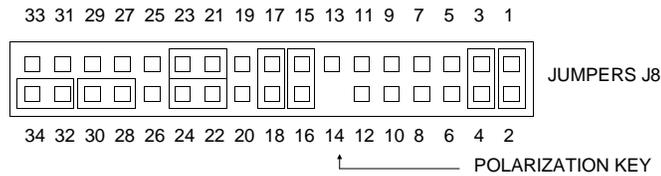
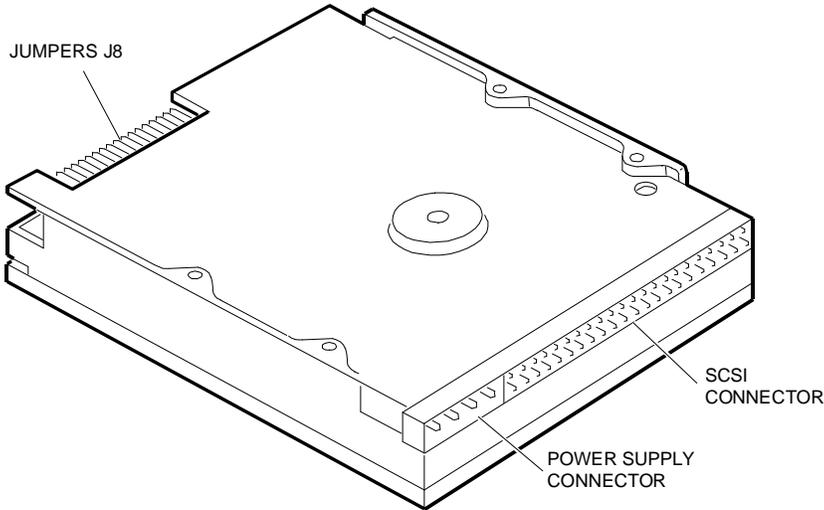
| JUMPER JP5 (PINs 9-10) | UNIT ATTENTION FEATURE |
|------------------------|---|
| ON | Unit Attention disabled at power on or at SCSI bus reset |
| OFF | Unit Attention enabled at power on or at SCSI bus reset * |

| JUMPER JP6 (PINs 11-12) | TERMINATOR ENABLE |
|-------------------------|----------------------|
| OFF | Terminators disabled |
| ON | Terminators enabled |

Note: *The terminators cannot be removed from this drive and are enabled by jumper JP6. 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.*

| JUMPER JP7 (PINs 13-14) | REMOTE LED CONNECTION |
|-------------------------|---|
| OFF * | Jumper JP7 is used for remote LED connection and is not used (jumper not inserted). |
| ON | |

| | | |
|--------------------|-------------------------|---------------|
| 1.05 GB HDU | SEAGATE ST51080N | SCSI-2 |
|--------------------|-------------------------|---------------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|----------|----------|-----------|-------|-------|-----------|
| ST51080N | 5376 RPM | 4826 | 2 | 4 | RLL 1.7 |

| JUMPERS J8 | | | SCSI ID SELECTION |
|------------|----------|----------|-------------------|
| PINs 5-6 | PINs 3-4 | PINs 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 |
| OFF | ON | ON | 6 |
| ON | ON | ON | 7 |

| JUMPERS J8 (PINs 9-10) | REMOTE LED CONNECTION |
|------------------------|---|
| OFF * ON | Pins 9 and 10 are used for remote LED connection and are not used (jumper not inserted) |

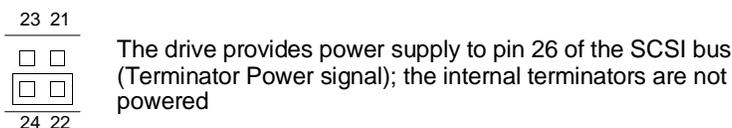
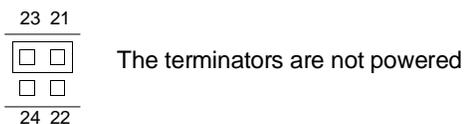
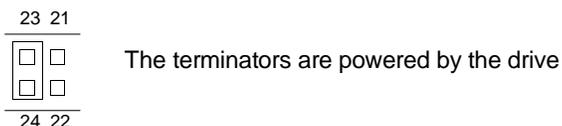
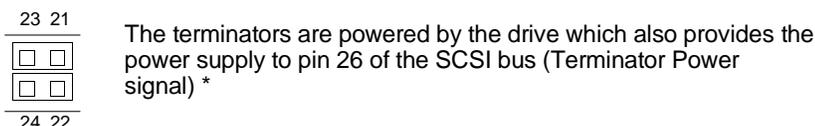
| JUMPERS J8 PINs 15-16 | DRIVE MOTOR START-UP |
|-----------------------|--|
| ON * OFF | The motor starts upon reception of a Start command The motor starts at power on |

| JUMPERS J8 PINS 17-18 | PARITY CHECKING ENABLE |
|-----------------------|--|
| OFF | Disables parity checking on the SCSI bus |
| ON * | Enables parity checking on the SCSI bus |

| JUMPERS J8 PINS 19-20 | TERMINATOR ENABLE |
|-----------------------|---------------------------|
| ON | SCSI terminators disabled |
| OFF | SCSI terminators enabled |

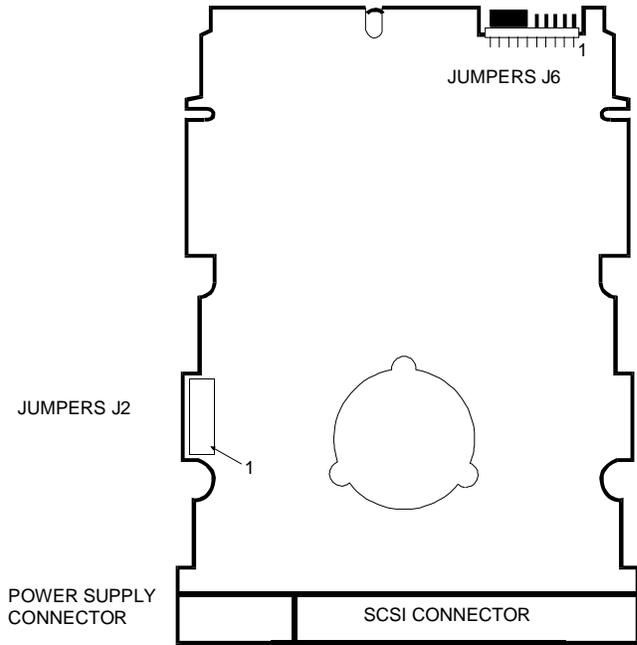
Note: *The terminators cannot be removed from this drive and are enabled by pins 19 and 20 of J8. Whether the terminators are enabled or not depends on the configuration of the system SCSI channel. Usually the SCSI channel must only be terminated at its ends (on the first and last device on the bus) 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.*

JUMPERS J8 PINS 21, 22, 23 and 24 (Terminator Power Supply)



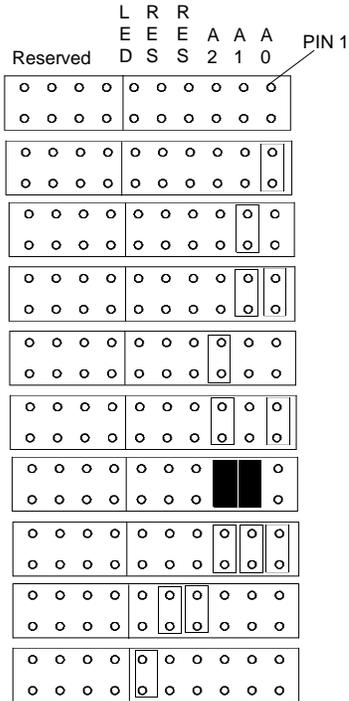
Note: *All other pins of J8 are reserved and must not be used. The jumpers on pins 28 and 30 and on pins 32 and 34 are spares; these pins do not require that jumpers be inserted.*

| | | |
|---|--|---------------|
| 1.05 GB HDU 2.1 GB HDU | SEAGATE ST31051N (Hawk 2XL) SEAGATE ST32151N (Hawk 2XL) | SCSI-2 |
|---|--|---------------|



JUMPERS J6

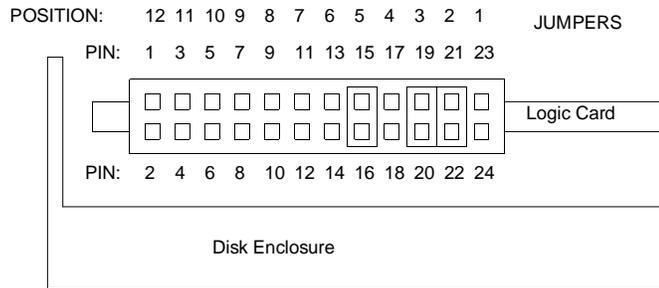
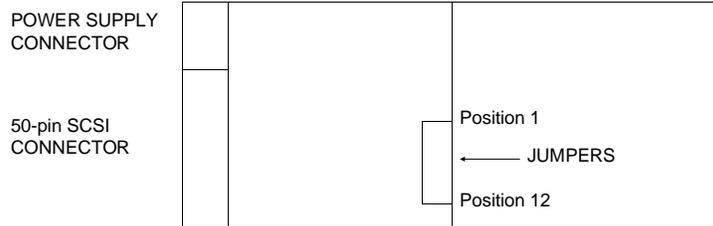
- SCSI ID = 0
- SCSI ID = 1
- SCSI ID = 2
- SCSI ID = 3
- SCSI ID = 4
- SCSI ID = 5
- SCSI ID = 6 (Default)
- SCSI ID = 7
- Reserved (jumpers not inserted)
- Pins used for remote LED connection (jumper not inserted)



Note: The four reserved jumpers to the left of J6 are always set to OFF (not inserted) and are protected by a plastic cover which is fitted at the factory.

HDUs WITH SINGLE-ENDED ULTRA NARROW SCSI INTERFACE

| | | |
|---|---|---------------|
| 2.1 GB HDU 2.1 GB HDU 4.2 GB HDU | IBM DORS-32160 (Orion) IBM DCAS-32160 (Capricorn) IBM DCAS-34330 (Capricorn) | SCSI-2 |
|---|---|---------------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|------------|----------|-----------|-------|-------|-----------|
| DORS-32160 | 5400 RPM | | 3 | 5 | PRML |
| DCAS-32160 | 5400 RPM | | 2 | 3 | PRML |
| DCAS-34430 | 5400 RPM | | 3 | 6 | PRML |

| JUMPERS | | | SCSI ID SELECTION |
|------------|------------|------------|-------------------|
| POSITION 2 | POSITION 3 | POSITION 4 | |
| 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 |

| JUMPERS - POSITION 6 | | TERMINATOR ENABLE |
|----------------------|--|---------------------------|
| OFF | | SCSI terminators disabled |
| ON | | SCSI terminators enabled |

Note: The terminators cannot be removed from this drive and are enabled by the jumper in position 6 (pins 13-14). 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.

| JUMPER POSITION 7 | UNIT ATTENTION FEATURE |
|-------------------|--|
| OFF * | Disables UAI (Unit Attention Inhibit) control in Mode Page 0 |
| ON | Enables UAI (Unit Attention Inhibit) control in Mode Page 0 |

| JUMPERS | | | DRIVE MOTOR START-UP |
|---------|--------|---------|--|
| POS. 5 | POS. 9 | POS. 10 | |
| ON | Any | Any | The motor starts upon reception of a Start command * |
| OFF | OFF | OFF | The motor starts at power on |
| OFF | ON | OFF | The motor starts at power on, with a delay of 6 seconds multiplied by the SCSI ID |
| OFF | ON | ON | The motor starts at power on, with a delay of 12 seconds multiplied by the SCSI ID |

| JUMPER - POSITION 11 | PARITY CHECKING ENABLE |
|----------------------|--|
| ON | Parity checking on the SCSI bus disabled |
| OFF * | Parity checking on the SCSI bus enabled |

9

| JUMPER - POSITION 12 | REMOTE LED CONNECTION |
|----------------------|---|
| OFF * | Pins 1 and 2 (pos. 12) are for remote LED connection and are not used (jumper not inserted) |
| ON | |

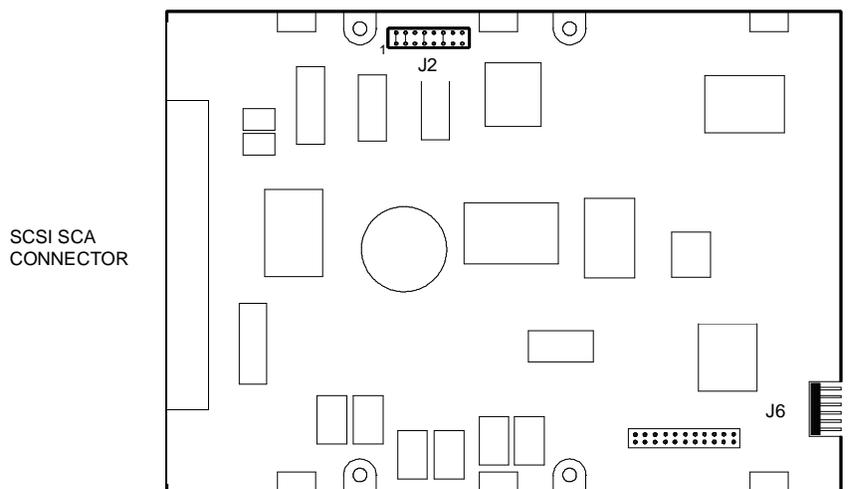
| JUMPER POSITION 8 | TI-SDTR ENABLE (for DCAS-32160/34330 only) |
|-------------------|--|
| ON | Target Initiated Synchronous Data Transfer Request Negotiation enable |
| OFF * | Target Initiated Synchronous Data Transfer Request Negotiation disable |

Note: Pins 23 and 24 (position 1) and pins 9 and 10 (position 8) of the DORS 32160 are reserved and must not be used. They must remain set in the OFF position.

Note: Pins 23 and 24 (position 1) of the DCAS-32160 and DCAS-34330 are reserved and must not be used. They must remain set in the OFF position.

HDUs WITH SINGLE-ENDED SCSI NARROW INTERFACE AND SCA CONNECTOR

| | | |
|---|--|--------|
| 525 MB HDU 1.05 GB HDU 2.1 GB HDU | SEAGATE ST3620NC SEAGATE ST31200NC (Hawk 1LP) SEAGATE ST12400NC (Hawk 2) | SCSI-2 |
|---|--|--------|



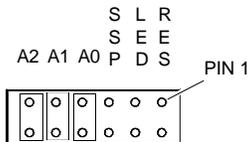
| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORD. |
|-----------|----------|-----------|-------|-------|---------|
| ST3620NC | 5411 RPM | 2700 | 3 | 5 | RLL 1.7 |
| ST31200NC | 5411 RPM | 2700 | 5 | 9 | RLL 1.7 |
| ST12400NC | 5411 RPM | 2611 | 10 | 19 | RLL 1.7 |

Note 1: With respect to the ST3620N, ST31200N and ST12400N drives, these HDUs have a single 80-pin (SCSI signals + power supply) SCA interface instead of the normal 50-pin SCSI and 4-pin power supply connectors. Also, these drives do not have jumper block J5. The 80-pin SCA connector has the automatic SCSI ID selection signals, drive motor start-up and delay signals, drive motor sync signals and those for connection to a remote LED.

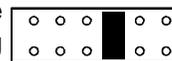
Note 2: These HDUs are always fixed on an appropriate mechanical support so that they can be inserted in resilience systems. This support prevents access to the jumpers on the drive; these jumpers are factory set and must not be changed. On the next page you will find the configuration of the jumpers on the drives.

JUMPERS J6

SCSI ID detection jumpers A2, A1 and A0 must not be used (all jumpers in the OFF, not installed, position) since this function can also be selected on the SCA connector.

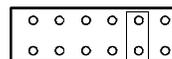


The function provided by the SSP jumper is also available on the SCA connector, but it is not handled automatically and therefore can only be activated by means of a jumper with the following meaning:

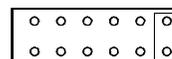


ON Drive motor sync enabled *
OFF Drive motor sync disabled

The LED jumper is used for connection to a remote LED and must not be used (jumper in the OFF, not installed, position) since the same function can also be selected on the SCA connector.

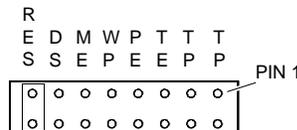


Reserved
(jumper not installed)

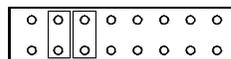


JUMPERS J2

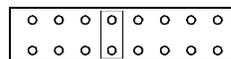
Reserved
(jumper not installed)



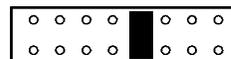
Jumpers DS and ME that determine drive motor start-up and delay must not be used (jumpers in the OFF, not installed, position since this function can also be selected on the SCA connector from where it is possible to set the drive motor to start-up with the Start command.



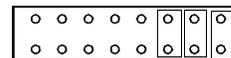
ON The drive is write protected
OFF The drive is not write protected*



ON Parity checking enabled *
OFF Parity checking disabled

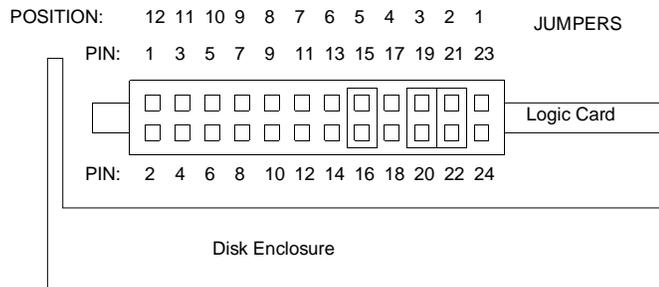
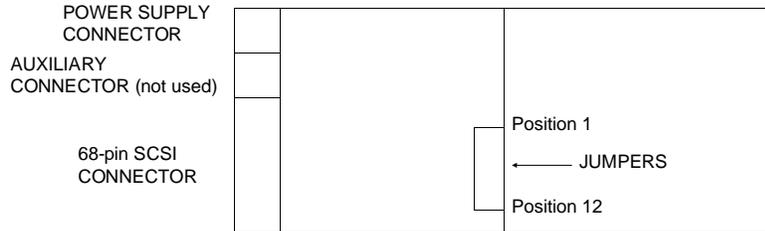


Jumper TE and the two jumpers TP refer to the internal terminators. Since these drives do not have terminators, the jumpers have no meaning and must always be kept in the OFF position.



HDUs WITH SINGLE-ENDED ULTRA WIDE SCSI INTERFACE

| | | |
|--|--|---------------|
| 2.1 GB HDU 4.2 GB HDU | IBM DCAS-32160 (Capricorn) IBM DCAS-34330 (Capricorn) | SCSI-2 |
|--|--|---------------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|------------|----------|-----------|-------|-------|-----------|
| DCAS-32160 | 5400 RPM | | 2 | 3 | PRML |
| DCAS-34430 | 5400 RPM | | 3 | 6 | PRML |

| JUMPERS | | | | SCSI ID SELECTION |
|------------|------------|------------|------------|-------------------|
| POSITION 1 | POSITION 2 | POSITION 3 | POSITION 4 | |
| OFF | OFF | OFF | OFF | 0 |
| OFF | OFF | OFF | ON | 1 |
| OFF | OFF | ON | OFF | 2 |
| OFF | OFF | ON | ON | 3 |
| OFF | ON | OFF | OFF | 4 |
| OFF | ON | OFF | ON | 5 |
| OFF | ON | ON | OFF | 6 |
| OFF | ON | ON | ON | 7 |
| ON | OFF | OFF | OFF | 8 |
| ON | OFF | OFF | ON | 9 |
| ON | OFF | ON | OFF | 10 |
| ON | OFF | ON | ON | 11 |
| ON | ON | OFF | OFF | 12 |
| ON | ON | OFF | ON | 13 |
| ON | ON | ON | OFF | 14 |
| ON | ON | ON | ON | 15 |

| JUMPERS - POSITION 6 | | TERMINATOR ENABLE |
|----------------------|--|---------------------------|
| OFF | | SCSI terminators disabled |
| ON | | SCSI terminators enabled |

Note: The terminators cannot be removed from this drive and are enabled by the jumper in position 6 (pins 13-14). 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.

| JUMPER - POSITION 7 | | UNIT ATTENTION feature |
|---------------------|--|--|
| OFF * | | Disables UAI (Unit Attention Inhibit) control in Mode Page 0 |
| ON | | Enables UAI (Unit Attention Inhibit) control in Mode Page 0 |

| JUMPER - POSITION 8 | | TI-SDTR/WDTR ENABLE |
|---------------------|--|---|
| ON | | Target Initiated Wide Data Transfer Request Negotiation enable |
| OFF * | | Target Initiated Wide Data Transfer Request Negotiation disable |

| JUMPERS | | | DRIVE MOTOR START-UP |
|---------|--------|---------|--|
| POS. 5 | POS. 9 | POS. 10 | |
| ON | Any | Any | The motor starts upon reception of a Start command * |
| OFF | OFF | OFF | The motor starts at power on |
| OFF | ON | OFF | The motor starts at power on, with a delay of 6 seconds multiplied by the SCSI ID |
| OFF | ON | ON | The motor starts at power on, with a delay of 12 seconds multiplied by the SCSI ID |

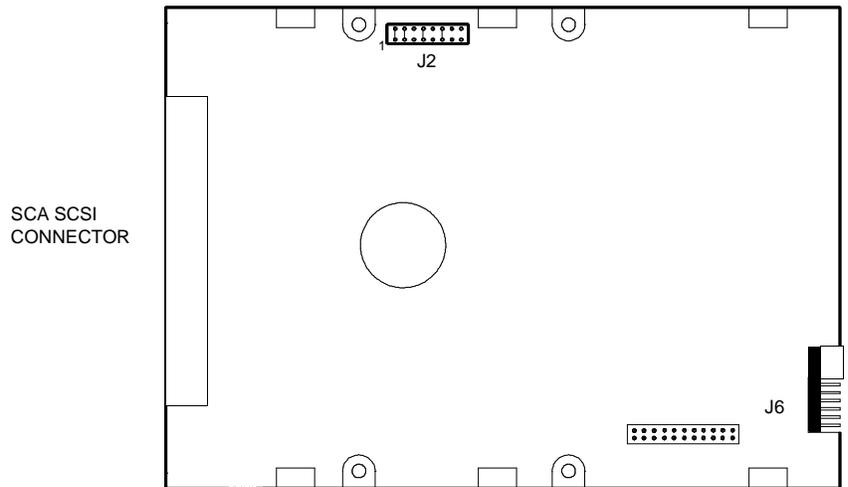
9

| JUMPER - POSITION 11 | | PARITY CHECKING ENABLE |
|----------------------|--|--|
| ON | | Parity checking on the SCSI bus disabled |
| OFF * | | Parity checking on the SCSI bus enabled |

| JUMPER - POSITION 12 | | REMOTE LED CONNECTION |
|----------------------|--|---|
| OFF * | | Pins 1 and 2 (pos. 12) are for remote LED connection and are not used (jumper not inserted) |
| ON | | |

HDUs WITH SINGLE-ENDED SCSI WIDE INTERFACE AND SCA CONNECTOR

| | | |
|---|--|--------|
| 1.05 GB HDU 2.1 GB HDU 4.2 GB HDU | SEAGATE ST31230WC (Hawk 2LP) SEAGATE ST32430WC (Hawk 2LP) SEAGATE ST15230WC (Hawk 4) | SCSI-2 |
|---|--|--------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|-----------|----------|-----------|-------|-------|-----------|
| ST31230WC | 5411 RPM | 3992 | 3 | 5 | RLL 1.7 |
| ST32430WC | 5411 RPM | 3992 | 5 | 9 | RLL 1.7 |
| ST15230WC | 5411 RPM | 3992 | 10 | 19 | RLL 1.7 |

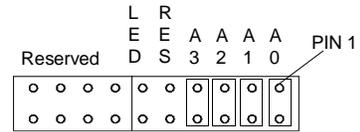
Note 1: These HDUs are equipped with a single 80-pin SCA interface connector (SCSI signals + power supply) instead of having a 68-pin SCSI wide connector and a 4-pin power supply connector. These SCA connectors are 16-bit data interface wide bus connectors (instead of 8-bit) and do not have SCSI terminators. The 80-pin SCA connector includes the signals for the automatic selection of the SCSI ID, for the drive motor start-up and delay, for drive motor synchronization and for remote LED connection.

Note 2: These HDUs are always fitted on a specific mechanical support by means of which they can be installed in resilience structures. This support prevents access to the jumpers on the drive; the jumpers are factory-set and their setting must not be changed. The jumper settings on the drive will be provided further on.

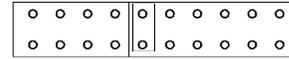
Note 3: In order for these HDUs to be installed on SNX 1xx/S systems, a specific SCSI adapter needs to be plugged into the SCA connector. This adapter renders the standard 68-pin SCSI wide connector, the 4-pin power supply connector, the SCSI ID selection jumpers and SCSI terminators all accessible to the user.

JUMPERS J6

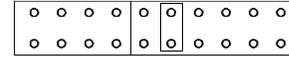
SCSI ID jumpers A3, A2, A1, A0 must not be used (all the jumpers set to the OFF, not inserted, position), since the same function can also be selected on the SCA connector.



The LED jumper is for remote LED connection but must not be used (jumper in the OFF, not inserted, position), since this same function can also be selected on the SCA connector.



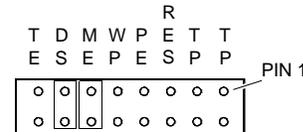
Reserved
(jumper not inserted)



Note: The four reserved jumpers to the left of J6 are always set to the OFF (not inserted) position and are protected by a plastic cover which is inserted at the factory.

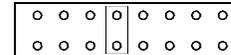
JUMPERS J2

Jumpers DS and ME that determine drive motor start-up and delay, must not be used (jumpers in the OFF, not inserted, position) since this same function can also be selected on the SCA connector where the drive motor start function is activated upon reception of the Start command.

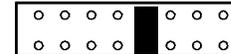


Note: If the drive is fitted on the SNX 1xx/S, it will be jumpered so that the motor starts upon reception of the Start command:
DS = OFF, ME = ON.

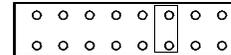
ON Drive write protected
OFF Drive not write protected *



ON Parity checking enabled *
OFF Parity checking disabled

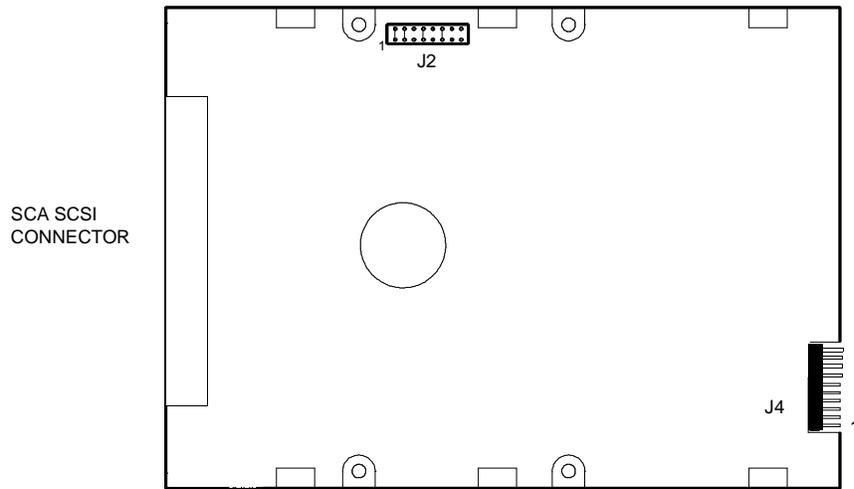


Reserved
(jumper not inserted)



Jumper TE and the two jumpers TP are referred to the internal terminators. There are no terminators on these drives and therefore the jumpers have no meaning and must be kept in the OFF position.



2.1 GB HDU**SEAGATE ST32550WC (Barracuda 2LP)****SCSI-2**

| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|-----------|----------|-----------|-------|-------|-----------|
| ST32550WC | 7200 RPM | 3510 | 5 | 11 | RLL 1.7 |

Note 1: These HDUs are equipped with a single 80-pin SCA interface connector (SCSI signals + power supply) instead of having a 68-pin SCSI wide connector and a 4-pin power supply connector. These SCA connectors are 16-bit data interface wide bus connectors (instead of 8-bit) and do not have SCSI terminators.

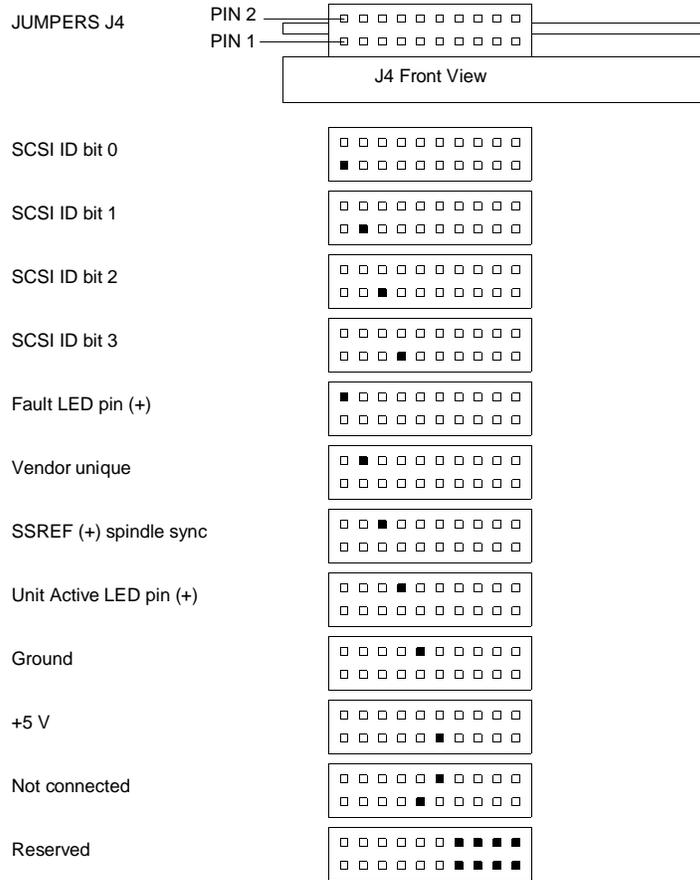
The 80-pin SCA connector includes the signals for the automatic selection of the SCSI ID, for the drive motor start-up and delay, for drive motor synchronization and for remote LED connection.

Note 2: These HDUs are always fitted on a specific mechanical support by means of which they can be installed in resilience structures. This support prevents access to the jumpers on the drive; the jumpers are factory-set and their setting must not be changed. The jumper settings on the drive will be provided further on.

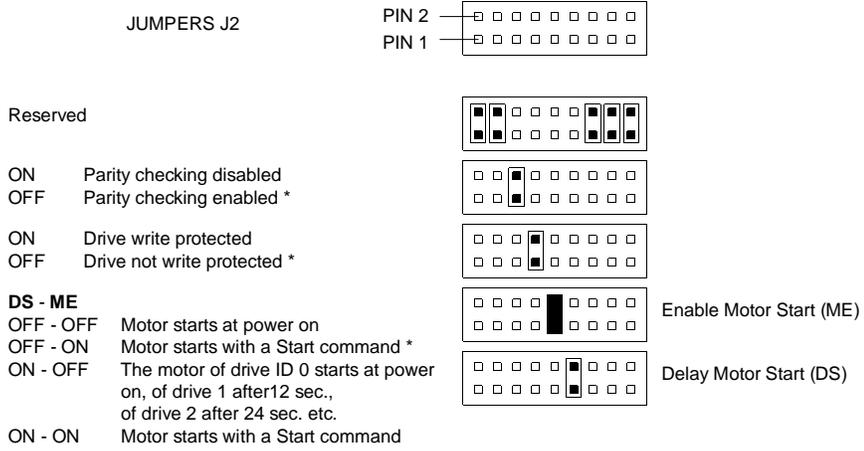
Note 3: In order for these HDUs to be installed on SNX 1xx/S systems, a specific SCSI adapter needs to be plugged into the SCA connector. This adapter renders the standard 68-pin SCSI wide connector, the 4-pin power supply connector, the SCSI ID selection jumpers and SCSI terminators all accessible to the user.

JUMPERS J4

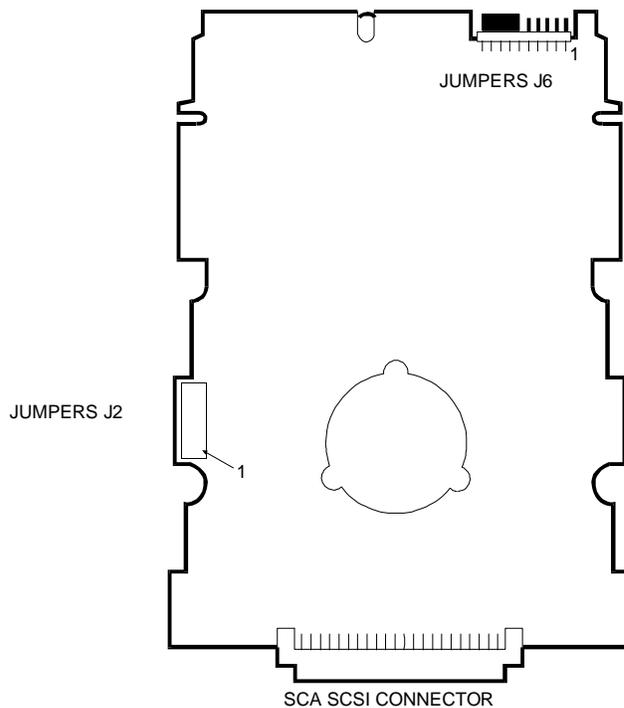
There is no jumper inserted on J4. The pin-out is provided below.



JUMPERS J2



| | | |
|---------------------------|--|--------|
| 1.05 GB HDU 2.1 GB HDU | SEAGATE ST31051WC (Hawk 2XL) SEAGATE ST32151WC (Hawk 2XL) | SCSI-2 |
|---------------------------|--|--------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|-----------|----------|-----------|-------|-------|-----------|
| ST31051WC | 5411 RPM | 4176 | 2 | 4 | RLL 1.7 |
| ST32151WC | 5411 RPM | 4176 | 4 | 8 | RLL 1.7 |

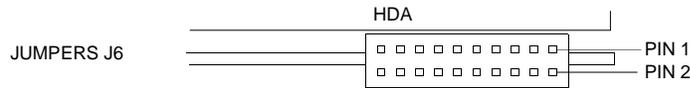
Note 1: These HDUs are equipped with a single 80-pin SCA interface connector (SCSI signals + power supply) instead of having a 68-pin SCSI wide connector and a 4-pin power supply connector. These SCA connectors are 16-bit data interface wide bus connectors (instead of 8-bit) and do not have SCSI terminators.

The 80-pin SCA connector includes the signals for the automatic selection of the SCSI ID, for the drive motor start-up and delay, for drive motor synchronization and for remote LED connection.

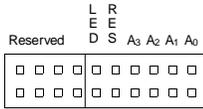
Note 2: These HDUs are always fitted on a specific mechanical support by means of which they can be installed in resilience structures. This support prevents access to the jumpers on the drive; the jumpers are factory-set and their setting must not be changed. The jumper settings on the drive will be provided further on.

JUMPERS J6

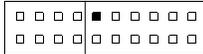
There is no jumper inserted on J6. The pin-out is provided below.



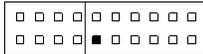
SCSI ID jumpers A3, A2, A1, A0 must not be used (all the jumpers set to the OFF, not inserted, position), since the same function can also be selected on the SCA connector.



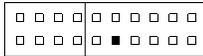
+5 Drive Activity LED



Drive Activity LED



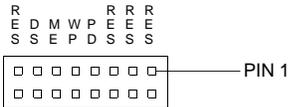
Ground



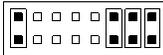
Note: There must be no jumper inserted on pins 13-20 (reserved).

JUMPERS J2

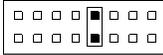
JUMPERS J2



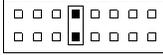
Reserved



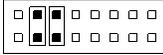
ON Parity checking disabled
OFF Parity checking enabled*



ON Drive write protected
OFF Drive not write protected *

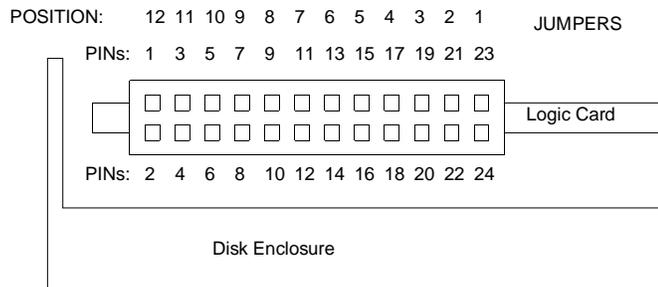
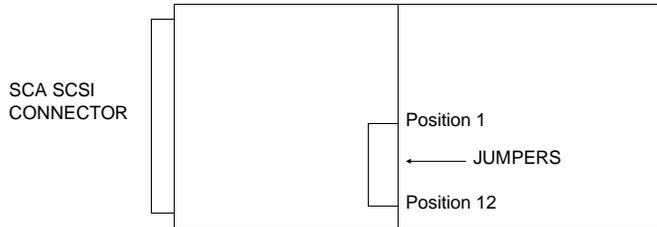


Jumpers DS and ME that determine drive motor start-up and delay, must not be used (jumpers in the OFF, not inserted, position) since this same function can also be selected on the SCA connector where the drive motor start function is activated upon reception of the Start command.



HDU WITH SINGLE-ENDED ULTRA WIDE SCSI INTERFACE WITH SCA CONNECTOR

| | | |
|--|--|---------------|
| 2.1 GB HDU 4.2 GB HDU | IBM DCAS-32160 (Capricorn) IBM DCAS-34430 (Capricorn) | SCSI-2 |
|--|--|---------------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|------------|----------|-----------|-------|-------|-----------|
| DCAS-32160 | 5400 RPM | | 2 | 3 | PRML |
| DCAS-34430 | 5400 RPM | | 3 | 6 | PRML |

Note 1: These HDUs are equipped with a single 80-pin SCA interface connector (SCSI signals + power supply) instead of having a 68-pin SCSI wide connector and a 4-pin power supply connector. These SCA connectors are 16-bit data interface wide bus connectors (instead of 8-bit) and do not have SCSI terminators.

The 80-pin SCA connector includes the signals for the automatic selection of the SCSI ID, for the drive motor start-up and delay, for drive motor synchronization and for remote LED connection.

Note 2: These HDUs are always fitted on a specific mechanical support by means of which they can be installed in resilience structures. This support prevents access to the jumpers on the drive; the jumpers are factory-set and their setting must not be changed. The jumper settings on the drive will be provided further on.

Note 3: In order for these HDUs to be installed on SNX 1xx/S systems, a specific SCSI adapter needs to be plugged into the SCA connector. This adapter renders the standard 68-pin SCSI wide connector, the 4-pin power supply connector, the SCSI ID selection jumpers and SCSI terminators all accessible to the user.

JUMPERS IN POSITIONS 1, 2, 3 and 4

The SCSI ID jumpers in positions 1, 2, 3 and 4 must not be used (all jumpers in the OFF, not inserted, position) since the same function can also be selected on the SCA connector.

| JUMPER - POSITION 7 | UNIT ATTENTION FEATURE |
|----------------------------|--|
| OFF * | Disables UAI (Unit Attention Inhibit) control in Mode Page 0 |
| ON | Enables UAI (Unit Attention Inhibit) control in Mode Page 0 |

| JUMPER - POSITION 8 | TI-SDTR/WDTR ENABLE |
|----------------------------|--|
| ON | Target Initiated Wide Data Transfer Request Negotiation enable |
| OFF * | Target Initiated Wide Data Transfer Request Negotiation disabled |

JUMPER IN POSITIONS 5, 9 and 10

The jumpers in positions 5, 9 and 10 that determine the drive motor start-up and delay must not be used (jumpers in the OFF, not inserted, position) since the same function can also be selected on the SCA connector where the feature by which the drive motor starts upon reception of a Start command is set.

Note: If the drive is fitted on the SNX 1xx/S, it will be set so that the drive motor starts upon reception of a Start command: jumper in pos. 5 = ON, pos. 9 and 10 don't care.

| JUMPER - POSITION 11 | PARITY CHECKING ENABLE |
|-----------------------------|--|
| ON | Parity checking on the SCSI bus disabled |
| OFF * | Parity checking on the SCSI bus enabled |

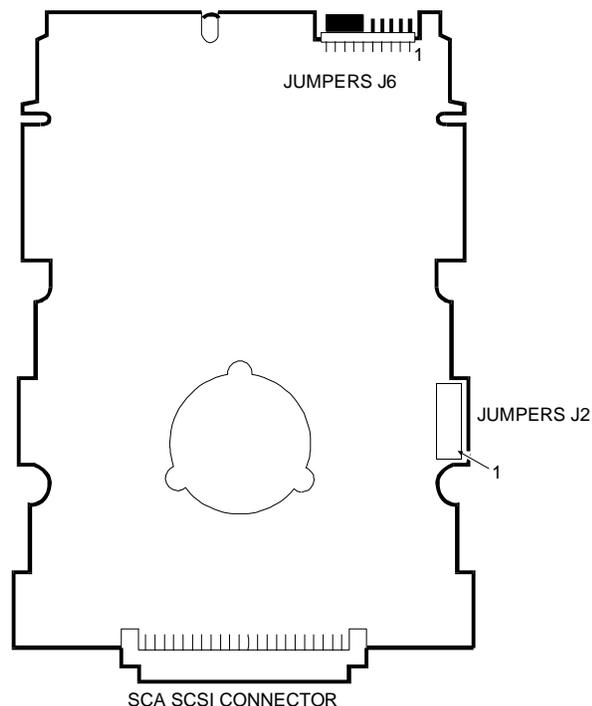
9

JUMPER IN POSITION 12

Pins 1 and 2 (position 12) are for remote LED connection and must not be used (jumper in the OFF, not inserted, position) since this same function can also be selected on the SCA connector.

Note: Pins 13 and 14 (position 6) refer to the internal terminators. There are no terminators on these drives and therefore the jumper setting is insignificant and must be kept in the OFF position.

| | | |
|--|---|--------|
| 2.1 GB HDU 4.2 GB HDU 9.1 GB HDU | SEAGATE ST32171WC (Barracuda 4LP) SEAGATE ST34371WC (Barracuda 4LP) SEAGATE ST19171WC (Barracuda 9) | SCSI-3 |
|--|---|--------|



| MODEL | ROTATION | CYLINDERS | DISKS | HEADS | RECORDING |
|-----------|----------|-----------|-------|-------|-----------|
| ST32171WC | 7200 RPM | 5167 | 5 | | RLL 1.7 |
| ST34371WC | 7200 RPM | 5167 | 10 | | RLL 1.7 |
| ST19171WC | 7200 RPM | 5273 | 10 | 20 | RLL 1.7 |

Note 1: These HDUs are equipped with a single 80-pin SCA interface connector (SCSI signals + power supply) instead of having a 68-pin SCSI wide connector and a 4-pin power supply connector. These SCA connectors are 16-bit data interface wide bus connectors (instead of 8-bit) and do not have SCSI terminators.

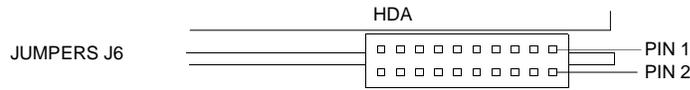
The 80-pin SCA connector includes the signals for the automatic selection of the SCSI ID, for the drive motor start-up and delay, for drive motor synchronization and for remote LED connection.

Note 2: These HDUs are always fitted on a specific mechanical support by means of which they can be installed in resilience structures. This support prevents access to the jumpers on the drive; the jumpers are factory-set and their setting must not be changed. The jumper settings on the drive will be provided further on.

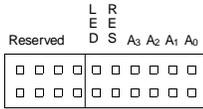
Note 3: The 9 GB ST19171WC HDU can be installed in Rack cabinet BUs only in areas with a temperature of $\leq 25^{\circ}\text{C}$.

JUMPERS J6

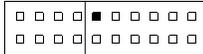
There is no jumper inserted on J6. The pin-out is provided below.



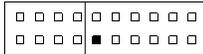
SCSI ID jumpers A3, A2, A1, A0 must not be used (all the jumpers set to the OFF, not inserted, position), since the same function can also be selected on the SCA connector.



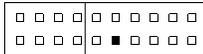
+5 Drive Activity LED



Drive Activity LED



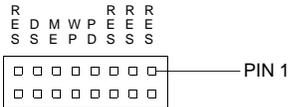
Ground



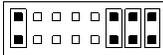
Note: There must be no jumper inserted on pins 13-20 (reserved).

JUMPERS J2

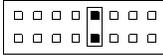
JUMPERS J2



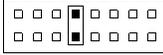
Reserved



ON Parity checking disabled
OFF Parity checking enabled *



ON Drive write protected
OFF Drive not write protected *



Jumpers DS and ME that determine drive motor start-up and delay, must not be used (jumpers in the OFF, not inserted, position) since this same function can also be selected on the SCA connector where the drive motor start function is activated upon reception of the Start command.

