GEN-011

CONVEX PERIPHERAL CONFIGURATORS

PERIPHERAL CONFIGURATORS

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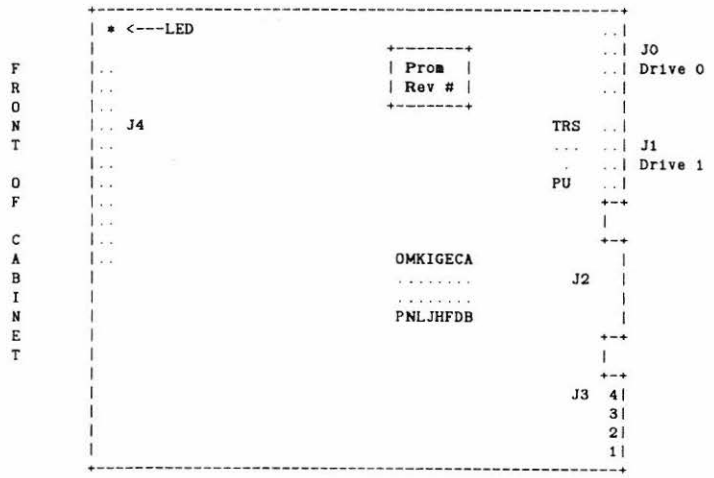
ADAPTEC DISC CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Adaptec Disc Controller (Convex P/N 201-000001-200).

1.2 Configuration



CABLES USED:

J0 - Cable from Controller to 20 or 26MB Winchester.
J1 - No cable.
J2 - Cable from Controller to 20 or 26MB Winchester.
J3 - Cable from the Controller to the Power Distribution Strip. Voltage should be as follows:
- J3-4 +5 volts (Red)
- J3-3 Ground (Black)
- J3-2 Ground (Black)
- J3-1 +12 volts (White)

J4 - Cable from the controller to P4 on the SPU backplane

1.3 Insure that push-on shorting jumpers (CONVEX P/N 312-000163-010) are shorting pins A-B and R-S.

1.4 Boards with Revision H or later Microcode have a Self-Test option for board verification. To enable the test, install a shorting jumper from pin P to O and power up the controller. The controller should go through the Self-Test and the LED should go out. If the test fails, the LED will flash with the following meanings:

Solid light= System Clock, 8085, or 2764 is bad.
1 flash = 8156 chip test failed.
2 flashes = 2764 checksum failed.
3 flashes = AIC-010 chip test failed.
4 flashes = not used.

5 flashes = AIC-300 chip test failed.
6 flashes - 2114 chip test (ram buffer) failed

FUJITSU M2351A (474MB EAGLE) DISC CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Fujitsu M2351A (474MB Eagle) Disc Drive (Convex P/N 204-000001-200).

1.2 Configuration

Remove the top cover from the drive by removing the four (4) screws, one in each corner of the cover. Viewing from the front of the drive, locate the card cage on the left side. Remove the second board from the left side of the card cage. This is the "LOGIC" board and can be further identified by the attached two interconnect cables. Set up the Sector Count and Interface Type by shorting the appropriate pins together as shown below. Also, see next page for an illustration of the jumper points on the LOGIC PCB.

- -

When the Drive is connected to a CONVEX system, jumper for 47 (decimal) Sectors per Track as shown below.

LOCATION	FUNCTION	PINS TO JUMPER			
AE7	Interface Type	3-4	6-7	9-10	
BC7	Sector Count	2-3	5-6	9-10	13-14
BD7	Sector Count	2-3	6-7	9-10	13-14
BE7	Sector Count	3-4	5-6	10-11	13-14
BF7	Sector Count	3-4	6-7	10-11	13-14 *

(* = Jumper BF7, 13-14 is a "Spare". As such, in or out are both acceptable)

- -

When the Drive is connected to a Sun system, jumper for 44 (decimal) Sectors per Track as shown below.

LOCATION	FUNCTION	PINS TO JUMPER			
AE7	Interface Type	2-3	6-7	9-10	
BC7	Sector Count	2-3	5-6	9-10	12-13
BD7	Sector Count	2-3	5-6	9-10	13-14
BE7	Sector Count	3-4	5-6	10-11	13-14
BF7	Sector Count	3-4	6-7	10-11	13-14 *

(* = Jumper BF7, 13-14 is a "Spare". As such, in or out are both acceptable)

FUJITSU M2351A (474MB EAGLE) DISC CONFIGURATOR (continued)

The Interface PCB is located at the rear of the drive on the left side (when viewed from the rear). Located on this PCB are the Drive Address switches and an Interface configuration jumper. Always jumper T1 from 01 to 02. Switch settings for Drive Address (Unit Number) options are shown below.

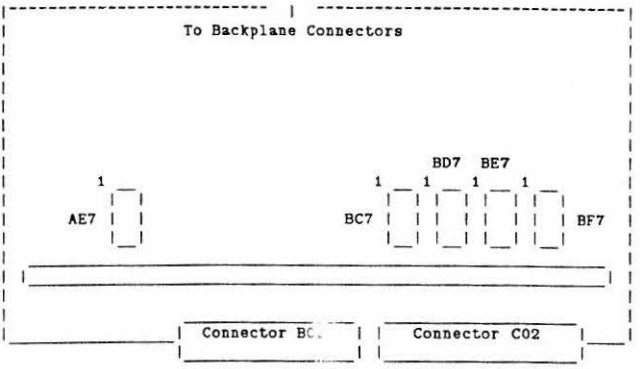
Drive Address	SW1-1	SW1-2	SW1-3	SW1-4
0	OFF	OFF	OFF	N/A
1	ON	OFF	OFF	N/A
2	OFF	ON	OFF	N/A
3	ON	ON	OFF	N/A

Reinstall the Logic and Interface cards and attach any cables that were removed.

At the rear of the disc enclosure is the head locking lever. This lever must be moved to the free position for operation of the device. To move the lever to the free position, loosen the retaining screw only enough to swing the head lock out of the way. Then, tighten the screw back down.

Insure the Local/Remote switch (located at the rear of the drive assembly) is in the LOCAL position. This allows the drive to be controlled by the front panel start switch. Insure the terminator is installed and grounded (terminator located on the Interface PCB).

LOGIC PCB JUMPER POINTS



FUJITSU M2234 (20MB) DISC CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Fujitsu M2234 (20MB) Disc Drive (Convex P/N 204-000002-200).

1.2 Configuration Switch SW1

Position	Description	Setting
1	Drive Select Always On	OFF
2	N/A	N/A
3	N/A	N/A
4	Drive Number	OFF
5	Drive Number	OFF
6	Drive Number	OFF
7	Drive Number	ON

CONTROL DATA 9766 (300MB) DISC CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Control Data 9766 (300MB) Disc Drive (Convex P/N 204-000005-200)

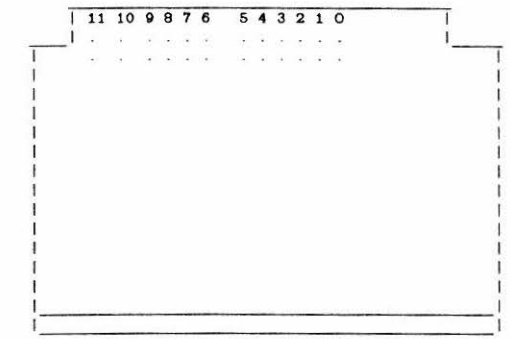
1.2 Procedure

The drive must be configured for the proper number of sectors and the maintenance disable switch must be off. These switches are located on two separate logic cards within the drive. Use the following procedure to gain access to the switches.

1) Power off the drive and open the back door (allen wrench req'd).
2) Release and swing out the logic chassis.
3) Remove the cover to the logic chassis.
4) Remove the "LTV" board (location A06). Sector switches are here.
5) Locate the "KFV" board (location A17) but don't remove.
6) Set the switches as shown below.
7) Reinstall everything.

1.3 Board Configuration

LTV Board (location A06)

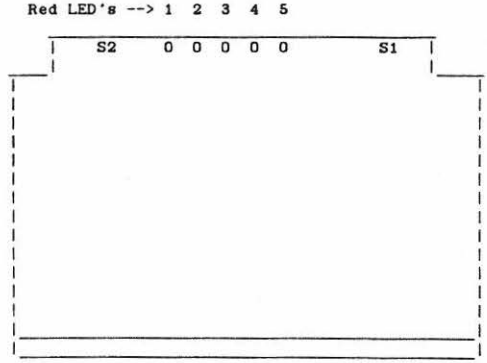


Sector Count = 32

Switch Number	11	10	9	8	7	6	5	4	3	2	1	0
Setting	0	0	0	C	C	0	C	0	0	0	C	C

0=Open=Off C=Closed=On

KLF Board (location A17)



Switch S2 Set to NORM
S1 Fault clear (Momentary switch)

LEDs
1 Read or Write while not on cyl.
2 Read and Write same time fault
3 Head select fault
4 Write fault
5 Voltage fault

CONTROL DATA 9715 (515MB FSD) DISC CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Control Data 9715 (515MB FSD) Disc Drive (Convex P/N 204-000006-200)

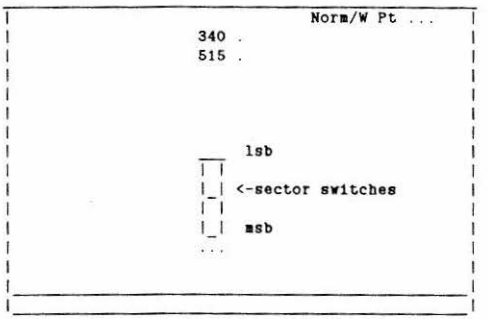
1.2 Procedure

Configuration switches are located on two separate logic cards within the drive. Use the following procedure to gain access to the switches.

1) Power off the drive and remove the top cover.
2) Switches and jumpers are located on the left side of the drive.
3) As one views the left side of the drive, the Control board is on the right, and the I/O board on the left (see figure below).
6) Set the switches and jumpers as shown below.
7) The drive number is configured by a front panel insert.

1.3 Board Configuration

Control Board (_VCX)



Sector Count = 50

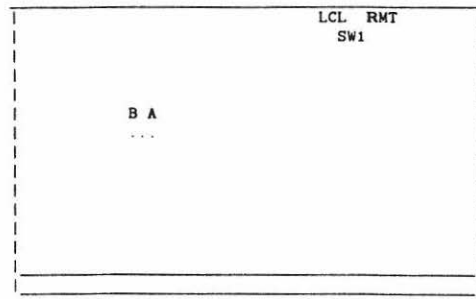
	msb										lsb	
Switch Number	11	10	9	8	7	6	5	4	3	2	1	0
Setting	0	0	0	C	0	0	0	0	C	0	C	0

0=Open=Off C=Closed=On

Jumper 340/515 Set to 515
Jumper NORM/W PROT Set to NORM

CONTROL DATA 9715 (515MB FSD) DISC CONFIGURATOR (continued)

I/O BOARD (_SYX)



Switch SW1 Set to LOC

Jumper BA Set to A position

FUJITSU M2235 (26MB) DISC CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Fujitsu M2235 (26MB) Disc Drive (Convex P/N 204-000007-200).

1.2 Configuration Switch SW1

Position	Description	Setting
1	Drive Select Always On	OFF
2	N/A	N/A
3	N/A	N/A
4	Drive Number	OFF
5	Drive Number	OFF
6	Drive Number	OFF
7	Drive Number	ON

NEC D2352 (520 MB) DISC CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the NEC D2352 (520 MB) Disc Drive (Convex P/N 204-000008-200).

1.2 Procedure

Configuration switches are accessible from the front of the Disc Drive. Use the following procedures to gain access to the switches.

1) Power off the drive. This is important (see NOTE, below).

2) Switches which must be configured are located on the G9WBZ (Logic and Servo) Board. They may be accessed by opening the front cover. The switches are on the left side and may be covered by a removable panel.

3) Other switches and jumpers exist within the drive and are factory set to the proper configuration. The factory set switches and jumpers are shown on the last pages of this section.

4) Set the switches as shown on the following pages.

- NOTE: Many of the switches are only read at initial power-on time. Therefore, if any switches are changed, be sure to invoke the new settings by powering the drive completely off and back on (main A.C. Power switch 'SW1' is at the rear of the unit). If this is not done, the previous switch settings may still be in use by the drive's firmware.

1.3 Termination

"A" Cable (60 Pin) termination is required at the last Disc Drive in a Daisy Chain or, if only one (1) Disc Drive is attached to a Controller, at that Drive. Termination is accomplished by *one of two* possible methods:

1) Resistor DIPs on-board the G9WBZ (Logic and Servo) Board. The DIPs will be located in sockets at Board Locations 1G, 1H, 1J, and 1K.

- OR -

2) An external 60 Pin Terminator plugged into Connector P4 which is located at the rear of the Disc Drive enclosure.

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NEC D2352 (520 MB) DISC CONGIGURATOR

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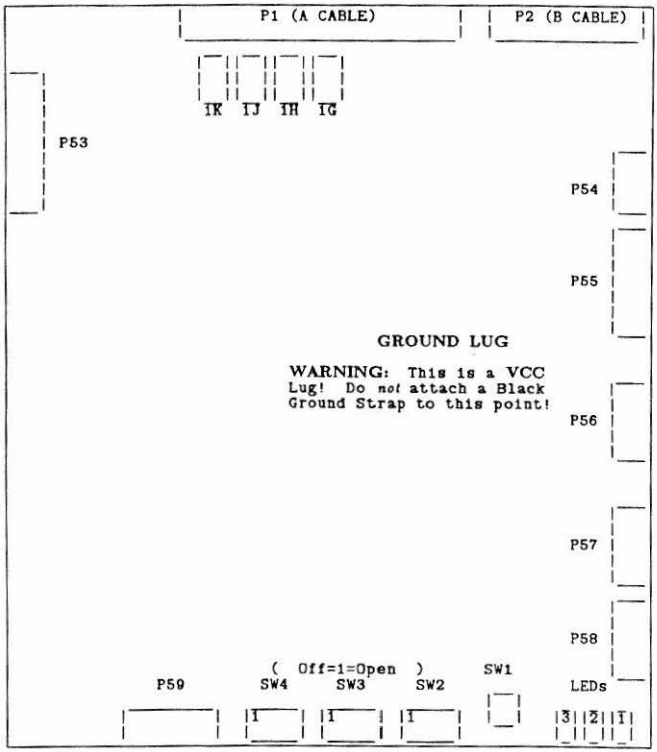
1.3 G9WBZ (Logic and Servo) Board Layout



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1.4 Switch Settings

Note: A closed (ON) switch = '0' and an open (OFF) switch = '1'. Looking at the DIP Switch Banks from the front access view, a switch is open ('1') when set to the left (away from the board).

SWITCH NUMBER	FUNCTION	NORMAL SETTING
SW1	Enable Write Protect when On (Down). Disable Write Protect when Off (Up)	Off (Up)
SW2-1	Enable Diagnostic Mode 1 when On (0). Disable Diagnostic Mode 1 when Off (1)	1 (Off)
SW2-2	Enable Offset Seek Commands when On (0) Disable Offset Seek Commands when Off (1)	0 (On)
SW2-3	Enable Remote Motor Start when Off (1) Enable Local Motor Start when On (0)	0 (On)
SW2-4	Enable 4-Bit Drive Address Mode when Off (1) Enable 2-Bit Drive Address Mode when On (0)	0 (On)
SW2-5 SW2-6 SW2-7 SW2-8	Drive Address Switches: UNIT 0: 0 (On), 0 (On), 0 (On), 0 (On) UNIT 1: 1 (Off), 0 (On), 0 (On), 0 (On) UNIT 2: 0 (On), 1 (Off), 0 (On), 0 (On) UNIT 3: 1 (Off), 1 (Off), 0 (On), 0 (On)	
SW3-1	Enable Diagnostic Mode 2 when On (0) Disable Diagnostic Mode 2 when Off (1)	1 (Off)
SW3-2	Enable Control Tag 4 when Off (1) Disable Control Tag 4 when On (0)	0 (On)
SW3-3	Enable Format Write Release Function (FWRF) when Off (1) Disable Format Write Release Function (FWRF) when On (0)	0 (On)
SW3-4	Enable Rotational Positioning Sensing (RPS) when Off (1) Disable Rotational Positioning Sensing (RPS) when On (0)	0 (On)
SW3-5	Enable Address Mark (AM) Read/Write when Off (1) Disable Address Mark (AM) Read/Write when On (0)	0 (On)
SW3-6 SW3-7 SW3-8	Motor Start Delay Control (Seconds). Possible settings for Switches 6, 7, and 8, respectively, are: 000 = No Delay 110 = 45 Seconds 011 = 90 Seconds 100 = 15 Seconds 001 = 60 Seconds 111 = 105 Seconds 010 = 30 Seconds 101 = 75 Seconds	0 (On) 0 (On) 0 (On)

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1.4 Switch Settings (continued)

SWITCH NUMBER	FUNCTION	NORMAL SETTING
	Switches SW4-1 thru SW4-7 will be set to define the number of Sectors per Track. Normal setting is for 60 physical Sectors per Track which yields 59 Logical Sectors plus one Sector reserved for slipping a defective Sector. Switch settings used are:	
SW4-1	Sector Select Bit 0 (Least Significant)	0 (On)
SW4-2	Sector Select Bit 1	0 (On)
SW4-3	Sector Select Bit 2	1 (Off)
SW4-4	Sector Select Bit 3	1 (Off)
SW4-5	Sector Select Bit 4	1 (Off)
SW4-6	Sector Select Bit 5	1 (Off)
SW4-7	Sector Select Bit 6 (Most Significant)	0 (On)
	Switches SW4-8 and SW4-9 will be set to select one of three possible sector length modes. They are (1) Last Sector Longer, (2) Last Sector Shorter, or (3) Extra Sector. Normal selection is Last Sector Longer Mode which requires the following switch settings:	
SW4-8	Format Setting Switch 0	0 (On)
SW4-9	Format Setting Switch 1	0 (On)
SW4-10	Enable Diagnostic Mode 3 when On (0) Disable Diagnostic Mode 3 when Off (1)	1 (Off)

MAINTENANCE INDICATORS (LEDs)

There are three (3) LED Indicators on the G9WBZ (Logic and Servo) Board that, when illuminated, indicate the following:

LED 1 - Dependent on JP6 Jumpers. If JP6 1-2 (Normal), ON indicates Drive Ready. If JP6 2-3, ON indicates On Cylinder. (JP6 is next to LED 1)
LED 2 - Fault Condition.
LED 3 - Seek Error.

There is one LED indicator, D21, on the G9WBR (Power Amp) Board that, when illuminated, indicates that +38 VDC is present.

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NEC D2352 (520 MB) DISC CONFIGURATOR

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FACTORY SET SWITCHES & JUMPERS

- G9WBR BOARD (Power Amp)

SW1-1	Closed (Down)	Jumper Block CN2 = All OFF (None used)
SW1-2	Open (Up)	
SW1-3	Closed (Down)	
SW1-4	Closed (Down)	
SW1-5	Closed (Down)	
SW1-6	Closed (Down)	
SW1-7	Closed (Down)	
SW1-8	Open (Up)	

- G9WCB BOARD (Read/Write and PLO)

NOTE: Jumper pins at locations T1 thru T6 are oriented and counted the same as pins of ICs on this board.

T1-3 to 14 IN; All others OUT

T2-5 to 12 IN; All others OUT

T3-5 to 12 IN; All others OUT

T4-6 to 11 IN; All others OUT

T5-4 to 19 IN; T5-6 to 17 IN; T5-8 to 15 IN; All others OUT

T6-2 to 7 IN; T6-3 to 6 IN; All others OUT

T7 - Not Jumpered (Open)

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FACTORY SET SWITCHES & JUMPERS
(continued)

- G9WBZ BOARD (Logic and Servo)

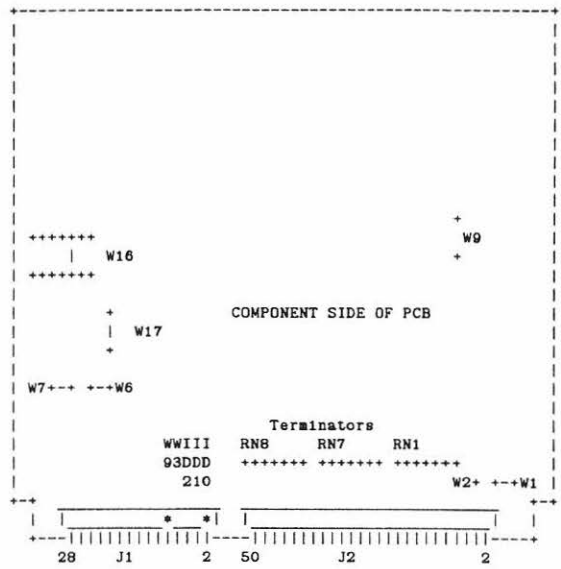
CN1 - Not Jumpered (All OFF)
CN2 - All IN (i.e., 1 to 7; 2 to 8; etc. through 6 to 12)
CN3 - 4 to 16 OUT; 8 to 20 OUT; all others IN
CN4 - Not Jumpered (All OFF)
CN5 - 2 to 3 IN; 1 OUT
CN6 - 2 to 3 IN; 1 OUT
CP1 - Not Jumpered (All OFF)
CP2 - Not Jumpered (All OFF)
JP1 - All IN (i.e., 1 to 13; 2 to 14; etc. through 12 to 24)
JP2 - All IN (i.e., 1 to 11; 2 to 12; etc. through 10 to 20)
JP3 - All IN (i.e., 1 to 13; 2 to 14; etc. through 12 to 24)
JP4 - 1 to 2 IN; 3 OUT
JP5 - 1 to 2 IN; 3 OUT
JP6 - 1 to 2 IN; 3 OUT
JP7 - 1 to 2 IN; 3 OUT
JP8 - 1 to 2 IN; 3 OUT
JP9 - 1 to 2 IN; 3 OUT
JP10 - 1 to 2 IN; 3 OUT
JP11 - 1 to 2 IN; 3 OUT
JP12 - 1 to 2 IN; 3 OUT
JP13 - 2 to 3 IN; 1 OUT

Micropolis 1375 SCSI Disk Drive Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Micropolis 1375 Disk Drive (CONVEX P/N 204-000010-200).

1.2 Configuration



CONVEX	TITLE: Micropolis 1375 Disk Configurator	REV: A 8/5/87
	DOCUMENT NUMBER: 204-000010-600	FROM: John Rachels
		PAGE: 21

JUMPER Settings

Location	Function	Normal Setting	
J2-28	Not Used	OFF	
-	-	-	
-	-	-	
J2-12	Not Used	OFF	
J2-10->9	W9	ON	(Does not check Parity)
J2-08	W3	OFF	(Motor starts with Power On)
J2-06	ID2	OFF	
J2-04	ID1	OFF	
J2-02->1	ID0	ON	(Unit Address = 0)

Terminators RN1, RN7 and RN8 are installed if this is the last device on the SCSI bus.

W1 ON (Drive provides termination power)
W2 OFF

NEC D2363 (1.1GB) DISC CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the NEC D2363 1.1 GB disk drive (Convex P/N 204-000012-200). This configuration is valid for both Multibus-based systems and VME-based systems.

1.2 Procedure

Configuration switches are accessible from the front of the disk drive. Use the following procedure to gain access to the switches.

1) Power off the drive.

2) Switches which must be configured are located in three places. Most of the switches are on the G9ZSW board. They may be accessed by opening the front cover and removing the screw that secures the small panel on the left. Two switches are located on the Status Display, and a rotary switch is located beneath the Front Panel ''Write Protect'' Switch.

3) Other switches and jumpers exist within the drive and are factory set to the proper configuration. Those are not listed here. Refer to the factory manuals for those settings.

4) Set the switches as shown on page 2 and 3.

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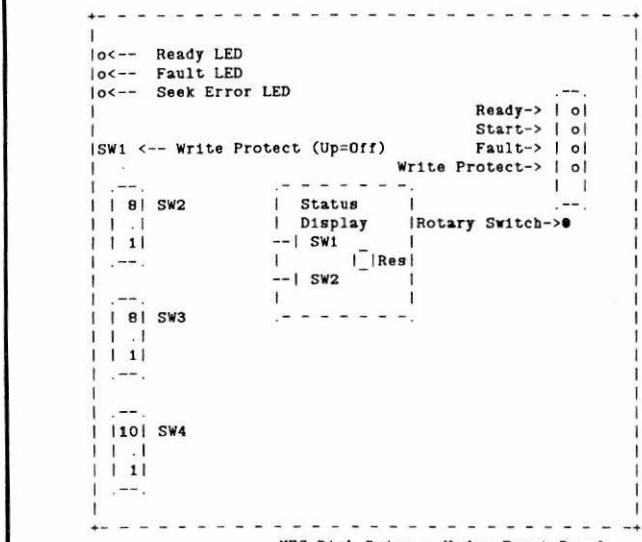
1.3 Configuration (continued)



NEC Disk Drive - Under Front Panel

Status Panel Switch Settings:

SW1	Status Mode	Normal Setting = Down
SW2	Operation Mode	Normal Setting = Down

Rotary Switch Setting:

The rotary switch must be set to a value of 'F'. For orientation purposes, the factory setting is '0' (see below). Set the switch for a value of 'F' by rotating one detent to the left (counter-clockwise).

Rotary Switch set to '0' (Factory Setting)

.....continued on next page.

G9ZSW Board Switch Settings (0=Closed=Right; 1=Open=Left)

Switch	*Function*	*Setting*	
SW1	Write Protect	Off (up)	
SW2-8	Unit Address 2**3	0	
SW2-7	Unit Address 2**2	0	
SW2-6	Unit Address 2**1	0	
SW2-5	Unit Address 2**0	0	(1 for Drive #1)
SW2-4	Address Mode	0	
SW2-3	Motor Start Select	0	
SW2-2	Offset Seek Mode	0	
SW2-1	Diagnostic Mode 1	1	
SW3-8	Motor Start Delay 2**2	0	
SW3-7	Motor Start Delay 2**1	0	
SW3-6	Motor Start Delay 2**0	0	
SW3-5	AM Mode	0	
SW3-4	Device Mode Select	0	
SW3-3	Device Type Select	0	
SW3-2	Tag 4 Control	0	
SW3-1	See Note 1, below	X	(See Note 1, below)
SW4-10	Sector Number/Length Mode	1	
SW4-9	Sectoring Mode Switch	0	
SW4-8	Sectoring Mode Switch	0	
SW4-7	Sector Size Switch	1	
SW4-6	Sector Size Switch	0	When set as shown,
SW4-5	Sector Size Switch	0	SW4-1 thru SW4-7
SW4-4	Sector Size Switch	0	will define 68
SW4-3	Sector Size Switch	1	physical sectors
SW4-2	Sector Size Switch	0	per track.
SW4-1	Sector Size Switch	0	

Note 1:

The purpose and setting of *SW3-1* is dependent on the revision level of the *G9ZSW Logic & Servo Board* (NEC P/N 134-532262-001) and its Firmware PROM at Location *4K* and the revision level of the *753 Head and Disc Assembly* (NEC P/N 134-532537-001). Usable combinations and applicable SW3-1 settings are shown below.

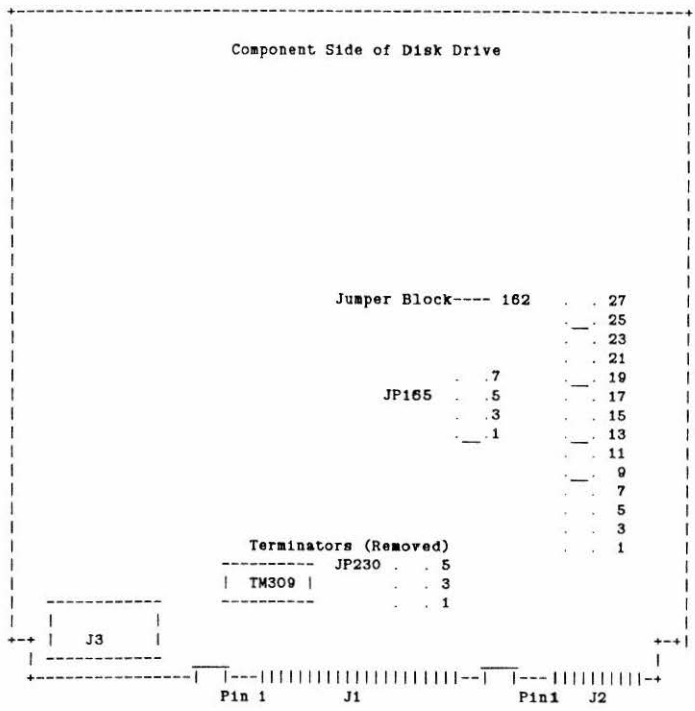
COMBINATION	*SW3-1 SETTING*	*FUNCTION*
G9ZSW Rev 12D or later, PROM 4K Rev ZSW1206 or later and HDA Rev 01B or later.	0	Seek Delay
G9ZSW Rev 01B or earlier, PROM 4K Rev ZSW0204 or earlier and HDA Rev 01A or earlier.	1	Diagnostic Mode 2

Hitachi 380MB Winchester Disk Drive

1.1 Scope

The purpose of this document is to provide configuration information for the Hitachi 380MB Winchester Disk Drive (CONVEX P/N 204-000013-200)

1.2 Disk Drive Configuration



JUMPER Settings

Terminators are removed from the device. The terminators are not required in the disk drive because the RDS base unit is equipped with terminators. To remove the terminators, pull the chip from TM309 and the three jumpers from JP230.

The device address is always set to device number 1. To set the address to device number 1, add a jumper from pin 1 to 2 of JP165.

The ESDI disk drives uses hard sectoring. To set the drive to hard sectoring, add a jumper from pin 25 to 26 of JP162.

The number of Sectors in the ESDI disk drive is 51 with the number of bytes per sector equal to 592 for 50 data sectors and one spare sector of 640 bytes. To set the sector size to 592 requires a jumper for 512 + 64 + 16 bytes. Select 512 by adding a jumper from pin 19 to 20 of JP162. Select 64 bytes by adding a jumper from pin 13 to 14 of JP162. Select 16 bytes by adding a jumper from pin 9 to 10 of JP162.

No other jumpers should be added or removed.

Summary:

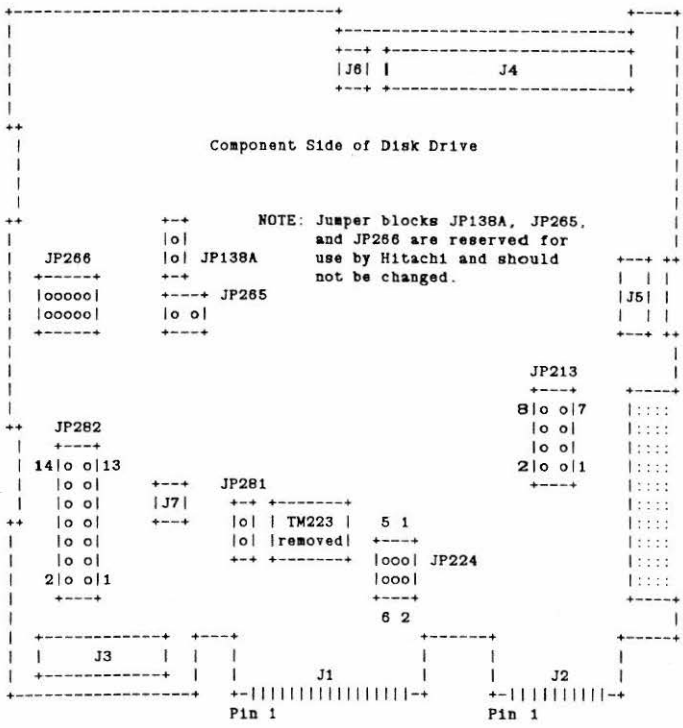
TM309	Removed	
JP230	5, 6	OPEN
JP230	3, 4	OPEN
JP230	1, 2	OPEN
JP165	1, 2	INSTALLED
JP165	3, 4	OPEN
JP165	5, 6	OPEN
JP165	7, 8	OPEN
JP162	1, 2	OPEN
JP162	3, 4	OPEN
JP162	5, 6	OPEN
JP162	7, 8	OPEN
JP162	9, 10	INSTALLED
JP162	11, 12	OPEN
JP162	13, 14	INSTALLED
JP162	15, 16	OPEN
JP162	17, 18	OPEN
JP162	19, 20	INSTALLED
JP162	21, 22	OPEN
JP162	23, 24	OPEN
JP162	25, 26	INSTALLED
JP162	27, 28	OPEN

Configurator, Hitachi 780MB ESDI Disk Drive

Section 1.0 Scope

This document provides configuration information for the Hitachi 780MB ESDI Disk Drive, model number DK515-78 (CONVEX P/N 204-000019-200).

Section 2.0 Disk Drive Configuration



CONVEX	TITLE: Hitachi 780MB ESDI Disk Drive Configurator DOCUMENT NUMBER: 204-000019-600	REV: A 03/02/90 FROM: Ken King PAGE: 28

Section 3.0 Jumper Settings

The correct jumper settings are summarized in the following table:

Jumper Location	Pins	Convex Setting	Purpose
TM223 Terminator		OUT	The RDS base unit provides termination, so this DIP must be removed
JP213	1-2	IN	These jumpers select the drive's address;
	3-4	OUT	address one is always used in the CONVEX RDS
	5-6	OUT	subsystem
JP213	7-8	OUT	OUT enables writing; IN write protects
JP224	ALL	OUT	OUT if terminator removed; IN if installed
JP281	1-2	IN	IN terminates synchronous spindle signal
JP282	1-2	IN	IN selects hard sectoring; OUT selects soft
JP282	3-4	IN	IN/IN selects off-line sync spindle mode;
	5-6	IN	OUT/IN slave; IN/OUT master; OUT/OUT remote
JP282	7-8	IN	IN doesn't start/stop spindle motor; OUT does
JP282	9-10	IN	Selects 512 data bytes/sector, 69 sectors/track
	11-12	OUT	
	13-14	IN	
JP138A	ALL		SET BY HITACHI; DO NOT CHANGE
JP265	ALL		SET BY HITACHI; DO NOT CHANGE
JP266	ALL		SET BY HITACHI; DO NOT CHANGE

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE	APPROVED
A	106198	Engineering Release	03/02/90	

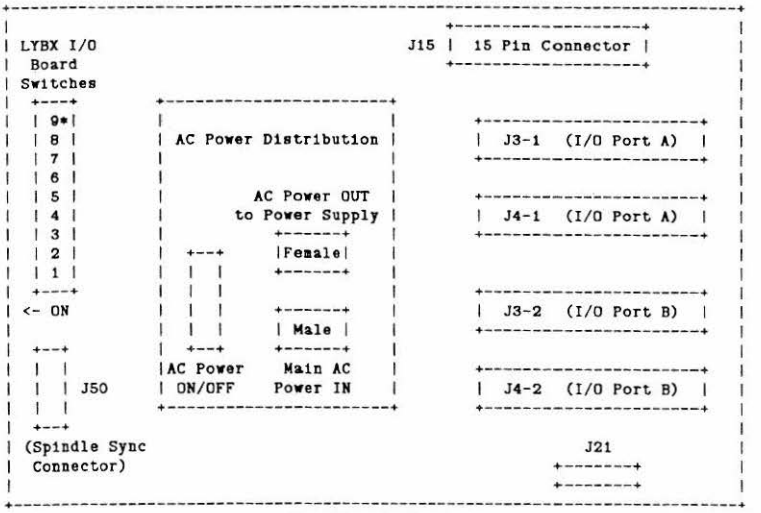
1.1 Scope

The purpose of this document is to provide configuration information for the Seagate Model 97229 (PA8Y2A) Sabre 2HP IPI Disc Drive (CONVEX Part Number 204-000016-200).

1.2 Configuration Information

(*Warning:* Do not apply AC Power to the unit until the setting of the Power Supply's AC Input Voltage Selection Switch has been verified.)

Rear View of Disc Drive



Rear View of Disc Drive

* = Switch 9 not on all versions.

Note: Switch Settings and other information are on the following pages.

1.2 Configuration Information (continued)

A. LYBX I/O Board Switch Settings and Jumper Options

- The following information is for LYBX I/O Board Part Numbers 54421758 and lower *OR* 54421760 only. See next page for LYBX I/O Board Part Numbers 54421759 only *OR* 54421761 and higher.

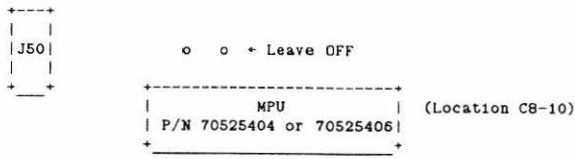
The LYBX I/O Board Switch setting options are shown below (reference illustration on Page 1 for switch locations).

Note: A switch is ON (Closed) when thrown to the *left*.

Switch Number	*Normal Setting*	*Switch Function*
8	ON	Switches 8, 7, 6, and 5 (ID0, ID1, ID2, and ID3,
7	OFF	respectively) combine to define a unique *Device*
6	ON	*Configuration Code*. They must be set as shown for
5	OFF	the Model 97229 Sabre 2HP.
4	ON	*ON* disables internal R/W operations; *OFF* enables.
3	OFF	*OFF* enables I/O Port A; *ON* disables.
2	ON	*ON* disables I/O Port B; *OFF* enables.
1	OFF	*OFF* enables local disc spin-up; *ON* disables.

The only LYBX I/O Board Jumper option is shown below. To gain access to the jumper, the entire rear panel must be removed from the unit.

When IN, the jumper *enables* the unit as a Master for Spindle Sync. When OUT (the normal CONVEX usage), the Spindle Sync Master will be selected by software. For normal CONVEX usage, leave the jumper *OFF*.



1.2 Configuration Information (continued)

- The following information is for LYBX I/O Board Part Number 54421759 only *OR* 54421761 and higher.

The LYBX I/O Board Switch setting options are shown below (reference illustration on Page 1 for switch locations).

Note: A switch is ON (Closed) when thrown to the *left*.

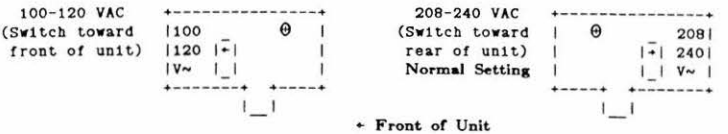
Switch Number	*Normal Setting*	*Switch Function*
9	OFF	*OFF* disables Master Sync; *ON* enables.
8	ON	Switches 8, 7, 6, and 5 (ID0, ID1, ID2, and ID3,
7	OFF	respectively) combine to define a unique *Device*
6	ON	*Configuration Code*. They must be set as shown for
5	OFF	the Model 97229 Sabre 2HP.
4	ON	*ON* disables internal R/W operations; *OFF* enables.
3	OFF	*OFF* enables I/O Port A; *ON* disables.
2	ON	*ON* disables I/O Port B; *OFF* enables.
1	OFF	*OFF* enables local disc spin-up; *ON* disables.

This version of the LYBX I/O Board Jumper has no jumper options.

B. Input AC Power Selection

A switch is located on the right side (as viewed from the front of the unit) of the Power Supply Assembly which allows for usage of the following AC inputs: 100-120 VAC *or* 208-240 VAC (50 or 60 Hz in both cases). For use in the CONVEX I/O Cabinet, the switch must be set to the 208-240 VAC position. **Failure to set the switch to the correct position will result in equipment damage.**

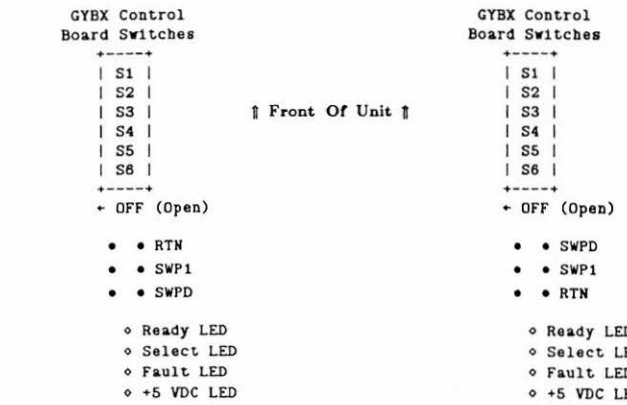
Verify the switch is correctly set per the following illustrations.



1.2 Configuration Information (continued)

C. GYBX Control Board Switch Settings and Jumper Options

- GYBX P/N 54420156 and lower only
- GYBX P/N 54420157 and higher only



- **Switch Setting Options**

Switch Number	*Normal Setting*	*Switch Function*
1	ON	S1, S2, S3, and S4 (S1 is 2°, i.e., least significant) combine to define a logical device address that can be x'0' through x'F'. Normal setting is for x'0', but the address selected at Operator Panel will be used instead.
2	ON	
3	ON	
4	ON	
5	OFF	Not used.
6	ON	*OFF* enables Write Protect; *ON* disables.

- **Jumper Options**

Jumper Name	*Normal Setting*	*Jumper Function*
SWPD	IN	*IN* disables Sweep Cycle; *OUT* enables.
SWP1	OUT	Not Used (Sweep Cycle parameter).
RTN	OUT	Not Used (Sweep Cycle parameter).

1.3 Miscellaneous Information

A. AC Power On/Off

There are two (2) AC Power Switches on the unit; one at the front and one at the rear. The front switch should be left in the On (1) position and the rear switch should be used to power the unit on and off.

The *Start* switch on the Operator Panel will cause the disc drive to spin up when both the front and rear AC Power switches are in the On (1) position.

B. Device Address

The unit's Device Address is selected by depressing the *Address* Switch on the Operator Panel while observing the incrementing LEDs which are identified with Binary weights of 1, 2, 4, and 8 (i.e, x'0' through x'F'). When none of the LEDs is on, the unit's Device Address is x'0'; when LED 1 is illuminated, the unit's Device Address is x'1'; when all of the LEDs are on, the unit's Device Address is x'F', etc. Once set, the selected Device Address will remain unchanged, even during power Off/On cycles.

C. Cable Connections

The IPI Data cable (CONVEX P/N 604-500007-0XX) will come to the drive from the controller or, if this is a daisy-chained unit, from the previous disc drive and will be connected to J4-1 (reference Page 1 illustration). If this is the only or last unit on the controller port, an IPI-2 Interface Terminator (CONVEX P/N 204-000016-012) must be installed at J3-1 (reference Page 1 illustration). Otherwise, an IPI Daisy Chain Data cable (CONVEX P/N 604-500007-001) will be connected to J3-1 and goes to J4-1 of the next disc drive in the daisy chain.

The Spindle Sync cable (CONVEX P/N 204-000015-00X), if used, will be connected to J50 (reference Page 1 illustration).

Connectors J21, J15, J3-2, and J4-2 (reference Page 1 illustration) are not normally used.

DOCUMENT REVISION HISTORY

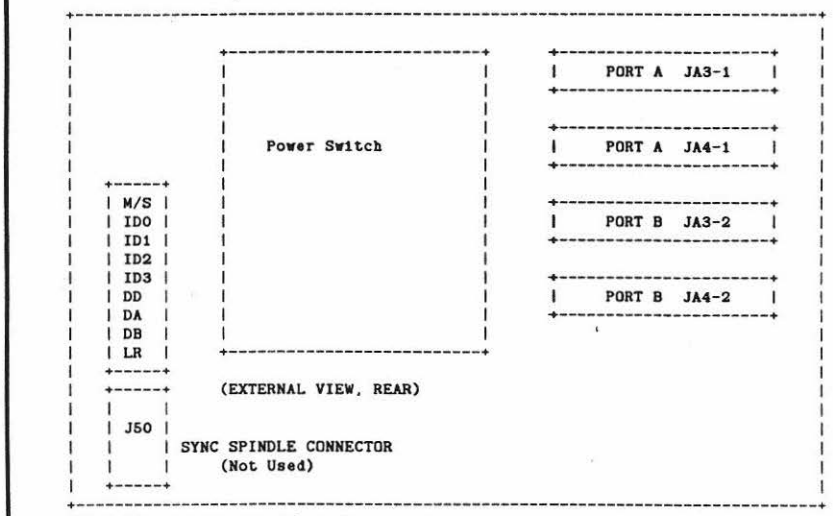
REVISION	ECN NO.	DESCRIPTION	DATE	APPROVED
A	105770	Initial release.	10/24/89	
B	106115	Rewrote to correct errors and add missing information.	02/09/90	

SEAGATE MODEL 97209 (3MB/sec) IPI DISK DRIVE

1.1 Scope

The purpose of this document is to provide configuration information for the SEAGATE Model 97209 EIGHT INCH 3MB/Sec IPI DISK DRIVE (CONVEX Part Number 204-000017-200).

1.2 I/O board at rear of disk drive.



>From the back of the I/O board at the rear of the IPI disk drive the switches to be concerned with are :

ID0, ID1, ID2, ID3, DD, DA, DB, and LR.

The switches can be set up for two configurations. One with Port A and Port B functional, the other, with Port A or Port B only. The cabling of the port will determine how the switches are set up. The following information on page 2 is the standard setup for a system with port A only.

Switch 9	M/S = OFF	(OFF)	Mater/Slave is not used
Switch 8	ID0 = ON	(ON)	Always - Part of device Code
Switch 7	ID1 = ON	(ON)	Always - Part of device Code
Switch 6	ID2 = OFF	(OFF)	Always - Part of device Code
Switch 5	ID3 = ON	(ON)	Always - Part of device Code
Switch 4	DD = ON	(ON)	Disable Diagnostics
Switch 3	DA = OFF	(OFF)	Enable Port A
Switch 2	DB = OFF	(OFF)	Disable Port B
Switch 1	LR = OFF	(OFF)	Local / Remote(ON)

TO POWER DRIVE ON AND SPIN-UP

Power switch at the rear of the unit must be used to enable power to the disk drive. The on/standby power switch on the power supply at the front of the disk drive is inconvenient when the disk unit is installed.

The start switch on the operator's panel will cause the disk drive to spin-up if the power switch on the rear of the unit and the on/standby power switch on the front of the unit's power supply are both in the ON position.

When the disk drive is installed the initially in a system the unit must be configured correctly for the AC power. The switch on the side of the power supply (visible without taking the unit out of the inner tray), must be set for the correct voltage.

********** CAUTION **********

IF THE SWITCH IS NOT IN THE CORRECT POSITION THE SUPPLY WILL BE DESTROYED!!

****

DEVICE ADDRESS

The device address is set by depressing the ADDRESS switch on the front operator's panel and letting the top row of LEDs increment to the proper address. Once set, the address will remain even with power down cycles.

CONTROL BOARD SWITCHES AND INDICATORS

The control board on the top of the HDA has an access that is covered by a plastic insert. When the insert is removed, LED indicators and switches are exposed.

(Continued on next page)

```
(LED) +5VDC
(LED) Fault
(LED) Select
(LED) Ready

--------
|      |   Unit ID 0       |
|      |   Unit ID 1       |
|      |   Unit ID 2       |----Overridden by front panel
|      |   Unit ID 3       |
|      |   Unit ID 4       |
|      |   Not Used
|      |   Write Protect  On enables read/write (Normal)
--------

--------
|      |   Sector Switches
|      |          |
|      |          |
|      |          |
|      |          |--------------NOT USED IN THIS UNIT
|      |          |
|      |          |
--------   Sector Switches
```

The switches are over-ridden by the operators panel and the IPI interface. Reference the User's Manual SEAGATE PN 83326010 for switch configuration if required.

. .	RTN	Connected enables return heads to original position
. .	SWP1	Connected disables sweep cycle only on seeks
. .	SWPD	Connected disables sweep cycle operations
. .	IDX S	Always Disconnected
. .	RUNT	Connected suppresses runt sector pulses
. .	FF	Reserved for Future use.

```
 RTN=OFF
SWP1=OFF
SWPD=ON
IDXS=OFF
RUNT=OFF
  FF=OFF
```

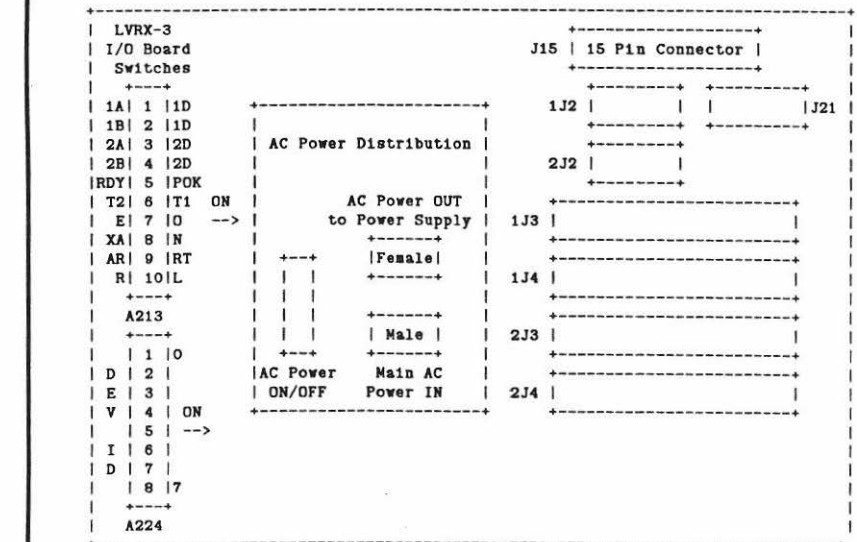
1.1 Scope

The purpose of this document is to provide configuration information for the Seagate Model ST81236J (PA8N2A) Sabre SMD Disc Drive (CONVEX Part Number 204-000021-200, Seagate Part Number 958001-042).

1.2 Configuration Information

(*Warning:* Do not apply AC Power to the unit until the setting of the Power Supply's AC Input Voltage Selection Switch has been verified.)

Rear View of Disc Drive



Rear View of Disc Drive

Note: Switch Settings and other information are on the following pages.

1.2 Configuration Information (*continued*)

A. LVRX-3 I/O Board Switch Settings

The LVRX-3 I/O Board Switch setting options are shown below (reference illustration on Page 1 for switch locations).

Note: A switch is ON (Closed) when thrown to the *right*.

- Location A213

Switch Number	*Normal Setting*	*Switch I.D.*	*Switch Function*
1	OFF	1A/1D	Switches SW-1 through SW-4 are combined to enable/disable Channels 1 and/or 2 and to define which cable(s) ("A" and/or "B") carry Index/Sector. The normal settings shown define Channel 2 disabled and Index and Sector on the "A" Cable.
2	ON	1B/1D	
3	ON	2A/2D	
4	ON	2B/2D	
5	OFF	RDY/PK	*OFF* enables normal I/O Ready status; *ON* will enable I/O Ready status only with "Power OK".
6	OFF	T2/T1	*OFF* enables Extended Cylinder Addressing via Tag 2; *ON* enables via Tag 1.
7	ON	E/O	*OFF* for SMD-E Mode; *ON* for SMD-O Mode.
8	OFF	XA/N	*OFF* for Extended Cylinder Addressing (>1023); *ON* for Standard Cylinder Addressing (<1024).
9	OFF	AR/RT	*OFF* for Dual Channel Absolute Reserve; *ON* for Dual Channel Reserve Timer.
10	ON	R/L	*OFF* for Remote Power On; *ON* for Local On.

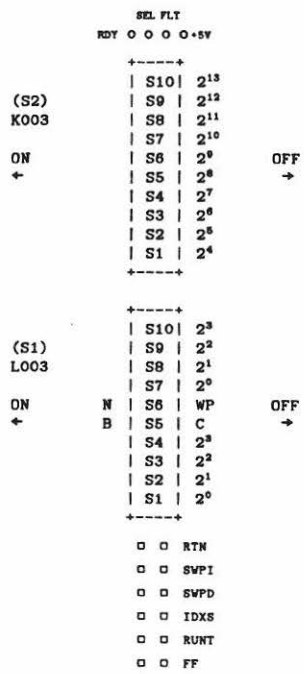
- Location A224

Switch Number	*Normal Setting*	*Switch I.D.*	*Switch Function*
1	OFF		Switches SW-1 through SW-8 are reserved for Device I.D. coding. Settings for SW-1 through SW-8 are "Don't Care" (not used).
2	OFF		
3	OFF		
4	OFF		
5	OFF		
6	OFF		
7	OFF		
8	OFF		

1.2 Configuration Information (*continued*)

B. AXYX Control Board Switch Settings and Jumper Options

⇑ Rear Of Unit ⇑



Note: Switch Settings and Strapping Options are on pages 4 and 5.

1.2 Configuration Information (*continued*)

B. AXYX Control Board Switch Settings and Jumper Options (*continued*)

The AXYX Control Board switch settings are shown below (reference illustration on Page 3 for switch locations).

- Location K003 (S2)

Switch Number	*Normal Setting*	*Switch I.D.*	*Switch Function*
10	ON	2^{13}	
9	ON	2^{12}	DIP Switches SW-1 through SW-10 of S2 (Location K003) are used in conjunction with SW-7 through SW-10 of DIP Switch S1 (Location L003) to select the number of physical sectors per track. With the settings shown, there will be 84 physical sectors per track.
8	ON	2^{11}	
7	ON	2^{10}	
6	ON	2^{9}	
5	OFF	2^{8}	
4	OFF	2^{7}	
3	ON	2^{6}	
2	ON	2^{5}	
1	ON	2^{4}	

- Location L003 (S1)

Switch Number	*Normal Setting*	*Switch I.D.*	*Switch Function*
10	OFF	2^{3}	
9	OFF	2^{2}	See information for S2 (Location K003), above, for SW-7 through SW-10.
8	OFF	2^{1}	
7	OFF	2^{0}	
6	ON	N/WP	*OFF* for Write Protect; *ON* for normal operation (write enabled).
5	OFF	B/C	*OFF* for 2.016 MHz sector clock frequency; *ON* for byte frequency sector clock.
4	ON	2^{3}	DIP Switches SW-1 through SW-4 are used to define the device address (x'0'-'F') of the disc drive. All *ON* will define device address x'0'. 2^{0} is Least Significant. Therefore, SW-2 through SW-4 *ON* and SW-1 *OFF* defines device address x'1'; SW-3 and SW-4 *ON* and SW-1 and SW-2 *OFF* defines device address x'3'; etc. *These switch settings will be overridden by the Operator Panel selection, if used.*
3	ON	2^{2}	
2	ON	2^{1}	
1	ON	2^{0}	

1.2 Configuration Information (*continued*)

B. AXYX Control Board Switch Settings and Jumper Options (*continued*)

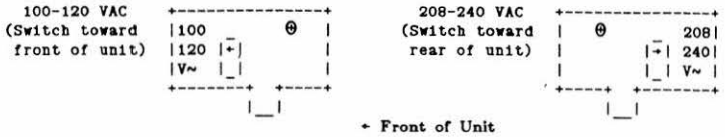
The AXYX Control Board jumper options are shown below (reference illustration on Page 3 for jumper locations).

Jumper	*Normal*	*Function*
RTN	OUT	*OUT* to disable heads returning to starting point after a sweep cycle; *IN* to enable return to original.
SWP1	OUT	*OUT* to enable sweep only on seeks; *IN* to disable.
SWPD	IN	*OUT* to enable sweep cycles; *IN* to disable.
IDXS	OUT	Always *OUT* (factory set).
RUNT	OUT	*OUT* to enable Runt sector pulse; *IN* to suppress Runt sector pulse.
FF	OUT	Always *OUT* (not used and reserved for future use).

C. Input AC Power Selection

A switch is located on the right side (as viewed from the front of the unit) of the Power Supply Assembly which allows for usage of the following AC inputs: 100-120 VAC *or* 208-240 VAC (50 or 60 Hz in both cases). For use in the CONVEX High Performance Peripheral (HPPC) Cabinet, the switch must be set to the 208-240 VAC position. For use in the CONVEX Standard I/O Expansion chassis, the switch setting will be 100-120 VAC (domestic cabinets) or 208-240 (international cabinets). **Failure to set the switch to the correct position can result in equipment damage.**

Verify the switch is correctly set per the following illustrations.



1.3 Miscellaneous Information

A. AC Power On/Off

There are two (2) AC Power Switches on the unit; one at the front and one at the rear. The front switch should be left in the On (1) position and the rear switch should be used to power the unit on and off.

The *Start* switch on the Operator Panel will cause the disc drive to spin up when both the front and rear AC Power switches are in the On (1) position.

B. Device Address

The unit's Device Address is selected by depressing the *Address* Switch on the Operator Panel while observing the incrementing LEDs which are identified with Binary weights of 1, 2, 4, and 8 (i.e, x'0' through x'F'). When none of the LEDs is on, the unit's Device Address is x'0'; when LED 1 is illuminated, the unit's Device Address is x'1'; when all of the LEDs are on, the unit's Device Address is x'F', etc. Once set, the selected Device Address will remain unchanged, even during power Off/On cycles.

C. Cable Connections

The SMD "A" Cable (CONVEX P/N 604-600001-2XX) will come to the drive from the controller or, if this is a daisy-chained unit, from the previous disc drive and will be connected to 1J4 (reference Page 1 illustration). If this is the only or last unit on the controller port, an SMD Interface Terminator (CONVEX P/N 204-000021-002) must be installed at 1J3 (reference Page 1 illustration). Otherwise, an SMD Daisy Chain "A" cable (CONVEX P/N 604-600001-2XX) will be connected to 1J3 and goes to 1J4 of the next disc drive in the daisy chain.

The SMD "B" cable (CONVEX P/N 604-260001-2XX) will come to the drive from the controller and will be connected to 1J2 (reference Page 1 illustration).

Connectors J15, J21, 2J2, 2J3, and 2J4 (reference Page 1 illustration) are not normally used.

D. File "DB_diskfmt" Contents

The SPU File "/mnt/bin/lib/DB_diskfmt" must contain the correct parameters under the section titled, "INTERPHASE 4200 SMD CONTROLLER (VME)". This section will also have parameters for the DKD-206 and DKD-208 disc drives. The CONVEX parameters for the Seagate Model ST81236J SMD Disc Drive are:

```
DKD-281 0 1635 15 84 83 4800 50400 9 9 1 14 14  smd 2-7 n
```

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE	APPROVED
1.0	-None-	Preliminary Release.	01/22/91	
A	107354	Initial Manufacturing Release.	02/15/91	

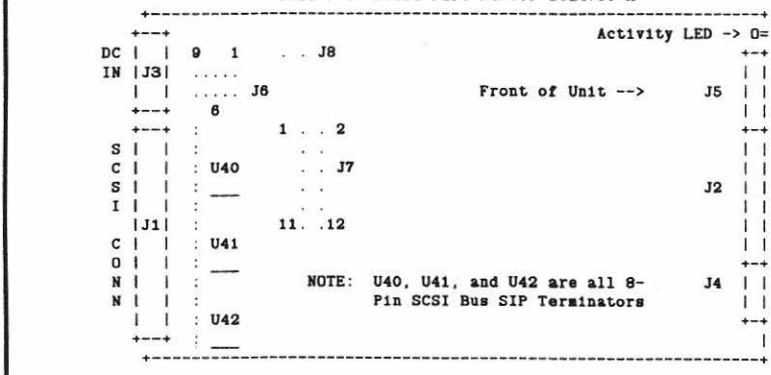
Maxtor Model LXT-535SY 3.5-Inch SCSI Disc Drive Configurator Document

Section 1.0 Scope

This document provides configuration information for the Maxtor Model LXT-535SY 3.5-Inch SCSI Disc Drive (Convex Part Number 220-000022-200).

Section 2.0 Disc Drive Configuration

SCSI P.C. Board Part Number 1024760-X



Remove the front bezel plate from the drive. Refer to the illustration, above, and set the jumpers as shown below.

- For use as a SPU Disc, one of the following configurations is required.

Jumper Location	1st 3800 SPU in Workstation	2nd 3800 SPU in Workstation	RDS SPU in C3800	SPU in C3200, C3400, and C2	RDS SPU in C2, C3200, and C3400
J6: 1-2	IN	IN	IN	IN	IN
3-4	IN	OUT	IN	OUT	OUT
5-6	OUT	OUT	OUT	OUT	OUT
7-8	IN	IN	IN	OUT	OUT
9-10	OUT	IN	IN	IN	IN
J8: 1-2	IN	IN	IN	IN	IN
J7: 1-2	OUT	OUT	OUT	OUT	OUT
3-4	IN	IN	IN	IN	IN
5-6	OUT	OUT	OUT	OUT	OUT
7-8	OUT	OUT	OUT	OUT	OUT
9-10	OUT	OUT	OUT	OUT	OUT
11-12	OUT	OUT	OUT	OUT	OUT

Section 2.0 Disc Drive Configuration (continued)

• Terminators (U40, U41, U42) installation/removal requirements:

	SPU In C3800 Workstation	RDS SPU In C3800	SPU In C3200, C3400, and C2	RDS SPU In C2, C3200, and C3400
Terminators:	All OUT	All IN	All IN	All IN

• External LED Usage

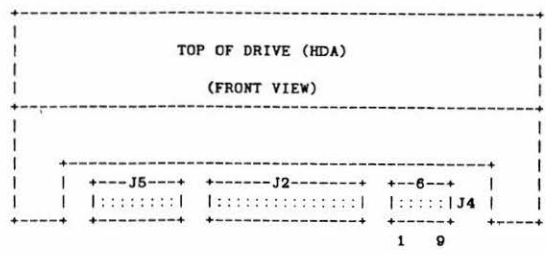
The External LED is not used in all applications. When it is used, it will be connected to Disc Drive Connector J4, Pins 9 and 10. Reference the table, below.

	SPU In C3800 Workstation	RDS SPU In C3800	SPU In C3200, C3400, and C2	RDS SPU In C2, C3200, and C3400
LED Used?	NO	YES	YES	YES

External LED Installation

The External LED is used with the 5¼" Mechanical Adapter Kit, Convex Part Number 204-000022-001. Attach the External LED to Disc Drive Connector J4 as shown below.

Orient the Disc Drive as shown below. Remove the front bezel plate if still attached (remove the two screws on the top of the drive).



Install the External LED on Connector J4, Pins 9 and 10. Pin 9 is +5VDC and Pin 10 is LED Drive (-). Other pins are for spindle sync and factory testing. No other pins of Connector J4 should be used. Reference the LXT-535SY OEM Manual for further information.

Section 2.0 Disc Drive Configuration (continued)

• Terminators (U40, U41, U42) Requirements:

Only the last device on the SCSI bus should be terminated. For the C3800 Workstation, internal devices should NOT be terminated (i.e., all terminators should be removed from SCSI devices inside the workstation). The last device on a SCSI Bus external to the C3800 workstation should be terminated.

Section 3.0 Jumper Functions

J6: 1-2 SCSI ID 2^0 (Least Significant)
3-4 SCSI ID 2^1
5-6 SCSI ID 2^2 (Most Significant)
Note: Each device on a SCSI Bus must have a unique ID Number.
7-8 Parity: IN = enabled
9-10 Motor Start: IN = Start On Power Up, OUT = Wait For Start Command
(Note: When the SPU Disc is in the C3800 Workstation, the first drive must have Jumper J6, 9-10 removed and the second, if used, must have Jumper J6, 9-10 installed. For all other applications, Jumper J6, 9-10 will be installed.)

J8: 1-2 Select Termination Power Source: IN = Enable Disc Drive To Provide Termination Power.

J7: 1-2 IN = Differential SCSI Interface Used; OUT = Single-Ended
3-4 IN = Single-Ended SCSI Interface Used; OUT = Differential
5-6 IN = Differential SCSI Interface Used; OUT = Single-Ended
7-8 IN = Differential SCSI Interface Used; OUT = Single-Ended
9-10 IN = Differential SCSI Interface Used; OUT = Single-Ended
11-12 IN = Differential SCSI Interface Used; OUT = Single-Ended

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE
A	108088	Initial Release.	09/25/91
B	108937	Corrected Reference Designator J7 (was J9) and added strapping options for a second SPU Disc in a C3800 Workstation.	04/29/92

Seagate Model ST83220K Sabre 7 IPI Disc Drive

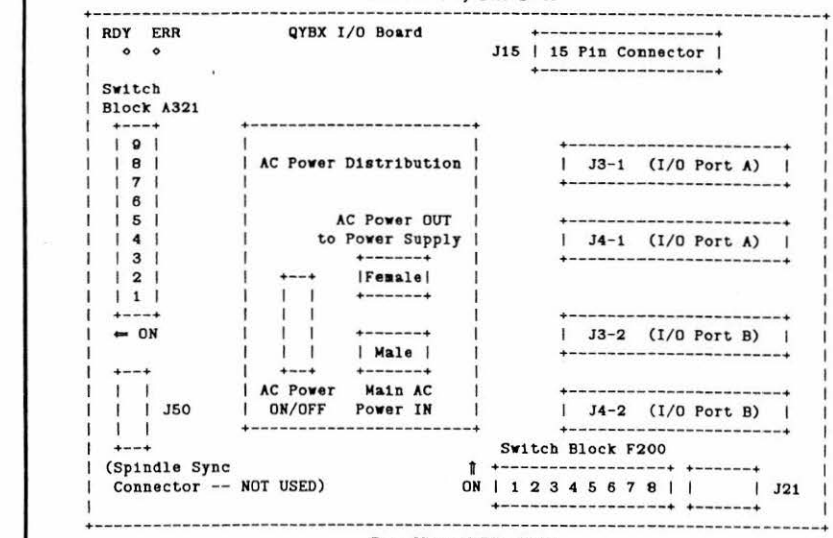
1.1 Scope

The purpose of this document is to provide configuration information for the Seagate Model ST83220K Sabre 7 IPI Disc Drive (CONVEX P/N 204-000023-200).

1.2 Configuration Information

(*Warning:* Do not apply AC Power to the unit until the setting of the Power Supply's AC Input Voltage Selection Switch has been verified.)

Rear View of Disc Drive



Rear View of Disc Drive

Note: Switch Settings and other information are on the following pages.

1.2 Configuration Information (continued)

A. QYBX I/O Board Switch Settings

The QYBX I/O board contains two switch blocks, as shown in the illustration on Page 1. The setting options for these switches are described below.

▪ Switch Block A321 Settings

Switch block A321 contains nine switches and is located above the spindle sync connector on the left edge of the I/O board. These switches are ON (Closed) when thrown to the *left*.

Switch Number	*Normal Setting*	*Switch Function*
9	OFF	*OFF* disables Master Sync; *ON* enables.
8	OFF	Switches 8, 7, 6, and 5 (ID0, ID1, ID2, and ID3,
7	ON	respectively) combine to define a unique *Device*
6	ON	*Configuration Code*. They must be set as shown for
5	OFF	the Model ST83220K Sabre 7.
4	ON	*ON* disables internal R/W operations; *OFF* enables.
3	OFF	*OFF* enables I/O Port A; *ON* disables.
2	ON	*ON* disables I/O Port B; *OFF* enables.
1	OFF	*OFF* enables local disc spin-up; *ON* disables.

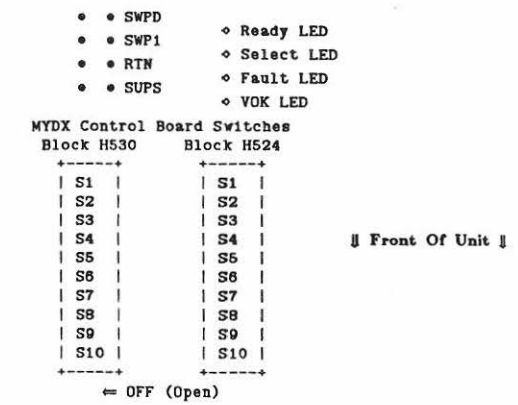
▪ Switch Block F200 Settings

Switch block F200 contains eight switches and is located near the J21 connector on the bottom edge of the board. These switches are ON (Closed) when thrown toward the *top* of the unit.

Switch Number	*Normal Setting*	*Switch Function*
1	OFF	Not used.
2	OFF	Not used.
3	OFF	Not used.
4	OFF	*OFF* disables drive delay mode; *ON* enables.
5	OFF	Not used.
6	ON	*ON* disables hardware assist mode; *OFF* enables.
7	OFF	*OFF* disables sweep cycle; *ON* enables.
8	OFF	*OFF* disables short RPS mode; *ON* enables.

1.2 Configuration Information (continued)

B. MYDX Control Board Switch Settings and Jumper Options



- **Switch Block H530 Settings**

Switch Number	*Normal Setting*	*Switch Function*
1 - 10	OFF	Not used.

- **Switch Block H524 Settings**

Switch Number	*Normal Setting*	*Switch Function*
1	ON	S1, S2, S3, and S4 (S1 is 2°, ie, least significant)
2	ON	define a logical unit address that can be 0x0 - 0xF
3	ON	Normal setting is 0x0, but the address selected
4	ON	at Operator Panel will be used instead.
5	ON	*ON* disables Write Protect; *OFF* enables.
6 - 10	OFF	Not used.

1.2 Configuration Information (continued)

B. MYDX Control Board Switch Settings and Jumper Options (continued)

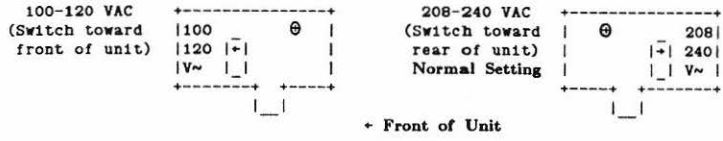
- **Jumper Options**

Jumper Name	*Normal Setting*	*Jumper Function*
SWPD	IN	*IN* disables Sweep Cycle; *OUT* enables.
SWP1	OUT	Not used (Sweep Cycle parameter).
RTN	OUT	Not used (Sweep Cycle parameter).
SUPS	OUT	Not used (SMD interface parameter).

C. Input AC Power Selection

A switch is located on the right side (as viewed from the front of the unit) of the Power Supply Assembly which allows for usage of the following AC inputs: 100-120 VAC *or* 208-240 VAC (50 or 60 Hz in both cases). For use in the CONVEX I/O Cabinet, the switch must be set to the 208-240 VAC position. **Failure to set the switch to the correct position will result in equipment damage.**

Verify the switch is correctly set per the following illustrations.



← Front of Unit

1.3 Miscellaneous Information

A. AC Power On/Off

There are two (2) AC Power Switches on the unit; one at the front and one at the rear. The front switch should be left in the On (1) position and the rear switch should be used to power the unit on and off.

The *Start* switch on the Operator Panel will cause the disc drive to spin up when both the front and rear AC Power switches are in the On (1) position.

B. Device Address

The unit's Device Address is selected by depressing the *Address* Switch on the Operator Panel while observing the incrementing LEDs which are identified with Binary weights of 1, 2, 4, and 8 (i.e, 0x0 through 0xF). When none of the LEDs is on, the unit's Device Address is 0x0; when LED 1 is illuminated, the unit's Device Address is 0x1; when all of the LEDs are on, the unit's Device Address is 0xF, etc. Once set, the selected Device Address will remain unchanged, even during power Off/On cycles.

C. Cable Connections

The IPI Data cable (CONVEX P/N 604-500007-0XX) will come to the drive from the controller or, if this is a daisy-chained unit, from the previous disc drive and will be connected to J4-1 (reference Page 1 illustration). If this is the only or last unit on the controller port, an IPI-2 Interface Terminator (CONVEX P/N 204-000016-012) must be installed at J3-1 (reference Page 1 illustration). Otherwise, an IPI Daisy Chain Data cable (CONVEX P/N 604-500007-001) will be connected to J3-1, and it will go to J4-1 of the next disc drive in the daisy chain.

Connectors J21, J15, J3-2, and J4-2 (reference Page 1 illustration) are not normally used.

DOCUMENT REVISION HISTORY

REVISION	ECN NUMBER	DESCRIPTION	DATE	APPROVED
A	108279	Initial Release.	10/16/91	

Seagate Model ST83050K Sabre 7 2HP IPI Disc Drive

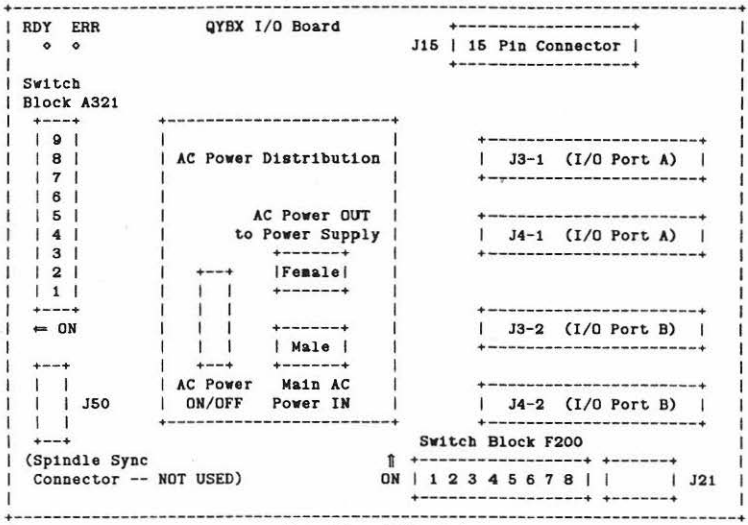
1.1 Scope

The purpose of this document is to provide configuration information for the Seagate Model ST83050K Sabre 7 2HP IPI Disc Drive (CONVEX P/N 204-000024-200).

1.2 Configuration Information

(*Warning:* Do not apply AC Power to the unit until the setting of the Power Supply's AC Input Voltage Selection Switch has been verified.)

Rear View of Disc Drive



Rear View of Disc Drive

Note: Switch Settings and other information are on the following pages.

1.2 Configuration Information (continued)

A. QYBX I/O Board Switch Settings

The QYBX I/O board contains two switch blocks, as shown in the illustration on Page 1. The setting options for these switches are described below.

▪ Switch Block A321 Settings

Switch block A321 contains nine switches and is located above the spindle sync connector on the left edge of the I/O board. These switches are ON (Closed) when thrown to the *left*.

Switch Number	*Normal Setting*	*Switch Function*
9	OFF	*OFF* disables Master Sync; *ON* enables.
8	ON	Switches 8, 7, 6, and 5 (ID0, ID1, ID2, and ID3,
7	ON	respectively) combine to define a unique *Device*
6	ON	*Configuration Code*. They must be set as shown for
5	OFF	the Model ST83050K Sabre 7 2HP.
4	ON	*ON* disables internal R/W operations; *OFF* enables.
3	OFF	*OFF* enables I/O Port A; *ON* disables.
2	ON	*ON* disables I/O Port B; *OFF* enables.
1	OFF	*OFF* enables local disc spin-up; *ON* disables.

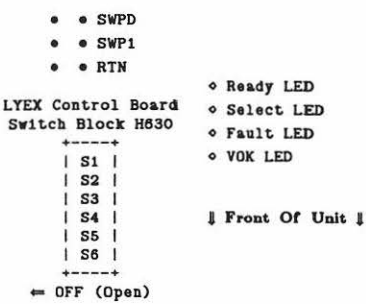
▪ Switch Block F200 Settings

Switch block F200 contains eight switches and is located near the J21 connector on the bottom edge of the board. These switches are ON (Closed) when thrown toward the *top* of the unit.

Switch Number	*Normal Setting*	*Switch Function*
1	OFF	Not used.
2	OFF	Not used.
3	OFF	Not used.
4	OFF	*OFF* disables drive delay mode; *ON* enables.
5	OFF	Not used.
6	ON	*ON* disables hardware assist mode; *OFF* enables.
7	OFF	*OFF* disables sweep cycle; *ON* enables.
8	OFF	*OFF* disables short RPS mode; *ON* enables.

1.2 Configuration Information (continued)

B. LYEX Control Board Switch Settings and Jumper Options



■ **Switch Block H630 Settings**

Switch Number	*Normal Setting*	*Switch Function*
1	ON	S1, S2, S3, and S4 (S1 is 2°, ie, least significant)
2	ON	define a logical unit address that can be 0x0 - 0xF
3	ON	Normal setting is 0x0, but the address selected
4	ON	at Operator Panel will be used instead.
5	ON	*ON* disables Write Protect; *OFF* enables.
6	OFF	Not used.

■ **Jumper Options**

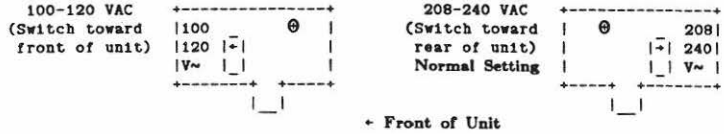
Jumper Name	*Normal Setting*	*Jumper Function*
SWPD	IN	*IN* disables Sweep Cycle; *OUT* enables.
SWP1	OUT	Not Used (Sweep Cycle parameter).
RTN	OUT	Not Used (Sweep Cycle parameter).

1.2 Configuration Information (continued)

C. Input AC Power Selection

A switch is located on the right side (as viewed from the front of the unit) of the Power Supply Assembly which allows for usage of the following AC inputs: 100-120 VAC *or* 208-240 VAC (50 or 60 Hz in both cases). For use in the CONVEX I/O Cabinet, the switch must be set to the 208-240 VAC position. **Failure to set the switch to the correct position will result in equipment damage.**

Verify the switch is correctly set per the following illustrations.



1.3 Miscellaneous Information

A. AC Power On/Off

There are two (2) AC Power Switches on the unit; one at the front and one at the rear. The front switch should be left in the On (1) position and the rear switch should be used to power the unit on and off.

The *Start* switch on the Operator Panel will cause the disc drive to spin up when both the front and rear AC Power switches are in the On (1) position.

B. Device Address

The unit's Device Address is selected by depressing the *Address* Switch on the Operator Panel while observing the incrementing LEDs which are identified with Binary weights of 1, 2, 4, and 8 (i.e, 0x0 through 0xF). When none of the LEDs is on, the unit's Device Address is 0x0; when LED 1 is illuminated, the unit's Device Address is 0x1; when all of the LEDs are on, the unit's Device Address is 0xF, etc. Once set, the selected Device Address will remain unchanged, even during power Off/On cycles.

C. Cable Connections

The IPI Data cable (CONVEX P/N 604-500007-0XX) will come to the drive from the controller or, if this is a daisy-chained unit, from the previous disc drive and will be connected to J4-1 (reference Page 1 illustration). If this is the only or last unit on the controller port, an IPI-2 Interface Terminator (CONVEX P/N 204-000016-012) must be installed at J3-1 (reference Page 1 illustration). Otherwise, an IPI Daisy Chain Data cable (CONVEX P/N 604-500007-001) will be connected to J3-1, and it will go to J4-1 of the next disc drive in the daisy chain.

Connectors J21, J15, J3-2, and J4-2 (reference Page 1 illustration) are not normally used.

DOCUMENT REVISION HISTORY

REVISION	ECN NUMBER	DESCRIPTION	DATE	APPROVED
A	108279	Initial Release.	10/16/91	

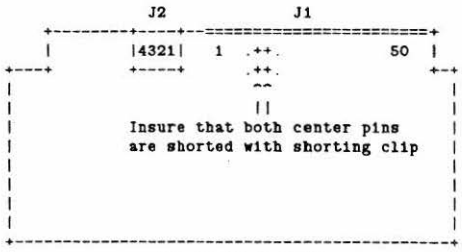
CIPHER 525 FLOPPY TAPE DRIVE CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Cipher 525 Floppy Tape Drive (Convex P/N 207-000001-200).

1.2 Hardware Strapping

Insure that the strapping is as follows:



Rear of Tape Drive

J2-1	+12 Volts	(White)
J2-2	Ground	(Black)
J2-3	Ground	(Black)
J2-4	+5 Volts	(Red)

Note: J1 interconnects the Tape Drive to P3 of the Backplane (SPU Slot).

ENHANCED CIPHER FLOPPY TAPE DRIVE CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Enhanced Cipher Floppy Tape Drive (Convex P/N 207-000001-201).

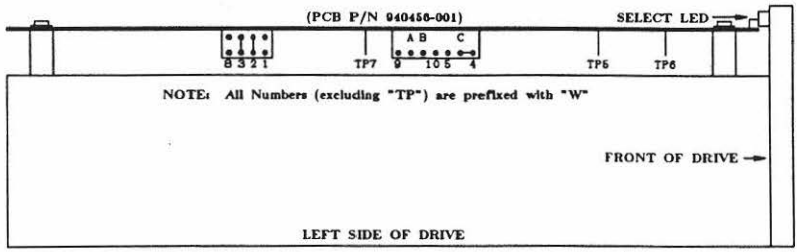
1.2 Hardware Strapping

Normal and preferred strapping options are shown below:

JUMPER	DESCRIPTION	NORMAL CONFIGURATION
W1 to W1	Stream Selection	OUT
W2 to W2	Stream Selection	IN
W3 to W3	Stream Selection	IN
W4 to C	'SELECT' LED ON when Drive is Selected.	IN
W5 to C	'SELECT' LED ON when Heads are loaded, Drive is Ready, and Drive is Selected.	OUT
W8 to W8	Host turns 'SELECT' LED ON	OUT
W9 to A	Maintenance use only	OUT
W10 to B	Maintenance use only	OUT

****

NORMAL STRAPPING ILLUSTRATION



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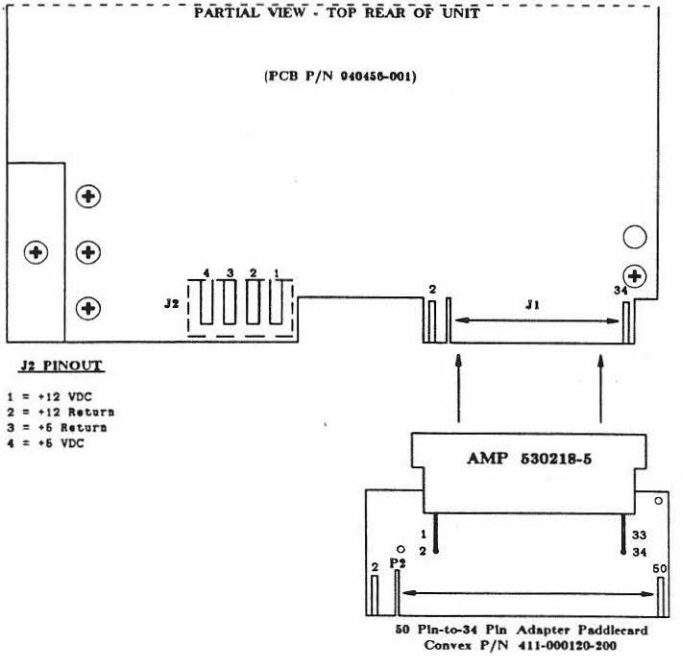
1.2 Miscellaneous Information



STORAGE TECHNOLOGY 1963 TAPE DRIVE CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Storage Technology 1963 Tape Drive (Convex P/N 207-000003-200).

1.2 Jumper Options

NONE REQUIRED.

STORAGE TECHNOLOGY 1968 TAPE DRIVE CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Storage Technology 1968 Tape Drive (Convex P/N 207-000004-200).

1.2 Jumper Options

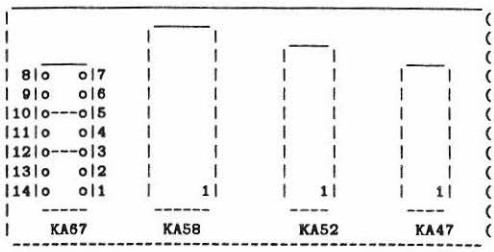
(Note: All jumper options are located on boards in the Formatter Control Unit)

KL Card Jumper Options Are At Location KA67:

POSITION	DESCRIPTION	NORMAL SETTING
5 to 10	Retry Correction	Installed
3 to 12	Force Good Parity	Installed
1 to 14	Disable Lost Byte	Open (Not Used)

(Note: Pins 2, 4, 6, 7, 8, 9, 11 and 13 have no function and should be OPEN)

KL CARD LAYOUT



(NORMAL COMPONENT-SIDE STRAPPING SHOWN)

KG Card Jumper Option is one (1) strap identified as KE65 that must be in for proper operation. KE65 is located at the upper-left, component side of the board between I.C. Locations KA62 and KA67.

STORAGE TECHNOLOGY 2921 TAPE DRIVE CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Storage Technology 2921 Tape Drive (Convex P/N 207-000005-200).

1.2 Configuration Options

Switch Location: FA 93 on the IF Card.

POSITION	DESCRIPTION	UNIT 0	UNIT 1	UNIT 2	UNIT 3
1	Drive Address (Low Order)	ON	OFF	ON	OFF
2	Drive Address (High Order)	ON	ON	OFF	OFF
3	NOT USED (DON'T CARE)	--	--	--	--
4	NOT USED (DON'T CARE)	--	--	--	--
5	NOT USED (DON'T CARE)	--	--	--	--
6	Vertical (Normal) Mount	ON	ON	ON	ON
	Horizontal Mount	OFF	OFF	OFF	OFF

In multiple drive systems, ensure that only the last drive on the daisy chain has terminators installed on the IF card. The Terminators are socketed Resistor DIPs and can be found at IF card Locations BA63 and BA45.

StorageTek 2922 Tape Drive Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the StorageTek 2922 Tape Drive (CONVEX P/N 207-000010-200, Domestic Only; 207-000010-201, International Only; and 207-000010-210, 100 to 240 VAC at 50 or 60 Hz).

1.2 Switch Settings

There is a 6-switch DIP on the *IF Board* at Location HA09 that will be configured as follows:

Switch	Function	Unit 0	Unit 1	Unit 2	Unit 3
1	Unit Address (L.S.)	ON	OFF	ON	OFF
2	Unit Address (M.S.)	ON	ON	OFF	OFF
3	Speed	ON	ON	ON	ON
4	Gap	ON	ON	ON	ON
5	Reserved	ON	ON	ON	ON
6	Drive Mounting Method (ON = Vertical; OFF = Horizontal)	ON	ON	ON	ON

1.3 Termination

If there is only one tape drive on a controller, it must have Termination DIPs installed at socketed Locations BA75 and BA63 on the *IF Board*.

In multiple drive systems, only the last drive on the daisy chain should have Terminator DIPs installed on the *IF Board* at Locations BA75 and BA63.

1.4 Input Voltage & Frequency Selection (207-000010-210 Only)

The VK and AK100 Boards have connections that will be used per the AC Input Voltage and Frequency available for the unit. Whenever the voltage and/or frequency configuration(s) is/are changed, ensure that the appropriate connector on the AC Power Cord is also used. The 3 most common connection methods are:

NEMA Number	*Hubbell Number*	*AC Input*
5-15P	5266C	120 Volts, 60 Hz
6-15P	5666C	220 Volts, 50 Hz
None	None	220/240 Volts, 50 Hz

1.4 Input Voltage & Frequency Selection (207-000010-210 Only) - *Continued*

- Depending on the AC Input Frequency, the AK100 Board must be connected as follows:

AK100 Board Frequency Options & Selection

50 Hertz: Connector P12 (from Transformer) to AK100 Board Connector J12.

60 Hertz: Connector P12A (from Transformer) to AK100 Board Connector J12.

- Depending on the AC Input Frequency and Voltage, the VK Board must be configured using the following guideleines:

VK Board Frequency Options & Selection

50 Hertz: Jumper Connector J70 to VK Board Connector J55 AND
Jumper Connector J71 to VK Board Connector J64.

60 Hertz: Jumper Connector J70 to VK Board Connector J56 AND
Jumper Connector J71 to VK Board Connector J58.

VK Board Voltage Options & Selection

100 Volts: Jumper Connector J72 to VK Board Connector J65 (50 Hz) OR
Jumper Connector J72 to VK Board Connector J59 (60 Hz)

120 Volts: Jumper Connector J72 to VK Board Connector J66 (50 Hz) OR
Jumper Connector J72 to VK Board Connector J60 (60 Hz)

200 Volts: Jumper Connector J72 to VK Board Connector J67 (50 Hz) OR
Jumper Connector J72 to VK Board Connector J61 (60 Hz)

220 Volts: Jumper Connector J72 to VK Board Connector J68 (50 Hz) OR
Jumper Connector J72 to VK Board Connector J62 (60 Hz)

240 Volts: Jumper Connector J72 to VK Board Connector J69 (50 Hz) OR
Jumper Connector J72 to VK Board Connector J63 (60 Hz)

Fujitsu M2436L1 & L8 Tape Drive Configurator

1.1 Scope

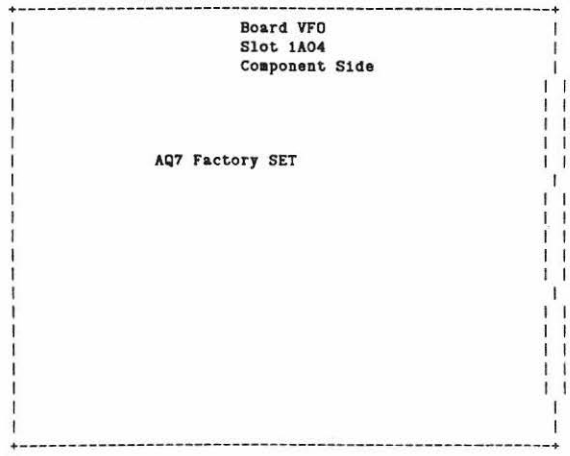
The purpose of this document is to provide configuration information for the Fujitsu M2436LX Tape Drive (CONVEX P/N 207-000006-XXX). Convex part numbers exist for six different drives:

Master	Slave
207-000006-200	207-000006-203
207-000006-210	207-000006-211
207-000006-220	207-000006-221

The following information pertains to the Master Tape Drive with a formatter and an MTU as well as a Slave unit with the MTU only. The jumpers are installed on a 16 pin DIP array. Jumpers with a PLUS sign between them are shorted. When listed without a + sign (or two plus signs) they are open. Not all pins are listed for each array.

1.2 Configuration

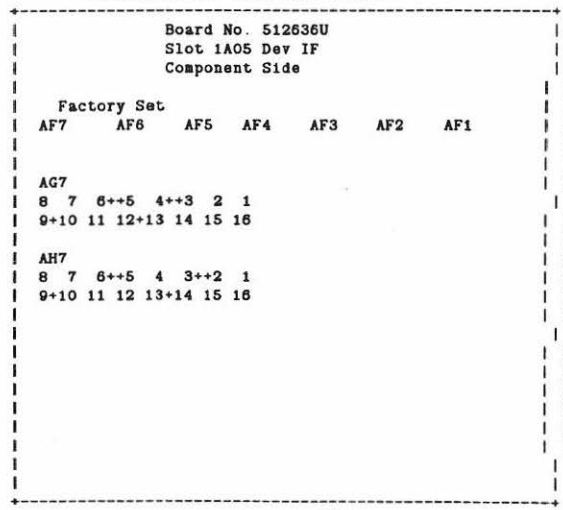
Located in the Formatter Chassis



NOTE: Jumpers listed as FACTORY SET should not be changed.

Fujitsu M2436LX Tape Drive Configurator

Located in the Formatter Chassis



AG7

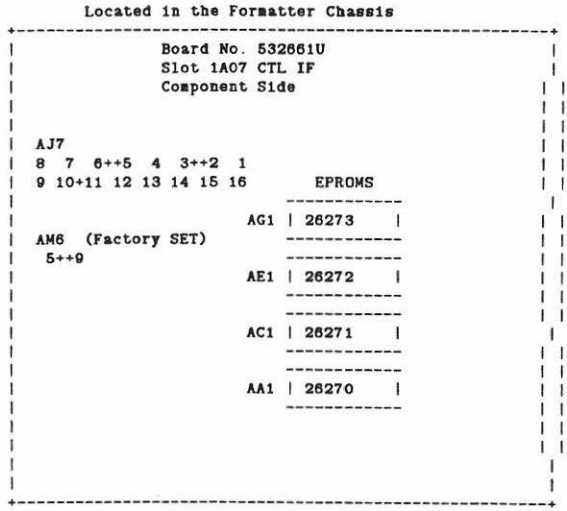
2-3	Disable Retry ID Burst
3-4	Enable Retry ID Burst
5-6	20 Meter Check Enabled
6-7	20 Meter Check Disabled
9-10	Reserved
12-13	Reserved

AH7

2-3	Reserved
5-6	Reserved
9-10	No ARA ID Check/Read
10-11	ARA ID Check/Read
12-13	Disable Seismic Option
13-14	Enable Seismic Option

AF1 through AF7, FACTORY SET

Fujitsu M2436LX Tape Drive Configurator



AJ7

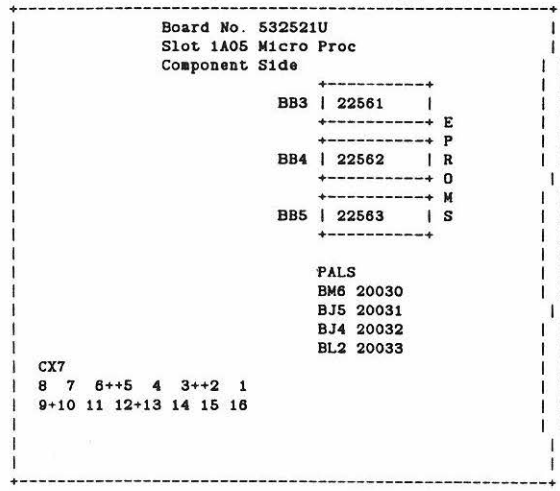
2-3	Enable Comand Extend
3-4	Disable Command Extend
5-6	Disable APR
6-7	Enable APR
9-10	Enable Addr Line 2
10-11	Disable Addr Line 2

AM6

5-9	Factory Set Treq/Traq

Fujitsu M2436LX Tape Drive Configurator

Located in the Mag Tape Station Electronics Chassis

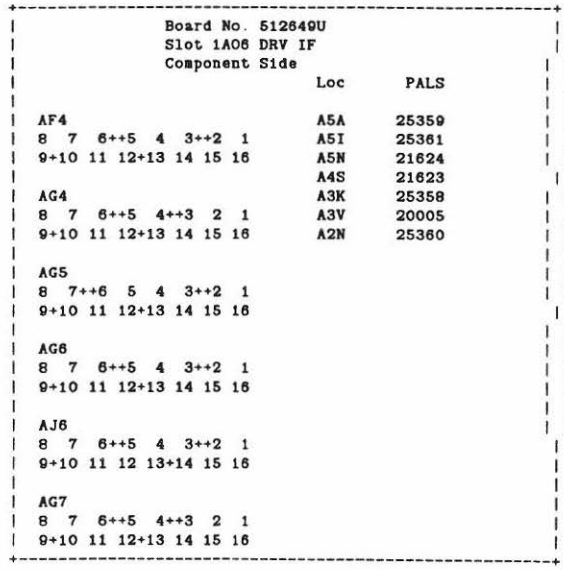


BG7

2-3	Disable Autoload Retry
3-4	Enable Retry/CCW
5-6	Enable 200ips FWD w/LD
6-7	Disable 200ips FWD w/LD
9-10	Disable bt AT Bot
10-11	Enable bt AT BOT
12-13	No Density Sel Panel
13-14	Density Sel Display

Fujitsu M2436LX Tape Drive Configurator

Located in the Mag Tape Station Electronics Chassis



NOTE: See Page 7 for options

AG4, AG5, AG6, and AG7 contain the Tape Drive Unique Serial Number. It is Facotry set and should not be changed.

Fujitsu M2436LX Tape Drive Configurator

Located in the Mag Tape Station Electronics Chassis

Fujitsu M2436LX Tape Drive Configurator

JUMPER Settings

Board	Location	Function		Normal Setting
512649U (MTU)				
	AF4	EC3		02->03
	AF4	EC2		05->06
	AF4	EC1		09->10
	AF4	EC0		12->13
	AG4	TID12	*	12->13
	AG4	NEWF		03->04
	AG4	SKIPF		05->06
	AG4	ENITR		09->10
	AG5	TID7	*	02->03
	AG5	TID6	*	06->07
	AG5	TID5	*	09->10
	AG5	TID4	*	12->13
	AG6	TID11	*	02->03
	AG6	TID10	*	05->06
	AG6	TID9	*	09->10
	AG6	TID8	*	12->13
	AG7	TID3	*	03->04
	AG7	TID2	*	05->06
	AG7	TID1	*	09->10
	AG7	TID0	*	12->13
	AJ6	Not Used		02->03
	AJ6	AGC Step C		05->06
	AJ6	Streaming**		09->10
	AJ6	Dual Dens		13->14

* Tape Unit UNIQUE Manf. Number ** Must be strapped for a 200ips MTU.

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE	APPROVED
A	107098	Initial Release	12/05/90	

ARCHIVE M2150S (150MB) TAPE CONFIGURATOR

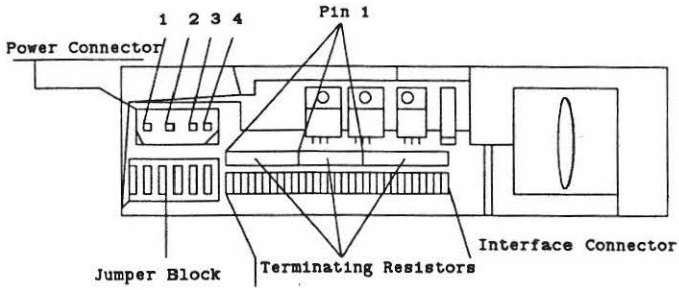
1.1 Scope

The purpose of this document is to provide configuration information for the Archive M2150S tape drive (Convex P/N 207-000009-200).

1.2 POWER and JUMPERS

The power pin connector pin assignments are:

```
Pin 1======> +12 VDC
Pin 2======> +12 Return
Pin 3======> +5  Return
Pin 4======> +5  VDC
```



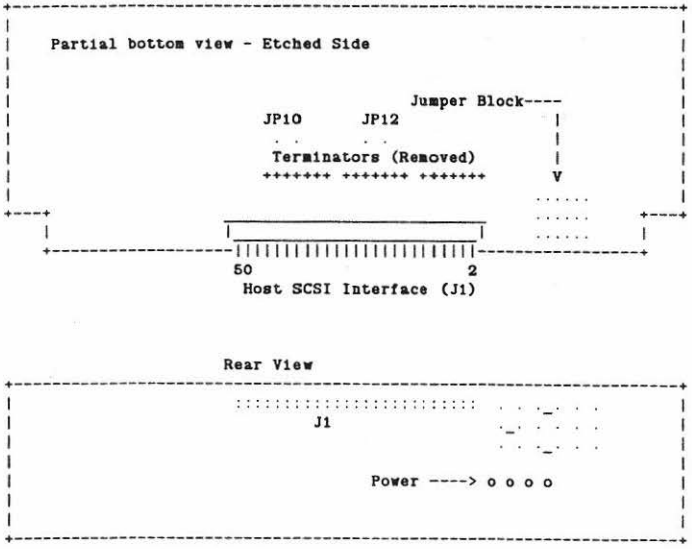

```
----------------------
|  *  *  *  *  *  *  |
|  *  *  *  *  *  *  |
|  *  *  *  *  *  *  |
----------------------

PARITY        SCSIID

    BLOCK SIZE
```

Archive 150MB SPU Cartridge Tape Viper Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the QIC150 Cartridge Tape (Convex P/N 207-000009-201).

1.2 Disk Drive Configuration



Jumper Settings (Two Steps)

First Step:

Hold the tape unit so the rear view is shown as indicated on the first page.

The jumper block is laid out as :

```
                              .ID0.   .CF0.   .PAR.
                              .ID1.   .CF1.   .Dia.
                              .ID2.   .CF2.   .Unu.
```

To configure for No Parity, 16K Buffer, Unit ID = 2.

Unu	Unused	out
Par	Parity	out
Dia	Diagnostic	out
CF2		IN
CF1		out
CF0		IN
ID2		out
ID1		IN
ID0		out

Terminators are normally removed from this device on the SCSI bus. If this unit is installed without any other device on the same SCSI bus, install the three terminators.

Second Step:

1) JP12 = out
2) JP10 = out

JP12 and JP10 are both inside the motherboard. They can be checked by measuring the continuity on the etched side of the motherboard using any ohm meter.

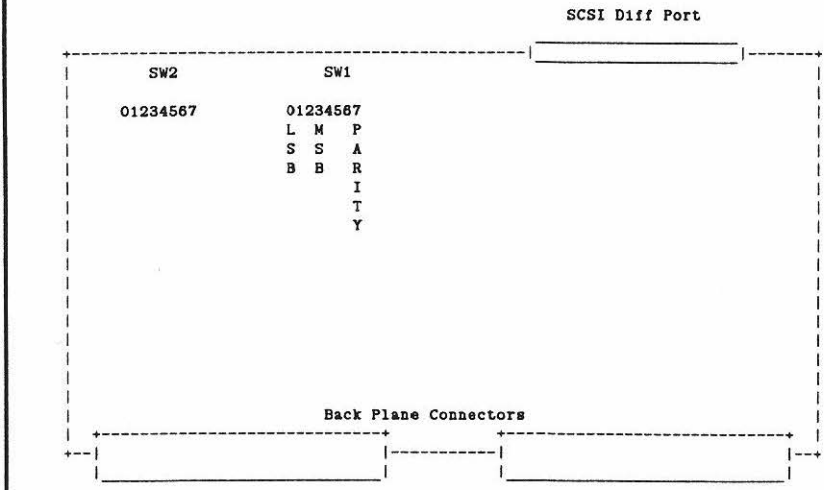
Fujitsu 2481B 3480 Compatible Tape Subsystem

1.1 Scope

The purpose of this document is to provide configuration information for the Fujitsu 2481B Tape Subsystem.

The Tape subsystem consist of two units minimum. At least one tape drive, either PN 207-000015-200 or PN 207-000015-201, and one formatter PN 207-000015-008 or PN 207-000015-024. To configure the subsystem extend the formatter and set the switches on the DI board. It is the inner most board in the slot marked SI/DI. There are no switches to be set on the Tape Unit.

1.2 Tape Subsystem Configuration



Normal Usage: Base Address of 1st controller in the SCSI BUS is normally "0".

The Interrupt Level determined by SW2 is always deactivated.

1.2 Tape Subsystem Configuration

Jumper & Switch Setting Options:

NOTE: The switch banks SW1 and SW2 indicate "ON" in the deactivated or UP position. Activated or "OFF" is in the DOWN position. Convex uses Parity, so, switch "7", the Parity switch, the eighth switch of SW1, must always be activated, ie., set to "OFF", the down position.

SCSI DEVICE ADDRESS SWITCH SETTINGS

BASE ADDRESS	*0*	*1*	*2*	*3*	*7*
0	ON	ON	ON	ON	OFF
1	OFF	ON	ON	ON	OFF
2	ON	OFF	ON	ON	OFF
3	OFF	OFF	ON	ON	OFF

NOTE:

Switches 4-6 on SW1 are used for trouble shooting. They set an RS232 address to allow a terminal connection. Refer to CE manual 900-000444-001.

The AC power for the Formatter can be set to 110VAC or 230VAC. To set the power supply it is necessary to open the Formatter and move a jumper in the power supply. To execute this maneuver properly refer to the procedure defined in the CTU Service Guide, Convex PN 081-003330-000.

The Tape Drive Unit has a user interface for setting address of the unit and other data. Refer to the CE manual 900-000443-001 or the Convex Service Guide, Convex PN 081-003330-000.

In configuring the system for high performance, it is recommended that no more than two tape drives be attached to a formatter with no more than two formatters per host adapter.

For lower performance up to four formatters with four tape drives per formatter may be installed on one host adapter.

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE	APPROVED
A	106507	Initial Rel	06/20/90	
B	106698	Switch Change	08/27/90	

Archive DAT drive configurator

1.1 Scope

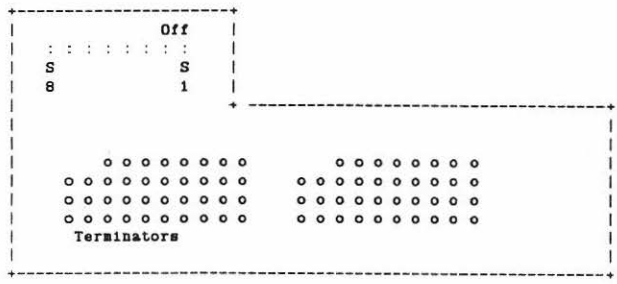
The purpose of this document is to provide configuration information for the Archive DAT drive (CONVEX P/N 207-000017-200).

1.2 Configuration

Place the drive right side up with the back toward you. There is an "L" shaped hole in the top cover.

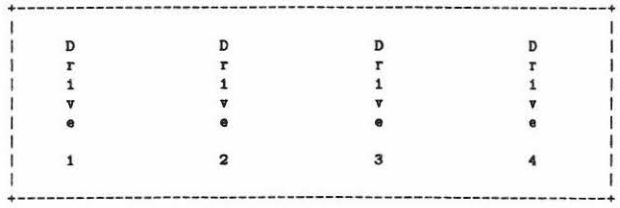
1.2.1 Internal Terminators

Remove all internal terminators from all drives.



1.2.2 Switch settings

Switches S1, S2, and S3 control the SCSI device address. They should be set according to where in the chassis the drive is going. The following diagram shows drive number from the front of the chassis.



S1	S2	S3	SCSI Device Address	Drive # in chassis
off	off	off	0	1
on	off	off	1	2
off	on	off	2	3
on	on	off	3	4

Following are the rest of the switches and their meaning and settings:

Switch:	S4	S5	S6	S7	S8
Setting:	ON	ON	OFF	OFF	ON
Meaning:	SCSI-2	Parity	reserve	reserve	Self-Test

1.2.3 Cable Termination

There are two possible internal SCSI cables. Both are flat 50 pin ribbon cables with connectors for the four drives. For cable P/N 601-500045-200, the terminator is built onto the cable. Most subsystems will have this cable, and will require no further action.

If SCSI cable number 601-500030-200 is used, terminator P/N 109-000007-001 is required. Attach the terminator on the connector for the fourth drive. Be sure pin one on the cable (signified by the arrow on the connector) goes to pin one on the terminator (terminator pins are numbered on the male side). If there are four drives in the chassis, the terminator will plug into the back of the fourth drive.

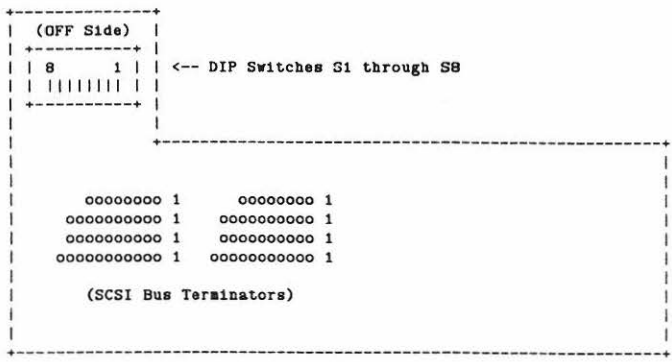
Archive Model 4520NT DAT Drive Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Archive Model 4520NT DAT Drive (Convex Part Number 207-000018-200) as used in the Convex SPARC SPU Workstation.

1.2 Configuration

The illustration, below, represents the DIP Switch and SCSI Bus Terminator locations as viewed from the top, left rear of the unit.



- **Termination**

As used in Convex systems, all eight (8) of the terminators should be removed. Refer to the Archive *Python DDS DAT Tape Drive Product Description* Manual for other termination options.

1.2 Configuration (continued)

• Switch Settings

DIP Switch options and normal Convex settings are defined below. Refer to the Archive *Python DDS DAT Tape Drive Product Description* Manual for other Switch Setting options.

Switch	Setting	Description
S1 S2 S3	ON OFF ON	Switches S1, S2, and S3 combine to define the unit's SCSI Bus Address. S1 is least significant. Device Address 5 (S1 and S3 ON; S2 OFF, as shown) is the normal Convex setting in the SPARC SPU Workstation application.
S4	ON OFF	(*Normal Setting*) Default to SCSI-2 Mode on power-up. Default to SCSI-1 Mode on power-up.
S5	ON OFF	(*Normal Setting*) Parity checking enabled. Parity checking disabled.
S6	OFF ON	(*Normal Setting*) Reserved. Reserved (not used).
S7	OFF ON	(*Normal Setting*) Reserved. Reserved (not used).
S8	ON OFF	(*Normal Setting*) Power-on self test enabled. Power-on self test disabled.

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE
A	108906	Initial release.	04/22/92

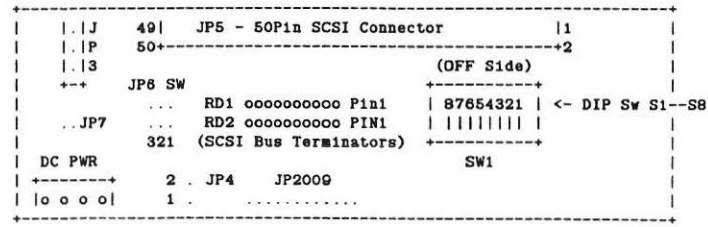
Archive Model 4320NT DAT Drive Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Archive Model 4320NT DAT Drive (Convex Part Number 207-000027-200) as used in the Convex SPARC SPU Workstation.

1.2 Configuration

The illustration, below, represents the DIP Switch and SCSI Bus Terminator locations as viewed from the rear of the unit.



- **Termination**

As used in the Convex SPU, the two terminators, RD1 and RD2 should be removed. Refer to the Archive *Python DDS DAT Tape Drive Product Description* Manual for other termination options.

- **Jumpers**

JP3 = OPEN JP4 = OPEN JP5 = SCSIbus Connnector JP6 = OPEN

JP7 = OPENP2009 = OPEN

NOTE: OPEN indicates no jumper installed

1.1 Configuration (continued)

- **Switch Settings**

DIP Switch options and normal Convex settings are defined below. Refer to the Archive *Python DDS DAT Tape Drive Product Description* Manual for other Switch Setting options.

Switch	Setting	Description
S1 S2 S3	OFF OFF ON	Switches S1, S2, and S3 combine to define the unit's SCSI Bus Address. S1 is least significant. Device Address 4 (S1 and S2 OFF; S3 ON, as shown) is the normal Convex setting in the *CompuAdd* SPARC SPU Workstation (Convex Part Number 217-000004-200) application. In the *Opus* SPARC SPU Workstation (Convex Part Number 217-000003-200) application, the normal Convex setting is Device Address 5 (S1 and S3 ON; S2 OFF).
S4	ON OFF	(*Normal Setting*) Default to SCSI-2 Mode on power-up. Default to SCSI-1 Mode on power-up.
S5	ON OFF	(*Normal Setting*) Parity checking enabled. Parity checking disabled.
S6	OFF ON	(*Normal Setting*) Reserved. Reserved (not used).
S7	OFF ON	(*Normal Setting*) Reserved. Reserved (not used).
S8	ON OFF	(*Normal Setting*) Power-on self test enabled. Power-on self test disabled.

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE
A	109477	Initial release.	11/2/92

CIT-101e SYSTEM CONSOLE CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the CIT-101e System Console (Convex P/N 210-000003-200).

1.2 Configuration Options

Apply AC to terminal, power on, and enter SETUP MODE:

1. Setup A - Leave as is received from factory.

2. Setup B - Registers = 0101 0011 0100 0011 0000
   (Transmit = 9600 and Receive = 9600)

3. Setup C - Registers = 1001 0101 0000 1010 0001 0

4. Setup D - Registers = 0010 1010 0011 0
   (Transmit = 9600 and Receive = 9600)

5. Once Setup is complete, do a ^s (CTRL s).
   The setup will be stored in the Terminal's memory.

CIT-101XL SYSTEM CONSOLE CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the CIT-101XL System Console (Convex P/N 210-000006-200).

1.2 Configuration

Apply AC Power to the 101XL and enter set-up mode by depressing and holding the *Shift* key while depressing and releasing the *SET-UP* key. This will result in a reverse video display at the bottom (line 25) of the screen as shown below and the *Comms* category will be highlighted:

Emulation Mode ANSI:	Comms	Display	Keyboard	Aux	Emulation	Tabs

At this time, the *down arrow* (↓) will enter into the first of the *Comms* options, the *right arrow* (→) will select the *Display* category, the *left arrow* (←) will select the *Tabs* category, and the *up arrow* (↑) will enter into the *Tabs* category. Therefore, use the '↓' or '↑' to move from one category to the next, the '→' or '←' to move from option to option within a displayed category, and the *space bar* to toggle and select option parameters. At the display shown above, the '↓' will obtain the *Comms 1* display (see below). The following displays show the set-up options that should be selected.

NOTE: An asterisk (*) signifies the option is left to user's choice.

Comms 1:	Speed 9600	Parity None	Data 8	Stop Bits 1	Protocol Xon

Comms 2:	Online	Mode FDX	RCV XOFF Process	Monitor Off

Display 1:	Screen 80	Freq 60HZ	Cursor *

Display 2:	Scroll *	Form Feed LF	CRT Saver 20

Display 3:	25 Rows & Labels

...continued on next page

...continued from previous page

Display 4:	Width Change Erase	RH of DW Erase	Erase Extent Page	
Display 5:	Tab Motion Direct	Insert Line Blank		
Display 6:	G0 Map US	G1 Map US		
Keyboard 1:	Click *	Repeat On	Margin Bell *	Normal CSR Keys
Keyboard 2:	Autowrap Off	New Line Off	Scroll Key VT100	
Keyboard 3:	Numeric Numpad	Decimal Numpad + PF's	Cntl Q/S Are Data	
Aux 1:	Speed 9600	Parity None	Data 8	Receive Xoff Process	Trans Xoff On
Aux 2:	Page Term None	Print Ext Screen		
Aux 3:	Fill After CR	Print Non Fill On	Fill Cnt 00	
Aux 4:	Print Normal			
Emul:	Mode VT100	Identify VT100	Keyboard Language US	

Tabs: As Required (Default is factory setting).

1.3 Miscellaneous Command Sequences:

- ^s (Ctrl s) while in set-up will store present configuration in memory.
- ^r (Ctrl r) while in set-up will restore former configuration from memory.
- *Shift, SET-UP* will cause an exit from set-up mode.

NCD X-terminal Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the NCD X-terminal (CONVEX P/N 210-000008-200). The board should come correctly configured.

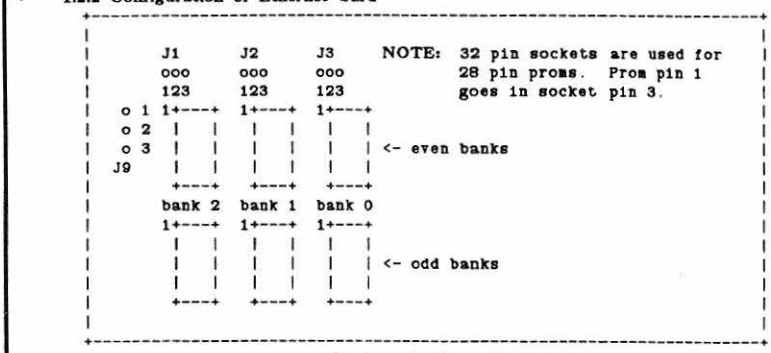
1.2 Ethernet Card

Following tells how to check the settings on the ethernet board.

1.2.1 Removing the Ethernet Card

Remove the two screws in the back of the base holding the ethernet card in place. Place a screwdriver in the slot at the bottom of the base and remove the ethernet card. Hold the card with the outside edge on the right.

1.2.2 Configuration of Ethernet Card



Output side

Set jumpers to match proms

Jumper #	Pins	Meaning
J1, J2, J3	1,2	128 Kbit & 256 Kbit proms
	2,3	512 Kbit & 1 Mbit proms
J9	1,2	170 ns proms
	2,3	250 ns proms

Note: should be set to match prom label
Sockets bank 2 and bank 1 should be empty. Socket bank 0 should have small proms in the bottom of the socket labeled V2.2 B0E (even) and V2.2 B00 (odd).

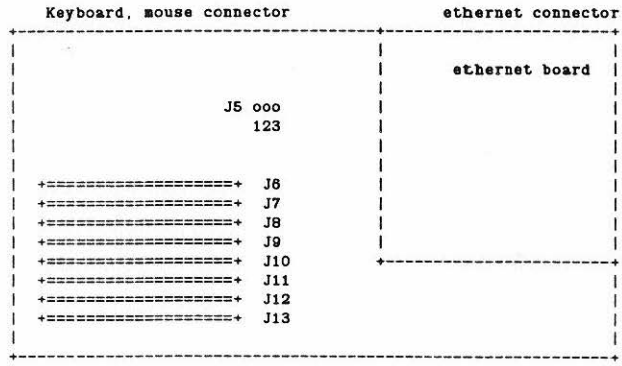
Replace the ethernet card and screws. Set the push switch on the outside edge of the card to THIN or TRANSCEIVER depending on where the ethernet cable attaches.

1.3 Main PCB

1.3.1 Removing Main PCB

Place the base upside down, and remove the two screws on the front of the base. Remove the bottom with the main pc board attached. Hold the board with the back away from you. If the ethernet board is still attached, you will see it in the upper right.

1.3.2 Configuration of Main PCB



Jumper	Set	Pins	Description
J5	yes	1,2	68705
		2,3	6805

Sockets J7, J9, J11 and J13 should all have boards installed. Each board should have 8 chips. This is the 4 Mbyte memory.

DOCUMENT REVISION HISTORY

REV.	ECN NO.	DESCRIPTION	DATE	APPROVED
A	106921	Initial release	10/16/90	

Link Model MC5 ASCII Terminal Configuration Document

1.1 Scope

The purpose of this document is to provide configuration information for the Link Model MC5 ASCII Terminal, Convex Part Numbers 210-000009-200 (110VAC, 60Hz) and 210-000009-201 (100-240VAC, 50/60Hz).

For additional information beyond the scope of this document, refer to:

Convex Part Number 900-000071-001 - *Link MC5 User's Guide*
Convex Part Number 900-000072-001 - *Link MC5 Quick Reference Guide*
Convex Part Number 900-000073-001 - *Link MC5 Setup Guide*

1.2 General Information

A. Apply A.C. Power to the MC5. Then, enter Setup Mode by depressing and releasing the *SetUp* key while holding the *Shift* key down. Upon initial entry into Setup Mode, the top line of the display will be, "Link MC5 - General Setup - [Date] - Ver X.XX".

B. To proceed through the Setup Mode options, use the *Function Keys* (F1-F9) to select the desired category, use the *Up* and *Down* arrow keys (i.e., ↑ and ↓) to select the desired parameter within a category, and use the *Left* and *Right* arrow keys (i.e., ← and →) to select the desired option within the currently selected parameter.

C. To *Save* all the current parameter options, depress and hold the *Shift* key while depressing and releasing the *S* key. When this is done, the message *Save Complete* will appear at the center of the display to indicate the operation has been performed. If the *Save* operation is not performed, any parameters changed since the last *Save* operation will be lost if the MC5 loses A.C. Power or is powered off.

D. To recall the Manufacturer's Factory Default Parameters, depress and hold the *Shift* key while depressing and releasing the *D* key. To recall the Parameters that were last saved (reference C, above), depress and hold the *Shift* key while depressing and releasing the *R* key.

E. As used by Convex, the MC5 communicates with the host system via the *Main* Port and with the Serial Printer via the *Aux* Port, both at the rear of the terminal. An alternative host system communication method (not used by Convex) is to communicate with the host system via the *Aux* Port at the rear of the terminal. To select either the *Main* or *Aux* Port and to alternate back and forth between them, depress and hold the *Shift* key while depressing and releasing the *P* key. Current connection information is displayed at the bottom-center of the screen when in Setup Mode.

The Link MC5 Setup Options and the normal Convex settings are shown on the following pages.

1.3 Configuration Information

The Setup Categories and the *Function Keys* that select them are:

F1 = General	F4 = Keyboard	F7 = Tabs
F2 = Communication	F5 = ANSI	F8 = Answerback
F3 = Display	F6 = Function Keys	F9 = Exit

Notes:

- If the "Convex Setting" is other than the Manufacturer's Factory Default Configuration, a comment in the "Other Options" column is used to point out the factory default.
- If the "Convex Setting" is shown as two (2) asterisks (**), the option to be selected is left totally up to the operator.

- **General (F1) Category:**

Parameter	Convex Setting	Other Options
Emulation	VT100	VT220-7 (*Factory Default*), VT220-8, VT52, Link 125, Wyse 60, Wyse 50+, ADM3A, ADM5, TVI955, TVI950, TVI925, TVI910+, PC Term, Adds VP, Adds 60.
Enhancements	Off	On.
Virtual Terminal	Off	On.
Scroll Style	Jump	Smooth-8, Smooth-4, Smooth-2, Smooth-1.
Auto Scroll	On	Off.
Auto Wrap	On	Off.
Received CR	CR	CRLF.
AutoPage	Off	On.
Warning Bell	**	On (*Factory Default*), Off.
Margin Bell	**	On, Off (*Factory Default*).
Bell Sound	**	1 (*Factory Default*), 2, 3.
Block Terminator	US/CR	CRLF/ETX.
Send ACK	Off	On.
Monitor Mode	Off	On.

1.3 Configuration Information (*continued*)

- **Communication (F2) Category:**

Parameter	Convex Setting	Other Options
Main Baud	9600	50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 9600, 19200, 38400.
Main Data/Parity	8/None	7/None, 7/Spce, 7/Odd, 7/Even, 7/Mark.
Main Stop bits	1	2.
Ignore 8th Bit	Off	On.
Main Rcv Hndsk	XON/XOFF	None, DTR, DTR/XOFF, XPC, DTR/XPC.
Main Xmt Hndsk	None	XON/XOFF.
Comm Mode	Full Duplex	Block, Half Duplex, Half Block, Local.
Disconnect	2 Sec	60 msec.
Aux Baud	9600	50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2400, 4800, 9600, 19200, 38400.
Aux Data/Parity	8/None	7/None, 7/Spce, 7/Odd, 7/Even, 7/Mark.
Aux Stop bits	1	2.
Aux Rcv Hndsk	XON/XOFF	None, DTR, DTR/XOFF, XPC, DTR/XPC.
Aux Xmt Hndsk	None	XON/XOFF.
Aux Port	RS232	RS232/RS422.
Aux Interface	RS232	(RS232 is the only option)
Printer	Serial	Parallel (*Factory Default*).

- **Display (F3) Category:**

Parameter	Convex Setting	Other Options
Columns	80	132, Econ-80.
80/132 Clear	On	Off.
Lines	24	25, 42, 43.
Pages	1 x Lines	2 x Lines, 4 x Lines, •.
Status Line	Ext	On, Off.
Cursor Style	••	Blink Block (*Factory Default*), Steady Block, Blink Line, Steady Line.
Cursor	On	Off.
Screen Save	15 Min	Off, 30 Min, 60 Min.
Background	Dark	Light.
Attributes	Char	Line, Page.
Wprt Intensity	Dim	Normal, Blank.

Display (F3) Category continued on next page...

1.3 Configuration Information (*continued*)

- **Display (F3) Category** (*. . . continued from previous page*):

Parameter	Convex Setting	Other Options
Wprt Reverse	Off	On.
Wprt Underline	Off	On.
Refresh Rate	60Hz	78 Hz.
Pound Char	US	British.
Auto Font Load	On	Off.

- **Keyboard (F4) Category:**

Parameter	Convex Setting	Other Options
Key Click	••	On (*Factory Default*), Off.
Key Repeat	On	Off.
Key Lock	Caps	Reverse, Shift.
Return Key	CR	CRLF.
Enter Key	CR	CRLF, +.
Back Space Key	BS/DEL	DEL/BS (*Factory Default*).
Funct Key	Hold	Funct (*Factory Default*), Meta, Compose.
Break	250 ms	170 ms, 500 ms, Off.
Xmt Limit	None	60 cps, 150 cps.
FKey Xmt Limit	None	60 cps, 150 cps.
Key Code	ASCII	Scan.
Language	US	UK, Norwgn/Danish, German, French, Spanish, Swedish/Finnish, Italian, Swiss(French), Swiss(German), Dutch.

- **ANSI (F5) Category:**

Parameter	Convex Setting	Other Options
FKey Lock	Off	On.
Feature Lock	Off	On.
KeyPad	Numeric	Application.
Cursor Keys	Normal	Application.
Xfer Term	EOS	Cursor.
Char Mode	Multinational	(Multinational is the only option)

ANSI (F5) Category continued on next page...

1.3 Configuration Information (*continued*)

- **ANSI (F5) Category** (*. . . continued from previous page*):

Parameter	Convex Setting	Other Options
Keys	Typewriter	(Typewriter is the only option)
VT100 ID	VT100	VT101, VT102, VT220.
Print	National	Multinational, Line Drawing.
Send	All	Eraseable.
Send Area	Screen	Scroll Rgn.
Print Area	Screen	Scroll Rgn.
Send Term	None	FF.
Print Term	None	FF.
Print Mode	Normal	Auto, Ctrl, Bi-Dir.
Auto Answerback	Off	On.

- **Function Keys (F6) Category:**

Parameter	Convex Setting	Other Options

Function Key usage may be determined by the operator, if desired.

- **Tabs (F7) Category:**

Parameter	Convex Setting	Other Options

Tab settings may be specified by the operator, if desired.

- **Answerback (F8) Category:**

Parameter	Convex Setting	Other Options
Answerback	(Not Used)	(Always left blank)
Conceal	No	(Always No)

1.4 Setup Conclusion

Once all Setup options have been entered and verified, *Save* the selections to MC5 memory by depressing and releasing the *S* key while depressing and holding the *Shift* key. When this is done, the message *Save Complete* will appear at the center of the display to indicate the operation has been performed. If the *Save* operation is not performed, any parameters changed since the last *Save* operation will be lost if the MC5 loses A.C. Power or is powered off.

Exit the Setup procedure by depressing and releasing *Function Key F9*.

2.0 Printer Operation

A. Screen Print: To print all of the data presently on the screen, depress and release the *Print Send* key while depressing and holding the *Shift* key.

B. Copy Print: To print all of the data being received and displayed by the terminal, depress and release the *Print Send* key while depressing and holding both the *Ctrl* and *Shift* keys.

3.0 AC Input Power

The 210-000009-201 unit has an auto-ranging power supply (100-240VAC, 50/60Hz). The AC Power Cable that comes with the unit is for Domestic (110VAC, 60Hz) use. Use the appropriate AC Input Power Cable for other applications.

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE	APPROVED
A	106695	NCR 2900 Initial Release.	09/27/90	
B	107100	NCR 2900 Release.	12/12/90	
C	108223	Initial release of the Link MC5 which replaced the NCR 2900. The NCR 2900 was never used, but was to have replaced the C.Itoh 101XL and the C.Itoh 50+.	10/16/91	
D	109402	Add reference to the 100-240VAC, 50/60Hz unit (Convex Part Number 210-000009-201).	09/22/92	

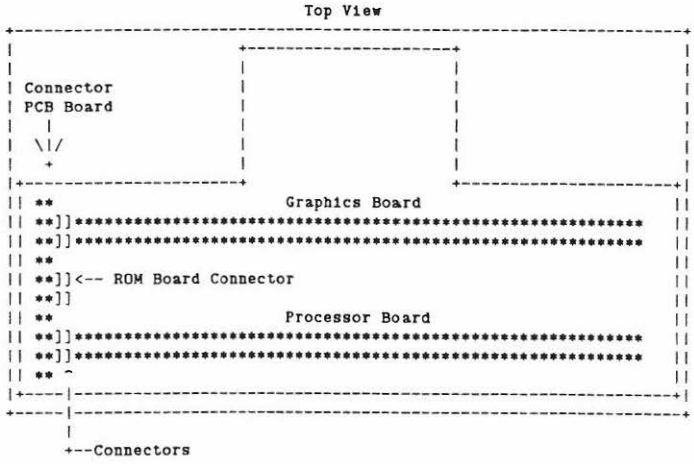
Tektronix XP29 Color X-terminal Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Tektronix XP29 Color X-terminal (CONVEX P/N 210-000013-200). The board should come correctly configured.

1.2 Removal of logic unit casing

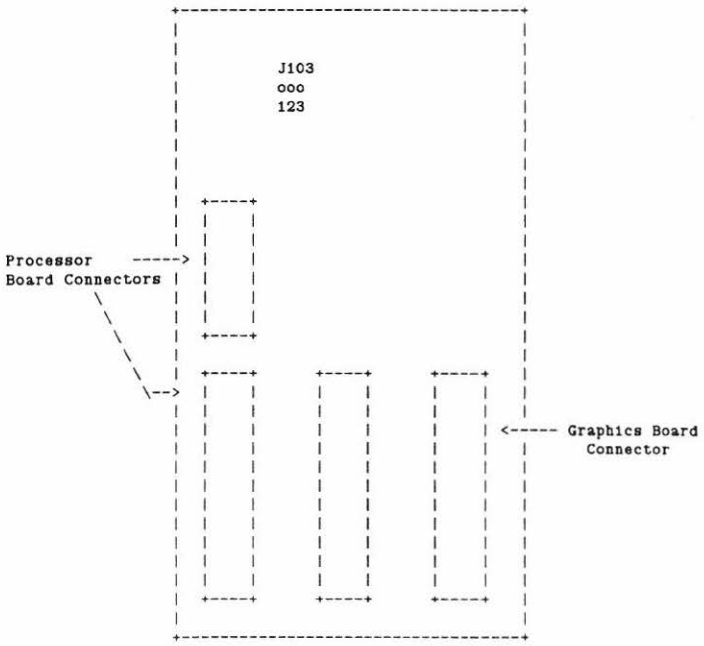
Remove the metal casing by unscrewing the two screws on either side of the logic unit and slid the casing up. The logic unit should look something like the following diagram.



1.3 Connector PCB board

The connector PCB board should look like the following diagram:

Connector PCB Board



Make sure that J103 pins 2 and 3 are jumpered.

1.3 Processor PCB Board

1.3.1 Removing Processor PCB Board

Remove the processor board by pulling it directly away from the connector board. The processor board should contain 4 Megabytes of RAM.

1.4 Graphics PCB Board

1.4.1 Removing Graphics PCB Board

Remove the graphics board by pulling it directly away from the connector board. The graphics board should contain a memory upgrade daughter card.

1.5 Memory Upgrade Daughter Card

1.5.1 Removing Memory Upgrade Daughter Card

Remove the memory daughter card by pushing the fasteners through the graphics board and pulling the memory card out of the connector. There should be a total of 5 Megabytes of RAM and an additional 2 Megabytes of video RAM.

DOCUMENT REVISIN HISTORY

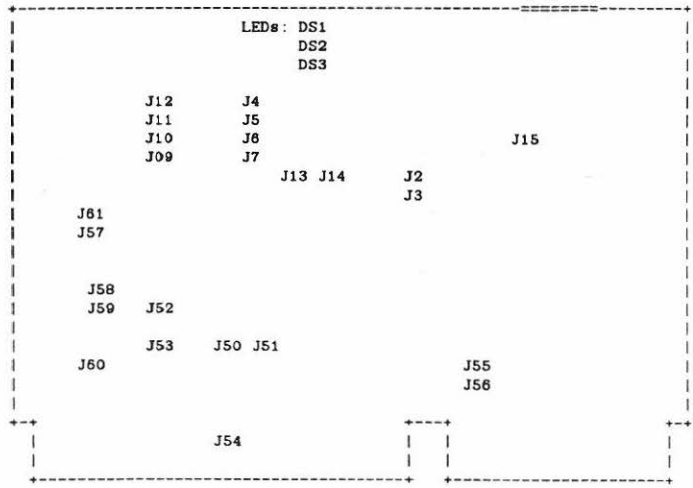
REV.	ECN NO.	DESCRIPTION	DATE	APPROVED
A	7779	Initial release		

EXCELAN ETHERNET CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Excelan Ethernet Communications Controller (Convex P/N 211-000101-200).

1.2 Controller Configuration



Standard Convex Address per Multibus:

First Controller	LAN-001	04c0	Interrupt Level 1
Second Controller	LAN-001	05c0	Interrupt Level X (X= Available)

EXCELAN ETHERNET CONTROLLER CONFIGURATOR (continued)

Jumper	Function (w/jumper installed)	Setting	Setting
J2	Reserved	Installed	same
J3	Reserved	Absent	|
J4	Reserved	Absent	|
J5	Reserved	Absent	|
J6	Boot from Network	Absent	|
J7	256k Memory	Absent	|
J9	Reserved	Absent	|
J10	Reserved	Installed	|
J11	Disable SQE Check	Installed	|
J12	Reserved	Absent	|
J13	Ground IRO from SBX	Absent	|
J14	Ground IRO from SBX	Absent	|
J15	Enable Watchdog timer	Absent	|
J50	Enable 16-Bit Address	Installed	|
J51	Enable 8-Bit Address	Absent	same
J52	Bits 1-7 of I/O Address	0000011 (04C0)	00000011
J53	Bits 8-15 of I/O Addr.	00100000	10100000 (05C0)
J54	*Interrupt Level 0-7	******** SEE NOTE	********
J55	27182 User EPROMs	Absent	|
J56	27256 User EPROMs	Absent	|
J57	Enable BPRO Output	Absent	|
J58	Enable response to CBRQ	Absent	|
J59	Respond as if CBRQ is always active	Installed	|
J60	Drive CCLK and BClk lines	Absent	|
J61	No overlapped DMA	Installed	same

NOTE: Interrupt Levels

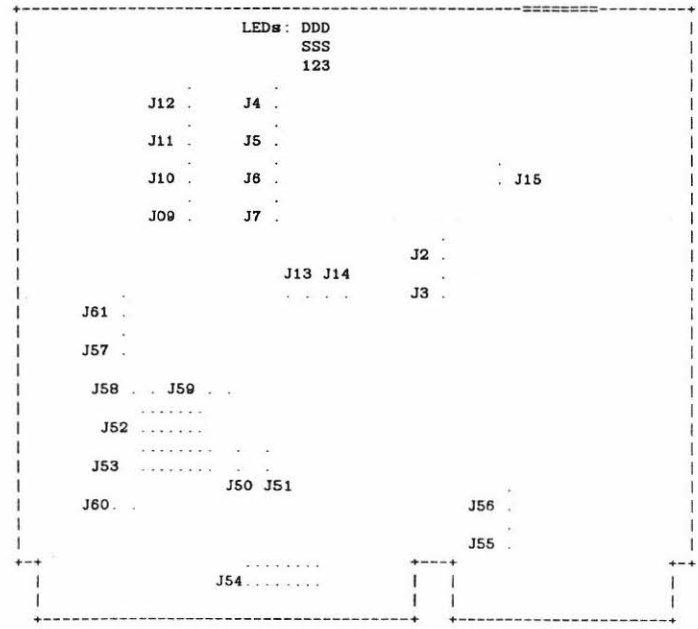
0----> 00000001	4----> 00010000
1----> 00000010	5----> 00100000
2----> 00000100	6----> 01000000
3----> 00001000	7----> 10000000

Excelan EXOS 201-M4 Communications Controller Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Excelan Ethernet communications controller(Convex P/N 211-000102-200).

1.2 Controller Configuration



Jumper	Function(jumper installed)	Setting	
J2	Reserved	Installed	
J3	Reserved	Absent	
J4	Mem Size = 512K	Installed	
J5	Reserved	Absent	
J6	Boot from Network	Absent	
J7	256k Memory	Absent	
J9	Reserved	Absent	
J10	Reserved	Installed	
J11	Disable SQE check	Installed	
J12	Reserved	Absent	
J13	Ground IRO from SBX	Absent	
J14	Ground IRO from SBX	Absent	
J15	Enable Watchdog timer	Absent	
J50	Enable 16 Bit Addr.	Installed	
J51	Enable 8 Bit Addr.	Absent	
J52	Bits 1-7 of I/O Addr.	0000011	(I/O Addr=04C0)
J53	Bits 8-15 of I/O Addr.	00100000	
J54	Interrupt Level 0-7	0000010	(Level 1)
J55	27182 user EPROMs	Absent	
J56	27256 user EPROMs	Absent	
J57	Enable BPRO output	Absent	
J58	Enable Response to CBRQ	Absent	
J59	Respond as if CBRQ always act.	Installed	
J60	Drive CCLK and BCLK lines	Absent	
J61	No Overlapped DMA	Installed	

IKON NFS HYPERCHANNEL CONTROLLER CONFIGURATOR

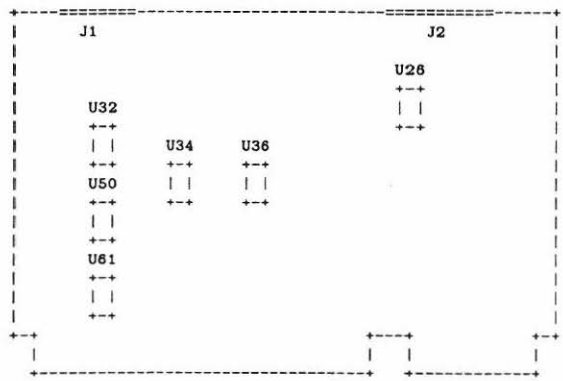
1.1 Scope

The purpose of this document is to provide configuration information for the IKON NFS Hyperchannel Controller (Convex P/N 211-000103-200).

Standard board addresses are given below. However, the interupt level selected must not conflict with the other controllers in the multibus.

Maximum cable length is 50 feet (shielded or unshielded round cable with twisted pairs).

1.2 Configuration



Standard Convex Addresses per Multibus:

First Controller	LAN-002	05C0
Second Controller	LAN-002	05E0

Switch Settings

Location	Function	Normal Setting	Setting For 2nd Controller
U26-1	N/A	OFF	SAME AS FOR 1st
U26-2	ENA LOOPBACK	OFF	"
U26-3	BUSY H HIGH	ON	"
U26-4	BUSY H LOW	OFF	"
U26-5	P-I/O BYTE SWAP	OFF	"
U26-6	DMA BYTE SWAP	ON	"
U26-7	REG BYTE SWAP	OFF	"
U26-8	N/A	OFF	"
U32-1	ADRF	OFF	"
U32-2	ADRE	OFF	"
U32-3	ADRD	OFF	"
U32-4	ADRC	OFF	"
U32-5	ADRB	OFF	"
U32-6	ADRA	ON	"
U32-7	ADR9	OFF	"
U32-8	ADR8	ON	"
U34-1	ADR7	ON	"
U34-2	ADR6	ON	"
U34-3	ADR5	OFF	(ON)
U34-4	N/A	OFF	SAME AS FOR 1st
U34-5	16/20/24 BIT AD	ON	"
U34-6	8 BIT REG ADD	OFF	"
U34-7	20/24 BIT REG	OFF	"
U34-8	8/16 BIT REG AD	ON	"
U36-1	ADR17	OFF	"
U36-2	ADR16	OFF	"
U36-3	ADR15	OFF	"
U36-4	ADR14	OFF	"
U36-5	ADR13	OFF	"
U36-6	ADR12	OFF	"
U36-7	ADR11	OFF	"
U36-8	ADR10	OFF	"

Switch Settings (continued)

Location	Function	Normal Setting
U50-1	MEM MAP READ	OFF
U50-2	MEM MAP WRITE	OFF
U50-3	I/O MAP READ	ON
U50-4	I/O MAP WRITE	ON
U50-5	INH1/ DRIVEN	OFF
U50-6	SERIAL BUS ARB	OFF
U50-7	CBRQ/ DUR REQ	OFF
U50-8	CBRQ/ ON	OFF
U61-1	INT0	
U61-2	INT1	
U61-3	INT2	
U61-4	INT3	
U61-5	INT4	
U61-6	INT5	
U61-7	INT6	
U61-8	INT7	

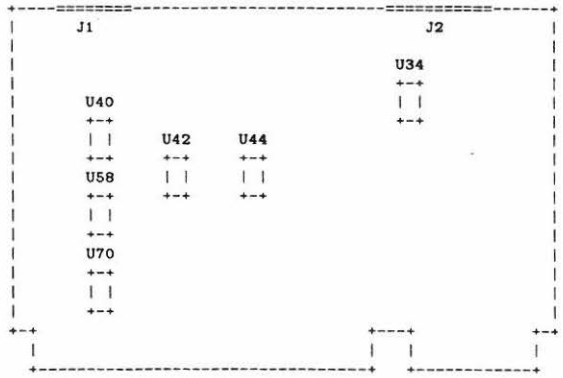
NOTE: SET ONLY ONE INTERRUPT SWITCH ON AND ALL THE REST OFF. SET INTERRUPT LEVEL TO A VALUE THAT DOES NOT CONFLICT WITH INTERRUPT LEVELS OF OTHER BOARDS LOCATED IN THE SAME MULTIBUS CHASSIS.

IKON DR11-W EMULATOR CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the IKON DR11-W Emulator controller (Convex P/N 211-000104-200). This board is used in several applications; first as a graphics terminal interface and, secondly, as a general purpose DMA interface between machines. Standard board addresses are given below. However, the interupt level must be selected so as not to conflict with the other controllers in the multibus. *Maximum* cable length is 50 feet (flat cable with ground plane).

1.2 Configuration



Standard Convex Addresses per Multibus:

First Controller	GPI-001	05C0
Second Controller	GPI-002	05E0

IKON DR-11W EMULATOR CONTROLLER CONFIGURATOR (continued)

Switch Settings

Location	Function	Normal Setting	Setting For 2nd Controller
U34-1	N/A	OFF	SAME AS FOR 1st
U34-2	FORCE AOO OFF	ON	"
U34-3	BUSY H HIGH	OFF	"
U34-4	BUSY H LOW	ON	"
U34-5	P-I/O BYTE SWAP	ON	"
U34-6	DMA BYTE SWAP	ON	"
U34-7	ENA PARITY FLAG	ON	"
U34-8	N/A	OFF	"
U42-1	ADR7	ON	"
U42-2	ADR6	ON	"
U42-3	ADR5	OFF	(ON)
U42-4	N/A	OFF	SAME AS FOR 1st
U42-5	16/20/24 ADDR	ON	"
U42-6	8 BIT ADDR	OFF	"
U42-7	20/24 BIT ADDR	OFF	"
U42-8	8/16 BIT ADDR	ON	"
U40-1	ADRF	OFF	"
U40-2	ADRE	OFF	"
U40-3	ADRD	OFF	"
U40-4	ADRC	OFF	"
U40-5	ADRB	OFF	"
U40-6	ADRA	ON	"
U40-7	ADR9	OFF	"
U40-8	ADR8	ON	"
U44-1	ADR17	OFF	"
U44-2	ADR16	OFF	"
U44-3	ADR15	OFF	"
U44-4	ADR14	OFF	"
U44-5	ADR13	OFF	"
U44-6	ADR12	OFF	"
U44-7	ADR11	OFF	"
U44-8	ADR10	OFF	"

Switch Settings (continued)

Location	Function	Normal Setting
U58-1	MEM MAP READ	OFF
U58-2	MEM MAP WRITE	OFF
U58-3	I/O MAP READ	ON
U58-4	I/O MAP WRITE	ON
U58-5	INH1/ DRIVEN	OFF
U58-6	SERIAL BUS ARB	OFF
U58-7	CBRQ/ DUR REQ	ON
U58-8	CBRQ/ ON	OFF
U70-1	INT0	
U70-2	INT1	
U70-3	INT2	
U70-4	INT3	
U70-5	INT4	
U70-6	INT5	
U70-7	INT6	
U70-8	INT7	

NOTE: SET ONLY ONE INTERRUPT SWITCH ON AND ALL THE REST OFF. SET INTERRUPT LEVEL TO A VALUE THAT DOES NOT CONFLICT WITH INTERRUPT LEVELS OF OTHER BOARDS LOCATED IN THE SAME MULTIBUS CHASSIS.

RACAL VADIC 1200vp MODEM CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Racal Vadic 1200vp Modem (Convex P/N 211-000105-200). This Modem is **NOT** to be connected to the C-1 Service Processor Unit (SPU). The *Enhanced* Racal Vadic 1200vp (Convex P/N 211-000106-200) is to be used for connection to the SPU.

1.2 Identification

The *Standard* Racal Vadic 1200vp and the *Enhanced* version are identical in appearance. To differentiate; the enhanced version can be identified by the Convex Part Number sticker (211-000106-200, Rev. A or later) affixed to the base of the unit.

1.3 Configuration

The configuration parameters will be entered via a 1200 Baud Terminal that is connected to the Modem. The terminal must be configured for 8 data bits, no parity, and 1 stop bit.

To configure the Modem, enter the following command sequence at the Terminal:

AT&F (return)	Loads standard parameters
OK	Modem response
ATS0=1 (return)	Sets Modem to auto-answer after 1 ring
OK	Modem response
ATS14=14 (return)	Disables Modem messages (Note that there will be no line feed or Modem ''OK'' response)
AT&W (return)	Saves Modem parameters in non-volatile memory (Note that there will be no line feed or MODEM ''OK'' response)

The Modem will now be set for Auto-Answer and Data Modes.

1.4 Switch Settings

For normal operation, Switch Settings internal to the Modem are factory set and should not require changes.

ENHANCED RACAL VADIC 1200vp MODEM CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Enhanced Racal Vadic 1200vp Modem (Convex P/N 211-000106-200).

1.2 Identification

The *Standard* Racal Vadic 1200vp and the *Enhanced* version are identical in appearance. To differentiate; the enhanced version can be identified by the Convex Part Number sticker (211-000106-200, Rev. A or later) affixed to the base of the unit.

1.3 Configuration

The configuration parameters will be entered via a 1200 Baud Terminal that is connected to the Modem. The terminal must be configured for 8 data bits, no parity, and 1 stop bit.

To configure the Modem, enter the following command sequence at the Terminal:

AT&F (return)	Loads standard parameters
OK	Modem response
ATS0=1 (return)	Sets Modem to auto-answer after 1 ring
OK	Modem response
ATS14=14 (return)	Disables Modem messages (Note that there will be no line feed or Modem ''OK'' response)
AT&W (return)	Saves Modem parameters in non-volatile memory (Note that there will be no line feed or MODEM ''OK'' response)

The Modem will now be set for Auto-Answer and Data Modes.

1.4 Jumper Options

Jumper Options (shown below) internal to the Modem are factory set.

STRAP	POSITION "A"	POSITION "B"
W1	*FG-frame ground,isolated	FG-connected to analog ground
W2	CXR-carrier forced	*CXR-follows &C command
W3	CTS follows CXR	*CTS follows RTS
W4	*DSR forced ON	DSR follows off-hook relay
W5	IRT control (EIA pin 21)	*Data rate select (EIA pin 23)
W7	*Watch dog timer enabled	Watch dog timer disabled

*Standard setting

RACAL-VADIC 1200VP MODEL 2 MODEM CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Racal-Vadic 1200VP Model 2 Modem (CONVEX P/N 211-000107-200).

1.2 Configuration

To enter Modem configuration parameters, a Terminal must be cabled to the Modem. The Terminal must be set up for *1200 Baud, 8 data bits, no parity,* and *1 stop bit.*

To configure the 1200VP Model 2, power on the Terminal, power on the Modem, and, *after* the Modem self-test completes ("Loop" light off after about 5 seconds), enter the following sequence of commands at the terminal:

AT&F (return)	Loads factory Modem parameters
OK	Modem completion response to Terminal
ATS0=1 (return)	Sets Modem for Auto-Answer after 1 ring
OK	Modem completion response to Terminal
ATS14=14 (return)	Disables Modem messages (note that there will be no line feed or Modem "OK" response)
AT&W (return)	Saves Modem parameters in non-volatile memory (note that there will be no line feed or Modem "OK" response)

The Modem will now be set for Auto-Answer and Data Modes of operation.

1.3 Jumper Options

For normal operation, Jumper Options are factory set and should not require change. Normal jumpering is:

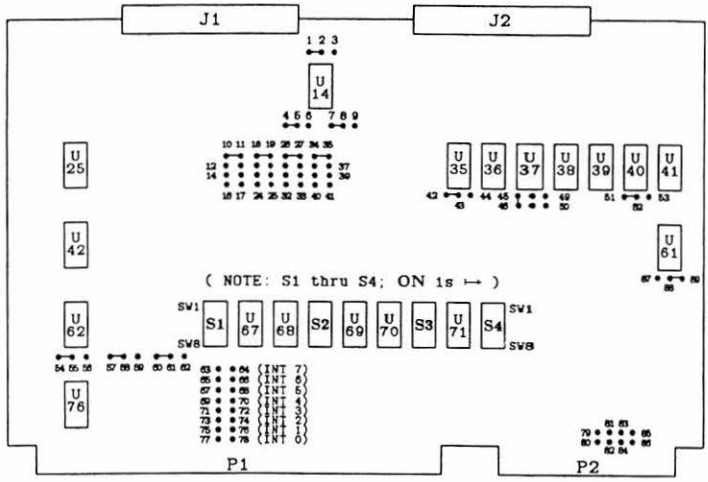
Strap *A* = ON	Leased line answer.
Strap *B* = OFF	Signal ground isolated from chassis ground.
Straps *K, L, & N* = OFF	Public switched telephone network.
Straps *P & R* = OFF	MI/MIC disabled.
Strap *S* = OFF	Receiver sensitivity -10 to -45 dBm.
Straps *W1* = ON & *W2* = OFF	-10dBm transmit level.
Strap *W3* = OFF	128K PROM.

IKON 10087 BUFFERED DR11-W CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the IKON 10087 *Buffered* DR11-W Emulator Controller (No Convex Part Number). This board is used in the same applications and with the same software as the IKON 10077 DR11-W Emulator Controller (Convex P/N 211-000104-200). *Maximum* cable length is 50 feet (flat cable with ground plane).

1.2 Board Layout



1.3 Preferred Convex Addresses per Multibus:

1st Controller - Address 05C0 (Use any available interrupt number)
2nd Controller - Address 05E0 (Use any available interrupt number)

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1.4 Switch Settings

SWITCH NUMBER	*FUNCTION WHEN ON*	*NORMAL SETTING (1st Controller)*	*NORMAL SETTING (2nd Controller)*
S3-1	Address Bit 17 True	Off	Off
S3-2	Address Bit 16 True	Off	Off
S3-3	Address Bit 15 True	Off	Off
S3-4	Address Bit 14 True	Off	Off
S3-5	Address Bit 13 True	Off	Off
S3-6	Address Bit 12 True	Off	Off
S3-7	Address Bit 11 True	Off	Off
S3-8	Address Bit 10 True	Off	Off
S1-1	Address Bit F True	Off	Off
S1-2	Address Bit E True	Off	Off
S1-3	Address Bit D True	Off	Off
S1-4	Address Bit C True	Off	Off
S1-5	Address Bit B True	Off	Off
S1-6	Address Bit A True	On	On
S1-7	Address Bit 9 True	Off	Off
S1-8	Address Bit 8 True	On	On
S2-1	Address Bit 7 True	On	On
S2-2	Address Bit 6 True	On	On
S2-3	Address Bit 5 True	Off	On
S2-4	DFLG Status Bit True	Off	Off
S2-5	Double Buffer Enable	On	On
S2-6	Memory Map Enable (Off = I/O Map Enable)	Off	Off
S2-7	Address Width:	Off	Off
S2-8	8-Bit = 7 Off; 8 On 16-Bit = 7 Off; 8 Off 20 & 24 Bit = 7 On; 8 Off	Off	Off
S4-1	DMA Burst 8	Off	Off
S4-2	DMA Burst 4	Off	Off
S4-3	DMA Burst 2	Off	Off
S4-4	DMA Burst 1	Off	Off
S4-5	Parity Flag Enable	Off	Off
S4-6	Swap DMA Bytes	On	On
S4-7	Swap P-I/O Bytes	On	On
S4-8	Watchdog Timer On	On	On

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1.5 Jumper Options

JUMPER	*FUNCTION WHEN IN*	*NORMAL USE*
W1 to W2	Enable 'CYCLE REQ B H'	In
W2 to W3	Disable (ground) 'CYCLE REQ B H'	Out
W4 to W5	Cycle Request active on rising edge	In
W5 to W6	Cycle Request active on falling edge	Out
W7 to W8	'BUSY H' asserted low true	In
W8 to W9	'BUSY H' asserted high true	Out
W10 to W11	100ns Input Deskew	In
W12 to W13	150ns Input Deskew	Out
W14 to W15	200ns Input Deskew	Out
W16 to W17	300ns Input Deskew	Out
W18 to W19	100ns Input Deskew	In
W20 to W21	150ns Input Deskew	Out
W22 to W23	200ns Input Deskew	Out
W24 to W25	300ns Input Deskew	Out
W26 to W27	30ns Data Settling Time	In
W28 to W29	80ns Data Settling Time	Out
W30 to W31	130ns Data Settling Time	Out
W32 to W33	230ns Data Settling Time	Out
W34 to W35	30ns Data Settling Time	In
W36 to W37	80ns Data Settling Time	Out
W38 to W39	130ns Data Settling Time	Out
W40 to W41	230ns Data Settling Time	Out
W42 to W43	16-Bit Range Counter	In
W43 to W44	32-Bit Range Counter	Out
W45 to W46	DMA Direction set by 'C1 CNTL H'	In
W47 to W48	DMA Direction set by 'FCN1'	Out
W49 to W50	DMA Direction set by 'SDIR' Bit	Out
W51 to W52	'READY H' asserted during 'BUSY H'	In
W52 to W53	'READY H' asserted at trailing edge of 'BUSY'	Out

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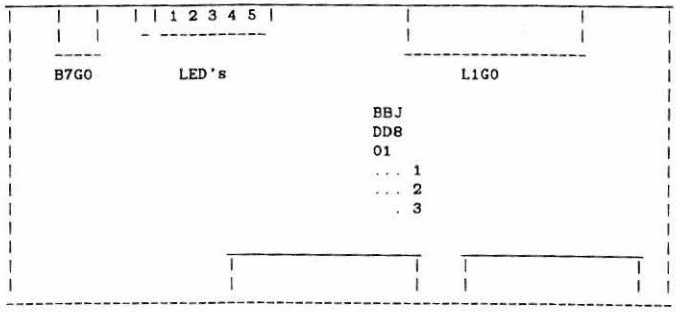
1.5 Jumper Options (continued)

JUMPER	*FUNCTION WHEN IN*	*NORMAL USE*
W54 to W55	Parallel Bus Arbitration	In
W55 to W56	Serial Bus Arbitration	Out
W57 to W58	'INH1' Not Driven	In
W58 to W59	'INH1' Driven	Out
W60 to W61	'CBRQ' Driven	In
W61 to W62	'CBRQ' Not Driven	Out
W63 to W64	Interrupt Level 7	Jumper for only one (1) of the eight (8) possible interrupt levels. Select a level that is not in conflict with one already used by another controller that is located in the same multibus.
W65 to W66	Interrupt Level 6	
W67 to W68	Interrupt Level 5	
W69 to W70	Interrupt Level 4	
W71 to W72	Interrupt Level 3	
W73 to W74	Interrupt Level 2	
W75 to W76	Interrupt Level 1	
W77 to W78	Interrupt Level 0	
W79 through W86	Not used. Ensure no jumpers are installed.	
W87 to W88	FIFO pre-loaded when 'GO' issued	Out
W88 to W89	FIFO loaded upon first 'CYCLE REQUEST'	In

1.1 Scope

The purpose of this document is to provide configuration information for the Ultranet Controller (CONVEX P/N 211-000108-600).

1.2 Controller configuration



Host Adapter jumpers:

Pins 2 and 3 of J8 should always be in.

controller	BD0	BD1	ADDRESS
0	IN	IN	0x7740
1	OUT	IN	0x7760
2	IN	OUT	0x7780
3	OUT	OUT	0x77a0

LED's

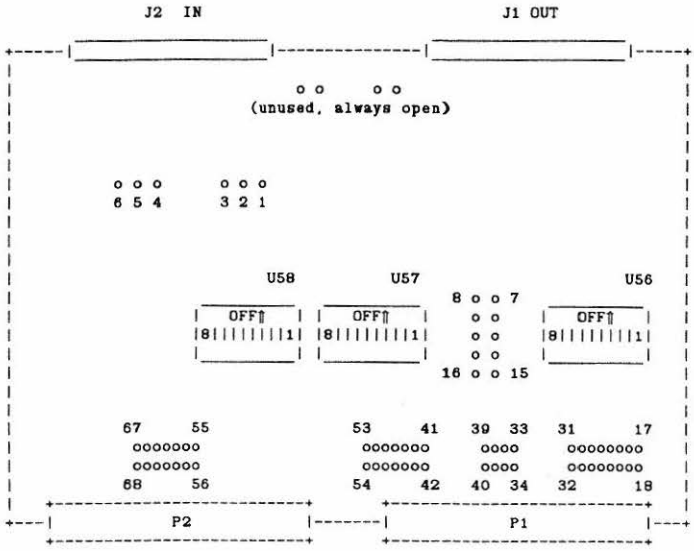
1 -- Controller is Bus Master
2 -- Adapter software is ALIVE and functioning
3 -- Toggles on and off when FIFO is full
4 -- Packet discard
5 -- Packet Retransmit

Ikon 10090 VME Hyperchannel Interface Adaptor Configurator

Section 1.1 Scope

The purpose of this document is to provide configuration information for the Ikon 10090 VME Hyperchannel Interface Adaptor (CONVEX P/N 211-000110-200).

Section 1.2 Interface Adaptor Configuration



Section 1.3 Setting the Interface Adaptor's Base Address

Switch blocks U56, U57 and U58 are used to select the board's base address. In a CONVEX configuration, U56 and U57 should *always* have the following settings:

U56-1 A23	U56-2 A22	U56-3 A21	U56-4 A20	U56-5 A19	U56-6 A18	U56-7 A17	U56-8 A16
ON	ON	ON	ON	ON	ON	ON	ON

U57-1 A15	U57-2 A14	U57-3 A13	U57-4 A12	U57-5 A11	U57-6 A10	U57-7 A9	U57-8 A8
ON	ON	OFF	ON	ON	ON	ON	ON

With U56 and U57 configured as above, the lower three switches of U58 select one of the five addresses defined for the Interface Adaptor:

Controller Number	Base Address	U58-1 A7	U58-2 A6	U58-3 A5
1	0x2000	ON	ON	ON
2	0x2020	ON	ON	OFF
3	0x2040	ON	OFF	ON
4	0x2060	ON	OFF	OFF
5	0x2080	OFF	ON	ON

NOTE: An ON switch decodes to a logical zero in that bit position.

Section 1.4 Setting the Interface Adaptor's Interrupt Level

Two jumper blocks determine the board's interrupt request (IR) and interrupt acknowledge (IA) levels. In a CONVEX configuration, IR and IA *must* be set to the same level, and that level *must* be unique in the target VMEbus. The following charts describe these jumper blocks and illustrate their default (IR and IA set to level 4) settings.

41-42 IR7	43-44 IR6	45-46 IR5	47-48 IR4	49-50 IR3	51-52 IR2	53-54 IR1
OUT	OUT	OUT	IN	OUT	OUT	OUT

55-56 IA1	57-58 IA2	59-60 IA3	61-62 IA4	63-64 IA5	65-66 IA6	67-68 IA7
OUT	OUT	OUT	IN	OUT	OUT	OUT

Section 1.5 Remaining Jumper and Switch Settings

The following table describes the functions and settings of the upper five U58 switches:

Dip Switch	Convex Setting	Purpose
U58-4	ON	Use short VME address space for CSR register access
U58-5	OFF	This switch is not connected
U58-6	OFF	Select normal mode rather than test mode
U58-7	OFF	Don't swap bytes during programmed-I/O transfers
U58-8	ON	Swap bytes during DMA tranfers

The CONVEX settings for the remaining jumper blocks are defined in the following table:

Jumper From	Jumper To	Purpose
2	3	Set the device flag to zero
5	6	Use 16-bit DMA transfer counter
7	8	Transfer 16 words per VME burst
18	20	Bypass VME bus grant level zero
22	24	Bypass VME bus grant level one
26	28	Bypass VME bus grant level two
29	30	Input VME bus grant level three
31	32	Output VME bus grant level three
39	40	Use VME bus request level three

NOTE: Configuration jumpers are CONVEX P/N 312-000143-001.

DOCUMENT REVISION HISTORY

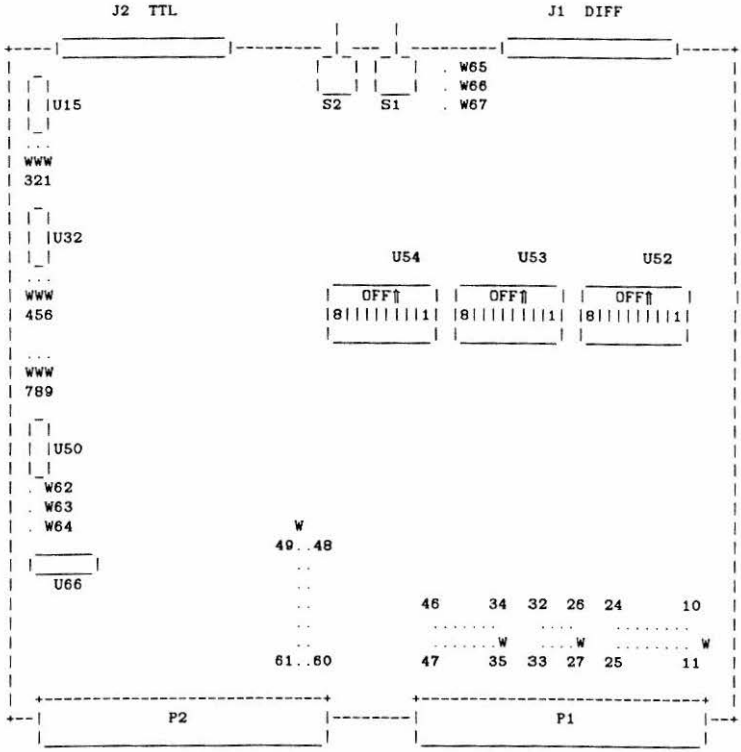
REVISION	ECN NUMBER	DESCRIPTION	DATE	APPROVED
A	107235	Engineering Release	02/05/91	

Ikon 10088 VMEbus Hardcopy Interface Controller Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Ikon 10088 VMEbus Hardcopy Interface Controller (CONVEX P/N 211-000111-200).

1.2 Controller Configuration



CONVEX	TITLE: VME Versatec Hardcopy Interface Controller Configurator DOCUMENT NUMBER: 211-000111-600	REV: A.1 12/9/91 FROM: Dave Harper PAGE: 120

1.2 Controller Configuration (continued)

Jumper & Switch Setting Options:

The *Controller Base Address* is normally set to "0x100" using dip switches U54 (1-8), U53 (1-8) and U52 (1-4) according to the chart shown below. To select a Base Address other than the one shown below, add a multiple of 0x10 to the base address. For example, to add a second controller, set the base address on it to "0x110" by switching OFF U53-8 and U54-4.

BASE ADDRESS SWITCH SETTINGS (Address 0x100)

	1	2	3	4	5	6	7	8
U52	ON	ON	ON	ON	ON	ON	ON	ON
U53	ON	ON	ON	ON	ON	ON	ON	OFF
U54	ON	ON	ON	ON				

The upper half of U54 is also used to select some of the operational parameters and should be set according to the following chart:

DIP SWITCH	POSITION	PURPOSE
U54-5	ON	Set for 16 bit DMA transfers
U54-6	OFF	Send low order byte of halfword first
U54-7	ON	Use TTL interface (*not* differential)
U54-8	ON	Use address modifier codes: 39, 3A, 3D & 3E

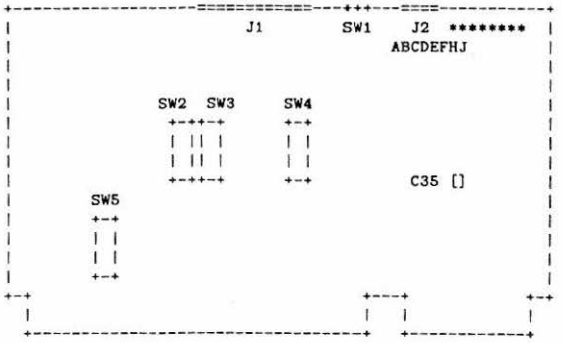
The jumpers on the board should be set according to the following chart:

FROM	TO	PURPOSE
W2	W3	Standard option timing
W4	W5	BUSY signal interpertation
W7	W8	BUSY signal interpertation
W11	W13	Bus Grant Level #0 Bypass
W15	W17	Bus Grant Level #1 Bypass
W19	W21	Bus Grant Level #2 Bypass
W22	W23	Bus Grant Level #3 Input
W24	W25	Bus Grant Level #3 Output
W32	W33	Bus Request Level #3
W36	W37	Interrupt Request Level #6
W50	W51	Interrupt Acknowledge Level #6
W63	W64	Test pattern select
W65	W66	Enable selective Data Streaming option

1.1 Scope

The purpose of this document is to provide configuration information for the Systech 1600 Communications Controller (Convex P/N 221-000001-202).

1.2 Hardware Strapping



Standard Convex Addresses and Interrupts per Multibus:

First Controller	ACM-001	03c0	int 7
Second Controller	ACM-001	03c8	int 6

SYSTECH 1600 COMMUNICATIONS CONTROLLER CONFIGURATOR (continued)

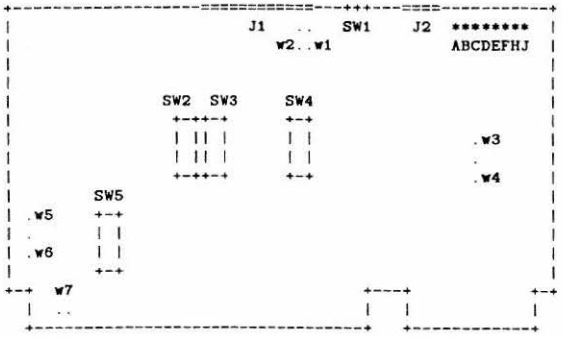
Switch Settings:

Switch Test Switch	First Controller S1	in normal postion	Second Controller S1	in normal postion
8xxx	S2-1	off	S2-1	off
4xxx	S2-2	off	S2-2	off
2xxx	S2-3	off	S2-3	off
1xxx	S2-4	off	S2-4	off
x8xx	S2-5	off	S2-5	off
x4xx	S2-6	off	S2-6	off
x2xx	S2-7	on	S2-7	on
x1xx	S2-8	on	S2-8	on
xx8x	S3-1	on	S3-1	on
xx4x	S3-2	on	S3-2	on
xx2x	S3-3	off	S3-3	off
xx1x	S3-4	off	S3-4	off
xxx8	S3-5	off	S3-5	on
16/8	S3-6	off	S3-6	off
Stop-+	S3-7	off	S3-7	off
Bits-+	S3-8	on	S3-8	on
Parity	S4-1	off	S4-1	off
Par Cntl	S4-2	off	S4-2	off
Char---+	S4-3	on	S4-3	on
Length-+	S4-4	on	S4-4	on
------+	S4-5	on	S4-5	on
Baud--+	S4-6	on	S4-6	on
Rate--+	S4-7	on	S4-7	on
------+	S4-8	off	S4-8	off
Int 0	S5-1	off	S5-1	off
Int 1	S5-2	off	S5-2	off
Int 2	S5-3	off	S5-3	off
Int 3	S5-4	off	S5-4	off
Int 4	S5-5	off	S5-5	off
Int 5	S5-6	off	S5-6	off
Int 6	S5-7	off	S5-7	on
Int 7	S5-8	on	S5-8	off

1.1 Scope

The purpose of this document is to provide configuration information for the Systech 1650 Communications Controller (Convex P/N 221-000002-200).

1.2 Hardware Strapping



Standard Convex Addresses and Interrupts per Multibus:

First Controller	ACM-001	03c0	int 7
Second Controller	ACM-001	03c8	int 6

Switch Settings:

Switch	First Controller		Second Controller	
Test Switch	S1	in normal postion	S1	in normal postion
8xxx	S2-1	off	S2-1	off
4xxx	S2-2	off	S2-2	off
2xxx	S2-3	off	S2-3	off
1xxx	S2-4	off	S2-4	off
x8xx	S2-5	off	S2-5	off
x4xx	S2-6	off	S2-6	off
x2xx	S2-7	on	S2-7	on
x1xx	S2-8	on	S2-8	on
xx8x	S3-1	on	S3-1	on
xx4x	S3-2	on	S3-2	on
xx2x	S3-3	off	S3-3	off
xx1x	S3-4	off	S3-4	off
xxx8	S3-5	off	S3-5	on
16/8	S3-6	off	S3-6	off
Stop-+	S3-7	off	S3-7	off
Bits-+	S3-8	on	S3-8	on
Parity	S4-1	off	S4-1	off
Par Cntl	S4-2	off	S4-2	off
Char---+	S4-3	on	S4-3	on
Length-+	S4-4	on	S4-4	on
------+	S4-5	on	S4-5	on
Baud--+	S4-6	on	S4-6	on
Rate--+	S4-7	on	S4-7	on
------+	S4-8	off	S4-8	off
Int 0	S5-1	off	S5-1	off
Int 1	S5-2	off	S5-2	off
Int 2	S5-3	off	S5-3	off
Int 3	S5-4	off	S5-4	off
Int 4	S5-5	off	S5-5	off
Int 5	S5-6	off	S5-6	off
Int 6	S5-7	off	S5-7	on
Int 7	S5-8	on	S5-8	off
Par Arb	W7	off	W7	off
Mbus Tim	W3	on	W3	on
16 bit	W6	on	W6	on

PRINTRONIX P-600 PRINTER CONFIGURATOR

1.1 Scope

The purpose of this document to provide configuration information for the Printronix P-600 PRINTER (Convex p/n 215-000001-203). Additional information is available in the vendors application note (Printronix P/N 105564).

1.2 Hardware Strapping (RS-232 Board; PCBA 106561; PCB 105076)

Note: All locations for jumpers are to be left unjumpered except as noted below. See attached figure for location information.

Description	Location	Setting
Baud Rate Select	11C 2-19	On
Eight Data Bits	4F 4-11	|
Bit 8 Function	3B PI 2-3	|
	3B Data 1-2	|
Parity Enable	7K 2-3	|
Buffer Full Level	4F 3-12	|
Hysteresis On	10H 2-3	|
Xoff Character	3K 3-14	|
	3K 1-16	|
	3K 4-13	|
	3K 6-11	|
	3K 8-9	|
Xon Character	4K 5-12	|
	4K 3-14	|
	4K 1-16	|
	4K 4-13	|
	4K 6-11	|
	4K 8-9	|
Req to send	9C 10-13	|
Data Term Ready	9C 8-15	|
Transmit Data	9C 4-19	|
Reverse Channel	9C 2-21	On

Printronix P6080 Line Printer Configurator

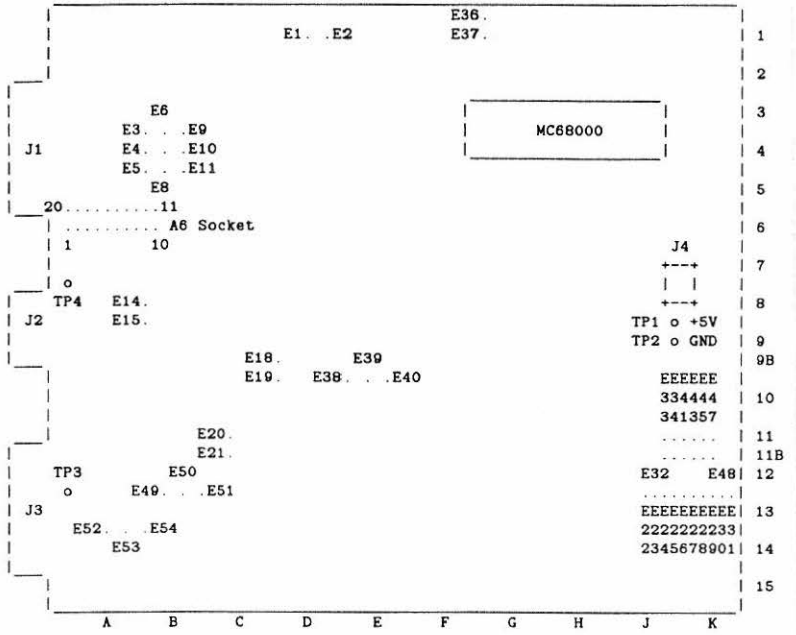
1.1 Scope

The purpose of this document is to provide configuration information for the Printronix P6080 Line Printer, CONVEX Part Numbers 215-000006-200 (Domestic) and 215-000006-210 (International).

1.2 Configuration

- **Logic C3 H/S Board** *(P/N 140578-001)*

(See Next Page for Strapping Instructions)



CONVEX	TITLE: Printronix P6080 Line Printer Controller Configurator DOCUMENT NUMBER: 215-000006-600	REV: A 02/16/90 FROM: Brad Jones PAGE: 127

1.2 Configuration (*continued*)

- **Logic C3 H/S Board** (*P/N 140578-001*)

(See Previous Page For Board Illustration)

JUMPER	*DESCRIPTION*	*NORMAL*
E1 to E2	In = EPROM Wait State Enable	OUT
E3 to E6	In = NTXCLK Input	OUT
E4 to E7	In = NRXCLK Input	OUT
E5 to E8	In = NEXTCLK Input	OUT
E6 to E9	In = Clock to 68901 TC Input	IN (*etch*)
E7 to E10	In = Clock to 68901 RC Input	IN (*etch*)
E8 to E11	In = Timer C Output to Clock	IN (*etch*)
E12 to E13	Spare	-
E14 to E15	In = Inverted (Dataproducts) Strobe Polarity	OUT
E16 to E17	Not Defined (Unused)	-
E18 to E19	In = P6080 Select; Out = P6040	IN
E20 to E21	In = P6080 NRESYNC Timer	IN
E22 to E23	Not Used	-
E24 to E25	Not Used	-
E26 to E27	Not Used	-
E28 to E29	Not Used	-
E30 to E31	Not Used	-
E32 to E33	In = P6080 Phase Fire Enable	IN
E34 to E35	In = EPROM 0 (27256) Addressing	IN
E36 to E37	In = CPU (Internal) Clock Select	IN
E38 to E39	In = 3.33 MHz (P6040) Hammer Load	OUT
E39 to E40	In = 1 MHz (P6080) Hammer Load	IN
E41 to E42	In = EPROM 1 (27256) Addressing	OUT
E43 to E44	In = EPROM 2 (27256) Addressing	OUT
E45 to E46	In = Font 0 (27256) Addressing	IN
E47 to E48	In = Font 1 (27256) Addressing	OUT
E49 to E50	In = Leading Edge Data Latch Select	IN
E50 to E51	In = Trailing Edge Data Latch Select	OUT
E52 to E53	In = Leading Edge Data Request Latch Select	IN
E53 to E54	In = Trailing Edge Data Request Latch Select	OUT

...C3 H/S Board continued on next page

1.2 Configuration (*continued*)

- **Logic C3 H/S Board** (*P/N 140572-001 - continued from previous page*)

(See First Page For Board Illustration)

JUMPER	*DESCRIPTION*	*NORMAL*
A6-1 to A6-20	In = Allow ICPE (Centronics Ready)	IN
A6-2 to A6-19	In = Allow Acknowledge to Interface	IN
A6-3 to A6-18	In = Allow Online to Interface	IN
A6-4 to A6-17	In = Allow Ready to Interface	IN
A6-5 to A6-16	In = Allow Data Request to Interface	IN
A6-6 to A6-15	In = Pull up HYSTER signal	OUT
A6-7 to A6-14	In = Allow REVCHNL to Interface	OUT
A6-8 to A6-13	In = Allow DTR to Interface	OUT
A6-9 to A6-12	In = Allow RTS to Interface	OUT
A6-10 to A6-11	In = Allow TXDATA to Interface	OUT

- **Power Supply Board** (*P/N 104712-001*)

- No Options -

- **Hammer Driver Board** (*P/N 103240-001*)

- No Options -

- **Centronics I/O Board** (*P/N 108253-001*)

1K Termination Resistors (DIPs) installed in U1 and U3. U2 is unused.

- **Hammer Reset Timer Board** (*P/N 104363-001*)

- No Options -

- **Backplane Board** (*P/N 104694-002*)

- No Options -

1.2 Configuration (*continued*)

• **Operator Control Panel** (*P/N 140578-001*)

There are no hardware jumper options. The Operator Control Panel is used to select configuration parameters other than those defined by hardware jumpers.

- Basic Control Panel Operations
  - The *FORMS LENGTH* switch will only function when the printer is *OFF-LINE*. Normal setting is for *11 INCHES*. To select a different value, take the printer *OFF-LINE*, depress the *FORMS LENGTH* switch until the desired option is displayed. Options are: *FORMS LENGTH SET IN INCHES; FORMS LENGTH SET IN 6LPI LINES;* and *FORMS LENGTH SET IN 8LPI LINES*. Once at the desired option, select the desired length by depressing the *CONFIG VALUE* switch. Depress the *CLEAR FAULT* switch to exit.
  - The *PRINT MODE* switch will only function when the printer is *OFF-LINE*. Normal setting is for *DP 10 CPI*. To select a different value, take the printer *OFF-LINE*, depress the *PRINT MODE* switch until the desired value is displayed, and depress the *CLEAR FAULT* switch to exit.
  - The *LINE SPACING* switch will only function when the printer is *OFF-LINE*. Normal setting is for *6 LPI*. To select a different value, take the printer *OFF-LINE*, depress the *LINE SPACING* switch until the desired value is displayed, and depress the *CLEAR FAULT* switch to exit.
- The Front Panel must be *unlocked* to change any Configuration Parameters. Instructions for unlocking and locking the Front Panel and configuring the printer with the standard CONVEX parameters are shown below and on the following pages.
  - To unlock the Front Panel, take the printer *OFF-LINE*. Then, simultaneously depress and release both the *CONFIG MENU* and *RUN/STOP TEST* switches. A momentary *CONFIGURATION UNLOCKED* message will be displayed on the Front Panel's Message Display.
  - Locking the Front Panel prevents inadvertent manipulation of the configuration switches. To lock an unlocked panel, simultaneously depress and release both the *CONFIG MENU* and *RUN/STOP TEST* switches. A momentary *CONFIGURATION LOCKED* message will be displayed on the Front Panel's Message Display.

1.2 Configuration (*continued*)

• **Operator Control Panel** (*P/N 140579-001*)

To display the current configuration, perform the following steps:

- Turn the printer power switch on. The red *Power* LED should be lit.
- Verify that the *OFF LINE READY* message is displayed. If not, depress the *ON LINE* switch one (1) time.
- Unlock (enable) the Front Panel by simultaneously pressing and releasing both the *CONFIG MENU* and *RUN/STOP TEST* switches. A momentary *CONFIGURATION UNLOCKED* message will be displayed.
- Slowly depress and release the *CONFIG MENU* switch eight (8) times at which point the *DIAGNOSTICS* message will be seen. Interim messages that will be seen are, in order: *RIBBON LIFE; CHARACTER SET; APPLICATION COMPATIBILITY; PAPER FORMAT; HOST INTERFACE; LOAD PARAMETERS;* and *SAVE PARAMETERS.*
- Depress and release the *CONFIG VALUE* switch one (1) time and the *CONFIGURATION PRINTOUT* message will be displayed.
- Depress and release the *RUN/STOP TEST* switch one (1) time. The message *CONFIGURATION PRINTING* will be displayed and the present configuration will be printed.
- Depress and release the *CLEAR FAULT* switch two (2) times to return to the *OFF LINE READY* display.
- Lock (disable) the Front Panel by simultaneously pressing and releasing both the *CONFIG MENU* and *RUN/STOP TEST* switches. A momentary *CONFIGURATION LOCKED* message will be displayed.

The format of the configuration printout with the standard (factory) Printronix configuration settings is shown on the following page.

Note: The standard (factory) Printronix configuration settings are *not* completely acceptable for use with the CONVEX system. The example on the following page is given for reference only.

1.2 Configuration (*continued*)

• Operator Control Panel (*P/N 140578-001*)

Standard (Factory) Printronix Configuration Parameters

```
Model number P6X80
Copyright (c) 1988, Printronix Inc.
P6000 Program 2.03E, 26-May-89 Part No. 148620
P6000 Font    2.03A, 24-Jul-89 Part No. 148622
Remember to use the Run/Stop key to change printer settings!

    FORM LENGTH SET        AT 11.0 INCHES
    LINE SPACING           SET AT 6 LPI
    PRINT MODE             DP AT 10 CPI
    CHARACTER SET            ASCII

    RIBBON LIFE
        RIBBON SIZE            CURRENT    60
        JOB RATE               CURRENT   350
        WHEN WORN ACTION       STOP PRINTER
        ENABLE/DISABLE         DISABLE ACTION

    PRINT STATISTICS
        POWER ON TIME          00001.4 Hrs.
        PRINT TIME             00000.1 Hrs.
        SHUTTLE STROKES        0,000,019,376
        PRINT LINES            0,000,001,745
        PRINT PAGES            0,000,000,028

    APPLICATION            COMPATIBILITY
        PRINTER PROTOCOL       P-SERIES
        BUFFER SIZE            2048 CHARACTERS
        UPPERCASE SELECT       UPPER & LOWER
        PRINTER SELECT         DISABLE
        PAPER ADVANCE SW       PRINT + PAP ADV
        POWER ON STATE         ONLINE
        UNIDIRECTIONAL         DISABLE

    PAPER FORMAT
        AUTO LINE FEED         AFTER FULL LINE
        DEFINE CR CODE         CR = CR
        DEFINE LF CODE         LF = CR + LF
        VFU SELECT             EVFU
        PERFORATION SKIP       DISABLE
        PAPER EMPTY            END OF PAPER
        PMD FAULT              ENABLE
        MODIFIED PLOT          DISABLE
        SLEW RELATIVE          1 TO 16

    HOST INTERFACE         CENTRONICS
        DATA BIT 8             ENABLE
        DATA POLARITY          STANDARD
        RESP. POLARITY         STANDARD
        FAST BUSY              ENABLE
        PI LINE                DISABLE
```

1.2 Configuration (*continued*)

• **Operator Control Panel** (*P/N 140578-001*)

There are two (2) configuration parameters that must be changed from the Printronix (Factory) Defaults prior to use on a CONVEX system. The differences are shown below, followed by detailed reconfiguration instructions.

PARAMETER DESCRIPTION	DEFAULT SETTING	CONVEX SETTING
PAPER ADVANCE SW	PRINT + PAP ADV	MOVE PAPER ONLY
POWER ON STATE	ONLINE	OFFLINE

To reconfigure, perform the following:

- Ensure the printer is Off Line (the message *OFF LINE READY* should be displayed).
- Unlock (enable) the Front Panel by simultaneously pressing and releasing both the *CONFIG MENU* and *RUN/STOP TEST* switches. A momentary *CONFIGURATION UNLOCKED* message will be displayed.
- Slowly depress and release the *CONFIG MENU* switch until the *LOAD PARAMETERS* message is displayed.
- Slowly depress and release the *CONFIG VALUE* switch until the message *LOAD FACTORY PARAMETERS* is displayed.
- Slowly depress and release the *RUN/STOP TEST* switch to save load the Factory Parameters into memory. A momentary *FACTORY PARAMETER LOADED* message will be displayed.
- lowly depress and release the *CLEAR FAULT* switch two (2) times and the *OFF LINE READY* message will be displayed.
- Slowly depress and release the *CONFIG MENU* switch until the *APPLICATION COMPATIBILITY* message is displayed.
- Slowly depress and release the *CONFIG VALUE* switch one (1) time and the message *PRINTER PROTOCOL* will be displayed.
- Slowly depress and release the *CONFIG MENU* switch until the *PAPER ADVANCE SW* message is displayed.
- Slowly depress and release the *CONFIG VALUE* switch until the message *MOVE PAPER ONLY* is displayed.

...CONVEX Parameters continued on next page

1.2 Configuration (*continued*)

...CONVEX Parameters continued from previous page

- Operator Control Panel (*P/N 140573-001*)

- Slowly depress and release the *RUN/STOP TEST* switch to load the *MOVE PAPER ONLY* parameter.
- Slowly depress and release the *CONFIG MENU* switch one (1) time and the message *POWER ON STATE* will be displayed.
- Slowly depress and release the *CONFIG VALUE* switch until the message *OFFLINE* is displayed.
- Slowly depress and release the *RUN/STOP TEST* switch to load the *OFFLINE* parameter.
- Slowly depress and release the *CLEAR FAULT* switch two (2) times and the *APPLICATION COMPATIBILITY* message will be displayed.
- Slowly depress and release the *CONFIG MENU* switch until the *SAVE PARAMETERS* message is displayed.
- Slowly depress and release the *RUN/STOP TEST* switch to save the latest parameter changes in memory. A momentary *VALUES SAVED* message will be displayed.
- Slowly depress and release the *CONFIG MENU* switch one (1) time and the *DIAGNOSTICS* message will be displayed.
- Slowly depress and release the *CONFIG VALUE* switch one (1) time and the message *CONFIGURATION PRINTOUT* will be displayed.
- Slowly depress the *RUN/STOP TEST* switch to obtain a printout of the present configuration. At this time, the message *CONFIGURATION PRINTING* will be displayed and the configuration will be printed. An example of the configuration printout with the CONVEX settings is shown on the following page.
- Slowly depress and release the *CLEAR FAULT* switch two (2) times and the *OFF LINE READY* message will be displayed.
- Lock (disable) the Front Panel by simultaneously pressing and releasing both the *CONFIG MENU* and *RUN/STOP TEST* switches. A momentary *CONFIGURATION LOCKED* message will be displayed.
- At this time, the CONVEX parameters are permanently stored in memory and the P6080 Line Printer is ready for system use.

1.2 Configuration (*continued*)

• Operator Control Panel (*P/N 140578-001*)

CONVEX P6080 Line Printer Configuration Parameters

```
Model number P6X80
Copyright (c) 1988, Printronix Inc.
P6000 Program 2.03E, 26-May-89 Part No. 148620
P6000 Font    2.03A, 24-Jul-89 Part No. 148622
Remember to use the Run/Stop key to change printer settings!

    FORM LENGTH SET          AT 11.0 INCHES
    LINE SPACING             SET AT 6 LPI
    PRINT MODE               DP AT 10 CPI
    CHARACTER SET              ASCII

    RIBBON LIFE
        RIBBON SIZE              CURRENT    60
        JOB RATE                 CURRENT   350
        WHEN WORN ACTION         STOP PRINTER
        ENABLE/DISABLE           DISABLE ACTION

    PRINT STATISTICS
        POWER ON TIME            00001.4 Hrs.
        PRINT TIME               00000.1 Hrs.
        SHUTTLE STROKES          0,000,019,376
        PRINT LINES              0,000,001,745
        PRINT PAGES              0,000,000,028

    APPLICATION              COMPATIBILITY
        PRINTER PROTOCOL         P-SERIES
        BUFFER SIZE              2048 CHARACTERS
        UPPERCASE SELECT         UPPER & LOWER
        PRINTER SELECT           DISABLE
        PAPER ADVANCE SW         MOVE PAPER ONLY
        POWER ON STATE           OFFLINE
        UNIDIRECTIONAL           DISABLE

    PAPER FORMAT
        AUTO LINE FEED           AFTER FULL LINE
        DEFINE CR CODE           CR = CR
        DEFINE LF CODE           LF = CR + LF
        VFU SELECT               EVFU
        PERFORATION SKIP         DISABLE
        PAPER EMPTY              END OF PAPER
        PMD FAULT                ENABLE
        MODIFIED PLOT            DISABLE
        SLEW RELATIVE            1 TO 16

    HOST INTERFACE           CENTRONICS
        DATA BIT 8               DISABLE
        DATA POLARITY            STANDARD
        RESP. POLARITY           STANDARD
        FAST BUSY                ENABLE
        PI LINE                  DISABLE
```

1.3 Additional Information

For additional information, reference *Printronix P6000 Series User's Reference Manual*, P/N 140576-001 (CONVEX P/N 900-000329-001) and/or *Printronix P6000 Series Operator's Guide*, P/N 140577-001 (CONVEX P/N 900-000330-001).

DOCUMENT REVISION HISTORY

REVISION	ECN NO.	DESCRIPTION	DATE	APPROVED
A	106068	Initial release.	02/16/90	

EPSON RX-80 CONSOLE PRINTER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Epson RX-80 Console Printer (Convex P/N 215-000002-202).

1.2 Required Equipment

RX-80 Printer (215-000002-202)
Serial Printer Interface (215-000002-201)
Printer Cable (603-250002-000)
Paper Tray (225-000102-001)

1.3 Switch Settings for the Microbuffer

Location	Setting	Description
Jumper H1-1	off	
Jumper H2-1	off	Not used
Jumper H2-2	off	Not used
Jumper H2-3	on	Transmit Data pin 3
Jumper H2-4	on	Receive data pin 2
Jumper H3-1	on	Data Terminal ready pin 20
Jumper H3,2-6	off	Handshake protocol
Jumper H4-1	off	300 baud
Jumper H4-2	off	600 baud
Jumper H4-3	off	1200 baud
Jumper H4-4	off	2400 baud
Jumper H4-5	off	4800 baud
Jumper H4-6	on	9600 baud
Jumper H4-7	off	19200 baud
Switch 1-1	off	X-on/X-off software handshake
Switch 1-2	off	Buffer timing
Switch 1-3	off	Error reporting
Switch 1-4	off	Hardware handshake(Busy)
Switch 1-5	off	Parity disabled
Switch 1-6	off	Parity odd/even
Switch 1-7	off	8-bit word length
Switch 1-8	on	1 Stop bit

1.4 Switch Settings for the RX-80

Location	Setting	Description
Switch 1-1	off	80 column (Pica)
Switch 1-2	off	Graphic character set
Switch 1-3	off	Bell
Switch 1-4	off	Form length (11)
Switch 1-5	off	Active Paper out sensor
Switch 1-6	on	International Character set
Switch 1-7	on	International Character set
Switch 1-8	on	International Character set
Switch 2-1	on	Slashed 0 enabled
Switch 2-2	on	Printer select active
Switch 2-3	off	Automatic line feed CR only
Switch 2-4	off	Skip over perforation

EPSON LX-90 CONSOLE PRINTER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Epson LX-90 Console Printer (Convex P/N 215-000004-200).

1.2 Required Equipment

LX-90 Printer (215-000004-200)
Printer Cable (215-000004-201)
Paper Tray (225-000102-001)

1.3 Switch Settings (Located on the rear of the unit)

SWITCH	FUNCTION	SETTING
S1-1	Print Mode	OFF
S1-2	NLQ/Draft	OFF
S1-3	Sheet Feeder	OFF
S1-4	Page Length 11"	OFF
S1-5	Paper Out Sensor	OFF
S1-6	Standard Character	OFF
S1-7	Not Used	OFF
S1-8	Not Used	OFF
S2-1	Slashed Zero	OFF
S2-2	Not Used	OFF
S2-3	Auto Line Feed	OFF
S2-4	Beeper Active	OFF

Console Printer Configurator - Fujitsu DX2100

1.1 Scope

The purpose of this document is to provide configuration information for the Fujitsu DX2100 console printer (Convex P/N 215-000005-200).

1.2 Required Equipment

Fujitsu DX2100 printer (215-000005-200)
Printer cable (xxx-yyyyyyy-zzz)
Paper tray (225-000102-001)

NOTE: VERSION

215-000005-200----Printer, Console DX2100-ES/ AMERICAN
215-000005-201----Printer, Console DX2100-EES/ EUROPEAN

1.3 Switch Settings (Located right rear corner behind small panel. Large thumbscrew will allow access).

IN THE FUJITSU PRINTER there are two small 3 x 3 pwa boards. A Memory board and a serial interface board. Both boards contain switches. The data cable from the TAB terminal plugs into the serial board. On the serial board the switch SW1 is set to the following:

		SW1-6	SW1-7	SW1-8	BAUD RATE
SW1-1 = ON	XON/XOFF	OFF	OFF	ON	300
SW1-2 = ON	7 bit	OFF	ON	ON	1200
SW1-3 = off	Parity off	ON	OFF	OFF	2400
SW1-4 = off	-	ON	OFF	ON	4800
SW1-5 = off	Stop Bit	ON	ON	OFF	9600

The second board, the memory board, have switches SW1 and SW2.

		SW1-6	SW1-7	SW1-8	LANGUAGE
SW1-1 = off	Charactor Size	OFF	OFF	OFF	Spanish
SW1-2 = off	Numer Zero	OFF	OFF	ON	Italian
SW1-3 = off	Paper-out Detector	OFF	ON	OFF	Swedish
SW1-4 = off	Buffer Selection	OFF	ON	ON	Danish
SW1-5 = off	Paper Length	ON	OFF	OFF	English
		ON	OFF	ON	German
		ON	ON	OFF	French
		ON	ON	ON	U.S.A.

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```
SW2-1 = ON    /SLCT IN signal        print enabled
SW2-2 = off   Cut sheet Feeder       Disabled
SW2-3 = off   Skip Perforation       Disabled
SW2-3 = off   Line Feed by CR code   /AUTO FEED XT
```

1.4 TAB Terminal Setup

The following options must be selected in the TAB Terminal for this printer:

* System Features = "Printer w/"

* Communications = "Flow Control XON/XOFF"

* Set Up Print =

S1	Baud Rate = 9600	S5	Print Ext Screen
S2	Parity = Odd	S6	Term Char none
S3	bits/char = 7	S7	Print Port SERIAL
S4	Suppress off	S8	Print Physical

Console Printer Configurator - Fujitsu DX2300

1.1 Scope

The purpose of this document is to provide configuration information for the Fujitsu DX2300 console printer (Convex P/N 215-000007-200).

1.2 Required Equipment

Fujitsu DX2300 printer (215-000007-200)
Printer cable (604-100003-001)

NOTE: VERSION

215-000007-200--Printer, Console D04B-7760-B163 (120VAC, 60Hz) National
215-000007-201--Printer, Console D04B-7760-B263 (220VAC, 50Hz) International

1.3 Switch Settings (Located right rear corner behind small panel. Large thumbscrew will allow access).

IN THE FUJITSU PRINTER there are two small 3" x 3" pwa boards. A Memory board and a serial interface board. Both boards contain switches. The data cable from the TAB terminal plugs into the serial board. On the serial board the switchbank SW1 is set to the following:

		SW1-6	SW1-7	SW1-8	BAUD RATE
SW1-1 = ON	XON/XOFF	OFF	OFF	ON	300
SW1-2 = ON	7 bit	OFF	ON	ON	1200
SW1-3 = off	Parity off	ON	OFF	OFF	2400
SW1-4 = off	-	ON	OFF	ON	4800
SW1-5 = off	Stop Bit	ON	ON	Off	9600

The second board, the memory board, have switches SW1 and SW2.

		SW1-6	SW1-7	SW1-8	LANGUAGE
SW1-1 = off	Charactor Size	OFF	OFF	OFF	Spanish
SW1-2 = off	Numer Zero	OFF	OFF	ON	Italian
SW1-3 = off	Paper-out Detector	OFF	ON	OFF	Swedish
SW1-4 = off	Buffer Selection	OFF	ON	ON	Danish
SW1-5 = off	Paper Length	ON	OFF	OFF	English
		ON	OFF	ON	German
		ON	ON	OFF	French
		ON	ON	ON	U.S.A.

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```
SW2-1 = ON     /SLCT IN signal          print enabled
SW2-2 = off    Cut sheet Feeder         Disabled
SW2-3 = off    Skip Perforation         Disabled
SW2-3 = off    Line Feed by CR code     /AUTO FEED XT
```

For setup on the Citoh 101XL:

1. depress SHIFT key and SET-UP key (upper right corner)
2. depress the up or down arrow key until AUX:1 is displayed
3. Set the following:

   Receive = 9600 Parity = None Data = 8
   Recv Xoff = Process Tx Xoff = ON

4. Depress the arrow key to move to AUX:2/3 and set as desired.
5. Depress the arrow key to move to AUX:4
   Print = Normal

NEC P3200 24-Pin Dot Matrix Printer Configuration

1.1 Scope

The purpose of this document to provide configuration information for the NEC 24-Pin Dot Matrix Printer (Convex Part Number 215-000010-200). This product is to be used on domestic (U.S.A.) systems only.

1.2 Configuration

There is no internal strapping required for the NEC printer. The only requirements for using this printer are to configure it as a serial printer and install the correct serial cable for the application.

- Serial Interface Module Installation

  A *Serial Interface Module* is packaged with each printer. Plug the module into the parallel port and tighten the two thumb screws to secure it to the printer casing.

- Serial Interface Cable Selection & Installation

  There are three (3) possible Serial Interface cables that may be connected to the printer. The applications and appropriate cables for each are shown below.

Terminal Type	Cable Part Number	Connect To	Cable Description
Link MC5	604-080007-001	Aux	9-Pin DShell, 6 Feet
Tab E-32	604-100003-001	Serial Printer	25-Pin DShell, 6 Feet
C.Itoh 101XL & 50+	604-100003-001	Aux	25-Pin DShell, 6 Feet
SPARC Workstation	604-080004-200	DIN on SWIP	25-Pin DShell to 9-Pin DIN

- Shippable Documentation

Manual Description	Convex Part Number	NEC Part Number
NEC P3200 Setup Guide	900-000091-001	819-180360-000
NEC P3200 User's Guide	900-000090-001	819-180361-000

Configuration Document Revision History

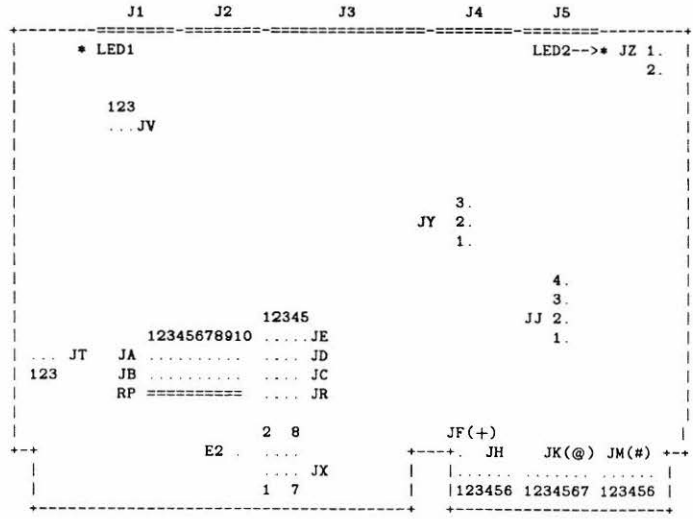
Revision	ECN No.	Description	Date
A	109325	Initial Release.	08/12/92

XYLOGICS MODEL 450 DISC CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Xylogics Model 450 Disc Controller (Convex P/N 220-000001-200). This Controller will not support the CDC 9715 FSD *or* NEC D2363 (1.1GB). Also, this Controller should only be used in Convex systems; not in Sun systems.

1.2 Controller Configuration



Standard Convex Addresses and Interrupts per Multibus:

First Controller	DKC-001	03F0	Int 2
Second Controller		03F8	Int 3

NOTES:

\+ = Jumper block JF not on all boards. If it is, jumper from JF-1 to JH-1.
@ = Jumper block JK not on all boards; two position block JN exists in the same position. JN should be unjumpered.
\# = 6-pin Jumper block JM not on all boards; 4-pin block JM exists in the same position. If 4-pin, jumper only from 3 to 4.

XYLOGICS MODEL 450 DISC CONTROLLER CONFIGURATOR (continued)

Description	First Controller		Second Controller	
Unused	JA1-JB1	off	JA1-JB1	off
8xxx	JA2-JB2	on	JA2-JB2	on
x1xx	JA3-JB3	off	JA3-JB3	off
4xxx	JA4-JB4	on	JA4-JB4	on
x2xx	JA5-JB5	off	JA5-JB5	off
2xxx	JA6-JB6	on	JA6-JB6	on
x4xx	JA7-JB7	on	JA7-JB7	on
1xxx	JA8-JB8	on	JA8-JB8	on
x8xx	JA9-JB9	on	JA9-JB9	on
8/16 Bit Address	JA10_JB10	off	JA10-JB10	off
xx8x	JE4-JE5	off	JE4-JE5	off
xx4x	JR1-JC1	on	JR1-JC1	on
xx2x	JR2-JC2	on	JR2-JC2	on
xx1x	JR3-JC3	on	JR3-JC3	on
xxx8	JC4-JD4	on	JR4-JC4	off
16/20 Bit Address	JM1-JM2	off	Same as #1	
	JM3-JM4	on	|	
			|	
*24 Bit Address: ADR14H	JM5-JM6	on	|	
ADR15H	JK5-JK6	on	|	
ADR16H	JK1-JK2	on	|	
ADR17H	JK3-JK4	on	Same as #1	
Interrupt Req. Level	E2-JX4 shorted		E2-JX5 shorted	
Disable BPRO	JE1-JE2	off	Same as #1	
			|	
*Power Fail	JH1-JH2	off	|	
	OR		|	
	JF1-JH1	on	|	
			|	
ECC Feedback Loop	JY2-JY3	on	|	
	JY1-JY2	off	|	
			|	
Clock Select (disc)	JJ1-JJ2	off	|	
	JJ3-JJ4	on	|	
			|	
*Clock Select (DMA)	JH5-JH6	on	|	
	JH3-JH4	off	|	
			|	
Clock Enable	JZ1-JZ2	on	Same as #1	

XYLOGICS MODEL 450 DISC CONTROLLER CONFIGURATOR (continued)

Description	First Controller		Second Controller
Buffer Size:			
2KB Buffer	JT1-JT2	off	Same as #1
	JT2-JT3	on	|
	JV2-JV3	on	|
	JV1-JV2	off	|
			|
8KB Buffer	JT1-JT2	on	|
(Normally Used)	JT2-JT3	off	|
	JV2-JV3	off	|
	JV1-JV2	on	Same as #1

NOTES: * = Strapping points not present on all revisions.

Shorting Jumpers are CONVEX Part Number 312-000163-010.

SUPPLEMENTAL ADDRESS STRAPPING INFORMATION

Address	8	4	2	1	X	X	X	X	X	X	X	X	X
	X	X	X	X	8	4	2	1	X	X	X	X	X
	X	X	X	X	X	X	X	X	8	4	2	1	X
	X	X	X	X	X	X	X	X	X	X	X	X	8

Address Bit	F	E	D	C	B	A	9	8	7	6	5	4	3
03f0	I	I	I	I	I	I	0	0	0	0	0	0	I
03f8	I	I	I	I	I	I	0	0	0	0	0	0	0

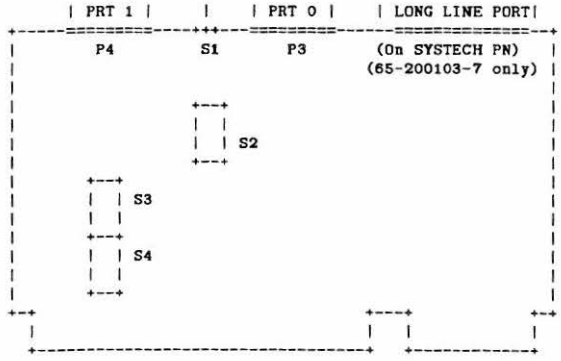
Jumper JA/JB	2	4	6	8	9	7	5	3					
Jumper JE4/JE5									X				
Jumper JR/JC/JD										1	2	3	4

SYSTECH MLP-2000 PRINTER CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Systech MLP-2000 Printer Controller (Convex P/N 220-000003-200).

1.2 Controller Configuration



NOTE: The Long Line Port is not used for Convex printers.

Standard Convex Addresses and Interrupts per Multibus:

First controller	PRC-001	02c0	int 0
Second Controller		02e0	int 1

SYSTECH MLP-2000 PRINTER CONTROLLER CONFIGURATOR (continued)

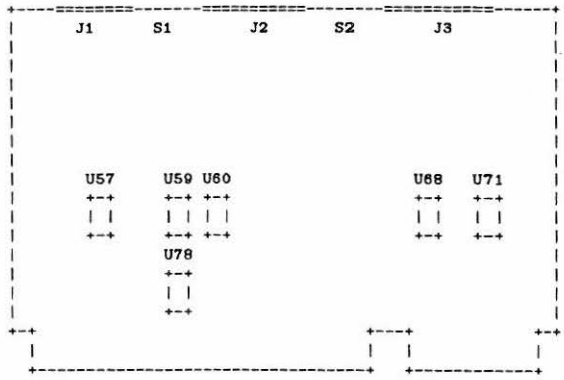
Description		Switch Number	Setting For 1st Controller	Setting for 2nd Controller
B				
O	8xxx	S2-8	ON	ON
A	4xxx	S2-7	ON	ON
R	2xxx	S2-6	ON	ON
D	1xxx	S2-5	ON	ON
	x8xx	S2-4	ON	ON
A	x4xx	S2-3	ON	ON
D	x2xx	S2-2	OFF	OFF
D	x1xx	S2-1	ON	ON
R				
E	xx8x	S3-4	OFF	OFF
S	xx4x	S3-3	OFF	OFF
S	xx2x	S3-2	ON	OFF
8/16 Bit Address		S3-1	ON	ON
	0	S4-1	ON	OFF
I	1	S4-2	OFF	ON
N	2	S4-3	OFF	OFF
T	3	S4-4	OFF	OFF
	4	S4-5	OFF	OFF
L	5	S4-6	OFF	OFF
E	6	S4-7	OFF	OFF
V	7	S4-8	OFF	OFF
TEST		S1	- In center position for normal use -	

IKON VERSATEC PLOTTER CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the IKON Versatec Plotter Controller (Convex P/N 220-000004-200). This controller supports one of two interface disciplines; TTL or Differential. Also, a Centronics Parallel Printer Port is available, but not presently supported.

1.2 Configuration



Standard Convex Addresses and Interrupts per Multibus:

First Controller	VER-001/VER-002	02C0	int 1
Second Controller	VER-001/VER-002	02E0	int 0

1.3 Connectors

J1 = Centronics Port (not supported).
J2 = TTL Versatec Port - VER-002.
J3 = Differential Versatec Port - VER-001.

IKON VERSATEC PLOTTER CONTROLLER CONFIGURATOR (continued)

Switch Settings

Location	Function	Normal Setting	Setting For 2nd Controller
U57-1	N/A	OFF	
U57-2	N/A	OFF	
U57-3	BYTE/WORD DMA	ON	
U57-4	DRIVE CBRQ	OFF	
U57-5	SERIAL BUS PRI.	OFF	
U57-6	BUS VEC. INT.	OFF	
U57-7	DRIVE INH1	OFF	
U57-8	N/A	OFF	
U59-1	ADR7	ON	
U59-2	ADR6	ON	
U59-3	ADR5	OFF	(ON)
U59-4	IO/MEM MAP	OFF	
U59-5	16/24 BIT MAP	OFF	
U59-6	16/8 BIT MAP	OFF	
U59-7	N/A	OFF	
U59-8	N/A	OFF	
U60-1	ADRF	OFF	
U60-2	ADRE	OFF	
U60-3	ADRD	OFF	
U60-4	ADRC	OFF	
U60-5	ADRB	OFF	
U60-6	ADRA	OFF	
U60-7	ADR9	ON	
U60-8	ADR8	OFF	
U68-1	ADR17	OFF	
U68-2	ADR16	OFF	
U68-3	ADR15	OFF	
U68-4	ADR14	OFF	
U68-5	ADR13	OFF	
U68-6	ADR12	OFF	
U68-7	ADR11	OFF	
U68-8	ADR10	OFF	

IKON VERSATEC PLOTTER CONTROLLER CONFIGURATOR (continued)

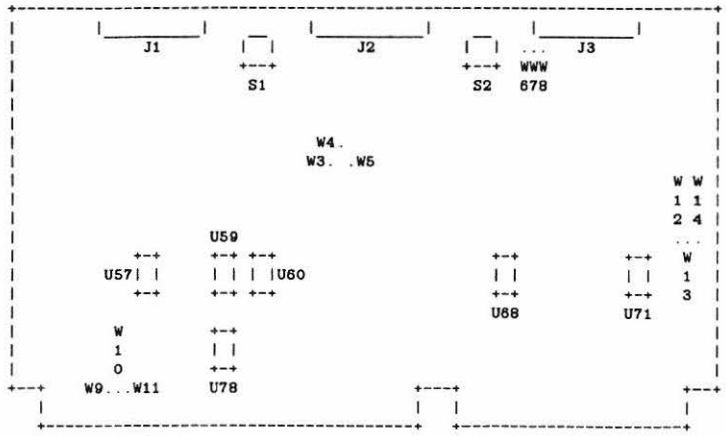
Location	Function	Normal Setting	Setting For 2nd Controller
U71-1	Long Data Hold	ON	
U71-2	Fast Timing	OFF	
U71-3	High Byte First	OFF	
U71-4	N/A	OFF	
U71-5	Busy Option 1	OFF	
U71-6	Busy Option 2	OFF	
U71-7	Force Nopap Off	OFF for TTL; ON for Differential	
U71-8	TTL/Diff I/F	OFF for TTL; ON for Differential	
U78-1	INT0	OFF	(ON)
U78-2	INT1	ON	(OFF)
U78-3	INT2	OFF	
U78-4	INT3	OFF	
U78-5	INT4	OFF	
U78-6	INT5	OFF	
U78-7	INT6	OFF	
U78-8	INT7	OFF	
S1	TEST/NORM/OPT	NORM	
S2	RESET/NORM/TEST	NORM	

IKON VERSATEC PLOTTER CONTROLLER CONFIGURATOR
Convex Revision B

1.1 Scope

The purpose of this document is to provide configuration information for the Ikon Versatec Plotter Controller (CONVEX P/N 220-000004-200). This controller supports two physical plotter interface types; one, a TTL level interface (J2), and the other, a differential interface (J3). A Centronics Parallel printer port exists on the board (J1), but is not supported by CONVEX.

1.2 Configuration



Standard Convex Addresses and Interrupt Levels (in each Multibus):

First Controller	VER-001/VER-002	02c0	int 1
Second Controller	VER-001/VER-002	02E0	int 0

Connector Assignments:

J1 = Centronics Port (not supported)
J2 = TTL Versatec Port - VER-002
J3 = Differential Versatec Port - VER-001

IKON VERSATEC PLOTTER CONFIGURATOR (continued)

Switch Settings:

Location	Function	Normal Setting Add 02c0, Int 1 (1st Controller)	Optional Setting Add 02e0, Int 0 (2nd Controller)
U57-1	Not Used	OFF	
U57-2	Not Used	OFF	
U57-3	Byte or Word DMA	ON	
U57-4	Drive CBRQ	OFF	
U57-5	Serial Bus Priority	OFF	
U57-6	Bus Vectored Interrupt	OFF	
U57-7	Drive INH1	OFF	
U57-8	Not Used	OFF	
U59-1	Address Bit 7	ON	
U59-2	Address Bit 6	ON	
U59-3	Address Bit 5	OFF	ON
U59-4	I/O or Memory Map	OFF	
U59-5	16 or 24 Bit Map	OFF	
U59-6	8 or 16 Bit Map	OFF	
U59-7	Not Used	OFF	
U59-8	Not Used	OFF	
U60-1	Address Bit F	OFF	
U60-2	Address Bit E	OFF	
U60-3	Address Bit D	OFF	
U60-4	Address Bit C	OFF	
U60-5	Address Bit B	OFF	
U60-6	Address Bit A	OFF	
U60-7	Address Bit 9	ON	
U60-8	Address Bit 8	OFF	
U68-1	Address Bit 17	OFF	
U68-2	Address Bit 16	OFF	
U68-3	Address Bit 15	OFF	
U68-4	Address Bit 14	OFF	
U68-5	Address Bit 13	OFF	
U68-6	Address Bit 12	OFF	
U68-7	Address Bit 11	OFF	
U68-8	Address Bit 10	OFF	

IKON VERSATEC PLOTTER CONTROLLER (continued)

Switch Settings:

Location	Function	Normal Setting Add 02c0, Int 1 (1st Controller)	Optional Setting Add 02e0, Int 0 (2nd Controller)
U71-1	Long Data Hold	ON	
U71-2	Fast Timing	OFF	
U71-3	High Byte First	OFF	
U71-4	Not Used	OFF	
U71-5	Busy Option 1	OFF	
U71-6	Busy Option 2	OFF	
U71-7	Force Nopaper Off	OFF if TTL ON if Differential	
U71-8	TTL or Differential	OFF if TTL ON if Differential	
U78-1	Interrupt Level 0	OFF	ON
U78-2	Interrupt Level 1	ON	OFF
U78-3	Interrupt Level 2	OFF	
U78-4	Interrupt Level 3	OFF	
U78-5	Interrupt Level 4	OFF	
U78-6	Interrupt Level 5	OFF	
U78-7	Interrupt Level 6	OFF	
U78-8	Interrupt Level 7	OFF	
S1	Test/Normal/Option	Normal (Center)	
S2	Test/Normal/Reset	Normal (Center)	

Jumper Options:

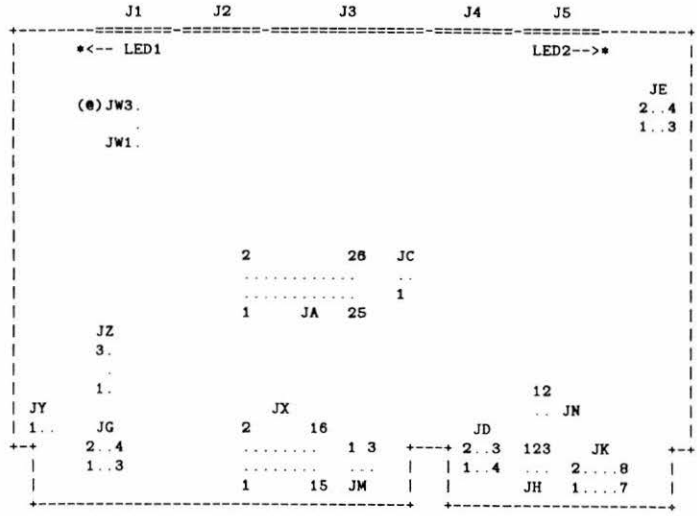
Location	Function	Normal Setting
W3 to W4	Normal Operation	In (Etched)
W4 to W5	Special Purpose	Out
W6 to W7	Normal Operation	In
W7 to W8	Special Purpose	Out
W9 to W10	Normal Operation	In
W10 to W11	Special Purpose	Out
W12 to W13	Normal Operation	In
W13 to W14	Special Purpose	Out

XYLOGICS MODEL 451 DISC CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Xylogics Model 451 Disc Controller (Convex P/N 220-000006-200). This Controller will support the Fujitsu M2351A Eagle, CDC 9766 SMD, CDC 9715 FSD, NEC D2352, and NEC D2363 Disc Drives. It can be used in Convex and Sun systems.

1.2 Controller Configuration



Standard Convex Addresses and Interrupts per Multibus:

First controller	DKC-001	O3F0	Int 2
Second Controller		O3F8	Int 3
SUN Workstation	-------	EE40	Int 2

NOTE: e = Jumper Block JW is as shown on Rev. C and later boards. On Rev. B and earlier boards, Jumper Block JW is laid out from left-to-right across the board (i.e., JW 1.2.3.).

XYLOGICS MODEL 451 DISC CONTROLLER CONFIGURATOR (continued)

NOTE: Shorting Jumpers are Convex Part Number 312-000163-010.

Description	1st Convex Controller In The Multibus	2nd Convex Controller In The Multibus	Sun Controller In The VME Bus
Device Address:			
8xxx	JA1-JA2 Off	JA1-JA2 Off	JA1-JA2 On
4xxx	JA3-JA4 Off	JA3-JA4 Off	JA3-JA4 On
2xxx	JA5-JA6 Off	JA5-JA6 Off	JA5-JA6 On
1xxx	JA7-JA8 Off	JA7-JA8 Off	JA7-JA8 Off
x8xx	JA9-JA10 Off	JA9-JA10 Off	JA9-JA10 On
x4xx	JA11-JA12 Off	JA11-JA12 Off	JA11-JA12 On
x2xx	JA13-JA14 On	JA13-JA14 On	JA13-JA14 On
x1xx	JA15-JA16 On	JA15-JA16 On	JA15-JA16 Off
xx8x	JA17-JA18 On	JA17-JA18 On	JA17-JA18 Off
xx4x	JA19-JA20 On	JA19-JA20 On	JA19-JA20 On
xx2x	JA21-JA22 On	JA21-JA22 On	JA21-JA22 Off
xx1x	JA23-JA24 On	JA23-JA24 On	JA23-JA24 Off
xxx8	JA25-JA26 Off	JA25-JA26 On	JA25-JA26 Off
8/16 bit address	JC1-JC2 Off	JC1-JC2 Off	JC1-JC2 Off
16/20 bit address	JM2-JM3 On	JM2-JM3 On	JM2-JM3 Off
16/24 bit address	JM1-JM2 Off	JM1-JM2 Off	JM1-JM2 On
Interrupt Request Level:			
INT0	JX1-JX2 Off	JX1-JX2 Off	JX1-JX2 Off
INT1	JX3-JX4 Off	JX3-JX4 Off	JX3-JX4 Off
INT2	JX5-JX6 On	JX5-JX6 Off	JX5-JX6 On
INT3	JX7-JX8 Off	JX7-JX8 On	JX7-JX8 Off
INT4	JX9-JX10 Off	JX9-JX10 Off	JX9-JX10 Off
INT5	JX11-JX12 Off	JX11-JX12 Off	JX11-JX12 Off
INT6	JX13-JX14 Off	JX13-JX14 Off	JX13-JX14 Off
INT7	JX15-JX16 Off	JX15-JX16 Off	JX15-JX16 Off

XYLOGICS MODEL 451 DISC CONTROLLER CONFIGURATOR (continued)

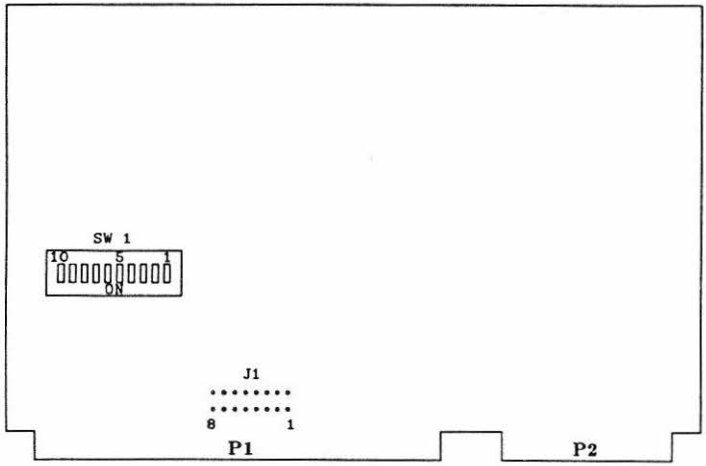
Description	1st Convex Controller In The Multibus		2nd Convex Controller In The Multibus		Sun Controller In The VME Bus	
Disable BPRO	JY1-JY2	Off	JY1-JY2	Off	JY1-JY2	On
Power Fail	JH1-JH2	On	JH1-JH2	On	JH1-JH2	On
CBRQ Enabled	JZ1-JZ2	Off	JZ1-JZ2	Off	JZ1-JZ2	On
CBRQ Disabled	JZ2-JZ3	On	JZ2-JZ3	On	JZ2-JZ3	Off
Remote Activity	JN1-JN2	Off	JN1-JN2	Off	JN1-JN2	Off
-5V Options (From Backplane)	JD1-JD2	Off	JD1-JD2	Off	JD1-JD2	Off
	JD3-JD4	Off	JD3-JD4	Off	JD3-JD4	Off
	JE1-JE2	Off	JE1-JE2	Off	JE1-JE2	Off
	JE3-JE4	Off	JE3-JE4	Off	JE3-JE4	Off
	JG1-JG2	On	JG1-JG2	On	JG1-JG2	On
	JG3-JG4	On	JG3-JG4	On	JG3-JG4	On
Multibus Transmit	JW1-JW2	Off	JW1-JW2	Off	JW1-JW2	On
Acknowledge Timing	JW2-JW3	On	JW2-JW3	On	JW2-JW3	Off
24-Bit Address	JK1-JK2	On	JK1-JK2	On	JK1-JK2	On
	JK3-JK4	On	JK3-JK4	On	JK3-JK4	On
	JK5-JK6	On	JK5-JK6	On	JK5-JK6	On
	JK7-JK8	On	JK7-JK8	On	JK7-JK8	On

SOFTWARE RESULTS MACH-I HASP HOST COMBOARD CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Software Results Mach-I HASP Host Comboard Controller (Convex P/N 220-000008-200). Recommended Board Addresses (CSR) and Interrupt levels are shown below. However, it must be ensured that the values chosen do not conflict with other controllers located in the same Multibus.

1.2 Board Layout



1.3 Preferred Convex Addresses and Interrupt Levels per Multibus:

1st Controller - Address 07C0 Interrupt Level 4
2nd Controller - Address 07E0 Interrupt Level 5

...continued on next page

...continued from previous page

1.4 Switch Settings and Jumper Options

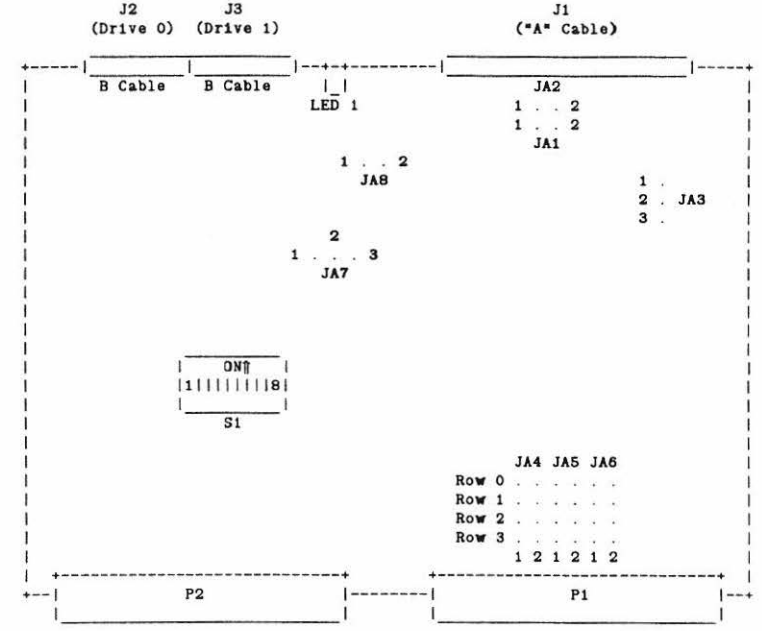
OPTION	1st CONTROLLER (CSR 07C0 - Int 4)	2nd CONTROLLER (CSR 07E0 - Int 5)
Interrupt Level 0	J1-1 OUT	J1-1 OUT
Interrupt Level 1	J1-2 OUT	J1-2 OUT
Interrupt Level 2	J1-3 OUT	J1-3 OUT
Interrupt Level 3	J1-4 OUT	J1-4 OUT
Interrupt Level 4	J1-5 IN	J1-5 OUT
Interrupt Level 5	J1-6 OUT	J1-6 IN
Interrupt Level 6	J1-7 OUT	J1-7 OUT
Interrupt Level 7	J1-8 OUT	J1-8 OUT
Address xx2x	S1-1 ON	S1-1 OFF
Address xx4x	S1-2 OFF	S1-2 OFF
Address xx8x	S1-3 OFF	S1-3 OFF
Address x1xx	S1-4 OFF	S1-4 OFF
Address x2xx	S1-5 OFF	S1-5 OFF
Address x4xx	S1-6 OFF	S1-6 OFF
Address x8xx	S1-7 ON	S1-7 ON
Address 1xxx	S1-8 ON	S1-8 ON
Address 2xxx	S1-9 ON	S1-9 ON
Address 4xxx	S1-10 ON	S1-10 ON

Interphase 4200 (SMD) Disc Controller Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Interphase 4200 (SMD) Disc Controller (CONVEX P/N 220-000010-200).

1.2 Controller Configuration



Normal Usage: Base Address of 1st controller in the VMEBus is normally "200". The Bus Request Priority must always be strapped for "3". The Interrupt Level is software configured from the contents of the SPU file, */ioconfig*.

1.2 Controller Configuration (continued)

Jumper & Switch Setting Options:

The *Bus Request Priority* level can be jumpered for a value of "0" (lowest priority) to "3" (highest priority). As used in CONVEX systems, this controller must always be jumpered for level "3" as shown below. To select other than level "3", consult the *4200 User's Guide*.

BUS PRIORITY LEVEL "3" STRAPPING

FROM	TO
Row 0, JA5-2	Row 0, JA6-1
Row 1, JA5-2	Row 1, JA6-1
Row 2, JA5-2	Row 2, JA6-1
Row 3, JA4-1	Row 3, JA4-2
Row 3, JA5-1	Row 3, JA5-2
Row 3, JA6-1	Row 3, JA6-2

CONVEX normally uses *Controller Base Addresses* "200", "400", "600", "800", "A00", "C00" and "E00" for the 1st through 6th Controllers, respectively, in the VMEBus. Switches 1 through 7 of DIP Switch "S1" are used to define the Base Address as shown below. To select a Base Address other than shown below, consult the *4200 User's Guide*.

BASE ADDRESS SWITCH SETTINGS (S1)

BASE ADDRESS	*1*	*2*	*3*	*4*	*5*	*6*	*7*
200	OFF	ON	ON	ON	ON	ON	ON
400	ON	OFF	ON	ON	ON	ON	ON
600	OFF	OFF	ON	ON	ON	ON	ON
800	ON	ON	OFF	ON	ON	ON	ON
A00	OFF	ON	OFF	ON	ON	ON	ON
C00	ON	OFF	OFF	ON	ON	ON	ON
E00	OFF	OFF	OFF	ON	ON	ON	ON

NOTE: Switch "8" of S1 must always be set to "OFF". When "OFF", all address modifiers are allowed; when "ON" only supervisor accesses are permitted.

In CONVEX systems, the following jumpers must always be set as shown.

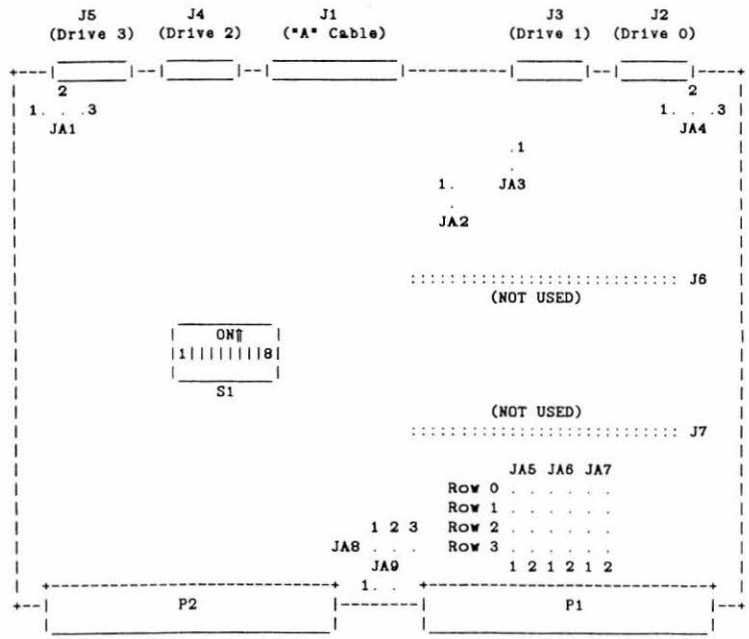
JUMPER	STRAP	JUMPER	STRAP
JA1 1-2	IN	JA7 1-2	IN
JA2 1-2	IN	JA7 2-3	OUT
JA3 1-2	OUT	JA8 1-2	IN
JA3 2-3	IN		

Interphase 4201 (ESDI) Disc Controller Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Interphase 4201 (ESDI) Disc Controller (CONVEX P/N 220-000011-200).

1.2 Controller Configuration



Normal Usage: Connectors J4 and J5 not supported or used in RDS Subsystems. Base Address of 1st controller in the VMEBus is normally "800". The Bus Request Priority must always be strapped for "3". The Interrupt Level is software configured from the contents of the SPU file, */iosconfig*.

1.2 Controller Configuration (continued)

Jumper & Switch Setting Options:

The *Bus Request Priority* level can be jumpered for a value of "0" (lowest priority) to "3" (highest priority). As used in CONVEX systems, this controller must always be jumpered for level "3" as shown below. To select other than level "3", consult the *4201 User's Guide*.

BUS PRIORITY LEVEL "3" STRAPPING

FROM	TO
Row 0, JA6-2	Row 0, JA7-1
Row 1, JA6-2	Row 1, JA7-1
Row 2, JA6-2	Row 2, JA7-1
Row 3, JA5-1	Row 3, JA5-2
Row 3, JA6-1	Row 3, JA6-2
Row 3, JA7-1	Row 3, JA7-2

CONVEX normally uses *Controller Base Addresses* "800", "A00", "C00", and "E00" for the 1st through 4th Controllers, respectively, in the VMEBus. Switches 1 through 7 of DIP Switch "S1" are used to define the Base Address as shown below. To select a Base Address other than shown below, consult the *4201 User's Guide*.

BASE ADDRESS SWITCH SETTINGS (S1)

BASE ADDRESS	*1*	*2*	*3*	*4*	*5*	*6*	*7*
800	ON	ON	OFF	ON	ON	ON	ON
A00	OFF	ON	OFF	ON	ON	ON	ON
C00	ON	OFF	OFF	ON	ON	ON	ON
E00	OFF	OFF	OFF	ON	ON	ON	ON

NOTE: Switch "8" of S1 must always be set to "OFF". When "OFF", all address modifiers are allowed; when "ON" only supervisor accesses are permitted.

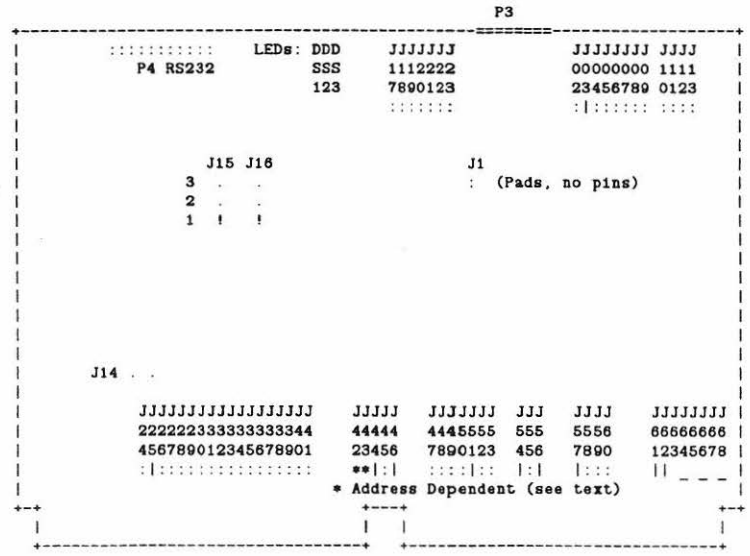
In CONVEX systems, the following jumpers must always be set as shown.

JUMPER	STRAP	JUMPER	STRAP
JA1 1-2	IN	JA4 1-2	OUT
JA1 2-3	OUT	JA4 2-3	IN
JA2 1-2	IN	JA8 1-2	OUT
JA3 1-2	IN	JA8 2-3	OUT
		JA9 1-2	OUT

1.1 Scope

The purpose of this document is to provide configuration information for the Excelan Ethernet communications controller(Convex P/N 220-000012-200 rev B).

1.2 Controller Configuration



NOTE: Strapping of J42 and J43 vary depending on the base address of the board depending upon the individual system configuration. See table on next page for possible addresses.

Jumper	Function(jumper installed)	Setting	
J1	Factory Only	Absent	
J2	CRS Check Flag	Absent	
J3	(SQE)	Installed	
J4	Non-Stand Console	Absent	
J5	Reserved	Absent	
J6	Reserved	Absent	
J7	Reserved	Absent	
J8	Reserved	Absent	
J9	Debug Option	Absent	
J10	Mem Size 512KB(out) 1MB(in)	Absent	
J11	Reserved	Absent	
J12	Reserved	Absent	
J13	Reserved	Absent	
J14	EPROM Wait State	Absent	
J15	EPROM size jumper 1	Installed 1-2	27128
J16	EPROM size jumper 2	Installed 1-2	27128
J24	GND (P2-C15)	Absent	
J25	VME Master burst trans (enable)	Installed 1-2	
J26	VME Slave Address bit 31 comp	Absent	
J27	VME Slave Address bit 30 comp	Absent	
J28	VME Slave Address bit 29 comp	Absent	
J29	VME Slave Address bit 28 comp	Absent	
J30	VME Slave Address bit 27 comp	Absent	
J31	VME Slave Address bit 26 comp	Absent	
J32	VME Slave Address bit 25 comp	Absent	
J33	VME Slave Address bit 24 comp	Absent	
J34	VME Slave Address bit 23 comp	Absent	
J35	VME Slave Address bit 22 comp	Absent	
J36	VME Slave Address bit 21 comp	Absent	
J37	VME Slave Address bit 20 comp	Absent	
J38	VME Slave Address bit 19 comp	Absent	
J39	VME Slave Address bit 18 comp	Absent	
J40	VME Slave Address bit 17 comp	Absent	
J41	VME Slave Address bit 16 comp	Absent	
J42	VME Slave Address bit 15 comp	See Table below	
J43	VME Slave Address bit 15 comp	See Table below	

Address Jumper Positions

Address Setting	Jumper 42	Jumper 43
FD80	Removed	Removed
FE00	Removed	Installed
FE80	Installed	Removed
FF00	Installed	Installed

.....continued

J44	VME master address width(slave)			Installed
J45	Factory test only			Absent
J46	VME slave address width(24bit)			Installed
J47	VME interrupt request 1**			Absent
J48	VME interrupt request 2**			Absent
J49	VME interrupt request 3**			Absent
J50	VME interrupt request 4**			Absent
J51	VME interrupt request 5**			Installed
J52	VME interrupt request 6**			Absent
J53	VME interrupt request 7**			Absent
754	VME interrupt acknowledge bit 1**			Installed
J55	VME interrupt acknowledge bit 2**			Absent
J56	VME interrupt acknowledge bit 3**			Installed
J57	VME bus request level 3***			Installed
J58	VME bus request level 2***			Absent
J59	VME bus request level 1***			Absent
J60	VME bus request level 0***			Absent
J61	VME Bus Grant 3	OUT	J57Pin1 to Pin2***	Installed
J62	VME Bus Grant 3	IN	J61Pin1 to Pin2***	Installed
			J62Pin1 to Pin2***	Installed
			J63 to J64***	Installed
			J65 to J66***	Installed
			J67 to J68***	Installed

** Note:1 The VMEbus Ethernet board will use the interrupt level 5

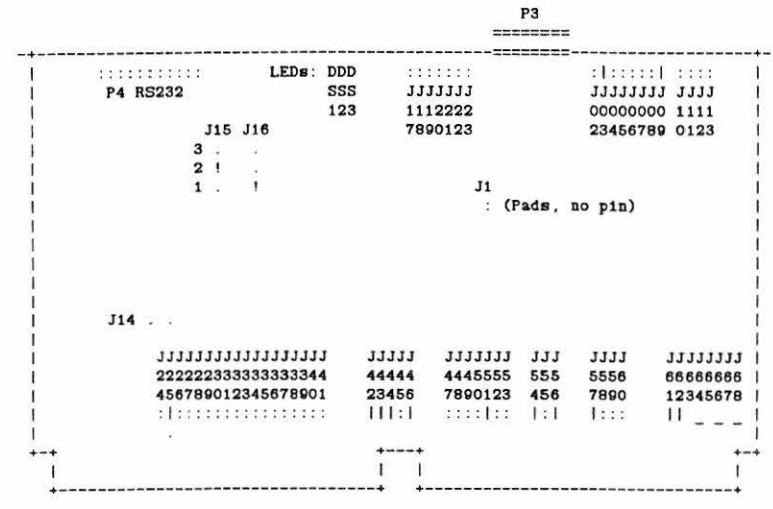
*** Note:2 Bus Request/Grant for VMEbus Ethernet will be 3

EXCELAN EXOS 302 COMMUNICATIONS CONTROLLER CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Excelan Ethernet communications controller (CONVEX P/N 220-000012-200 rev C).

1.2 Controller Configuration



csr address = ff00
interrupt = 5
bus req/grant = 3

Jumper	Function	Setting
J1	Factory Only	OUT
J2	CRS Check Flag	OUT
J3	(SQE)	IN
J4	Non-Stand Console	OUT
J5	Reserved	OUT
J6	Reserved	OUT
J7	Reserved	OUT
J8	Reserved	OUT
J9	Firmware V6.x Mode	IN
J10	Mem Size 512KB(out) 1MB(in)	OUT
J11	Reserved	OUT
J12	Reserved	OUT
J13	Reserved	OUT
J14	EPROM Wait State	OUT
J15	EPROM size jumper 1	IN 2-3 27256
J16	EPROM size jumper 2	IN 1-2 27256
J17	+12VDC (P2-C16)	OUT
J18	TRMT+ (P2-A13)	OUT
J19	TRMT- (P2-A14)	OUT
J20	RECV+ (P2-A15)	OUT
J21	RECV- (P2-A16)	OUT
J22	CLSN+ (P2-C13)	OUT
J23	CLSN- (P2-C14)	OUT
J24	GND (P2-C15)	OUT
J25	VME Master burst trans(enable)	IN 1-2
J26	VME Slave Address bit 31 comp	OUT
J27	VME Slave Address bit 30 comp	OUT
J28	VME Slave Address bit 29 comp	OUT
J29	VME Slave Address bit 28 comp	OUT
J30	VME Slave Address bit 27 comp	OUT
J31	VME Slave Address bit 26 comp	OUT
J32	VME Slave Address bit 25 comp	OUT
J33	VME Slave Address bit 24 comp	OUT
J34	VME Slave Address bit 23 comp	OUT
J35	VME Slave Address bit 22 comp	OUT
J36	VME Slave Address bit 21 comp	OUT
J37	VME Slave Address bit 20 comp	OUT
J38	VME Slave Address bit 19 comp	OUT
J39	VME Slave Address bit 18 comp	OUT
J40	VME Slave Address bit 17 comp	OUT
J41	VME Slave Address bit 16 comp	OUT
J42	VME Slave Address bit 15 comp Selector 1 ****	XXX
J43	VME Slave Address bit 15 comp Selector 0 ****	XXX
J44	VME master address width(slave)	IN
J45	Factory test only	OUT
J46	VME slave address width(24bit)	IN
J47	VME interrupt request 1 **	OUT
J48	VME interrupt request 2 **	OUT

J49	VME interrupt request 3	**	OUT
J50	VME interrupt request 4	**	OUT
J51	VME interrupt request 5	**	IN
J52	VME interrupt request 6	**	OUT
J53	VME interrupt request 7	**	OUT
J54	VME interrupt ack bit 1	*****	IN
J55	VME interrupt ack bit 2	*****	OUT
J56	VME interrupt ack bit 3	*****	IN
J57	VMEbus req level 3	***	IN
J58	VMEbus req level 2	***	OUT
J59	VMEbus req level 1	***	OUT
J60	VMEbus req level 0	***	OUT
J61	VMEbus Grant 3 out	J57P1-P2 ***	IN
J62	VMEbus Grant 3 in	J61P1-P2 ***	IN
		J62P1-P2 ***	IN
		J63-J64 ***	IN
		J65-J66 ***	IN
		J67-J68 ***	IN

** Note:1 The jumper configuration for rev. A controllers differs from the above in the following locations:

Jumper	Function	Setting
J9	Debug Option	OUT
J15	EPROM size jumper 1	IN 1-2 27128
J16	EPROM size jumper 2	IN 1-2 27128

** Note:2 The VMEbus Ethernet board will use the interrupt level 5

** Note:3 Bus Request/Grant for VMEbus Ethernet will always be 3

** Note:4 The strapping combinations of jumpers 42 and 43 selects one of four possible addresses. The addresses are as follows:

42 Out and 43 Out = FD80
42 Out and 43 IN = FE00
42 IN and 43 Out = FE80
42 IN and 43 IN = FF00

** Note:5

The interrupt acknowledge bits 54, 55, and 56 are used to set the interrupt acknowledge level and the octal count in the three switches must match the interrupt selected.

The interrrupt is not relative to the address. Select an interrupt that is not in the ioconfig file and strap it in.

```
J47     VME inter req 1
J48     VME inter req 2
J49     VME inter req 3
J50     VME inter req 4
J51     VME inter req 5   (Interrupt # 5 is recommended)
J52     VME inter req 6
J53     VME inter req 7
J54     VME inter Ack jumper 2 to the zero power---------|
J55     VME inter Ack jumper 2 to the one power          |-------|
J56     VME inter Ack jumper 2 to the second power ------|       |
                                                                 |
       ------------------------------------------------------------
       |
       |
  J54  J55  J56

   0    0    |      Int ONE
   0    |    0      Int Two
   0    |    |      Int Three
     ////
   |    |    |      Int Seven
```

EXAMPLES:

Strapping for interrupt and interrupt acknowledge for INTERRUPT 5:

J51,J54,J56 = | (Strapped)
J48,J49,J50,J52,J53,J54,J55 = 0 (NO Strap)

Strapping for interrupt and interrupt acknowledge for INTERRUPT 2:

J49,J55 = | (Strapped)
J47,J49,J50,J51,J52,J53,J54,J56 = 0 (NO Strap)

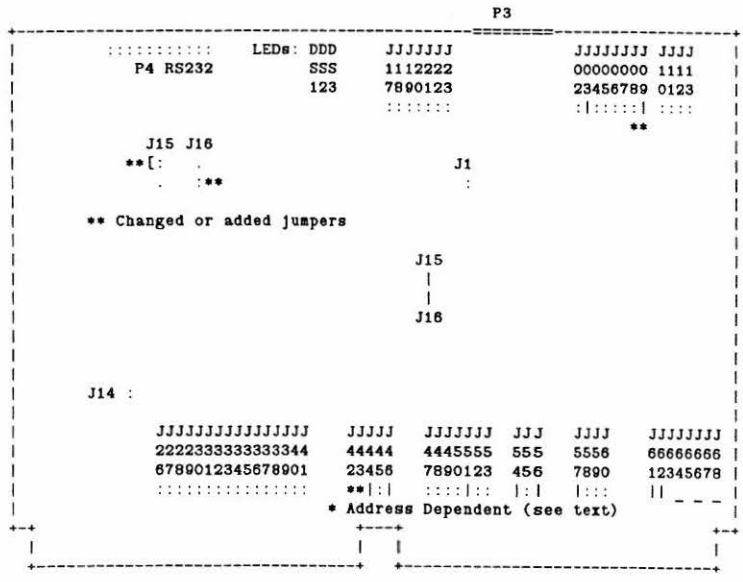
**********See page 2-18 of the EXOS 302 Reference Manual.**********

Excelan EXOS 302 Controller Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Excelan Ethernet communications controller(Convex P/N 220-000012-200 rev C).

1.2 Controller Configuration



NOTE: Strapping of J42 and J43 vary depending on the base address of the board depending upon the individual system configuration. See table on next page for possible addresses.

Jumper	Function(jumper installed)	Setting
J1	Factory Only	Absent
J2	CRS Check Flag	Absent
J3	(SQE)	Installed
J4	Non-Stand Console	Absent
J5	Reserved	Absent
J6	Reserved	Absent
J7	Reserved	Absent
J8	Reserved	Absent
J9	Debug Option	Installed (for v6.2 code or later)
J10	Mem Size 512KB(out) 1MB(in)	Absent
J11	Reserved	Absent
J12	Reserved	Absent
J13	Reserved	Absent
J14	EPROM Wait State	Absent
J15	EPROM size jumper 1	Installed 2-3 27256 (for v6.2 code
J16	EPROM size jumper 2	Installed 1-2 27256 or later)
J26	VME Slave Address bit 31 comp	Absent
J27	VME Slave Address bit 30 comp	Absent
J28	VME Slave Address bit 29 comp	Absent
J29	VME Slave Address bit 28 comp	Absent
J30	VME Slave Address bit 27 comp	Absent
J31	VME Slave Address bit 26 comp	Absent
J32	VME Slave Address bit 25 comp	Absent
J33	VME Slave Address bit 24 comp	Absent
J34	VME Slave Address bit 23 comp	Absent
J35	VME Slave Address bit 22 comp	Absent
J36	VME Slave Address bit 21 comp	Absent
J37	VME Slave Address bit 20 comp	Absent
J38	VME Slave Address bit 19 comp	Absent
J39	VME Slave Address bit 18 comp	Absent
J40	VME Slave Address bit 17 comp	Absent
J41	VME Slave Address bit 16 comp	Absent
J42	VME Slave Address bit 15 comp	See Table below
J43	VME Slave Address bit 15 comp	See Table below

Address Jumper Positions

Address Setting	Jumper 42	Jumper 43
FD80	Removed	Removed
FE00	Removed	Installed
FE80	Installed	Removed
FF00	Installed	Installed

.....continued

J44	VME master address width(slave)			Installed
J45	Factory test only			Absent
J46	VME slave address width(24bit)			Installed
J47	VME interrupt request 1**			Absent
J48	VME interrupt request 2**			Absent
J49	VME interrupt request 3**			Absent
J50	VME interrupt request 4**			Absent
J51	VME interrupt request 5**			Installed
J52	VME interrupt request 6**			Absent
J53	VME interrupt request 7**			Absent
J54	VME interrupt acknowledge bit 1**			Installed
J55	VME interrupt acknowledge bit 2**			Absent
J56	VME interrupt acknowledge bit 3**			Installed
J57	VME bus request level 3***			Installed
J58	VME bus request level 2***			Absent
J59	VME bus request level 1***			Absent
J60	VME bus request level 0***			Absent
J61	VME Bus Grant 3	OUT	J57Pin1 to Pin2***	Installed
J62	VME Bus Grant 3	IN	J61Pin1 to Pin2***	Installed
			J62Pin1 to Pin2***	Installed
			J63 to J64***	Installed
			J65 to J66***	Installed
			J67 to J68***	Installed

SBE COM-4 Communications Controller Configurator

1.0. Scope

This document provides configuration information for the SBE COM-4 communications controller (Convex P/N 220-000013-200).

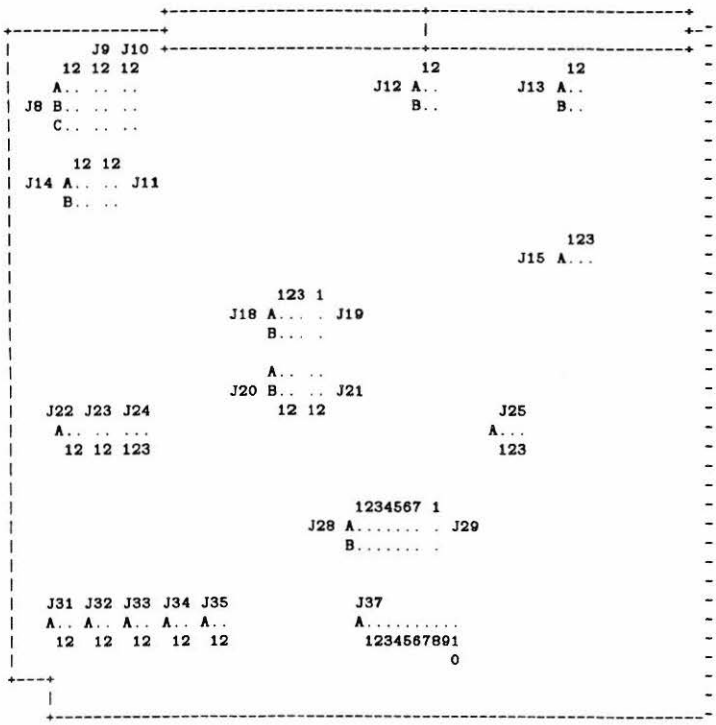
2.0. Configuration of SBE COM-4 Communications Controller

There are 38 jumper blocks of varying dimensions on the controller. Although these jumpers are set by the vendor for a standard Convex configuration, they should be verified before installation.

Non-standard settings are discussed in sections 2.2.1, 2.2.2 and 2.2.3.

2.1. Standard COM-4 Jumper Settings

Due to the large number of jumpers on the COM-4, the settings will be discussed in two groups: left side jumpers and right side jumpers. The following diagram shows the positions of the left side jumpers:



2.1.1. Settings for Left Side Jumpers

The following information describes the particular setting of each jumper block on the left side of the COM-4 board:

J8-A1 to J8-B1
J8-A2 to J8-B2

J9-A1 to J9-B1
J9-A2 to J9-B2

J10-A1 to J10-B1
J10-A2 to J10-B2

J11-A1 to J11-B1
J11-A2 to J11-B2

J12-A1 to J12-B1
J12-A2 to J12-B2

J13-A1 to J13-B1
J13-A2 to J13-B2

J14-A1 to J14-A2
J14-B1 to J14-B2

J15-A2 to J15-A3

J18-B2 to J18-B3

J19, None

J20, None

J21, None

J22-A1 to J22-A2

J23, None

J24-A1 to J24-A2

J25-A1 to J25-A2

J28-A1 to J28-B1
J28-A2 to J28-B2

J29, None

J31, None

J32, None

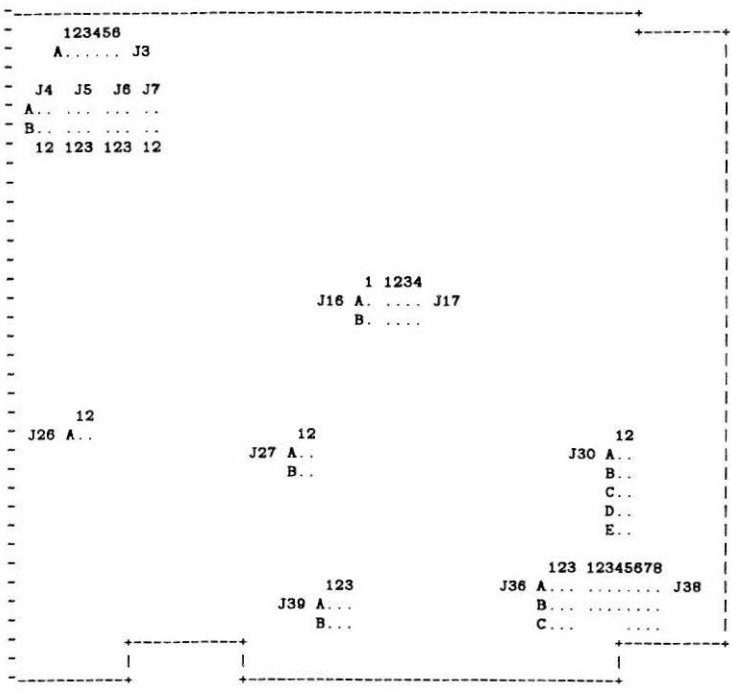
J33, None

J34-A1 to J34-A2

J35, None

J37-A9 to J37-A10

The following diagram shows the positions of the right side jumpers:



2.1.2. Settings for Right Side Jumpers

The following information describes the particular setting of each jumper block on the right side of the COM-4 board:

J3-A2 to J3-A3	J16-A1 to J16-B1	J36-A2 to J36-A3
		J36-B2 to J36-B3
J4-A1 to J4-A2	J17-A2 to J17-B2	J36-C2 to J36-C3
J4-B1 to J4-B2		
	J26, None	J38, None
J5-A2 to J5-A3		
J5-B2 to J5-B3	J27-A1 to J27-A2	J39-A1 to J39-A2
	J27-B1 to J27-B2	J39-B1 to J39-B2
J6-A2 to J6-A3		
J6-B2 to J6-B3	J30, None	

J7, None

2.2.1. Non-standard Jumper Settings

If more than one COM-4 controller is to be installed in the same Multibus, then one of the controllers must be installed with a non-standard jumper configuration. For multiple controllers, the table below provides the required CSR addresses, interrupt levels, and jumper setting changes. Only jumper blocks J28 and J37 require any changes. All other jumper blocks should be set according to the Standard Configuration (see Section 2.1).

Controller	CSR Address	Int. Level	Jumper Setting Changes
First	0x08c0	7	Use Standard Configuration
Second	0x08c2	6	J37-A8 to J37-A10 J28-A1 to J28-B1 J28-A2 to J28-B2 J28-A7 to J28-B7
Third	0x08c4	5	J37-A7 to J37-A10 J28-A1 to J28-B1 J28-A2 to J28-B2 J28-A6 to J28-B6
Fourth	0x08c6	4	J37-A6 to J37-A10 J28-A1 to J28-B1 J28-A2 to J28-B2 J28-A6 to J28-B6 J28-A7 to J28-B7

2.2.2. Setting the CSR Address

The CSR address is governed by jumper block J28 on the controller. Only the lower byte of the CSR address may be changed. J28 corresponds to bits 7-1 of this byte (bit 0 is always set to 0). The bits in J28 are labeled 1234567, and the bits required to be present are shown in the table above.

2.2.3. Setting the Interrupt Level

The interrupt level used by the controller is governed by J37. For the standard configuration, a jumper can be applied between pins 9 and 10. However, for any of the non-standard configurations, pin 10 must be wire-wrapped to one of the remaining pins of J37 (see the table above).

2.2.4. Additional Jumpers

Jumper block J36 has three jumpers installed as follows: J36-A2 to J36-A3, J36-B2 to J36-B3, and J36-C2 to J36-C3. In the event that a non-standard configuration requires more jumpers than were supplied on the board, additional jumpers can be taken from J36. Any or all of the jumpers at J36 can be removed without effecting the board configuration.

3.0. Related Documents

Refer to the X.25 Multibus Configurator (P/N 220-000013-203).

SBE SCI-449T Communications Module Configurator

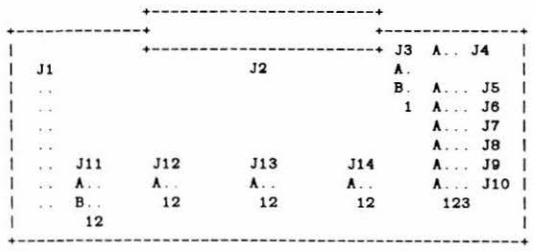
1.0. Scope

This document provides configuration information for the SBE/SCI-449T (Convex P/N 220-000015-100/200).

2.0. Configuration of the SCI-449T Communication Module

There are 14 jumper blocks of varying dimensions on the controller. These jumpers are not set by the vendor and must be configured before installation in the Multibus X.25 RS-449 (RS-422) Panel Assembly (Convex P/N 500-000277-201).

The SCI-449T should be configured as shown below:



J3-A1 to J3-B1

J4, None

J5, None

J6, None

J7, None

J8, None

J9, None

J10, None

J11-A1 to J11-B1
J11-A2 to J11-B2

J12-A1 to J12-A2

J13-A1 to J13-A2

J14-A2 to J14-A3

3.0. Labeling

Affix Convex Part Number and Revision Level label on solder side near Board Artwork P/N.

SBE SCI-232 Communications Module Configurator

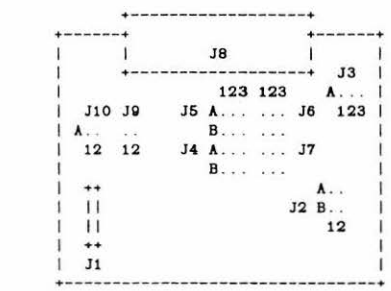
1.0. Scope

This document provides configuration information for the SBE/SCI-232 (Convex P/N 220-000016-100/200).

2.0. Configuration of the SBE/SCI-232 Communications Module

There are 10 jumper blocks of varying dimensions on the module. These jumpers are not set by the vendor and must be configured before installation into the Multibus X.25 RS-232 Panel Assembly (Convex P/N 500-000277-200).

The SCI-232 should be configured as shown below:



J2-A1 to J2-B1
J2-A2 to J2-B2

J3-A2 to J3-A3

J4-A2 to J4-A3
J4-B2 to J4-B3

J5-A2 to J5-A3
J5-B2 to J5-B3

J6-A2 to J6-A3
J6-B2 to J6-B3

J7-A2 to J7-A3
J7-B2 to J7-B3

J9, None

J10, None

3.0. Labeling

Affix Convex Part Number and Revision Level label on component side, on plastic connector surface.

SBE SCI-V35B Communications Module Configurator

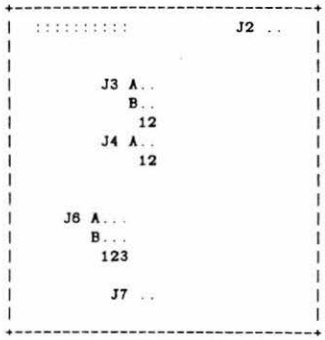
1.0. Scope

This document provides configuration information for the SBE SCI-V35B (Convex P/N 220-000017-100/200).

2.0. Configuration of the SBE SCI-V35B Communications Module

There are 7 jumper blocks of varying dimensions on the controller. These jumpers are not set by the vendor and must be configured before installation in the Multibus X.25 V.35 Panel Assembly (Convex P/N 500-000277-202).

The SCI-V35P should be configured as shown below:



J2, None

J3-A1 to J3-A2
J3-B1 to J3-B2

J4-A1 to J4-A2

J6-A1 to J6-B1

J7, None

3.0. Labeling

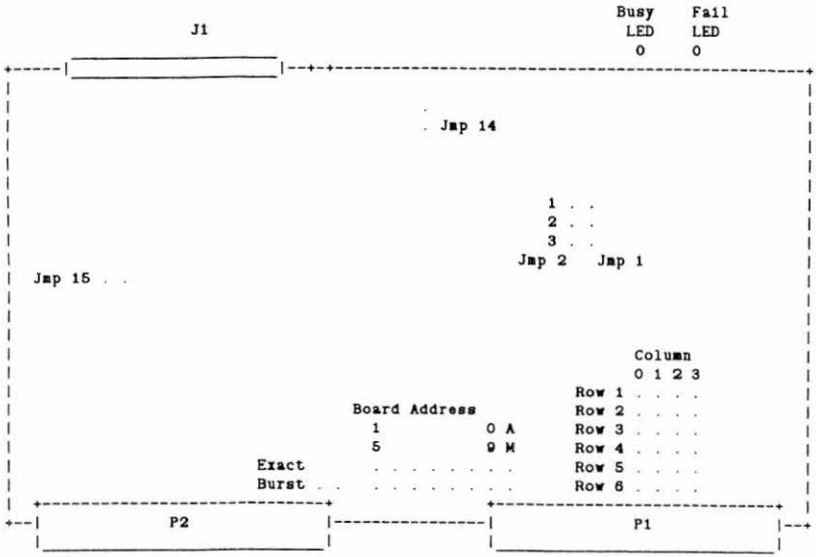
Affix Convex Part Number and Revision Level label to module solder side near Board Artwork P/N.

Ciprico Model 3516 VME/SCSI Host Adapter Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Ciprico Model 3516 VME/SCSI Host Adapter, (CONVEX P/N 220-000019-200).

1.2 Host Adapter Configuration



Normal Usage: Base Address of 1st controller in the VMEBus is normally EE00*. The Bus Request Priority must always be strapped for "3". The Interrupt Level is software configured from the contents of the SPU file, */ioconfig*.

1.2 Host Adapter Configuration (continued)

Jumper & Switch Setting Options:

The *Bus Request Priority* level is always jumpered for a value of "3".

BUS PRIORITY LEVEL "3" STRAPPING

FROM	TO
Col 0, Row-4	Col 0, Row-5
Col 1, Row-4	Col 1, Row-5
Col 2, Row-4	Col 2, Row-5
Col 3, Row-1	Col 3, Row-2
Col 3, Row-3	Col 3, Row-4
Col 3, Row-5	Col 3, Row-6

CONVEX normally uses *Controller Base Addresses* "EE00", "EA00", "EC00", and "E600" for the 1st through 4th Controllers, respectively, in the VMEBus. Jumpers 1 through 7 of Brd Add Jumpers are used to define the Base Address as shown below.

BASE ADDRESS JUMPER SETTINGS

BASE ADDRESS	*15*	*14*	*13*	*12*	*11*	*10*	*9*
EE00	OFF	OFF	OFF	ON	OFF	OFF	OFF
EC00	OFF	OFF	OFF	ON	OFF	OFF	ON
EA00	OFF	OFF	OFF	ON	OFF	ON	OFF
E600	OFF	OFF	OFF	ON	ON	OFF	OFF

NOTE: Jumper "8" of BRD ADD jumpers, AM must always be set to "OFF".

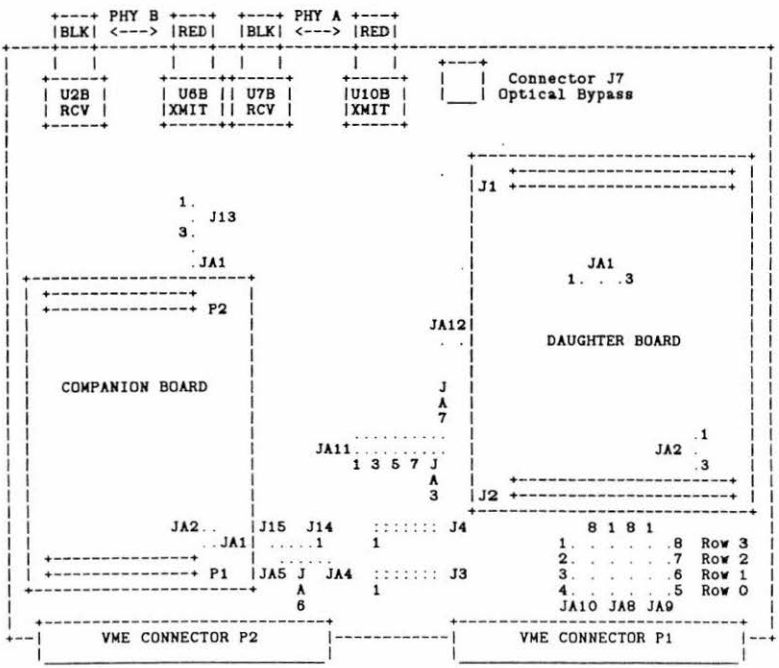
In CONVEX systems, the following jumpers must always be set as shown.

JUMPER	STRAP	JUMPER	STRAP
JMP1 1-2	Out	JMP14 1-2	IN
JMP1 2-3	IN	JMP15 1-2	IN
JMP2 1-2	IN	EXT BST	IN (Exact Burst)
JMP2 2-3	Out		

1.1 Scope

The purpose of this document is to provide configuration information for the Interphase Model 4211 VME/FDDI Controller (Convex Part Number 220-000021-200).

1.2 Controller Configuration



Normal Usage: Base Address of 1st controller in the VMEBus is normally "6000". The Bus Request Priority must always be strapped for "3". The Interrupt Level is software configured from the contents of the SPU file, */ioconfig*.

1.2 Controller Configuration (*continued*)

- **Companion Board Jumper Setting Options:**

Jumpers JA1 (1 to 2) and JA2 (1 to 2) are factory set and should not be changed. They are normally soldered in.

- **Daughter Board Jumper Setting Options:**

Jumper JA1 (1 to 2 or 2 to 3) is factory set and should not be changed. For 32-pin EPROM, the jumper should be from 1 to 2; for 28-pin EPROM, the jumper should be from 2 to 3.

Jumper JA2 (1 to 2 or 2 to 3) is factory set and should not be changed. For "single export register", the jumper should be from 2 to 3; for "split export register", the jumper should be from 1 to 2.

- **Main Board Jumper Setting Options:**

  - **Bus Request Priority**

The *Bus Request Priority* level can be jumpered for a value in the range "0" (lowest priority) through "3" (highest priority). As used in Convex systems, this controller must always be jumpered for level "3" as shown below. To select other than level "3", consult the *4211 User's Guide*.

BUS PRIORITY LEVEL "3" STRAPPING

From	To	From	To
Row 0, JA10-4	Row 0, JA10-5	Row 1, JA8-6	Row 1, JA9-3
Row 0, JA8-4	Row 0, JA8-5	Row 2, JA8-7	Row 2, JA9-2
Row 0, JA9-4	Row 0, JA9-5	Row 3, JA8-8	Row 3, JA9-1

  - **Controller Base Address**

Convex normally uses *Controller Base Address* "6000" for the 1st Controller in the VMEBus. Jumpers JA11-1 through JA11-8 are used to define the Base Address as shown below. To select a Base Address other than "6000" (shown below), consult the *4211 User's Guide*.

BASE ADDRESS "6000" JUMPER SETTINGS (JA11)

JA11-	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
IN/OUT	IN	IN	IN	IN	OUT	OUT	IN	OUT
ADRS BIT	9	10	11	12	13	14	15	(Note)

Note: Jumper "JA11-8" must always be "OUT". When "OUT", all address modifiers are allowed; when "IN", only supervisor accesses are permitted.

1.2 Controller Configuration (*continued*)

- **Main Board Jumper Setting Options** (*continued*):
  - **Miscellaneous Jumpers**

Identifier	Pins	Usage & Description
JA1	1 to 2	IN (*Normal Usage*) = Dual Physical Layer Protocol. OUT = Single Physical Layer Protocol.
JA2	-	Not Used.
JA3	1 to 2	OUT (*Normal Usage*) = Originate Byte Clock. IN = Terminate Byte Clock.
JA4	1 to 2	OUT (*Normal Usage*) = Enable Local Clock. IN = Disable Local Clock.
JA5	1 to 2	OUT (*Normal Usage*) = Enable Optical Bypass Control (1). IN = Disable Optical Bypass Control (1).
JA6	1 to 2	OUT (*Normal Usage*) = Enable Optical Bypass Control (2). IN = Disable Optical Bypass Control (2).
JA7	1 to 2	OUT (*Normal Usage*) = Early Bus Busy Release. IN = Late Bus Busy Release.
JA12	1 to 2	OUT (*Normal Usage*) = Normal Operation IN = Factory Test (Xmit Count <16/<32 Bytes).
J3	All 14	Factory Use Only.
J4	All 14	Factory Use Only.
J13	1 to 2 2 to 3	OUT (*Normal Usage*). IN (*Normal Usage*). J13 is Factory Set and should not be changed. When set for 1 to 2 OUT and 2 to 3 IN, Missed Frame Interrupts are disabled. When set for 1 to 2 IN and 2 to 3 OUT, Missed Frame Interrupts are enabled.
J14	1 to 2 2 to 3	OUT (*Normal Usage*). IN (*Normal Usage*). J14 is Factory Set and should not be changed. When set for 1 to 2 OUT and 2 to 3 IN, 2K Internal Frame Segmentation is disabled. When set for 1 to 2 IN and 2 to 3 OUT, 2K Internal Frame Segmentation is enabled.
J15	1 to 2	OUT (*Normal Usage*) = Disable Restricted Token Support. IN = Enable Restricted Token Support.

DOCUMENT REVISION HISTORY

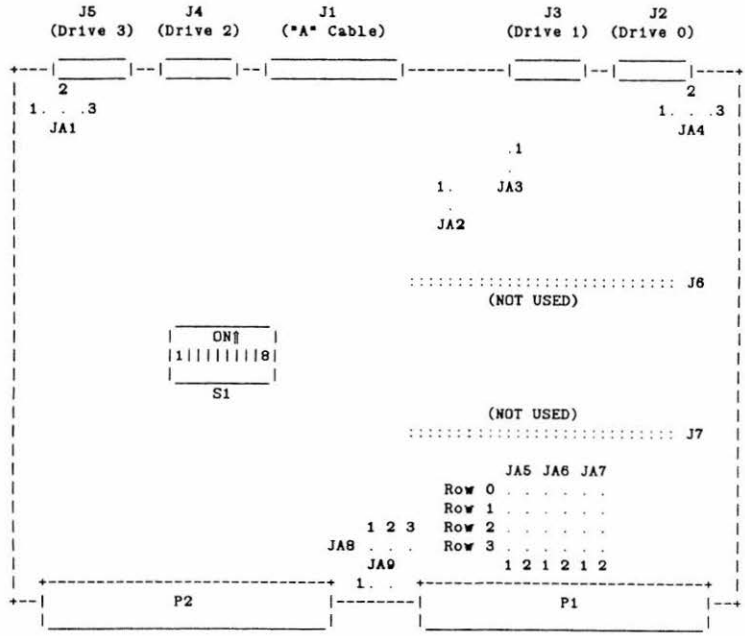
REVISION	ECN NO.	DESCRIPTION	DATE
A	108527	Initial Release.	12/18/91

Interphase 4201 ESDI Disc Controller (Fast) Configurator

1.1 Scope

The purpose of this document is to provide configuration information for the Interphase 4201 ESDI Disc Controller (Fast) (Convex Part Number 220-000025-200).

1.2 Controller Configuration



Normal Usage: Connectors J4 and J5 not supported or used in RDS Subsystems. Base Address of 1st controller in the VMEBus is normally "800". The Bus Request Priority must always be strapped for "3". The Interrupt Level is software configured from the contents of the SPU file, */ioconfig*.

CONVEX	TITLE: Interphase 4201 ESDI Disc Controller (Fast) Configurator DOCUMENT NUMBER: 220-000025-600	REV: A 04/17/92 FROM: Brad Jones PAGE: 191

1.2 Controller Configuration (continued)

• Jumper & Switch Setting Options

▪ Bus Request Priority

The *Bus Request Priority* level can be jumpered for a value of "0" (lowest priority) to "3" (highest priority). As used in Convex systems, this controller must always be jumpered for level "3" as shown below. To select other than level "3", consult the *4201 User's Guide*.

BUS PRIORITY LEVEL "3" STRAPPING

From	*To*	*From*	*To*
Row 0, JA6-2	Row 0, JA7-1	Row 3, JA5-1	Row 3, JA5-2
Row 1, JA6-2	Row 1, JA7-1	Row 3, JA6-1	Row 3, JA6-2
Row 2, JA6-2	Row 2, JA7-1	Row 3, JA7-1	Row 3, JA7-2

▪ Controller Base Address

Convex normally uses *Controller Base Addresses* 0x0800, 0x0A00, 0x0C00, and 0x0E00 for the 1st through 4th Controllers, respectively, in the VMEBus. Switches 1 through 7 of DIP Switch "S1" are used to define the Base Address as shown below. To select a Base Address other than shown below, consult the *4201 User's Guide*.

Base Address Switch Settings (S1)

Base Address	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
800	ON	ON	OFF	ON	ON	ON	ON	OFF
A00	OFF	ON	OFF	ON	ON	ON	ON	OFF
C00	ON	OFF	OFF	ON	ON	ON	ON	OFF
E00	OFF	OFF	OFF	ON	ON	ON	ON	OFF

NOTE: Switch "8" of S1 must always be set to "OFF". When "OFF", all address modifiers are allowed; when "ON" only supervisor accesses are permitted.

- **Miscellaneous Jumpers**

Identifier	Pins	Usage & Description
JA1	1 to 2	IN (*Normal Usage*) = Enable P2, Rows A and C.
	2 to 3	IN = Disable P2, Rows A and C.
JA2	1 to 2	IN (*Normal Usage*) = Enable Oscillator.
		OUT = Disable Oscillator (Factory Test).
JA3	1 to 2	IN (*Normal Usage*) = Enable Oscillator.
		OUT = Disable Oscillator (Factory Test).
JA4	2 to 3	IN (*Normal Usage*) = 256K EPROM Used.
	1 to 2	IN = 128K EPROM Used.
JA8	2 to 3	IN (*Normal Usage*) = Enable address auto-increment.
	1 to 2	IN = Disable address auto-increment.
JA9	1 to 2	OUT (*Normal Usage*) = -12V not applied to P2A or P2C.
	1 to 2	IN = -12V applied to P2A, Pin 31 and P2C, Pin 13.

DOCUMENT REVISION HISTORY

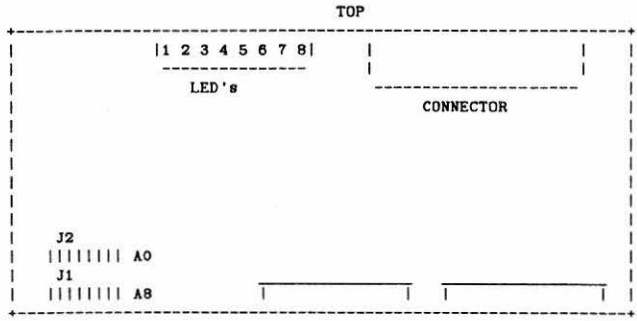
REVISION	ECN NO.	DESCRIPTION	DATE
A	108907	Initial release.	04/17/92

VME Async Controller

1.1 Scope

The purpose of this document is to provide configuration information for the Async Controller (CONVEX P/N 410-001193-600).

1.2 Controller Configuration



J2 A0-A7
J1 A8-A15

Address 1100 A8 and A12 removed; All other jumpers installed
Address 1120 A5, A8 and A12 removed.
Address 1140 A6, A8 and A12 removed.

There are no other jumpers on the board. All other variables are Software selectable.

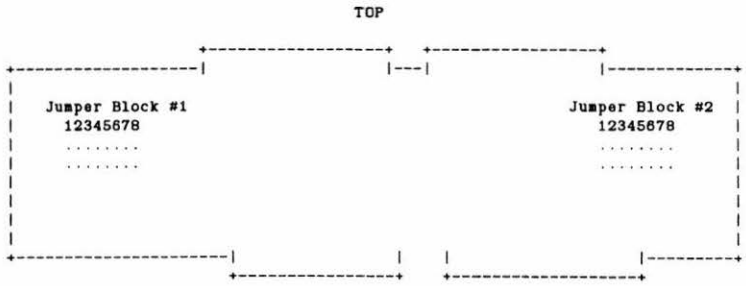
LED's

1) Heartbeat
2) Idle
3) VMEDMA Request
4) TXQFULL (Controller send queue full)
5) DUSCCSVC (DUSCC interrupt)
6) OCTARTSVC (UART interrupt)
7) SPURINT (Spurious interrupt)
8) SYSFAIL (VMEbus SYSFAIL)

1.1 Scope

The purpose of this document is to provide configuration information for the VME Tape Controller (CONVEX P/N 401-001152-600)

1.2 Controller Configuration



CSR address is set with Jumper Block #2
address 0x1000 is J7 out with all others installed
0x1040 is J1 and J7 out
0x1080 is J2 and J7 out
0x10C0 is J1, J2 and J7 out

Jumper Block #1 is for interrupt/Bus Request

Interrupt level 7 is all jumpers out.
6 J6 installed
5 J7 installed
4 J6 and J7 installed

Jumper 1 and 2 are for Bus Request lines. As BR is always 3, these will not have anything installed.

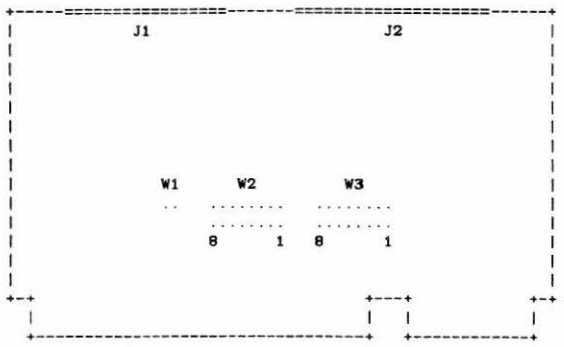
JUMPER ON = 0
JUMPER OFF = 1

CONVEX MULTIBUS TAPE CONTROLLER (MBTC) CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the CONVEX Multibus Tape Controller (MBTC) board (Convex P/N 420-000101-200). This Controller supports the Storage Technology Corporation (STC) Model 2921 and 196x Series Tape Drives and the Fujitsu 243x Series Tape Drives.

1.2 Controller Configuration



Standard Convex Addresses and Interrupts per Multibus:

First Controller	MTC-001	00c0	int 4
Second Controller		01c0	int 5

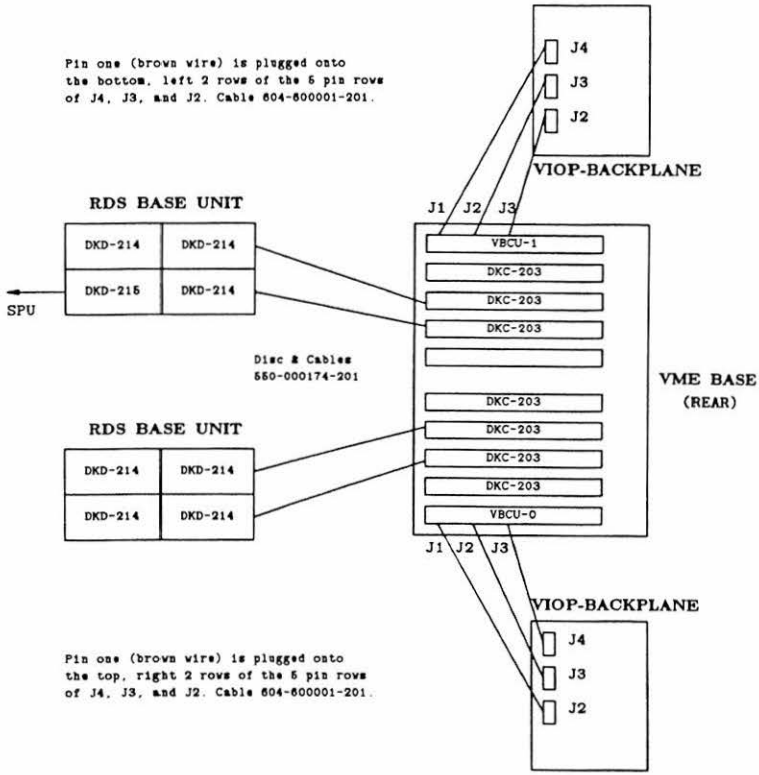
Jumper W1 must always be out.

Description	1st Controller		2nd Controller	
Interrupt 0	W2-8	out	W2-8	out
Interrupt 1	W2-7	out	W2-7	out
Interrupt 2	W2-6	out	W2-6	out
Interrupt 3	W2-5	out	W2-5	out
Interrupt 4	W2-4	in	W2-4	out
Interrupt 5	W2-3	out	W2-3	in
Interrupt 6	W2-2	out	W2-2	out
Interrupt 7	W2-1	out	W2-1	out
Address xx4x	W3-8	out	W3-8	out
Address xx8x	W3-7	out	W3-7	out
Address x1xx	W3-6	in	W3-6	out
Address x2xx	W3-5	in	W3-5	in
Address x4xx	W3-4	in	W3-4	in
Address x8xx	W3-3	in	W3-3	in
Address 1xxx	W3-2	in	W3-2	in
Address 2xxx	W3-1	in	W3-1	in

REMOVABLE DISC SYSTEM (RDS) CONFIGURATOR

1.1 Scope

The purpose of this document is to provide configuration information for the Convex RDS and VME controllers. See the RDS manuals for greater detail!

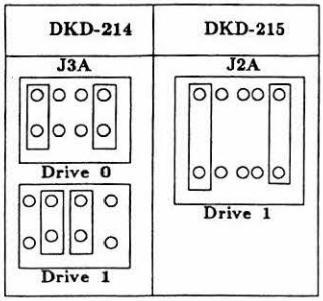


REMOVABLE DISC SYSTEM (RDS)

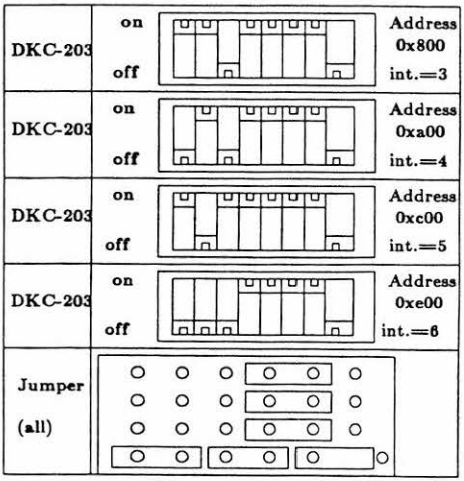
CONFIGURATOR

1.2 STRAPPING

DRIVE ADDRESS JUMPERS



CONTROLLER STRAPPING



CONFIGURATION GUIDELINES

PARAMETER	MAXIMUM VALUE	RECOMMENDED VALUE
DKD-214 disks per DKC-203 controller	2	1
DKC-203 controllers per VME for DKD-214's	4	3
RDS base units per Convex expansion Cab.	3	3
Cables, VIOP to VME.....(604-600001-201)	25 ft.	15ft.
Cables, DKC-203 to DKD-214 (604-600001-200)	11ft.	11ft.
(604-250001-200)	11ft.	11ft.
Daisy Chain..... (601-340003-200)	----	----
Ribbon (flat)..... (601-340009-200)	----	----
Ribbon (flat)..... (601-200004-200)	----	----
Cables, SPU to DKD-215.... (604-600001-200)	10ft.	10ft.
Ribbon (flat)..... (601-500018-200)	----	----

APPENDIX A

MULTIBUS CONFIGURATION

1.1 Scope

The purpose of this document is to provide guidelines to follow when configuring or reconfiguring a Multibus Chassis.

1.2 Default Device Address Space

- Hex Addresses XX00 thru XX3F are reserved for customer (Non-Convex) Controllers (Note: 'X' can be any value, 0 thru F).
- Hex Addresses XX40 thru XXBF are reserved for future use. (Note: 'X' can be any value, 0 thru F).
- Hex Addresses XXC0 thru XXFF are reserved for Convex-supported Controllers (Note: 'X' can be any value, 0 thru F).

Within the Convex-supported Controllers Address Space, the following Device Addresses and Interrupt Levels are presently assigned (default) for Multibus Configurations that contain no more than two (2) each of the Controllers shown:

CONTROLLER	PERIPHERAL	DEVICE ADDRESS	INTERRUPT LEVEL
Convex MBTC	Mag Tape	00C0 (1st Contrlr)	4
		01C0 (2nd Contrlr)	5
Systech MLP-2000	Printer	02C0 (1st Contrlr)	0 (If Unused)
		02E0 (2nd Contrlr)	1 (If Unused)
IKON Versatec	Plotter	02C0 (1st Contrlr)	1 (If Unused)
		02E0 (2nd Contrlr)	0 (If Unused)
Systech 1600/1650	Async Comm	03C0 (1st Contrlr)	7
		03C8 (2nd Contrlr)	6
Xylogics 450/451	Disc	03F0 (1st Contrlr)	2
		03F8 (2nd Contrlr)	3
Excelan EXOS 201	Ethernet	04C0 (1st Contrlr)	1 (If Unused)
IKON DR-11W	General	05C0 (1st Contrlr)	First Unused
	Purpose	05E0 (2nd Contrlr)	First Unused
IKON NFS	Hyper-	05C0 (1st Contrlr)	First Unused
	Channel	05E0 (2nd Contrlr)	First Unused

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1.3 Non-Standard Device Address Selection

If a Multibus Configuration consists of more than two (2) of any type Controller, the third and subsequent Controllers must be assigned addresses using the following guidelines:

- Each Controller's Device Address space will consist of a specific number of bytes, beginning at the assigned base address. This is shown below:

CONTROLLER TYPE	BASE ADDRESS	BYTES (HEX)	TOTAL ADDRESS SPACE
Convex MBTC	00C0	40	00C0 thru 00FF
Systech Printer	02C0	20	02C0 thru 02DF
IKON Versatec	02E0	20	02E0 thru 02FF
IKON Hyperchannel	05C0	20	05C0 thru 05DF
Systech 1600/1650	03C0	8	03C0 thru 03C7
Xylogics 450/451	03F0	8	03F0 thru 03F8
Excelan Ethernet	04C0	2	04C0 thru 04C1

- When adding third thru sixth Systech 1600/1650 Async Controllers the following Device Addresses are to be used:

  Third = Address 03D0
  Fourth = Address 03D8
  Fifth = Address 03E0
  Sixth = Address 03E8

- Seventh and subsequent Systech 1600/1650 Async Controllers and third and subsequent Controllers of other types will be assigned Device Addresses according to vacancies in the "Standard Controller Overflow Address Space", which is defined as Hex Addresses X9C0 thru XFFF (Note: 'X' can be any value, 0 thru F). When assigning addresses in this space, the main concern is to avoid overlapping one Controller's address range into another's.

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APPENDIX A

MULTIBUS CONFIGURATION

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- When no Interrupt Level is defined for a Controller, one must be selected that does not conflict with other Controllers in the Multibus. Generally, Interrupt Levels will be allocated as follows:

```
FROM LOWEST PRIORITY                                  TO HIGHEST PRIORITY
     >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
(INTERRUPT LEVEL 0)                                   (INTERRUPT LEVEL 7)

Printer/Plotter > Ethernet > Hyperchannel > Disc > Mag Tapes > Async Communication
```