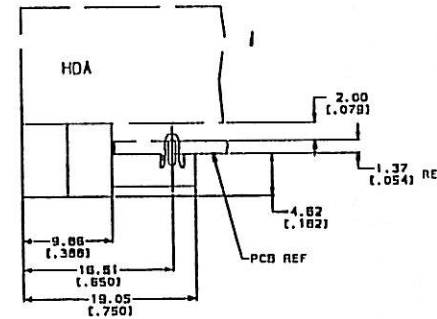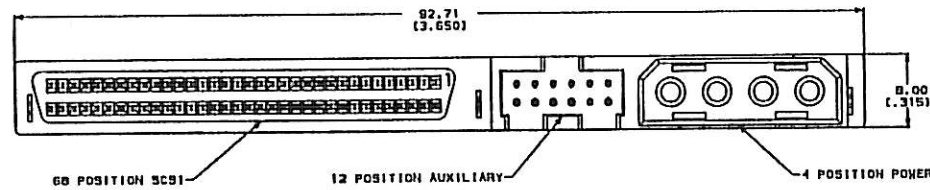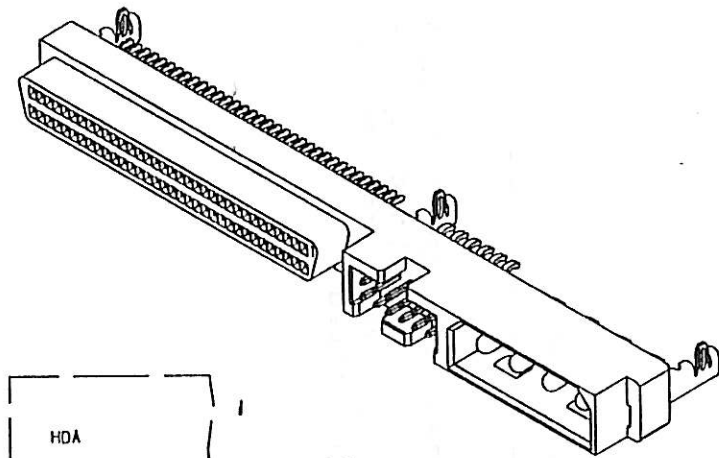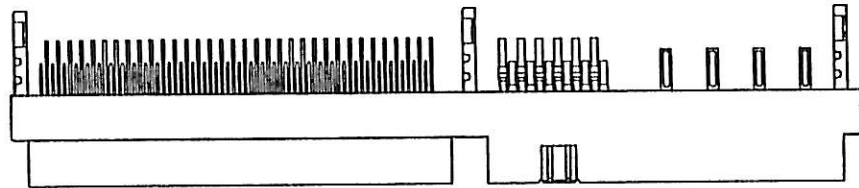to: X3T9.2, SCSI committee
dt: 11 August, 1992
fm: Steve Cornaby, Conner
re: Submittal of Appendix document for auxilliary connector

I have written a draft of the auxilliary connector for subsequent
inclusion within the document appendix. Appendix format appears to
have fewer guidelines than the body of the document, so committee
input for correct wording will be most appreciated.

THIS DRAWING IS UNPUBLISHED.

RELEASED FOR PUBLICATION

REVISIONS

			ZONE	LTR	DESCRIPTION	DATE	APVD
				0	-	-	
				A	REVISED		HJH

92.71
[3.650]

8.00
[.315]

68 POSITION SCSI

12 POSITION AUXILIARY

4 POSITION POWER

HDA

2.00
[.079]

1.37 REF
[.054]

4.62
[.182]

PCB REF

9.88
[.380]

16.51
[.650]

19.05
[.750]

40.59
[1.598]

48.92
[1.926]

11.00
[.433]

1.73
[.068]

42.54
[1.675]

3.12
[.123]

1.78 4 PLC
[.070]

POSITION #68

0.64 TYP
[.025]

2.00
[.07874] TYP

5.08 TYP
[.200]

2.54
[.100]

1.27 TYP
[.050]

0.89
[.035]
68 PLC

2.21
[.087]

1.00
[.03937]
TYP

2.54
[.100]

4.37
[.172]

1.52 REF
[.060]

0.70
[.027]
REF

8.32
[.367]
BOARDLOCK PAD
3 PLC

1.90
[.075]

1.00
[.075]
68 PLC

POSITION #1

1.90 12 PLC
[.075]

2.03
[.080]
4 PLC

6.40
[.252]

2.21
[.087]

Ø1.52
[.060]
PLATED THRU
HOLE 3 PLC

1.14 12 PLC
[.045]

3.86
[.152]

2.74
[.108]

BOARDLOCK PAD
3 PLC

P.C. BOARD MOUNTING DIMENSIONS
PAD LAYOUT - CONNECTOR SIDE

DO NOT SCALE PRINT.
UNLESS SPECIFIED
DIMENSIONS IN mm (INCHES)
TOLERANCES ON :

AMP Incorporated
Harrisburg, PA 17105-3608

DISK DRIVE COMBINATION
CONNECTOR, SURFACE MOUNT

	CAGE CODE	DRAWING NO
DD	00779	92-8012-16
SCALE 4:1		SHEET 1 OF 1

92-8012-16-1

CUSTOMER DRAWING

92-139 R1

The following is a definition of pin assignments and functions for the
12-pin auxilliary connector.

```
                    -> SCSI ID 0 (in)

                        -> SCSI ID 1 (in)

                            -> SCSI ID 2 (in)

                                -> SCSI ID 3 (in)

                                    -> Term-on (in)

                                        -> Ground

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

                                        -> Fault (in)

                                    -> +5 V

                                -> Activity LED (out)

                            -> Spindle Sync (out)

                        -> Vendor Unique (out)

                    -> Fault LED (out)
```
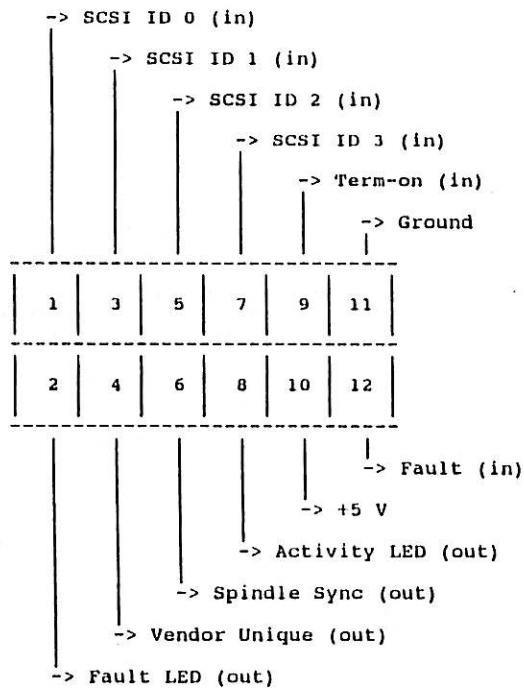
where pin one is located closest to the 68-pin connector, and pin 12 to
the power connector.

Explanation:

The output pins opposite the SCSI ID must be in the LOW state when the
SCSI ID is sampled. These pins are marked with a *.

Pin definitions:

	Pin 1:	SCSI ID select 0 input
*	Pin 2:	Open-collector output for external Fault LED. Pulled low during initialization.
	Pin 3:	SCSI ID select 1 input
*	Pin 4:	Vendor Unique open-collector output. Pulled low during initialization.
	Pin 5:	SCSI ID select 2 input
*	Pin 6:	Open-collector output for spindle synchronization reference. Pulled low during initialization. Note: spindle synchronization is only effective if all drives connected through this pin are the identical make and model.
	Pin 7:	SCSI ID select 3 input
*	Pin 8:	Open-collector output for external Drive Activity LED. Pulled low during initialization.
	Pin 9:	Enable termination input. Connect to low reference to enable the drive's terminators, leave unconnected to disable drive's terminators.
	Pin 10:	Ground
	Pin 11:	+5 V output Note: This signal is intended only for powering External LED's. Current supplied must not exceed 40 mA.
	Pin 12:	Drive fault input. Normally pulled to the high position. Assertion of this signal will cause the drive to stop any media-altering activity and may cause the drive to assert the fault LED or VU output. Note: This signal can be used as a write-fault input in addition to a fault input.

The auxilliary connector is intended for use in three separate applications. An explanation and sample configuration is given for each case.

I.   STAND-ALONE DEVICE.

In this case, the drive would be connected only to the power connector and the 68-pin ANSI standard connector. 2-mil jumpers would be used for configuration. The auxilliary connector will be used to set the SCSI ID, select termination, and if the Device is configured at ID 0-7, power the LED.

The ID jumpers would be configured to reflect the desired device ID. Bits left without attachment would float to the inactive state. Thus, no jumpers would configure the device to respond to ID 0. All jumpers installed would configure the device to respond to device ID Fh.

If the Busy LED is desired, it can be placed between pins 8 and 10. (This, of course, precludes setting the device ID to ID's 8-Fh, which would require a jumper to be placed across 7 and 8.)

If the terminator is to be disabled, a shunt across pins 9 and 11 is required.

II.   REMOTE DEVICE.

In this case, the drive would be connected to the power connector and the 68-pin ANSI standard connector. In addition, a separate cable and connector would be used to connect the device to some remote configuration board.

The device ID would be set by placing a low signal level on the desired ID pins. ID pins not set low will float high. The ground signal provided on the connector can be used for this reference.

The various LED functions can likewise use the 5V output supplied to power the LED outputs.

Spindle SYNC signals could be tied together, if the function is desired.

The terminator would be activated by placing the Term-on signal in the low state. Again, the ground supplied can be used for this purpose.

The Fault in line can be utilized as a write-protect function if desired.

III. BANK OF DEVICES

In this case, the drive would be connected to the power connector, the 68-pin ANSI standard connector, and the auxilliary connector, likely through the mechanism of a common backplane. The ID would likely depend upon the position of the device within the backplane.

The device ID would be set by placing a low signal level on the desired ID pins. ID pins not set low will float high.

LED outputs can be routed to convenient locations within the system.

Spindle SYNC signals could be tied together, if the function is desired.

The terminator would be activated by placing the Term-on signal in the low state. This would only apply to the last device on the backplane.

The Fault line can be utilized as a write-protect function if desired.