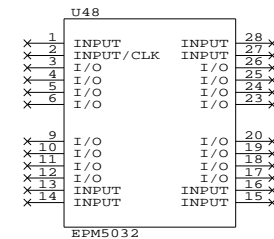
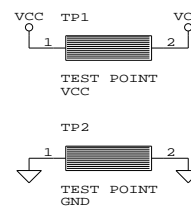
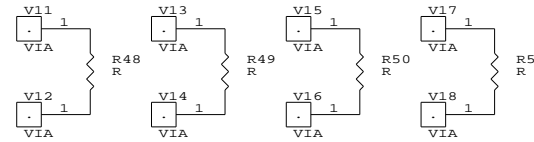
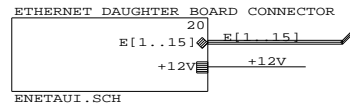
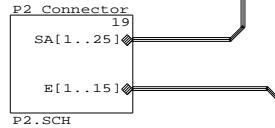
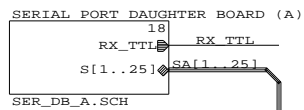
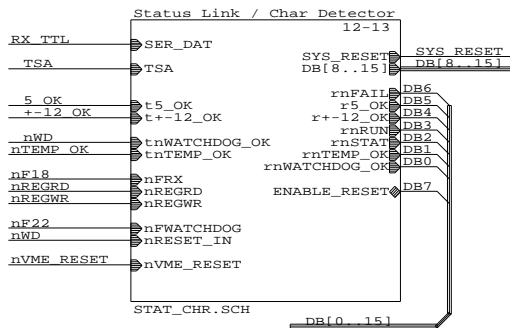
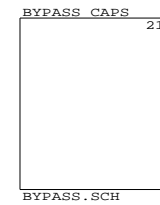
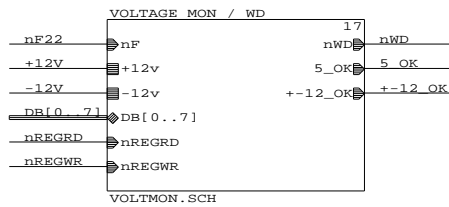


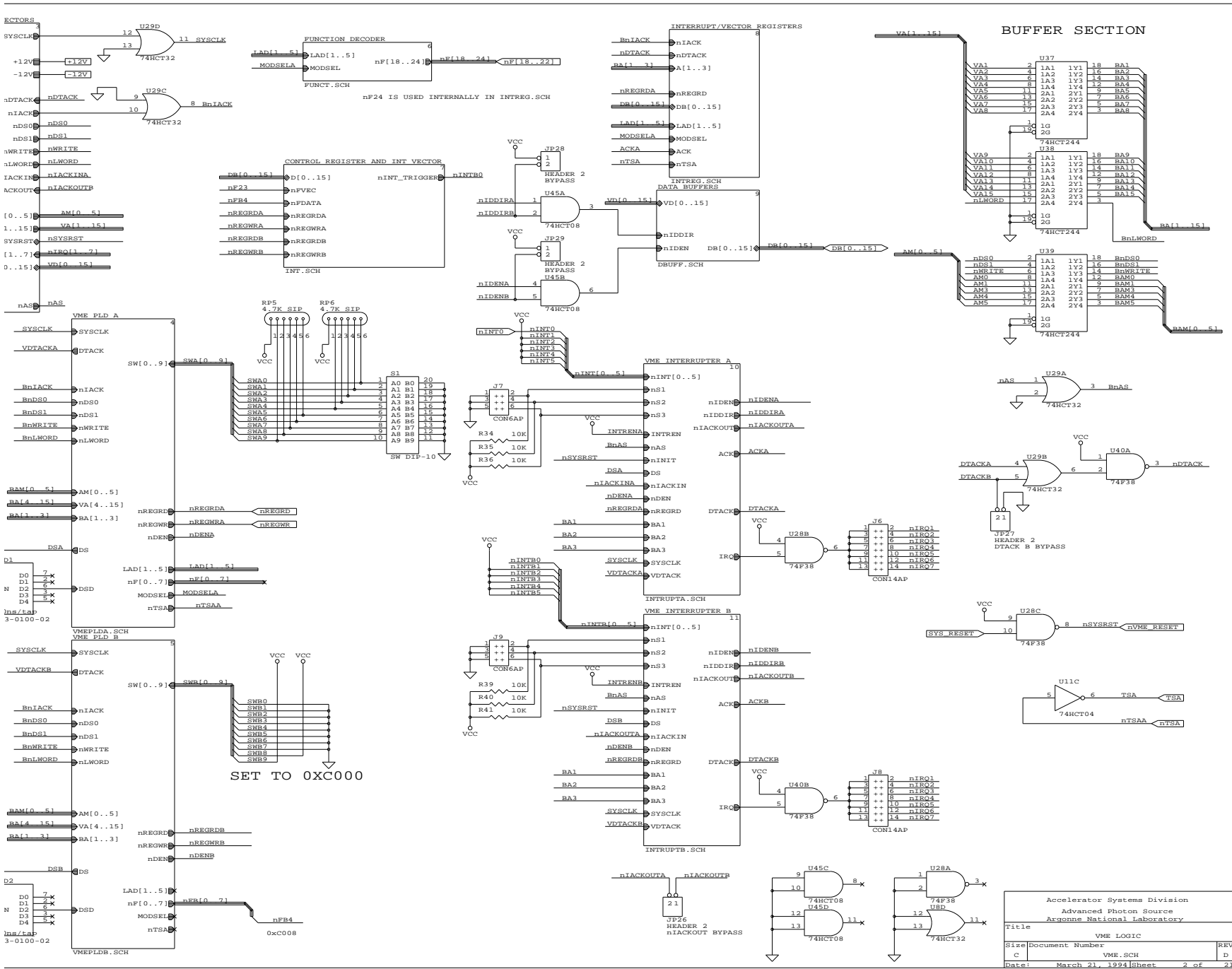
DAUGHTER BOARDS LOCATED IN:  
 ELECSER.SCH - ELECTRICAL RS-232  
 FOSER.SCH - FIBER OPTIC RS-232  
 ELEENET.SCH - 10 BASE-T  
 FOENET.SCH - 10 BASE-FO  
 STAT\_DB.SCH - FO STATUS LINK

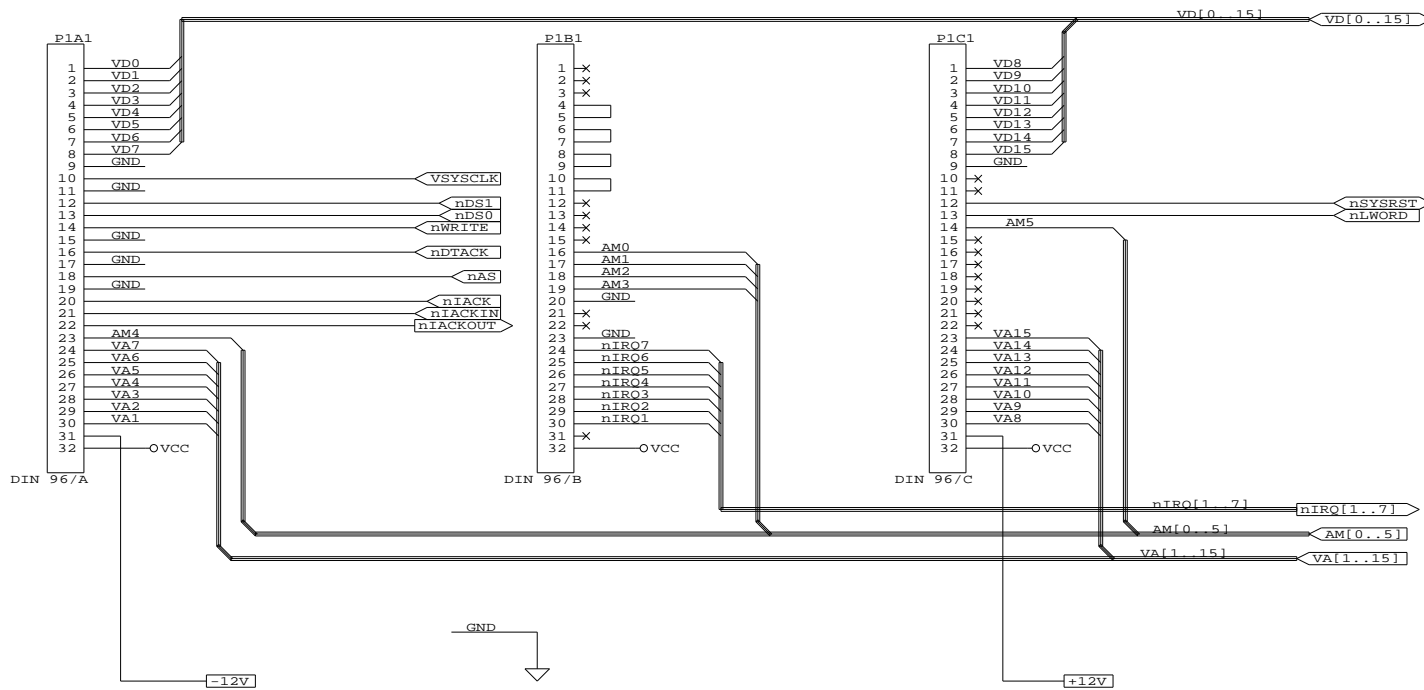


**SPARE**

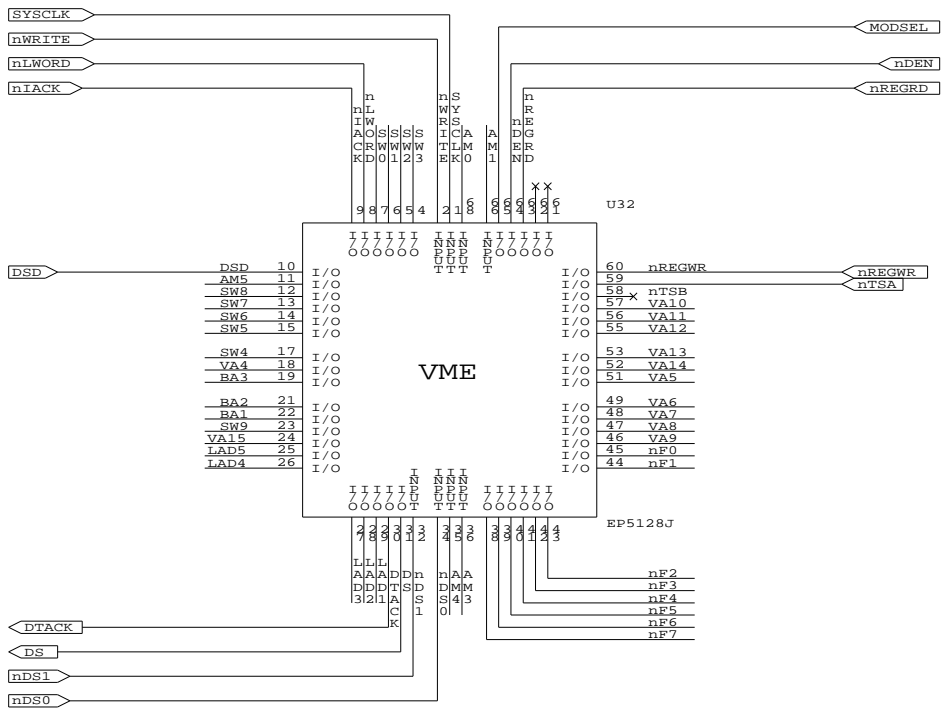
FIX INTERRUPTS  
 FASTER BINARY OUTPUTS  
 CLEAR BO ON RESET  
 GET RID OF VXI  
 FIX VOLTAGE MON

Accelerator Systems Division Advanced Photon Source Argonne National Laboratory		
Title VME SYSTEM MONITOR		
Size B	Document Number SYSMON4.SCH	REV D
Date: December 6, 1994	Sheet	1 of 21





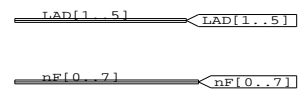
Accelerator Systems Division Advanced Photon Source Argonne National Laboratory		
Title VME CONNECTORS		
Size	Document Number	REV
B	CONN.SCH	C
Date:	March 10, 1994	Sheet 3 of 21



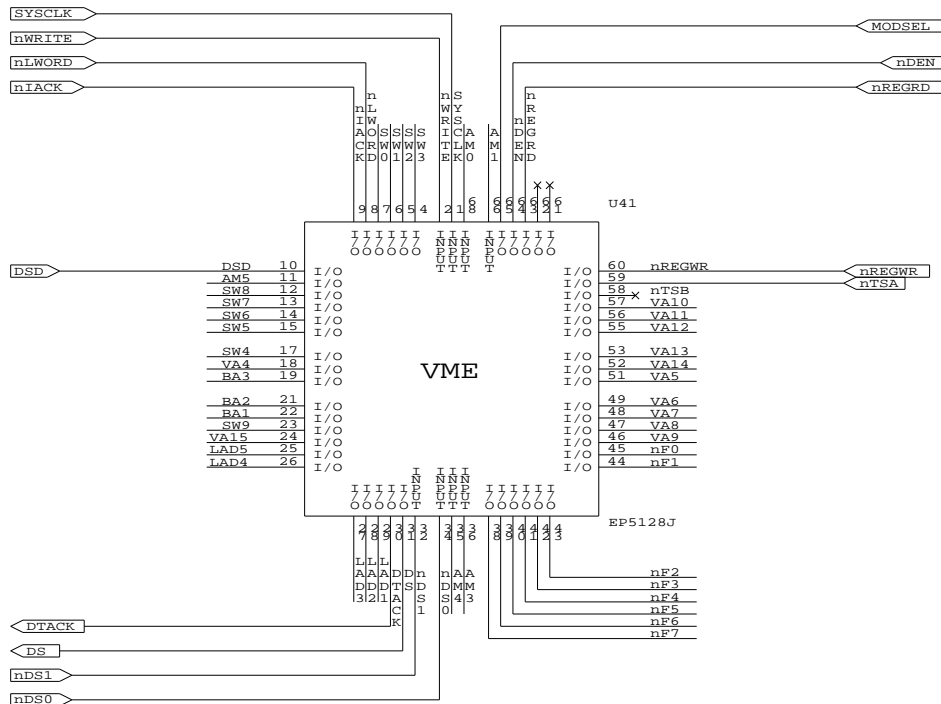
AM2 DOES NOT GET CONNECTED

—AM2—x

- AM[0..5] — AM[0..5]
- VA[4..15] — VA[4..15]
- SW[0..9] — SW[0..9]
- BA[1..3] — BA[1..3]



Accelerator Systems Division Advanced Photon Source Argonne National Laboratory		
Title VME PLD		
Size	Document Number	REV
B	VMEPLDA.SCH	C
Date:	March 10, 1994	Sheet 4 of 21



AM2 DOES NOT GET CONNECTED

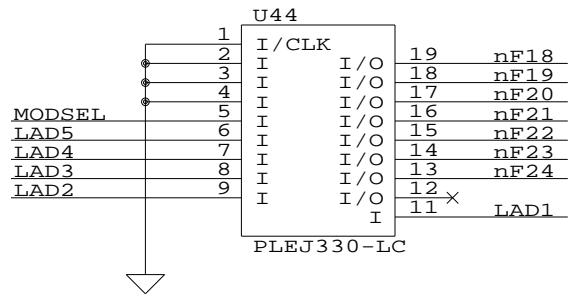
—AM2—x

Accelerator Systems Division Advanced Photon Source Argonne National Laboratory		
Title VME PLD - MESSAGE REGISTER DECODER		
Size	Document Number	REV
B	VMEPLDB.SCH	C
Date:	March 10, 1994	Sheet 5 of 21

LAD[1..5] LAD[1..5]

nF[18..24] nF[18..24]

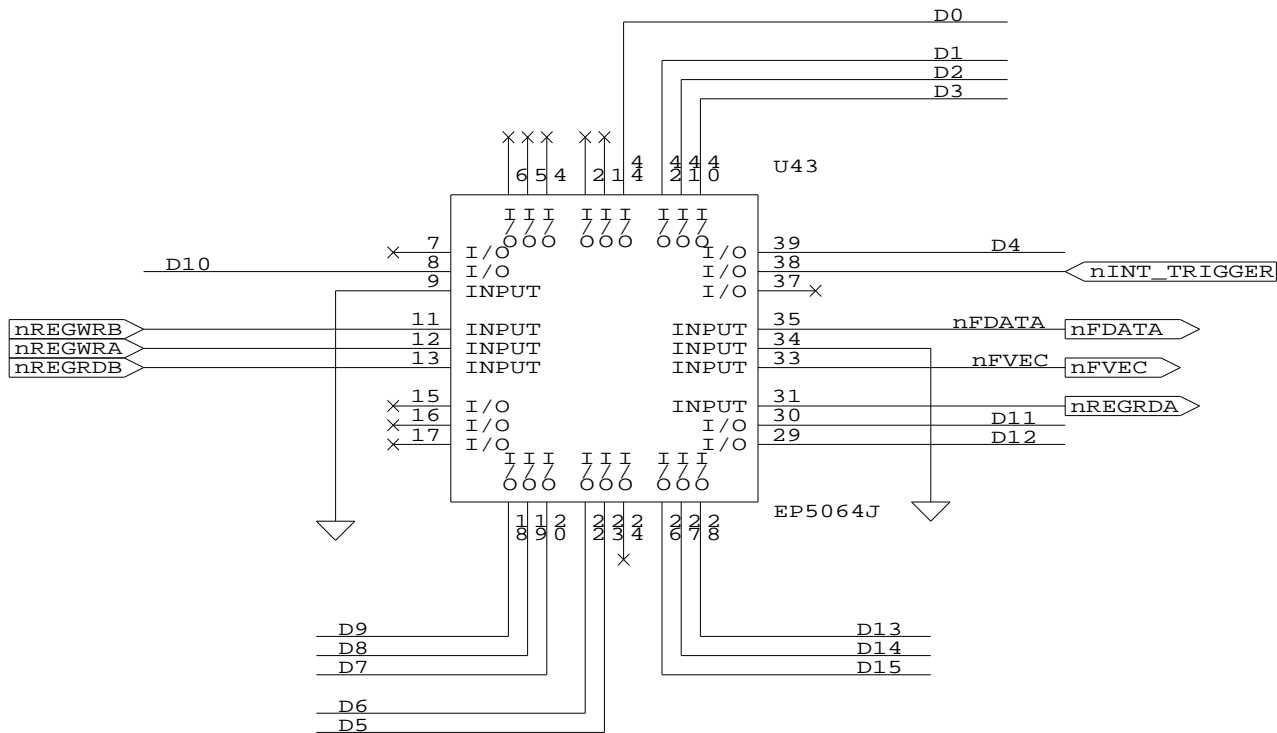
MODSEL MODSEL



C:\ALTERA\SYSMON2\FUNCT.GDF

ALTERA: FUNCT.GDF

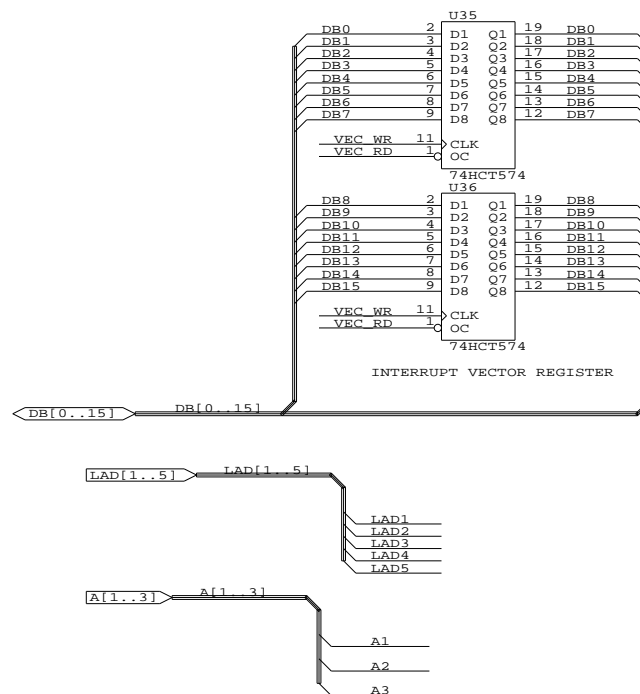
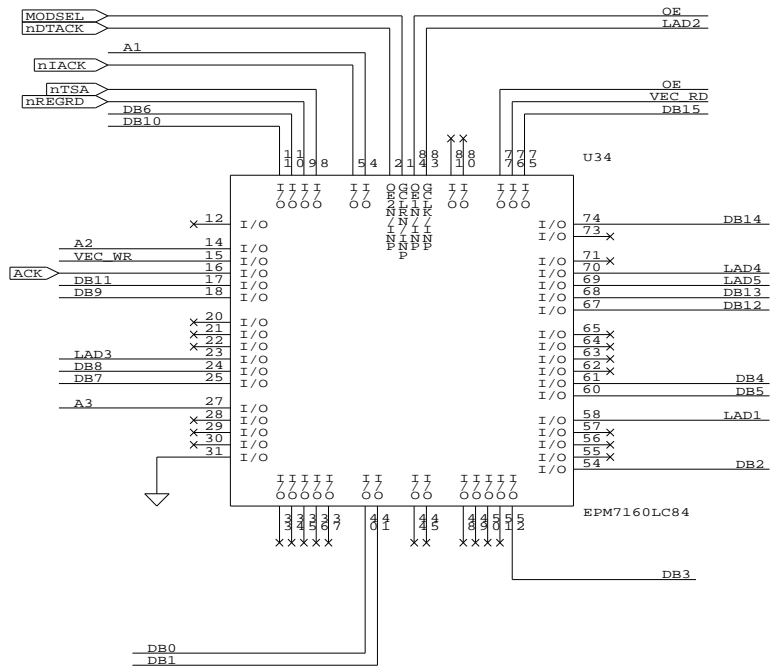
Accelerator Systems Division Advanced Photon Source Argonne National Laboratory		
Title FUNCTION DECODER		
Size	Document Number	REV
A	FUNCT.SCH	C
Date:	March 10, 1994	Sheet 6 of 21



C:\ALTERA\SYSMON2\INT.GDF

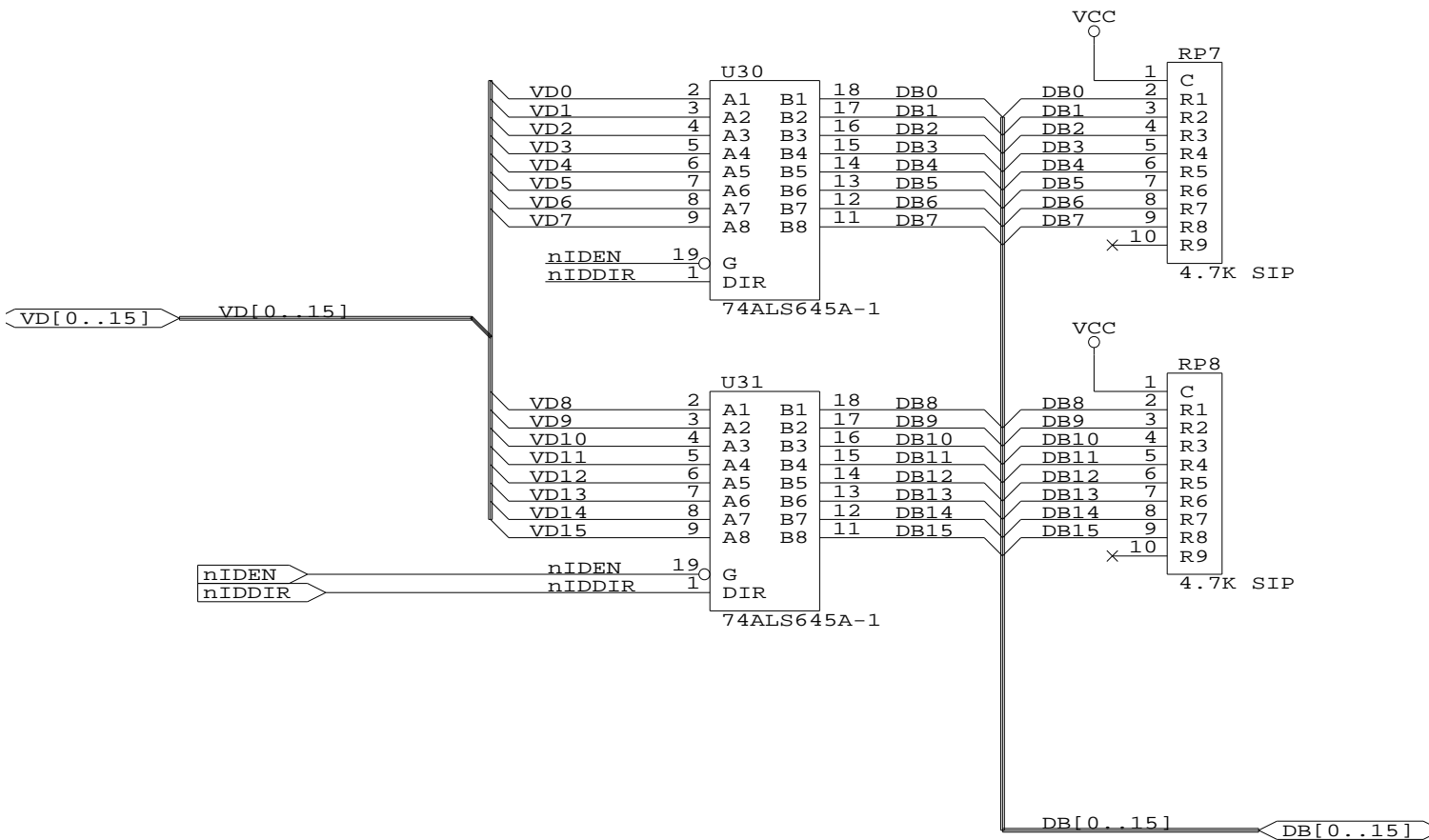
D[0..15] ——— D[0..15]

Advanced Photon Source - Controls Group		
Argonne National Laboratory		
9700 South Cass Avenue		
Argonne, IL 60517		
Title		
CONTROL REGISTER AND INT VECTOR		
Size	Document Number	REV
A	INT.SCH	C
Date:	March 10, 1994	Sheet 7 of 21

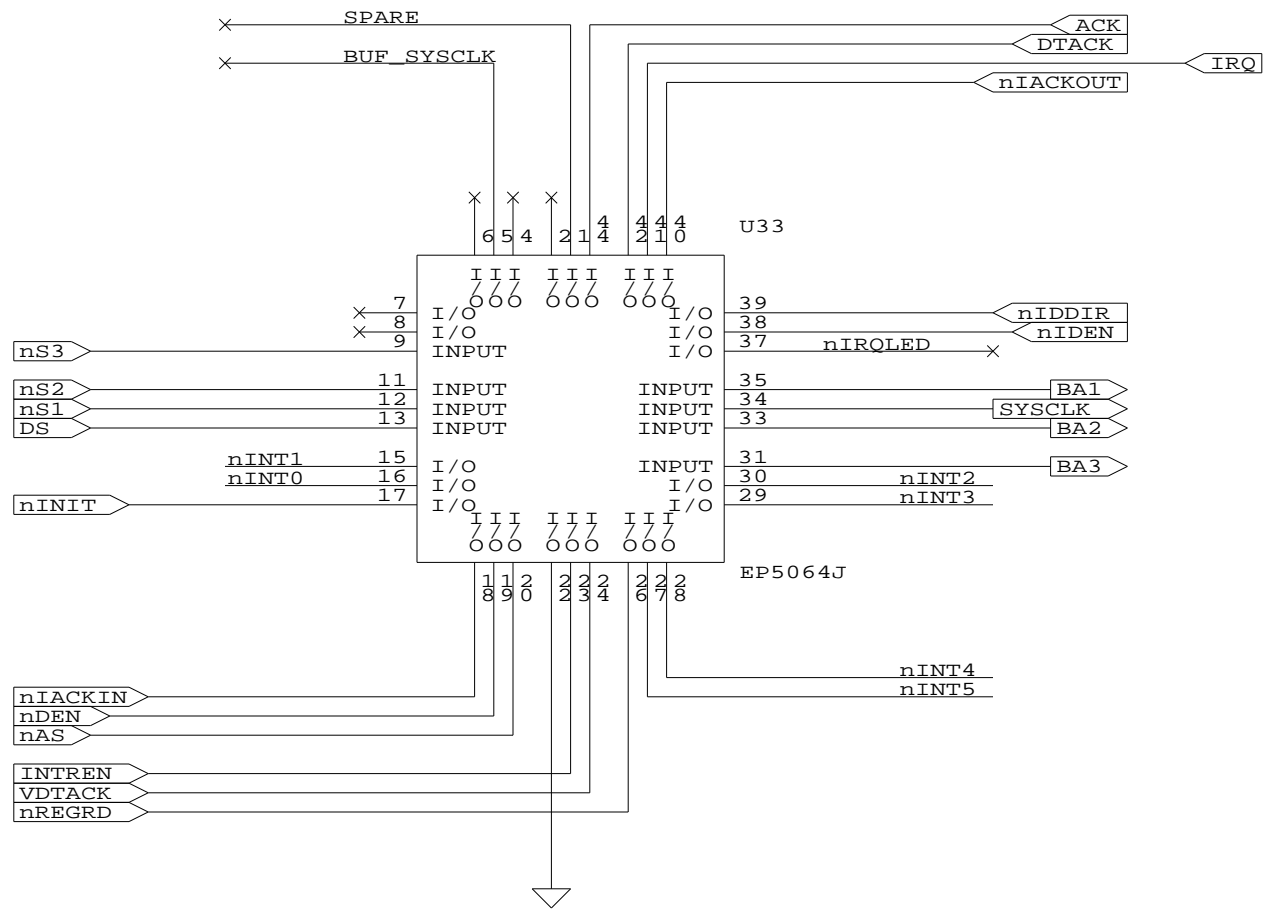


C:\ALTERA\SYSMON2\INT\_FUN.GDF



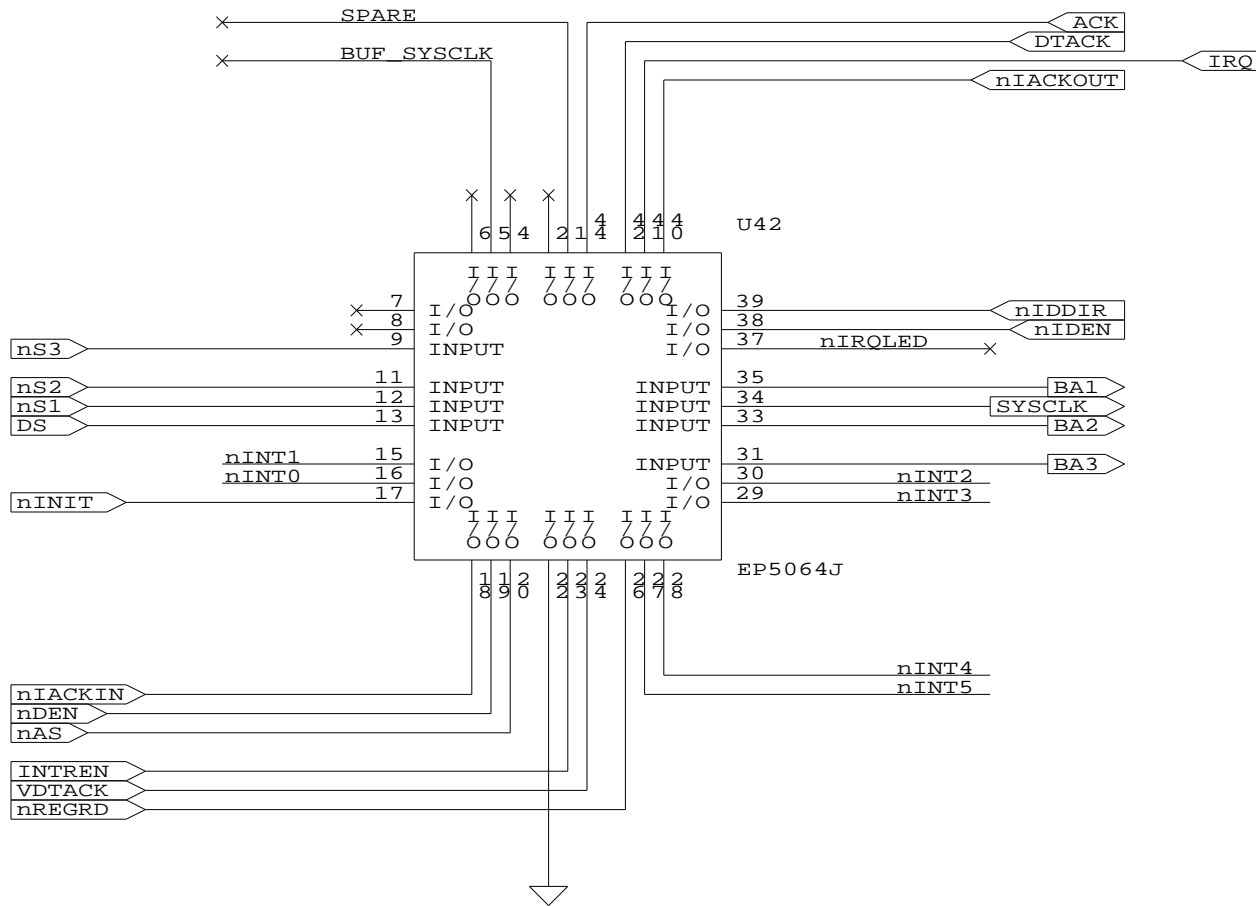


Accelerator Systems Division		
Advanced Photon Source		
Argonne National Laboratory		
Title		
DATA BUFFERS		
Size	Document Number	REV
A	DBUFF.SCH	C
Date:	March 10, 1994	Sheet 9 of 21



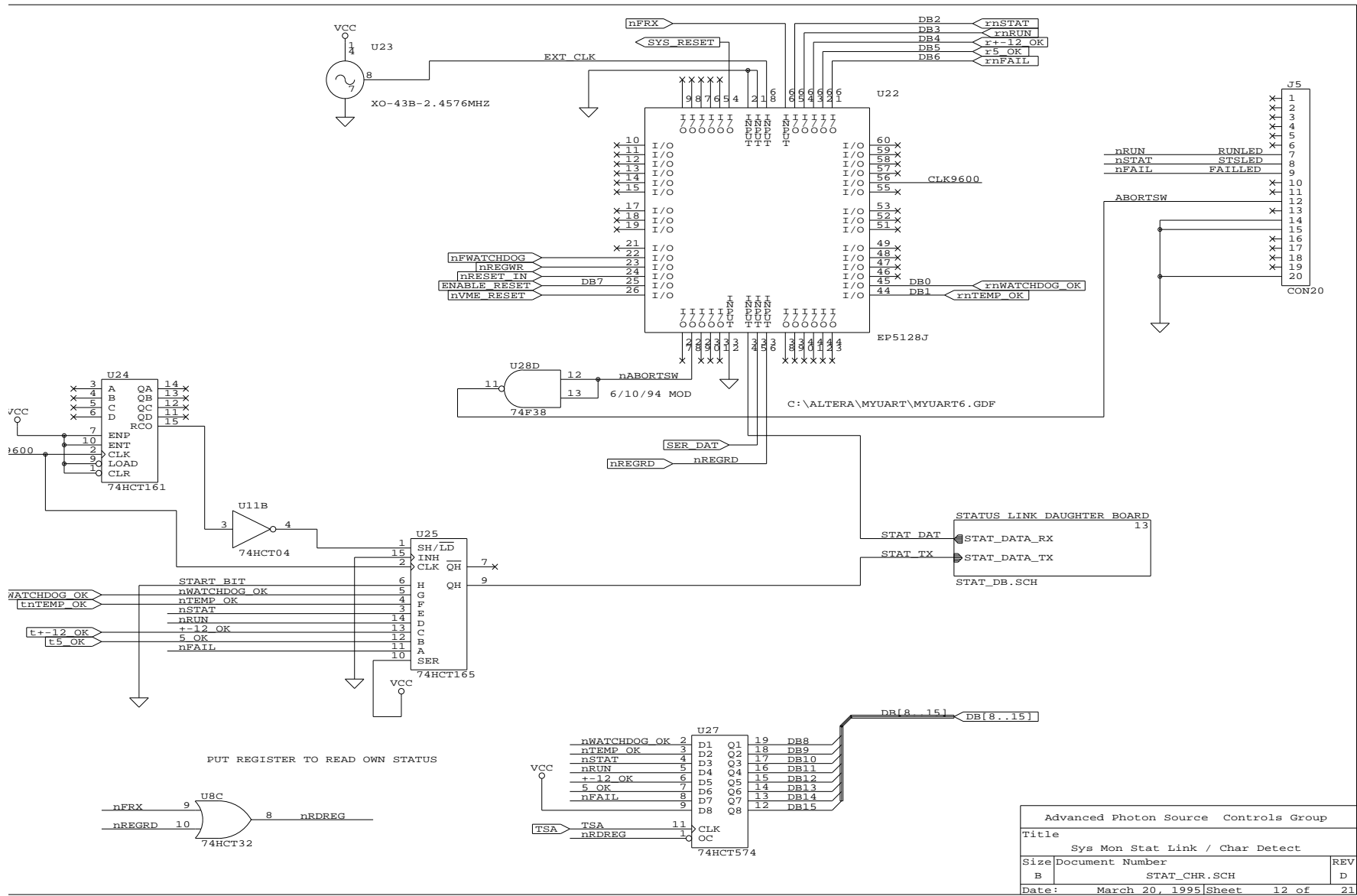
INT[0..5] → nINT[0..5]

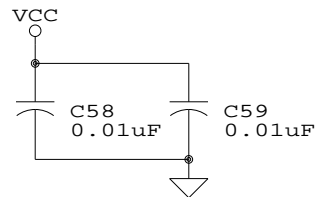
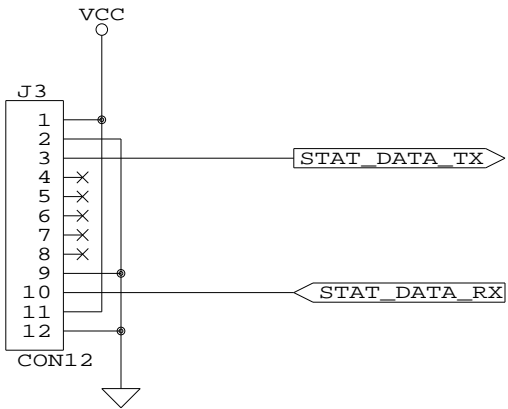
Accelerator Systems Division		
Advanced Photon Source		
Argonne National Laboratory		
Title		
VME INTERRUPTER A		
Size	Document Number	REV
A	INTRUPTA.SCH	C
Date:	March 10, 1994	Sheet 10 of 21



nINT[0..5] → nINT[0..5]

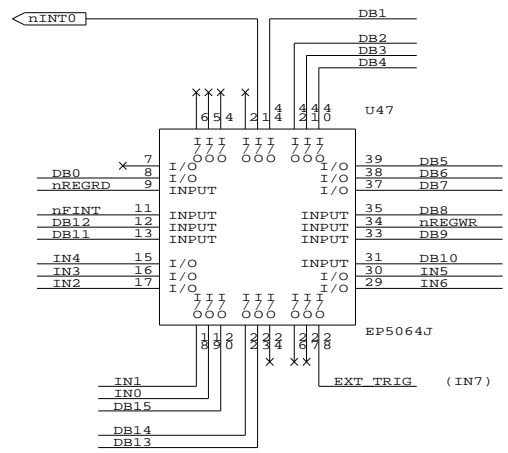
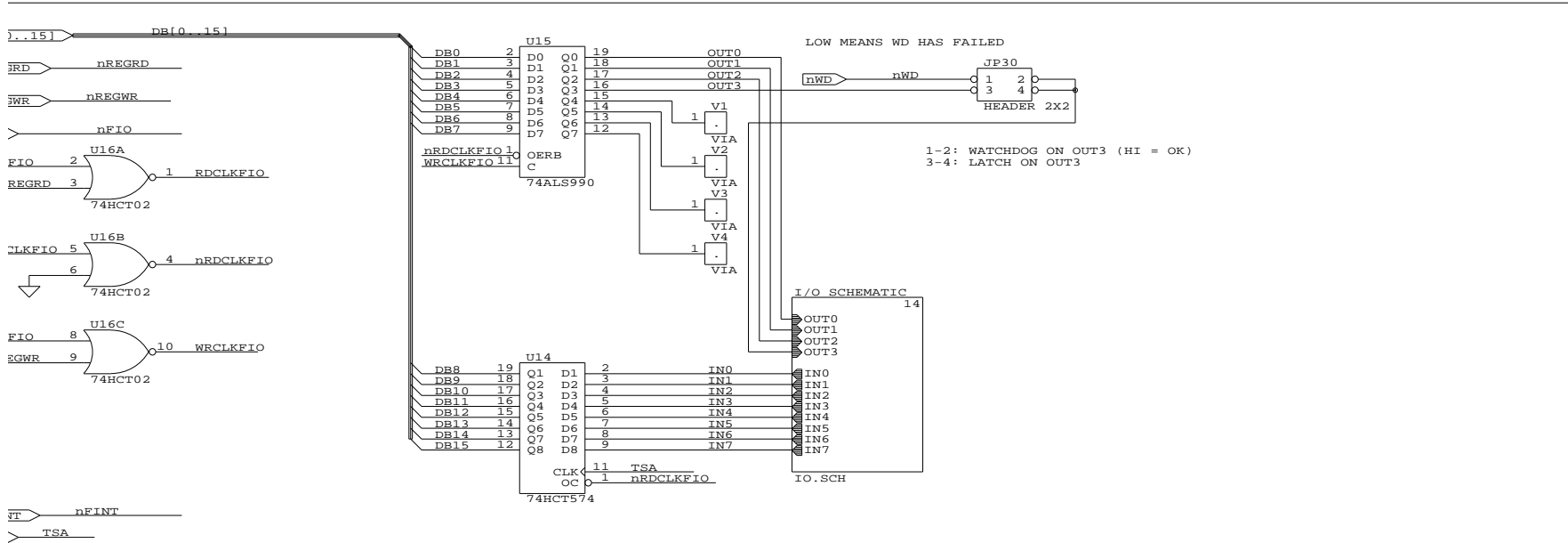
Accelerator Systems Division		
Advanced Photon Source		
Argonne National Laboratory		
Title		
VME INTERRUPTER B		
Size	Document Number	REV
A	INTRUPTB.SCH	C
Date:	March 10, 1994	Sheet 11 of 21



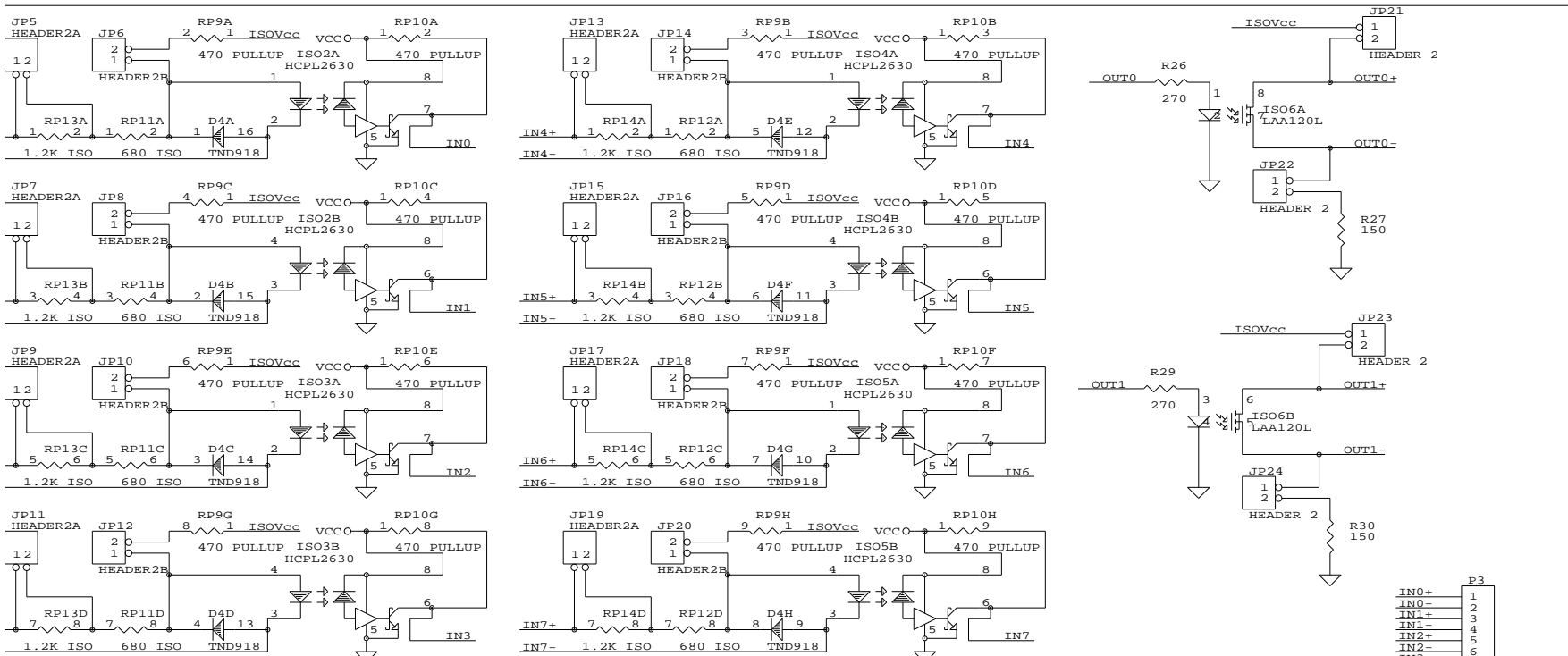


STATUS LINK  
 TRANSCEIVER DAUGHTER BOARDS  
 FIBER OPTIC OR ELECTRICAL

Advanced Photon Source - Controls Group		
Argonne National Laboratory		
9700 South Cass Avenue		
Argonne, IL 60517		
Title		
STATUS LINK DAUGHTER BOARD CONNECTOR		
Size	Document Number	REV
A	STAT_DB.SCH	C
Date:	March 10, 1994	Sheet 13 of 21

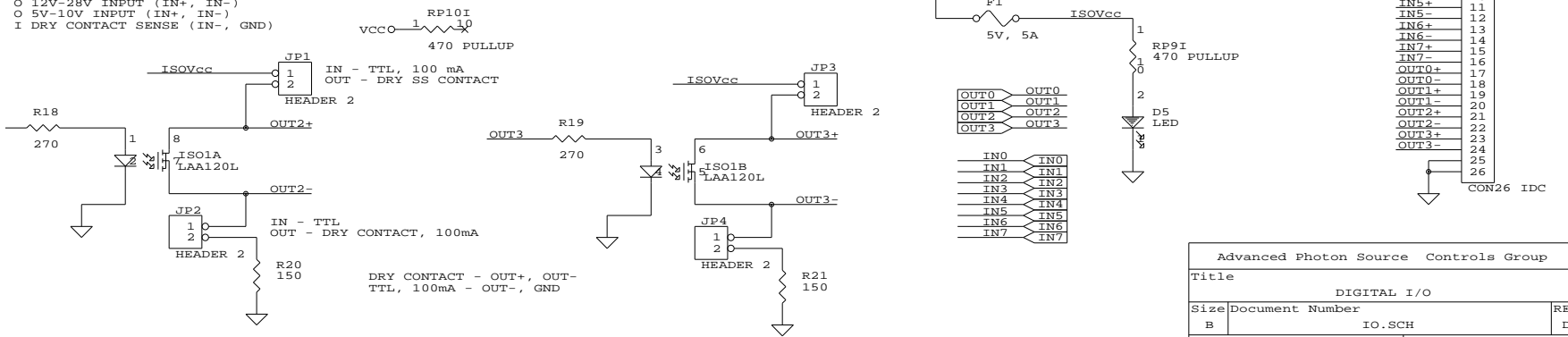


Advanced Photon Source Controls Group		
Title		
CONTROL FOR DIGITAL I/O		
Size	Document Number	REV
B	DIGIO.SCH	D
Date:	May 17, 1994	Sheet 14 of 21



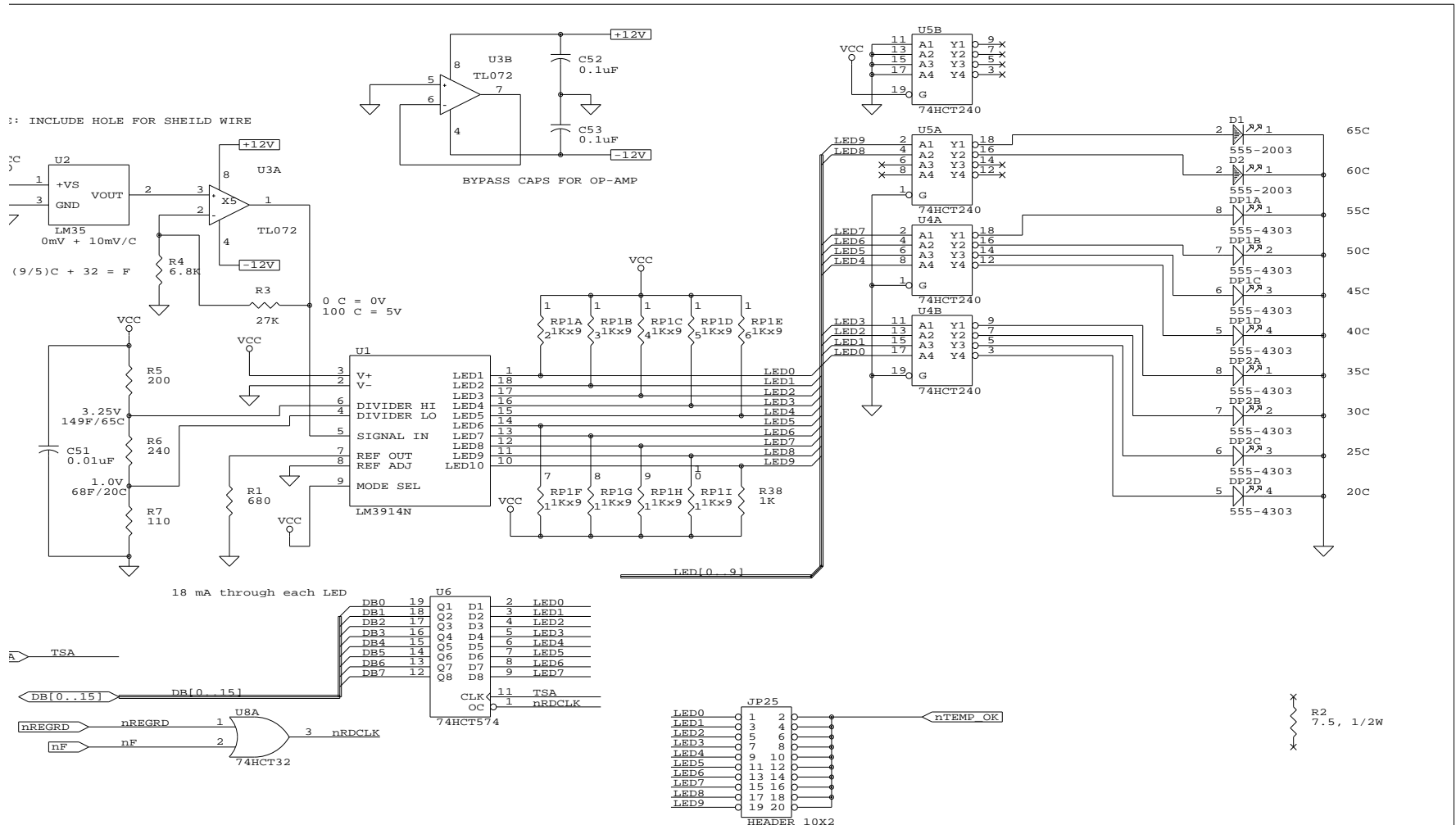
IT OPTO-ISOLATION CONFIGURATION

- B CONFIG  
 O 12V-28V INPUT (IN+, IN-)  
 □ 5V-10V INPUT (IN+, IN-)  
 I DRY CONTACT SENSE (IN-, GND)



IN0+	1
IN0-	2
IN1+	3
IN1-	4
IN2+	5
IN2-	6
IN3+	7
IN3-	8
IN4+	9
IN4-	10
IN5+	11
IN5-	12
IN6+	13
IN6-	14
IN7+	15
IN7-	16
OUT0+	17
OUT0-	18
OUT1+	19
OUT1-	20
OUT2+	21
OUT2-	22
OUT3+	23
OUT3-	24
	25
	26

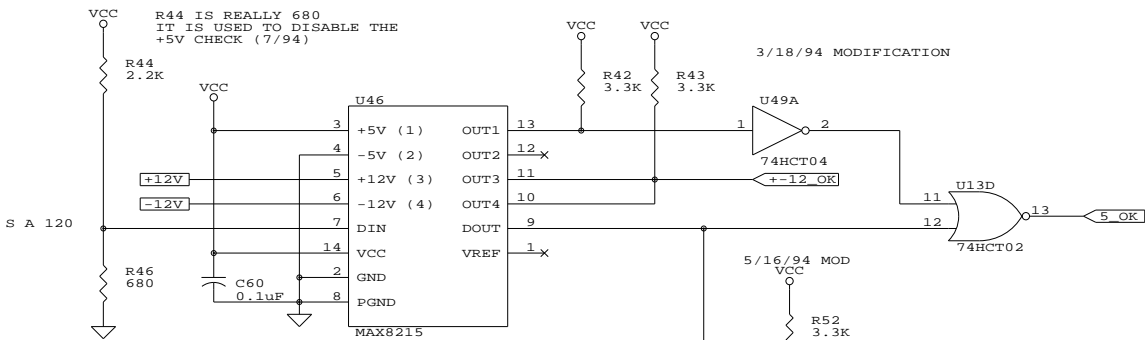
CON26 IDC



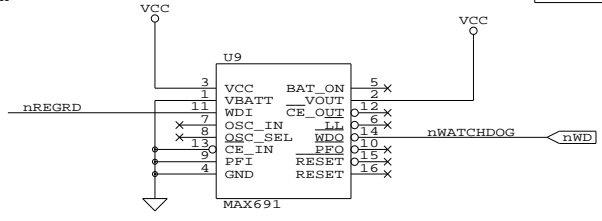
Advanced Photon Source - Controls Group  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, IL 60517

Title		
TEMPERATURE MONITOR		
Size	Document Number	REV
B	TEMPMON.SCH	C
Date:	March 10, 1994	Sheet 16 of 21

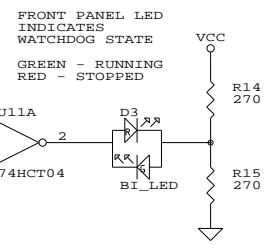
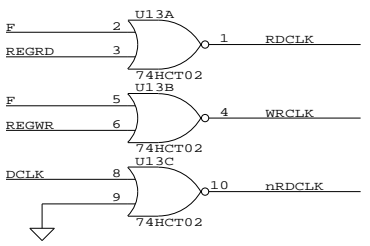
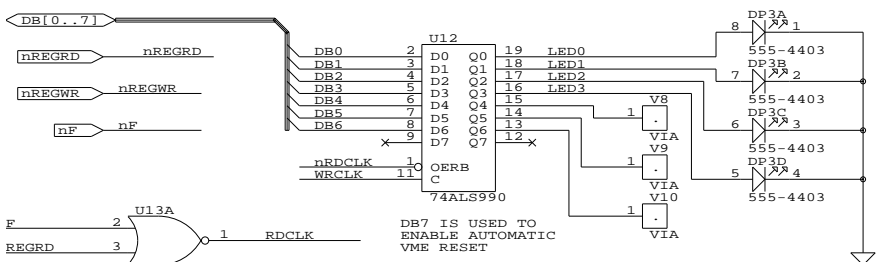




20/94 modification

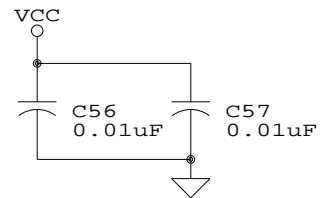
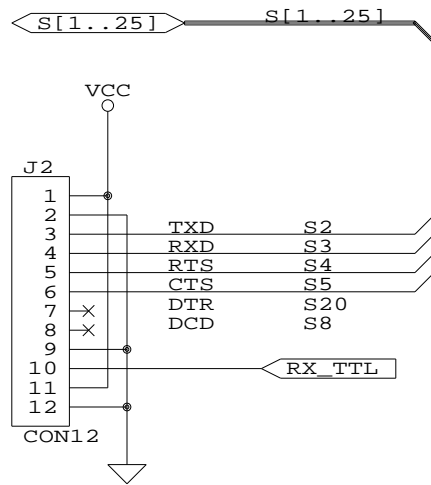


FRONT PANEL LEDS (YELLOW)



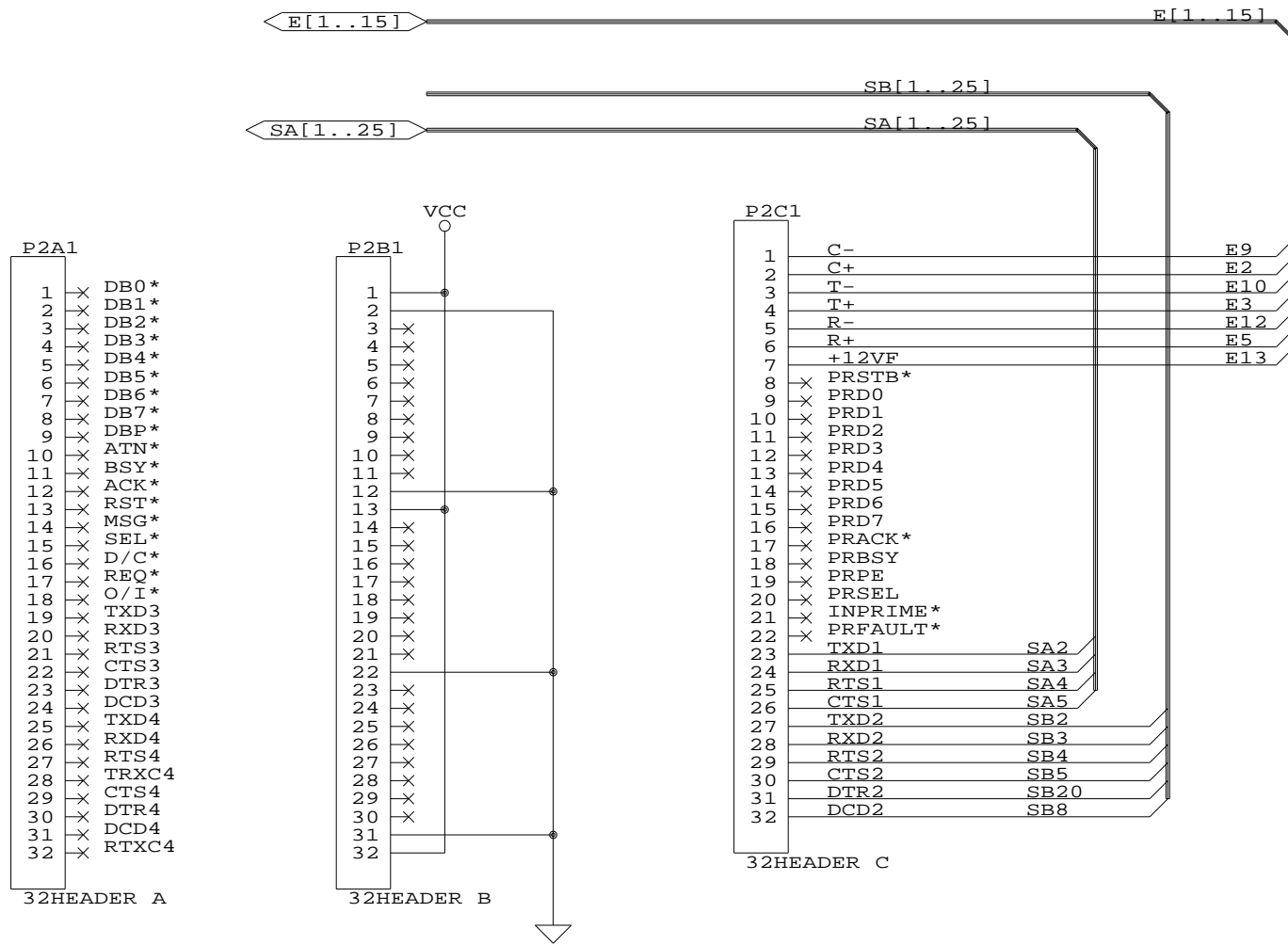
FRONT PANEL LED INDICATES WATCHDOG STATE  
GREEN - RUNNING  
RED - STOPPED

Accelerator Systems Division		
Advanced Photon Source		
Argonne National Laboratory		
Title		
VOLTAGE MONITOR / WATCHDOG		
Size	Document Number	REV
B	VOLTMON.SCH	D
Date:	October 21, 1994	Sheet 17 of 21

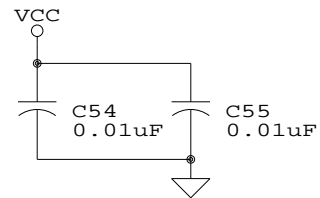
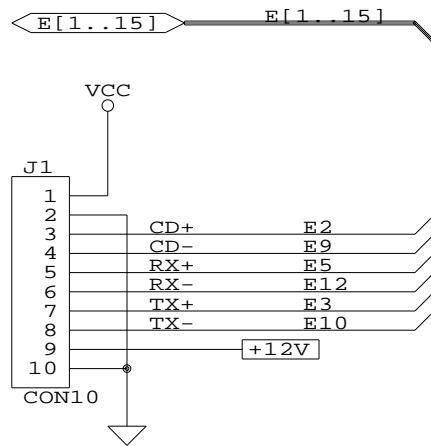


SERIAL PORT  
 TRANSCEIVER DAUGHTER BOARDS  
 FIBER OPTIC OR ELECTRICAL

Advanced Photon Source - Controls Group		
Argonne National Laboratory		
9700 South Cass Avenue		
Argonne, IL 60517		
Title		
SERIAL PORT DAUGHTER BOARD CONNECTOR		
Size	Document Number	REV
A	SER_DB_A.SCH	C
Date:	March 10, 1994	Sheet 18 of 21



Advanced Photon Source Controls Group		
Title		
P2 CONNECTOR		
Size	Document Number	REV
A	P2.SCH	C
Date:	March 10, 1994	Sheet 19 of 21

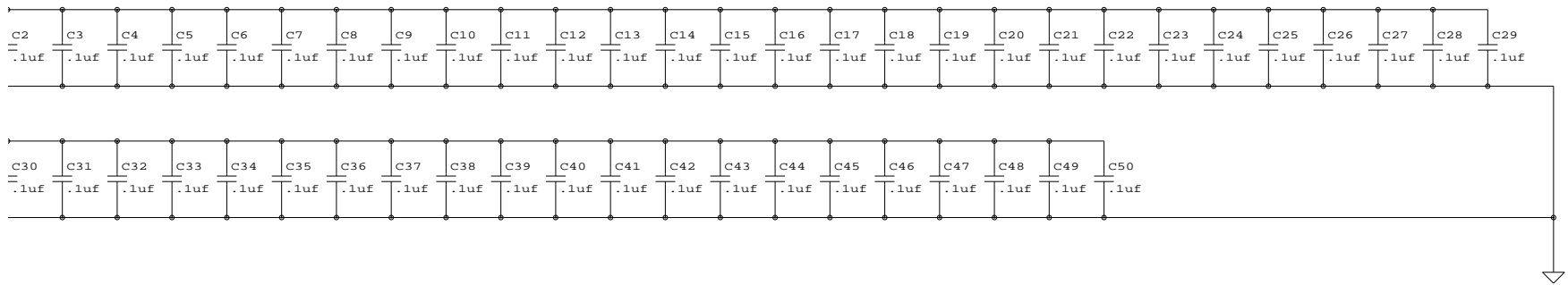


CONNECTOR FOR ETHERNET  
TRANSCEIVER DAUGHTER BOARDS

10 BASE-F0 OR THINNET

+12V - SOURCE UP TO 500mA  
COMMON - SINK UP TO 2A

Advanced Photon Source - Controls Group		
Argonne National Laboratory		
9700 South Cass Avenue		
Argonne, IL 60517		
Title		
ETHERNET DAUGHTER BOARD CONNECTOR		
Size	Document Number	REV
A	ENETAUI.SCH	C
Date:	March 10, 1994	Sheet 20 of 21

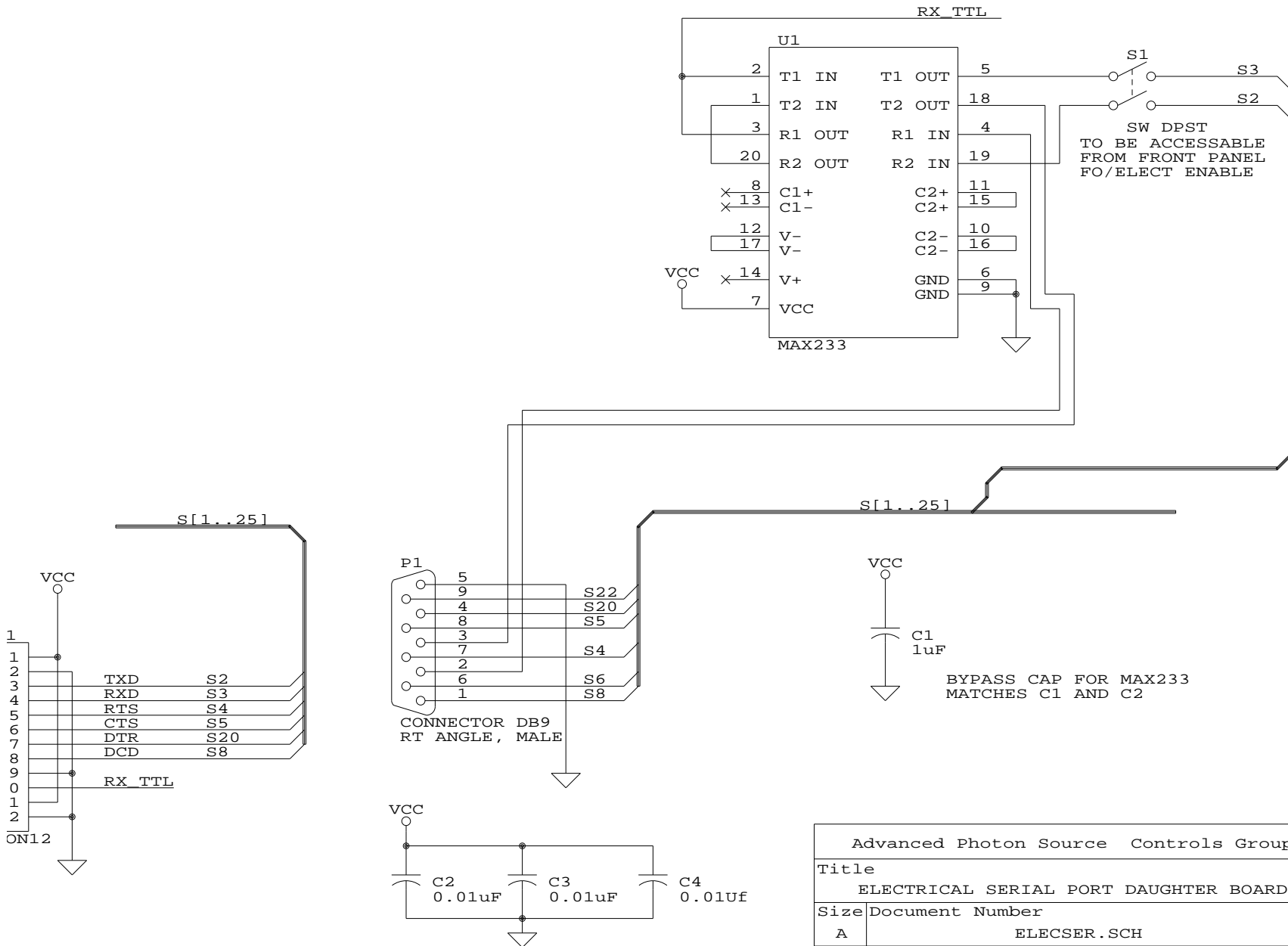


C1  
15uf

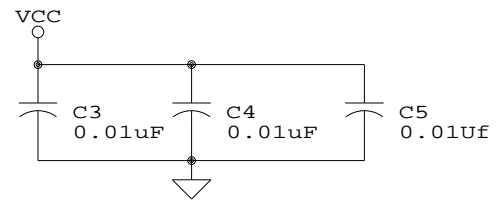
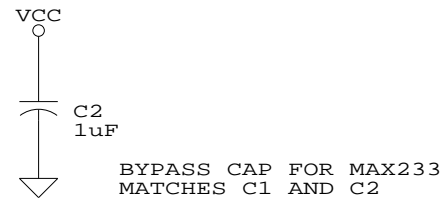
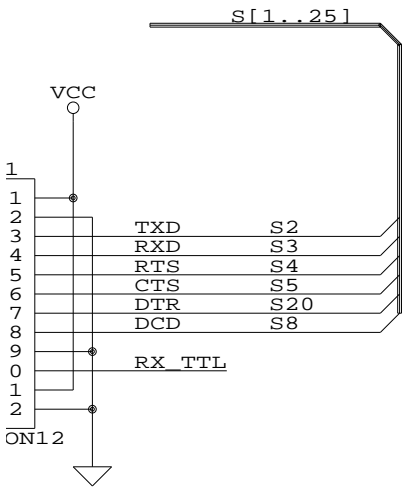
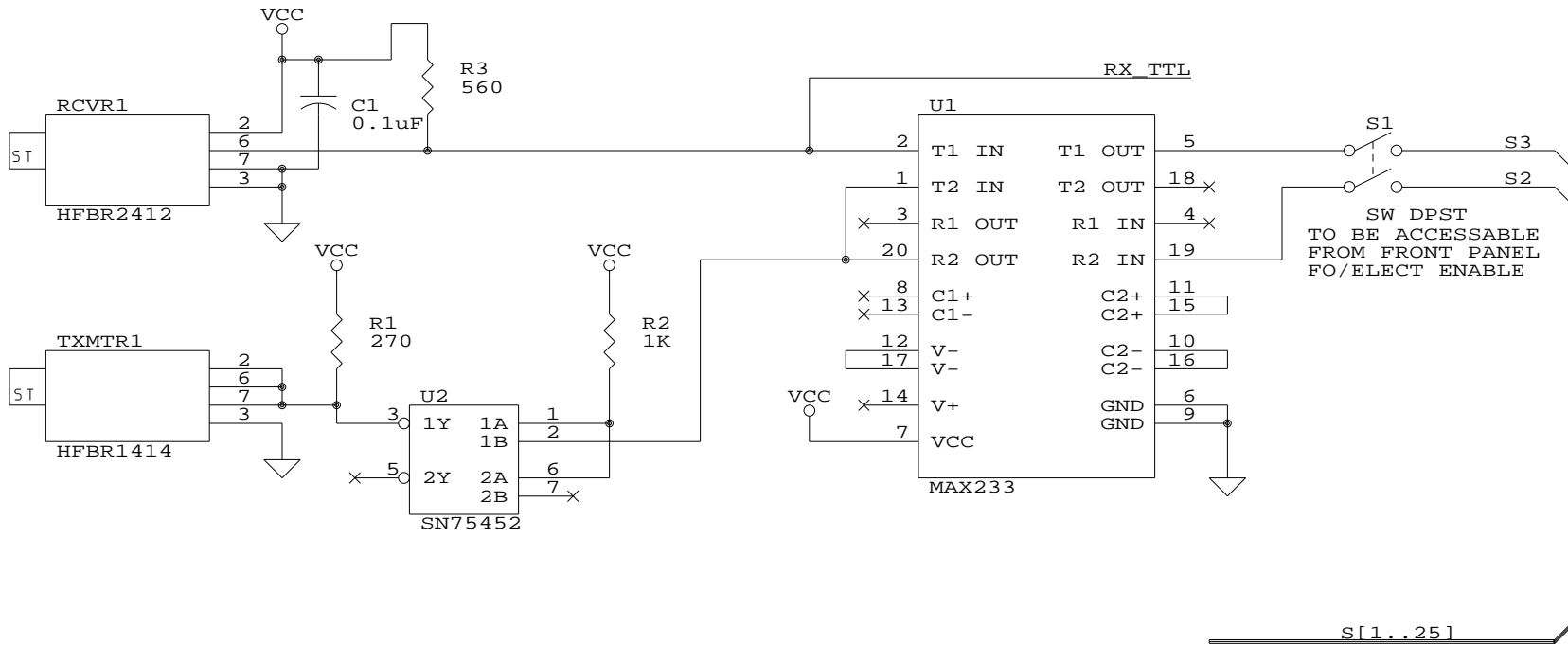
7

THE APPLICATION NOTE FOR PLACEMENT OF BYPASS CAPS FOR ALTERA COMPONENTS

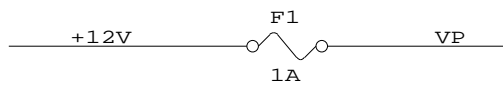
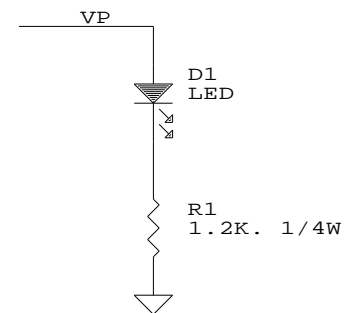
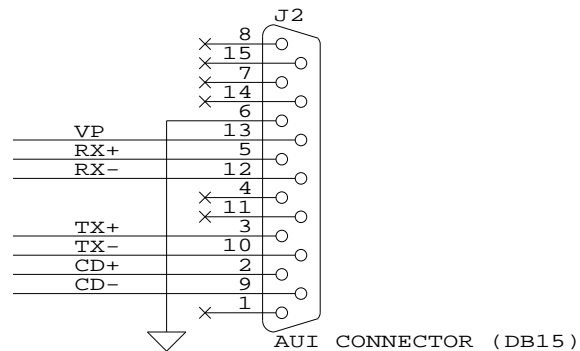
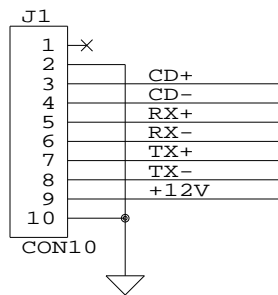
Accelerator Systems Division Advanced Photon Source Argonne National Laboratory		
Title BYPASS CAPACITORS		
Size	Document Number	REV
B	BYPASS.SCH	C
Date:	March 10, 1994	Sheet 21 of 21



Advanced Photon Source Controls Group		
Title		
ELECTRICAL SERIAL PORT DAUGHTER BOARD		
Size	Document Number	REV
A	ELECSER.SCH	A
Date:	April 6, 1994	Sheet 1 of 1



Advanced Photon Source Controls Group		
Title FIBER OPTIC SERIAL DAUGHTER BOARD		
Size A	Document Number FOSER.SCH	REV
Date:	December 22, 1993	Sheet 1 of 1



Advanced Photon Source - Controls Group		
Argonne National Laboratory		
9700 South Cass Avenue		
Argonne, IL 60517		
Title		
AUI CONNECTOR		
Size	Document Number	REV
A	AUIENET.SCH	
Date:	April 1, 1994	Sheet 1 of 1