

APPENDIX B

Following is a list of the switches on the 1830 Indexer. The switches are labeled on the boards. (* indicates factory default setting.)

<u>SWITCH</u>	<u>FUNCTION</u>		<u>SWITCH ACTIVE IF:</u>
<u>S1</u>	Self test		Pressed
<u>S2</u>	<u>FUNCTION</u>	<u>HEX</u>	<u>SWITCH ACTIVE IF:</u>
#1	Enable fail int.		On
#2	Enable message int.		On
#3	Enable buffer ready int.		On
#4	Disable watchdog alarm		On *
<u>S3</u>	<u>FUNCTION</u>	<u>HEX</u>	<u>SWITCH ACTIVE IF:</u>
#1	Address bit 8, value =	100h	Off *
#2	Address bit 9, value =	200h	Off *
#3	Address bit 10, value =	400h	Off *
#4	Address bit 11, value =	800h	Off *
#5	Address bit 12, value =	1000h	Off *
#6	Address bit 13, value =	2000h	Off *
#7	Address bit 14, value =	4000h	Off *
#8	Address bit 15, value =	8000h	Off *
<u>S4</u>	<u>FUNCTION</u>	<u>HEX</u>	<u>SWITCH ACTIVE IF:</u>
#1	Address bit 16, value =	10000h	Off *
#2	Address bit 17, value =	20000h	Off *
#3	Address bit 18, value =	40000h	Off *
#4	Address bit 19, value =	80000h	Off *
#5	Address bit 20, value =	100000h	Off *
#6	Address bit 21, value =	200000h	Off *
#7	Address bit 22, value =	400000h	Off *
#8	Address bit 23, value =	800000h	Off *
<u>S5</u>	<u>FUNCTION</u>	<u>HEX</u>	<u>SWITCH ACTIVE IF:</u>
#1	bit 0 STATUS/ID value =	1h	Off *
#2	bit 1 STATUS/ID value =	2h	Off *
#3	bit 2 STATUS/ID value =	4h	Off *
#4	bit 3 STATUS/ID value =	8h	Off *
#5	bit 4 STATUS/ID value =	10h	Off *
#6	bit 5 STATUS/ID value =	20h	Off *
#7	bit 6 STATUS/ID value =	40h	Off *
#8	bit 7 STATUS/ID value =	80h	Off *

<u>S6</u>	<u>FUNCTION</u>	<u>SWITCH ACTIVE IF:</u>
#1	bit 0 INT level select	Off
#2	bit 1 INT level select	Off
#3	bit 2 INT level select	Off
#4	Select short addressing	On *

<u>S7</u>	<u>FUNCTION</u>	<u>SWITCH ACTIVE IF:</u>
#1	Invert encoder direction	On
#2	Defeat CCW LIMIT	On *
#3	Defeat CW LIMIT	On *
#4	Not Used	(On) *

<u>S8</u>	<u>FUNCTION</u>	<u>SWITCH ACTIVE IF:</u>
#1	Z Channel active low	On *
#2	Z Channel active high	On
#3	CCW Limit not isolated	On
#4	CCW Limit isolated	On *
#5	CW Limit not isolated	On
#6	CW Limit isolated	On *
#7	Not used	On *
#8	Not used	On *

Note: Pairs 1 & 2, 3 & 4, 5 & 6 of switch 8 are mutually exclusive for proper operation.

*indicates factory default setting

APPENDIX C

J3 - AUXILLIARY FUNCTIONS CONNECTOR
 1830 Indexer
 25-pin D connector

Pin #	Signal
1	Programmable output 2
2	Programmable output 1
3	Trigger 6
4	Trigger 1
5	JOGPOS input
6	JOGHI input
7	JOGNEG input
8	Trigger 5
9	Trigger 2
10	CW limit
11	Shield
12	CCW limit opto return
13	CCW limit
14	DC common
15	DC common
16	DC Common
17	Trigger 3
18	Trigger 4
19	Shutdown in
20	EXT clk input
21	Home limit
22	Auxilliary connector +5 V
23	CW limit return
24	CW limit opto return
25	CCW limit return

J4 - MOTOR DRIVE CONNECTOR
1830 Indexer
25-pin D connector

Pin #	Signal
1	Step
2	Direction
3	CW step
4	CCW step
5	Shield
6	Gearshift
7	Fault reset
8	Motor/driver +5 volts
9	Drive fault
10	Slip fault
11	Overdrive
12	Reserved
13	TTL direction
14	Step Return
15	Direction return
16	Remote shutdown
17	Remote shutdown return
18	Gearshift return
19	Fault reset return
20	DC common
21	Drive fault return
22	Slip fault return
23	Overdrive return
24	DC common
25	TTL step

J5 - ENCODER CONNECTOR
1830 Indexer
25-pin D connector

Pin #	Signal
1	Ch A(+)
2	Ch A(-)
3	Ch B(+)
4	Ch B(-)
5	Ch Z(+)
6	Ch Z(-)
7	NC
8	Shield
9	NC
10	Step out
11	Direction out
12	NC
13	Home enable
14	DC common
15	DC common
16	DC common
17	DC common
18	DC common
19	DC common
20	DC common
21	NC
22	NC
23	+5 volts out
24	+5 volts out
25	+5 volts out

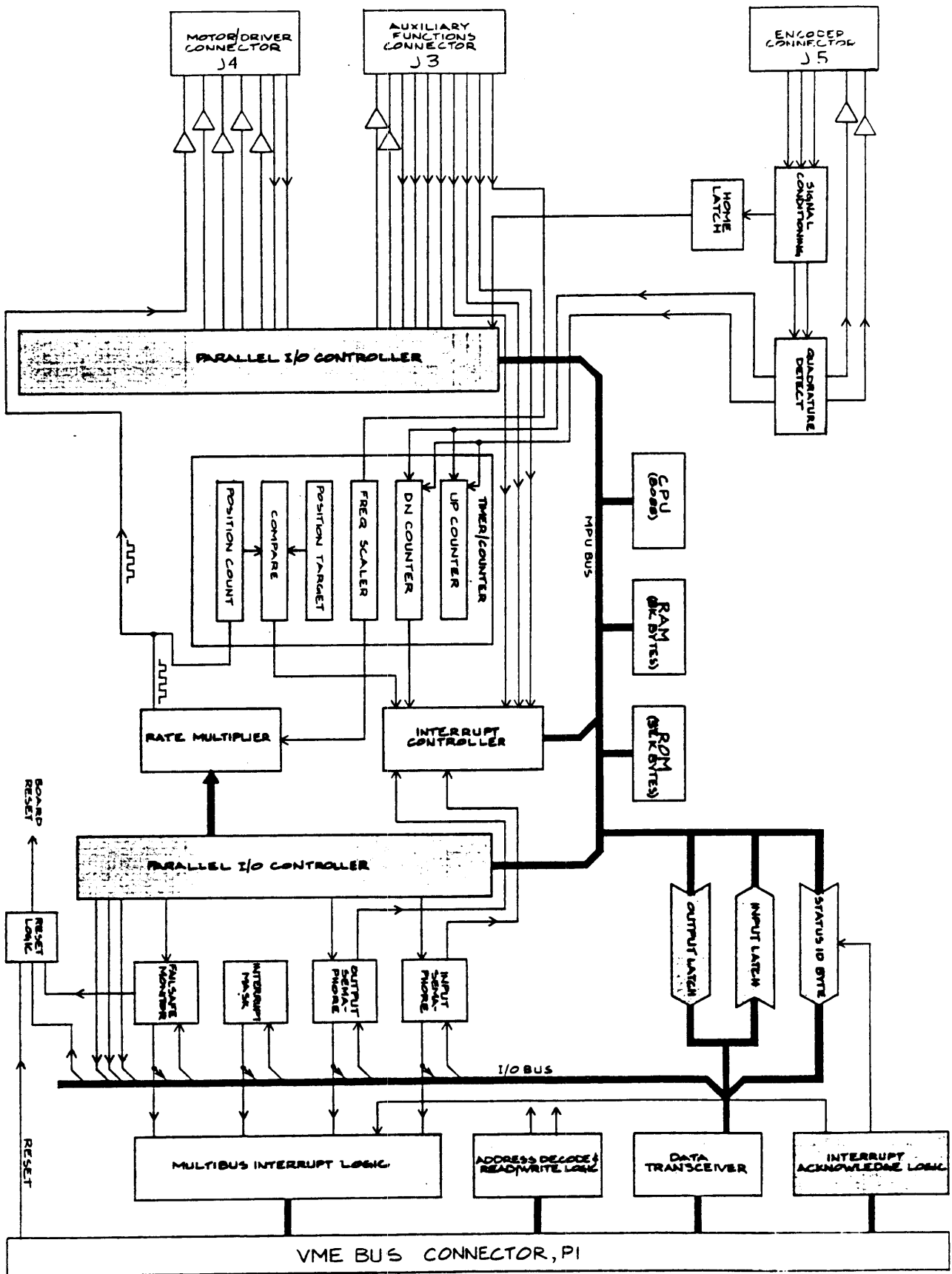
VMEbus BACKPLANE CONNECTORS AND VME BOARD CONNECTORS

INTRODUCTION

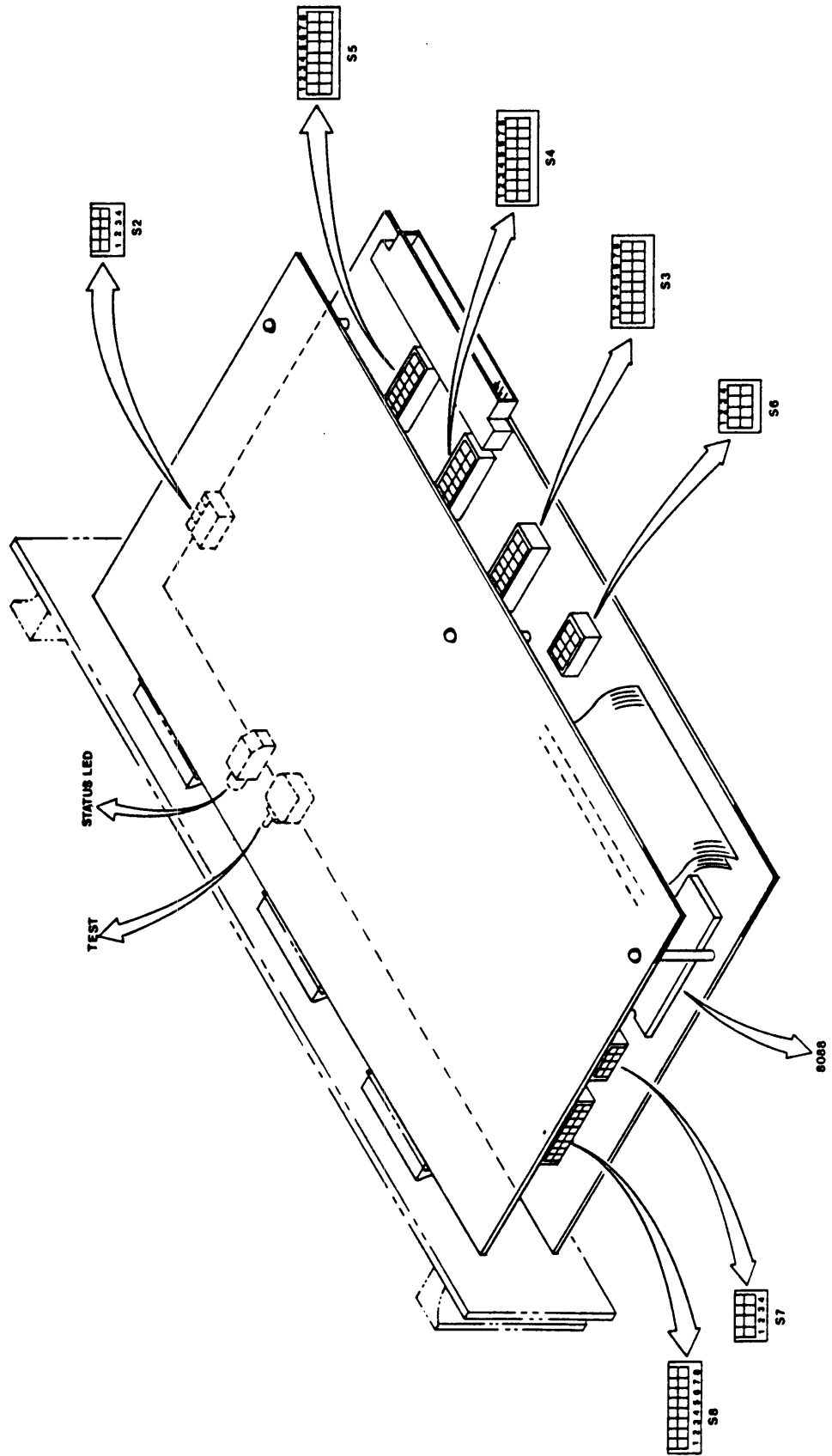
This section identifies the VMEbus backplane P1 connector pin assignments.* The following table lists the pin assignments by pin number order. (The connector consists of three rows of pins labeled rows A, B, and C.)

* those which are brought onto the 1830 indexer

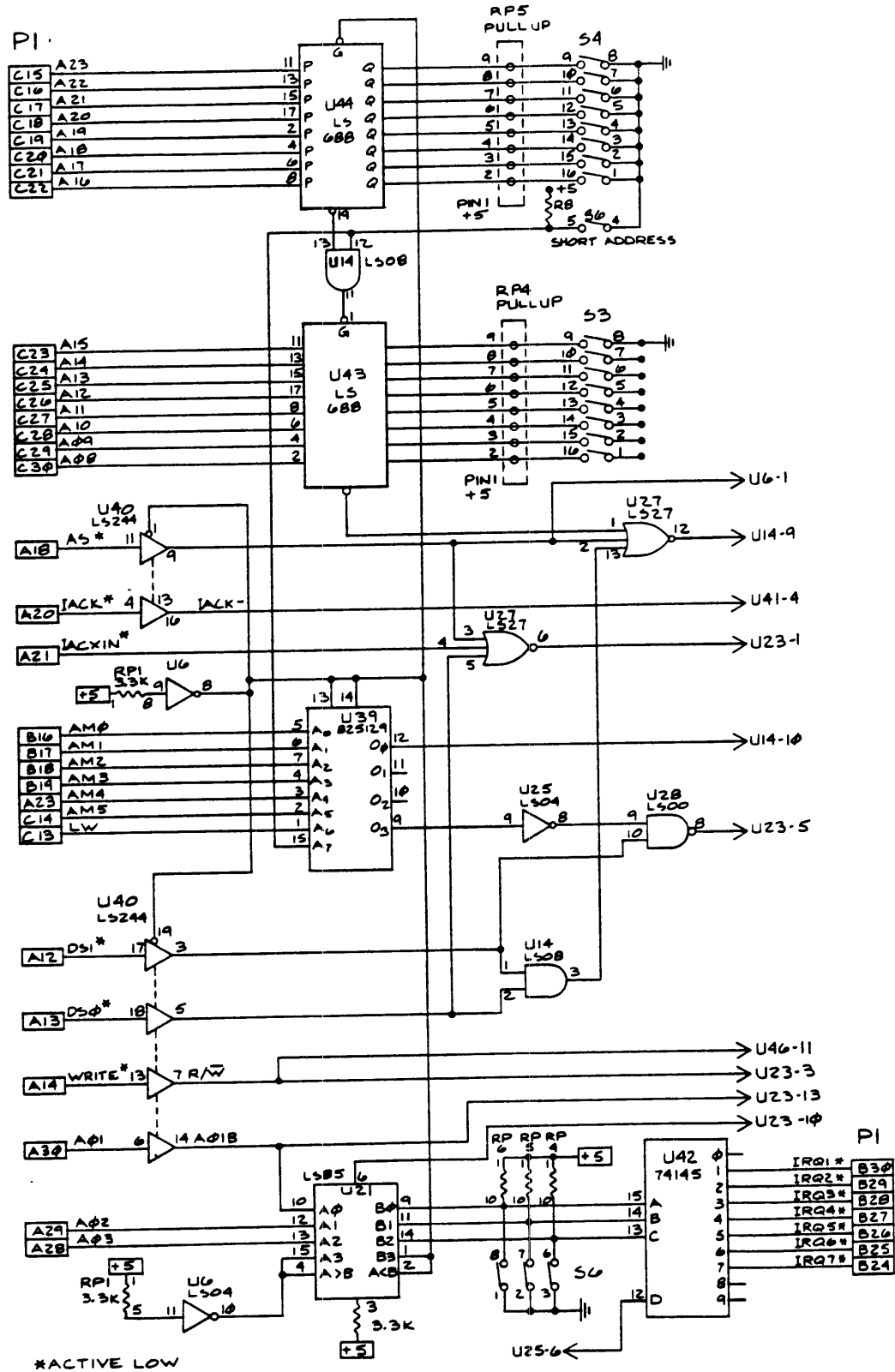
<u>PIN NUMBER</u>	<u>ROW A SIGNAL MNEMONIC</u>	<u>ROW B SIGNAL MNEMONIC</u>	<u>ROW C SIGNAL MNEMONIC</u>
1	DO0	NC	NC
2	DO1	NC	NC
3	DO2	NC	NC
4	DO3	NC	NC
5	DO4	NC	NC
6	DO5	NC	NC
7	DO6	NC	NC
8	DO7	NC	NC
9	GND	NC	NC
10	NC	NC	NC
11	GND	NC	BERR*
12	DS1*	NC	SYSRESET*
13	DS0*	NC	LWORD*
14	WRITE*	NC	AM5
15	GND	NC	A23
16	DTACK*	AM0	A22
17	GND	AM1	A21
18	AS*	AM2	A20
19	GND	AM3	A19
20	IACK*	GND	A18
21	IACKIN*	NC	A17
22	IACKOUT*	NC	A16
23	AM4	GND	A15
24	A07	IRQ7*	A14
25	A06	IRQ6*	A13
26	A05	IRQ5*	A12
27	A04	IRQ4*	A11
28	A03	IRQ3*	A10
30	A01	IRQ2*	A09
31	NC	NC	NC
32	+5V	+5V	+5V



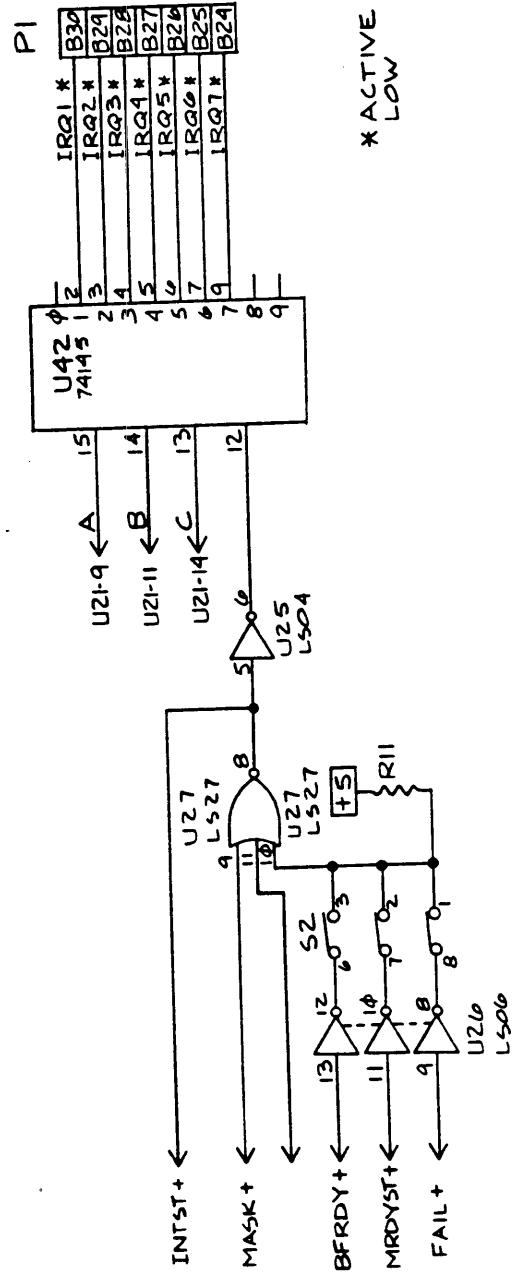
BLOCK DIAGRAM 1830 MOTOR CONTROLLER



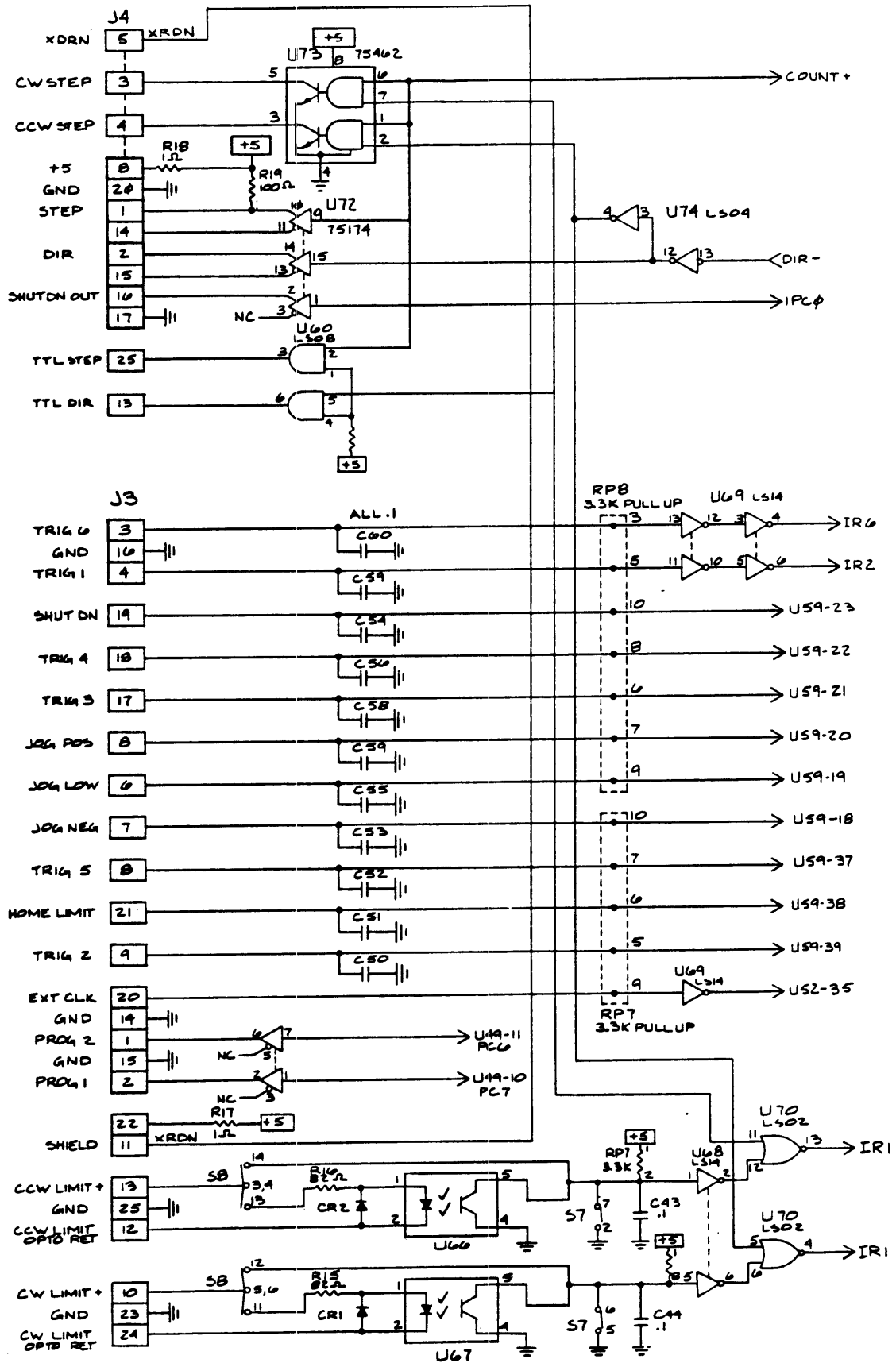
1830 CONFIGURATION JUMPER/EPROM LOCATION DIAGRAM



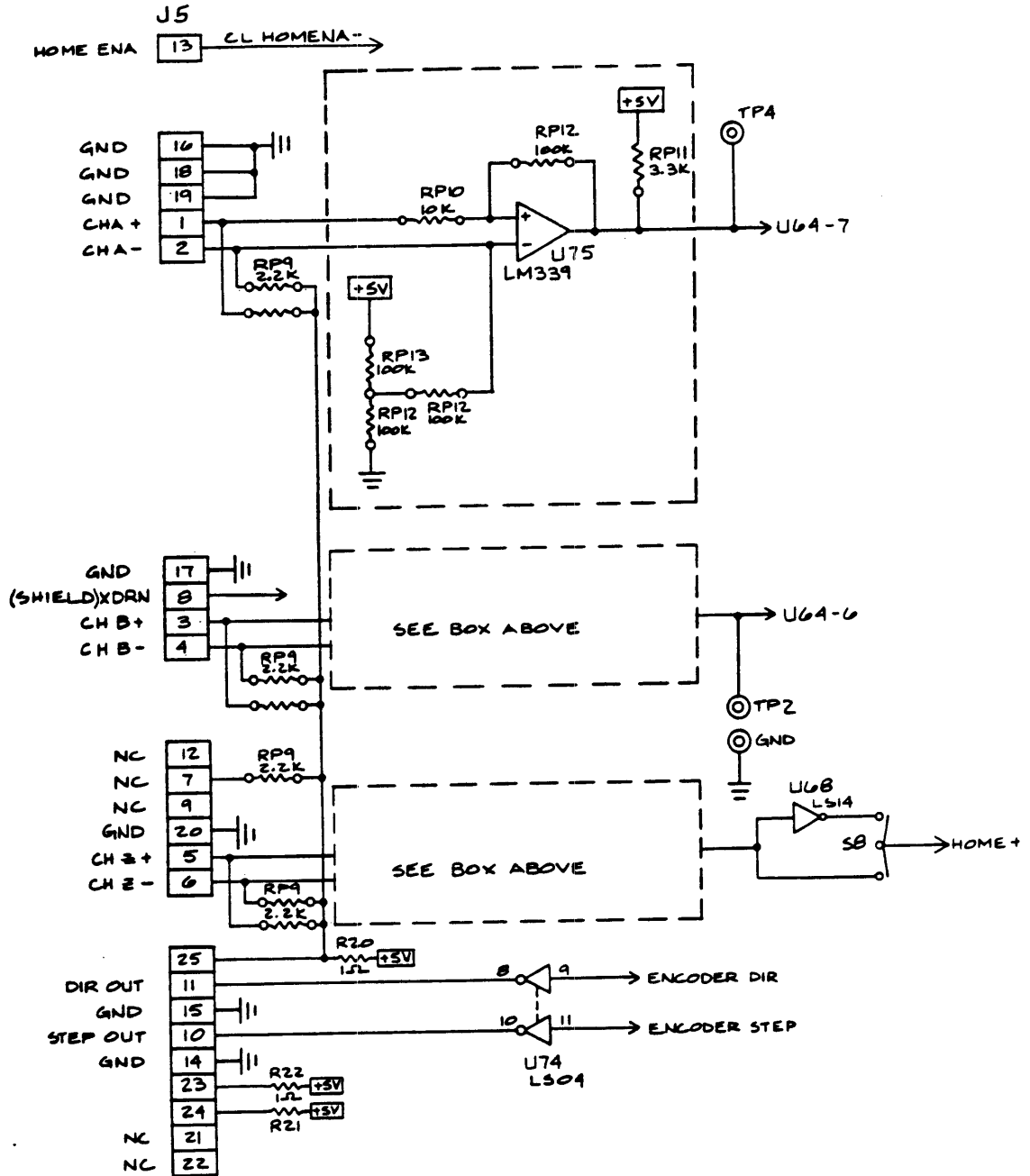
1830 ADDRESS AND INTERRUPT SELECTION DIAGRAM



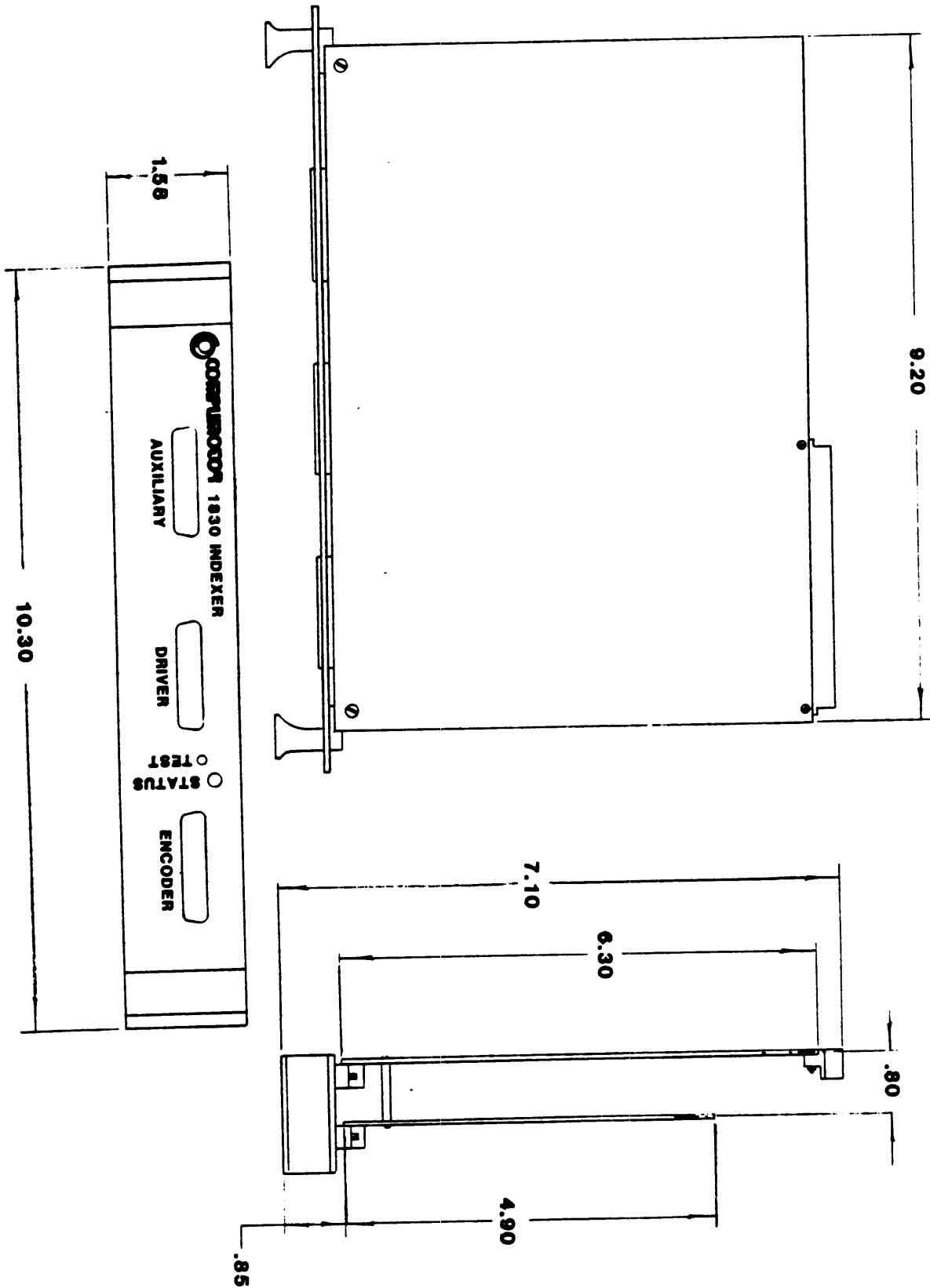
1830 INTERRUPT SELECTION DIAGRAM



1830 AUXILIARY INTERFACE DIAGRAM



1830 ENCODER INTERFACE DIAGRAM



1830 DIMENSIONAL DRAWING

