

1

2

3

4

5

A

B

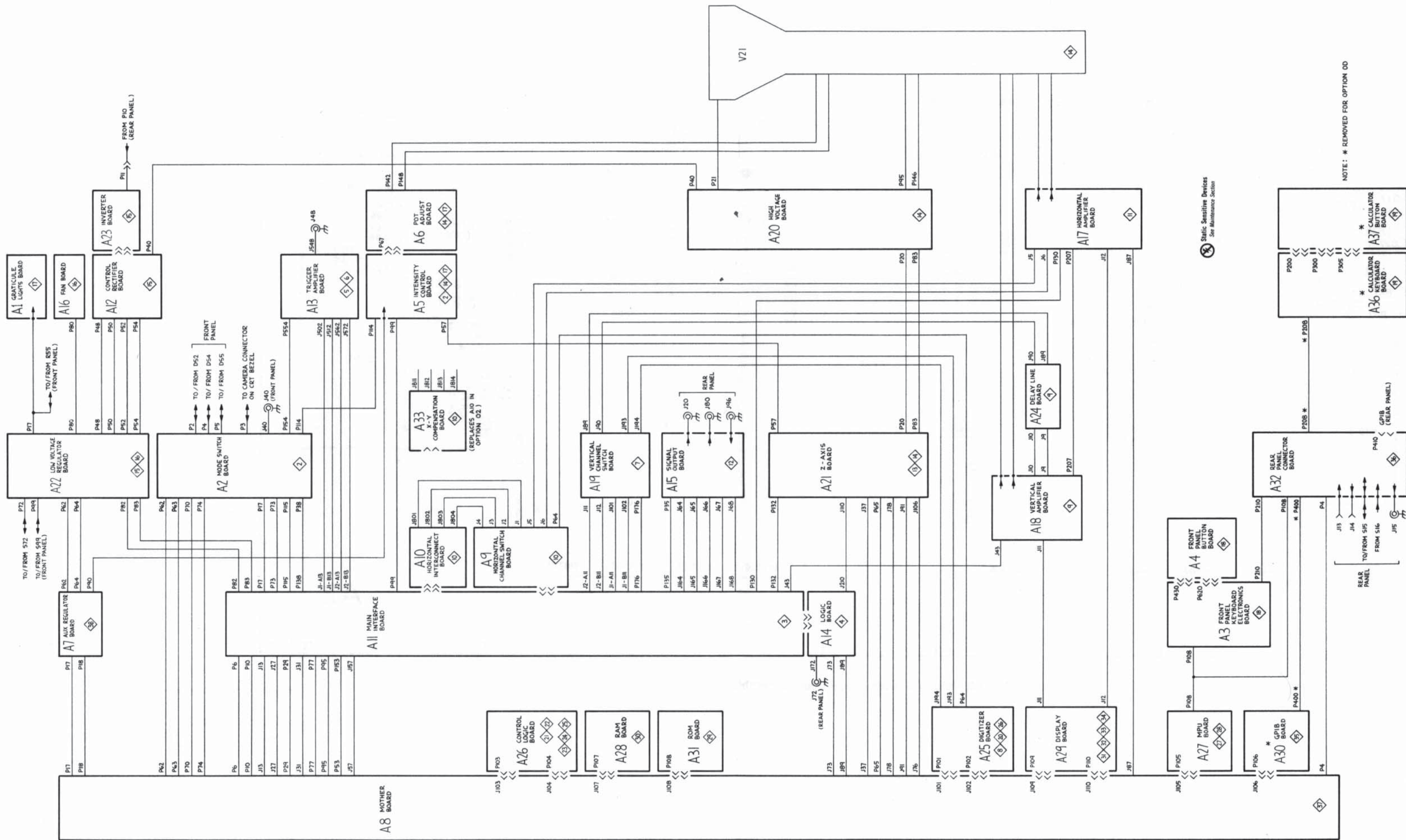
C

D

E

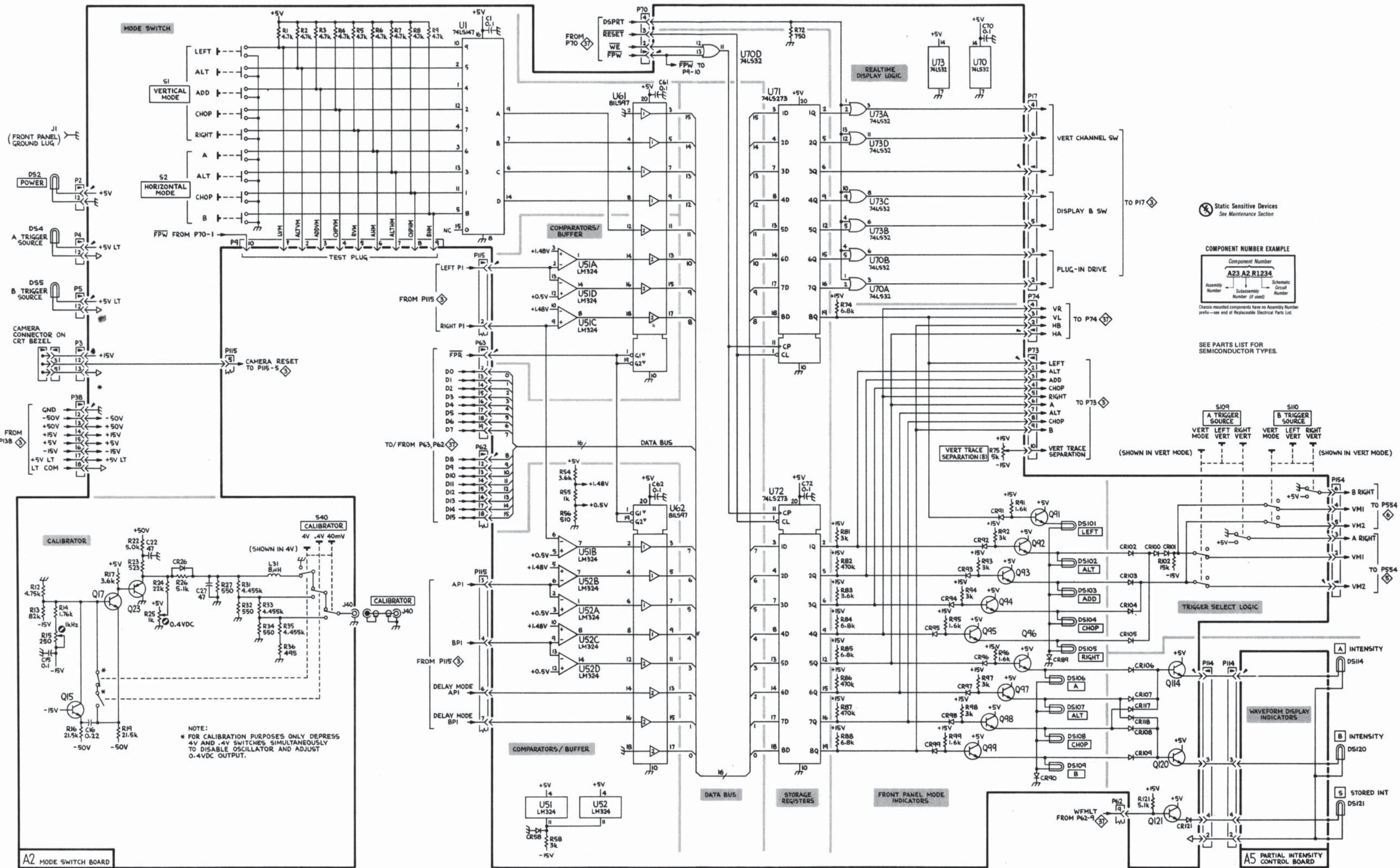
F

G



⊗ Static Sensitive Devices
See Maintenance Section



A**B****C****D****E****F****G****H**

⊗ Static Sensitive Devices
See Maintenance Section

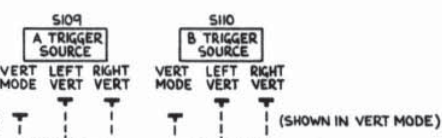
COMPONENT NUMBER EXAMPLE

Component Number
A23 A2 R1234

Assembly Number Subassembly Number (if used) Schematic Circuit Number

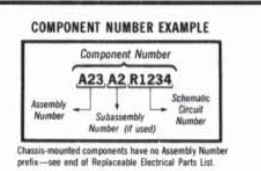
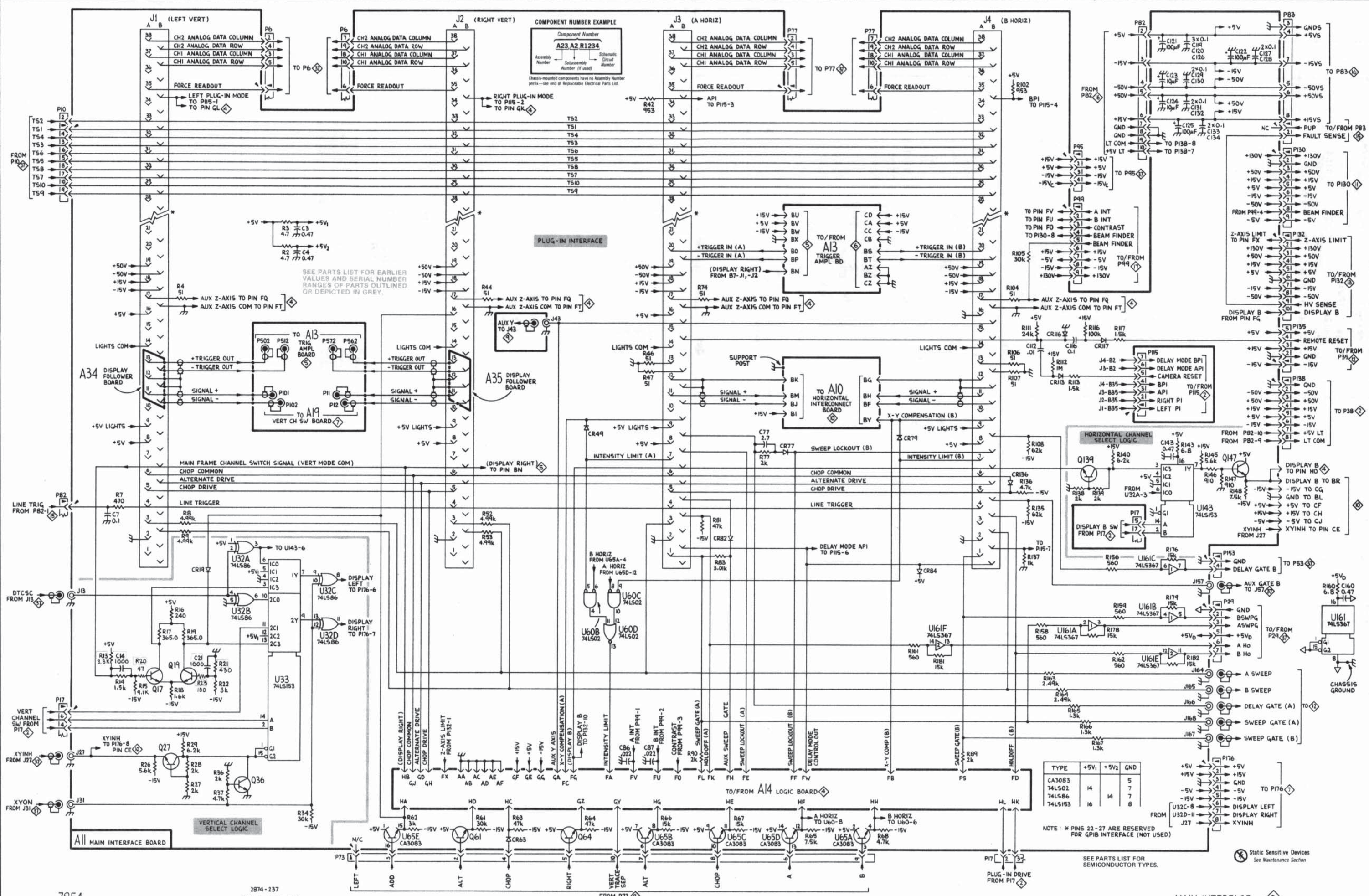
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.



NOTE:
* FOR CALIBRATION PURPOSES ONLY DEPRESS 4V AND .4V SWITCHES SIMULTANEOUSLY TO DISABLE OSCILLATOR AND ADJUST 0.4VDC OUTPUT.

1
2
3
4
5



TYPE	+5V1	+5V2	GND
CA3083	14	5	7
74LS02			7
74LS86	14	14	7
74LS153	16		8

NOTE: * PINS 22-27 ARE RESERVED FOR GPIB INTERFACE (NOT USED)

Static Sensitive Devices
See Maintenance Section

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

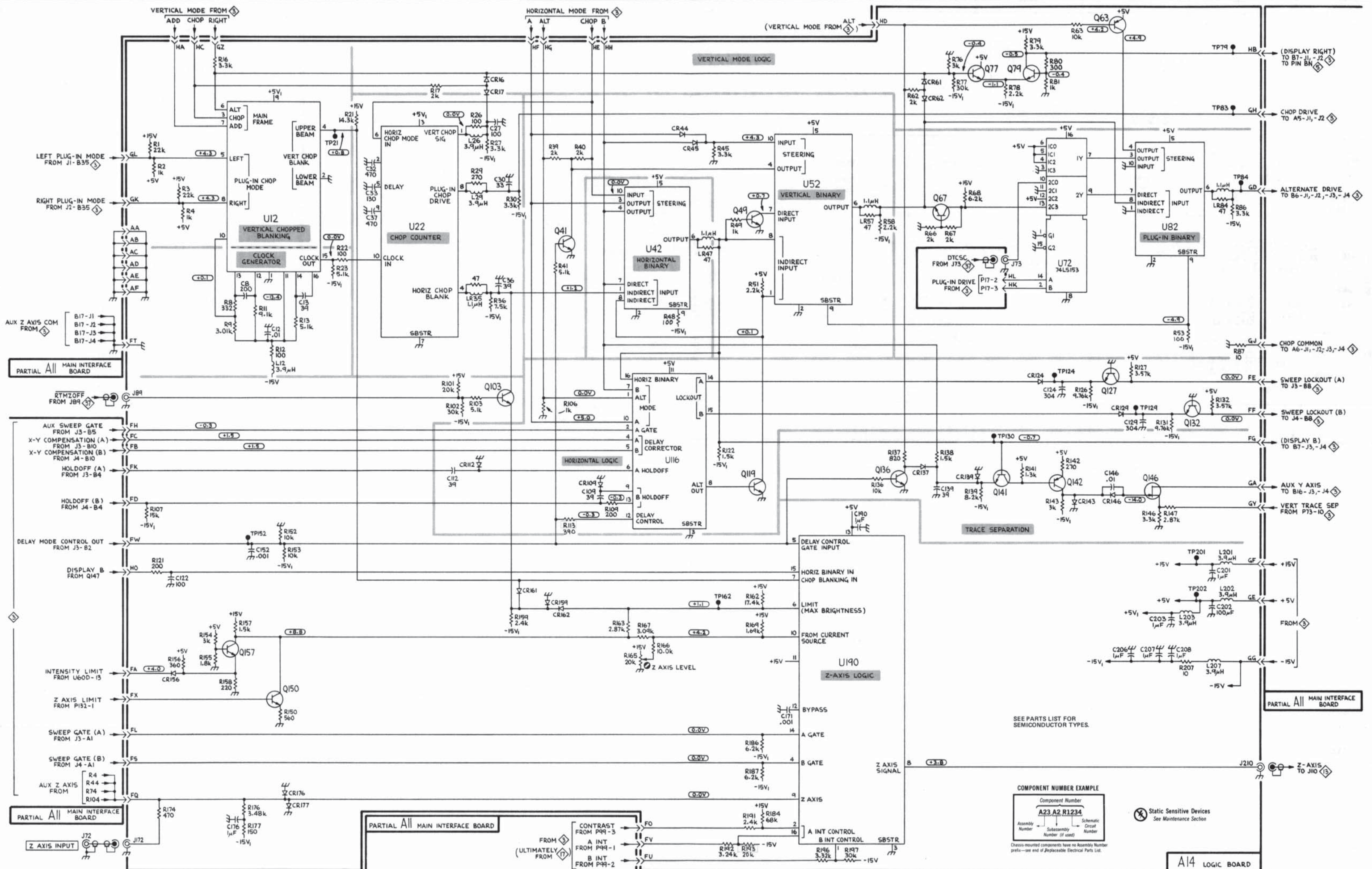
1

2

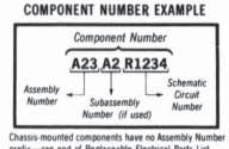
3

4

5

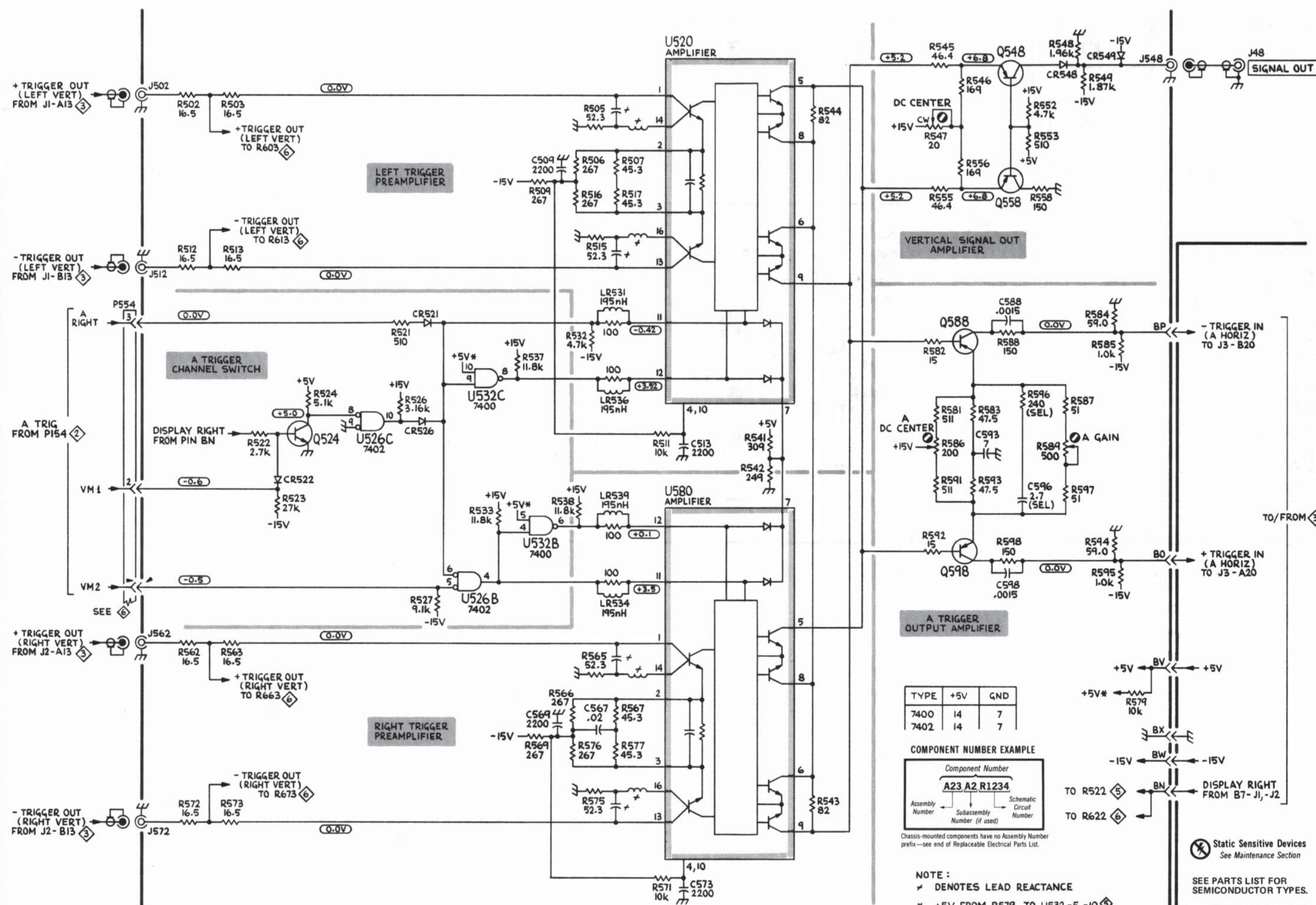


SEE PARTS LIST FOR SEMICONDUCTOR TYPES.



Static Sensitive Devices See Maintenance Section

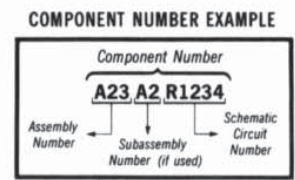
1
2
3
4
5



PARTIAL A13 TRIGGER AMPLIFIER BOARD

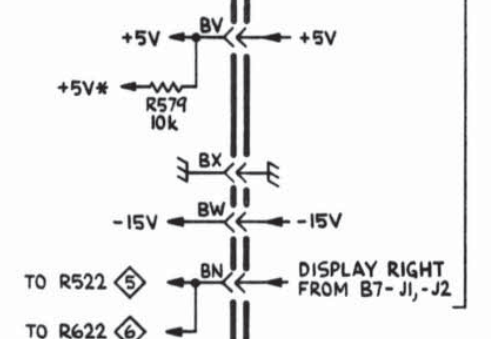
PARTIAL A11 MAIN INTERFACE BOARD

TYPE	+5V	GND
7400	14	7
7402	14	7



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

- NOTE:
- * DENOTES LEAD REACTANCE
 - * +5V FROM R579 TO U532-5, -10 TO U532-1, -13

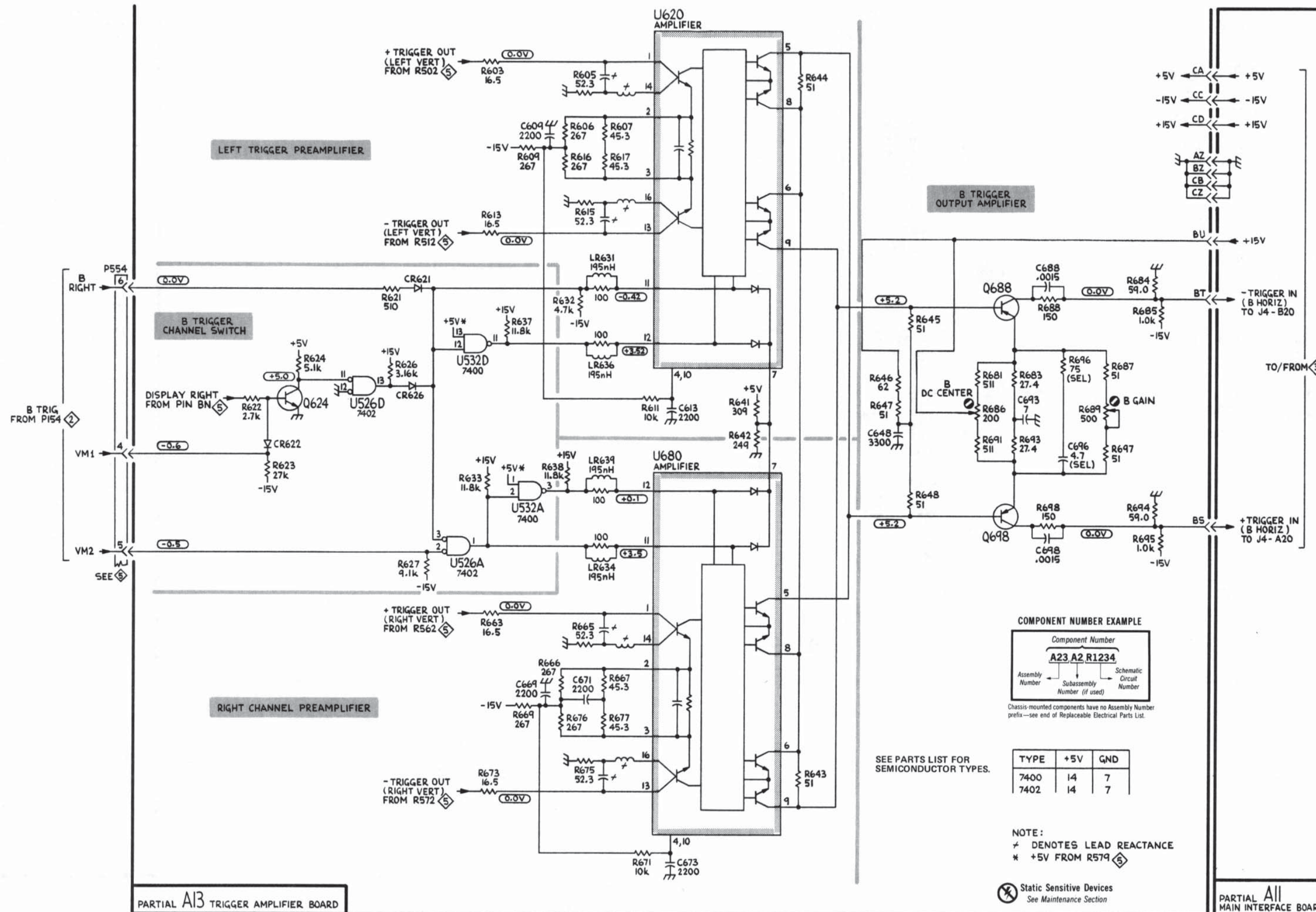


Static Sensitive Devices
See Maintenance Section

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

A B C D E F G

1
2
3
4
5



PARTIAL A13 TRIGGER AMPLIFIER BOARD

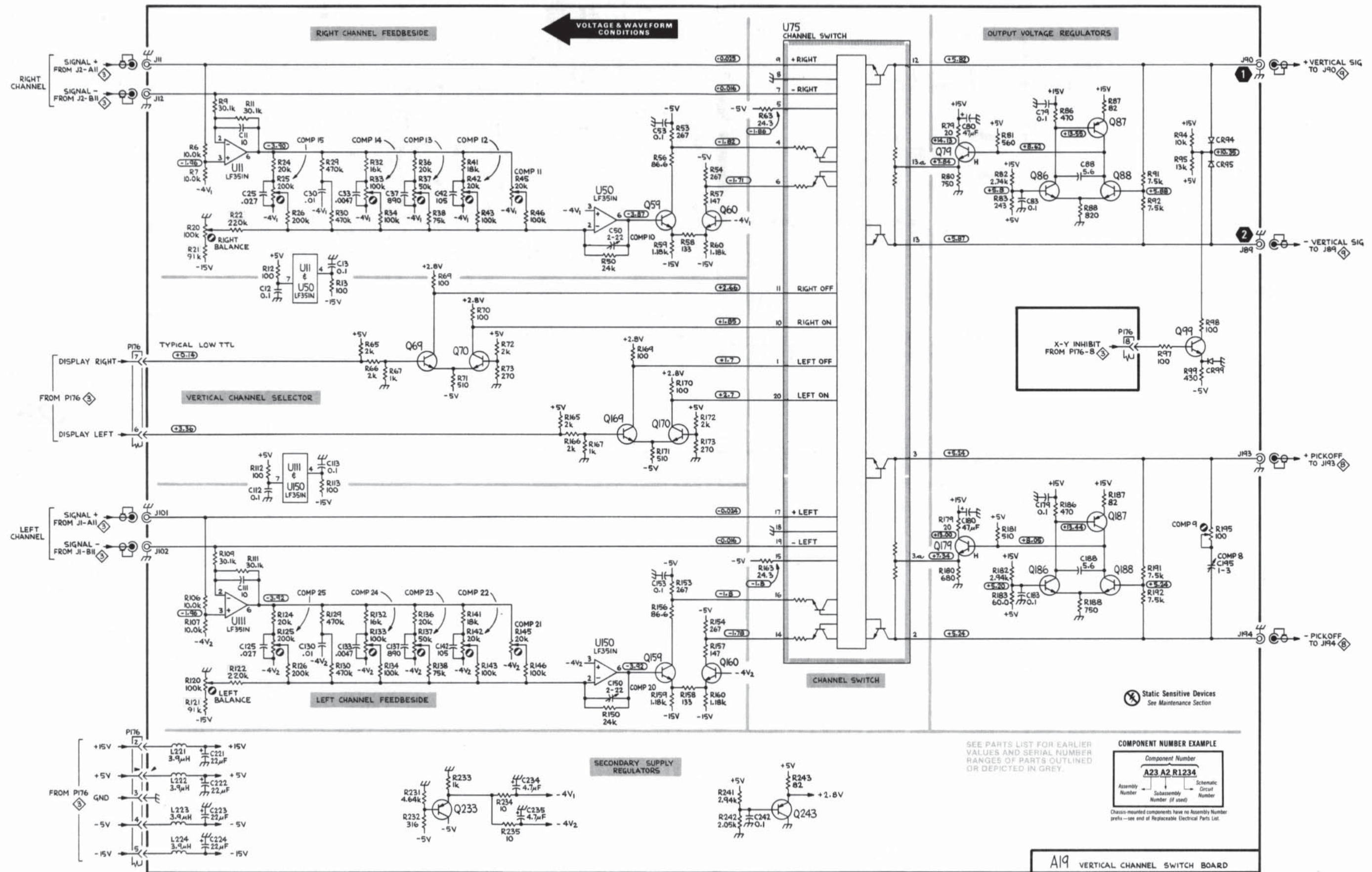
PARTIAL A11 MAIN INTERFACE BOARD

1

2

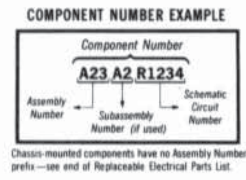
3

4



Static Sensitive Devices
See Maintenance Section

SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.



A B C D E F G

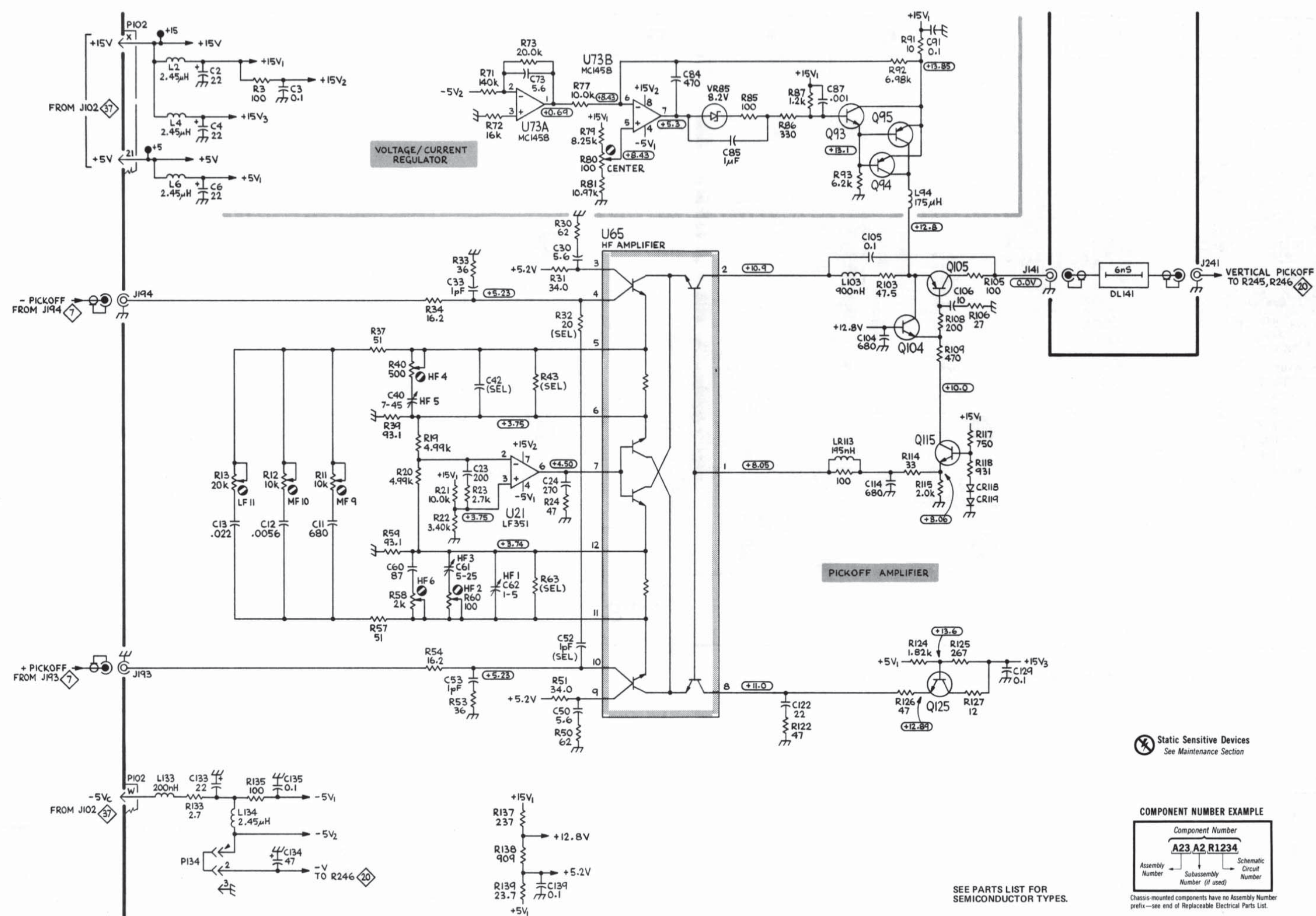
1

2

3

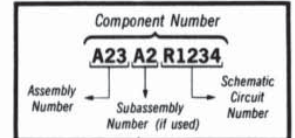
4

5



⊗ Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

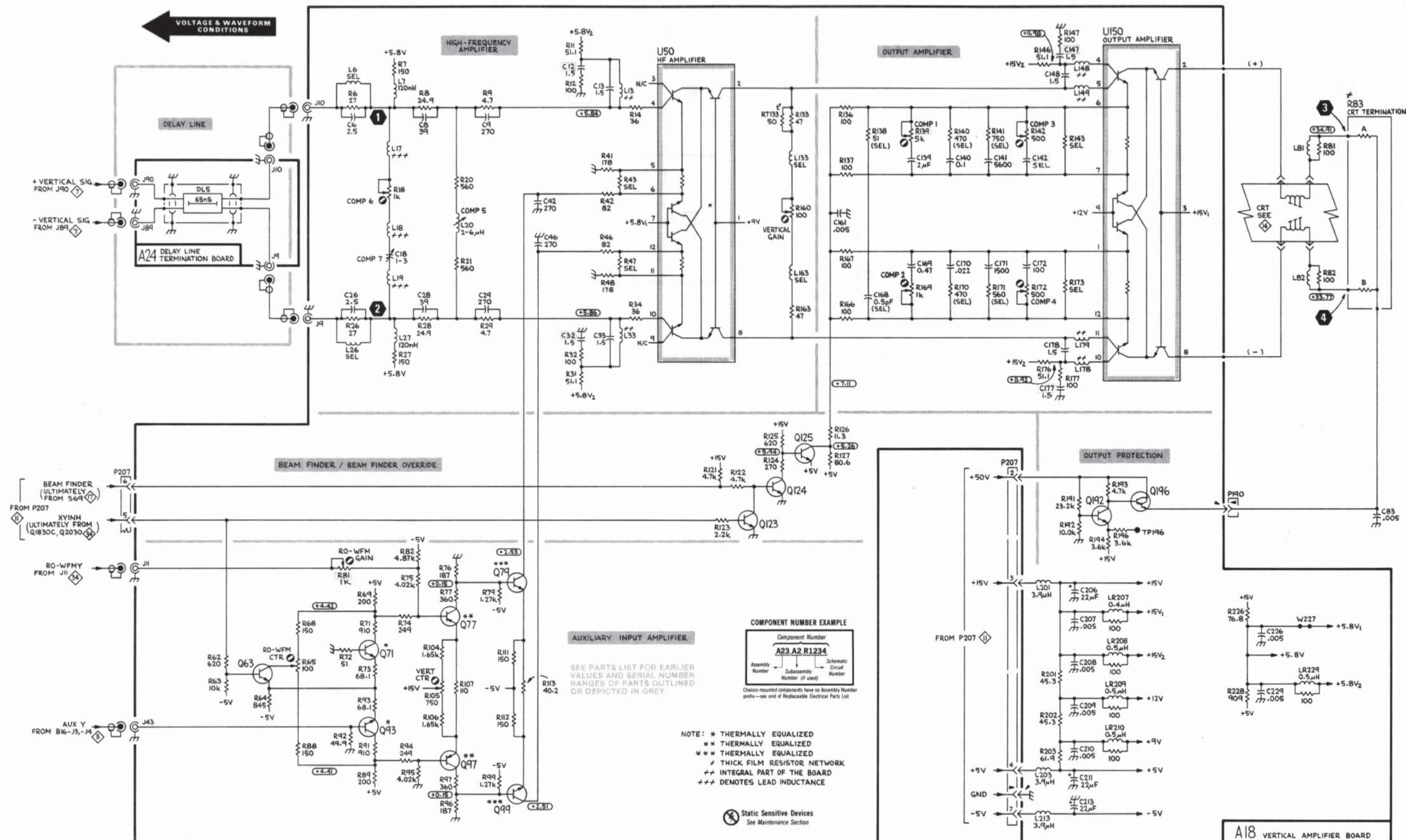
SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

PARTIAL A25 DIGITIZER BOARD

A**B****C****D****E****F****G****1****2****3****4**

VOLTAGE & WAVEFORM CONDITIONS

←



COMPONENT NUMBER EXAMPLE

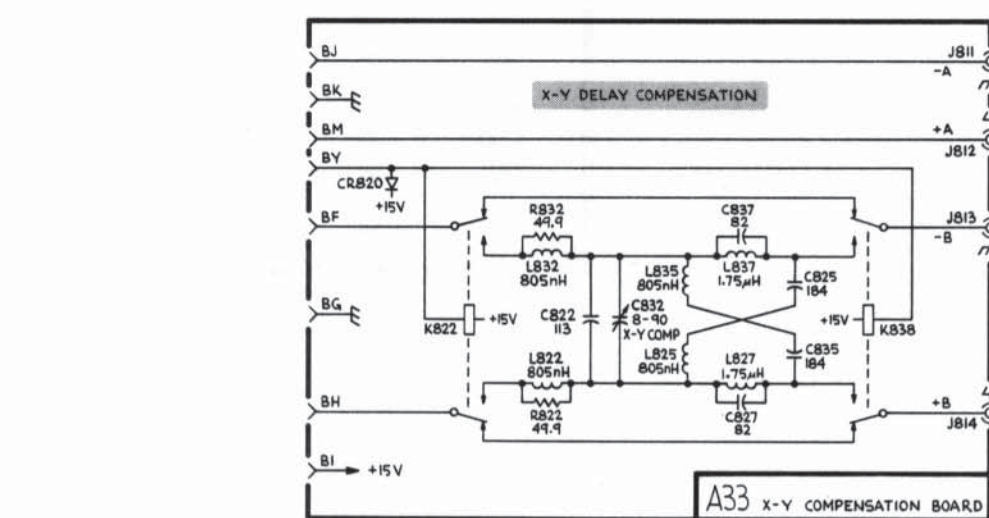
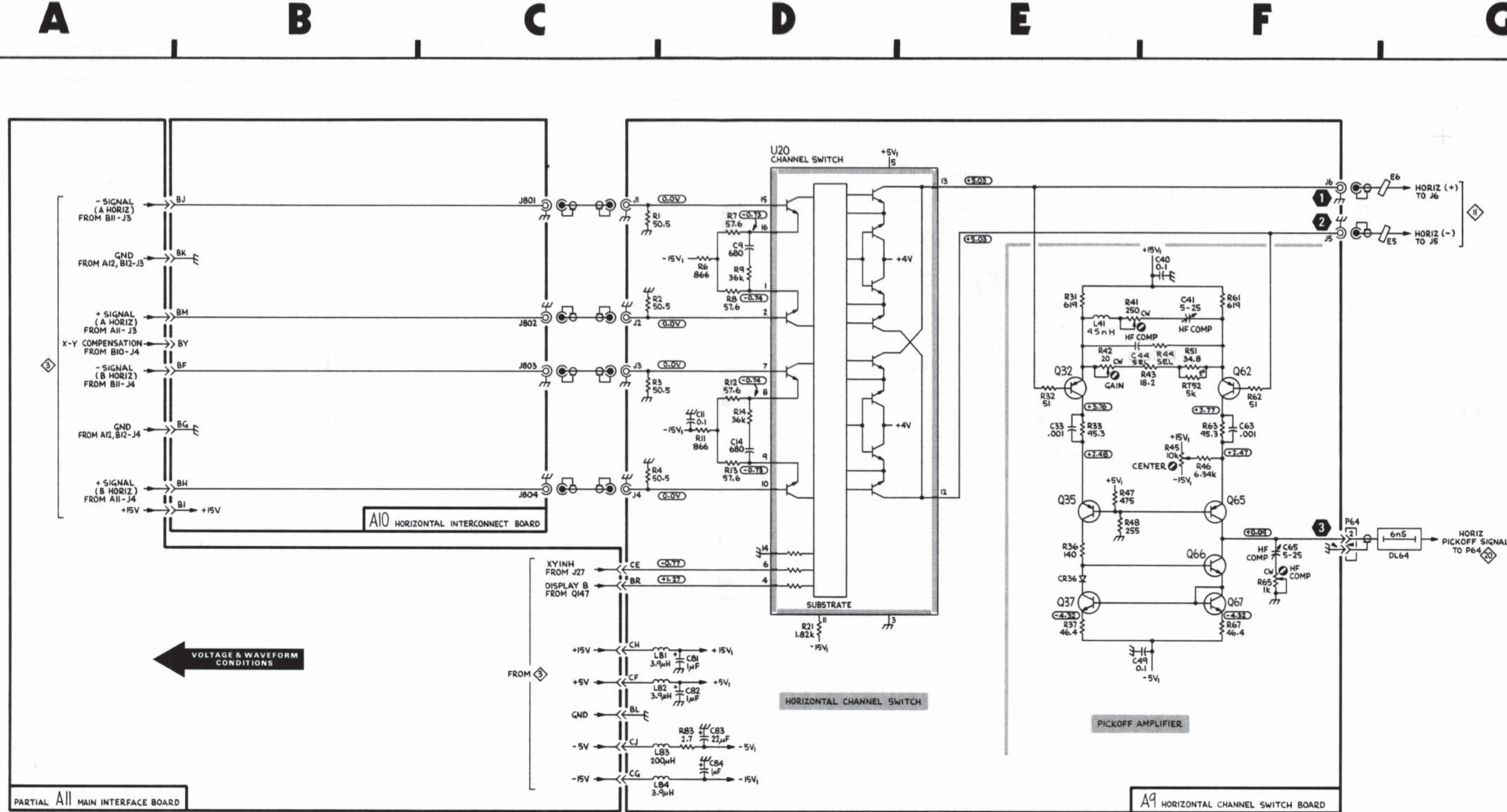
Component Number		
A23	A2	R1234
Assembly Number	Subassembly Number (if used)	Schematic Circuit Number

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

NOTE:

- * THERMALLY EQUALIZED
- ** THERMALLY EQUALIZED
- *** THERMALLY EQUALIZED
- † THICK FILM RESISTOR NETWORK
- ++ INTEGRAL PART OF THE BOARD
- +++ DENOTES LEAD INDUCTANCE

Static Sensitive Devices
See Maintenance Section

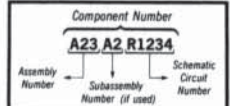


NOTE:
IN THE 7854 OPTION 02, THE A33 X-Y COMPENSATION BOARD
REPLACES THE A10 HORIZONTAL INTERCONNECT BOARD

SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.

⊗ Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number
prefix—see end of Replaceable Electrical Parts List.

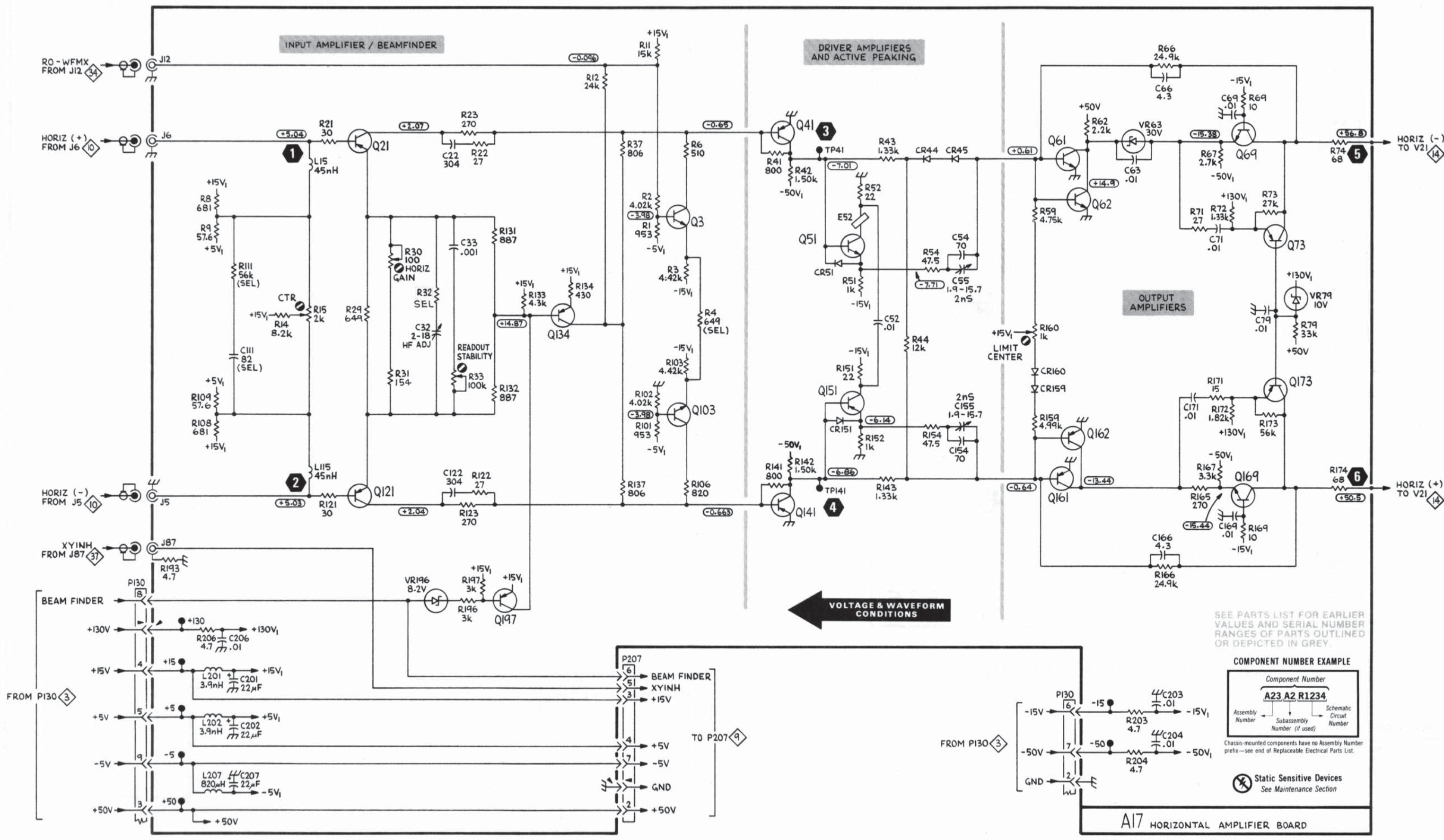
1

2

3

4

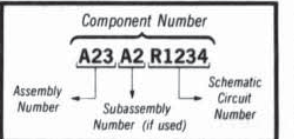
5



VOLTAGE & WAVEFORM CONDITIONS

SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY.

COMPONENT NUMBER EXAMPLE

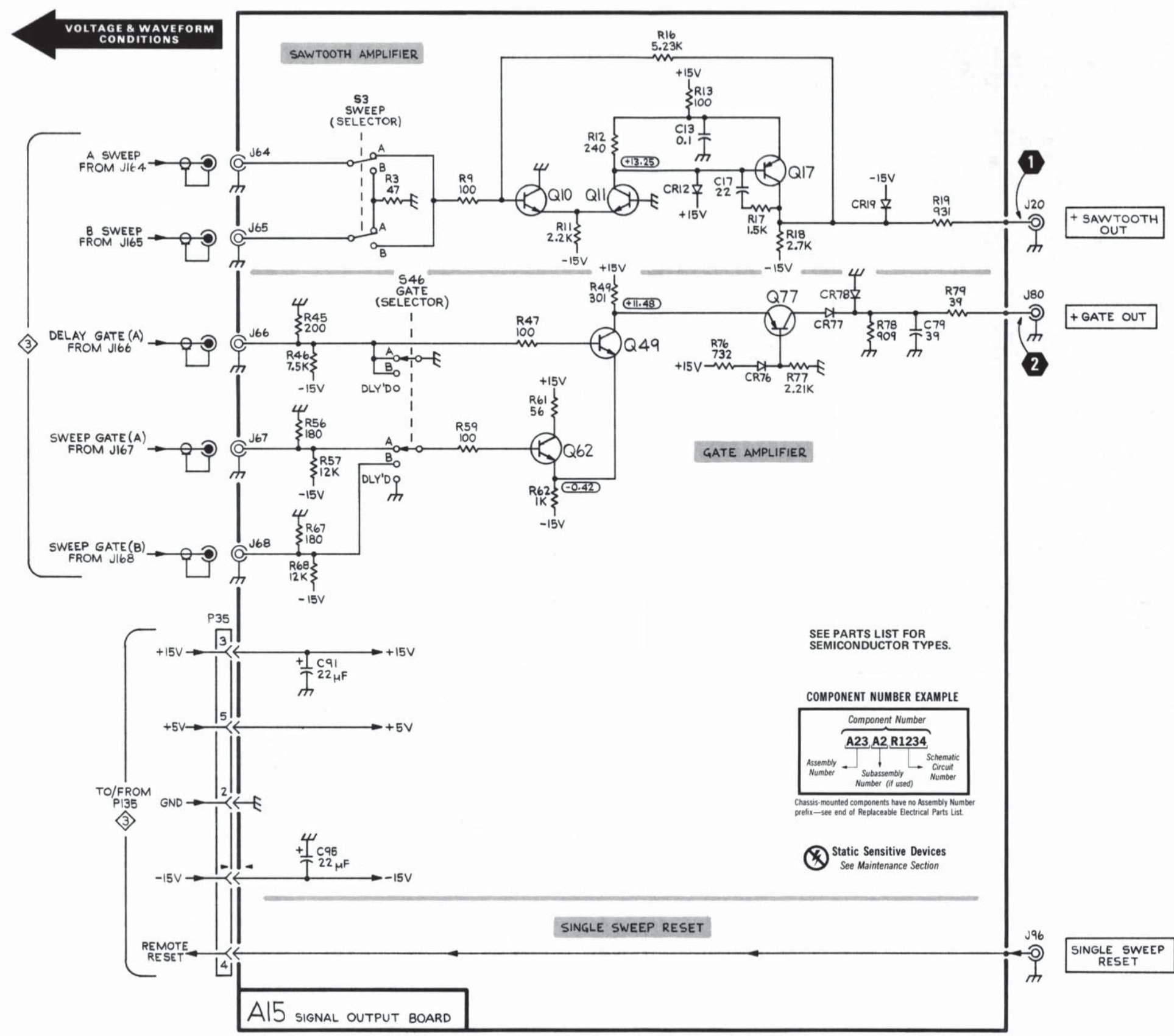


Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

Static Sensitive Devices See Maintenance Section

A17 HORIZONTAL AMPLIFIER BOARD

1
2
3
4
5

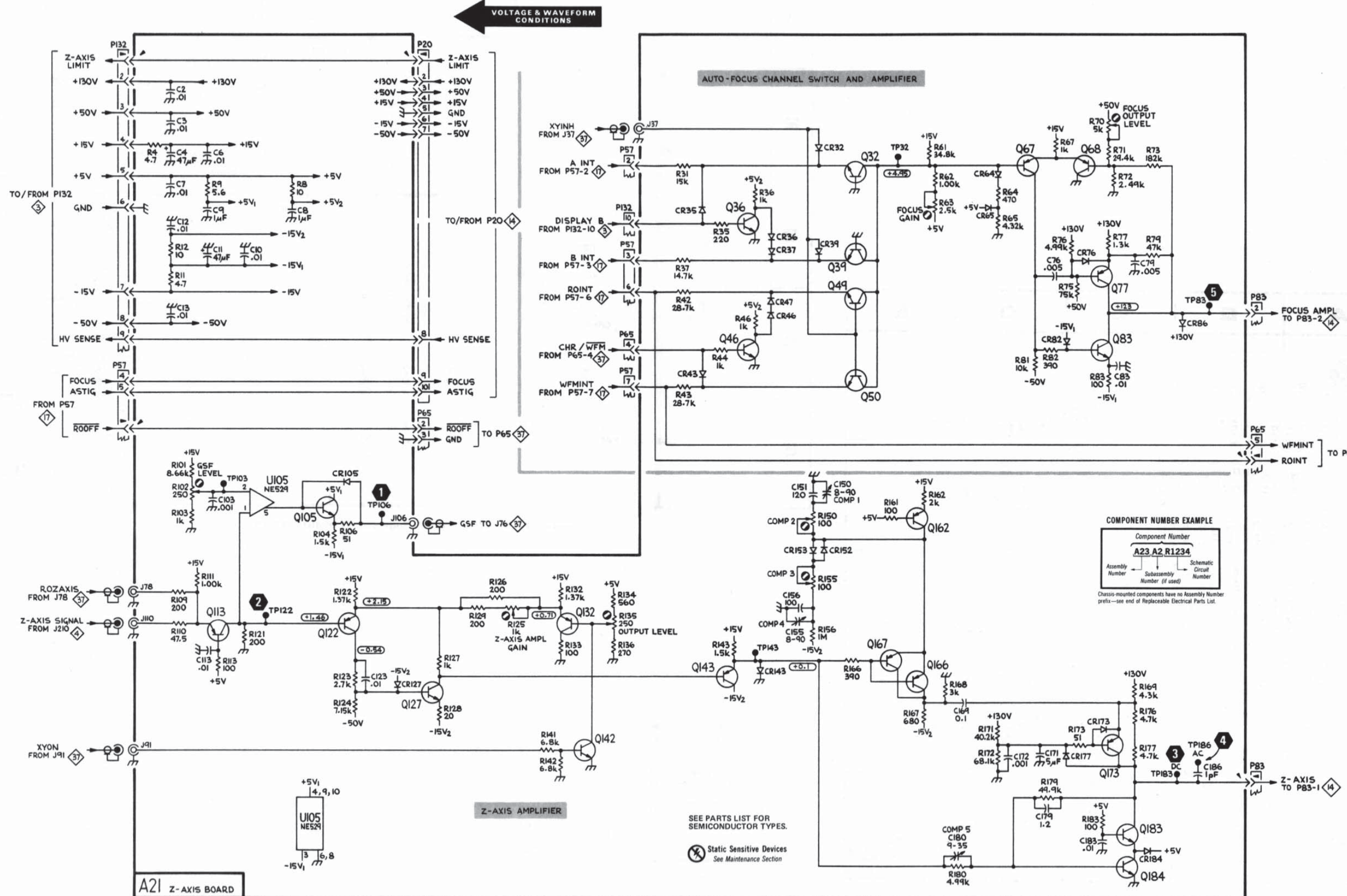


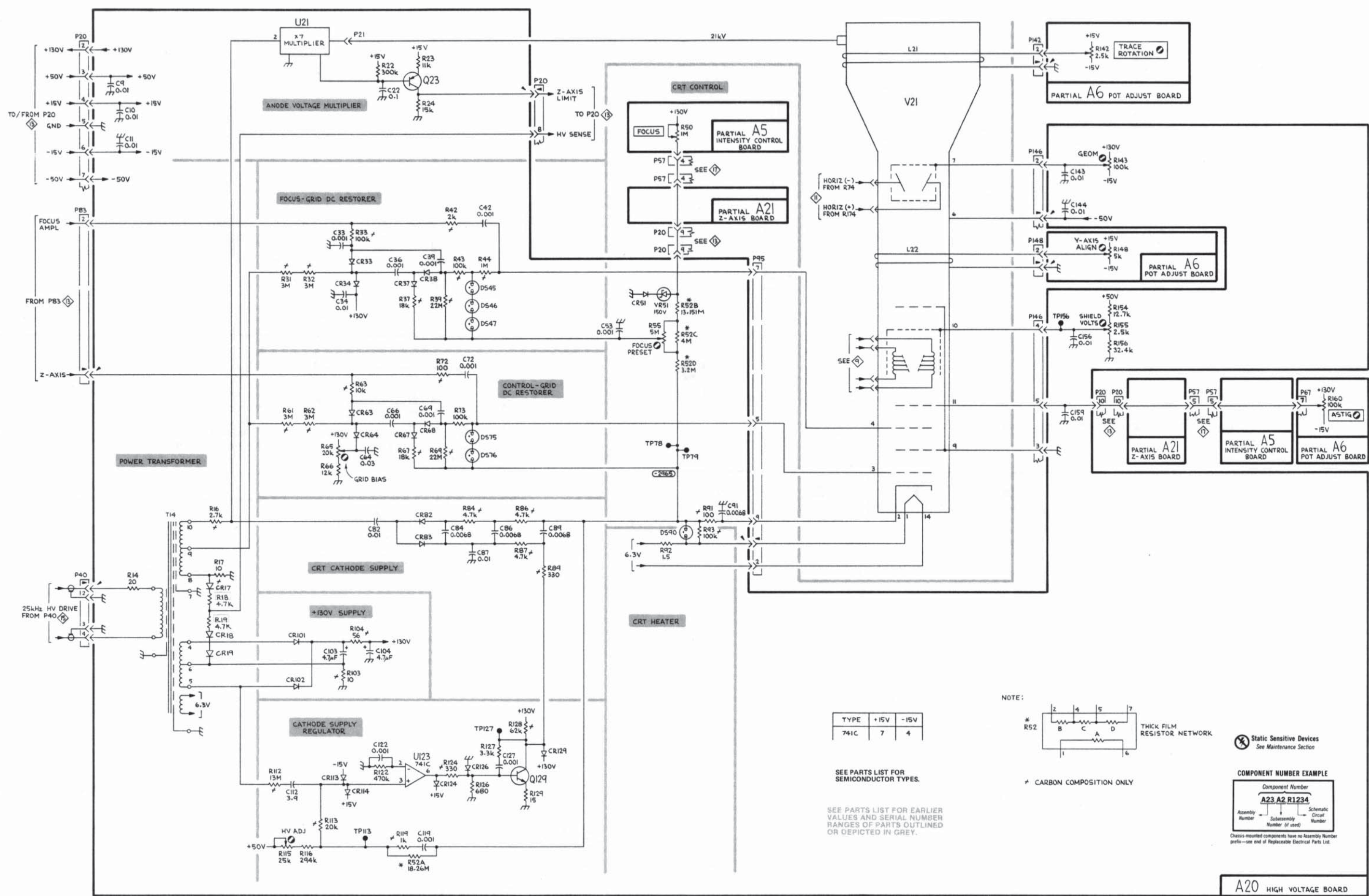
1

2

3

4



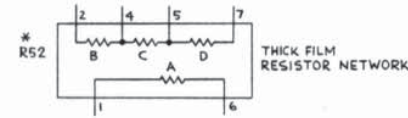
A**B****C****D****E****F****G****1****2****3****4****5**

TYPE	+15V	-15V
741C	7	4

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY.

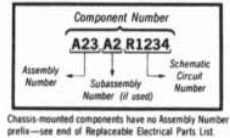
NOTE:



* CARBON COMPOSITION ONLY

⊗ Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

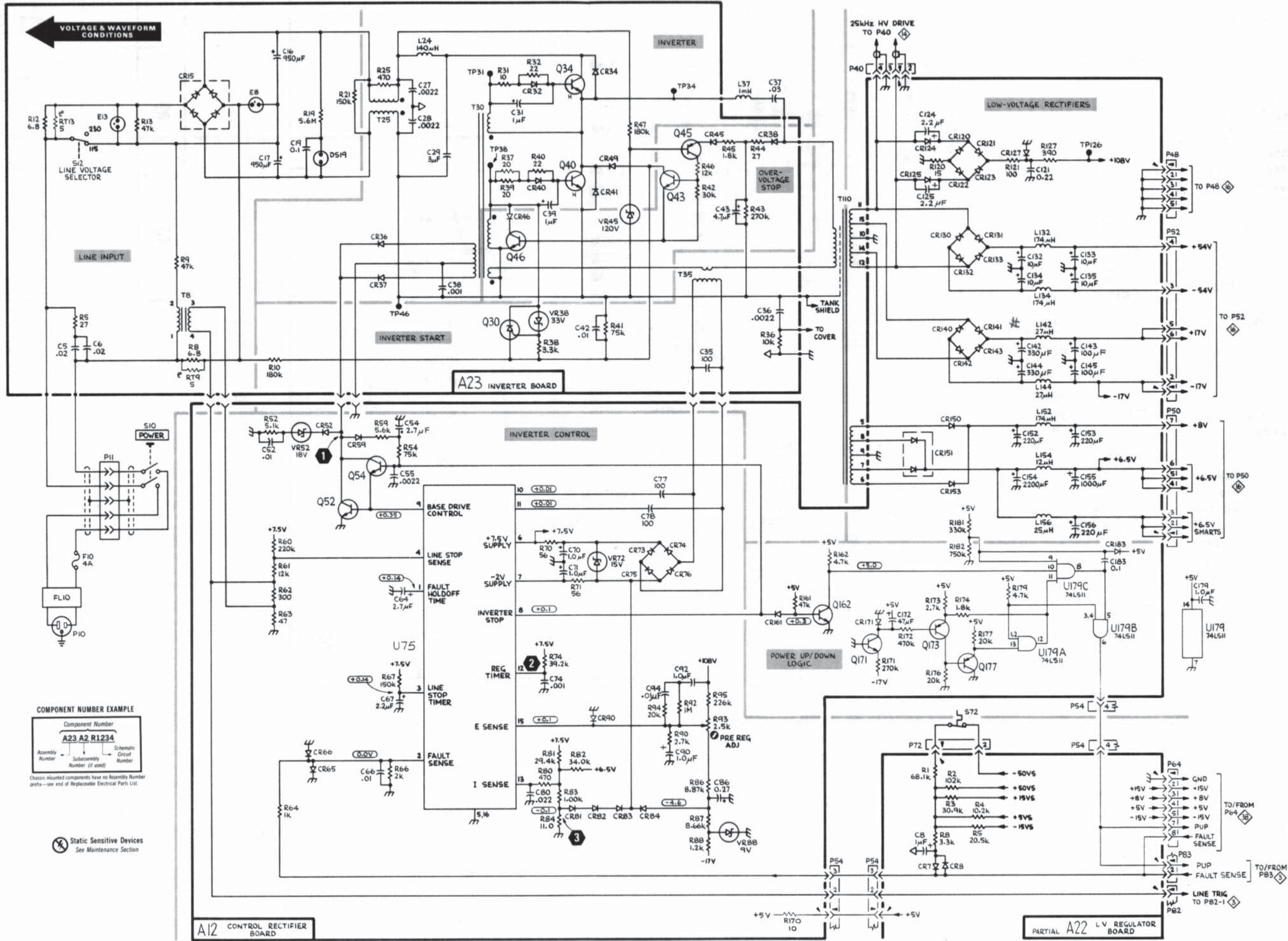
1

2

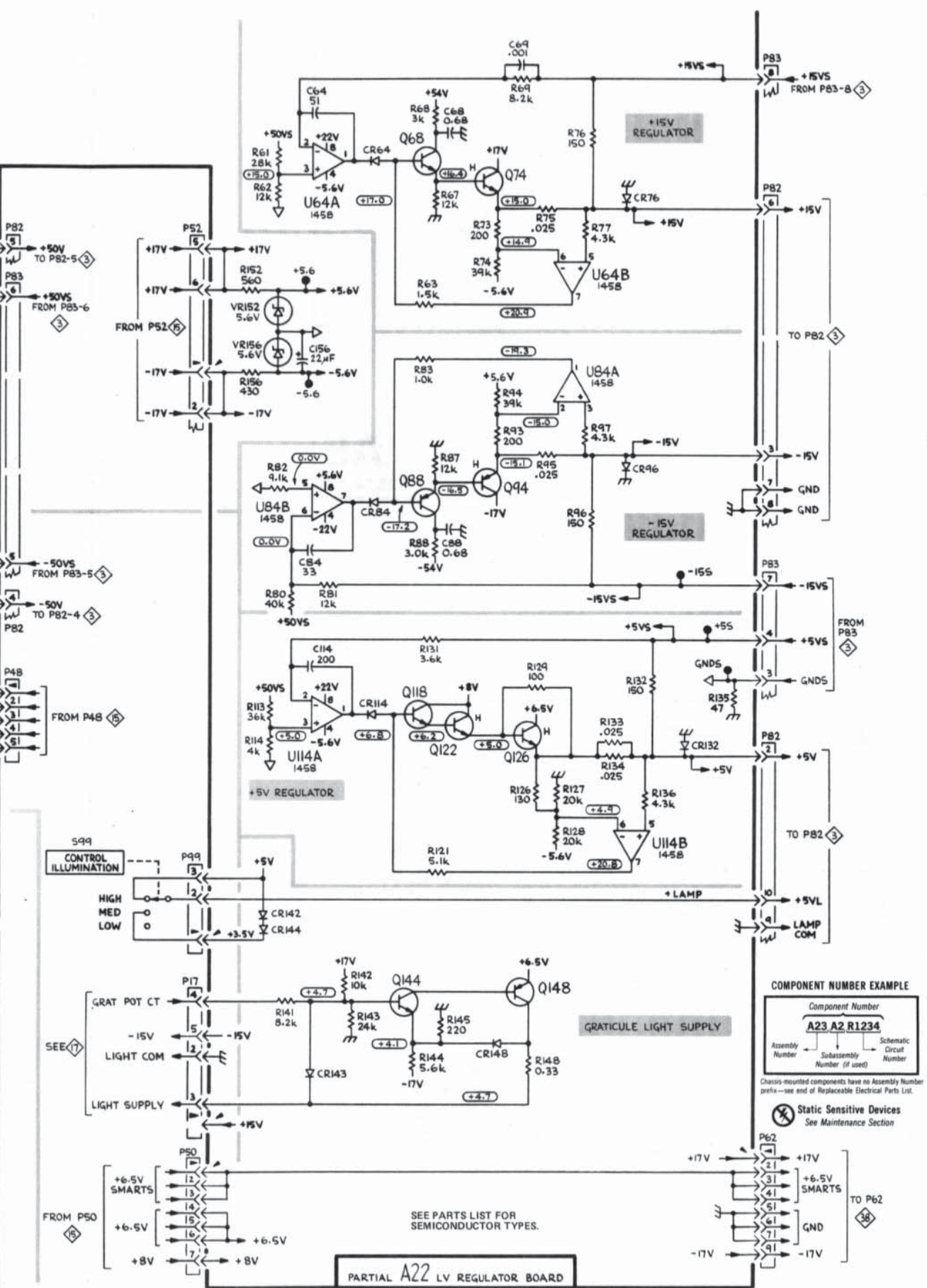
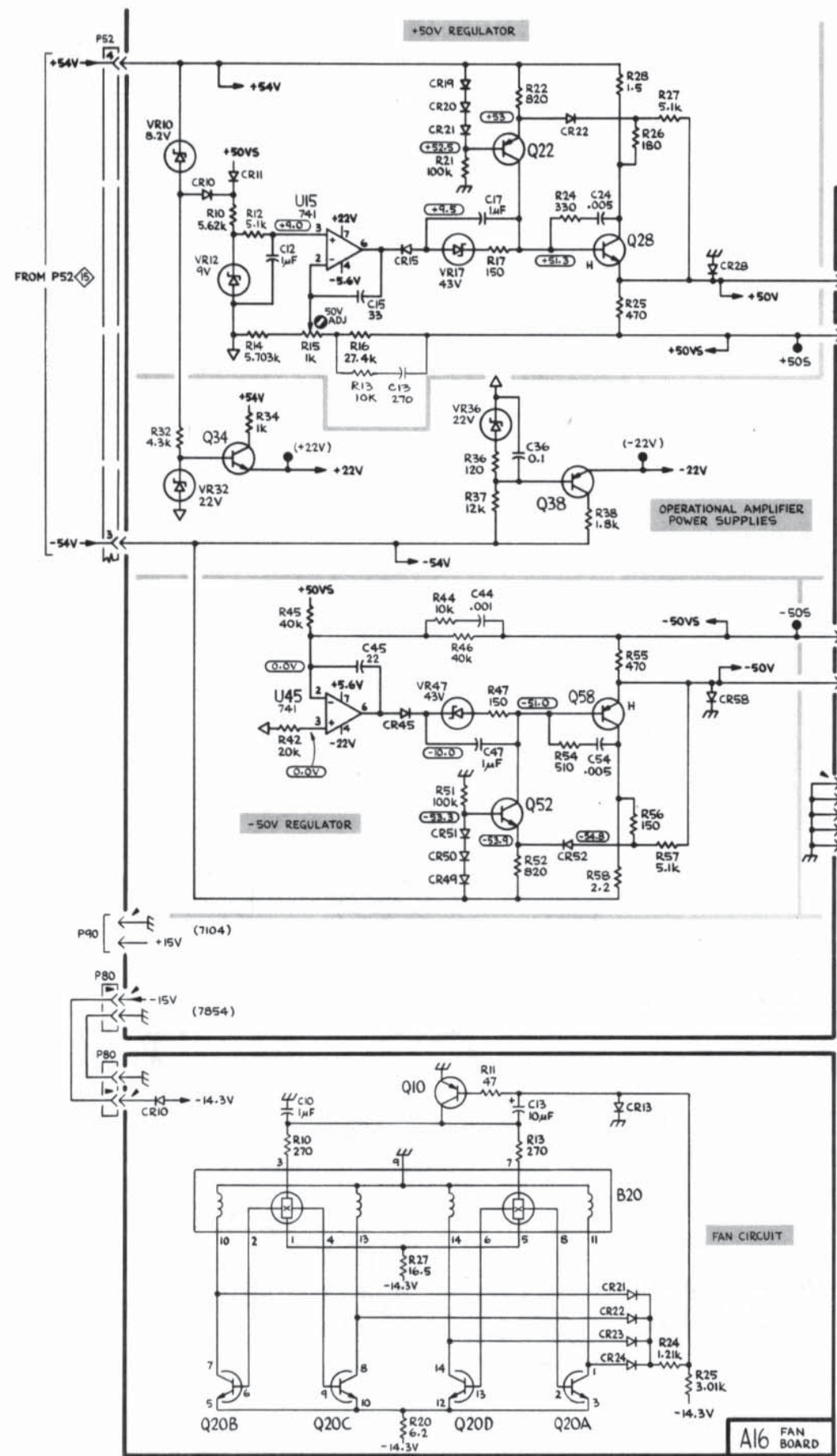
3

4

5



1
2
3
4
5



COMPONENT NUMBER EXAMPLE

Component Number			
A23	A2	R1234	
Assembly Number	Subassembly Number (if used)	Schematic Circuit Number	

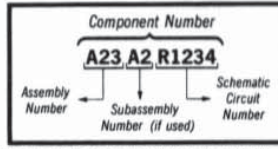
chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

Static Sensitive Devices
 See Maintenance Section

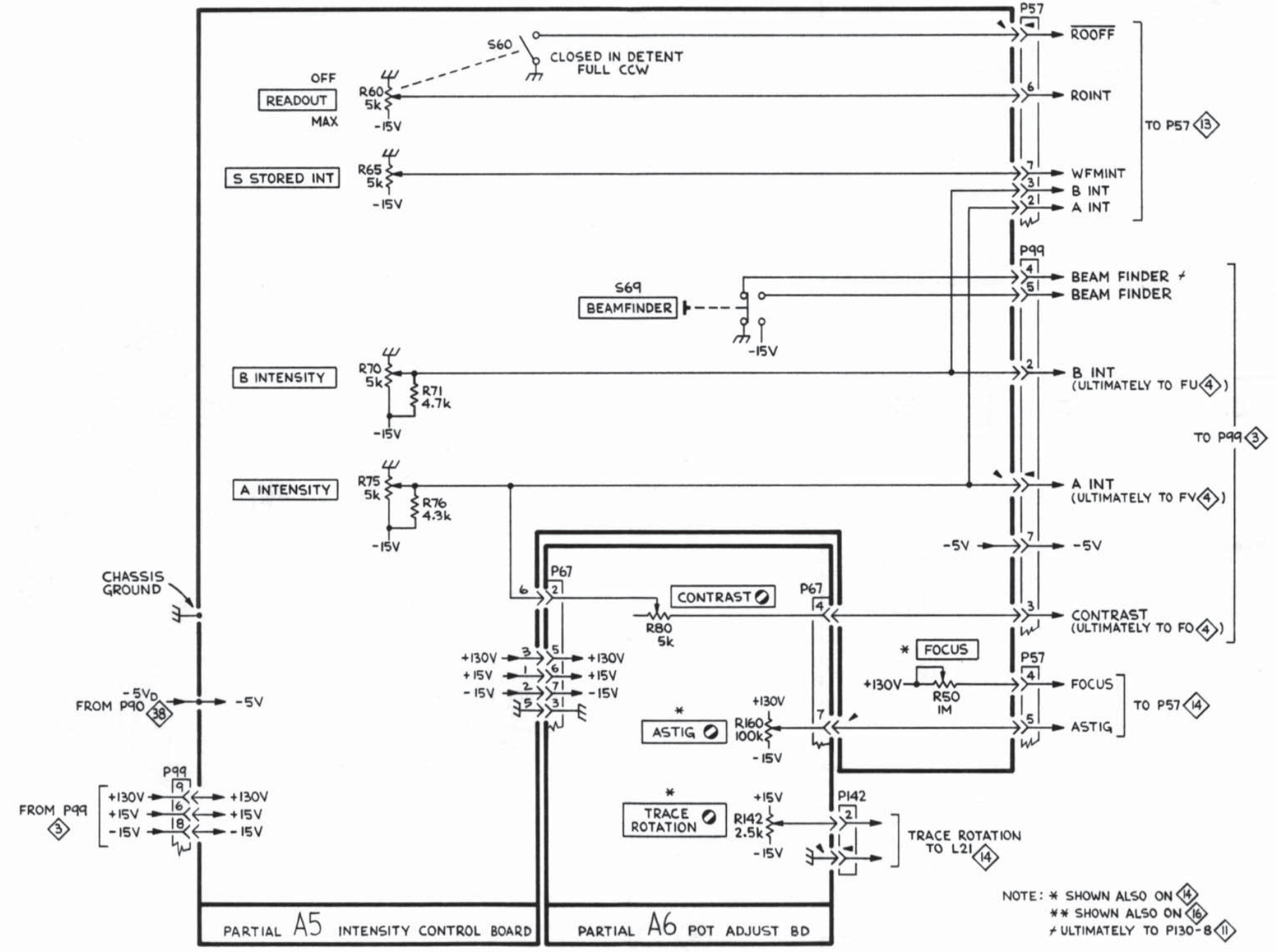
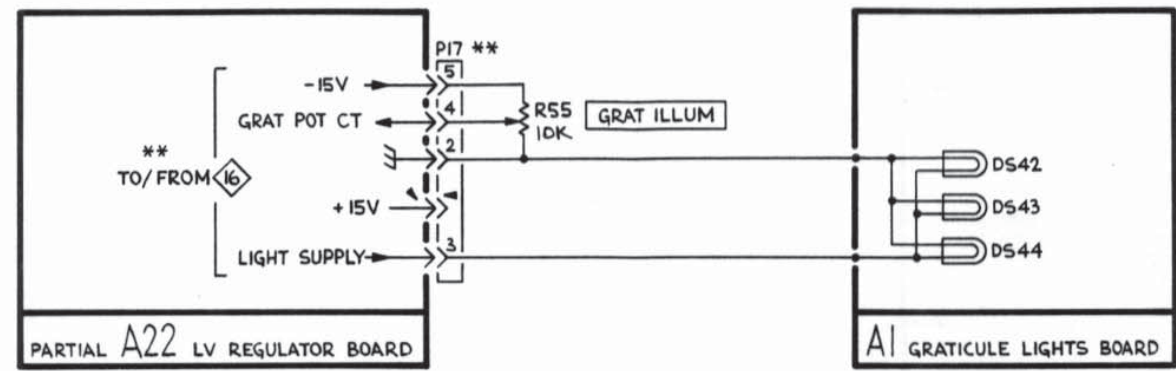
1
2
3
4
5

⊗ Static Sensitive Devices
See Maintenance Section

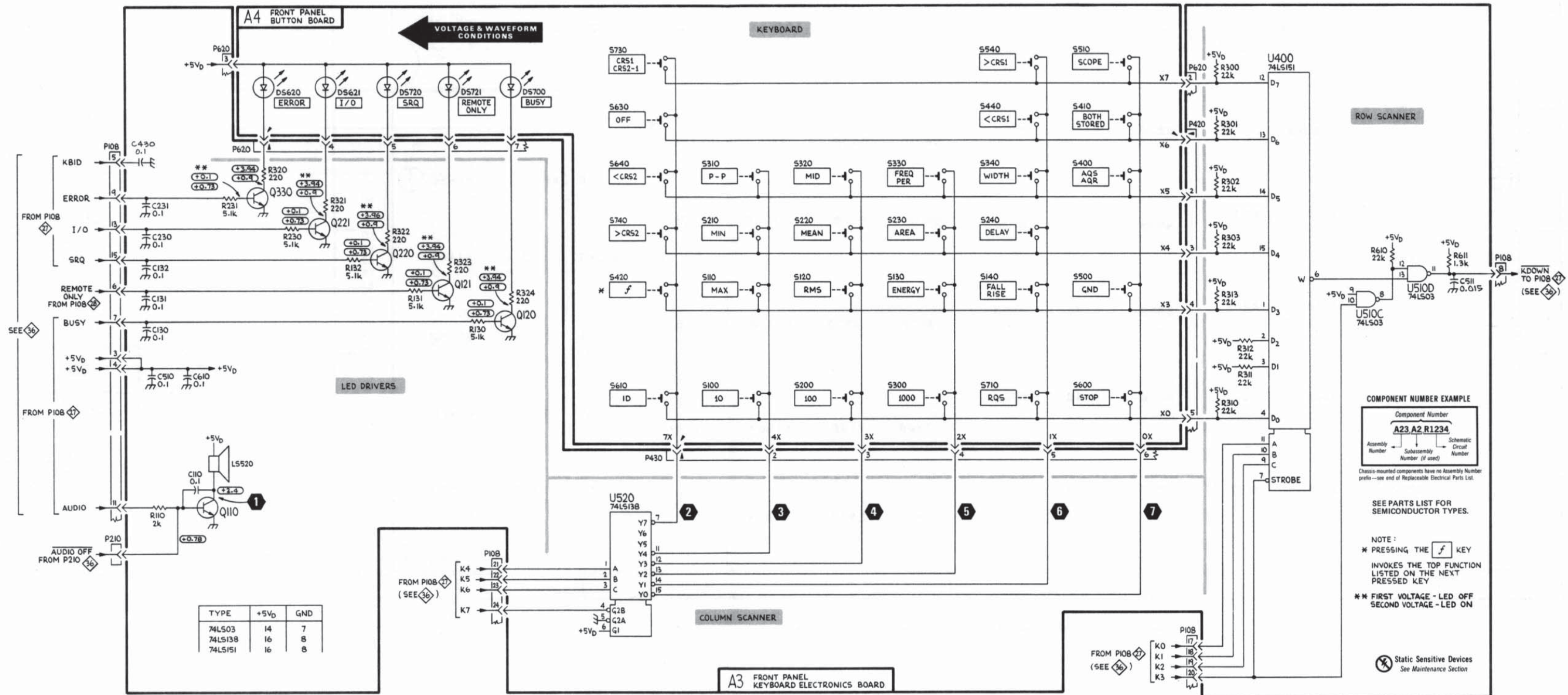
COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



NOTE: * SHOWN ALSO ON 14
 ** SHOWN ALSO ON 16
 † ULTIMATELY TO P130-B 11

A**B****C****D****E****F****G**

7854

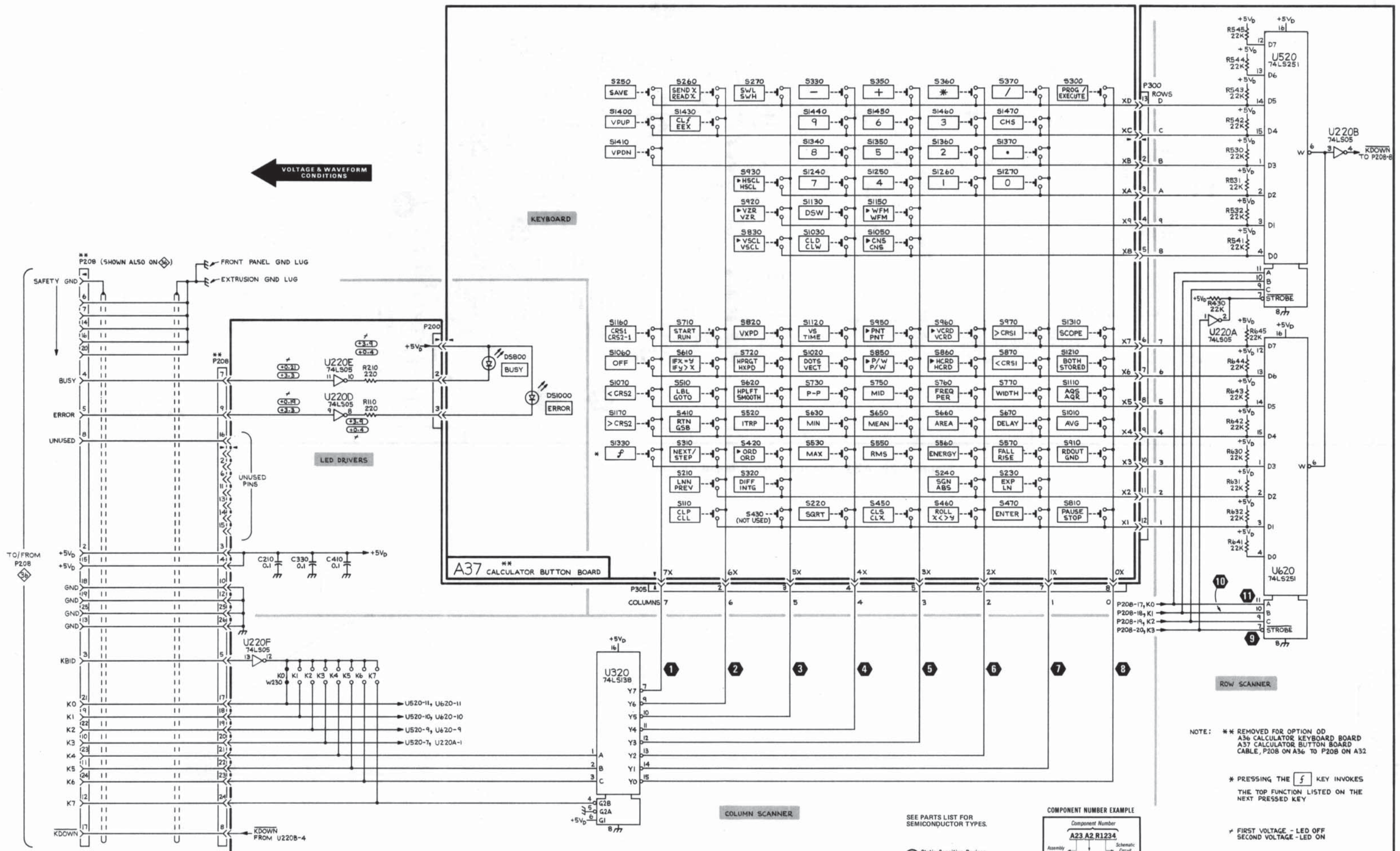
2874-252
REV A MAR 1981

FRONT-PANEL KEYBOARD

18

1
2
3
4
5

VOLTAGE & WAVEFORM CONDITIONS



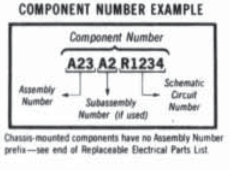
NOTE: ** REMOVED FOR OPTION 0D
 A36 CALCULATOR KEYBOARD BOARD
 A37 CALCULATOR BUTTON BOARD
 CABLE, P208 ON A36 TO P208 ON A32

* PRESSING THE **f** KEY INVOKES
 THE TOP FUNCTION LISTED ON THE
 NEXT PRESSED KEY

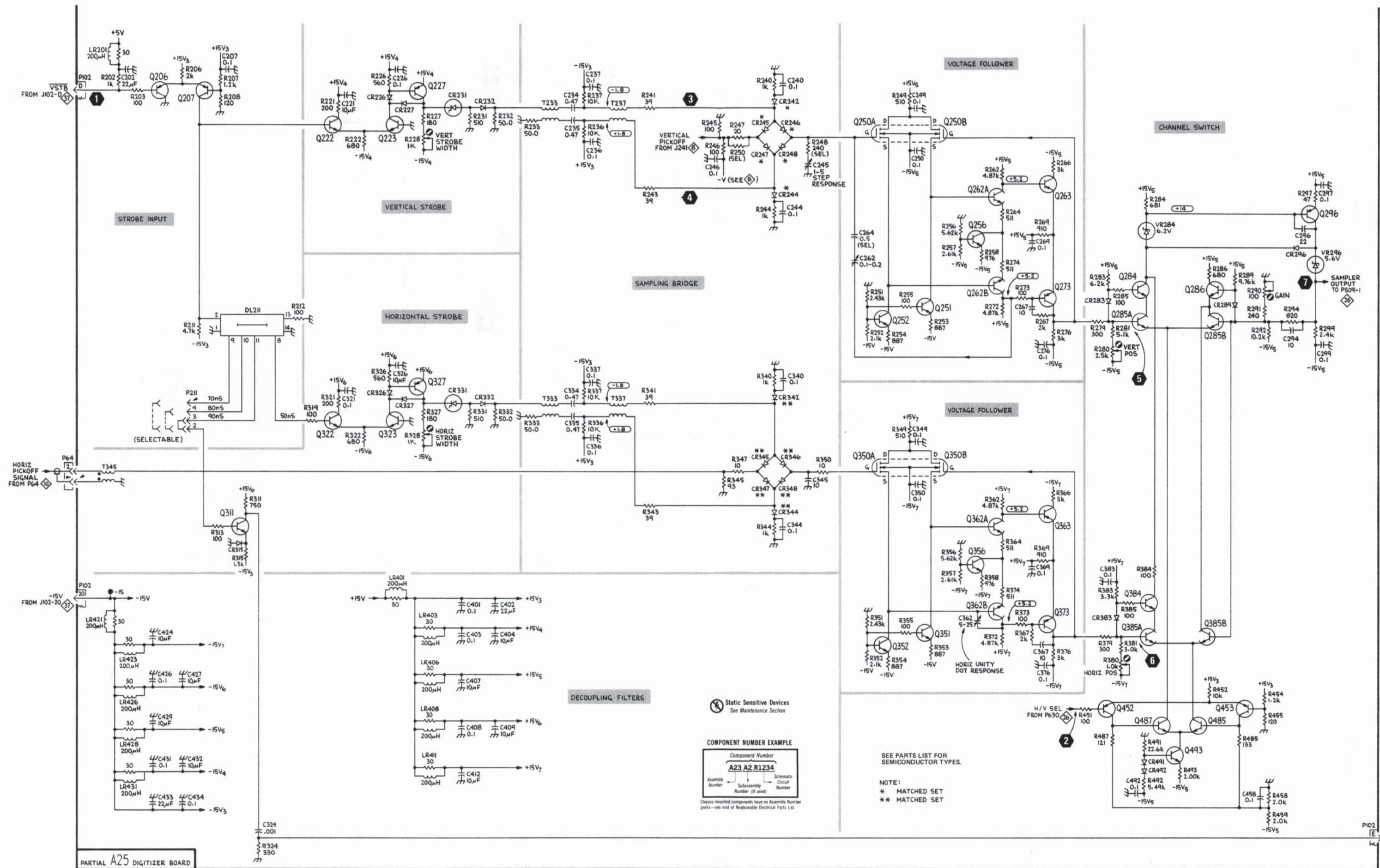
* FIRST VOLTAGE - LED OFF
 SECOND VOLTAGE - LED ON

SEE PARTS LIST FOR
 SEMICONDUCTOR TYPES.

Static Sensitive Devices
 See Maintenance Section



A36 ** CALCULATOR KEYBOARD BOARD



Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number		
A23	A2	R1234
Assembly Number	Subassembly Number (if used)	Schematic Circuit Number

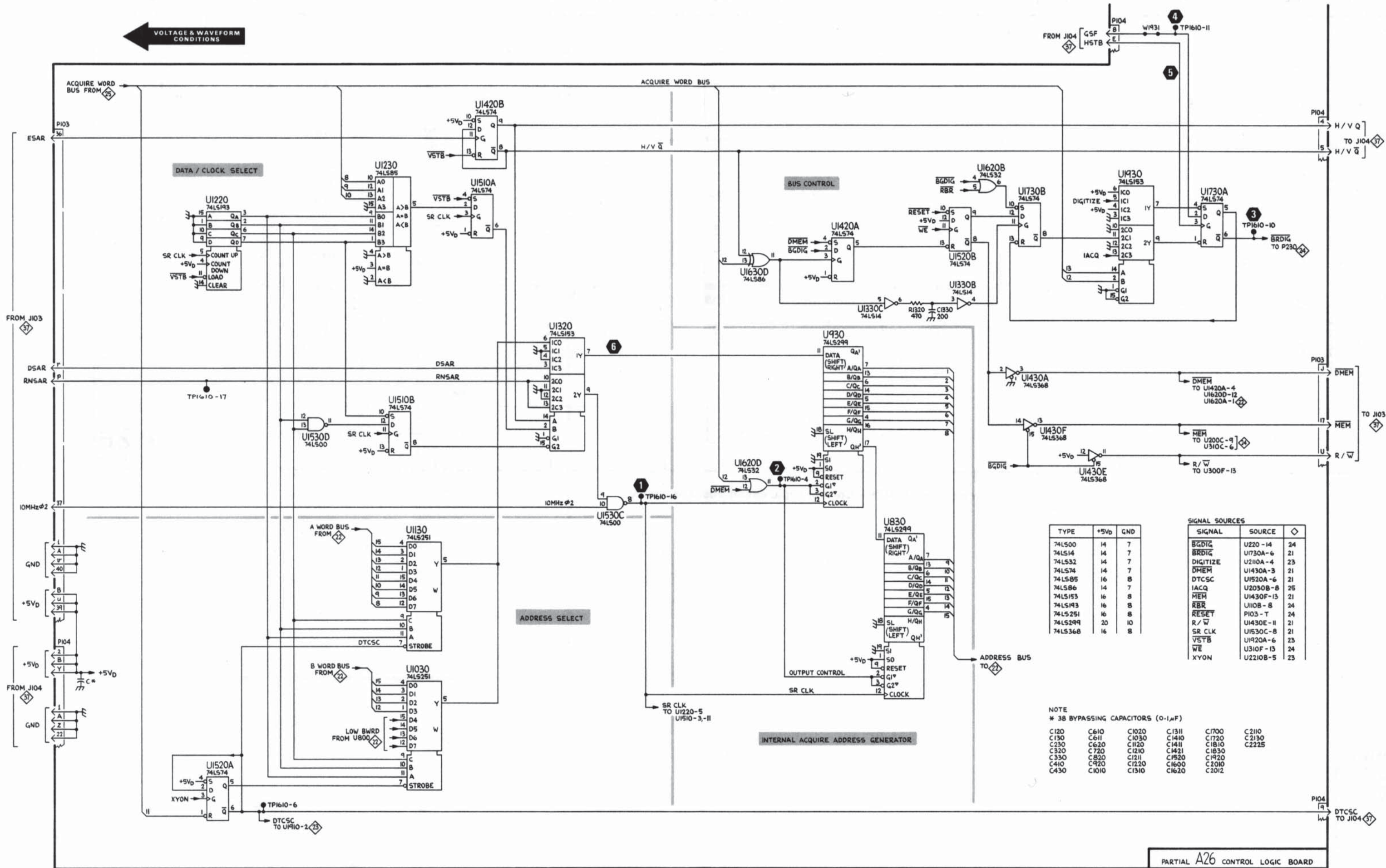
Caution: mismatched components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

NOTE:
* MATCHED SET
** MATCHED SET

1
2
3
4
5

VOLTAGE & WAVEFORM CONDITIONS



TYPE	+5Vd	GND	SIGNAL	SOURCE	◇
74LS00	14	7	BGDIG	U220-14	24
74LS14	14	7	BRDIG	U1730A-6	21
74LS32	14	7	DIGITIZE	U2110A-4	23
74LS74	14	7	DMEM	U1430A-3	21
74LS85	16	8	DTCSC	U1520A-6	21
74LS86	14	7	IACQ	U2030B-8	25
74LS153	16	8	MEM	U1430F-13	21
74LS193	16	8	RBR	U110B-8	24
74LS251	16	8	RESET	PI03-T	24
74LS299	20	10	R/W	U1430E-11	21
74LS368	16	8	SR CLK	U1530C-8	21
			VSTB	U1920A-6	23
			WE	U310F-13	24
			XYON	U2210B-5	23

NOTE
* 38 BYPASSING CAPACITORS (0.1μF)

C120	C610	C1020	C1311	C1700	C2110
C130	C611	C1030	C1410	C1720	C2130
C230	C620	C1120	C1411	C1810	C2225
C320	C720	C1210	C1421	C1830	
C330	C820	C1211	C1520	C1920	
C410	C920	C1220	C1600	C2010	
C430	C1010	C1310	C1620	C2012	

PARTIAL A26 CONTROL LOGIC BOARD

A

B

C

D

E

F

G

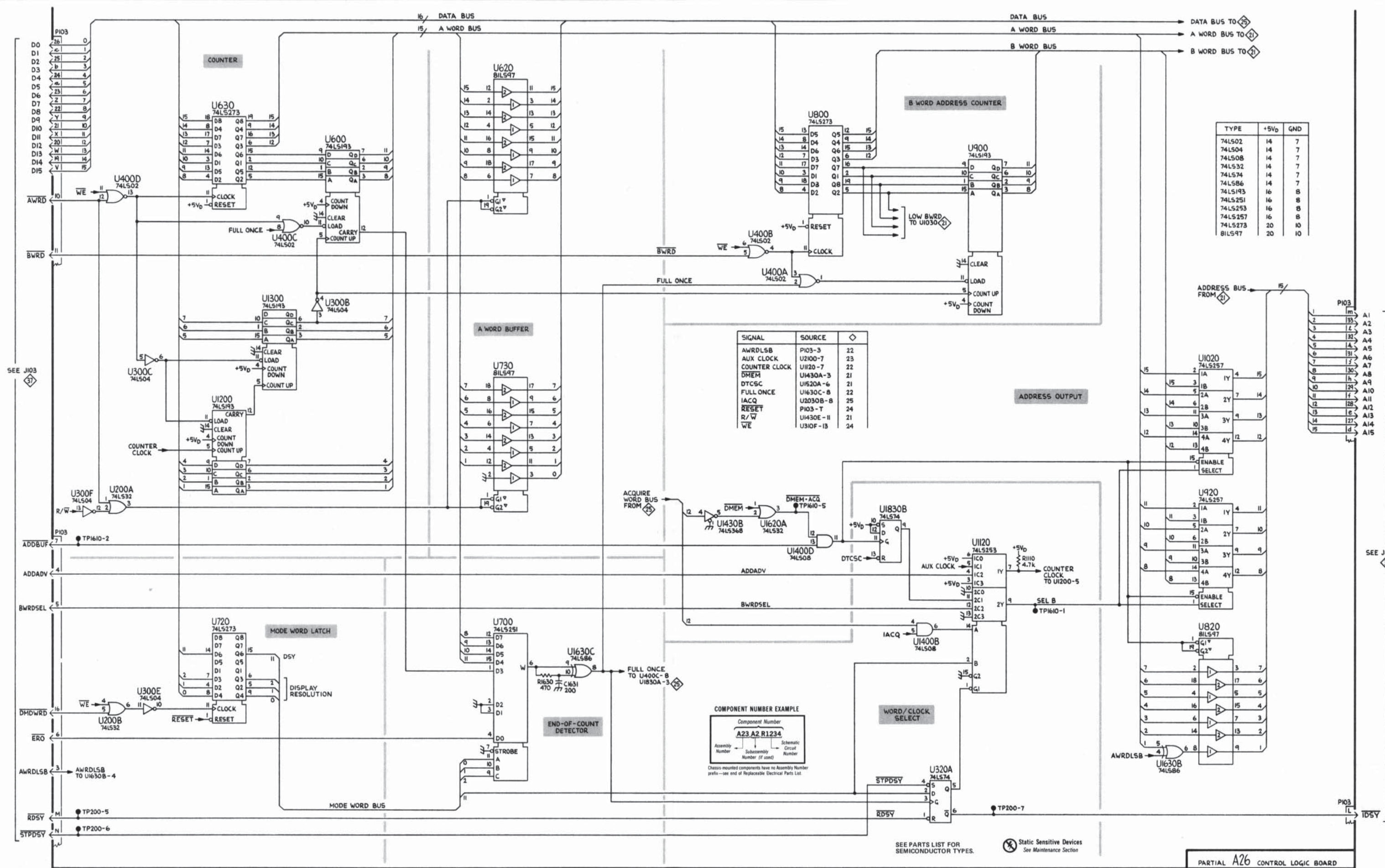
1

2

3

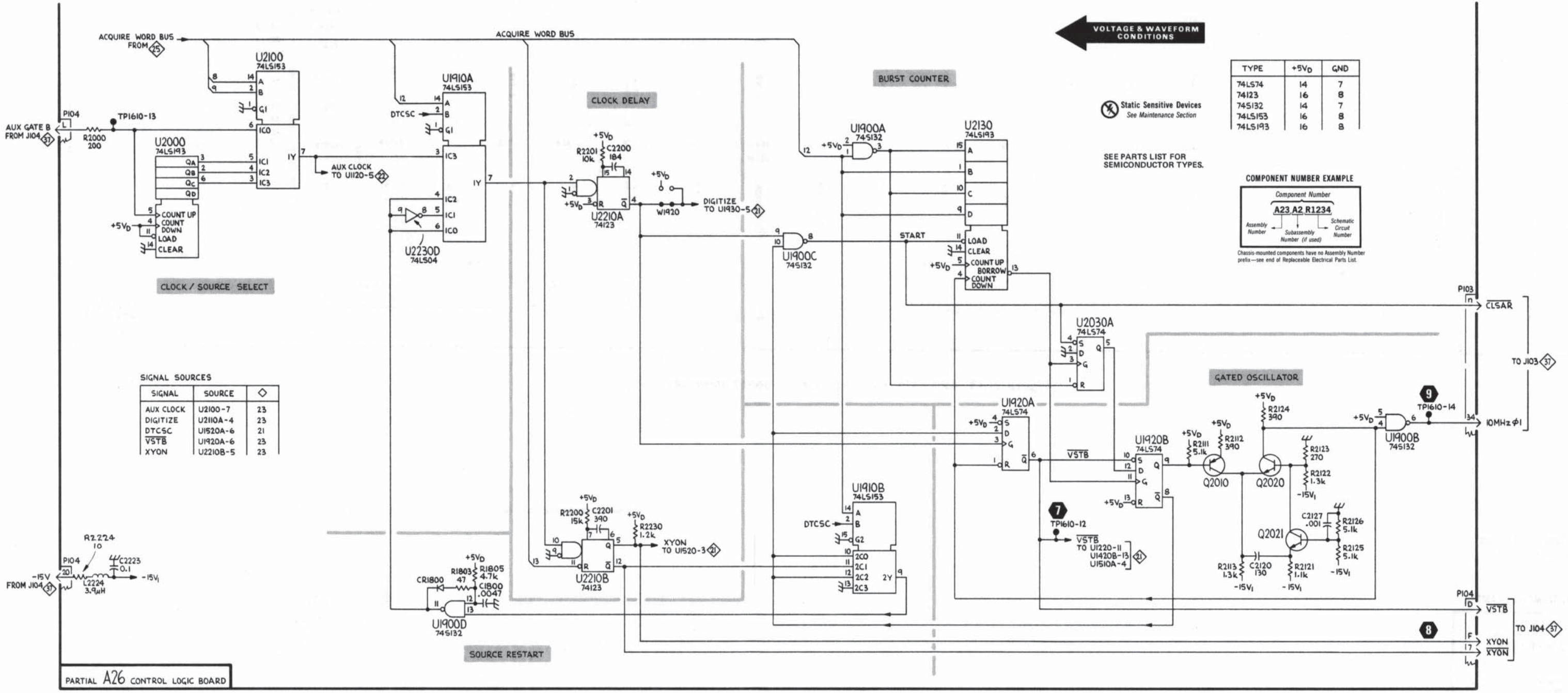
4

5



A B C D E F G

1
2
3



SIGNAL SOURCES

SIGNAL	SOURCE	◇
AUX CLOCK	U2100-7	23
DIGITIZE	U2100A-4	23
DTCSC	U1920A-6	21
VSTB	U1920A-6	23
XYON	U2210B-5	23

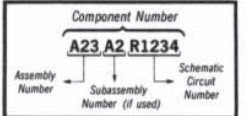
TYPE	+5V _D	GND
74LS74	14	7
74LS13	16	8
74LS132	14	7
74LS153	16	8
74LS193	16	8

VOLTAGE & WAVEFORM CONDITIONS

⊗ Static Sensitive Devices
See Maintenance Section

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

COMPONENT NUMBER EXAMPLE



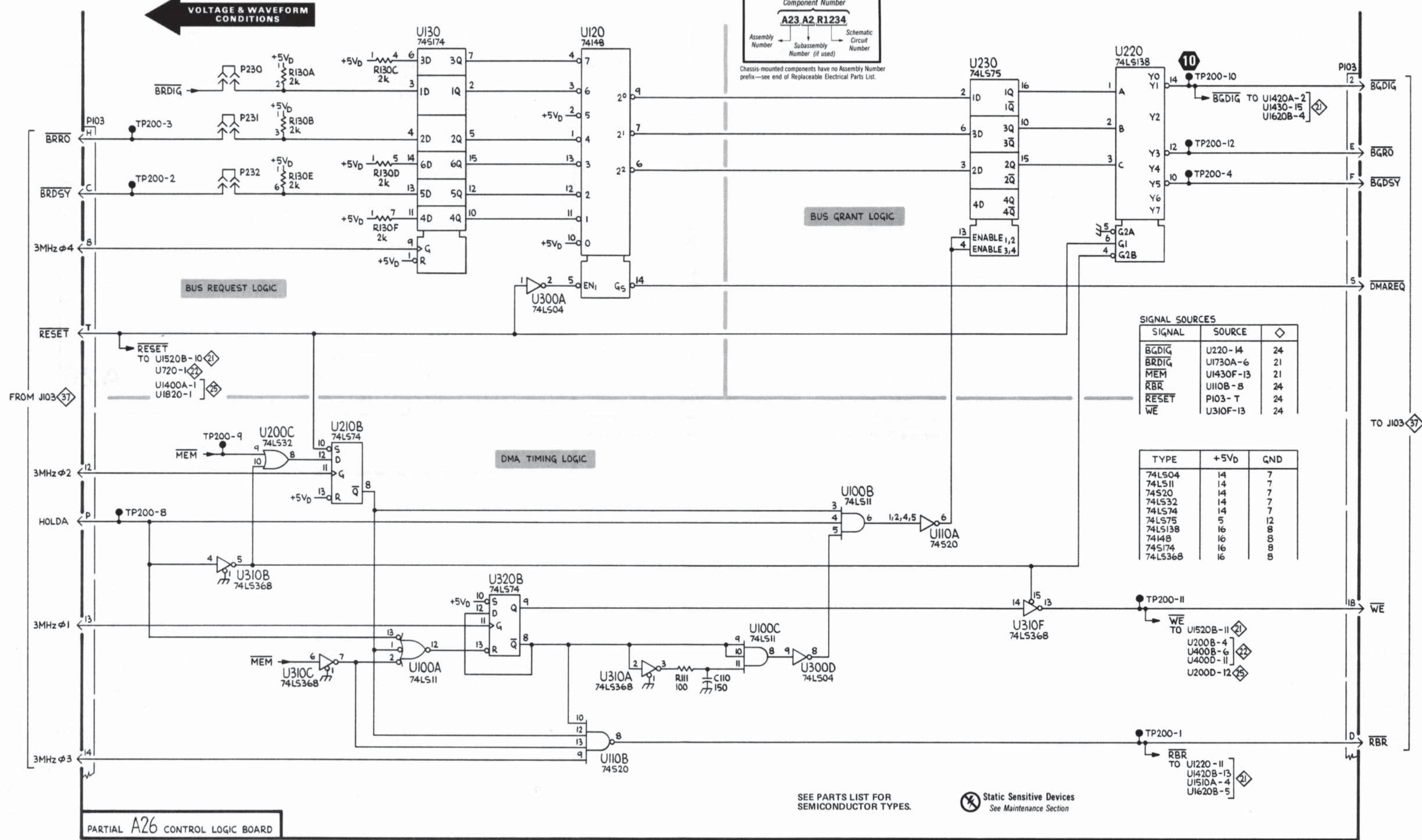
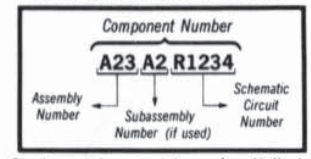
Chassis mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

PARTIAL A26 CONTROL LOGIC BOARD

1
2
3
4
5

VOLTAGE & WAVEFORM CONDITIONS

COMPONENT NUMBER EXAMPLE



SIGNAL SOURCES

SIGNAL	SOURCE	◇
BGDIG	U220-14	24
BRDIG	U1730A-6	21
MEM	U1430F-13	21
RBR	U110B-8	24
RESET	PI03-T	24
WE	U310F-13	24

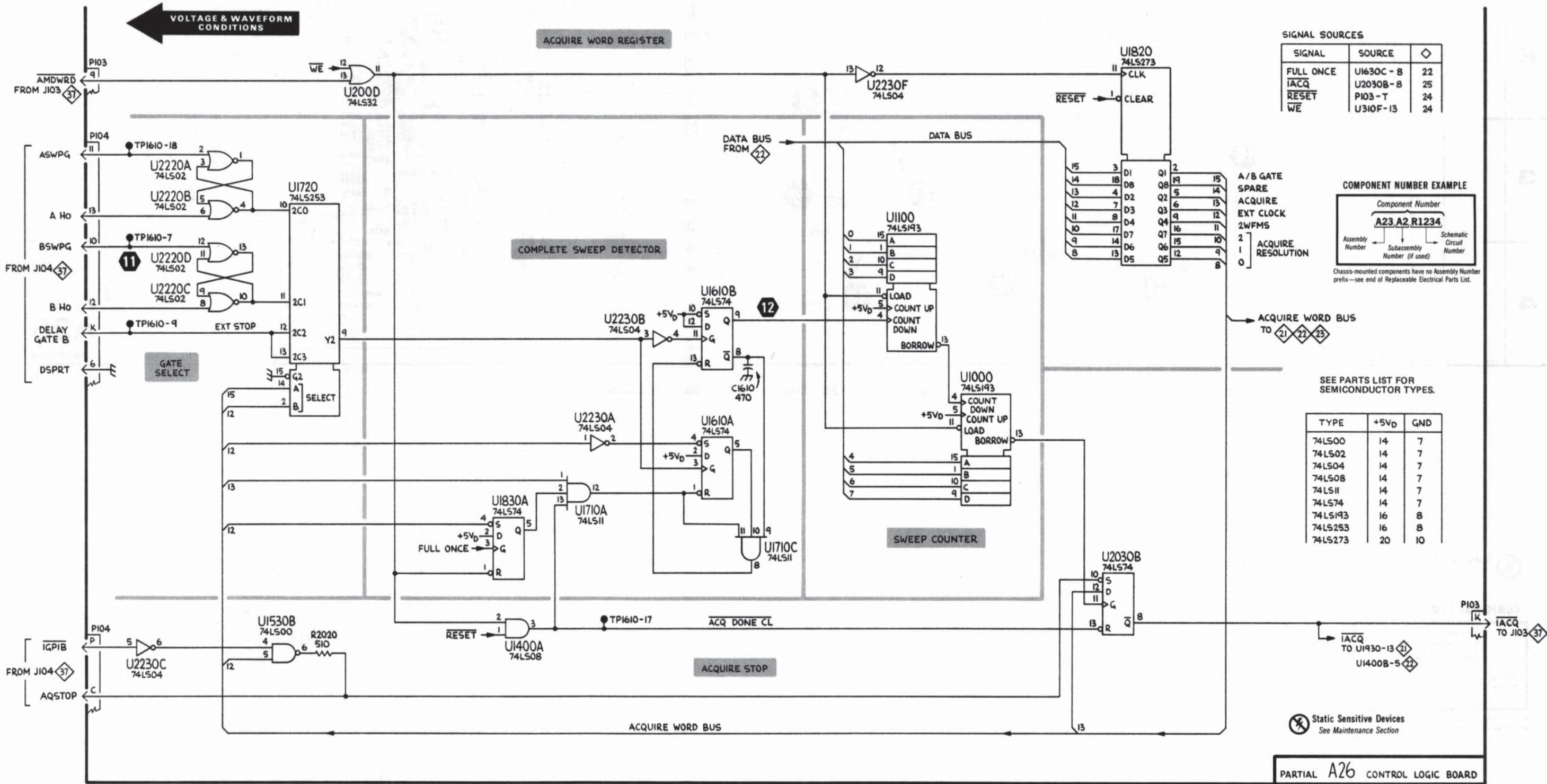
TYPE	+5V _D	GND
74LS04	14	7
74LS11	14	7
74LS20	14	7
74LS32	14	7
74LS74	14	7
74LS75	5	12
74LS138	16	8
74LS148	16	8
74LS174	16	8
74LS368	16	8

PARTIAL A26 CONTROL LOGIC BOARD

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

⊗ Static Sensitive Devices
See Maintenance Section

A B C D E F



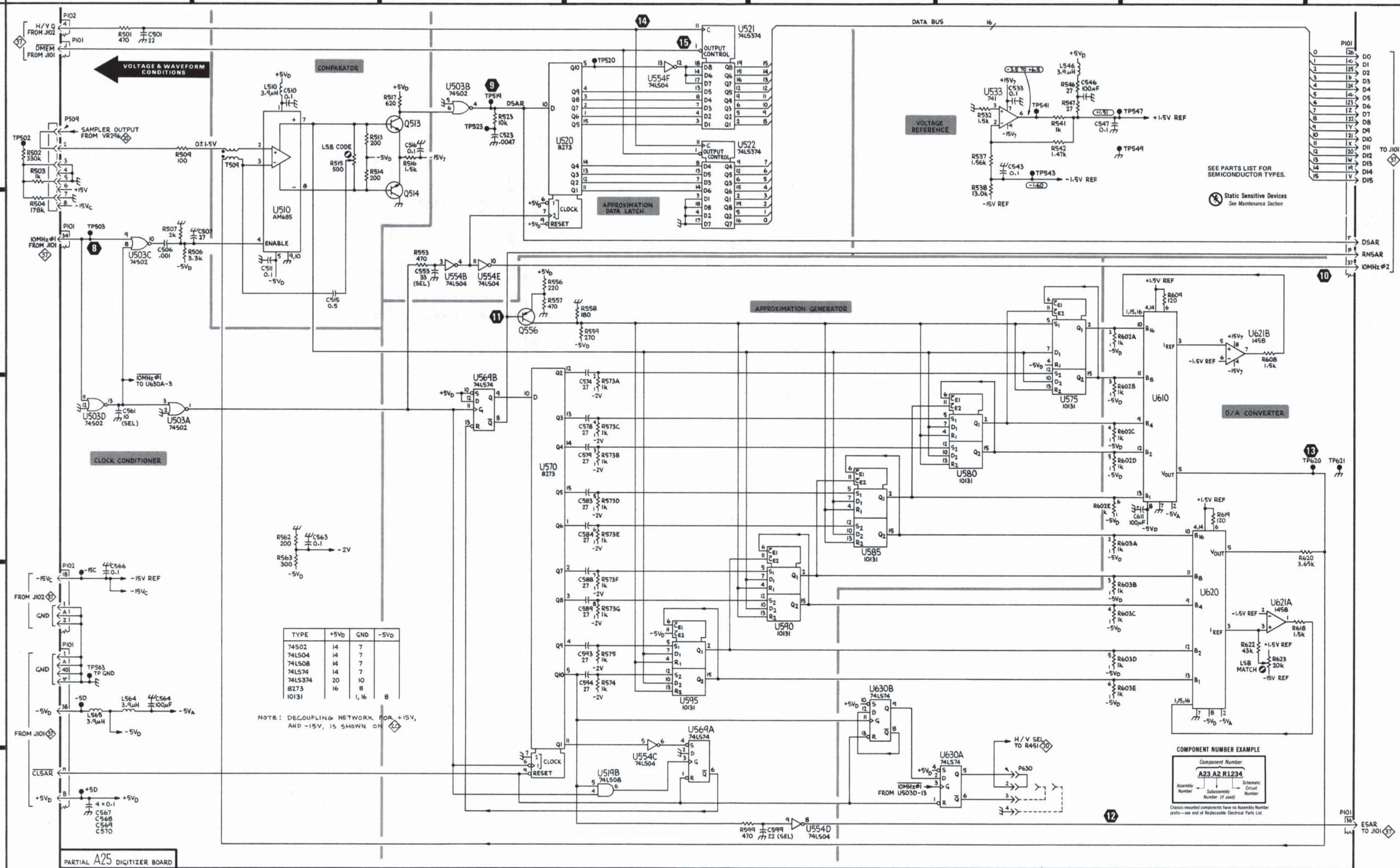
1

2

3

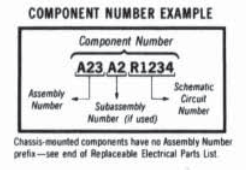
4

5

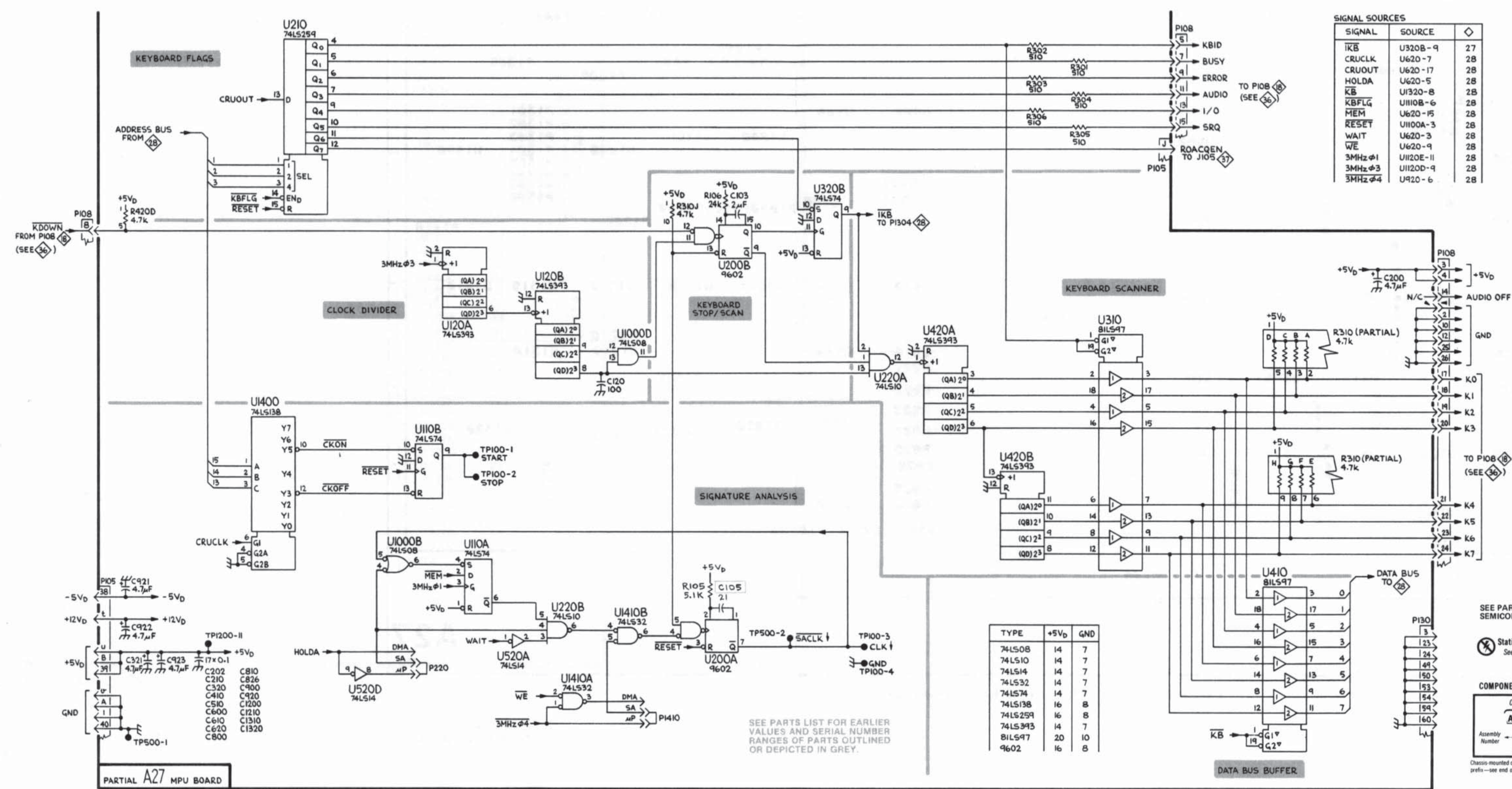


TYPE	+5V _D	GND	-5V _D
74502	14	7	
74LS04	14	7	
74LS08	14	7	
74LS74	14	7	
74LS374	20	10	
8273	16	8	
10131		1, 16	8

NOTE: DECOUPLING NETWORK FOR +15V, AND -15V, IS SHOWN ON



A B C D E F



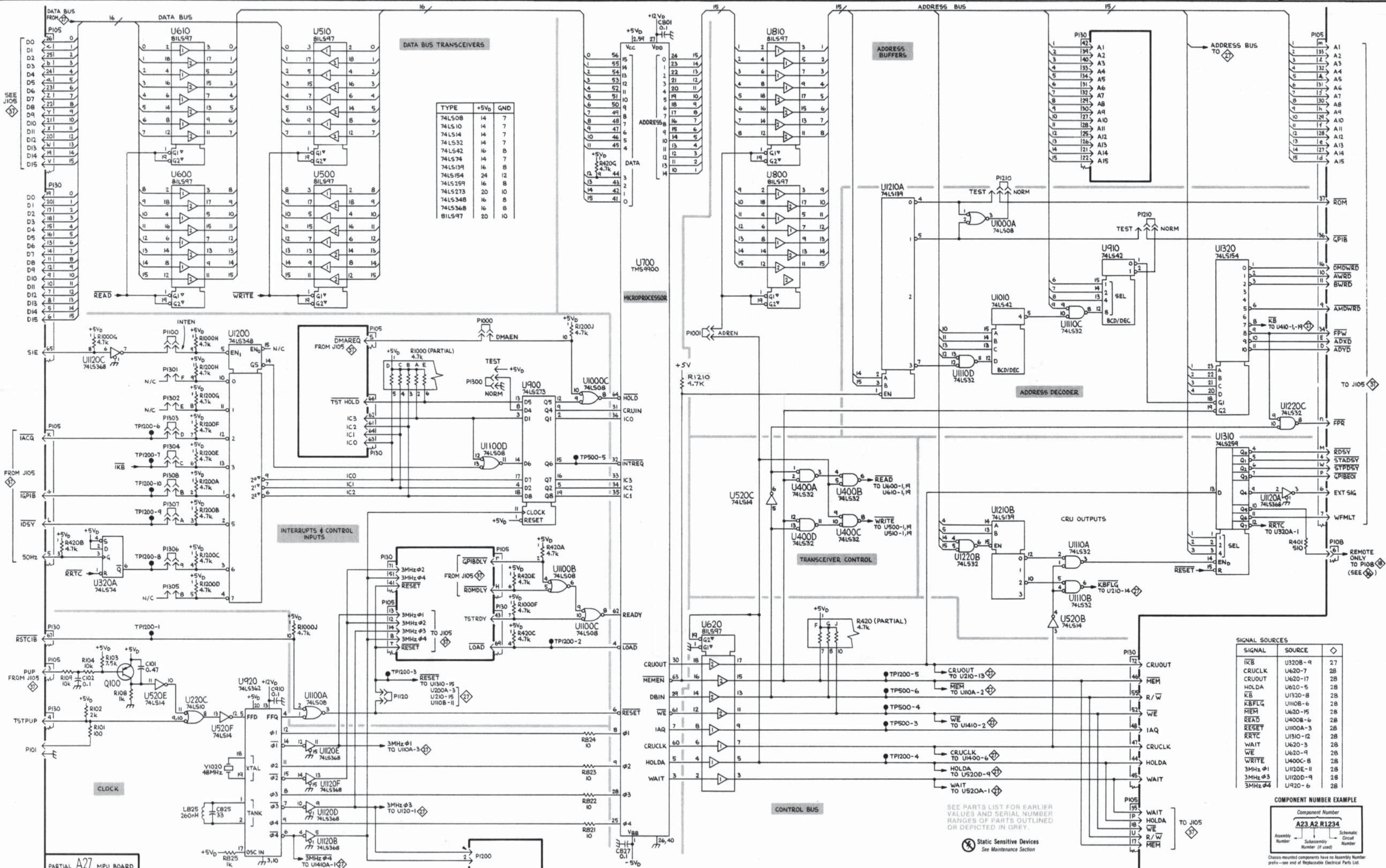
SIGNAL SOURCES

SIGNAL	SOURCE	Pin
IKB	U320B-9	27
CRUCLK	U620-7	28
CRUOUT	U620-17	28
HOLDA	U620-5	28
KB	U1320-8	28
KBFLG	U1110B-6	28
MEM	U620-15	28
RESET	U1100A-3	28
WAIT	U620-3	28
WE	U620-9	28
3MHz φ1	U1120E-11	28
3MHz φ3	U1120D-9	28
3MHz φ4	U920-6	28

TYPE	+5V _D	GND
74LS08	14	7
74LS10	14	7
74LS14	14	7
74LS32	14	7
74LS74	14	7
74LS138	16	8
74LS259	16	8
74LS393	14	7
81LS97	20	10
9602	16	8

SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY.

1
2
3
4
5



A

B

C

D

E

F

G

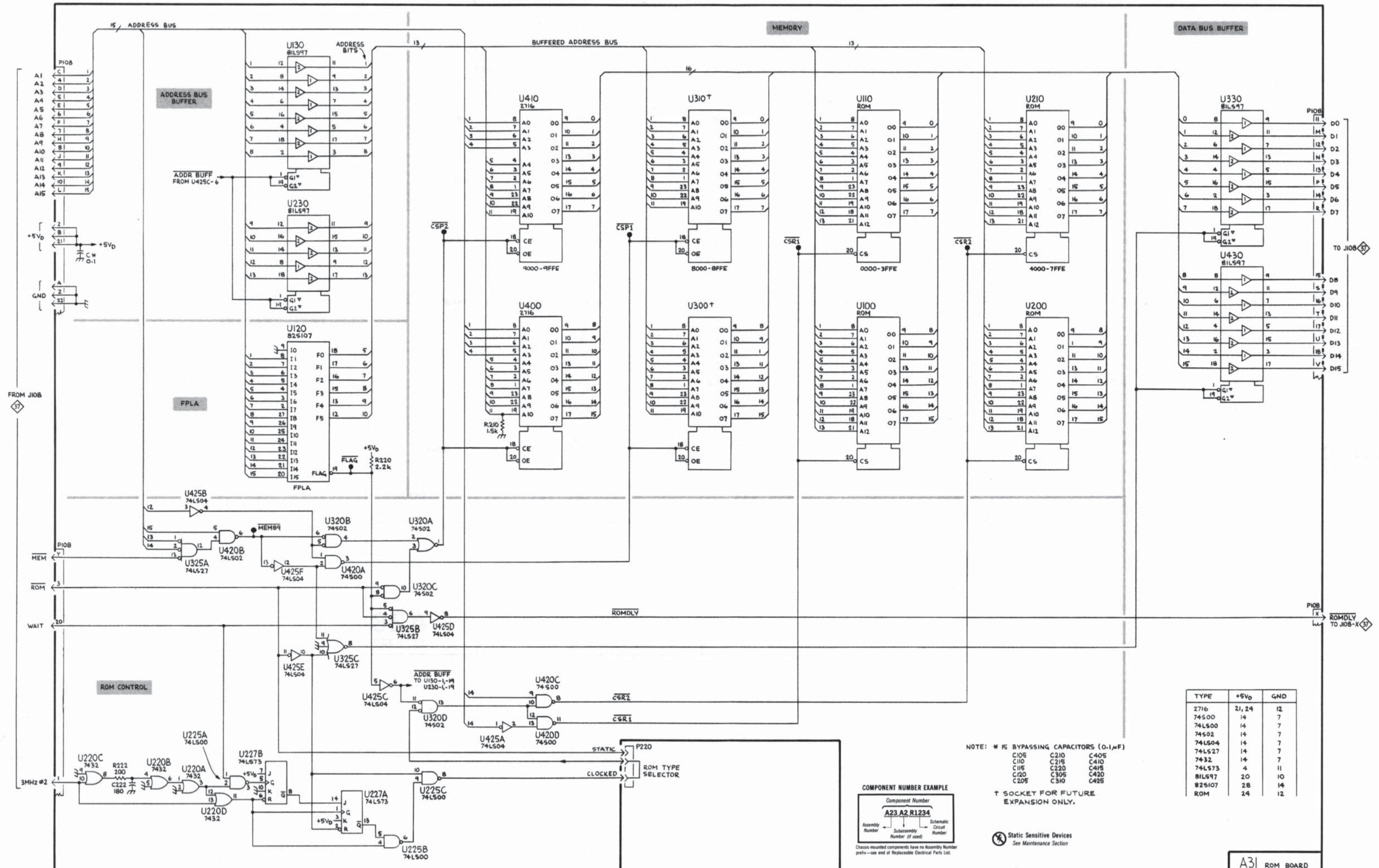
1

2

3

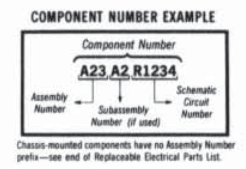
4

5

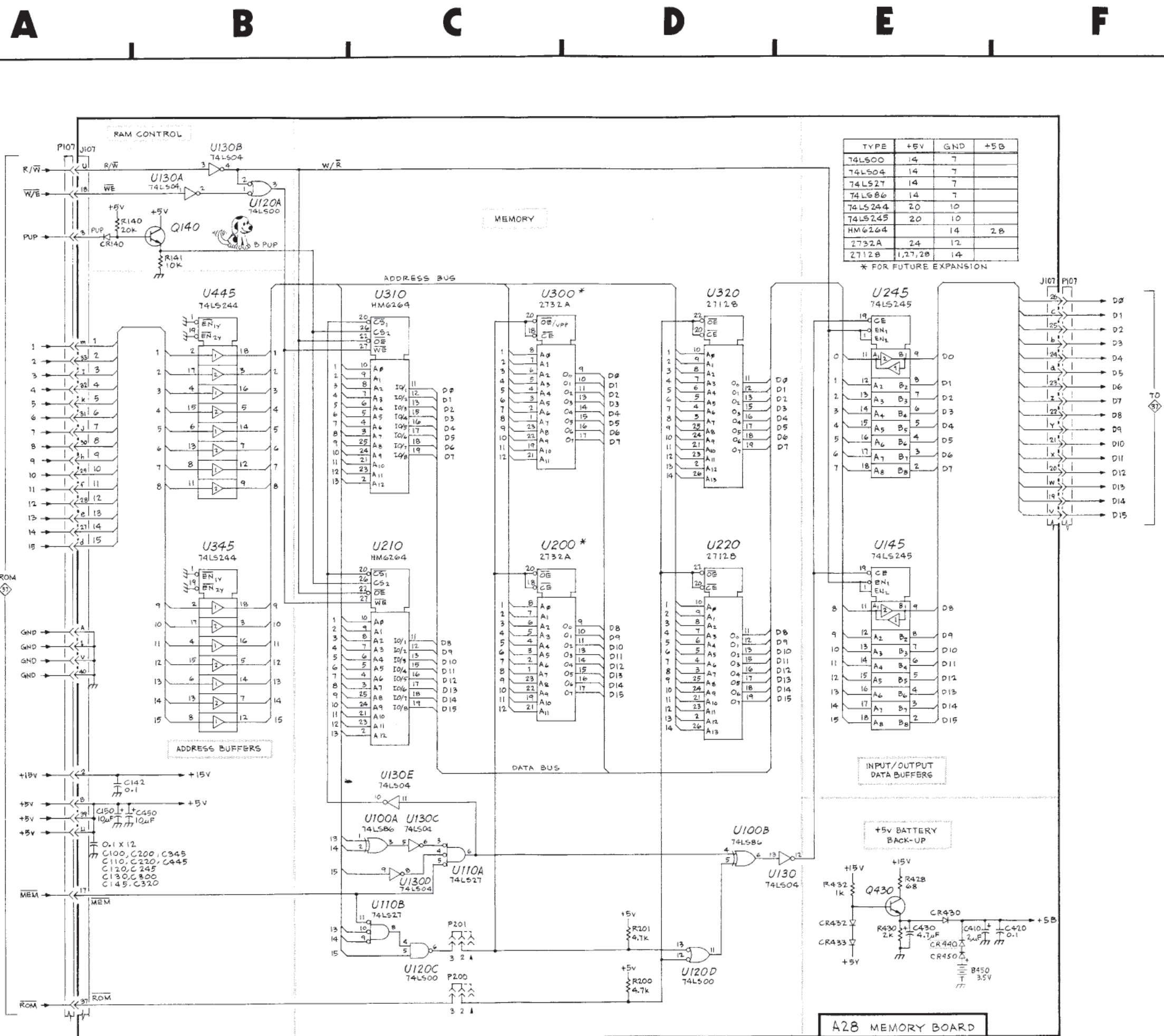


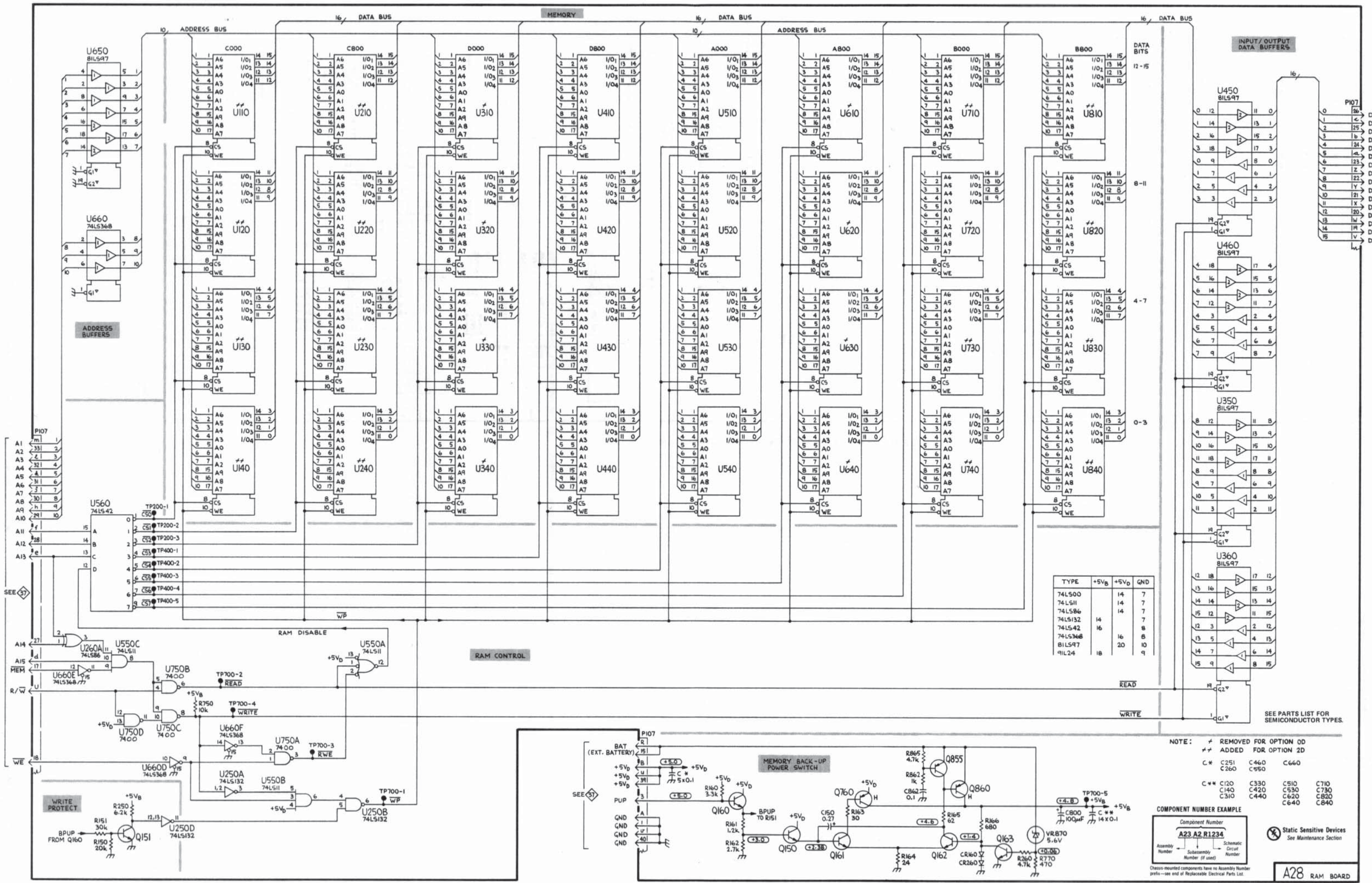
TYPE	+5V _D	GND
2716	21, 24	12
74500	14	7
74LS00	14	7
74502	14	7
74LS04	14	7
74LS27	14	7
7432	14	7
74LS73	4	11
81LS97	20	10
825107	28	14
ROM	24	12

NOTE: * IS BYPASSING CAPACITORS (0.1µF)
 † SOCKET FOR FUTURE EXPANSION ONLY.



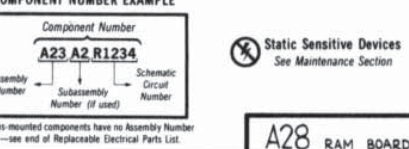
Static Sensitive Devices
 See Maintenance Section



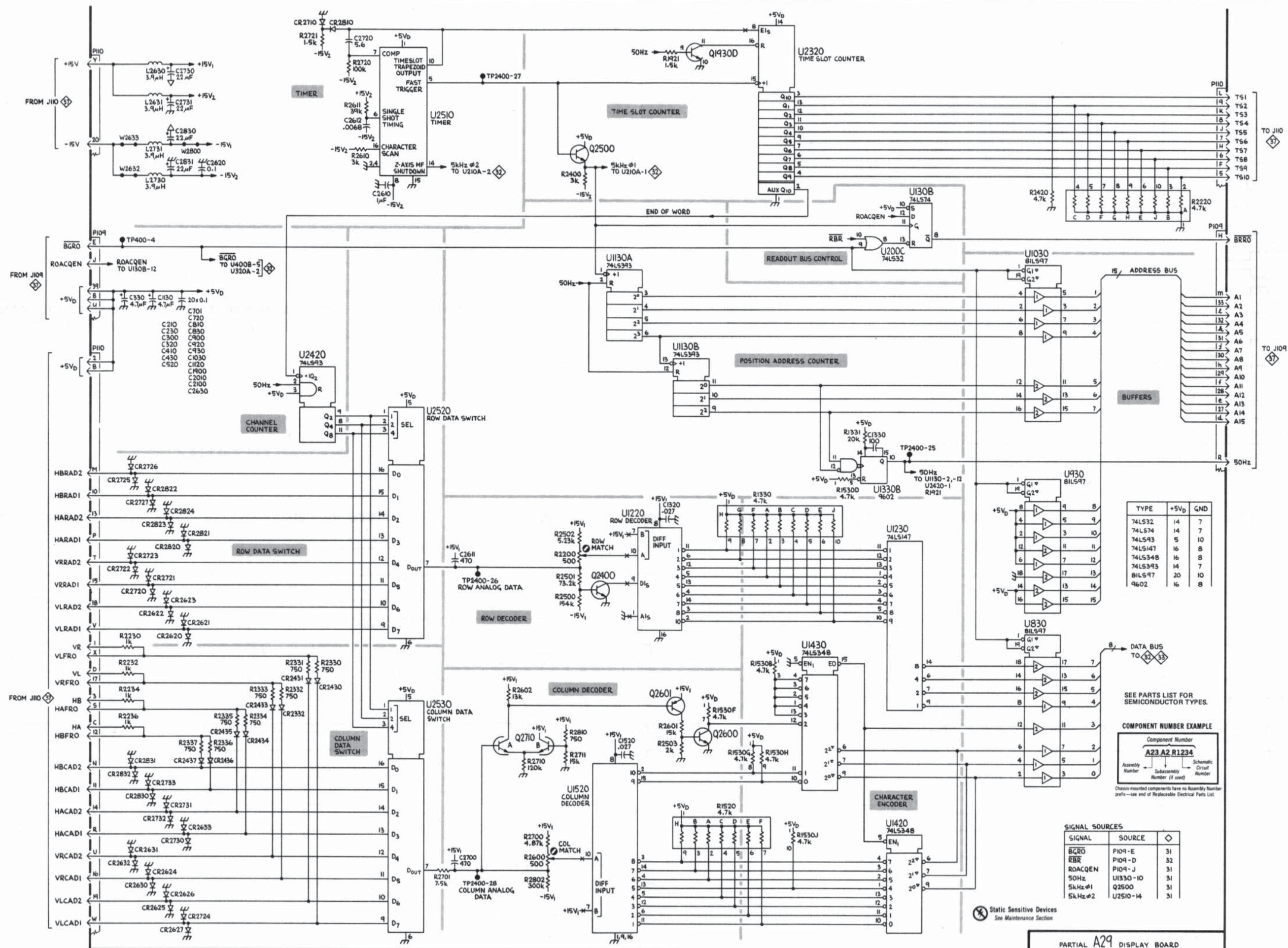


TYPE	+5V _B	+5V _D	GND
74LS00	14	7	
74LS11	14	7	
74LS86	14	7	
74LS132	14	7	
74LS42	16	8	
74LS368	16	8	
81LS97	20	10	
91L24	18	9	

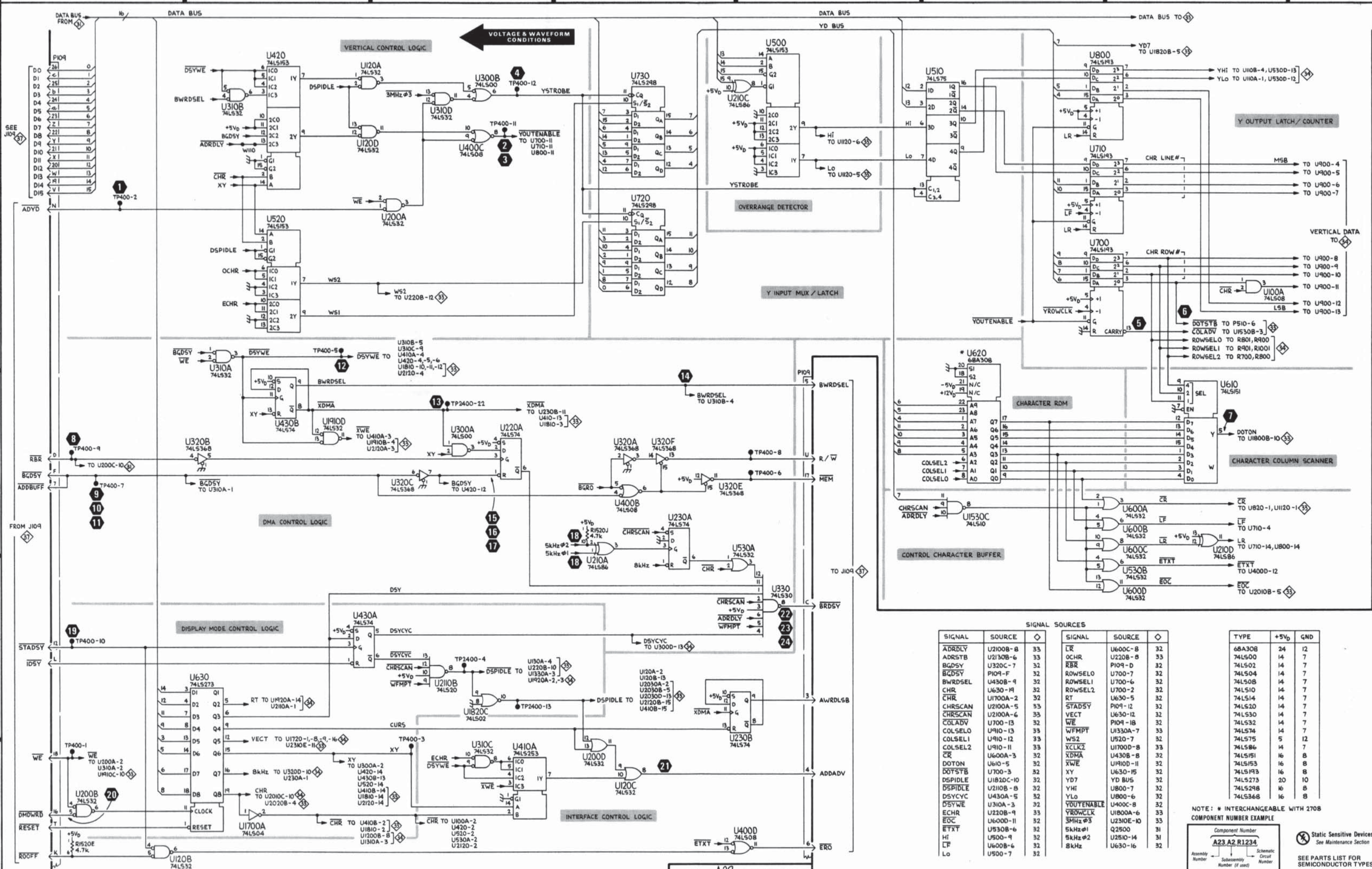
NOTE: * REMOVED FOR OPTION 0D
 ** ADDED FOR OPTION 2D
 C* C251 C460 C660
 C260 C950
 C** C120 C330 C510 C710
 C140 C420 C530 C730
 C310 C440 C620 C820
 C640 C840



1
2
3
4
5



1
2
3
4
5



SIGNAL SOURCES

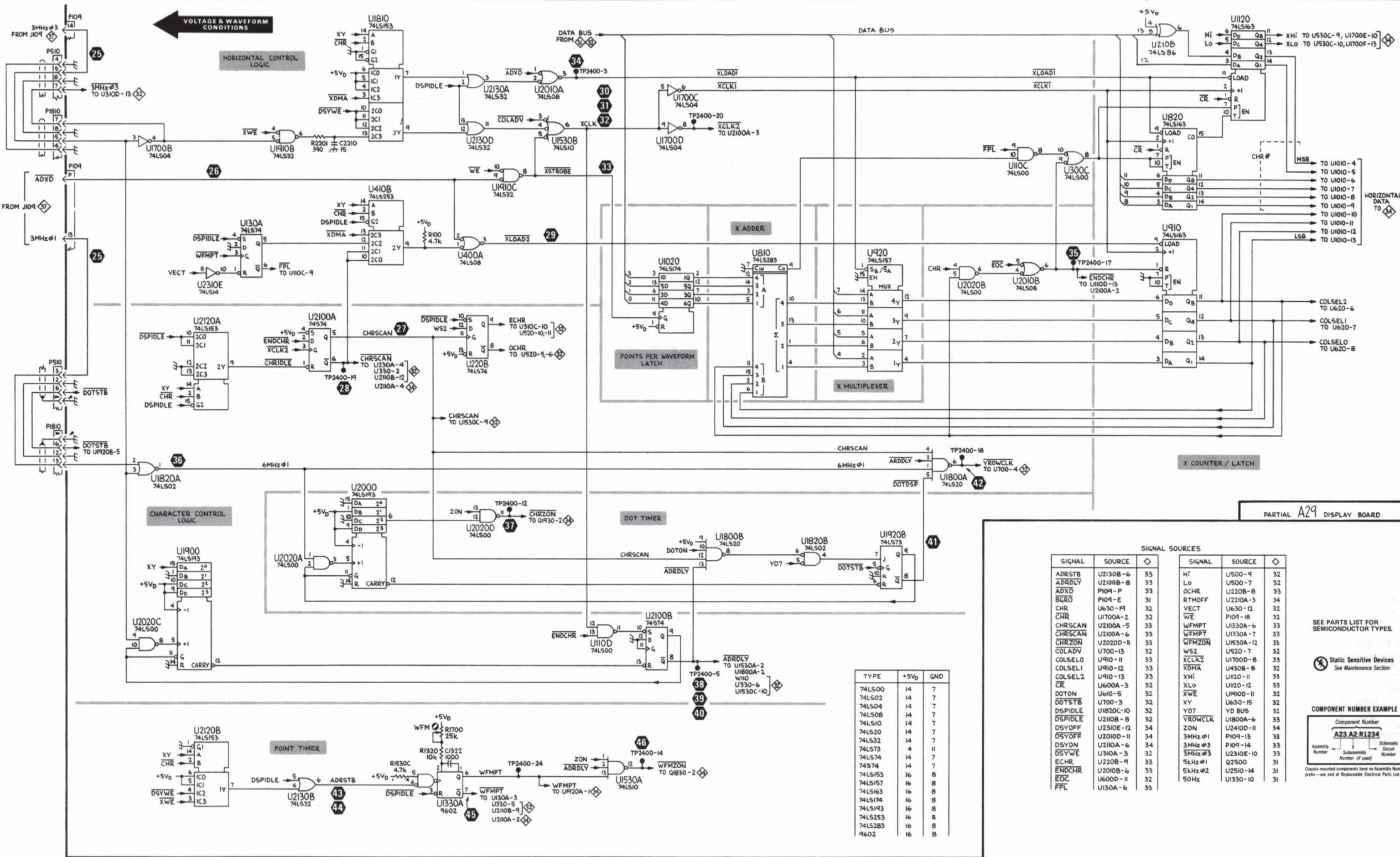
SIGNAL	SOURCE	Pin	SIGNAL	SOURCE	Pin
ADRDLY	U2100B-8	33	LR	U600C-8	32
ADRSTB	U2130B-6	33	OCHR	U220B-8	33
BGDSY	U320C-7	32	RBR	PI09-D	32
BGDSY	PI09-F	32	ROWSELO	U700-0	32
BWRDSEL	U430B-F	32	ROWSEL1	U700-6	32
CHR	U630-F	32	ROWSEL2	U700-2	32
CHR	U1700A-2	32	RT	U630-5	32
CHRSCAN	U2100A-5	33	STADSY	PI09-I2	32
CHRSCAN	U2100A-6	33	VECT	U630-12	32
COLADV	U700-13	32	WE	PI09-I8	32
COLSEL1	U910-13	33	WFMPPT	U1330A-7	33
COLSEL2	U910-12	33	WS2	U520-7	32
COLSEL2	U910-11	33	XCLK2	U1700D-8	33
CR	U600A-3	32	XDMA	U430B-8	32
DOTON	U610-5	32	XWE	U410D-11	32
DOTSTB	U700-3	32	XY	U630-15	32
DSPIBLE	U1820C-10	32	YD7	YD BUS	32
DSPIBLE	U210B-8	32	YHI	U800-7	32
DSYCYC	U430A-5	32	YLO	U800-6	32
DSYWE	U310A-3	32	YOUTENABLE	U400C-8	32
ECHR	U220B-9	33	YROWCLK	U1800A-6	33
ETXT	U600D-11	32	3MHz #3	U2310E-10	33
ETXT	U530B-6	32	5kHz #1	Q2500	31
ETXT	U530B-6	32	5kHz #2	U2510-14	31
ETXT	U600B-6	32	8kHz	U630-16	32
Lo	U500-7	32			

TYPE **+5V** **GND**

68A308	24	12
74LS00	14	7
74LS02	14	7
74LS04	14	7
74LS10	14	7
74LS14	14	7
74LS15	14	7
74LS20	14	7
74LS30	14	7
74LS32	14	7
74LS50	14	7
74LS54	14	7
74LS57	5	12
74LS74	14	7
74LS86	14	7
74LS151	16	8
74LS153	16	8
74LS155	16	8
74LS157	20	10
74LS248	16	8
74LS368	16	8

NOTE: * INTERCHANGEABLE WITH 2708
COMPONENT NUMBER EXAMPLE:
 Component Number: A23 A2 R1234
 Assembly Number (if used):
 Subassembly Number (if used):
 Schematic Circuit Number

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.



PARTIAL A29 DISPLAY BOARD

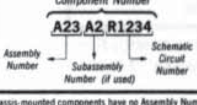
SIGNAL SOURCES			
SIGNAL	SOURCE	Pin	Pin
ADRSTB	U2130B-6	33	
ADRDLV	U2100B-8	33	
ADXD	PI09-P	33	
BGR0	PI09-E	31	
CHR	U630-F	32	
CHR	U1700A-2	32	
CHRSCAN	U2100A-5	33	
CHRSCAN	U2100A-6	33	
CHRZON	U2020D-11	33	
COLADV	U700-13	32	
COLSEL0	U910-11	33	
COLSEL1	U910-12	33	
COLSEL2	U910-13	33	
CR	U600A-3	32	
DOTON	U610-5	32	
DOTSTB	U700-3	32	
DSPIDLE	U1820C-10	32	
DSPIDLE	U2100B-8	32	
DSYOFF	U2310E-12	34	
DSYON	U2010D-11	34	
DSYWE	U2100A-6	34	
ECHR	U310A-3	32	
ENDCHR	U220B-9	33	
EOC	U600D-11	32	
FPL	U130A-6	33	
H1	U500-9	32	
Lo	U500-7	32	
OCHR	U220B-8	33	
RTMOFF	U210A-3	34	
VECT	U630-12	32	
WE	PI09-18	32	
WFMPT	U1330A-6	33	
WFMPT	U1330A-7	33	
WFMZON	U1330A-12	33	
WS2	U520-7	32	
XCLK2	U1700D-8	33	
XDMA	U430B-8	32	
XH1	U110-11	33	
XLo	U110-12	33	
XWE	U1910D-11	32	
XY	U630-15	32	
YD BUS	U630-15	32	
YD7	U630-15	32	
YROWCLK	U1800A-6	33	
ZON	U2410D-11	34	
3MHz φ1	PI09-13	33	
3MHz φ3	PI09-14	33	
3MHz φ3	U2310E-10	33	
5kHz φ1	Q2500	31	
5kHz φ2	U2510-14	31	
50Hz	U1330-10	31	

TYPE	+5V _D	GND
74LS00	14	7
74LS02	14	7
74LS04	14	7
74LS08	14	7
74LS10	14	7
74LS12	14	7
74LS13	14	7
74LS14	14	7
74LS15	16	8
74LS16	16	8
74LS17	16	8
74LS18	16	8
74LS19	16	8
74LS20	16	8
74LS21	16	8
74LS22	16	8
74LS23	16	8
74LS24	16	8
74LS25	16	8
74LS26	16	8
74LS27	16	8
74LS28	16	8
74LS29	16	8
74LS30	16	8
74LS31	16	8
74LS32	16	8
74LS33	16	8
74LS34	16	8
74LS35	16	8
74LS36	16	8
74LS37	16	8
74LS38	16	8
74LS39	16	8
74LS40	16	8
74LS41	16	8
74LS42	16	8
74LS43	16	8
74LS44	16	8
74LS45	16	8
74LS46	16	8
74LS47	16	8
74LS48	16	8
74LS49	16	8
74LS50	16	8
74LS51	16	8
74LS52	16	8
74LS53	16	8
74LS54	16	8
74LS55	16	8
74LS56	16	8
74LS57	16	8
74LS58	16	8
74LS59	16	8
74LS60	16	8
74LS61	16	8
74LS62	16	8
74LS63	16	8
74LS64	16	8
74LS65	16	8
74LS66	16	8
74LS67	16	8
74LS68	16	8
74LS69	16	8
74LS70	16	8
74LS71	16	8
74LS72	16	8
74LS73	16	8
74LS74	16	8
74LS75	16	8
74LS76	16	8
74LS77	16	8
74LS78	16	8
74LS79	16	8
74LS80	16	8
74LS81	16	8
74LS82	16	8
74LS83	16	8
74LS84	16	8
74LS85	16	8
74LS86	16	8
74LS87	16	8
74LS88	16	8
74LS89	16	8
74LS90	16	8
74LS91	16	8
74LS92	16	8
74LS93	16	8
74LS94	16	8
74LS95	16	8
74LS96	16	8
74LS97	16	8
74LS98	16	8
74LS99	16	8
74LS100	16	8

SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

Static Sensitive Devices See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

A

B

C

D

E

F

G

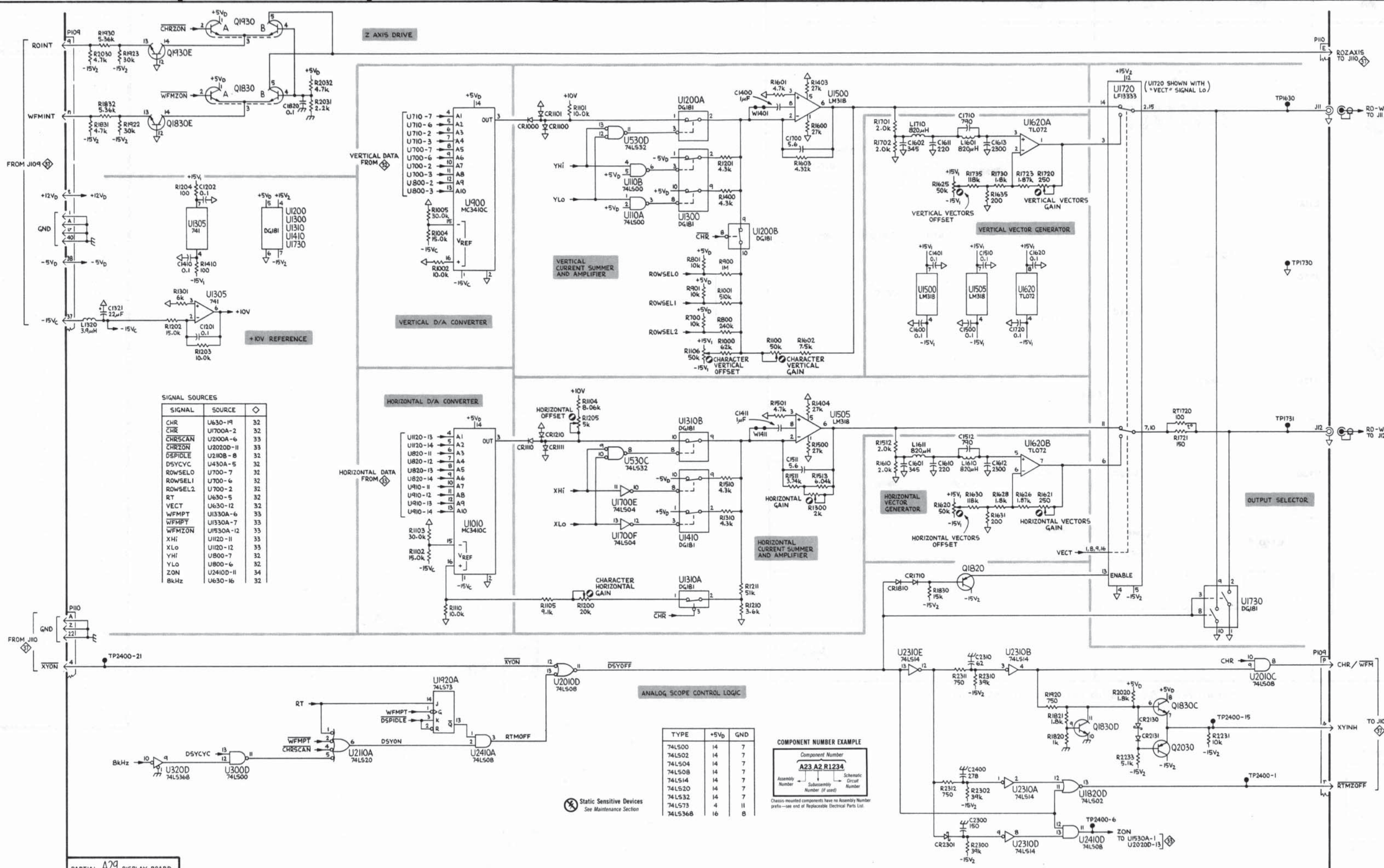
1

2

3

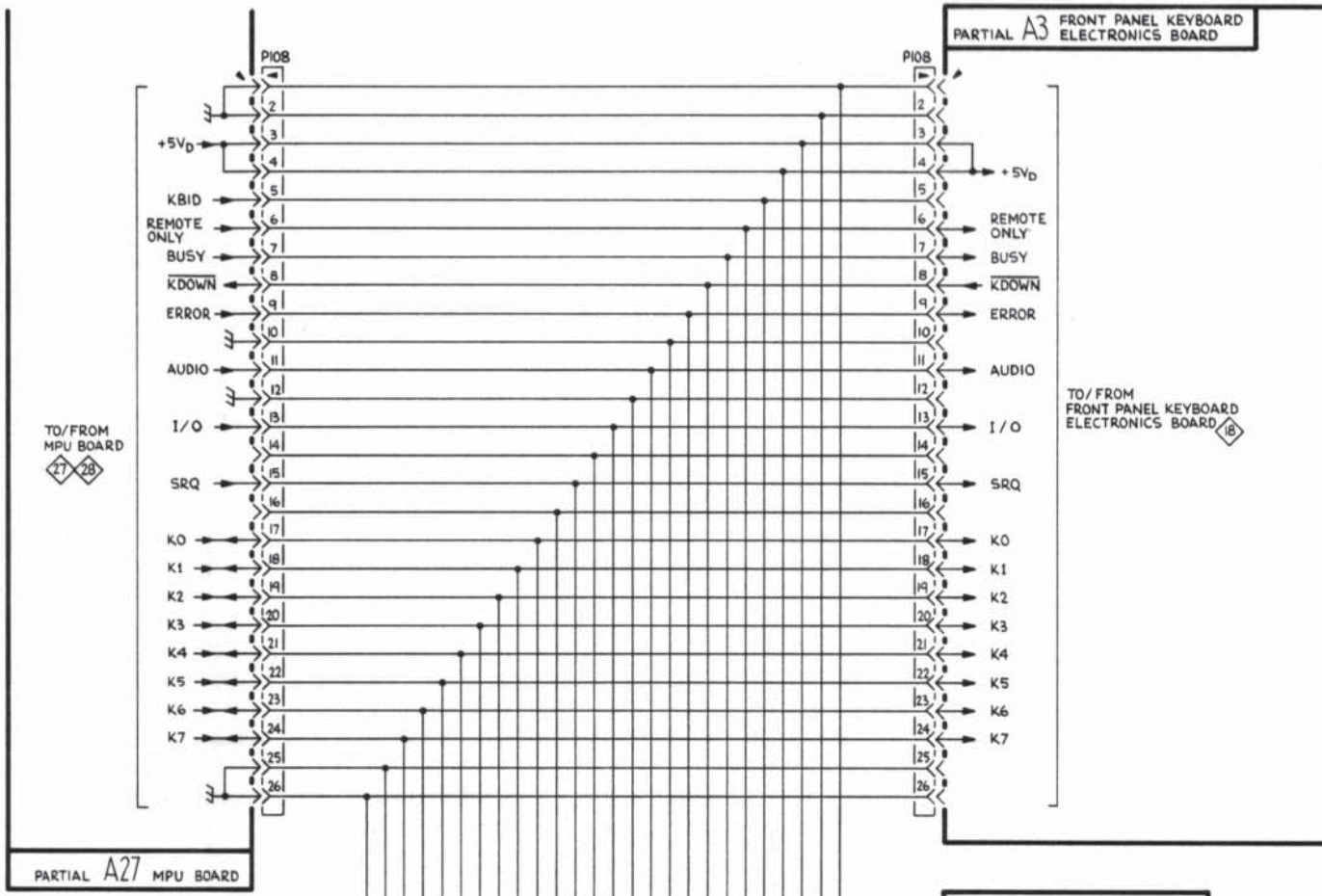
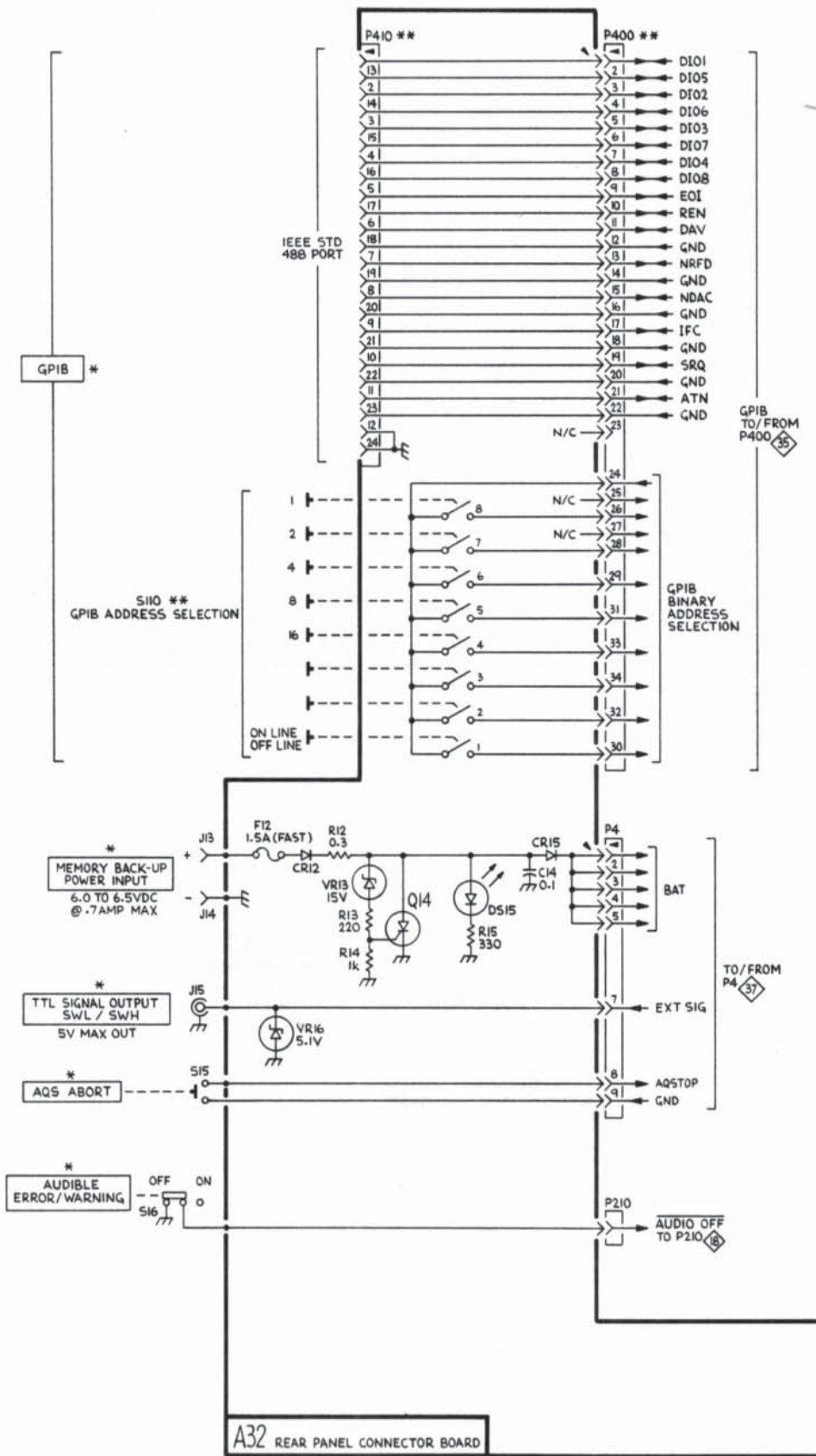
4

5



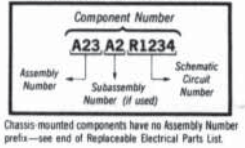
PARTIAL A29 DISPLAY BOARD

1
2
3
4



SEE PARTS LIST FOR SEMICONDUCTOR TYPES.

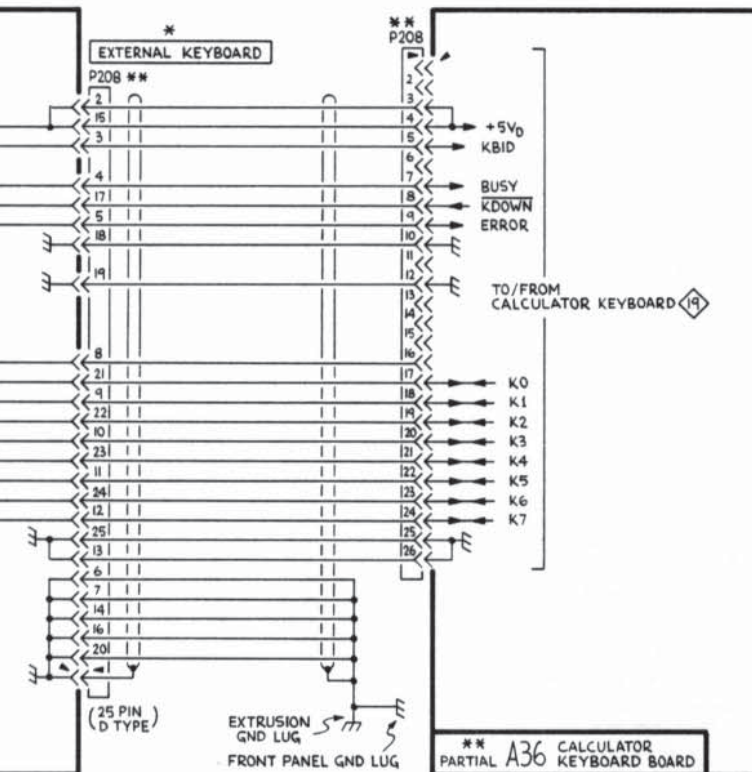
COMPONENT NUMBER EXAMPLE



Chassis mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

Static Sensitive Devices See Maintenance Section

NOTE: * REAR PANEL OF THE INSTRUMENT
** REMOVED FOR OPTION OD
CABLE, P208 ON A32 TO P208 ON A36
CABLE, P400 ON A32 TO P400 ON A30
S110, GPIB ADDRESS SELECTOR, ON A32
CONNECTOR, P410, ON A32



A

B

C

D

E

F

G

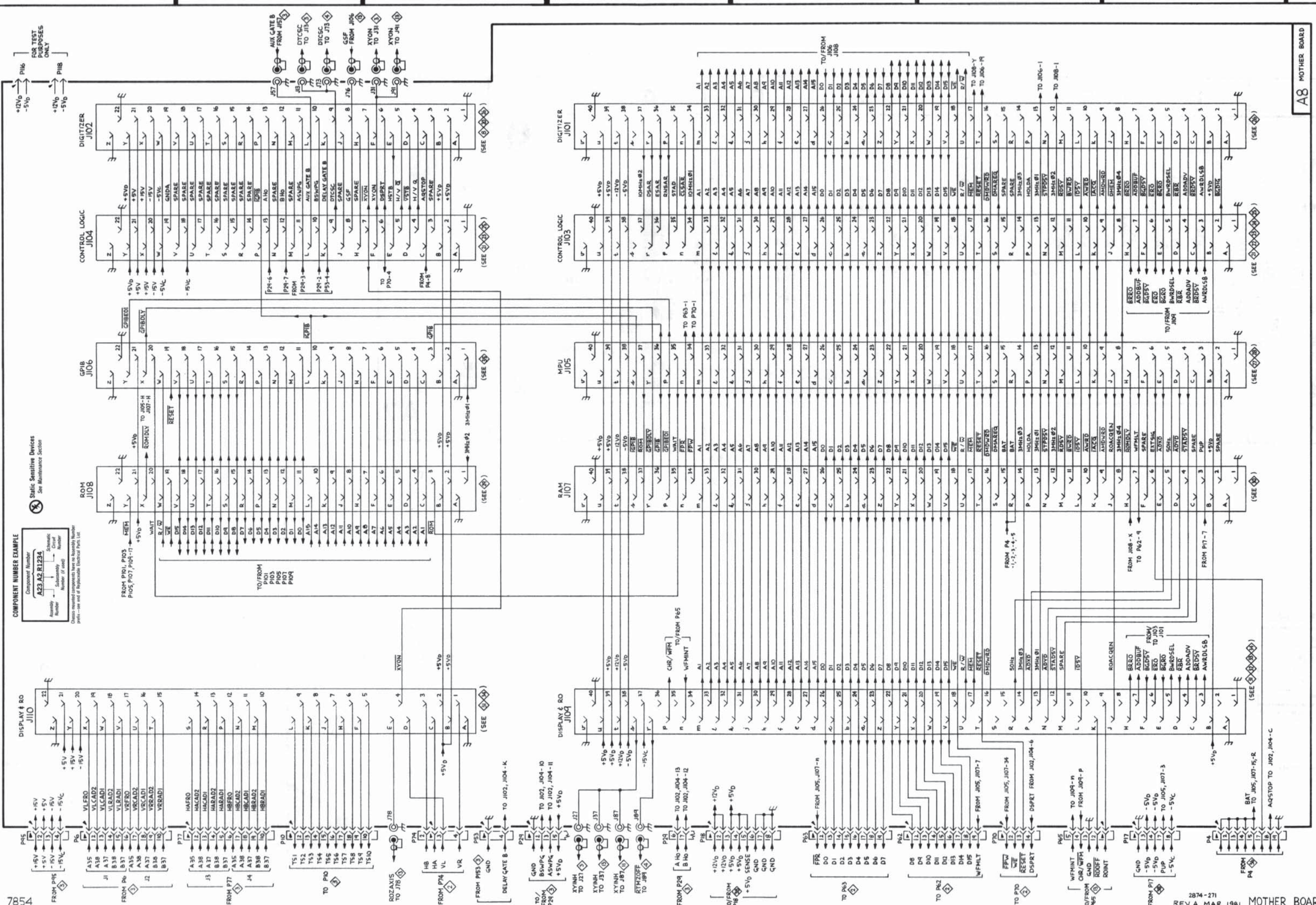
1

2

3

4

5



A8 MOTHER BOARD

1

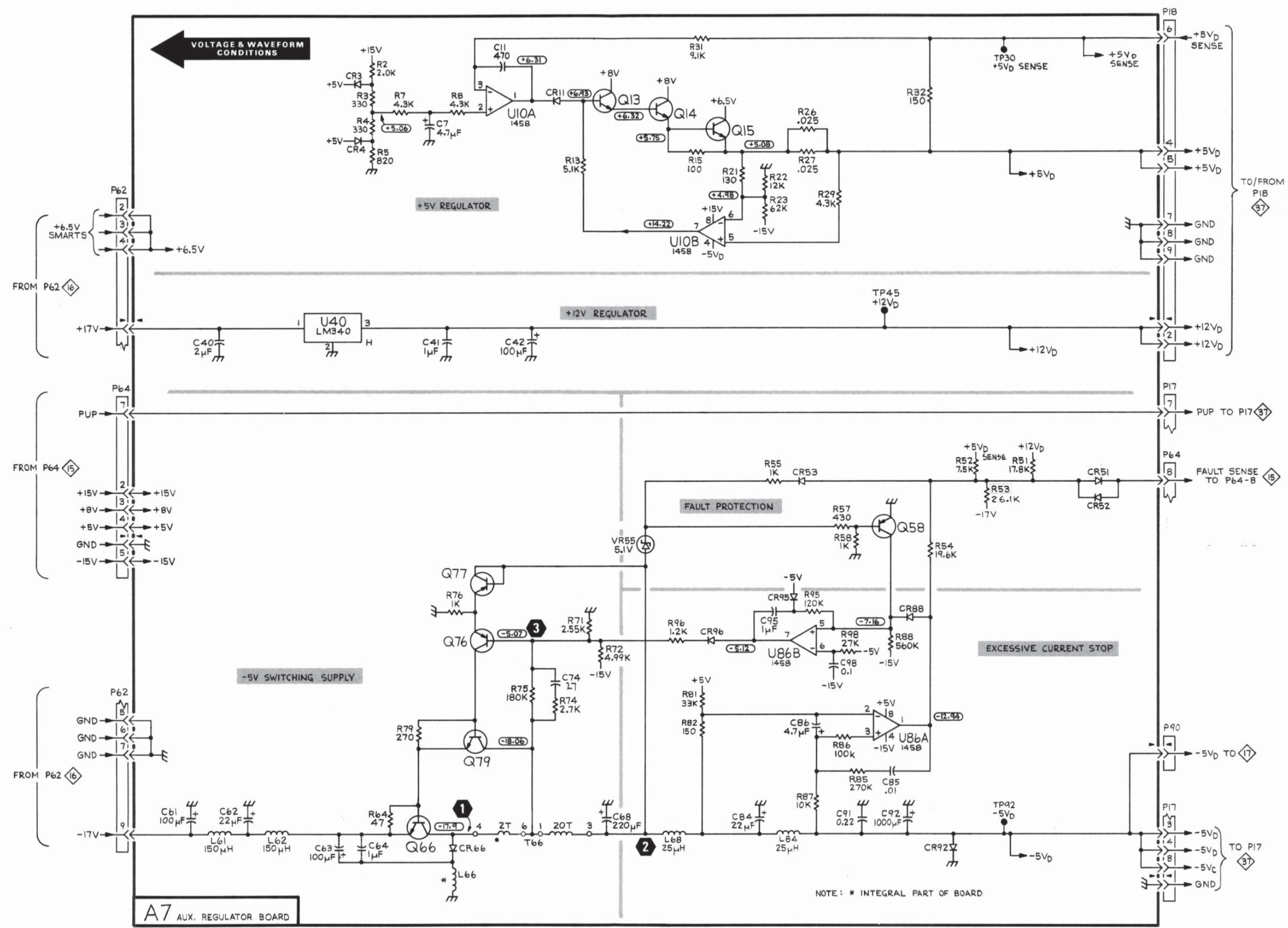
2

3

4

5

6



1

2

3

4

5

A

B

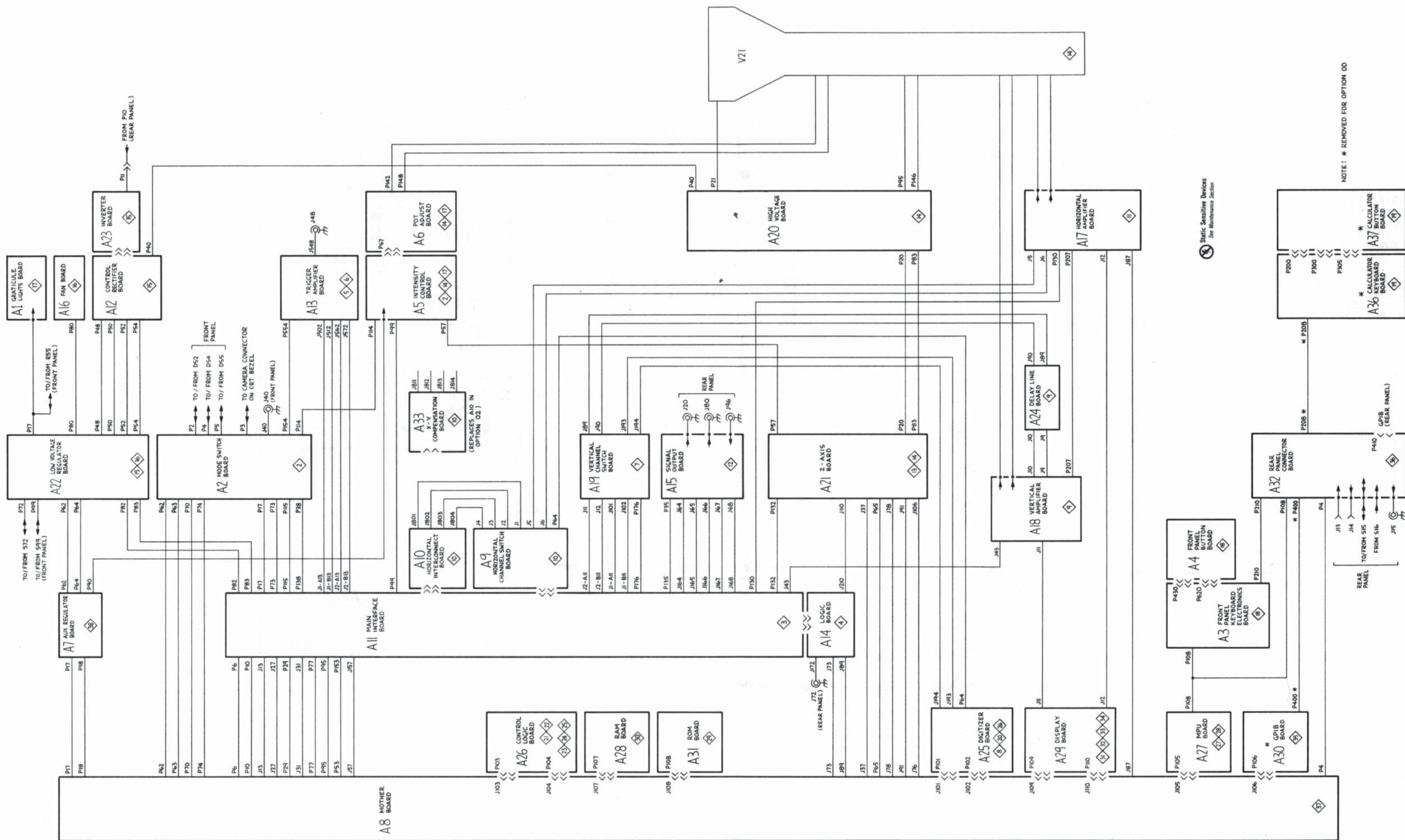
C

D

E

F

G



⊗ Static Sensitive Devices
See Maintenance Section

NOTE: * REMOVED FOR OPTION 00

