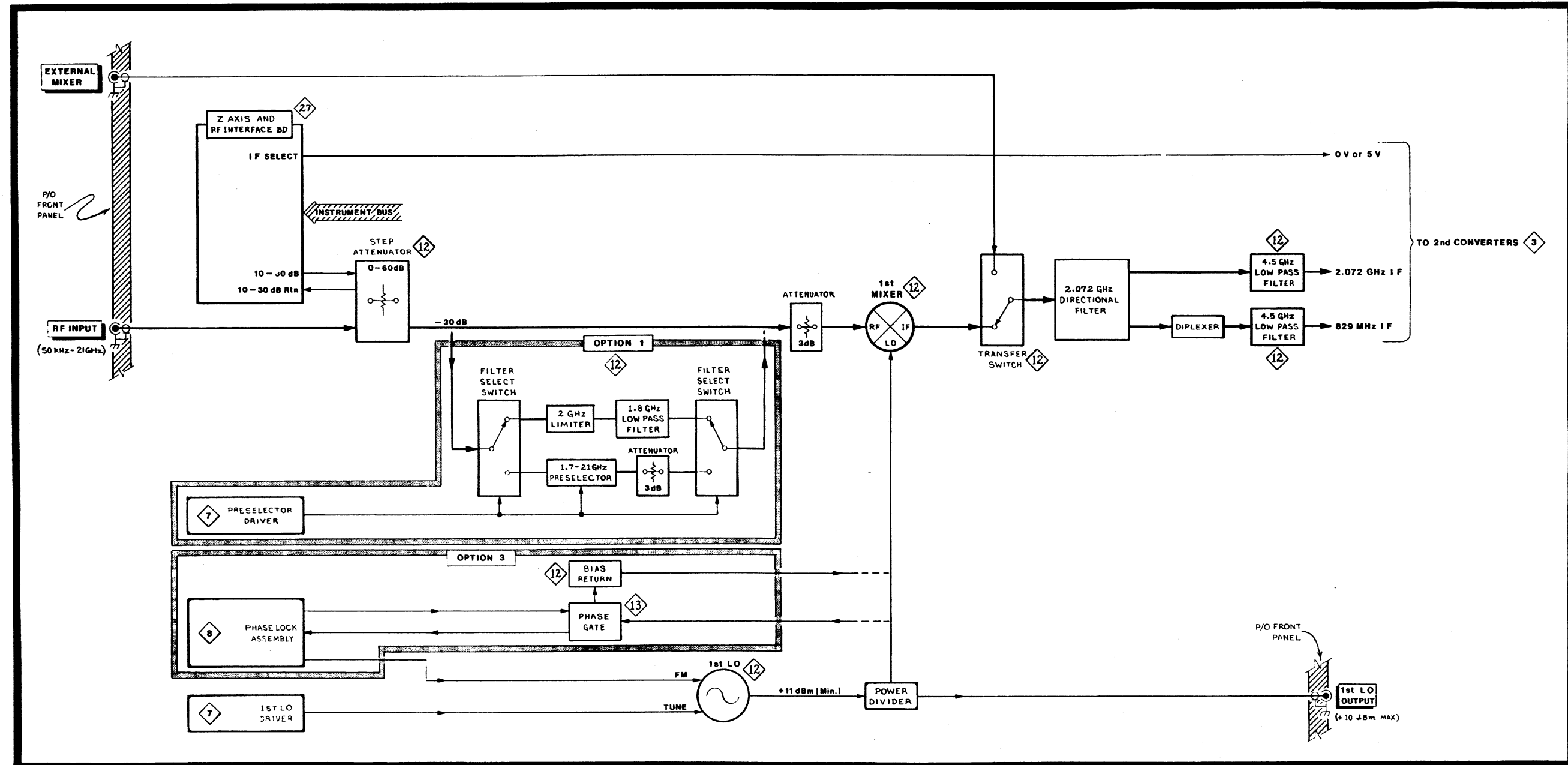


492/492P (SN B030000 & UP)

(2852-70) 378\*-01  
REV. JUL 1981

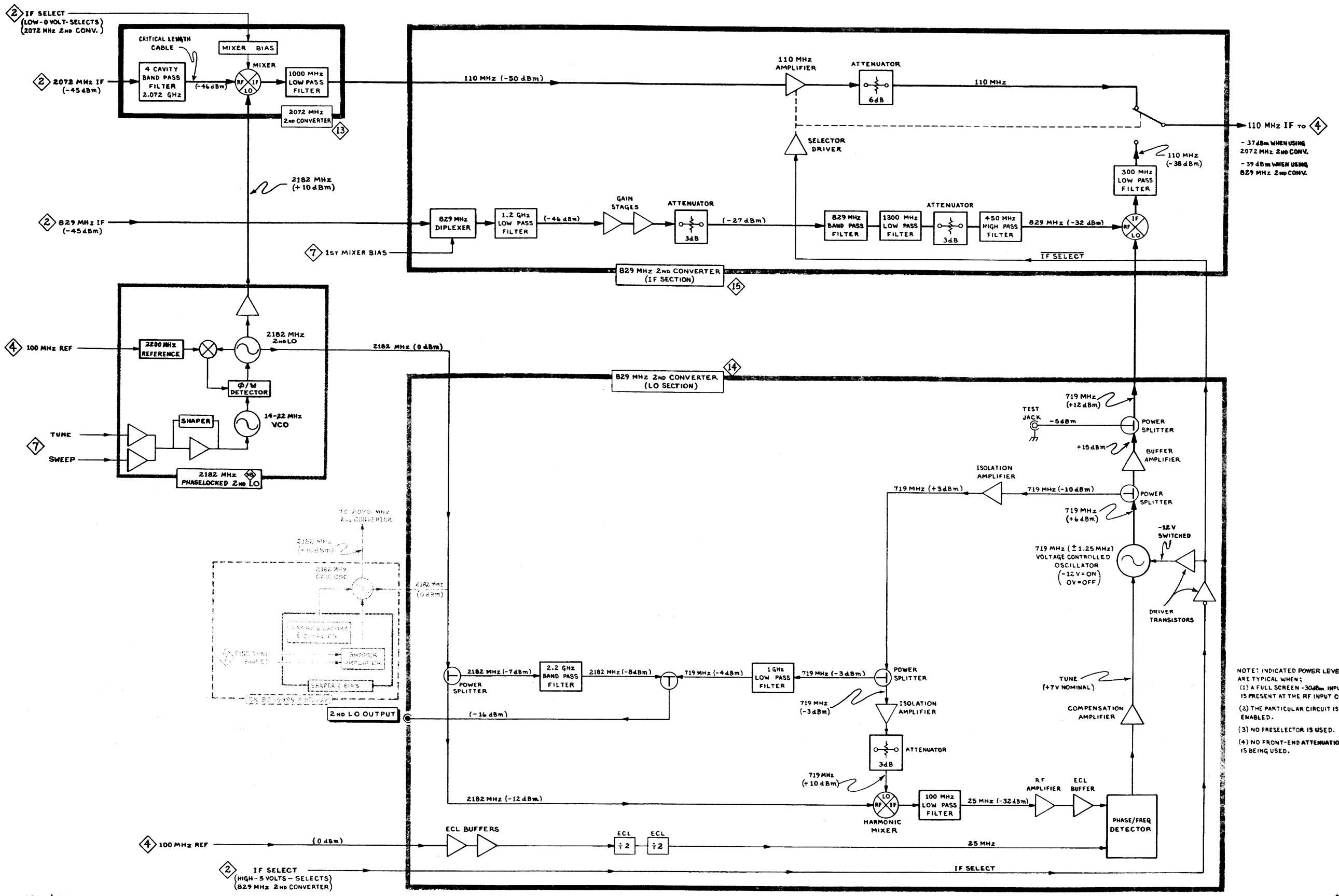
FUNCTIONAL BLOCK DIAGRAM 1



492/492 P (5N 8030000 E UP)

(4952-91) 3784-02  
REV FEB 1983

1st CONVERTER BLOCK DIAGRAM 2 JAW

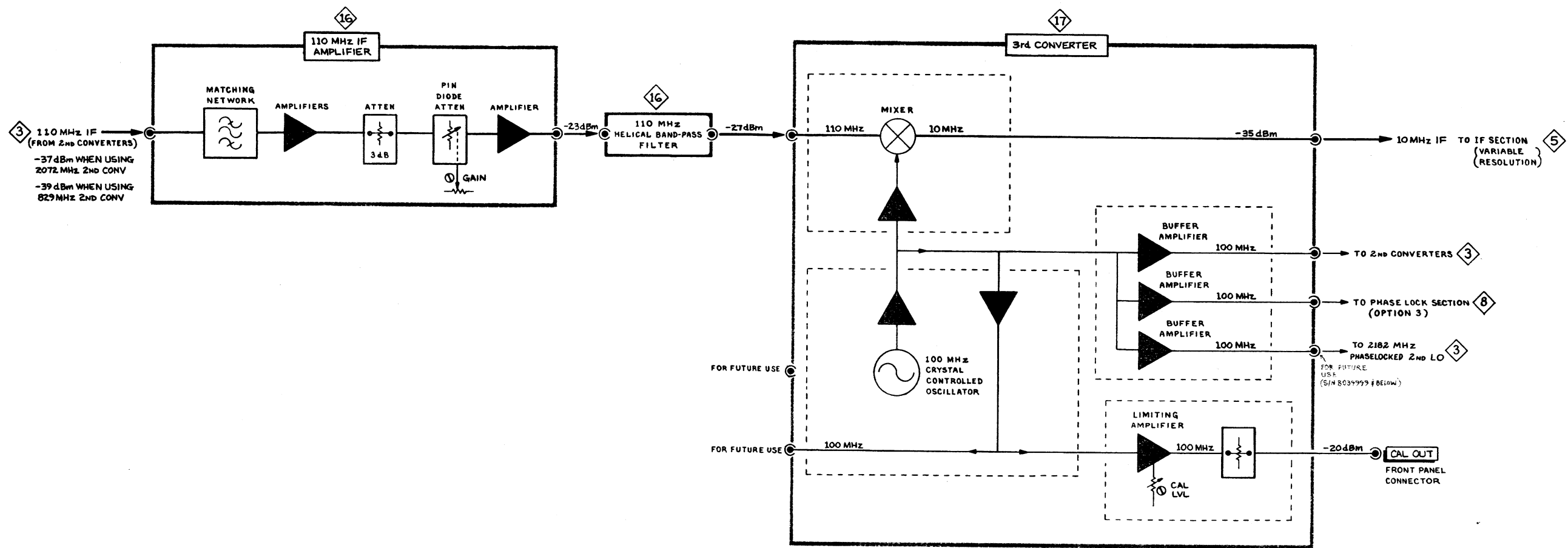


492/492P (SN B030000 & UP)

(2852-72) 3784-03  
REV. DEC. 1981

2nd CONVERTERS BLOCK DIAGRAM

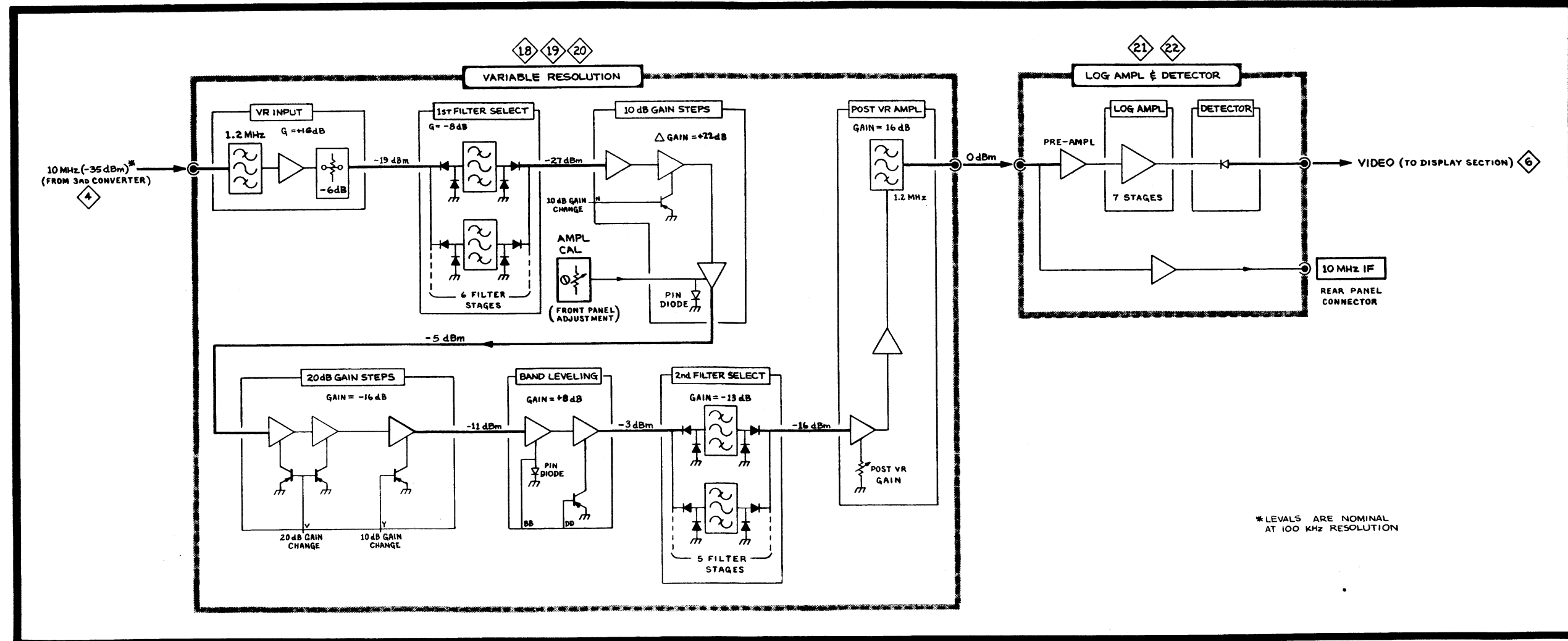
NOTE: INDICATED POWER LEVELS ARE TYPICAL WHEN:  
(1) A FULL SCREEN -30dBm INPUT SIG. IS PRESENT AT THE RF INPUT CONN.  
(2) THE PARTICULAR CIRCUIT IS ENABLED.  
(3) NO PRESELECTOR IS USED.  
(4) NO FRONT-END ATTENUATION IS BEING USED.



492/492P (SN B030000 & UP)

(2852 - 73) 3784-04  
REV. JUL 1981

3rd CONVERTER BLOCK DIAGRAM 4 JAN

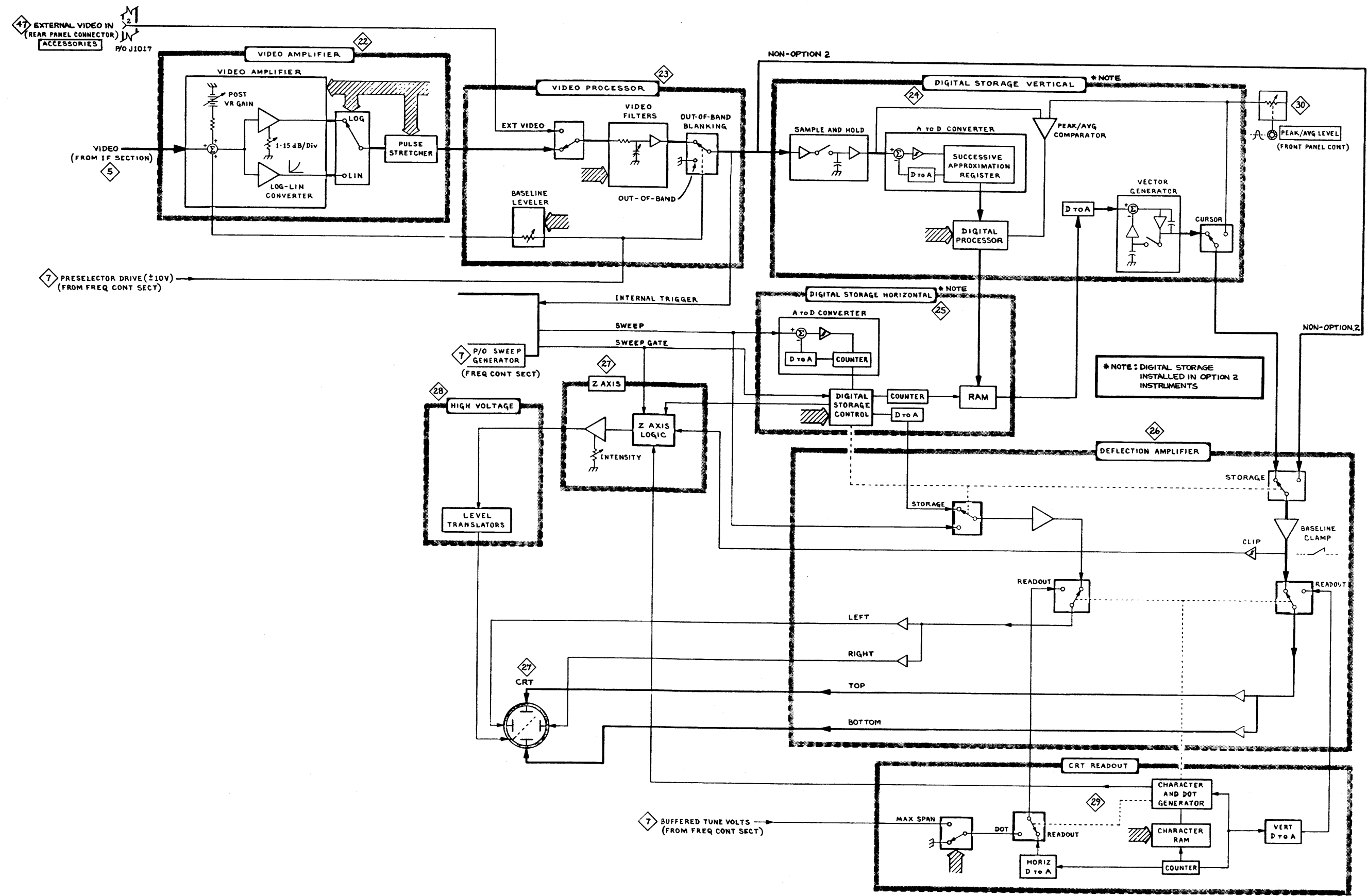


\*LEVELS ARE NOMINAL AT 100 KHZ RESOLUTION

492/492P (SN 8030000 & UP)

(2852-232) 3784-05  
REV JUL 1981

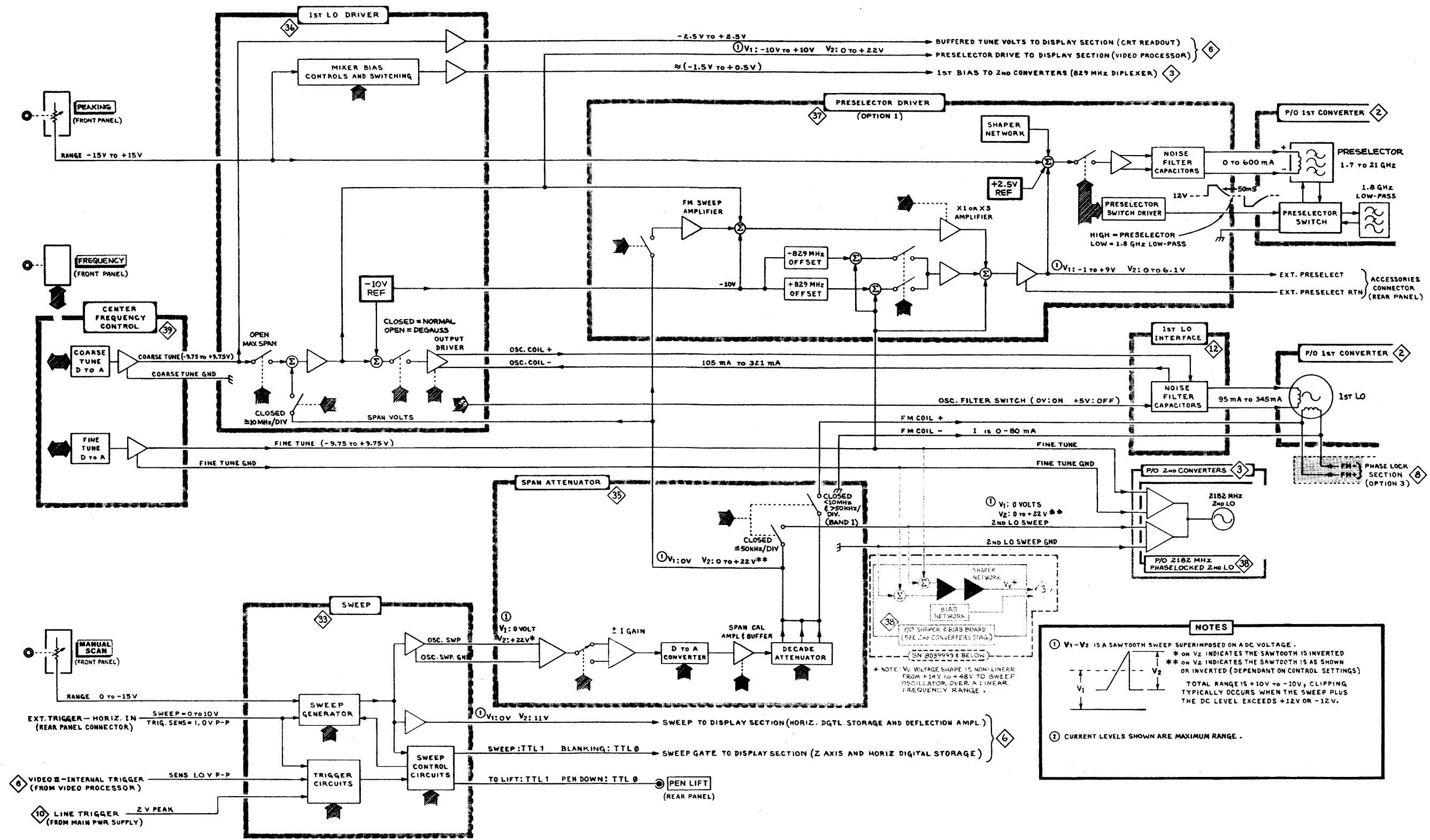
IF SECTION BLOCK DIAGRAM 5



492/492P (SN 803000 & UP)

(2852-75) 3784-06  
REV. JUL 1981

DISPLAY SECTION BLOCK DIAGRAM 6

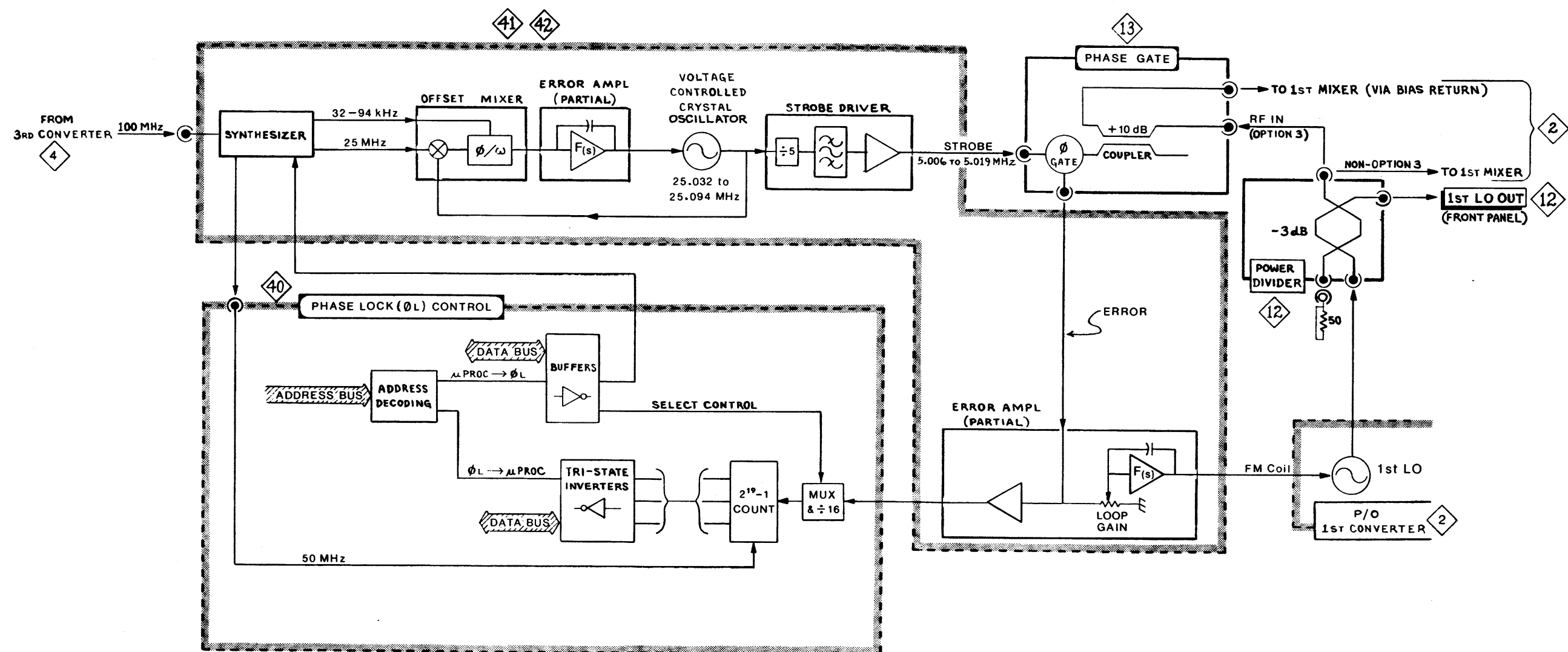


**NOTES**

①  $V_1 - V_2$  IS A SAWTOOTH SWEEP SUPERIMPOSED ON A DC VOLTAGE. \* ON  $V_2$  INDICATES THE SAWTOOTH IS INVERTED. \*\* ON  $V_2$  INDICATES THE SAWTOOTH IS AS SHOWN OR INVERTED (DEPENDANT ON CONTROL SETTINGS).

TOTAL RANGE IS  $+10V$  TO  $-10V$ , CLIPPING TYPICALLY OCCURS WHEN THE SWEEP PLUS THE DC LEVEL EXCEEDS  $+12V$  OR  $-12V$ .

② CURRENT LEVELS SHOWN ARE MAXIMUM RANGE.

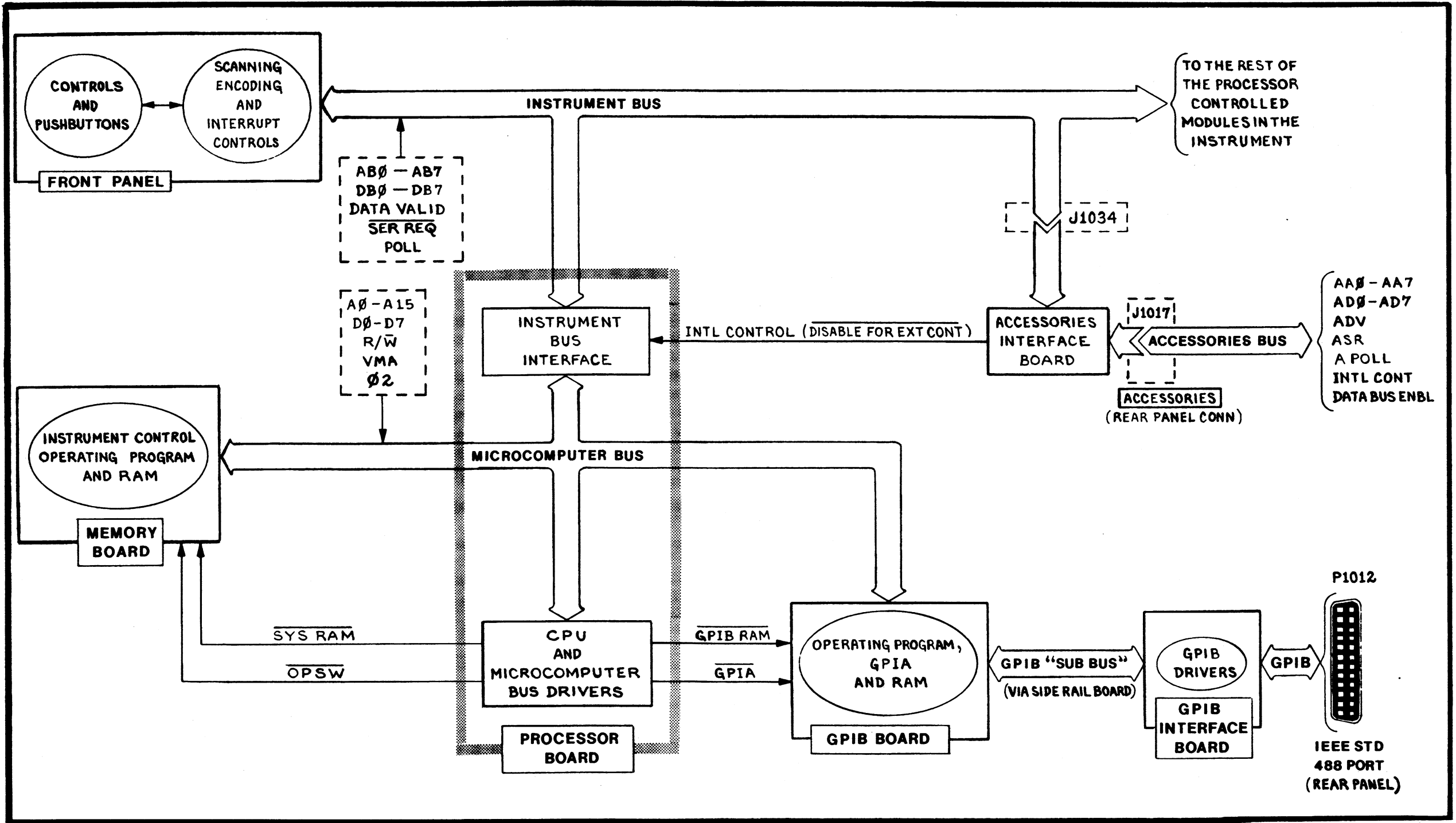


492/492P (SN 8030000 & UP)

(2852-77) 3784-08  
REV JUL 1981

(OPTION 03) PHASE LOCK SECTION BLOCK DIAGRAM 8 JAW

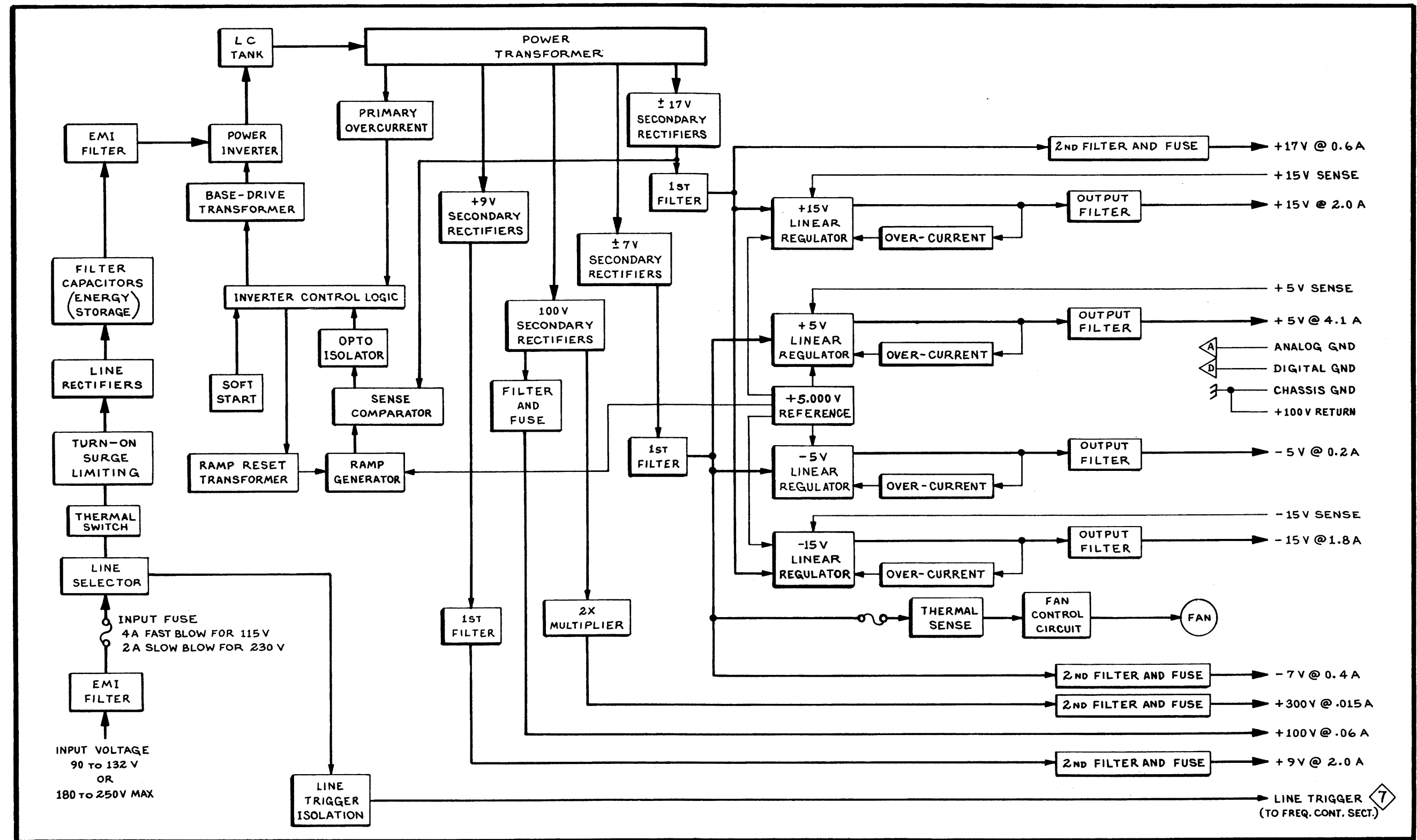




492/492P (SN B030000 & UP)

(2852-78) 3784-09  
REV JUL 1981

DIGITAL CONTROL BLOCK DIAGRAM 9

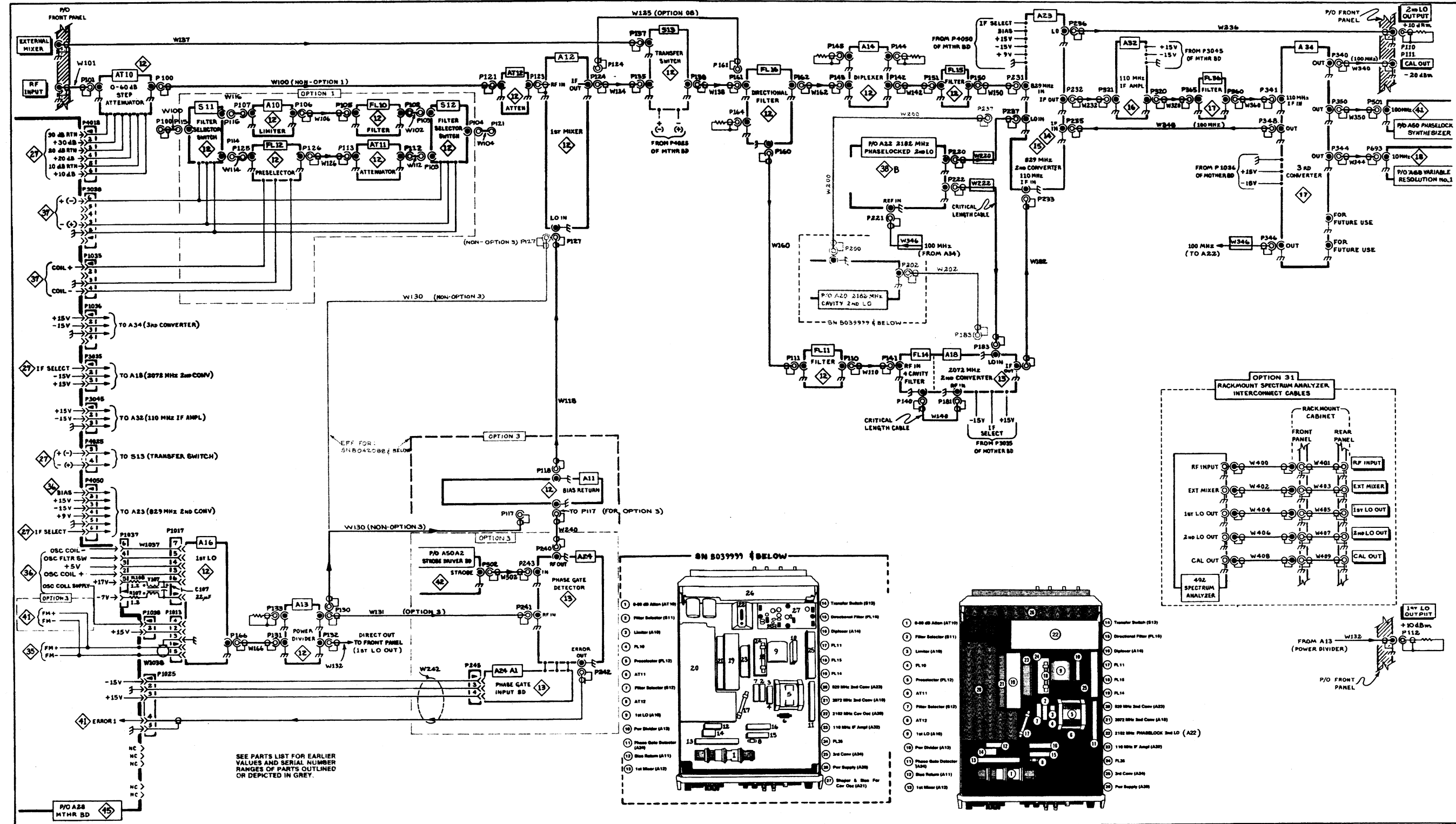


492/492P (SN B030000 & UP)

(2852-79) 3784-10

REV JUL 1981

POWER SUPPLY BLOCK DIAGRAM



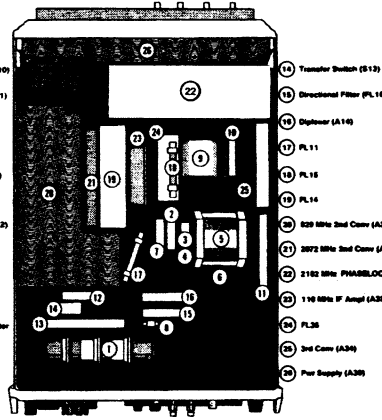
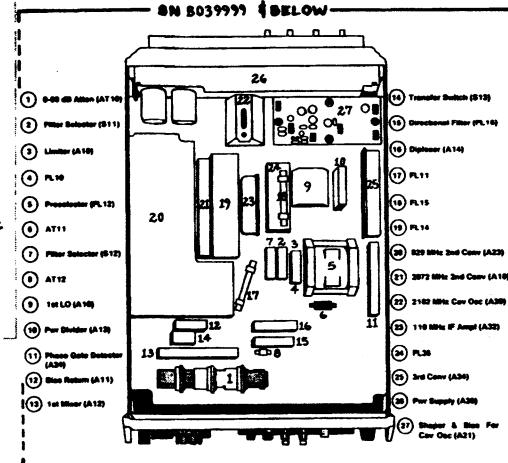
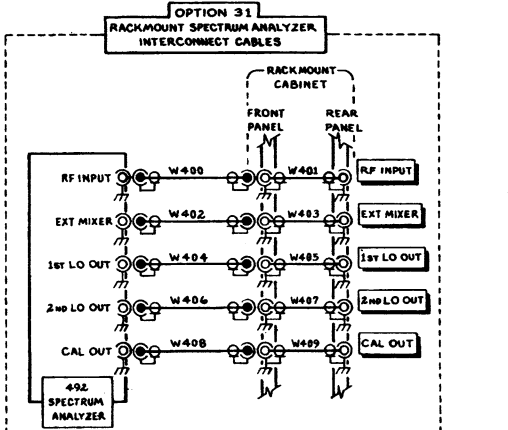
492/492P (SN 803000 & UP)

REV MAR 1965 (2851-80)3764-11

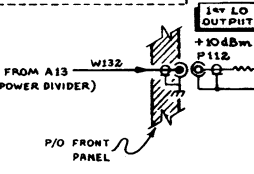
36x A01

RF DECK INTERCONNECT DIAGRAM

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



- ① 0-60 dB Att'n (A110)
- ② Filter Selector (P111)
- ③ Limiter (A116)
- ④ P110
- ⑤ Preselector (P112)
- ⑥ Filter Selector (P112)
- ⑦ P110
- ⑧ P111
- ⑨ P112
- ⑩ 829 MHz 2nd Conv (A22)
- ⑪ 3072 MHz 2nd Conv (A118)
- ⑫ 2160 MHz 2nd Conv (A20)
- ⑬ 110 MHz IF Amp (A22)
- ⑭ P113
- ⑮ 2nd Conv (A20)
- ⑯ Phase Gate Detector (A20)
- ⑰ Bias Return (A111)
- ⑱ 1st Mixer (A112)
- ⑲ Transfer Stub (P113)
- ⑳ Directional Filter (P113)
- ㉑ Diplexer (A114)
- ㉒ P111
- ㉓ P112
- ㉔ 829 MHz 2nd Conv (A22)
- ㉕ 3072 MHz 2nd Conv (A118)
- ㉖ 2160 MHz PHASELOCK 2nd LO (A22)
- ㉗ 110 MHz IF Amp (A22)
- ㉘ P113
- ㉙ 2nd Conv (A20)
- ㉚ Phase Gate Detector (A20)
- ㉛ Bias Return (A111)
- ㉜ 1st Mixer (A112)



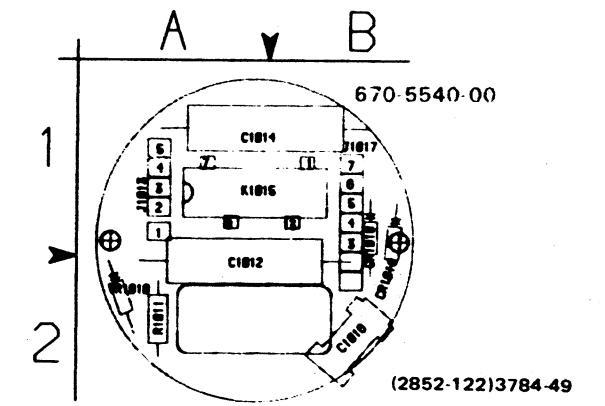
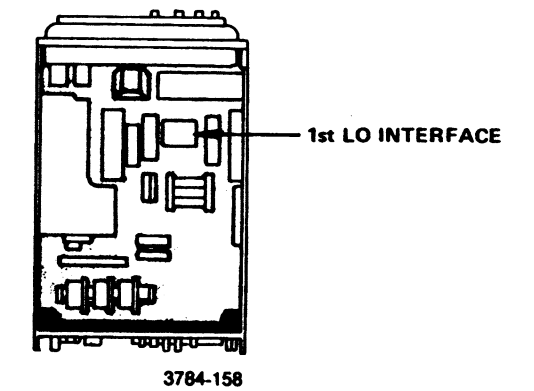
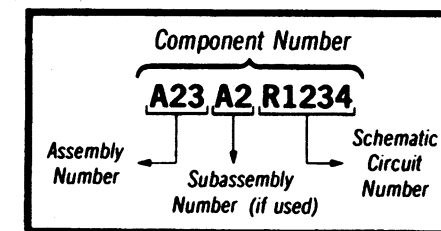


Fig. 8-1. A16A1—1st LO Interface circuit board.

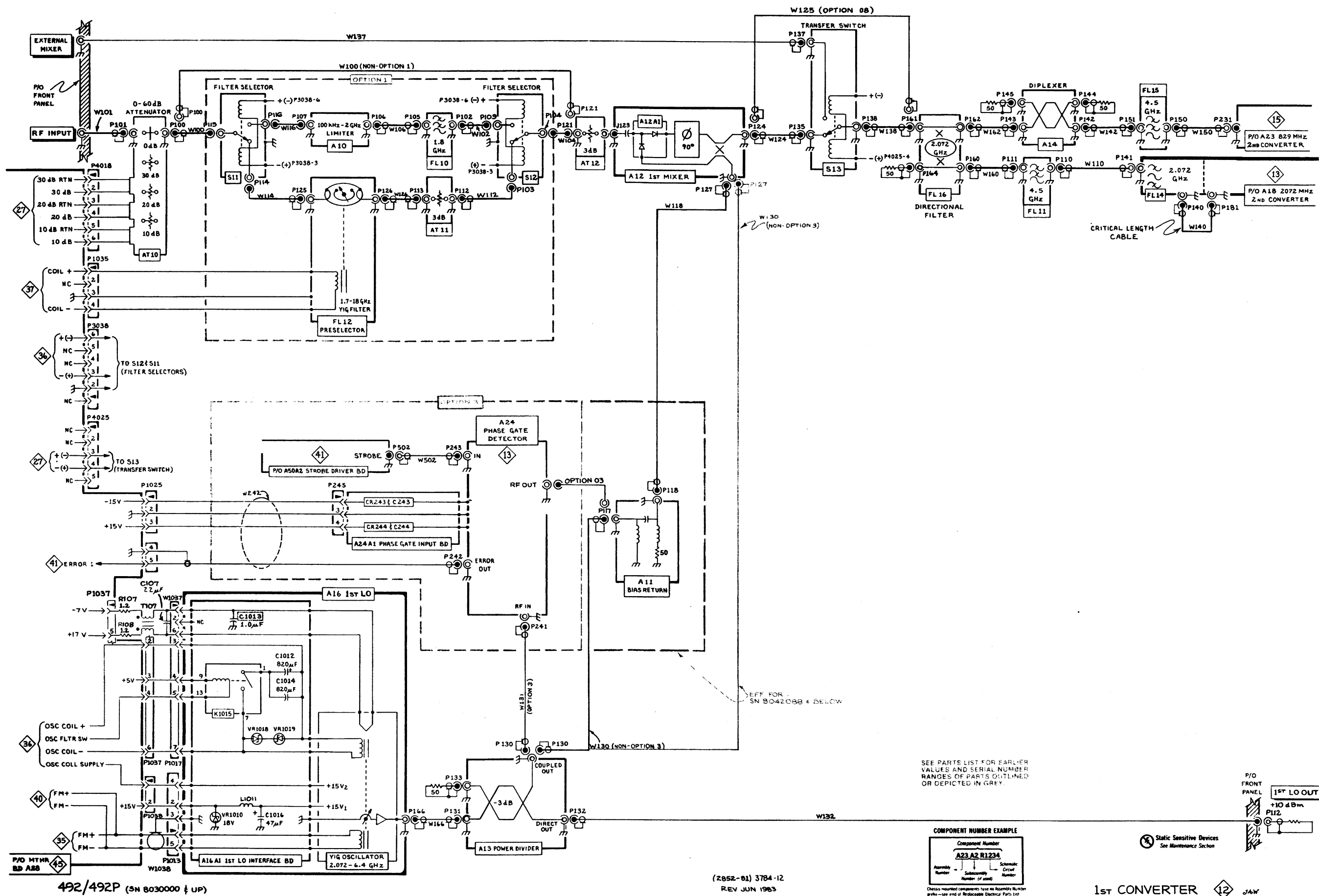


 **Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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



492/492P (SN 8030000 & UP)

(2852-81) 3784-12  
REV JUN 1983

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

COMPONENT NUMBER EXAMPLE

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

Check required components have an Assembly Number prefix—see end of Replaceable Electrical Parts List.

Static Sensitive Devices  
See Maintenance Section

1ST CONVERTER

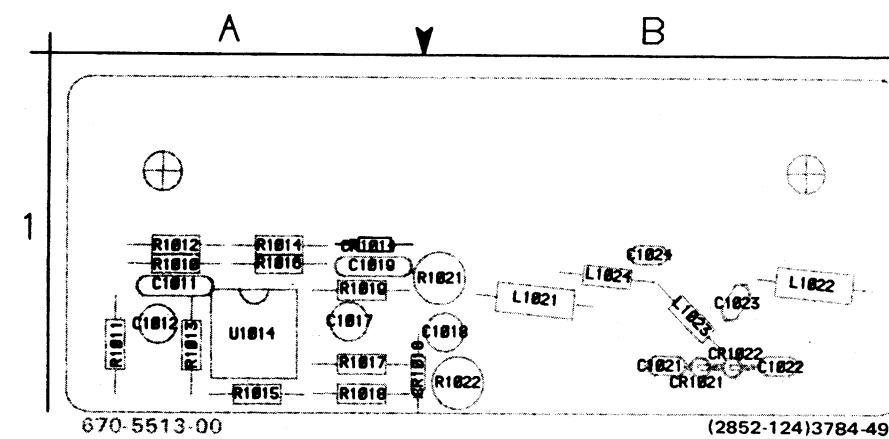


Fig. 8-2. A18A1—2nd Converter circuit board.

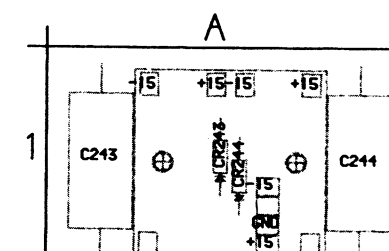
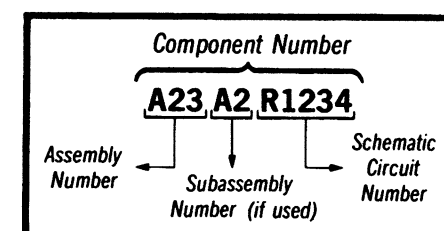


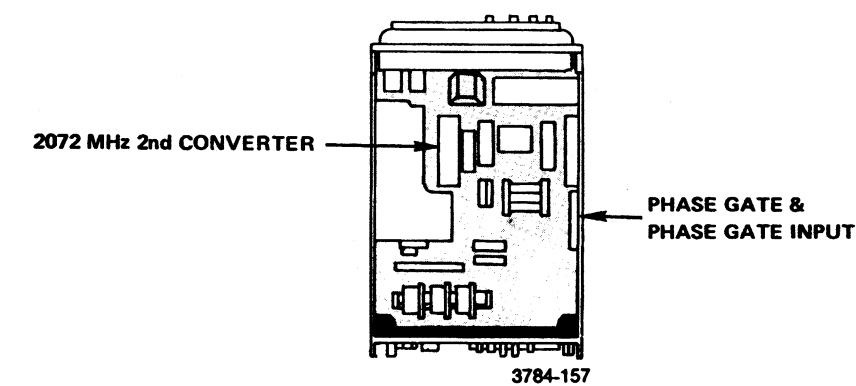
Fig. 8-3. A4A1—Phase Gate Input circuit board.

 **Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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



2072 MHz 2nd Converter and Phase Gate Circuitry DIAGRAM 13

ASSEMBLY A18A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	A2	A1	CR1022	B1	B1	R1014	B2	A1
C1012	A2	A1	CR1021	B1	B1	R1015	A2	A1
C1017	A2	A1				R1016	C2	A1
C1018	A2	B1	L1021	B1	B1	R1017	B2	A1
C1019	B2	A1	L1022	B1	B1	R1018	C2	A1
C1021	B1	B1	L1023	C1	B1	R1019	A2	A1
C1022	B1	B1	L1024	C1	B1	R1021	B2	B1
C1023	B1	B1				R1022	B2	B1
C1024	C1	B1	R1010	A2	A1	U1014	B2	A1
CR1018	C2	A1	R1011	A2	A1			
CR1014	C2	A1	R1012	A2	A1			
			R1013	A2	A1			

2nd Converter

ASSEMBLY A24

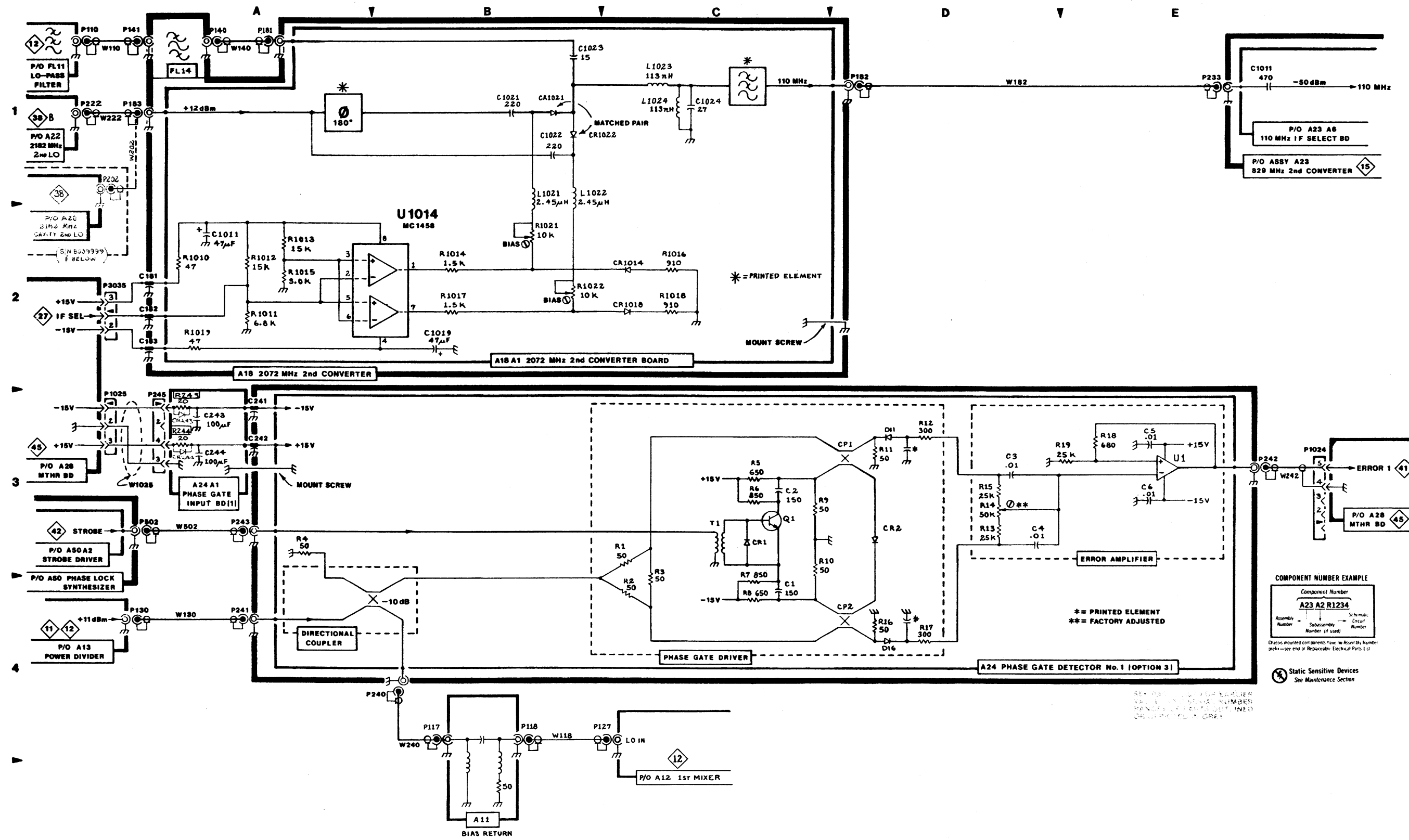
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	C4	NA	Q1	C3	NA	R11	D3	NA
C2	C3	NA				R12	D3	NA
C3	D3	NA	R1	C3	NA	R13	D3	NA
C4	D3	NA	R2	C4	NA	R14	D3	NA
C5	E3	NA	R3	C3	NA	R15	D3	NA
C6	E3	NA	R4	A3	NA	R16	D4	NA
CP1	D3	NA	R5	C3	NA	R17	D4	NA
CP2	D4	NA	R6	C3	NA	R18	E3	NA
CR1	C3	NA	R7	C3	NA	R19	E3	NA
CR2	D3	NA	R8	C4	NA	T1	C3	NA
			R9	C3	NA			
			R10	C3	NA			

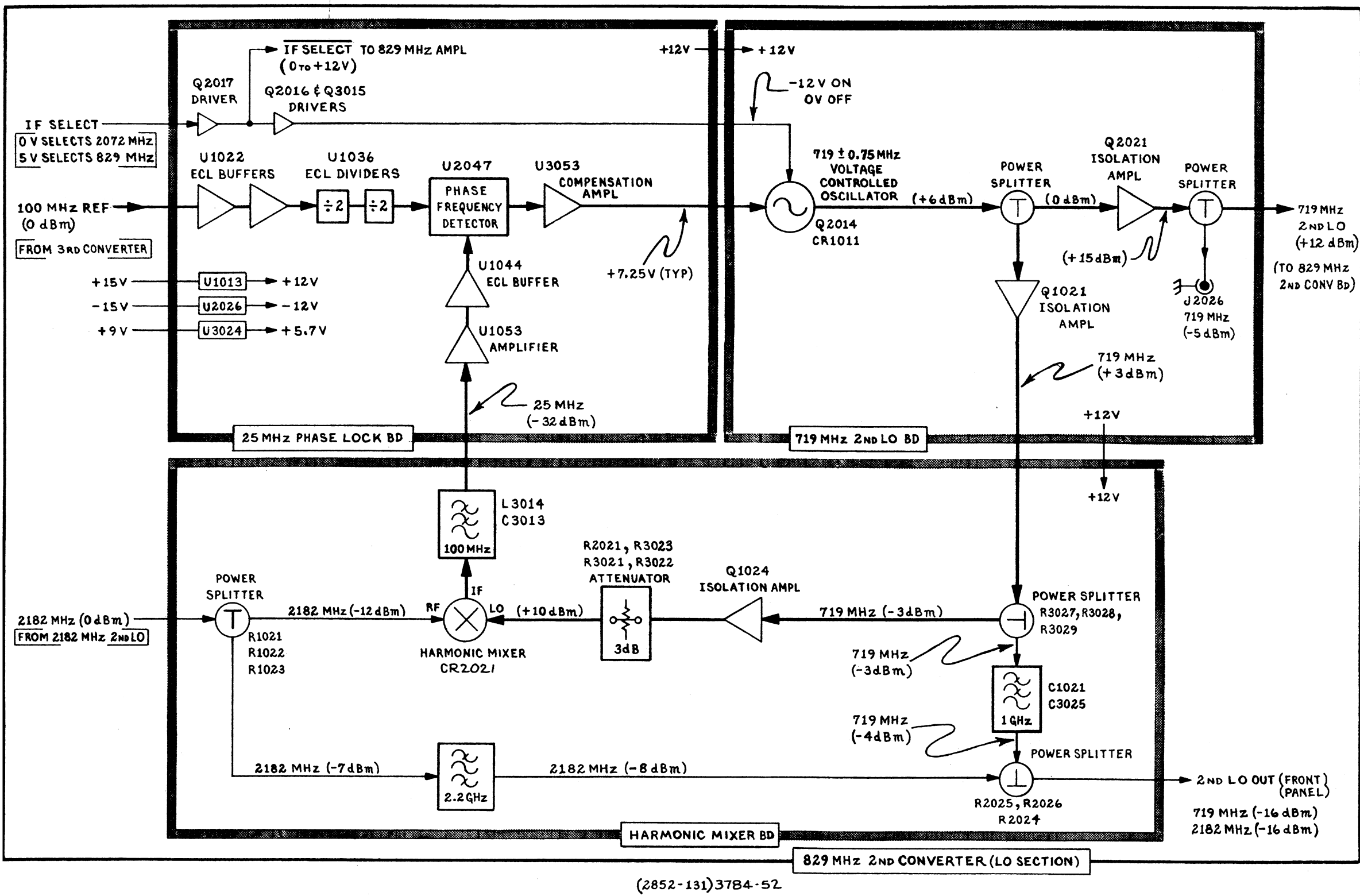
Phase Gate

ASSEMBLY A24A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C243	A3	A1	CR243	A3	A1			
C244	A3	A1	CR244	A3	A1			

Phase Gate Input





REV FEB 1983

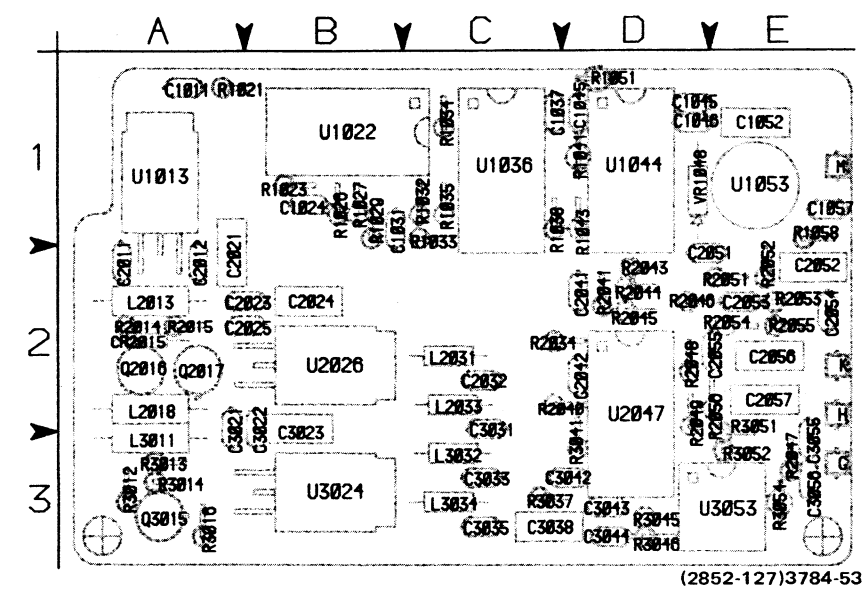
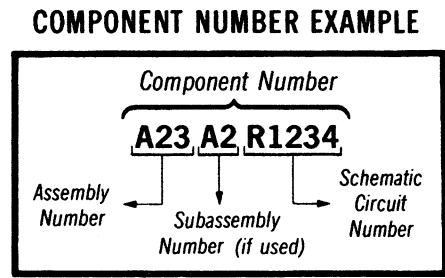


Fig. 8-4. A23A2—25 MHz Phase Lock circuit board.

Static Sensitive Devices  
See Maintenance Section



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

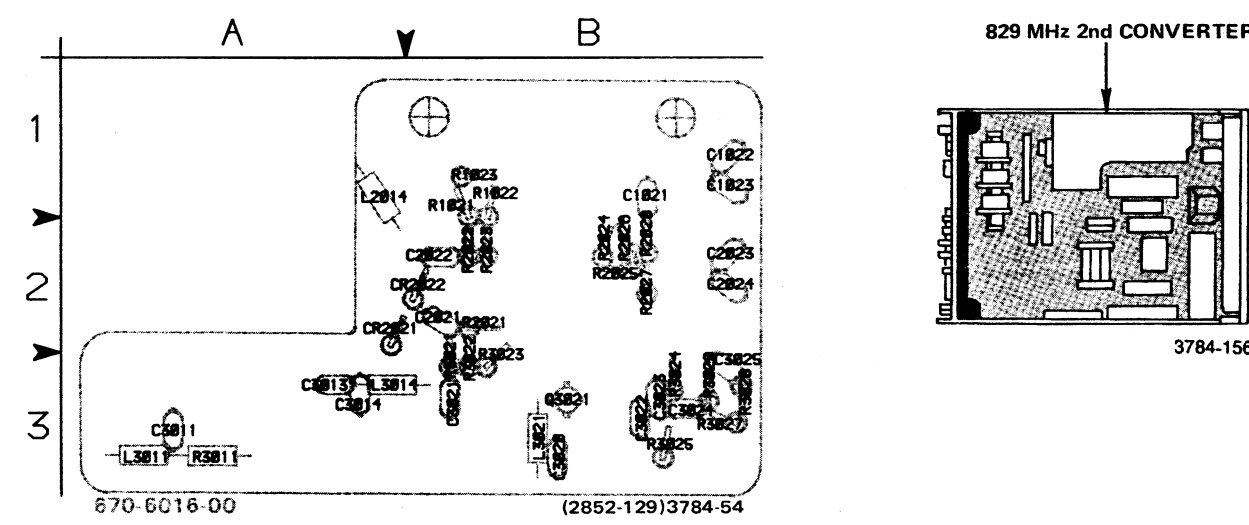


Fig. 8-5. A23A3—Harmonic Mixer circuit board.



**829 MHz 2nd Converter (LO Section) DIAGRAM 14**

**ASSEMBLY A23A1**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R2028	F4	NA	C2015	E4	NA	Q2014	F3	NA	R2013	F3	NA
C1011	D4	NA	C2022	E4	NA	Q2014	D4	NA	R2014	F3	NA
C1012	E3	NA	C2023	E5	NA	Q2021	E4	NA	R2016	E4	NA
C1013	F3	NA	C2024	F4	NA	R1011	E2	NA	R2021	E4	NA
C1021	D4	NA	CR1011	F2	NA	R1020	D4	NA	R2024	E5	NA
C1022	D5	NA	J2026	F5	NA	R1021	D5	NA	R2025	F4	NA
C1023	D5	NA	L1011	D4	NA	R1022	D5	NA	R2026	F5	NA
C1024	D4	NA	L1021	D4	NA	R1023	D4	NA	R2027	F4	NA
C1025	C4	NA	L2010	F3	NA	R1024	D4	NA	TP1011	E2	NA
C2011	F3	NA	L2010	F3	NA	R2010	D5	NA			
C2012	F3	NA	L2010	F3	NA	R2010	D5	NA			
C2013	F3	NA	L2010	F3	NA	R2010	D5	NA			
C2014	F4	NA	L2021	E4	NA	R2012	F4	NA			

**ASSEMBLY A23A2**

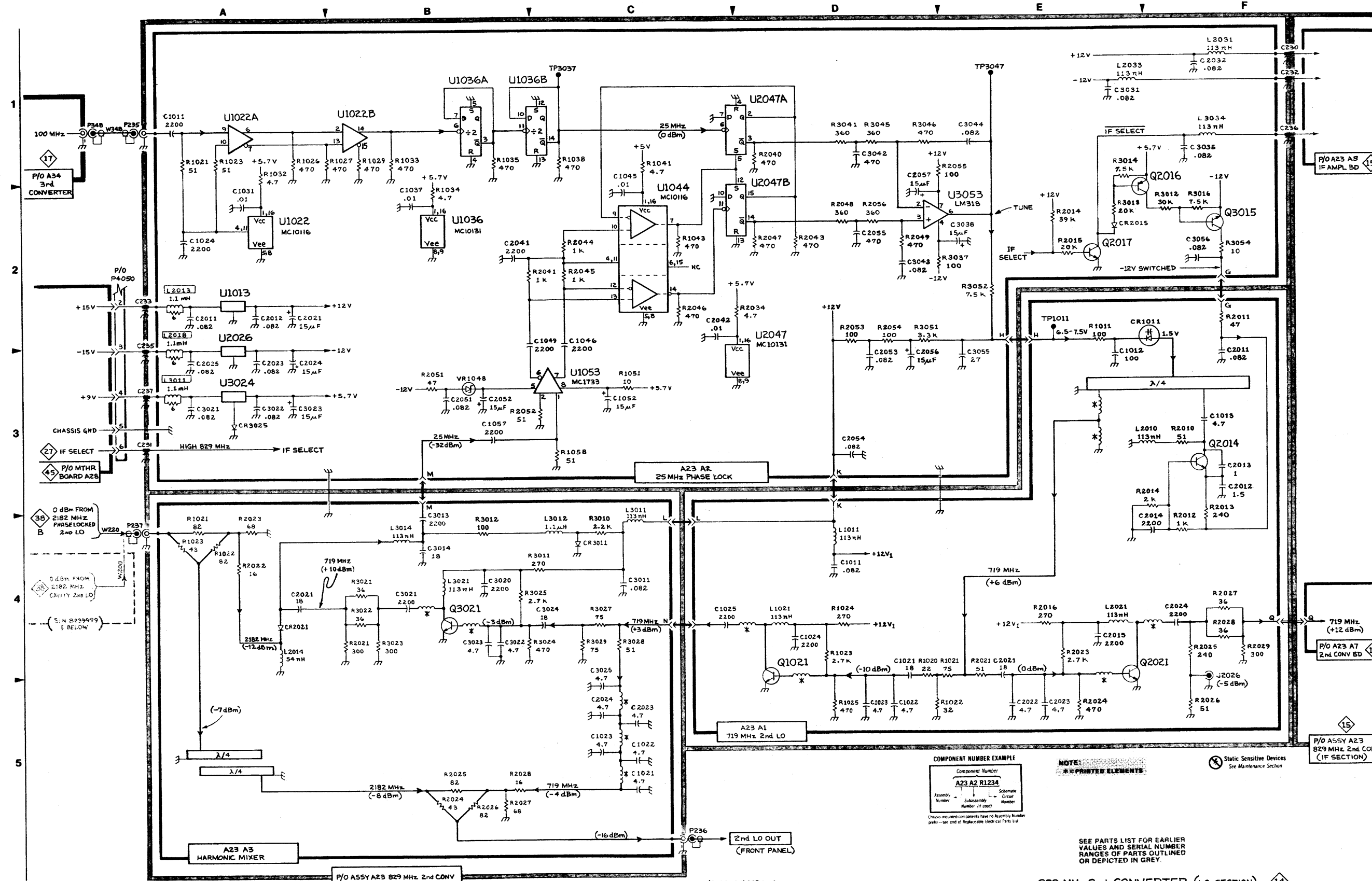
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	A1	A1	C3035	F1	C3	R1034	B2	C1	R3037	E2	C3
C1024	A2	B1	C3038	E2	C3	R1035	B1	C1	R3041	D1	D3
C1031	A2	B1	C3042	D1	C3	R1038	C1	C1	R3045	D1	D3
C1037	B2	C1	C3043	D2	D3	R1041	C1	D1	R3046	D1	D3
C1045	C2	D1	C3044	E1	D3	R1043	C2	D1	R3051	D2	E2
C1046	C2	D1	C3055	E3	E3	R1051	C3	D1	R3052	E2	E3
C1052	C3	E1	C3056	F2	E3	R1058	C3	E1	R3054	F2	E3
C1057	B3	E1				R2014	E2	A2			
C2011	A2	A2	CR2015	E2	A2	R2015	E2	A2	U1013	A2	A1
C2012	A2	A2				R2015	E2	A2	U1022	A2	B1
C2021	A2	A2	L2013	A2	A2	R2030	D1	C2	U1022A	A1	B1
C2023	A3	A2	L2018	A2	A2	R2041	C2	D2	U1022B	B1	B1
C2024	A3	B2	L2031	F1	C2	R2043	D2	D2	U1036B	C1	C1
C2025	A3	A2	L2033	E1	C2	R2044	C2	D2	U1036	B2	C1
C2032	F1	C2	L3011	A3	A3	R2045	C2	D2	U1036A	B1	C1
C2041	B2	D2	L3034	F1	C3	R2046	C2	D1	U1044	C2	D1
C2042	C2	D2				R2047	D2	E3	U1053	C3	E1
C2051	B3	E2	Q2016	E2	A2	R2048	D2	D2	U2026	A3	B2
C2052	B3	E2	Q2017	E2	A2	R2049	D2	D2	U2047A	D2	D2
C2053	D3	E2	Q3015	F2	A3	R2051	D2	D2	U2047	B3	D2
C2054	D3	E2				R2053	D2	E2	U2047A	D1	D2
C2055	D2	E2	R1021	A1	A1	R2054	D2	E2	U3024	A3	B3
C2056	D3	E2	R1023	A1	B1	R2055	E1	E2	U3053	E2	E3
C2057	D1	E2	R1026	A1	B1	R2056	D2	E3	VR1048	B3	D1
C3021	A3	A3	R1027	B1	B1	R3012	F2	A3			
C3022	A3	B3	R1029	B1	B1	R3013	E2	A3			
C3023	A3	B3	R1032	A1	C1	R3014	E1	A3			
C3031	E1	C3	R1033	B1	C1	R3016	F2	A3			

**ASSEMBLY A23A3**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1021	C5	B1	C3023	B4	B3	Q3021	B4	B3	R3011	C4	A3
C1022	C5	B1	C3023	C5	B3				R3021	B4	B2
C1023	C5	B1	C3024	C5	B3	R1021	A4	B1	R3022	B4	B2
C2021	A4	B2	C3024	C4	B3	R1022	A4	B1	R3023	B4	B2
C2022	A4	B2	C3025	C5	B3	R1023	A4	B1	R3024	C4	B3
C2023	A5	B2				R2021	B4	B2	R3025	C4	B3
C2024	A5	B2	CR2022	A4	B2	R2022	A4	B2	R3027	C4	B3
C3011	C4	A3	CR2021	A4	B2	R2023	A4	B2	R3028	C4	B3
C3013	B4	A3				R2024	B5	B2	R3029	C4	B3
C3014	B4	A3	L2014	A5	A1	R2025	B5	B2			
C3020	B4	B3	L3011	C4	A3	R2026	B5	B2			
C3021	B4	B3	L3014	B4	A3	R2027	B5	B2			
C3022	B4	B3	L3021	B4	B3	R2028	B5	B2			

**25 MHz Phase Lock**

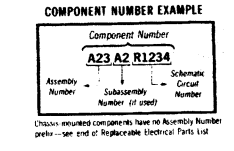
**Harmonic Mixer**



492/492P (S/N B030000 & UP)

(2852-83) 3784-14  
REV NOV 1983

829 MHz 2nd CONVERTER (LO SECTION) 14



NOTE: \* PRINTED ELEMENTS

Static Sensitive Devices See Maintenance Section

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

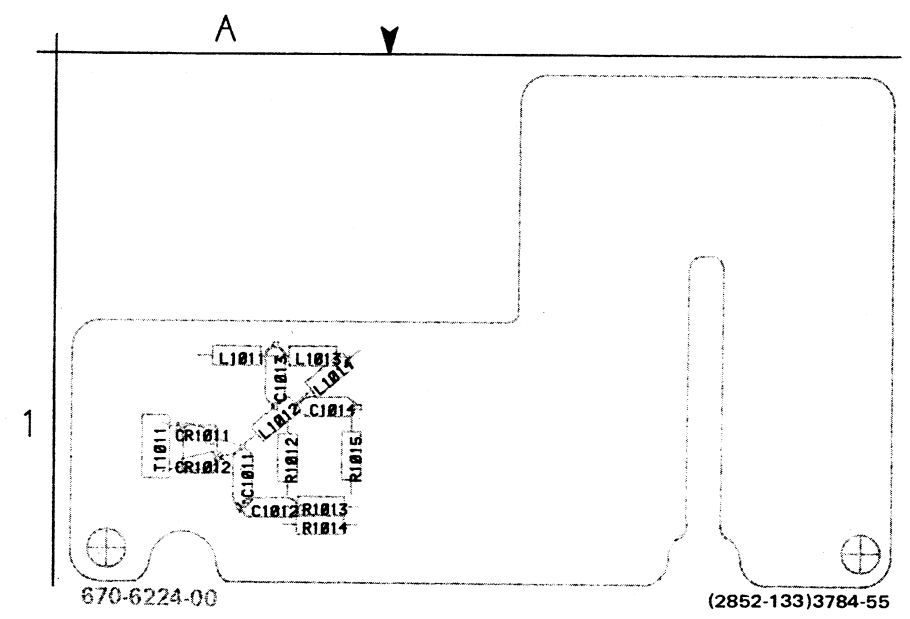
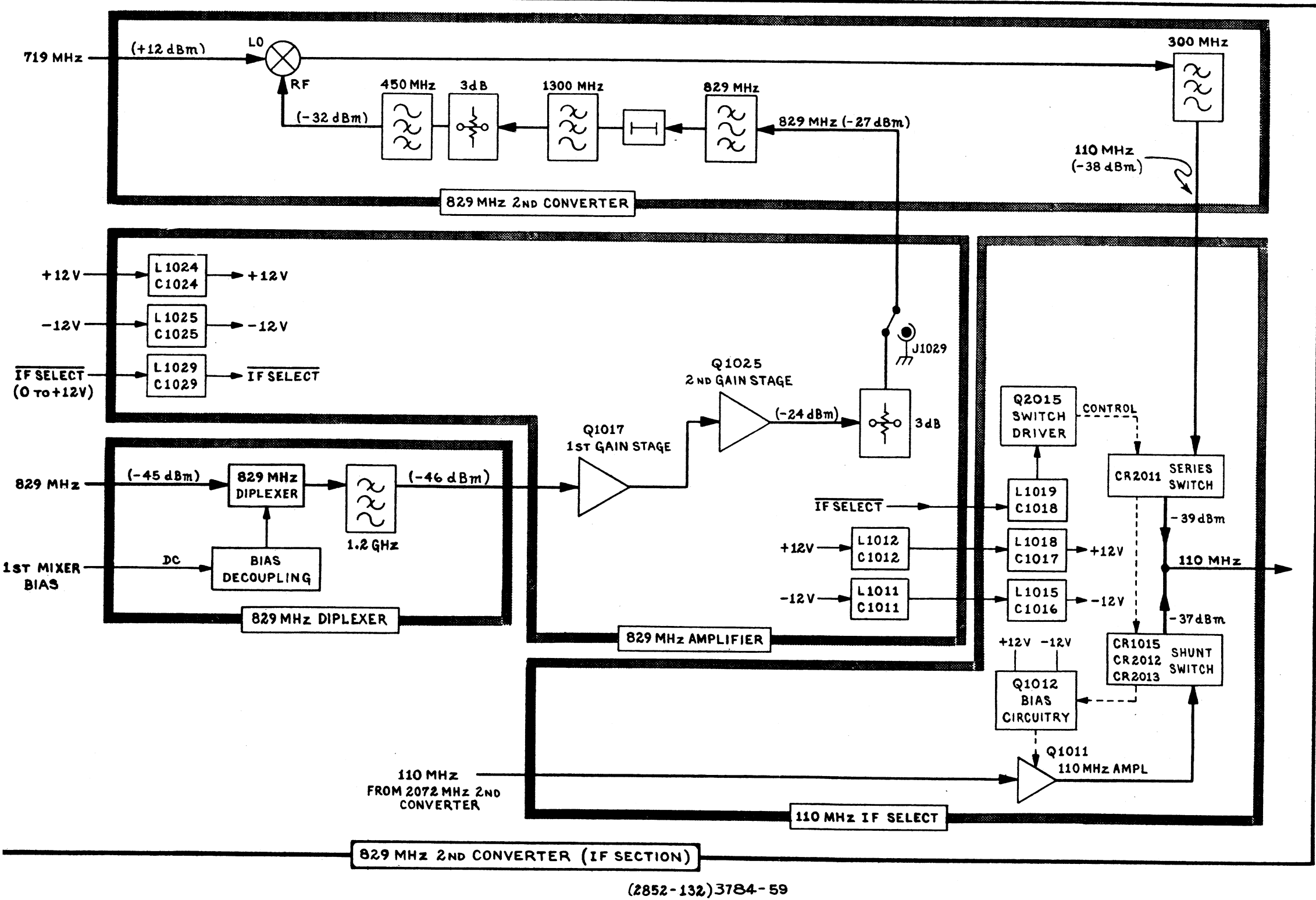


Fig. 8-6. A23A7—829 MHz 2nd Converter circuit board.

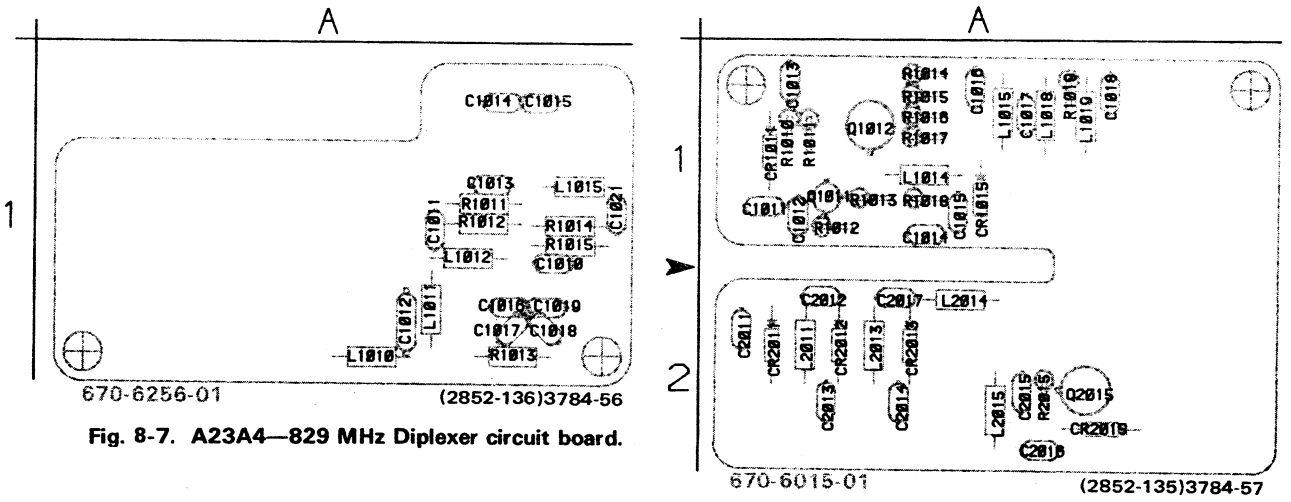


Fig. 8-7. A23A4—829 MHz Diplexer circuit board.

Fig. 8-8. A23A6—110 MHz IF Select circuit board.

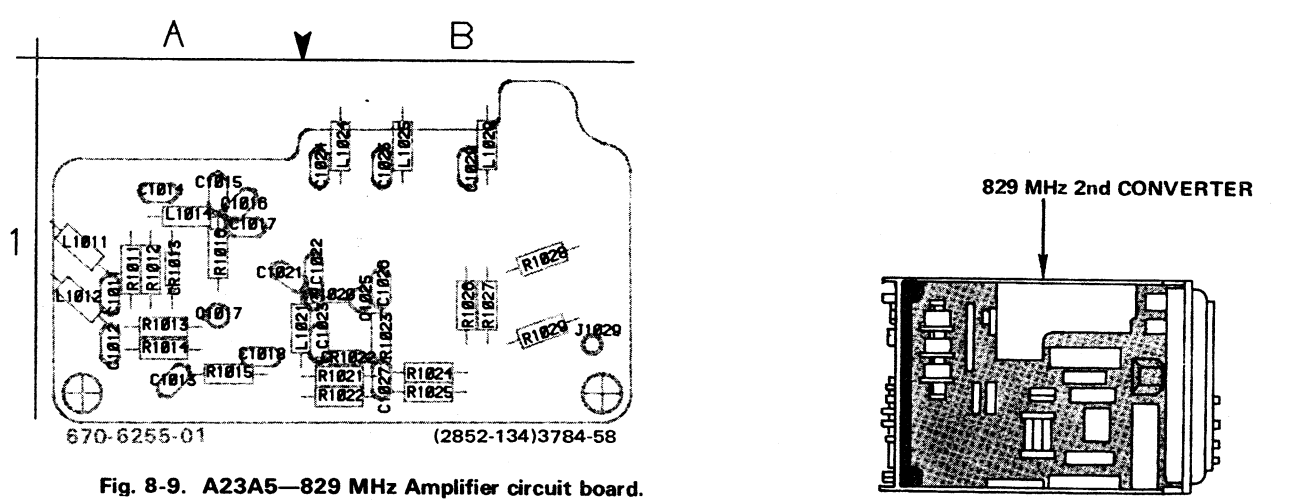
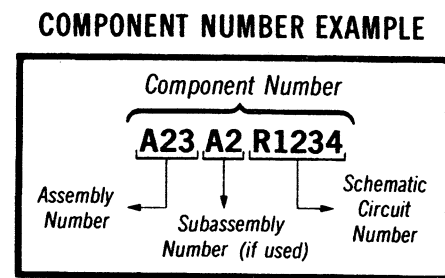


Fig. 8-9. A23A5—829 MHz Amplifier circuit board.

**Static Sensitive Devices**  
See Maintenance Section



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

829 MHz 2nd Converter (IF Section) DIAGRAM 15

ASSEMBLY A23A7

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	B1	A1
C1012	B1	A1
C1013	E1	A1
C1014	E1	A1
R1014	C1	A1
R1015	C1	A1
T1011	B1	A1

829 MHz 2nd Converter

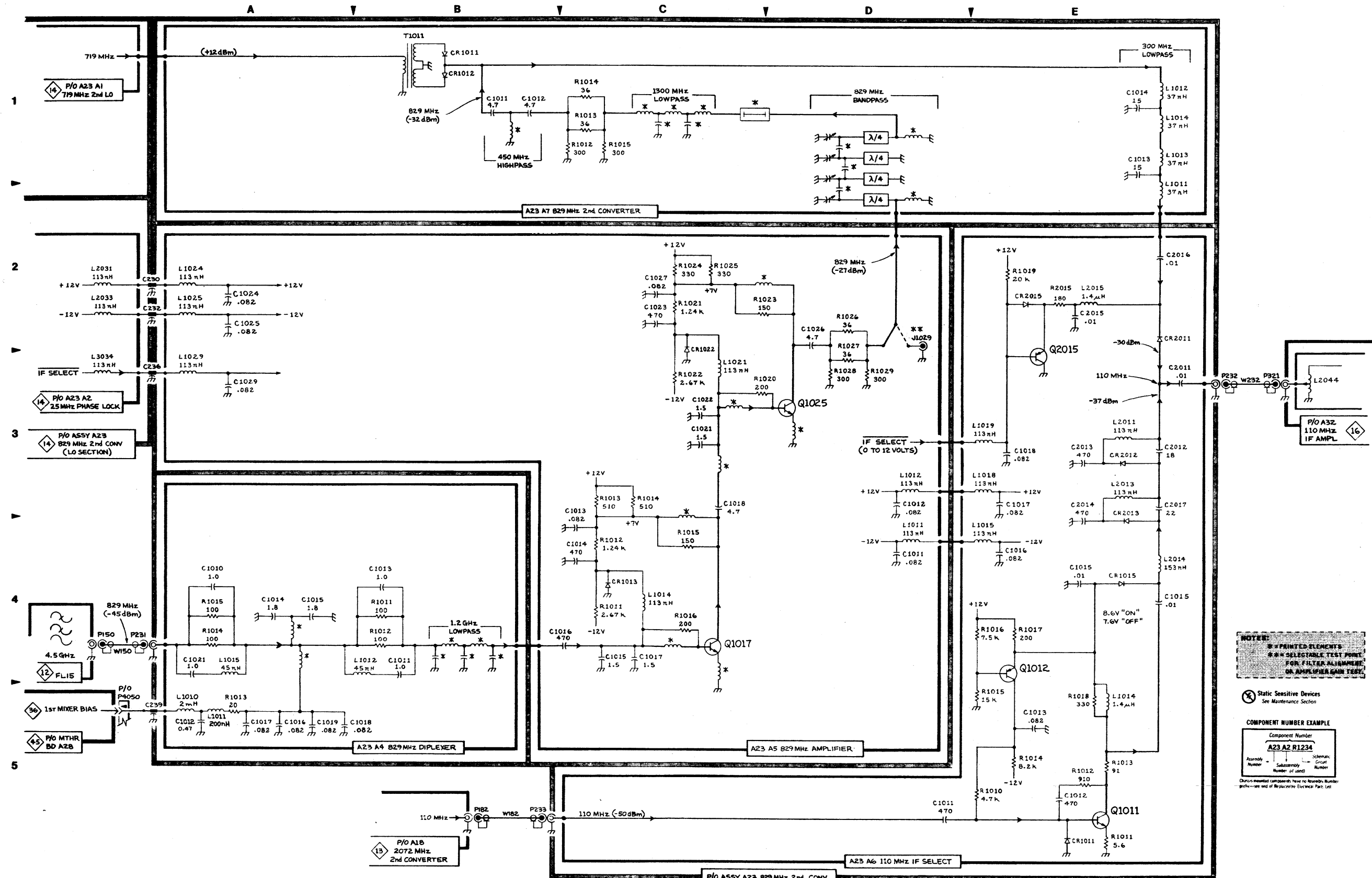
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR1011	B1	A1
CR1012	B1	A1
L1011	E1	A1
L1012	E1	A1
L1013	E1	A1
L1014	E1	A1
R1012	C1	A1
R1013	C1	A1

ASSEMBLY A23A5

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	D4	A1
C1012	D3	A1
C1013	C4	A1
C1014	C4	A1
C1015	C4	A1
C1016	C4	A1
C1017	C4	A1
C1018	C3	A1
C1021	C3	A1
C1022	C3	B1
C1023	C2	B1
C1024	A2	B1
C1025	A2	B1
R1020	C3	B1
R1021	C2	B1
R1022	C3	B1
R1023	C2	B1
R1024	C2	B1
R1025	C2	B1
R1026	D3	B1
R1027	D2	B1
R1029	D3	B1

829 MHz Amplifier

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1026	D2	B1
C1027	C2	B1
C1029	A3	B1
CR1013	C4	A1
CR1022	C2	B1
J1029	D2	B1
L1011	D4	A1
L1012	D3	A1
L1014	C4	A1
L1021	C3	A1
L1024	A2	B1
L1025	A2	B1
L1029	A3	B1
Q1017	C4	A1
Q1025	D3	B1
R1011	C4	A1
R1012	C4	A1
R1013	C3	A1
R1014	C3	A1
R1015	C4	A1
R1016	C4	A1



492/492P (SN 8030000 & UP)

(2852-84) 3784-1-15  
REV. AUG. 1981

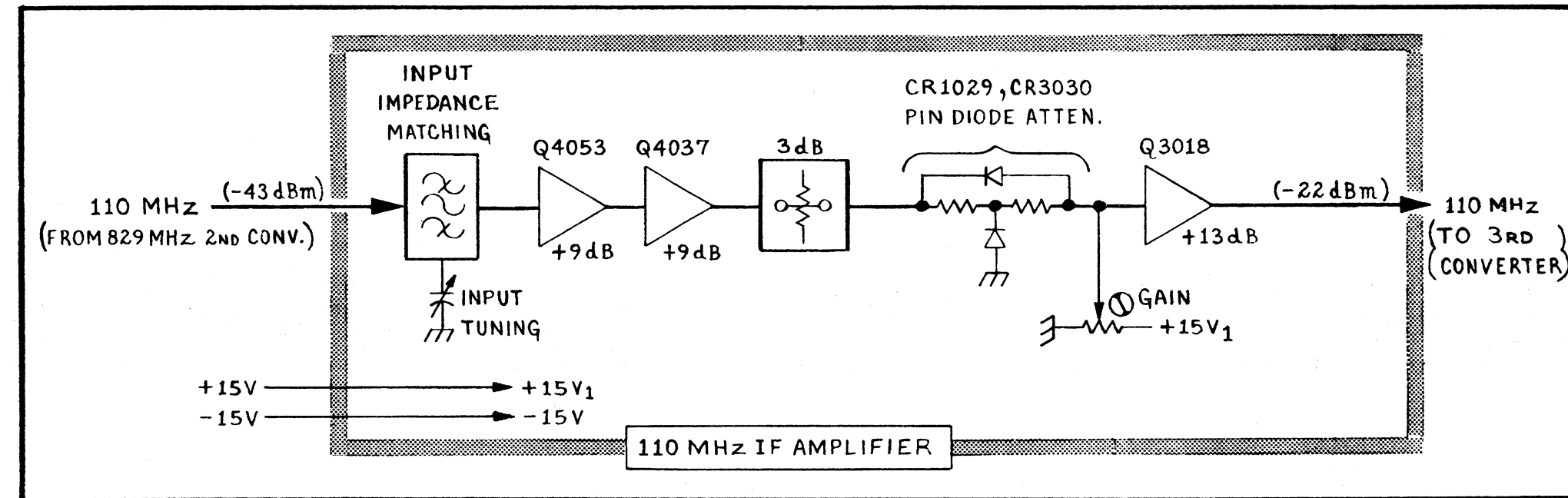
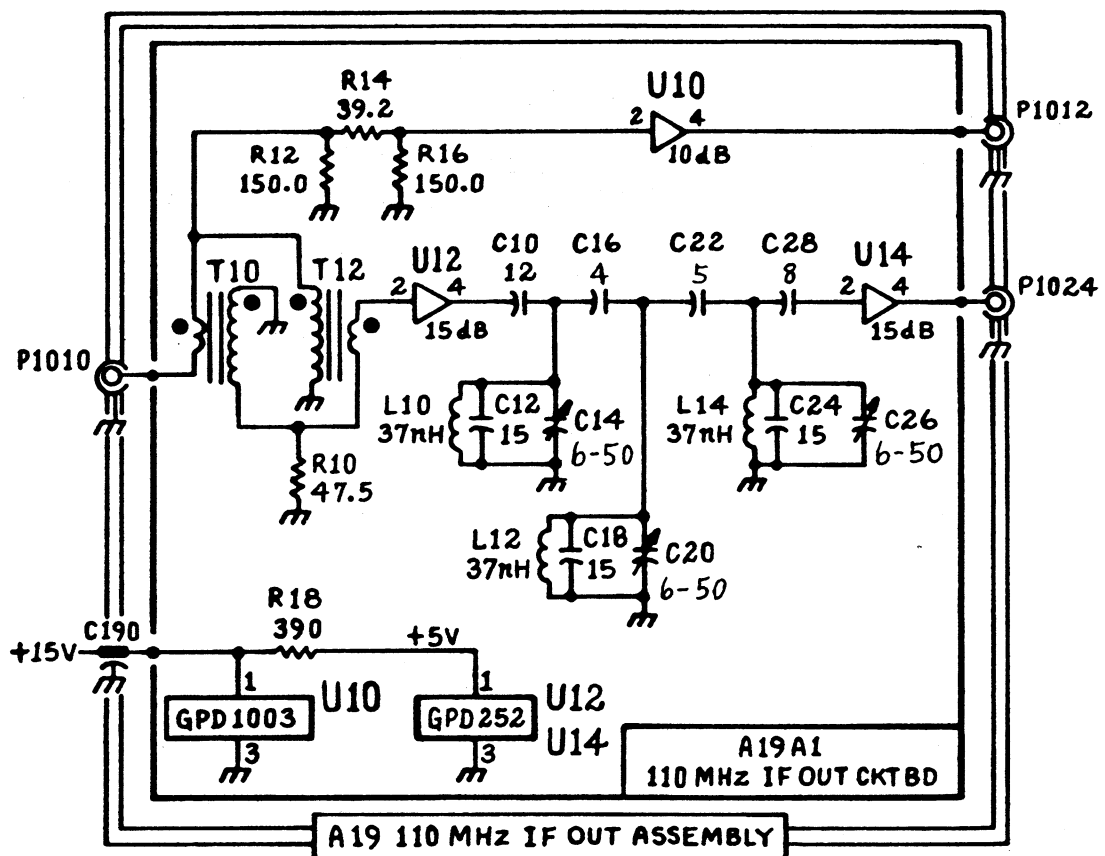
829 MHz 2nd CONVERTER (IF SECTION)

15

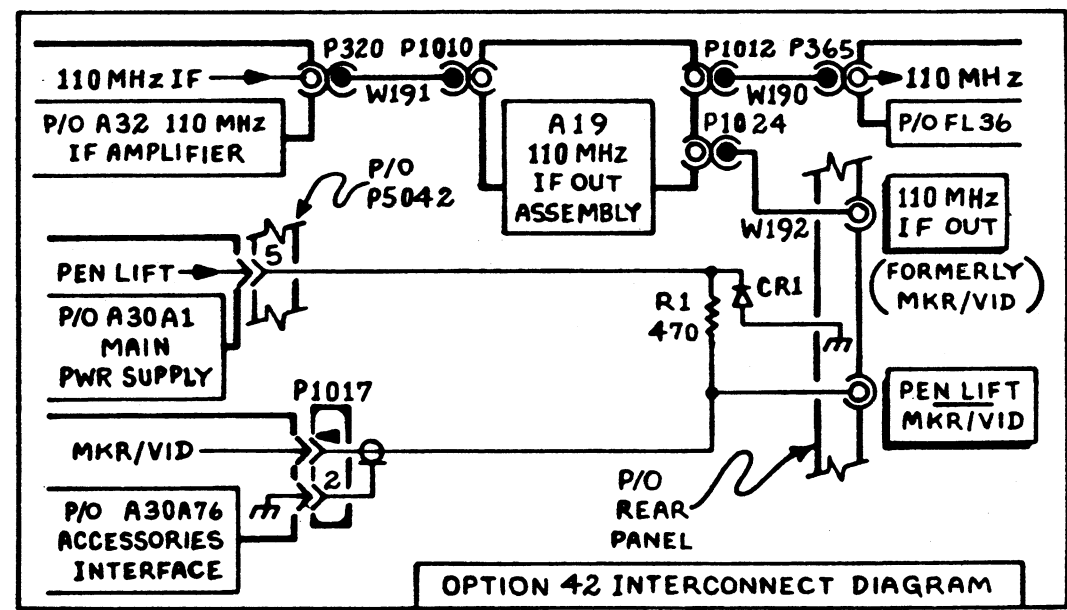
NOTES:  
\* PRINTED ELEMENTS  
\* IN SELECTABLE TEST POINT  
FOR FILTER ALIGNMENT  
OR AMPLIFIER GAIN TEST.

Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE  
Component Number  
A23 A2 R1234  
Assembly Number | Subassembly Number | Schematic Number | Circuit Number | Number of Units



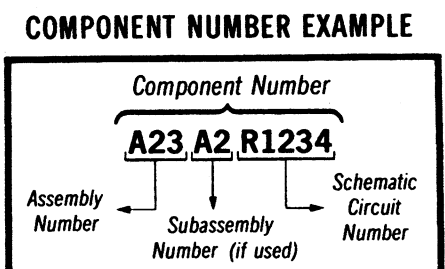
(2852-138)3784-60



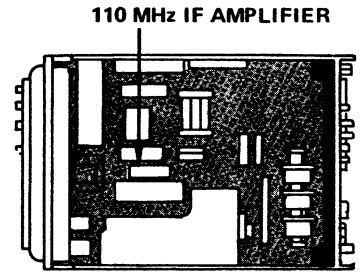
	A	B	C	D	E
1	R1015 C1012	R1012 R2019	CR1029 CR3030 C2037 R2038 R2039 C2040 C2041 C2042 C2043	L1030 L2041 C2044 R2045 R2046 R2047 R2048 R2049 R2050 R2051	MOUNTED ON MODULE BASE C325 INPUT TUNE
2	C2010 C2011	R1018 R4012	T2020 R2021 C2022 R2023 R2024 R2025 R2026 R2027 R2028 C2029 R2030 R2031 R2032 R2033 C2034 R2035 R2036 R2037	C2038 R2039 R2040 R2041 R2042 R2043 R2044 R2045 R2046 R2047 R2048 R2049 R2050 R2051	
3	R2014	Q3018	Q4053 Q4037 Q4038 Q4039 Q4040 Q4041 Q4042 Q4043 Q4044 Q4045 Q4046 Q4047 Q4048 Q4049 Q4050 Q4051 Q4052 Q4053 Q4054 Q4055 Q4056 Q4057	Q3018 Q4037 Q4038 Q4039 Q4040 Q4041 Q4042 Q4043 Q4044 Q4045 Q4046 Q4047 Q4048 Q4049 Q4050 Q4051 Q4052 Q4053 Q4054 Q4055 Q4056 Q4057	
4		R4018	C4020 R4021 R4022 R4023 R4024 R4025 R4026 R4027 R4028 R4029 R4030 R4031 R4032 R4033 R4034 R4035 R4036 R4037 R4038 R4039 R4040 R4041 R4042 R4043 R4044 R4045 R4046 R4047 R4048 R4049 R4050 R4051 R4052 R4053 R4054 R4055 R4056 R4057	R4038 R4039 R4040 R4041 R4042 R4043 R4044 R4045 R4046 R4047 R4048 R4049 R4050 R4051 R4052 R4053 R4054 R4055 R4056 R4057	

Fig. 8-10. A32A1—110 MHz IF Amplifier circuit board.

Static Sensitive Devices  
See Maintenance Section



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



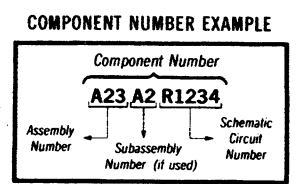
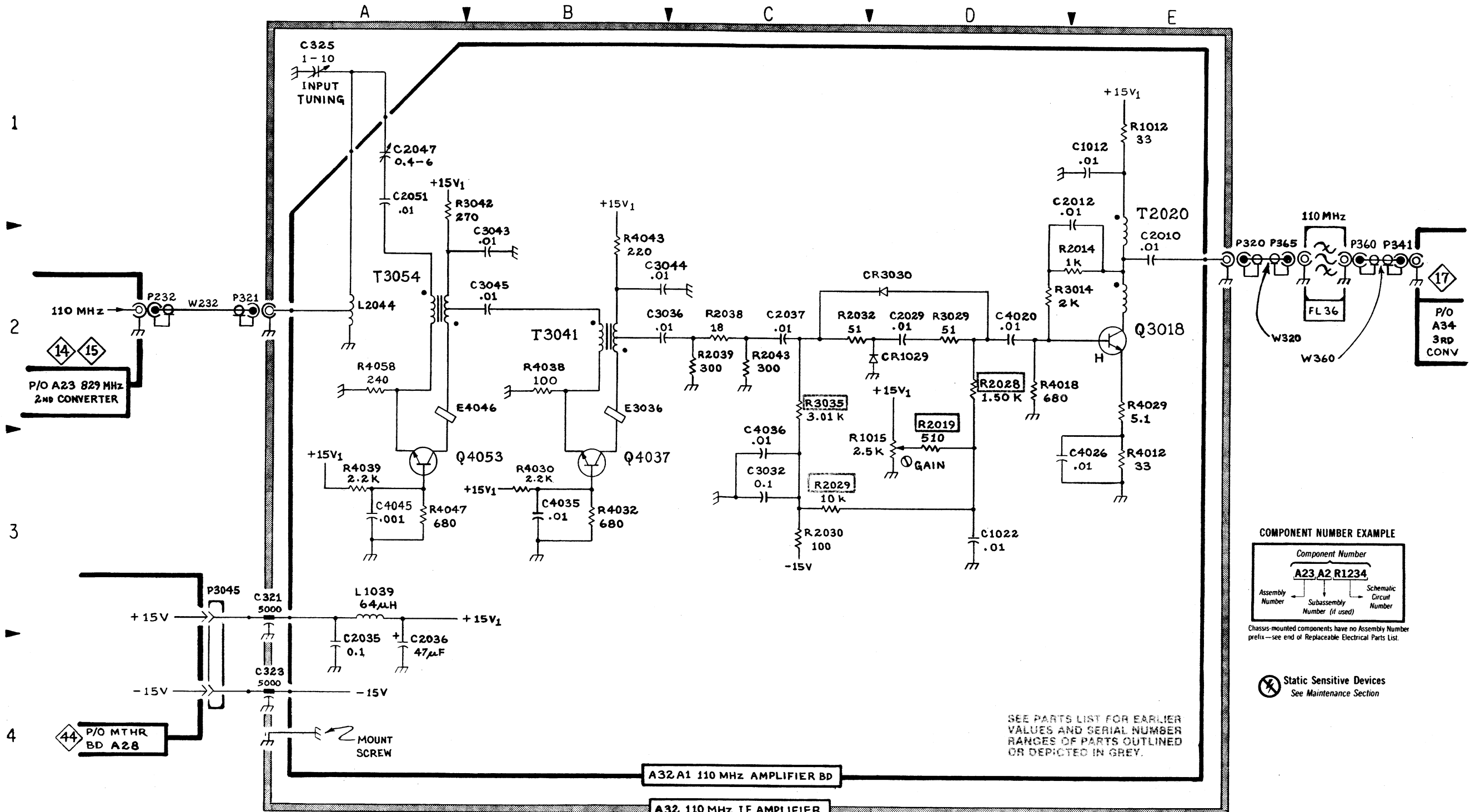
3784-154

110 MHz IF DIAGRAM 16

ASSEMBLY A32A1

110 MHz IF Amplifier

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C325	A1	E1	CR1029	D2	C1	R2039	C2	C2
C1012	E1	A1	CR3032	D2	C3	R2043	C2	D2
C1022	D3	B2				R3014	D2	A3
C2010	E2	A2	E3036	B2	NA	R3029	D2	B3
C2012	E1	A2	E4046	A2	NA	R3035	C2	C2
C2029	D2	B2				R3042	A1	D2
C2035	A4	C2	L1039	A3	D1	R4012	E3	A4
C2036	A4	D1	L2044	A2	D2	R4018	D2	B4
C2037	C2	C2				R4029	E2	B4
C2047	A1	D2	Q3018	E2	A3	R4030	B3	B4
C2051	A1	E2	Q4037	B3	C4	R4032	B3	C4
C3032	C3	C3	Q4053	A3	E4	R4038	B2	D4
C3036	B2	C2				R4039	A3	D4
C3043	B2	D3	R1012	E1	B1	R4043	B2	D3
C3044	B2	D3	R1015	D3	A1	R4047	A3	E4
C3045	B2	D3	R2014	E2	A2	R4058	A2	E4
C4020	D2	B4	R2019	D3	B2	T2020	E1	B2
C4026	D3	B4	R2028	D2	B3	T3041	B2	D3
C4035	B3	C4	R2029	D3	B2	T3054	B2	D3
C4036	C3	C4	R2030	C3	C2			
C4045	A3	D4	R2032	C2	C2			
			R2038	C2	C2			



⊗ Static Sensitive Devices  
See Maintenance Section

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

492/492P (SN B030000 & UP)

(2852 - 85) 3784-16  
REV JUNE 81

110 MHz IF 16

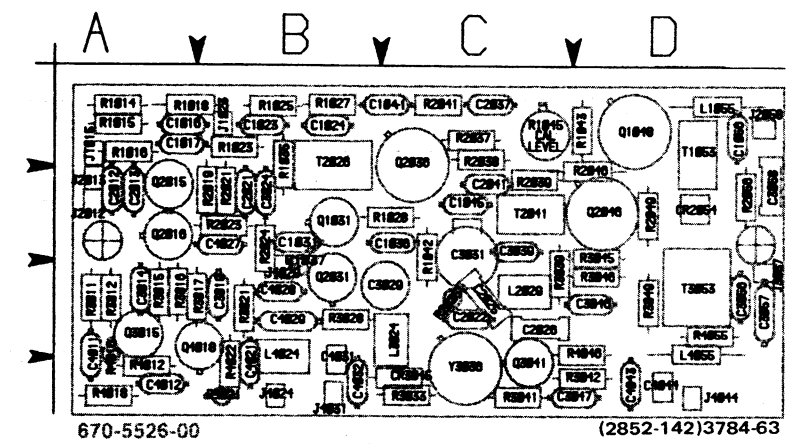
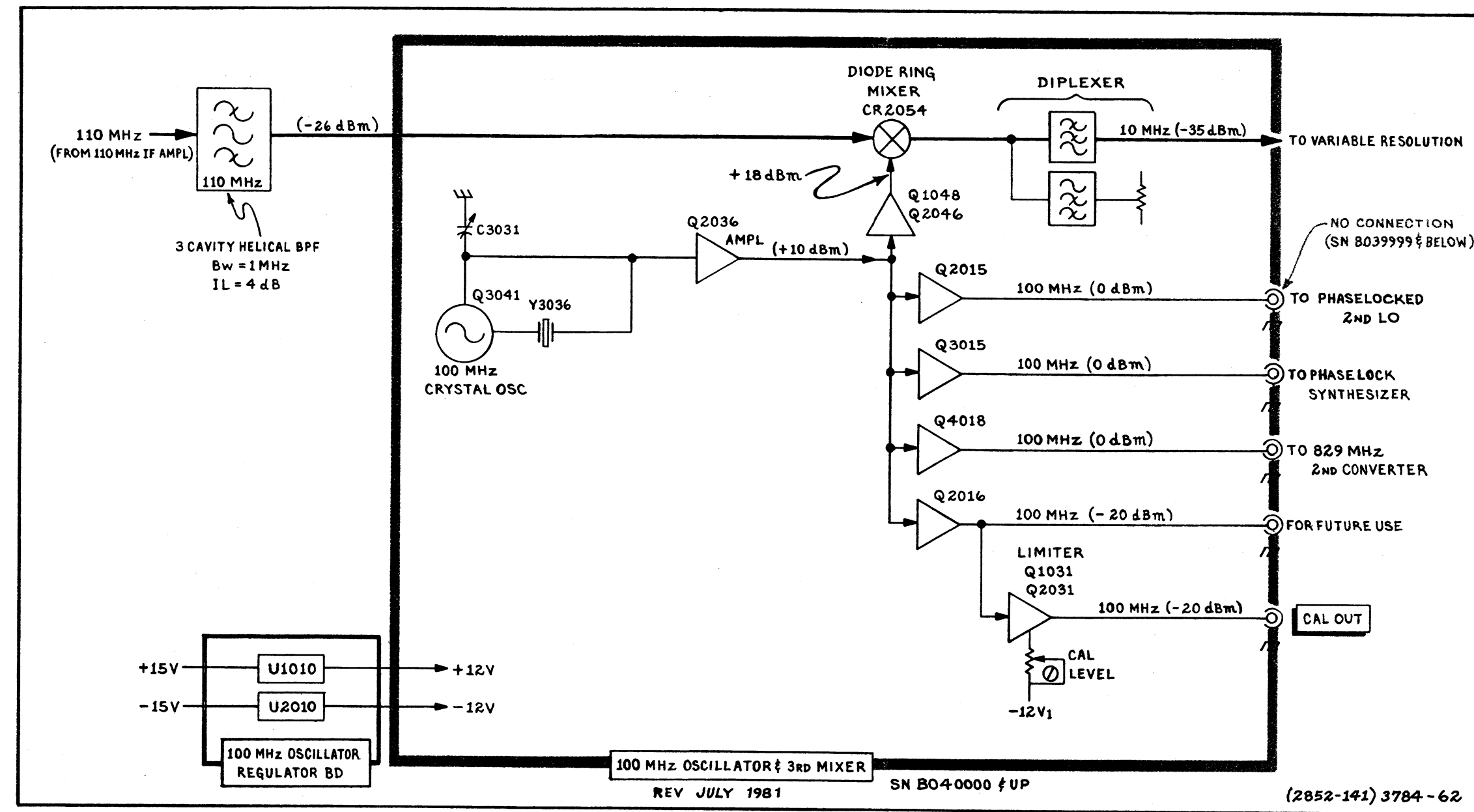
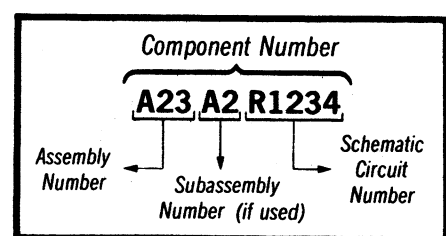


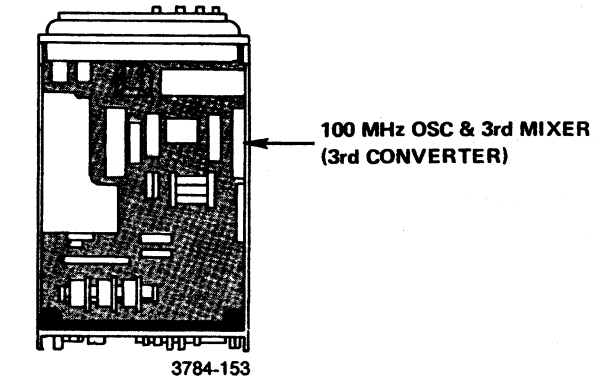
Fig. 8-11. A34A1—100 MHz OSC & 3rd Mixer circuit board.

Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



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

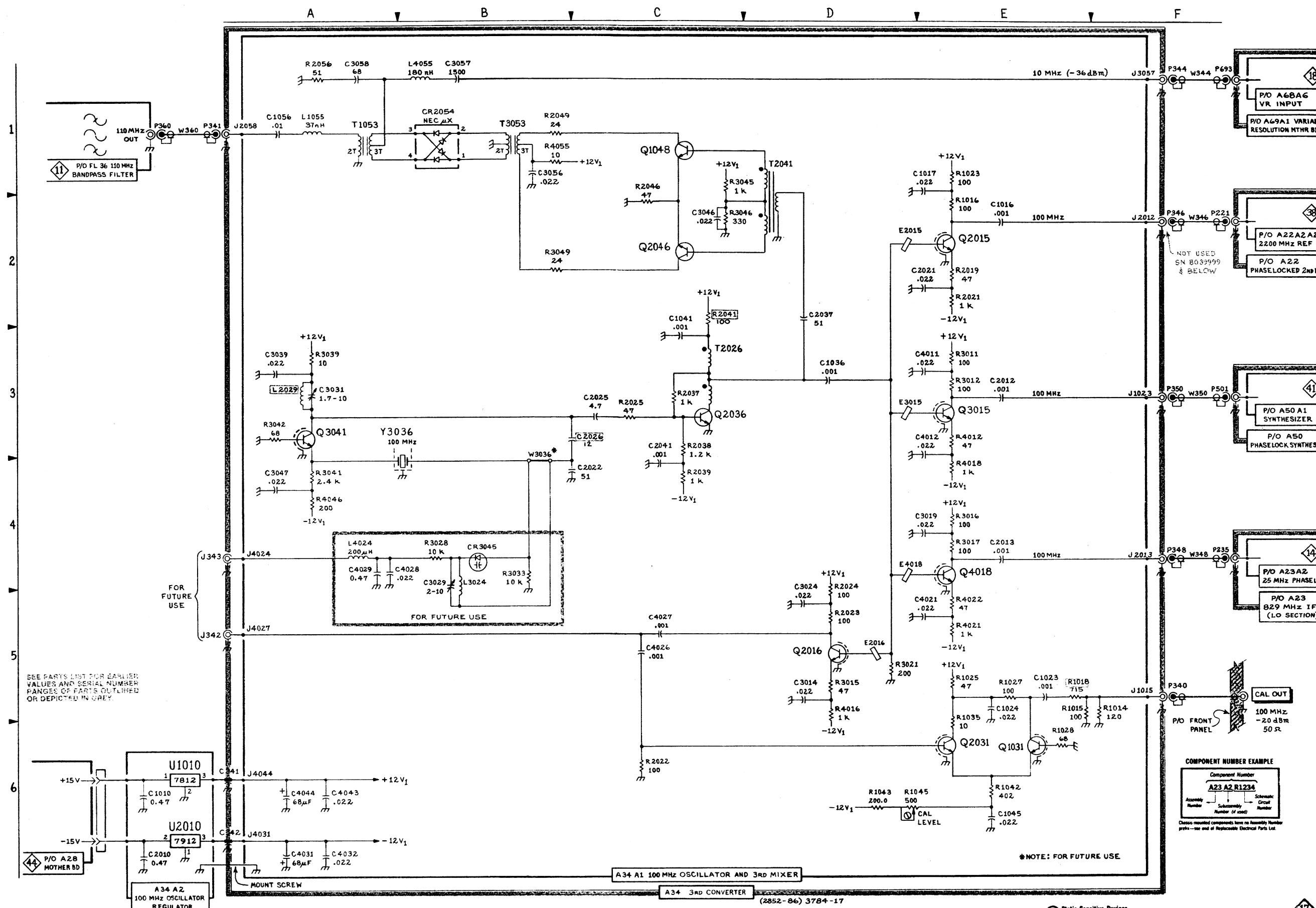


### 3rd Converter DIAGRAM 17

#### ASSEMBLY A34A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
L1055	B1	E1	C4028	B3	B3	Q1031	E4	B2	R2049	C1	D2
C1016	E2	A1	C4029	B4	B3	Q1048	C1	D1	R2056	B2	E2
C1017	E2	A1	C4031	B5	B4	Q2015	E3	A2	R3011	E3	A3
C1023	E4	B1	C4032	B5	B4	Q2016	C4	A2	R3012	E3	A3
C1024	E4	B1	C4043	B5	B4	Q2031	E4	B3	R3015	C4	A3
C1036	D2	C2	C4044	B5	E4	Q2036	D2	C1	R3016	E1	A3
C1041	D2	C1	C4026	C4	B2	Q2046	C2	D2	R3017	E1	A3
C1045	E5	C2	CR2054	B1	E2	Q3015	E3	A3	R3021	D4	B3
C1056	B1	E1	CR3045	B3	C4	Q3041	B2	D4	R3028	B3	B3
C2012	E3	A2				Q4018	E2	A4	R3033	B3	C4
C2013	E2	A2	E2015	E3	A2	R1014	E4	A1	R3039	B2	D3
C2021	E3	B2	E2016	D4	A2	R1015	E4	A1	R3041	B3	D4
C2022	C3	C3	E3015	E3	A3	R1016	E2	A1	R3042	B2	D4
C2025	C2	C3	E4018	E2	A4	R1018	E4	A1	R3045	D1	D2
C2026	C2	D3				R1023	E2	B1	R3046	D1	D3
C2037	D2	C1	J1015	A1	A1	R1025	E4	B1	R3049	C2	D3
C2041	D2	C2	J1023	F2	B1	R1027	E4	B1	R4012	E3	A4
C3014	C4	A3	J2012	A2	A2	R1028	E4	C2	R4016	C4	A4
C3019	E1	B3	J2013	A2	A2	R1035	E4	B1	R4021	E2	B4
C3024	C4	B2	J2058	E1	E1	R1042	E5	C2	R4022	E2	B4
C3029	B3	C3	J3057	E3	E3	R1043	D5	D1	R4046	B3	D4
C3031	B2	C2	J4024	B4	B4	R1045	D5	D1	R4055	C1	E3
C3039	B2	D2	J4029	B2	B3	R2019	E3	A2	R2022	C5	B2
C3046	D1	D3	J4031	B4	B4	R2021	E3	B2	T1053	B1	E1
C3047	B3	D4	J4044	E4	E4	R2023	C4	B2	T2026	D2	B1
C3056	C1	E3				R2024	C4	B2	T2041	D1	D2
C3057	C1	E3	L1055	B1	E1	R2025	C2	C3	T3053	C1	E3
C3058	B1	E2	L2029	B2	D3	R2037	D2	C1	W3036	B3	C4
C4011	E3	A4	L3024	C3	C3	R2038	D2	C1	Y3036	B2	C4
C4012	E3	A4	L4024	B4	B4	R2039	D2	D2			
C4021	E2	B4	L4055	C1	E4	R2041	D1	C1			
C4027	C4	B2				R2046	C1	D1			

#### 100 MHz OSC & 3rd Mixer

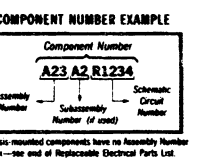


492/492P (SN B030000 & UP)

REV MAR 1985

Static Sensitive Devices See Maintenance Section

3RD CONVERTER



\*NOTE: FOR FUTURE USE

A34 A1 100 MHz OSCILLATOR AND 3rd MIXER

A34 A2 100 MHz OSCILLATOR REGULATOR

A34 3rd CONVERTER

(2852-86) 3784-17

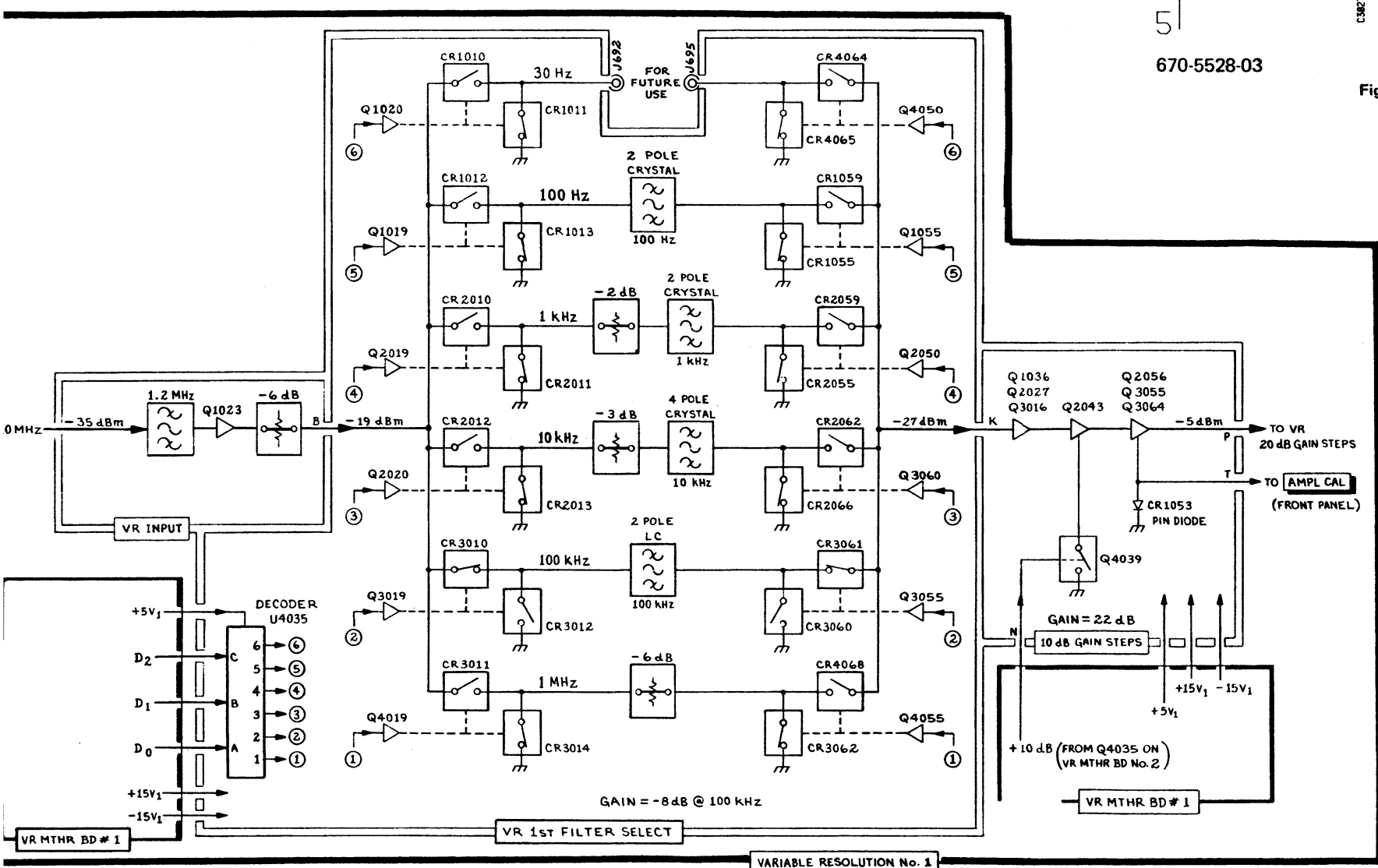
Variable Resolution No 1 DIAGRAM 18

ASSEMBLY A68A5

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1066	E5	F1	C3029	B3	B2	L3066	A2	F3	R2088	H2	NA
C1067	A5	F1	C3035	C3	B3				R3019	A2	A3
C1068	D5	F2	C3043	B3	D3	R1065	A5	F1	R3026	A5	B3
C1069	C5	F1	C3045	B3	C3	R1066	C5	F1	R3028	B3	B3
C1075	E5	G2	C3048	B2	E3	R1067	E5	F1	R3029	B2	B3
C1082	A4	H1	C3049	B3	E3	R1068	D5	F2	R3035	C3	B3
C1083	A5	H1	C3062	A2	F3	R1075	E5	G2	R3043	B3	D3
C1084	A5	H1	C3066	A3	F3	R1082	A4	H2	R3045	B3	C3
C2076	B4	G2	C3077	A4	G3	R1083	A5	H1	R3048	A2	E3
C2086	A4	H3	C3083	A4	H3	R1084	A5	H1	R3049	B3	E3
C3019	A2	A3	C3088	A4	H3	R1085	H1	NA	R3081	A4	H3
C3026	A5	B3				R2076	B4	G2			
C3028	B3	B3	L3065	A3	F3	R2086	A4	H2			

#1 VR Mother

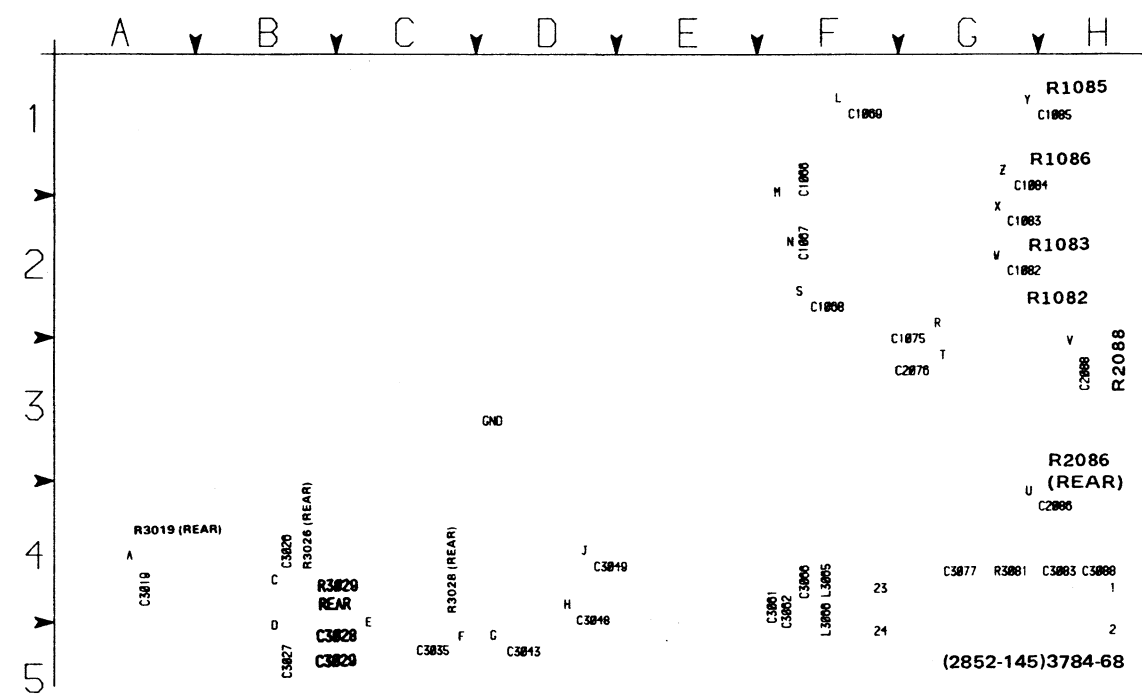
\*See Parts List for serial number ranges.



REV JULY 1981

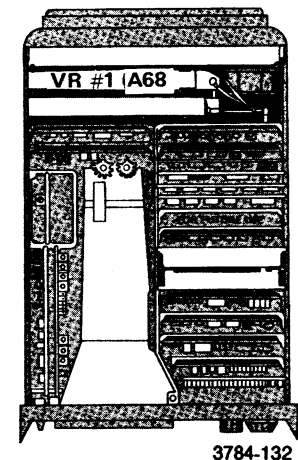
VARIABLE RESOLUTION No. 1

(2852-233) 3784-64



670-5528-03

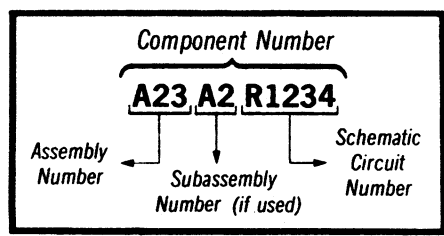
Fig. 8-12. A68A5—#1 VR Mother circuit board.



3784-132

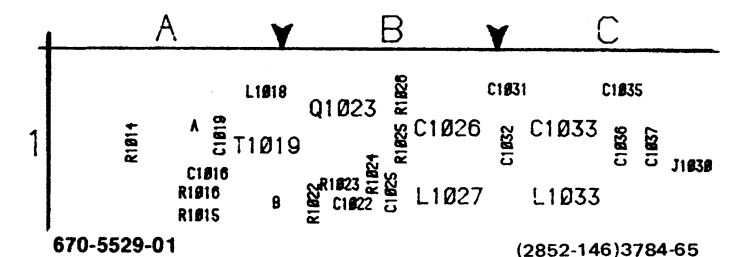
Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



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

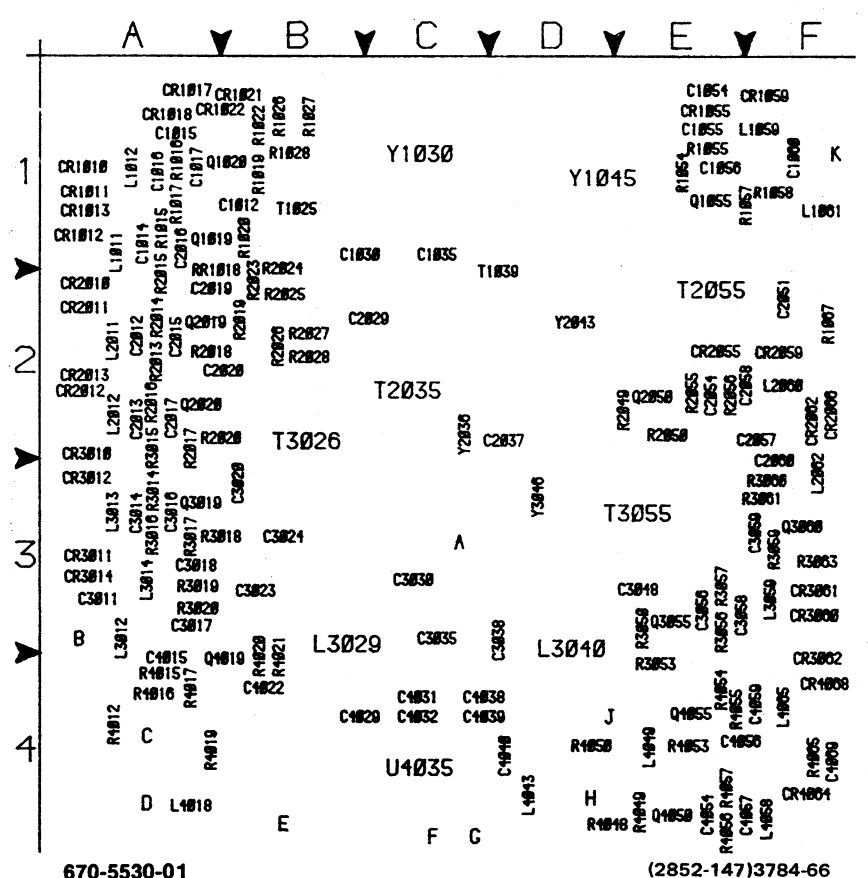
REV OCT 1985



670-5529-01

Fig. 8-13. A68A6—VR Input circuit board.

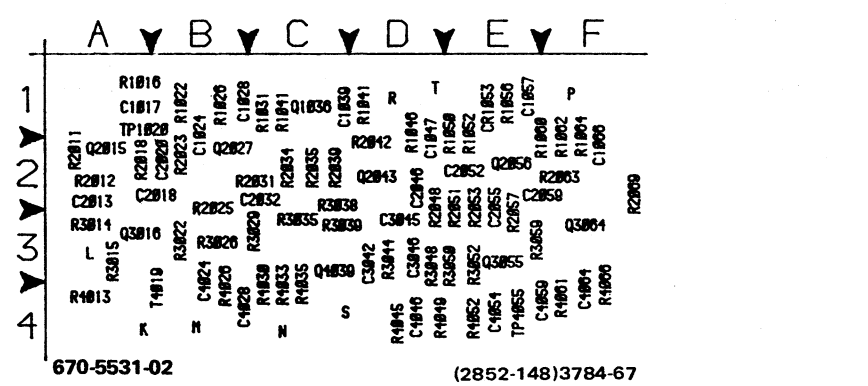
(2852-146)3784-65



670-5530-01

Fig. 8-14. A68A7—1st Filter Select circuit board.

(2852-147)3784-66



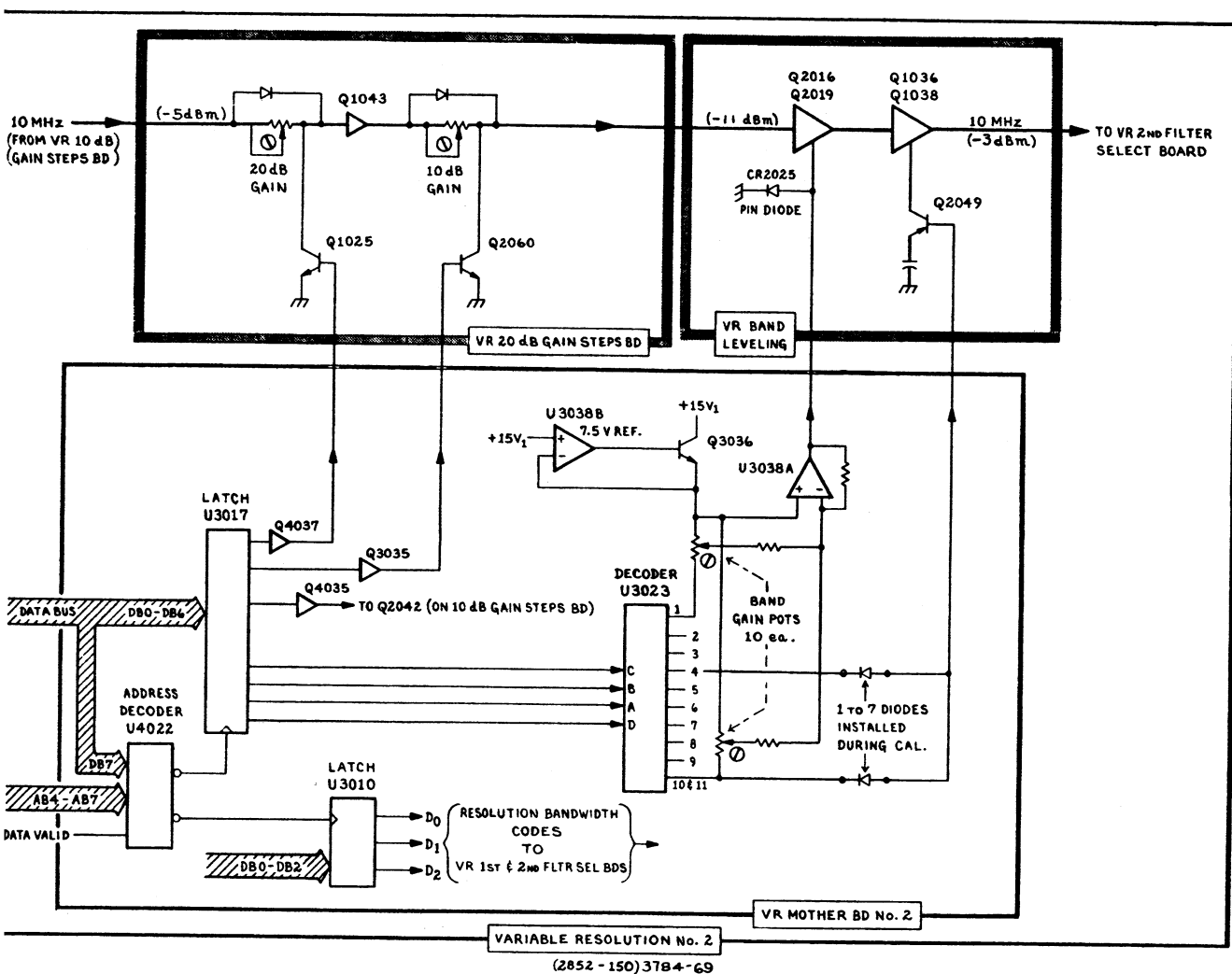
670-5531-02

Fig. 8-15. A68A8—10 dB Gain circuit board.

(2852-148)3784-67







VR MOTHER BD No. 2  
(2852-150) 3784-69

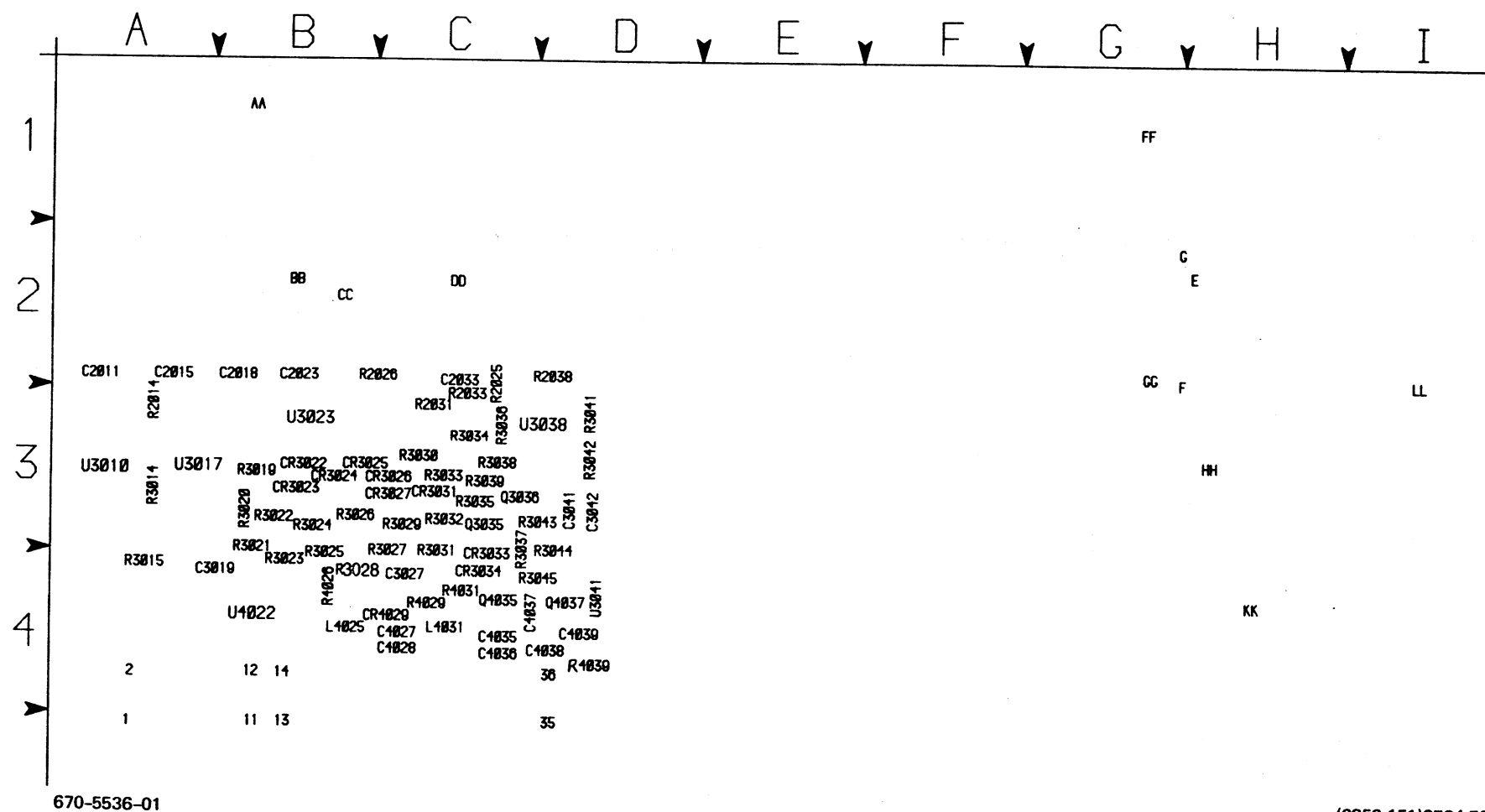
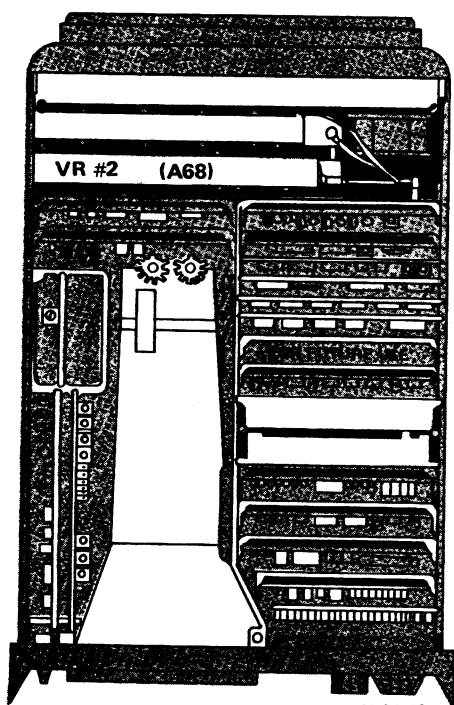


Fig. 8-16. A68A1-#2 VR Mother circuit board.



3784-131

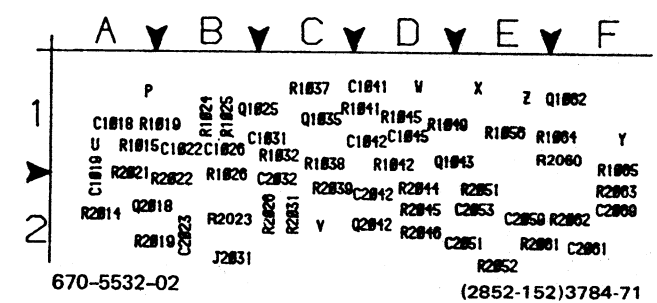


Fig. 8-17. A68A9-20 dB Gain Steps circuit board.

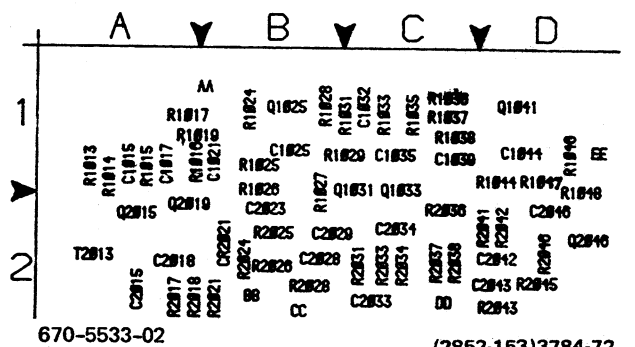
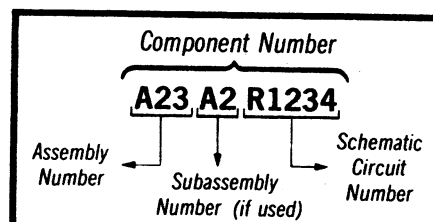


Fig. 8-18. A68A3-Band leveling circuit board.

(2852-151)3784-70

⚡ Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



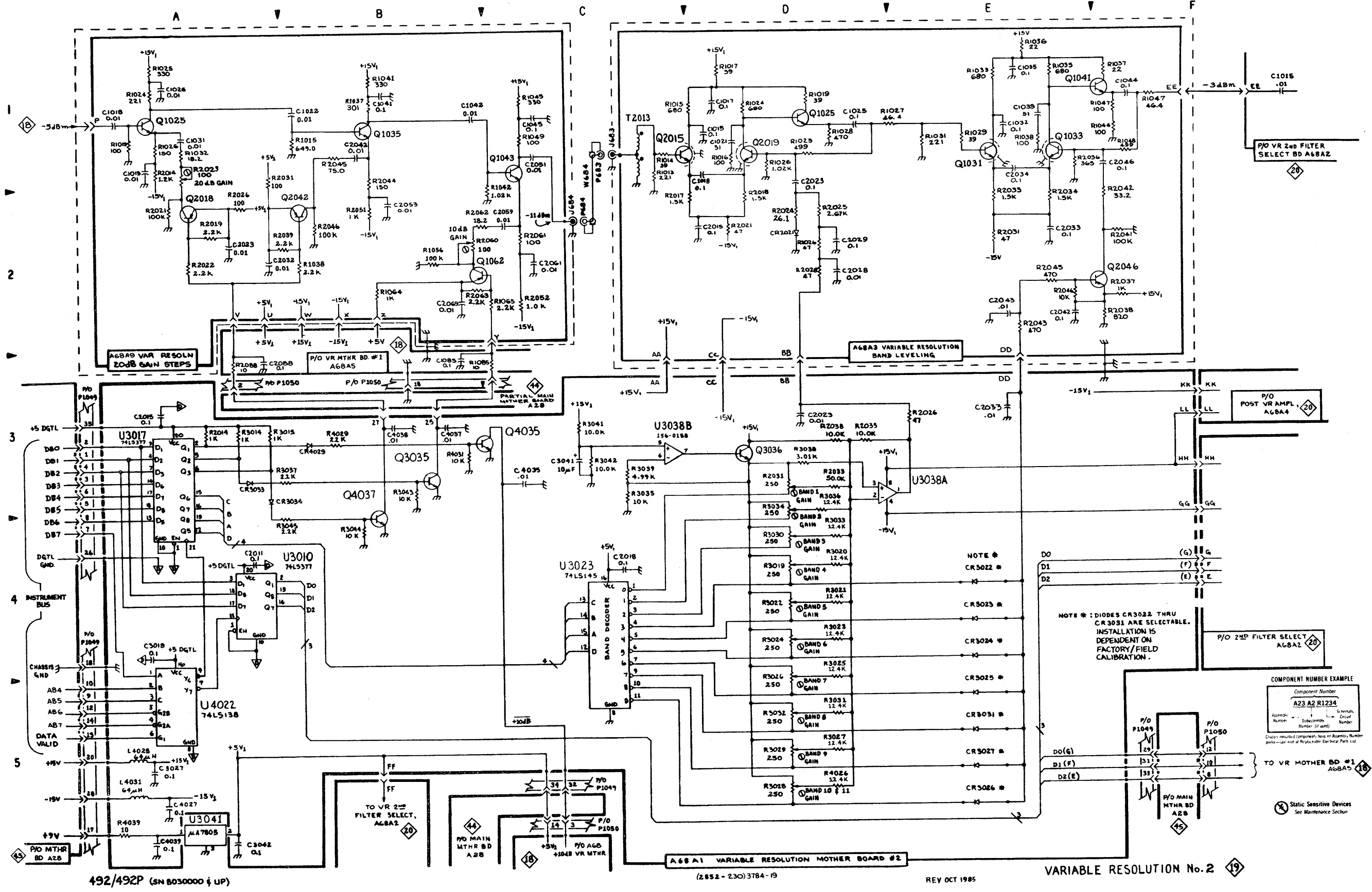
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

Variable Resolution No 2 DIAGRAM 19

ASSEMBLY A68A1 #2 VR Mother. Table with columns: CIRCUIT NUMBER, SCHEM LOCATION, BOARD LOCATION, CIRCUIT NUMBER, SCHEM LOCATION, BOARD LOCATION. Lists components like CR3025, R2033, R3035, etc.

ASSEMBLY A68A9 20 dB Gain Steps. Table with columns: CIRCUIT NUMBER, SCHEM LOCATION, BOARD LOCATION, CIRCUIT NUMBER, SCHEM LOCATION, BOARD LOCATION. Lists components like R1026, R2021, R1032, etc.

ASSEMBLY A68A3 Band leveling. Table with columns: CIRCUIT NUMBER, SCHEM LOCATION, BOARD LOCATION, CIRCUIT NUMBER, SCHEM LOCATION, BOARD LOCATION. Lists components like CR2021, R1026, R2025, etc.



492/492P (SN 8030000 & UP)

(2852 - 230)3784-19

REV OCT 1985

VARIABLE RESOLUTION No. 2 19

COMPONENT NUMBER EXAMPLE A23 A2 R1234. Includes a small schematic for a component number example and a note about static sensitive devices.

NOTE: DIODES CR3022 THRU CR3031 ARE SELECTABLE. INSTALLATION IS DEPENDENT ON FACTORY/FIELD CALIBRATION.

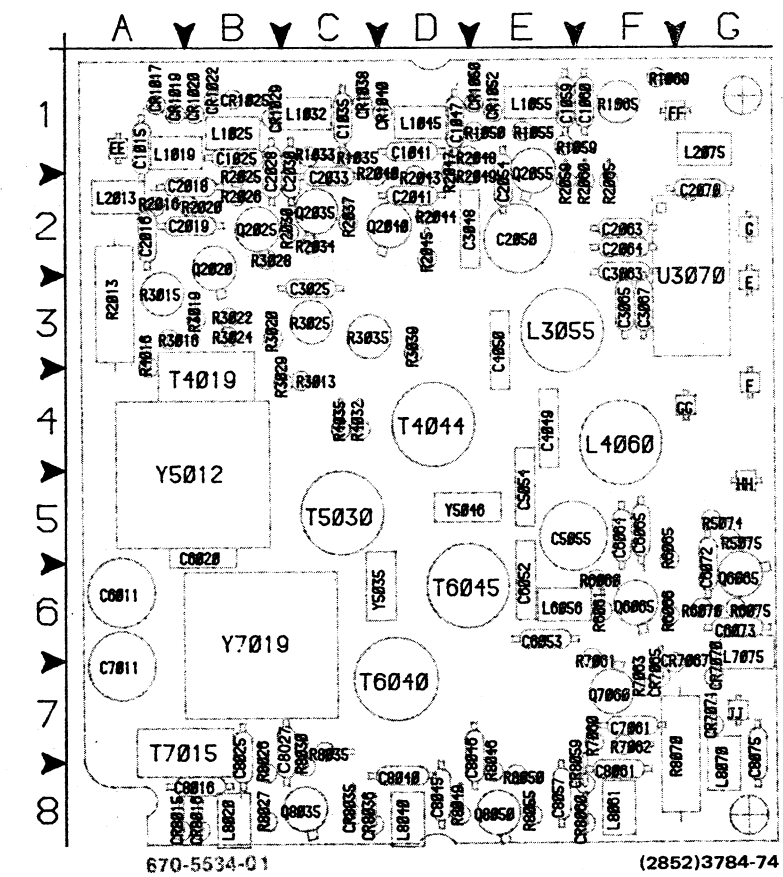
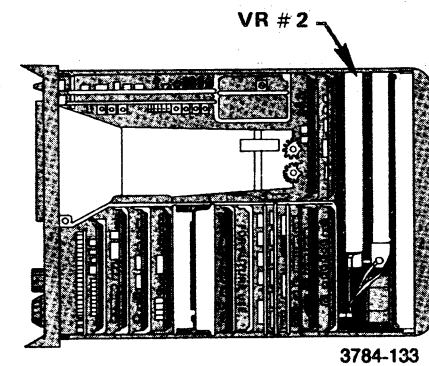
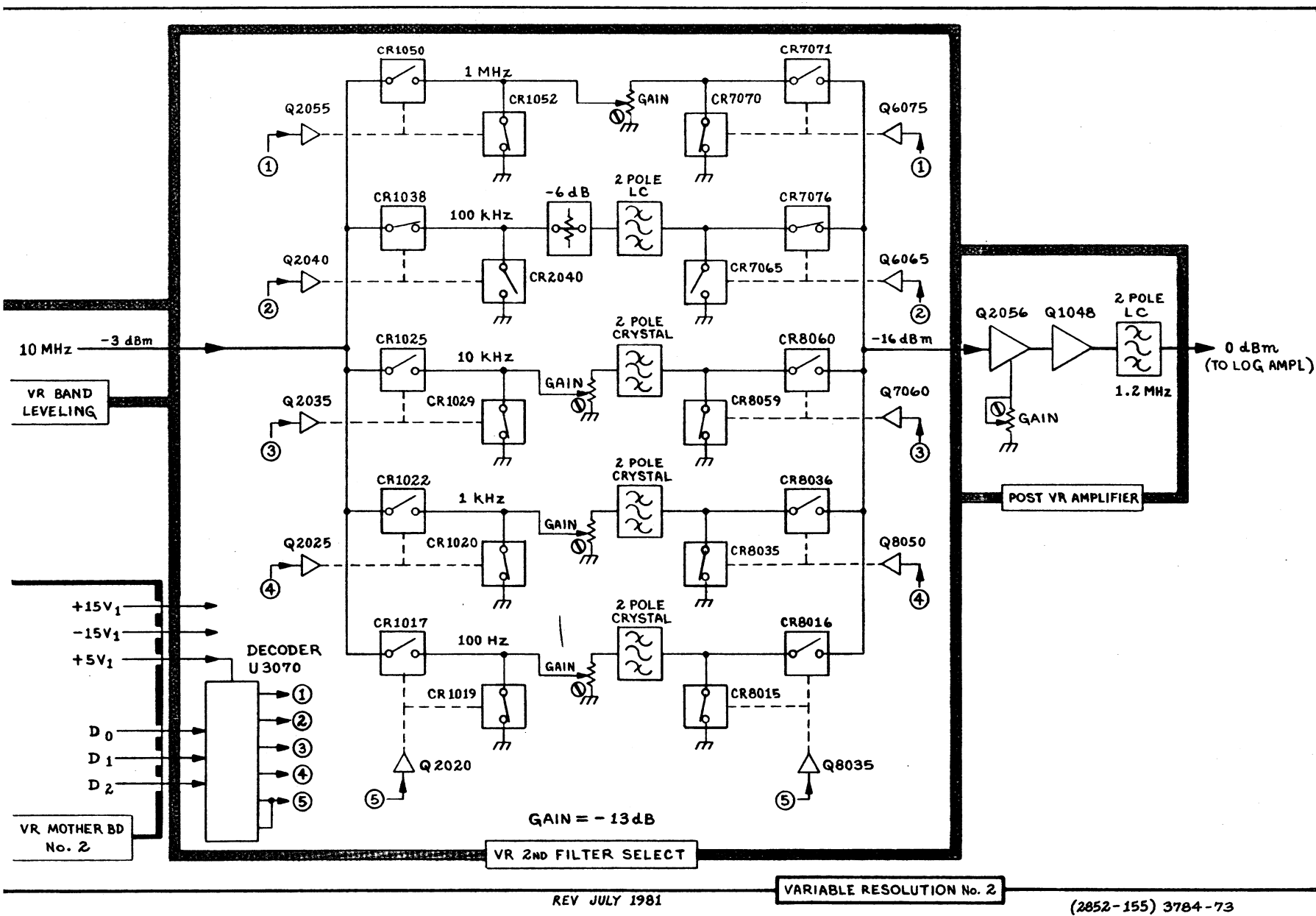


Fig. 8-19. A68A2—2nd Filter Select circuit board.

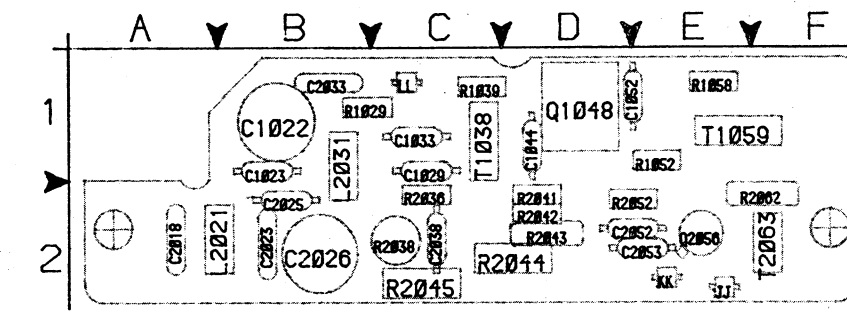
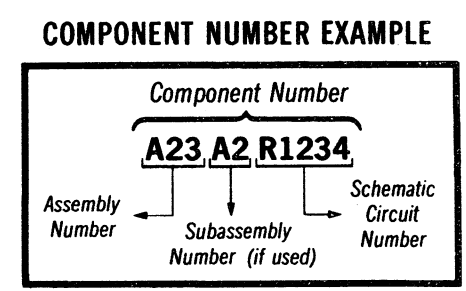


Fig. 8-20. A68A4—Post VR Amplifier circuit board.

Static Sensitive Devices  
See Maintenance Section



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

Variable Resolution No 2 DIAGRAM 20

ASSEMBLY A68A2

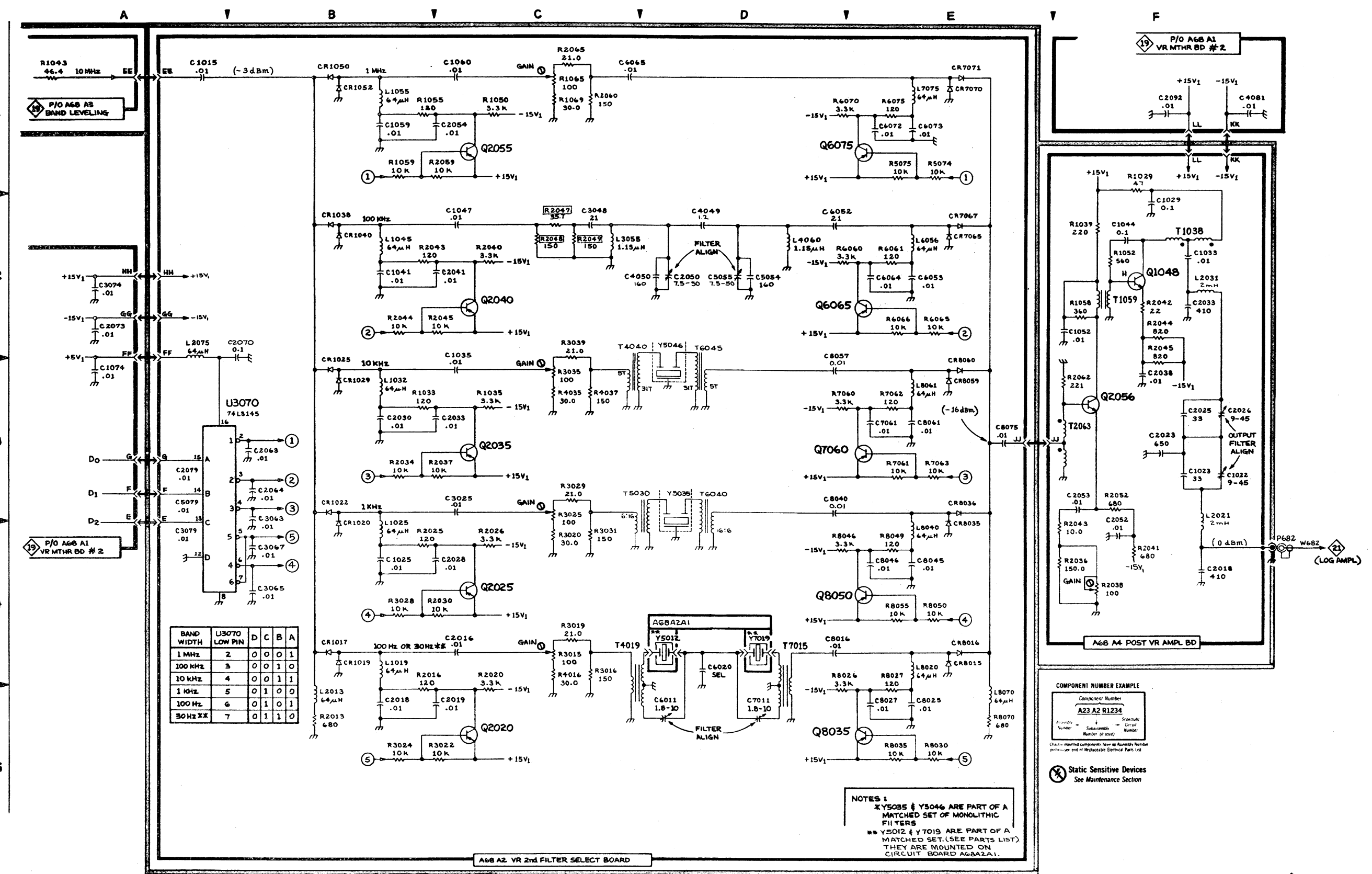
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1015	A1	A1	C8046	E4	E8	Q2025	C4	B2	R3029	C3	C4
C1025	B4	B1	C8057	D3	F8	Q2035	C3	C2	R3031	C4	C4
C1035	C3	C1	C8061	E3	F8	Q2040	C2	D2	R3035	C3	C3
C1041	B2	D1	C8075	E3	G7	Q2055	C1	E2	R3039	C3	D3
C1047	C2	D1				Q6065	E2	F6	R4016	C4	A3
C1059	B1	E1	CR1017	B4	A1	Q6075	E1	G5	R4032	C3	C4
C1060	C1	F1	CR1019	B4	A1	Q7060	E3	F7	R4035	C3	C4
C2016	C4	A2	CR1020	B4	B1	Q8035	E5	C8	R5074	E1	G5
C2018	B5	B2	CR1022	B3	B1	Q8050	E4	E8	R5075	E1	G5
C2019	B5	B2	CR1025	B3	B1				R6060	D2	F6
C2028	B4	B2	CR1029	B3	B1	R1033	B3	C1	R6061	E2	F6
C2030	B3	C2	CR1038	B2	C1	R1035	C3	C1	R6065	E2	G5
C2033	B3	C2	CR1040	B2	D1	R1050	C1	E1	R6066	E2	G6
C2041	C2	D2	CR1050	B1	E1	R1055	B1	E1	R6070	D1	G6
C2050	D2	E2	CR1052	B1	E1	R1059	B1	F1	R6075	E1	G6
C2054	C1	E2	CR7065	E2	G7	R1065	C1	F1	R7060	D3	F7
C2063	B3	F2	CR7067	E2	G7	R1069	C1	F1	R7061	E3	F6
C2064	B3	F2	CR7070	E1	G7	R2013	B5	A3	R7062	E3	F7
C2070	B2	G2	CR7071	E1	G7	R2016	B5	A2	R7063	E3	F7
C3025	C3	C3	CR8015	E4	B8	R2020	C5	B2	R8026	D6	B8
C3048	C2	D2	CR8016	E4	B8	R2025	B4	B2	R8027	E5	B8
C3063	B3	F3	CR8035	E4	C8	R2026	C4	B2	R8030	E5	C8
C3065	B4	F3	CR8036	E3	C8	R2030	B4	C2	R8035	E5	C8
C3067	B4	F3	CR8059	E3	F8	R2034	B3	C2	R8046	D4	E8
C4049	D2	E4	CR8060	E3	F8	R2037	B3	C2	R8049	E4	E8
C4050	D2	E3				R2040	C2	D2	R8050	E4	E8
C5054	D2	E5	L1019	B4	A1	R2043	B2	D2	R8055	E4	E8
C5055	D2	F5	L1025	B4	B1	R2044	B2	D2	R8070	E5	G7
C6011	D5	A6	L1032	B3	C1	R2045	B2	D2			
C6020	D4	B6	L1045	B2	D1	R2047	C2	D2	T4019	C4	B4
C6052	D2	E6	L1055	B1	E1	R2048	C2	E1	T4040	C3	D4
C6053	E2	E6	L2013	B5	A2	R2049	C2	E2	T5030	C3	C5
C6064	E2	F5	L2075	A2	G1	R2059	C1	F2	T6040	D3	D7
C6065	C1	F5	L3065	C2	E3	R2060	C1	F2	T6045	D3	E6
C6072	E1	G5	L4060	D2	F4	R2065	C1	F2	T7015	D4	B7
C6073	E1	G6	L6056	E2	F6	R3015	C4	A3	U3070	B3	G3
C7011	D5	A7	L7075	E1	G6	R3016	C4	A3	Y5012	D4	A5
C7061	E3	F7	L8020	E4	B8	R3019	C4	B3	Y5035	B3	D6
C8016	D4	B8	L8040	E4	D8	R3020	C4	B3	Y5046	D2	E5
C8025	E5	B8	L8061	E3	F8	R3022	B5	B3	Y7019	D4	B6
C8027	E5	C8	L8070	E5	G8	R3024	B5	B3			
C8040	D3	D8				R3025	C3	C3			
C8045	E4	D8	Q2020	C5	B3	R3028	B4	B2			

2nd Filter Select

ASSEMBLY A68A4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1022	F3	B1	C2033	F2	B2	R1029	F1	B1	R2045	F3	C2
C1023	F3	B1	C2038	F3	B2	R1039	F2	C1	R2052	F3	C2
C1029	F2	B1	C2052	F4	C2	R1052	F2	D1	R2062	F3	D2
C1033	F2	B1	C2053	F3	C2	R1058	F2	D1			
C1044	F2	C1				R2036	F4	C2	T1038	F2	C1
C1052	F2	C1	L2021	F3	A2	R2038	F4	B2	T1059	F2	D1
C2018	F4	A2	L2031	F2	B2	R2041	F4	C2	T2063	F3	D2
C2023	F3	B2				R2042	F2	C2			
C2025	F3	B2	Q1048	F2	C1	R2043	F4	C2			
C2026	F3	B2	Q2056	F3	D2	R2044	F2	C2			

Post VR Amplifier

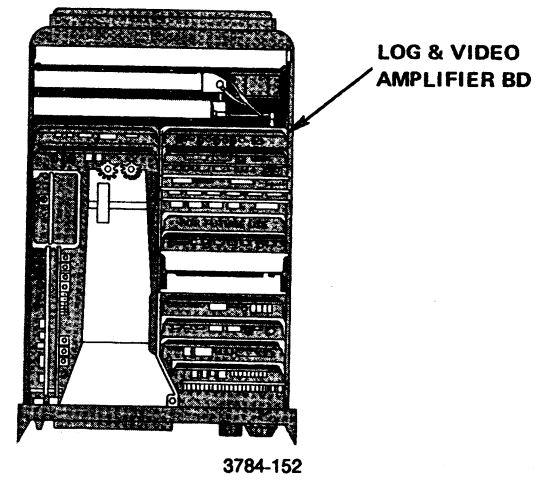
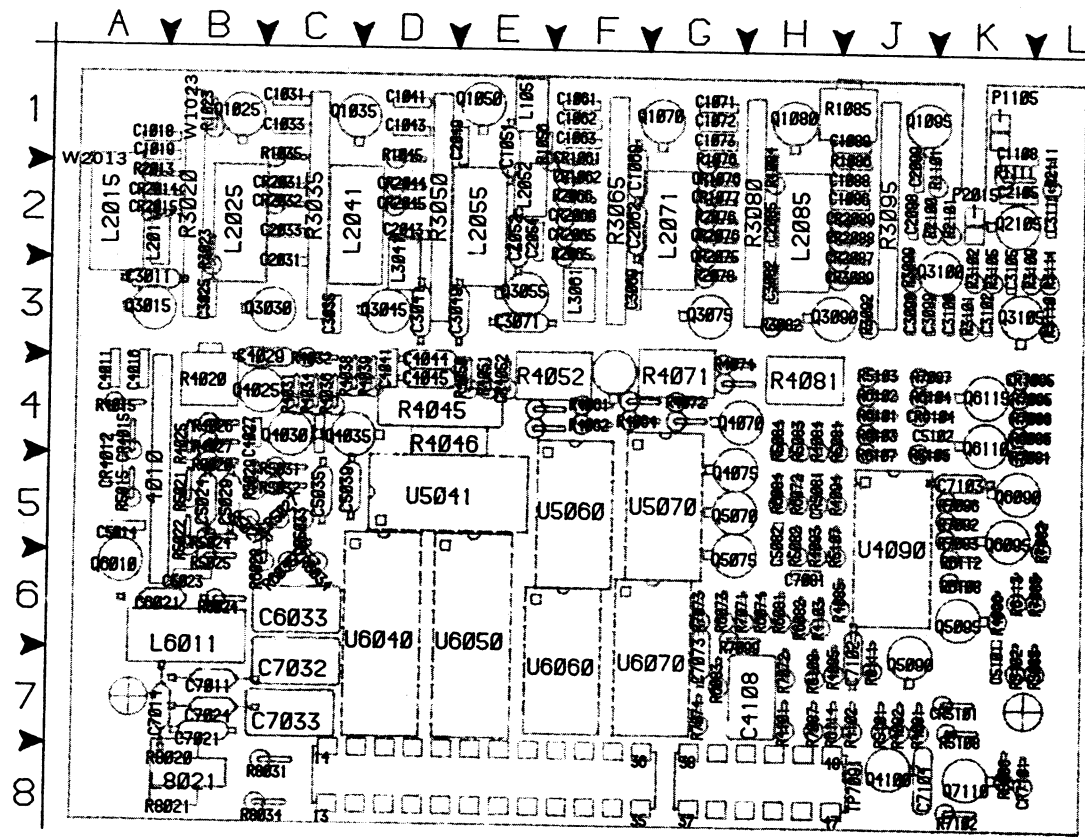
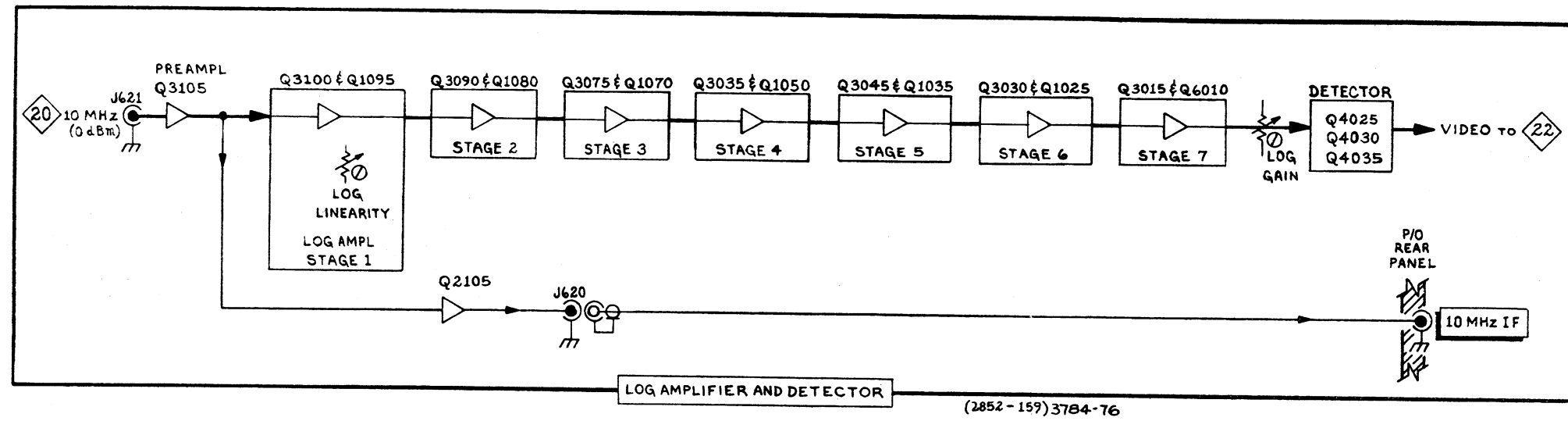


BAND WIDTH	U3070 LOW PIN	D	C	B	A
1 MHz	2	0	0	0	1
100 kHz	3	0	0	1	0
10 kHz	4	0	0	1	1
1 kHz	5	0	1	0	0
100 Hz	6	0	1	0	1
30 Hz XX	7	0	1	1	0

NOTES:  
 \*Y5035 & Y5046 ARE PART OF A MATCHED SET OF MONOLITHIC FILTERS  
 \*\*Y5012 & Y7019 ARE PART OF A MATCHED SET (SEE PARTS LIST) THEY ARE MOUNTED ON CIRCUIT BOARD AG8A2A1.

COMPONENT NUMBER EXAMPLE  
 Component Number  
**A23 A2 R1234**  
 Assembly Number      Subassembly Number      Serial Number  
 (Number of units)

Static Sensitive Devices  
 See Maintenance Section

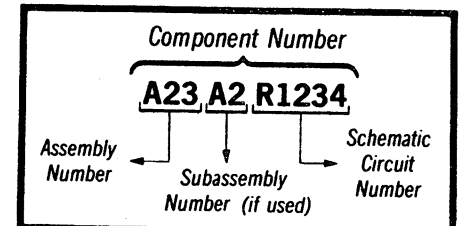


670-5548-01 (2852-160)3784-77

Fig. 8-21. A62—Log & Video Amplifier circuit board.

 Static Sensitive Devices  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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

Log Amplifier and Detector DIAGRAM 21

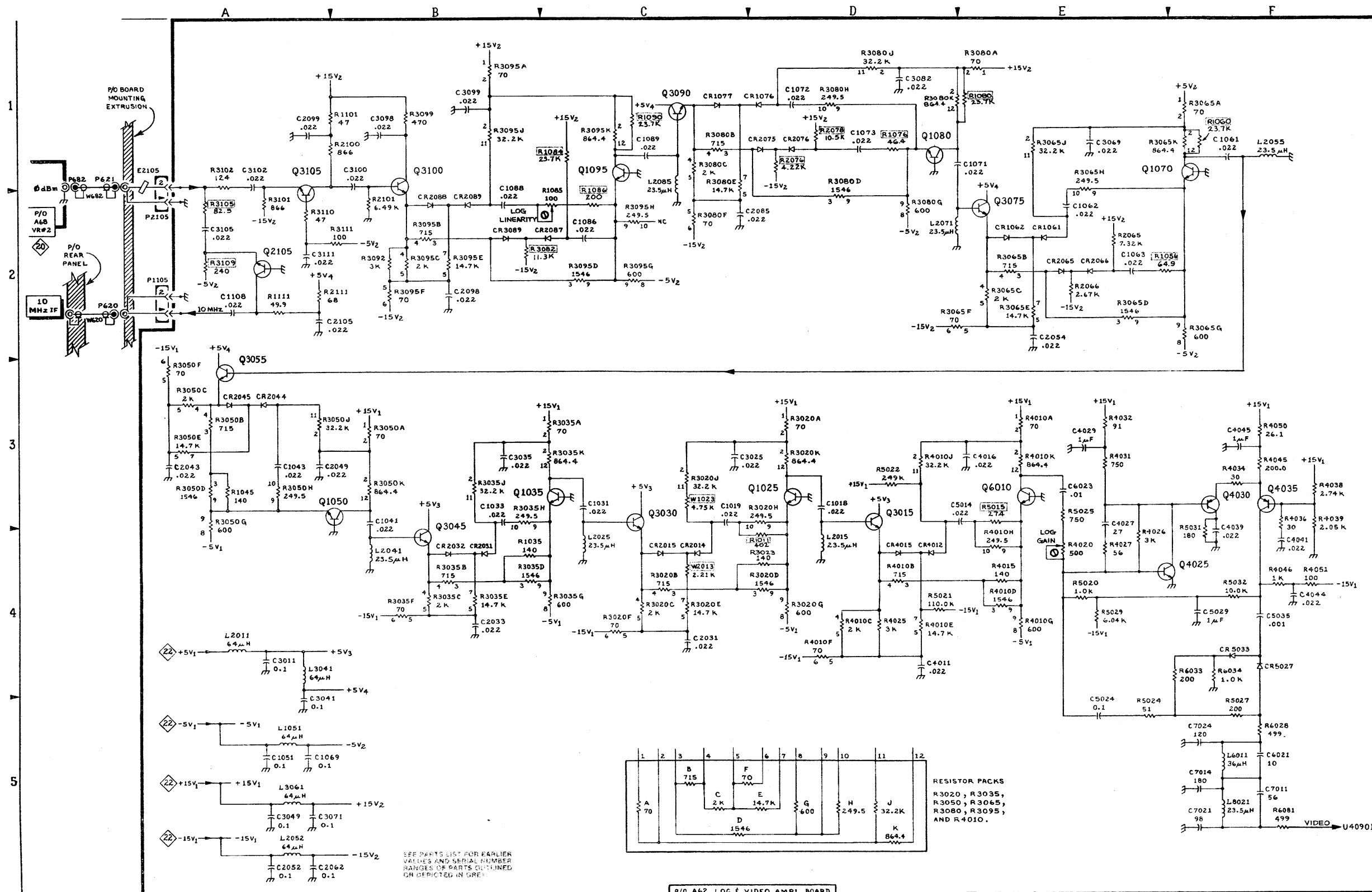
ASSEMBLY A62

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1018	D3	A1	CR1061	E2	F1	R1035	B4	C1	R3080G	D2	H2
C1019	C3	A1	CR1062	E2	F2	R1045	A3	D1	R3080H	D1	H2
C1031	C3	C1	CR1076	D1	G2	R1056	E2	E1	R3080J	D1	H2
C1033	B3	C1	CR1077	C1	G2	R1060*	F2	F2	R3080K	E1	H2
C1041	B3	D1	CR2014	C4	A2	R1076	D1	G1	R3082	B2	H3
C1043	A3	D1	CR2015	C4	A2	R1080*	E1	H2	R3092	B2	J3
C1051	A5	E1	CR2031	B4	C2	R1084	C1	H1	R3095A	B1	J2
C1061	F1	F1	CR2032	B4	C2	R1085	C2	J1	R3095B	B2	J2
C1062	E2	F1	CR2044	A3	D2	R1086	C2	J1	R3095C	B2	J2
C1063	E2	F1	CR2045	A3	D2	R1090*	C1	J2	R3095D	C2	J2
C1069	A5	F1	CR2065	E2	F2	R1101	A1	J1	R3095E	B2	J2
C1069	A5	F1	CR2066	E2	F2	R1111	A2	K1	R3095F	B2	J2
C1071	E1	G1	CR2075	D1	G2	R2013	C4	A2	R3095G	C2	J2
C1072	D1	G1	CR2076	D1	G2	R2065	E2	F2	R3095H	C2	J2
C1073	D1	G1	CR2076	D2	G2	R2066	E2	F2	R3095J	B1	J2
C1086	C2	J2	CR2087	C2	J2	R2076	D1	G2	R3095K	C1	J2
C1088	B2	J2	CR2088	B2	J2	R2078	D1	G3	R3099	B1	J2
C1089	C1	J1	CR2089	B2	J2	R2100	A1	J2	R3101	A2	K3
C1108	A2	K1	CR3089	B2	J3	R2101	B2	K2	R3102	A1	K2
C2031	C4	C3	CR4012	D4	A4	R2111	A2	K1	R3105	A2	K2
C2033	B4	C2	CR4015	D4	A4	R3020A	D3	B2	R3109	A2	K2
C2043	A3	D2	CR5027	F4	B5	R3020B	C4	B2	R3110	A2	K3
C2049	A3	E1	CR5033	F4	C5	R3020C	C4	B2	R3111	B2	K2
C2052	A5	E2				R3020D	D4	B2	R4010A	E3	A5
C2054	E2	E2	L1061	A5	E1	R3020E	C4	B2	R4010B	D4	A5
C2062	A5	F2	L2011	A4	A2	R3020F	C4	B2	R4010C	D4	A5
C2085	C2	H2	L2015	D4	A2	R3020G	D4	B2	R4010D	E4	A5
C2098	B2	J2	L2025	C4	B2	R3020J	C3	B2	R4010E	D4	A5
C2099	A1	J1	L2041	B4	C2	R3020K	D3	B2	R4010F	D4	A5
C2106	A2	K2	L2052	A5	E2	R3023	D4	B3	R4010G	E4	A5
C3011	A4	A3	L2055	F1	E2	R3035A	C3	C2	R4010H	E4	A5
C3025	C3	B3	L2071	D2	G2	R3035B	B4	C2	R4010J	D3	A5
C3035	B3	C3	L2085	C1	H2	R3035C	B4	C2	R4010K	E3	A5
C3041	A4	D3	L3041	A4	D2	R3035D	B4	C2	R4015	E4	A2
C3049	A5	E3	L3061	A5	F3	R3035E	B4	C2	R4025	D4	A3
C3069	E1	F3	L6011	F5	B6	R3035F	B4	C2	R4026	E4	A2
C3071	A5	E3	L8021	F5	B8	R3035G	B4	C2	R4027	E4	A3
C3082	D1	H3				R3035H	C4	C2	R4031	E3	B2
C3098	B1	J3	P1105	A2	K1	R3035I	B3	C2	R4032	E3	B2
C3099	B1	J3	P2105	A2	K2	R3035J	B3	C2	R4034	F3	C4
C3100	B1	K3				R3035K	C3	C2	R4036	F4	B2
C3102	A1	K3	Q1025	D3	B1	R3050A	B3	D2	R4038	F3	B2
C3105	A2	K2	Q1035	C3	C1	R3050B	A3	D2	R4039	F4	B2
C3111	A2	K2	Q1060	A3	E1	R3050C	A3	D2	R4045	F3	B2
C4011	D4	A4	Q1070	E1	G1	R3050D	A3	D2	R4046	F4	B2
C4016	E3	A4	Q1070	F1	G1	R3050E	A3	D2	R4050	F3	C2
C4027	E3	B4	Q1080	D1	H1	R3050F	A3	D2	R4051	F4	C2
C4029	E3	B4	Q1085	C1	J1	R3050H	A3	D2	R5015	E3	A3
C4039	F4	A4	Q2105	A2	K2	R3050J	A3	D2	R5020	E4	A3
C4041	F4	D4	Q3015	D3	A3	R3050K	B3	D2	R5021	D4	A3
C4044	F4	D4	Q3030	C3	C3	R3065A	F1	F2	R5022	D3	A3
C4045	F3	D4	Q3045	B4	D3	R3065B	E2	F2	R5024	E5	A3
C5014	D3	A5	Q3065	A3	E3	R3065C	E2	F2	R5025	E4	A3
C5024	E5	B5	Q3075	E2	G3	R3065D	E2	F2	R5027	F5	B3
C5029	F4	B5	Q3090	C1	H3	R3065E	E2	F2	R5029	E4	B3
C5029	F4	B5	Q3100	B1	K2	R3065F	D2	F2	R5031	F4	B3
C5035	F4	C5	Q3105	A1	K3	R3065G	F2	F2	R5032	F4	B3
C6021	F5	B6	Q4025	F4	B4	R3065H	E1	F2	R6028	F5	A3
C6023	E3	B6	Q4030	F3	C4	R3065J	E1	F2	R6033	F4	B3
C7011	F5	B7	Q4035	F3	C4	R3065K	F1	F2	R6034	F4	B3
C7014	F5	A7	Q6010	E3	A6	R3080A	E1	H2	R6081	F5	D3
C7021	F5	B7				R3080B	C1	H2			
C7024	F5	B7				R3080C	C1	H2			
			R1011*	D3	B2	R3080D	D2	H2			
			R1023	C3	B1	R3080E	C1	H2			
						R3080F	C2	H2			
									TP1048	E1	D1
									W1023*	C3	B1
									W2013*	C4	A2

Partial A62 also shown on diagram 22

\*See Parts list for serial number ranges.

†Parts located on back of board.

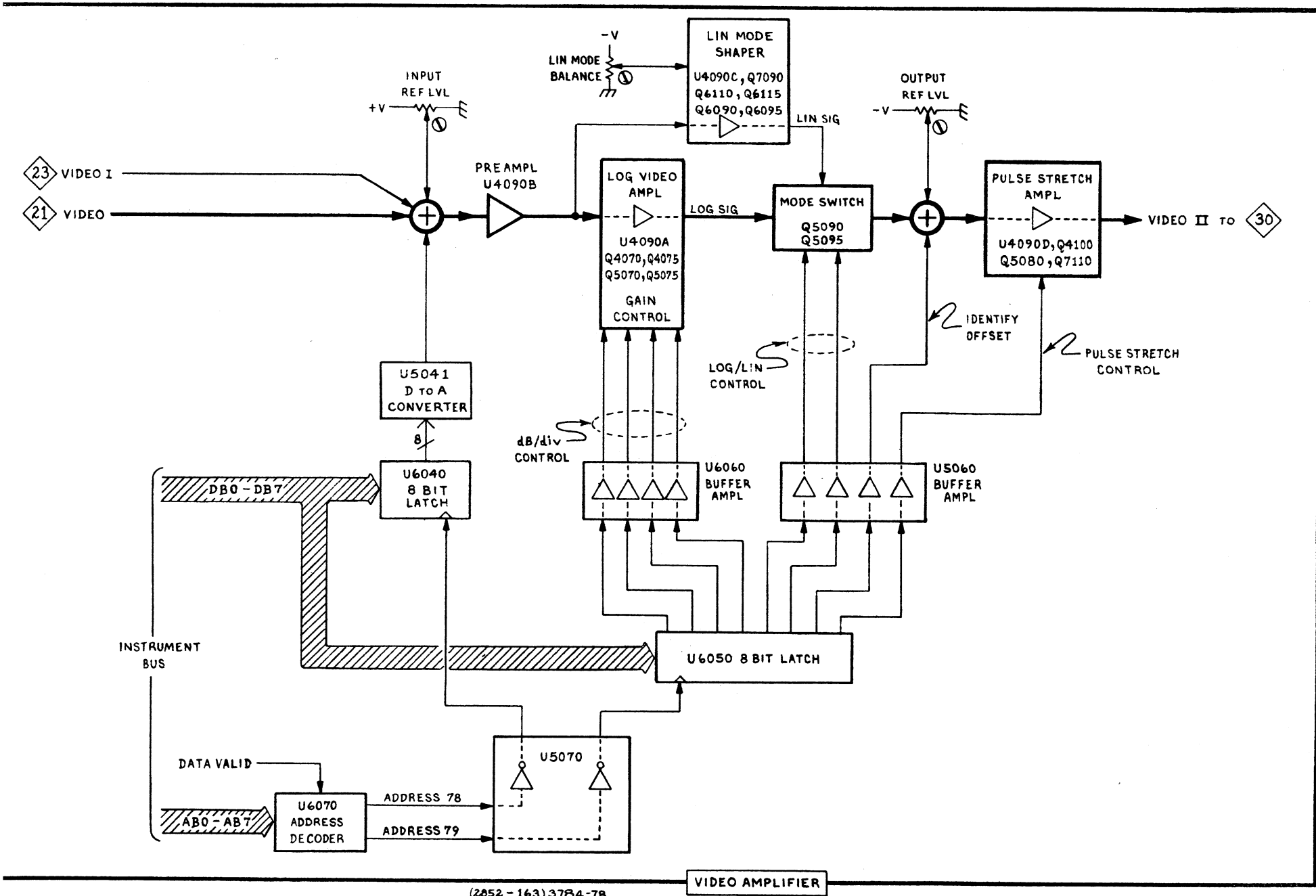


492/492P (SN 803000 & UP)

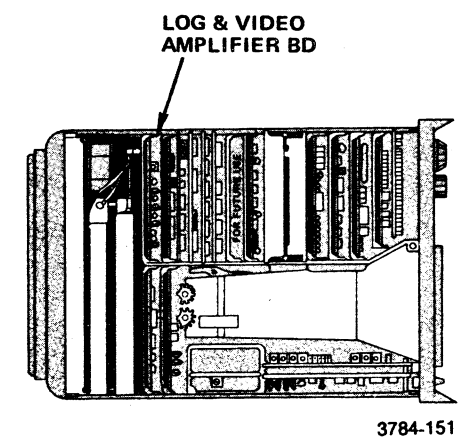
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COMPONENT NUMBER EXAMPLE  
 Component Number: A23 A2 R1234  
 Assembly Number: 1  
 Subassembly Number: 2  
 Part Number: 3

Static Sensitive Devices See Maintenance Section LOG AMPLIFIER & DETECTOR 21 JAW



REFER TO PRECEDING PAGE FOR  
CIRCUIT BOARD ILLUSTRATION





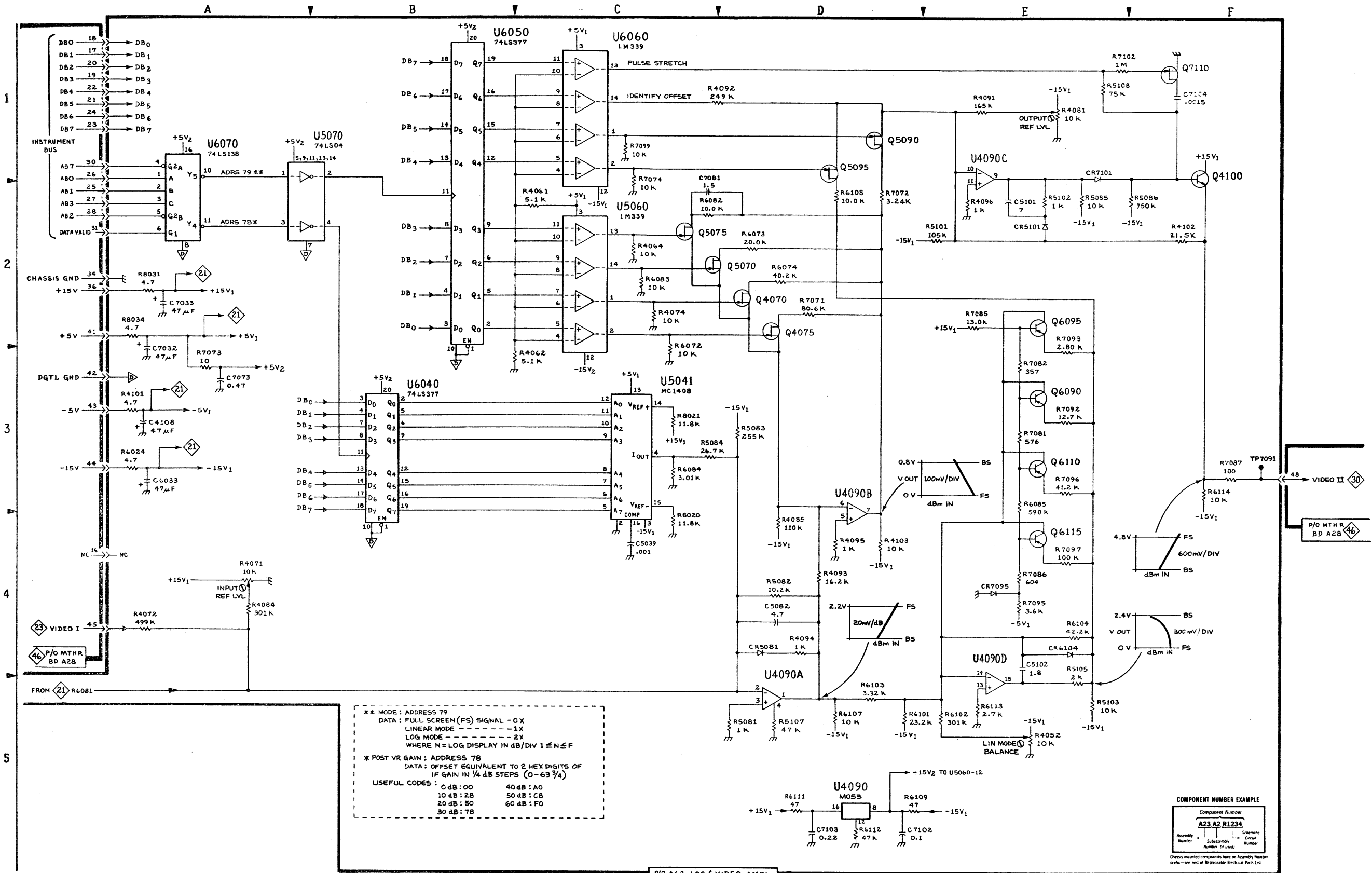
Video Amplifier DIAGRAM 22

ASSEMBLY A62

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C4108	A3	H7	Q6110	E3	K4	R5105	E5	J4	R7086	E4	K4
C5039	C4	C5	Q6115	E4	K4	R5107	D5	J5	R7087	F3	H7
C5082	D4	H5	Q7110	F1	K8	R5108	E1	K7	R7092	E3	K5
C5101	E2	K6				R6024	A3	B6	R7093	E3	K5
C5102	E4	J4	R4052	E5	E4	R6072	C3	H5	R7095	E4	K4
C6033	A3	C6	R4054	C2	F4	R6073	D2	G6	R7096	E3	K5
C7032	A3	C7	R4071	A4	G4	R6074	D2	H6	R7097	E4	J4
C7033	A2	C7	R4072	A4	G4	R6082	C2	H6	R7099	C1	G6
C7073	A3	G6	R4074	C2	G3	R6083	C2	G7	R7102	E1	K8
C7081	C2	H6	R4081	E1	H4	R6084	C3	H5	R8020	C4	B8
C7102	D5	J6	R4084	A4	H4	R6085	C4	K4	R8021	C3	B8
C7103	D5	K5	R4085	D4	J6	R6101	D5	J4	R8031	A2	C8
C7104	F1	J8	R4091	E1	J7	R6102	E5	J4	R8034	A2	C8
			R4092	C1	J7	R6103	D5	J4			
CR5081	D4	H5	R4093	D4	H5	R6104	E4	J4	TP7091	F3	J8
CR5101	E2	K7	R4094	D4	J5	R6107	D5	J4			
CR6104	E4	J4	R4095	D4	J6	R6108	D2	K6	U4090A	D5	J5
CR7095	E4	K4	R4096	E2	K6	R6109	D5	H7	U4090B	D3	J5
CR7101	E2	K8	R4101	A3	H7	R6111	D5	J6	U4090C	E1	J5
			R4102	F2	J7	R6112	D5	K5	U4090D	E5	J5
Q4070	D2	G4	R4103	D4	H6	R6113	E5	K6	U5041	C3	D5
Q4075	D2	G4	R5081	D5	J4	R6114	F3	J7	U5060	C2	F5
Q4100	F1	J8	R5082	D4	H5	R7071	D2	H6	U5070	A1	G5
Q5070	D2	G5	R5083	D3	H4	R7072	D2	H7	U6040	B3	D6
Q5075	C2	G5	R5084	C3	H4	R7073	A3	G6	U6050	B1	E6
Q5090	D1	J6	R5086	F2	K8	R7074	C1	G7	U6060	C1	F7
Q5095	D1	K6	R5101	E2	J7	R7081	E3	K4	U6070	A1	G7
Q6090	E3	K5	R5102	E2	K6	R7082	E3	K5			
Q6095	E2	K5	R5103	E5	J4	R7085	E2	K6			

Log & Video Amplifier

Partial A62 also shown on diagram 21



\*\* MODE : ADDRESS 79  
 DATA : FULL SCREEN (FS) SIGNAL - 0 X  
 LINEAR MODE ----- 1 X  
 LOG MODE ----- 2 X  
 WHERE N = LOG DISPLAY IN dB/DIV 1 ≤ N ≤ F

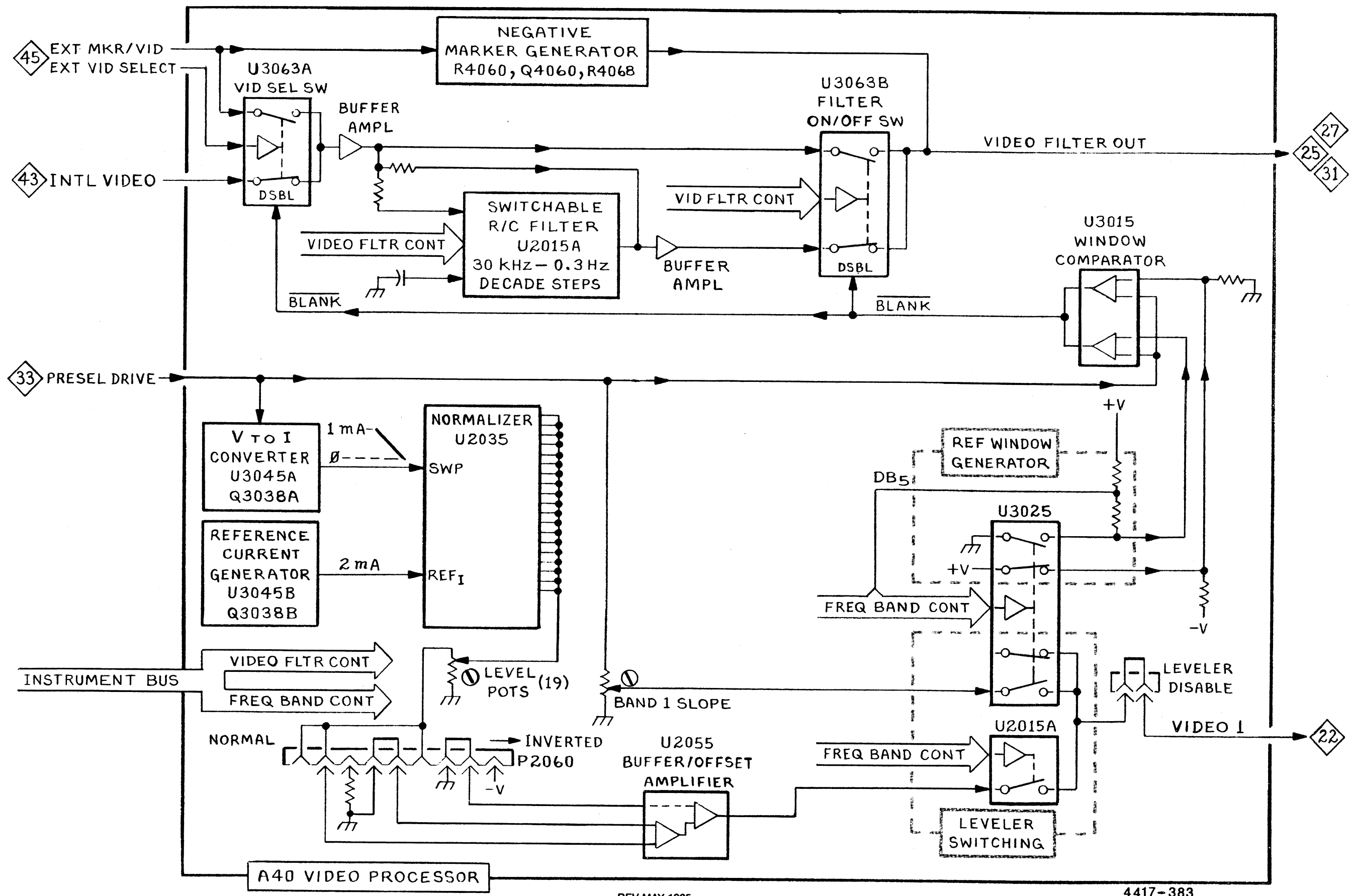
\* POST VR GAIN : ADDRESS 78  
 DATA : OFFSET EQUIVALENT TO 2 HEX DIGITS OF  
 IF GAIN IN 1/4 dB STEPS (0-63 3/4)

USEFUL CODES : 0 dB : 00      40 dB : A0  
 10 dB : 28      50 dB : CB  
 20 dB : 50      60 dB : FD  
 30 dB : 78

COMPONENT NUMBER EXAMPLE

Component Number	A23 A2 R1234
Assembly Number	1
Subassembly Number (if any)	
Schematic Number	
Detail Number	

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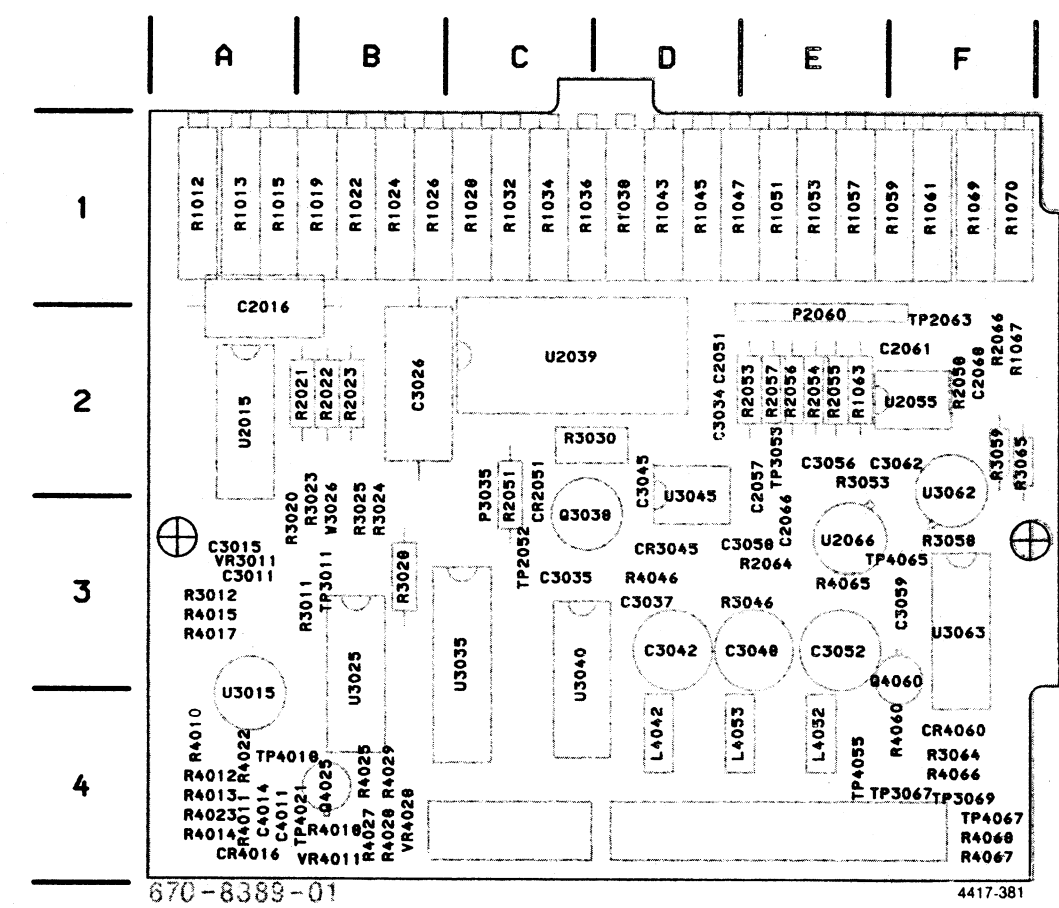
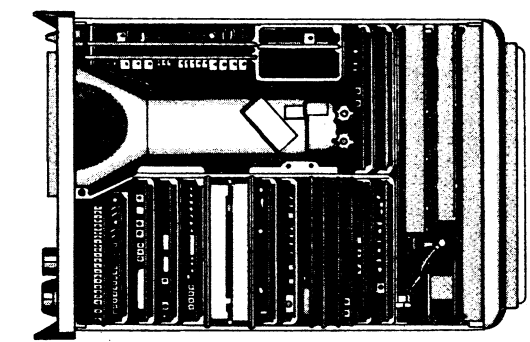


Fig. 8-22A. A40—Video Processor & Marker Interface circuit board.



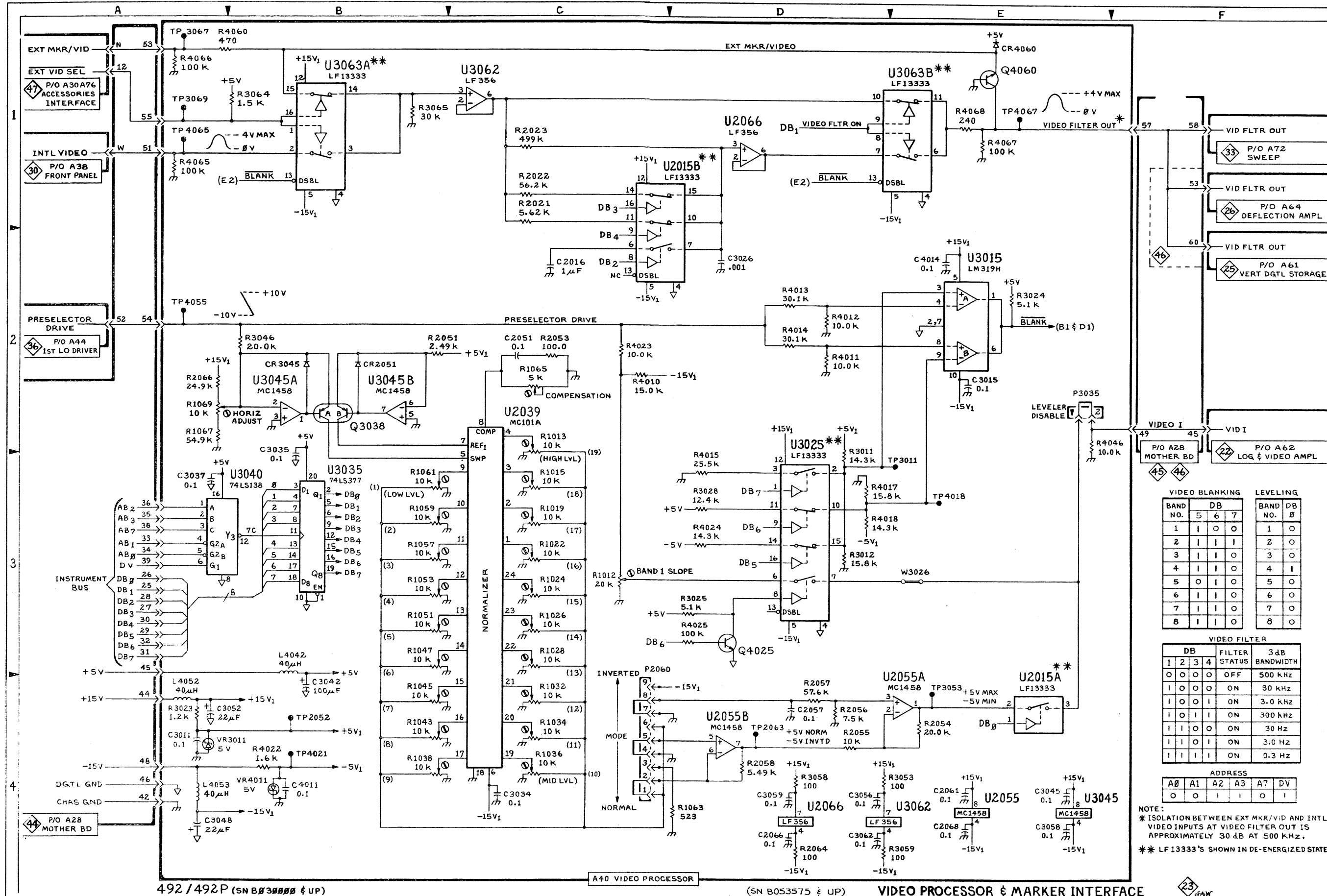
4417-382

**VIDEO PROCESSOR & MARKER INTERFACE**  
(SN B053575 & UP)

DIAGRAM 23

**ASSEMBLY A40**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C2016	C2	A2	R1034	C4	C1	R4022	B4	A4
C2051	C2	D2	R1036	C4	C1	R4023	C3	A4
C2057	D4	E2	R1038	B4	D1	R4024	D3	B4
C2061	E4	F2	R1043	B4	D1	R4025	D3	B4
C2066	D4	E3	R1045	B4	D1	R4046	E2	D3
C2088	E4	F2	R1047	B3	E1	R4060	A1	F4
C3011	A4	A3	R1051	B3	E1	R4065	A1	E3
C3015	E2	A3	R1053	B3	E1	R4066	A1	F4
C3026	D2	B2	R1057	B3	E1	R4067	E1	F4
C3034	C4	D2	R1059	B3	F1	R4068	E1	F4
C3035	B3	C3	R1061	B3	F1			
C3037	A3	D3	R1063	D4	E2	TP2052	B4	D2
C3042	B4	D3	R1065	C2	F1	TP2063	D4	F2
C3045	E4	D2	R1067	A2	F2	TP3011	E2	B3
C3048	B4	E3	R1069	A2	F1	TP3053	E4	E2
C3052	A4	E3	R2021	C1	B2	TP3067	A1	F4
C3056	D4	E2	R2022	C1	B2	TP3069	A1	F4
C3058	E4	E3	R2023	C1	B2	TP4018	E2	A4
C3059	D4	F3	R2051	B2	C3	TP4021	B4	B4
C3062	D4	F2	R2053	C2	E2	TP4055	A2	E4
CA011	B4	A4	R2054	E4	E2	TP4065	A1	F3
CA014	E2	A4	R2055	D4	E2	TP4067	E1	F4
			R2056	D4	E2			
			R2057	D4	E2	U2015A	E4	A2
CR2051	B2	C2	R2058	D4	F2	U2015B	D1	A2
CR3045	B2	D3	R2064	D4	E3	U2039	C2	D2
CR4060	E1	F4	R2066	A2	F2	U2055A	E4	F2
			R3011	D3	B3	U2055B	D4	F2
L4042	B3	D4	R3012	D3	A3	U2055	E4	F2
L4052	A4	E4	R3023	A4	B3	U2066	D1	E3
L4053	B4	E4	R3024	E2	B2	U2066	D4	E3
			R3025	D3	B3	U3011	A4	B4
P2060	C4	E1	R3026	E2	B3	U3015	E2	A3
P3035	E2	C3	R3028	D3	B3	U3025	D3	B3
			R3046	B2	E3	U3035	B3	C3
Q3038	B2	D2	R3053	E2	E2	U3040	B3	C3
Q4025	D3	B4	R3058	D4	F3	U3045A	B2	D2
Q4060	E1	F3	R3059	D4	F2	U3045B	B2	D2
			R4012	D2	F4	U3045	E4	D2
			R4013	B1	F4	U3062	C1	F2
R1012	C3	A1	R4014	D2	A4	U3062	E4	F2
R1013	C2	A1	R4015	D2	A4	U3063A	B1	F3
R1015	C3	A1	R4017	D2	A4	U3063B	E1	F3
R1019	C3	B1	R4022	D2	A4	VR4011	B4	B4
R1019	C3	B1	R4024	D2	A4			
R1022	C3	B1	R4025	D2	A4			
R1024	C3	B1	R4026	D2	A4			
R1026	C3	B1	R4027	D3	A3			
R1028	C3	C1	R4028	D3	A3			
R1032	C4	C1	R4029	D3	A3			
			R4030	D3	A3			



492 / 492P (SN B053575 & UP)

3784-179  
REV NOV 1983

(SN B053575 & UP)

VIDEO PROCESSOR & MARKER INTERFACE

VIDEO BLANKING					LEVELING				
BAND NO.	5	6	7	8	BAND NO.	5	6	7	8
1	I	I	I	I	1	O			
2	I	I	I	I	2	O			
3	I	I	I	I	3	O			
4	I	I	I	I	4	I			
5	O	I	I	I	5	O			
6	I	I	I	I	6	O			
7	I	I	I	I	7	O			
8	I	I	I	I	8	O			

DB	1	2	3	4	5	6	7	8
INVERTED	O	O	O	O	O	O	O	O
NORMAL	I	O	O	O	O	O	O	O
MODE	I	O	O	O	O	O	O	O
INVERTED	I	O	O	O	O	O	O	O
NORMAL	I	O	O	O	O	O	O	O

DB	1	2	3	4	5	6	7	8
STATUS	O	O	O	O	O	O	O	O
OFF	I	O	O	O	O	O	O	O
ON	I	O	O	O	O	O	O	O
ON	I	O	O	O	O	O	O	O
ON	I	O	O	O	O	O	O	O
ON	I	O	O	O	O	O	O	O
ON	I	O	O	O	O	O	O	O
ON	I	O	O	O	O	O	O	O

ADDRESS	A0	A1	A2	A3	A7	DV
	O	O	I	I	O	I

NOTE:  
\* ISOLATION BETWEEN EXT MKR/VID AND INTL VIDEO INPUTS AT VIDEO FILTER OUTPUT IS APPROXIMATELY 30 dB AT 500 KHZ.  
\*\* LF 13333'S SHOWN IN DE-ENERGIZED STATE

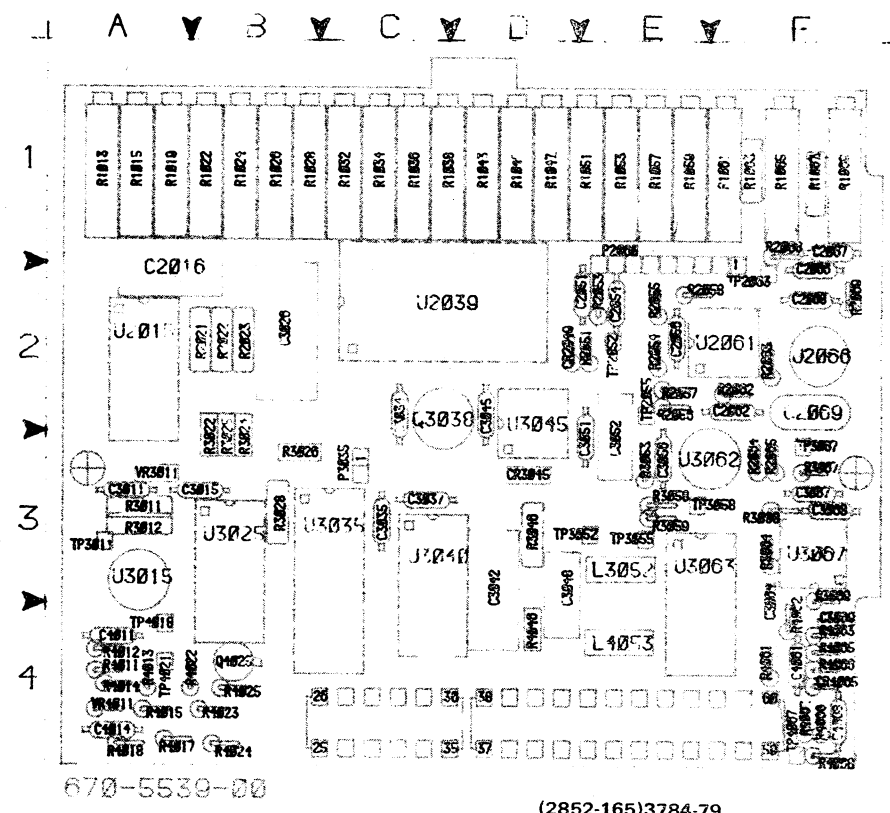
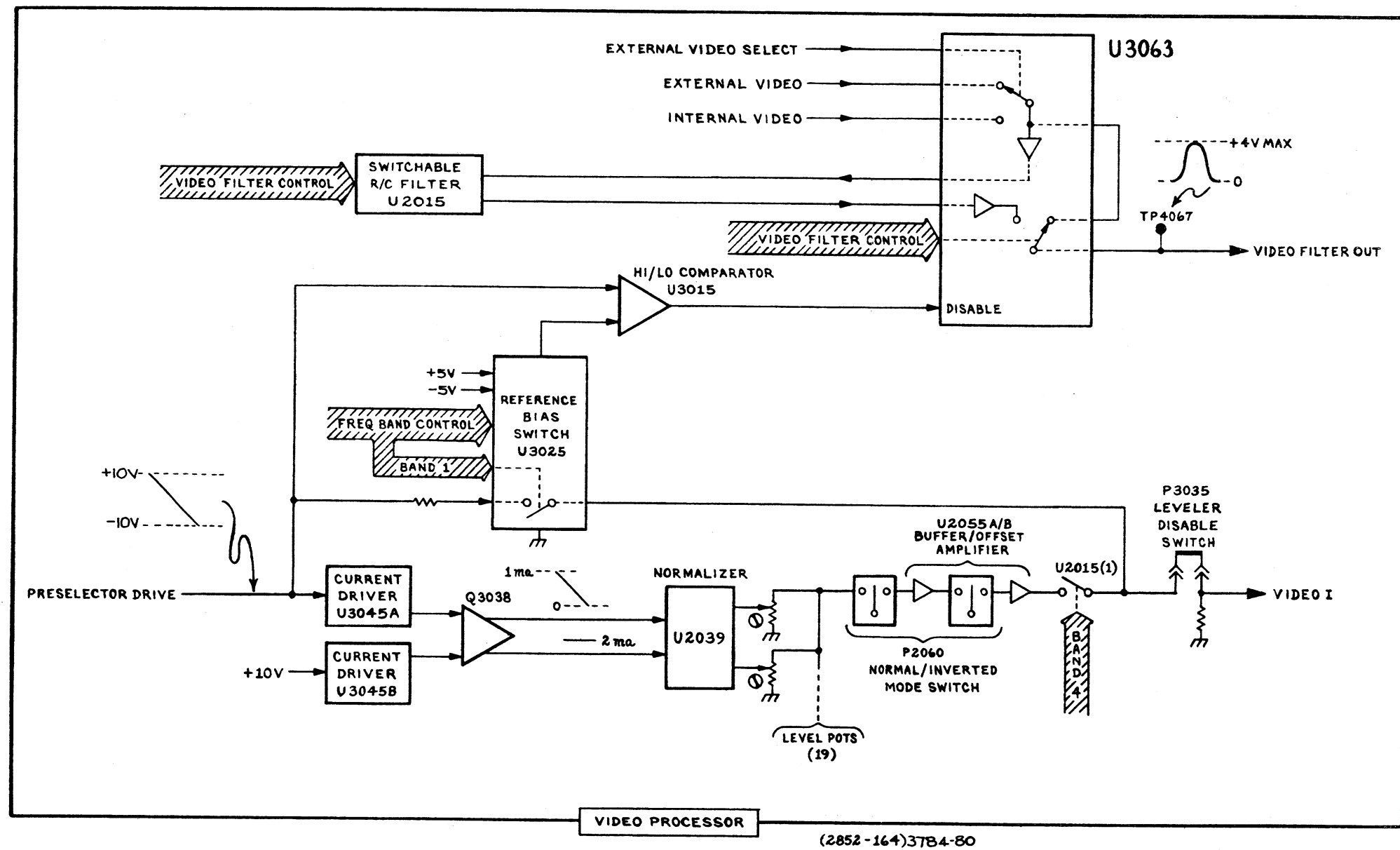
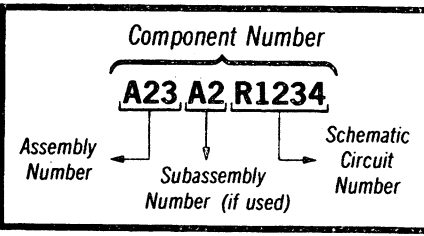


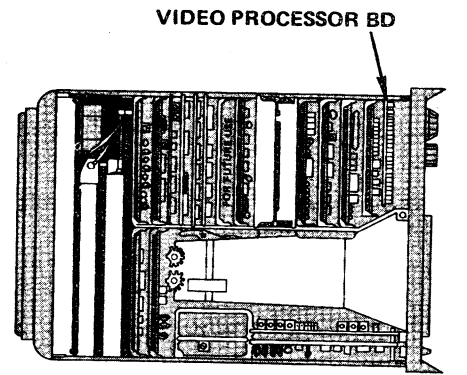
Fig. 8-22B. A40—Video Processor circuit board (SN B030000 - B053574).

**Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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

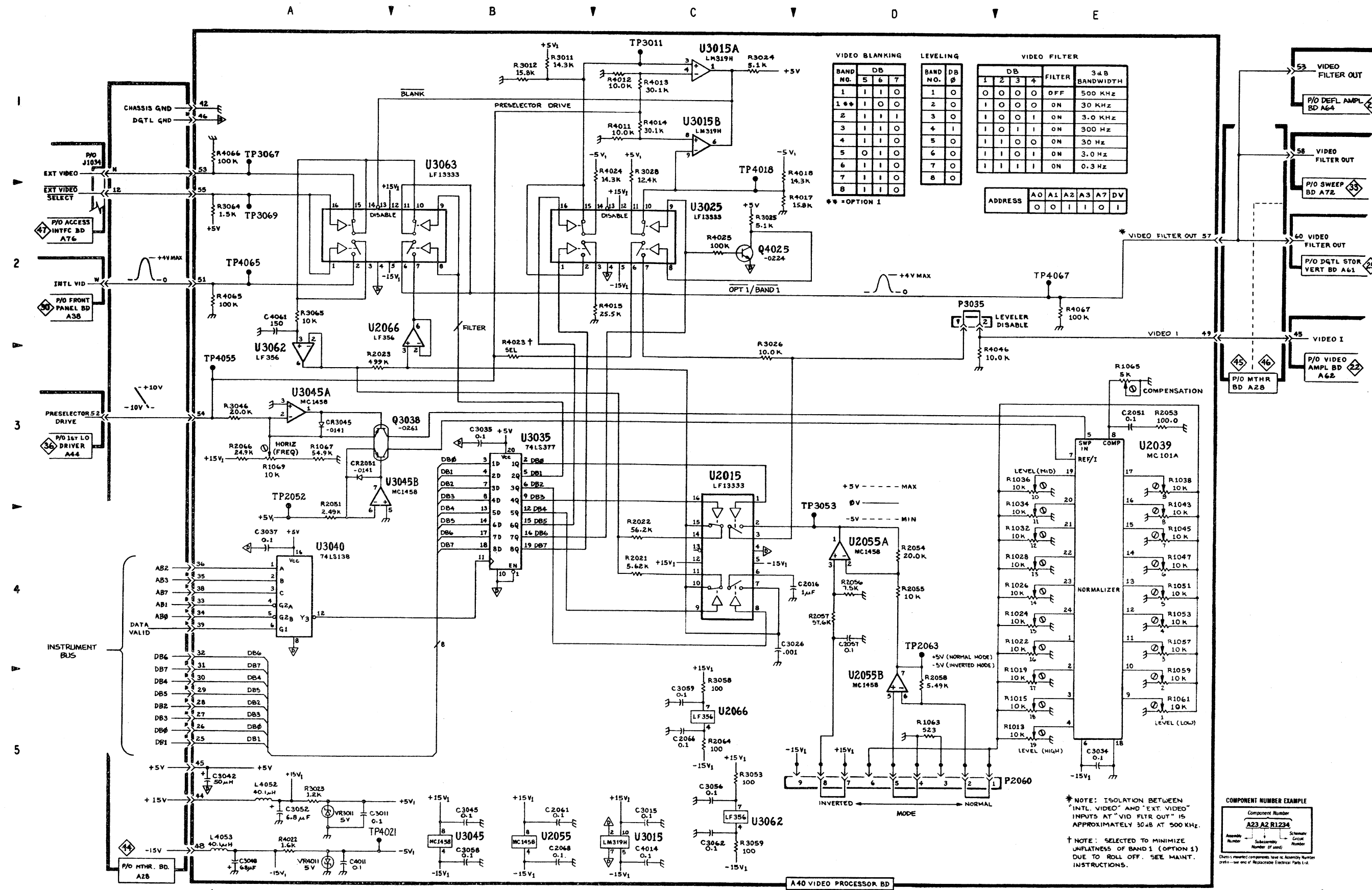


# Video Processor DIAGRAM 23

(SN B030000 - B053574)

## Video Processor

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C2016	D4	A2	Q4025	C2	B4	R2058	D4	F2	TP2063	D4	F1
C2051	E3	E2				R2064	C5	F2	TP3011	C1	A3
C2057	D4	E2	R1013	E5	A1	R2066	A3	F1	TP3053	D3	E3
C2061	B5	F2	R1015	E5	A1	R3011	B1	A3	TP3067	A1	F3
C2066	C5	F2	R1019	E4	A1	R3012	B1	A3	TP3069	A2	F3
C2068	B5	F1	R1022	E4	B1	R3023	A5	B2	TP4018	C1	A4
C3011	A5	A3	R1024	E4	B1	R3024	C1	B2	TP4021	A5	A4
C3015	C5	B3	R1026	E4	B1	R3025	C2	B2	TP4055	A2	E4
C3024	E5	C2	R1028	E4	B1	R3026	C2	B3	TP4065	A2	F4
C3026	C4	B2	R1032	E4	C1	R3028	C1	B3	TP4067	E2	F4
C3035	B3	C3	R1034	E3	C1	R3046	A3	D3			
C3037	A4	C3	R1036	E3	C1	R3053	C5	E3	U2015	C3	A2
C3042	A5	D3	R1038	E3	C1	R3058	C5	F3	U2039	E3	C2
C3045	B5	D2	R1043	E3	D1	R3059	C5	F3	U2055	B5	F2
C3048	A5	D3	R1045	E4	D1	R3064	A2	F3	U2055A	D4	F2
C3052	A5	E3	R1047	E4	D1	R3065	A2	F3	U2055B	D4	F2
C3056	C5	E3	R1051	E4	D1	R4011	C1	A4	U2066	B2	F2
C3058	B5	F3	R1053	E4	E1	R4012	C1	A4	U2066	C5	F2
C3059	C5	F3	R1057	E4	E1	R4013	C1	A4	U3015	C5	A3
C3062	C5	F3	R1059	E4	E1	R4014	C1	A4	U3015A	C1	A3
C4011	A5	A4	R1061	E5	F1	R4015	B2	A4	U3015B	C1	A3
C4014	C5	A4	R1063	D5	F1	R4017	C2	A4	U3025	C2	B3
C4061	A2	F4	R1065	E3	F1	R4018	C1	A4	U3035	B3	B3
CR2051	A3	D2	R1067	A3	F1	R4022	A5	A4	U3040	A4	C3
CR3045	A3	D3	R1069	A3	E1	R4023	B2	B4	U3045	B5	D2
L4052	A5	E3	R2021	C4	B2	R4023	B2	B4	U3045A	A3	D2
L4053	A5	E4	R2022	C4	B2	R4024	C1	B4	U3045B	A3	D2
P2060	D5	E1	R2023	A3	B2	R4025	C2	B4	U3062	A2	F3
P3035	D2	B3	R2051	A3	E2	R4046	A2	D4	U3062	C5	F3
Q3038	A3	C2	R2053	E3	E2	R4065	A2	F4	U3063	B1	F3
			R2054	D4	E2	R4066	A1	F4	VR3011	A5	A3
			R2055	D4	E2	R4067	E2	F4	VR4011	A5	A4
			R2056	D4	F2						
			R2057	D4	F2	TP2052	A4	E2			



VIDEO BLANKING						
BAND NO.	DB	5	6	7		
1	1	1	1	0		
2	1	1	1	0		
3	1	1	1	0		
4	1	1	1	0		
5	0	1	0	0		
6	1	1	1	0		
7	1	1	1	0		
8	1	1	1	0		

LEVELING						
BAND NO.	DB	5	6	7		
1	0	0	0	0		
2	0	0	0	0		
3	0	0	0	0		
4	0	0	0	0		
5	0	0	0	0		
6	0	0	0	0		
7	0	0	0	0		
8	0	0	0	0		

VIDEO FILTER						
DB	5	6	7	FILTER	3 dB BANDWIDTH	
1	0	0	0	OFF	500 KHz	
2	0	0	0	ON	30 KHz	
3	0	0	0	ON	30 KHz	
4	0	0	0	ON	30 Hz	
5	0	0	0	ON	30 Hz	
6	0	0	0	ON	30 Hz	
7	0	0	0	ON	30 Hz	
8	0	0	0	ON	0.3 Hz	

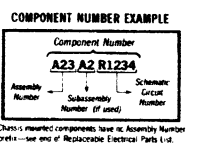
ADDRESS						
AO	A1	A2	A3	A7	DV	
0	0	0	1	1	0	1

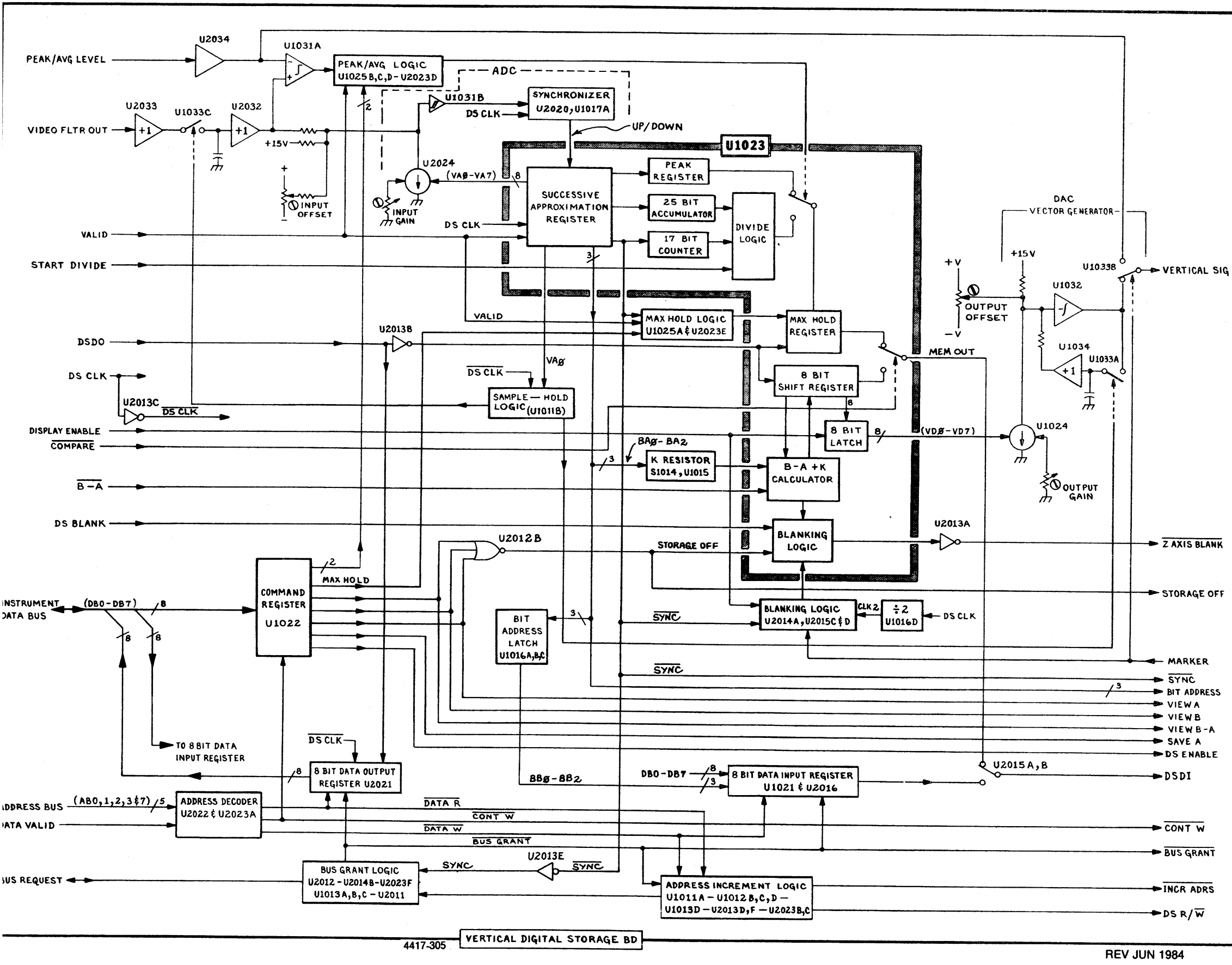
492/492P (SN B030000 & UP)

(2852 - 92) 3784-23  
REV NOV 1983

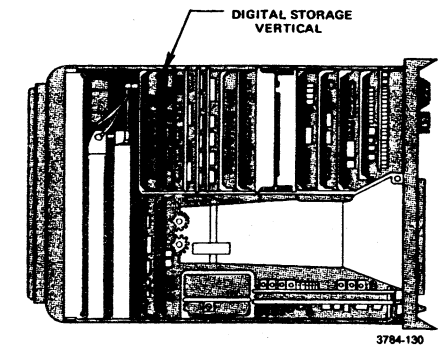
Static Sensitive Devices  
See Maintenance Section

VIDEO PROCESSOR  
(SN B030000 - B053574)

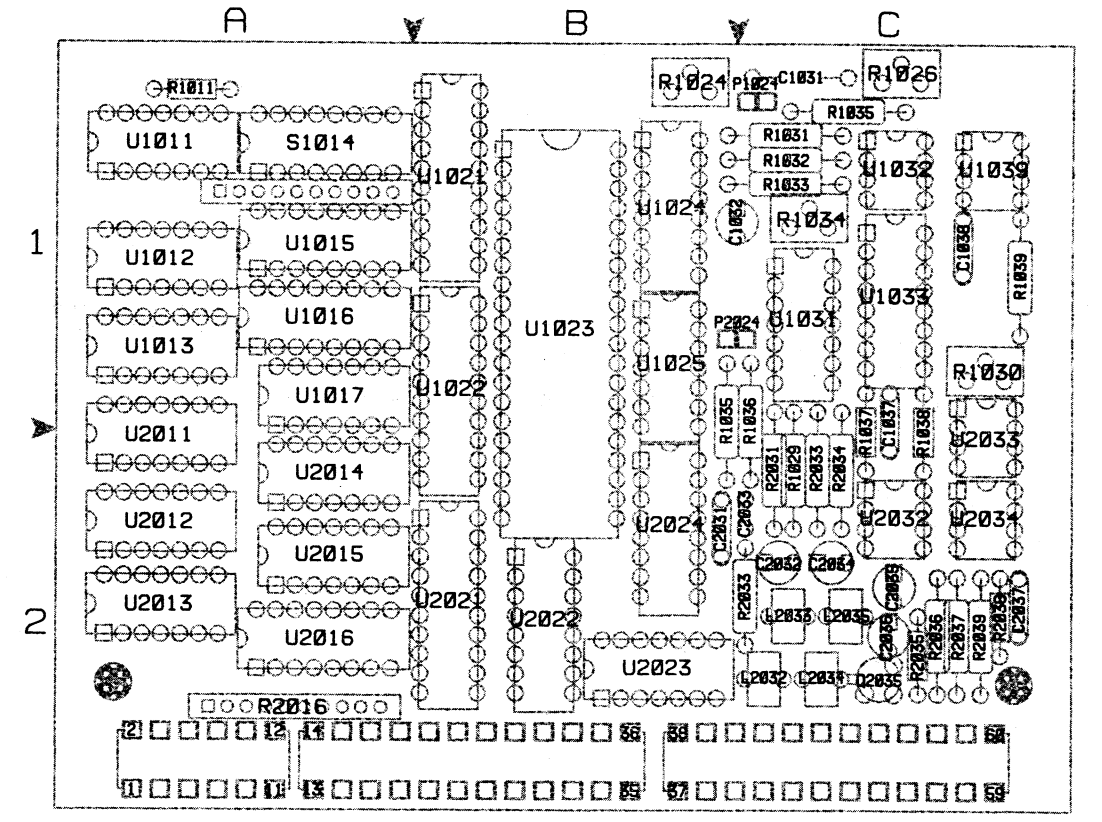




REV JUN 1984



3784-130



670-5554 Fig. 8-23A. A61-Digital Storage Vertical circuit board (SN B030000 - B043114). (2852-171)3784-81

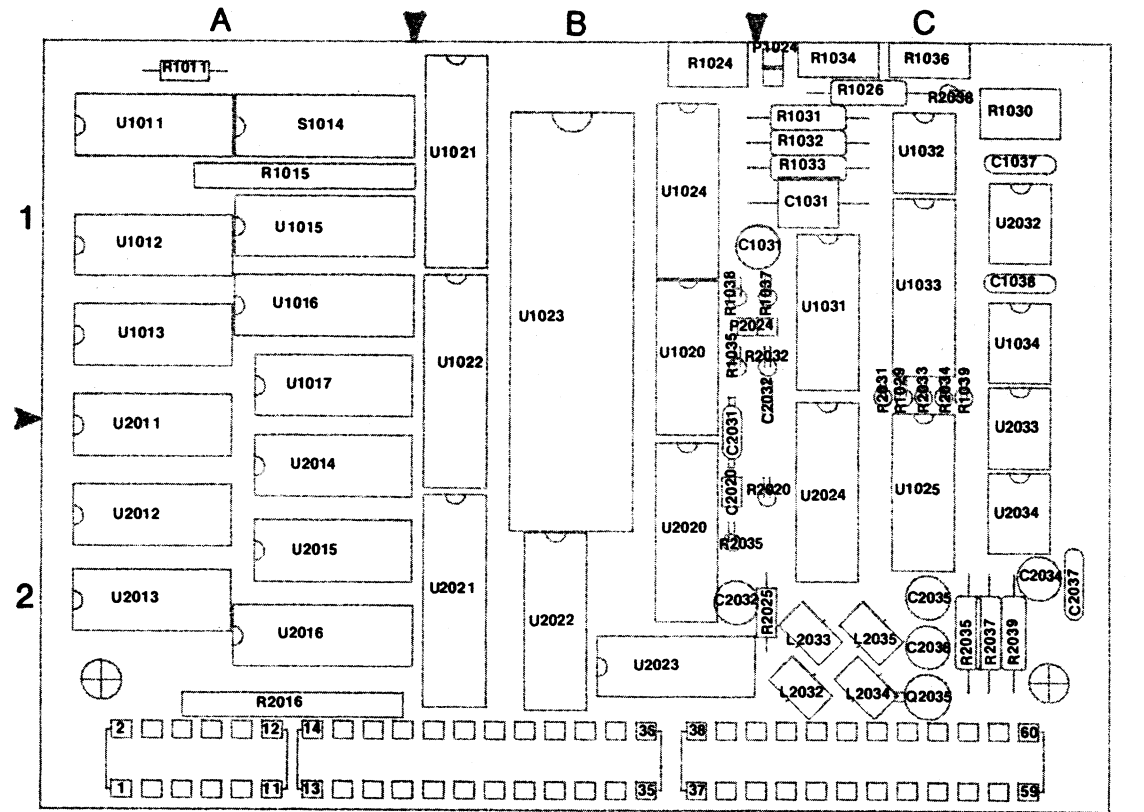
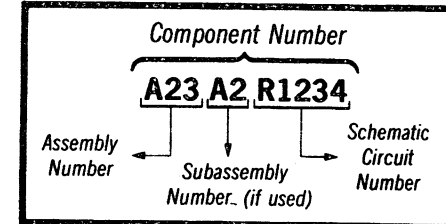


Fig. 8-23B. A61-Digital Storage Vertical circuit board (SN B043115 & UP).

3784-175

Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



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

Digital Storage, Vertical (Option 02) Diagram

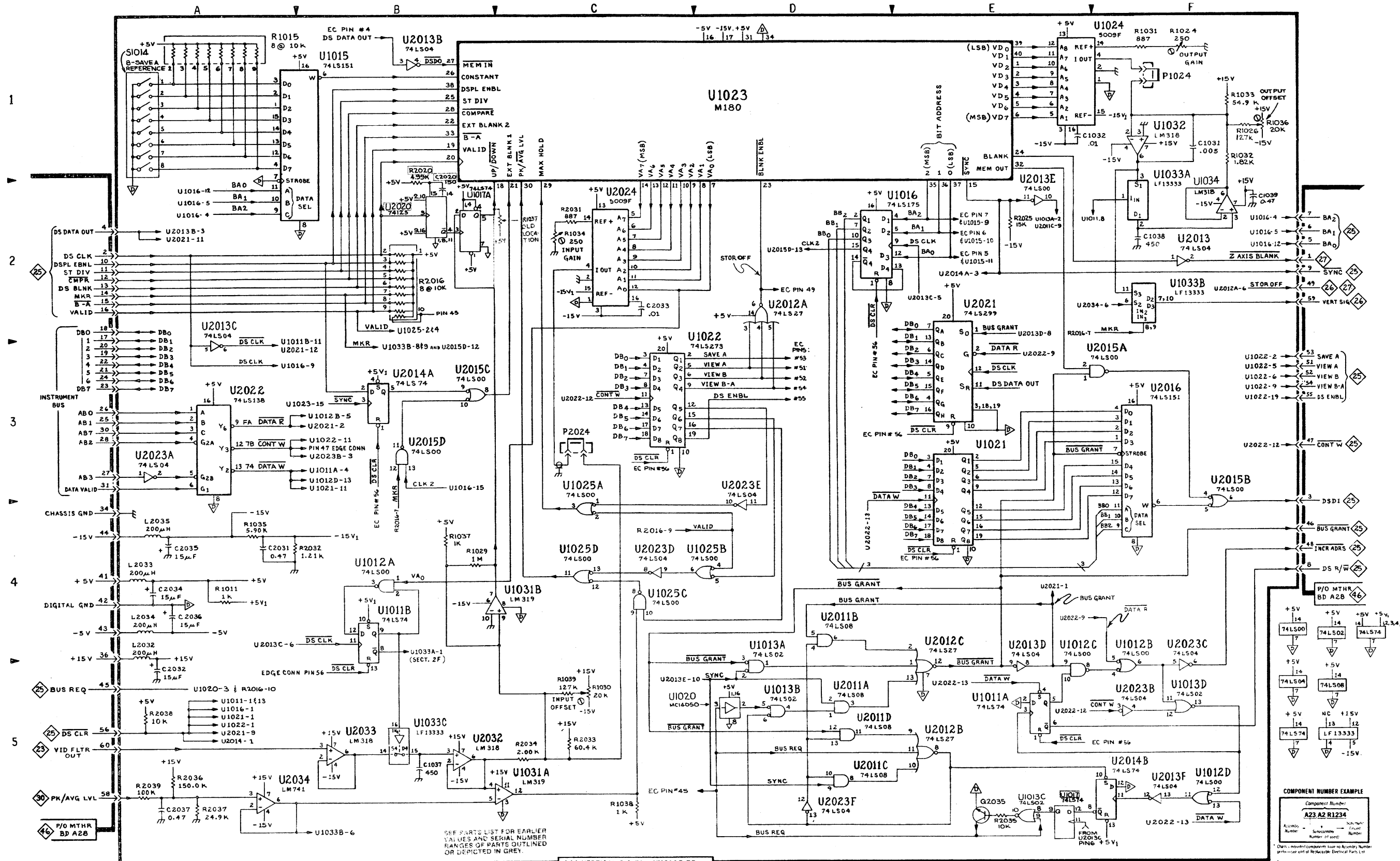
24

ASSEMBLY A61 (SN B043115 & UP)

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1031	F1	C1	R2016	B2	A2	U1033A	F2	C1
C1032	E1	C1	R2031	C2	C2	U1033B	F2	C1
C1037	B5	C2	R2032	A4	B1	U1033C	B5	C1
C1038	F2	C1	R2033	C5	C2	U1034	F2	C1
C1039†	F2	C2	R2034	C5	C2	U2011A	D5	A2
C2020*	B2	B2	R2035	E5	C2	U2011B	D4	A2
C2031	A4	C2	R2036	A5	C2	U2011C	D5	A2
C2032	A5	C2	R2037	A5	C2	U2011D	D5	A2
C2033	C2	C2	R2038	A5	C2	U2012A	D2	A2
C2034	A4	C2	R2039	A5	C2	U2012B	E5	A2
C2035	A4	C2				U2012C	E5	A2
C2036	A4	C2	S1014	A1	A1	U2013	F2	A2
C2037	A5	C2				U2013B	B1	A2
			U1011A	E5	A1	U2013C	A3	A2
L2032	A4	C2	U1011B	B4	A1	U2013D	E5	A2
L2033	A4	C2	U1012A	B4	A1	U2013E	E2	A2
L2034	A4	C2	U1012B	F5	A1	U2013F	F5	A2
L2035	A4	C2	U1012C	E5	A1	U2014A	B3	A2
			U1012D	F5	A1	U2014B	F5	A2
P1024	F1	C1	U1013A	D5	A1	U2015A	F3	A2
P2024	C3	C1	U1013B	D5	A1	U2015B	F4	A2
			U1013C	E5	A1	U2015C	B3	A2
Q2035	E5	C2	U1013D	F5	A1	U2015D	B3	A2
			U1015	A1	A1	U2016	F3	A2
R1011	A4	A1	U1016	D2	A1	U2020*	B2	B2
R1015	A1	A1	U1017*	F5	A1	U2021	E2	B2
R1026	F1	C1	U1020*	D5	B1	U2022	A3	B2
R1024	F1	B1	U1021	E3	B1	U2023A	A3	B2
R1029	B4	C2	U1022	C3	B1	U2023B	F5	B2
R1036	F1	C1	U1023	D1	B1	U2023C	F5	B2
R1030	C5	C1	U1024	E1	B1	U2023D	C4	B2
R1031	F1	C1	U1025	B2	B1	U2023E	D4	B2
R1032	F1	C1	U1025A	C4	B1	U2023F	D5	B2
R1033	F1	C1	U1025C	C4	B1	U2024	C2	B2
R1034	C2	C1	U1025D	C4	B1	U2032	B5	C2
R1035	A4	C2	U1025E	D4	B1	U2033	B5	C2
R1036	A4	NA	U1031A	C5	C1	U2034	A5	C2
R1037	B4	C1	U1031B	B4	C1			
R1038	C5	C2	U1032	F1	C1			
R1039	C5	C1						

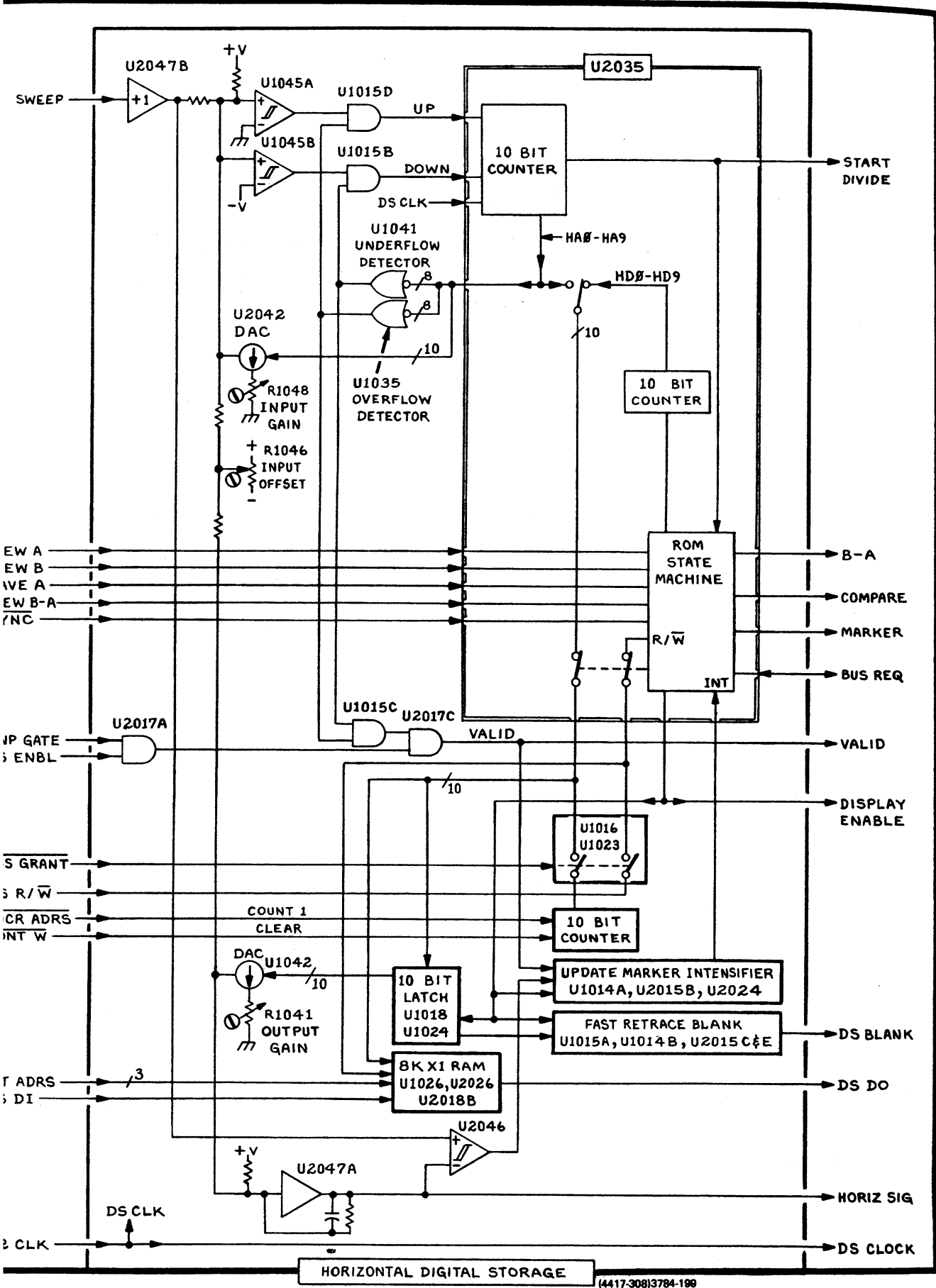
\*See Parts List for serial number ranges.

† Located on back of board.



492/492P (SN B030000 & UP)

(2852-98)3764-24  
REV MAR 1985



(4417-308)3784-199

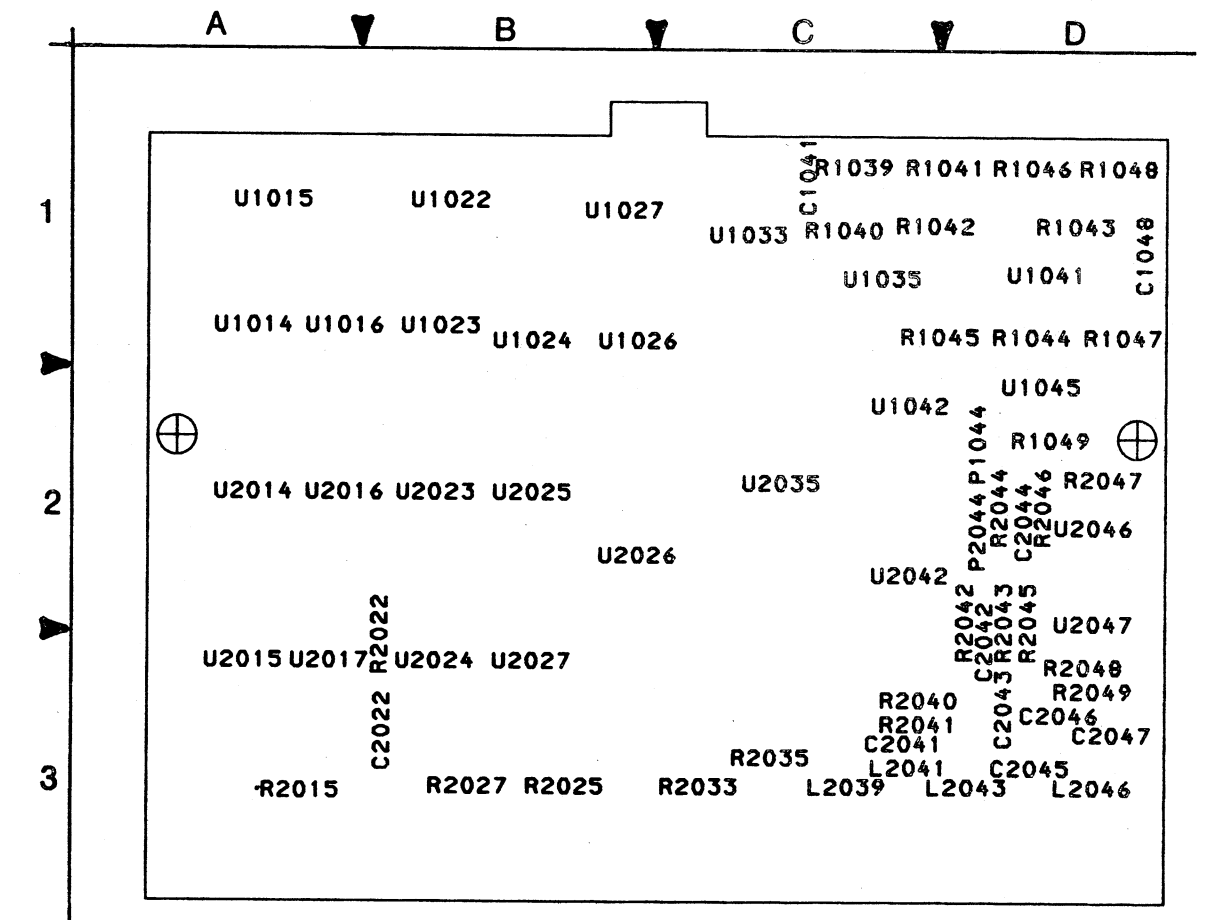
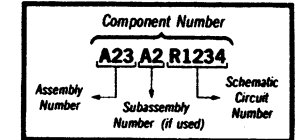


Fig. 8-24A. A60—Digital Storage Horizontal circuit board (SN B043115 & UP).

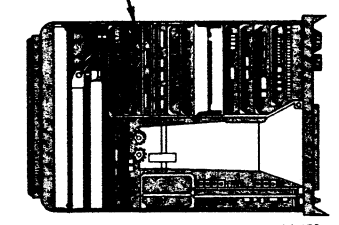
⊗ Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



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

DIGITAL STORAGE HORIZONTAL



3784-150



**Digital Storage, Horizontal (Option 02) DIAGRAM**  
(SN B043115 & up)

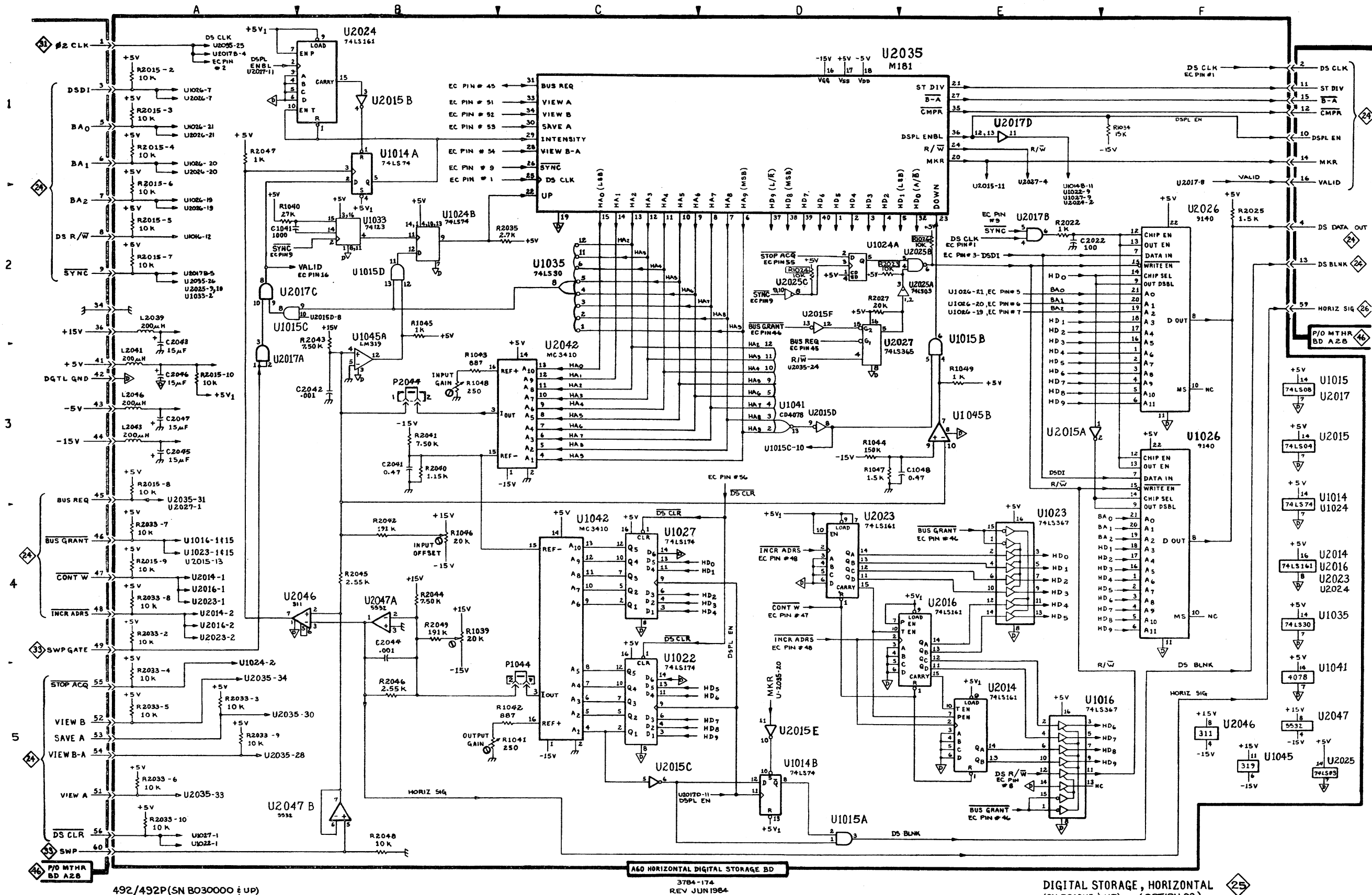
25

**ASSEMBLY A60**

CIRCUIT NUMBER	SCHEMATIC LOCATION	BOARD LOCATION
C1041	A2	C1
C1048	E2	B3
C2022	E1	B3
C2041	A2	D3
C2042	B3	D3
C2043	A3	D3
C2044	B5	D2
C2045	A3	D3
C2046	A3	D3
C2047	A1	D3
L2039	A2	C3
L2041	A3	C3
L2043	A3	C3
L2046	A3	D3
P1044	B5	D2
P2044	B3	D2
R1039	B4	C1
R1040	A2	C1
R1041	B5	C1
R1042	B5	C1
R1043	B3	D1
R1044	D3	D1
R1045	B2	D1
R1046	B4	D1
R1047	D3	D2
R1048	B3	D1
R1049	E3	B2
R2015	A3	A3
R2022	B2	B2
R2025	F2	B3
R2027	D3	B3
R2033	A4	C3
R2035	C2	C3
R2040	B3	D3
R2041	B3	D3
R2042	B4	D3
R2043	B3	D3
R2044	B4	D2
R2045	B4	D3
R2046	B5	D2
R2047	A1	D2
R2048	B5	D3
R2049	D3	D3
U1014A	B1	A1
U1014B	D5	A1
U1015A	D5	A1
U1015B	E5	A1
U1015C	A2	A1
U1015D	B2	A1
U1016	E5	A1

**Digital Storage Horizontal**

CIRCUIT NUMBER	SCHEMATIC LOCATION	BOARD LOCATION
U1022	C4	B1
U1023	E4	B1
U1024A	D2	B1
U1024B	F2	B1
U1026	B3	B1
U1027	C4	B1
U1033	B2	C1
U1035	C2	C1
U1041	D3	D1
U1042	C4	C1
U1045A	B3	D1
U1045B	E3	D1
U2014	E5	A2
U2015A	E3	A3
U2015B	B1	A3
U2015C	C5	A3
U2015D	D3	A3
U2015E	D5	A3
U2015F	D3	A3
U2016	E4	A2
U2017A	A3	A3
U2017B	E2	A3
U2017C	A2	A3
U2017D	E1	A3
U2024	B1	B3
U2025A	D2	B3
U2025B	D2	B3
U2025C	D2	B3
U2026	F2	B2
U2027	D3	B2
U2035	D1	C2
U2042	C3	C2
U2046	A4	C2
U2047A	B4	D2
U2047B	A5	D2

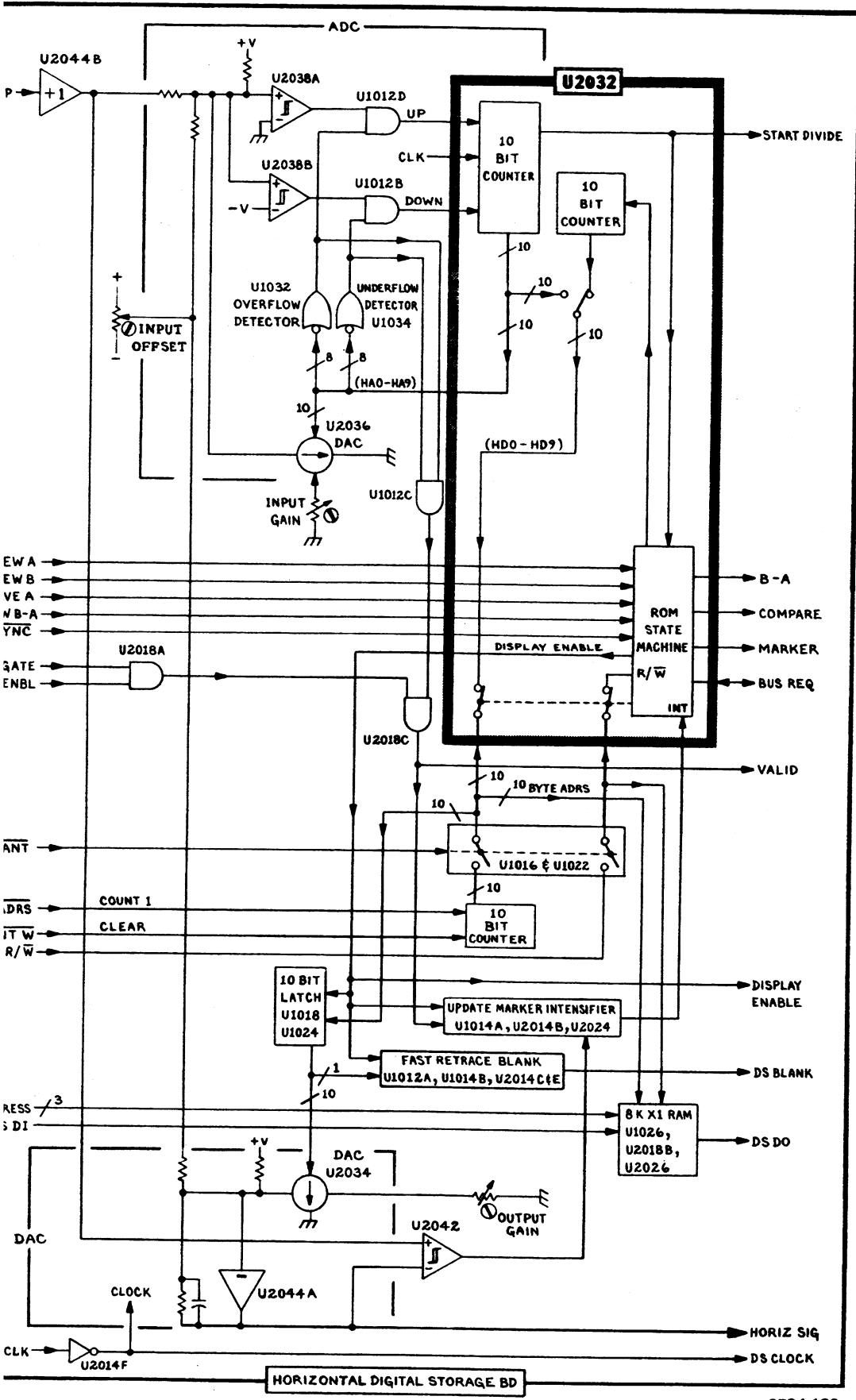


492/492P (SN B030000 & up)

3784-174  
REV JUN 1964

DIGITAL STORAGE, HORIZONTAL  
(SN B043115 & up) (OPTION 02)

25



3784-126

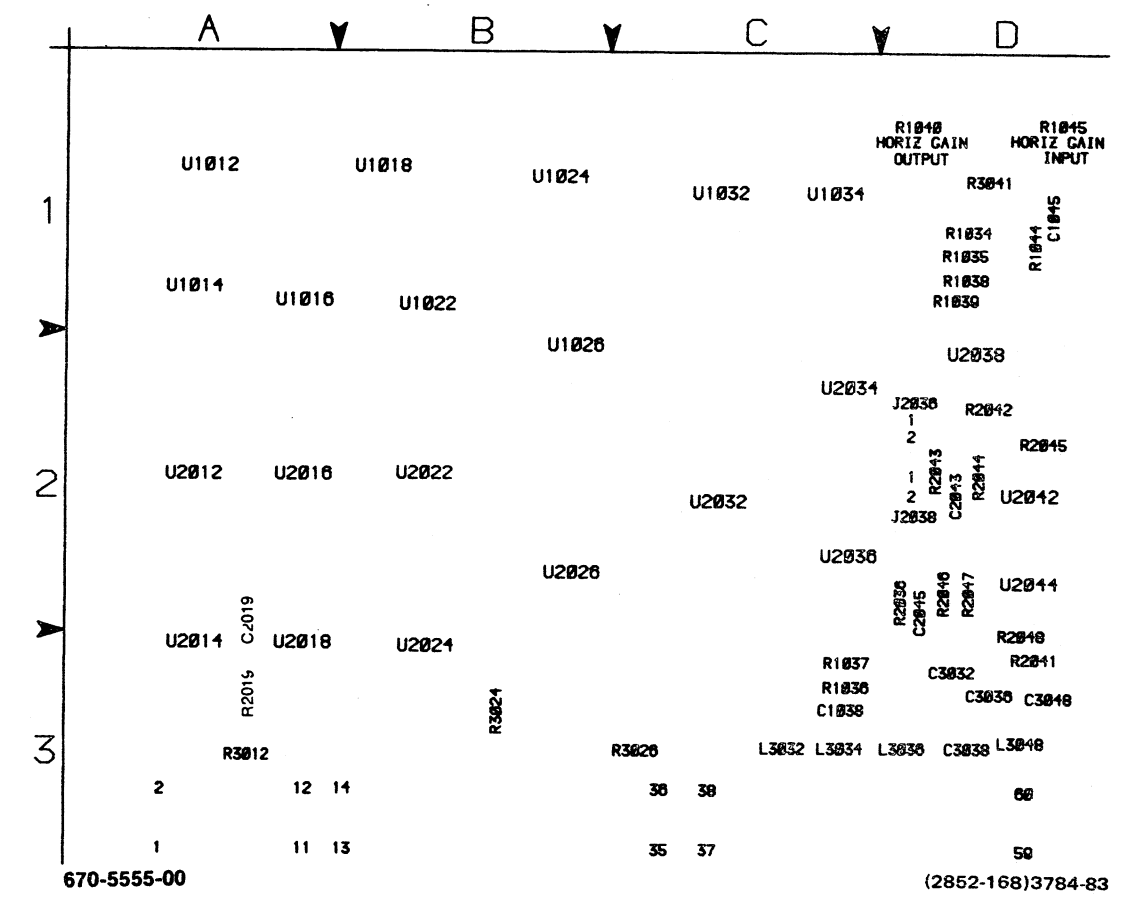
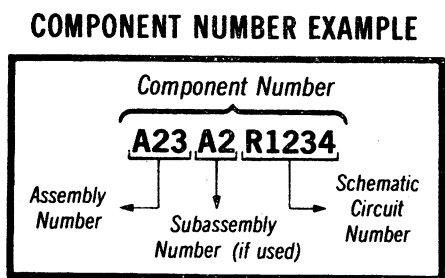
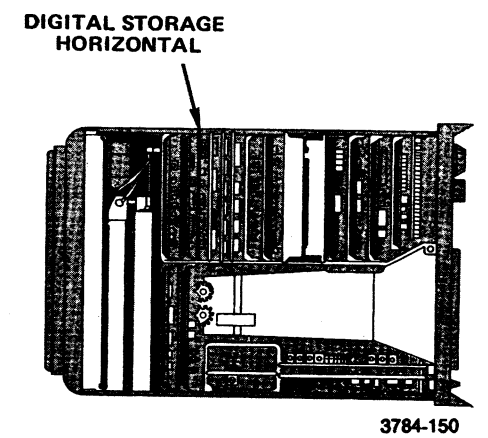


Fig. 8-24B. A60—Digital Storage Horizontal circuit board (SN B030000 — B043114).

Static Sensitive Devices  
See Maintenance Section



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



3784-150

**Digital Storage, Horizontal (Option 02) DIAGRAM**  
(SN B030000 - B043114)

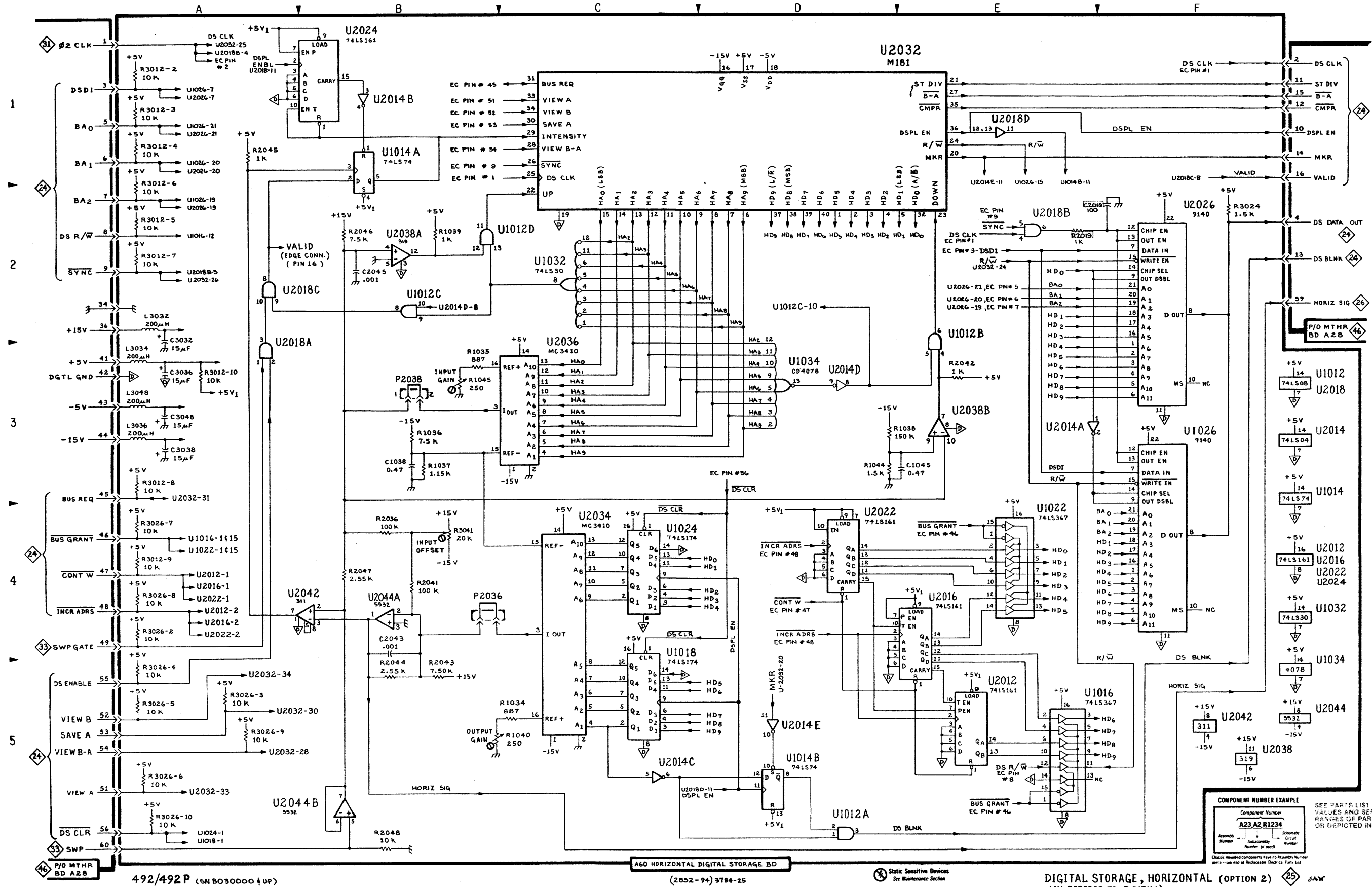
**25**

ASSEMBLY A60

Digital Storage Horizontal

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1038	B3	C3	R2045	A1	D2	U2014A	E3	A3
C1045	E3	D1	R2047	B4	D2	U2014B	B1	A3
C2019*	E2	A2	R2048	B2	D2	U2014C	C5	A3
C2043	B4	D2	R2048	B5	D2	U2014D	B2	A3
C2045	B2	D2	R3012	A1	A3	U2014E	D3	A3
C3032	A3	D3	R3012	A3	A3	U2014F	A1	A3
C3036	A3	D3	R3012	A3	A3	U2016	E4	A2
C3038	A3	D3	R3024	F2	B3	U2016	F4	A2
C3048	A3	D3	R3026	A4	C3	U2018	F3	A3
L3032	A2	C3	R3026	A5	C3	U2018A	A3	A3
L3034	A3	C3	R3041	B4	D1	U2018B	E2	A3
L3036	A3	D3	U1012	F3	A1	U2018C	A2	A3
L3048	A3	D3	U1012A	D5	A1	U2018D	E1	A3
P2036	B4	D2	U1012B	E2	A1	U2022	D4	B2
P2038	B3	D2	U1012C	B2	A1	U2022	F4	B2
R1034	C5	D1	U1012D	B2	A1	U2024	B1	B3
R1035	B3	D1	U1014	F3	A1	U2026	F3	B2
R1036	B3	C3	U1014A	B1	A1	U2032	D1	C2
R1037	B3	C3	U1014B	D5	A1	U2032	F4	C2
R1038	D3	D1	U1016	E5	A1	U2034	C4	C2
R1039	B2	D1	U1018	C5	B1	U2036	C3	C2
R1040	B5	D1	U1022	E4	B1	U2038	F5	D2
R1044	D3	D1	U1024	C4	B1	U2038A	B2	D2
R1045	B3	D1	U1026	F2	B2	U2038B	E3	D2
R2019*	E2	A2	U1032	C2	C1	U2042	B4	D2
R2036	B4	D2	U1034	D3	C1	U2042	F5	D2
R2041	B4	D3	U1034	F5	C1	U2044	F5	D2
R2042	E3	D2	U2012	E5	A2	U2044A	B4	D2
R2043	B5	D2	U2012	F4	A2	U2044B	B5	D2
R2044	B5	D2	U2014	F3	A3			

\*See Parts List for serial number ranges.



COMPONENT NUMBER EXAMPLE  
 Component Number  
 A23 A2 R1234  
 Assembly Number    Subassembly Number  
 100                  1001

SEE PARTS LIST FOR EXACT VALUES AND SERIAL NUMBER RANGES OF PARTS SHOWN OR DEPICTED IN GREY.

Static Sensitive Devices See Maintenance Section

492/492 P (SN B030000 to up)

(2052-94) 3784-25  
REV JUN 1985

DIGITAL STORAGE, HORIZONTAL (OPTION 2)  
(SN B030000 TO B043114)

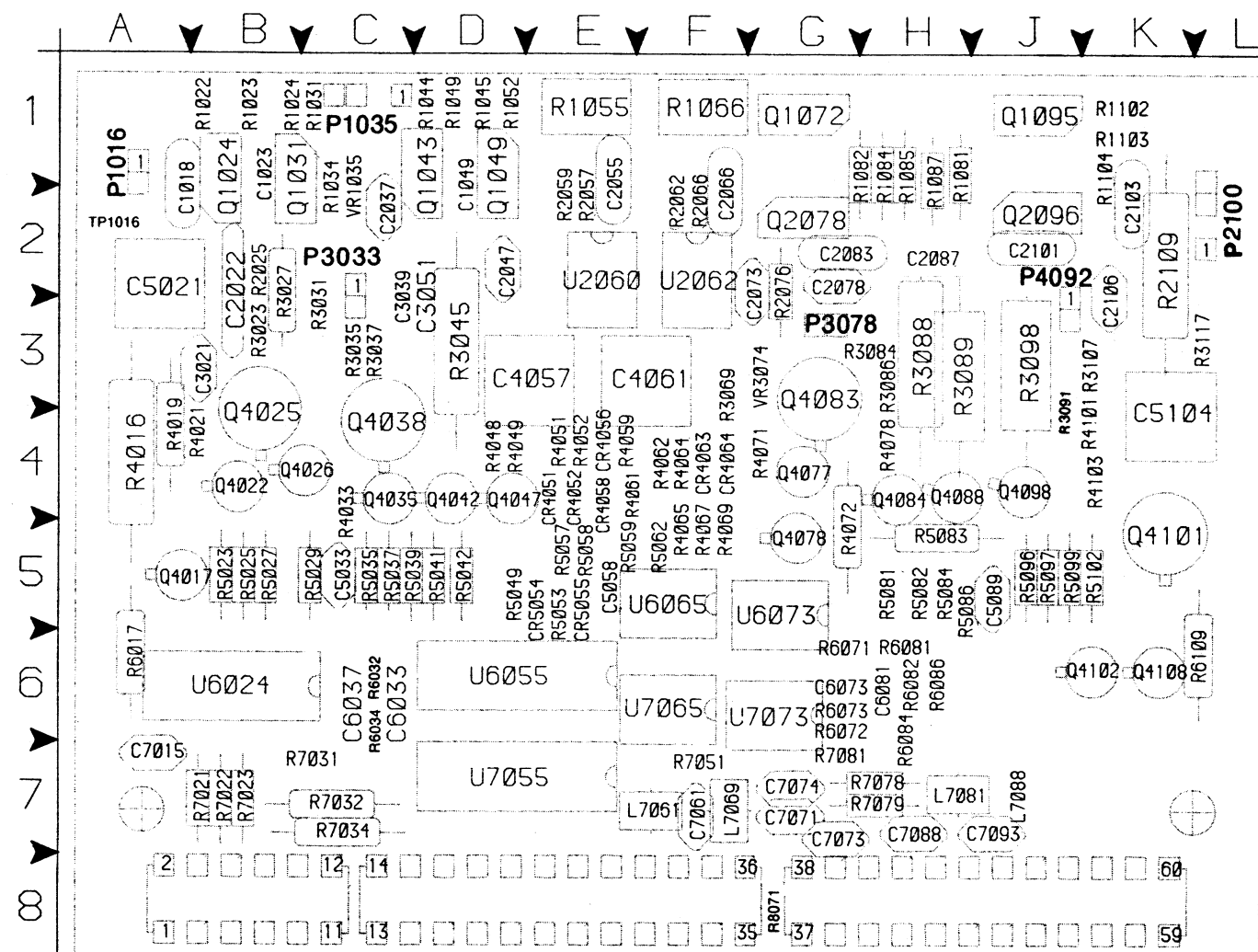
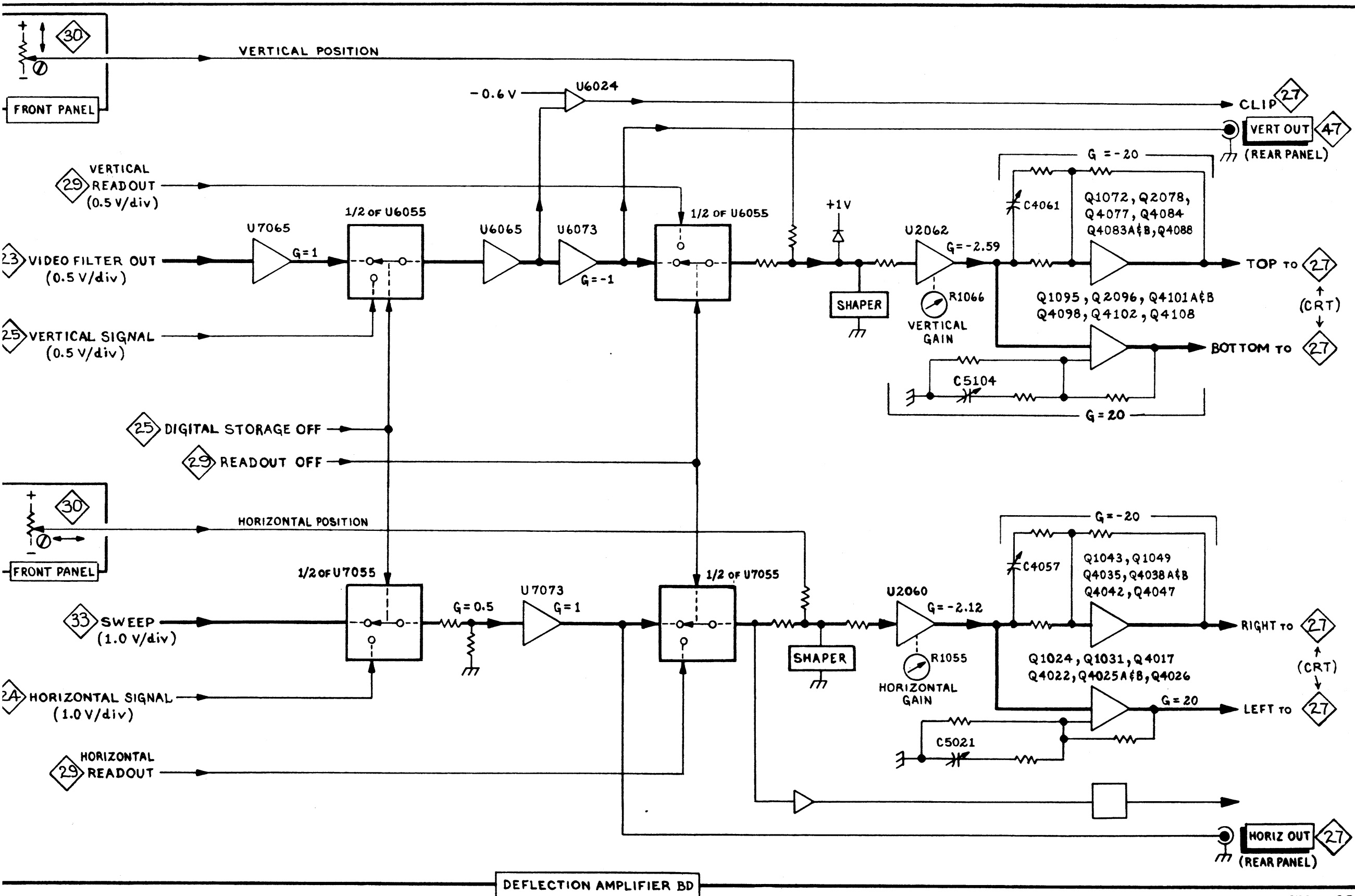
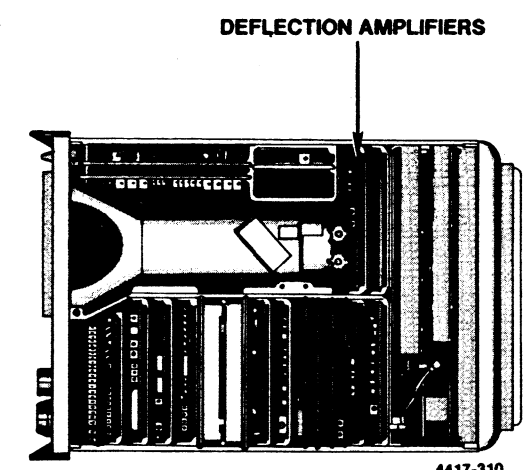
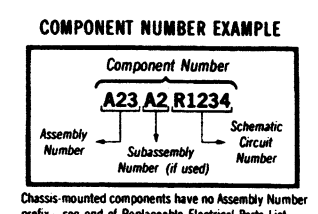


Fig. 8-25A A64— DEFLECTION AMPLIFIER Circuit Board (SN B054644 & UP).

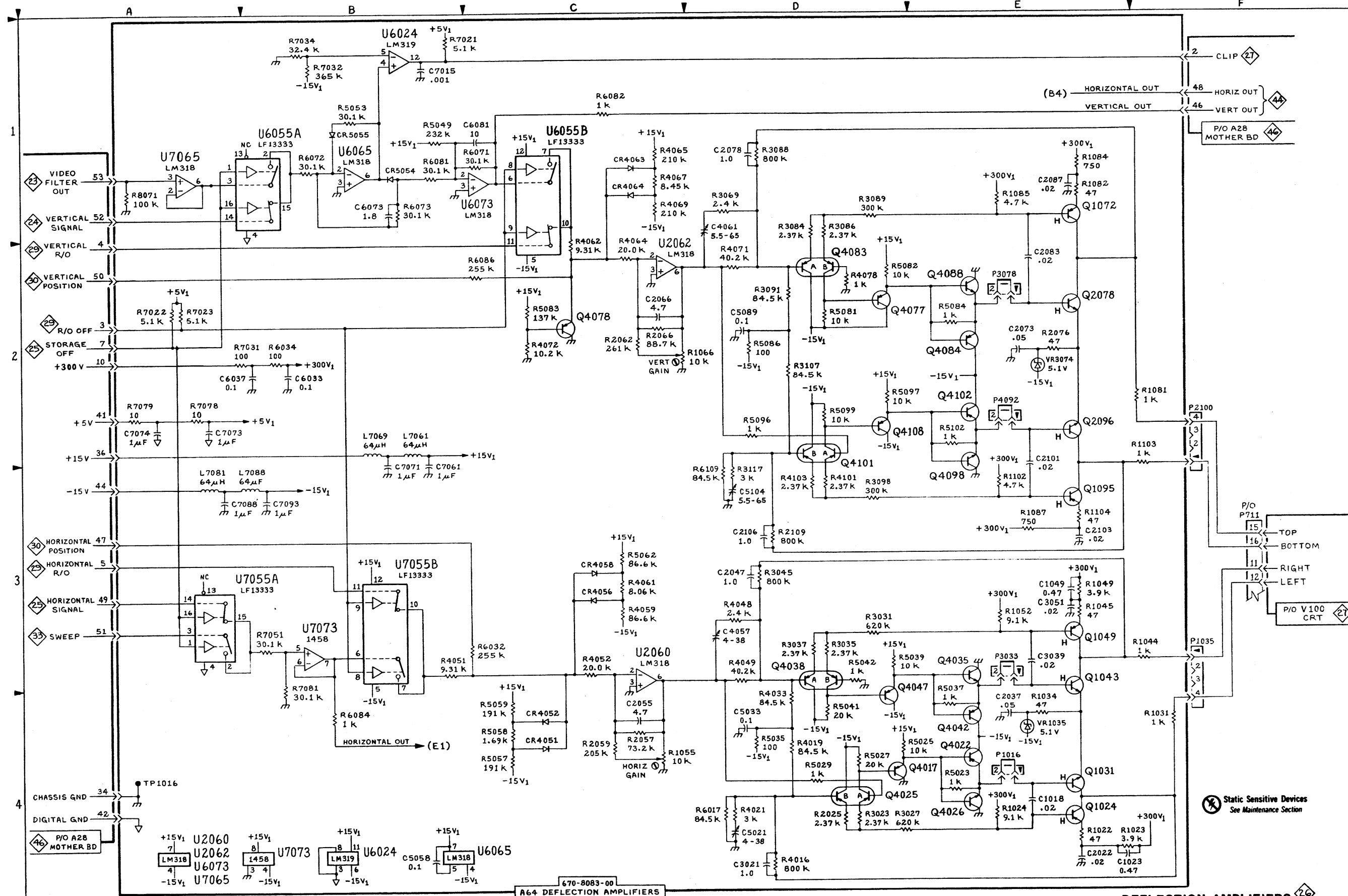


# DEFLECTION AMPLIFIERS (SN B054644 & UP)

DIAGRAM 26

## ASSEMBLY A64

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1018	E4	A2	R4092	E2	I3	R2109	D3	J2	R5084	E2	H5
C1023	E4	B1	P3033	E3	C2	R3023	D4	B3	R5086	D2	H5
C1049	E3	D1				R3027	D4	B3	R5096	D2	I5
C2022	E4	B3				R3031	D3	C3	R5097	D2	I5
C2037	E4	C2	Q1024	E4	B1	R3035	D3	C3	R5099	D2	I5
C2047	D3	D2	Q1031	E4	B1	R3037	D3	C3	R5102	E2	J5
C2055	C4	E2	Q1043	E3	D1	R3045	D3	D3	R6017	D4	A6
C2066	C2	F2	Q1049	E3	D1	R3049	D1	F3	R6032	C3	C6
C2073	E2	G2	Q1072	E1	G1	R3069	D1	H3	R6034	B2	C7
C2078	D1	G2	Q1095	E3	I1	R3084	D1	H3	R6071	C1	G6
C2083	E2	G2	Q2078	E2	G2	R3086	D1	H3	R6072	B1	G6
C2087	E1	H2	Q2096	E2	I2	R3088	D1	H3	R6073	B1	G6
C2101	E2	I2	Q4017	D4	A5	R3089	D1	H3	R6081	B1	H6
C2103	E3	J2	Q4022	E4	B4	R3091	D2	J4	R6082	C1	H6
C2106	D3	J2	Q4025	E4	B3	R3098	D3	I3	R6084	B4	H7
C3021	D4	B3	Q4026	E4	B4	R3107	D2	J3	R6086	H6	C2
C3039	E3	C3	Q4035	E3	C4	R3117	D3	J3	R6109	D3	K6
C3051	E3	D3	Q4038	D3	C4	R4016	D4	A4	R7021	B1	B7
C4057	D3	D3	Q4042	E4	D4	R4019	D4	A4	R7022	A2	B7
C4061	D1	E3	Q4047	D4	D4	R4021	D4	B4	R7023	A2	B7
C5021	D4	A2	Q4077	D2	G4	R4033	D4	C4	R7031	B2	C7
C5033	D4	C5	Q4078	C2	G5	R4038	D3	D4	R7032	B1	B7
C5058	B4	E5	Q4083	D2	G3	R4049	D3	D4	R7034	B1	B7
C5089	D3	I5	Q4084	E2	H4	R4051	B3	E4	R7051	B3	F7
C5104	D2	J3	Q4088	E2	H4	R4052	C3	E4	R7078	A2	H7
C6033	B2	C6	Q4098	E3	I4	R4059	C3	E4	R7079	A2	H7
C6037	A2	C6	Q4101	J5	D2	R4061	C3	E4	R7081	B4	G6
C6073	B1	G6	Q4102	E2	I6	R4062	C2	F4	R8071	A1	G8
C6081	C1	H6	Q4108	E2	J6	R4064	C2	F4			
C7015	B1	A7	R1022	E4	B1	R4065	C1	F4			
C7061	B3	F7	R1023	E4	B1	R4067	C1	F4			
C7071	B3	G7	R1024	E4	B1	R4069	C1	F4			
C7073	A2	G7	R1024	E4	B1	R4071	D2	G4	TP1016	A4	A2
C7074	A2	G7	R1031	F4	C1	R4072	C2	G4			
C7088	A3	H7	R1034	E4	C2	R4078	D2	H4	U2060	A4	E2
C7093	B3	I7	R1044	F3	D1	R4101	D3	J4	U2060	C3	E2
CR4051	C4	E4	R1045	E3	D1	R4103	D3	J4	U2062	A4	F2
CR4052	C4	E4	R1049	E3	D1	R5023	E4	B5	U2062	C2	F2
CR4056	C3	E4	R1052	E3	D1	R5025	D4	B5	U6024	B1	B6
CR4058	C3	E4	R1055	C4	E1	R5027	D4	B5	U6055A	B1	E6
CR4063	C1	F4	R1066	C2	F1	R5029	D4	C5	U6055B	C1	E6
CR4064	C1	F4	R1081	F2	H2	R5035	D4	C5	U6065	B1	F5
CR5054	B1	E5	R1082	E1	G2	R5037	E4	C5	U6065	B4	F5
CR5055	B1	E5	R1084	E1	H2	R5039	D3	C5	U6073	A4	G5
			R1085	E1	H2	R5041	D4	D5	U6073	C1	G5
			R1087	E3	H2	R5042	D3	D5	U7055A	A3	E7
			R1102	E3	J1	R5049	B1	D5	U7055B	B3	E7
			R1103	F2	J1	R5053	B1	E5	U7065	A1	F6
			R1104	E3	K2	R5057	C4	E5	U7065	A4	F6
			R1108	B3	I7	R5058	C4	E5	U7073	B3	G6
			R2025	D4	B5	R5059	C4	E5	U7073	B4	G6
			R2057	C4	E2	R5062	C3	F5	VR1035	E4	C2
			R2059	C4	E2	R5081	D2	H5	VR3074	E2	G3
			R2100	F2	K2	R5082	D2	H5			
			R3078	E2	G3	R5083	C2	H5			



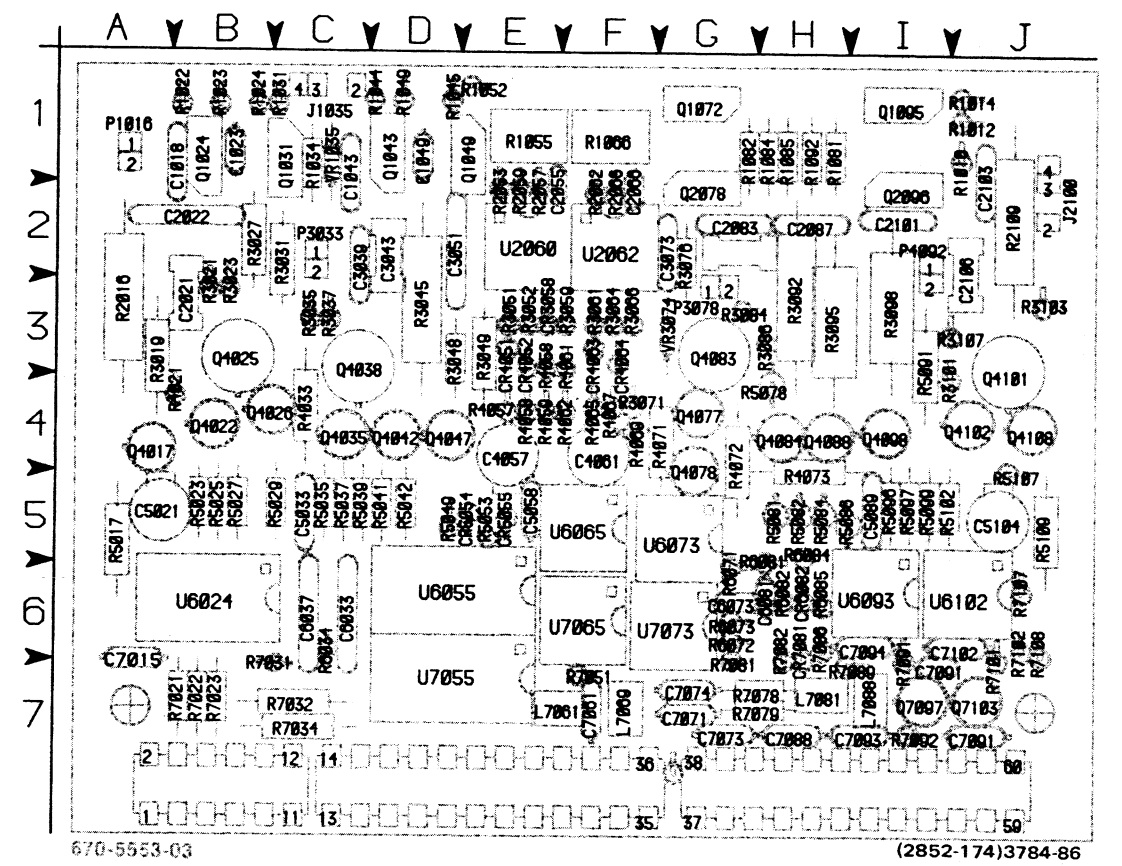
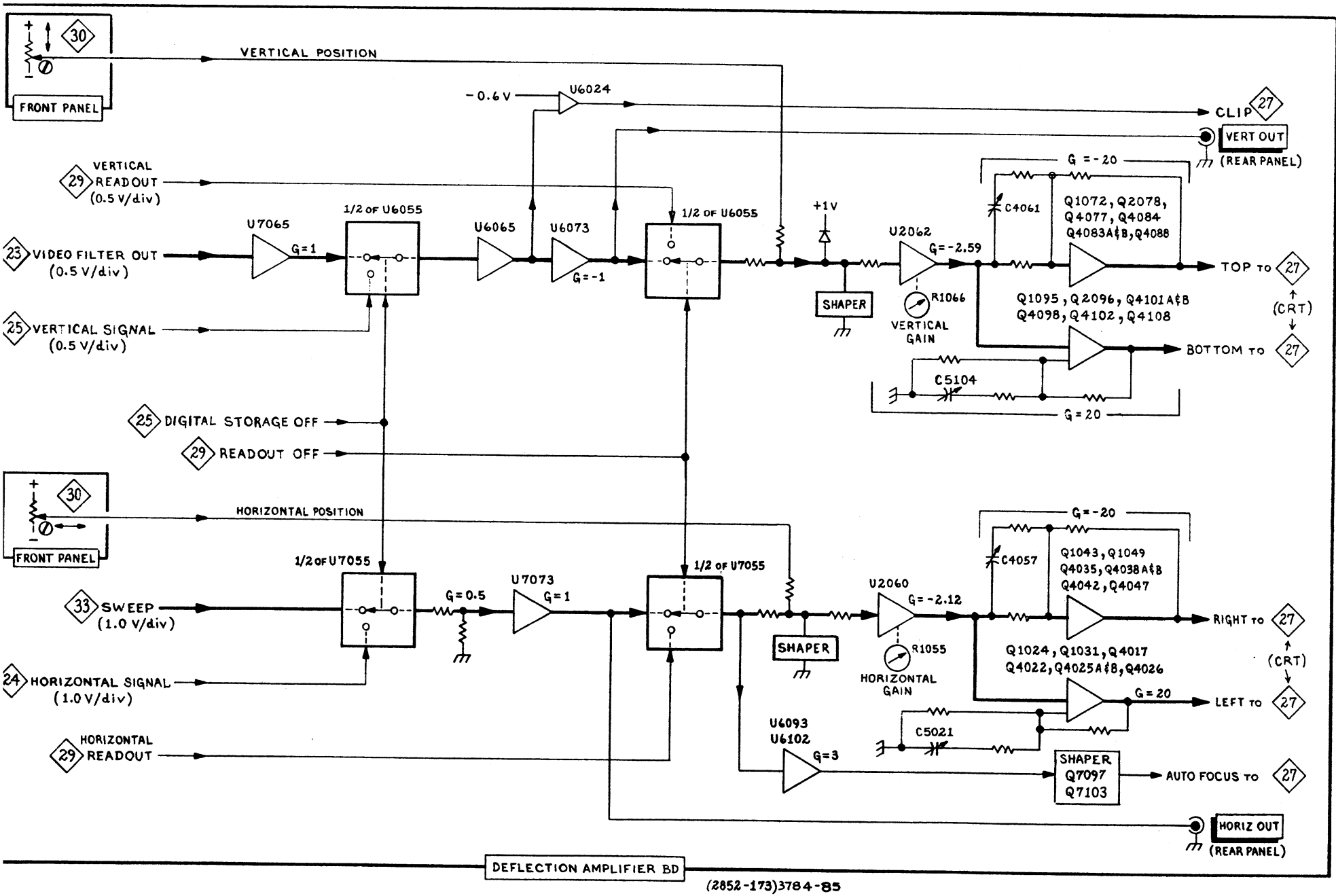
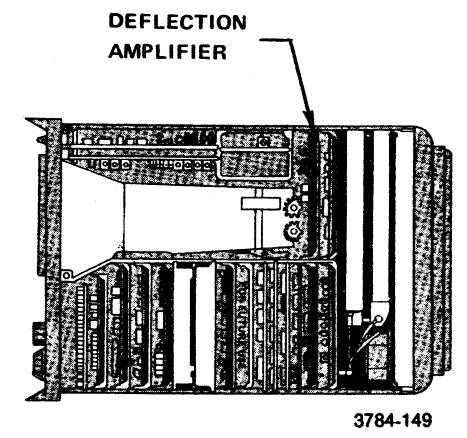
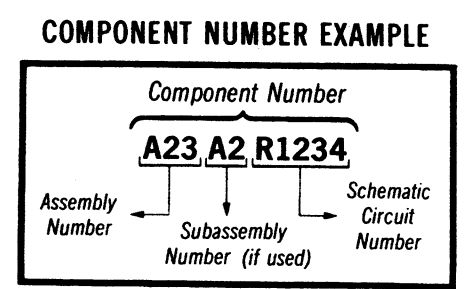


Fig. 8-25B A64 DEFLECTION AMPLIFIER Circuit Board (SN B054643 & BELOW).



Static Sensitive Devices  
See Maintenance Section

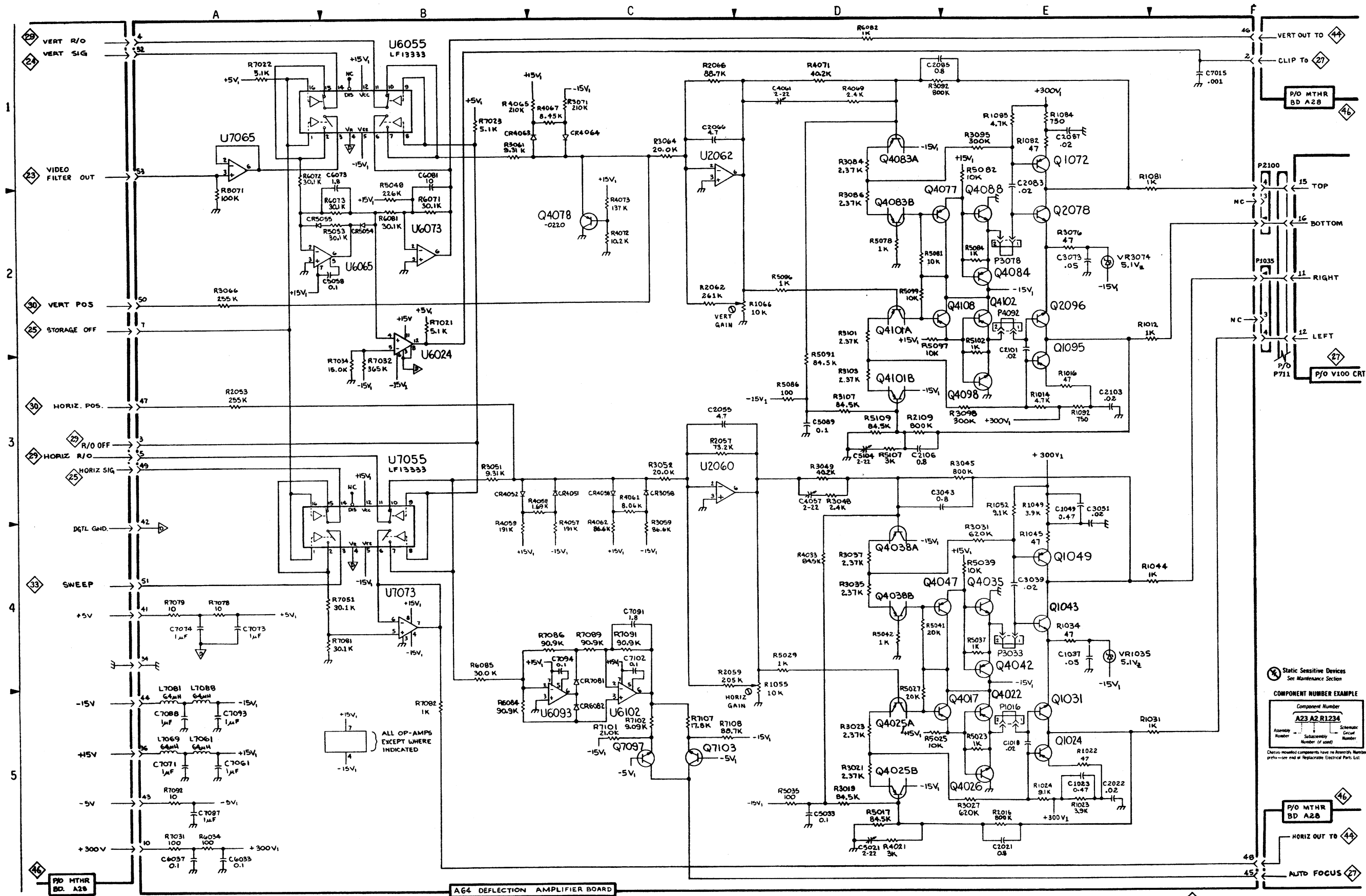


Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

### Deflection Amplifier DIAGRAM 26

ASSEMBLY A64 (SN B054643 & BELOW)

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1018	E5	B1	P1016	E5	A1	R1092	E3	H1	R5049	B2	D5	R5049	B2	D5
C1023	E5	B1	P1035	F2	C1	R2016	E5	A3	R5053	B2	E5	R5053	B2	E5
C1043	E4	C1	P2100	F2	J2	R2053	A3	E2	R5078	D2	H4	R5078	D2	H4
C1049	E3	D1	P3033	E4	C2	R2057	C3	E2	R5081	D2	H5	R5081	D2	H5
C2021	E5	B3	P3078	E2	G3	R2059	C4	E2	R5082	E1	H5	R5082	E1	H5
C2022	E5	B2	P4092	E2	I2	R2062	C2	F2	R5084	E2	H5	R5084	E2	H5
C2055	C3	E2				R2066	C1	F2	R5086	D3	H5	R5086	D3	H5
C2066	C1	F2	Q1024	E5	B1	R2109	D3	J2	R5091	D3	I3	R5091	D3	I3
C2083	E2	G2	Q1031	E5	C1	R3019	D5	A3	R5096	D2	I5	R5096	D2	I5
C2087	E1	H2	Q1043	E4	D1	R3021	D5	B3	R5097	D2	I5	R5097	D2	I5
C2101	E2	I2	Q1049	E4	E1	R3023	D5	B3	R5099	D2	I5	R5099	D2	I5
C2103	E3	J1	Q1072	E1	G1	R3027	E5	B2	R5102	E2	I5	R5102	E2	I5
C2106	D3	J2	Q1095	E3	I1	R3031	E4	C2	R5107	D3	J4	R5107	D3	J4
C3039	E4	C2	Q2078	E2	G2	R3035	D4	C3	R5109	D3	J5	R5109	D3	J5
C3043	E3	D2	Q2096	E2	I2	R6034	D4	C3	R6034	A5	C6	R6034	A5	C6
C3051	E3	D2	Q4017	E5	A4	R6071	D3	D3	R6071	B2	G6	R6071	B2	G6
C3073	E2	G2	Q4022	E5	B4	R6072	A1	G6	R6072	A1	G6	R6072	A1	G6
C4057	D3	E4	Q4025A	D5	B3	R6073	B2	G6	R6073	B2	G6	R6073	B2	G6
C4061	D1	F4	Q4025B	D5	B3	R6081	B2	H5	R6081	B2	H5	R6081	B2	H5
C5021	D5	A5	Q4026	E5	B4	R6082	D1	H6	R6082	D1	H6	R6082	D1	H6
C5033	D5	C5	Q4035	E4	C4	R6084	B5	H5	R6084	B5	H5	R6084	B5	H5
C5058	B2	E5	Q4038A	D4	C3	R6085	B4	H6	R6085	B4	H6	R6085	B4	H6
C5089	D3	I5	Q4038B	D4	C3	R7021	B2	B7	R7021	B2	B7	R7021	B2	B7
C5104	D3	J5	Q4042	E4	D4	R7022	A1	B7	R7022	A1	B7	R7022	A1	B7
C6033	A5	C6	Q4047	E4	D4	R7023	B1	B7	R7023	B1	B7	R7023	B1	B7
C6033	A5	C6	Q4077	D2	G4	R7031	A5	B6	R7031	A5	B6	R7031	A5	B6
C6037	A5	C6	Q4078	C2	G4	R7032	B3	C7	R7032	B3	C7	R7032	B3	C7
C6037	A5	C6	Q4083A	D1	G3	R7033	B3	C7	R7033	B3	C7	R7033	B3	C7
C6073	B2	G6	Q4083B	D2	G3	R7034	B3	C7	R7034	B3	C7	R7034	B3	C7
C6081	B2	H6	Q4084	E2	H4	R7051	A4	F7	R7051	A4	F7	R7051	A4	F7
C7015	F1	A6	Q4088	E2	H4	R7078	A4	G7	R7078	A4	G7	R7078	A4	G7
C7061	A5	F7	Q4098	E3	I4	R7079	A4	G7	R7079	A4	G7	R7079	A4	G7
C7071	A5	G7	Q4101A	D2	J3	R3101	D2	I3	R7081	A4	G6	R7081	A4	G6
C7073	A4	G7	Q4101B	D3	J3	R3103	D3	J3	R7082	D3	I3	R7082	D3	I3
C7074	A4	G7	Q4102	E2	J4	R3107	D3	I3	R7086	C4	H6	R7086	C4	H6
C7088	A5	H7	Q4108	E2	J4	R4021	D5	B4	R7089	C4	H6	R7089	C4	H6
C7091	C4	I6	Q7097	C5	I7	R4033	D4	C4	R7091	C4	I6	R7091	C4	I6
C7093	A5	I7	Q7103	C5	J7	R4057	C4	E4	R7092	A5	I7	R7092	A5	I7
C7094	C4	I6				R4058	C3	E3	R7101	C5	J6	R7101	C5	J6
C7097	A5	NA	R1012	E2	J1	R4059	B4	E4	R7102	C5	J6	R7102	C5	J6
C7102	C4	I6	R1014	E3	J1	R4061	C3	E3	R7107	C5	J6	R7107	C5	J6
CR3058	C3	E3	R1016	E3	J1	R4062	C4	E4	R7108	C5	J6	R7108	C5	J6
CR4051	C3	E3	R1022	E5	B1	R4065	C1	F4	U2060	C3	E2	U2060	C3	E2
CR4052	B3	E3	R1023	E5	B1	R4067	C1	F4	U2062	C1	F2	U2062	C1	F2
CR4063	C1	F3	R1024	E5	B1	R4069	D1	F4	U6024	B2	B6	U6024	B2	B6
CR4064	C1	F3	R1031	E5	C1	R4071	D1	F4	U6055	B1	D6	U6055	B1	D6
CR5054	B2	E5	R1034	E4	C1	R4072	C2	H4	U6065	A2	F5	U6065	A2	F5
CR5055	B2	E5	R1044	E4	D1	R4073	C2	H4	U6073	B2	G5	U6073	B2	G5
CR6082	C5	H6	R1045	E4	D1	R5017	D5	A5	U6093	C5	I6	U6093	C5	I6
CR7081	C4	H6	R1049	E3	D1	R5023	E5	B5	U6102	C5	I6	U6102	C5	I6
			R1052	E3	E1	R5025	D5	B5	U6103	A1	F6	U6103	A1	F6
			R1055	D4	E1	R5027	D4	B5	U7073	B4	G6	U7073	B4	G6
			R1056	D4	E1	R5029	D4	C5	VR1035	E4	C1	VR1035	E4	C1
			R1066	D2	F1	R5035	D5	C5	VR3074	E2	G3	VR3074	E2	G3
			R1081	E2	H1	R5037	E4	C5						
			R1082	E1	G1	R5039	E4	C5						
			R1084	E1	H1	R5041	D4	D5						
			R1085	E1	H1	R5042	D4	D5						



492/492P (SN B030000 & UP)

(2852-95) 3784-26  
REV. MAR. 1965

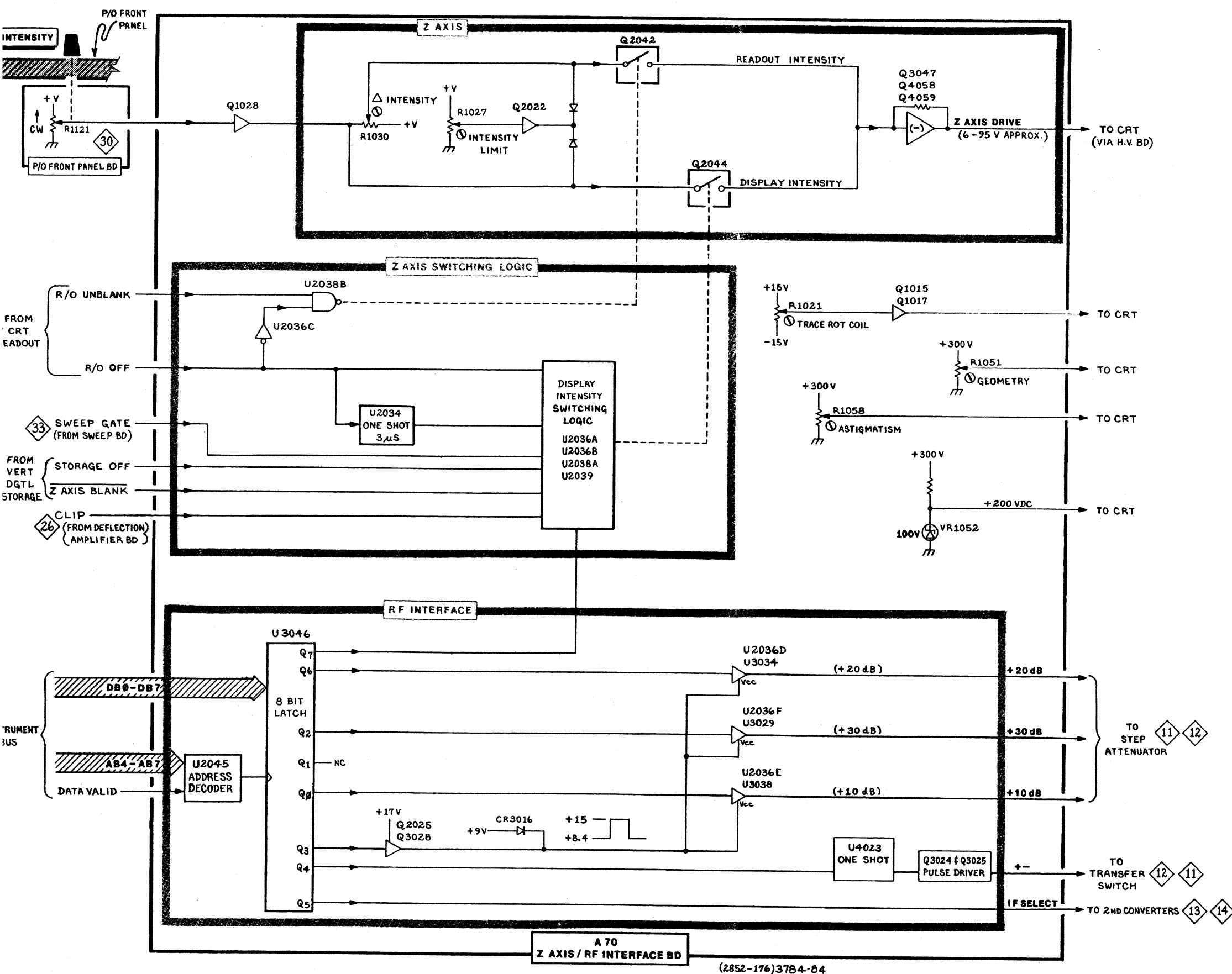
DEFLECTION AMPLIFIER 26  
(SN B054643 & BELOW)

Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE

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

Caution: Nonstatic Components Have No Removable Barrier  
and are of Replicable Electrical Parts List



(2852-176)3784-84

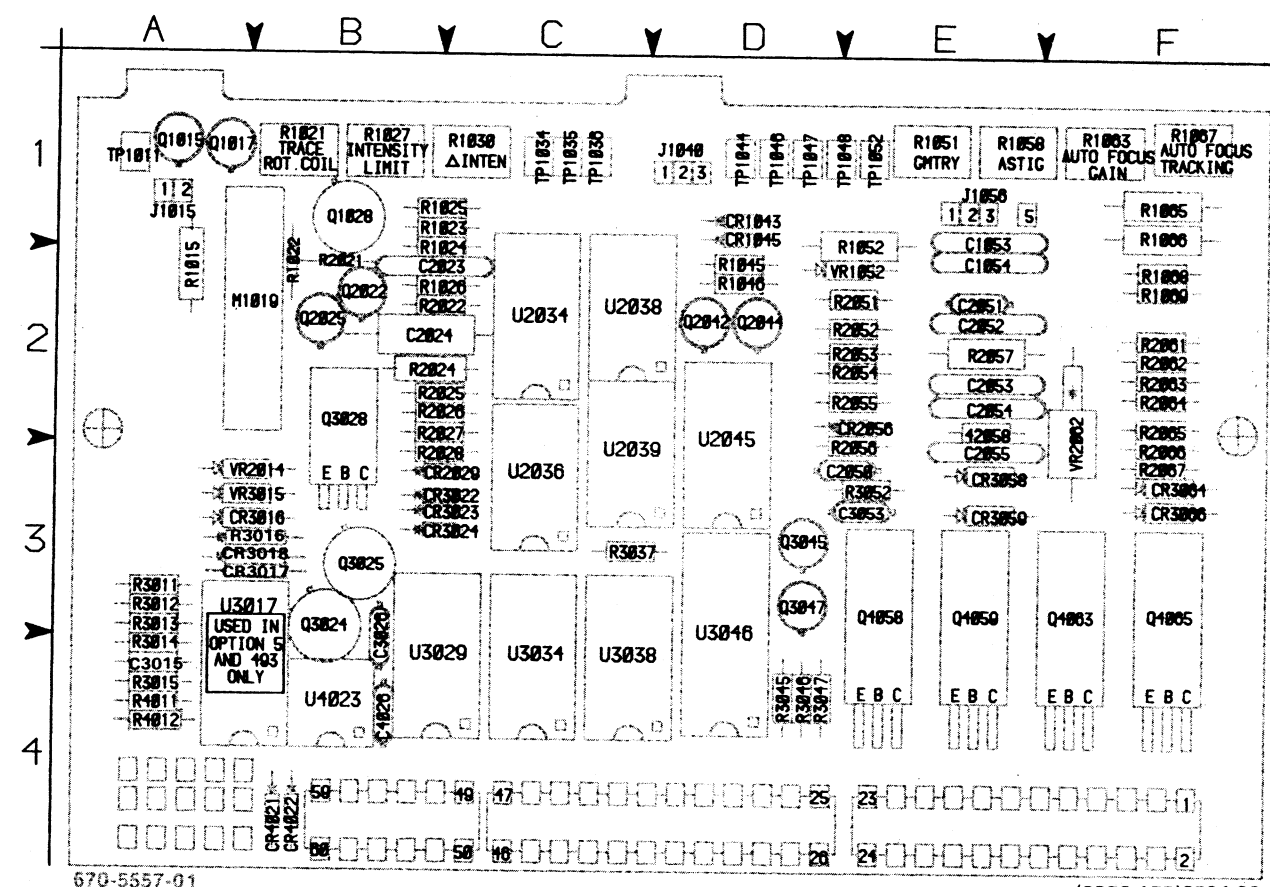
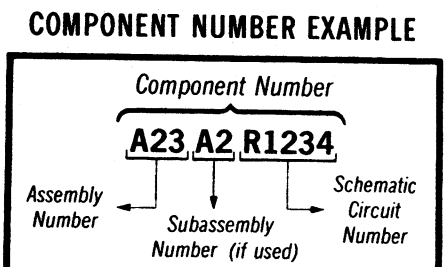
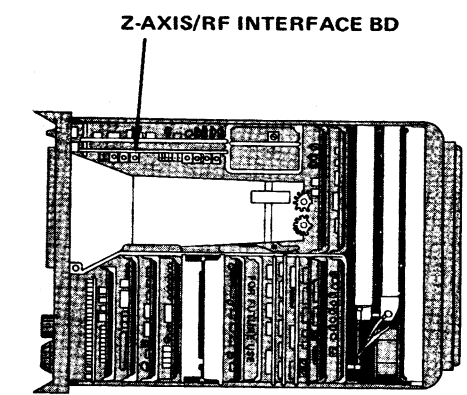


Fig. 8-26. A70-Z Axis circuit board. (2852-177)3784-88

Static Sensitive Devices  
See Maintenance Section



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

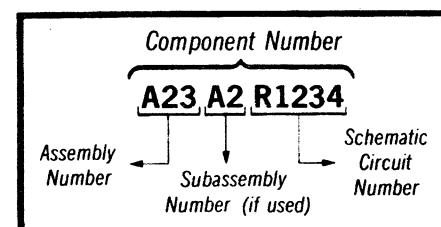






 **Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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

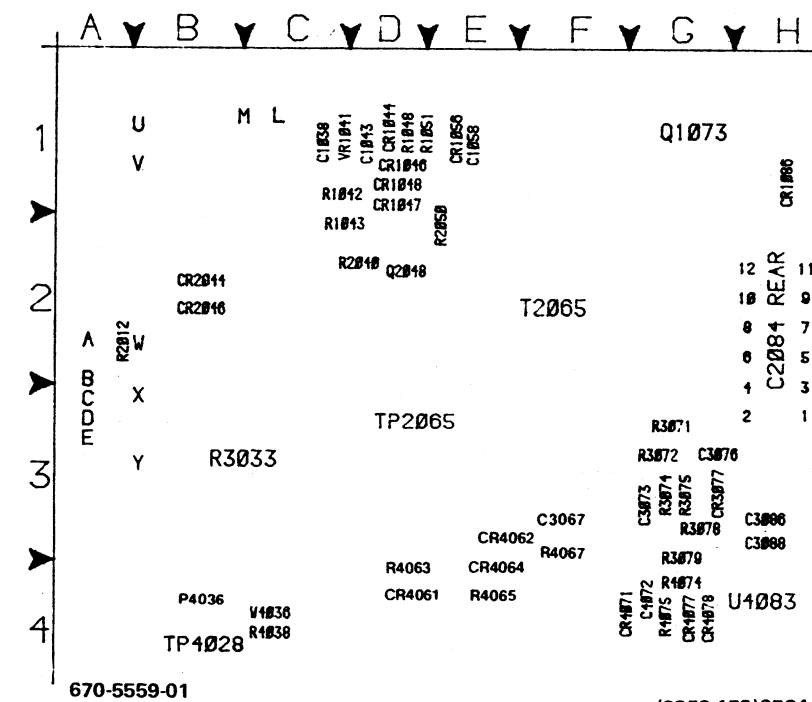
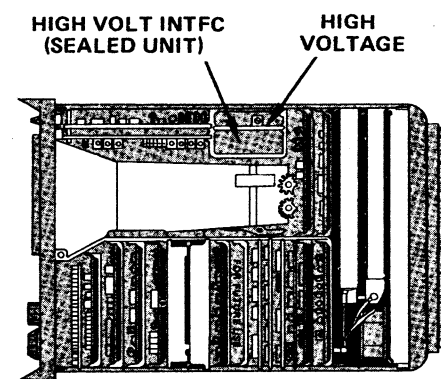


Fig. 8-27. A74—High Voltage circuit board.



3784-147

REV OCT 1985

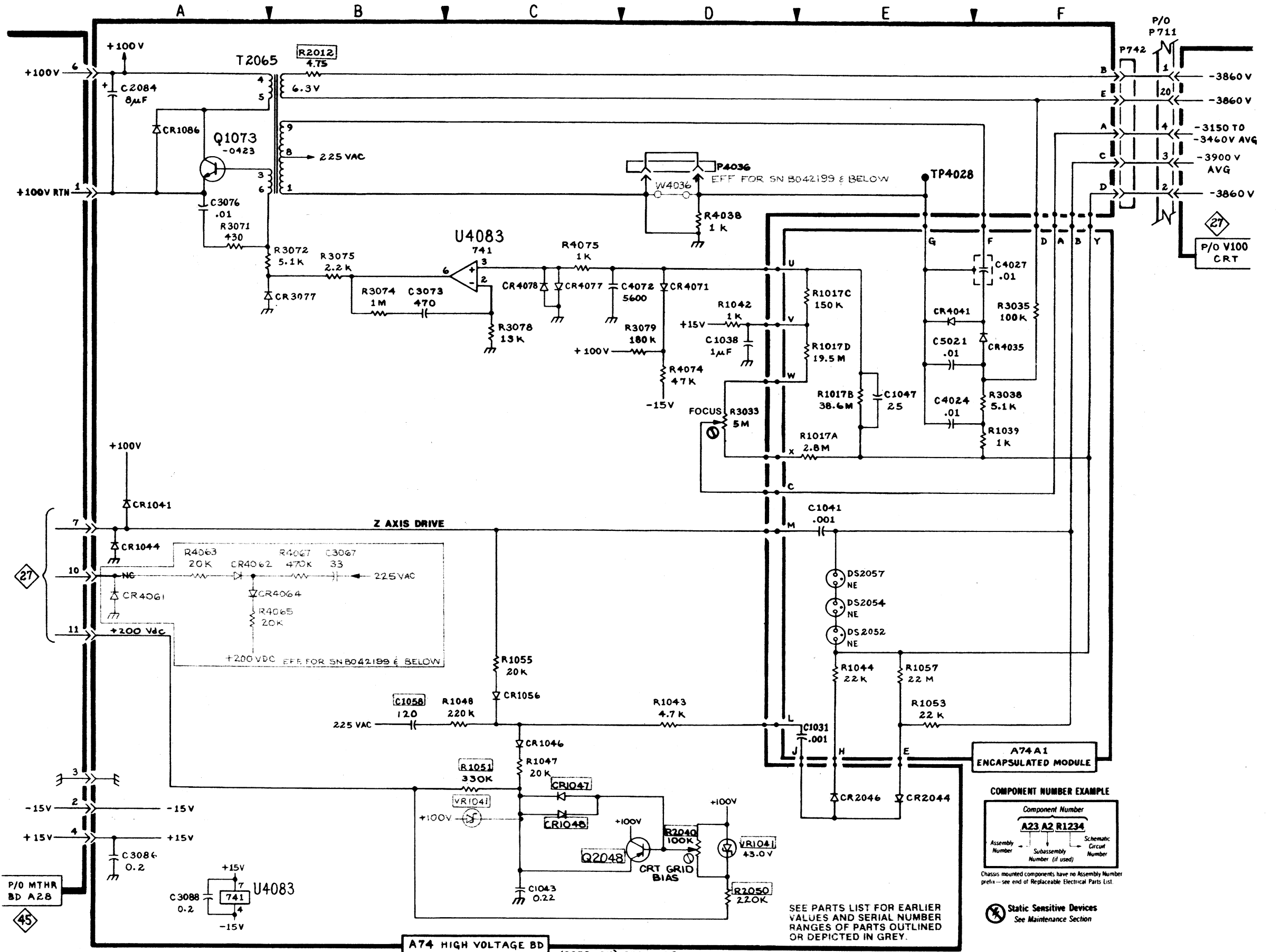
# HIGH VOLTAGE DIAGRAM 28

## ASSEMBLY A74

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1038	D2	C1	CR1048*	C5	D1	R1043	D4	D1	R4038	D1	C4	R4038	D1	C4
C1043	C5	D1	CR1056	C4	E1	R1048	C4	D1	R4063*	A3	D4	R4063*	A4	E4
C1058	B4	E1	CR1076	A3	D1	R1051	C5	E1	R4065*	B3	F4	R4067*	B3	F4
C2084	A1	H2	CR1086	A1	H1	R2012	B1	A2	R4074	D2	G4	R4074	D2	G4
C3067*	B3	F3	CR3077	B2	G3	R2040*	D5	D2	R4075	C2	G4	R4075	C2	G4
C3073	B2	G3	CR4061*	A4	E4	R2050*	D5	E1	T2065	B1	F2	T2065	B1	F2
C3076	A1	G3	CR4062*	A3	E3	R3033	D3	C3	U4083	A5	H4	U4083	A5	H4
C3086	A5	H3	CR4064*	A4	E4	R3071	A2	G3	VR1041	D5	D1	VR1041	D5	D1
C3088	A5	H3	CR4071	D2	G4	R3072	B2	G3	W4036	D1	C4	W4036	D1	C4
C4072	C2	G4	CR4077	C2	G4	R3074	B2	G3						
			CR4078	C2	G4	R3075	B2	G3						
						R3076	B2	G3						
						R3077	C2	G3						
						R3078	C2	G3						
						R3079	D2	G3						
CR1044	A3	D1	Q1073	A1	G1	Q2048*	C5	D2						
CR1046	C4	E1												
CR1047*	C5	D1												

## High Voltage

\*See Parts List for serial number ranges.



492/492P (SN B030000 & UP)

REV OCT 1985

(2852-97) 3784-28

HIGH VOLTAGE SUPPLY 28 JAW

**COMPONENT NUMBER EXAMPLE**

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

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

Static Sensitive Devices  
See Maintenance Section

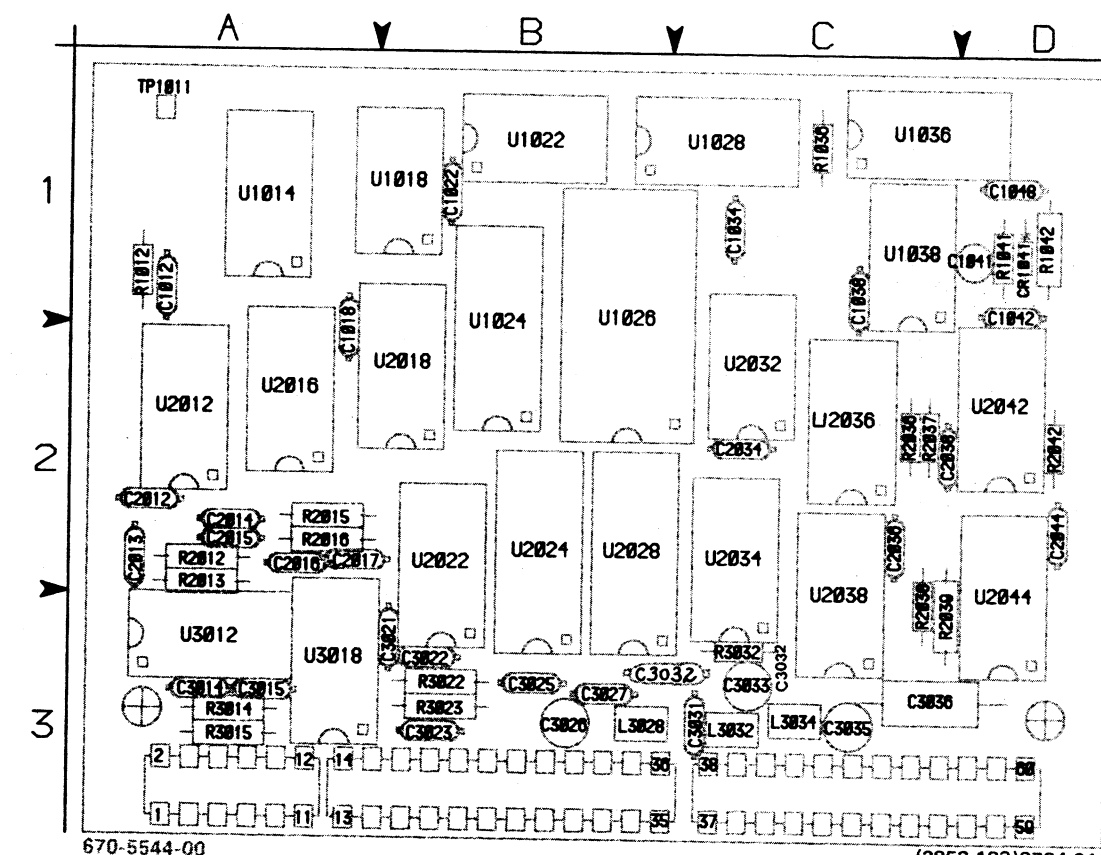
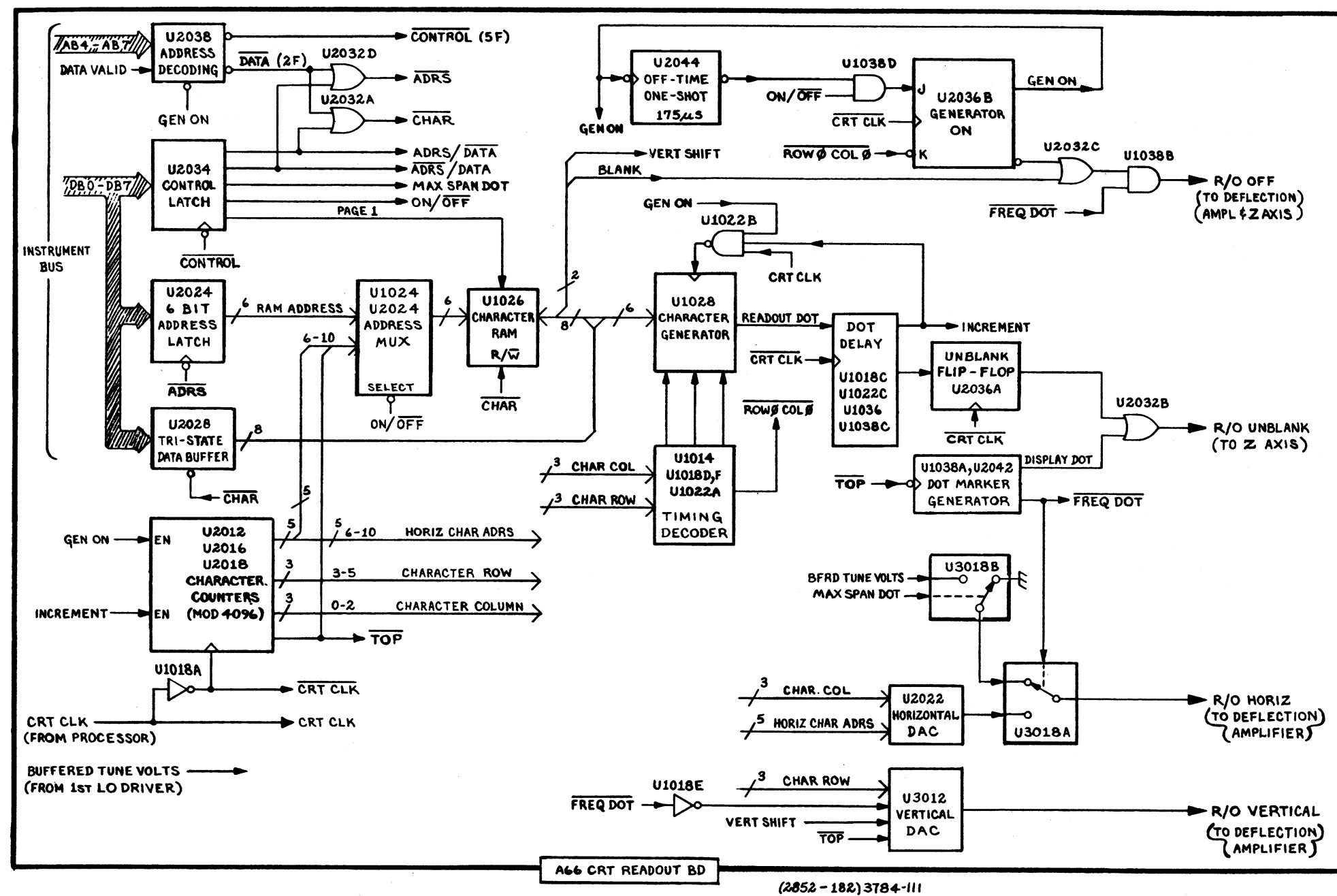
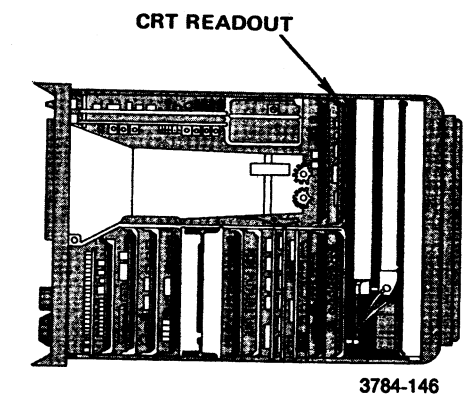


Fig. 8-29. A66—CRT Readout circuit board.



3784-146

**Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**

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

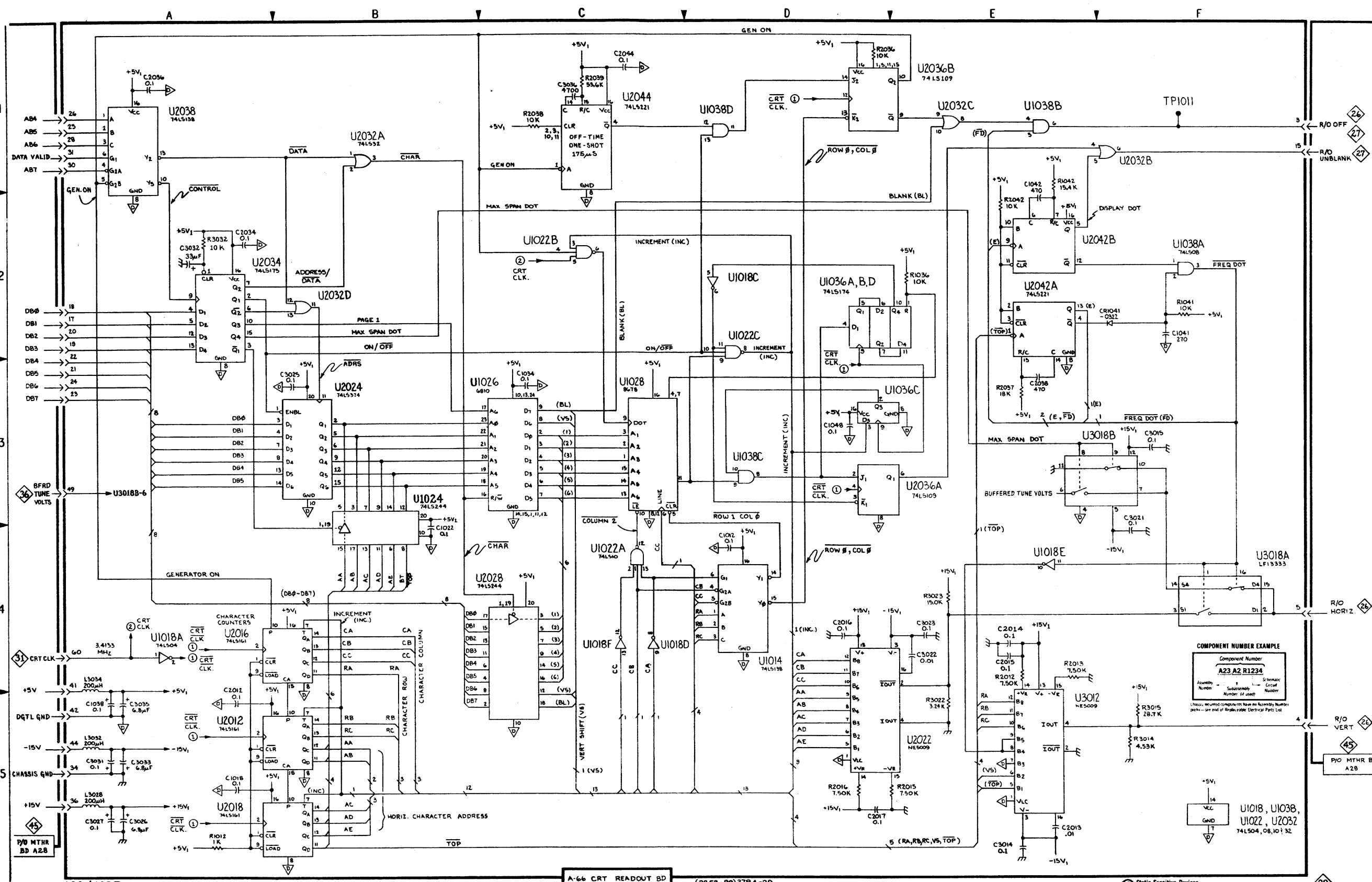
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

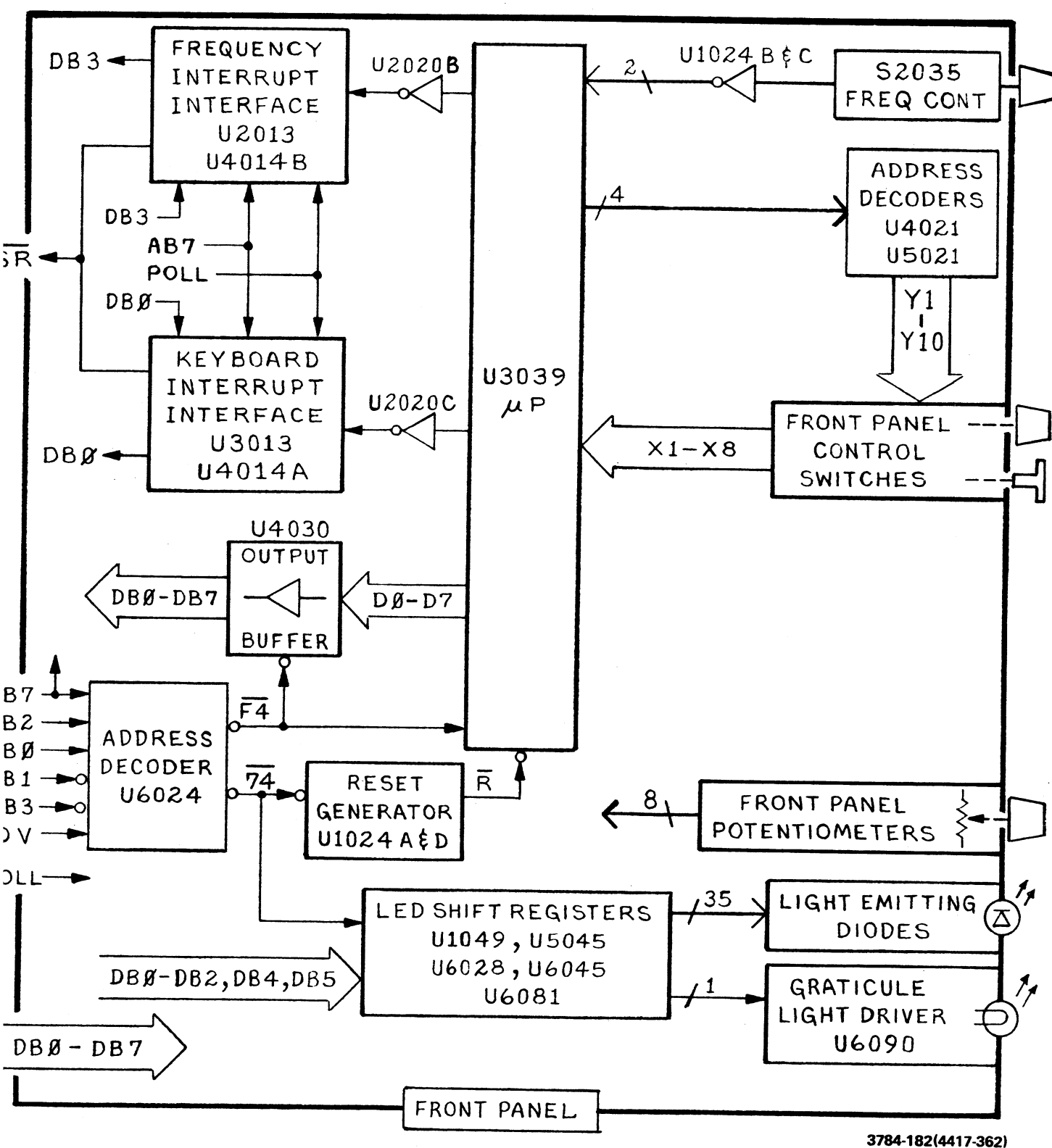
CRT Readout DIAGRAM 29

ASSEMBLY A66

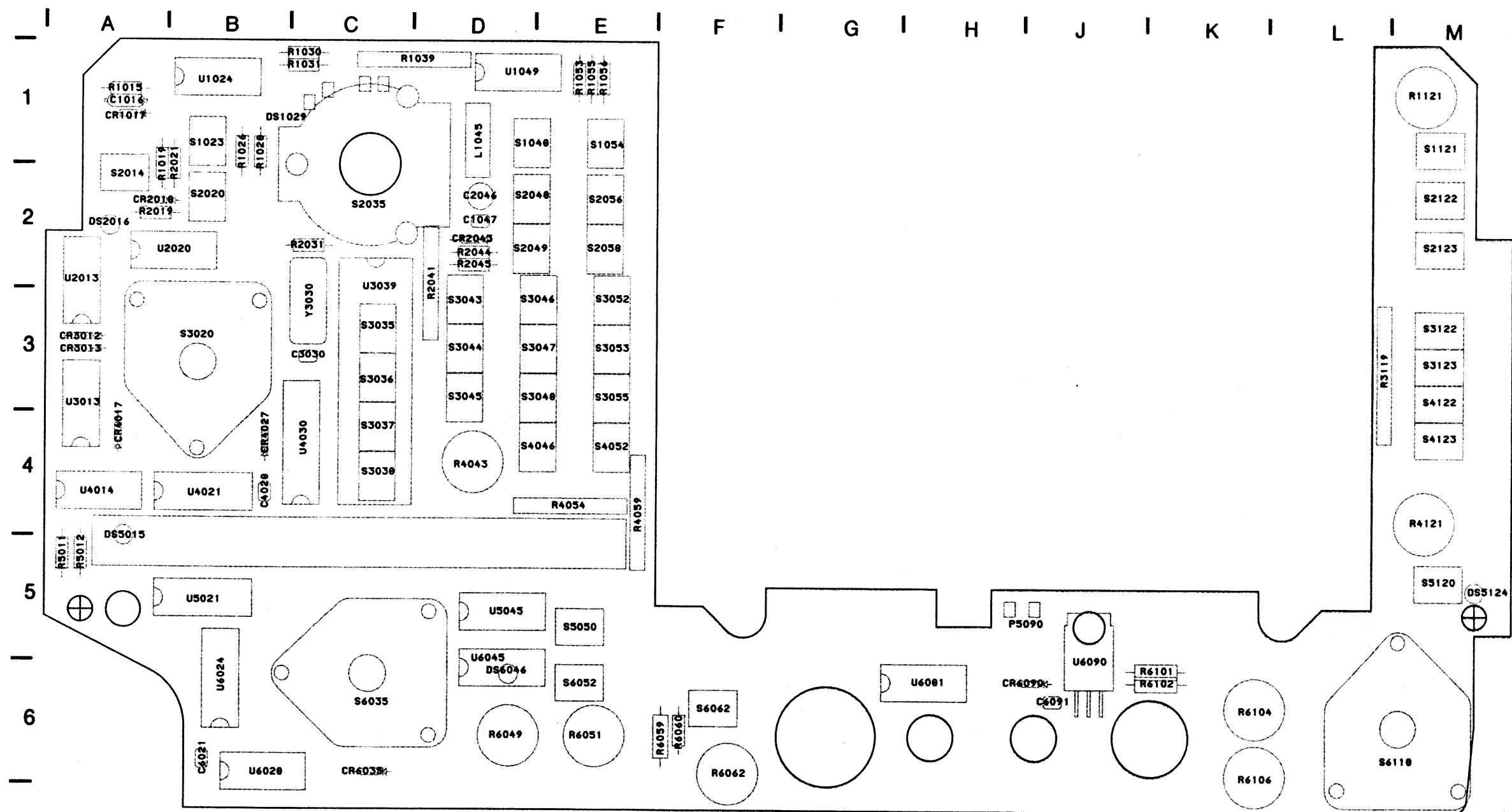
CRT

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1012	D4	A1	L3028	A5	B3	U1022C	D2	B1
C1018	A5	A2	L3032	A5	C3	U1024	B3	B1
C1022	B4	B1	L3034	A4	C3	U1026	C3	B1
C1034	C3	C1				U1026	C3	B1
C1038	A5	C1	R1012	A5	A1	U1028	C3	C1
C1041	F2	D1	R1036	E2	C1	U1036C	E3	C1
C1042	E1	D1	R1041	F2	D1	U1038A	F2	C1
C1048	D3	D1	R1042	E1	D1	U1038B	E1	C1
C2012	A5	A2	R2012	E4	A2	U1038C	D3	C1
C2013	E5	A2	R2013	E4	A2	U1038D	D1	C1
C2014	E4	A2	R2015	E5	A2	U2012	A5	A2
C2015	E4	A2	R2016	D5	A2	U2016	A4	A2
C2016	D4	A2	R2036	D1	C2	U2018	A5	B2
C2017	D5	A2	R2037	E3	C2	U2022	E5	B2
C2034	A2	C2	R2038	C1	C2	U2024	B3	B2
C2036	A1	C2	R2039	C1	D3	U2028	C4	B2
C2038	E3	C2	R2042	E2	D2	U2032A	B1	C2
C2044	C1	D2	R3014	F5	A3	U2032B	F1	C2
C3014	E5	A3	R3015	F5	A3	U2032C	E1	C2
C3015	F3	A3	R3022	E5	B3	U2032D	B2	C2
C3021	F3	B3	R3023	E4	B3	U2034	A2	C2
C3022	E4	B3	R3032	A2	C3	U2036A	E3	C2
C3023	E4	B3				U2036B	E1	C2
C3025	B3	B3	TP1011	F1	A1	U2038	A1	C2
C3026	A5	B3				U2042A	E2	D2
C3027	A5	B3	U1014	D4	A1	U2042B	E2	D2
C3031	A5	C3	U1018A	A4	B1	U2044	C1	D2
C3032	A2	C3	U1018C	D2	B1	U3012	E5	A3
C3033	A5	C3	U1018D	C4	B1	U3018A	F4	A3
C3035	A5	C3	U1018E	E4	B1	U3018B	F3	A3
C3036	C1	C3	U1018F	C4	B1	U1036AB		
			U1022A	C4	B1			
			U1022B	C2	B1			
CR1041	F2	D1						



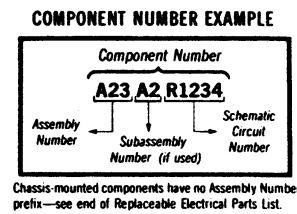


3784-182(4417-362)

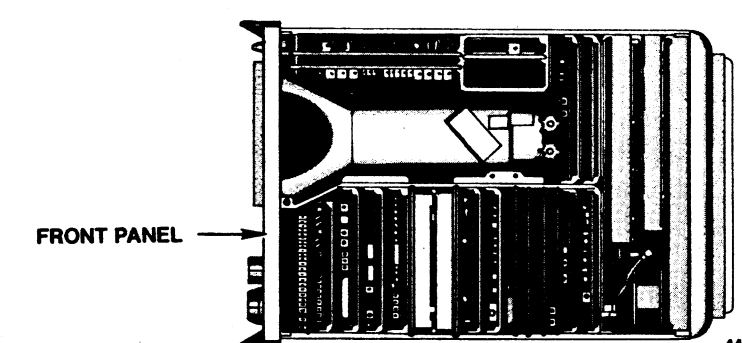


3782-183(4417-360)

Fig. 8-30A. A3B—Front Panel circuit board (SN B054245 & UP).



REV JUN 1984



4417-361

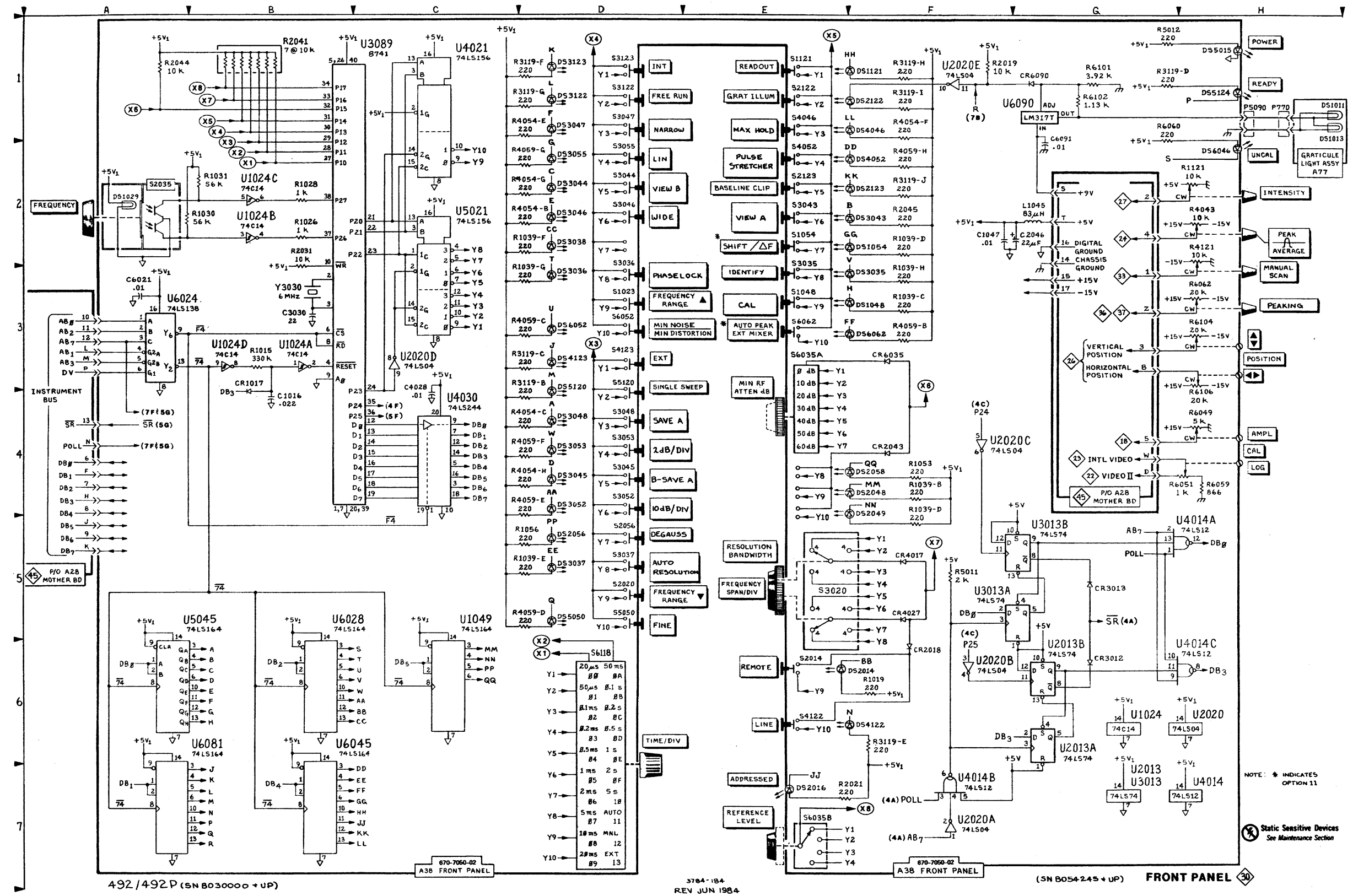


FRONT PANEL (SN B054245 & UP)

DIAGRAM 43

ASSEMBLY A38

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1016	B4	A1	DS5050	D5	E5	R4059C	D3	B4	S3123	D1	M3
C1047	F2	D2	DS5120	D4	L5	R4059D	D5	B4	S4046	E1	D4
C2046	G2	D2	DS5124	H1	M5	R4059E	D4	B4	S4052	E2	B4
C3030	B3	C3	DS6046	H2	D6	R4059F	D4	B4	S4112	E6	M3
C4028	C1	B4	DS6052	D3	E6	R4059G	D2	B4	S4123	D3	M4
C6021	A3	B6	DS6062	F3	F6	R4059H	F2	B4	S5050	D5	E5
C6091	F1	J6				R4121	H2	M4	S5120	D4	M5
						R5011	F5	A5	S6035A	E3	C6
CR1017	B4	A1				R5012	G1	A5	S6035B	E7	C6
CR2018	F6	A2	P5090	H1	J5	R6049	H4	D6	S6052	D3	E6
CR2043	F4	D2				R6051	H4	E6	S6062	E3	F6
CR3012	G5	A3	R1015	B3	A1	R6060	G1	F6	S6118	D6	M6
CR3013	G6	A3	R1019	E7	A2	R6062	H3	F6			
CR4017	F5	A4	R1026	B2	B1	R6101	G1	K6	U1024A	B3	B1
CR4027	F5	B4	R1028	B2	B1	R6102	G1	K6	U1024B	B2	B1
CR6035	F3	C6	R1030	A2	C1	R6104	H3	L6	U1024C	B2	B1
CR6090	G1	J6	R1031	B2	C1	R6106	H3	L6	U1024D	B3	B1
			R1039B	F4	D1				U1024	G6	B1
DS1029	A2	B1	R1039C	F3	D1	R3119C	D3	L3	U1049	C6	D1
DS1048	F3	D1	R1039D	F2	D1	R4054E	H1	E4	U2013A	G6	A2
DS1054	F2	E1	R1039D	F4	D1	R6059	H4	F6	U2013B	G6	A2
DS1121	F1	L1	R1039E	D6	D1				U2013	G7	A2
DS2014	E6	A2	R1039F	D2	D1	S1023	D3	B1	U2020A	F7	B2
DS2016	E7	A2	R1039G	D3	D1	S1048	E3	D1	U2020B	F6	B2
DS2056	D5	E2	R1039H	F3	D1	S1054	E2	D1	U2020C	F4	B2
DS2122	F1	L2	R1053	F4	E1	S1121	E1	M1	U2020D	C3	B2
DS2123	F2	L3	R1055	F2	E1	S2014	E6	A2	U2020E	F1	B2
DS3035	F3	C3	R1056	D5	E1	S2020	D5	B2	U2020	H6	B2
DS3036	D3	C3	R121	H2	M1	S2035	A2	C2	U3013A	G5	A3
DS3037	D5	C4	R2019	F1	A2	S2056	D5	E2	U3013B	G5	A3
DS3043	F2	D3	R2021	E7	B2	S2122	E1	M2	U3013	G7	A3
DS3044	D2	D3	R2031	B3	C2	S2123	E2	M2	U3039	C1	C2
DS3045	D4	D3	R2041	B1	D2	S3020	E5	B3	U4014A	H5	A4
DS3046	D2	D3	R2044	A1	D2	S3020	E3	C3	U4014B	F7	A4
DS3047	D1	D3	R2045	F2	D2	S3035	D3	C3	U4014C	H6	A4
DS3048	D4	D3	R3119D	G1	L3	S3037	D5	C4	U4014	H7	A4
DS3052	D4	D3	R3119E	F6	L3	S3043	E2	D3	U4021	C1	B4
DS3053	D4	E3	R3119F	D1	L3	S3044	D2	D3	U4030	C4	C4
DS3056	D2	E3	R3119G	D1	L3	S3045	D4	D3	U5021	C2	B5
DS3122	D1	L3	R3119H	F1	L3	S3046	D2	D3	U5045	A6	D5
DS3123	D1	L3	R3119I	F1	L3	S3047	D1	D3	U6024	A3	B6
DS4046	F1	D4	R3119J	F2	L3	S3048	D4	D3	U6028	B6	B6
DS4052	F2	E4	R3199B	D4	L3	S3052	D4	E3	U6045	B7	D5
DS4122	F6	L3	R4043	H2	D4	S3053	D4	E3	U6081	A7	H6
DS4123	D3	L4	R4054B	D2	B4	S3055	D2	E3	U6090	G1	J5
DS5015	H1	A5	R4054C	D4	B4	S3122	D1	M3			
			R4054F	F1	B4				Y3030	B3	C3
			R4054G	D2	B4						
			R4054H	D4	B4						
			R4059B	F3	B4						



432/492 D (SN B030000 & UP)

3764-104 REV JUN 1964

(SN B054245 & UP) FRONT PANEL

NOTE: \* INDICATES OPTION 11  
 \* Static Sensitive Devices See Maintenance Section

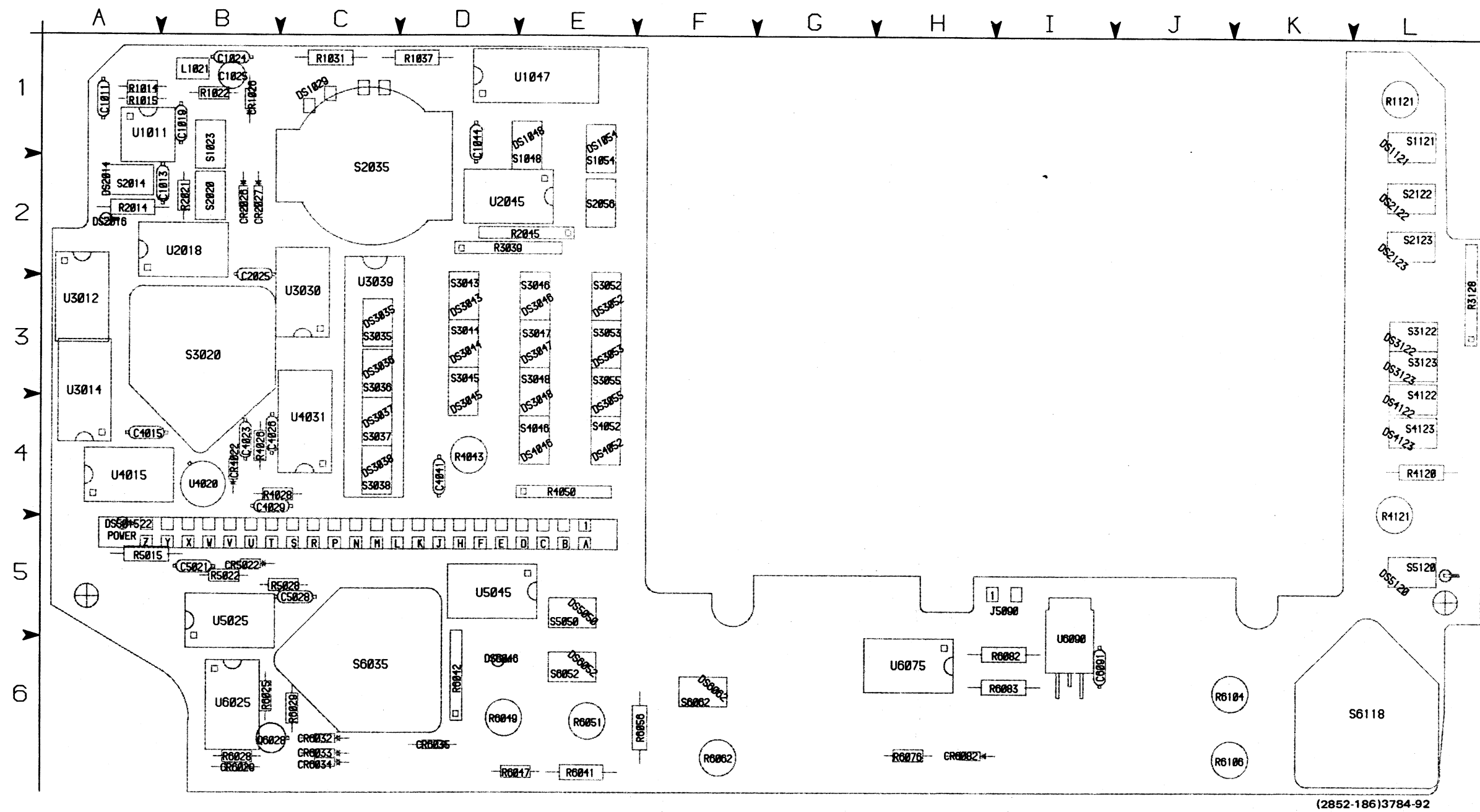
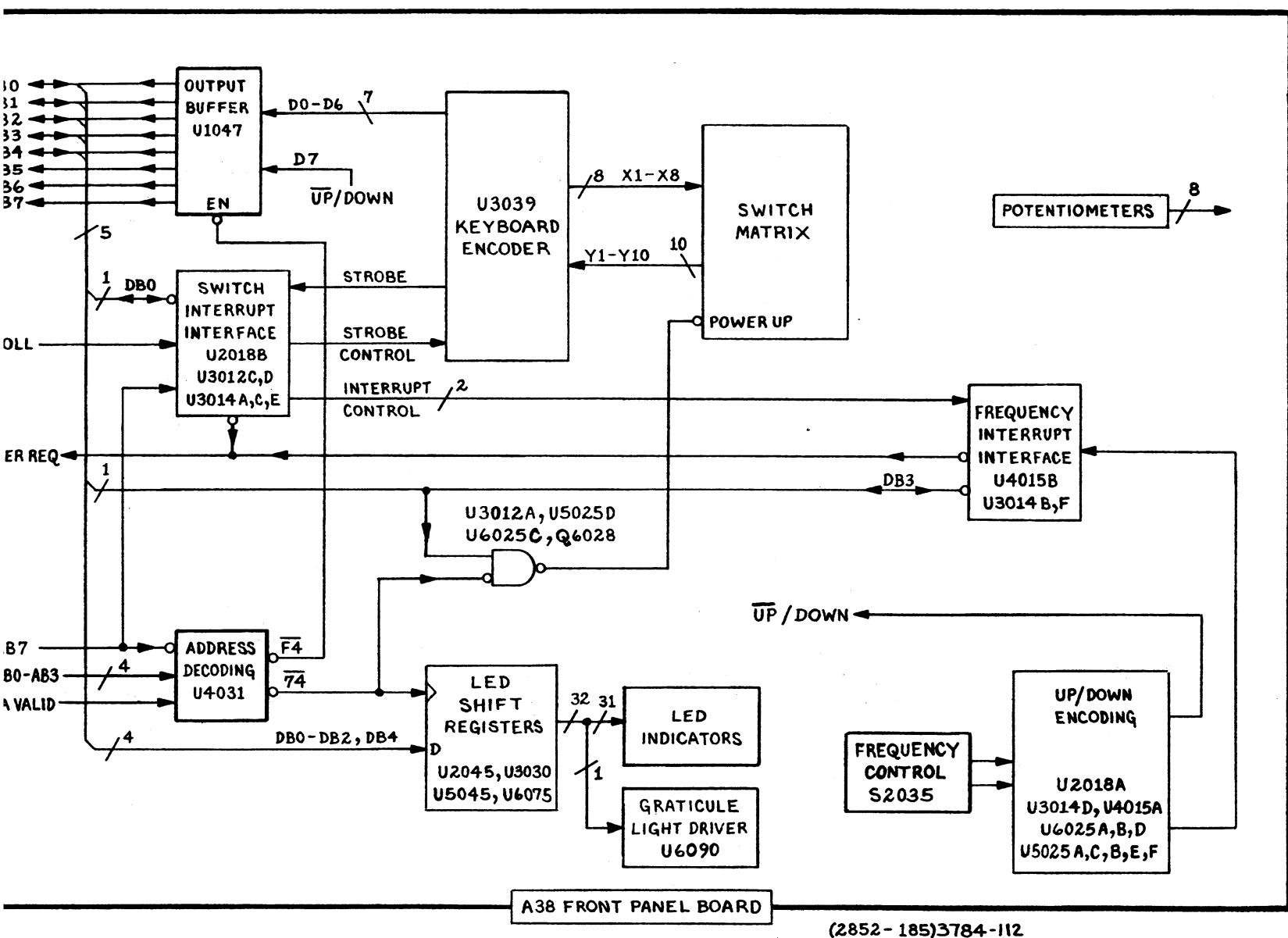


Fig. 8-30B. A38—Front Panel circuit board (SN B054244 & Below).

**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.

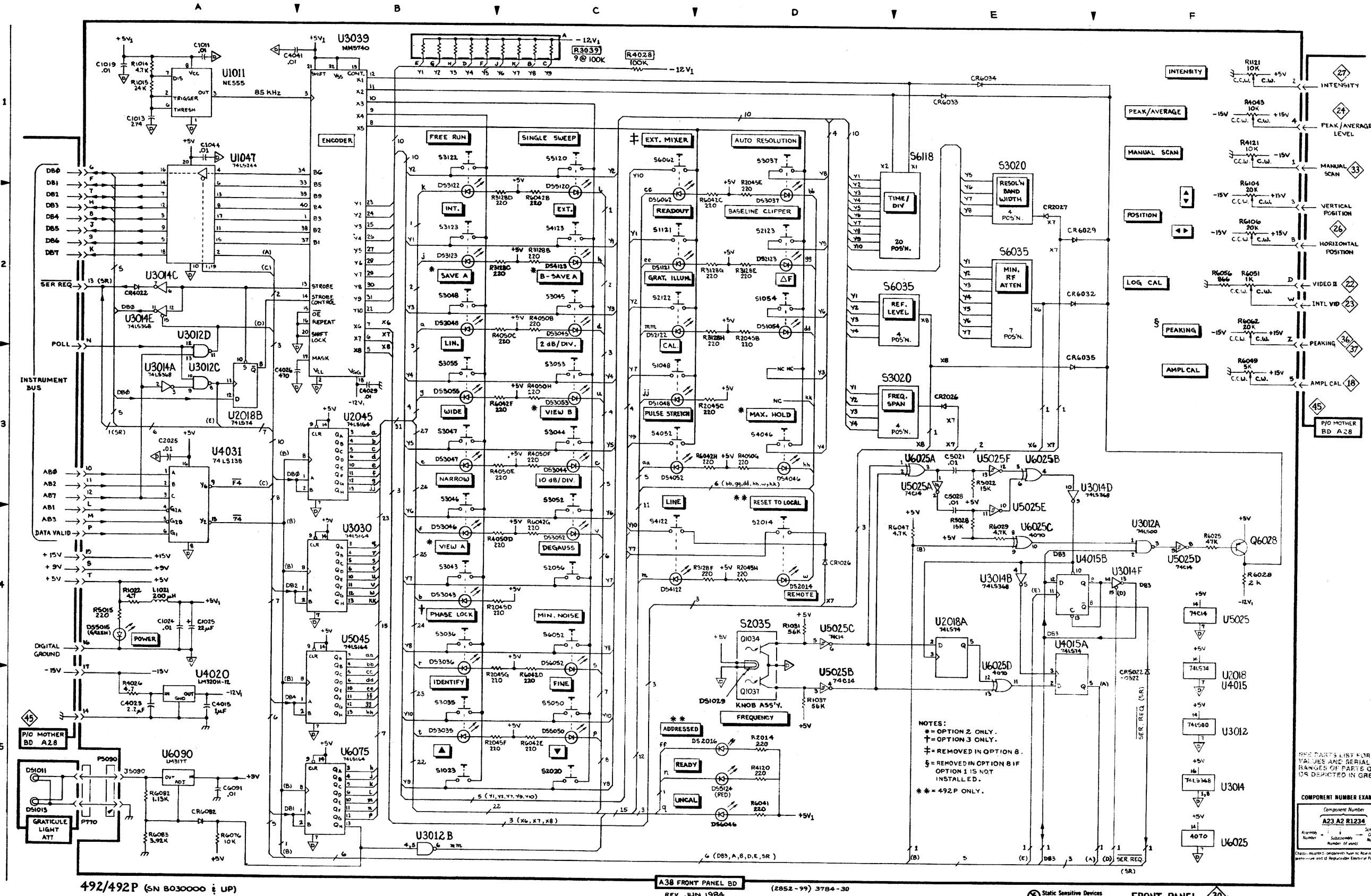


### Front Panel DIAGRAM 30

#### Front Panel

#### ASSEMBLY A38

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	A1	A1	DS3123	B2	L3	R4120	D5	L4	S3055	B3	E3			
C1013	A1	B2	DS4046	D3	E4	R4121	F1	L4	S3122	B1	L3			
C1019	A1	B1	DS4052	C3	E4	R5015	A4	A5	S3123	B2	L3			
C1024	A4	B1	DS4122	D4	L3	R5022	E3	B5	S4046	D3	E4			
C1025	A4	B1	DS4123	C2	L3	R5028	E4	B5	S4052	C3	E4			
C1044	A1	D1	DS5015	A4	A5	R6025	F4	B6	S4122	C4	L4			
C2025	A3	B2	DS5050	C5	E5	R6028	F4	B6	S4123	C2	L3			
C4015	A5	A4	DS5120	C2	L5	R6029	E4	B6	S5050	C5	E5			
C4023	A5	B4	DS6046	D5	E6	R6041	D5	E6	S5120	C1	L4			
C4026	B3	B4	DS6052	C4	E6	R6042B	C2	D6	S6035	E2	C6			
C4029	B3	B4	DS6062	C2	E6	R6042C	D2	D6	S6052	C4	E6			
C4041	A1	D4	J5090	A5	H5	R6042D	C5	D6	S6062	C1	F6			
C5021	E3	B5				R6042E	C5	D6	S6118	E1	L6			
C5028	E3	C5				R6042F	C3	D6	U1011	A1	A1			
C6091	A5	I5	L1021	A4	B1	R6042G	C4	D6	U1047	A1	E1			
CR1026	D4	B1	Q6028	F4	B6	R6047	E4	D6	U2018	F4	B2			
CR2026	E3	B2				R6049	F3	D6	U2018A	E4	B2			
CR2027	E2	B2	R1014	A1	A1	R6051	F2	E6	U2018B	A3	B2			
CR4022	A2	B4	R1015	A1	A1	R6056	F2	E6	U2045	B3	D2			
CR5022	F4	B5	R1022	A4	B1	R6062	F2	F6	U3012A	F4	A3			
CR6029	F2	B6	R1031	D4	C1	R6076	A5	H6	U3012B	B5	A3			
CR6032	F2	C6	R1037	D5	D1	R6082	A5	H5	U3012C	A3	A3			
CR6033	E1	C6	R1121	F1	L1	R6083	A5	H6	U3012D	A2	A3			
CR6033	E1	C6	R2014	D5	A2	R6104	F1	J6	U3014A	A3	A3			
CR6034	E1	C6	R2045B	D2	E2	R6106	F2	J6	U3014B	E4	A3			
CR6035	F2	D6	R2045C	D3	E2				U3014C	A2	A3			
CR6082	A5	H6	R2045D	C4	E2	S1023	B5	B1	U3014D	F3	A3			
DS1029	D4	C1	R2045E	D1	E2	S1048	C3	E1	U3014E	A2	A3			
DS1048	C3	E1	R2045F	C5	E2	S1054	D2	E1	U3014F	F4	A3			
DS1054	D2	E1	R2045H	D4	E2	S1121	C2	L1	U3030	B4	C3			
DS1121	C2	L1	R3039	C1	D2	S2014	D4	A2	U3039	B1	C2			
DS2014	D4	A2	R3128B	C2	L2	S2020	C5	B2	U4015A	E4	A4			
DS2016	D5	A2	R3128C	C2	L2	S2035	D4	C2	U4015B	F4	A4			
DS2122	C2	L2	R3128D	C2	L2	S2056	C4	E2	U4020	A5	B4			
DS2123	D2	L2	R3128E	D4	L2	S2122	C2	L2	U4031	A3	C4			
DS2305	B5	C3	R3128F	D4	L2	S2123	D2	L2	U5025	F4	B5			
DS2306	B4	C3	R3128G	D2	L2	S3020	E1	B3	U5025A	E3	B5			
DS2307	D2	C4	R3128H	D2	L2	S3020	E3	B3	U5025B	D5	B5			
DS2304	B4	D3	R4026	A5	B4	S3025	B5	C3	U5025C	D4	B5			
DS2304	B4	D3	R4028	C1	B4	S3036	B4	C3	U5025D	F4	B5			
DS2304	C3	D3	R4043	C1	D4	S3037	D1	C4	U5025E	E3	B5			
DS2306	B4	E3	R4050B	F2	E4	S3043	B4	D2	U5025F	E3	B5			
DS2307	B3	E3	R4050C	C2	E4	S3044	C3	D3	U6025A	E3	B6			
DS2308	B2	E3	R4050D	C4	E4	S3045	C2	D3	U6025B	E3	B6			
DS2308	C4	E3	R4050E	C3	E4	S3046	B3	E2	U6025C	E4	B6			
DS2309	C3	E3	R4050F	C3	E4	S3047	B3	E3	U6025D	E4	B6			
DS2309	C3	E3	R4050G	D3	E4	S3048	B2	E3	U6025D	E4	B6			
DS2309	B3	E3	R4050H	D3	E4	S3052	C3	E2	U6075	B5	H5			
DS3122	B2	L3	R4050H	C3	E4	S3053	C3	E3	U6090	A5	I5			



NOTES:  
\* = OPTION 2 ONLY.  
† = OPTION 3 ONLY.  
# = REMOVED IN OPTION B.  
\$ = REMOVED IN OPTION B IF  
OPTION 1 IS NOT  
INSTALLED.  
\*\* = 492P ONLY.

Component Number	Location
A23 A2 R1234	
C5021	
D5021	
E5021	
F5021	
G5021	
H5021	
I5021	
J5021	
K5021	
L5021	
M5021	
N5021	
P5021	
Q5021	
R5021	
S5021	
T5021	
V5021	
W5021	
X5021	
Y5021	
Z5021	

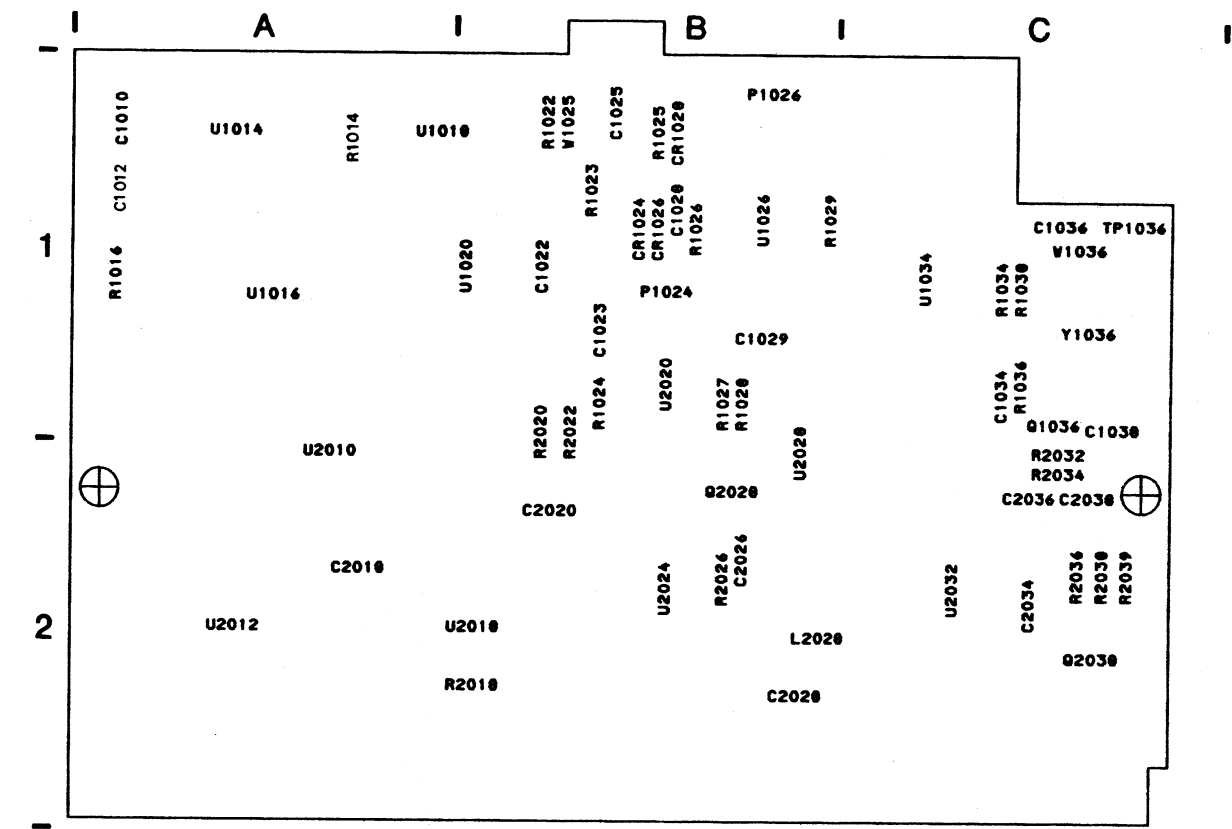


Fig. 8-31A A58 Processor Circuit Board (SN B054830 & Up).

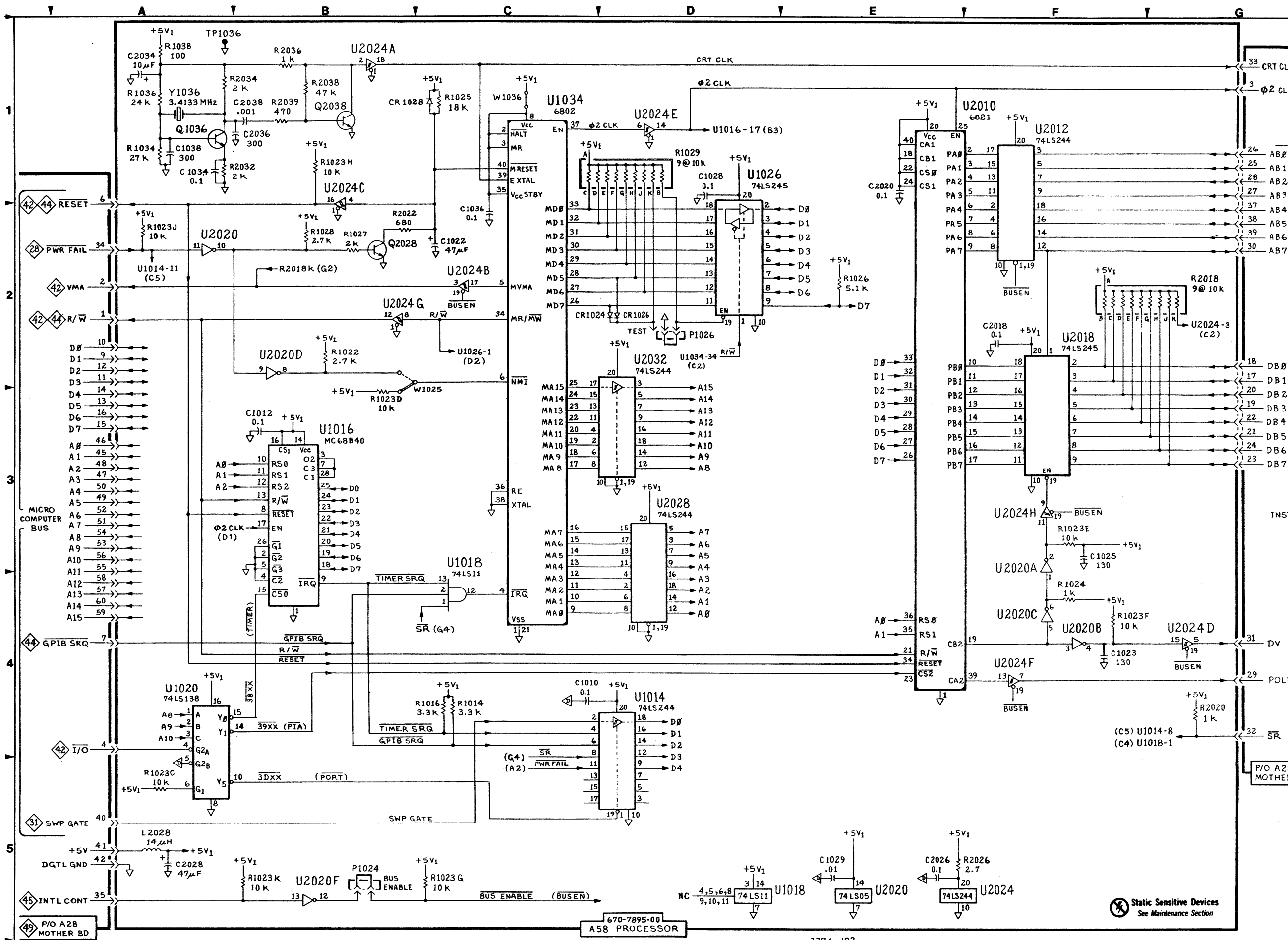
3784-192

# PROCESSOR (SN B054830 & Up)

## DIAGRAM 31

### ASSEMBLY A58

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1010	C4	A1	Q1036	A1	C1	R2020	G4	B2	U2020B	F4	B1	U2020B	F4	B1
C1012	B3	A1	Q2028	B2	B2	R2022	B2	B2	U2020C	F4	B1	U2020C	F4	B1
C1022	C2	B1	Q2038	B1	C2	R2026	E5	B2	U2020D	B2	B1	U2020D	B2	B1
C1023	F4	B1				R2032	A1	C2	U2020E	A2	B1	U2020E	A2	B1
C1025	F3	B1	R1014	C4	A1	R2034	A1	C2	U2020F	B5	B1	U2020F	B5	B1
C1028	D1	B1	R1016	C4	A1	R2036	B1	C2	U2020G	E5	B1	U2020G	E5	B1
C1029	E5	B1	R1022	B2	B1	R2038	B1	C2	U2024A	B1	B2	U2024A	B1	B2
C1034	A1	C1	R1023C	A5	B1	R2039	B1	C2	U2024B	C2	B2	U2024B	C2	B2
C1036	C2	C1	R1023D	B3	B1				U2024C	B2	B2	U2024C	B2	B2
C1038	A1	C1	R1023E	F3	B1				U2024D	G4	B2	U2024D	G4	B2
C2018	F2	A2	R1023F	F4	B1				U2024E	D1	B2	U2024E	D1	B2
C2020	E1	B2	R1023G	C5	B1	TP1036	A1	C1	U2024F	F4	B2	U2024F	F4	B2
C2026	E5	B2	R1023H	B1	B1				U2024G	B2	B2	U2024G	B2	B2
C2028	A5	B2	R1023J	A2	B1				U2024H	F3	B2	U2024H	F3	B2
C2034	A1	C2	R1023K	B5	B1	U1014	D4	A1	U2024I	E5	B2	U2024I	E5	B2
C2036	B1	C2	R1024	F4	B1	U1016	B3	A1	U2028	D3	B2	U2028	D3	B2
C2038	B1	C2	R1025	C1	B1	U1018	C4	A1	U2032	D3	C2	U2032	D3	C2
			R1026	E2	B1	U1020	D5	A1						
			R1027	B2	B1	U1026A	C2	B1						
			R1028	B2	B1	U1026	D2	B1						
			R1029	D1	B1	U1034	C1	C1						
			R1034	A1	C1	U2010	E1	A2						
			R1036	A1	C1	U2012	F1	A2						
			R1038	A1	C1	U2018	F2	B2						
			R2018	G2	B2	U2020A	F3	B1						
			R2018K	B2	B2									
CR1024	D2	B1												
CR1026	D2	B1												
CR1028	C1	B1												
L2028	A5	B2												
P1024	B5	B1												
P1026	D2	B1												

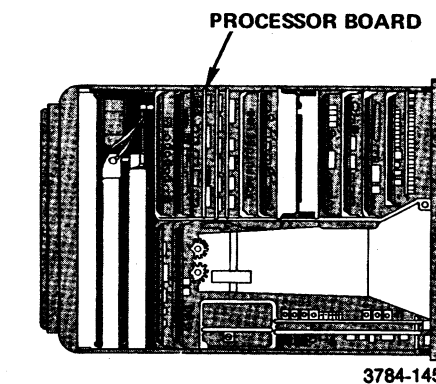
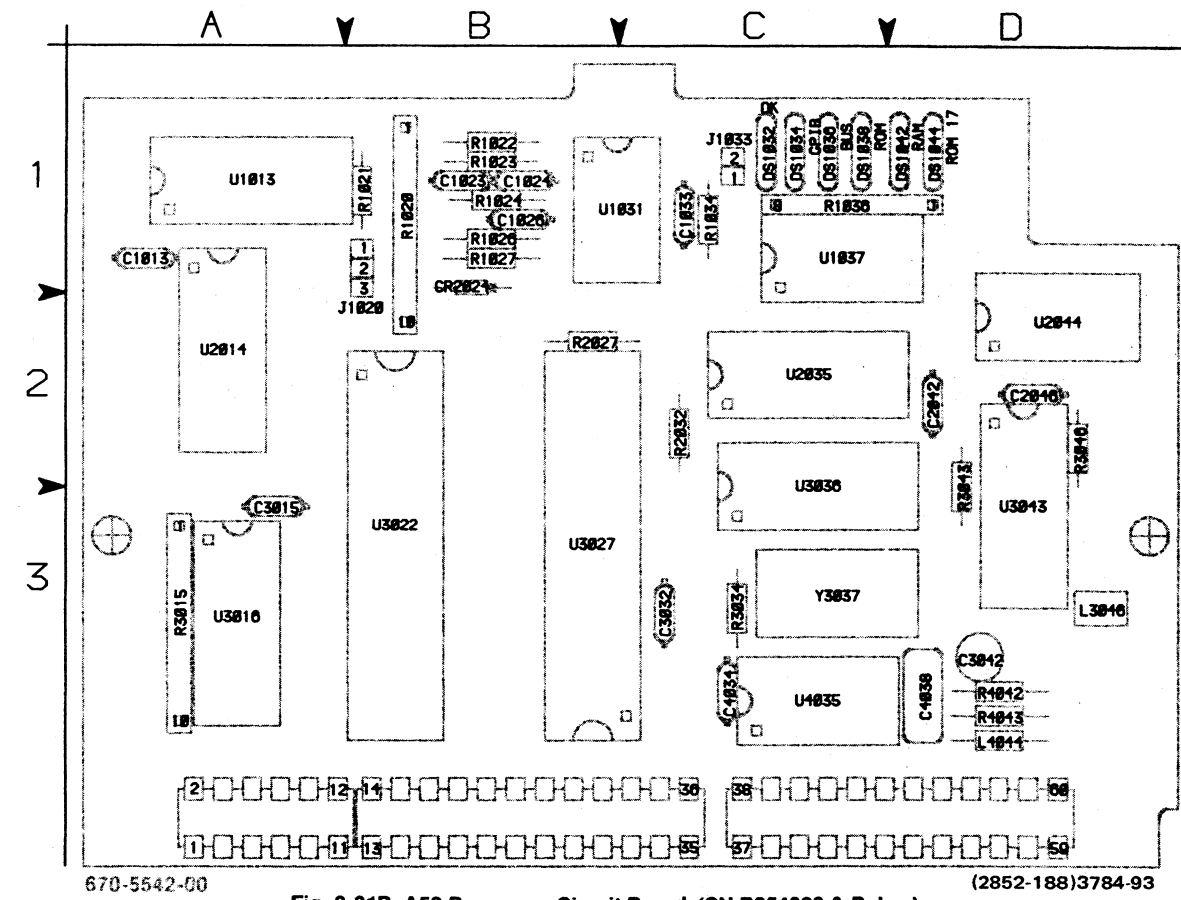
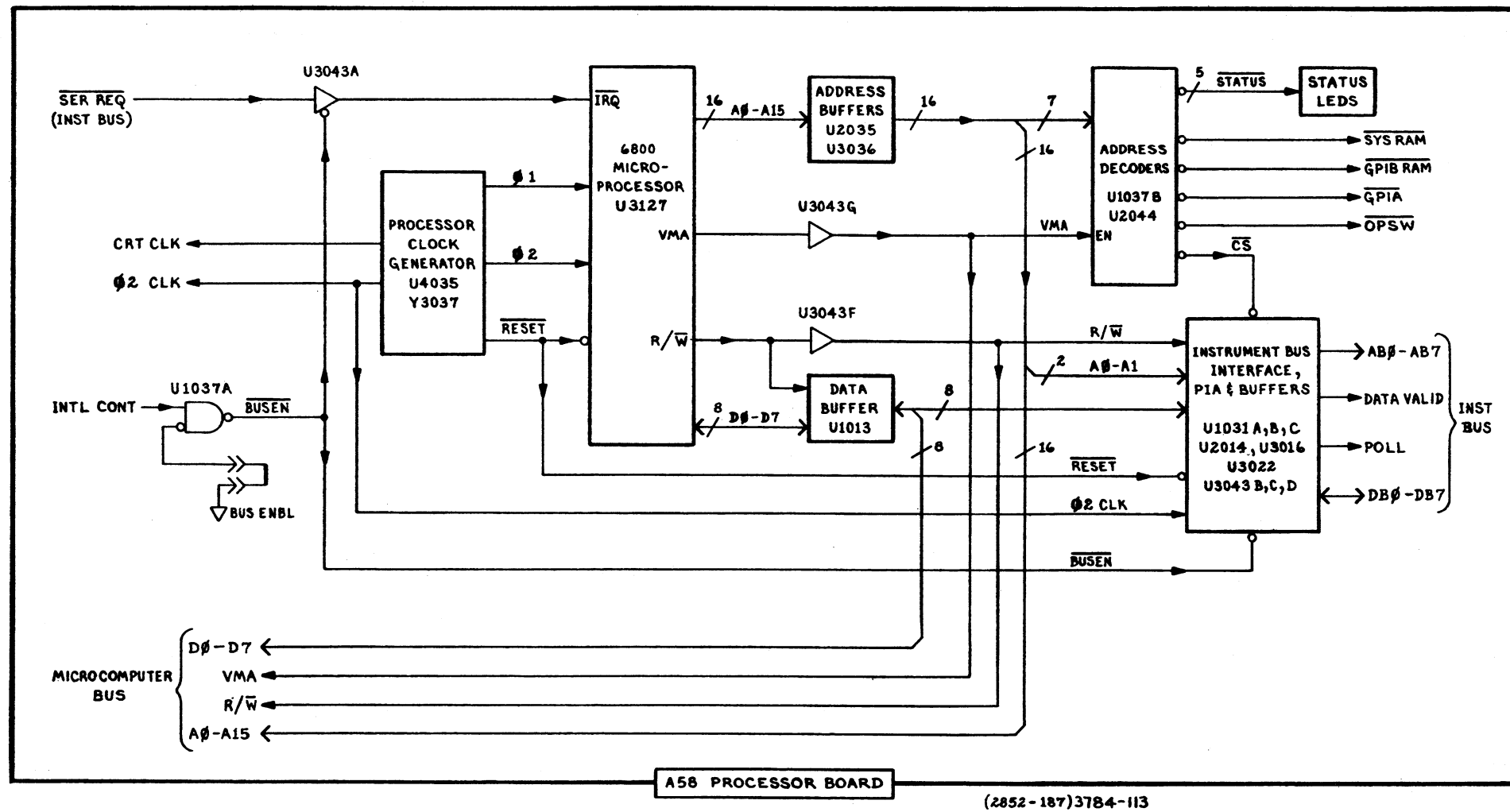


492/492P (SN B030000 & UP)

3784-193  
REV MAR. 1985

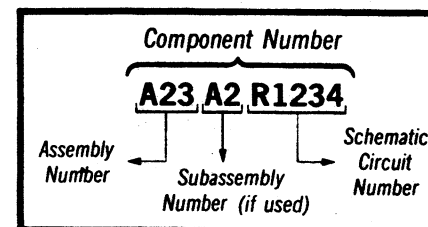
PROCESSOR  
(SN B054830 & Up)

Static Sensitive Devices  
See Maintenance Section



**Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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

**Processor DIAGRAM 31**  
(SN B054829 & Below)

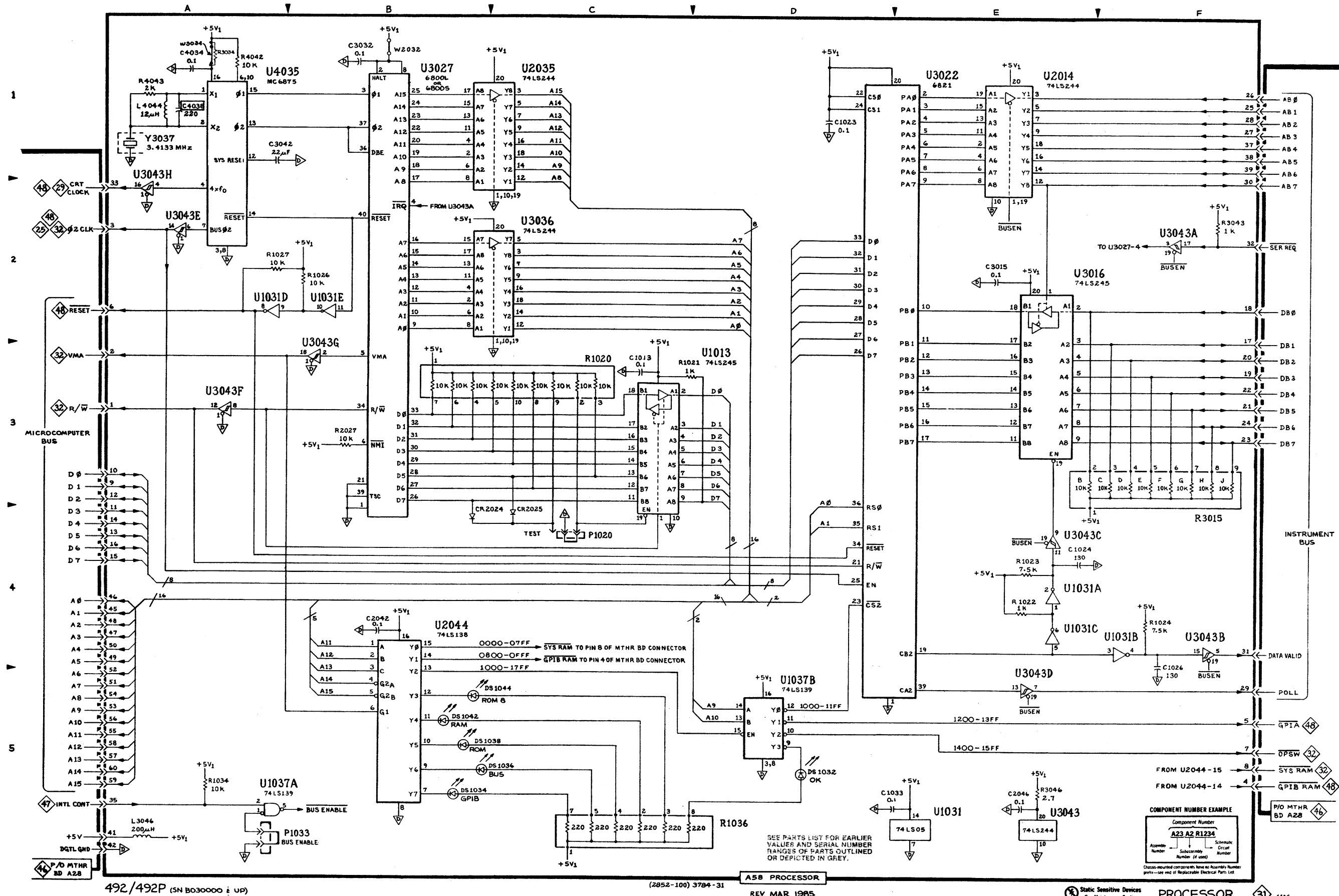
**ASSEMBLY A58**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1013	D1	A1
C1023	C3	B1
C1024	E4	B1
C2042	F4	B1
C1033	D5	C1
C3042	B4	D2
C2046	A5	D2
C3015	E2	A3
C3032	B1	C3
C3042	A2	D3
C4034	A1	C3
C4038	A1	D3
CR2024	B3	B1
DS1032	D5	C1
DS1034	B5	C1
DS1036	B5	C1
DS1038	B5	C1
DS1042	B5	D1
DS1044	B5	D1
L3046	A5	D3
L4044	A1	D3

**Processor**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P1020	C4	B2	U1031C	E4	C1			
P1033	A5	C1	U1031D	A2	C1			
R1020	C3	B1	U1031E	A2	C1			
R1021	C3	B1	U1037A	A5	C1			
R1022	E4	B1	U1037B	D5	C1			
R1023	E4	B1	U2014	A5	A2			
R1024	F4	B1	U2015	E1	A2			
R1025	E4	B1	U2035	C1	C2			
R1026	A2	B1	U2044	B4	D2			
R1027	A2	B1	U3016	E2	A3			
R1034	A5	C1	U3022	E1	B3			
R1036	C5	C1	U3027	B1	B3			
R2027	B3	B2	U3036	C2	C2			
R2032	B1	C2	U3043	A5	D2			
R3015	F3	A3	U3043A	A2	D2			
R3034*	A1	C3	U3043B	F4	D2			
R3043	A2	D2	U3043C	E4	D2			
R3046	A4	D2	U3043D	E5	D2			
R4042	A1	D3	U3043E	A2	D2			
R4043	A1	D3	U3043F	A3	D2			
U1013	C3	A1	U3043G	B3	D2			
U1031	E5	C1	U3043H	A2	D2			
U1031A	E4	C1	U4035	A1	C3			
U1031B	F4	C1	Y3037	A1	C3			

\*See Parts List for serial number ranges.



Static Sensitive Devices  
See Maintenance Section

**PROCESSOR**  
(SN B054829 + Below)

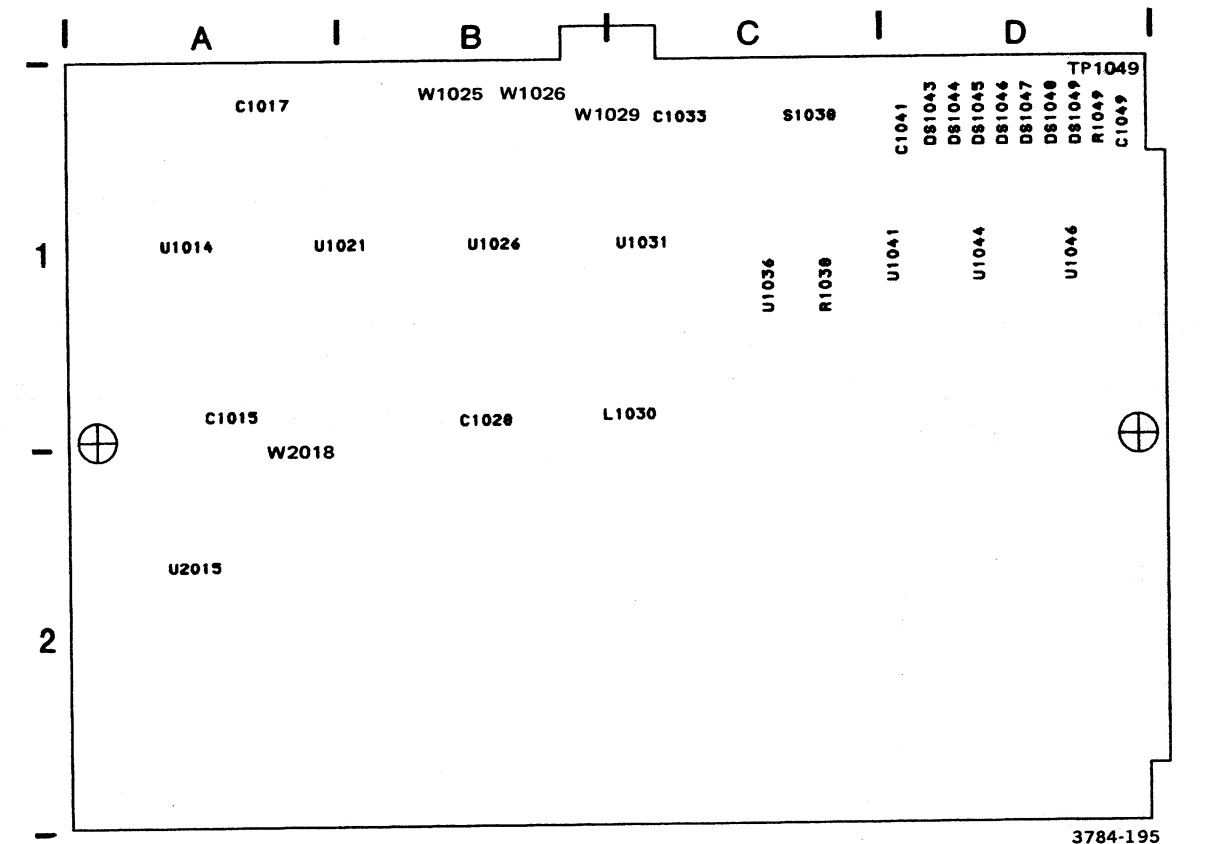


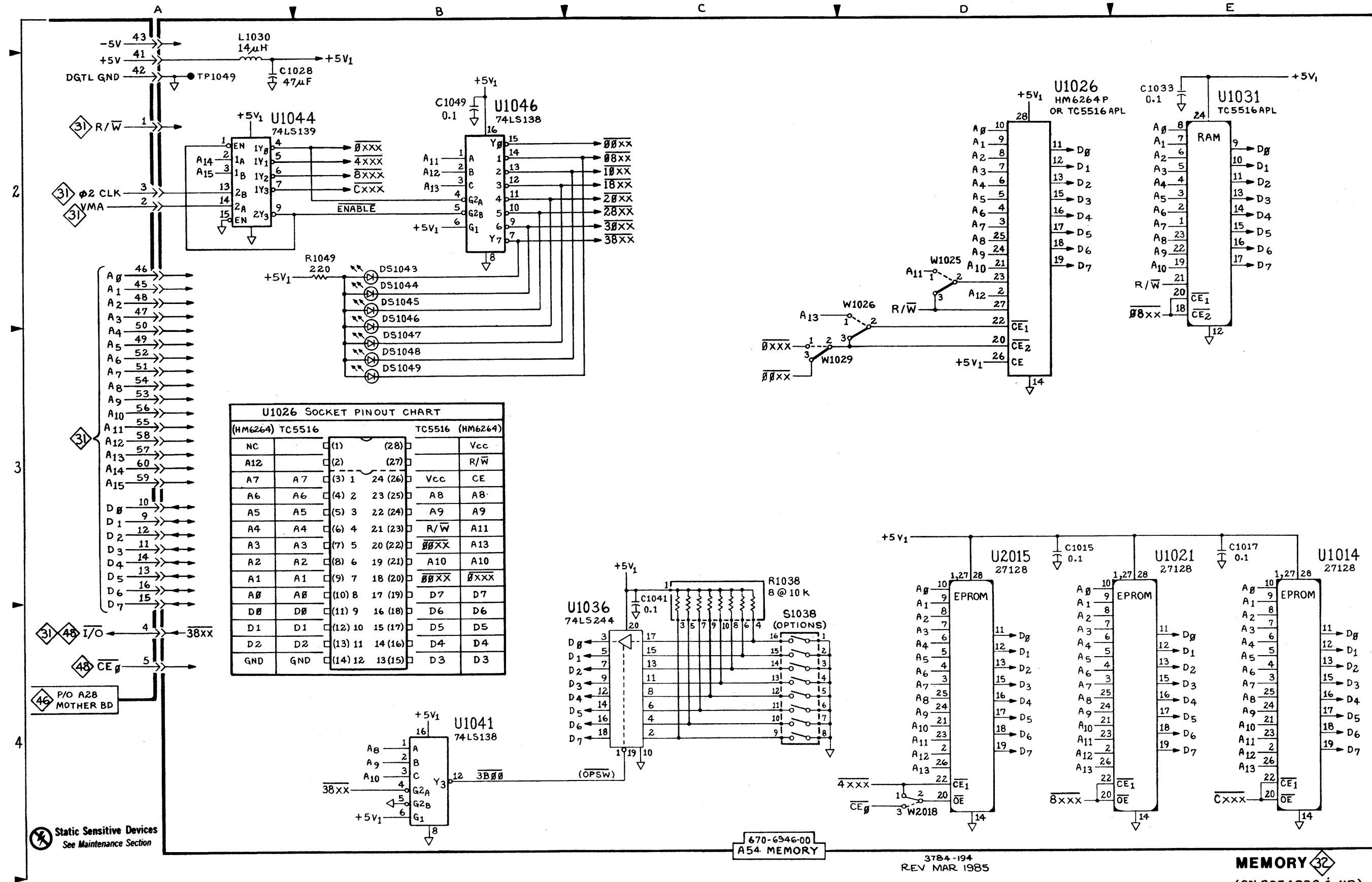
Fig. 8-32A A 54 Memory Circuit Board (SN B054830 & Up).

**MEMORY**  
(SN B054830 & UP)

**DIAGRAM** 32

**ASSEMBLY A54**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1015	D3	A1	U1014	E3	A1
C1017	E3	A1	U1021	E3	A1
C1028	A2	B1	U1026	B3	B1
C1033	E2	C1	U1026	D2	B1
C1041	C4	D1	U1031	E2	C1
			U1036	C4	C1
DS1043	B2	D1	U1041	B4	D1
DS1044	B2	D1	U1044	A2	D1
DS1045	B2	D1	U1046	B2	D1
DS1046	B3	D1	U2015	D3	A2
DS1047	B4	D1			
DS1048	B4	D1	TP1049	D1	A2
DS1049	B4	D1			
			W 1029	C3	B1
			W1025	C3	B1
L1030	A1	C1			
R1038	C3	C1			
S1038	C4	C1			



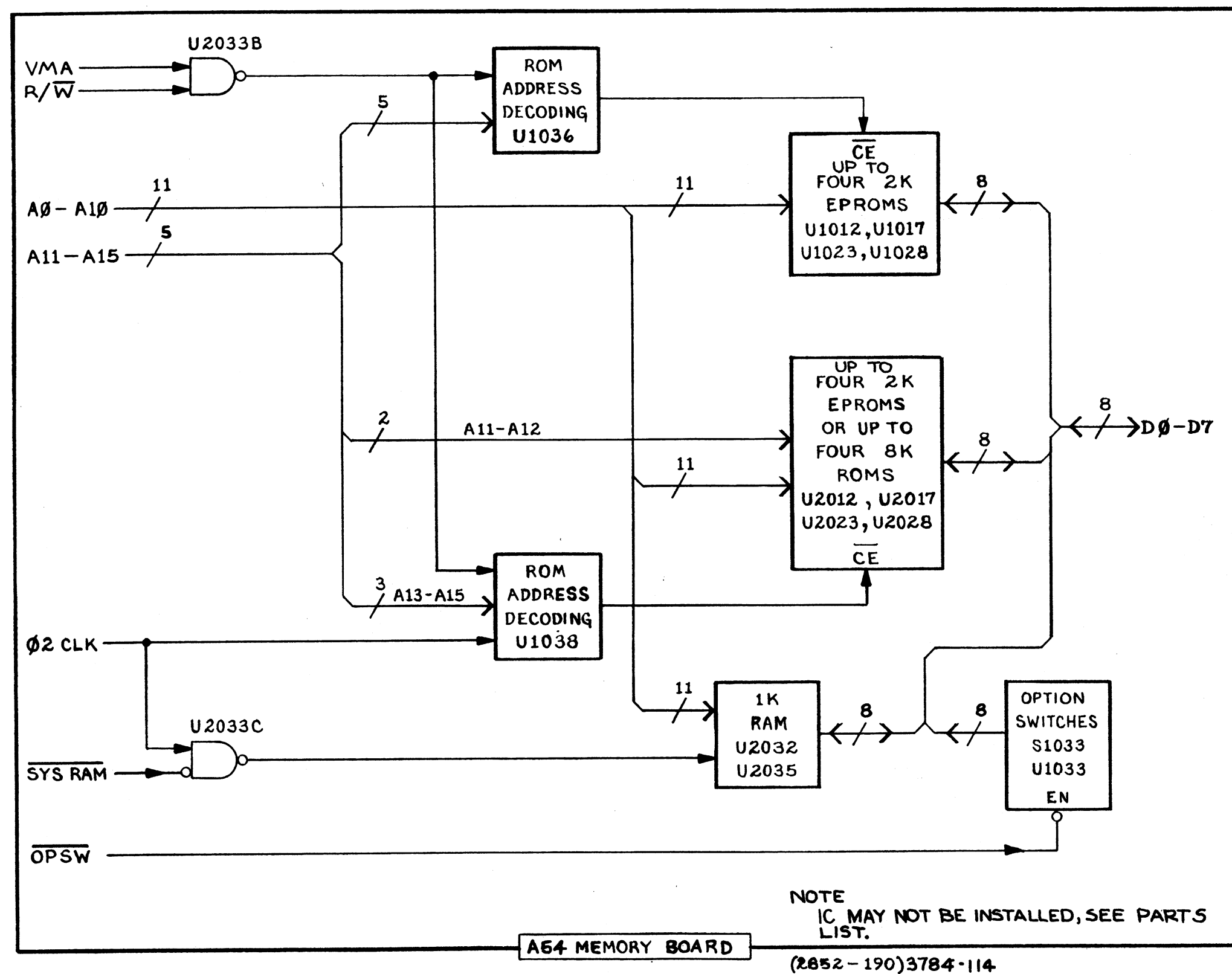
**U1026 SOCKET PINOUT CHART**  
(HM6264) TC5516

Pin	Signal	Pin	Signal
NC		(1)	(28)
A12		(2)	(27)
A7	A7	(3)	1
A6	A6	(4)	2
A5	A5	(5)	3
A4	A4	(6)	4
A3	A3	(7)	5
A2	A2	(8)	6
A1	A1	(9)	7
A0	A0	(10)	8
D0	D0	(11)	9
D1	D1	(12)	10
D2	D2	(13)	11
D3	D3	(14)	12
GND	GND	(15)	13
		(16)	14
		(17)	15
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		(200)	198

670-6946-00  
A54 MEMORY

3784-194  
REV MAR 1985

**MEMORY** 32  
(SN B054830 & UP)



REV MAR 1985

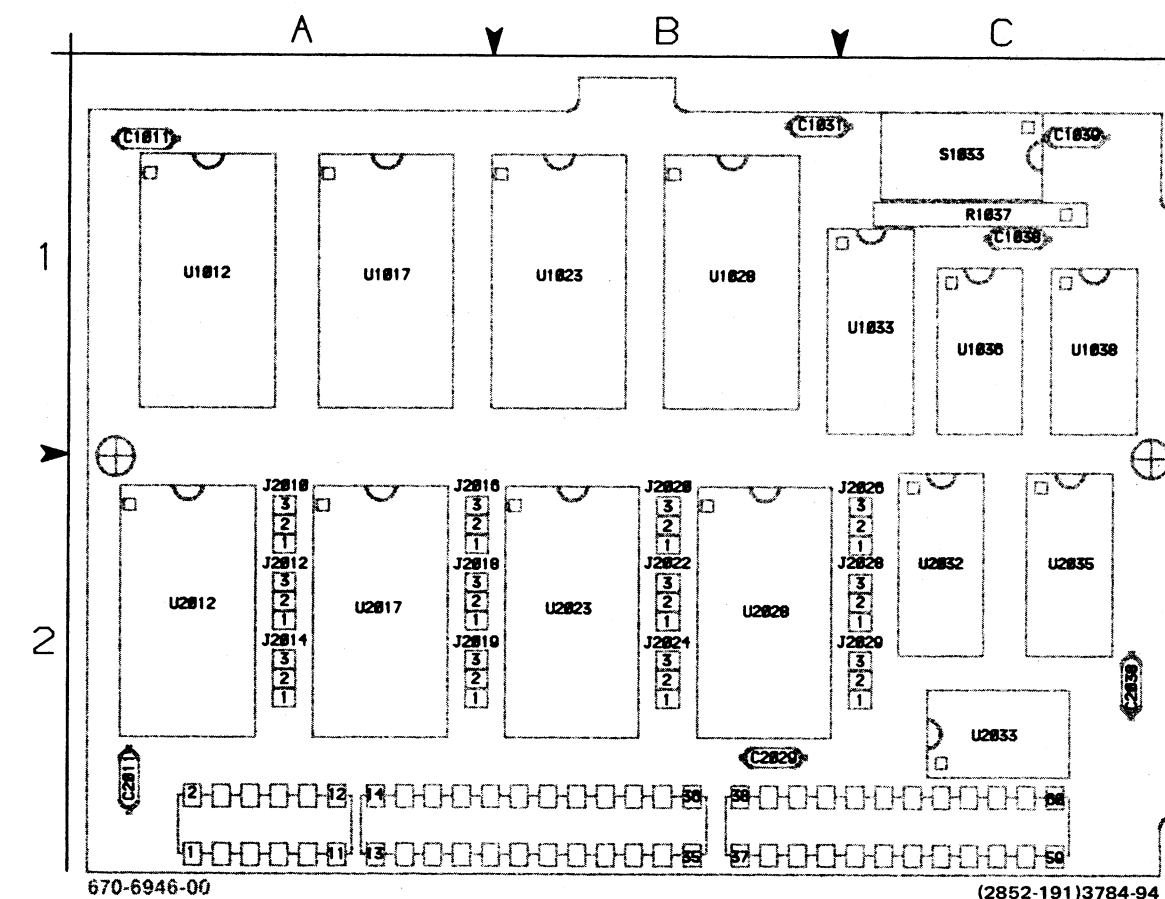
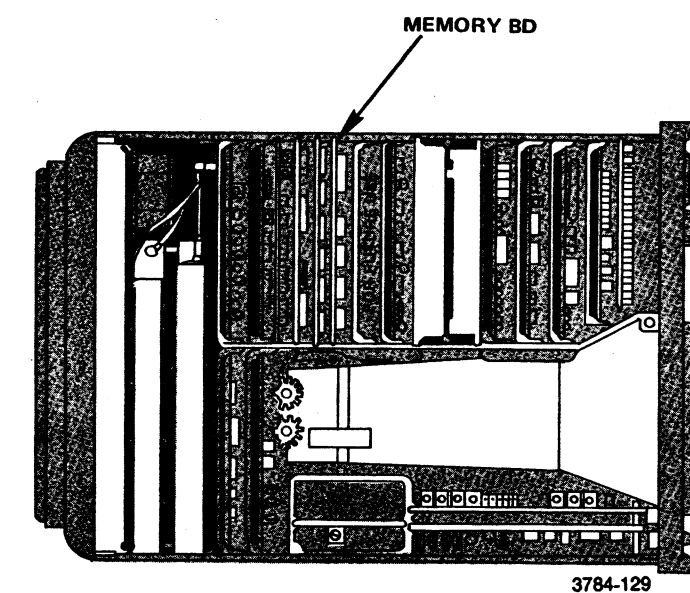
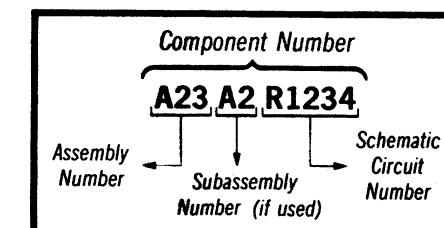


Fig. 8-32B A54 Memory Circuit Board (SN B054829 & Below).



⊗ Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



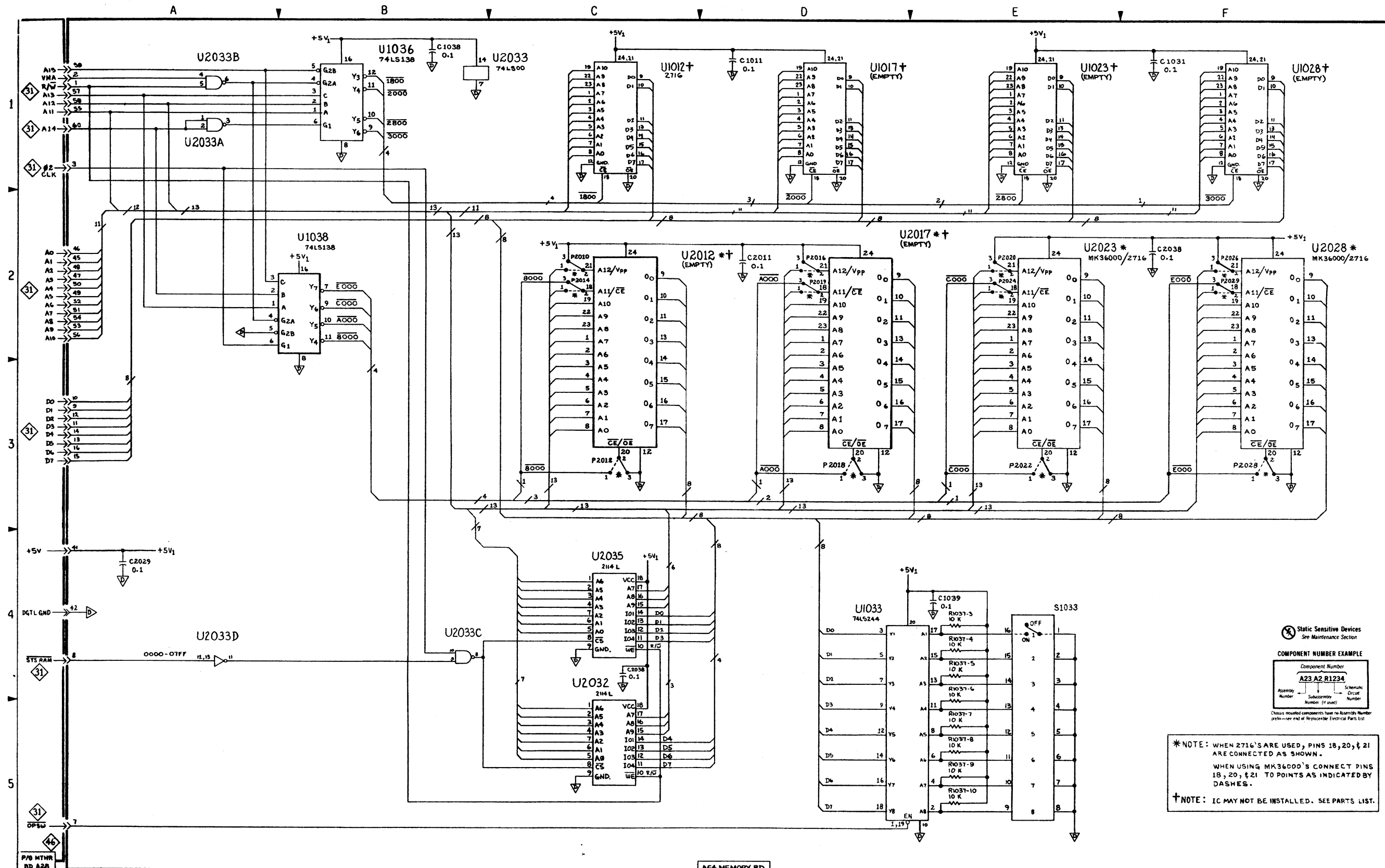
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



**Memory DIAGRAM** 32  
(SN B054829 & BELOW)

**ASSEMBLY A54**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	D1	A1
C1031	F1	B1
C1038	B1	C1
C1039	E4	C1
C2011	D2	A2
C2038	C4	C2
C2038	F2	C2
S1033	E4	C1
U1012	C1	A1
U1017	D1	A1
U1023	D1	B1
U1033	E4	C1
U1036	B1	C1
U1038	B2	C1
U2012	C2	A2
U2017	D2	A2
U2017	D2	A2
U2023	E2	B2
U2028	F2	B2
U2032	C5	C2
U2033	B1	C2
U2033A	A1	C2
U2033B	A1	C2
U2033C	B4	C2
U2033D	A4	C2
U2035	C4	C2

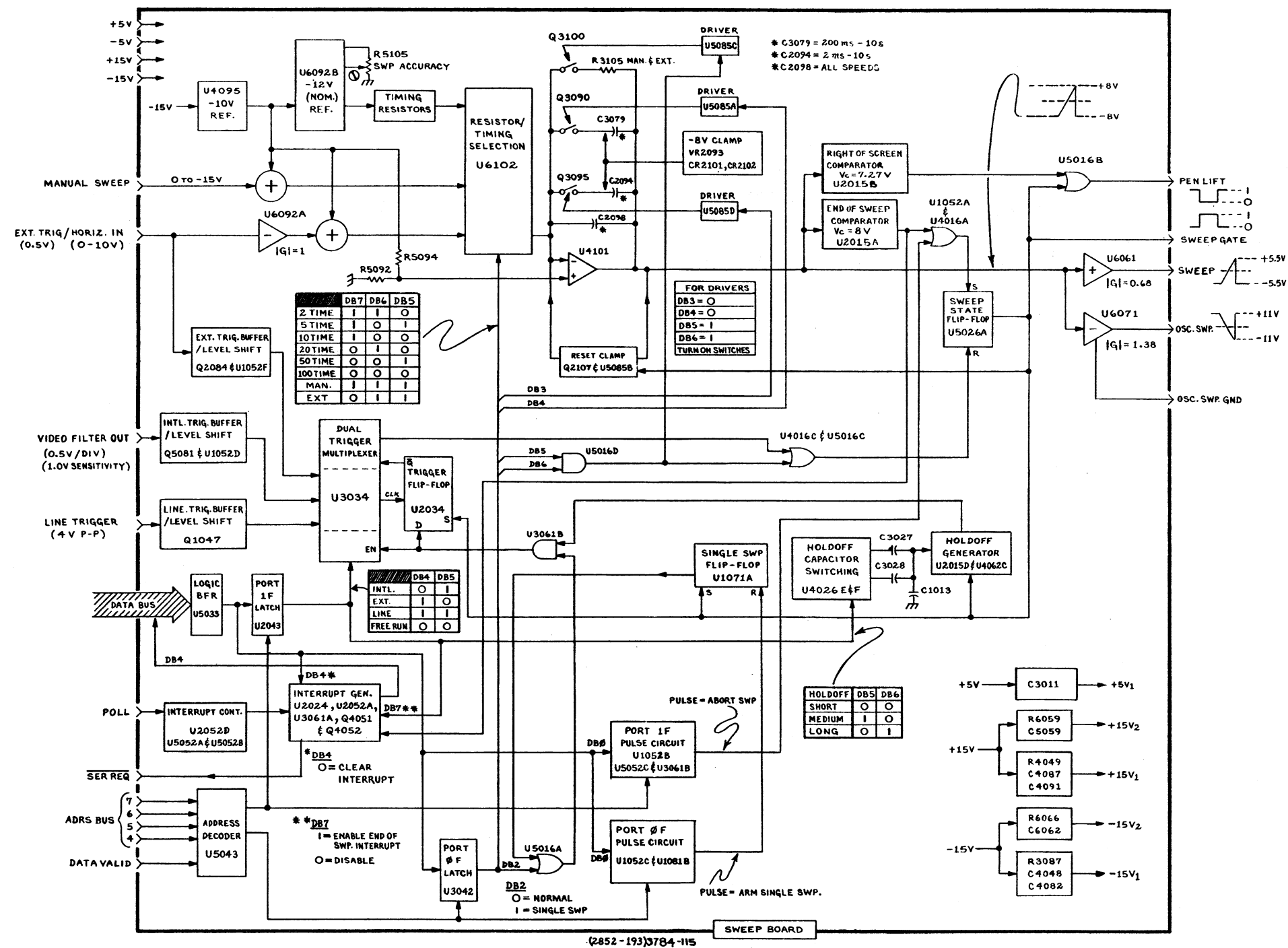


492/492P (SN B030000 & UP)

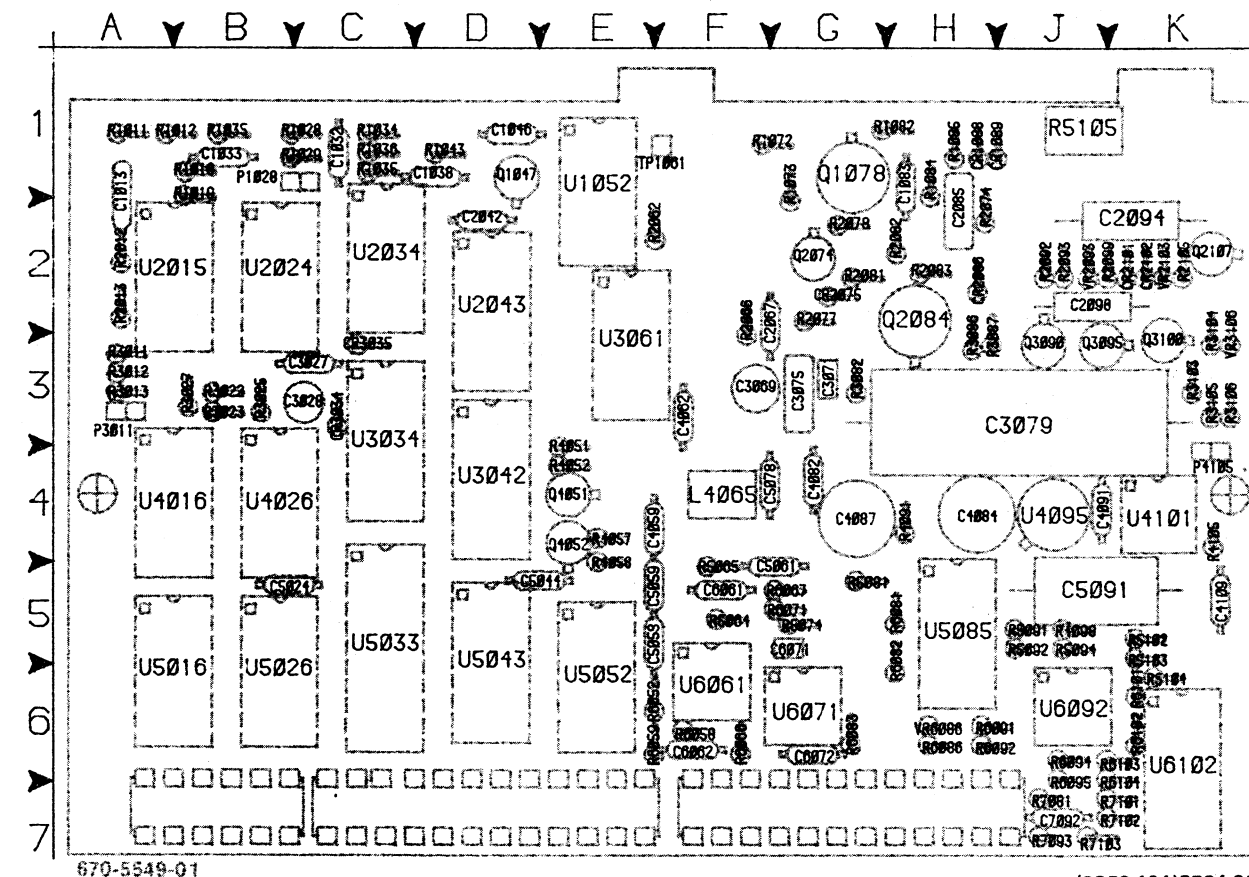
A54 MEMORY BD  
(2852-101)3784-32  
REV MAR. 1985

Static Sensitive Devices  
See Maintenance Section

MEMORY 32 SNP  
(SN B054829 & BELOW)



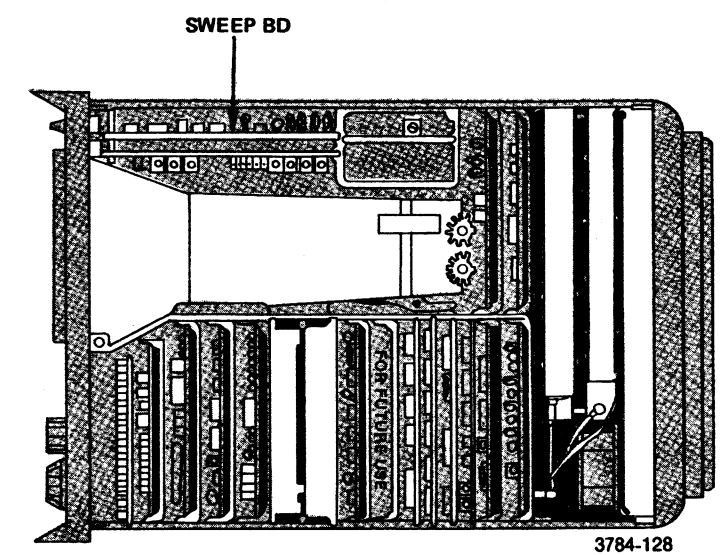
(2852-193)3784-115



670-5549-01

(2852-194)3784-95

Fig. 8-33. A72—Sweep circuit board.



**Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**

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

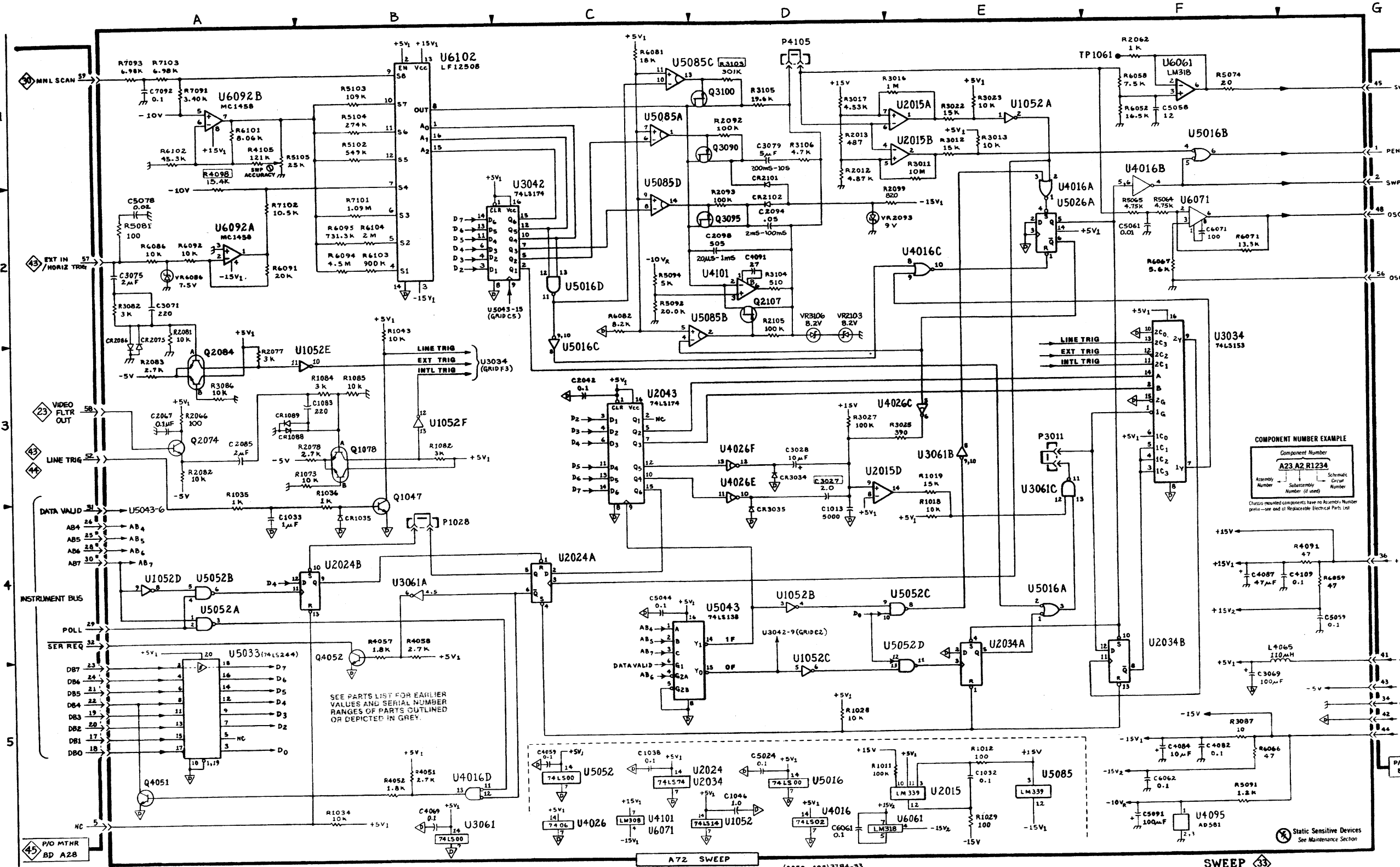
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

## SWEEP DIAGRAM 33

**ASSEMBLY A72**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1013	D4	A1	Q1047	B4	D1	R3104	D2	K3	U1052E	B3	E1
C1032	E5	C1	Q1078	B3	G1	R3105	D1	K3	U1052F	B3	E1
C1033	A4	B1	Q2074	A3	G2	R3106	D1	K3	U2015A	E1	A2
C1038	C5	D1	Q2084	A3	H3	R4051	B5	E4	U2015B	E1	A2
C1046	D5	D1	Q2107	D2	K2	R4052	B5	E4	U2015D	D3	A2
C1083	B3	H1	Q3090	D1	J3	R4057	B4	E4	U2024A	C4	B2
C2042	C3	D2	Q3095	D2	J3	R4058	B4	E4	U2024B	B4	B2
C2067	A3	G3	Q3100	D1	K3	R4091	G4	H4	U2034A	E4	C2
C2085	A3	H2	Q4051	A5	E4	R4098	A2	J5	U2034B	F4	C2
C2094	D2	K2	Q4052	B4	E4	R4105	A1	K4	U2043	C3	D2
C2098	D2	J2				R5064	F3	F5	U3034	F3	C3
C3027	D3	B3	R1011	D5	A1	R5065	F3	F5	U3042	C2	D3
C3028	D3	B3	R1012	D5	A1	R5074	F1	G5	U3061A	B4	E2
C3069	F5	F3	R1018	E4	B1	R5081	A2	G5	U3061B	E2	E3
C3071	A2	G3	R1019	E3	B1	R5091	F5	J5	U3061C	E2	E2
C3075	A2	G3	R1028	D5	B1	R5092	C2	J5	U4016A	E3	A4
C3079	D1	J3	R1029	E5	B1	R5094	C2	J5	U4016B	F3	A4
C4059	C5	E4	R1034	B5	C1	R5102	B1	K5	U4016C	E2	A4
C4069	B5	F3	R1035	A4	B1	R5103	B1	K5	U4016D	E2	A4
C4082	F5	G4	R1036	B4	C1	R5104	B1	K6	U4026C	E3	B4
C4084	F5	H4	R1043	B2	D1	R5105	A1	J1	U4026E	D3	B4
C4087	F4	G4	R1073	B3	G1	R6052	F1	F6	U4026F	D3	B4
C4091	D2	J4	R1082	B3	H1	R6058	F1	F6	U4095	F5	J4
C4109	F4	K5	R1084	B3	H1	R6059	G4	F6	U4101	D2	K4
C5024	D5	B5	R1085	B3	H1	R6066	F5	F6	U5016A	E4	A5
C5058	F1	F5	R2012	D1	A2	R6067	F3	G5	U5016B	F1	A5
C5059	G4	E5	R2013	D1	A2	R6071	F3	G5	U5016C	C2	A5
C5061	F3	F5	R2062	F1	F2	R6081	C1	H5	U5016D	C2	A5
C5078	A2	G4	R2066	A3	F2	R6082	C2	H5	U5026A	E2	B5
C5091	F5	J5	R2077	A3	G3	R6083	G2	G6	U5033	A5	C5
C6061	D5	F5	R2078	B3	G2	R6086	A2	H6	U5043	C4	D5
C6062	F5	F6	R2081	A2	G2	R6091	A2	H6	U5052A	A4	E5
C6071	F3	G5	R2082	A3	H2	R6092	A2	H6	U5052B	A4	E5
C6072	G2	G6	R2083	A3	H2	R6094	B2	J6	U5052C	D4	E5
C7092	A1	J7	R2088	D1	J2	R6095	B2	J6	U5052D	E5	E5
			R2092	D2	J2	R6101	A1	K6	U5085A	C1	H5
CR1035	B4	C1	R2099	D2	J2	R6102	A1	K6	U5085B	C2	H5
CR1088	A3	H1	R2105	D2	K2	R6103	B2	K6	U5085C	C1	H5
CR1089	A3	H1	R3011	E1	A3	R6104	B2	K6	U5085D	C2	H5
CR2075	A2	G2	R3012	E1	A3	R7091	A1	J7	U6061	F1	F6
CR2086	A2	H2	R3013	E1	A3	R7093	A1	J7	U6071	F3	G6
CR2101	D2	K2	R3016	E1	B3	R7101	A1	K7	U6092A	A2	J6
CR2102	D2	K2	R3017	D1	B2	R7102	A2	K7	U6092B	A1	J6
CR3034	D3	C3	R3022	E1	B3	R7103	A1	K7	U6102	B1	K6
CR3035	D4	C3	R3023	E1	B3						
			R3025	E3	B3				VR2093	D2	J2
L4065	F5	F4	R3027	D3	B3				VR2103	D2	K2
			R3082	A2	G3				VR3106	D2	K3
P1028	B4	B1	R3086	A3	H3				VR6086	A2	H6
P3011	E3	A3	R3087	F5	H3						
P4105	D1	K4	R3103	D1	K3						
			U1052A	E1	E1						
			U1052B	A4	E1						
			U1052B	D4	E1						
			U1052C	D5	E1						

Sweep



492/492P (SN 8030000 & UP)

REV FEB 1983

(2852-102)3184-53

SWEEP 33

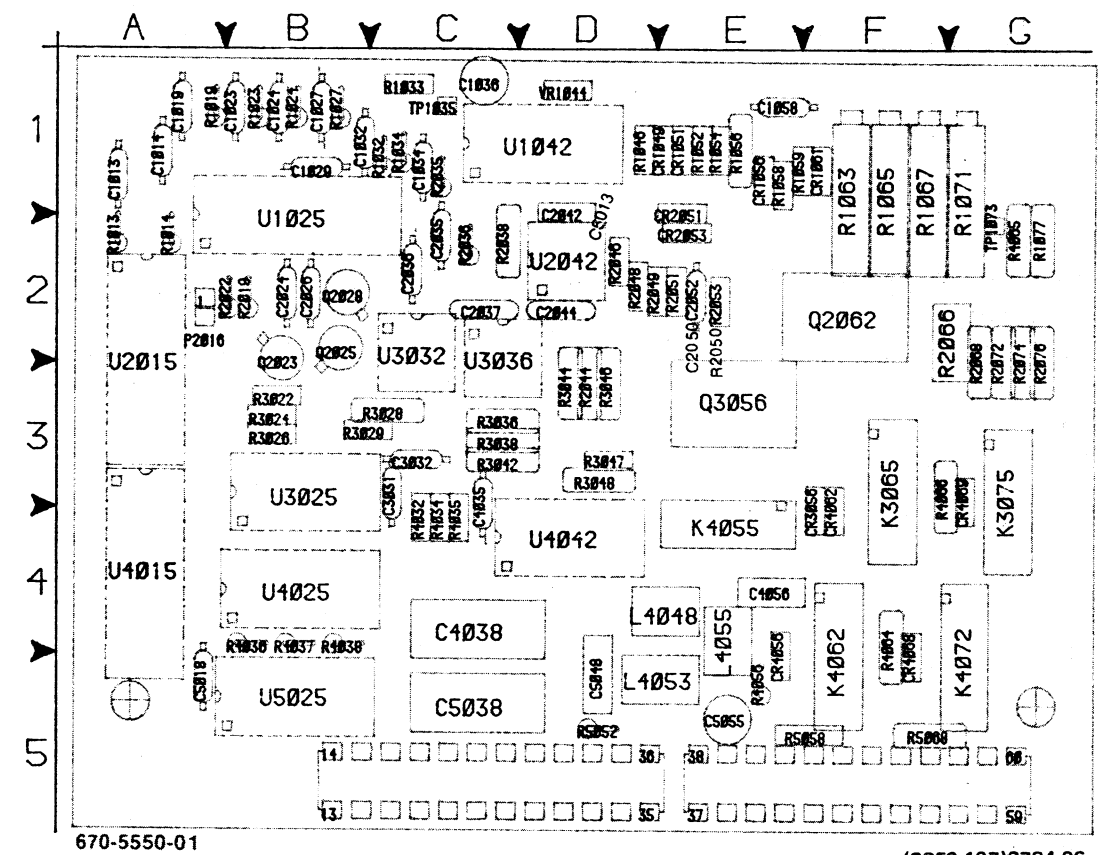
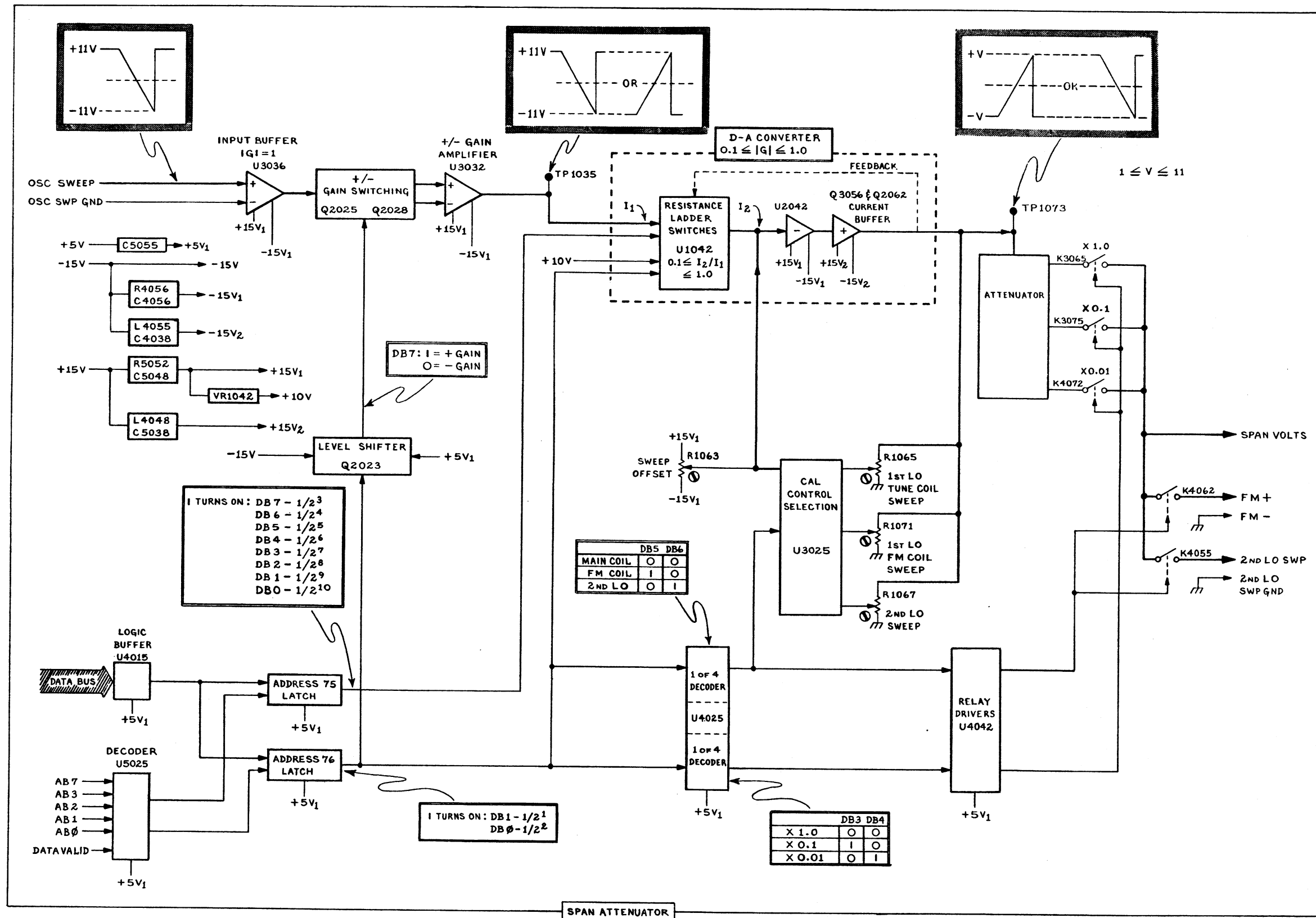
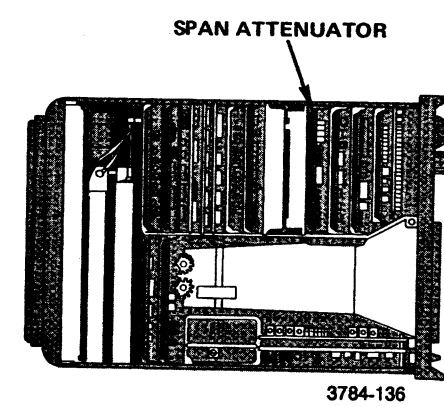


Fig. 8-34. A48—Span Attenuator circuit board.



**Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**

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

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

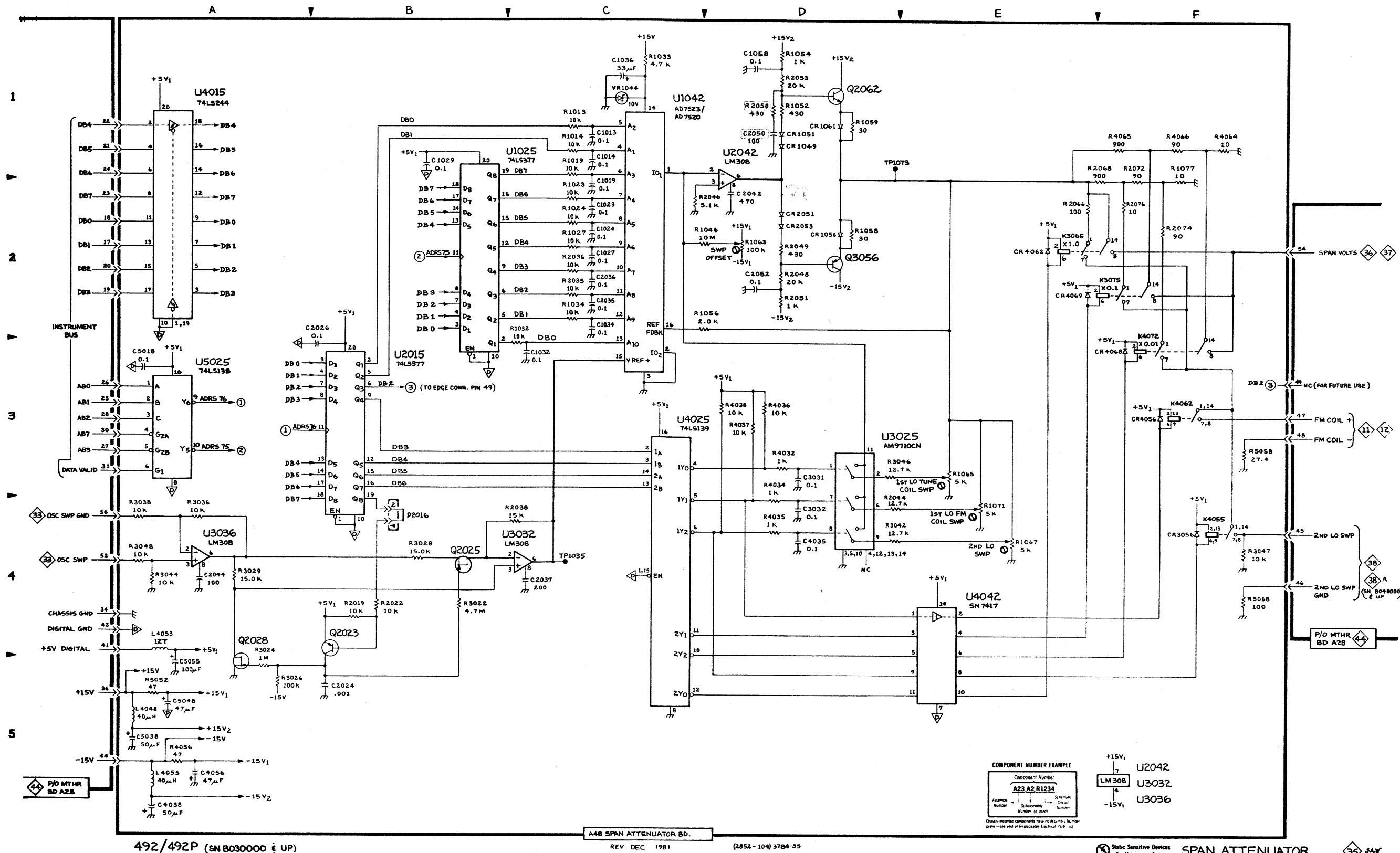
## Span Attenuator DIAGRAM 35

### ASSEMBLY A48

### Span Attenuator

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1013	C1	A1	L4048	A5	D4	F2074	F2	F2
C1014	C1	A1	L4053	A4	E5	R2076	F2	F2
C1019	C2	A1	L4055	A5	D4	R3022	B4	B2
C1023	C2	B1				R3024	A5	B2
C1024	C2	B1	P2016	B4	A2	R3026	A5	B3
C1027	C2	B1				R3028	B4	B2
C1029	B1	B1	Q2023	B4	B2	R3029	A4	B3
C1032	C3	B1	Q2025	B4	B2	R3036	A4	C3
C1034	C2	C1	Q2028	A5	B2	R3038	A4	C3
C1036	C1	C1	Q2062	D1	E2	R3042	D4	C3
C1058	D1	D1	Q3056	D2	D2	R3044	A4	C2
C2024	B5	B2				R3046	D3	C2
C2026	B3	B2	R1013	C1	A1	R3047	F4	D3
C2035	C2	C2	R1014	C1	A1	R3048	A4	D3
C2036	C2	C2	R1019	C1	A1	R4032	D3	B3
C2037	C4	C2	R1023	C2	B1	R4034	D3	C3
C2042	D2	C1	R1024	C2	B1	R4035	D4	C3
C2044	A4	C2	R1027	C2	B1	R4036	D3	B4
C2052	D2	D2	R1032	C3	B1	R4037	D3	B4
C3031	D3	B3	R1033	C1	B1	R4038	D3	B4
C3032	D4	B3	R1034	C2	B1	R4056	A5	D4
C4035	D4	C3	R1046	C2	D1	R4064	F1	F5
C4038	A5	C4	R1052	D1	D1	R4065	F1	G2
C4056	A5	D4	R1054	D1	D1	R4066	F1	F4
C5013*	D2	E2	R1056	C2	D1	R5052	A5	D4
C5018	A3	A4	R1058	D2	D1	R5058	F3	D4
C5038	A5	C4	R1059	D1	D1	R5068	F4	E4
C5048	A5	D4	R1063	D2	E1			
C5055	A5	D4	R1065	E3	F1	TP1035	C4	C1
			R1067	E4	E1	TP1073	D1	E1
			R1071	E4	E1			
			R1077	F2	F2	U1025	B2	B1
			R2019	B4	A2	U1042	C1	C1
			R2022	B4	A2	U2015	B3	A2
			R2035	C2	C1	U2042	D1	C2
			R2036	C2	C2	U3025	D3	B3
			R2038	C4	C2	U3032	C4	B2
			R2044	D4	C2	U3036	A4	C2
			R2046	C2	C2	U4015	A1	A3
			R2048	D2	D2	U4025	C3	B3
			R2049	D2	D2	U4042	E4	C3
			R2050*	D2	E2	U5025	A3	B4
			R2051	D2	D2			
			R2053	D1	D2	VR1044	C1	C2
			R2066	E2	E2			
			R2068	F2	E2			
			R2072	F2	E2			

\*See Parts List for serial number ranges.



COMPONENT NUMBER EXAMPLE

Component Number	A23 A2 R1234
Assembly Number	A23
Subassembly Number (if used)	R1234
Critical Number	1234

Drawn: [Name] Checked: [Name] Approved: [Name]  
Date: [Date] Part: [Part Number]

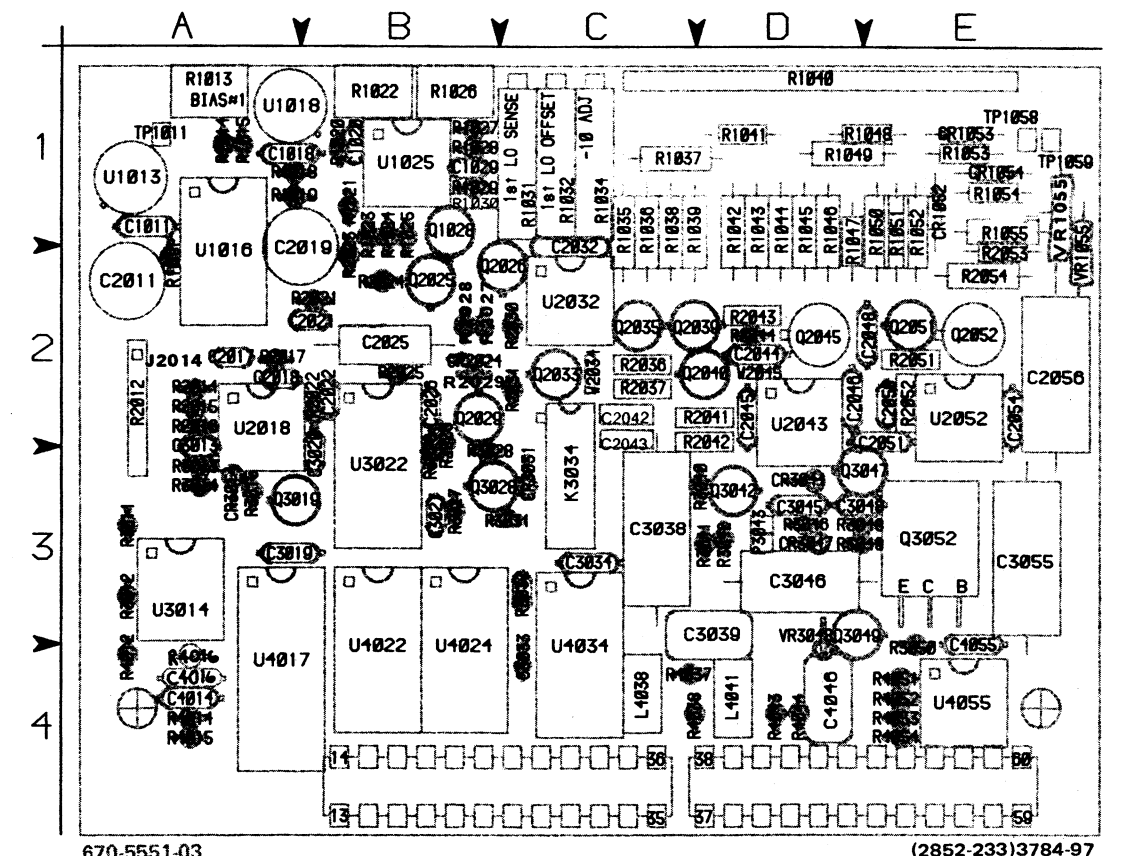
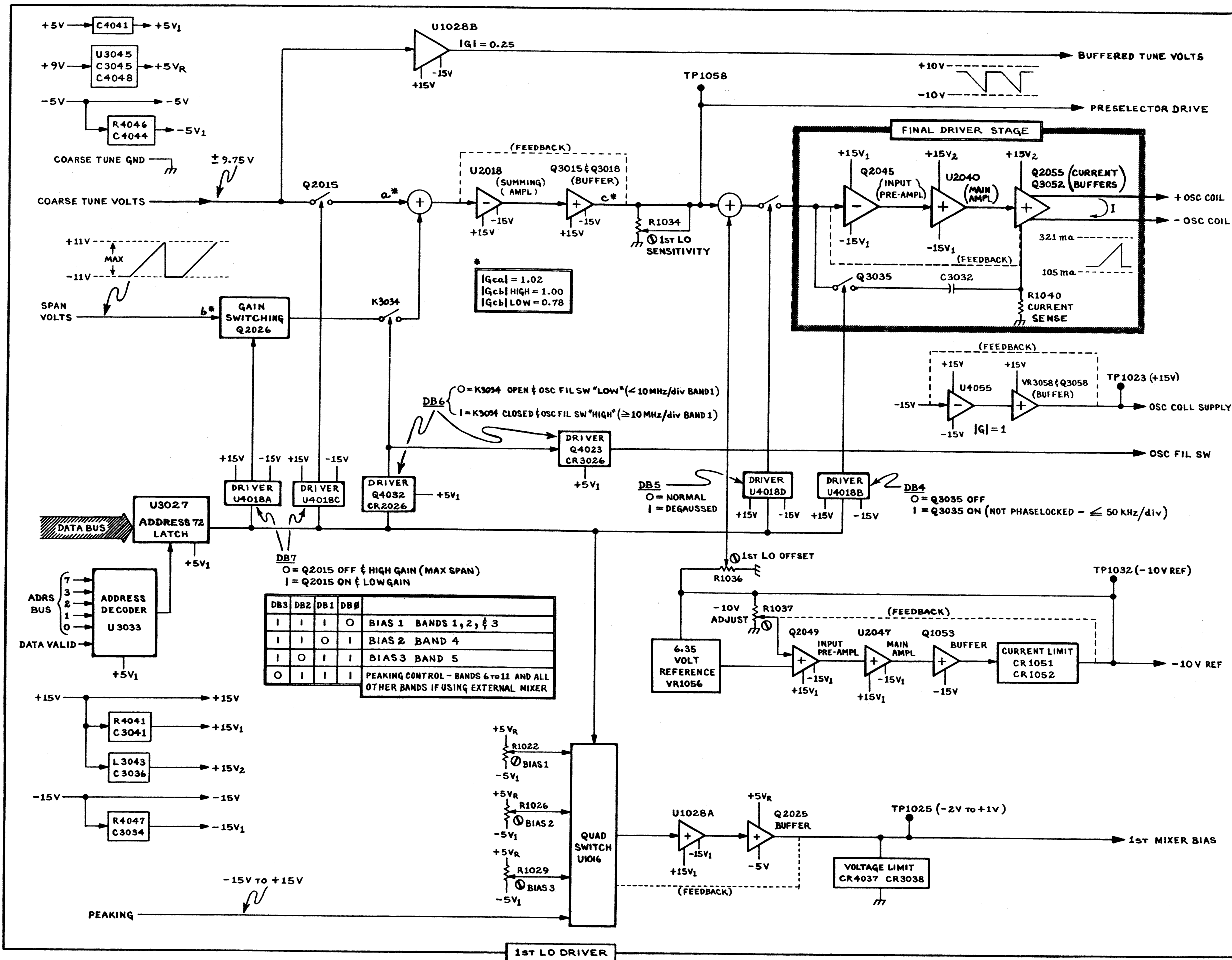
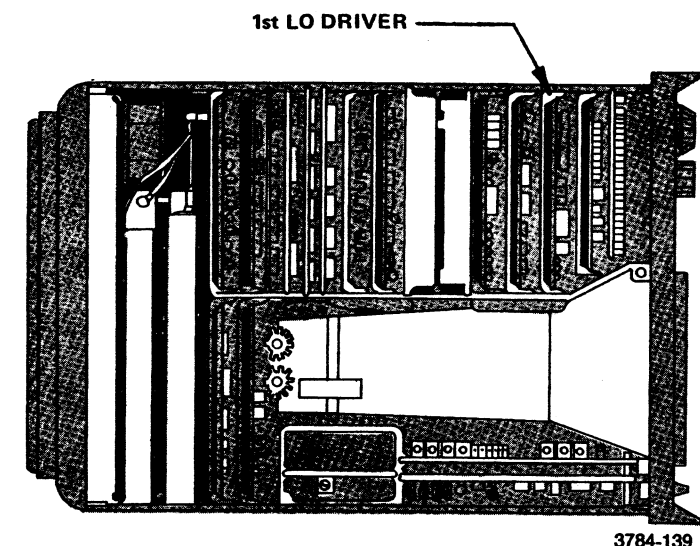


Fig. 8-35. A44—1st LO Driver circuit board.



**Static Sensitive Devices**  
 See Maintenance Section

**COMPONENT NUMBER EXAMPLE**

Component Number

A23 A2 R1234

Assembly Number ← A23      R1234 → Schematic Circuit Number  
 Subassembly Number (if used)

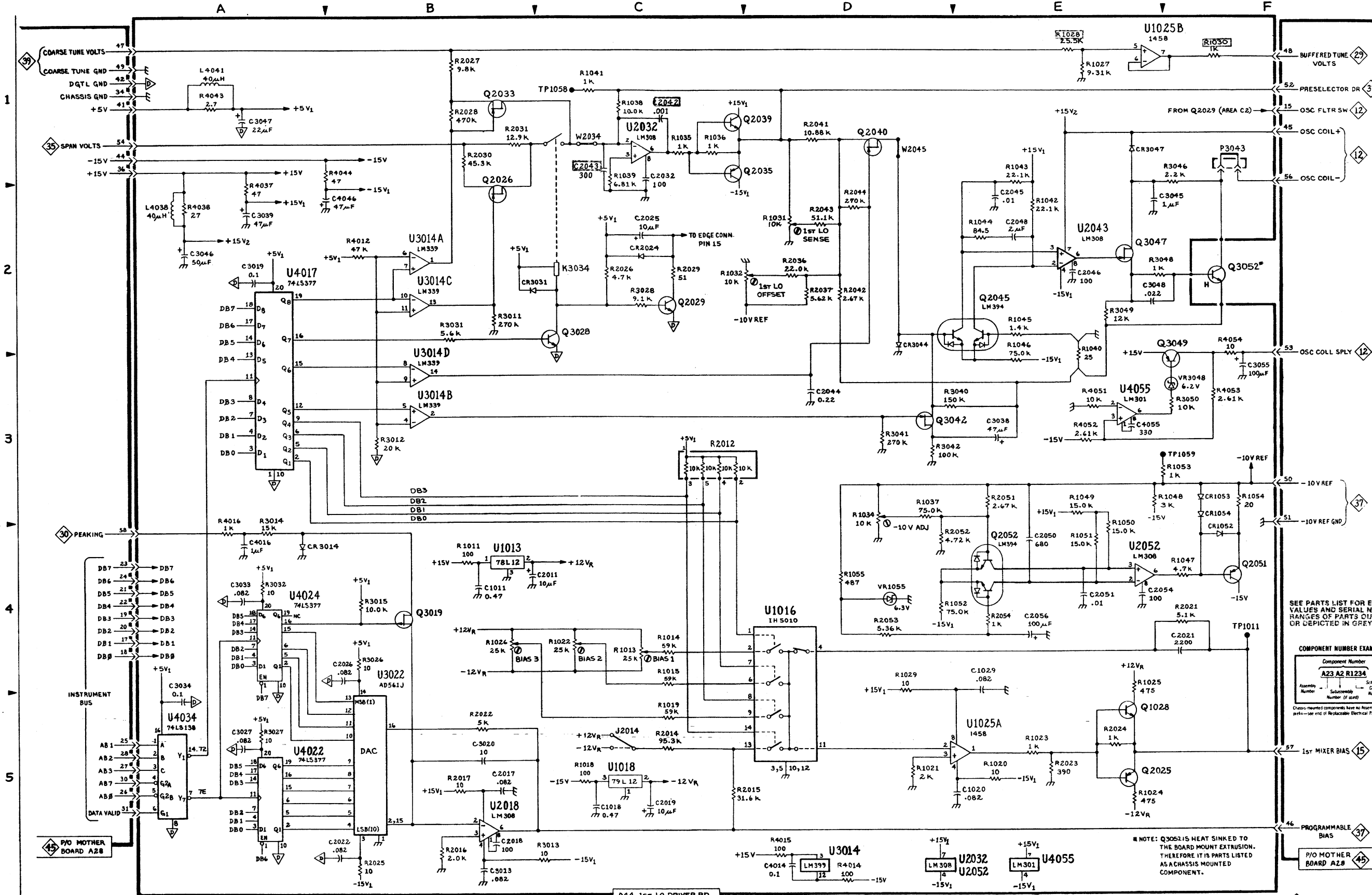
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

# 1ST LO DRIVER DIAGRAM 36

## ASSEMBLY A44

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	B4	A1	L4038	A2	C4	R1043	E1	D1	R3041	D3	D3
C1018	C5	A1	L4041	A1	D4	R1044	E2	D1	R3042	D3	D3
C1020	E5	B1				R1045	E2	D1	R3046	F1	D3
C1029	E4	B1	P3043	F1	D3	R1046	E3	D1	R3048	E2	D3
C2011	B4	A2				R1047	F4	D1	R3049	E2	D3
C2017	B5	A2	Q1028	E5	B1	R1048	E3	D1	R3050	F3	E4
C2018	B5	A2	Q2025	E5	B2	R1049	E3	D1	R4012	B2	A4
C2019	C5	A2	Q2026	B2	B2	R1050	E4	E1	R4014	D5	A4
C2021	F4	A2	Q2029	C2	B2	R1051	E4	E1	R4015	D5	A4
C2022	B5	B2	Q2033	B1	C2	R1052	D4	E1	R4016	A4	A4
C2025	C2	B2	Q2035	C1	C2	R1053	F3	E1	R4037	A2	C4
C2026	B4	B2	Q2039	C1	C2	R1054	F3	E1	R4038	A2	C4
C2032	C1	C2	Q2040	D1	C2	R1055	D4	E1	R4043	A1	D4
C2041*	A1	C2	Q2045	E2	D2	R2012	C3	A2	R4044	B1	D4
C2043*	C2	C2	Q3019	F4	E2	R2014	C5	A2	R4051	E3	E4
C2044	D3	D2	Q3022	E4	E2	R2015	C5	A2	R4052	E3	E4
C2045	E2	D2	Q3019	B4	A3	R2016	B5	A2	R4053	F3	E4
C2046	E2	D2	Q3028	C2	B3	R2017	B5	A2	R4054	F3	E4
C2048	E2	D2	Q3042	D3	D3	R2021	F4	A2			
C2050	E4	E2	Q3047	E2	D3	R2022	B5	B2	TP1011	F4	A1
C2051	E4	E2	Q3049	F3	D3	R2023	E5	B2	TP1058	C1	E1
C2054	E4	E2	Q3052	F2	E3	R2024	E5	B2	TP1059	F3	E1
C2056	E4	E2				R2025	B5	B2			
C3013	B5	A2	R1011	B4	A2	R2026	C2	B2	U1013	B4	A1
C3019	A2	A3	R1013	C4	A1	R2027	B1	B2	U1016	D4	A1
C3020	B5	B3	R1014	C4	A1	R2028	B1	B2	U1018	C5	A1
C3027	A5	B3	R1015	C4	A1	R2029	C2	B2	U1025A	E5	B1
C3033	A4	C3	R1018	C5	A1	R2030	B1	C2	U1025B	E1	B1
C3034	A5	C3	R1019	C5	A1	R2031	B1	C2	U2018	B5	A2
C3038	E3	C3	R1020	E5	B1	R2036	D2	C2	U2032	C1	C2
C3039	A2	D3	R1021	D5	B1	R2037	D2	C2	U2043	E2	D2
C3045	E2	D3	R1022	C4	B1	R2041	D1	D2	U2052	E4	E2
C3046	A2	D3	R1023	E5	B1	R2042	D2	D2	U3014A	B2	A3
C3047	A1	D4	R1024	E5	B1	R2043	D2	D2	U3014B	B3	A3
C3048	E2	D3	R1025	E4	B1	R2044	D2	D2	U3014C	B2	A3
C3055	F3	E3	R1026	B4	B1	R2051	E3	E2	U3014D	B3	A3
C4014	D5	A4	R1027	E1	B1	R2052	D4	E2	U3022	B5	B3
C4016	A4	A4	R1028	E1	B1	R2053	D4	E2	U4017	A2	A4
C4046	B2	D4	R1029	D4	B1	R2054	E4	E2	U4022	A5	B3
C4055	E3	E4	R1030*	F1	B1	R3011	B2	A3	U4024	A4	B3
			R1031	D2	C1	R3012	B3	A3	U4034	A5	C4
CR1052	F4	E1	R1032	C2	C1	R3013	C5	A3	U4055	E3	E4
CR1053	F3	E1	R1034	D3	C1	R3014	A4	A3			
CR1054	F3	E1	R1035	C1	C1	R3015	B4	A3	VR1055	D4	E1
CR2024	C2	B2	R1036	C1	C1	R3026	B4	B3	VR3048	F3	D3
CR3014	A4	A3	R1037	D3	C1	R3027	A5	B3			
CR3031	B2	C3	R1038	C1	C1	R3028	C2	B3	W2034	C1	C2
CR3044	D2	D3	R1039	C1	C1	R3031	B2	C3	W2045	D1	D2
CR3047	E1	D3	R1040	E2	D1	R3032	A4	C3			
			R1041	C1	D1	R3040	E3	C3			
K3034	C2	C3	R1042	E2	D1						

\*See Parts List for serial number ranges.



492/492P (SN 8030000 & UP)

A44 1ST LO DRIVER BD (2852-232) 3784-36 REV MAR 1985

Static Sensitive Devices See Maintenance Section 1ST LO DRIVER

SEE PARTS LIST FOR EARLY VALUES AND SERIAL NUMBERS OF PARTS OUTLINED OR DEPICTED IN GREY.

COMPONENT NUMBER EXAMPLE

A23 A2 R1234

Assembly Number Subassembly Number (if any) Component Number

Caution: mounted components have no Assembly Number - see end of Replaceable Electrical Parts List.

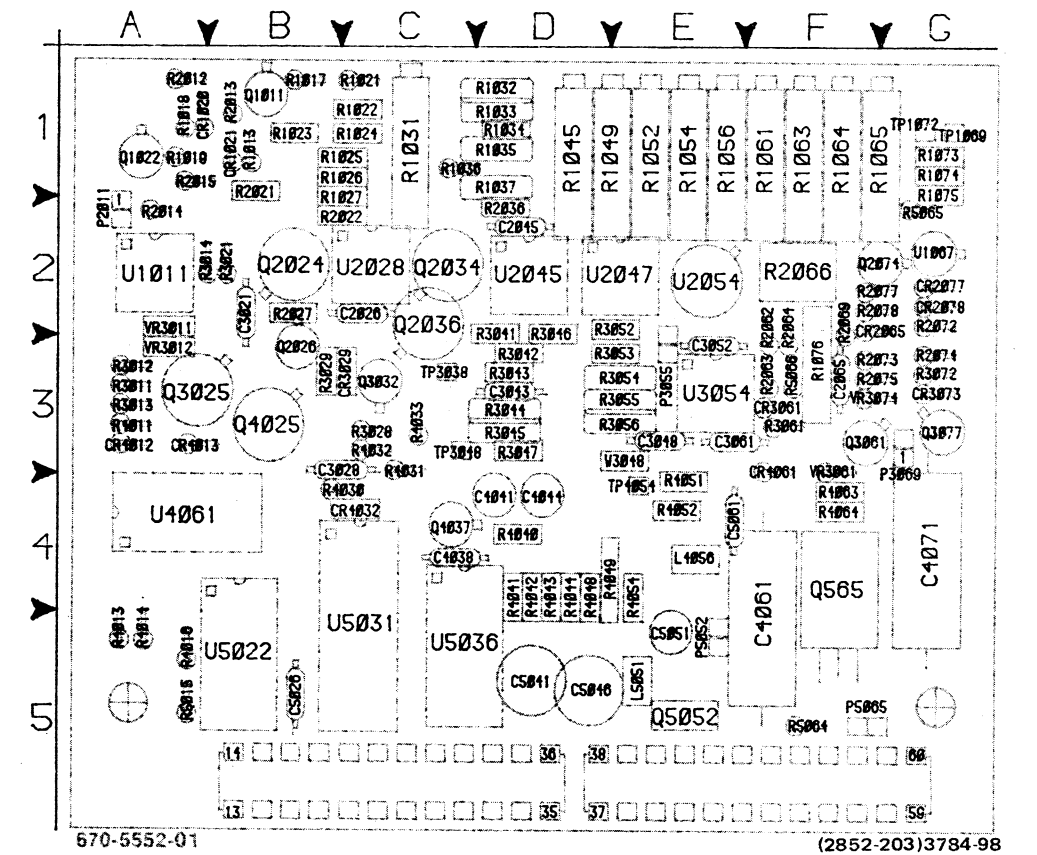
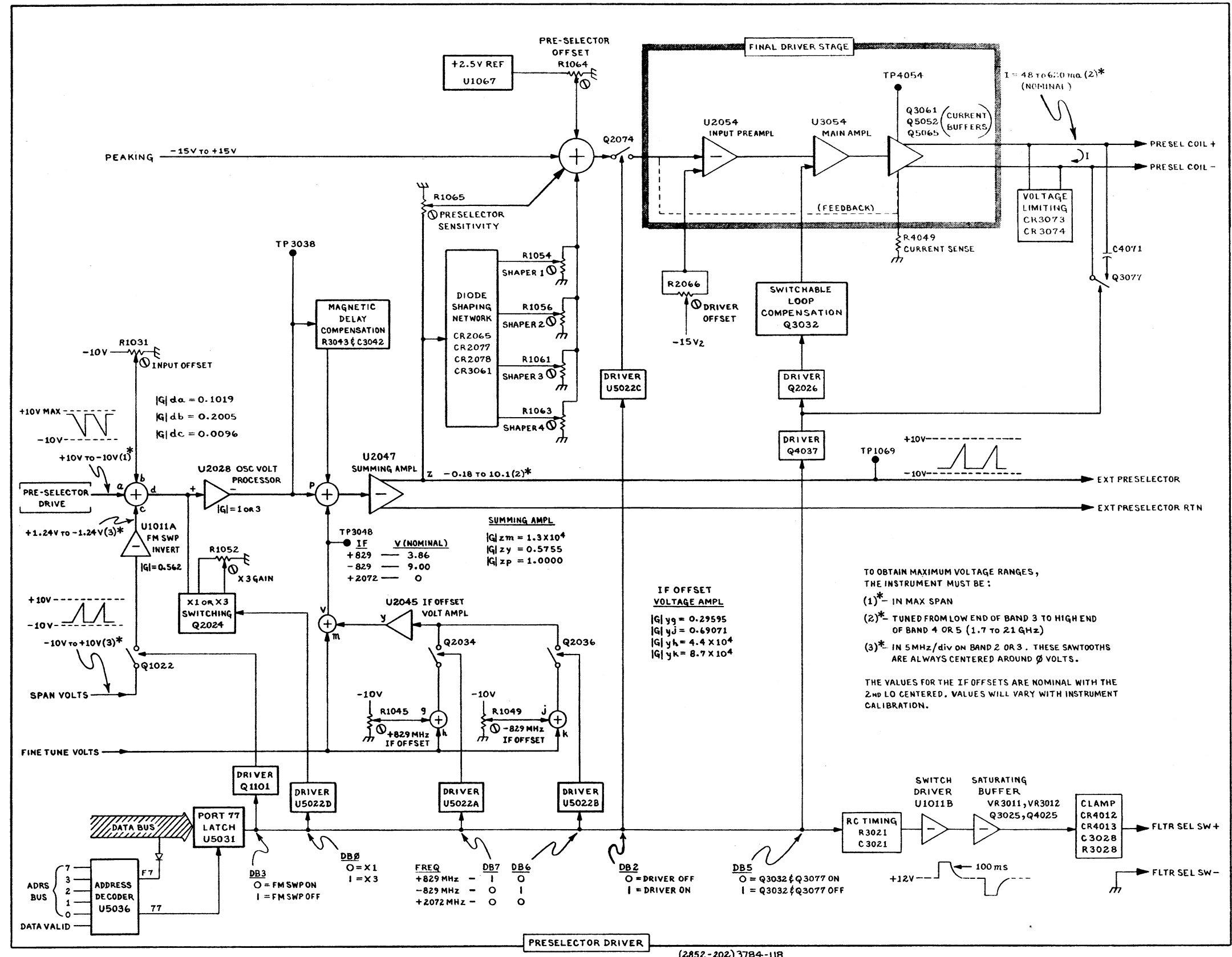
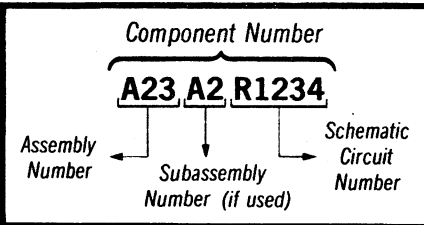


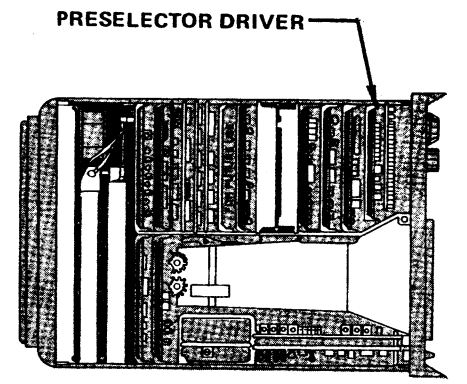
Fig. 8-36. A42—Preselector Driver circuit board.

Static Sensitive Devices  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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



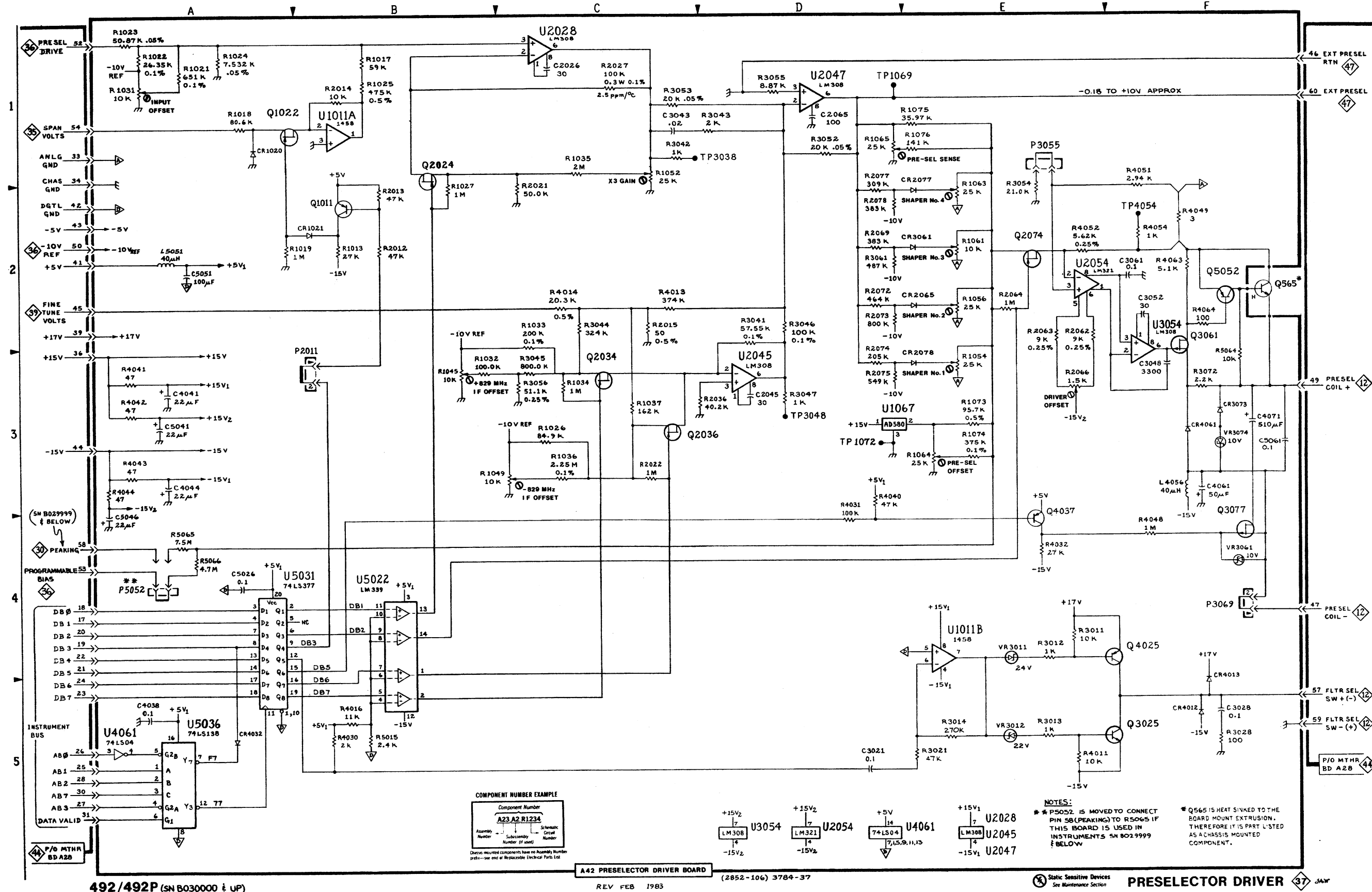
3784-138

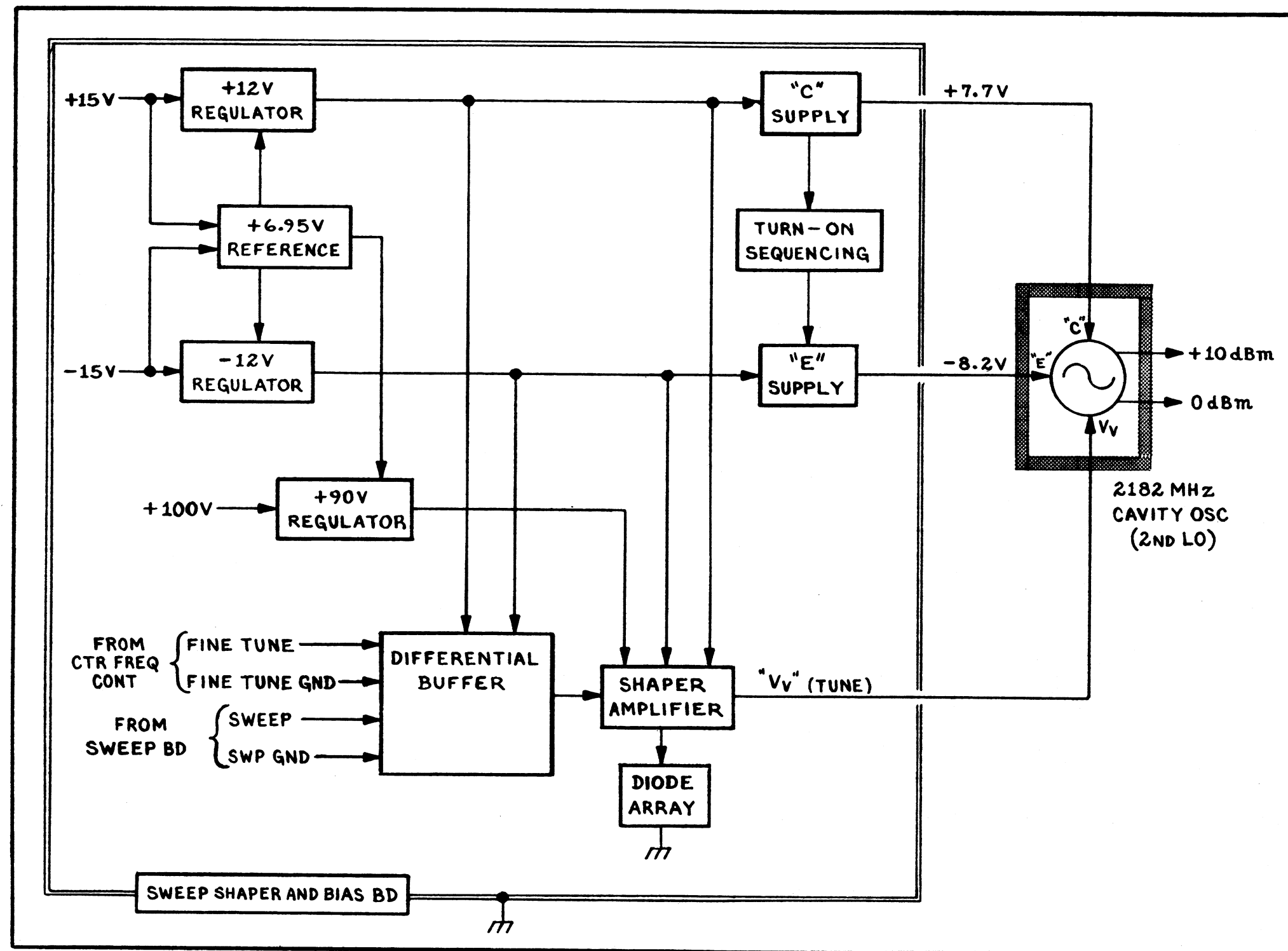


PRESELECTOR DRIVER DIAGRAM 37

ASSEMBLY A42

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C2026	C1	C2	Q2034	C3	C2	R2015	C2	A1	R4040	D3	D4	R2015	C2	A1	R4040	D3	D4
C2045	D3	D2	Q2036	C3	C2	R2021	C2	B1	R4041	A3	D4	R2021	C2	B1	R4041	A3	D4
C2065	D1	F3	Q2074	E2	F2	R2022	C3	C2	R4042	A3	D4	R2022	C3	C2	R4042	A3	D4
C3021	D5	B2	Q3025	F5	A3	R2027	C1	B2	R4043	A3	D4	R2027	C1	B2	R4043	A3	D4
C3028	F5	C3	Q3061	F2	F3	R2036	C3	D2	R4044	A3	D4	R2036	C3	D2	R4044	A3	D4
C3043	C1	D3	Q3077	F4	G3	R2062	E2	F2	R4048	F4	D4	R2062	E2	F2	R4048	F4	D4
C3048	F3	E3	Q4025	F4	B3	R2063	E2	F3	R4049	F2	D4	R2063	E2	F3	R4049	F2	D4
C3052	F2	E3	Q4037	E4	C4	R2064	E2	F2	R4051	F2	E4	R2064	E2	F2	R4051	F2	E4
C3061	F2	E3	Q5062	F2	E5	R2066	E3	F2	R4052	E2	E4	R2066	E3	F2	R4052	E2	E4
C4038	A5	C4				R2069	D2	F2	R4054	F2	E4	R2069	D2	F2	R4054	F2	E4
C4041	A3	D4	R1013	B2	B1	R2072	D2	G2	R4063	F2	F4	R2072	D2	G2	R4063	F2	F4
C4044	A3	D4	R1017	B1	B1	R2073	D2	F3	R4064	F2	F4	R2073	D2	F3	R4064	F2	F4
C4061	F3	F4	R1018	A1	A1	R2074	D3	G3	R5015	B5	A5	R2074	D3	G3	R5015	B5	A5
C4071	F3	G4	R1019	A2	A1	R2075	D3	F3	R5064	F3	F5	R2075	D3	F3	R5064	F3	F5
C5026	A4	B5	R1021	A1	C1	R2077	D2	F2	R5065	A4	G2	R2077	D2	F2	R5065	A4	G2
C5041	A3	D5	R1022	A1	C1	R2078	D2	F2	R5066	A4	F3	R2078	D2	F2	R5066	A4	F3
C5046	A4	D5	R1024	A1	C1	R3011	E4	A3	TP1069	D1	G1	R3011	E4	A3	TP1069	D1	G1
C5051	A2	E5	R1025	B1	C1	R3012	E4	A3	TP1072	D3	G1	R3012	E4	A3	TP1072	D3	G1
C5061	F3	E4	R1026	C3	C1	R3013	E5	A3	TP3038	C1	C3	R3013	E5	A3	TP3038	C1	C3
			R1027	B2	C1	R3014	E5	A2	TP3048	D3	C3	R3014	E5	A2	TP3048	D3	C3
CR1020	A1	A1	R1031	A1	C1	R3021	E5	B2	TP4054	F2	E4	R3021	E5	B2	TP4054	F2	E4
CR1021	B2	B1	R1032	B3	D1	R3028	F5	C3	U1011A	B1	A2	R3028	F5	C3	U1011A	B1	A2
CR2065	E2	F2	R1033	C2	D1	R3041	D2	D2	U1011B	E4	A2	R3041	D2	D2	U1011B	E4	A2
CR2077	E2	G2	R1034	C3	D1	R3042	C1	D3	U1067	D3	G2	R3042	C1	D3	U1067	D3	G2
CR2078	E3	G2	R1035	C1	D1	R3043	D1	D3	U2028	C1	C2	R3043	D1	D3	U2028	C1	C2
CR3061	E2	F3	R1036	C3	C1	R3044	C2	D3	U2045	D3	D2	R3044	C2	D3	U2045	D3	D2
CR3073	F3	G3	R1037	C3	D1	R3045	C3	D3	U2047	D1	D2	R3045	C3	D3	U2047	D1	D2
CR4012	F5	A3	R1045	B3	D1	R3046	D2	D2	U2054	E2	E2	R3046	D2	D2	U2054	E2	E2
CR4013	F5	A3	R1049	C3	D1	R3047	D2	D3	U3054	F2	E3	R3047	D2	D3	U3054	F2	E3
CR4032	A5	C4	R1052	C1	E1	R3052	D1	D2	U4061	A5	A4	R3052	D1	D2	U4061	A5	A4
CR4061	F3	F3	R1054	E3	E1	R3053	C1	D3	U5022	B4	B5	R3053	C1	D3	U5022	B4	B5
			R1056	E2	E1	R3054	E2	D3	U5031	A4	C5	R3054	E2	D3	U5031	A4	C5
L4056	F3	E4	R1061	E2	F1	R3055	D1	D3	U5036	A5	C5	R3055	D1	D3	U5036	A5	C5
L5051	A2	E5	R1063	E2	F1	R3061	D2	F3	VR3011	E4	A2	R3061	D2	F3	VR3011	E4	A2
			R1064	E3	F1	R3072	F3	G3	VR3012	E5	A3	R3072	F3	G3	VR3012	E5	A3
P2011	B3	A2	R1065	D1	F1	R4011	E5	A3	VR3061	F4	F3	R4011	E5	A3	VR3061	F4	F3
P3055	E1	E2	R1073	E3	G1	R4013	C2	A5	VR3074	F3	F3	R4013	C2	A5	VR3074	F3	F3
P3069	F4	G3	R1074	E3	G1	R4014	C2	A5				R4014	C2	A5			
P5052	A4	E5	R1075	E1	G1	R4016	B5	A5				R4016	B5	A5			
			R1076	E1	F3	R4030	B5	C4				R4030	B5	C4			
Q1011	B2	B1	R2012	B2	A1	R4031	D4	C3				R4031	D4	C3			
Q1022	A1	A1	R2013	B2	B1	R4032	E4	C3				R4032	E4	C3			
Q2024	B1	B2	R2014	B1	A2												





(2852-205) 3784-119

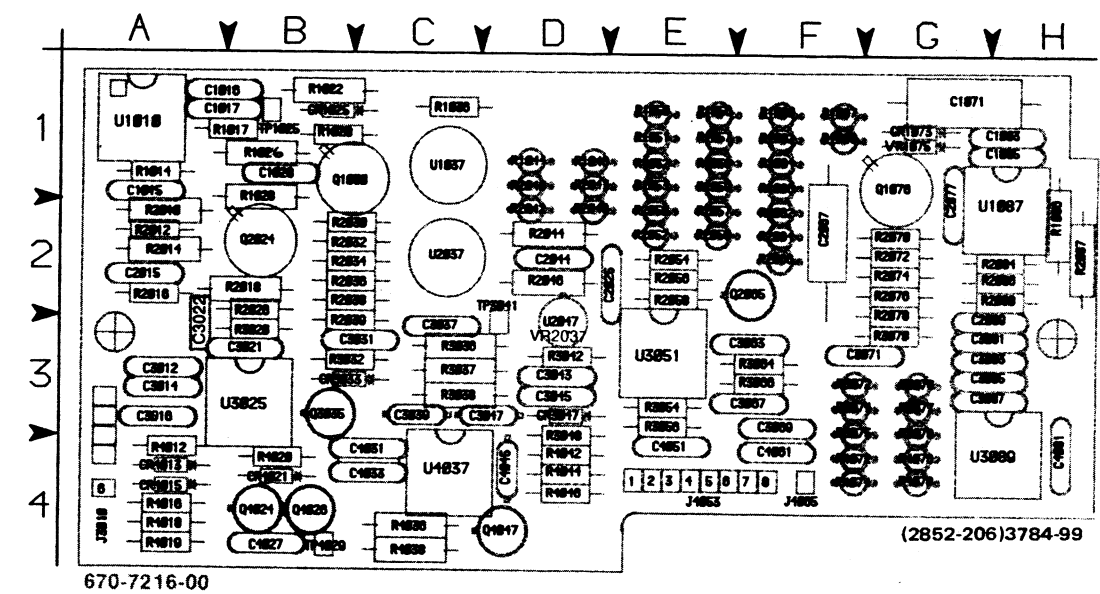
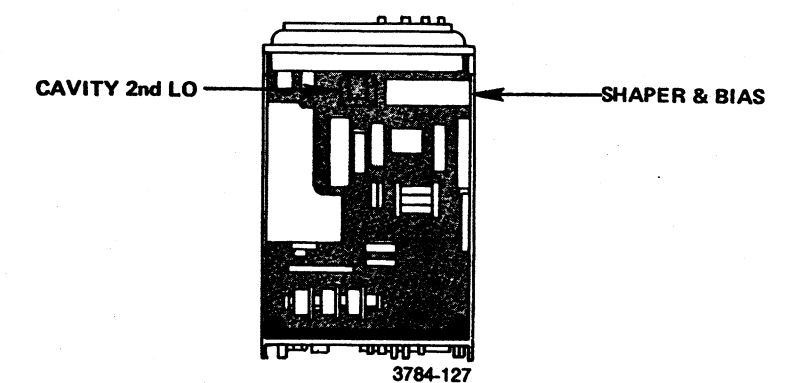
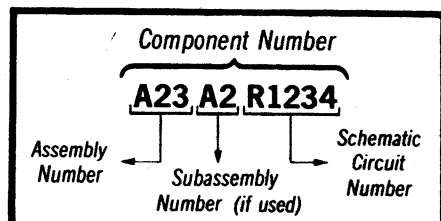


Fig. 8-37. A21—Shaper & Bias circuit board.



Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



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

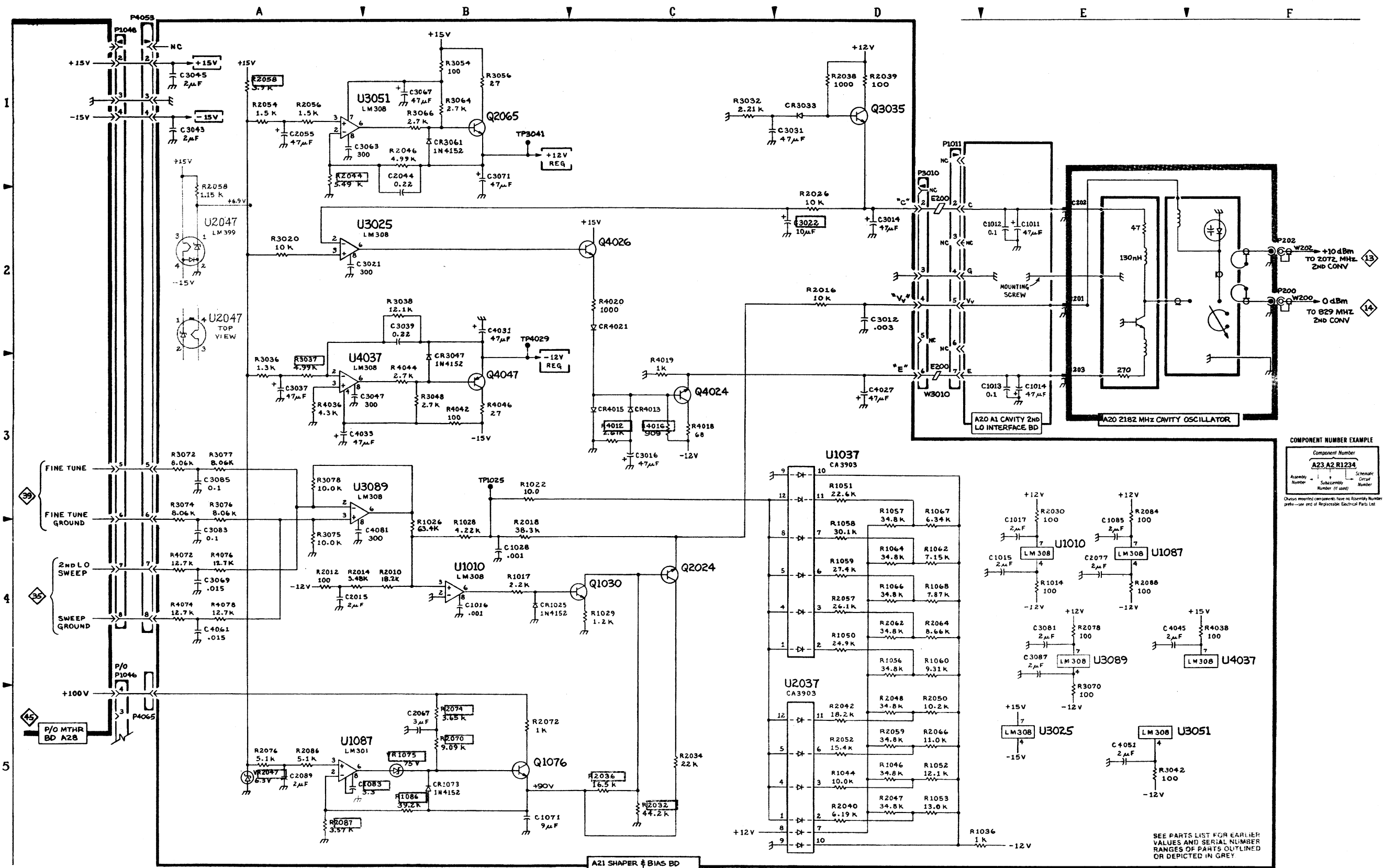
# Shaper and Bias for Cavity Oscillator DIAGRAM 38

## ASSEMBLY A21

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1015	E4	A1	CR4013	C3	A4	R2018	B4	B2	R3072	A3	F3
C1016	B4	A1	CR4015	C3	A4	R2026	D2	B2	R3074	A3	F3
C1017	E4	A1	CR4021	C2	B4	R2030	E3	B2	R3075	A4	F3
C1028	B4	B1	P4055	A5	E4	R2032	C5	B2	R3076	A3	G3
C1071	B5	G1	P4053	A1	E4	R2034	C5	B2	R3077	A3	G3
C1083	A5	H1	P4065	A5	F4	R2036	C5	B2	R3078	A3	G3
C1085	E4	H1				R2038	D1	B2	R4012	C2	A4
C2015	A4	A2	Q1030	C4	B1	R2039	D1	B2	R4016	C3	A4
C2044	B1	D2	Q1076	B5	G1	R2040	D5	D1	R4018	C2	A4
C2055	A1	D2	Q2024	C4	B2	R2042	D5	D2	R4019	D3	A4
C2067	B5	F2	Q2065	B1	F2	R2044	A1	D2	R4020	C2	B4
C2077	E4	G1	Q3035	D1	B3	R2046	B1	D2	R4036	A3	C4
C2089	A5	H2	Q4024	C2	B4	R2047	D5	D1	R4038	F4	C4
C3012	D2	A3	Q4026	C2	B4	R2048	D5	D2	R4042	B3	D4
C3014	D2	A3	Q4047	B3	D4	R2050	D5	E2	R4044	B3	D4
C3016	C3	A3				R2052	D5	E2	R4046	B3	D4
C3021	A2	B3	R1014	E4	A1	R2054	A1	E2	R4072	A4	F4
C3031	C1	B3	R1017	B4	B1	R2056	A1	E2	R4074	A4	F4
C3037	A3	C3	R1022	B3	B1	R2057	D4	E2	R4076	A4	G4
C3039	B2	C3	R1026	B4	B1	R2058	A1	E2	R4078	A4	G4
C3043	A1	D3	R1028	B4	B1	R2059	D5	E2	TP1025	B3	B1
C3045	A1	D3	R1029	C4	B1	R2062	D4	F2	TP3041	B1	D2
C3047	A3	D3	R1036	E5	C1	R2064	D4	F2	TP4029	B2	B4
C3063	A1	F3	R1044	D5	D1	R2066	D5	F2			
C3067	B1	F3	R1046	D5	D1	R2070	B5	G2	U1010	B4	A1
C3069	A4	F3	R1050	D4	E1	R2072	B5	G2	U1010	E4	A1
C3071	B1	F3	R1051	D3	E1	R2074	B5	G2	U1037	D3	C1
C3081	E4	H2	R1052	D5	E1	R2076	A5	G2	U1087	A5	H1
C3083	A4	H3	R1053	D5	E1	R2078	E4	G2	U1087	A5	H1
C3085	A3	H3	R1056	D4	E1	R2084	E3	H2	U2037	D5	C2
C3087	E4	H3	R1057	D4	E1	R2086	A5	H2	U2047*	A2	D2
C4027	D3	B4	R1058	D4	E1	R2087	E4	H2	U2047*	A2	D2
C4031	B2	C4	R1059	D4	E1	R3020	A2	B3	U3025	A2	B3
C4033	A3	C4	R1060	D4	F1	R3032	C1	B3	U3025	E5	B3
C4045	E4	D4	R1062	D4	F1	R3036	A3	C3	U3051	B1	E3
C4051	E5	E3	R1064	D4	F1	R3037	A3	C3	U3051	E5	E3
C4061	A4	F4	R1066	D4	F1	R3038	B2	C3	U3089	A3	H4
C4081	A4	H3	R1067	D4	F1	R3042	E5	D3	U3089	E4	H4
			R1068	D4	F1	R3048	B3	D3	U4037	A3	C4
CR1025	B4	B1	R1086	B5	H1	R3054	B1	E3	U4037	F4	C4
CR1073	B5	G1	R2010	B4	A2	R3056	B1	E3	VR1075	B5	G1
CR3033	D1	B3	R2012	A4	A2	R3064	B1	F3	VR2047*	A5	D3
CR3047	B3	D3	R2014	A4	A2	R3066	B1	F3			
CR3061	B1	F3	R2016	D2	A2	R3070	E5	G2			

### Shaper & Bias

\*See Parts List for serial number ranges.



492/492P (SN B030000 & UP)

REV FEB 1983

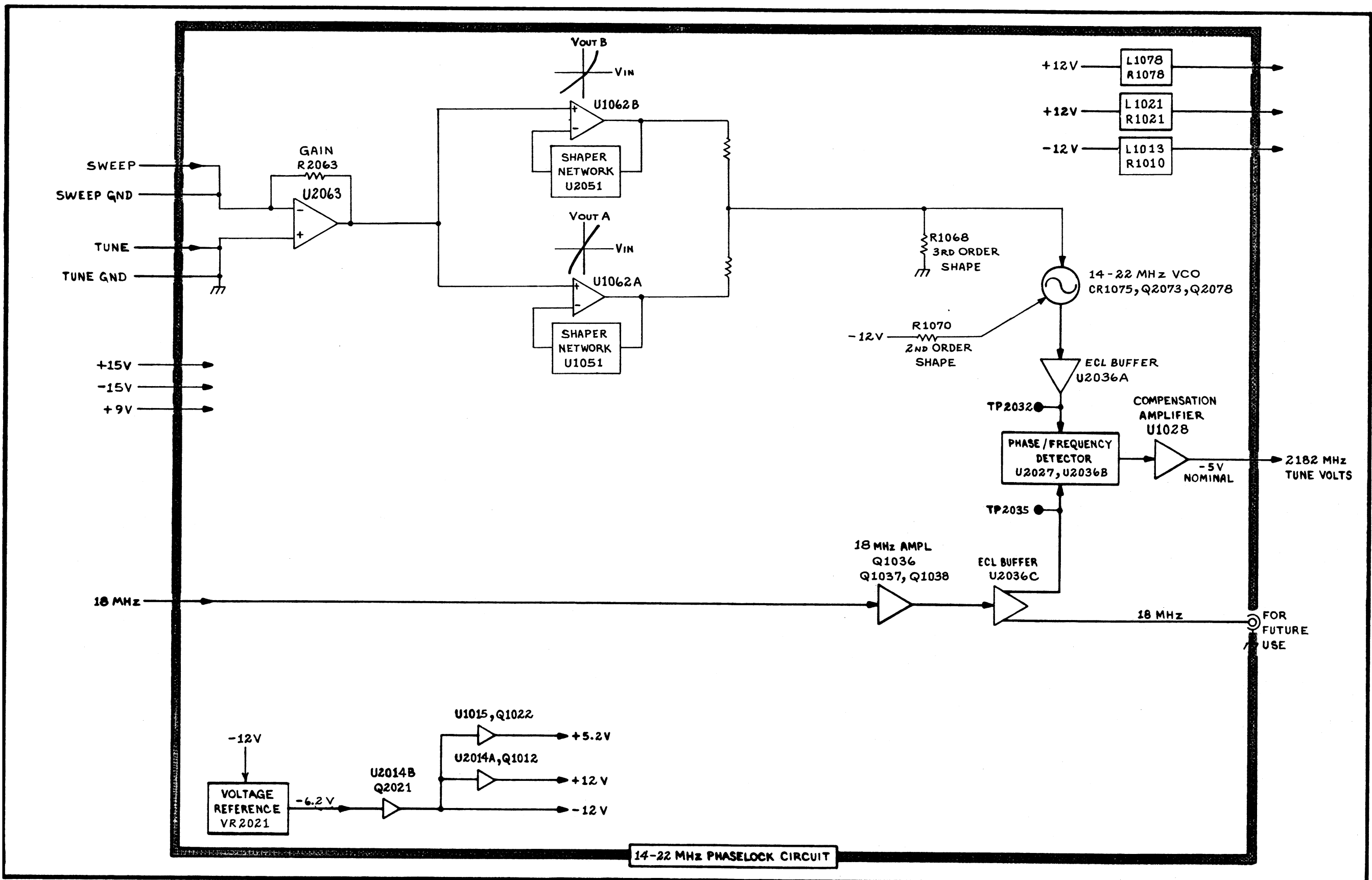
(2852-107) 3784-38

Static Sensitive Devices See Maintenance Section

SHAPER AND BIAS FOR CAVITY OSCILLATOR (SN B030000 - B039999)

COMPONENT NUMBER EXAMPLE  
Component Number  
A23 A2 R1234  
Assembly Number  
Subassembly Number (if any)  
Serial Number  
Check manufacturer's literature for Component Number prefix - see end of Replaceable Electrical Parts List

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



REV JUL 1981

3784-163

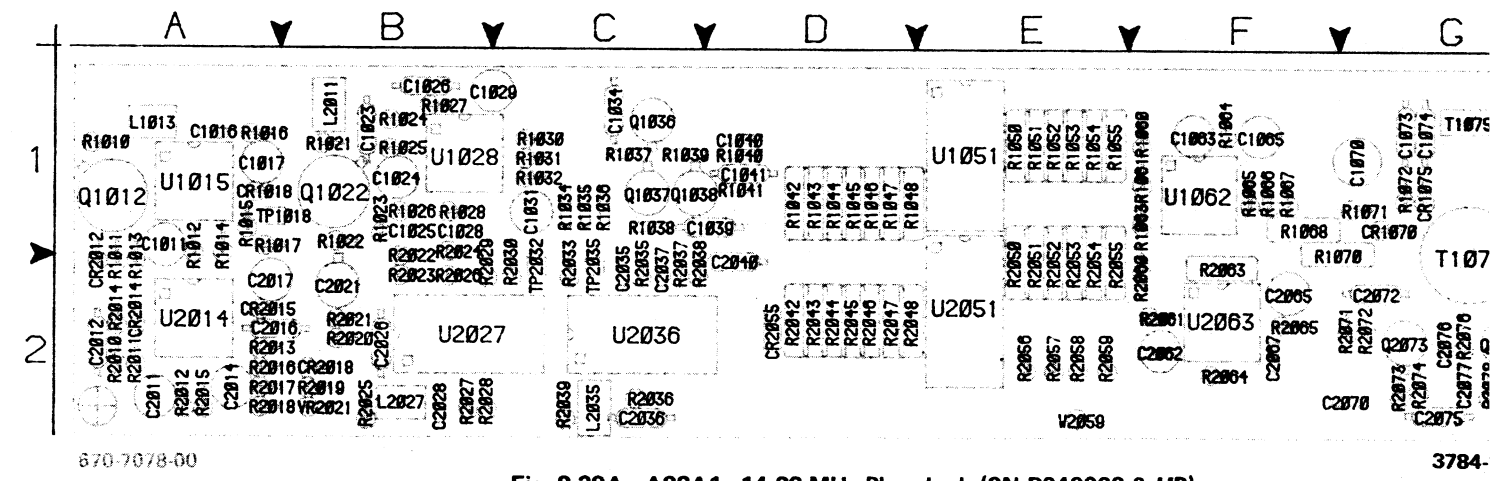
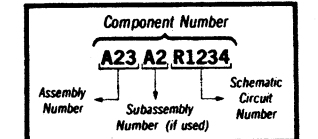


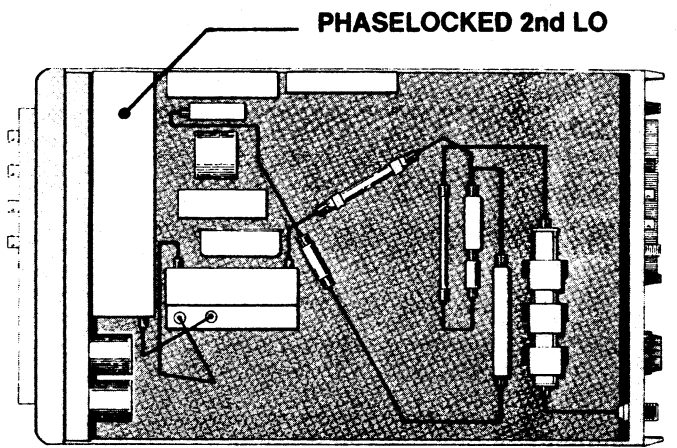
Fig. 8-38A. A22A1-14-22 MHz Phaselock (SN B040000 & UP).

Static Sensitive Devices  
 See Maintenance Section

COMPONENT NUMBER EXAMPLE



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



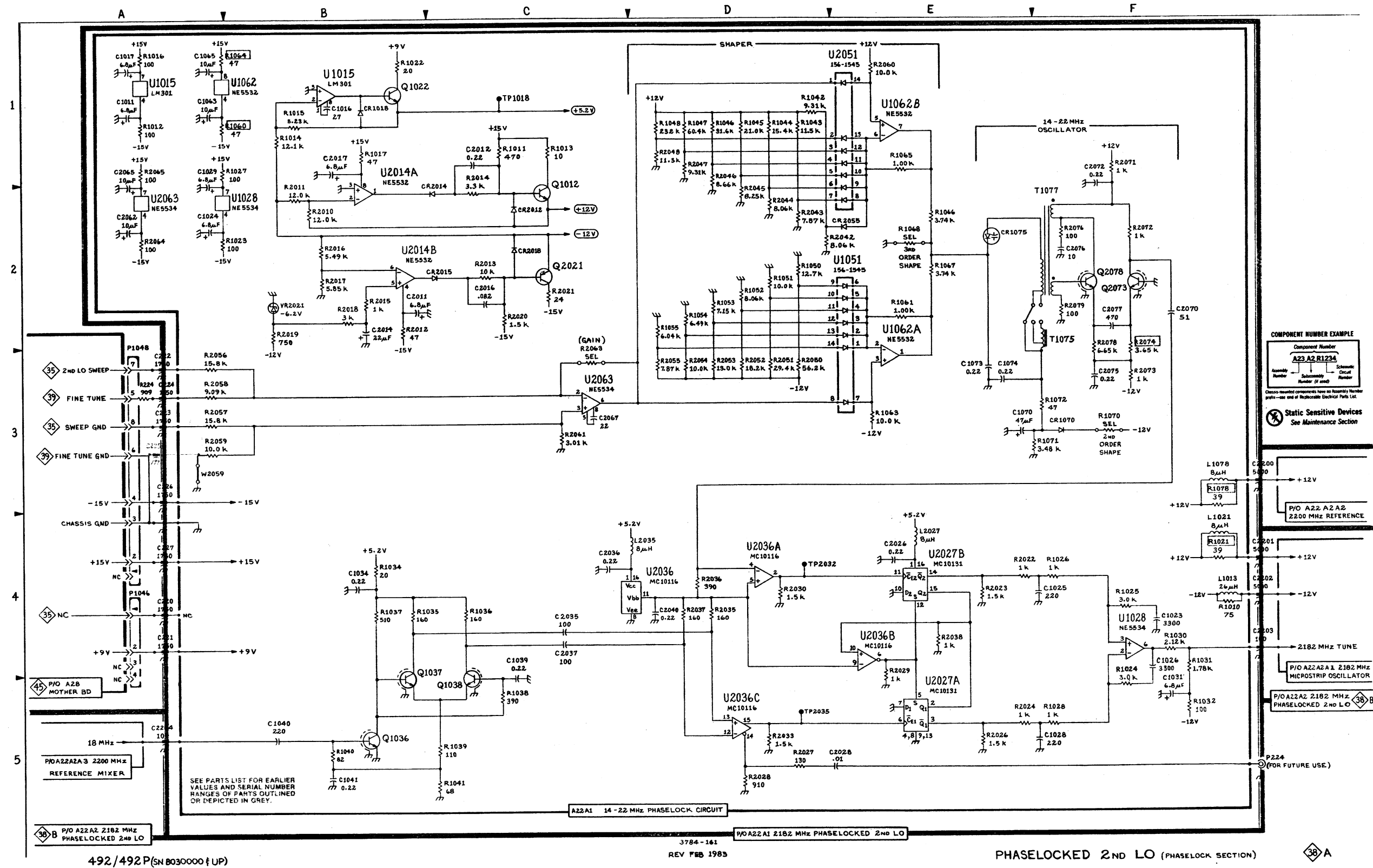
PHASELOCKED 2ND LO (PHASELOCK SECTION) DIAGRAM 38 A

ASSEMBLY A22A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	A1	A1	L1013	F4	A1	R1052	D2	E1	R2052	D3	E2
C1016	B1	A1	L1078	F3	G1	R1053	D2	E1	R2053	D3	E2
C1017	A1	A1	L2011	F4	B1	R1054	D2	E1	R2054	D3	E2
C1023	A2	B1	L2027	E4	B2	R1055	D2	E1	R2055	D3	E2
C1024	F2	B1	L2035	D4	C2	R1060	A1	F1	R2056	A3	E2
C1025	E4	B1	Q1012	C2	A1	R1061	E2	F1	R2057	A3	E2
C1026	F4	B1	Q1021	C2	B2	R1064	A1	F1	R2058	A3	E2
C1028	A2	B1	Q1022	B1	B1	R1065	E1	F1	R2059	A3	E2
C1028	E5	B1	Q1036	B5	C1	R1066	E2	F1	R2060	E1	F2
C1029	A2	B1	Q1037	B5	C1	R1067	E2	F1	R2061	C3	F2
C1029	F2	B1	Q1038	C5	C1	R1068	E2	F1	R2063	C3	F1
C1031	F5	C1	Q2073	F2	G2	R1070	F3	F1	R2064	A2	F2
C1034	B4	C1	Q2078	F2	G2	R1071	E3	G1	R2065	A1	F2
C1039	C5	C1				R1072	F3	G1	R2071	F1	F2
C1040	B5	D1	R1011	C1	A2	R1078	F4	G1	R2072	F2	G2
C1041	B5	D1	R1012	A1	A1	R1078	F4	G1	R2073	F3	G2
C1063	A1	F1	R1013	C1	A1	R2010	B2	A2	R2074	F2	G2
C1065	A1	F1	R1014	B1	A1	R2011	B2	A2	R2076	F2	G2
C1070	E3	G1	R1015	B1	A1	R2012	B2	A2	R2078	F2	G2
C1073	E3	G1	R1016	A1	A1	R2013	C2	A2	R2079	F2	G2
C1074	E3	G1	R1017	B1	A1	R2014	C1	A2			
C2011	B2	A2	R1021	F4	B1	R2015	B2	A2	T1075	F2	G1
C2012	C1	A2	R1022	B1	B1	R2016	B2	A2	T1077	F2	G1
C2014	B2	A2	R1023	F2	B1	R2017	B2	A2			
C2016	C2	A2	R1024	F5	B1	R2018	B2	A2	TP1018	C1	A1
C2017	B1	A2	R1025	F4	B1	R2019	B2	A2	TP2032	D4	C2
C2026	E4	B2	R1026	F4	B1	R2020	C2	B2	TP2035	D5	C2
C2028	D5	B2	R1027	A1	B1	R2021	C2	B2			
C2035	C4	C2	R1028	F5	B1	R2022	E4	B1	U1015	B1	A1
C2036	C4	C2	R1030	F4	C1	R2023	E4	B1	U1028	F2	B1
C2037	C4	C2	R1031	F4	C1	R2024	E5	B1	U1028	F4	B1
C2040	D4	D2	R1032	F5	C1	R2026	E5	B2	U1051	E2	E1
C2062	A2	F2	R1034	B4	C1	R2027	D5	B2	U1062A	E3	F1
C2065	A2	F2	R1035	B4	C1	R2028	E5	B2	U1062B	E1	F1
C2067	C3	F2	R1036	C4	C1	R2029	E5	B2	U2014A	B2	A2
C2070	F2	F2	R1037	B4	C1	R2030	D4	C2	U2014B	B2	A2
C2072	F1	G2	R1038	C5	C1	R2033	D5	B2	U2027A	E5	B2
C2075	F3	G2	R1039	C5	C1	R2035	D4	C2	U2027B	E4	B2
C2076	F2	G2	R1040	B5	D1	R2036	D4	C2	U2036A	D4	C2
C2077	F2	G2	R1041	C5	D1	R2037	D4	C2	U2036B	E4	C2
CR1018	B1	A1	R1042	D1	D1	R2038	E4	C2	U2036C	D5	C2
CR1070	F3	G1	R1043	D1	D1	R2042	D2	D2	U2051	E1	E2
CR1075	E2	G1	R1044	D1	D1	R2043	D2	D2	U2063	C3	F2
CR2012	C2	A2	R1045	D1	D1	R2044	D2	D2	VR2021	B2	B2
CR2014	C1	A2	R1046	D1	D1	R2045	D2	D2	W2059	A3	E2
CR2015	C2	A2	R1047	D1	D1	R2046	D1	D2			
CR2018	C2	A2	R1048	D1	D1	R2047	D1	D2			
CR2055	E2	D2	R1050	D2	E1	R2048	D1	D2			
			R1051	D2	E1	R2050	D3	E2			
			R2051	D3	E2	R2051	D3	E2			

ASSEMBLY A22

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C220	A4	NA	C224	A3	NA	C2200	F3	NA	C2204	A4	NA
C221	A4	NA	C226	A3	NA	C2201	F4	NA			
C222	A3	NA	C227	A4	NA	C2202	F4	NA			
C223	A3	NA				C2203	F4	NA			



492/492P(SN 8030000 f UP)

3784-161  
REV FEB 1985

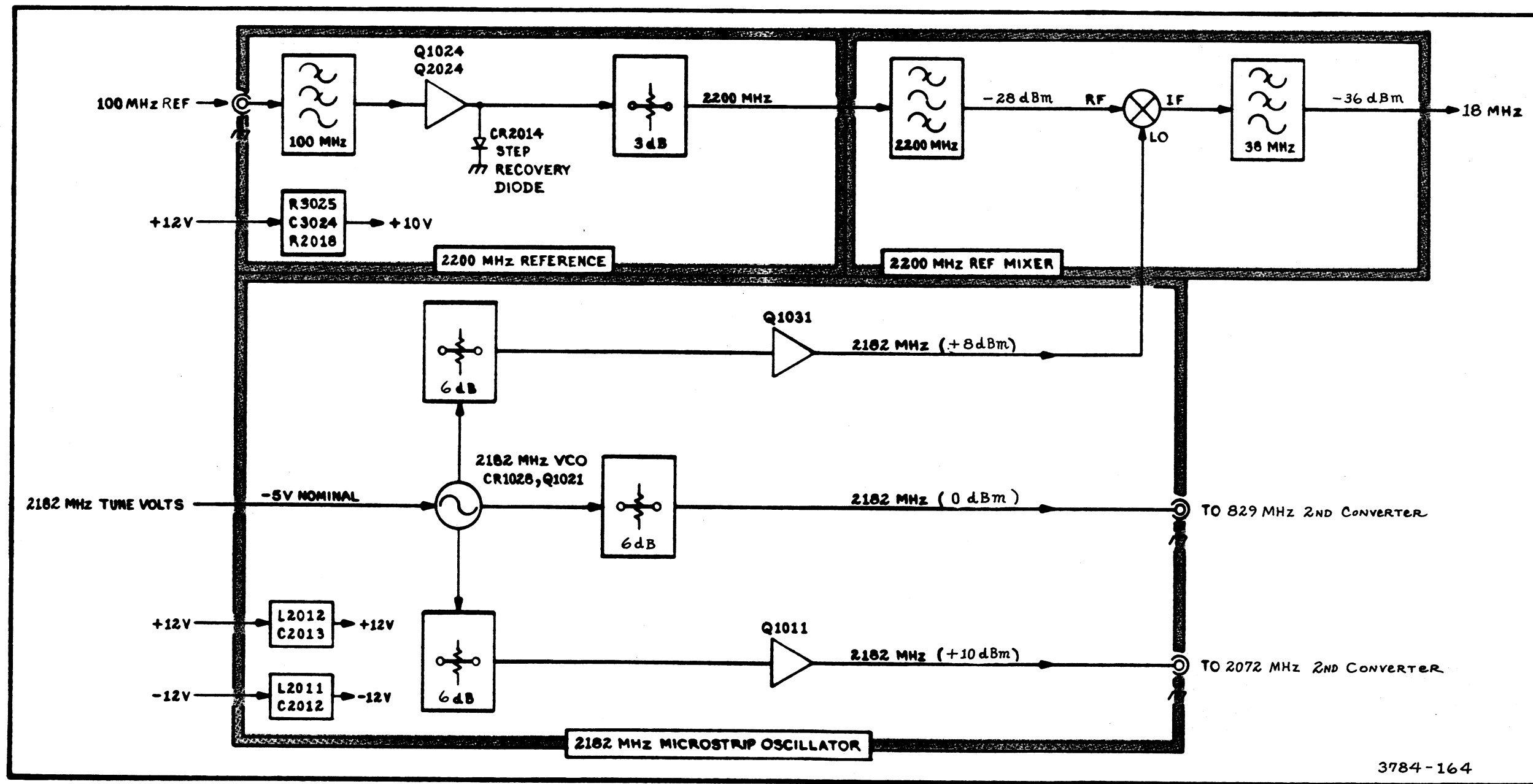
PHASELOCKED 2ND LO (PHASELOCK SECTION) 38 A

**COMPONENT NUMBER EXAMPLE**

Component Number	
A22 A2 R1234	Schematic Number
1234	Subassembly Number
1234	Detail Number
1234	Number (if used)

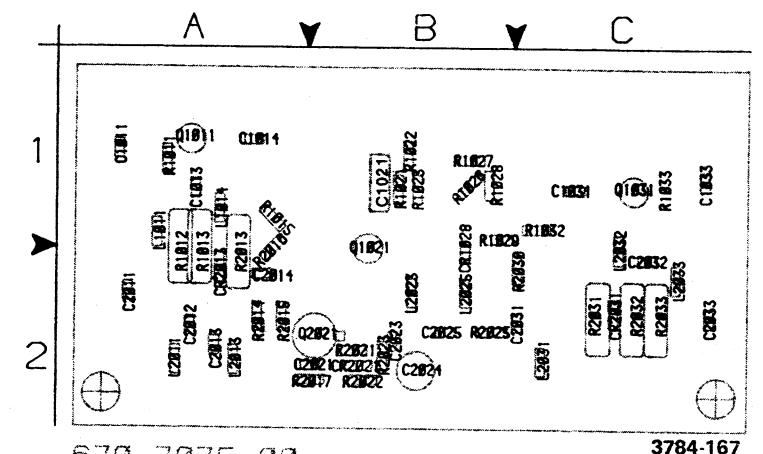
Check component numbers from the Assembly Number parts—see end of Reference Electrical Parts List.

**Static Sensitive Devices**  
See Maintenance Section



3784-164

REV FEB 1983



670-7075-00  
 Fig. 8-38B. A22A2A1—2182 MHz Microstrip Oscillator circuit board (SN B040000 & UP).  
 3784-167

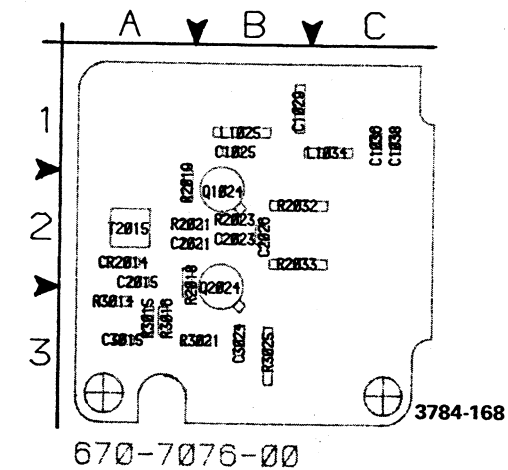


Fig. 8-38C. A22A2A2—2200 MHz Reference (SN B040000 & UP).  
 670-7076-00

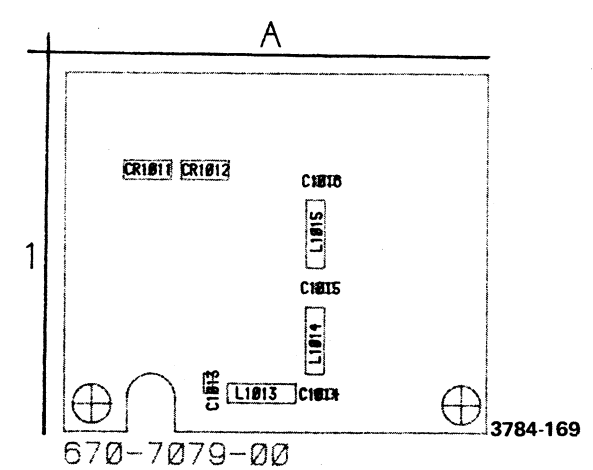
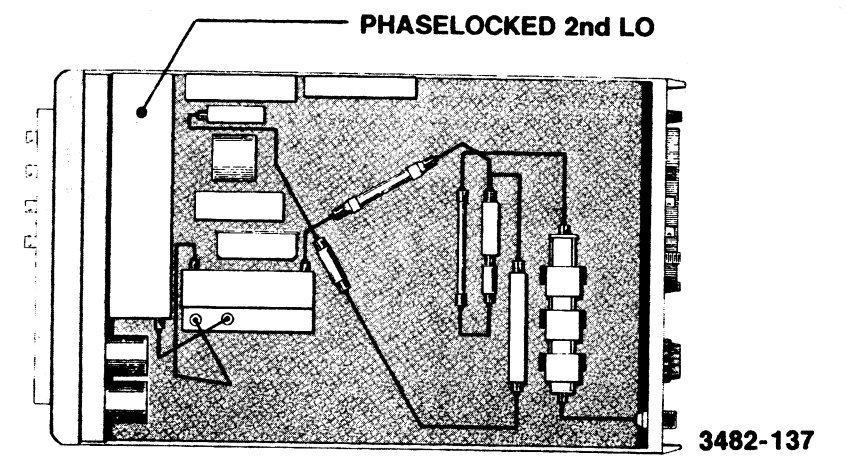


Fig. 8-38D. A22A2A3—2200 MHz Reference Mixer circuit board (SN B040000 & UP).  
 670-7079-00



3482-137

PHASELOCKED 2ND LO (LO SECTION) DIAGRAM 38 B

ASSEMBLY A22A2A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	E4	A1	C2201	A3	NA	Q1011	D4	A1	R2013	D4	A2
C1013	E4	A1	C2202	A3	NA	Q1021	C5	B1	R2014	B5	A2
C1014	D4	A1	C2203	A3	NA	Q1031	D3	C1	R2015	C5	A2
C1021	C5	B1				Q2021	B5	B2	R2016	C5	A2
C1022	C4	B2	CR1028	C3	B1	R1011	E3	A1	R2017	B4	A2
C1031	C3	C1	CR2013	D4	A2	R1012	D4	A1	R2021	B5	B2
C1033	E3	C1	CR2014	B4	B2	R1013	D4	A1	R2022	B4	B2
C2011	E4	A2	CR2031	D3	C2	R1015	C5	A1	R2023	B4	B2
C2012	A3	A2				R1021	C4	B1	R2025	B3	B2
C2013	A3	A2	L1011	E4	A1	R1022	C4	B1	R2030	C3	C2
C2014	C5	A2	L1014	D4	A1	R1023	C4	B1	R2031	D3	C2
C2021	B5	B2	L2011	A3	A2	R1026	C3	B1	R2032	D3	C2
C2023	B4	B2	L2013	A3	A2	R1027	C3	B1	R2033	D3	C2
C2024	B4	B2	L2023	B4	B2	R1028	C3	B1	TP1015	C5	A1
C2025	B3	B2	L2025	B3	B2	R1029	C3	B1			
C2031	A3	C2	L2031	A3	C2	R1032	C3	C1			
C2032	D3	C2	L2032	D3	C2	R1033	E3	C1			
C2033	E3	C2	L2033	E3	C2						

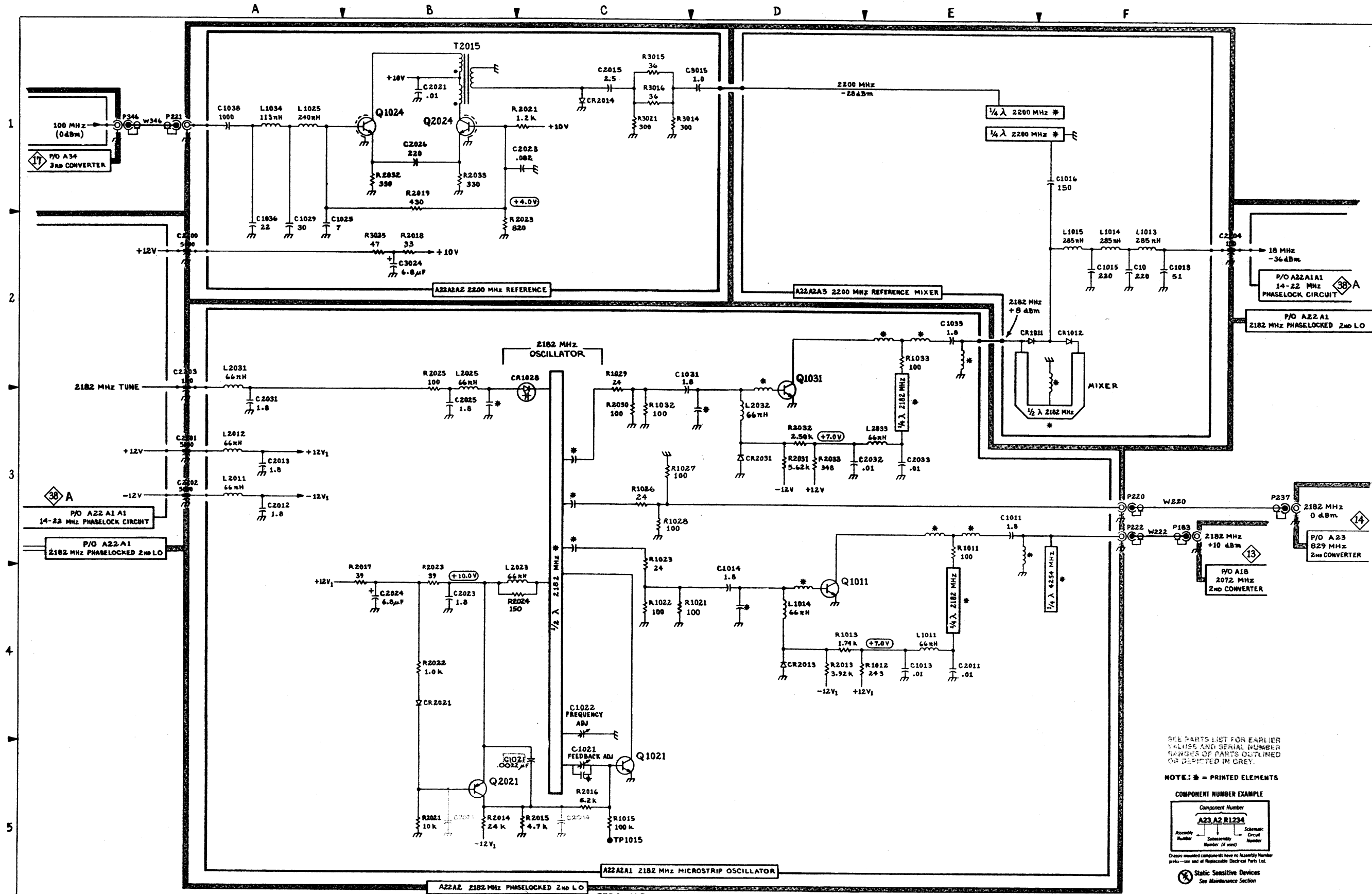
ASSEMBLY A22A2A2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1021*	B5	B2	C3024	B2	B3	R2018	B2	A2	R3016	C1	A3
C1025	A2	B1				R2019	B1	A2	R3021	C1	B3
C1029	A2	B1	CR2014	C1	A2	R2021	C1	A2	R3025	B2	B3
C1036	A2	C1				R2023	B2	B2			
C1038	A1	C1				R2032	B1	B2	T2015	B1	A2
C2014*	C5	A2	L1025	A1	B1	R2033	B1	B2			
C2015*	C1	A2	L1034	A1	C1	R2033	B2	B2			
C2021	B1	A2	Q1024	B1	B2	R3014	C1	A3			
C2023	C1	B2	Q2024	B1	B2	R3015	C1	A3			
C2026	B1	B2									
C3015	D1	A3									

ASSEMBLY A22A2A3

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1013	F2	A1	C1016	F1	A1	CR1011	E2	A1	L1013	F2	A1
C1014	F2	A1	C2204	F2	NA	CR1012	F2	A1	L1014	F2	A1
C1015	F2	A1									

\*See Parts List for serial number ranges.



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

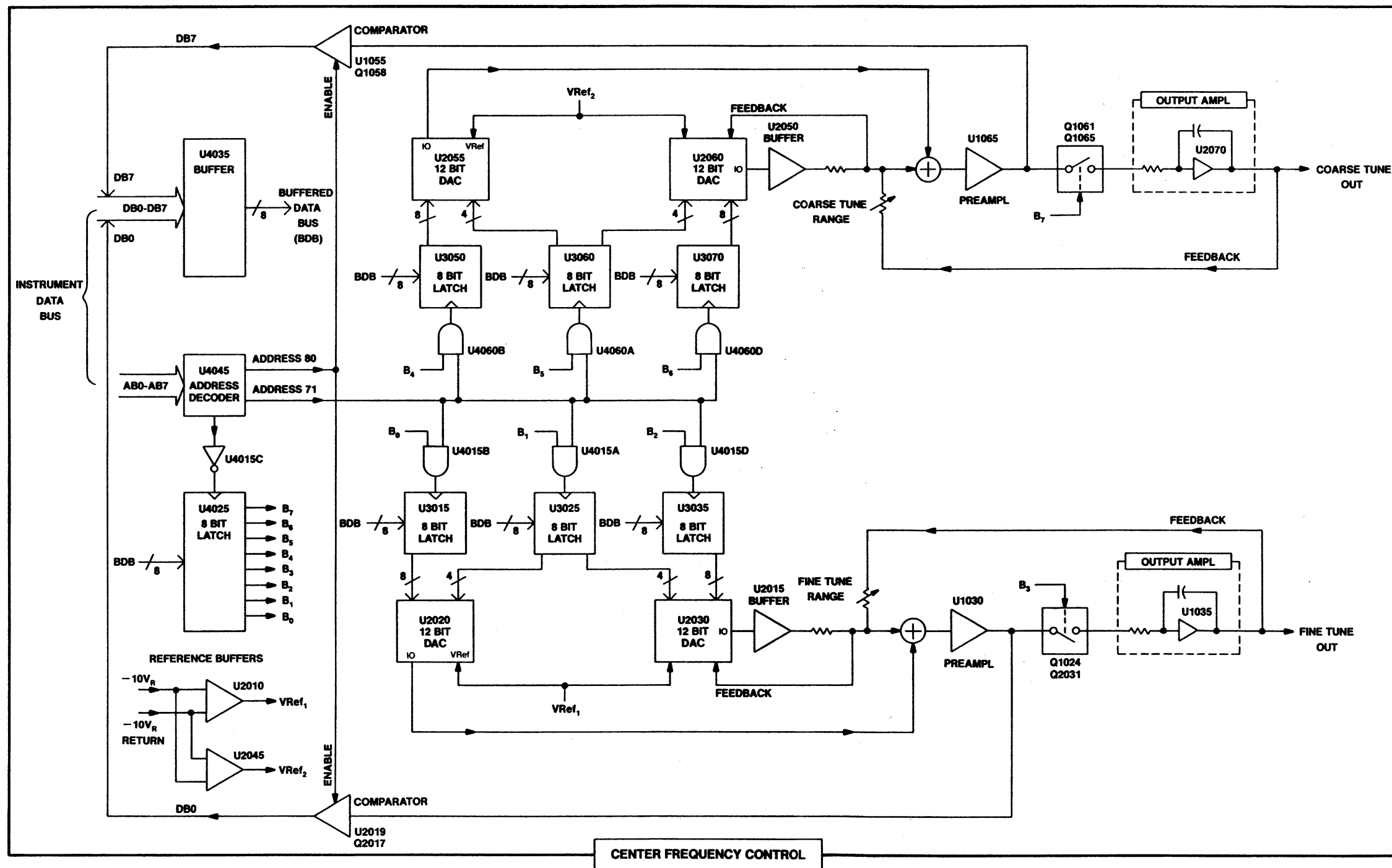
NOTE: \* = PRINTED ELEMENTS

COMPONENT NUMBER EXAMPLE

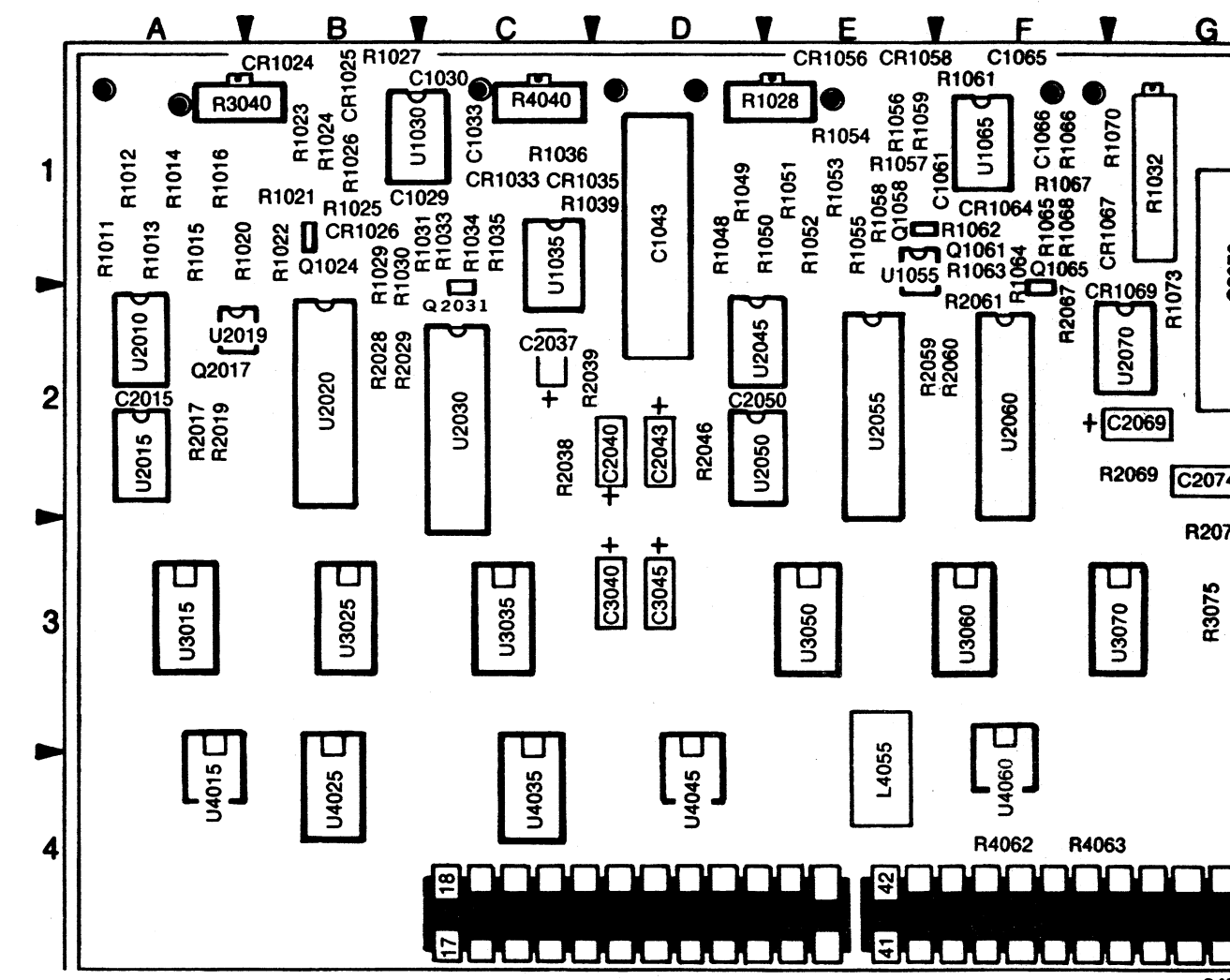
Component Number			
A23	A2	R1234	
Assembly Number	Subassembly Number (if used)	Schematic Number	Circuit Number

Drawn: [Name] Checked: [Name] Approved: [Name]

Static Sensitive Devices See Maintenance Section



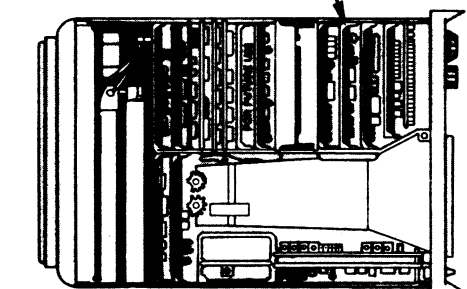
3482-256



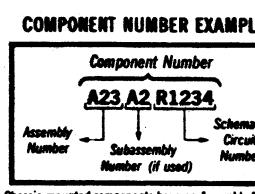
670-9094-00

Fig. 8-38E. A46—Center Frequency Control circuit board (SN B055508).

CENTER FREQUENCY CONTROL



3784-144



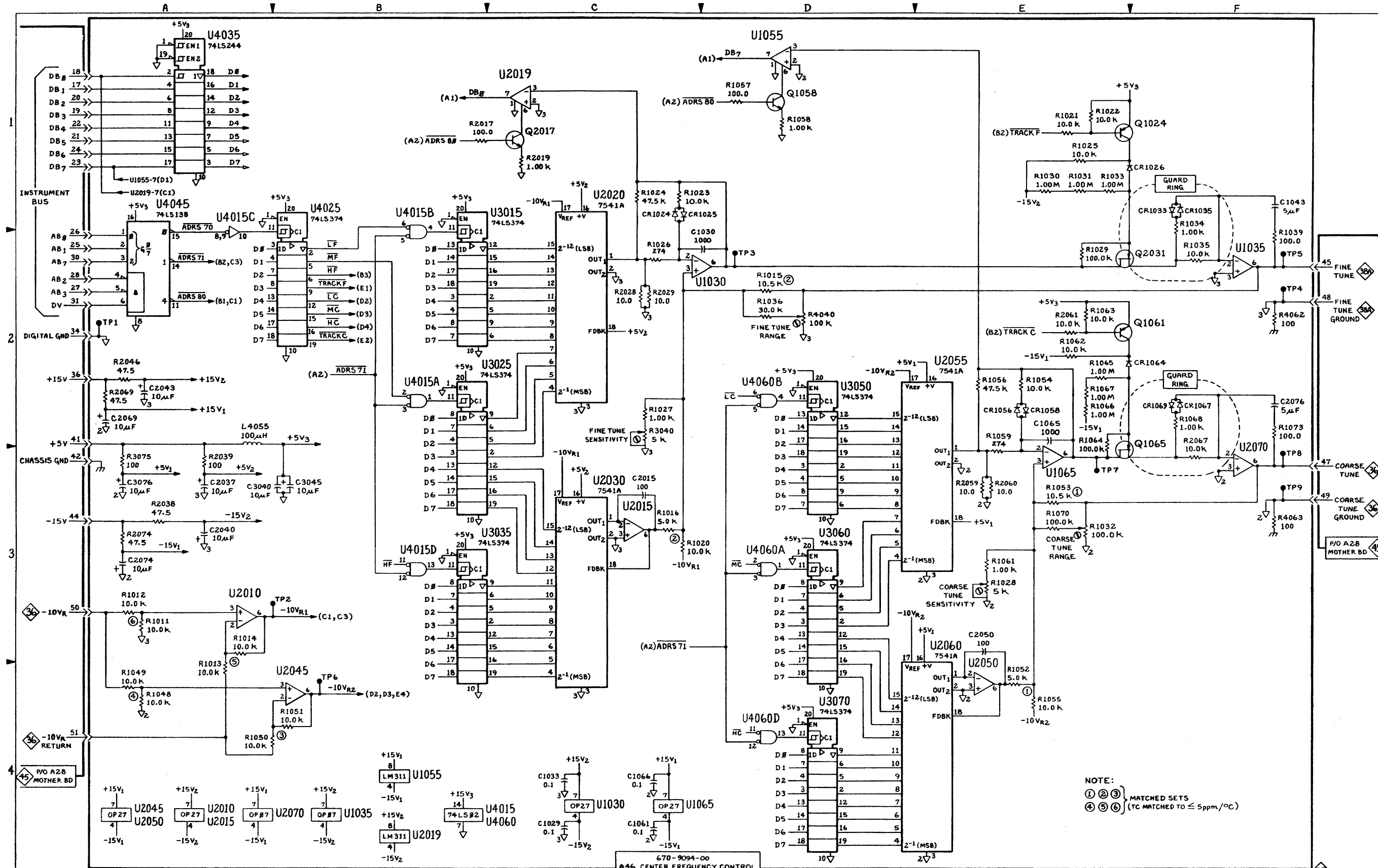


# CENTER FREQUENCY CONTROL SN B055508 & UP

## ASSEMBLY A46

CIRCUIT NUMBER	SCHEM LOC	BOARD LOC	CIRCUIT NUMBER	SCHEM LOC	BOARD LOC	CIRCUIT NUMBER	SCHEM LOC	BOARD LOC
C1029	C4	B1	R1027	C2	B1	R4040	D2	C1
C1030	C2	D1	R1028	E3	D1	R4062	F2	F4
C1033	C4	C1	R1029	E2	B1	R4063	F3	F4
C1043	F1	D1	R1030	E1	B1	U1030	C2	C1
C1061	C4	F1	R1031	E1	C1	U1035	F2	C1
C1065	E2	F1	R1032	E3	G1	U1055	D1	E1
C1066	C4	F1	R1033	E1	C1	U1065	E3	F1
C2015	C3	A2	R1034	F1	C1	U2010	A3	A2
C2037	A3	C2	R1035	F2	C1	U2015	C3	A2
C2040	A3	D2	R1036	D2	C1	U2019	C1	A2
C2043	A2	D2	R1039	F2	C1	U2020	C1	B2
C2050	E3	D2	R1048	A4	D1	U2030	C3	C2
C2069	A2	G2	R1049	A4	D1	U2045	B4	D2
C2074	A3	G2	R1050	A4	D2	U2050	E4	D2
C2076	F2	G1	R1051	B4	E1	U2055	E2	E2
C3040	A3	D3	R1052	E4	E1	U2060	F2	F2
C3045	B3	D3	R1053	E3	E1	U2070	F3	G2
C3076	A3	G3	R1054	E2	E1	U3015	B2	A3
CR1024	C1	B1	R1055	E4	E1	U3025	B2	B3
CR1025	C1	B1	R1056	E2	E1	U3035	B3	C3
CR1026	E1	B1	R1057	D1	E1	U3050	D2	E3
CR1033	F1	C1	R1058	D1	E1	U3060	D3	F3
CR1035	F1	C1	R1059	E3	E1	U3070	D4	G3
CR1056	E2	E1	R1061	E3	F1	U4015	B2	A4
CR1058	E2	E1	R1062	E2	E1	U4025	B1	B4
CR1064	E2	F1	R1063	E2	F1	U4035	A1	C4
CR1067	F2	G1	R1064	E3	F1	U4045	A1	D4
CR1069	F2	G2	R1065	E2	F1	U4060	D3	F4
L4055	A2	E4	R1066	E2	F1			
Q1024	E1	B1	R1067	E2	F1			
Q1058	D1	E1	R1068	F2	F1			
Q1061	E2	F1	R1070	E3	G1			
Q1065	E3	F1	R1073	F2	G2			
Q2017	C1	A2	R2017	B1	A2			
Q2031	F2	C2	R2019	C1	A2			
R1011	A3	A1	R2028	C2	B2			
R1012	A3	A1	R2029	B2	B2			
R1013	A4	A1	R2038	A3	C2			
R1014	A3	A1	R2039	A3	C2			
R1015	D2	A1	R2046	A2	D2			
R1016	C3	A1	R2059	E3	E2			
R1020	C3	B1	R2060	E3	F2			
R1021	E1	B1	R2061	E2	F2			
R1022	E1	B1	R2067	F2	F2			
R1023	C1	B1	R2069	A2	G2			
R1024	C1	B1	R2074	A3	G3			
R1025	E1	B1	R3040	C2	A1			
R1026	C2	B1	R3075	A3	G3			

\*See Parts List for serial number ranges.



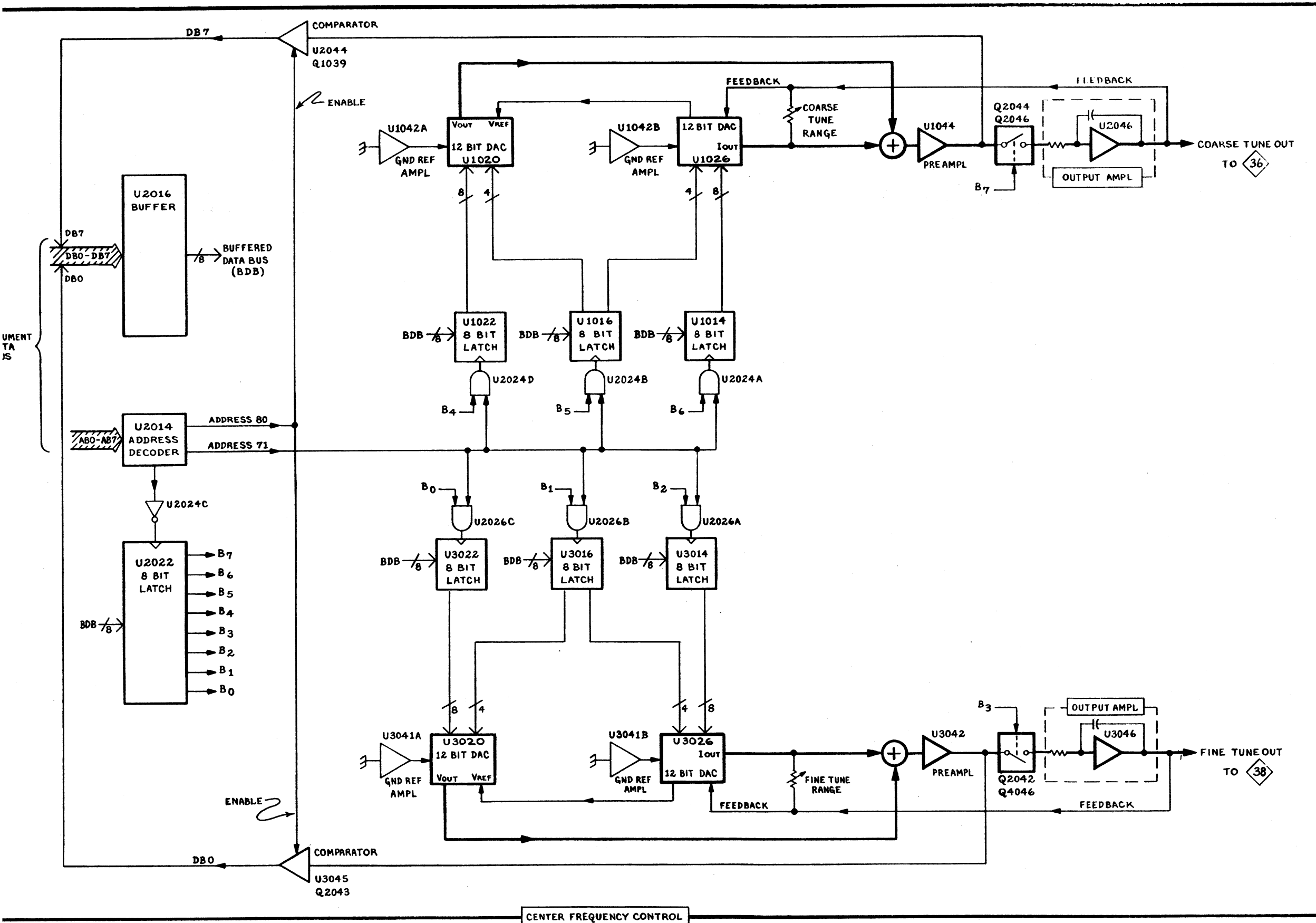
NOTE:  
 (1) (2) (3) MATCHED SETS  
 (4) (5) (6) (TC MATCHED TO  $\leq 5$  ppm/°C)

492/492P (SN B03000 & UP)

670-9094-00  
 A46 CENTER FREQUENCY CONTROL  
 (3482-258) 3784-201

ADD OCT 1985

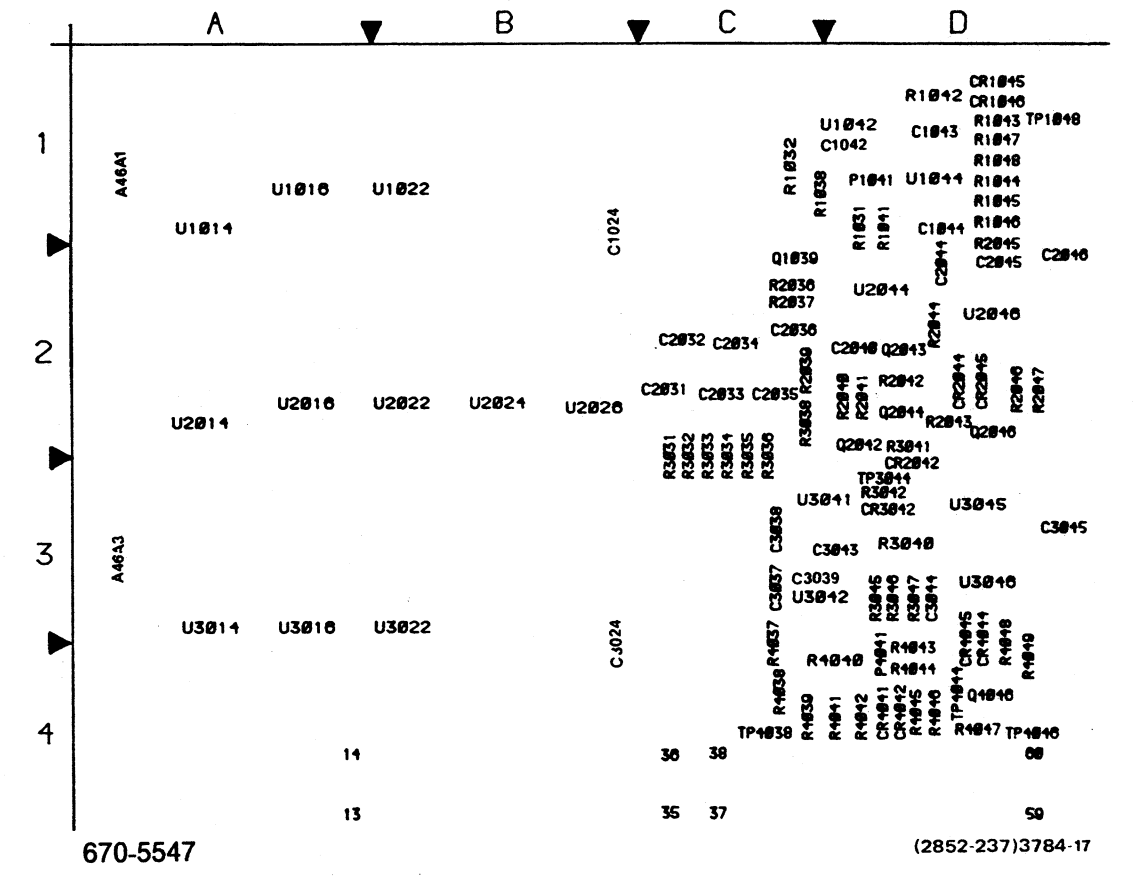
CENTER FREQUENCY CONTROL  
 (SN B055508 AND UP)



CENTER FREQUENCY CONTROL

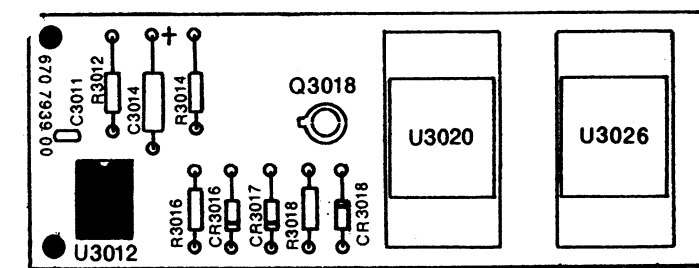
(2852-209) 3784-172

ADD OCT 1985

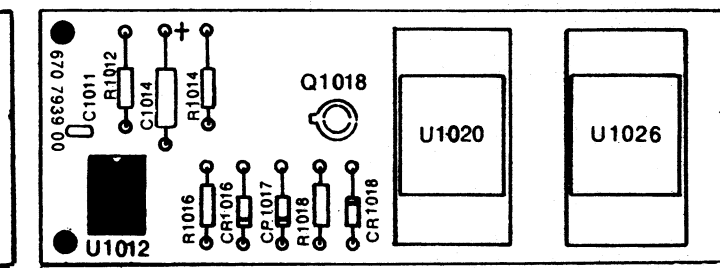


670-5547

Fig. 8-38F. A46—Center Frequency Control circuit board (SN B042480—B055507).

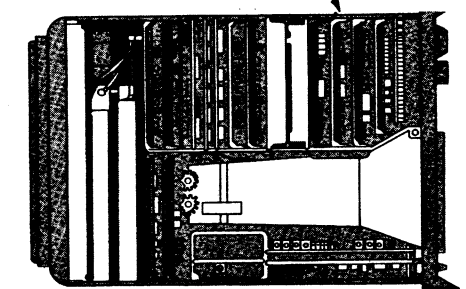


A46A3—DAC 1200 Interface (fine tune frequency)  
SN B042480—B055507.



A46A1—DAC 1200 Interface (coarse tune frequency)  
SN B042480—B055507.

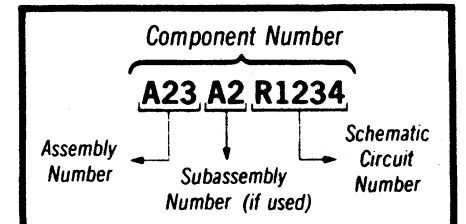
CENTER FREQUENCY CONTROL



3784-144

Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



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

**CENTER FREQUENCY CONTROL**  
SN B042480—B055507

**ASSEMBLY A46**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1024*	C1	C2	R1041	C1	D1	R4045	D4	D4
C1042†	D1	D1				R4046	D4	D4
C1043	D1	D1	R1043	C1	D1	R4047	E1	D4
C1044	A4	D1	R1044	C1	D1	R4048	E4	D4
C2031	A3	C2	R1045	C1	D1	R4049	E4	D4
C2032	A3	C2	R1046	C1	D1			
C2033	A3	C2	R1047	C1	D1	TP1029	B1	B1
C2034	A3	C2	R1048	C1	D1	TP3044	A2	D3
C2035	A3	C2	R2036	B2	C2	TP4038	C4	C4
C2036	A4	C2	R2037	A2	C2	TP4044	E4	D4
C2040	A4	D2	R2039	A4	C2	TP4046	E1	D4
C2044	A4	D2	R2040	D4	D2			
C2045	F1	D2	R2041	D1	D2	U1014	E3	A1
C2046	F1	D2	R2042	D1	D2	U1016	D2	A1
C3024*	C4	B4	R2043	E1	D2	U1022	C2	B1
C3037	B4	C3	R2044	A2	D2	U1042A	B2	D1
C3038	D4	C3	R2045	E1	D2	U1042B	E3	D1
C3039†	D4	D3	R2046	E1	D2	U1044	C1	D1
C3043	B4	D3	R2047	E1	D2	U2014	A2	A2
C3044	F5	D3	R3026	E3	D2	U2016	A1	A2
C3045	E4	D3	R3031	A3	C3	U2022	A3	B2
			R3032	A3	C3	U2024A	D2	B2
CR1045	C1	D1	R3033	A3	C3	U2024B	C2	B2
CR1046	C1	D1	R3034	A3	C3	U2024C	A3	B2
CR2042	D1	D3	R3035	A3	C3	U2024D	B2	B2
CR2044	E1	D2	R3036	A4	C3	U2026A	D3	B2
CR2045	E1	D2	R3038	D4	C3	U2026B	C3	B2
CR3042	D4	D3	R3040	C4	D3	U2026C	B3	B2
CR4041	C4	D4	R3041	D1	D3	U2044	A1	D2
CR4042	C4	D4	R3042	D1	D3	U2046	E1	D2
CR4044	D4	D4	R3043	E1	D3	U3014	E3	A3
CR4045	E4	D4	R3045	D4	D3	U3016	D3	A3
			R3045	D4	D3	U3022	C3	B4
P1041	E1	D1	R3046	E4	D3	U3041A	B3	D3
PA041	E4	D4	R3047	C4	D3	U3041B	D4	D3
			R4037	C4	C4	U3042	C4	D3
Q1039	A2	C2	R4038	E4	C4	U3045	A2	D3
Q2042	D4	D2	R4039	C4	C4	U3046	E4	D3
Q2043	A2	D2	R4040	E4	D4			
Q2044	D1	D2	R4041	C4	D4			
Q2046	E1	D2	R4042	E4	D4			
Q4046	E1	D4	R4043	C4	D4			
R1026	E3	D1	R4044	C4	D4			
R1028	D2	D1						
R1031	A2	D1						
R1032	E1	C1						
R1038	E1	C1						

**ASSEMBLY A46A1**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	D2	A1	R1012	D2	A1
C1014	D2	A1	R1014	D2	A1
			R1016	D2	A2
			R1018	C2	B2
CR1016	D2	A2	U1012	D2	A1
CR1017	D2	A2	U102C	C2	B1
CR1018	C2	B2	U1026	E2	C1
Q1018	C2	B2			

**ASSEMBLY A46A3**

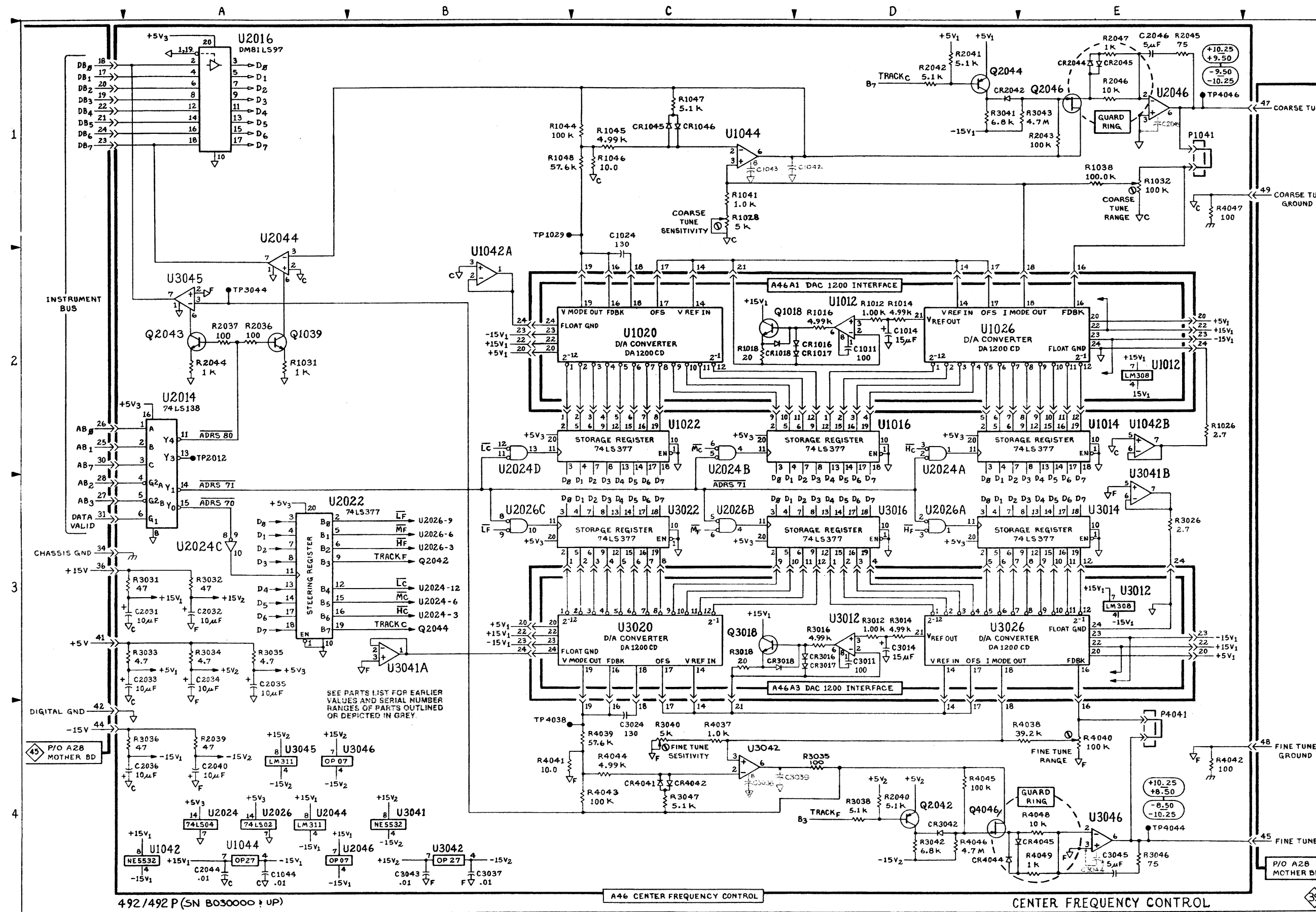
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C3011	D3	A3	R3012	D3	A3
C3014	D3	A3	R3014	D3	A3
			R3016	D3	A4
			R3018	D3	A4
CR3016	D3	A3			
CR3017	D3	A3	U3012	D3	A4
CR3018	D3	A3	U3020	C3	B4
Q3018	D3	B3	U3026	C3	B4

**DAC 1200 INTERFACE**

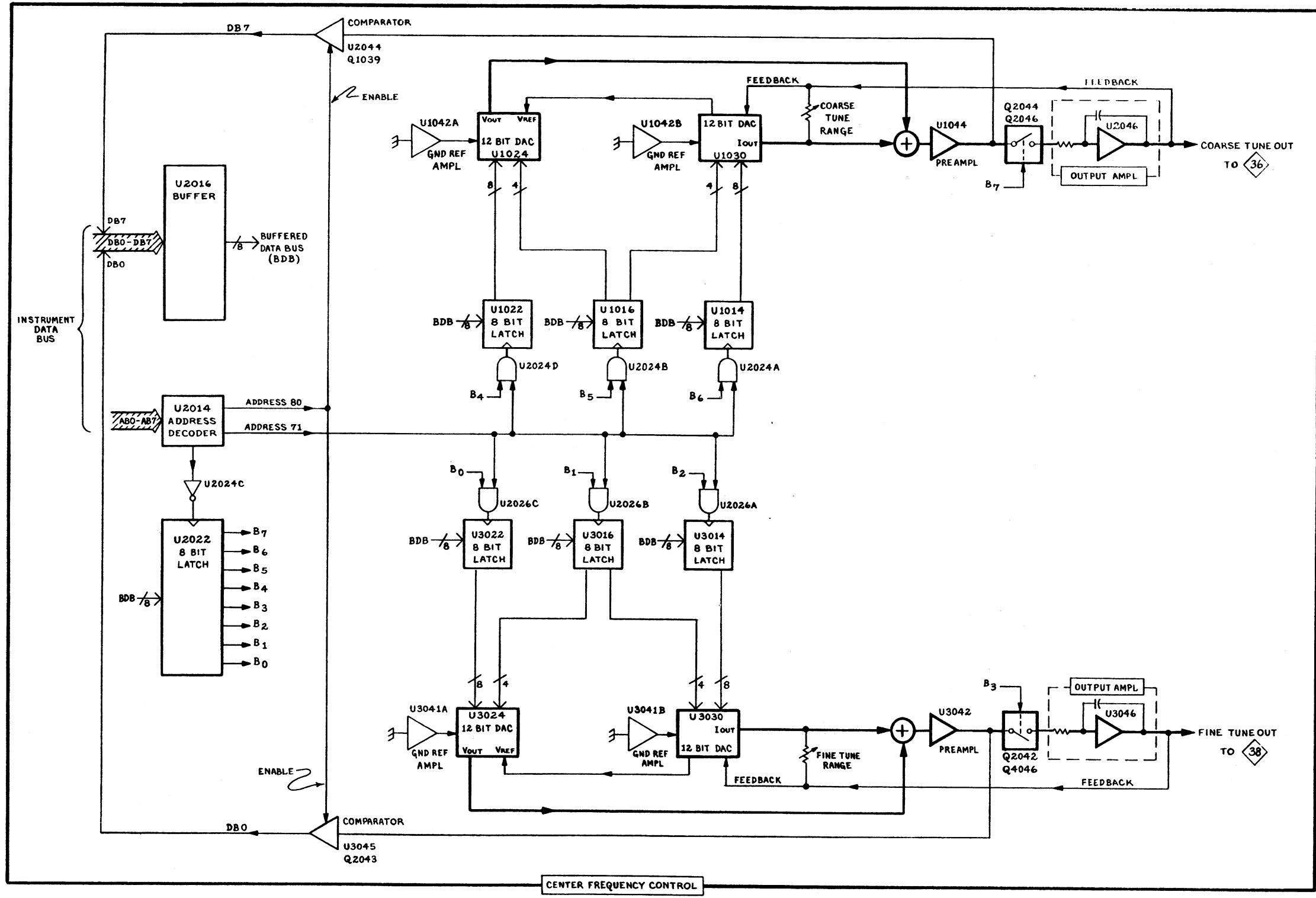
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R1012	D2	A1			
R1014	D2	A1			
R1016	D2	A2			
R1018	C2	B2			
U1012	D2	A1			
U102C	C2	B1			
U1026	E2	C1			

**DAC 1200 INTERFACE**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R3012	D3	A3			
R3014	D3	A3			
R3016	D3	A4			
R3018	D3	A4			
U3012	D3	A4			
U3020	C3	B4			
U3026	C3	B4			



\*See Parts List for serial number ranges.  
†Located on back of board.



(2852-209) 3784-120

REV OCT 1985

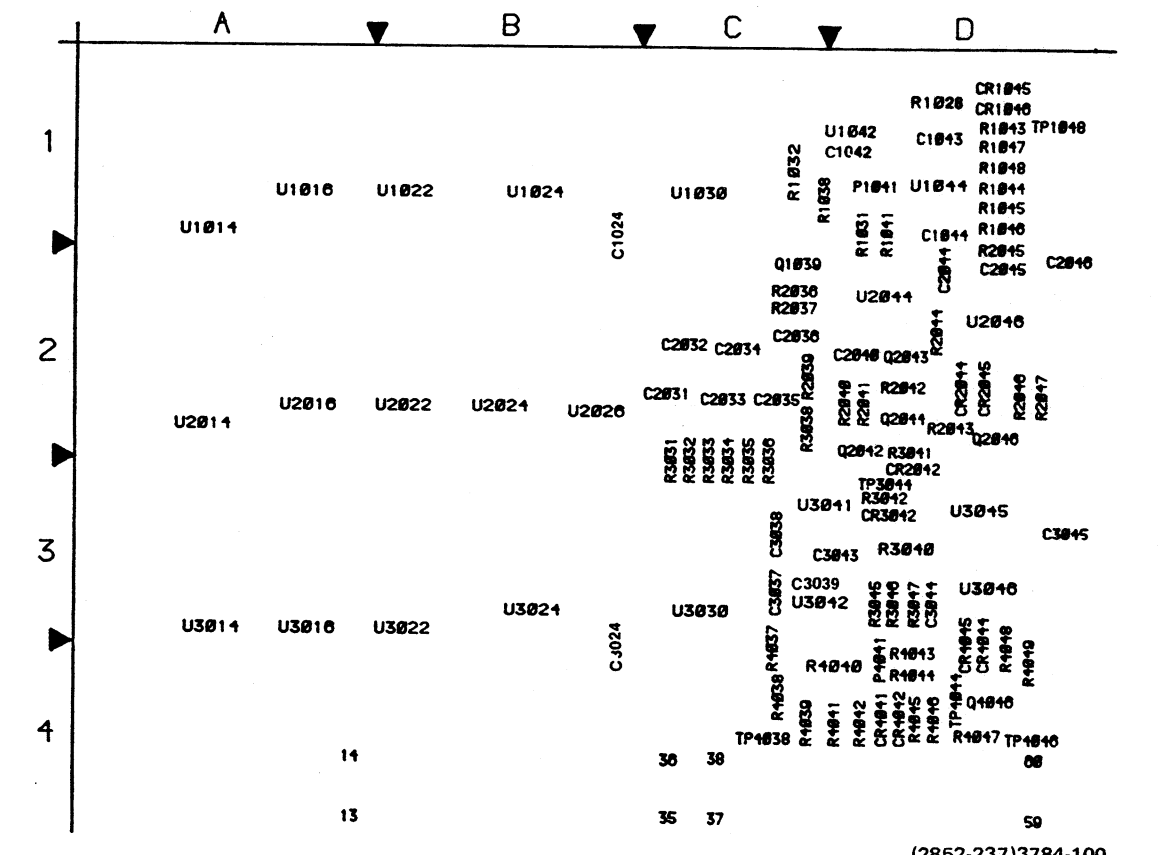
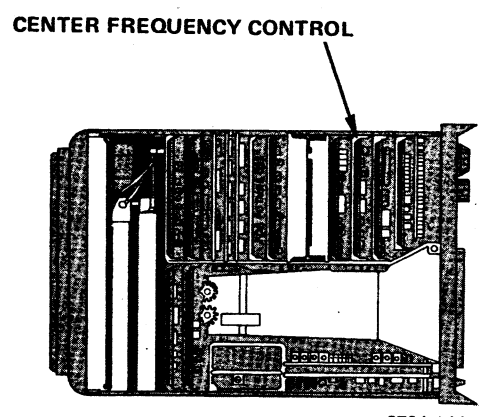
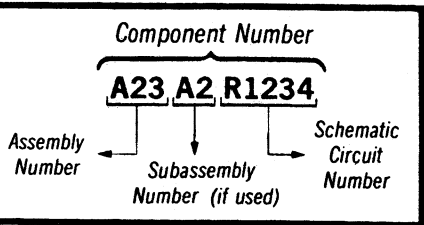


Fig. 8-38G. A46—Center Frequency Control circuit board (SN B030000—B042479).



3784-144

**Static Sensitive Devices**  
See Maintenance Section  
**COMPONENT NUMBER EXAMPLE**



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

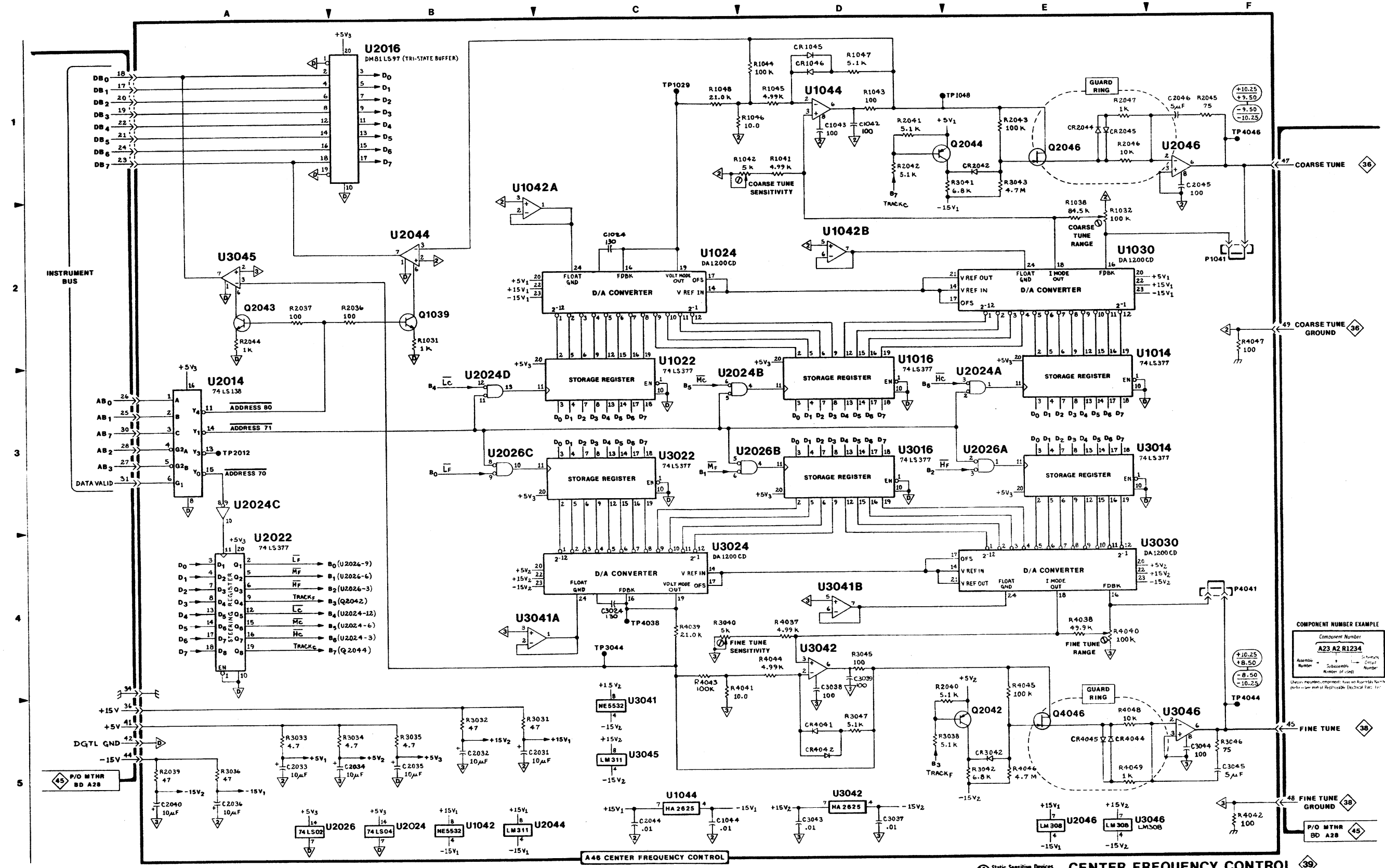
ASSEMBLY A46

Center Frequency Control

DIAGRAM 39

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1024*	C2	C2	R1041	D1	D1	R4045	E4	D4
C1042†	D1	D1	R1042	D1	D1	R4046	E5	D4
C1043	D1	D1	R1043	D1	D1	R4047	F2	D4
C1044	C5	D1	R1044	D1	D1	R4048	E5	D4
C2031	B5	C2	R1045	D1	D1	R4049	E5	D4
C2032	B5	C2	R1046	C1	D1			
C2033	A5	C2	R1047	D1	D1	TP1029	C1	B1
C2034	B5	C2	R1048	C1	D1	TP3044	C4	D3
C2035	B5	C2	R2036	B2	C2	TP4038	C4	C4
C2036	A5	C2	R2037	A2	C2	TP4044	F5	D4
C2040	A5	D2	R2039	A5	C2	TP4046	F1	D4
C2044	C5	D2	R2040	D5	D2			
C2045	F1	D2	R2041	D1	D2	U1014	E3	A1
C2046	F1	D2	R2042	D1	D2	U1016	D3	A1
C3024*	C4	B4	R2043	E1	D2	U1022	C3	B1
C3037	D5	C3	R2044	A2	D2	U1024	C2	B1
C3038	D4	C3	R2045	F1	D2	U1030	E2	C1
C3039†	D5	D3	R2046	E1	D2	U1042A	B2	D1
C3043	D5	D3	R2047	E1	D2	U1042B	D2	D1
C3044	F5	D3	R3031	B5	C3	U1044	D1	D1
C3045	F5	D3	R3032	B5	C3	U2014	A3	A2
CR1045	D1	D1	R3033	A5	C3	U2016	B1	A2
CR1046	D1	D1	R3034	B5	C3	U2022	A4	B2
CR2042	E1	D3	R3035	B5	C3	U2024A	E3	B2
CR2044	E1	D2	R3036	A5	C3	U2024B	C3	B2
CR2045	E1	D2	R3038	D5	C3	U2024C	A3	B2
CR3042	F5	D3	R3040	C4	D3	U2024D	B3	B2
CR4041	D5	D4	R3041	E1	D3	U2026A	E3	B2
CR4042	D5	D4	R3042	E5	D3	U2026B	D3	B2
CR4044	E5	D4	R3043	E1	D3	U2026C	B3	B2
CR4045	E5	D4	R3045	D4	D3	U2044	B2	D2
P1041	F2	D1	R3045	D5	D3	U2046	F1	D2
P4041	F4	D4	R3046	F3	D3	U3014	E3	A3
Q1039	B2	C2	R3047	D5	D3	U3016	D3	A3
Q2042	E5	D2	R4037	D4	C4	U3022	C3	B4
Q2043	A2	D2	R4038	E4	C4	U3024	C4	B3
Q2044	E1	D2	R4039	C4	C4	U3030	E4	C3
Q2046	E1	D2	R4040	E4	D4	U3041A	B4	D3
Q4046	E5	D4	R4041	C4	D4	U3041B	D4	D3
			R4042	F5	D4	U3042	A2	D3
			R4043	C5	D4	U3045	A4	D3
			R4044	D4	D4	U3046	F5	D3
R1031	B2	D1						
R1032	E2	C1						
R1038	E2	C1						

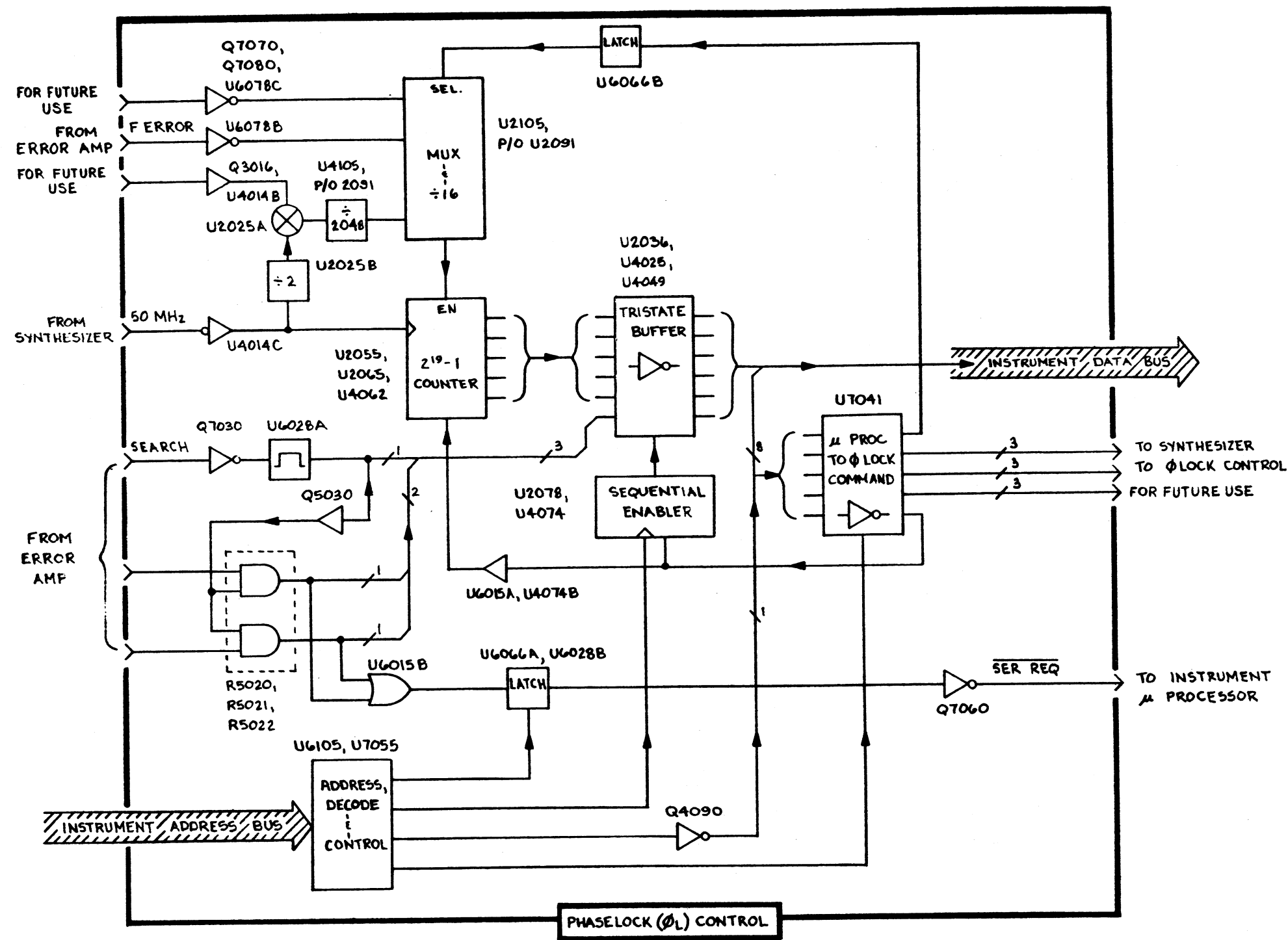
\*See Parts List for serial number ranges.  
†Located on back of board.



492/492P (SN B030000 & UP)

(2852-234)3784-39  
REV NOV 1983

Static Sensitive Devices  
See Maintenance Section  
**CENTER FREQUENCY CONTROL** 39  
(SN B030000 & SN B041479)



(2852-212)3784-121

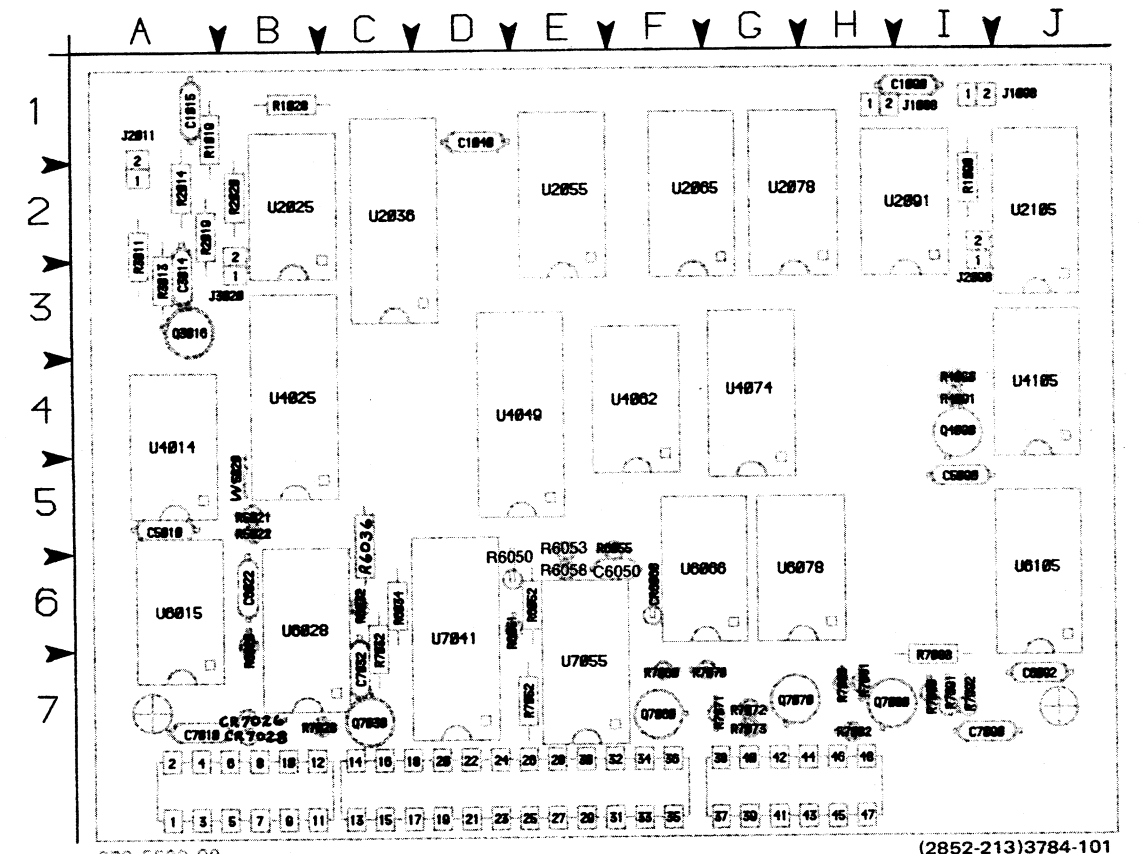
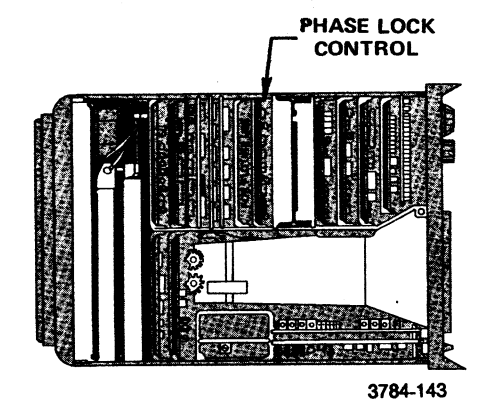


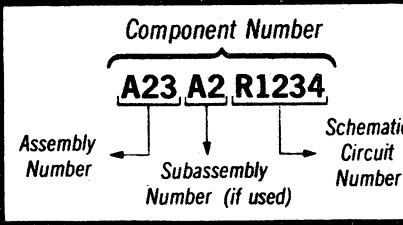
Fig. 8-39. A51—Phase Lock Control circuit board.



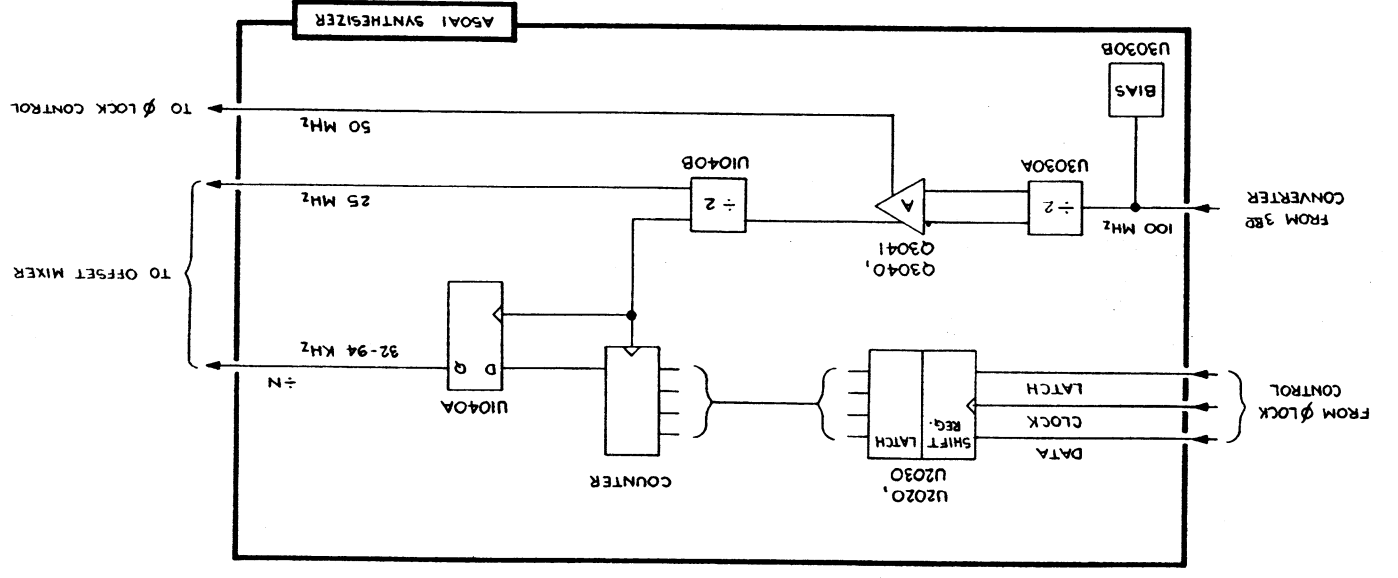
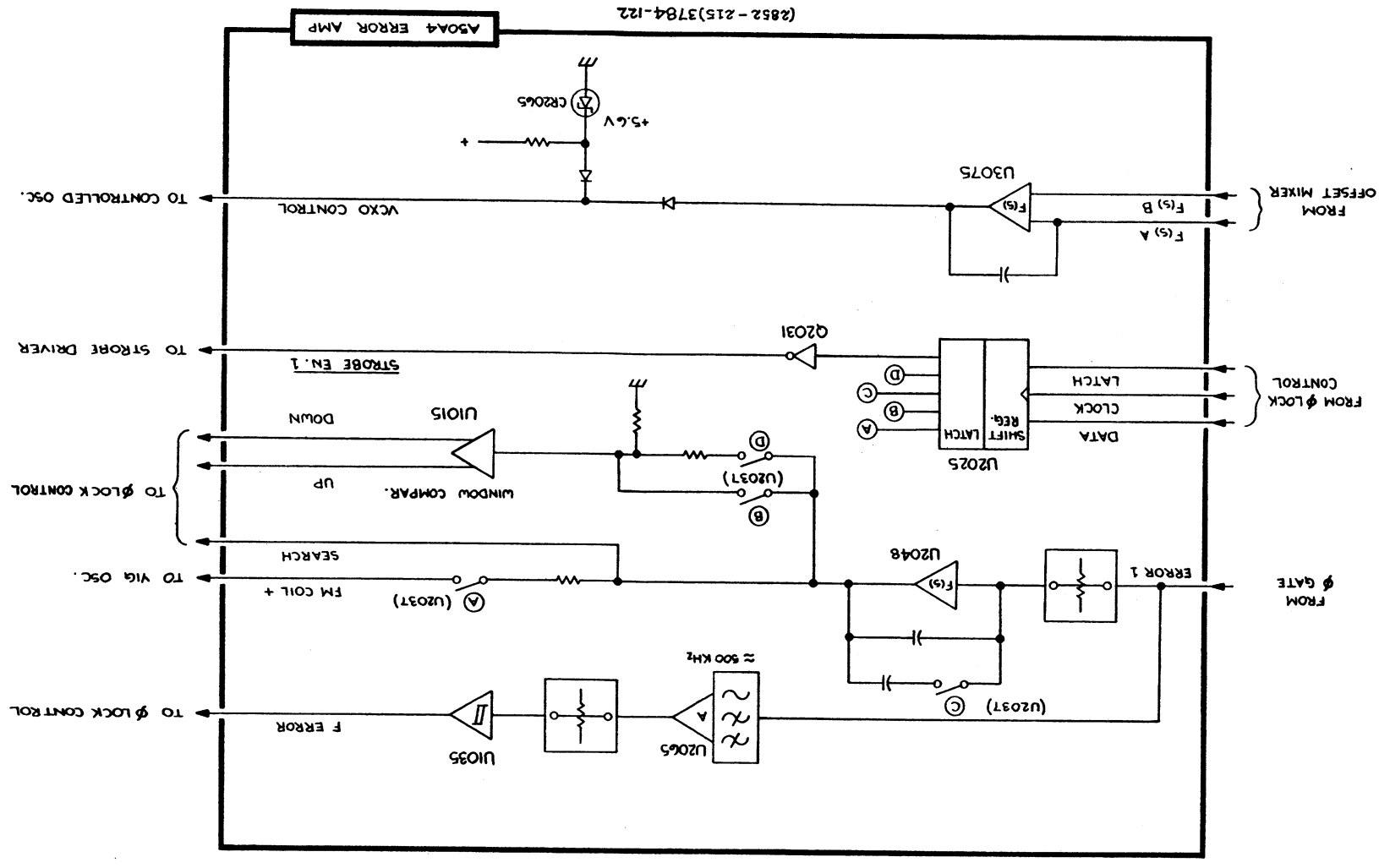
3784-143

Static Sensitive Devices  
See Maintenance Section

COMPONENT NUMBER EXAMPLE



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



REV JUL 1981

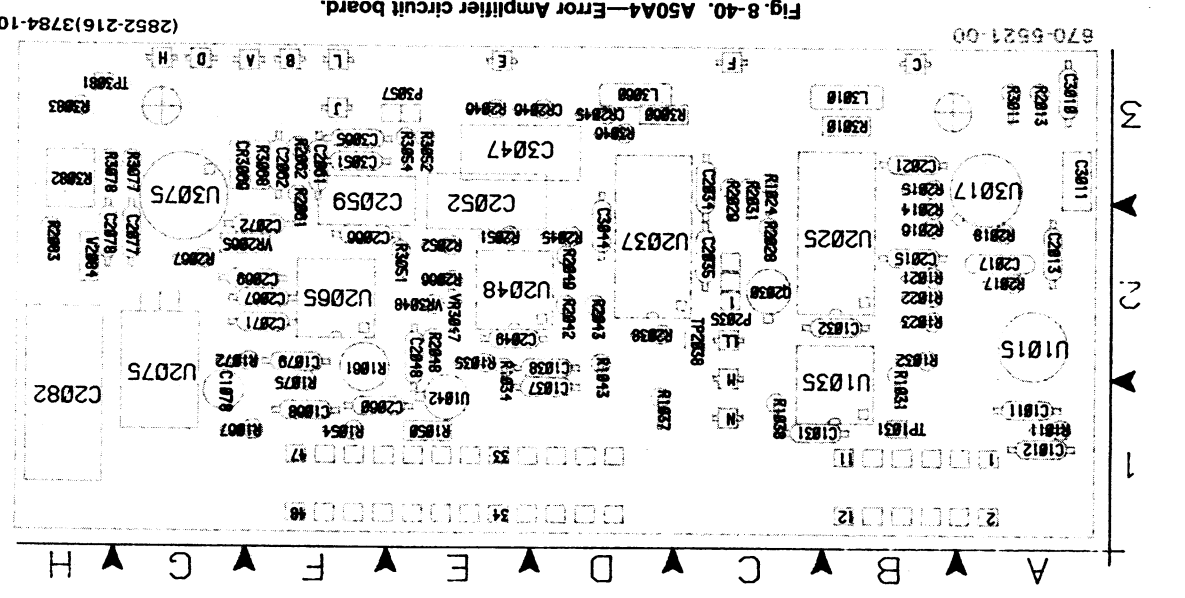


Fig. 8-40. A50A4—Error Amplifier circuit board.

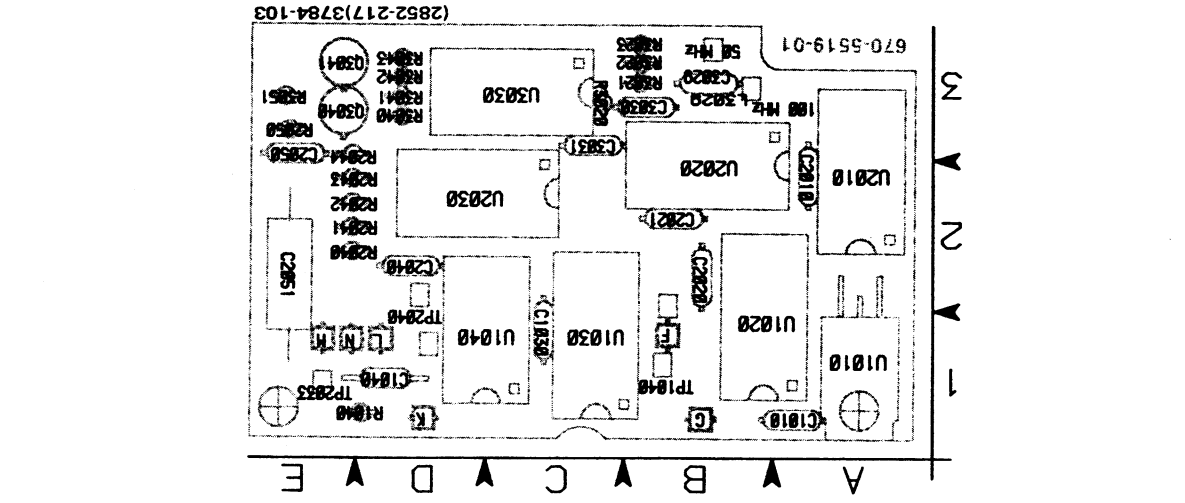
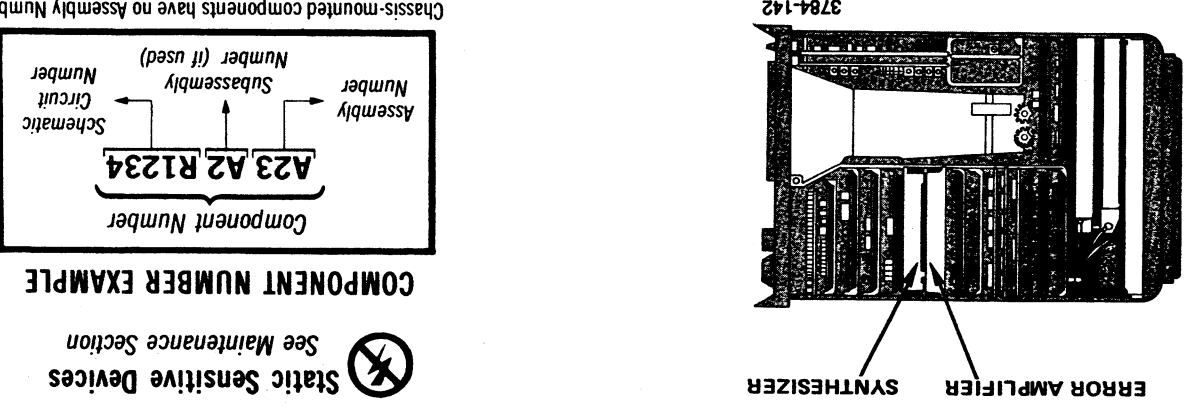


Fig. 8-41. A50A1—Synthesizer circuit board.



COMPONENT NUMBER EXAMPLE

See Maintenance Section  
Static Sensitive Devices

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

Phase Lock Control (Option 03) DIAGRAM 40

ASSEMBLY A51

CIRCUIT NUMBER	BOARD LOCATION	CIRCUIT NUMBER	BOARD LOCATION	CIRCUIT NUMBER	BOARD LOCATION	CIRCUIT NUMBER	BOARD LOCATION
C1015	B1	R3011	A1	U2065	A2	U2065	D1
C1040	A5	R3013	A3	U2078	C4	U2078	C4
C1090	A5	R4090	B5	U2091	B3	U2091	B3
C3014	A1	R4091	A3	U2105	B5	U2105	B5
C5010	A5	R5021	A4	U4014	A4	U4014	A4
C5090	A5	R5022	A4	U4014A	B4	U4014A	B4
C6022	C5	R6020	B5	U4014B	A4	U4014B	A4
C6050	E2	R6032	A3	U4014C	C6	U4014C	C6
C6092	A2	R6034	A3	U4014D	C6	U4014D	C6
C7010	A7	R6036	D3	U4025	C5	U4025	C5
C7030*	A2	R6037	D7	U4025A	A3	U4025A	A3
C7032	A3	R6051	D6	U4062	D6	U4062	D6
C7090	A2	R6052	E3	U4074A	D4	U4074A	D4
C86060	C5	R6053	E5	U4074B	C1	U4074B	C1
C86060	F6	R6053	E5	U4074C	C1	U4074C	C1
CR2027	A3	R6054	E5	U4074D	D4	U4074D	D4
CR7030*	A2	R6055	E2	U4074E	D4	U4074E	D4
CR7030*	A3	R6056	E5	U4074F	D4	U4074F	D4
CR7030*	A3	R6057	B7	U4074G	D4	U4074G	D4
CR7030*	A3	R6058	E3	U4074H	D4	U4074H	D4
CR7030*	A3	R6059	E3	U4074I	D4	U4074I	D4
CR7030*	A3	R6060	E3	U4074J	D4	U4074J	D4
CR7030*	A3	R6061	E3	U4074K	D4	U4074K	D4
CR7030*	A3	R6062	E3	U4074L	D4	U4074L	D4
CR7030*	A3	R6063	E3	U4074M	D4	U4074M	D4
CR7030*	A3	R6064	E3	U4074N	D4	U4074N	D4
CR7030*	A3	R6065	E3	U4074O	D4	U4074O	D4
CR7030*	A3	R6066	E3	U4074P	D4	U4074P	D4
CR7030*	A3	R6067	E3	U4074Q	D4	U4074Q	D4
CR7030*	A3	R6068	E3	U4074R	D4	U4074R	D4
CR7030*	A3	R6069	E3	U4074S	D4	U4074S	D4
CR7030*	A3	R6070	E3	U4074T	D4	U4074T	D4
CR7030*	A3	R6071	E3	U4074U	D4	U4074U	D4
CR7030*	A3	R6072	E3	U4074V	D4	U4074V	D4
CR7030*	A3	R6073	E3	U4074W	D4	U4074W	D4
CR7030*	A3	R6074	E3	U4074X	D4	U4074X	D4
CR7030*	A3	R6075	E3	U4074Y	D4	U4074Y	D4
CR7030*	A3	R6076	E3	U4074Z	D4	U4074Z	D4
CR7030*	A3	R6077	E3	U4074AA	D4	U4074AA	D4
CR7030*	A3	R6078	E3	U4074AB	D4	U4074AB	D4
CR7030*	A3	R6079	E3	U4074AC	D4	U4074AC	D4
CR7030*	A3	R6080	E3	U4074AD	D4	U4074AD	D4
CR7030*	A3	R6081	E3	U4074AE	D4	U4074AE	D4
CR7030*	A3	R6082	E3	U4074AF	D4	U4074AF	D4
CR7030*	A3	R6083	E3	U4074AG	D4	U4074AG	D4
CR7030*	A3	R6084	E3	U4074AH	D4	U4074AH	D4
CR7030*	A3	R6085	E3	U4074AI	D4	U4074AI	D4
CR7030*	A3	R6086	E3	U4074AJ	D4	U4074AJ	D4
CR7030*	A3	R6087	E3	U4074AK	D4	U4074AK	D4
CR7030*	A3	R6088	E3	U4074AL	D4	U4074AL	D4
CR7030*	A3	R6089	E3	U4074AM	D4	U4074AM	D4
CR7030*	A3	R6090	E3	U4074AN	D4	U4074AN	D4
CR7030*	A3	R6091	E3	U4074AO	D4	U4074AO	D4
CR7030*	A3	R6092	E3	U4074AP	D4	U4074AP	D4
CR7030*	A3	R6093	E3	U4074AQ	D4	U4074AQ	D4
CR7030*	A3	R6094	E3	U4074AR	D4	U4074AR	D4
CR7030*	A3	R6095	E3	U4074AS	D4	U4074AS	D4
CR7030*	A3	R6096	E3	U4074AT	D4	U4074AT	D4
CR7030*	A3	R6097	E3	U4074AU	D4	U4074AU	D4
CR7030*	A3	R6098	E3	U4074AV	D4	U4074AV	D4
CR7030*	A3	R6099	E3	U4074AW	D4	U4074AW	D4
CR7030*	A3	R6100	E3	U4074AX	D4	U4074AX	D4
CR7030*	A3	R6101	E3	U4074AY	D4	U4074AY	D4
CR7030*	A3	R6102	E3	U4074AZ	D4	U4074AZ	D4
CR7030*	A3	R6103	E3	U4074BA	D4	U4074BA	D4
CR7030*	A3	R6104	E3	U4074BB	D4	U4074BB	D4
CR7030*	A3	R6105	E3	U4074BC	D4	U4074BC	D4
CR7030*	A3	R6106	E3	U4074BD	D4	U4074BD	D4
CR7030*	A3	R6107	E3	U4074BE	D4	U4074BE	D4
CR7030*	A3	R6108	E3	U4074BF	D4	U4074BF	D4
CR7030*	A3	R6109	E3	U4074BG	D4	U4074BG	D4
CR7030*	A3	R6110	E3	U4074BH	D4	U4074BH	D4
CR7030*	A3	R6111	E3	U4074BI	D4	U4074BI	D4
CR7030*	A3	R6112	E3	U4074BJ	D4	U4074BJ	D4
CR7030*	A3	R6113	E3	U4074BK	D4	U4074BK	D4
CR7030*	A3	R6114	E3	U4074BL	D4	U4074BL	D4
CR7030*	A3	R6115	E3	U4074BM	D4	U4074BM	D4
CR7030*	A3	R6116	E3	U4074BN	D4	U4074BN	D4
CR7030*	A3	R6117	E3	U4074BO	D4	U4074BO	D4
CR7030*	A3	R6118	E3	U4074BP	D4	U4074BP	D4
CR7030*	A3	R6119	E3	U4074BQ	D4	U4074BQ	D4
CR7030*	A3	R6120	E3	U4074BR	D4	U4074BR	D4
CR7030*	A3	R6121	E3	U4074BS	D4	U4074BS	D4
CR7030*	A3	R6122	E3	U4074BT	D4	U4074BT	D4
CR7030*	A3	R6123	E3	U4074BU	D4	U4074BU	D4
CR7030*	A3	R6124	E3	U4074BV	D4	U4074BV	D4
CR7030*	A3	R6125	E3	U4074BW	D4	U4074BW	D4
CR7030*	A3	R6126	E3	U4074BX	D4	U4074BX	D4
CR7030*	A3	R6127	E3	U4074BY	D4	U4074BY	D4
CR7030*	A3	R6128	E3	U4074BZ	D4	U4074BZ	D4
CR7030*	A3	R6129	E3	U4074CA	D4	U4074CA	D4
CR7030*	A3	R6130	E3	U4074CB	D4	U4074CB	D4
CR7030*	A3	R6131	E3	U4074CC	D4	U4074CC	D4
CR7030*	A3	R6132	E3	U4074CD	D4	U4074CD	D4
CR7030*	A3	R6133	E3	U4074CE	D4	U4074CE	D4
CR7030*	A3	R6134	E3	U4074CF	D4	U4074CF	D4
CR7030*	A3	R6135	E3	U4074CG	D4	U4074CG	D4
CR7030*	A3	R6136	E3	U4074CH	D4	U4074CH	D4
CR7030*	A3	R6137	E3	U4074CI	D4	U4074CI	D4
CR7030*	A3	R6138	E3	U4074CJ	D4	U4074CJ	D4
CR7030*	A3	R6139	E3	U4074CK	D4	U4074CK	D4
CR7030*	A3	R6140	E3	U4074CL	D4	U4074CL	D4
CR7030*	A3	R6141	E3	U4074CM	D4	U4074CM	D4
CR7030*	A3	R6142	E3	U4074CN	D4	U4074CN	D4
CR7030*	A3	R6143	E3	U4074CO	D4	U4074CO	D4
CR7030*	A3	R6144	E3	U4074CP	D4	U4074CP	D4
CR7030*	A3	R6145	E3	U4074CQ	D4	U4074CQ	D4
CR7030*	A3	R6146	E3	U4074CR	D4	U4074CR	D4
CR7030*	A3	R6147	E3	U4074CS	D4	U4074CS	D4
CR7030*	A3	R6148	E3	U4074CT	D4	U4074CT	D4
CR7030*	A3	R6149	E3	U4074CU	D4	U4074CU	D4
CR7030*	A3	R6150	E3	U4074CV	D4	U4074CV	D4
CR7030*	A3	R6151	E3	U4074CW	D4	U4074CW	D4
CR7030*	A3	R6152	E3	U4074CX	D4	U4074CX	D4
CR7030*	A3	R6153	E3	U4074CY	D4	U4074CY	D4
CR7030*	A3	R6154	E3	U4074CZ	D4	U4074CZ	D4
CR7030*	A3	R6155	E3	U4074DA	D4	U4074DA	D4
CR7030*	A3	R6156	E3	U4074DB	D4	U4074DB	D4
CR7030*	A3	R6157	E3	U4074DC	D4	U4074DC	D4
CR7030*	A3	R6158	E3	U4074DD	D4	U4074DD	D4
CR7030*	A3	R6159	E3	U4074DE	D4	U4074DE	D4
CR7030*	A3	R6160	E3	U4074DF	D4	U4074DF	D4
CR7030*	A3	R6161	E3	U4074DG	D4	U4074DG	D4
CR7030*	A3	R6162	E3	U4074DH	D4	U4074DH	D4
CR7030*	A3	R6163	E3	U4074DI	D4	U4074DI	D4
CR7030*	A3	R6164	E3	U4074DJ	D4	U4074DJ	D4
CR7030*	A3	R6165	E3	U4074DK	D4	U4074DK	D4
CR7030*	A3	R6166	E3	U4074DL	D4	U4074DL	D4
CR7030*	A3	R6167	E3	U4074DM	D4	U4074DM	D4
CR7030*	A3	R6168	E3	U4074DN	D4	U4074DN	D4
CR7030*	A3	R6169	E3	U4074DO	D4	U4074DO	D4
CR7030*	A3	R6170	E3	U4074DP	D4	U4074DP	D4
CR7030*	A3	R6171	E3	U4074DQ	D4	U4074DQ	D4
CR7030*	A3	R6172	E3	U4074DR	D4	U4074DR	D4
CR7030*	A3	R6173	E3	U4074DS	D4	U4074DS	D4
CR7030*	A3	R6174	E3	U4074DT	D4	U4074DT	D4
CR7030*	A3	R6175	E3	U4074DU	D4	U4074DU	D4
CR7030*	A3	R6176	E3	U4074DV	D4	U4074DV	D4
CR7030*	A3	R6177	E3	U4074DW	D4	U4074DW	D4
CR7030*	A3	R6178	E3	U4074DX	D4	U4074DX	D4
CR7030*	A3	R6179	E3	U4074DY	D4	U4074DY	D4
CR7030*	A3	R6180	E3	U4074DZ	D4	U4074DZ	D4
CR7030*	A3	R6181	E3	U4074EA	D4	U4074EA	D4
CR7030*	A3	R6182	E3	U4074EB	D4	U4074EB	D4
CR7030*	A3	R6183	E3	U4074EC	D4	U4074EC	D4
CR7030*	A3	R6184	E3	U4074ED	D4	U4074ED	D4
CR7030*	A3	R6185	E3	U4074EE	D4	U4074EE	D4
CR7030*	A3	R6186	E3	U4074EF	D4	U4074EF	D4
CR7030*	A3	R6187	E3	U4074EG	D4	U4074EG	D4
CR7030*	A3	R6188	E3	U4074EH	D4	U4074EH	D4
CR7030*	A3	R6189	E3	U4074EI	D4	U4074EI	D4
CR7030*	A3	R6190	E3	U4074EJ	D4	U4074EJ	D4
CR7030*	A3	R6191	E3	U4074EK	D4	U4074EK	D4
CR7030*	A3	R6192	E3	U4074EL	D4	U4074EL	D4
CR7030*	A3	R6193	E3	U4074EM	D4	U4074EM	D4
CR7030*	A3	R6194	E3	U4074EN	D4	U4074EN	D4
CR7030*	A3	R6195	E3	U4074EO	D4	U4074EO	D4
CR7030*	A3	R6196	E3	U4074EP	D4	U4074EP	D4
CR7030*	A3	R6197	E3	U4074EQ	D4	U4074EQ	D4
CR7030*	A3	R6198	E3	U4074ER	D4	U4074ER	D4
CR7030*	A3	R6199	E3	U4074ES	D4	U4074ES	D4
CR7030*	A3	R6200	E3	U4074ET	D4	U4074ET	D4
CR7030*	A3	R6201	E3	U4074EU	D4	U4074EU	D4
CR7030*	A3	R6202	E3	U4074EV	D4	U4074EV	D4
CR7030*	A3	R6203	E3	U4074EW	D4	U4074EW	D4
CR7030*	A3	R6204	E3	U4074EX	D4	U4074EX	D4
CR7030*	A3	R6205	E3	U4074EY	D4	U4074EY	D4
CR7030*	A3	R6206	E3	U4074EZ	D4	U4074EZ	D4
CR7030*	A3	R6207	E3	U4074FA	D4	U4074FA	D4
CR7030*	A3	R6208	E3	U4074FB	D4	U4074FB	D4
CR7030*	A3	R6209	E3	U4074FC	D4	U4074FC	D4
CR7030*	A3	R6210	E3	U4074FD	D4	U4074FD	D4
CR7030*	A3	R6211	E3	U4074FE	D4	U4074FE	D4
CR7030*	A3	R6212	E3	U4074FF	D4	U4074FF	



Error Amplifier and Synthesizer (Option 03) DIAGRAM

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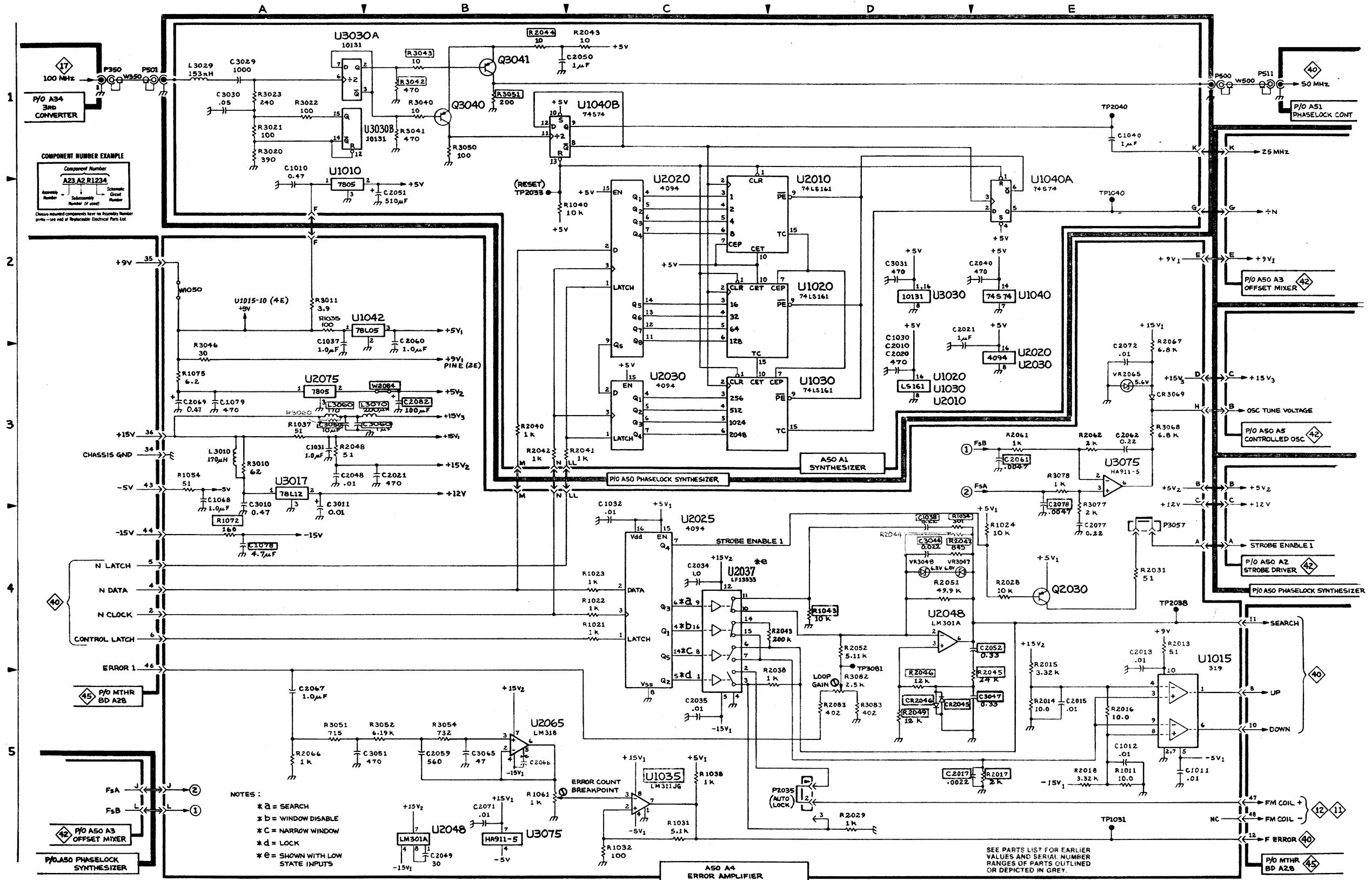
ASSEMBLY A50A4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	E5	A1	C3044	D4	D2	R1075	A3	F1	R3054	B5	E3			
C1012	E5	A1	C3047	D5	D3	R2013	E4	E3	R3060	A3	D3			
C1031	A3	B1	C3051	A5	E3	R2014	E4	B2	R3068	F3	F3			
C1032	C4	B2	C3065	B5	F3	R2015	E5	B3	R3077	E3	G3			
C1037	A3	D1	CR2045*	D5	D3	R2016	E5	B2	R3078	E3	H3			
C1038*	D4	D2	CR2046*	D5	E3	R2017	E5	A2	R3082	D5	H3			
C1068	A3	F1	CR3069	E3	G3	R2018	E5	A2	R3083	D5	H3			
C1078	A4	G1				R2028	E4	C2						
C1079	A3	F2	L3010	A3	B3	R2029	D5	C3	TP1031	E5	B1			
C2013	E4	A2	L3060	A3	D3	R2031	E4	C3	TP2038	F4	C2			
C2017*	E5	A2				R2038	D5	D2	TP3081	D4	H3			
C2021	B3	B3	P2035	D5	C2			D2						
C2034	C4	C3	P3057	E4	E3	R2049*	D5	D2	U1015	E4	A2			
C2035	C5	C2				R2043	D4	D2	U1035	C5	B1			
C2048	A3	E2	Q2030	E4	C2	R2044*	D4	D2	U1042	B2	E1			
C2049	B5	E2				R2045	D5	D2	U2025	C4	B2			
C2052	E4	D2				R2046	D5	D3	U2037	C4	D2			
C2059	B5	F2	R1011	E5	A1	R2048	A3	E2	U2048	B5	E2			
C2060	B2	E1	R1022	C4	B2	R2051	D4	E2	U2048	D4	E2			
C2061	E3	F3	R1023	C4	B2	R2052	D4	E2	U2065	B5	F2			
C2062	E3	F3	R1024	E4	C3	R2061	E3	F2	U2075	A3	G1			
C2066*	B5	F2	R1031	C5	B1	R2062	E3	F3	U3017	A3	A3			
C2067	A5	F2	R1032	C5	B2	R2066	A5	E2	U3075	B5	G2			
C2069	A3	F2	R1034*	D4	E3	R2067	E3	G2	U3075	E3	G2			
C2071	B5	F2	R1037	A3	D1	R2083	D5	H2						
C2072	E3	F2	R1038	C5	C1	R3011	A2	A3	VR2065	E3	F2			
C2077	E4	G2	R1043*	D4	D2	R3046	A3	D3	VR3047	D4	E3			
C2078	E3	H2	R1054	A3	F1	R3051	A5	E2	VR3048	D4	E3			
C2082	B3	H1	R1061	B5	F2	R3052	B5	E3						
C3010	A4	A3	R1072	A4	A4	W1050*	A2	E1						
C3011	A4	A3				W2084*	B3	H2						

ASSEMBLY A50A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1010	A2	A1	L3029	A1	B3	R3022	A1	B3	U1020	D3	B1			
C1030	D2	C1				R3023	A1	B3	U1030	D3	C1			
C1040	E1	D1	Q3040	B1	E3	R3040	B1	D3	U1030	C3	C1			
C2010	D3	A2	Q3041	B1	E3	R3041	B1	D3	U1040	E2	C1			
C2020	D3	B2				R3042	B1	D3	U1040B	B1	C1			
C2021	D3	B2	R1040	B2	D1	R3043	B1	D3	U1040A	E2	C1			
C2040	E2	D2	R2040	B3	D2	R3050	B1	E3	U2010	C2	A2			
C2040	E2	D2	R2040	B1	D2	R3051	B1	E3	U2010	D3	A2			
C2050	B1	E2	R2041	B3	D2				U2020	C2	B2			
C2051	B2	E2	R2042	B3	D2	TP1040	E2	B1	U2020	E3	B2			
C3029	A1	B3	R2043	C1	D2	TP2033	B2	E1	U2030	E3	D2			
C3030	A1	B3	R2044	B1	D2	TP2040	E1	D1	U2030	C3	D2			
C3031	D2	C3	R3020	A1	C3				U3038	A1	C3			
			R3021	A1	B3	U1010	A2	A1						
						U1020	C2	B1						

\*See Parts List for serial number ranges.





Controlled Oscillator, Offset Mixer and Strobe Driver (Option 03)

DIAGRAM 42

ASSEMBLY A50A3

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1030	C3	C1	L2020	B1	B2	R1042	B1	D1	TP1058	A3	E1
C1031	C3	C1				R1050	B3	E1	TP2012	B2	A2
C1040	B2	D1	Q1020	C1	B1	R2010	A2	A1			
C1050	C3	E1	Q2021	B1	B2	R2021	A1	B1	U1030	C3	C1
C2012	B1	B2	Q1030	C1	C1	R2025	B1	B2	U1050B	B2	E1
C2020	B2	B2	Q1040	B2	D1	R2026	B1	B2	U1050A	A2	E1
C2041	C3	C2				R2030	B1	C2	U1050	C3	E1
C2050	C3	E2				R2031	C1	C2	U2040	C3	D2
CR1010	A2	A1	R1010	A2	A1	R2032	C1	C2	U2050	C3	E2
CR1011	A1	A1	R1011	A1	A1	R2033	C1	C2	U2050A	A3	E2
CR2010	A2	A1	R1020	C1	B1	R2040	A3	D2	U2050B	A3	E2
CR2011	A1	A1	R1030	C1	C1						
CR2012	A1	B1	R1031	C3	C1	T1010	A1	A1			
			R1040	C3	C1	T2010	B1	A2			
			R1041	C1	D1	T2030	B1	C2			

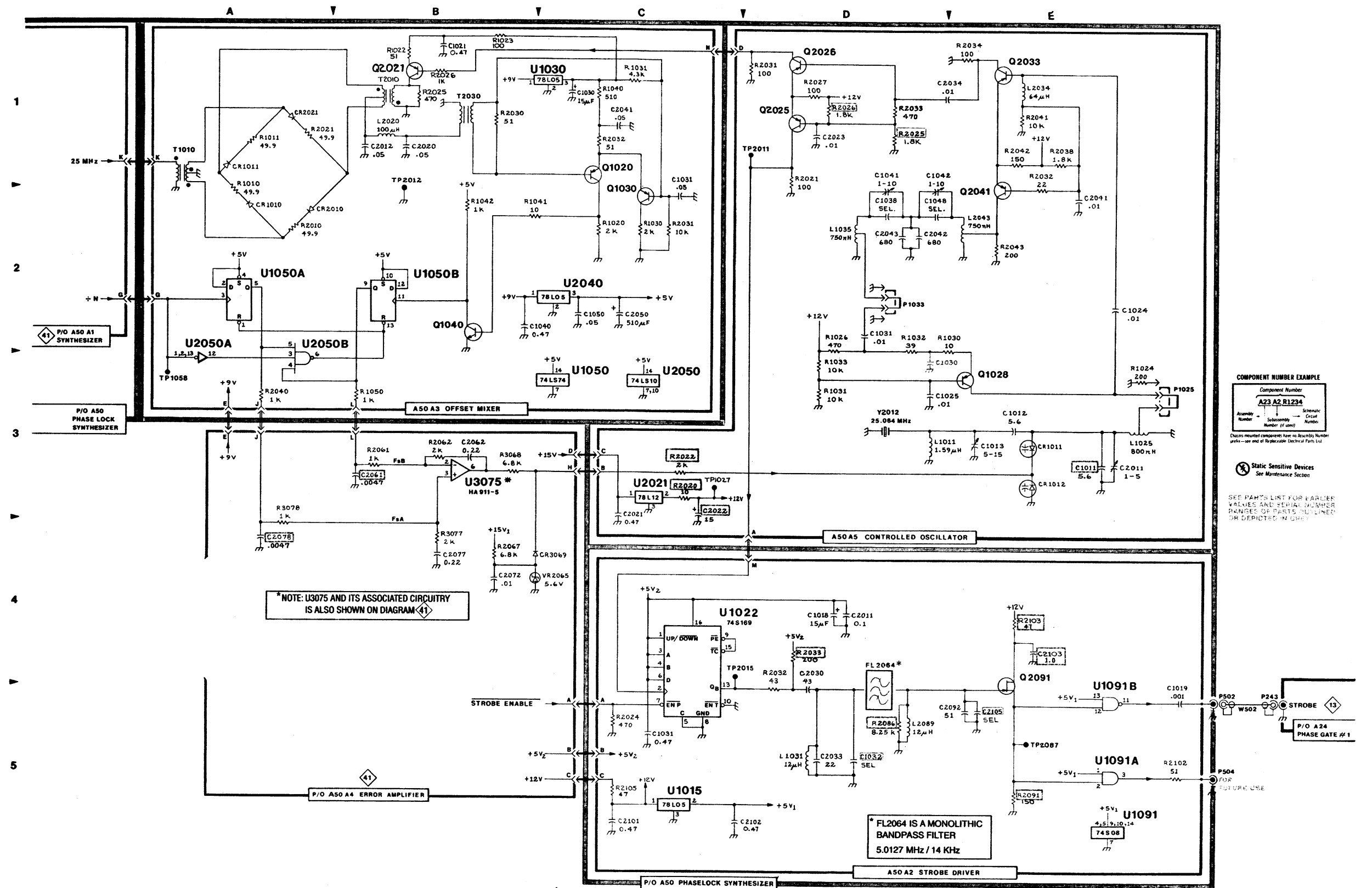
ASSEMBLY A50A5

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1011	E3	B1	C2041	E2	D2	Q1028	E3	B1	R2031	D1	B1
C1012	E3	A2	C2042	D2	D1	Q2025	D1	B2	R2032	E1	D2
C1013	E3	A1	C2043	D2	D2	Q2026	D1	C2	R2033	D1	B2
C1024	E2	B1				Q2033	E1	C2	R2034	E1	C2
C1025	D3	B1	CR1011	E3	A1	Q2041	E2	D2	R2038	E1	C2
C1030	D3	C1	CR1012	E3	A1				R2041	E1	C2
C1031	D2	C1				R1024	E3	B1	R2042	E1	D2
C1038	D2	C1	L1011	D3	A1	R1026	D2	B1	R2043	E2	D2
C1041	D1	D1	L1025	E3	B1	R1030	D2	C2			
C1042	D1	D1	L1035	D2	C1	R1031	D3	C1	TP1027	C3	B1
C1048	D2	D2	L2034	E1	C2	R1032	D2	C2	TP2011	D1	A2
C2011	E3	A1	L2043	E2	D2	R1033	D3	C1			
C2021	C3	B1	P1025	E3	B1	R2020*	C3	B2	U2021	C3	B2
C2022	C3	B2	P1033	D2	C1	R2021	D1	B2			
C2023	D1	B2				R2022*	C3	B2			
C2034	E1	C2				R2025	D1	B2			
						R2026	D1	B2			
						R2027	D1	B2			

ASSEMBLY A50A2

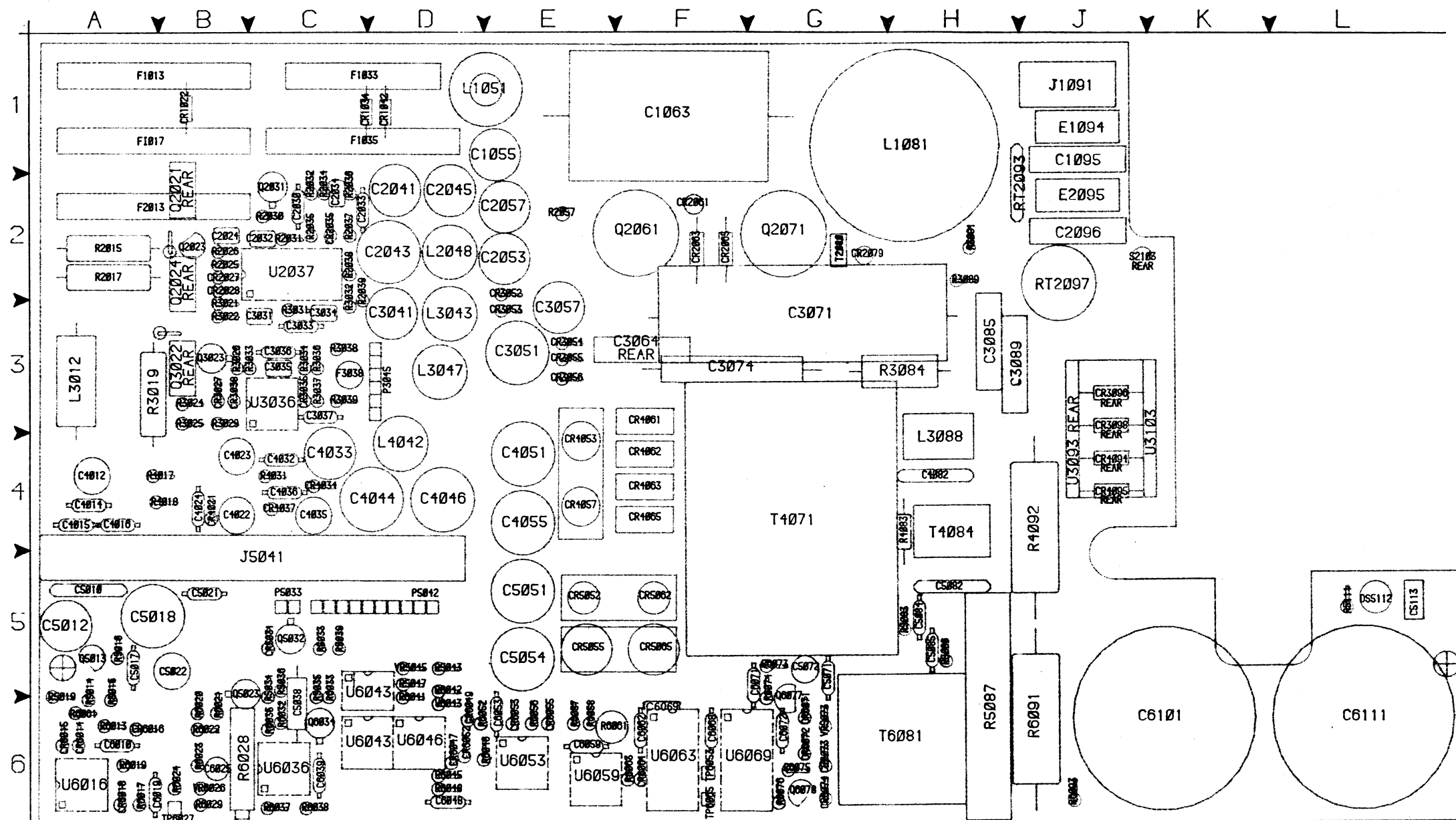
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1018	D4	A1	C2101	C5	I2	U1015	C5	J1			
C1019	E5	J1	C2102	C5	I2	U1022	C4	B1			
C1031	C5	B1	C2103	E4	I2	U1091A	E5	I1			
C1032	D5	C1	C2105	E5	I2	U1091	E5	I1			
						U1091B	E5	I1			
C2011	D4	A2				R2024	C5	B2			
C2030	D4	C1				R2032	D5	C2			
C2033	D5	C2				R2033	D5	C2			
C2092	E5	H2									
						R2086	D5	H2			
						R2091	E5	H2			
						R2102	E5	J2			
						R2103	E4	I2			
						R2105	C5	J2			
						TP2015	C4	A2			
						TP2087	E5	H2			

\*See Parts List for serial number ranges.



COMPONENT NUMBER EXAMPLE  
 Component Number  
 A23 A2 R1234  
 Assembly Number  
 Subassembly Number (if any)  
 Part Number (if any)  
 Static Sensitive Devices  
 See Maintenance Section

SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DELETED IN SHIP



670-5564-01

3784-107

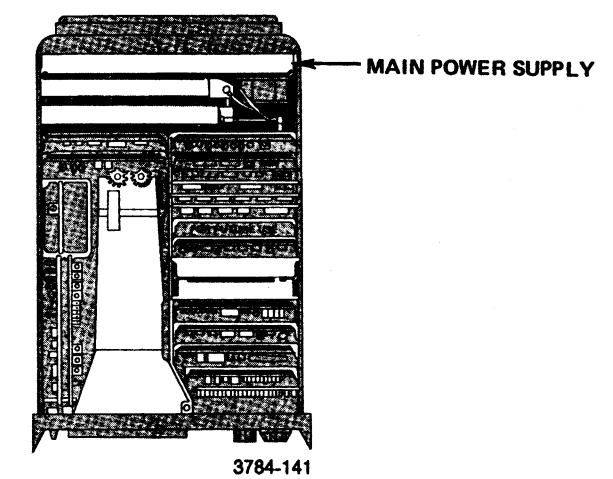
Fig. 8-45. A30A1—Main Power Supply circuit board.

**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.



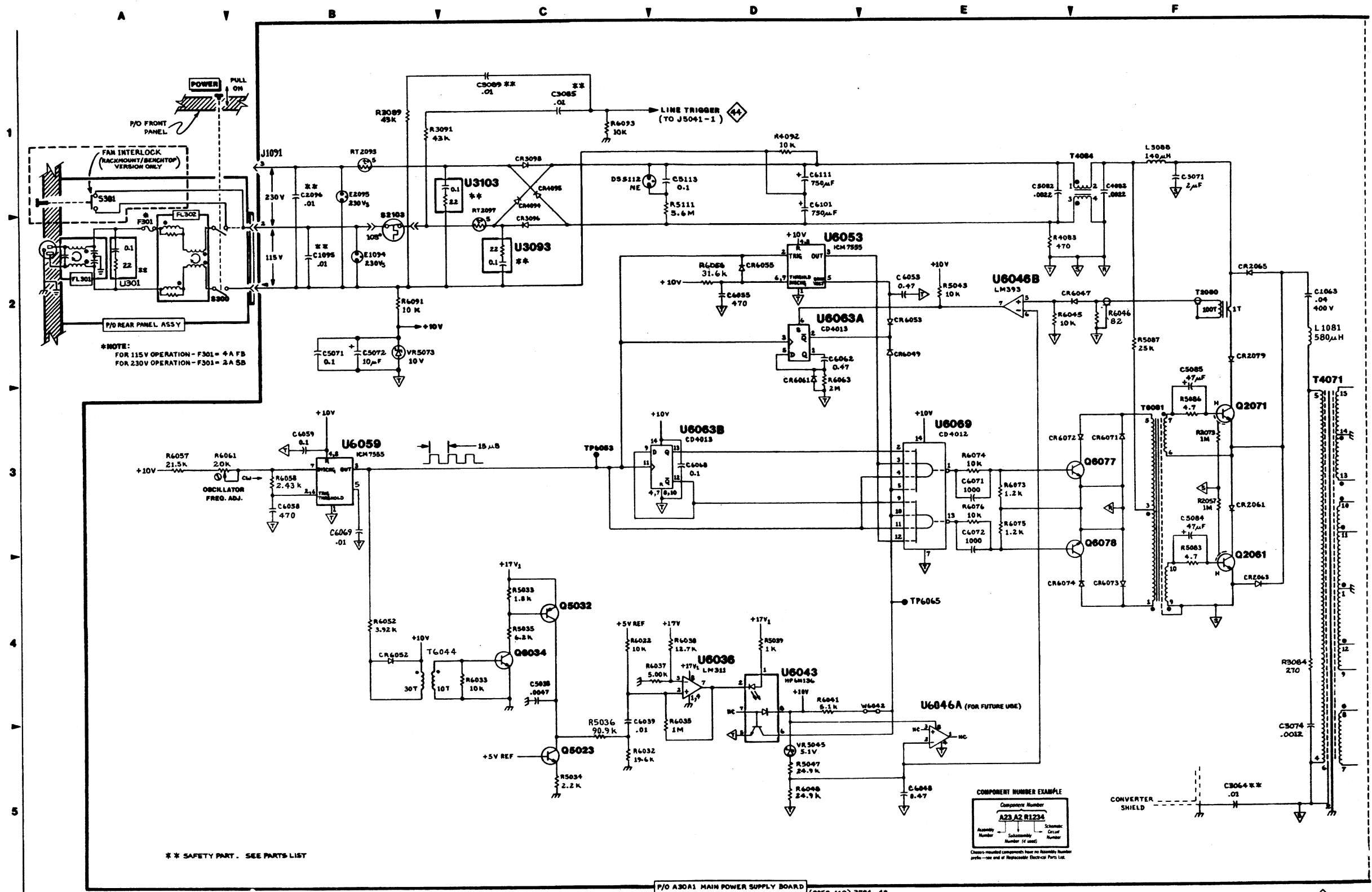
# Main Power Supply DIAGRAM 43

## ASSEMBLY A30A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1063	F2	F1	CR4095	C1	J4	R4092	D1	J4	R6093	C1	J6
C1095	B2	J1	CR6047	E2	D6	R5033	C4	C5	RT2097	C1	J2
C2096	B1	J2	CR6049	E2	D6	R5034	C5	C5	RT2093	B1	J2
C3074	F4	G3	CR6052	B4	D6	R5035	C4	C5	RT3093	C2	J3
C3074	F4	G3	CR6053	E2	D6	R5036	C4	C5	S2103	B2	J2
C3085	C1	J3	CR6055	D2	E6	R5039	D4	C5	T2080	F2	H2
C4082	F1	H4	CR6061	D2	E6	R5043	E2	C5	T4071	F2	G4
C5038	C4	C5	CR6072	E3	G6	R5047	D5	D6	T4084	F1	H4
C5071	B2	G5	CR6071	F3	G6	R5083	F3	H5	T6044	B4	D6
C5072	B2	G6	CR6073	F4	G6	R5086	F3	H5	T6081	F3	H6
C5082	E1	H5	CR6074	E4	G6	R5087	F2	I6	TP6053	C3	F6
C5084	F3	H5	DS5112	C1	L5	R5111	D1	L5	TP6065	E4	F6
C5085	F2	H5	E1094	B2	J1	R6022	C4	B6	U3093	C2	J4
C5113	D1	L5	E2095	B1	J2	R6032	C5	C6	U6036	D4	C6
C6039	C4	C6	L1081	F2	H1	R6033	C4	C6	U6043	D4	D5
C6048	E5	E6	L3088	F1	H4	R6034	D4	C6	U6046A	E5	D6
C6053	E2	E2	Q2061	F3	F2	R6035	D4	C6	U6046B	E2	D6
C6058	B3	E6	Q2071	F3	G2	R6037	D4	C6	U6053	D2	E6
C6059	B3	E6	Q5023	C5	B5	R6042	E4	C6	U6059	B3	E6
C6062	D2	E6	Q5023	C4	C5	R6045	E2	E6	U6063B	D3	F6
C6068	D3	F6	Q6034	C4	C5	R6048	E4	E6	U6063A	D2	F6
C6069*	B3	F6	Q6077	F3	G6	R6052	B4	E6	U6069	E3	F6
C6071	E3	G6	Q6078	F3	G6	R6056	D2	E6	VR5045	D5	D5
C6072	D1	G6	R3084	F4	H3	R6074	E3	G6	VR5073	B2	G5
C6101	D1	J6	R3091	B1	J3	R6075	E3	G6			
C6111	D1	L6	R4083	E2	H4	R6076	E3	G6			
CR2061	F3	F2				R6091	B2	I6			
CR2063	F4	F2									
CR2065	F2	F2									
CR2079	F2	H2									
CR3098	C1	J3									
CR3096	C2	J3									
CR4094	C1	J4									

A30A1 also shown on diagram 42

\*See Parts List for serial number ranges.



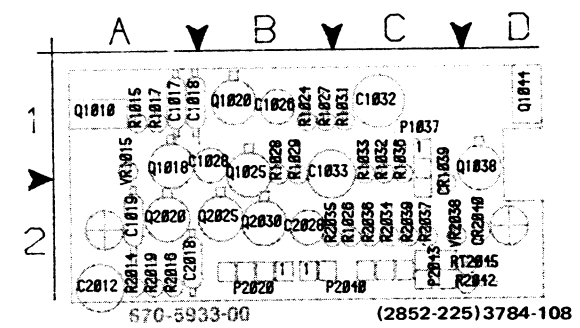
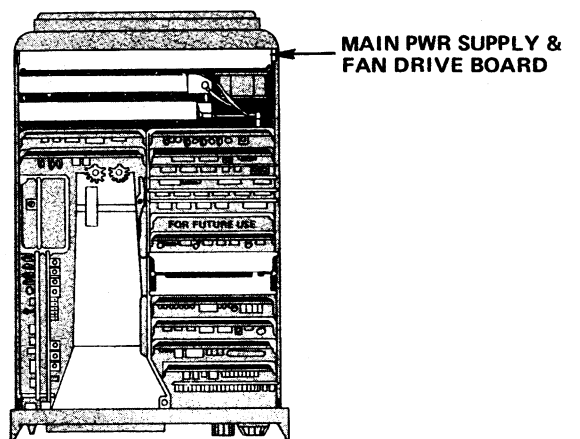
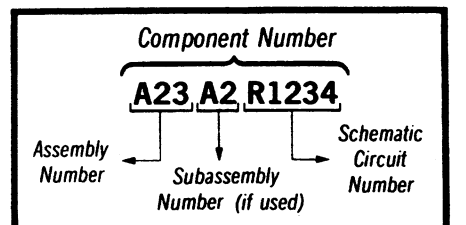


Fig. 8-46. A30A2—Fan Drive circuit board.



 **Static Sensitive Devices**  
See Maintenance Section

**COMPONENT NUMBER EXAMPLE**



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

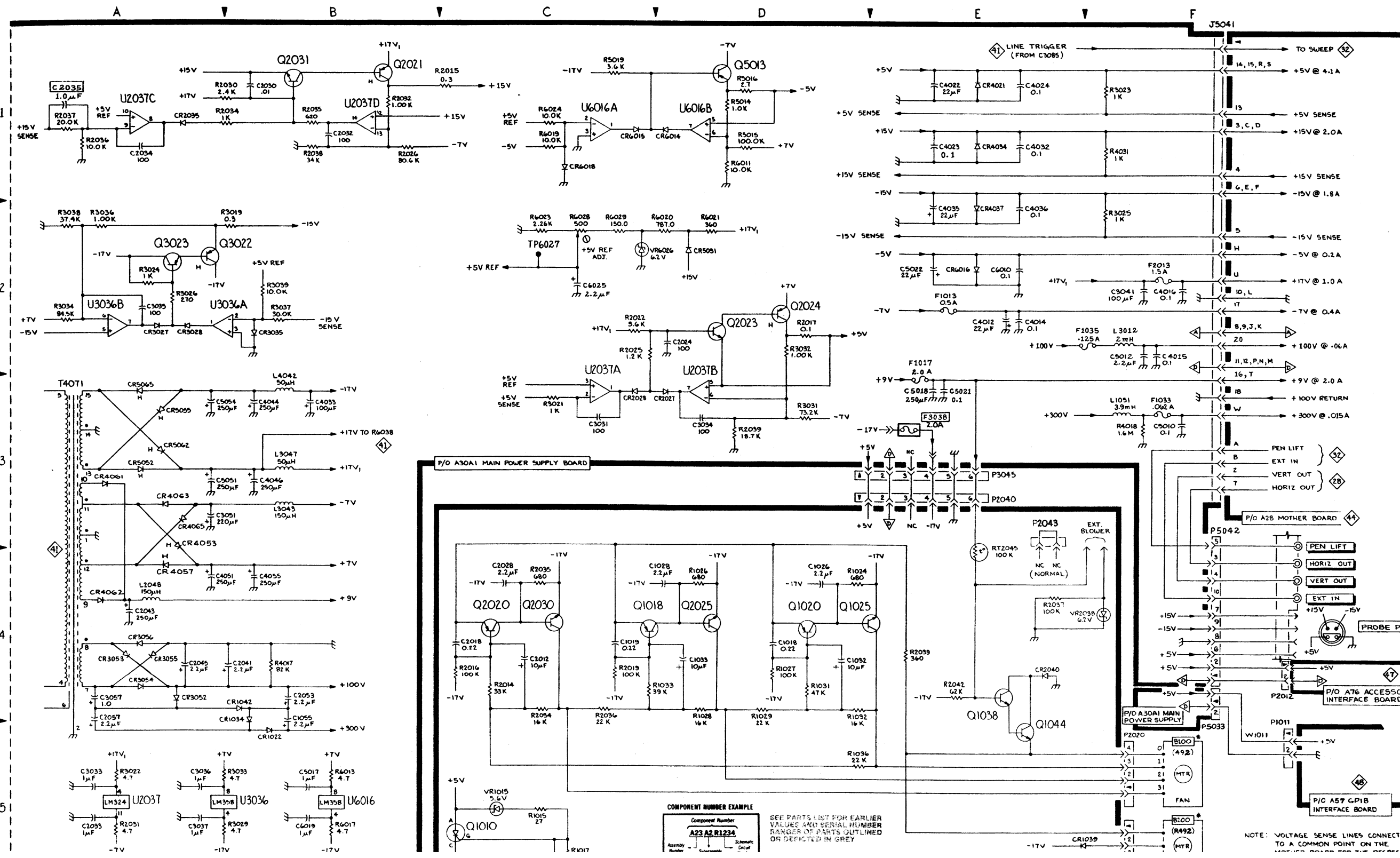
# MAIN POWER SUPPLY (SECONDARY) AND FAN DRIVE DIAGRAM 44

## ASSEMBLY A30A2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1017	C5	A1	P2043	E3	C2	R1017	C5	A1	R2034	C4	C2
C1018	D4	A1				R1024	D4	B1	R2035	D4	B1
C1019	C4	A2	Q1010	C5	A1	R1026	D4	C2	R2036	C4	C2
C1026	D4	B1	Q1018	C4	A1	R1027	D4	B1	R2037	E4	C2
C1028	D4	B1	Q1020	D4	B1	R1028	D4	B1	R2039	E4	C2
C1032	D4	C1	Q1025	E4	B1	R1029	D4	B1	R2042	E4	C2
C1033	D4	B1	Q1038	E4	D1	R1031	D4	C1			
C2012	C4	A2	Q1044	E5	D1	R1032	D4	C1	RT2045	E4	C2
C2018	C4	A2	Q2020	C4	A2	R1033	C4	C1	VR1015	C5	A1
C2028	C4	B2	Q2025	D4	B2	R1036	D5	C1	VR2038	F4	C2
			Q2030	C4	B2	R2014	C4	A2			
CR1039	F5	C1				R2016	C4	A2			
CR2040	E4	D2	R1015	C5	A1	R2019	C4	A2			

## ASSEMBLY A30A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1055	B4	D1	C5051	A3	E5	F1033	F3	C1	R3029	A5	B3
C2024	D2	B2	C5054	A3	E5	F1035	F2	C1	R3031	D3	C3
C2030	B1	C2	C6010	E2	A6	F2013	F2	A2	R3032	D2	C2
C2032	B1	C2	C6019	B5	A6	F3038	E3	C3	R3033	A5	B3
C2033	A5	C2	C6025	C2	B6				R3034	A2	C3
C2034	A1	C2				L1051	F3	D1	R3036	A2	C3
C2041	B4	D2	CR1022	B5	B1	L2048	A4	D2	R3037	B2	C3
C2043	A4	D2	CR1034	B4	C1	L3012	F2	A3	R3038	A2	C3
C2045	A4	D2	CR1042	B4	D1	L3043	B3	D3	R3039	B2	C3
C2053	B4	E2	CR2027	D3	B2	L3047	B3	D3	R4017	B4	A4
C2057	A4	E2	CR2028	C3	B2	L4042	B3	D4	R4018	F3	A4
C3031	C3	C3	CR2035	A1	C2	Q2021	B1	B2	R4031	F1	C4
C3033	A5	C3	CR3027	A2	B3	Q2023	D2	B2	R5014	D1	A5
C3034	D3	C3	CR3028	A2	B3	Q2024	D2	B2	R5015	D1	A5
C3035	A2	C3	CR3035	B2	C3	Q2031	B1	C2	R5016	D1	A5
C3036	A5	C3	CR3052	A4	E2	Q3021	B1	C2	R6011	D1	A5
C3037	A5	C3	CR3053	A4	E3	Q3022	A2	B3	R6013	B5	A6
C3041	F2	D3	CR3054	A4	E3	Q3023	A2	B3	R6017	B5	A6
C3051	A3	E3	CR3055	A4	E3	Q5013	D1	A5	R6019	C1	A6
C3057	A4	E3	CR3056	A4	E3				R6020	D2	B6
C4012	E2	A4	CR4021	E1	B4	R2015	B1	A2	R6021	D2	B6
C4014	E2	A4	CR4034	E1	C4	R2017	D2	A2	R6023	C2	B6
C4015	F2	A4	CR4037	E2	C4	R2022	C2	A2	R6024	C1	B6
C4016	F2	A4	CR4053	A4	E4	R2025	C2	B2	R6028	C2	B6
C4022	E1	B4	CR4057	A4	E4	R2026	B1	B2	R6029	C2	B6
C4023	E1	B4	CR4061	A4	F3	R2030	B1	C2			
C4024	E1	B4	CR4062	A4	F4	R2031	A5	C2			
C4032	E1	C4	CR4063	A3	F4	R2032	B1	C2	T4071	A3	G4
C4033	B3	C4	CR4065	A3	F4	R2034	B1	C2	TP6027	C2	B6
C4035	E2	C4	CR5031	D2	C5	R2035	B1	C2			
C4036	E2	C4	CR5052	A3	E5	R2036	A1	C2	U2037A	C3	C2
C4044	B3	C4	CR5055	A3	E5	R2037	A1	C2	U2037B	D3	C2
C4046	B3	D4	CR5062	A3	F5	R2038	B1	C2	U2037C	A1	C2
C4051	A4	E4	CR5065	A3	F5	R2039	D3	C2	U2037D	B1	C2
C4055	B4	E4	CR6014	D1	A6	R3019	B2	A3	U3036A	B2	C3
C5010	F3	A5	CR6015	C1	A6	R3021	C3	B3	U3036B	A2	C3
C5012	F2	A5	CR6016	E2	A6	R3022	A5	B3	U6016A	C1	A6
C5017	B5	A5	CR6018	C1	A6	R3023	F1	B3	U6016B	D1	A6
C5018	E3	A5				R3024	A2	B3			



COMPONENT NUMBER EXAMPLE  
 Component Number  
**A23 A2 B1234**  
 Assembly Number      Component      Schematic Circuit

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

NOTE: VOLTAGE SENSE LINES CONNECT TO A COMMON POINT ON THE MOTHER BOARD FOR THE RESPECTIVE BOARD.

# DIAGRAMS AND CIRCUIT BOARD ILLUSTRATIONS

## Symbols

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975.

Logic symbology is based on ANSI Y32.14-1973 in terms of positive logic. Logic symbols depict the logic function performed and may differ from the manufacturer's data.

The overline on a signal name indicates that the signal performs its intended function when it is in the low state.

Abbreviations are based on ANSI Y1.1-1972.

Other ANSI standards that are used in the preparation of diagrams by Tektronix, Inc. are:

- Y14.15, 1966 Drafting Practices.
- Y14.2, 1973 Line Conventions and Lettering.
- Y10.5, 1968 Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.

American National Standard Institute  
1430 Broadway  
New York, New York 10018

## Component Values

Electrical components shown on the diagrams are in the following units unless noted otherwise:

Capacitors = Values one or greater are in picofarads (pF).  
Values less than one are in microfarads (μF).

Resistors = Ohms (Ω).

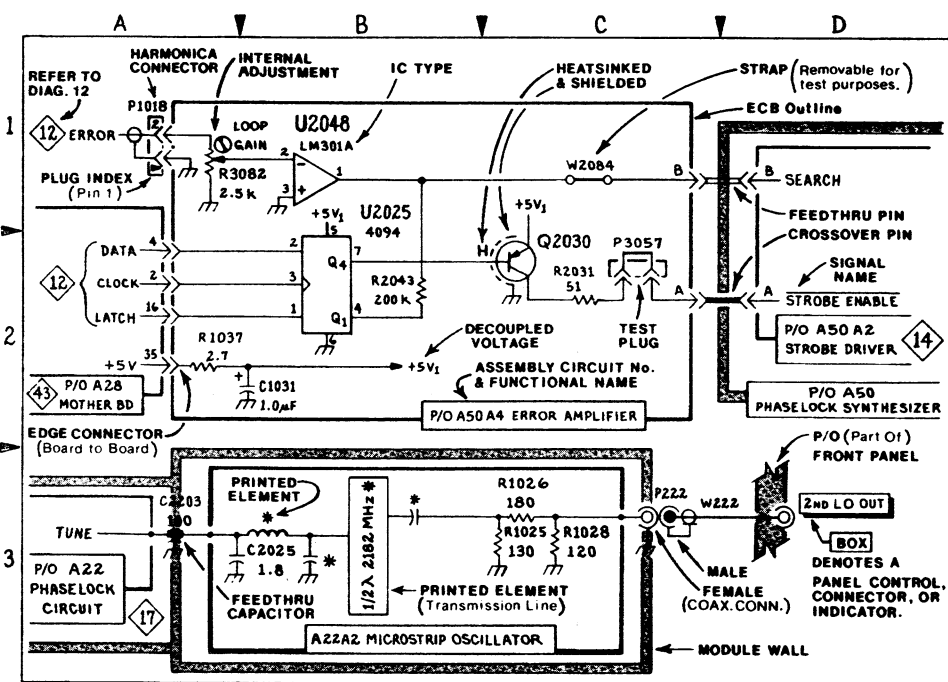
The information and special symbols below may appear in this manual.

## Assembly Numbers and Grid Coordinates

Each assembly in the instrument is assigned an assembly number (e.g., A20). The assembly number appears on the circuit board outline on the diagram, in the title for the circuit board component location illustration, and in the lookup table for the schematic diagram and corresponding component locator illustration. The Replaceable Electrical Parts list is arranged by assemblies in numerical sequence; the components are listed by component number \*(see following illustration for constructing a component number).

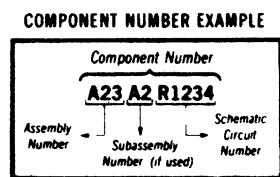
The schematic diagram and circuit board component location illustration have grids. A lookup table with the grid coordinates is provided for ease of locating the component. Only the components illustrated on the facing diagram are listed in the lookup table. When more than one schematic diagram is used to illustrate the circuitry on a circuit board, the circuit board illustration may only appear opposite the first diagram on which it was illustrated; the lookup table will list the diagram number of other diagrams that the circuitry of the circuit board appears on.

## Schematics



3482-220

DIAGRAM TITLE & NUMBER → ERROR AMPLIFIER 13



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

## INDEX

Assembly No. ▶	Diagram Title	Grid
A10	Functional	1
A11	1st Converter	2
A12	2nd Converter	3
A12A1	3rd Converter	4
A13	IF Section	5
A14	Display Section	6
A15	Frequency Control	7
A16	Phase Lock System	8
A16A1	Digital Control Section	9
A17	Power Supply	10
A18		
A18A1		
A20		
A20A1		
A21		
A22		
A22A1		
A22A2		
A22A2A1		
A22A2A2		
A22A2A3		
A23		
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A23A2		
A23A3		
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A23A5		
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