

SECTION 5

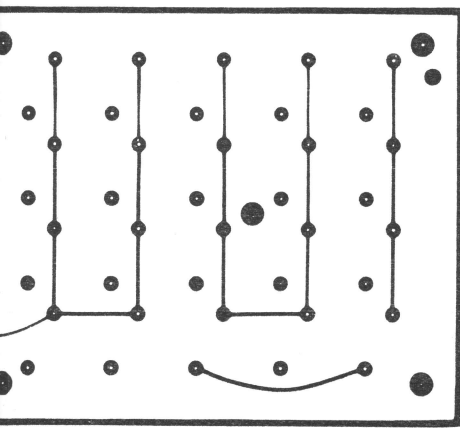
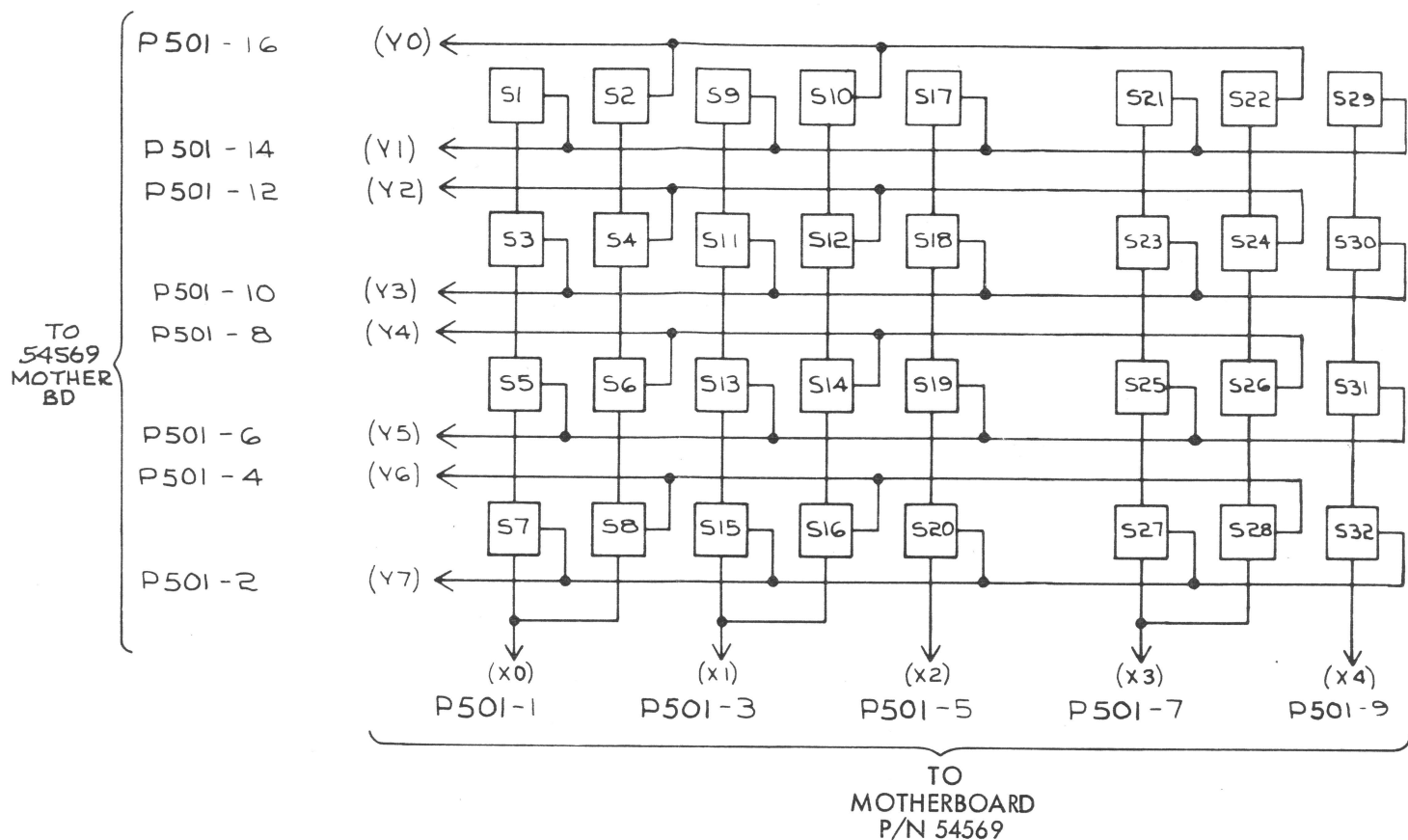
PARTS LISTS AND DIAGRAMS

5.1 2150/2160 FINAL ASSEMBLY (P/N 32150, 32160)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	SUBASSEMBLY, FRONT END	46096
	SUBASSEMBLY, CRT CASE	46095
	CIRCUIT ASSEMBLY, MOTHERBOARD	54569
	CIRCUIT ASSEMBLY, DIGITAL BOARD	53522
	CIRCUIT ASSEMBLY, ANALOG BOARD	53675
	CIRCUIT ASSEMBLY, CASSETTE/RS-232 (2160 ONLY)	52674
	ASSEMBLY, POWER SUPPLY MODULE	45845
	PIVOT ROD	45367
	BACK PANEL, RH	44964
	SIDE PANEL, RH	44931
	CABLE MOTHERBOARD-TO-KEYBOARD	47112
	COVER, CRT CASE	45078
	STRAIN RELIEF BRACKET	45081
	BRACKET ANGLE, SIDE PANEL	46288
	POWER CORD	24077
	LABEL (WARNING DANGEROUS VOLTAGE)	46047
	SHIELD, SIDE, POWER SUPPLY	45957
	CASSETTE, TAPE (2160 ONLY)	55852
	MANUAL, SERVICE 2150/2160	54327
	WELDMENT, CASE	45157
	CORD WRAP	45782
	FEET, 0.75SQ x 0.5 HIGH	46446
	FEET, ROUND 0.5 DIA	04276
	ASSEMBLY, CONNECTOR COVER, HANDLER	46947
	CABLE ASSEMBLY, TAPEDECK-TO-RS232 (2160 ONLY)	47254
	HOLDER, PC BOARD	46287
	ASSEMBLY, CONNECTOR COVER, IEEE (2150 ONLY)	46948

5.2 FRONT END SUBASSEMBLY (P/N 46096)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	END CAP, LH, PAINTED	47271
	END CAP, RH, PAINTED	47272
	EXT, UPPER CUT	44818
	EXT, LOWER CUT	44958
	BRACKET, UPPER LH	44828
	BRACKET, UPPER RH	44827
	BRACKET, LOWER	44826
	BRACKET, SIDE PANEL	45213
	SUB PANEL, UPPER RH (2160 ONLY)	45337
	FRONT PANEL, UPPER LH	45338
	REMOVABLE WINDOW, CRT	53590
	FRONT PANEL, UPPER RH (2160 ONLY)	53677
	FRONT PANEL, LOWER	45340
	BUTTON, KEYBOARD (MIST GRAY/WHITE)	45608
	BUTTON, KEYBOARD (BLU)	46510
	BUTTON, KEYBOARD (GRAY)	45348
	HANDLE, PAINTED	47166
	PIVOT, PLASTIC HANDLE	44892
	PIN, HANDLE	44894
	COVER, HANDLE	44895
	BUTTON, HANDLE	44896
	SPRING, HANDLE	44897
	PLATE, HANDLE SIDE	44891
	SPACING STRIP, MOTHERBOARD	45351
	SPRING, TAPEDECK BUTTON (2160 ONLY)	46331
	SPACER, TAPEDECK BUTTON (2160 ONLY)	46332
	TAPEDECK (2160 ONLY)	53870
	ALPHA KEYBOARD OVERLAY (2160 ONLY)	55413
	CIRCUIT ASSEMBLY, KEYBOARD	45573
	FOOT, ROUND STICKY	22343
	SUB PANEL, UPPER RH (2150 ONLY)	45374
	FRONT PANEL, UPPER RH (2150 ONLY)	57679



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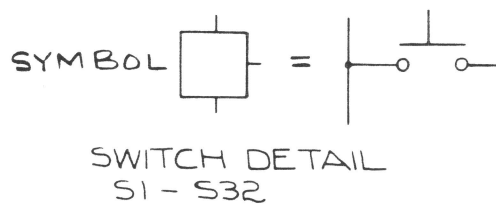
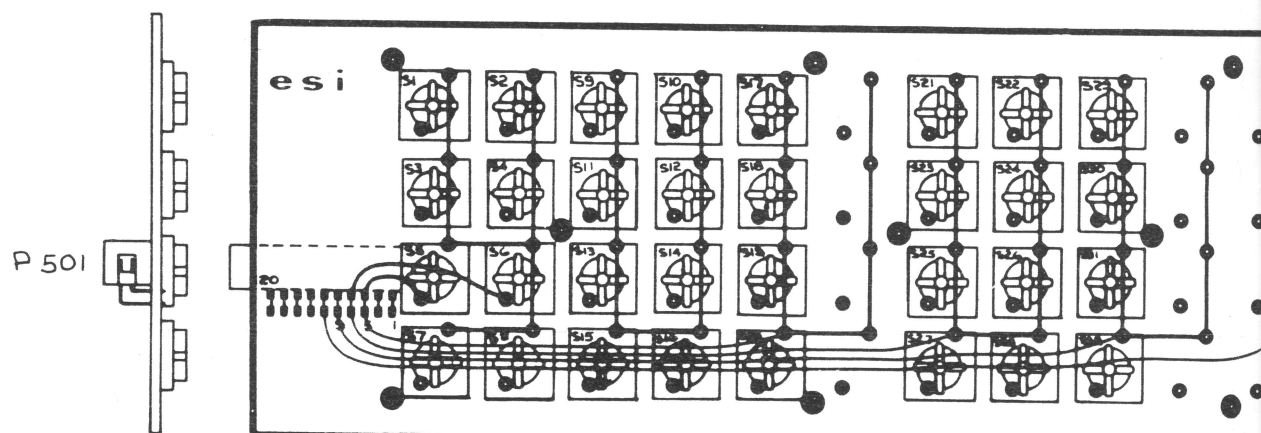


Figure 5-1. Keyboard Circuit Assembly (P/N 45573)

5.2.1 Keyboard Circuit Assembly (P/N 45573)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PC BOARD, KEYBOARD	45572
S1-S32	SWITCH, MOMENTARY, PUSHBUTTON	46500
P501	HEADER, I/O, 20 CONTACT RTANG	46501



THESE LOCATIONS
FUTURE CKT ASSY

5.2.2 Keyboard-to-Motherboard Cable Assembly (P/N 47112)

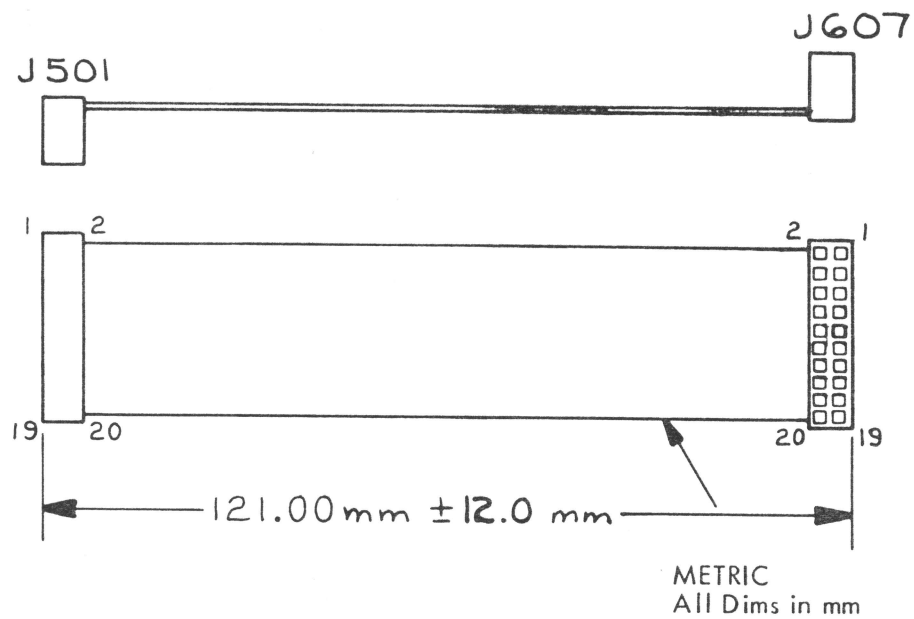


Figure 5-2. Keyboard-to-Motherboard Cable Assembly (P/N 47112)

5.3 MOTHERBOARD CIRCUIT ASSEMBLY (P/N 54569)

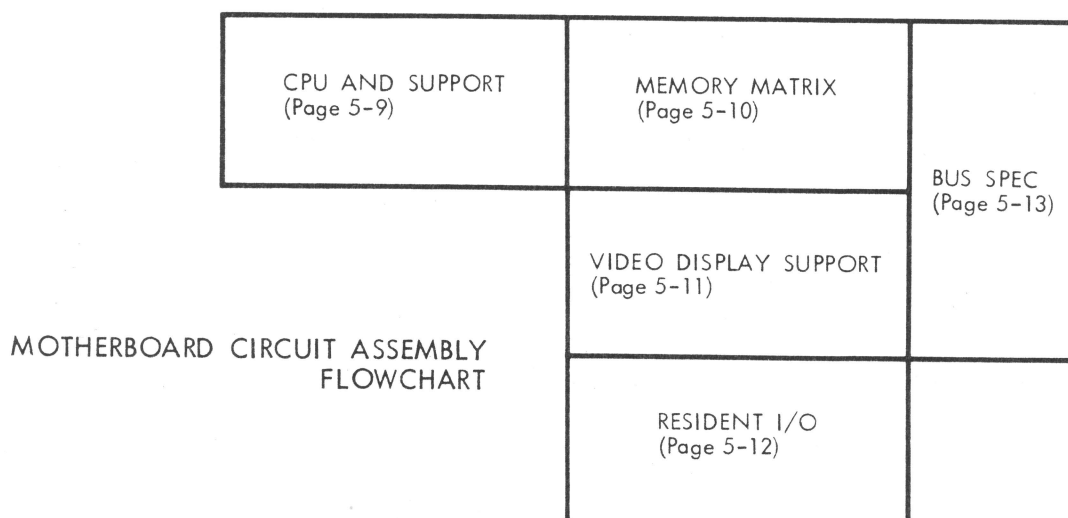
<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PCB, MOTHERBOARD	53871
C1,C44	CAPACITOR, 100 picofarad, 1000V, DISC	12241
C2,C5	CAPACITOR, 22 microfarad, 15V TANT	18852
C3,C4	CAPACITOR, 25 picofarad, DISC	01924
C7	CAPACITOR, 560 picofarad, POLY	25922
C8	CAPACITOR, 20 picofarad POLY	20926
C9-C40	CAPACITOR, 0.01 microfarad	45658
C41-C43,		
C45-C47	CAPACITOR, 1 microfarad, 50V	43852
CR1,CR2	DIODE, 1N4005	01779
CR6,CR7	DIODE, 1N914A	12356
DS1-DS5	LED, RED, 1/8 DIA	24009
J1-J7	CONNECTOR, PCB, 100 PIN	45661
J10	I/O HEADER, 20 PIN, RT ANGLE, 2 ROW	46501
Q1-Q4	TRANSISTOR, 2N3904	18751
R1,R10,R16,		
R19,R20,R39,		
R41,R45	RESISTOR, 1 kilohm, 1/4W, 10%	13920
R2,R4	RESISTOR, 68 ohm, 1/4W, 10%	13902
R3,R6,R5	RESISTOR, 220 ohm, 1/4W, 10%	13911
R7	RESISTOR, 100 ohm, 1/4W, 10%	13907
R9	RESISTOR, 4.7 kilohm, 1/4W, 10%	13927
R11-R15,R25,		
R42,R43,R36	RESISTOR, 47 ohm, 1/4W, 10%	13901
R17,R24	RESISTOR, 330 ohm, 1/4W, 10%	13913
R18,R21,R22	RESISTOR, 680 ohm, 1/4W, 10%	13917
R23	RESISTOR, 39 ohm, 1/4W, 10%	21219
R26,R28	RESISTOR, 820 ohm, 1/4W, 10%	13919
R27,R29,R8	RESISTOR, 560 ohm, 1/4W, 10%	13916
R30	RESISTOR, 10 kilohm, 1/4W, 1%	21740
R31	RESISTOR, 11.5 kilohm, 1/4W, 1%	21769
R32	RESISTOR, 470 kilohm, 1/4W, 10%	13955

5.3 MOTHERBOARD CIRCUIT ASSEMBLY (P/N 54569) (cont)

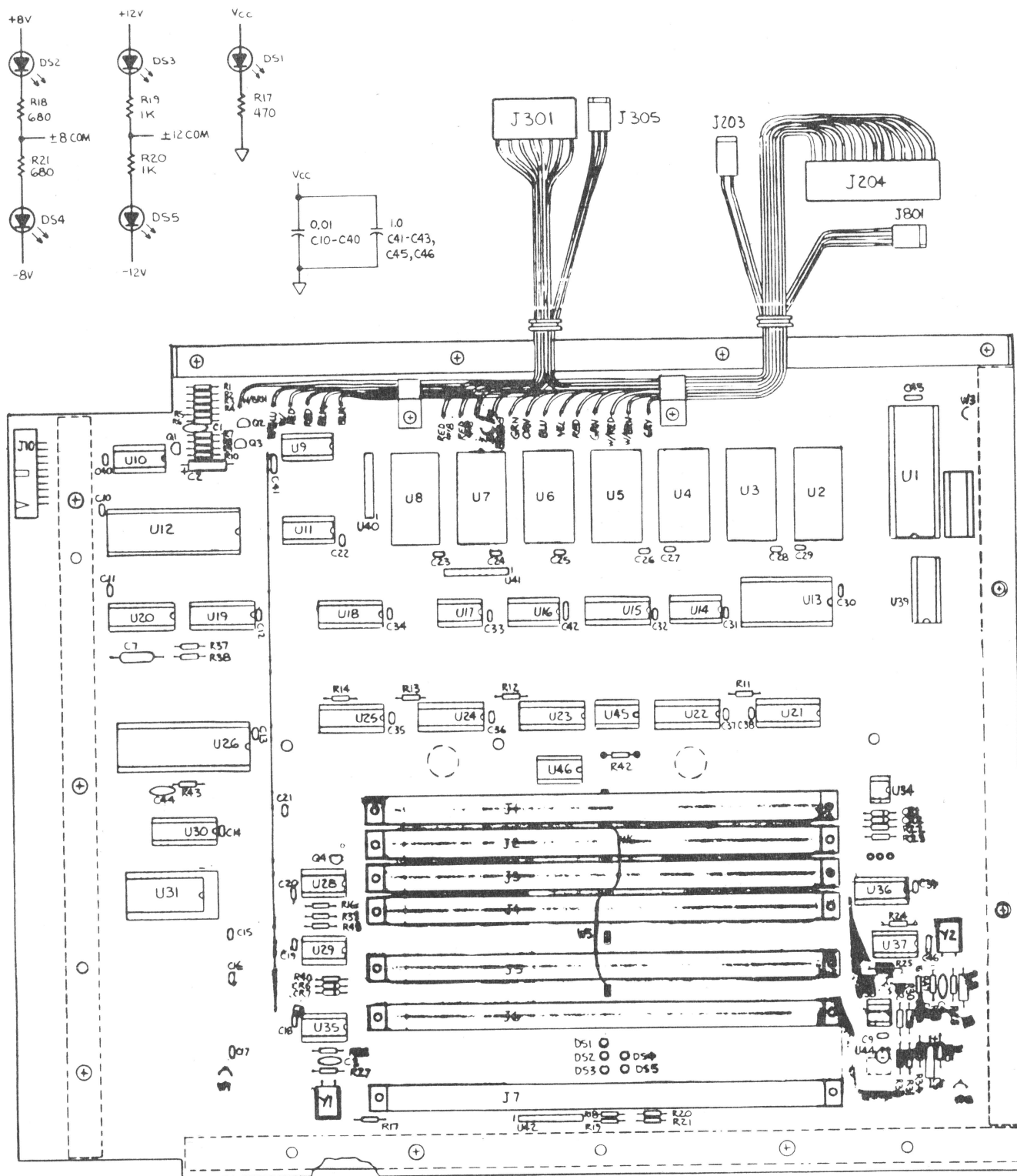
<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
R33,R35,R34	RESISTOR, 470 ohm, 1/4W, 10%	13915
R37	RESISTOR, 120 ohm, 1/4W, 10%	13908
R38	RESISTOR, 100 ohm, 1/4W, 1%	21720
R40	RESISTOR, 5.6 kilohm, 1/4W, 10%	13928
R47	RESISTOR, 10 ohm, 1/4W, 10%	13895
U1	IC, 280 uP	46178
U2-U6	IC, EPROM SET	55088
U7,U8	IC, 2K x 8 RAM (Model 2150)	47264
U7,U8	IC, 8K x 8 RAM (Model 2160)	53874
U9	IC, 74LS139	45656
U10	IC, 7442	20608
U11,U16	IC, DM8131	45527
U12	IC, 8279	45651
U13	IC, MK3882, PROGRAM COUNTER TIMER	49183
U14	IC, FUSIBLE LINK PROM	53863
U15	IC, PAL14L4 (PRGM ARRAY LOGIC CHIP)	47321
U17,U35,U37	IC, 7404	20695
U18-U25	IC, DP8304B	45262
U26	IC, MC6847	45472
U28	IC, 7410	20603
U29,U46	IC, 7474	26225
U30,U39	IC, 74S373, OCTAL D LATCH	46201
U31	IC, 2K x 8 RAM (standard, Model 2150/2160)	47264
U31	IC, 2K x 8 ZRAM (optional, Model 2150/2160)	55843
U34	IC, 4N28, OPTO ISOLATOR	20674
U36	IC, 74LS163A	45647
U38	IC, LM311	29544
U40,U42	RESISTOR PAK, 10 kilohm, SIP	46560
U41	RESISTOR PAK, 330 ohm, SIP	46072
U44	IC, MC1403, 2.5V REF	43099
U45	IC, 7401	20601

5.3 MOTHERBOARD CIRCUIT ASSEMBLY (P/N 54569) (cont)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
W1-W4	WIRE, #18 BUS	06089
W5,W6	JUMPER, 3 INCH #22 YEL, 0.025 SQ SOCKET	48453
Y1	CRYSTAL, 3.58MHz	45663
Y2	CRYSTAL, 7.68MHz	45662
	BRACE, RH SIDE	46227
	BRACE, FRONT	46228
	BRACE, BACK	46229
	BUS STRIP	23997
	CABLE ASSEMBLY, MOTHERBOARD-TO-POWER SUPPLY	47111
	CABLE CLAMP	01703
	CABLE CLAMP	05269
	CONNECTOR STRIP, 36 PIN, 0.025 SQ	24012
	PIVOT, BRACKET	45163
	SOCKET, IC, 16 PIN	20860
	SOCKET, IC, 40 PIN	41342
	SOCKET, IC, 28 PIN	43844
	SOCKET, IC, 20 PIN	45660



POWER SUPPLY MONITOR LED'S



NOTE:

1. All Resistor Values are in Ohms, 1/4 W, 10%, Unless Otherwise Stated
2. All Capacitors are in μ F Unless Otherwise Stated

Figure 5-3. Motherboard Circuit Assembly (P/N 54569)

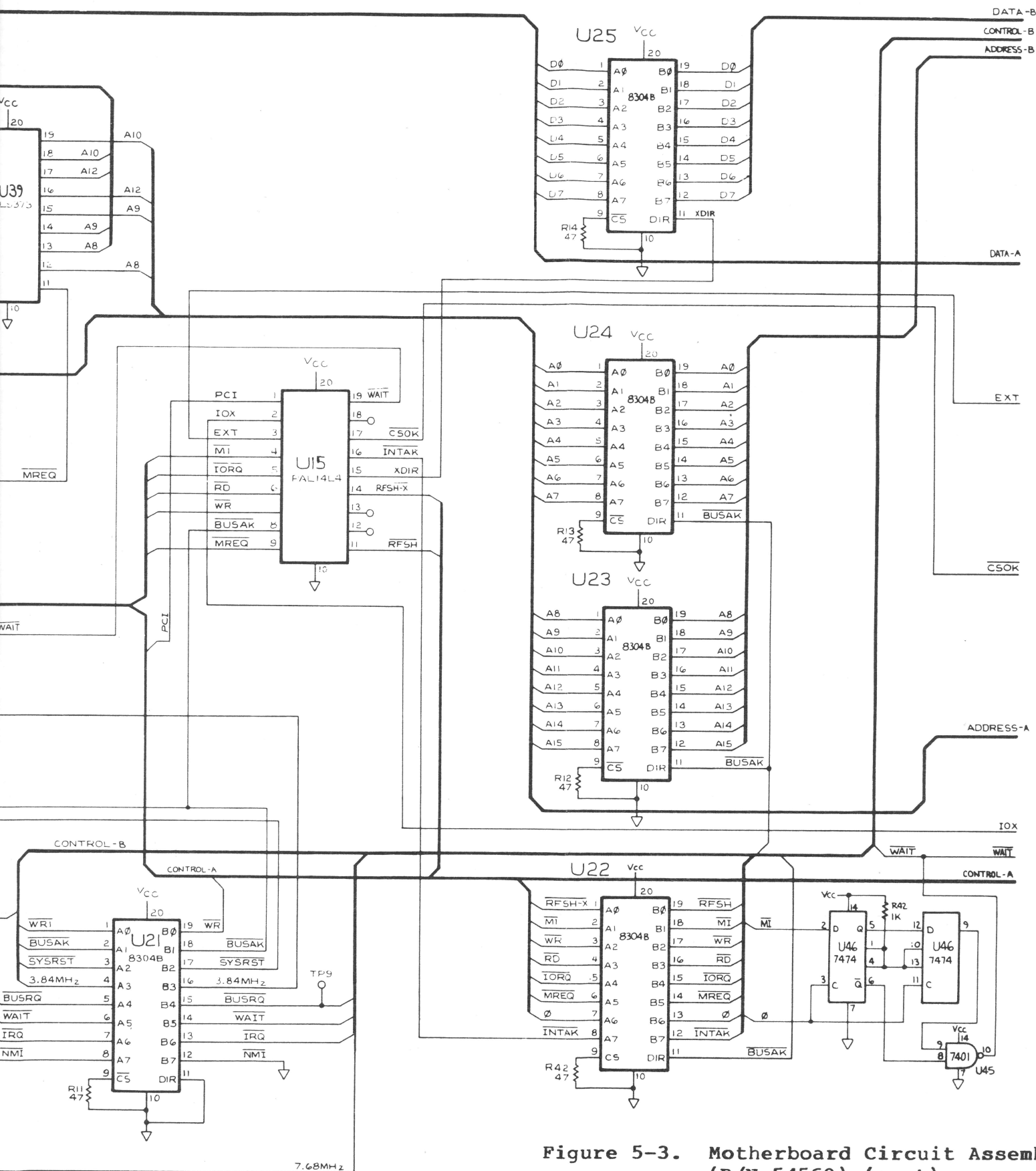


Figure 5-3. Motherboard Circuit Assembly (P/N 54569) (cont)



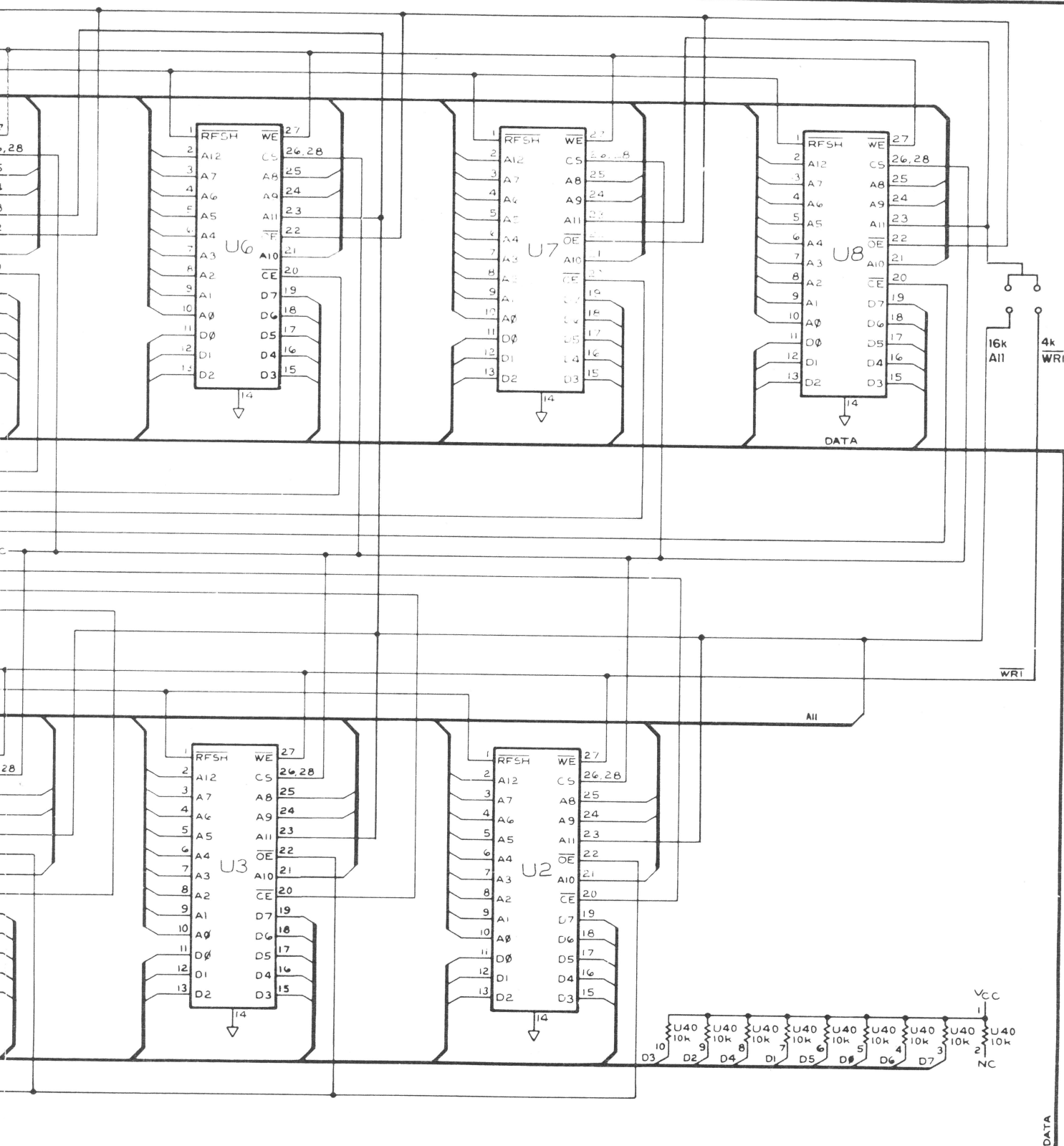


Figure 5-3. Motherboard Circuit Assembly (P/N 54569) (cont)

DATA-B
CONTROL-B
ADDRESS-B

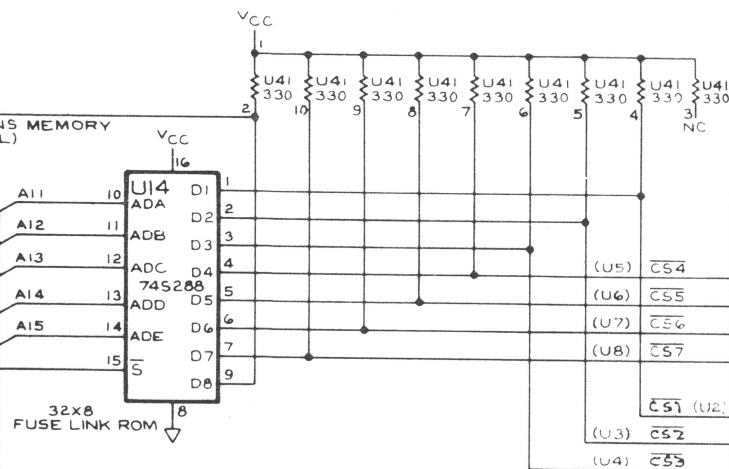
DATA-A

EXT
(TRUE MEANS MEMORY
IS EXTERNAL)

CSOK

ADDRESS-A

IOX
WMT
CONTROL-A
DATA-A
ADDRESS-A



RD

WRI

RF5H-X

WRI

RF5H-X

RD

MEMORY MATRI

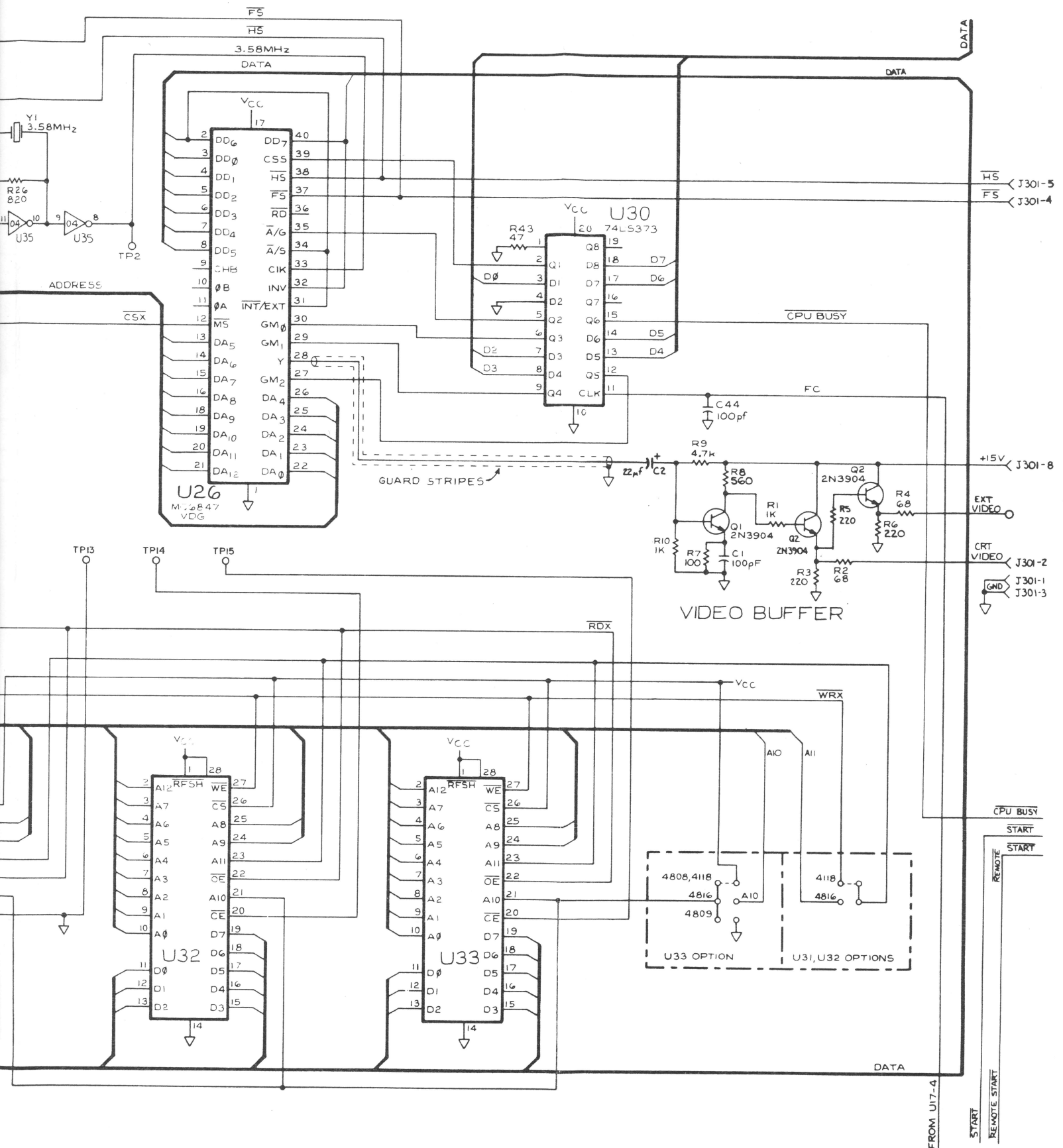


Figure 5-3. Motherboard Circuit Assembly (P/N 54569) (cont)

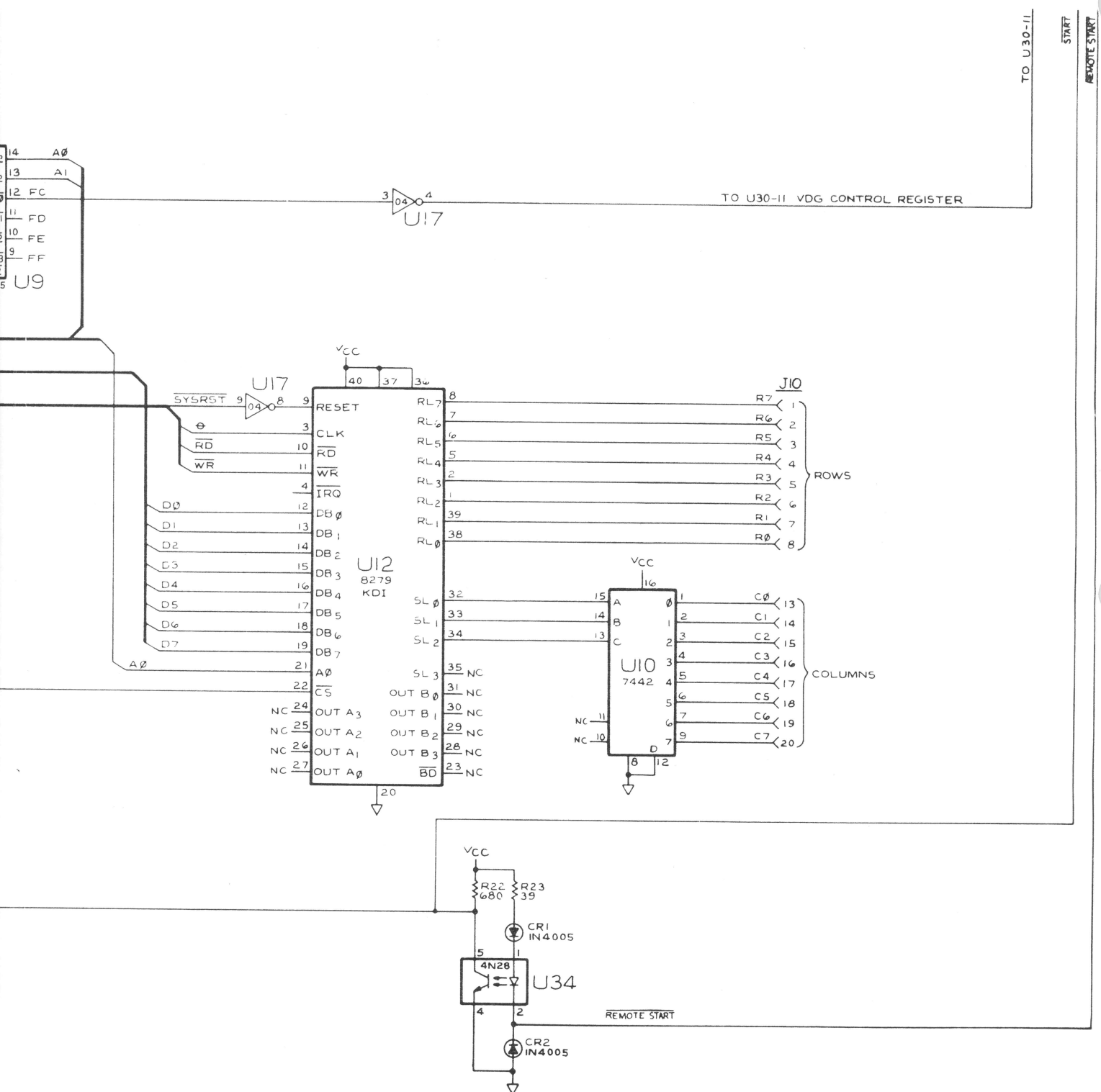
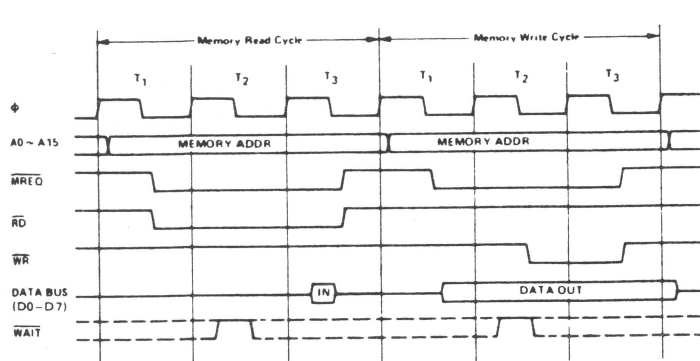
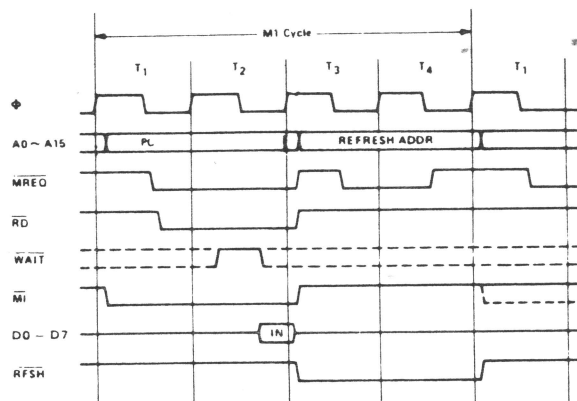


Figure 5-3. Motherboard Circuit Assembly (P/N 54569) (cont)

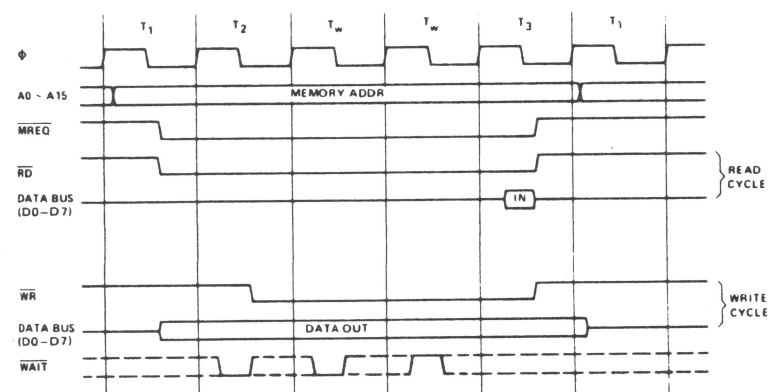




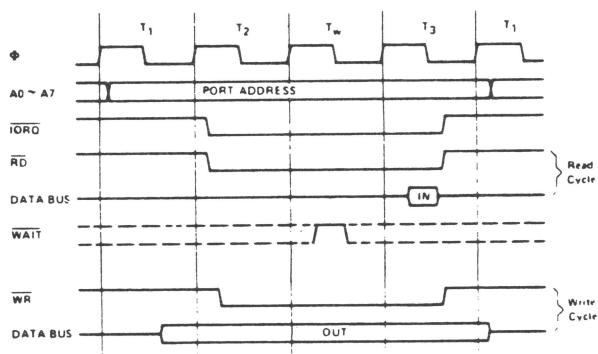
MEMORY READ OR WRITE CYCLES



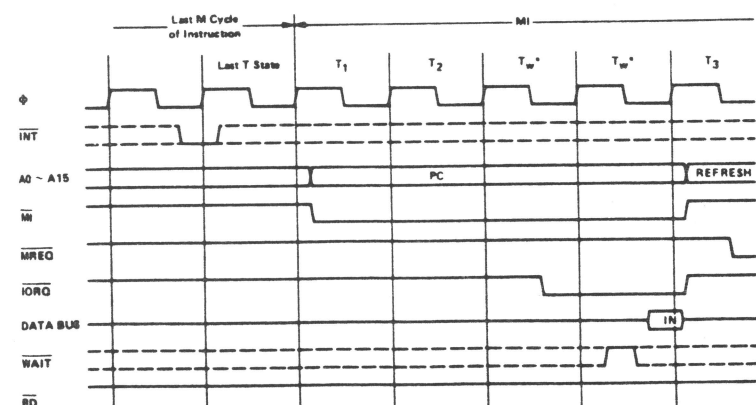
INSTRUCTION OF CODE FETCH



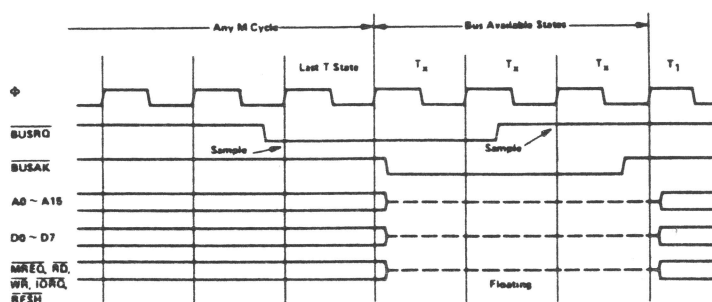
MEMORY READ OR WRITE CYCLES WITH WAIT STATES



INPUT OR OUTPUT CYCLES

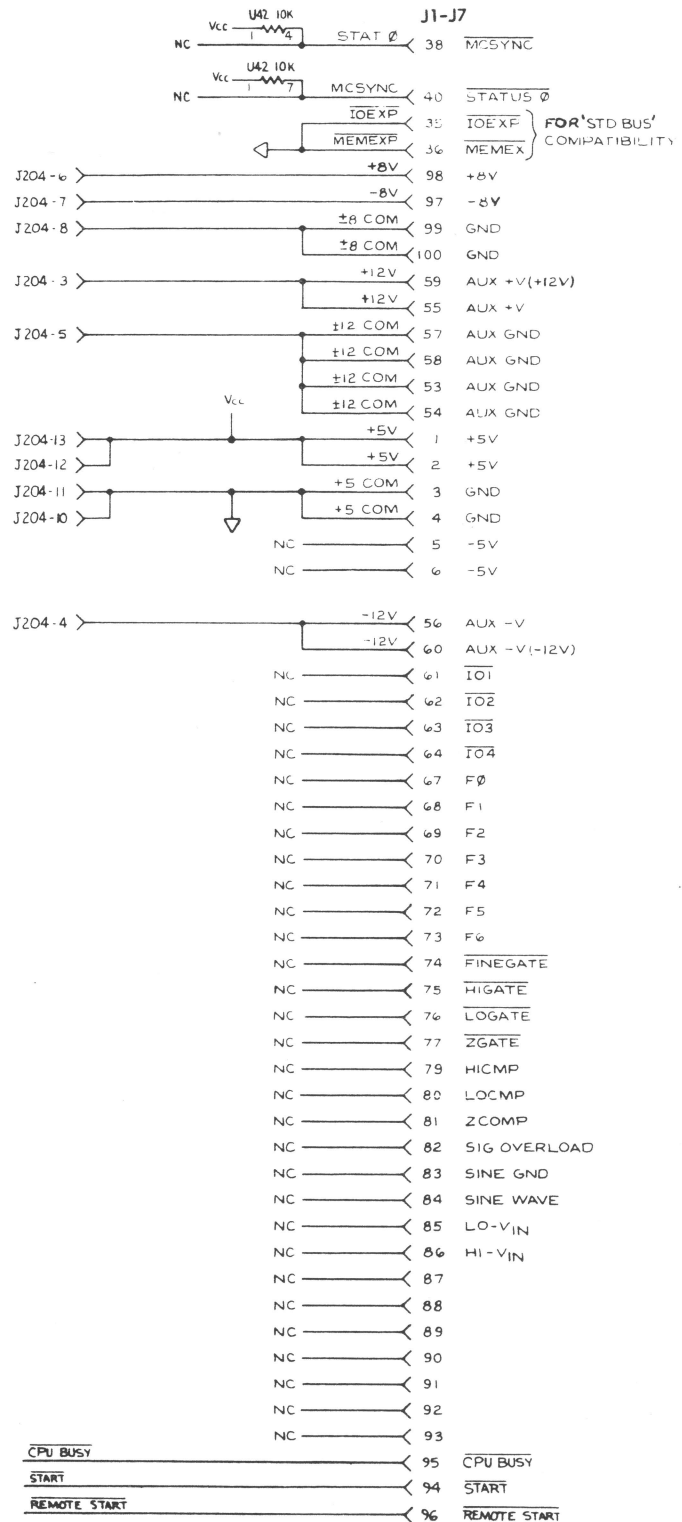
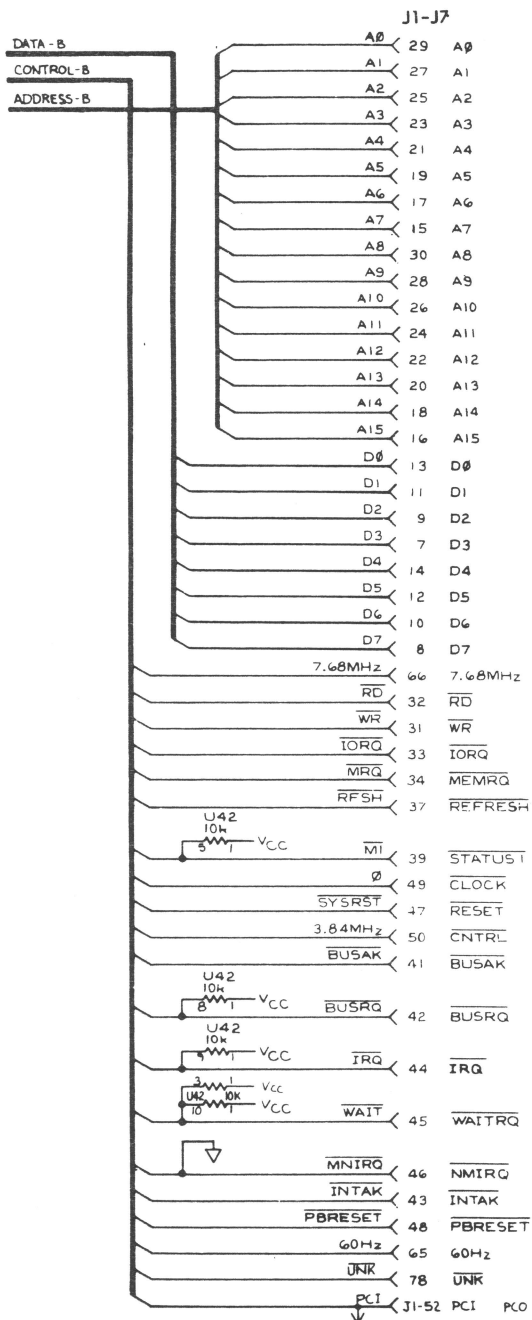


INTERRUPT REQUEST/ACKNOWLEDGE CYCLE



BUS REQUEST/ACKNOWLEDGE CYCLE

Figure 5-3. Motherboard Circuit Assembly (P/N 54569) (cont)



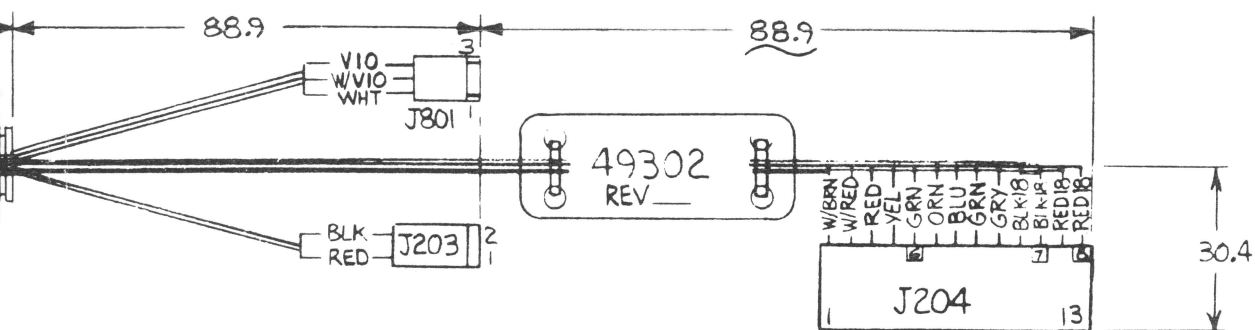
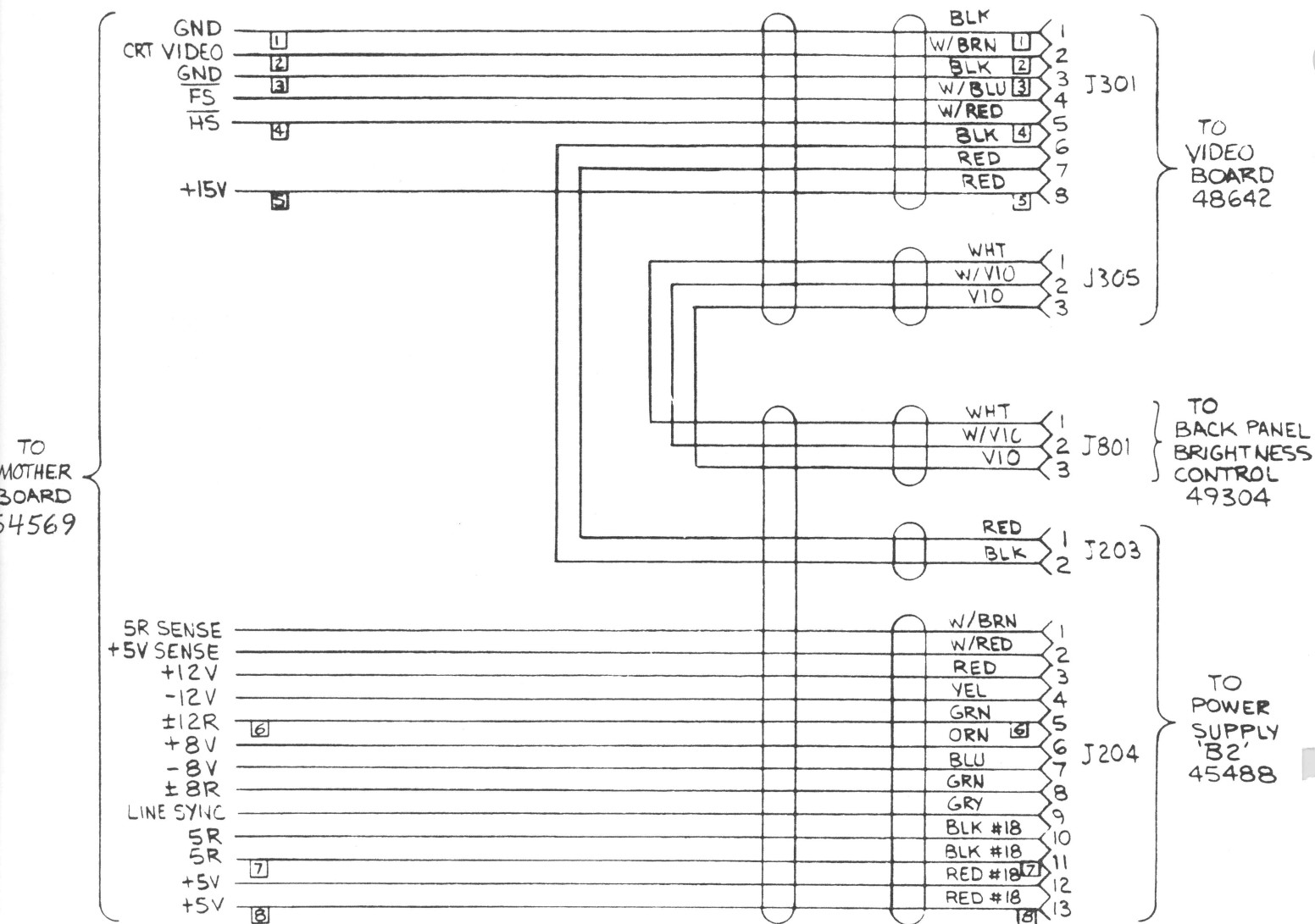


Figure 5-4. Motherboard Cable Assembly (Part No. 49302)

TO
MOTHER
BOARD
5456

Diagram illustrating the wiring configuration for a 16-pin connector, showing the connection between the connector pins and the internal wiring harness.

Connector Pinout (Left):

- Pin 1: W/BLU
- Pin 2: W/RED
- Pin 3: RED
- Pin 4: BLK
- Pin 5: BLK
- Pin 6: W/BLU
- Pin 7: W/RED
- Pin 8: RED
- Pin 9: W/BLU
- Pin 10: W/RED
- Pin 11: RED
- Pin 12: BLK
- Pin 13: BLK
- Pin 14: W/BLU
- Pin 15: W/RED
- Pin 16: RED

Connector Pinout (Right):

- Pin 1: W/BLU
- Pin 2: W/RED
- Pin 3: RED
- Pin 4: BLK
- Pin 5: BLK
- Pin 6: W/BLU
- Pin 7: W/RED
- Pin 8: RED
- Pin 9: W/BLU
- Pin 10: W/RED
- Pin 11: RED
- Pin 12: BLK
- Pin 13: BLK
- Pin 14: W/BLU
- Pin 15: W/RED
- Pin 16: RED

Dimensions:

- Overall width: 114.3
- Overall height: 25.4
- Pin pitch: 6.35 (TYP 16 PLCS)
- Distance from centerline to Pin 1: 12.70
- Distance from centerline to Pin 16: 12.70
- Distance from centerline to Pin 8: 76.2
- Distance from centerline to Pin 9: 76.2
- Distance from centerline to Pin 16: 114.3
- Distance from centerline to Pin 1: 114.3
- Distance from centerline to Pin 8: 76.2
- Distance from centerline to Pin 9: 76.2
- Distance from centerline to Pin 16: 114.3

Wiring Labels:

- RED #18
- RED #18
- BLK #18
- BLK #18
- GRN
- ORN
- BLU
- YEL
- RED
- GRN
- W/RED
- W/BLU
- GRY

Other Labels:

- J301
- J305
- 25.4 REF
- 88.9

5.4 ANALOG CIRCUIT ASSEMBLY (P/N 53675)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PC BOARD, ANALOG	53674
	PANEL, CONNECTOR	45162
	SWING LUG, BINDING POST	03247
	BRACKET, CONNECTOR PANEL	45161
	HEAT SINK, 14-16 PIN DIP	54740
	BUS, POWER STRIP	23997
	SOCKETS, 14 PIN DIP	19189
	SOCKETS, 16 PIN DIP	20860
	SOCKETS, 8 PIN DIP	52188
	SOCKETS, 8 PIN DIP	22410
	SOCKETS, 10 PIN DIP	46481
	SOCKET, 20 PIN DIP	45660
	CONNECTOR, BNC ISOLATED	41820
	FUSE CARRIER, GRAY 3AG	45966
	POST, FUSE BODY, HI PROFILE	45968
	JACK 1/8" PHONO	47082
	PLUG, MALE PIN PHONO	47083
	POST, BINDING	01435
	FUSE CARRIER ALT METRIC 5 x 20 BLK	45965
	INSULATOR, TRANSFORMER MTG	47275
C1,C3,C5,C6,	CAPACITOR, 0.1 microfarad, 50V, DIP	51268
C12,C13,C15,		
C16,C21,C22,		
C24-C28,C30,		
C31,C34,C35,		
C36,C43,C56		
C2,C8,C20	CAPACITOR, 30 picofarads, POLY	20242
C4,C14,C23,	CAPACITOR, 0.47 microfarad, 100V	45645
C29		

5.4 ANALOG CIRCUIT ASSEMBLY (cont)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
C7	CAPACITOR, 100 picofarad, POLY	18760
C9,C10,C19	CAPACITOR, 220 picofarad, POLY	29297
C11,C39	CAPACITOR, 470 picofarad, POLY	44711
C17	CAPACITOR, 0.022 microfarad, 200V, MYLAR	48665
C18	CAPACITOR, 0.0022 microfarad,	12399
C37,C38	CAPACITOR, 390 picofarad, POLY	29299
C40,C41	CAPACITOR, 0.01 microfarad, 50V CERAMIC	78032
C44,C48	CAPACITOR, 8.2 picofarad, DISC	02127
C45	CAPACITOR, 25 microfarad, 25V ELECTROLYTIC	01941
C46,C47	CAPACITOR, 6.8 microfarad, TANT 35V	43792
C50,C51	CAPACITOR, 0.047 microfarad, 63VDC, FILM	54696
C52,C53	CAPACITOR, 0.0022 microfarad, 100VDC, FILM	54697
C54,C55	CAPACITOR, 0.0047 microfarad, 100VDC, MYLAR	54694
C57	CAPACITOR, 150 picofarad, POLY	29606
C58	CAPACITOR, 500 picofarad, CERAMIC, 1000V	01920
C59	CAPACITOR, 47 picofarad,	29605
C60,C61	CAPACITOR, 0.047 microfarad, 63VDC, FILM	54695
C62	CAPACITOR, 10 microfarad, 20V, TANT	43856
C63	CAPACITOR, 15 picofarad, 1kV, 5%	56191
	CAPACITOR, 0.02 microfarad, 100V, 20%	12115
CR1,CR2,CR5, CR6,CR7,CR9, CR10	DIODE, 1N4005, 500V PIV	13654
CR12,CR13, CR16-CR19, CR24,CR25, CR30-CR35	DIODE, 1N914A, 75V PIV	12356
CR22	SURGE ARRESTOR, GAS	55494
CR23	VARISTOR, 10V LIMIT	42632
CR26,CR27	DIODE, 1N5355A, ZENER, 18V, 5 OWT	29033
	DIODE, 1N4937 600V PIV	45856
F2	FUSE, 0.5A, 250V, 3AG, FAST-BLOW	01802

5.4 ANALOG CIRCUIT ASSEMBLY (cont)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
K1,K4,K6	RELAY, FORM 1A, 5V, SIP	53599
K2,K5	RELAY, GB 822	26667
K3	RELAY, 1805 B-300 ELECTRODYNE	46286
Q1,Q2	XSTR, PNP/NPN ARRAY (WITH HEAT SINK)	55067
R1	RESISTOR, 8.2 kilohm, 1/2W, 5%	06181
R2	RESISTOR, 22 kilohm, 1/2W, 10%	02453
R3	RESISTOR, 820 ohm, 1W, 10%	26836
R4	RESISTOR, 47 ohm, 1W, 10%	53593
R5,R6	RESISTOR, 100 kilohm, 1/4W, 10%	13945
R7	RESISTOR, 18 ohm, 1W, 5%	55845
R8	RESISTOR, 90 kilohm, 0.01%	53953
R9	RESISTOR, 10 ohm, ESI QB, 0.005%	53952
R10	RESISTOR, 90 ohm, ESI QB, 0.005%	53954
R11	RESISTOR, 900 ohm, ESI QB, 0.005%	53956
R12	RESISTOR, 9 kilohm, ESI QB, 0.005%	53955
R13,R18,R25, R33-R35,R41	RESISTOR, 10 kilohm, 1/4W, 10%	13933
R14,R16,R24, R36	RESISTOR, 2 megohm, 1%	21772
R15	RESISTOR, 500 kilohm, VARIABLE, 20T	54104
R17	RESISTOR, 15 megohm, 10%	13976
R19-R23	RESISTOR, 2 kilohm, VARIABLE, 1/4W	46388
R26	RESISTOR, 2.55 ohm, 1/4W, 1%	21761
R27	RESISTOR, 1 kilohm, 1/4W, 1%	21730
R30,R42,R43	RESISTOR, 10 kilohm, 1%	21740
R31	RESISTOR, 9.53 kilohm, 1/4W, 1%	21762
R32,R49,R51, R60-R63	RESISTOR, 2.2 kilohm, 1/4W, 10%	13924

5.4 ANALOG CIRCUIT ASSEMBLY (cont)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
R37-R40	RESISTOR, 2.7 ohm, 1/4W, 10%	13887
R44	RESISTOR, 4.99 kilohm, 1/4W, 1%	21737
R45,R46	RESISTOR, 10 kilohm, VARIABLE	46204
R47	RESISTOR, 150 ohm, 1/4W, 10%	13909
R48,R52,R53	RESISTOR, 1 kilohm, 1/4W, 10%	13920
R58		
R54,R55	RESISTOR, 10 kilohm, VARIABLE, 20T	41902
R56,R57	RESISTOR, 10 ohm, 1/4W, 10%	13895
R65,R66	RESISTOR, 100 ohm, 1/4W, 10%	13907
R68	RESISTOR, 2.7 kilohm, 1/4W, 10%	13925
T1	TRANSFORMER	46480
TP1-TP8	TERMINAL, TURRET	52073
U1,U19	IC, HA5115	53895
U2,U3,U6,U8	IC, LF356N	41473
U4,U10,U20	IC, 4052AE	20743
U5	IC, CD4051	40841
U7	IC, LM311	29544
U11,U13	IC, TL074	43299
U12	IC, 74S472, PROGRAMMED	53960
U14,U17	IC, AD7524JN DAC	45652
U15	IC, DIP RESISTORS R698-3-R10K	43077
U16	IC, SIP RESISTORS	47328
U18,U21	IC, 7475N	20614
U22	IC, AD7548 DAC	54174
U23	IC, 7406	20678
U24	IC, 74LS373	46201

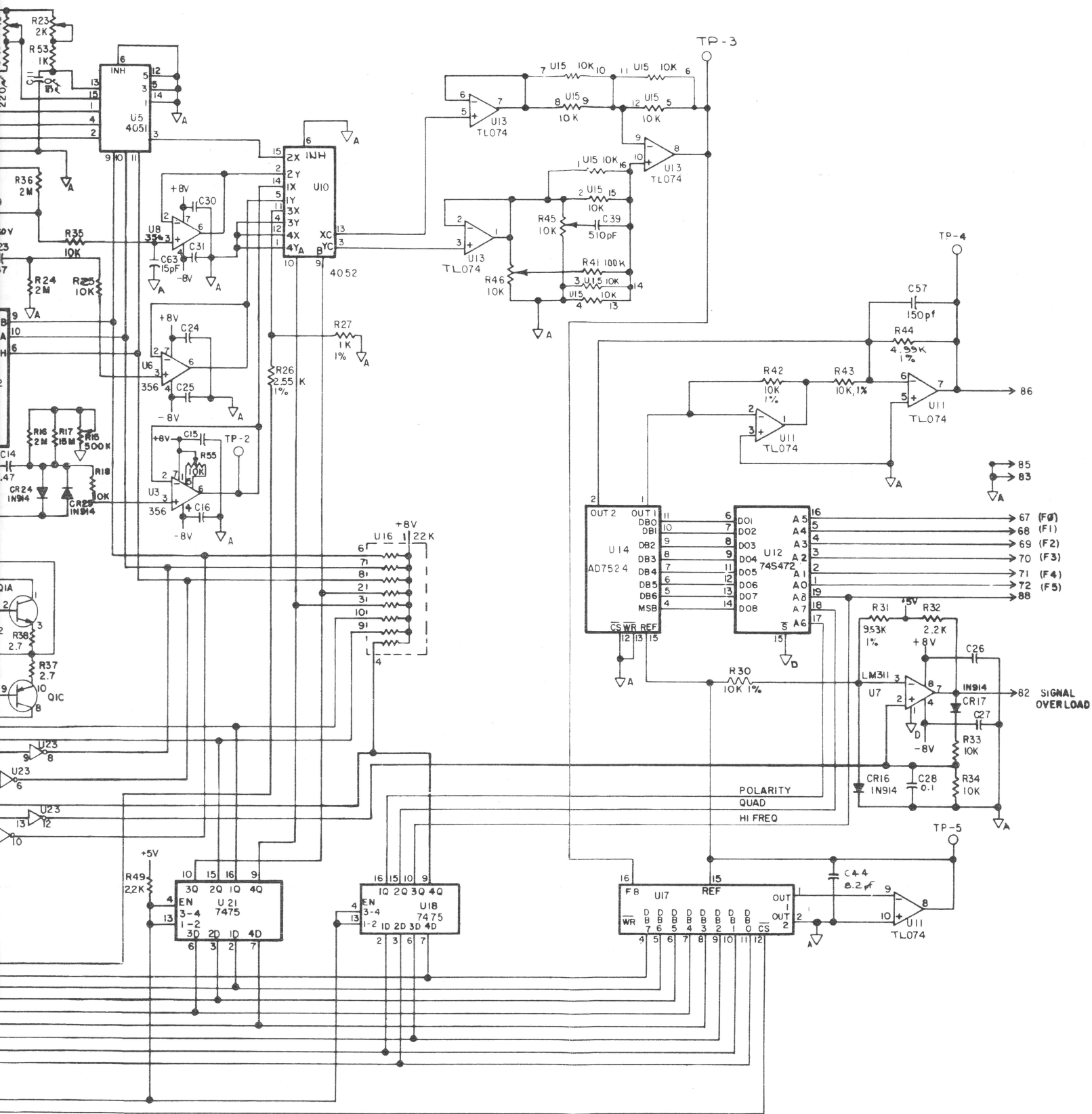
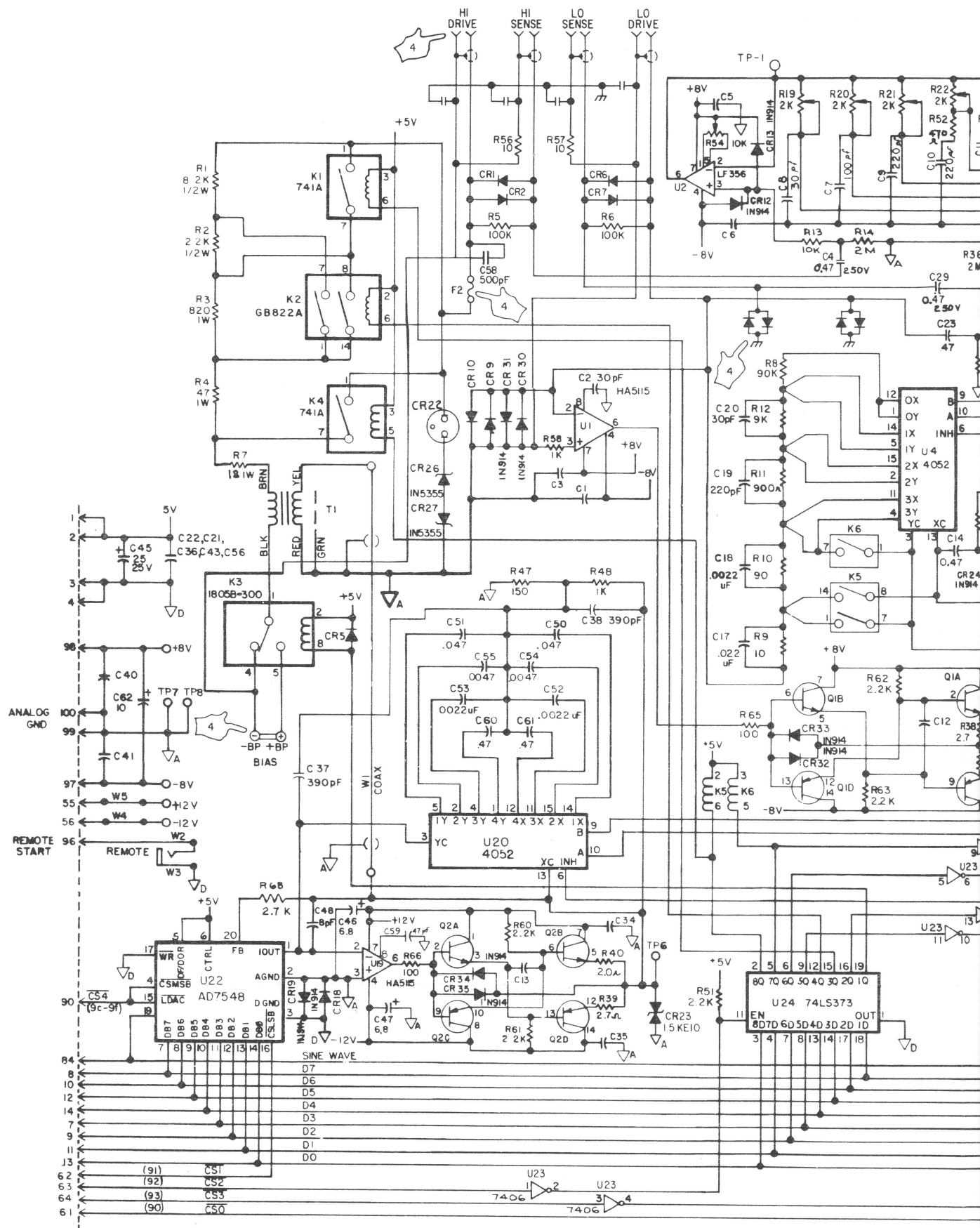


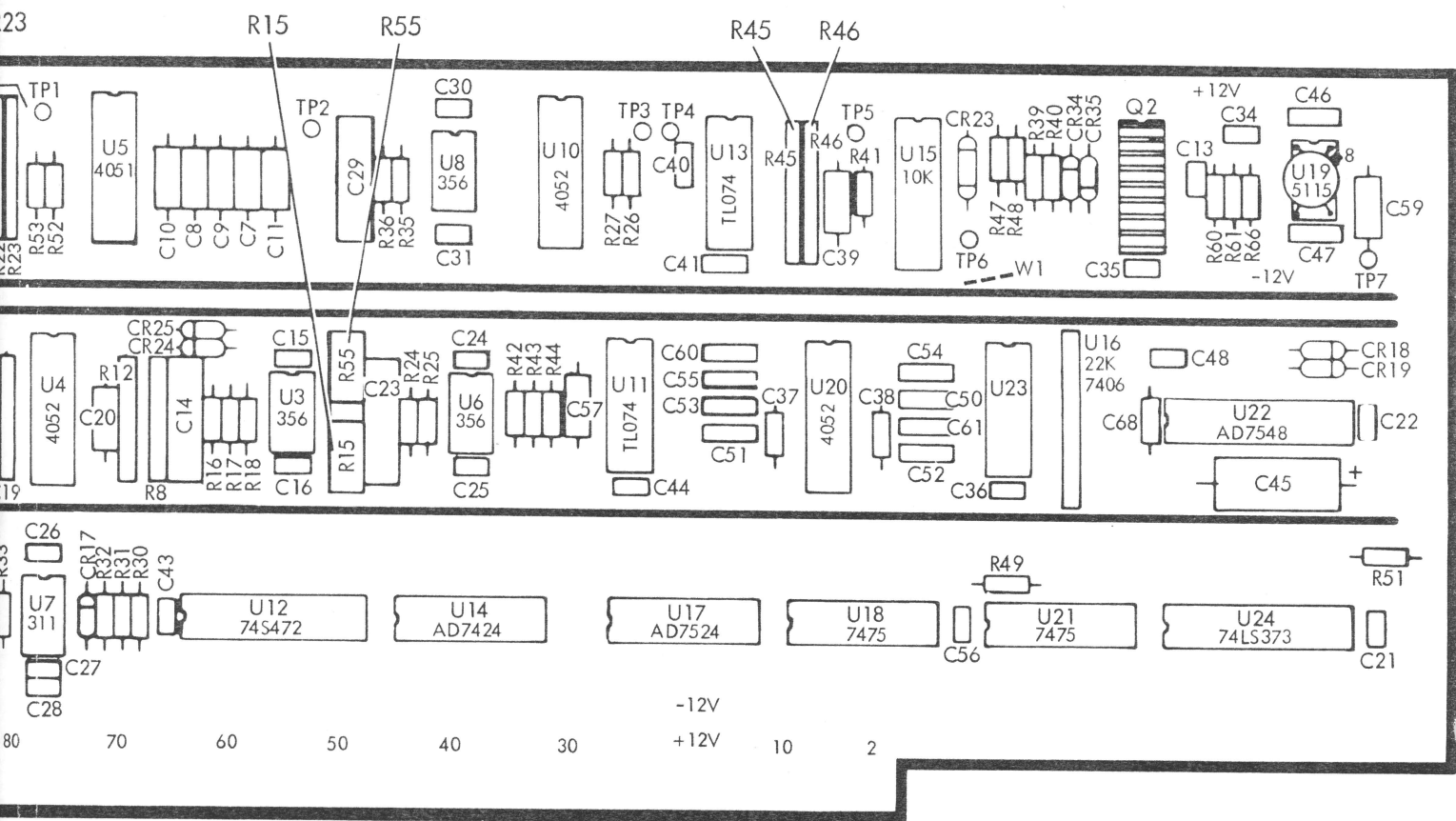
Figure 5-5. Analog Circuit Assembly (P/N 53675)



NOTES; UNLESS OTHERWISE SPECIFIED:

1. ALL RESISTOR VALUES ARE IN OHMS, 1/4 W, 10%.
2. ALL CAPACITORS ARE IN μ F, UNLISTED VALUES ARE
3. ALL DIODES ARE IN4005.

4 COMPONENTS NOTED ARE MOUNTED ON THE REAR PANEL



. Analog Circuit Assembly (P/N 53675) (cont)

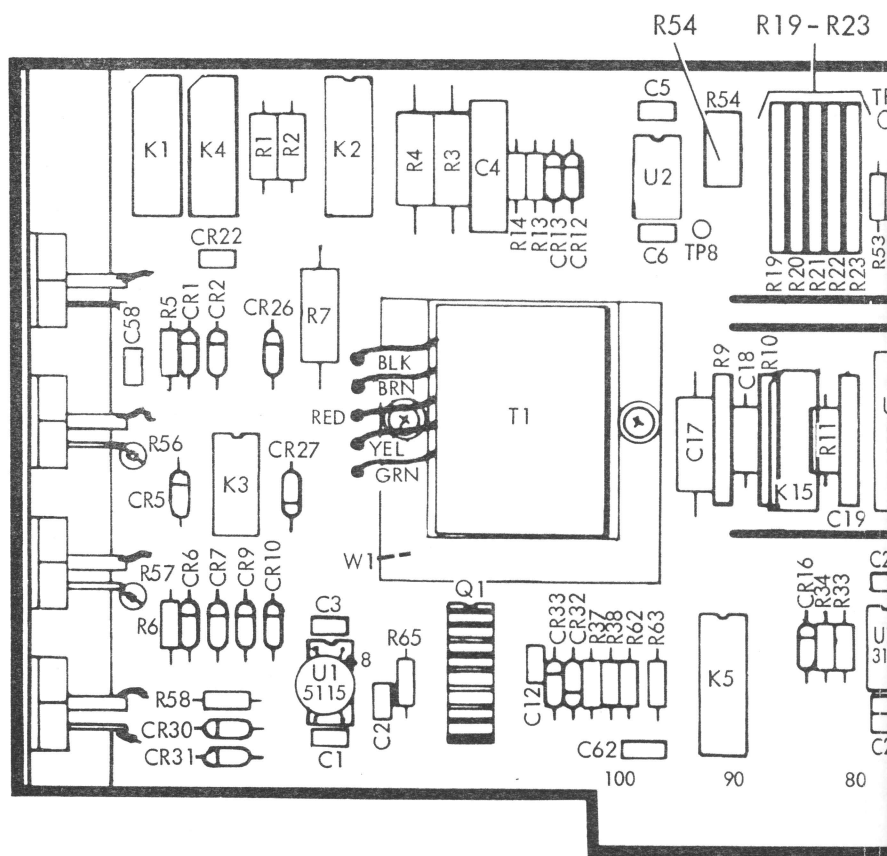


Figure 5-5.

5.5 DIGITAL CIRCUIT ASSEMBLY (P/N 53522)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PC BOARD, DIGITAL	53521
C3	CAPACITOR, 0.068 microfarad, 250V, POLY	47081
C4,C5,C7,C10, C11,C12,C13, C15,C17,C19, C25,C26	CAPACITOR, 0.01 microfarad, 50V, 20%, DIP	54326
C6	CAPACITOR, 100 picofarad, 1kV	12241
C8,C9,C27	CAPACITOR, 25 microfarad, 25V	01941
C18	CAPACITOR, 10 picofarad, 1kV	43277
C28	CAPACITOR, 0.01 microfarad, 50V, 20%	45658
CR1,CR2	DIODE, 1N914A	12356
R1	RESISTOR, Variable, 50 kilohm	12091
R2	RESISTOR, 255 kilohm, 1%	21228
R3	RESISTOR, 1 megohm, 1%	18236
R4-R6,R8,R19	RESISTOR, 10 kilohm, 10%, 1/4W	13933
R7	RESISTOR, 3.3 kilohm, 5%, 1/4W	13926
R9	RESISTOR, 10 kilohm, 1%	21740
R10	RESISTOR, 249 ohm, 1%	21724
R11	RESISTOR, 1 megohm, 10%, 1/4W	13960
R12-R14	RESISTOR, 2.2 kilohm, 10%, 1/4W	13924
R15	RESISTOR, 33 kilohm, 10%, 1/4W	13939
R16,R18	RESISTOR, 100 kilohm, 10%	13945
R17	RESISTOR, 1 kilohm, 10%	13920
R20	RESISTOR, 4.7 kilohm, 5%, 1/4W	13927
U1	IC AD7519JN	46476
U2,U12	DIP RESISTOR, 10 kilohm, R698-3-R10K	43077
U3	IC, TL074	43299
U4	IC, 7406	20678
U5	IC, LM339	40849
U6	IC, 7474	26225
U7,U11	IC, 7400	20600

5.5 DIGITAL CIRCUIT ASSEMBLY (P/N 53522) (cont)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
U8	IC, 7420	20604
U9	IC, REF02CJ OR MC1404U5	45654
U10	IC, 7404	20695
U13	IC, DAC08	44264
U14	IC, NE5534N, OPAMP	46406
U15,U16,U19, U22-U25,		
U30,U31	IC, SN74LS163A	45647
U17	IC, PROGRAMMED PROM DGTL	53959
U18	IC, 74LS139	45656
U20	IC, 7410	20603
U21,U28	IC, DP8304B	45262
U26	IC, DM8131	45527
U27	IC, 8255A	45650
U29	IC, 8253-5	49185
	GROUND BRACKET, PCB	45951
	POWER BUS STRIP	23997
	SOCKET, 14 PIN DIP	19189
	SOCKET, 16 PIN DIP	20860
	SOCKET, 20 PIN DIP	45660
	SOCKET, 24 PIN DIP	41492
	SOCKET, 40 PIN DIP	41342
	SOCKET, 8 PIN DIP	22410

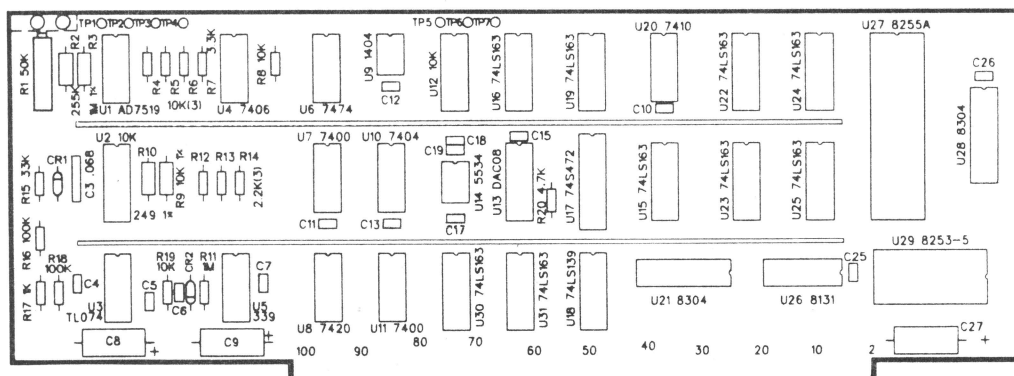
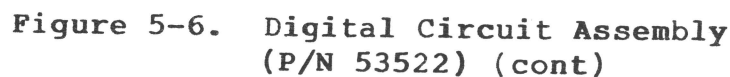
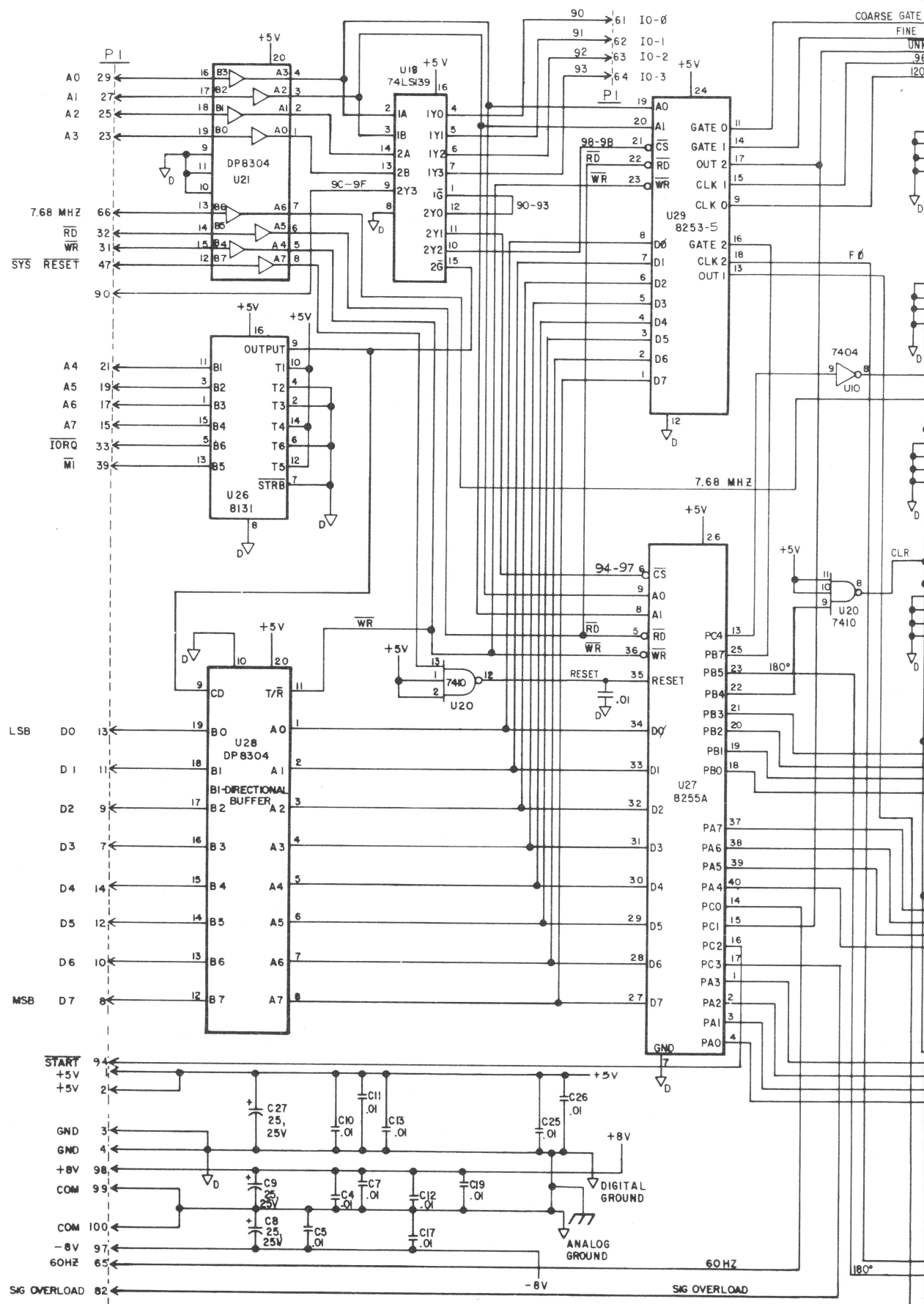


Figure 5-6. Digital Circuit Assembly (P/N 53522)





5.6 CRT SUBASSEMBLY (P/N 46095)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	CASE, LOWER CRT	45075
	SUBASSEMBLY, BACK PANEL	48364
	PANEL, SEPARATOR, CRT	45291
	BRACKET, PCB MT	45204
	BRACKET, CRT LH	45783
	BRACKET, CRT	44825
	INSULATOR, POWER SWITCH	45277
	ACTUATOR, POWER SWITCH	45279
	SPACER, POWER SWITCH	45281
	BRACKET, PIVOT ROD	45366
	CRT 5 INCH	45878
	ASSEMBLY, DEFLECTION YOKE	48704
	CABLE, CRT - VIDEO BOARD	46504
	SWITCH, POWER, PUSHBUTTON	23164
	SPRING, RETURN	46505
	CIRCUIT ASSEMBLY, VIDEO	48642
	INSERT, SHEET EDGE	50749
	STANDOFF, COVER	46292

5.6.1 Video Circuit Assembly (P/N 48642)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PC CARD, VIDEO	48641
C1	CAPACITOR, 22 microfarad, 15V, TANT	18852
C2	CAPACITOR, 390 picofarad, POLY	29299
C3,C11	CAPACITOR, 1000 picofarad, POLY	07094
C4	CAPACITOR, 0.01 microfarad, 100V, MYLAR	12260
C5,C9	CAPACITOR, 1 microfarad, CERAMIC	43852
C6	CAPACITOR, 0.47 microfarad, 100V, 5%	45645
C7,C8,C12,C13		
C14	CAPACITOR, 47 microfarad, 50V, RADIAL, ELEC	46482
C10	CAPACITOR, 0.01 microfarad, 100V, CERAMIC	12144
C15	CAPACITOR, 0.022 microfarad, 200V, MYLAR	48665
C16	CAPACITOR, 10 microfarad, 35V, MYLAR	48532
C17,C18,C19,		
C20	CAPACITOR, 0.01 microfarad, 1000V, CERAMIC	46484
CR1,CR2,CR3,		
CR5,CR6,CR7	DIODE, 1N914A	12356
CR4	DIODE, 1N4736, 6.8V ZENER	12443
CR8,CR9,CR10,		
CR11	DIODE, 1N4007	12161
L1	COIL, HORIZONTAL LINEARITY	48703
L2	COIL, HORIZONTAL WIDTH	48702
P301,P302		
P304	CONNECTOR, 8 PIN MALE, PC	46631
P303	CONNECTOR, 4 PIN MALE, PC	46629
P305	CONNECTOR, 3 PIN MALE, PC	46847
Q1,Q3,Q5	TRANSISTOR, 2N3904	18751
Q2,Q4	TRANSISTOR, 2N3906	18754
Q6	FET, VN10KM	49062
Q7	FET,IRF630	48725
R1	TRIMPOT, 220 ohm, PC, 3/4T	48736
R2	RESISTOR, 68 ohm, 1/4W, 10%	13902
R3	RESISTOR, 3.9 kilohm, 1/4W, 10%	13929

5.6.1 Video Circuit Assembly (P/N 48642) (cont)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
R4,R7,R8,R9		
R10,R18,R28	RESISTOR, 10 kilohm, 1/4W, 10%	13933
R5	RESISTOR, 27 kilohm, 1/4W, 10%	13938
R6,R21	RESISTOR, 100 ohm, 1/4W, 10%	13907
R11,R27,R30,		
R31	RESISTOR, 100 kilohm, 1/4W, 10%	13945
R12	RESISTOR, 220 kilohm, 1/4W, 10%	13949
R13	RESISTOR, 1 megohm, 1/4W, 1%	18236
R14	RESISTOR, 1 kilohm, 1/4W, 10%	13920
R15,R19	RESISTOR, 3.3 kilohm, 1/4W, 10%	13926
R16,R17	TRIMPOT, 5 kilohm, PC, 3/4T	48724
R20,R25,R26	RESISTOR, 49.9 kilohm, 1/4W, 1%	21747
R22,R24,R29	RESISTOR, 1 ohm, 1/2W, 10%	12448
R23	RESISTOR, 33 ohm, 1/2W, 10%	46485
R32	TRIMPOT, 1 megohm, PC, 3/4T	48737
T1	TRANSFORMER, HIGH VOLTAGE	48705
U1	IC, CA3140, OP-AMP	48723
U2,U3	IC,UA759, PWR OP-AMP	46479
U4	IC, 555, TIMER	20721
	SOCKET, 8 PIN DIP	22410
	SHOCK SHIELD, VIDEO	49191
	BOX, H.V. XFMR	49190
	INSERT, SHEET EDGE 6-32	50740
	STANDOFF, PLASTIC PCB SUPPORT	49398
	SCREW, 6-32 x 0.375LG PHP	03643
	SCREW, 4-40 x 0.312 LG PHP	03630
	SOLDER LUG, #4	05890
	SHOULDER WASHER, #4 INSULATING	41937
	INSULATOR, RECTANGULAR SILICON	46256
	WIRE, #22 SOLID	06091
	BUSHING, 0.312 x 0.25ID x 0.375 OD	49397



DANGER

HIGH VOLTAGES ARE PRESENT. USE EXTREME CAUTION TO PREVENT POSSIBLE PHYSICAL INJURY AND/OR ELECTRICAL SHOCK.

EXTERNAL COMPONENTS
REF ONLY

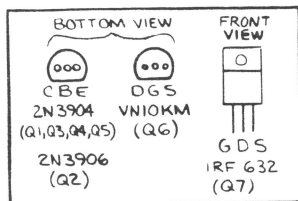
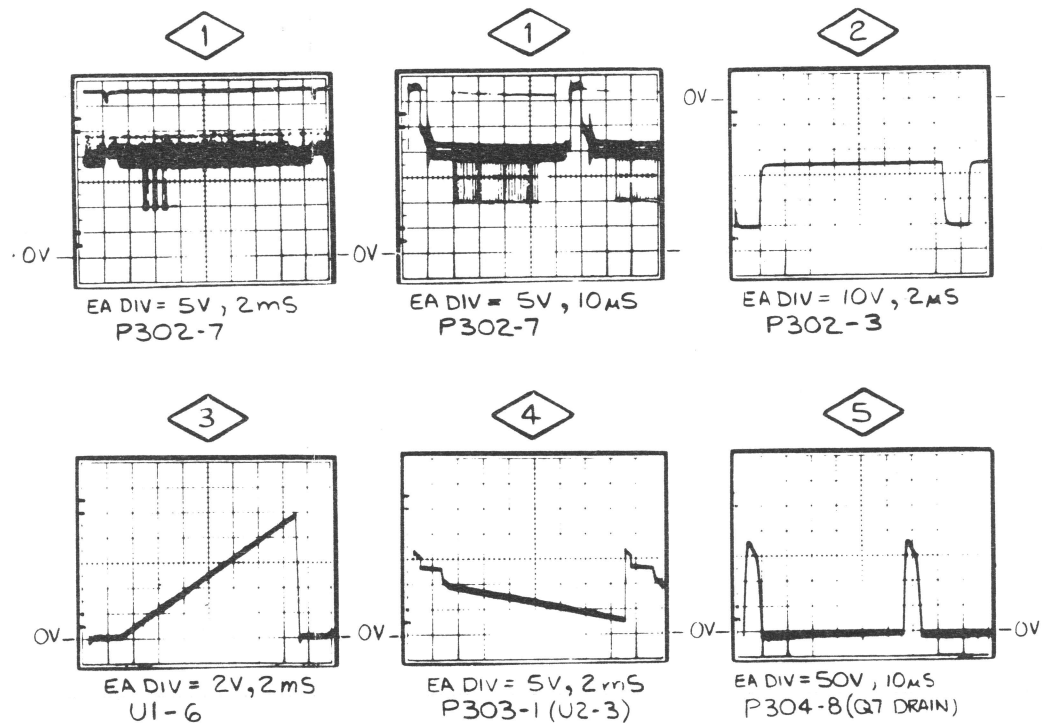
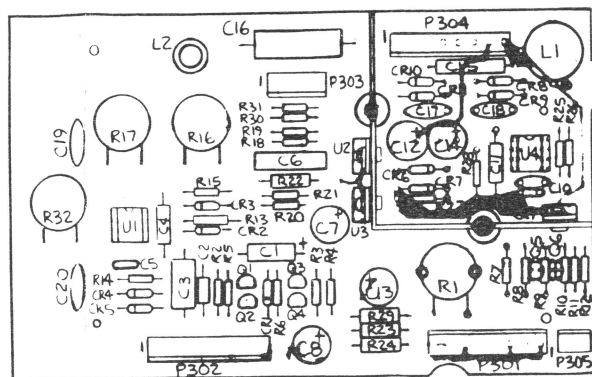
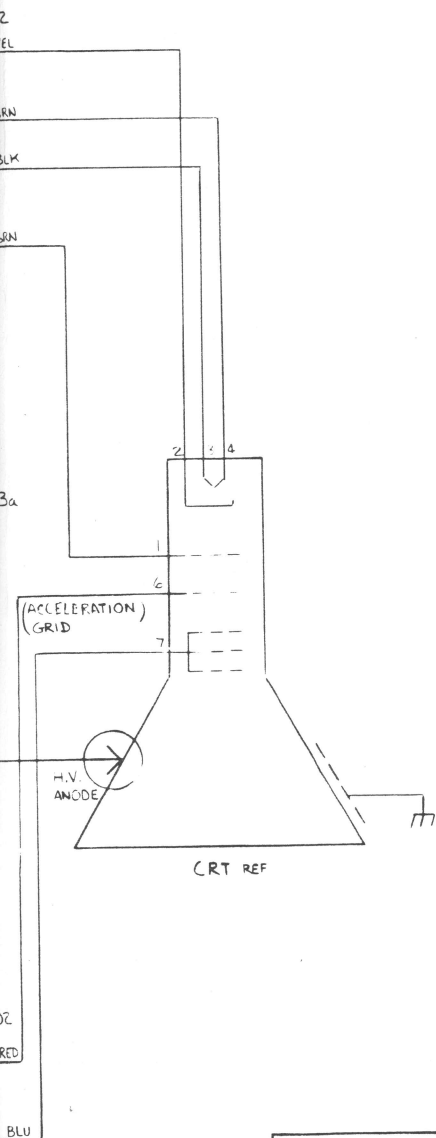
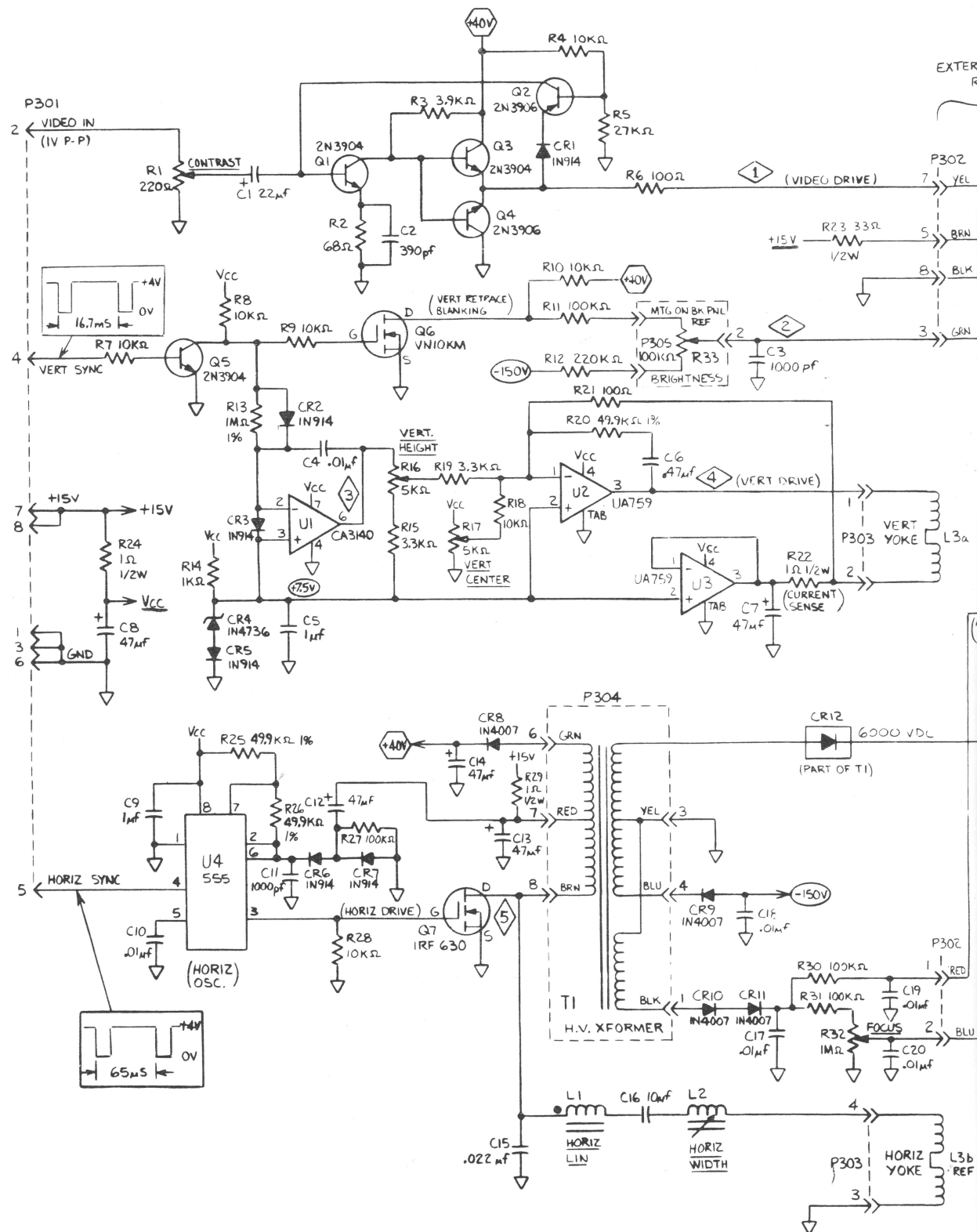


Figure 5-7. Video Circuit Assembly (P/N 48642)



5.6.2 Back Panel Subassembly (P/N 48364)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	REAR PANEL, LH	45070
	BRACKET, UPPER BACK PANEL	45241
	BRACKET, LOWER BACK PANEL	45242
	FAN	45704
	RECEPTACLE, AC	24078
	SWITCH, 120-220	18424
	SCREEN, FAN	46289
	FILTER, FAN	46932
	SCREW, 4-40 x 0.250L BH CAP	50533
	SCREW, 10-32 x 0.500L, TAMPER PROOF	45869
	WASHER, LOCK #4	03577
	WASHER, FLAT #10	05921
	WASHER, LOCK #10	03586
	THUMB SCREW, #4 CAP	27959
	SOLDER LUG, #10	05911
	SWITCH, POWER, PUSHBUTTON	23164
	REWORK, COVER	46290
	CABLE, BACK PANEL - POWER SUPPLY	47115
	MOUNT, FAN GUARD	46038
	SPACER, FAN MOUNT, 0.450 OD x 0.15 OT	46291
	BAR, MOUNTING FAN FILTER	46264
	FUSE HOLDER HIGH PROFILE	45968
	3AG FUSE CARRIER, GRAY	45966
	3AG FUSE 2A SLOW BLOW	13700
	5 x 20 METRIC FUSE CARRIER, BLK	45965
	FUSE, 1.6A SLOW BLOW (EUROPE)	52676
	NUT, HEX, 4-40	03538
	NUT, HEX, 10-32	03547
	ASSY, BRIGHTNESS CONTROL	49304
	KNOB, BLACK	49239

5.7 POWER SUPPLY MODULE ASSEMBLY (P/N 45845)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	CIRCUIT ASSEMBLY, POWER SUPPLY B1	45490
	CIRCUIT ASSEMBLY, POWER SUPPLY B2	45488
	STANDOFF, 0.37 OD x 0.5 LG x 6-32	45278
	STANDOFF, 0.31 OD x 2.937 LG x 6-32	45585
	STANDOFF, 0.31 OD SLOTTED x 6-32	45584
	BRACKET, POWER SUPPLY MTG	45583
	INSULATOR, D0-4 DIODE STYLE	46546
	CABLE ASSEMBLY, 3 PIN MOLEX	47114
	CABLE ASSY, 2 PIN MOLEX	47113
	SHIELD, POWER SUPPLY BOARD LOWER	45950
	LOCTITE 601	50576

5.7.1 Power Supply (B1) Circuit Assembly (P/N 45490)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PC BOARD, POWER SUPPLY (B1)	45489
C1	CAPACITOR, 0.005 microfarad, 1kV CER	01919
C2	CAPACITOR, 0.1 microfarad, 250VAC MYL	54501
C3,C4	CAPACITOR, 750 microfarad, 200V ELEC	46612
C5	CAPACITOR, 0.0015 microfarad, 600VDC POLY	26203
C6	CAPACITOR, 0.1 microfarad, 600VDC MYLAR	46609
C7,C8,C10	CAPACITOR, 100 microfarad, 25V ELEC	46614
C9,C13,C14	CAPACITOR, 10 microfarad, 16V ELEC	46616
C11	CAPACITOR, 0.001 microfarad, 1kV CER	21215
C12	CAPACITOR, 0.01 microfarad, 50V CER	12144
C15	CAPACITOR, 0.01 microfarad, 5% CER	46607
CR1	M.O.V, 1.5 KE10C, 10V	42632
CR2	BRIDGE RECT, W08M	46404
CR3,CR9,CR10	DIODE, 1N4937	45856
CR4	DIODE, MR818	45850
CR5,CR11,		
CR13-CR15	DIODE, 1N914A	12356
CR6	DIODE, ZENER 1N4746 18V	44027
CR7,CR8	DIODE, 1N4005	01779
CR12	DIODE, ZENER 1N4737A, 7.5V +/- 5%	12353
CR16,CR17	DIODE, CLAMP, VS150, LA10A	42633
L1	INDUCTOR, (ESI TOROID)	46494
P101	CONNECTOR, 9 PIN, STRAIGHT, MOLEX (MALE)	
	POLARIZED	46634
P102,P103,	CONNECTOR, 3 PIN, STRAIGHT, MOLEX (MALE)	
P104	POLARIZED	46627
P105	CONNECTOR, 2 PIN, STRAIGHT, MOLEX (MALE)	
	POLARIZED	46625
Q1,Q2	TRANSISTOR, MJE13003	45863
Q3	TRANSISTOR, 2N6543 (TO-3)	45864
Q4	TRANSISTOR, D42C9	45865
Q5,Q9	TRANSISTOR, 2N2905A	22713

5.7.1 Power Supply (B1) Circuit Assembly (P/N 45490) (Cont)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
Q6	TRANSISTOR, TIP-30C	45862
Q7,Q8,Q10, Q11,Q12	TRANSISTOR, 2N2222	27671
R1	RESISTOR, 2.2 kilohm, 1/4W, 10%	13924
R2,R3	RESISTOR, 150 kilohm, 1/2W, 10%	15986
R4	RESISTOR, 3.9 kilohm, 5W, 1%, WW, DALE	46496
R5	RESISTOR, 470 kilohm, 1/2W	01649
R6	RESISTOR, 82 ohm, 1/2W	06183
R7	RESISTOR, 0.200 ohm, 1/4W, WW, FILM	46497
R8	RESISTOR, 56 ohm 1/4W	46746
R9	RESISTOR, 27 ohm, 1W, 10%	46495
R10,R12,R29	RESISTOR, 470 ohm, 1/4W	13915
R11	RESISTOR, 30 ohm, 3W, 5%, WW	46464
R13,R14,R28	RESISTOR, 1 kilohm, 1/4W, 10%	13920
R15,R17	RESISTOR, 220 ohm, 1/4W	13911
R16	RESISTOR, 1.8 kilohm, 1/4W	13923
R18	RESISTOR, 820 ohm, 1/4W	13919
R19	RESISTOR, 1.5 kilohm, 1/4W	13922
R20	RESISTOR, 390 ohm, 1/4W	13914
R21	RESISTOR, 120 ohm, 1/4W	13908
R22,R23	RESISTOR, 6.8 kilohm, 1/4W, 10%	13930
R24	RESISTOR, 10 kilohm, 1/4W	13933
R25	RESISTOR, 100 ohm, 1/4W	13907
R26	RESISTOR, 4.7 kilohm, 1/4W, 5%	46499
R27	RESISTOR, 20 kilohm, 20W, WW	46410
RV1	VARISTOR, (AMETEX RODAN DIV SG.5)	46493
U1	OPTICAL COUPLER, MCT-6	24008
U2	VOLT REGULATOR, LM7905 CT, -5V	41876
U3	VOLT REGULATOR, LM7812 CT, 12V	46412
U4	CONTROL IC SG 3524	43825
U5	OPTICAL COUPLER, MCT-2E	46403
	CABLE TIE (SMALL)	06147

5.7.1 Power Supply (B1) Circuit Assembly (P/N 45490) (Cont)

CIRCUIT NO.	DESCRIPTION	ESI PART NO.
	SOCKET, 6 PIN, DIP	45831
	SOCKET, 8 PIN, DIP	22410
	SOCKET, 16 PIN DIP	20860
	SOCKET, T03	12262
	HEATSINK B1	45587
	INSULATOR SILICON TO -3 STYLE	43176

WARNING

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DANGER



⚠ = CIRCUIT COMMON; HAZARDOUS VOLTAGE.

ALL PARTS OF THIS ASSEMBLY INCLUDING CIRCUIT COMMON ARE AT OR ABOVE POWER LINE VOLTAGE. AVAILABLE ENERGY AT ANY POINT MAY BE LIMITED ONLY BY INPUT FUSE. DO NOT ATTEMPT SERVICE OPERATIONS WITHOUT LINE ISOLATION FOR BOTH THIS ASSEMBLY AND TEST EQUIPMENT. FAILURE TO OBSERVE THIS PRECAUTION MAY RESULT IN SEVERE INJURY OR DEATH.

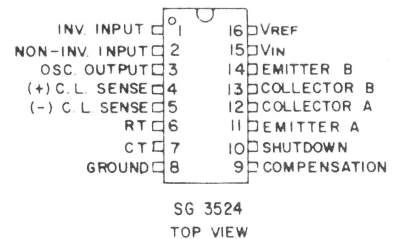
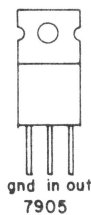
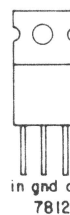
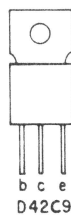
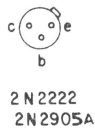
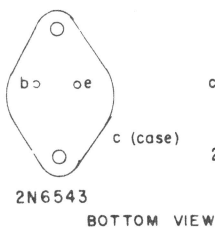
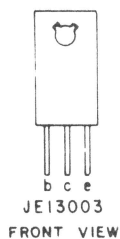
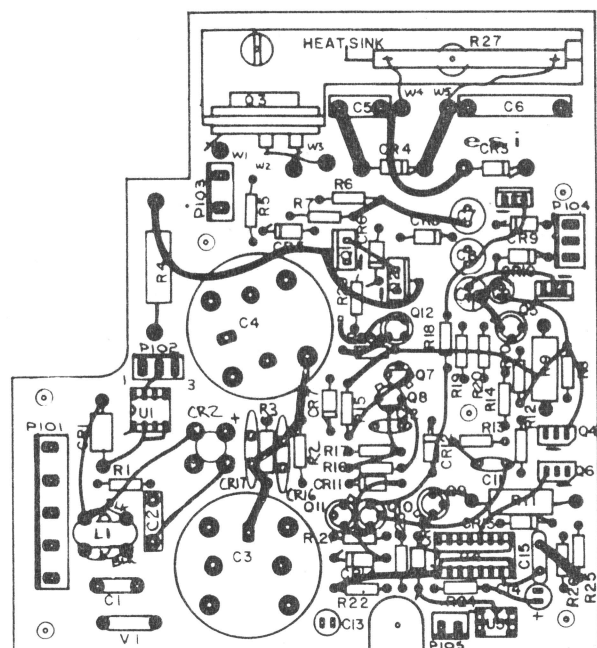
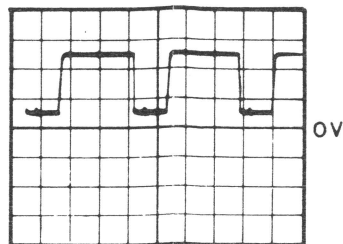
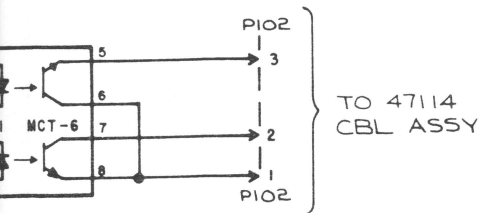
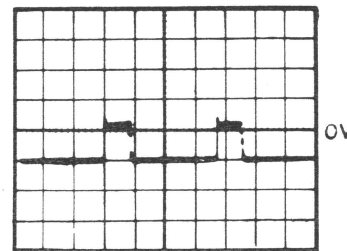


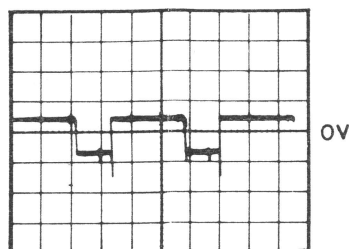
Figure 5-8. Power Supply B1 Circuit Assembly (P/N 45490)



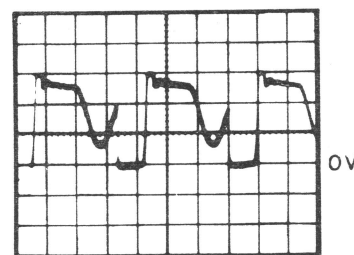
EACH DIV. = 5V, 10 μ S
BASE of Q6



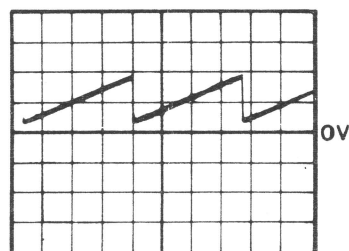
EACH DIV. = 5V, 10 μ S
BASE of Q3



EACH DIV. = 2V, 10 μ S
BASE of Q5



EACH DIV. = 200V, 10 μ S
COLLECTOR of Q3



EACH DIV. = 2V, 10 μ S
PIN 7 of U4

WARNING

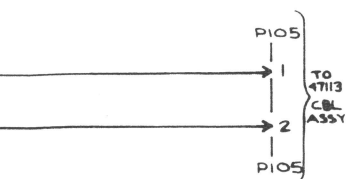
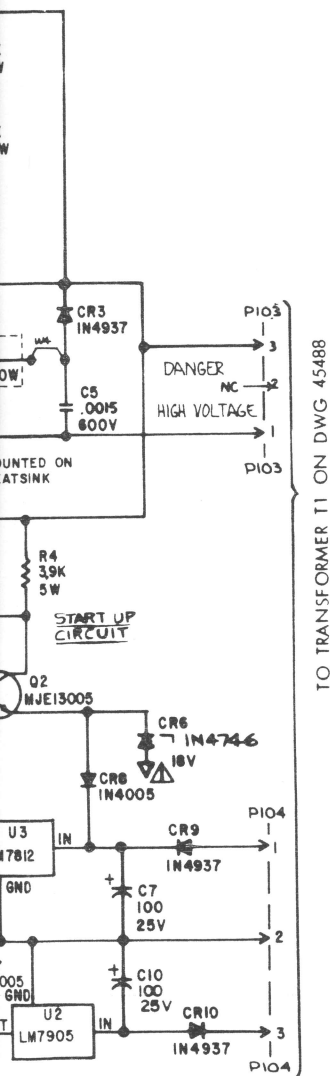
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DANGER



⚠ = CIRCUIT COMMON; HAZARDOUS VOLTAGE.

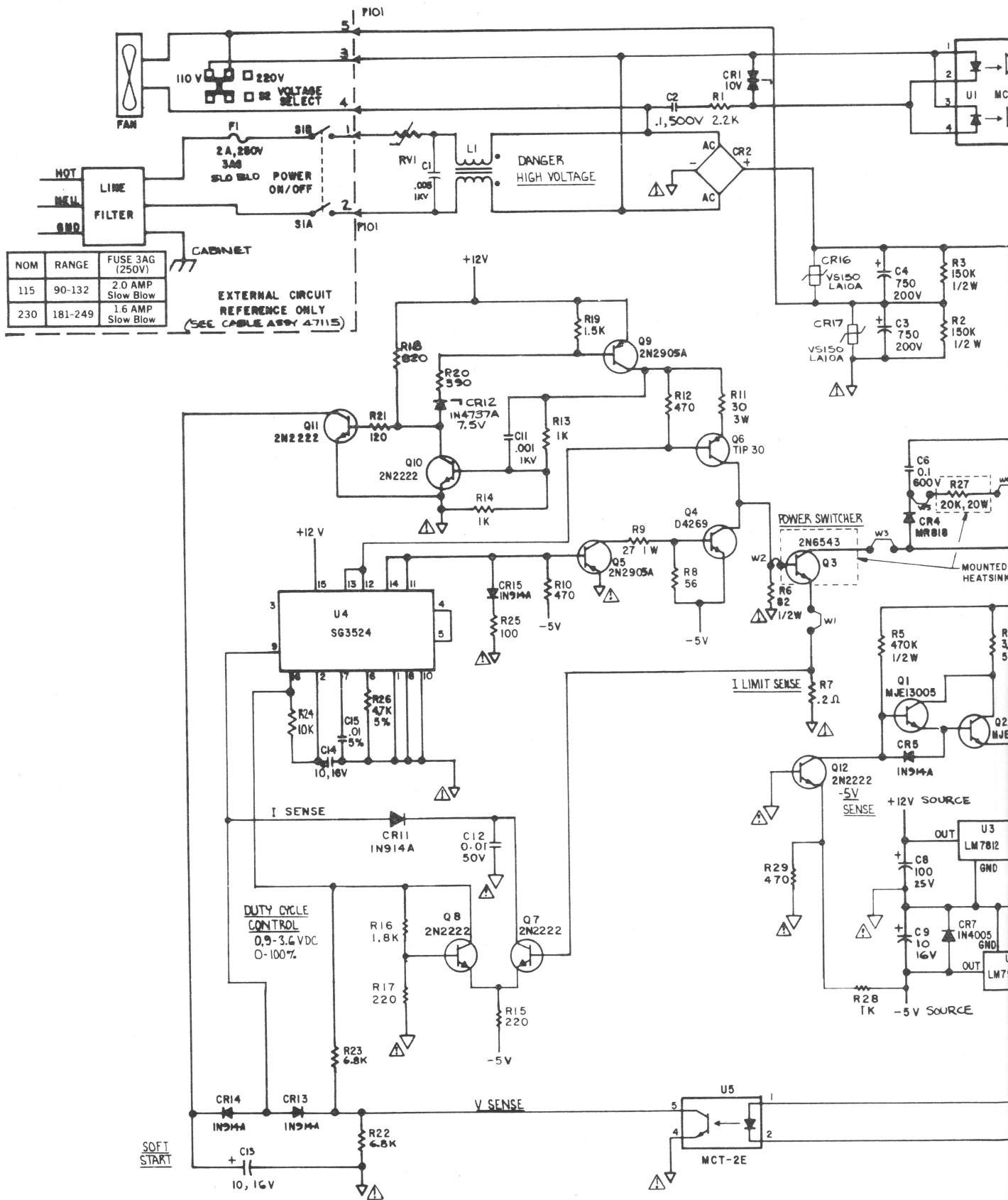
ALL PARTS OF THIS ASSEMBLY INCLUDING CIRCUIT COMMON
ARE AT OR ABOVE POWER LINE VOLTAGE. AVAILABLE ENERGY
AT ANY POINT MAY BE LIMITED ONLY BY INPUT FUSE. DO NOT
ATTEMPT SERVICE OPERATIONS WITHOUT LINE ISOLATION FOR
BOTH THIS ASSEMBLY AND TEST EQUIPMENT. FAILURE TO OBSERVE
THIS PRECAUTION MAY RESULT IN SEVERE INJURY OR DEATH.



NOTES

1. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 10% UNLESS OTHERWISE STATED.
2. ALL CAPACITORS ARE IN μ F UNLESS OTHERWISE STATED.

Figure 5-8. Power Supply B1 Circuit Assembly (P/N 45490) (cont)



<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
R10,R26	RESISTOR, 82 ohm, 1/2W, 10%	06183
R11,R24	RESISTOR, 10 ohm, 1/4W, 10%	13895
R12	RESISTOR, 39 ohm, 1/4W, 10%	21219
R15	RESISTOR, 1,2 kilohm, 1/4W, 10%	13921
R16	RESISTOR, 18 kilohm, 1/4W, 10%	13936
R17	RESISTOR, 1.5 kilohm 1/4W	13922
R19	RESISTOR, 27 kilohm, 1/4W, 10%	13938
R21	RESISTOR, 2 kilohm, 1/4W, 1%	21733
R22	RESISTOR, TRIMMER, 500 ohm, 20T	12093
R23	RESISTOR, 2.49 kilohm, 1/4W, 1%	21734
R27,25	RESISTOR, 22 ohm 1/4W	12455
R28	RESISTOR, 100 ohm, 1/4W, 10%	13907
R29	RESISTOR, 2.7 kilohm, 1/4W, 10%	13925
R30	RESISTOR, 10 kilohm, 1/4W, 10%	13933
R31	RESISTOR, 330 ohm, 1W, 10%	12174
R32	RESISTANT WIRE, #19GA B. MANGANIN	05944
R33	RESISTOR, 100 kilohm, 1/4W	13945
T1	XFRMR, POWER SUPPLY	45877
U1	VOLTAGE REGULATOR, LM7815	27816
U2	VOLTAGE REGULATOR, LM7812 CT	46412
U3	VOLTAGE REGULATOR, 7912C	47296
U4	VOLTAGE REGULATOR, LM7808	46622
U5	VOLTAGE REGULATOR, LM7908	46621
U6	COMPARATOR, LM311	29544
U7, U8	OP AMP, 741	20668
	GREASE, TEMP CONDUCTIVE	08506
	HEATSINK	45586
	INSULATOR, SILICON TO-220 TRANSISTOR	46256
	MOUNTING KIT, D05 DIODE	47646
	SLEEVING, #8 BLACK SILICON RUBBER	05883
	SOCKET, 8 PIN DIP	22410
	CRIMP TERMINAL	45887

5.7.2 Power Supply (B2) Circuit Assembly (P/N 45488)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PC BOARD, POWER SUPPLY	45487
C2	CAPACITOR, 420 microfarad, 25V ELEC	46524
C3,C4,C9-C16	CAPACITOR, 6.8 microfarad, 35V TANT	43792
C7-C8	CAPACITOR, 580 microfarad, 20V ELEC	46409
C17	CAPACITOR, 0.01 microfarad DISC	12144
C18,C19,C20	CAPACITOR, 2900 microfarad, 6.3V ELEC	46408
C21	CAPACITOR, 0.1 microfarad, 25V CER	24395
C23	CAPACITOR, 2000 picofarad	21214
C26,C25	CAPACITOR, 33 microfarad, RAD, 6.3V ELEC	46615
C27	CAPACITOR, 0.005 microfarad DISC	12143
C30	CAPACITOR, 0.22 microfarad, 50V	13680
C31	CAPACITOR, 0.1 microfarad	45247
CR1,CR2,CR3	DIODE, MR851 (3A)	45851
CR4	DIODE, 1N5832 STUD MOUNT	45853
CR5	DIODE, SCR, 2N3896	46619
CR6,CR7	DIODE, ZENER 1N4735 6.2V	12079
CR8,CR10,	DIODE, 1N914A	12356
CR15,CR16		
CR9	DIODE ZENER, ADJUSTABLE, TL430	46620
CR11,CR12,		
CR13,CR14	DIODE, 1N4005	13654
J103,J104	CONNECTOR, MOLEX, 3 PIN	46628
L1,L2,L3	INDUCTOR, FERRITE BEAD	47318
L4	INDUCTOR, POWER SUPPLY	47128
P201,P203	CONNECTOR, 2 PIN MOLEX (MALE) STRAIGHT POLARIZED	46625
P202	CONNECTOR, 3 PIN MOLEX (MALE) STRAIGHT POLARIZED	46627
P204	CONNECTOR, 13 PIN RECTANGLE MOLEX (MALE)	46636
R2	RESISTOR, 1 kilohm, 1/2W, 10%	01969
R13,R20	RESISTOR, 1 kilohm, 1/4W, 10% CARBON	13920
R9	RESISTOR, 1.0 ohm, 1/2W, 10%	12448

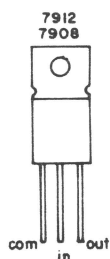
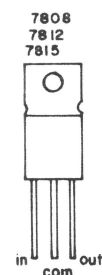
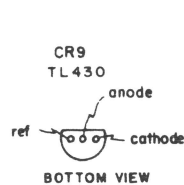
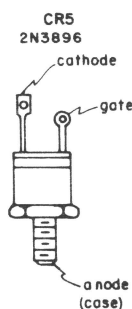
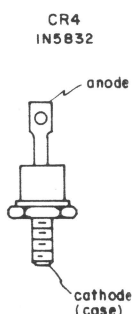
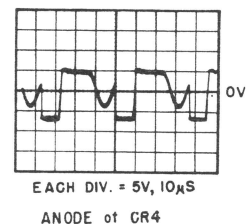
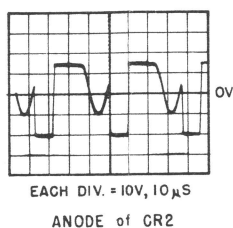
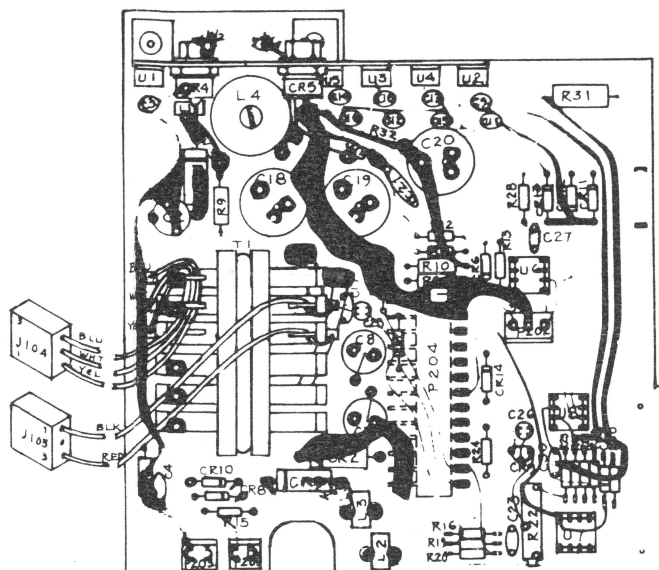
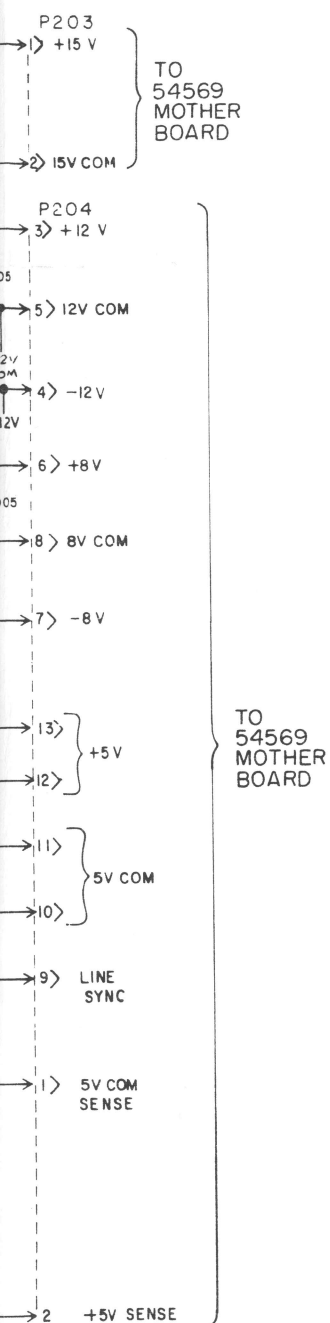


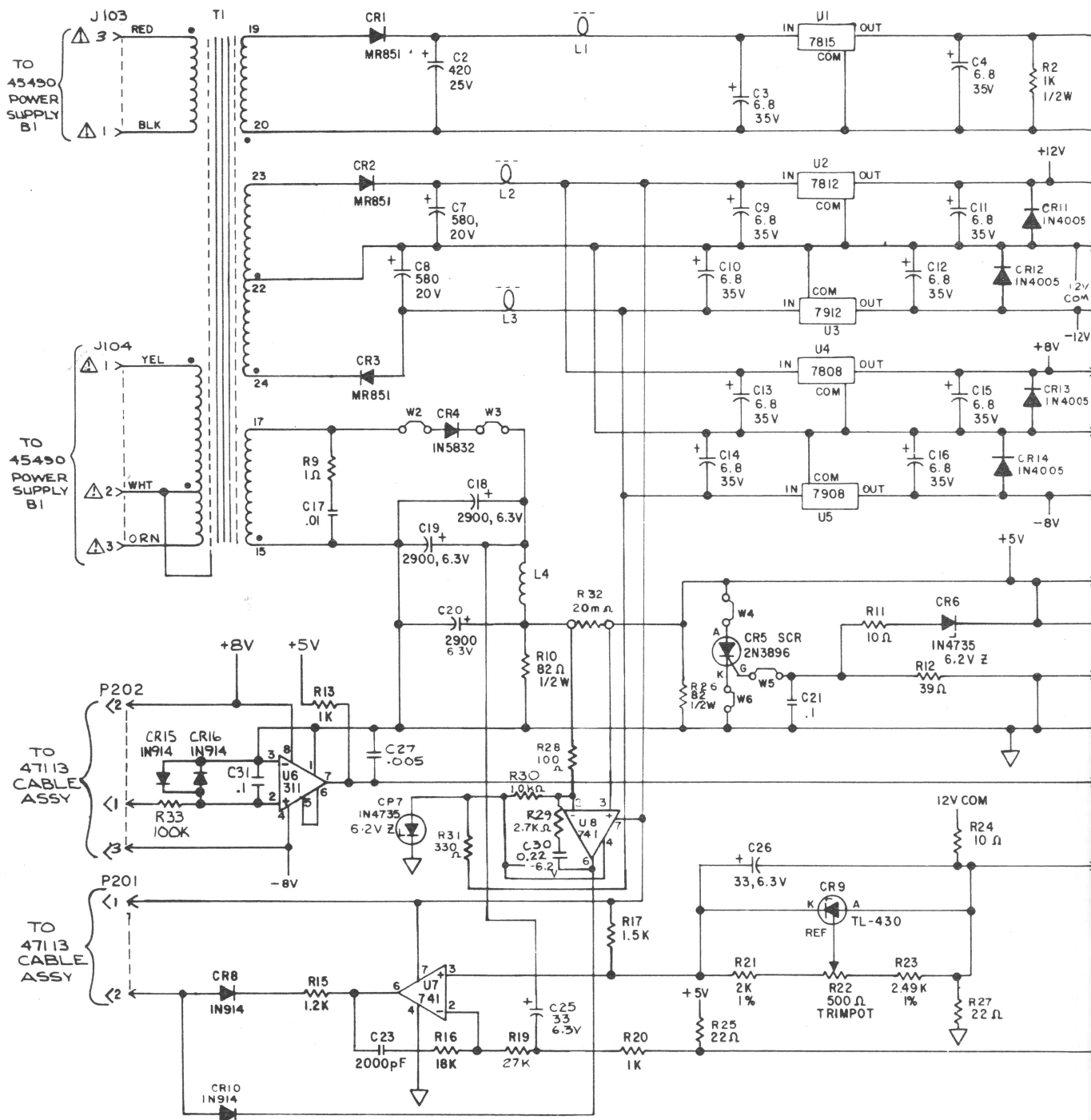
Figure 5-9. Power Supply B2 Circuit Assembly (P/N 45488)

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EVE INJURY OR DEATH.



NOTES:

1. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 10% UNLESS OTHERWISE STATED.
2. ALL CAPACITORS ARE IN μ F UNLESS OTHERWISE STATED.

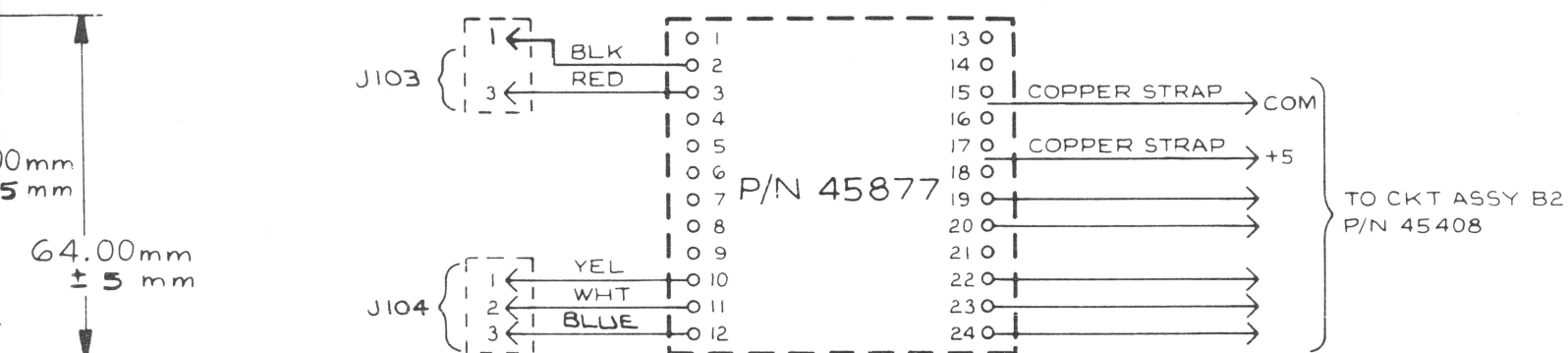
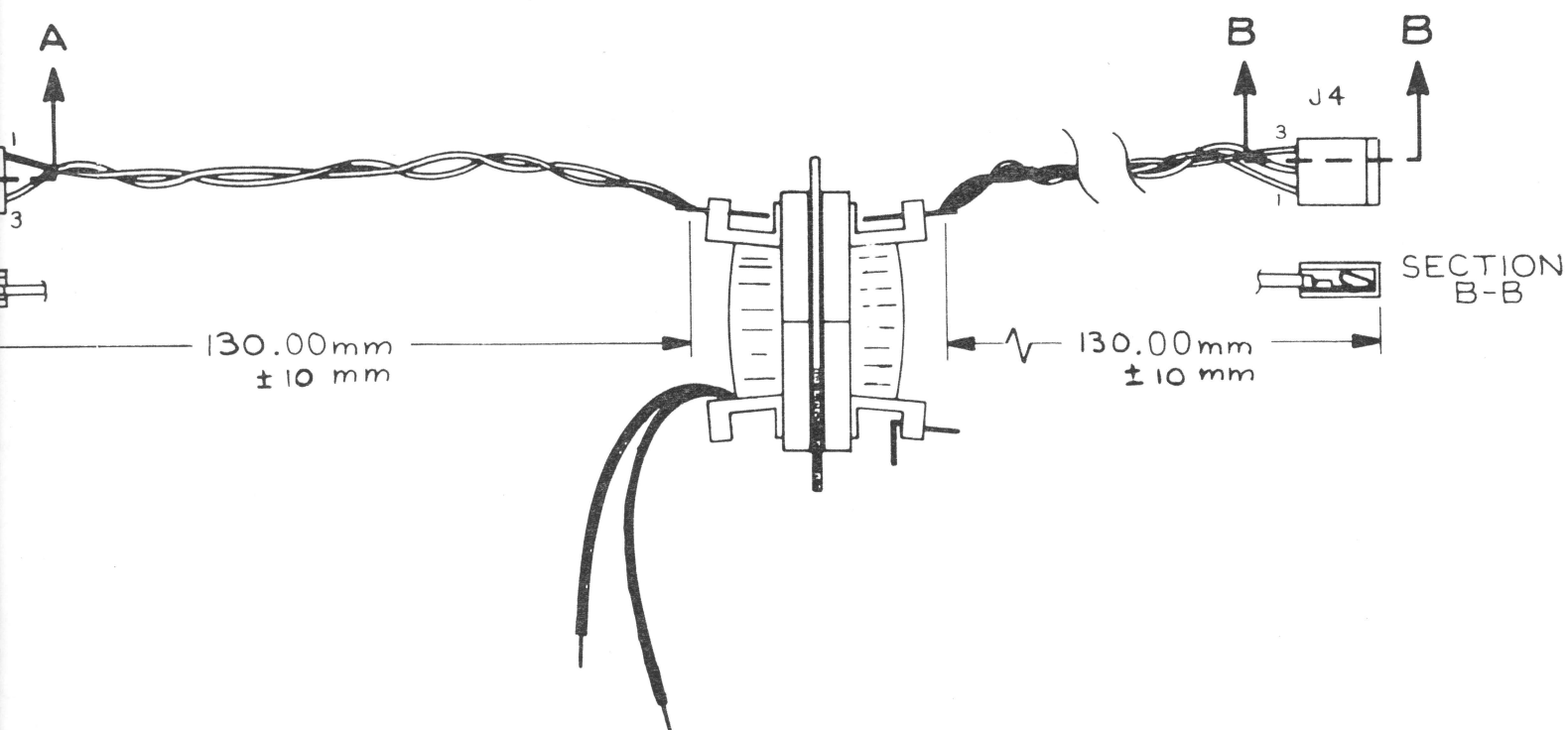
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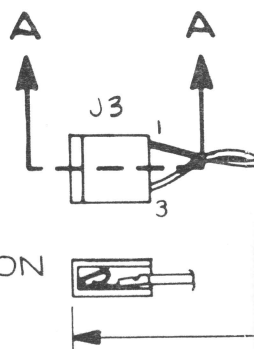


= CIRCUIT COMMON; HAZARDOUS
ALL PARTS OF THIS ASSEMBLY IN
ARE AT OR ABOVE POWER LINE VOLTAGE
AT ANY POINT MAY BE LIMITED ONLY
ATTEMPT SERVICE OPERATIONS WITHOUT
BOTH THIS ASSEMBLY AND TEST EQUIPMENT
THIS PRECAUTION MAY RESULT IN SEVERE

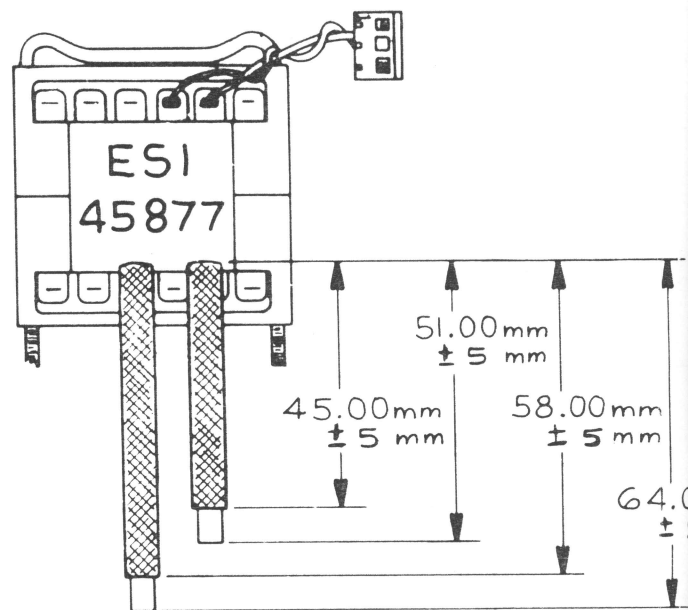


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Figure 5-9. Power Supply B2 Circuit Assembly (P/N 45488) (cont)



SECTION
A-A



5.7.3 Motherboard-to-Power Supply Interconnect Cable Assembly (P/N 47111)

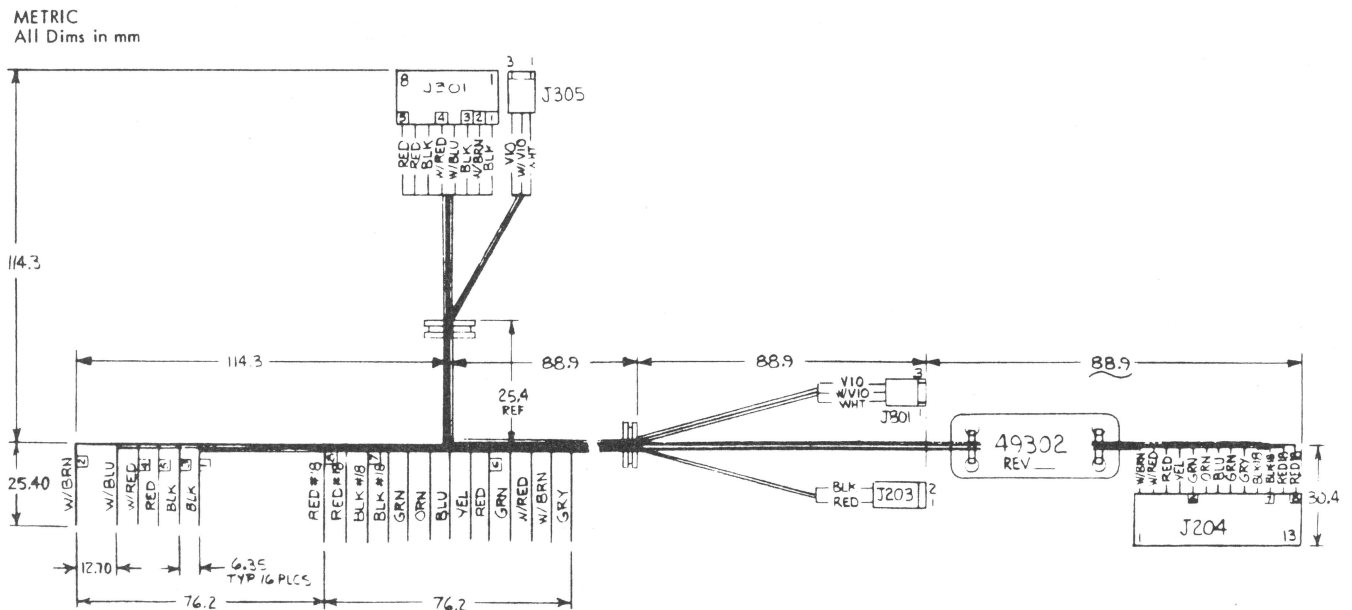
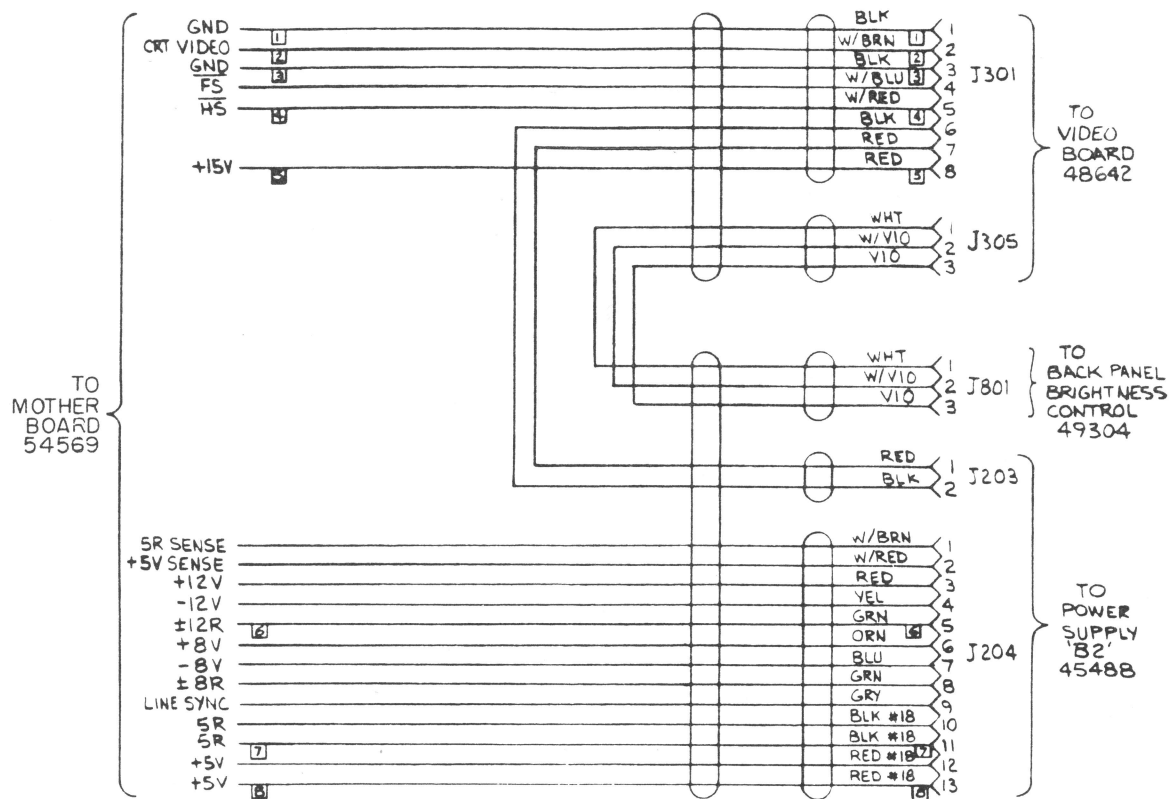


Figure 5-10. Motherboard-to-Power Supply Interconnect Cable Assembly (P/N 47111)

5.7.4 Back Panel-to-Power Supply Cable Assembly (P/N 47115)

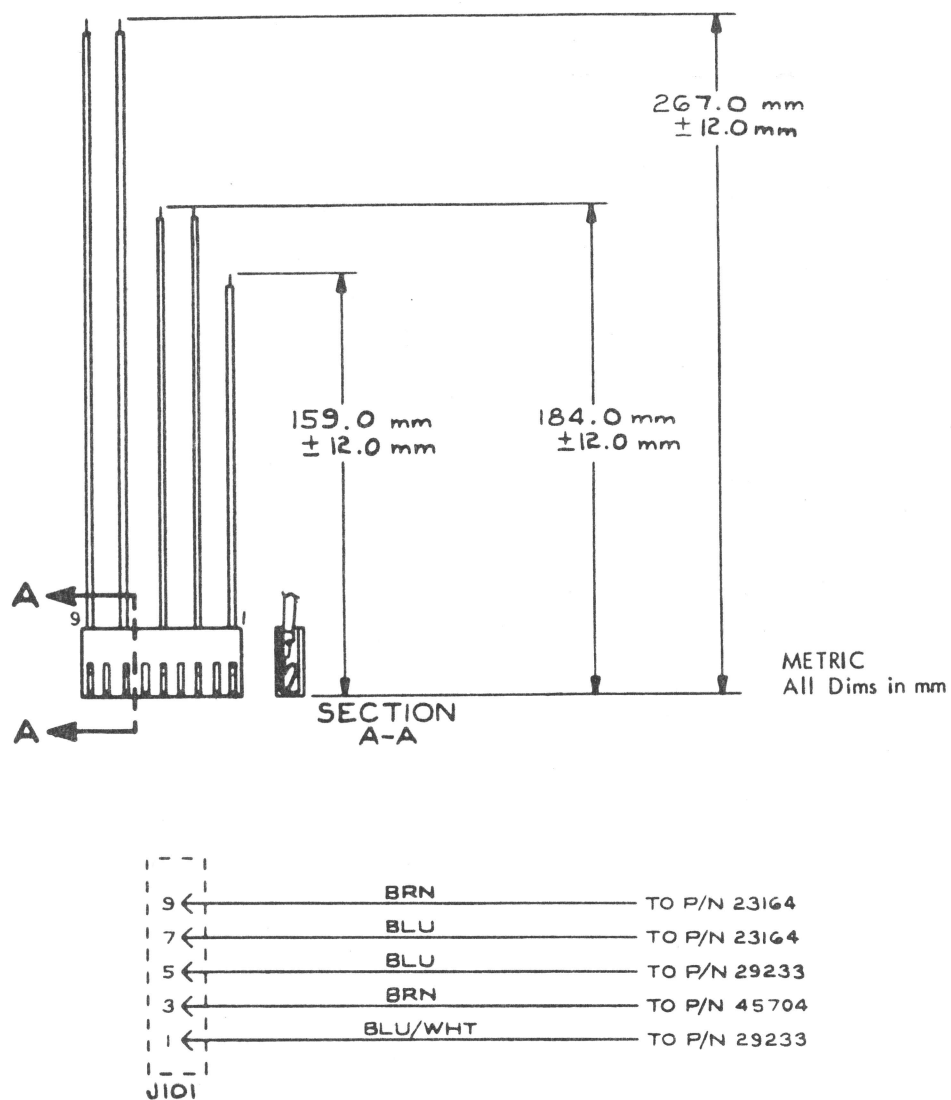


Figure 5-11. Back Panel-to-Power Supply Cable Assembly (P/N 47115)

5.8 RS-232/CASSETTE INTERFACE CIRCUIT ASSEMBLY (P/N 52674)

<u>CIRCUIT NO.</u>	<u>DESCRIPTION</u>	<u>ESI PART NO.</u>
	PC BOARD, RS-232/CASSETTE INTERFACE	52673
C1-C11	CAPACITOR, 0.01 microfarad, 50V, 20%	45658
J701	CONNECTOR, DB255	45983
R1	RESISTOR, 1 kilohm, 1/4W, 10%	13920
R2	RESISTOR, 15 megohm, 1/4W, 20%	13976
R3	RESISTOR, 6.8 kilohm, 1/4W, 10%	13930
S1, S2	SWITCH, 10 POSITION DIP	52711
	BRACKET, RS-232	45815
	BRACKET, GROUND	45951
UR1, UR2	RESISTOR, SIP, SR, 2.2 kilohm	45847
U1	IC, 74LS00	52760
U2	IC, 74LS32	52582
U3	IC, 8131	45527
U5	IC, 74LS139	45656
U6, U11	IC, 8304	45262
U8	IC, 3882N-4	49183
U9	IC, 74LS74	52761
U10	IC, 74LS86	52762
U12	IC, 74LS174	43681
U13	IC, 3884N-4, Z80-SIO	49184
U14	IC, MC 14411	42933
U15	IC, MC 1488L	42301
U16	IC, MC 1489L	42302
Y1	CRYSTAL, 1.8432MHz, 0.05%	45974
	SOCKET, 14 PIN DIP	19189
	SOCKET, 16 PIN DIP	20860
	SOCKET, 40 PIN DIP	41342
	SOCKET, 24 PIN DIP	41492
	SOCKET, 20 PIN DIP	45660
	SOCKET, 28 PIN DIP	43844

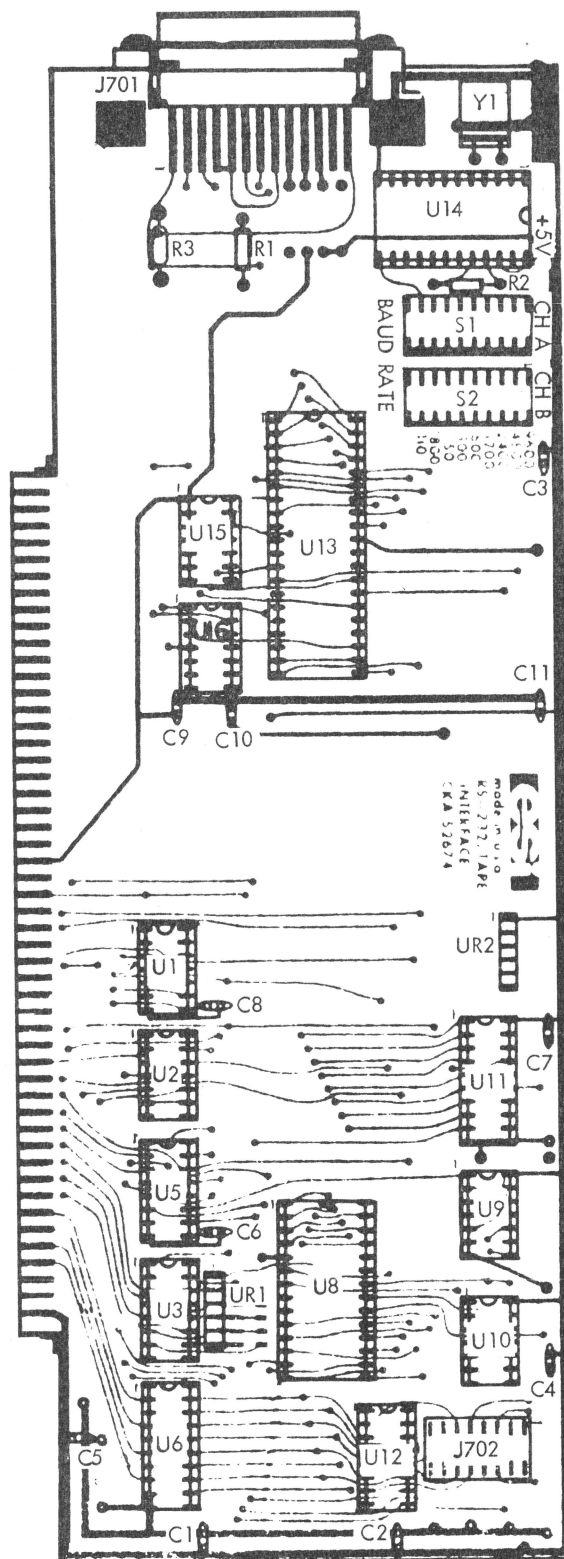


Figure 5-12. RS-232/Cassette Interface (optional on 2150) Circuit Assembly (P/N 52674)

