

KENWOOD

NTSC WAVEFORM MONITOR

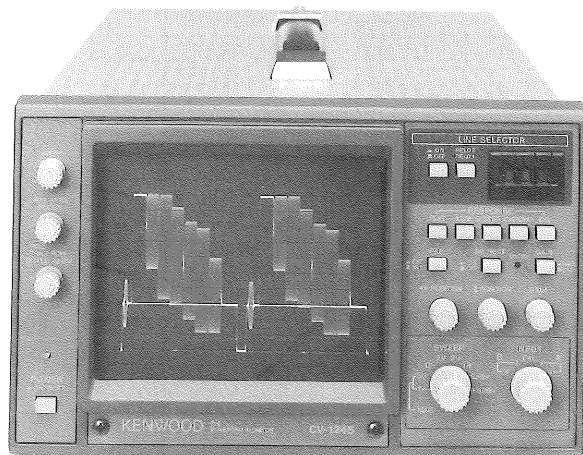
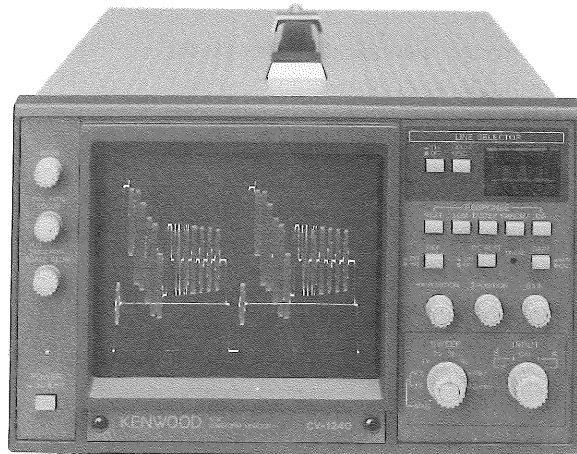
CV-1240

PAL WAVEFORM MONITOR

CV-1245

SERVICE MANUAL

KENWOOD CORPORATION



WARNING

The following instructions are for use by qualified personnel only. To avoid electric shock, do not perform any servicing other than contained in the operating instructions unless you are qualified to do so.

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ADJUSTMENT

To obtain the best performance, periodically calibrate the unit. Sometimes, only one mode need be calibrated, while at other times, all modes should be calibrated. When one mode is calibrated, it must be noted that the other modes may be affected. When calibrating all modes, perform the calibration in the specified sequence.

The following calibration required an accurate measuring instrument and an insulated adjusting flat blade screwdriver. If they are not available, contact your dealer. For optimum adjustment, turn the power on and warm up the scope sufficiently (more than 30 minutes) before starting.

Before calibrating the scope, check the power supply voltage.

TEST EQUIPMENT REQUIRED

The following instrument or their equivalent should be used for making adjustment.

Test Equipment	Model	Maker
Multi-meter	45	Fluke
Oscilloscope	CS-6040	KENWOOD
NTSC Color Pattern Generator	CG-931	KENWOOD
PAL Color Pattern Generator	CG-932	KENWOOD
NTSC Signal Generator	1410	Tektronix
PAL Signal Generator	1411	Tektronix
NTSC Color Bar	TSG-7	Tektronix
PAL Color Bar	TSG-11	Tektronix
NTSC Steer Case	TSG-3	Tektronix
PAL Steer Case	TSG-13	Tektronix
NTSC Pulse & Bar	TSG-5	Tektronix
PAL Pulse & Bar	TSG-15	Tektronix
NTSC Multi Barst	TSG-6	Tektronix
PAL Multi Barst	TSG-16	Tektronix
Pulse Generator	PG-506	Tektronix
Time Marker	TG-501	Tektronix
Level Generator	SG-503	Tektronix
50Ω Termination	—	—
75Ω Termination	—	—
RGB Jig	—	—

PREPARATION FOR ADJUSTMENT

Control Settings

The control settings listed below must be used for each adjustment procedure.

Exceptions to these settings will be noted as they occur.

After completing a adjustment, return the controls to the following settings.

NAME OF KNOBS	POSITION
POWER	ON
SCALE ILLUM	Desired position
FOCUS	Best position
ASTIG	Best position
INTENSITY	Desired position
◀ POSITION	Spot center
⬆ POSITION	Spot center
GAIN	CAL
DC REST	ON
REF	INT
SWEEP	2H
RESPONSE	FLAT

ADJUSTMENT

Item	Adjustment VR (TC)	P.C.B.	Procedure
+12 V	VR1	X68-1620	<ul style="list-style-type: none"> ● Connect a multimeter to pin 4 of P10 (X75-1210) and adjust to +12.0 V.
FOCUS	VR102	X68-1620	<ul style="list-style-type: none"> ● Set the FOCUS potentiometer on the panel to the center position. ● Adjust the ASTIG potentiometer on the panel and VR102 for just in focus.
INTENSITY	VR101	X68-1620	<ul style="list-style-type: none"> ● Display the spot. ● Adjust INTEN on the panel so that the spot disappears at the 10:00 position. ● After adjustment, cancel the spot display.
X-Axis Bias	VR106	X73-1910	<ul style="list-style-type: none"> ● Set the average potential of pins ① and ③ of P304 to +70 V. ● Set the trace on the center of the horizontal direction.
Y-Axis Bias	VR6	X73-1910	<ul style="list-style-type: none"> ● Set the trace on the center of the vertical direction. ● Set the average potential of pins ① and ③ of P302 to +40 V.
Trace length	VR1	X74-1540	<ul style="list-style-type: none"> ● SWEEP MODE: 2 V, color bar input. ● Adjust so that the length of the pedestal of the output of TSG-7 extends over 12.4 div. of the horizontal scale.
2H Sweep Time	TC1	X74-1540	<ul style="list-style-type: none"> ● INPUT: B.1, SWEEP MODE: 2H. ● TG-501 input (10 μs/div.) ● Adjust to 10 μs/div.
X-Axis Balance (Coarse adjustment)	VR105 VR103 VR108	X73-1910	<ul style="list-style-type: none"> ● Move the X-axis to the mechanical center with ◀ POSI and GAIN, and adjust so that the negative going of H SYNC of the TV signal comes on the center of the screen.
0.2 μs/div Sweep Time	VR107	X73-1910	<ul style="list-style-type: none"> ● TG-501 input (0.2 μs/div.) ● Adjust to 0.2 μs/div.
0.2 μs/div MAG Center	VR105 VR108	X73-1910	<ul style="list-style-type: none"> ● Search the position to be magnified with MAG. ● Adjust VR105 so that the position magnified with MAG comes on the center of the screen. ● Adjust VR108 for fine-adjustment.
1 μs/div Sweep Time	VR102	X73-1910	<ul style="list-style-type: none"> ● TG-501 input (1 μs/div.). ● Adjust to 1 μs/div.
1 μs MAG Center	VR103	X73-1910	<ul style="list-style-type: none"> ● Move the position to be magnified to the center of screen.
Horizontal Position	VR101	X73-1910	<ul style="list-style-type: none"> ● Turn fully clockwise. ● Adjust to 7.0 div. ● With both 0.1 μs/div. and 0.2 μs/div., all of the traces should be displayed on the screen.
RGB Trace Length	VR3	X74-1540	<ul style="list-style-type: none"> ● Color bar input. ● Adjust the trace length to 12.4 div. <div style="text-align: center; margin-top: 10px;"> </div>
RGB Position	VR2	X74-1540	<ul style="list-style-type: none"> ● Color bar input. ● Align the start point (with RGB ON/OFF). ● With H.POSI turned fully clockwise, adjust to 7.0 div.

ADJUSTMENT

Item	Adjustment VR (TC)	P.C.B.	Procedure
Variable Balance	VR9	X66-1180	<ul style="list-style-type: none"> ● Set to UNCAL. ● Adjust so that the trace does not move when GAIN VR is turned.
DC REST Position	VR1	X66-1180	<ul style="list-style-type: none"> ● REF: EXT. ● Color bar input to EXT. ● No other input. ● Adjust so that the trace position does not change when DC REST is switched ON/OFF (by aligning the OFF position with ON position).
Y-Gain	VR2	X73-1910	<ul style="list-style-type: none"> ● 75-ohm: OFF. ● PG-506: 1 V input. ● Adjust to the full scale. (CV-1240: -40 to +100) (CV-1245: 0 to 1.0)
Y-Position Range	VR1	X73-1910	<ul style="list-style-type: none"> ● Turn V.POSI to fully counterclockwise. ● 75-ohm: OFF. ● 100% white input (Acceptable if 100% white is present partially). ● DC REST: ON. ● Move the 100% white signal to 01 div. below the pedestal line.
ATT (Rectangular wave)	TC1	X75-1210	<ul style="list-style-type: none"> ● 1 V range. ● PG-506: 100 kHz input.
Square wave (middle)	VR4	X66-1180	<ul style="list-style-type: none"> ● PG-506: 10 kHz input.
Square wave (high)	TC1 TC2	X73-1910	<ul style="list-style-type: none"> ● PG-506: 100 kHz 1 MHz } inputs.
	TC1 TC7 VR10	X66-1180	
4V Range ATT	TC2	X75-1210	<ul style="list-style-type: none"> ● PG-506: 100 kHz input.
MON OUT	TC3	X75-1210	<ul style="list-style-type: none"> ● SG-503 input (50-ohm terminated). ● MON OUT: 75-ohm terminated. ● Adjust to make flat from 50k to 5M Hz.
LUM Filter	TC4	X66-1180	<ul style="list-style-type: none"> ● Pulse & bar input. ● There should be no height difference in the 2T pulse. ● SG-503 input: 50 kHz REF <li style="padding-left: 40px;">350 kHz 94 to 97.5% <li style="padding-left: 40px;">1 MHz 70 to 08% <li style="padding-left: 40px;">2 MHz 31.2 to 42.5% <li style="padding-left: 40px;">3.6 MHz 5.6 to 10.4%
B.P.F	TC5 TC6 VR7	X66-1180	<ul style="list-style-type: none"> ● Color bar input. ● With NTSC, set R-Y to ALT. ● The waveforms should be superimposed neatly.
B.P.F Gain	VR5	X66-1180	<ul style="list-style-type: none"> ● SG-503: Full-scale input (peak value) of 3.58M (NTSC) or 4.43M (PAL). ● Adjust so that the gain difference from FLAT is 0.
DG	VR3	X66-1180	<ul style="list-style-type: none"> ● 5-step steer case input. ● Adjust to 100 IRE centered around the pedestal line.

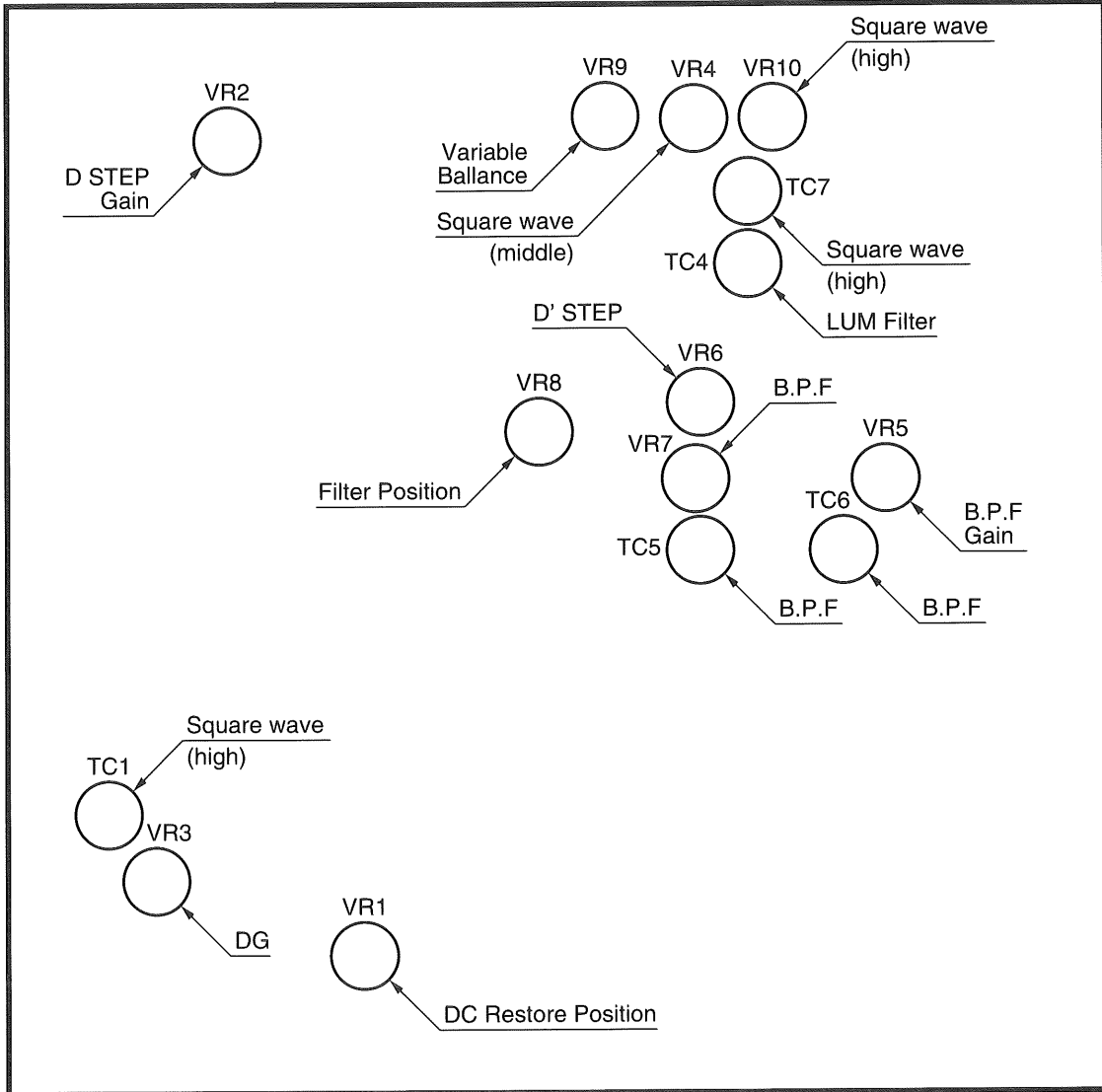
ADJUSTMENT

Item	Adjustment VR (TC)	P.C.B.	Procedure
D'STEP	VR6	X66-1180	<ul style="list-style-type: none">● Set to CAL.● Undershooting should not be observed.
D'STEP Gain	VR2	X66-1180	<ul style="list-style-type: none">● 5-step steer case input.● Adjust so that the pulse amplitude with respect to the pedestal line is 100 IRE.
Filter Position	VR8	X66-1180	<ul style="list-style-type: none">● No input.● Set the position movement between FLAT and CHROM to 0.
CAL Gain	VR1	X75-1210	<ul style="list-style-type: none">● Adjust to 1 Vp-p.

ADJUSTMENT

PANEL UNIT (X66-1180-00/X66-1180-01)

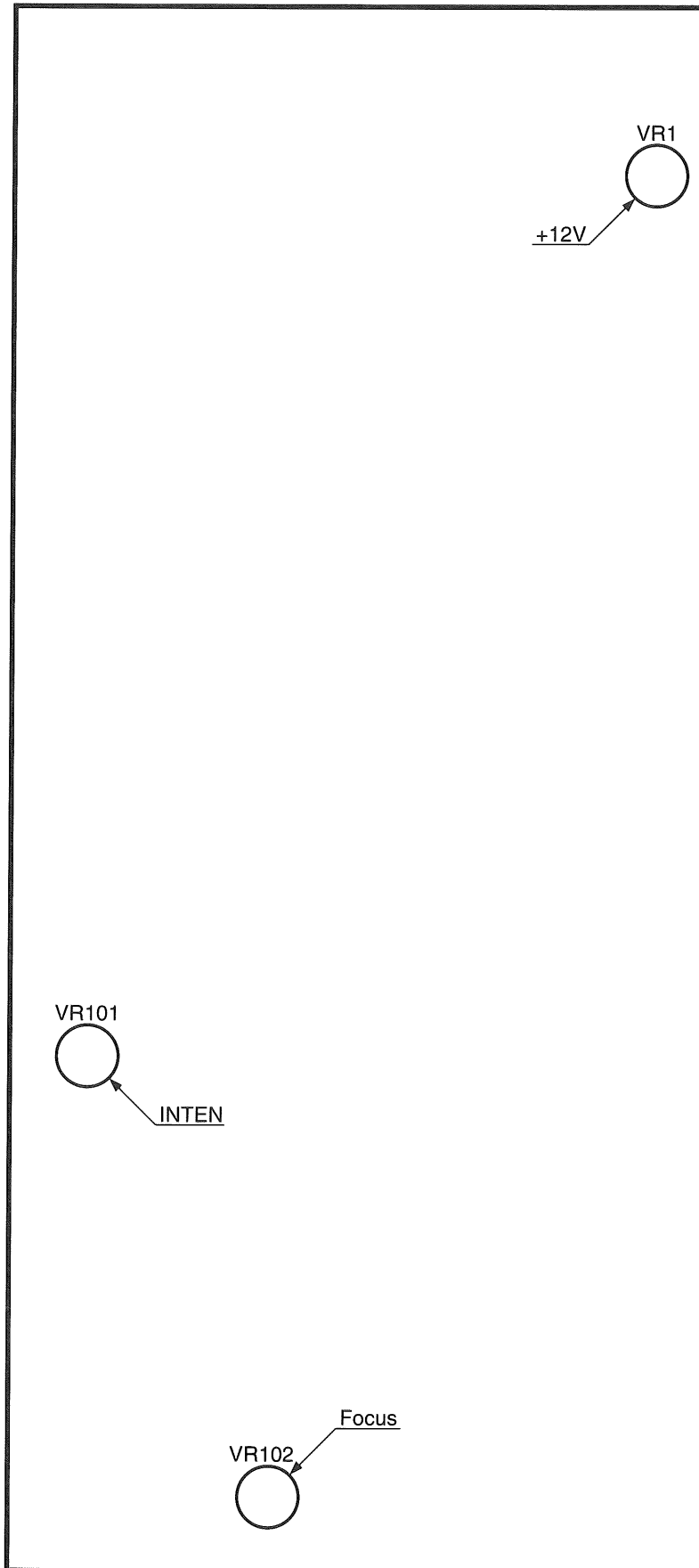
Pattern side view



ADJUSTMENT

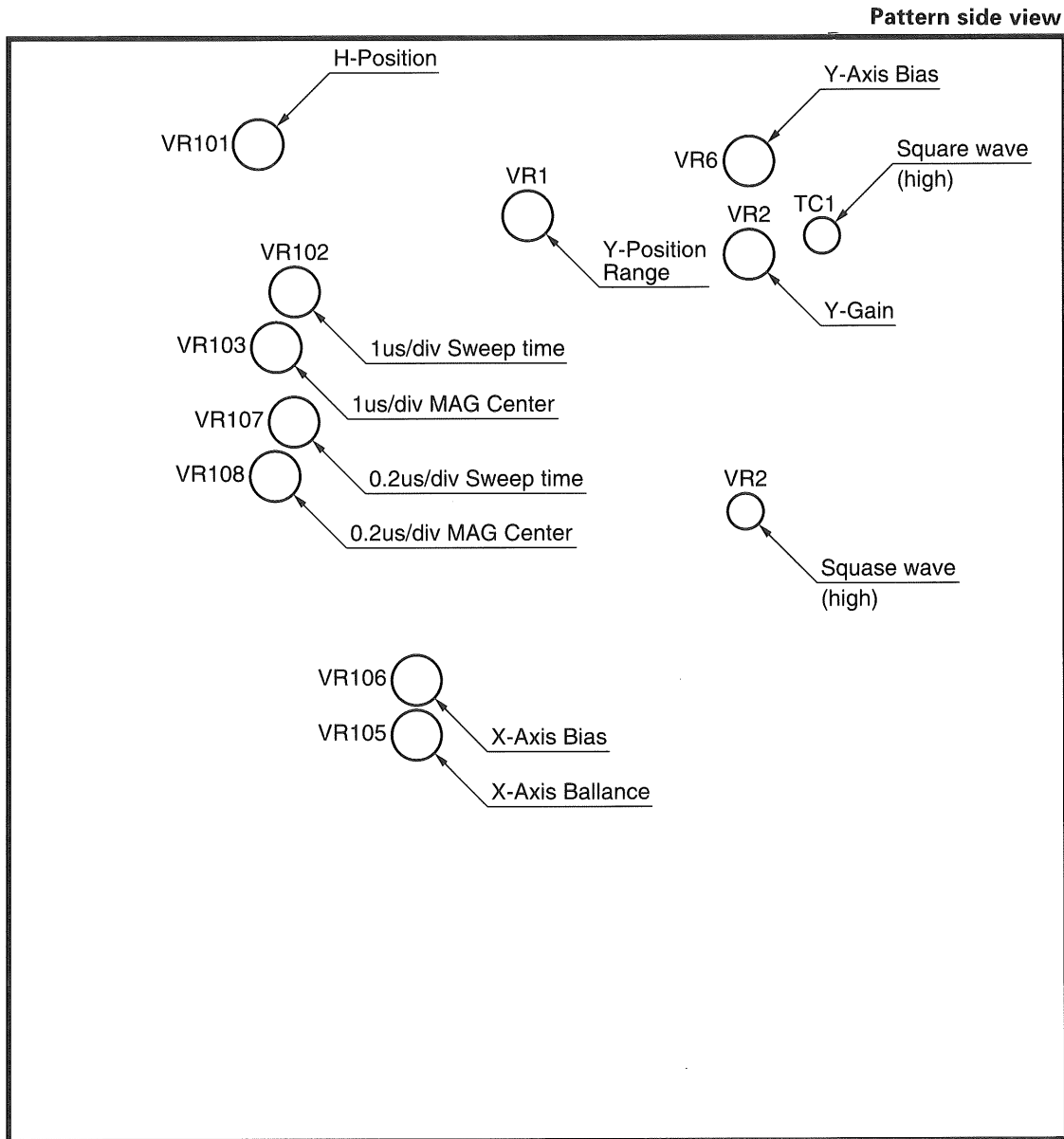
POWER SUPPLY UNIT (X68-1620-01)

Pattern side view



ADJUSTMENT

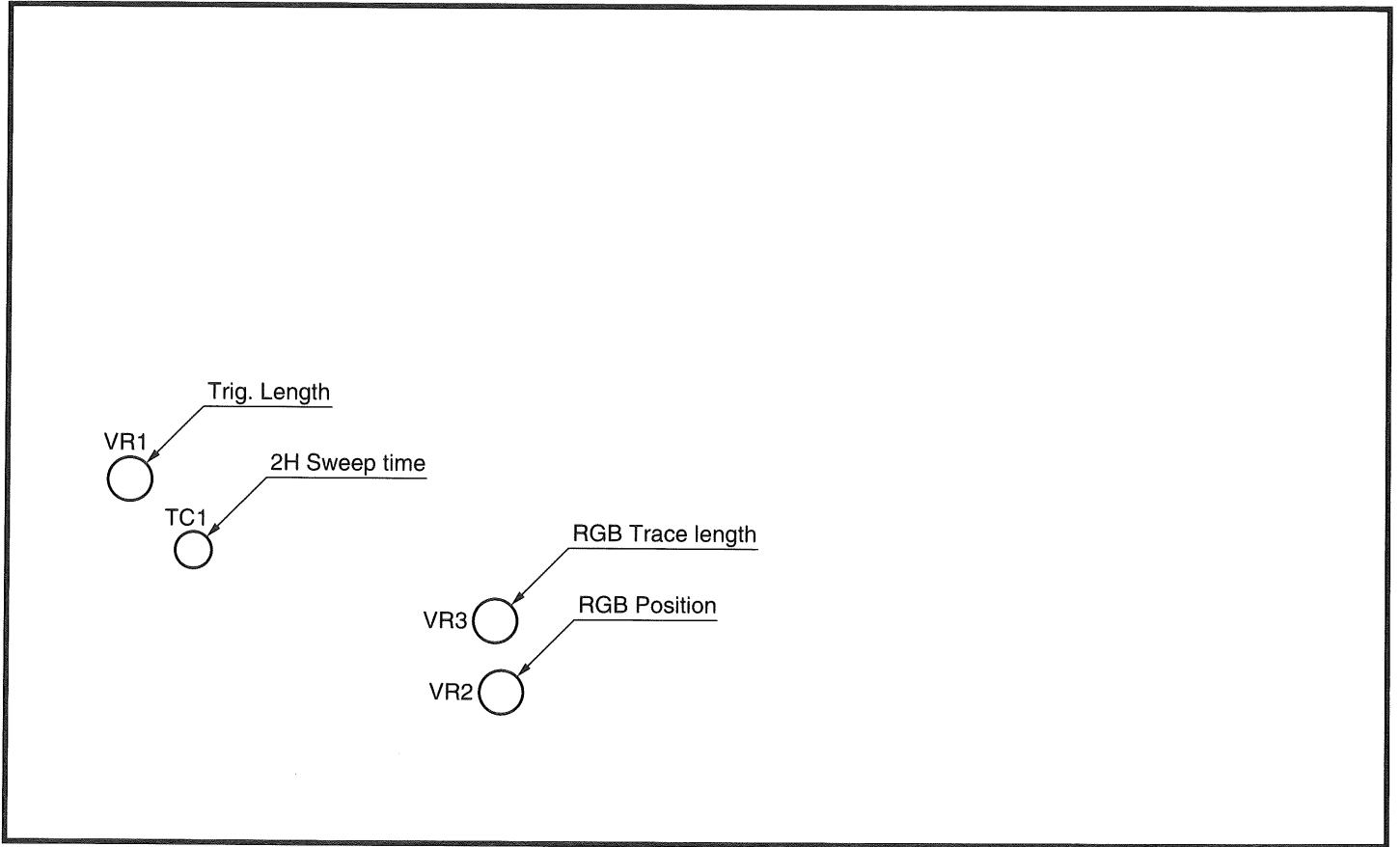
FINAL AMP UNIT (X73-1910-01)



ADJUSTMENT

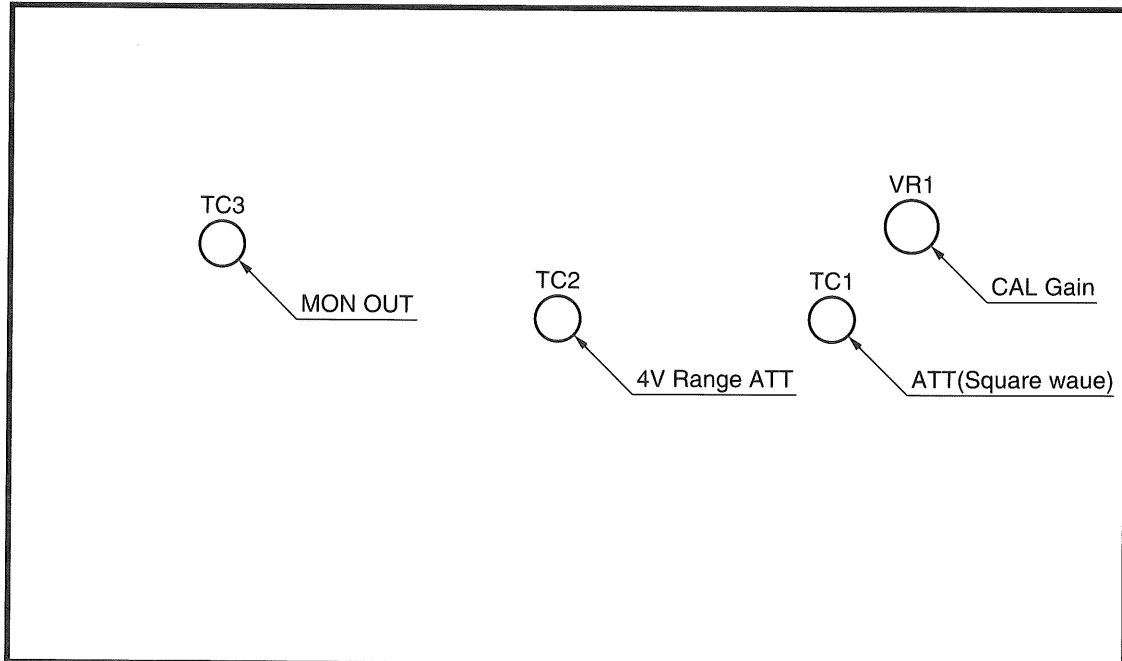
SWEEP UNIT (X74-1540-00/X74-1540-01)

Pattern side view



INPUT ATT UNIT (X75-1210-00/X75-1210-01)

Pattern side view



PARTS LIST

CV-1240

Y71-1170-00

REF. NO	PARTS NO	NAME & DESCRIPTION
	A01-1256-12	CASE, TOP
	A01-1257-12	CASE, BOTTOM
	A13-0982-03	FRAME, TOP, FOR MOLDED PANEL
	A13-0983-13	FRAME, BOTTOM, FOR MOLDED PANEL
	A13-0984-12	FRAME, RIGHT
	A13-0985-12	FRAME, LEFT
	A21-1190-14	DECORATIVE PANEL, POWER
	A21-1192-14	DECORATIVE PANEL, LINE SELECTOR
	A33-0502-05	REFLECTING PANEL (1)
	A63-0047-21	MOLDED PANEL
	A83-0030-12	REAR PANEL
	B11-0536-14	FILTER
	B30-0952-05	LAMP (T4.2 8V 0.15A)
	B38-0411-05	ILLUMI LAMP ASS'Y
	B41-0710-14	CAUTION LABEL, HIGH VOLTAGE
	B42-3816-04	SERIAL NO. PLATE
	B63-0099-00	INSTRUCTION MANUAL: ENG. / JAP.
	B73-0020-14	MODEL NO. PLATE
	D19-0505-05	FLEXIBLE WIRE, FOR POWER SWITCH
	D21-0931-03	EXTENSION SHAFT
	E01-0903-05	9P SOCKET
	E04-0263-05	BNC RECEPTACLE
	E05-0901-05	9P PLUG
	E18-0365-05	AC SELECTOR WITH 6X30MM FUSE
	E18-0366-15	AC SELECTOR WITH 5X20MM FUSE
	E21-0667-05	METAL TERMINAL
	E23-0546-24	EARTH PLATE
	E23-0588-14	EARTH PLATE, ATTACHED TO BRACKE
	E30-1644-15	BS POWER CORD
	E30-1645-05	CEE POWER CODE SET
	E30-1647-05	SAA POWER CORD SET
	E30-1722-05	JIS POWER CORD SET
	E30-2013-05	UL/CSA POWER CORD SET
	E31-0564-15	WIRE ASS'Y: AC IN TO GND
	E38-0508-15	WIRE ASS'Y: P19 TO P212
	E38-0510-05	WIRE ASS'Y: P204 TO P404
	E38-0512-05	WIRE ASS'Y: P18 TO P109
	E38-0515-05	WIRE ASS'Y: P203 TO P403
	E38-0516-05	WIRE ASS'Y: P205 TO P405
	E38-0517-05	WIRE ASS'Y: P21 TO P113
	E38-0518-05	WIRE ASS'Y: P210 TO P309
	E38-0524-05	WIRE ASS'Y: P111 TO P301
	E38-0525-05	WIRE ASS'Y: P6 TO P114
	E38-0526-05	WIRE ASS'Y: P17 TO P106
	E38-0527-05	WIRE ASS'Y: P20, 24 TO P107, 102
	E38-0529-05	WIRE ASS'Y: P8 TO P18
	E38-0530-05	WIRE ASS'Y: P7 TO P101
	E38-0532-05	WIRE ASS'Y: P9 TO P109
	E38-0533-05	WIRE ASS'Y: 9P SOCKET
	E38-1007-05	WIRE ASS'Y: HIGH VOLTAGE BLOCK
	F05-1023-05	FUSE (6X32MM) 1A/250V
	F05-5013-05	FUSE (6X32MM) 0.5A/250V
	F05-5016-05	FUSE (5X20MM) T500MA/250V
	F10-1665-14	SHIELD PLATE, FOR TR
	F11-1206-13	SHIELD CASE, CRT
	F11-1249-03	SHIELD CASE
	F11-1261-04	SHIELD, CRT
	F15-0760-04	BLIND PLATE
	F15-0763-04	FELT
	F20-0698-03	INSULATOR
	F29-0508-05	CAP FOR BNC
	G13-0737-14	CUSHION
	G16-0609-04	RUBBER SHEET
	H10-2862-02	FOAMED STYRENE PAD, FRONT
	H10-2863-02	FOAMED STYRENE PAD, REAR
	H20-1725-04	VINYL COVER
	H53-0056-04	CARTON BOX
	J02-0089-05	RUBBER FOOT
	J19-1653-23	HOLDER FOR CRT
	J21-4784-13	BRACKET: CRT, FORWARD
	J21-4785-03	BRACKET: CRT, BACKWARD
	J21-4786-24	BRACKET: FOR ROTARY SWITCH UNIT
	J42-0534-05	BUSHING
	K01-0545-05	HANDLE
	K21-0908-04	KNOB, SWEEP/INPUT
	K23-0808-03	KNOB: 6 USED
	K27-0504-04	BUTTON: POWER
	K27-0590-04	PUSH BUTTON: GRAYWHITE
	L01-9980-15	POWER TRANSFORMER
	L39-0531-05	ROTATION COIL
	N09-0623-04	SCREW, SENS PAN HD M3X8
	N09-0654-05	SCREW, SENS PAN HD M4X8
	N09-0739-05	SCREW, SENS BINDING TAPTITE 3X8
	N09-0748-04	SCREW, SENS PAN HD M4X12
	N09-0777-05	SCREW, SENS PAN HD M4X6
	N10-2030-41	NUT, HEX M3
	N17-1030-41	LOCK WASHER M3
	N30-3010-41	SCREW, PAN HD M3X10
	N32-3008-41	SCREW, FLAT HD M3X8
	N32-3020-41	SCREW, FLAT HD M3X20
	N88-3008-41	SCREW, FLAT HD TAPTITE 3X8
	N89-3008-41	SCREW, BINDING TAPTITE 3X8
	N89-3008-47	SCREW, BINDING TAPTITE 3X8
	N89-3012-41	SCREW, BINDING TAPTITE 3X12

S40-1524-05	PUSH SWITCH, POWER
X66-1180-00	PANEL UNIT
X68-1620-01	POWER SUPPLY UNIT
X73-1910-01	FINAL AMP UNIT
X74-1540-00	SWEEP UNIT
X75-1210-00	INPUT ATT UNIT
X80-1320-00	LINE FILTER & CRT UNIT
150GKM31T	CRT

CV-1245

Y71-1170-01

REF. NO	PARTS NO	NAME & DESCRIPTION
	A01-1256-12	CASE, TOP
	A01-1257-12	CASE, BOTTOM
	A13-0982-03	FRAME, TOP, FOR MOLDED PANEL
	A13-0983-13	FRAME, BOTTOM, FOR MOLDED PANEL
	A13-0984-12	FRAME, RIGHT
	A13-0985-12	FRAME, LEFT
	A21-1190-14	DECORATIVE PANEL, POWER
	A21-1192-14	DECORATIVE PANEL, LINE SELECTOR
	A33-0502-05	REFLECTING PANEL (1)
	A63-0047-21	MOLDED PANEL
	A83-0030-12	REAR PANEL
	B11-0536-14	FILTER
	B30-0952-05	LAMP (T4.2 8V 0.15A)
	B38-0411-05	ILLUMI LAMP ASS'Y
	B41-0710-14	CAUTION LABEL, HIGH VOLTAGE
	B42-3817-04	SERIAL NO. PLATE
	B63-0099-00	INSTRUCTION MANUAL: ENG. / JAP.
	B73-0031-14	MODEL NO. PLATE
	D19-0505-05	FLEXIBLE WIRE, FOR POWER SWITCH
	D21-0931-03	EXTENSION SHAFT
	E01-0903-05	9P SOCKET
	E04-0263-05	BNC RECEPTACLE
	E18-0365-05	AC SELECTOR WITH 6X30MM FUSE
	E21-0667-05	METAL TERMINAL
	E23-0546-24	EARTH PLATE
	E23-0588-14	EARTH PLATE, ATTACHED TO BRACKE
	E30-1644-15	BS POWER CORD
	E30-1645-05	CEE POWER CODE SET
	E30-1647-05	SAA POWER CORD SET
	E30-1722-05	JIS POWER CORD SET
	E30-2013-05	UL/CSA POWER CORD SET
	E31-0564-15	WIRE ASS'Y: AC IN TO GND
	E38-0508-15	WIRE ASS'Y: P19 TO P212
	E38-0510-05	WIRE ASS'Y: P204 TO P404
	E38-0512-05	WIRE ASS'Y: P18 TO P109
	E38-0515-05	WIRE ASS'Y: P203 TO P403
	E38-0516-05	WIRE ASS'Y: P205 TO P405
	E38-0517-05	WIRE ASS'Y: P21 TO P113
	E38-0518-05	WIRE ASS'Y: P210 TO P309
	E38-0524-05	WIRE ASS'Y: P111 TO P301
	E38-0525-05	WIRE ASS'Y: P6 TO P114
	E38-0526-05	WIRE ASS'Y: P17 TO P106
	E38-0527-05	WIRE ASS'Y: P20, 24 TO P107, 102
	E38-0529-05	WIRE ASS'Y: P8 TO P18
	E38-0530-05	WIRE ASS'Y: P7 TO P101
	E38-0532-05	WIRE ASS'Y: P9 TO P109
	E38-0533-05	WIRE ASS'Y: 9P SOCKET
	E38-1007-05	WIRE ASS'Y: HIGH VOLTAGE BLOCK
	F05-1023-05	FUSE (6X32MM) 1A/250V
	F05-5013-05	FUSE (6X32MM) 0.5A/250V
	F05-5016-05	FUSE (5X20MM) T500MA/250V
	F10-1665-14	SHIELD PLATE, FOR TR
	F11-1206-13	SHIELD CASE, CRT
	F11-1249-03	SHIELD CASE
	F11-1261-04	SHIELD, CRT
	F15-0760-04	BLIND PLATE
	F15-0763-04	FELT
	F20-0698-03	INSULATOR
	F29-0508-05	CAP FOR BNC
	G13-0737-14	CUSHION
	G16-0609-04	RUBBER SHEET
	H10-2862-02	FOAMED STYRENE PAD, FRONT
	H10-2863-02	FOAMED STYRENE PAD, REAR
	H20-1725-04	VINYL COVER
	H53-0074-04	CARTON BOX
	J02-0089-05	RUBBER FOOT
	J19-1653-23	HOLDER FOR CRT
	J21-4784-13	BRACKET: CRT, FORWARD
	J21-4785-03	BRACKET: CRT, BACKWARD
	J21-4786-24	BRACKET: FOR ROTARY SWITCH UNIT
	J42-0534-05	BUSHING
	K01-0545-05	HANDLE
	K21-0908-04	KNOB, SWEEP/INPUT
	K23-0808-03	KNOB: 6 USED
	K27-0504-04	BUTTON: POWER
	K27-0590-04	PUSH BUTTON: GRAYWHITE
	L01-9980-15	POWER TRANSFORMER
	L39-0531-05	ROTATION COIL
	N09-0623-04	SCREW, SENS PAN HD M3X8
	N09-0654-05	SCREW, SENS PAN HD M4X8
	N09-0739-05	SCREW, SENS BINDING TAPTITE 3X8

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION
	N09-0748-04	SCREW, SEMS PAN HD M4X12
	N09-0777-05	SCREW, SEMS PAN HD M4X6
	N10-2030-41	NUT, HEX M3
	N17-1030-41	LOCK WASHER M3
	N30-3010-41	SCREW, PAN HD M3X10
	N32-3008-41	SCREW, FLAT HD M3X8
	N32-3020-41	SCREW, FLAT HD M3X20
	N88-3008-41	SCREW, FLAT HD TAPTITE 3X8
	N89-3008-41	SCREW, BINDING TAPTITE 3X8
	N89-3008-47	SCREW, BINDING TAPTITE 3X8
	N89-3012-41	SCREW, BINDING TAPTITE 3X12
	S40-1524-05	PUSH SWITCH, POWER
	X66-1180-01	PANEL UNIT
	X6R-1620-01	POWER SUPPLY UNIT
	X73-1910-01	FINAL AMP UNIT
	X74-1540-01	SWEEP UNIT
	X75-1210-01	INPUT ATT UNIT
	X80-1320-00	LINE FILTER & CRT UNIT
	150HKM31T	CRT

REF. NO	PARTS NO	NAME & DESCRIPTION
D16	1SS132	DIODE
D17	1SS132	DIODE
D18	1SS132	DIODE
D19	1SS132	DIODE
D20	1SS132	DIODE
D21	1SS132	DIODE
D22	1SS132	DIODE
D23	1SS132	DIODE
D24	1SS132	DIODE
D25	1SS132	DIODE

D201	B30-0957-05	LED (LN322GPT)
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D201	J39-0543-05	
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K1	S51-2508-05	RELAY
K2	S51-2508-05	RELAY

L1	L40-1211-17	FERRI INDUCTOR 120UH 10%
L2	L40-5611-15	FERRI INDUCTOR 560UH 10%
L3	L40-4791-17	FERRI INDUCTOR 4.7UH 10%
L4	L40-2201-17	FERRI INDUCTOR 22UH 10%
L5	L40-8201-17	FERRI INDUCTOR 82UH 10%
L6	L40-5601-17	FERRI INDUCTOR 56UH 10%

L101	L79-0526-05	NOISE FILTER
L102	L79-0526-05	NOISE FILTER
L103	L79-0526-05	NOISE FILTER

P101	E40-3240-05	PIN CONNECTOR 5P
P102	E40-3238-05	PIN CONNECTOR 3P
P103	E40-3239-05	PIN CONNECTOR 4P
P104	E40-3239-05	PIN CONNECTOR 4P
P105	E40-3239-05	PIN CONNECTOR 4P
P106	E40-3237-05	PIN CONNECTOR 2P
P107	E40-3238-05	PIN CONNECTOR 3P
P108	E40-3239-05	PIN CONNECTOR 4P
P109	E40-5070-05	PIN CONNECTOR 13P
P110	NO USE	
P111	E40-3237-05	PIN CONNECTOR 2P
P112	E40-3239-05	PIN CONNECTOR 4P
P113	E40-3238-05	PIN CONNECTOR 3P
P114	E40-3237-05	PIN CONNECTOR 2P
P115	E40-3237-05	PIN CONNECTOR 2P
P116	E40-3237-05	PIN CONNECTOR 2P

Q1	2SC4072-KEN	TR. SI, NPN
Q2	2SA1005(K)	TR. SI, PNP
Q3	2SA1005(K)	TR. SI, PNP
Q4	2SA1175(F)	TR. SI, PNP
Q5	2SC2786(K)	TR. SI, NPN
Q6	2SA1005(K)	TR. SI, PNP
Q7	2SA1005(K)	TR. SI, PNP
Q8	2SA1175(F)	TR. SI, PNP
Q9	2SC2785(F)	TR. SI, NPN
Q10	2SK583-KEN	FET, N-CHANNEL
Q11	2SK583-KEN	FET, N-CHANNEL
Q12	2SA1175(F)	TR. SI, PNP
Q13	2SA1175(F)	TR. SI, PNP
Q14	2SA1565	TR. SI, PNP
Q15	2SA1565	TR. SI, PNP
Q16	2SC4049	TR. SI, NPN
Q17	2SC2785(F)	TR. SI, NPN
Q18	2SA1175(F)	TR. SI, PNP
Q19	2SC2785(F)	TR. SI, NPN
Q20	2SC2785(F)	TR. SI, NPN
Q21	2SC2785(F)	TR. SI, NPN
Q22	2SC2785(F)	TR. SI, NPN
Q23	2SC2785(F)	TR. SI, NPN
Q24	2SA1005(K)	TR. SI, PNP
Q25	2SC2786(K)	TR. SI, NPN
Q26	2SA1005(K)	TR. SI, PNP
Q27	2SA1005(K)	TR. SI, PNP
Q28	2SC2785(F)	TR. SI, NPN
Q29	2SA1175(F)	TR. SI, PNP
Q30	2SC2786(K)	TR. SI, NPN
Q31	2SC2786(K)	TR. SI, NPN
Q32	2SC4049	TR. SI, NPN

Q201	2SA1565	TR. SI, PNP
R1	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R2	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R3	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R4	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R5	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R6	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R7	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R8	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R9	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R10	RD14BB2C621J	RES. CARBON 620 5% 1/6W
R11	RD14BB2C362J	RES. CARBON 3.6K 5% 1/6W
R12	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W
R13	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
R14	RD14BB2C243J	RES. CARBON 24K 5% 1/6W
R15	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R16	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R17	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R18	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W

CV-1240 PANEL UNIT

X66-1180-00

REF. NO	PARTS NO	NAME & DESCRIPTION
	J73-0061-13	PCB (UNMOUNTED)
C1	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C2	CC45FCH1H040C	CAP. CERANIC 4P 0.25P 50V
C8	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C9	CQ92M1H104K	CAP. NYLAR 0.1 10% 50V
C10	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C11	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C12	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C13	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C14	CQ92FM1H102K	CAP. NYLAR 1000P 10% 50V
C15	NO USE	
C16	CE04EW1H010M	CAP. ELECTRO 1 20% 50V
C17	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C18	CM93BD2A470J	CAP. MICA 47P 5% 100V
C19	CC45FCH1H221J	CAP. CERANIC 220P 5% 50V
C20	CM93BD2A361J	CAP. MICA 360P 5% 100V
C21	CC45FCH1H181J	CAP. CERANIC 180P 5% 50V
C22	CM93BD2A391J	CAP. MICA 390P 5% 100V
C23	CC45FCH1H101J	CAP. CERANIC 100P 5% 50V
C26	CC45FF1H103Z	CAP. CERANIC 0.01 10% 50V
C27	CC45FCH1H560J	CAP. CERANIC 56P 5% 50V
C28	CQ92FM1H223K	CAP. NYLAR 0.022 10% 50V
C29	CQ92M1H104K	CAP. NYLAR 0.1 10% 50V
C30	CC45FF1H103Z	CAP. CERANIC 0.01 10% 50V
C31	NO USE	
C32	CC45FCH1H030C	CAP. CERANIC 3P 0.25P 50V
C33	CC45FCH1H050C	CAP. CERANIC 5P 0.25P 50V
C101	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C102	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C103	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C104	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C105	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C106	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C107	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C108	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C109	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C110	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C111	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C112	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C113	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C114	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C115	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C116	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C117	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C118	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C119	C91-1315-05	CAP. CERANIC 0.1 80/-10% 50V
C120	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C121	CQ92M1H104K	CAP. NYLAR 0.1 10% 50V
C201	C91-1315-05	CAP. CERANIC 0.1 80/-10% 50V
C202	CE04EW1E330M	CAP. ELECTRO 33 20% 25V

D1	1SS132	DIODE
D2	1SS132	DIODE
D3	NO USE	
D4	1SS132	DIODE
D5	1SS132	DIODE
D6	1SS132	DIODE
D7	1SS132	DIODE
D8	1SS132	DIODE
D9	1SS132	DIODE
D10	1SS132	DIODE
D11	1SS132	DIODE
D12	1SS132	DIODE
D13	1SS132	DIODE
D14	1SS132	DIODE
D15	1SS132	DIODE

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION
R19	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R20	NO USE	
R21	RD14BB2C621J	RES. CARBON 620 5% 1/6W
R22	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W
R23	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
R26	RD14BB2C392J	RES. CARBON 3.9K 5% 1/6W
R27	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R28	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R29	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R30	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R31	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R32	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R33	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R34	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R35	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R36	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
R37	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
R38	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R39	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
R40	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R41	RD14BB2C303J	RES. CARBON 30K 5% 1/6W
R42	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R43	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
R44	RD14BB2C511J	RES. CARBON 510 5% 1/6W
R45	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R52	RN14BK2C1600F	RES. METAL FILM 160 1% 1/6W
R53	RN14BK2C51R0F	RES. METAL FILM 51.0 1% 1/6W
R54	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R55	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R56	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R57	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
R58	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R59	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R60	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R61	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R62	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
R63	RD14BB2C150J	RES. CARBON 15 5% 1/6W
R64	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R65	RD14BB2C303J	RES. CARBON 30K 5% 1/6W
R66	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R67	RD14BB2C303J	RES. CARBON 30K 5% 1/6W
R68	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R69	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R70	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R71	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R72	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R73	RN14BK2C5101F	RES. METAL FILM 5.1K 1% 1/6W
R74	RN14BK2C3301F	RES. METAL FILM 3.3K 1% 1/6W
R75	RN14BK2C3300F	RES. METAL FILM 330 1% 1/6W
R76	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R77	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R78	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R79	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R80	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R81	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R82	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R83	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R84	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R85	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W
R86	RN14BK2C4990F	RES. METAL FILM 499 1% 1/6W
R87	RD14BB2C751J	RES. CARBON 750 5% 1/6W
R88	NO USE	
R89	RD14BB2C512J	RES. CARBON 5.1K 5% 1/6W
R90	RD14BB2C333J	RES. CARBON 33K 5% 1/6W
R91	RD14BB2C682J	RES. CARBON 6.8K 5% 1/6W
R92	RD14BB2C512J	RES. CARBON 5.1K 5% 1/6W
R93	RD14BB2C333J	RES. CARBON 33K 5% 1/6W
R94	RD14BB2C512J	RES. CARBON 5.1K 5% 1/6W
R95	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R96	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R97	RN14BK2C1801F	RES. METAL FILM 1.8K 1% 1/6W
R98	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
R99	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
R100	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
R101	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
R102	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R103	RD14BB2C561J	RES. CARBON 560 5% 1/6W
R104	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W
R105	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
R106	RD14BB2C331J	RES. CARBON 330 5% 1/6W
R107	RD14BB2C392J	RES. CARBON 3.9K 5% 1/6W
R108	RD14BB2C822J	RES. CARBON 8.2K 5% 1/6W
R109	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R110	RD14BB2C362J	RES. CARBON 3.6K 5% 1/6W
R111	RD14BB2C4R7J	RES. CARBON 4.7 5% 1/6W
R112	RN14BK2C6200F	RES. METAL FILM 620 1% 1/6W
R113	RD14BB2C682J	RES. CARBON 6.8K 5% 1/6W
R114	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R115	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R116	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R117	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
R118	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R119	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W
R201	RN14BK2C51R0F	RES. METAL FILM 51.0 1% 1/6W
R202	RD14BB2C301J	RES. CARBON 300 5% 1/6W
R203	RD14BB2C301J	RES. CARBON 300 5% 1/6W

REF. NO	PARTS NO	NAME & DESCRIPTION
R204	RD14BB2C301J	RES. CARBON 300 5% 1/6W
R205	RD14BB2C301J	RES. CARBON 300 5% 1/6W
S201	S60-0603-05	ROTARY SWITCH
S202	S60-0604-05	ROTARY SWITCH
S203	S68-0608-05	PUSH SWITCH
S204	S42-1502-05	PUSH SWITCH
S205	S42-1502-05	PUSH SWITCH
S206	S42-1502-05	PUSH SWITCH
S207	S42-1502-05	PUSH SWITCH
S208	S42-1502-05	PUSH SWITCH
S209	S79-0604-05	DIGITAL SWITCH
TC1	C05-0446-05	CAP. TRIMMER 30P
TC4	C05-0447-05	CAP. TRIMMER 50P
TC5	C05-0447-05	CAP. TRIMMER 50P
TC6	C05-0446-05	CAP. TRIMMER 30P
TC7	C05-0446-05	CAP. TRIMMER 30P
U1	NJN072BD	IC,JFET INPUT OP AMP
U2	CA3080E	IC,OP TRANSCONDUCTANCE AMP
U3	1F357N	IC,MONOLITHIC JFET OP AMP
U4	TC4052BP	IC,DIFFERENTIAL 4CH MPX/DE-MPX
U5	CA3086	IC,NPN TRANSISTOR ARRAY
VR1	R12-3548-05	RES. SEMI FIXED 20KR
VR2	R12-4515-05	RES. SEMI FIXED 50KR
VR3	R12-0573-05	RES. SEMI FIXED 200 B
VR4	R12-5528-05	RES. SEMI FIXED 100KB
VR5	R12-0572-05	RES. SEMI FIXED 100 B
VR6	R12-2521-05	RES. SEMI FIXED 5KB
VR7	R12-2521-05	RES. SEMI FIXED 5KB
VR8	R12-0574-05	RES. SEMI FIXED 500 B
VR9	R12-3548-05	RES. SEMI FIXED 20KB
VR10	R12-1543-05	RES. SEMI FIXED 1KB
VR201	R01-3526-05	V. R. 10KB
VR202	R01-3526-05	V. R. 10KB
VR203	R05-0505-05	V. R. 200 B
W201	E38-0534-15	WIRE ASS'Y
W202	NO USE	
W203	E38-0535-05	WIRE ASS'Y
W204	E38-0535-05	WIRE ASS'Y
W205	E38-0531-15	WIRE ASS'Y

CV-1245 PANEL UNIT

X66-1180-01

REF. NO	PARTS NO	NAME & DESCRIPTION
	J73-0061-13	PCB (UNMOUNTED)
C1	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C2	CC45FCH1H040C	CAP. CERAMIC 4P 0.25P 50V
C8	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C9	CQ92M1H104K	CAP. NYLAR 0.1 10% 50V
C10	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C11	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C12	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C13	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C14	CQ92FM1H102K	CAP. NYLAR 1000P 10% 50V
C15	NO USE	
C16	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C17	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C18	CH93BD2A470J	CAP. NICA 47P 5% 100V
C19	CH93BD2A221J	
C20	CH93BD2A361J	CAP. NICA 360P 5% 100V
C21	CC45FCH1H151J	CAP. CERAMIC 150P 5% 50V
C22	CH93BD2A391J	CAP. NICA 390P 5% 100V
C23	CC45FCH1H101J	CAP. CERAMIC 100P 5% 50V
C26	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C27	CC45FCH1H560J	CAP. CERAMIC 56P 5% 50V
C28	NO USE	
C29	CQ92M1H104K	CAP. NYLAR 0.1 10% 50V
C30	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C31	NO USE	
C32	CC45FCH1H030C	CAP. CERAMIC 3P 0.25P 50V
C33	CC45FCH1H050C	CAP. CERAMIC 5P 0.25P 50V
C101	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C102	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C103	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C104	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C105	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C106	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C107	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C108	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C109	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C110	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C111	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C112	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C113	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C114	CE04EW1E330M	CAP. ELECTRO 33 20% 25V

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION			
C115	CQ92FN1H103K	CAP. MYLAR	0.01	10%	50V
C116	CQ92FN1H103K	CAP. MYLAR	0.01	10%	50V
C117	GE04EW1E330M	CAP. ELECTRO	33	20%	25V
C118	GE04EW1E330M	CAP. ELECTRO	33	20%	25V
C119	G91-1315-05	CAP. CERAMIC	0.1	80/-10%	50V
C120	GE04EW1E330M	CAP. ELECTRO	33	20%	25V
C121	CQ92FN1H104K	CAP. MYLAR	0.1	10%	50V
C201	G91-1315-05	CAP. CERAMIC	0.1	80/-10%	50V
C202	GE04EW1E330M	CAP. ELECTRO	33	20%	25V
D1	1SS132	DIODE			
D2	1SS132	DIODE			
D3	NO USE				
D4	1SS132	DIODE			
D5	1SS132	DIODE			
D6	1SS132	DIODE			
D7	1SS132	DIODE			
D8	1SS132	DIODE			
D9	1SS132	DIODE			
D10	1SS132	DIODE			
D11	1SS132	DIODE			
D12	1SS132	DIODE			
D13	1SS132	DIODE			
D14	1SS132	DIODE			
D15	1SS132	DIODE			
D16	1SS132	DIODE			
D17	1SS132	DIODE			
D18	1SS132	DIODE			
D19	1SS132	DIODE			
D20	1SS132	DIODE			
D21	1SS132	DIODE			
D22	1SS132	DIODE			
D23	1SS132	DIODE			
D24	1SS132	DIODE			
D25	1SS132	DIODE			
D201	B30-0957-05	LED (LN322GPT)			
D201	J39-0543-05				
K1	S51-2508-05	RELAY			
K2	S51-2508-05	RELAY			
L1	L40-1211-17	FERRI INDUCTOR	120UH	10%	
L2	L40-5611-15	FERRI INDUCTOR	560UH	10%	
L3	L40-4791-17	FERRI INDUCTOR	4.7UH	10%	
L4	L40-1501-17	FERRI INDUCTOR	15UH	10%	
L5	L40-5601-17	FERRI INDUCTOR	56UH	10%	
L6	L40-5601-17	FERRI INDUCTOR	56UH	10%	
L101	L79-0526-05	NOISE FILTER			
L102	L79-0526-05	NOISE FILTER			
L103	L79-0526-05	NOISE FILTER			
P101	E40-3240-05	PIN CONNECTOR	5P		
P102	E40-3238-05	PIN CONNECTOR	3P		
P103	E40-3239-05	PIN CONNECTOR	4P		
P104	E40-3239-05	PIN CONNECTOR	4P		
P105	E40-3239-05	PIN CONNECTOR	4P		
P106	E40-3237-05	PIN CONNECTOR	2P		
P107	E40-3238-05	PIN CONNECTOR	3P		
P108	E40-3239-05	PIN CONNECTOR	4P		
P109	E40-5070-05	PIN CONNECTOR	13P		
P110	NO USE				
P111	E40-3237-05	PIN CONNECTOR	2P		
P112	E40-3239-05	PIN CONNECTOR	4P		
P113	E40-3238-05	PIN CONNECTOR	3P		
P114	E40-3237-05	PIN CONNECTOR	2P		
P115	E40-3237-05	PIN CONNECTOR	2P		
P116	E40-3237-05	PIN CONNECTOR	2P		
Q1	2SC4072-KEN	TR. SI, NPN			
Q2	2SA1005(K)	TR. SI, PNP			
Q3	2SA1005(K)	TR. SI, PNP			
Q4	2SA1175(F)	TR. SI, PNP			
Q5	2SC2786(K)	TR. SI, NPN			
Q6	2SA1005(K)	TR. SI, PNP			
Q7	2SA1005(K)	TR. SI, PNP			
Q8	2SA1175(F)	TR. SI, PNP			
Q9	2SC2785(F)	TR. SI, NPN			
Q10	2SK583-KEN	FET, N-CHANNEL			
Q11	2SK583-KEN	FET, N-CHANNEL			
Q12	2SA1175(F)	TR. SI, PNP			
Q13	2SA1175(F)	TR. SI, PNP			
Q14	2SA1565	TR. SI, PNP			
Q15	2SA1565	TR. SI, PNP			
Q16	2SC4049	TR. SI, NPN			
Q17	2SC2785(F)	TR. SI, NPN			
Q18	2SA1175(F)	TR. SI, PNP			
Q19	2SC2785(F)	TR. SI, NPN			
Q20	2SC2785(F)	TR. SI, NPN			
Q21	2SC2785(F)	TR. SI, NPN			
Q22	2SC2785(F)	TR. SI, NPN			
Q23	2SC2785(F)	TR. SI, NPN			
Q24	2SA1005(K)	TR. SI, PNP			
Q25	2SC2786(K)	TR. SI, NPN			
Q26	2SA1005(K)	TR. SI, PNP			
Q27	2SA1005(K)	TR. SI, PNP			

REF. NO	PARTS NO	NAME & DESCRIPTION			
Q28	2SC2785(F)	TR. SI, NPN			
Q29	2SA1175(F)	TR. SI, PNP			
Q30	2SC2786(K)	TR. SI, NPN			
Q31	2SC2786(K)	TR. SI, NPN			
Q32	2SC4049	TR. SI, NPN			
Q201	2SA1565	TR. SI, PNP			
R1	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R2	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R3	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R4	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R5	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R6	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R7	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R8	RN14BK2C1001F	RES. METAL FILM	1K	1%	1/6W
R9	RN14BK2C1001F	RES. METAL FILM	1K	1%	1/6W
R10	RD14BB2C621J	RES. CARBON	620	5%	1/6W
R11	RD14BB2C362J	RES. CARBON	3.6K	5%	1/6W
R12	RD14BB2C562J	RES. CARBON	5.6K	5%	1/6W
R13	RD14BB2C622J	RES. CARBON	6.2K	5%	1/6W
R14	RD14BB2C243J	RES. CARBON	24K	5%	1/6W
R15	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R16	RD14BB2C222J	RES. CARBON	2.2K	5%	1/6W
R17	RN14BK2C1001F	RES. METAL FILM	1K	1%	1/6W
R18	RD14BB2C472J	RES. CARBON	4.7K	5%	1/6W
R19	RN14BK2C1001F	RES. METAL FILM	1K	1%	1/6W
R20	NO USE				
R21	RD14BB2C621J	RES. CARBON	620	5%	1/6W
R22	RD14BB2C562J	RES. CARBON	5.6K	5%	1/6W
R23	RD14BB2C622J	RES. CARBON	6.2K	5%	1/6W
R26	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R27	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R28	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R29	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R30	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R31	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R32	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R33	RD14BB2C100J	RES. CARBON	10	5%	1/6W
R34	RD14BB2C222J	RES. CARBON	2.2K	5%	1/6W
R35	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R36	RD14BB2C203J	RES. CARBON	20K	5%	1/6W
R37	RD14BB2C203J	RES. CARBON	20K	5%	1/6W
R38	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R39	RD14BB2C203J	RES. CARBON	20K	5%	1/6W
R40	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R41	RD14BB2C303J	RES. CARBON	30K	5%	1/6W
R42	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R43	RD14BB2C203J	RES. CARBON	20K	5%	1/6W
R44	RD14BB2C511J	RES. CARBON	510	5%	1/6W
R45	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R52	RN14BK2C1600F	RES. METAL FILM	160	1%	1/6W
R53	RN14BK2C5100F	RES. METAL FILM	51.0	1%	1/6W
R54	RD14BB2C472J	RES. CARBON	4.7K	5%	1/6W
R55	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R56	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R57	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R58	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R59	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R60	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R61	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R62	RD14BB2C622J	RES. CARBON	6.2K	5%	1/6W
R63	RD14BB2C150J	RES. CARBON	15	5%	1/6W
R64	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R65	RD14BB2C303J	RES. CARBON	30K	5%	1/6W
R66	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R67	RD14BB2C303J	RES. CARBON	30K	5%	1/6W
R68	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R69	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R70	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R71	RN14BK2C3000F	RES. METAL FILM	300	1%	1/6W
R72	RN14BK2C3000F	RES. METAL FILM	300	1%	1/6W
R73	RN14BK2C5101F	RES. METAL FILM	5.1K	1%	1/6W
R74	RN14BK2C3301F	RES. METAL FILM	3.3K	1%	1/6W
R75	RN14BK2E3300F	RES. METAL FILM	330	1%	1/4W
R76	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R77	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R78	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R79	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R80	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R81	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R82	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R83	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R84	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R85	RN14BK2C1501F	RES. METAL FILM	1.5K	1%	1/6W
R86	RN14BK2C4990F	RES. METAL FILM	499	1%	1/6W
R87	RD14BB2C751J	RES. CARBON	750	5%	1/6W
R88	NO USE				
R89	RD14BB2C512J	RES. CARBON	5.1K	5%	1/6W
R90	RD14BB2C333J	RES. CARBON	33K	5%	1/6W
R91	RD14BB2C682J	RES. CARBON	6.8K	5%	1/6W
R92	RD14BB2C512J	RES. CARBON	5.1K	5%	1/6W
R93	RD14BB2C333J	RES. CARBON	33K	5%	1/6W
R94	RD14BB2C512J	RES. CARBON	5.1K	5%	1/6W
R95	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R96	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R97	RN14BK2C1801F	RES. METAL FILM	1.8K	1%	1/6W

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION			
R98	RD14BB2C123J	RES. CARBON	12K	5%	1/6W
R99	RD14BB2C123J	RES. CARBON	12K	5%	1/6W
R100	RD14BB2C123J	RES. CARBON	12K	5%	1/6W
R101	RD14BB2C123J	RES. CARBON	12K	5%	1/6W
R102	RD14BB2C332J	RES. CARBON	3.3K	5%	1/6W
R103	RD14BB2C561J	RES. CARBON	560	5%	1/6W
R104	RN14BK2C1501F	RES. METAL FILM	1.5K	1%	1/6W
R105	RD14BB2C622J	RES. CARBON	6.2K	5%	1/6W
R106	RD14BB2C331J	RES. CARBON	330	5%	1/6W
R107	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R108	RD14BB2C822J	RES. CARBON	8.2K	5%	1/6W
R109	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R110	RD14BB2C362J	RES. CARBON	3.6K	5%	1/6W
R111	RD14BB2C4R7J	RES. CARBON	4.7	5%	1/6W
R112	RN14BK2C6200F	RES. METAL FILM	620	1%	1/6W
R113	RD14BB2C682J	RES. CARBON	6.8K	5%	1/6W
R114	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R115	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R116	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R117	RD14BB2C123J	RES. CARBON	12K	5%	1/6W
R118	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R119	RD14BB2C152J	RES. CARBON	1.5K	5%	1/6W
R201	RN14BK2C51R0F	RES. METAL FILM	51.0	1%	1/6W
R202	RD14BB2C301J	RES. CARBON	300	5%	1/6W
R203	RD14BB2C301J	RES. CARBON	300	5%	1/6W
R204	RD14BB2C301J	RES. CARBON	300	5%	1/6W
R205	RD14BB2C301J	RES. CARBON	300	5%	1/6W
S201	S60-0603-05	ROTARY SWITCH			
S202	S60-0604-05	ROTARY SWITCH			
S203	S6R-0608-05	PUSH SWITCH			
S204	S42-1502-05	PUSH SWITCH			
S205	S42-1502-05	PUSH SWITCH			
S206	S42-1502-05	PUSH SWITCH			
S207	S42-1502-05	PUSH SWITCH			
S208	S42-1502-05	PUSH SWITCH			
S209	S79-0604-05	DIGITAL SWITCH			
TC1	C05-0446-05	CAP. TRIMMER	30P		
TC4	C05-0447-05	CAP. TRIMMER	50P		
TC5	C05-0447-05	CAP. TRIMMER	50P		
TC6	C05-0446-05	CAP. TRIMMER	30P		
TC7	C05-0446-05	CAP. TRIMMER	30P		
U1	NJN072BD	IC, JFET INPUT OP AMP			
U2	CA3080E	IC, OP TRANSCONDUCTANCE AMP			
U3	LF357N	IC, MONOLITHIC JFET OP AMP			
U4	TC4052BP	IC, DIFFERENTIAL 4CH MPX/DE-MPX			
U5	CA3086	IC, NPN TRANSISTOR ARRAY			
VR1	R12-3548-05	RES. SEMI FIXED	20KB		
VR2	R12-4515-05	RES. SEMI FIXED	50KB		
VR3	R12-0573-05	RES. SEMI FIXED	200 B		
VR4	R12-5528-05	RES. SEMI FIXED	100KB		
VR5	R12-0572-05	RES. SEMI FIXED	100 B		
VR6	R12-2521-05	RES. SEMI FIXED	5KB		
VR7	R12-1544-05	RES. SEMI FIXED	2KB		
VR8	R12-0574-05	RES. SEMI FIXED	500 B		
VR9	R12-3548-05	RES. SEMI FIXED	20KB		
VR10	R12-1543-05	RES. SEMI FIXED	1KB		
VR201	R01-3526-05	V. R.	10KB		
VR202	R01-3526-05	V. R.	10KB		
VR203	R05-0505-05	V. R.	200 B		
W201	E38-0534-15	WIRE ASS'Y			
W202	NO USE				
W203	E38-0535-05	WIRE ASS'Y			
W204	E38-0535-05	WIRE ASS'Y			
W205	E38-0531-15	WIRE ASS'Y			

POWER SUPPLY UNIT

X68-1620-01

REF. NO	PARTS NO	NAME & DESCRIPTION			
F01	0835-05	HEAT SINK: 23.4X40X17			
F01	0893-04	HEAT SINK: 101X43			
F10	1601-04	SHIELD PLATE			
F15	0727-04	HOLDER (NEON LAMP)			
J73	0058-02	PCB (UNMOUNTED)			
N09	0623-04	SCREW, SENS PAN HD N3X8			
N09	0731-05	SCREW, SENS PAN HD N3X12			
N14	0638-04	PLATE NUT: 3-N3			
C1	CE04W2E470M	CAP. ELECTRO	47	20%	250V
C2	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C3	CE04W2E4R7M	CAP. ELECTRO	4.7	20%	250V
C4	CK45FB2H472K	CAP. CERAMIC	4700P	10%	500V
C5	C90-3070-05	CAP. ELECTRO	390	20%	160V
C6	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C7	CE04W2A220M	CAP. ELECTRO	22	20%	100V
C8	CK45FB2H472K	CAP. CERAMIC	4700P	10%	500V
C9	C90-3069-05	CAP. ELECTRO	5600	20%	35V
C10	CE04EW1E221M	CAP. ELECTRO	220	20%	25V

REF. NO	PARTS NO	NAME & DESCRIPTION			
C11	C092FM1H104K	CAP. NYLAR	0.1	10%	50V
C12	C90-3069-05	CAP. ELECTRO	5600	20%	35V
C13	CE04EW1C101M	CAP. ELECTRO	100	20%	16V
C14	CE04EW1E221M	CAP. ELECTRO	220	20%	25V
C15	C092FM1H104K	CAP. NYLAR	0.1	10%	50V
C16	C90-3068-05	CAP. METAL FILM	8200	20%	10V
C17	CE04EW1C101M	CAP. ELECTRO	100	20%	16V
C18	C092FM1H104K	CAP. NYLAR	0.1	10%	50V
C19	CK45B2H472K	CAP. CERAMIC	4700P	10%	500V
C20	CK45B2H472K	CAP. CERAMIC	4700P	10%	500V
C101	CF92V1H224J	CAP. POLYESTER	0.22	5%	50V
C102	CF92V1H224J	CAP. POLYESTER	0.22	5%	50V
C103	C092FM1H222K	CAP. NYLAR	2200P	10%	50V
C104	C092FM1H103K	CAP. NYLAR	0.01	10%	50V
C105	CK45E3F102P	CAP. CERAMIC	1000P		3.15KV
C106	NO USE				
C107	CF92V1H472J	CAP. POLYESTER	4700P	5%	50V
C108	CE04EW1V221M	CAP. ELECTRO	220	20%	35V
C109	CE04EW1V221M	CAP. ELECTRO	220	20%	35V
C110	CE04EW1V221M	CAP. ELECTRO	220	20%	35V
C111	CE04EW1V221M	CAP. ELECTRO	220	20%	35V
C112	C092FM1H103K	CAP. NYLAR	0.01	10%	50V
C113	C092FM1H103K	CAP. NYLAR	0.01	10%	50V
C114	CE04W2E2R2M	CAP. ELECTRO	2.2	20%	250V
C115	NO USE				
C116	CK45FB2H472K	CAP. CERAMIC	4700P	10%	500V
C117	CC45FCH2H010C	CAP. CERAMIC	1P	0.25P	500V
C118	CK45FB2H472K	CAP. CERAMIC	4700P	10%	500V
C119	CE04EW1E330M	CAP. ELECTRO	33	20%	25V
C120	CE04W2E2R2M	CAP. ELECTRO	2.2	20%	250V
C121	CE04W2E2R2M	CAP. ELECTRO	2.2	20%	250V
C122	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C123	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C124	CK45FB2H102K	CAP. CERAMIC	1000P	10%	500V
C125	CC45FCH2H020C	CAP. CERAMIC	2P	0.25P	500V
C126	CC45FCH2H010C	CAP. CERAMIC	1P	0.25P	500V
C127	CK45FB2H472K	CAP. CERAMIC	4700P	10%	500V
C128	CE04EW1E101M	CAP. ELECTRO	100	20%	25V
C129	CE04EW1E330M	CAP. ELECTRO	33	20%	25V
C130	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C131	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C132	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C133	CK45FB2H102K	CAP. CERAMIC	1000P	10%	500V
C134	CC45SL2H101J	CAP. CERAMIC	100P	5%	500V
C135	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C136	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C137	CK45E3D103P	CAP. CERAMIC	0.01		2KV
C140	C092FM1H102K	CAP. NYLAR	1000P	10%	50V
D1	1J4B42	DIODE, BRIDGE			
D2	1SS132	DIODE			
D3	R92-1061-05	JUMPING RES.	ZERO OHM		(5MM)
D4	1SS132	DIODE			
D5	S4VB20F1	DIODE, BRIDGE			
D6	MTZ16JA	DIODE, ZENER	9.6V		
D7	MTZ16JA	DIODE, ZENER	9.6V		
D8	MTZ5.1JB	DIODE, ZENER	5.07V		
D9	S4VB20F1	DIODE, BRIDGE			
D10	MTZ7.5JA	DIODE, ZENER	7.04V		
D101	1SS132	DIODE			
D102	1SS132	DIODE			
D103	1SS132	DIODE			
D104	1SS83	DIODE			
D105	1SS83	DIODE			
D106	1SR35-200A	DIODE			
D107	1SR35-200A	DIODE			
D108	1SS83	DIODE			
D109	1SS83	DIODE			
D110	1SR35-200A	DIODE			
D111	1SR35-200A	DIODE			
D112	1SS132	DIODE			
L101	L40-1021-03	FERRI INDUCTOR	1MH	10%	
L102	L40-1011-03	FERRI INDUCTOR	100UH	10%	
L103	L40-1011-03	FERRI INDUCTOR	100UH	10%	
N1101	NE-2B	NEON LAMP			
N1102	NE-2B	NEON LAMP			
N1103	NE-2B	NEON LAMP			
N1104	NE-2B	NEON LAMP			
P201	E40-5070-05	PIN CONNECTOR	13P		
P202	NO USE				
P203	E40-3237-05	PIN CONNECTOR	2P		
P204	E40-3239-05	PIN CONNECTOR	4P		
P205	E40-3240-05	PIN CONNECTOR	5P		
P206	E40-3238-05	PIN CONNECTOR	3P		
P207	E40-4235-05	PIN CONNECTOR	6P		
P208	E40-3238-05	PIN CONNECTOR	3P		
P209	E40-3239-05	PIN CONNECTOR	4P		
P210	E40-3239-05	PIN CONNECTOR	4P		
P211	NO USE				
P212	E40-3237-05	PIN CONNECTOR	2P		
Q1	2SD1409	TR. SI, NPN			
Q2	2SC2271(D,E)	TR. SI, NPN			

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION
Q3	2SD1409	TR. SI, NPN
Q4	2SC2271(D,E)	TR. SI, NPN
Q5	2SB1133(S)	TR. SI, PNP
Q6	2SD1666(S)	TR. SI, NPN
Q7	2SB1133(S)	TR. SI, PNP
Q101	2SA1175(F)	TR. SI, PNP
Q102	2SD613(E)	TR. SI, NPN
Q103	2SC2271(D,E)	TR. SI, NPN
Q104	2SC3787(S)	TR. SI, NPN
Q105	2SA1477(S)	TR. SI, PNP
Q106	2SC3787(S)	TR. SI, NPN
Q107	2SA1477(S)	TR. SI, PNP
Q111	2SC2785(F)	TR. SI, NPN
R1	RD14BB2E163J	RES. CARBON 16K 5% 1/4W
R2	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R3	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R4	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R5	RN14BK2C1503F	RES. METAL FILM 150K 1% 1/6W
R6	RN14BK2C1302F	RES. METAL FILM 13K 1% 1/6W
R7	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
R8	RD14BB2E362J	RES. CARBON 3.6K 5% 1/4W
R9	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R10	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R11	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R12	RN14BK2C7502F	RES. METAL FILM 75K 1% 1/6W
R13	RN14BK2C1302F	RES. METAL FILM 13K 1% 1/6W
R14	RD14BB2C113J	RES. CARBON 11K 5% 1/6W
R15	R92-1449-05	RES. METAL FILM 33 5% 5W
R16	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R17	RD14BB2C912J	RES. CARBON 9.1K 5% 1/6W
R18	RN14BK2C1802F	RES. METAL FILM 18K 1% 1/6W
R19	RN14BK2C1802F	RES. METAL FILM 18K 1% 1/6W
R20	R92-1449-05	RES. METAL FILM 33 5% 5W
R21	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R22	RN14BK2C6801F	RES. METAL FILM 6.8K 1% 1/6W
R23	RN14BK2C4701F	RES. METAL FILM 4.7K 1% 1/6W
R24	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
R25	RD14BB2C132J	RES. CARBON 1.3K 5% 1/6W
R26	NO USE	
R27	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R28	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W
R29	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R30	RN14BK2C1802F	RES. METAL FILM 18K 1% 1/6W
R101	RN14BK2C1203F	RES. METAL FILM 120K 1% 1/6W
R102	RD14BB2C124J	RES. CARBON 12K 5% 1/6W
R103	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R104	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R105	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W
R106	RD14BB2C511J	RES. CARBON 510 5% 1/6W
R107	R92-1125-05	RES. METAL FILM 7.5M 1% 1W
R108	R92-1125-05	RES. METAL FILM 7.5M 1% 1W
R109	RD14BB2C753J	RES. CARBON 75K 5% 1/6W
R110	RD14BB2C513J	RES. CARBON 51K 5% 1/6W
R111	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
R112	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
R113	RD14BB2C913J	RES. CARBON 91K 5% 1/6W
R116	RN14BK2C1202F	RES. METAL FILM 12K 1% 1/6W
R117	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R118	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R119	RN14BK2E6202F	RES. METAL FILM 62K 1% 1/4W
R120	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R121	RD14BB2C134J	RES. CARBON 130K 5% 1/6W
R122	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R123	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R124	NO USE	
R125	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R126	RD14BB2C334J	RES. CARBON 330K 5% 1/6W
R127	R92-1034-05	RES. METAL FILM 47M 5% 1/2W
R128	RD14BB2C114J	RES. CARBON 110K 5% 1/6W
R129	RD14BB2C753J	RES. CARBON 75K 5% 1/6W
R130	RD14BB2C113J	RES. CARBON 11K 5% 1/6W
R131	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R132	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R133	RD14BB2C134J	RES. CARBON 130K 5% 1/6W
R134	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R135	R92-1034-05	RES. METAL FILM 47M 5% 1/2W
R136	R92-1193-05	RES. METAL FILM 8.2M 5% 1W
R137	R92-1153-05	RES. METAL FILM 5.1M 5% 1W
R138	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R139	RD14BB2C473J	RES. CARBON 47K 5% 1/6W
R140	NO USE	
R141	RD14BB2C334J	RES. CARBON 330K 5% 1/6W
R150	RD14BB2C223J	RES. CARBON 22K 5% 1/6W
R153	RD14BB2C913J	RES. CARBON 91K 5% 1/6W
U1	NJM4556S	IC, DUAL OP AMP
U2	NJM4556S	IC, DUAL OP AMP
U3	NJM4556S	IC, DUAL OP AMP
U101	NJM4558D	IC, DUAL OP AMP
VR1	R12-1543-05	RES. SEMI FIXED 1KB

REF. NO	PARTS NO	NAME & DESCRIPTION
VR101	R12-5530-05	RES. SEMI FIXED 100KB
VR102	R12-8501-05	RES. SEMI FIXED 2.2MB
W101	W02-2256-05	HIGH VOLTAGE BLOCK

FINAL AMP UNIT

X73-1910-01

REF. NO	PARTS NO	NAME & DESCRIPTION
	F01-0859-14	HEAT SINK
	J73-0060-02	PCB (UNMOUNTED)
	N09-0623-04	SCREW, SEMS PAN HD M3X8
C3	CC45FSLH561J	CAP. CERAMIC 560P 5% 50V
C4	NO USE	
C5	CC45FCH1H101J	CAP. CERAMIC 100P 5% 50V
C8	CC45FCH1H010C	CAP. CERAMIC 1P 0.25P 50V
C101	CF92V1H103J	CAP. POLYESTER 0.01 5% 50V
C102	CF92V1H223J	CAP. POLYESTER 0.022 5% 50V
C105	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C106	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C107	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C108	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C109	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C110	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C111	CC45FCH2H010C	CAP. CERAMIC 1P 0.25P 500V
C112	CC45FCH2H010C	CAP. CERAMIC 1P 0.25P 500V
C113	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C201	CE04W2E3R3M	CAP. ELECTRO 3.3 20% 250V
C202	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C203	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C204	CE04W2E3R3M	CAP. ELECTRO 3.3 20% 250V
C205	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C206	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C207	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C208	CE04W1E101M	CAP. ELECTRO 100 20% 25V
C209	CE04W1E330M	CAP. ELECTRO 33 20% 25V
C210	CE04W1E330M	CAP. ELECTRO 33 20% 25V
C211	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C212	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C213	CE04W1E330M	CAP. ELECTRO 33 20% 25V
C214	CE04W1E330M	CAP. ELECTRO 33 20% 25V
C215	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C216	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C217	CE04W1E330M	CAP. ELECTRO 33 20% 25V
C218	NO USE	
C219	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C220	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C221	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C222	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C223	CE04W1E330M	CAP. ELECTRO 33 20% 25V
C224	CE04W1E330M	CAP. ELECTRO 33 20% 25V
C225	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C226	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
D101	1SS132	DIODE
D102	TLR112	LED, RED
D103	TLR112	LED, RED
D104	1SS132	DIODE
D105	1SS132	DIODE
D106	1SS132	DIODE
D107	1SS132	DIODE
D108	MTZ7.5JC	DIODE, ZENER 9.6V
D109	MTZ7.5JC	DIODE, ZENER 9.6V
D110	MTZ7.5JC	DIODE, ZENER 9.6V
L1	L40-1091-17	FERRI INDUCTOR 1UH 5%
L2	L40-1091-17	FERRI INDUCTOR 1UH 5%
P301	E40-3237-05	PIN CONNECTOR 2P
P302	E40-3238-05	PIN CONNECTOR 3P
P303	E40-3237-05	PIN CONNECTOR 2P
P304	E40-3238-05	PIN CONNECTOR 3P
P305	E40-3239-05	PIN CONNECTOR 4P
P306	NO USE	
P307	E40-3239-05	PIN CONNECTOR 4P
P308	E40-3238-05	PIN CONNECTOR 3P
P309	E40-3239-05	PIN CONNECTOR 4P
Q1	2SC2786(K)	TR. SI, NPN
Q2	2SC2786(K)	TR. SI, NPN
Q3	2SC3354(S)	TR. SI, NPN
Q4	2SC3354(S)	TR. SI, NPN
Q5	2SC2786(K)	TR. SI, NPN
Q6	2SC2786(K)	TR. SI, NPN
Q7	2SC2786(K)	TR. SI, NPN
Q8	2SC2786(K)	TR. SI, NPN
Q9	2SC3779(D)	TR. SI, PNP
Q10	2SC3779(D)	TR. SI, PNP

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION			
Q13	2SC3787(S)	TR. SI, NPN			
Q14	2SC3787(S)	TR. SI, NPN			
Q15	2SC2786(K)	TR. SI, NPN			
Q101	2SC2785(F)	TR. SI, NPN			
Q102	2SC2785(F)	TR. SI, NPN			
Q103	2SC3066(F)	TR. DUAL, SI, NPN			
Q104	2SC3066(F)	TR. DUAL, SI, NPN			
Q105	2SC3066(F)	TR. DUAL, SI, NPN			
Q106	NO USE				
Q107	2SA1005(K)	TR. SI, PNP			
Q108	2SA1005(K)	TR. SI, PNP			
Q111	2SC2785(F)	TR. SI, NPN			
Q112	2SC2785(F)	TR. SI, NPN			
Q113	2SC3354(S)	TR. SI, NPN			
Q114	2SC3354(S)	TR. SI, NPN			
Q115	2SA1005(K)	TR. SI, PNP			
Q116	2SA1005(K)	TR. SI, PNP			
Q117	2SC2785(F)	TR. SI, NPN			
Q118	2SC2785(F)	TR. SI, NPN			
Q119	2SC3787(S)	TR. SI, NPN			
Q120	2SC3787(S)	TR. SI, NPN			
Q121	2SA1477(S)	TR. SI, PNP			
Q122	2SA1477(S)	TR. SI, PNP			
Q123	2SC2786(K)	TR. SI, NPN			
Q124	2SC2785(F)	TR. SI, NPN			
Q125	2SC2786(K)	TR. SI, NPN			
Q126	2SC2785(F)	TR. SI, NPN			
Q127	2SC2786(K)	TR. SI, NPN			
Q128	2SC2785(F)	TR. SI, NPN			
R1	RD14BB2C821J	RES. CARBON	820	5%	1/6W
R2	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R3	RD14BB2C822J	RES. CARBON	8.2K	5%	1/6W
R4	NO USE				
R5	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R6	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R7	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R8	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R9	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R10	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R11	RN14BK2C5100F	RES. METAL FILM	510	1%	1/6W
R12	RN14BK2C5100F	RES. METAL FILM	510	1%	1/6W
R13	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R14	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R15	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R16	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R17	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R18	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R19	RN14BK2C1300F	RES. METAL FILM	130	1%	1/6W
R20	RD14BB2C681J	RES. CARBON	680	5%	1/6W
R21	RD14BB2C513J	RES. CARBON	51K	5%	1/6W
R22	RN14BK2C5101F	RES. METAL FILM	5.1K	1%	1/6W
R23	RN14BK2C2401F	RES. METAL FILM	2.4K	1%	1/6W
R24	RN14BK2C8200F	RES. METAL FILM	820	1%	1/6W
R25	RN14BK2C1201F	RES. METAL FILM	1.2K	1%	1/6W
R26	RN14BK2C1201F	RES. METAL FILM	1.2K	1%	1/6W
R27	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R28	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R29	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R30	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R31	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R32	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R33	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R34	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R35	RN14BK2E820F	RES. METAL FILM	82.0	1%	1/4W
R36	RN14BK2E820F	RES. METAL FILM	82.0	1%	1/4W
R37	RN14BK2E470F	RES. METAL FILM	47.0	1%	1/4W
R38	RD14BB2C750J	RES. CARBON	75	5%	1/6W
R39	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R40	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R41	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R42	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R43	RS14KB3F222J	RES. METAL FILM	2.2K	5%	3W
R44	RS14KB3F222J	RES. METAL FILM	2.2K	5%	3W
R45	RS14KB3F222J	RES. METAL FILM	2.2K	5%	3W
R46	RS14KB3F222J	RES. METAL FILM	2.2K	5%	3W
R47	RD14BB2C221J	RES. CARBON	220	5%	1/6W
R48	RD14BB2C221J	RES. CARBON	220	5%	1/6W
R51	RN14BK2C3300F	RES. METAL FILM	330	1%	1/6W
R52	RN14BK2C6801F	RES. METAL FILM	6.8K	1%	1/6W
R53	RN14BK2C3601F	RES. METAL FILM	3.6K	1%	1/6W
R54	NO USE				
R55	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R56	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R101	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R102	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R103	RD14BB2C133J	RES. CARBON	13K	5%	1/6W
R104	NO USE				
R105	RD14BB2C132J	RES. CARBON	1.3K	5%	1/6W
R106	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R107	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R108	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R109	RN14BK2C8200F	RES. METAL FILM	820	1%	1/6W
R110	RN14BK2C8200F	RES. METAL FILM	820	1%	1/6W
R111	RD14BB2C331J	RES. CARBON	330	5%	1/6W

REF. NO	PARTS NO	NAME & DESCRIPTION			
R112	RN14BK2C1000F	RES. METAL FILM	100	1%	1/6W
R113	RN14BK2C5100F	RES. METAL FILM	510	1%	1/6W
R114	RN14BK2C5100F	RES. METAL FILM	510	1%	1/6W
R115	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R116	RN14BK2C3601F	RES. METAL FILM	3.6K	1%	1/6W
R117	RN14BK2C1801F	RES. METAL FILM	1.8K	1%	1/6W
R118	RN14BK2C7500F	RES. METAL FILM	750	1%	1/6W
R119	RN14BK2C7500F	RES. METAL FILM	750	1%	1/6W
R120	RN14BK2C7501F	RES. METAL FILM	7.5K	1%	1/6W
R121	RN14BK2C1101F	RES. METAL FILM	1.1K	1%	1/6W
R122	RN14BK2C1101F	RES. METAL FILM	1.1K	1%	1/6W
R123	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R124	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R125	RN14BK2C4701F	RES. METAL FILM	4.7K	1%	1/6W
R126	NO USE				
R127	RD14BB2C473J	RES. CARBON	47K	5%	1/6W
R128	RD14BB2C473J	RES. CARBON	47K	5%	1/6W
R129	RN14BK2C2001F	RES. METAL FILM	2K	1%	1/6W
R130	RN14BK2C2001F	RES. METAL FILM	2K	1%	1/6W
R131	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R132	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R133	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R134	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R135	RN14BK2C1201F	RES. METAL FILM	1.2K	1%	1/6W
R136	RN14BK2C1201F	RES. METAL FILM	1.2K	1%	1/6W
R139	RN14BK2C2401F	RES. METAL FILM	2.4K	1%	1/6W
R140	RN14BK2C2401F	RES. METAL FILM	2.4K	1%	1/6W
R141	RD14BB2C272J	RES. CARBON	2.7K	5%	1/6W
R142	RD14BB2C272J	RES. CARBON	2.7K	5%	1/6W
R143	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R144	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R145	RD14BB2C911J	RES. CARBON	910	5%	1/6W
R146	RD14BB2C911J	RES. CARBON	910	5%	1/6W
R147	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R148	RD14BB2C392J	RES. CARBON	3.9K	5%	1/6W
R149	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R150	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R151	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R152	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R153	RN14BK2C3601F	RES. METAL FILM	3.6K	1%	1/6W
R154	RN14BK2C1003F	RES. METAL FILM	100K	1%	1/6W
R155	RN14BK2C7500F	RES. METAL FILM	750	1%	1/6W
R156	RN14BK2C7500F	RES. METAL FILM	750	1%	1/6W
R157	RN14BK2E8202F	RES. METAL FILM	82K	1%	1/4W
R158	RN14BK2E8202F	RES. METAL FILM	82K	1%	1/4W
R159	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R160	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R163	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R164	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R165	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R166	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R167	RN14BK2C2200F	RES. METAL FILM	220	1%	1/6W
R168	RN14BK2C2200F	RES. METAL FILM	220	1%	1/6W
R169	RN14BK2C7500F	RES. METAL FILM	750	1%	1/6W
R170	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R171	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R172	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R173	NO USE				
R174	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R175	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R176	NO USE				
R177	RN14BK2E8202F	RES. METAL FILM	82K	1%	1/4W
R178	RN14BK2E8202F	RES. METAL FILM	82K	1%	1/4W
R179	RN14BK2C1202F	RES. METAL FILM	12K	1%	1/6W
R180	NO USE				
R181	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R182	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R183	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R184	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R185	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R186	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R187	RN14BK2C1101F	RES. METAL FILM	1.1K	1%	1/6W
R188	RN14BK2C1101F	RES. METAL FILM	1.1K	1%	1/6W
R195	RD14BB2C47J	RES. CARBON	4.7	5%	1/6W
R301	RN14BK2H75R0F	RES. METAL FILM	75.0	1%	1/2W
R302	RN14BK2H75R0F	RES. METAL FILM	75.0	1%	1/2W
R303	RN14BK2H75R0F	RES. METAL FILM	75.0	1%	1/2W
S301	S31-1502-05	SLIDE SWITCH			
S302	S31-1502-05	SLIDE SWITCH			
S303	NO USE				
S304	S31-1502-05	SLIDE SWITCH			
TC1	C05-0446-05	CAP. TRIMMER	30P		
TC2	C05-0447-05	CAP. TRIMMER	50P		
VR1	R12-3548-05	RES. SEMI FIXED	20KB		
VR2	R12-0574-05	RES. SEMI FIXED	500 B		
VR6	R12-0574-05	RES. SEMI FIXED	500 B		
VR101	R12-3548-05	RES. SEMI FIXED	20KB		
VR102	R12-0573-05	RES. SEMI FIXED	200 B		
VR103	R12-0572-05	RES. SEMI FIXED	100 B		
VR104	NO USE				

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION
VR105	R12-0573-05	RES. SEMI FIXED 200 B
VR106	R12-0573-05	RES. SEMI FIXED 200 B
VR107	R12-0572-05	RES. SEMI FIXED 100 B
VR108	R12-0572-05	RES. SEMI FIXED 100 B
W301	E38-0495-05	WIRE ASS'Y
W302	E38-0495-05	WIRE ASS'Y
W303	E38-0497-05	WIRE ASS'Y
W304	E38-0495-05	WIRE ASS'Y
W305	E38-0498-05	WIRE ASS'Y

CV-1240 SWEEP UNIT

X74-1540-00

REF. NO	PARTS NO	NAME & DESCRIPTION
	J73-0063-12	PCB (UNMOUNTED)
C1	CC45FCH1H080D	CAP. CERAMIC 8P 0.5P 50V
C2	CE04HW1E220M	CAP. ELECTRO 22 20% 25V
C3	CF92V1H103J	CAP. POLYESTER 0.01 5% 50V
C4	CE04EW1C470M	CAP. ELECTRO 47 20% 16V
C5	CE04EW1C470M	CAP. ELECTRO 47 20% 16V
C6	CE04EW1C470M	CAP. ELECTRO 47 20% 16V
C7	CE04HW1E220M	CAP. ELECTRO 22 20% 25V
C8	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C9	CE04EW1C470M	CAP. ELECTRO 47 20% 16V
C10	CE04EW1C470M	CAP. ELECTRO 47 20% 16V
C11	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C12	CE04EW1H010M	CAP. ELECTRO 1 20% 50V
C13	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C14	CC45FCH1H101J	CAP. CERAMIC 100P 5% 50V
C15	CC45FCH1H181J	CAP. CERAMIC 180P 5% 50V
C16	CC45FCH1H100D	CAP. CERAMIC 10P 0.5P 50V
C17	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C18	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C19	CQ92FM1H102K	CAP. NYLAR 1000P 10% 50V
C20	CE04EW1H010M	CAP. ELECTRO 1 20% 50V
C21	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C22	CF92V1H474J	CAP. POLYESTER 0.47 5% 50V
C23	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C24	CQ92FM1H102K	CAP. NYLAR 1000P 10% 50V
C25	CC45FSL1H271J	CAP. CERAMIC 270P 5% 50V
C26	CF92V1H474J	CAP. POLYESTER 0.47 5% 50V
C27	CF92V1H102J	CAP. POLYESTER 1000P 5% 50V
C28	CF92V1H102J	CAP. POLYESTER 1000P 5% 50V
C29	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C30	CF92V1H104J	CAP. POLYESTER 0.1 5% 50V
C31	CC45FCH1H151J	CAP. CERAMIC 150P 5% 50V
C32	CF92V1H822J	CAP. POLYESTER 8200P 5% 50V
C33	CC45FCH1H121J	CAP. CERAMIC 120P 5% 50V
C34	NO USE	
C35	CQ92FM1H102K	CAP. NYLAR 1000P 10% 50V
C36	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C37	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C38	CH93BD2A391J	CAP. NICA 390P 5% 100V
C39	CF92V1H392J	CAP. POLYESTER 3900P 5% 50V
C40	CF92V1H473J	CAP. POLYESTER 0.47 5% 50V
C41	CF92V1H333J	CAP. POLYESTER 0.33 5% 50V
C42	CF92V1H102J	CAP. POLYESTER 1000P 5% 50V
C43	NO USE	
C44	CC45FCH1H121J	CAP. CERAMIC 120P 5% 50V
C45	CE04EW1H010M	CAP. ELECTRO 1 20% 50V
C46	CC45FSL1H681J	CAP. CERAMIC 680P 5% 50V
C47	CC45FSL1H681J	CAP. CERAMIC 680P 5% 50V
C201	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C202	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C203	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C204	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C205	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C206	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C207	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C208	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C209	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C210	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C211	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C212	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C213	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C214	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C215	CE04EW1A221M	CAP. ELECTRO 220 20% 10V
C216	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C217	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C218	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C219	CE04EW1A221M	CAP. ELECTRO 220 20% 10V
C220	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C221	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V
C222	NO USE	
C223	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C224	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C225	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C226	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C227	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C228	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C229	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V

REF. NO	PARTS NO	NAME & DESCRIPTION
C230	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C231	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C232	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C233	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C234	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C235	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C236	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C237	CE04EW1E330M	CAP. ELECTRO 33 20% 25V
C238	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C239	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C240	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C241	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C242	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V
C243	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V

D1	1SS132	DIODE
D2	1SS132	DIODE
D3	1SS132	DIODE
D4	1SS132	DIODE
D5	1SS132	DIODE
D6	1SS132	DIODE
D7	HTZ6.2JB	DIODE, ZENER 12.23V
D8	HTZ6.2JB	DIODE, ZENER 12.23V
D9	1SS132	DIODE
D10	1SS132	DIODE
D11	NO USE	
D12	HA700	DIODE
D13	1SS132	DIODE
D14	HA700	DIODE
D15	1SS132	DIODE
D16	HA700	DIODE
D17	HA700	DIODE
D18	HA700	DIODE
D19	HA700	DIODE
D20	1SS132	DIODE
D21	1SS132	DIODE
D22	1SS132	DIODE
D23	1SS132	DIODE
D24	1SS132	DIODE
D25	1SS132	DIODE
D26	1SS132	DIODE
D27	1SS132	DIODE
L201	L79-0526-05	NOISE FILTER
L202	L79-0526-05	NOISE FILTER
L203	L79-0526-05	NOISE FILTER
P3	E40-3237-05	PIN CONNECTOR 2P
P4	NO USE	
P5	E40-3237-05	PIN CONNECTOR 2P
P13	E40-3237-05	PIN CONNECTOR 2P
P14	E40-3239-05	PIN CONNECTOR 4P
P17	E40-3237-05	PIN CONNECTOR 2P
P18	E40-3240-05	PIN CONNECTOR 5P
P19	E40-3237-05	PIN CONNECTOR 2P
P20	E40-3238-05	PIN CONNECTOR 3P
P21	E40-3238-05	PIN CONNECTOR 3P
P22	E40-3241-05	PIN CONNECTOR 6P
P23	E40-3237-05	PIN CONNECTOR 2P
P24	E40-3238-05	PIN CONNECTOR 3P
Q1	2SK404(F)	FET, N-CHANNEL
Q2	2SC2785(F)	TR. SI, NPN
Q3	2SK404(F)	FET, N-CHANNEL
Q4	2SC2785(F)	TR. SI, NPN
Q5	2SC2785(F)	TR. SI, NPN
Q6	2SC3732(L)	TR. SI, NPN
Q7	2SC2785(F)	TR. SI, NPN
Q8	NO USE	
Q9	2SC3732(L)	TR. SI, NPN
Q10	2SA1175(F)	TR. SI, PNP
Q11	2SC2785(F)	TR. SI, NPN
Q12	2SK332(F)	FET, N-CHANNEL
Q13	2SC2785(F)	TR. SI, NPN
Q14	2SC2785(F)	TR. SI, NPN
Q15	2SC2785(F)	TR. SI, NPN
Q16	2SA1175(F)	TR. SI, PNP
Q17	2SA1175(F)	TR. SI, PNP
Q18	2SA1175(F)	TR. SI, PNP
Q19	2SC2785(F)	TR. SI, NPN
Q20	2SC2785(F)	TR. SI, NPN
Q21	2SA1175(F)	TR. SI, PNP
Q22	2SA1175(F)	TR. SI, PNP
Q23	2SC2785(F)	TR. SI, NPN
Q24	2SK332(F)	FET, N-CHANNEL
Q25	2SC3354(S)	TR. SI, NPN
Q26	2SA1565	TR. SI, PNP
Q27	2SC2785(F)	TR. SI, NPN
Q28	2SC2785(F)	TR. SI, NPN
R1	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R2	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R3	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R4	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
R5	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R6	RD14BB2C243J	RES. CARBON 24K 5% 1/6W
R7	RD14BB2C101J	RES. CARBON 100 5% 1/6W

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION			
R8	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R9	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R10	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R11	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R12	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R13	RD14BB2C222J	RES. CARBON	2.2K	5%	1/6W
R14	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R15	RD14BB2C153J	RES. CARBON	15K	5%	1/6W
R16	NO USE				
R17	RD14BB2C471J	RES. CARBON	470	5%	1/6W
R18	NO USE				
R19	RD14BB2C123J	RES. CARBON	12K	5%	1/6W
R20	RD14BB2C222J	RES. CARBON	2.2K	5%	1/6W
R21	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R22	RD14BB2C472J	RES. CARBON	4.7K	5%	1/6W
R23	RD14BB2C222J	RES. CARBON	2.2K	5%	1/6W
R24	RD14BB2C105J	RES. CARBON	1H	5%	1/6W
R25	RD14BB2C433J	RES. CARBON	43K	5%	1/6W
R26	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R27	RD14BB2C104J	RES. CARBON	100K	5%	1/6W
R28	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R29	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R30	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R31	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R32	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R33	RD14BB2C472J	RES. CARBON	4.7K	5%	1/6W
R34	RD14BB2C561J	RES. CARBON	560	5%	1/6W
R35	RD14BB2C684J	RES. CARBON	680K	5%	1/6W
R36	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R37	RD14BB2C272J	RES. CARBON	2.7K	5%	1/6W
R38	RD14BB2C432J	RES. CARBON	4.3K	5%	1/6W
R39	RD14BB2C512J	RES. CARBON	5.1K	5%	1/6W
R40	RD14BB2C334J	RES. CARBON	330K	5%	1/6W
R41	RD14BB2C183J	RES. CARBON	18K	5%	1/6W
R42	RD14BB2C753J	RES. CARBON	75K	5%	1/6W
R43	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R44	RD14BB2C222J	RES. CARBON	2.2K	5%	1/6W
R45	RD14BB2C122J	RES. CARBON	1.2K	5%	1/6W
R46	RD14BB2C153J	RES. CARBON	15K	5%	1/6W
R47	RD14BB2C122J	RES. CARBON	1.2K	5%	1/6W
R48	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R49	RN14BK2C4301F	RES. METAL FILM	4.3K	1%	1/6W
R50	RN14BK2C4702F	RES. METAL FILM	47K	1%	1/6W
R51	RD14BB2C754J	RES. CARBON	750K	5%	1/6W
R52	RD14BB2C754J	RES. CARBON	750K	5%	1/6W
R53	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R54	RD14BB2C203J	RES. CARBON	20K	5%	1/6W
R55	NO USE				
R56	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R57	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R58	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R59	NO USE				
R60	RN14BK2C5002D	RES. METAL FILM	50K	0.5%	1/6W
R61	RN14BK2C1003D	RES. METAL FILM	100K	0.5%	1/6W
R62	RN14BK2C1203F	RES. METAL FILM	120K	1%	1/6W
R63	RN14BK2C2403F	RES. METAL FILM	240K	1%	1/6W
R64	RN14BK2C1003F	RES. METAL FILM	100K	1%	1/6W
R65	RN14BK2C4302F	RES. METAL FILM	43K	1%	1/6W
R66	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R67	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R68	RD14BB2C104J	RES. CARBON	100K	5%	1/6W
R69	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R70	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R71	RN14BK2C5601F	RES. METAL FILM	5.6K	1%	1/6W
R72	RN14BK2C2402F	RES. METAL FILM	24K	1%	1/6W
R73	RN14BK2C2002F	RES. METAL FILM	20K	1%	1/6W
R74	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R75	RD14BB2C472J	RES. CARBON	4.7K	5%	1/6W
R76	RN14BK2C2701F	RES. METAL FILM	2.7K	1%	1/6W
R77	RD14BB2C622J	RES. CARBON	6.2K	5%	1/6W
R78	RN14BK2C1001F	RES. METAL FILM	1K	1%	1/6W
R79	RN14BK2C9101F	RES. METAL FILM	9.1K	1%	1/6W
R80	RD14BB2C332J	RES. CARBON	3.3K	5%	1/6W
R81	RN14BK2C8200F	RES. METAL FILM	820	1%	1/6W
R82	RN14BK2C2701F	RES. METAL FILM	2.7K	1%	1/6W
R83	RN14BK2C3901F	RES. METAL FILM	3.9K	1%	1/6W
R84	RN14BK2C5101F	RES. METAL FILM	5.1K	1%	1/6W
R85	RN14BK2C8200F	RES. METAL FILM	820	1%	1/6W
R86	RD14BB2C332J	RES. CARBON	3.3K	5%	1/6W
R87	RD14BB2C470J	RES. CARBON	47	5%	1/6W
R88	RD14BB2C243J	RES. CARBON	24K	5%	1/6W
R89	RD14BB2C243J	RES. CARBON	24K	5%	1/6W
R90	RD14BB2C822J	RES. CARBON	8.2K	5%	1/6W
R91	RN14BK2C3301F	RES. METAL FILM	3.3K	1%	1/6W
R92	RN14BK2C8201F	RES. METAL FILM	8.2K	1%	1/6W
R93	RD14BB2C243J	RES. CARBON	24K	5%	1/6W
R94	RD14BB2C243J	RES. CARBON	24K	5%	1/6W
R95	RD14BB2C822J	RES. CARBON	8.2K	5%	1/6W
R96	RN14BK2C1001F	RES. METAL FILM	1K	1%	1/6W
R97	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R98	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R99	RN14BK2C2403F	RES. METAL FILM	240K	1%	1/6W
R100	RN14BK2C7503F	RES. METAL FILM	750K	1%	1/6W
R101	RD14BB2C152J	RES. CARBON	1.5K	5%	1/6W
R102	RD14BB2C162J	RES. CARBON	1.6K	5%	1/6W
R103	RD14BB2C752J	RES. CARBON	7.5K	5%	1/6W
R104	RD14BB2C152J	RES. CARBON	1.5K	5%	1/6W
R105	RD14BB2C301J	RES. CARBON	300	5%	1/6W
R106	RD14BB2C432J	RES. CARBON	4.3K	5%	1/6W

REF. NO	PARTS NO	NAME & DESCRIPTION			
R107	RD14BB2C822J	RES. CARBON	8.2K	5%	1/6W
R108	RD14BB2C242J	RES. CARBON	2.4K	5%	1/6W
R109	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R110	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R111	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R112	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R113	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R114	RD14BB2C911J	RES. CARBON	910	5%	1/6W
R115	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R116	RD14BB2C202J	RES. CARBON	2K	5%	1/6W
R117	RD14BB2C204J	RES. CARBON	200K	5%	1/6W
R118	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R119	RD14BB2C103J	RES. CARBON	10K	5%	1/6W

REF. NO	PARTS NO	NAME & DESCRIPTION			
TC1	G05-0457-05	CAP. TRINER	6P		
U1	TA7347P	IC, 2-INPUT VIDEO SWITCH			
U2	NE592N8	IC, VIDEO AMPLIFIER			
U3	LN1881N	IC, VIDEO SYNC SEPARATOR			
U4	MN1021XS	IC, SYNC. DETECTOR			
U5	TC74HC221AP	IC, DUAL MONOSTABLE MULTIVIB.			
U6	TC74HC123AP	IC, DUAL MONOSTABLE MULTIVIB.			
U7	TC74HC107AP	IC, DUAL J-K F.F. WITH CLEAR			
U8	TC74HC151AP	IC, 8-CHANNEL MULTIPLEXER			
U9	TC74HC00AP	IC, 2-INPUT NAND GATE			
U10	TC74HC00AP	IC, 2-INPUT NAND GATE			
U11	TC74HC00AP	IC, 2-INPUT NAND GATE			
U12	TC74HC123AP	IC, DUAL MONOSTABLE MULTIVIB.			
U13	TC74HC74AP	IC, DUAL D-FLIP FLOP			
U14	TC4052BP	IC, DIFFERENTIAL 4CH MPX/DE-MPX			
U15	NM4558D	IC, DUAL OP AMP			
U16	TC74HC02AP	IC, QUAD 2-INPUT NOR GATE			
U17	TC74HC00AP	IC, 2-INPUT NAND GATE			
U18	TC74HC04AP	IC, HEX INVERTER			
U19	TLF521-1(A)	IC, PHOTO COUPLER			
VR1	R12-3548-05	RES. SEMI FIXED 20KB			
VR2	R12-1544-05	RES. SEMI FIXED 2KB			
VR3	R12-0574-05	RES. SEMI FIXED 500 B			
X1	L78-0120-05	CERAMIC OSCILLATOR			

CV-1245 SWEEP UNIT

X74-1540-01

REF. NO	PARTS NO	NAME & DESCRIPTION			
C1	J73-0063-12	PCB (UNMOUNTED)			
C2	CC45FCH1H080D	CAP. CERAMIC	8P	0.5P	50V
C3	CE04HW1E220H	CAP. ELECTRO	22	20%	25V
C4	CF92V1H103J	CAP. POLYESTER	0.01	5%	50V
C5	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C6	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C7	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C8	CE04HW1E220H	CAP. ELECTRO	22	20%	25V
C9	CE04HW1H010M	CAP. ELECTRO	1	20%	50V
C10	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C11	CE04EW1A101H	CAP. ELECTRO	100	20%	10V
C12	CE04EW1H010M	CAP. ELECTRO	1	20%	50V
C13	CF92V1H104J	CAP. POLYESTER	0.1	5%	50V
C14	CC45FCH1H101J	CAP. CERAMIC	100P	5%	50V
C15	CC45FCH1H181J	CAP. CERAMIC	180P	5%	50V
C16	CC45FCH1H100D	CAP. CERAMIC	10P	0.5P	50V
C17	CF92V1H104J	CAP. POLYESTER	0.1	5%	50V
C18	CQ92FM1H104K	CAP. NYLAR	0.1	10%	50V
C19	CQ92FM1H102K	CAP. NYLAR	1000P	10%	50V
C20	CE04EW1H010M	CAP. ELECTRO	1	20%	50V
C21	CF92V1H104J	CAP. POLYESTER	0.1	5%	50V
C22	CF92V1H474J	CAP. POLYESTER	0.47	5%	50V
C23	CE04EW1E330H	CAP. ELECTRO	33	20%	25V
C24	CQ92FM1H102K	CAP. NYLAR	1000P	10%	50V
C25	CC45FSL1H271J	CAP. CERAMIC	270P	5%	50V
C26	CF92V1H474J	CAP. POLYESTER	0.47	5%	50V
C27	CF92V1H102J	CAP. POLYESTER	1000P	5%	50V
C28	CF92V1H102J	CAP. POLYESTER	1000P	5%	50V
C29	CF92V1H104J	CAP. POLYESTER	0.1	5%	50V
C30	CF92V1H104J	CAP. POLYESTER	0.1	5%	50V
C31	CC45FCH1H151J	CAP. CERAMIC	150P	5%	50V
C32	CF92V1H822J	CAP. POLYESTER	8200P	5%	50V
C33	CC45FCH1H121J	CAP. CERAMIC	120P	5%	50V
C34	NO USE				
C35	CQ92FM1H102K	CAP. NYLAR	1000P	10%	50V
C36	CQ92FM1H103K	CAP. NYLAR	0.01	10%	50V
C37	CE04HW1H010M	CAP. ELECTRO	1	20%	50V
C38	CF93BD2A391J	CAP. NICA	390P	5%	100V
C39	CF92V1H392J	CAP. POLYESTER	3900P	5%	50V
C40	CF92V1H473J	CAP. POLYESTER	0.47	5%	50V
C41	CF92V1H333J	CAP. POLYESTER	0.33	5%	50V
C42	CF92V1H102J	CAP. POLYESTER	1000P	5%	50V
C43	NO USE				
C44	CC45FCH1H121J	CAP. CERAMIC	120P	5%	50V
C45	CE04EW1H010M	CAP. ELECTRO	1	20%	50V
C46	CC45FSL1H681J	CAP. CERAMIC	680P	5%	50V
C47	CC45FSL1H681J	CAP. CERAMIC	680P	5%	50V

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION	REF. NO	PARTS NO	NAME & DESCRIPTION
C201	GE04EW1A101M	CAP. ELECTRO 100 20% 10V	Q9	2SC3732(L)	TR. SI, NPN
C202	GE04EW1A101M	CAP. ELECTRO 100 20% 10V	Q10	2SA1175(F)	TR. SI, PNP
C203	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q11	2SC2785(F)	TR. SI, NPN
C204	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q12	2SK332(F)	FET, N-CHANNEL
C205	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q13	2SC2785(F)	TR. SI, NPN
C206	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q14	2SC2785(F)	TR. SI, NPN
C207	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q15	2SC2785(F)	TR. SI, NPN
C208	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q16	2SA1175(F)	TR. SI, PNP
C209	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q17	2SA1175(F)	TR. SI, PNP
C210	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q18	2SA1175(F)	TR. SI, PNP
C211	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q19	2SC2785(F)	TR. SI, NPN
C212	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q20	2SC2785(F)	TR. SI, NPN
C213	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q21	2SA1175(F)	TR. SI, PNP
C214	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q22	2SA1175(F)	TR. SI, PNP
C215	GE04EW1A221M	CAP. ELECTRO 220 20% 10V	Q23	2SC2785(F)	TR. SI, NPN
C216	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q24	2SK332(F)	FET, N-CHANNEL
C217	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q25	2SC3354(S)	TR. SI, NPN
C218	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V	Q26	2SA1565	TR. SI, PNP
C219	GE04EW1A221M	CAP. ELECTRO 220 20% 10V	Q27	2SC2785(F)	TR. SI, NPN
C220	GE04EW1A101M	CAP. ELECTRO 100 20% 10V	Q28	2SC2785(F)	TR. SI, NPN
C221	CQ92FM1H104K	CAP. NYLAR 0.1 10% 50V	R1	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
C222	NO USE		R2	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
C223	GE04EW1A101M	CAP. ELECTRO 100 20% 10V	R3	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
C224	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R4	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
C225	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R5	RD14BB2C101J	RES. CARBON 100 5% 1/6W
C226	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R6	RD14BB2C243J	RES. CARBON 24K 5% 1/6W
C227	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R7	RD14BB2C101J	RES. CARBON 100 5% 1/6W
C228	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R8	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
C229	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R9	RD14BB2C101J	RES. CARBON 100 5% 1/6W
C230	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R10	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
C231	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R11	RD14BB2C101J	RES. CARBON 100 5% 1/6W
C232	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R12	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
C233	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R13	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
C234	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R14	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
C235	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R15	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
C236	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R16	NO USE	
C237	GE04EW1E330M	CAP. ELECTRO 33 20% 25V	R17	RD14BB2C471J	RES. CARBON 470 5% 1/6W
C238	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R18	NO USE	
C239	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R19	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
C240	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R20	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
C241	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R21	RD14BB2C101J	RES. CARBON 100 5% 1/6W
C242	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R22	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
C243	CQ92FM1H103K	CAP. NYLAR 0.01 10% 50V	R23	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
D1	1SS132	DIODE	R24	RD14BB2C105J	RES. CARBON 1K 5% 1/6W
D2	1SS132	DIODE	R25	RD14BB2C433J	RES. CARBON 43K 5% 1/6W
D3	1SS132	DIODE	R26	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
D4	1SS132	DIODE	R27	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
D5	1SS132	DIODE	R28	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
D6	1SS132	DIODE	R29	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
D7	MTZ6.2JB	DIODE, ZENER 12.23V	R30	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
D8	MTZ6.2JB	DIODE, ZENER 12.23V	R31	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
D9	1SS132	DIODE	R32	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
D10	1SS132	DIODE	R33	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
D11	NO USE		R34	RD14BB2C561J	RES. CARBON 560 5% 1/6W
D12	MA700	DIODE	R35	RD14BB2C684J	RES. CARBON 680K 5% 1/6W
D13	1SS132	DIODE	R36	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
D14	MA700	DIODE	R37	RD14BB2C272J	RES. CARBON 2.7K 5% 1/6W
D15	1SS132	DIODE	R38	RD14BB2C432J	RES. CARBON 4.3K 5% 1/6W
D16	MA700	DIODE	R39	RD14BB2C512J	RES. CARBON 5.1K 5% 1/6W
D17	MA700	DIODE	R40	RD14BB2C334J	RES. CARBON 330K 5% 1/6W
D18	MA700	DIODE	R41	RD14BB2C183J	RES. CARBON 18K 5% 1/6W
D19	MA700	DIODE	R42	RD14BB2C753J	RES. CARBON 75K 5% 1/6W
D20	1SS132	DIODE	R43	RD14BB2C101J	RES. CARBON 100 5% 1/6W
D21	1SS132	DIODE	R44	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
D22	1SS132	DIODE	R45	RD14BB2C122J	RES. CARBON 1.2K 5% 1/6W
D23	1SS132	DIODE	R46	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
D24	1SS132	DIODE	R47	RD14BB2C122J	RES. CARBON 1.2K 5% 1/6W
D25	1SS132	DIODE	R48	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
D26	1SS132	DIODE	R49	RN14BK2C4301F	RES. METAL FILM 4.3K 1% 1/6W
D27	1SS132	DIODE	R50	RN14BK2C4702F	RES. METAL FILM 47K 1% 1/6W
L201	L79-0526-05	NOISE FILTER	R51	RD14BB2C754J	RES. CARBON 750K 5% 1/6W
L202	L79-0526-05	NOISE FILTER	R52	RD14BB2C754J	RES. CARBON 750K 5% 1/6W
L203	L79-0526-05	NOISE FILTER	R53	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
P3	E40-3237-05	PIN CONNECTOR 2P	R54	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
P4	NO USE		R55	NO USE	
P5	E40-3237-05	PIN CONNECTOR 2P	R56	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
P13	E40-3237-05	PIN CONNECTOR 2P	R57	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
P14	E40-3239-05	PIN CONNECTOR 4P	R58	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
P17	E40-3237-05	PIN CONNECTOR 2P	R59	NO USE	
P18	E40-3240-05	PIN CONNECTOR 5P	R60	RN14BK2C5002D	RES. METAL FILM 50K 0.5% 1/6W
P19	E40-3237-05	PIN CONNECTOR 2P	R61	RN14BK2C1003D	RES. METAL FILM 100K 0.5% 1/6W
P20	E40-3238-05	PIN CONNECTOR 3P	R62	RN14BK2C1503F	RES. METAL FILM 150K 1% 1/6W
P21	E40-3238-05	PIN CONNECTOR 3P	R63	RN14BK2C3003F	RES. METAL FILM 300K 1% 1/6W
P22	E40-3241-05	PIN CONNECTOR 6P	R64	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
P23	E40-3237-05	PIN CONNECTOR 2P	R65	RN14BK2C4302F	RES. METAL FILM 43K 1% 1/6W
P24	E40-3238-05	PIN CONNECTOR 3P	R66	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
Q1	2SK404(F)	FET, N-CHANNEL	R67	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q2	2SC2785(F)	TR. SI, NPN	R68	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
Q3	2SK404(F)	FET, N-CHANNEL	R69	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q4	2SC2785(F)	TR. SI, NPN	R70	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
Q5	2SC2785(F)	TR. SI, NPN	R71	RN14BK2C5601F	RES. METAL FILM 5.6K 1% 1/6W
Q6	2SC3732(L)	TR. SI, NPN	R72	RN14BK2C2402F	RES. METAL FILM 24K 1% 1/6W
Q7	2SC2785(F)	TR. SI, NPN	R73	RN14BK2C2002F	RES. METAL FILM 20K 1% 1/6W
Q8	NO USE		R74	RD14BB2C101J	RES. CARBON 100 5% 1/6W
			R75	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
			R76	RN14BK2C2701F	RES. METAL FILM 2.7K 1% 1/6W
			R77	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
			R78	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION			
R79	RN14BK2C9101F	RES. METAL FILM 9.1K	1%	1/6W	
R80	RD14BB2C332J	RES. CARBON 3.3K	5%	1/6W	
R81	RN14BK2C8200F	RES. METAL FILM 820	1%	1/6W	
R82	RN14BK2C2701F	RES. METAL FILM 2.7K	1%	1/6W	
R83	RN14BK2C3901F	RES. METAL FILM 3.9K	1%	1/6W	
R84	RN14BK2C5101F	RES. METAL FILM 5.1K	1%	1/6W	
R85	RN14BK2C8200F	RES. METAL FILM 820	1%	1/6W	
R86	RD14BB2C332J	RES. CARBON 3.3K	5%	1/6W	
R87	RD14BB2C470J	RES. CARBON 47	5%	1/6W	
R88	RD14BB2C243J	RES. CARBON 24K	5%	1/6W	
R89	RD14BB2C243J	RES. CARBON 24K	5%	1/6W	
R90	RD14BB2C822J	RES. CARBON 8.2K	5%	1/6W	
R91	RN14BK2C3301F	RES. METAL FILM 3.3K	1%	1/6W	
R92	RN14BK2C8201F	RES. METAL FILM 8.2K	1%	1/6W	
R93	RD14BB2C243J	RES. CARBON 24K	5%	1/6W	
R94	RD14BB2C243J	RES. CARBON 24K	5%	1/6W	
R95	RD14BB2C822J	RES. CARBON 8.2K	5%	1/6W	
R96	RN14BK2C1001F	RES. METAL FILM 1K	1%	1/6W	
R97	RD14BB2C302J	RES. CARBON 3K	5%	1/6W	
R98	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	
R99	RN14BK2C2403F	RES. METAL FILM 240K	1%	1/6W	
R100	RN14BK2C7503F	RES. METAL FILM 750K	1%	1/6W	
R101	RD14BB2C152J	RES. CARBON 1.5K	5%	1/6W	
R102	RD14BB2C162J	RES. CARBON 1.6K	5%	1/6W	
R103	RD14BB2C752J	RES. CARBON 7.5K	5%	1/6W	
R104	RD14BB2C152J	RES. CARBON 1.5K	5%	1/6W	
R105	RD14BB2C301J	RES. CARBON 300	5%	1/6W	
R106	RD14BB2C432J	RES. CARBON 4.3K	5%	1/6W	
R107	RD14BB2C822J	RES. CARBON 8.2K	5%	1/6W	
R108	RD14BB2C242J	RES. CARBON 2.4K	5%	1/6W	
R109	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	
R110	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	
R111	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	
R112	RD14BB2C302J	RES. CARBON 3K	5%	1/6W	
R113	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	
R114	RD14BB2C911J	RES. CARBON 910	5%	1/6W	
R115	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	
R116	RD14BB2C202J	RES. CARBON 2K	5%	1/6W	
R117	RD14BB2C204J	RES. CARBON 200K	5%	1/6W	
R118	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	
R119	RD14BB2C103J	RES. CARBON 10K	5%	1/6W	

TC1	C05-0457-05	CAP. TRICKER	6P		
U1	TA7347P	IC, 2-INPUT VIDEO SWITCH			
U2	NF592N8	IC, VIDEO AMPLIFIER			
U3	LM1881N	IC, VIDEO SYNC SEPARATOR			
U4	MN1021XS	IC, SYNC. DETECTOR			
U5	TC74HC221AP	IC, DUAL MONOSTABLE MULTIVIB.			
U6	TC74HC123AP	IC, DUAL MONOSTABLE MULTIVIB.			
U7	TC74HC107AP	IC, DUAL J-K F.F WITH CLEAR			
U8	TC74HC151AP	IC, 8-CHANNEL MULTIPLEXER			
U9	TC74HC00AP	IC, 2-INPUT NAND GATE			
U10	TC74HC00AP	IC, 2-INPUT NAND GATE			
U11	TC74HC00AP	IC, 2-INPUT NAND GATE			
U12	TC74HC123AP	IC, DUAL MONOSTABLE MULTIVIB.			
U13	TC74HC74AP	IC, DUAL D-FLIP FLOP			
U14	TC4052BP	IC, DIFFERENTIAL 4CH MPX/DE-MPX			
U15	NJM4558D	IC, DUAL OP AMP			
U16	TC74HC02AP	IC, QUAD 2-INPUT NOR GATE			
U17	TC74HC00AP	IC, 2-INPUT NAND GATE			
U18	TC74HC04AP	IC, HEX INVERTER			
U19	TLP521-1(A)	IC, PHOTO COUPLER			
VR1	R12-3548-05	RES. SEMI FIXED 20KB			
VR2	R12-1544-05	RES. SEMI FIXED 2KB			
VR3	R12-0574-05	RES. SEMI FIXED 500 B			
X1	L78-0121-05	CERAMIC OSCILLATOR			

CV-1240 INPUT ATT UNIT X75-1210-00

REF. NO	PARTS NO	NAME & DESCRIPTION			
	J73-0143-02	PCB (UNMOUNTED)			
C1	CC45FCH1H220J	CAP. CERAMIC 22P	5%	50V	
C2	CC45FCH1H220J	CAP. CERAMIC 22P	5%	50V	
C3	CQ92FHN1H103K	CAP. NYLAR 0.01	10%	50V	
C4	CE04HW1E220M	CAP. ELECTRO 22	20%	25V	
C5	CC45FCH1H020C	CAP. CERAMIC 2P	0.25P	50V	
C6	CC45FCH1H050C	CAP. CERAMIC 5P	0.25P	50V	
C7	CC45FCH1H060D	CAP. CERAMIC 6P	0.5P	50V	
C8	CC45FCH1H270J	CAP. CERAMIC 27P	5%	50V	
C9		NO USE			
C10	CC45FCH1H680J	CAP. CERAMIC 68P	5%	50V	
C11		NO USE			
C12	CC45FCH1H030C	CAP. CERAMIC 3P	0.25P	50V	
C13		NO USE			
C14	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C15	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C16	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C17	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C18	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C19	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	

REF. NO	PARTS NO	NAME & DESCRIPTION			
C20	CE04EWIC101M	CAP. ELECTRO 100	20%	16V	
C21	CE04EWIC101M	CAP. ELECTRO 100	20%	16V	
C22	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C23	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C24	CC45FSL1H331J	CAP. CERAMIC 330P	5%	50V	
C25	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C26	CK45FF1H103Z	CAP. CERAMIC 0.01	10%	50V	
C27	CE04EWIC101M	CAP. ELECTRO 100	20%	16V	
C28	CE04EWIC101M	CAP. ELECTRO 100	20%	16V	
C29	CE04HW1H010M	CAP. ELECTRO 1	20%	50V	
C30	CE04EW1A221M	CAP. ELECTRO 220	20%	10V	
C31	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	

C101	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C102	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C103	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C104	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C105	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C106	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C107	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C108	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C109	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C110	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C111	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	

C115	C91-1315-05	CAP. CERAMIC 0.1	80/-10%	50V	
C116	CE04EW1A101M	CAP. ELECTRO 100	20%	10V	
C117	CE04EW1A101M	CAP. ELECTRO 100	20%	10V	
C118	CE04EW1A101M	CAP. ELECTRO 100	20%	10V	
C119	CE04EW1A101M	CAP. ELECTRO 100	20%	10V	
C120	CF92V1H334J	CAP. POLYESTER 0.33	5%	50V	

D1	NTZ3.0JB	DIODE, ZENER 9.6V			
D2	1SS132	DIODE			
D3	1SS132	DIODE			
D4	1SS132	DIODE			
D5	1SS132	DIODE			
D6	1SS132	DIODE			
D7	1SS132	DIODE			
D8	MA700	DIODE			
D9	MA700	DIODE			

K1	S51-2508-05	RELAY			
K2	S51-2508-05	RELAY			
K3	S51-2508-05	RELAY			
K4	S51-2508-05	RELAY			
K5	S51-2508-05	RELAY			

L101	L79-0526-05	NOISE FILTER			
P1	E40-3237-05	PIN CONNECTOR 2P			
P2	E40-3237-05	PIN CONNECTOR 2P			
P3		NO USE			
P4	E40-3237-05	PIN CONNECTOR 2P			
P5		NO USE			
P6	E40-3237-05	PIN CONNECTOR 2P			
P7	E40-3240-05	PIN CONNECTOR 5P			
P8	E40-3240-05	PIN CONNECTOR 5P			
P9	E40-5070-05	PIN CONNECTOR 13P			
P10	E40-3239-05	PIN CONNECTOR 4P			
P11	E40-3239-05	PIN CONNECTOR 4P			
P12	E40-3239-05	PIN CONNECTOR 4P			
P16	E40-3237-05	PIN CONNECTOR 2P			

Q1	2SC3354(S)	TR. SI, NPN			
Q2	2SC3066(F)	TR. DUAL, SI, NPN			
Q3	2SA1005(K)	TR. SI, PNP			
Q4	2SC2909(S,T)	TR. SI, NPN			
Q5	2SA1207(S,T)	TR. SI, PNP			
Q6	2SC3354(S)	TR. SI, NPN			

Q101	2SA1565	TR. SI, PNP			
------	---------	-------------	--	--	--

R1	RD14BB2C153J	RES. CARBON 15K	5%	1/6W	
R2	RD14BB2C153J	RES. CARBON 15K	5%	1/6W	
R3	RD14BB2C100J	RES. CARBON 10	5%	1/6W	
R4	RN14BK2C7501D	RES. METAL FILM 7.5K	0.5%	1/6W	
R5		NO USE			
R6	RN14BK2C5252D	RES. METAL FILM 52.5K	0.5%	1/6W	
R7		NO USE			
R8	RN14BK2C7501D	RES. METAL FILM 7.5K	0.5%	1/6W	
R9	RD14BB2C331J	RES. CARBON 330	5%	1/6W	
R10	RD14BB2C220J	RES. CARBON 22	5%	1/6W	
R11	RD14BB2C220J	RES. CARBON 22	5%	1/6W	
R12	RD14BB2C101J	RES. CARBON 100	5%	1/6W	
R13	RD14BB2C911J	RES. CARBON 910	5%	1/6W	
R14	RD14BB2C101J	RES. CARBON 100	5%	1/6W	
R15	RD14BB2C102J	RES. CARBON 1K	5%	1/6W	
R16	RN14BK2C1001F	RES. METAL FILM 1K	1%	1/6W	
R17		NO USE			
R18	RD14BB2C100J	RES. CARBON 10	5%	1/6W	
R19	RN14BK2C3001F	RES. METAL FILM 3K	1%	1/6W	
R20	RD14BB2C430J	RES. CARBON 43	5%	1/6W	
R21	RD14BB2C242J	RES. CARBON 2.4K	5%	1/6W	
R22	RD14BB2C220J	RES. CARBON 22	5%	1/6W	
R23	RD14BB2C220J	RES. CARBON 22	5%	1/6W	
R24	RD14BB2C100J	RES. CARBON 10	5%	1/6W	
R25	RN14BK2E75R0F	RES. METAL FILM 75.0	1%	1/4W	

PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION
R26	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R27	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R28	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R29	RN14BK2C1801F	RES. METAL FILM 1.8K 1% 1/6W
R30	RN14BK2C2000F	RES. METAL FILM 200 1% 1/6W
R31	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R32	RD14BB2C240J	RES. CARBON 24 5% 1/6W
R101	R90-0653-05	RES. NETWORK 8X10K
R102	R90-0653-05	RES. NETWORK 8X10K
R103	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R104	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
S1	S31-2512-05	SLIDE SWITCH
TC1	C05-0445-05	CAP. TRIMMER 20P
TC2	C05-0443-05	CAP. TRIMMER 6P
TC3	C05-0445-05	CAP. TRIMMER 20P
U1	LH4001CN	IC, WIDEBAND CURRENT BUFFER
U101	TC74HC107AP	IC, DUAL J-K F.F WITH CLEAR
U102	TC74HC162AP	IC, SYNCHRONOUS DECADE COUNTER
U103	TC74HC162AP	IC, SYNCHRONOUS DECADE COUNTER
U104	TC74HC162AP	IC, SYNCHRONOUS DECADE COUNTER
U105	TC74HC688AP	IC, 8-BIT EQUALITY COMPARATOR
U106	TC74HC688AP	IC, 8-BIT EQUALITY COMPARATOR
U107	TC74HC10AP	IC, TRIPLE 3-INPUT NAND GATE
U108	TC74HC02AP	IC, QUAD 2-INPUT NOR GATE
U109	TC74HC00AP	IC, 2-INPUT NAND GATE
U110	TC74HC00AP	IC, 2-INPUT NAND GATE
U111	TC74HC390AP	IC, DUAL DECADE COUNTER
VR1	R12-0563-05	RES. SEMI FIXED 500 B
W1	E38-0536-05	WIRE ASS'Y
X101	L77-1054-05	CRYSTAL RESONATOR (10MHZ)

CV-1245 INPUT ATT UNIT X75-1210-01

REF. NO	PARTS NO	NAME & DESCRIPTION
	J73-0143-02	PCB (UNMOUNTED)
C1	CC45FCH1H220J	CAP. CERAMIC 22P 5% 50V
C2	CC45FCH1H220J	CAP. CERAMIC 22P 5% 50V
C3	CQ92FM1H103K	CAP. MYLAR 0.01 10% 50V
C4	CE04HW1E220N	CAP. ELECTRO 22 20% 25V
C5	CC45FCH1H020C	CAP. CERAMIC 2P 0.25P 50V
C6	CC45FCH1H050C	CAP. CERAMIC 5P 0.25P 50V
C7	CC45FCH1H060D	CAP. CERAMIC 6P 0.5P 50V
C8	CC45FCH1H270J	CAP. CERAMIC 27P 5% 50V
C9		NO USE
C10	CC45FCH1H680J	CAP. CERAMIC 68P 5% 50V
C11		NO USE
C12	CC45FCH1H030C	CAP. CERAMIC 3P 0.25P 50V
C13		NO USE
C14	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C15	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C16	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C17	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C18	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C19	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C20	CE04EW1C101M	CAP. ELECTRO 100 20% 16V
C21	CE04EW1C101M	CAP. ELECTRO 100 20% 16V
C22	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C23	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C24	CC45FSL1H331J	CAP. CERAMIC 330P 5% 50V
C25	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C26	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C27	CE04EW1C101M	CAP. ELECTRO 100 20% 16V
C28	CE04EW1C101M	CAP. ELECTRO 100 20% 16V
C29	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C30	CE04EW1A221M	CAP. ELECTRO 220 20% 10V
C31	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C101	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C102	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C103	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C104	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C105	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C106	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C107	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C108	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C109	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C110	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C111	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C115	C91-1315-05	CAP. CERAMIC 0.1 80/-10% 50V
C116	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C117	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C118	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C119	CE04EW1A101M	CAP. ELECTRO 100 20% 10V
C120	CF92V1H334J	CAP. POLYESTER 0.33 5% 50V

REF. NO	PARTS NO	NAME & DESCRIPTION
D1	NTZ3.0JB	DIODE, ZENER 9.6V
D2	1SS132	DIODE
D3	1SS132	DIODE
D4	1SS132	DIODE
D5	1SS132	DIODE
D6	1SS132	DIODE
D7	1SS132	DIODE
D8	NA700	DIODE
D9	NA700	DIODE
K1	S51-2508-05	RELAY
K2	S51-2508-05	RELAY
K3	S51-2508-05	RELAY
K4	S51-2508-05	RELAY
K5	S51-2508-05	RELAY
L101	L79-0526-05	NOISE FILTER
P1	E40-3237-05	PIN CONNECTOR 2P
P2	E40-3237-05	PIN CONNECTOR 2P
P3		NO USE
P4	E40-3237-05	PIN CONNECTOR 2P
P5		NO USE
P6	E40-3237-05	PIN CONNECTOR 2P
P7	E40-3240-05	PIN CONNECTOR 5P
P8	E40-3240-05	PIN CONNECTOR 5P
P9	E40-5070-05	PIN CONNECTOR 13P
P10	E40-3239-05	PIN CONNECTOR 4P
P11	E40-3239-05	PIN CONNECTOR 4P
P12	E40-3239-05	PIN CONNECTOR 4P
P16	E40-3237-05	PIN CONNECTOR 2P
Q1	2SC3354(S)	TR. SI, NPN
Q2	2SC3066(F)	TR. DUAL, SI, NPN
Q3	2SA1005(K)	TR. SI, PNP
Q4	2SC2909(S,T)	TR. SI, NPN
Q5	2SA1207(S,T)	TR. SI, PNP
Q6	2SC3354(S)	TR. SI, NPN
Q101	2SA1565	TR. SI, PNP
R1	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
R2	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
R3	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R4	RN14BK2C7501D	RES. METAL FILM 7.5K 0.5% 1/6W
R5		NO USE
R6	RN14BK2C5252D	RES. METAL FILM 52.5K 0.5% 1/6W
R7		NO USE
R8	RN14BK2C7501D	RES. METAL FILM 7.5K 0.5% 1/6W
R9	RD14BB2C331J	RES. CARBON 330 5% 1/6W
R10	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R11	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R12	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R13	RD14BB2C911J	RES. CARBON 910 5% 1/6W
R14	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R15	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R16	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R17		NO USE
R18	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R19	RN14BK2C3001F	RES. METAL FILM 3K 1% 1/6W
R20	RD14BB2C430J	RES. CARBON 43 5% 1/6W
R21	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R22	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R23	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R24	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R25	RN14BK2E75R0F	RES. METAL FILM 75.0 1% 1/4W
R26	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R27	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R28	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R29	RN14BK2C1801F	RES. METAL FILM 1.8K 1% 1/6W
R30	RN14BK2C2000F	RES. METAL FILM 200 1% 1/6W
R31	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R32	RD14BB2C240J	RES. CARBON 24 5% 1/6W
R101	R90-0653-05	RES. NETWORK 8X10K
R102	R90-0653-05	RES. NETWORK 8X10K
R103	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R104	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
S1	S31-2512-05	SLIDE SWITCH
TC1	C05-0445-05	CAP. TRIMMER 20P
TC2	C05-0443-05	CAP. TRIMMER 6P
TC3	C05-0445-05	CAP. TRIMMER 20P
U1	LH4001CN	IC, WIDEBAND CURRENT BUFFER
U101	TC74HC107AP	IC, DUAL J-K F.F WITH CLEAR
U102	TC74HC162AP	IC, SYNCHRONOUS DECADE COUNTER
U103	TC74HC162AP	IC, SYNCHRONOUS DECADE COUNTER
U104	TC74HC162AP	IC, SYNCHRONOUS DECADE COUNTER
U105	TC74HC688AP	IC, 8-BIT EQUALITY COMPARATOR
U106	TC74HC688AP	IC, 8-BIT EQUALITY COMPARATOR
U107	TC74HC10AP	IC, TRIPLE 3-INPUT NAND GATE
U108	TC74HC02AP	IC, QUAD 2-INPUT NOR GATE
U109	TC74HC00AP	IC, 2-INPUT NAND GATE
U110	TC74HC00AP	IC, 2-INPUT NAND GATE
U111	TC74HC390AP	IC, DUAL DECADE COUNTER

PARTS LIST

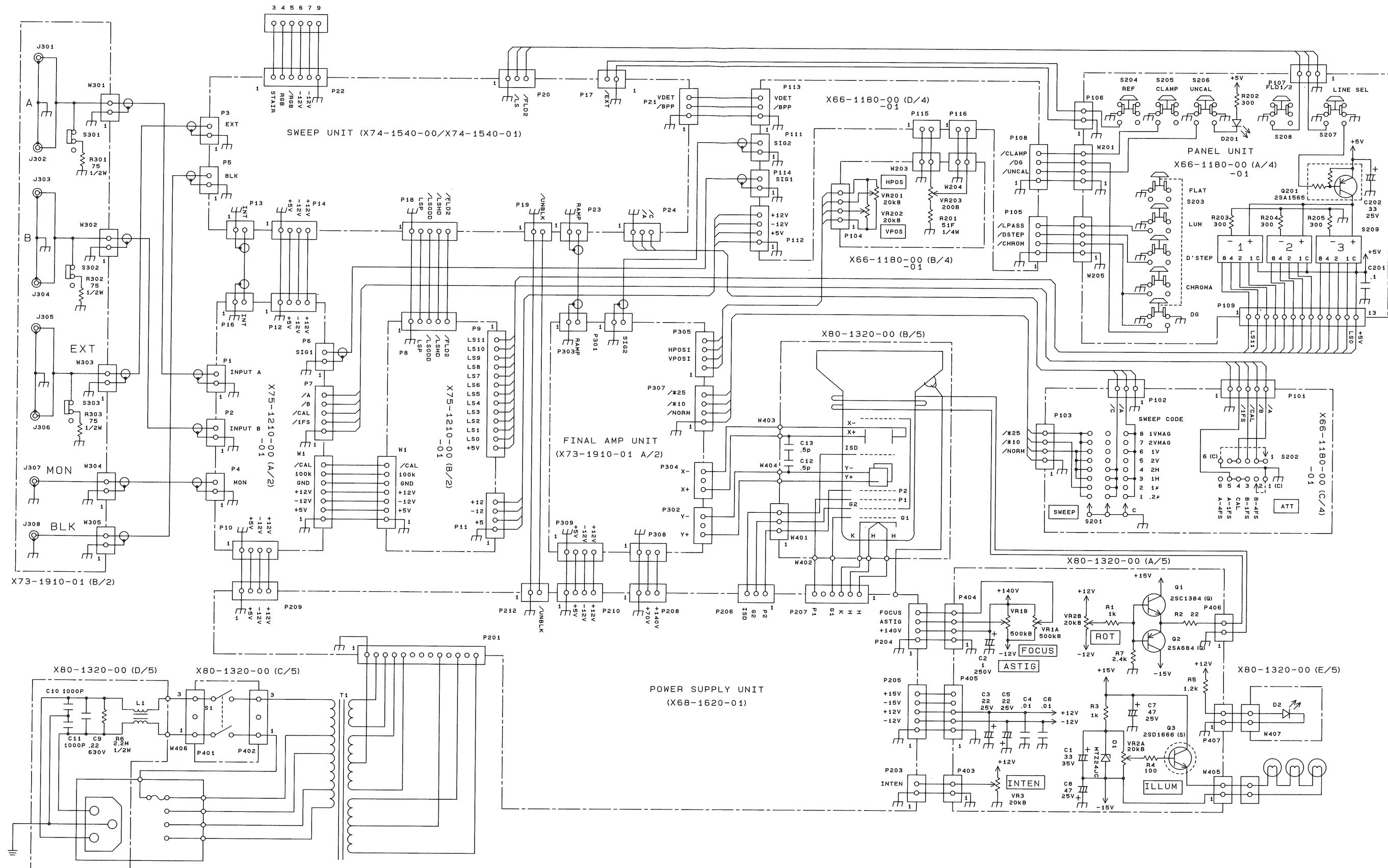
REF. NO	PARTS NO	NAME & DESCRIPTION
VR1	R12-0563-05	RES. SEMI FIXED 500 B
W1	E38-0536-05	WIRE ASS'Y
X101	L77-1054-05	CRYSTAL RESONATOR (10MHZ)

LINE FILTER & CRT UNIT

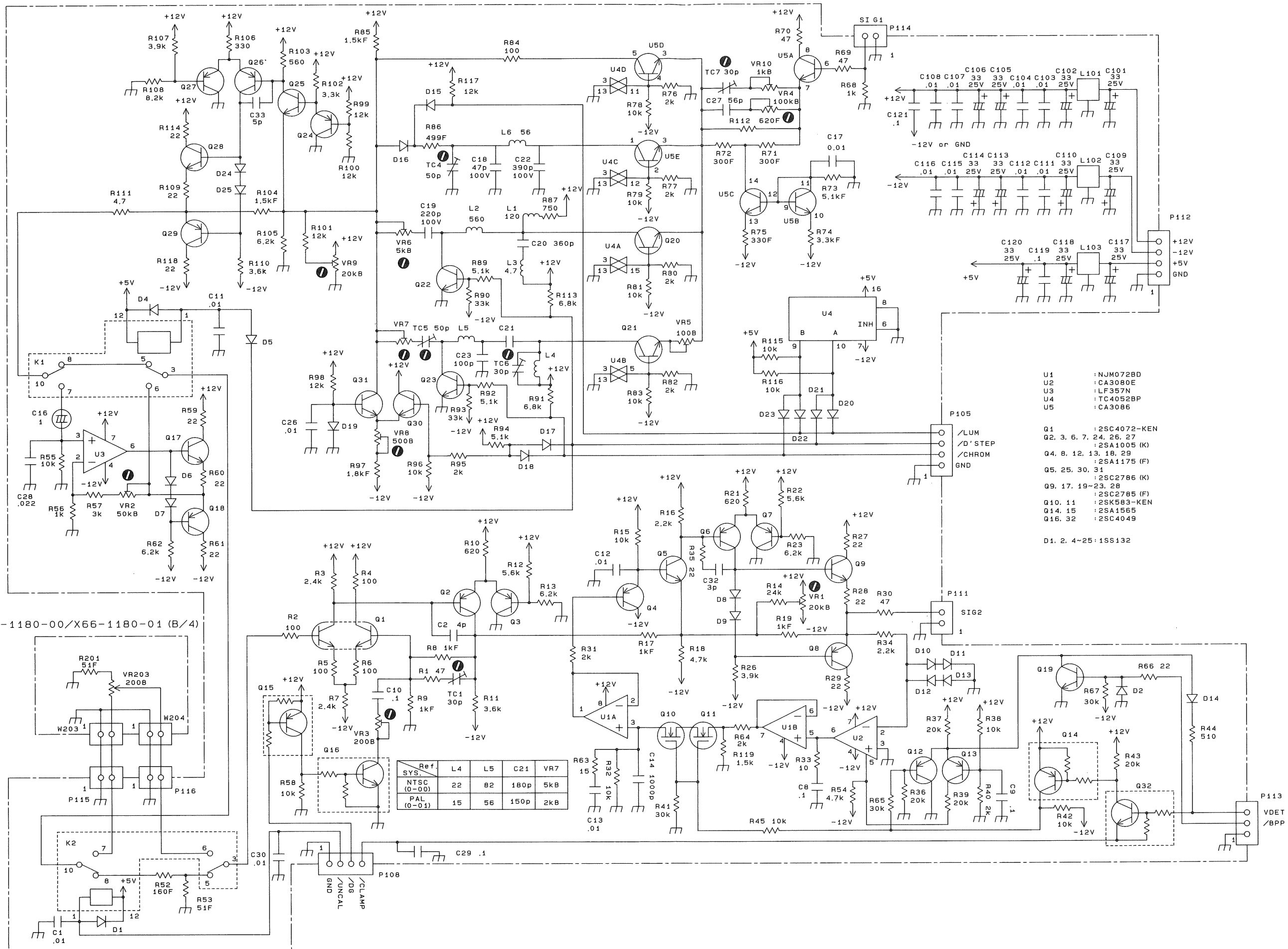
X80-1320-00

REF. NO	PARTS NO	NAME & DESCRIPTION
	E01-0103-05	CRT SOCKET
	F01-0859-14	HEAT SINK
	J21-4783-04	BRACKET, VR
	J73-0064-13	PCB (UNMOUNTED)
	N09-0623-04	SCREW, SENS PAN HD H3X8
C1	CF04EW1V330M	CAP. ELECTRO 33 20% 35V
C2	CF04EW2E010M	CAP. ELECTRO 1 20% 250V
C3	CF04EW1E220M	CAP. ELECTRO 22 20% 25V
C4	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C5	CF04EW1E220M	CAP. ELECTRO 22 20% 25V
C6	CK45FF1H103Z	CAP. CERAMIC 0.01 10% 50V
C7	CF04EW1E470M	CAP. ELECTRO 47 20% 25V
C8	CF04EW1E470M	CAP. ELECTRO 47 20% 25V
C9	C91-0551-05	CAP. METALIZED 0.22 10% 630V
C10	C91-0575-05	CAP. CERAMIC 1000P 20% 4KV
C11	C91-0575-05	CAP. CERAMIC 1000P 20% 4KV
C12	CC45FCH2HOR5C	CAP. CERAMIC 0.5P 0.25P 500V
C13	CC45FCH2HOR5C	CAP. CERAMIC 0.5P 0.25P 500V
D1	MTZ24JC	DIODE, ZENER 23.72V
D2	B30-0957-05	LED (LN322GPT)
L1	L33-0808-05	CHOKE COIL 1000UH
P401	E40-0330-05	PIN CONNECTOR 3P
P402	E40-0330-05	PIN CONNECTOR 3P
P403	E40-3299-05	PIN CONNECTOR 2P
P404	E40-3301-05	PIN CONNECTOR 4P
P405	E40-3302-05	PIN CONNECTOR 5P
P406	E40-3299-05	PIN CONNECTOR 2P
P407	E40-3237-05	PIN CONNECTOR 2P
Q1	2SC1384(Q)	TR. SI, NPN
Q2	2SA684(Q)	TR. SI, PNP
Q3	2SD1666(S)	TR. SI, NPN
R1	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R2	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R3	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R4	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R5	RD14BB2C122J	RES. CARBON 1.2K 5% 1/6W
R6	RD14BY2H225J	RES. CARBON 2.2M 5% 1/2W
S1	S59-2505-05	POWER SWITCH
VR1	R10-7502-05	V. R. 2X500KB
VR2	R10-3506-05	V. R. 2X200KB
VR3	R05-3526-05	V. R. 2X200KB
W401	E38-0489-15	WIRE ASS'Y: P2, G2, IDS
W402	E38-0490-05	WIRE ASS'Y: HIGH VOLTAGE
W403	E38-0491-05	WIRE ASS'Y
W404	E38-0492-05	WIRE ASS'Y
W405	E38-0493-05	WIRE ASS'Y
W406	E38-0519-05	WIRE ASS'Y: AC
W407	E38-0520-05	WIRE ASS'Y: POWER LED

SCHEMATIC DIAGRAM

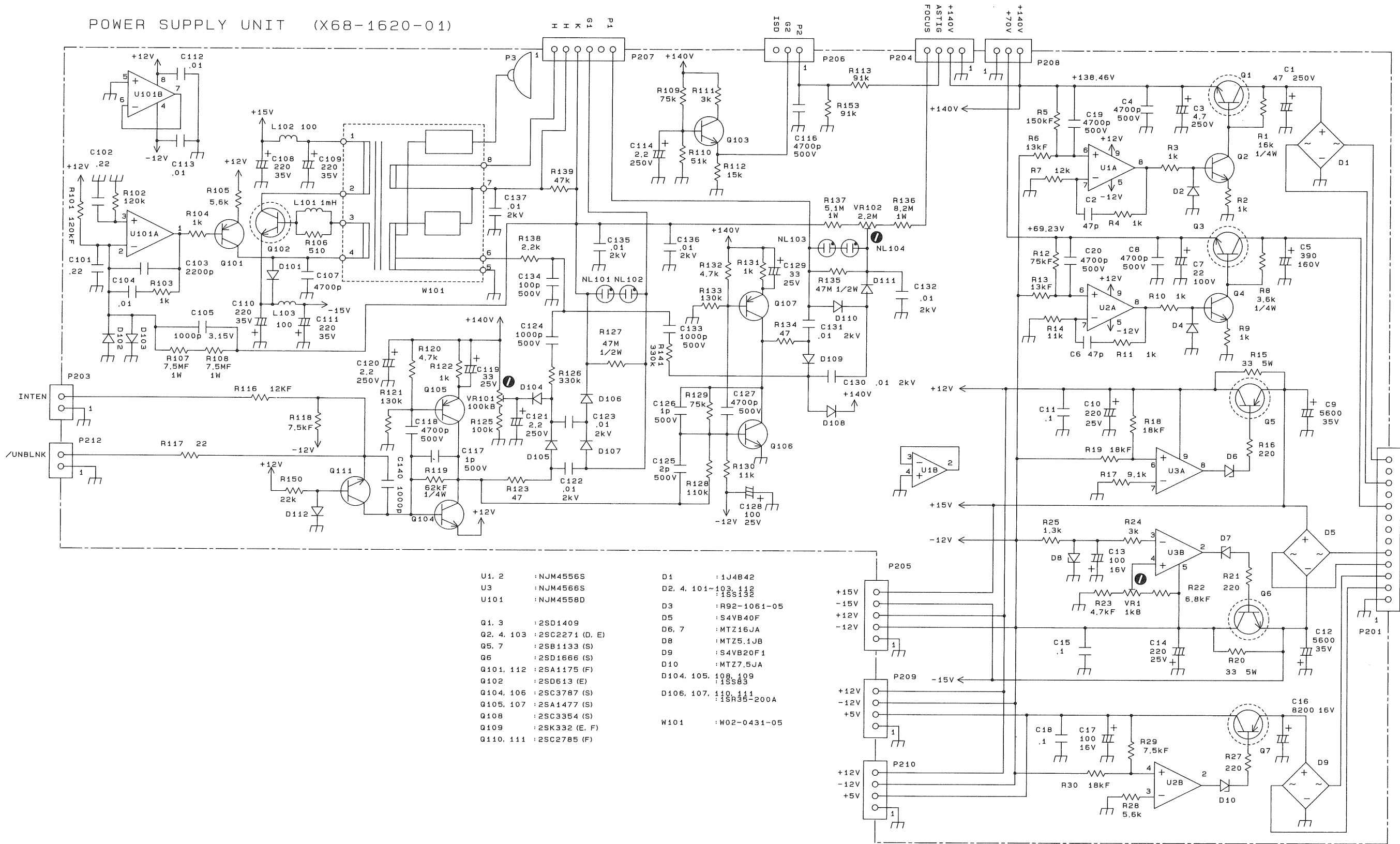


SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM

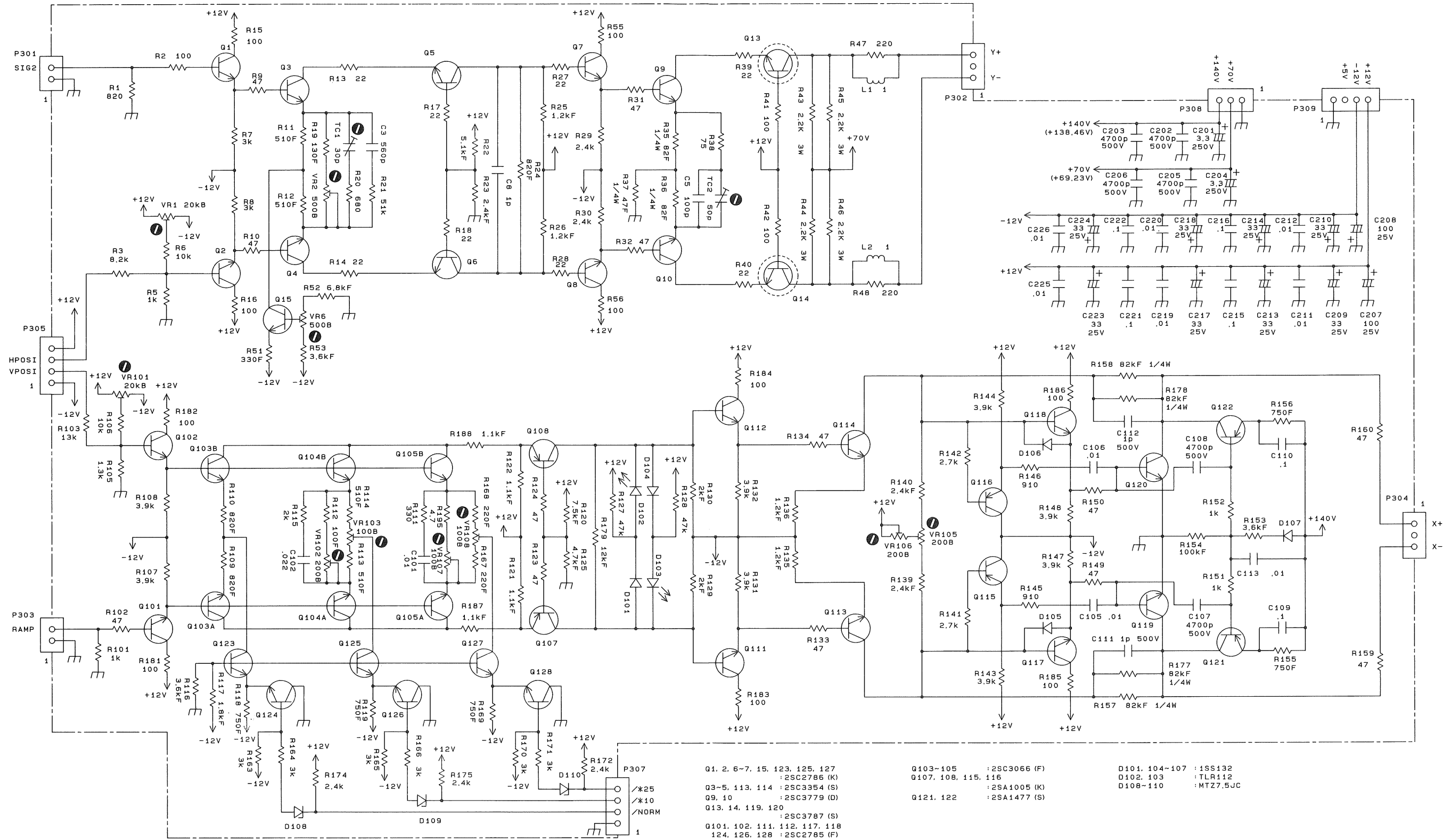
POWER SUPPLY UNIT (X68-1620-01)



U1. 2	: NJM4556S	D1	: 1J4B42
U3	: NJM4566S	D2. 4. 101-103. 112	: 1S5132
U101	: NJM4558D	D3	: R92-1061-05
Q1. 3	: 2SD1409	D5	: S4VB40F
Q2. 4. 103	: 2SC2271 (D. E)	D6. 7	: MTZ16JA
Q5. 7	: 2SB1133 (S)	D8	: MTZ5.1JB
Q6	: 2SD1666 (S)	D9	: S4VB20F1
Q101. 112	: 2SA1175 (F)	D10	: MTZ7.5JA
Q102	: 2SD613 (E)	D104. 105. 108. 109	: 1S583
Q104. 106	: 2SC3787 (S)	D106. 107. 110. 111	: 1SR35-200A
Q105. 107	: 2SA1477 (S)	W101	: W02-0431-05
Q108	: 2SC3354 (S)		
Q109	: 2SK332 (E. F)		
Q110. 111	: 2SC2785 (F)		

SCHEMATIC DIAGRAM

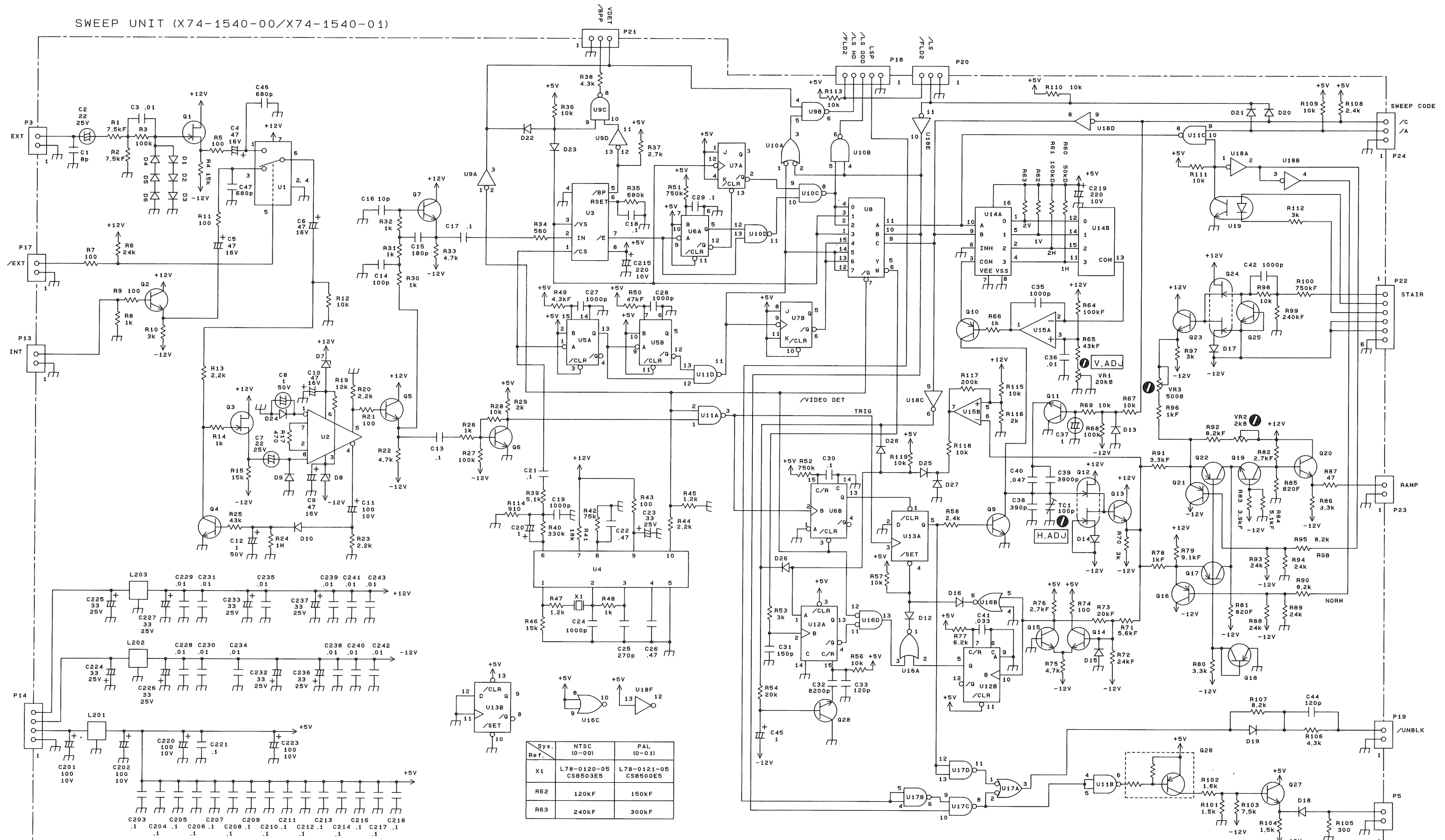
FINAL AMP UNIT (X73-1910-01 A/2)



- | | | | | | |
|-------------------------------|---------------|---------------------|---------------|---------------|------------|
| Q1, 2, 6-7, 15, 123, 125, 127 | : 2SC2786 (K) | Q103-105 | : 2SC3066 (F) | D101, 104-107 | : 1SS132 |
| Q3-5, 113, 114 | : 2SC3354 (S) | Q107, 108, 115, 116 | : 2SA1005 (K) | D102, 103 | : TLR112 |
| Q9, 10 | : 2SC3779 (D) | Q121, 122 | : 2SA1477 (S) | D108-110 | : MTZ7.5JC |
| Q13, 14, 119, 120 | : 2SC3787 (S) | | | | |
| Q101, 102, 111, 112, 117, 118 | : 2SC2785 (F) | | | | |

SCHEMATIC DIAGRAM

SWEEP UNIT (X74-1540-00/X74-1540-01)

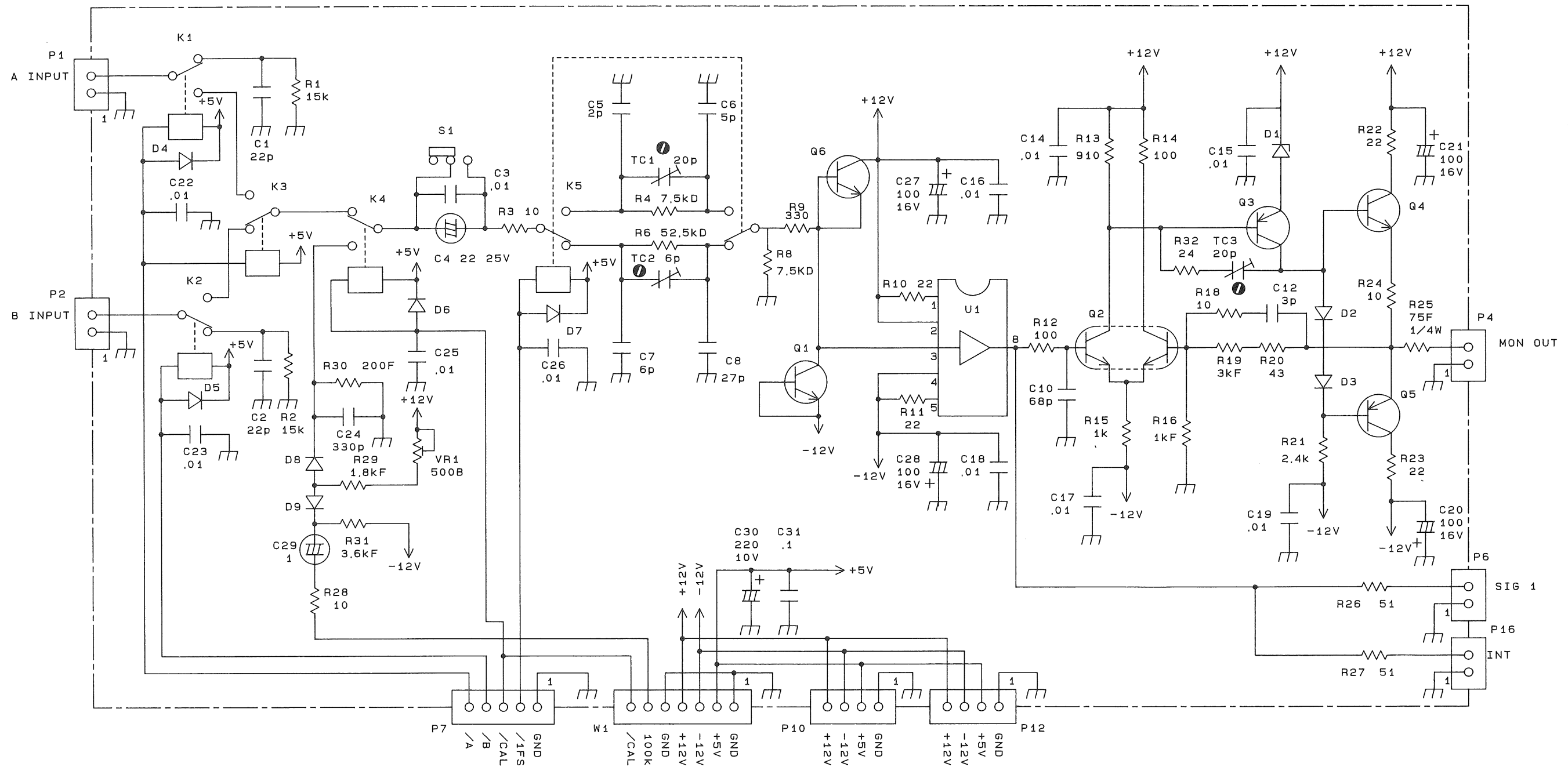


Sys. Ref.	NTSC (0-00)	PAL (0-01)
X1	L78-0120-05 CSB503E5	L78-0121-05 CSB500E5
R62	120kF	150kF
R63	240kF	300kF

- | | | | | |
|-----------|---------------|--------------------------------|--------------|---------------------|
| U1 | :TA7347P | Q1, 3 | :2SK404 (F) | D1-6, 9, 10, 13, 15 |
| U2 | :NE528 | Q2, 4, 5, 7, 11, 13-15, 19, 20 | | 20-27 :1SS132 |
| U3 | :LM1881N | Q3, 27, 28 :2SC2785 (F) | | D7, 8 :HT26,2JB |
| U4 | :MM1021XS | Q6, 9 | :2SC3732 (L) | D12, 14, 16-19 |
| U5 | :TC74HC221AP | Q10, 16-18, 21, 22 | | :MA700 |
| U5, 12 | :TC74HC123AP | | | |
| U7 | :TC74HC107AP | Q12, 24 | :2SA1175 (F) | |
| U8 | :TC74HC151AP | Q25 | :2SK332 (F) | |
| U9-11, 17 | :TC74HC00AP | Q26 | :2SC3354 (B) | |
| U13 | :TC74HC74AP | | :2SA1565 | |
| U14 | :TC4052B | | | |
| U15 | :NJM4558D | | | |
| U16 | :TC74HC02AP | | | |
| U18 | :TC74HC04AP | | | |
| U19 | :TLP521-1 (A) | | | |

SCHEMATIC DIAGRAM

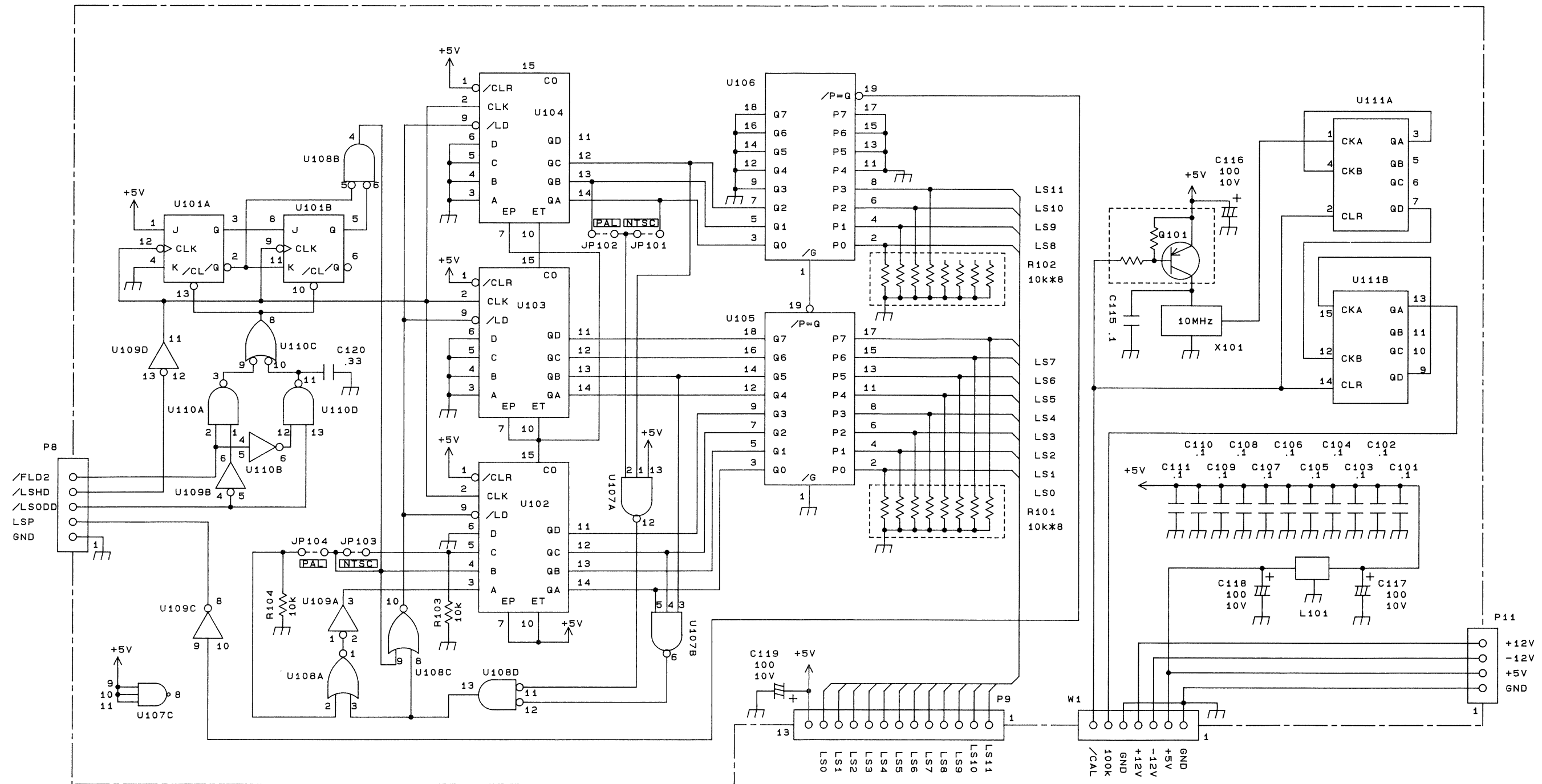
INPUT ATT UNIT (X75-1210-00/X75-1210-01 A/2)



- | | | | |
|-------|------------------|-------|------------|
| U1 | : LH4001CN | D1 | : MTZ3.0JB |
| Q1, 6 | : 2SC3354 (S) | D2~7 | : 1SS132 |
| Q2 | : 2SC3066 (F) | D8, 9 | : MA700 |
| Q3 | : 2SA1005 (K) | | |
| Q4 | : 2SC2909 (S, T) | | |
| Q5 | : 2SA1207 (S, T) | | |

SCHEMATIC DIAGRAM

INPUT ATT UNIT (X75-1210-00/X75-1210-01 B/2)

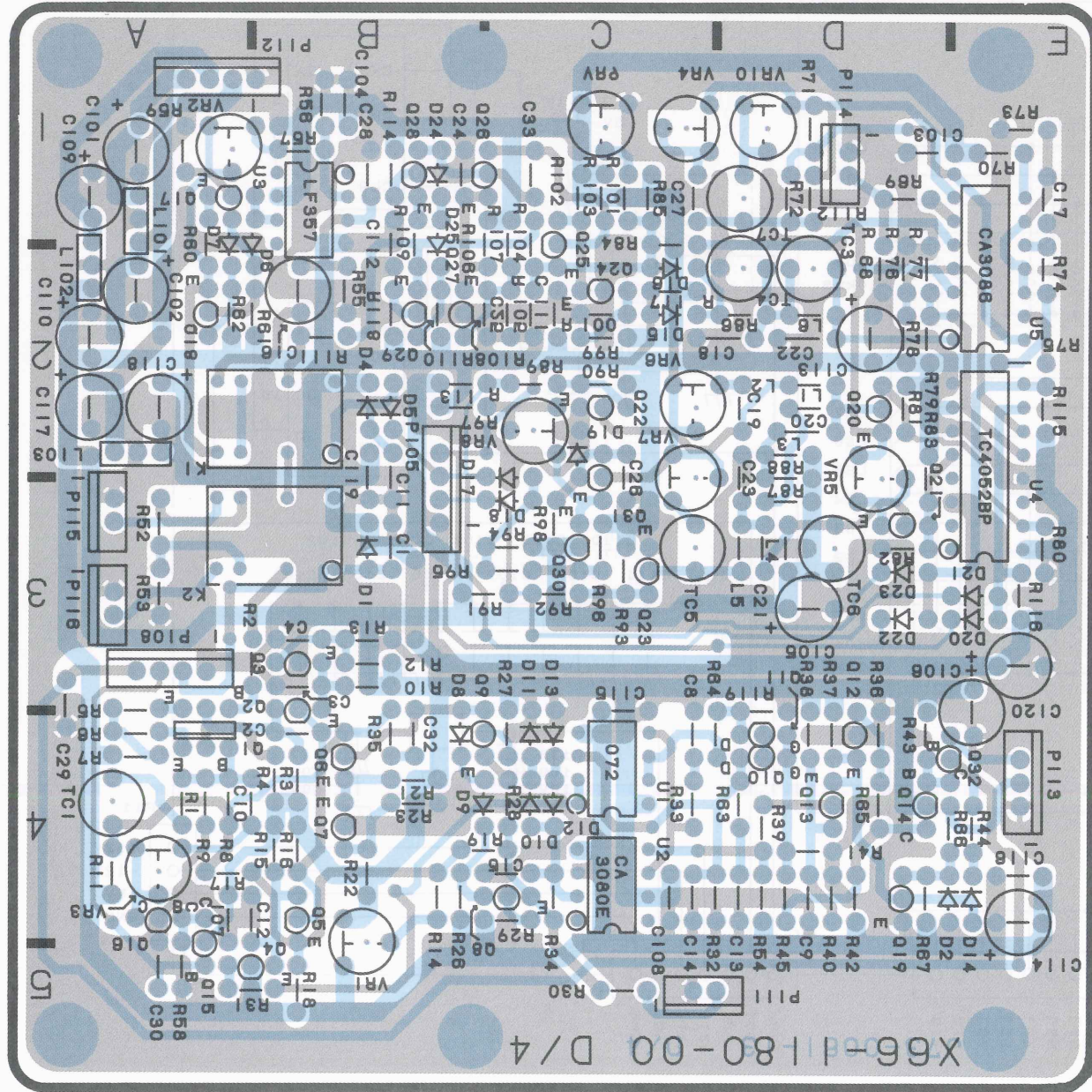


- | | | | |
|-----------|---------------|------|-----------|
| U101 | : TC74HC107AP | Q101 | : 2SA1565 |
| U102~104 | : TC74HC162AP | | |
| U105, 106 | : TC74HC688AP | | |
| U107 | : TC74HC10AP | | |
| U108 | : TC74HC02AP | | |
| U109, 110 | : TC74HC00AP | | |
| U111 | : TC74HC390AP | | |

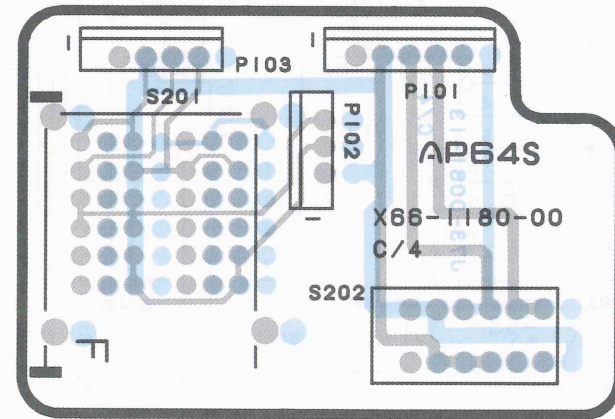
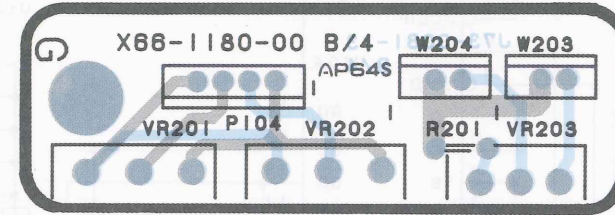
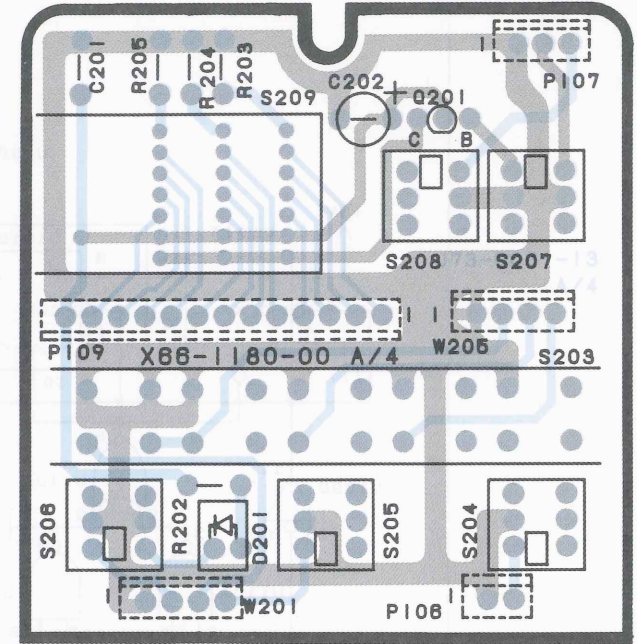
P.C. BOARD

Panel Unit (X66-1180-00/X66-1180-01)

Pattern side view



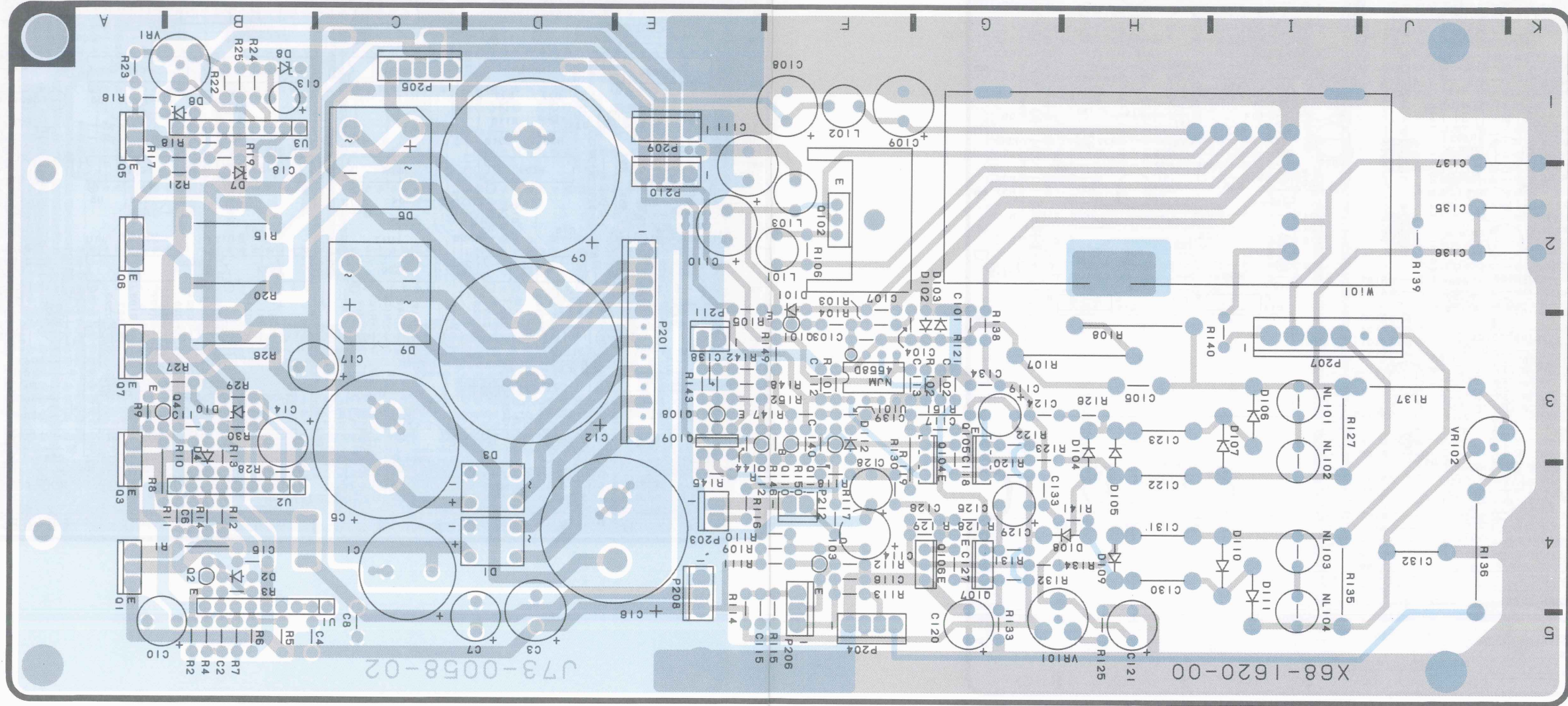
Pattern side view



P.C. BOARD

Power Supply Unit (X68-1620-01)

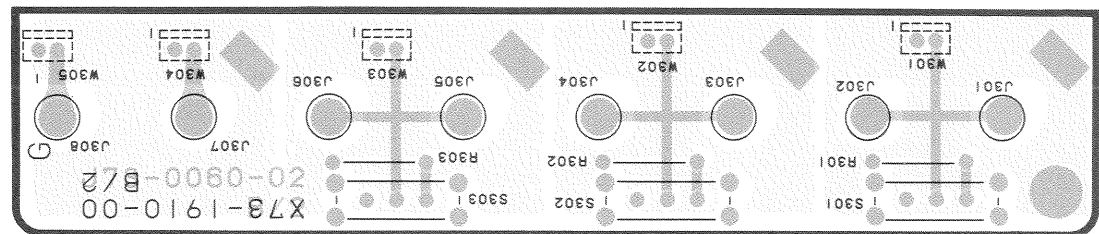
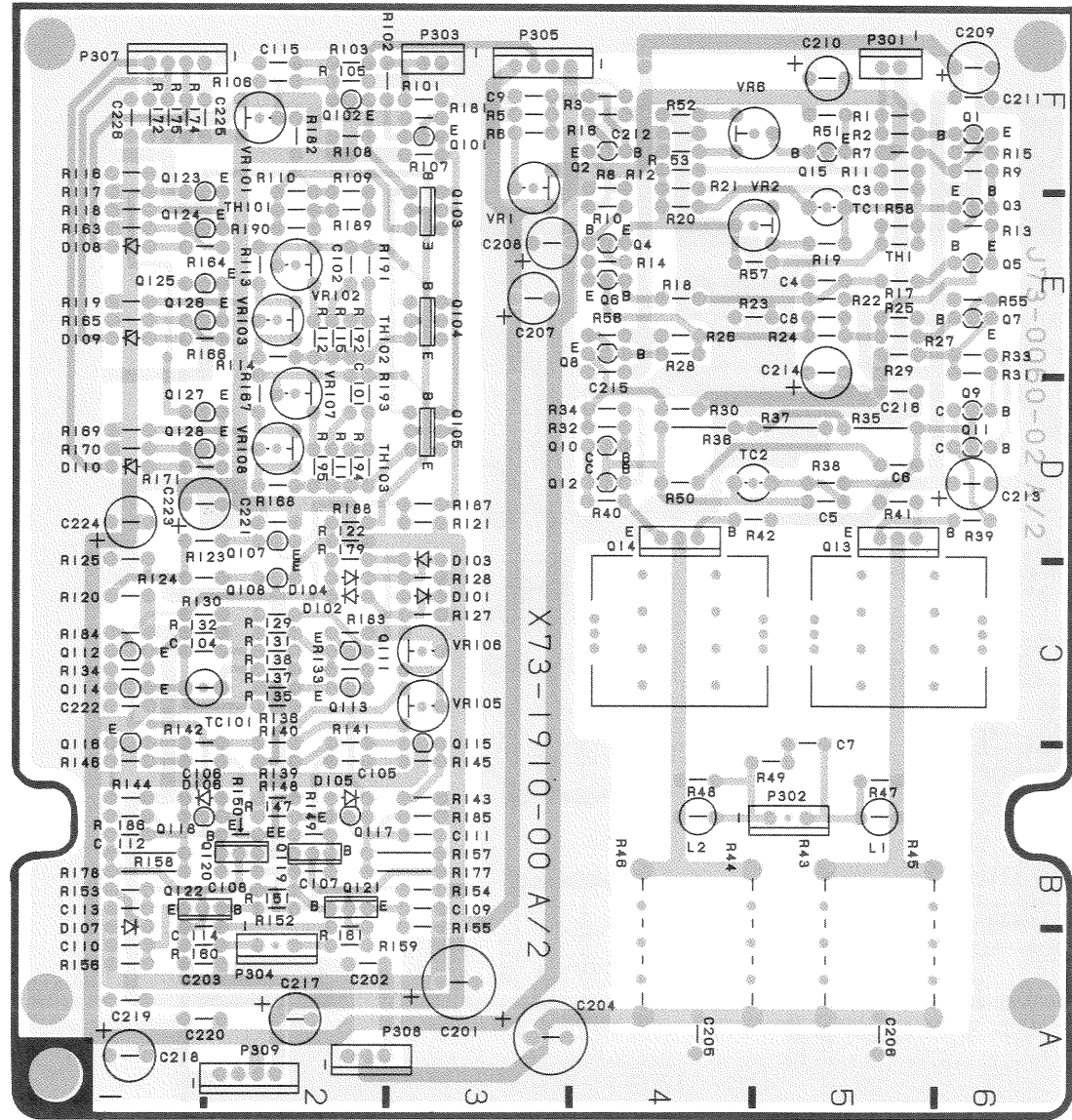
Pattern side view



P.C. BOARD

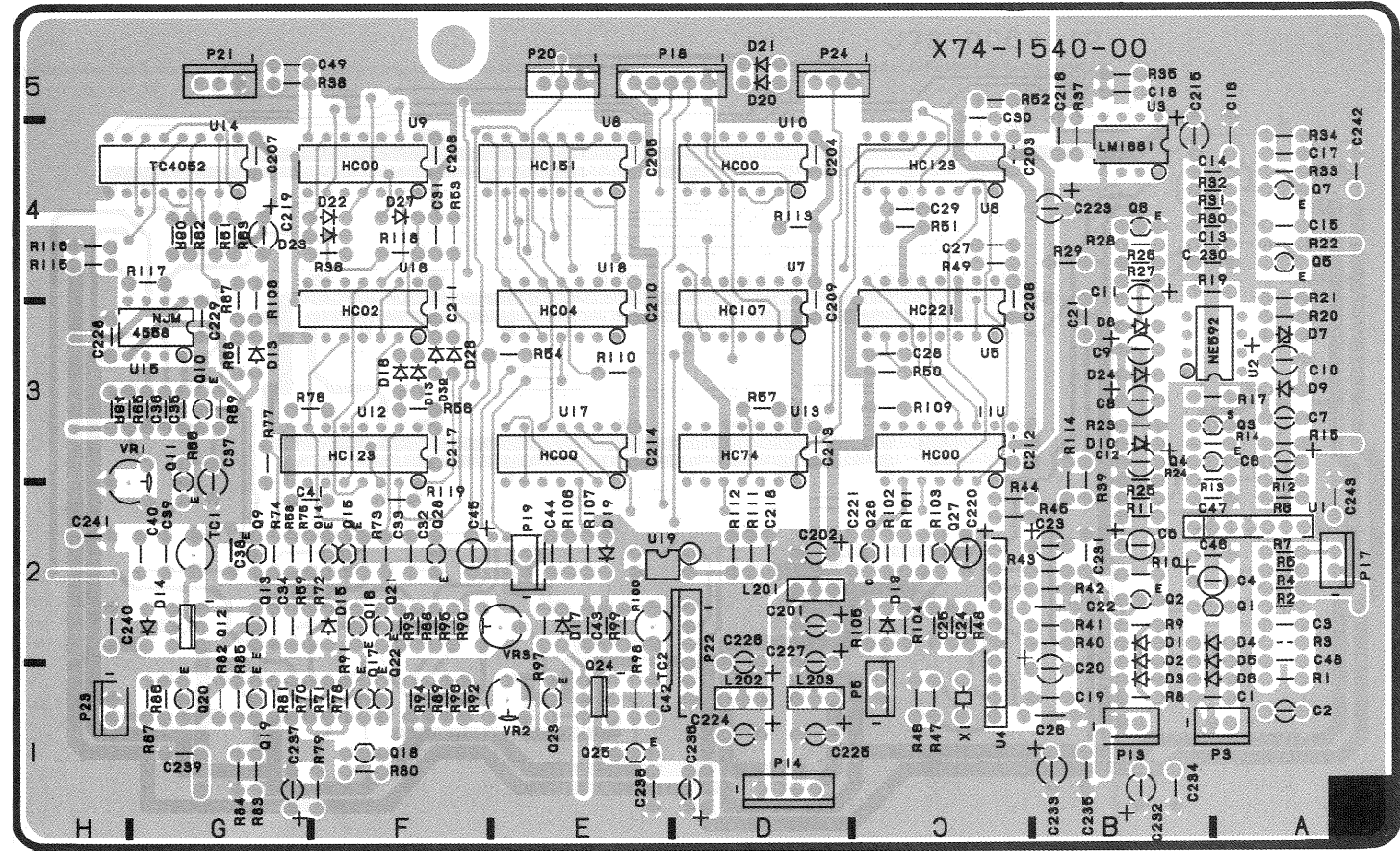
Final Amp Unit (X73-1910-01)

Pattern side view



Sweep Unit (X74-1540-00/X74-1540-01)

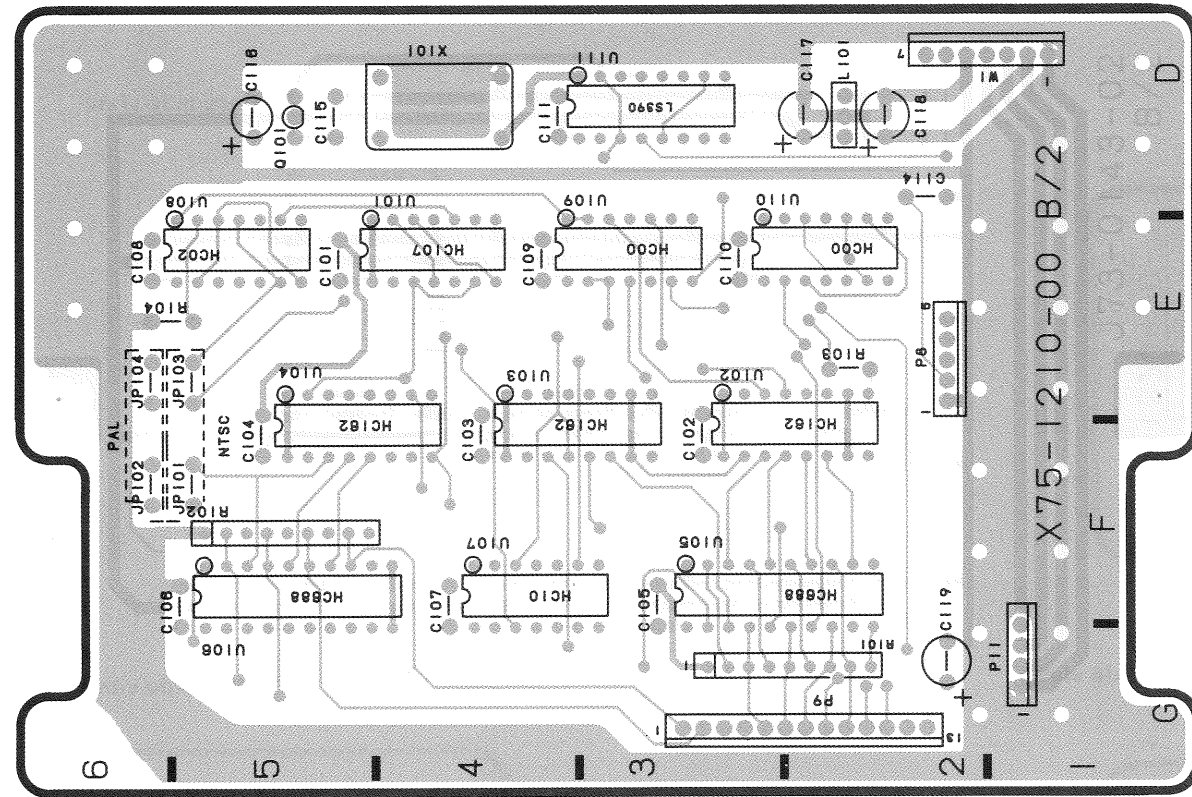
Pattern side view



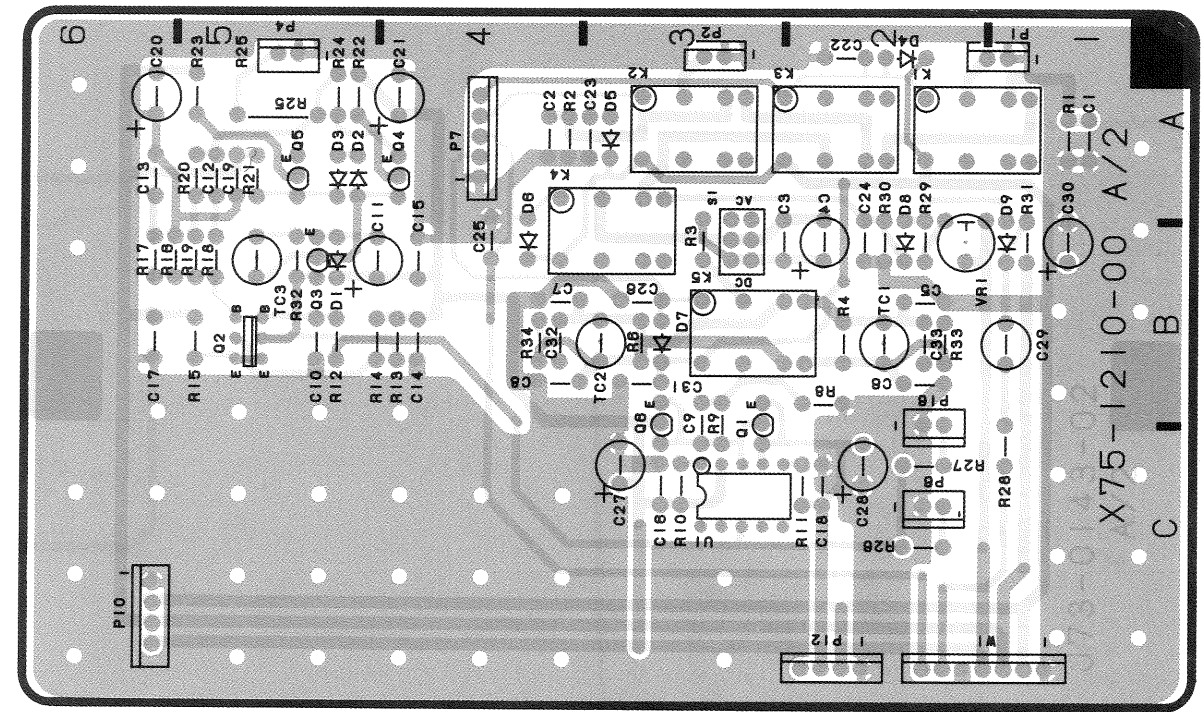
P.C. BOARD

Input ATT Unit (X75-1210-00/X75-1210-01)

Pattern side view

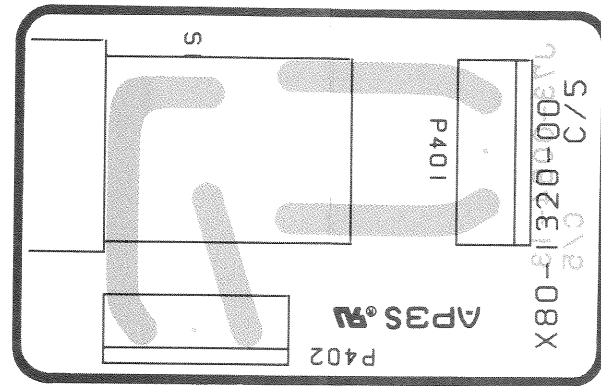
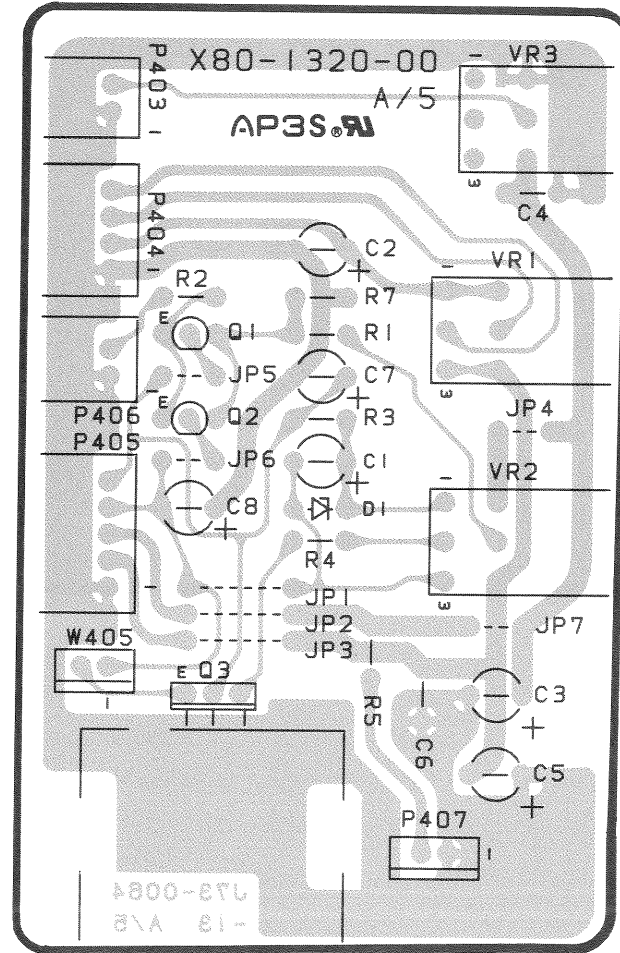


Pattern side view

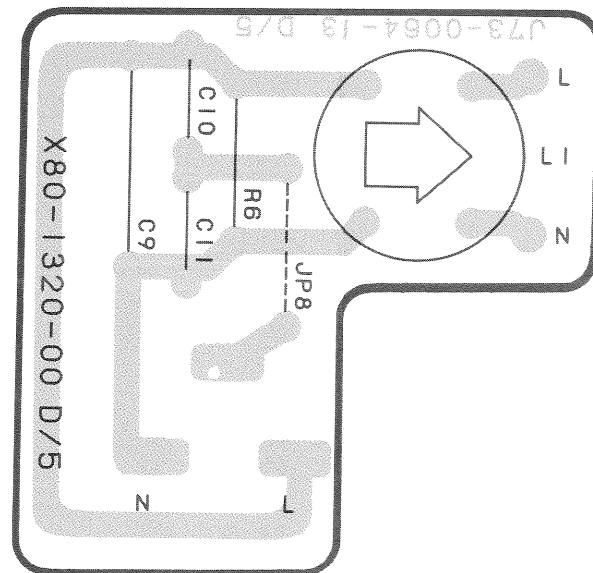


P.C. BOARD

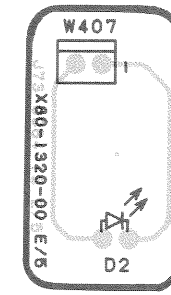
Line Filter & CRT Unit (X80-1320-00)



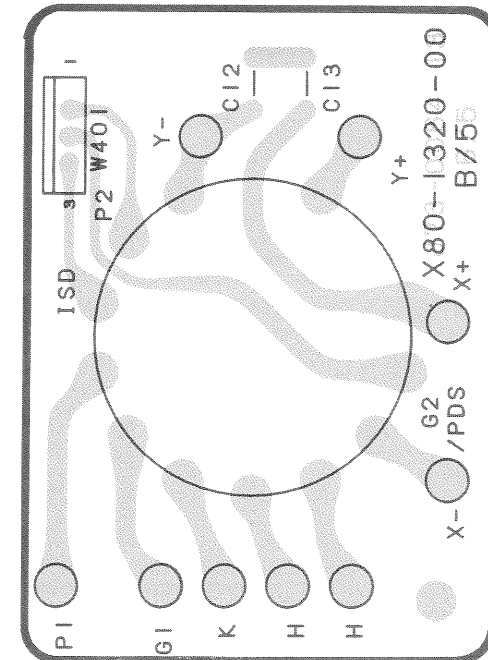
Pattern side view



Pattern side view



Pattern side view





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