

# PARTS LIST

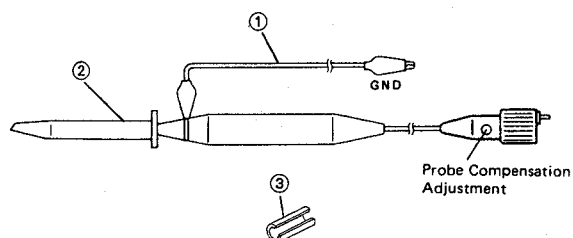
## CS-6010 UNIT

### Y70-1630-01

REF. NO	PARTS NO	NAME & DESCRIPTION
	B07-0703-04	ESCUTCHEON FOR ASTIG
	B30-0925-05	LAMP
	B50-7670-10	INSTRUCTION MANUAL, JAPANESE
	B50-7671-10	INSTRUCTION MANUAL, ENGLISH
	E30-1644-15	BS POWER CORD
	E30-1818-05	JIS POWER CORD
	E30-1819-05	CEE POWER CORD
	E30-1820-05	UL/CSA POWER CORD
	E30-1821-05	SAA POWER CORD
	E31-0717-05	WIRE ASS'Y(INLET TO GND)
	E31-5561-05	WIRE ASS'Y(NO.22)
	E31-5562-05	WIRE ASS'Y(NO.30)
	E31-5563-05	WIRE ASS'Y(NO.7,8,9)
	E31-5564-05	WIRE ASS'Y(NO.25)
	E31-5565-05	WIRE ASS'Y(NO.26)
	E31-5566-05	WIRE ASS'Y(CAL)
	E31-5567-05	WIRE ASS'Y(NO.4)
	F05-1224-05	FUSE 1.2A(6X30MM) FOR 100/120V
	F05-8013-05	FUSE 0.8A(5X20MM) FOR 220/240V
	F05-8015-05	FUSE 0.8A(6X30MM) FOR 220/240V
	F15-0733-04	FELT (CRT SHIELD)
	F20-0674-04	INSULATED SHEET, HIGH VOLTAGE
	H01-5894-04	CARTON BOX
	H10-2901-02	FOAMED STYRENE PAD, FRONT
	H10-2902-02	FOAMED STYRENE PAD, REAR
	H20-1727-04	VINYL COVER
	W03-2301-15	R/O PROBE, PC-31
C1	CC45CH2H330J	CAP. CERAMIC 33P 5% 500V
R1	RD148B2C471J	RES. CARBON 470 5% 1/6W
1	A01-1194-12	CASE, TOP
2	A01-1195-32	CASE, BOTTOM
3	A13-0924-12	FRAME, RIGHT
4	A13-0933-22	FRAME, CENTER
5	A13-0934-12	FRAME, LEFT
6	A13-0927-03	FRAME, P.C.B SUPPORT
7	A13-0928-03	FRAME
8	A13-0929-03	FRAME
9	A20-2826-11	MOLDED PANEL
10	A20-2827-12	MOLDED PANEL
11	A21-1143-03	DECORATIVE PANEL
12	A21-1136-03	DECORATIVE PANEL
13	A23-1683-12	REAR PANEL
14	B11-0504-14	FILTER
15	B30-0963-05	LAMP ASS'Y, SCALE ILLUMINATION
16	B40-2918-03	NAME PLATE, MODEL
17	B41-0807-04	CAUTION LABEL, REAR PANEL
18	D19-0505-05	FLEXIBLE WIRE, FOR POWER SWITCH
19	G53-0015-14	BUSHING
20	E04-0259-05	BNC RECEPTACLE
21A	E18-0365-05	AC SELECTOR WITH 6X30MM FUSE
21B	E18-0366-05	AC SELECTOR WITH 5X20MM FUSE
22	E21-0660-04	TERMINAL, CAL
23	E21-0667-05	METAL TERMINAL
24	E23-0513-05	EARTH LUG, BNC
25	E31-5568-05	FLAT CABLE
26	E31-5569-05	FLAT CABLE
27	F07-0936-04	COVER, HANDLE LATCH
28	F10-1604-04	SHIELD, R/O UNIT
29	F10-1605-03	SHIELD, R/O UNIT
30	F10-1606-03	SHIELD, HIGH VOLTAGE UNIT
31	F11-1212-12	SHIELD, CRT: FRONT
32	F11-1210-03	SHIELD, CRT: REAR
33	F20-0673-04	INSULATED SHEET
34	G02-0606-14	SPRING, FOR HANDLE
35	J02-0089-05	RUBBER FOOT
36	J11-0508-05	CABLE CLAMP
37	J19-1656-03	HOLDER, COIL
38	J19-1657-04	WEDGE
39	J21-2906-05	GEAR, FOR HANDLE
40	J21-2907-05	RING, FOR HANDLE
41	J21-4642-04	BRACKET
42	J21-4613-04	BRACKET
43	J32-0887-04	BOSS, FOR POWER SWITCH
44	J61-0516-05	SUPPORT
45	J61-0521-05	SUPPORT
46	K01-0528-05	HANDLE, CARRYING
47	K21-0898-03	KNOB, VOLT/DIV, SWEEP TIME/DIV
48	K23-0808-03	KNOB (18 USED)
49	K27-0504-04	KNOB, PUSH: POWER
50	K27-0543-04	KNOB, PUSH(34 USED)
51	L01-9766-05	POWER TRANSFORMER
52	L39-0527-05	COIL, TRACE ROTATION
53	L76-0115-05	DELAY LINE
54	S40-1524-05	PUSH SWITCH, POWER
55	W01-0503-04	REAR RUBBER FOOT/CORD WRAP
56	X66-1050-00	PANEL UNIT

REF. NO	PARTS NO	NAME & DESCRIPTION
57	X68-1500-00	POWER SUPPLY UNIT
58	X68-1510-01	HIGH VOLTAGE UNIT
59	X69-1150-01	SWITCH UNIT
60	X73-1760-00	VERTICAL PREAMP UNIT
61	X74-1480-01	HORIZONTAL UNIT
62	X75-1180-00	ATT. UNIT
63	X77-1490-00	R/O UNIT
64	X77-1500-00	CONNECTION UNIT
65	X80-1100-01	FINAL UNIT
66	X81-2330-01	VR UNIT
67	150YTM31	CRT
68	J59-0403-05	NYLON RIVET (ILLUMI)
69	N19-0710-05	WASHER
70	J19-1660-05	SUPPORT, FOR PCB

## MODEL PC-31 (LOW CAPACITY PROBE)



ITEM	DESCRIPTION	PARTS NO.
①	Ground Wire Assembly	E30-1883-08
②	Retractable Hook Tip	E29-0540-08
③	Marker (Orange)	B42-1950-08

# PARTS LIST

## PANEL UNIT

### X66-1050-00

REF.NO	PARTS NO	NAME & DESCRIPTION
	J25-5197-03	PCB (UNMOUNTED)
	J61-0521-05	SUPPORT
C001	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C002	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C003	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C004	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C005	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C006	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C007	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C008	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
D001	MA700	DIODE
D002	MA700	DIODE
J031	E31-5555-05	LEAD WIRE WITH CONNECTOR
J100	R92-0150-05	JUMPING RES. ZERO OHM(10MM)
J101	R92-0150-05	JUMPING RES. ZERO OHM(10MM)
P002	E40-7038-05	PIN CONNECTOR 26P
Q001	2SC2785(F)	TR. SI. NPN
Q002	2SA1175(F)	TR. SI. PNP
Q003	2SC2785(F)	TR. SI. NPN
Q004	2SA1175(F)	TR. SI. PNP
R001	RN14BK2C2202F	RES. METAL FILM 22K 1% 1/6W
R002	RN14BK2C9103F	RES. METAL FILM 910K 1% 1/6W
R003	RN14BK2C9103F	RES. METAL FILM 910K 1% 1/6W
R004	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R005	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R006	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R007	RN14BK2C2202F	RES. METAL FILM 22K 1% 1/6W
R008	RN14BK2C9103F	RES. METAL FILM 910K 1% 1/6W
R009	RN14BK2C9103F	RES. METAL FILM 910K 1% 1/6W
R010	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R011	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R012	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R013	RN14BK2C6801F	RES. METAL FILM 6.8K 1% 1/6W
R014	RN14BK2C1802F	RES. METAL FILM 18K 1% 1/6W
R015	RD14BB2E220J	RES. CARBON 22 5% 1/4W
U001	NJM4558D	IC. DUAL OP AMP
VR001	R05-3514-05	VOLUME 20K B
VR002	R05-3514-05	VOLUME 20K B
VR003	R05-3514-05	VOLUME 20K B
VR004	R05-3514-05	VOLUME 20K B
VR005	R05-3514-05	VOLUME 20K B
VR006	R05-3514-05	VOLUME 20K B
VR007	R05-3514-05	VOLUME 20K B
VR008	R05-3514-05	VOLUME 20K B
VR009	R05-3514-05	VOLUME 20K B
VR010	R05-3514-05	VOLUME 20K B
VR011	R10-3504-05	ENDLESS VOLUME 2X10K B
VR012	R10-3504-05	ENDLESS VOLUME 2X10K B
VR013	R10-3504-05	ENDLESS VOLUME 2X10K B
VR014	R10-3504-05	ENDLESS VOLUME 2X10K B

## POWER SUPPLY UNIT

### X68-1500-00

REF.NO	PARTS NO	NAME & DESCRIPTION
	J25-5227-03	PCB (UNMOUNTED)
	N14-0626-04	NUT
	N30-3008-41	SCREW, PAN HD M3X8
73	F01-0865-14	HEAT SINK
C001	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V
C002	CE04W2A220M	CAP. ELECTRO 22 20% 100V
C003	CE04EW1C331M	CAP. ELECTRO 330 20% 16V
C004	CE04EW1C331M	CAP. ELECTRO 330 20% 16V
C005	CE04EW1E101M	CAP. ELECTRO 100 20% 25V
C006	CE04EW1A102M	CAP. ELECTRO 1000 20% 10V
C007	CE04W2E470M	CAP. ELECTRO 47 20% 250V
C008	CE04EW2A471M	CAP. ELECTRO 470 20% 100V
C009	C90-0973-05	CAP. ELECTRO 6800 20% 25V
C010	C90-0973-05	CAP. ELECTRO 6800 20% 25V
C011	C90-0982-05	CAP. ELECTRO 10000 20% 16V
C012	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C013	CE04EW1H331M	CAP. ELECTRO 330 20% 50V
C014	CE04EW1V471M	CAP. ELECTRO 470 20% 35V
C015	CE04EW1E101M	CAP. ELECTRO 100 20% 25V

REF.NO	PARTS NO	NAME & DESCRIPTION
C016	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C017	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C018	CC45FCH1H470J	CAP. CERAMIC 47P 5% 50V
C019	CC45FCH1H470J	CAP. CERAMIC 47P 5% 50V
D001	1SS132	DIODE
D002	1SS132	DIODE
D003	MT213JB	DIODE, ZENER 12.88V
D004	MT213JB	DIODE, ZENER 12.88V
D005	MT25.1JB	DIODE, ZENER 5.07V
D006	S1VB60	DIODE
D007	S1VB60	DIODE
D008	S4VB40F	DIODE, BRIDGE
D009	S4VB40F	DIODE, BRIDGE
D010	1SR35-200A	DIODE
D011	1SR35-200A	DIODE
D012	MT224JC	DIODE, ZENER 23.72V
D013	MT27.5JA	DIODE, ZENER 7.04V
P017	E40-1173-05	PIN CONNECTOR 11P
P018	E40-7040-05	PIN CONNECTOR 13P
Q001	2SD1409	TR. SI. NPN
Q002	2SC2271(O)	TR. SI. NPN
Q003	2SD1409	TR. SI. NPN
Q004	2SC2271(O)	TR. SI. NPN
Q005	2SB1133(S)	TR. SI. PNP
Q006	2SD1666(S)	TR. SI. NPN
Q007	2SB1133(S)	TR. SI. PNP
Q008	2SA684(O)	TR. SI. PNP
R001	RN14BK2C1302F	RES. METAL FILM 13K 1% 1/6W
R002	RN14BK2C1803F	RES. METAL FILM 180K 1% 1/6W
R003	RD14BB2C123J	RES. CARBON 12K 5% 1/6W
R004	RN14BK2C2002F	RES. METAL FILM 20K 1% 1/6W
R005	RN14BK2C1203F	RES. METAL FILM 120K 1% 1/6W
R006	RD14BB2C912J	RES. CARBON 9.1K 5% 1/6W
R007	RN14BK2C2002F	RES. METAL FILM 20K 1% 1/6W
R008	RN14BK2C2002F	RES. METAL FILM 20K 1% 1/6W
R009	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R010	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R011	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R012	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R013	RD14BB2C512J	RES. CARBON 5.1K 5% 1/6W
R014	RN14BK2C1002F	RES. METAL FILM 10K 1% 1/6W
R015	RN14BK2C2002F	RES. METAL FILM 20K 1% 1/6W
R016	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R017	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R018	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R019	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R020	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R021	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R022	NO USE	
R023	RD14BB2C362J	RES. CARBON 3.6K 5% 1/6W
R024	RD14BB2C163J	RES. CARBON 16K 5% 1/6W
R025	R92-1402-05	RES. SPECIAL POWER 24 5% 2W
R026	NO USE	
R027	R92-1402-05	RES. SPECIAL POWER 24 5% 2W
R028	RD14BB2C333J	RES. CARBON 33K 5% 1/6W
R029	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R030	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
R031	R92-1421-05	RES. SPECIAL POWER 7.5 5% 3W
R032	RN14BK2C1502F	RES. METAL FILM 15K 1% 1/6W
R033	RN14BK2C1002F	RES. METAL FILM 10K 1% 1/6W
R034	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
R035	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R036	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
U001	NJM4556S	IC. DUAL OP AMP
U002	NJM4556S	IC. DUAL OP AMP
U003	NJM4556S	IC. DUAL OP AMP
VR001	R12-1551-05	RES. SEMI FIXED 1K8

# PARTS LIST

## HIGH VOLTAGE UNIT

### X68-1510-01

REF.NO	PARTS NO	NAME & DESCRIPTION
	F01-0813-05	HEAT SINK (CONVERTER)
	F10-1601-04	SHIELD PLATE
	F15-0727-04	HOLDER (NEON LAMP)
	J25-S226-03	PCB (UNMOUNTED)
	N30-3006-41	SCREW, PAN HD M3X6
	W02-0458-05	HIGH VOLTAGE UNIT
C001	CE04EW1E221M	CAP. ELECTRO 220 20% 25V
C002	CE04EW1E221M	CAP. ELECTRO 220 20% 25V
C003	CK45B1H472K	CAP. CERAMIC 4700P 10% 50V
C004	CK45FB1H222K	CAP. CERAMIC 2200P 10% 50V
C005	CC45SL2H101J	CAP. CERAMIC 100P 5% 500V
C006	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C007	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C008	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C009	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C010	CF92V1H224J	CAP. POLYESTER 0.22 5% 50V
C011	CF92V1H224J	CAP. POLYESTER 0.22 5% 50V
C012	CK45E3F102P	CAP. CERAMIC 1000P 10% 50V
C013	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C014	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C015	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C016	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C017	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C018	CK45B2H102K	CAP. CERAMIC 1000P 10% 500V
C019	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C020	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C021	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
C022	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
C023	CK45F1H103Z	CAP. CERAMIC 0.01 50V
C024	CC45CH2H020C	CAP. CERAMIC 2P 0.25P 500V
C025	CC45CH2H010C	CAP. CERAMIC 1P 0.25P 500V
C026	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C027	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C031	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C032	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C033	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C034	C91-1274-05	CAP. CERAMIC 2700P 10% 3.15K
C035	CE04W2C2R2M	CAP. ELECTRO 2.2 20% 160V
C036	CE04W2C2R2M	CAP. ELECTRO 2.2 20% 160V
C037	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C038	CE04EW1C101M	CAP. ELECTRO 100 20% 16V
C039	CE04EW1C101M	CAP. ELECTRO 100 20% 16V
C040	CE04EW1C101M	CAP. ELECTRO 100 20% 16V
C043	CE04EW0J102M	CAP. ELECTRO 1000 20% 6.3V
C044	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
D001	1SS132	DIODE
D002	1SS132	DIODE
D003	1SS132	DIODE
D004	1SR35-200A	DIODE
D005	1SR35-200A	DIODE
D006	1SS83	DIODE
D007	1SS83	DIODE
D008	1SR35-200A	DIODE
D009	1SR35-200A	DIODE
D010	1SS83	DIODE
D011	1SS132	DIODE
D012	1SS132	DIODE
D013	1SS83	DIODE
L001	L40-3925-04	FERRI INDUCTOR 3.9MH
L002	L40-1011-04	FERRI INDUCTOR 100UH
L003	L40-1011-04	FERRI INDUCTOR 100UH
L004	L40-1545-06	FERRI INDUCTOR 150MH
NL001	NE-2B	NEON LAMP
NL002	NE-2B	NEON LAMP
NL003	NE-2B	NEON LAMP
NL004	NE-2B	NEON LAMP
P019	E40-1273-05	PIN CONNECTOR 12P
P022	E40-0273-05	PIN CONNECTOR 2P
P023	E40-0503-05	PIN CONNECTOR 5P
P024	E40-0373-05	PIN CONNECTOR 3P
P025	E40-0473-05	PIN CONNECTOR 4P
P026	E40-1073-05	PIN CONNECTOR 10P
Q001	2SD613(E)	TR. SI. NPN
Q002	2SA1175(F)	TR. SI. PNP
Q003	2SA1208(S.T)	TR. SI. PNP
Q004	2SC2910(S.T)	TR. SI. NPN
Q005	2SA1209(S.T)	TR. SI. PNP
Q006	2SC2911(S.T)	TR. SI. NPN

REF.NO	PARTS NO	NAME & DESCRIPTION
Q007	2SA1175(F)	TR. SI. PNP
Q008	2SC3315(C)	TR. SI. NPN
R001	RD14BB2C821J	RES. CARBON 820 5% 1/6W
R002	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W
R003	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R004	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R005	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R006	RD14BB2C473J	RES. CARBON 47K 5% 1/6W
R007	R92-1127-05	RES. FIXED 8.2M 1% 1W
R008	R92-1125-05	RES. METAL FILM 7.5M 1% 1W
R009	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
R010	R92-1034-05	RES. METAL FILM 47M 5% 1/2W
R011	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R012	RD14BB2C474J	RES. CARBON 470K 5% 1/6W
R013	R92-1034-05	RES. METAL FILM 47M 5% 1/2W
R014	RD14BB2C474J	RES. CARBON 470K 5% 1/6W
R015	RD14BB2C823J	RES. CARBON 82K 5% 1/6W
R016	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R017	RD14BB2C753J	RES. CARBON 75K 5% 1/6W
R018	RD14BB2C114J	RES. CARBON 110K 5% 1/6W
R019	RD14BB2C822J	RES. CARBON 8.2K 5% 1/6W
R020	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R021	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R022	RD14BB2C134J	RES. CARBON 130K 5% 1/6W
R023	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R024	RD14BB2C134J	RES. CARBON 130K 5% 1/6W
R025	RD14BB2C751J	RES. CARBON 750 5% 1/6W
R026	RD14BB2C913J	RES. CARBON 91K 5% 1/6W
R027	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R028	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R029	RD14BB2C113J	RES. CARBON 11K 5% 1/6W
R030	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
R034	R92-1422-05	RES. FIXED 3.9M 5% 1/2W
R035	R92-1422-05	RES. FIXED 3.9M 5% 1/2W
R036	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
R037	RN14BK2E5103F	RES. METAL FILM 510K 1% 1/4W
R038		NO USE
R039	RD14BB2C204J	RES. CARBON 200K 5% 1/6W
R040	RD14BB2C684J	RES. CARBON 680K 5% 1/6W
R041	RD14BB2C684J	RES. CARBON 680K 5% 1/6W
R042	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R043	RD14BB2C2R2J	RES. CARBON 2.2 5% 1/6W
R044	R92-1026-05	RES. METAL FILM 3.3M
R045	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R046	RD14BB2C243J	RES. CARBON 24K 5% 1/6W
R047	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R048	RD14BB2C101J	RES. CARBON 100 5% 1/6W
U001	NJM4558D	IC. DUAL OP AMP
VR001	R12-5524-05	RES. SEMI FIXED 100K B
VR002	R12-8501-05	RES. SEMI FIXED 2.2M B

## SWITCH UNIT

### X69-1150-01

REF.NO	PARTS NO	NAME & DESCRIPTION
	J25-S233-03	PCB (UNMOUNTED)
D038	B30-0964-05	LED
D039	B30-0965-05	LED
D040	B30-0964-05	LED
D041	B30-0965-05	LED
D042	B30-0964-05	LED
D043	B30-0965-05	LED
D044	B30-0965-05	LED
D045	1SS132	DIODE
D046	1SS132	DIODE
D047	1SS132	DIODE
D048	1SS132	DIODE
D049	1SS132	DIODE
P001	E40-7036-05	PIN CONNECTOR 20P
R015	R90-0652-05	RES. NETWORK 6X10K 5%
R016	R90-0653-05	RES. NETWORK 8X10K 5%
R017	R90-0614-05	RES. NETWORK 8X390 5%
R018	R90-0639-05	RES. NETWORK 6X390 5%
R019	R90-0639-05	RES. NETWORK 6X390 5%
R020	R90-0639-05	RES. NETWORK 6X390 5%
R021	RD14BB2C391J	RES. CARBON 390 5% 1/6W
R022	RD14BB2C391J	RES. CARBON 390 5% 1/6W
R023	RD14BB2C391J	RES. CARBON 390 5% 1/6W

# PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION
S001	W02-2077-05	ROTARY ENCODER
S002	W02-2077-05	ROTARY ENCODER
S003	W02-2077-05	ROTARY ENCODER
S004	S40-2525-05	SWITCH
S005	S40-2525-05	SWITCH
S006	S40-2525-05	SWITCH
S007	S40-2525-05	SWITCH
S008	S40-2525-05	SWITCH
S009	S40-2525-05	SWITCH
S010	S40-2525-05	SWITCH
S011	S40-2525-05	SWITCH
S012	S40-2525-05	SWITCH
S013	S40-2525-05	SWITCH
S014	S40-2525-05	SWITCH
S015	S40-2525-05	SWITCH
S016	S40-2525-05	SWITCH
S017	S40-2525-05	SWITCH
S018	S40-2525-05	SWITCH
S019	S40-2525-05	SWITCH
S020	S40-2525-05	SWITCH
S021	S40-2525-05	SWITCH
S022	S40-2525-05	SWITCH
S023	S40-2525-05	SWITCH
S024	S40-2525-05	SWITCH
S025	S40-2525-05	SWITCH
S026	S40-2525-05	SWITCH
S027	S40-2525-05	SWITCH
S028	S40-2525-05	SWITCH
S029	S40-2525-05	SWITCH
S030	NO USE	
S031	S40-2525-05	SWITCH
S032	S40-2525-05	SWITCH
S033	S40-2525-05	SWITCH
S034	S40-2525-05	SWITCH
S035	S40-2525-05	SWITCH
S036	S40-2525-05	SWITCH
S037	S40-2525-05	SWITCH
U002	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH
U003	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH
U004	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH
U005	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH
U006	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH
U007	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH
U008	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH
U009	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH

REF. NO	PARTS NO	NAME & DESCRIPTION			
C039	CK45F1H103Z	CAP. CERAMIC	0.01		50V
C040	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C041	CC45CH1H101J	CAP. CERAMIC	100P	5%	50V
C042	CC45CH1H101J	CAP. CERAMIC	100P	5%	50V
C043	CC45CH1H101J	CAP. CERAMIC	100P	5%	50V
C044	CC45CH1H101J	CAP. CERAMIC	100P	5%	50V
C045	C092FM1H104K	CAP. MYLAR	0.1	10%	50V
C046	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C103	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C104	CC45FCH1H050C	CAP. CERAMIC	5P	0.25P	50V
C105	NO USE				
C106	CC45FCH1H060D	CAP. CERAMIC	6P	0.5P	50V
C107	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C108	CC45FCH1H150J	CAP. CERAMIC	15P	5%	50V
C109	CK45B1H102K	CAP. CERAMIC	1000P	10%	50V
C110	CC45CH1H010C	CAP. CERAMIC	1P	0.25P	50V
C111	CC45FCH1H030C	CAP. CERAMIC	3P	0.25P	50V
C112	CC45CH1H010C	CAP. CERAMIC	1P	0.25P	50V
C113	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C114	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C203	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C204	CC45FCH1H050C	CAP. CERAMIC	5P	0.25P	50V
C205	NO USE				
C206	CC45FCH1H060D	CAP. CERAMIC	6P	0.5P	50V
C207	NO USE				
C208	CC45FCH1H150J	CAP. CERAMIC	15P	5%	50V
C209	CK45B1H102K	CAP. CERAMIC	1000P	10%	50V
C210	CC45CH1H010C	CAP. CERAMIC	1P	0.25P	50V
C211	CC45FCH1H030C	CAP. CERAMIC	3P	0.25P	50V
C212	CC45CH1H010C	CAP. CERAMIC	1P	0.25P	50V
C213	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C214	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C301	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C401	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C402	C092FM1H104K	CAP. MYLAR	0.1	10%	50V
C501	CC45FCH1H680J	CAP. CERAMIC	68P	5%	50V
C502	CC45FCH1H680J	CAP. CERAMIC	68P	5%	50V
C503	CC45CH1H120J	CAP. CERAMIC	12P	5%	50V
C504	CC45CH1H120J	CAP. CERAMIC	12P	5%	50V
C505	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C506	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C509	CC45SL1H471J	CAP. CERAMIC	470P	5%	50V
C510	CC45SL1H471J	CAP. CERAMIC	470P	5%	50V
C511	C092FM1H104K	CAP. MYLAR	0.1	10%	50V
C512	NO USE				
C513	CC45FCH1H040C	CAP. CERAMIC	4P	0.25P	50V
C514	CC45FCH1H040C	CAP. CERAMIC	4P	0.25P	50V
C515	CC45FCH1H040C	CAP. CERAMIC	4P	0.25P	50V
C516	CC45FCH1H040C	CAP. CERAMIC	4P	0.25P	50V
C517	C092FM1H103K	CAP. MYLAR	0.01	10%	50V
C518	C092FM1H104K	CAP. MYLAR	0.1	10%	50V
C519	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C520	CC45FCH1H101J	CAP. CERAMIC	100P	5%	50V
C601	CC45FCH1H070D	CAP. CERAMIC	7P	0.5P	50V
C602	CC45FCH1H070D	CAP. CERAMIC	7P	0.5P	50V
C603	CC45FCH1H120J	CAP. CERAMIC	12P	5%	50V
C604	CC45FCH1H120J	CAP. CERAMIC	12P	5%	50V
C605	CE04HW1H010M	CAP. ELECTRO	1	20%	50V
C606	CC45CH1H010C	CAP. CERAMIC	1P	0.25P	50V
C607	CE04HW1E220M	CAP. ELECTRO	22	20%	25V
C608	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C609	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C610	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C611	NO USE				
C612	CC45FCH1H020C	CAP. CERAMIC	2P	0.25P	50V
C701	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C702	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C703	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C704	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C705	CC45FCH1H220J	CAP. CERAMIC	22P	5%	50V
C706	CC45FCH1H220J	CAP. CERAMIC	22P	5%	50V
C707	C092M1H104K	CAP. MYLAR	0.1	10%	50V
C708	NO USE				
C709	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C710	NO USE				
C711	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C714	CE04EW1A101M	CAP. ELECTRO	100	20%	10V
C715	CE04EW1A101M	CAP. ELECTRO	100	20%	10V
C716	CE04EW1C330M	CAP. ELECTRO	33	20%	16V
C720	C092FM1H104K	CAP. MYLAR	0.1	10%	50V
C721	C092FM1H104K	CAP. MYLAR	0.1	10%	50V

## VERTICAL PREAMP UNIT

### X73-1760-00

REF. NO	PARTS NO	NAME & DESCRIPTION			
	E31-5576-05	WIRE ASS'Y(GND TO GND)			
	E31-5577-05	WIRE ASS'Y(NO. A,B,C,D)			
	J25-5228-02	PCB (UNMOUNTED)			
	J61-0408-05	WIRE WRAPPING BAND			
C001	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C002	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C003	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C004	CE04EW1A101M	CAP. ELECTRO	100	20%	10V
C005	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C006	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C007	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C008	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C009	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C019	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C020	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C021	CE04EW1C100M	CAP. ELECTRO	10	20%	16V
C022	CE04EW1C100M	CAP. ELECTRO	10	20%	16V
C023	NO USE				
C024	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C025	C092FM1H103K	CAP. MYLAR	0.01	10%	50V
C026	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C027	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C028	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C029	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C030	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C031	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C032	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C033	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C034	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C035	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C036	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C037	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C038	CK45F1H103Z	CAP. CERAMIC	0.01		50V

# PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION	REF. NO	PARTS NO	NAME & DESCRIPTION
C800	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	Q116	2SC2785(F)	TR. SI. NPN
C801	CC45CH1H101J	CAP. CERAMIC 100P 5% 50V	Q117	2SC3779(D)	TR. SI. NPN
C802	CC45CH1H330J	CAP. CERAMIC 33P .5% 50V	Q118	2SC3779(D)	TR. SI. NPN
C803	CC45SL1H470J	CAP. CERAMIC 47P 5% 50V	Q119	2SC3779(D)	TR. SI. NPN
C804	CC45SL1H470J	CAP. CERAMIC 47P 5% 50V	Q120	2SC3779(D)	TR. SI. NPN
C805	C092M1H104K	CAP. MYLAR 0.1 10% 50V	Q201	2SC4072	TR. SI. NPN
C806	C092M1H104K	CAP. MYLAR 0.1 10% 50V	Q202	2SC4072	TR. SI. NPN
C807	CC45CH1H0R5C	CAP. CERAMIC 0.5P 0.25P 50V	Q203	2SC3779(D)	TR. SI. NPN
C808	CC45CH1H0R5C	CAP. CERAMIC 0.5P 0.25P 50V	Q204	2SC3779(D)	TR. SI. NPN
D101	1S5132	DIODE	Q205	2SC3315(C)	TR. SI. NPN
D102	1S5132	DIODE	Q206	2SC3315(C)	TR. SI. NPN
D103	MA700	DIODE	Q207	2SC3315(C)	TR. SI. NPN
D104	MA700	DIODE	Q208	2SA1161	TR. SI. PNP
D150	MA700	DIODE	Q209	2SA1161	TR. SI. PNP
D151	MA700	DIODE	Q210	2SC4049	TR. SI. NPN
D152	MA700	DIODE	Q211	2SC4049	TR. SI. NPN
D153	MA700	DIODE	Q212	2SC3779(D)	TR. SI. NPN
D154	MA700	DIODE	Q213	2SC3779(D)	TR. SI. NPN
D155	MA700	DIODE	Q214	2SC3779(D)	TR. SI. NPN
D201	1S5132	DIODE	Q215	2SC3779(D)	TR. SI. NPN
D202	1S5132	DIODE	Q216	2SC2785(F)	TR. SI. NPN
D203	MA700	DIODE	Q217	2SC3779(D)	TR. SI. NPN
D204	MA700	DIODE	Q218	2SC3779(D)	TR. SI. NPN
D250	MA700	DIODE	Q219	2SC3779(D)	TR. SI. NPN
D251	MA700	DIODE	Q220	2SC3779(D)	TR. SI. NPN
D252	MA700	DIODE	Q301	2SC3779(D)	TR. SI. NPN
D253	MA700	DIODE	Q302	2SC3779(D)	TR. SI. NPN
D254	MA700	DIODE	Q303	2SC3779(D)	TR. SI. NPN
D255	MA700	DIODE	Q304	2SC3779(D)	TR. SI. NPN
D501	1S5132	DIODE	Q401	2SC3779(D)	TR. SI. NPN
D502	1S5132	DIODE	Q402	2SC3779(D)	TR. SI. NPN
D503	1S5132	DIODE	Q403	2SC3779(D)	TR. SI. NPN
D504	1S5132	DIODE	Q404	2SC3779(D)	TR. SI. NPN
D505	1S5132	DIODE	Q501	2SA1206	TR. SI. PNP
D506	1S5132	DIODE	Q502	2SA1206	TR. SI. PNP
D507	1S5132	DIODE	Q503	2SC3315(C)	TR. SI. NPN
D508	1S5132	DIODE	Q504	2SC3315(C)	TR. SI. NPN
D509	1S5132	DIODE	Q505	2SA1206	TR. SI. PNP
D510	MTZ10JC	DIODE, ZENER 9.95V	Q506	2SA1206	TR. SI. PNP
D511	1S5132	DIODE	Q507	2SC3315(C)	TR. SI. NPN
D512	MTZ5.1JB	DIODE, ZENER 5.07V	Q508	2SC3315(C)	TR. SI. NPN
D601	DAP401	DIODE ARRAY	Q509	2SA1206	TR. SI. PNP
D602	DAP401	DIODE ARRAY	Q510	2SA1206	TR. SI. PNP
D603	1S5132	DIODE	Q511	2SC3315(C)	TR. SI. NPN
K101	S51-2508-05	RELAY	Q512	2SC3315(C)	TR. SI. NPN
K102	S51-2508-05	RELAY	Q513	2SA1206	TR. SI. PNP
K201	S51-2508-05	RELAY	Q514	2SA1206	TR. SI. PNP
K202	S51-2508-05	RELAY	Q515	2SC3315(C)	TR. SI. NPN
P005	E40-0373-05	PIN CONNECTOR 3P	Q516	2SC3315(C)	TR. SI. NPN
P006	E40-0373-05	PIN CONNECTOR 3P	Q517	NO USE	
P007	E40-0473-05	PIN CONNECTOR 4P	Q518	2SC3732(L)	TR. SI. NPN
P008	E40-0473-05	PIN CONNECTOR 4P	Q519	2SA1206	TR. SI. PNP
P009	E40-0373-05	PIN CONNECTOR 3P	Q520	2SA1206	TR. SI. PNP
P010	E40-7039-05	PIN CONNECTOR 20P	Q521	2SA1175(F)	TR. SI. PNP
P011	E40-0373-05	PIN CONNECTOR 3P	Q522	2SA1175(F)	TR. SI. PNP
P030	E40-0273-05	PIN CONNECTOR 2P	Q523	2SA1175(F)	TR. SI. PNP
Q001	2SA1005(K)	TR. SI. PNP	Q524	2SC3779(D)	TR. SI. NPN
Q002	2SA1005(K)	TR. SI. PNP	Q525	2SC3779(D)	TR. SI. NPN
Q003	2SA1005(K)	TR. SI. PNP	Q526	2SA1206	TR. SI. PNP
Q004	2SA1005(K)	TR. SI. PNP	Q527	2SA1206	TR. SI. PNP
Q005	2SA1005(K)	TR. SI. PNP	Q528	2SA1161	TR. SI. PNP
Q006	2SA1005(K)	TR. SI. PNP	Q529	2SA1161	TR. SI. PNP
Q007	2SA1005(K)	TR. SI. PNP	Q601	2SA1206	TR. SI. PNP
Q008	2SA1005(K)	TR. SI. PNP	Q602	2SA1206	TR. SI. PNP
Q101	2SC4072	TR. SI. NPN	Q603	2SC3779(D)	TR. SI. NPN
Q102	2SC4072	TR. SI. NPN	Q604	2SA1206	TR. SI. PNP
Q103	2SC3779(D)	TR. SI. NPN	Q605	2SA1206	TR. SI. PNP
Q104	2SC3779(D)	TR. SI. NPN	Q606	2SA1206	TR. SI. PNP
Q105	2SC3315(C)	TR. SI. NPN	Q607	2SC3779(D)	TR. SI. NPN
Q106	2SC3315(C)	TR. SI. NPN	Q608	2SA1206	TR. SI. PNP
Q107	2SC3315(C)	TR. SI. NPN	Q609	2SA1206	TR. SI. PNP
Q108	2SA1161	TR. SI. PNP	Q610	2SA1206	TR. SI. PNP
Q109	2SA1161	TR. SI. PNP	Q611	2SC3779(D)	TR. SI. NPN
Q110	2SC4049	TR. SI. NPN	Q612	2SA1206	TR. SI. PNP
Q111	2SC4049	TR. SI. NPN	Q613	2SA1206	TR. SI. PNP
Q112	2SC3779(D)	TR. SI. NPN	Q614	2SA1206	TR. SI. PNP
Q113	2SC3779(D)	TR. SI. NPN	Q615	2SC3779(D)	TR. SI. NPN
Q114	2SC3779(D)	TR. SI. NPN	Q616	2SA1206	TR. SI. PNP
Q115	2SC3779(D)	TR. SI. NPN	Q617	2SA1161	TR. SI. PNP
			Q618	2SA1161	TR. SI. PNP
			Q619	2SA1175(F)	TR. SI. PNP
			Q620	2SA1175(F)	TR. SI. PNP
			Q621	2SC3779(D)	TR. SI. NPN
			Q622	2SC3779(D)	TR. SI. NPN
			Q623	2SC2785(F)	TR. SI. NPN
			Q624	2SC3315(C)	TR. SI. NPN

# PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION	REF. NO	PARTS NO	NAME & DESCRIPTION
Q625	2SC3315(C)	TR. SI. NPN	R170	RN14BK2C91ROF	RES. METAL FILM 91.0 1% 1/6W
Q626	2SC3315(C)	TR. SI. NPN	R171	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q627	2SC3315(C)	TR. SI. NPN	R172	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q628	2SC3315(C)	TR. SI. NPN	R173	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q629	2SC3315(C)	TR. SI. NPN	R174	RN14BK2C4702F	RES. METAL FILM 47K 1% 1/6W
Q630	2SC3315(C)	TR. SI. NPN	R175	RN14BK2C4702F	RES. METAL FILM 47K 1% 1/6W
Q631	2SC3315(C)	TR. SI. NPN	R176	RN14BK2C1301F	RES. METAL FILM 1.3K 1% 1/6W
Q632	2SC3779(D)	TR. SI. NPN	R177	RN14BK2C6800F	RES. METAL FILM 680 1% 1/6W
Q633	2SC3779(D)	TR. SI. NPN	R178	RN14BK2C6800F	RES. METAL FILM 680 1% 1/6W
R001	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R179	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R002	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R180	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R003	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R181	RN14BK2C5101F	RES. METAL FILM 5.1K 1% 1/6W
R004	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R182	RN14BK2C4701F	RES. METAL FILM 4.7K 1% 1/6W
R005	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R183	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R006	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R184	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R007	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R185	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R008	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R186	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
R009	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R187	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R010	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R190	RD14BB2C270J	RES. CARBON 27 5% 1/6W
R011	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R201	RD14BB2C751J	RES. CARBON 750 5% 1/6W
R012	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R202	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R013	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R203	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R014	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R204	NO USE	
R101	RD14BB2C751J	RES. CARBON 750 5% 1/6W	R205	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R102	RD14BB2C470J	RES. CARBON 47 5% 1/6W	R206	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R103	RD14BB2C470J	RES. CARBON 47 5% 1/6W	R207	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R104	RD14BB2C221J	RES. CARBON 220 5% 1/6W	R208	RD14BB2C331J	RES. CARBON 330 5% 1/6W
R105	NO USE		R209	RD14BB2C331J	RES. CARBON 330 5% 1/6W
R106	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W	R210	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W
R107	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W	R211	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W
R108	RD14BB2C331J	RES. CARBON 330 5% 1/6W	R212	RD14BB2C820J	RES. CARBON 82 5% 1/6W
R109	RD14BB2C331J	RES. CARBON 330 5% 1/6W	R217	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R110	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W	R218	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R111	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W	R219	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W
R112	RD14BB2C820J	RES. CARBON 82 5% 1/6W	R220	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W
R117	RD14BB2C220J	RES. CARBON 22 5% 1/6W	R221	RD14BB2C223J	RES. CARBON 22K 5% 1/6W
R118	RD14BB2C220J	RES. CARBON 22 5% 1/6W	R222	RD14BB2C750J	RES. CARBON 75 5% 1/6W
R119	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W	R223	RD14BB2C301J	RES. CARBON 300 5% 1/6W
R120	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W	R224	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R121	RD14BB2C223J	RES. CARBON 22K 5% 1/6W	R225	RD14BB2C471J	RES. CARBON 470 5% 1/6W
R122	RD14BB2C750J	RES. CARBON 75 5% 1/6W	R226	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R123	RD14BB2C301J	RES. CARBON 300 5% 1/6W	R227	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R124	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W	R228	RN14BK2C4301F	RES. METAL FILM 4.3K 1% 1/6W
R125	RD14BB2C471J	RES. CARBON 470 5% 1/6W	R229	RN14BK2C4300F	RES. METAL FILM 430 1% 1/6W
R126	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R230	NO USE	
R127	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W	R231	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R128	RN14BK2C4301F	RES. METAL FILM 4.3K 1% 1/6W	R232	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R129	RN14BK2C4300F	RES. METAL FILM 430 1% 1/6W	R233	RD14BB2C151J	RES. CARBON 150 5% 1/6W
R130	NO USE		R234	RD14BB2C151J	RES. CARBON 150 5% 1/6W
R131	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W	R235	RN14BK2C2401F	RES. METAL FILM 2.4K 1% 1/6W
R132	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W	R236	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R133	RD14BB2C151J	RES. CARBON 150 5% 1/6W	R237	RN14BK2C1002F	RES. METAL FILM 10K 1% 1/6W
R134	RD14BB2C151J	RES. CARBON 150 5% 1/6W	R238	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R135	RN14BK2C2401F	RES. METAL FILM 2.4K 1% 1/6W	R239	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R136	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W	R240	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R137	RN14BK2C1002F	RES. METAL FILM 10K 1% 1/6W	R241	RN14BK2C1601F	RES. METAL FILM 1.6K 1% 1/6W
R138	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W	R242	RN14BK2C1601F	RES. METAL FILM 1.6K 1% 1/6W
R139	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R243	RN14BK2C3000D	RES. METAL FILM 300 0.5% 1/6W
R140	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R244	RN14BK2C3000D	RES. METAL FILM 300 0.5% 1/6W
R141	RN14BK2C1601F	RES. METAL FILM 1.6K 1% 1/6W	R245	RN14BK2C1500D	RES. METAL FILM 150 0.5% 1/6W
R142	RN14BK2C1601F	RES. METAL FILM 1.6K 1% 1/6W	R246	RN14BK2C1500D	RES. METAL FILM 150 0.5% 1/6W
R143	RN14BK2C3000D	RES. METAL FILM 300 0.5% 1/6W	R247	RN14BK2C3000D	RES. METAL FILM 300 0.5% 1/6W
R144	RN14BK2C3000D	RES. METAL FILM 300 0.5% 1/6W	R248	RD14BB2C331J	RES. CARBON 330 5% 1/6W
R145	RN14BK2C1500D	RES. METAL FILM 150 0.5% 1/6W	R249	NO USE	
R146	RN14BK2C1500D	RES. METAL FILM 150 0.5% 1/6W	R250	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R147	RN14BK2C3000D	RES. METAL FILM 300 0.5% 1/6W	R251	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R148	RD14BB2C331J	RES. CARBON 330 5% 1/6W	R252	RD14BB2C680J	RES. CARBON 68 5% 1/6W
R149	RD14BB2C100J	RES. CARBON 10 5% 1/6W	R253	RD14BB2C680J	RES. CARBON 68 5% 1/6W
R150	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R254	RD14BB2C182J	RES. CARBON 1.8K 5% 1/6W
R151	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R255	RD14BB2C182J	RES. CARBON 1.8K 5% 1/6W
R152	RD14BB2C680J	RES. CARBON 68 5% 1/6W	R256	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R153	RD14BB2C680J	RES. CARBON 68 5% 1/6W	R257	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R154	RD14BB2C182J	RES. CARBON 1.8K 5% 1/6W	R258	RN14BK2C1600F	RES. METAL FILM 160 1% 1/6W
R155	RD14BB2C182J	RES. CARBON 1.8K 5% 1/6W	R259	RN14BK2C1600F	RES. METAL FILM 160 1% 1/6W
R156	RD14BB2C220J	RES. CARBON 22 5% 1/6W	R260	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W
R157	RD14BB2C220J	RES. CARBON 22 5% 1/6W	R261	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R158	RN14BK2C1600F	RES. METAL FILM 160 1% 1/6W	R262	RD14BB2C151J	RES. CARBON 150 5% 1/6W
R159	RN14BK2C1600F	RES. METAL FILM 160 1% 1/6W	R263	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R160	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W	R264	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R161	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R265	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R162	RD14BB2E151J	RES. CARBON 150 5% 1/6W	R266	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
R163	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W	R267	RD14BB2C223J	RES. CARBON 22K 5% 1/6W
R164	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W	R268	RD14BB2C752J	RES. CARBON 7.5K 5% 1/6W
R165	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R269	RN14BK2C91ROF	RES. METAL FILM 91.0 1% 1/6W
R166	RD14BB2C153J	RES. CARBON 15K 5% 1/6W	R270	RN14BK2C91ROF	RES. METAL FILM 91.0 1% 1/6W
R167	RD14BB2C223J	RES. CARBON 22K 5% 1/6W	R271	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R168	RD14BB2C752J	RES. CARBON 7.5K 5% 1/6W	R272	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R169	RN14BK2C91ROF	RES. METAL FILM 91.0 1% 1/6W	R273	RD14BB2C470J	RES. CARBON 47 5% 1/6W



# PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION		
R634	NO USE			
R635	RD14BB2C302J	RES. CARBON	3K	5% 1/6W
R636	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R637	RN14BK2C1001F	RES. METAL FILM	1K	1% 1/6W
R638	RN14BK2C5600F	RES. METAL FILM	560	1% 1/6W
R639	RD14BB2C101J	RES. CARBON	100	5% 1/6W
R640	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R641	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R642	RN14BK2C1001F	RES. METAL FILM	1K	1% 1/6W
R643	RD14BB2C101J	RES. CARBON	100	5% 1/6W
R644	RN14BK2C1001F	RES. METAL FILM	1K	1% 1/6W
R645	RN14BK2C1001F	RES. METAL FILM	1K	1% 1/6W
R646	RN14BK2C1300F	RES. METAL FILM	130	1% 1/6W
R647	NO USE			
R648	RD14BB2C302J	RES. CARBON	3K	5% 1/6W
R649	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R650	RN14BK2C1001F	RES. METAL FILM	1K	1% 1/6W
R651	RN14BK2C5600F	RES. METAL FILM	560	1% 1/6W
R652	RD14BB2C101J	RES. CARBON	100	5% 1/6W
R653	RD14BB2C822J	RES. CARBON	8.2K	5% 1/6W
R654	RD14BB2C222J	RES. CARBON	2.2K	5% 1/6W
R655	R90-0657-05	RES. MULTIPLE	8X330	1%
R656	RD14BB2C331J	RES. CARBON	330	5% 1/6W
R657	RN14BK2C7500F	RES. METAL FILM	750	1% 1/6W
R658	RN14BK2C7500F	RES. METAL FILM	750	1% 1/6W
R659	RN14BK2C4701F	RES. METAL FILM	4.7K	1% 1/6W
R660	RN14BK2C4701F	RES. METAL FILM	4.7K	1% 1/6W
R661	RN14BK2C2701F	RES. METAL FILM	2.7K	1% 1/6W
R662	RN14BK2C2701F	RES. METAL FILM	2.7K	1% 1/6W
R663	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R664	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R665	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R666	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R667	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R668	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R669	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R670	RD14BB2C220J	RES. CARBON	22	5% 1/6W
R671	RD14BB2C102J	RES. CARBON	1K	5% 1/6W
R672	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R673	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R674	RN14BK2C2701F	RES. METAL FILM	2.7K	1% 1/6W
R675	RN14BK2C1002F	RES. METAL FILM	10K	1% 1/6W
R676	E31-2170-05	JUMPING WIRE		
R677	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R678	RD14BB2C101J	RES. CARBON	100	5% 1/6W
R679	RD14BB2C622J	RES. CARBON	6.2K	5% 1/6W
R680	RN14BK2C1001F	RES. METAL FILM	1K	1% 1/6W
R681	RN14BK2C8200F	RES. METAL FILM	820	1% 1/6W
R682	RN14BK2C1601F	RES. METAL FILM	1.6K	1% 1/6W
R683	RD14BB2C391J	RES. CARBON	390	5% 1/6W
R684	RD14BB2C300J	RES. CARBON	30	5% 1/6W
R685	RD14BB2C104J	RES. CARBON	100K	5% 1/6W
R686	RD14BB2C111J	RES. CARBON	110	5% 1/6W
R687	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R688	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R689	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R690	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R691	RN14BK2C6801F	RES. METAL FILM	6.8K	1% 1/6W
R701	RD14BB2C101J	RES. CARBON	100	5% 1/6W
R702	RD14BB2C202J	RES. CARBON	2K	5% 1/6W
R703	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R704	RN14BK2C5600F	RES. METAL FILM	560	1% 1/6W
R705	RN14BK2C1601F	RES. METAL FILM	1.6K	1% 1/6W
R706	RD14BB2C101J	RES. CARBON	100	5% 1/6W
R707	RD14BB2C202J	RES. CARBON	2K	5% 1/6W
R708	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R709	RN14BK2C5600F	RES. METAL FILM	560	1% 1/6W
R710	RN14BK2C1601F	RES. METAL FILM	1.6K	1% 1/6W
R711	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R712	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R713	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R714	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R800	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R801	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R802	RD14BB2C561J	RES. CARBON	560	5% 1/6W
R810	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R811	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R812	RD14BB2C470J	RES. CARBON	47	5% 1/6W
R813	RD14BB2C470J	RES. CARBON	47	5% 1/6W
TC101	C05-0469-05	CAP. TRIMMER	10P	
TC201	C05-0469-05	CAP. TRIMMER	10P	
TC501	C05-0469-05	CAP. TRIMMER	10P	
TC502	C05-0469-05	CAP. TRIMMER	10P	
TC503	C05-0469-05	CAP. TRIMMER	10P	
TC504	C05-0469-05	CAP. TRIMMER	10P	

REF.NO	PARTS NO	NAME & DESCRIPTION	
TH501	SDT100	THERMISTOR	
U001	HD74HC595P	IC, 8-BIT SHIFT REGISTER/LATCH	
U002	HD74HC595P	IC, 8-BIT SHIFT REGISTER/LATCH	
U003	HD74HC595P	IC, 8-BIT SHIFT REGISTER/LATCH	
U004	HD74LS42P	IC, BCD TO DECIMAL DECODER	
U005	SN74ALS00AN	IC, QUAD 2 INPUT NAND GATE	
U006	SN74ALS112AN	IC, DUAL J-K F.F. (WITH PR&CLR)	
U007	SN74ALS00AN	IC, QUAD 2 INPUT NAND GATE	
U008	SN74ALS112AN	IC, DUAL J-K F.F. (WITH PR&CLR)	
U009	SN74ALS00AN	IC, QUAD 2 INPUT NAND GATE	
U101	NJM4558D	IC, DUAL OP AMP	
U201	NJM4558D	IC, DUAL OP AMP	
VR101	R12-0569-05	RES. SEMI FIXED 100B	
VR102	R12-0569-05	RES. SEMI FIXED 100B	
VR103	R12-2520-05	RES. SEMI FIXED 5KB	
VR104	R12-3543-05	RES. SEMI FIXED 20KB	
VR201	R12-0569-05	RES. SEMI FIXED 100B	
VR202	R12-0569-05	RES. SEMI FIXED 100B	
VR203	R12-2520-05	RES. SEMI FIXED 5KB	
VR204	R12-3543-05	RES. SEMI FIXED 20KB	
VR501	R12-0570-05	RES. SEMI FIXED 200B	
VR502	R12-1538-05	RES. SEMI FIXED 1KB	
VR503	R12-3543-05	RES. SEMI FIXED 20KB	
VR504	R12-0570-05	RES. SEMI FIXED 200B	
VR505	R12-1538-05	RES. SEMI FIXED 1KB	
VR506	R12-3543-05	RES. SEMI FIXED 20KB	
VR507	R12-0570-05	RES. SEMI FIXED 200B	
VR508	R12-1538-05	RES. SEMI FIXED 1KB	
VR509	R12-3543-05	RES. SEMI FIXED 20KB	
VR510	R12-0570-05	RES. SEMI FIXED 200B	
VR511	R12-1538-05	RES. SEMI FIXED 1KB	
VR512	R12-3543-05	RES. SEMI FIXED 20KB	
VR513	R12-3543-05	RES. SEMI FIXED 20KB	
VR601	R12-3543-05	RES. SEMI FIXED 20KB	
VR602	R12-3543-05	RES. SEMI FIXED 20KB	
VR603	R12-3543-05	RES. SEMI FIXED 20KB	
VR604	R12-3543-05	RES. SEMI FIXED 20KB	

## HORIZONTAL UNIT

### X74-1480-01

REF.NO	PARTS NO	NAME & DESCRIPTION		
	E31-5572-05	WIRE ASS'Y(NO.1)		
	J25-5229-02	PCB (UNMOUNTED)		
	R92-1061-05	JUMPING RES.	ZERO OHM (SMM)	
C001	CE04HW1H010M	CAP. ELECTRO	1	20% 50V
C002	NO USE			
C003	CC45FCH1H030C	CAP. CERAMIC	3P	0.25P 50V
C004	NO USE			
C005	CQ92FM1H104K	CAP. MYLAR	0.1	10% 50V
C006	CC45FCH1H221J	CAP. CERAMIC	220P	5% 50V
C007	CC45FCH1H200J	CAP. CERAMIC	20P	5% 50V
C008	CF92V1H333J	CAP. PLASTIC FILM	0.033	5% 50V
C009	CF92V1H684J	CAP. PLASTIC FILM	0.68	5% 50V
C010	CF92V1H684J	CAP. PLASTIC FILM	0.68	5% 50V
C011	CE04EW1A470M	CAP. ELECTRO	47	20% 10V
C012	CC45FCH1H150J	CAP. CERAMIC	15P	5% 50V
C013	CE04HW1H010M	CAP. ELECTRO	1	20% 50V
C014	CC45FCH1H030C	CAP. CERAMIC	3P	0.25P 50V
C015	CC45FCH1H150J	CAP. CERAMIC	15P	5% 50V
C016	CQ92FM1H104K	CAP. MYLAR	0.1	10% 50V
C017	CC45FCH1H200J	CAP. CERAMIC	20P	5% 50V
C018	CF92V1H333J	CAP. PLASTIC FILM	0.033	5% 50V
C019	CC45FCH1H221J	CAP. CERAMIC	220P	5% 50V
C020	CK45FF1H103Z	CAP. CERAMIC	0.01	50V
C021	CK45FF1H103Z	CAP. CERAMIC	0.01	50V
C022	NO USE			
C023	CK45FF1H103Z	CAP. CERAMIC	0.01	50V
C024	CK45FF1H103Z	CAP. CERAMIC	0.01	50V
C025	NO USE			
C026	CK45FF1H103Z	CAP. CERAMIC	0.01	50V
C027	CK45FF1H103Z	CAP. CERAMIC	0.01	50V



# PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION			
C101	CC45FCH1H050C	CAP. CERAMIC	5P	0.25P	50V
C102	CK45FB1H222K	CAP. CERAMIC	2200P	10%	50V
C103	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C104	CC45FCH1H050C	CAP. CERAMIC	5P	0.25P	50V
C105	CK45FB1H222K	CAP. CERAMIC	2200P	10%	50V
C106	CK45FB1H222K	CAP. CERAMIC	2200P	10%	50V
C107	CE04EW1A470M	CAP. ELECTRO	47	20%	10V
C108	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C109	CC45FCH1H101J	CAP. CERAMIC	100P	5%	50V
C110	CM93BD2A101J	CAP. MICA	100P	5%	100V
C111	C91-1272-05	CAP. PLASTIC FILM	1.5	5%	100V
C112	CE04EW1C220M	CAP. ELECTRO	22	20%	16V
C113	CE04EW1A470M	CAP. ELECTRO	47	20%	10V
C114	CE04EW1C220M	CAP. ELECTRO	22	20%	16V
C115	CC45FSL1H391J	CAP. CERAMIC	390P	5%	50V
C116	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C117	CE04HW1H010M	CAP. ELECTRO	1	20%	50V
C118	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C119	NO USE				
C120	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C121	CC45FCH1H680J	CAP. CERAMIC	68P	5%	50V
C122	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C123	CC45FCH1H101J	CAP. CERAMIC	100P	5%	50V
C124	CM93BD2A101J	CAP. MICA	100P	5%	100V
C125	C91-1272-05	CAP. PLASTIC FILM	1.5	5%	100V
C126	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C127	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C128	CE04EW1A470M	CAP. ELECTRO	47	20%	10V
C129	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C130	CK45FB1H102K	CAP. CERAMIC	1000P	10%	50V
C131	CK45FB1H102K	CAP. CERAMIC	1000P	10%	50V
C132	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C133	CC45FCH1H101J	CAP. CERAMIC	100P	5%	50V
C134	CE04EW1C330M	CAP. ELECTRO	33	20%	16V
C135	CE04EW1C330M	CAP. ELECTRO	33	20%	16V
C136	CE04HW1H010M	CAP. ELECTRO	1	20%	50V
C137	CE04EW1C220M	CAP. ELECTRO	22	20%	16V
C138	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C139	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C140	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C141	CC45FCH1H200J	CAP. CERAMIC	20P	5%	50V
C145	CK45FB1H102K	CAP. CERAMIC	1000P	10%	50V
C302	CE04EW1A470M	CAP. ELECTRO	47	20%	10V
C303	NO USE				
C304	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C305	CC45FCH1H101J	CAP. CERAMIC	100P	5%	50V
C306	C90-0987-05	CAP. ELECTRO	1000	20%	6.3V
C310	CC45FCH1H070D	CAP. CERAMIC	7P	0.5P	50V
C311	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C312	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C313	CC45FCH1H070D	CAP. CERAMIC	7P	0.5P	50V
C325	CE04EW1H2R2M	CAP. ELECTRO	2.2	20%	50V
C401	CC45FCH1H680J	CAP. CERAMIC	68P	5%	50V
C402	CC45FCH1H910J	CAP. CERAMIC	91P	5%	50V
C403	CC45FCH1H910J	CAP. CERAMIC	91P	5%	50V
C404	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C405	CC45FCH1H101J	CAP. CERAMIC	100P	5%	50V
C406	CE04EW1C100M	CAP. ELECTRO	10	20%	16V
C407	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C501	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C502	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C503	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C504	CQ92FM1H104K	CAP. MYLAR	0.1	10%	50V
C505	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C506	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C507	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C508	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C509	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C510	NO USE				
C511	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C512	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C513	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C519	CE04EW1A101M	CAP. ELECTRO	100	20%	10V
C533	CE04EW1A101M	CAP. ELECTRO	100	20%	10V
C534	CE04EW1A101M	CAP. ELECTRO	100	20%	10V
C551	CE04EW1A471M	CAP. ELECTRO	470	20%	10V
C552	CE04EW1C331M	CAP. ELECTRO	330	20%	16V
C553	CE04EW1C331M	CAP. ELECTRO	330	20%	16V

REF.NO	PARTS NO	NAME & DESCRIPTION			
C554	CE04EW1A102M	CAP. ELECTRO	1000	20%	10V
C555	CE04EW1C101M	CAP. ELECTRO	100	20%	16V
C556	CK45FF1H1032	CAP. CERAMIC	0.01		50V
C557	CQ92FM1H103K	CAP. MYLAR	0.01	10%	50V
C558	CQ92FM1H103K	CAP. MYLAR	0.01	10%	50V
C600	CC45CH1H270J	CAP. CERAMIC	27P	5%	50V
C601	CC45CH1H101J	CAP. CERAMIC	100P	5%	50V
C602	CC45SL1H471J	CAP. CERAMIC	470P	5%	50V
C603	CC45SL1H471J	CAP. CERAMIC	470P	5%	50V
D001	1SS132	DIODE			
D002	1SS132	DIODE			
D003	MA700	DIODE			
D004	MA700	DIODE			
D005	MA700	DIODE			
D006	MA700	DIODE			
D007	MA700	DIODE			
D008	1SS132	DIODE			
D009	1SS132	DIODE			
D010	MA700	DIODE			
D101	MA700	DIODE			
D102	MA700	DIODE			
D103	MA700	DIODE			
D104	MA700	DIODE			
D105	MA700	DIODE			
D106	NO USE				
D107	MA700	DIODE			
D108	NO USE				
D109	MA700	DIODE			
D110	MA700	DIODE			
D111	MA700	DIODE			
D112	1SS132	DIODE			
D113	1SS132	DIODE			
D114	NO USE				
D115	MA700	DIODE			
D116	MA700	DIODE			
D117	MA700	DIODE			
D118	1SS132	DIODE			
D119	1SS132	DIODE			
D120	1SS132	DIODE			
D121	NO USE				
D122	MA700	DIODE			
D123	MA700	DIODE			
D124	1S1587	DIODE			
D125	NO USE				
D126	1S1587	DIODE			
D127	NO USE				
D128	1SS132	DIODE			
D301	1SS132	DIODE			
D302	1SS132	DIODE			
D303	1SS132	DIODE			
D304	NO USE				
D305	1SS132	DIODE			
D306	NO USE				
D307	1SS132	DIODE			
D308	1SS132	DIODE			
D309	1SS132	DIODE			
D315	1SS132	DIODE			
D316	1SS132	DIODE			
D350	MTZ3.3JA	DIODE, ZENER	3.27V		
D351	1SS132	DIODE			
D401	1SS132	DIODE			
K001	SS1-1523-05	RELAY			
K002	SS1-1523-05	RELAY			
L001	L40-1011-04	FERRI INDUCTOR	100UH		
L002	L40-2201-03	FERRI INDUCTOR	22UH		
L003	L40-2201-03	FERRI INDUCTOR	22UH		
P018	E40-7035-05	SOCKET	40P		
Q001	2SC3779(D)	TR. SI. NPN			
Q002	2SC3779(D)	TR. SI. NPN			
Q003	2SA1565	TR. SI. PNP			
Q004	2SC4049	TR. SI. NPN			
Q005	2SA1206	TR. SI. PNP			
Q006	2SC3779(D)	TR. SI. NPN			
Q007	2SA1206	TR. SI. PNP			
Q008	2SC2785(F)	TR. SI. NPN			
Q009	2SC4049	TR. SI. NPN			
Q010	2SC4049	TR. SI. NPN			
Q014	2SC3779(D)	TR. SI. NPN			
Q015	2SC3779(D)	TR. SI. NPN			

# PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION	REF.NO	PARTS NO	NAME & DESCRIPTION
Q016	2SA1565	TR. SI. PNP	R027	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
Q017	2SA1206	TR. SI. PNP	R028	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q018	2SC3779(D)	TR. SI. NPN	R029	RD14BB2C181J	RES. CARBON 180 5% 1/6W
Q019	2SA1206	TR. SI. PNP			
Q020	2SC2785(F)	TR. SI. NPN			
Q101	2SC4049	TR. SI. NPN	R033	RD14BB2C754J	RES. CARBON 750K 5% 1/6W
Q102	NO USE		R034	RD14BB2C754J	RES. CARBON 750K 5% 1/6W
Q103	2SA1206	TR. SI. PNP	R035	RD14BB2C105J	RES. CARBON 1M 5% 1/6W
Q104	2SC2785(F)	TR. SI. NPN	R036	RD14BB2C105J	RES. CARBON 1M 5% 1/6W
Q105	2SC4049	TR. SI. NPN	R037	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
Q106	2SC4049	TR. SI. NPN	R038	RD14BB2C361J	RES. CARBON 360 5% 1/6W
Q107	2SC4049	TR. SI. NPN	R039	RN14BK2C5100F	RES. METAL FILM 510 1% 1/6W
Q108	NO USE		R040	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q109	2SA1005(K)	TR. SI. PNP	R041	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q110	2SA1175(F)	TR. SI. PNP	R042	RN14BK2C5100F	RES. METAL FILM 510 1% 1/6W
Q111	2SC3732(L)	TR. SI. NPN	R043	RN14BK2C6801F	RES. METAL FILM 6.8K 1% 1/6W
Q112	2SC3732(L)	TR. SI. NPN	R044	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q113	2SA1175(F)	TR. SI. PNP	R045	NO USE	
Q114	2SC3315(C)	TR. SI. NPN	R046	RN14BK2C6801F	RES. METAL FILM 6.8K 1% 1/6W
Q115	2SA1175(F)	TR. SI. PNP			
Q116	2SC3354(T,S)	TR. SI. NPN	R051	RD14BB2C361J	RES. CARBON 360 5% 1/6W
Q117	2SC3315(C)	TR. SI. NPN	R052	RD14BB2C162J	RES. CARBON 1.6K 5% 1/6W
Q118	2SC2785(F)	TR. SI. NPN	R053	RN14BK2C3901F	RES. METAL FILM 3.9K 1% 1/6W
Q119	2SA1175(F)	TR. SI. PNP	R054	RN14BK2C1600F	RES. METAL FILM 160 1% 1/6W
Q120	2SC2785(F)	TR. SI. NPN	R055	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W
Q121	2SC3732(L)	TR. SI. NPN	R056	NO USE	
Q122	2SA1206	TR. SI. PNP	R057	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q123	2SC3315(C)	TR. SI. NPN	R058	RD14BB2C202J	RES. CARBON 2K 5% 1/6W
Q124	2SA1206	TR. SI. PNP	R059	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
Q125	2SA1565	TR. SI. PNP	R060	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
Q126	2SA1206	TR. SI. PNP	R061	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
Q127	NO USE		R062	RD14BB2C220J	RES. CARBON 22 5% 1/6W
Q128	2SA1005(K)	TR. SI. PNP	R063	RD14BB2C682J	RES. CARBON 6.8K 5% 1/6W
Q129	2SA1175(F)	TR. SI. PNP	R064	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
Q130	2SC3732(L)	TR. SI. NPN	R065	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
Q131	2SC3732(L)	TR. SI. NPN	R066	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q132	2SA1175(F)	TR. SI. PNP	R067	RN14BK2C2200F	RES. METAL FILM 220 1% 1/6W
Q133	2SC3315(C)	TR. SI. NPN	R068	RN14BK2C3301F	RES. METAL FILM 3.3K 1% 1/6W
Q134	2SC3354(T,S)	TR. SI. NPN	R069	RN14BK2C6800F	RES. METAL FILM 680 1% 1/6W
Q135	2SC3315(C)	TR. SI. NPN	R070	RD14BB2C101J	RES. CARBON 100 5% 1/6W
Q136	2SC3732(L)	TR. SI. NPN	R071	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q137	2SC3732(L)	TR. SI. NPN	R072	RD14BB2C181J	RES. CARBON 180 5% 1/6W
			R073	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
			R074	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
Q301	2SA1175(F)	TR. SI. PNP	R077	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
Q302	2SC2785(F)	TR. SI. NPN	R078	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q303	2SC3315(C)	TR. SI. NPN	R079	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
Q304	2SC3315(C)	TR. SI. NPN	R080	RD14BB2C361J	RES. CARBON 360 5% 1/6W
Q305	2SC3315(C)	TR. SI. NPN	R081	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
Q306	2SC3315(C)	TR. SI. NPN	R082	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
Q307	2SC3315(C)	TR. SI. NPN	R083	RD14BB2C153J	RES. CARBON 15K 5% 1/6W
Q308	2SC3315(C)	TR. SI. NPN			
Q309	2SC3315(C)	TR. SI. NPN	R101	RD14BB2C331J	RES. CARBON 330 5% 1/6W
Q310	2SA1565	TR. SI. PNP	R102	RD14BB2C751J	RES. CARBON 750 5% 1/6W
Q311	2SC3354(T,S)	TR. SI. NPN	R103	RD14BB2C391J	RES. CARBON 390 5% 1/6W
			R104	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q314	2SC3354(T,S)	TR. SI. NPN	R105	R90-0659-05	RES. NETWORK 4X510 5% 1/8W
			R106	NO USE	
Q401	2SK583	FET. N-CHANNEL	R107	RD14BB2C105J	RES. CARBON 1M 5% 1/6W
Q402	2SA1175(F)	TR. SI. PNP	R108	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
Q403	2SA1005(K)	TR. SI. PNP	R109	R90-0660-05	RES. NETWORK 4X1K 5% 1/8W
Q404	2SA1005(K)	TR. SI. PNP	R110	RD14BB2C470J	RES. CARBON 47 5% 1/6W
Q405	2SA1175(F)	TR. SI. PNP	R111	RD14BB2C331J	RES. CARBON 330 5% 1/6W
Q406	2SC2785(F)	TR. SI. NPN	R112	RD14BB2C751J	RES. CARBON 750 5% 1/6W
			R113	RD14BB2C391J	RES. CARBON 390 5% 1/6W
R001	RD14BB2C361J	RES. CARBON 360 5% 1/6W	R114	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R002	RN14BK2C1801F	RES. METAL FILM 1.8K 1% 1/6W	R115	R90-0659-05	RES. NETWORK 4X510 5% 1/8W
R003	RN14BK2C3901F	RES. METAL FILM 3.9K 1% 1/6W	R116	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R004	RN14BK2C1600F	RES. METAL FILM 160 1% 1/6W	R117	R90-0660-05	RES. NETWORK 4X1K 5% 1/8W
R005	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W	R118	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R006	NO USE		R119	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W
R007	RD14BB2C470J	RES. CARBON 47 5% 1/6W	R120	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R008	RD14BB2C202J	RES. CARBON 2K 5% 1/6W	R121	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R009	RD14BB2C153J	RES. CARBON 15K 5% 1/6W	R122	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R010	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W	R123	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R011	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W	R124	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R012	RD14BB2C220J	RES. CARBON 22 5% 1/6W	R125	RD14BB2C331J	RES. CARBON 330 5% 1/6W
R013	RD14BB2C682J	RES. CARBON 6.8K 5% 1/6W	R126	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R014	RD14BB2C302J	RES. CARBON 3K 5% 1/6W	R127	R90-0658-05	RES. NETWORK
R015	RD14BB2C472J	RES. CARBON 4.7K 5% 1/6W	R128	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R016	RD14BB2C470J	RES. CARBON 47 5% 1/6W	R129	RN14BK2C8201F	RES. METAL FILM 8.2K 1% 1/6W
R017	RN14BK2C2200F	RES. METAL FILM 220 1% 1/6W	R130	RN14BK2C1601F	RES. METAL FILM 1.6K 1% 1/6W
R018	RN14BK2C3301F	RES. METAL FILM 3.3K 1% 1/6W	R131	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R019	RN14BK2C6800F	RES. METAL FILM 680 1% 1/6W	R132	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R020	RD14BB2C101J	RES. CARBON 100 5% 1/6W	R133	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R021	RD14BB2C470J	RES. CARBON 47 5% 1/6W	R134	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R022	RD14BB2C181J	RES. CARBON 180 5% 1/6W	R135	RD14BB2C241J	RES. CARBON 240 5% 1/6W
R023	RD14BB2C102J	RES. CARBON 1K 5% 1/6W	R136	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W
R024	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W	R137	RD14BB2C362J	RES. CARBON 3.6K 5% 1/6W
R025	RD14BB2C105J	RES. CARBON 1M 5% 1/6W	R138	RD14BB2C561J	RES. CARBON 560 5% 1/6W
R026	RD14BB2C105J	RES. CARBON 1M 5% 1/6W	R139	RD14BB2C471J	RES. CARBON 470 5% 1/6W



# PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION			
R422	RD148B2C101J	RES. CARBON	100	5%	1/6W
R423	RD148B2C471J	RES. CARBON	470	5%	1/6W
R600	RD148B2C393J	RES. CARBON	39K	5%	1/6W
R601	RD148B2C220J	RES. CARBON	22	5%	1/6W
R602	RD148B2C220J	RES. CARBON	22	5%	1/6W
TC101	C05-0446-05	CAP. TRIMMER	30P		
TC102	C05-0446-05	CAP. TRIMMER	30P		
TC302	C05-0468-05	CAP. TRIMMER	7P		
TC303	C05-0468-05	CAP. TRIMMER	7P		
U001	MC10H102L	IC, QUAD 2-INPUT NOR GATE			
U002	MC10H102L	IC, QUAD 2-INPUT NOR GATE			
U003	MC10H131L	IC, DUAL D-FLIP FLOP			
U004	MC10103L	IC, QUAD 2-INPUT OR GATE			
U005	SN74ALS74AN	IC, DUAL D-F.F. (WITH PR & CLR)			
U006	SN74ALS74AN	IC, DUAL D-F.F. (WITH PR & CLR)			
U007	SN74ALS74AN	IC, DUAL D-F.F. (WITH PR & CLR)			
U011	SN74ALS02N	IC, QUAD 2 INPUT NOR			
U012	SN74ALS32N	IC, QUAD 2 INPUT OR			
U013	SN74ALS08N	IC, QUAD 2 INPUT AND			
U014	SN74ALS32N	IC, QUAD 2 INPUT OR			
U015	SN74ALS02N	IC, QUAD 2 INPUT NOR			
U016	MC14052BCP	IC, DUAL 4-CH ANALOG MPX/DE-MPX			
U017	MC14052BCP	IC, DUAL 4-CH ANALOG MPX/DE-MPX			
U018	MC14052BCP	IC, DUAL 4-CH ANALOG MPX/DE-MPX			
U019	MC74HC4053AN	IC, TRIPLE 2CH ANALOG MPX/DE-MPX			
U020	NO USE				
U021	NJM072S	IC, J-FET INPUT OP AMP			
U022	NJM072S	IC, J-FET INPUT OP AMP			
U023	NO USE				
U024	NJM072S	IC, J-FET INPUT OP AMP			
U025	NJM072S	IC, J-FET INPUT OP AMP			
U026	NJM072S	IC, J-FET INPUT OP AMP			
U027	NJM072S	IC, J-FET INPUT OP AMP			
U028	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH			
U029	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH			
U030	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH			
U031	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH			
U032	HD74HC595AP	IC, 8-BIT SHIFT REGISTER/LATCH			
U101	2SK332(E)	FET, N-CHANNEL			
U102	2SC3066(F)	TR, SI, NPN			
U103	2SK332(E)	FET, N-CHANNEL			
VR001	R12-3543-05	RES. SEMI FIXED 20KB			
VR002	NO USE				
VR003	R12-0571-05	RES. SEMI FIXED 500B			
VR004	R12-3543-05	RES. SEMI FIXED 20KB			
VR101	R12-1538-05	RES. SEMI FIXED 1KB			
VR102	R12-2520-05	RES. SEMI FIXED 5KB			
VR103	R12-3543-05	RES. SEMI FIXED 20KB			
VR104	R12-3543-05	RES. SEMI FIXED 20KB			
VR301	R12-1539-05	RES. SEMI FIXED 2KB			
VR302	R12-1539-05	RES. SEMI FIXED 2KB			
VR303	R12-0571-05	RES. SEMI FIXED 500B			
VR304	R12-3453-05	RES. SEMI FIXED 10KB			
VR305	R12-3453-05	RES. SEMI FIXED 10KB			
VR306	R12-3453-05	RES. SEMI FIXED 10KB			
VR307	R12-0569-05	RES. SEMI FIXED 100B			

## VERTICAL ATTENUATOR UNIT

### X75-1180-00

REF. NO	PARTS NO	NAME & DESCRIPTION			
	J25-5230-03	PCB (UNMOUNTED)			
74	E04-0260-05	BNC RECEPTACLE (READOUT)			
75	J21-4612-14	BRACKET FOR BNC			
76	J30-0623-04	SPACER			
C001	CE04EW1G471M	CAP. ELECTRO	470	20%	16V
C002	CE04EW1G471M	CAP. ELECTRO	470	20%	16V
C003	CE04EW1A221M	CAP. ELECTRO	220	20%	10V
C004	CE04EW1A221M	CAP. ELECTRO	220	20%	10V
C005	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C006	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C007	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C008	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C009	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C010	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C011	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C012	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C013	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C014	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C015	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C016	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C017	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C018	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C019	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C020	CK45FF1H103Z	CAP. CERAMIC	0.01		50V
C101	C91-0502-05	CAP. METAL FILM	0.01	20%	630V
C102	NO USE				
C103	CE04EW1C330M	CAP. ELECTRO	33	20%	16V
C104	CC45CH1H101J	CAP. CERAMIC	100P	5%	50V
C105	NO USE				
C106	CC45FCH1H330J	CAP. CERAMIC	33P	5%	50V
C107	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C201	C91-0502-05	CAP. METAL FILM	0.01	20%	630V
C202	NO USE				
C203	CE04EW1C330M	CAP. ELECTRO	33	20%	16V
C204	CC45CH1H101J	CAP. CERAMIC	100P	5%	50V
C205	NO USE				
C206	CC45FCH1H330J	CAP. CERAMIC	33P	5%	50V
C207	CC45FCH1H470J	CAP. CERAMIC	47P	5%	50V
C301	CC45CH2H050C	CAP. CERAMIC	5P	0.25P	500V
C302	C91-0502-05	CAP. METAL FILM	0.01	20%	630V
C303	NO USE				
C304	CC45FCH1H030C	CAP. CERAMIC	3P	0.25P	50V
C305	CC45CH2H080D	CAP. CERAMIC	8P	0.5P	500V
C306	NO USE				
C307	CK45FB1H102K	CAP. CERAMIC	1000P	10%	50V
C350	CC45CH1H180J	CAP. CERAMIC	18P	5%	50V
C351	CC45CH1H220J	CAP. CERAMIC	22P	5%	50V
C401	CC45CH2H050C	CAP. CERAMIC	5P	0.25P	500V
C402	C91-0502-05	CAP. METAL FILM	0.01	20%	630V
C403	NO USE				
C404	CC45FCH1H030C	CAP. CERAMIC	3P	0.25P	50V
C405	CC45CH2H080D	CAP. CERAMIC	8P	0.5P	500V
C406	NO USE				
C407	CK45FB1H102K	CAP. CERAMIC	1000P	10%	50V
C450	CC45CH1H180J	CAP. CERAMIC	18P	5%	50V
C451	CC45CH1H220J	CAP. CERAMIC	22P	5%	50V
D001	1SS132	DIODE			
D002	1SS132	DIODE			
D101	1SS132	DIODE			
D102	1SS132	DIODE			
D201	1SS132	DIODE			
D202	1SS132	DIODE			
D301	1SS132	DIODE			
D302	1SS132	DIODE			
D303	1SS135	DIODE			
D401	1SS132	DIODE			
D402	1SS132	DIODE			
D403	1SS135	DIODE			
JW005	E31-5578-05	LEAD WIRE WITH CONNECTOR			
JW006	E31-5579-05	LEAD WIRE WITH CONNECTOR			

# PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
K301	SS1-2508-05	RELAY
K401	SS1-2508-05	RELAY
L001	L40-1011-03	FERRI INDUCTOR 100UH
P004	E40-0973-05	PIN CONNECTOR 9P
P007	E40-0473-05	PIN CONNECTOR 4P
P008	E40-0473-05	PIN CONNECTOR 4P
P009	E40-0373-05	PIN CONNECTOR 3P
Q001	2SA1565	TR. SI. PNP
Q002	2SA1565	TR. SI. PNP
Q101	2SC3354(T.S)	TR. SI. NPN
Q102	2SC3354(T.S)	TR. SI. NPN
Q201	2SC3354(T.S)	TR. SI. NPN
Q202	2SC3354(T.S)	TR. SI. NPN
Q301	2SK241(GR)	FET, N-CHANNEL
Q302	2SK241(GR)	FET, N-CHANNEL
Q303	2SC3354(T.S)	TR. SI. NPN
Q304	2SC3779(D)	TR. SI. NPN
Q305	2SC3779(D)	TR. SI. NPN
Q306	2SC3354(T.S)	TR. SI. NPN
Q401	2SK241(GR)	FET, N-CHANNEL
Q402	2SK241(GR)	FET, N-CHANNEL
Q403	2SC3354(T.S)	TR. SI. NPN
Q404	2SC3779(D)	TR. SI. NPN
Q405	2SC3779(D)	TR. SI. NPN
Q406	2SC3354(T.S)	TR. SI. NPN
R001	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R002	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R003	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R004	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R005	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R006	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R007	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R008	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R009	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R101	RN14BK2E1004D	RES. METAL FILM 1M 0.5% 1/4W
R102	RD14BB2C824J	RES. CARBON 820K 5% 1/6W
R103	RN14BK2C62ROF	RES. METAL FILM 62.0 1% 1/6W
R104	RN14BK2C62ROF	RES. METAL FILM 62.0 1% 1/6W
R105	R92-1431-05	RES. TEMP. COEFF. 330 5% 1/6W
R106	RN14BK2C5100F	RES. METAL FILM 510 1% 1/6W
R107	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
R108	RN14BK2C1000F	RES. METAL FILM 100 1% 1/6W
R109	RN14BK2C1000F	RES. METAL FILM 100 1% 1/6W
R110	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R111	RD14BB2C181J	RES. CARBON 180 5% 1/6W
R112	NO USE	
R113	RN14BK2C4300F	RES. METAL FILM 430 1% 1/6W
R114	RN14BK2C4301F	RES. METAL FILM 4.3K 1% 1/6W
R115	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R116	RN14BK2C2401F	RES. METAL FILM 2.4K 1% 1/6W
R117	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R118	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W
R119	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R120	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R121	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R122	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R123	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R124	NO USE	
R125	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R126	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R127	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R128	RN14BK2C3300F	RES. METAL FILM 330 1% 1/6W
R150	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R201	RN14BK2E1004D	RES. METAL FILM 1M 0.5% 1/4W
R202	RD14BB2C824J	RES. CARBON 820K 5% 1/6W
R203	RN14BK2C62ROF	RES. METAL FILM 62.0 1% 1/6W
R204	RN14BK2C62ROF	RES. METAL FILM 62.0 1% 1/6W
R205	R92-1431-05	RES. TEMP. COEFF. 330 5% 1/6W
R206	RN14BK2C5100F	RES. METAL FILM 510 1% 1/6W
R207	RN14BK2C1003F	RES. METAL FILM 100K 1% 1/6W
R208	RN14BK2C1000F	RES. METAL FILM 100 1% 1/6W
R209	RN14BK2C1000F	RES. METAL FILM 100 1% 1/6W
R210	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R211	RD14BB2C181J	RES. CARBON 180 5% 1/6W
R212	NO USE	
R213	RN14BK2C4300F	RES. METAL FILM 430 1% 1/6W
R214	RN14BK2C4301F	RES. METAL FILM 4.3K 1% 1/6W
R215	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W

REF.NO	PARTS NO	NAME & DESCRIPTION
R216	RN14BK2C2401F	RES. METAL FILM 2.4K 1% 1/6W
R217	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R218	RN14BK2C2401F	RES. METAL FILM 2.4K 1% 1/6W
R219	RN14BK2C7501F	RES. METAL FILM 7.5K 1% 1/6W
R220	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R221	RN14BK2C1001F	RES. METAL FILM 1K 1% 1/6W
R222	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R223	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R224	RD14BB2C682J	RES. CARBON 6.8K 5% 1/6W
R225	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R226	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R227	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R228	RN14BK2C3300F	RES. METAL FILM 330 1% 1/6W
R250	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R301	RD14BB2E330J	RES. CARBON 33 5% 1/4W
R302	RD14BB2C560J	RES. CARBON 56 5% 1/6W
R303	R92-1433-05	RES. METAL FILM 800K 0.5% 1/2W
R304	R92-1432-05	RES. METAL FILM 250K 0.5% 1/2W
R305	RD14BB2C240J	RES. CARBON 24 5% 1/6W
R306	RN14BK2E1004D	RES. METAL FILM 1M 0.5% 1/4W
R307	RD14BB2C684J	RES. CARBON 680K 5% 1/6W
R308	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R309	RD14BB2C201J	RES. CARBON 200 5% 1/6W
R310	RN14BK2C3900F	RES. METAL FILM 390 1% 1/6W
R311	RN14BK2C3900F	RES. METAL FILM 390 1% 1/6W
R312	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R313	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R314	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R315	RN14BK2C3901F	RES. METAL FILM 3.9K 1% 1/6W
R316	RN14BK2C3900F	RES. METAL FILM 390 1% 1/6W
R317	NO USE	
R318	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R319	RD14BB2C820J	RES. CARBON 82 5% 1/6W
R320	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R350	RD14BB2C221J	RES. CARBON 220 5% 1/6W
R401	RD14BB2E330J	RES. CARBON 33 5% 1/4W
R402	RD14BB2C560J	RES. CARBON 56 5% 1/6W
R403	R92-1433-05	RES. METAL FILM 800K 0.5% 1/2W
R404	R92-1432-05	RES. METAL FILM 250K 0.5% 1/2W
R405	RD14BB2C240J	RES. CARBON 24 5% 1/6W
R406	RN14BK2E1004D	RES. METAL FILM 1M 0.5% 1/4W
R407	RD14BB2C684J	RES. CARBON 680K 5% 1/6W
R408	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R409	RD14BB2C201J	RES. CARBON 200 5% 1/6W
R410	RN14BK2C3900F	RES. METAL FILM 390 1% 1/6W
R411	RN14BK2C3900F	RES. METAL FILM 390 1% 1/6W
R412	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R413	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R414	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R415	RN14BK2C3901F	RES. METAL FILM 3.9K 1% 1/6W
R416	RN14BK2C3900F	RES. METAL FILM 390 1% 1/6W
R417	NO USE	
R418	RD14BB2C510J	RES. CARBON 51 5% 1/6W
R419	RD14BB2C820J	RES. CARBON 82 5% 1/6W
R420	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R450	RD14BB2C221J	RES. CARBON 220 5% 1/6W
S101	S02-4511-15	ATTENUATOR UNIT
S201	S02-4511-15	ATTENUATOR UNIT
TC101	C05-0459-05	CAP. TRIMMER 10P
TC201	C05-0459-05	CAP. TRIMMER 10P
TC301	C05-0031-15	CAP. TRIMMER 10P
TC302	C05-0031-15	CAP. TRIMMER 10P
TC401	C05-0031-15	CAP. TRIMMER 10P
TC402	C05-0031-15	CAP. TRIMMER 10P
U001	HD74HC595P	IC, 8-BIT SHIFT REGISTER/LATCH
U002	HD74HC595P	IC, 8-BIT SHIFT REGISTER/LATCH
U101	DN1901	FET, DUAL, N-CHANNEL
U102	UPA101G	IC, NPN TRANSISTOR ARRAY
U201	DN1901	FET, DUAL, N-CHANNEL
U202	UPA101G	IC, NPN TRANSISTOR ARRAY
VR101	R12-3543-05	RES. SEMI FIXED 20KB
VR201	R12-3543-05	RES. SEMI FIXED 20KB



# PARTS LIST

REF. NO	PARTS NO	NAME & DESCRIPTION
R069	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R070	RD14BB2C162J	RES. CARBON 1.6K 5% 1/6W
R071	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R072	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R073	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R074	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R075	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R076	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R077	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R078	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R079	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R080	RN14BK2C2001F	RES. METAL FILM 2K 1% 1/6W
R081	RN14BK2C2001F	RES. METAL FILM 2K 1% 1/6W
R082	RD14BB2C622J	RES. CARBON 6.2K 5% 1/6W
R083	RN14BK2C5600F	RES. METAL FILM 560 1% 1/6W
R128	E31-2170-05	JUMPING WIRE
U001	LC3517BML-15	IC.2048X8 STATIC RAM
U001	MBB416-20LPF	IC.2048X8 STATIC RAM
U002	MBM27C128*S	IC.16384X8 EPROM
U003	MSM6242BGS-VK	IC.REAL TIME CLOCK
U004	PST518B	IC.RESET
U005	LHO080A	IC.CPU
U006	DTM-5010	IC. GATE ARRAY
U007	HD74LS138FP	IC.3-TO-8 DEMULTIPLEXER
U008	HD74HC238FP	IC.3-TO-8 LINE DECODER
U009	HD74HC238FP	IC.3-TO-8 LINE DECODER
U010	HD74HC107FP	IC.DUAL J-K FLIP-FLOP
U011	HD74LS04FP	IC.HEX INVERTERS
U012	HD74LS244FP	IC.OCTAL 3-STATE BUS BUFFER
U013	HD74LS244FP	IC.OCTAL 3-STATE BUS BUFFER
U014	HD74LS04FP	IC.HEX INVERTERS
U015	HD74LS30FP	IC.8-INPUT NAND
U016	HD74LS374FP	IC.DCTAL 3-STATE D-FF
U017	HD74LS244FP	IC.OCTAL 3-STATE BUS BUFFER
U018	HD74LS244FP	IC.OCTAL 3-STATE BUS BUFFER
U019	HD14066BFP	IC.QUAD BILATERAL SWITCH
U020	HD74LS107AFP	IC.QUAD JK-FF WITH CLEAR
U021	HD74LS107AFP	IC.QUAD JK-FF WITH CLEAR
U022	HD74LS107AFP	IC.QUAD JK-FF WITH CLEAR
U023	HD74LS107AFP	IC.QUAD JK-FF WITH CLEAR
U024	HD74LS30FP	IC.8-INPUT NAND
U025	HD74LS11FP	IC.TRIPLE 3-INPUT AND
U026	NJM555M	IC.TIMER
U027	HD74LS157FP	IC.2 TO 1 DATA SELECTORS
U028	HD74LS157FP	IC.2 TO 1 DATA SELECTORS
U029	HD74HC08FP	IC.QUAD 2-INPUT AND GATE
U030	HD74HC7266FP	IC.QUAD 2-INPUT NDR GATE
U031	HD74HC08FP	IC.QUAD 2-INPUT AND GATE
U032	MBM27C64*U	IC.8192X8 EPROM
U033	CTM5020	IC.GATE ARRAY (R/O CONTROLLER)
U034	HD14051BFP	IC.8-CH ANALOG MPX/DE-MPX
U035	NJM311M	IC.VOLTAGE COMPARATOR
U036	HD74HC174FP	IC.HEX D-TYPE FLIP-FLOP
U037	AM6012DC	IC.12-BIT D/A CONVERTER
U038	HD74HC564FP	IC.DCTAL D-TYPE FLIP-FLOP
U039	HD74HC244FP	IC.OCTAL BUS BUFFER
U040	HD14052BFP	IC.DUAL 4-CH ANALOG MPX/DE-MPX
U041	HD14051BFP	IC.8-CH ANALOG MPX/DE-MPX
U042	DAC0808LCN	IC.8-BIT D/A CONVERTER
U043	HD14052BFP	IC.DUAL 4-CH ANALOG MPX/DE-MPX
U044	NJM072M	IC.DUAL J-FET INPUT OP AMP
U045	NJM072M	IC.DUAL J-FET INPUT OP AMP
U046	NJM072M	IC.DUAL J-FET INPUT OP AMP
U047	NJM072M	IC.DUAL J-FET INPUT OP AMP
X001	L78-0107-05	CERAMIC RESONATOR (10MHZ)
X002	L77-1229-05	CRYSTAL (SUB L77-1025-05)

## CONNECTION UNIT

### X77-1500-00

REF. NO	PARTS NO	NAME & DESCRIPTION
P003	E40-7034-05	PIN CONNECTOR 40P
P010	E40-7036-05	PIN CONNECTOR 20P
P011	NO USE	
P012	E31-5551-05	LEAD WIRE WITH CONNECTOR 10P
P013	E31-5550-05	LEAD WIRE WITH CONNECTOR 6P
P017	E31-5552-05	LEAD WIRE WITH CONNECTOR 11P
P018	E40-7034-05	PIN CONNECTOR 40P
P019	E31-5553-05	LEAD WIRE WITH CONNECTOR 12P

## FINAL AMP UNIT

### X80-1100-01

REF. NO	PARTS NO	NAME & DESCRIPTION
	J25-5196-03	PCB (UNMOUNTED)
	N09-0718-05	SCREW,SEMS PAN HD M3X6
	N89-3008-41	SCREW, BINDING TAP TITE M3X8
71	F01-0866-04	HEAT SINK
72	F02-0502-04	HEAT SINK
C001	CK45F81H102K	CAP. CERAMIC 1000P 10% 50V
C002	C91-1275-05	CAP. ELECTRO 0.033F 5.5V
C003	C91-1275-05	CAP. ELECTRO 0.033F 5.5V
C004	C092FM1H472K	CAP. MYLAR 4700P 10% 50V
C005	CE04HW1H010M	CAP. ELECTRO 1 20% 50V
C006	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V
C007	CC45FCH1H070D	CAP. CERAMIC 7P 0.5P 50V
C008	NO USE	
C009	CC45FCH1H330J	CAP. CERAMIC 33P 5% 50V
C010	CC45FCH1H390J	CAP. CERAMIC 39P 5% 50V
C011	C092FM1H104K	CAP. MYLAR 0.1 10% 50V
C012	C092FM1H104K	CAP. MYLAR 0.1 10% 50V
C013	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C014	CC45FSL1H561J	CAP. CERAMIC 560P 5% 50V
C015	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C020	CC45CH1H120J	CAP. CERAMIC 12P 5% 50V
C103	CC45FCH1H020C	CAP. CERAMIC 2P 0.25P 50V
C104	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C105	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C108	CC45FCH1H070D	CAP. CERAMIC 7P 0.5P 50V
C109	CC45FCH2H020C	CAP. CERAMIC 2P 0.25P 500V
C110	CC45FCH2H0R5C	CAP. CERAMIC 0.5P 0.25P 500V
C111	CF93AN2E103K	CAP. METAL FILM 0.01 10% 250V
C112	CF93AN2E103K	CAP. METAL FILM 0.01 10% 250V
C113	CF93AN2E104K	CAP. METAL FILM 0.1 10% 250V
C114	CF93AN2E104K	CAP. METAL FILM 0.1 10% 250V
C115	CC45FCH1H040C	CAP. CERAMIC 4P 0.25P 50V
C116	CE04HW1E220M	CAP. ELECTRO 22 20% 25V
C301	CE04EW1C331M	CAP. ELECTRO 330 20% 16V
C302	CE04EW1C331M	CAP. ELECTRO 330 20% 16V
C303	CE04EW1E101M	CAP. ELECTRO 100 20% 25V
C304	CE04EW2A220M	CAP. ELECTRO 22 20% 100V
C305	CE04W2E4R7M	CAP. ELECTRO 4.7 20% 250V
C306	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C307	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C308	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C309	C092FM1H104K	CAP. MYLAR 0.1 10% 50V
C310	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C311	CK45FF1H103Z	CAP. CERAMIC 0.01 50V
C312	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C313	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C314	CK45FB2H472K	CAP. CERAMIC 4700P 10% 500V
C501	C092M1H102K	CAP. MYLAR 1000P 10% 50V
D001	1SS132	DIODE
D002	1SS132	DIODE
D101	TLR112	LED,RED
D102	MA700	DIODE
D105	MA700	DIODE
D106	TLR112	LED,RED
D107	1SS132	DIODE
D108	1SS132	DIODE
D201	1SS132	DIODE
D202	1SS132	DIODE
L001	L33-0806-05	CHOKE COIL (0.52UH)
L002	L33-0806-05	CHOKE COIL (0.52UH)
L003	L33-0806-05	CHOKE COIL (0.52UH)
L004	L33-0806-05	CHOKE COIL (0.52UH)
L005	L40-2202-70	FERRI INDUCTOR 22UH
P011	E40-0373-05	PIN CONNECTOR 3P
P012	E40-1073-05	PIN CONNECTOR 10P
P013	E40-0673-05	PIN CONNECTOR 6P
P014	E40-0373-05	PIN CONNECTOR 3P
P015	E40-0373-05	PIN CONNECTOR 3P
Q001	2SC3779(D)	TR. SI, NPN
Q002	2SC3779(D)	TR. SI, NPN
Q003	2SC3779(D)	TR. SI, NPN
Q004	2SC3779(D)	TR. SI, NPN
Q005	2SA1161	TR. SI, PNP
Q006	2SA1161	TR. SI, PNP

# PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION
Q007	2SC3779(D)	TR. SI. NPN
Q008	2SC3779(D)	TR. SI. NPN
Q009	2SC3779(D)	TR. SI. NPN
Q010	2SC3779(D)	TR. SI. NPN
Q011	2SC3779(D)	TR. SI. NPN
Q012	2SC3779(D)	TR. SI. NPN
Q013	2SC1164(D)*S	TR. SI. NPN
Q014	2SC1164(D)*S	TR. SI. NPN
Q101	2SA1005(K)	TR. SI. PNP
Q102	2SA1005(K)	TR. SI. PNP
Q103	2SC3315(C)	TR. SI. NPN
Q104	2SC3315(C)	TR. SI. NPN
Q105	2SA1005(K)	TR. SI. PNP
Q106	2SA1005(K)	TR. SI. PNP
Q107	2SA1005(K)	TR. SI. PNP
Q108	2SA1005(K)	TR. SI. PNP
Q109	2SC3354(T,S)	TR. SI. NPN
Q110	2SC3354(T,S)	TR. SI. NPN
Q111	2SA1206	TR. SI. PNP
Q112	2SC3354(T,S)	TR. SI. NPN
Q113	2SC3354(T,S)	TR. SI. NPN
Q114	2SC3600(E,F)	TR. SI. NPN
Q115	2SC3600(E,F)	TR. SI. NPN
Q116	2SA1406(E,F)	TR. SI. PNP
Q117	2SA1406(E,F)	TR. SI. PNP
Q201	2SC3315(C)	TR. SI. NPN
Q202	2SC3315(C)	TR. SI. NPN
Q203	2SC3354(T,S)	TR. SI. NPN
Q204	2SC3354(T,S)	TR. SI. NPN
Q205	2SC2785(F)	TR. SI. NPN
Q206	2SC3315(C)	TR. SI. NPN
Q207	2SC3315(C)	TR. SI. NPN
Q208	2SC3354(T,S)	TR. SI. NPN
Q209	2SC3354(T,S)	TR. SI. NPN
Q210	2SC2785(F)	TR. SI. NPN
R001	RN14BK2C1000F	RES. METAL FILM 100 1% 1/6W
R002	RN14BK2C1000F	RES. METAL FILM 100 1% 1/6W
R003	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R004	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R005	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R006	RD14BB2C432J	RES. CARBON 4.3K 5% 1/6W
R007	RD14BB2C432J	RES. CARBON 4.3K 5% 1/6W
R008	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R009	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R010	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R011	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W
R012	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W
R013	RD14BB2C303J	RES. CARBON 30K 5% 1/6W
R014	RD14BB2C753J	RES. CARBON 75K 5% 1/6W
R015	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W
R016	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W
R017	RN14BK2C2700F	RES. METAL FILM 270 1% 1/6W
R018	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R019	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R020	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R021	RN14BK2C3000F	RES. METAL FILM 300 1% 1/6W
R022	RD14BB2C681J	RES. CARBON 680 5% 1/6W
R023	RD14BB2C681J	RES. CARBON 680 5% 1/6W
R024	RD14BB2C821J	RES. CARBON 820 5% 1/6W
R025	RN14BK2C2201F	RES. METAL FILM 2.2K 1% 1/6W
R026	RN14BK2C2201F	RES. METAL FILM 2.2K 1% 1/6W
R027	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W
R028	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W
R029	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R030	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R031	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R032	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R033	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R034	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R035	RN14BK2E82R0F	RES. METAL FILM 82.0 1% 1/4W
R036	RN14BK2E82R0F	RES. METAL FILM 82.0 1% 1/4W
R037	RN14BK2C1500F	RES. METAL FILM 150 1% 1/6W
R038	R92-1191-05	
R039	RD14BB2C513J	RES. CARBON 51K 5% 1/6W
R040	RD14BB2C240J	RES. CARBON 24 5% 1/6W
R041	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R042	RD14BB2C680J	RES. CARBON 68 5% 1/6W
R043	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R044	RD14BB2C223J	RES. CARBON 22K 5% 1/6W
R045	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R046	RD14BB2E220J	RES. CARBON 22 5% 1/4W
R047	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R048	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R049	NO USE	
R050	R92-1420-05	RES. METAL FILM 510 5% 7W
R051	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R052	R92-1420-05	RES. METAL FILM 510 5% 7W
R053	RD14BB2C220J	RES. CARBON 22 5% 1/6W

REF.NO	PARTS NO	NAME & DESCRIPTION
R054	NO USE	
R055	RD14BB2C361J	RES. CARBON 360 5% 1/6W
R056	RD14BB2C361J	RES. CARBON 360 5% 1/6W
R059	RD14BB2C223J	RES. CARBON 22K 5% 1/6W
R070	RD14BB2C100J	RES. CARBON 10 5% 1/6W
R101	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R102	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R103	RN14BK2C4300F	RES. METAL FILM 430 1% 1/6W
R104	RN14BK2C4300F	RES. METAL FILM 430 1% 1/6W
R105	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R106	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R107	RN14BK2C3001F	RES. METAL FILM 3K 1% 1/6W
R108	RN14BK2C5101F	RES. METAL FILM 5.1K 1% 1/6W
R109	RN14BK2C1201F	RES. METAL FILM 1.2K 1% 1/6W
R110	RN14BK2C3001F	RES. METAL FILM 3K 1% 1/6W
R111	RN14BK2C3001F	RES. METAL FILM 3K 1% 1/6W
R112	RD14BB2C151J	RES. CARBON 150 5% 1/6W
R113	RD14BB2C431J	RES. CARBON 430 5% 1/6W
R114	RD14BB2C431J	RES. CARBON 430 5% 1/6W
R115	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R116	RD14BB2C104J	RES. CARBON 100K 5% 1/6W
R117	RN14BK2C6800F	RES. METAL FILM 680 1% 1/6W
R118	RN14BK2C6800F	RES. METAL FILM 680 1% 1/6W
R119	RN14BK2C4701F	RES. METAL FILM 4.7K 1% 1/6W
R120	RN14BK2C3901F	RES. METAL FILM 3.9K 1% 1/6W
R121	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R122	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R123	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W
R124	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W
R125	RN14BK2C1501F	RES. METAL FILM 1.5K 1% 1/6W
R126	RD14BB2C392J	RES. CARBON 3.9K 5% 1/6W
R127	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R128	RD14BB2C220J	RES. CARBON 22 5% 1/6W
R129	RD14BB2C392J	RES. CARBON 3.9K 5% 1/6W
R130	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R131	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R132	RN14BK2C1301F	RES. METAL FILM 1.3K 1% 1/6W
R133	RN14BK2C1301F	RES. METAL FILM 1.3K 1% 1/6W
R134	RD14BB2C103J	RES. CARBON 10K 5% 1/6W
R135	NO USE	
R136	RD14BB2C514J	RES. CARBON 510K 5% 1/6W
R137	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R138	RD14BB2C242J	RES. CARBON 2.4K 5% 1/6W
R139	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R140	RD14BB2C222J	RES. CARBON 2.2K 5% 1/6W
R141	RD14BB2C152J	RES. CARBON 1.5K 5% 1/6W
R142	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R143	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R144	RN14BK2E2002F	RES. METAL FILM 20K 1% 1/4W
R145	RN14BK2E2002F	RES. METAL FILM 20K 1% 1/4W
R146	R92-1434-05	RES. SPECIAL POWER 47K 5% 1/2W
R147	RN14BK2C7500F	RES. METAL FILM 750 1% 1/6W
R148	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R149	RN14BK2C4702F	RES. METAL FILM 47K 1% 1/6W
R150	RN14BK2C4702F	RES. METAL FILM 47K 1% 1/6W
R151	RN14BK2C3601F	RES. METAL FILM 3.6K 1% 1/6W
R152	RN14BK2C7500F	RES. METAL FILM 750 1% 1/6W
R153	RN14BK2E2002F	RES. METAL FILM 20K 1% 1/4W
R154	RN14BK2E2002F	RES. METAL FILM 20K 1% 1/4W
R155	R92-1434-05	RES. SPECIAL POWER 47K 5% 1/2W
R156	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R157	RD14BB2C821J	RES. CARBON 820 5% 1/6W
R158	RD14BB2C101J	RES. CARBON 100 5% 1/6W
R159	RD14BB2C470J	RES. CARBON 47 5% 1/6W
R160	RD14BB2C223J	RES. CARBON 22K 5% 1/6W
R161	RD14BB2C473J	RES. CARBON 47K 5% 1/6W
R162	RD14BB2C473J	RES. CARBON 47K 5% 1/6W
R163	NO USE	
R164	RD14BB2C203J	RES. CARBON 20K 5% 1/6W
R201	RD14BB2C162J	RES. CARBON 1.6K 5% 1/6W
R202	RD14BB2C102J	RES. CARBON 1K 5% 1/6W
R203	RN14BK2C1200F	RES. METAL FILM 120 1% 1/6W
R204	RN14BK2C1200F	RES. METAL FILM 120 1% 1/6W
R205	RD14BB2C621J	RES. CARBON 620 5% 1/6W
R206	RD14BB2C623J	RES. CARBON 62K 5% 1/6W
R207	RD14BB2C912J	RES. CARBON 9.1K 5% 1/6W
R208	RD14BB2C301J	RES. CARBON 300 5% 1/6W
R209	RD14BB2C302J	RES. CARBON 3K 5% 1/6W
R210	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R211	RD14BB2C562J	RES. CARBON 5.6K 5% 1/6W
R212	RN14BK2C5001F	RES. METAL FILM 5K 1% 1/6W
R213	RD14BB2C332J	RES. CARBON 3.3K 5% 1/6W
R214	RN14BK2C1800F	RES. METAL FILM 180 1% 1/6W
R215	RD14BB2C301J	RES. CARBON 300 5% 1/6W
R216	RD14BB2C821J	RES. CARBON 820 5% 1/6W
R217	RN14BK2C3300F	RES. METAL FILM 330 1% 1/6W
R218	RN14BK2C3300F	RES. METAL FILM 330 1% 1/6W



# PARTS LIST

REF.NO	PARTS NO	NAME & DESCRIPTION			
R219	RD14BB2C221J	RES. CARBON	220	5%	1/6W
R220	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R221	RD14BB2C912J	RES. CARBON	9.1K	5%	1/6W
R222	RD14BB2C301J	RES. CARBON	300	5%	1/6W
R223	RD14BB2C302J	RES. CARBON	3K	5%	1/6W
R224	RD14BB2C332J	RES. CARBON	3.3K	5%	1/6W
R225	RD14BB2C562J	RES. CARBON	5.6K	5%	1/6W
R226	RN14BK2C9101F	RES. METAL FILM	9.1K	1%	1/6W
R227	RN14BK2C4701F	RES. METAL FILM	4.7K	1%	1/6W
R228	RN14BK2C5600F	RES. METAL FILM	560	1%	1/6W
R229	RD14BB2C163J	RES. CARBON	16K	5%	1/6W
TC001	C05-0471-05	CAP. TRIMMER	30P		
TC002	C05-0460-05	CAP. TRIMMER	20P		
TC101	C05-0464-05	CAP. TRIMMER	2P		
TC102	NO USE				
TC103	C05-0464-05	CAP. TRIMMER	2P		
TH002	SDT100	THERMISTOR			
VR001	R12-0569-05	RES. SEMI FIXED	100B		
VR002	NO USE				
VR003	R12-3453-05	RES. SEMI FIXED	10KB		
VR004	R12-0058-05	RES. SEMI FIXED	470 B		
VR101	R12-1538-05	RES. SEMI FIXED	1KB		
VR102	R12-0571-05	RES. SEMI FIXED	500B		
VR103	R12-3453-05	RES. SEMI FIXED	10KB		
VR201	R12-3543-05	RES. SEMI FIXED	20KB		
VR202	R12-3543-05	RES. SEMI FIXED	20KB		

REF.NO	PARTS NO	NAME & DESCRIPTION			
R008	RD14BB2C103J	RES. CARBON	10K	5%	1/6W
R009	RD14BB2C104J	RES. CARBON	100K	5%	1/6W
R010	RD14BB2C473J	RES. CARBON	47K	5%	1/6W
R011	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R012	RD14BB2C333J	RES. CARBON	33K	5%	1/6W
R013	RD14BB2C433J	RES. CARBON	43K	5%	1/6W
R014	RD14BB2C473J	RES. CARBON	47K	5%	1/6W
R015	RD14BB2C162J	RES. CARBON	1.6K	5%	1/6W
R016	RD14BB2C182J	RES. CARBON	1.8K	5%	1/6W
R017	RD14BB2C271J	RES. CARBON	270	5%	1/6W
R018	RD14BB2C100J	RES. CARBON	10	5%	1/6W
R019	RD14BB2C272J	RES. CARBON	2.7K	5%	1/6W
R020	RD14BB2C473J	RES. CARBON	47K	5%	1/6W
R021	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R022	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R023	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R024	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R025	RD14BB2C100J	RES. CARBON	10	5%	1/6W
R026	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R101	RD14BY2H225J	RES. CARBON	2.2M	5%	1/2W
S101	S59-2505-05	SWITCH			
U001	NJM4558D	IC. DUAL OP AMP			
VR001	R05-3515-05	V.R. WITH SW<READOUT INT>	20KB		
VR002	R10-3505-05	V.R.(A/B INT.ROT+ILLUM)	20KB X2		
VR003	R10-7501-05	V.R.(FOCUS/ASTIG)	500KB/500KB		
VR004	R10-3505-05	V.R.(A/B INT.ROT+ILLUM)	20KB X2		
VR005	R12-3543-05	RES. SEMI FIXED	20KB		
VR006	R12-1538-05	RES. SEMI FIXED	1KB		

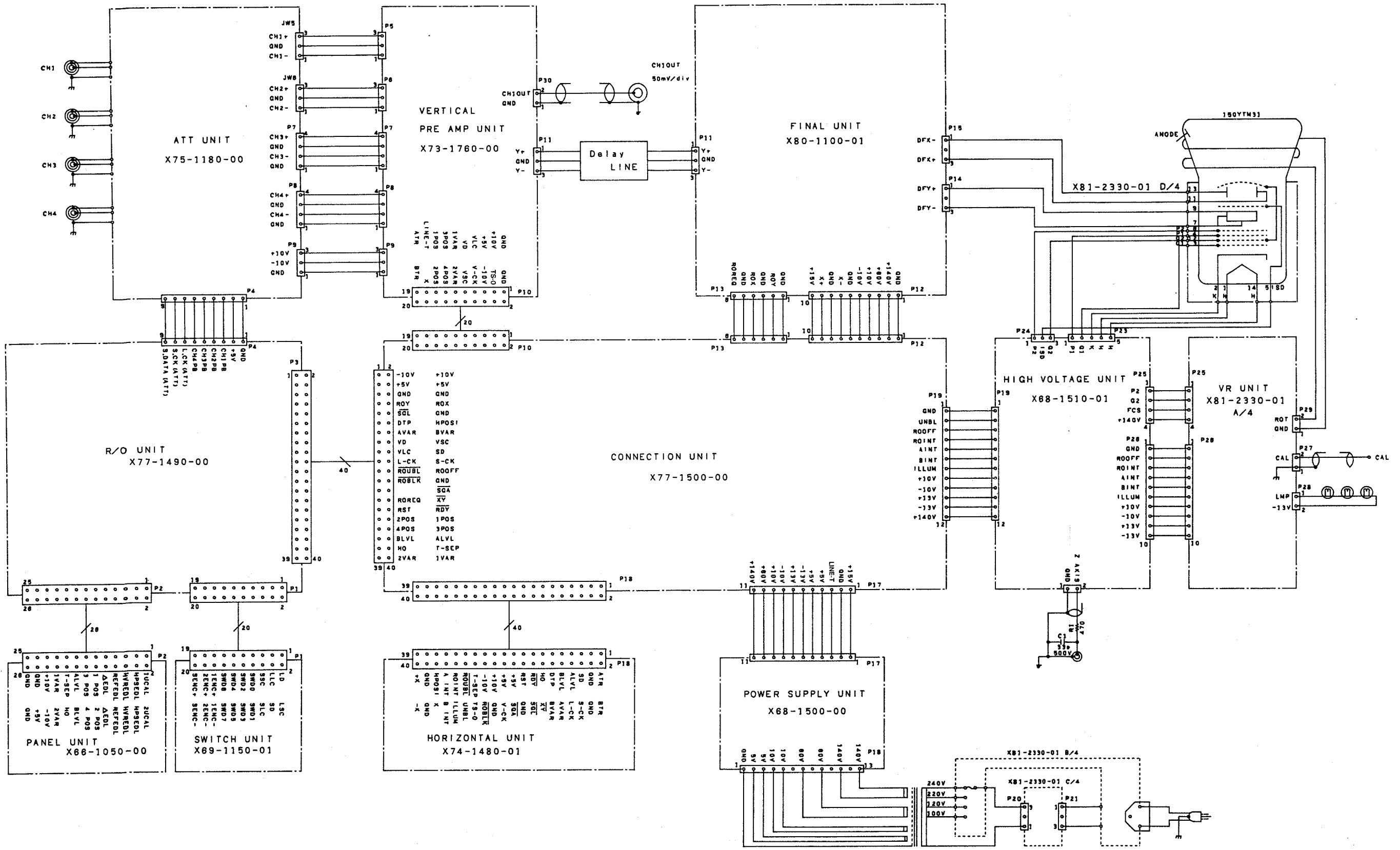
## VR UNIT

### X81-2330-01

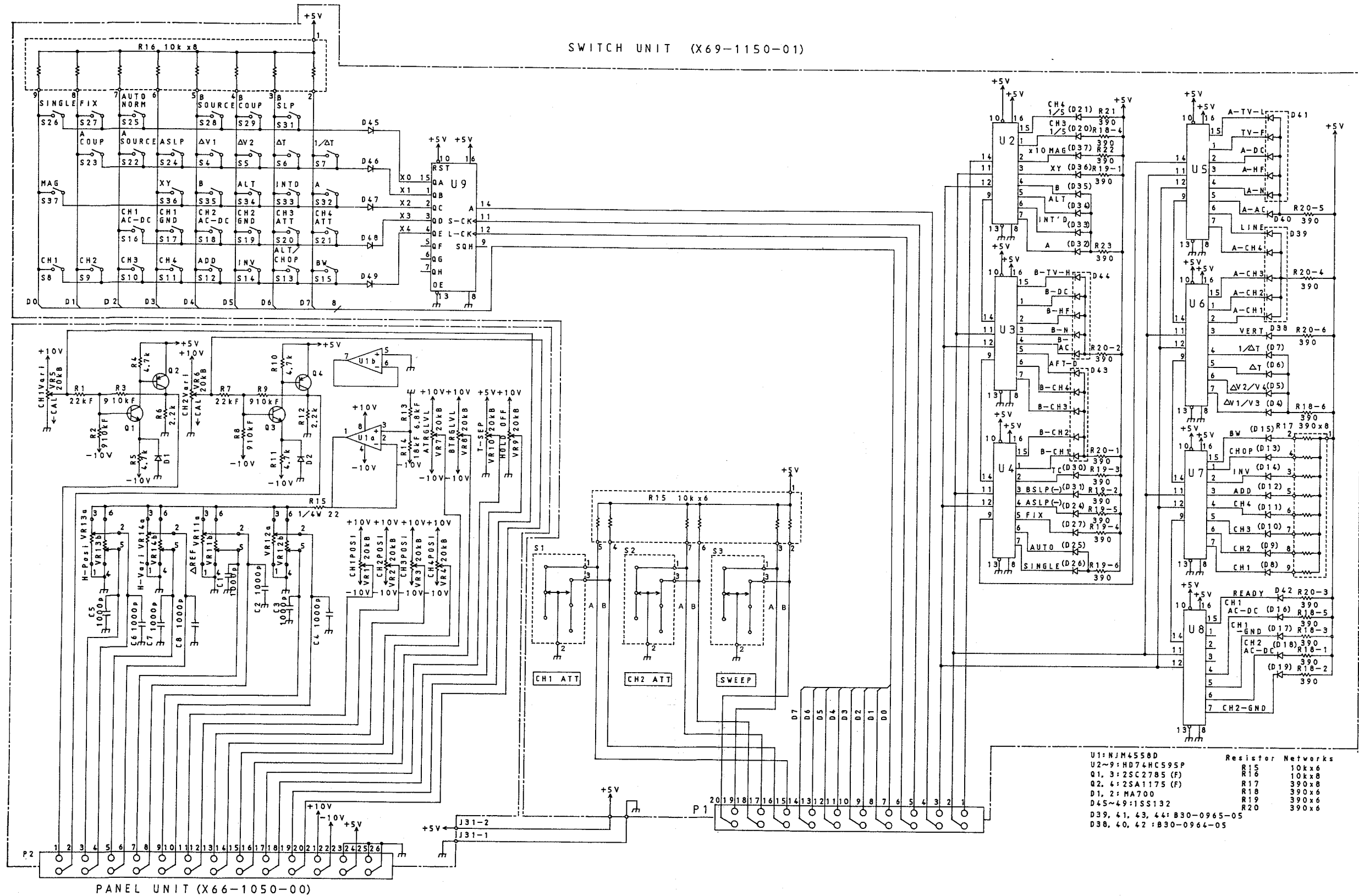
REF.NO	PARTS NO	NAME & DESCRIPTION			
	E01-0103-05	CRT SOCKET			
	E31-5582-05	WIRE ASS'Y<NO.14>			
	E31-5583-05	WIRE ASS'Y<NO.15>			
	E31-5584-05	WIRE ASS'Y<NO.24>			
	E31-5585-05	WIRE ASS'Y<NO.23>			
	F01-0859-14	HEAT SINK			
	N09-0623-04	SCREW, SEMS	M3X8		
	R92-0150-05	JUMPING RES.	ZERO OHM<10MM>		
77	J21-4610-04	BRACKET			
C001	CC45CH2H0R5C	CAP. CERAMIC	0.5P 0.25P	500V	
C002	CC45CH2H0R5C	CAP. CERAMIC	0.5P 0.25P	500V	
C006	CE04EW1C101M	CAP. ELECTRO	100	20%	16V
C007	CK45F1H1032	CAP. CERAMIC	0.01		50V
C008	CK45FB2H472K	CAP. CERAMIC	4700P	10%	500V
C009	C092M1H103J	CAP. MYLAR	0.01	5%	50V
C010	CE04EW1C470M	CAP. ELECTRO	47	20%	16V
C101	C91-0551-05	CAP. POLYESTER	0.22	10%	630V
C102	C91-0575-05	CAP. CERAMIC	1000P		4KV
C103	C91-0575-05	CAP. CERAMIC	1000P		4KV
D001	1SS132	DIODE			
D002	1SS132	DIODE			
D003	MTZ24JC	DIODE, ZENER	23.72V		
J021	E31-5571-05	LEAD WIRE WITH CONNECTOR			
L101	L33-0808-05	CHOKE COIL			
P020	E40-0328-05	PIN CONNECTOR	3 P		
P021	E40-0328-05	PIN CONNECTOR	3 P		
P025	E40-0474-05	PIN CONNECTOR	4P		
P026	E40-1074-05	PIN CONNECTOR	10P		
P027	E40-0273-05	PIN CONNECTOR	2P		
P028	E40-0274-05	PIN CONNECTOR	2P		
P029	E40-0274-05	PIN CONNECTOR	2P		
Q002	2SC1384(Q)	TR. SI, NPN			
Q003	2SA684(Q)	TR. SI, PNP			
Q004	2SA1175(F)	TR. SI, PNP			
Q005	2SC2785(F)	TR. SI, NPN			
Q006	2SD1666(S)	TR. SI, NPN			
R001	RD14BB2C101J	RES. CARBON	100	5%	1/6W
R004	RD14BB2C221J	RES. CARBON	220	5%	1/6W
R005	RD14BB2C220J	RES. CARBON	22	5%	1/6W
R006	RD14BB2C102J	RES. CARBON	1K	5%	1/6W
R007	RD14BB2C102J	RES. CARBON	1K	5%	1/6W



# SCHEMATIC DIAGRAM

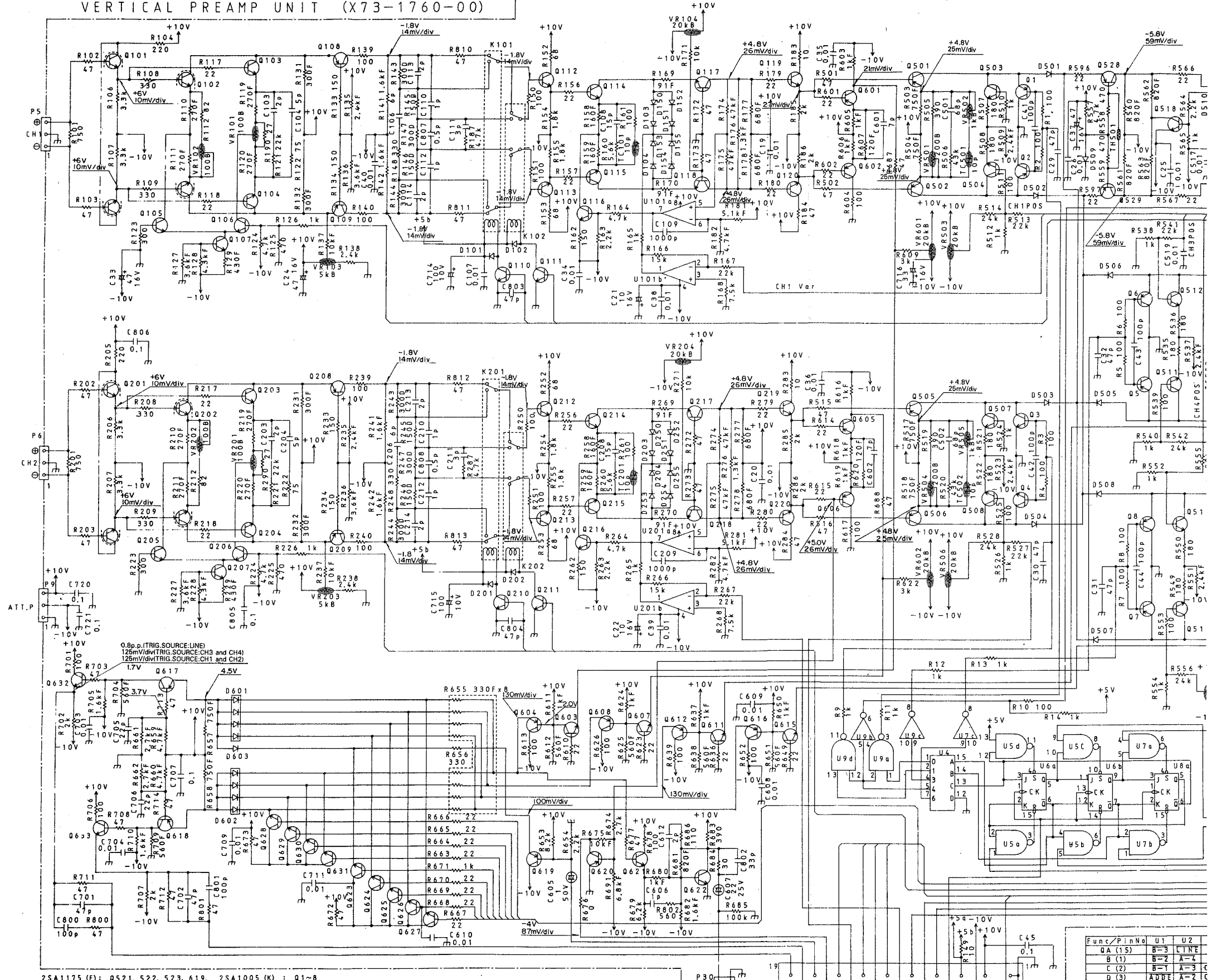


# SCHEMATIC DIAGRAM



# SCHEMATIC DIAGRAM

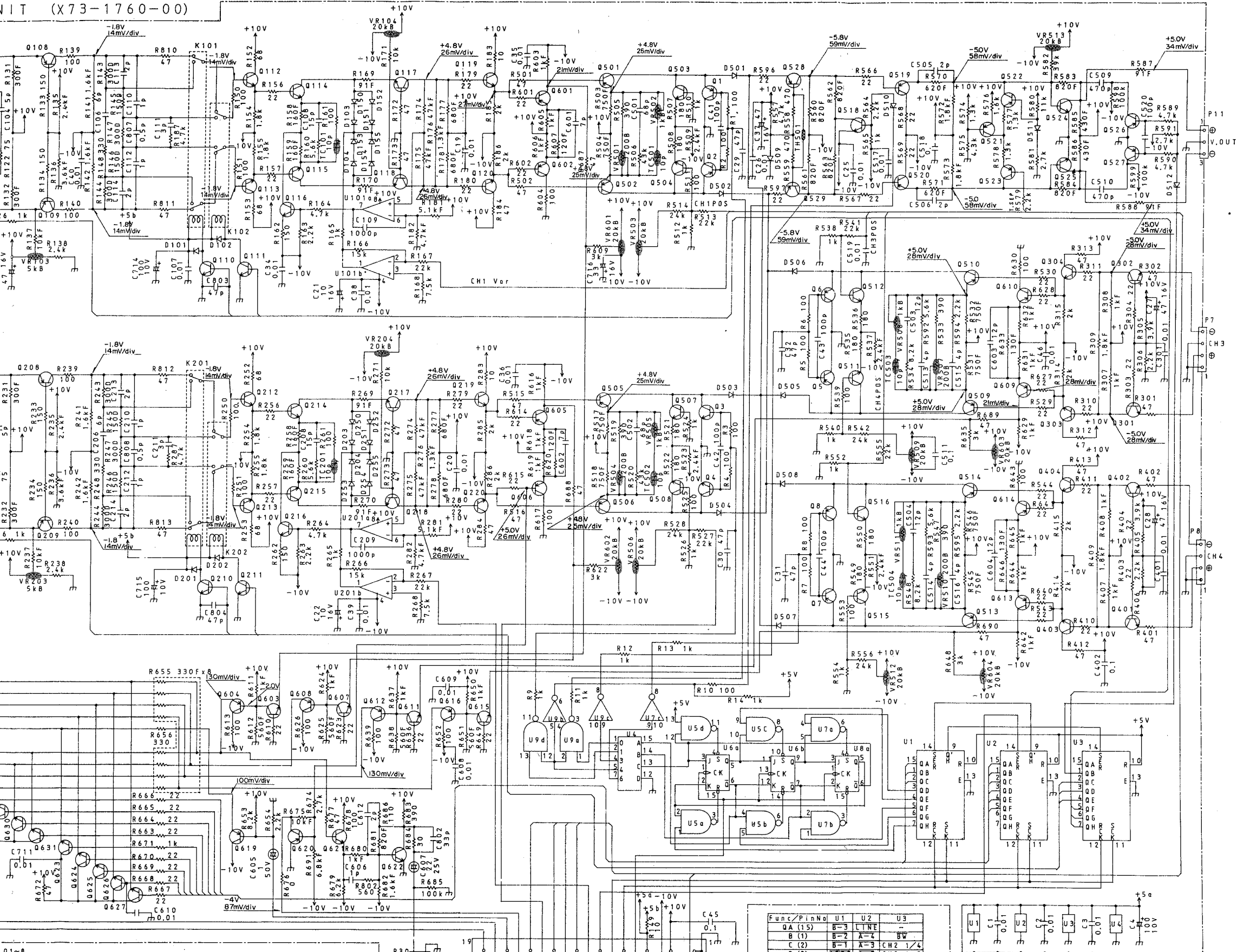
## VERTICAL PREAMP UNIT (X73-1760-00)



- 25A1175 (F): Q521, 522, 523, 619, Q620  
 25A1206 : Q501, 502, 505, 506, Q509, 510, 513, 514, Q519, 520, 526, 527, Q601, 602, 604, 605, Q606, 608, 609, 610, Q612, 613, 614, 616  
 25C2785 (F): Q116, 216, 623  
 25C3732 (L): Q518  
 25C3779 (D): Q103, 104, 112-115, Q117-120, 203, 204, Q212-215, 217-220, Q301-304, 401-404, Q524, 525, 603, 607, Q611, 615, 621, 622, Q632, 633  
 25C4049 : Q110, 111, 210, 211  
 25C4072 : Q101, 102, 201, 202  
 25C3315 (C): Q105, 106, 107, 205, Q206, 207, 503, 504, Q507, 508, 511, 512, Q515, 516, 624, 625, Q626, 627, 628, 629, Q630, 631

Func/Pin No	U1	U2
QA (15)	B-3	CTNE
B (1)	B-2	A-4
C (2)	B-1	A-3
D (3)	ADDE	A-2
E (4)	CHLE	A-1
F (5)	CEFE	B-4
G (6)	CHZE	-
H (7)	CHTE	-

- SN74ALS00AN : U5, 7, 9 1SS1  
 SN74ALS112AN : U6, 8  
 HD74LS42P : U4  
 HD74HC595P : U1, 2, 3 DAP4  
 NJM4558D : U101, 201 MTZ1

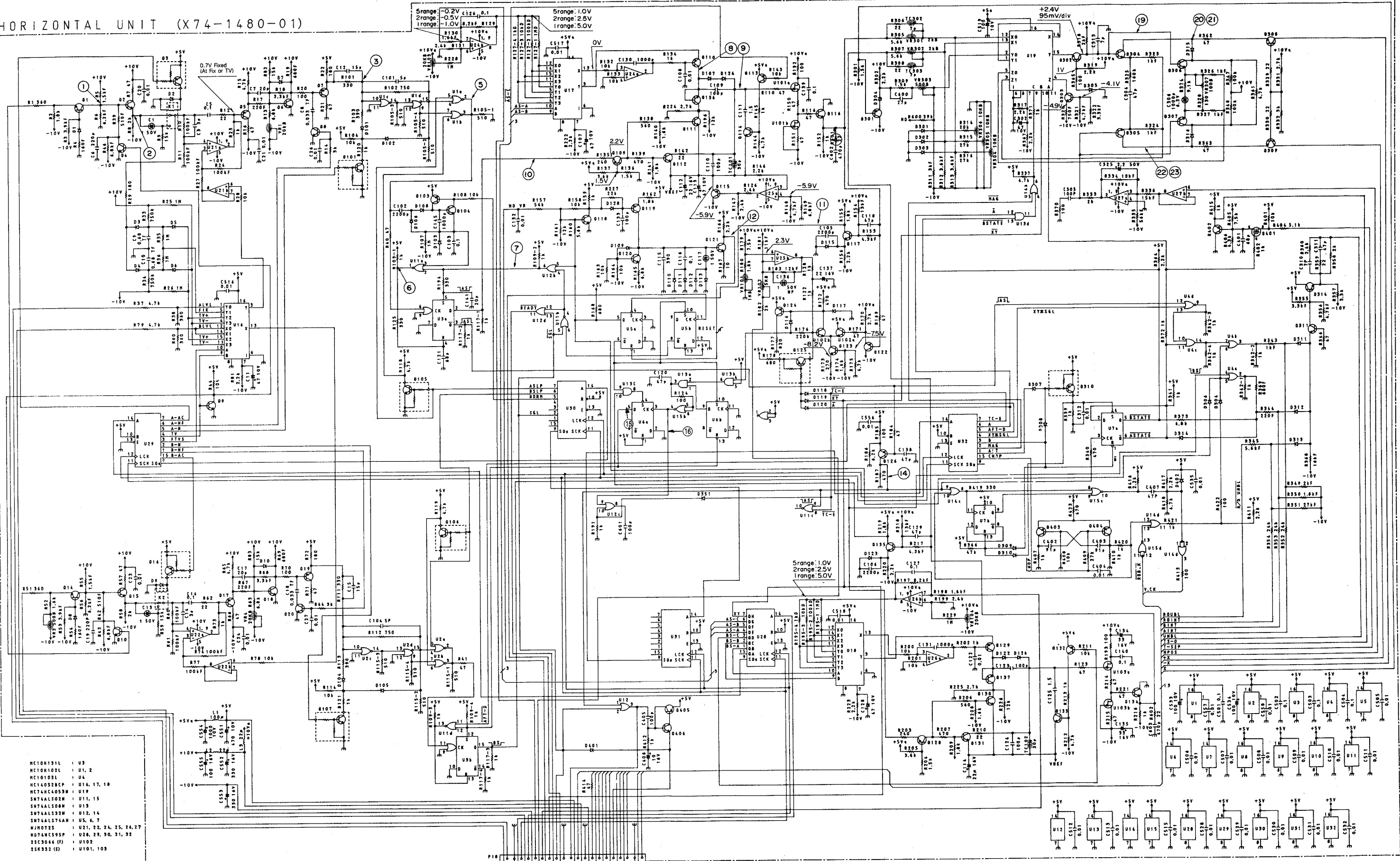


- Q1-8 2SC2785 (F) : Q116, 216, 623
- Q108, 109, 208, 209, 2SC3732 (L) : Q518
- Q528, 529, 617, 618 2SC3779 (D) : Q103, 104, 112~115,
- Q105, 106, 107, 205, Q117~120, 203, 204,
- Q206, 207, 503, 504, Q212~215, 217~220,
- Q507, 508, 511, 512, Q301~304, 401~404,
- Q515, 516, 624, 625, Q524, 525, 603, 607,
- Q626, 627, 628, 629, Q611, 615, 621, 622,
- Q630, 631 2SC4049 : Q110, 111, 210, 211
- 2SC4072 : Q101, 102, 201, 202

- BTrig@ ATrig@
- X @ LINE.I
- CH2Pos CH1Pos
- CH4Pos CH3Pos
- CH2Var CH1Var
- S.CLK S.DATA
- CLK L.CLK
- 10V +5V
- T.SEP +10V
- SN74ALS00AN : U5, 7, 9 155132 : D101, 102, 201, 202, MA700 : D103, 104, 150~155,
- SN74ALS112AN : U6, 8 D501~508, 509, 511, MT210JC : D203, 204, 250~255
- HD74LS42P : U4 D603 SDT-100 : TH501
- HD74HC595P : U1, 2, 3 DAP401 : D601, 602
- NJM4558D : U101, 201 MT25.1JB : D512

Func/PinNo	U1	U2	U3
QA (15)	B-3	LINE	-
B (1)	B-2	A-4	BW
C (2)	B-1	A-3	CH2 1/4
D (3)	ADDE	A-2	CH2 1-2
E (4)	CH4E	A-1	CH2 HAG
F (5)	CE3E	B-4	CH1 1/4
G (6)	CH2E	-	CH1 1/2
H (7)	CH1E	-	CH1 HAG

HORIZONTAL UNIT (X74-1480-01)



- HC10H131L U3
- HC10H102L U1, 2
- HC10103L U4
- HC140578SP U5, 17, 18
- MC74ALS05M U18
- SN74ALS02M U11, 15
- SN74ALS08M U19
- SN74ALS32M U12, 14
- SN74ALS74AM U5, 6, 7
- NJ40123 U21, 22, 24, 25, 24, 27
- HD74AC595P U28, 29, 30, 31, 32
- 25C3044 (F) U102
- 25K332 (S) U101, 103

- 25A1005 (H) U109, 128, 403, 404
- 25A1175 (F) U110, 113, 115, 119, 129, 132, 301, 402, 405
- 25A1204 U5, 7, 17, 19, 109, 127, 174, 124, 127
- 25A1545 U3, 14, 125, 310
- 25C2785 (F) U4, 20, 104, 114, 120, 302, 406
- 25C3315 (C) U114, 117, 123, 133, 135, 303-309
- 25C3954 (S, T) U114, 134, 311, 314
- 25C3732 (C) U111, 112, 121, 130, 131, 134, 137
- 25C3779 (D) U1, 2, 4, 14, 15, 16, 18, 9, 14, 101, 105, 104, 107
- 25K583 U401

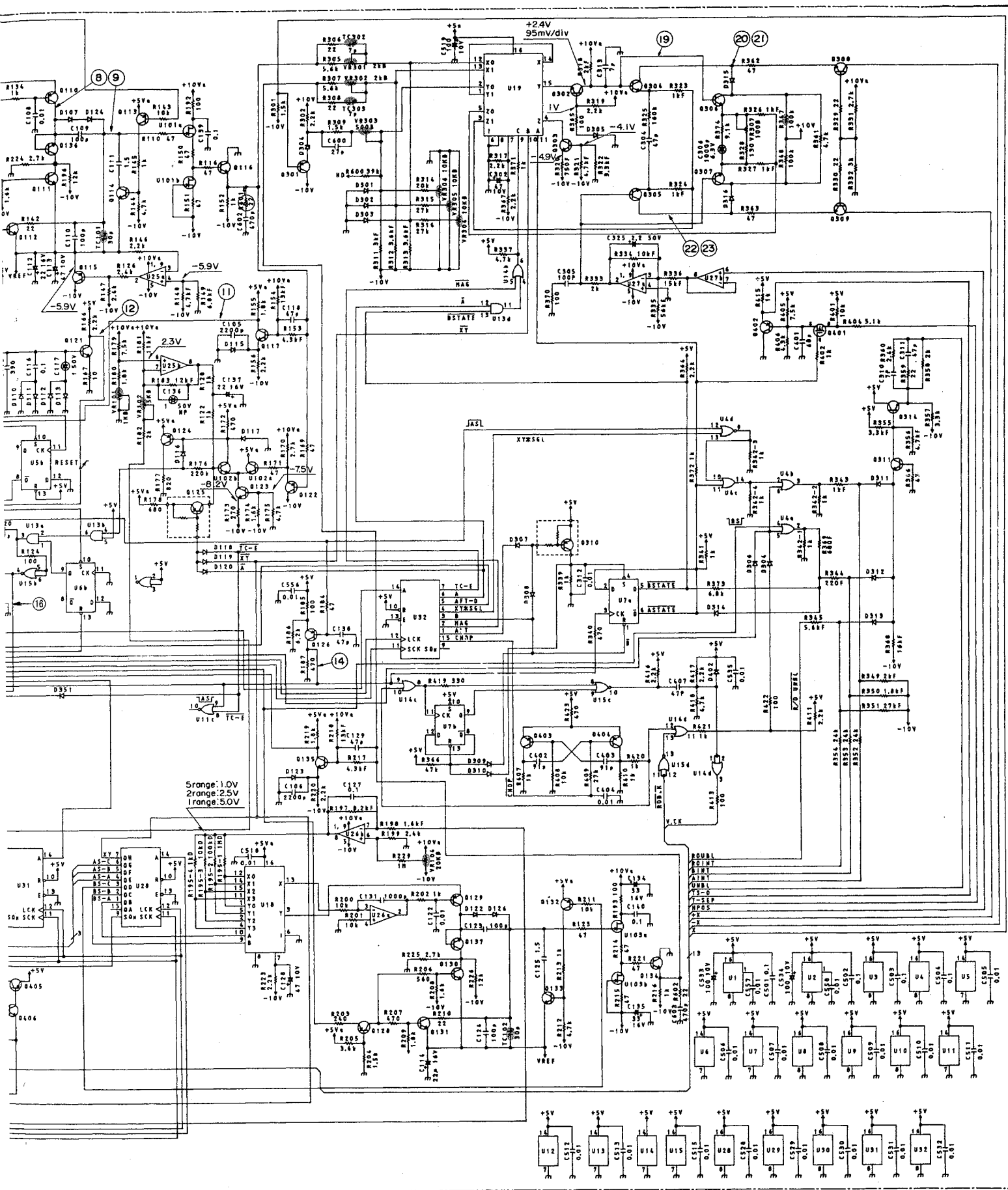
- AT8 BTR
- ED S-CC
- EV LVL
- DIP BYAR
- HO BYEL
- REBY SSK
- +5V Y-CC
- +10V Y-CC
- 10V Y-CC
- T-SEP 1500
- ROBRT ILLUM
- ALMT BIRT
- MPDE: X
- END -X

- 155192 U1, 2, 4, 9, 112, 113, 116, 119, 120, 124, 125, 302, 303, 305, 307, 308, 309, 315, 316, 351, 401

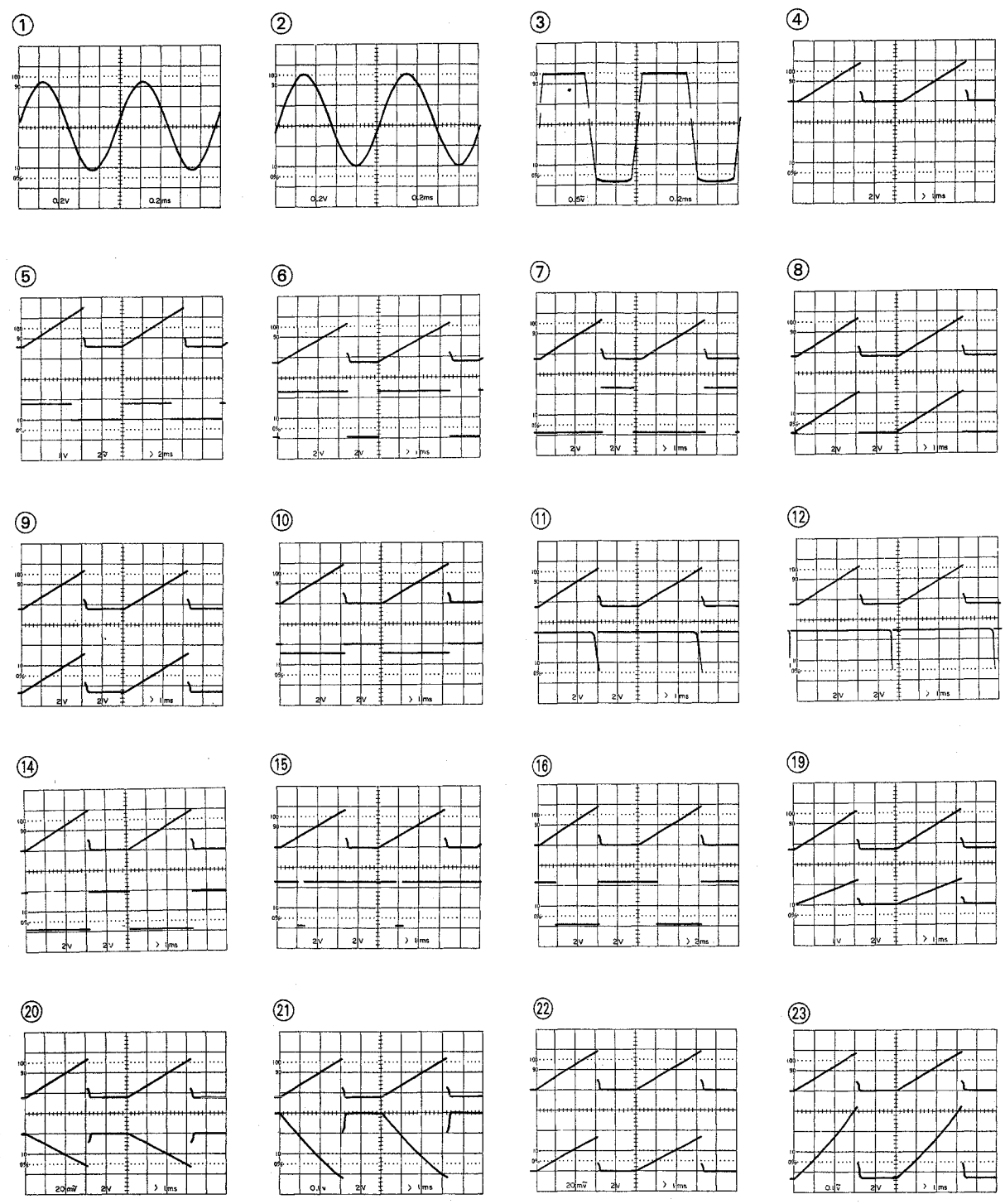
- W4700 U3, 4, 5, 6, 7, 10, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 115, 116, 117, 122, 123

- 0304, 306, 310, 311, 312, 313, 314, 402

- HT23, 31A U350, 151587, U124, 126



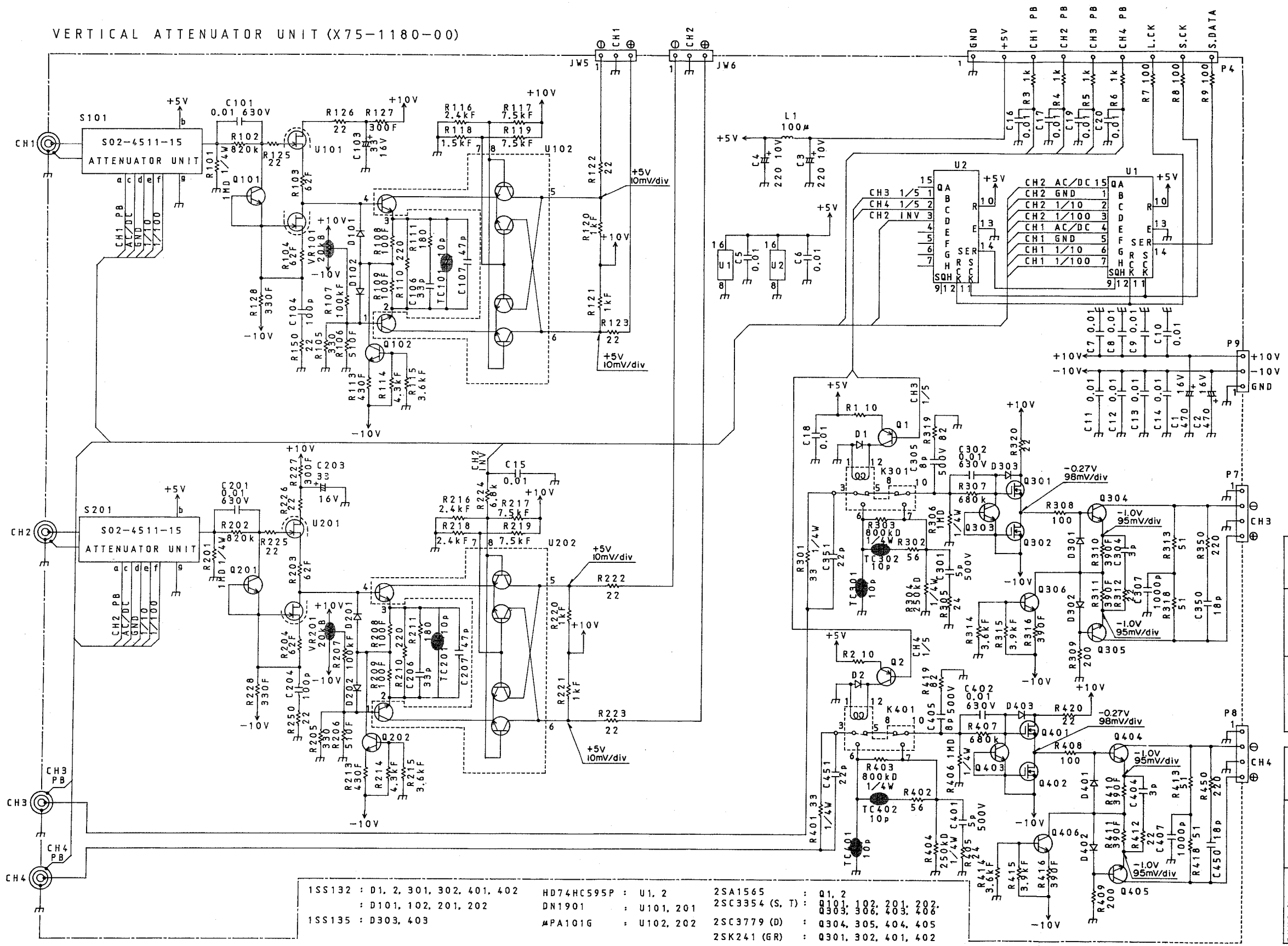
# SCHEMATIC DIAGRAM



155192 : 01, 2, 4, 9, 112, 113,    M4700 : 03, 4, 5, 6, 7, 10,    D304, 306, 310, 311,    HT23,9JA : D350  
 D118, 119, 120, 128,    D101, 102, 103, 104,    D312, 313, 314, 402    IS1587 : D124, 126  
 D301, 302, 303, 305,    D105, 106, 107, 108,    D109, 110, 111, 115,    D316, 351, 401  
 D314, 351, 401,    D114, 117, 122, 123,



# SCHEMATIC DIAGRAM



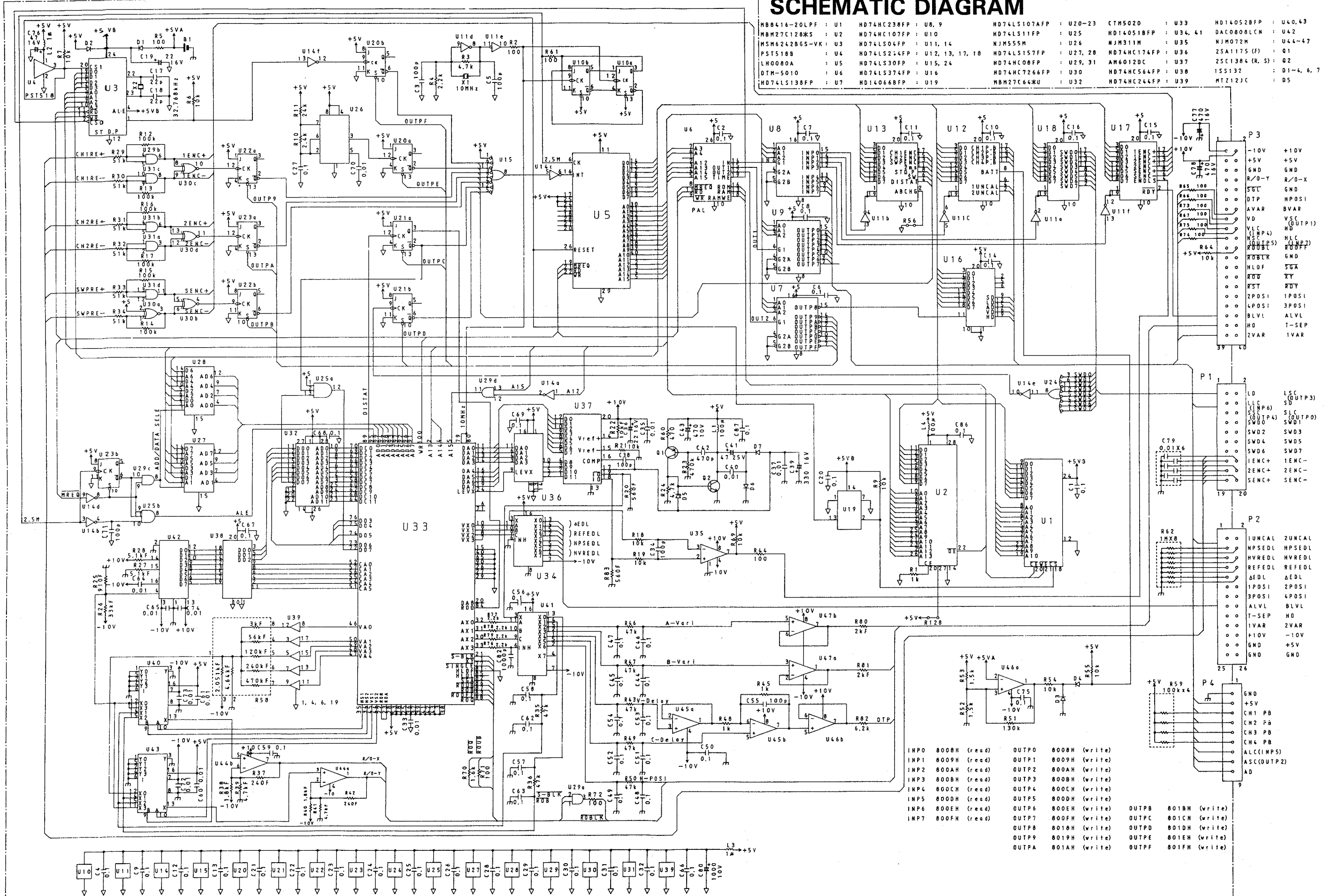
- |                                                                                                              |                                                                                            |                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1SS132 : D1, 2, 301, 302, 401, 402<br/>         : D101, 102, 201, 202<br/>         1SS135 : D303, 403</p> | <p>HD74HC595P : U1, 2<br/>         DN1901 : U101, 201<br/>         #PA101G : U102, 202</p> | <p>2SA1565 : Q1, 2<br/>         2SC3354 (S, T) : Q103, 102, 201, 202,<br/>         Q303, 306, 403, 406<br/>         2SC3779 (D) : Q304, 305, 404, 405<br/>         2SK241 (GR) : Q301, 302, 401, 402</p> |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

FUNC/PinNo	U1	U2
E (4)	CH1 AC/DC	-
F (5)	CH1 GND	-
G (6)	CH1 1/10	-
H (7)	CH1 1/100	-

FUNC/PinNo	U1	U2
QA (15)	CH2 AC/DC	-
B (1)	CH2 GND	CH3 1/5
C (2)	CH2 1/10	CH4 1/5
D (3)	CH2 1/100	CH2 INV

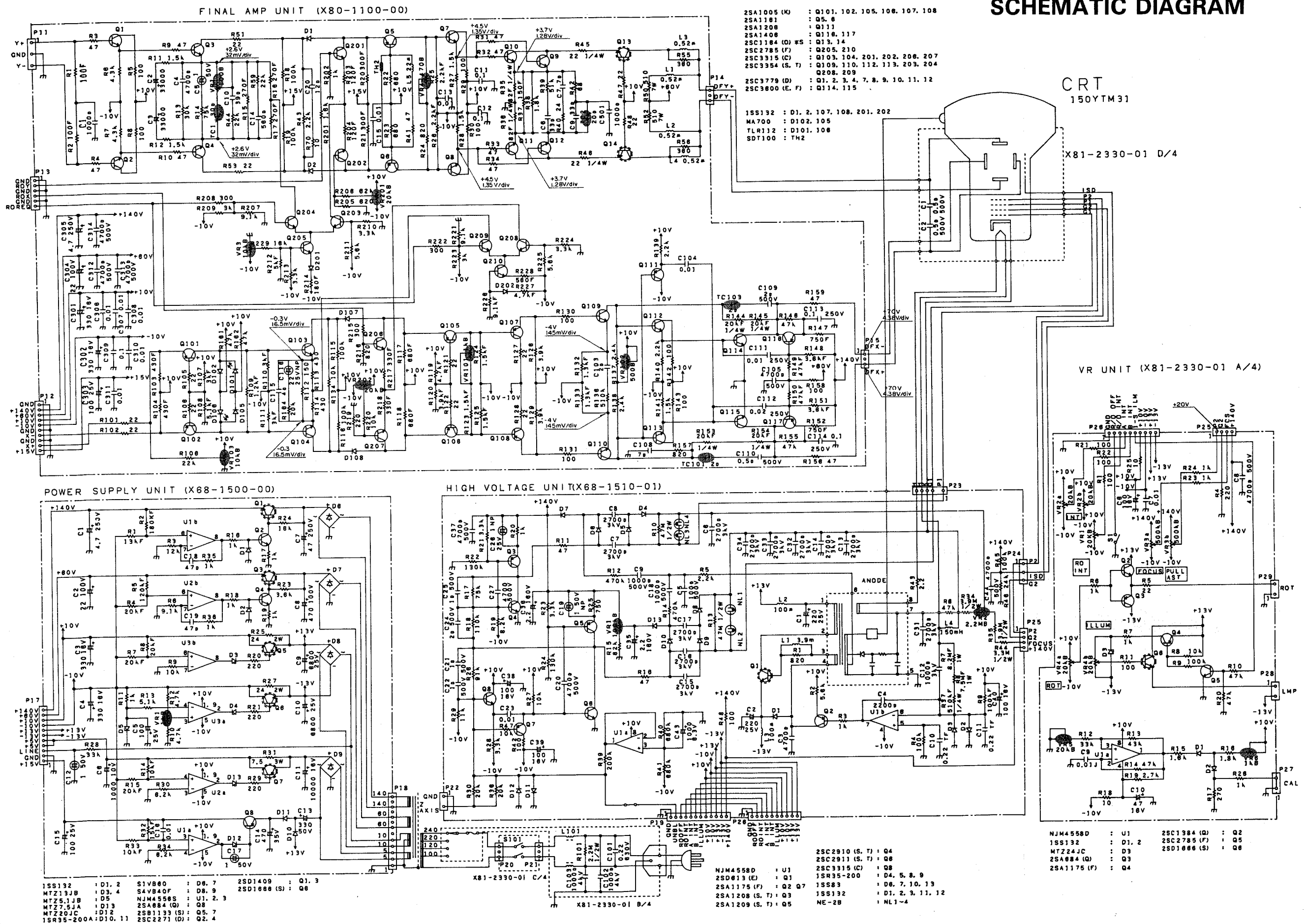
# SCHEMATIC DIAGRAM

M88416-20LPF : U1	HD74HC238FP : U8, 9	HD74LS107AFP : U20-23	CTM5020 : U33	HD140528FP : U40, 43
M8M27C128X5 : U2	HD74HC107FP : U10	HD74LS11FP : U25	HD140518FP : U34, 41	DAC0808LCM : U42
MSM62428G5-VK : U3	HD74LS04FP : U11, 14	NJM555M : U26	NJM072M : U35	NJM072M : U44-47
PST518B : U4	HD74LS244FP : U12, 13, 17, 18	HD74LS157FP : U27, 28	HD74HC174FP : U36	2SA1175 (F) : O1
LH0080A : U5	HD74LS30FP : U15, 24	HD74HC08FP : U29, 31	AM6012DC : U37	2SC1384 (R, S) : O2
DTM-5010 : U6	HD74LS374FP : U16	HD74HC7266FP : U30	HD74HC564FP : U38	1SS132 : O1-4, 6, 7
HD74LS138FP : U7	HD140688FP : U19	M8M27C64JU : U32	HD74HC244FP : U39	HTZ12JC : O5



INP0 800BH (read)	OUTP0 800BH (write)	OUTPB 801BH (write)
INP1 8009H (read)	OUTP1 8009H (write)	OUTPC 801CH (write)
INP2 800AH (read)	OUTP2 800AH (write)	OUTPD 801DH (write)
INP3 800BH (read)	OUTP3 800BH (write)	OUTPE 801EH (write)
INP4 800CH (read)	OUTP4 800CH (write)	OUTPF 801FH (write)
INP5 800DH (read)	OUTP5 800DH (write)	
INP6 800EH (read)	OUTP6 800EH (write)	
INP7 800FH (read)	OUTP7 800FH (write)	
	OUTP8 8018H (write)	
	OUTP9 8019H (write)	
	OUTPA 801AH (write)	

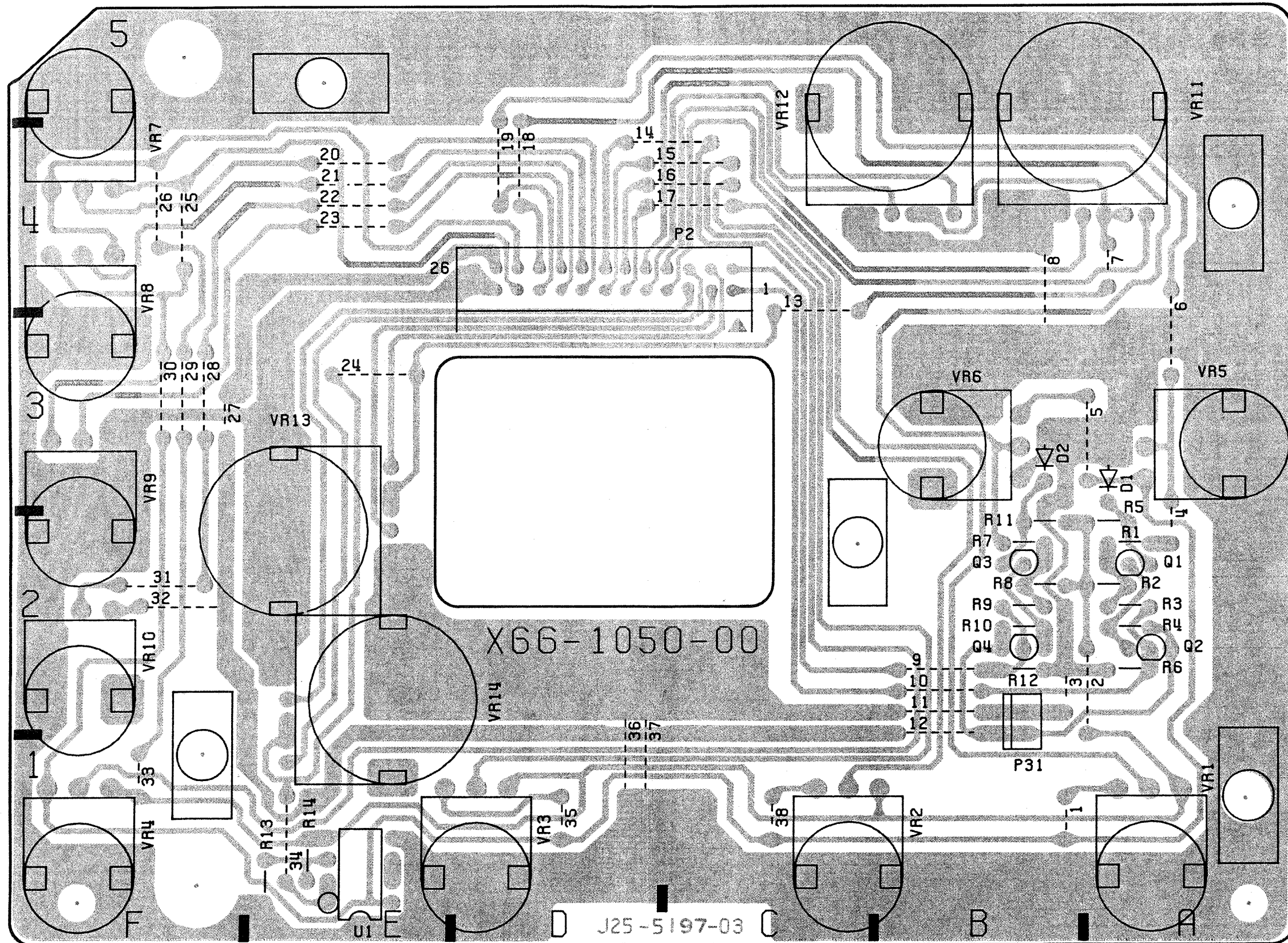
# SCHEMATIC DIAGRAM



# P.C BOARD

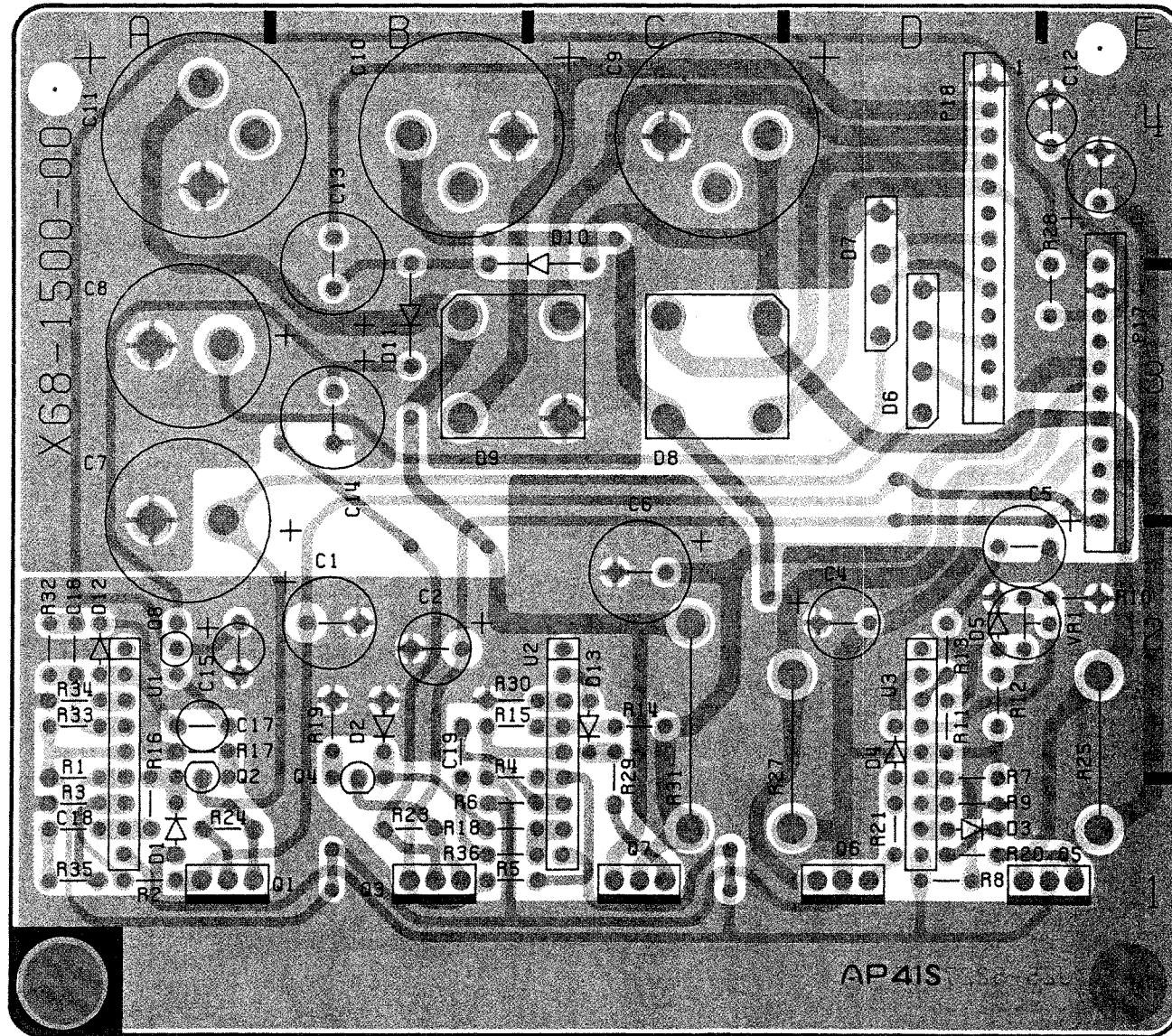
PANEL UNIT (X66-1050-00)

Pattern side view



# P.C BOARD

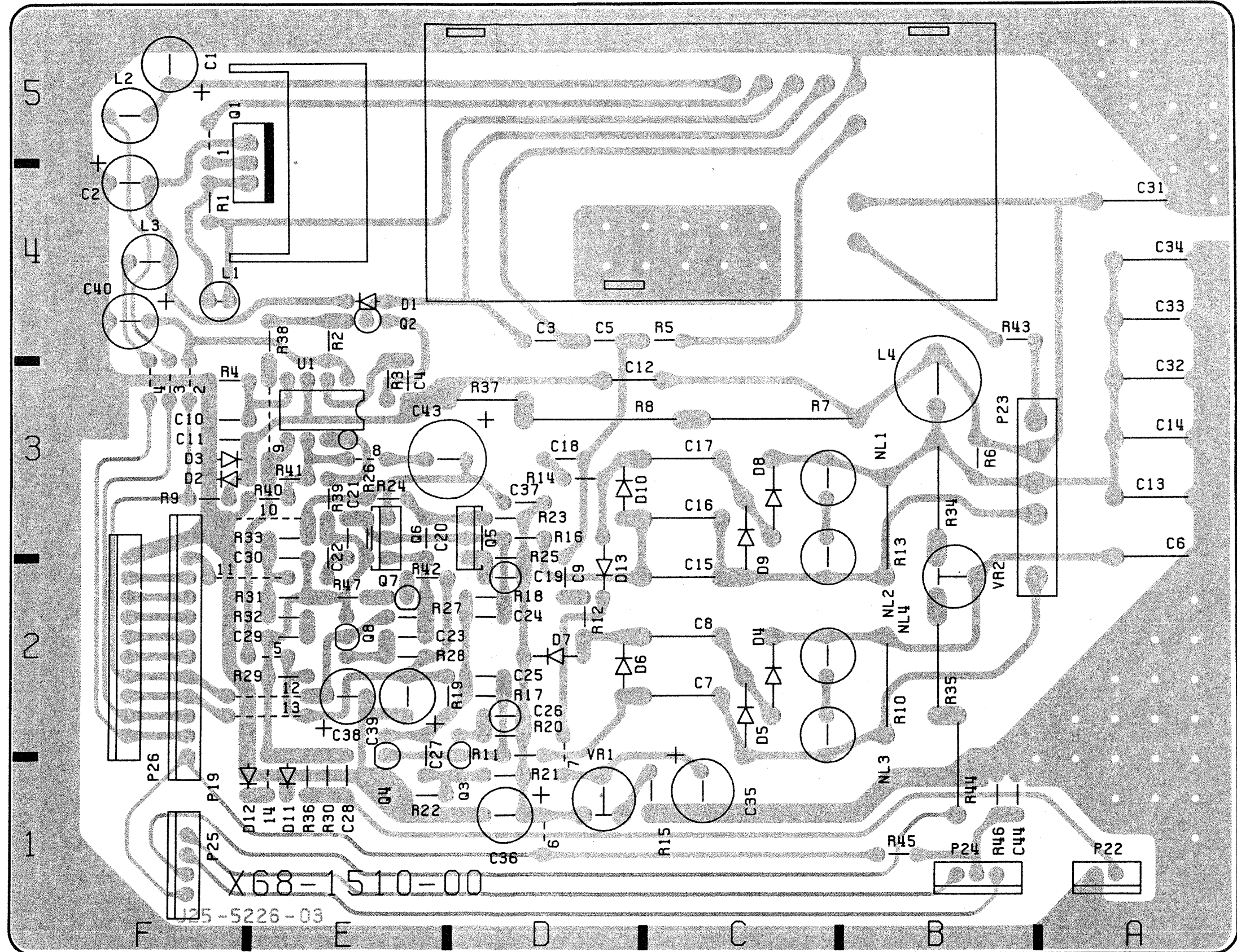
POWER SUPPLY UNIT (X68-1500-00)



# P.C BOARD

HIGH VOLTAGE UNIT (X68-1510-01)

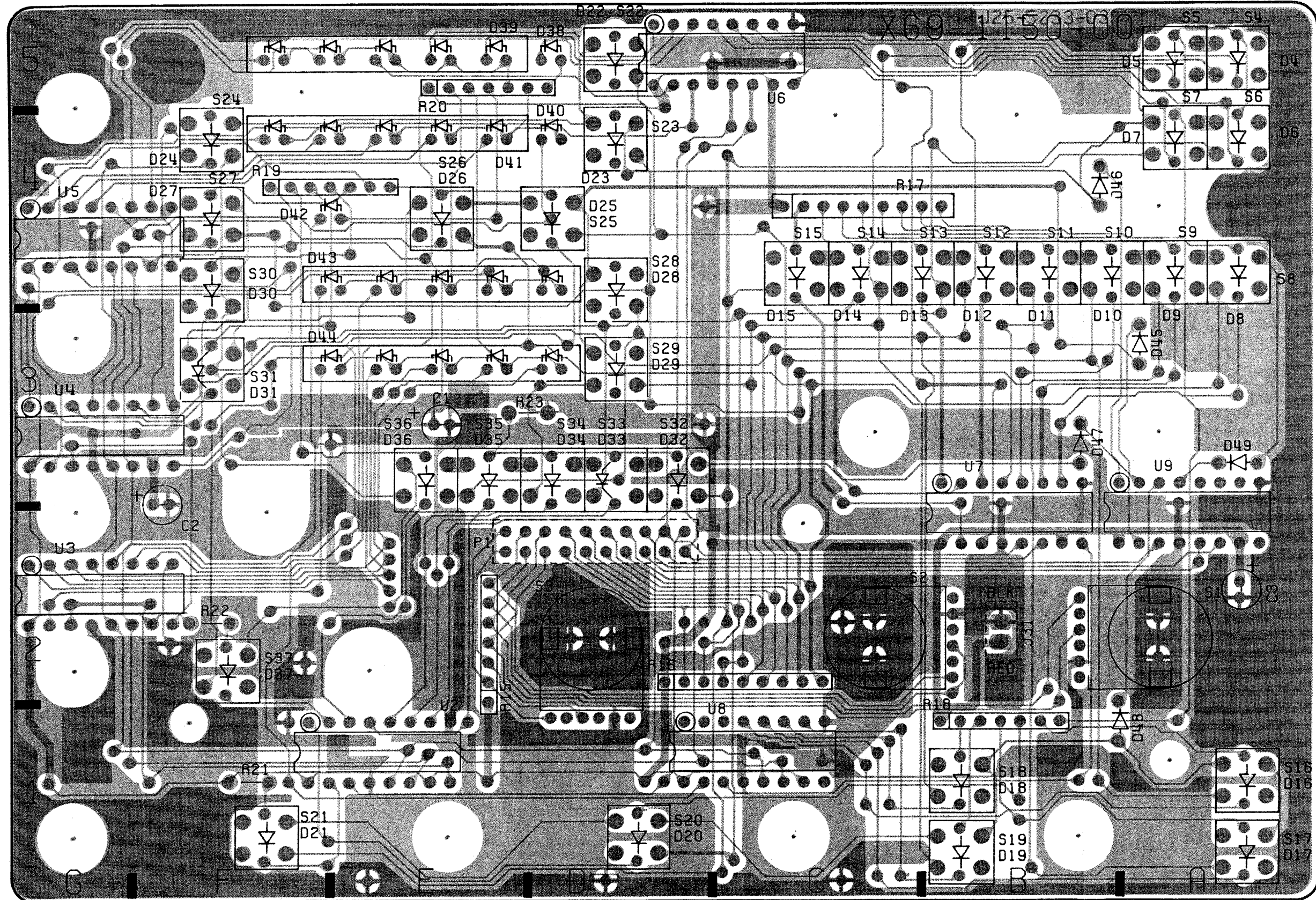
Pattern side view



# P.C BOARD

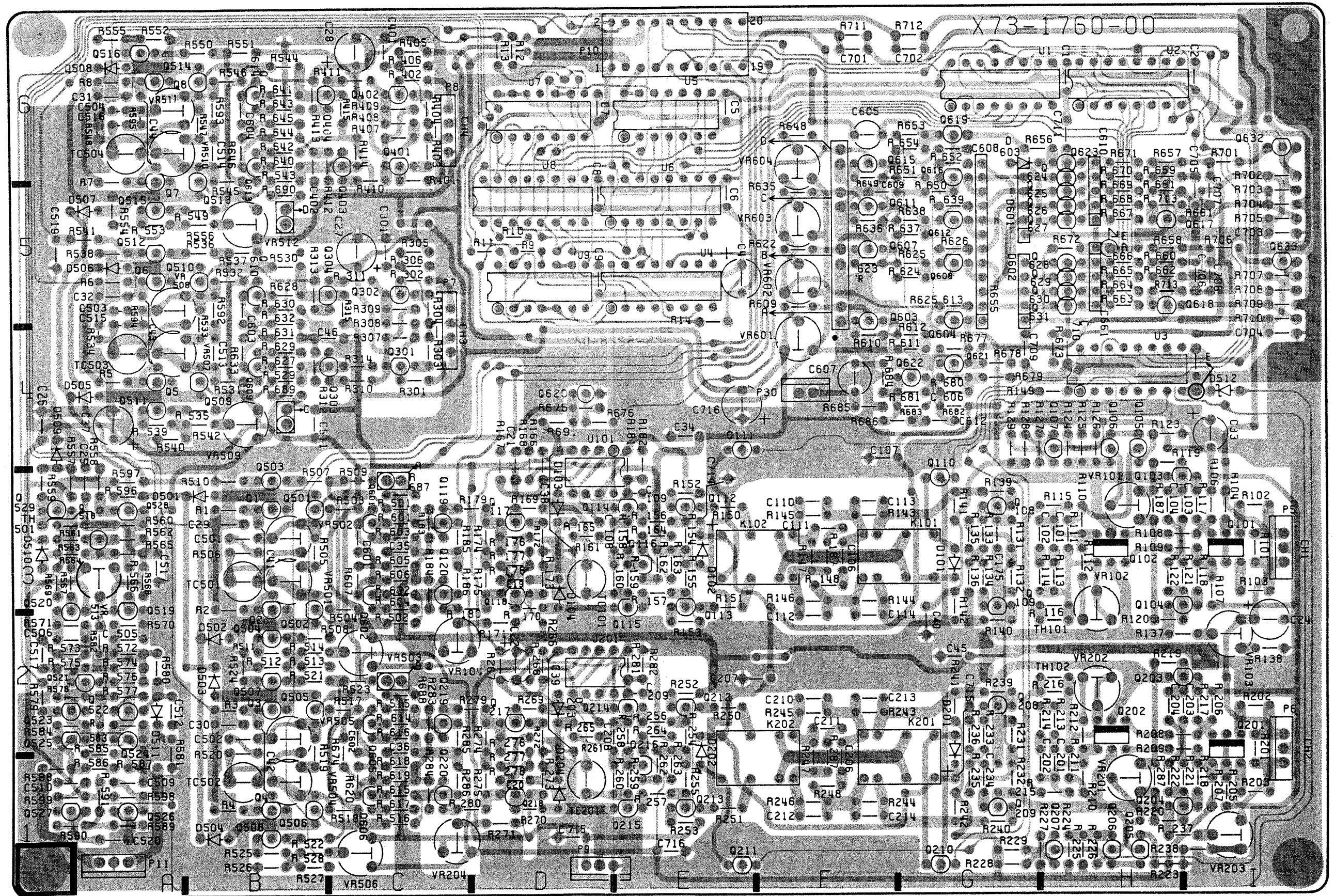
SWITCH UNIT (X69-1150-01)

Pattern side view



# P.C BOARD

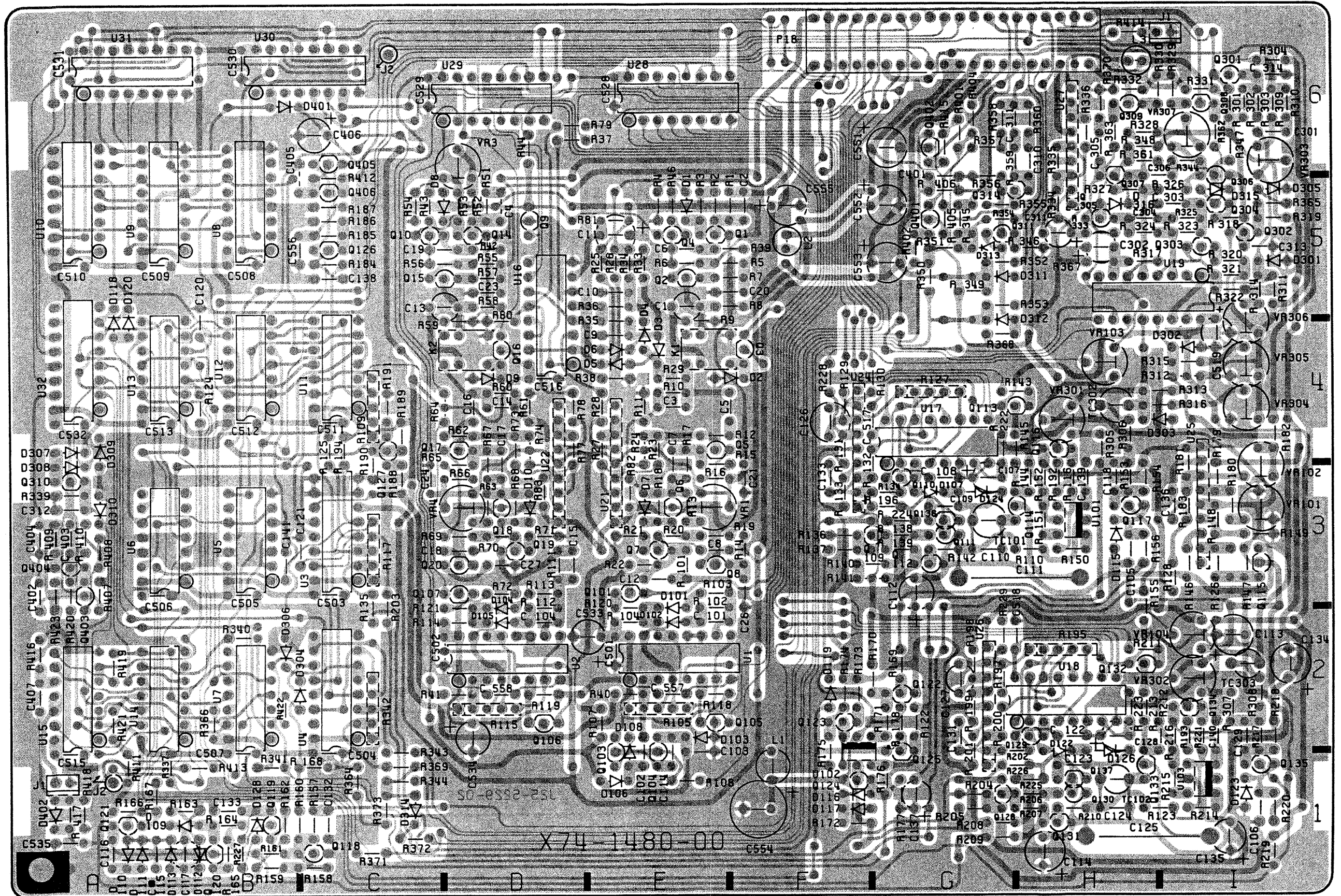
VERTICAL PREAMP UNIT (X73-1760-00)





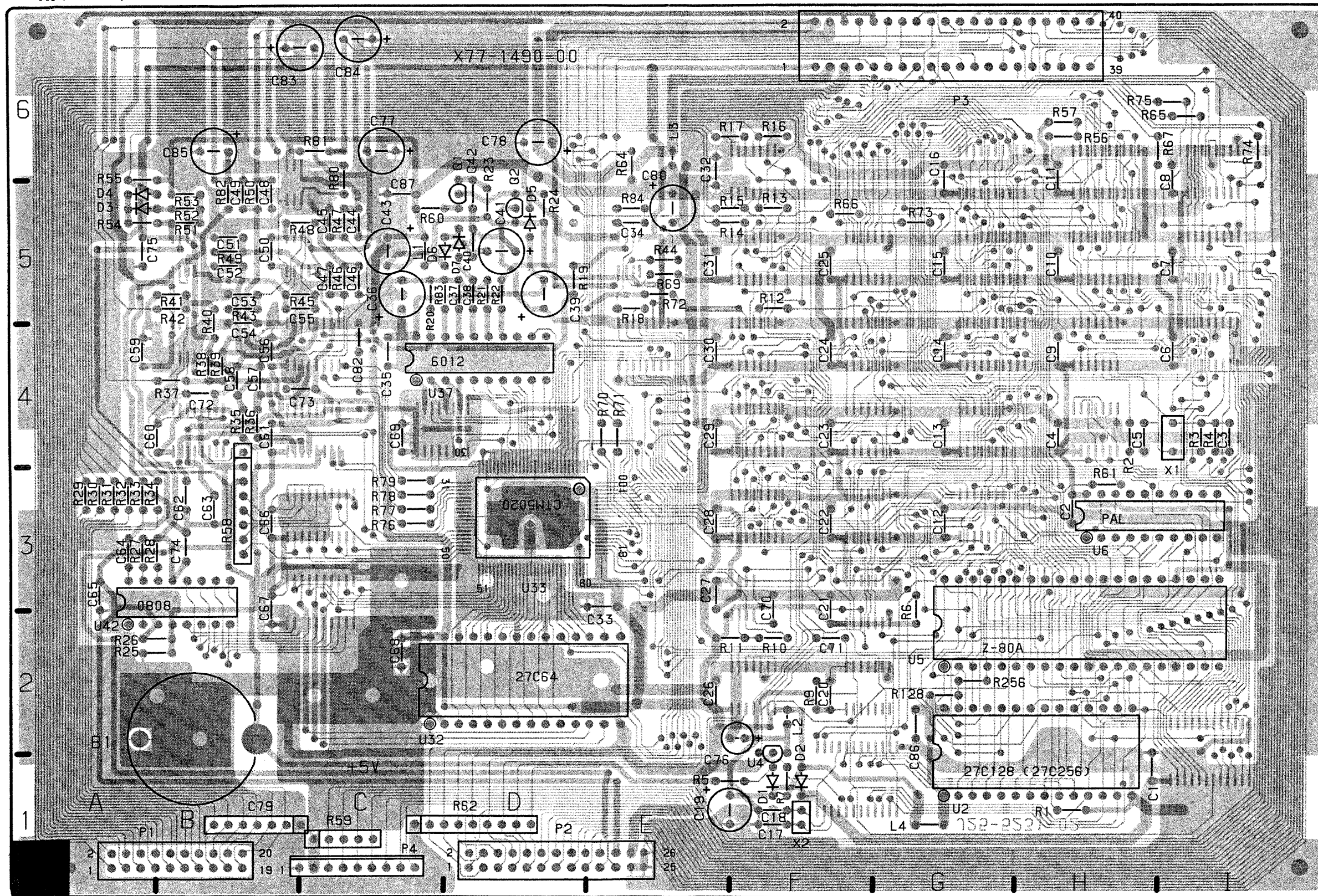
# P.C BOARD

HORIZONTAL UNIT (X74-1480-01)



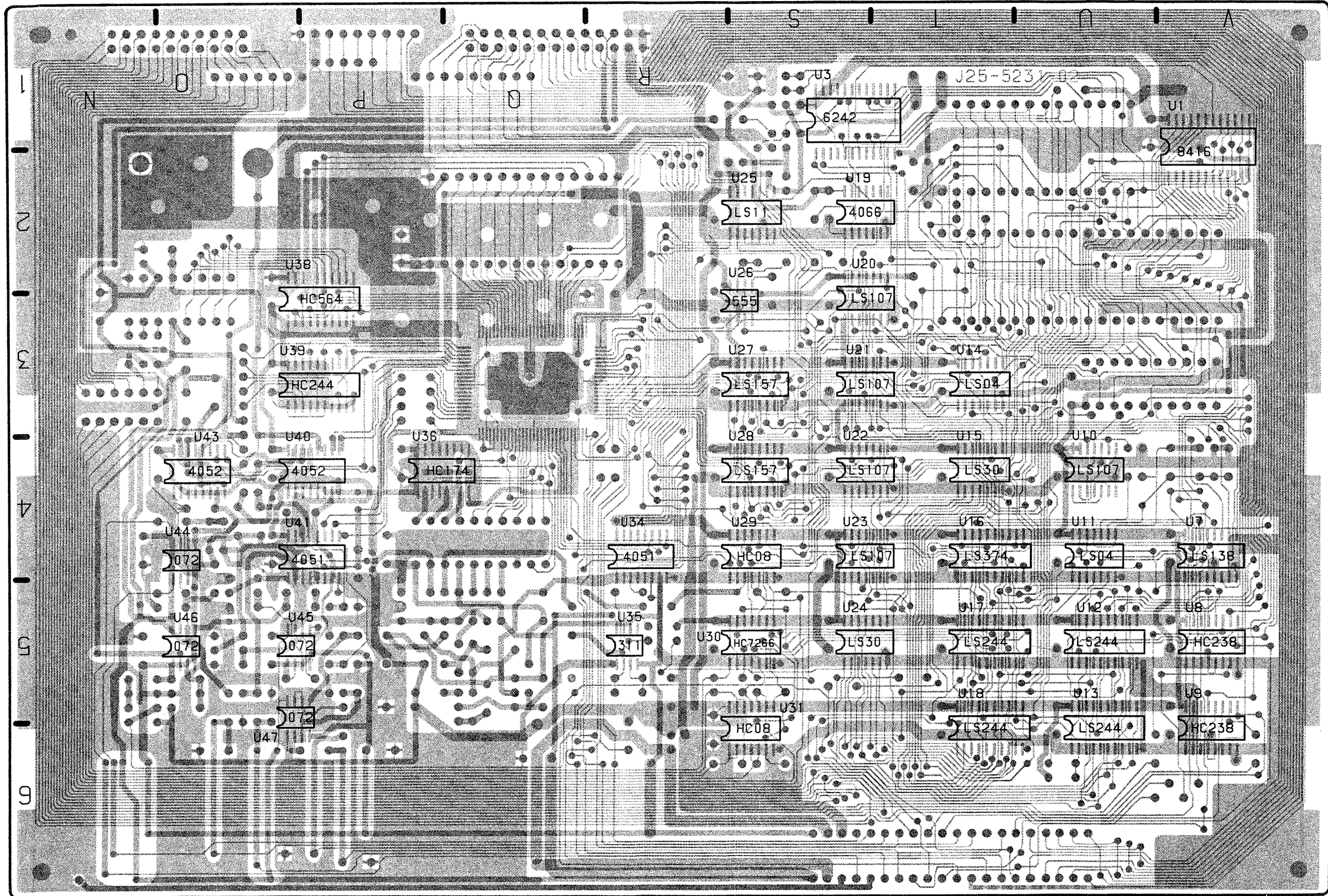
# P.C BOARD

R/O UNIT (X77-1490-00)



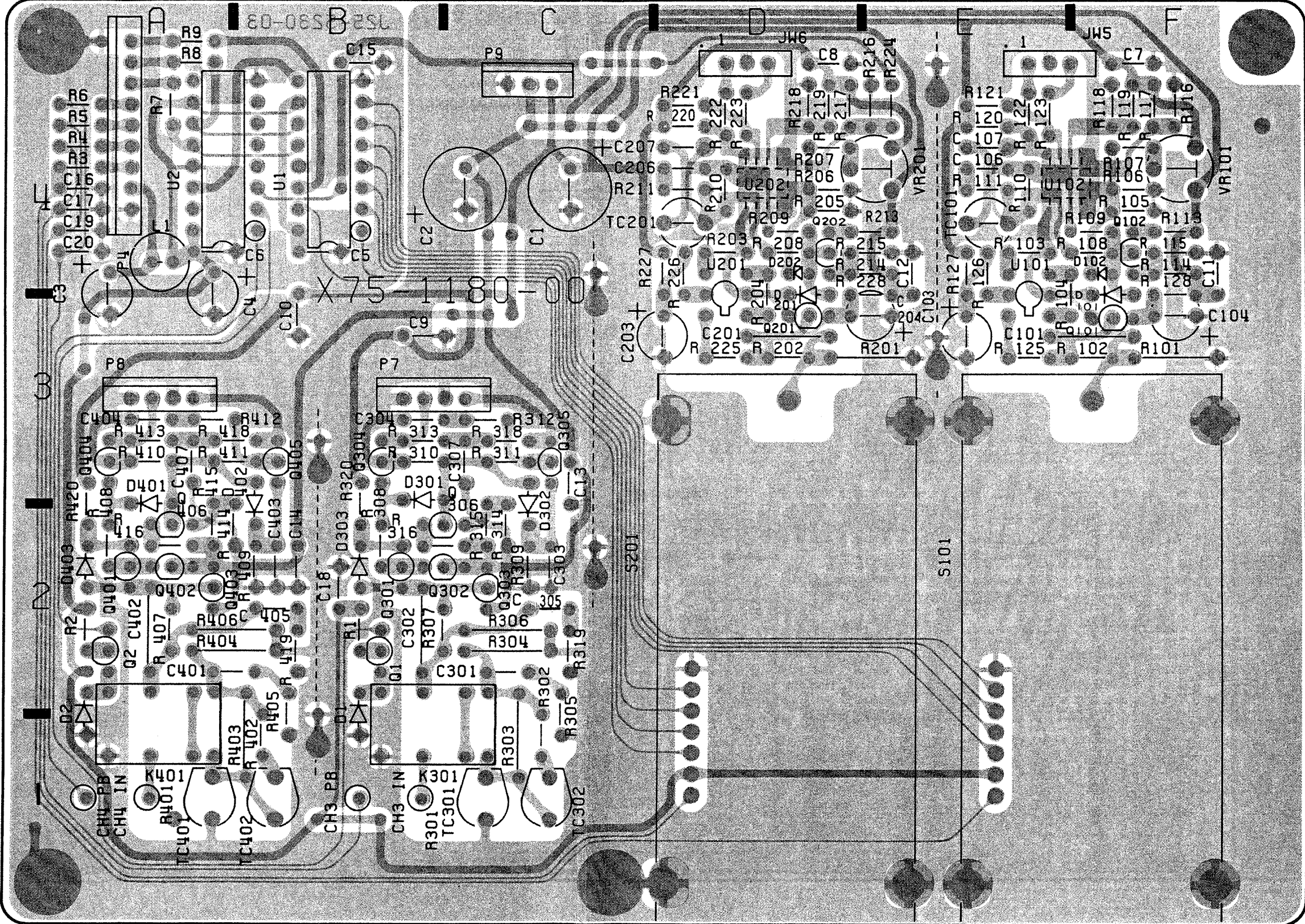
# P.C BOARD

R/O UNIT (X77-1490-00)



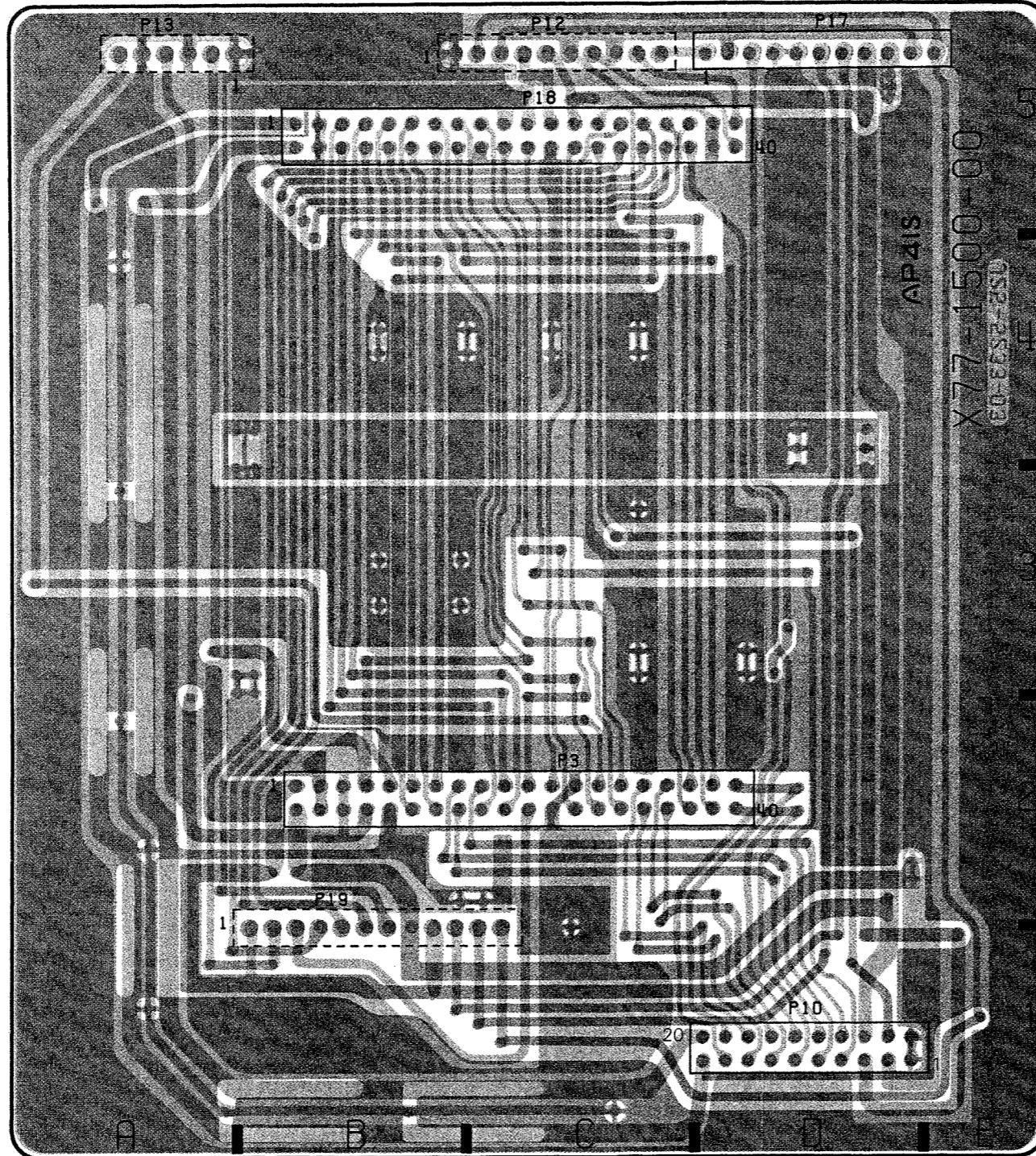
P.C BOARD

ATT UNIT (X75-1180-00)



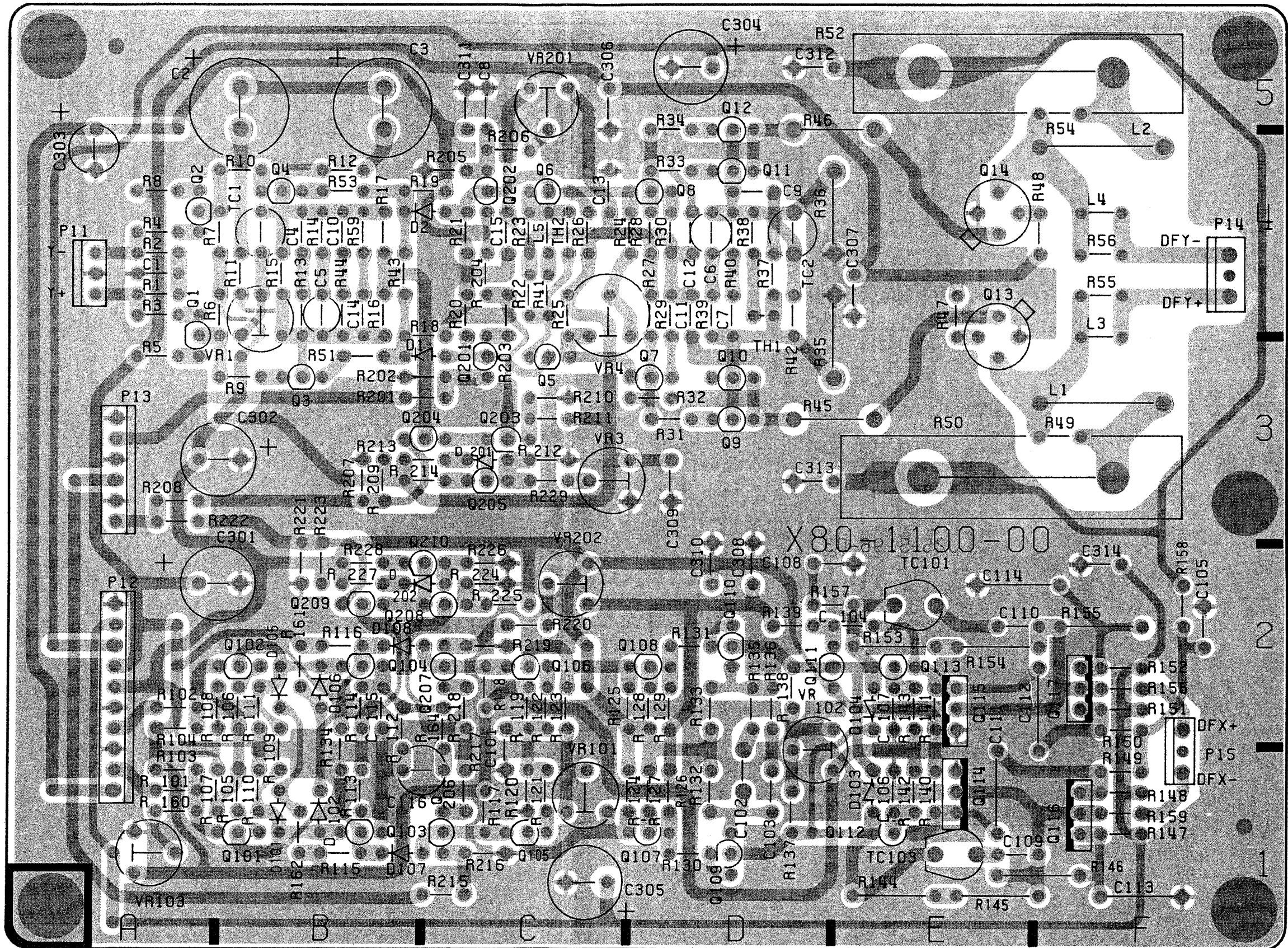
# P.C BOARD

CONNECTION UNIT (X77-1500-00)



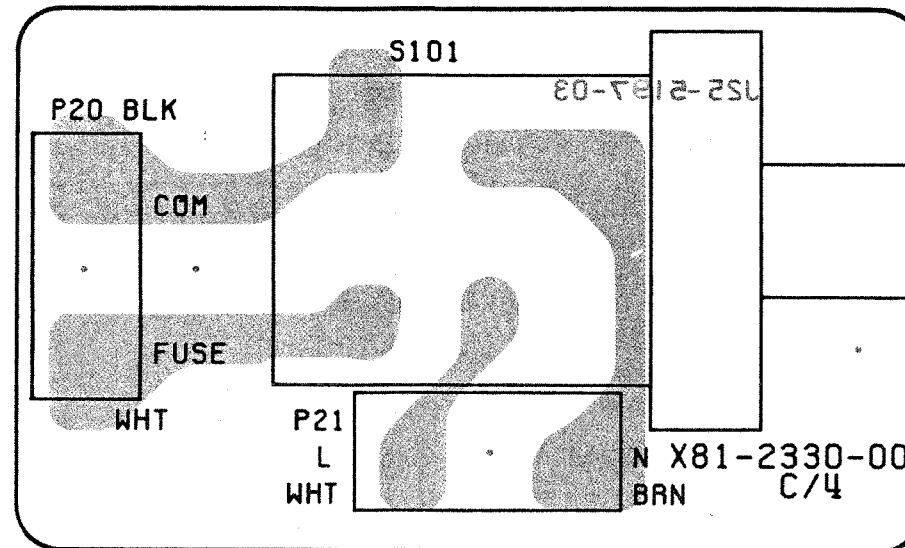
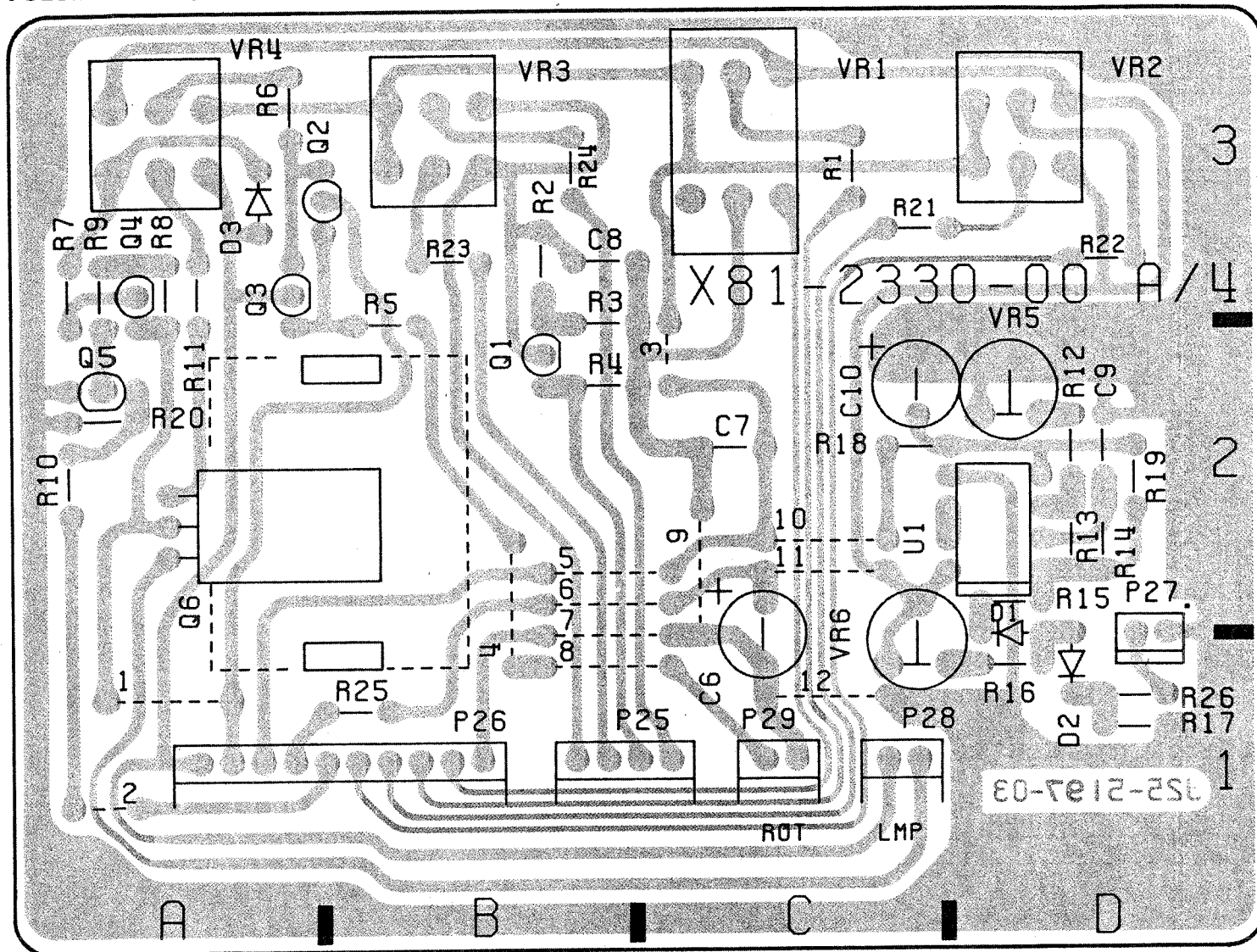
# P.C BOARD

FINAL UNIT (X80-1100-01)

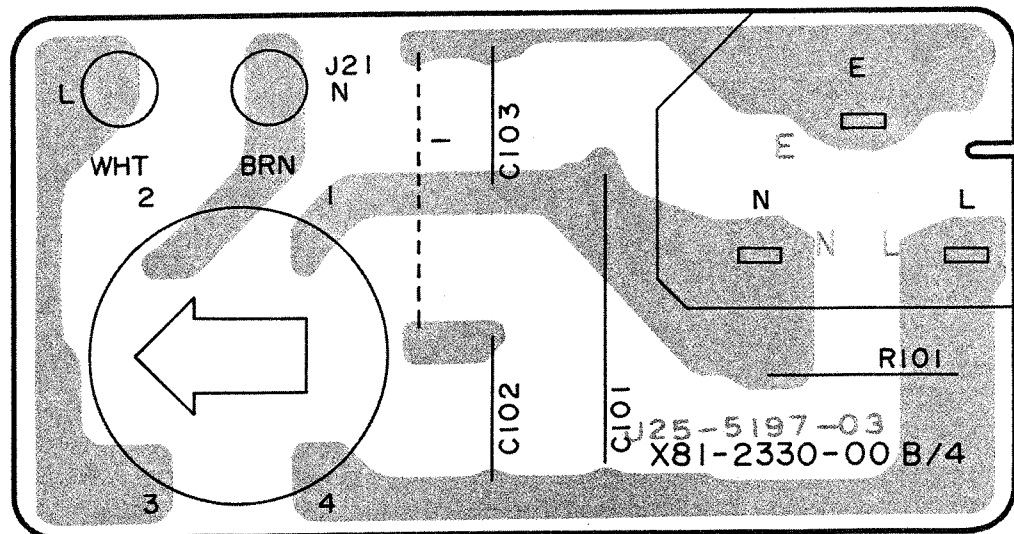
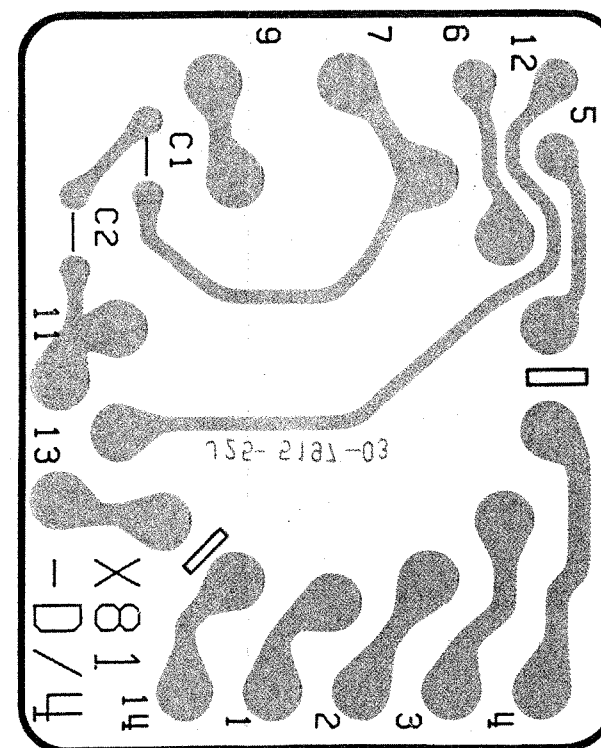


# P.C BOARD

VOLUME UNIT (X81-2330-01)














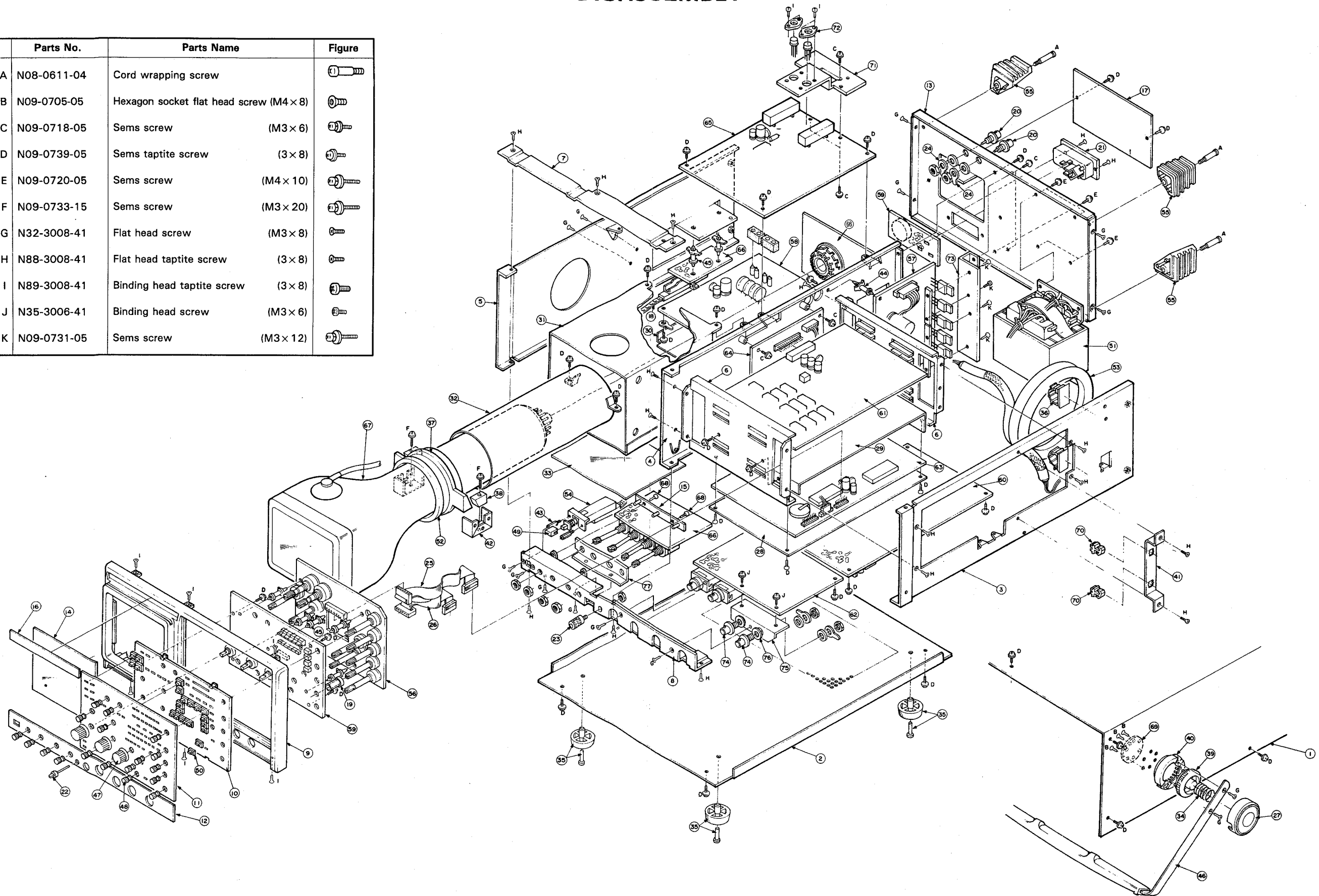
CRT SOCKET



Pattern side view

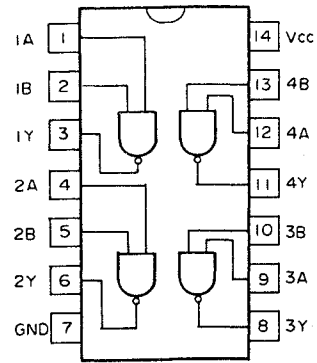
# DISASSEMBLY

	Parts No.	Parts Name	Figure
A	N08-0611-04	Cord wrapping screw	
B	N09-0705-05	Hexagon socket flat head screw (M4×8)	
C	N09-0718-05	Sems screw (M3×6)	
D	N09-0739-05	Sems taptime screw (3×8)	
E	N09-0720-05	Sems screw (M4×10)	
F	N09-0733-15	Sems screw (M3×20)	
G	N32-3008-41	Flat head screw (M3×8)	
H	N88-3008-41	Flat head taptime screw (3×8)	
I	N89-3008-41	Binding head taptime screw (3×8)	
J	N35-3006-41	Binding head screw (M3×6)	
K	N09-0731-05	Sems screw (M3×12)	

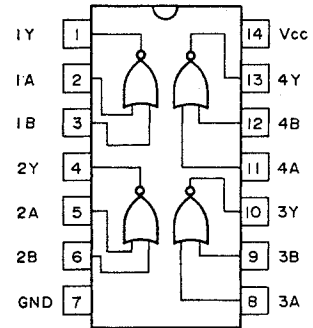




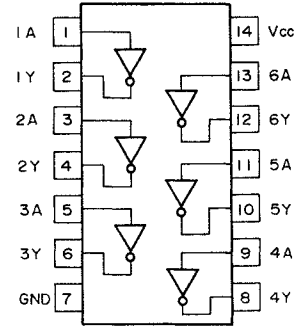
# SEMICONDUCTORS



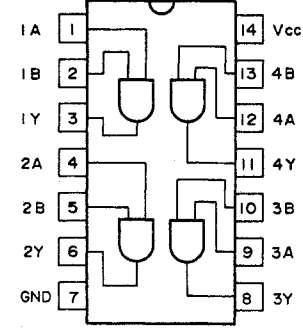
SN74ALS00AN



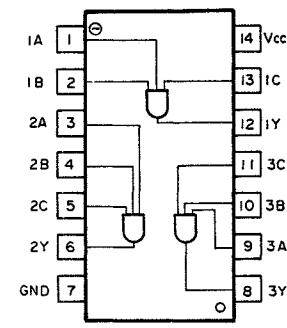
SN74ALS02N



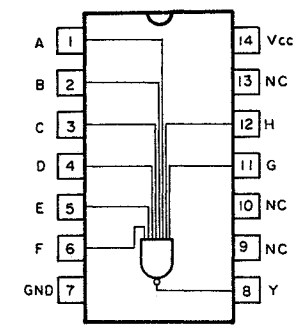
HD74LS04FP



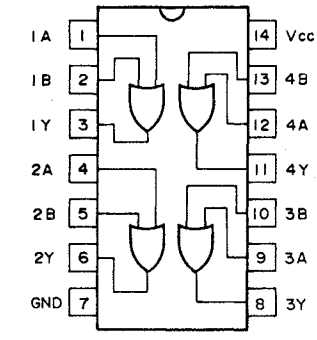
SN74ALS08N  
HD74HC08FP



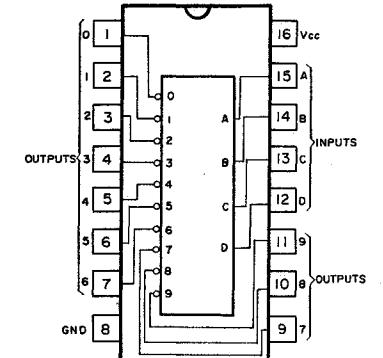
HD74LS11FP



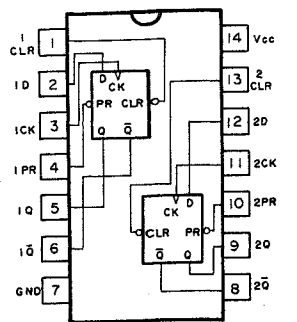
HD74LS30FP



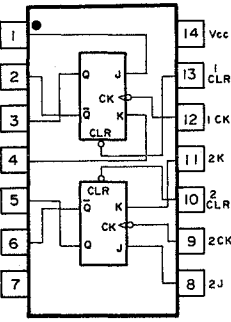
SN74ALS32N



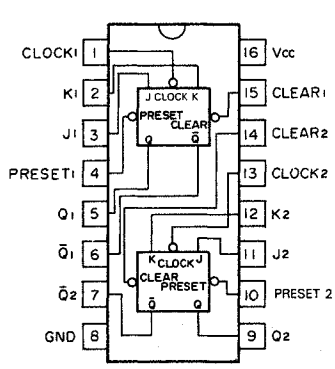
HD74LS42P



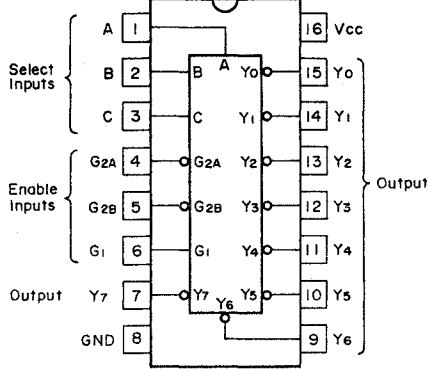
SN74ALS74AN



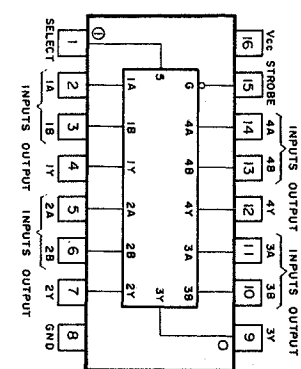
HD74LS107AFP  
HD74HC107FP



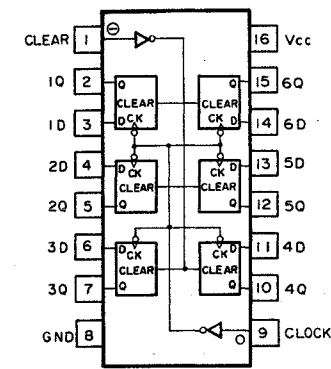
SN74ALS112AN



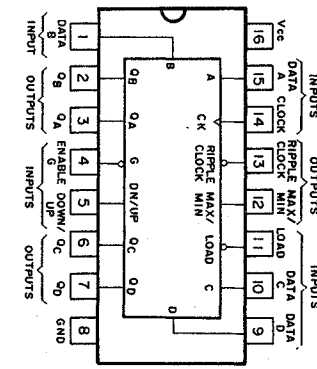
HD74LS138FP



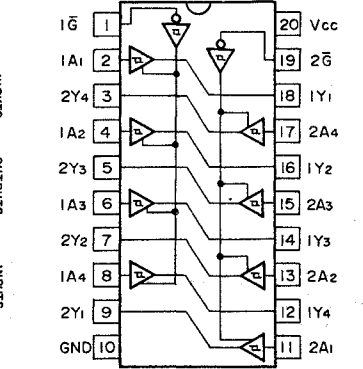
HD74LS157FP



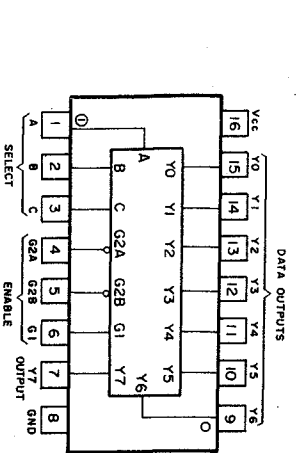
HD74HC174FP



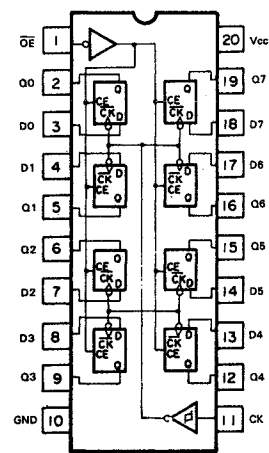
SN74ALS191N



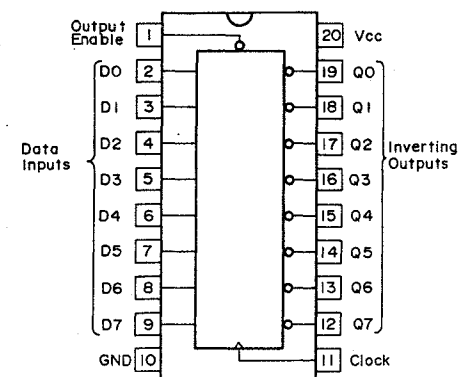
HD74LS244FP



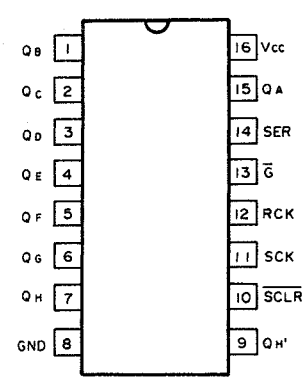
HD74HC238FP



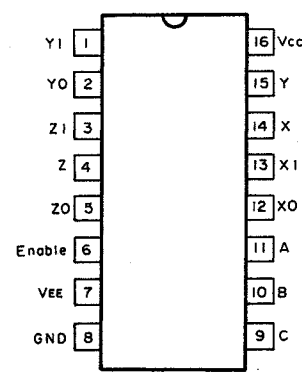
HD74LS374FP



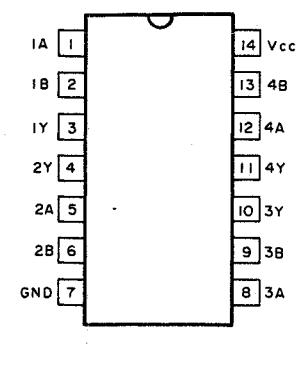
HD74HC564FP



HD74HC595P

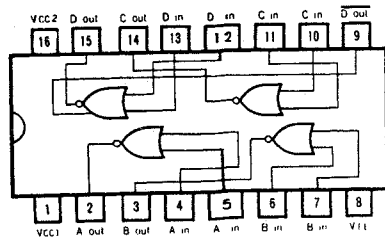


MC74HC4053N

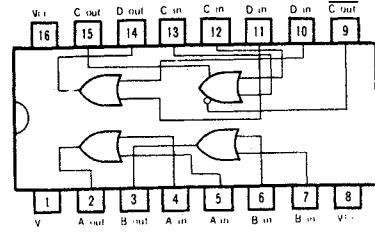


HD74HC7266FP

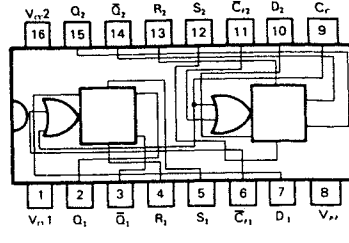
# SEMICONDUCTORS



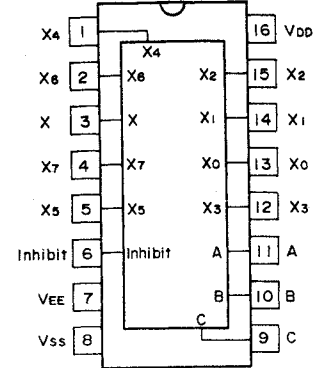
MC10H102L



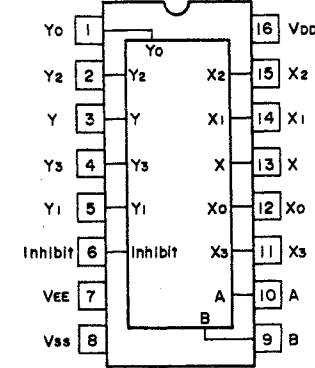
MC10103L



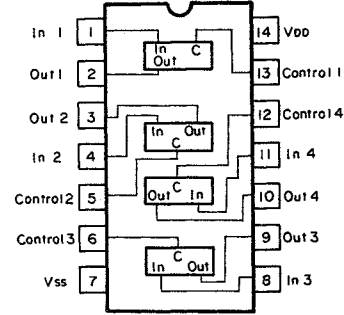
MC10H131L



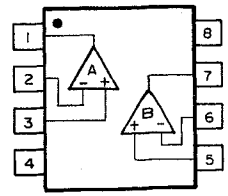
HD14051BFP



HD14052BFP  
MC14052BCP

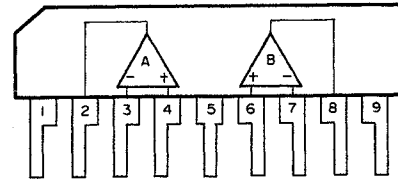


HD14066BFP



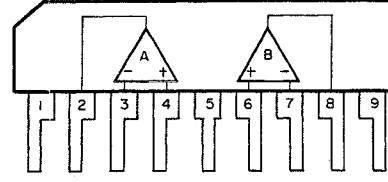
NJM072M

- Pin name
1. A OUTPUT
  2. A (-) INPUT
  3. A (+) INPUT
  4. V<sup>-</sup>
  5. B (+) INPUT
  6. B (-) INPUT
  7. B OUTPUT
  8. V<sup>+</sup>



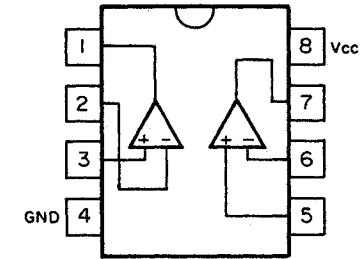
NJM072S

- Pin name
1. V<sup>+</sup>
  2. A OUTPUT
  3. A (-) INPUT
  4. A (+) INPUT
  5. V<sup>-</sup>
  6. B (+) INPUT
  7. B (-) INPUT
  8. B OUTPUT
  9. V<sup>+</sup>

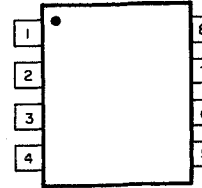


NJM4556S

- Pin name
1. V<sup>+</sup>
  2. A OUTPUT
  3. A - INPUT
  4. A + INPUT
  5. V<sup>-</sup>
  6. B + INPUT
  7. B - INPUT
  8. B OUTPUT
  9. V<sup>+</sup>

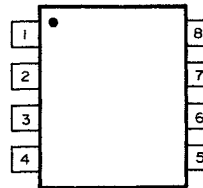


NJM4558D



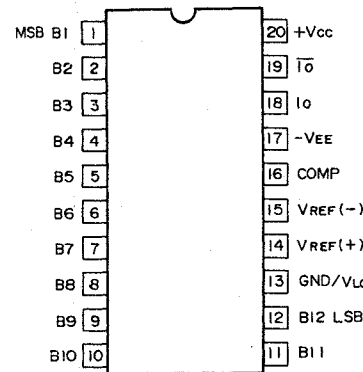
NJM311M

- Pin name
1. GROUND
  2. + INPUT
  3. - INPUT
  4. V<sup>-</sup>
  5. BAL
  6. BAL/STROBE
  7. OUTPUT
  8. V<sup>+</sup>

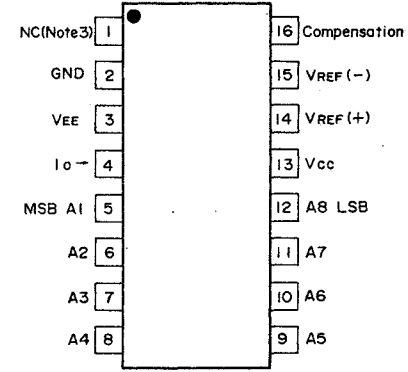


NJM555M

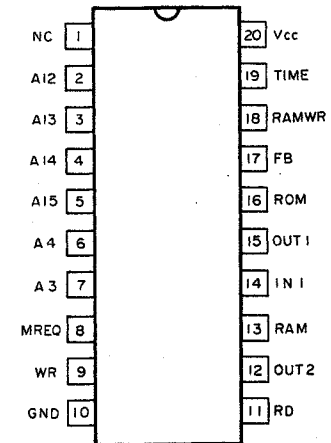
- Pin name
1. GND
  2. TRIGGER
  3. OUTPUT
  4. RESET
  5. CONTROL VOLTAGE
  6. SLESHHOLD
  7. DISCHARGE
  8. V<sup>+</sup>



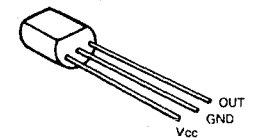
AM6012DC



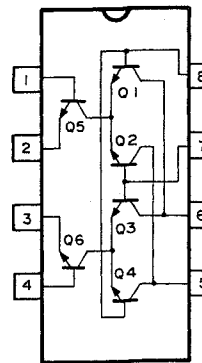
DAC0808LCN



DTM-5010

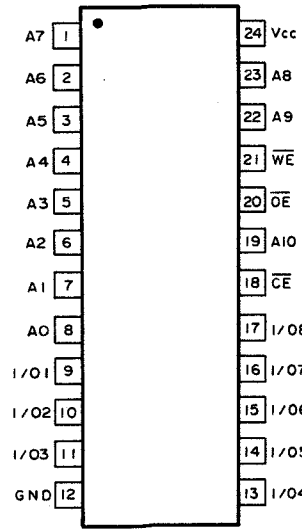


PST518B

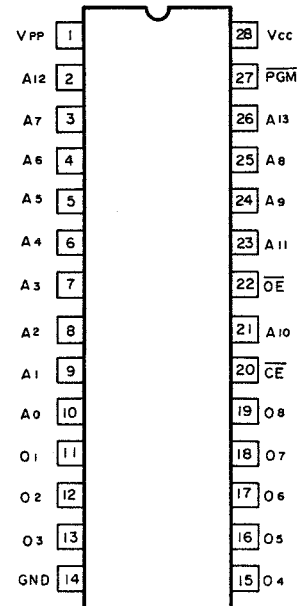


μPA101G

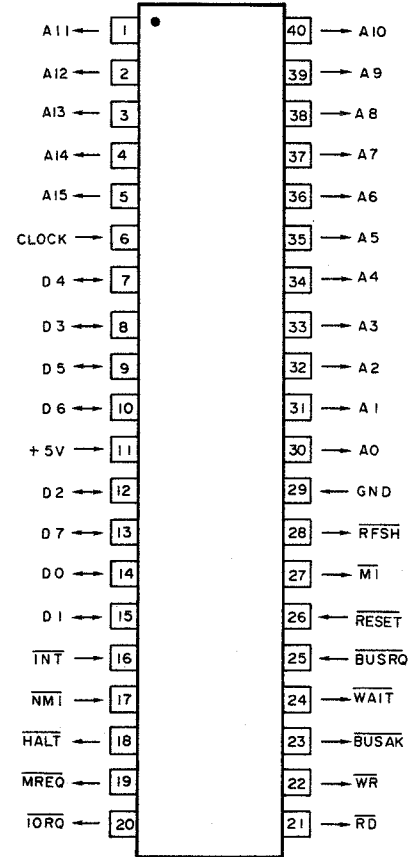
# SEMICONDUCTORS



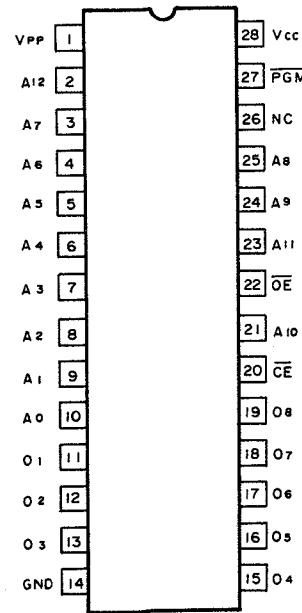
LC3517BML-15



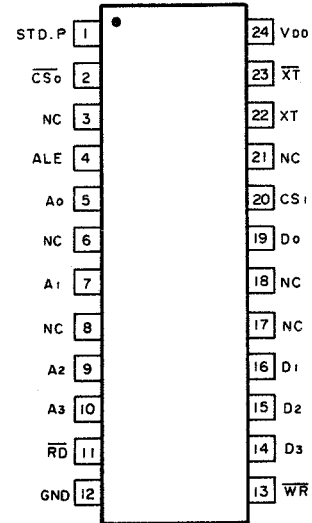
MBM27C128\*S



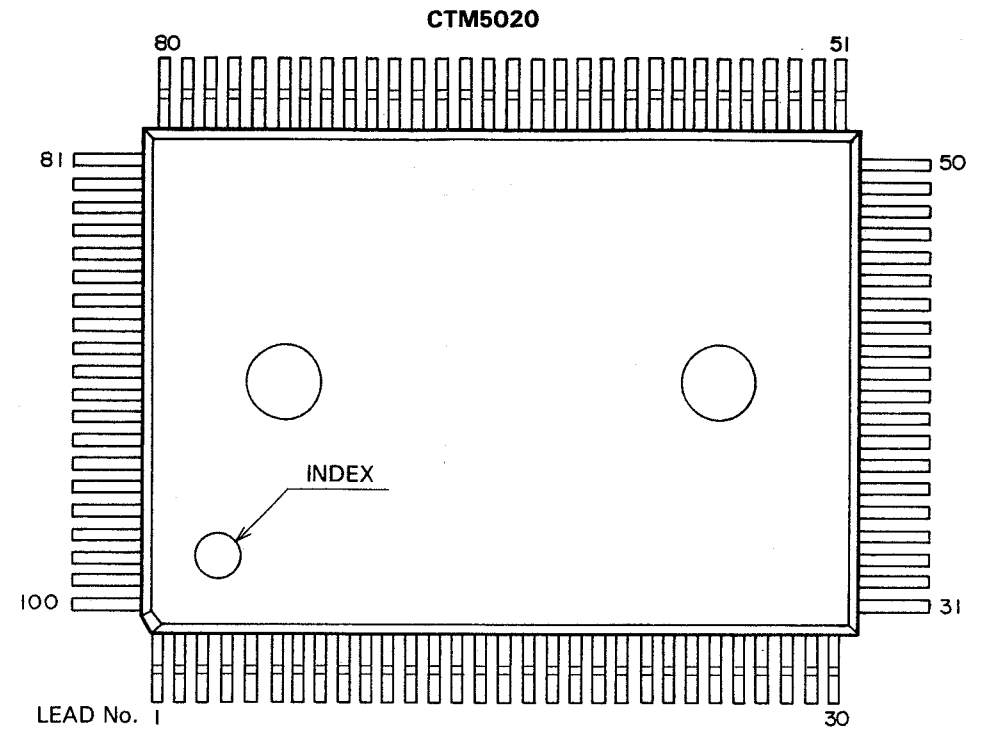
LHO080A



MBM27C64\*U

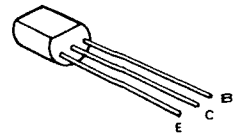


MSM6242BGS-VK

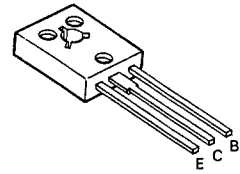


Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name
1	CONT	26	TSD0	51	GETD	76	DD3
2	A13	27	TSD1	52	CA0	77	SING
3	VDD	28	VDD	53	VDD	78	VDD
4	A14	29	TSD2	54	CA4	79	R10M
5	A15	30	AX2	55	CA3	80	10M
6	INT0	31	AX1	56	CA2	81	HLDF
7	VX3	32	AX0	57	CA1	82	SGA
8	VX2	33	AX3	58	CD3	83	ROSP
9	VX1	34	HS2	59	CD2	84	ROD
10	VX0	35	HS1	60	CD4	85	HLDL
11	DA0	36	TDIO	61	CD1	86	ROUB
12	DA1	37	TWE	62	CD5	87	ROB
13	DA2	38	TCK1	63	DC4	88	ROQ
14	DA3	39	TST1	64	CD7	89	ROED
15	VSS	40	VSS	65	VSS	90	VSS
16	DA4	41	TST2	66	DC3	91	D7
17	DA5	42	TADD	67	DC2	92	D5
18	DA6	43	TCK2	68	CD6	93	D3
19	DA7	44	VS2	69	DC1	94	D1
20	DA8	45	VS1	70	DC0	95	ALE
21	DA9	46	VA0	71	CD0	96	D6
22	ROR	47	VA4	72	DD7	97	D4
23	ROA	48	VA3	73	DD6	98	D2
24	LEVX	49	VA2	74	DD5	99	D0
25	TCL	50	VA1	75	DD4	100	WR

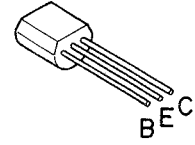
# SEMICONDUCTORS



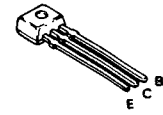
2SA684 (Q)  
2SA1208 (S, T)  
2SC2271 (D)  
2SC2910 (S, T)  
2SC1384 (R, S)



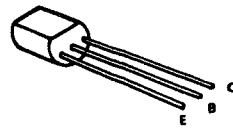
2SA1209 (S, T)  
2SA1406 (E, F)  
2SC2911 (S, T)  
2SC3600 (E, F)



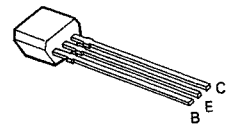
2SA1161  
2SC3779 (D)



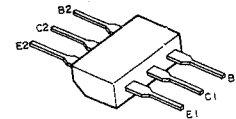
2SA1175 (E)  
2SC2785 (F)  
2SC3732 (L)



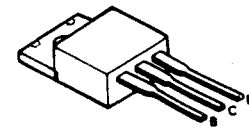
2SA1206



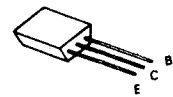
2SA1565  
2SC4049



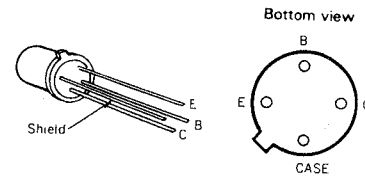
2SC4072  
2SC3066 (F)



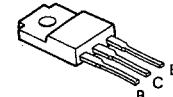
2SB1133 (S)  
2SD1666 (S)



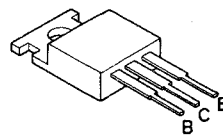
2SC3354 (T, S)



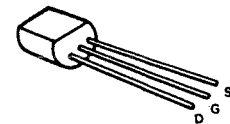
2SC1164 (O)\*S



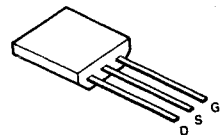
2SD1409



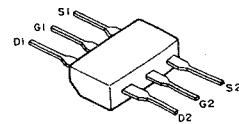
2SD613 (E)



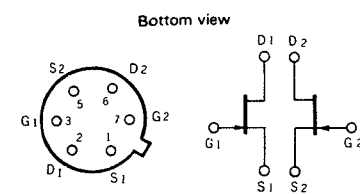
2SK583



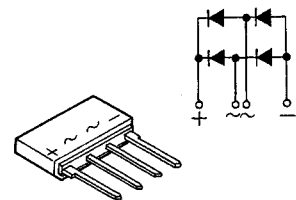
2SK241 (GR)



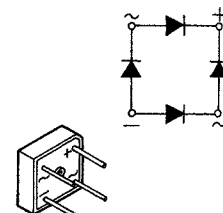
2SK332 (F)



DN1901



S1VB60



S4VB40F

A product of  
**KENWOOD CORPORATION**  
17-5, 2-chome, Shibuya, Shibuya-ku, Tokyo 150, Japan