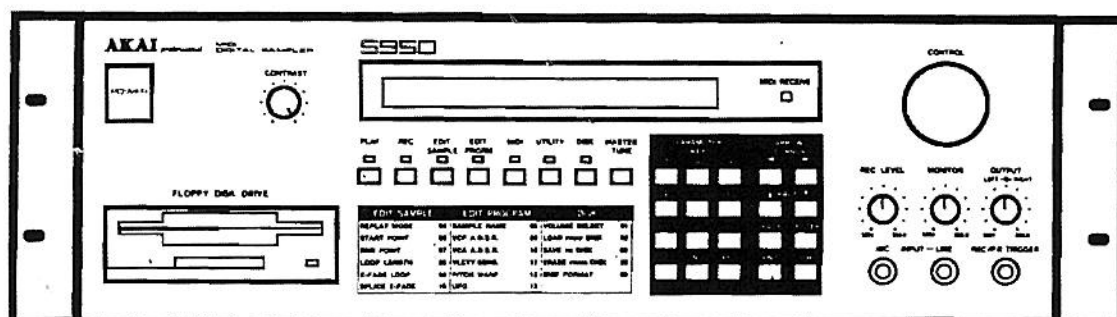


AKAI SERVICE MANUAL

S-950



MIDI DIGITAL SAMPLER

MODEL S950

SPECIFICATIONS

System	Digital sampling Sampling frequency : 7.5 kHz - 48kHz(MIN - MAX) Sampling time : 63.35 sec - 9.79 sec (MIN - MAX) Voice : 8 Voice Range : 6 Octave	Velocity switch Positional cross fade Time stretch Pitch warp LFO(delay rate, depth) Filter(Key tracking, Velocity, A.D.S.R) Sample merge
Storage	Built-in FLOPPY DISK DRIVE Memory capacity : 1 Mbyte(2DD) Memory Medium : 3.5 inch MICRO FLOPPY DISK (2DD, 2HD) Internal memory: 750 K byte (Expansion memory is adaptable)	Communication RS-232C or equivalent External jack MIDI(IN, OUT, THRU) Mic input × 1 Line input × 1 REC/PB trigger × 1 Line output × 8 Stereo output × 2 (L, R) Mix output × 1 Voice output × 1 (13 PIN/DIN)
Multi sampling	99	Dimensions 482.6(W) × 132.6(H) × 410(D) mm
Edit	Scanning(ONE SHOT, LOOPING, ALTERNATING) A.D.S.R(Velocity-Attack, Velocity Release)	Weight 10.8 kg

* For improvement purposes, specifications and design are subject to change without notice.

★ SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the Δ (*) symbol are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
These must also be replaced only with specified replacements.
Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation tape
 - 2) PVC tubing
 - 3) Spacers (insulating barriers)
 - 4) Insulation sheets for transistors
 - 5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

7. Check that replaced wires do not contact sharpened or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.

The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal-input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 μ F capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.

The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 Mohms.



(DANGER)



(RECOMMENDED WAY)

★ INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

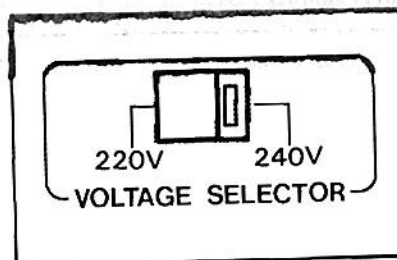
Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
A	USA
B	UK
C	Canada
E	Europe (except UK)
J	Japan
S	Australia
V	W. Germany only
U	Universal Area
Y*	Custom version

VOLTAGE CONVERSION

(E, V, B, S) Model only)

Before connecting the power cord. Set the VOLTAGE SELECTOR located on the rear panel with a screwdriver so that the correct voltage is indicated.

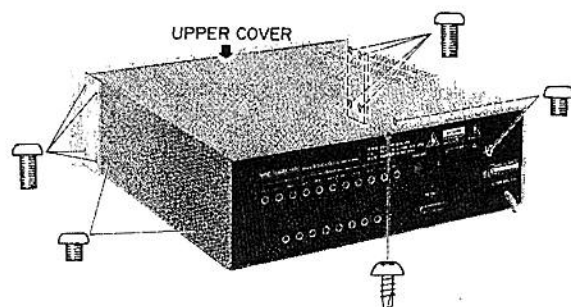


I. DISASSEMBLY

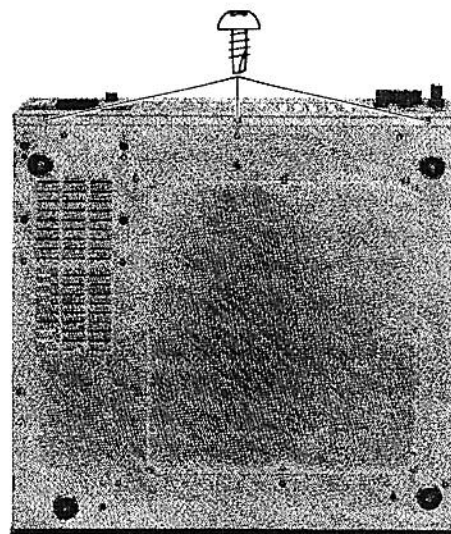
In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in the reverse order.

* Photographs employed on this page are of model S900.

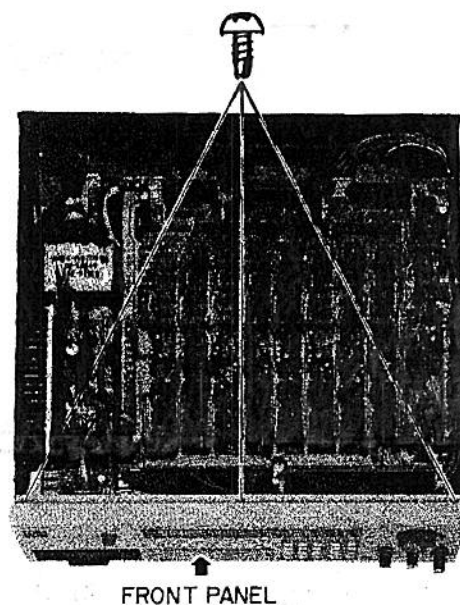
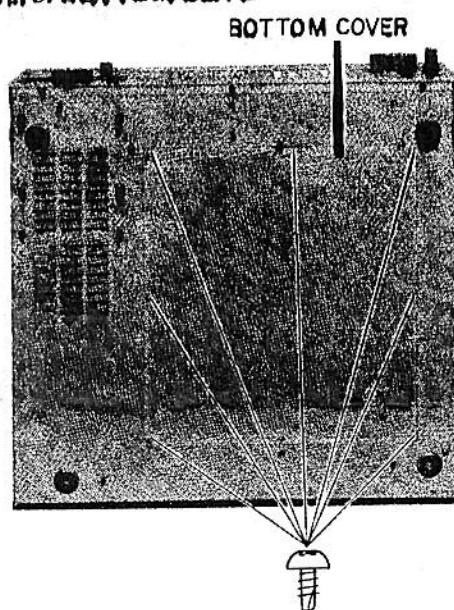
1. Removal of UPPER COVER



3. Removal of FRONT PANEL



2. Removal of BOTTOM COVER



II. CONTROLS

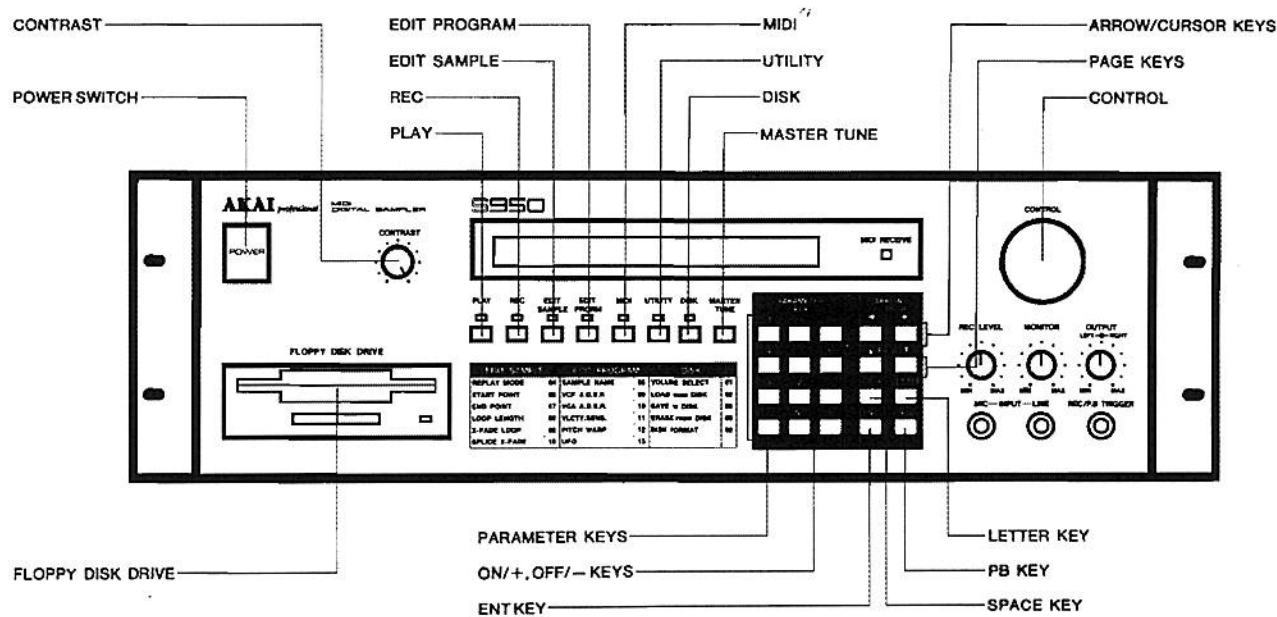


Fig. 2-1

III. CONNECTIONS

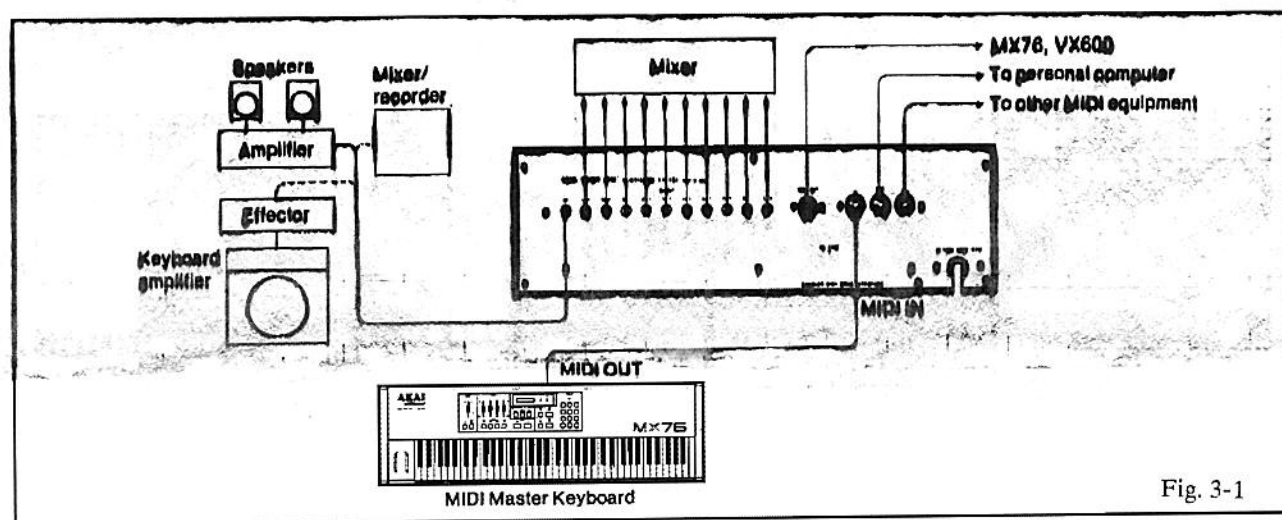


Fig. 3-1

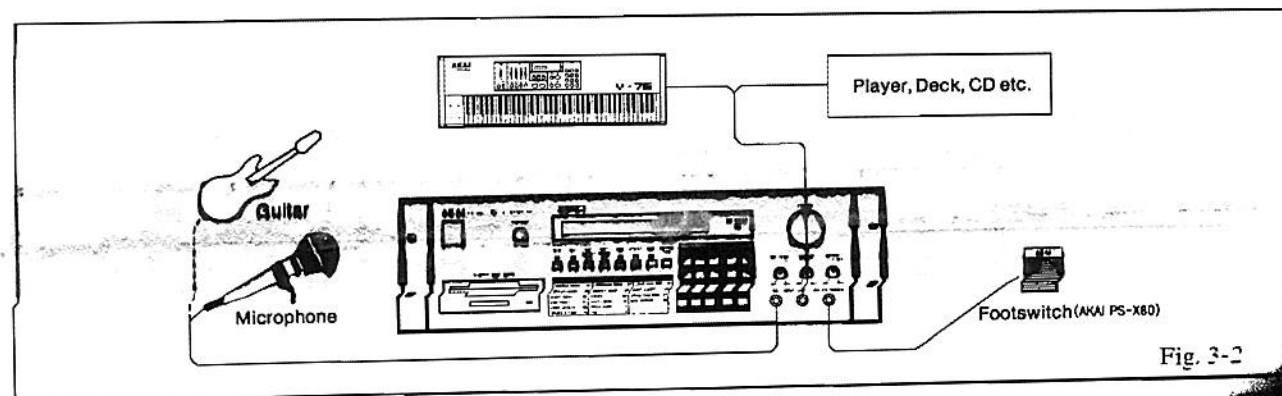


Fig. 3-2

IV. PRINCIPAL PARTS LOCATION

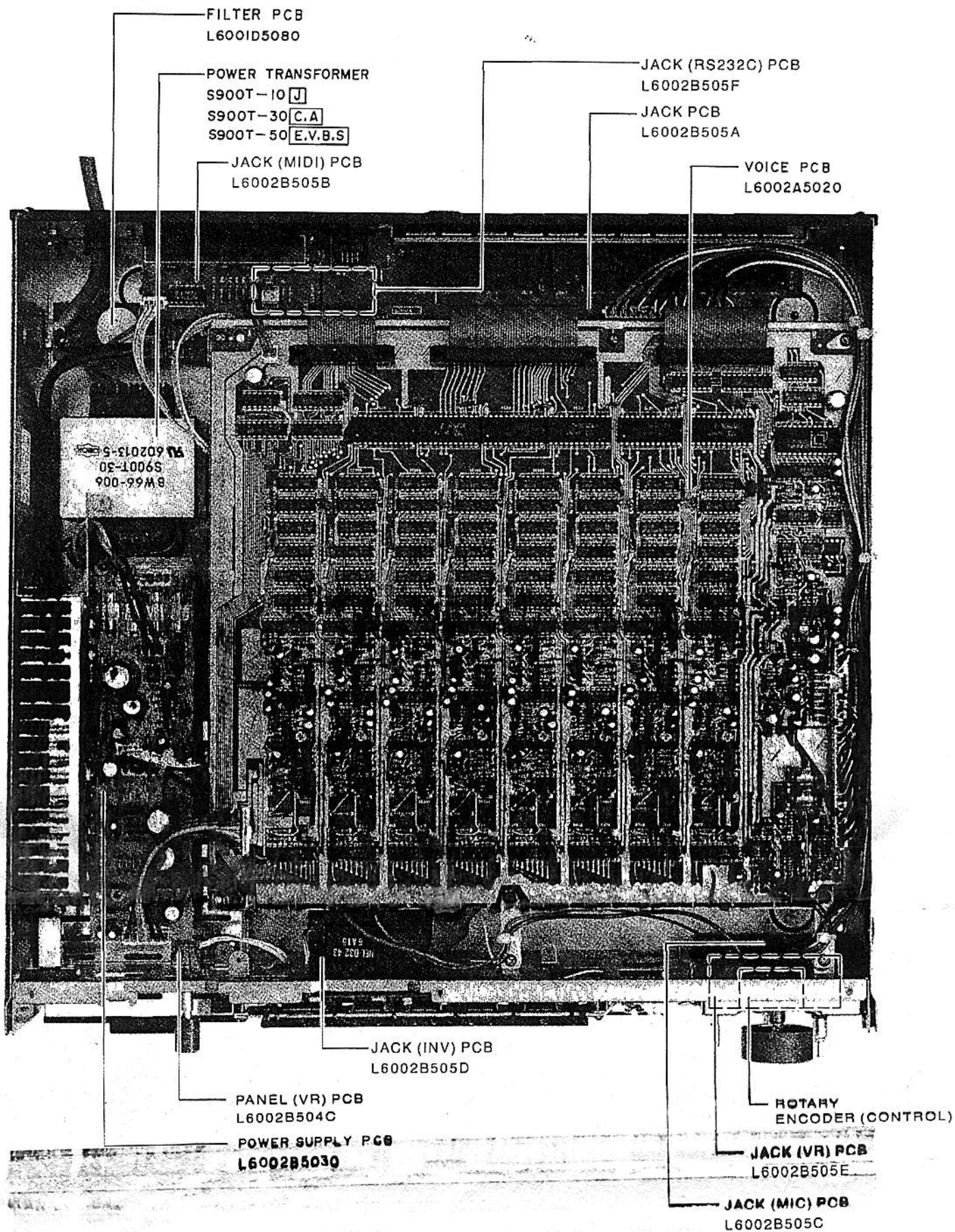


Fig. 4-1

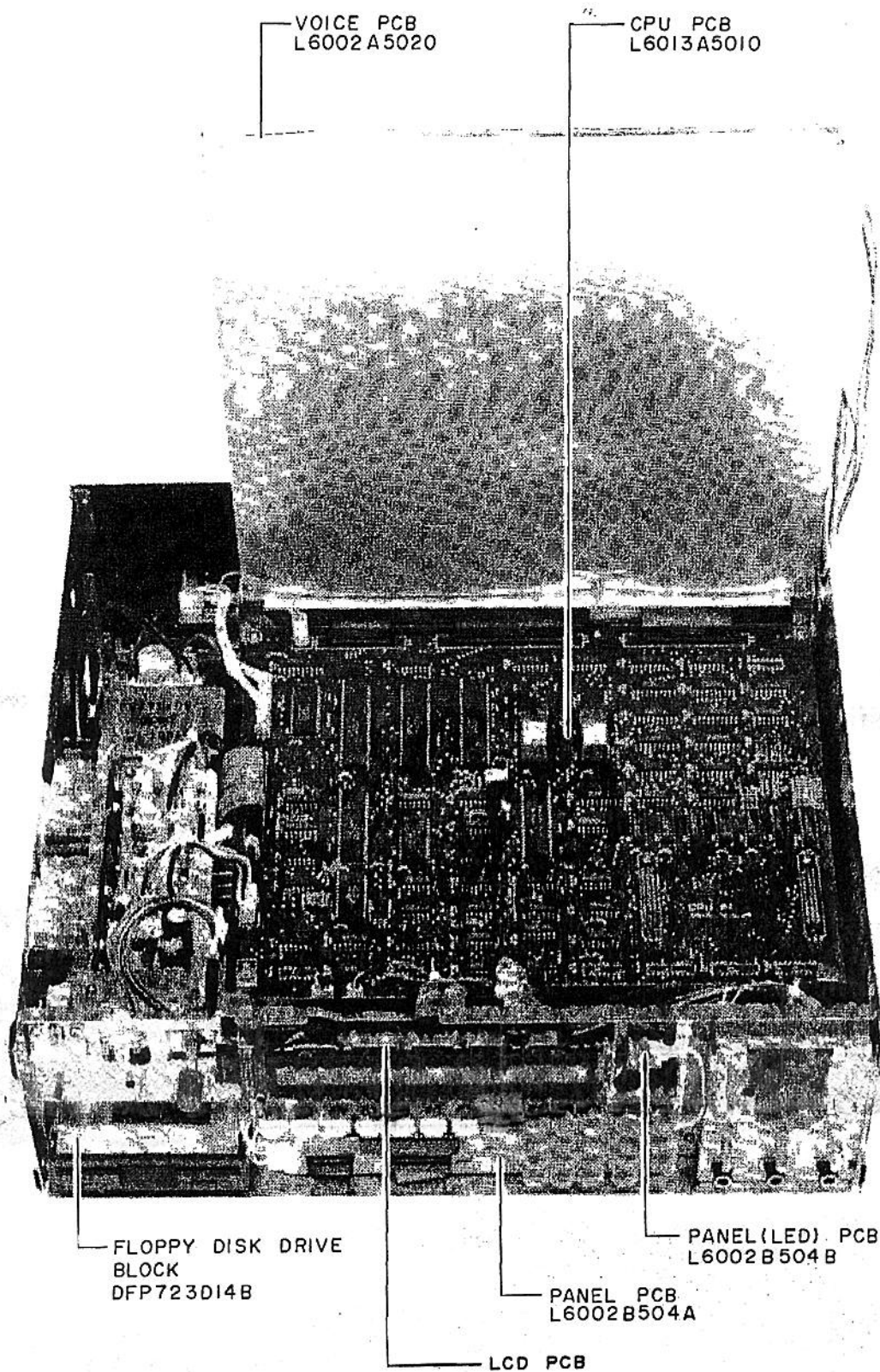


Fig. 4-2

V. ADJUSTMENT

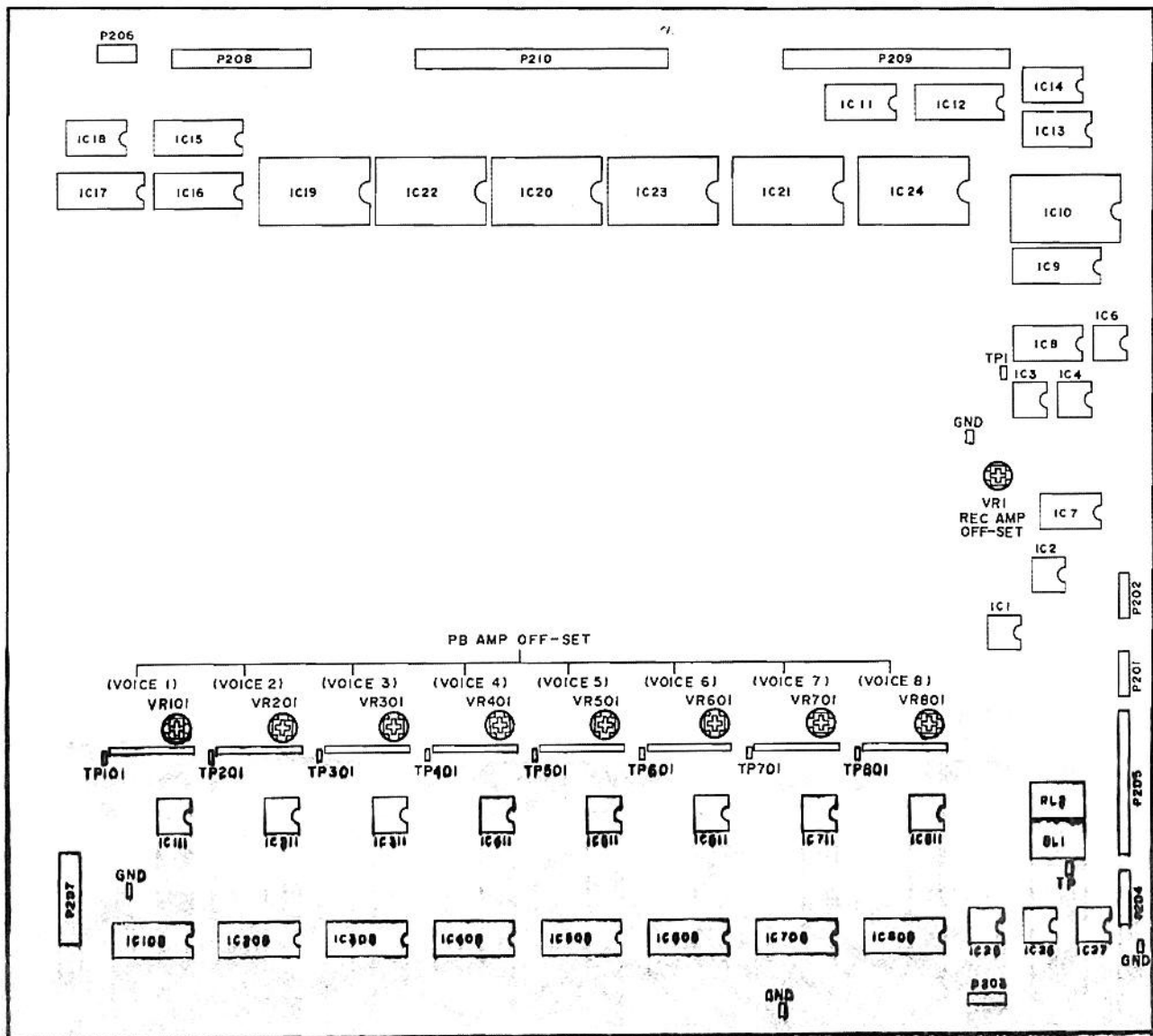


Fig. 5-1 Adjustment points of VOICE PCB

5-1. ADJUSTMENT OF REC AMP OFF-SET

- 1) Connect the digital DC voltmeter between TP1(REC AMP OFF-SET) and TP(GND).
- 2) Adjust VR1(REC AMP OFF-SET) so that the reading on the digital DC voltmeter is $DC\ 0 \pm 1mV$.

5-2. ADJUSTMENT OF PB AMP OFF-SET

- 1) Connect the digital DC voltmeter between TP101(PB AMP OFF-SET) and TP(GND).
- 2) Set the REC LEVEL control to "MIN" position, and record with no signal input condition.
- 3) After recording, read the voltage on the digital DC voltmeter, then push the PB button on the front panel and read the voltage again.
- 4) Adjust VR101(VOICE 1 PB AMP OFF-SET) so that the both reading voltages are equal or the voltage difference is within $\pm 5\ mV$.
- 5) Adjust VR201(VOICE 2 PB AMP OFF-SET) to VR801(VOICE 8 PB AMP OFF-SET) as same maner as 1 to 4).

[MIDI DIGITAL SAMPLER]

Model S950 MIDI Implementation Chart Version : 1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	×	1	Without Disk Memorized(Disk)
	Changed	×	1-16	
Mode	Default	×	Mode 1	Without Disk Memorized(Disk)
	Messages Altered	×	Mode1 - 4 Omni on/off, P/M ×	
Note Number : True voice		×	0 - 127	
		*****	24 - 96	
Velocity Note ON Note OFF		×	○ 9n V=1 - 127	Used Velocity release
		×	○ 9n V=0 or 8n V=0 - 127	
After Touch	Key's	×	×	
	Ch's	×	○	
Pitch Bender		×	○	0 - 2: Half tone step (7 bit)
Control Change	1	×	○	Modulation wheel
	64	×	○	Damper pedal
Prog Change : True#		×	1 - 127	by preset number value
		*****	1 - 127	
System Exclusive		○	○	ID: 47
System Common	Song Pos	×	×	
	Song Sel	×	×	
	Tune	×	×	
System Real time	Clock	×	×	
	Commands	×	×	
Aux Messages	: Local ON/OFF	×	×	
	: All Notes OFF	×	○ (123)	
	: Active Sense	×	×	
	: Reset	×	×	
Notes				

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONO

○ : Yes
× : No

ATTENTION

1. When placing an order for parts, be sure to list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering.
If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification
This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination
 [A]: AAL (U.S.A.) [S]: SAA (Australia)
 [B]: BEAB (England) [U]: U/T (Universal Area)
 [C]: CSA (Canada) [E]: CEE (Europe) [V]: VDE (W. Germany)
 [J]: JPN (Japan) [Y]: Custom Version

SP (Service Parts) Classification
These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTROLLED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	BB-389042J	FLOPPY DISK DFP723D14B	50	EI-378218	IC MB81C4256-10-G
2	*BT-365907	TRANS POWER S900T-10(J)	51	EI-372103	IC MB89254
		[J]	52	EI-360058	IC MF6CN-50
3	*BT-365908	TRANS POWER S900T-30(A,C)	53	EI-375346	IC MM74HCO4N
		[A,C,Y1]	54	EI-375347	IC MM74HC14N
4	*BT-365909	TRANS POWER S900T-50(E,V,B,S)	55	EI-375345	IC MM74HC373N
		[E,V,B,S]	56	EI-360043	IC M5220P
5	ED-364261	D LED SLP-981C-50	57	*EI-348123	IC M5230L
6	*ED-365819	D SILICON CTU-12R 200/ 6.0A	58	EI-362588	IC M5238P
7	*ED-365818	D SILICON CTU-12S 200/ 6.0A	59	*EI-365822	IC NJM78M06A
8	*ED-330319	D SILICON DBA10B 100/1.0A	60	*EI-365823	IC NJM79M06A
9	*ED-357038	D SILICON DBB10B 100/1.0A	61	EI-365798	IC SED9420CAC
10	ED-301911	D SILICON H DS448	62	EI-310044	IC SN74LS05N
11	ED-370990	D SILICON ISR35-100AHS F10	63	*EI-365820	IC STR9005
12	*ED-346617	D ZENER H HZ12 C2	64	*EI-347758	IC TA78012AP
13	*EF-355226	FUSE BET T 250V 1.00A	65	EI-360038	IC TC74HC02P
		[B]	66	EI-360039	IC TC74HC08P
14	*EF-359225	FUSE BET T 250V 3.15A	67	EI-365846	IC TC74HC109P
		[B]	68	EI-360025	IC TC74HC138P
5	*EF-358974	FUSE BET T 250V 630MA	69	EI-356049	IC TC74HC139P
		[B]	70	EI-372578	IC TC74HC153P
16	*EF-358641	FUSE BET T 250V 800MA	71	EI-365840	IC TC74HC155P
		[B]	72	EI-360035	IC TC74HC157P
17	*EF-623103	FUSE SEMKO T 250V 1.00A	73	EI-360048	IC TC74HC173P
		[E,V,S]	74	EI-360054	IC TC74HC174P
18	*EF-691007	FUSE SEMKO T 250V 3.15A	75	EI-360053	IC TC74HC175P
		[E,V,S]	76	EI-365802	IC TC74HC191P
19	*EF-601842	FUSE SEMKO T 250V 630MA	77	EI-365101	IC TC74HC195P
		[E,V,S]	78	EI-365801	IC TC74HC257P
20	*EF-258344	FUSE SEMKO T 250V 800MA	79	EI-360042	IC TC74HC259P
		[E,V,S]	80	EI-384782J	IC TC74HC365P
21	*EF-308387	FUSE TSC A 250V 1.00A	81	EI-360047	IC TC74HC374P
		[J]	82	EI-365831	IC TC74HC393P
22	*EF-308851	FUSE TSC A 250V 2.50A	83	EI-365803	IC TC74HC4002P
		[J]	84	EI-365830	IC TC74HC870P
23	*EF-308852	FUSE TSC A 250V 4.00A	85	EI-360027	IC TC74HC86P
		[J]	86	EI-365828	IC UPC812C-AK
24	*EF-308124	FUSE TSC A 250V 630MA	87	EI-365782	IC UPD70118C-8
		[J]	88	EI-365793	IC UPD71011C
25	*EF-310220	FUSE TSC 125V 1.00A	89	EI-365813	IC UPD71055C
		[C,A,Y1]	90	EI-365785	IC UPD71058C
26	*EF-308954	FUSE TSC 125V 2.00A	91	EI-365784	IC UPD71071C
		[C,A,Y1]	92	EI-378275	IC UPD72088C
27	*EF-308857	FUSE TSC 125V 4.00A	93	EI-364146	IC UPD8253C-2
		[C,A,Y1]	94	EI-365811	OSC XTAL NR18 16.000MHZ
28	*EF-308703	FUSE TSC 125V 830MA	95	EM-365844	IND LCD DMC40218UE
		[C,A,Y1]			[INC. PCB]
29	EI-347688	COMP R EXB-P88 472K	96	EO-360068	COIL LF LF-2 R
30	EI-360049	IC AM2504PC	97	*ER-324185	R CB H S10 FS RDS 1/4W 221J
31	EI-354283	IC BA6110	98	*ER-328189	R FUSE H S10 ERD2PC 1/4W 22R0G
32	EI-390060	IC BA9201	99	*ER-366747	R QMF H S16 FS 1W 820J
33	EI-360050	IC BA9221	100	ES-365843	SW EWT-XDFK2550B
34	EI-389128J	IC CD74AC138E			[E,V,B,S]
35	EI-360045	IC DG211CJ			SW PUSH SDDLD1 01-1
36	EI-389049J	IC HD63B50P	101	*ES-307400	SW SLIDE J-S4013#01 01-2
37	EI-389061J	IC HD74AC04P	102	*ES-306430	[E,V,B,S]
38	EI-389060J	IC HD74AC158P			SW TACT SPPQ19
39	EI-389050J	IC HD74AC32P	103	ES-365851	DETECTOR PC900V
40	EI-388711J	IC HD74HC00P	104	ET-354167	TR 2SA1317 S,T,U
41	EI-387934J	IC HD74HC04P	105	ET-353899	TR 2SB891 Q,R
42	EI-388707J	IC HD74HC244P	106	*ET-356817	TR 2SC3330 U,V F05
43	EI-388712J	IC HD74HC245P	107	ET-360137	TR 2SD1189 Q,R
44	EI-388708J	IC HD74HC32P	108	*ET-354083	VR ROTARY RK1612221 B103X2
45	EI-365808	IC HD75188P	109	EV-389054J	VR ROTARY RK1631110 A103
46	EI-365805	IC HD75189P	110	EV-389052J	VR ROTARY RK1631110 B103
47	EI-360854	IC IR9311	111	EV-389053J	VR ROTARY 16P10X2G
48	EI-367571	IC LA8358T	112	EV-365817	MULTI BLK INVERTER NEL-D32-43
49	EI-378295	IC MBM27C256-15CZ-G	113	VT-365945	

2. PC BORAD BLOCK

Ref. No.	Part No.	Description
1	BA-L6002A050B	PC VOICE BLK S950
2	BA-L6013A040A	PC CPU BLK S950
3	BA-L6002A020A	PC(#) PANEL BLK S900
4	BA-L6002A080B	PC(#) JACK BLK S950
5	BA-L6002A060A	POWER BLK S900

3. VOICE P.C BOARD

Ref. No.	Part No.	Description
D1	ED-301911	D SILICON H DS448
D2	ED-370990	D SILICON 1SR35-100AHS F10
IC1	EI-360043	IC M5220P
IC2	EI-362588	IC M5238P
IC3	EI-362588	IC M5238P
IC4	EI-365829	IC UPC812C-AK
IC6	EI-360954	IC IR9311
IC7	EI-360058	IC MF6CN-50
IC8	EI-360045	IC DG211CJ
IC9	EI-360050	IC BA9221
IC10	EI-360049	IC AM2504PC
IC11	EI-360048	IC TC74HC173P
IC12	EI-360047	IC TC74HC374P
IC13	EI-365846	IC TC74HC109P
IC14	EI-360038	IC TC74HC02P
IC15	EI-360047	IC TC74HC374P
IC16	EI-360047	IC TC74HC374P
IC17	EI-388707J	IC HD74HC244P
IC18	EI-375346	IC MM74HCO4N
IC19	EI-372103	IC MB89254
IC20	EI-372103	IC MB89254
IC21	EI-372103	IC MB89254
IC22	EI-354146	IC UPD8253C-2
IC23	EI-354146	IC UPD8253C-2
IC24	EI-354146	IC UPD8253C-2
IC25	EI-362588	IC M5238P
IC26	EI-362588	IC M5238P
IC27	EI-362588	IC M5238P
IC101	EI-365830	IC TC74HC670P
IC102	EI-365830	IC TC74HC670P
IC103	EI-365830	IC TC74HC670P
IC104	EI-365831	IC TC74HC393P
IC105	EI-360038	IC TC74HC02P
IC106	EI-360027	IC TC74HC86P
IC107	EI-360050	IC BA9221
IC108	EI-360060	IC BA9201
IC109	EI-360058	IC MF6CN-50
IC110	EI-354283	IC BA6110
IC111	EI-367571	IC LA6358T
IC201	EI-365830	IC TC74HC670P
IC202	EI-365830	IC TC74HC670P
IC203	EI-365830	IC TC74HC670P
IC204	EI-365831	IC TC74HC393P
IC205	EI-360038	IC TC74HC02P
IC206	EI-360027	IC TC74HC86P
IC207	EI-360050	IC BA9221
IC208	EI-390060	IC BA9201
IC209	EI-360058	IC MF6CN-50
IC210	EI-354283	IC BA6110
IC211	EI-367571	IC LA6358T
IC301	EI-365830	IC TC74HC670P
IC302	EI-365830	IC TC74HC670P
IC303	EI-365830	IC TC74HC670P
IC304	EI-365831	IC TC74HC393P
IC305	EI-360038	IC TC74HC02P
IC306	EI-360027	IC TC74HC86P
IC307	EI-360050	IC BA9221
IC308	EI-390060	IC BA9201
IC309	EI-360058	IC MF6CN-50
IC310	EI-354283	IC BA6110
IC311	EI-367571	IC LA6358T
IC401	EI-365830	IC TC74HC670P
IC402	EI-365830	IC TC74HC670P

Ref. No.	Part No.	Description
IC403	EI-365830	IC TC74HC670P
IC404	EI-365831	IC TC74HC393P
IC405	EI-360038	IC TC74HC02P
IC406	EI-360027	IC TC74HC86P
IC407	EI-360050	IC BA9221
IC408	EI-390060	IC BA9201
IC409	EI-360058	IC MF6CN-50
IC410	EI-354283	IC BA6110
IC411	EI-367571	IC LA6358T
IC501	EI-365830	IC TC74HC670P
IC502	EI-365830	IC TC74HC670P
IC503	EI-365830	IC TC74HC670P
IC504	EI-365831	IC TC74HC393P

Ref. No.	Part No.	Description
IC505	EI-360038	IC TC74HC02P
IC506	EI-360027	IC TC74HC86P
IC507	EI-360050	IC BA9221
IC508	EI-390060	IC BA9201
IC509	EI-360058	IC MF6CN-50
IC510	EI-354283	IC BA6110
IC511	EI-367571	IC LA6358T
IC601	EI-365830	IC TC74HC670P
IC602	EI-365830	IC TC74HC670P
IC603	EI-365830	IC TC74HC670P
IC604	EI-365831	IC TC74HC393P
IC605	EI-360038	IC TC74HC02P
IC606	EI-360027	IC TC74HC86P
IC607	EI-360050	IC BA9221
IC608	EI-390060	IC BA9201
IC609	EI-360058	IC MF6CN-50
IC610	EI-354283	IC BA6110
IC611	EI-367571	IC LA6358T
IC701	EI-365830	IC TC74HC670P
IC702	EI-365830	IC TC74HC670P
IC703	EI-365830	IC TC74HC670P
IC704	EI-365831	IC TC74HC393P
IC705	EI-360038	IC TC74HC02P
IC706	EI-360027	IC TC74HC86P
IC707	EI-360050	IC BA9221
IC708	EI-390060	IC BA9201
IC709	EI-360058	IC MF6CN-50
IC710	EI-354283	IC BA6110
IC711	EI-367571	IC LA6358T
IC801	EI-365830	IC TC74HC670P
IC802	EI-365830	IC TC74HC670P
IC803	EI-365830	IC TC74HC670P
IC804	EI-365831	IC TC74HC393P
IC805	EI-360038	IC TC74HC02P
IC806	EI-360027	IC TC74HC86P
IC807	EI-360050	IC BA9221
IC808	EI-390060	IC BA9201
IC809	EI-360058	IC MF6CN-50
IC810	EI-354283	IC BA6110
IC811	EI-367571	IC LA6358T
P208	EJ-365891	OLUG RA-H261TD-0190 26P
P209	EJ-365892	PLUG RK-H401TD-0190 40P
P210	EJ-365894	PLUG RA-H602TD-0190 60P
RL1	EQ-348929	RELAY SIG Q6A-837P 8TR 12V
R7	ER-362496	R OMF H S10 FS 1/2W 101J
R8	ER-362496	R OMF H S10 FS 1/2W 101J
R29	ER-324185	R CB H S10 FS RDS 1/4W 221J
R30	ER-324185	R FUSE H S10 ERD2FC 1/4W 22R0G
R31	ER-365788	R MF H F10 1/4W 2491F
R32	ER-365789	R MF H F10 1/4W 4991F
R58	ER-365747	R OMF H S16 FS 1W 820J
R121	ER-324185	R CB H S10 FS RDS 1/4W 221J
R202	ER-365788	R MF H F10 1/4W 2491F
R203	ER-365789	R MF H F10 1/4W 4991F
R221	ER-324185	R CB H S10 FS RDS 1/4W 221J
R302	ER-365788	R MF H F10 1/4W 2491F
R303	ER-365789	R MF H F10 1/4W 4991F
R321	ER-324185	R CB H S10 FS RDS 1/4W 221J
R402	ER-365788	R MF H F10 1/4W 2491F
R403	ER-365789	R MF H F10 1/4W 4991F
R421	ER-324185	R CB H S10 FS RDS 1/4W 221J
R502	ER-365788	R MF H F10 1/4W 2491F
R503	ER-365789	R MF H F10 1/4W 4991F
R521	ER-324185	R CB H S10 FS RDS 1/4W 221J
R602	ER-365788	R MF H F10 1/4W 2491F
R603	ER-365789	R MF H F10 1/4W 4991F
R621	ER-324185	R CB H S10 FS RDS 1/4W 221J
R702	ER-365788	R MF H F10 1/4W 2491F
R703	ER-365789	R MF H F10 1/4W 4991F
R721	ER-324185	R CB H S10 FS RDS 1/4W 221J
R802	ER-365788	R MF H F10 1/4W 2491F
R803	ER-365789	R MF H F10 1/4W 4991F
R821	ER-324185	R CB H S10 FS RDS 1/4W 221J
TR1	ET-360197	TR 2SC3330 U.V F05
TR101	ET-353899	TR 2SA1317 S,T,U
TR201	ET-353899	TR 2SA1317 S,T,U
TR301	ET-353899	TR 2SA1317 S,T,U
TR401	ET-353899	TR 2SA1317 S,T,U

Ref. No.	Part No.	Description
TR501	ET-353899	TR 2SA1317 S,T,U
TR601	ET-353899	TR 2SA1317 S,T,U
TR701	ET-353899	TR 2SA1317 S,T,U
TR801	ET-353899	TR 2SA1317 S,T,U
VR1	EV-307695	R S-FIX H RH0651C 0.05W104
VR101	EV-307695	R S-FIX H RH0651C 0.05W104
VR201	EV-307695	R S-FIX H RH0651C 0.05W104
VR301	EV-307695	R S-FIX H RH0651C 0.05W104
VR401	EV-307695	R S-FIX H RH0651C 0.05W104
VR501	EV-307695	R S-FIX H RH0651C 0.05W104
VR601	EV-307695	R S-FIX H RH0651C 0.05W104
VR701	EV-307695	R S-FIX H RH0651C 0.05W104
VR801	EV-307695	R S-FIX H RH0651C 0.05W104

4. CPU P.C BOARD

Ref. No.	Part No.	Description
D1	ED-301911	D SILICON H DS448
IC1	EI-365792	IC UPD70116C-8
IC2	EI-365793	IC UPD71011C
IC3	EI-365794	IC UPD71071C
IC4	EI-365794	IC UPD71071C
IC5	EI-365794	IC UPD71071C
IC6	EI-365795	IC UPD71059C
IC8	EI-389049J	IC HD63B50P
IC9	EI-378275	IC UPD72066C
IC10	EI-365798	IC SED9420CAC
IC11	EI-378295	IC MBM27C256-15CZ-G
IC12	EI-378295	IC MBM27C256-15CZ-G
IC13	EI-375345	IC MM74HC373N
IC14	EI-375345	IC MM74HC373N
IC15	EI-375345	IC MM74HC373N
IC16	EI-375345	IC MM74HC373N
IC17	EI-375345	IC MM74HC373N
IC18	EI-388712J	IC HD74HC245P
IC19	EI-365831	IC TC74HC393P
IC20	EI-365801	IC TC74HC257P
IC21	EI-360053	IC TC74HC175P
IC22	EI-360025	IC TC74HC138P
IC23	EI-360025	IC TC74HC138P
IC24	EI-356049	IC TC74HC138P
IC25	EI-360042	IC TC74HC259P
IC26	EI-388707J	IC HD74HC244P
IC27	EI-365801	IC TC74HC257P
IC28	EI-365802	IC TC74HC191P
IC30	EI-360054	IC TC74HC174P
IC31	EI-365803	IC TC74HC4002P
IC32	EI-387934J	IC HD74HC04P
IC33	EI-388709J	IC HD74HC32P
IC34	EI-388709J	IC HD74HC32P
IC35	EI-388711J	IC HD74HC00P
IC36	EI-388711J	IC HD74HC00P
IC37	EI-360030	IC TC74HC08P
IC38	EI-387934J	IC HD74HC04P
IC39	EI-375347	IC MM74HC14N
IC40	EI-365101	IC TC74HC195P
IC41	EI-360030	IC TC74HC08P
IC42	EI-360030	IC TC74HC157P
IC43	EI-365805	IC HD75188P
IC44	EI-365806	IC HD75188P
IC45	EI-378210	IC MB81C4256-10-G
IC46	EI-378210	IC MB81C4256-10-G
IC47	EI-378210	IC MB81C4256-10-G
IC48	EI-378210	IC MB81C4256-10-G
IC49	EI-378210	IC MB81C4256-10-G
IC50	EI-378210	IC MB81C4256-10-G
IC51	EI-378210	IC MB81C4256-10-G
IC52	EI-385830	IC TC74HC870P
IC53	EI-385830	IC TC74HC870P
IC54	EI-388712J	IC HD74HC245P
IC55	EI-372570	IC TC74HC153P
IC56	EI-365840	IC TC74HC155P
IC57	EI-360038	IC TC74HC02P
IC58	EI-384782J	IC TC74HC365P
IC59	EI-384782J	IC TC74HC365P
IC60	EI-360025	IC TC74HC138P
IC61	EI-389050J	IC HD74AC32P
IC62	EI-389060J	IC HD74AC158P
IC63	EI-360035	IC TC74HC157P
IC64	EI-389060J	IC HD74AC158P
IC65	EI-389060J	IC HD74AC158P
IC66	EI-360039	IC TC74HC08P
IC67	EI-389061J	IC HD74AC04P
IC68	EI-389128J	IC CD74AC138E
IC69	EI-360039	IC TC74HC08P
IC70	EW-365836	WIRE ASSY S900 (14) 20P
IC71	EW-365836	WIRE ASSY S900 (15) 50P
IC72	EW-365836	WIRE ASSY S900 (16) 40P
P107	EJ-365833	PLUG RA-H201TD-0190 20P
P108	EJ-378287	PLUG RP148B30P-1TD2-03 48P
P109	EJ-365834	PLUG RK-H341TD-0190 34P
P110	EJ-389062J	PLUG RA-H601TD-1190 60P

Ref. No.	Part No.	Description
P111	EJ-378287	PLUG RP148B30P-1TD2-03 48P
R40	ER-200939	R CB H S10 FS RDS 1/4W 181J
R41	ER-200939	R CB H S10 FS RDS 1/4W 181J
X1	EI-365811	OSC X'TAL NR18 16.000MHZ
1	EJ-358691	SOCKET IC DILB28P-8J

5. PANEL P.C BOARD

Ref. No.	Part No.	Description
CR1	EH-347688	COMP R EXB-P88 472K
CR2	EH-347688	COMP R EXB-P88 472K
D1	ED-364261	D LED SLP-981C-50
D2	ED-364261	D LED SLP-981C-50
D3	ED-364261	D LED SLP-981C-50
D4	ED-364261	D LED SLP-981C-50
D5	ED-364261	D LED SLP-981C-50
D6	ED-364261	D LED SLP-981C-50
D7	ED-364261	D LED SLP-981C-50
IC1	EI-365813	IC UPD71055C
J401	EW-365814	WIRE ASSY S900 (17) 20P
J402	EW-365815	WIRE ASSY S900 (18) 14P
SW1	ES-365851	SW TACT SPPQ19
SW2	ES-365851	SW TACT SPPQ19
SW3	ES-365851	SW TACT SPPQ19
SW4	ES-365851	SW TACT SPPQ19
SW5	ES-365851	SW TACT SPPQ19
SW6	ES-365851	SW TACT SPPQ19
SW7	ES-365851	SW TACT SPPQ19
SW8	ES-365851	SW TACT SPPQ19
SW9	ES-365851	SW TACT SPPQ19
SW10	ES-365851	SW TACT SPPQ19
SW11	ES-365851	SW TACT SPPQ19
SW12	ES-365851	SW TACT SPPQ19
SW13	ES-365851	SW TACT SPPQ19
SW14	ES-365851	SW TACT SPPQ19
SW15	ES-365851	SW TACT SPPQ19
SW16	ES-365851	SW TACT SPPQ19
SW17	ES-365851	SW TACT SPPQ19
SW18	ES-365851	SW TACT SPPQ19
SW19	ES-365851	SW TACT SPPQ19
SW20	ES-365851	SW TACT SPPQ19
SW21	ES-365851	SW TACT SPPQ19
SW22	ES-365851	SW TACT SPPQ19
SW23	ES-365851	SW TACT SPPQ19
SW24	ES-365851	SW TACT SPPQ19
SW25	ES-365851	SW TACT SPPQ19
SW26	ES-365851	SW TACT SPPQ19
SW27	ES-365851	SW TACT SPPQ19
SW28	ES-365851	SW TACT SPPQ19

6. JACK P.C BOARD

Ref. No.	Part No.	Description
J501	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J502	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J503	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J505	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J506	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J507	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J508	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J509	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J510	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J511	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J512	EJ-360771	DIN J TCS5037-01-241 13P

7. JACK (MIC) P.C BOARD

Ref. No.	Part No.	Description
J514	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J515	EJ-354269	PHONE J 3P HLJ0540-110 6.3
J516	EJ-354269	PHONE J 3P HLJ0540-110 6.3

8. JACK (MIDI) P.C BOARD

Ref. No.	Part No.	Description
D1	ED-301011	D SILICON H DS448
IC1	EI-310044	IC SN74LS05N
J613	EJ-364266	DIN J M1704 3P
PH1	ET-364167	DETECTOR PC900V

9. JACK (INV) P.C BOARD

Ref. No.	Part No.	Description
R1	ER-333372	R CB H S10 F8 RDS 1/4W 150J
1	VT-365945	MULTI BLK INVERTER NEL-D32-43

10. JACK (VR) P.C BOARD

Ref. No.	Part No.	Description
VR1A	EV-389052J	VR ROTARY RK1691110 A103
VR2A	EV-389053J	VR ROTARY RK1631110 B103
VR3A	EV-389054J	VR ROTARY RK1612221 B109X2

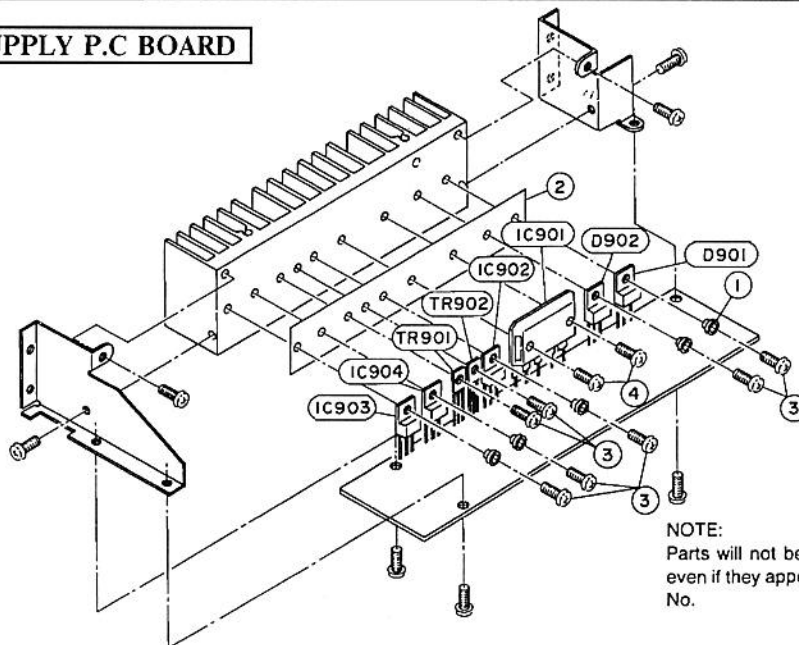
11. PANEL (VR) P.C BOARD

Ref. No.	Part No.	Description
VR1	EV-365817	VR ROTARY 16P10X2G

12. PANEL (LED) P.C BOARD

Ref. No.	Part No.	Description
D1	ED-364261	D LED SLP-981C-50

POWER SUPPLY P.C BOARD



NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

13. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
C1	EC-201650	C EC V CUT AS1 472M 10.0DC
C5	EC-316188	C EC V CUT SM 102M 25DC
C8	EC-316188	C EC V CUT SM 102M 25DC
D1	*ED-357038	D SILICON DBB10B 100/1.0A
D2	*ED-330318	D SILICON DBA10B 100/1.0A
D3	ED-370990	D SILICON 1SR35-100AHS F10
D4	ED-370990	D SILICON 1SR35-100AHS F10
D5	ED-370990	D SILICON 1SR35-100AHS F10
D6	ED-370990	D SILICON 1SR35-100AHS F10
D7	ED-370990	D SILICON 1SR35-100AHS F10
D8	ED-301911	D SILICON H DS448
D9	*ED-346517	D ZENER H HZ12 C2
IC1	*EI-348123	IC M5230L
R1	*ER-324185	R CB H 510 FS RDS 1/4W 221J
R2	*ER-324185	R CB H 510 FS RDS 1/4W 221J
TR1	ET-380137	TR 28C3330 U,V F05
F2	*EF-306952	FUSE TSC A 250V 4.00A [J]
F2A	*EF-306957	FUSE TSC 125V 4.00A [C,A,Y1]
F2B	*EF-601007	FUSE SEMKO T 250V 3.15A [E,V,S]
F2C	*EF-355225	FUSE BET T 250V 5.15A [B]
F3	*EF-306124	FUSE TSC A 250V 630MA [J]
F3A	*EF-305703	FUSE TSC 125V 630MA [C,A,Y1]
F3B	*EF-601942	FUSE SEMKO T 250V 630MA [E,V,S]
F3C	*EF-358974	FUSE BET T 250V 630MA [B]
F4	*EF-309387	FUSE TSC A 250V 1.00A [J]
F4A	*EF-310229	FUSE TSC 125V 1.00A [C,A,Y1]
F4B	*EF-258344	FUSE SEMKO T 250V 800MA [E,V,S]
F4C	*EF-358441	FUSE BET T 250V 800MA [B]
F5	*EF-309387	FUSE TSC A 250V 1.00A [J]
F5A	*EF-310229	FUSE TSC 125V 1.00A [C,A,Y1]
F5B	*EF-258344	FUSE SEMKO T 250V 800MA [E,V,S]
F5C	*EF-358641	FUSE BET T 250V 800MA [B]

Ref. No.	Part No.	Description
D901	*ED-365818	D SILICON CTU-12S 200/ 6.0A
D902	*ED-365819	D SILICON CTU-12R 200/ 6.0A
IC901	*EI-365820	IC STR9005
IC902	*EI-347758	IC TA78012AP
IC903	*EI-365822	IC NJM78M06A
IC904	*EI-365823	IC NJM79M06A
TR901	*ET-356817	TR 2SB891 Q,R
TR902	*ET-354083	TR 2SD1189 Q,R
1	ZW-632228	WASHER INSULATOR (BUSH M)
2	EZ-362348	SHEET HEATSINK
3	ZB-421806	PAN30X08STL CMT
4	ZS-380048	PAN30X10STL CMT

14. FILTER P.C BOARD

Ref. No.	Part No.	Description
C2	*EC-358450	C CE V DNS102MBE B 102M 400AC [A,V]
C3	*EC-358450	C CE V DNS102MBE B 102M 400AC [A,V]
C4A	*EC-358970	C MMY V XE 683M 250AC [A,V]
FL1	EO-360068	COIL LF LF-2 B
F1	*EF-306951	FUSE TSC A 250V 2.50A [J]
F1A	*EF-306954	FUSE TSC 125V 2.00A [C,A,Y1]
F1B	*EF-623103	FUSE SEMKO T 250V 1.00A [E,V,S]
F1C	*EF-355226	FUSE BET T 250V 1.00A [B]

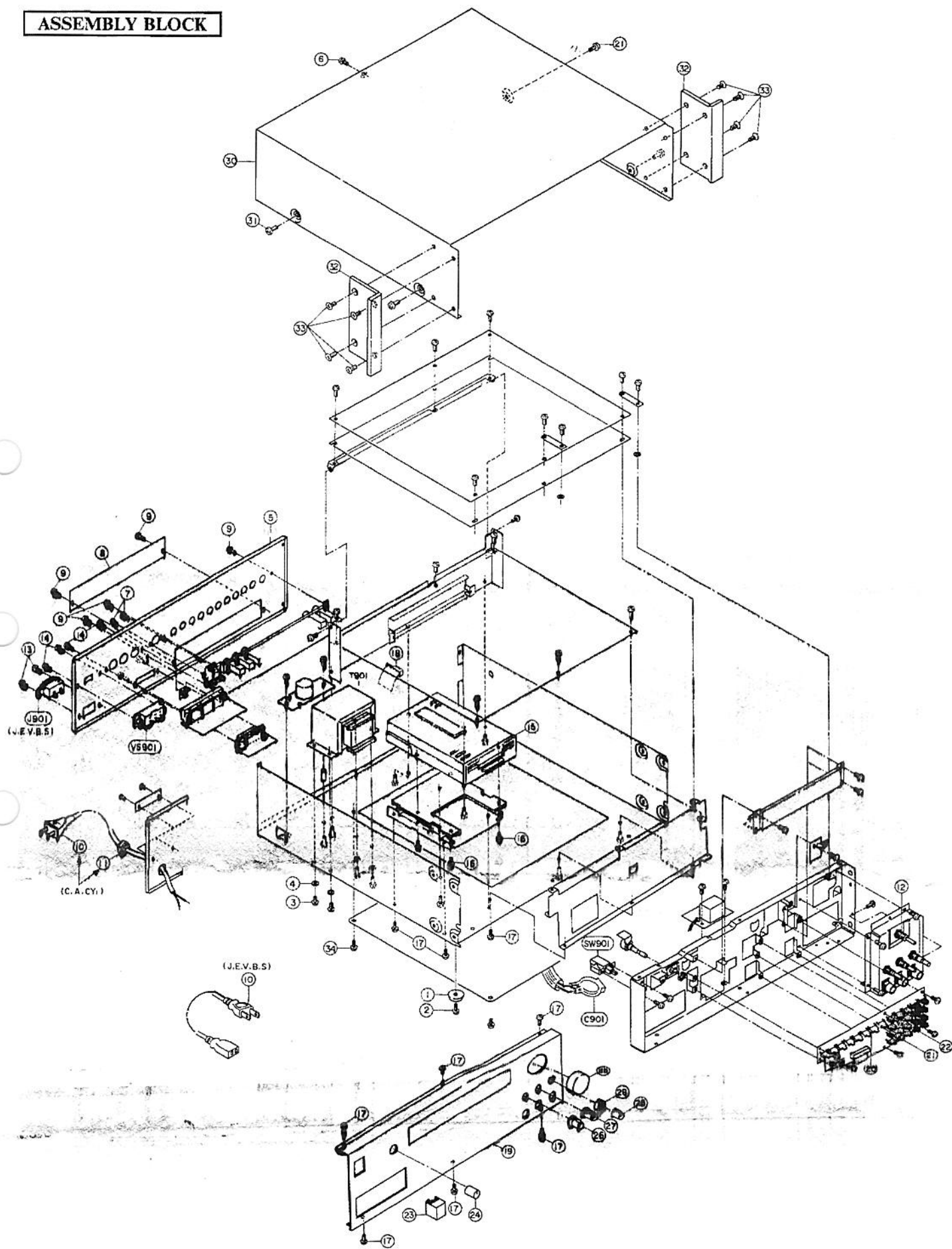
15. LCD P.C BOARD

Ref. No.	Part No.	Description
1	EM-385844	IND LCD DMC40218UE [INC. PCB]
2	EL-728381J	DMC40218UE EL BACK LIGHT

16. JACK (RS232C) P.C BOARD

Ref. No.	Part No.	Description
J522	EJ-365932	CONNECTOR HDB0001-01-2131 25P

ASSEMBLY BLOCK



PARTS LIST

18. ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1	SA-349332	FOOT
2	ZS-360715	ST PAN30X08STL CMT C080 [FOOT FIX]
3	ZS-301576	ST PAN40X10STL CMT [TRANS POWER FIX]
4	ZW-273892	TW40
5	SP-389043J1	PANEL REAR S950(J)
5A	SP-389044J1	PANEL REAR S950(C,A)
5B	SP-389045J	PANEL REAR S950(E,V,B,S)
6	ZS-308846	T2BR30X08STL BZN PROJECTION [PANEL REAR FIX]
7	ZW-688308	RV NYL30X055 BL
8	SC-362359A	COVER REAR (A)
9	ZS-308846	T2BR30X08STL BZN PROJECTION [COVER REAR FIX]
10	*EW-365947	AC CORD 250 SKP210KS17B A [J]
10A	*EW-366055	AC CORD 250 KP11WSJT18 UC [A]
10B	*EW-357931	AC CORD 3 CORES VM0033A SGT18A [C,Y1]
10C	*EW-358629	AC CORD 2C KP4819C KS-17Y [E,V]
10D	*EW-358631	AC CORD 2C KS-17 LTBS2F BS [B]
10E	*EW-358630	AC CORD 2C KP560 LTSA2F KS17 S [S]
11	*EZ-302906	STRAIN RELIEF SR-6N-4 [C,A,Y1]
12	ES-365943	SW EWT-XDFK2550B [J,E,V,B,S]
C901	*EC-361942	C CE V DNS103ZV V 103Z 400AC
J901	*EJ-358633	SOCKET INLET SOT-17 2P [J,E,V,B,S]
13	ZS-362534	T2CTS30X10STL BNI
BW901	*EB-337903	SW PUSH SDDL1 01-1
VS901	*EB-306430	SW SLIDE J-S4013 #Q1 01-2 [E,V,B,S]
14	ZS-350834	PT BR30X08STL BNI
T901	*BT-365907	TRANS POWER S900T-10(J) [J]
T901A	*BT-365908	TRANS POWER S900T-30(A,C) [A,C,Y1]
T901B	*BT-365909	TRANS POWER S900T-50(E,V,B,S) [E,V,B,S]
15	BB-389043J	FLOPPY DISK DFP723D14B
16	ZS-379406	BID30X06STL CMT
17	ZS-348375	ST BR30X08STL CMT
18	EW-365912	WIRE ASSY S900 (3)34P
19	BD-389089J	PANEL FRONT PART
20	SK-382347A-A	KNOB PUSH (1)
21	SK-382347E	KNOB PUSH (5)
22	SK-382347F	KNOB PUSH (6)
23	SK-343017J	KNOB POWER (C)
24	SK-383061J	KNOB(A-7)
25	SK-389048J	KNOB ROTARY(B)
26	SK-386675J	KNOB SINGLE(2)PART
27	SK-386676J	KNOB SINGLE(3)PART
28	SK-386860J	KNOB DOUBLE(UPPER) 2 PART
29	SK-383781J	KNOB DOUBLE(LOWER)
30	SP-362371-A	COVER UPPER
31	ZS-341959	ST BID40X06STL N13 [COVER UPPER FIX]
32	SH-362361	HANDLE RACK
33	ZS-321783	ST BID40X10STL N13 [HANDLE RACK FIX]
34	ZS320906	ST BR30X08STL CMT

NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
BA-L6002A020A	2-3	EF-359225	1-14	EI-360050	3-IC107	EI-365830	3-IC501
BA-L6002A050B	2-1	EF-359225	13-F2C	EI-360050	3-IC207	EI-365830	3-IC502
BA-L6002A060A	2-5	EF-601942	1-19	EI-360050	3-IC307	EI-365830	3-IC503
BA-L6002A080B	2-4	EF-601942	13-F3B	EI-360050	3-IC407	EI-365830	3-IC601
BA-L6013A040A	2-2	EF-623103	1-17	EI-360050	3-IC507	EI-365830	3-IC602
BB-389042J	1-1	EF-623103	14-F1B	EI-360050	3-IC607	EI-365830	3-IC603
BB-389042J	18-15	EF-691007	1-18	EI-360050	3-IC707	EI-365830	3-IC701
BD-389089J	18-19	EF-691007	13-F2B	EI-360050	3-IC807	EI-365830	3-IC702
BT-365907	1-2	EH-347688	1-29	EI-360053	1-75	EI-365830	3-IC703
BT-365907	18-T901	EH-347688	5-CR1	EI-360053	4-IC21	EI-365830	3-IC801
BT-365908	1-3	EH-347688	5-CR2	EI-360054	1-74	EI-365830	3-IC802
BT-365908	18-T901A	EI-310044	1-62	EI-360054	4-IC30	EI-365830	3-IC803
BT-365909	1-4	EI-310044	8-IC1	EI-360058	1-52	EI-365830	4-IC61
BT-365909	18-T901B	EI-347758	1-64	EI-360058	3-IC7	EI-365830	4-IC62
EC-201650	13-C1	EI-347758	13-IC902	EI-360058	3-IC109	EI-365831	1-82
EC-316188	13-C5	EI-348123	1-57	EI-360058	3-IC209	EI-365831	3-IC104
EC-316188	13-C6	EI-348123	13-IC1	EI-360058	3-IC309	EI-365831	3-IC204
EC-358450	14-C2	EI-354146	1-93	EI-360058	3-IC409	EI-365831	3-IC304
EC-358450	14-C3	EI-354146	3-IC22	EI-360058	3-IC509	EI-365831	3-IC404
EC-361942	18-C901	EI-354146	3-IC23	EI-360058	3-IC609	EI-365831	3-IC504
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