# DENON

# **SERVICE MANUAL**

## **ELECTRONIC PIANO**

# MODEL **EP-5000**

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NIPPON COLUMBIA CO., LTD.

#### **IMPORTANT TO SAFETY**

#### WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

#### **CAUTION:**

#### 1. Handle the power supply cord carefully

Do not damage or deform the power supply cord. If it is damaged or deformed, it may cause electric shock or malfunction when used. When removing from wall outlet, be sure to remove by holding the play attachment and not by pulling the cord.

#### 2. Do not open the top cover

In order to prevent electric shock, do not open the cover. If problems occur, contact your WURLITZER dealer.

#### 3. Do not place anything inside

Do not place metal objects or spill liquid inside INSTRUMENTS. Electric shock or malfunction may result.

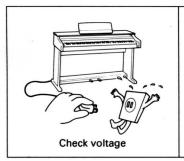
Please, record and retain the Model name and serial number of your INSTRUMENTS shown on the rating label. Model No. EP-913R

NOTE: To allow you to enjoy music at a stable operation, it is recommended to use this in a room 10°C~35°C.

#### SAFETY INSTRUCTIONS FOR ELECTRONIC PIANO

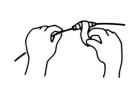
#### ■ INSTALLATION

- Operate the INSTRUMENTS only from a power source which is indicated on the rating label (indication) at the back of the INSTRUMENTS.
- 2. Prayed cords and broken plugs may cause a fire or shock hazard.
  - Do not damage the power cord.
- Do not cut and splice the power cord.
- When removing the power cord from wall outlet, be sure to unplug by holding the play attachment and not by pulling the cord. Do not hold the plug with wet hands.
- Call your service technician for replacement of damaged cords and plugs.
- 3. Select a place so that the location or position does not interfere with the proper ventilation of the INSTRUMENTS for releasing heat generated during operation.
- Select a flat and level surface allowing enough space for setting up and operation.
- Never block the bottom ventilation holes placing the INSTRU-MENTS on a bed, sofa, rug etc.
- Never place the INSTRUMENTS in a "built-in" enclosure unless proper ventilation is provided.
- Never place the INSTRUMENTS near a radiator, heat register or stove.
- Avoid locations where the INSTRUMENTS is exposed directly to the sun light.





Do not pinch power cord.



Do not splice power cord.



Avoid heat.

#### USE

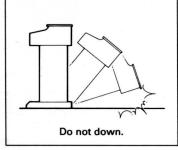
- Do not expose the INSTRUMENTS to rain or water (liquid). Do not spill liquid or insert metal objects inside the set. Rain, water or liquid such as cosmetics as well as metal may cause electric shorts which can result in fire or shock hazard. If anything gets inside, unplug the power cord and have a WURLITZER service technician check your set before further use.
- 2. Never leave your INSTRUMENTS switched on when leaving the house. For added protection of your audio system during lightning storm or when the INSTRUMENTS is to be left unused for a long period of time, be sure to unplug the power cord from the wall outlet.
- Take care so that the INSTRUMENTS is not dropped to avoid damaging the cabinet which defeats safeguards or injuring yourself. If the INSTRUMENTS has been dropped or the cabinet has been damaged, unplug the INSTRUMENTS and have it checked by a WURLITZER service technician to restore the safeguards.



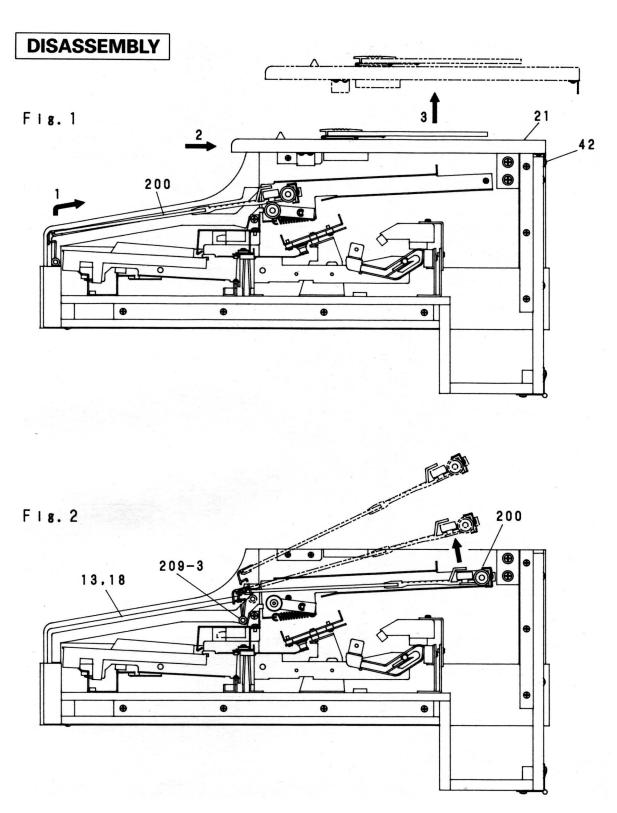
Remove power in your absence.

#### ■ SERVICING

- The servicing of the INSTRUMENTS must not be attempted by yourself beyond that described in the operating instructions. In case of problems that cannot be settled by referring to your operating instructions, unplug the power cord and contact your WURLITZER dealer. No user serviceable parts are inside the INSTRUMENTS. Only qualified service technician can service inside your INSTRUMENTS.
- Refer to the operating instructions for maintenance and cleaning.



No user-serviceable parts in side.



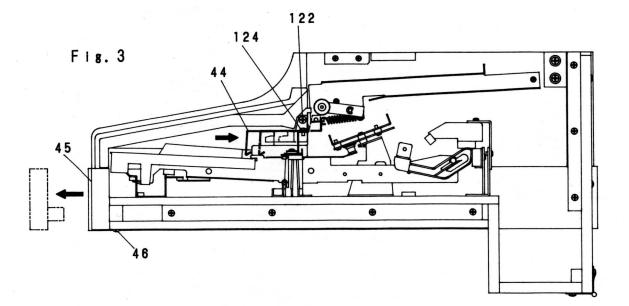
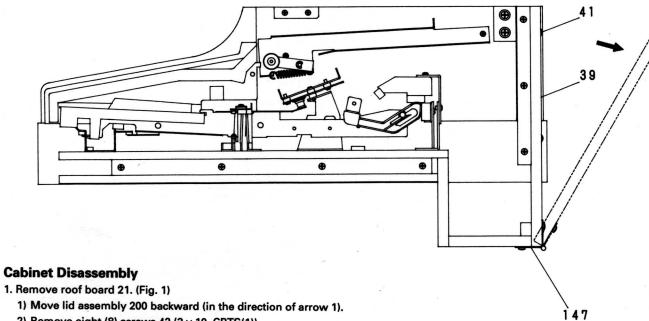


Fig. 4



- 2) Remove eight (8) screws 42 (3 × 10, CBTS(1)).
- 3) Move roof board 21 in the direction of arrow 2 and remove it in the direction of arrow 2,
- 2. Remove lid assembly 200. (Fig. 2)
- 1) Move lid assembly 200 backward and lift its rear in the direction of the arrow.
- 2) Lift guide roller (B) 209-3 at the front obliquely along the grooves in cover guides (L) 13 and (R) 18 to remover it.
- 3. Remove top panel semi-assembly 44 and front board assembly 45. (Fig. 3)
  - 1) Remove two (2) screws 122 (3.5 × 30, CTTS(1)) each on the left and right and screw 124 (3 × 6, CBTS(S)), then move top panel semi-assembly 44 in the direction of the arrow to remove it.
  - 2) Remove five (5) screws 46 (4 × 40, CTTS(1)) and then front board assembly 45 in the direction of the arrow.
- 4. Open rear board 49. (Fig. 4)
- 1) Remove nine (9) screws 41 (3.5 × 20, CTTS(1)) and turn rear board 39 to open it using rear hinge 147 as a fulcrum.

## PARTS LIST OF EXPLODED VIEW

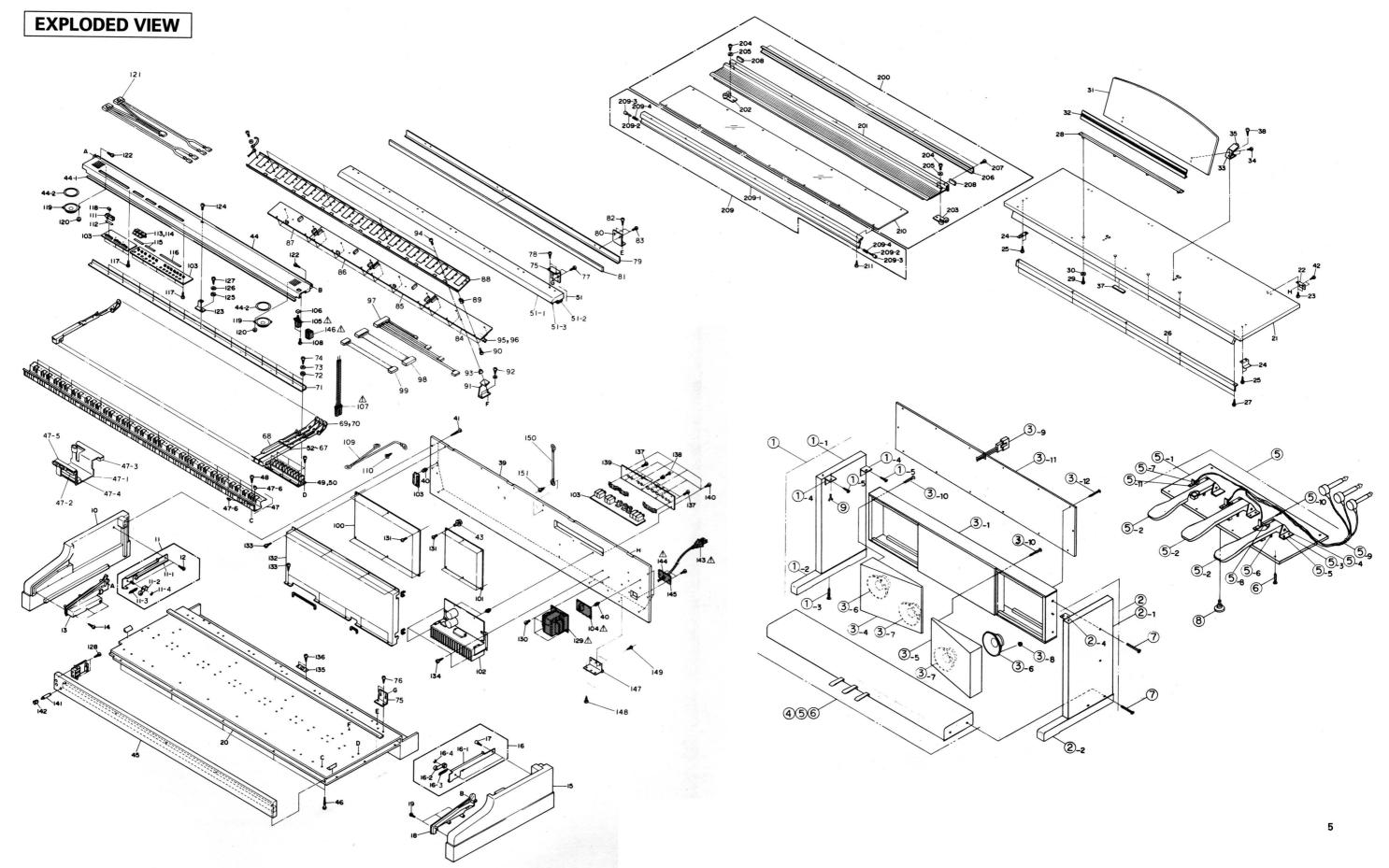
N-	D N		EP-5000						
No.	Part Name	Q'ty	Part No.						
1	SIDE BOARD (L) ASS'Y	(1)	1077286005						
-1	SIDE BOARD (L)	1	1077287004						
-2	FOOT (L)	1	1077288003						
-3	4 × 40 CTTS (1)	2	4734803032						
-4	JOINT BRACKET	2	4127184009						
-5	3.5 × 16 CTTS (1)	4	4734806026						
2	SIDE BOARD (R) ASS'Y	(1)	1077289002						
-1	SIDE BOATD (R)	1	1077290004						
-2	FOOT (R)	1	1077291003						
-3	4×40 CTTS (1)	2	4734803032						
-4	JOINT BRACKET	2	4127184009						
-5	3.5×16 CRWS	4	4734806026						
-6	CORD HOLER	2	EP-4772						
-7	3.1 × 16 CRWS	2	4720309029						
3	SPEAKER BOX ASS'Y	(1)	1077292002						
-1	SPEAKER BOX SEMI ASS'Y	1	1077293001						
-2	CORD HOLDER	4	EP-4772						
-3	3 × 8 CBRTS (1)	4	4730304014						
-4	SPEAKER GRILL (L) ASS'Y	1	1077295009						
-5	SPEAKER GRILL (R) ASS'Y	1	1077297007						
-6	16RG03M (SPEAKER)	2	3017017009						
-7	16RG04M (SPEAKER)	2	3017018008						
-8	M4 FLANGE NUT	16	SC-1050H						
-9	4P CONNECTOR ASS'Y	1	2037470009						
-10	3.5 × 32 CRWS	8	4720413012						
-11	REAR BOARD	1	1077299005						
-12	3.5 × 20 CTTS (1)	14	4734806000						
4,5,6	PEDAL BOX ASS'Y	(1)	1077300004						
4	PEDAL BOX SEMI ASS'Y	1	1077301003						
5	PEDAL BOARD ASS'Y	(1)	1077303001						
-1	PEDAL BOARD	1	1077305009						
-2	PEDAL	3	4367263023						
-3	PEDAL FLANGE	6	4367082000						
-4	PF. BUSH	6	4367083106						
-5	4 × 14 CPS (W,SW)	12	4700021026						
-6	PEDAL SPRING	3	4367148009						
-7	PEDAL SWITCH BRACKET	3	4127160104						
-8	PEDAL SWITCH	3	2127001003						
-9	3P PEDAL WIRE	1	2039458008						
-10	2 ×10 CPS	3	4711810006						
-11	3.5 × 10 CBTS (1)	3	4733804003						
6	3.5 × 25 CRWS	6	4720411014						
7	6 × 55 CTS	8	4714804019						
8	ADJUSTER	1	1047038005						
9	PRESS WING SCREW	4	MMP1142						
		+							
10	SIDE BOARD (L) SEMI ASS'Y	1	1077216004						
11	GUIDE RAIL (L) ASS'Y	(1)	4097016605						
-1	GUIDE RAIL (L) SEMI ASS'Y	1	4097015305						
-2	ROLLER ARM ASS'Y	1	4307104304						
-3	ROLLER ARM SPRING	1	4367293103						
-4	3E RING	1	4361003009						
12	3 × 12 CFTS (1)	2	4732306010						
13	COVER GUIDE (L)	1	4097011516						
14	3 × 16 CBRTS (1)	3	4730309019						
15	SIDE BOARD (R) SEMI ASS'Y	1	1077219001						
16	GUIDE RAIL (R) ASS'Y	(1)	4097018603						
-1	GUIDE RAIL (R) SEMI ASS'Y	1	4097017303						
-2	ROLLER ARM ASS'Y	1	4307104304						
-3	ROLLER ARM SPRING	1	4367293103						
-4	3E RING	1	4761003009						
. 17	3 × 12 CFTS (1)	2	4732306010						

			EP-5000						
No.	Part Name	Q'tv							
18	COVER GUIDE (R)	1	4097012418						
19	3 × 16 CBRTS (1)	3	4730309019						
20	BOTTOM BOARD ASS'Y	1	1077221109						
21	ROOF BOARD	+	1077221109						
22	ANGLE BRACKET	4	4037010001						
23	3 × 12 CBRTS (1)	8	4730306012						
24	TOP BRACKET	2							
25	3 × 12 CBRTS (1)	4	2010023J 4730306012						
26	REFORM RAIL	1	4097020109						
27	3.5 × 12 CBTS	5	4733804045						
28	MUSIC STOPPER	1	4397035108						
29	3 × 18 CBTS (P)	4	4737500060						
30	3.5 W	4	4751134001						
31	SCORE HOLDER	1	4397022111						
32	SCORE SUPPORT	+	1037055014						
33	SCORE HINGE								
34	3×6 CBTS (P)	2	4017027108						
35	PROTECTION SHEET	4	4737508004						
36		2	1247123008						
36	PROTECTION SHEET	+-	1047440000						
38		1	1247118000						
38	3 × 10 CBTS (1) REAR BOARD	4	4733804006						
40		1 0	1077322008						
	LOCKING SUPPORT	8	4498079005						
41	3.5 × 20 CTTS (1)	9	4734806000						
42	3 × 10 CBTS (1)	8	4733816004						
	TOP PANEL SEMI ASSIV	12	4777036002						
44	TOP PANEL SEMI ASS'Y	1	1027191014						
-1	KEY FELT	1	1247095068						
-2	SPEAKER HIMELON	2	1227032000						
45	FRONT BOARD ASS'Y	1	1077232004						
46	4 × 40 CTTS (1)	5	4734803029						
47	FRONT GUIDE RAIL ASS'Y	(1)	4307073532						
-1	FRONT GUIDE RAIL	1	4367224211						
-2	FRONT RAIL FELT	1	1247109006						
-3	FRONT RAIL FELT	1	1247110008						
-4	FRONT RAIL FELT	1	1247111007						
-5	PANEL FELT	1	1247070038						
-6	KEY GUIDE	88	4317002001						
48	3.5 × 14 CBTS (1) (SW)	50	4718003007						
49	CENTER RAIL	6	4367179104						
50	DENTER RAIL (S)	1	4367317005						
51	BACK RAIL ASS'Y	(1)	1007129116						
-1	BACK RAIL	1	1017315017						
-2	BACK RAIL FELT	1	1247087018						
-3	BACK RAIL FELT	1	1247087034						
52	KEY ASS'Y (W) A	5	4367304005						
53	KEY ASS'Y (W) A	2	4367305004						
54	KEY ASS'Y (W) B	6	4367304018						
55	KEY ASS'Y (W) B	2	4367305017						
56	KEY ASS'Y (W) C	6	4367304021						
57	KEY ASS'Y (W) C	1	4367305020						
58	KEY ASS'Y (W) D	6	4367304034						
59	KEY ASS'Y (W) D	1	4367305033						
60	KEY ASS'Y (W) E	6	4367304047						
61	KEY ASS'Y (W) E	1	4367305046						
62	KEY ASS'Y (W) F	6	4367304050						
63	KEY ASS'Y (W) F	1	4367305059						
64	KEY ASS'Y (W) G	6	4367304063						
65	KEY ASS'Y (W) G	1	4367305062						
66	KEY ASS'Y (W) A'	+							
	KEY ASS'Y (W) C'	_	4367304076						
67	KEY ASS'Y (W) C'	1 26	4367305075						
68	I KET AGG T (VV) A#	36	4307071107						

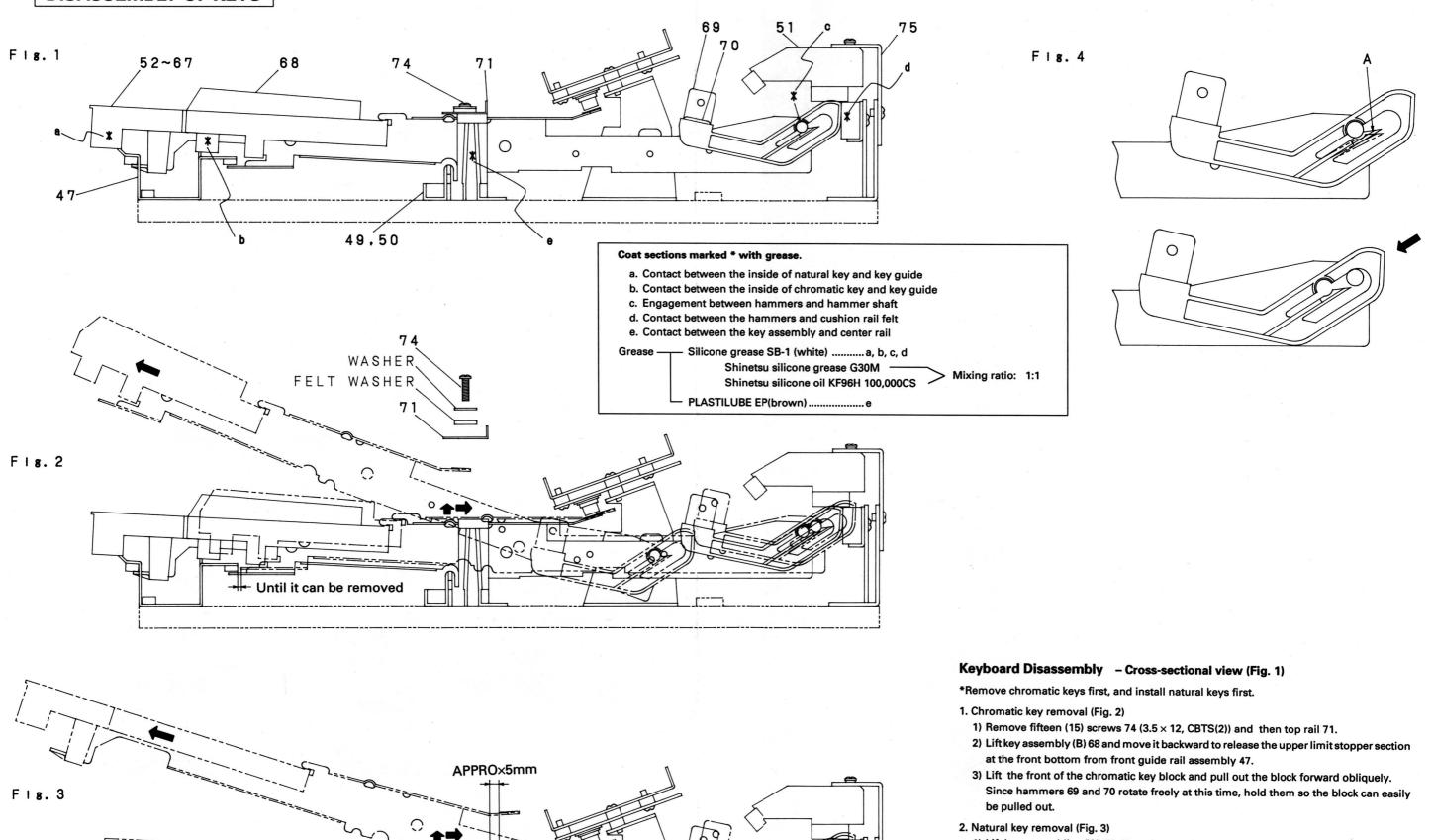
1			EP-5000							
١	No.	Part Name	Q'ty	Part No.						
ŀ	69	HAMMER	81	4367183213						
ŀ	70	HAMMER	7	4367183226						
t	71	TOP RAIL	1	4367189330						
t	72	FELT WASHER	14	1247108007						
t	73	3.5W	14	4751134001						
t	74	3.5 × 12 CBRTS (2)	15	4730800013						
Ī	75	BACK RAIL BRACKET	14	4127126000						
Ī	76	3.5 × 14 CBTS (1) (SW)	14	4718003007						
Ī	77	4 × 6 CTTS (2)	14	4738003003						
I	78	3.5 × 14 CBTS (1) (SW)	14	4718003007						
I	79	CUSHION RAIL	1	4367254003						
	80	CUSHION BRACKET	3	4127130008						
	81	CUSHION RAIL FELT	1	1247094014						
	82	3.5 × 14 CBTS (1) (SW)	6	4718003007						
	83	4 × 6 CTTS (S)	6	4738003003						
	84	SWITCH BOARD I UNIT	1	BP-343						
L	85	SWITCH BOARD II UNIT	1	BP-339						
L	86	SWITCH BOARD III UNIT	1	BP-344						
L	87	SWITCH BOARD IV UNIT	1	BP-341						
L	88	SWITCH BASE	1	4117092211						
L	89	COLLAR	30	4497023010						
L	90	3 × 10 CBRTS (S)	26	4737005002						
L	91	BASE BRACKET	4	4127144104						
L	92	3.1 × 14 CBTS (1) (SW)	8	4718003001						
L	93	COLLOAR	4	4497023010						
ļ	94	3.1 × 16 CBTS (S)	4	4737005031						
ļ	95	8 KEY RUBBER SWITCH	11	2128582107						
ŀ	96	1 KEY RUBBER SWITCH	1	2128584105						
ŀ	97	11P CONNECTOR ASS'Y	1	2047426001						
ŀ	98	10P CONNECTOR ASS'Y	1	2045031032						
1	99	6P CONNECTOR ASS'Y	1	2041432020						
-	100	MAIN BOARD UNIT	1	3997011015						
	100 101	MAIN BOARD UNIT CONTROL BOARD UNIT		3997011015 3997008002						
	100 101 102	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT	1 1 1	3997011015 3997008002 3997009027						
	100 101 102 103	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B.	1 1 1	3997011015 3997008002 3997009027 BP-410						
	100 101 102 103 104	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT	1 1 1 1	3997011015 3997008002 3997009027 BP-410 BP-393-2						
	100 101 102 103 104 105	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH	1 1 1 1 1 1 1 1	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018						
	100 101 102 103 104 105 106	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON	1 1 1 1 1 1 1 1 1	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048						
	100 101 102 103 164 105 106	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y	1 1 1 1 1 1 1 1 1 1	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055						
	100 101 102 103 104 105 106 107 108	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S)	1 1 1 1 1 1 1 1 2	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512065 4737002034						
	100 101 102 103 104 105 106 107 108	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y	1 1 1 1 1 1 1 2	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025						
	100 101 102 103 104 105 106 107 108	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S)	1 1 1 1 1 1 1 1 2	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003						
	100 101 102 103 104 105 106 107 108 109	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1)	1 1 1 1 1 1 1 2 1	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025						
	100 101 102 103 104 105 106 107 108 109 110	MAIN BOARD UNIT  CONTROL BOARD UNIT  POWER BOARD UNIT  MULTIPLEX P.C.B.  L/FILTER BOARD UNIT  POWER SWITCH  PUSH BUTTON  SW. CONNECTOR ASS'Y  3 × 6 CBTS (S)  EARTH WIRE ASS'Y  3.5 × 10 CBTS (1)  VOLUME PANEL	1 1 1 1 1 1 1 1 2 1 1 1 3	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103						
	100 101 102 103 104 105 106 107 108 109 110 111	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET	1 1 1 1 1 1 1 2 1 1 1 3 3	3997011015 3997008002 3997009027 BP-410 BP-393-2 2125590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108						
	100 101 102 103 104 105 106 107 108 109 110 111 111 112	MAIN BOARD UNIT  CONTROL BOARD UNIT  POWER BOARD UNIT  MULTIPLEX P.C.B.  L/FILTER BOARD UNIT  POWER SWITCH  PUSH BUTTON  SW. CONNECTOR ASS'Y  3 × 6 CBTS (S)  EARTH WIRE ASS'Y  3.5 × 10 CBTS (1)  VOLUME PANEL  BLIND SHEET  SWITCH BUTTON (S)	1 1 1 1 1 1 1 1 2 1 1 3 3 3	3997011015 3997008002 3997009027 BP-410 BP-393-2 2125590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113	MAIN BOARD UNIT  CONTROL BOARD UNIT  POWER BOARD UNIT  MULTIPLEX P.C.B.  LIFILTER BOARD UNIT  POWER SWITCH  PUSH BUTTON  SW. CONNECTOR ASS'Y  3 × 6 CBTS (S)  EARTH WIRE ASS'Y  3.5 × 10 CBTS (1)  VOLUME PANEL  BLIND SHEET  SWITCH BUTTON (S)  SWITCH BUTTON	1 1 1 1 1 1 1 2 1 1 3 3 2	3997011015 3997008002 3997009027 BP-410 BP-393-2 2122590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. LIFILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1	3997011015 3997008002 3997009027 BP-410 BP-393-2 2122590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 1 2	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590318 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET 3 × 6 CBTS (S)	1 1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 1 1 2 9	3997011015 3997008002 3997009027 BP-410 BP-393-2 2122590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET BLIND SHEET SLIDE VOLUME KNOB	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 9 9 3	3997011015 3997008002 3997009027 BP-410 BP-393-2 2122590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET 3 × 6 CBTS (S) SLIDE VOLUME KNOB PT-01M (CONE TWEETER)	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 9 3 2 9	3997011015 3997008002 3997008002 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B.  L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET 3 × 6 CBTS (S) SLIDE VOLUME KNOB PT-01M (CONE TWEETER) 3 NUT-W	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 9 3 2 4	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET BLIND SHEET SUITCH BUTTON BLIND SHEET SUITCH BUTTON BLIND SHEET 3 × 6 CBTS (S) SLIDE VOLUME KNOB PT-01M (CONE TWEETER) 3 NUT-W SPEAKER WIRE ASS'Y	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 9 3 2 4 1	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2 2045051009						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET 3 × 6 CBTS (S) SLIDE VOLUME KNOB PT-01M (CONE TWEETER) 3 NUT-W SPEAKER WIRE ASS'Y 3.5 × 30 CTTS (1)	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 9 3 2 4 1 1 2	3997011015 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2 2045051009 4734806042						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET BLIND SHEET BLIND SHEET 3 × 6 CBTS (S) SLIDE VOLUME KNOB PT-01M (CONE TWEETER) 3 NUT-W SPEAKER WIRE ASS'Y 3.5 × 30 CTTS (1) PANEL SUPPORT	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 9 3 2 4 1 1 2 1	3997011015 3997008002 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2 2045051009 4734806042 4127181109						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET BLIND SHEET 3 × 6 CBTS (S) SLIDE VOLUME KNOB PT-01M (CONE TWEETER) 3 NUT-W SPEAKER WIRE ASS'Y 3.5 × 30 CTTS (1) PANEL SUPPORT 3 × 6 CBTS (S)	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 1 2 9 3 2 4 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1	3997011015 3997008002 3997008002 3997009027 BP-410 BP-393-2 2128590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2 2045051009 4734806042 4127181109 4737002034						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125	MAIN BOARD UNIT  CONTROL BOARD UNIT  POWER BOARD UNIT  MULTIPLEX P.C.B.  L/FILTER BOARD UNIT  POWER SWITCH  PUSH BUTTON  SW. CONNECTOR ASS'Y  3 × 6 CBTS (S)  EARTH WIRE ASS'Y  3.5 × 10 CBTS (1)  VOLUME PANEL  BLIND SHEET  SWITCH BUTTON (S)  SWITCH BUTTON  BLIND SHEET  BLIND SHEET  BLIND SHEET  3 × 6 CBTS (S)  SLIDE VOLUME KNOB  PT-01M (CONE TWEETER)  3 NUT-W  SPEAKER WIRE ASS'Y  3.5 × 30 CTTS (1)  PANEL SUPPORT  3 × 6 CBTS (S)  FELT WASHER	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 2 9 3 2 4 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3997011015 3997008002 3997008002 3997009027 BP-410 BP-393-2 2122590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2 2045051009 4734806042 4127181109 4737002034 11247108007						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126	MAIN BOARD UNIT  CONTROL BOARD UNIT  POWER BOARD UNIT  MULTIPLEX P.C.B.  L/FILTER BOARD UNIT  POWER SWITCH  PUSH BUTTON  SW. CONNECTOR ASS'Y  3 × 6 CBTS (S)  EARTH WIRE ASS'Y  3.5 × 10 CBTS (1)  VOLUME PANEL  BLIND SHEET  SWITCH BUTTON (S)  SWITCH BUTTON  BLIND SHEET  BLIND SHEET  BLIND SHEET  3 × 6 CBTS (S)  SLIDE VOLUME KNOB  PT-01M (CONE TWEETER)  3 NUT-W  SPEAKER WIRE ASS'Y  3.5 × 30 CTTS (1)  PANEL SUPPORT  3 × 6 CBTS (S)  FELT WASHER  3.5W	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 2 9 3 2 4 1 1 1 1 1 1 1 1 1 1 1	3997011015 3997008002 3997008002 3997009027 BP-410 BP-393-2 2122590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2 2045051009 4734806042 4127181109 4737002034 1247108007 4751134001						
	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127	MAIN BOARD UNIT CONTROL BOARD UNIT POWER BOARD UNIT MULTIPLEX P.C.B. L/FILTER BOARD UNIT POWER SWITCH PUSH BUTTON SW. CONNECTOR ASS'Y 3 × 6 CBTS (S) EARTH WIRE ASS'Y 3.5 × 10 CBTS (1) VOLUME PANEL BLIND SHEET SWITCH BUTTON (S) SWITCH BUTTON BLIND SHEET BLIND SHEET BLIND SHEET BLIND SHEET BLIND SHEET 3 × 6 CBTS (S) SLIDE VOLUME KNOB PT-01M (CONE TWEETER) 3 NUT-W SPEAKER WIRE ASS'Y 3.5 × 30 CTTS (1) PANEL SUPPORT 3 × 6 CBTS (S) FELT WASHER 3.5W 3.5 × 12 CBRTS (2)	1 1 1 1 1 1 1 2 1 1 3 3 2 1 1 2 9 3 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3997011015 3997008002 3997008002 3997009027 BP-410 BP-393-2 2122590018 1137015048 2033512055 4737002034 2097038025 4733804003 1037092103 1227027108 1137032005 1137030104 1227029164 1227029177 4737002034 1137031103 3017023006 SC1082-2 2045051009 4734806042 4127181109 4737002034 1247108007 4751134001 4730800013						

	No.	Dont Nome		EP-5000
	NO.	Part Name	Q'ty	Part No.
	131	3×6 CBTS (S)	12	4777002034
	132	SHIELD CASE	1	4147013202
	133	3.5 × 10 CBTS (1)	10	4733804003
	134	3.5 × 10 CBTS (1)	4	4733804003
	135	PLUG BRACKET	1	4127182001
	136	3.5 × 10 CBTS (1)	2	4733804003
	137	3 × 8 CBTS (S)	6	4737002021
	138	PUSH RIVET	6	4770210003
	139	AUX PANEL	1	1027193009
	140	3 × 10 CBTS (1)	8	4733814006
	141	LED ASS'Y	1	3937018081
Δ	142	LED BUSHING AC CORD WITH PLUG	1	4430310007
<u>A</u>	144	BUSHING	1	2062021009 4450047004
44	145	BUSHING PLATE	1	4127133005
$\mathbf{\Lambda}$	146	SWITCH COVER	1	4157006005
	147	REAR HINGE	2	4017034007
	148	3 × 10 CBTS (1)	4	4733816004
	149	3 × 10 CBTS (1)	6	4733816004
	150	STAY	1	1297010006
	151	3.5 × 10 CBTS (1)	1	4733804003
	200	LID ASS'Y	(1)	1037094004
	201	REAR LID	1	1037054316
	202	R/BRACKET (L) ASS'Y	1	4397025406
	203	R/BRACKET (R) ASS'Y	1	4397026405
	204	3×8 CBTS (S)	4	4737002018
	205 206	3 W COVER SUPPORTER	4	4751003006
	207	3×6 CBTS (P)	5	4337005004
	208	PANEL FELT	2	4737500002 1247096025
	209	FRONT LID ASS'Y	(1)	1037095003
	-1	FRONT LID	1	1037053003
	-2	ROLLER SHAFT (B)	2	4227002201
	-3	GUIDE ROLLER (B)	2	4217002004
	-4	SPRING	2	4367294102
	210	WINDOW	1	1037053304
	211	3 × 5 CBTS (B0)	1	4733814006
	250	CARTON CASE ASS'Y (PIANO STAND)	(1)	5017415104
	251	CASE	1	5017416006
	252	CUSHION ASS'Y	1	5027508001
	253	OUT CARTON	1	5017413122
	300	CARTON CASE ASS'Y (PIANO MAIN UNIT)	(1)	5017402007
	301	CARTON CASE ASS T (FIAND MAIN UNIT)	1	5017402007
	302	OVER SIDE CUSHION	1	5017300033
	303	UNDER SIDE CUSHION	1	5027445003
	304	F.R. COVER	2	5027470016
	305	OVER COVER	1	5027471002
	306	UNDER COVER	1	5027472001
	307	KEY CUSHION	2	5027473000
	308	PAD	2	5047029104
	309	OUT CARTION	1	5017413009
	401	INSTRUCTION MANUAL (PIANO STAND)	1	E117221000
	402	OWNERS MANUAL (PIANO MAIN UNIT)	1	5117231000 5117230001
		The state of the s	Ė	5.1720001
				:
			-	

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## **DISASSEMBLY OF KEYS**



WEIGHT

- 1) Lift key assemblies (W) 52-67 and move them backward to release the upper limit stopper section from front guide rail assembly 47.
- 2) Lift the front of the natural key and the key forward obliquely up to about 5 mm where the weight nearly touched center rails 49 and 50 and then turn it to the left or right by 45° to pull it out. Since hammer 69 rotates freely at this time, hold it so the key can easily be pulled out.

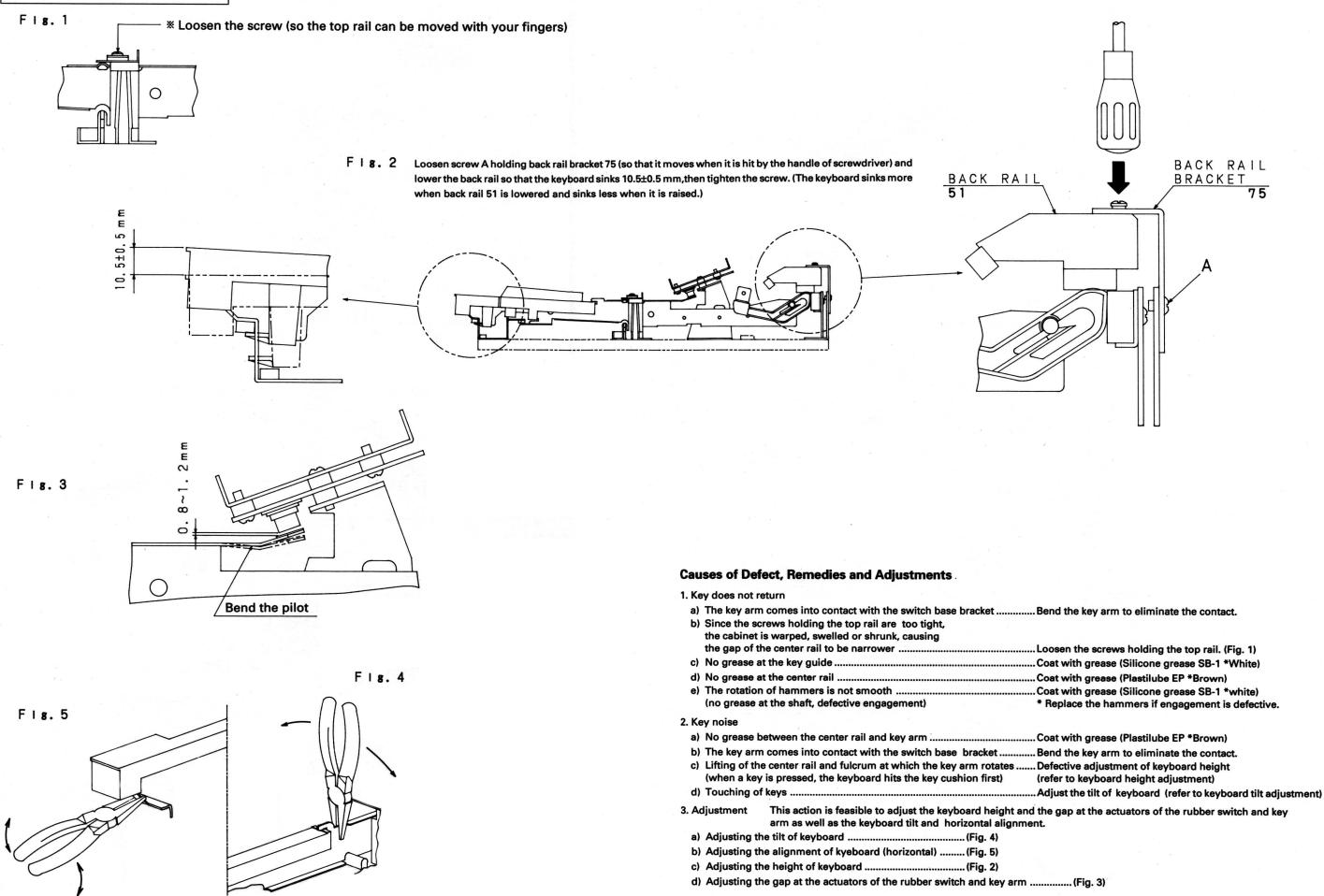
#### 3. Hammer removal (Fig. 4)

1) Depress sections A of hammers 69 and 70 and push the hammers in the direction of the arrow to remove them.

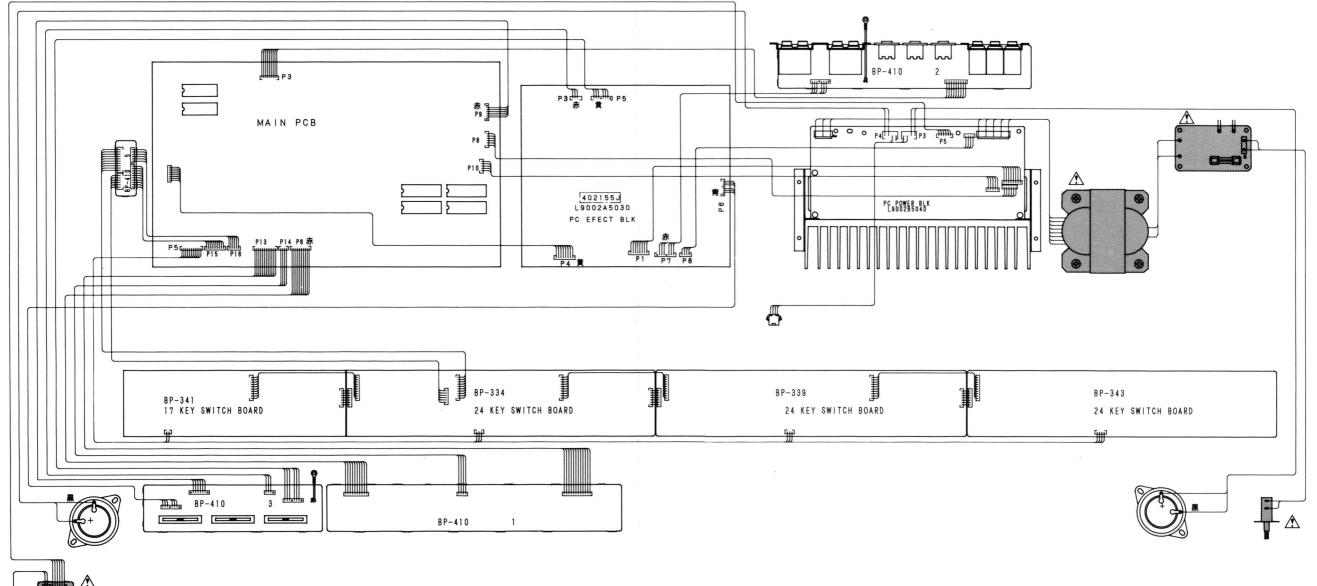
Until it can

be removed

## **ADJUSTMENT OF KEYS**



## **BLOCK DIAGRAM**



#### **NOTES**

ALL RESISTANCE VALUES IN OHM k=1,000 OHM M=1,000,000 OHM ALL CAPACITANCE VALUES IN MICRO FARAD P=MICRO-MICRO FARAD EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

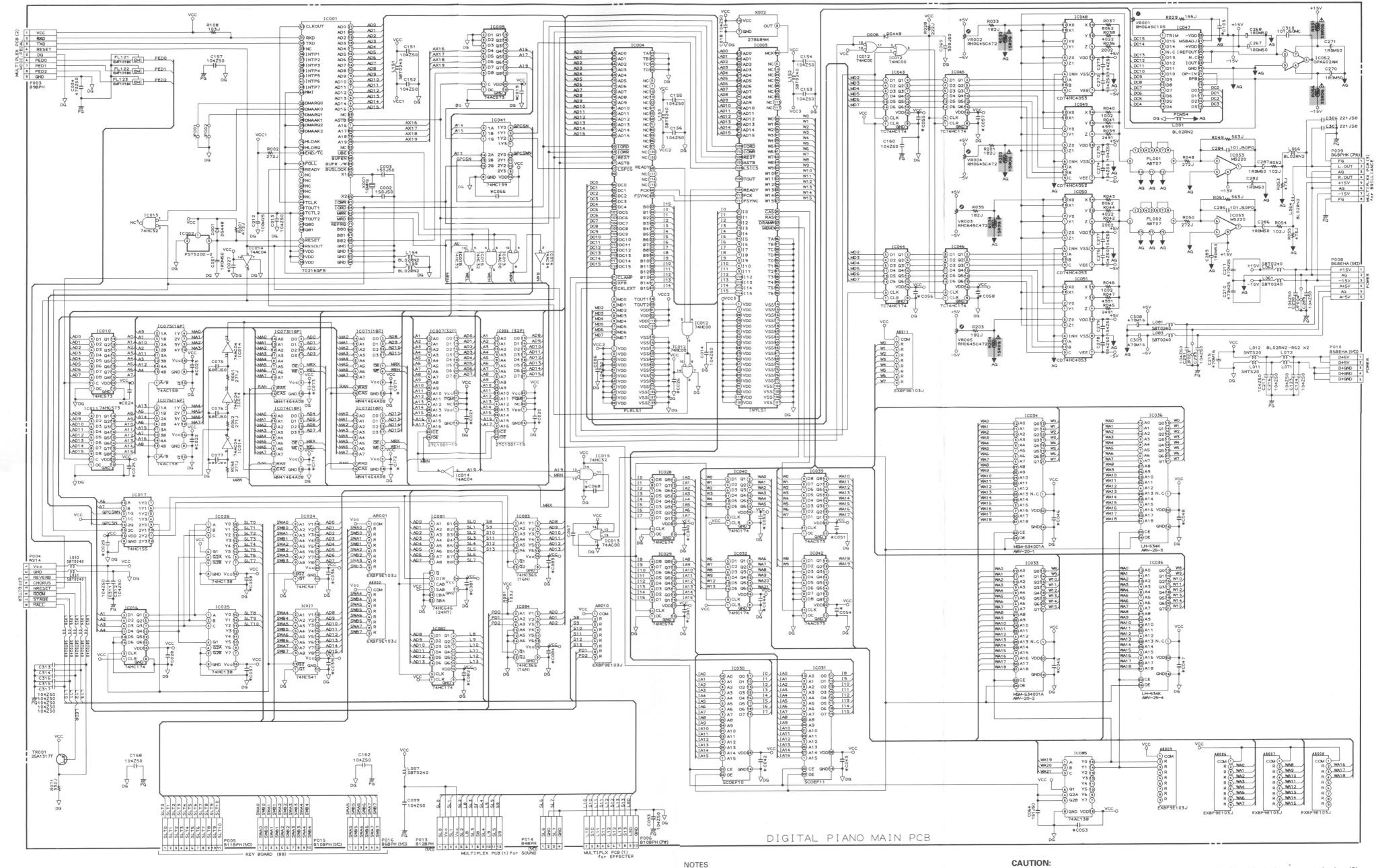
#### **WARNING:**

Parts marked with this symbol  $\Delta$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

#### **CAUTION:**

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or it the resistance from shassis to either side of the power cord is less than 240 k ohm, the unit is defective.

#### WARNING:

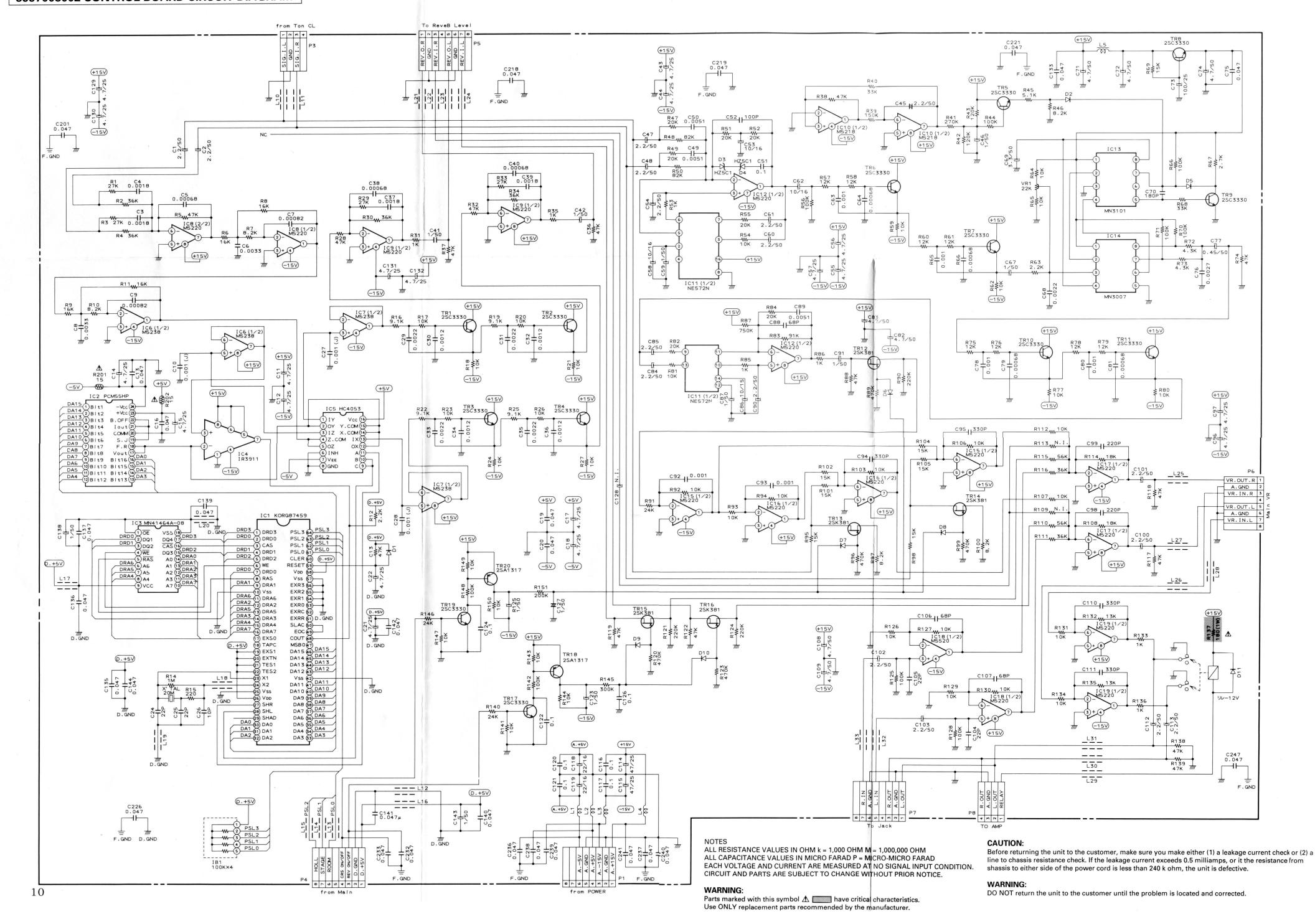


ALL RESISTANCE VALUES IN OHM k = 1,000 OHM M = 1,000,000 OHM ALL CAPACITANCE VALUES IN MICRO FARAD P = MICRO-MICRO FARAD EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

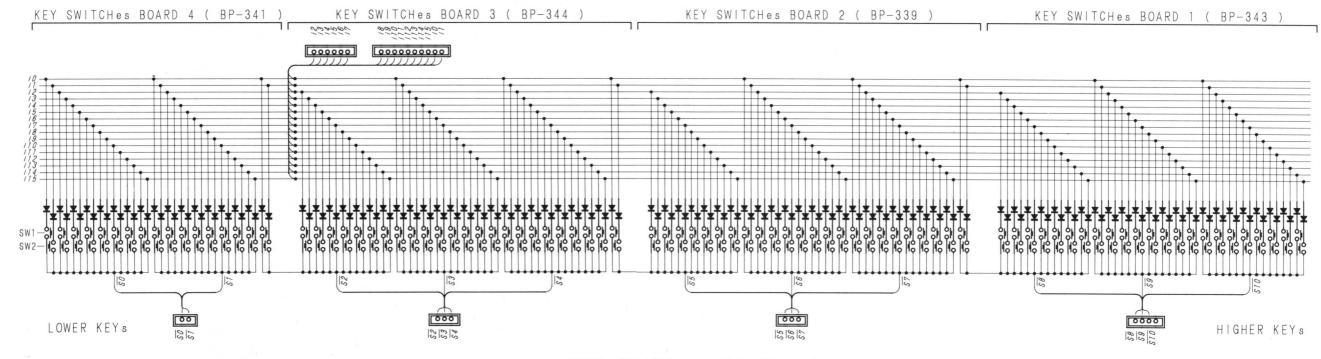
Parts marked with this symbol  $\triangle$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or it the resistance from shassis to either side of the power cord is less than 240 k ohm, the unit is defective.

## WARNING:



## **BP-343, 339, 334, 341 SWITCH BOARD CIRCUIT DIAGRAM**



KEY SWITCHes BOARDs ( 88 KEYs MATRIX )

**NOTES** 

ALL RESISTANCE VALUES IN OHM k = 1,000 OHM M = 1,000,000 OHM ALL CAPACITANCE VALUES IN MICRO FARAD P = MICRO-MICRO FARAD EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

#### WARNING:

Parts marked with this symbol  $\triangle$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

#### CAUTION:

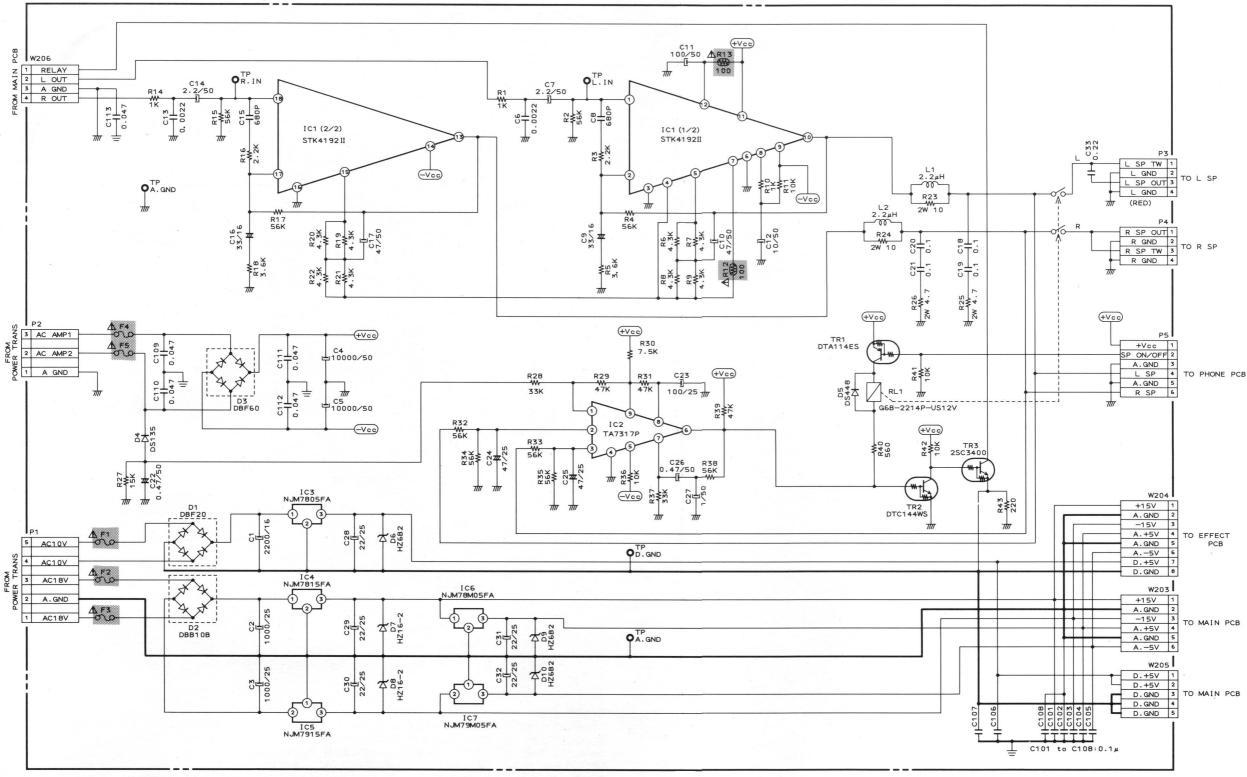
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or it the resistance from shassis to either side of the power cord is less than 240 k ohm, the unit is defective.

#### WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

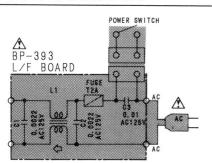
KEY SWITCH ; ≌≅

## 3997009027 POWER BOARD CIRCUIT DIAGRAM



POWER PCB

# **BP-393-2 L/FILTER BOARD CIRCUIT DIAGRAM**



#### NOTES

ALL RESISTANCE VALUES IN OHM k=1,000 OHM M=1,000,000 OHM ALL CAPACITANCE VALUES IN MICRO FARAD P=MICRO-MICRO FARAD EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

#### WARNING:

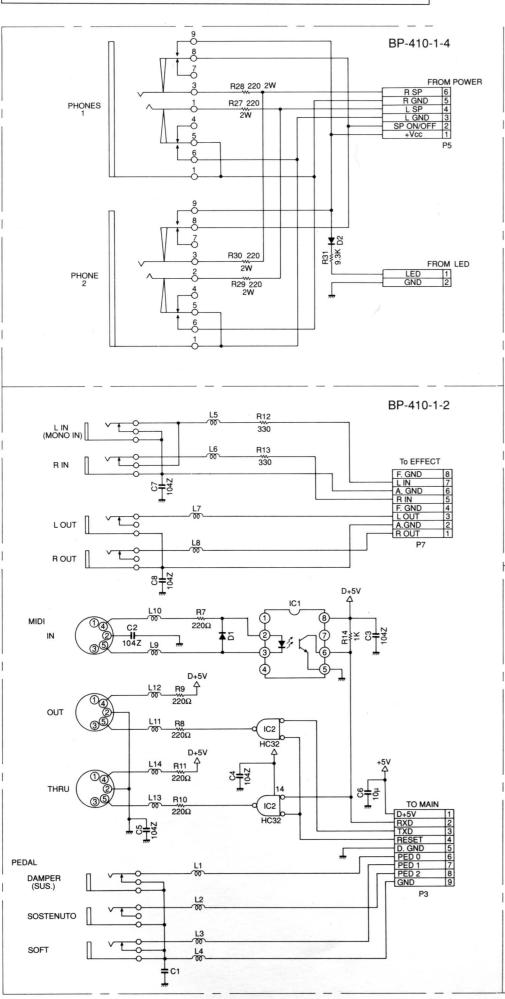
Parts marked with this symbol  $\triangle$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

#### CAUTION:

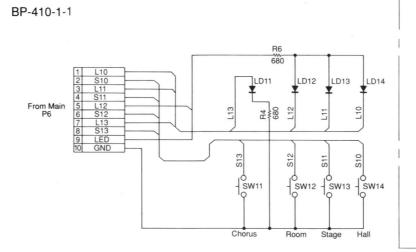
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or it the resistance from shassis to either side of the power cord is less than 240 k ohm, the unit is defective.

#### WARNING:

## **BP-410 MULTIPLE BOARD CIRCUIT DIAGRAM**



#### \_\_\_\_\_



#### NOTES

ALL RESISTANCE VALUES IN OHM k=1,000 OHM M=1,000,000 OHM ALL CAPACITANCE VALUES IN MICRO FARAD P=MICRO-MICRO FARAD EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION. CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

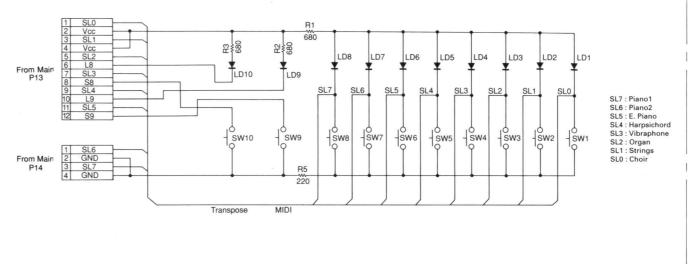
#### WARNING:

Parts marked with this symbol  $\triangle$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

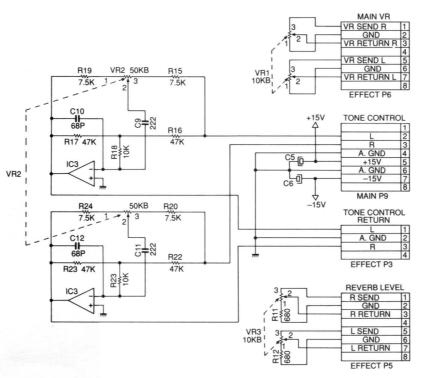
#### CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or it the resistance from shassis to either side of the power cord is less than 240 k ohm, the unit is defective.

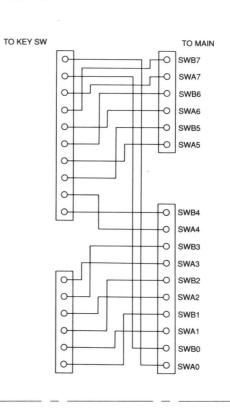
#### WARNING:

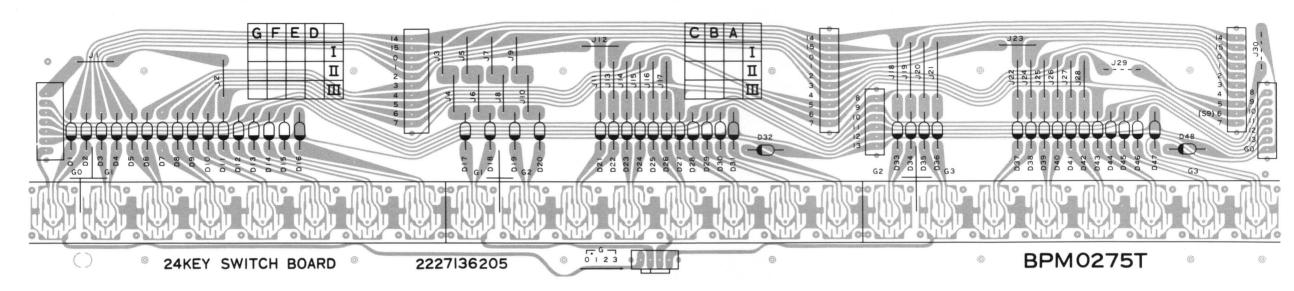




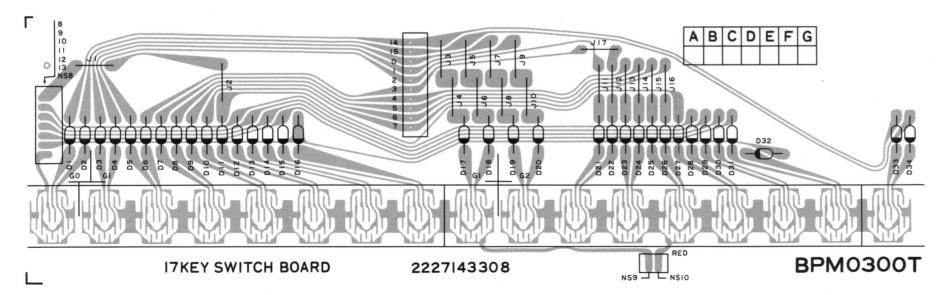


BP-410-1-5

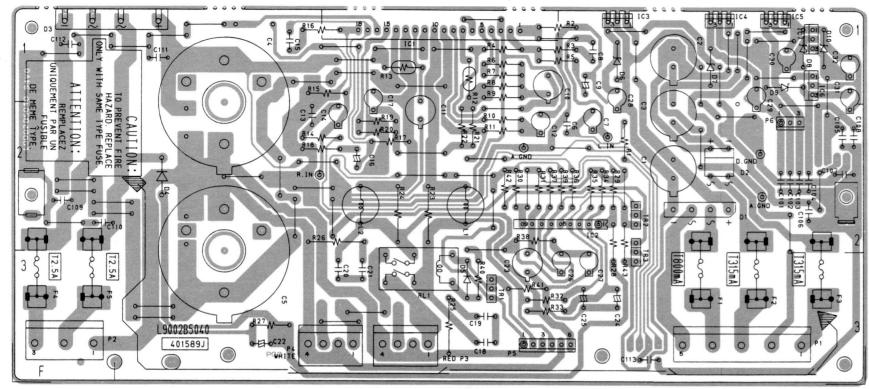




## **BP-341 SWITCH BOARD UNIT**

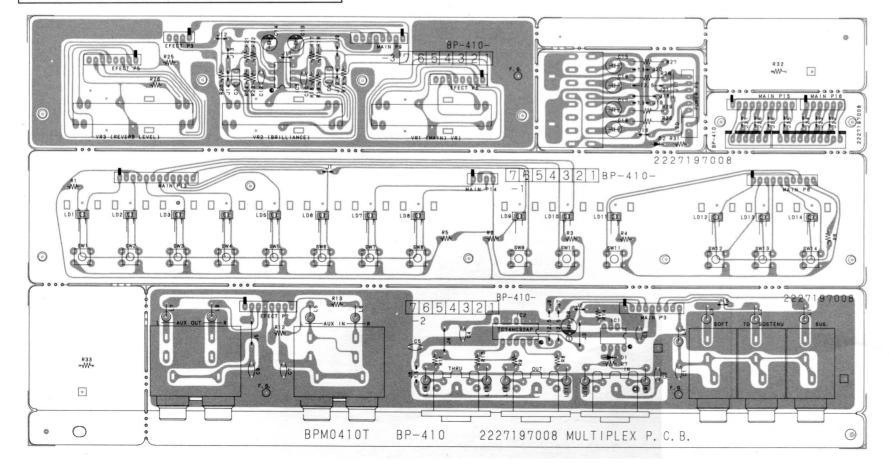


## **3997009027 POWER BOARD UNIT**

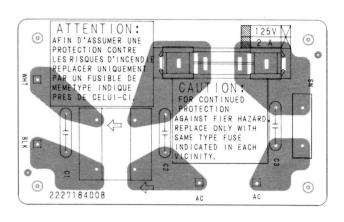


POWER PCB L9002B5040

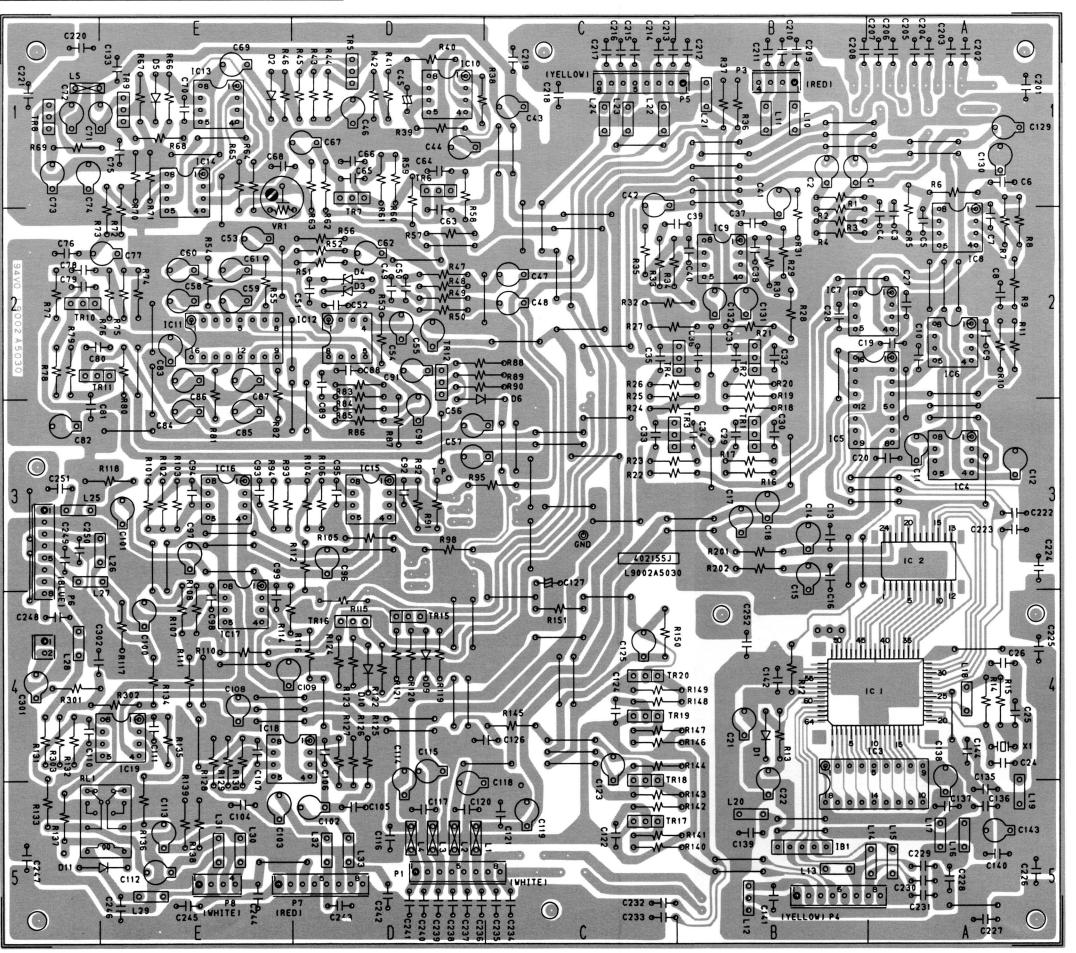
## **BP-410 MULTIPLEX BOARD UNIT**



## **BP-393-2 L/FILTER BOARD UNIT**



## 3997008002 CONTROL BOARD UNIT



#### PRINCIPAL PARTS LOCATION

CS		
C1	 	 A,B4
C2	 	 АЗ
C3	 	 A,B5
C4	 	 АЗ
C5	 	 A,B2
C6	 	 A2
C7	 	 A,B2
C8	 	 <b>A</b> 2
C9	 	 B2
C10	 	 D1
C11	 	 E2
C12	 	 D2
C13	 	 E1
C14	 	 E1
C15	 	 D3
C16	 	 E3
IC17	 	 E4
IC18	 	 D,E4
IC19	 	 E4

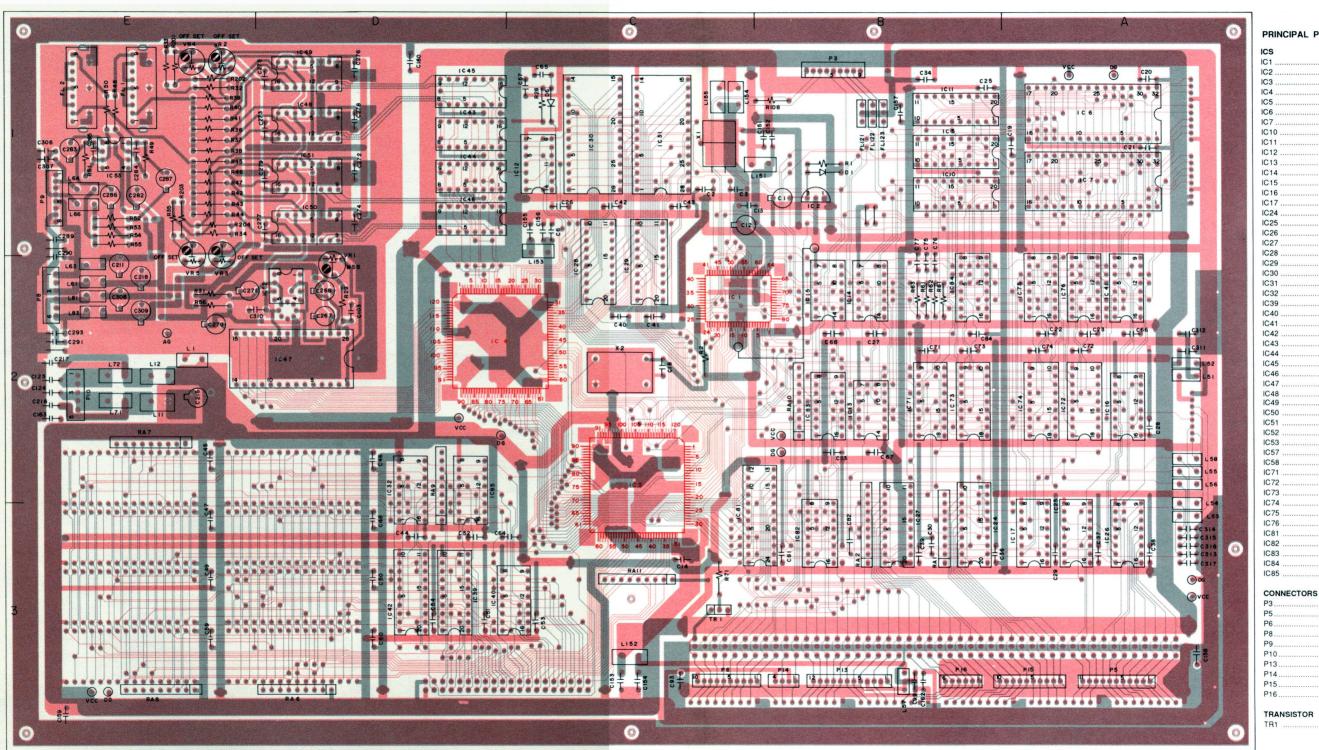
#### **CONNECTORS**

21												D5
23	•											B1
P4												
P5	•											C1
P6	•											F3
Ρ7												
DΩ												E

#### **TRANSISTORS**

TR1		B3
TR2		B2
TR3		C3
TR4		B,C2
TR5		D1
TR6		D1
TR7		D1
TR8		F1
TR9		E1
TR10		F2
<b>TR11</b>		E,F2
TR12	!	D2
TR15	i	D4
TR16		D4
TR17	•	C5
<b>TR18</b>		C5
<b>TR19</b>		C4
TR20	)	C4

### **3997011015 MAIN BOARD UNIT**



PRINCIPAL PARTS LOCATION C2,3

## **VOLUME ADJUSTMENT**

#### Test Mode and Adjustment EP-5000 MAIN PCB

#### Test mode

How to set to the test mode:

Press the CHOIR button and hold it, then turn the power switch on.

Only the PIANO 1 indicator lights.

How to release the test mode:

Press the tone select button or turn the power switch off and then on again.

Details of test mode:

Offset adjustment

MSB adjustment

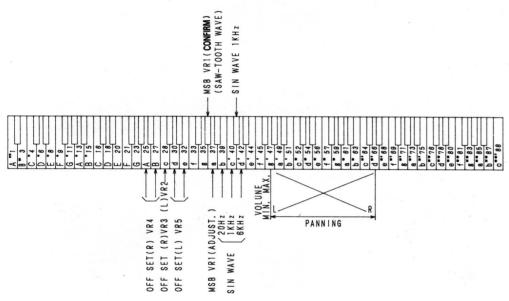
Sine-wave output (20Hz, 1kHz, 6kHz, 20kHz)

Sine-wave output (1kHz, output higher than above)

**Panning** 

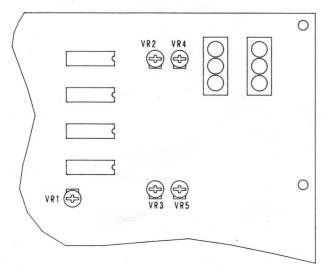
Relationship between the test mode and keyboard

See below.



#### **Adjustment**

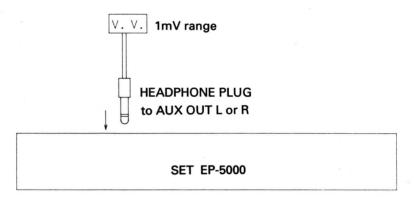
- (1) Test equipment necessary for adjustment Millivoltmeter
- (2) Warm up the instrument for mode than 5 minutes and set it to the test mode, then start adjustments.
- (3) Locations of adjustment components



#### (4) Order of adjustments

1. Warm up	more than 5 minutes
2. Teat mode	
3. Offset adjustment	1 VR2 (R Side)
	2 VR3 (L Side)
	3 VR4 (R Side)
	4 VR5 (L Side)
4. MSB adjustment	VR1
4. WISD adjustillerit	VIII

#### Adjustment



#### Setting of variable resistors on panel

Variable resistor	VOLUME	BRILLIANCE
Setting	MAX.	BRIGHT

#### **Adjuatment**

Adjust the variable resistors so the reading of the V.V. is minimum.

	Adjustment	Plug Position (AUX OUT)	KEY No.	Opration
1	VR2	R	28 (C)	VR2 Turn C on repeatedly.
2	VR3	L	28 (C)	VR3 Turn C on repeatedly.
3	VR4	R	30, 32 (D, E)	VR4 Turn D and E on alternately and repeatedly.
4	VR5	L	25, 27 (A,B)	VR5 Turn A and B on alternately and repeatedly.
5	VR1	L	37 (A)	VR1 Turn A on. (Adjust so the volume is minimum when hearing.)

## **SPECIFICATIONS**

#### Model EP-5000

Keyboards	88 Keys (A <sub>2</sub> ~c <sup>5</sup>	88 Keys (A <sub>2</sub> ~c <sup>5</sup> )								
Sound range	7 octaves 1/4	7 octaves 1/4								
Voices	Piano 1•2, E.Pi	Piano 1•2, E.Piano, Harpsichord								
voices	Vibraphone, O	rgan, Strings, C	Choir							
Effects	Reverb									
Lifects	Chorus									
Controls	Volume, Tunir	Volume, Tuning, Transpose								
	AUX IN (mona	AUX IN (monaural, steleo)								
Connecting	AUX OUT (ste	AUX OUT (stereo)								
Jacks	Headphone te	Headphone terminal × 2								
Jucks	Sustain pedal,	Sustain pedal, Soft pedal								
	MIDI IN, MIDI	MIDI IN, MIDI OUT, MIDI THRU								
Speakers	16 cm × 4, Tw	eeter × 2								
Output	30 W+30 W									
Dimensions	Width	Height	Depth							
Difficitions	1370 mm									
Weight	74 Kg									

**Note**: The specifications and appearance are subject to changes with out notice.

## LIST OF P.W.BOARD No.

Name of P.W.BOARD	P.W.BOARD No.
SWITCH BOARD I	BP-343
SWITCH BOARD II	BP-339
SWITCH BOARD III	BP-344
SWITCH BOARD IV	BP-341
MAIN BOARD	3997011015
CONTROL BOARD	3997008002
POWER BOARD	3997009027
MULTIPLEX BOARD	BP-410
L/FILTER BOARD	BP-393-2