

DENON

SERVICE MANUAL

ELECTRONIC PIANO

MODEL EP-700

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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

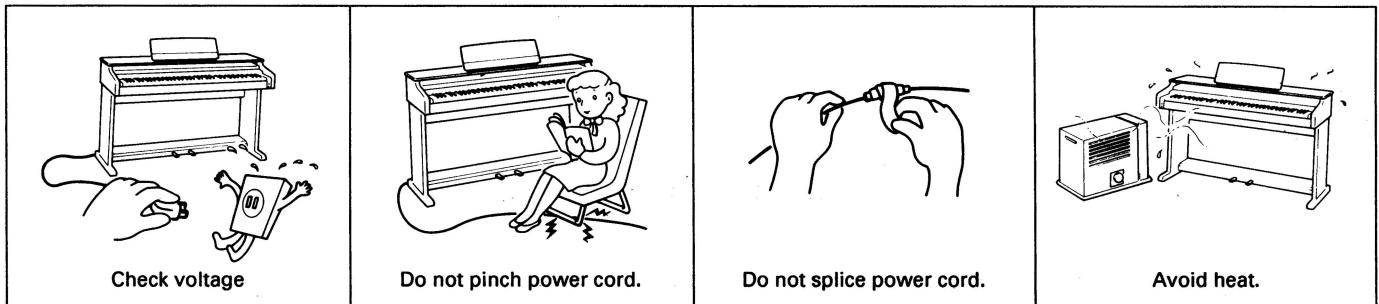
NOTE: To allow you to enjoy music at a stable operation, it is recommended to use this in a room 10°C-35°C.

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.
- 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.

- 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 INSTRUMENTS 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.



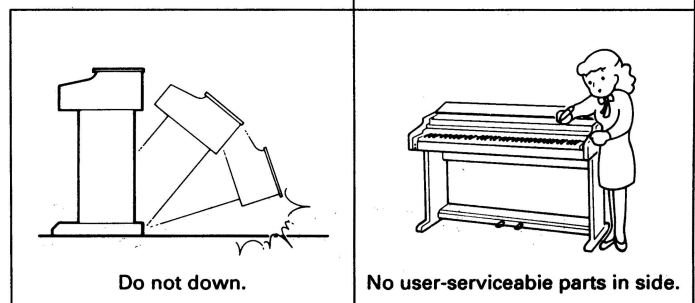
■ USE

- 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.
- 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.



■ 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.



DISASSEMBLY

Fig. 1

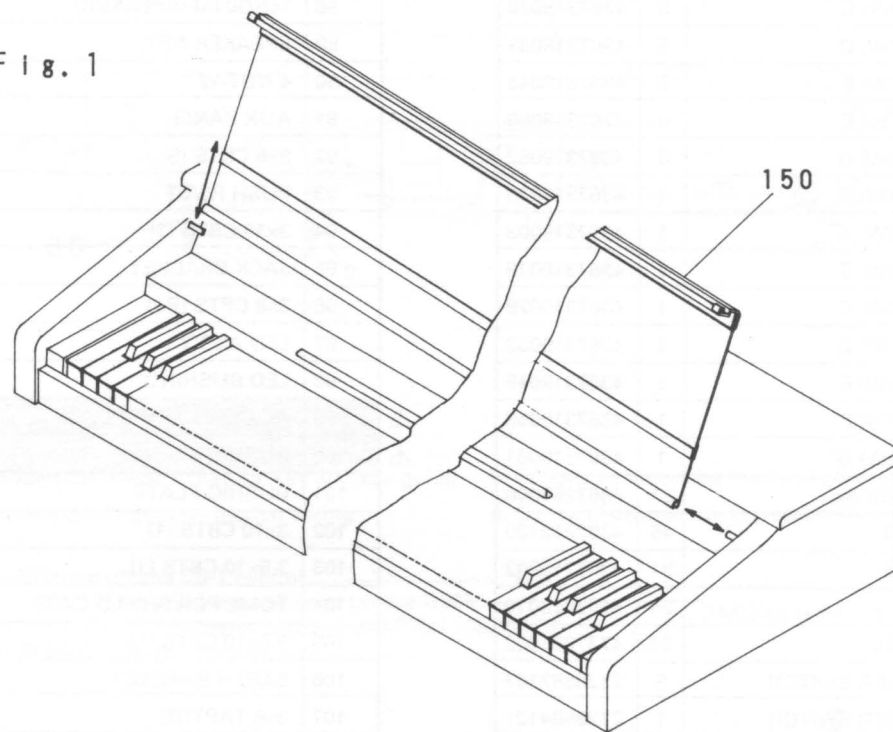


Fig. 2

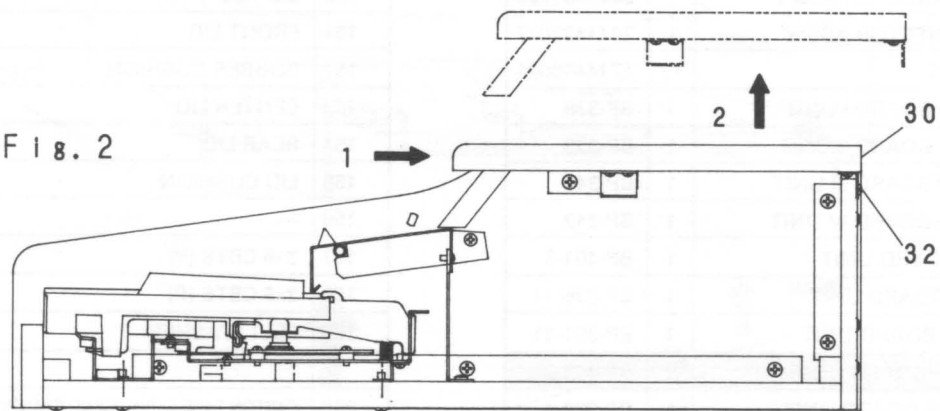


Fig. 3

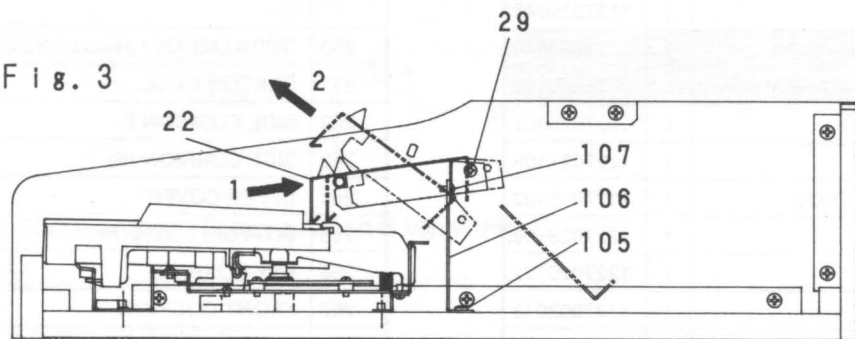


Fig. 4

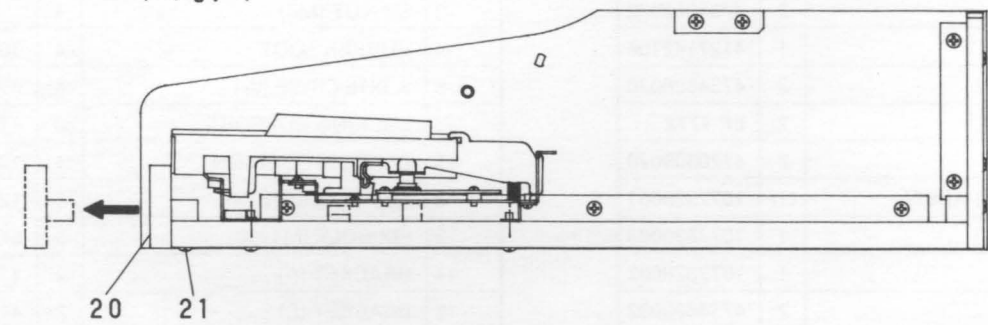
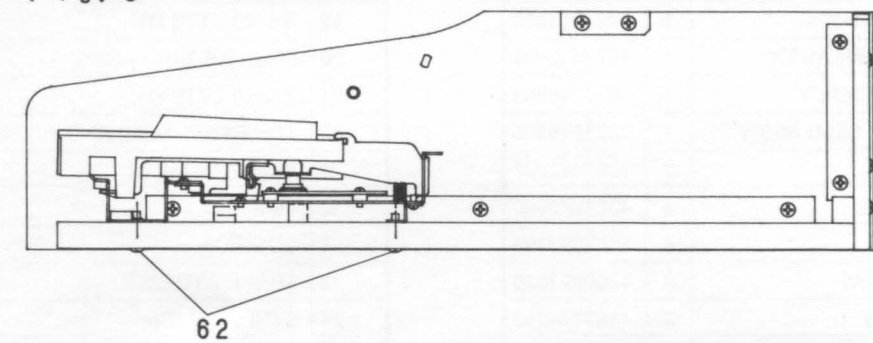


Fig. 5



Cabinet Disassembly

1. Remove lid assembly 150. (Fig.1)
 - 1) Open lid assembly 150 as shown in the figure and lift its left end and slide the entire assembly to remove it.
2. Remove roof board 30. (Fig.2)
 - 1) Remove six (6) screws 32 (3 × 10, CBTS(1)).
 - 2) Move roof board 30 in the direction of arrow 1 and remove it in the direction of arrow 2.
3. Remove top panel assembly 22. (Fig.3)
 - 1) Remove screw 107 (3 × 6, TAPTITE) and two (2) screws 105 (3.5 × 10, CBTS(1)), then remove earth bracket 106.
 - 2) Remove screw 29 (3.5 × 10, CBTS (1)) and push top panel assembly 22 in the direction of arrow 1.
 - 3) Lift the front of top panel assembly 22 and move the entire assembly in the direction of arrow 2 to remove it.
4. Remove front board assembly 20. (Fig.4)
 - 1) Remove five (5) screws (3.5 × 25, CTTS(1)) and move front board assembly 20 in the direction of the arrow to remove it.
5. Remove the key unit. (Fig.5)
 - 1) Remove twelve (12) screws 62 and lift the key unit to remove it.

PARTS LIST OF EXPLODED VIEW

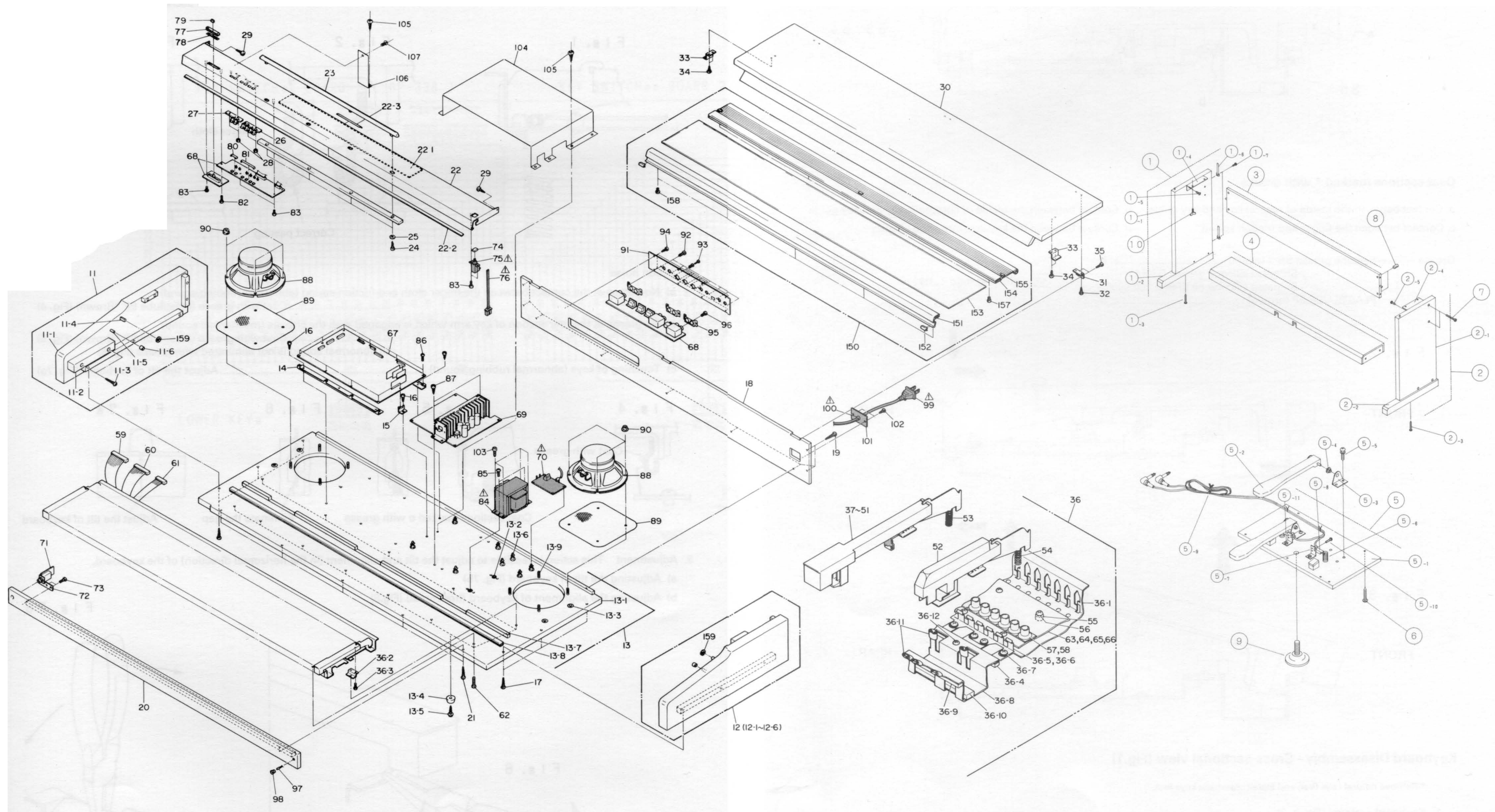
No.	Part Name	EP-700	
		Q'ty	Part No.
1	SIDE PANEL (L) ASS'Y	(1)	1077326004
-1	SIDE PANEL (L)	1	1077327003
-2	FOOT	1	1077328002
-3	4x40 CTTS (1)	2	4734803032
-4	JOINT BRACKET	1	4127142106
-5	3.5x16 CTTS (1)	3	4734806026
-6	CORD HOLDER	2	EP-4772
-7	3.1x16 CRWS	2	4720309029
2	SIDE PANEL (R) ASS'Y	(1)	1077329001
-1	SIDE PANEL (R)	1	1077330003
-2	FOOT	1	1077328002
-3	4x40 CTTS (1)	2	4734803032
-4	JOINT BRACKET	1	4127142106
-5	3.5x16 CRWS	3	4734806026
3	REAR BOARD ASS'Y	1	1017738005
4,5	PEDAL BOX ASS'Y	1	1077331002
4	PEDAL BOX SEMI ASS'Y	1	1077332001
5	PEDAL BOARD ASS'Y	(1)	1017746204
-1	PEDAL BOARD SEMI ASS'Y	1	1077075106
-2	PEDAL	2	4367263007
-3	PEDAL FLANGE	4	4367082000
-4	PF. BUSH	4	4367083106
-5	4x14 CPS (W,SW)	8	4700021026
-6	PEDAL SPRING	2	4367148009
-7	PEDAL SWITCH BRACKET	2	4127160104
-8	PEDAL SWITCH	2	2127001003
-9	H/P PLUG	1	2039455103
-10	2x10 CPS	2	4711810006
-11	3.5x10 CBTS (1)	2	4733804003
6	3.5x25 CRWS	7	4720411014
7	6x45 CBS	6	4713827013
8	CROSS DOWEL	2	MMP1140
9	ADJUSTER	1	1047038005
10	PRESS WING SCREW	4	MMP1142
11	SIDE BOARD (L) ASS'Y	(1)	1077306008
-1	SIDE BOARD (L)	1	1077307007
-2	KEY BLOCK (L)	1	1077308006
-3	4x35 CTTS (1)	2	4734803058
-4	LID PIN	1	4017030108
-5	FIX PIN	1	4437015004
-6	KEY GUIDE	1	4317002001
12	SIDE BOARD (R) ASS'Y	(1)	1077309005
-1	SIDE BOARD (R)	1	1077310007
-2	KEY BLOCK (R)	1	1077311006
-3	4x35 CTTS (1)	2	4734803058
-4	LID PIN (B)	1	4227007002
-5	FIX PIN	1	4437015004
-6	KEY GUIDE	1	4317002001

No.	Part Name	EP-700	
		Q'ty	Part No.
13	BOTTOM BOARD ASS'Y	(1)	1077343003
-1	BOTTOM BOARD	1	1077313004
-2	SP NUT (M4)	2	SC-1123-1
-3	SP NUT (M6)	4	
-4	RUBBER FOOT	4	1047037006
-5	3.1x16 CRWS (W)	4	4700035009
-6	LOCKING SUPPORT	8	4498079005
-7	BOTTOM CUSHION	1	1247090018
-8	KEY CUSHION	1	1247089003
-9	FIX BOLT (M4x30)	8	SC-1136J-1
14	BRACKET (A)	2	4127158006
15	BRACKET (B)	2	4127159005
16	3.5x10 CBTS (1)	8	4733804003
17	3.5x25 CTTS (1)	6	4734804002
18	REAR BOARD	1	1077344002
19	3.5x20 CTTS (1)	9	4734806000
20	FRONT BOARD ASS'Y	1	1077315002
21	3.5x25 CTTS (1)	5	4734804002
22	TOP PANEL SEMI ASS'Y	1	1027210212
-1	PANEL DAMPER	1	1297012004
-2	KEY FELT	1	1247095071
-3	CUSHION	1	1247113021
23	MUSIC STOPPER	1	4397007110
24	3x10 CBTS (Bo)	4	4733814019
25	3.5W	4	4751134001
26	SWITCH BUTTON	1	1137020004
27	SWITCH BUTTON (B)	1	1137022002
28	3 LN	4	4756007007
29	3.5x10 CBTS (1)	2	4733804003
30	ROOF BOARD ASS'Y	1	1077317000
31	ANGLE BRACKET	3	4037010001
32	3x12 CBTRS (1)	6	4730306012
33	TOP BRACKET	2	2010023J
34	3x12 CBTRS (1)	4	4730306012
35	3x10 CBTS (1)	6	4733814006
36	KEY CHASSIS ASS'Y	(1)	4117095108
-1	KEY CHASSIS	1	4117090103
-2	KEY CHASSIS BRACKET	5	4127128007
-3	3x6 TAPTITE	10	4770152006
-4	KEY CUSHION	1	1247089016
-5	FRICTION SPRING (F)	5	4367245009
-6	FRICTION SPRING (S)	1	4367246008
-7	3x6 CUP SCREW	39	4738007012
-8	FRONT GUIDE RAIL	1	4367237101
-9	KEY CUSHION	1	1247089016
-10	KEY CUSHION	1	1247089003
-11	KEY GUIDE	76	4317002001
-12	3x6 TAPTITE	13	4770152006
37	KEY ASS'Y (W) A	5	4367318004

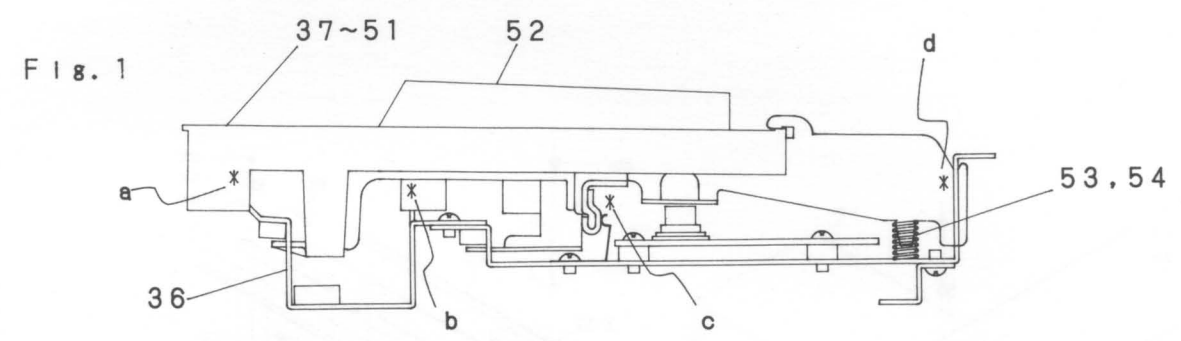
No.	Part Name	EP-700	
		Q'ty	Part No.
38	KEY ASS'Y (W) B	5	4367318017
39	KEY ASS'Y (W) C	5	4367318020
40	KEY ASS'Y (W) D	5	4367318033
41	KEY ASS'Y (W) E	5	4367318046
42	KEY ASS'Y (W) F	6	4367318059
43	KEY ASS'Y (W) G	6	4367318062
44	KEY ASS'Y (W) E'	1	4367318075
45	KEY ASS'Y (W) A	1	4367319003
46	KEY ASS'Y (W) B	1	4367319016
47	KEY ASS'Y (W) C	1	4367319029
48	KEY ASS'Y (W) D	1	4367319032
49	KEY ASS'Y (W) E	1	4367319045
50	KEY ASS'Y (W) F	1	4367319058
51	KEY ASS'Y (W) G'	1	4367319061
52	KEY ASS'Y (B) A#	31	4367257000
53	KEY SPRING	45	4367212100
54	KEY SPRING	31	4367213002
55	COLLAR	24	4497023010
56	3x10 TAPTITE	24	4737005002
57	8 KEY RUBBER SWITCH	9	2128582107
58	4 KEY RUBBER SWITCH	1	2128584121
59	11P CONNECTOR ASS'Y	1	2047413014
60	10P CONNECTOR ASS'Y	1	2045031029
61	6P CONNECTOR ASS'Y	1	2041432017
62	4x20 CTS	12	4714410021
63	SWITCH BOARD I UNIT	1	BP-338
64	SWITCH BOARD II UNIT	1	BP-339
65	SWITCH BOARD III UNIT	1	BP-340
66	SWITCH BOARD IV UNIT	1	BP-342
67	TONE BOARD UNIT	1	BP-401-3
68	PANEL BOARD UNIT	1	BP-336-11
69	POWER BOARD UNIT	1	BP-391-11
70	L/FILTER BOARD UNIT	1	BP-393-2
71	H/PHONE BOARD UNIT	1	BP-389-4
72	H/P BRACKET	1	4127114008
73	3.5x10 CBTS (1)	2	4733804004
74	PUSH BUTTON	1	1137015048
75	POWER SWITCH	1	2128590018
76	SW. CONNECTOR ASS'Y	1	2033505172
77	VOLUME PANEL	1	1037025002
78	BLIND SHEET	1	1227027108
79	SLIDE VOLUME KNOB	1	1137019002
80	BLIND SHEET	1	1227029106
81	BLIND SHEET	1	1227029122
82	3x8 TAPTITE	1	4737002018
83	3x6 TAPTITE	5	4770152006
84	POWER TRANS	1	2338530004
85	4x14 CTS	2	4714408017
86	3x6 TAPTITE	10	4770152006

No.	Part Name	EP-700	
		Q'ty	Part No.
87	3.5x10 CBTS (1)	2	4733804003
88	16RG04M (SPEAKER)	2	3017018008
89	SPEAKER NET	2	1097020005
90	4 NUT-W	8	SC-1050H
91	AUX PANEL	1	1027121110
92	3x6 CBTS (S)	6	4737002034
93	PUSH RIVET	6	4770210003
94	3x10 CBTS (1)	6	4733814006
95	JACK BRACKET	3	4127138000
96	3x8 CPTS (Bo)	3	4733814006
97	LED ASS'Y	1	3937018049
98	LED BUSHING	1	4430310007
99	AC CORD WITH PLUG	1	2062021009
100	BUSHING	1	4450047004
101	BUSHIG PLATE	1	4127133005
102	3x10 CBTS (1)	2	4733814006
103	3.5x10 CBTS (1)	4	4733804003
104	TOME PCB SHIELD CASE	1	4147018003
105	3.5x10 CBTS (1)	10	4733804004
106	EARTH BRACKET	1	4127194002
107	3x6 TAPTITE	1	4770152006
150	LID ASS'Y	(1)	1037102006
151	FRONT LID	1	1037046405
152	RUBBER CUSHION	2	4617037006
153	CENTER LID	1	1037047404
154	REAR LID	1	1037068205
155	LID CUSHION	3	1247124007
156	—		
157	3x6 CBTS (P)	5	4737508004
158	3x6 CBTS (P)	4	4737508004
159	FELT WASHER	2	1247125006
200	CARTON CASE ASS'Y (PIANO STAND)	(1)	5017422003
201	CASE	1	5027423021
202	CUSHION ASS'Y	1	5027370006
250	CARTON CASE ASS'Y (PIANO MAIN UNIT)	(1)	5017410109
251	CARTON CASE	1	5017400012
252	SIDE CUSHION (L)	1	5027482004
253	SIDE CUSHION (R)	1	5027483003
254	UPPER COVER	1	5027484109
255	BOTTOM CUSHION	1	5027485001
256	KEY CUSHION	1	5027486000
257	FRONT CUSHION	1	5027487009
258	OUT CARTON	1	5017412026
301	INSTRUCTION MANUAL (PIANO STAND)	1	5117234007
302	OWNERS MANUAL (PIANO MAIN UNIT)	1	5117233008

EXPLODED VIEW



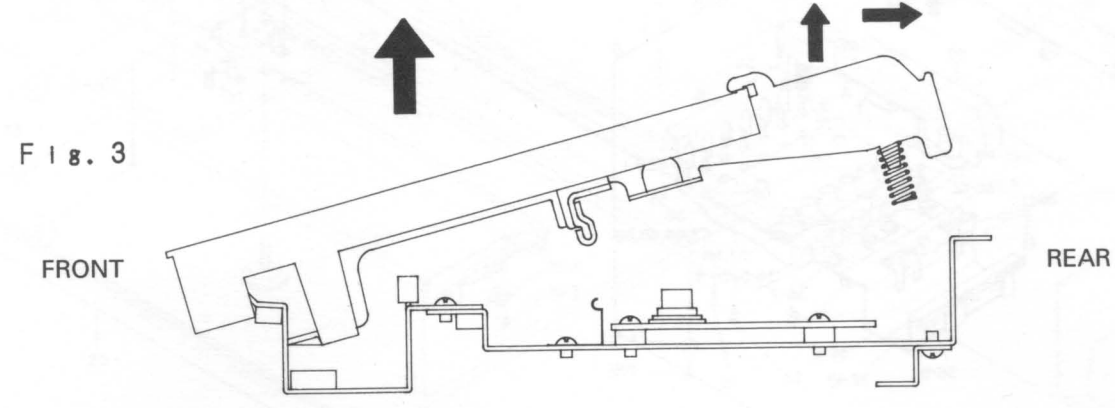
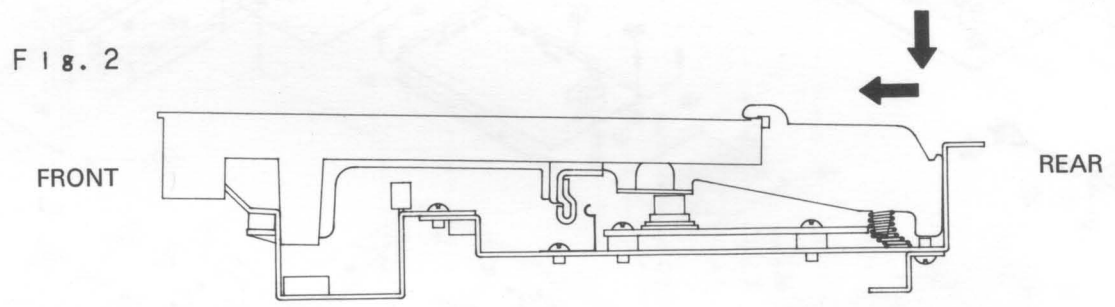
DISASSEMBLY AND ADJUSTMENT OF KEYS



Coat sections marked * with grease

- a. Contact between the inside of natural key and key guide
- b. Contact between the inside of chromatic key and key guide
- c. Contact between the finger and friction spring
- d. Contact between the key assembly and chassis

Grease — Silicone grease SB-1 (white) a, b
 (Shinetsu silicone grease G30M
 Shinetsu silicone oil KF96H 100,000CS) — Mixing ratio : 1:1
 — PLASTILUBE EP (brown) c, d



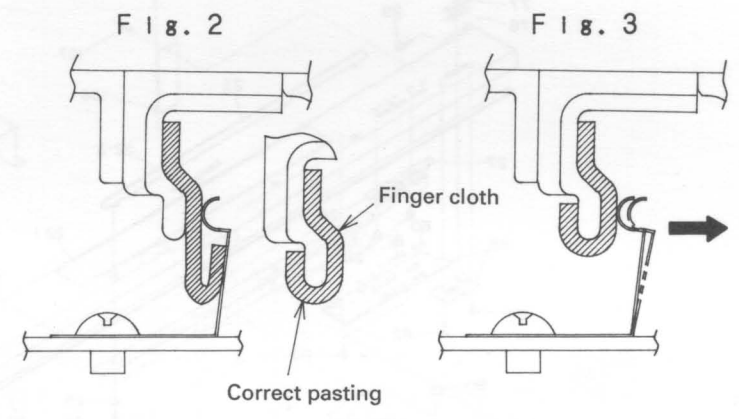
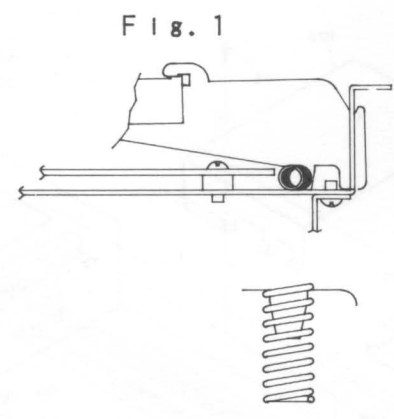
Keyboard Disassembly - Cross-sectional view (Fig.1)

* Remove natural keys first, and install chromatic keys first.

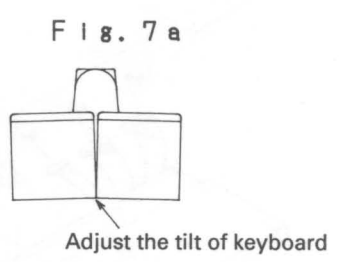
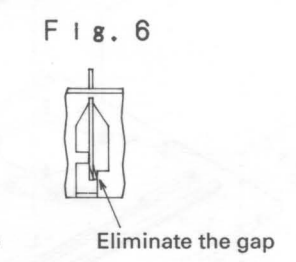
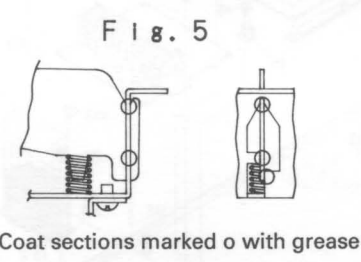
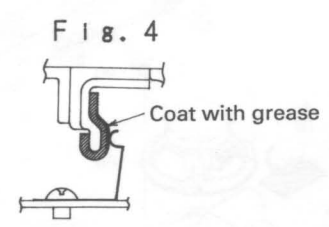
1. Keyboard removal (Fig. 2, 3)
 - 1) Depress the rear of key assemblies (W) 37-51 in the direction of the arrow and then move the assemblies forward. (Fig.2)
 - 2) Lift the rear of the assembly in the direction of the arrow and move it backward, then lift the whole assembly to remove it. (Fig.3)
 - 3) Remove key assembly (B) 52 in the same way.

Causes of Defect, Remedies and Adjustments

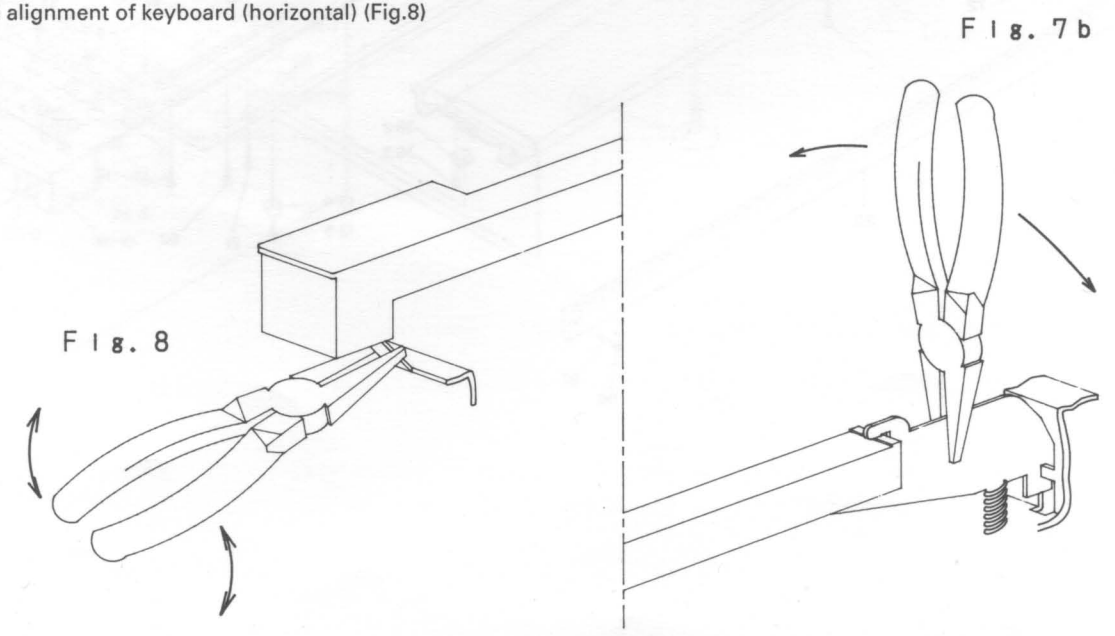
1. Key does not return
 - a) Key spring comes off Install the key spring correctly. (Fig. 1)
 - b) Finger cloth peels off Re-paste the finger cloth. (Fig. 2)
 - c) No grease at the key guide Coat with grease (silicon grease SB-1 * white)
 - d) Pressure of contact between the finger and friction spring is too high Bend the friction spring in the direction of the arrow to decrease the pressure. (Fig. 3)



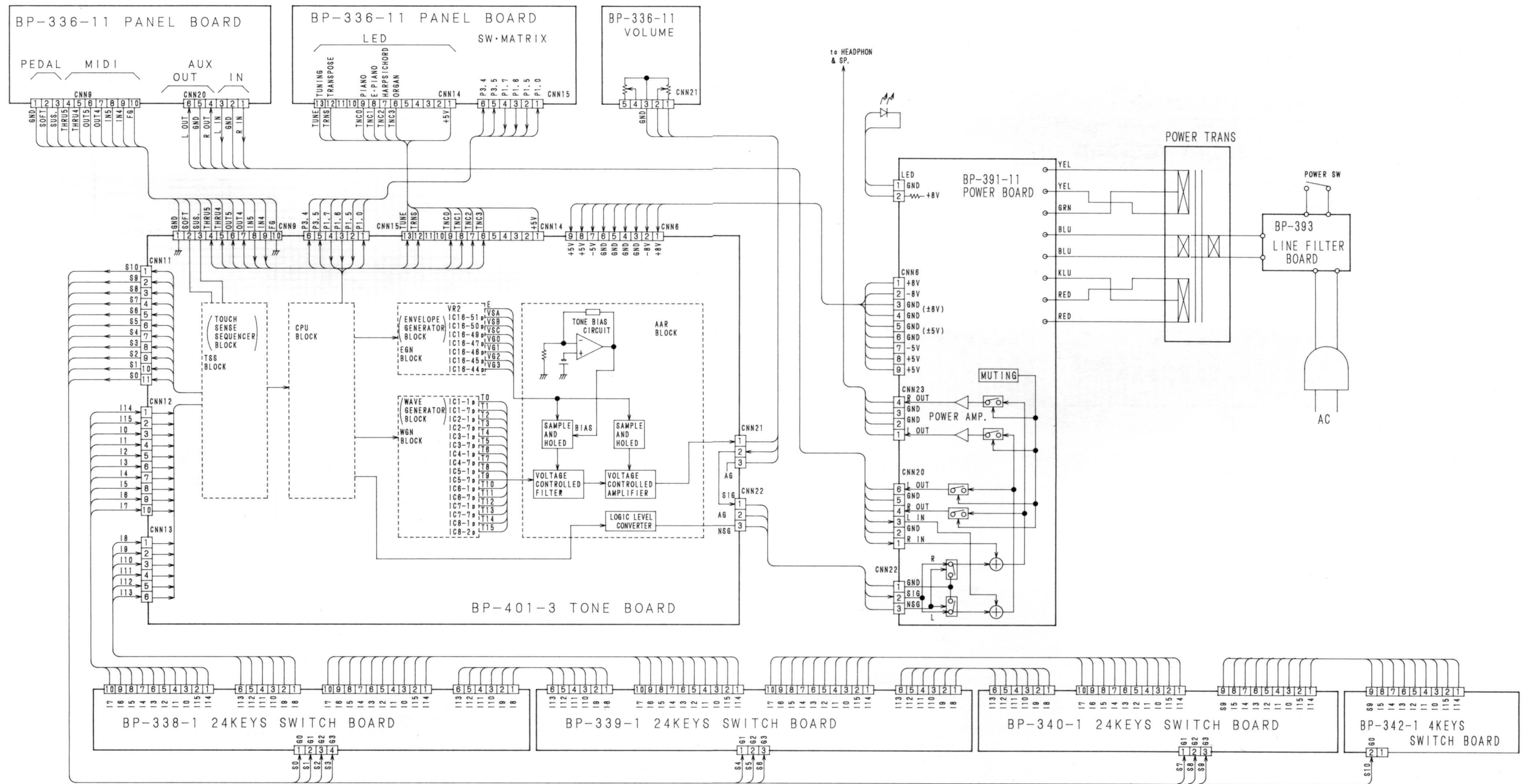
2. Action noise
 - a) No grease at the contact between the finger cloth and friction spring (abnormal rubbing sound) Coat with grease (Plastilube EP *Brown) (Fig. 4)
 - b) No grease at the rear section of key arm which is engaged with the chassis (mechanical sound) Coat with grease (Plastilube EP *Brown) (Fig. 5)
 *If abnormal sound is not eliminated with grease (Fig. 6)
 - c) Touching of keys (abnormal rubbing sound) Adjust the tilt of keyboard (Fig. 7a)



3. Adjustment This action is feasible to adjust the tilt and alignment (in the horizontal direction) of the keyboard.
 - a) Adjusting the tilt of keyboard (Fig. 7b)
 - b) Adjusting the alignment of keyboard (horizontal) (Fig.8)



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 have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

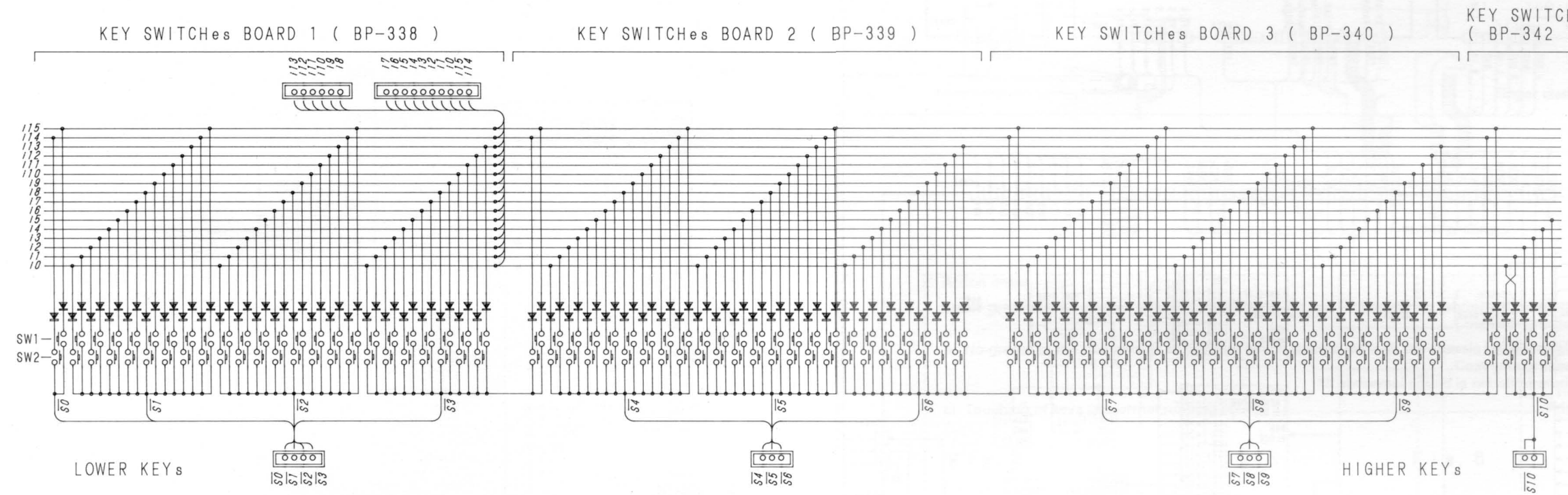
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 k ohm, the unit is defective.

WARNING:

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

BP-338, 339, 340, 342 SWITCH BOARD CIRCUIT DIAGRAM

BLOCK DIAGRAM



KEY SWITCHES BOARDs (76 KEYS MATRIX)

KEY SWITCH : [Symbol]

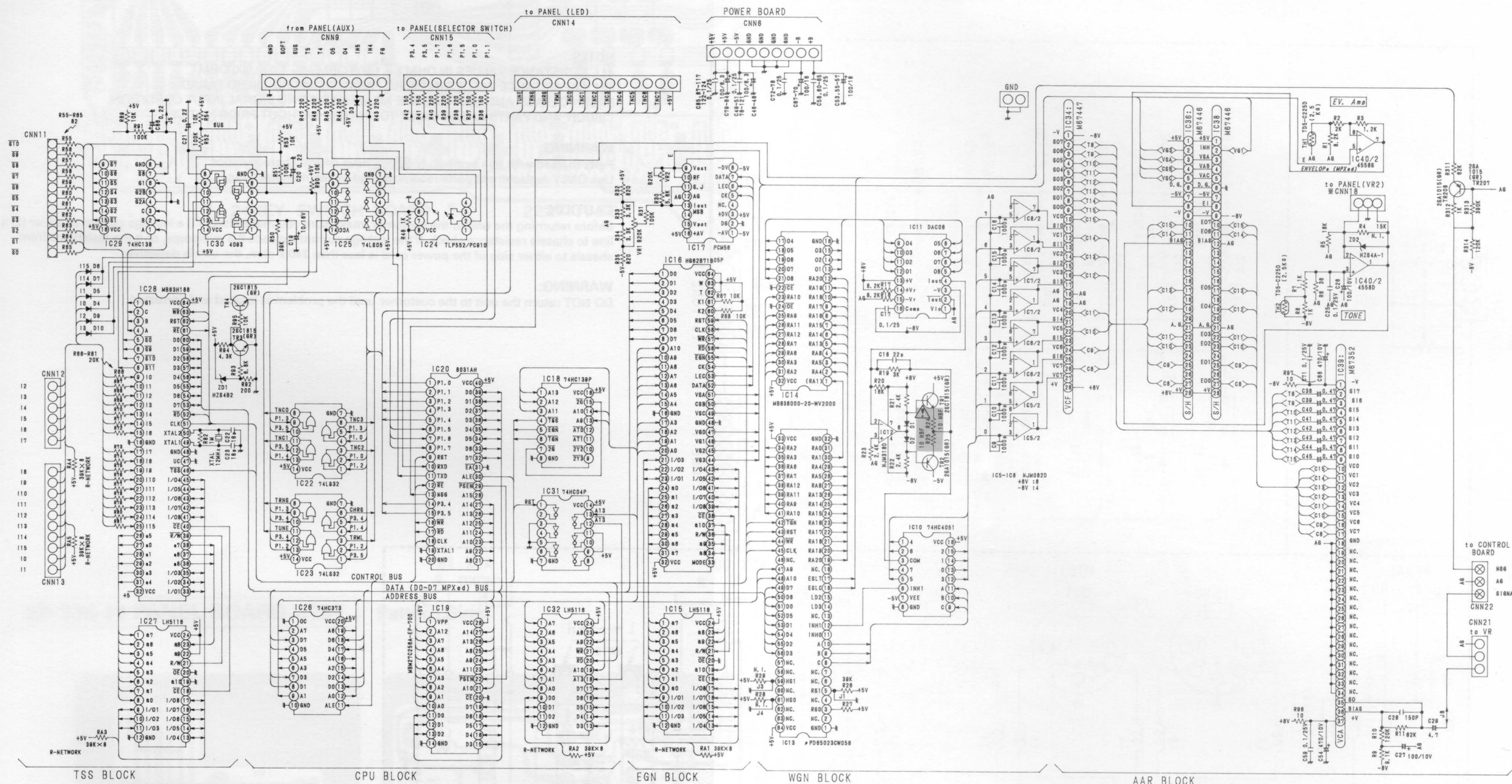
NOTES
 ALL RESISTANCE VALUES IN OHM k = 1,000 OHM M = 1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD P = MICRO-MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
 Parts marked with this symbol Δ [Symbol] 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 if the resistance from chassis 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.

BP-401-3 TONE 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.

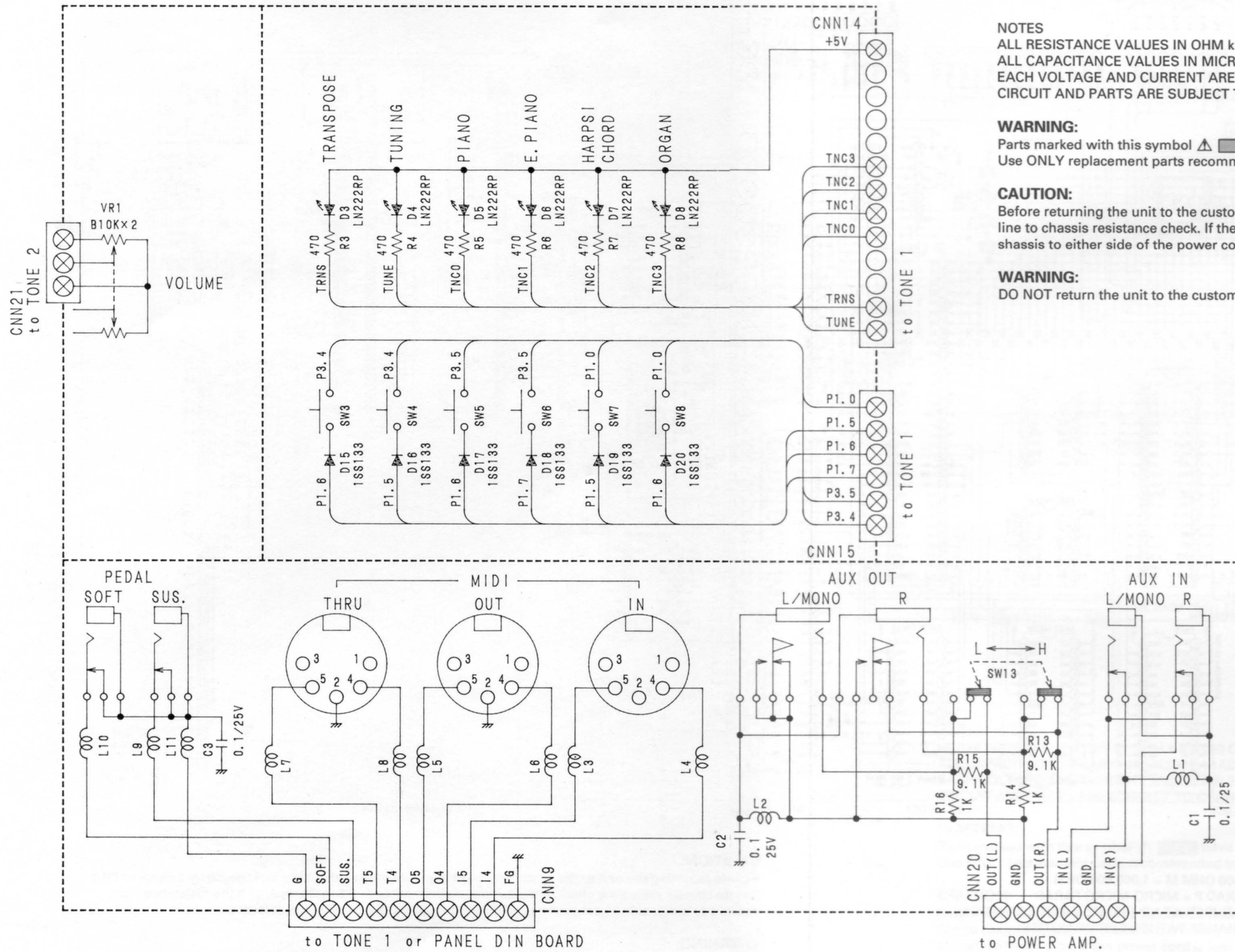
WARNING:
 Parts marked with this symbol have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

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 if the resistance from chassis 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.

BP-336-11 PANEL BOARD CIRCUIT DIAGRAM


BP-336-11 TONE 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  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

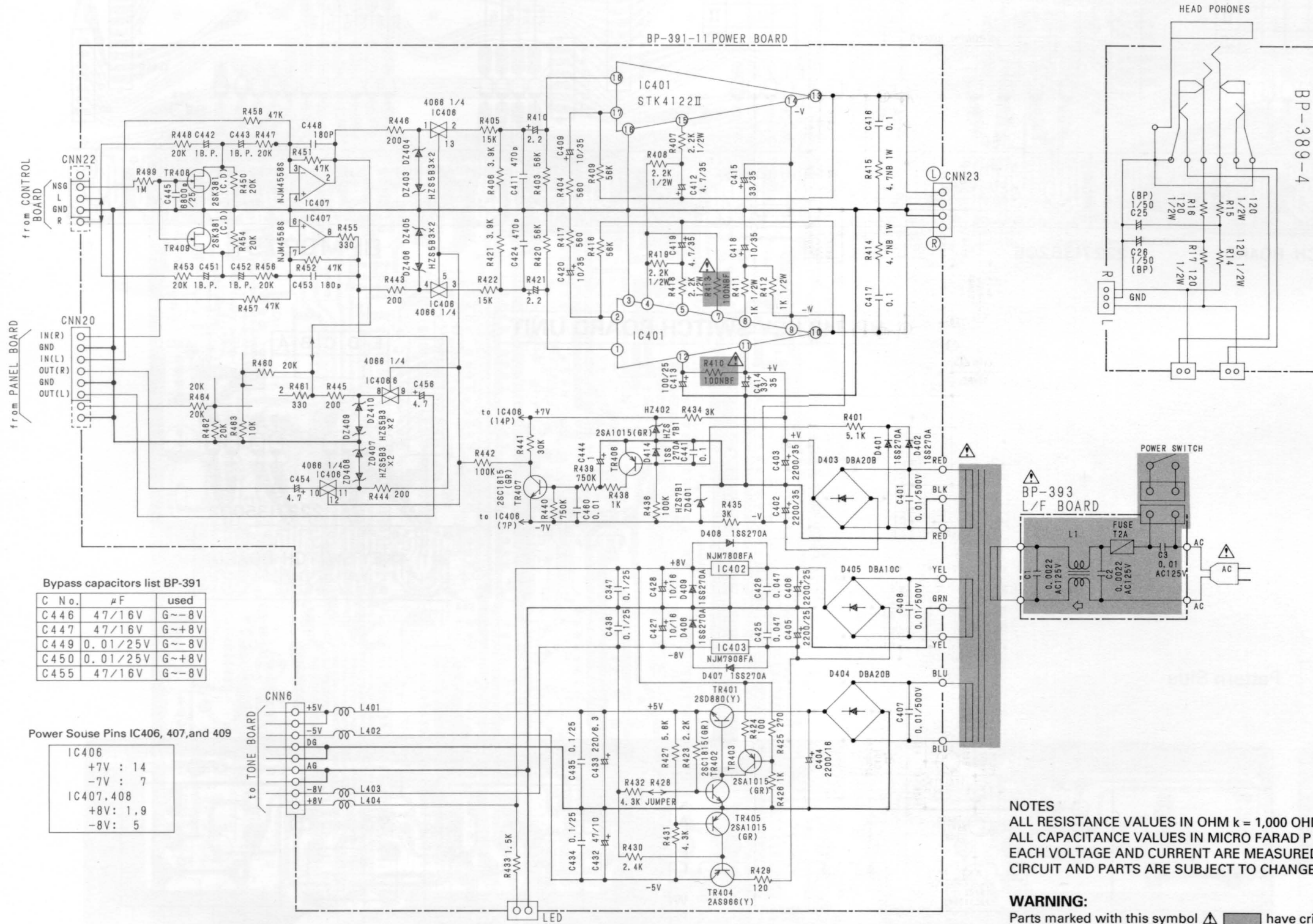
CAUTION:

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 if the resistance from chassis 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.

BP-391-11 POWER & POWER SUPPLY, BP393-2 L/FILTER BOARD, BP-389-4 H/PHONE BOARD CIRCUIT DIAGRAM



Bypass capacitors list BP-391

C No.	μF	used
C 446	47/16V	G~-8V
C 447	47/16V	G~+8V
C 449	0.01/25V	G~-8V
C 450	0.01/25V	G~+8V
C 455	47/16V	G~-8V

Power Souse Pins IC406, 407, and 409

IC 406	+7V : 14
	-7V : 7
IC 407, 408	+8V : 1, 9
	-8V : 5

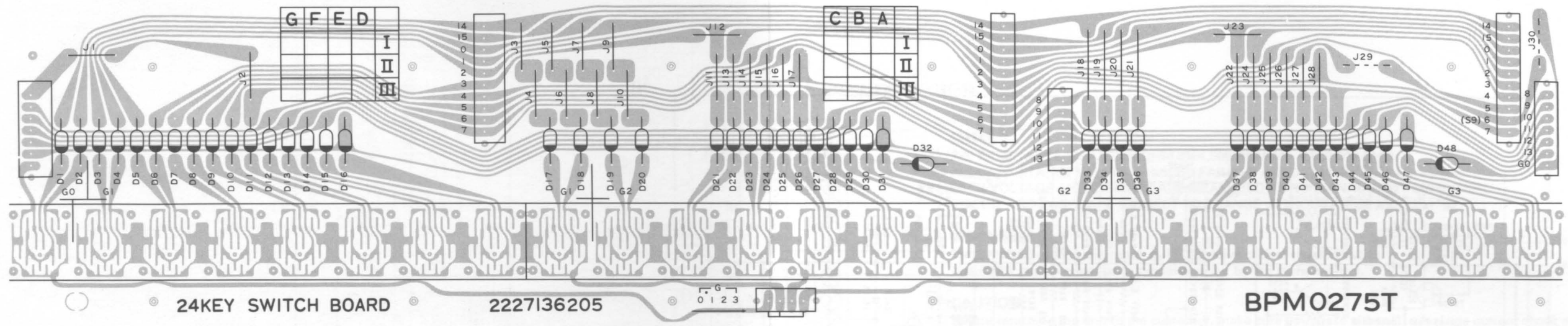
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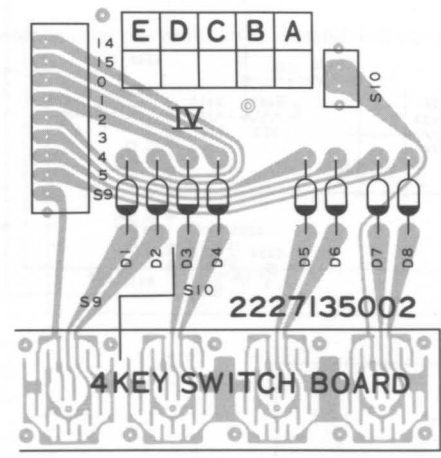
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WARNING:
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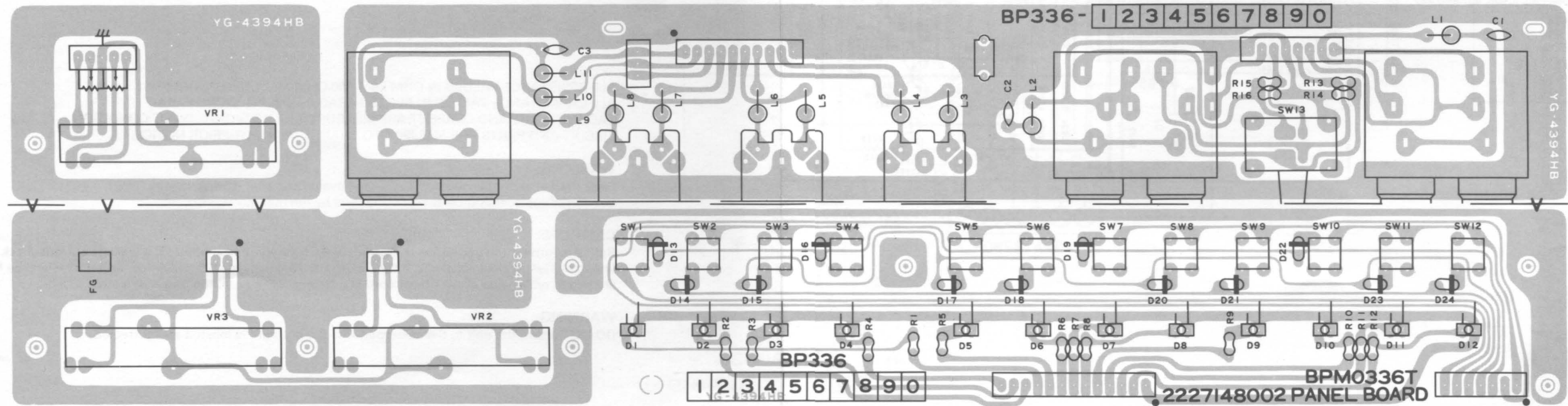
BP-338, 339, 340 KEY SWITCH BOARD UNIT

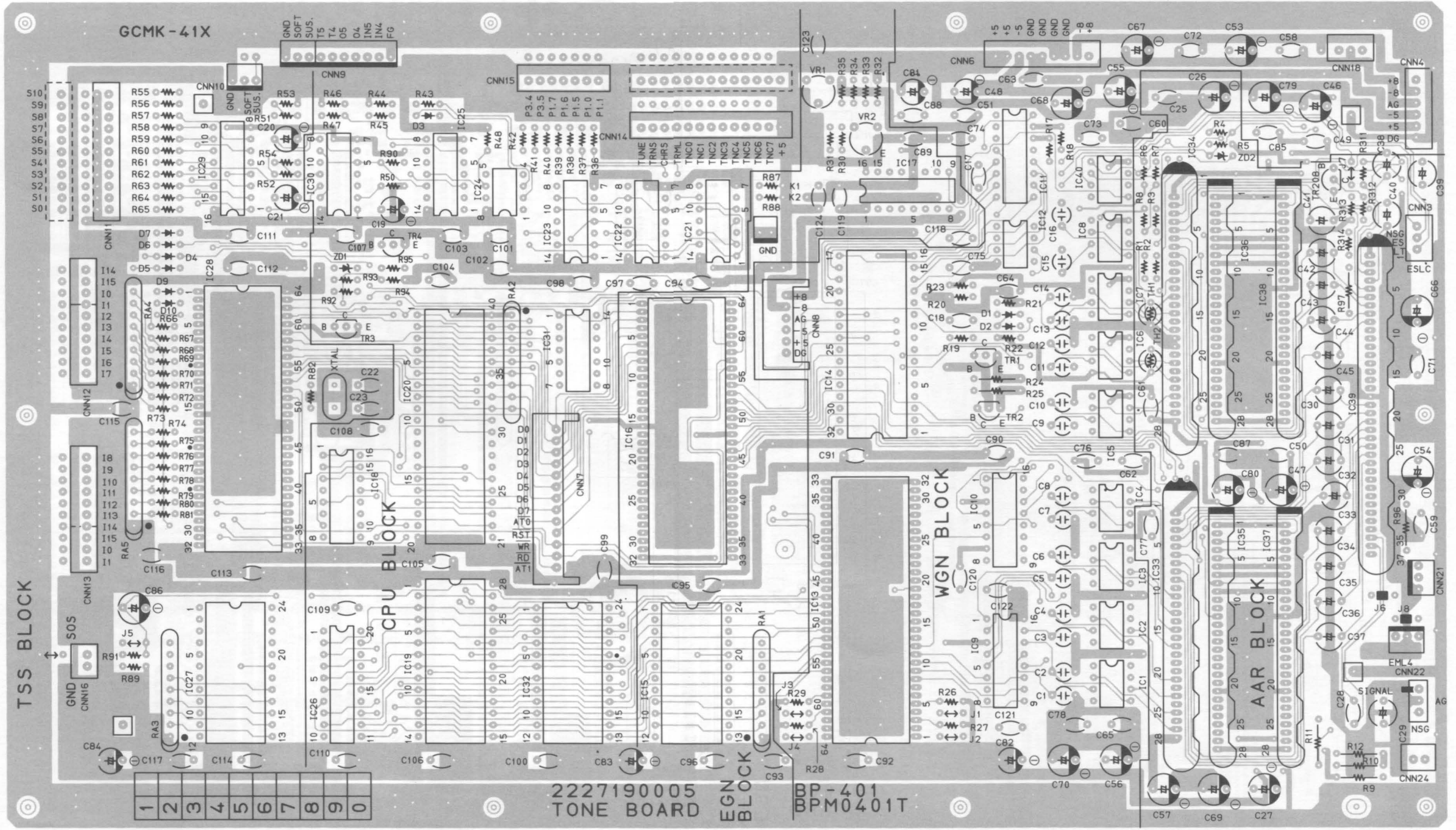


BP-342 KEY SWITCH BOARD UNIT



BP-336-11 PANEL BOARD UNIT Pattern Side



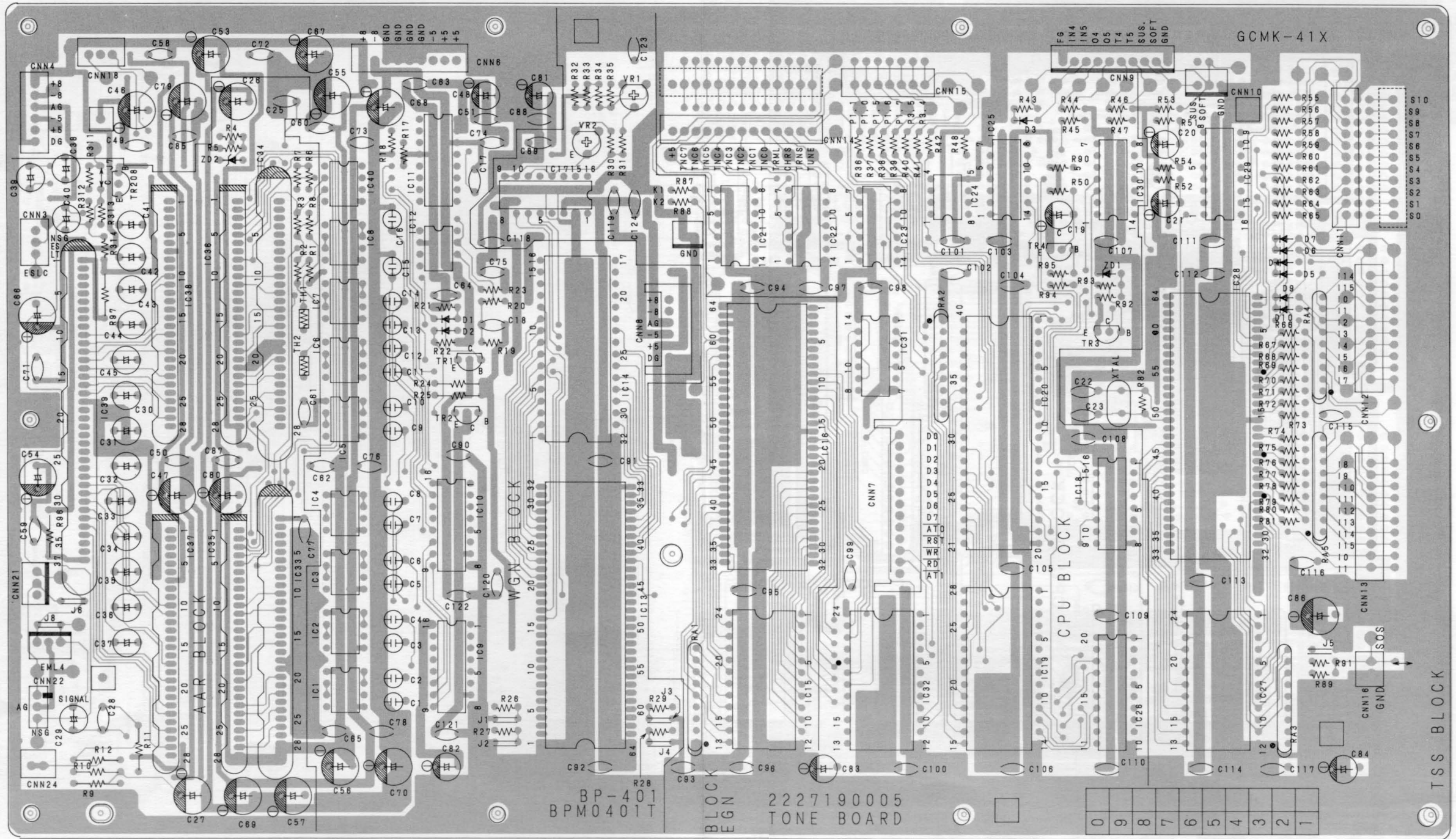


1
2
3
4
5
6
7
8
9
0

2227190005
TONE BOARD

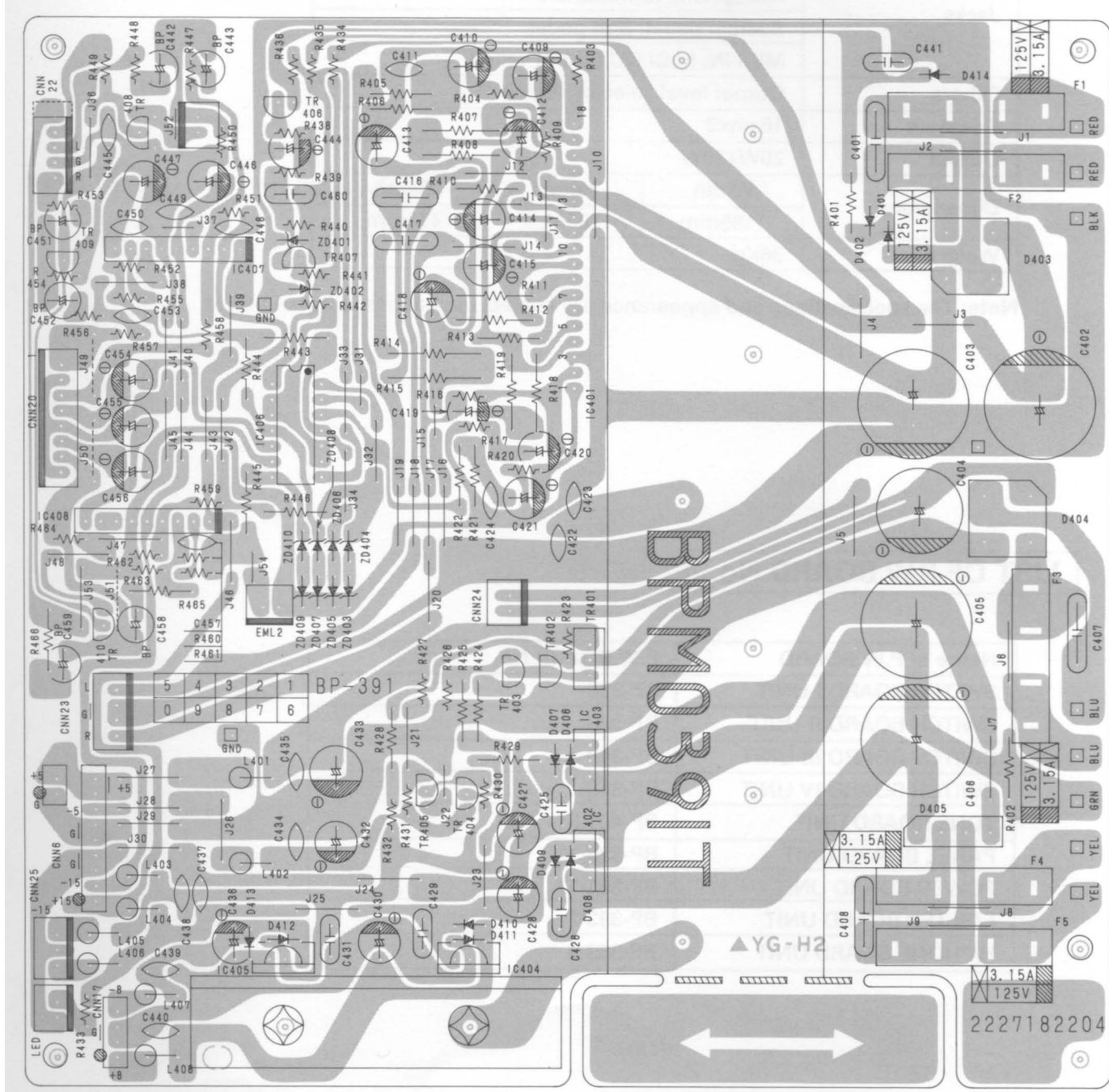
EGN
BLOCK

BP-401
BPM0401T



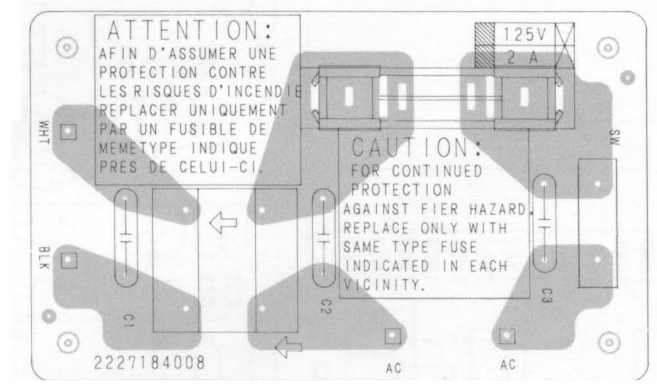
BP-391-11 POWER BOARD UNIT

Pattern Side



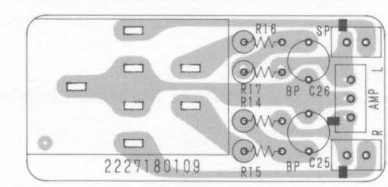
BP-393-2 L/FILTER BOARD UNIT

Pattern Side

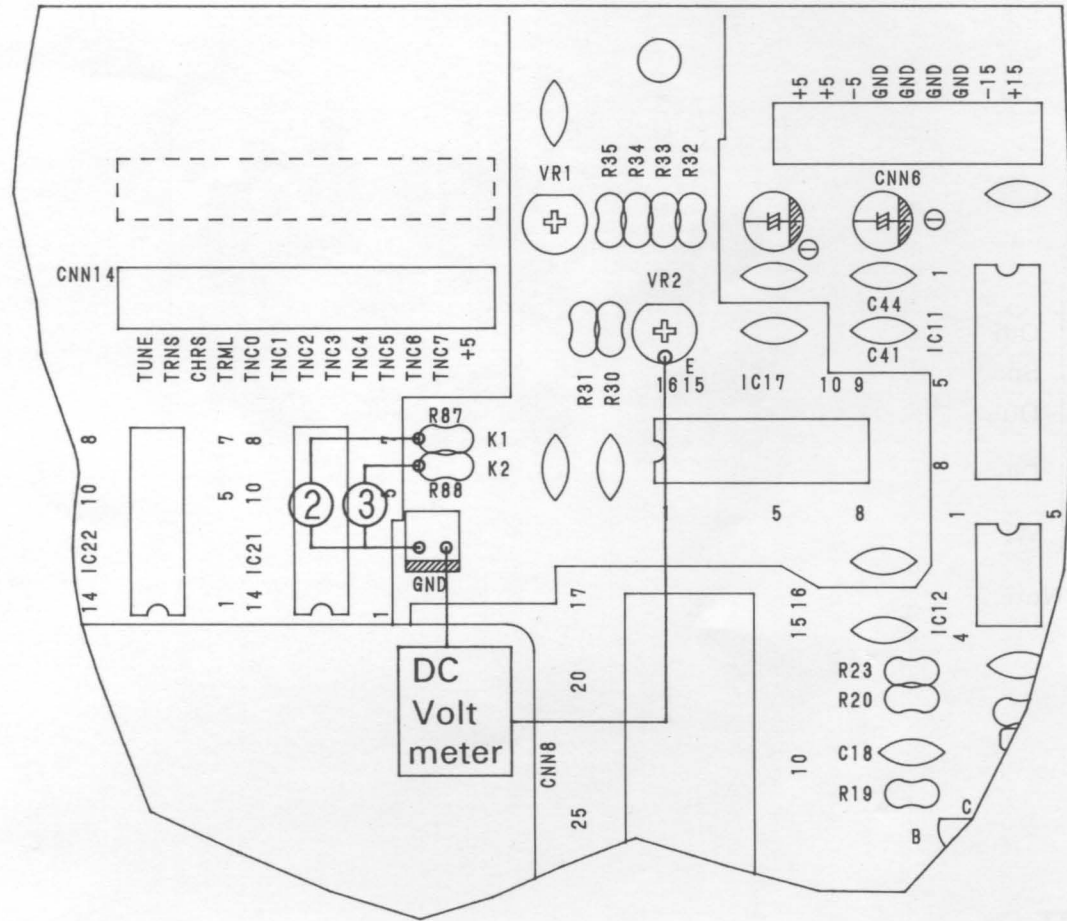


BP-389-4 HEADPHONE BOARD UNIT

Pattern Side



VOLUME ADJUSTMENTS VR1, VR2 (TONE BOARD)



DC Volt meter

0. Turn the MAIN volume to the minimum setting.
This is necessary because if your finger touches a key during adjustments, a big sound is generated unless the MAIN volume is set at this minimum position.
1. Connect the DC voltmeter as illustrated above.
2. Short the opposite side of the K1 of R87 to GND, and adjust VR1 to obtain $0 \pm 10\text{mV}$.
3. Short the opposite side of K2 of R88 to GND, and turn VR2 to obtain $-2.325 \pm 0.025\text{V}$.

Notes:

1. Always adjust VR1 first and then VR2.
2. Re-adjustment is required only when IC 17 (PCM56P) has been replaced.

SPECIFICATIONS

Model EP-700

Keyboards	76keys (E ₁ ~g ⁴)		
Sound range	6 octaves 1/4		
Voices	Piano, E.Piano, Harpsichord, Organ		
Controls	Volume, Tuning, Transpose		
Connecting Jacks	AUX IN (monaural, stereo)		
	AUX OUT × 2		
	Headphone terminal × 1		
	Sustain pedal, Soft pedal		
Others	MIDI IN, MIDI OUT, MIDI THRU		
	Output level selector switch		
Speakers	16cm×2		
Output	20W+20W		
Dimensions	Width	Height	Depth
	1185mm	795mm	475mm
Weight	36Kg		

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 UNIT	BP-338
SWITCH BOARD II UNIT	BP-339
SWITCH BOARD III UNIT	BP-340
SWITCH BOARD IV UNIT	BP-342
TONE BOARD UNIT	BP-401-3
PANEL BOARD UNIT	BP-336-11
POWER BOARD UNIT	BP-391-11
L/FILTER BOARD UNIT	BP-393-2
H/PHONE BOARD UNIT	BP-389-4