DENON

SERVICE MANUAL

ELECTRONIC PIANO

MODEL EP-5500

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NIPPON COLUMBIA CO., LTD.

CAUTIONS

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 it the resistance from chassis to either side of the power cord is less than 240 Kohms, the unit is defective.

WARNING:

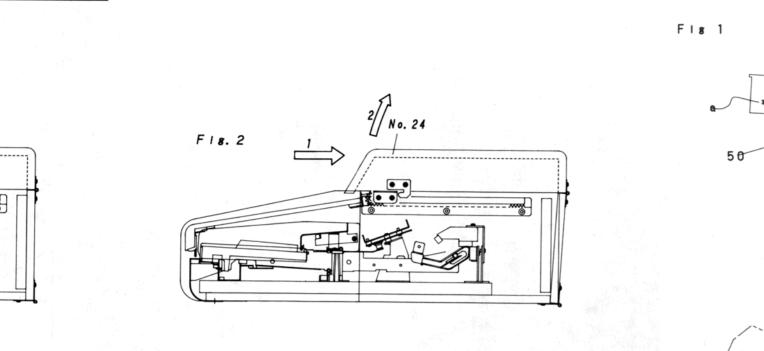
- Parts marked with <u>A</u> this symbol have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.
- DO NOT return the unit to the customer until the problem is located and corrected.

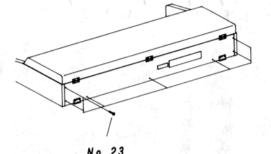
Name of P.C. Board	UNIT No.	Remarks
SWITCH BOARD I	BP-343	8
SWITCH BOARD II	BP-339	
SWITCH BOARD III	BP-344	
SWITCH BOARD IV	BP-341	
MAIN PCB	BP-421-2	
EFFECT BOARD	BP-422-1	
POWER BOARD	BP-419-1	
PANEL BOARD	BP-420-3	
L/FILTER BOARD	BP-393-2	U.S.A., Canada Models
	BP-393-3	Europe, U.K., Asia Models

LIST OF P.C. Board UNIT

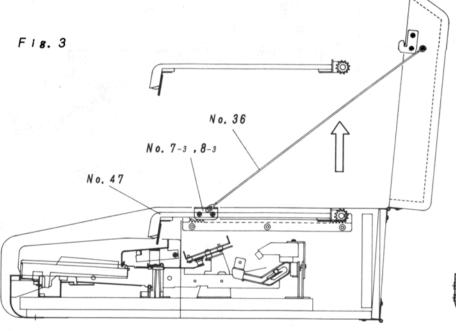
EP-5500 CABINET MECHANICAL PARTS REMOVAL

F 18.1

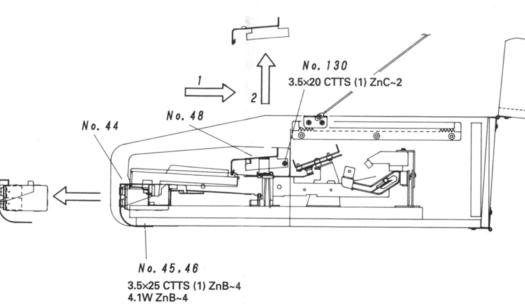




No. 23 3.5 × 25 CTTS (1) ZnB~7



F 18.4



FIS 3

FIs 2

Until it comes off

F 18.4

1. Remove roof board assembly 24. (Fig. 1)

1) Remove seven (7) screws 23 (3.5×25 CTTS(1)).

2) Move roof board assembly 24 in the direction of arrow 1 and lift it in the direction of arrow 2.

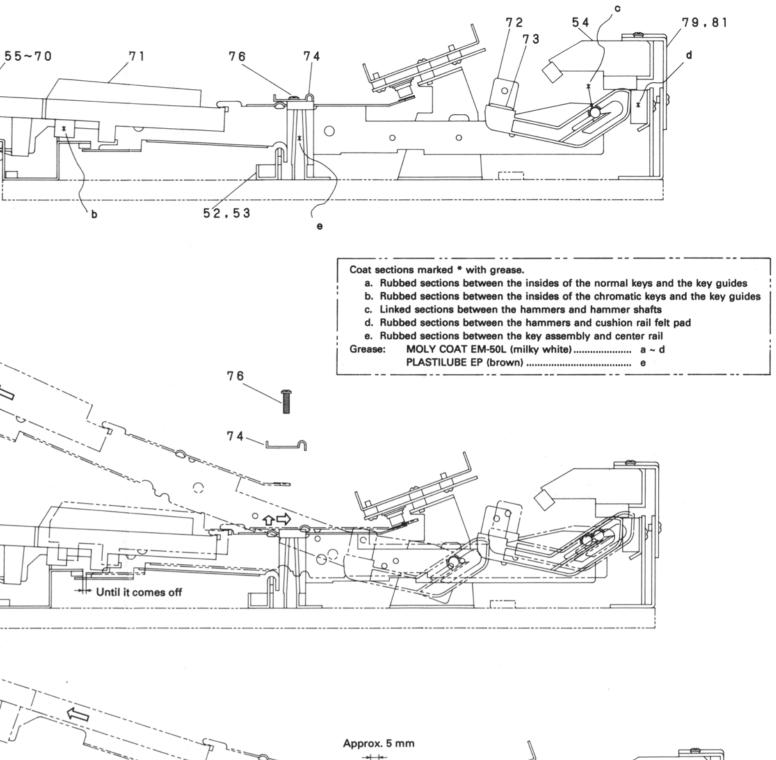
3) Hook stay 36 to joint bracket (A) 7-3. (Fig. 2) 2. Remove key cover assembly 47. (Fig. 3)

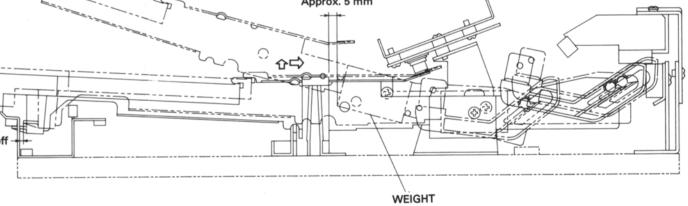
1) Lift key cover assembly 47 to remove it.

3. Remove top panel semi-assembly 48 and front panel 44. (Fig. 4)

1) Remove two (2) screws 130 (3.5×20 CTTS(1)) and move top panel semi-assembly 48 in the direction of arrow 1 and then in the direction of arrow 2 to remove it.

2) Remove four (4) screws 45 (3.5 × 25 CTTS(1)) and four (4) washers 46 (4.1 W), then remove front panel 44 in the direction of the arrow.



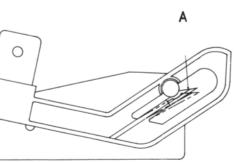


Keyboard Removal (grand hammer action) - Section View (Fig. 1)

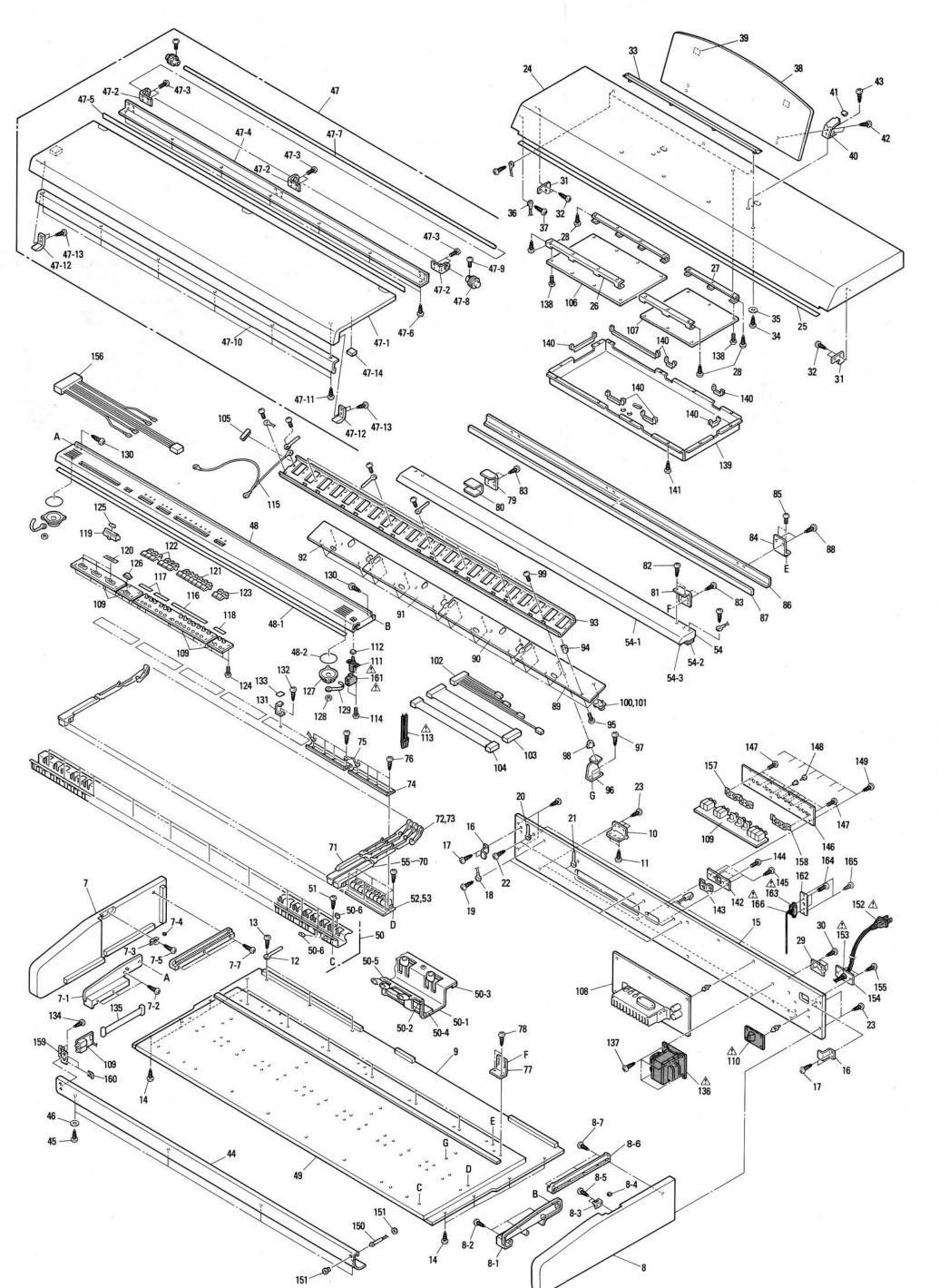
- * Remove chromatic keys first, and install normal keys first.
- 1. Chromatic key removal (Fig. 2)
- 1) Remove two (2) screws 76 (3.5 \times 12 CBTS (2)) (1 block) and then key stopper 74. 2) Lift key assembly (B) 71 and move it backwards, then release the upper limit stopper at the front bottom from front guide rail assembly 50.
- 3) Lift the front of the chromatic key and pull it out to the front.
- Since hammers 72 and 73 rotate freely at this time, hold them with your fingers so the key can be pulled out easily.
- 2. Normal key removal (Fig. 3)
- 1) Lift key assemblies (W) 55~70 and move them backwards, then release the upper limit stopper at the front bottom from front guide rail assembly 50.
- 2) Lift the front of the normal key and pull it to the front obliquely until approx. 5 mm before the weight hits center rails 52 and 53, then twist it to the left or right by approx. 45° to pull it out.

Since hammers 72 and 73 rotate freely at this time, hold them with your fingers so the key can be pulled out easily.

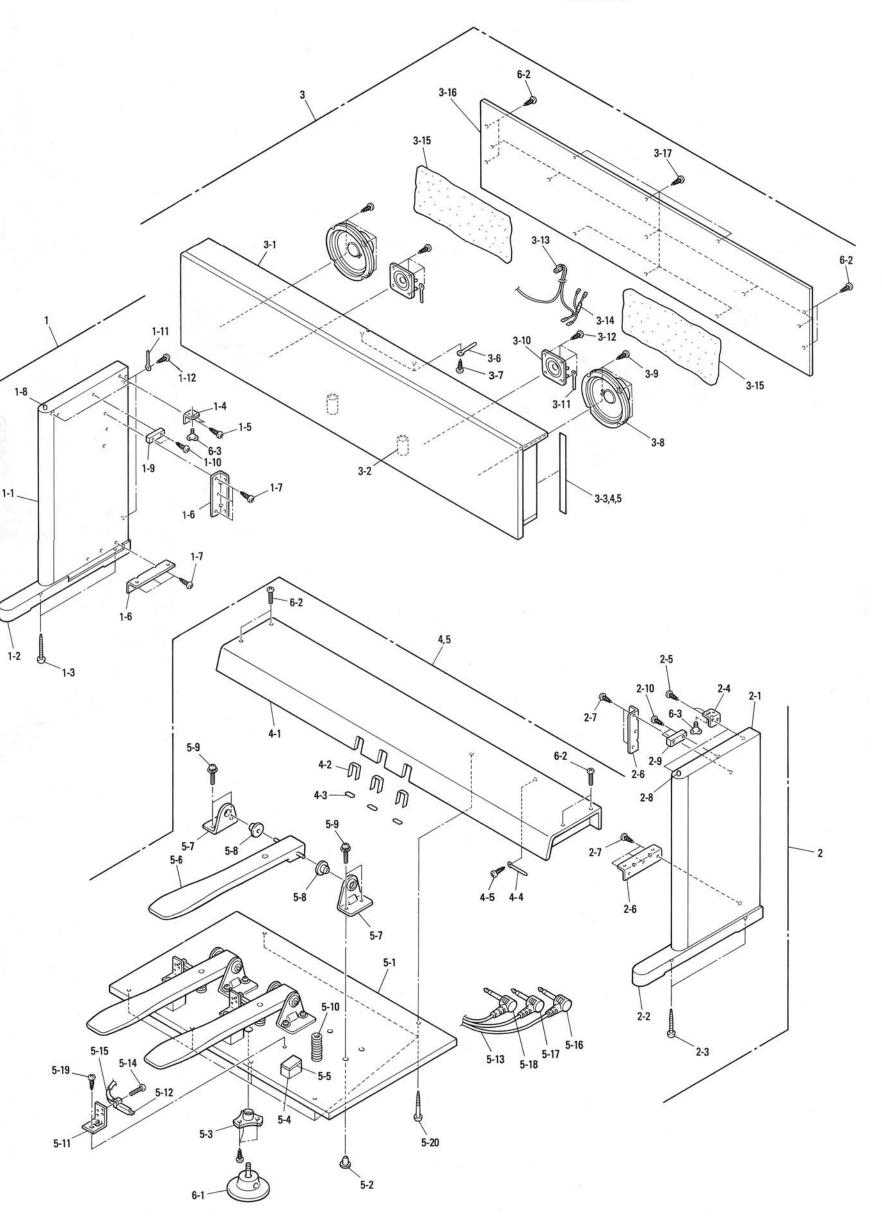
- 3. Hammer removal (Fig. 4)
- 1) Push section A of hammers 72 and 73 to widen it and push the hammer in the direction of the arrow.







WARNING: Parts marked with Description: Use ONLY replacement parts recommended by the manufacturer. DO NOT return the unit to the customer until the problem is located and corrected.



1-1

PARTS LIST OF EXPLODED VIEW

		1	EP-5500				1	EP-5500				F	P-5500		lг		-	EP-5500	
No.	Part Name	-	Part No.	Remarks	No.	. Part Name	Q'ty		Remarks	No	Part Name	Q'ty	Part No.	Remarks	1	lo. Part Name	Q'ty	T	Remarks
1	SIDE PANEL (L) ASS'Y	(1)	1077518003		-2	6 × 25 CTS	8			-13	2.6 × 10 CFTS (1)	4	4732205027		1 1	05 EDGING 45mm	1		
-1	SIDE PANEL (L)	1	1077519002		-3	PRESS WING SCREW	4	MMP1142		-14	STOPPER RUBBER	2	1247144003] [06 MAIN PCB UNIT	1	BP-421-2	
-2	FOOT (L)	1	1077520004						1	48	TOP PANEL SEMI ASS'Y	(1)	1027231408		1 [07 EFFECT PCB UNIT	1	BP-422-1	
-3	4 × 40 CTTS (1)	2			7	SIDE BOARD (L) SEMI	(1)	1077466100		-1	KEN OSAE FELT	1	1247095068			08 POWER PCB UNIT	1	BP-419-1	
-4	JOINT BRACKET	2	4127184009		-1	KEY BLOCK (L)	1	1037131103		-2	SPEAKER HIMELON	2	1227032009			09 PANEL BOARD UNIT	1	BP-420-3	
-5	3.5 × 16 CTTS (1)		4734806026			3.5 × 16 CTTS (1)		4734806071			UNDER BOARD	1	1077491007			10 L/FILTER BOARD UNIT	1	BP-393-2	U.S.A.,Canada
-6	JOINT BRACKET (B)	2				JOINT BRACKET (A)	1	4127200103		50	FRONT GUIDE RAIL ASS'Y	(1)	4307073639		_	10 L/FILTER BOARD UNIT	1	BP-393-3	Asia,Europe U.K.
-7	3.5 × 16 CTTS (1)	6	4734806026			HIMELON	1	1247073006		-1	FRONT GUIDE RAIL	1	4367237211			11 POWER SWITCH	1	2128590018	
-8	DOWEL <i>φ</i> 6 × 30	1				3.5 × 10 CBTS (1)	2	4733804003		-2	FRONT RAIL FELT	1	1247109006		-	12 PUSH BUTTON	1	1137015048	
-9	SP. BOX STOPPER	1				RACK (L)	1	4357011104	· · · · · · · · · · · · · · · · · · ·	-3	FRONT RAIL FELT	1	1247110008			13 SW CONNECTOR ASS'Y	1	2033512055	
	3.1 × 25 CFWS	_	4722311015			3.5 × 20 CTTS (1)	3	4734806039		-4	FRONT RAIL FELT	1	1247111007			14 3 × 6 CBTS (S)	2	4737002034	
	CORD HOLDER		EP-4772			SIDE BOARD (R) SEMI	(1)	1077467109			PANEL FELT	1	1247070038			15 EARTH WIRE ASS'Y	1	2097038025	
-12	3.1 × 16 CRWS	_	4720309029		_	KEY BLOCK (R)	1	1037132102			KEY GUIDE	88	4317002001		1 1	16 BLIND SHEET	1	1227029135	
2	SIDE PANEL (R) ASS'Y	(1)	1077522002			3.5 × 16 CTTS (1)		4734806071			3.5 × 14 CBTS (1) (SW)	50	4718003007			17 BLIND SHEET	1	1227029164	
-1	SIDE PANEL (R)	1	1077523001			JOINT BRACKET (A)		4127200103			CENTER RAIL	6	4367179104			18 BLIND SHEET	2	1227029177	
	FOOT (R) 4 × 40 CTTS (1)	1	1077524000			HIMELON	1	1247073006			CENTER RAIL (S)	1	4367317005			19 VOLUME PANEL	3	1037092116	
-3		2	4734803032			3.5 × 10 CBTS (1)	2	4733804003			BACK RAIL ASS'Y	(1)	1007129116			20 BLIND SHEET	3	1227027108	<u>+</u>
-4	JOINT RACKET		4127184009			RACK (R)	1	4357012103		-1		1	1017315017			21 SWITCH BUTTON	1	1137030117	<u> </u>
-5	3.5 × 16 CTTS (1)	4	4734806026			3.5 × 20 CTTS (1)		4734806039		-2	BACK RAIL FELT	1	1247087018			22 SWITCH BUTTON (S)	2	1137032021	+
-0	JOINT BRACKET (B)	-	4127209007			BOTTOM BOARD ASS'Y		1077456107		-3	BACK RAIL FELT	1	1247087034			23 SWITCH BUTTON (S)	1	1137032034	<u> </u>
-/	3.5 × 16 CTTS (1)	-	4734806026			REAR HINGE		4017034007			KEY ASS'Y (W) A	5	4367343008			24 3 × 6 CBTS (S)	20		<u> </u>
-0	DOWEL Ø6 × 30 SP. BOX STOPPER	1	1077521003			3.5 × 10 CBTS (1)		4733804087			KEY ASS'Y (W) A KEY ASS'Y (W) B	2	4367344007			25 SLIDE VOLUME KNOB	3	1137031116	<u> </u>
-10	3.1 × 25 CFWS	2	4722311015			CORD HOLDER		EP-6214	· · · · · · · · · · · · · · · · · · ·			6	4367343011			26 SLIDE SW. KNOB		1137033101	<u>+</u>
- 10	SPEAKER BOX ASS'Y					3.5 × 10 CBTS (1)	3	4733804003			KEY ASS'Y (W) B KEY ASS'Y (W) C	2	4337344010			27 PT-01M (CONE TWEETER)	2	3017023006	<u> </u>
3	SP. BOX SEMI ASS'Y	(1)	1077526008			3.5 × 20 CTTS (1) REAR BOARD ASS'Y	1	4734806000			KEY ASS'Y (W) C	6	4367343024 4367344023			28 3 NUT-W 29 CORD HOLDER	4	SC-1082-2	
-1	DUCT PIPE	2	MPB1077			HANGER	(1)	1077458105				1						EP-4772	
-2	RUBBER SHEET	4	MRB1093			3.5 × 10 CBTS (1)	2	4127208008			KEY ASS'Y (W) D	6	4367343037		-	30 3.5 × 20 CTTS (1)	2	4734806039	
-3	RUBBER SHEET	4	MRB1093			STAY	4	4733804003			KEY ASS'Y (W) D KEY ASS'Y (W) E	1	4367344036 4367343040			31 PANEL SUPPORT	1	4127204002	
-4	RUBBER SHEET	4	MRB1098			3.5 × 10 CBTS (1)	3	1297010022		-	and the second se	6	and the second sec			32 3.5 × 12 CBRTS (2)	1	4730800013	
-5	CORD HOLDER	-	EP-4772		-	CORD HOLDER		4733804003			KEY ASS'Y (W) E KEY ASS'Y (W) F		4367344049			33 LID CUSHION	1	1247124007	
-7	3 × 8 CBRTS (1)	2	All and the second s			CORD HOLDER	3	EP-4772 EP-6214			KEY ASS'Y (W) F	6	4367343053			34 3 × 6 CBTS (S) 35 5P CONNECTOR ASS'Y	2	4737002034	
-/	16RG05M	2				3.5 × 10 CBTS (1)		and the second second second			KEY ASSY (W) F	1	4367344052				1	2039460017	
-0	4 × 16 CTTS (1)	8	4734409012				4	4733804003				6	4367343066		_	36 POWER TRANS	1	2338539005	U.S.A.,Canada
-10	57RT01M	2	3017026003		-	3.5 × 20 CTTS (1) ROOF BOARD ASS'Y	7				KEY ASS'Y (W) G KEY ASS'Y (W) A'	1	4367344065			36 POWER TRANS	1	2338542005	
-11	CORD HOLDER	_	EP-4772			PROTECTION FELT	(1)	1077460009			KEY ASSY (W) C'		4367343079			36 POWER TRANS 36 POWER TRANS	1	2338544003	
	3 × 12 CTTS (1)	8	4734406015			BRACKET (A)	2	1247146001 4127158006			KEY ASS'Y (W) C KEY ASS'Y (B) A#	++	4367344078				1	2338541006	U.K.
-13	SP CONNECTOR ASS'Y	1	2037480109			EARTH BRACKET (S)	2				HAMMER (H)	81	4367344052 4367339009		- н	37 4 × 14 CTS 38 3 × 6 CBTS (S)	16	4714408020	
-14	CF93A1H474J		2561035059			3 × 8 CBRTS (1)		412/180100			HAMMER (L)	81				38 3 × 6 CBTS (S) 39 SHIELD CASE	16	4737002034	
-15	ACOUSTIC MATERIAL	2	MFE1119			ROOF HINGE	3	4017035103			KEY STOPPER	7	4367340001 4367341107		т н	40 EDGING 630mm	1	4147026008	
-16		1	1077530007			3 × 10 CBTS (1)		4017035103			STAY	6	1297010035			41 3 × 8 CBRTS (1)	10	4730301014	
	3.5 × 25 CTTS (1)		4734806002			JOINT PLATE		4127201005			3.5 × 12 CBRTS (2)	-	4730800013		4 H	42 CONNECTOR PLATE	12		
	PEDAL BOX ASS'Y	(1)				3.5 × 10 CBTS (1)		4733804003			BACK RAIL BRACKET		4127126009			43 CONNECTOR BRACKET		4127205108 4127206000	
	PEDAL BOX	1				MUSIC STOPPER	1	4397035108			3.5 × 14 CBTS (1) (SW)	-	4718003007			44 3 × 8 CBTS (S)	2	4737002021	
	PEDAL FELT	-	1247131016			3 × 14 CBTS (1)	4	4337033108			BACK RAIL SUPPORT	-	4367342009			44 3 × 8 CB13 (3) 45 3 × 10 CBTS (1)	2	4733814006	
-3	PEDAL FELT	3				3.5 W		4751134001	1 DC		BACK RAIL CUSHION	5	1247141103			46 AUX PANEL (BLACK COATIN	G) 1	1027193012	
_	CORD HOLDER	-	EP-4772			STAY	1	1297014002			BACK RAIL BRACKET	-	4127126009		- H	46 AUX PANEL (VINYL CHLORIDE STEEL PLA		1027193012	
	3 × 8 CBRTS (1)	_	4730304014			3.5 × 10 CBTS (1)	1	4733804003			3.5 × 14 CBTS (1) (SW)		4718003007			40 AX FANEL (VINTE CHEORIDE STEEL FLA	6	4737002021	
	PEDAL BOARD	1				SCORE HOLDER ASS'Y	(1)	1077464005			4 × 6 CTTS (S)	_	4738003003			48 PUSH RIVET	6	4770210003	
	SPECIAL NUT	-	SC-1123-1			LID CUSHION		4617026017			CUSHION BRACKET	_	4127130008		-	49 3 × 10 CBTS (1)	8	4733814006	
	NUT	_	0J-0103M			SCORE HINGE		4017027108			3.5 × 14 CBTS (1) (SW)		4718003007			50 LED ASS'Y	1	3937019006	<u> </u>
	PEDAL STOPPER	3	and the second se			PROTECTION SHEET		1247123008			CUSHION RAIL	1	4367254100		4 H	51 LED BUSHING	1	4430310007	1 1
	STOPPER FELT	-	1247112006			3 × 8 CBTS (1)		4733830006			CUSHION RAIL FELT	1	1247094014			52 AC CORD WITH PLUG	1		U.S.A.,Canada
	PEDAL	_	4367263023			3 × 10 CBTS (1)		4733804006			4×6 CTTS (S)	6	4738003003			52 AC CORD WITH PLUG	1		Asia,Europe
	PEDAL FLANG	6				FRONT PANEL	1	1027242002			SWITCH BOARD I UNIT		BP-343			52 AC CORD WITH PLUG	1	2007057009	
	PF. BUSH	6				3.5 × 25 CTTS (1)	4	4734804002			SWITCH BOARD II UNIT		BP-339			53 BUSHING	1		U.S.A., Canada Asia, Europe
-	4 × 4 CPS (WITH W. SW)	_	4700021026		-	4.1 W		4751152009		-	SWITCH BOARD III UNIT		BP-344			54 BUSHING PLATE	1	4127133005	
	PEDAL SPRING	_	4367148009			KEY COVER ASS'Y		1077462308			SWITCH BOARD IV UNIT		BP-341		- E	54 BUSHING PLATE	2	4127223009	
_	PEDAL SW BRACKET	_	4127160104			KEY COVER	1	1077463006			SWITCH BASE		4117092211		1 -	55 3 × 10 CBTS (1)	2	4733814006	
-12	PEDAL SWITCH		2127001003		-	BRACKET (A)	3	4127202208			COLLAR	-	4497023010			56 SPEAKER WIRE ASS'Y	1	2045058206	
	3P PEDAL WIRE	1	2039461003			3 × 6 CBTS (S)		4737002005			3 × 10 CBRTS (S)	_	4737005002			57 JACK BRACKET	2	4127138000	
	2 × 10 CPS	3	4711810006			BRACKET (B)		4127203207			BASE BRACKET		4127144104			58 JACK BRACKET	1	4127185008	
	UL TUBE 14mm	3	-			HIMELON SHEET	1	1247142018			3.5 × 14 CBTS (1) (SW)	_	4718003007			59 H/J BRACKET	1	4127207106	
-	DAN. PLUG SHEET	1	the second s			3.5 × 10 CBTS (1)	7	4733804003			COLLAR	_	4497023010			60 SNAP PLATE	2		
-17	SOF. PLUG SHEET	1	5137147006		-	SHAFT	1	4357010105			3 × 16 CBRTS (S)		4737005031		- Hara - Hara	61 SWITCH COVER	1	4157006005	
	SOS. PLUG SHEET	1	-		_	GEAR	2	4247001101			8 KEY RUBBER SWITCH	-	2128582107			62 SWITCH PLATE	1	4127199007	Asia
	3.5 × 10 CBTS (1)	3	4733804003			3 × 8 CBTS (S)		4737002018			1 KEY RUBBER SWITCH	_	2128584105			63 VOLTAGE SELECTOR SW.	1	2122001008	the second data and the second
		10	4720411014		-	FRONT COVER	1	1027229203	1.		11P CONNECTOR ASS'Y	_	2047415067			64 3 × 10 CBTS (P)	2	4737508017	
-20	3.5 × 25 CRWS	6	4720411014																
	3.5 × 25 CRWS ENVELOPE ASS'Y	(1)			-11	3.5 × 10 CBTS (1)	12	4733804003		103	10P CONNECTOR ASS'Y	1	2045039034			65 3 × 10 CBTS (1)	2	4733804006	Asia
6			the second se			3.5 × 10 CBTS (1) PROTECTER		4733804003 4317005202			10P CONNECTOR ASS'Y 6P CONNECTOR ASS'Y		2045039034 2041437038		-	65 3 × 10 CBTS (1) 66 1 WAY WIRE ASS'Y	2	4733804006 2031448011	

WARNING:

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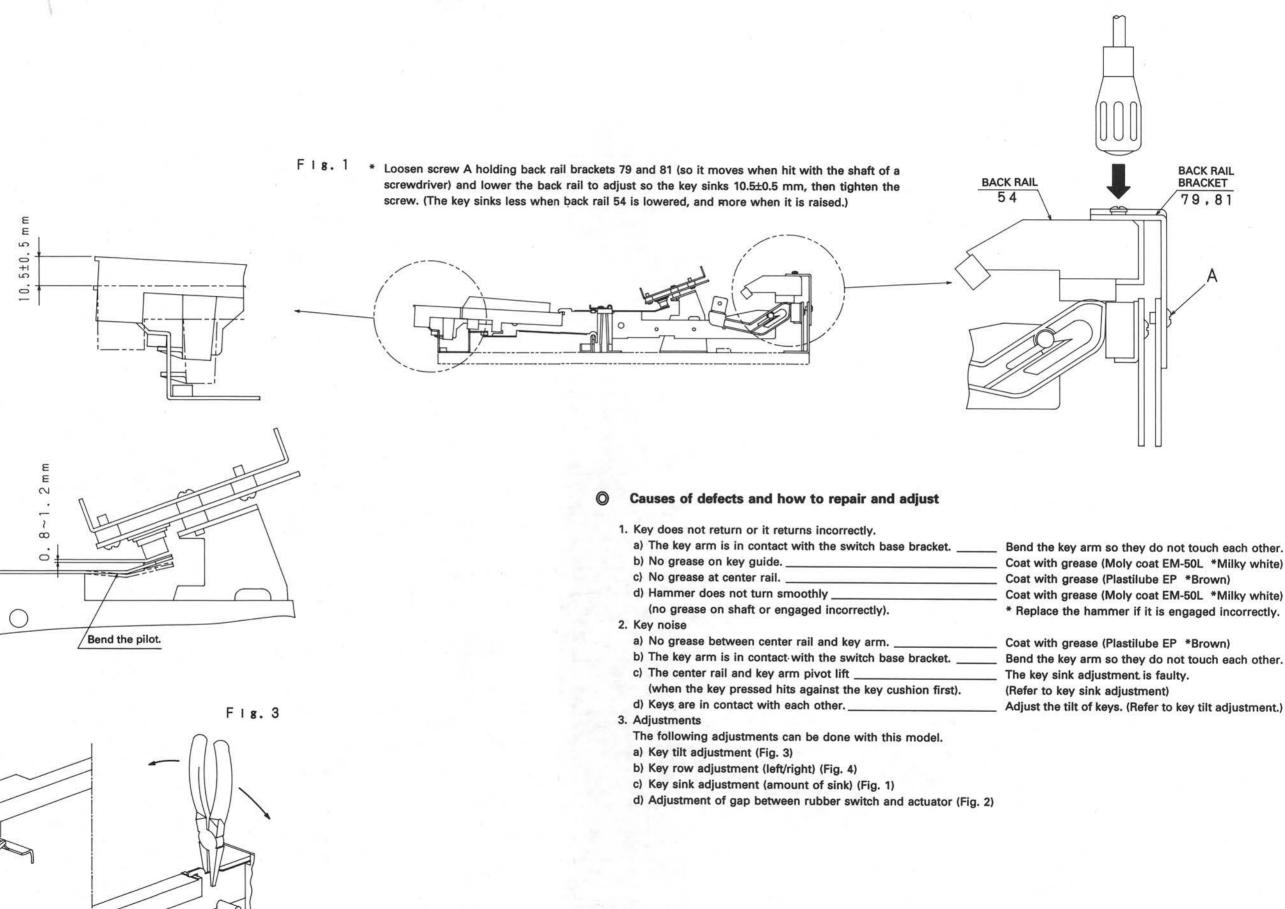


Fig. 2

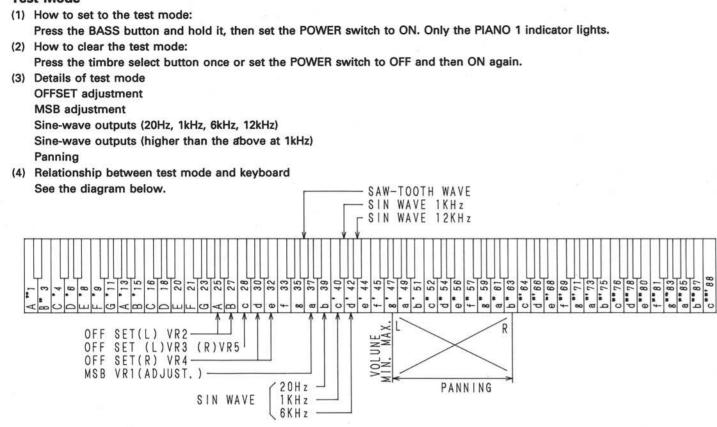
F 18.4

- Bend the key arm so they do not touch each other.

- Coat with grease (Moly coat EM-50L *Milky white) * Replace the hammer if it is engaged incorrectly.
- Bend the key arm so they do not touch each other.
- Adjust the tilt of keys. (Refer to key tilt adjustment.)

TEST MODE AND ADJUSTMENT BP-421 MAIN PCB

Test Mode



(6) How to connect

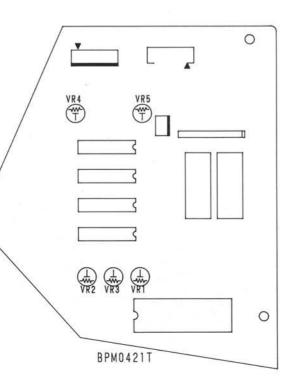


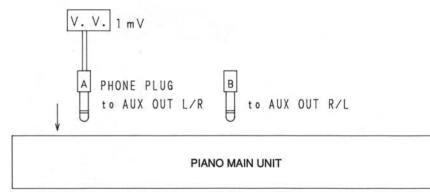
- (1) Test equipment necessary for adjustment Millivoltmeter
- Before starting
 Warm up for 5 minutes and set to the test mode before starting adjustment.
- (3) Adjustment point locations See the diagram on the right.
- (4) Order of adjustments

1	Warm up	M	ore than 5 minutes
2	Test mode		
3	MSB adjustment		VR1
4	OFFSET adjustment	1	VR5 (R Side)
		2	VR4 (R Side)
		3	VR3 (L Side)
		4	VR2 (L Side)

(5) Settings of VRs on panel

Name of VR	VOLUME	BRILLIANCE
Setting	MAX.	BRIGHT



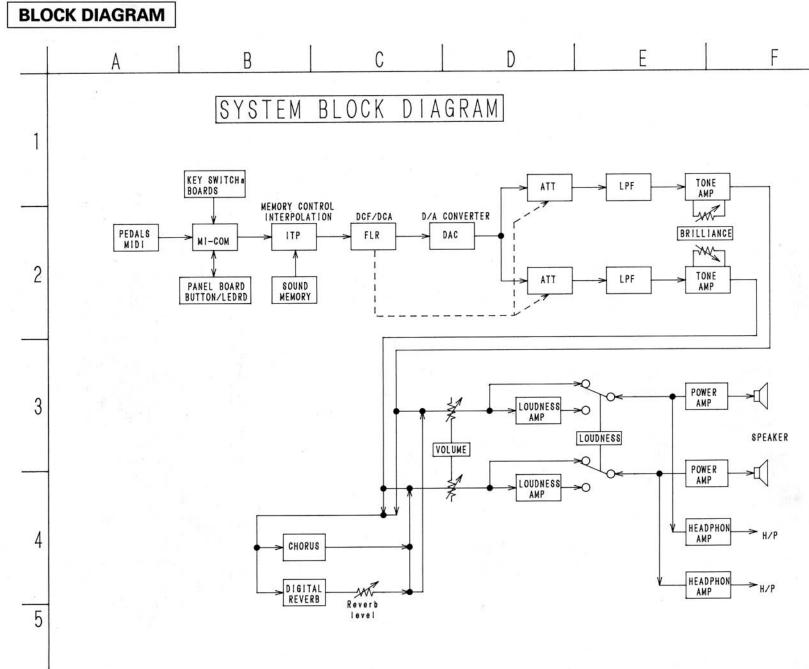


(7) Adjustment procedure

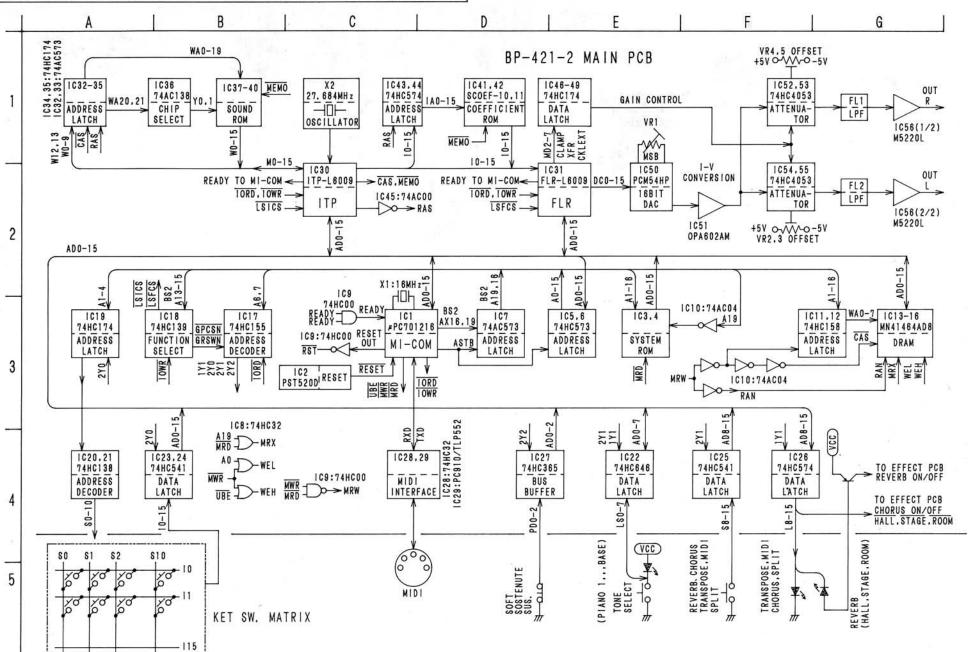
Adjust the VRs so the millivoltmeter reading is minimum.

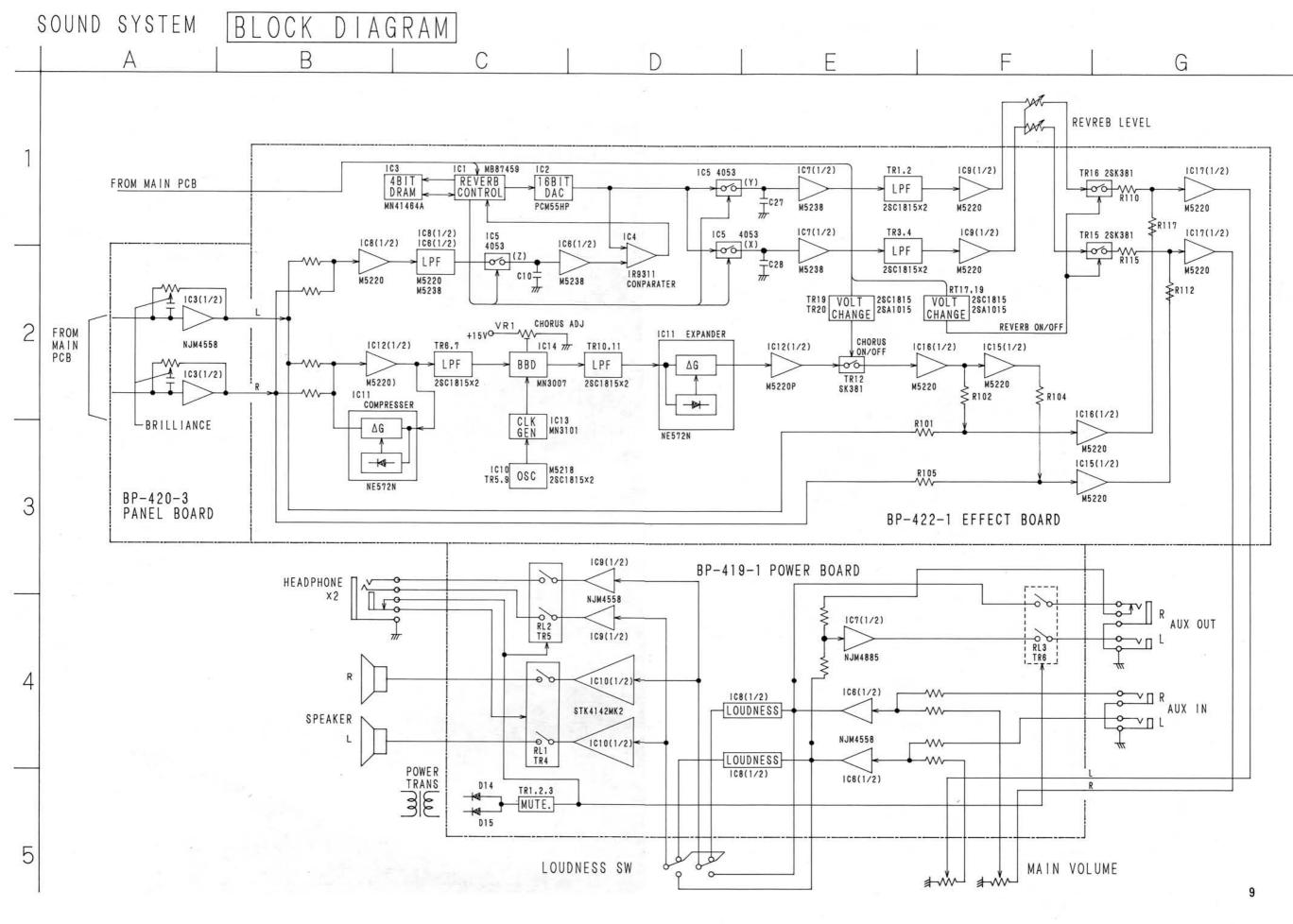
	VR No.	Plug positions (AUX OUT)		No. of keys	Operation
		Α	В		A BOOM STORE
1	VR1	R	L	37 (A)	Set A to ON.
2	VR5	R	L	28 (C)	Set C to ON repeatedly.
3	VR4	R	L	30, 32 (D, E)	Set D and E to ON alternately and repeatedly
4	VR3	L	R	28 (C)	Set C to ON repeatedly.
5	VR2	L	R	25, 27 (A, B)	Set A and B to ON alternately and repeatedly

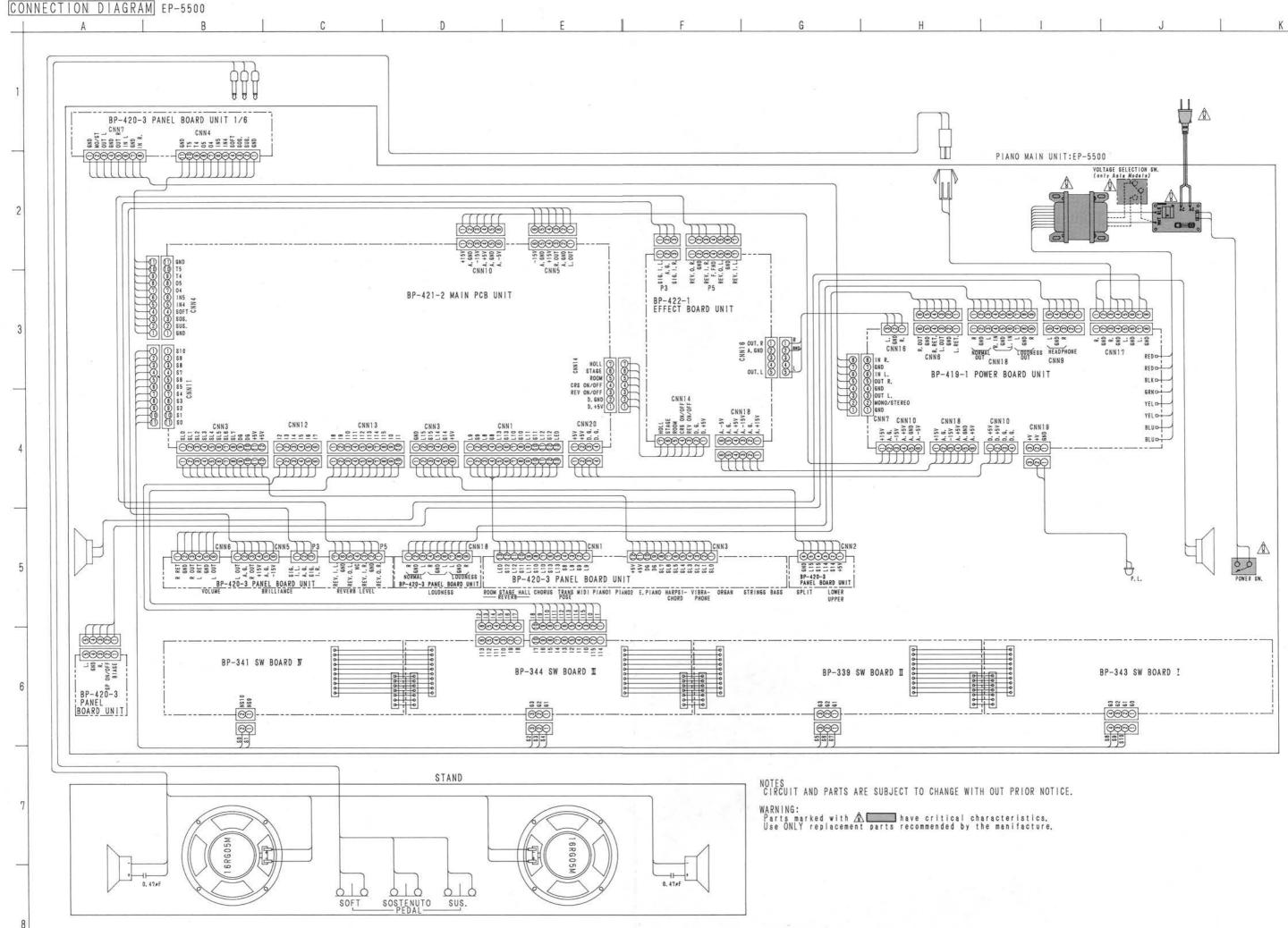
Note: For item 1 adjust to the volume is minimum when listening.



CONTROL SYSTEM & D/A CONVERTER BLOCK DIAGRAM







PARTS LIST Printed Circuit Board: EP-5500

BP-421-2 MAIN PCB

BP-422-1	EFFECT

2630803002 2621726075 2621727074	27C512-5500-3.0-L 27C512-5500-3.0-M TC74HC573AP CD74AC573E TC74HC32AP TC74HC00AP HD74AC04P	
2621726075 2621727074 2621313006 2621538001 2621321001 2621318001 2621542000 2621552003	27C512-5500-3.0-L 27C512-5500-3.0-M TC74HC573AP CD74AC573E TC74HC32AP TC74HC00AP HD74AC04P	
2621727074 2621313006 2621538001 2621321001 2621318001 2621542000 2621552003	27C512-5500-3.0-M TC74HC573AP CD74AC573E TC74HC32AP TC74HC00AP HD74AC04P	
2621313006 2621538001 2621321001 2621318001 2621542000 2621552003	TC74HC573AP CD74AC573E TC74HC32AP TC74HC00AP HD74AC04P	
2621538001 2621321001 2621318001 2621542000 2621552003	CD74AC573E TC74HC32AP TC74HC00AP HD74AC04P	
2621321001 2621318001 2621542000 2621552003	TC74HC32AP TC74HC00AP HD74AC04P	
2621318001 2621542000 2621552003	TC74HC00AP HD74AC04P	
2621542000 2621552003	HD74AC04P	
2621552003		
전 전 전 전 전 전 전 전 전 전 전 전 전 전 전	UD7/AC150D	
2621551004	HU/4ACISOF	
	MN4164A-08	
2621544008	TC74HC155AP	
2621159008	TC74HC139AP	
2621543002	TC74HC174AP	
2621160000	TC74HC138AP	
2621077009	TC74HC646AP	
2621315004	TC74HC541AP	
2621314005	TC74HC574AP	
2621553002	TC74HC365AP	
3939330000	TLP552/PC910	
2621536003	ITP-L6009	
2621537002	FLR-L6009	
2621592005	TC74AC138P	
2621730003	LH538K13 AWV-100-3	
2621731002	LH538K14 AWV-100-4	
2621728002	LH538K11 AWV-100-1	
2621729001	LH538K12 AWV-100-2	
2621545007	SCOEF10-512 9743-081	
2621546006	SCOEF11-512 9743-081	
2621541001	HD74AC00P	
2620672007	PCM54HP	
2630804001	OPA602AM	
2621550005	CD74HC4053E	
2630226003	M5220L	
2610123003	LP YC258BLR-5589N	
2412315035	RD14B2E3306FRF	330
2412371011	RD14B2E150GFRF	150
	HC-49/U-S 16.000MHz	
3997002008	COX-042C 27.684MHz	
2462045038	RK99=1H103JP8	1 OK 0 × 8
2462085001	RK99=1H103JP3	10K 0×3
2116089010	K07PB105	В−1 МК Ф
2116089007	K07PB502	B-5K ^Q
	2621543002 2621160000 2621077009 2621315004 2621314005 2621533002 3939330000 2621536003 2621537002 2621730003 2621730003 2621730003 2621728002 2621728002 2621728002 2621728001 2621545007 2621546006 2621541001 2620672007 2630804001 2621550005 2630226003 2610123003 2412315035 2412371011 3997002008 2462045038 2462045038	2621543002 TC74HC174AP 2621160000 TC74HC138AP 2621077009 TC74HC646AP 2621315004 TC74HC541AP 2621314005 TC74HC574AP 2621553002 TC74HC365AP 393933000 TLP552/PC910 2621536003 ITP-L6009 2621592005 TC74AC138P 2621730002 FLR-L6009 2621730003 LH538K13 AWV-100-3 2621730003 LH538K14 AWV-100-4 2621728002 LH538K12 AWV-100-2 2621545007 SCOEF10-512 9743-081 262154008 SCOEF11-512 9743-081 262154001 HD74AC00P 2620672007 PCM54HP 2630804001 OPA602AM 261550005 CD74HC4053E 2630226003 M5220L 2610123003 LP YC258BLR-5589N 2412315035 RD1482E3306FRF 2412371011 RD1482E306FRF 2452045038 RK99=1H103JP8 2462045030 RK99=1H103JP3 2116089010 K07PB105

Ref. No.	Part No.	Part Name	Remarks
D1,2,5,6	2760432000	1\$\$270A	
9.10			
D3,4	2760460001	HZS5C-1	
TR1-6.8-11	2730198028	2SC1815(GR)	
17,19		POD Paraneto tertor	
TR12.15.16	2750048006	2CK381(D/E)	
TR7	2730415002	2SC3330T	
TR18.20	2710102021	2SA1015(GR)	
101	2631486001	MB87459PF-001	
102	2621561007	PCM55HP	
103	2621551004	MN41464A-08	
1C4	2630806009	IR9311	
105	2621562006	TC74HC4053AP	
106.7	2630679000	M5238P	
108,9,12	2630317006	M5220P	
15-17			
1010	2630711000	M5218AP	20
IC11	2630807008	NE572N	
1013	2620212001	MN3101	
IC14	2630152009	MN3007	
X1	3997002024	HC-49/U-S 20.000MHz	
R201,202	2412371011	RD14B2E150GFRF	150
RA1	2462077006	RK99=1H104JP4	100K0×4
VR1	2116056072	V06PB203	B-20K ^Q
L10-16,19	2350023007	BL02RN2-R62	
21-25.27			
21-25,27 L1-5	2350090001	SBT-0240	
L1-5			
L1-5 BP-420-3	PANEL BO	ARD	Remarks
L1-5 BP-420-3 Rof. No.	PANEL BO	ARD Part Name	Remarks
L1-5 BP-420-3 Rof.No. IC3	PANEL BO Part No. 2630081002	ARD Part Name NJM4558D	Remarka
L1-5 BP-420-3 Ref. No. IC3 SW1-16	PANEL BO Part No. 2630081002 2124388004	ARD Part Name NJM4558D TACT SWITCH	Remarks
L1-5 BP-420-3 Ref.No. IC3 SW1-16 SSW1	PANEL BO Part No. 2630081002 2124388004 2128600005	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH	Remarks
L1-5 BP-420-3 Ref.No. IC3 SW1-16 SSW1 LD1-16	PANEL BO Pert No. 2630081002 2124388004 2128600005 3939490005	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP	
L1-5 BP-420-3 Ref.No. IC3 SW1-16 SSW1 LD1-16 VR1.3	PANEL BO Part No. 2630081002 2124388004 2128600005 3939490005 2117050006	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP J3020VBB103	B−10K ₽
L1-5 BP-420-3 R of. No. IC3 SW1-16 SSW1 LD1-16 VR1.3 VR2	PANEL BO Part No. 2630081002 2124388004 2128600005 3939490005 2117050006 2117050019	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP J3020VBB103 J3020VBB503	
L1-5 BP-420-3 R e f. N o. IC3 SW1-16 SSW1 LD1-16 VR1.3 VR2 L1-12	PANEL BO Part No. 2630081002 2124388004 2128600005 3939490005 2117050006 2117050019 2350050009	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP J3020VBB103 J3020VBB503 BEAD INDUCTOR	В−10К¤ В−50К¤
L1-5 BP-420-3 Ref.No. IC3 SW1-16 SSW1 LD1-16 VR1.3 VR2 L1-12 R29-32	PANEL BO Part No. 2630081002 2124388004 2128600005 3939490005 2117050006 2117050019 2350050009 2412314007	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP J3020VBB103 J3020VBB503 BEAD INDUCTOR RD14B2E101JNBF	B−10K ₽
L1-5 BP-420-3 Ref.No. IC3 SW1-16 SSW1 LD1-16 VR1.3 VR2 L1-12 R29-32 MID1	PANEL BO Part No. 2630081002 2124388004 2128600005 3939490005 2117050006 2117050019 2350050009 2412314007 2049431007	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP J3020VBB103 J3020VBB503 BEAD INDUCTOR RD14B2E101JNBF DIN SOCKET	B-10Kº B-50Kº
L1-5 BP-420-3 Ref.No. IC3 SW1-16 SSW1 LD1-16 VR1.3 VR2 L1-12 R29-32 MID1 AUX IN	PANEL BO Part No. 2630081002 2124388004 2128600005 3939490005 2117050018 2350050009 2412314007 2049431007 2049437001	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP J3020VBB103 J3020VBB503 BEAD INDUCTOR RD14B2E101JNBF DIN SOCKET PHONE JACK	B-50Kº
L1-5 BP-420-3 Ref.No. IC3 SW1-16 SSW1 LD1-16 VR1.3 VR2 L1-12 R29-32 MID1	PANEL BO Part No. 2630081002 2124388004 2128600005 3939490005 2117050006 2117050019 2350050009 2412314007 2049431007	ARD Part Name NJM4558D TACT SWITCH SLIDE SWITCH LN221RP J3020VBB103 J3020VBB503 BEAD INDUCTOR RD14B2E101JNBF DIN SOCKET PHONE JACK PHONE JACK	B-10Kº B-50Kº

Ref. No.	Part No.	Part Name	Remarks
101	2360053006	NJM7805FA	
102	2630561001	NJM7915FA	
103	2630560002	NJM7815FA	
1C4	2630567005	NJM78M05FA	
105	2630501003	NJM79M05FA	
106-8	2630405002	NJM4558S	
109	2630485006	NJM4556S	
1010	2650074002	STK4142MK2	
D1	2760505005	DBA20B	States and the
D2.3.5-12	2760432000	1SS270A	
14-19			
D4	2760504006	DBA10C	and the strength
D13	2780604003	DBA60C	
ZD1	2760468003	HZS9B-(1)	
TR1.4-6	2730198028	2SC1815(GR)	
TR2.3	2710102021	2SA1015(GR)	
RL1	2140146000	G6B2214P-US DC12V	
RL2.3	2140148008	G5A-234P DA12	
F1.2	2061039092	FUSE 4A 125V	U.S.ACanad
F1.2	2081015087	FUSE 4A 125V	Europe.U.K.
F1,2	2061035070	FUSE 4A 125V	Asia
F3.4	2061039021	FUSE 500mA 125V	U. S. A Canad
F3,4	2061015003	FUSE 500mA 250V	Europe.U.K.
F3,4	2061035083	FUSE 630mA 125V	Asla
F5	2061039034	FUSE 1A 125V	U. S. A. , Canad
F5	2061015029	FUSE 1A 250V	Europe, U. K.
F5	2061053007	FUSE 1A 125V	Asle
R69.78	2412314007	RD14B2E101JNBF	1000
R76,77	2452381003	RN14B3D4R7JNBF	4.70
R80	2412321029	RD14B2E152JNBF	1. 5KQ
R92	2412314081	RD14B2E561JNBF	5600
R95.98	2412321087	RD14B2E121JNBF	1200
R105,106	2412314049	RD14B2E100JNBF	100
L1-5	2350050009	BEAD INDUCTOR	
BP-344,	339.343 KE	Y SWITCH BOARD	
		Deservice N	
Ref. No.	Part No.	. Part Name	Remarks
Ref. No. D1-48	2760049008		Remarks

2128582107 8KEY RUBBER SWITCH

Part No. Part Name

2128582107 8 KEY RUBBER SWITCH 2128584105 1 KEY RUBBER SWITCH

2760049008 182706

Remarks

BP-341 KEY SWITCH BOARDⅣ

Ref. No.

D1-34

Ref. No.	Part No.	Part Name	Remarks
F	2061056004	FUSE 2A 125V	
Constraint and a lo	2397001008	LINE FILTER	and the second
C1.2	2538012005	CK45F2GAC222M	A CONTRACTOR OF
C3	2538015002	CK45F2GAC103P	The same of the second
SW	2033518004	2P CONNECTOR BASE	1222 1222

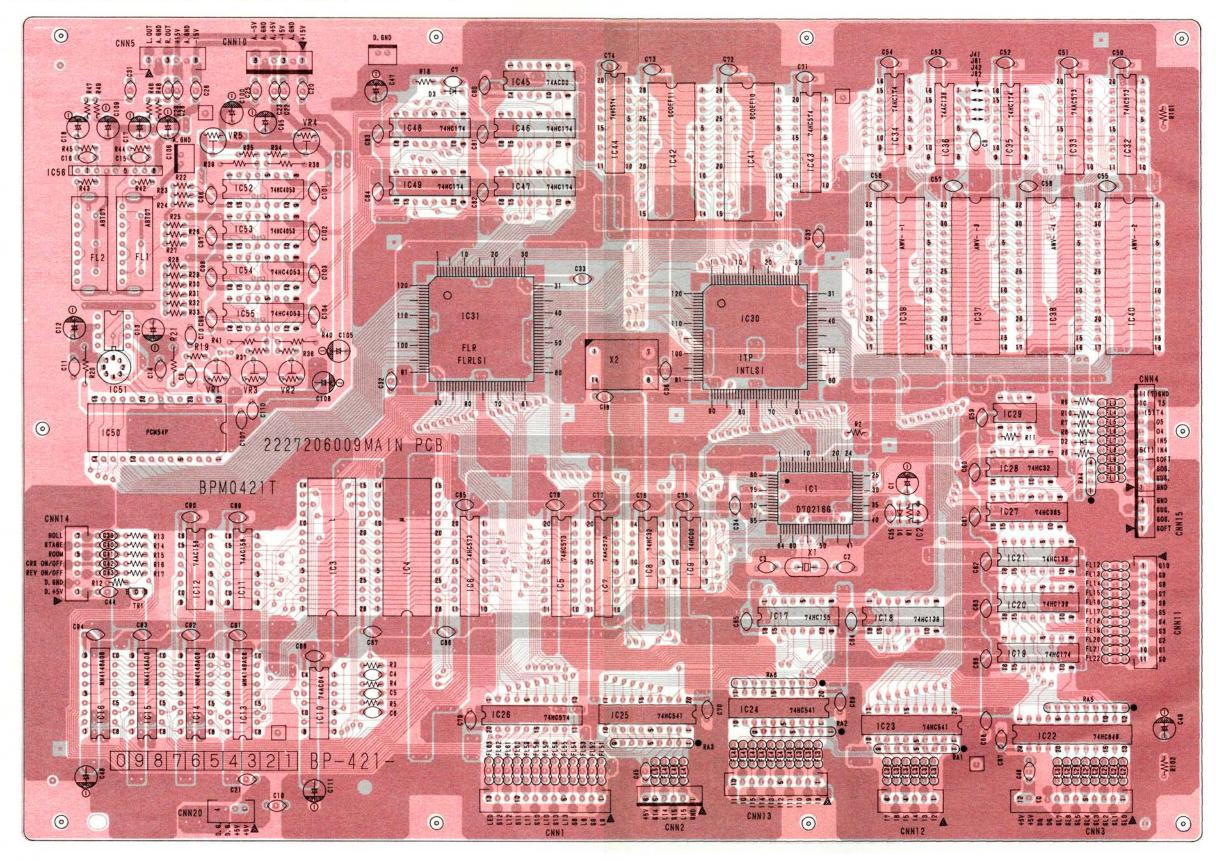
BP-393-3 L/FILTER BOARD(Europe, U.K., Asia)

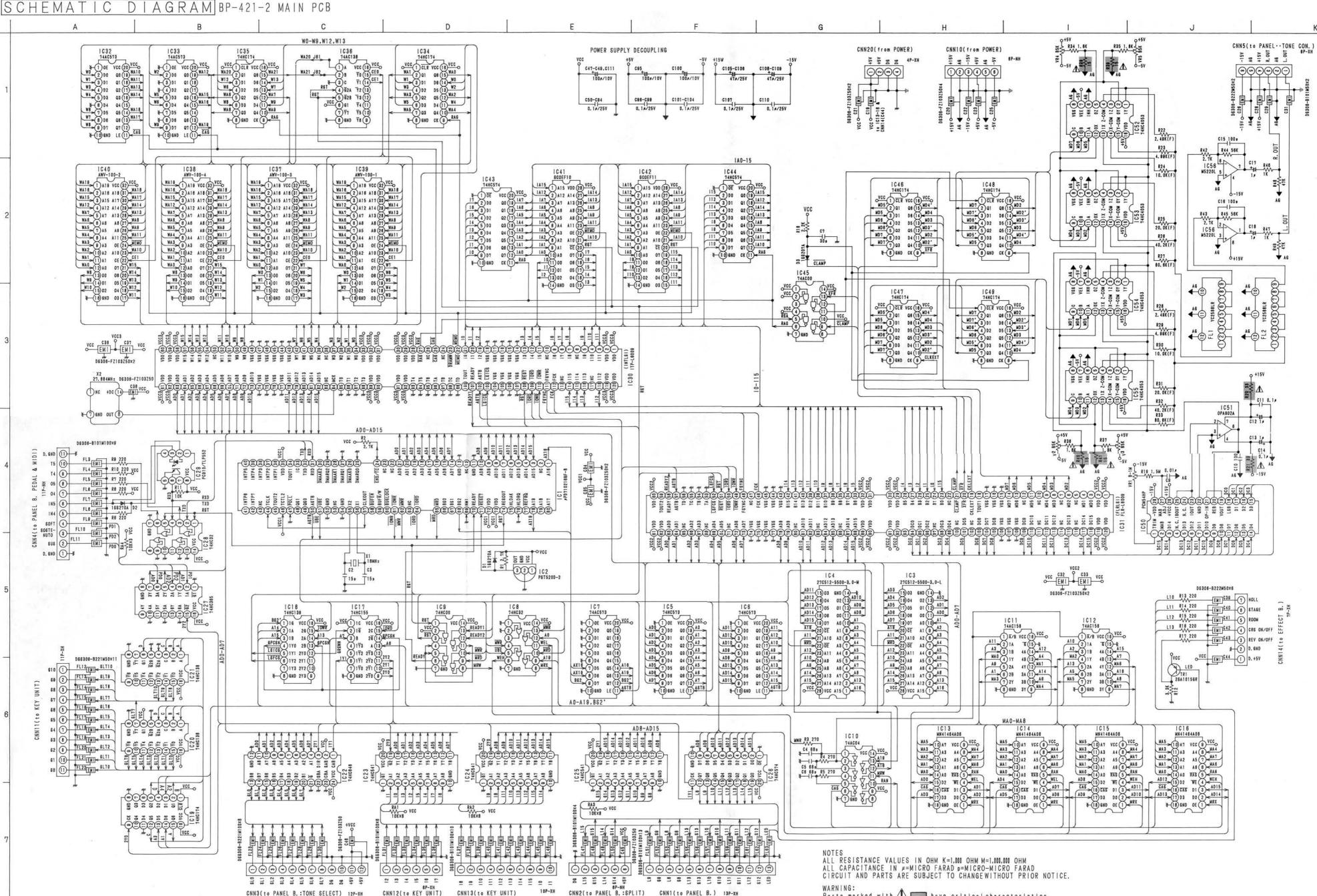
	Ref. No.	Part No.	Part Name	Remarks
Â	F	2061015061	FUSE 2A 250V	Street Land
Λ	and the second	2020014003	FUSE CLIP	
A	Printer Part	2397001008	LINE FILTER	
A	C1.2	2538012005	CK45F2GAC222M	
Λ	C3	2538015002	CK45F2GAC103P	The state of the state
Â	SW	2033518004	2P CONNECTOR BASE	

WARNING: Parts marked with A barecritical characteristics. Use ONLY replacement parts recommendedby the manifacture.

BP-421 MAIN PCB UNIT Soldering side

Mounting Side



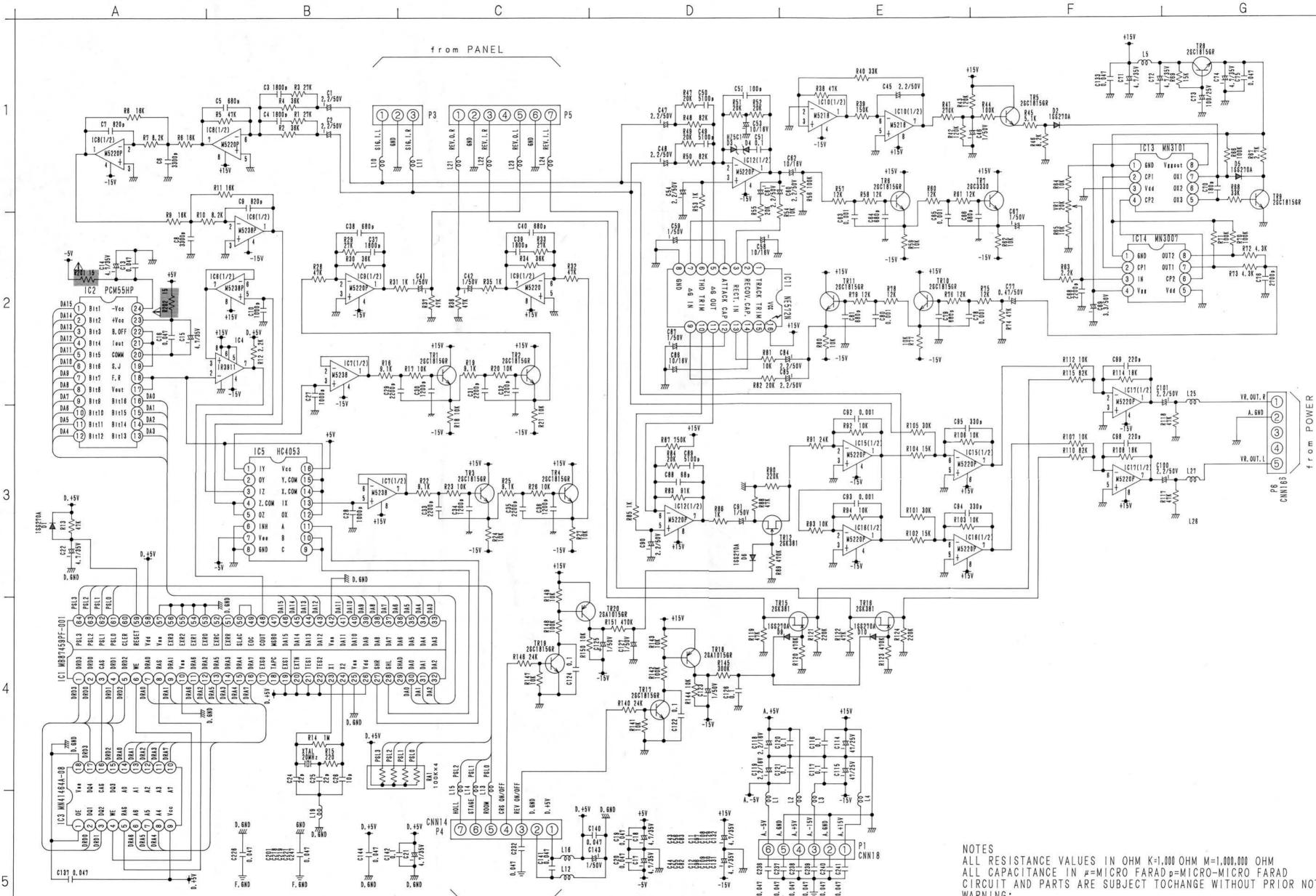


CNN3(to PANEL B. : TONE SELECT) 12P-XH

WARNING: Parts marked with 🗥 📖 have critical characteristics.

Use ONLY replacement parts recommended by the manifacture.

AGRAM BP-422-1 EFFECT BOARD ΜA S U



to MAIN

14

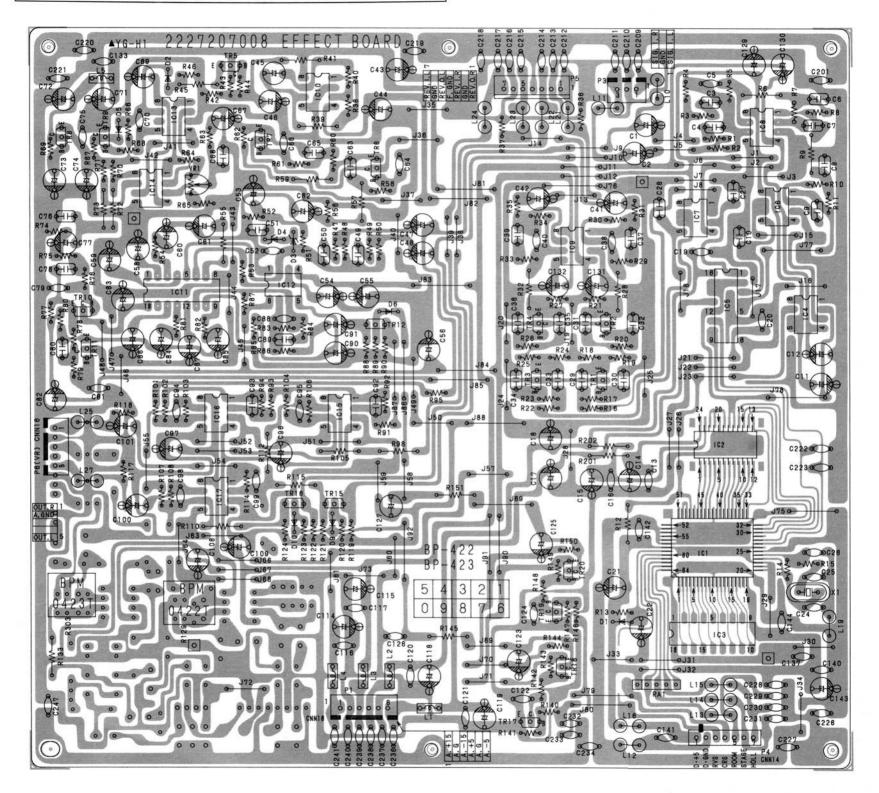
5

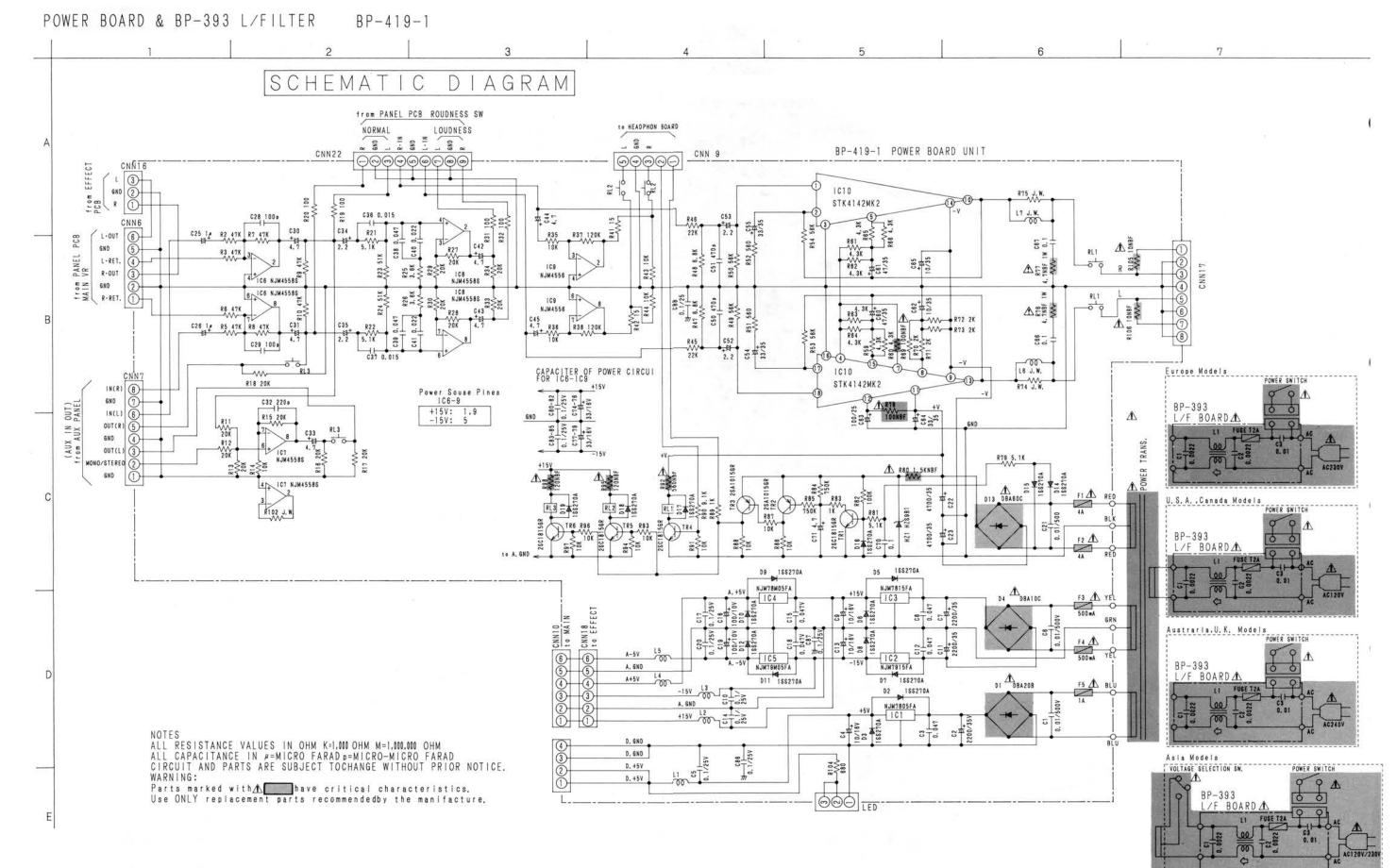
4

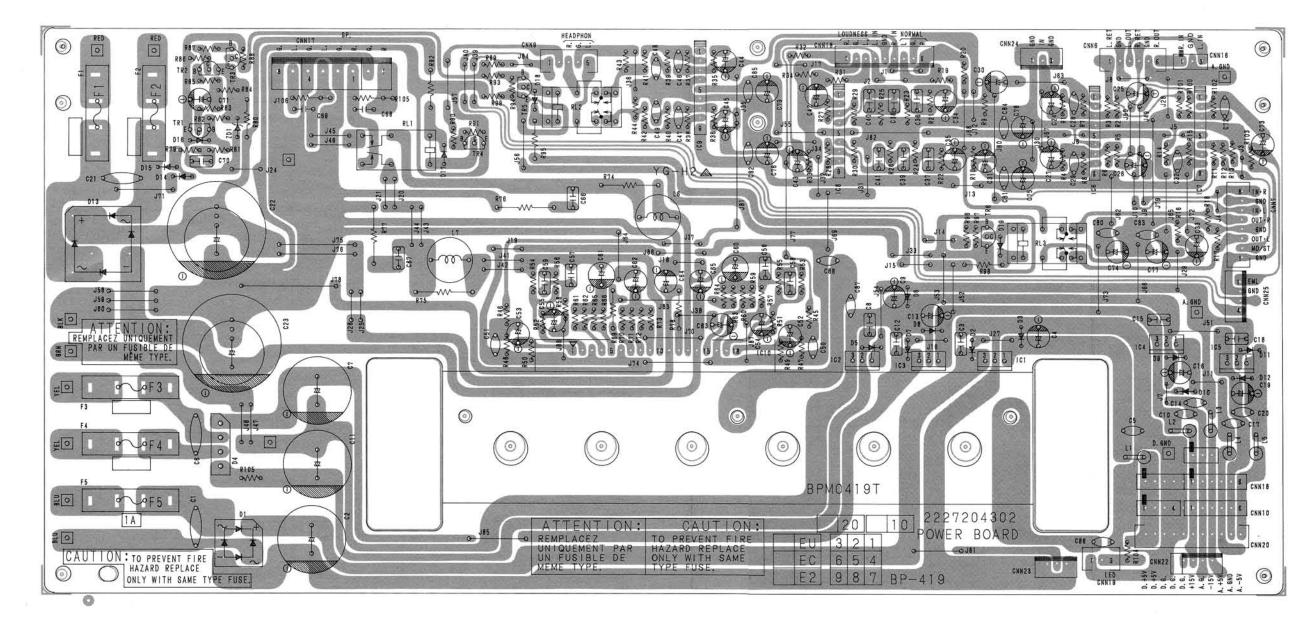
from POWER

NOTES ALL RESISTANCE VALUES IN OHM K=1,000 OHM M=1,000,000 OHM ALL CAPACITANCE IN #=MICRO FARADp=MICRO-MICRO FARAD CIRCUIT AND PARTS ARE SUBJECT TOCHANGE WITHOUT PRIOR NOTICE. WARNING: Parts marked with \Lambda 🌉 have critical characteristics. Use ONLY replacement parts recommendedby the manifacture.

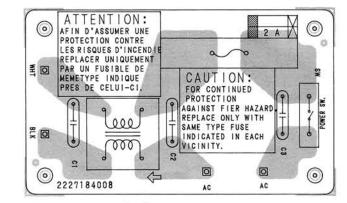
BP-422, BP-423 EFFECT BOARD UNIT Pattern side







BP-393 L/FILTER BOARD Pattern side



PANEL BOARD BP-420-3 SCHEMAT

В

A

С

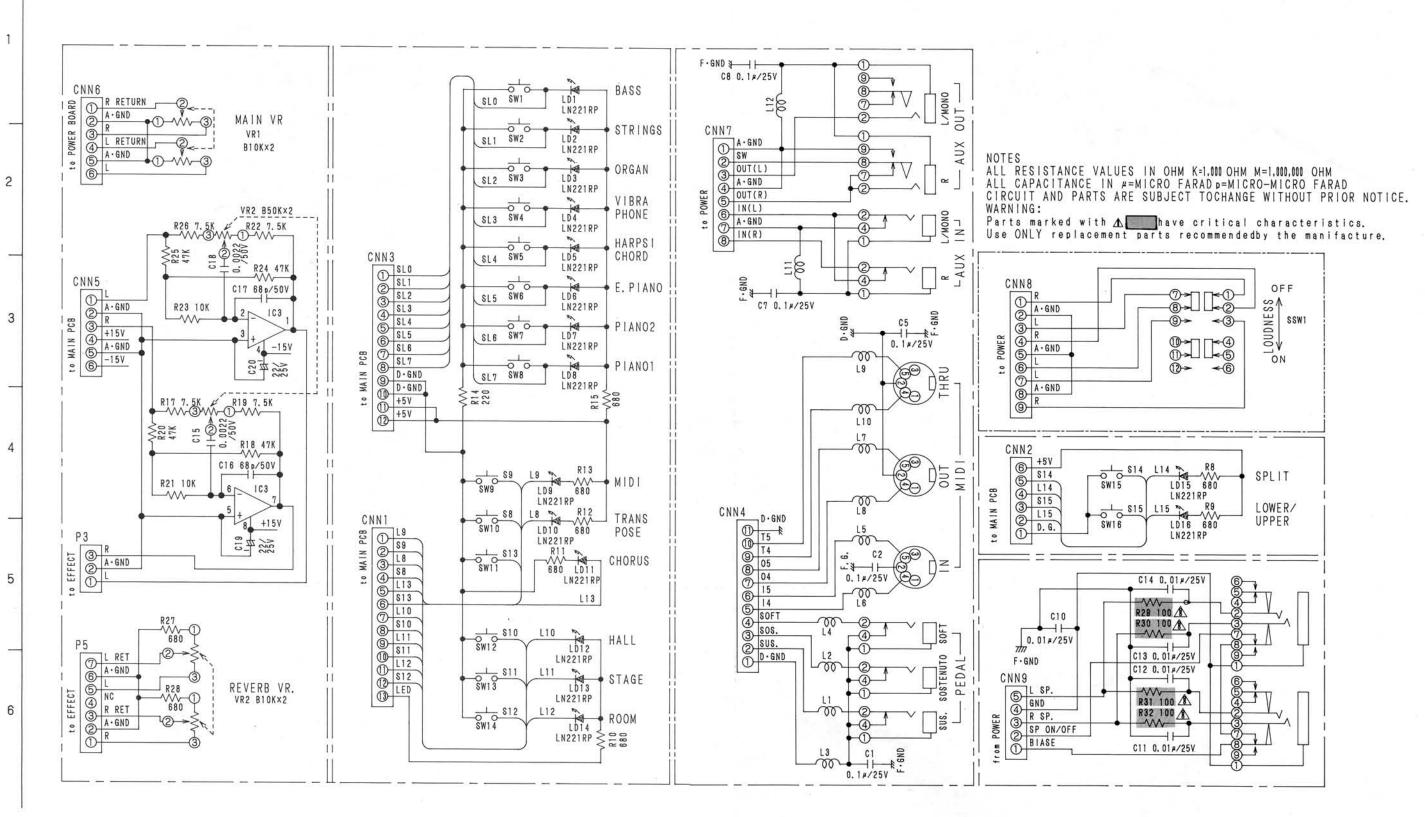
AGRAM

U

D

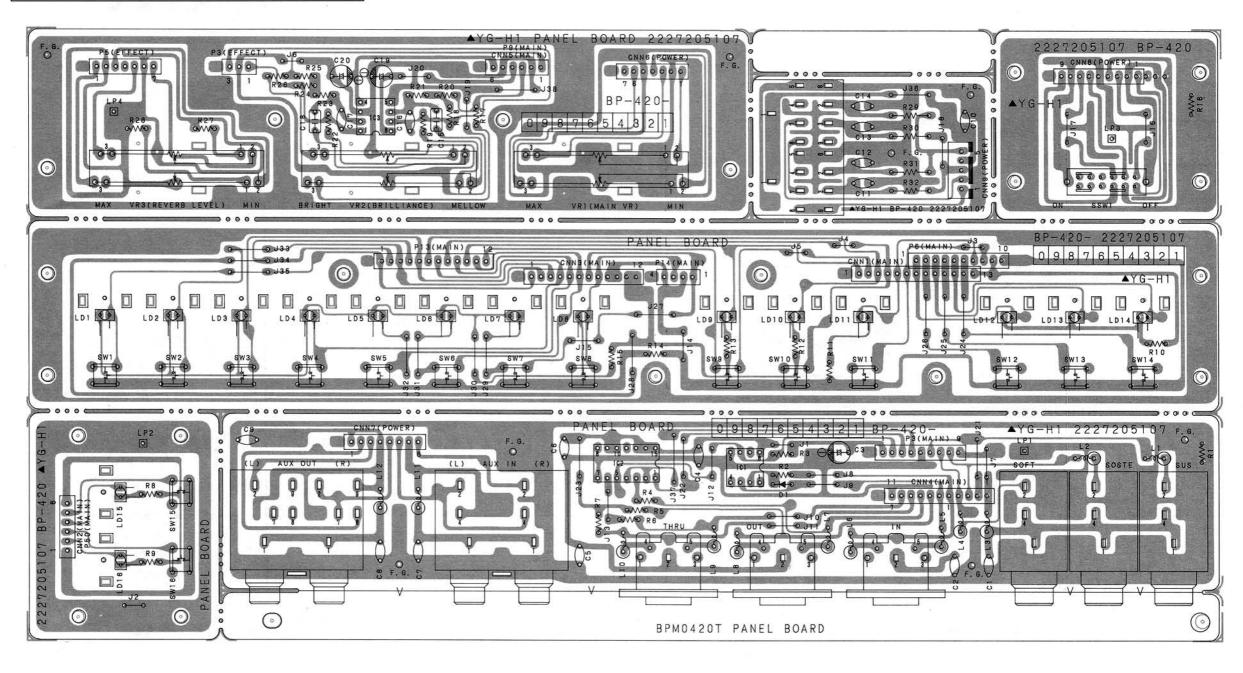
E I

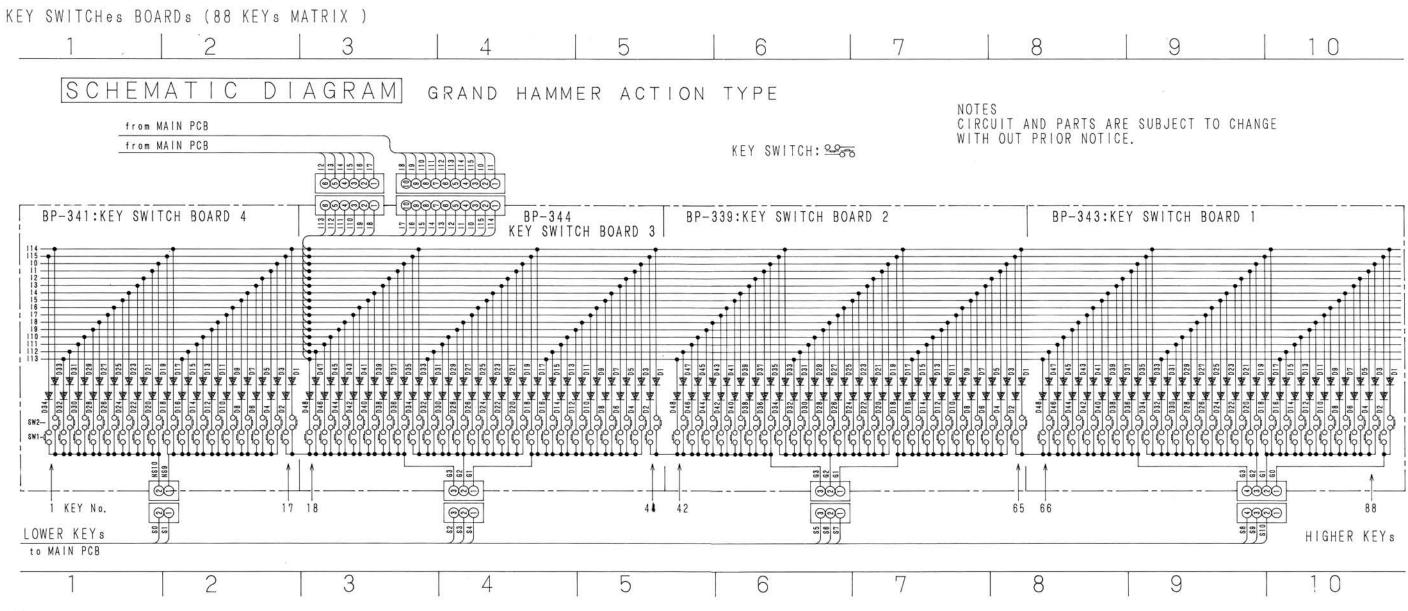
F



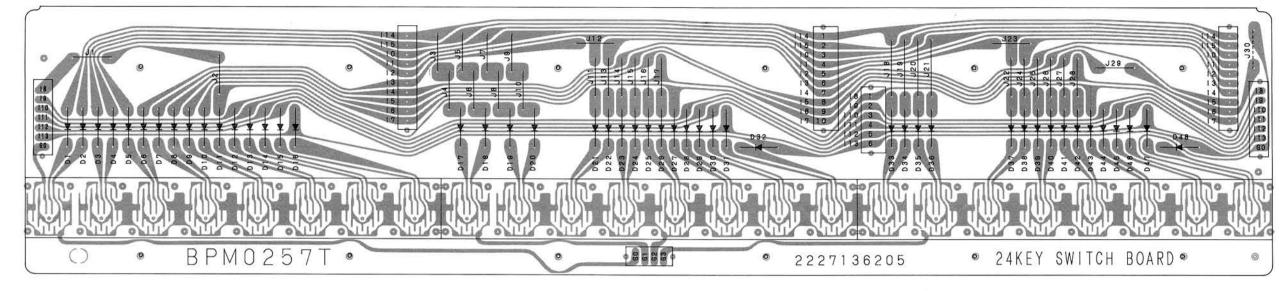
18

BP-420 PANEL BOARD UNIT Pattern side

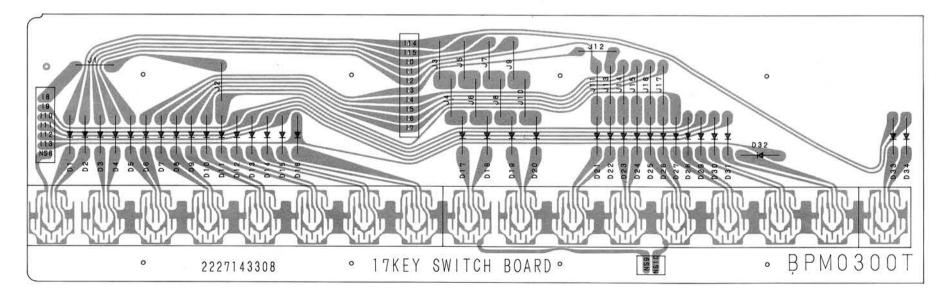




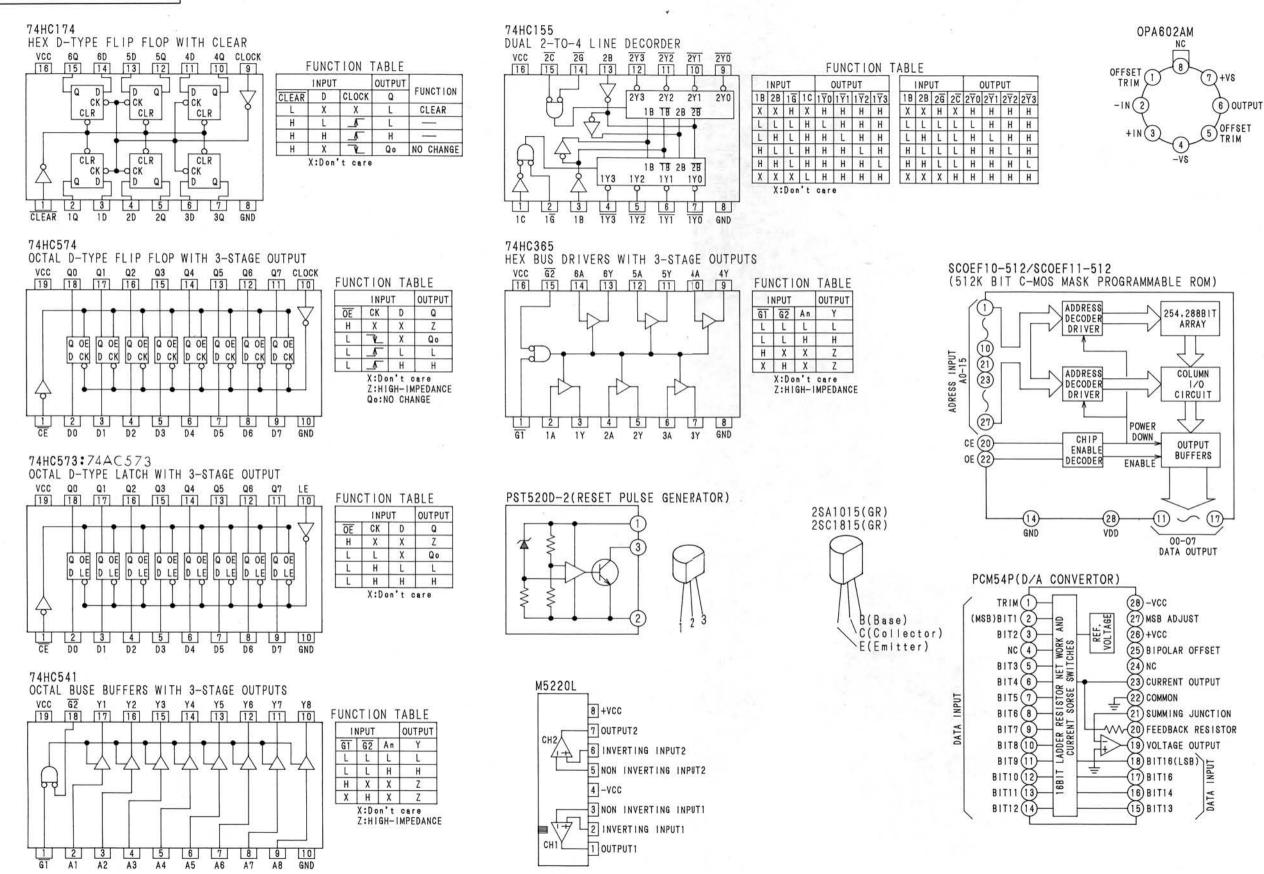
BP-344, BP-339, BP-343 SWITCH BOARD Soldering side



BP-341 SW BOARD IV Soldering side



SEMICONDUCTORS



22

SEMICONDUCTORS

