

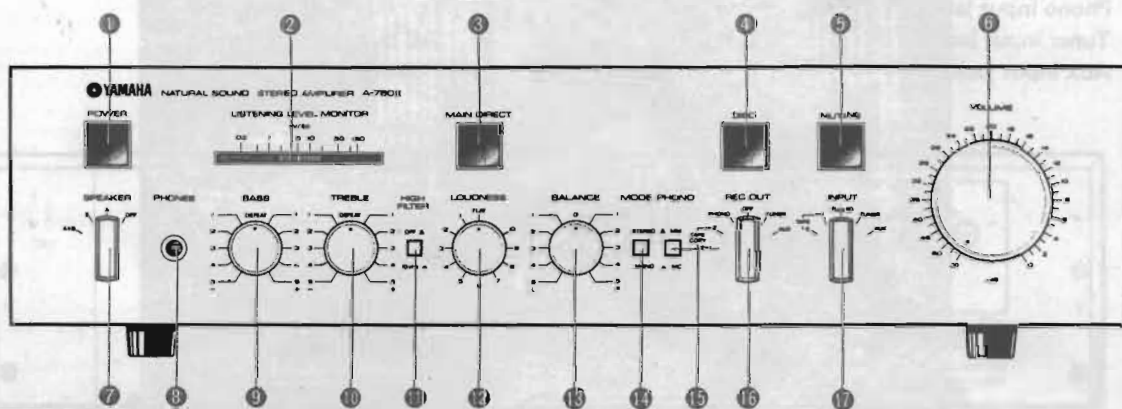
# STEREO INTEGRATED AMPLIFIER

14106

# A-760II

## SERVICE MANUAL

### FRONT PANEL



- |                           |                    |
|---------------------------|--------------------|
| ① Power Switch            | ⑩ Treble Control   |
| ② Listening Level Monitor | ⑪ High Filter      |
| ③ Main Direct Switch      | ⑫ Loudness Control |
| ④ Disc Switch             | ⑬ Balance Control  |
| ⑤ Muting Switch           | ⑭ Mode Control     |
| ⑥ Volume Control          | ⑮ Phono Selector   |
| ⑦ Speaker Switch          | ⑯ Rec Out Selector |
| ⑧ Phones Jack             | ⑰ Input Selector   |
| ⑨ Bass Control            |                    |

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SINCE 1887

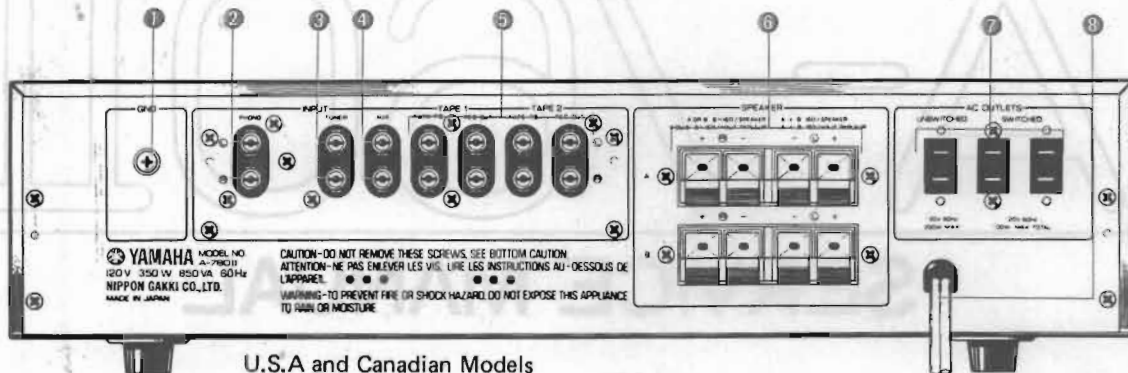


**YAMAHA**

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

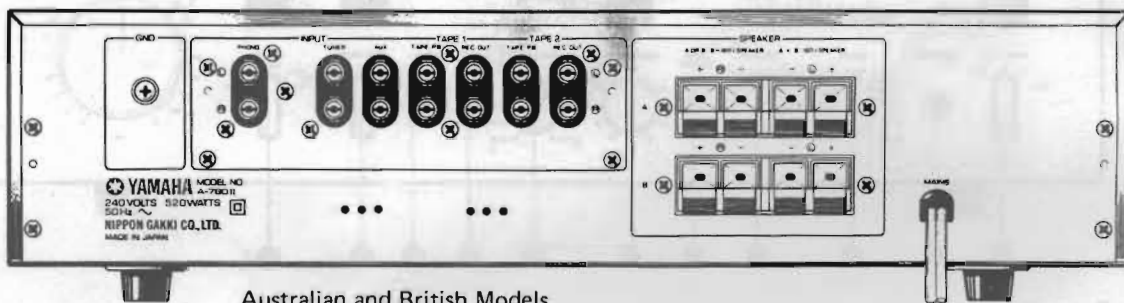
82.3.2.65K Printed in Japan.

REAR PANEL

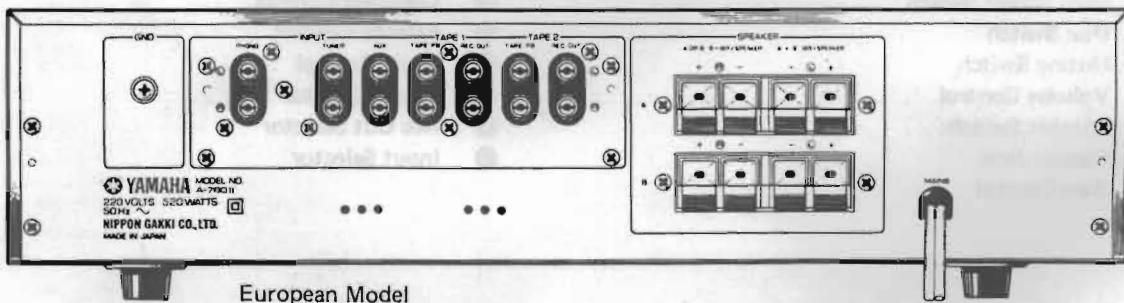


U.S.A and Canadian Models

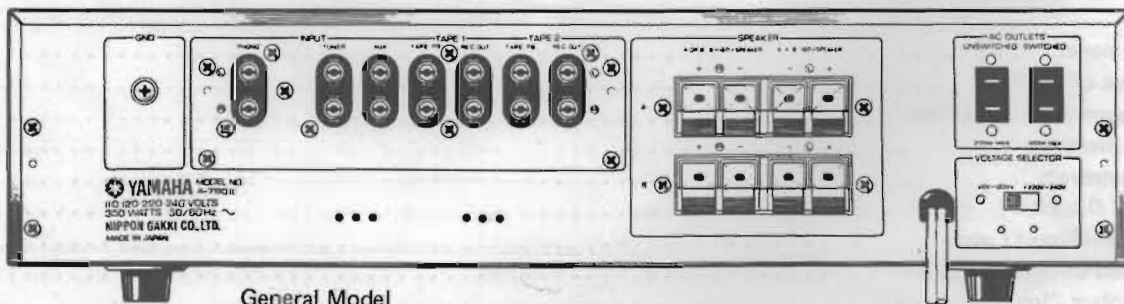
- ① Gnd terminal
- ② Phono input jacks
- ③ Tuner input jacks
- ④ Aux input jacks
- ⑤ Tape 1, 2 record/playback jacks
- ⑥ Speaker A, B terminals
- ⑦ AC outlets
- ⑧ Power cord



Australian and British Models



European Model

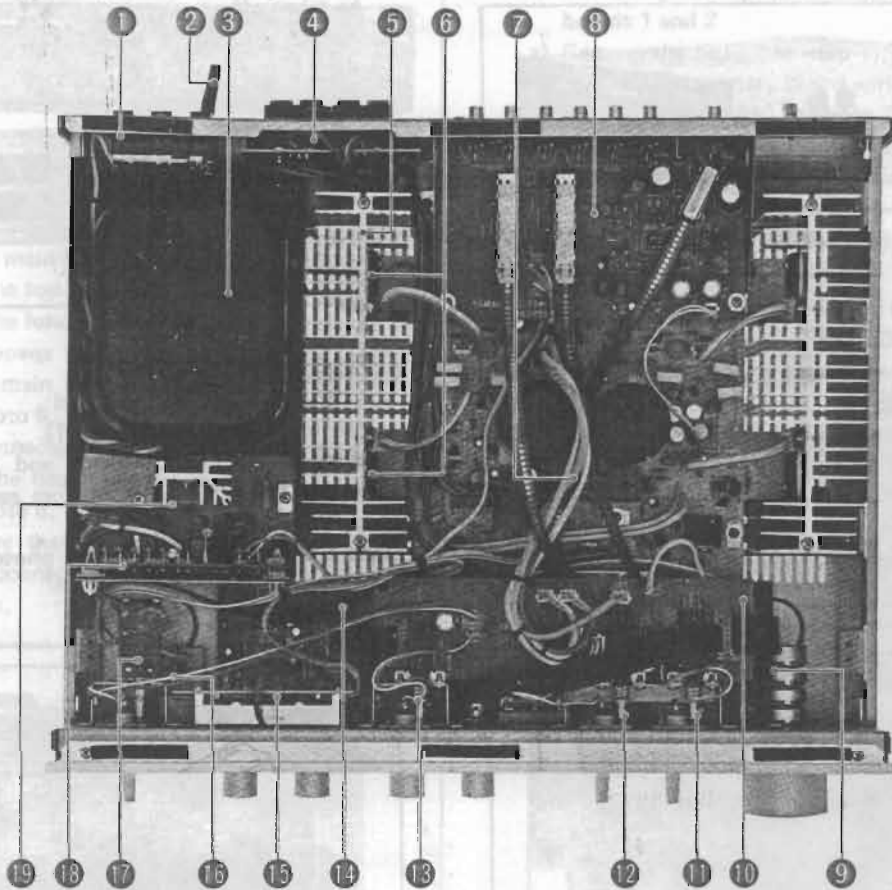


General Model

**NAME OF THE PARTS**

**Internal Top View**

U.S.A and Canadian Model



- 1 AC outlet
- 2 Power cord
- 3 Power transformer
- 4 Main board 2 (NA07861-2)
- 5 Heat sink
- 6 Power transistor
- 7 Main board 1 (NA07861-1)
- 8 Function board (NA07857)
- 9 Tone control board 3 (NA07859-3)
- 10 Tone control board 2 (NA07859-2)

- 11 Muting switch
- 12 Disk switch
- 13 Main Direct switch
- 14 Tone control board 1 (NA07859-1)
- 15 Main board 4 (NA07861-4)
- 16 Main board 5 (NA07861-5)
- 17 Power switch
- 18 Primary board 1
- 19 Primary board 2

## DISASSEMBLY INSTRUCTIONS

### 1. Removing the top cover

Remove screws ① and ② on each side, per photo 1 and remove the top cover by pulling back and lifting up.

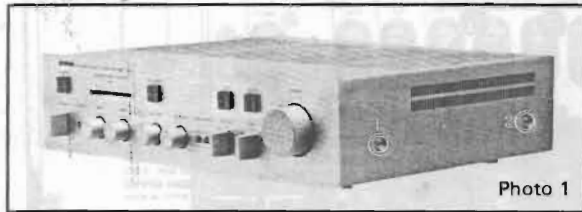


Photo 1

### 2. Removing the bottom cover

Flip the A-760II over and remove screws ① ~ ⑨ in photo 2; then remove the bottom cover.

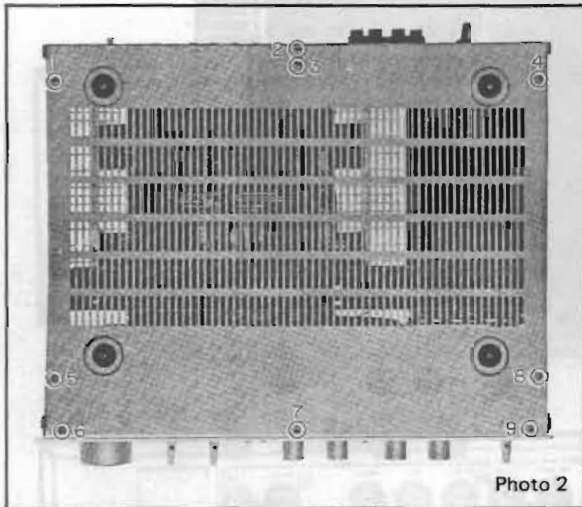


Photo 2

### 3. Removing the front panel

- Remove the top cover (step 1).
- Remove the bottom cover (step 2).
- Loosen the Speaker, Rec Out and Input knobs with a 1.5 mm allen wrench. Pull each knob off its shaft.
- Disconnect the wires from the Power, Main Direct, Disc and Muting switches being careful not to break them.
- Remove screws ① and ② in photo 3 and remove the front panel by pulling forward.



Photo 3

### 4. Removing the rear panel

- Remove the top cover (step 1).
- Remove the bottom cover (step 2).
- Remove screws ① ~ ⑫. The cover can then be taken off.

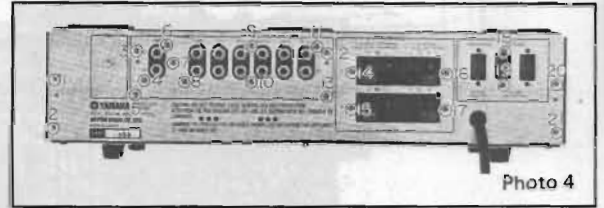


Photo 4

### 5. Removing the function board

- Remove the top cover (step 1).
- Detach the various cords and connectors; then detach the flexible wire from each switch with a screwdriver. (Fig. 1)
- Take out screws ③ ~ ⑬ photo 4 to remove the function board.

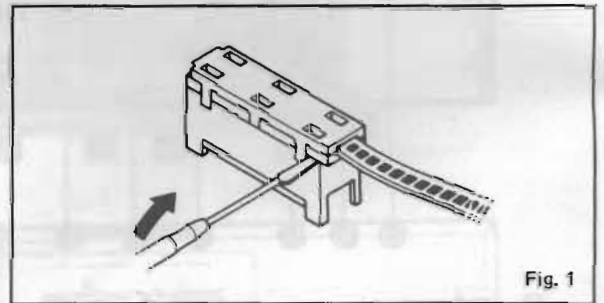
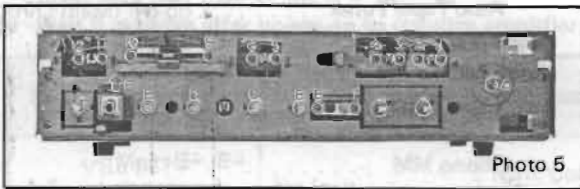


Fig. 1

### 6. Removing tone control boards 1, 2, and 3, main boards 4 and 5 and the power switch

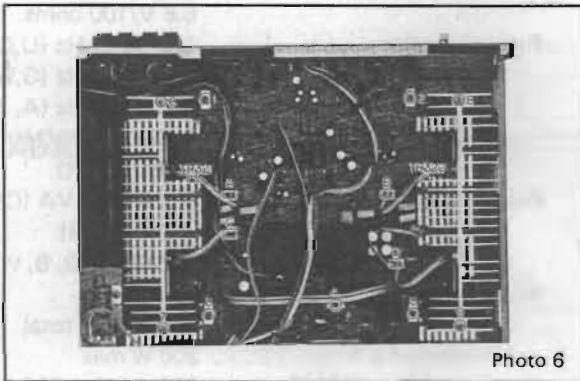
- Remove the top cover, bottom cover, and front panel (steps 1, 2, 3).
- Pull off the Bass, Treble, Loudness, Balance and Volume controls.
- Tone control boards 2 and 3 can be removed by taking out nut (A) and screws ① ~ ⑥ in photo 5.
- Tone control board 1 can be removed by taking out screws ⑦ and ⑧ and nuts (B) ~ (E) in photo 5.
- Main board 4 is removed by taking out screws ⑨ and ⑩ and pulling off the Listening Level Monitor knob in photo 5.
- The power switch can be removed by removing screws ⑪ and ⑫ in photo 5.
- Main board 5 can be removed by pulling out the phone jack fastener (F) in photo 5 in the direction of the arrow.



### 7. Removing main board 1 and the heat sink

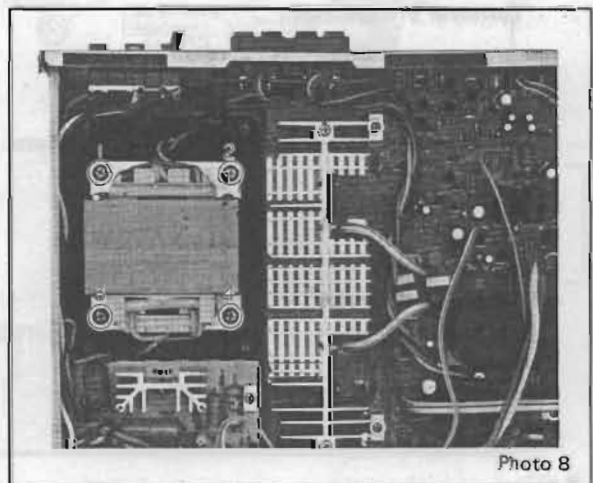
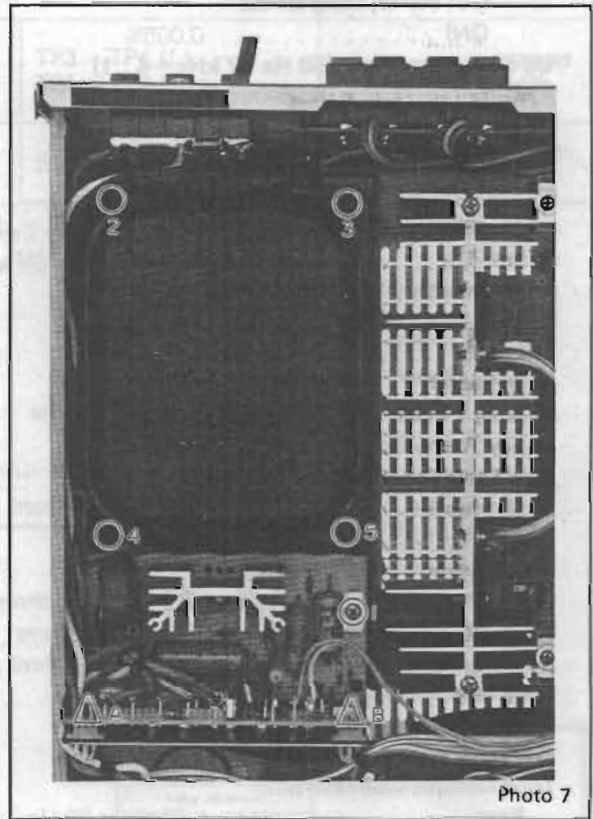
- a) Remove the top and bottom covers.
- b) Remove the function board (step 5).
- c) Desolder power transistors TR335 ~ TR338.
- d) Take out main board 1 by removing screws ① ~ ⑤ in photo 6.
- e) Detach connectors (A) ~ (D) in photo 6.
- f) Remove the heat sink by taking out screws ⑥ ~ ⑨ in photo 6.

\*Make sure that transistors TR321 and TR322 are correctly connected to the heat sink for proper heat dissipation.



### 8. Removing the power transformer and primary boards 1 and 2

- a) Remove the top cover (step 1).
- b) Remove the primary board wiring.
- c) Take out screw ① in photo 7 and release primary boards 1 and 2 from board fasteners (A) and (B).
- d) Remove the power transformer cover by taking out screws ② ~ ⑤ in photo 7.
- e) Take out screws ① ~ ④ in photo 8 to remove the power transformer.



**SPECIFICATIONS**

25  
25

<b>Minimum RMS Output Power</b>	
8 ohms, 20 to 20,000Hz (Main Direct ON)	
0.005% THD	80 W + 80 W
8 ohms, 1 kHz 0.002%	
THD	80 W + 80 W
<b>4 ohms clipping power</b>	
1 kHz 0.5% THD	150 W + 150 W
<b>Total Harmonic Distortion (20 Hz to 20 kHz)</b>	
Phono MM to Rec Out (5 V output)	0.003%
Phono MC to Rec Out (5 V output)	0.006%
Aux/Tape/Tuner to Sp Out (40 W, Main Direct ON)	0.005%
<b>IM Distortion Ratio (60 Hz : 7 kHz = 4 : 1)</b>	
Aux/Tape/Tuner to Sp Out	
8 ohms, 80W	0.002%
8 ohms, 1 W	0.01%
<b>Power Bandwidth (Main Direct ON)</b>	
(8 ohms, 40 W, 0.02% THD)	10 Hz to 100 kHz
<b>Damping Factor (8 ohms, 1 kHz)</b>	
	Better than 65
<b>Frequency Response (Aux/Tape/Tuner to Sp Out, 8 ohms)</b>	
	1 Hz to 100 kHz (+0, -2 dB)
<b>RIAA Deviation</b>	
Phono MM	± 0.2 dB
Phono MC	± 0.3 dB
<b>Input Sensitivity/Impedance</b>	
Phono MM	2.5 mV/47 k ohms
Phono MC	160 μV/100 ohms
Aux/Tape/Tuner	150 mV/47 kohms
<b>Maximum Input Level (1 kHz)</b>	
Phono MM	180 mV RMS
Phono MC	10 mV RMS
<b>Tone Control Characteristics</b>	
Bass	± 10 dB at 20 Hz
Treble	± 10 dB at 20 kHz
<b>Turnover Frequencies</b>	
Bass	500 Hz
Treble	3.5 kHz
<b>Output Level/Impedance</b>	
Rec Out	150 mV/270 ohms
<b>Signal-to-Noise Ratio (IHF A Network, Input Shorted)</b>	
Phono MM (5 mV)	92 dB
Phono MC (500 μV)	76 dB
Aux/Tape/Tuner	106 dB (Main Direct ON)

<b>Signal-to-Noise Ratio (NEW IHF)</b>	
Phono MM	74.5 dB
Phono MC	78 dB
Aux/Tape/Tuner	85 dB (Main Direct ON)
<b>Residual Noise (IHF A Network)</b>	
	65 μV
<b>Input Equivalent Noise</b>	
Phono MM	-138 dBV
Phono MC	-142 dBV
<b>Filter Characteristics</b>	
High	10 kHz, 12 dB/oct.
<b>Channel Separation (1 kHz, vol. -30 dB, Shorted)</b>	
Aux, Tuner to Sp Out	70 dB
Phono MM to Sp Out	70 dB
Phono MC to Sp Out	70 dB
<b>Continuous Loudness Control (Level-Related Equalization)</b>	
Max. Attenuation	20 dB at 1 kHz
Audio Muting	-20 dB
<b>Gain Tracking Error (0 to -60 dB)</b>	
	2 dB
<b>Headphone Output/Impedance (0.01% THD)</b>	
	0.72 V/8 ohms
	6.8 V/100 ohms
<b>Power Supplies</b>	
	120 V, 60 Hz (U,C)
	220 V, 50 Hz (G,W)
	240 V, 50 Hz (A, B)
	110/120/220/240 V, 50/60 Hz (R)
<b>Power Consumption</b>	
	350 W/850 VA (C)
	350 W (U, R)
	520 W (A, G, B, W)
<b>AC Outlets</b>	
Switched x 2	100 W max total
Unswitched x 1	200 W max
<b>Dimensions (W x H x D)</b>	
	435 x 112 x 365 mm (17-1/8" x 4-7/16" x 14-3/8")
<b>Weight</b>	
	9.1 kg (20 lbs., 7 oz.)

Specifications subject to change without notice.

- U : U.S.A. Model
- C : Canadian Model
- R : General Model
- A : Australian Model
- B : British Model
- G : European Model
- W : West Germany Model

## GENERAL ADJUSTMENTS

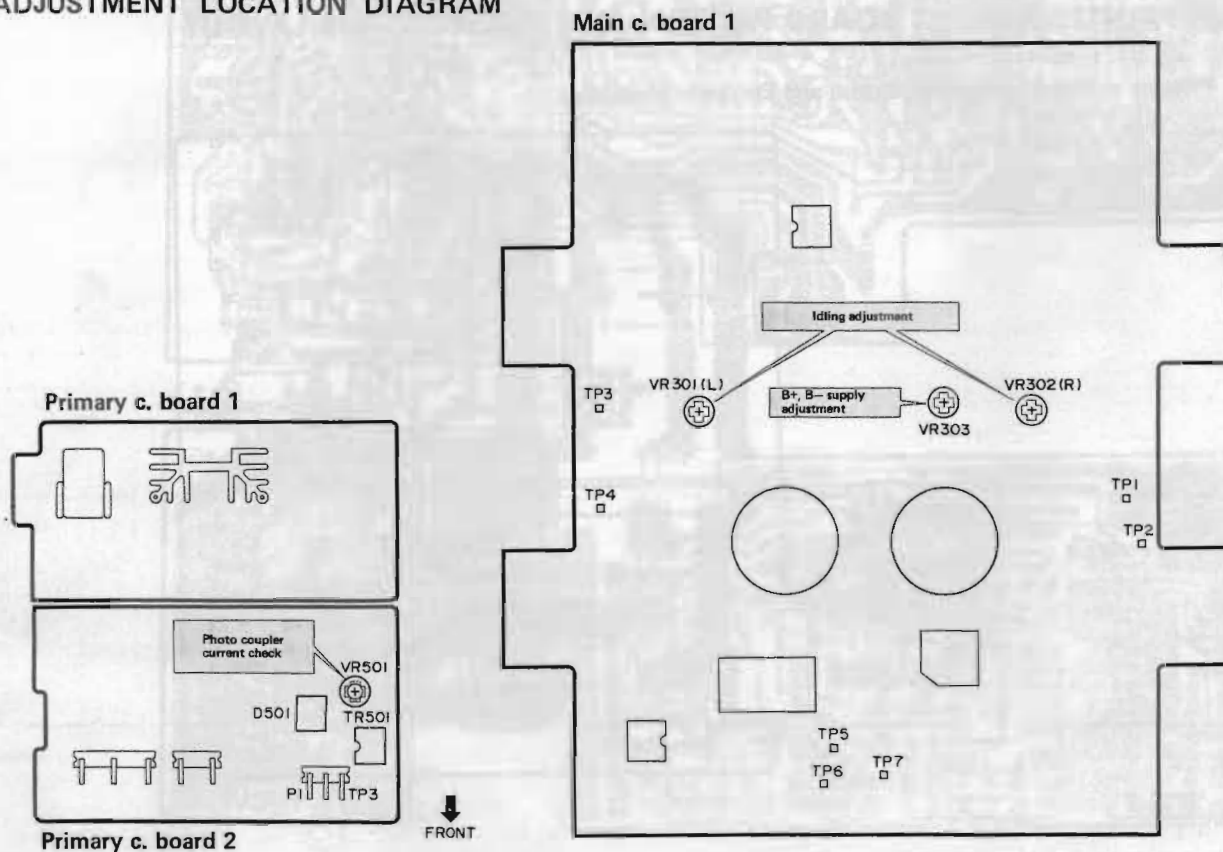
### Before adjustment

- Make sure that the AC line is  $\pm 10\%$
- Wait 5 minutes after power-on to stabilize amplifier operation

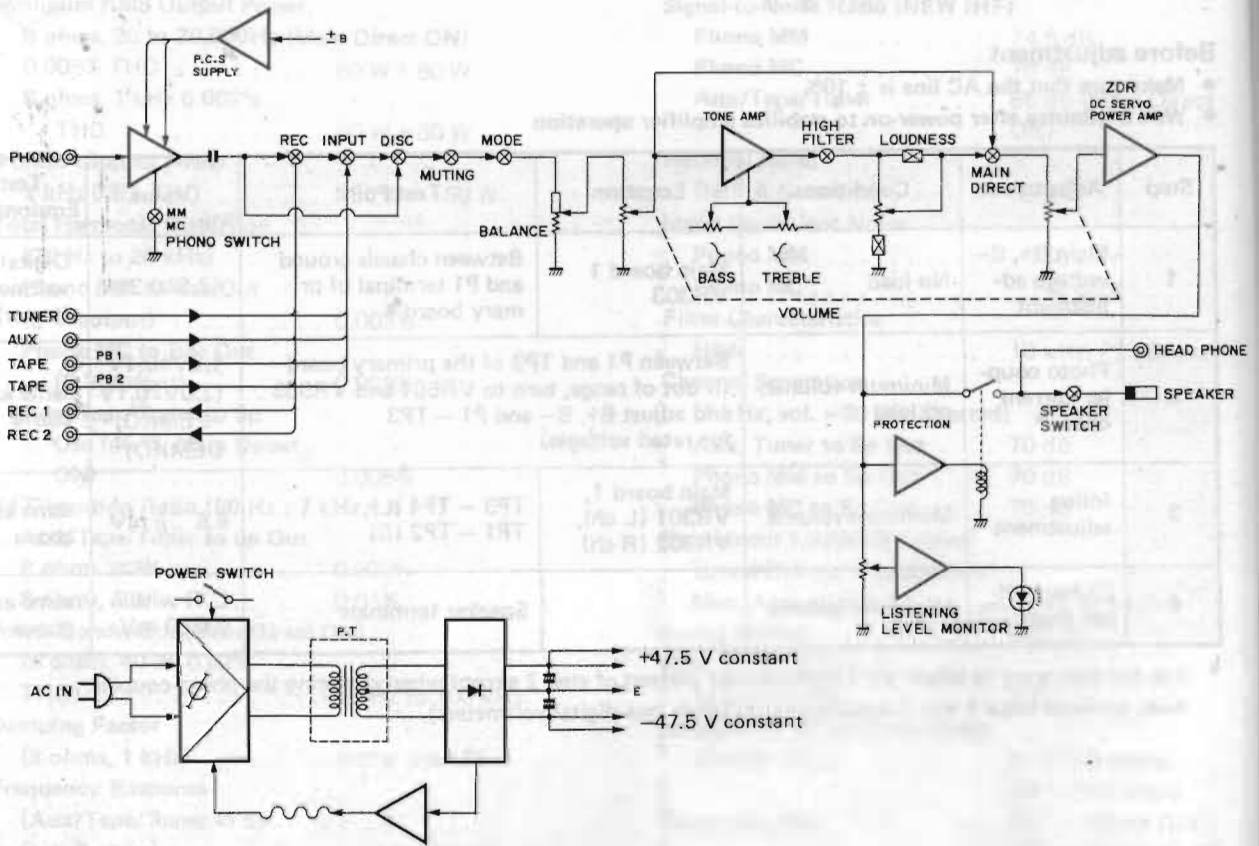
Step	Adjustment	Conditions	Location	Test Point	Value	Test Equipment
1	Main B+, B- voltage adjustment	No load	Main board 1 VR303	Between chassis ground and P1 terminal of primary board	$47.5 \pm 0.3V$	Digital voltmeter (tester)
2	Photo coupler current check*	Minimum volume, no load	Between P1 and TP3 of the primary board (if out of range, turn to VR501 and VR303 and adjust B+, B- and P1 - TP3 for rated voltages)		$1.2V \pm 0.1V$ ( $2.0V \pm 0.1V = FEMKO, DEMKO$ )	same as above
3	Idling adjustment	Minimum volume	Main board 1, VR301 (L ch), VR302 (R ch)	TP3 - TP4 (L), TP1 - TP2 (R)	$6.6 \begin{smallmatrix} +5 \\ -0 \end{smallmatrix} mV$	same as above
4	Output off-set check	Minimum volume		Speaker terminals	L, R within $0 \pm 30 mV$	same as above

\* It is not necessary to check the photo-coupler current of step 2 except when replacing the photo-coupler. Also, perform steps 1 and 2 simultaneously (with two digital voltmeters).

### ADJUSTMENT LOCATION DIAGRAM

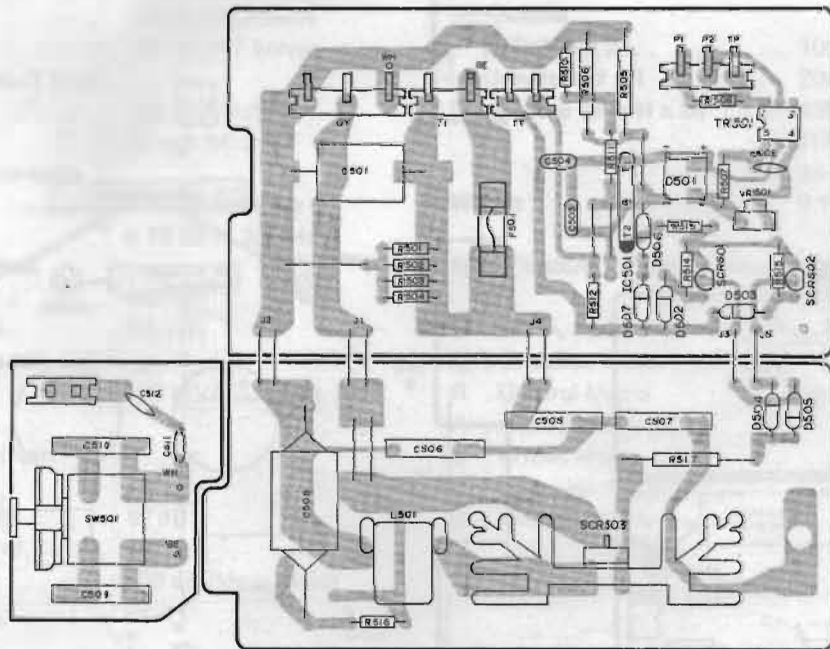


**BLOCK DIAGRAM**

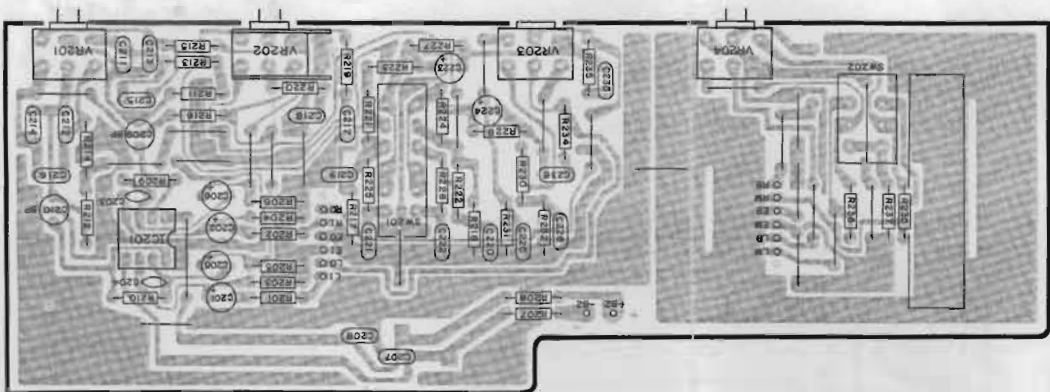


**PRINTED CIRCUIT BOARD PATTERN-SIDE COMPONENTS LAYOUT**

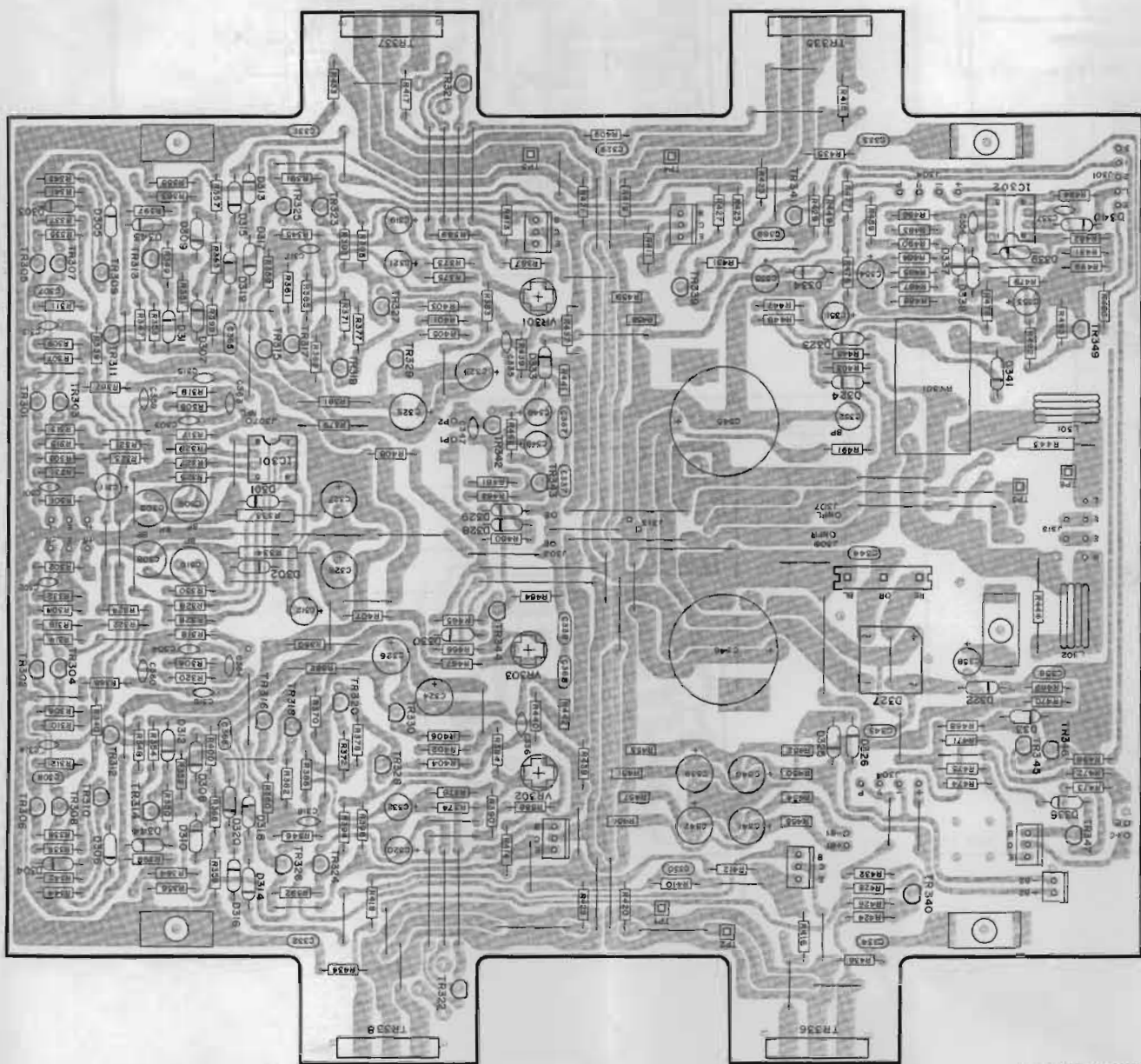
Primary c. board (Australian, British and European Models)







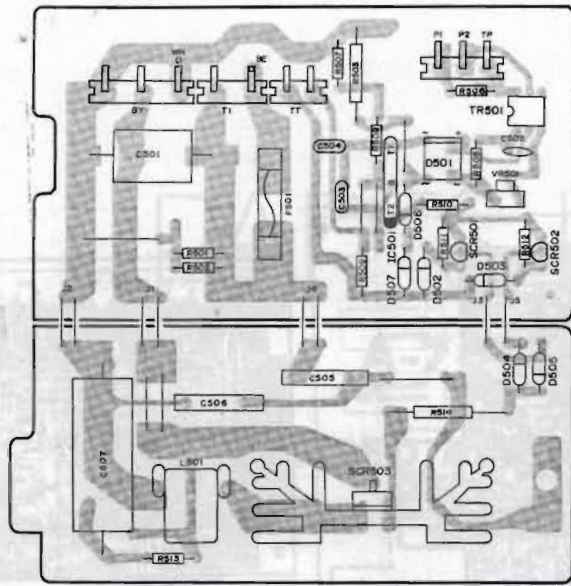
Tone control c. board 1



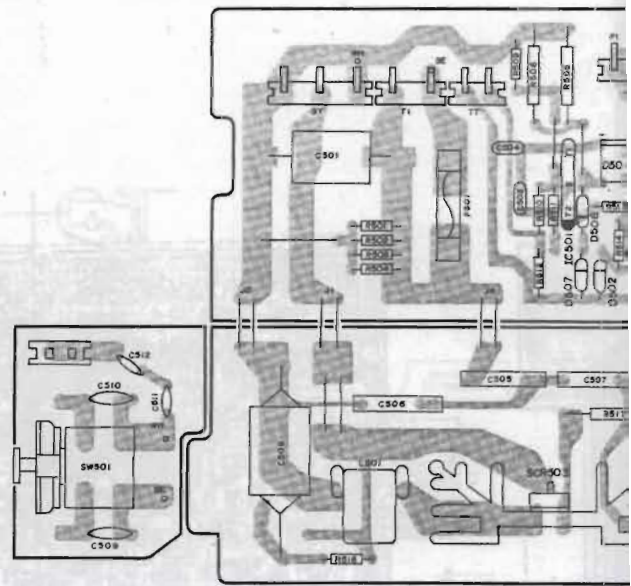
Main c. board 1

# PRINTED CIRCUIT BOARD PATTERN-SIDE COMPONENTS LAYOUT

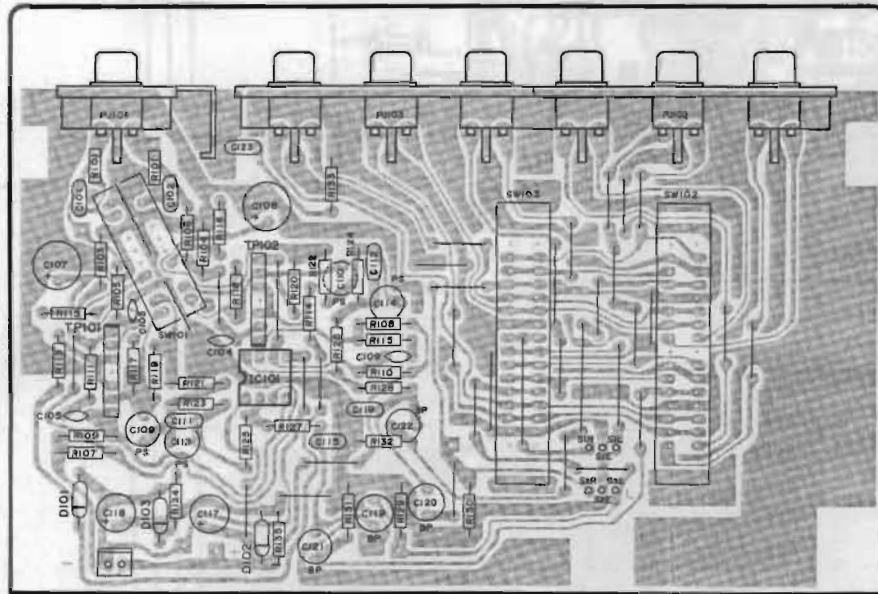
Primary c. board (U. S. A and Canadian Models)



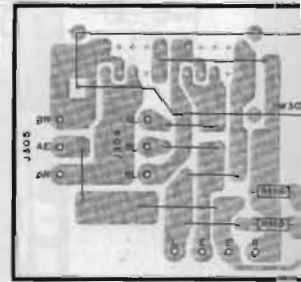
Primary c. board (General Model)



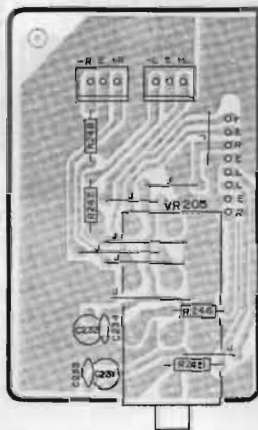
Function circuit board



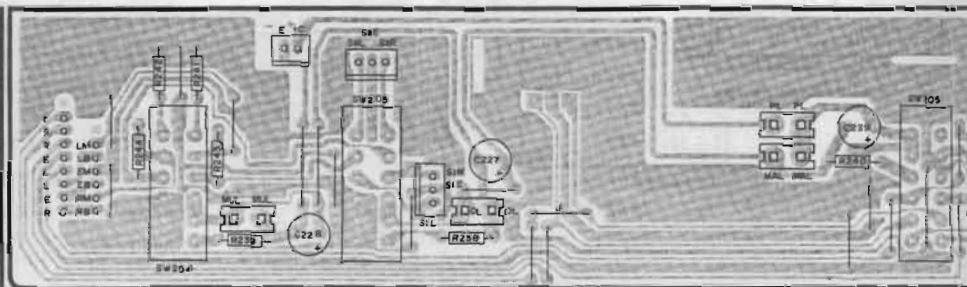
Main c. board 5



Tone control c. board 3

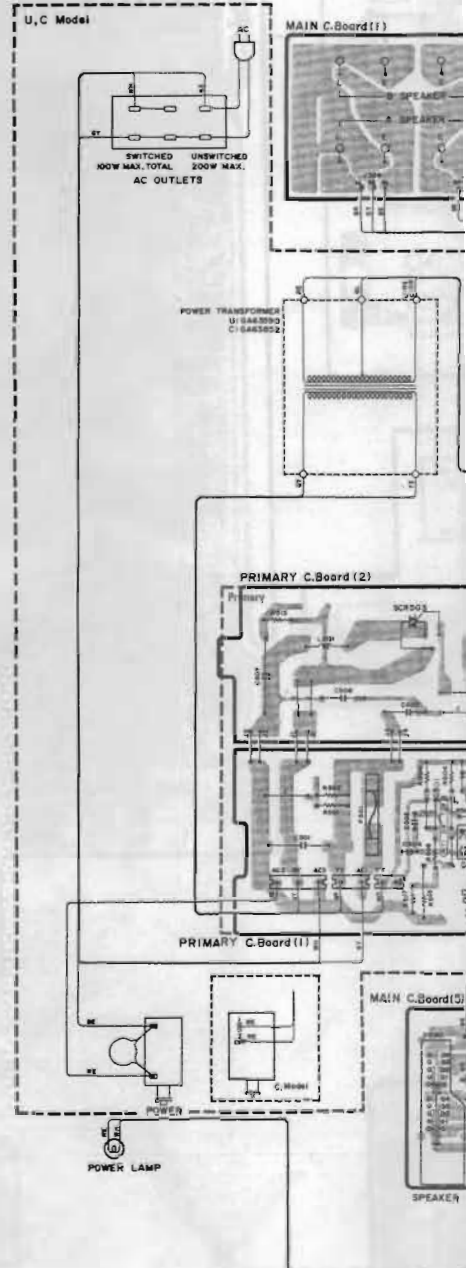
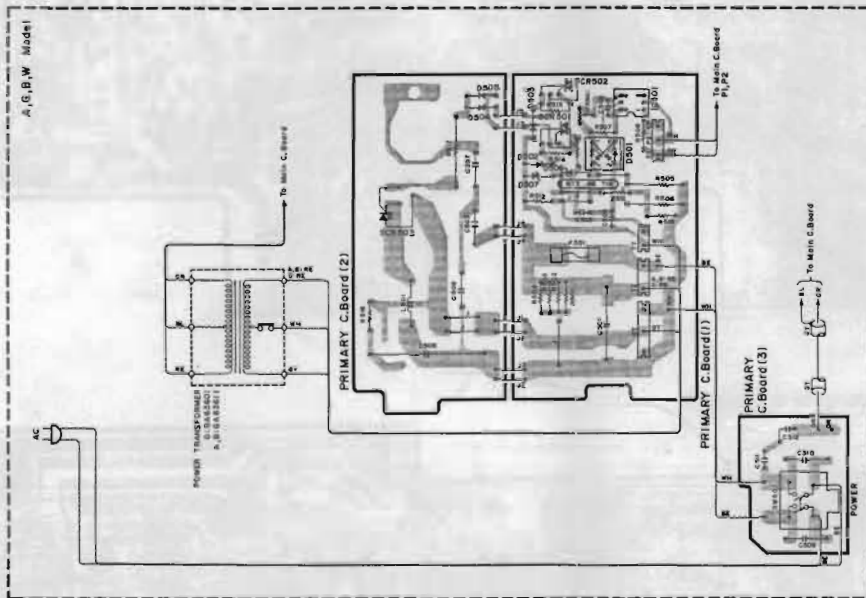
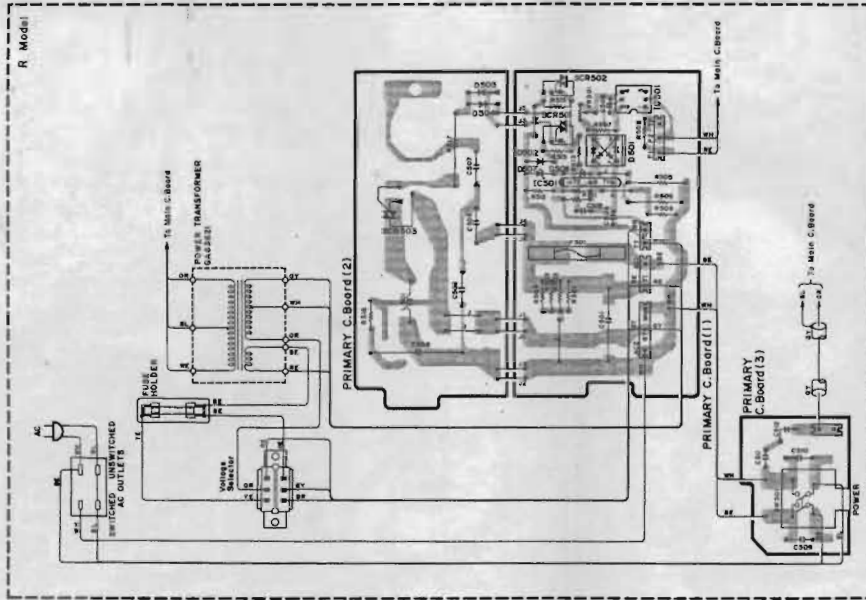


Tone control c. board 2





PRINTED CIRCUIT LAYOUT/WIRING



# PARTS LIST

## A-760 II

### STEREO AMPLIFIER

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■ PARTS LIST(Circuit Board)	
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Control Circuit Board	
U,C models .....	11
R model .....	12
A,G,B,W models .....	13

#### Notes

#### DESTINATION ABBREVIATIONS

- U..... U.S.A
- C..... CANADIAN
- G..... NORTH EUROPEAN
- B..... BRITISH
- R..... GENERAL
- A..... AUSTRALIAN
- W..... WEST GERMANY

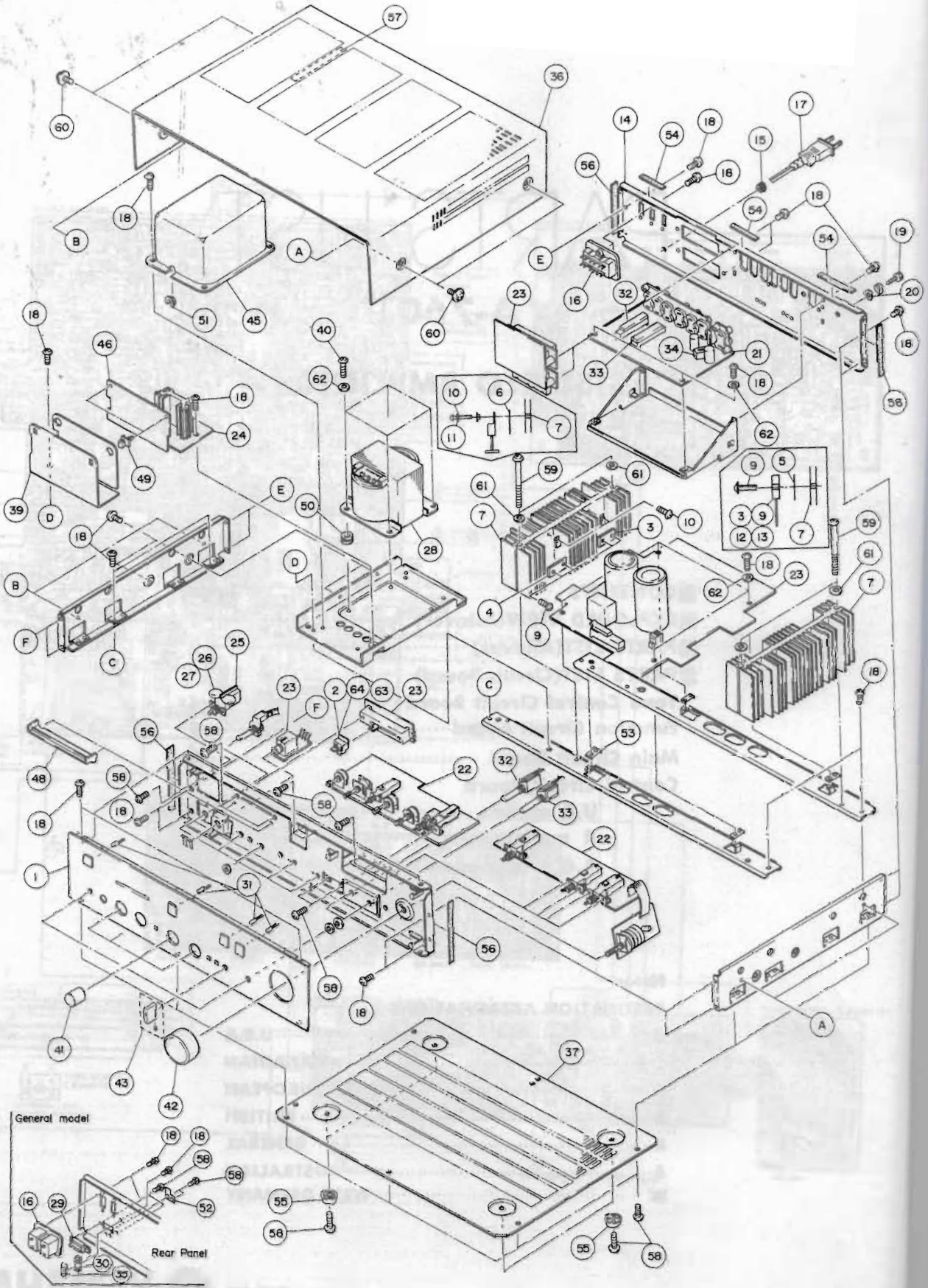
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# YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

EXPLODED VIEW (All over)



## PARTS LIST(All over)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
※	1	NB:60:43:70	Front Panel Unit			J
※	"	NB:60:43:80	"			W,R,U,A,G,C,B
※	2	NB:60:42:90	Knob Ass'y			
	3	iA:11:69:00	Transistor	2SA1169(O,Y)	トランジスタ	
	4	iC:27:73:00	"	2SC2773(O,Y)	"	
	5	iL:00:02:70	Mica Base	AC-229	マイカベース	
	6	iL:00:06:00	"	MT-200	"	
※	7	BA:08:25:30	Heat Sink		放熱板	
	8	CB:07:28:80	Bush		絶縁ブッシュ	
	9	Ei:33:01:20	Bind Head Tapping Screw	3×12(FCM3-B $\phi$ )	鉄バインドタッピングネジ	
※	10	ED:82:61:00	Bind Head Screw	M2.6×10	銅バインド小ネジ	
※	11	EV:20:32:60	Spring Washer	M2.6(FCM3-B $\phi$ )	スプリングワッシャー	
	12	iA:11:69:00	Transistor	2SA1169(O,Y)	トランジスタ	
	13	iC:27:73:00	"	2SC2773(O,Y)	"	
※	14	AA:61:05:10	Rear Panel (J)		リヤパネル	J
※	"	AA:61:05:30	" (R)		"	R
※	"	AA:61:05:20	" (U,C)		"	U,C
※	"	AA:61:05:50	" (A,B)		"	A,B
※	"	AA:61:05:40	" (G)(W)		"	G,W
	15	CB:07:27:50	Cord Stopper	SR-4N-4	コードストッパー	
	16	LB:40:10:00	AC Scket	M7025-A(2連)	ACアウトレット	R
	"	LB:60:48:10	"	M7026-B(3連)	"	J,U
	"	LB:60:43:10	"	M7017-A	"	C
	17	MG:00:07:80	AC Cord	Black 2m 6A 250V	電源コード	R
	"	MG:00:13:60	"	" 2m 13A 125V	"	U,C
	"	MG:00:09:10	"	" 2m 6A 250V	"	W,G
	"	MG:00:09:20	"	Gray 2.5m 7.5A 250V	"	A
	"	MG:00:10:00	"	Black 2m 6A $\frac{300V}{500}$	"	B
	18	EN:33:00:10	Bind Head Tapping Screw	3×8(FCM3-B $\phi$ )	鉄バインドタッピンネジ	
	19	EZ:00:14:00	Screw, for Ground Terminal	$\oplus$ 3×13.5(MFNI-II)	アース端子ネジ	
	20	EV:90:13:60	Sems Plain Washer	$\phi$ 3.6- $\phi$ 10-t0.8 (FNM3-3g)	鉄セムス平座金	
※	21	NA:07:85:70	Function Circuit Board		ファンクションシート	J,R,A,G,C,B
※	"	NA:07:85:80	"		"	U
※	"	NA:07:96:30	"		"	W
※	22	NA:07:96:20	Tone Control Circuit Board		トーンコントロールシート	W
※	"	NA:07:86:00	"		"	U
※	"	NA:07:95:10	"		"	R,A,G,C,B
※	23	NA:07:96:40	Main Circuit Board		メインシート	W
※	"	NA:07:86:20	"		"	R,A,G,B
※	"	NA:07:86:30	"		"	U
※	"	NA:07:86:40	"		"	C
※	24	NA:07:86:60	Control Circuit Board		制御シート	R
※	"	NA:07:86:70	"		"	U,C
※	"	NA:07:86:80	"		"	W,A,G,B
	25	KA:80:23:10	Push Switch	SDV3P E5A 125V	ブッシュSW	J
	"	KA:80:23:20	"	SDV3P TV-5	"	U
	"	KA:80:24:30	"	Z-33-6 TV-8	"	C
	26	Fi:16:41:00	Ceramic Capacitor	0.01 150VACE(P)	セラコン	J
	"	Fi:34:41:00	"	0.01 MY(DE)	"	U,C
	27	CB:09:52:60	Cover for Capacitor	SB-0833	コンデンサーカバー丸型	U
	"	CB:60:08:10	Cover for Capacitor	HY-0102	コンデンサーカバー半丸型	J

※: New Parts (新部品)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
28	GA:63:59:00	Power Transformer	電源トランス		A-760	U
"	GA:63:60:10	"	"		"	W,G
"	GA:63:61:10	"	"		"	A,B
"	GA:63:85:20	"	"		"	C
"	GA:64:43:20	"	"		"	J
"	GA:63:62:10	"	"		"	R
29	KA:40:07:40	Slide Switch	ESD-3992	スライドSW		R
30	LB:20:13:00	Fuse Holder		ヒューズホルダー		R
※	31	JB:00:11:00	Pilot Lamp Lead Type	8V 0.15A	パイロットランプリード式	
※	32	KA:90:30:30	Remote Rotary Switch	CONTROL + wire	リモートロータリーSW	
	33	KA:90:16:50	"	"	"	
	34	KA:90:16:70	Remote Push Switch	Wire Section	リモートプッシュSW	R,U,A,G,C,B
	"	KA:90:31:80	"	"	"	W
	35	KB:00:13:00	Fuse	T7A 250V	ヒューズタイラッシュ	R
	36	AA:60:35:50	Top Cover		トップカバー	A-760
	37	AA:60:36:20	Bottom Cover		ボトムカバー	"
	39	AA:60:41:90	Holder,C+S		C+Sホルダー	
	40	AA:60:38:50	Tight Screw with Steps		段付ネジ	
	41	BA:07:72:80	Knob, (TONE CONTROL)		T・Cつまみ	CR-240
※	42	BA:08:25:40	" (VOLUME)		VOL "	
	43	BA:07:94:60	" (Switch)		SW "	A-760
	45	BA:07:95:70	Cover, Power Transformer		トランスカバー	J,R,A,G,B
	"	BA:07:99:10	" "		"	U,C
	46	CB:60:24:30	Isolation Plate		絶縁板	J
	"	CB:60:46:10	"		"	R,U,A,G,C,B
	47	CB:60:29:20	Spacer, Switch		SWスペーサー	C
	48	CB:09:97:40	Slit Cover		スリットカバー	
	49	CB:09:98:30	Support,P.C		P・Cサポート	
	50	CB:09:99:10	Rubber,Anti Vibration		防振ゴム	
	51	CB:60:05:70	Bush		リードブッシュ	
	52	CB:60:14:40	Stopper,Voltage Selector		VSストッパー	R
※	53	BB:06:97:90	Spacer		スペーサー	J
	54	CB:09:98:10	Rubber,Anti Vibration		防振ゴム	
	55	CB:09:86:00	Leg		脚	
※	56	CB:60:43:80	Damper		ダンパー	
	57	CB:60:05:80	Tape,Anti Vibration		防振テープ	
	58	ED:33:00:60	Bind Head Screw	3×6(FCM3-B $\phi$ )	鉄バインド小ネジ	
※	59	EA:34:07:50	Pan Head Screw	4×75( " )	鉄ナベ小ネジ	
	60	EZ:00:08:10	B.W Head Screw	4×8 $\phi$ 10(FNM3-3g)	鉄プレザ-ワッシャー-ヘッド小ネジ	
※	61	EV:21:84:00	Flat Washer	$\phi$ 4	銅平座金(小形丸)	
	62	EV:42:90:30	Toothed Lock Washer	M3(FCM3-B $\phi$ )	外歯付歯付座金	
	63	M1:06:99:50	Wire Cord	L=80 2P	リボンワイヤー	
	64	IF:00:18:90	LED	SLR-34UR(Red)	LED (赤)	
		Accessories Assembly			付属品Ass'y	
		TX:90:09:30	Hexagonal Wrench	1.5 $\phi$	六角レンチ	

※ : New Parts (新部品)



## PARTS LIST(Circuit Board)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
※	NA 07 95 10	Tone Control Circuit Board	トーンコントロールシート			R.A.G.C.B
※	NA 07 86 00					U
C201 C202	UW 84 64 70	Electrolytic Capacitor	4.7 $\mu$ F 25V	ケミコン		
C203 C204	FG 41 14 70	Ceramic Capacitor	47PF 50V(K)	セラコン		
C205 C206	UW 81 73 30	Electrolytic Capacitor	33 $\mu$ F 6.3V	ケミコン		
C207 C208	UA 25 41 00	Mylar Capacitor	0.01 $\mu$ F 50V(J)	マイラーコン		
C209 C210	FM 11 62 20	Electrolytic Capacitor	2.2 $\mu$ F 50V	B・Pコン		
C211 -214	UA 25 32 20	Mylar Capacitor	0.0022 $\mu$ F 50V(J)	マイラーコン		
C215 C216	UA 25 43 90	"	0.039 $\mu$ F "	"		
C217 C218	FA 15 42 20	"	0.022 $\mu$ F "	"		
C219 C220	UA 25 35 60	"	0.0056 $\mu$ F "	"		
C221 C222	UA 25 31 80	"	0.0018 $\mu$ F "	"		
C223 C224	UW 86 63 30	Electrolytic Capacitor	3.3 $\mu$ F 50V	ケミコン		
C225 C226	FA 15 51 50	Mylar Capacitor	0.15 $\mu$ F 50V(J)	マイラーコン		
C227 -229	UW 86 81 00	Electrolytic Capacitor	100 $\mu$ F 50V	ケミコン		
※ C231 C232	FD 61 21 80	Polystyrene Film Capacitor	180PF 50V(K)	スチコン		
C233 C234	FU 35 21 00	Mica Capacitor	100PF FE500V	マイカコン		
C235 C236	FA 15 33 90	Mylar Capacitor	0.0039 $\mu$ F 50V(J)	マイラーコン		
R201 R202	HJ 35 61 00	Carbon Resistor	1K $\Omega$ RD25	カーボン抵抗		
R203 R204	HJ 35 88 20	"	820K $\Omega$ "	"		
R205 R206	HJ 35 71 00	"	10K $\Omega$ "	"		
R207 R208	HJ 35 51 50	"	150 $\Omega$ "	"		
R209 -212	HJ 35 84 70	"	470K $\Omega$ "	"		
R213 -216	HJ 35 71 00	"	10K $\Omega$ "	"		
R217 R218	HJ 35 71 20	"	12K $\Omega$ "	"		
R219 R220	HJ 35 56 80	"	680 $\Omega$ "	"		
R221 R222	HJ 35 92 20	"	2.2M $\Omega$ "	"		
R223 -226	HJ 35 68 20	"	8.2K $\Omega$ "	"		
R227 R228	HJ 35 61 00	"	1K $\Omega$ "	"		
R229 R230	HJ 35 61 80	"	1.8K $\Omega$ "	"		
R231 R232	HJ 35 72 70	"	27K $\Omega$ "	"		
R233 R234	HJ 35 66 80	"	6.8K $\Omega$ "	"		
R235 R236	HJ 35 64 70	"	4.7K $\Omega$ "	"		
R237	HJ 35 92 20	"	2.2M $\Omega$ "	"		
R238 -240	HJ 35 34 70	"	4.7 $\Omega$ "	"		
R241 R242	HJ 35 65 60	"	5.6K $\Omega$ "	"		
R243 R244	HJ 35 74 70	"	47K $\Omega$ "	"		
R245 R246	HJ 35 62 20	"	2.2K $\Omega$ "	"		
R247 R248	HU 57 51 10	Metal Film Resistor	110 $\Omega$	金属皮膜抵抗		
※	VR201	HS 31 16 00	Variable Resistor	30KB $\times$ 2 (11 click) $t=30$	VR16形 1軸 2連	
※	VR202	HS 31 16 10	"	5KG $\times$ 2 (with CT) $t=30$	"	
※	VR203	HS 31 15 90	"	20KB $\times$ 2 (11 click) $t=30$	"	
※	VR204	HS 31 15 80	"	200KBH $\times$ 2 ( " )	"	
※	VR205	HS 32 06 70	"	60K $\times$ 2/100K $\times$ 2	VR24形	
IC201	iG 03 96 00	IC	NJM4559D	IC	} Inter-changeable	
※	iG 05 44 00	"	TA75559P	"		
SW201	KA 80 16 80	Push Switch	4 Unit S	ブッシュSW単連S		
SW202	KA 90 15 90	Push Switch with Remote	2-2	リモート付ブッシュSW2連		
SW203 -205	KA 80 16 90	Push Switch	4 Unit NS	ブッシュSW単連NS		
	LB 30 07 30	2.5 Pitch Base Pin	3P	2.5ピッチベースピン		
	LA 00 21 10	Wrapping Terminal	Type-i	ラッピング端子板		

※ : New Parts (新部品)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
※	NA 07:85:70	Function Circuit Board	ファンクションシート			J,R,A,G,C,B
※	NA 07:85:80	"	"			U
※	NA 07:96:30	"	"			W
C101 C102	UA 25:41:00	Mylar Capacitor	0.01 $\mu$ F 50V(J)	マイラーコン		
C103 C104	FG 41:22:20	Ceramic Capacitor	220PF 50V(K)	セラコン		
C105 C106	FG 41:21:50	"	150PF "	"		
※ C107 C108	FV 81:92:20	Electrolytic Capacitor	2200 $\mu$ F 6.3V	プラスチックケミコン		
※ C109 C110	FT 76:43:90	Polypropylene Film Capacitor	0.039 $\mu$ F 50V(G)	PSコン		
C111 C112	UA 25:31:00	Mylar Capacitor	0.001 $\mu$ F 50V(J)	マイラーコン		
C113 C114	FT 76:41:00	Polypropylene Film Capacitor	0.01 $\mu$ F 50V(G)	PSコン		
C115 C116	FA 15:33:90	Mylar Capacitor	0.0039 $\mu$ F 50V(J)	マイラーコン		
C117 C118	FV 84:82:20	Electrolytic Capacitor	220 $\mu$ F 25V	プラスチックケミコン		
※ C119 C120	FZ 00:30:80	"	1 $\mu$ F 25V	B・Pプラスチックケミコン		
C121 C122	FM 11:62:20	"	2.2 $\mu$ F 50V	BPコン		
C123	UA 25:51:00	Mylar Capacitor	0.1 $\mu$ F 50V(J)	マイラーコン		
C125 -132	FG 41:23:30	Ceramic Capacitor	330PF 50V(K)	セラコン		W
R101 R102	HU 07:51:00	Metal Film Resistor	100 $\Omega$ RE35(F)	金属皮膜抵抗		
R103 R104	HJ 35:74:70	Carbon Resistor	47K $\Omega$ RD25	カーボン抵抗		
R105 R106	HJ 35:41:00	"	10 $\Omega$ "	"		
R107 -110	HJ 35:64:70	"	4.7K $\Omega$ "	"		
R111 R112	HJ 35:55:60	"	560 $\Omega$ "	"		
R113 R114	HJ 35:63:30	"	3.3K $\Omega$ "	"		
R115 R116	HJ 35:41:00	"	10 $\Omega$ "	"		
R117 R118	HJ 35:51:50	"	150 $\Omega$ "	"		
R119 R120	HJ 35:63:30	"	3.3K $\Omega$ "	"		
R121 R122	HU 57:78:20	Metal Film Resistor	82K $\Omega$ SN14K2E(F)	金属皮膜抵抗		
R123 R124	HU 57:66:80	"	6.8K $\Omega$ "	"		
R125 R126	HJ 35:41:00	Carbon Resistor	10 $\Omega$ RD25	カーボン抵抗		
R127 R128	HJ 35:52:70	"	270 $\Omega$ "	"		
R129 -132	HJ 35:84:70	"	470K $\Omega$ "	"		
R133	HJ 35:34:70	"	4.7 $\Omega$ "	"		
R134 R135	HJ 35:71:50	"	15 K $\Omega$ "	"		
R137 -144	HJ 35:62:20	"	2.2K $\Omega$ "	"		W
TR101 TR102	iE 10:27:00	Dual FET	2SK270(GR,BL)	デュアルFET		
D101	iF 00:14:70	Zener Diode	RD6.2EB2	ツェナーダイオード		
D102 D103	iF 00:21:20	"	BZ-162	"		
※ IC101	iG 05:44:00	IC	TA75559P	IC		
SW101	KA 90:16:80	Remote Push Switch	4 Circuit 2point	リモートプッシュSW		
SW102 SW103	KA 90:12:30	Remote Rotary Switch	4 Circuit 6Point	リモートロータリーSW		
PJ101	LB 20:17:30	Pin Jack	2P	2Pピンジャック		
PJ102 PJ103	LB 60:19:30	"	6P	6Pピンジャック		
BB 00:44:30	Contact Pin	2.5Pitch SHF-001T-08CS	2.5ピッチコンタクトピン			
LB 30:07:20	Housing	2.5Pitch H3P-SHF	2.5ピッチハウジング			
※ CB 60:63:80	Shielded Cap	HY-Q202	シールドキャップ			
※ Mi 07:44:30	Shielded Wire Flat type	L=100	平型PVCシールド線			W
LB 20:13:90	Base Pin	2.5Pitch TEB2P-SHF	2.5ピッチベースピン			
LB 20:13:80	Housing	2.5Pitch H2P-SHF	2.5ピッチハウジング			
LB 30:07:30	Base Pin	2.5Pitch 3P TEB3P-SHF	2.5ピッチベースピン			
LA 00:21:10	Wrapping Terminal	2P P=5 i-type	i型ラッピング端子板			

※ : New Parts (新部品)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
* NA:07:96:40		Main Circuit Board	メインシート			W
* NA:07:86:20		"	"			R,A,G,B
* NA:07:86:30		"	"			U
* NA:07:86:40		"	"			C
C301 C302	FH 61:11:00	Ceramic Capacitor	10PF 500V CH-type	セラコン		
C303 C304	FG 41:14:70	"	47PF 50V(K)	"		
* C305 C306	FZ 00:30:10	Electrolytic Capacitor	2.2 $\mu$ F 25V	B・Pプラスチックケミコン		
C307 C308	UA 25:32:20	Mylar Capacitor	0.0022 $\mu$ F 50V(J)	マイラーコン		
C309 C310	FZ 00:30:10	Electrolytic Capacitor	2.2 $\mu$ F 25V	B・Pプラスチックケミコン		
C311 C312	UW 84:81:00	"	100 $\mu$ F 25V	ケミコン		
C313 C314	FH 61:14:70	Ceramic Capacitor	47PF 500V CH-type	セラコン		
* C315 C318	FH 61:21:20	"	120PF "	"		
C317 C318	FG 41:14:70	"	47PF 50V(K)	"		
C319 -322	UW 82:81:00	Electrolytic Capacitor	100 $\mu$ F 10V	ケミコン		
C323 -326	UW 85:81:00	"	100 $\mu$ F 35V	"		
* C327 C328	UJ 47:82:20	"	220 $\mu$ F 63V	"		
C329 C330	UA 25:51:00	Mylar Capacitor	0.1 $\mu$ F 50V(J)	マイラーコン		
C331 -334	FC 04:41:00	"	0.01 $\mu$ F 400V(K)	"		
C335 C336	FH 61:15:60	Ceramic Capacitor	56PF 500V CH-type	セラコン		
C337 C338	UA 25:51:00	Mylar Capacitor	0.1 $\mu$ F 50V(J)	マイラーコン		
C339 -342	UW 86:81:00	Electrolytic Capacitor	100 $\mu$ F 50V	ケミコン		
C343 C344	FC 04:41:00	Mylar Capacitor	0.01 $\mu$ F 400V(K)	マイラーコン		
* C345 C346	FZ 00:32:70	Electrolytic Capacitor	15000 $\mu$ F 56V	ブロックケミコン		
C347	FG 41:21:00	Ceramic Capacitor	100PF 50V(K)	セラコン		
C348	UW 83:72:20	Electrolytic Capacitor	22 $\mu$ F 16V	ケミコン		
C349	UW 86:64:70	"	4.7 $\mu$ F 50V	"		
* C350	FC 04:51:00	Mylar Capacitor	0.1 $\mu$ F 400V(K)	マイラーコン		
C351	UW 56:52:20	Electrolytic Capacitor	0.22 $\mu$ F 50V	ケミコン		
C352	FM 11:71:00	"	10 $\mu$ F 50V	B・Pコン		
C353	UW 83:72:20	"	22 $\mu$ F 16V	ケミコン		
C354	FM 39:81:00	"	100 $\mu$ F 16V	Zコン		
C355	UW 86:71:00	"	10 $\mu$ F 50V	ケミコン		
C356	FG 41:21:00	Ceramic Capacitor	100PF 50V(K)	セラコン		
C357	FG 44:41:00	"	0.01 $\mu$ F 50V(Z)	"		
C358	UW 96:54:70	Electrolytic Capacitor	0.47 $\mu$ F 50V	ケミコン		
C359 C360	FG 41:12:20	Ceramic Capacitor	22PF 50V(K)	セラコン		
C361 C362	UA 25:42:20	Mylar Capacitor	0.022 $\mu$ F 50V(J)	マイラーコン		W
C363 C364	FG 41:14:70	Ceramic Capacitor	47PF 50V(K)	セラコン		
C365 C366	UA 25:41:00	Mylar Capacitor	0.01 $\mu$ F 50V(J)	マイラーコン		
C367 -369	UA 25:51:00	"	0.1 $\mu$ F "	"		
C371 C372	UA 25:42:20	"	0.022 $\mu$ F 50V(J)	"		W
C373 C374	UA 25:41:00	"	0.01 $\mu$ F 50V(J)	"		
L301 L302	GD 90:03:40	Coil, out put	1.5 $\mu$ H	アウトプットコイル		
R301 R302	HJ 35:52:20	Carbon Resistor	220 $\Omega$ RD25	カーボン抵抗		
R303 -306	HJ 35:84:70	"	470K $\Omega$ "	"		
R307 -310	HJ 35:64:70	"	4.7K $\Omega$ "	"		
R311 R312	HJ 35:44:70	"	47 $\Omega$ "	"		
R313 -316	HJ 35:42:20	"	22 $\Omega$ "	"		
R317 R318	HJ 35:71:80	"	18K $\Omega$ "	"		
R319 R320	HJ 35:71:50	"	15K $\Omega$ "	"		
R321 R322	HJ 35:63:90	"	3.9K $\Omega$ "	"		
R323 R324	HJ 35:52:20	"	220 $\Omega$ "	"		

\* : New Parts (新部品)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
R325 R326	HJ 35 82 20	Carbon Resistor	220KΩ RD25	カーボン抵抗		
R327 R328	HJ 35 81 50	"	150KΩ "	"		
R329 R330	HJ 35 65 60	"	5.6KΩ "	"		
R331 R332	HJ 35 51 00	"	100Ω "	"		
R333 R334	HJ 72 61 00	Metal Oxide Film Resistor	1KΩ 2P	酸化抵抗		
R335 -338	HJ 35 42 70	Carbon Resistor	27Ω RD25	カーボン抵抗		
R339 R340	HJ 35 68 20	"	8.2KΩ "	"		
R341 R342	HJ 35 61 20	"	1.2KΩ "	"		
R343 R344	HJ 35 48 20	"	82Ω "	"		
R345 R346	HJ 35 52 70	"	270Ω "	"		
R347 R348	HJ 35 53 30	"	330Ω "	"		
R349 R350	HJ 35 74 70	"	47KΩ "	"		
R351 R352	HV 35 52 70	Flame Proof Carbon Resistor	270Ω RDF25SF	不燃化カーボン抵抗		
R353 R354	HJ 35 52 70	Carbon Resistor	270Ω RD25	カーボン抵抗		
R355 -358	HJ 35 72 70	"	27KΩ "	"		
R359 -362	HV 35 44 70	Flame Proof Carbon Resistor	47Ω RDF25SF	不燃化カーボン抵抗		
R363 R364	HJ 35 61 50	Carbon Resistor	1.5KΩ RD25	カーボン抵抗		
R365 R366	HJ 35 52 70	"	270Ω "	"		
R367 R368	HJ 35 63 30	"	3.3KΩ "	"		
R369 R370	HJ 35 71 20	"	12KΩ "	"		
R371 R372	HJ 35 52 20	"	220Ω "	"		
R373 -376	HJ 35 63 90	"	3.9KΩ "	"		
R377 R378	HJ 35 54 70	"	470Ω "	"		
R379 -382	HL 71 61 80	Metal Oxide Film Resistor	1.8KΩ 1P	酸化抵抗		
R383 -386	HJ 35 71 20	Carbon Resistor	12KΩ RD25	カーボン抵抗		
R387 R388	HJ 35 63 90	"	3.9KΩ "	"		
R389 R390	HJ 35 61 50	"	1.5KΩ "	"		
R391 -396	HV 35 61 20	Flame Proof Carbon Resistor	1.2KΩ RDF25SF	不燃化カーボン抵抗		
R397 R398	HV 35 52 70	"	270Ω "	"		
R399 R400	HV 35 58 20	"	820Ω "	"		
R401 R402	HJ 35 64 70	Carbon Resistor	4.7KΩ RD25	カーボン抵抗		
R403 -406	HJ 35 48 20	"	82Ω "	"		
R407 R408	HV 35 41 20	Flame Proof Carbon Resistor	12Ω RDF25SF	不燃化カーボン抵抗		
R409 R410	HV 35 51 00	"	100Ω "	"		
R411 -414	HV 35 43 30	"	33Ω "	"		
R415 -418	HV 35 34 70	"	4.7Ω "	"		
R419 -422	HZ 00 23 90	Metal Plate Resistor	0.22Ω 3P RGC3	金属板抵抗		
R423 R424	HJ 35 61 80	Carbon Resistor	1.8KΩ RD25	カーボン抵抗		
R425 R426	HJ 35 54 70	"	470Ω "	"		
R427 R428	HJ 35 41 00	"	10Ω "	"		
R429	HJ 35 61 20	"	1.2KΩ "	"		
R430	HJ 35 74 70	"	47KΩ "	"		
R431 R432	HJ 35 61 20	"	1.2KΩ "	"		
R433 -436	HV 35 32 20	Flame Proof Carbon Resistor	2.2Ω RDF25SF	不燃化カーボン抵抗		
R437 R438	HZ 00 24 00	Metal Plate Resistor	0.22Ω 5P RGC5	金属板抵抗		
R439 R440	HU 57 53 60	Metal Film Resistor	360Ω SN14K2E(F)	金属被覆抵抗		
R441 R442	HL 33 34 70	Metal Oxide Film Resistor	4.7Ω 2P	酸化抵抗		

\* : New Parts (新部品)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
R443	HL 72 41 00	Metal Oxide Film Resistor	10Ω 2P	酸金抵抗		
R444	HL 72 41 00	"	10Ω 2P	"		
R445	HJ 35 72 20	Carbon Resistor	22KΩ RD25	カーボン抵抗		
R447 R448	HJ 35 61 00	Carbon Resistor	1KΩ RD25	カーボン抵抗		
R449	HJ 35 55 60	"	560Ω "	"		
R450	HL 81 54 70	Metal Oxide Film Resistor	470Ω 1P	酸金抵抗		
R451	HL 82 56 80	"	680Ω 2P	"		
R452	HL 81 54 70	"	470Ω 1P	"		
R453	HL 82 56 80	"	680Ω 2P	"		
R454 R455	HL 81 54 70	"	470Ω 1P	"		
R456 R457	HL 82 56 80	"	680Ω 2P	"		
R458 R459	HL 82 71 50	"	15KΩ 2P	"		
R460	HJ 35 73 90	Carbon Resistor	39KΩ RD25	カーボン抵抗		
R461	HJ 35 71 00	"	10KΩ "	"		
R462	HJ 35 53 30	"	330Ω "	"		
R463 -466	HJ 35 64 70	"	4.7KΩ "	"		
R467	HJ 35 76 80	"	68KΩ "	"		
R468	HJ 35 71 50	"	15KΩ "	"		
R469	HJ 35 83 90	"	390KΩ "	"		
R470	HJ 35 74 70	"	47KΩ "	"		
R471	HJ 35 72 20	"	22KΩ "	"		
R472	HJ 35 68 20	"	8.2KΩ "	"		
R473	HJ 35 64 70	"	4.7KΩ "	"		
R474 R475	HL 82 52 20	Metal Oxide Film Resistor	220Ω 2P	酸金抵抗		
R476	HJ 35 71 00	Carbon Resistor	10KΩ RD25	カーボン抵抗		
R477	HJ 35 66 80	"	6.8KΩ "	"		
R478	HJ 35 81 00	"	100KΩ "	"		
R479	HJ 35 76 80	"	68KΩ "	"		
R480	HJ 35 66 80	"	6.8KΩ "	"		
R481	HJ 35 62 20	Carbon Resistor	2.2KΩ RD25	カーボン抵抗		
R482	HJ 35 71 20	"	12KΩ "	"		
R483	HJ 35 63 30	"	3.3KΩ "	"		
R484	HJ 35 81 00	"	100KΩ "	"		
R485	HJ 35 81 20	Carbon Resistor	120KΩ RD25	カーボン抵抗		
R486	HJ 35 74 70	"	47KΩ "	"		
R487	HJ 35 82 20	"	220KΩ "	"		
R488	HJ 35 61 80	"	1.8KΩ "	"		
R489	HJ 35 83 90	"	390KΩ "	"		
R490	HJ 35 74 70	"	47KΩ "	"		
R491	HV 35 53 90	Flame Proof Carbon Resistor	390Ω RDF25SF	不燃化カーボン抵抗		
R492	HJ 35 68 20	Carbon Resistor	8.2KΩ RD25	カーボン抵抗		
R493	HJ 35 61 80	"	1.8KΩ "	"		
R494	HJ 35 92 20	"	2.2MΩ "	"		
R495 R496	HL 82 52 70	Metal Oxide Film Resistor	270Ω 2P	酸金抵抗		

\* : New Parts (新部品)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
R497	HJ 35 61 50	Carbon Resistor	1.5KΩ RD25	カーボン抵抗		
R498	HJ 35 82 20	"	220KΩ "	"		
R499	HJ 35 82 20	"	2.2KΩ "	"		
VR301 VR302	HT 41 00 40	Semi Variable Resistor	B4.7KΩ	ソリッドFVR		
VR303	HT 41 00 80	"	B22KΩ	"		
VR304	HQ 10 00 50	Slided Variable Resistor	200KΩ	スライドFVR		
* TR301 -304	iE 10 24 20	FET	2SK170(GR,BL)	FET		
TR305 -308	iC 22 40 00	Transistor	2SC2240(GR,BL)	トランジスタ		
TR309 TR310	iA 10 15 70	"	2SA1015(O,Y)	"		
TR311 TR312	iA 11 45 00	"	2SA1145(O,Y)	"		
TR313 TR314	iC 27 05 00	"	2SC2705(O,Y)	"		
TR315 TR316	iC 18 15 70	"	2SC1815(O,Y)	"		
TR317 TR318	iA 10 15 70	"	2SA1015(O,Y)	"		
TR319 TR320	iC 18 15 70	"	2SC1815(O,Y)	"		
TR321 TR322	iC 23 20 10	"	2SC2320(E,F)	"		
TR323 TR324	iC 27 05 00	"	2SC2705(O,Y)	"		
TR325 TR326	iA 11 45 00	"	2SA1145(O,Y)	"		
TR327 -330	iA 10 15 70	"	2SA1015(O,Y)	"		
TR339 TR340	iC 22 40 00	Transistor	2SC2240(GR,BL)	トランジスタ		
TR341	iA 09 70 00	"	2SA970(GR,BL)	"		
TR342	iC 22 40 00	"	2SC2240(GR,BL)	"		
TR343 TR344	iA 09 70 00	"	2SA970(GR,BL)	"		
TR345	iA 09 99 10	"	2SA999(E,F)	"		
TR346 TR347	iC 22 40 00	"	2SC2240(GR,BL)	"		
TR349	iC 27 05 00	"	2SC2705(O,Y)	"		
D301 D302	iF 00 20 80	Zener Diode	HZ16L-3	ツェナーダイオード		
D303 -306	iF 00 00 40	Diode	IS1555	ダイオード	} Inter-changeable	
"	iF 00 06 70	"	IS2473	"		
D307 -310	iF 00 14 00	"	ISS82	"		
* D311 D312	iF 00 34 80	Zener Diode	HZ3C1	ツェナーダイオード		
D313 -316	iF 00 15 10	"	HZ-6C1L	"		
D317 -320	iF 00 06 70	Diode	IS2473	ダイオード	} Inter-changeable	
"	iF 00 00 40	"	IS1555	"		
D323 D324	iF 00 00 40	Diode	IS1555	ダイオード	} Inter-changeable	
"	iF 00 06 70	"	IS2473	"		
D325 D326	iF 00 21 20	Zener Diode	BZ-162	ツェナーダイオード		
D327	iH 00 08 70	Bridge Diode	4D4B41	ダイオードブリッジ		
D328	iF 00 07 90	Diode	MV12	バリスタ		
D329	iF 00 14 70	Zener Diode	RD6,2EB2	ツェナーダイオード		
D330	iF 00 06 70	"	IS2473	ダイオード	} Inter-changeable	
"	iF 00 00 40	"	IS1555	"		
D331	iF 00 07 90	Diode	MV12	バリスタ		
D332	iH 00 07 10	Diode	W06C	ダイオード		
D333 D334	iF 00 06 70	"	IS2473	"	} Inter-changeable	
"	iF 00 00 40	"	IS1555	"		
D336	iF 00 05 50	Zener Diode	HZ12C	ツェナーダイオード		
D337	iF 00 07 90	Diode	MV12	バリスタ		
D338 -340	iF 00 06 70	Diode	IS2473	ダイオード		

\* : New Parts (新部品)

0621 888000  
 Bwact  
 ET FA



## Control Circuit Board (U,C models)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
	NA 07 86 70	Control Circuit Board	制御シート			U,C
C501	FC 24 52 20	MM Capacitor	0.22 $\mu$ F 125V ECQ-UC(M)	MMコン		
C502	FG 41 21 00	Ceramic Capacitor	100pF 50V(K)	セラコン		
C503	UA 25 43 30	Mylar Capacitor	0.033 $\mu$ F 50V(J)	マイラーコン		
C504	UA 55 54 70	"	0.47 $\mu$ F "	"		
C505 C506	Fi 34 33 30	Ceramic Capacitor	0.0033 $\mu$ F MY(DE)	セラコン		
C507	FC 24 51 00	MM Capacitor	0.1 $\mu$ F 125V	MMコン		
L501	GD 90 03 60	Coil	100 $\mu$ H	雑防コイル		
R501 R502	HJ 35 82 20	Carbon Resistor	220K $\Omega$ R28FSL	カーボン抵抗		
R503	HL 82 71 80	Metal Oxide Film Resistor	18K $\Omega$ 2P	酸化抵抗		
R504	HJ 35 62 70	Carbon Resistor	2.7K $\Omega$ RD25	カーボン抵抗		
R505	HJ 35 88 20	"	820K $\Omega$ "	"		
R506	HJ 35 61 00	"	1K $\Omega$ "	"		
R507	HJ 35 75 60	"	56K $\Omega$ "	"		
R508	HJ 35 81 20	"	120K $\Omega$ "	"		
R509	HJ 35 71 50	"	15K $\Omega$ "	"		
R510	HJ 35 41 50	"	15 $\Omega$ "	"		
R511 R512	HJ 35 54 70	"	470 $\Omega$ "	"		
R513	HV 35 41 50	Flame Proof Carbon Resistor	15 $\Omega$ RDF25SF	不燃化カーボン抵抗		
R514	HL 82 53 90	Metal Oxide Film Resistor	390 $\Omega$ 2P	酸化抵抗		
VR501	HT 41 01 50	Solid Variable Resistor	B4.7K $\Omega$ SR29R	ソリッドVVR		
IC501	iG 04 08 00	Triger IC		トリガーIC		
D501	iH 00 08 80	Bridge Diode	SIWB	ダイオードブリッジ		
D502 -505	iH 00 00 60	Diode	10D-4	ダイオード		
SCR 501.502	iH 00 09 00	Triac	SMOR5G0.5A	トライアック		
SCR 503	iH 00 11 10	"	AC16DGM-L 16A	"		
TR501	iK 00 03 30	Photo Coupler	TLP508(BL)	フォトカプラ		
F501	KB 00 15 40	Fuse	12A 250VUL	ヒューズ		
※	LB 20 19 70	Fuse Holder Pin	23165081	ヒューズホルダーピン		
	LA 00 23 50	Wrapping Terminal type-L	2P P=5	L型ラッピング端子板		
	LA 00 23 60	"	3P P=5	"		
	LA 00 23 90	"	2P P=7.5	"		
	LA 00 24 00	"	3P P=7.5	"		
	BA 08 24 20	Heat Sink		放熱板		
	BB 06 83 70	Metal Fitting		アース金具		
	CB 07 28 80	Insulating Bush		絶縁ブッシュ		
※	CA 07 18 10	Insulating Plate		絶縁板		
	CB 60 14 80	Damper		ダンパー		
	iL 00 02 70	Mica Base	AC-229	マイカベース		
	EN 33 00 90	Bind Head Tapping Screw	3 $\times$ 10(FCM3-B $\times$ )	鉄バインドタッピングネジ	Type II	
	EN 33 00 70	"	3 $\times$ 8( " )	"	"	
	EA 02 60 80	Pan Head Screw	2.6 $\times$ 8( " )	ナベ小ネジ		

※ : New Parts (新部品)



## Control Circuit Board (R model)

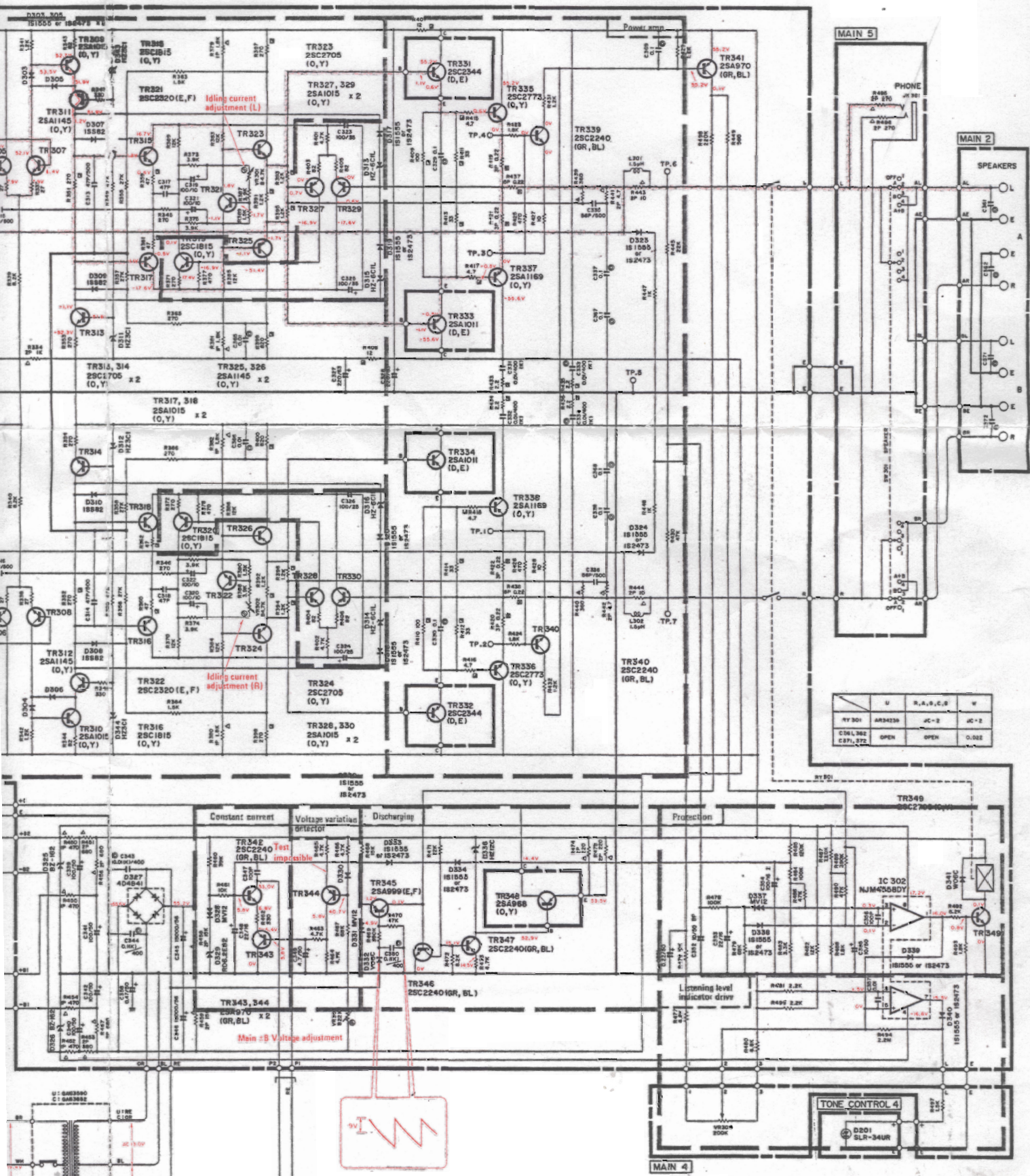
Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
*	NA 07:86:60	Control Circuit Board	制御シート			R
C501	FR 15:52:20	MP Capacitor	0.22 $\mu$ F 250V PME 271	MPコン		
C502	FG 41:21:00	Ceramic Capacitor	100pF 50V(K)	セラコン		
C503	UA 25:43:30	Mylar Capacitor	0.033 $\mu$ F 50V(J)	マイラーコン		
C504	UA 55:54:70	"	0.47 $\mu$ F "	"		
C505 -507	FR 16:36:80	MP Capacitor	0.0068 $\mu$ F 250V PME285	MPコン		
C508	FO 09:46:80	Oil Capacitor	0.068 $\mu$ F 450V ECN-C4A	オイルコン		
C509 C510	Fi 34:41:00	Ceramic Capacitor	0.01 $\mu$ F MY(DE)	セラコン		
C511 C512	Fi 33:31:00	"	0.001 $\mu$ F AC400V KC(DE)	"		
L501	GD 90:03:90	Coil	150 $\mu$ H SF-HP-6A	雑防コイル		
R501 -504	HJ 35:84:70	Carbon Resistor	470K $\Omega$ RD25	カーボン抵抗		
R505 R506	HL 82:73:90	Metal Oxide Film Resistor	39K $\Omega$ 2P	酸化抵抗		
R507	HJ 35:88:20	Carbon Resistor	820K $\Omega$ RD25	カーボン抵抗		
R508	HJ 35:61:00	"	1K $\Omega$ "	"		
R509	HJ 35:75:60	"	56K $\Omega$ "	"		
R510	HJ 35:73:30	"	33K $\Omega$ "	"		
R511	HJ 35:81:20	"	120K $\Omega$ "	"		
R512	HJ 35:71:50	"	15K $\Omega$ "	"		
R513	HJ 35:41:50	"	15 $\Omega$ "	"		
R514 R515	HJ 35:54:70	"	470 $\Omega$ "	"		
R516	HV 35:41:50	Flame proof Carbon Resistor	15 $\Omega$ RDF25SF	不燃化カーボン抵抗		
R517	HL 82:53:90	Metal Oxide Resistor	390 $\Omega$ 2P	酸化抵抗		
VR501	HT 41:01:50	Solid Variable Resistor	B4.7K $\Omega$ SR29R	ソリッドVVR		
IC501	iG 04:08:00	Triger IC		トリガーIC		
D501	iH 00:08:80	Bridge Diode	SIWB	ダイオードブリッジ		
D502 -505	iH 00:00:60	Diode	10D-4	ダイオード		
D506 D507	iF 00:19:40	Zener Diode		ツェナーダイオード		
SCR 501 502	iH 00:09:00	Triac	SMOR5G 0.5A	トライアック		
SCR 503	iH 00:11:10	"	16A AC16DGM-L	"		
TR501	iK 00:03:30	Photo Coupler	TLP508(BL)	フォトカプラー		
SW501	KA 80:21:70	Push Switch	SDS3P 5/80A	プッシュSW		
F501	KB 00:13:80	Fush	15A250V UL	ヒューズ		
*	LB 20:19:70	Fush Holder Pin	23165081	ヒューズホルダーピン		
	LA 00:21:10	Wrapping Terminal type-i	2P P=5	i型ラッピング端子板		
	LA 00:23:50	" type-L	2P P=5	L型ラッピング端子板		
	LA 00:23:60	" "	3P P=5	"		
	LA 00:23:90	" "	2P P=7.5	"		
	LA 00:24:00	" "	3P P=3	"		
	BA 08:24:20	Heat Sink		放熱板		
	BB 06:83:70	Metal Fitting		アース金具		
*	CB 07:28:80	Insulating Bush		絶縁ブッシュ		
	CA 07:18:10	Insulating Plate		絶縁板		
	CB 60:14:80	Damper		ダンパー		
	iL 00:02:70	Mica Base	AC-229	マイカベース		
	EN 33:00:90	Bind Head Tapping Screw	3 $\times$ 10(FCM3-B $\phi$ )	鉄バインドタッピンネジ	Type II	
	EN 33:00:70	"	3 $\times$ 8( " )	"	"	
	EA 02:60:80	Pan Head Screw	2.6 $\times$ 8( " )	ナベ小ネジ		

\*: New Parts (新部品)

## Control Circuit Board (W,A,G,B models)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
	NA:07:86:80	Control Circuit Board	制御シート			A,G,B,W
C501	FR:15:54:70	MP Capacitor	0.47 $\mu$ F 250V PME271	MPコン		
C502	FG:41:21:00	Cermic Capacitor	100pF 50V(K)	セラコン		
C503	UA:25:43:30	Mylar Capacitor	0.033 $\mu$ F 50V(J)	マイラーコン		
C504	UA:55:54:70	"	0.47 $\mu$ F "	"		
C505 -507	FR:16:36:80	MP Capacitor	0.0068 $\mu$ F 250V PME265	MPコン		
C508	FQ:09:46:80	Oil Capacitor	0.068 $\mu$ F 450V ECN-C4A	オイルコン		
C509 C510	FR:16:41:00	MP Capacitor	0.01 $\mu$ F 250V	MPコン		
C511 C512	Fi:35:26:80	Ceramic Capacitor	680pF AC400V	セラコン		
L501	GD:90:03:90	Coil	150 $\mu$ H SF-HP-6A	雑防コイル		
R501 -504	HJ:35:84:70	Carbon Resistor	470K $\Omega$ RD25	カーボン抵抗		
R505 R506	HL:82:73:90	Metal Oxide Film Resistor	39K $\Omega$ 2P	酸化金抵抗		
R507	HJ:35:88:20	Carbon Resistor	820K $\Omega$ RD25	カーボン抵抗		
R508	HJ:35:61:00	"	1K $\Omega$ "	"		
R510 R511	HJ:35:81:80	"	180K $\Omega$ "	"		
R512	HJ:35:71:50	"	15K $\Omega$ "	"		
R513	HJ:35:41:50	"	15 $\Omega$ "	"		
R514 R515	HJ:35:54:70	"	470 $\Omega$ "	"		
R516	HV:35:41:50	Flame Proof Carbon Resistor	15 $\Omega$ RDF25SF	不燃化カーボン抵抗		
R517	HL:82:53:90	Metal Oxide Film Resistor	390 $\Omega$ 2P	酸化金抵抗		
VR501	HT:41:01:50	Solid Variable Resistor	B4.7K $\Omega$ SR29R	ソリッドVVR		
IC501	iG:04:08:00	Triger IC		トリガーIC		
D501	iH:00:08:80	Bridge Diode	SIWB	ダイオードブリッジ		
D502 -505	iH:00:00:60	Diode	10D-4	ダイオード		
D506 D507	iF:00:19:40	Zener Diode	HZ-24	ツェナーダイオード		
SCR 501 502	iH:00:09:00	Triac	SMOR5G0.5A	トライアック		
SCR 503	iH:00:11:10	"	AC16DGM-L 16A	"		
TR501	iK:00:03:30	Photo Coupler	TLP508(BL)	フォトカブラ		
"	iK:00:03:50	"	4N35	"		(FD)Models
SW501	KA:80:21:70	Push Switch	CDS3P 5/8A	プッシュSW		
F501	KB:00:17:60	Fuse	T6.3A 250V $\text{\textcircled{S}}$	ヒューズ		
	LB:20:10:60	Fuse Holder Pin	YSH403T	ヒューズホルダーピン		
	LA:00:21:10	Wrapping Terminal type-i	2P P=5	i型ラッピング端子板		
	LA:00:23:50	" type-L	2P P=5	L型ラッピング端子板		
	LA:00:23:50	"	3P P=5	"		
	LA:00:23:90	"	2P P=7.5	"		
	LA:00:24:00	"	3P P=7.5	"		
	BA:08:24:20	Heat Sink		放熱板		
	BB:06:83:70	Metal Fitting		アース金具		
	CB:07:28:80	Insulating Bush		絶縁ブッシュ		
	CA:07:18:10	Insulating Plate		絶縁板		
	CB:60:14:80	Damper		ダンパー		
	iL:00:02:70	Mica Base	AC-229	マイカベース		
	EN:33:00:90	Bind Head Tapping Screw	3 $\times$ 10(FCM3-B $\ell$ )	鉄バインドタッピングネジ	type-II	
	EN:33:00:70	"	3 $\times$ 8( " )	"	"	
	EA:02:60:80	Pan Head Screw	2.6 $\times$ 8( " )	ナベ小ネジ		

\* : New Parts (新部品)



	U	R, A, B, C, D	W
RY 301	AR34236	JC-2	JC-2
C56, L302	OPEN	OPEN	0.002
C87, 272	OPEN	OPEN	0.002

Caution:  
Avoid touching the emitter of TR344  
in the main board amplifier with a  
test probe.

SYMBOL	PARTS NAME
NO MARK	CARBON RESISTOR
FLAME PROOF	FLAME PROOF CARBON RESISTOR
METAL FILM	METAL FILM RESISTOR
METAL OXIDE FILM	METAL OXIDE FILM RESISTOR
FLAME PROOF	FLAME PROOF RESISTOR
CEMENT	CEMENT RESISTOR
DUAL METAL PLATE	DUAL METAL PLATE RESISTOR
FUSE	FUSE RESISTOR
SEMI VARIABLE	SEMI VARIABLE RESISTOR

SYMBOL	PARTS NAME	REMARKS
NO MARK	CERAMIC CAPACITOR	
X	OIL PAPER CAPACITOR	
⊗	METALIZED POLYESTER FILM CAPACITOR	
○	MYLAR CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
○	MICA CAPACITOR	
PS	P.S. CAPACITOR	
NO MARK	ELECTROLYTIC CAPACITOR	
⊗	TANTALUM CAPACITOR	
SP	NON POLAR CAPACITOR	

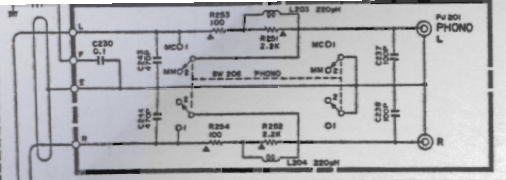


A

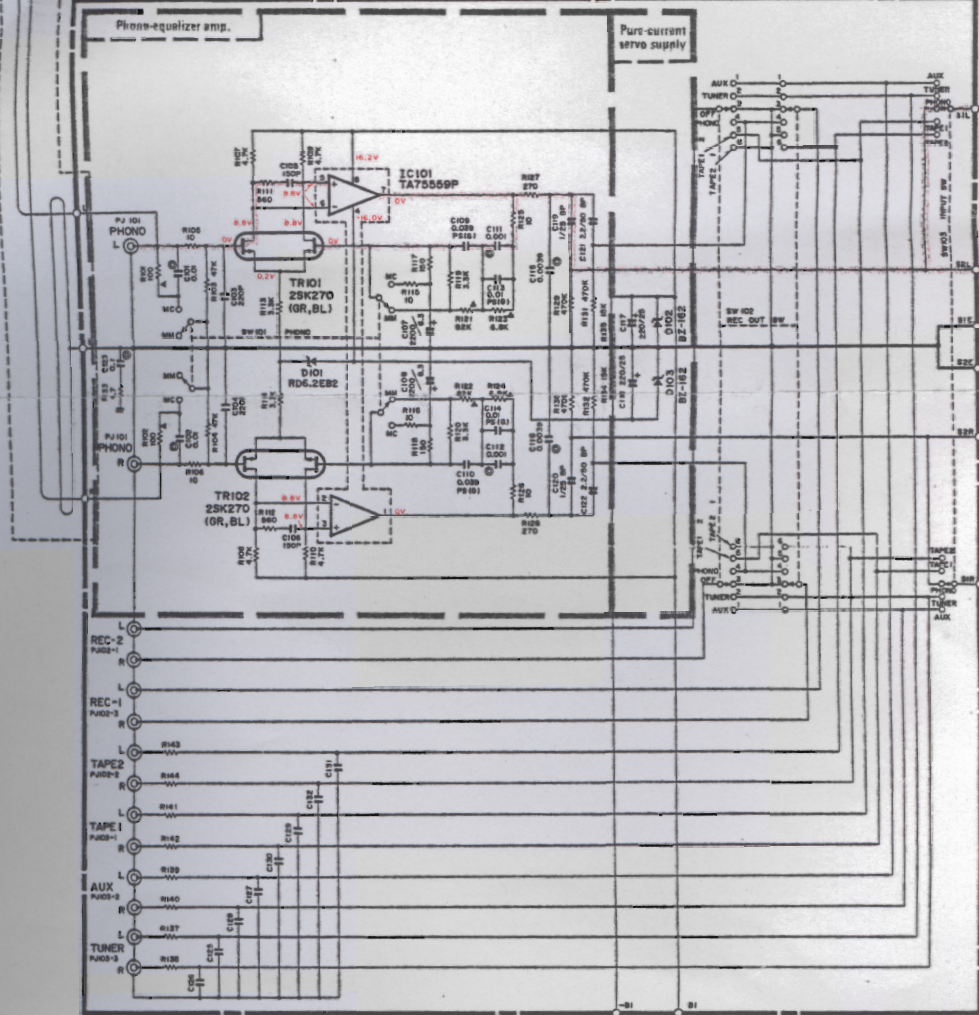
B

C

D



FUNCTION

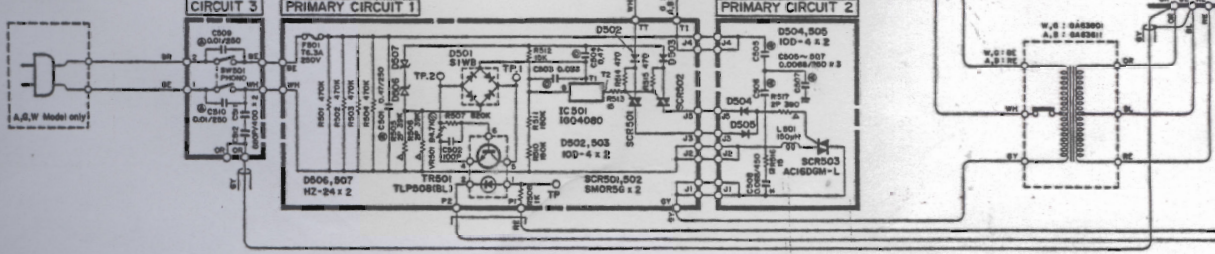


U, C, A, G, B, R	W
C123~122	OPEN 220P
R127~144	SHORT 2.2K
PJ101	PJ101

Caution:

1. Do not touch conductive parts of the oscilloscope body, etc. while observing the control board waveforms. Do not connect to ground, either.
2. Make sure to perform the control board tester check within the range of the voltage tester reference line.
3. To check the Triac, confirm the waveform at both sides of R515 (3P 1.2 k-ohms). The waveforms should match the diagram.

A, G, B, W Model



R Model

