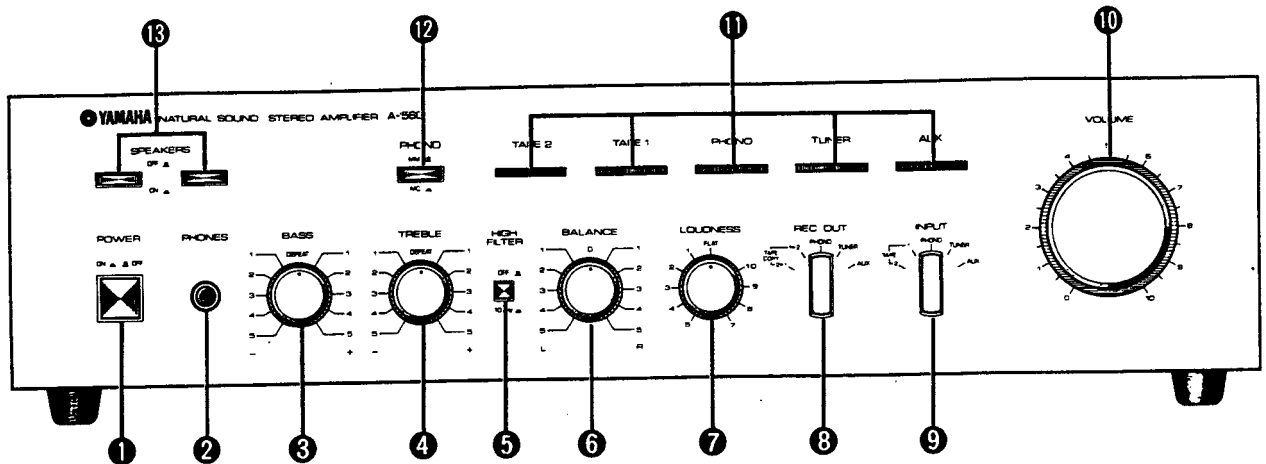


STEREO INTEGRATED AMPLIFIER

A-560

SERVICE MANUAL

FRONT PANEL



- | | |
|----------------------|-------------------------|
| ① POWER SWITCH | ⑧ REC OUT SELECTOR |
| ② PHONES JACK | ⑨ INPUT SELECTOR |
| ③ BASS CONTROL | ⑩ VOLUME CONTROL |
| ④ TREBLE CONTROL | ⑪ INPUT INDICATOR LAMPS |
| ⑤ HIGH FILTER SWITCH | ⑫ PHONO SELECTOR |
| ⑥ BALANCE CONTROL | ⑬ SPEAKERS SWITCHES |
| ⑦ LOUDNESS CONTROL | |

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004429

SINCE 1887



YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

4.81 2.5K

■ SPECIFICATIONS

Continuous RMS Output Power	
20Hz ~ 20kHz (0.015% THD 8Ω)	55W
1kHz (0.01% THD 8Ω)	60W
DIN Standard Output Power	
1kHz (1% THD 8Ω)	65W (G)(B)
Power Bandwidth	
0.05% THD, 27.5W (8Ω)	10Hz ~ 50kHz
Damping Factor	
(50Hz, 8Ω)	better than 80
(1kHz, 8Ω)	better than 80
Input Sensitivity/Impedance	
Phono MC	160μV/100Ω
Phono MM	2.5mV/47kΩ, 220pF
Aux, Tape, Tuner	150mV/40kΩ
Input Sensitivity (New IHF)	
Phono MC	22μV
Phono MM	0.336mV
Aux, Tape, Tuner	20.2mV
Maximum Input Signal (0.01% THD)	
Phono MC	8mV
Phono MM 1kHz	150mV
Over load Margin	
Phono MC	35dB (G)(B)
Phono MM	35dB (G)(B)
Output Level/Impedance	
Rec Out	150mV/470Ω
Headphone Jack Rated Output/ Output Impedance	
0.01% THD	0.8V/8Ω
Frequency Response	
Aux/Tape/Tuner	20Hz ~ 20kHz, -0.2dB
RIAA Equalization Deviation	
Phono MC	± 0.5dB
Phono MM	± 0.3dB
Total Harmonic Distortion (20Hz ~ 20kHz)	
Phono MC to Rec Out (3V)	0.01%
Phono MM (3V)	0.005%
Aux, Tape, Tuner to Sp Out (1W/8Ω)	0.01%
Residual Noise (IHF-A-Network)	
	210μV
NDCR (IHF-A-Network)	
0.1% THD -20dB vol	25mW ~ 65W
Phono MM to SP Out	
Channel Separation (Phono MM/ Aux, Tape)	
40Hz	80dB
1kHz	80dB
10kHz	60dB

Tone Control Characteristics	
Bass boost/cut	± 10dB (at 50Hz)
Bass turnover frequency	350Hz
Treble boost/cut	± 10dB (at 20kHz)
Turnover frequency	3.5kHz
Intermodulation Distortion	
Aux, Tape, Tuner Rated	
Output/8Ω	0.01%
1W/8Ω	0.015%
Signal-to-Noise Ratio (IHF-A-Network)	
Phono MC	
(500μV, Input shorted)	76dB
Phono MM	
(5mV, Input shorted)	92dB
Aux, Tape, Tuner	
(0.5V, Input shorted)	100dB
Signal-to-Noise Ratio (New IHF)	
Phono MC	
	74.5dB
Phono MM	
	78dB
Aux, Tape, Tuner	
	82dB
Filter Characteristics	
Low (Subsonic; built-in)	10Hz 12dB/oct
High	10kHz 12dB/oct
Continuous Loudness Control (Level-related equalization)	
Attenuation	-20dB (at 1kHz)
Semiconductor	
	19 Transistors, 3 ICs 4 FET, 16 Diodes
Power Supplies	
USA and Canadian models	
	AC120V, 60Hz
General model	
	AC110/120/220/240V 60/50Hz
North European model	
	AC220V, 50Hz
British & Australian models	
	AC240V, 50Hz
Power Consumption	
General, U.S.A. and Canadian models	
	200W
North European and British models	
	300W
Dimensions (W x H x D)	
	435 x 112 x 299.5mm (17-1/8x4-2/5x11-4/5")
Weight	
	7kg (14.3lbs)

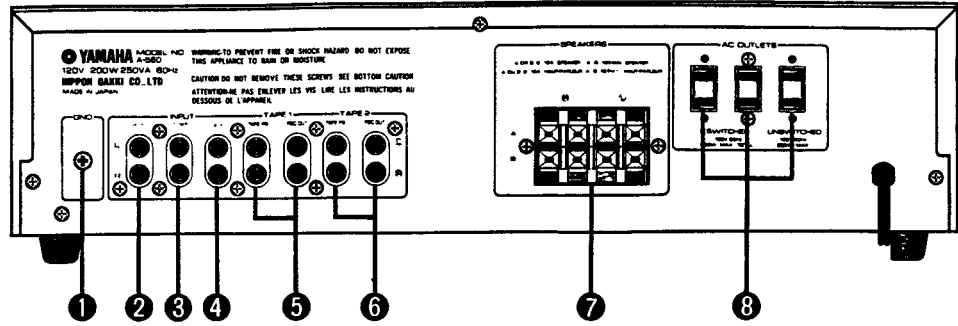
(G) North European model only.

(B) British model only.

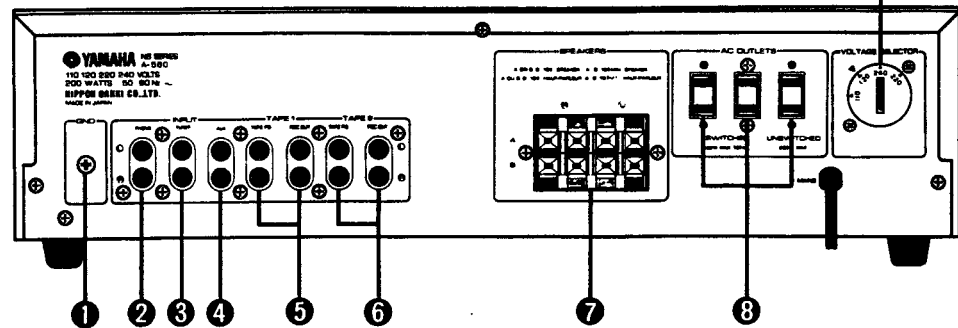
Specifications subject to change without notice.

REAR PANELS

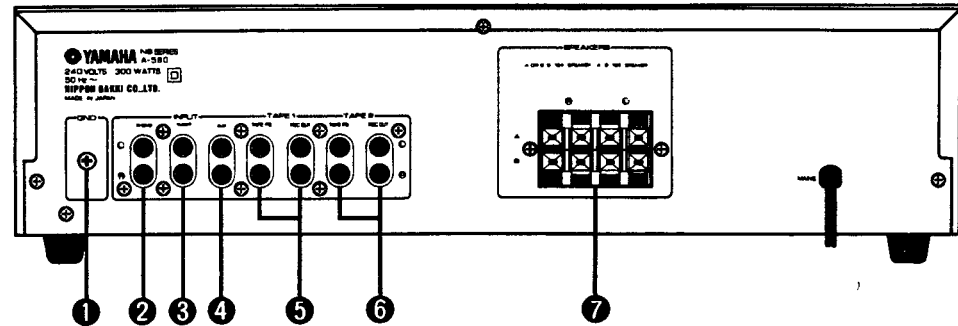
▼ U.S. & CANADIAN MODELS



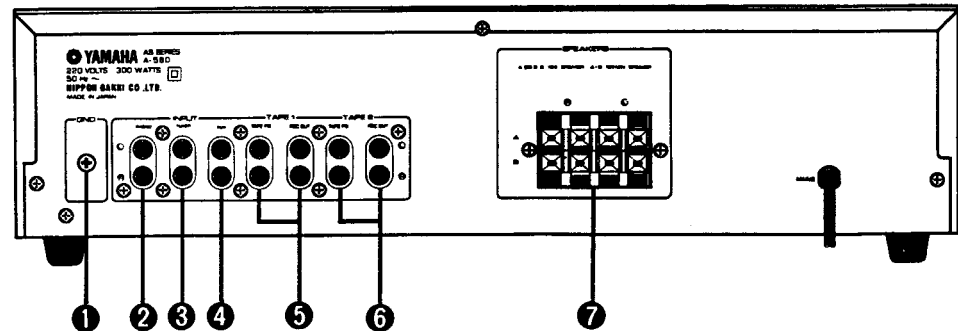
▼ GENERAL MODEL



▼ BRITISH & AUSTRALIAN MODELS



▼ NORTH EUROPEAN MODEL

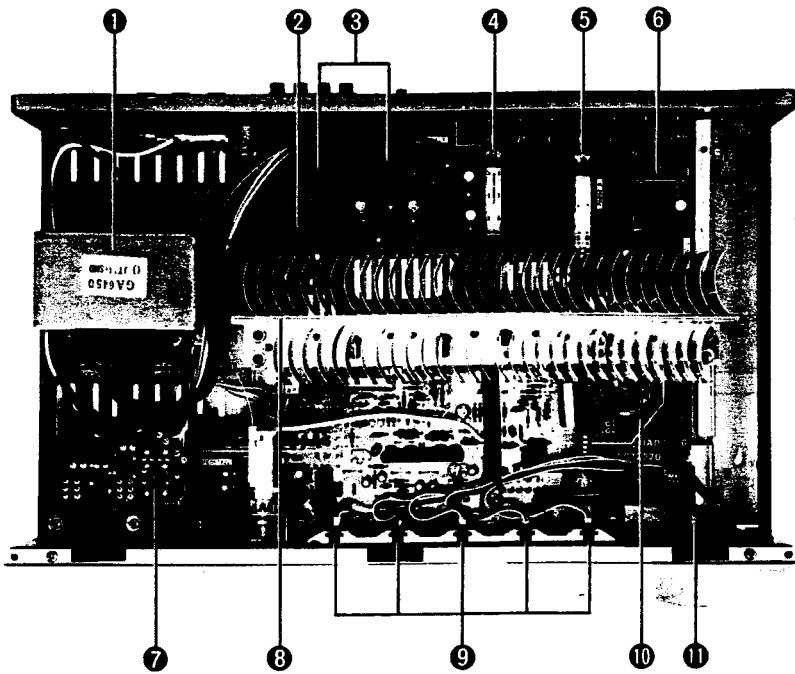


- ① GND TERMINAL
- ② PHONO INPUT JACKS
- ③ TUNER INPUT JACKS
- ④ AUX INPUT JACKS
- ⑤ TAPE 1 PB/REC OUT JACKS

- ⑥ TAPE 2 PB/REC OUT JACKS
- ⑦ SPEAKER TERMINALS
- ⑧ AC OUTLETS
- ⑨ VOLTAGE SELECTOR

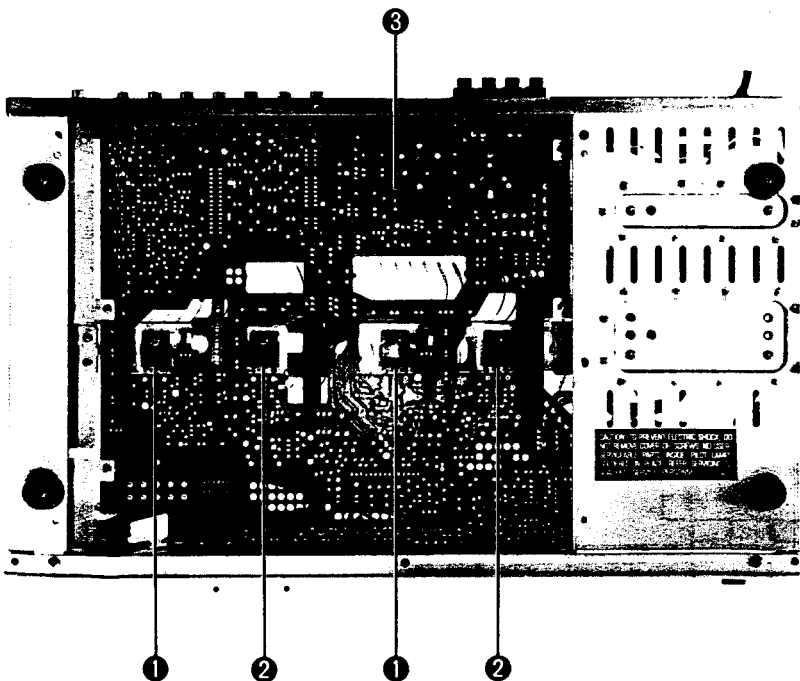
INTERNAL VIEW

▼ TOP VIEW



- ① POWER TRANSFORMER
U.S.A. model : GA6450
N. European model : GA6451
British & Australian models : GA6452
Canadian model : GA6472
General mode : GA6453
- ② DIODE BRIDGE 4D4B41 (iH00870)
- ③ ELECTROLYTIC CAPACITOR
(10000 μ F/63V) (FZ0025)
- ④ REC OUT SELECTOR SWITCH (SW102)
- ⑤ INPUT SELECTOR SWITCH (SW103)
- ⑥ PHONO SELECTOR SWITCH (SW101)
- ⑦ MAIN C. BOARD [¾]
U.S.A. model: NA07646
N. European model: NA07648
 : NA07649 (Black)
British model : NA07648
Australian model : NA07647
Canadian model : GA07646
General model : GA07645
- ⑧ HEAT SINK (BA08057)
- ⑨ INPUT INDICATORS
- ⑩ MAIN C. BOARD [¼]
- ⑪ VOLUME CONTROL

▼ BOTTOM VIEW



- ① POWER TRANSISTOR 2SC2581
(iC25810)
- ② POWER TRANSISTOR 2SA1106
(iA11060)
- ③ MAIN C. BOARD [¼]

■ DISASSEMBLY PROCEDURES

1. Top cover removal

Remove screws ① to ③ in photo 1 from both right and left sides then remove the top cover.

- ① ~ ② : B.W. head screw
- ③ : Bind head tapping screw

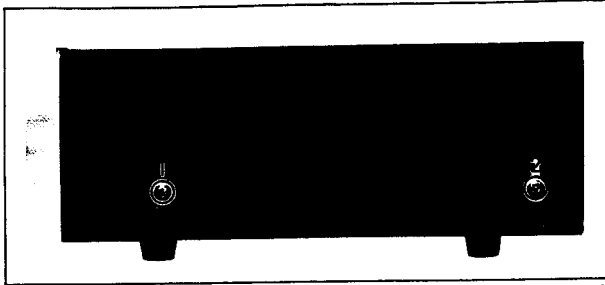


Photo 1

2. Bottom cover removal

Remove screws ① to ⑤ in photo 2 and then remove the bottom cover.

- ① ~ ⑤ : Bind head tapping screw

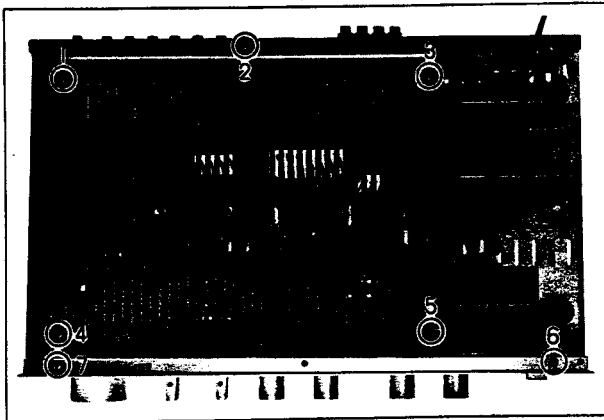


Photo 2

3. Front panel removal

a. Loosen the set screws of REC OUT, and Input knobs with a 1.5 mm hexagon wrench, then pull out each knob.

b. Remove screws ⑥ and ⑦ in photo 2 as well as screws ① and ② in photo 3 and then remove the front panel.

- ① - ② (photo 3) ⑥ - ⑦ (photo 2): Bind head tapping screw

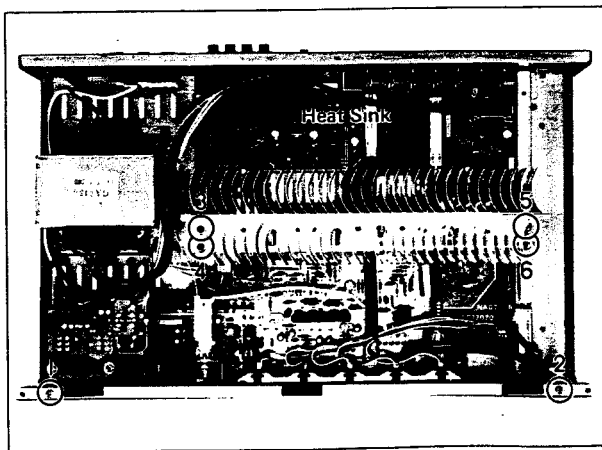


Photo 3

4. Power transistor replacement

a. Remove screws ① to ④ in photo 4.

- ① ~ ④ : Bind head tapping B tight screw

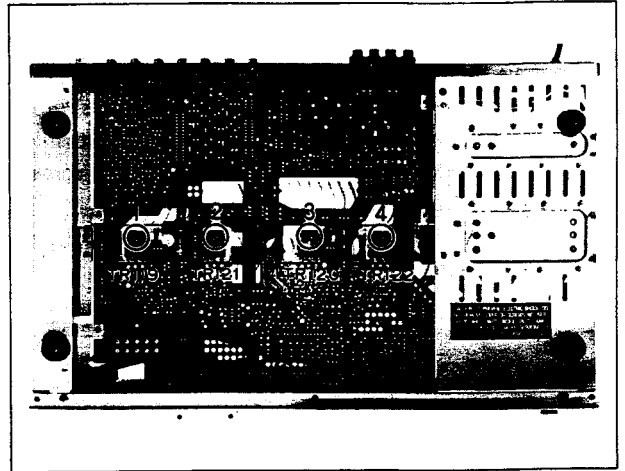


Photo 4

b. Remove screws ③ to ⑥ in photo 3 and remove the heat sink.

- ③ ~ ⑥ : B.W. head tapping screw

c. Detach the soldering of the power transistor and then replace the power transistors.

d. When mounting power transistors, screw power transistors putting mica base between the heat sink and the transistors. Be sure that the heat sink should not be touched to the case of the power transistor. When isolation between power transistors and the heat sink is imperfect, the circuit is occurred.

Apply silicon grease to both sides of the mica base so that heat coupling between power transistors and the heat sink should be tight.

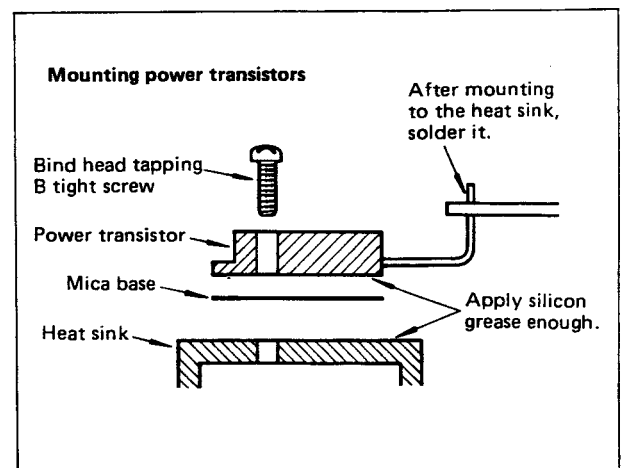


Fig. 1

5. Main printed circuit board removal

- a. Remove the Top cover, Bottom cover and Front panel according to foregoing steps 1 to 3.
- b. Pull out lamps ① to ⑤ in photo 5.
① ~ ⑤ : Pilot lamp
- c. Remove the remote switch wire as shown in Fig. 2.
- d. Remove screws ① to ④ in photo 4 as well as screws ⑥ to ⑨ in photo 5 and then remove the heat sink.
① ~ ④ (photo 4): Bind head tapping B tight screw
⑥ ~ ⑨ (photo 5): B.W head tapping screw
- e. Detach the lead wires which are connected to the main printed circuit board.

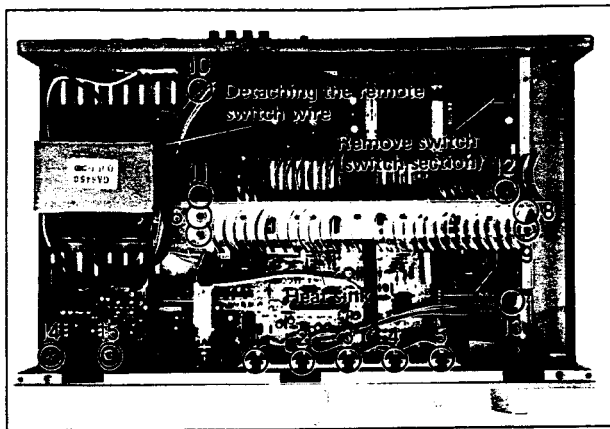


Photo 5

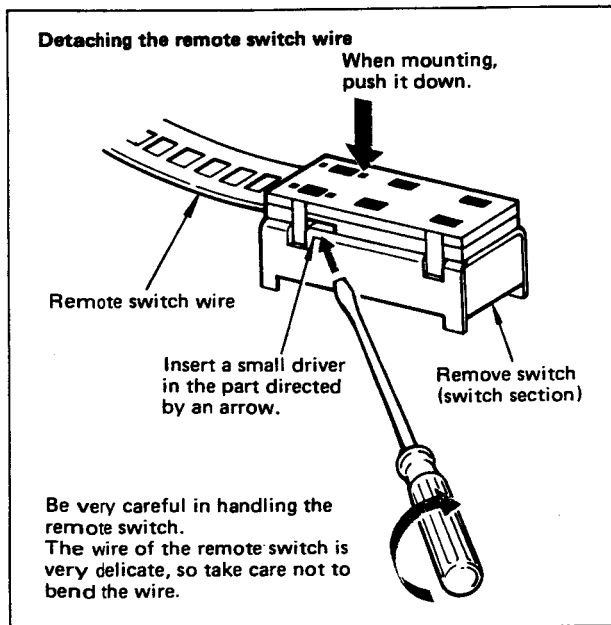


Fig. 2

- f. Pull out the stopper ① with pliers upwards.
- g. Remove nuts ② to ⑦ in photo 6.
- h. Remove screws ⑩ to ⑬ in photo 5.
⑩ ~ ⑬ : B.W. head tapping screw
- i. Remove screws ① to ⑩ in photo 7.
① ~ ⑩ : Bind head tapping screw
- j. Remove screws ⑪ to ⑮ in photo 7.
Remove rear panel and then remove main printed circuit board.
⑪ ~ ⑮ : Bind head tapping screw

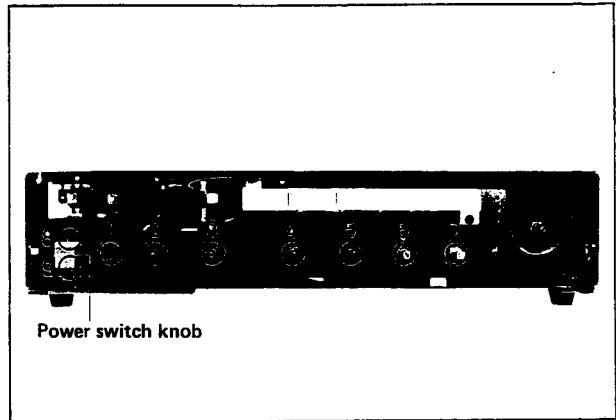


Photo 6

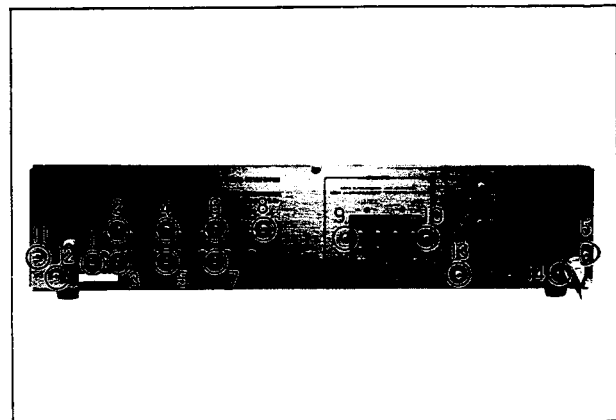


Photo 7

ADJUSTMENTS

1. Idling current

When repairing the main amplifier (replacing TR105 to 122), adjust idling current.

- Set the VOLUME control to its lowest position.
- Rotate VR109 (L ch) and VR110 (R ch) for idling current adjustment fully counterclockwise.
- Connect a voltage tester to the test points.
(L ch: TP1 ⊕ ~ TP2 ⊖, R ch: TP3 ⊕ ~ TP4 ⊖)
- After the power has been switched, rotate VR109 and VR110 and set so that the voltage between test points comes to 20mV.
- Set so that the voltage between test points comes within $20 \pm 4\text{mV}$ about 3 or 4 minutes after the power has been switched on to enable the operation of the amplifier to stabilize.

* When idling current rises abnormally and the voltage of test points is very high, in spite of rotating VR109 or VR110 counterclockwise, the set is broken.

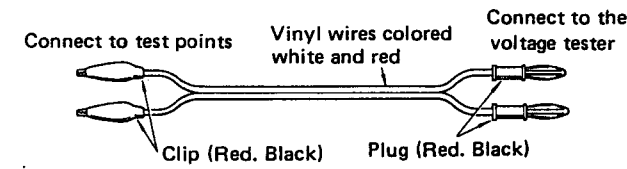
2. DC offset

After the power switch is pushed on, wait 3 ~ 4 minutes before measuring, to be sure of the most stable operation.

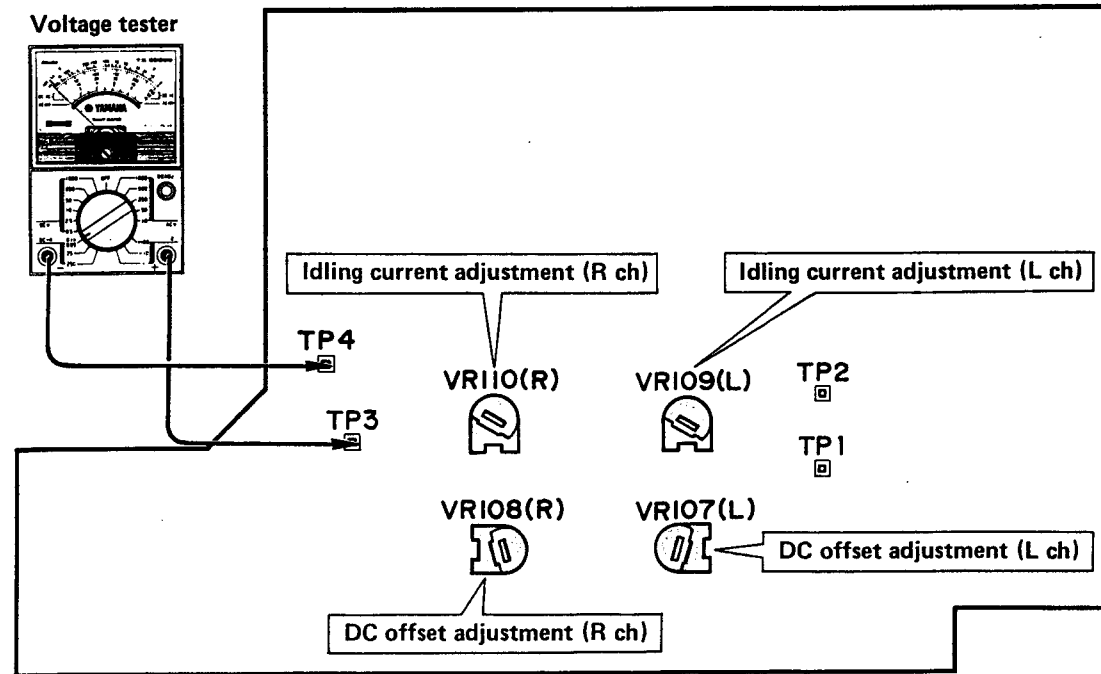
- Check that idling current is within rating.
- Connect a voltage tester to the test points.
(L ch; TP1 ~ E, R ch; TP3 ~ E)
- Rotate VR107 (L ch) and VR108 (R ch) for DC offset and adjust so that the voltage between test points comes to 0V.

* Center voltage drifts within \pm a few milli volts across 0V. When center voltage drifts abnormally and transiently, the set is broken.

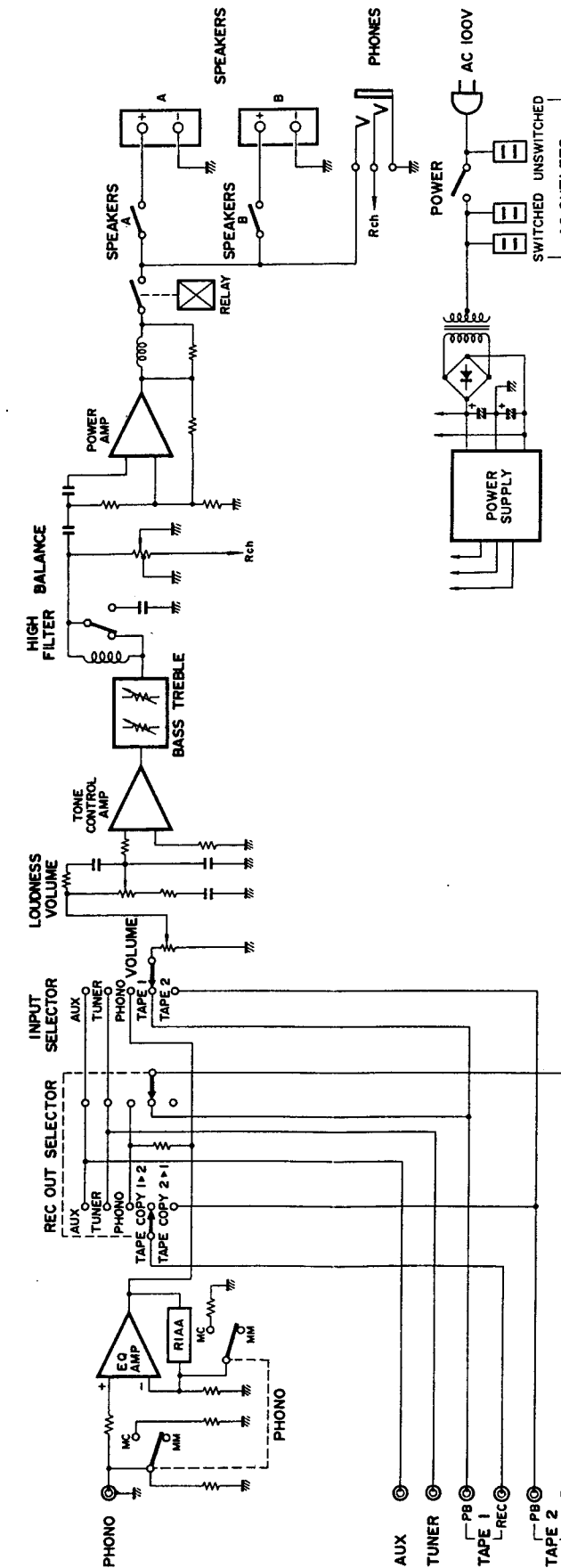
You will find that Adjustment will be facilitated if you use the lead wires as shown in the bottom figure.



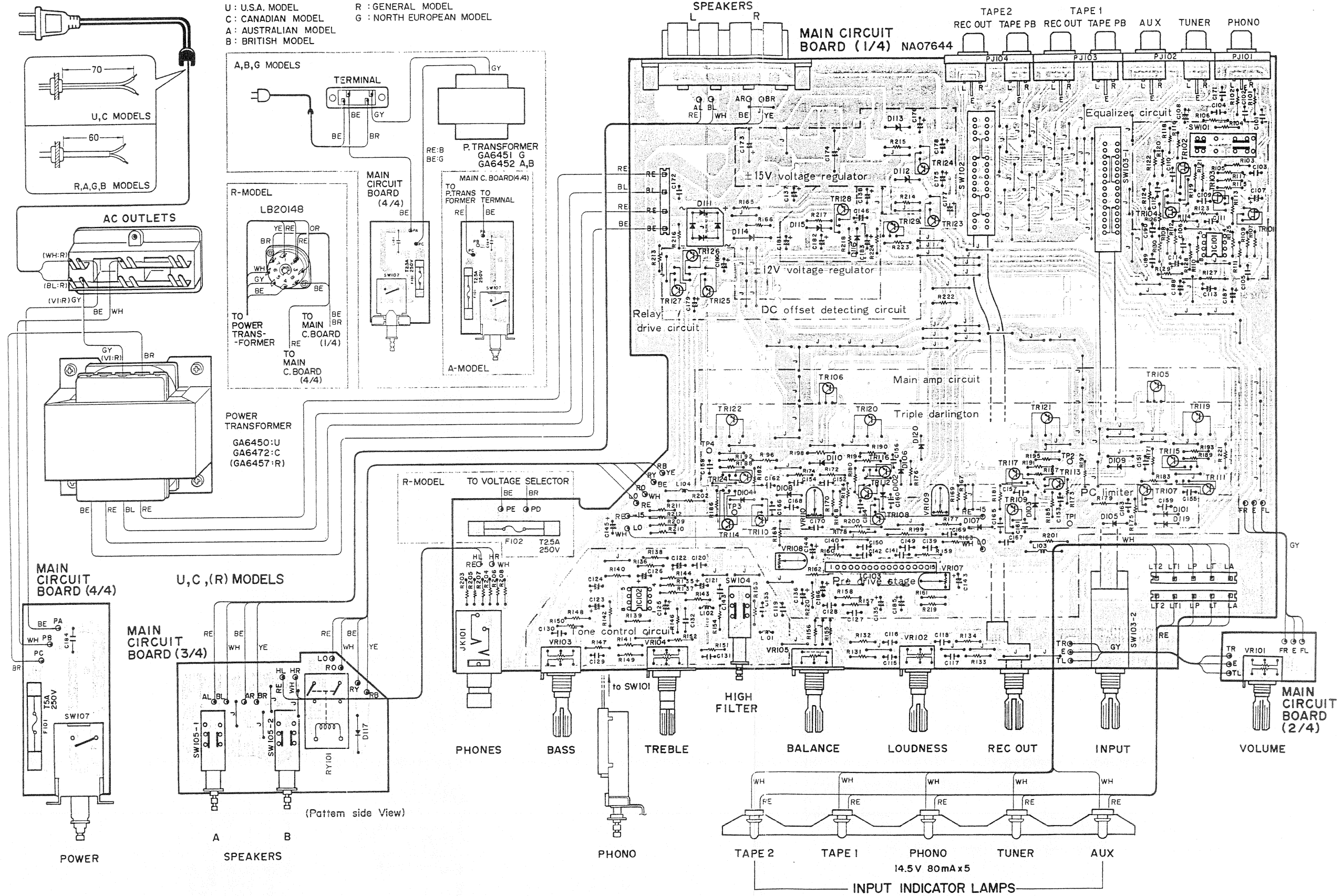
Adjustment item	Channel	Test point	Adjustment VR	Rating or standard
Idling current adjustment	L ch	TP1 ⊕ ~ TP2 ⊖	VR109	20 ± 4 mV
	R ch	TP3 ⊕ ~ TP4 ⊖	VR110	
DC offset adjustment	L ch	TP1 ~ E	VR107	0 ± 10mV
	R ch	TP3 ~ E	VR108	



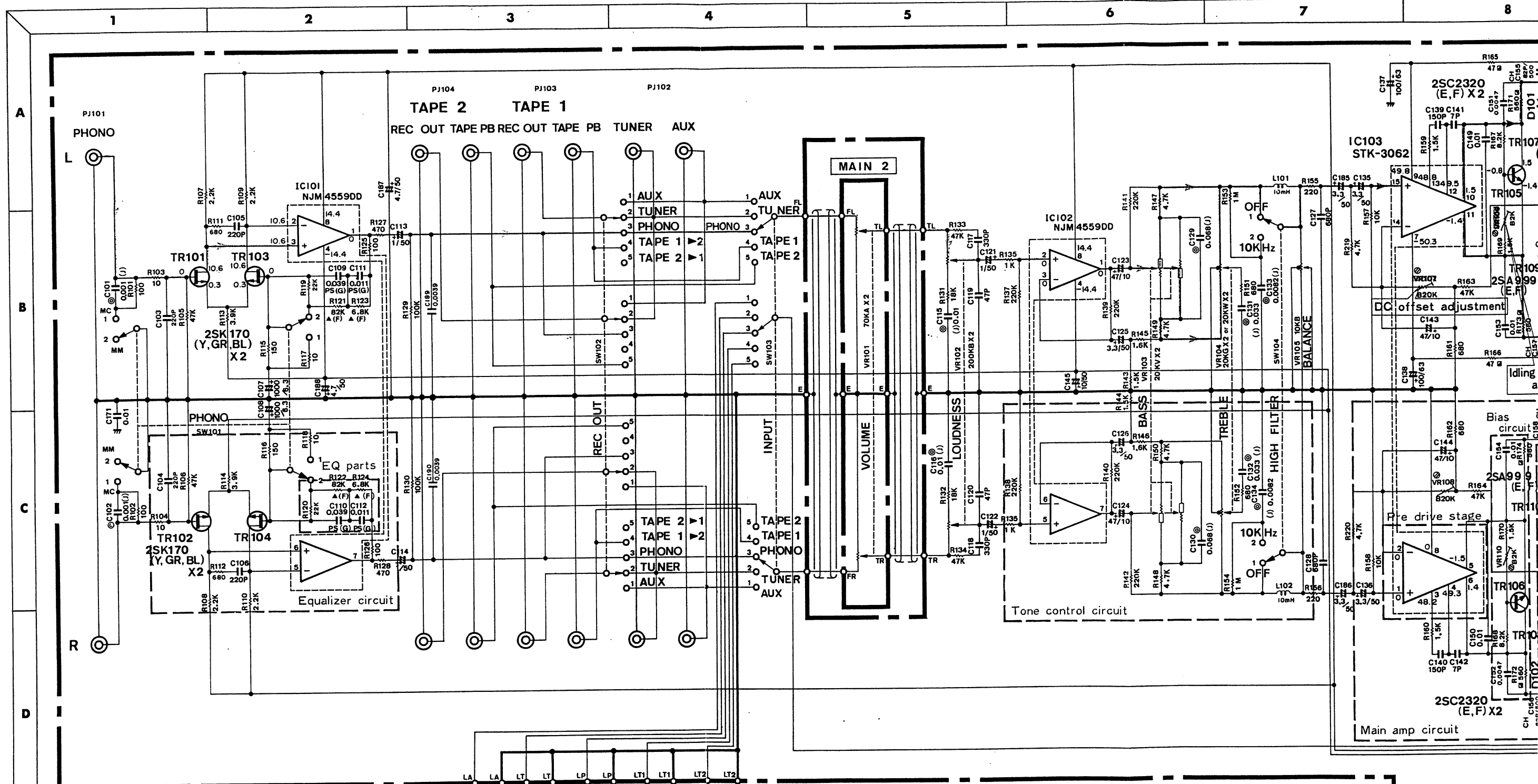
BLOCK DIAGRAM



PRINTED CIRCUIT BOARD/WIRING



SCHEMATIC DIAGRAM

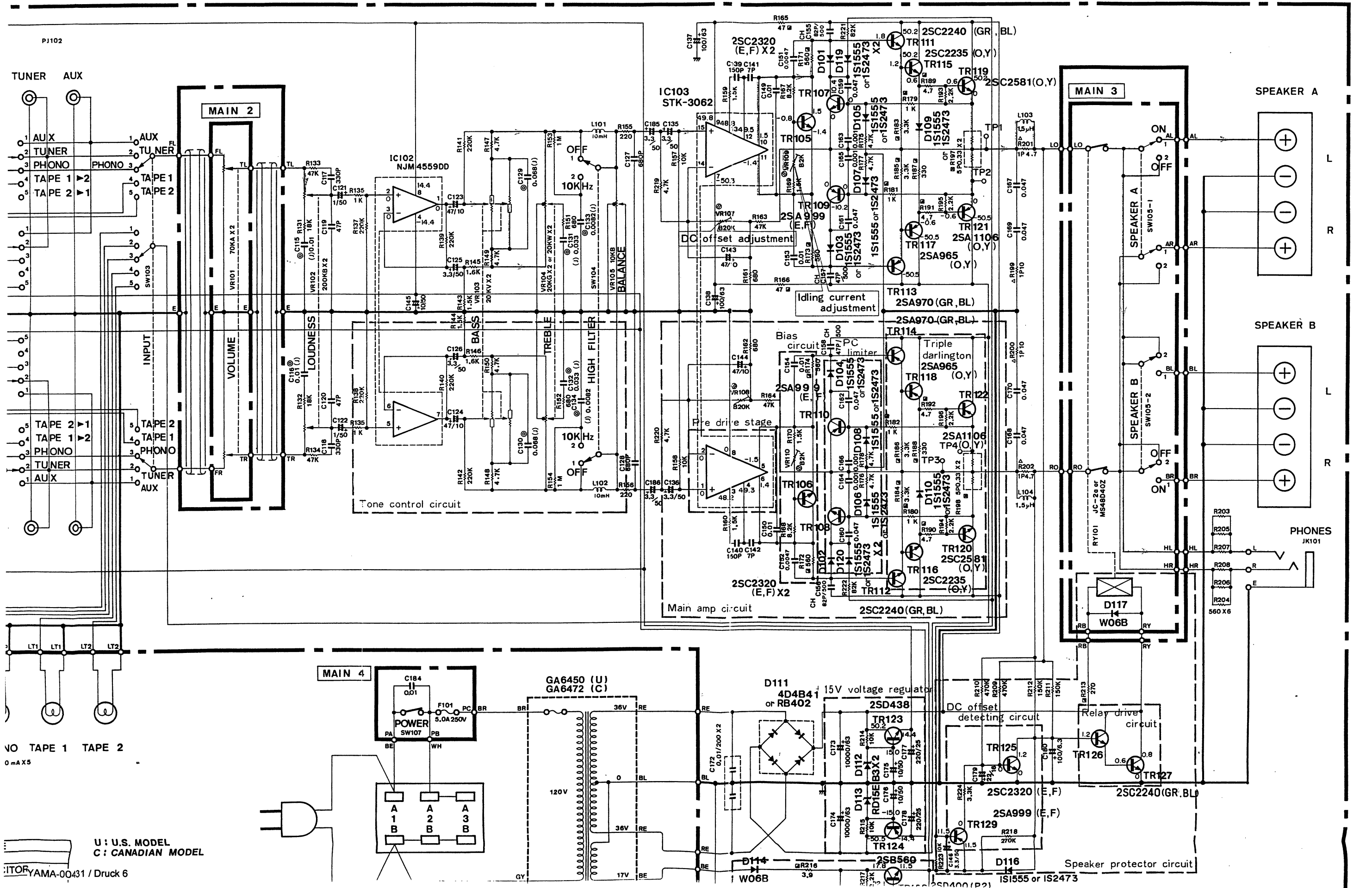


REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
⊙	SEMI VARIABLE RESISTOR
△	METAL FILM RESISTOR
	METAL SLIP RESISTOR

REMARKS	PARTS NAME
NO MARK	CERAMIC CAPACITOR
⊙	POLYESTEL FILM CAPACITOR
PS	PS CAPACITOR

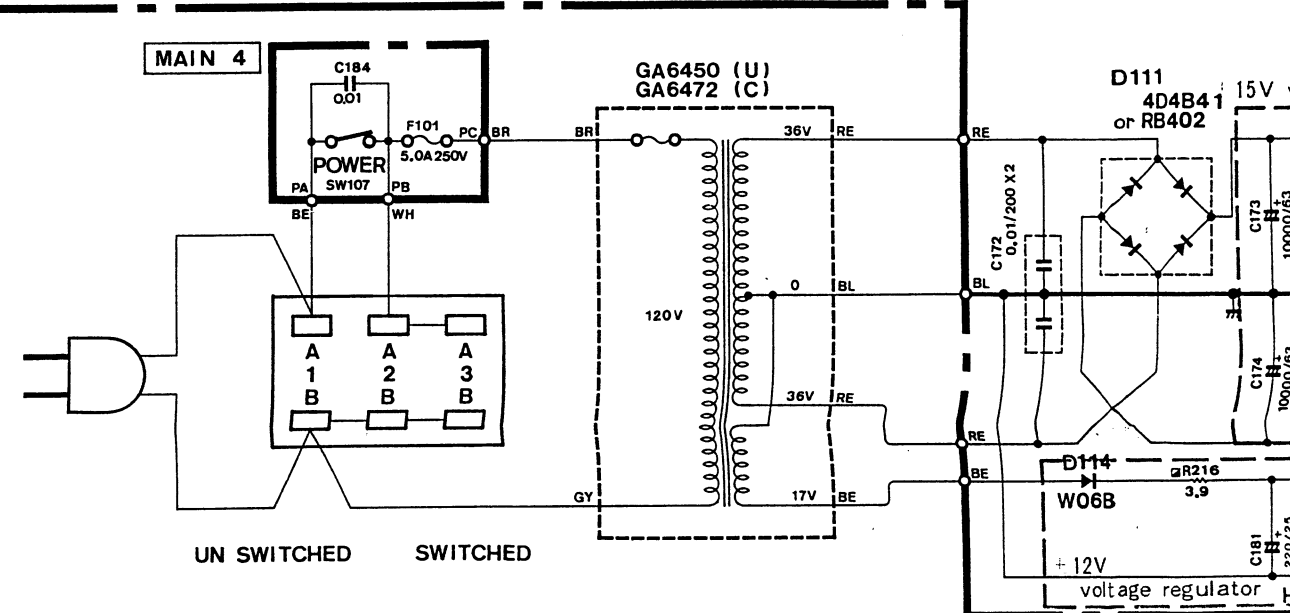
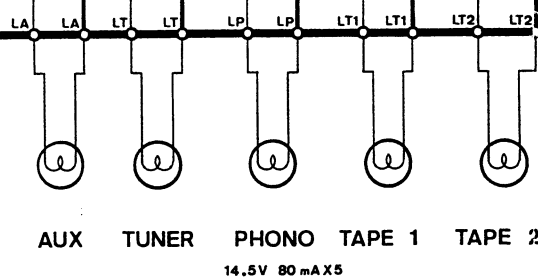
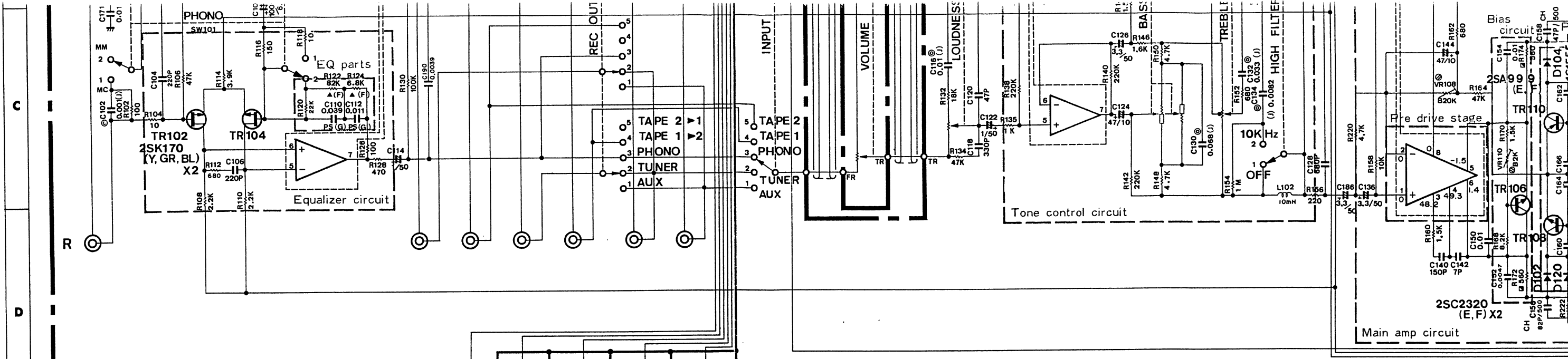
U : U.S. MODEL
C : CANADIAN MODEL

4 5 6 7 8 9 10 11



NO TAPE 1 TAPE 2
0 mA X5

U: U.S. MODEL
C: CANADIAN MODEL
YAMAHA-00431 / Druck 6



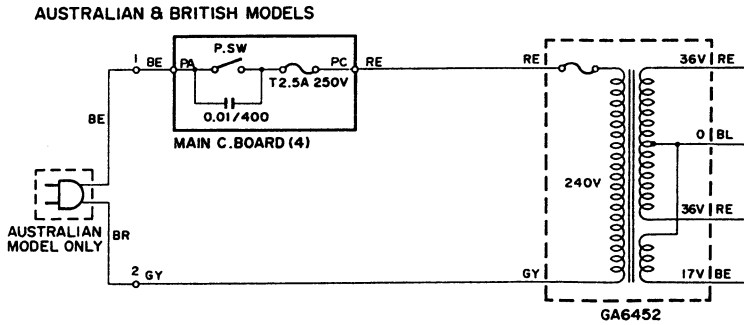
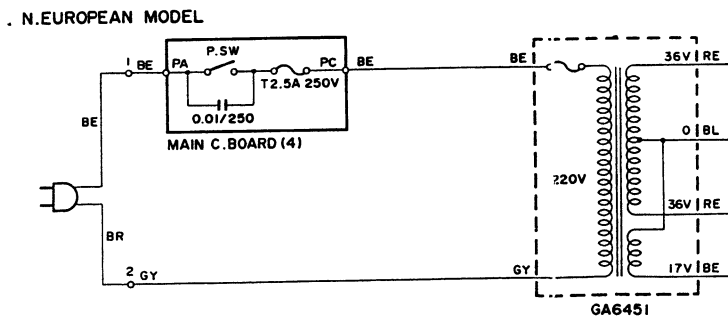
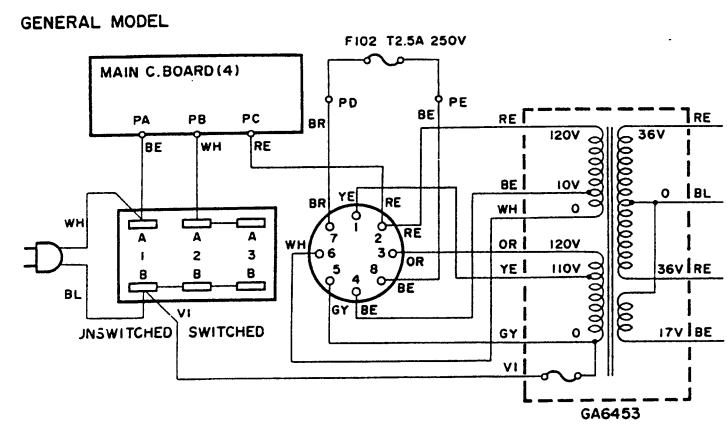
RESISTOR

REMARKS	PARTS NAME
∅	CARBON FILM RESISTOR
∅	SEMI VARIABLE RESISTOR
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
■	METAL PLATE RESISTOR
■	FLAME PROOF CARBON FILM RESISTOR

CAPACITOR

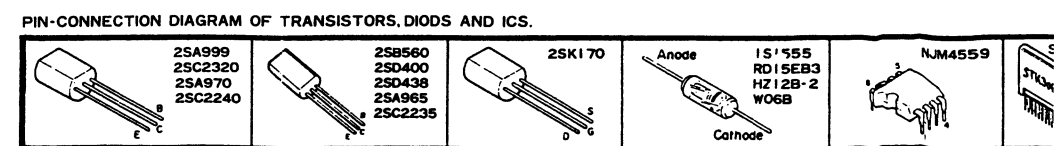
REMARKS	PARTS NAME
∅	CERAMIC CAPACITOR
⊙	POLYESTEL FILM CAPACITOR
PS	PS CAPACITOR

U: U.S. MODEL
C: CANADIAN MODEL



No.	R	U, C	A	G, B
F101	T5.0A 250V	5.0A 250V	T2.5A 250V	T2.5A 250V
C184	0.01	0.01	0.01/400	0.01/250
F102	T2.5A 250V			

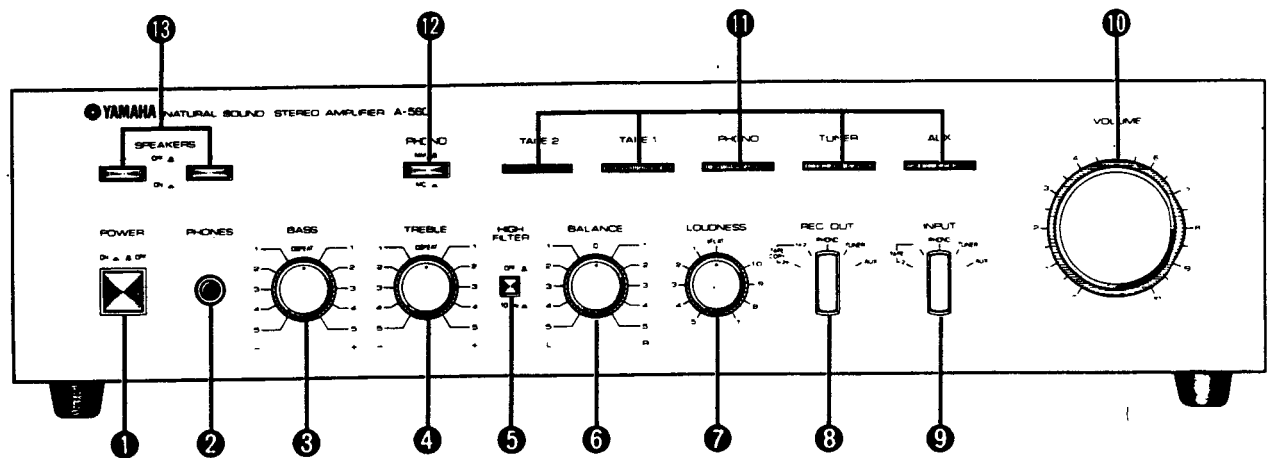
* All voltages measured with a 10MΩ/V DC electric volt meter, under no-signal condition.
* Schematic Diagram is subject to change without notice.



STEREO INTEGRATED AMPLIFIER

A-560

SERVICE MANUAL



- ① POWER SWITCH
- ② PHONES JACK
- ③ BASS CONTROL
- ④ TREBLE CONTROL
- ⑤ HIGH FILTER SWITCH
- ⑥ BALANCE CONTROL
- ⑦ LOUDNESS CONTROL

- ⑧ REC OUT SELECTOR
- ⑨ INPUT SELECTOR
- ⑩ VOLUME CONTROL
- ⑪ INPUT INDICATOR LAMPS
- ⑫ PHONO SELECTOR
- ⑬ SPEAKERS SWITCHES

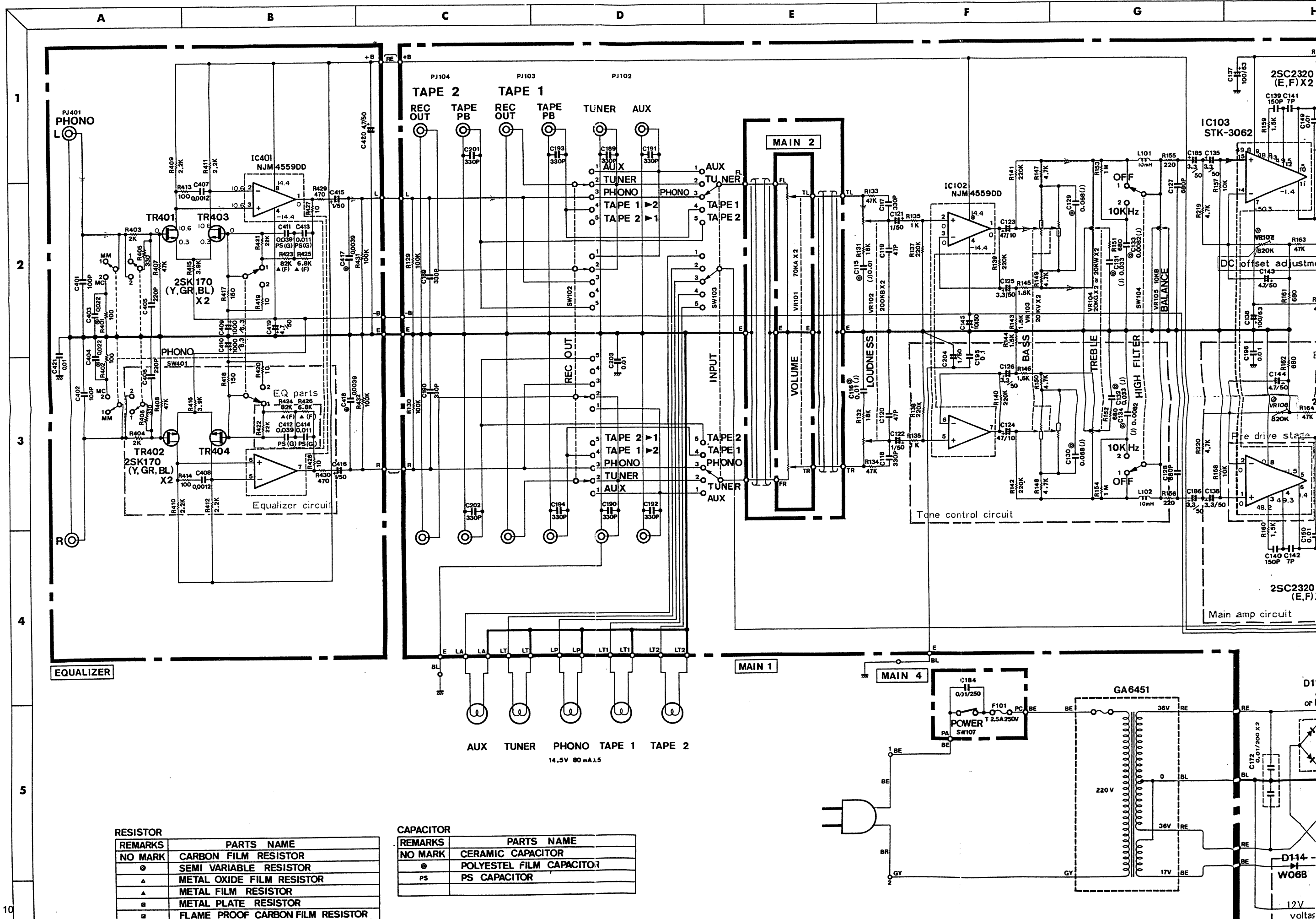
■ SPECIFICATIONS

Continuous RMS Output Power	
20Hz ~ 20kHz (0.015% THD 8Ω)	55W
1kHz (0.01% THD 8Ω)	60W
1kHz (0.5% THD 4Ω)	90W
DIN Standard Output Power	
1kHz (1% THD 8Ω)	65W
Power Bandwidth	
0.05% THD, 27.5W (8Ω)	10Hz ~ 50kHz
Damping Factor	
(50Hz, 8Ω)	better than 80
(1kHz, 8Ω)	better than 80
Input Sensitivity/Impedance	
Phono MC	160μV/100Ω
Phono MM	2.5mV/47kΩ, 220pF
Aux, Tape, Tuner	150mV/40kΩ
Input Sensitivity (New IHF)	
Phono MC	22μV
Phono MM	0.336mV
Aux, Tape, Tuner	20.2mV
Maximum Input Signal (0.01% THD)	
Phono MC	8mV
Phono MM 1kHz	150mV
Over load Margin	
Phono MC	35dB
Phono MM	35dB
Output Level/Impedance	
Rec Out	150mV/470Ω
Headphone Jack Rated Output/ Output Impedance	
0.01% THD	0.8V/8Ω
Frequency Response	
Aux/Tape/Tuner	20Hz ~ 20kHz, -0.2dB
RIAA Equalization Deviation	
Phono MC	± 0.5dB
Phono MM	± 0.3dB
Total Harmonic Distortion (20Hz ~ 20kHz)	
Phono MC to Rec Out (3V)	0.01%
Phono MM (3V)	0.005%
Aux, Tape, Tuner to Sp Out (1W/8Ω)	0.01%
Residual Noise (IHF-A-Network)	
210μV	
NDCR (IHF-A-Network)	
0.1% THD -20dB vol Phono MM to SP Out	25mW ~ 65W
Channel Separation (Phono MM/ Aux, Tape)	
40Hz	80dB
1kHz	80dB
10kHz	60dB

Tone Control Characteristics	
Bass boost/cut	± 10dB (at 50Hz)
Bass turnover frequency	350Hz
Treble boost/cut	± 10dB (at 20kHz)
Turnover frequency	3.5kHz
Intermodulation Distortion	
Aux, Tape, Tuner Rated	
Output/8Ω	0.01%
1W/8Ω	0.015%
Signal-to-Noise Ratio (IHF-A-Network)	
Phono MC	
(500μV, Input shorted)	76dB
Phono MM	
(5mV, Input shorted)	98dB
Aux, Tape, Tuner	
(0.5V, Input shorted)	100dB
Signal-to-Noise Ratio (New IHF)	
Phono MC	
	74.5dB
Phono MM	
	78dB
Aux, Tape, Tuner	
	82dB
Filter Characteristics	
Low (Subsonic; built-in)	10Hz 12dB/oct
High	10kHz 12dB/oct
Continuous Loudness Control (Level-related equalization)	
Attenuation	-20dB (at 1kHz)
Semiconductor	
	19 Transistors, 3 ICs 4 FET, 16 Diodes
Power Supplies	
	AC220V, 50Hz
Power Consumption	
	300W
Dimensions (W x H x D)	
	435 x 112 x 299.5mm (17-1/8x4-2/5x11-4/5")
Weight	
	7kg (14.3lbs)

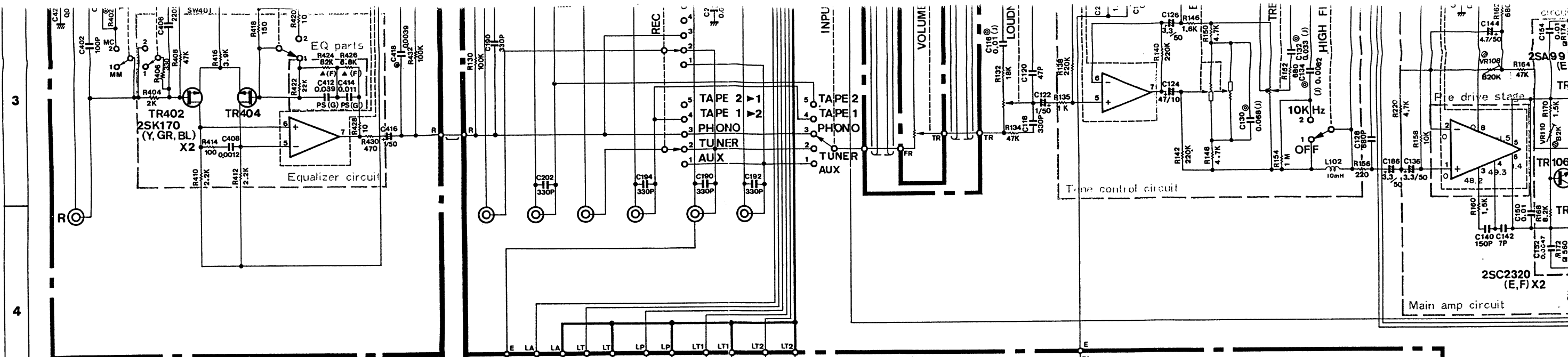
Specifications subject to change without notice.

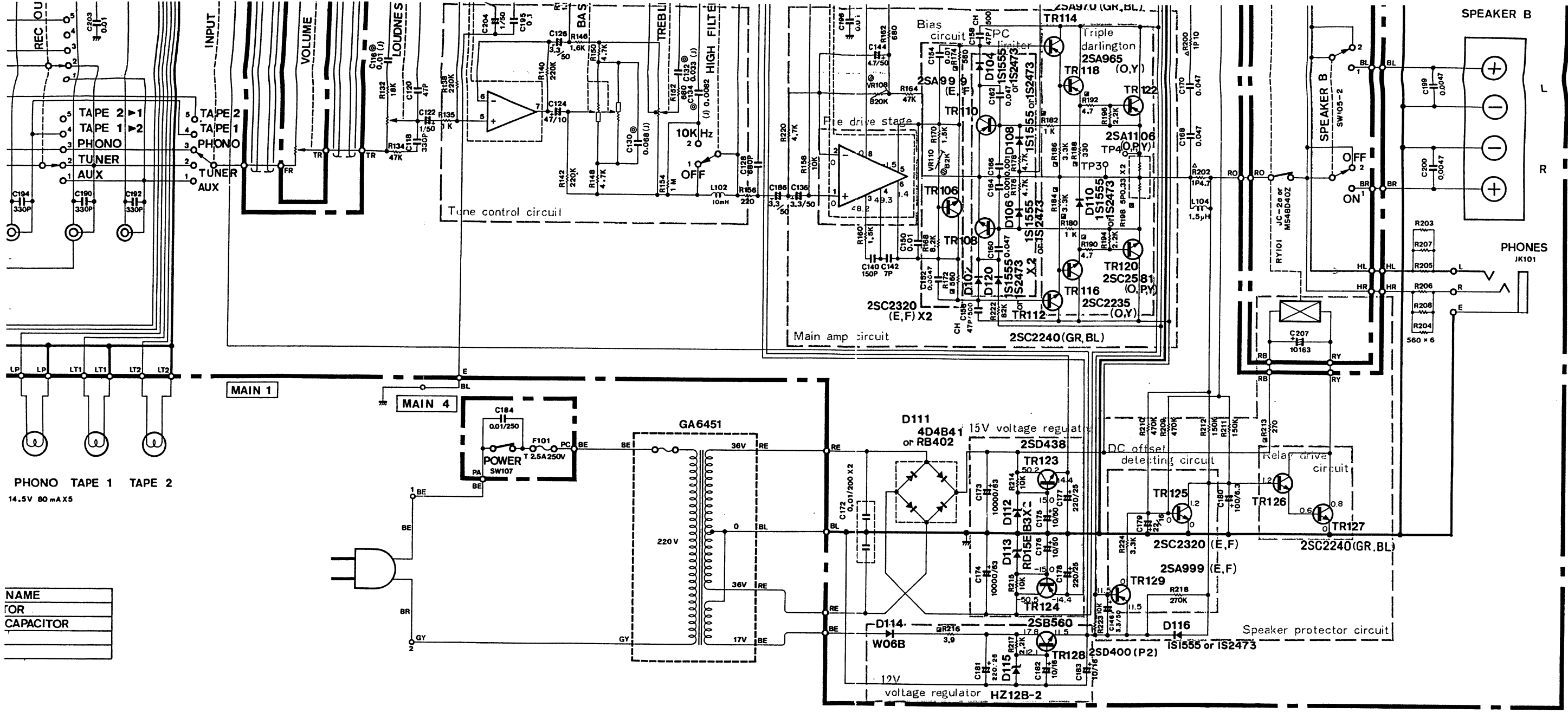
SCHEMATIC DIAGRAM



REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
⊙	SEMI VARIABLE RESISTOR
△	METAL OXIDE FILM RESISTOR
■	METAL FILM RESISTOR
▣	METAL PLATE RESISTOR
■	FLAME PROOF CARBON FILM RESISTOR

REMARKS	PARTS NAME
NO MARK	CERAMIC CAPACITOR
⊙	POLYESTEL FILM CAPACITOR
PS	PS CAPACITOR

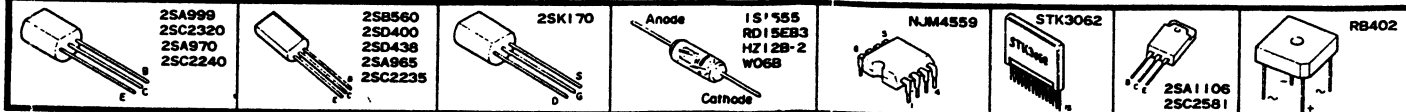




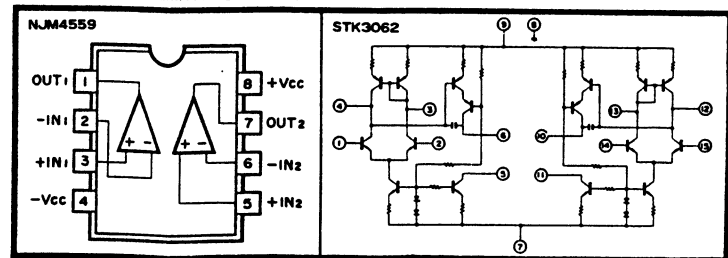
PHONO TAPE 1 TAPE 2
14.5V 80mA X5

NAME
OR
CAPACITOR

PIN-CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

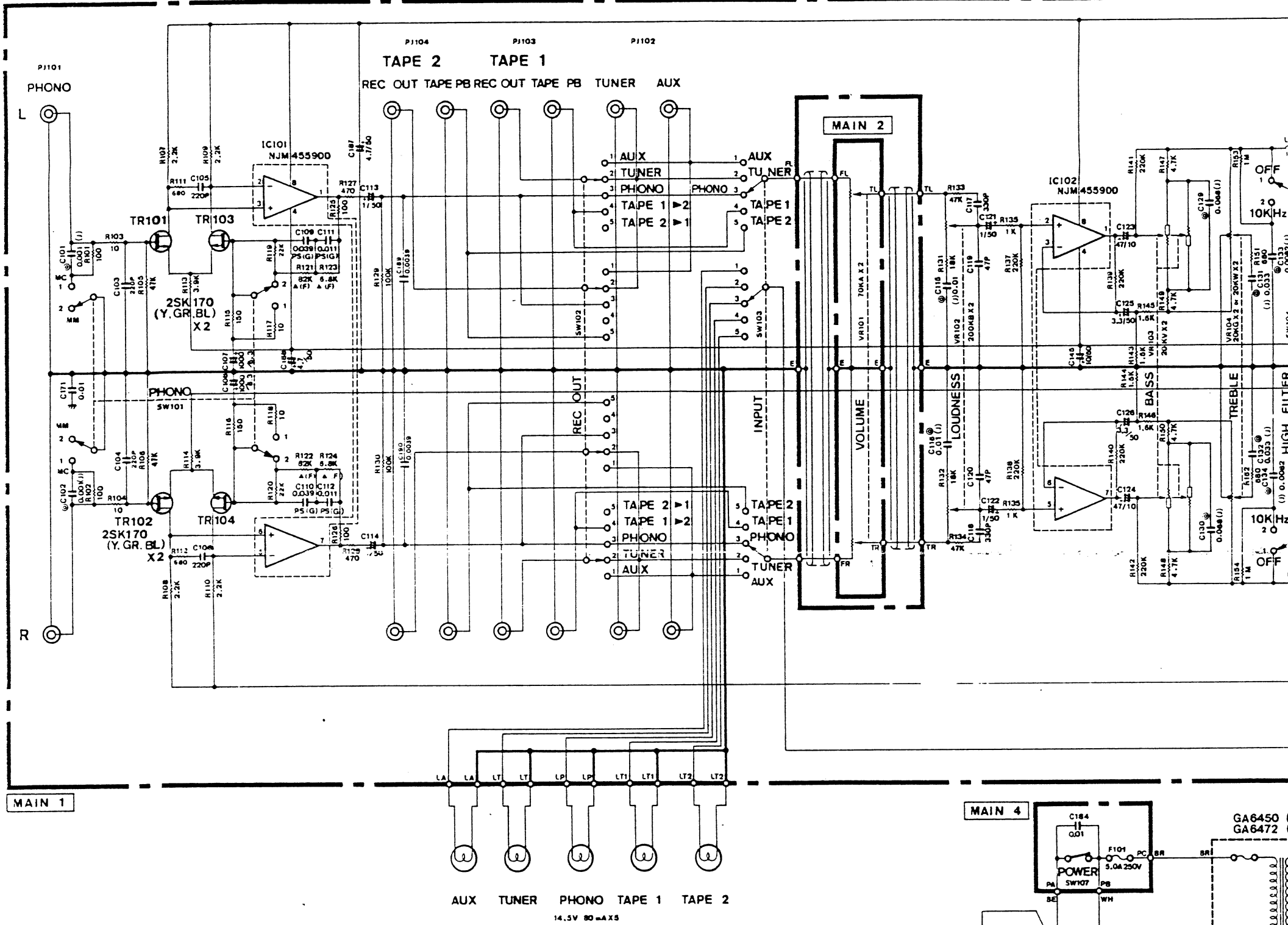


IC BLOCK & SCHEMATIC DIAGRAM



A-560

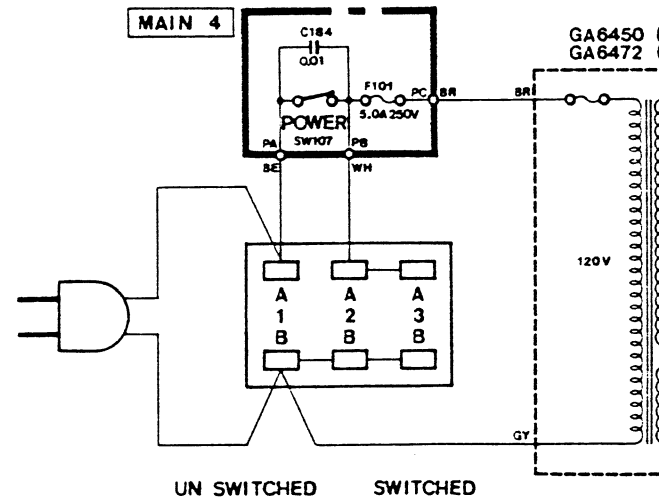
SCHEMATIC DIAGRAM ● SCHEMA SYNOPTIQUE ● SCHEMATISCHES BILD ● KOPPLINGS-DIA



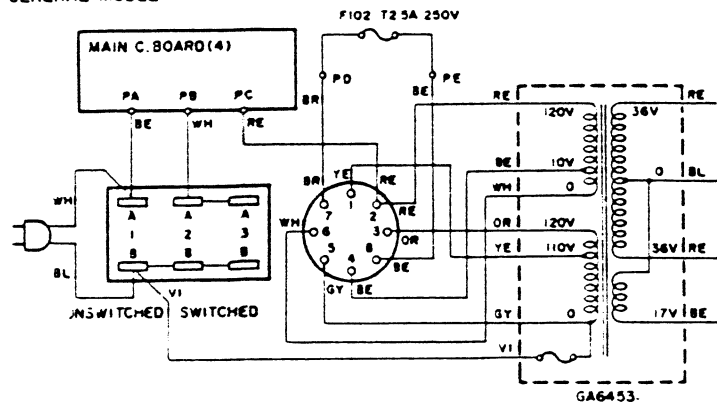
RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
⊖	SEMI VARIABLE RESISTOR
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
■	METAL PLATE RESISTOR
⊠	FLAME PROOF CARBON FILM RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	CERAMIC CAPACITOR
⊙	POLYESTER FILM CAPACITOR
PS	PS CAPACITOR

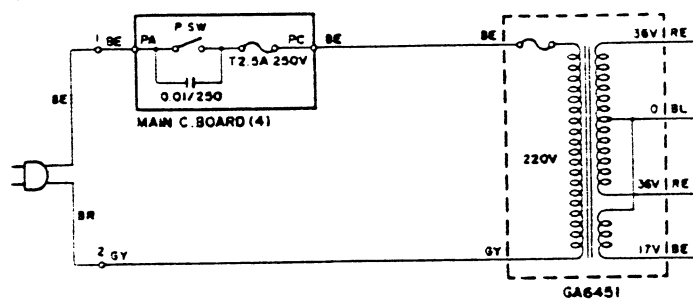
U : U.S. MODEL
C : CANADIAN MODEL



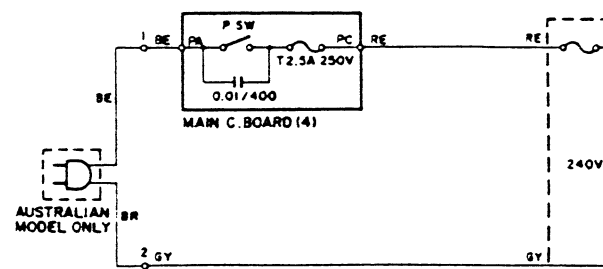
GENERAL MODEL



N. EUROPEAN MODEL



AUSTRALIAN & BRITISH MODELS



PARTS LIST

A-560

STEREO INTEGRATED AMPLIFIER

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PARTS LIST (CIRCUIT BOARD)	5

R: General model

U: U.S.A. model

C: Canadian model

A: Australian model

G: North European model

B: British model


SINCE 1887



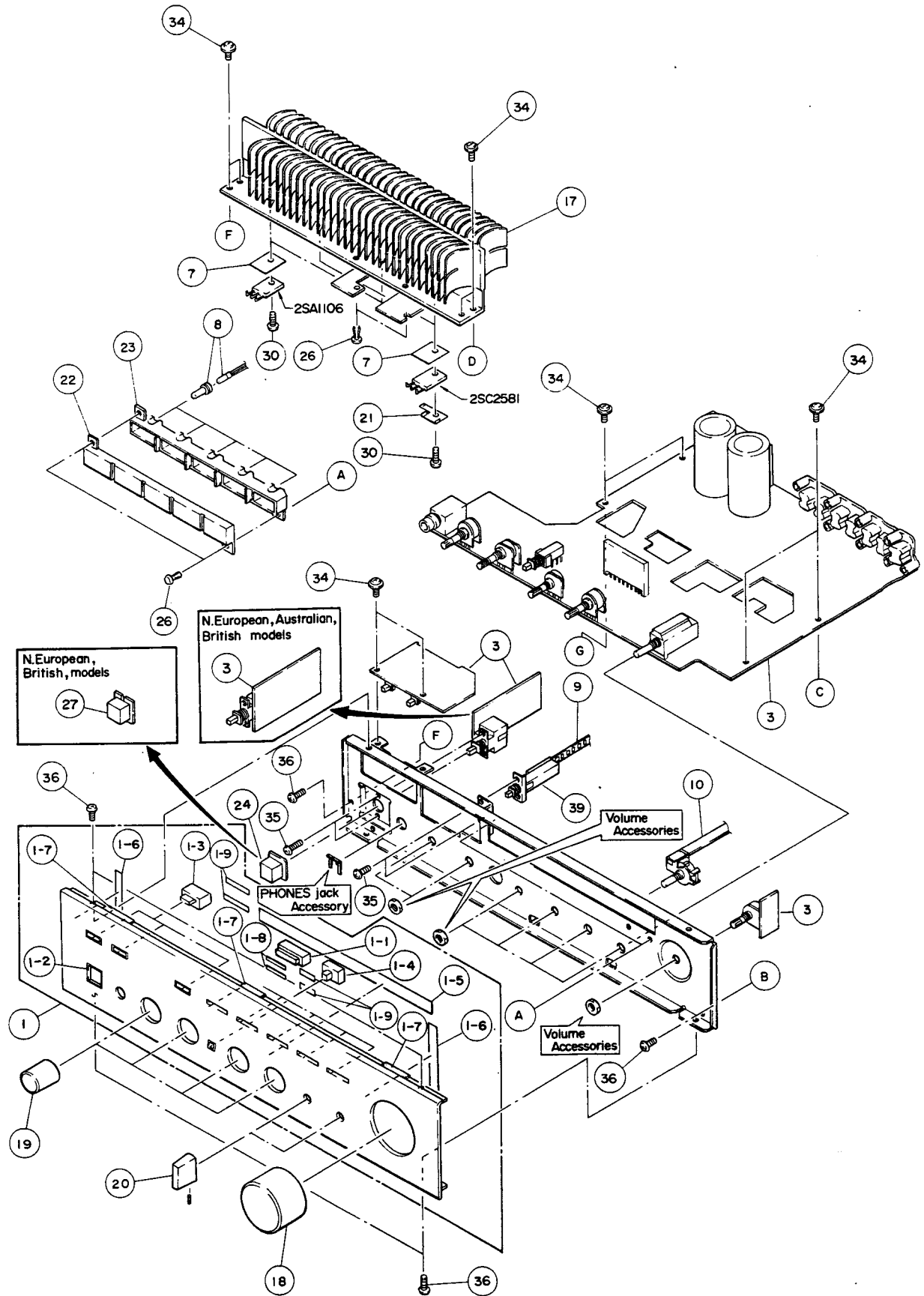
YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

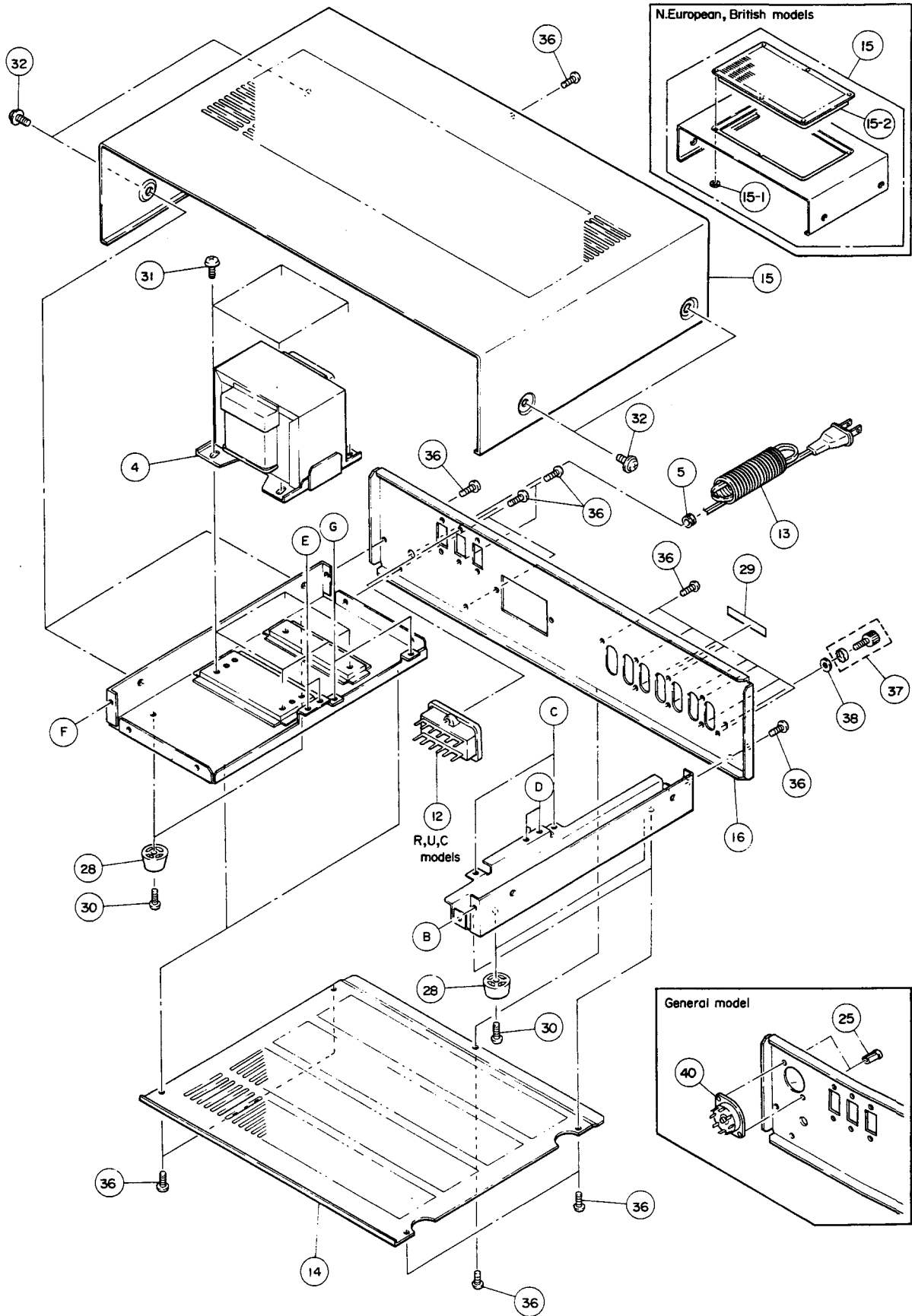
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Printed in Japan 4.81  2.5K

EXPLODED VIEW (FRONT)



EXPLODED VIEW (REAR)



PARTS LIST

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
* 1	32'00'00 NB 60'11'80	Front Panel Unit	フロントパネルユニット			
* "	32'00'00 NB 60'11'90	" (Black model)	"			G
* 1-1	32'00'00 CB 60'32'30	Indicator	I インジケーター			
* "	32'00'00 CB 60'37'80	" (Black model)	"			G
* 1-2	32'00'00 CB 09'38'40		パワ ー ボ タ ン 枠		CR-240	
* "	32'00'00 CB 09'38'80	" (Black model)	"		CR-240B	G
* 1-3	32'00'00 NB 60'02'40	Push Button Ass'y	プッシュボタン Ass'y			
* "	32'00'00 NB 60'09'00	" (Black model)	"			G
* 1-4	32'00'00 NB 09'39'20	"	"		CR-640	
* "	32'00'00 NB 09'39'30	" (Black model)	"		CR-640B	G
1-5	42'00'00 CB 60'32'80	Shade Tape	遮 光 テ ー プ			
1-6	42'00'00 CB 09'31'90	"	"			
1-7	42'00'00 CB 07'59'80	Anti Vibrator Tape	防 振 テ ー プ			
1-8	42'00'00 CB 07'41'90	Tape	ダブルタックテープ			
* 1-9	42'00'00 CB 60'32'70	"	両 面 テ ー プ			
* 3	32'00'00 NA 07'64'50	Main C. Board	メ イン シ ー ト			R
* "	32'00'00 NA 07'64'60	"	"			U,C
* "	32'00'00 NA 07'64'70	"	"			A
* "	32'00'00 NA 07'64'80	"	"			G,B
* "	32'00'00 NA 07'64'90	" (Black model)	"			G
* 4	42'00'00 GA 64'50'00	Power Transformer	電 源 ト ラ ン ス			U
* "	42'00'00 GA 64'51'00	"	"			G
* "	42'00'00 GA 64'52'00	"	"			A,B
* "	42'00'00 GA 64'53'00	"	"			R
* "	42'00'00 GA 64'72'00	"	"			C
5	40'10'00 CB 06'86'30	Cord Stopper	SR-3P-4	コ ー ド ス ト ッ パ ー		U,C
"	42'00'00 CB 07'27'50	"	SR-4N-4	"		R,A,G,B
6	42'00'00 CB 06'92'50	Binding Tie	BK-1	インシュロックタイ		
7	42'00'00 iL 00'05'70	Mica Base	MT-100	マイカベース		
* 8	42'00'00 JB 00'09'60	Pilot Lamp with Cap.	14.5V 80mA	パイロットランプリード式		
* 9	42'00'00 KA 90'19'30	Remote Push Switch		リモートプッシュSWワイヤ部		
* 10	42'00'00 KA 90'19'40	Remote Rotary Switch		リモートルーリ-SW操作ワイヤ部		
11	42'00'00 LA 00'29'50	2P Terminal Plate	MA0092A	2 P 中 継 端 子 台		A,G,B
* 12	42'00'00 LB 60'39'20	AC Outlet (3 Socket)	MD-86-4	AC. アウトレット3連		R,U,C
13	42'00'00 MG 00'07'80	Power Cord		電 源 コ ー ド		R
"	42'00'00 MG 00'08'40	"		"		U,C
"	42'00'00 MG 00'09'20	"		"		A
"	42'00'00 MG 00'09'50	"		"		G
"	42'00'00 MG 00'10'00	"		"		B
* 14	32'00'00 AA 60'66'90	Bottom Cover		ボ ト ム カ バ ー		
* 15	32'00'00 AA 60'67'10	Top Cover		ト ッ プ カ バ ー		R,U,A,C
* "	32'00'00 NB 60'12'00	Top Cover Unit		ト ッ プ カ バ ー ユ ニ ッ ト		G, B
15-1	42'00'00 EV 52'35'00	Stop Ring CS-Type	φ5	C S 止 メ 輪		G,B
* 15-2	32'00'00 CB 60'37'90	Radiation Grille		放 熱 グ リ ル		G,B
* 16	32'00'00 AA 60'67'50	Rear Panel		リ ア パ ネ ル		R
* "	32'00'00 AA 60'67'60	"		"		U,C
* "	32'00'00 AA 60'67'70	"		"		G
* "	32'00'00 AA 60'69'40	"		"		A,B
* 17	42'00'00 BA 08'05'70	Heat Sink		放 熱 板		
18	32'00'00 BA 07'33'80	Volume Knob		ボ リ ュ ー ム ツ マ ミ		
"	32'00'00 BA 07'60'80	" (Black model)		"		A-550B G
19	32'00'00 BA 08'01'40	Knob		ツ マ ミ	Inter-	R-300
"	32'00'00 BA 08'14'70	"		"	changeable	

* NEW PARTS

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
19	32,00,00 BA 08,01,70	Knob (Black model)	ツ マ ミ		R-300B	G
20	32,00,00 BA 07,94,60	Switch Knob	ス イ ッ チ ツ マ ミ		A-760	
"	32,00,00 BA 08,01,80	" (Black model)	"		R-300B	G
21	32,00,00 BB 06,94,40	Transistor Pusher	ト ラ ン ジ ス タ プ ッ シ ャ ー		R-300	
※ 22	32,00,00 CB 60,31,90	Indicator Lamp Cover	イ ラ ン プ カ バ ー			
※ 23	32,00,00 CB 60,32,00	Indicator Lamp Holder	イ ラ ン プ ホ ル ダ			
24	32,00,00 CB 09,38,30	Power Button	パ ワ ー ボ タ ン		CR-240	R,U,C,A
25	42,00,00 CB 06,88,80	Plastic Rivet	プ ラ ス チ ッ ク リ ベ ッ ト			R
26	32,00,00 CB 60,32,40	"	"			
※ 27	30,00,00 NB 60,29,50	Knob Ass'y	ツ マ ミ A s s ' y			G,B
※ "	32,00,00 NB 60,29,60	" (Black model)	"			G
28	42,00,00 CB 09,86,00	Leg	脚			
30	42,00,00 EK 39,50,60	Bind Head Tap-Tyte Screw(B-Tyte) 3x12 ZMC2-Bℓ	バ イ ン ド タ ッ プ タ イ ト (B タ イ ト)			
31	42,00,00 EK 92,00,10	" 4 x 6 ZMC2-Bℓ	"			
32	42,00,00 EK 36,50,40	B.W. Head Tapping Screw φ10M4 x 8 FCM3-Bℓ	プ レ ー フ ッ シ ャ ー ヘ ッ ド タ ッ プ イ ン グ ネ ヅ (2 種)			
34	42,00,00 EK 33,60,10	" 3x8 FCM3-Bℓ	"			
35	42,00,00 ED 33,00,60	Bind Head Screw M3 x 6 FCM3-Bℓ	バ イ ン ド 小 ネ ヅ			
36	42,00,00 EN 33,00,10	Bind Tapping Screw 3 x 8 FCM3-Bℓ	バ イ ン ド タ ッ プ イ ン グ ネ ヅ (2 種)			
37	42,00,00 EZ 00,14,00	Earth Lug Screw 3 x 13.5 MFNI-II	⊕ ア ー ス 端 子 ネ ヅ			
38	42,00,00 EV 90,13,60	Plain Washer Sems Type FNM3-3g	セ ム ス 平 座 金			
39	42,00,00 KA 90,13,00	Remote Push Switch	リ モ ー ト プ ッ シ ャ ー S W 操 作 部			
40	42,00,00 LB 20,14,80	Voltage Selector	電 圧 切 換 器			R
	32,00,00 NB 07,62,40	Accessories Ass'y	付 属 品 A s s ' y			
	42,00,00 TX 90,07,80	Hexagonal Lench 1.5φ	六 角 レ ン チ 1.5φ			

※ NEW PARTS

PARTS LIST (CIRCUIT BOARD)

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
*	32,00,00 NA 07 64,50	Main. C. Board	メ イ ン シ ー ト			R
*	32,00,00 NA 07 64,60	"	"			U,C
*	32,00,00 NA 07 64,70	"	"			A
*	32,00,00 NA 07 64,80	"	"			G,B
*	32,00,00 NA 07 64,90	"	"			G
C101, 102	42,00,00 FA 85 31,00	Mylar Cap. 0.001 μ F 50V	マ イ ラ ー コ ン			
C103, 104	42,00,00 FG 41 22,20	Ceramic Cap. 220pF 50V	セ ラ コ ン			
C105, 106	42,00,00 FG 41 22,20	" 220pF 50V	"			
C107, 108	42,00,00 UW 81 19,10	Electrolytic Cap. 1000 μ F 6.3V	ケ ミ コ ン			
C109, 110	42,00,00 FT 36 43,90	Polypropylene Film Cap. 0.039 μ F	P S コ ン			
C111, 112	42,00,00 FT 36 41,10	" 0.011 μ F	"			
C113, 114	42,00,00 UW 86 61,00	Electrolytic Cap. 1 μ F 50V	ケ ミ コ ン			
C115, 116	42,00,00 FA 85 41,00	Mylar Cap. 0.01 μ F 50V	マ イ ラ ー コ ン			
C117, 118	42,00,00 FG 41 23,30	Ceramic Cap. 330pF 50V	セ ラ コ ン			
C119, 120	42,00,00 FG 41 14,70	" 47pF 50V	"			
C121, 122	42,00,00 UW 86 61,00	Electrolytic Cap. 1 μ F 50V	ケ ミ コ ン			
C123, 124	42,00,00 UW 82 74,70	" 47 μ F 10V	"			
C125, 126	42,00,00 UW 86 63,30	" 3.3 μ F 50V	"			
C127, 128	42,00,00 FG 41 26,80	Ceramic Cap. 680pF 50V	セ ラ コ ン			
C129, 130	42,00,00 FA 85 46,80	Mylar Cap. 0.068 μ F 50V	マ イ ラ ー コ ン			
C131, 132	42,00,00 FA 85 43,30	" 0.033 μ F 50V	"			
C133, 134	42,00,00 FA 85 38,20	" 0.0082 μ F 50V	"			
C135, 136	42,00,00 UW 86 63,30	Electrolytic Cap. 3.3 μ F 50V	ケ ミ コ ン			
C137, 138	42,00,00 UW 67 81,00	" 100 μ F 63V	"			
C139, 140	42,00,00 FG 41 21,50	Ceramic Cap. 150pF 50V	セ ラ コ ン			
C141, 142	42,00,00 FG 41 07,00	" 7pF 50V	"			
C143, 144	42,00,00 UW 82 74,70	Electrolytic Cap. 47 μ F 10V	ケ ミ コ ン			
C145	42,00,00 UW 86 71,00	" 10 μ F 50V	"			
C146	42,00,00 UW 86 63,30	" 3.3 μ F 50V	"			
C149, 150	42,00,00 FG 44 41,00	Ceramic Cap. 0.01 μ F 50V	セ ラ コ ン			
C151, 152	42,00,00 FG 41 34,70	" 0.0047 μ F 50V	"			
C153, 154	42,00,00 FG 44 41,00	" 0.01 μ F 50V	"			
C155, 156	42,00,00 FH 61 18,20	" 82pF 500V	"			
C157, 158	42,00,00 FH 61 14,70	" 47pF 500V	"			
C159 ~ C162	42,00,00 FG 44 44,70	" 0.047 μ F 50V	"			
C163 ~ C166	42,00,00 FG 41 31,00	" 0.001 μ F 50V	"			
C167 ~ C170	42,00,00 FG 44 44,70	" 0.047 μ F 50V	"			
C171	42,00,00 FG 44 41,00	" 0.01 μ F 50V	"			
C172	42,00,00 FZ 00 25,10	" 0.01 μ F 200V	"			
C173, 174	42,00,00 FZ 00 25,00	Electrolytic Cap. 10000 μ F 63V	ケ ミ コ ン			
C175, 176	42,00,00 UW 86 71,00	" 10 μ F 50V	"			
C177, 178	42,00,00 UW 84 82,20	" 220 μ F 25V	"			
C179	42,00,00 UW 83 72,20	" 22 μ F 16V	"			
C180	42,00,00 UW 81 81,00	" 100 μ F 6.3V	"			
C181	42,00,00 UW 84 82,20	" 220 μ F 25V	"			
C182, 183	42,00,00 UW 83 71,00	" 10 μ F 16V	"			
C184	42,00,00 Fi 33 41,00	Ceramic Cap. 0.01 μ F 400V	セ ラ コ ン			A
"	42,00,00 Fi 34 41,00	" 0.01 μ F	"			R,U,C
"	42,00,00 FR 16 41,00	Metalized Paper Cap. 0.01 μ F 250V	M P コ ン			G,B
C185, 186	42,00,00 UW 86 63,30	Electrolytic Cap. 3.3 μ F 50V	ケ ミ コ ン			
C187, 188	42,00,00 UW 86 64,70	" 4.7 μ F 50V	"			
C189, 190	42,00,00 FA 85 33,90	Mylar Cap. 0.0039 μ F 50V	マ イ ラ ー コ ン			
* L101, 102	42,00,00 GE 20 03,70	Inductor 10mH	固定インダクター-FS型			

* NEW PARTS

Ref. No.	Part No.	Description	(部 品 名)	Remarks	Common model	Markets
R224	42,00,00 HJ 35 63,30	Carbon Resistor RD25	3.3k Ω	カーボン抵抗		
* VR101	42,00,00 HS 41 14,20	Variable Resistor	70k Ω A x 2	可変抵抗器		
* VR102	42,00,00 HS 31 13,00	"	200k Ω B x 2	"	Inter-changeable	
"	42,00,00 HS 41 12,90	"	200k Ω B x 2	"		
VR103	42,00,00 HS 31 12,20	"	20k Ω W x 2	"	Inter-changeable	
"	42,00,00 HS 41 11,80	"	20k Ω W x 2	"		
* VR104	42,00,00 HS 31 13,40	"	20k Ω G x 2	"	Inter-changeable	
"	42,00,00 HS 41 11,10	"	20k Ω G x 2	"		
* VR105	42,00,00 HS 31 13,10	"	10k Ω B	"	Inter-changeable	
"	42,00,00 HS 41 13,00	"	10k Ω B	"		
VR107, VR108	42,00,00 HT 37 00,80	Semi Variable	B20k Ω	半固定抵抗	Inter-changeable	
"	42,00,00 HT 77 00,70	"	B20k Ω	"		
VR109, VR110	42,00,00 HT 37 00,60	"	B2k Ω	"	Inter-changeable	
"	42,00,00 HT 77 00,40	"	B2k Ω	"		
Tr101 ~ Tr104	42,00,00 iE 10,24,00	FET	2SK170 (Y, GR, BL)	F E T		
Tr105 ~ Tr108	42,00,00 iC 23,20,10	Transistor	2SC2320 (E, F)	トランジスタ		
Tr109, 110	42,00,00 iA 09,99,10	"	2SA999 (E, F)	"	Inter-changeable	
"	42,00,00 iA 11,15,10	"	2SA1115 (E, F)	"		
Tr111, 112	42,00,00 iC 22,40,00	"	2SC2240 (GR, BL)	"	Complementary Pair.	
Tr113, 114	42,00,00 iA 09,70,00	"	2SA970 (GR, BL)	"		
Tr115, 116	42,00,00 iC 22,35,00	"	2SC2235 (O, Y)	"	Complementary Pair.	
Tr117, 118	42,00,00 iA 09,65,00	"	2SA965 (O, Y)	"		
Tr119, 120	42,00,00 iC 25,81,00	"	2SC2581 (O, Y)	"	Complementary Pair.	
* Tr121, 122	42,00,00 iA 11,06,00	"	2SA1106 (O, Y)	"		
Tr123	42,00,00 iD 04,38,00	"	2SD438	"		
Tr124	42,00,00 iB 05,60,00	"	2SB560	"		
Tr125	42,00,00 iC 23,20,10	"	2SC2320 (E, F)	"		
Tr126, 127	42,00,00 iC 22,40,00	"	2SC2240 (GR, BL)	"		
Tr128	42,00,00 iD 04,00,10	"	2SD400 (P2)	"		
Tr129	42,00,00 iA 09,99,10	"	2SA999 (E, F)	"	Inter-changeable	
"	42,00,00 iA 11,15,10	"	2SA1115 (E, F)	"		
D101 ~ D110	42,00,00 iF 00,00,40	Diode	1S1555	ダイオード	Inter-changeable	
"	42,00,00 iF 00,06,70	"	1S2473	"		
D111	42,00,00 iH 00,08,70	Diode Bridge	4D4841	ダイオードブリッジ	Inter-changeable	
"	42,00,00 iH 00,10,40	"	PB402 (LFA)	"		
D112, 113	40,10,00 iF 00,17,00	Zener Diode	RD15EB3	ツェナダイオード		
D114	42,00,00 iH 00,07,30	Diode	W06B	ダイオード		
D115	42,00,00 iF 00,23,50	Zener Diode	HZ12B-2	ツェナダイオード		
D116	42,00,00 iF 00,00,40	Diode	1S1555	ダイオード	Inter-changeable	
"	42,00,00 iF 00,06,70	"	1S2473	"		
D117	42,00,00 iH 00,07,30	"	W06B	"		
D119, 120	42,00,00 iF 00,00,40	"	1S1555	"	Inter-changeable	
"	42,00,00 iF 00,06,70	"	1S2473	"		
* IC101, 102	30,00,00 iG 03,96,10	IC	NJM4559DD	I C		
* IC103	42,00,00 iG 04,86,00	"	STK3062	"		
SW101	42,00,00 KA 90,16,80	Remote Push Switch		リモートプッシュスイッチ		
SW102	42,00,00 KA 90,10,70	Remote Switch		リモートスイッチ		
SW103-1	42,00,00 KA 90,12,30	Remote Rotary Switch		リモートロータリースイッチ		
* SW103-2	42,00,00 KA 90,19,10	"		"		
SW104	42,00,00 KA 80,23,50	Push Switch		プッシュスイッチ		
* SW105	42,00,00 KA 80,25,40	Push Switch		プッシュスイッチ		
* SW107	42,00,00 KA 80,25,20	Power Switch		電源スイッチ		R,A
"	42,00,00 KA 80,25,30	"		"		U,C

* NEW PARTS

Ref. No.	Part No.		Description	(部 品 名)	Remarks	Common model	Markets
L103, 104	42,00,00	GD 90,03,40	Output Coil	1.5μH	アウトプットコイル		
R101, 102	42,00,00	HJ 35,51,00	Carbon Resistor RD25	100Ω	カーボン抵抗		
R103, 104	42,00,00	HJ 35,41,00	"	10Ω	"		
R105, 106	42,00,00	HJ 35,74,70	"	47kΩ	"		
R107 ~ R110	42,00,00	HJ 35,62,20	"	2.2kΩ	"		
R111, 112	42,00,00	HJ 35,56,80	"	680Ω	"		
R113, 114	42,00,00	HJ 35,63,90	"	3.9kΩ	"		
R115, 116	42,00,00	HJ 35,51,50	"	150Ω	"		
R117, 118	42,00,00	HJ 35,41,00	"	10Ω	"		
R119, 120	42,00,00	HJ 35,72,20	"	22kΩ	"		
R121, 122	42,00,00	HU 57,78,20	Metal Film Resistor	82kΩ	金属被膜抵抗		
R123, 124	42,00,00	HU 57,66,80	"	6.8kΩ	"		
R125, 126	42,00,00	HJ 35,51,00	Carbon Resistor RD25	100Ω	カーボン抵抗		
R127, 128	42,00,00	HJ 35,54,70	"	470Ω	"		
R129, 130	42,00,00	HJ 35,81,00	"	100kΩ	"		
R131, 132	42,00,00	HJ 35,71,80	"	18kΩ	"		
R133, 134	42,00,00	HJ 35,74,70	"	47kΩ	"		
R135, 136	42,00,00	HJ 35,61,00	"	1kΩ	"		
R137 ~ R142	42,00,00	HJ 35,82,20	"	220kΩ	"		
R143, 144	42,00,00	HJ 35,61,50	"	1.5kΩ	"		
R145, 146	42,00,00	HK 35,61,60	"	1.6kΩ	"		
R147 ~ R150	42,00,00	HJ 35,64,70	"	4.7kΩ	"		
R151, 152	42,00,00	HJ 35,56,80	"	680Ω	"		
R153, 154	42,00,00	HJ 35,91,00	"	1MΩ	"		
R155, 156	42,00,00	HJ 35,52,20	"	220Ω	"		
R157, 158	42,00,00	HJ 35,71,00	"	10kΩ	"		
R159, 160	42,00,00	HJ 35,61,50	"	1.5kΩ	"		
R161, 162	42,00,00	HJ 35,56,80	"	680Ω	"		
R163, 164	42,00,00	HJ 35,74,70	"	47kΩ	"		
R165, 166	42,00,00	HV 55,44,70	Flame Proof Carbon Resistor RDF25SW 47Ω	47Ω	不燃化カーボン抵抗		
R167, 168	42,00,00	HJ 35,68,20	Carbon Resistor RD25	8.2kΩ	カーボン抵抗		
R169, 170	42,00,00	HJ 35,61,50	"	1.5kΩ	"		
R171 ~ R174	42,00,00	HV 55,55,60	Flame Proof Carbon Resistor RDF25SW 560Ω	560Ω	不燃化カーボン抵抗		
R175 ~ R178	42,00,00	HJ 35,64,70	Carbon Resistor RD25	4.7kΩ	カーボン抵抗		
* R179 ~ R182	42,00,00	HV 55,61,00	Flame Proof Carbon Resistor RDF25SW 1kΩ	1kΩ	不燃化カーボン抵抗		
* R183 ~ R186	42,00,00	HV 55,63,30	"	3.3kΩ	"		
R187, 188	42,00,00	HV 55,53,30	"	330Ω	"		
R189 ~ R192	42,00,00	HV 55,34,70	"	4.7Ω	"		
R193 ~ R196	42,00,00	HJ 35,62,20	Carbon Resistor RD25	2.2kΩ	カーボン抵抗		
R197, 198	42,00,00	HZ 00,15,80	Dual Metal Plate Resistor RGC 5P	0.33Ω	デュアル金属板抵抗		
R199, 200	42,00,00	HL 71,41,00	Flame Proof Carbon Resistor RDF25SW 1kΩ	1kΩ	酸金抵抗		
R201, 202	42,00,00	HL 71,34,70	"	1P 4.7Ω	"		
R203 ~ R208	42,00,00	HJ 35,55,60	Carbon Resistor RD25	560Ω	カーボン抵抗		
R209, 210	42,00,00	HJ 35,84,70	"	470kΩ	"		
R211, 212	42,00,00	HJ 35,81,50	"	150kΩ	"		
R213	42,00,00	HV 55,52,70	Flame Proof Carbon Resistor RDF25SW 270Ω	270Ω	不燃化カーボン抵抗		
R214, 215	42,00,00	HJ 35,71,00	Carbon Resistor RD25	10kΩ	カーボン抵抗		
* R216	42,00,00	HV 55,33,90	Flame Proof Carbon Resistor RD25SF 3.9Ω	3.9Ω	不燃化カーボン抵抗		
R217	42,00,00	HJ 35,62,20	Carbon Resistor RD25	2.2kΩ	カーボン抵抗		
R218	42,00,00	HJ 35,82,70	"	270kΩ	"		
R219, 220	42,00,00	HJ 35,64,70	"	4.7kΩ	"		
R221, 222	42,00,00	HJ 35,78,20	"	82kΩ	"		
R223	42,00,00	HJ 35,71,00	"	10kΩ	"		

* NEW PARTS

