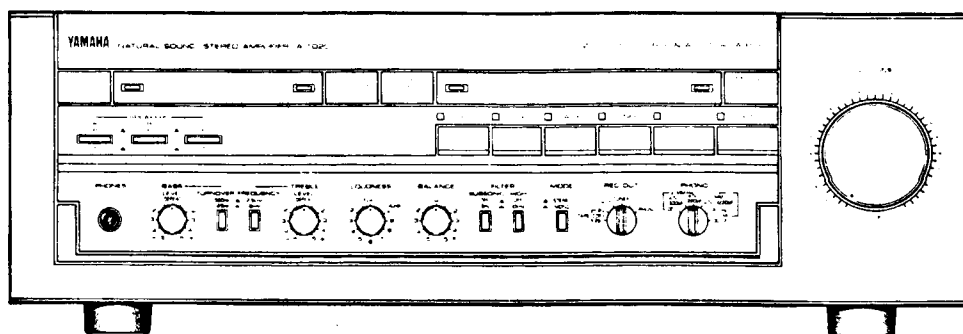


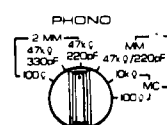
STEREO INTEGRATED AMPLIFIER A-1020

SERVICE MANUAL

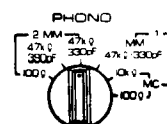
FRONT PANEL



U, C, R model



A, E model



IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principle agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit/s indicated on the cover. The research, engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

CONTENTS

TO SERVICE PERSONNEL	1	ADJUSTMENTS	5
SPECIFICATIONS	1	PRINTED CIRCUIT BOARD (Pattern side)	5 ~ 9
REARPANELS	2	SCHEMATIC DIAGRAM	10
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INTERNAL VIEW	4	PARTS LIST	12 ~ 18
DISASSEMBLY PROCEDURES	4		

004589

SINCE 1887



YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

2.6K-972 Printed in Japan '85.1

TO SERVICE PERSONNEL

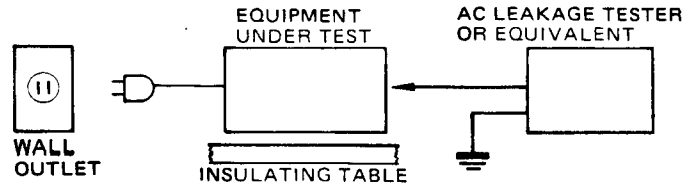
1. Critical Components Information.

Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.

2. Leakage Current Measurement (For 120 V Model Only).

When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.



SPECIFICATIONS

Continuous Power Per Channel	
20Hz ~ 20kHz, 0.005% THD, 8 Ω	125W
0.007% THD, 6 Ω	145W
1kHz, 0.01% THD, 8 Ω (IEC Rated Power)	130W (A)(E)
DIN Standard Output Power Per Channel	
1kHz, 1% THD, 4 Ω	169W (A)(E)
Dynamic Headroom	
8 Ω	1.36dB
4 Ω	1.73dB
Dynamic Power Per Channel (IHF)	
8 Ω	171W
6 Ω	216W
4 Ω	269W
Power Band Width	
0.003% THD, 62.5W, 8 Ω	10Hz ~ 50kHz
Damping Factor	
1kHz, 8 Ω (SPEAKER A)	45
Input Sensitivity/Impedance	
Phono 1 MC	160 μ V/100 Ω , 10k Ω
MM	2.5mV/47k Ω 220pF
	47k Ω 330pF (A) (E)
Phono 2 MM	2.5mV/47k Ω 220pF
	47k Ω 330pF (A) (E)
	47k Ω 330pF
	47k Ω 390pF (A) (E)
	100 Ω
CD, TUNER, AUX, TAPE	150mV/47k Ω
Input Sensitivity (New IHF)	
Phono MC	15 μ V
MM	0.23mV
CD, TUNER, AUX, TAPE	13.4mV
Maximum Input Signal	
1kHz, 0.01% THD, Phono MC	10mV
MM	170mV
Output Level/Impedance	
Rec Out	150mV/470 Ω
Headphone Jack Rated Output/Impedance	
0.005% THD	0.91V/8 Ω
Frequency Response	
20Hz ~ 20kHz, CD/TUNER/AUX/TAPE	+0
(TONE BYPASS ON)	-0.5dB
RIAA Equalization Deviation	
20Hz ~ 20kHz Phono MC	\pm 0.3dB
MM	\pm 0.2dB
Total Harmonic Distortion	
Phono MC to Rec Out 3V	0.005%
MM to Rec Out 3V	0.003%
CD/TUNER/AUX/TAPE to SP Out	0.005%
62.5W/8 Ω	
Intermodulation Distortion	
CD/TUNER/AUX/TAPE Rated Output/8 Ω	0.002%
1W/8 Ω	0.003%

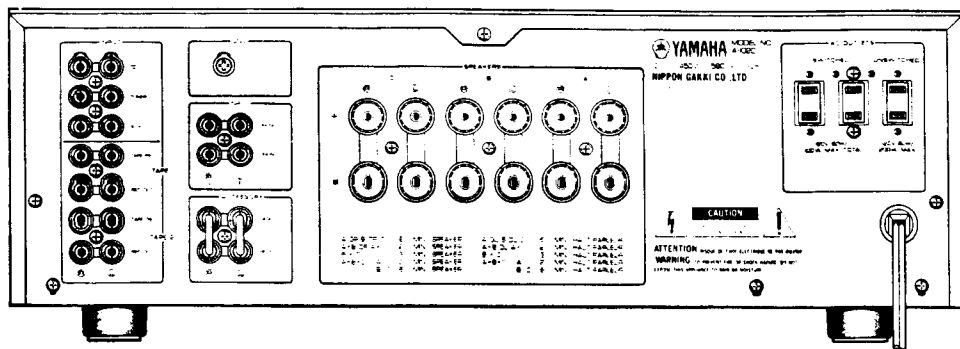
Signal to Noise Ratio (IHF-A-Network)	
Phono MC (500 μ V, Input Shorted)	80dB
MM (5mV, Input Shorted)	94dB
CD/TUNER/AUX/TAPE	
(Input Shorted, TONE BYPASS ON)	106dB
Signal to Noise Ratio (New IHF)	
Phono MC	76dB
MM	79dB
CD/TUNER/AUX/TAPE	86dB
Input Equivalent Noise	
Phono MC	-145dBV (A)(E)
MM	-138dBV (A)(E)
Residual Noise (IHF-A-Network)	
TONE BYPASS ON	133 μ V
Channel Separation	
Phono MM (Input Shorted, 1kHz, Vol -30dB)	70dB
CD/TUNER/AUX/TAPE (5.1k Ω , 1kHz, Vol -30dB)	65dB
Tone Control Characteristics	
BASS boost/cut	\pm 10dB (at 20Hz)
turnover frequency	125Hz, 500Hz
TREBLE boost/cut	\pm 10dB (at 20kHz)
	2.5kHz, 8kHz
Filter Characteristics	
Low (Subsonic)	15Hz, -12dB/oct
High	10kHz, -12dB/oct
Continuous Loudness Control (Level-related equalization)	
Attenuation	-40dB (at 1kHz)
Gain Tracking Error (0 to -60dB)	
	-20dB
Power Supply	
U.S.A. & Canadian models	120V AC, 60Hz
General model	110V/120V/220V/240V AC
	60/50Hz
European model	220V/240V AC, 50Hz
Australian model	240V AC, 50Hz
Power Consumption	
	450W (U)(C)(A)
	580W (E)
	280W (R)
AC Outlet (U) (C) (R)	
Switched x 2	200W max total
Unswitched x 1	200W max
Dimensions (W x H x D)	
	435 x 147 x 422 mm
	(17-1/8" x 5-3/4" x 16-5/8")
Weight	
	11.5 kg (26.3 lbs.)

*Specifications are subject to change without notice.

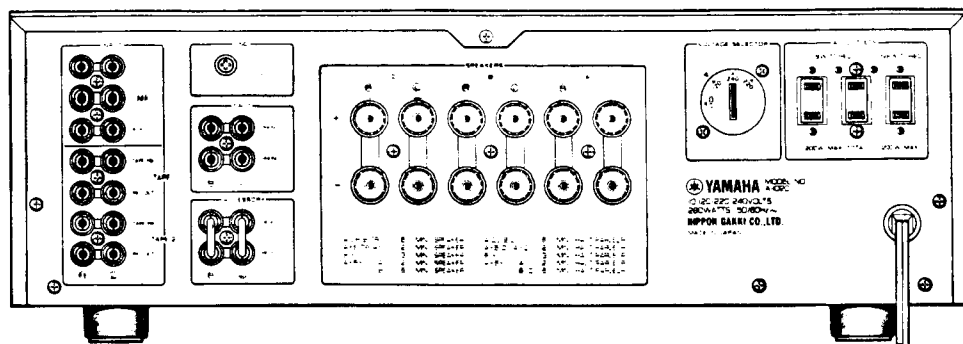
- (U) U.S.A. model
- (C) Canadian model
- (A) Australian model
- (E) European model
- (R) General model

REAR PANELS

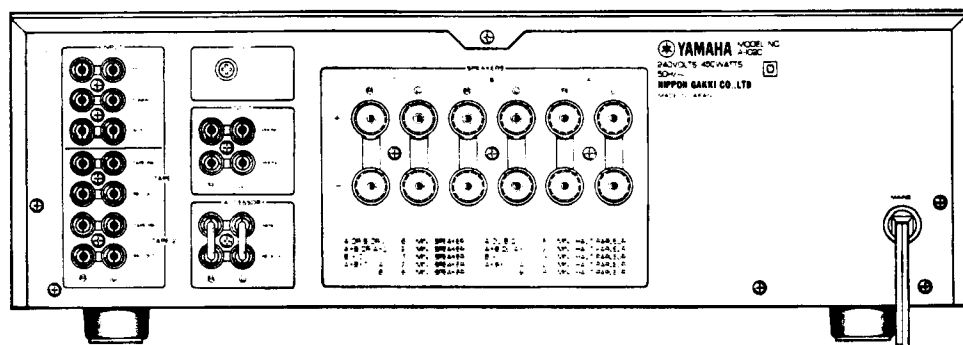
▼ U.S.A. & Canadian models



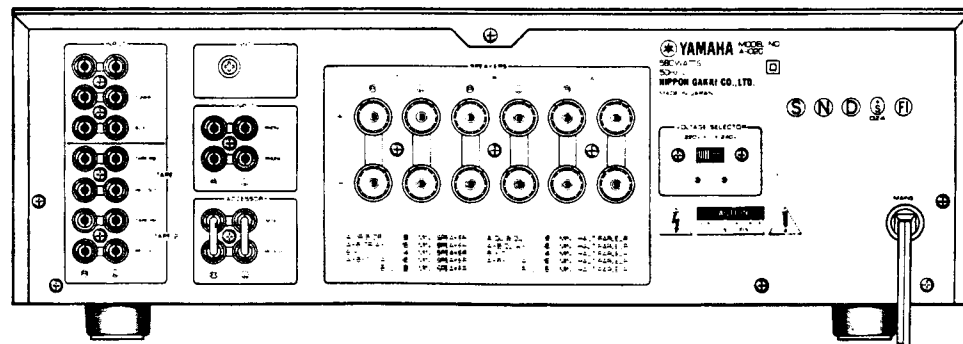
▼ General model



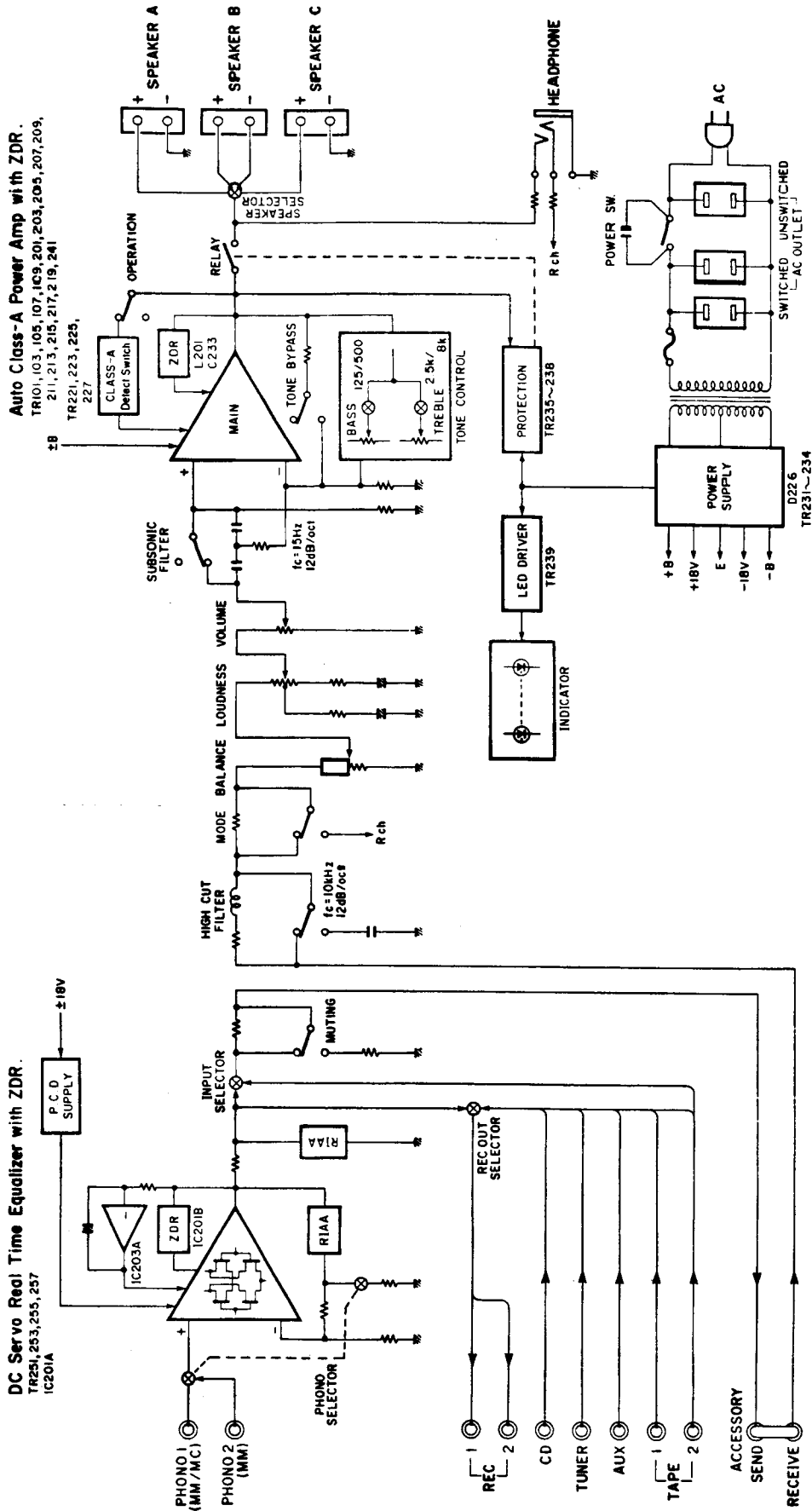
▼ Australian model



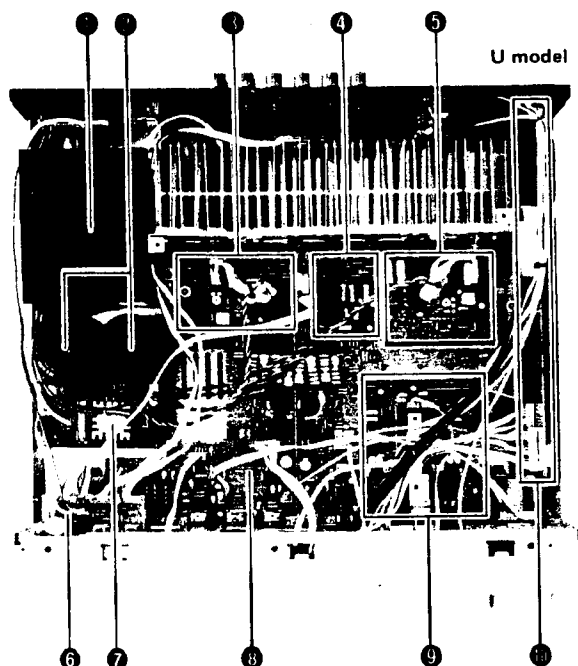
▼ European model



■ BLOCK DIAGRAM



INTERNAL VIEW



- ① POWER TRANSFORMER
U.S.A. model: GA68410
Canadian model: GA68420
European model: GA68430
Australian model: GA68440
General model: GA68450
- ② ELECTROLYTIC CAP.: 22000 μ F 69V
- ③ POWER AMP SECTION (Lch)
- ④ PROTECTION SECTION
- ⑤ POWER AMP SECTION (Rch)
- ⑥ POWER SWITCH
- ⑦ DIODE BRIDGE: D5FB20
- ⑧ MAIN CIRCUIT BOARD
- ⑨ EQUALIZER AMP SECTION
- ⑩ FUNCTION CIRCUIT BOARD

DISASSEMBLY PROCEDURES

(Remove parts in disassembly order as numbered.)

1. **Removal of Top Cover**
Remove 5 screws (①) in Fig. 1, and slide the Top Cover back.
2. **Removal of Front Panel**
Remove 6 screws (②) in Fig. 1, and pull the Front Panel forward.
3. **Removal of Bottom Cover**
Remove 6 screws (③) in Fig. 1.

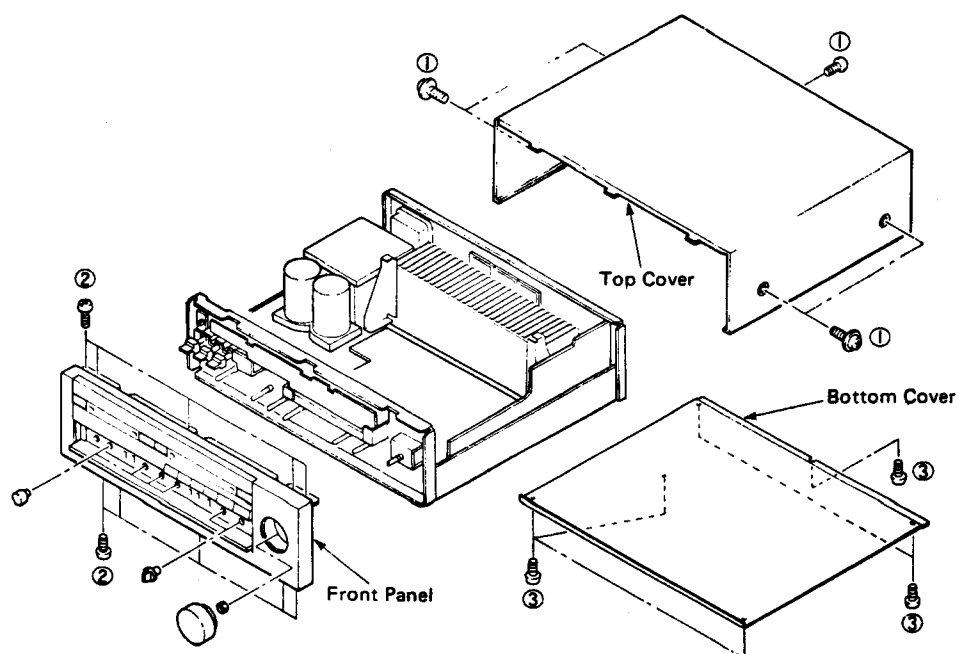


Fig. 1

ADJUSTMENTS

● IDLING CURRENT ADJUSTMENT

After the power has been turned on, age about 2 minutes in no signal and non-loaded condition.

Switch off the Auto CLASS A switch.

Adjust VR207 (Lch) and VR208 (Rch) so that the voltage across the terminals of R277 (Lch) and R272 (Rch) comes to $8mV \pm 2mV$ DC.

● CONFIRMATION OF AUTO CLASS A OPERATION

After the auto class A has been turned on, age about 1 minute in no signal and non-loaded condition.

Confirm that the voltage across the terminals of R277 (Lch) and R272 (Rch) comes to $55mV \pm 25mV$ DC.

Item to be Adjusted	Test Points	Adjustment Points	Rating
Idling Current	Lch: Across the terminals of R277 Rch: Across the terminals of R272	VR207 (Lch) VR208 (Rch)	$8mV \pm 2mV$ DC.
AUTO CLASS A OPERATION		—	$55mV \pm 25mV$ DC.

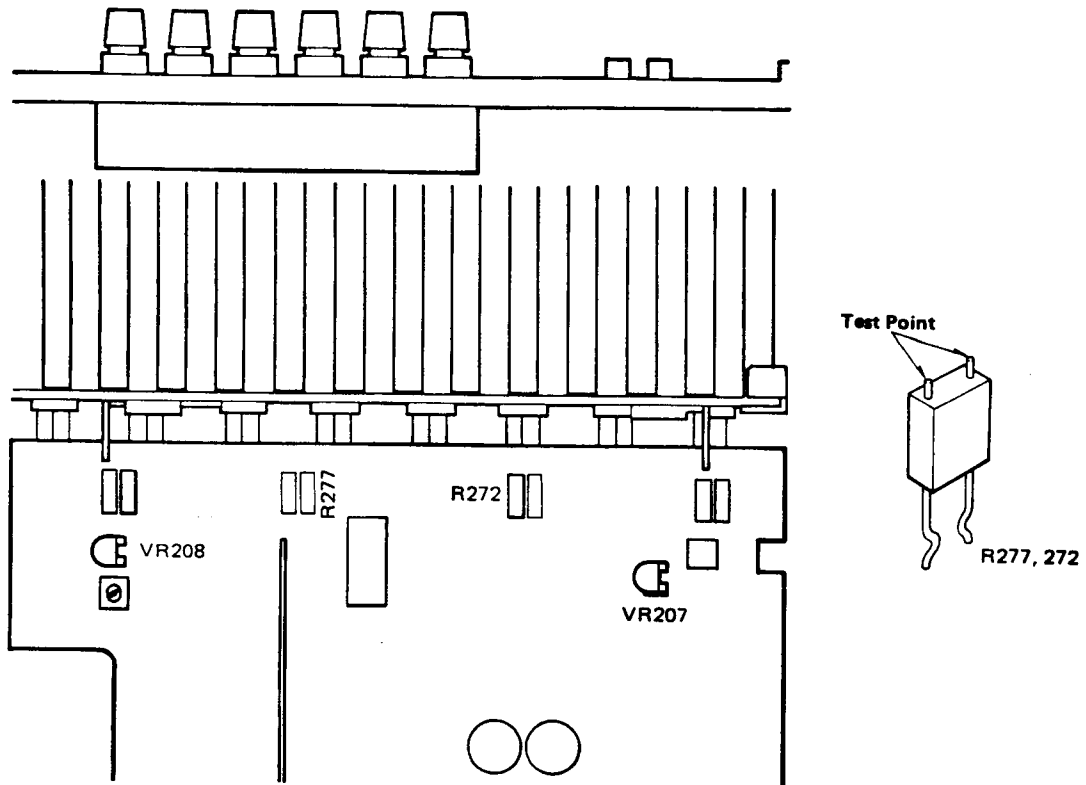


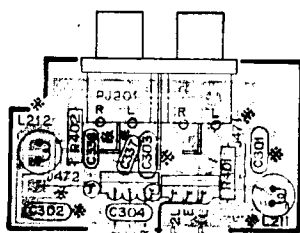
Fig. 2

PRINTED CIRCUIT BOARD (Pattern side)

Main Circuit Board (4)

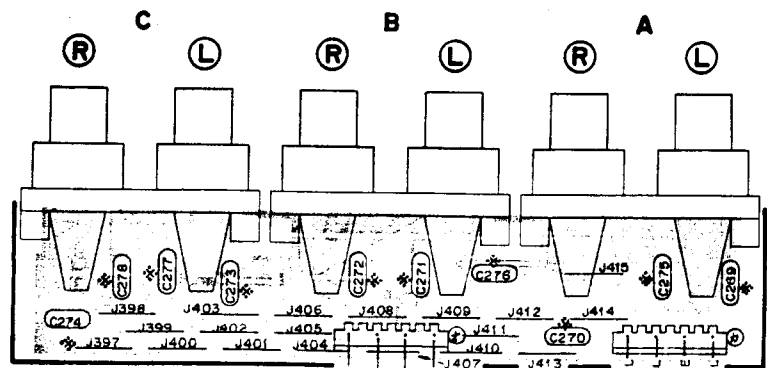
Main Circuit Board (7)

INPUT
PHONO 2 PHONO 1

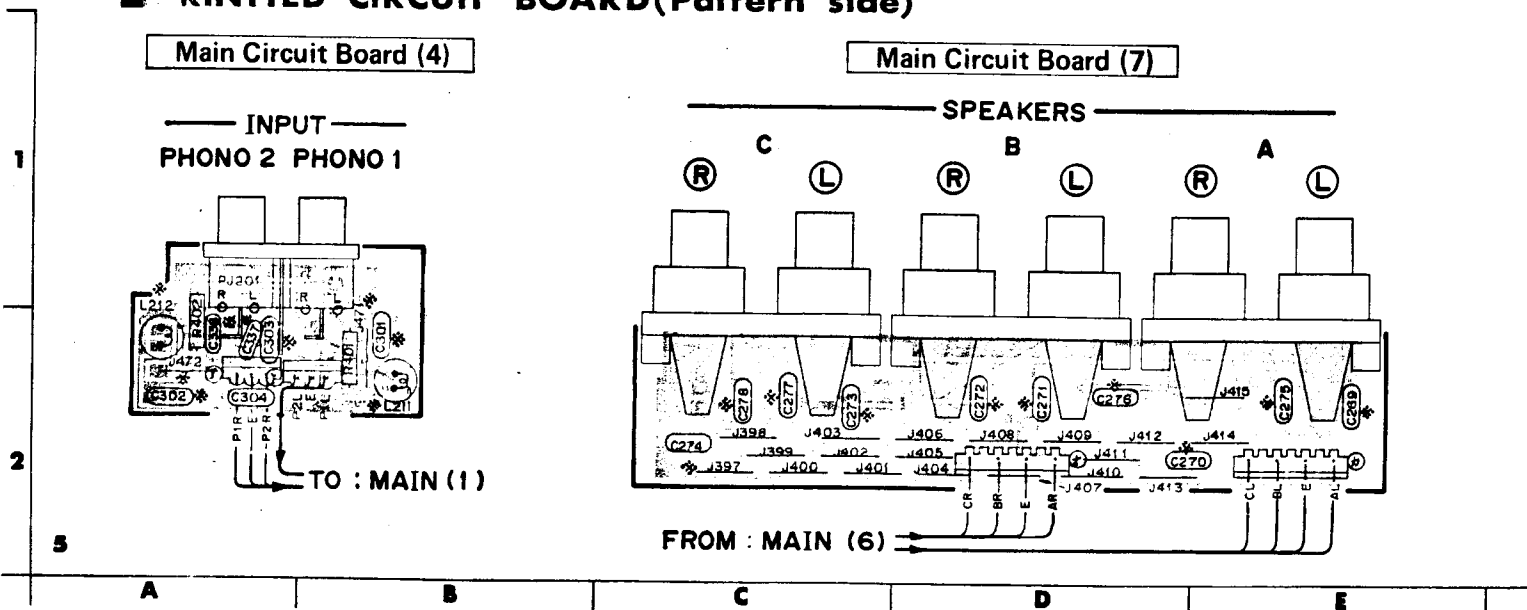


TO : MAIN (1)

SPEAKERS



FROM : MAIN (6)



PRINTED CIRCUIT BOARD (Pattern side)

Note) 文字面 : Letter side

1

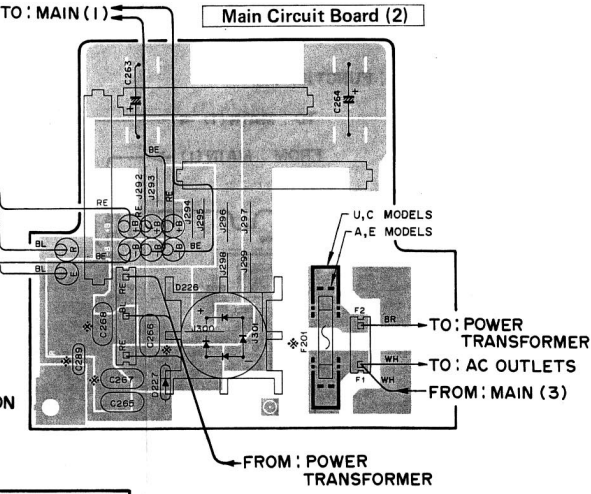
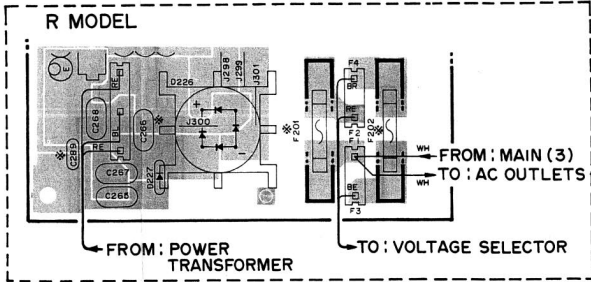
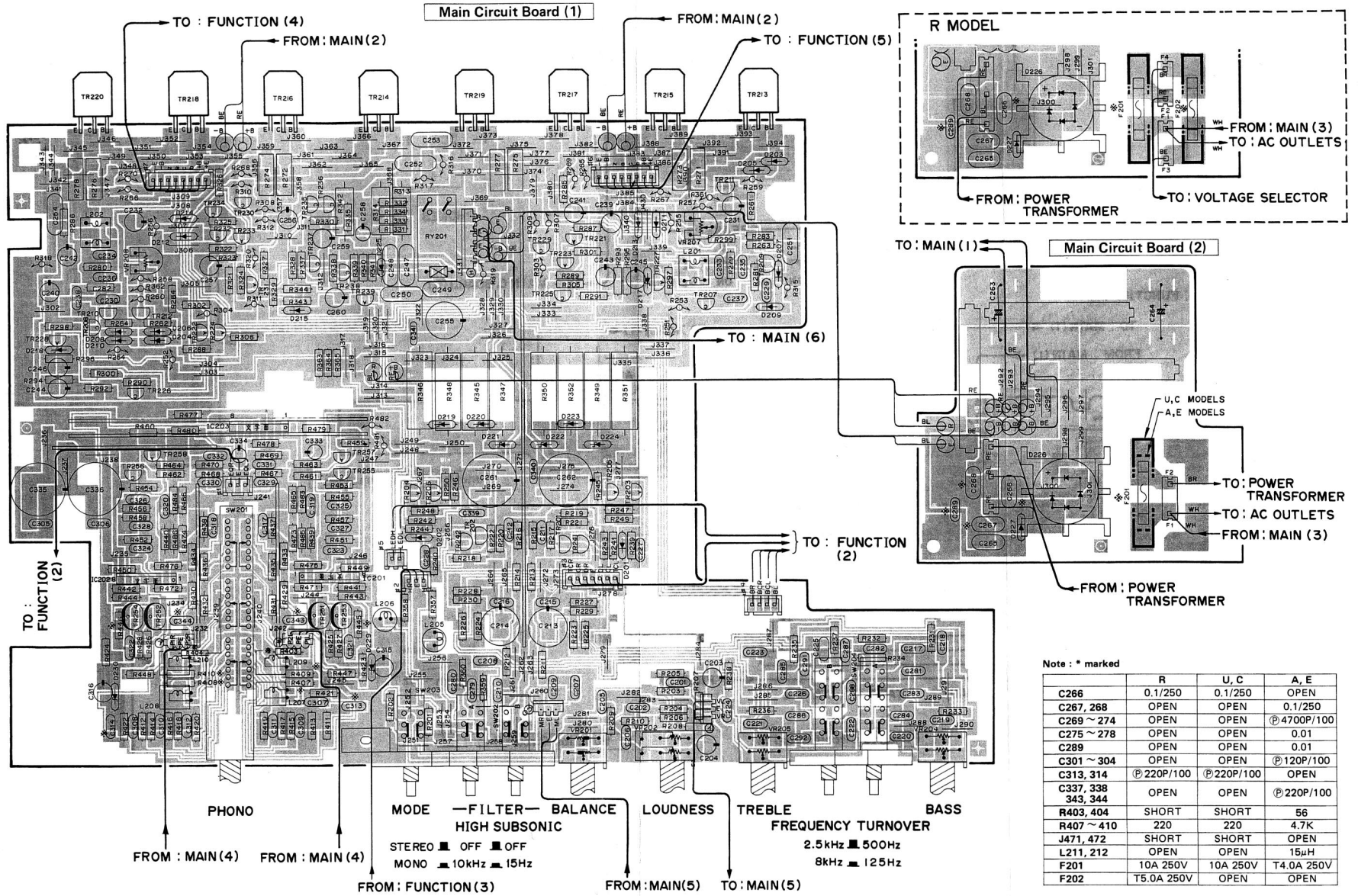
2

3

4

5

6



Note : * marked

	R	U, C	A, E
C266	0.1/250	0.1/250	OPEN
C267, 268	OPEN	OPEN	0.1/250
C269 ~ 274	OPEN	OPEN	Ⓟ 4700P/100
C275 ~ 278	OPEN	OPEN	0.01
C289	OPEN	OPEN	0.01
C301 ~ 304	OPEN	OPEN	Ⓟ 120P/100
C313, 314	Ⓟ 220P/100	Ⓟ 220P/100	OPEN
C337, 338 343, 344	OPEN	OPEN	Ⓟ 220P/100
R403, 404	SHORT	SHORT	56
R407 ~ 410	220	220	4.7K
J471, 472	SHORT	SHORT	OPEN
L211, 212	OPEN	OPEN	15μH
F201	10A 250V	10A 250V	T4.0A 250V
F202	T5.0A 250V	OPEN	OPEN

A-1020

A

B

C

D

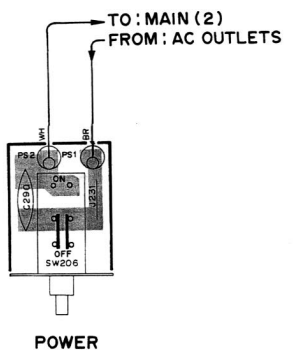
E

F

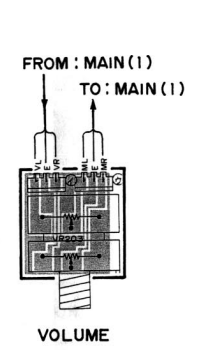
G

H

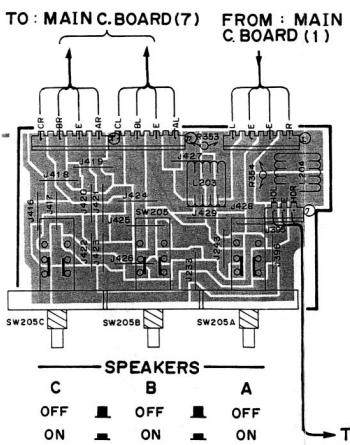
Main Circuit Board (3)



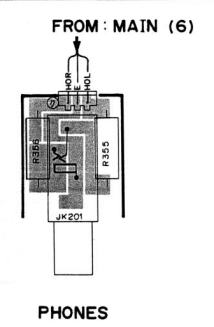
Main Circuit Board (5)



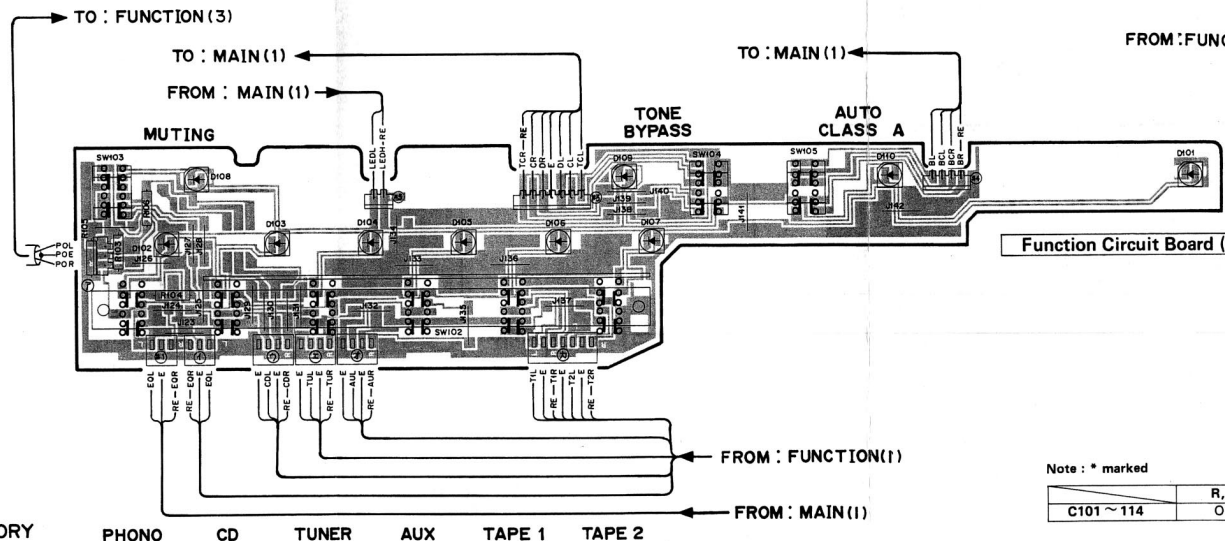
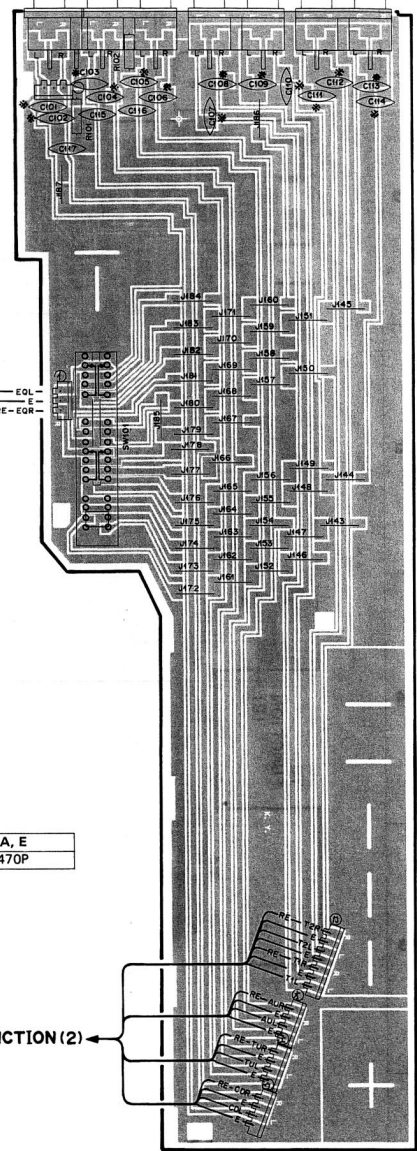
Main Circuit Board (6)



Main Circuit Board (8)



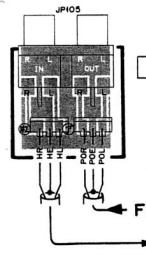
INPUT CD AUX TAPE 1 TAPE 2
TUNER PB REC PB REC
OUT OUT



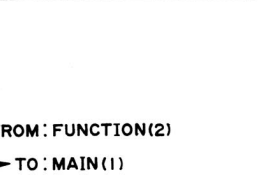
Note: * marked

C101 ~ 114	R, U, C OPEN	A, E 470P
------------	-----------------	--------------

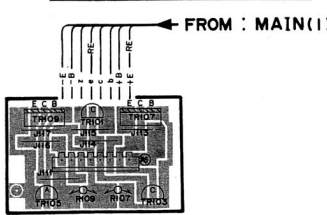
ACCESSORY SEND RECEIVE



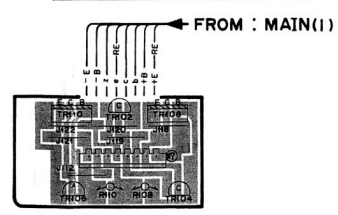
Function Circuit Board (3)



Function Circuit Board (4)

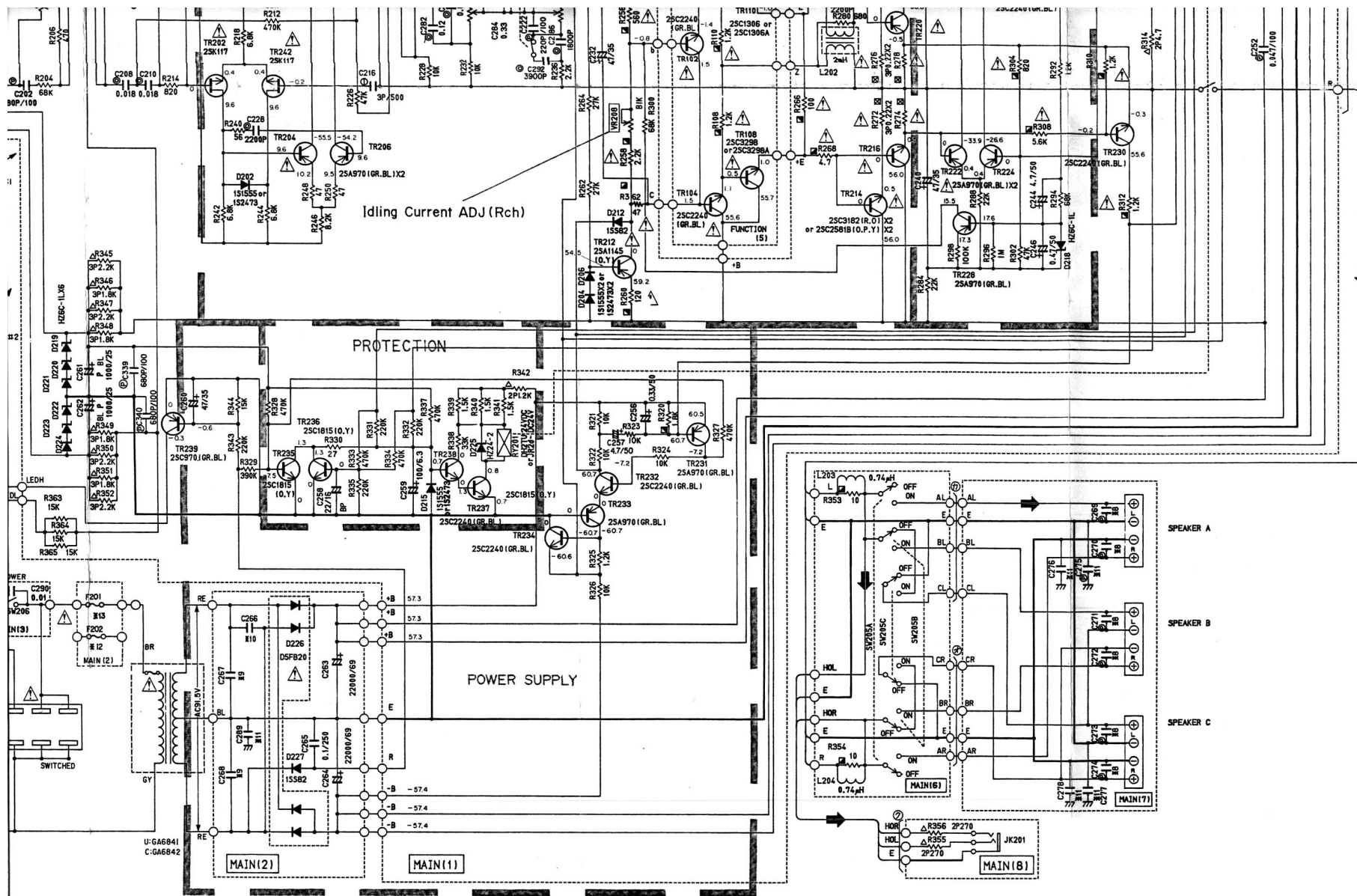


Function Circuit Board (5)

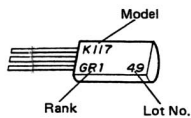


Function Circuit Board (1)

1
2
3
4
5
8



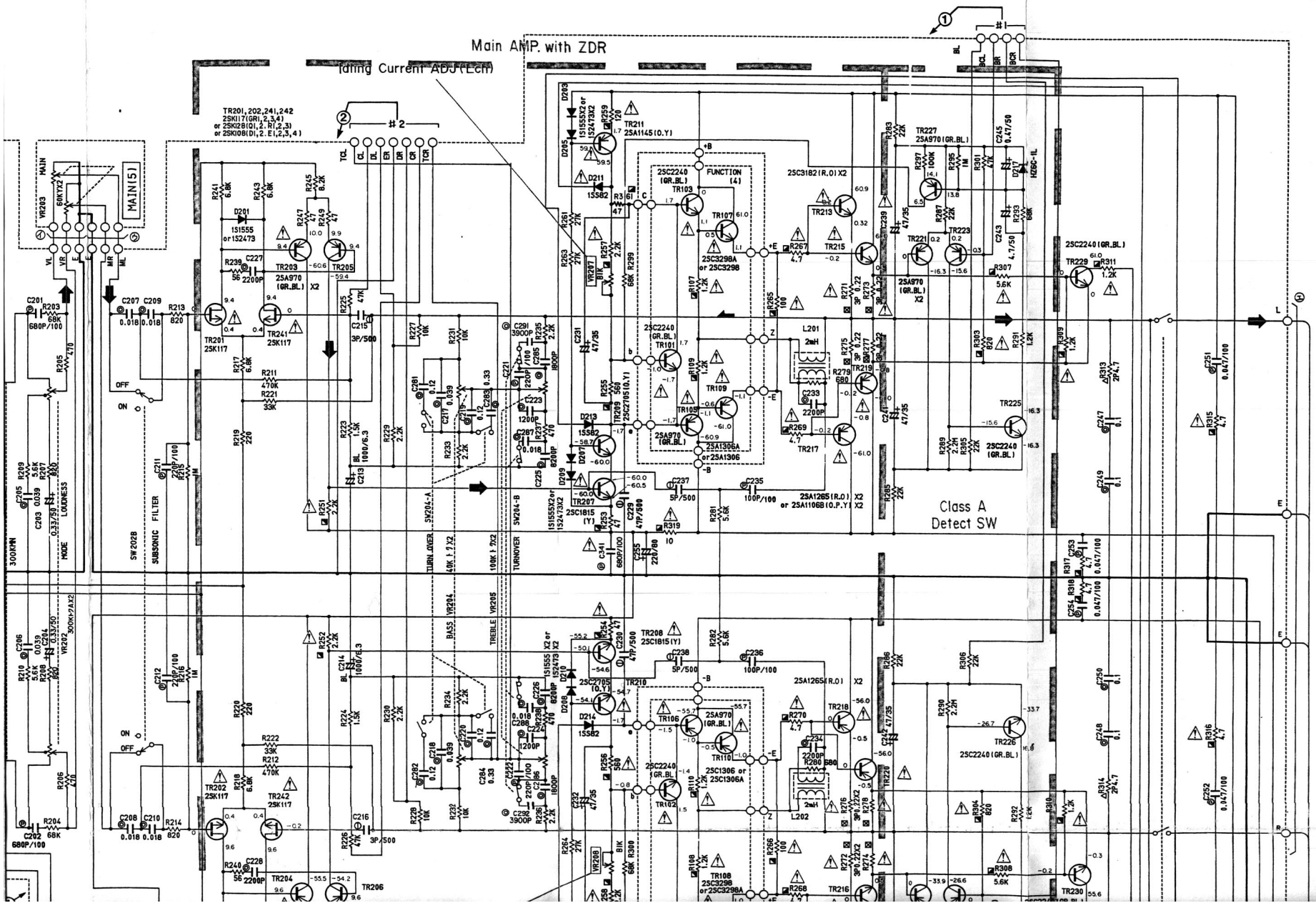
Note: The same rank FETs must be used for TR201, TR202, TR241, TR242. FETs are classified into four rank (GR1, GR2, GR3, GR4).



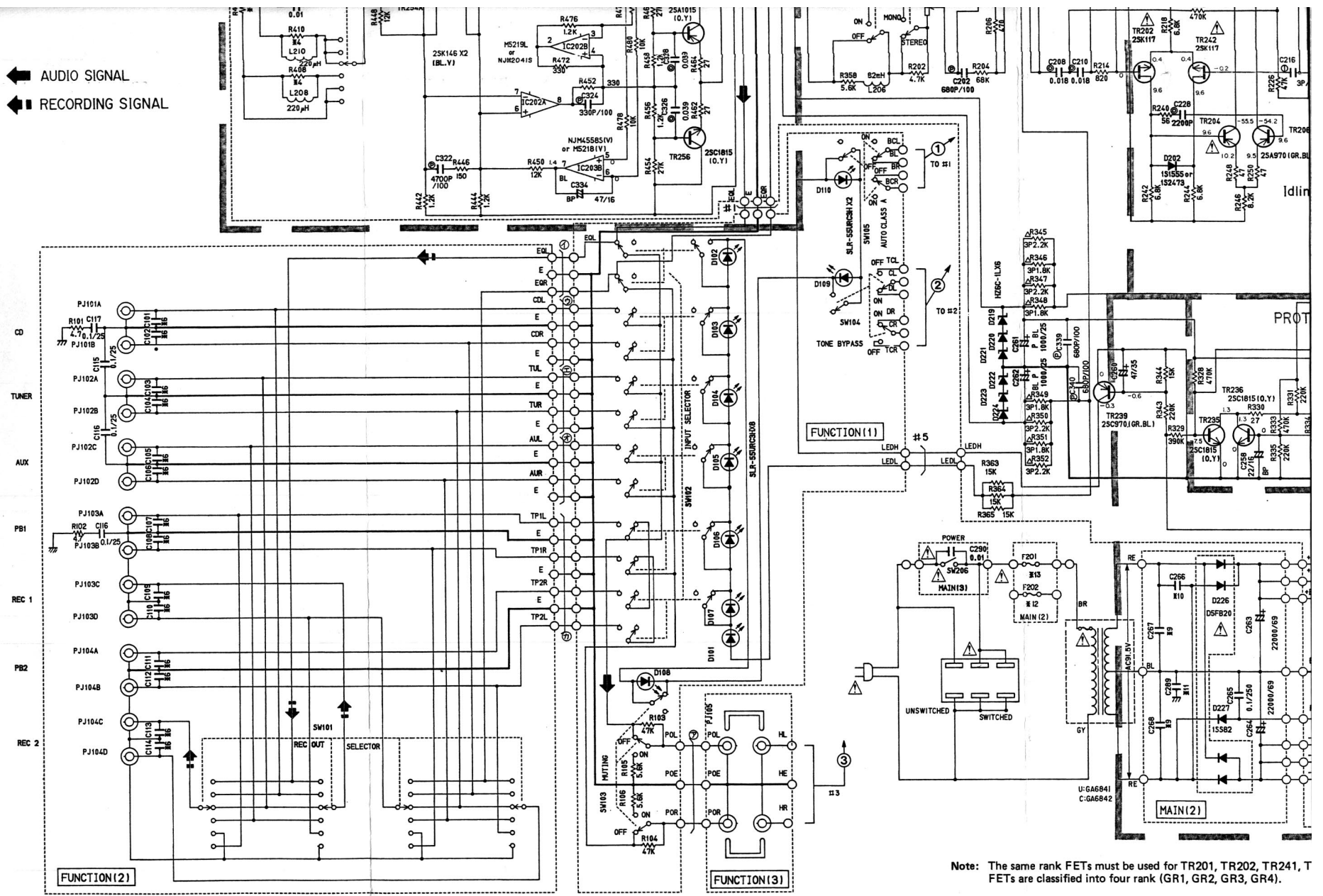
• All voltages are measured with a 10MS/DC electric volt meter.

AUTO CLASS A → OFF Lch
 AUTO CLASS A → ON Rch

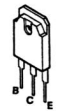


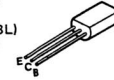



- Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
- Schematic diagram is subject to change without notice.

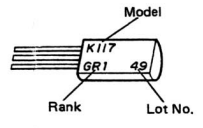


← AUDIO SIGNAL
 ← RECORDING SIGNAL



Note: The same rank FETs must be used for TR201, TR202, TR241, T FETs are classified into four rank (GR1, GR2, GR3, GR4).

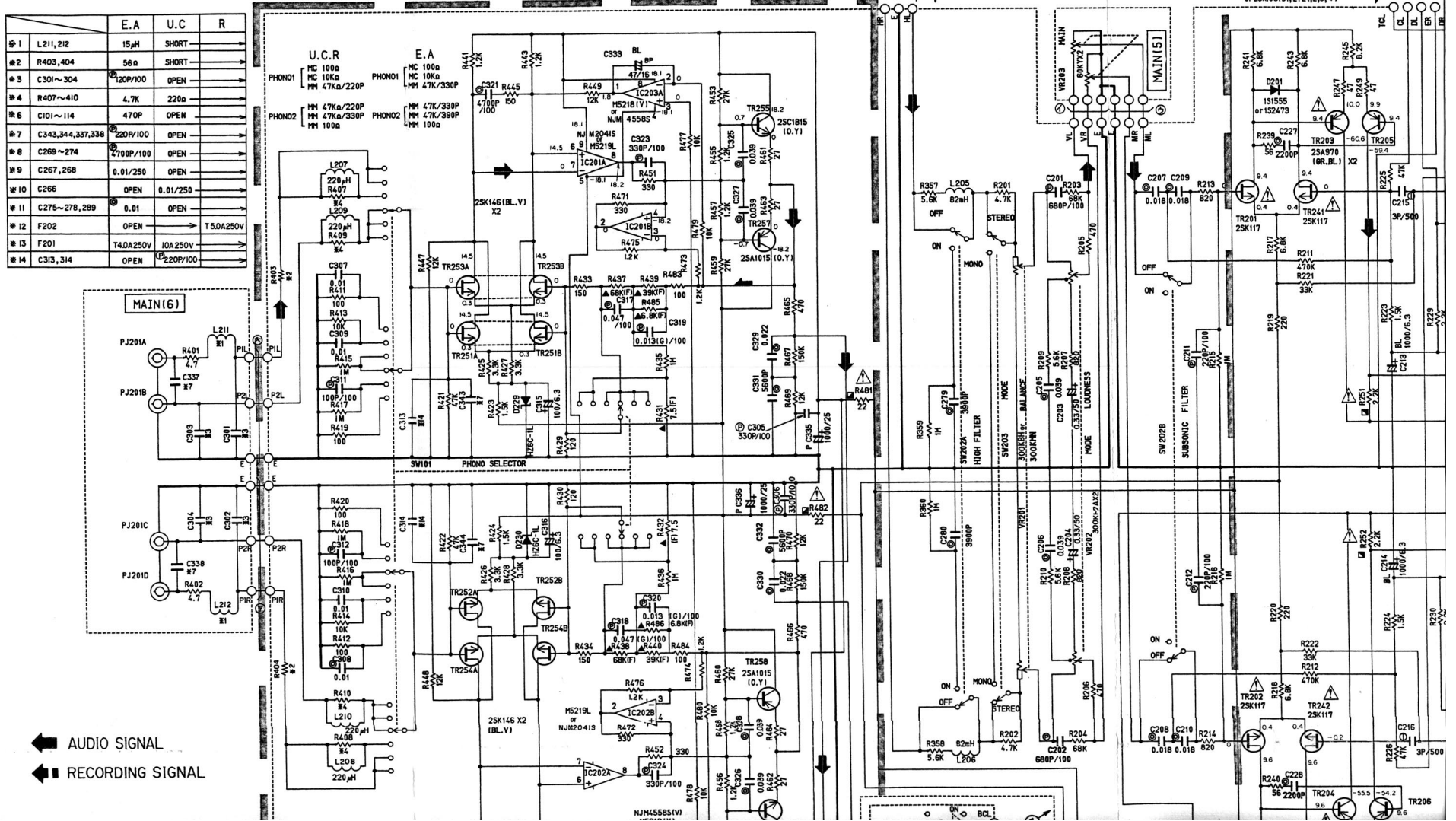
2SC2581B (O, P, Y) 2SC3182 (R, O) 2SA1106B (O, P, Y) 2SA1265 (R, O)		2SA1306A 2SC3298A 2SA1306 2SC3298		2SK146 (BL, V)		2SK117 (GR1, 2, 3, 4)		2SA970 (GR, BL) 2SA1015 (Y) 2SA1145 (O, Y) 2SC1815 (Y) 2SC2240 (GR, BL) 2SC2705 (O, Y)		HZ24-2 1S2473 1S1555 HZ6C-1L 1SS82		D5FB20		M5218L NJM4558S (F) M5219L NJM2041S
--	---	--	---	----------------	---	-----------------------	---	---	---	--	---	--------	---	--



■ SCHEMATIC DIAGRAM

DC Servo Real Time EQ AMP. with ZDR

	E.A	U.C	R
*1	L211, 212	15μH	SHORT
*2	R403, 404	56Ω	SHORT
*3	C301~304	120P/100	OPEN
*4	R407~410	4.7K	220Ω
*6	C101~114	470P	OPEN
*7	C343, 344, 337, 338	220P/100	OPEN
*8	C269~274	4700P/100	OPEN
*9	C267, 268	0.01/250	OPEN
*10	C266	OPEN	0.01/250
*11	C275~278, 289	0.01	OPEN
*12	F202	OPEN	T.5.0A250V
*13	F201	T4.0A250V	10A250V
*14	C313, 314	OPEN	220P/100



← AUDIO SIGNAL
 ← RECORDING SIGNAL

PARTS LIST

ELECTRICAL PARTS

- Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
- Carbon resistors of this stereo amplifier are 1/4W. There are no description about them in this parts list. Use the "Parts No." HJ35 000C (1/4W) or equivalent.

Ref No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
*	NA 08 71 00	Main Circuit Board	メ イ ン シ ー ト	Silver		R	
*	NA 08 71 10	"	"	Black		R	
*	NA 08 71 20	"	"	Silver		U,C	
*	NA 08 71 30	"	"	Black		U,C	
*	NA 08 71 40	"	"	Silver		A,E	
*	NA 08 71 50	"	"	Black		A,E	
	FC 36 51 00	Mylar Cap.	マ イ ラ ー コ ン	C247~250			
	FC 34 31 20	"	"	C223,224			
	FC 34 31 80	"	"	C285,286			
	FC 34 32 20	"	"	C227,228,233,234			
	FC 34 33 90	"	"	C279,280,291,292			
	FC 34 35 60	"	"	C331,332			
	FC 34 38 20	"	"	C225,226			
	FC 34 41 00	"	"	C307~310			
	FC 34 41 00	"	"	C275~278,289		A,E	
	FC 34 41 80	"	"	C207~210,287,288			
	FC 34 42 20	"	"	C329,330			
	FC 34 43 90	"	"	C217,218,325~328,205,206			
	FA 55 51 20	"	"	C219,220,281,282			
	FA 55 53 30	"	"	C283,284			
	FI 38 41 00	Ceramic Cap.	セ ラ コ ン	C290			Δ
	FU 35 03 00	Mica Cap.	マ イ カ コ ン	C215,216			
	FU 35 05 00	"	"	C237,238			
	FU 35 14 70	"	"	C229,230			
	FV 44 91 00	Electrolytic Cap.	ケ ミ コ ン	C335,336			
	FZ 00 46 60	Metallized Mylar Cap.	M M コ ン	C266		R,U,C	
	FZ 00 46 60	"	"	C267,268		A,E	
	FZ 00 46 60	"	"	C265			
	FZ 00 47 00	Electrolytic Cap.	B P ケ ミ コ ン	C258			
*	FZ 00 72 00	"	ケ ミ コ ン	C255			
	FZ 00 62 70	"	ブ ラ ッ ク ゲ ー ト コ ン	C213,214			
	FZ 00 74 20	"	"	C333,334			
	UT 46 41 30	Polypropylene Film Cap.	ポ リ プ ロ コ ン	C319,320			
	UT 46 44 70	"	"	C317,318			
	UT 45 21 00	"	"	C235,236,311,312			
	UT 45 22 20	"	"	C337,338,343,344		A,E	
	UT 45 21 20	"	"	C301~304		A,E	
	UT 45 22 20	"	"	C211,212,221,222			
	UT 45 22 20	"	"	C313,314		R,U,C	
	UT 45 23 30	"	"	C305,306,323,324			
	UT 45 26 80	"	"	C201,202,339~341			
	UT 45 34 70	"	"	C269~274		A,E	
	UT 45 34 70	"	"	C321,322			
	UT 45 44 70	"	"	C251~254			
	UW 81 81 00	Electrolytic Cap.	ケ ミ コ ン	C259,315,316			
	UW 85 74 70	"	"	C231,232,239~242,260			
	UW 96 54 70	"	"	C245,246			
	UW 96 64 70	"	"	C243,244,257			
	UJ 16 53 30	"	"	C203,204,256			
	GD 90 06 80	Coil	コ イ ル	L203,204			
	GE 90 08 40	"	"	L211,212		A,E	

*New Parts (新規部品)

A-1020

Ref. No.	Part No.	Description	部品名		Remarks	Common Model	Markets	ランク
	GD 90 07 10	ZDR Transformer	2mH	Z D R ト ラ ンス	L201,202	Inter-changeable		
	GD 90 07 20	"	2mH	"	"			
*	GD 90 08 00	Choke Coil	82mH	チ ョ ー ク コ イ ル	L205,206			
	GE 90 03 30	"	220 μ H	"	L207~210			
	HL 82 34 70	Metal Oxide Film Resistor	4.7 Ω 2W	酸 金 抵 抗	R313,314			
	HL 72 52 70	"	270 Ω 2W	"	R355,356			
	HL 72 61 20	"	1.2k Ω 2W	"	R342			
	HL 33 61 80	"	1.8k Ω 3W	"	R346,348,349,351			
	HL 33 62 20	"	2.2k Ω 3W	"	R345,347,350,352			
	HU 57 37 50	Metal Film Resistor	7.5 Ω 1/4W	金 属 皮 膜 抵 抗	R431,432			
	HU 57 66 80	"	6.8k Ω 1/4W	"	R485,486			
	HU 57 73 90	"	39k Ω 1/4W	"	R439,440			
	HU 57 76 80	"	68k Ω 1/4W	"	R437,438			
	HV 45 34 70	Flame Proof Carbon Resistor	4.7 Ω ERD25FV	不 燃 化 カ ー ボ ン 抵 抗	R267~270,315~318			△
	HV 45 41 00	"	10 Ω "	"	R319,353,354			
	HV 45 42 20	"	22 Ω "	"	R481,482			
	HV 45 44 70	"	47 Ω "	"	R253,254,361,362			△
	HV 45 51 00	"	100 Ω "	"	R265,266			△
	HV 45 51 20	"	120 Ω "	"	R259,260			△
	HV 45 55 60	"	560 Ω "	"	R255,256			
	HV 45 58 20	"	820 Ω "	"	R303,304			△
	HV 45 61 20	"	1.2k Ω "	"	R309~312			△
	HV 45 61 80	"	1.8k Ω "	"	R320			
	HV 45 62 20	"	2.2k Ω "	"	R251,252,257,258			△
	HV 45 65 60	"	5.6k Ω "	"	R307,308			△
	HZ 00 30 50	Metal Film Resistor	0.22 Ω 3W	金 属 板 抵 抗	R271~278			△
*	HS 31 25 00	Potentiometer	40Kトク×2	可 変 抵 抗 器	VR204	Inter-changeable		
*	HS 41 23 70	"	40Kトク×2	"	"			
*	HS 31 25 10	"	100Kトク×2	"	VR205	Inter-changeable		
*	HS 41 23 80	"	100Kトク×2	"	"			
*	HS 31 25 20	"	300KトクA×2	"	VR202	Inter-changeable		
*	HS 41 25 00	"	300KトクA×2	"	"			
*	HS 31 25 30	"	300KBH	"	VR201	Inter-changeable		
*	HS 41 24 80	"	300KMN	"	"			
	HS 32 07 00	"	60KY×2	"	VR203			
	HT 37 00 10	Pre-Set Potentiometer	B1K Ω	半 固 定 抵 抗	VR207,208			
	iA 09 70 00	Transistor	2SA970 (GR,BL)	ト ラ ン ジ ス タ	TR203~206,221~224,227,228,231,233,239			△
	iA 10 15 20	"	2SA1015 (Y)	"	TR257,258			△
	iA 11 45 00	"	2SA1145 (O,Y)	"	TR211,212			△
	iC 18 15 20	"	2SC1815 (Y)	"	TR207,208,235,236,238,255,256			△
	iC 22 40 00	"	2SC2240 (GR,BL)	"	TR225,226,229,230,232,234,237			
	iC 27 05 00	"	2SC2705 (O,Y)	"	TR209,210			△
	iE 10 22 00	FET	2SK146 (BL,V)	F E T	TR251~254			
	iE 10 34 10	"	2SK117 (GR1,2,3,4)	"	TR201,202,241,242			△
	iF 00 06 70	Diode	1S2473	ダ イ オ ード	D201~210,215	Inter-changeable		
	iF 00 00 40	"	1S1555	"	"			
	iF 00 14 00	"	ISS82	"	D211~214,227			

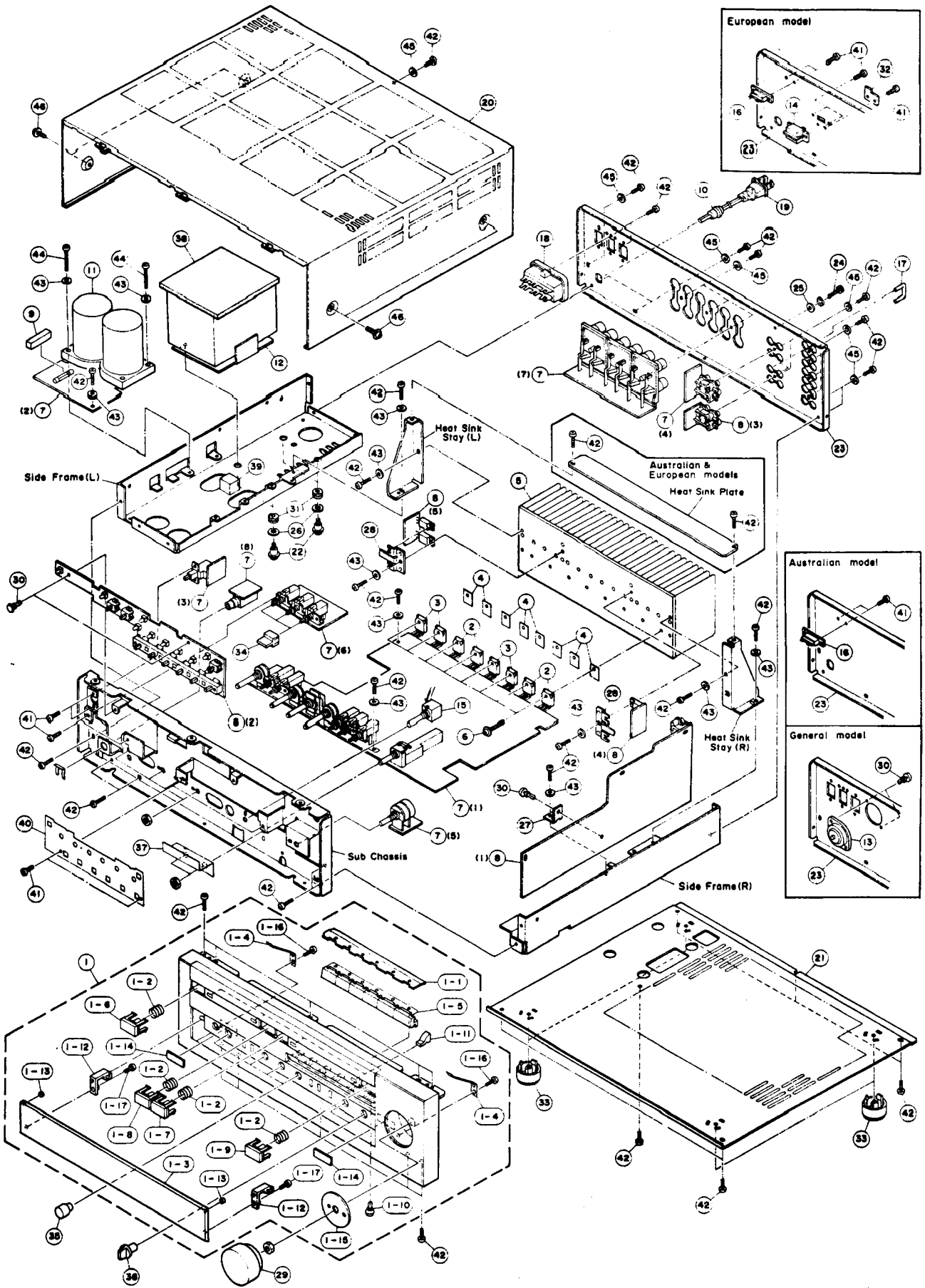
*New Parts (新規部品)

A1020

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	iF 00:19:40	Zener Diode	HZ24-2	ツェナーダイオード	D225		
	iF 00:15:10	"	HZ6C-1L	"	D217~224,229,230		
	iF 00:11:30	Diode	D5FB20	ダイオードブリッジ	D226		△
	iG 08:57:00	IC	M5218L(V)	I C	IC203		
	iG 09:21:00	"	M5219L	"	IC201,202		
	iG 07:69:00	"	NJM2041S	"	"	inter-changeable	
*	KA 50:20:30	Rotary Switch	SRZ-V 6-6S	ロータリースイッチ	SW201		
	KA 80:35:20	Push Switch	TV-5	プッシュスイッチ	SW206		△
*	KA 80:50:00	"	2-2 NS	"	SW205		
*	KA 80:50:10	"	2-2 NS	"	SW203		
*	KA 80:50:20	"	2-2 NS	"	SW202		
*	KA 80:50:30	"	4-2 NS	"	SW204		
	KB 00:04:00	Fuse	T5.0A 250V	ヒ ュ ー ズ	F202	R	△
	KB 00:13:90	"	10A 250V	"	F201	U,C	△
	KB 00:14:90	"	10A 250V	"	"	R	△
	KB 00:07:90	Fuse,Miniature	T4.0A 250V	ミニチュアヒューズ	"	A,E	△
	KC 00:19:40	Relay	DH2TU 24VDC	リ レ -	RY201		
*	KC 00:20:00	"	JR2a-DC 24V	"	"	inter-changeable	
	LB 30:17:10	Jack,Head Phone	Gray	ホ ー ン ジャ ッ ク	JK201 Silver		
	LB 30:17:20	"	Black	"	" Black		
*	LB 40:13:30	Pin Jack	4P	ピ ン ジャ ッ ク	PJ201		
	CB 09:52:60	Cover For Capacitor	SB-0833	コンデンサーカバー		A,E	
	LA 00:21:40	Lapping Terminal	P=10,2P i-Type	i 型ラッピング端子板		R	
	LA 00:21:50	"	P=10,3P i-Type	"			
	LA 00:25:80	"	P=10,2P i-Type	"			
*	LA 00:54:10	Speaker Terminal	4P	スピーカーターミナル			
	LB 20:10:60	Pin,Fuse Holder	YSH403T	ヒューズホルダーピン		A,E	
	LB 20:19:70	"	23165081	"		R,U,C	
	LB 91:80:20	Base Pin	i-Type 2P	X H ベースピン I 型			
	LB 91:80:30	"	i-Type 3P	"			
	LB 91:80:40	"	i-Type 4P	"			
	LB 91:80:70	"	i-Type 7P	"			
	LB 91:80:80	"	i-Type 8P	"			
	BB 06:83:70	Metal,Ground		ア ー ス 金 具			
	BB 07:04:40	Bus Ber		バ ス バ ー		A-1000	
	BB 07:04:10	"	I=55	"		A-700	
	BB 07:04:20	"	I=100	"		"	
	BB 07:04:30	"	I=145	"		"	
*	NA 08:70:80	Funcution Circuit Board		ファンクションシート		A-720	R,U,C
*	NA 08:70:90	"		"		"	A,E
	FG 21:24:70	Ceramic Cap	470pF 50V	セ ラ コ ン	C101~114		A,E
	FZ 00:41:30	"	0.1μF 25V	半 導 体 セ ラ コ ン	C115~117		
	HV 45:61:20	Flame Proof Carbon Resistor	1.2kΩ ER-D25FV	不燃化カーボン抵抗	R107~110		

*New Parts (新規部品)

EXPLODED VIEW



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MECHANISM PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
* 1	NB 62 58 30	Panel Unit	パネルユニット	Silver		R,U,C	
* "	NB 62 58 40	"	"	Black		R,U,C	
* "	NB 62 67 70	"	"	Silver		A,E	
* "	NB 62 67 80	"	"	Black		A,E	
1-1	AA 61 78 70	Cover	カバ ー				
1-2	AA 61 78 80	Spring	ス プ リ ン グ				
1-3	BA 08 67 30	Shielding Panel	シ ー リ ン グ パ ネ ル	Silver			
"	BA 08 67 40	"	"	Black			
1-4	BB 07 04 50	Holder, Hinge	ヒ ン ジ 押 え				
1-5	NB 62 27 90	Knob Ass'y	ツ マ ミ Ass'y	Silver	A-520		
"	NB 62 28 00	"	"	Black			
1-6	CB 63 51 20	Button, P	ボ タ ン	POWER Silver			
"	CB 63 51 30	"	"	" Black			
1-7	CB 63 51 40	Button, T	"	TO NE BY PASS Silver			
"	CB 63 51 50	"	"	" Black			
1-8	CB 63 51 60	Button, A	"	AUTO CLASS A Silver			
"	CB 63 51 70	"	"	" Black			
1-9	CB 63 51 80	Button, M	"	MUTING Silver			
"	CB 63 51 90	"	"	" Black			
1-10	CB 06 88 80	Plastic Rivet	プ ラ ス チ ッ ク リ ベ ッ ト				
1-11	CB 62 29 70	Lens	レ ン ズ				
1-12	CB 62 07 70	Hinge	ヒ ン ジ	Silver			
"	CB 62 07 80	"	"	Black			
1-13	CB 62 08 90	Damper	ダ ン パ ー	Silver			
"	CB 62 19 30	"	"	Black			
1-14	CB 62 34 40	Damper, Panel	パ ネ ル ダ ン パ ー				
1-15	CB 62 17 50	Plate, Shield	シ ー ル ド 板				
1-16	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCM3-BI	バ イ ン ド タ ッ ピ ン グ ネ ジ	PACK		
1-17	ED 33 00 66	Binding Head Screw	3×6 FCM3-BI	バ イ ン ド 小 ネ ジ	PACK		
* 2	iX 60 32 40	Transistor	2SA1265(R,O)	ト ラ ン ジ ス タ	TR217~220		
* 3	iX 60 32 50	"	2SC3182(R,O)	"	TR213~216		
4	iL 00 05 70	Insulation Base		マ イ カ ー ベ ー ス			
5	BA 09 17 70	Heat Sink		放 熱 板			
6	EZ 00 13 50	Cup Screw	3×14 FCM3-BI	カ ッ プ ス ク リ ュ (Bタイ)			
* 7	NA 08 71 00	Main Circuit Board		メ イ ン シ ー ト	Silver	R	
* "	NA 08 71 10	"		"	Black	R	
* "	NA 08 71 20	"		"	Silver	U,C	
* "	NA 08 71 30	"		"	Black	U,C	
* "	NA 08 71 40	"		"	Silver	A,E	
* "	NA 08 71 50	"		"	Black	A,E	
8	NA 08 70 80	Function Circuit Board		フ ァ ン ク シ ョ ン シ ー ト	A-720	R,U,C	
"	NA 08 70 90	"		"	A-720	A,E	
9	CB 09 95 80	Fuse Holder Cover	SB-0664U	ヒ ュ ー ス ホ ル ダ ー カ バ ー		LA	
10	CB 62 01 90	Cord Stopper	CM-22B	コ ー ド ス ト ッ パ ー		R,A,E	
"	CB 62 02 00	"	CM-22C	"		U,C	
* 11	FZ 00 70 20	Electrolytic Cap. Set	22000μF 69V	ケ ミ コ ン セ ッ ト			
* 12	GA 68 41 00	Power Transformer		電 源 ト ラ ン ス		U	△
* "	GA 68 42 00	"		"		C	△
* "	GA 68 43 00	"		"		E	△
* "	GA 68 44 00	"		"		A	△
* "	GA 68 45 00	"		"		R	△
13	LB 20 14 80	Voltage Selector		電 圧 切 換 器		R	△
14	KA 40 12 60	Slide Switch	SS-12	ス ラ イ ド ス イ ッ チ		E	△

*New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
* 15	KA:90:70:60	Remote Rotary Switch	ESA-33	リモートロータリースイッチ			
16	LA:00:29:50	Terminal Board	2P	中継端子台		A,E	△
17	LB:10:11:10	Plug,Short		ショートプラグ	Accessory Terminal		
18	LB:60:39:20	AC Outlet	M7026-C	A C アウトレット		R,U	△
* "	LB:60:81:30	"	M7032-B	"		C	△
19	MG:00:09:20	Power Cord	7.5A 250V 2.5m	電 源 コ ー ド	} Interchangeable	A	△
"	MG:00:14:90	"	7.5A 250V 2.5m	"		A	△
"	MG:00:14:50	"	10A 125V 1.98m	"	} Interchangeable	U	△
"	MG:00:14:60	"	10A 125V 2m	"		U	△
"	MG:00:16:20	"	2.5A 250V 2m	"		E	△
"	MG:00:16:30	"	6A 250V 2m	"		R	△
* "	MG:00:22:20	"	10A 125V 2m	"		C	△
* 20	AA:62:47:80	Top Cover		ト ッ プ カ バ ー	Silver		
* "	AA:62:47:90	"		"	Black		
* 21	AA:62:48:10	Bottom Cover		ボ ト ム カ バ ー			
22	AA:60:38:50	Screw		段 付 ネ ジ			
* 23	AA:62:48:40	Rear Panel		リ ア パ ネ ル		R	
* "	AA:62:48:50	"		"		U,C	
* "	AA:62:48:60	"		"		A	
* "	AA:62:48:70	"		"		E	
24	EZ:00:14:00	Ground Terminal Screw	3×13.5MFNI-II	ア ー ス 端 子 ネ ジ			
25	EV:90:13:60	Toothed Locked Washer	φ10×φ3.6×10.8 FNM3-3g	セ ム ス 平 座 金			
26	EV:20:00:66	Plain Washer	φ6 ZMC2-Y	平 座 金	PACK		
* 27	AA:62:49:10	Circuit Board Stay		シ ー ト ス テ ー			
* 28	AA:62:49:20	TR Pusher		T R プ ッ シ ャ ー			
29	BA:08:77:10	Knob		ツ マ ミ	VOLUME Silver		
"	BA:08:77:20	"		"	" Black		
30	CB:06:88:80	Plastic Rivet		プ ラ ス チ ッ ク リ ベ ッ ト			
31	CB:09:99:10	Rubber, Cushion		防 振 ゴ ム			
32	CB:60:14:40	Voltage Selector Stopper		V S ス ト ッ パ ー		E	
33	CB:62:07:30	Leg	TL-037	ト ラ ン レ ッ グ			
34	NB:62:36:20	Button F Ass'y		ボ タ ン (F) Ass'y	SPEAKERS Silver	T-500	
"	NB:60:92:00	"		"	" Black	"	
35	CB:63:79:40	Knob		ツ マ ミ	BASS, TREBLE LOUDNESS, BLANCE Silver	K-1020	
"	CB:62:08:20	"		"	" Black		
36	CB:63:42:60	Knob, Switch		S W ツ マ ミ	RECOUT. PHONO Silver	K-720	
"	CB:63:42:70	"		"	" Black	"	
* 37	CB:63:91:80	Plate, Shield		シ ー ル ド 板			
38	CB:62:33:90	Dumper		ダ ン パ ー			
39	CB:63:29:60	"		"			
* 40	CB:64:20:10	Plate, Shield		シ ー ル ド プ レ ー ト			
41	ED:33:00:66	Binding Head Screw	3×6 FCM3-BI	バ イ ン ド 小 ネ ジ	PACK		
42	Ei:33:00:86	Binding Head Tapping Screw	3×8 FCM3-BI	バ イ ン ド タ ッ ピ ン グ ネ ジ	PACK		
43	EV:20:30:36	Plain Washer	φ3 FCM3-BI	平 座 金	PACK		
44	EK:93:50:10	BW Head Tapping Screw	3×20 ZMC2-BI	BWヘッドタッピングネジ			
45	EV:41:30:36	Toothed Lock Washer	φ3 FCM3-BI	歯 付 座 金	PACK		
46	EZ:00:13:10	Cup Tight Screw	4×8 FNM3-3g	カ ッ プ タ イ ト ス ク リ ュ ー	Silver		
"	EZ:00:13:20	"	4×8 FCM3-BI	"	Black		
	CB:0f:92:50	Binding Tie	BK-1	イ ン シ ュ ロ ッ ク タイ			

*New Parts (新規部品)