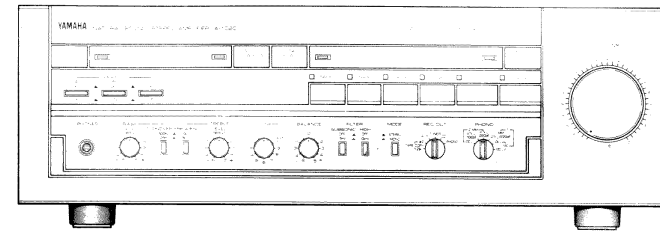


STEREO INTEGRATED AMPLIFIER

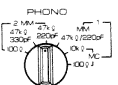
A-1020

SERVICE MANUAL

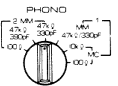
FRONT PANEL



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

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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 ッ ク	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	3x13.5MFNi-II	ア ー ス 端 子 ネ ジ			
✱ 25	EV 90 13 60	Toothed Locked Washer	#10xφ3.6x10.8 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	3x6 FCM3-BI	バ イ ン ド 小 ネ ジ	PACK		
✱ 42	Ei 33 00 86	Binding Head Tapping Screw	3x8 FCM3-BI	バ イ ン ド タ ッ ピ ン ク 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	3x20 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	4x8 FNM3-3g	カ ッ プ タ イ ト ス ク リ ュ ー	Silver		
✱ "	EZ 00 13 20	"	4x8 FCM3-BI	"	Black		
✱ "	CB 06 92 50	Binding Tie	BK-1	イ ン シ ュ ロ ッ ク タ イ			

*New Parts (新規部品)

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SINCE 1887



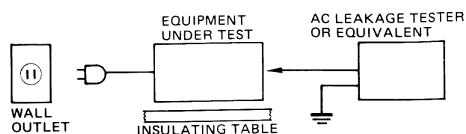
YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

2.6k-972 Printed in Japan '85.1

■ TO SERVICE PERSONNEL

- Critical Components Information.**
Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
- 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
Phono 2 MM	47k Ω 330pF (A) (E)
	2.5mV/47k Ω 220pF
	47k Ω 330pF (A) (E)
	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 (TONE BYPASS ON)	+0 dB
	-0.5 dB
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 62.5W/8 Ω	0.005%
Intermodulation Distortion	
CD/TUNER/AUX/TAPE Rated Output/8 Ω 1W/8 Ω	0.002%
	0.003%

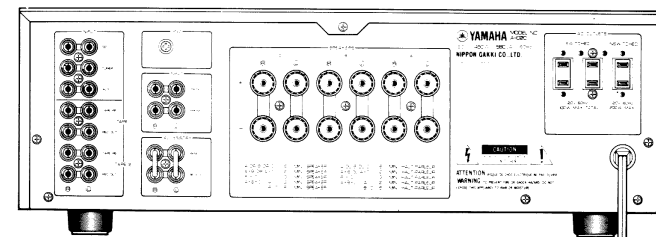
Signal to Noise Ratio (IHF-A-Network)	
Phono MC (500 μ V, Input Shorted)	80dB
MM (5mV, Input Shorted)	94dB
CD/TUNER/AUX/TAPE (Input Shorted, TONE BYPASS ON)	106dB
Signal to Noise Ratio (New IHF)	
Phono MC	76dB
MM	79dB
CD/TUNER/AUX/TAPE	86dB
Input Equivalent Noise	
Phono MC	-145dBV (A)(E)
MM	-138dBV (A)(E)
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.

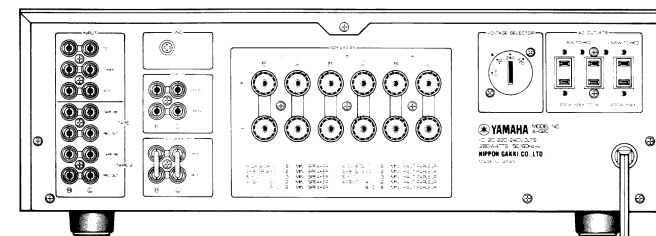
(U) U.S.A. model
(C) Canadian model
(A) Australian model
(E) European model
(R) General model

■ REAR PANELS

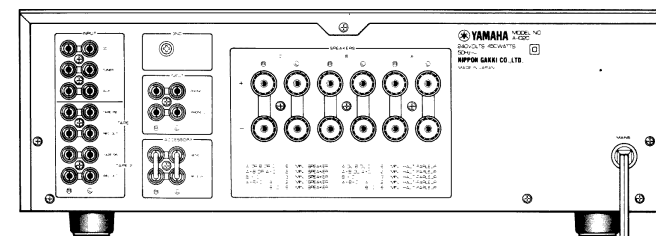
▼ U.S.A. & Canadian models



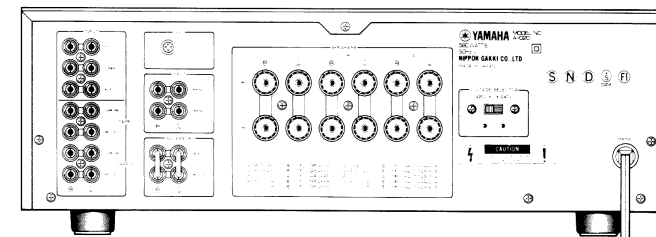
▼ General model



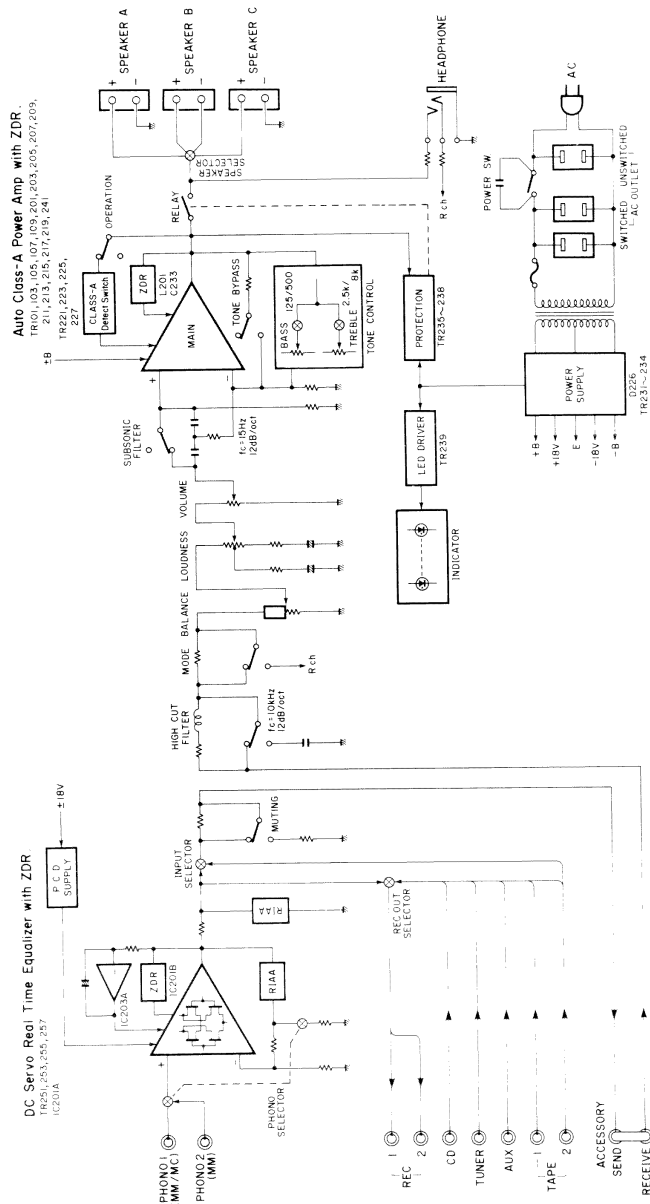
▼ Australian model



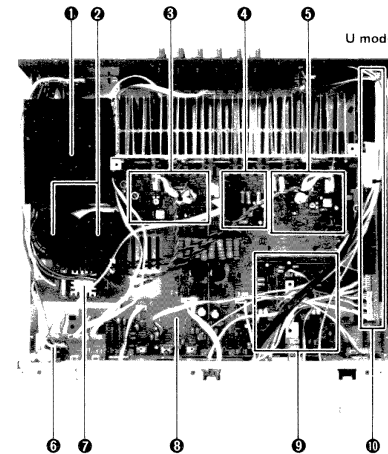
▼ European model



BLOCK DIAGRAM



INTERNAL VIEW



DISASSEMBLY PROCEDURES

(Remove parts in disassembly order as numbered.)

- 1. Removal to 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.

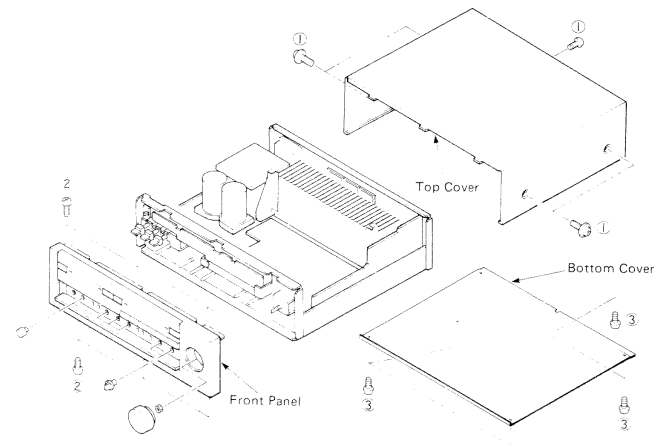


Fig. 1

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 ± 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 ± 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 ± 2mV DC.
AUTO CLASS A OPERATION		—	55mV ± 25mV DC.

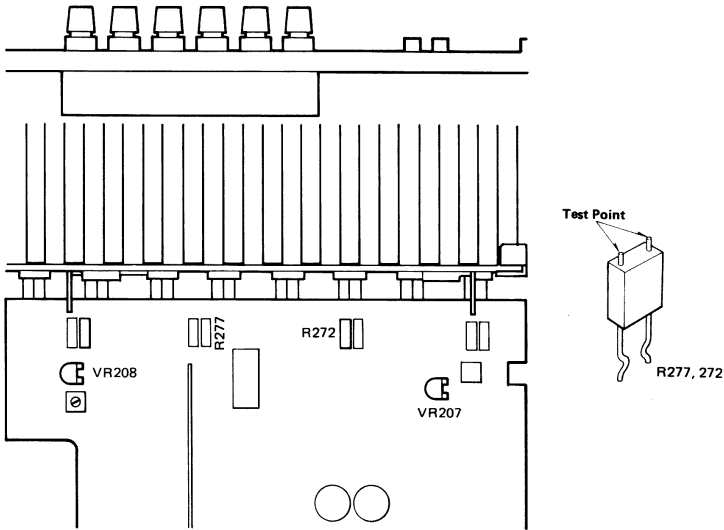
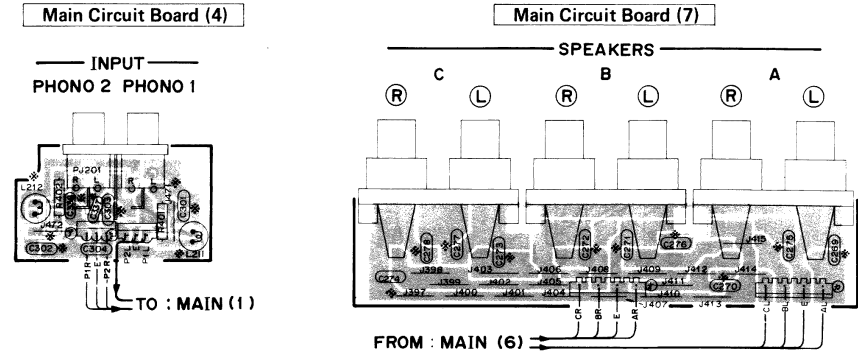
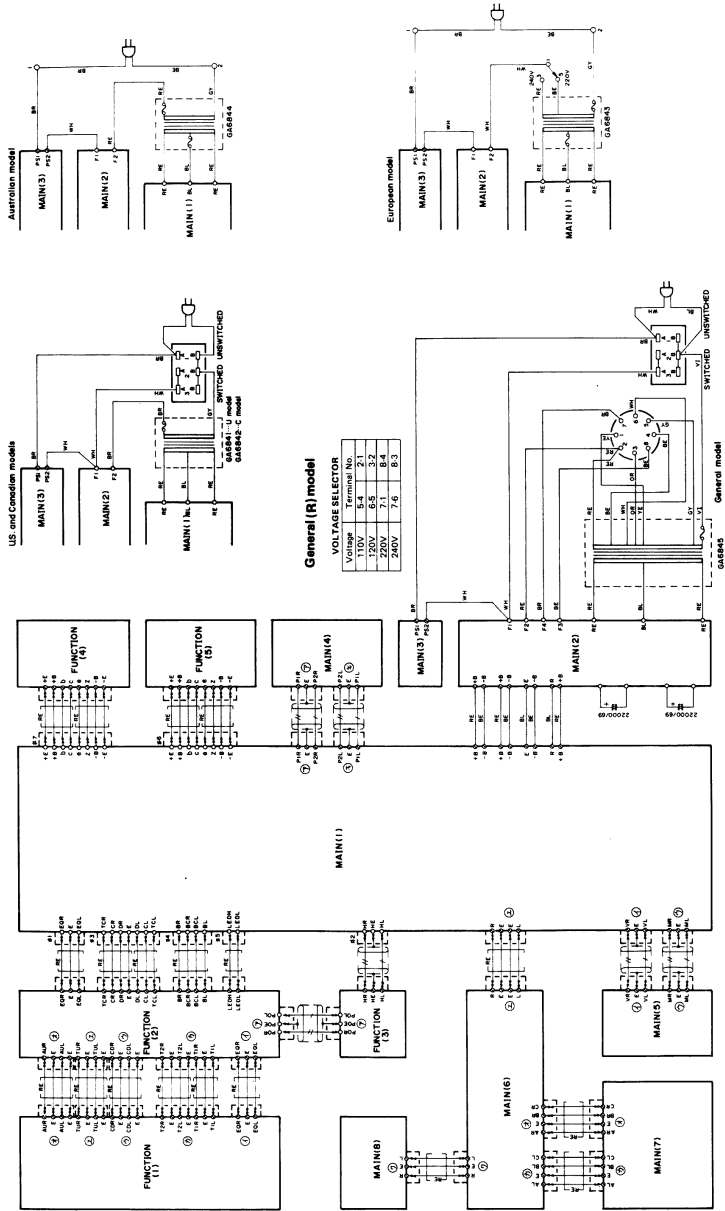


Fig. 2

PRINTED CIRCUIT BOARD(Pattern side)

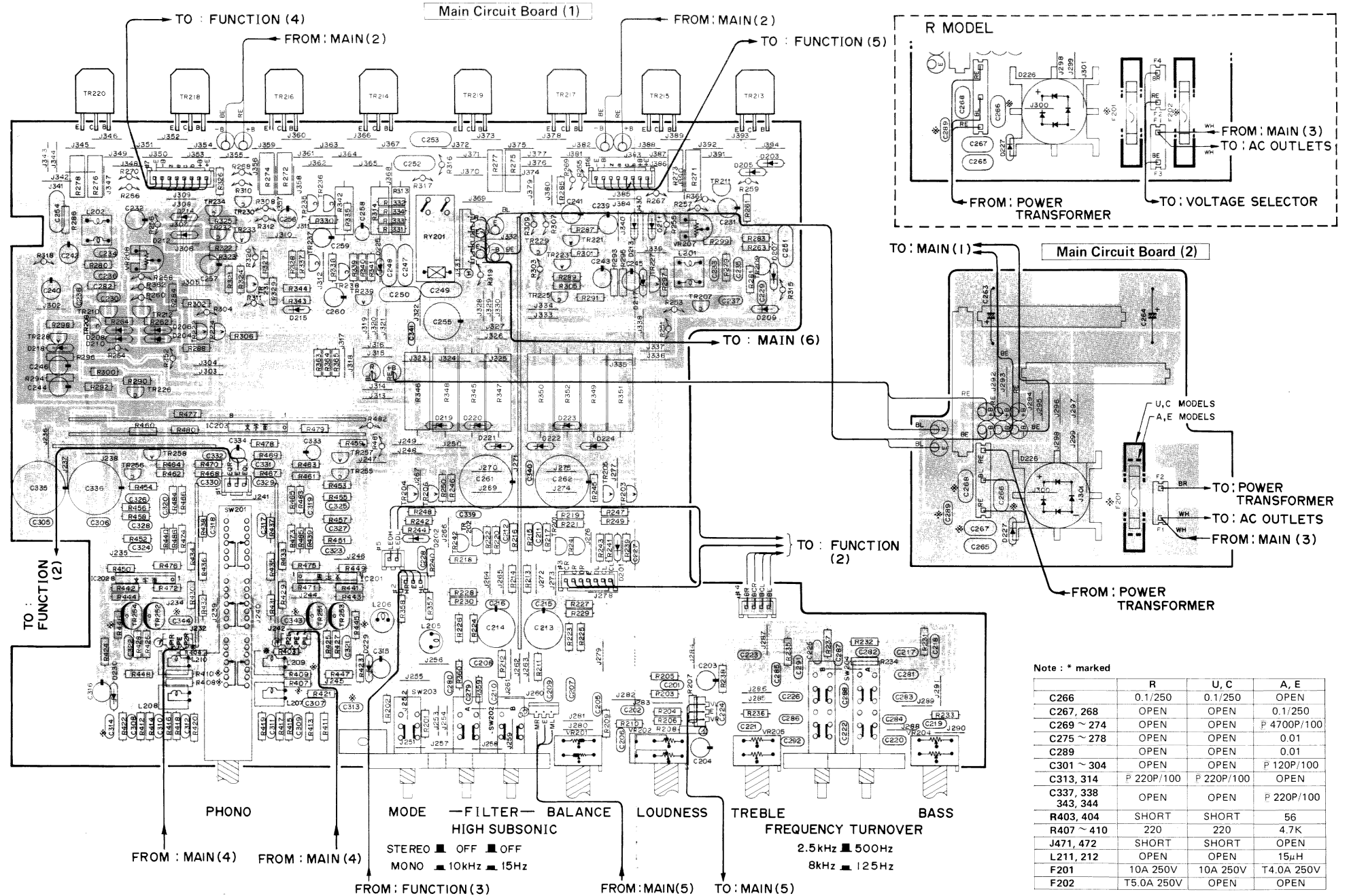


WIRING



PRINTED CIRCUIT BOARD (Pattern side)

Note)
文字面 : Letter side



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	P 4700P/100
C275 ~ 278	OPEN	OPEN	0.01
C289	OPEN	OPEN	0.01
C301 ~ 304	OPEN	OPEN	P 120P/100
C313, 314	P 220P/100	P 220P/100	OPEN
C337, 338 343, 344	OPEN	OPEN	P 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

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 discription about them in this parts list.
Use the "Parts No." HJ350000(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 80	"	"	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			
	UA 55 51 20	"	"	C219, 220, 281, 282			
	UA 55 53 30	"	"	C283, 284			
	FI 38 41 00	Ceramic Cap.	セラコン	C290			
	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	Metalized 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	"	"	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)

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		
	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	酸化膜抵抗	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	金属膜抵抗	R271~278		
	HS 31 25 00	Potentiometer	40K Ω $\times$ 2	可変抵抗器	VR204		
	HS 41 23 70	"	40K Ω $\times$ 2	"	"		
	HS 31 25 10	"	100K Ω $\times$ 2	"	VR205		
	HS 41 23 80	"	100K Ω $\times$ 2	"	"		
	HS 31 25 20	"	300K Ω $\times$ 2	"	VR202		
	HS 41 25 00	"	300K Ω $\times$ 2	"	"		
	HS 31 25 30	"	300KBH	"	VR201		
	HS 41 24 80	"	300KMN	"	"		
	HS 32 07 00	"	60KY $\times$ 2	"	VR203		
	HT 37 00 10	Pre-Set Potentiometer	81K 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	"	2SC1915 (Y)	"	TR207, 208, 235, 236, 238, 239, 246		
	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	"	2SK1117 (P1)234	"	TR201, 202, 241, 242		
	IF 00 06 70	Diode	1S2473	ダイオード	D201~210, 215		
	IF 00 00 40	"	1S1555	"	"		
	IF 00 14 00	"	ISS82	"	D211~214, 227		

*New Parts (新規部品)

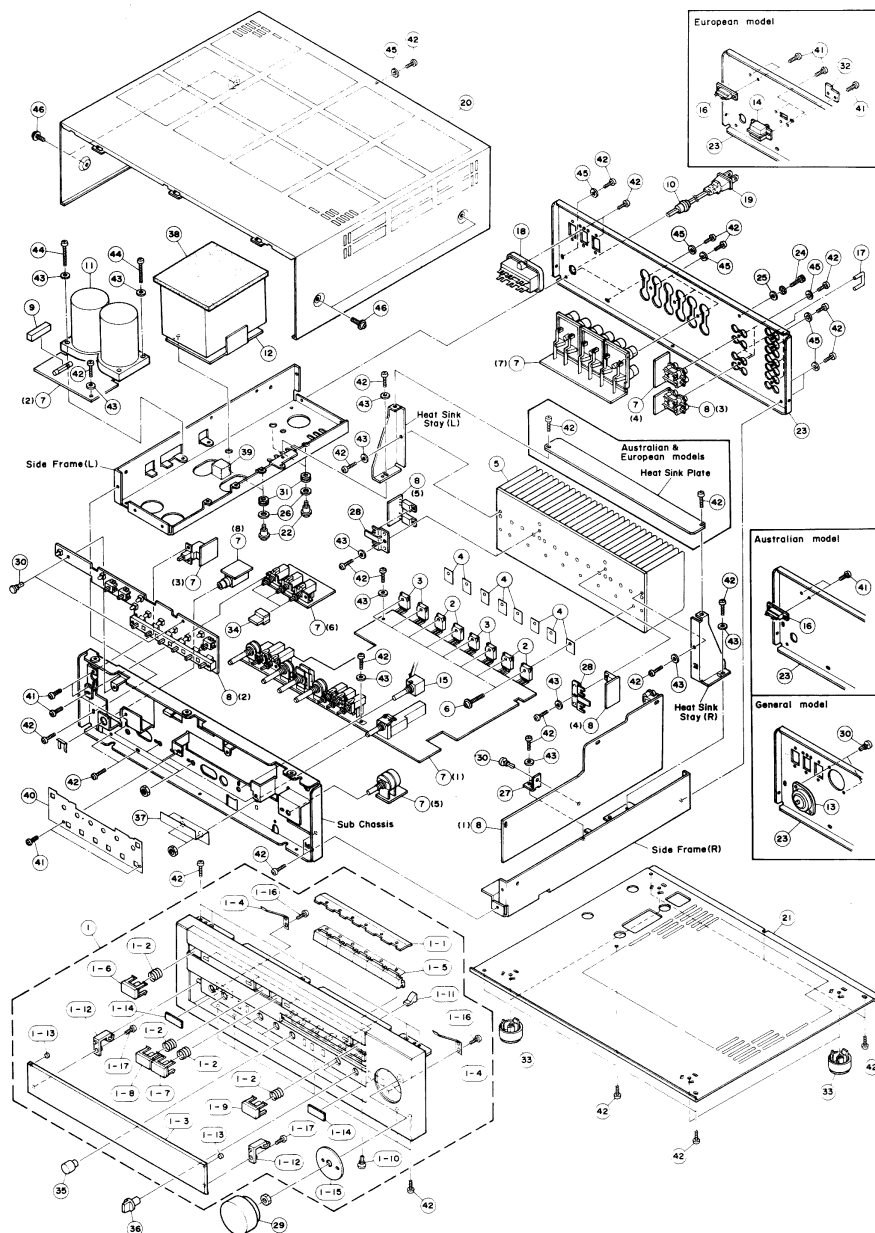
Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	IF 00 19 40	Zener Diode	HZ24-2	ツェナーダイオード	D225		
	IF 00 15 10	"	HZ6C-1L	"	D217~224,229,230		
	IF 00 11 30	Diode	D5FB20	ダイオードブリッジ	D226		△
	IG 08 57 00	IC	M5218L(V)	I C	IC203		
	IG 09 21 00	"	M5219L	"	IC201,202		
	IG 07 69 00	"	NJM2041S	"	"	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 ー	RY201	Inter-changeable	
*	KC 00 20 00	"	JR2a-DC 24V	"	"	"	
	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	Function 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)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	IA 09 70 00	Transistor	2SA970 (GR,BL)	ト ラ ン ジ ス タ	TR105,106		
	IC 22 40 00	"	2SC2240 (GR,BL)	"	TR101~104		△
	IX 60 16 50	"	2SA1306A	"	TR109,110		△
	IX 60 16 60	"	2SC3298A	"	TR107,108		△
	IF 00 42 70	LED (Red)	SLR-55URC3H	L E D	D101~110		
	KA 80 48 30	Push Switch	4-2NS SEA	プッシュスイッチ	SW102		
	KA 80 48 50	"	"	"	SW103~105		
	KA 90 10 70	Remote Switch		リ モ ー ト ス イ ッ チ	SW101		
	LB 20 22 60	Pin Jack	2P	ピ ン ジャ ッ ク	PJ101		
	LB 40 10 30	"	4P	"	PJ102~105		
	BB 07 04 20	Bus Ber	I=100	バ ス バ ー			

*New Parts (新規部品)

EXPLODED VIEW



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	"	TOE BYPASS	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	カップスクリュー (Bタイト)			
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	ヒューズホルダーカバー		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	

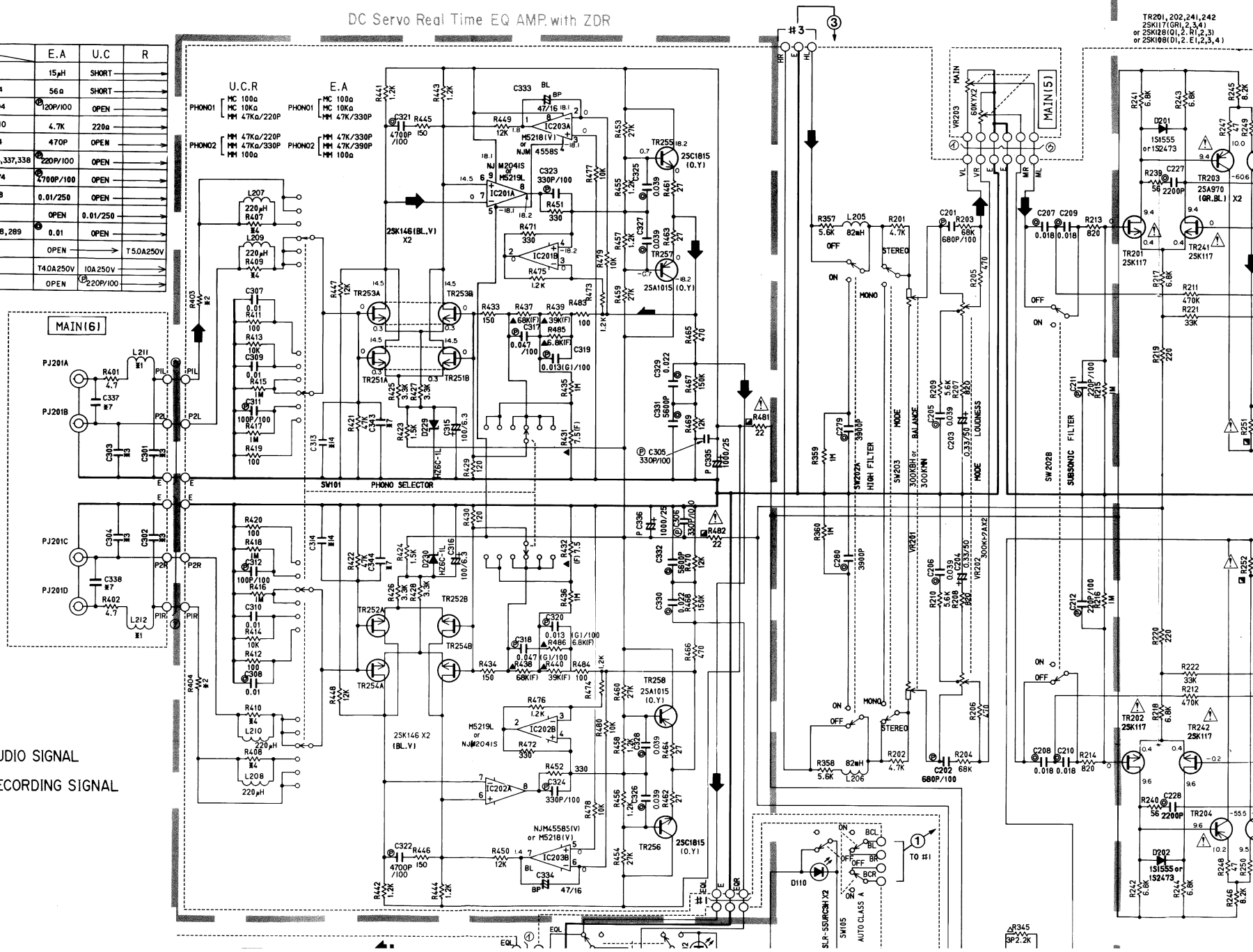
*New Parts (新規部品)

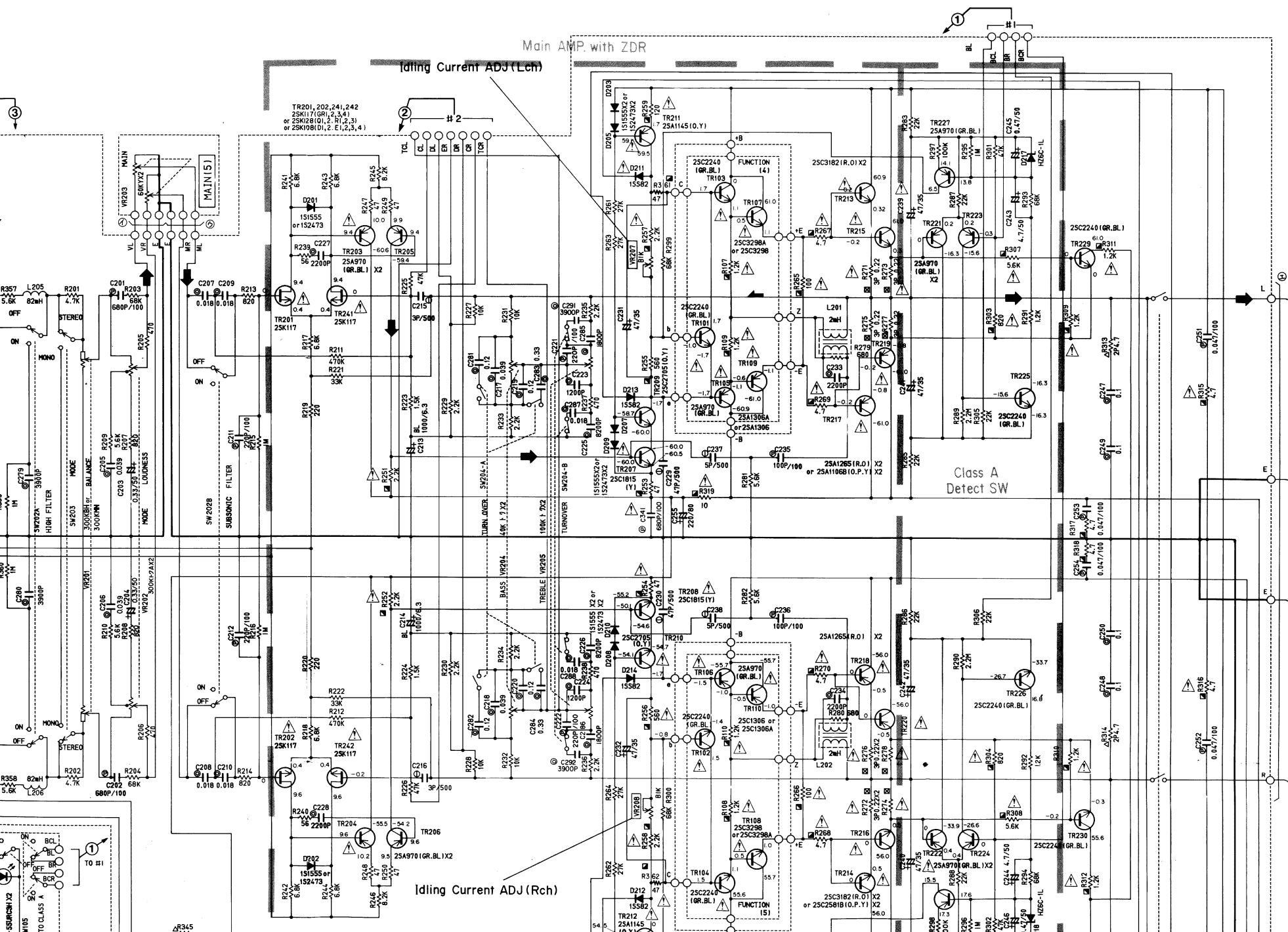
SCHEMATIC DIAGRAM

DC Servo Real Time EQ AMP with ZDR

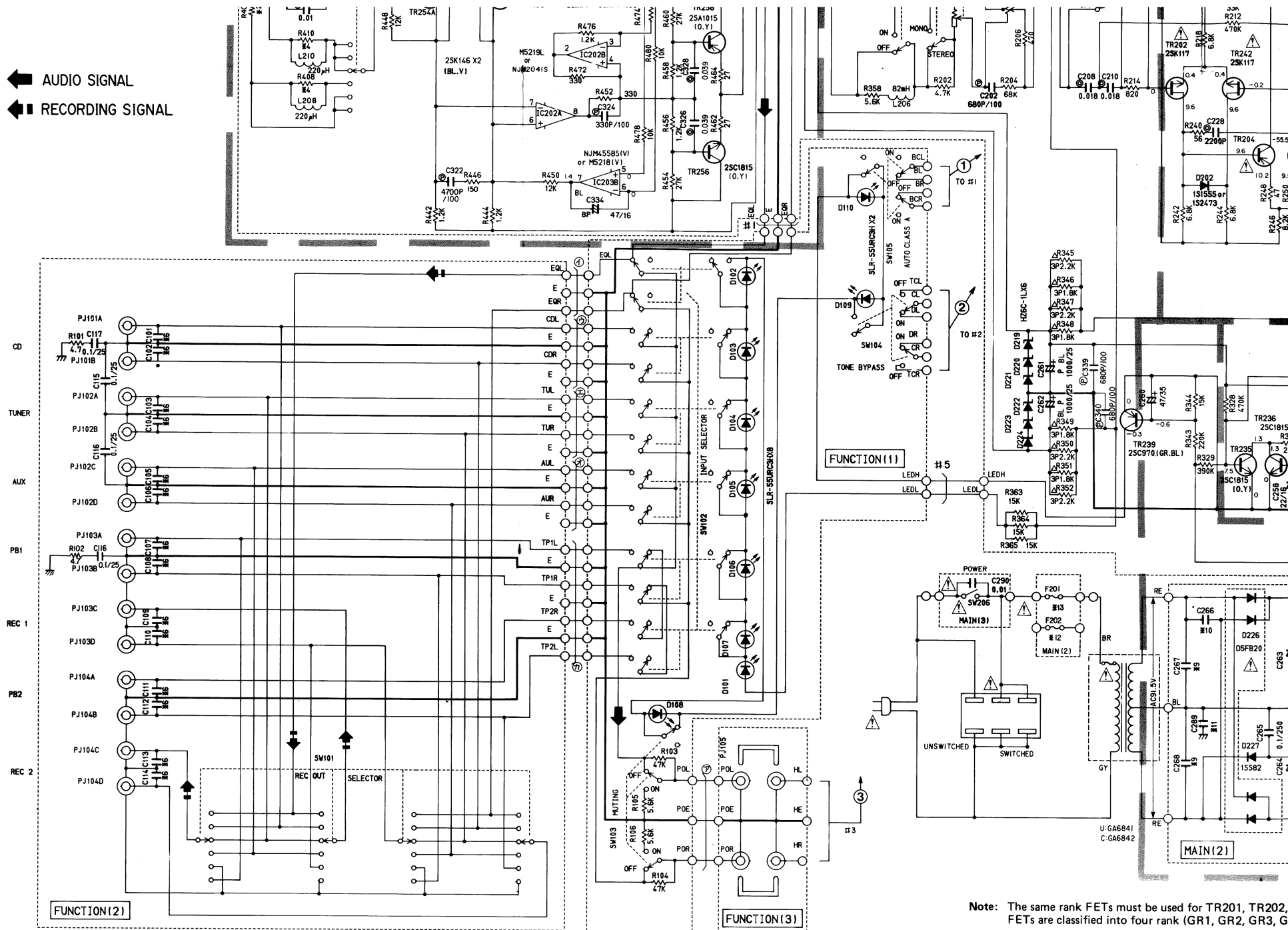
	E.A	U.C	R
*1	L211, 212	15μH	SHORT
*2	R403, 404	56Ω	SHORT
*3	C301~304	120P/100	OPEN
*4	R407~410	4.7K	220Ω
*5	C101~114	470P	OPEN
*6	C343, 344, 337, 338	220P/100	OPEN
*7	C269~274	2700P/100	OPEN
*8	C267, 268	0.01/250	OPEN
*9	C266	0.01/250	OPEN
*10	C275~278, 289	0.01	OPEN
*11	F202	OPEN	T5.0A250V
*12	F201	T4.0A250V	10A250V
*13	C313, 314	OPEN	220P/100
*14			

AUDIO SIGNAL
 RECORDING SIGNAL



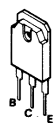


← AUDIO SIGNAL
 ← RECORDING SIGNAL



Note: The same rank FETs must be used for TR201, TR202, FETs are classified into four rank (GR1, GR2, GR3, G

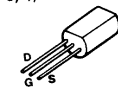
2SC2581B (O, P, Y)
2SC3182 (R, O)
2SA1106B (O, P, Y)
2SA1265 (R, O)



2SA1306A
2SC3298A
2SA1306
2SC3298

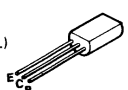


2SK146 (BL, V)



2SK117 (GR1, 2, 3, 4)

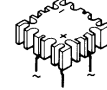
2SA970 (GR, BL)
2SA1015 (Y)
2SA1145 (O, Y)
2SC1815 (Y)
2SC2240 (GR, BL)
2SC2705 (O, Y)



HZ24-2
1S2473
1S1555
HZ26C-1L
1SS82



D5FB20



M5218L
NJM4558S (F)
M5219L
NJM2041S

