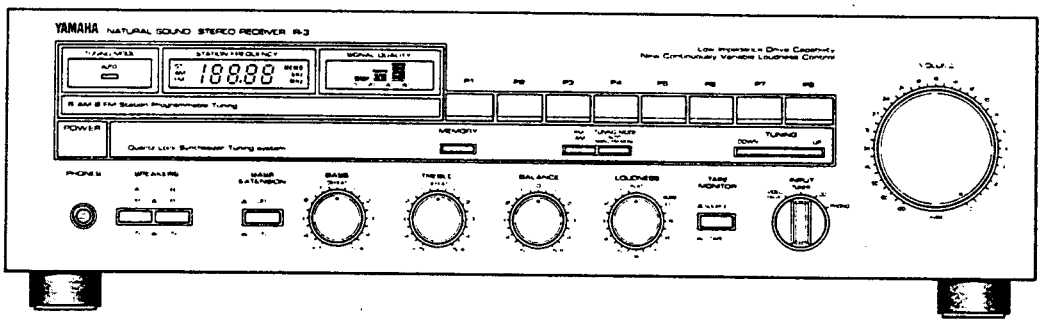
STEREO RECEIVER

R-3

SERVICE MANUAL



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 inherant 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

004593

MC-Service

SINCE 1887 YAMAHA

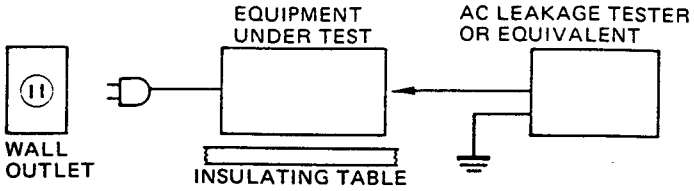
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

2.5K-453 Printed in Japan '85.3

■ 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 120V 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 0.15μF.
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.



■ SPECIFICATIONS

■ AUDIO SECTION

Continuous Power Per Channel	
20Hz ~ 20kHz, 0.04% THD, 8Ω	35W (R)(U)(C) 33W (G)(A)(B)
0.06% THD, 6Ω	40W (R)(U)(C) 39W (G)(A)(B)
DIN Standard Output Power Per Channel	
1kHz, 1% THD, 4Ω	47W (G)(A)(B)
Dynamic Headroom	
8Ω	1.88dB
Power Band Width	
0.1% THD, 17.5W 8Ω	10Hz ~ 40kHz
Damping Factor	
1kHz, 8Ω	50
Input Sensitivity/Impedance	
Phono	2.5mV/47kΩ
AUX/TAPE/CD	150mV/50kΩ
Input Sensitivity (New IHF)	
Phono	0.42mV
AUX/TAPE/CD	25mV
Maximum Input Signal	
Phono, 1kHz, 0.01% THD	120mV
Output Level/Impedance	
REC OUT	150mV/4.7kΩ
Headphone Jack Rated Output/Impedance	0.55V/235Ω
Frequency Response	
20Hz ~ 20kHz, AUX/TAPE/CD	±0.5dB
RIAA Equalization Deviation	
Phono	±0.5dB
Total Harmonic Distortion	
Phono to Rec Out 3V	0.01%
AUX/TAPE/CD to SP Out 17.5W/8Ω	0.02%
Intermodulation Distortion	
AUX/TAPE/CD Rated Output/8Ω	0.04%
Signal to Noise Ratio (IHF-A-Network)	
Phono (5mV Input Shorted)	88dB/82dB (G)
AUX/TAPE/CD (0Ω)	103dB
Residual Noise (IHF-A-Network)	100μV
Channel Separation	
1kHz, Phono	55dB
AUX/TAPE/CD	52dB
Tone Control Characteristics	
BASS boost/cut	±10dB (at 50Hz)
turnover frequency	350Hz
TREBLE boost/cut	±10dB (at 20kHz)
turnover frequency	3.5kHz
Filter Characteristics	
Bass Extension	60Hz, +8dB
Continuous Loudness Control (Level-related equalization)	
Attenuation	−40dB (at 1kHz)

■ AM SECTION

Turning Range	520 to 1610kHz (U)(C) 522 to 1611kHz (G)(A)(B) 520 to 1620kHz or 522 to 1611kHz (R)
Usable Sensitivity (IHF)	250μV/m
Selectivity	24dB
Signal to Noise Ratio	50dB
Image Response Ratio	40dB
Spurious Response Ratio	Better than 50dB
Distortion	0.5%

■ FM SECTION

Tuning Range	87.5 to 108.1MHz (U)(C)(A)(B)(R) 87.5 to 108.0MHz (G)
50dB Quieting Sensitivity	
Mono, 75Ω	1.55μV (15.1dBf)
Stereo, 75Ω	21μV (37.7dBf)
Usable Sensitivity	
Mono	0.8μV (75Ω) 9.3dBf
(30dB Quieting)	
DIN Mono (S/N 26dB), 75Ω	1.4μV (G)
DIN Stereo (S/N 46dB), 75Ω	30μV (G)
Image Response Ratio	
(98MHz)	40dB 75dB (G)
IF Response Ratio	
(98MHz)	90dB 75dB (G)
Spurious Response Ratio	
(98MHz)	70dB
AM Suppression Ratio	
(IHF)	55dB
Capture Ratio	
(IHF)	1.5dB
Alternate Channel	85dB
Signal to Noise Ratio	
(at 85dBf)	
Mono	81dB
Stereo	76dB
Harmonic Distortion	
Mono 1kHz	0.1%
Stereo 1kHz	0.2%
Stereo Separation	
1kHz	40dB
Frequency Response	
30Hz to 13kHz	0 ± 0.5dB

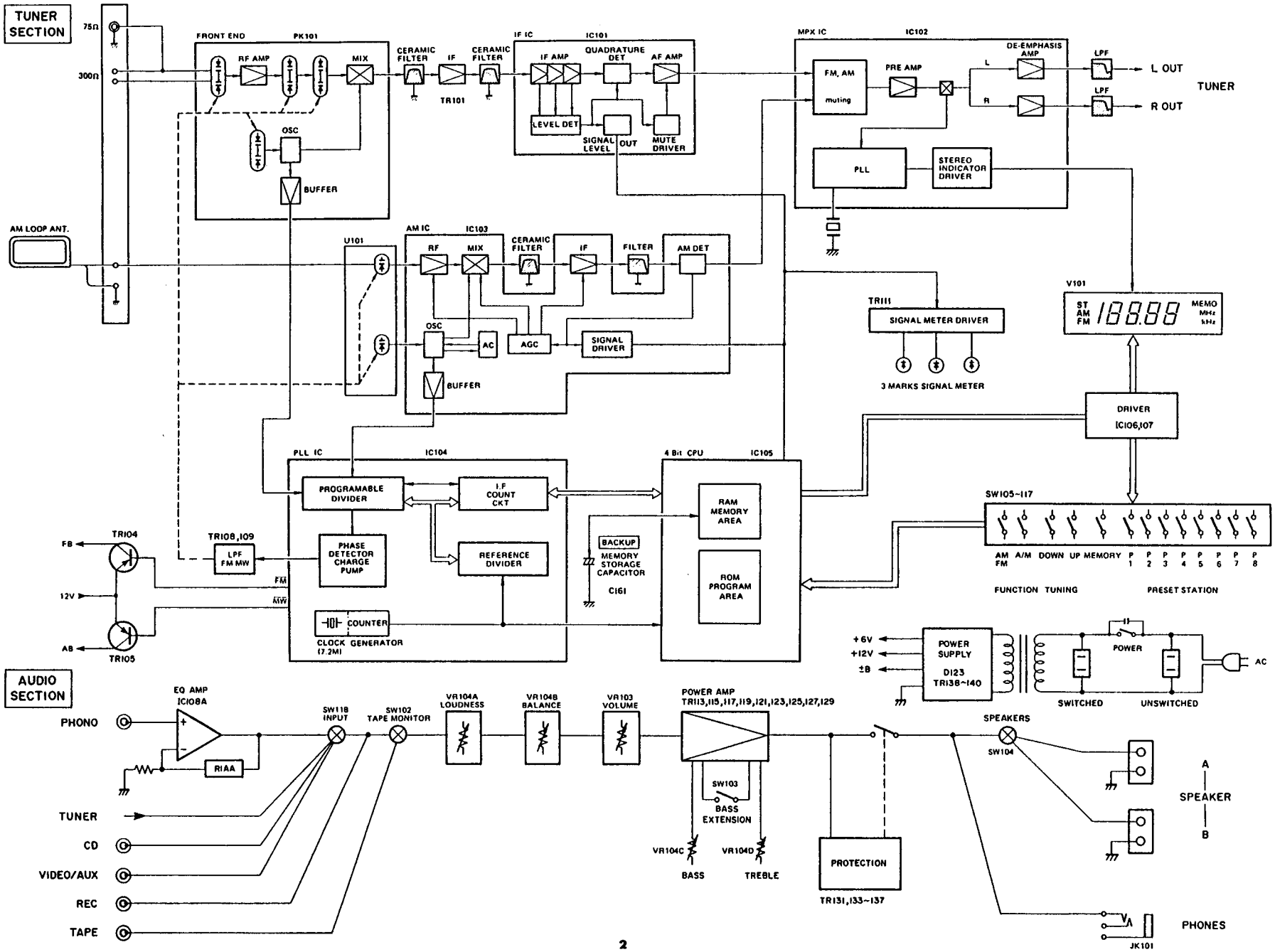
■ GENERAL

Power Supply	
U.S. & Canadian Models	120V AC, 60Hz
General Model	110V/120V/220V/240V AC 50/60Hz
European Models	220V AC, 50Hz
British & Australian Models	240V AC, 50Hz
Power Consumption	180W (U)(C) 145W (R) 260W (A)(G)(B)
AC Outlet (U)(C)(R)	
Switched x 1	100W max
Unswitched x 1	200W max
Dimensions (WxHxD)	435 x 126 x 289 mm (17-1/8" x 4-15/16" x 11-3/8")
Weight	5.2 kg (11 lbs 7 oz)

(U) ..... U.S.A. model
(C) ..... Canadian model
(A) ..... Australian model
(G) ..... European model
(B) ..... British model
(R) ..... General model

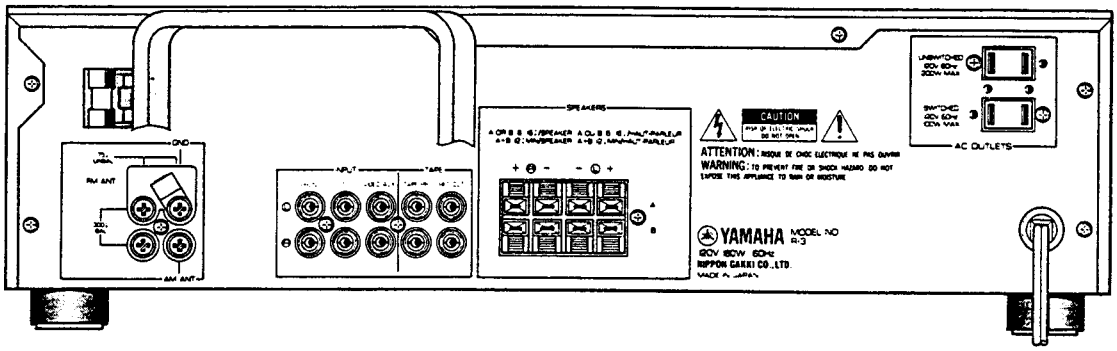
Specifications subject to change without notice.

■ BLOCK DIAGRAM

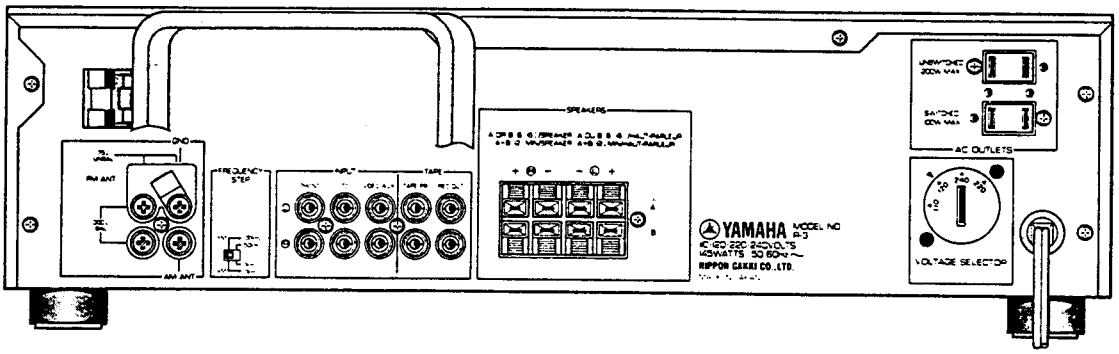


■ REAR PANELS

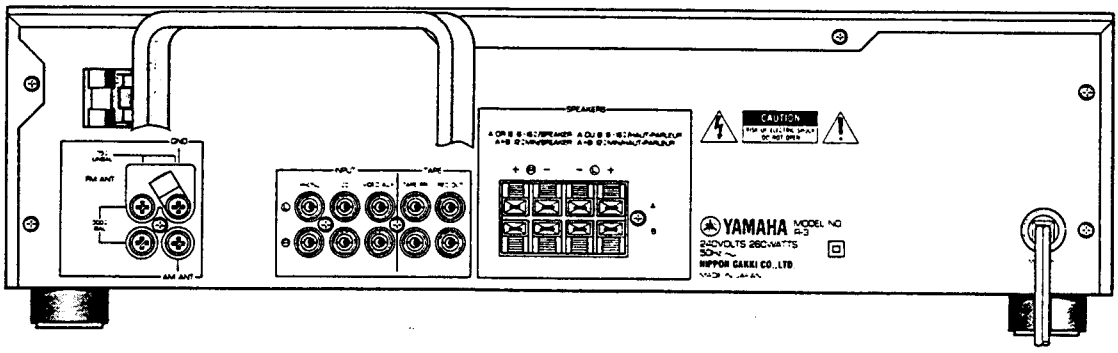
▼U.S.A. & Canadian models



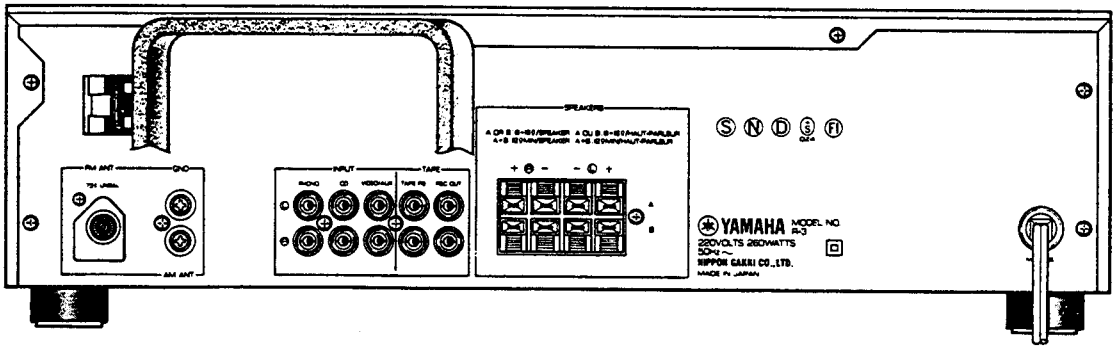
▼General model



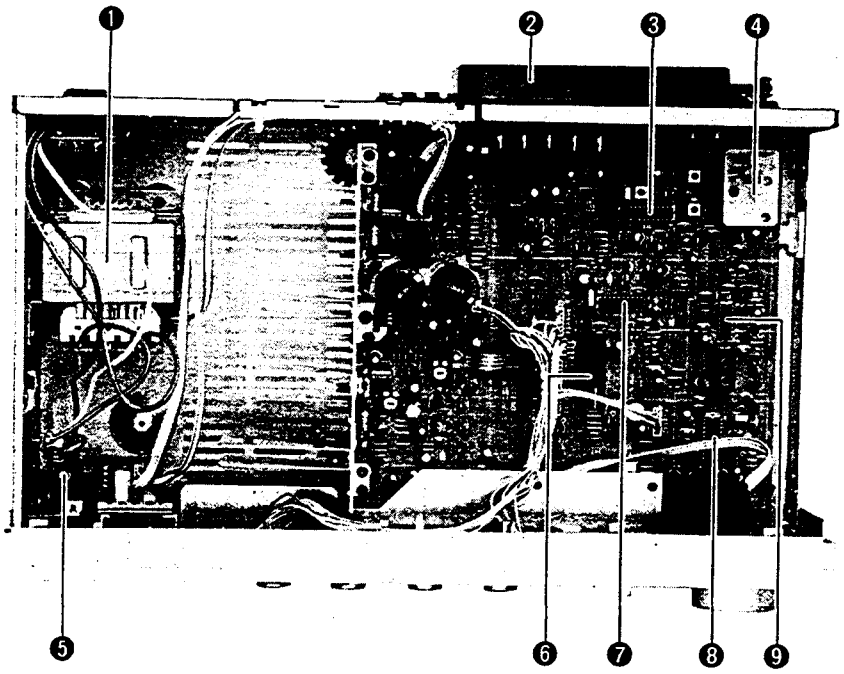
▼Australian & British models



▼European model



■ INTERNAL VIEW



❶ POWER TRANSFORMER
U.S.A. model: GA68800
Canadian model: GA68810
General model: GA68820
European model: GA68830
Australian & British models: GA68840
❷ AM LOOP ANTENNA
❸ AM IC: LA1245
❹ FRONT END PACK
❺ POWER SWITCH
❻ 4 BIT CPU IC: LC7030
❼ PLL IC: LM7000
❽ MPX IC: LA3400
❾ FM IF IC: LA1235

■ DISASSEMBLY PROCEDURES

1. Removal of Top Cover
Remove 7 screws (①) in Fig. 1, and slide the Top Cover back.

2. Removal of Front Panel
Remove 4 screws (②) and 4 hooks in Fig. 1, and pull the Front Panel forward.

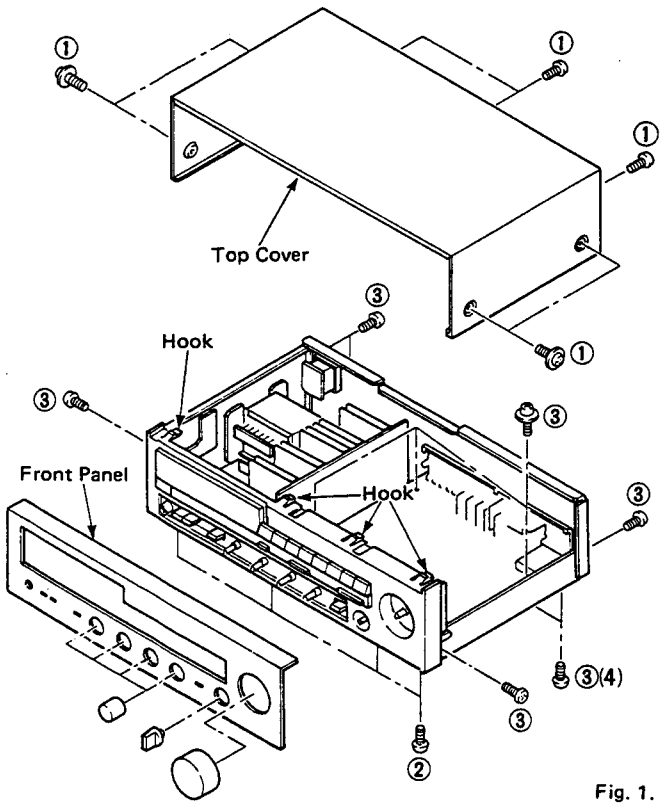


Fig. 1.

3. Check of Main Circuit Board (1) & replacement of parts.
a. Remove 12 screws (③) in Fig. 1.
b. Push the Power switch on.
c. Remove the Main Chassis as shown in Fig. 2
In this condition it is possible for you check the Main Circuit Board (1) and replace the parts.

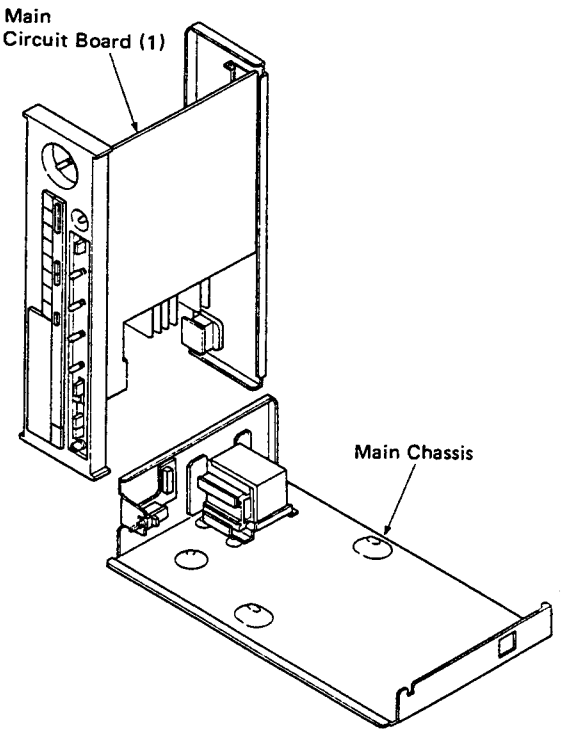


Fig. 2

■ ADJUSTMENTS

1. Before adjustment

1) After the Power switch is pushed on, wait for 5 minutes before measuring, to be sure of the most stable operation.
2) Adjust the OSC coil and IFT with a nonferrous screw driver.
3) Proceed with the AM section adjustments after having finished the FM section adjustment.
4) 0dBμ = 1μV Ex: 60dBμ = 1mV

2. Measuring instruments abbreviation

FM SG : FM signal generator
SSG : Stereo signal generator
AM SG : AM signal generator
DIST. M : Distortion meter
FC : Frequency counter
A.C.V.M. : AC voltagemeter
D.C.V.M. : DC voltagemeter

<POWER SUPPLY CHECK>

Check that the following voltages are obtained respectively across each test point and ground on main circuit.

Test point	Rating or standard	Remark
+6	+6V ± 1V DC	Make sure that AC line voltage comes within: Models U, C — 120V ± 10%; G — 220V ± 10%; A, B — 240V ± 10%
+12	+12V ± 1V DC	
−12	−12V ± 1V DC	

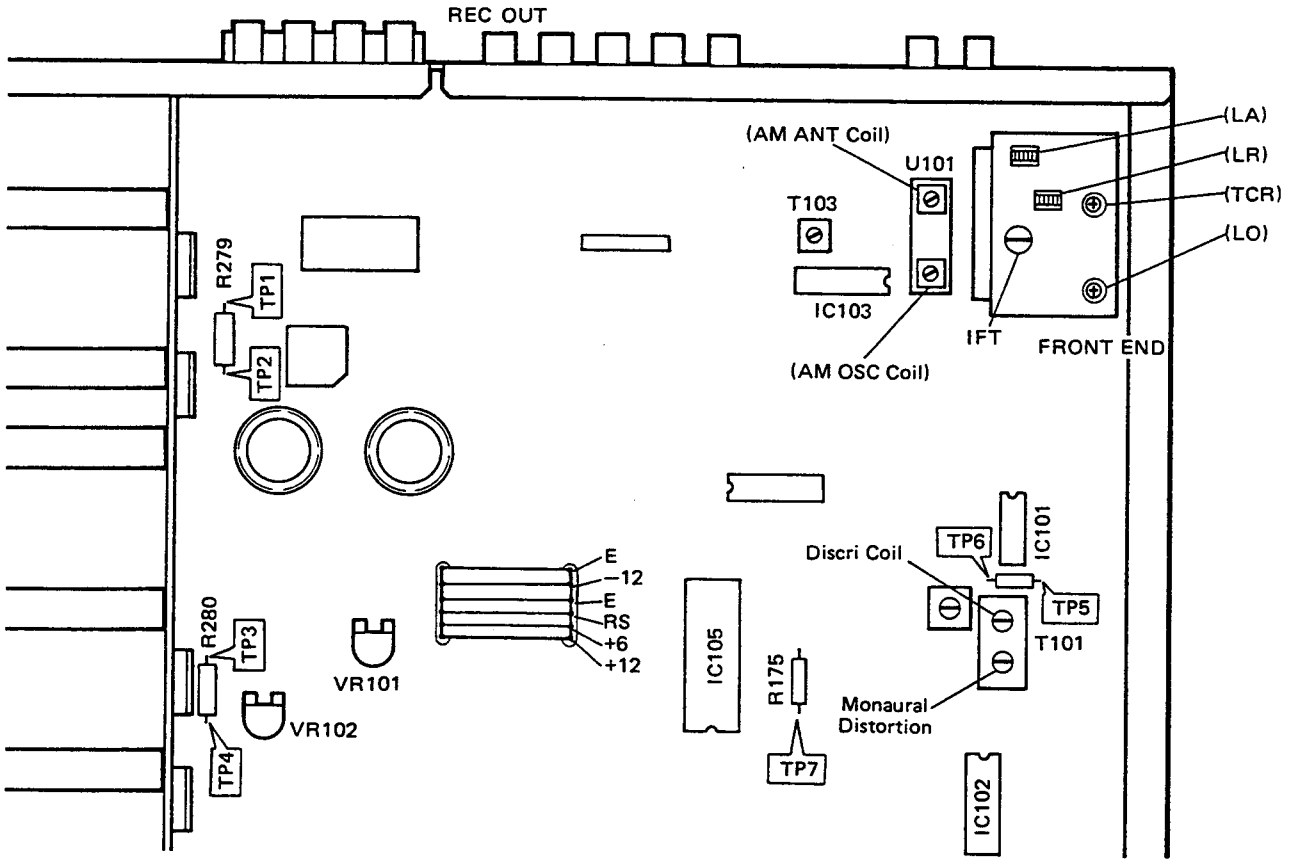
<AUDIO SECTION>

• IDLING CURRENT ADJUSTMENT

When replacing the power and drive transistors, adjust idling current. After the power has been turned on, age about 5 minutes in non loaded condition. Adjust VR101 (Lch) and VR102 (Rch) so that the voltage across the terminals of R279 (TP1 - TP2) and R280 (TP3 - TP4) come to 8mV ~ 15mV DC.

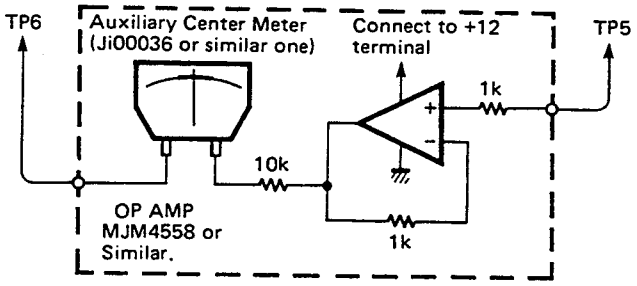
Test points		Adjustment points	Rating
Lch	Across the terminals of R279 (TP1 - TP2)	VR101	8mV ~ 15mV DC.
Rch	Across the terminals of R280 (TP3 - TP4)	VR102	8mV ~ 15mV DC.

• TEST POINTS



<FM TUNER SECTION>

- Use 19kHz L.P.F. to measure the output.
- On step 1 and 2 connect the auxiliary center meter (ji00036 or similar) to confirm the best tuned point.
- 100% modulation means that the Frequency Deviation is 75kHz. (R, U, C, A, B)
- For the G model, Frequency Deviation is 40kHz.
- For the G model, install the Matching Transformer and connect FM SG.



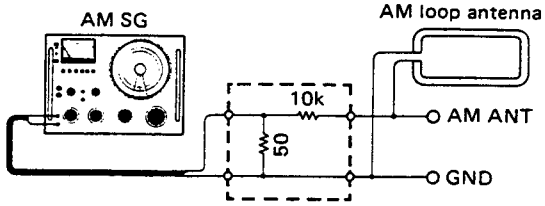
Step	Adjustment item	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
1	Discriminator balance	TP5 ~ TP6	Auxiliary center meter	T101 (Discri Coil)	Adjust the pointer of the auxiliary center meter point to "0" at detuned point.		After the adjustment of step 1 to 5, confirm it again.
2	Confirmation of station center set	300Ω FM ANT	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf) MONO 1kHz 100% MOD]	TUNING Key → UP or DOWN	Confirm that the auxiliary center meter deflects to "0" when tuned to signal of FM SG.		
		TP5 ~ TP6	Auxiliary center meter				
3	Monaural distortion	300Ω FM ANT	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf) MONO 100Hz 100% MOD]	T101 (Monaural Distortion) SIGNAL QUALITY indicator	Reduce distortion to minimum.	Less than −43dB	Confirm that all signal quality indicators lights
		REC OUT L, R	DIST. M L.P.F.				
4	Stereo distortion	300Ω FM ANT	FM SG, SSG [98MHz ± 1kHz 70dBμ (75.2dBf) STEREO L, R 1kHz, 100% MOD]	Front end IFT ST indicator	Same as step 3	Less than −33dB	Confirm that ST indicator lights up.
		REC OUT L, R	DIST. M L.P.F.				
5	Confirmation of separation	300Ω FM ANT	FM SG, SSG [98MHz ± 1kHz 70dBμ (75.2dBf) STEREO L, R 1kHz, 100% MOD]		Reduce output level to minimum.	Separation more than 28dB	
		REC OUT L, R	L.P.F. A.C.V.M.				
6	Confirmation of auto seach reception	300Ω FM ANT	FM SG [98MHz ± 1kHz 25dBμ (30.2dBf) MONO 1kHz 100% MOD]	TUNING Key → Up or DOWN		Confirm that auto search reception is possible with the tuning key.	Confirm that muting is performed at auto reception.

Note: X dBμ = x + 5.2dBμf

<AM TUNER SECTION>

- Connect the AM loop antenna to the AM ANT terminals.
- Connect the AM dummy antenna for adjustment.

AM DUMMY ANTENNA CONNECTION



- Shorting TP7 (P SET) and ground (between chassis) while set at FM will result in automatic memory of each preset from P1 to P3 as given in the right table. This is convenient when making an adjustment.
<Addition> P SET : 4 Pin of IC105 (LC7030)

	P1	P2	P3
FM	98.0MHz		
AM	630kHz	1080kHz	1440kHz

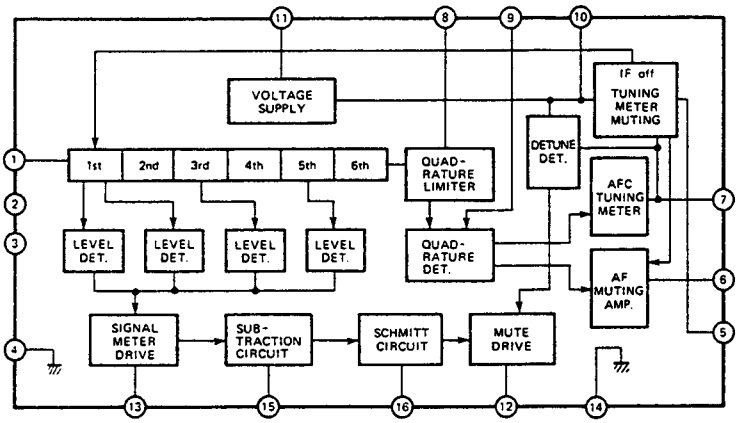
Step	Adjustment item	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard
1	AM IFT	AM ANT	AM SG AM dummy antenna [630kHz ± 0.1kHz 50dBμ 400Hz, 30% MOD]	T103	Adjust T103 to maximize detector output.	
		REC OUT	A.C.V.M.			
2	Confirmation of sensitivity	AM ANT	AM SG AM dummy antenna [630kHz ± 0.1kHz 1080kHz ± 0.1kHz 1440kHz ± 0.1kHz 400Hz, 30% MOD]		Obtain AM SG output level where distortion become 10%.	Less than 58dBμ
		REC OUT	A.C.V.M. DIST. M			
3	Confirmation of auto search reception	AM ANT	AM SG AM dummy antenna [1080kHz ± 0.1kHz 60dBμ 400Hz, 30% MOD]	TUNING key UP or DOWN		Confirm the auto search reception with the tuning key

<DIGITAL CONTROL SECTION>

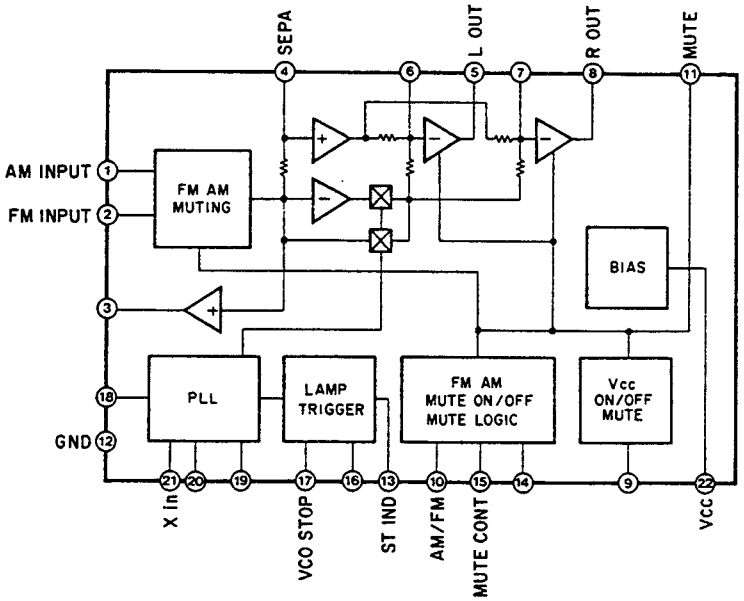
Step	Confirmation item	Connection terminal	Instrument required	Operation key	Confirmation method
1	Preset memory	300Ω FM ANT	FM SG. SSG [98MHz ± 1kHz 70dBμ (75.2 dBf) STEREO L, R 1kHz, 100% MOD]	FUNCTION key TUNING MODE key TUNING key (UP or DOWN) MEMORY key PRESET STATION key	①Receive FM 98MHz by means of auto search. ②Press MEMORY key → MEMORY indicator flashes about 5 seconds. ③Press P1 → MEMORY indicator goes OFF
		AM ANT	AM SG AM dummy antenna [1080kHz ± 0.1kHz 80dBμ 400Hz, 30% MOD]		④Receive AM 1080kHz ⑤Press MEMORY key → MEMORY indicator flashes about 5 seconds. ⑥Press P2 → MEMORY indicator goes OFF
		300Ω FM ANT AM ANT	FM SG. SSG AM SG AM dummy antenna		⑦Press P1 and P2 and check that content is read out. → P1 and P2 of PRESET STATION indicator lights.
2	Tuning mod	Same as step 1	Same as step 1	FUNCTION key TUNING MODE key TUNING key (UP or DOWN)	Tune to FM 98MHz and AM 1080kHz, and chech that when receiving MAN'L/MONO, FM reception become forced mono TUNING MODE indicator → Goes out ST indicator → Goes out
					Check that tuning operation stops when tuned while AUTO searching. TUNING MODE indicator → lights up ST indicator → lights up
3	Last channel memory			POWER key	①Read out P2. ②Turn OFF POWER Switch. ③Turn ON POWER Switch after 5 seconds. ④P2 content should come out.

■IC BLOCK

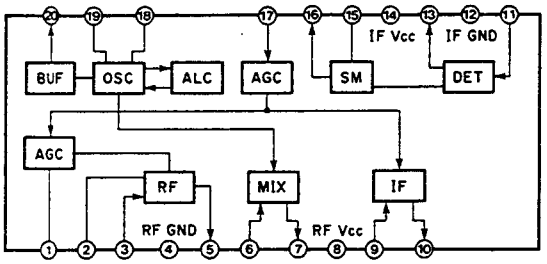
IC101 : LA1235



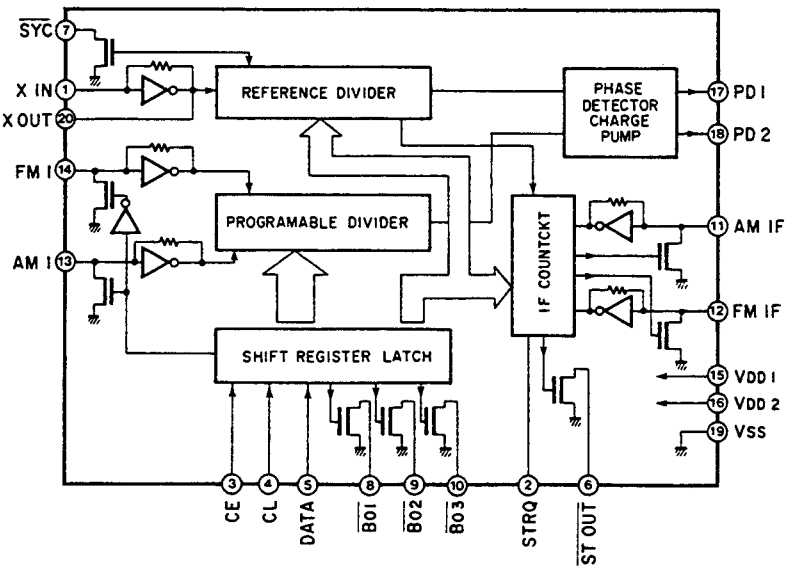
IC102 : LA3400



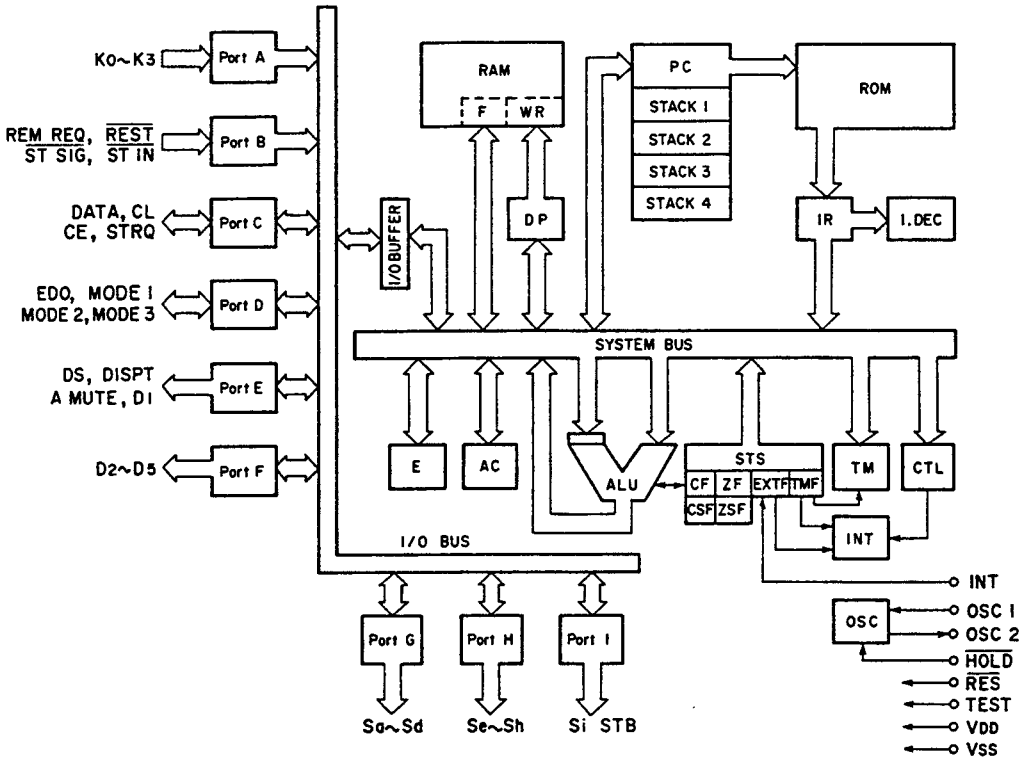
IC103 : LA1245



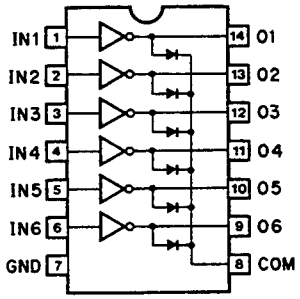
IC104 : LM7000



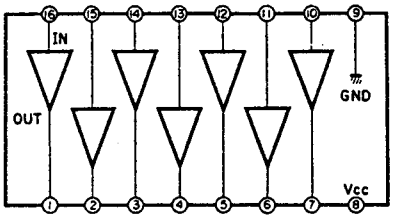
IC105 : LC7030



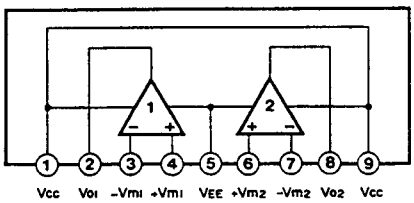
IC106 : LB1274



IC107 : BA618

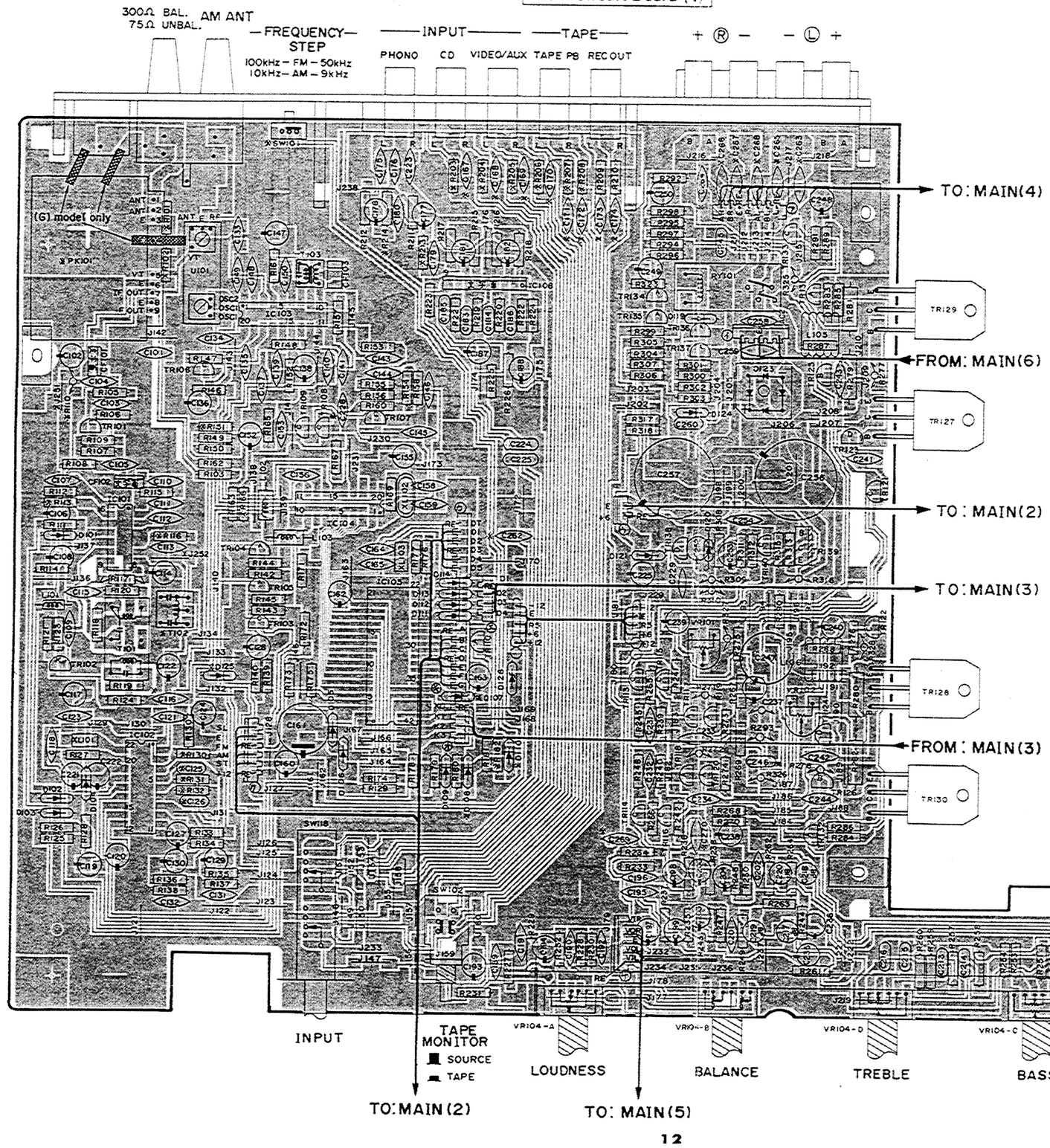


IC108 : NJM2043S, AN6557 or M5220L

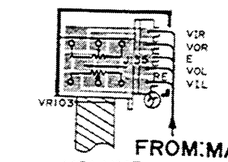


■ PRINTED CIRCUIT BOARD (Pattern side)

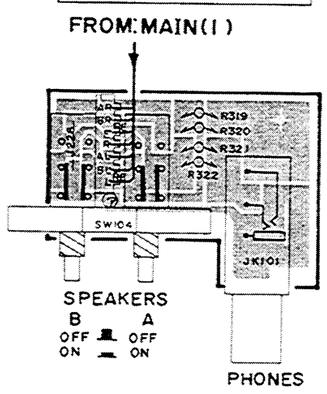
Main Circuit Board (1)



Main Circuit Board (5)



Main Circuit Board (4)

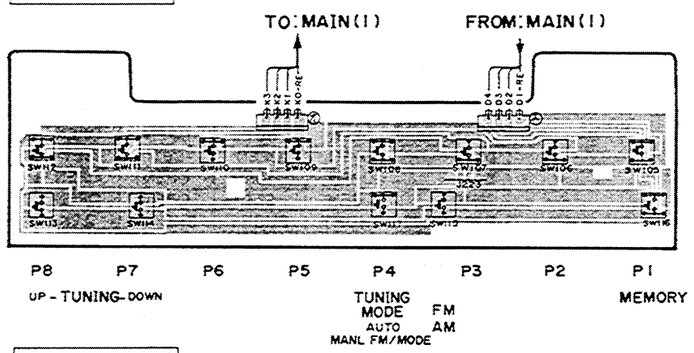


Note)
文字面 : Letter side
Note : * marked

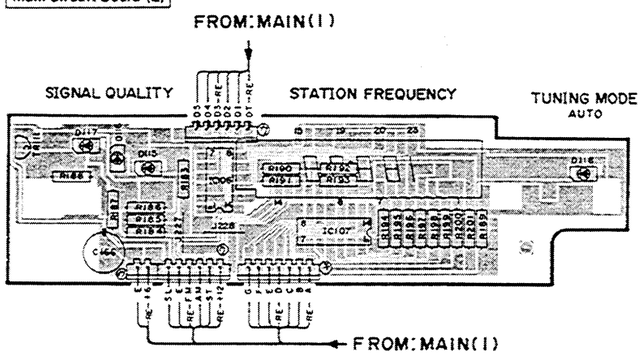
	U, C	R	A, B	G
R110	OPEN	OPEN	OPEN	100
R101	SHORT	SHORT	SHORT	100K
R102	OPEN	OPEN	OPEN	1M
R116	OPEN	OPEN	OPEN	4.7K
J251, 252	SHORT	SHORT	SHORT	OPEN
T102	OPEN	OPEN	OPEN	GE20053
C121	0.047	0.047	0.047	0.022
R131, 132	47K	47K	47K	100K
C125, 126	1500P/100	1500P/100	1000P/50	470P/50
R151	22K	22K	22K	47K
D125	1S1555	1S1555	1S1555	SHORT
D107, 110	OPEN	SET	OPEN	OPEN
D108	OPEN	OPEN	SET	SET
R182	OPEN	10K	OPEN	OPEN
SW101	OPEN	SET	OPEN	OPEN
R203 ~ 208	SHORT	SHORT	SHORT	2.2K
C167 ~ 172	OPEN	OPEN	OPEN	390P
C175, 176	OPEN	OPEN	OPEN	220P
R213, 214	150	150	150	2.2K
C227 263 ~ 266	OPEN	OPEN	OPEN	0.022
C262, 226	OPEN	OPEN	OPEN	0.01
C267, 268	OPEN	OPEN	OPEN	0.047
C223	OPEN	OPEN	OPEN	0.1/25
PK101	PA00081	PA00081	PA00081	PA00085
C173, 174 269, 270	OPEN	OPEN	OPEN	100P
R113	6.8K	6.8K	6.8K	15K
R130	56K	56K	56K	15K

■ PRINTED CIRCUIT BOARD (Pattern side)

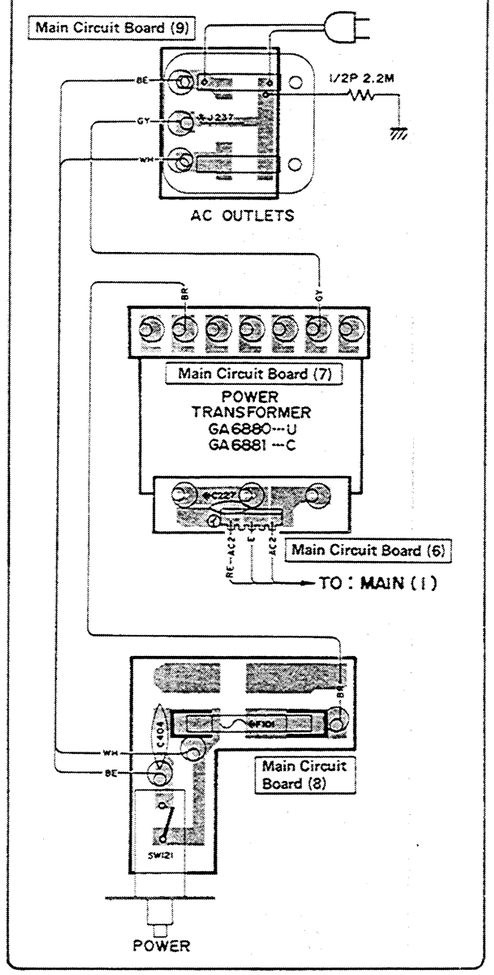
Main Circuit Board (3)



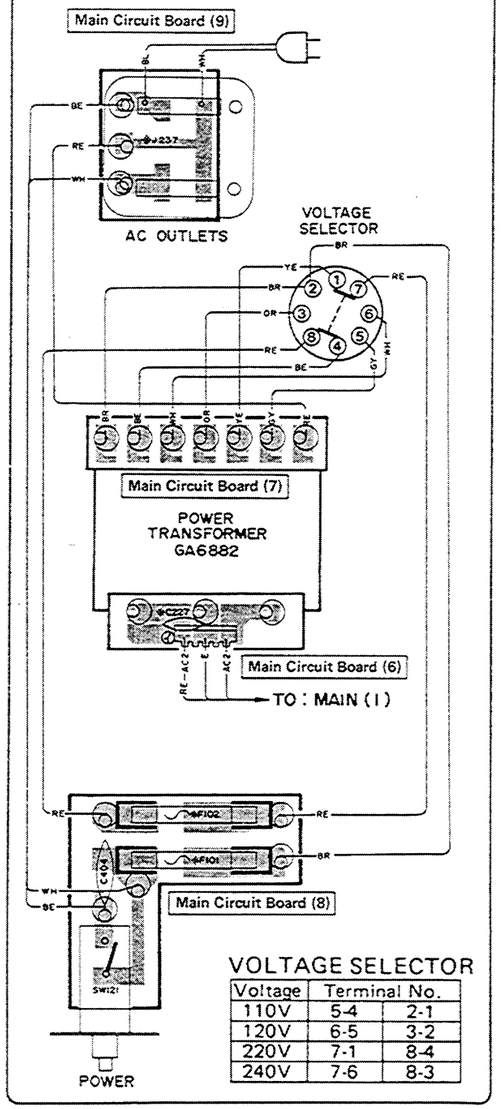
Main Circuit Board (2)



U.S.A and Canadian models



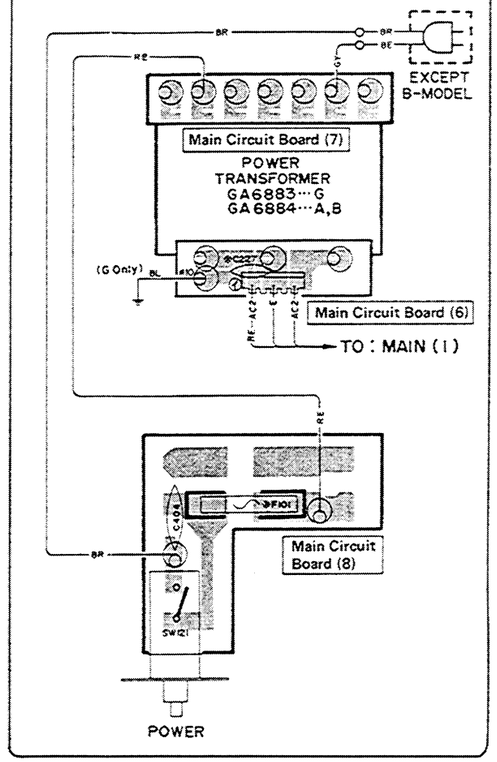
General model



VOLTAGE SELECTOR

Voltage	Terminal No.	
110V	5-4	2-1
120V	6-5	3-2
220V	7-1	8-4
240V	7-6	8-3

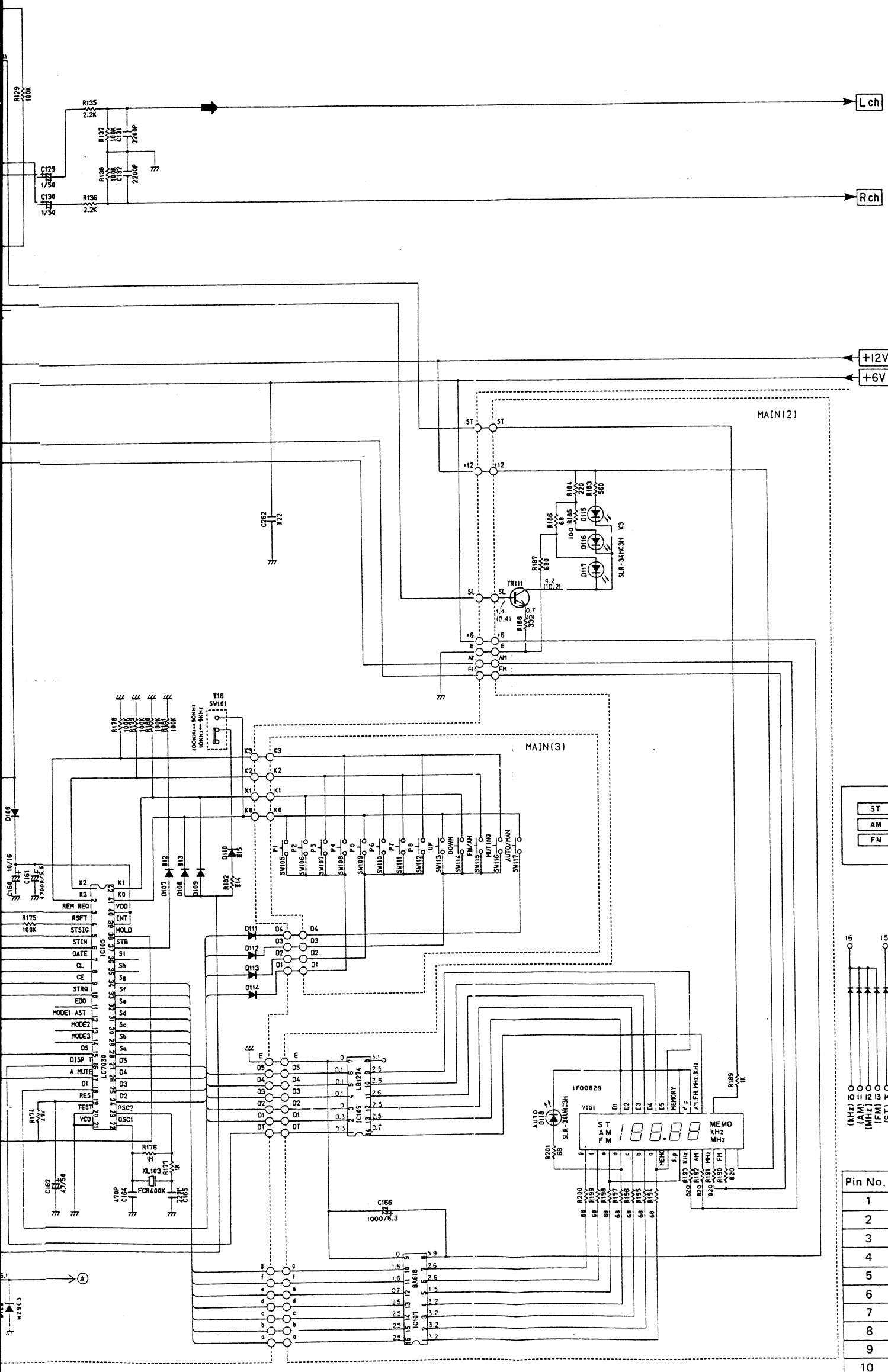
Australian, British and European models



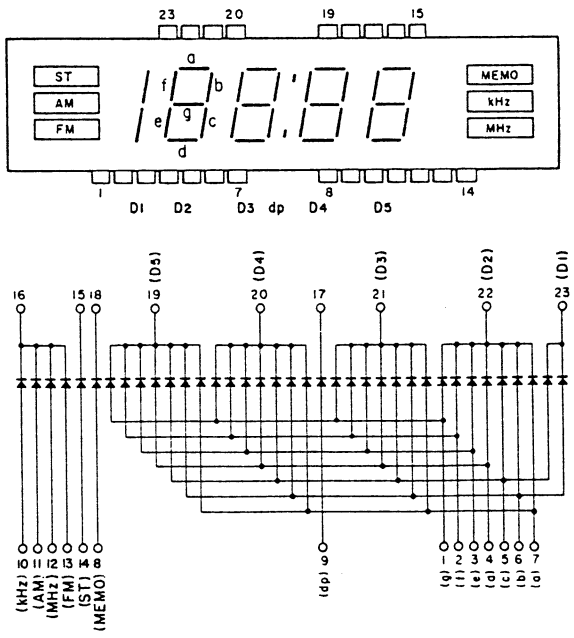
■ SCHEMATIC DIAGRAM

- Tuner Section

		U.C.	R	A	G	B
※1	R110	OPEN	→	→	100	OPEN
※2	R101	SHORT	→	→	100K	SHORT
※3	R102	OPEN	→	→	1M	OPEN
※4	R116	OPEN	→	→	4.7K	OPEN
※5	J251, 252	SHORT	→	→	OPEN	SHORT
※6	T102	OPEN	→	→	GE20053	OPEN
※7	C121	0.047	→	→	0.022	0.047
※8	R131.132	47K	→	→	100K	47K
※9	C125.126	Ⓟ 1500P/100	→	1000P/50	470P/50	1000P/50
※10	R151	22K	→	→	47K	22K
※11	D125	1S1555	→	→	SHORT	1S1555
※12	D107	OPEN	1S1555 or 1S2473	OPEN	→	→
※13	D108	OPEN	→	1S1555 or 1S2473	→	→
※14	R182	OPEN	10K	OPEN	→	→
※15	D110	OPEN	1S1555 or 1S2473	OPEN	→	→
※16	SW101	OPEN	KA40169	OPEN	→	→
※17	R203~208	SHORT	→	→	2.2K	SHORT
※18	C167~172	OPEN	→	→	390P	OPEN
※19	C175.176	OPEN	→	→	220P	OPEN
※20	R213.214	150	→	→	2.2K	150
※21	R263~266	OPEN	→	→	0.022	OPEN
※22	C226.262	OPEN	→	→	0.01	OPEN
※23	C267.268	OPEN	→	→	0.047	OPEN
※24	C223	OPEN	→	→	0.1/25	OPEN
※25	PK101	PA00081	→	→	PA00082	PA00081
※26	C173,174 269,270	OPEN	→	→	100P	OPEN
※28	R113	6.8K	→	→	15K	6.8K
※29	R130	56K	→	→	15K	56K



VC101 (Frequency Display)

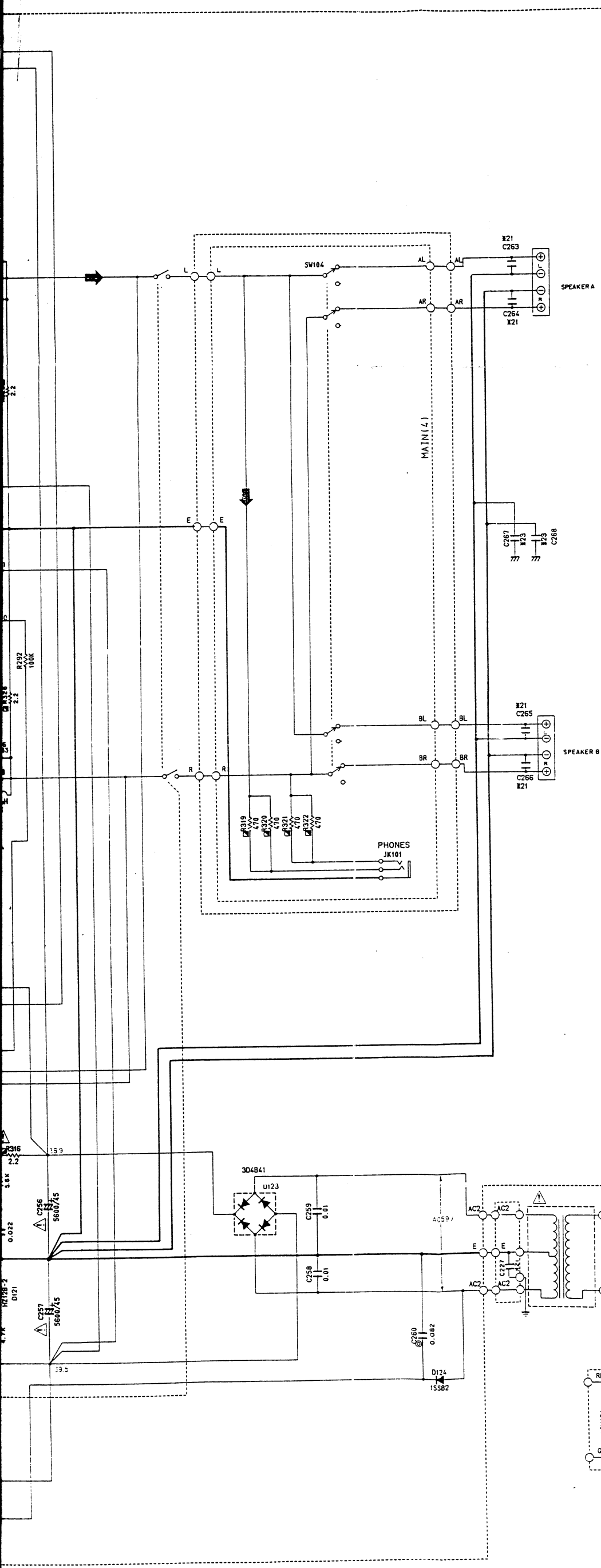


Pin No.	Function		Pin No.	Function	
1	segment "g"	Anode	13	"FM"	Anode
2	segment "f"	Anode	14	"ST"	Anode
3	segment "e"	Anode	15	"ST"	Cathod
4	segment "d"	Anode	16	"AM" "FM" "kHz" "MHz"	Cathode
5	segment "c"	Anode			
6	segment "b"	Anode	17	decimal point	Cathode
7	segment "a"	Anode	18	"MEMO"	Cathode
8	"MEMO"	Anode	19	digit "5"	Cathod
9	decimal point	Anode	20	digit "4"	Cathod
10	"kHz"	Anode	21	digit "3"	Cathod
11	"AM"	Anode	22	digit "2"	Cathod
12	"MHz"	Anode	23	digit "1"	Cathod

- *All voltages measured with a 10MΩ/VDC electric volt meter, under no-signal condition.*
- *The voltages are measured at FM reception mode. Only the voltages at IC103 are at AM reception mode.*
- *Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.*
- *Schematic Diagram is subject to change without notice.*

■ SCHEMATIC DIAGRAM

- Audio Section



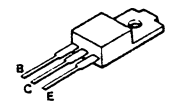
RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
◪	CARBON FILM RESISTOR (1/6W)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	SEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR

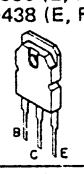
CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⧺
NO MARK	CERAMIC CAPACITOR	⊣⊢
◎	POLYESTEL FILM CAPACITOR (Mylar)	
○	POLYSTYRENE FILM CAPACITOR	
Ⓘ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

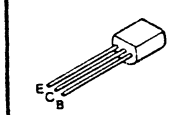
2SC3677
2SD1405



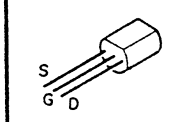
2SB560 (E, F)
2SD438 (E, F)



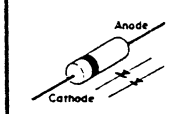
2SA970 (GR, BL)
2SA1115 (E, F)
2SA1310 (R, S, T)
2SC2240 (GR, BL)
2SC2603 (E, F)
2SC3312 (R, S, T)
2SC2060
2SD240



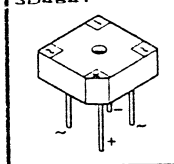
2SK105 (E, F)
2SK246 (Y)



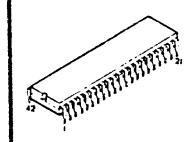
1SS82
1S2473
1S1555
RD6.8EB2
HZ12B-2
HZ9C3



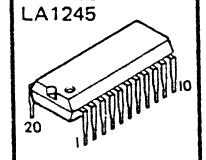
3D4B41



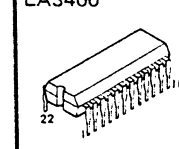
LC7030



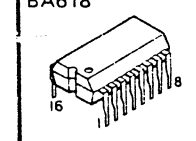
LM7000
LA1245



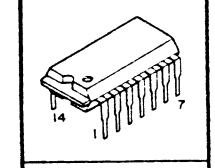
LA3400



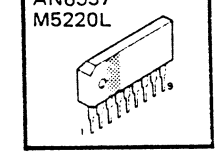
LA1235
BA618



LB1274



NJM2043S
AN6557
M5220L



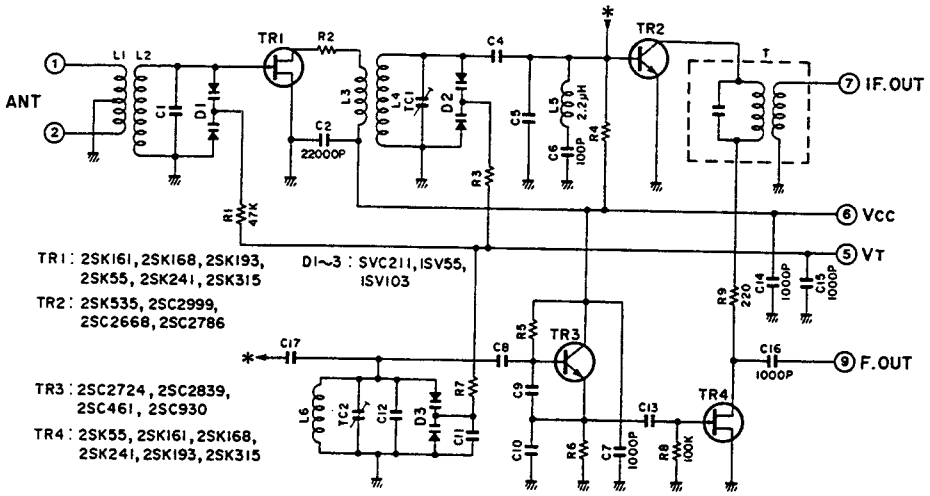
UNLESS OTHERWISE SPECIFIED :
DIODES ARE 1S1555 or 1S2473
PNP TRANSISTORS ARE 2SA1115(E.F) or 2SA1310(R.S.T)
NPN TRANSISTORS ARE 2SC2603(E.F) or 2SC3312(R.S.T)

- *All voltages measured with a 10MΩ/VDC electric volt meter, under no-signal condition.*
- *Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.*
- *Schematic Diagram is subject to change without notice.*

■ SCHEMATIC DIAGRAM

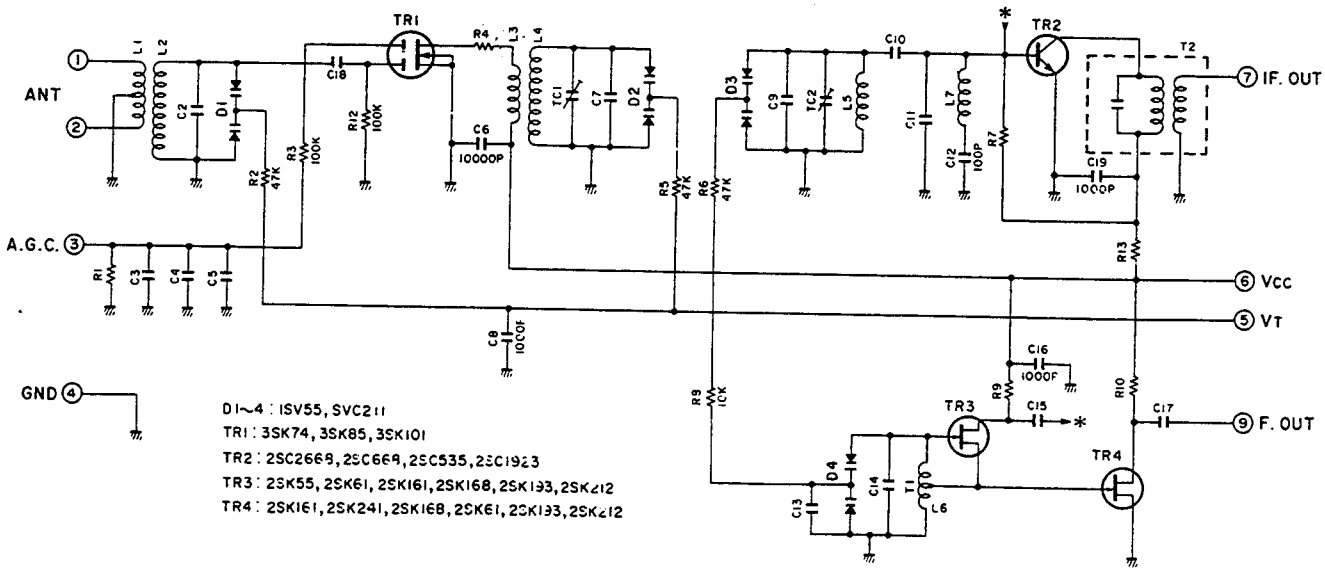
- FRONT END PACK (PK101)

R, U, C, A, B models

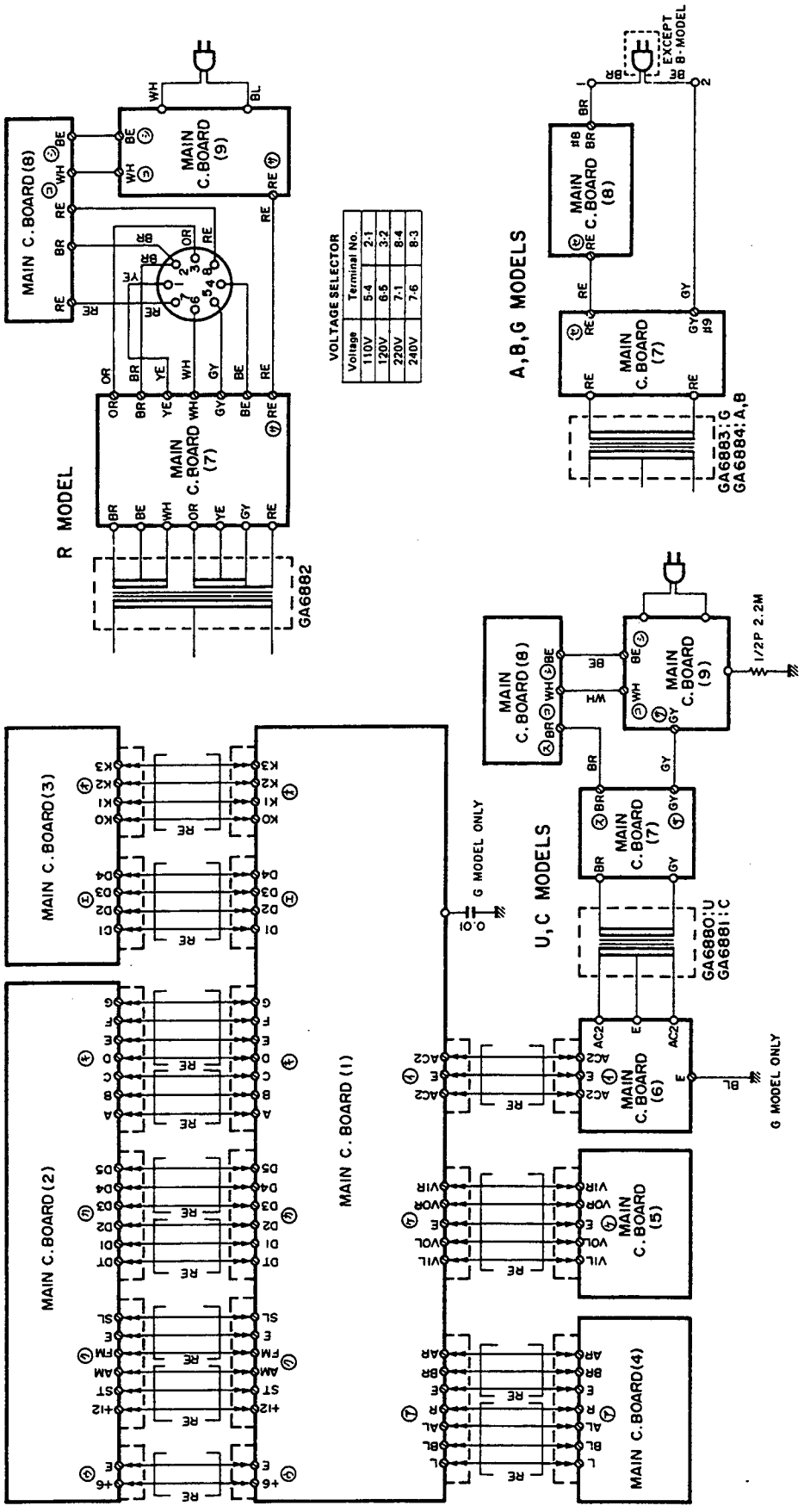


MC-Service

G model



■WIRING


R MODEL
A,B,G MODELS
U,C MODELS
MAIN C.BOARD (1)
MAIN C.BOARD (2)
MAIN C.BOARD (3)
MAIN C.BOARD (4)
MAIN C.BOARD (5)
MAIN C.BOARD (6)
MAIN C.BOARD (7)
MAIN C.BOARD (8)
MAIN C.BOARD (9)
GA6882
GA6883:G
GA6884:A,B
GA6880:U
GA6881:C
EXCEPT B-MODEL
G MODEL ONLY
VOLTAGE SELECTOR
Voltage
Terminal No.
110V 5-4 2-1
120V 6-5 3-2
220V 7-1 8-4
240V 7-6 8-3

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	
	GD 90 06 80	Coil	0.74μH	空芯コイル	L105,106			
	GE 30 05 00	Inductor	12μH	円筒型インダクター	L101			
	GE 30 04 50	〃	1mH	〃	L102,103			
	GE 10 04 70	AM IFT Coil	AM	AM IFT コイル	T103			
	GE 10 07 40	Quadrature Detectorcoil		クオドラチャー検波コイル	T101			
	GE 20 05 30	Anti-Birdie Filter	114KHz	アンチバーディーフィルター	T102		G	
	GG 00 05 60	FM Ceramic Filter	SFE10.7MS3GHY-A	FMセラミックフィルター	CF101,102			
	GG 00 06 60	AM 〃	SFU 450B9	AMセラミックフィルター	CF103			
	GG 00 07 00	Ceramic Resonator	FCR 400K	セラミック振動子	XL103			
	GG 00 07 40	〃	CSB 456F10	〃	XL101			
	QU 00 38 00	Quartz Crystal Unit	7.2MHz	水晶振動子	XL102			
	HL 51 22 20	Metal Oxide Film Resistor	0.22Ω 1W	酸金抵抗	R279~282			
	HV 45 32 20	Flame Proof Carbon	2.2Ω ERD25FV	不燃化カーボン抵抗	R316,325,326			
	HV 45 42 20	〃	22Ω 〃	〃	R293			
	HV 45 43 90	〃	39Ω 〃	〃	R309,310			
	HV 45 51 00	〃	100Ω 〃	〃	R110		G	
	HV 45 54 70	〃	470Ω 〃	〃	R272,278,319~322			
	HV 45 61 00	〃	1KΩ 〃	〃	R271,272,327,328			
	HV 45 68 20	〃	8.2kΩ RDF25SL	〃	R117			
	HS 41 25 40	Potentiometer	100KA×2	可変抵抗器	VR103 VOL.			
	HS 41 25 30	〃 (4-Ganged)	100Kトク×2,80Kトク×2 250KMN,300Kトク×2	〃	VR104 LOUD.BAL. TRE.BAS.			
	HT 37 03 50	Pre-Set Potentiometer	B2KΩ	半固定抵抗	VR101,102			
	iA 09 70 00	Transistor	2SA970 (GR,BL)	トランジスタ	TR119,120,131,132			
	iA 11 15 10	〃	2SA1115 (E,F)	〃	TR104,105,110,117,118,134~137	Inter-changeable		
	iX 60 31 70	〃	2SA1310 (R,S,T)	〃	〃	Inter-changeable		
	iC 22 40 00	〃	2SC2240 (GR,BL)	〃	TR121,122			
	iC 26 03 10	〃	2SC2603 (E,F)	〃	TR101,103,106~109,111,113~116,140,133	Inter-changeable		
	iX 60 31 80	〃	2SC3312 (R,S,T)	〃	〃	Inter-changeable		
	iC 20 60 00	〃	2SC2060	〃	TR138	Inter-changeable		
	iD 04 00 10	〃	2SD400	〃	〃	Inter-changeable		
	iC 36 77 00	〃	2SC3677	〃	TR139	Inter-changeable		
	iD 14 05 00	〃	2SD1405	〃	〃	Inter-changeable		
	iB 05 60 10	〃	2SB560 (E,F)	〃	TR125,126			
	iD 04 38 10	〃	2SD438 (E,F)	〃	TR123,124			
	iE 10 12 30	FET	2SK105 (E,F)	FET	TR102	Inter-changeable		
	iE 10 26 00	〃	2SK246	〃	〃	Inter-changeable		
	iF 00 06 70	Diode	1S2473	ダイオード	D101~106,109,111~114,119	Inter-changeable		
	iF 00 00 40	〃	1S1555	〃	〃	Inter-changeable		
	iF 00 06 70	〃	1S2473	〃	D107,110	Inter-changeable	R	
	iF 00 00 40	〃	1S1555	〃	〃	Inter-changeable	〃	
	iF 00 06 70	〃	1S2473	〃	D108	Inter-changeable	A,B,G	
	iF 00 00 40	〃	1S1555	〃	〃	Inter-changeable	〃	
	iF 00 00 40	〃	1S1555	〃	D125		R,U,C,A,B	
	iF 00 14 00	〃	1SS82	〃	D124			
	iF 00 16 70	Zener Diode	RD6.8EB2	ツェナーダイオード	D120			
	iF 00 35 50	〃	HZ12B-2	〃	D121			

※New Parts (新規部品)

PARTS LIST

■ELECTRICAL PARTS

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

- Carbon resistors of this stereo receiver are 1/4W. There is no discription about them in this parts list. Use the "Part No." HJ35○○○○ or equivalent.

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	
※		NA 08 68 60	*Main Circuit Board*		メインシート			R	
※		NA 08 68 80	〃		〃			U	
※		NA 08 68 90	〃		〃			C	
※		NA 08 69 00	〃		〃			A,B	
※		NA 08 69 20	〃		〃			G	
		FG 20 03 00	Ceramic Cap.	3pF 50V	セラコン	C201,202			
		FG 21 11 00	〃	10pF 50V	〃	C233,234			
		FG 21 13 30	〃	33pF 50V	〃	C113,115,134			
		FG 21 16 80	〃	68pF 50V	〃	C116,241~244,145			
		FG 21 22 20	〃	220pF 50V	〃	C165,179,180,195,196			
		FG 21 22 20	〃	220pF 50V	〃	C175,176		G	
		FG 21 24 70	〃	470pF 50V	〃	C123,164,189,190			
		FG 21 21 00	〃	100pF 50V	〃	C173,174,269,270		G	
		FG 21 23 90	〃	390pF 50V	〃	C167~172		G	
		FG 41 31 00	〃	1000pF 50V	〃	C144,149,156,231,232			
		FG 41 32 20	〃	2200pF 50V	〃	C131,132			
		FG 44 42 20	〃	0.022μF 50V	〃	C227,263~266		G	
		FG 44 41 00	〃	0.01μF 50V	〃	C101,103~105,107,109~112,258,259,133,137,139~141,143,148,150			
		FG 44 41 00	〃	0.01μF 50V	〃	C262		G	
		FG 44 42 20	〃	0.022μF 50V	〃	C146,254,191,192,228			
		FG 44 44 70	〃	0.047μF 50V	〃	C267,268		G	
		FG 44 44 70	〃	0.047μF 50V	〃	C118,153			
		FG 44 42 20	〃	0.022μF 50V	〃	C121		G	
		FG 44 44 70	〃	0.047μF 50V	〃	〃		R,U,C,A,B	
		Fi 19 13 30	〃	33pF 50V	〃	C158,159			
		Fi 41 41 00	〃	0.01μF	〃	C261			
		FZ 00 41 30	〃	0.1μF 25V	〃	C223		G	
		FZ 00 41 30	〃	0.1μF 25V	〃	C229			
		FZ 00 35 80	Capacitor	47000μF 5.5V	スーパーキャパシタ	C161 (Inter-changeable)			
		FZ 00 64 00	〃	47000μF 5.5V	〃	〃 (Inter-changeable)			
		UA 25 32 70	Mylar Cap.	2700pF 50V	マイラーコン	C213,214			
		UA 25 39 10	〃	9100pF 50V	〃	C183,184			
		UA 25 41 80	〃	0.018μF 50V	〃	C207,208,215,216,224,225			
		UA 25 43 30	〃	0.033μF 50V	〃	C185,186,245,246			
		FA 15 48 20	〃	0.082μF 50V	〃	C209,210,260			
		FG 21 24 70	Ceramic Cap.	470pF 50V	セラコン	C125,126		G	
		FG 41 31 00	〃	1000pF 50V	〃	〃		A,B	
		UT 45 31 50	Polypropylene Film Cap.	1500pF 100V	ポリプロコン	〃		R,U,C	
		FZ 00 39 50	Electroltic Cap.	5600μF 45V	ブロックケミコン	C256,257			
		UK 16 63 30	〃	3.3μF 50V	BPコン	C217~220			
		UW 91 81 00	〃	100μF 6.3V	ケミコン	C181,182,250			
		UW 91 84 70	〃	470μF 6.3V	〃	C155			
※		FZ 00 74 70	〃	1000μF 6.3V	〃	C166			
		UW 82 74 70	〃	47μF 10V	〃	C259,249,203,204,211,212			
		UW 83 71 00	〃	10μF 16V	〃	C102,117,124,127,136,147,160,163			
		UW 84 74 70	〃	47μF 25V	〃	C237,238,255			
		UW 56 51 00	〃	0.1μF 50V	〃	C193,194			
		UW 86 54 70	〃	0.47μF 50V	〃	C138,222			
		UW 56 61 00	〃	1μF 50V	〃	C106,108,119,120,128~130,152,177,178,221,239,240,248			
		UW 86 62 20	〃	2.2μF 50V	〃	C114,187,188,197,198,235,236			
		UW 86 64 70	〃	4.7μF 50V	〃	C162,199,200,253,122			
		UW 86 83 30	〃	330μF 50V	〃	C247			

※New Parts (新規部品)

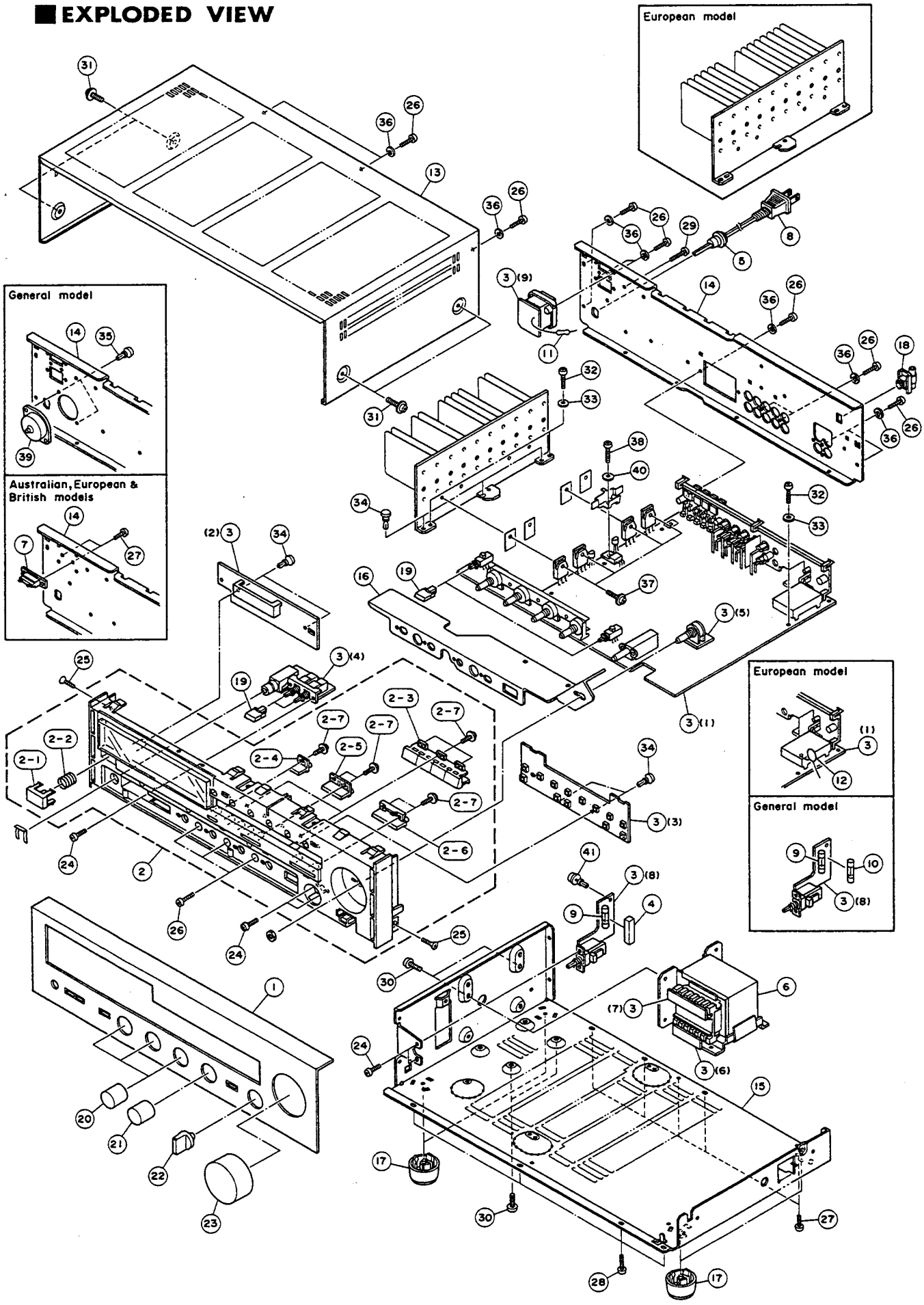
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	
		iF 00 33 20	Zener Diode	HZ9C-3	ツェナダイオード	D126			
※		iF 00 87 30	LED (Red)	SLR-34URC3H	L E D	D118			
※		iF 00 87 40	〃 (Green)	SLR-34MC3H	〃	D115~117			
		iH 00 10 30	Diode	3D4B41	ダイオードブリッジ	D123			
※		iF 00 82 90	Frequency Display		周波数表示器	V101			
		iG 04 78 00	IC	LA1245	I C	IC103			
		iG 04 94 10	〃	LB1274	〃	IC106			
		iG 08 02 00	〃	NJM2043S	〃	IC108			
		iG 08 52 00	〃	AN6557	〃	〃 Inter-changeable			
		iG 09 20 00	〃	M5220L	〃	〃			
		iG 13 20 00	〃	BA618	〃	IC107			
		iG 13 95 00	〃	LA1235	〃	IC101			
		iG 14 25 00	〃	LA3400	〃	IC102			
		iG 14 26 00	〃	LM7000	〃	IC104			
		iG 14 27 00	〃	LC7030	〃	IC105			
※		KA 40 16 90	Slide Switch		スライドスイッチ	SW101		R	
※		KA 50 20 80	Rotary Switch	SRZ-S 4-4NS	ロータリースイッチ	SW118			
		KA 80 32 10	Push Switch	SDL-1P	プッシュスイッチ	SW119			
※		KA 80 51 40	〃	SUL2-2NS	〃	SW102			
※		KA 80 51 00	〃	SUL2-2	〃	SW104			
※		KA 80 51 30	〃	SUL2-2S	〃	SW103			
		KA 90 63 80	Push Switch	EVQ-QRB-04M	ライトタッチスイッチ	SW105~117			
		KC 00 19 40	Relay	DH2TU24VDC	リレー	RY101 Inter-changeable			
※		KC 00 20 00	〃	JR2a-DC24V	〃	〃			
		LB 30 17 20	Jack, Head Phone	Black	ホーンジャック	JK101			
※		NA 08 78 30	Tuning Block	AM	電子同調用ブロック	U101			
		PA 00 08 10	FM Front End Pack	FE343U	FMフロントエンドパック	PK101		R,U,C,A,B	
		PA 00 08 50	〃	BFE446U16	〃	〃		G	
		iL 00 05 70	Insulation Washer		マイカーベース				
※		BA 09 22 20	Heat Sink		放熱板			R,U,C,A,B	
※		BA 09 22 30	〃		〃			G	
		EZ 00 13 50	Cup Screw	3×14FCM3-BI	カップスクリュー				
		iX 60 35 60	Transistor	2SA1264(O,R)	トランジスタ	TR129,130			
		iX 60 35 70	〃	2SC3181(O,R)	〃	TR127,128			
※		LA 00 54 90	Terminal	834T-1100	ボードインタイ			R	
		LB 20 14 80	Voltage Selector		電圧切換器			R	
※		LB 40 14 50	AC Outlet		ACアウトレット			R,U	
※		LB 40 14 60	〃		〃			C	
		LB 20 18 80	Pin, Fuse Holder	PC-FH1	ヒューズホルダーピン				
※		NB 62 58 50	Terminal Unit		ターミナルユニット			R,U,C,A,B	
※		NB 62 58 60	〃		〃			G	
		Mi 07 06 50	Parallel Cable	6P ℓ=60	パラレルケーブル				
		BB 06 83 70	Metal, Earth		アース金具				
※		BB 07 09 10	TR Pusher		TRプッシャー				
		CB 60 56 20	Plastic Rivet		プラスチックリベット				

※New Parts (新規部品)

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	
	EJ 33 01 06	Pan Head Tapping Screw	3×10 FCRM3-BI	ナベタッピングネジ	PACK		
	EV 20 30 36	Plain Washer	φ3 FCRM3-BI	平座金	PACK		

※New Parts (新規部品)

■ EXPLODED VIEW



■MECHANISM PARTS

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	
※	1	NB 62 56 80	Panel Unit		パネルユニット	Silver			
※	〃	NB 62 56 90	〃		〃	Black			
※	2	NB 62 57 00	Sub Chassis Unit		サブシャーシユニット	Silver			
※	〃	NB 62 57 10	〃		〃	Black			
	2-1	CB 63 51 20	Button		ボタン	POWER Silver	A-520		
	〃	CB 63 51 30	〃		〃	〃 Black	〃		
	2-2	AA 61 78 80	Spring		スプリング				
※	2-3	CB 63 99 00	Button, Push	4P	ボタンプッシュ	P1～P8 Silver			
※	〃	CB 63 99 10	〃	〃	〃	〃 Black			
※	2-4	CB 63 99 20	〃	1P	〃	MEMORY Silver			
※	〃	CB 63 99 30	〃	〃	〃	〃 Black			
※	2-5	CB 63 99 40	〃	2P	〃	TUNING MODE Silver			
※	〃	CB 63 99 50	〃	〃	〃	〃 Black			
※	2-6	CB 63 99 60	Button, Seesaw		ボタンシーソー	TUNING Silver			
※	〃	CB 63 99 70	〃		〃	〃 Black			
※	2-7	EX 60 02 00	Cup Screw	2×6 FCM3-BI	カップスクリュー				
※	3	NA 08 68 60	Main Circuit Board		メインシート			R	
※	〃	NA 08 68 80	〃		〃			U	
※	〃	NA 08 68 90	〃		〃			C	
※	〃	NA 08 69 00	〃		〃			A,B	
※	〃	NA 08 69 20	〃		〃			G	
	4	CB 09 95 80	Fuse Holder Cover	SB-0664U	ヒューズホルダーカバー			U	
	5	CB 61 68 10	Cord Stopper	CM-22A	コードストッパー			U	
	〃	CB 62 01 90	〃	CM-22B	〃			R,A,G,B	
	〃	CB 62 02 00	〃	CM-22C	〃			C	
※	6	GA 68 80 00	Power Transformer		電源トランス			U	⚠
※	〃	GA 68 81 00	〃		〃			C	⚠
※	〃	GA 68 82 00	〃		〃			R	⚠
※	〃	GA 68 83 00	〃		〃			G	⚠
※	〃	GA 68 84 00	〃		〃			A,B	⚠
	7	LA 00 29 50	Terminal Board	2P	中継端子台			A,G,B	⚠
	8	MG 00 09 80	Power Cord	10A 125V 2m	電源コード	Inter-changeable		U	⚠
	〃	MG 00 12 40	〃	10A 125V 2m	〃	Inter-changeable		U	⚠
	〃	MG 00 09 20	〃	7.5A 250V 2.5m	〃	Inter-changeable		A	⚠
	〃	MG 00 14 90	〃	7.5A 250V 2.5m	〃	Inter-changeable		A	⚠
	〃	MG 00 09 60	〃	2.5A 250V 2m	〃	Inter-changeable		G	⚠
	〃	MG 00 16 20	〃	2.5A 250V 2m	〃	Inter-changeable		G	⚠
	〃	MG 00 18 60	〃	2.5A 250V 2m	〃			B	⚠
	〃	MG 00 16 30	〃	6A 250V 2m	〃			R	⚠
※	〃	MG 00 22 20	〃	10A 125V 1.98m	〃			C	⚠
	9	KB 00 03 60	Fuse	T3.0A 250V	ヒューズ			R	⚠
	〃	KB 00 06 80	〃	T1.25A 250V	〃			A,G,B	⚠
※	〃	KB 00 26 50	〃	3.0A 250V	〃			U,C	⚠
	10	KB 00 03 40	〃	T1.5A 250V	〃			R	⚠
	11	HG 30 92 20	Carbon Resistor	2.2MΩ 1/2W	カーボン抵抗			U,C	⚠
	12	FG 24 41 00	Ceramic Cap.	0.01μF 50V	セラコン	C226		G	
※	13	AA 62 55 10	Top Cover		トップカバー	Silver			
※	〃	AA 62 55 20	〃		〃	Black			
※	14	AA 62 55 30	Rear Panel		リアパネル			R	
※	〃	AA 62 55 40	〃		〃			U,C	
※	〃	AA 62 55 50	〃		〃			G	
	〃	AA 62 55 60	〃		〃			A,B	
※	15	AA 62 55 00	Chassis		シャーシ				

※New Parts (新規部品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	
※	16	AA 62 56 30	Plate Shield		シールドプレート				
	17	CB 62 07 30	Leg		トランレッグ				
	18	CB 60 74 70	Holder Antenna		アンテナホルダー				
	19	CB 63 42 40	Button, Push		プッシュボタン	TAPE MONITER Silver	A-520		
	〃	CB 63 42 30	〃		〃	〃 Black	〃		
	20	CB 63 82 30	Knob		ツマミ	BASS/TREBLE BALANCE Silver	〃		
	〃	CB 63 82 40	〃		〃	〃 Black	〃		
※	21	CB 63 82 50	〃		〃	LOUDNESS Silver			
※	〃	CB 63 82 60	〃		〃	〃 Black			
	22	CB 63 82 70	〃		〃	INPUT Silver	A-520		
	〃	CB 63 82 80	〃		〃	〃 Black			
※	23	BA 09 28 60	〃		〃	VOLUME Silver			
※	〃	BA 09 28 70	〃		〃	〃 Black			
	24	ED 33 00 66	Binding Head Screw	3×6 FCM3-Bl	バインド小ネジ	PACK			
	25	EO 33 00 86	Flat Head Tapping Screw	3×8 FCM3-Bl	皿タッピングネジ	PACK			
	26	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCM3-Bl	バインドタッピングネジ	PACK			
	27	Ei 03 00 66	〃	3×6 ZMC2-Y	〃	PACK			
	28	Ei 33 01 06	〃	3×10ZMC2-Bl	〃	PACK			
	29	Ei 13 01 20	〃	3×12 FNM3-3G	〃			U,C,G	
	30	Ei 34 00 86	〃	4×8 FCRM3-Bl	〃	PACK			
	31	EK 13 00 20	BW Head Screw	4×8 FNM3-3g	ブレザー小ネジ	Silver			
	〃	EK 36 50 40	〃	4×8 FCRM3-Bl	〃	Black			
	32	Ei 13 00 86	Binding Head Tapping Screw	3×8 FNM3-3G	バインドタッピングネジ	PACK			
	33	EV 20 10 36	Plain Washer	φ3 FNM3-3G	平座金	PACK			
	34	CB 60 56 20	Plastic Rivet		プラスチックリベット				
	35	CB 06 88 80	〃		〃			R	
	36	EV 41 30 36	Toothed Locked Washer	φ3 FCRM3-Bl	歯付座金	PACK			
	37	EZ 00 13 50	Cup Screw	3×14 FCRM3-Bl	カップスクリュー				
	38	EJ 33 01 06	Pan Head Tapping Screw	3×10 FCRM3-Bl	ナベタッピングネジ	PACK			
	39	LB 20 14 80	Voltage Selector		電圧切換器			R	
	40	EV 20 30 36	Plain Washer	φ3 FCRM3-Bl	平座金	PACK			
	41	CB 09 80 00	Holder, Board		シートホルダー				
		CB 06 92 50	Binding Tie	BK-1	インシュロックタイ				
			Accessories		付属品				
		Mi 06 44 00	FM Q-matching Antenna	FM	FMQマッチアンテナ				
		Mi 08 29 10	Loop Antenna	AM	ループアンテナ				
		LB 60 59 30	Matching Transformer	FM(300Ω→75Ω)	整合器			G	

※New Parts (新規部品)

YAMAHA
Elektronik Europa GmbH

YEED-04-07-85

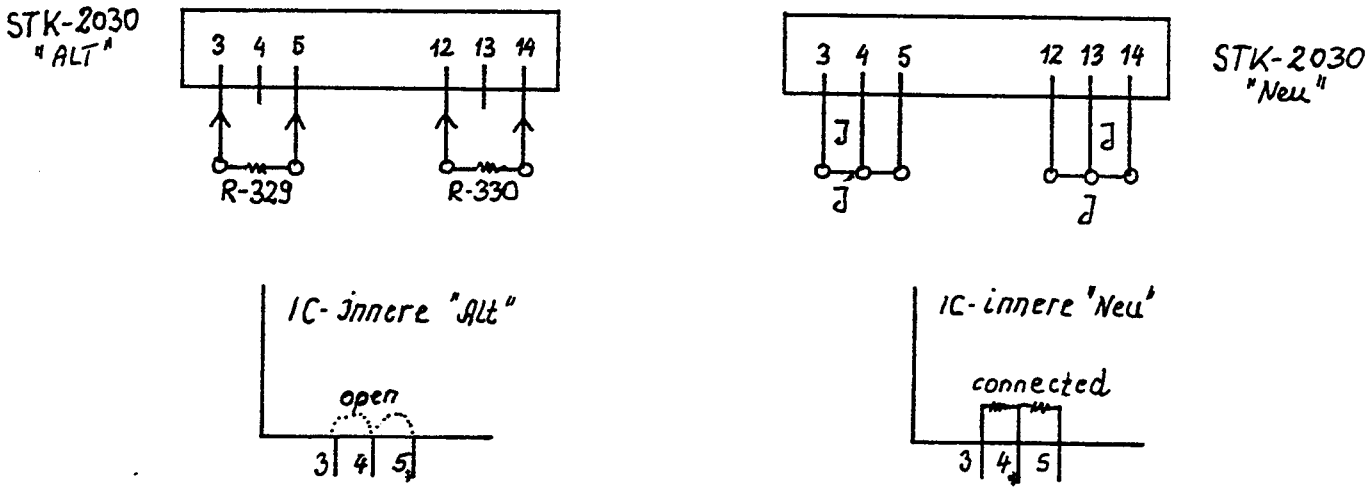
Betr.: STK-2030 im YAMAHA R-300

Von Nippon Gakki erhielten wir folgende Mitteilung:

Das IC-303 (STK-2030) wurde intern schaltungstechnisch geändert. Zwischen die Anschlüsse 3, 4, 5, (12,13,14) wurden Widerstände geschaltet.

Bei der alten STK-2030-Ausführung lagen diese Widerstände extern an den Anschlüssen als "R-329/330".
In der neuen Ausführung sind in der Platine statt der Widerstände Drahtbrücken.
Bitte prüfen Sie deshalb vor dem Einbau des IC-303 ob zwischen dem Pin 3, 4 und 5 (12,13,14) eine Verbindung besteht (neue Ausführung) bzw. zwischen den Pins keine Verbindung besteht (alte Ausführung).

Achten Sie bitte auch bei der neuen Ausführung darauf, daß die Widerstände auf der Platine "R-329/330" durch Drahtbrücken bzw. die Brücken durch Widerstände ersetzt werden.



Mit freundlichen Grüßen

YAMAHA Elektronik Europa GmbH
Elektrotechn. Abt.