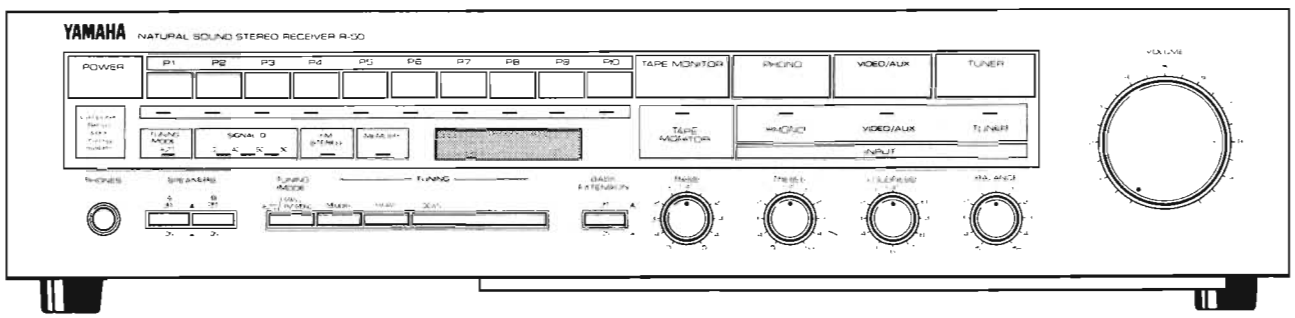
STEREO RECEIVER

R-50

SERVICE MANUAL

■ FRONT PANEL



■ CONTENTS

004497

SINCE 1887 YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

Printed in Japan 83.3. 2.6k 474

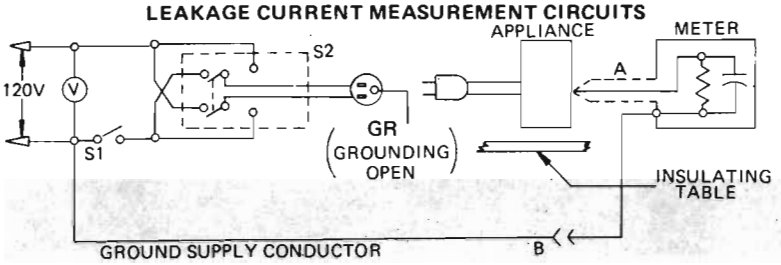
■ TO SERVICE PERSONNEL

(Prepared in accordance with UL Standard 1270)
Before service of this appliance by you, please carefully read this service manual.
Please make Leakage-current or Resistance measurements by suitable meter to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

A PROBE WITH SHIELDED LEAD.
B SEPARATED AND USED AS CLIP WHEN MEASURING CURRENTS FROM ONE PART OF APPLIANCE TO ANOTHER.

Confirm that the leakage current is not more than 0.5mA AC.

LEAKAGE CURRENT MEASUREMENT CIRCUITS



Appliance intended for connection to a 120 volt power supply.

■ SPECIFICATIONS

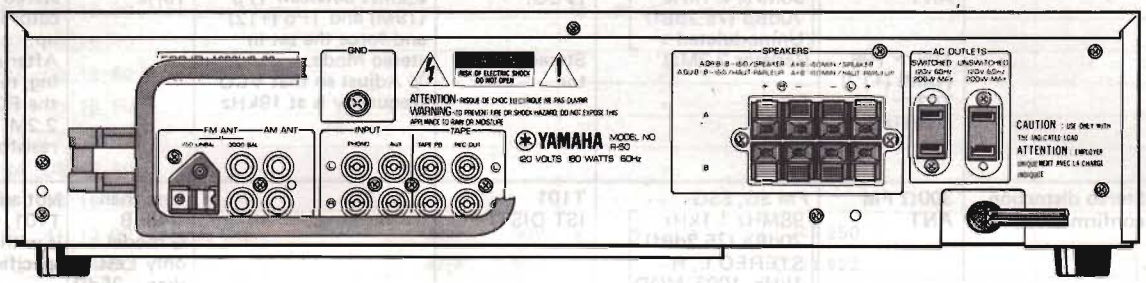
■ AUDIO SECTION	
Continuous Power Per Channel	
20Hz to 20kHz 0.015% THD 8Ω	35W
Dynamic Power	
1kHz IHF Signal 4Ω	60W
2Ω	70W
DIN Standard Output Power Per Channel	
1kHz 1% THD 8Ω	45W (A)(B)(G)
Dynamic Headroom (IHF)	
8Ω	1.8dB
Power Band Width	
0.02% THD 17.5W 8Ω	10Hz to 30kHz
Damping Factor	
1kHz 8Ω	49
Input Sensitivity/Impedance	
Phono	2.5mV/47kΩ
Aux, Tape	120mV/42kΩ
Input Sensitivity (New IHF)	
Phono	0.42mV
Aux, Tape	20mV
Maximum Input Signal	
1kHz 0.01% THD Phono	85mV
Output Level/Impedance	
Rec Out	120mV/1kΩ
Headphone Jack Rated Output/Impedance	
0.015% THD	0.59V/220Ω
Frequency Response	
20Hz to 100kHz Aux, Tape	−3dB
RIAA Equalization Deviation	
Phono	±0.5dB
Total Harmonic Distortion	
Phono (IV)	0.015%
Aux, Tape to SP Out 1W/8Ω	0.008%
Intermodulation Distortion	
Aux, Tape Rated Output/8Ω	0.01%
Intermodulation Distortion (DIN)	
Aux, Tape 8Ω	0.01% (A)(B)(G)
Signal to Noise Ratio (IHF-A-Network)	
Phono (5mV Input Shorted)	88dB/80dB (G)
Aux, Tape, Tuner (Input Shorted)	97dB/95dB (G)
Signal to Noise Ratio (New IHF)	
Phono	73dB/72dB (G)
Aux, Tape, Tuner	79dB
Residual Noise (IHF-A-Network)	175μV
Channel Separation	
Aux, Tape 5.1kΩ Shorted 1kHz	60dB
Tone Control Characteristics	
Bass boost/cut	±10dB (at 50Hz)
Treble boost/cut	±10dB (at 20kHz)
Bass Extension	+ 8dB (at 62Hz)
Filter Characteristics	
Low (Subsonic Builtin)	−15Hz, −12dB/oct
Continuous Loudness Control (Level-related equalization)	
Attenuation	−20dB (at 1kHz)
Rec Output Level/Impedance (Fixed)	
FM 100% mod 1kHz	500mV/5kΩ
FM 40kHz mod	380mV/5kΩ (G)
AM 30% mod 400Hz	150mV/5kΩ
■ FM SECTION	
Tuning Range	87.5 to 108.0MHz
50dB Quieting Sensitivity (IHF)	
Mono	1.6μV (15.3dBf)
Stereo	22μV (38.1dBf)
Usable Sensitivity	
30dB Quieting 75Ω	0.8μV (9.3dBf)
Usable Sensitivity (DIN)	
Mono (S/N 26dB)	0.8μV (9.3dBf) (G)(B)(A)
Stereo (S/N 46dB)	25μV (39.2dBf) (G)(B)(A)
Image Response Ratio	50dB
IF Response Ratio	90dB
Spurious Response Ratio	70dB
AM Suppression Ratio	60dB
Capture Ratio	1.5dB
Alternate Channel Selectivity (IHF)	55dB
Selectivity (two signals)(DIN)	60dB (G)
Signal to Noise Ratio (IHF)	
Mono	85dB
Stereo	81dB
Signal to Noise Ratio (DIN-UNWeighted)	
Mono	80dB (G)(B)(A)
Stereo	76dB (G)(B)(A)
Harmonic Distortion	
Mono 1kHz	0.1%
Stereo 1kHz	0.15%
Harmonic Distortion (40kHz Dev)	
Stereo 1kHz	0.15% (G)
Stereo Separation (IHF)	
1kHz	40dB
Frequency Response	$^{+0.5}_{-1.5}$dB
30Hz to 15kHz	
Sub-carrier Product Ratio (IHF)	45dB
■ AM Section	
Tuning Range	510 to 1620kHz (U)(C) 513 to 1620kHz (G)(A)(B) 510 to 1620kHz or 513 to 1620kHz (R)
Usable Sensitivity	250μV
Selectivity	25dB
Signal to Noise Ratio	52dB
Image Response Ratio	40dB
Spurious Response Ratio	50dB
Harmonic Distortion (400Hz)	0.3%
■ GENERAL	
Power Supply	
US & Canadian Models	120V AC, 60Hz
General Model	110 − 120V AC/220 − 240V AC, 50/60Hz
European Model	220V AC, 50Hz
British & Australian Models	240V AC, 50Hz
Power Consumption	180W (U)(C) 100W (R) 250W (G)(A)(B)
AC Outlet	
Switched	200W max.
Unswitched	200W max.
Dimensions (W x H x D)	435 x 102 x 347.7mm (17-1/8 x 4 x 13-5/8)"
Weight	6.5kg (14.3 lbs)

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

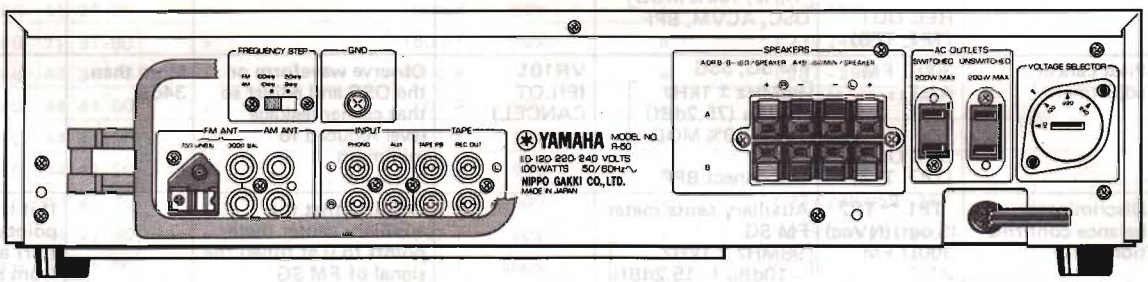
Specifications subject to change without notice.

■ REAR PANEL

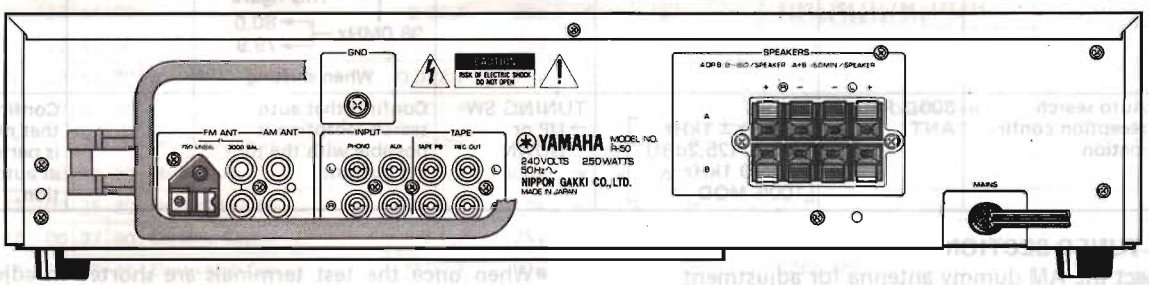
▼ U.S.A. & Canadian models



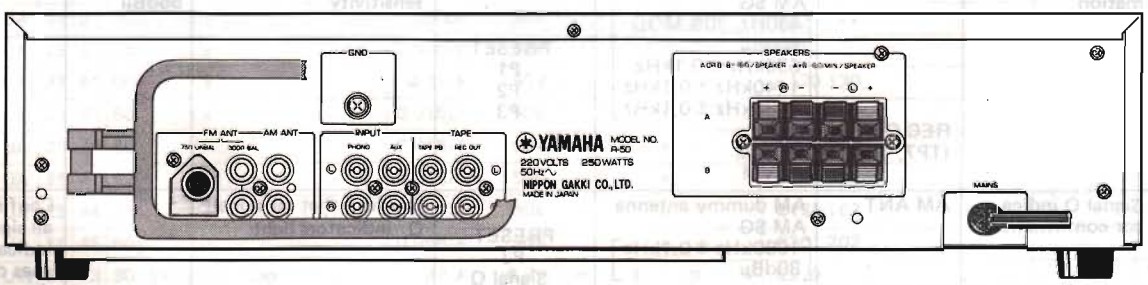
▼ General model



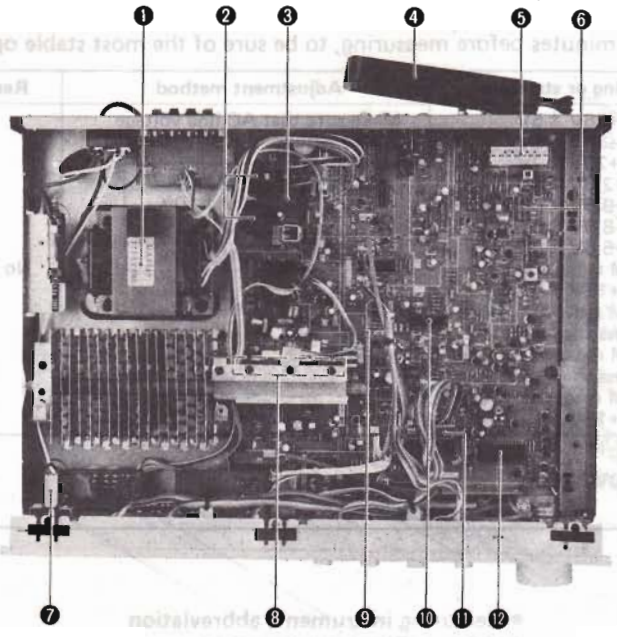
▼ British & Australian models



▼ European model



■ INTERNAL VIEW



❶ POWER TRANSFORMER

U.S.A. & Canadian models:	GA66400
European model:	GA66410
Australian & British models:	GA66420
General model:	GA66430

❷ ELECTROLYTIC CAP.: 6800μF 46V
❸ DIODE BRIDGE: S4VB20 or RB402 or 4D4B41
❹ AM LOOP ANTENNA
❺ FRONT END PACK
❻ IF IC: μPC577H (E, F)
❼ POWER SWITCH
❽ POWER IC: STK-4873
❾ MAIN CIRCUIT BOARD (1)
❿ MPX IC: LA3380
⓫ MICRO CONPUTER IC : LC6502C-604
⓬ TUNING CONTROLLER IC: LC7210

■ DISASSEMBLY PROCEDURES (Remove parts in order of disassembly as numbered.)

* Replacement of the parts of almost circuit boards in this unit is possible by removing the top and bottom cover.

① Removing Top Cover . . . . Cup Screw 4x8 FNM3-3g
② Removing Front Panel . . . Binding Head Tapping Screw 3x8 FCRM3-Bℓ
③ Removing Bottom Cover . Binding Head Tapping Screw 3x8 FCRM3-Bℓ
④ Removing Heat Sink . . . . Binding Head Tapping Screw 3x8 FCM3-Bℓ

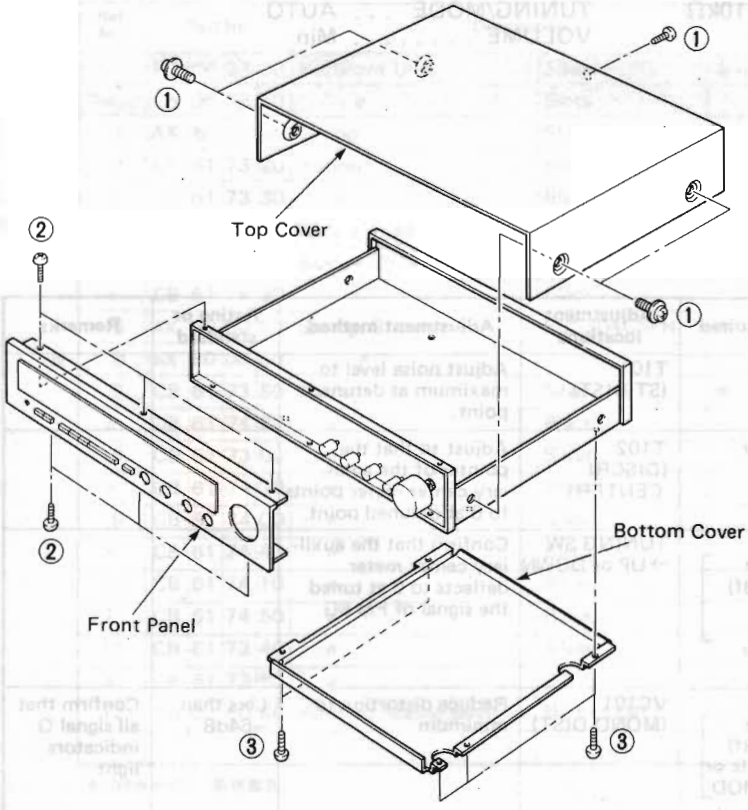


Fig. 1

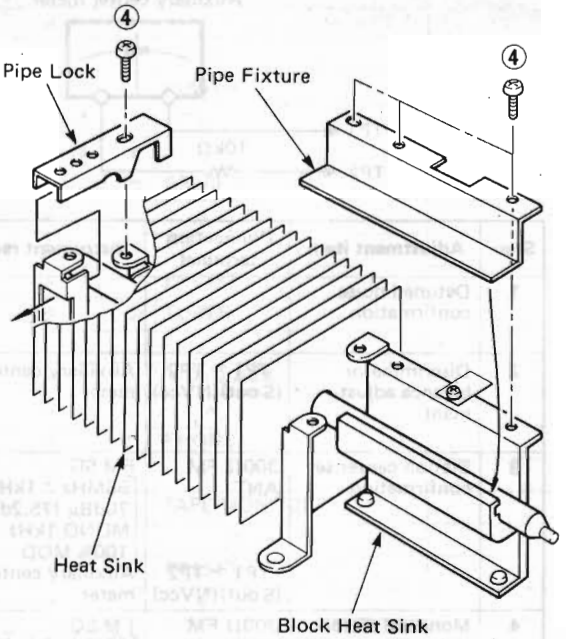


Fig. 2

■ ADJUSTMENTS

<CONFIRMATION OF AUDIO SECTION>

Before adjustment

Note 1: After the power switch is pushed on, wait for 5 minutes before measuring, to be sure of the most stable operation.

Step	Confirmation	Test point	Rating or standard	Adjustment method	Remark
1	Power supply voltage	+B ~ E −B ~ E +20 ~ E +12 ~ E +9 ~ E −9 ~ E +5.6 ~ E FB ~ E AB ~ E	+36V ± 5V −36V ± 5V +20V ± 2V +12.5V ± 1V +9.5V ± 0.5V −8.9V ± 0.5V +5.6V ± 0.5V At FM reception mode +12V ± 1V At AM reception mode less than +1V At FM reception mode less than +1V At AM reception mode +12V ± 1V	Make sure that AC line voltage comes within Models / AC line voltage U, C: 120V ± 10% G: 220V ± 10% A, B: 240V ± 10%	No load
2	DC offset	Speaker terminal or pin 5 of IC112 (L ch) and Pin 12 (R ch)	0V ± 50mV		

<TUNER ADJUSTMENT>

●Before adjustment

Note 1) After the Power switch is pushed on, wait for 5 minutes before measuring, to be sure of the most stable operation.

Note 2) Adjust the OSC coil and IFT with a nonferrous screw driver.

Note 3) Do not forget to keep the bottom cover on.

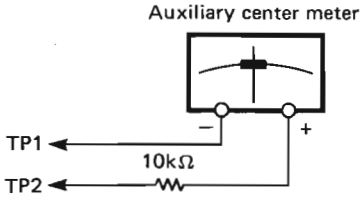
●Measuring instruments abbreviation

FM SG : FM signal generator
SSG : Stereo signal generator
AM SG : AM signal generator
OSC : Oscilloscope
DIST. M : Distortion meter
FC : Frequency counter
ACVM : AC volt meter

1. FM TUNER SECTION

●Use 200Hz to 15kHz bandpass filter to measure the REC OUT.

●On step 1 and 2 connect the auxiliary center meter (Ji00036 or similar) in series with the resistor 10kΩ between TP1 (S OUT) and TP2 (NVcc).



●Set the switches to the following positions.
INPUT . . . . . TUNER
Band Select . . . . . FM
TUNING/MODE . . . AUTO
VOLUME . . . . . Min

Step	Adjustment item	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
1	Detuned noise confirmation			T101 (ST DIST)	Adjust noise level to maximum at detuned point.		
2	Discriminator balance adjustment	TP1 ~ TP2 (S out) (NVcc)	Auxiliary center meter	T102 (DISCRI CENTER)	Adjust so that the pointer of the auxiliary center meter points to 0 at detuned point.		
3	Station center set confirmation	300Ω FM ANT TP1 ~ TP2 (S out) (NVcc)	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf) MONO 1kHz 100% MOD] Auxiliary center meter	TUNING SW → UP or DOWN	Confirm that the auxiliary center meter deflects to 0 at tuned the signal of FM SG		
4	Monaural distortion adjustment	300Ω FM ANT REC OUT (TP7, TP8)	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf) monaural 100Hz or 400Hz 100% MOD] DIST. M. OSC BPF	VC101 (MONO DIST)	Reduce distortion to minimum	Less than −64dB	Confirm that all signal Q indicators light

Step	Adjustment item	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
5	VCO adjustment	300Ω FM ANT TP5 ~ TP6 (19M) (+12) TP3 ~ TP4 (19kHz) (G)	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf) Unmodulated] Resistor 2.2MΩ FC	VR102 (VCO) Stereo indicator	① Connect resistor 2.2MΩ between TP5 (19M) and TP6 (+12) and force the set in stereo mode. ② Adjust so that VCO frequency is at 19kHz	19kHz ± 10Hz	Confirm that stereo indicator lights up. After adjusting, remove the FC and 2.2MΩ resistor.
6	Stereo distortion confirmation	300Ω FM ANT REC OUT (TP7, TP8)	FM SG, SSG [98MHz ± 1kHz 70dBμ (75.2dBf) STEREO L, R 1kHz, 100% MOD] DIST. M, OSC BPF	T101 (ST DIST)		Less than −48dB G model only Less than −35dB	Not adjust T101, when it is within specifications.
7	Separation confirmation	300Ω FM ANT REC OUT (TP7, TP8)	FM SG, SSG [98MHz ± 1kHz 70dBμ (75.2dBf) STEREO L or R 1kHz, 100% MOD] OSC, ACVM, BPF		Confirm that the leakage level of the opposite channel is minimum	Less than 26dB	
8	Pilot cancel adjustment	300Ω FM ANT REC OUT (TP7, TP8)	FM SG, SSG [98MHz ± 1kHz 70dBμ (75.2dBf) PILOT 9% MOD] OSC Disconnect BPF	VR101 (PILOT CANCEL)	Observe waveform on the OSC and adjust so that carrier leakage level reduced to minimum	More than 34dB	
9	Discriminator balance confirmation	TP1 ~ TP2 (S out) (NVcc) 300Ω FM ANT	Auxiliary cente meter FM SG [98MHz ± 1kHz −10dBμ (−15.2dBf)]		Confirm that the auxiliary center meter points to 0 at tuned the signal of FM SG		If it is not points to 0, start allover from step 2.
10	If offset adjustment	300Ω FM ANT TEST terminals (K4, T6)	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf)] Short	VR103 (FM FINE)	By shorting TEST terminals, the counter shifts by one digit, then adjust so that the lowest effective digit comes to 9 or 0. This figure 98.0MHz → 80.0 / 79.9 When shifting		After adjusting, open the TEST terminals.
11	Auto search reception confirmation	300Ω FM ANT	FM SG [98MHz ± 1kHz 20dBμ (25.2dBf) MONO 1kHz 100% MOD]	TUNING SW → UP or DOWN	Confirm that auto search reception is possible with the tuning button.		Confirm that muting is performed at auto reception.

2. AM TUNER SECTION

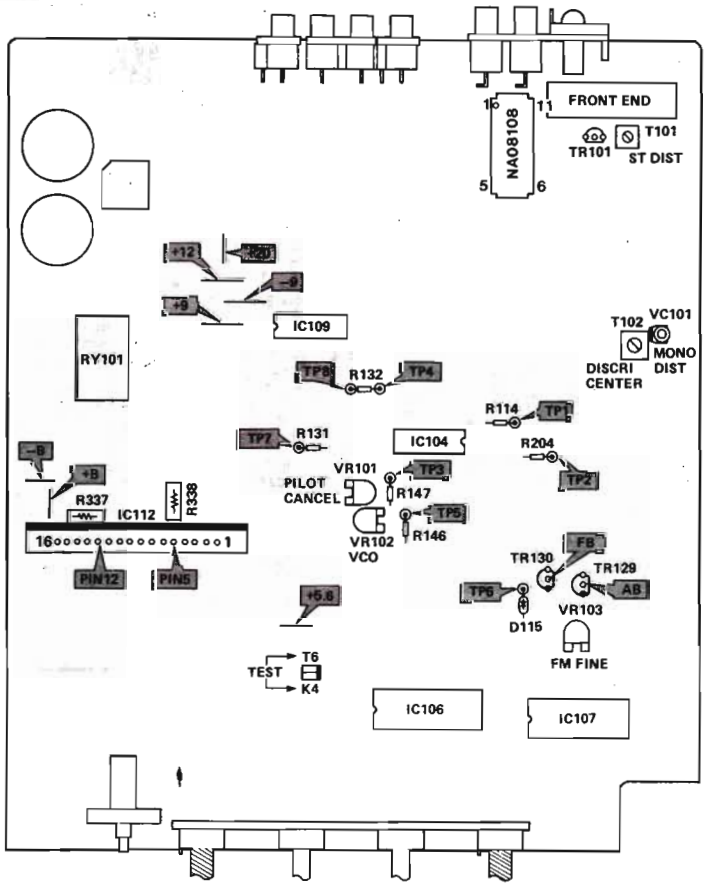
- Connect the AM dummy antenna for adjustment.
- When once the test terminals are shorted in adjusting FM, the frequency of 630kHz, 1440kHz, and 1080 kHz is memoried at each AM preset position 1, 2 and 3.

Step	Adjustment item	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
1	Sensitivity confirmation	AM ANT REC OUT (TP7, TP8)	AM dummy antenna AM SG [400Hz, 30% MOD 50dBμ 630kHz ± 0.1kHz 1440kHz ± 0.1kHz 1080kHz ± 0.1kHz] OSC. DST. M ACVM	PRESET P1 P2 P3	Confirm the maximum sensitivity	less than 55dBμ	
2	Signal Q indicator confirmation	AM ANT	AM dummy antenna AM SG [1080kHz ± 0.1kHz 80dBμ]	PRESET P3 Signal Q	Confirm that all signal Q indicators light.		Confirm that all signal Q indicators goes out at detuned point.
3	Auto search reception confirmation	AM ANT	AM dummy antenna AM SG [1080kHz ± 0.1kHz 60dBμ]	TUNING SW → UP or DOWN	Confirm that auto search reception is possible with the tunning button.		

3. DIGITAL CONTROL SECTION

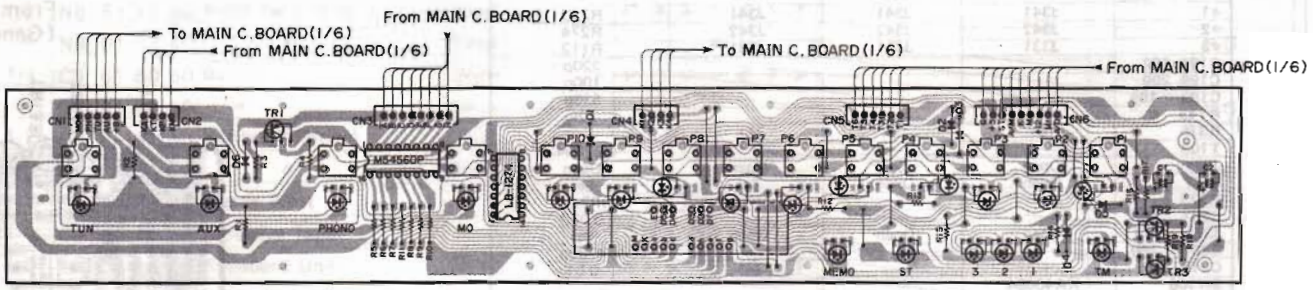
Step	Adjustment item	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
1	Preset memory confirmation	300Ω FM ANT AM ANT	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf) MONO 1kHz 100% MOD] AM dummy antenna AM SG [1080kHz ± 0.1kHz 80dBμ 400Hz, 30% MOD]	FM/AM SW TUNING SW MEMORY SW PRESET SW	① Memoring the PRESET P1 at FM SG frequency. ② Memoring the PRESET P2 at AM SG frequency. ③ Confirm that the frequency memorized is recalled.	① Press the FM button and tuned the 98MHz with AUTO seach ↓ Press the Memory button. ↓ The Memory indicator lights about 3 seconds ↓ Press the PRESET P1 during the Memory indicator lights. ↓ The PRESET LED of P1 lights. ② Press the AM button and tuned the 1080kHz with AUTO seach. ↓ Press the Memory button ↓ The Memory indicator lights and the PRESET LED of P1 flashes. ↓ Press the PRESET P2 ↓ The Memory indicator goes out and the PRESET LED of P2 lights.	
2	Last channel memory confirmation			POWER SW	① Press the PRESET P1 ② Turn the power switch off. ③ After about 5 seconds, turn the power switch on. ④ Confirm that the PRESET P1 memorized is recalled.		④ The PRESETof P1 does not lights

●TEST POINT

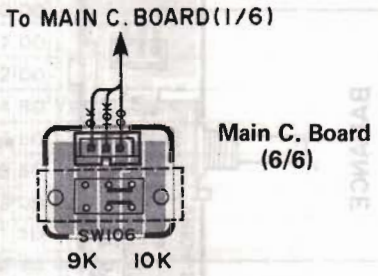


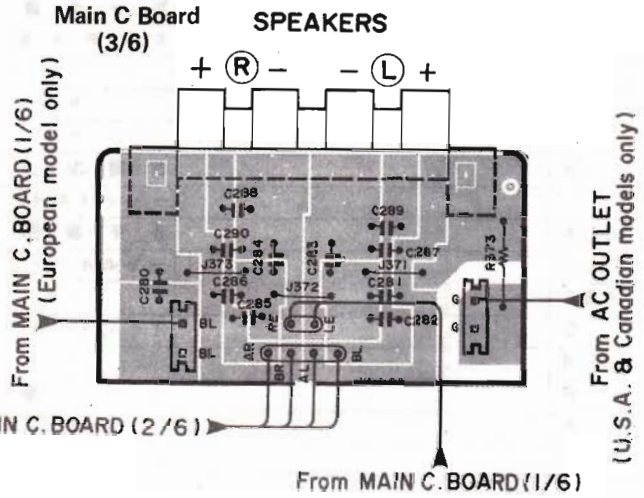
■ PRINTED CIRCUIT BOARD (Pattern side)

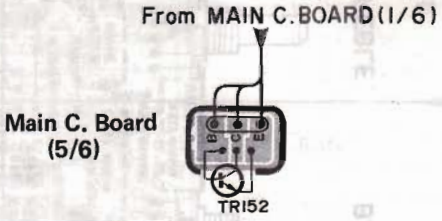
● Key circuit board

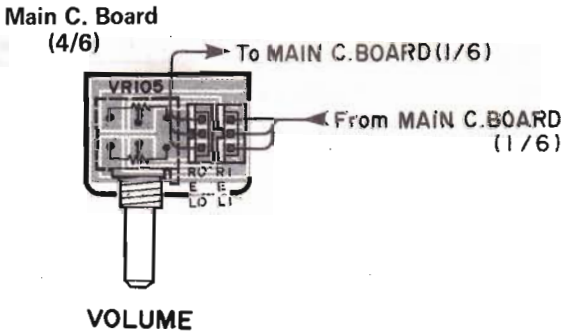


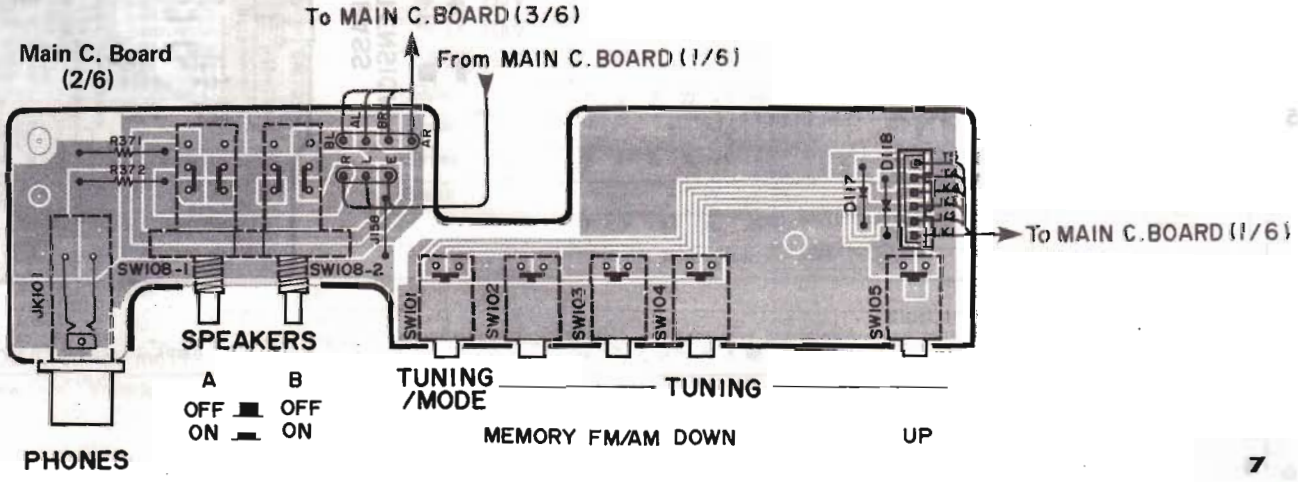
● Main circuit board (2/6 ~ 6/6)









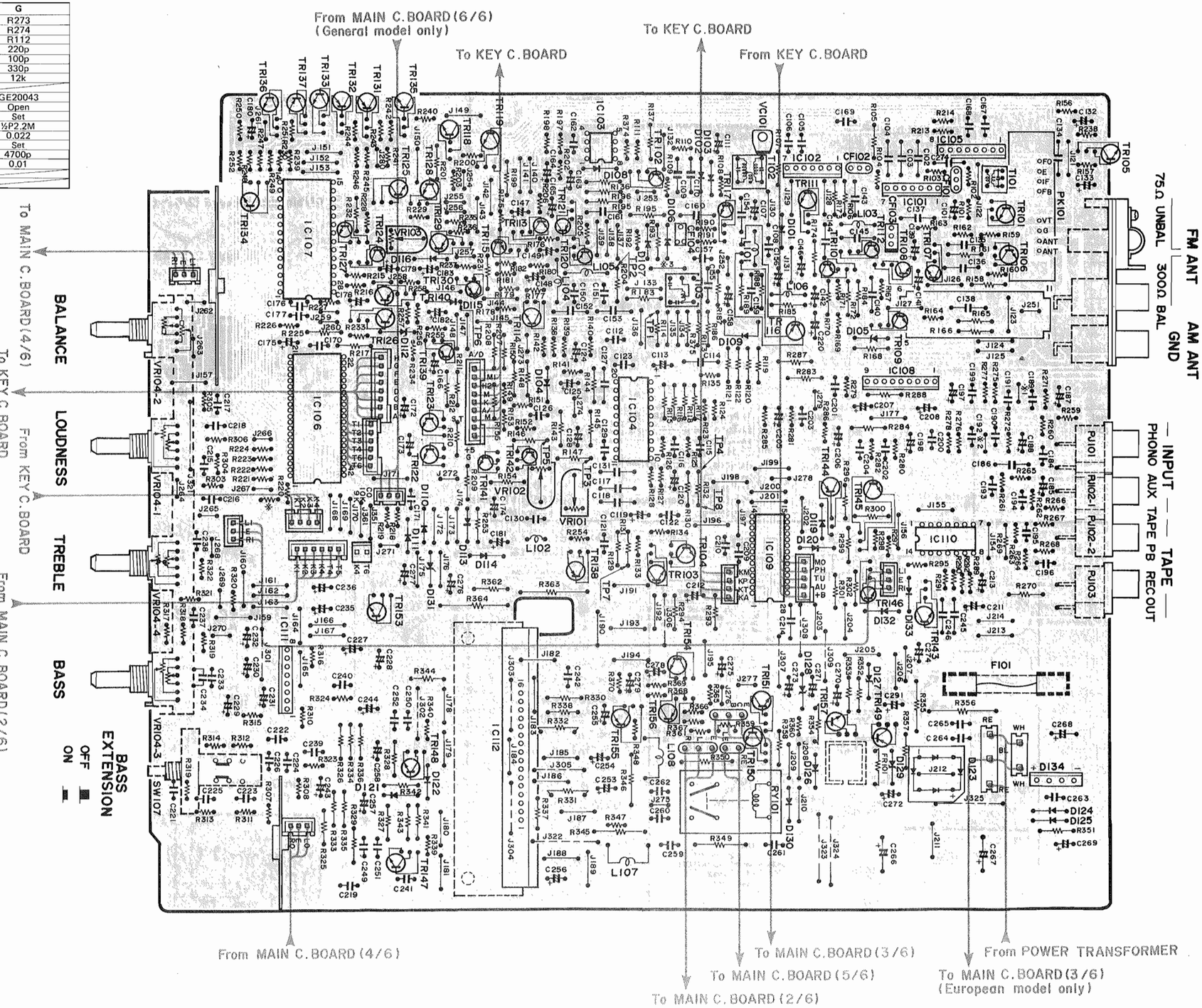


■PRINTED CIRCUIT BOARD (Pattern side)

The following parts and values differ from each model, so refer to the corresponding column.

	R	U, C	A, B	G
※1	J341	J341	J341	R273
※2	J342	J342	J342	R274
※3	J331	J331	J331	R112
C191, 192				220p
C199, 200				100p
C193～196				330p
R113				12k
R375	15k	15k	15k	
T103				GE20043
J351	Open	Set	Open	Open
J361	Open	Open	Set	Set
R373				½P2.2M
C281～286				0.022
J371～373	Open	Open	Open	Set
C287～290				4700p
C219, 280				0.01
SW106	KA40094			
Main (6)	Set			

●Main circuit board (1/6)



PARTS LIST

■ELECTRICAL PARTS

■WARNING

UL Standard 1270 requires that components marked ⚠ be replaced with parts having specifications equal to those originally installed.

- Carbon resistors of this receiver are ¼W.
  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 16 30	Main Circuit Board	Silver	総合シート			R
※		NA 08 16 40	〃	〃	〃			U,C
※		NA 08 16 50	〃	〃	〃			A
※		NA 08 16 60	〃	〃	〃			G
※		NA 08 16 70	〃	〃	〃			B
※		NA 08 16 80	〃	Black	〃			R
※		NA 08 16 90	〃	〃	〃			G
		FG 41 13 90	Ceramic Cap	39pF 50V	セラコン	C249,250		
		FG 41 14 70	〃	47pF 50V	〃	C221,222		
		FG 41 21 00	〃	100pF 50V	〃	C199,200		G
		FG 41 22 20	〃	220pF 50V	〃	C191,192		G
		FG 41 22 20	〃	220pF 50V	〃	C189,190,241,242		
		FG 41 23 30	〃	330pF 50V	〃	C193~196		G
		FG 41 25 60	〃	560pF 50V	〃	C217,218		
		FG 41 31 00	〃	1000pF 50V	〃	C108,168		
		FG 71 31 80	〃	1800pF 50V	〃	C239,240,251,252		
		FG 41 34 70	〃	4700pF 50V	〃	C287~290		G
		FG 44 41 00	〃	0.01μF 50V	〃	C105,106,157,167,169,171,184,209,210,263		
		FG 44 41 00	〃	0.01μF 50V	〃	C219,280		G
		FG 44 42 20	〃	0.022μF 50V	〃	C281~286		G
		FG 44 44 70	〃	0.047μF 50V	〃	C237,238,259~262		
		FG 44 42 20	〃	0.022μF 50V	〃	C215,216,264,265		
		FH 23 41 00	〃	0.01μF 500V	〃	C186		
		Fi 19 12 20	〃	22pF 50V	〃	C176,177		
		Fi 19 21 00	〃	100pF 50V	〃	C109,110		
		FG 21 31 00	〃	1000pF 50V	〃	C143,152,160		
		FG 21 24 70	〃	470pF 50V	〃	C153		
		FG 21 34 70	〃	4700pF 50V	〃	C114,117,118		
		Fi 22 41 00	〃	0.01μF 25V	〃	C102~104,131,134~137,144,145,154,159,161,214		
		Fi 22 41 00	〃	0.01μF 25V	〃	C155		G
		Fi 22 42 20	〃	0.022μF 25V	〃	〃		R,U,A,C,B
		Fi 22 42 20	〃	0.022μF 25V	〃	C127,138,140,245,246		
		FS 25 26 80	Semi Conductive Ceramic Cap.	680pF 50V	SAコン	C126		
		FU 35 12 70	Mica Cap.	27pF 500V	マイカコン	C170		
		FZ 00 35 80	Electrolytic Cap.	47000μF 5.5V	ケミコン	C173		
※		FZ 00 37 90	Ceramic Cap.	0.1μF 25V	セラコン	C233,234		
※		FZ 00 39 40	Electrolytic Cap.	6800μF 50V	ケミコン	C266,267		⚠
		UA 25 24 70	Mylar Cap.	470pF 50V	マイラーコン	C115,116		A,G,B
		UA 25 26 80	〃	680pF 50V	〃	〃		R,U,C
		UA 25 26 80	〃	680pF 50V	〃	C123		R,U,A,C,B
		UA 25 31 00	〃	1000pF 50V	〃	〃		G
		UA 25 31 00	〃	1000pF 50V	〃	C121,122		
		UA 25 31 50	〃	1500pF 50V	〃	C112		
		UA 25 41 00	〃	0.01μF 50V	〃	C129,130		
		UA 25 41 50	〃	0.015μF 50V	〃	C150		
		UA 25 41 60	〃	0.016μF 50V	〃	C203,204		
		UA 25 41 80	〃	0.018μF 50V	〃	C223~226		
		UA 25 44 70	〃	0.047μF 50V	〃	C151,162		
		UA 25 45 60	〃	0.056μF 50V	〃	C201,202		
		UW 91 73 30	Electrolytic Cap.	33μF 6.3V	ケミコン	C279		
		UW 91 74 70	〃	47μF 6.3V	〃	C181,142		
		UW 91 81 00	〃	100μF 6.3V	〃	C158,197,198		

※ New Parts（新規部品）

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
		UW 91 82 20	Electrolytic Cap.	220μF 6.3V ケミコン	C111		
※		UW 81 84 70	〃	470μF 6.3V 〃	C174,179		
		UW 82 74 70	〃	47μF 10V 〃	C278		
※		Ui 93 82 20	〃	220μF 16V 〃	C183,207,220		
		UW 93 71 00	〃	10μF 16V 〃	C101,107,113,124,139,146,156,165,172		
		UW 93 73 30	〃	33μF 16V 〃	C141,166,180,275		
		UW 93 74 70	〃	47μF 16V 〃	C182		
		UW 94 74 70	〃	47μF 25V 〃	C276		
		UW 94 93 30	〃	3300μF 25V 〃	C268		△
		UW 85 72 20	〃	22μF 35V 〃	C243,244		
		UW 86 52 20	〃	0.22μF 50V 〃	C185,213		
		UW 96 54 70	〃	0.47μF 50V 〃	C148,163,164,175		
		UW 96 61 00	〃	1μF 50V 〃	C119,120,125,128,132,149,187,188,212,269,271,274,277		
		UW 96 62 20	〃	2.2μF 50V 〃	C133		
		UW 96 63 30	〃	3.3μF 50V 〃	C147,178		
		UW 96 64 70	〃	4.7μF 50V 〃	C205,206,211,231,232,235,236		
		UW 96 71 00	〃	10μF 50V 〃	C208,227～230,256,272,273,291		
		UW 96 72 20	〃	22μF 50V 〃	C270,254		
		UW 96 74 70	〃	47μF 50V 〃	C255,257,258		△
		UW 86 81 00	〃	100μF 50V 〃	C253		
		FY 00 01 90	Trimmer Cap.	5P トリマーコン	VC101		
		GD 90 03 40	Output Coil	1.5μH アウトプットコイル	L107,108		
		GE 30 04 50	Inductor	1mH インダクター	L104,105		
		GE 30 05 00	〃	12μH 〃	L103,106		
		GE 30 05 10	〃	120μH 〃	L101		
		GE 90 06 90	〃	8.2mH 〃	L102		
		GE 10 02 80	FM Discriminator Coil	GE10028 FMディスクリコイル	T102		
		GE 10 06 50	FM IFT	GE10065 FM IFT	T101		
		GE 20 04 30	Anti-birdie Filter	114kHz アンチバーディーフィルター	T103		G
		GG 00 04 20	AM Ceramic Discriminator	CDA450A AMセラミックディスクリ	CF104		
※		GG 00 06 20	FM Ceramic Filter	SFE10.7MS 3GHY-Z FMセラミックフィルター	CF101,102		G
		GG 00 06 30	〃	SFE10.7 MMH-Z 〃	〃		R,U,A,C,B
※		GG 00 06 60	AM Ceramic Filter	SFU-450B9 AMセラミックフィルター	CF103		
※		HF 85 42 20	Carbon Resistor	22Ω 1/6W カーボン抵抗	R127,128		
※		HF 85 51 00	〃	100Ω 〃 〃	R135,160,191		
※		HF 85 51 20	〃	120Ω 〃 〃	R277,278		
※		HF 85 51 50	〃	150Ω 〃 〃	R103,		
※		HF 85 51 50	〃	150Ω 〃 〃	R271,272		R,U,A,C,B
※		HF 85 61 50	〃	1.5kΩ 〃 〃	〃		G
※		HF 85 52 20	〃	220Ω 〃 〃	R108,176,258,361		
※		HF 85 53 30	〃	330Ω 〃 〃	R104,321,322		
※		HF 85 54 70	〃	470Ω 〃 〃	R290,307,308		
※		HF 85 55 60	〃	560Ω 〃 〃	R265～268		R,U,A,C,B
※		HF 85 62 20	〃	2.2kΩ 〃 〃	〃		G
※		HF 85 61 00	〃	1kΩ 〃 〃	R102,141,179,250,370		
※		HF 85 61 20	〃	1.2kΩ 〃 〃	R139,252		
※		HF 85 61 20	〃	1.2kΩ 〃 〃	R273,274		G

※ New Parts (新規部品)

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	
※		HF 85 61 50	Carbon Resistor	1.5kΩ 1/6W	カーボン抵抗	R171		
※		HF 85 61 80	〃	1.8kΩ 〃	〃	R297,298		
※		HF 85 62 20	〃	2.2kΩ 〃	〃	R244,247,339,340		
※		HF 85 63 30	〃	3.3kΩ 〃	〃	R167,175,235,255,257		
※		HF 85 63 90	〃	3.9kΩ 〃	〃	R317~320		
※		HF 85 64 70	〃	4.7kΩ 〃	〃	R101,133,134,156,177,241,281,282		
※		HF 85 66 80	〃	6.8kΩ 〃	〃	R109,110,178		
※		HF 85 68 20	〃	8.2kΩ 〃	〃	R181		
※		HF 85 71 00	〃	10kΩ 〃	〃	R123,124,162,163,169,192,202,205,215 216,236,237,242,256,303,304,359,368		
※		HF 85 71 50	〃	15kΩ 〃	〃	R111,203		
※		HF 85 72 20	〃	22kΩ 〃	〃	R140,213,214,228,233,275 276,289		
※		HF 85 72 70	〃	27kΩ 〃	〃	R164,249,311,312		
※		HF 85 73 30	〃	33kΩ 〃	〃	R142,230,243		
※		HF 85 73 90	〃	39kΩ 〃	〃	R246,366		
※		HF 85 74 70	〃	47kΩ 〃	〃	R157,229,234,305,306		
※		HF 85 75 60	〃	56kΩ 〃	〃	R259,260,279,280		
※		HF 85 76 80	〃	68kΩ 〃	〃	R180		
※		HF 85 78 20	〃	82kΩ 〃	〃	R369,292		
※		HF 85 81 00	〃	100kΩ 〃	〃	R125,126,151,182,198,200,218~224,239,240,254,285,286,323,324,347,348,365		
※		HF 85 81 80	〃	180kΩ 〃	〃	R360		
※		HF 85 82 20	〃	220kΩ 〃	〃	R138,149,152,153,226,238		
※		HF 85 83 30	〃	330kΩ 〃	〃	R227,245,248,291,313,314		
※		HF 85 84 70	〃	470kΩ 〃	〃	R159,190,206,295,367		
※		HF 85 88 20	〃	820kΩ 〃	〃	R309,310		
※		HF 85 91 00	〃	1MΩ 〃	〃	R197,251,261~264,315,316		
		HG 30 92 20	〃	2.2MΩ RD50S	〃	R373	U,C	⚠
		HL 71 34 70	Metal Oxide Film Resistor	4.7Ω 1P	酸金抵抗	R345,346,349,350		
		HL 71 51 50	〃	150Ω 1P	〃	R355		⚠
		HL 71 52 20	〃	220Ω 1P	〃	R371,372		
		HL 72 45 60	〃	56Ω 2P	〃	R363,364		⚠
		HL 33 53 90	〃	390Ω 3P	〃	R356		⚠
		HU 57 81 00	Metal Film Resistor	100kΩ	金属被膜抵抗	R217		
		HV 35 42 20	Flame Proof Carbon Resistor	22Ω RDF25SF	不燃化カーボン抵抗	R332		⚠
		HV 35 51 00	〃	100Ω 〃	〃	R331		⚠
		HV 35 48 20	〃	82Ω 〃	〃	R354		⚠
		HZ 00 29 20	Metal Plate Resistor	0.47Ω 3P	金属板抵抗	R337,338		
		HT 37 00 50	Semi Variable Resistor	B5kΩ	半固定抵抗	VR103	Interchangeable	
※		HT 57 05 70	〃	B5kΩ	〃	〃		
		HT 37 00 20	〃	B10kΩ	〃	VR102	Interchangeable	
※		HT 57 05 80	〃	B10kΩ	〃	〃		
		HT 37 00 30	〃	B100kΩ	〃	VR101		
※		HS 41 18 40	VR Unit		VRユニット	VR104		
※		HS 41 18 50	Variable Resistor		可変抵抗器	VR105		
※		HW 39 41 00	Fuse Resistor	10Ω 1/4W	ヒューズ抵抗	FR101		⚠
		iA 09 70 00	Transistor	2SA970 (GR,BL)	トランジスタ	TR116		
		iA 09 99 10	〃	2SA999 (E,F)	〃	TR110,113,120,121,124,127,129,130~132,137~140,144,155,156	Inter-changeable	
		iA 11 27 00	〃	2SA1127(R,S,T)	〃	〃		
※		iA 12 62 00	〃	2SA1262(O,Y,G)	〃	TR149	Interchangeable	
		iB 08 34 00	〃	2SB834	〃	〃		

※ New Parts (新規部品)

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	
✱		iC 19 23 00	Transistor	2SC1923	トランジスタ	TR111		
		iC 20 88 00	〃	2SC2088(BL,V)	〃	TR147,148 } Interchangeable		
		iC 22 40 00	〃	2SC2240(GR,BL)	〃	〃 }		
		iC 23 20 10	〃	2SC2320(E,F)	〃	TR101,102,105～108,112,114,115,117～119,122,123, 125,126,128,133～136,141～143,150,151,154 } Inter-changeable		
		iC 26 34 00	〃	2SC2634(R,S,T)	〃	〃		
✱		iC 28 78 00	〃	2SC2878	〃	TR145,146 } Interchangeable		
✱		iD 13 02 00	〃	2SD1302(R,S)	〃	〃 }		
		iD 06 55 00	〃	2SD655 (D,E,F)	〃	TR103,104,109 } Interchangeable		
✱		iD 10 12 00	〃	2SD1012(G,H)	〃	〃		
		iD 13 02 00	〃	2SD1302(R,S)	〃	〃		
		iD 04 00 20	〃	2SD400(F)	〃	TR152,153		
✱		iD 09 72 00	〃	2SD972	〃	TR157 } Interchangeable		
✱		iD 06 35 00	〃	2SD635	〃	〃 }		
		iF 00 00 40	Diode	1S1555	ダイオード	D102,103		
		iF 00 00 40	〃	1S1555	〃	D101,104,106～111,113～122, 124～126,130,132,133 } Inter-changeable		
		iF 00 06 70	〃	1S2473	〃	〃		
		iF 00 18 40	Zener Diode	RD3.0EB2	ツェナーダイオード	D105,112		
		iF 00 33 20	〃	HZ9C-3	〃	D128,129		
		iF 00 16 70	〃	RD6.8EB2	〃	D131		
✱		iF 00 44 30	〃	HZ12C2	〃	D127		
		iH 00 08 10	Diode Bridge	1B4B41	ダイオードブリッジ	D134		
		iH 00 08 70	〃	4D4B41	〃	D123 } Interchangeable		
		iH 00 10 40	〃	RB402(LFD)	〃	〃 }		
		iH 00 10 90	〃	S4VB20	〃	〃		
		iG 00 12 70	IC	TC4066BP	IC	IC110 } Interchangeable		
✱		iG 08 92 00	〃	LC4066B	〃	〃 }		
		iG 00 13 90	〃	NJM4558DV	〃	IC103		
		iG 02 92 20	〃	LA3380	〃	IC104		
		iG 03 45 00	〃	μPC577H(E,F)	〃	IC101,102		
		iG 04 14 00	〃	M54459L	〃	IC105		
		iG 04 91 00	〃	LC7210	〃	IC107		
		iG 08 01 00	〃	LC7815	〃	IC109		
✱		iG 08 53 00	〃	LC6502C-604	〃	IC106		
✱		iG 08 89 00	〃	STK-4873	〃	IC112		⚠
✱		iG 09 21 00	〃	M5219L	〃	IC111		
✱		iG 08 52 00	〃	AN6557	〃	IC108 } Interchangeable		
✱		iG 08 29 00	〃	NJM2043SD	〃	〃 }		
		KA 40 09 40	Slide Switch	SSB-022	スライドスイッチ	SW106		R
		KA 80 28 20	Push Switch	2circuit2point	プッシュスイッチ	SW107		
✱		KA 80 37 40	〃	〃	〃	SW108		
		KA 90 29 30	Switch		タクトスイッチ	SW101～105		
		KB 00 03 50	Fuse	T2.0A 250V	ヒューズ	F101		R ⚠
		KB 00 16 60	〃	T1.6A 250V	〃	〃		A,G,B ⚠
		KB 00 10 30	〃	2.0A 250V	〃	〃		U,C ⚠
		KC 00 11 00	Relay	DC12V	リレー	RY101		R,A,G,B
		KC 00 14 90	〃	〃	〃	〃		U,C
✱		LB 20 22 90	Pin Jack	2P	ピンジャック	PJ101,103		

✱ New Parts (新規部品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
		LB 40 10 30	Pin Jack	4P	ピンジャック	PJ102	K-1000	
		LB 30 17 50	Headphone Jack	Gray	ヘッドホンジャック	JK101	A-500	R,U,A,G,C,B
		LB 30 17 60	〃	Black	〃	〃	〃	R,G
※		PA 00 07 50	Front End Pack	FE529U12	フロントエンドパック	PK101		
※		QU 00 39 00	Quartz Crystal Unit	32kHz	水晶振動子			
		LA 00 39 90	Antenna Terminal	5P	アンテナ端子板			R,U,A,C
		LA 00 40 00	〃	5P	〃			G,B
※		LA 00 42 50	Speaker Terminal		スピーカーターミナル			R,A,B
※		LA 00 43 30	〃		〃			U,G,C
		LA 00 21 10	Wrapping Terminal	P=5 2P i-Type	i型ラッピング端子板			U,G,C
		LA 00 20 00	〃	P=7.5 2P i-Type	〃			
		LA 00 23 20	〃	P=7.5 3P i-Type	〃			R,U,A,C,B
		LA 00 25 70	〃	P=7.5(0) 3P i-Type	〃			G
		LB 20 13 90	2.5 Pitch Base Pin	TEB2P-SHF	2.5 ピッチベースピン			
		LB 20 18 80	Fuse Holder Pin	PC-FH1	ヒューズホルダーピン			
※		LB 92 10 40	Connector Plug	4P(i-Type)	コネクタープラグ			
※		LB 92 10 50	〃	5P(i-Type)	〃			
※		LB 92 10 60	〃	6P(i-Type)	〃			
※		LB 92 10 80	〃	8P(i-Type)	〃			
※		LB 92 10 90	〃	9P(i-Type)	〃			
※		NA 08 10 80	AM Coil Pack		AMコイルパック			
※		AA 61 70 10	Sealed Plate	40×30	シールド板			
※		AA 61 69 90	〃	60×30	〃			
		BA 08 40 00	Radiator		放熱器		K-1000	
		BA 08 57 50	Radiation Block		放熱ブロック		R-30	
		BB 06 83 70	Ground Plate		アース金具			
		CB 06 88 80	Plastic Rivet		プラスチックリベット			
			Binding Head Tapping Screw	3×8 FCM3-Bℓ	バインドタッピングネジ			
			〃	3×14 FCM3-Bℓ	〃			
		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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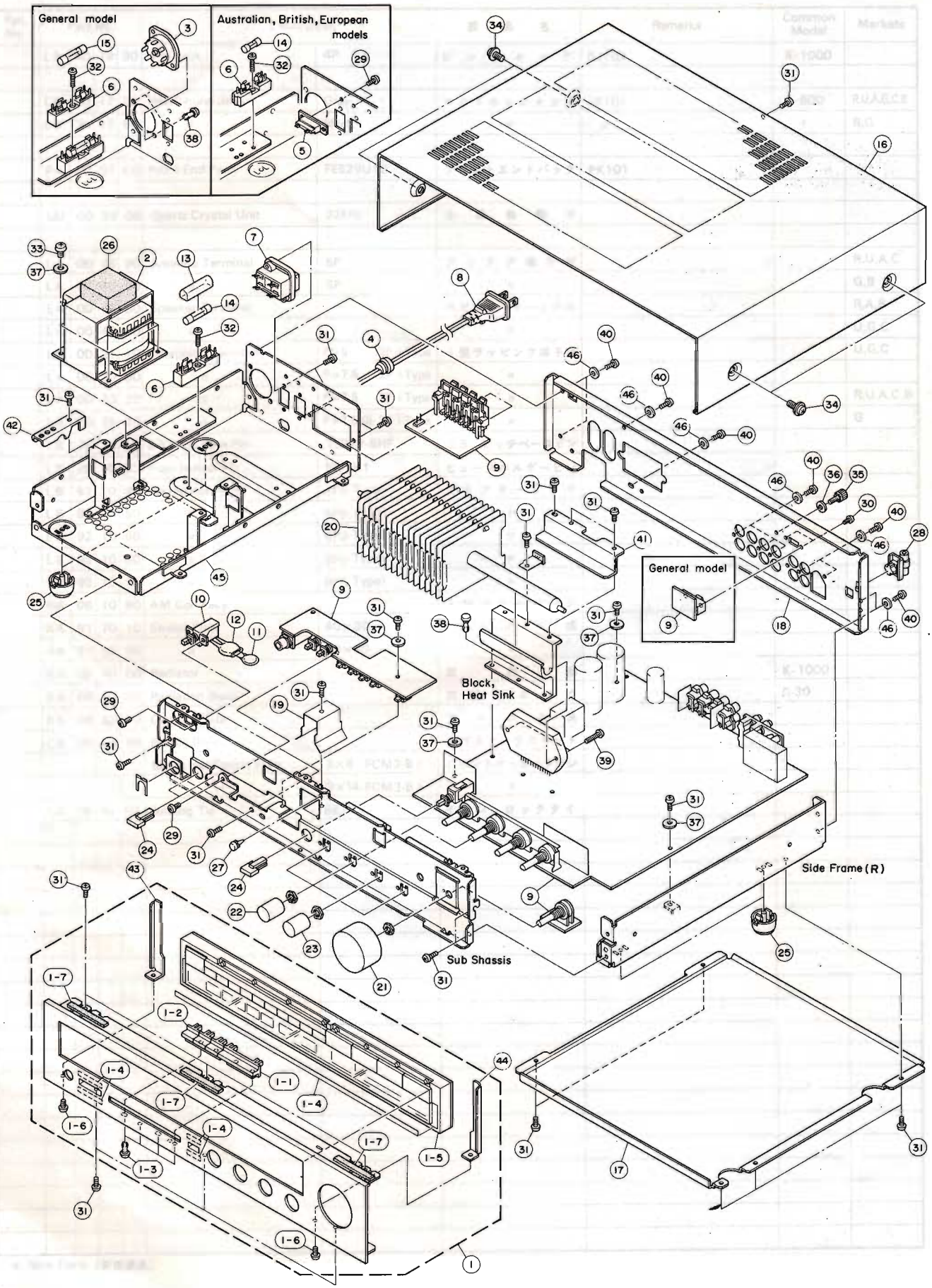
■ EXPLODED VIEW (All-over)



■ MECHANISM PARTS (All-over)

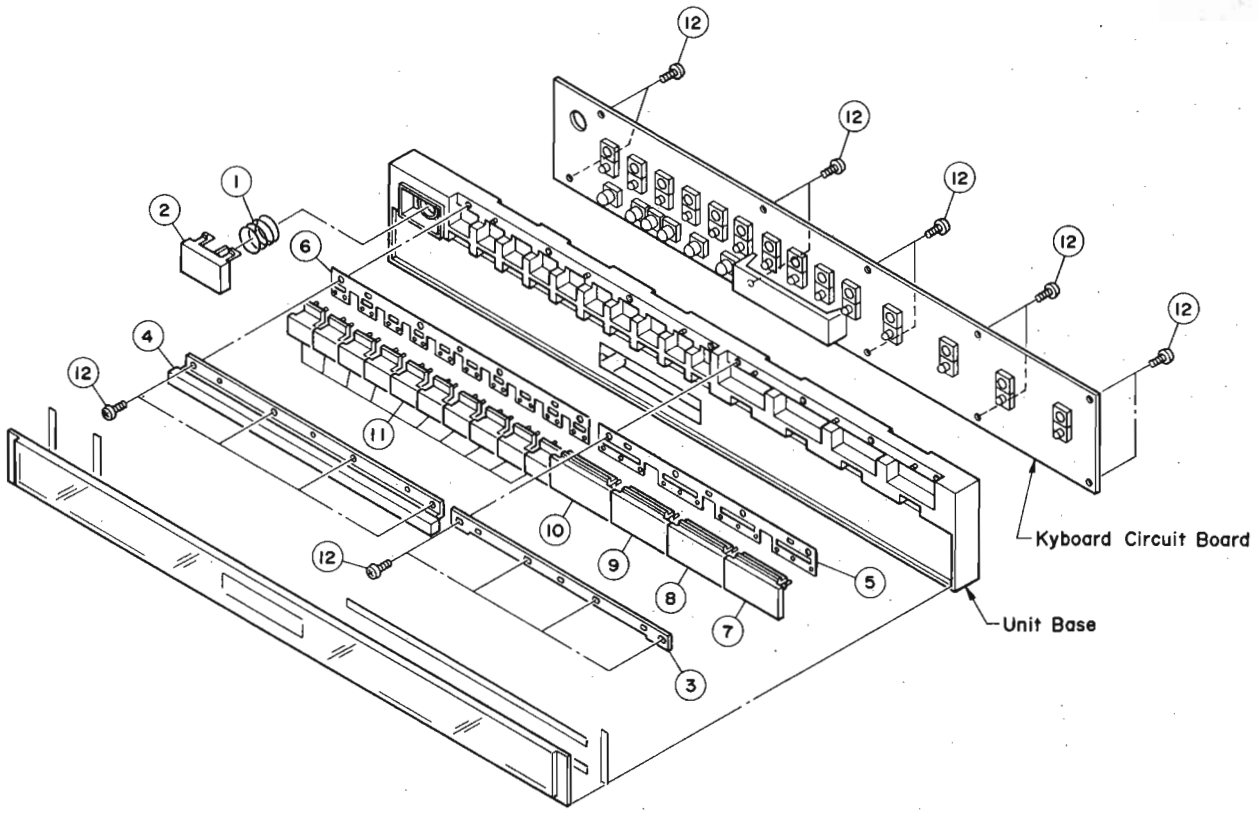
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	
※	1	NB 61 17 30	Front Panel Unit	Silver	パネルユニット				
※	〃	NB 61 17 40	〃	Black	〃			R.G	
※	1-1	CB 61 80 80	Button	Silver	シーソーボタン		R-30		
※	〃	CB 61 80 90	〃	Black	〃		〃	R.G	
※	1-2	CB 61 81 40	Button (3 Range)	Silver	3連ボタン				
※	〃	CB 61 81 50	〃	Black	〃			R.G	
	1-3	CB 06 88 80	Plastic Rivet		プラスチックリベット				
	1-4	CB 07 41 90	Adhesive Tape		ダブルタックテープ				
※	1-5	PB 06 28 00	Keyboard Unit	Silver	キーボードユニット				
※	〃	PB 06 28 10	〃	Black	〃			R.G	
	1-6	ED 03 00 66	Binding Head Screw	3×6 ZMC2-Y	バインド小ネジ				
	1-7	CB 08 50 50	Antivibration Tape		防振テープ				
※	2	GA 66 43 00	Power Transformer		電源トランス			R	⚠
※	〃	GA 66 40 00	〃		〃			U.C	⚠
※	〃	GA 66 41 00	〃		〃			G	⚠
※	〃	GA 66 42 00	〃		〃			A.B	⚠
	3	LB 20 14 80	Voltage Selector		電圧切換器			R	
	4	CB 07 27 50	Cord Stopper	SR-4N-4	コードストッパー				
	5	LA 00 29 50	Terminal Board	2P	中継端子台			A.G.B	
	6	LB 20 13 00	Fuse Holder		ヒューズホルダー			R.U.C	
	〃	LB 20 21 10	〃		〃			G.B.A	
	7	LB 40 09 40	AC Outlet		ACアウトレット			C	⚠
	〃	LB 40 10 00	〃		〃			R.U	⚠
	8	MG 00 07 80	Power Cord	6A250V 2m	電源コード			R	⚠
	〃	MG 00 09 20	〃	7.5A250V 2.5m	〃			A	⚠
	〃	MG 00 09 50	〃	2.5A250V 2m	〃			G	⚠
	〃	MG 00 10 00	〃	6A300/500V 2m	〃			B	⚠
	〃	MG 00 14 50	〃	10A125V 1.98m	〃	Inter Changeable		U.C	⚠
	〃	MG 00 14 60	〃	10A125V 2m	〃			U.C	⚠
※	9	NA 08 16 30	Main Circuit Board	Silver	総合シート			R	
※	〃	NA 08 16 40	〃	〃	〃			U.C	
※	〃	NA 08 16 50	〃	〃	〃			A	
※	〃	NA 08 16 60	〃	〃	〃			G	
※	〃	NA 08 16 70	〃	〃	〃			B	
※	〃	NA 08 16 80	〃	Black	〃			R	
※	〃	NA 08 16 90	〃	〃	〃			G	
	10	KA 80 36 10	Push Switch	TV-3	プッシュスイッチ	POWER			⚠
	11	Fi 38 41 00	Ceramic Cap.	0.01μF	セラコン				⚠
	12	CB 09 52 60	Cover		コンデンサーカバー				
	13	CB 09 95 80	Fuse Holder Cover		ヒューズホルダーカバー			U	
	14	KB 00 03 50	Fuse	T2A 250V	ヒューズ			R	⚠
	〃	KB 00 16 60	〃	T1.6A 250V	〃			G.B.A	⚠
	〃	KB 00 25 70	〃	4.0A 250V	〃			U.C	⚠
	15	KB 00 03 80	〃	T4.0A 250V	〃			R	⚠
※	16	AA 61 53 90	Top Cover	Silver	トップカバー		R-30		
※	〃	AA 61 54 00	〃	Black	〃		〃	R.G	
※	17	AA 61 63 40	Bottom Cover	Silver	ボトムカバー		〃		
※	〃	AA 61 76 90	〃	Black	〃			R.G	
※	18	AA 61 64 00	Rear Panel		リアパネル			R	
※	〃	AA 61 64 10	〃		〃			U.C	
※	〃	AA 61 64 20	〃		〃			G	
※	〃	AA 61 64 30	〃		〃			A.B	
※	19	AA 61 64 50	Plate		B—EXシールド板				

※ New Parts (新規部品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
※	20	BA 08 57 40	Heat Sink	35W	ヒートキッカー			
	21	BA 08 48 90	Knob	Silver	ツマミ	VOLUME	A-500	
	〃	BA 08 50 90	〃	Black	〃	〃	〃	R.G
	22	BA 08 39 50	〃	Silver	〃	BASS, TREBLE, BALANCE	A-05	
	〃	BA 08 58 70	〃	Black	〃	〃	〃	R.G
	23	BA 08 44 90	〃	Silver	〃	LOUDNESS	〃	
	〃	BA 08 45 00	〃	Black	〃	〃	〃	R.G
	24	CB 61 01 30	Push Button	Silver	プッシュボタン	SPEKERS, BASS, EXTENTION	K-200	
	〃	CB 61 01 40	〃	Black	〃	〃	〃	R.G
	25	CB 61 03 90	Leg		脚		〃	
※	26	CB 61 90 20	Rubber, Antivibration		防振ゴム			
	27	CB 08 17 00	Clip		クリップ		CR-420	
	28	CB 60 74 70	Antenna Holder		アンテナホルダー		T-960II	
	29	ED 33 00 66	Binding Head Screw	M3×6 FCM3-BL	バインド小ネジ	PACK		
	30	ED 32 60 46	〃	M2.6×4 FCM3-BL	〃	PACK		R
	31	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCRM3-BL	バインドタッピングネジ	PACK		
	32	Ei 33 01 06	〃	3×10 ZMC2-BL	〃	PACK		
	33	ED 34 00 66	Cup Screw	4×6 FCM3-BL	カップスクリュー(Sタイト)			
	34	EZ 00 13 10	〃	4×8 FNM3-3g	カップタイトネジ	Silver		
	〃	EZ 00 13 20	〃	4×8 FCM3-BL	〃	Black		R.G
	35	EZ 00 14 00	Ground Terminal Screw	3×13.5 MFNi-II	アース端子ネジ			
	36	EV 90 13 60	Sens Plain Washer	φ10×φ3.6×t0.8 FNM3-3g	センス平座金			
	37	EV 20 31 06	Plain Washer	φ10 FMC2-BL	平座金	PACK		
	38	CB 06 88 80	Plastic Rivet		プラスチックリベット			
	39	EZ 00 13 50	Cup Screw	3×14 FCM3-BL	カップスクリュー(Bタイト)			
	40	Ei 33 00 86	Bind Bonding Head Taping Screw	3×8 FCM3-B ℓ	バインドボンディングタッピングネジ	PACK		
※	41	AA 61 64 60	Holder, Pipe		パイプ押え			
※	42	AA 61 64 70	Pipe Lock		パイプロック			
※	43	AA 61 64 80	Unit Base Fixture	A	ユニットベース押え			
※	44	AA 61 64 90	〃	B	〃			
※	45	AA 61 63 20	Holder, Trans former		トランスホルダー			
	46	EV 41 30 36	Washer	φ3	ワッシャー	PACK		
		CB 06 92 50	Binding Tie	BK-1	インシュロックタイ			
			Accessories Assembly		付属品 Ass'y			
		Mi 08 28 50	Antenna	FM	FMQマッチアンテナ			
※		Mi 08 29 10	Loop Antenna	AM	ループアンテナ			

※ New Parts（新規部品）

■EXPLODED VIEW(Keyboard Unit)



■MECHANISM PARTS(Keyboard Unit)

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
※		PB 06 28 00	Keyboard Unit	Silver	キーボードユニット		
※		PB 06 28 10	〃	Black	〃		R, G
※	1	AX 60 00 40	Spring	SUS304WPB	スプリング		
	2	CB 61 73 20	Button	Silver	ボタン	POWER	
	〃	CB 61 73 30	〃	Black	〃	〃	
※	3	AX 60 00 70	Spring, Hold	t 1.6	バネ押え		
	4	CB 61 75 00	Button Blow	Silver	ボタンブロウ	PRESET	
	〃	CB 61 75 30	〃	Black	〃	〃	
※	5	AX 60 00 50	Spring, Button	SUS304CSPH	ボタンバネ	INPUT	
※	6	AX 60 00 60	〃		〃	PRESET	
	7	CB 61 73 80	Button	Silver	ボタン	TUNER	
	〃	CB 61 74 20	〃	Black	〃	〃	
	8	CB 61 73 90	〃	Silver	〃	VIDEO/AUX	
	〃	CB 61 74 30	〃	Black	〃	〃	
	9	CB 61 74 00	〃	Silver	〃	PHONO	
	〃	CB 61 74 40	〃	Black	〃	〃	
	10	CB 61 74 10	〃	Silver	〃	TAPE MONITOR	
	〃	CB 61 74 50	〃	Black	〃	〃	
	11	CB 61 73 40	〃	Silver	〃	PRESET	
	〃	CB 61 73 50	〃	Black	〃	〃	
	12	EA 02 60 66	Pan Head Tapping Screw	M2.6×6 ZMC2-Y	ナベタッピングネジ		

※ New Parts (新規部品)

■ELECTRICAL PARTS

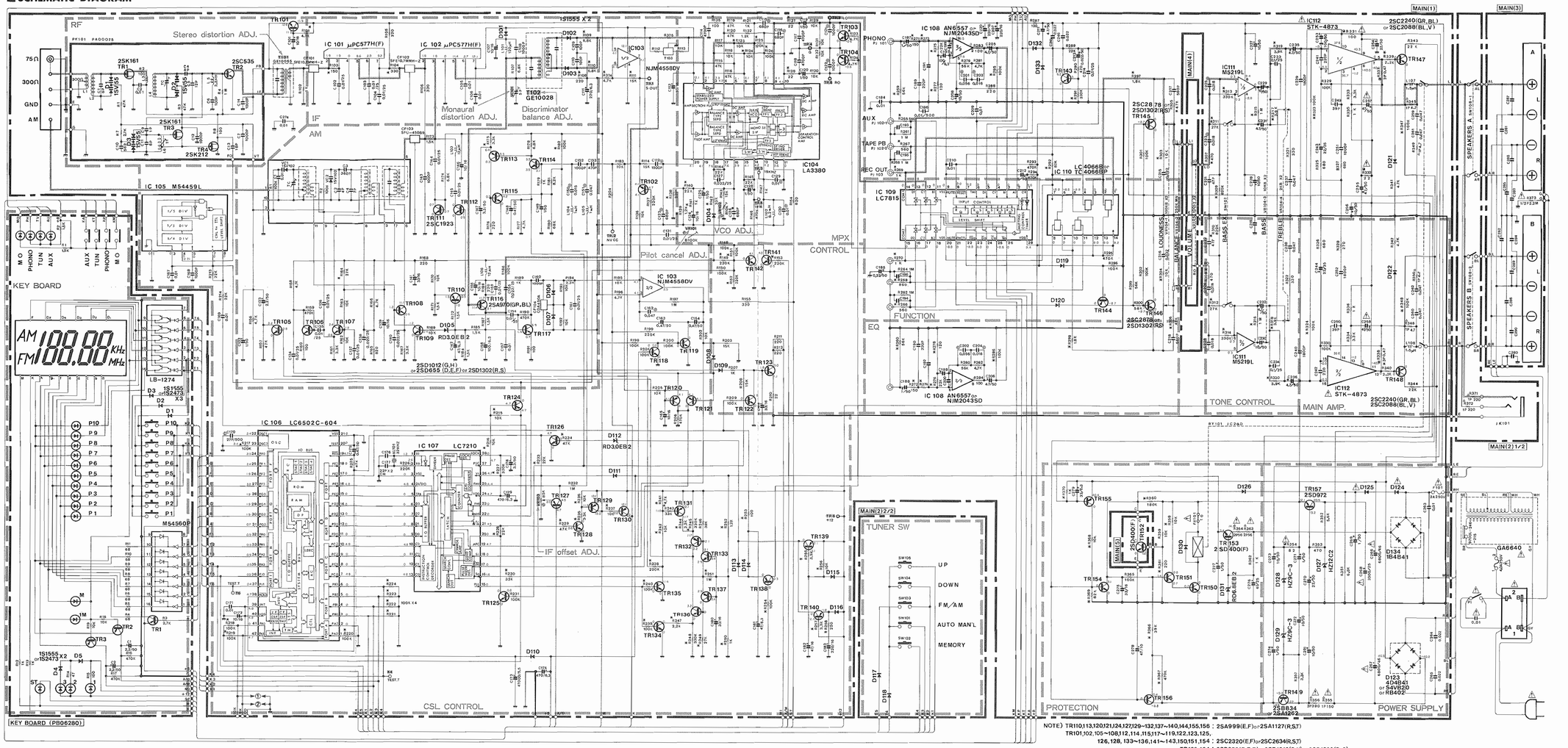
	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
※			Keyboard Circuit Board	Silver キーボードシート			
			〃	Black 〃			R, G
		KA 80 29 50	Switch	タクトスイッチ			
		UW 86 62 20	Electrolytic Cap	2,2μF 50V ケミコン	C1, 2		
※		iF 00 45 40	LED	SLR-34URC3H LED	(Red)		
※		iF 00 42 80	〃	SLR-55MC3H 〃	(Green)	A-500	
※		iF 00 42 70	〃	SLR-55URC3H 〃	(Red)	〃	
※		iF 00 45 50	〃	SLR-34MC3H 〃	(Green)		
		iF 00 00 40	Diode	IS1555 ダイオード	D1~5		
		iA 09 37 00	Transistor	2SA937 トランジスタ	TR1~3		
		iG 04 94 00	IC	LB1274 IC	Interchangeable		
			〃	M54527P 〃	Replaced by IC:LB1274		
※		iX 60 14 70	〃	M54560P 〃			
※		iF 00 44 10	Frequency Display	LC-205MK(N) 周波数表示器	Silver		
※		iF 00 44 20	〃	LC-205MK(B) 〃	Black		

※ New Parts (新規部品)

R-50

YAMAHA

■ SCHEMATIC DIAGRAM



NOTE) TR110,113,120121,124,127,129~132,137~140,144,155,156 : 2SA999(E,F) or 2SA1127(R,S,T)
TR101,102,105~108,112,114,115,117~119,122,123,125,
126,128, 133~136,141~143,150,151,154 : 2SC2320(E,F) or 2SC2634(R,S,T)
TR103,104 : 2SD655(D,E,F) or 2SD1012(G,H) or 2SD1302(R,S)
D 101,104,106~111,113~122,124~126,130,132,133 : 1S1555 or 1S2473

CAPACITOR

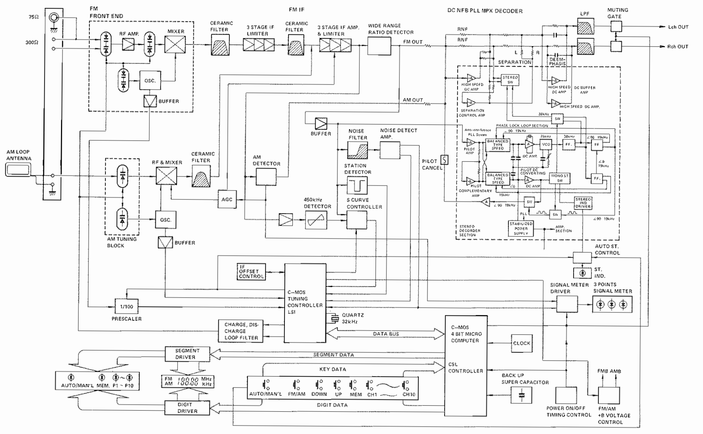
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊞
NO MARK	CERAMIC CAPACITOR	⊞
◎	POLYESTEL FILM CAPACITOR	
●	SA CAPACITOR	
◎	MICA CAPACITOR	

RESISTOR

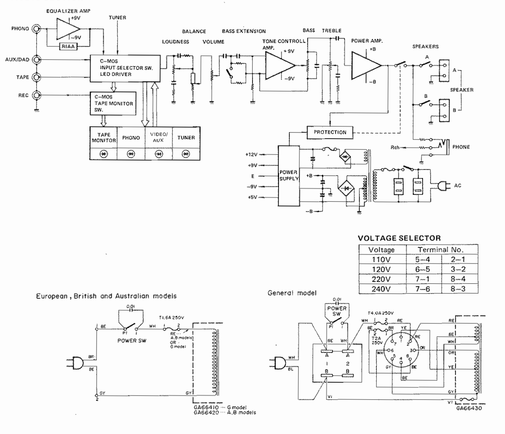
REMARKS	PARTS NAME
NO MARK	1/4W CARBON FILM RESISTOR
▲	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
■	METAL PLATE RESISTOR
★	FLAME PROOF CARBON FILM RESISTOR
⊘	SEMI VARIABLE RESISTOR
★	1/6W CARBON FILM RESISTOR

■ BLOCK DIAGRAM

●TUNER SECTION



●AUDIO SECTION



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

European, British and Australian models

General model

This schematic diagram is for U.S. and Canadian models. The following parts and values differ from each model, so refer to the corresponding column.

	R	U, C	A, B	G
CF101, 102	SFE10.7MMH-Z	SFE10.7MMH-Z	SFE10.7MMH-Z	SFE10.7MS3GHY-Z
R112	Open	Open	Open	220
R113	Open	Open	Open	12k
R119, 120	47k	47k	47k	33k
R121	1k	1k	1k	5.6k
R122	1.2k	1.2k	1.2k	5.6k
R129, 130	10k	10k	10k	5.6k
R131, 132	10k	10k	10k	33k
R183	10k	10k	10k	4.7k
R186	100k	100k	100k	150k
R204	1k	1k	1k	2.2k
R265 ~ 268	560	560	560	2.2k
R271, 272	150	150	150	1.5k
R273, 274	Short	Short	Short	1.2k
R373	Open	½p 2.2M	Open	Open
R375	15k	15k	15k	Open
T103	Open	Open	Open	GE20043
C115, 116	680p	680p	470p	470p
C123	680p	680p	680p	1000p
C155	0.022	0.022	0.022	0.01
C191, 192	Open	Open	Open	220p
C193 ~ 196	Open	Open	Open	330p
C199, 200	Open	Open	Open	100p
C219, 280	Open	Open	Open	0.01
C281 ~ 286	Open	Open	Open	0.022
C287 ~ 290	Open	Open	Open	4700p
F101	T2.0A 250V	2A 250V	T1.6A 250V	T1.6A 250V
→ ① ←	Open	Short	Open	Open
→ ② ←	Open	Open	Short	Short
Main (6)	Set	———	———	———

*Schematic diagram is subject to change without notice.

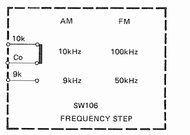
■WARNING

UL Standard 1270 requires that components marked ⚠ be replaced with parts having specifications equal to those originally installed.

FM/AM SELECTORS → FM
FUNCTION → TUNER
TUNING/MODE → AUTO

**All voltages are measured with a 10MΩ/V DC electric volt meter.*
The voltage in the tuner section are measured in FM reception mode.
Only the voltages at TR105 ~ TR112 are measured in AM reception mode.

MAIN (6)



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.