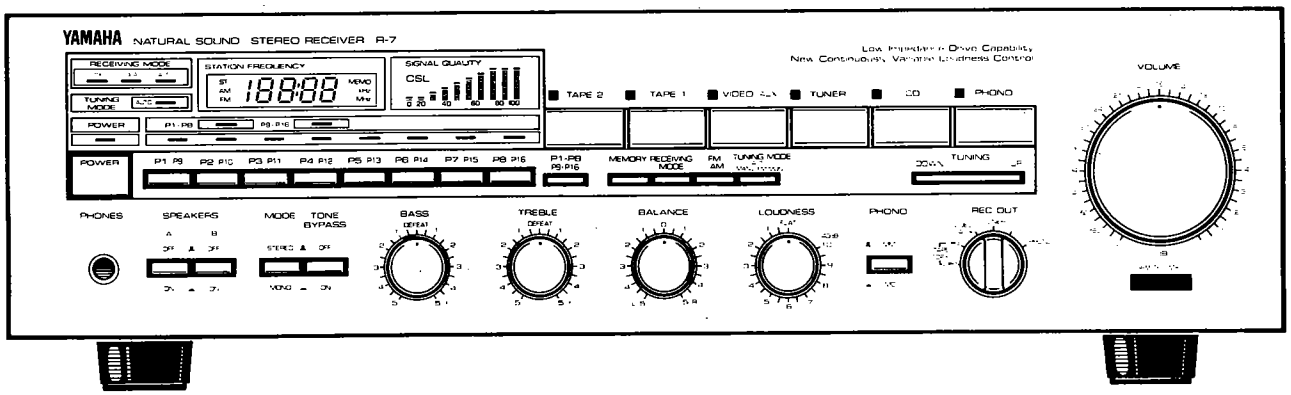
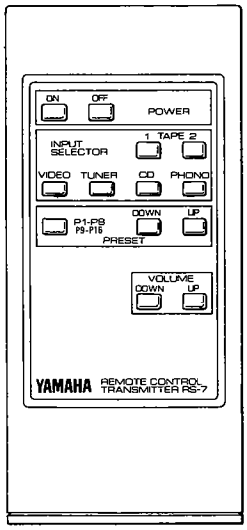
STEREO RECEIVER

R-7

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.

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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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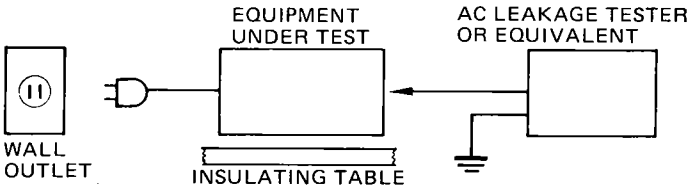
SINCE 1887 YAMAHA
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN
1.8k-148 Printed in Japan '85.5

■ 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, 0.015% THD, 8Ω	65W
20Hz ~ 20kHz, 0.03% THD, 6Ω	75W
1kHz, 0.01% THD, 8Ω (IEC Rated Power)	75W
Dynamic Headroom	
8Ω	1.8dB
Dynamic Power	
8Ω	101W
6Ω	118W
4Ω	144W
2Ω	170W
Power Band Width	
0.1% THD, 32.5W, 8Ω	10Hz ~ 50kHz
Damping Factor	
1kHz, 8Ω	more than 50
Input Sensitivity/Impedance	
Phono MC	160μV/220Ω
Phono MM	2.5mV/47kΩ
CD/TAPE/VIDEO	150mV/47kΩ
Input Sensitivity (New IHF)	
Phono MC	20μV
Phono MM	0.31mV
CD/TAPE/VIDEO	18.6mV
Maximum-Input Signal	
0.01% THD, Phono MC	8mV
0.01% THD, Phono MM	110mV
Output Level/Impedance	
REC OUT	150mV/470Ω
Headphone Jack Rated Output Load/Impedance	
0.015% THD	0.8V/8Ω
Frequency Response	
20Hz ~ 20kHz, CD/TAPE/VIDEO	±0.5dB
RIAA Equalization Deviation	
30Hz ~ 20kHz, Phono MC RIAA	±0.5dB
20Hz ~ 20kHz, Phono MM RIAA	±0.3dB
Total Harmonic Distortion (20Hz ~ 20kHz)	
Phono MC to Rec Out 3V	0.005%
Phono MM to Rec Out 3V	0.003%
CD/TAPE/VIDEO to SP out 30W/8Ω	0.015%
Intermodulation Distortion	
CD/TAPE/VIDEO Rated Output/8Ω	0.01%
Signal to Noise Ratio	
Phono MC (500μV, Input Shorted)	75dB
Phono MM (5mV, Input Shorted)	92dB
CD/TAPE/VIDEO (Input Shorted)	103dB
Signal to Noise Ratio (New IHF)	
Phono MC	75dB
Phono MM	76dB
CD/TAPE/VIDEO	82dB
Residual Noise (IHF-A-Network)	140μV
Channel Separation	
Phono MM, 1kHz (Input Shorted, Vol. −20dB)	60dB
CD/TAPE/VIDEO, 1kHz (5.1kΩ)	60dB
Tone Control Characteristics	
BASS boost/cut	±10dB (at 50Hz)
BASS turnover frequency	350Hz
TREBLE boost/cut	±10dB (at 20kHz)
TREBLE turnover frequency	3.5kHz
Filter Characteristics	
LOW (Subsonic, builtin)	10Hz, −12dB/oct
Continuous Loudness Control (Level-related equalization)	
Attenuation	40dB (at 1kHz)

■ FM SECTION

Tuning Range	87.5MHz ~ 108.0MHz
50dB Quieting Sensitivity (IHF)	
Mono, 75Ω	1.55μV (15.1dBf)
Stereo, 75Ω	21μV (37.7dBf)
Usable Sensitivity (IHF Mono)	
1kHz, 100% MOD, 75Ω	0.8μV (9.3dBf)
Image Response Ratio	40dB
IF Response Ratio	90dB
Spurious Response Ratio	70dB
AM Suppression Ratio	55dB
Capture Ratio	
Local	1.2dB
DX	2.5dB
Alternate Channel Selectivity	
DX	85dB
Signal to Noise Ratio	
Mono	85dB
Stereo	81dB
Harmonic Distortion	
Mono 100Hz	0.05%
Mono 1kHz	0.05%
Mono 6kHz	0.1%
Stereo 100Hz	0.07%
Stereo 1kHz	0.07%
Stereo 6kHz	0.15%
Stereo Separation	
Local 50Hz	45dB
Local 1kHz	50dB
Local 10kHz	45dB
Frequency Response	
30Hz to 13kHz	±0.5dB
Output Level/Impedance (Rec Out)	
100% MOD, 1kHz	500mV/2.8kΩ

■ AM SECTION

Tuning Range	510kHz ~ 1620kHz (U)(C) 510kHz ~ 1620kHz or 513kHz ~ 1620kHz (R) 513kHz ~ 1620kHz (A)(B)
Usable Sensitivity	250μV/m
Selectivity	24dB
Signal to Noise Ratio	50dB
Image Response Ratio	40dB
Spurious Response Ratio	50dB
Harmonic Distortion (400Hz)	0.3%
Output Level/Impedance (Rec Out)	
30% MOD, 400Hz	150mV/2.8kΩ

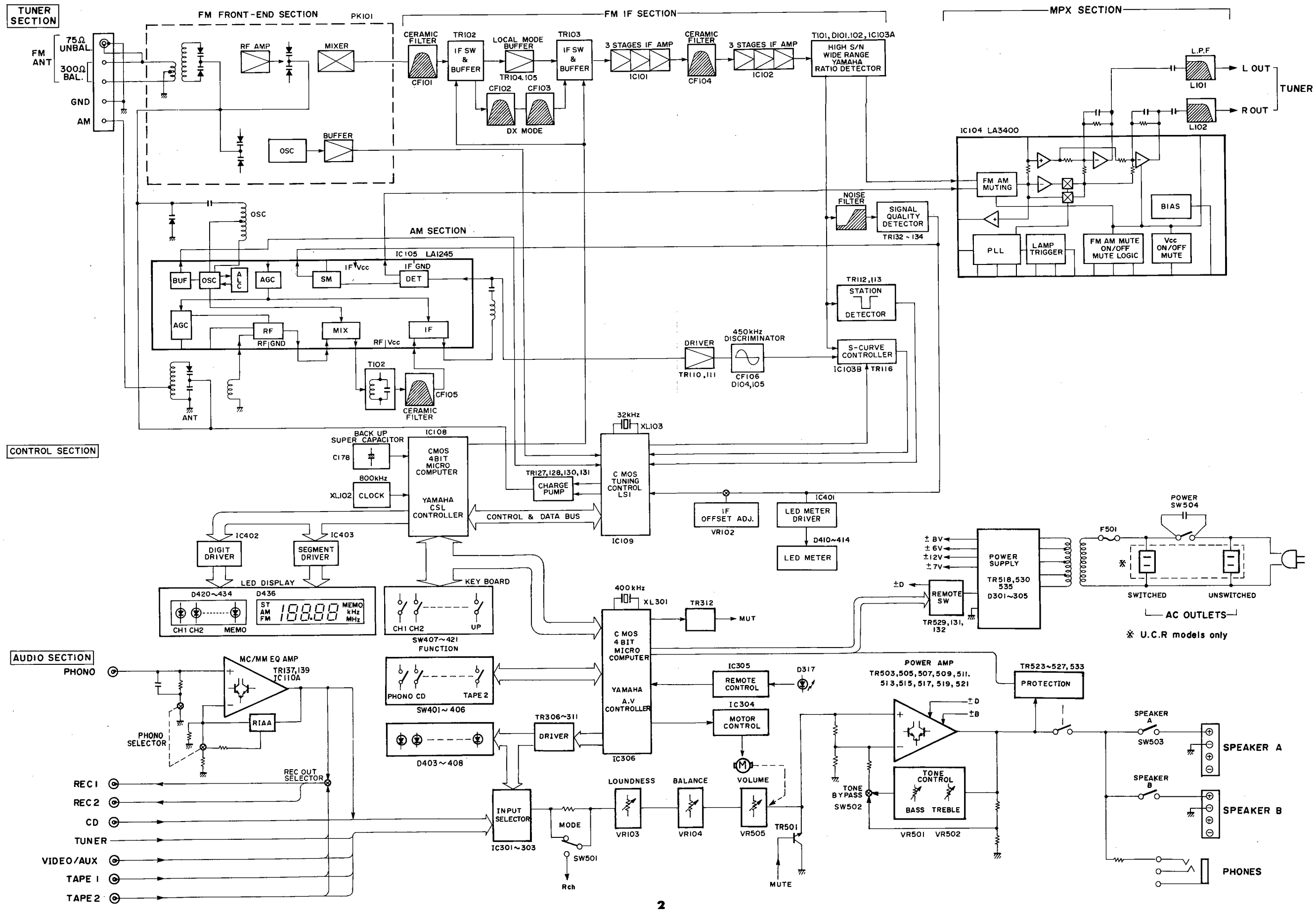
■ GENERAL

Power Supply	
U.S.A. & Canadian models	120V AC, 60Hz
General model	110V/120V/220V/240V AC, 60/50Hz
Australian & British models	240V AC, 50Hz
Power Consumption	260W (U)(C)(R) 420W (A)(B)
AC Outlet . . . . . (U)(C)(R) only	
Switched x 1	100W max.
Unswitched x 1	200W max.
Dimensions (W x H x D)	435 x 126 x 289 mm (17-1/8" x 4-15/16" x 11-3/8")
Weight	6.3 kg (13.8 lbs)

Specifications subject to change without notice.

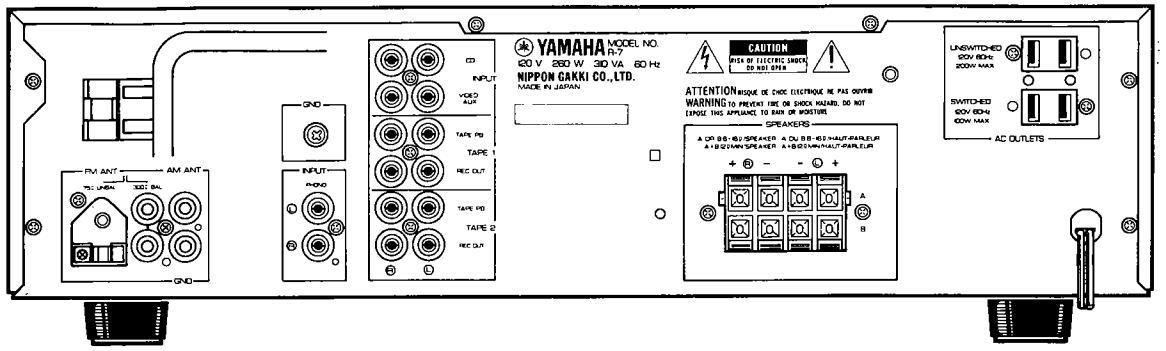
(U) ..... U.S.A. model
(C) ..... Canadian model
(A) ..... Australian model
(G) ..... European model
(B) ..... British model
(R) ..... General model

■ BLOCK DIAGRAM

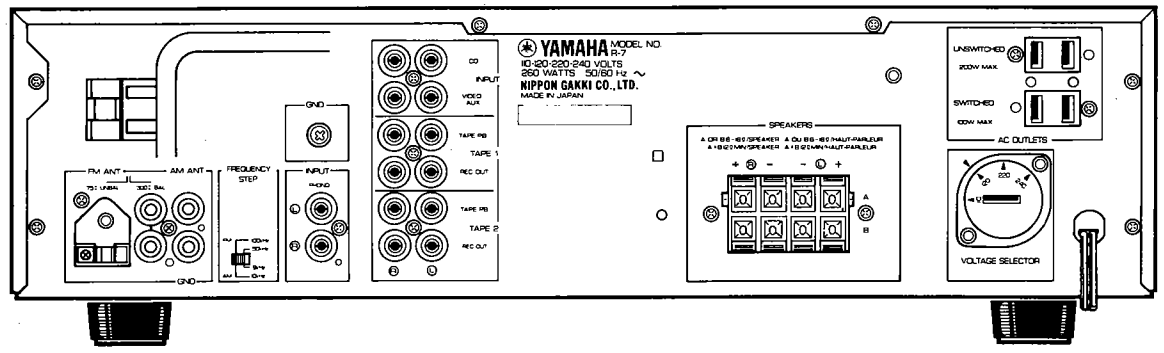


REAR PANELS

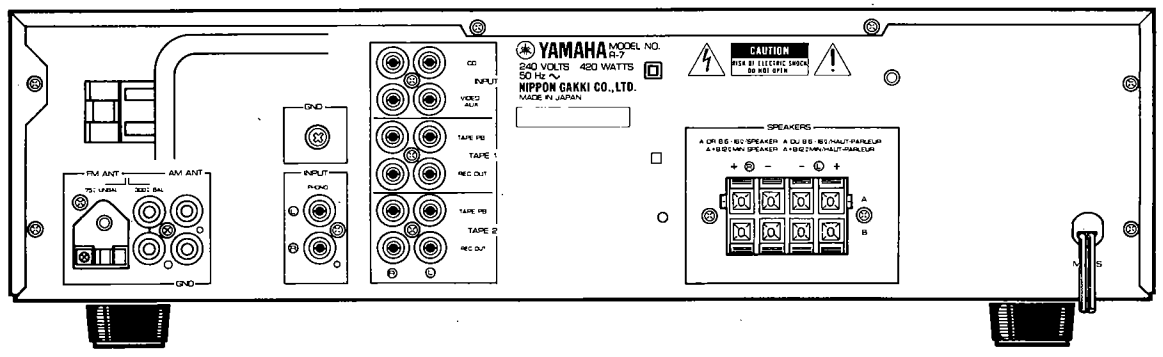
U.S.A. & Canadian models



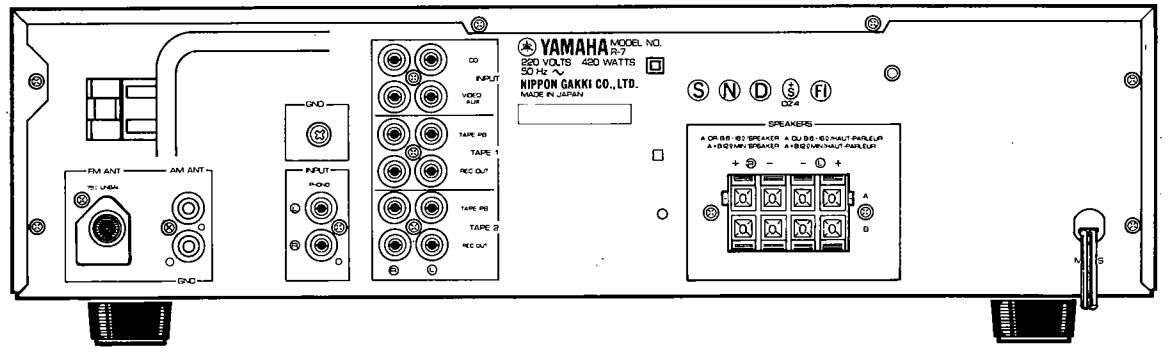
General model



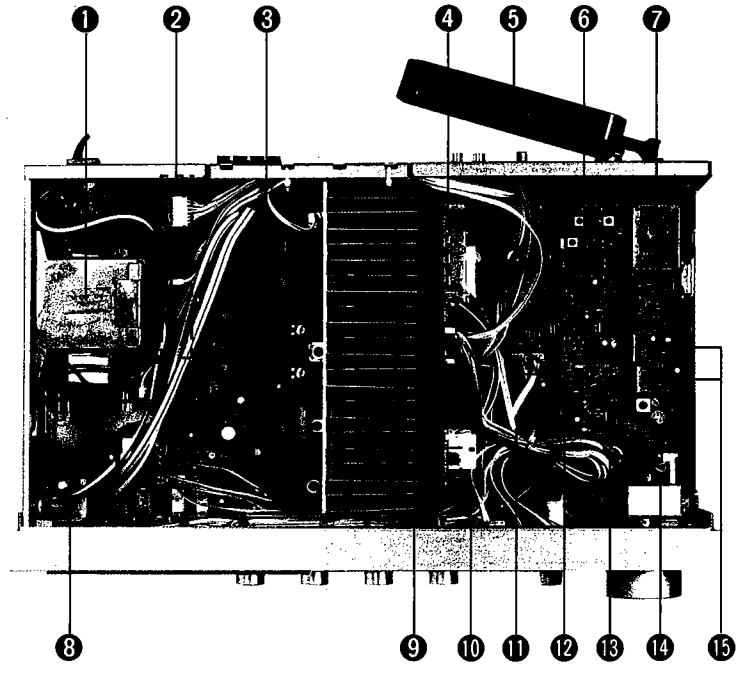
Australian & British models



European model



INTERNAL VIEW



1. POWER TRANSFORMER
   U.S.A. model: GA69001
   Canadian model: GA69011
   European model: GA69022
   General model: GA69032
   Australian & British models: GA69042
2. MAIN CIRCUIT BOARD (2)
3. MAIN CIRCUIT BOARD (1)
4. TUNER CIRCUIT BOARD (2)
5. AM LOOP ANTENNA
6. AM IC: LA1245
7. FRONT END PACK
8. POWER SWITCH
9. MOTOR CONTROL IC: BA6229
10. A.V CONTROLLER IC: iG14780 (LC6505C-696)
11. PLL IC: LC7210
12. CSL CONTROLLER IC: iG14770 (LC6510C-695)
13. TUNER CIRCUIT BOARD (1)
14. POTENTIOMETER WITH MOTOR
15. IF IC: μPC577H (E, F)

DISASSEMBLY PROCEDURES

1. **Removal of Top Cover**
   Remove 7 screws (①) in Fig. 1, and slide the Top Cover back and up.
2. **Removal of Front Panel**
   Remove 4 screws (②) and 4 hooks in Fig. 1, and pull the Front Panel forward.
3. **Check of Main & Tuner Circuit Board (1) and replacement of parts.**
   a. Remove 13 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 and Tuner Circuit Board (1), and replace the parts.

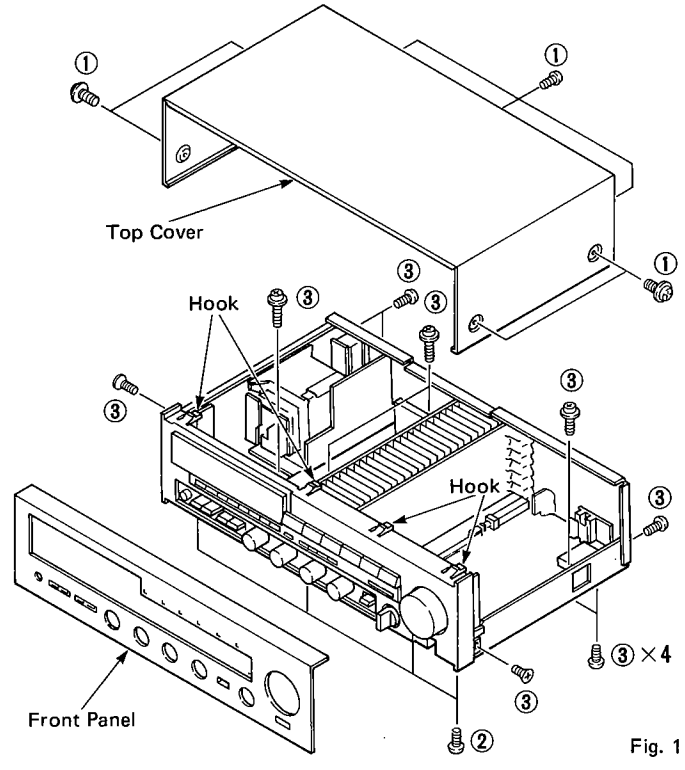


Fig. 1

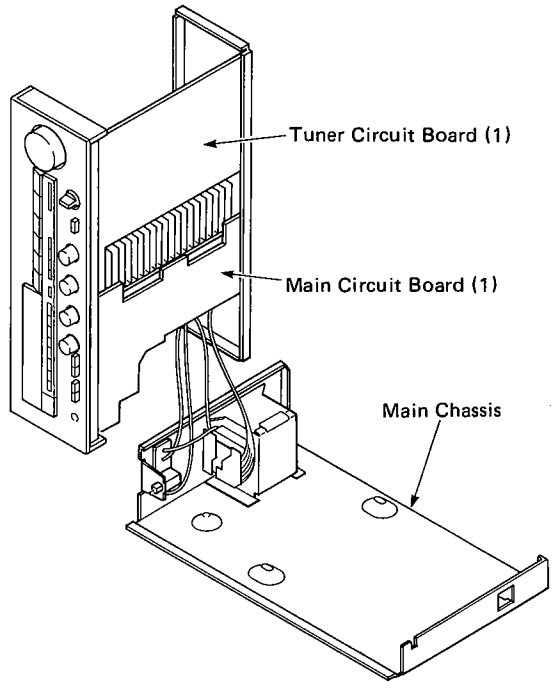


Fig. 2

■ 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) Set the switches to the following positions.
   TUNING MODE ..... AUTO
   RECEIVING MODE ..... AUTO
4) Proceed with the AM section adjustments after having finished the FM section adjustment.
5) 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
A.C.V.M. : AC voltmeter
D.C.V.M. : DC voltmeter

<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
TR301 EMITTER	+11.9V ± 0.5V	Make sure that AC line voltage comes within Models: U, C — AC line voltage: 120V ± 10% Models: G — AC line voltage: 220V ± 10% Models: A, B — AC line voltage: 240V ± 10%
D305 Anode	+5.8V ± 0.5V	
+7	+5.5V ± 0.5V	
TR303 EMITTER	+6.1V ± 0.5V	
TR302 EMITTER	−11.9V ± 0.5V	
D304 Anode	−6.1 ± 0.5V	
+B	+50V ± 5V	
−B	−50V ± 5V	
+18	+18V ± 5V	
−18	−18V ± 5V	
FB	At FM reception mode +12V ± 1V	
	At AM reception mode 0V	
AB	At FM reception mode 0V	
	At AM reception mode +12V ± 1V	

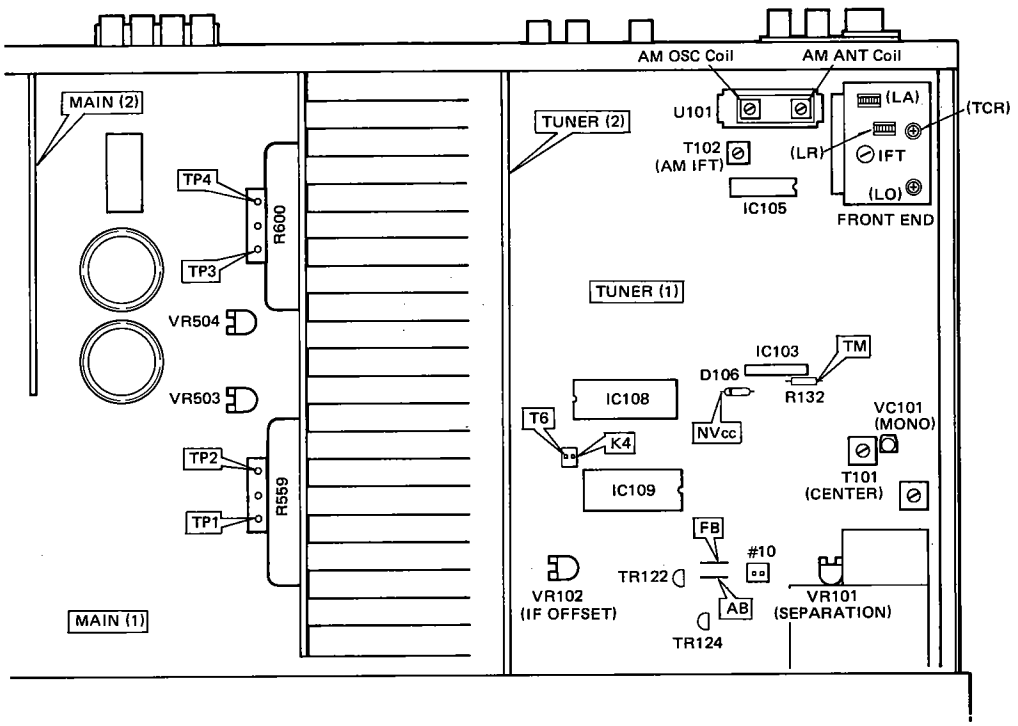
<AUDIO SECTION>

- **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 VR503 (Lch) and VR504 (Rch) so that the voltage across the terminals of R559 (TP1 - TP2) and R560 (TP3 - TP4) comes to 11mV ± 2mV DC.

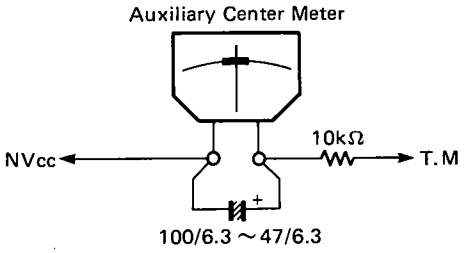
Test points		Adjustment points	Rating
Lch	Across the terminals of R559 (TP1 - TP2)	VR503	11mV ± 2mV DC.
Rch	Across the terminals of R560 (TP3 - TP4)	VR504	11mV ± 2mV DC.

- **TEST POINT**



< FM TUNER SECTION >

- Use 19kHz L.P.F. to measure the REC OUT.
- 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	Item to be Adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
1	Discriminator balance	NVcc ~ T.M	Auxiliary center meter	T101 (CENTER)	Adjust the pointer of the auxiliary center meter points 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.		
		NVcc ~ T.M	Auxiliary center meter				
3	Monaural distortion	300Ω FM ANT	FM SG [98MHz ± 1kHz 70dBμ (75.2dBf) MONO 100Hz 100% MOD]	VC101 (MONO)	Reduce distortion to minimum.	Less than −55dB	Reception should be made in LOCAL mode
		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 −46dB	Confirm that ST indicator lights up. Reception should be made in LOCAL mode.
		REC OUT L, R	DIST. M L.P.F.				
5	Separation	300Ω FM ANT	FM SG, SSG [98MHz ± 1kHz 70dBμ (75.2dBf) STEREO L, R 1kHz, 100% MOD]	VR101 (SEPARATION)	Reduce output level to minimum.	Separation more than 40dB	
		REC OUT L, R	A.C.V.M L.P.F.				

Step	Item to be Adjusted	Connection terminal	Instrument required	Adjustment locations	Adjustment method	Rating or standard	Remarks
6	Confirmation of Full-scale signal quality level	300Ω FM ANT	FM SG, SSG [98MHz ± 1kHz, 70dBμ (75.2dBf), STEREO L, R, 1kHz, 100% MOD]	SIGNAL QUALITY indicator	Confirm that all signal quality indicators light up.		Confirm that all signal quality indicators goes out at detuned point.
7	IF Offset	300Ω FM ANT	FM SG. [98MHz ± 1kHz, 70dBμ (75.2dBf), STEREO L, R, 1kHz 30% MOD]	VR102 (IF OFFSET) Frequency display	By shorting across terminals K4 and T6, the frequency display shifts 1 digit. Therefore, adjust VR102 until 10kHz digit becomes 9 or 0.		After adjustment open across K4 and T6.
		K4 ~ T6	Short				
8	Confirmation of auto search reception	300Ω FM ANT	FM SG [98MHz ± 1kHz, 15dBμ (20.2dBf), 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

- Shorting K4 and T6 while set at FM will result in automatic memory of each preset from P1/P9 to P9/P16 as given in the right table. This is convenient when making an adjustment.

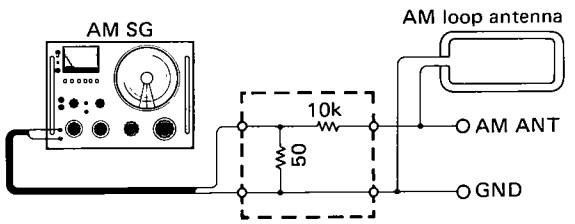
P1/P9	P2/P10	P3/P11	P4/P12	P5/P13
AM 630kHz	AM 1080kHz	AM 1440kHz	FM 87.5MHz	FM 95.1MHz

P6/P14	P7/P15	P8/P16
FM 98.1MHz	FM 101.5MHz	FM 108.0MHz

< AM TUNER SECTION >

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

AM DUMMY ANTENNA CONNECTION



Step	Item to be Adjusted	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]	T102	Adjust T102 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]	PRESET STATION key P1/P9 P2/P10 P3/P11	Obtain AM SG output level where distortion become 10%.	Less than 58dBμ
		REC OUT	A.C.V.M. DST. M.			
3	Confirmation Full-scale signal quality level	AM ANT	AM SG. AM dummy antenna [1080kHz ± 0.1kHz, 80dBμ, 400Hz, 30% MOD]	PRESET STATION key P2/P10 SIGNAL QUALITY indicator	Confirm that all signal quality indicators light up.	
4	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 P1-P8/P9-P16	① Receive FM 98MHz by means of auto search. ② Set P1-P8 → P1-P8 indicator lights. ③ Press MEMORY key → MEMORY indicator flashes about 5 seconds. ④ Press P1 → MEMORY indicator goes OFF P1 of PRESET STATION indicator lights.
		AM ANT	AM SG AM dummy antenna [1080kHz ± 0.1kHz 80dBμ 400Hz, 30% MOD]		⑤ Receive AM 1080kHz ⑥ Press MEMORY key → MEMORY indicator flashes about 5 seconds. ⑦ Press P2 → MEMORY indicator goes OFF P2 of PRESET STATION indicator lights.
		300Ω FM ANT AM ANT	FM SG, SSG AM SG AM dummy antenna		⑧ Press P1 and P2 and check that content is read out. → P1 and P2 of PRESET STATION indicator lights.
					⑨ Set P9-P16 → P9-P16 indicator flashes. ⑩ Press MEMORY key → MEMORY indicator flashes. ⑫ Press P9 → MEMORY indicator goes OFF. P9-P16 indicator lights. P9 indicator lights.
					⑬ Press P9 and check that content is read out.
2	Tuning mode	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 check that when receiving MAN'L/MONO, FM reception become forced mono TUNING MODE indicator → Goes out ST indicator → Goes out
				PRESET STATION key P1. P2	Check that tuning operation stops when tuned while AUTO searching. TUNING MODE indicator → lights up ST indicator → lights up
3	Receiving Mode			PRESET STATION key P1 RECEIVING MODE key	① Press P1 and content is read out (FM) ② Press RECEIVING MODE key → The following 3 states are switched and each indicator lights up. [→ AUTO → DX → LOCAL]
4	Last channel memory			POWER key	① Read out P1. ② Turn OFF POWER Switch. ③ Turn ON POWER Switch after 5 seconds. ④ P1 content should come out. P1 of PRESET STATION indicator lights.

■LSI DATA

• IC109: LC7210

This is the CMOS LSI utilized to tune the CSL (Computer Servo Lock) tuning system for FM/AM radio which has realized stable station selection by PLL (Phase Locked Loop) synthesizer, precise automatic station search (applicable to all areas of the world and multiple bands) by SL^2 (Signal Locked Loop) voltage synthesizer, and optimum tuning point reception by AFC operation.

When combined with a prescaler (÷100), this LSI can be controlled by a 4-bit microcomputer in the controller.

The functions are:

- SL^2 auto search control
- PLL control
- Analog switch for S-curve AFC
- Station-originated frequency counter
- Data generation for FM band IF offset adjustment (5 bits)

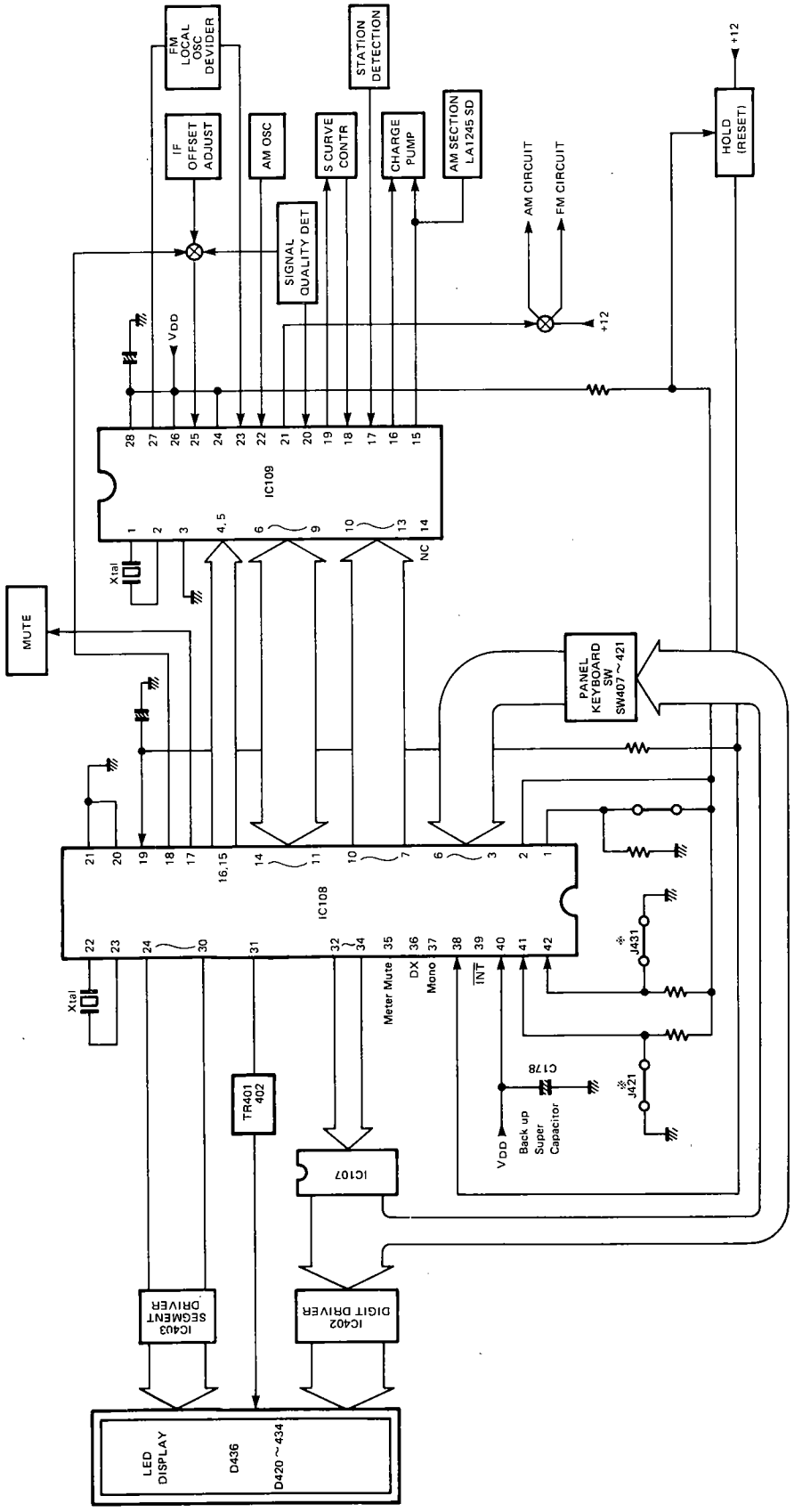
Terminal No.	Description	I/O	Funciton
1	Xin	IN	Oscillation terminals. By connecting Quartz across Xin and Xout, and load capacity across both teminals and Vss, basic clock signal is generated (32kHz).
2	Xout	OUT	
3	Vss	–	Ground terminal
4	DI/DO	IN	Pull-up feature. Input terminal which controls whether data terminal ($D_0 \sim 3$) signal is input mode (DI/DO = 1) or output mode. (DI/DO = 0).
5	STB	IN	Pull-up feature. Determines the timing of internal latch, FF clock pulse and set/reset signal which are determined by control input ($C_0 \sim 3$).
6	D_3	I/O	I/O terminals. Push-pull output. Transfers (DI/DO = 1) data to internal data bus (4 bits) or outputs the contents of internal data bus.
7	D_2		
8	D_1		
9	D_0		
10	C_3	IN	Pull-up feature. Input used to create signal which specifies which logic is to be connected with internal data bus.
11	C_2		
12	C_1		
13	C_0		
14	M/L	OUT	Outputs "1" only when received band is AM NC.
15	PLL	OUT	Push-pull. Outputs "1" while PLL operation is made.
16	Sout	OUT	Tri-state. Connected with push-pull output and analog switch. • PLL mode: Charge pump output can be obtained. • SEARCH mode: Auto search output can be obtained. • AFC mode: Conducts to Sin terminal via analog switch. High impedance state in other modes
17	$\overline{SD}$	IN	Controls whether reception is made by SL^2 or PLL when FM is received.
18	Sin	IN	Connected with analog switch or comparator input. • AFC mode: Conducts to Sout terminal via analog switch and makes reception by AFC. • AUTO SEARCH mode: Discriminates S signal between SH and SL via wind comparator and uses as input which controls search speed limit and stop.
19	AFC	OUT	Outputs "1" in AFC mode. Outputs "0" in other than AFC mode.
20	SMK	IN	Prohibits search stop and speed control by SH and SL in AUTO SEARCH mode ("1"). Controls when "0" is input.
21	F/A	OUT	Band data output terminal. Outputs "1" in FM mode.
22	Ain	IN	AM (FM) local oscillator frequency input terminal. Pull-down transistor is turned on in FM mode.
23	Fin	IN	1/100 dividing output of AM (FM) local oscillator frequency is input. Pull-down transistor is turned off in FM mode in which reception is not made by AFC.
24	VDD	–	Power source +5V
25	A/D	IN	Input used to generate data for compensating the shift of center frequency of FM IF filter.
26	Vref	–	Power source for setting wind comparator level (Sin) and power source for A/D converter ladder network of FM fine.
27	$\overline{PSC}$	OUT	Outputs "0" when PLL or counter is operated in FM mode. Outputs "1" in other cases (other than when reception is made in FM mode, and other than in FM mode).
28	LOC	I/O	Detects the locking of CSL operation, connected with CR integration circuit. Judges as LOCK state when "1" is input and as UNLOCK state when "0" is input.

• IC108: CSL Controller V4.0 695 (LC6510C-695)

1-chip type 4-bit microcomputer which incorporates 4096 x 8 bit ROM (for programming) and 256 x 4 bit RAM (for data memory)

Terminal No.	Description	I/O	Function
1	PA2 AWAM9K	IN	Destination symbol. 42 Pin = "1" : U model AM in 10kHz increments.
2	PA3 $\overline{\text{REM REQ}}$	IN	Destination symbol. $\overline{\text{REM REQ}}$ = "1" : Remote Control Request
3	PB_0 K1	IN	Key matrix input. Judges the switches 407 to 421.
4	PB_1 K2	IN	
5	PB_2 K3	IN	
6	PB_3 K4	IN	
7	PC_0 C0	OUT	Control output. Sepcifies which logic of LC7210 is connected with data bus.
8	PC_1 C1	OUT	
9	PC_2 C2	OUT	
10	PC_3 C3	OUT	
11	PD_0 D0	I/O	Data bus. Sends and receives data to and from LC7210.
12	PD_1 D1	I/O	
13	PD_2 D2	I/O	
14	PD_3 D3	I/O	
15	PE_0 STB	OUT	Strobe output.
16	PE_1 DI/DO	OUT	Specifies the direction of I/O of data bus.
17	PE_2 MUT	OUT	Muting output. +4.5V (reference value) in MUTING mode.
18	PE_3 A/D	OUT	Signal Quality/IF Offset select. Signal Quality at "1" IF Offset at "0"
19	$\overline{\text{RES}}$	IN	Reset input. +5V in normal condition.
20	TEST	—	
21	Vss	—	Power ground.
22	OSC1	IN	Terminals for clock oscillating circuit.
23	OSC2	OUT	
24	PF_0 $\overline{\text{H}}$	OUT	Display, segment output. h segment.
25	PF_1 $\overline{\text{G}}$	OUT	g segment.
26	PF_2 $\overline{\text{F}}$	OUT	f segment.
27	PF_3 $\overline{\text{E}}$	OUT	e segment.
28	PG_0 D	OUT	d segment.
29	PG_1 C	OUT	c segment.
30	PG_2 B	OUT	b segment.
31	PG_3 A	OUT	a segment.
32	PH_0 TA	OUT	Display, digit output
33	PH_1 TB	OUT	
34	PH_2 TC	OUT	
35	PH_3 Mute	OUT	Meter Mute Control
36	PI_0 DX	OUT	DX Mode Control
37	PI_1 MONO	OUT	Mono Mode Control
38	$\overline{\text{HOLD}}$	IN	Hold mode demand input terminal.
39	$\overline{\text{INT}}$	—	$\overline{\text{INTVAL}}$
40	Vdd	—	Power source +5V.
41	PA_0 $\overline{\text{U}}$	IN	Destination symbol. (42 pin / 41 pin: 0 → J, 1 → U; 1 → G, 1 → W)
42	PA_1 $\overline{\text{G}}$	IN	

- **Block Diagram of Microcomputer Peripheral Circuit**



※Marked

	R	U,C	A	G	B
J421	OPEN	SHORT	OPEN	OPEN	OPEN
J431	OPEN	OPEN	SHORT	SHORT	SHORT

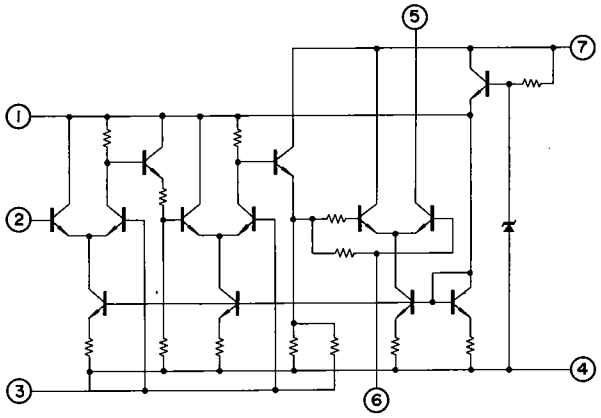
• IC306: A.V Controller V1.0 696 (LC6505C-696)

1-chip type 4-bit microcomputer witch incorporates 1024 x 6 bit ROM (for programming) and 64 x 4 bit RAM (for data memory)

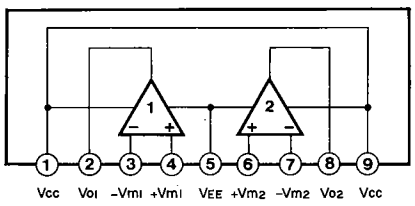
Terminal No.	Description	I/O	Function
1	PA_2	IN	INPUT port $A_0 \sim A_3$ Input by 4 bit and decision by 1 bit for branch are possible. Also used for HALT mode cancel request input.
2	PA_3		
3	PB_0	IN	INPUT port $B_0 \sim B_3$ Input by 4 bit and decision by 1 bit for branch are possible.
4	PB_1		
5	PB_2		
6	PB_3		
7	PC_0	IN/ OUT	IN/OUT common port $C_0 \sim C_3$ When INPUT, input by 4 bit and decision by 1 bit for branch are possible. When OUTPUT, output by 4 bit and set or reset by 1 bit are possible.
8	PC_1		
9	PC_2		
10	PC_3		
11	PC_0	IN/ OUT	IN/OUT common port $D_0 \sim D_3$ When INPUT, input by 4 bit and decision by 1 bit for branch are possible. When OUTPUT, output by 4 bit and set or reset by 1 bit are possible.
12	PD_1		
13	PD_2		
14	PD_3		
15	PE_0	OUT	OUTPUT port $E_0 \sim E_3$ Output by 4 bit and set or reset by 1 bit are possible. Input of output latch content by 4 bit and decision of output latch by 1 bit for branch are possible.
16	PE_1		
17	PE_2		
18	PE_3		
19	$\overline{RES}$	IN	Reset input terminal
20	TEST	IN	LSI test terminal usually connected to Vss (0V).
21	Vss	–	Connected to 0V of power supply.
22	OSC 1	IN	Used by supplying external clock. Also used with OSC2 terminal and C.R. ceramic oscillator when using internal clock oscillation.
23	OSC 2	OUT	Attached to oscillatory circuit for internal clock oscillation.
24	PF_0	OUT	OUTPUT port $F_0 \sim F_3$ Output by 4 bit and set or reset by 1 bit are possible. Input of output latch content by 4 bit and decision of output latch by 1 bit for branch are possible.
25	PF_1		
26	PF_2		
27	PF_3		
28	PG_0	OUT	OUTPUT port $G_0 \sim G_3$ Output by 4 bit and set or reset by 1 bit are possible. Input of output latch content by 4 bit and decision of output latch by 1 bit for branch are possible.
29	PG_1		
30	PG_2		
31	PG_3		
32	PH_0	OUT	OUTPUT port $H_0 \sim H_3$ Output by 4 bit and set or reset by 1 bit are possible. Input to output latch content by 4 bit and decision of output latch by 1 bit for branch are possible.
33	PH_1		
34	PH_2		
35	PH_3		
36	PI_0	OUT	OUTPUT port I_0, I_1 Output by 2 bit and set or reset by 1 bit are possible. Input of output latch content by 2 bit and decision of output latch by 1 bit for branch are possible.
37	PI_1		
38	$\overline{HOLD}$	IN	HOLD mode request input terminal
39	$\overline{INT}$	IN	Interrupt request input terminal
40	V_{DD}	IN	Power supply terminal usually connected to +5V terminal.
41	PA_0	IN	INPUT port $A_0 \sim A_3$ Input by 4 bit and decision by 1 bit branch are possible. Also used for HALT mode cancel request input.
42	PA_1		

■IC BLOCK

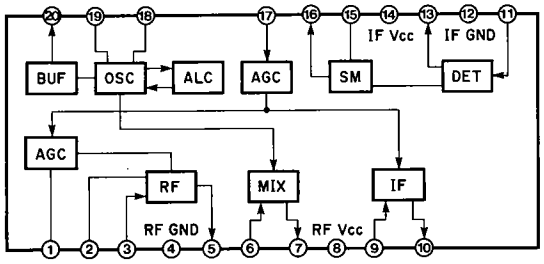
IC101, 102: μPC577H (E, F)



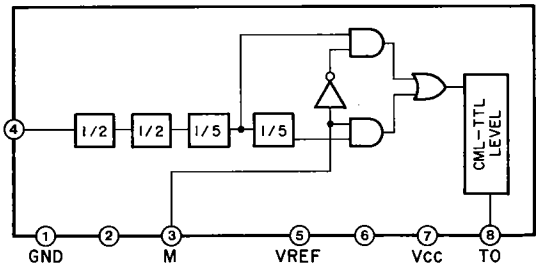
IC103: AN6551, NJM4558S or BA715
IC110: NJM4560S or BA4561



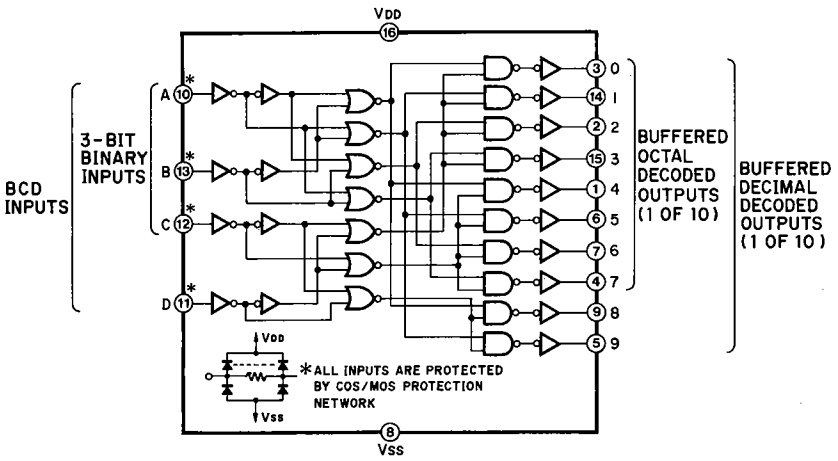
IC105: LA1245



IC106: M54459L



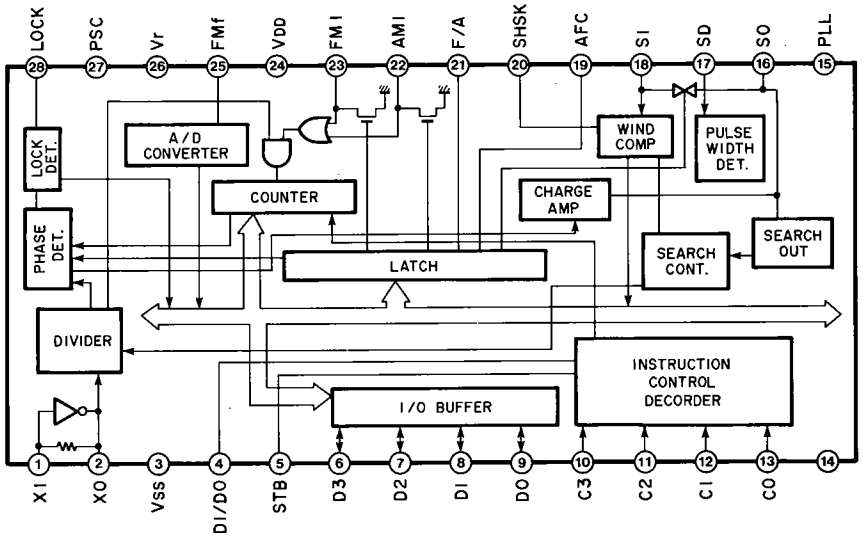
IC107: TC4028BP or BU4028B



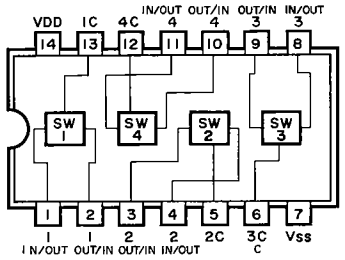
Data Table

D	C	B	A	0	1	2	3	4	5	6	7	8	9
0	0	0	0	1	0	0	0	0	0	0	0	0	0
0	0	0	1	0	1	0	0	0	0	0	0	0	0
0	0	1	0	0	0	1	0	0	0	0	0	0	0
0	0	1	1	0	0	0	1	0	0	0	0	0	0
0	1	0	0	0	0	0	0	1	0	0	0	0	0
0	1	0	0	0	0	0	0	0	1	0	0	0	0
0	1	1	0	0	0	0	0	0	0	1	0	0	0
0	1	1	1	0	0	0	0	0	0	0	1	0	0
1	0	0	0	0	0	0	0	0	0	0	0	1	0
1	0	0	1	0	0	0	0	0	0	0	0	0	1
1	0	1	0	0	0	0	0	0	0	0	0	0	0
1	0	1	1	0	0	0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	0
1	1	0	1	0	0	0	0	0	0	0	0	0	0
1	1	1	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	0	0	0	0	0	0	0	0	0	0

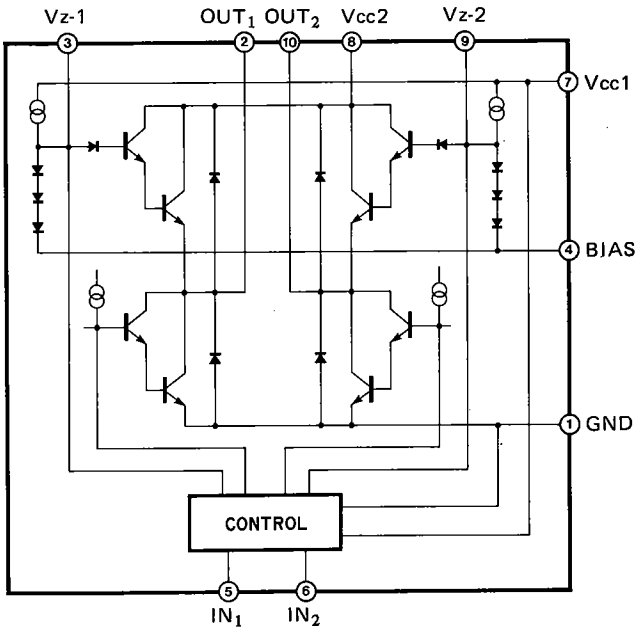
IC109: LC7210



IC301, 302: μPD4066 or LC4066B
IC303: LC4966

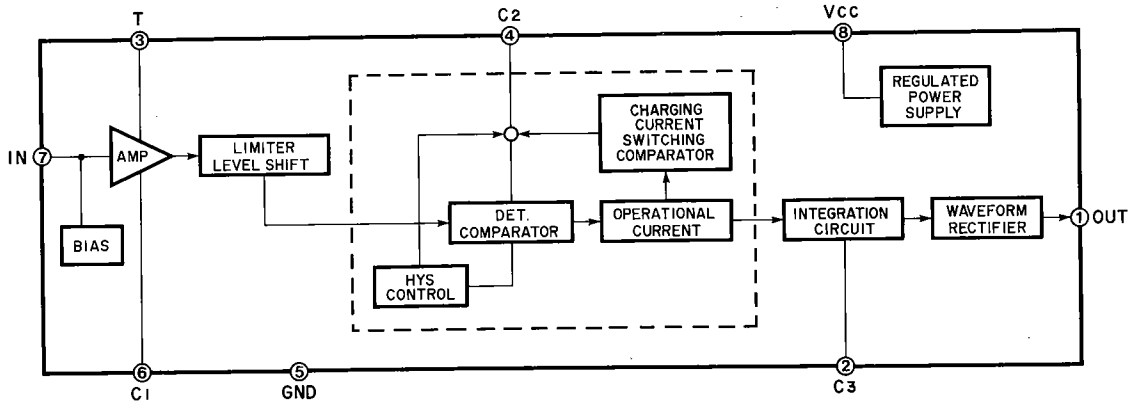


IC304: BA6229

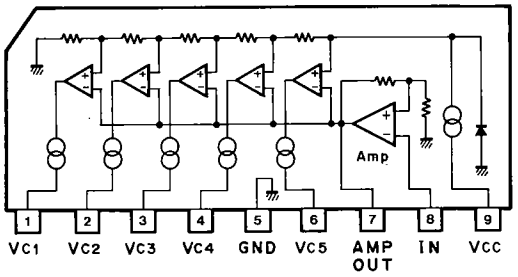


INPUT		OUTPUT		VOLUME
IN1 (5 pin)	IN2 (6 pin)	OUT1 (2 pin)	OUT2 10 pin)	
L	L	OPEN	OPEN	STOP
H	L	H	L	UP
L	H	L	H	DOWN
H	H	L	L	BRAKE

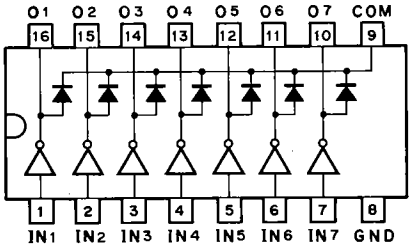
IC305: BA6340



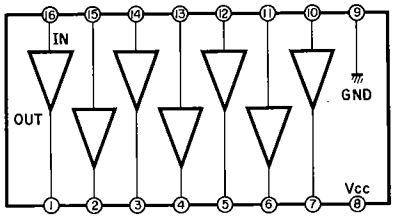
IC401: LB1413



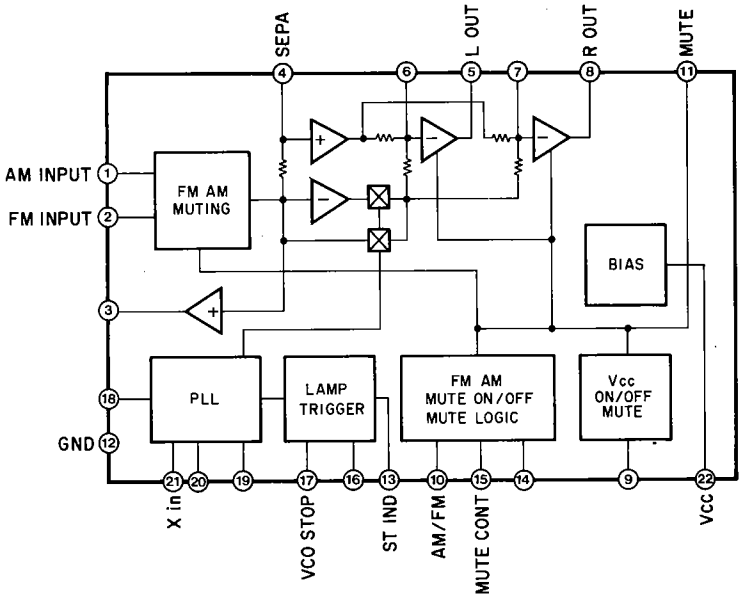
IC402: LB1234



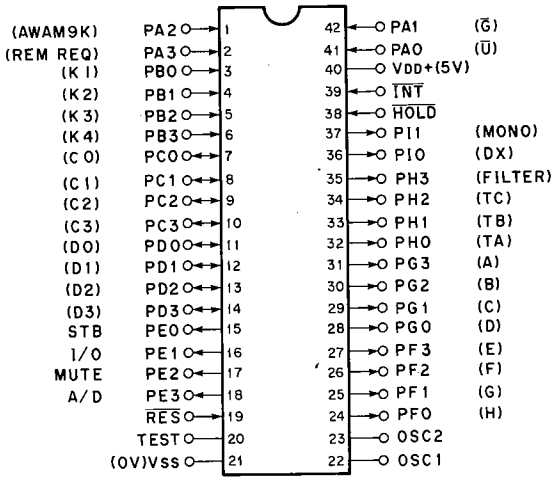
IC403: BA618

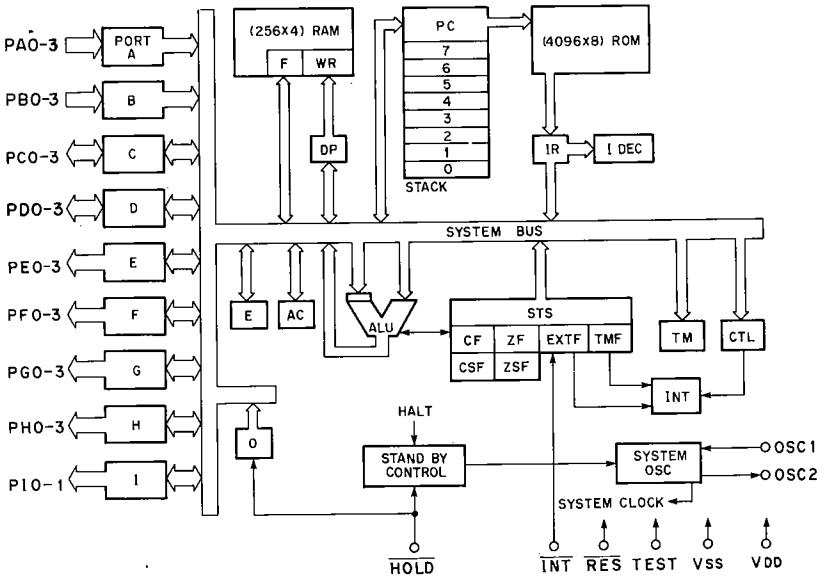


IC104: LA3400

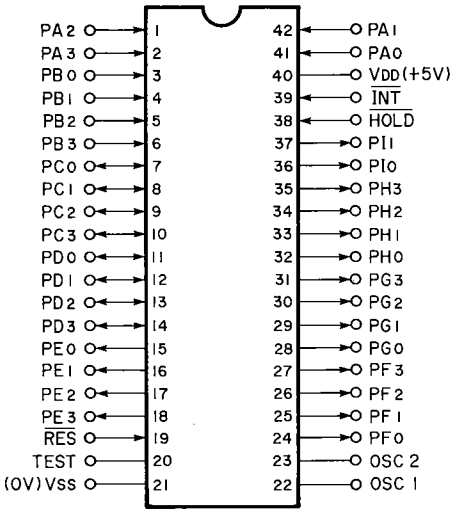


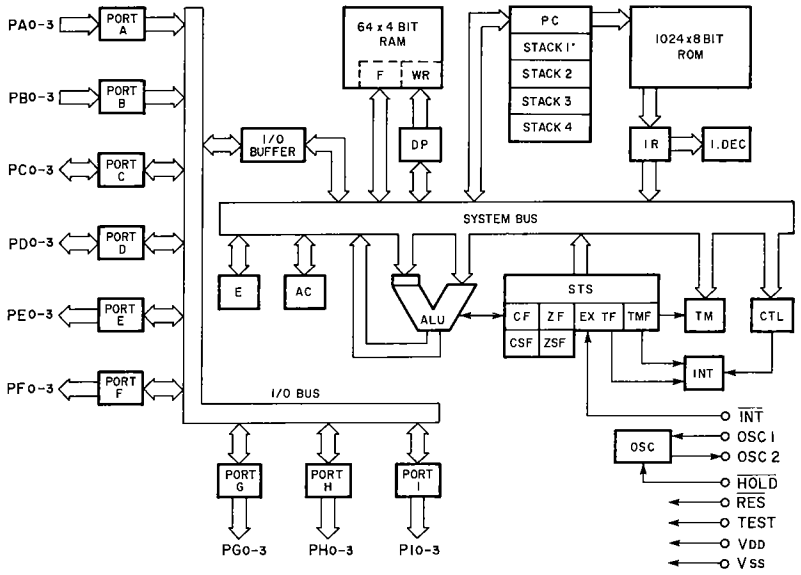
IC108: LC6510C-695





IC306: LC6505C-696



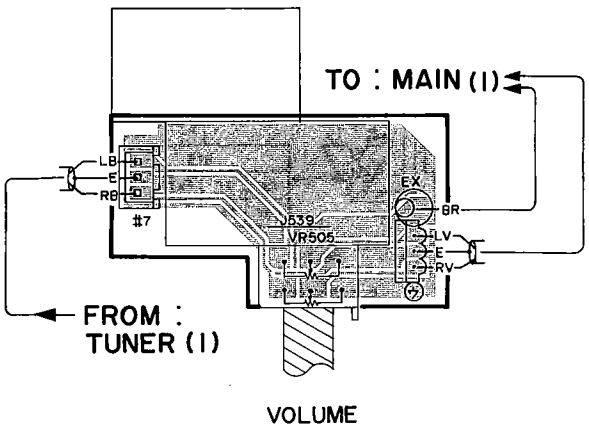


■ PRINTED CIRCUIT BOARD (Pattern side)

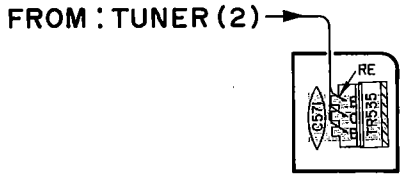
Note: * marked

	R	U	C	A, B	G
C545 ~548	OPEN	OPEN	OPEN	OPEN	4700P
C549 ~554	OPEN	OPEN	OPEN	OPEN	0.022
C565	0.01/500	0.01/500	0.01/500	0.01/500	OPEN
C563, 564	OPEN	OPEN	OPEN	OPEN	0.047/100
R575, 576	OPEN	OPEN	OPEN	OPEN	4.7
R603	OPEN	2.2M ½P	2.2M ½P	OPEN	OPEN
J538	OPEN	SHORT	SHORT	OPEN	OPEN
J661	OPEN	OPEN	OPEN	OPEN	SHORT
D516	4D4B41	4D4B41	D5FB20	4D4B41	4D4B41
F501	T7.0A 250V	5A 125V	5A 125V	T3.15A 250V	T3.15A 250V
F502	T3.5A 250V	OPEN	OPEN	OPEN	OPEN

Main Circuit Board (5)



Main Circuit Board (7)



■ PRINTED CIRCUIT BOARD (Pattern side)

U. S. A. & Canadian models

Note)
文字面 : Component side

SPEAKERS
+ Ⓡ − − Ⓛ +

Main Circuit Board (1)

Main Circuit Board (2)

TO : TUNER (2)

Main Circuit Board (4)

TO : TUNER (1)
FROM : MAIN (5)
FROM : TUNER (2)

TREBLE BASS TONE BYPASS OFF / ON MODE STEREO / MONO SPEAKERS B OFF / ON, A OFF / ON PHONES

Main Circuit Board (8)

UNSWITCHED
SWITCHED
AC OUTLETS

Main Circuit Board (3)

POWER TRANSFORMER
GA6900 … U
GA6901 … C

Main Circuit Board (6)

POWER SW

General model

UNSWITCHED
SWITCHED
AC OUTLETS
POWER TRANSFORMER
VOLTAGE SELECTOR
GA6903

POWER SW

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

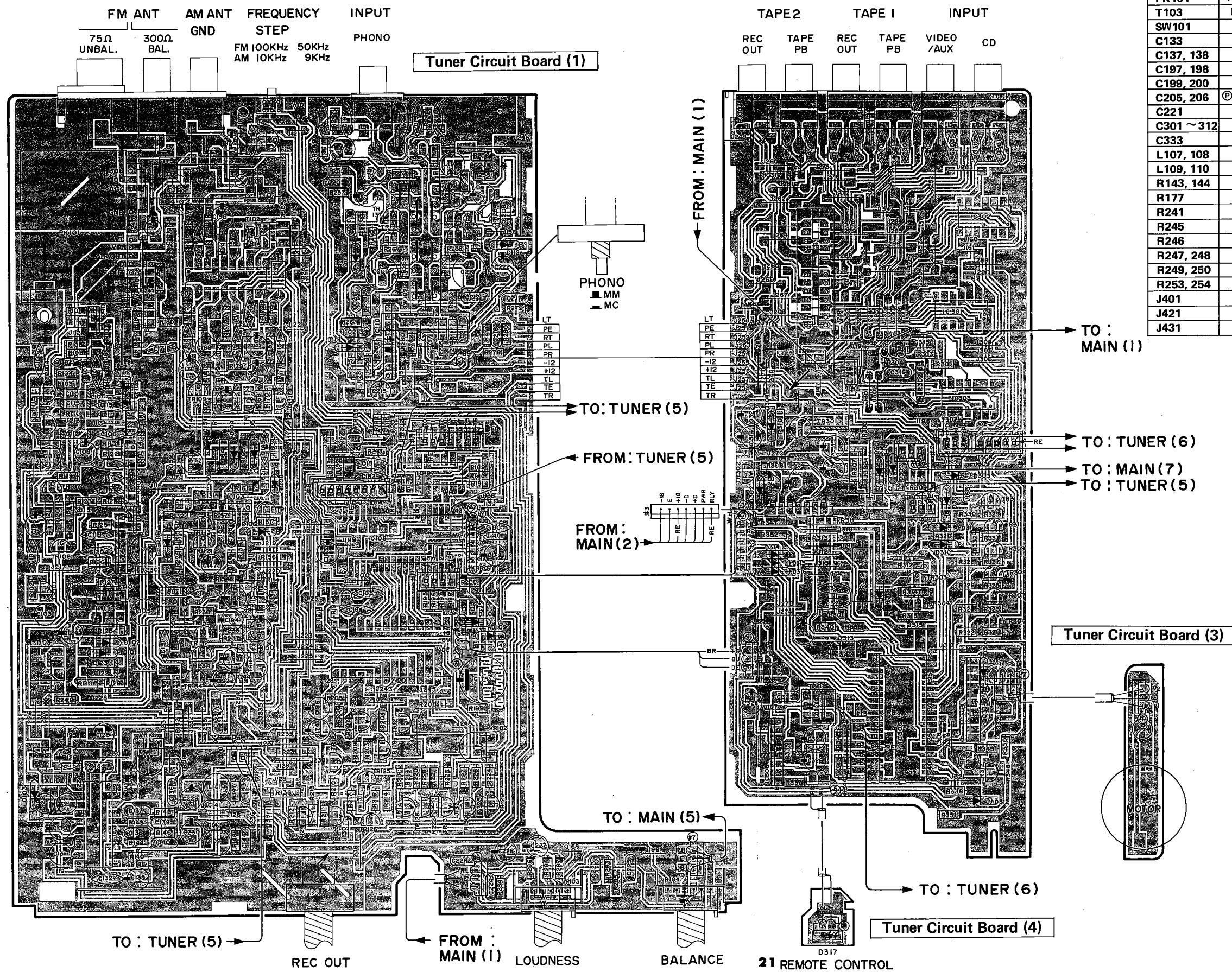
Australian, European & British models

EXCEPT B-MODEL
ROWER TRANSFORMER
GA6904 … A, B
GA6902 … G

POWER SW

■ PRINTED CIRCUIT BOARD (Pattern side)

Note)
文字面 : Component side　　: Cylindrical Ceramic Capacitor

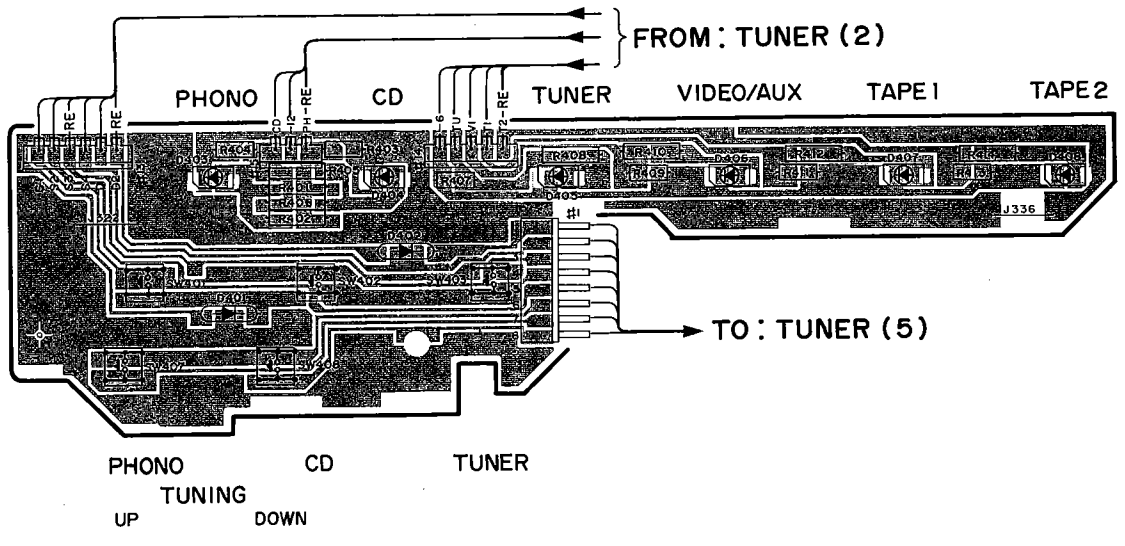


Note: * marked

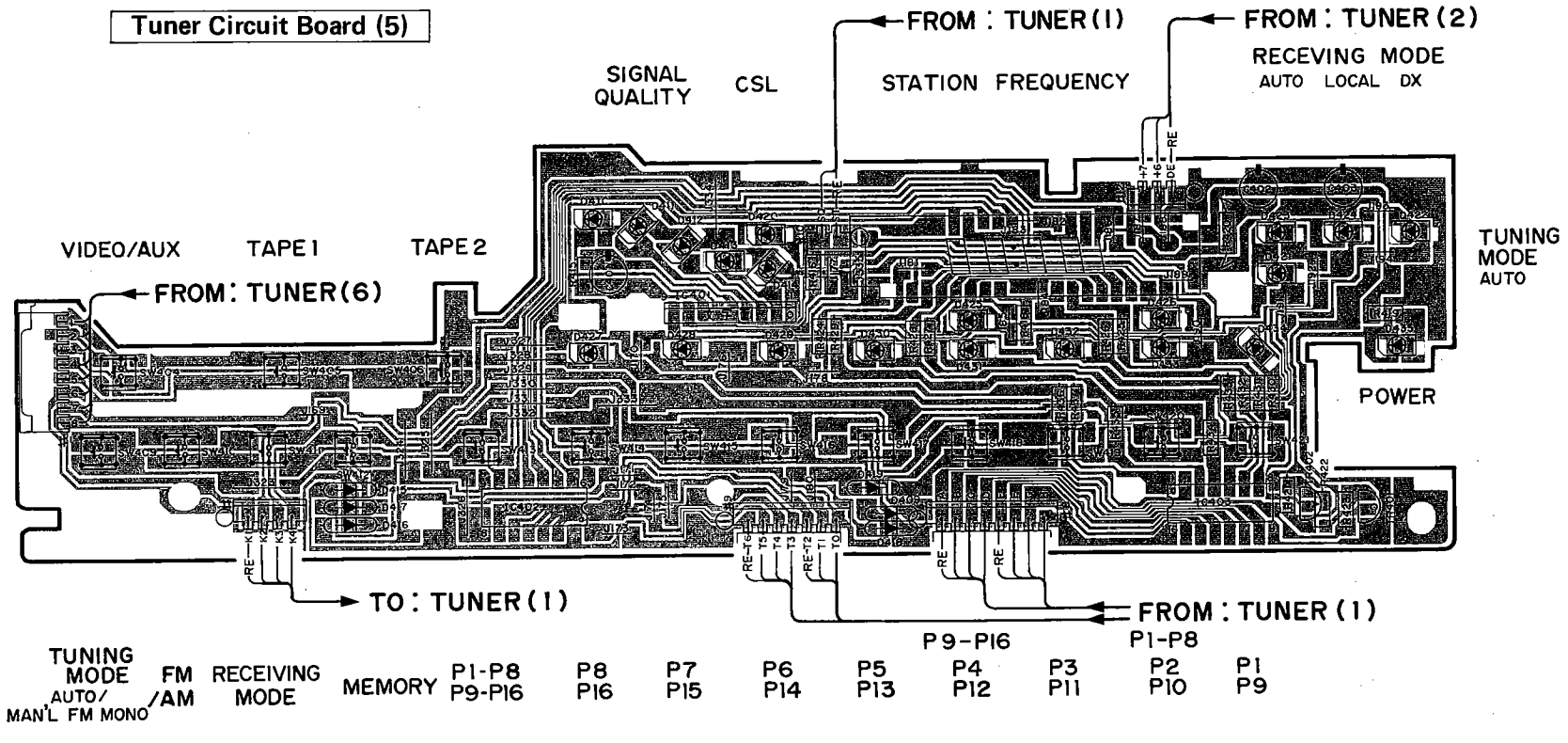
	R	U, C	A, B	G
PK101	PA00081	PA00081	PA00081	PA00085
T103	Non Set	Non Set	Non Set	Set
SW101	Set	Non Set	Non Set	Non Set
C133	0.047	0.047	0.047	0.022
C137, 138	1500P	1500P	1000P	Ⓟ470P/100
C197, 198	OPEN	OPEN	OPEN	100P
C199, 200	OPEN	OPEN	OPEN	47P
C205, 206	Ⓟ220P/100	Ⓟ220P/100	Ⓟ220P/100	Ⓟ100P/100
C221	0.01	0.01	0.01	OPEN
C301～312	OPEN	OPEN	OPEN	330P
C333	OPEN	OPEN	OPEN	0.1/25
L107, 108	OPEN	OPEN	OPEN	15μH
L109, 110	OPEN	OPEN	OPEN	220μH
R143, 144	47K	47K	47K	100K
R177	12K	12K	12K	47K
R241	SHORT	SHORT	SHORT	100K
R245	OPEN	OPEN	OPEN	1M
R246	SHORT	SHORT	SHORT	4.7K
R247, 248	10	10	10	33
R249, 250	SHORT	SHORT	SHORT	470
R253, 254	33	33	33	2.2K
J401	SHORT	SHORT	SHORT	OPEN
J421	OPEN	SHORT	OPEN	OPEN
J431	OPEN	OPEN	SHORT	SHORT

■PRINTED CIRCUIT BOARD (Pattern side)

Tuner Circuit Board (6)

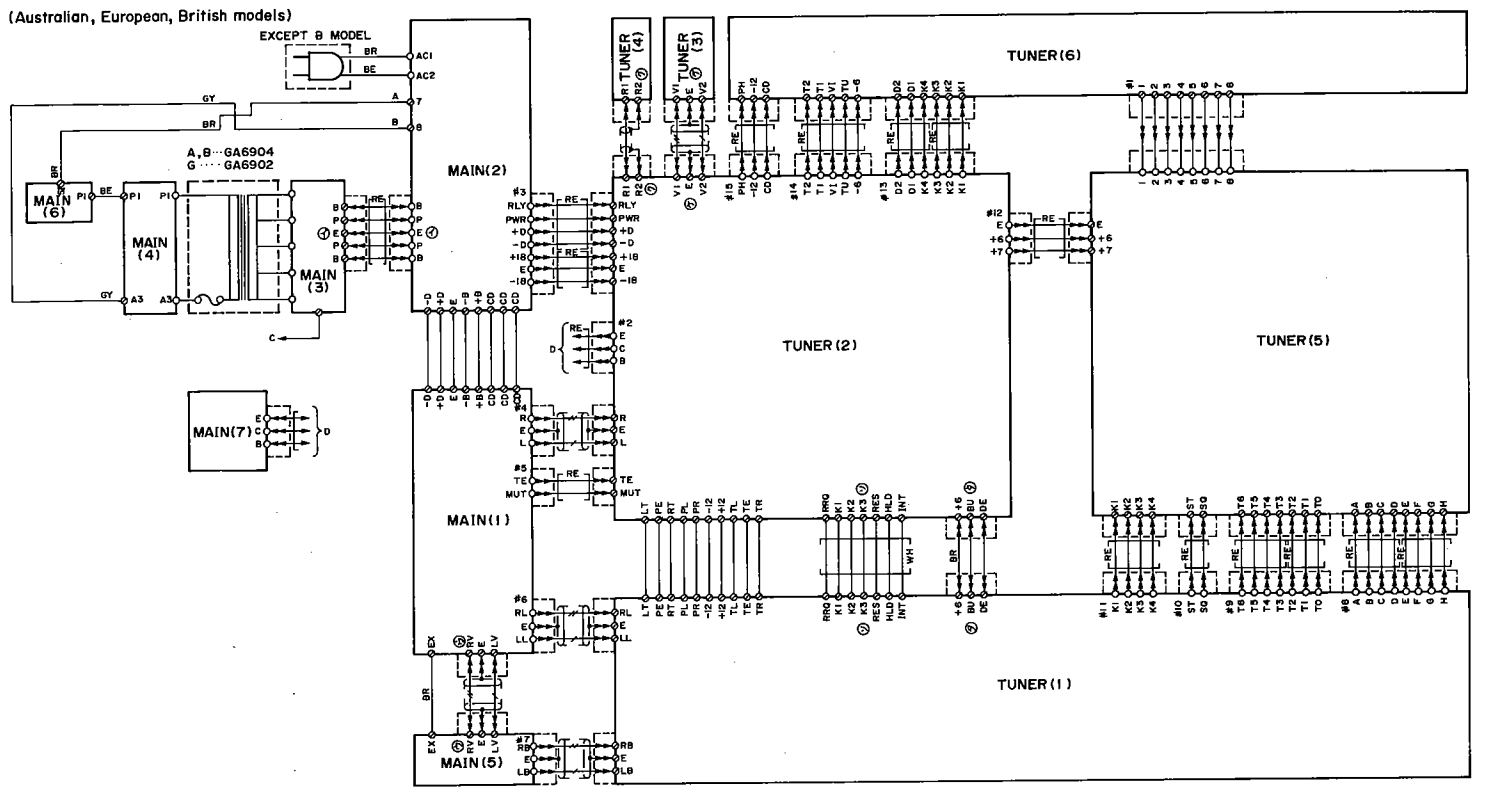


Tuner Circuit Board (5)

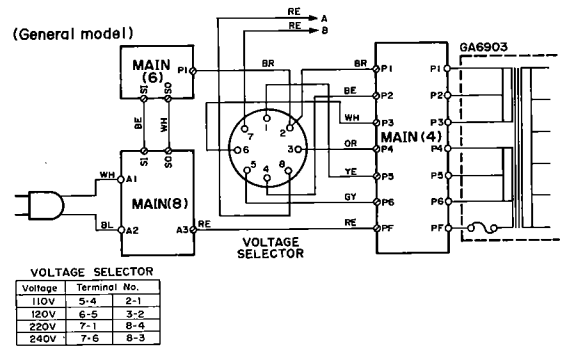


■WIRING

(Australian, European, British models)



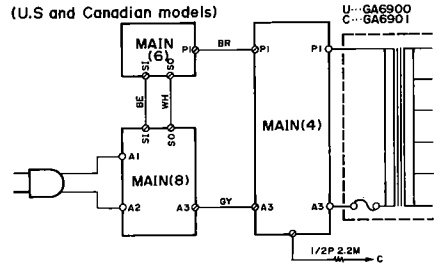
(General model)



VOLTAGE SELECTOR

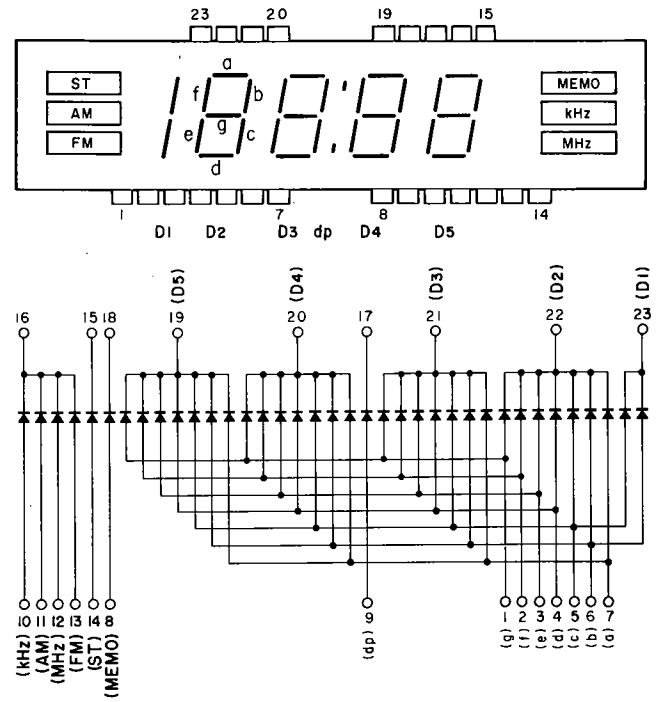
Voltage	Terminal No.	
110V	5-4	2-1
120V	6-5	3-2
220V	7-1	8-4
240V	7-6	8-3

(U.S and Canadian models)



■CIRCUIT DATA

• D436 (Frequency Display)



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

• MATRIX OF DISPLAY (D436, D420 ~ 434)

IC108 / IC107	A [31 Pin]	B [30 Pin]	C [29 Pin]	D [28 Pin]	E [27 Pin]	F [26 Pin]	G [25 Pin]	H [24 Pin]
T6 [4 Pin]	D5 a	D5 b	D5 c	D5 d	D5 e	D5 f	D5 g	
T5 [7 Pin]	D4 a	D4 b	D4 c	D4 d	D4 e	D4 f	D4 g	
T4 [1 Pin]	D3 a	D3 b	D3 c	D3 d	D3 e	D3 f	D3 g	FM DOT
T3 [1 Pin]	D2 a	D2 b	D2 c	D2 d	D2 e	D2 f	D2 g	P9—16 (D425)
T2 [15 Pin]	LOCAL (D424)	D1 b	D1 c	AUTO DX (D423)	DX (D422)	AUTO (D421)		P1—8 (D426)
T1 [2 Pin]	P-1/9 (D434)	P-2/10 (D433)	P-3/11 (D432)	P-4/12 (D431)	P-5/13 (D430)	P6/14 (D429)	P-7/15 (D428)	P8/16 (D427)
T0 [14 Pin]	MEMO	CSL (D420)	kHz	AM	MHz	FM		

• MATRIX OF INPUT KEY

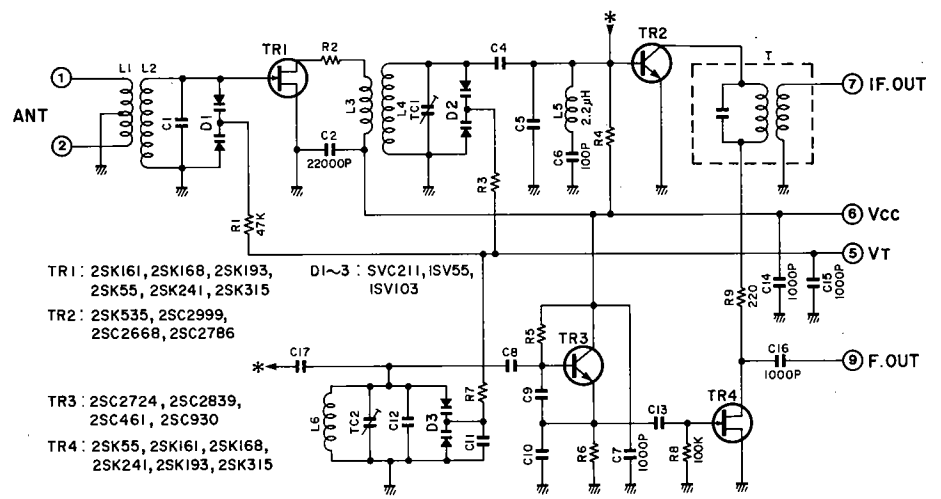
IC107 / IC108	T1 [2 Pin]	T2 [15 Pin]	T3 [1 Pin]	T4 [6 Pin]	D5 [7 Pin]	T6 [4 Pin]
K1 [3 Pin]	P1/9	P5/13		UP	P1-8/ P9-16	
K2 [4 Pin]	P2/10	P6/14		DOWN	FM/AM	
K3 [5 Pin]	P3/11	P7/15	AUTO/ MAN'L		RECEIVING MOD	
K4 [6 Pin]	P4/12	P8/.6	MEMORY			TEST (OFFSET)

• IC107 DATA TABLE

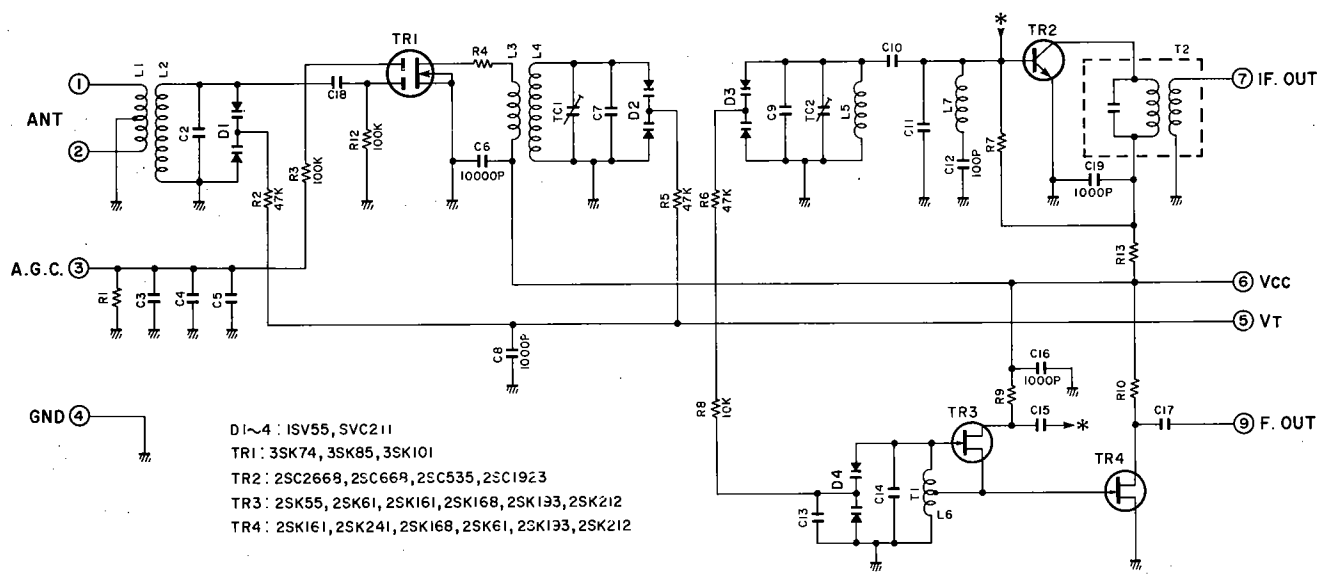
INPUT			OUTPUT						
TC [12 Pin]	TB [13 Pin]	TA [10 Pin]	T0 [14 Pin]	T1 [2 Pin]	T2 [15 Pin]	T3 [1 Pin]	T4 [6 Pin]	T5 [7 Pin]	T6 [4 Pin]
0	0	0	0	0	0	0	0	0	0
0	0	1	1	0	0	0	0	0	0
0	1	0	0	1	0	0	0	0	0
0	1	1	0	0	1	0	0	0	0
1	0	0	0	0	0	1	0	0	0
1	0	1	0	0	0	0	1	0	0
1	1	0	0	0	0	0	0	1	0
1	1	1	0	0	0	0	0	0	1

• FRONT END PACK (PK101)

R, U, C, A, B models (PA00081)



G model (PA00085)



■ SCHEMATIC DIAGRAM

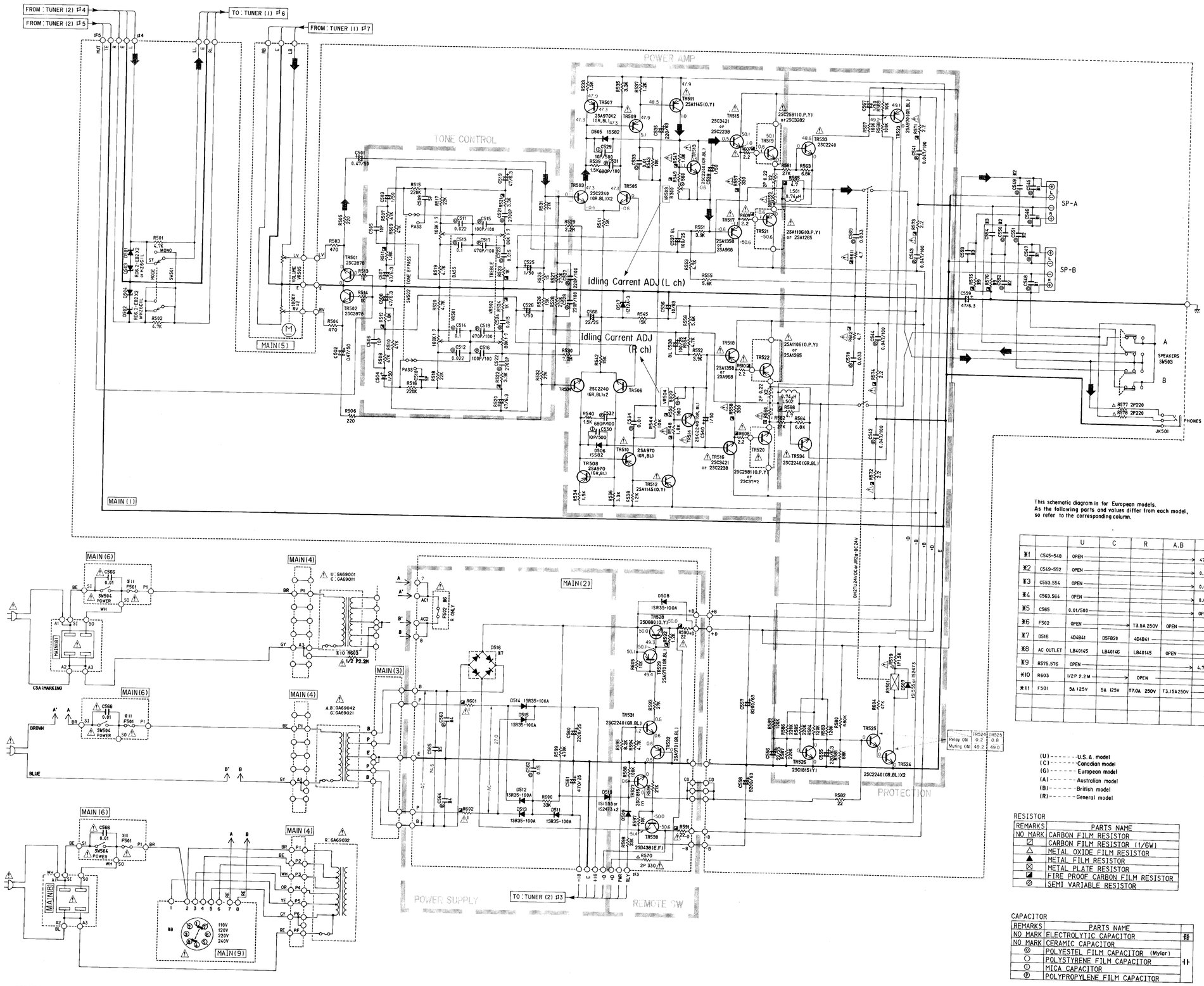
- Tuner Section

	U,C	R	A,B	C
M1	0.047	←	←	0.022
M2	@ 1500P	←	@ 1000P	@470P/100
M3	OPEN	←	←	100P
M4	OPEN	←	←	47P
M5	220P/100	←	←	100P/100
M7	OPEN	←	←	330P
M8	OPEN	←	←	0.1/25
M9	OPEN	←	←	15μH
M10	OPEN	←	←	220μH
M11	OPEN	←	←	0E20053
M12	SHORT	←	←	100K
M13	OPEN	←	←	1M
M14	SHORT	←	←	4.7K
M15	47K	←	←	100K
M16	12K	←	←	47K
M17	10	←	←	33
M18	SHORT	←	←	470
M19	33	←	←	2.2K
M20	PA00081	←	←	PA00085
M21	OPEN	K440169	OPEN	←
M22	SHORT	←	←	OPEN
M23	OPEN	←	SHORT	←
M24	SHORT	OPEN	←	←
M25	0.01	←	←	OPEN
M26	OPEN	←	←	330P

- *All voltages measured with a 10MΩ/VDC electric volt meter, under no-signal conditon.*
- *The voltages are measured at FM reception mode. The voltages ( ) are at detuned mode, but the voltages at TR109 ~ TR111 and IC105 are at AM reception model.*
- *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



This schematic diagram is for European models.
As the following parts and values differ from each model, so refer to the corresponding column.

		U	C	R	A,B	G
※1	C545-548	OPEN				4700P
※2	C549-552	OPEN				0.022
※3	C553.554	OPEN				0.022
※4	C563.564	OPEN				0.047/100
※5	C565	0.01/500				OPEN
※6	F502	OPEN		T3.5A 250V	OPEN	
※7	D516	4D4B41	D5FB20	4D4B41		
※8	AC OUTLET	LB40145	LB40146	LB40145	OPEN	
※9	R575.576	OPEN				4.7
※10	R603	I/2P 2.2M		OPEN		
※11	F501	5A 125V	5A 125V	T7.0A 250V	T3.15A250V	

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

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
⊘	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

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODS AND ICS.

LC7210 · LC6510C-695 LC6505C-696 · BA6229 · LA3400 · LA1245 · μPD4066 LC4066B LC4966 · LB1234 TC4028BP BU4028B · BA618 · LB1413 NJM4560S BA4561 · μPC577H (E, F) · AN6551 NJM4558S BA715 · M54459L · BA6340

2SD880 (O, Y)
2SD1437 (E, F)
2SA968
2SC2238
2SA1358
2SC3421

2SA1106 (O, P, Y)
2SC2581 (O, P, Y)
2SA1265
2SC3182

2SA970 (GR, BL)
2SA1145 (O, Y)
2SC1815 (Y)
2SC2240 (GR, BL)
2SC2878
2SD1275
2SD655 (E, F)
2SD880 (O, Y)
2SD1437 (E, F)
2SD438 (E, F)

2SA933S (Q, R)
2SA1115 (E, F)
2SA1310 (R, S, T)
2SA934
2SB544
2SC1923
2SC1740S (S, R)
2SC2603 (E, F)
2SC3312 (R, S, T)
2SC2060

2SD400
2SD1302
2SD3792

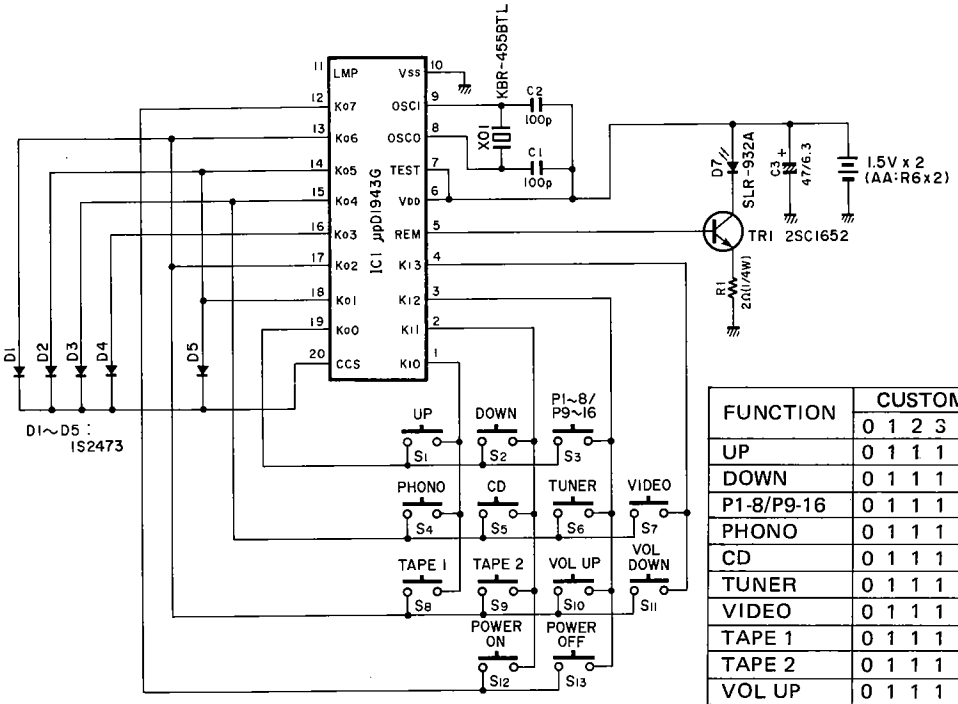
1S2473 · HZ7B · 1S1555 · HZ6C1L · RD6.2EB2 · HZ12A3 · HZ9C3 · MA1047M · 1SS82 · 1SR35-100A · MA1068H

4D4B41 D5FB20 · TSP703 PH302 PN313

- *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.*
- *Shcematic Diagram is subject to change without notice.*

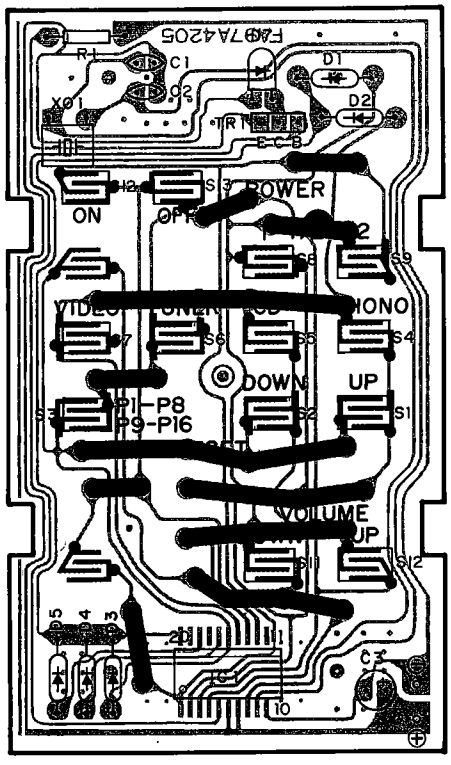
RS-7
REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM

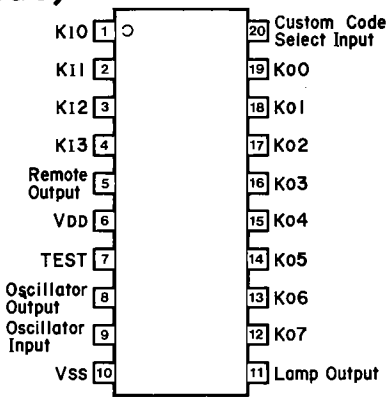


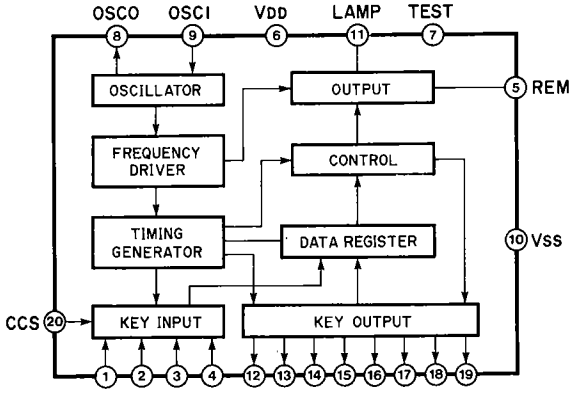
FUNCTION	CUSTOM CODE								DATA CODE							
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
UP	0	1	1	1	1	0	1	0	0	0	0	0	1	0	0	0
DOWN	0	1	1	1	1	0	1	0	1	0	0	0	1	0	0	0
P1-8/P9-16	0	1	1	1	1	0	1	0	0	1	0	0	1	0	0	0
PHONO	0	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
CD	0	1	1	1	1	0	1	0	1	0	1	0	1	0	0	0
TUNER	0	1	1	1	1	0	1	0	0	1	1	0	1	0	0	0
VIDEO	0	1	1	1	1	0	1	0	1	1	1	0	1	0	0	0
TAPE 1	0	1	1	1	1	0	1	0	0	0	0	1	1	0	0	0
TAPE 2	0	1	1	1	1	0	1	0	1	0	0	1	1	0	0	0
VOL UP	0	1	1	1	1	0	1	0	0	1	0	1	1	0	0	0
VOL DOWN	0	1	1	1	1	0	1	0	1	1	0	1	1	0	0	0
POWER ON	0	1	1	1	1	0	1	0	0	0	1	1	1	0	0	0
POWER OFF	0	1	1	1	1	0	1	0	1	0	1	1	1	0	0	0

■ PRINTED CIRCUIT BOARD (Pattern side)



IC1: μPD1943G





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 1/6W. There is no discription about them in this parts list. Use the "Part No." HF85○○○○ or equivalent.

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
※		NA 08 74 40	*Main Circuit Board*		メインシート			R		
※		NA 08 74 60	〃		〃			U		
※		NA 08 74 80	〃		〃			C		
※		NA 08 75 00	〃		〃			A,B		
※		NA 08 78 50	〃		〃			G		
		FG 21 05 00	Ceramic Cap.	5pF 50V	セラコン	C509,510				
		FG 21 11 00	〃	10pF 50V	〃	C505,506				
		FG 21 31 00	〃	1000pF 50V	〃	C571				
		FG 24 42 20	〃	0.022μF 50V	〃	C553,554		G		
		FU 35 11 00	Mica Cap.	10pF 500V	マイカコン	C529,530				
		FH 23 41 00	Ceramic Cap.	0.01μF 500V	セラコン	C565		R,U,A,C,B		
		Fi 41 41 00	〃	0.01μF	〃	C566				⚠
		FZ 00 44 20	Polypropylene Film Cap.	0.047μF 100V	ポリプロコン	C541~544				
		FZ 00 44 20	〃	0.047μF 100V	〃	C563,564		G		
※		FZ 00 76 20	Electrolytic Cap.	8200μF 63V	ブロックケミコン	C557,558				
		FZ 00 61 40	〃	100μF 25V	ブラックゲートコン	C537,538				
		UA 25 32 70	Mylar Cap.	2700pF 50V	マイラーコン	C521,522				
		UA 25 34 70	〃	4700pF 50V	〃	C545~548		G		
		UA 25 41 00	〃	0.01μF 50V	〃	C533,534				
		UA 25 41 50	〃	0.015μF 50V	〃	C523,524				
		UA 25 42 20	〃	0.022μF 50V	〃	C511,512				
		UA 25 42 20	〃	0.022μF 50V	〃	C549~552		G		
		UA 25 43 30	〃	0.033μF 50V	〃	C569,570				
		UA 25 51 00	〃	0.1μF 50V	〃	C513,514				
		UA 25 51 50	〃	0.15μF 50V	〃	C562				
		UT 45 21 00	Polypropylene Film Cap.	100pF 100V	ポリプロコン	C515,516				
		UT 45 22 20	〃	220pF 100V	〃	C527,528				
		UT 45 24 70	〃	470pF 100V	〃	C517,518				
		UT 45 26 80	〃	680pF 100V	〃	C531,532				
		UW 91 74 70	Electrolytic Cap.	47μF 6.3V	ケミコン	C507,508,519,520,559				
		UW 81 82 20	〃	220μF 6.3V	〃	C555				
		UW 94 72 20	〃	22μF 25V	〃	C556,568				
		UW 96 54 70	〃	0.47μF 50V	〃	C501,502				
		UJ 16 61 00	〃	1μF 50V	〃	C503,504,525,526,539,540,567				
		UW 97 71 00	〃	10μF 63V	〃	C536				
※		UW 94 84 70	〃	470μF 25V	〃	C561				
		UW 84 92 20	〃	2200μF 25V	〃	C560				
※		FZ 00 76 00	〃	220μF 63V	〃	C535				
		GD 90 06 80	Coil	0.74μH	空芯コイル	L501,502				
		HJ 35 42 20	Carbon Resistor	22Ω 1/4W	カーボン抵抗	R582				
		HJ 35 52 20	〃	220Ω 〃	〃	R505,506				
		HJ 35 54 70	〃	470Ω 〃	〃	R503,504				
		HV 45 55 60	Flame Proof Carbon Resistor	560Ω 〃	不燃化カーボン抵抗	R549,550				
		HJ 35 66 80	Carbon Resistor	6.8kΩ 〃	カーボン抵抗	R563,564				
		HJ 35 61 00	〃	1kΩ 〃	〃	R513,514				
		HJ 35 61 20	〃	1.2kΩ 〃	〃	R537,538				
		HJ 35 61 50	〃	1.5kΩ 〃	〃	R533,534,539,540				
		HJ 35 63 30	〃	3.3kΩ 〃	〃	R535,536				
		HJ 35 63 90	〃	3.9kΩ 〃	〃	R551,552				
		HJ 35 64 70	〃	4.7kΩ 〃	〃	R501,502,519,520,553,554,594				
		HJ 35 65 60	〃	5.6kΩ 〃	〃	R555,556				

※New Parts（新規部品）

	Ref. No.	Part No.	Description	部品名		Remarks	Common Model	Markets	ランク	
		HJ 35 68 20	Carbon Resistor	8.2kΩ 1/4W	カーボン抵抗	R595				
		HJ 35 71 00	〃	10kΩ 〃	〃	R543,544,569,597,605				
		HJ 35 71 50	〃	15kΩ 〃	〃	R525,526,541,542,545				
		HJ 35 72 20	〃	22kΩ 〃	〃	R517,518				
		HJ 35 72 70	〃	27kΩ 〃	〃	R531,532,561,562,593,596				
		HJ 35 73 30	〃	33kΩ 〃	〃	R598,600				
		HJ 35 74 70	〃	47kΩ 〃	〃	R507~510,604				
		HJ 35 76 80	〃	68kΩ 〃	〃	R581				
		HJ 35 81 00	〃	100kΩ 〃	〃	R567,568,588,589				
		HJ 35 81 20	〃	120kΩ 〃	〃	R583,584				
		HJ 35 82 70	〃	270kΩ 〃	〃	R527,528				
		HJ 35 82 20	〃	220kΩ 〃	〃	R515,516,585~587				
		HJ 35 84 70	〃	470kΩ 〃	〃	R599				
		HJ 35 86 80	〃	680kΩ 〃	〃	R580				
		HJ 35 92 20	〃	2.2MΩ 〃	〃	R529,530				
※		HZ 00 51 10	〃	2.2MΩ RD50S	〃	R603		U,C		
		HL 31 61 50	Metal Oxide Film Resistor	1.5kΩ 1W	酸金抵抗	R579				⚠
		HL 32 52 20	〃	220Ω 2W	〃	R577,578				
		HL 72 53 30	〃	330Ω 2W	〃	R570				⚠
		HV 45 31 00	Flame Ploof Carbon Resistor	1Ω ERD25FV	不燃化カーボン抵抗	R601,602				⚠
		HV 45 32 20	〃	2.2Ω 〃	〃	R571~574,607~610				⚠
		HV 45 34 70	〃	4.7Ω 〃	〃	R565,566,611,612				⚠
		HV 45 34 70	〃	4.7Ω 〃	〃	R575,576		G		
		HV 45 61 00	〃	1kΩ 〃	〃	R523,524				
		HV 45 61 20	〃	1.2kΩ 〃	〃	R592				
		HV 45 42 20	〃	22Ω 〃	〃	R590,591				⚠
		HV 45 61 80	〃	1.8kΩ 〃	〃	R511,512,547,548				⚠
		HV 45 53 30	〃	330Ω 〃	〃	R557,558				⚠
		HV 45 63 30	〃	3.3kΩ 〃	〃	R521,522				
		HZ 00 36 80	Dual Metal Plate Resistor	0.22×2 2W	デュアル金属板抵抗	R559,560				⚠
※		HS 31 26 50	Potentiometer with Motor	100KY×2	モーター付可変抵抗器	VR505 VOLUME				
※		HS 41 26 10	Potentiometer	100Kトク×2	可変抵抗器	VR501 BASS				
※		HS 41 26 20	〃	80Kトク×2	〃	VR502 TREBLE				
		HT 37 03 20	Pre-Set Potentiometer	B300Ω	半固定抵抗	VR503,504				
		iA 09 70 00	Transistor	2SA970(GR,BL)	トランジスタ	TR507~510,523,529,532				⚠
		iA 11 45 00	〃	2SA1145(O,Y)	〃	TR511,512				⚠
		iC 18 15 20	〃	2SC1815 (Y)	〃	TR526,527				
		iC 22 40 00	〃	2SC2240(GR,BL)	〃	TR503~506,513,514,524,525,531,533,534				⚠
		iC 28 78 00	〃	2SC2878	〃	TR501,502				
		iD 12 75 10	〃	2SD1275	〃	TR535				
		iD 08 80 00	〃	2SD880 (O,Y)	〃	TR528 } Inter-changeable				
※		iD 14 37 00	〃	2SD1437 (E,F)	〃	〃 } Inter-changeable				
		iD 04 38 00	〃	2SD438 (E,F)	〃	TR530				
		iA 09 68 00	〃	2SA968	〃	TR517,518				⚠
		iC 22 38 00	〃	2SC2238	〃	TR515,516				⚠
		iF 00 06 70	Diode	1S2473	ダイオード	D507,509,510 } Inter-changeable				
		iF 00 00 40	〃	1S1555	〃	〃 } Inter-changeable				
		iF 00 14 00	〃	1SS82	〃	D505,506				
※		iX 60 42 90	Zener Diode	HZ12A3	ツェナーダイオード	D517				

※New Parts（新規部品）

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク	
		iF 00 41 60	Zener Diode	HZ6C1L	ツェナーダイオード	D501~504 Inter-changeable			
		iF 00 14 70	〃	RD6.2EB2	〃	〃 Inter-changeable			
		iH 00 08 70	Diode Bridge	4D4B41	ダイオードブリッジ	D516		R,U,A,G,B	
		iH 00 11 30	〃	D5FB20	〃	〃		C	
		iH 00 14 30	Diode	1SR35-100A	ダイオード	D508,511~515			
※		KA 80 52 10	Push Switch		プッシュスイッチ	SW503 SPEAKERS			
		KA 80 45 00	Power Switch	TV-3	電源スイッチ	SW504 POWER		A,G,B	⚠
		KA 80 35 20	〃	SDLB1P017	〃	〃 〃		R,U,C	⚠
※		KA 80 51 10	Push Switch	SUN2-2NS	プッシュスイッチ	SW501,502 MODE, TONE PASS			
		KB 00 13 00	Fuse	T7.0A 250V	ヒューズ	F501		R	⚠
		KB 00 07 60	〃	T3.15A 250V	〃	〃		A,G,B	⚠
		KB 00 14 20	〃	5A 125V	〃	〃		U,C	⚠
		KB 00 03 70	〃	T3.5A 250V	〃	F502		R	⚠
		KC 00 19 40	Relay	DH2TU24VDC	リレー	RY501 Inter-changeable			
		KC 00 20 00	〃	JR2a-DC24V	〃	〃 Inter-changeable			
		LB 30 13 70	Phone Jack	Black	ホーンジャック	JK501			
		LB 20 14 80	Voltage Selector		電圧切換器			R	
		LA 00 38 70	Lapping Terminal	P=10 2P WTM -Type	WTM型ラッピング端子板				
※		LA 00 54 60	Speaker Terminal	8P	スピーカーターミナル				
		LB 20 18 80	Pin,Fuse Holder	PC-FHI	ヒューズホルダーピン				
※		LB 40 14 50	AC Outlet	M7025-C	ACアウトレット			R,U	⚠
※		LB 40 14 60	〃	M7031-C	〃			C	⚠
		BB 06 83 70	Grond Metal		アース金具				
		CB 09 12 90	Holder,P.C.B		基板ホルダー				
※		AA 62 61 00	Shield Plate		シールド板				
		CB 06 92 50	Binding Tie	BK-1	インシュロックタイ				
※		***NA 08 75 20***	***Tuner Circuit Board***		チューナーシート			R	
※		***NA 08 75 30***	〃		〃			U,C	
※		***NA 08 75 40***	〃		〃			A,B	
※		***NA 08 75 50***	〃		〃			G	
		FG 21 11 20	Ceramic Cap.	12pF 50V	セラコン	C191			
		FG 21 14 70	〃	47pF 50V	〃	C107			
		FG 21 14 70	〃	47pF 50V	〃	C199,200		G	
		FG 21 21 00	〃	100pF 50V	〃	C181,182,187,188			
		FG 21 21 00	〃	100pF 50V	〃	C197,198		G	
		FG 21 22 20	〃	220pF 50V	〃	C330			
		FG 21 23 30	〃	330pF 50V	〃	C301~310		G	
		FG 21 24 70	〃	470pF 50V	〃	C132,329			
		FG 21 31 00	〃	1000pF 50V	〃	C159,172			
		FG 24 41 00	〃	0.01μF 50V	〃	C102,104~106,109,115~121,149, 154,157,162~165,171,180,231			
		FG 24 41 00	〃	0.01μF 50V	〃	C221		R,U,A,C,B	
		Fi 19 12 20	〃	22pF 50V	〃	C184,185			
		Fi 19 21 00	〃	100pF 50V	〃	C122,123			
		FG 21 23 30	〃	330pF 50V	〃	C311,312		G	
		FG 21 24 70	〃	470pF 50V	〃	C324			
		FG 24 31 00	〃	1000pF 50V	〃	C155,161			
		FX 60 08 00	〃	4700pF 25V	〃	C189,190			

※New Parts（新規部品）

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	FX 60 07 90	Ceramic Cap.	0.01μF 16V	セラコン	C101,110,112~114,151,160, 167,173			
	FZ 00 41 30	〃	0.1μF 25V	〃	C334			
	FZ 00 41 30	〃	0.1μF 25V	〃	C333		G	
	FZ 00 35 80	Electrolytic Cap.	47000μF 5.5V	スーパーキャパシタ	C178 } Inter-changeable			
	FZ 00 64 00	〃	47000μF 5.5V	〃	〃 }			
	UA 25 31 00	Mylar Cap.	1000pF 50V	マイラーコン	C141,142			
	UA 25 31 00	〃	1000pF 50V	〃	C137,138		A,B	
	UA 25 31 50	〃	1500pF 50V	〃	〃		R,U,C	
	UT 45 24 70	Polypropylene Film Cap.	470pF100V	ポリプロコン	〃		G	
	UA 25 31 50	Mylar Cap.	1500pF 50V	マイラーコン	C207,208			
	UA 25 32 70	〃	2700pF 50V	〃	C139,140			
	UA 25 33 30	〃	3300pF 50V	〃	C217,218			
	UA 25 33 90	〃	3900pF 50V	〃	C143,144			
	UA 25 41 10	〃	0.011μF 50V	〃	C201,202,213,214,325			
	UA 25 42 20	〃	0.022μF 50V	〃	C136,225,226			
	UA 25 42 20	〃	0.022μF 50V	〃	C133		G	
	UA 25 44 70	〃	0.047μF 50V	〃	〃		R,U,A,C,B	
	UA 25 43 90	〃	0.039μF 50V	〃	C211,212			
	UA 25 44 70	〃	0.047μF 50V	〃	C129,148			
	UK 13 72 20	Electrolytic Cap.	22μF 16V	BPコン	C215,216			
	UK 16 54 70	〃	0.47μF 50V	〃	C127,147			
	UK 16 61 00	〃	1μF 50V	〃	C128,332,335			
	UL 46 61 00	〃	1μF 50V	ローノイズケミコン	C175			
	UL 46 62 20	〃	2.2μF 50V	〃	C176			
	UT 45 21 00	Polypropylene Film Cap.	100pF100V	ポリプロコン	C205,206		G	
	UT 45 22 20	〃	220pF100V	〃	〃		R,U,A,C,B	
	UT 45 25 60	〃	560pF100V	〃	C156			
	UT 45 26 80	〃	680pF100V	〃	C223,224,315,316			
	UW 92 81 00	Electrolytic Cap.	100μF 10V	ケミコン	C402,403			
	UW 93 71 00	〃	10μF 16V	〃	C103,108,125,134,135,145,150,152,153,158, 166,169,174,179,327,328,331,401			
	UW 94 72 20	〃	22μF 25V	〃	C126,195,222,313, 314,319~323			
	UW 56 51 00	〃	0.1μF 50V	〃	C227,228			
	UJ 16 61 00	〃	1μF 50V	〃	C111,130,131,170,183,186,193, 203,204,229,230			
	UW 96 63 30	〃	3.3μF 50V	〃	C192,194,196			
	UW 96 64 70	〃	4.7μF 50V	〃	C146,168,326			
※	UW 84 83 30	〃	330μF 25V	〃	C317			
	Ui 91 84 70	〃	470μF 6.3V	〃	C124			
※	Ui 91 92 20	〃	2200μF 6.3V	〃	C209,210			
	FY 00 01 90	Trimmer Cap.	5pF	トリマーコン	VC101			
	GE 10 02 80	Discri Coil	FM	FMディスクリコイル	T101			
	GE 10 04 70	IFT Coil	AM	AM IFTコイル	T102			
	GE 20 05 30	Anti-Bridie Filter	114kHz	アンチバーディーフィルター	T103			
	GE 90 12 30	Indactor	7.9mH	インダクター	T301		G	
	GE 30 04 30	Indactor,RF	220μH	RFインダクター	L103			
	GE 90 06 90	Coil	8.2mH	コイル	L104,105			
※	GE 90 18 50	〃	39mH	〃	L101,102			
	GE 90 08 40	〃	15μH	〃	L107,108		G	
	GE 90 03 30	〃	220μH	〃	L109,110		G	

※New Parts（新規部品）

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	GG 00 04 20	AM Ceramic Discriminator	CDA450A	AMセラミックディスクリ	CF106			
	GG 00 06 00	Ceramic Filter	SFE10.7MX×2	セラミックフィルター	CF101,104 } PACK			
			SFE10.7MS3G×2	〃	CF102,103 } PACK			
	GG 00 06 60	AM Ceramic Filter	SFU450B9	AMセラミックフィルター	CF105			
				〃				
	GG 00 07 00	Ceramic Vibrator	FCR400K	セラミック振動子	XL301			
	GG 00 07 40	〃	CSB456F10	〃	XL101			
※	GG 00 07 60	〃	CSB800K	〃	XL102			
	QU 00 39 00	Quartz Crystal Unit	32kHz	水晶振動子	XL103			
	HJ 35 46 80	Carbon Resistor	68Ω 1/4W	カーボン抵抗	R311,312			
	HJ 35 52 20	〃	220Ω 〃	〃	R110,128,173			
	HJ 35 53 90	〃	390Ω 〃	〃	R310			
	HJ 35 61 00	〃	1kΩ 〃	〃	R115,139,309,315,408,410 412,414			
	HJ 35 61 20	〃	1.2kΩ 〃	〃	R281,313			
	HJ 35 62 20	〃	2.2kΩ 〃	〃	R302			
	HJ 35 63 30	〃	3.3kΩ 〃	〃	R230,316			
	HJ 35 64 70	〃	4.7kΩ 〃	〃	R401,402,405,406			
	HJ 35 66 80	〃	6.8kΩ 〃	〃	R132,235,307			
	HJ 35 71 00	〃	10kΩ 〃	〃	R118,164,165,208,314,352			
	HJ 35 71 50	〃	15kΩ 〃	〃	R308			
	HJ 35 74 70	〃	47kΩ 〃	〃	R120,121,347			
	HJ 35 74 70	〃	47kΩ 〃	〃	R177		G	
	HJ 35 71 20	〃	12kΩ 〃	〃	〃		R,U,A,C,B	
	HJ 35 78 20	〃	82kΩ 〃	〃	R342			
	HJ 35 81 00	〃	100kΩ 〃	〃	R138,156			
	HJ 35 81 00	〃	100kΩ 〃	〃	R241		G	
	HJ 35 82 20	〃	220kΩ 〃	〃	R142			
	HJ 35 91 00	〃	1MΩ 〃	〃	R231			
	HJ 35 91 00	〃	1MΩ 〃	〃	R245		G	
	HL 82 42 70	Metal Oxide Film Resistor	27Ω 2W	酸金抵抗	R319			
	HL 32 61 80	〃	1.8kΩ 2W	〃	R305,306			⚠
	HV 45 31 00	Flame Ploof Carbon Resistor	1Ω RDF25SL	不燃化カーボン抵抗	R420			⚠
※	HS 41 25 90	Potentiometer	300Kトク×2	可変抵抗器	VR103 LOUDNESS			
※	HS 41 26 00	〃	250KMN	〃	VR104 BALANCE			
	HT 37 03 70	Pre-set Potentiometer	B5kΩ	半固定抵抗	VR102 } Inter-changeable			
	HT 77 02 30	〃	B5kΩ	〃	〃 } Inter-changeable			
	HT 37 04 20	〃	B100kΩ	〃	VR101			
	iA 09 33 00	Transistor	2SA933S(Q,R)	トランジスタ	TR109,114,115,120,121,123~125,127, 131,133,304,306~312,402			
	iA 11 15 10	〃	2SA1115 (E,F)	〃	〃 } Inter-changeable			
	iX 60 31 70	〃	2SA1310 (R,S,T)	〃	〃 } Inter-changeable			
	iA 09 70 00	〃	2SA970 (GR,BL)	〃	TR137~140			
	iA 09 34 00	〃	2SA934	〃	TR302			
	iC 19 23 00	〃	2SC1923	〃	TR102,103			
	iC 26 03 10	〃	2SC2603 (E,F)	〃	TR101,104~108,110~113,116,117,119,122, 126,128~130,132,134,135,401			
	iX 60 31 80	〃	2SC3312 (R,S,T)	〃	〃 } Inter-changeable			
	iC 17 40 00	〃	2SC1740S(S,R)	〃	〃 } Inter-changeable			
	iC 20 60 00	〃	2SC2060	〃	TR303			
	iC 28 78 00	〃	2SC2878	〃	TR118 } Inter-changeable			
	iD 06 55 10	〃	2SD655(E,F)	〃	〃 } Inter-changeable			
	iD 13 02 00	〃	2SD1302	〃	〃 } Inter-changeable			

※New Parts（新規部品）

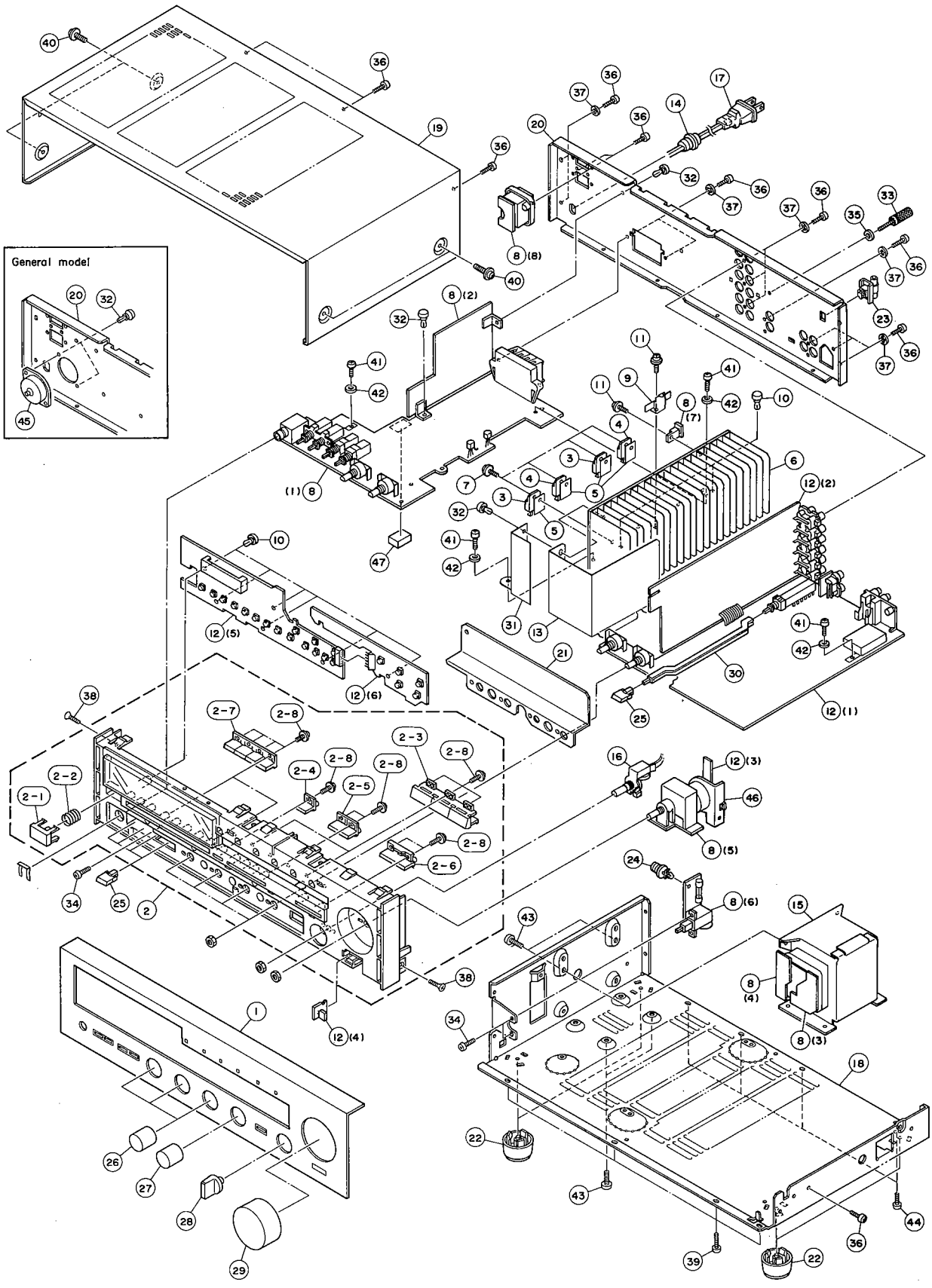
Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
	iD 08 80 20	Transistor	2SD880 (O,Y)	トランジスタ TR301			
	iD 14 37 00	〃	2SD1437 (E,F)	〃 〃 Inter-changeable			
	iF 00 06 70	Diode	1S2473	ダイオード D103~107,109~112,308,312~316,401,402,409,415~419			
	iF 00 00 40	〃	1S1555	〃 〃 Inter-changeable			
	iF 00 00 40	〃	1S1555	〃 D101,102			
	iF 00 41 60	Zener Diode	HZ6C1L	ツェナーダイオード D113,304~306			
	iF 00 14 70	〃	RD6.2EB2	〃 〃 Inter-changeable			
	iF 00 06 40	〃	HZ7B	〃 D303			
	iF 00 68 00	〃	MA1608H	〃 〃 Inter-changeable			
	iX 60 42 90	〃	HZ12A3	〃 D301,302			
	iF 00 33 20	〃	HZ9C3	〃 D310,311			
	iF 00 45 90	Photo Diode	TSP703	フォトダイオード D317			
	iF 00 47 10	〃	PH302	〃 〃 Inter-changeable			
	iF 00 66 70	Zener Diode	MA1047M	ツェナーダイオード D108			
	iF 00 67 20	〃	MA1056L	〃 D309			
※	iF 00 82 90	Frequency Display		周波数表示器 D436			
※	iF 00 87 30	LED(Red)	SLR-34URC3H3	LED D403~408,420~435			
	iF 00 87 40	〃 (Green)	SLR-34MC3H3	〃 D410~414			
	iG 03 45 00	IC	μPC577H (E,F)	IC IC101,102			
	iG 03 47 00	〃	AN6551	〃 IC103			
	iG 07 68 00	〃	NJM4558S	〃 〃 Inter-changeable			
	iG 13 22 00	〃	BA715	〃 〃			
	iG 03 55 00	〃	TC4028BP	〃 IC107			
※	iG 14 87 00	〃	BU4028B	〃 〃 Inter-changeable			
	iG 04 14 00	〃	M54459L	〃 IC106			
	iG 04 78 00	〃	LA1245	〃 IC105			
	iG 04 91 00	〃	LC7210	〃 IC109			
	iG 06 16 00	〃	μPD4066	〃 IC301,302			
	iG 08 92 00	〃	LC4066B	〃 〃 Inter-changeable			
	iG 15 25 00	〃	BA6229	〃 IC304			
	iG 12 18 00	〃	NJM4560S	〃 IC110			
	iG 13 30 00	〃	BA4561	〃 〃 Inter-changeable			
	iG 13 20 00	〃	BA618	〃 IC403			
	iG 14 25 00	〃	LA3400	〃 IC104			
※	iG 14 54 00	〃	LB1234	〃 IC402			
※	iG 14 67 00	〃	LB1413	〃 IC401			
※	iG 14 77 00	〃	LC6510C-695	〃 IC108			
※	iG 14 78 00	〃	LC6505C-696	〃 IC306			
※	iG 14 92 00	〃	BA6340	〃 IC305			
※	iG 14 93 00	〃	LC4966	〃 IC303			
※	KA 40 16 90	Slide Switch		スライドスイッチ SW101		R	⚠
※	KA 80 51 90	Push Switch		プッシュスイッチ SW102 PHONO			
	KA 90 10 70	Remote Switch		リモートスイッチ SW301 REC OUT			
	KA 90 63 80	Switch	EVQ-QRB-04M	ライトタッチスイッチ SW401~421			
	LB 20 22 90	Pin Jack	2P	ピンジャック PJ101			
	LB 40 10 30	〃	4P	〃 PJ301,303			
	LB 40 10 30	〃	4P	〃 PJ302		R,U,A,C,B	
	LB 40 10 40	〃	4P	〃 〃		G	

※New Parts (新規部品)

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
		NA 08 58 20	Coil Pack	AM	A M コイルパック	U101 } Inter-changeable		
※		NA 08 78 30	〃	〃	〃 〃 }			
		PA 00 08 10	Front End Pack	FE343U	フロントエンドパック	PK101		R,U,A,C,B
※		PA 00 08 50	〃	FE446U16	〃	〃		G
		LA 00 39 90	Antenna Terminal	5P	アンテナ端子板			R,U,A,C,B
		LA 00 54 30	〃	3P	〃			G
※		LB 02 30 80	Connector	8P SSQ-8	コネクター			
※		LB 94 00 80	〃	8P SHF-1AA	〃			
※		AA 62 61 00	Shield Plate		シールド板			
		BB 06 83 70	Ground Metal		アース金具			
※		CB 08 77 90	Holder,P.C.B		PCBホルダー			
※		AA 62 64 20	Shield Plate		シールド板			

※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 63 30	Panel Unit		パネルユニット	Silver				
※	〃	NB 62 63 40	〃		〃	Black				
※	2	NB 62 63 50	Sub Chassis Unit		サブシャーシユニット	Silver				
※	〃	NB 62 63 60	〃		〃	Black				
	2-1	CB 63 51 20	Button		ボタン	Silver POWER	A-520			
	〃	CB 63 51 30	〃		〃	Black POWER	〃			
	2-2	AA 61 78 80	Spring		スプリング		A-720			
※	2-3	CB 64 01 20	Button,Push	3P	ボタンプッシュ	Silver				
※	〃	CB 64 01 30	〃	3P	〃	Black				
	2-4	CB 63 99 20	〃	1P	〃	Silver	R-3			
	〃	CB 63 99 30	〃	1P	〃	Black	〃			
	2-5	CB 63 99 40	〃	2P	〃	Silver	〃			
	〃	CB 63 99 50	〃	2P	〃	Black	〃			
	2-6	CB 63 99 60	Button,Seesaw		ボタンシーソー	Silver	〃			
	〃	CB 63 99 70	〃		〃	Black	〃			
※	2-7	CB 64 34 20	Button,Push	4P	ボタンプッシュ	Silver				
※	〃	CB 64 01 50	〃	4P	〃	Black				
	2-8	EX 60 02 00	Cup Screw	2×6 FCRM3-Bl	カップスクリュー					
	3	iX 60 12 60	Transistor	2SA1106(O,P,Y)	トランジスタ	TR521,522 Inter-changeable				
	〃	iX 60 32 40	〃	2SA1265	〃	〃 Inter-changeable				
	4	iX 60 12 70	〃	2SC2581(O,P,Y)	〃	TR519,520 Inter-changeable				
	〃	iX 60 32 50	〃	2SC3182	〃	〃 Inter-changeable				
	5	iL 00 04 60	Mica Base	AC-238	マイカベース					
	6	BA 09 25 50	Heat Sink		放熱板					
	7	EZ 00 13 50	Cup Screw	3×14FCRM3-Bl	カップスクリュー					
※	8	NA 08 74 40	Main Circuit Board		メインシート			R		
※	〃	NA 08 74 60	〃		〃			U		
※	〃	NA 08 74 80	〃		〃			C		
※	〃	NA 08 75 00	〃		〃			A,B		
※	〃	NA 08 78 50	〃		〃			G		
※	9	BB 07 09 60	TR Pusher		TRプッシャー					
	10	CB 60 56 20	Plastic Rivet		プラスチックリベット					
	11	EX 60 02 50	Cup Tight Screw	3×10FCRM3-Bl	カップタイトスクリュー					
※	12	NA 08 75 20	Tuner Circuit Board		チューナーシート			R		
※	〃	NA 08 75 30	〃		〃			U,C		
※	〃	NA 08 75 40	〃		〃			A,B		
※	〃	NA 08 75 50	〃		〃			G		
※	13	AA 62 80 60	Shield Plate		シールドプレート					
	14	CB 62 01 90	Cord Stopper	CM-22B	コードストッパー			R,A,G,B		
	〃	CB 62 02 00	〃	CM-22C	〃			U,C		
※	15	GA 69 00 10	Power Transformer		電源トランス			U		⚠
※	〃	GA 69 01 10	〃		〃			C		⚠
※	〃	GA 69 02 10	〃		〃			G		⚠
※	〃	GA 69 03 20	〃		〃			R		⚠
※	〃	GA 69 04 20	〃		〃			A,B		⚠
※	16	KA 90 70 90	Remote Rotary Switch	ESA-33	リモートロータリースイッチ					
	17	MG 00 16 30	Power Cord	6A 250V 2m	電源コード			R		⚠
	〃	MG 00 14 50	〃	10A 125V 1.98m	〃	Inter-changeable		U		⚠
	〃	MG 00 14 60	〃	10A 125V 2m	〃	Inter-changeable		U		⚠
	〃	MG 00 09 60	〃	2.5A 250V 2m	〃	Inter-changeable		G		⚠
	〃	MG 00 16 20	〃	2.5A 250V 2m	〃	Inter-changeable		G		⚠
	〃	MG 00 09 20	〃	7.5A 250V 2.5m	〃	Inter-changeable		A		⚠
	〃	MG 00 14 90	〃	7.5A 250V 2.5m	〃	Inter-changeable		A		⚠

※New Parts（新規部品）