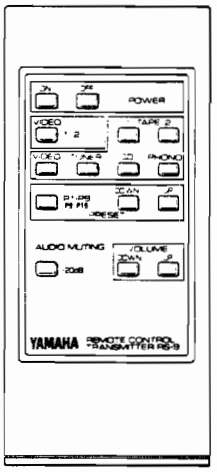
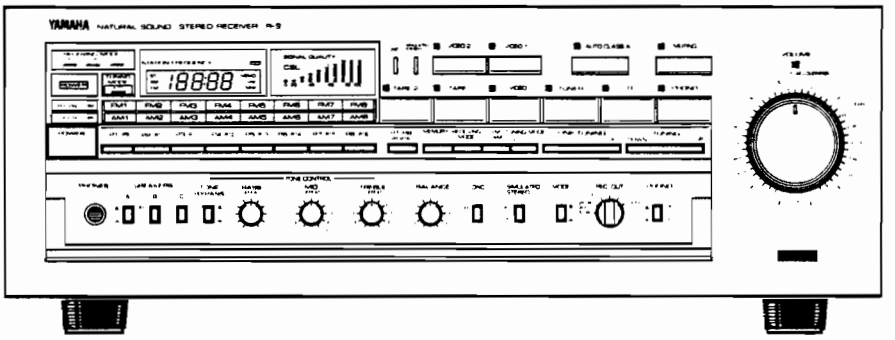
STEREO RECEIVER

R-9

SERVICE MANUAL





IMPORTANT NOTICE

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

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

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

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

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

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

R-9

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004617

SINCE 1887 YAMAHA
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN
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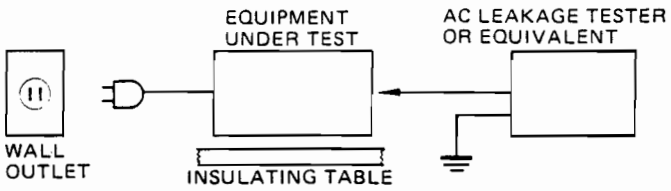
■ TO SERVICE PERSONNEL

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

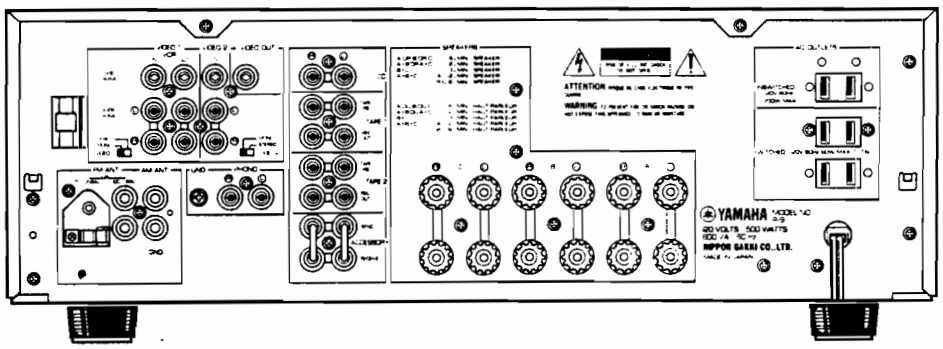
2. Leakage Current Measurement (For 120V Model Only).
   When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.

- 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.

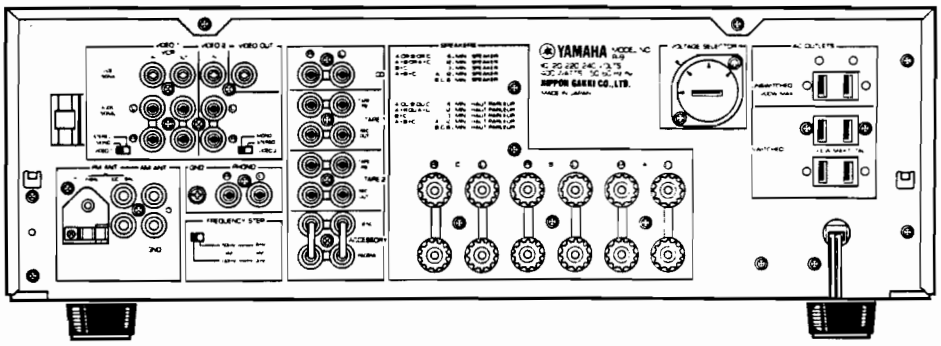


■ REAR PANELS

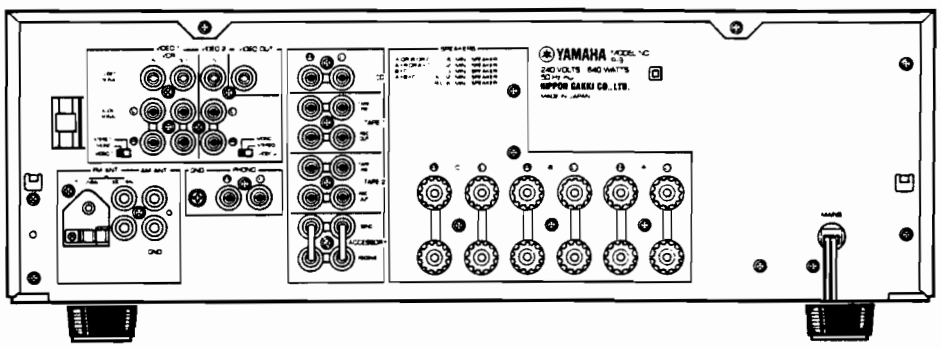
▼ U.S.A. & Canadian models



▼ General model



▼ Australian model



■ SPECIFICATIONS

■ AUDIO SECTION

Continuous Power Per Channel	
20Hz ~ 20kHz, 0.015% THD, 8Ω	125W
20Hz ~ 20kHz, 0.03% THD, 6Ω	145W
1kHz, 0.01%,THD, 8Ω (IEC Rated Power)	145W
Dynamic Headroom	
8Ω	1.58dB
Dynamic Power	
8Ω (1kHz/channel)	180W
6Ω (1kHz/channel)	220W
4Ω (1kHz/channel)	280W
2Ω (1kHz/channel)	360W
Power Band Width	
0.08% THD, 62.5W, 8Ω	10Hz ~ 50kHz
Damping Factor	
1kHz, 8Ω	60
Input Sensitivity/Impedance	
Phono MC	160μV/220Ω
Phono MM	2.5mV/47kΩ
CD/TAPE/VIDEO	150mV/47kΩ
RECEIVE (ACCESSORY)	150mV/47kΩ
Input Sensitivity (New IHF)	
Phono MC	14μV
Phono MM	0.22mV
CD/TAPE/VIDEO	13.4mV
Maximum-Input Signal (1kHz)	
0.01% THD, Phono MC	8mV
0.01% THD, Phono MM	110mV
Output Level/Impedance	
REC OUT	150mV/470Ω
Headphone Jack Rated Output/Impedance	
0.015% THD	0.91V/270Ω
Frequency Response	
20Hz ~ 20kHz, CD/TAPE/VIDEO	$^{+0}_{-0.3}$ dB
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 to SP Out 62.5W/8Ω	0.015%
VIDEO to SP Out 62.5W/8Ω	0.02%
Intermodulation Distortion	
CD/TAPE/VIDEO Reted Output/8Ω	0.01%
Signal to Noise Ratio	
Phono MC (500μV, Input Shorted)	75dB
Phono MM (5mV, Input Shorted)	92dB
CD/TAPE (Input Shorted)	103dB
VIDEO (Input Shorted)	91dB
Signal to Noise Ratio (New IHF)	
Phono MC	74.5dB
Phono MM	75dB
CD/TAPE	80dB
Residual Noise (IHF-A-Network)	120μV
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)
turnover frequency	350Hz
TREBLE boost/cut	±10dB (at 20kHz)
turnover frequency	3.5kHz
MID control range	±12dB (at 1kHz)
center frequency	1kHz
Filter Characteristics	
LOW (subsonic, builtin)	10Hz, –12dB/oct
Continuous Loudness Control (Level-related equalization)	
Attenuation	–40dB (at 1kHz)
Audio Muting	–20dB

■ FM SECTION

Tuning Range	87.5MHz ~ 108.0MHz
50dB Quieting Sensitivity (IHF)	
Mono, 75Ω	1.5μV (14.8dBf)
Stereo, 75Ω	20μV (37.3dBf)
Usable Sensitivity (IHF Mono)	
30dB S/N Quieting, 75Ω	0.75μV (8.8dBf)
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 (Local)	0.05%
1kHz (Local)	0.05%
6kHz (Local)	0.1%
Stereo 100Hz (Local)	0.07%
1kHz (Local)	0.07%
6kHz (Local)	0.15%
Stereo Separation	
Local 50Hz	45dB
1kHz	50dB
10kHz	45dB
Frequency Response	
30Hz to 13kHz	±0.5dB
Output Level/Impedance (Rec Out)	
FM 100% MOD, 1kHz	500mV/2.8kΩ

■ AM SECTION

Tuning Range	510kHz ~ 1620kHz (U)(C) 510kHz ~ 1620kHz or 513kHz ~ 1620kHz (R) 513kHz ~ 1620kHz (A)
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)	
AM 30% MOD, 400Hz	150mV/2.8kΩ

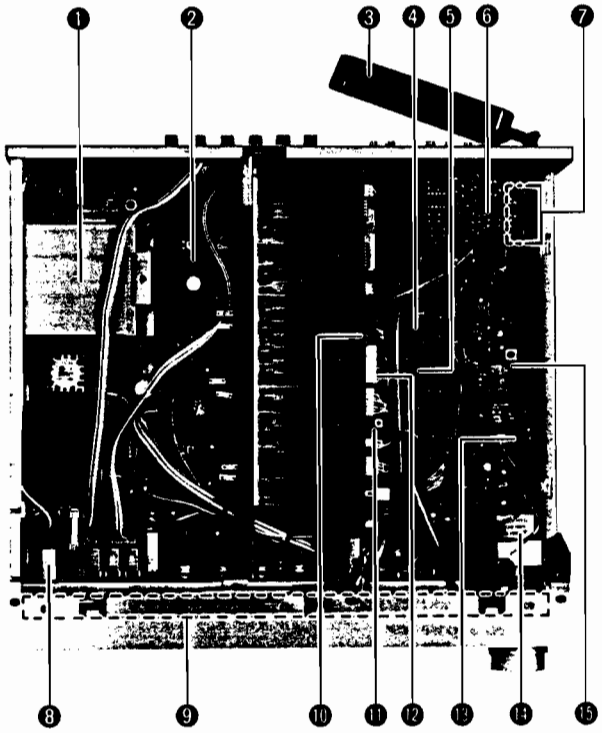
■ GENERAL

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	500W (U)(C) 400W (R) 640W (A)
AC Outlet ..... (U)(C)(R) only	
Switched x 2	100W max. (R) 60W max. (U)(C)
Unswitched x 1	200W max.
Dimensions (W x H x D)	435 x 151 x 423 mm (17-1/8" x 5-15/16" x 16-5/8")
Weight	12 kg (26 lbs. 7 oz.)

Specifications subject to change without notice.

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

■ INTERNAL VIEW



❶ POWER TRANSFORMER
U.S.A. model: GA69090
Canadian model: GA69100
General model: GA69110
Australian model: GA69120
❷ MAIN CIRCUIT BOARD (1)
❸ AM LOOP ANTENNA
❹ CSL CONTROLLER IC:
LC6510C-695
❺ PLL IC: LC7210
❻ MAIN CIRCUIT BOARD (3)
❼ FRONT END PACK
❽ POWER SWITCH
❾ KEY BOARD CIRCUIT BOARD
❿ TUNER CIRCUIT BOARD (2)
⓫ MOTOR CONTROL IC: M54542
⓬ A.V CONTROLLER IC:
LC6505C-696
⓭ MPX IC: LA3400
⓮ POTENTIOMETER WITH MOTOR
⓯ TUNER CIRCUIT BOARD (1)

■ DISASSEMBLY PROCEDURES

1. **Removal of Top Cover**
   Remove 6 screws (①) in Fig. 1, and Slide the Top Cover back and up.

2. **Removal of Bottom Cover**
   Remove 8 screws (②) in Fig. 1.

3. **Removal of Panel Unit**
   a. Remove the knobs.
   b. Remove 4 screws (③) in Fig. 1, and pull the Panel Unit forward.

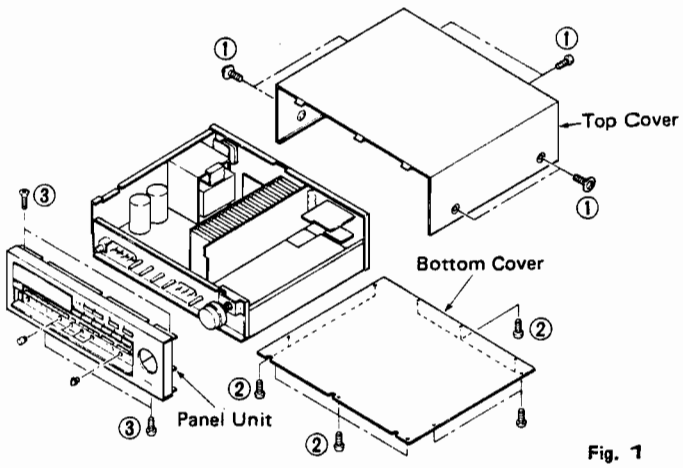
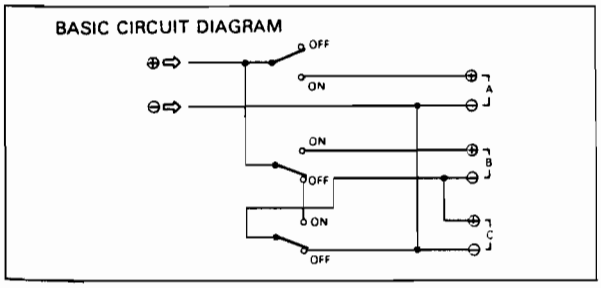


Fig. 1

SPEAKER SELECTION SWITCHES

The B Speaker and C Speaker terminals are configured in series (please refer to the Basic Circuit Diagram). When using either the B or C Speaker terminals independently of the other, it is necessary that the terminals not being used are turned OFF with the front panel speaker selector switch.



■ 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
   AUTO CLASS A . . . . . OFF
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
ACVM : AC voltmeter
DCVM : 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
TR407 EMITTER	+12V ± 0.5V	Make sure that AC line voltage comes within Models: U, C — AC line voltage: 120V ± 10% Models: A — AC line voltage: 240V ± 10%
TR409 COLLECTOR	−12V ± 0.5V	
TR413 EMITTER	+9V ± 0.5V	
TR410 EMITTER	+6.3V ± 0.5V	
TR412 COLLECTOR	+6.3V ± 0.5V	
TR428 EMITTER	−5.8V ± 0.5V	
TR405 EMITTER	+6.4V ± 0.5V	
M+	VOLUME UP +6V ± 1V	
M−	VOLUME DOWN +6V ± 1V	
FB	At FM reception mode +12V ± 1V	
	At AM reception mode 0V	
AB	At FM reception mode 0V	
	At AM reception mode +12V ± 1V	

• IDLING CURRENT ADJUSTMENT

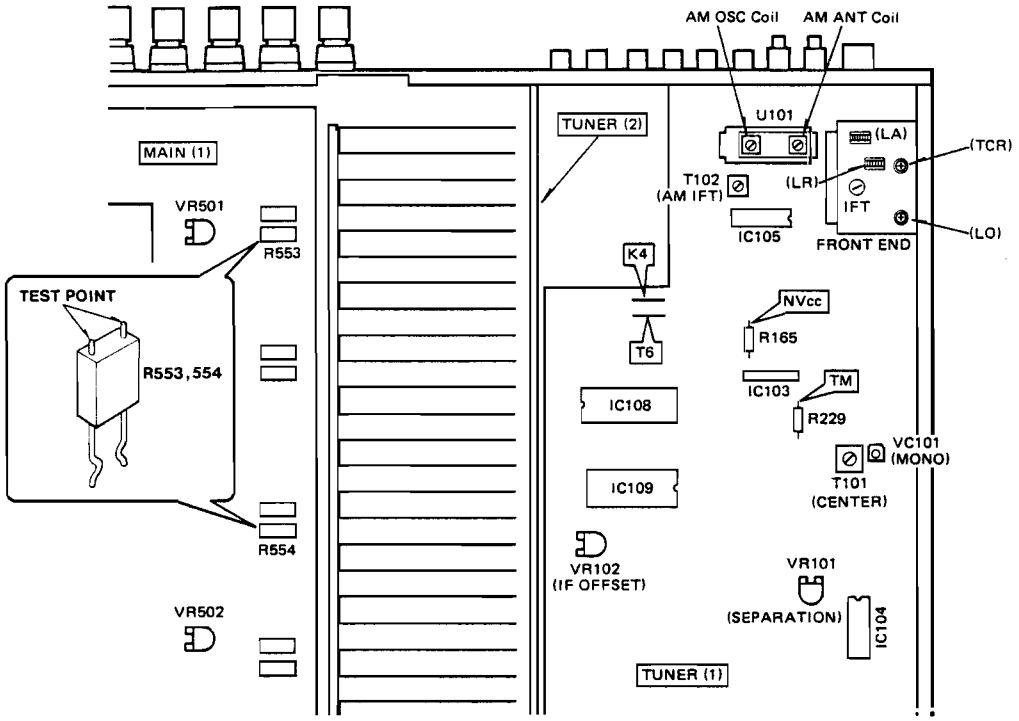
After the power has been turned on, age about 2 minutes in no signal and non-loaded condition.
Switch off the AUTO CLASS A switch.
Adjust VR501 (Lch) and VR502 (Rch) so that the voltage across the terminals of R553 (Lch) and R554 (Rch) comes to 10mV ± 1mV DC.

• CONFIRMATION OF AUTO CLASS A OPERATION

After the AUTO CLASS A has been turned on, age about 1 minute in no signal and non-loaded condition.
Confirm that the voltage across the terminals of R553 (Lch) and R554 (Rch) comes to 60mV ± 30mV DC.

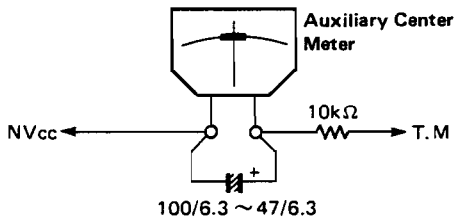
Item to be Adjusted	Test Points	Adjustment Points	Rating
Idling Current	Lch: Across the terminals of R553 Rch: Across the terminals of R554	VR501 (Lch) VR502 (Rch)	10mV ± 1mV DC.
AUTO CLASS A Operation		—	60mV ± 30mV DC.

- **TEST POINT**



< FM TUNER SECTION >

- Use 19kHz L.P.F. to measure the REC OUT.
- On step 1 and 2 connect an auxiliary center meter (ji00036 or similar) to confirm the best tuned point.
- 100% modulation means that the Frequency Deviation is ±75kHz.



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 point to "0" at detuned point.		After the adjustment of step 1 to 5, confirm it again.
2	Confirmation of station center set	300Ω FM ANT	FM SG [98MHz ± 1kHz, 70dBμ (75.2dBf), MONO 1kHz, 100% MOD]	TUNING key →UP or DOWN	Confirm that the auxiliary center meter deflects to "0" when tuned to signal of FM SG.		
		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 −66dB	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 −56dB	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	ACVM 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 K4 ~ T6	FM SG. 98MHz ± 1kHz 70dBμ (75.2dBf) STEREO L, R 1kHz 30% MOD Short	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.
8	Confirmation of auto search reception	300Ω FM ANT	FM SG 98MHz ± 1kHz 20dBμ (25.2dBf) 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.

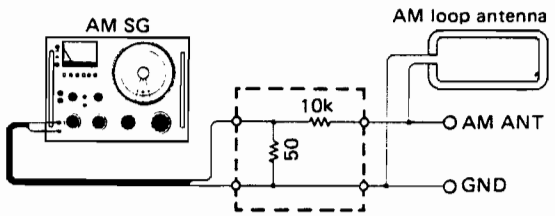
P1/P9	P2/P10	P3/P11	P4/P12	P5/P13
AM 630kHz	AM 1080kHz	AM 1440kHz	FM 87.5MHz	FM 95.1MHz

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	ACVM			
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	ACVM DST. M.			
3	Confirmation Full-scale signal quality level	AM ANT	AM SG. AM dummy antenna 1080kHz ± 0.1kHz 90dBμ 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	Fine Tuning	Same as step 1	Same as state 1	PRESET STATION key P1, P2, FINE TUNING key (+ or −)	① Press P1 and content is read out (FM) ② Press FINE TUNING key → FINE TUNING indicator lights. ③ Press FINE TUNING key and check that 10kHz step seach. ④ Press P2 and content is read out (AM) ⑤ Press FINE TUNING key and check that 1kHz step seach.
4	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—
5	Last channel memory			POWER key	① Read out P1. ② Turn OFF POWER key. ③ Turn ON POWER key after 5 seconds. ④ P1 content should come on. 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	Function
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.

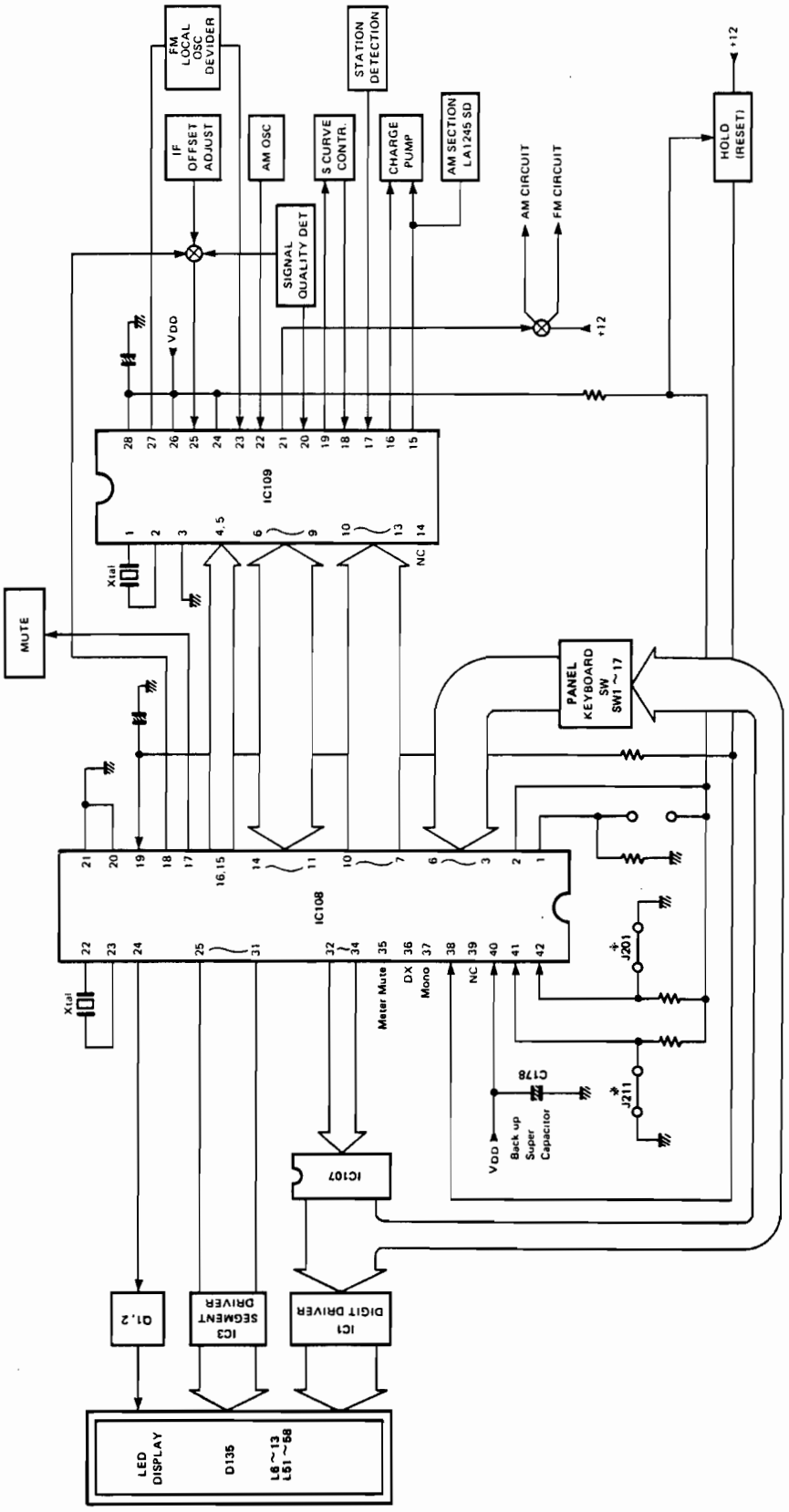
- **IC108: CSL Controller V4.0 695 (LC6510C-695)**

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 1 to 17.
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	PA_1 $\overline{\text{G}}$	IN	

41 pin / 41 pin	0	1
0	J	U
1	G	W

- **Block Diagram of Microcomputer Peripheral Circuit**



*Marked

	R	U.C	A	J
J211	OPEN	SHORT	OPEN	SHORT
J201	OPEN	OPEN	SHORT	SHORT

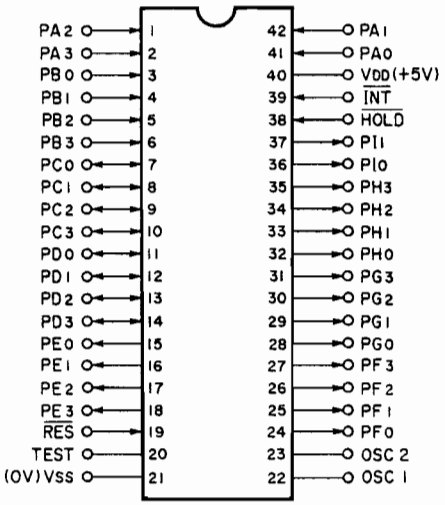
- **IC401: A. V Controller V1.0 696 (LC6505C-696)**

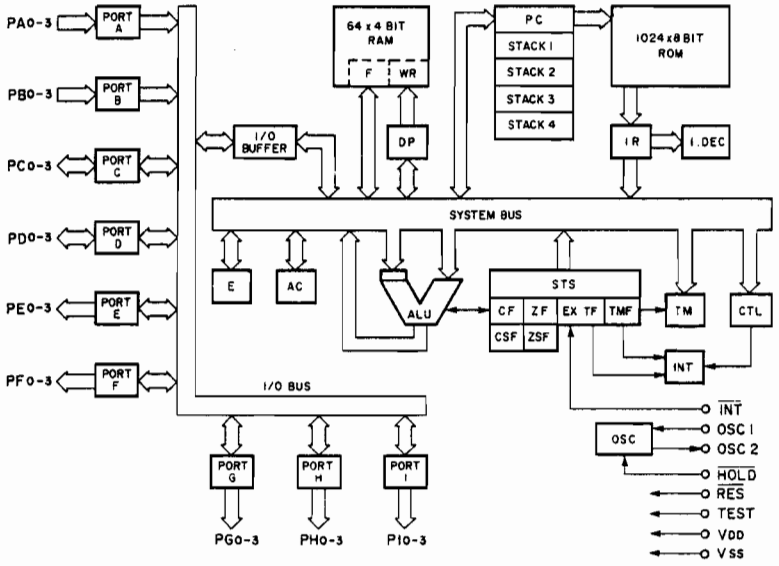
1-chip type 4-bit microcomputer witch incorporates 1024 x 6 bit ROM (for programming) and 64 x 4 bit RAM (for data memory)

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		

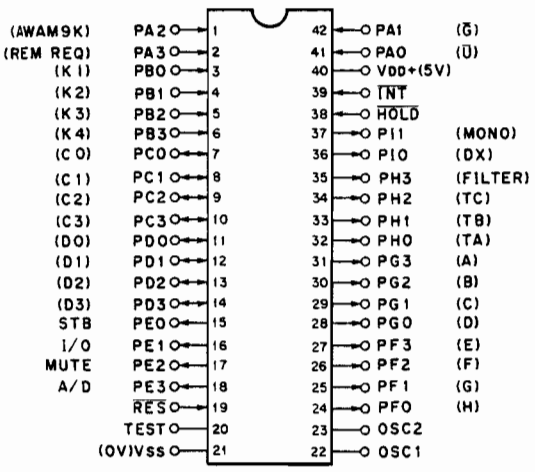
■IC BLOCK

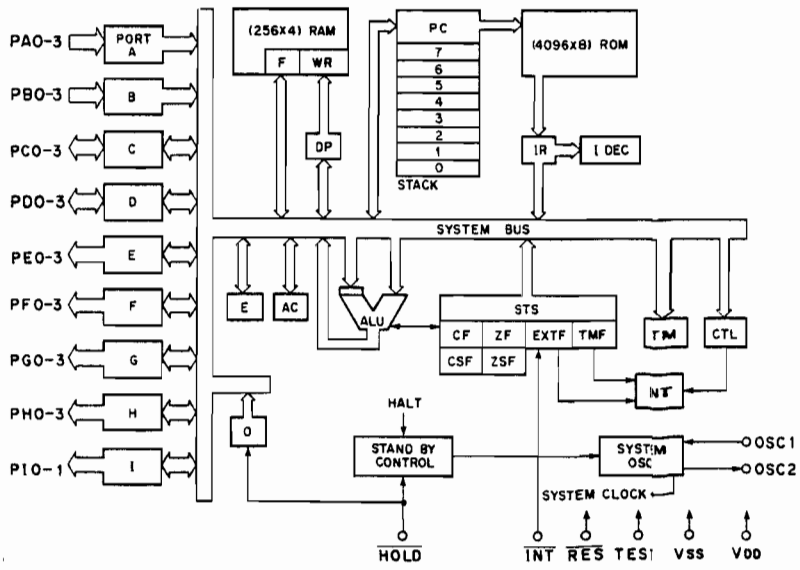
IC401 : LC6505C-696



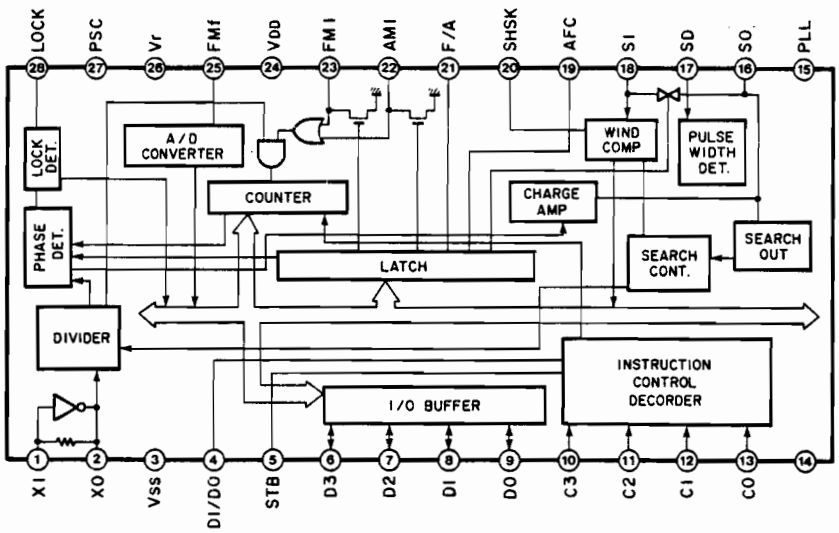


IC108 : LC6510C-695

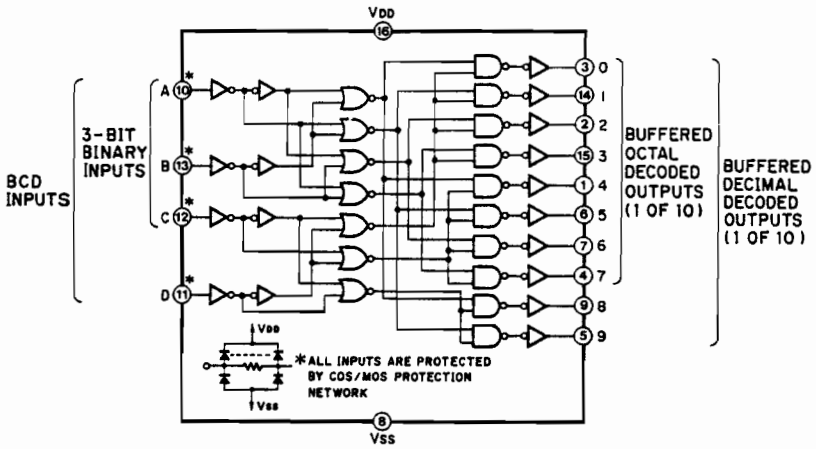




IC109 : LC7210



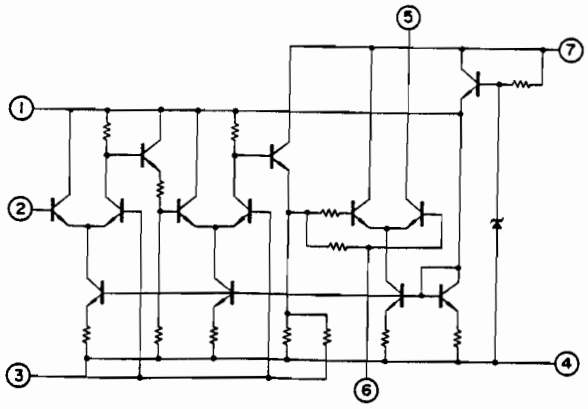
IC107 : TC4028BP or BU4028B



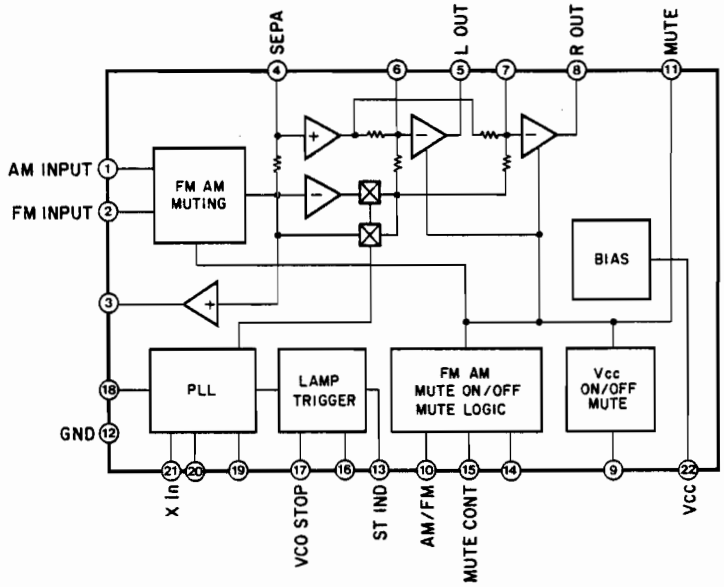
Data Table

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

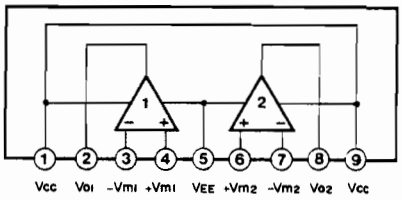
IC101, 102 : μPC577H (E, F)



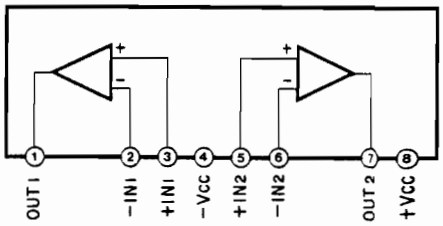
IC104 : LA3400



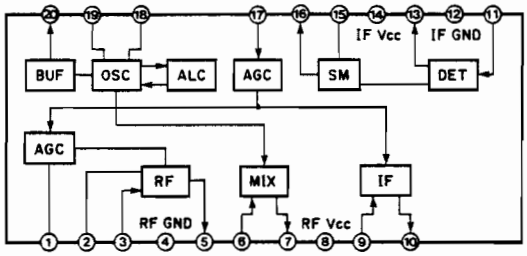
IC103 : NJM4558S or BA715
IC302, 303, 407: NJM4558S (F)



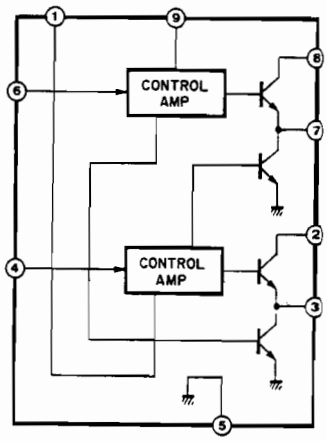
IC301 : NJM4560S or BA4561
IC302, 303, 407: M5218L (V)
IC501 : M5220L



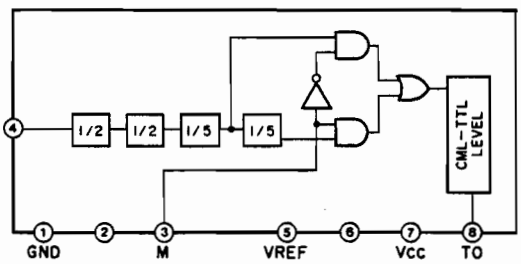
IC105 : LA1245



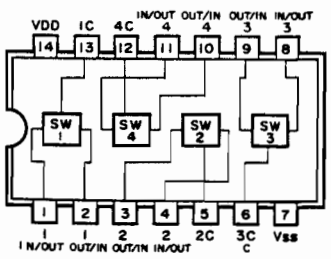
IC402 : M54542



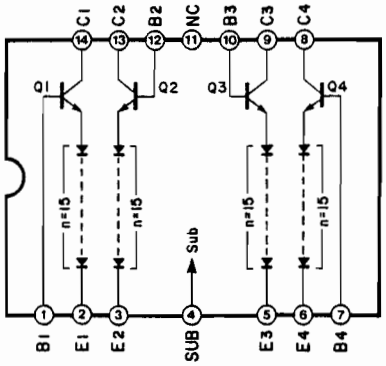
IC106 : M54459L



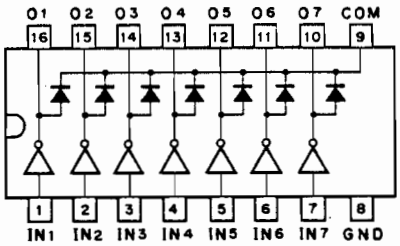
IC404 ~ 406 : μPD4066BC or LC4066B
IC403 : LC4966



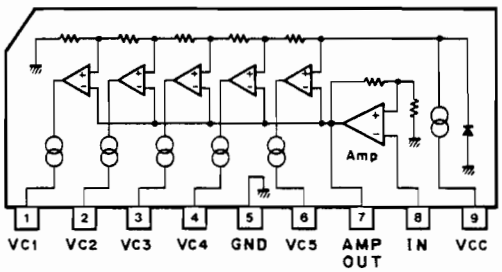
IC502 : M51010P



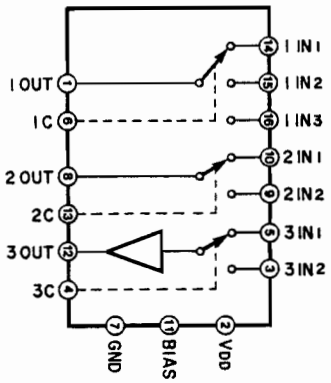
IC1 : M54526P, LB1234 or BA12004



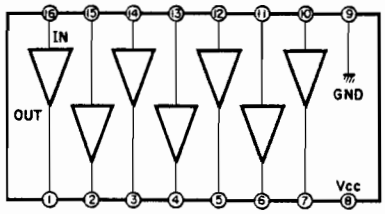
IC2 : LB1413



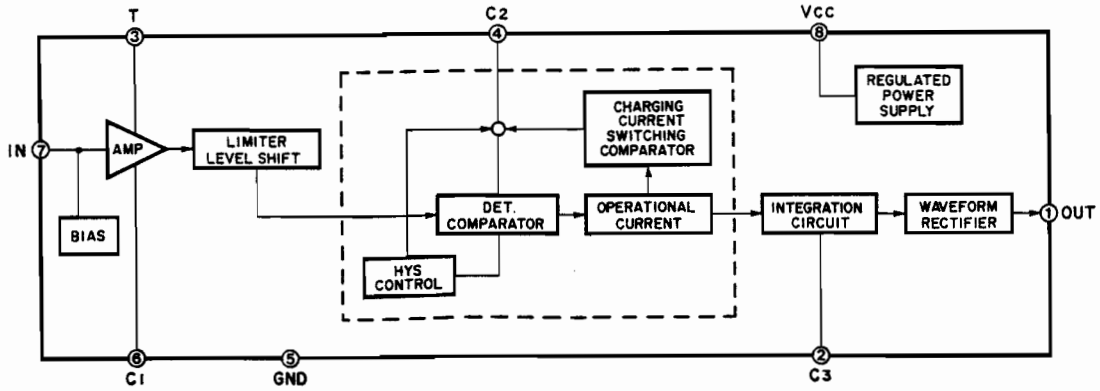
IC503 : M51320P



IC3 : BA618



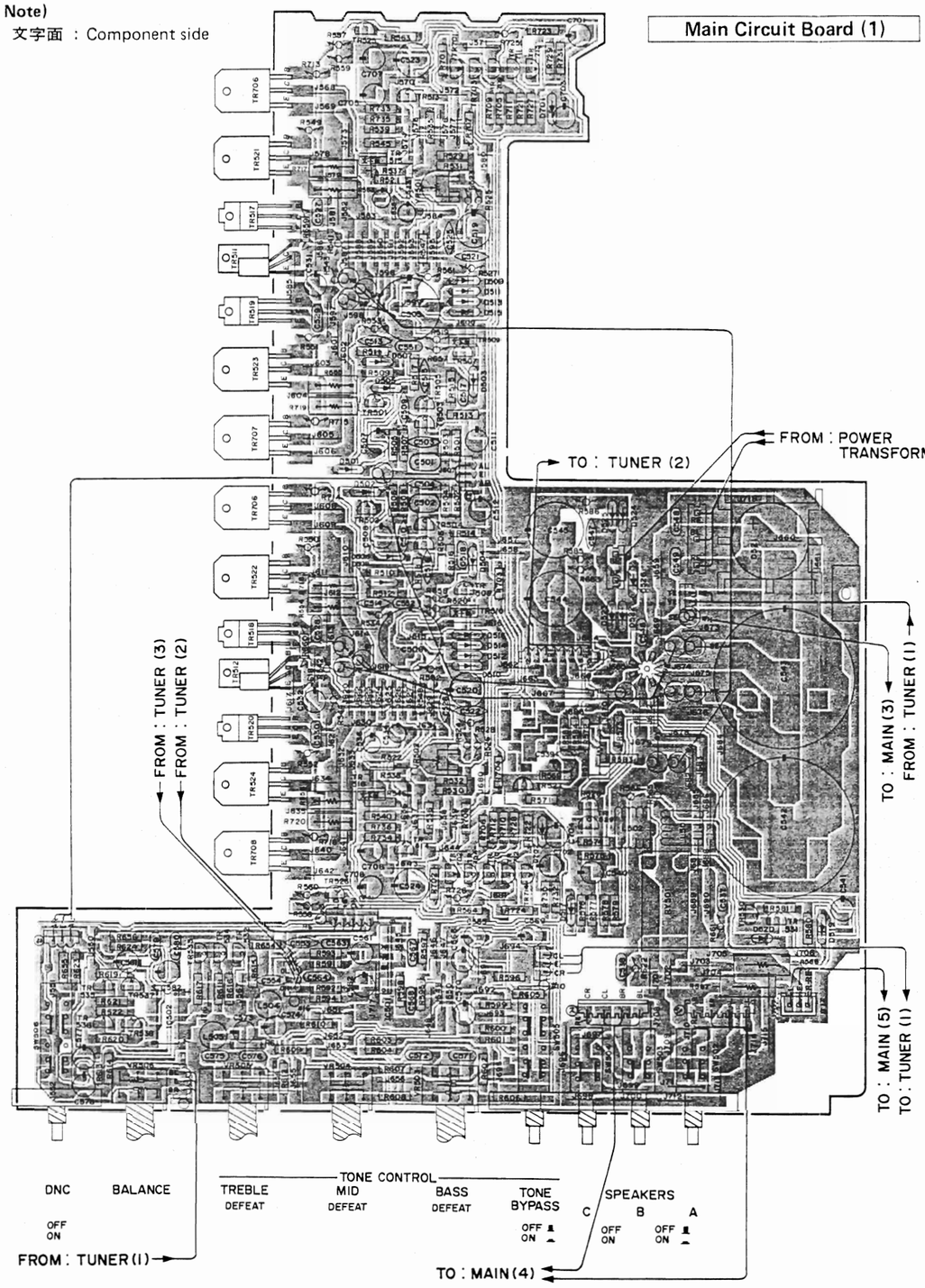
IC4 : BA6340



■ PRINTED CIRCUIT BOARD(Pattern side)

Note)
文字面 ： Component side

Main Circuit Board (1)

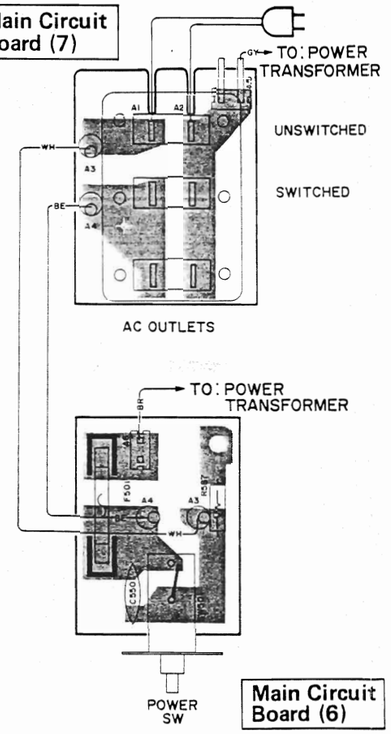


Note: * marked

	R	U	C	A	J
F501	10A 250V	10A 250V	10A 250V	T4.0A 250V	10A 250V
F502	T5.0A 250V	OPEN	OPEN	OPEN	OPEN
R587	OPEN	1/2P 2.2M	1/2P 2.2M	OPEN	OPEN
C703, 704	0.47/50	0.47/50	0.47/50	0.47/50	4.7/50

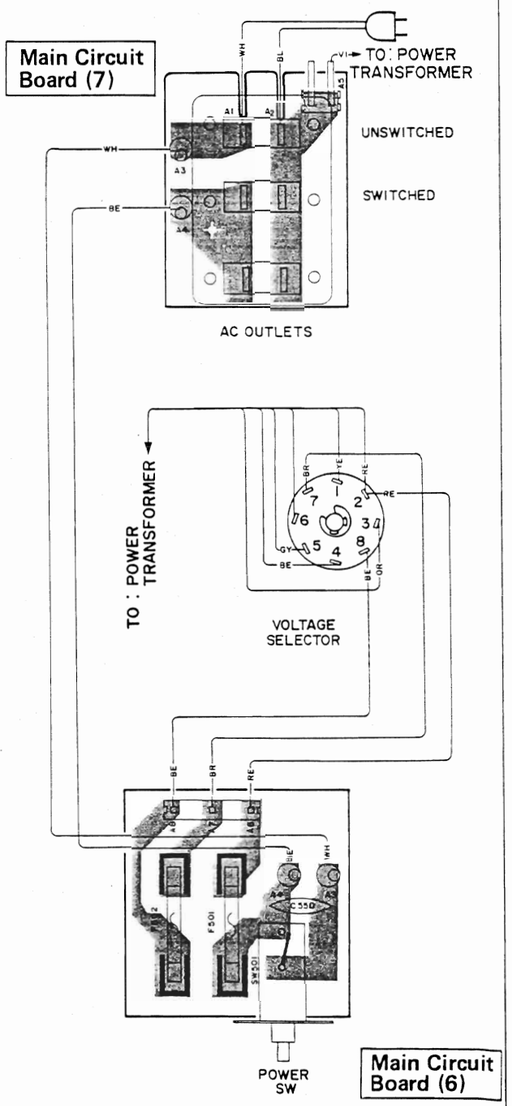
U.S.A. & Canadian models

Main Circuit Board (7)

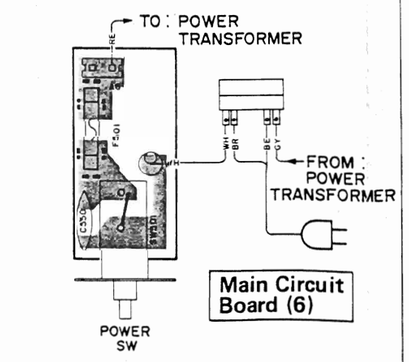


General model

Main Circuit Board (7)



Australian model

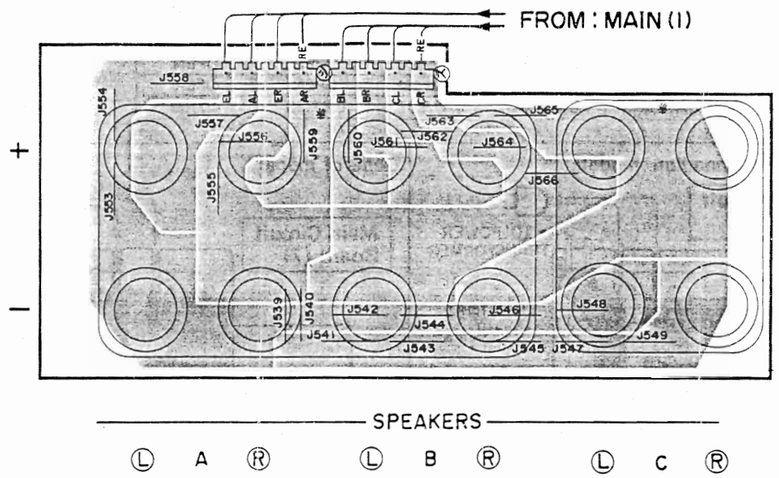


VOLTAGE SELECTOR

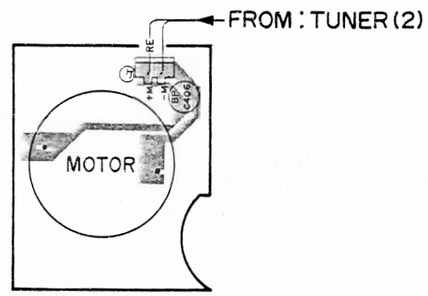
Voltage	Terminal No.	
110V	5-4	2-1
120V	6-5	3-2
220V	7-1	8-4
240V	7-6	8-3

■ PRINTED CIRCUIT BOARD(Pattern side)

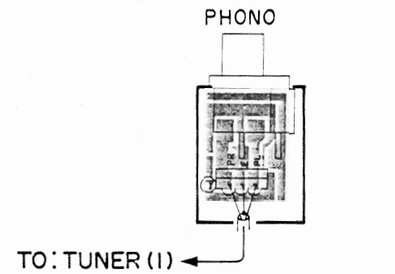
Main Circuit Board (4)



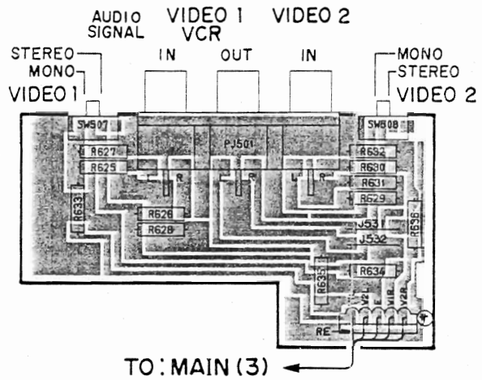
Tuner Circuit Board (4)



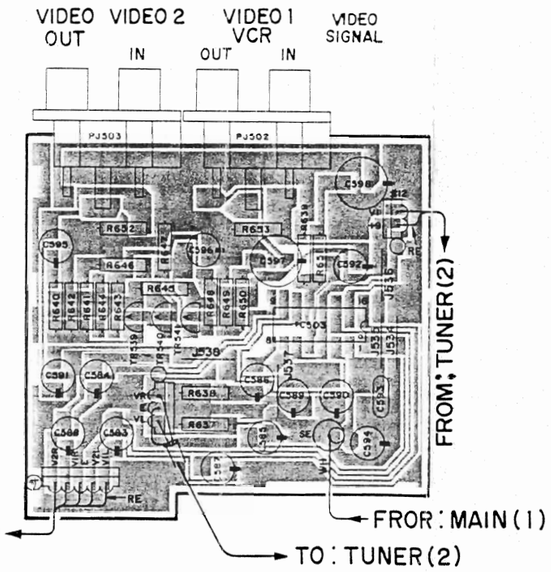
Tuner Circuit Board (5)



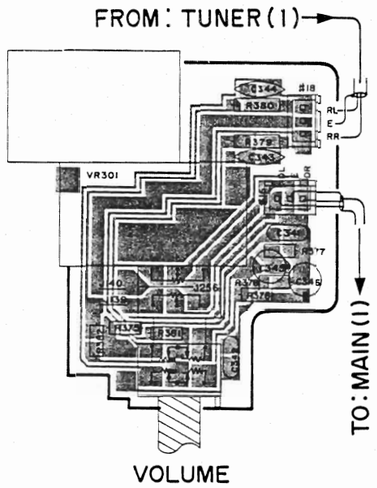
Main Circuit Board (2)



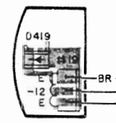
Main Circuit Board (3)



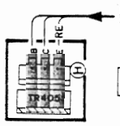
Tuner Circuit Board (3)



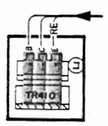
Tuner Circuit Board (6)



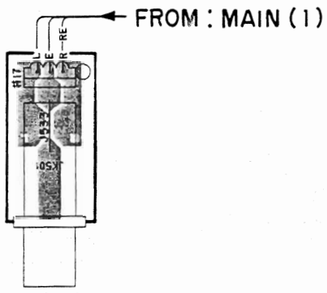
Tuner Circuit Board (7)



Tuner Circuit Board (8)

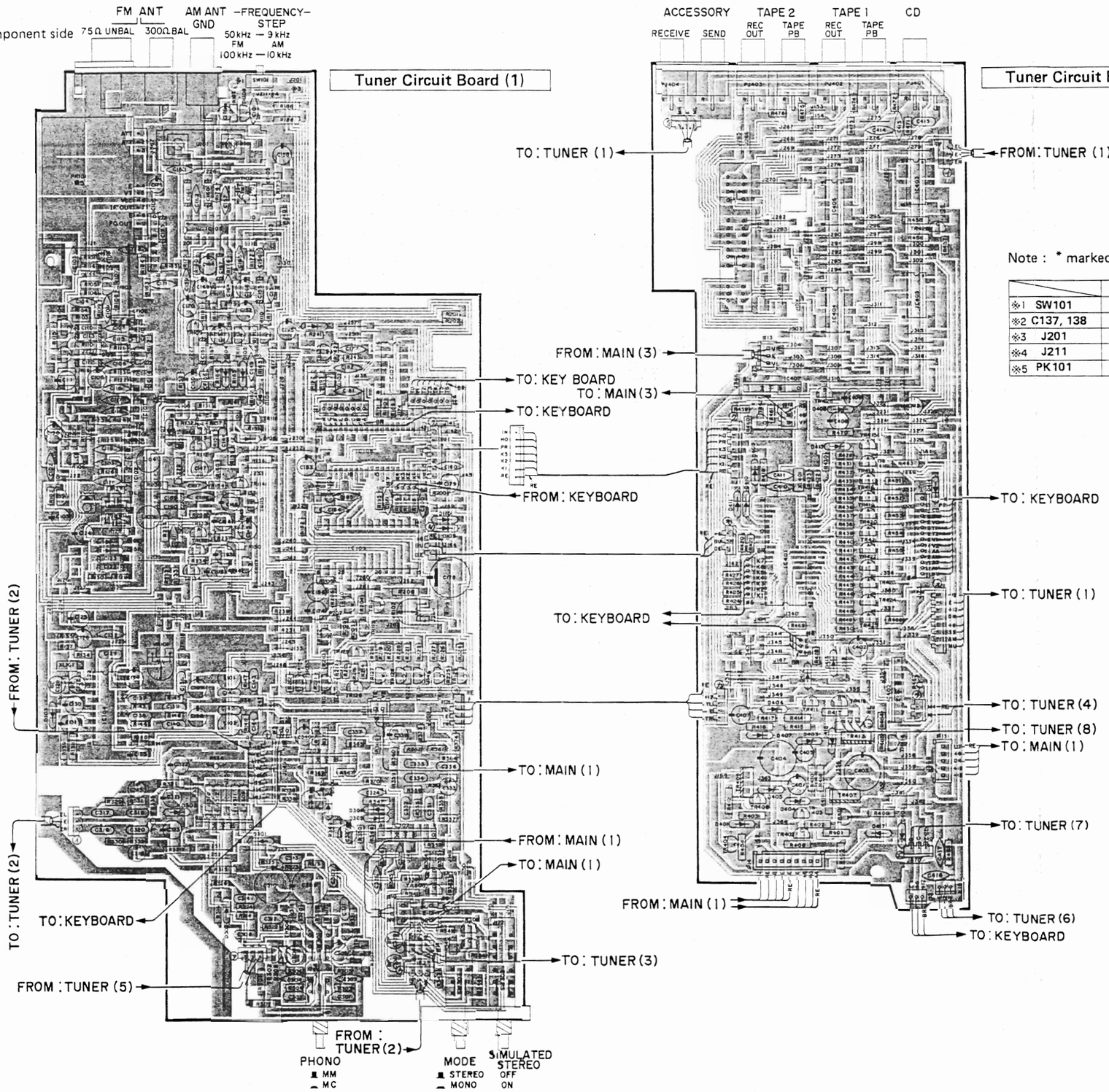


Main Circuit Board (5)



■ PRINTED CIRCUIT BOARD(Pattern side)

Note)
文字面 : Component side



Note)
: Cylindrical Ceramic Capacitor

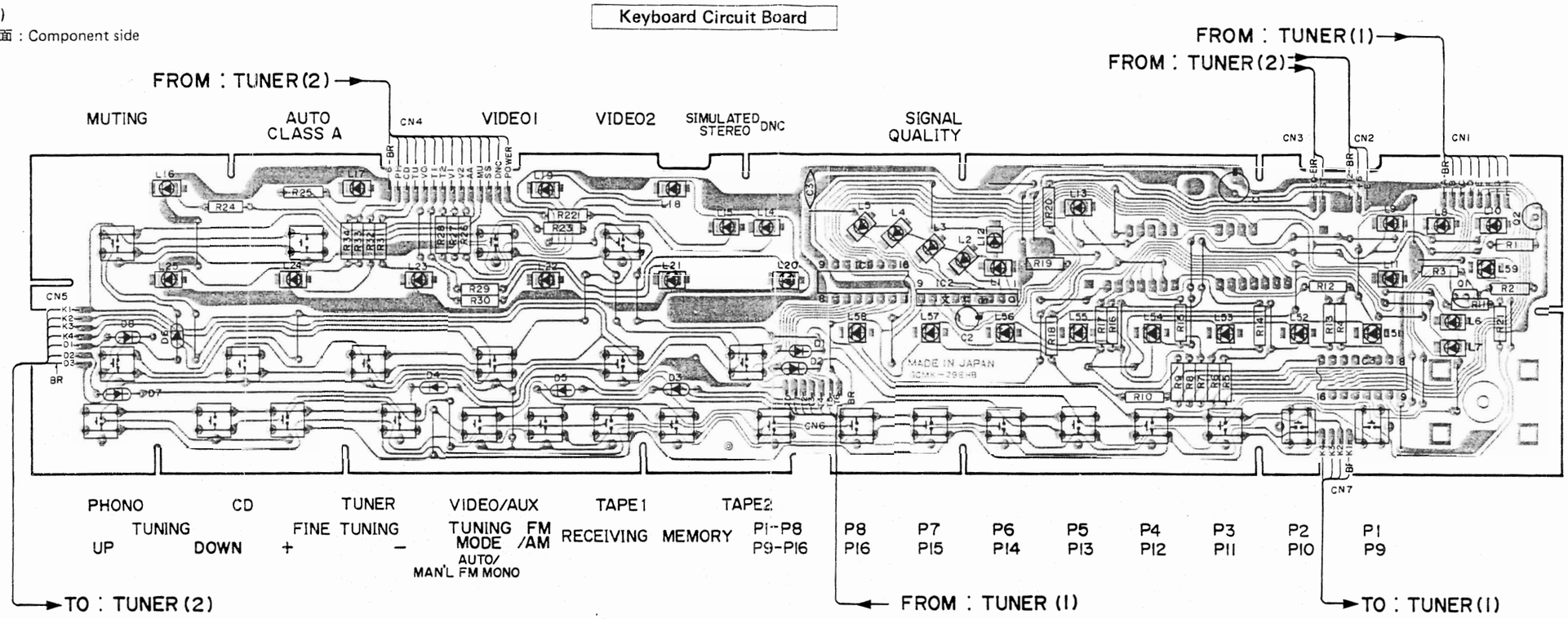
Note : * marked

	R	U, C	A	J
※1 **SW101**	KA40169	OPEN	OPEN	OPEN
※2 **C137, 138**	1500P	1500P	1000P	1000P
※3 **J201**	OPEN	OPEN	SHORT	SHORT
※4 **J211**	OPEN	SHORT	OPEN	SHORT
※5 **PK101**	PA00081	PA00081	PA00081	PA00071

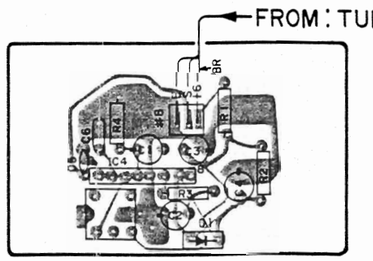
■ PRINTED CIRCUIT BOARD(Pattern side)

Note)
文字面 : Component side

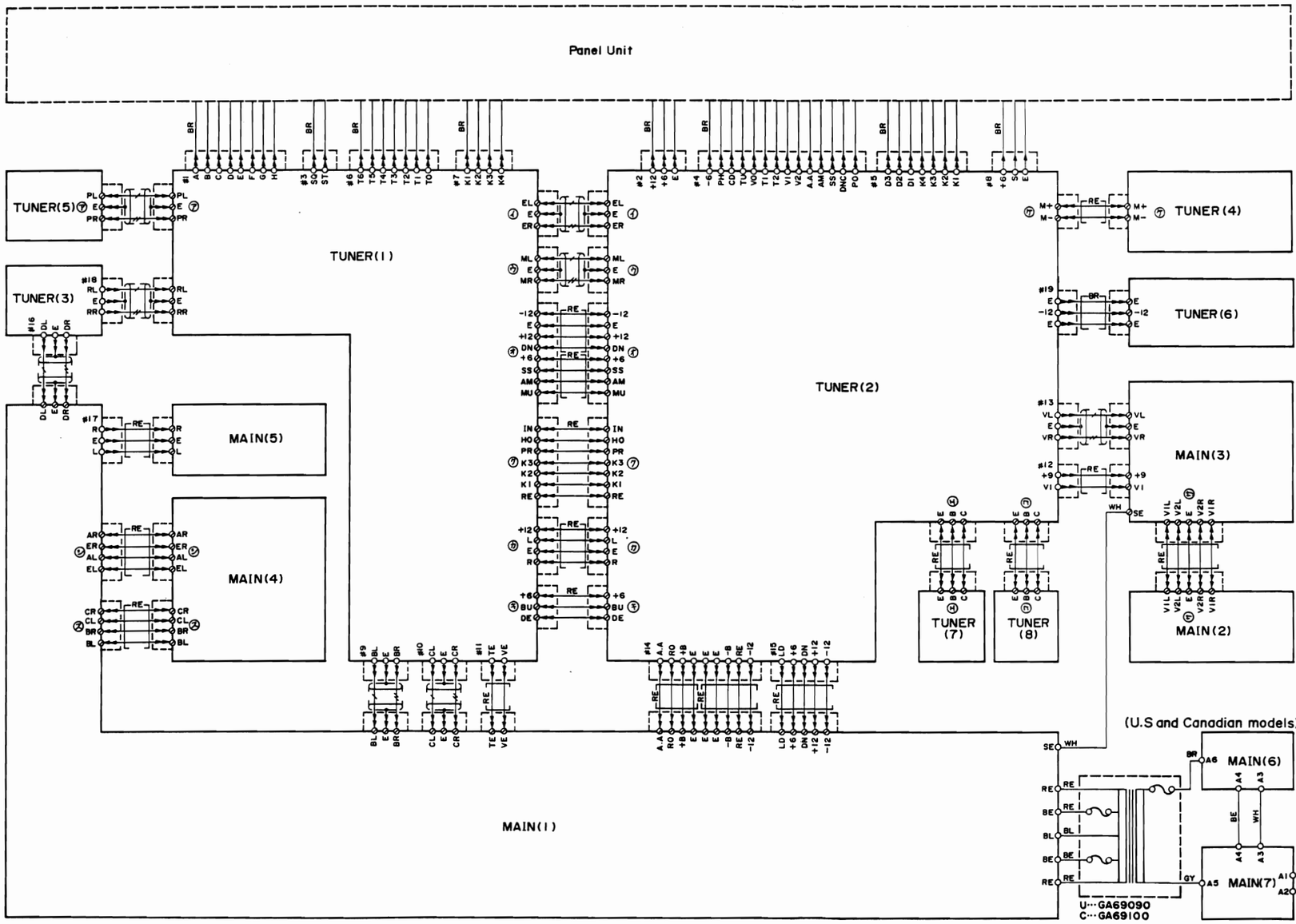
Keyboard Circuit Board



Remote Control Circuit Board



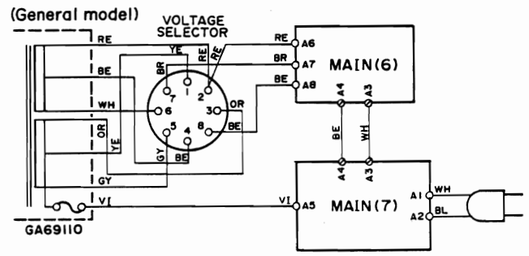
■ WIRING



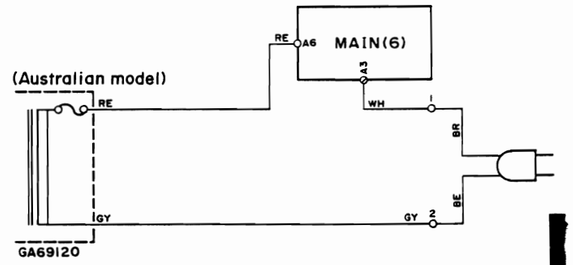
VOLTAGE SELECTOR

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

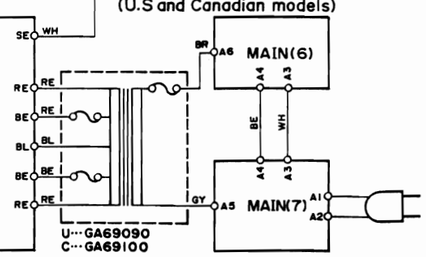
(General model)



(Australian model)

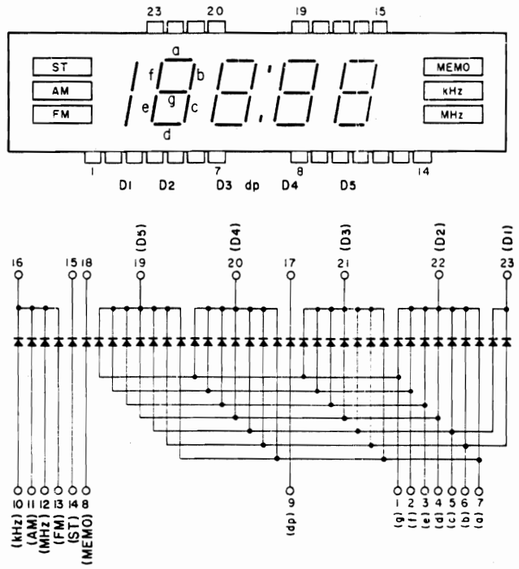


(U.S and Canadian models)



■ CIRCUIT DATA

- 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 (Frequency Display, L6 ~ L13, L51 ~ L58)

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 (L7)
T2 [15 Pin]	LOCAL (L8)	D1 b	D1 c	AUTO RX (L9)	DX (L10)	AUTO (L11)		P1–8 (L6)
T1 [2 Pin]	P-1/9 (L51)	P-2/10 (L52)	P-3/11 (L53)	P-4/12 (L54)	P-5/13 (L55)	P6/14 (L56)	P-7/15 (L57)	P8/16 (L58)
T0 [14 Pin]	MEMO	CSL (L12)	kHz	AM	MHz	FM		FINE (L13)

- MATRIX OF INPUT KEY

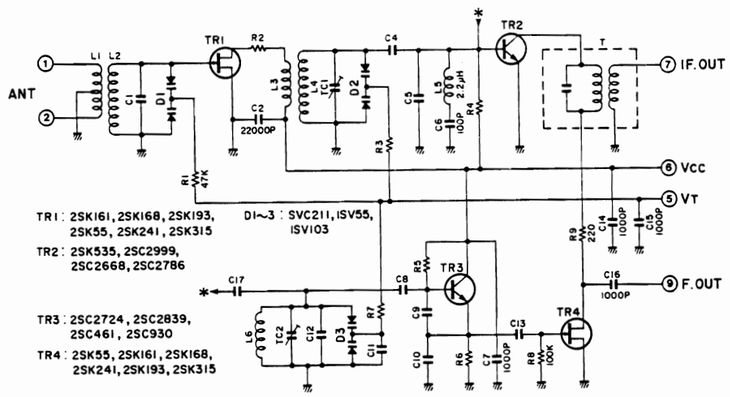
IC107 / IC108	T1 [2 Pin]	T2 [15 Pin]	T3 [1 Pin]	T4 [6 Pin]	D5 [7 Pin]	T6 [4 Pin]
K1 [3 Pin]	P1/9	P5/13		UP	P1-8/ P9-16	
K2 [4 Pin]	P2/10	P6/14		DOWN	FM/AM	
K3 [5 Pin]	P3/11	P7/15	AUTO/ MAN'L	FINE UP	RECEIVING MODE	
K4 [6 Pin]	P4/12	P8/.6	MEMORY	FINE DOWN		TEST (OFFSET)

- 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

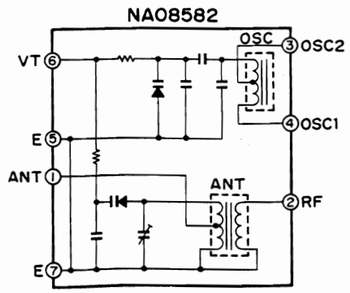
- FRONT END PACK (PK101)

PA00081

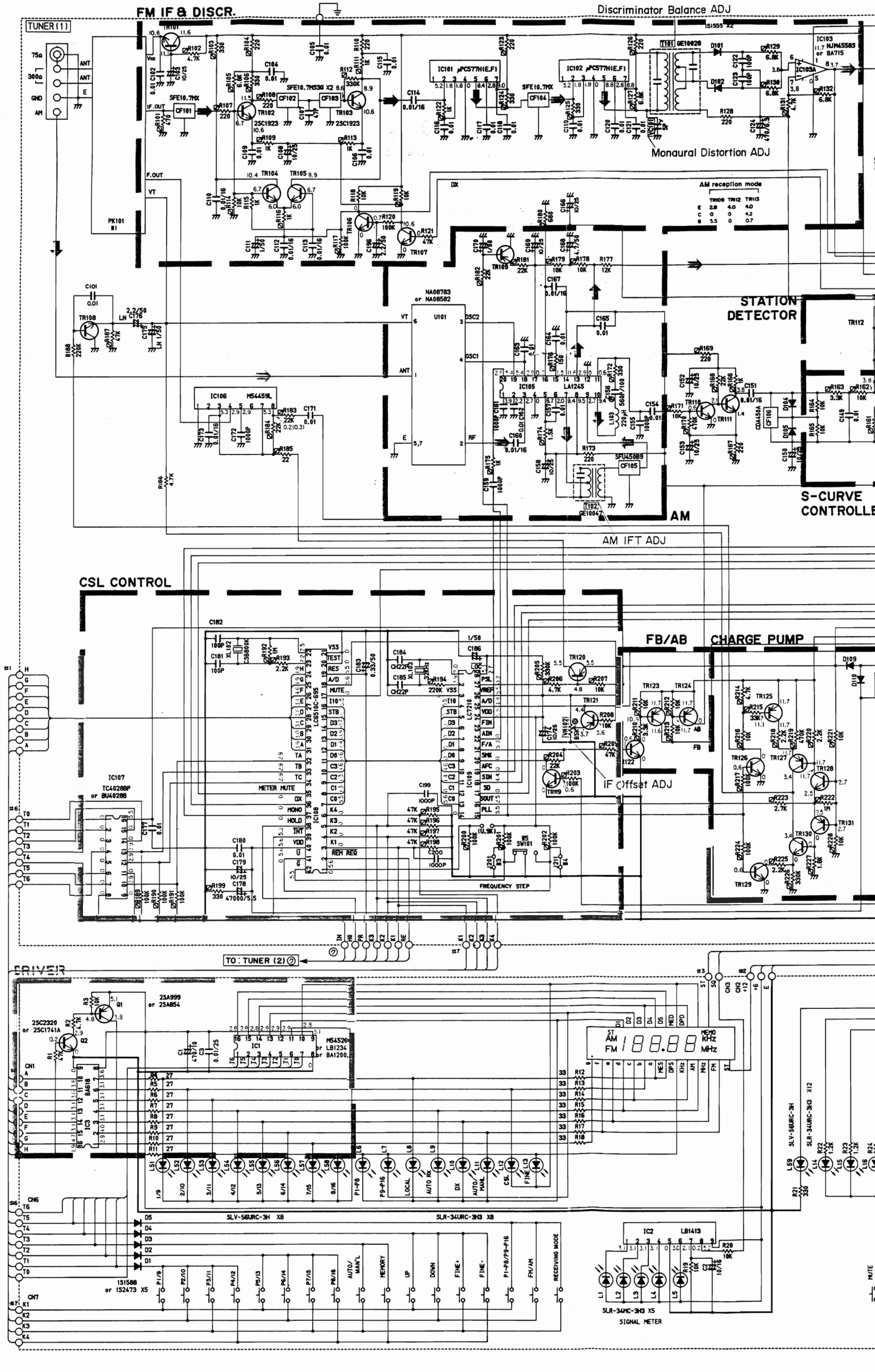


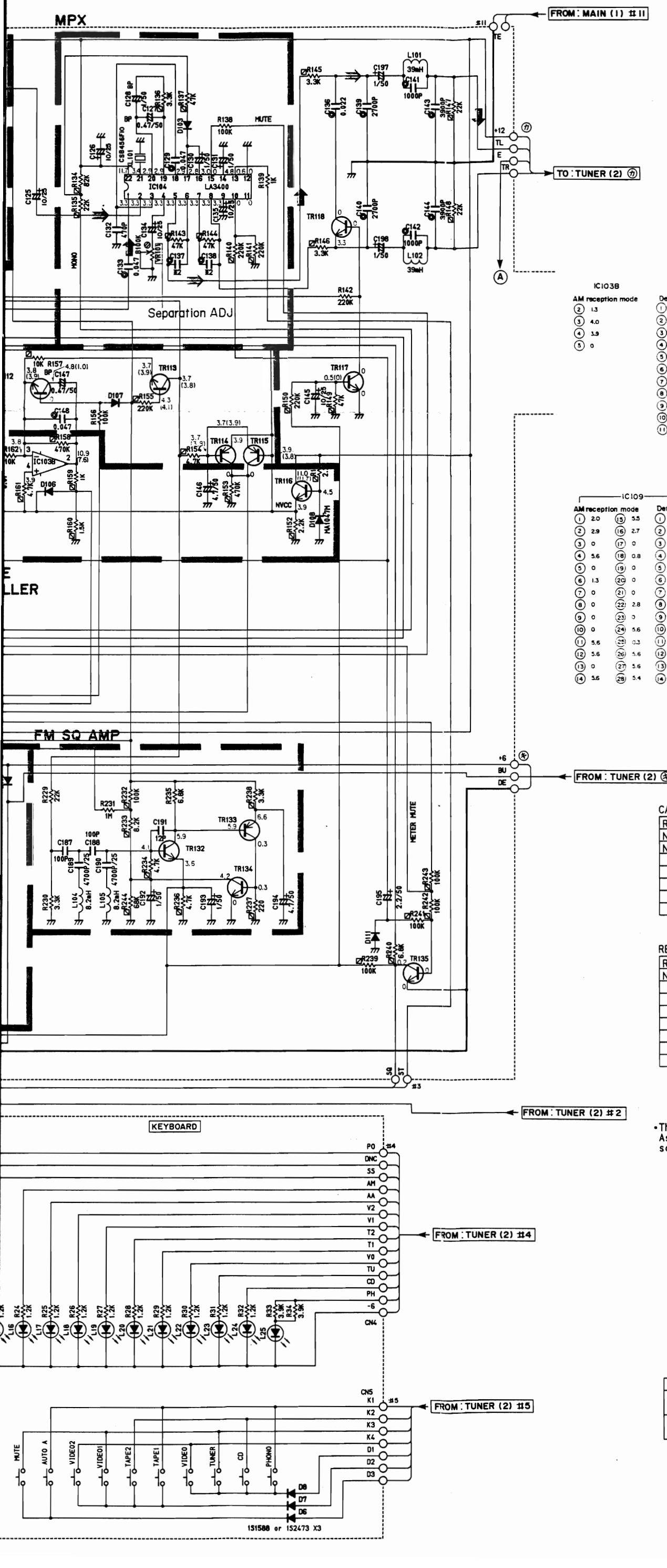
- AM Coil Pack (U101)

NA08582



■ SCHEMATIC DIAGRAM





CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	#
NO MARK	CERAMIC CAPACITOR	
◎	POLYESTEL FILM CAPACITOR (Mylar)	
○	POLYSTYRENE FILM CAPACITOR	##
ⓘ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

RESISTOR

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

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

		J	U.C	R	A
#1	PK101	PA00071	PA00081	→	→
#2	C137,138	1000P ◎	1500P ◎	→	1 1000P ◎
#3	J201	SHORT	OPEN	→	SHORT
#4	J211	SHORT	→	OPEN	→
#5	SW101	OPEN	→	KA40169	OPEN

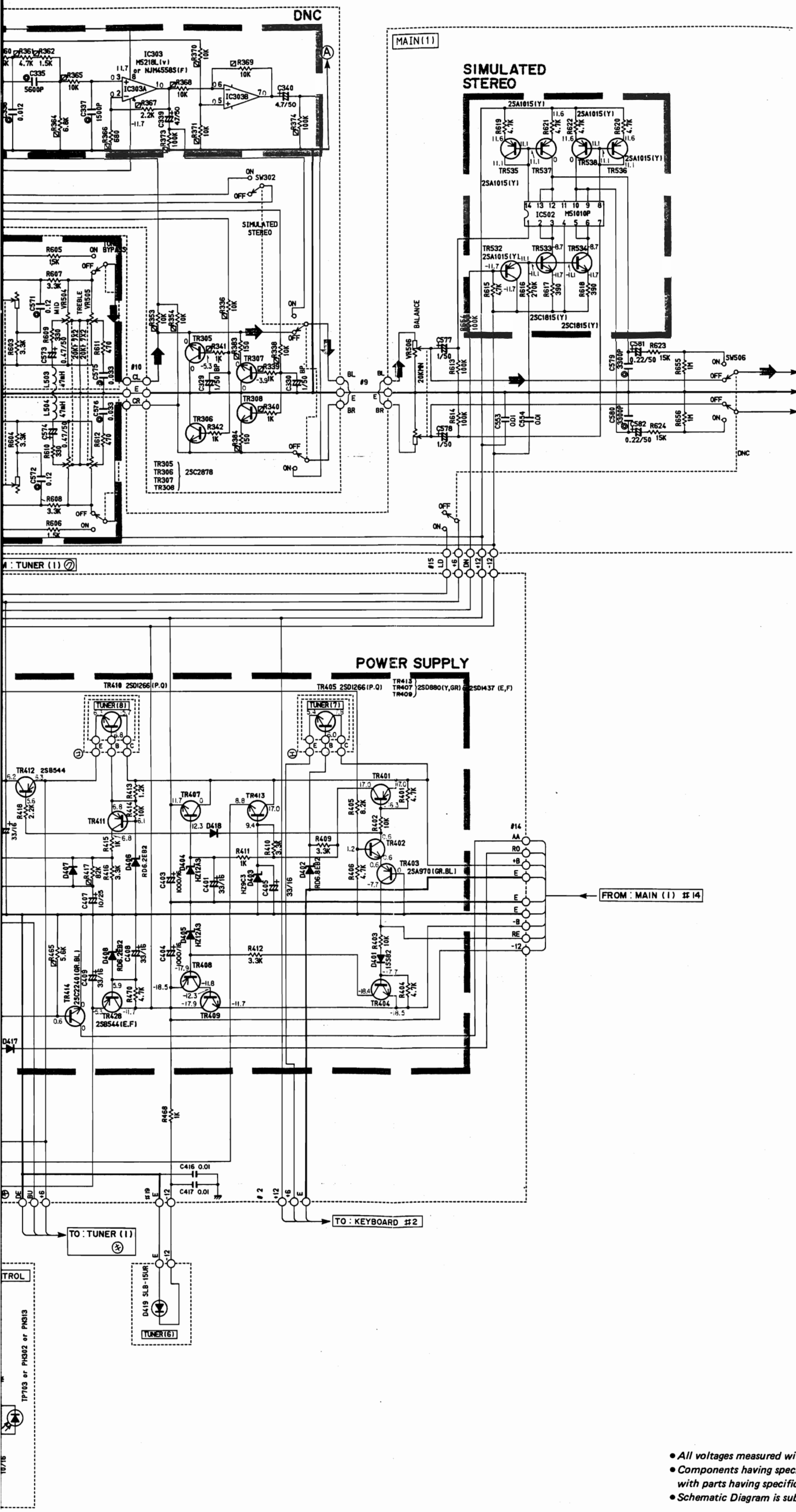
•NOTICE
(U) ..... U.S.A model
(C) ..... Canadian model
(A) ..... Australian model
(R) ..... General model
(J) ..... Japan model

UNLESS OTHERWISE SPECIFIED :

DIODES ARE 1S1555 or 1S2473
PNP TRANSISTORS ARE 2SA933S(Q.R) or 2SA1015(Y) or 2SA1115(E.F) or 2SA1310(R.S.T)
NPN TRANSISTORS ARE 2SC1815(Y) or 2SC1740S(S.R) or 2SC2603(E.F) or 2SC3312(R.S.T)

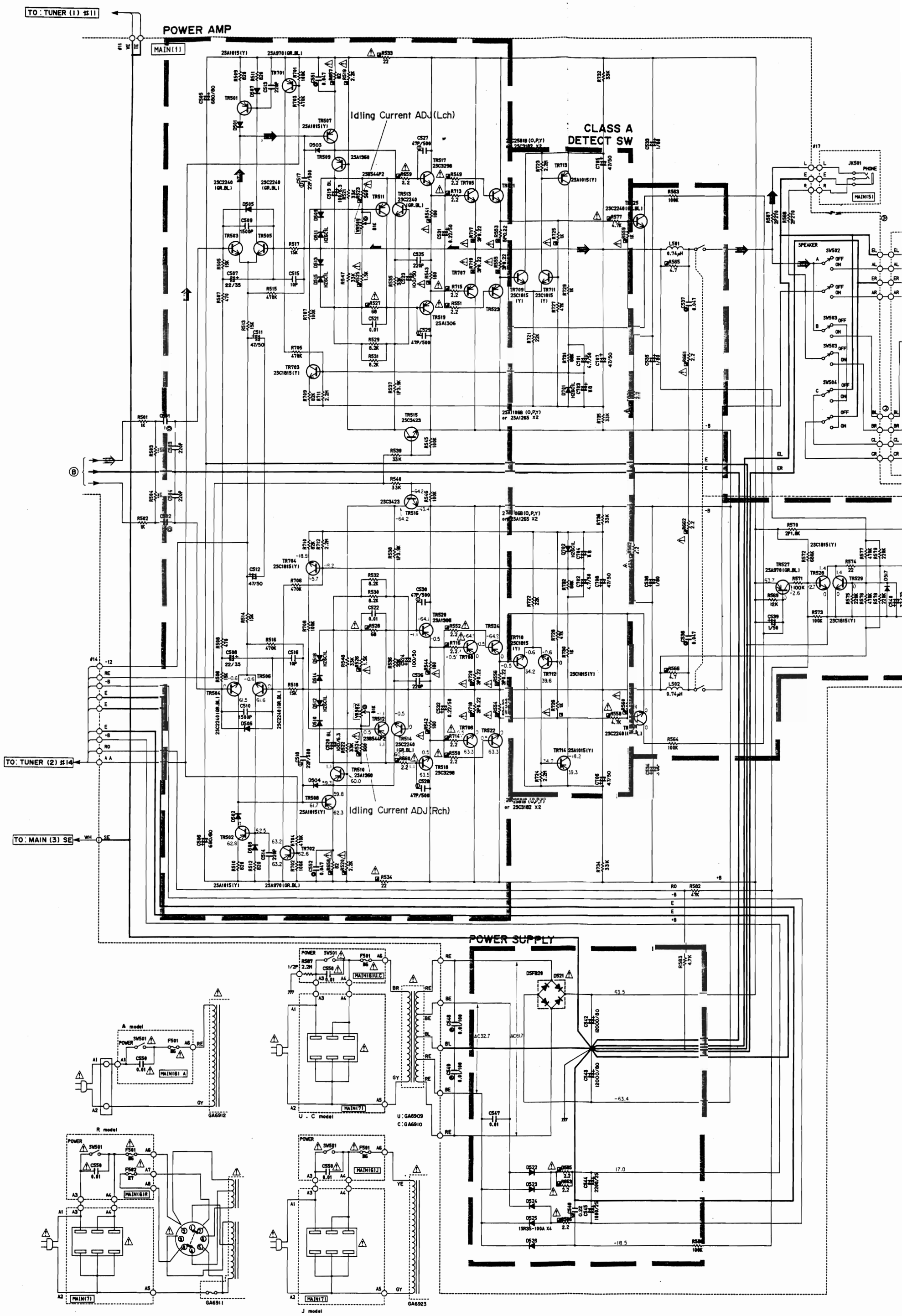
- *All voltages measured with a 10MΩ/VDC electric volt meter, under no-signal condition.*
- *The voltages are measured at FM reception mode. The voltages ( ) are at detuned mode, but the voltages at TR109 ~ TR111 and IC105 are at AM reception model.*
- *Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.*
- *Schematic Diagram is subject to change without notice.*

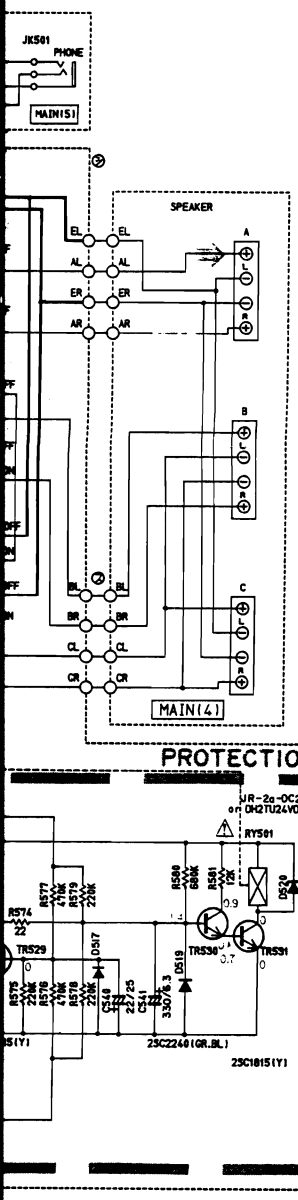
■ SCHEMATIC DIAGRAM



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

■ SCHEMATIC DIAGRAM

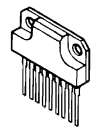




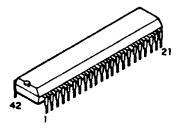
R-9

		R	U.C	A	J	
※6	F501	UL 10A 250V	UL 10A 250V	⑤ T4.0A 250V	UL 10A 250V	
※7	F502	T5.0A 250V	OPEN	———	———	
※8	C703 704	0.47/50	———	———	4.7/50	

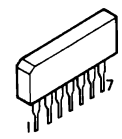
M54542



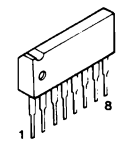
LC6510C-695
LC6505C-696



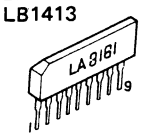
μPC577H (E, F)



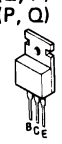
BA6340



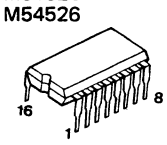
NJM45558S
BA715
LB1413



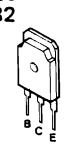
2SD880 (Y, GR)
2SD1437 (E, F)
2SD1266 (P, Q)
2SC3298
2SA1306



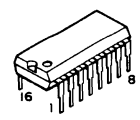
TC4028 BP
BU4028
M51320P
M54526



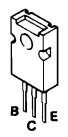
2SA1106B
(O, P, Y)
2SC2581B
(O, P, Y)
2SA1265
2SC3182



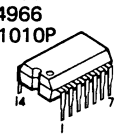
BA618



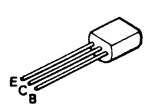
2SA1360
2SC3423



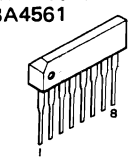
μPD4066BC
LC4066B
LC4966
M51010P



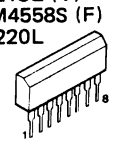
2SB544 (P2)
2SA970 (GR, BL)
2SA1015 (Y)
2SC1815 (Y)
2SC2240 (GR, BL)
2SA933S (Q, R)
2SA1115 (E, F)
2SA1310 (R, S, T)
2SB544
2SC1923
2SC2878
2SC1740S (S, R)
2SC2603 (E, F)
2SC3312 (R, S, T)



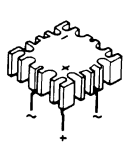
NJM4560S
BA4561



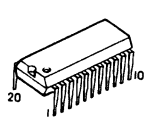
M54459L
M5218L (V)
NJM4558S (F)
M5220L



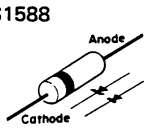
D5FB20



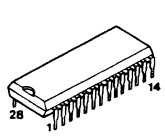
LA1245



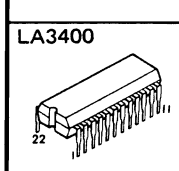
HZ24-2
HZ6C1L
1S2473
1S1555
1SR35-100A
1SS82
HZ12A3.
RD6.2EB2
RD6.8EB2
HZ9C3
MA1047M
1S1588



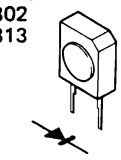
LC7210



LA3400

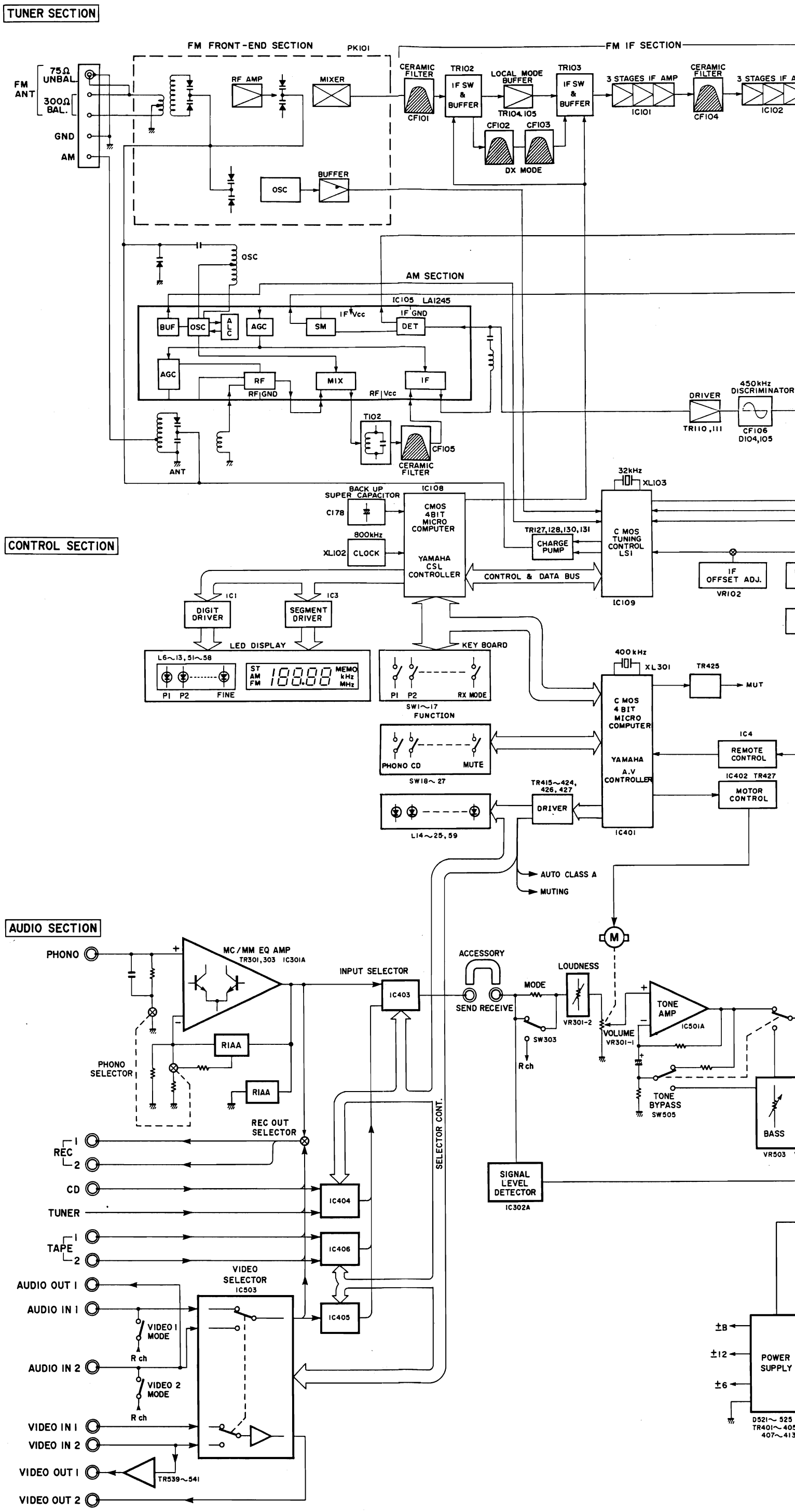


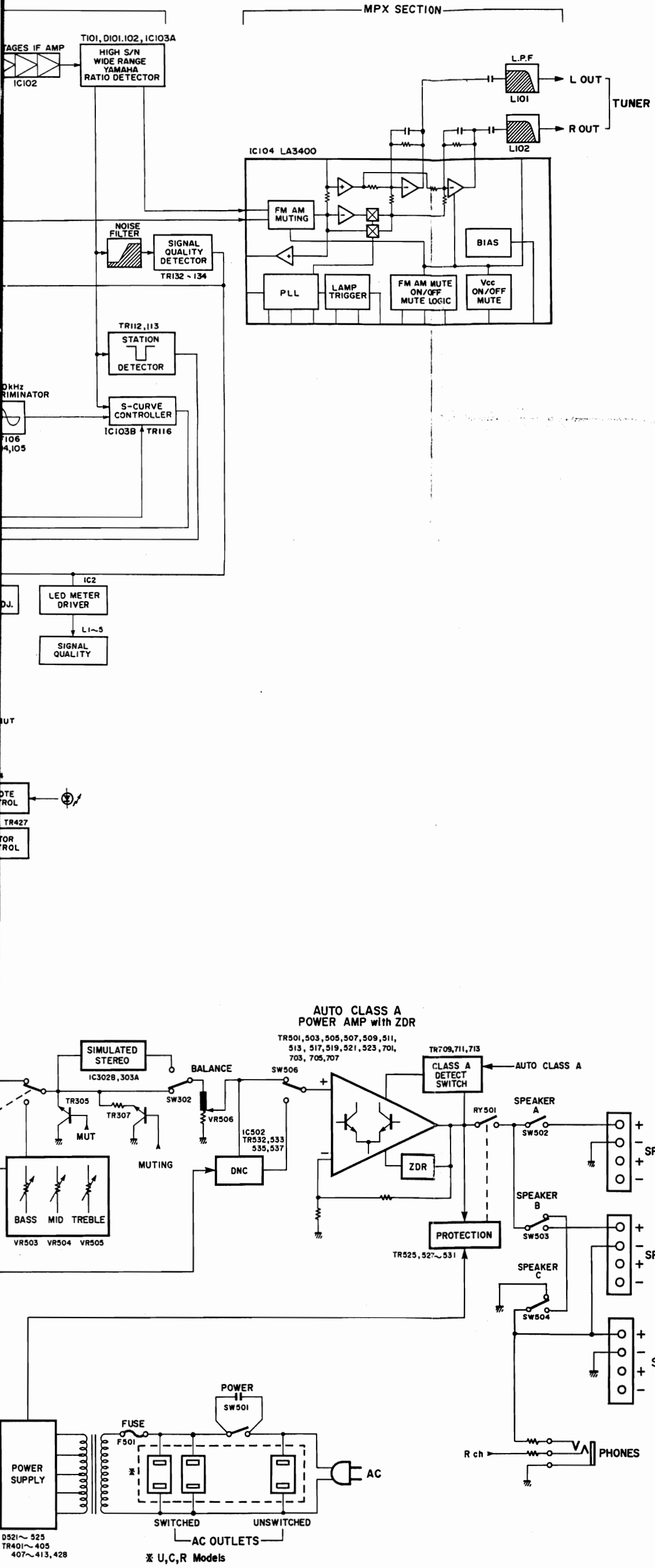
TPS703
PH302
PN313



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

■ BLOCK DIAGRAM



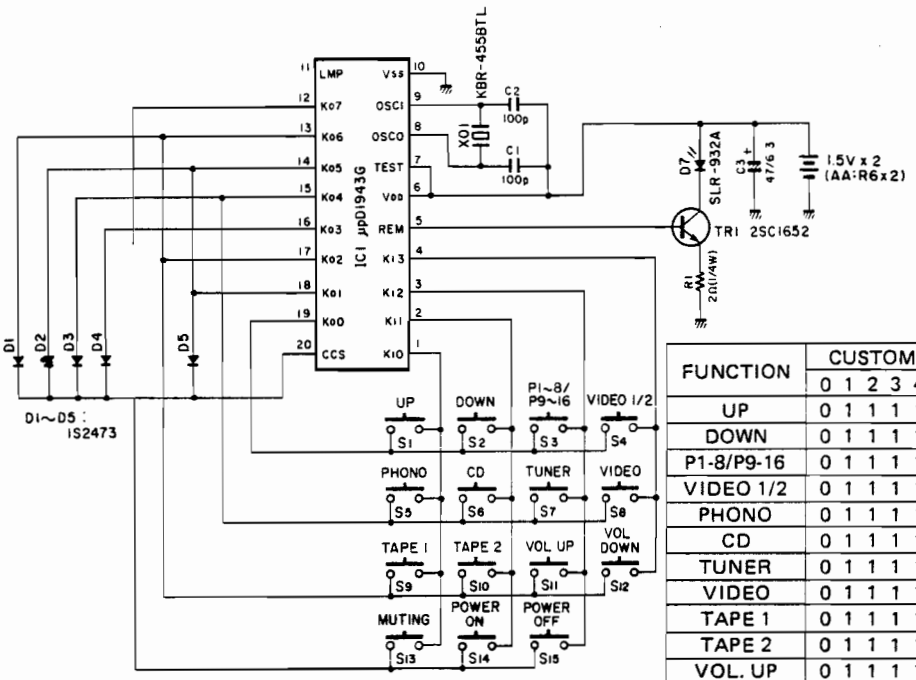


AUTO CLASS A
POWER AMP with ZDR

■ The B speaker and C speaker terminals are configured in series.

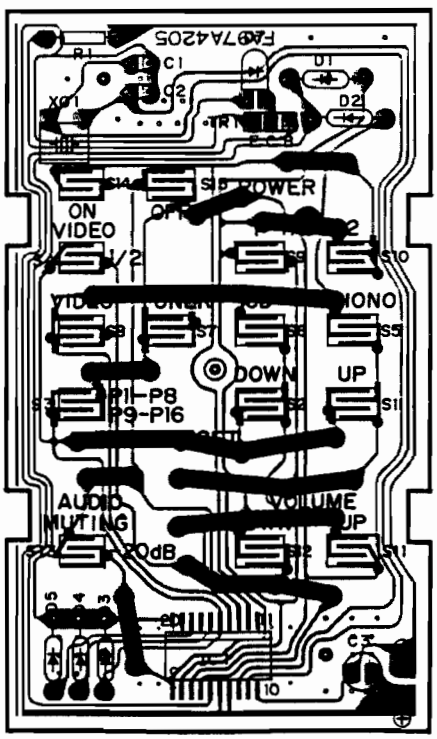
RS-9
REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM

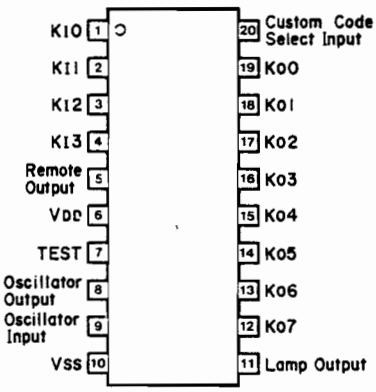


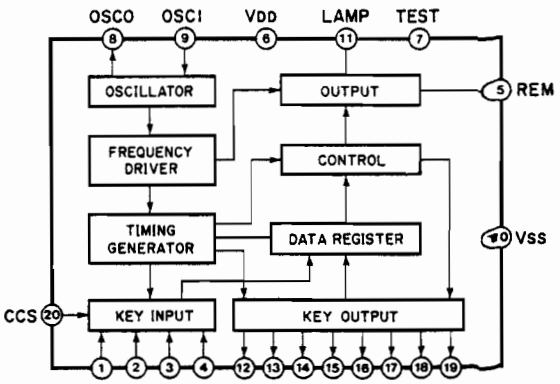
FUNCTION	CUSTOM CODE								DATA CODE							
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
UP	0	1	1	1	1	0	1	0	0	0	0	0	1	0	0	0
DOWN	0	1	1	1	1	0	1	0	1	0	0	0	1	0	0	0
P1-8/P9-16	0	1	1	1	1	0	1	0	0	1	0	0	1	0	0	0
VIDEO 1/2	0	1	1	1	1	0	1	0	1	1	0	0	1	0	0	0
PHONO	0	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
CD	0	1	1	1	1	0	1	0	1	0	1	0	1	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
MUTING	0	1	1	1	1	0	1	0	0	0	1	1	1	0	0	0
POWER ON	0	1	1	1	1	0	1	0	1	0	1	1	1	0	0	0
POWER OFF	0	1	1	1	1	0	1	0	0	1	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 76 50	*Main Circuit Board*		メインシート			R		
※		NA 08 76 70	〃		〃			U		
※		NA 08 76 90	〃		〃			C		
※		NA 08 77 10	〃		〃			A		
※		NA 08 80 50	〃		〃			J		
		FG 21 11 00	Ceramic Cap.	10pF 50V	セラコン	C515,516				
		FG 21 22 20	〃	220pF 50V	〃	C503,504,513,514,525,526				
		FG 21 31 50	〃	1500pF 50V	〃	C509,510				
		FG 24 41 00	〃	0.01μF 50V	〃	C521,522,547,553,554				
		Fi 41 41 00	〃	0.01μF	〃	C550				⚠
		FU 35 12 20	Mica Cap.	22pF 500V	マイカコン	C517,518				
		FU 35 14 70	〃	47pF 500V	〃	C527～530				
		FZ 00 54 10	Electrolytic Cap.	100μF 6.3V	ブラックゲートコン	C519,520				
※		FZ 00 75 90	〃	12000μF 80V	ブロックコン	C542,543				
		UA 25 33 30	Mylar Cap.	3300pF 50V	マイラーコン	C579,580				
		UA 25 43 30	〃	0.033μF 50V	〃	C575,576				
		UA 25 44 70	〃	0.047μF 50V	〃	C537,538,551,552				
		FA 15 51 20	〃	0.12μF 50V	〃	C571,572,593				
		UA 25 52 20	〃	0.22μF 50V	〃	C546				
		UA 55 61 00	〃	1μF 50V	〃	C501,502				
		UM 07 61 00	Electrolytic Cap.	1μF 50V	ケミコン	C561,562				
		UT 45 22 20	Polypropylene Film Cap.	220pF 100V	ポリプロコン	C563,564,567,568				
		UT 45 41 00	〃	0.01μF 100V	〃	C548,549				
		Ui 93 82 20	Electrolytic Cap.	220μF 16V	ケミコン	C594				
		UJ 12 84 70	〃	470μF 10V	〃	C590				
		UW 91 73 30	〃	33μF 6.3V	〃	C565,566				
		UW 91 83 30	〃	330μF 6.3V	〃	C541				
		UW 92 81 00	〃	100μF 10V	〃	C591,592,596				
		UW 94 72 20	〃	22μF 25V	〃	C540,569,570,589,595				
		UJ 45 72 20	〃	22μF 35V	〃	C507,508				
		UJ 16 74 70	〃	47μF 50V	〃	C511,512,705～708				
		UW 96 54 70	〃	0.47μF 50V	〃	C573,574				
		UW 96 54 70	〃	0.47μF 50V	〃	C703,704		R,U,A,C		
		UW 96 64 70	〃	4.7μF 50V	〃	〃		J		
		UJ 16 52 20	〃	0.22μF 50V	〃	C531,532,581,582				
		UJ 16 61 00	〃	1μF 50V	〃	C539,577,578,583～588				
		UW 96 64 70	〃	4.7μF 50V	〃	C701,702				
		UW 82 84 70	〃	470μF 10V	〃	C597,598				
		UW 86 81 00	〃	100μF 50V	〃	C523,524				
		UW 84 91 00	〃	1000μF 25V	〃	C545				
		UW 84 92 20	〃	2200μF 25V	〃	C544				
※		UW 88 86 80	〃	680μF 80V	〃	C505,506				
		UW 68 61 00	〃	1μF 80V	〃	C533～536				
		GD 90 06 80	Coil	0.74μH	空芯コイル	L501,502				
※		GE 90 18 60	〃	47mH	コイル	L503,504				
		HJ 35 42 20	Carbon. Resistor	22Ω 1/4W	カーボン抵抗	R574				
		HJ 35 46 80	〃	68Ω 〃	〃	R650,651				
		HJ 35 48 20	〃	82Ω 〃	〃	R652,653				
		HJ 35 51 00	〃	100Ω 〃	〃	R648				
		HJ 35 52 20	〃	220Ω 〃	〃	R591,592,633～636,639,649				
		HJ 35 53 30	〃	330Ω 〃	〃	R609,610,644				

※New Parts (新規部品)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
	HJ 35 53 90	Carbon Resistor	390Ω 1/4W	カーボン抵抗	R617,618				
	HJ 35 54 70	〃	470Ω 〃	〃	R507,508,611,612,645,646				
	HJ 35 58 20	〃	820Ω 〃	〃	R509~512,640				
	HJ 35 61 00	〃	1kΩ 〃	〃	R501,502,595,596,643,729,730				
	HJ 35 61 50	〃	1.5kΩ 〃	〃	R605,606				
	HJ 35 61 80	〃	1.8kΩ 〃	〃	R647				
	HJ 35 62 20	〃	2.2kΩ 〃	〃	R625,626,629,630				
	HJ 35 63 30	〃	3.3kΩ 〃	〃	R603,604,607,608				
	HJ 35 64 70	〃	4.7kΩ 〃	〃	R583,615,619~622				
	HJ 35 65 60	〃	5.6kΩ 〃	〃	R601,602				
	HJ 35 66 80	〃	6.8kΩ 〃	〃	R599,600				
	HJ 35 68 20	〃	8.2kΩ 〃	〃	R529~532				
	HJ 35 71 20	〃	12kΩ 〃	〃	R569,581,642				
	HJ 35 71 50	〃	15kΩ 〃	〃	R505,506,513,514,517,518,623,624				
	HJ 35 72 20	〃	22kΩ 〃	〃	R721,722				
	HJ 35 72 70	〃	27kΩ 〃	〃	R641				
	HJ 35 73 30	〃	33kΩ 〃	〃	R521,522,535,536,539,540,547,548,733~736				
	HJ 35 74 70	〃	47kΩ 〃	〃	R582,727,728				
	HJ 35 76 80	〃	68kΩ 〃	〃	R731,732				
	HJ 35 78 20	〃	82kΩ 〃	〃	R709,710				
	HJ 35 81 00	〃	100kΩ 〃	〃	R545,546,563,564,571,573,584,613,614,637,638,654,701,702,707,708				
	HJ 35 82 20	〃	220kΩ 〃	〃	R575,578,579,627,628,631,632				
	HJ 35 82 70	〃	270kΩ 〃	〃	R593,594,616				
	HJ 35 84 70	〃	470kΩ 〃	〃	R515,516,576,577,597,598,703~706				
	HJ 35 86 80	〃	680kΩ 〃	〃	R572,580				
	HJ 35 91 00	〃	1MΩ 〃	〃	R503,504,655,656				
	HJ 35 92 20	〃	2.2MΩ 〃	〃	R711,712,723,724				
	HG 30 92 20	〃	2.2MΩ 1/2W	〃	R587				
	HL 71 63 90	Metal Oxide Film Resistor	3.9kΩ 1W	酸金抵抗	R537,538				⚠
	HL 72 52 70	〃	270Ω 2W	〃	R567,568				
	HL 32 61 80	〃	1.8kΩ 2W	〃	R570				
	HV 45 32 20	Flame Proof Carbon Resistor	2.2Ω 1/4W	不燃化カーボン抵抗	R549~552,561,562,585,586,659~663,713,716				⚠
	HV 45 34 70	〃	4.7Ω 〃	〃	R565,566				
	HV 45 42 20	〃	22Ω 〃	〃	R533,534				⚠
	HV 45 46 80	〃	68Ω 〃	〃	R527,528				⚠
	HV 45 48 20	〃	82Ω 〃	〃	R657,658				⚠
	HV 45 51 80	〃	180Ω 〃	〃	R541~544				⚠
	HV 45 55 60	〃	560Ω 〃	〃	R523,524				⚠
	HV 45 61 00	〃	1kΩ 〃	〃	R559,560,725,726				⚠
	HV 45 64 70	〃	4.7kΩ 〃	〃	R557,558				⚠
	HV 45 61 50	〃	1.5kΩ 〃	〃	R525,526				⚠
	HV 45 62 20	〃	2.2kΩ 〃	〃	R519,520				⚠
	HZ 00 30 50	Metal Plate Resistor	0.22Ω 5W	金属板抵抗	R553,554				⚠
	HZ 00 23 90	〃	0.22Ω 3W	〃	R555,556,717~720				⚠
※	HS 41 25 60	Potentiometer	10kトク×2	可変抵抗器	VR504,505 BASS,TREBLE				
※	HS 41 25 70	〃	16kトク×2	〃	VR503 LOUDNESS				
※	HS 41 25 80	〃	20kMN	〃	VR506 BALANCE				
	HT 37 03 40	Pre-Set Potentiometer	B1kΩ	半固定抵抗	VR501,502				
	iA 09 70 00	Transistor	2SA970(GR,BL)	トランジスタ	TR527,701,702				
	iA 10 15 20	〃	2SA1015 (Y)	〃	TR501,502,507,508,532,535~538,540,713,714				
※	iA 13 60 00	〃	2SA1360	〃	TR509,510				

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
		iC 18 15 20	Transistor	2SC1815 (Y)	トランジスタ	TR528,529,531,533,534,539,541,703,704,709~712				
		iC 22 40 00	〃	2SC2240 (GR,BL)	〃	TR503~506,513,514,525,526,530				
※		iC 34 23 00	〃	2SC3423	〃	TR515,516				
		iF 00 19 40	Zener Diode	HZ24-2	ツェナーダイオード	D520				
		iF 00 41 60	〃	HZ6C1L	〃	D511,512,515,516,701,702				
		iF 00 06 70	Diode	1S2473	ダイオード	D501~510,513,514,517,519,526	Inter-changeable			
		iF 00 00 40	〃	1S1555	〃	〃				
		iH 00 11 30	Diode Bridge	D5FB20	ダイオードブリッジ	D521				⚠
		iH 00 14 30	Diode	1SR35-100A	ダイオード	D522~525				
		iG 06 69 00	IC	M51010P	IC	IC502				
		iG 09 20 00	〃	M5220L	〃	IC501				
※		iG 14 94 00	〃	M51320P	〃	IC503				
		KA 40 16 90	Slide Switch	SSJ312A	スライドスイッチ	SW507,508 ST/MONO				
		KA 80 27 60	Push Switch		プッシュスイッチ	SW502~504 SPEAKER				
		KA 80 35 20	〃	SDL TV-5	〃	SW501 POWER				⚠
※		KA 80 51 80	〃		〃	SW505,506 TONE BYPASS				
		KB 00 04 00	Fuse	T5.0A 250V	ヒューズ	F502		R		⚠
		KB 00 07 90	〃	T4.0A 250V	〃	F501		A		⚠
		KB 00 13 90	〃	10A 250V	〃	〃		U,C		⚠
		KB 00 14 90	〃	10A 250V	〃	〃		J,R		⚠
※		KC 00 20 20	Relay	DH2TU24VDC	リレー	RY501				⚠
		LB 30 17 60	Phone Jack	Black	ホーンジャック	JK501				
※		LB 20 30 40	Pin Jack	2P	ピンジャック	PJ502,503				
		LB 60 60 90	〃	6P	〃	PJ501				
		LA 00 20 00	Lapping Terminal	P=7.5 2P i-Type	i型ラッピング端子板					
		LA 00 21 10	〃	P=5 2P i-Type	〃					
		LA 00 21 50	〃	P=10 3P i-Type	〃					
		LA 00 23 20	〃	P=7.5 3P i-Type	〃					
※		LA 00 55 90	〃	4P	スピーカーターミナル					
※		LA 00 56 20	〃	8P	〃					
		LB 20 10 60	Fuse Holder Pin	YSH403T	ヒューズホルダーピン			A		
		LB 20 19 70	〃	23165081	〃			J,R,U,C		
		LB 60 42 80	AC Outlet	M7026E	ACアウトレット			J,R,U		
※		LB 60 81 70	〃	M7026D	〃			C		
		LA 00 26 10	Lapping Terminal	P=5 2P L-Type	L型ラッピング端子板			J,R,U,C		
		BB 06 83 70	Ground Metal		アース金具					
		BB 07 07 00	〃		〃					
※		***NA 08 77 70***	***Tuner Circuit Board***		チューナーシート			R		
※		***NA 08 77 80***	〃		〃			U,C		
※		***NA 08 77 90***	〃		〃			A		
※		***NA 08 80 40***	〃		〃			J		
		FG 21 11 20	Ceramic Cap.	12pF 50V	セラコン	C191				
		FG 21 14 70	〃	47pF 50V	〃	C107				
		FG 21 21 00	〃	100pF 50V	〃	C181,182,187,188,324				

※New Parts (新規部品)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	FG 21 22 20	Ceramic Cap.	220pF 50V	セラコン	C303,304,411			
	FG 21 24 70	〃	470pF 50V	〃	C132,343,344,410			
	FG 21 31 00	〃	1000pF 50V	〃	C159,172,199,200,413,414			
	FG 24 41 00	〃	0.01μF 50V	〃	C101,102,104～106,109,115～121,149,154,157,162～165,171,177,180,325,326,416,417			
	Fi 19 12 20	〃	22pF 50V(CH)	〃	C184,185			
	Fi 19 21 00	〃	100pF 50V	〃	C122,123			
	FG 24 31 00	〃	1000pF 50V	〃	C155,161			
	FX 60 08 00	〃	4700pF 25V	〃	C189,190			
	FX 60 07 90	〃	0.01μF 16V	〃	C110,112～114,151,160 167,173			
	FZ 00 64 00	Electrolytic Cap.	47000μF 5.5V	スーパーキャパシタ	C178 } Inter-changeable			
	FZ 00 35 80	〃	47000μF 5.5V	〃	〃 }			
	UA 25 31 00	Mylar Cap.	1000pF 50V	マイラーコン	C141,142			
	UA 25 31 50	〃	1500pF 50V	〃	C307,308,337			
	UA 25 31 00	〃	1000pF 50V	〃	C137,138		J,A	
	UA 25 31 50	〃	1500pF 50V	〃	〃		R,U,C	
	UA 25 32 70	〃	2700pF 50V	〃	C139,140			
	UA 25 33 90	〃	3900pF 50V	〃	C143,144			
	UA 25 35 60	〃	5600pF 50V	〃	C319,320,334,335			
	UA 25 41 10	〃	0.011μF 50V	〃	C301,302,313,314			
	UA 25 41 20	〃	0.012μF 50V	〃	C336			
	UA 25 42 20	〃	0.022μF 50V	〃	C136,317,318			
	UA 25 43 30	〃	0.033μF 50V	〃	C341,342			
	UA 25 43 90	〃	0.039μF 50V	〃	C311,312			
	UA 25 44 70	〃	0.047μF 50V	〃	C129,133,148,415			
	UA 25 52 20	〃	0.22μF 50V	〃	C331,332			
	Ui 91 84 70	Electrolytic Cap.	470μF 6.3V	ケミコン	C124			
※	Ui 91 92 20	〃	2200μF 6.3V	〃	C309,310			
	UK 13 72 20	〃	22μF 16V	BPコン	C315,316			
	UK 16 54 70	〃	0.47μF 50V	〃	C127,147,333			
	UK 16 61 00	〃	1μF 50V	〃	C128,329,330,406			
	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 25 60	Polypropylene Film Cap.	560pF 100V	ポリプロコン	C156			
	UW 93 73 30	Electrolytic Cap.	33μF 16V	ケミコン	C321,401,402,405,408,409,412			
	UW 93 81 00	〃	100μF 16V	〃	C323			
	UW 94 71 00	〃	10μF 25V	〃	C103,108,125,126,134,135,145,150,152,153,158,166,169,174,179,305,306,407			
	UW 84 83 30	〃	330μF 25V	〃	C322			
	UJ 14 73 30	〃	33μF 25V	〃	C327,328			
	UJ 16 53 30	〃	0.33μF 50V	〃	C183,345,346			
	UJ 16 61 00	〃	1μF 50V	〃	C111,130,131,170,186,192,193,197,198			
	UW 96 62 20	〃	2.2μF 50V	〃	C195,196			
	UW 96 64 70	〃	4.7μF 50V	〃	C146,168,194,339,340			
	UW 83 91 00	〃	1000μF 16V	〃	C403,404			
	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 30 04 30	RF Inductor	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			
	GG 00 04 20	AM Ceramic Discriminator	CDA450A	AMセラミックディスクリ	CF106			

※New Parts（新規部品）

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	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	XL401			
	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			
	FY 00 01 90	Trimmer Cap.	5pF	トリマーコン	VC101			
	HJ 35 52 20	Carbon Resistor	220Ω 1/4W	カーボン抵抗	R110,128,173			
	HJ 35 41 00	〃	10Ω 〃	〃	R301,302			
	HJ 35 54 70	〃	470Ω 〃	〃	R327,328			
	HJ 35 61 00	〃	1kΩ 〃	〃	R115,139,411,415,468			
	HJ 35 61 20	〃	1.2kΩ 〃	〃	R333,413			
	HJ 35 62 20	〃	2.2kΩ 〃	〃	R418,463			
	HJ 35 63 30	〃	3.3kΩ 〃	〃	R230,409,410,412,416			
	HJ 35 64 70	〃	4.7kΩ 〃	〃	R186,315,316,401,404,406,470			
	HJ 35 66 80	〃	6.8kΩ 〃	〃	R235,419			
	HJ 35 68 20	〃	8.2kΩ 〃	〃	R405			
	HJ 35 71 00	〃	10kΩ 〃	〃	R118,164,165,208,309~312,402,403,414			
	HJ 35 71 20	〃	12kΩ 〃	〃	R177			
	HJ 35 72 20	〃	22kΩ 〃	〃	R229			
	HJ 35 74 70	〃	47kΩ 〃	〃	R121,456			
	HJ 35 76 80	〃	68kΩ 〃	〃	R379,380			
	HJ 35 78 20	〃	82kΩ 〃	〃	R307			
	HJ 35 81 00	〃	100kΩ 〃	〃	R120,138,156,458			
	HJ 35 82 20	〃	220kΩ 〃	〃	R142,188			
	HJ 35 83 90	〃	390kΩ 〃	〃	R347			
	HJ 35 91 00	〃	1MΩ 〃	〃	R231			
	HV 45 41 00	Flame Proof Carbon Resistor	10Ω 1/4W	〃	R462			
	HV 45 51 00	〃	100Ω 〃	〃	R334,335			
※	HS 31 26 60	Potentiometer with Motor	100kΩ×2 +300kトク×2	モーター付可変抵抗器	VR301 VOLUME			
	HT 37 03 70	Pre-Set Potentiometer	B5kΩ	半固定抵抗	VR102			
	HT 37 04 20	〃	B100kΩ	〃	VR101			
	iA 09 70 00	Transistor	2SA970 (GR,BL)	トランジスタ	TR301~304,403			
	iA 10 15 20	〃	2SA1015 (Y)	〃	TR109,114,115,120,121,123~125,127,131,133,401,408,411,415~425 } Inter-changeable			
	iA 11 15 10	〃	2SA1115 (E,F)	〃	〃 } Inter-changeable			
	iX 60 31 70	〃	2SA1310 (R,S,T)	〃	〃 } Inter-changeable			
	iB 05 44 10	〃	2SB544	〃	TR412,428			
	iC 19 23 00	〃	2SC1923	〃	TR102,103			
	iC 22 40 00	〃	2SC2240(GR,BL)	〃	TR414			
	iC 28 78 00	〃	2SC2878	〃	TR305~308			
	iC 18 15 20	〃	2SC1815 (Y)	〃	TR101,104~108,110~113,116~119,122,126,128~130,132,134,135,402,404,426,427 } Inter-changeable			
	iC 26 03 10	〃	2SC2603 (E,F)	〃	〃 } Inter-changeable			
	iX 60 31 80	〃	2SC3312 (R,S,T)	〃	〃 } Inter-changeable			
	iD 08 80 10	〃	2SD880 (Y,G,R)	〃	TR407,409,413 } Inter-changeable			
※	iD 14 37 00	〃	2SD1437 (E,F)	〃	〃 } Inter-changeable			
※	iD 12 66 00	〃	2SD1266(P,Q)	〃	TR405,410			

※New Parts (新規部品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
		iF 00 00 40	Diode	1S1555	ダイオード	D101,102			
		iF 00 06 70	〃	IS2473	〃	D103~107,109~111,301,302,304~306 407,409~412,414,415,417,418 } Inter-changeable			
		iF 00 00 40	〃	IS1555	〃	〃			
		iF 00 14 00	〃	ISS82	〃	D401			
		iF 00 20 20	LED (Red)	SLB-15UR	LED	D419			
		iX 60 42 90	Zener Diode	HZ12A3	ツェナーダイオード	D404,405			
		iF 00 14 70	〃	RD6.2EB2	〃	D303,406,408,413			
		iF 00 16 70	〃	RD6.8EB2	〃	D402			
		iF 00 33 20	〃	HZ9C3	〃	D403			
		iF 00 66 70	〃	MA1047M	〃	D108			
		iG 03 45 00	IC	μPC577H(E,F)	IC	IC101,102			
		iG 07 68 00	〃	NJM4558S	〃	IC103 } Inter-changeable			
		iG 13 22 00	〃	BA715	〃	〃 } Inter-changeable			
		iG 03 55 00	〃	TC4028BP	〃	IC107 } Inter-changeable			
※		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 05 49 00	〃	M54542	〃	IC402			
		iG 06 16 00	〃	μPD4066BC	〃	IC404~406 } Inter-changeable			
		iG 08 92 00	〃	LC4066B	〃	〃 } Inter-changeable			
		iG 12 18 00	〃	NJM4560S	〃	IC301 } Inter-changeable			
		iG 13 30 00	〃	BA4561	〃	〃 } Inter-changeable			
		iG 14 25 00	〃	LA3400	〃	IC104			
		iG 08 57 00	〃	M5218L (V)	〃	IC302,303,407 } Inter-changeable			
		iG 14 50 00	〃	NJM4558S (F)	〃	〃 } Inter-changeable			
※		iG 14 77 00	〃	LC6510C-695	〃	IC108			
※		iG 14 78 00	〃	LC6505C-696	〃	IC401			
※		iG 14 93 00	〃	LC4966	〃	IC403			
※		KA 40 16 90	Slide Switch	SSJ312A	スライドスイッチ	SW101		R	
※		KA 80 51 10	Push Switch	SUN 2-2 NS	プッシュスイッチ	SW303 MODE			
		KA 80 51 70	〃	SUN 4-2 NS	〃	SW302 SIMULATED STEREO			
※		KA 80 52 00	〃	SUF 4-2 S&NS	〃	SW301 PHONO			
		KA 90 10 70	Remote Switch		リモートスイッチ	SW401 REC OUT			
		LB 20 22 90	Pin Jack	2P	ピンジャック	PJ301,401			
		LB 40 10 30	〃	4P	〃	PJ402~404			
		NA 08 58 20	Coil Pack	AM	AMコイルパック	U101			
		PA 00 08 10	Front End Pack	FE343U	フロントエンドパック	PK101		R,U,A, C	
		PA 00 07 10	〃	BFE346J15	〃	〃		J	
		LA 00 48 40	Antenna Terminal	5P	アンテナ端子板			J	
		LA 00 39 90	〃	5P	〃			R,U,A, C	
		BB 06 83 70	Ground Metal		アース金具				
		CB 09 95 40	Hinge, P.C.B		PCBヒンジ				
		AA 62 64 20	Shield Plate		シールド板				

※New Parts (新規部品)

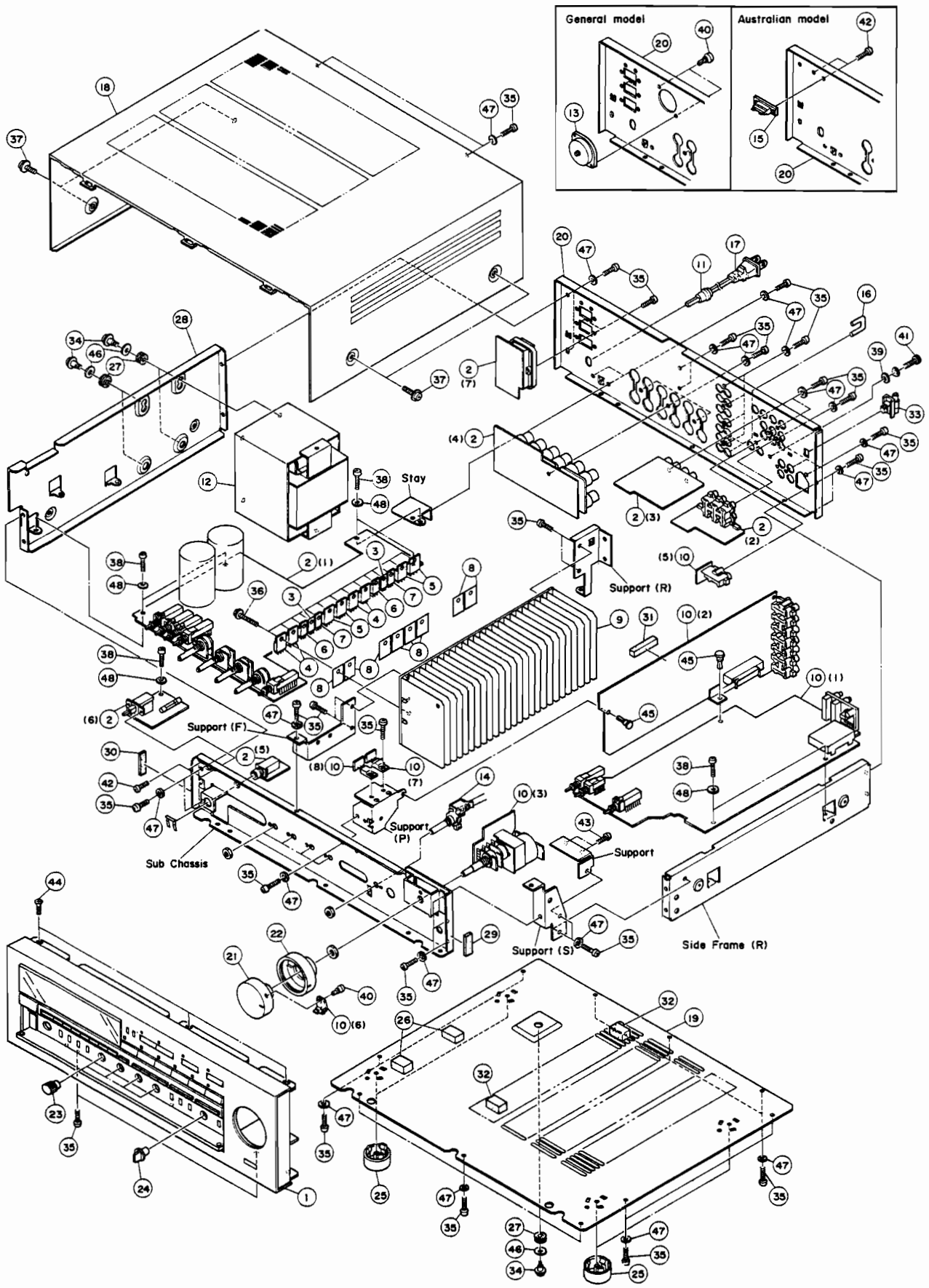
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		*NA 08 83 80*	*Keyboard Circuit Board*		キーボートシート				
		HJ 35 63 90	Carbon Resistor	3.9kΩ 1/4W	カーボン抵抗	R33,34			
		HJ 35 53 30	〃	330Ω 〃	〃	R21			
		HJ 35 74 70	〃	47kΩ 〃	〃	R1			
		HJ 35 71 00	〃	10kΩ 〃	〃	R3,19,20			
		HJ 35 42 70	〃	27Ω 〃	〃	R4～11			
		HJ 35 43 30	〃	33Ω 〃	〃	R12～18			
		HJ 35 64 70	〃	4.7kΩ 〃	〃	R2			
		HJ 35 61 20	〃	1.2kΩ 〃	〃	R22～32			
		FG 24 41 00	Ceramic Cap.	0.01μF 50V	セラコン	C3			
		UW 93 71 00	Electrolytic Cap.	10μF 16V	ケミコン	C2			
		UJ 12 84 70	〃	470μF 10V	〃	C1			
		iF 00 34 20	Diode	1S1588	ダイオード	D1～8 Inter-changeable			
		iF 00 06 70	〃	1S2473	〃	〃 Inter-changeable			
		iC 23 20 00	Transistor	2SC2320	トランジスタ	Q2			
		iA 09 99 00	〃	2SA999	〃	Q1			
		iG 13 20 00	IC	BA618	IC	IC3			
		iG 14 67 00	〃	LB1413	〃	IC2			
		iG 11 71 00	〃	M54526	〃	IC1 Inter-changeable			
		iG 14 54 00	〃	LB1234	〃	〃 Inter-changeable			
		iG 14 72 00	〃	BA12004	〃	〃 Inter-changeable			
		iF 00 87 40	LED (Green)	SLR-34MC-3H3	LED	L1～5			
		iF 00 87 30	〃 (Red)	SLR-34URC-3H3	〃	L6～25			
		iF 00 44 40	〃 (Red)	SLV-56URC-3H	〃	L51～59			
		iF 00 82 90	Frequency Display	LC337-829	表示器				
※		LX 60 01 90	MP Socket	4P	MPソケット	CN7			
※		LX 60 02 00	〃	7P	〃	CN6			
※		LX 60 02 10	〃	7P	〃	CN5			
※		LX 60 02 30	〃	14P	〃	CN4			
※		LX 60 01 60	〃	2P	〃	CN3			
※		LX 60 01 70	〃	3P	〃	CN2			
※		LX 60 02 20	〃	8P	〃	CN1			
※		KX 60 04 10	Switch		MTスイッチ				

※New Parts (新規部品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		***NA 08 83 90***	***Remote Control Circuit Board***		リモコンシート				
		UA 25 41 00	Mylar Cap.	0.01μF 50V	マイラーコン	C6			
		FG 21 24 70	Ceramic Cap.	470pF 50V	セラコン	C5			
		FJ 23 64 70	Electrolytic Cap.	4.7μF 16V	ケミコン	C2			
		UJ 12 74 70	〃	47μF 10V	〃	C3			
		UW 93 71 00	〃	10μF 16V	〃	C1,4			
		HJ 35 44 70	Carbon Resistor	47Ω 1/4W	カーボン抵抗	R3			
		HJ 35 51 00	〃	100Ω 〃	〃	R1			
		HJ 35 61 00	〃	1kΩ 〃	〃	R2			
		HJ 35 82 70	〃	270kΩ 〃	〃	R4			
		iG 14 92 00	IC	BA6340	IC	IC4			
		iF 00 45 90	Photo Diode	TPS703	フォトダイオード	Inter-changeable			
		iF 00 47 10	〃	PH302	〃				
		GE 90 12 30	Coil,Inductor	GE90123	変調コイル				
※		LX 60 01 80	MP Socket	3P	MPソケット	CN8			

※New Parts（新規部品）

■EXPLODED VIEW



■ MECHANISM PARTS

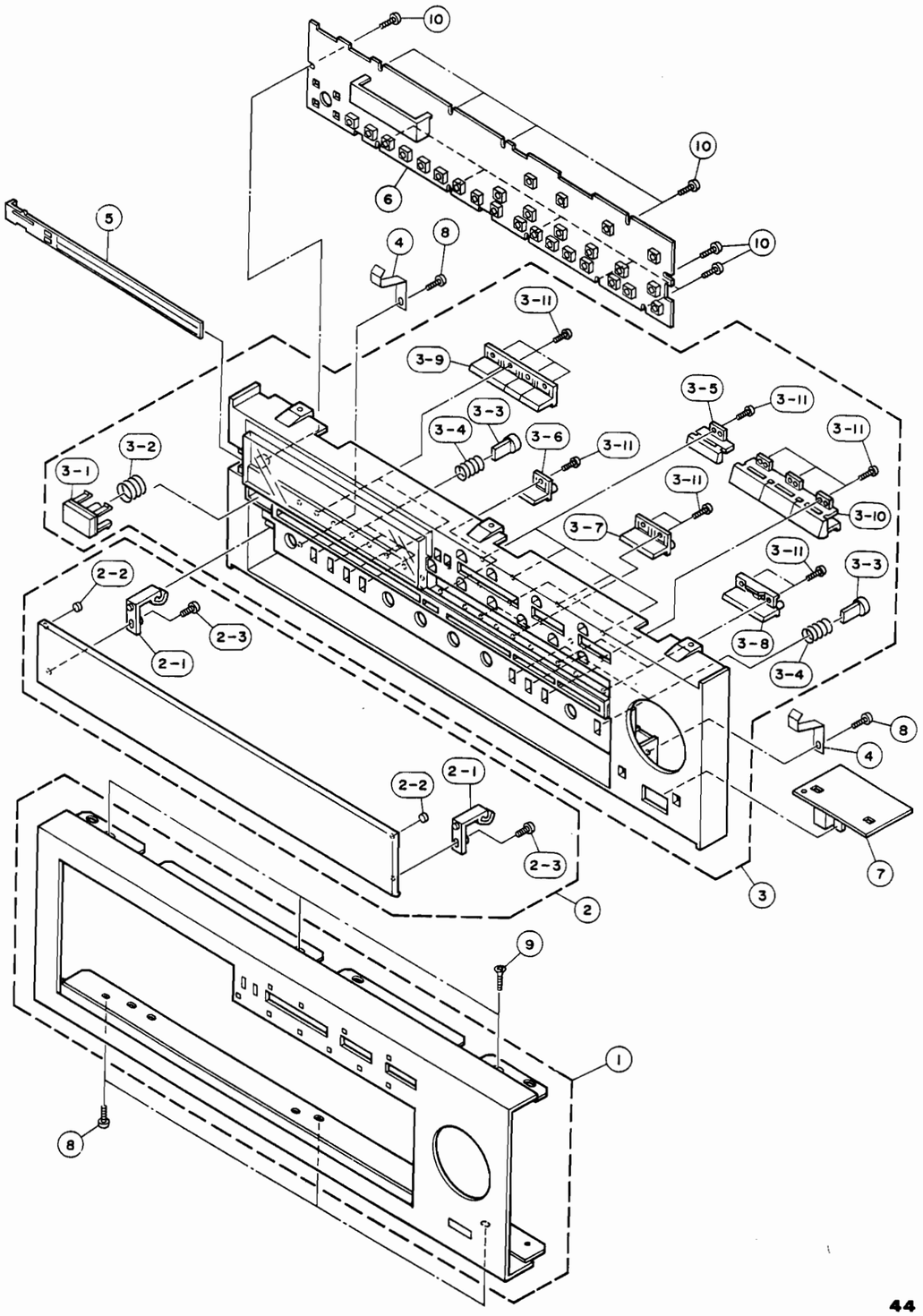
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
※	1	NB 62 65 40	Panel Unit		パネルユニット	Silver				
※	〃	NB 62 65 50	〃		〃	Black				
※	2	NA 08 76 50	Main Circuit Board		メインシート			R		
※	〃	NA 08 76 70	〃		〃			U		
※	〃	NA 08 76 90	〃		〃			C		
※	〃	NA 08 77 10	〃		〃			A		
	3	iB 05 44 10	Transistor	2SB544 (P2)	トランジスタ	TR511,512				
	4	iA 11 06 40	〃	2SA1106B(O,Y)	〃	TR523,524,707,708	Inter-changeable			
※	〃	iA 12 65 30	〃	2SA1265	〃	〃				
	5	iC 25 81 40	〃	2SC2581B(O,Y)	〃	TR521,522,705,706	Inter-changeable			
	〃	iC 31 82 30	〃	2SC3182	〃	〃				
	6	iA 13 06 10	〃	2SA1306	〃	TR519,520				
	7	iC 32 98 10	〃	2SC3298	〃	TR517,518				
	8	iL 00 04 60	Mica Base	AC-238	マイカベース					
	9	BA 09 24 80	Heat Sink		放熱板					
※	10	NA 08 77 70	Tuner Circuit Board		チューナーシート			R		
※	〃	NA 08 77 80	〃		〃			U,C		
※	〃	NA 08 77 90	〃		〃			A		
	11	CB 62 01 90	Cord Stopper	CM-22B	コードストッパー			R,A		
	〃	CB 62 02 00	〃	CM-22C	〃			U,C		
※	12	GA 69 09 00	Power Transformer		電源トランス			U		⚠
※	〃	GA 69 10 00	〃		〃			C		⚠
※	〃	GA 69 11 00	〃		〃			R		⚠
※	〃	GA 69 12 00	〃		〃			A		⚠
	13	LB 20 14 80	Voltage Selector		電圧切換器			R		⚠
※	14	KA 90 71 00	Remote Rotary Switch	ESA-33	リモートロータリースイッチ					
	15	LA 00 29 50	Terminal Board	2P	中継端子台			A		
	16	LB 10 11 10	Short Plug		ショートプラグ	ACCESSORY Terminal				
	17	MG 00 09 20	Power Cord	7.5A250V 2.5m	電源コード	Inter-changeable		A		⚠
	〃	MG 00 14 90	〃	7.5A250V 2.5m	〃			A		⚠
	〃	MG 00 14 50	〃	10A125V 1.98m	〃	Inter-changeable		U		⚠
	〃	MG 00 14 60	〃	10A125V 2m	〃			U		⚠
	〃	MG 00 16 30	〃	6A250V 2m	〃			R		⚠
※	〃	MG 00 22 20	〃	10A125V 1.98m	〃			C		⚠
※	18	AA 62 60 40	Top Cover		トップカバー	Silver				
※	〃	AA 62 60 60	〃		〃	Black				
※	19	AA 62 60 30	Bottom Cover		ボトムカバー					
※	20	AA 62 59 20	Rear Panel		リアパネル			R		
※	〃	AA 62 59 30	〃		〃			U,C		
※	〃	AA 62 59 40	〃		〃			A		
※	21	BA 09 24 90	Knob		ツマミ	Silver VOLUME				
※	〃	BA 09 25 00	〃		〃	Black 〃				
※	22	BA 09 25 30	〃		〃	Silver LOUDNESS				
※	〃	BA 09 25 40	〃		〃	Black 〃				
	23	CB 62 08 10	〃		〃	Silver				
	〃	CB 62 08 20	〃		〃	Black				
	24	CB 62 08 30	Switch Knob		スイッチツマミ	Silver REC OUT				
	〃	CB 62 08 40	〃		〃	Black 〃				
	25	CB 62 07 30	Leg	TL-037	トランレッグ					
※	26	CB 64 58 80	Spacer		スペーサー					
	27	CB 09 99 10	Rubber,Cushion		防振ゴム					
※	28	AA 62 59 00	Side Frame(L)		サイドフレーム(L)					
	29	CB 61 93 10	Damper		ダンパー					

※New Parts (新規部品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	30	CB 09 85 70	Spacer		スペーサー				
※	31	CB 64 42 40	Cushion		クッション				
※	32	CB 64 20 50	Damper		ダンパー				
	33	CB 60 74 70	Holder,Antenna		アンテナホルダー				
	34	AA 60 38 50	Screw		段付ネジ				
	35	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCRM3-Bl	バインドタッピングネジ	PACK			
	36	EZ 00 13 50	Cup Screw	3×14FCRM3-Bl	カップスクリュー(Bタイト)				
	37	EK 13 00 20	BW Head Tapping Screw	4×8 FNM3-3g	BWヘッドタッピングネジ	Silver			
	〃	EK 36 50 40	〃	4×8 FCRM3-Bl	〃	Black			
	38	Ei 13 00 86	Binding Head Tapping Screw	3×8 FNM3-3g	バインドタッピングネジ	PACK			
	39	EV 90 13 60	Sems Plain Washer	ϕ10×ϕ3.6×t0.8 FNM3-3g	セムス平座金				
	40	CB 06 88 80	Plastic Rivet		プラスチックリベット			R	
	41	AA 62 73 10	Ground Terminal Screw	3×13	アース端子ネジ				
	42	ED 33 00 66	Binding Head Screw	3×6 FCRM3-Bl	バインド小ネジ	PACK			
	43	Ei 33 00 66	Binding Head Tapping Screw	3×6 FCRM3-Bl	バインドタッピングネジ	PACK			
	44	EO 33 00 66	Flat Head Tapping Screw	3×6 FCRM3-Bl	皿タッピングネジ	PACK			
	45	CB 60 56 20	Plastic Rivet		プラスチックリベット				
	46	EV 20 00 66	Washer	ϕ6	平座金	PACK			
	47	EV 41 30 36	Toothed Lock Washer	ϕ3 FCRM3-Bl	歯付座金	PACK			
	48	EV 20 10 36	Plain Washer	ϕ3 FNM3-3g	平座金	PACK			
		CB 06 92 50	Binding Tie	BK-1	インシュロックタイ				
			Accessories		付属品				
※		PB 06 47 60	Remote Control Transmitter	RS-9	リモコントランスミッター				
※		CB 64 11 40	Station Card		ステーションカード	Silver			
※		CB 64 24 20	〃		〃	Black			
		Mi 08 28 50	FM Q-matching Antenna	FM	FMQマッチアンテナ				
※		Mi 08 88 80	Loop Antenna	AM	ループアンテナ				
			Dry Battery	SUM-3 (AA,R6)	単3乾電池				

※New Parts (新規部品)

■EXPLODED VIEW(Panel Unit)

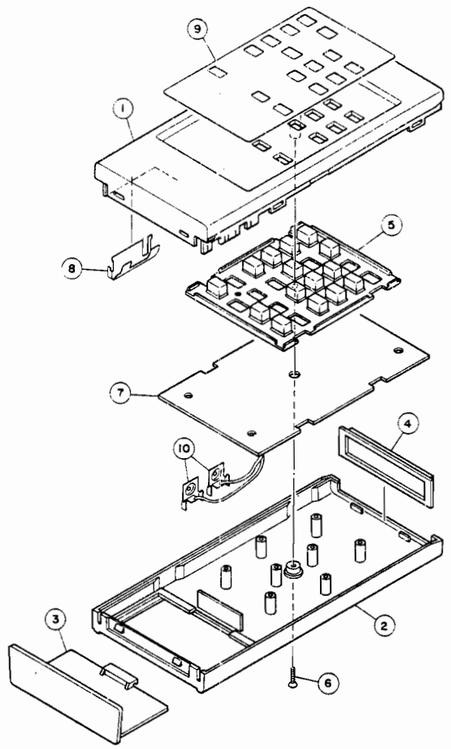


■MECHANISM PARTS(Panel Unit)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		***NB 62 65 40***	***Panel Unit***		パネルユニット	Silver			
※		***NB 62 65 50***	〃		〃	Black			
※	1	NB 62 82 70	Front Panel Ass'y		フロントパネルAss'y	Silver			
※	〃	NB 62 82 80	〃		〃	Black			
※	2	NB 62 82 90	Sealing Panel Ass'y		シーリングパネルAss'y	Silver			
※	〃	NB 62 83 00	〃		〃	Black			
※	2-1	XX 65 00 10	Hinge		ヒンジ	Silver			
※	〃	XX 65 00 20	〃		〃	Black			
※	2-2	CB 62 08 90	Cushion		クッション	Silver			
※	〃	CB 62 19 30	〃		〃	Black			
	2-3	EA 33 00 66	Pan Head Screw	3×6 FCRM3-BI	ナベ小ネジ	PACK			
※	3	NB 62 65 60	Sub Chassis Unit		サブシャーシユニット	Silver			
※	〃	NB 62 65 70	〃		〃	Black			
	3-1	NB 61 42 10	Button		ボタン	Silver POWER			
	〃	NB 61 42 20	〃		〃	Black 〃			
	3-2	AA 61 78 80	Spring		スプリング				
※	3-3	CB 62 08 50	Push Button		プッシュボタン	Silver			
※	〃	CB 62 08 60	〃		〃	Black			
	3-4	AA 61 78 90	Spring		スプリング				
※	3-5	XX 65 00 30	Button,V		Vボタン	Silver			
※	〃	XX 65 00 40	〃		〃	Black			
	3-6	CB 63 99 20	Button,Push	1P	ボタンプッシュ	Silver			
	〃	CB 63 99 30	〃	1P	〃	Black			
	3-7	CB 63 99 40	〃	2P	〃	Silver			
	〃	CB 63 99 50	〃	2P	〃	Black			
	3-8	CB 63 99 60	Button Seesaw		ボタンシーソー	Silver			
	〃	CB 63 99 70	〃		〃	Black			
	3-9	CB 64 01 40	Button,Push	4P	ボタンプッシュ	Silver			
	〃	CB 64 01 50	〃	4P	〃	Black			
	3-10	CB 64 01 20	〃	3P	〃	Silver			
	〃	CB 64 01 30	〃	3P	〃	Black			
	3-11	EJ 02 00 66	Pan Head Tapping Screw	2×6 ZMC2-Y	ナベタッピングネジ	PACK			
	4	XX 65 00 50	Spring		バネ				
※	5	XX 65 00 60	Slider		スライダー	Silver			
※	〃	XX 65 00 70	〃		〃	Black			
※	6	NA 08 83 80	Keyboard Circuit Board		キーボードシート				
※	7	NA 08 83 90	Remote Control Circuit Board		リモコンシート				
	8	EJ 33 00 66	Pan Head Tapping Screw	3×6 FCRM3-BI	ナベタッピングネジ	PACK			
	9	EO 33 00 66	Flat Head Tapping Screw	3×6 FCRM3-BI	皿タッピングネジ	PACK			
	10	EJ 02 60 66	Pan Head Tapping Screw	2.6×6 ZMC2-Y	ナベタッピングネジ	PACK			

※New Parts (新規部品)

■EXPLODED VIEW(RS-9)



■PARTS LIST(RS-9)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
		PB 06 47 60	***Remote Control Transmitter***	***RS-9***	リモコントランスミッタ				
※	1	XX 64 99 10	Case (A)		ケース(A)				
※	2	XX 64 24 20	Case (B)		ケース(B)				
	3	XX 64 24 30	Case (C)		ケース(C)				
	4	XX 64 24 40	Filter		フィルター				
※	5	XX 64 99 30	Rubber		ゴム接点				
	6	EO 22 61 06	Flat Head Screw	2.6×10	皿小ネジ	PACK			
※	7	XX 64 99 60	P.C. Board Ass'y		プリント基板Ass'y				
	8	XX 64 24 80	Battery Terminal A		電池電極板A				
※	9	XX 64 99 50	Plate		プレート				
※		XX 64 99 60	P.C. Board Ass'y		プリント基板Ass'y				
		iX 60 16 00	IC	μPD1943G	IC	IC1			
		iX 60 36 10	Transistor	2SC1652	トランジスタ	TR1			
		iX 60 36 00	LED	SLR-932A	LED	D7			
		iF 00 06 70	Diode	1S2473	ダイオード	D1～5			
		QX 60 00 40	Ceramic Resonator	KBR-455BTL	セラミック振動子	X01			
		FG 21 21 00	Ceramic Cap.	100pF 50V	セラコン	C1,2			
		UJ 11 74 70	Electrolytic Cap.	47μF 6.3V	ケミコン	C3			
		HJ 35 32 00	Carbon Resistor	2Ω 1/4W	カーボン抵抗	R1			
	10	XX 64 24 90	Battery Terminal C		電極板C				

※New Parts (新規部品)

R-9

YAMAHA