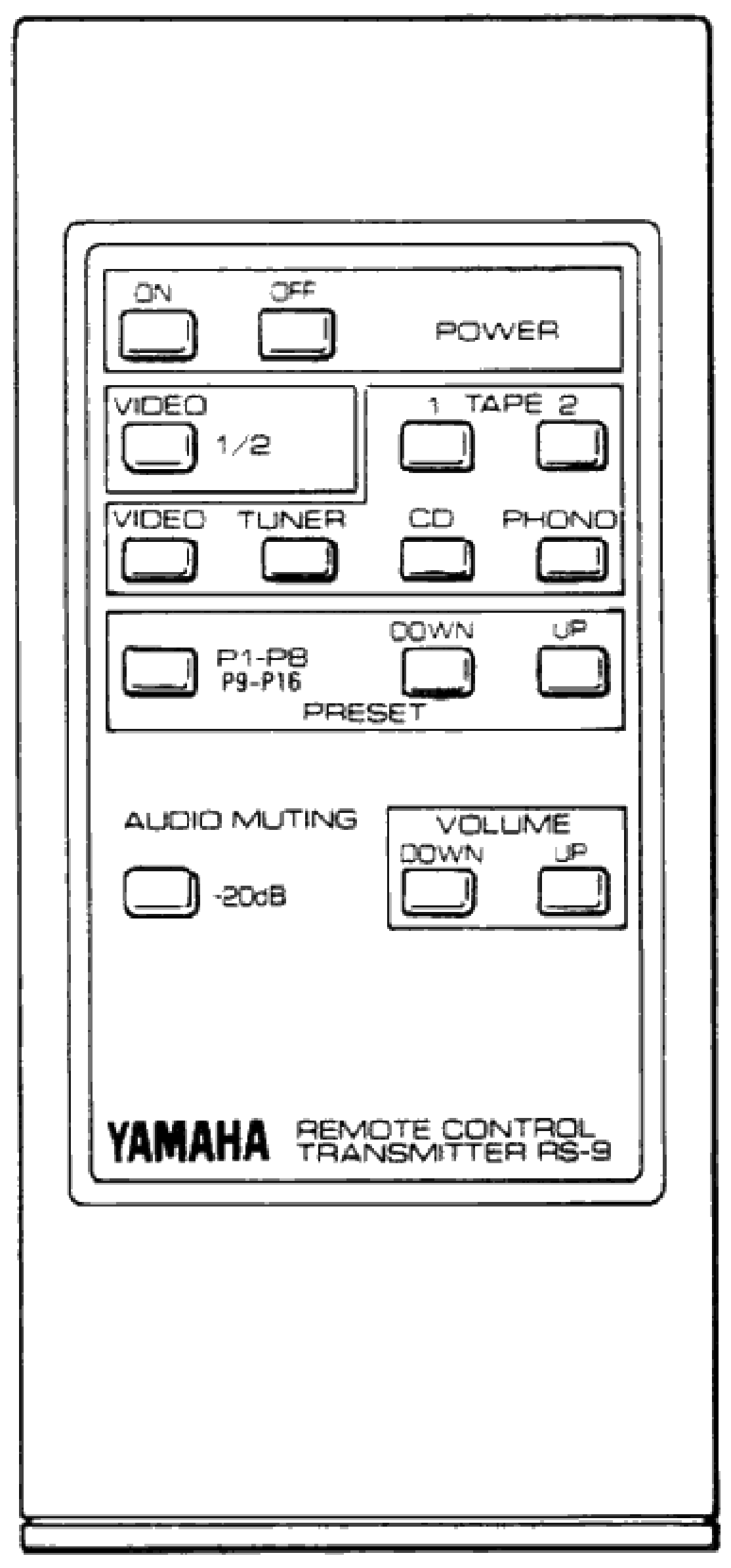
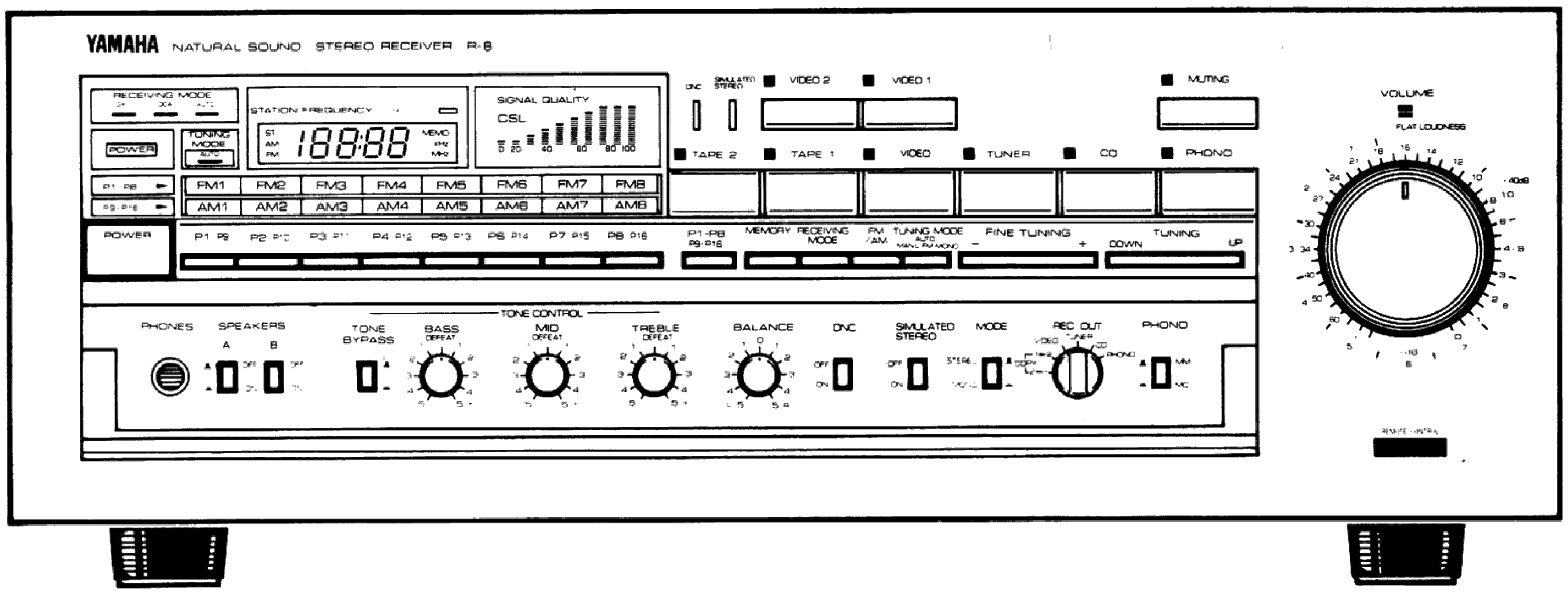
STEREO RECEIVER

R-8

SERVICE MANUAL





IMPORTANT NOTICE

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

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

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

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

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

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

■ CONTENTS

004616

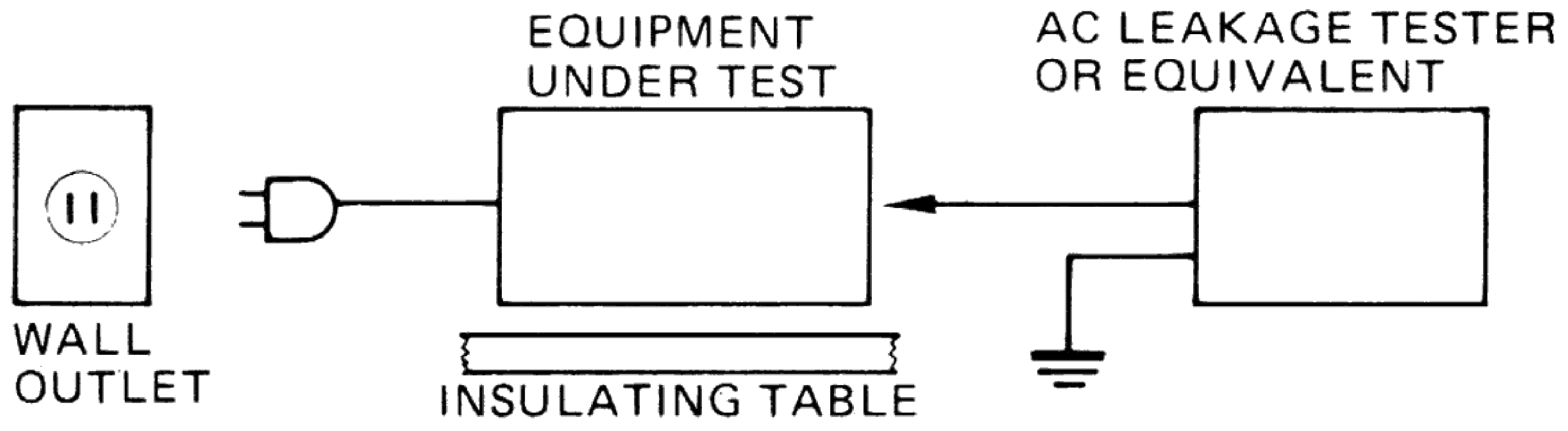
SINCE 1887 YAMAHA
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN
1.8K-2301 Printed in Japan '85.5

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.

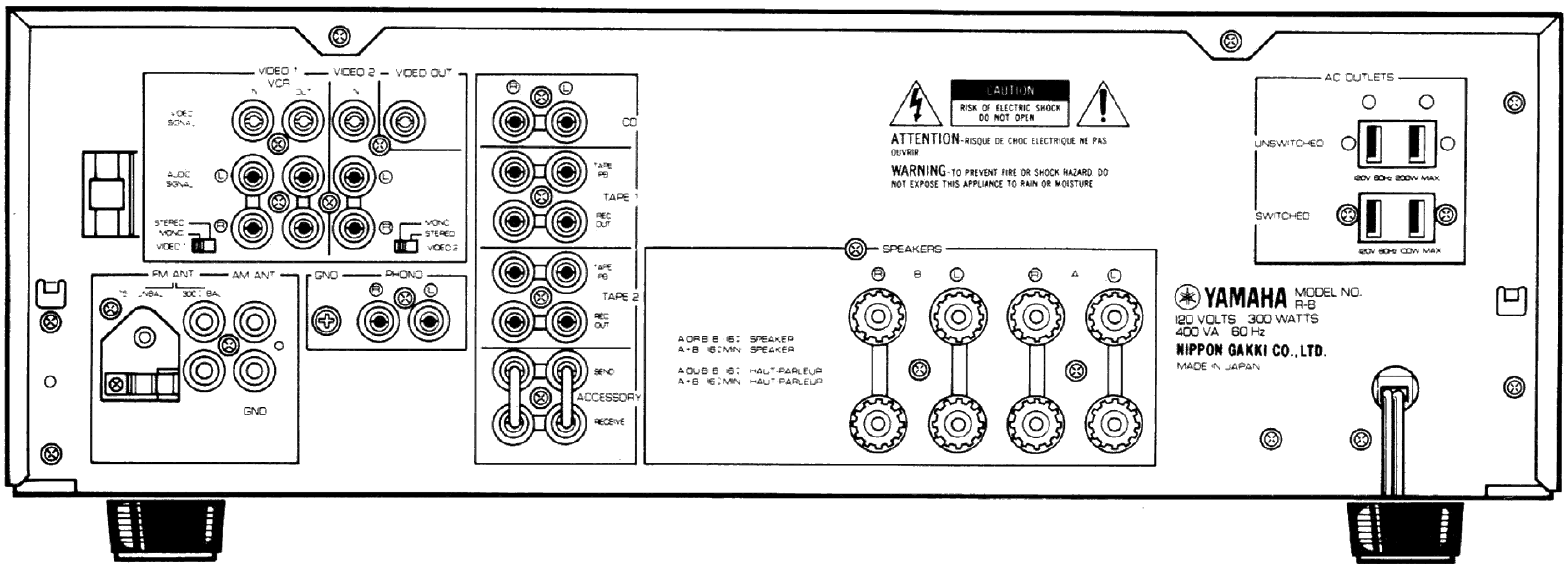
2. Leakage Current Measurement (For 120V Model Only).
   When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.

- 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.

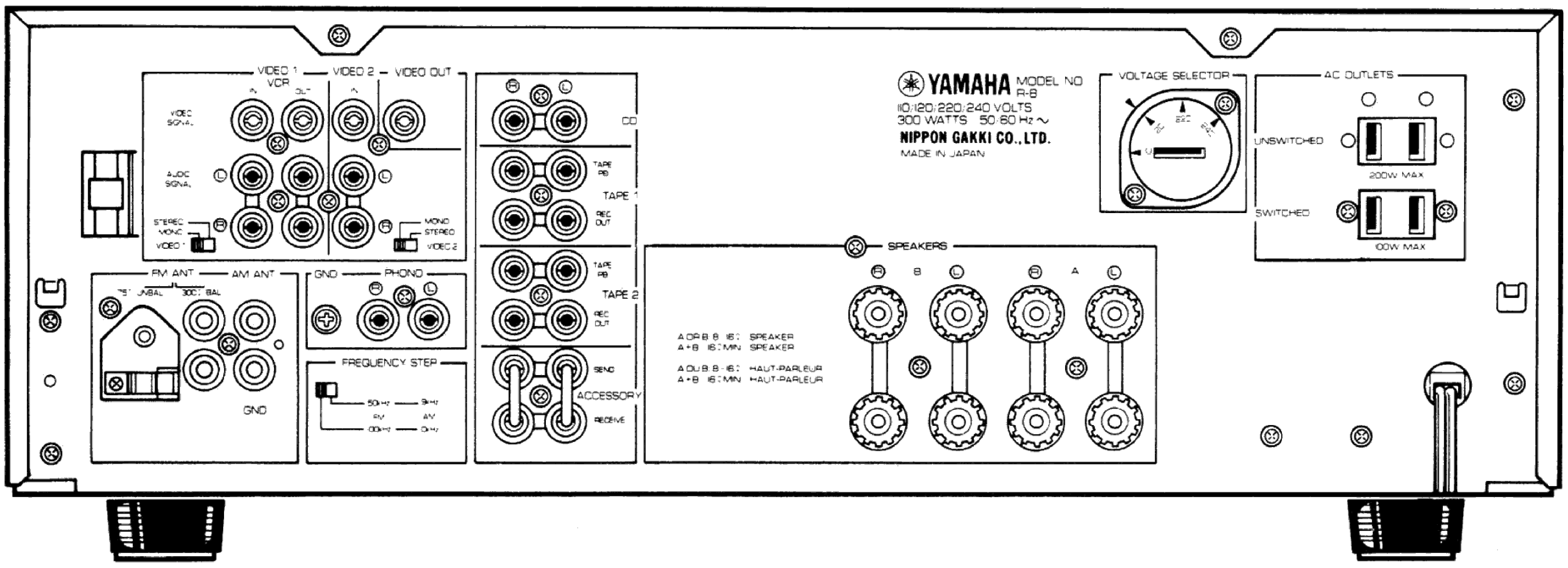


REAR PANELS

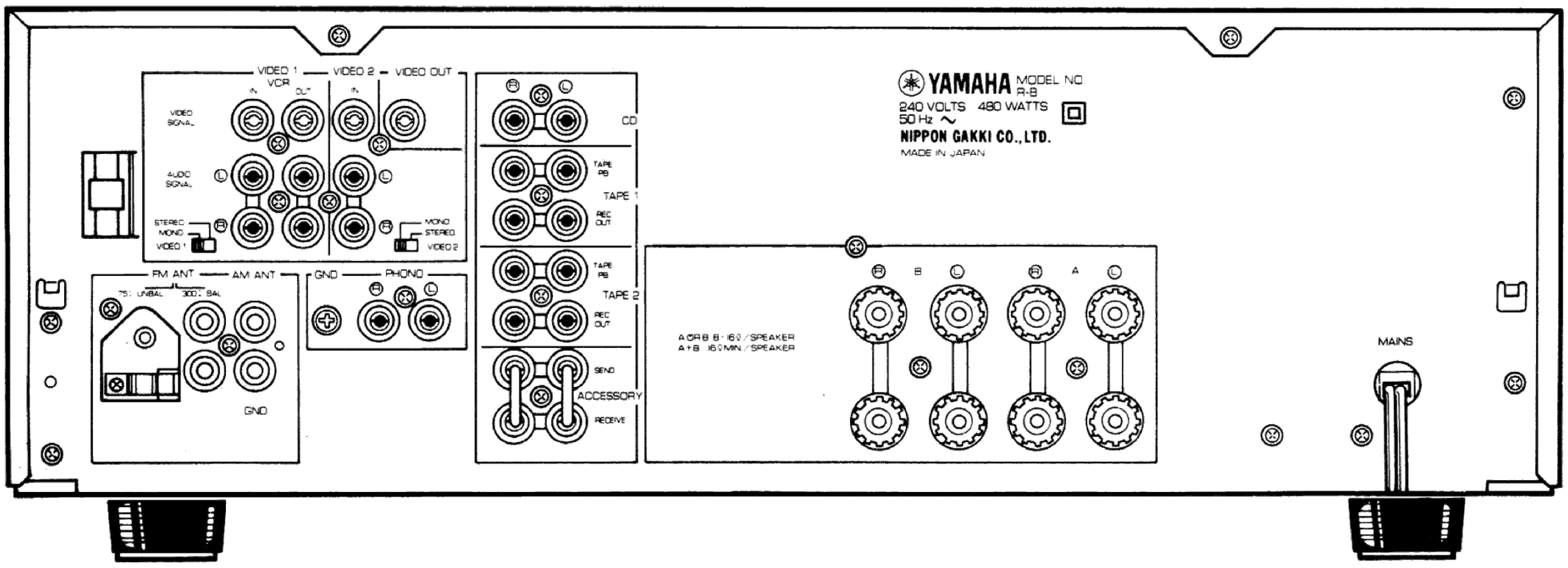
▼ U.S.A. & Canadian models



▼ General model



▼ Australian model



SPECIFICATIONS

AUDIO SECTION

Continuous Power Per Channel	
20Hz ～20kHz, 0.015% THD, 8Ω	85W
20Hz ～20kHz, 0.03% THD, 6Ω	100W
1kHz, 0.01% THD, 8Ω	95W
Dynamic Headroom	
8Ω	1.84dB
Dynamic Power	
8Ω (1kHz/channel)	130W
6Ω (1kHz/channel)	150W
4Ω (1kHz/channel)	190W
2Ω (1kHz/channel)	200W
Power Band Width	
0.08% THD, 42.5W, 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	17μV
Phono MM	0.27mV
CD/TAPE/VIDEO	16.3mV
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	0.75V/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
10Hz ～100kHz, Phono MM	±0.5dB
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 42.5W/8Ω	0.015%
VIDEO to SP Out 42.5W/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	75dB
Phono MM	75.5dB
CD/TAPE	81dB
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)

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)	
1kHz, 100% MOD, 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

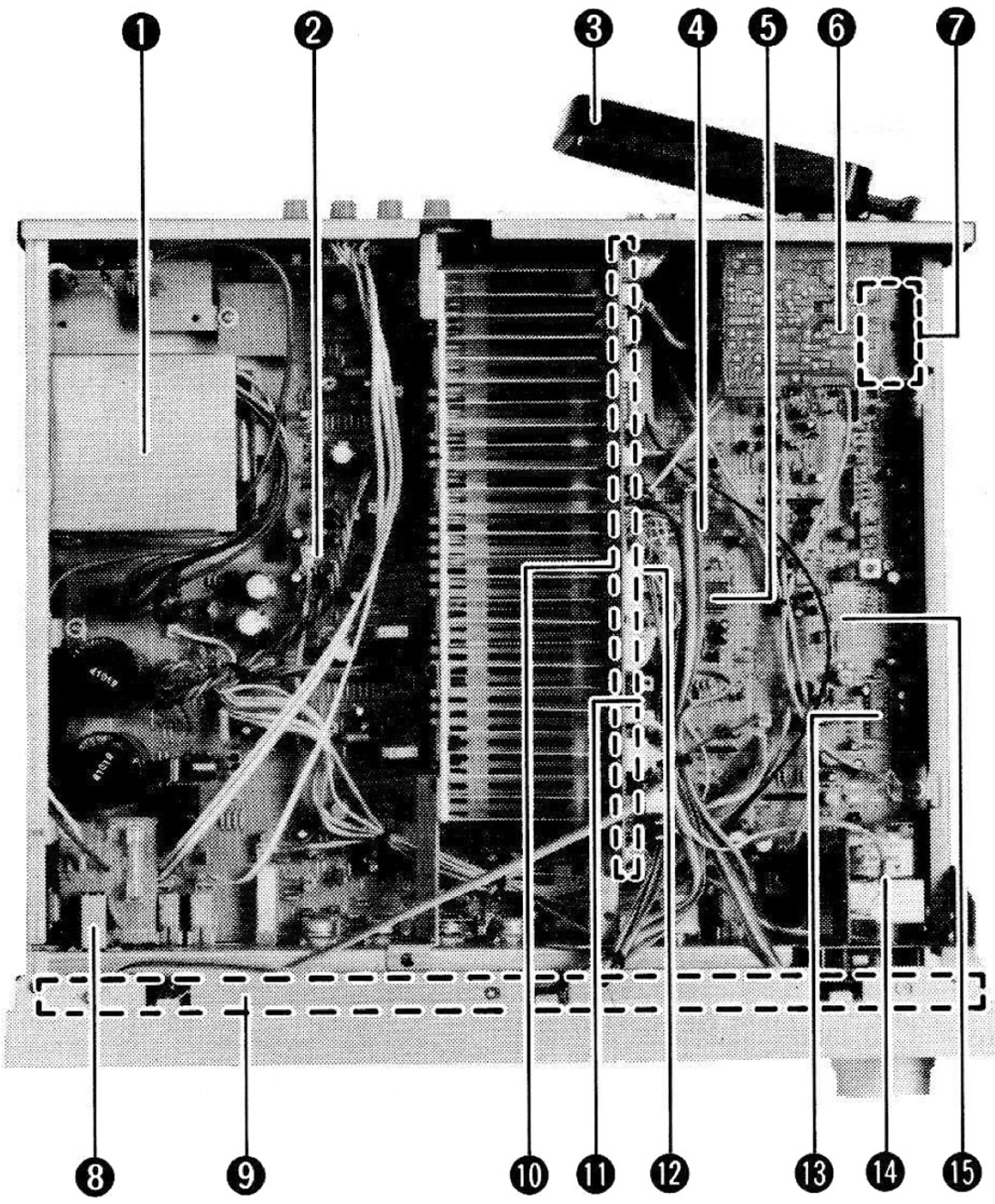
GENERAL

Power Supply	
U.S.A. & Canadian models	120V AC, 60Hz
General model	110V/120V/220V/240V AC, 60/50Hz
Australian model	240V AC, 50Hz
Power Consumption	300W (U)(C)(R) 480W (A)
AC Outlet .... (U)(C)(R) only	
Switched x 1	100W max.
Unswitched x 1	200W max.
Dimensions (W x H x D)	435 x 151 x 423mm (17-1/8"x5-15/16"x16-5/8")
Weight	11kg (24 lbs 3 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 : GA69050
Canadian model : GA69060
General model : GA69070
Australian model : GA69080
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 POTENIOMETER 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.

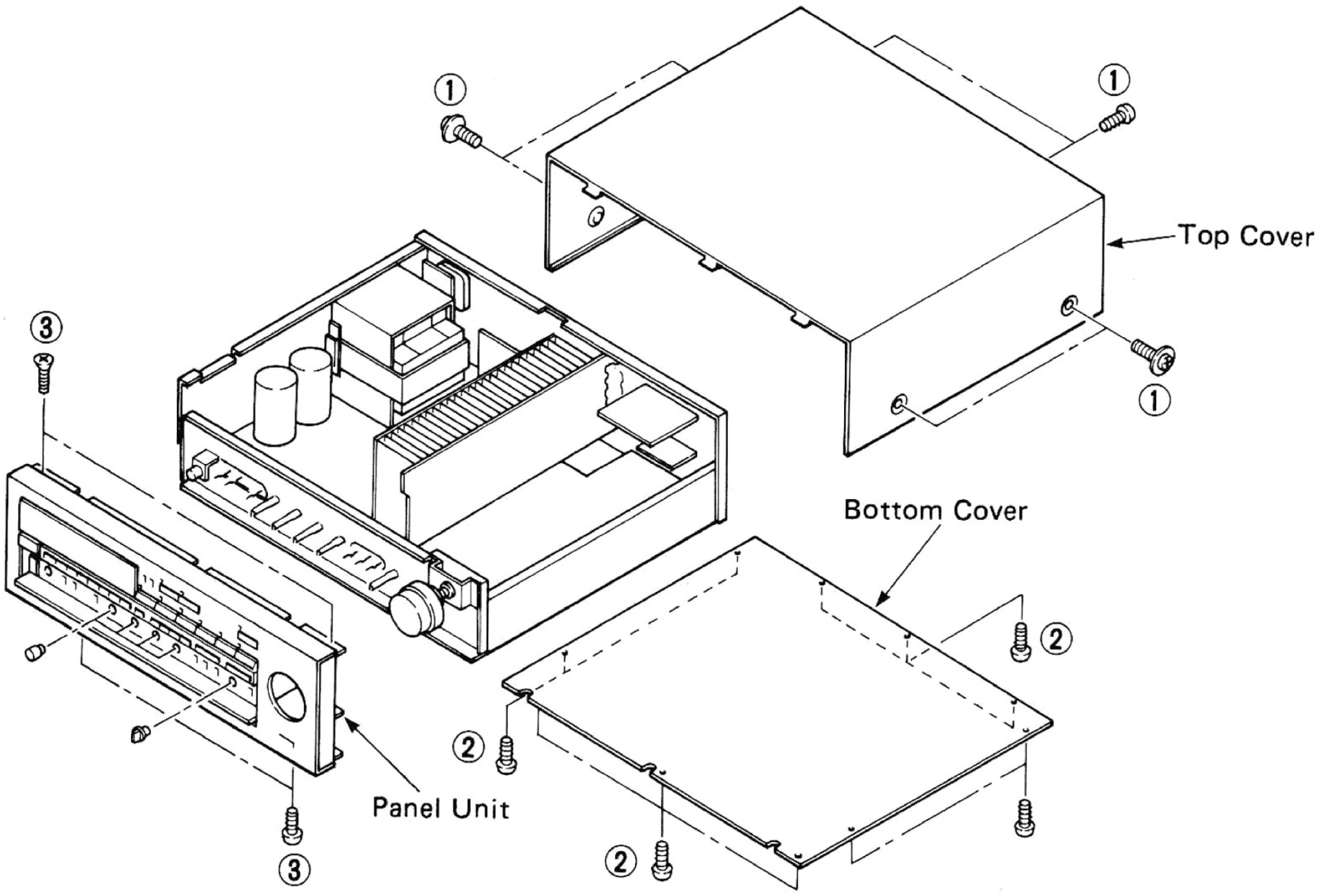


Fig. 1

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
TR407 EMITTER	+ 12V ± 0.5V	Make sure that AC line voltage comes within
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	

Models	AC line voltage
U, C	120V ± 10%
A	240V ± 10%

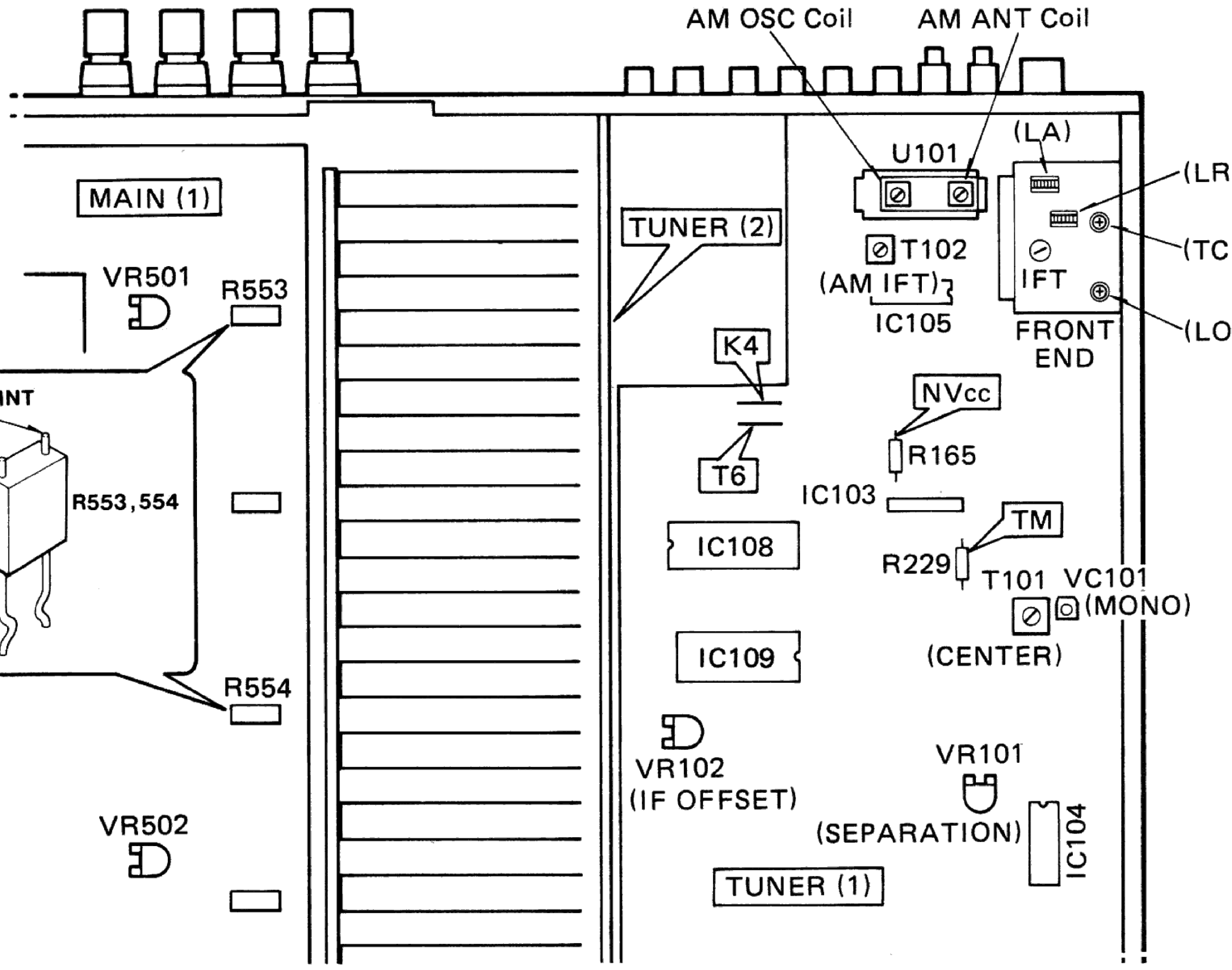
<AUDIO SECTION>

- **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 VR501 (Lch) and VR502 (Rch) so that the voltage across the terminals of R553 (TP1 - TP2) and R554 (TP3 - TP4) comes to 10mV ± 1mV DC.

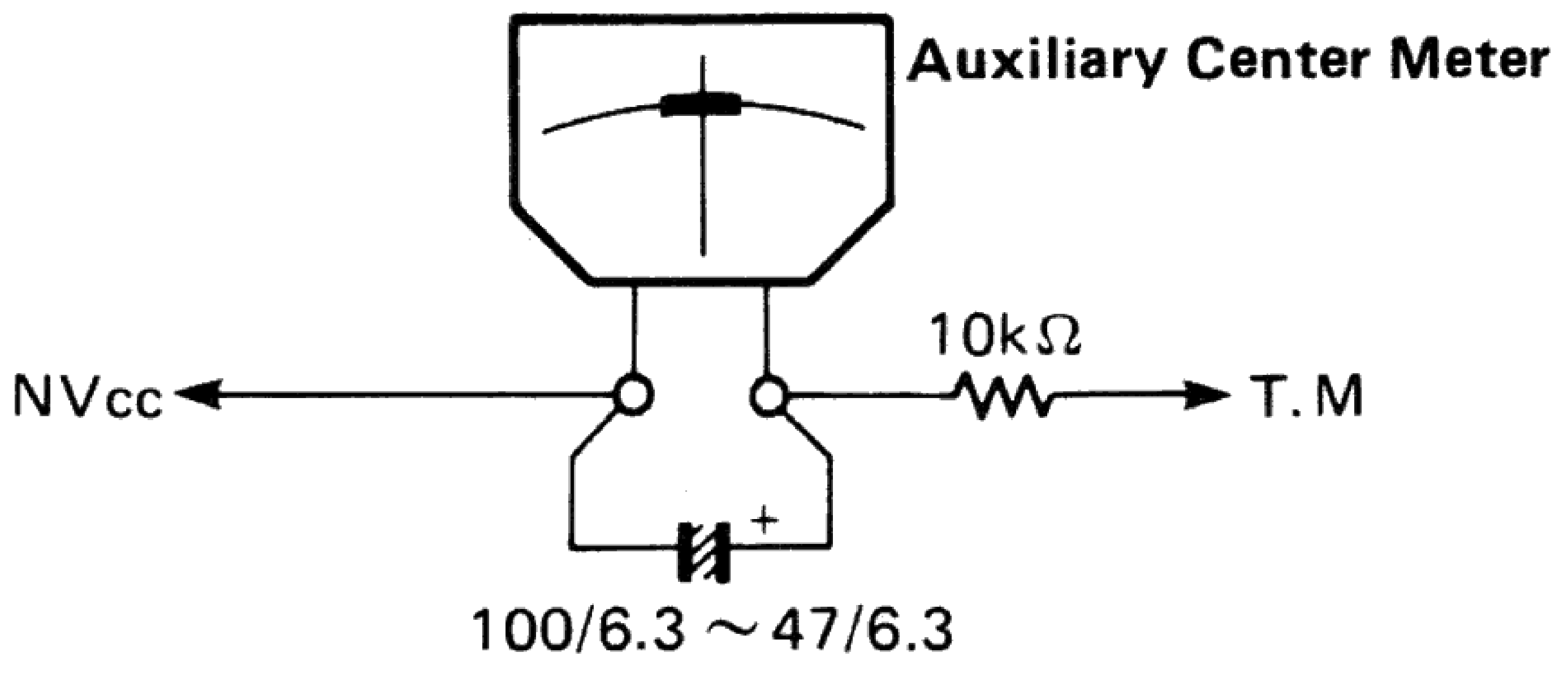
Test points		Adjustment points	Rating
Lch	Across the terminals of R553 (TP1 - TP2)	VR501	10mV ± 1mV DC.
Rch	Across the terminals of R554 (TP3 - TP4)	VR502	10mV ± 1mV DC.

• 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	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 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 unit 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.

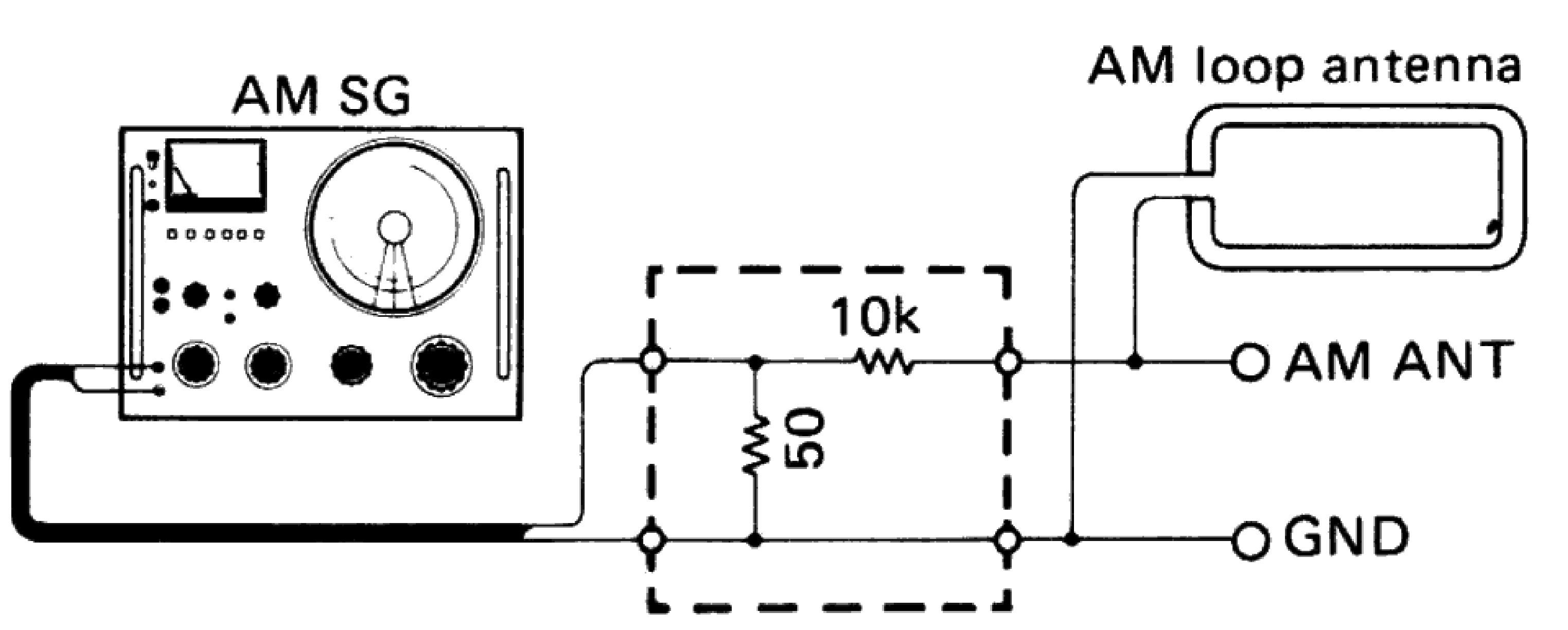
P1/P9	P2/P10	P3/P11	P4/P12	P5/P13
AM 630kHz	AM 1080kHz	AM 1440kHz	FM 87.5MHz	FM 95.1MHz

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 REC OUT	AM SG AM dummy antenna [630kHz ± 0.1kHz 50dBμ 400Hz, 30% MOD] A C V M	T102	Adjust T102 to maximize detector output.	
2	Confirmation of sensitivity	AM ANT REC OUT	AM SG AM dummy antenna [630kHz ± 0.1kHz 1080kHz ± 0.1kHz 1440kHz ± 0.1kHz 400Hz, 30% MOD] A C V M DST. M.	PRESET STATION key P1/P9 P2/P10 P3/P11	Obtain AM SG output level where distortion become 10%.	Less than 58dBμ
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.

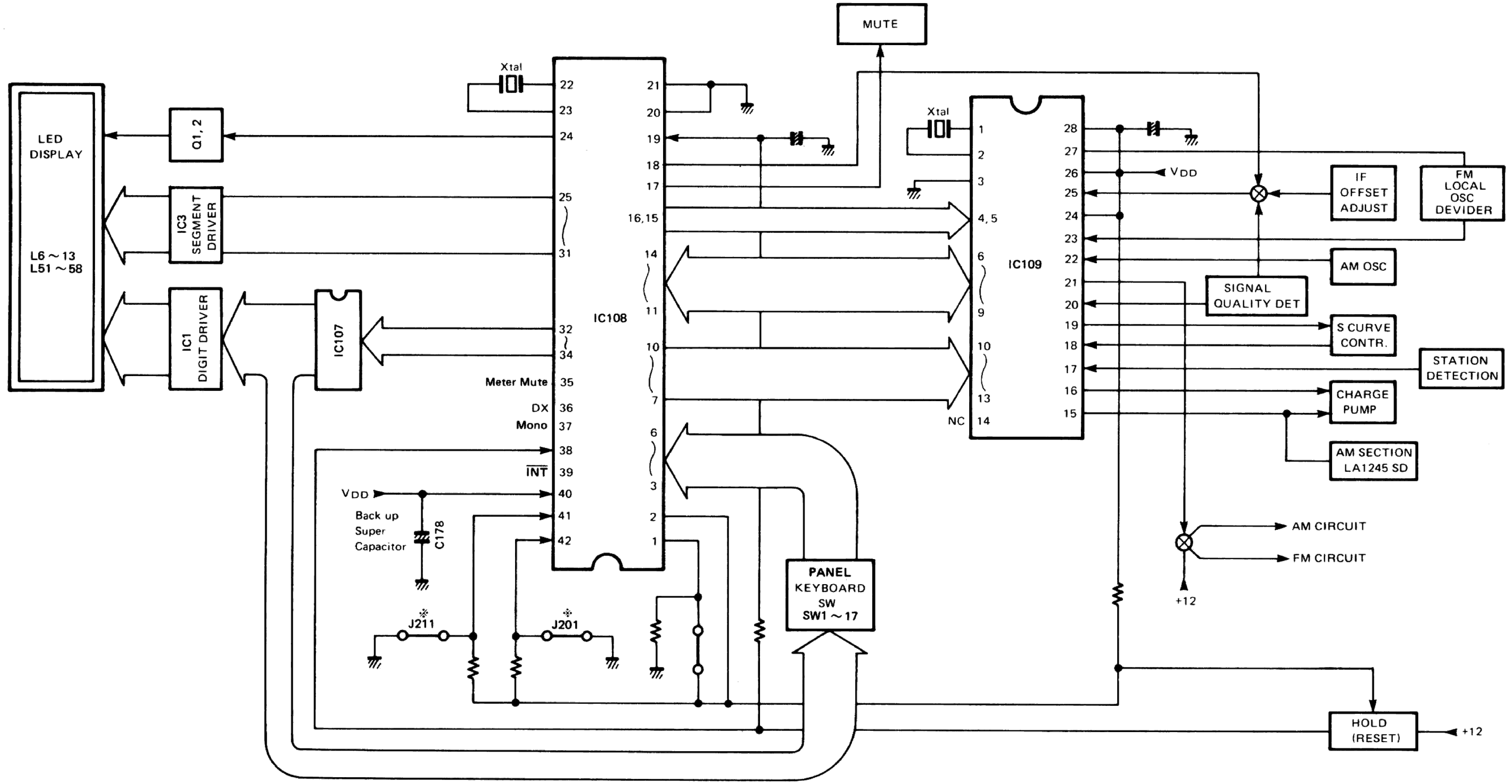
- **IC108: CSL Controller V4.0 695 (LC6510C-695)**

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 $\overline{\text{A/D}}$	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
J211	OPEN	SHORT	OPEN
J201	OPEN	OPEN	SHORT

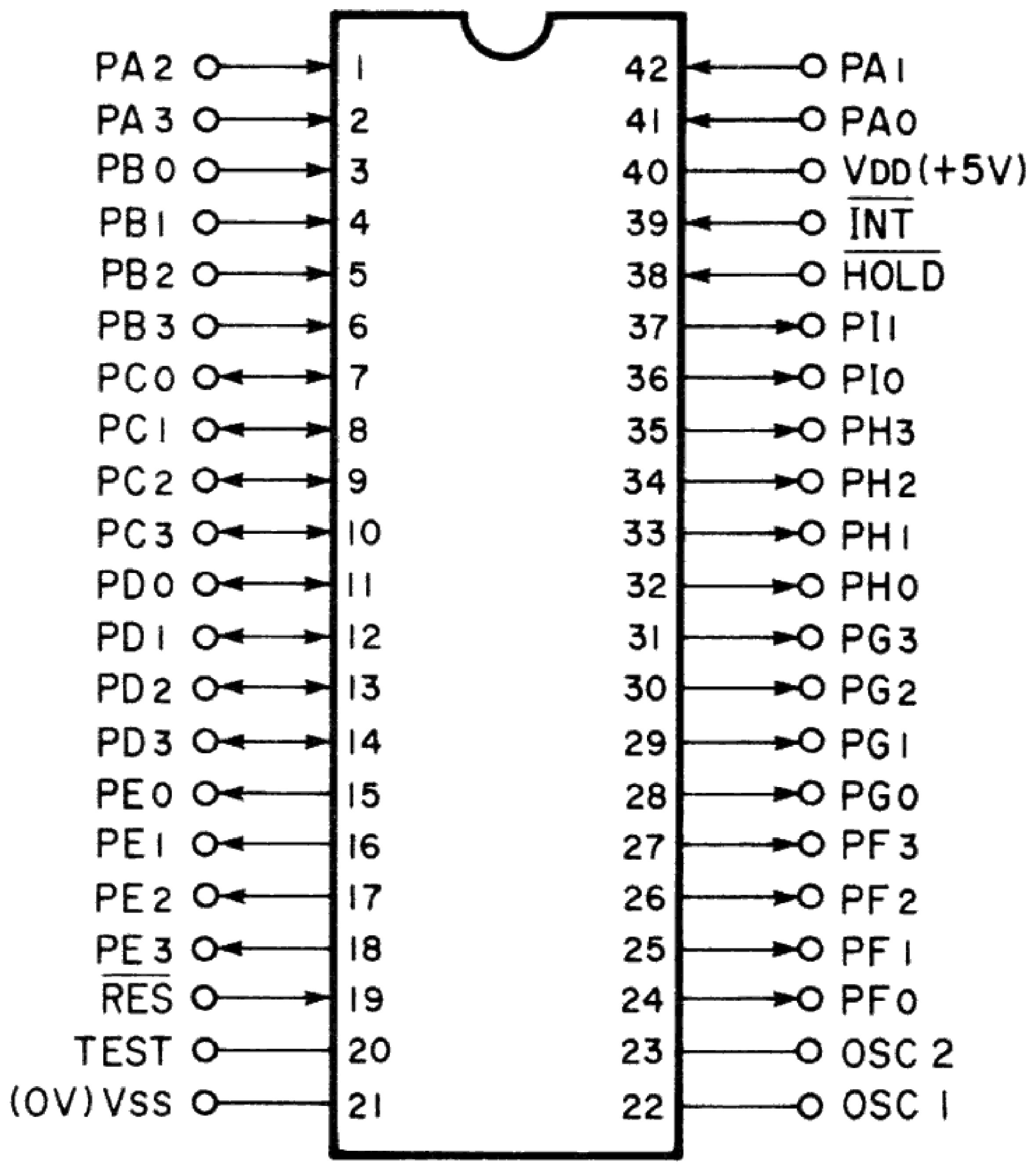
● IC401: A.V Controller V1.0 696 (LC6505C-696)

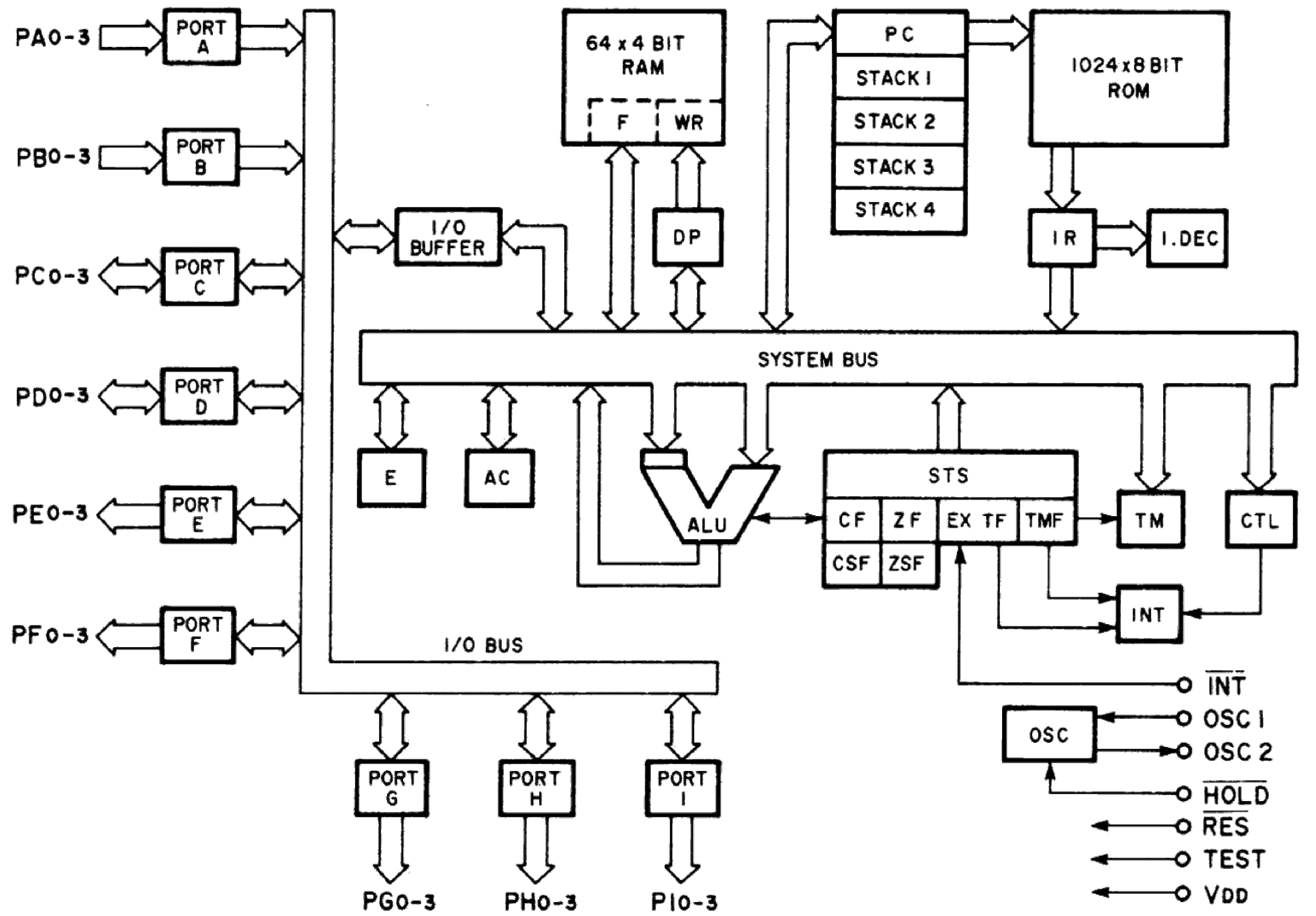
1-chip type 4-bit microcomputer witch incorporates 1024 x 6 bit ROM (for programming) and 64 x 4 bit RAM (for data memory)

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	$\overline{\text{RES}}$	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	$\overline{\text{HOLD}}$	IN	HOLD mode request input terminal
39	$\overline{\text{INT}}$	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$_1$		

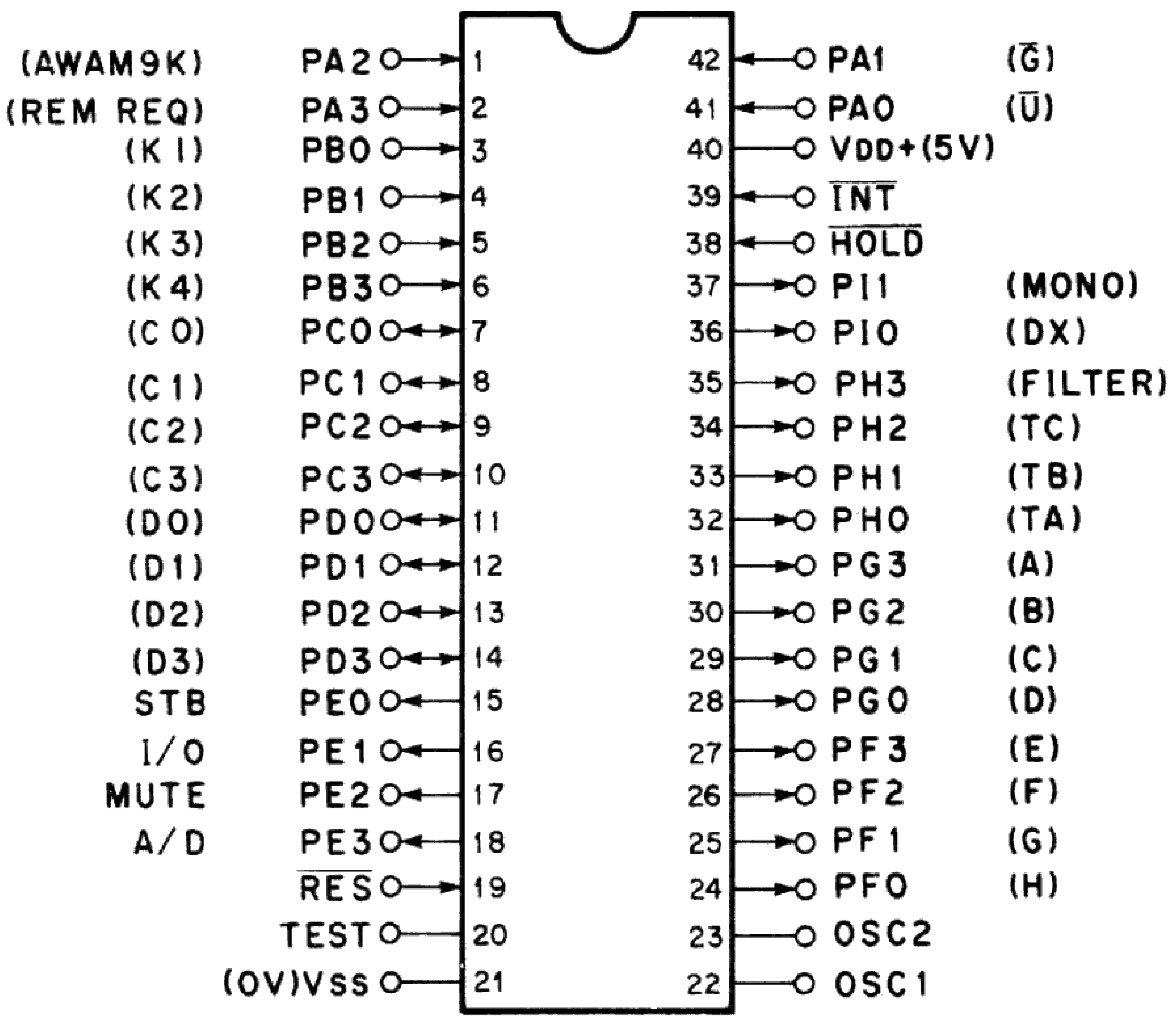
IC BLOCK

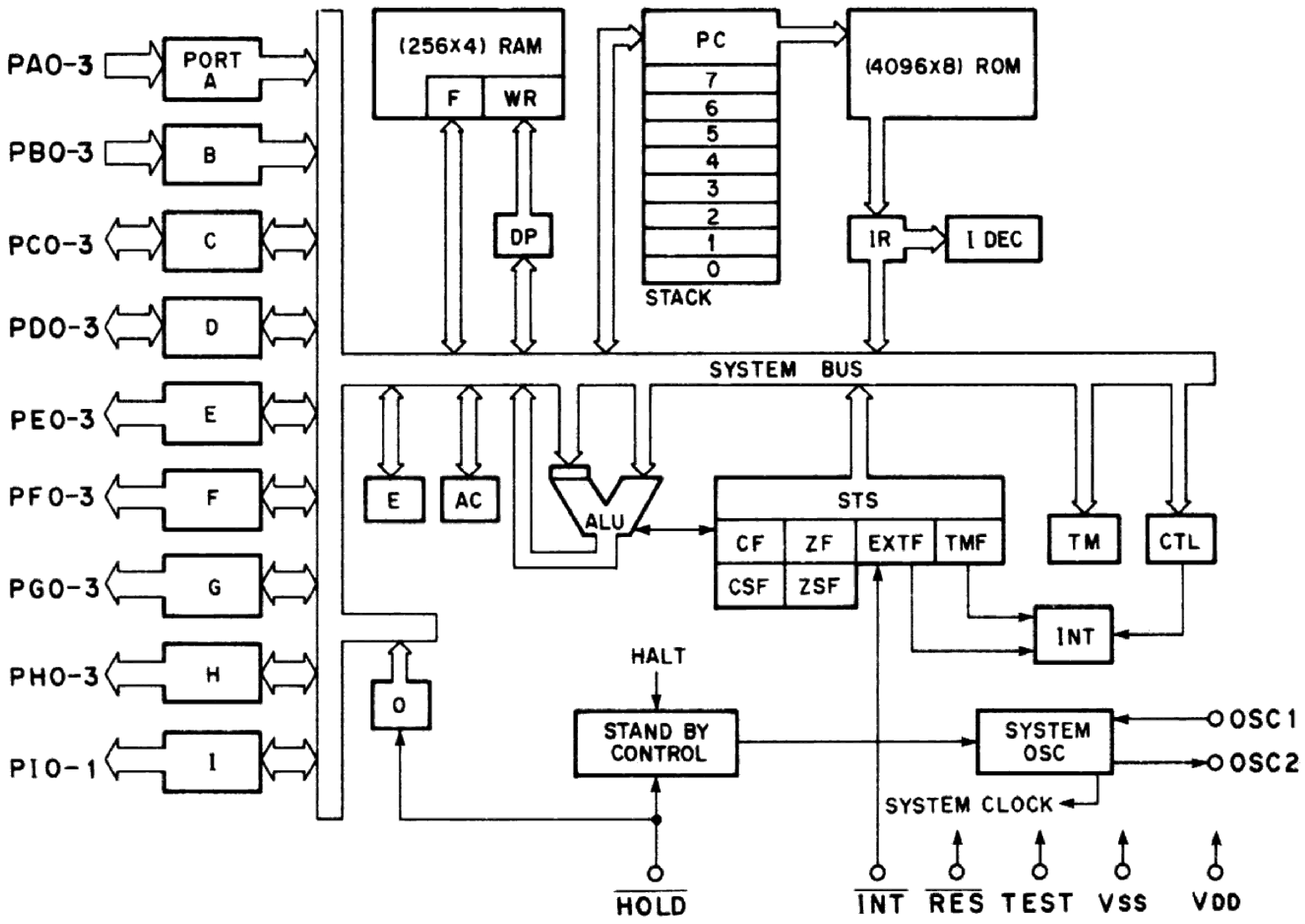
IC401 : LC6505C-696



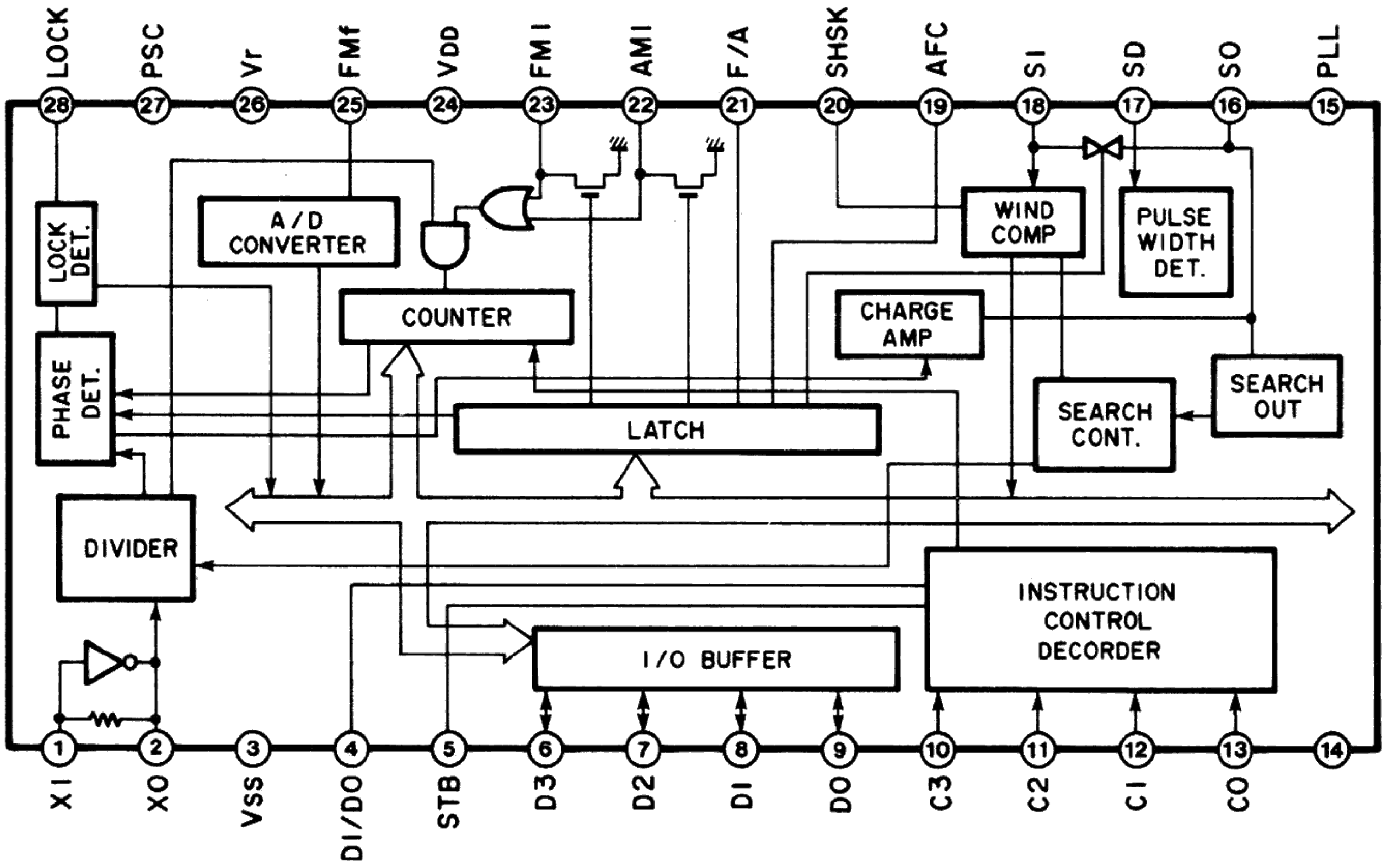


IC108 : LC6510C-695

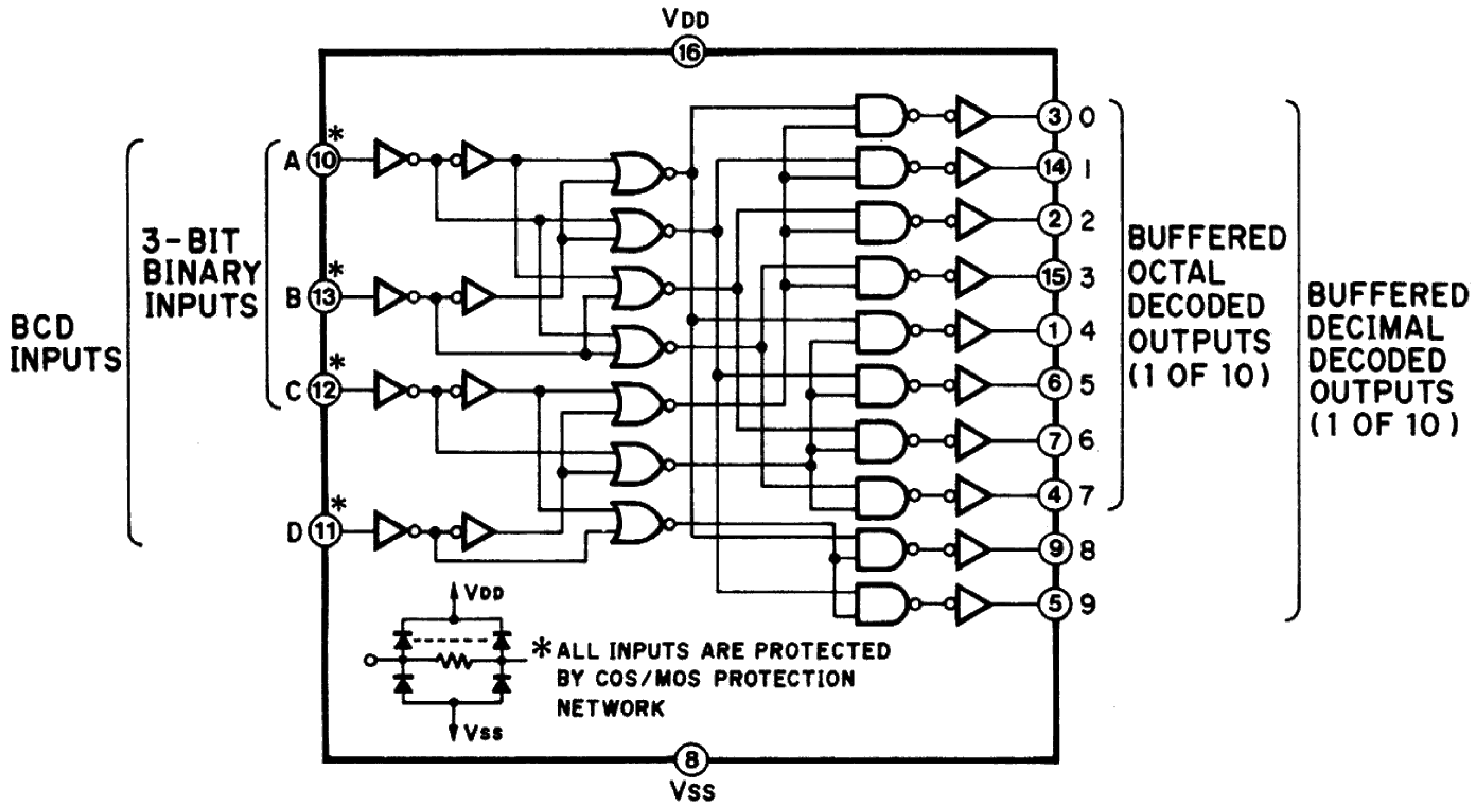




IC109 : LC7210



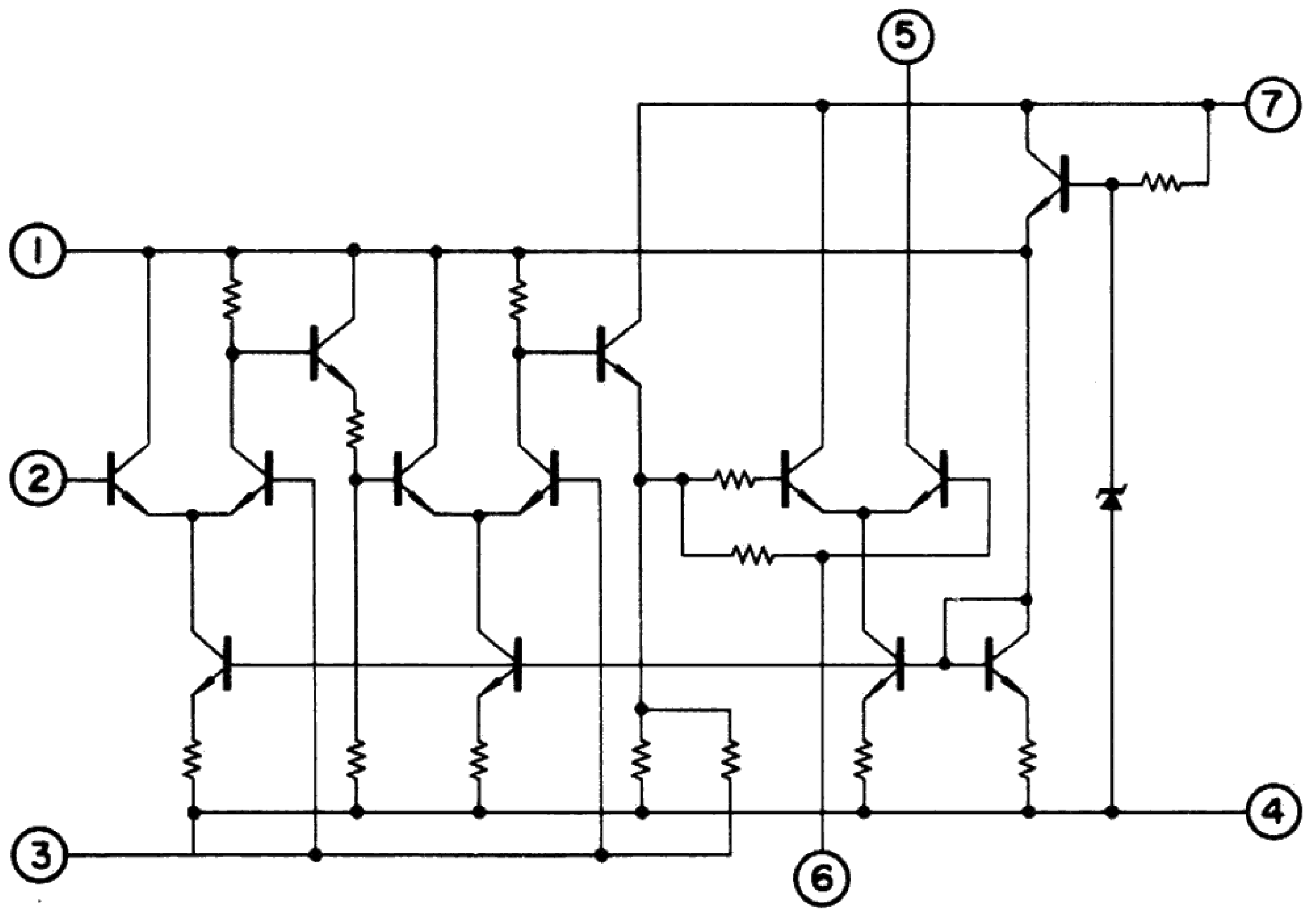
IC107 : TC4028BP or BU4028B



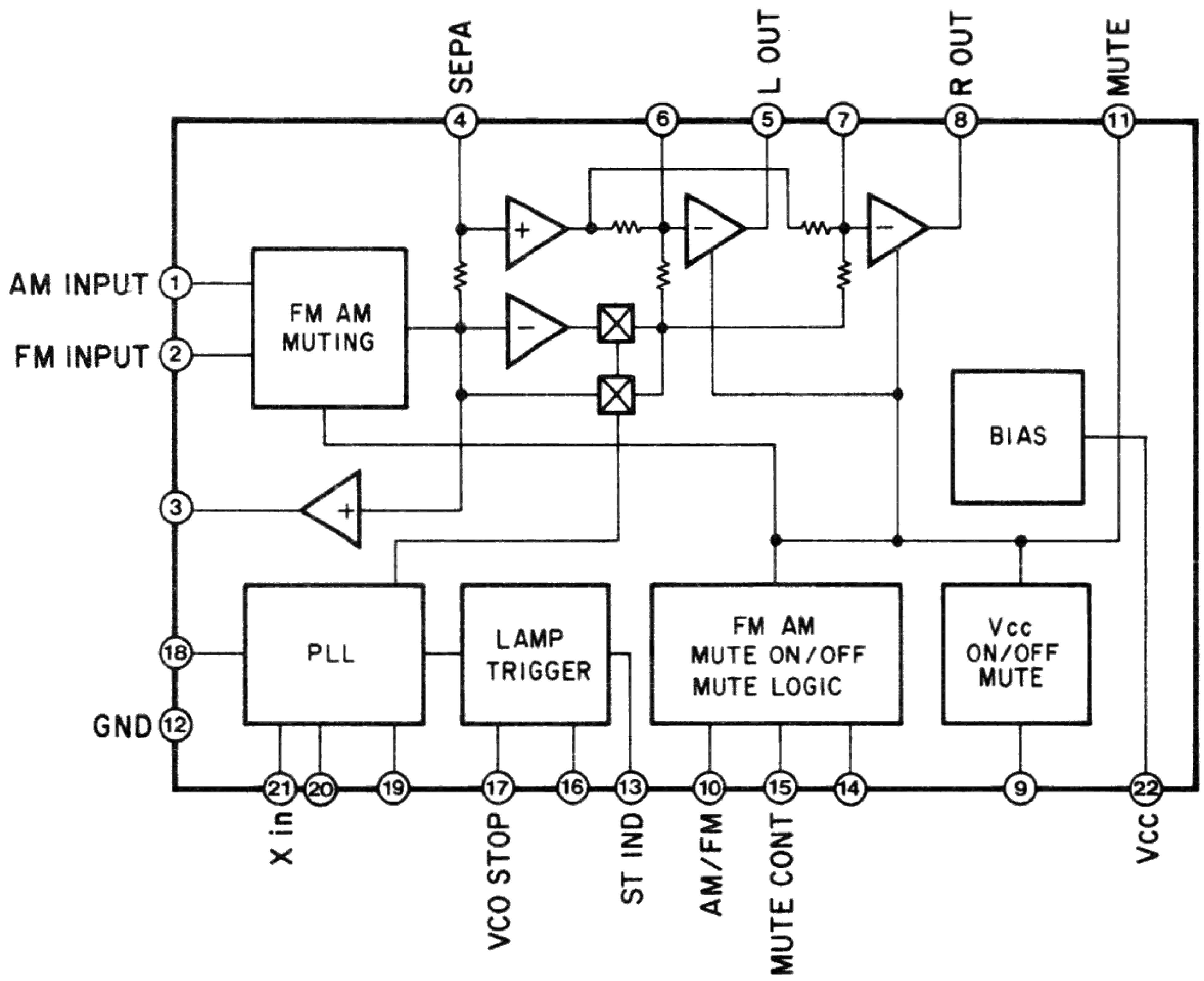
Data Table

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

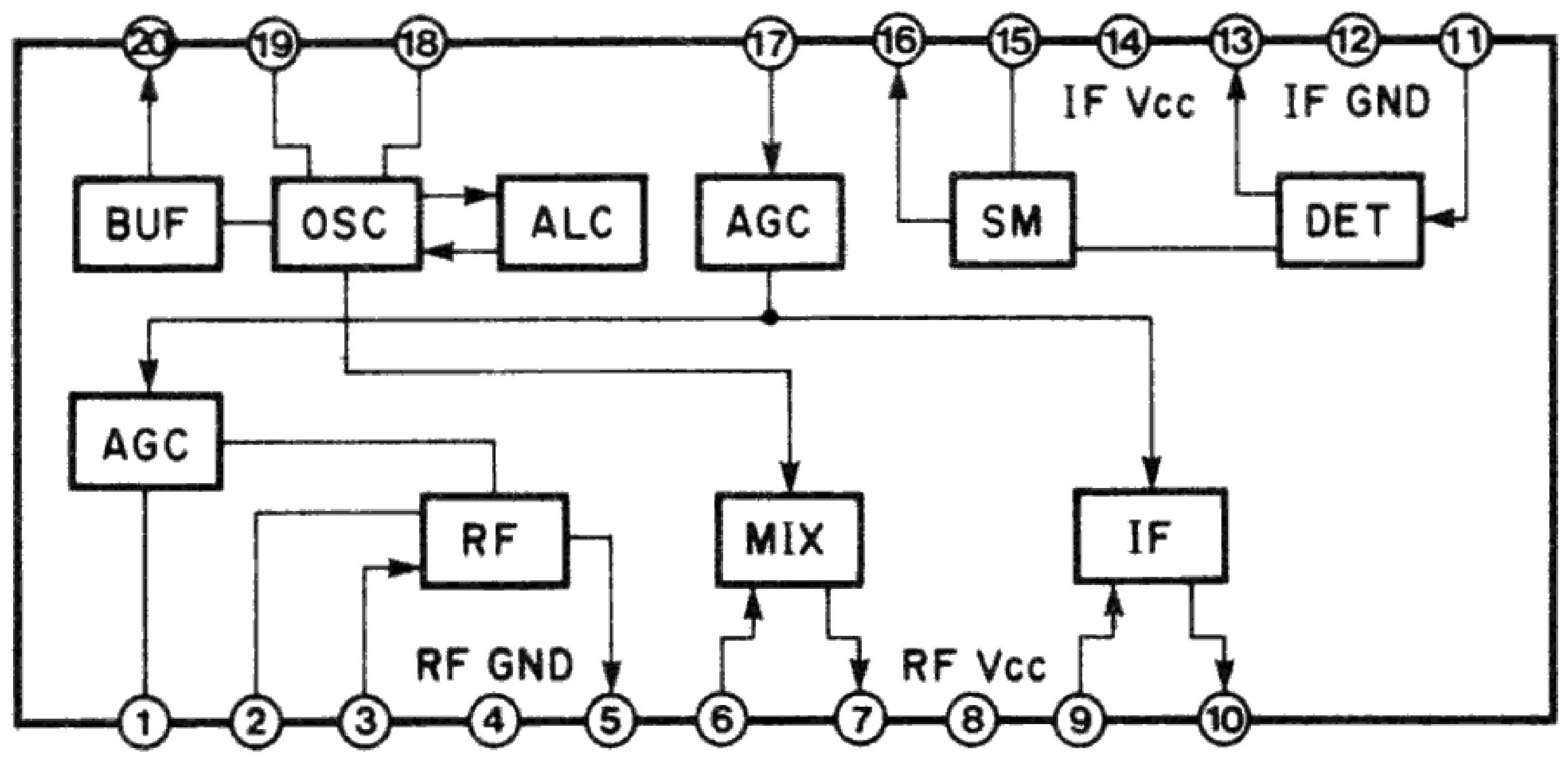
IC101, 102 : μPC577H (E, F)



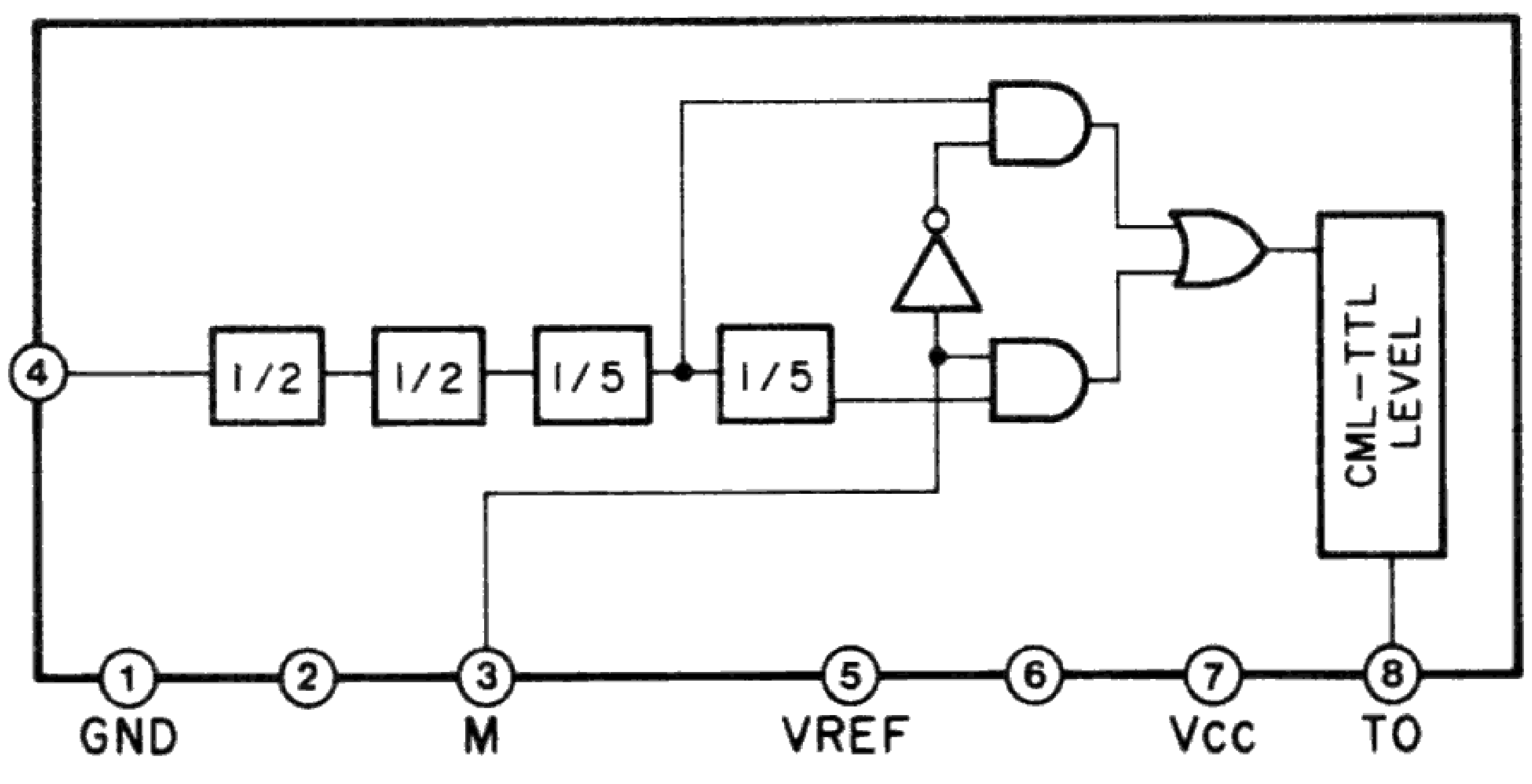
IC104 : LA3400



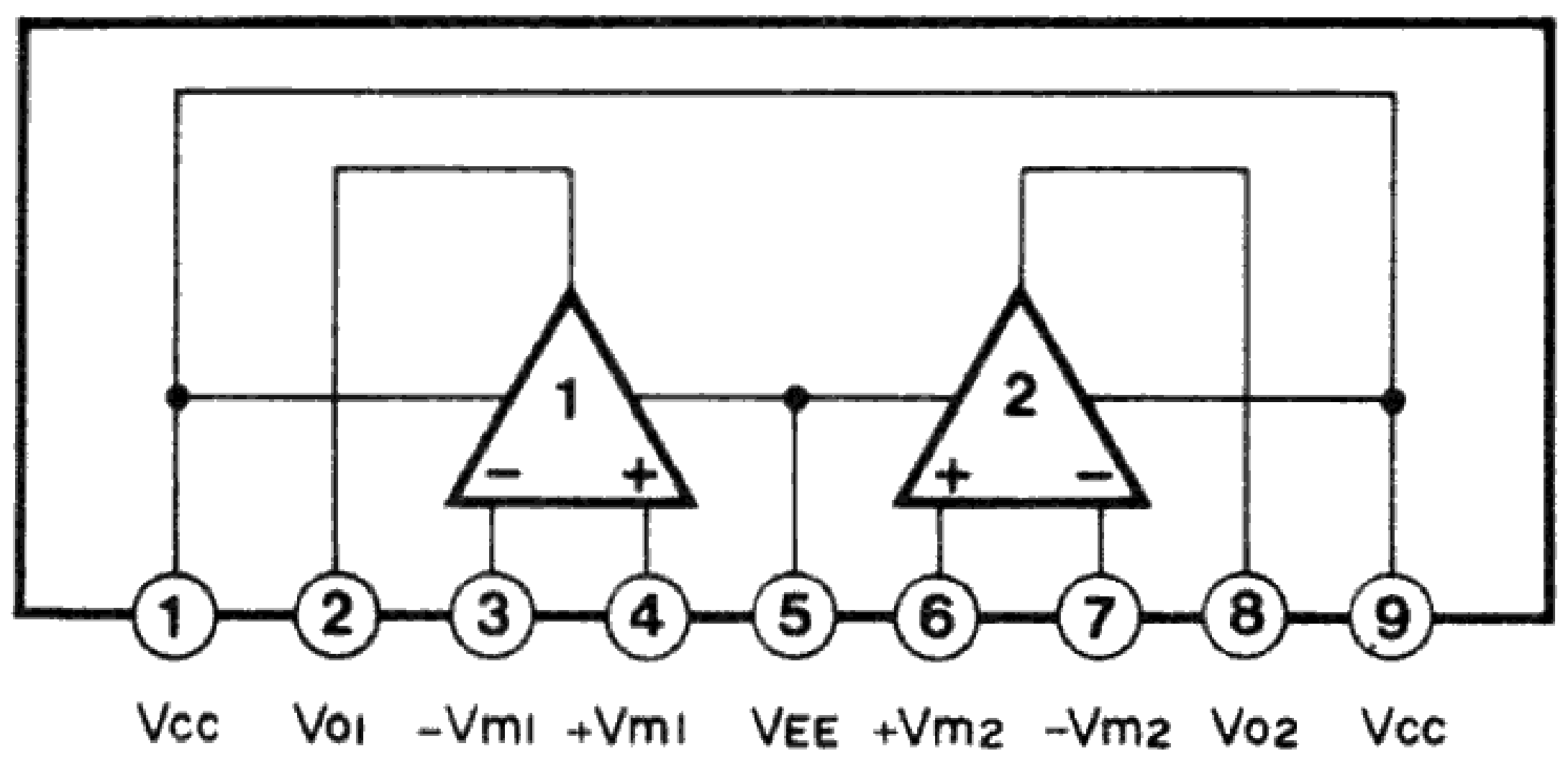
IC105 : LA1245



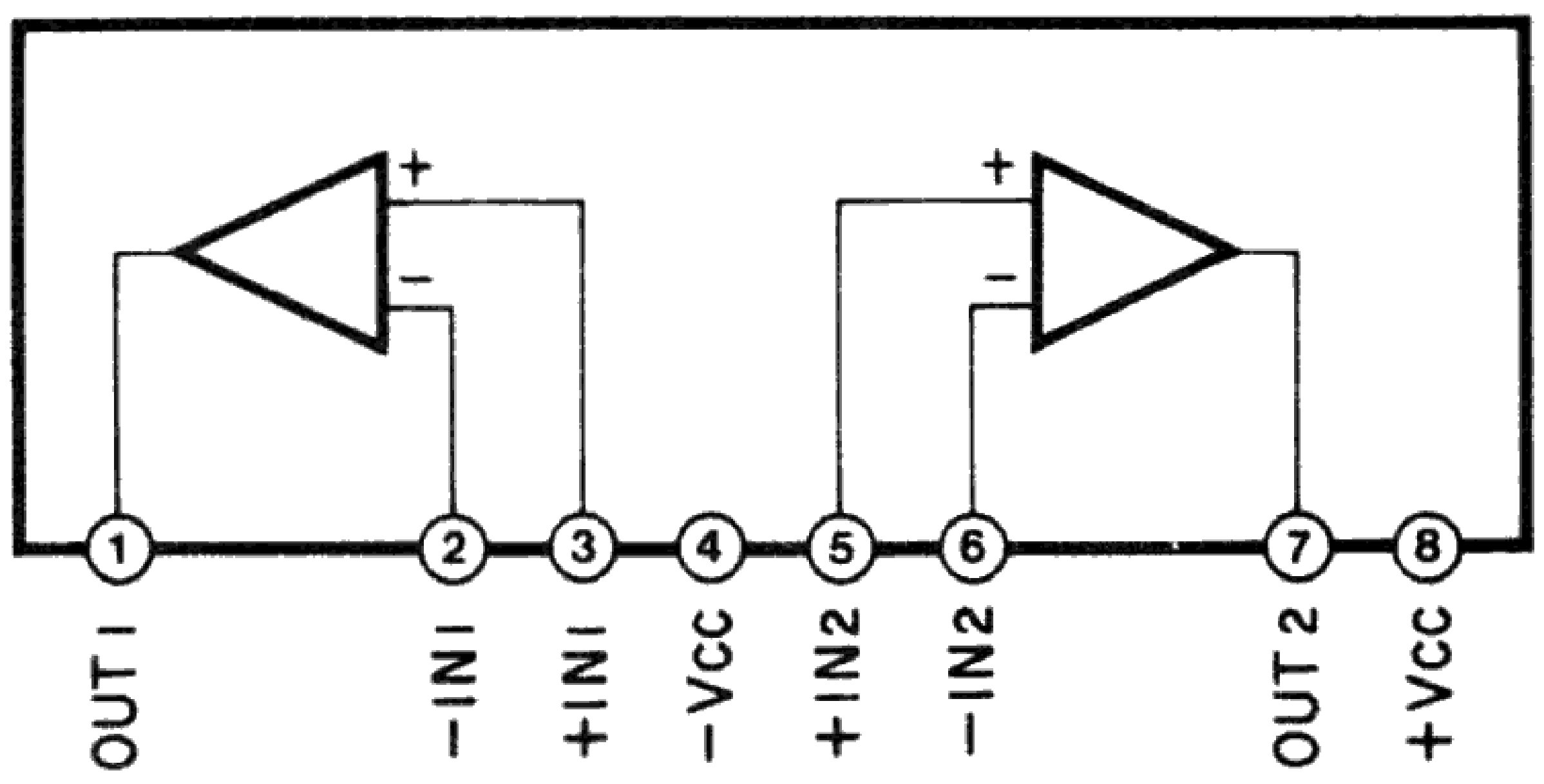
IC106 : M54459L



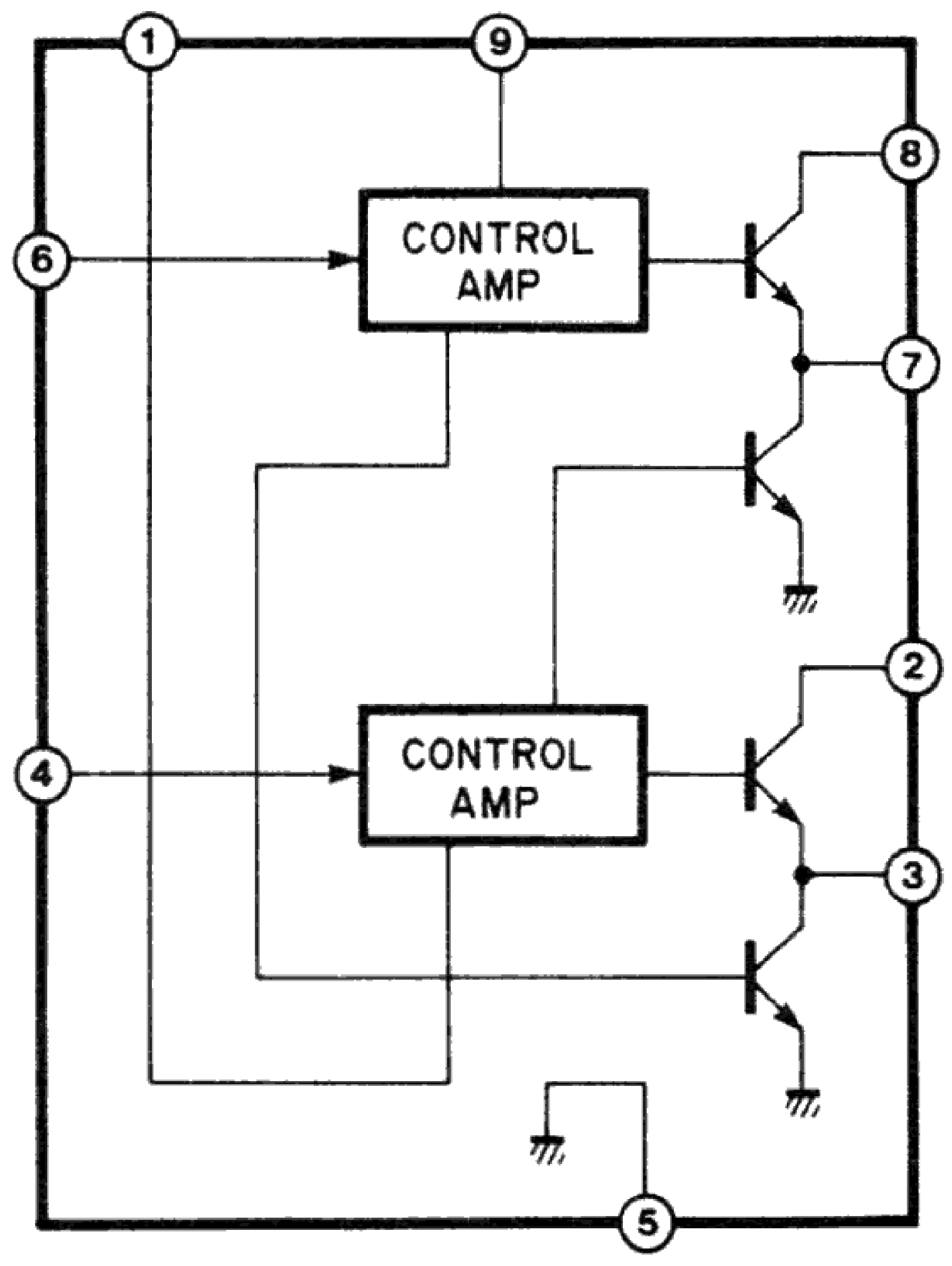
IC103 : NJM4558S or BA715
IC302, 303, 407 : NJM4558S (F)



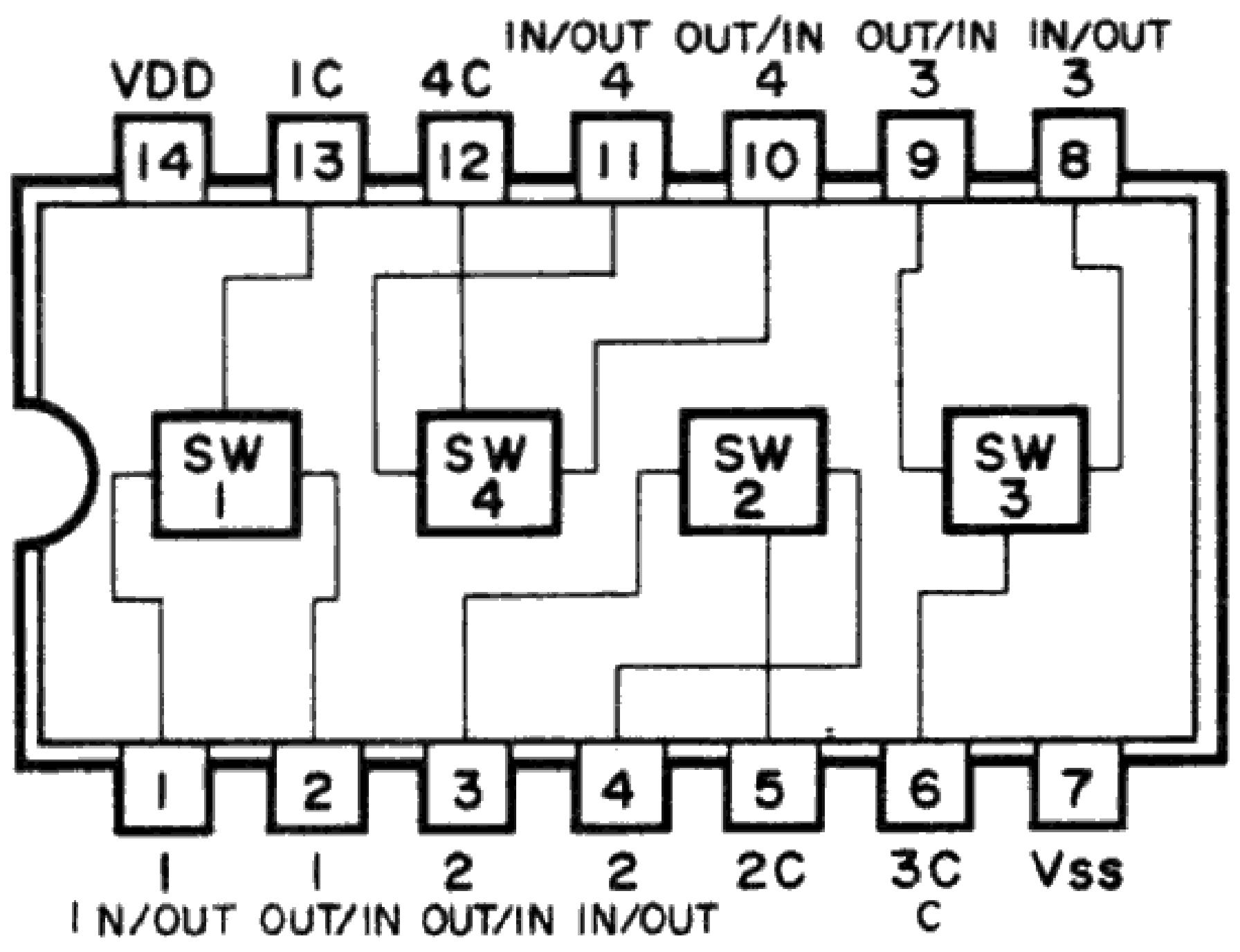
IC301 : NJM4560S or BA4561
IC302, 303, 407: M5218L (V)
IC501 : M5220L



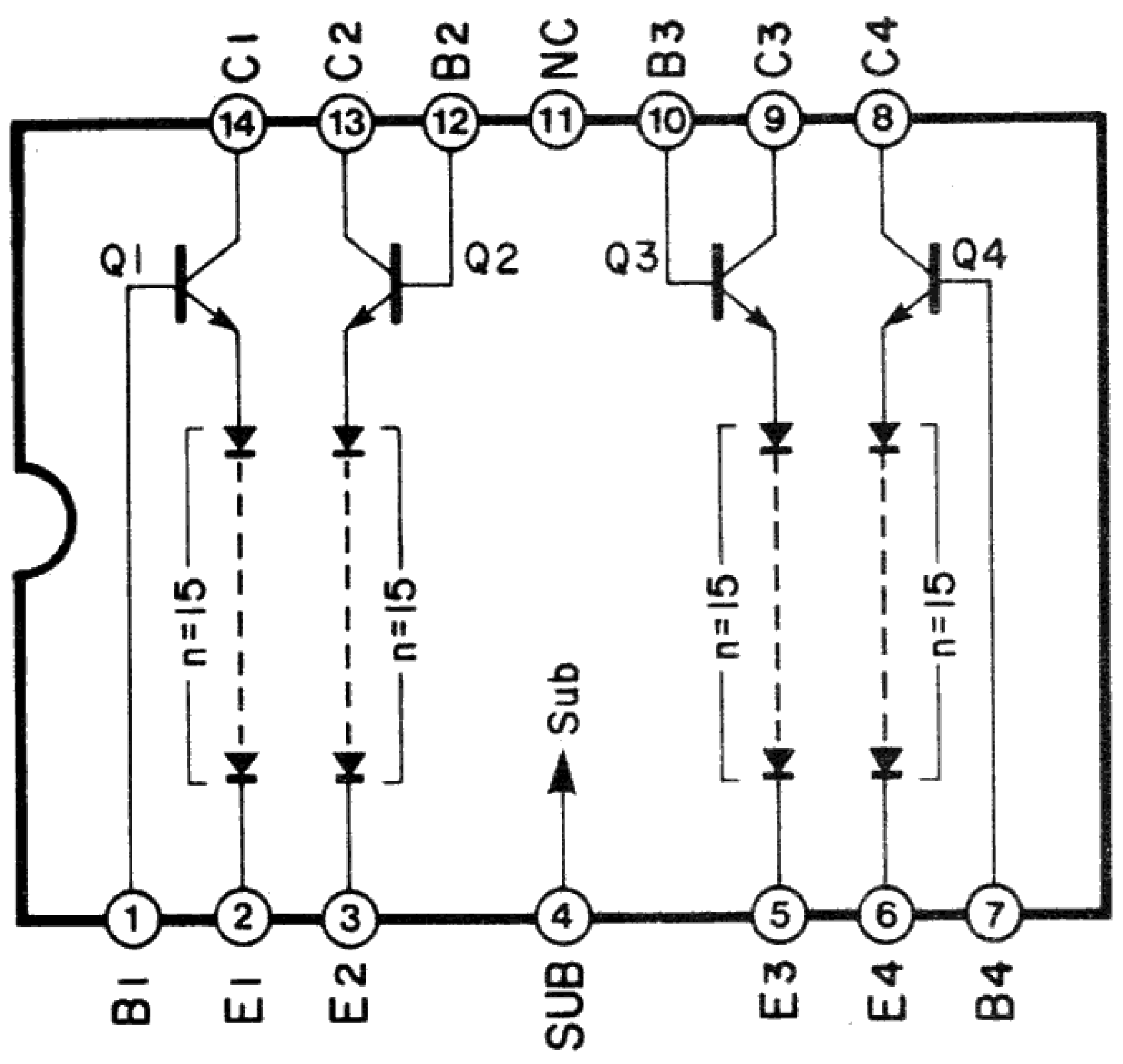
IC402 : M54542



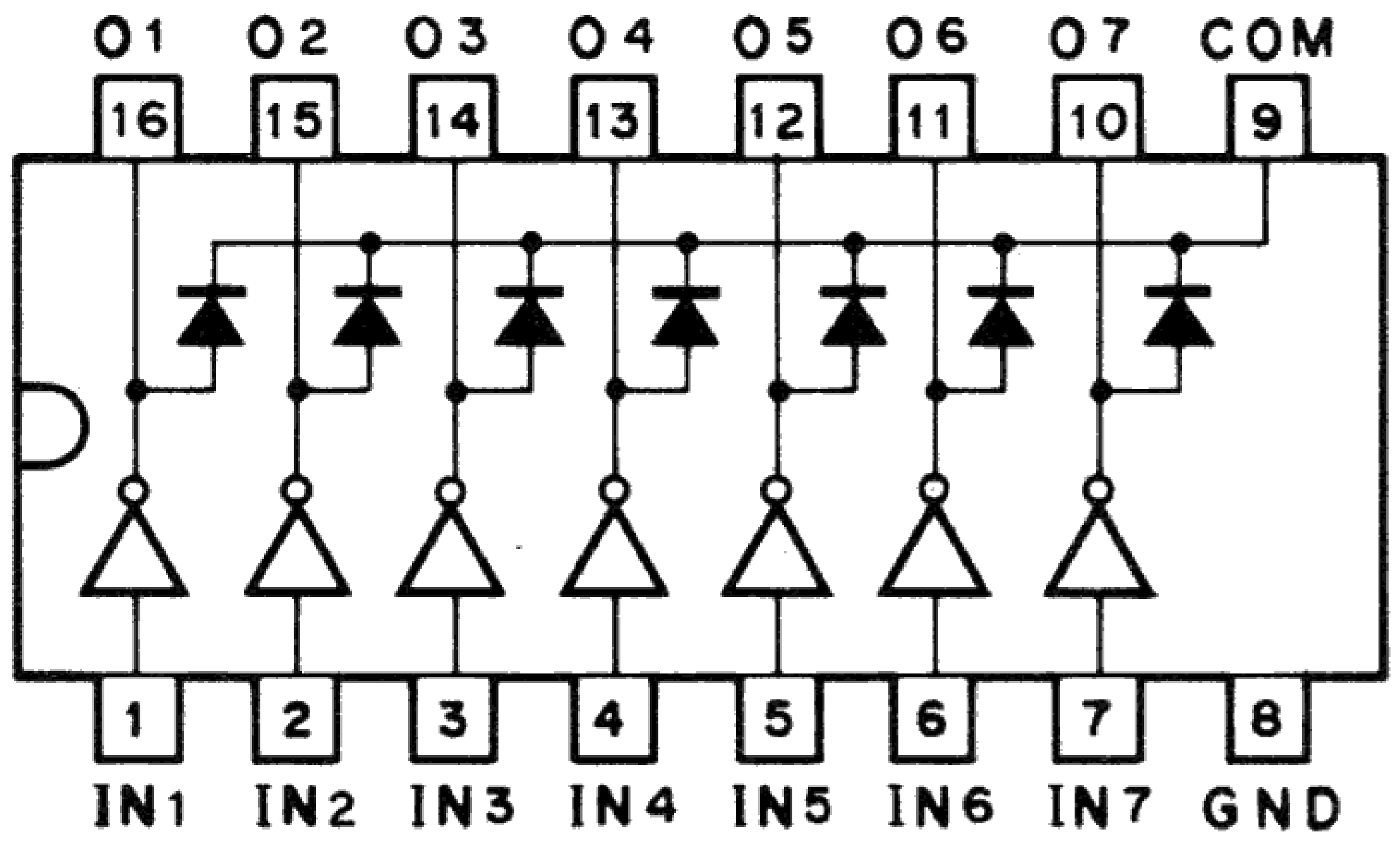
IC404 ~ 406 : μPD4066BC or LC4066B
IC403 : LC4966



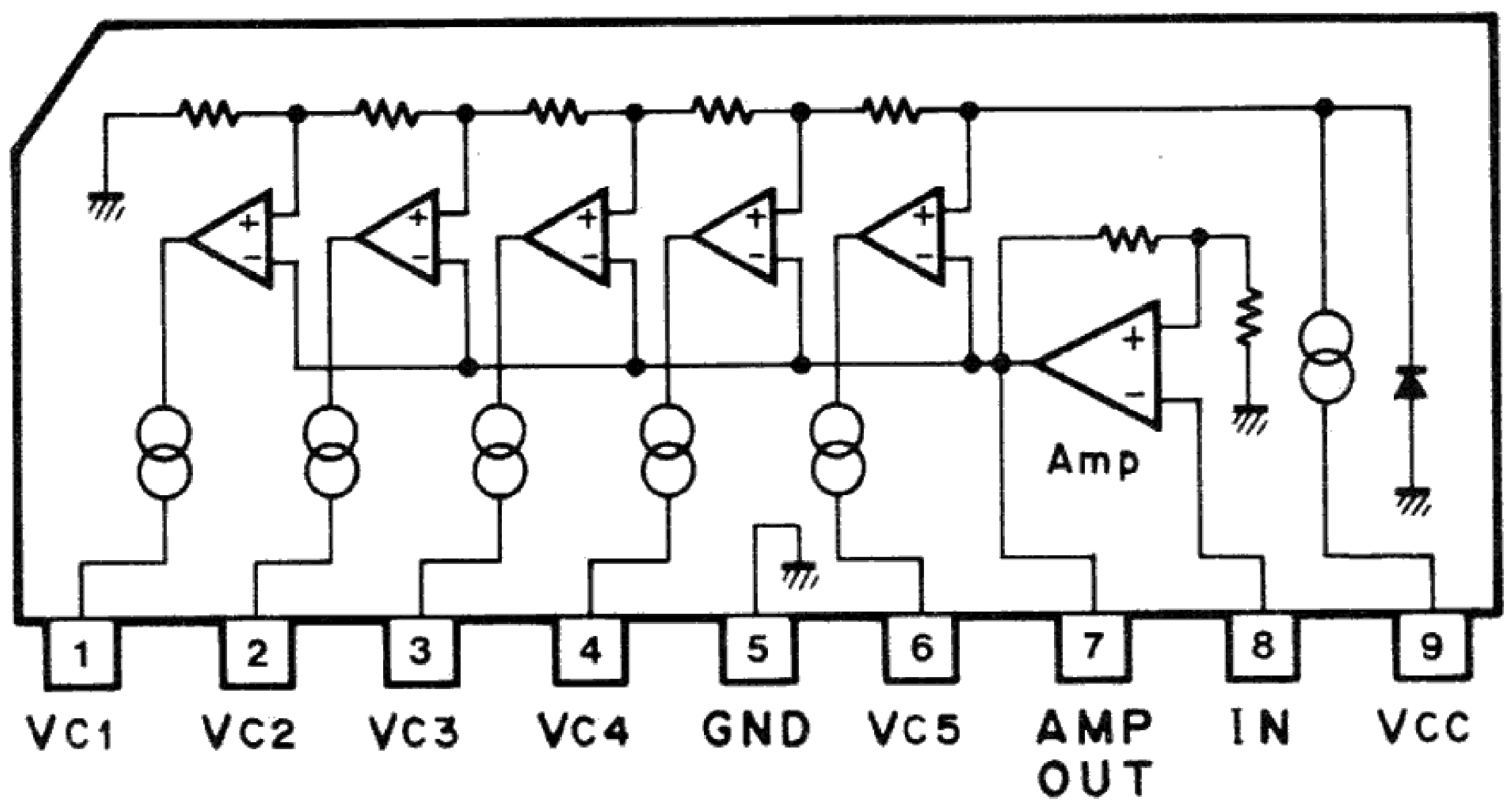
IC502 : M51010P



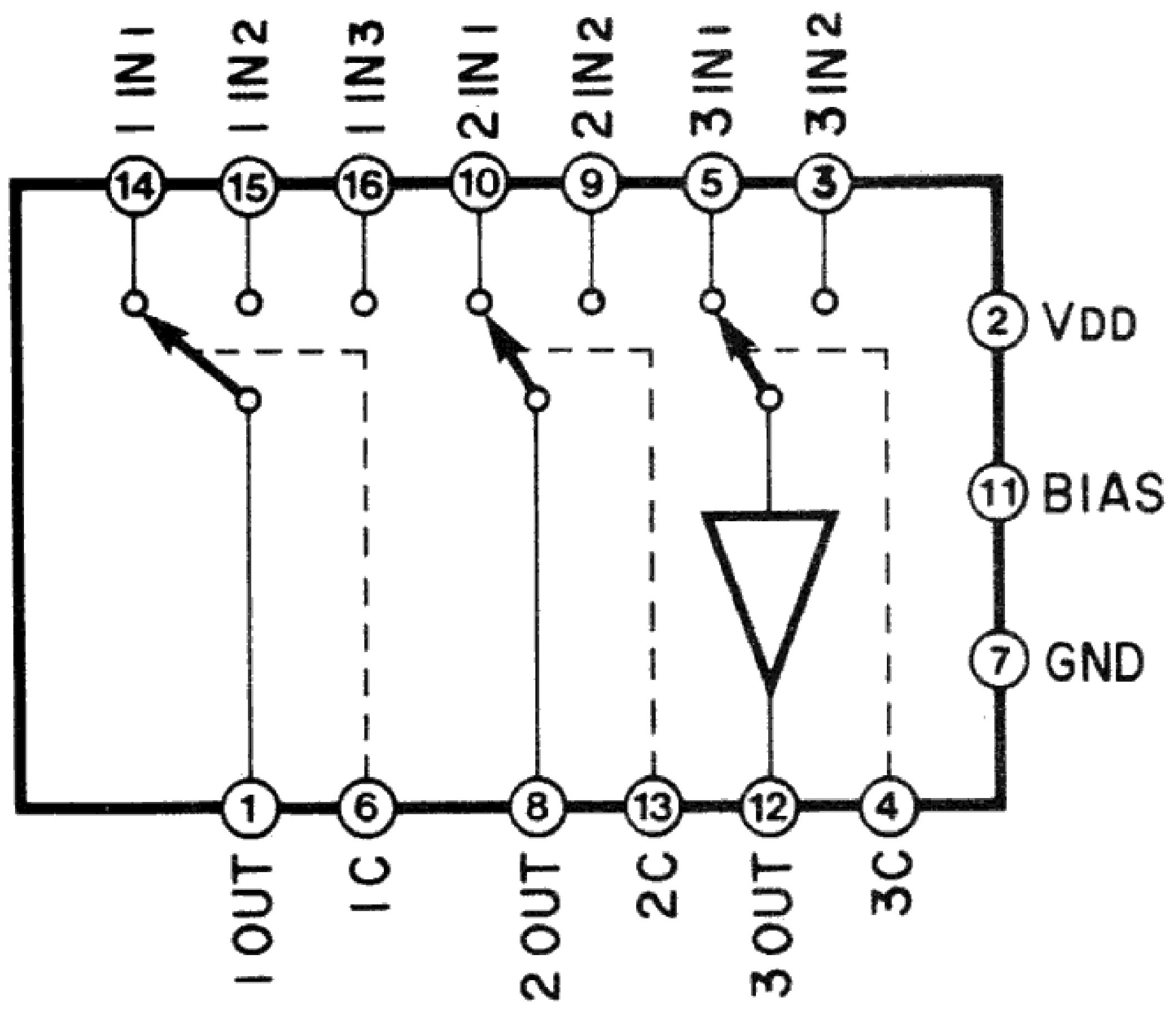
IC1 : M54526P, LB1234 or BA12004



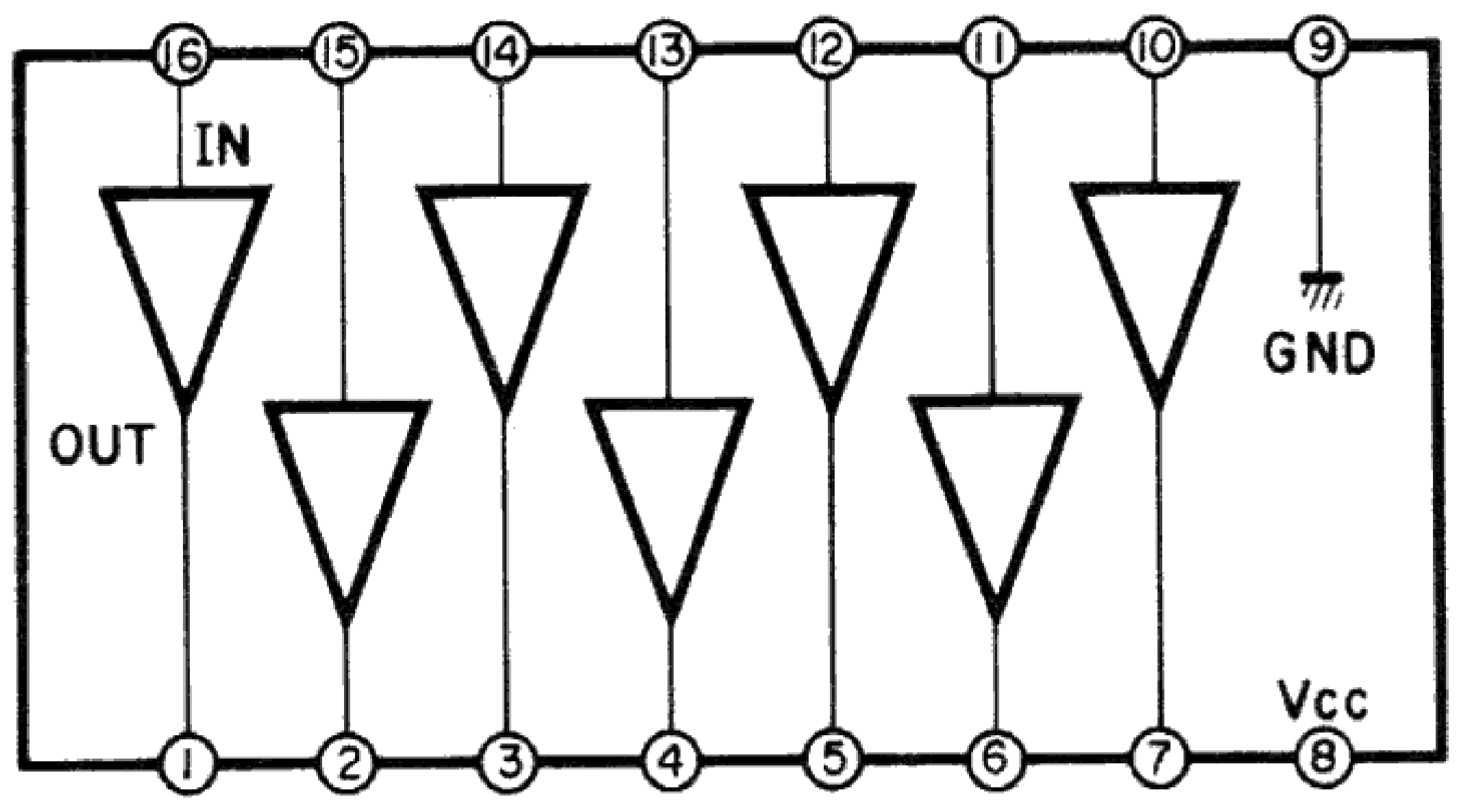
IC2 : LB1413



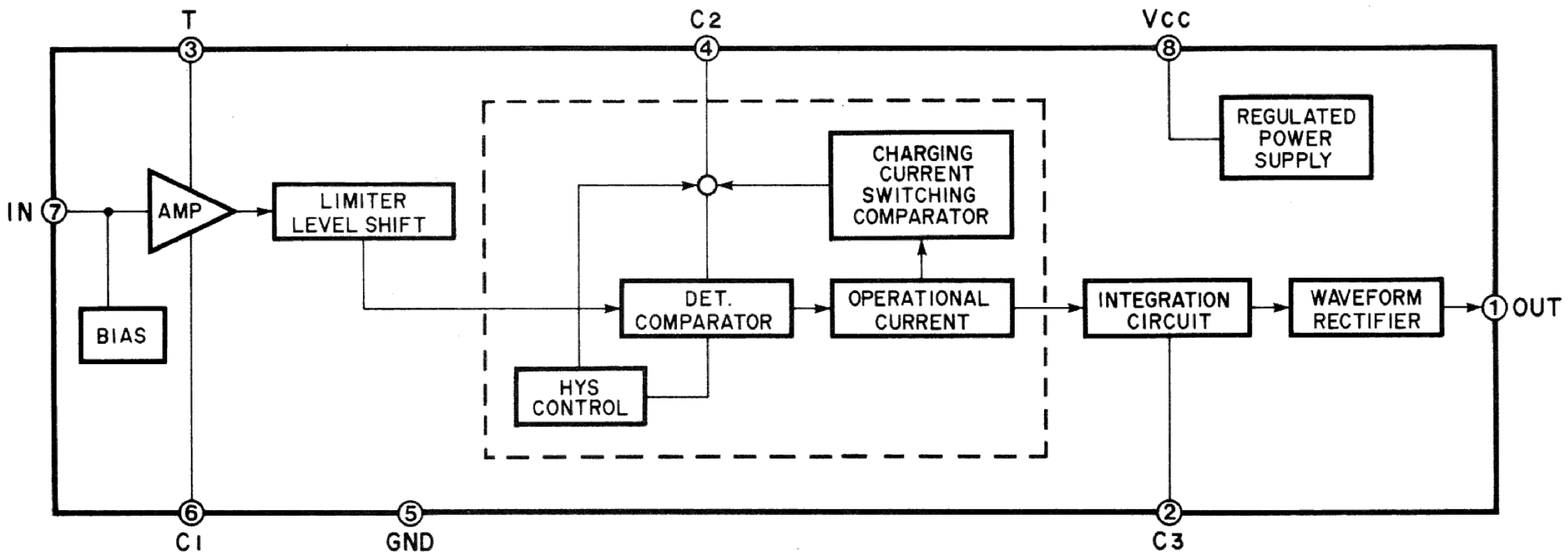
IC503 : M51320P



IC3 : BA618

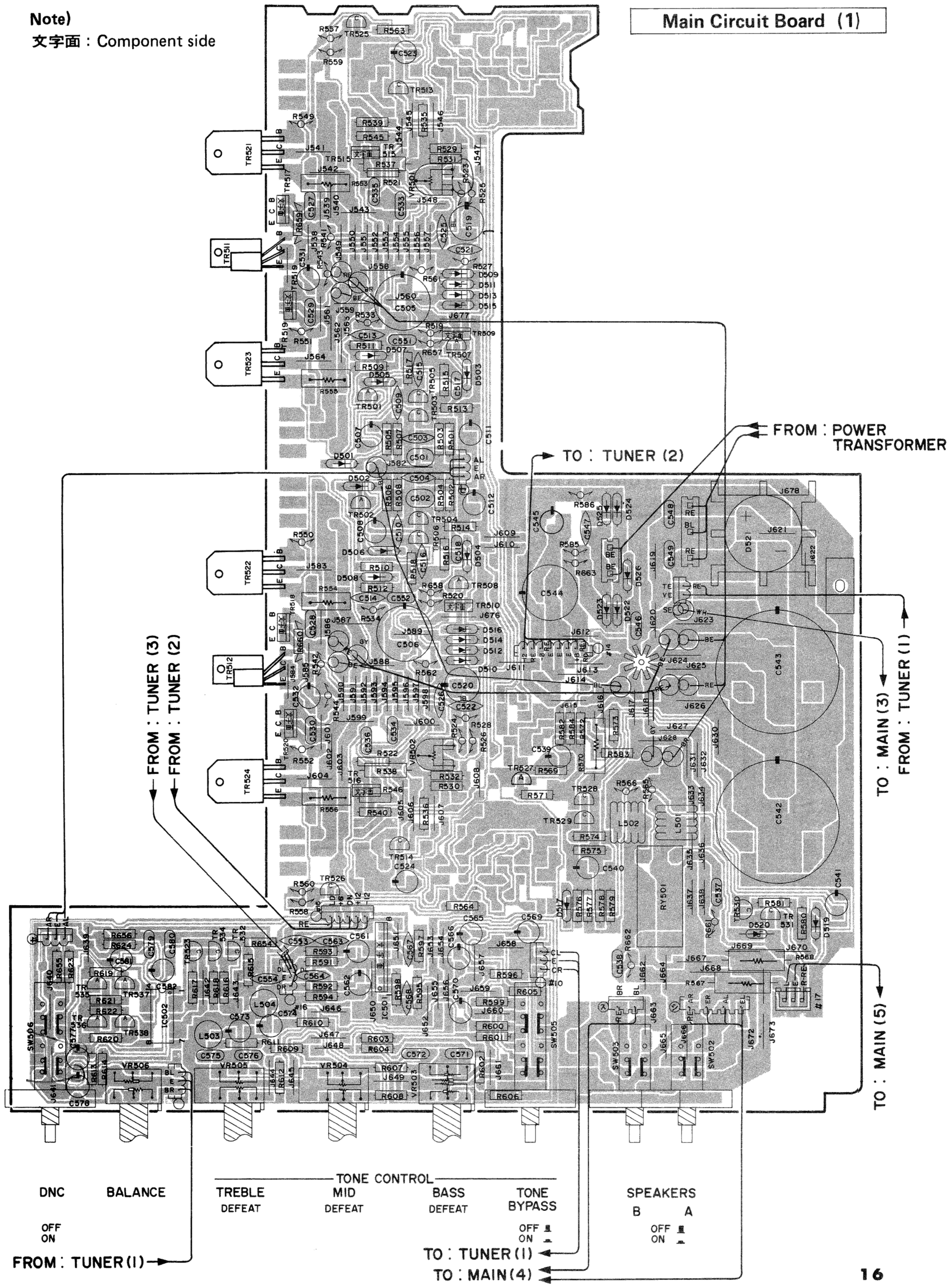


IC4 : BA6340



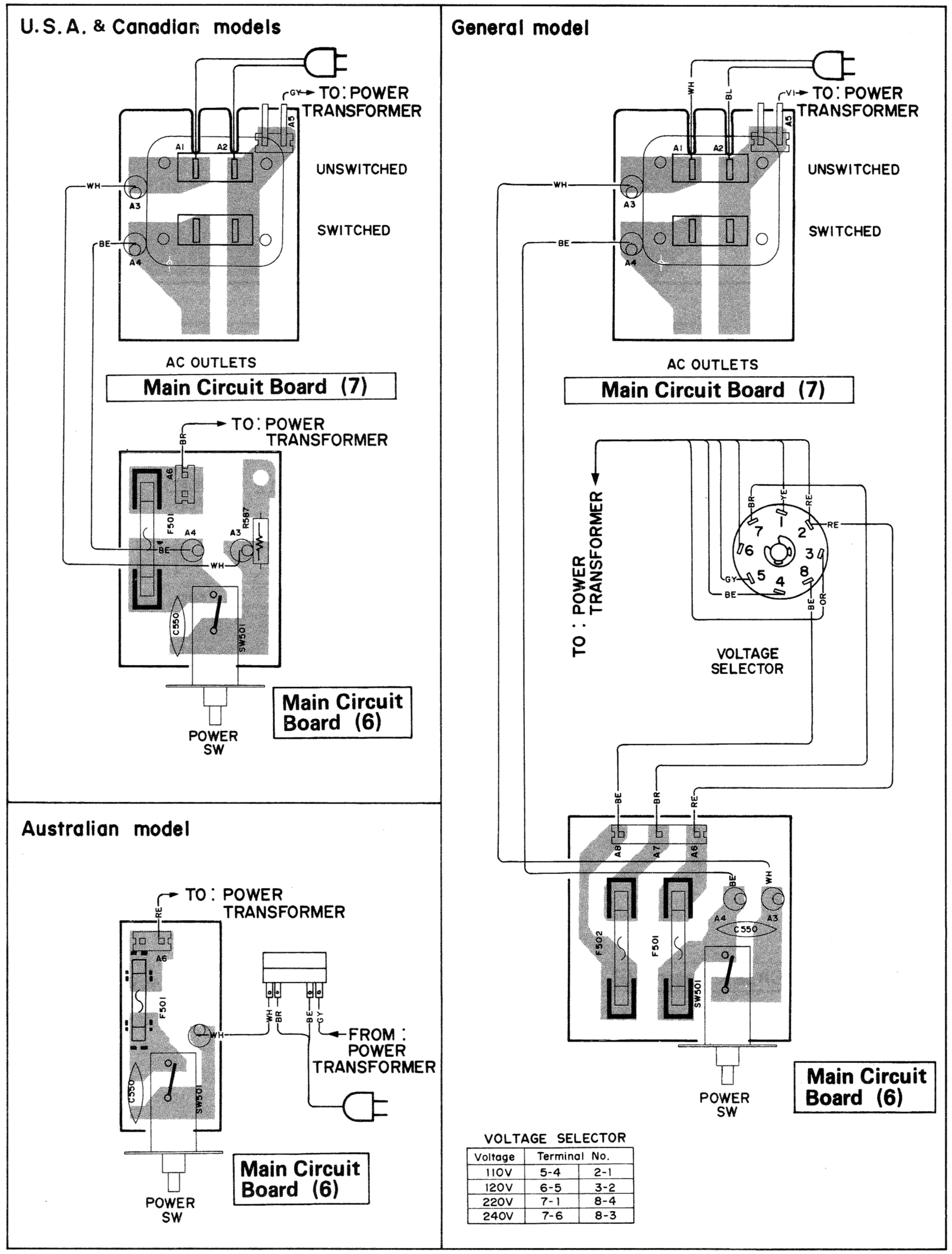
PRINTED CIRCUIT BOARD (Pattern side)

Note)
文字面 : Component side



Note: * marked

	R	U	C	A
F501	T7.0A 250V	7A 125V	7A 125V	T3.15A 250V
F502	T3.5A 250V	OPEN	OPEN	OPEN
D521	4D4B41	4D4B41	D5FB20	4D4B41

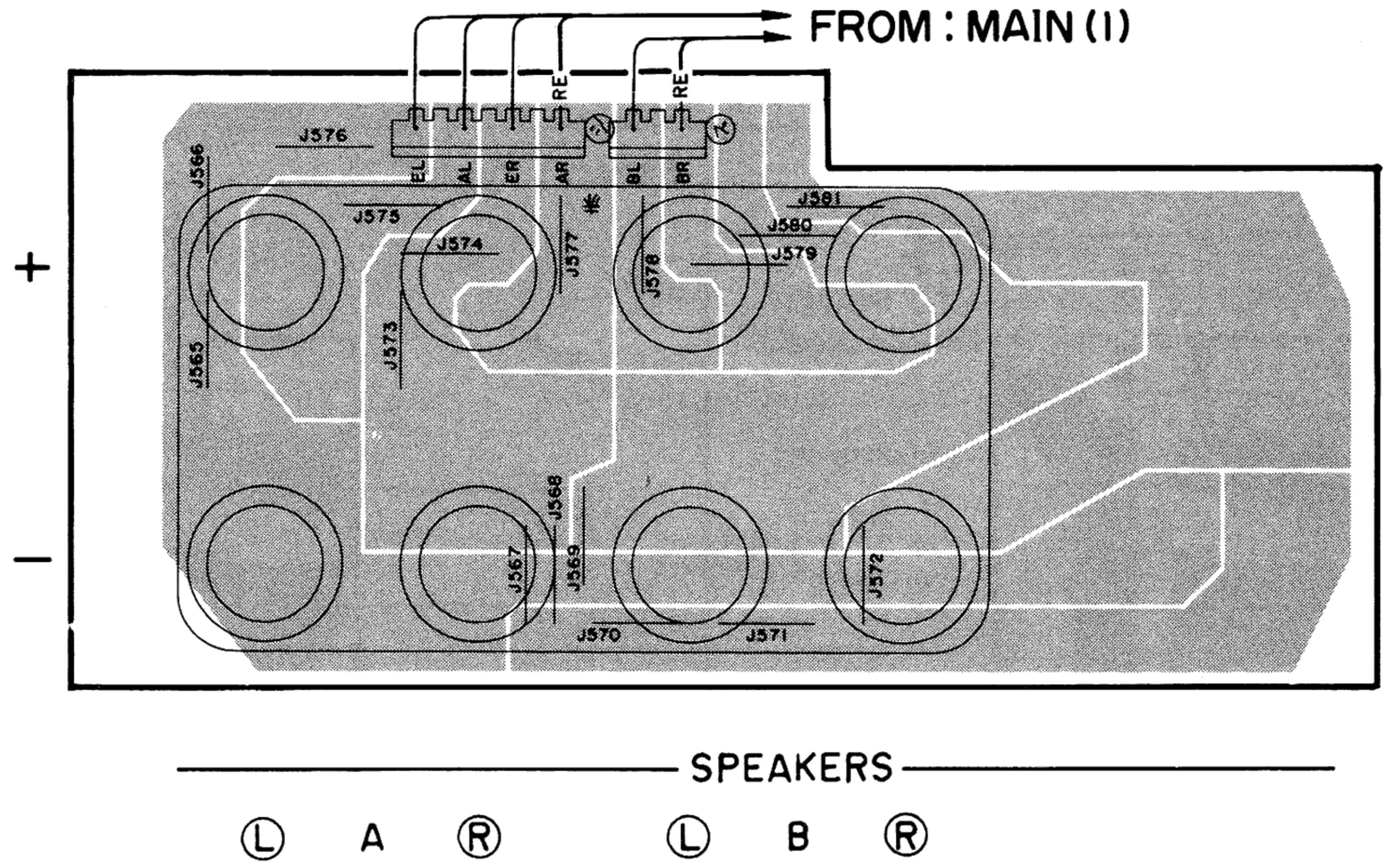


VOLTAGE SELECTOR

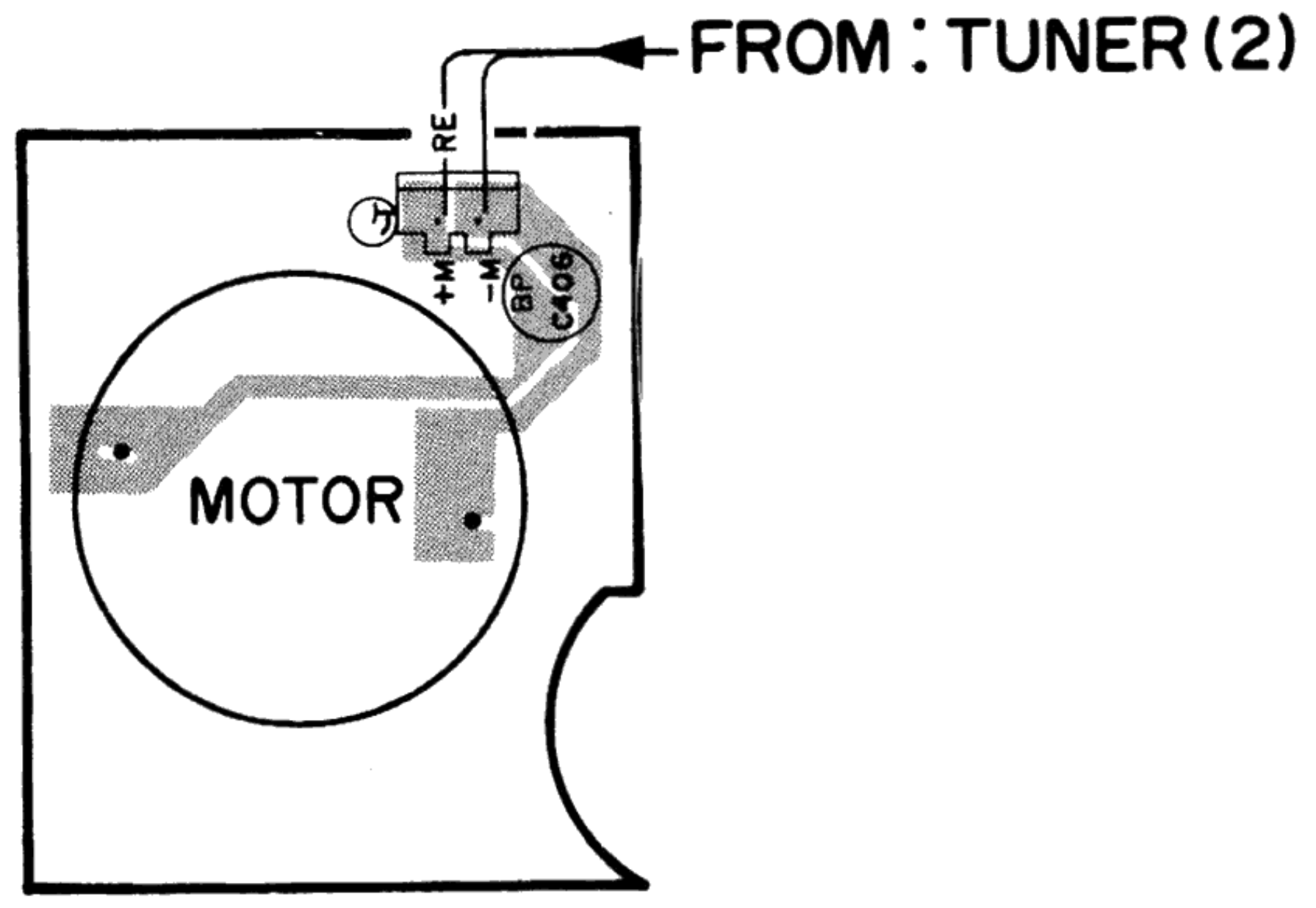
Voltage	Terminal No.	
110V	5-4	2-1
120V	6-5	3-2
220V	7-1	8-4
240V	7-6	8-3

■ PRINTED CIRCUIT BOARD (Pattern side)

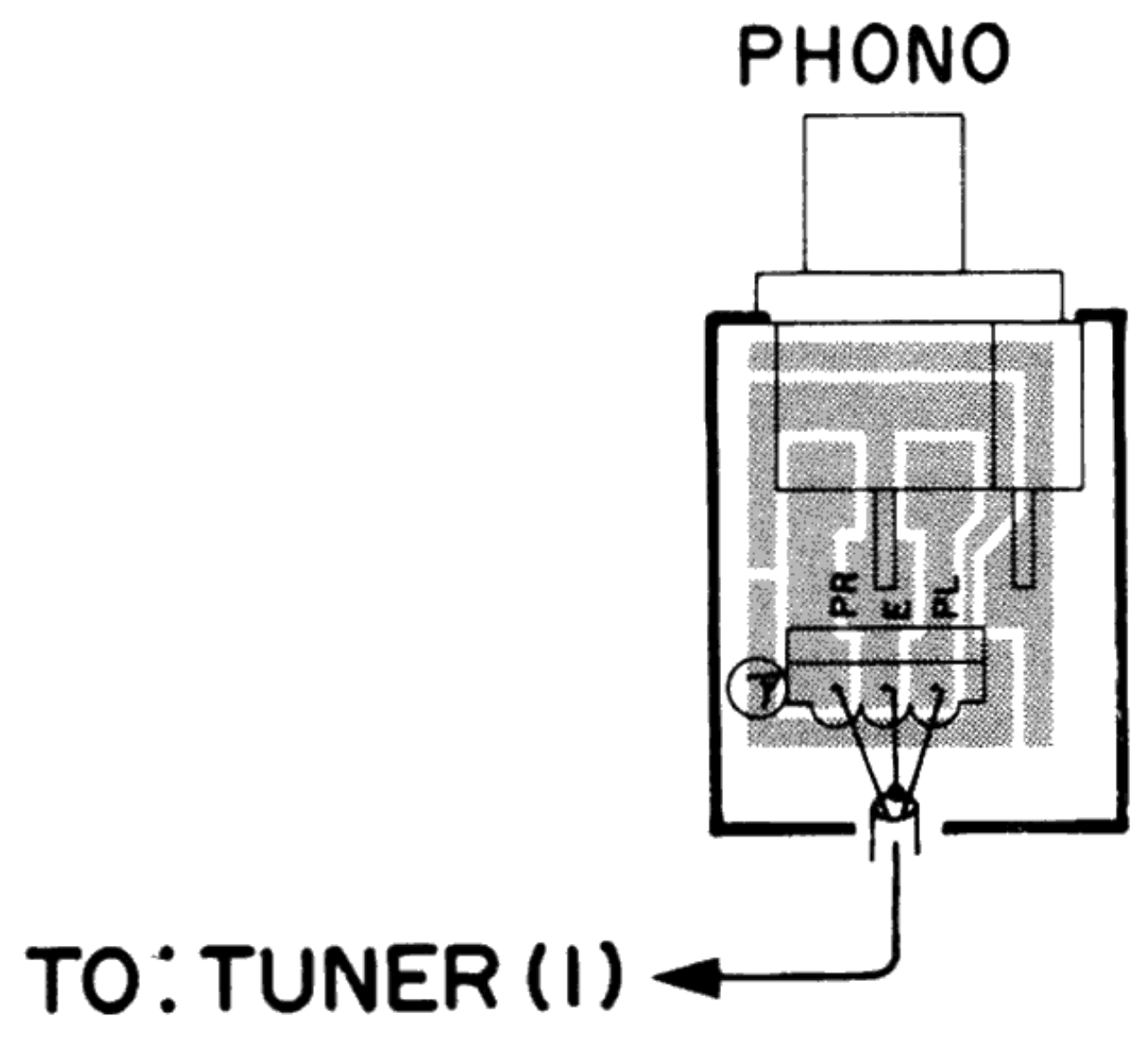
Main Circuit Board (4)



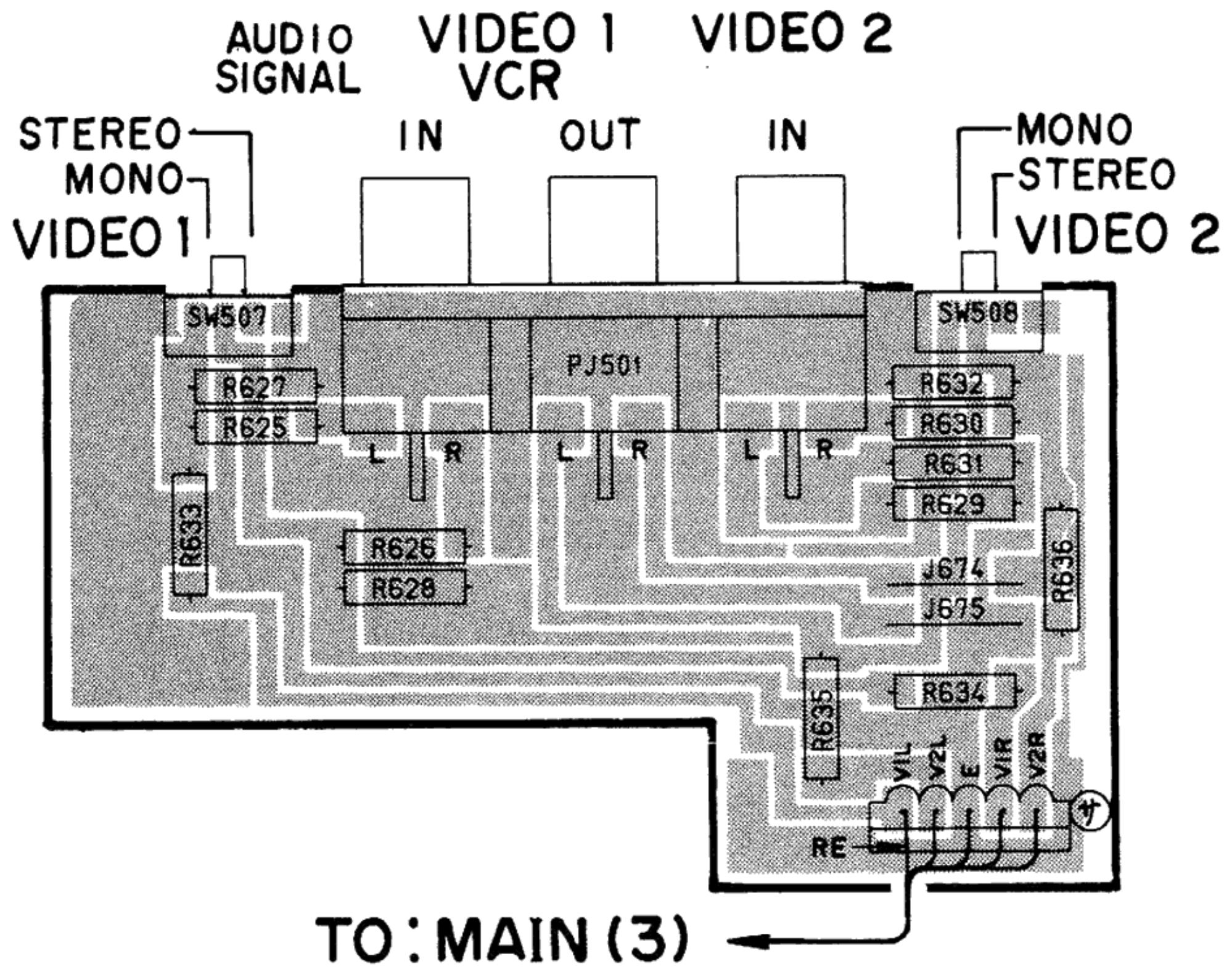
Tuner Circuit Board (4)



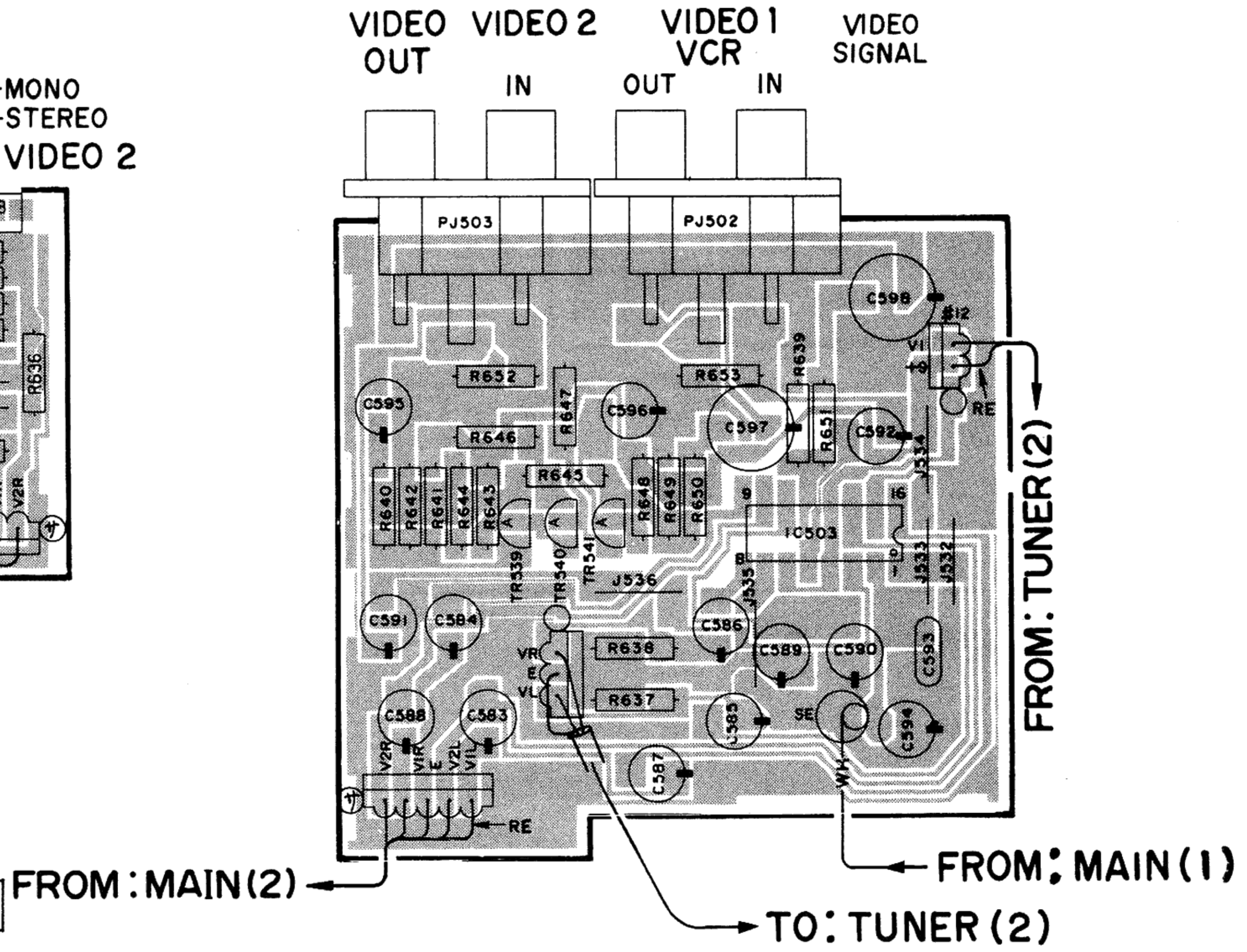
Tuner Circuit Board (5)



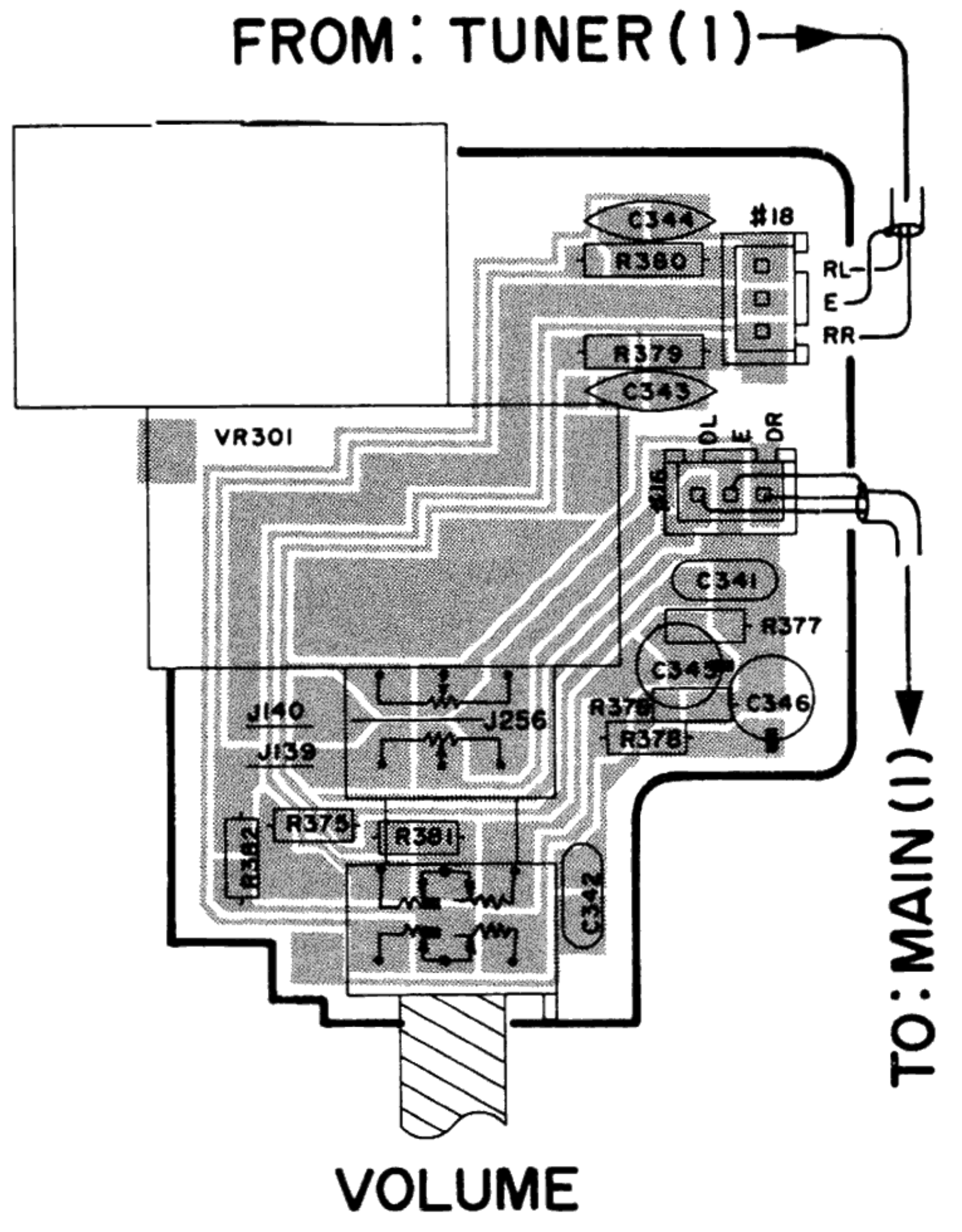
Main Circuit Board (2)



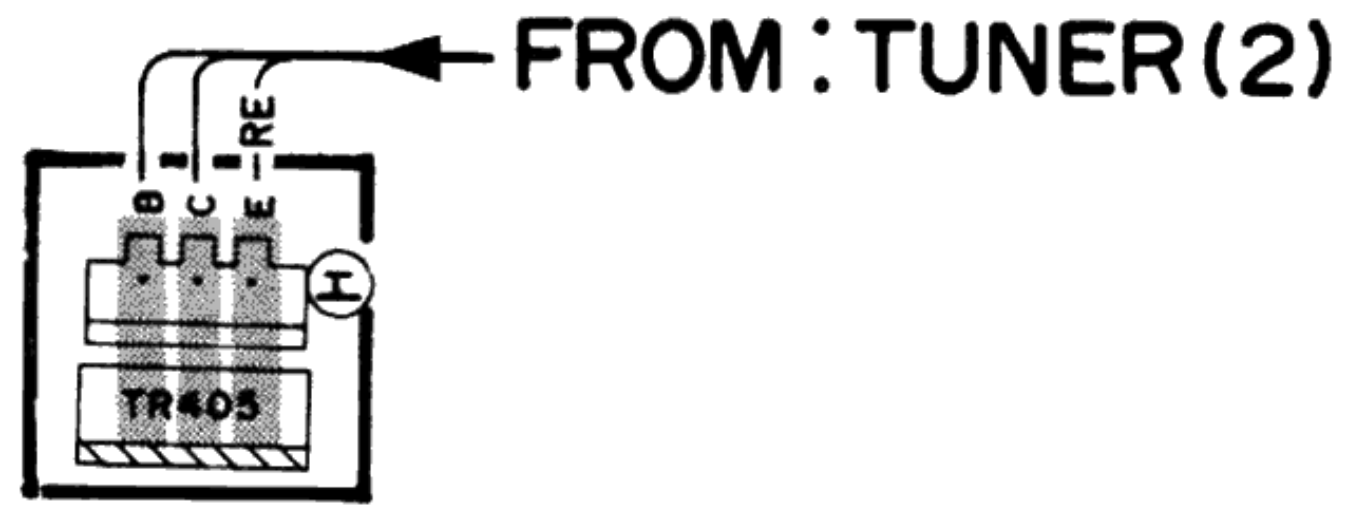
Main Circuit Board (3)



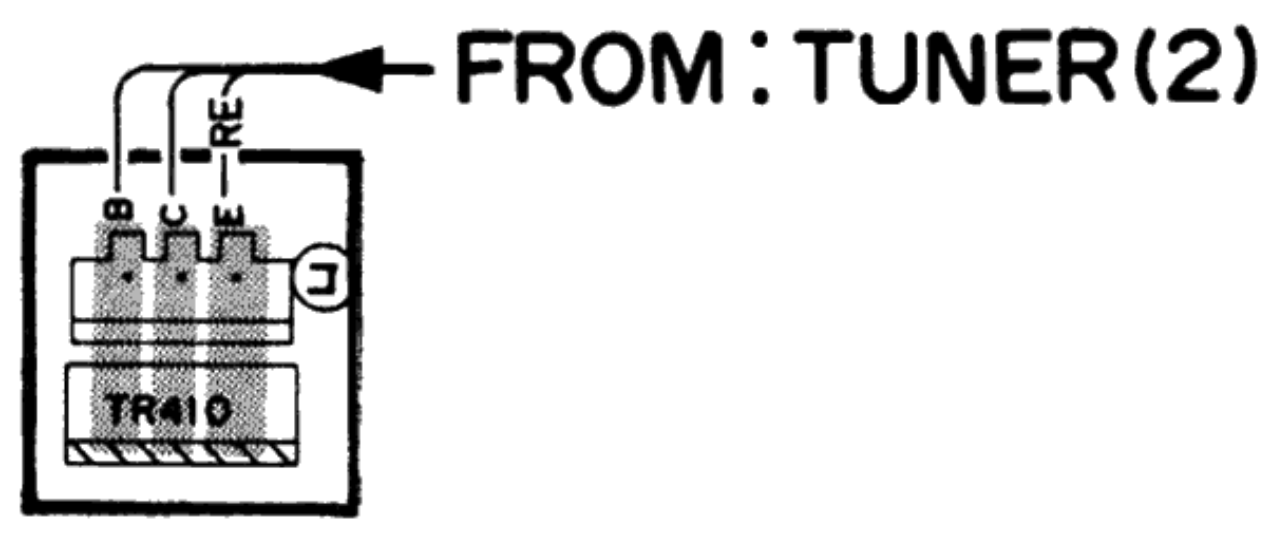
Tuner Circuit Board (3)



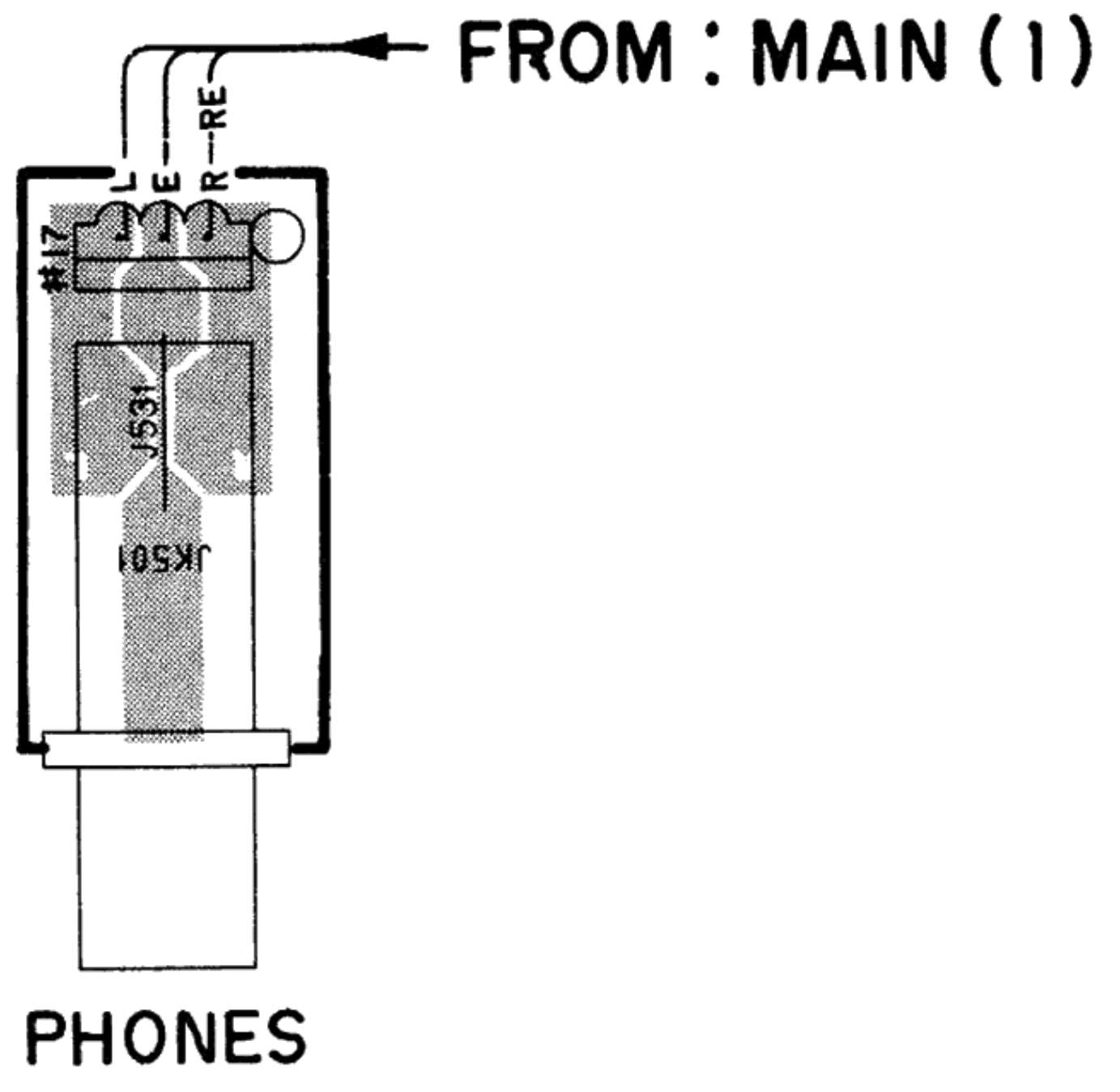
Tuner Circuit Board (7)



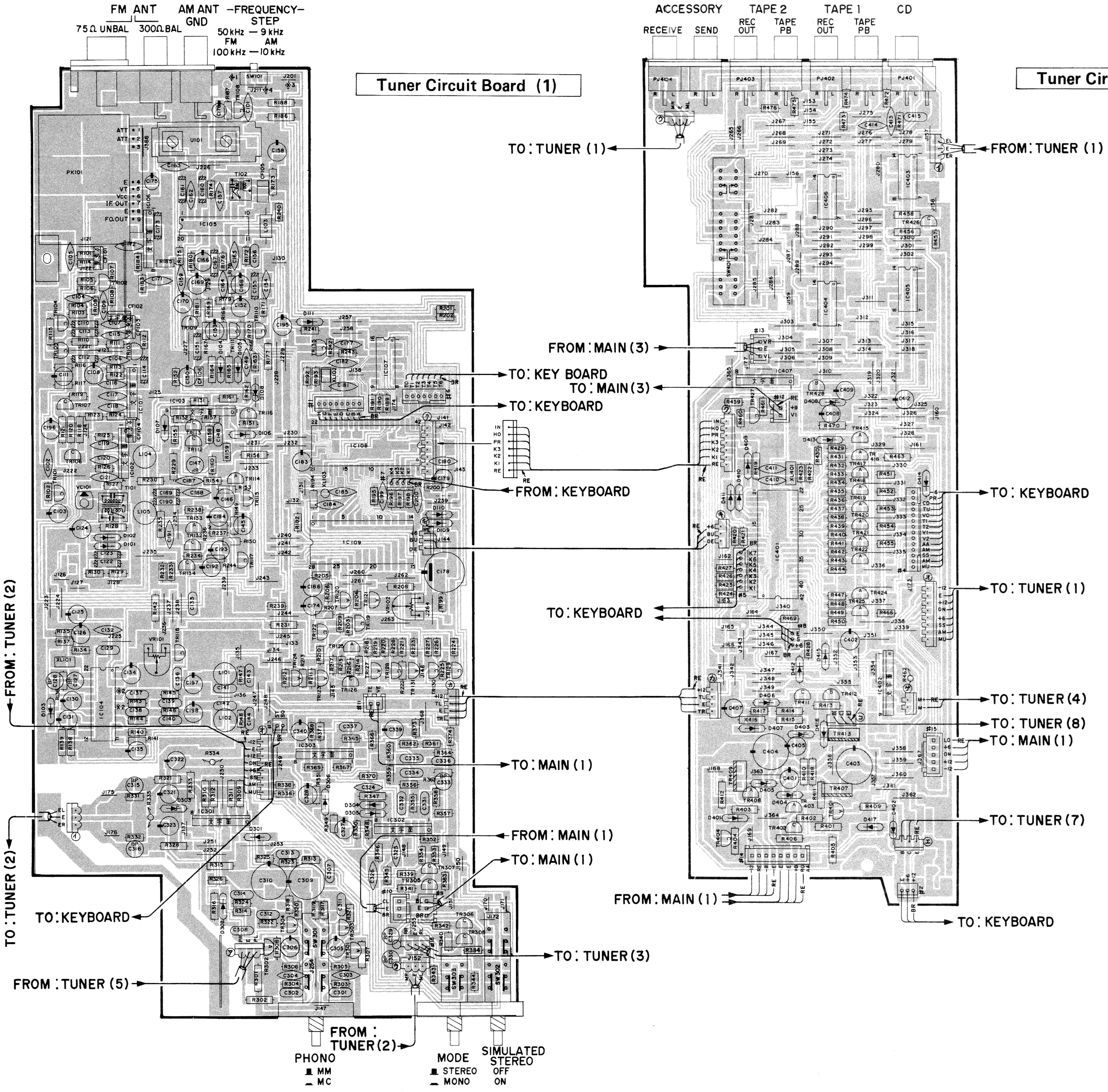
Tuner Circuit Board (8)



Main Circuit Board (5)



■PRINTED CIRCUIT BOARD (Pattern side)



Note)

文字面 : Component side

—▨— : Cylindrical Ceramic Capacitor

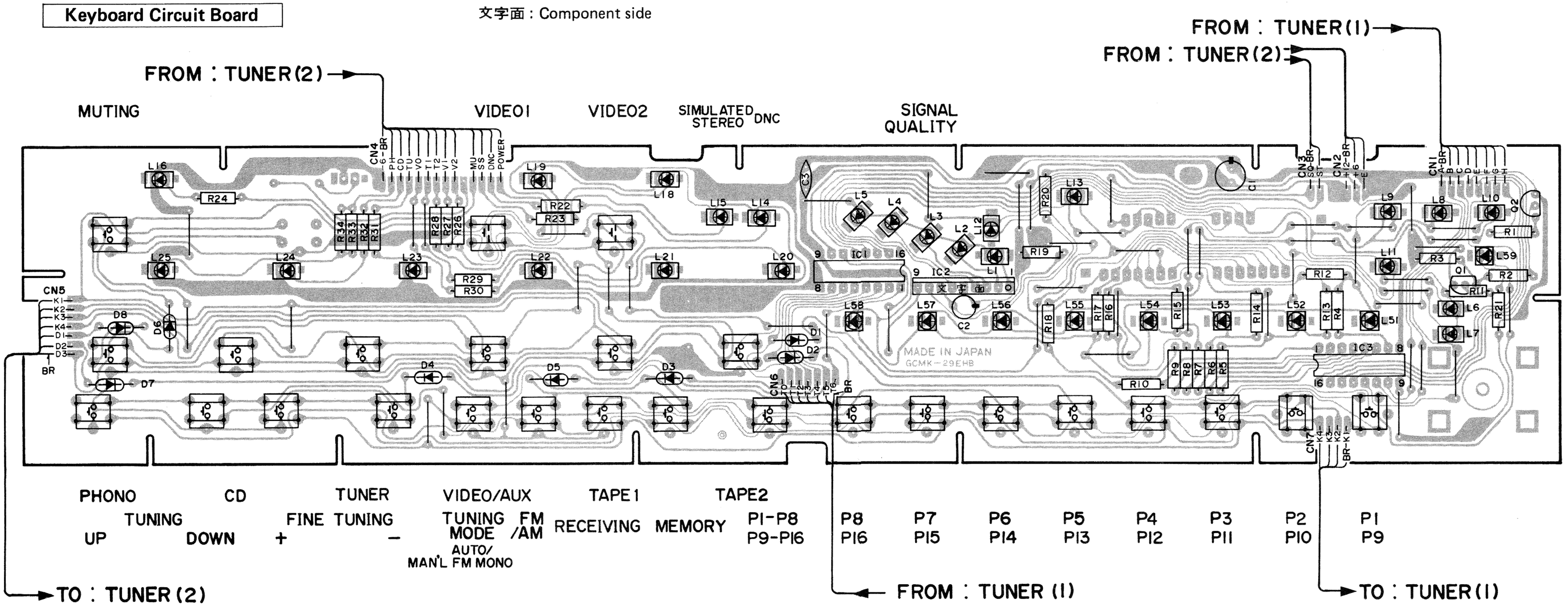
Note: * marked

	R	U, C	A
SW101	KA40169	OPEN	OPEN
C137, 138	1500P	1500P	1000P
J201	OPEN	OPEN	SHORT
J211	OPEN	SHORT	OPEN

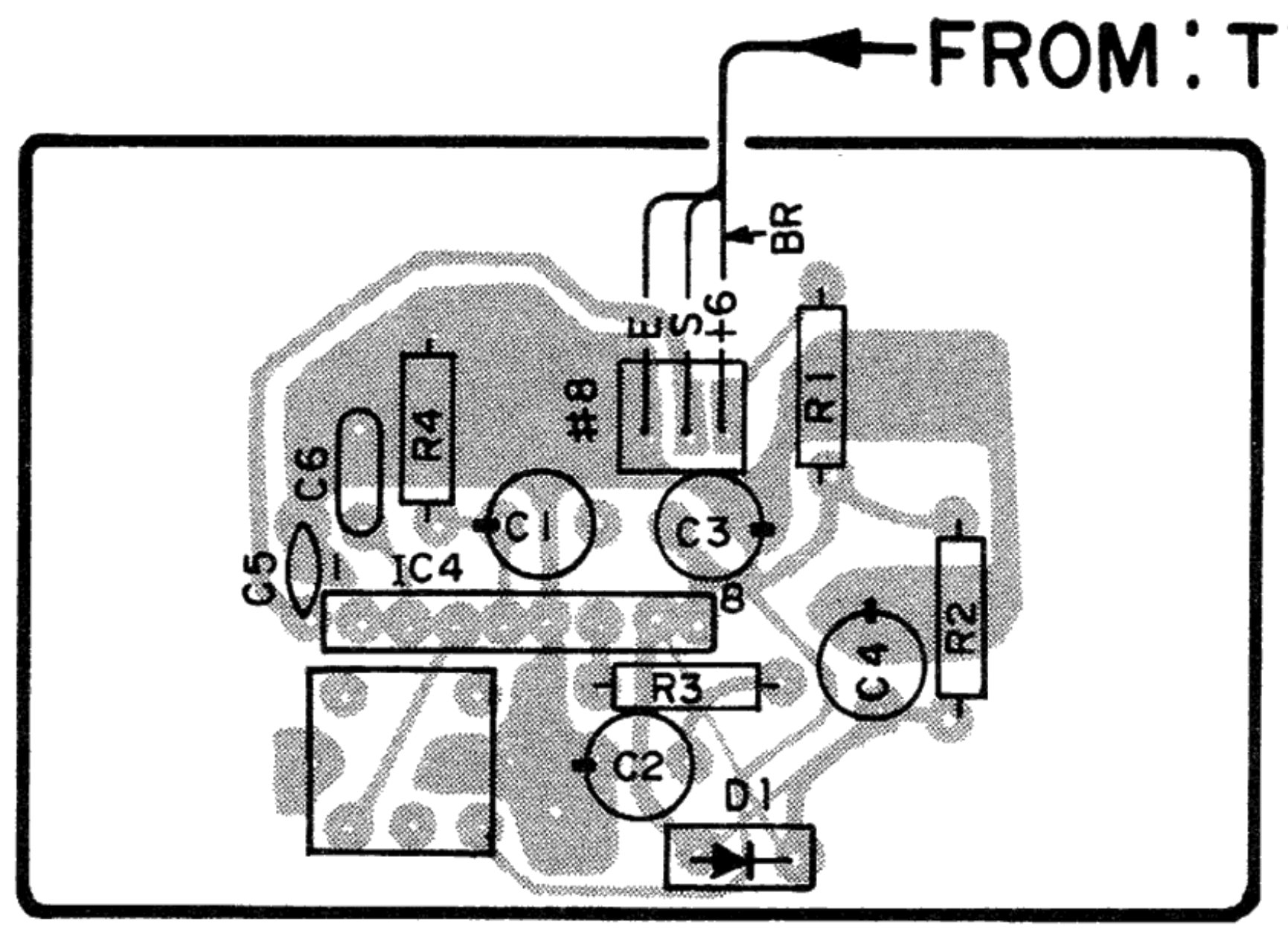
■PRINTED CIRCUIT BOARD (Pattern side)

Note)
文字面 : Component side

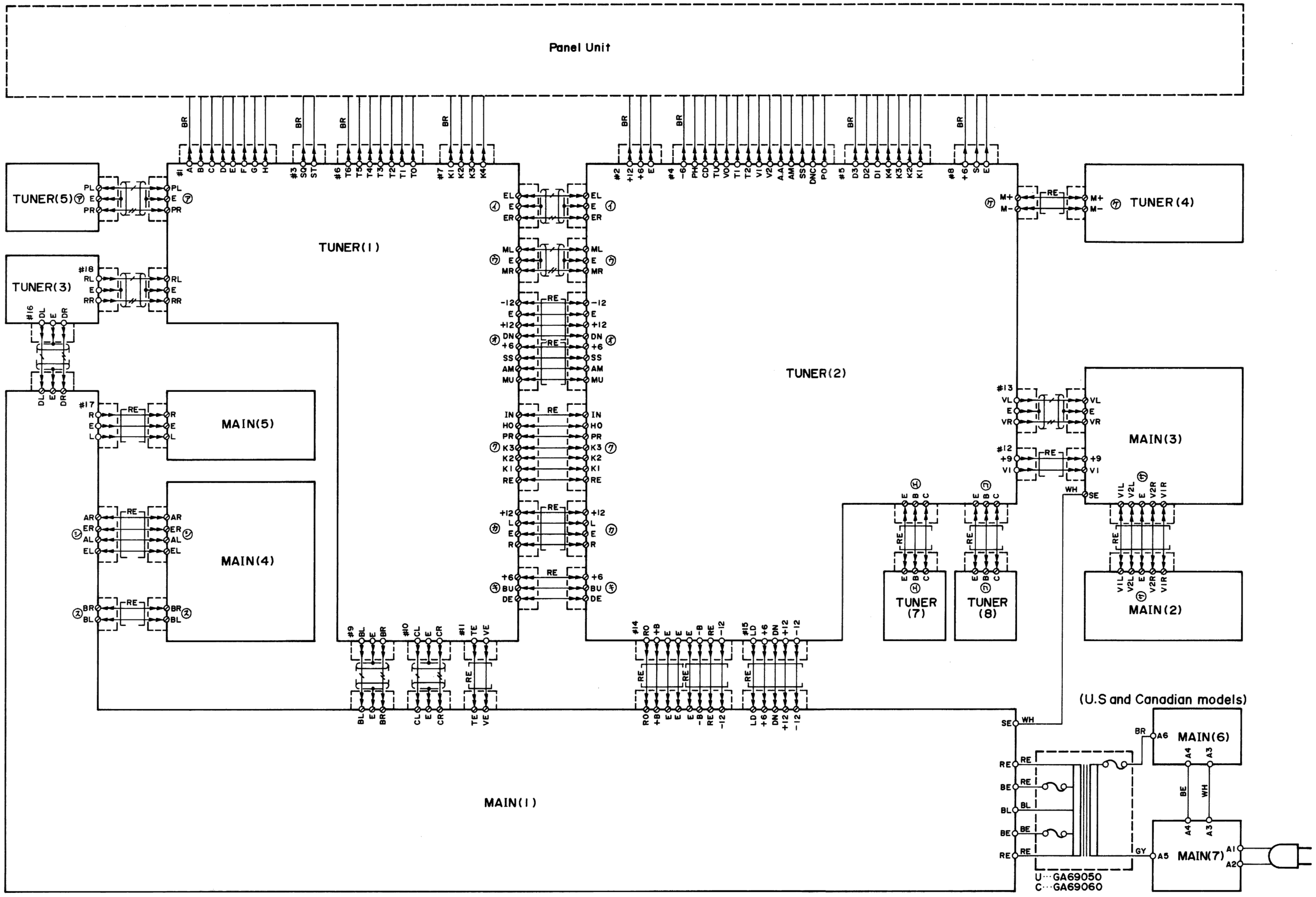
Keyboard Circuit Board



Remote Control Circuit Board



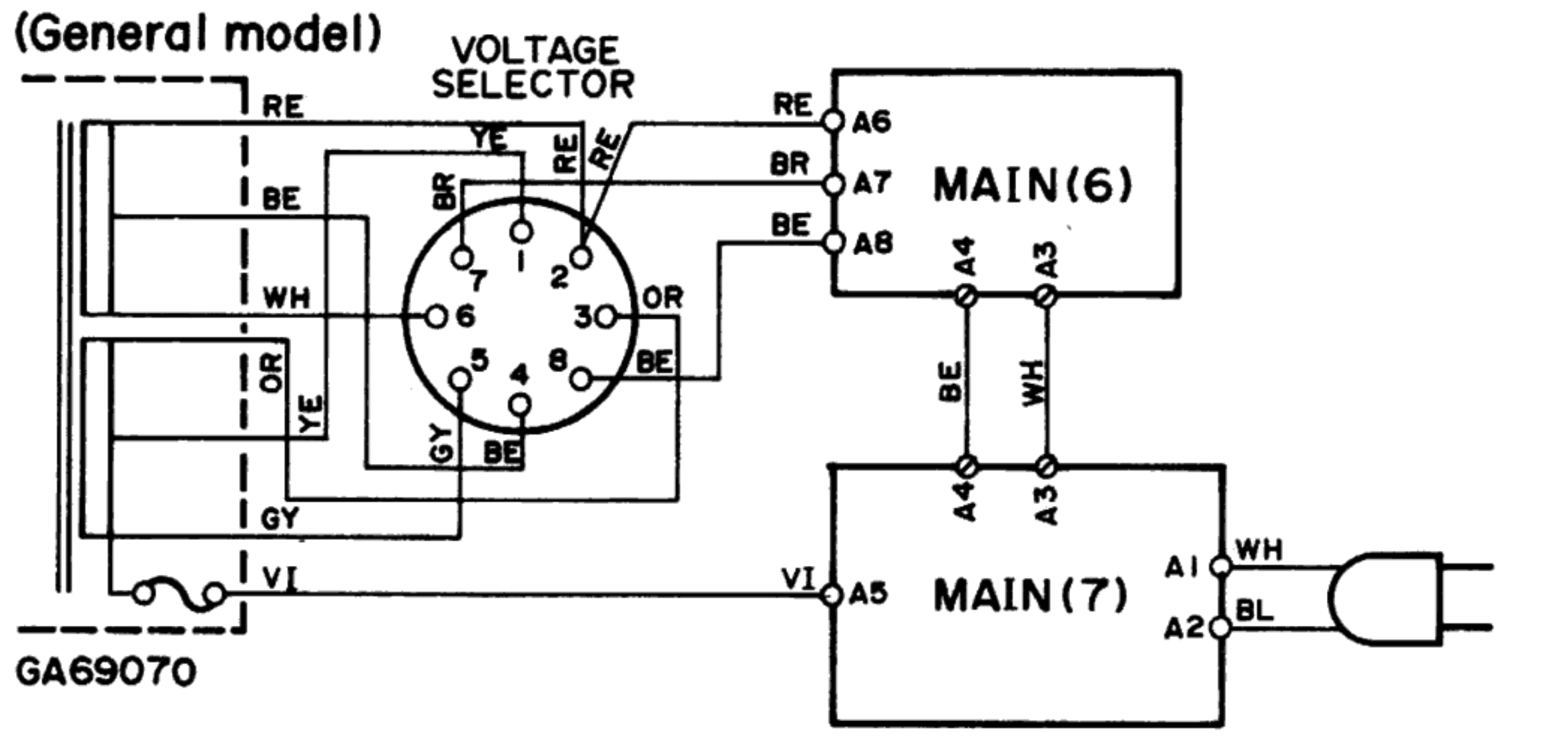
■WIRING



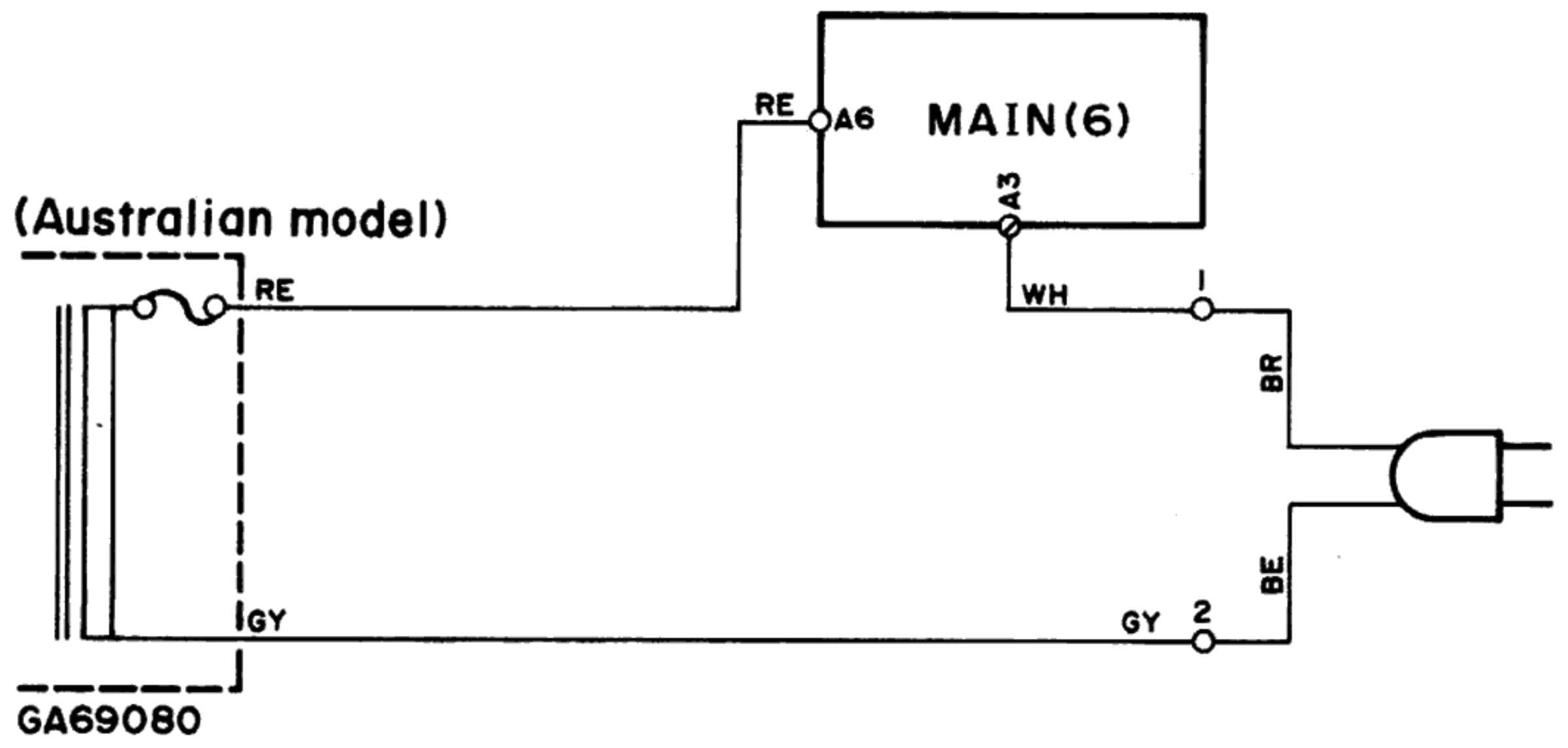
VOLTAGE SELECTOR

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)

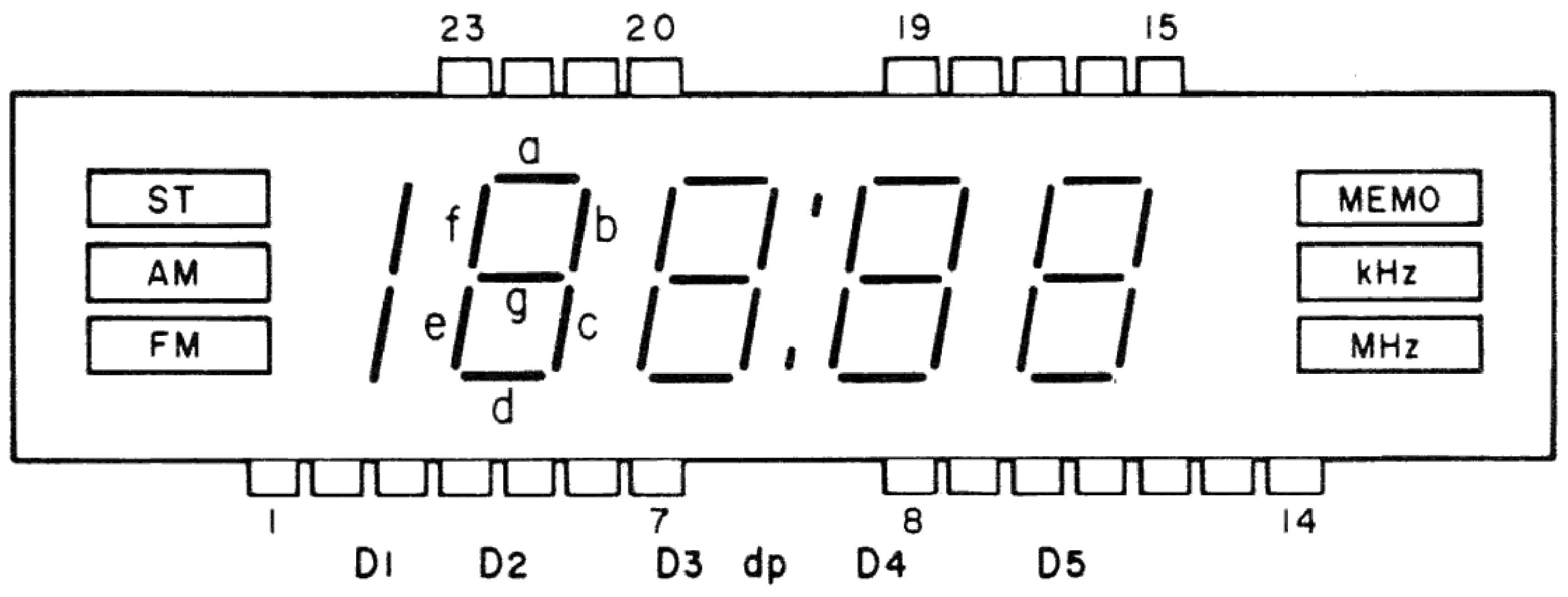


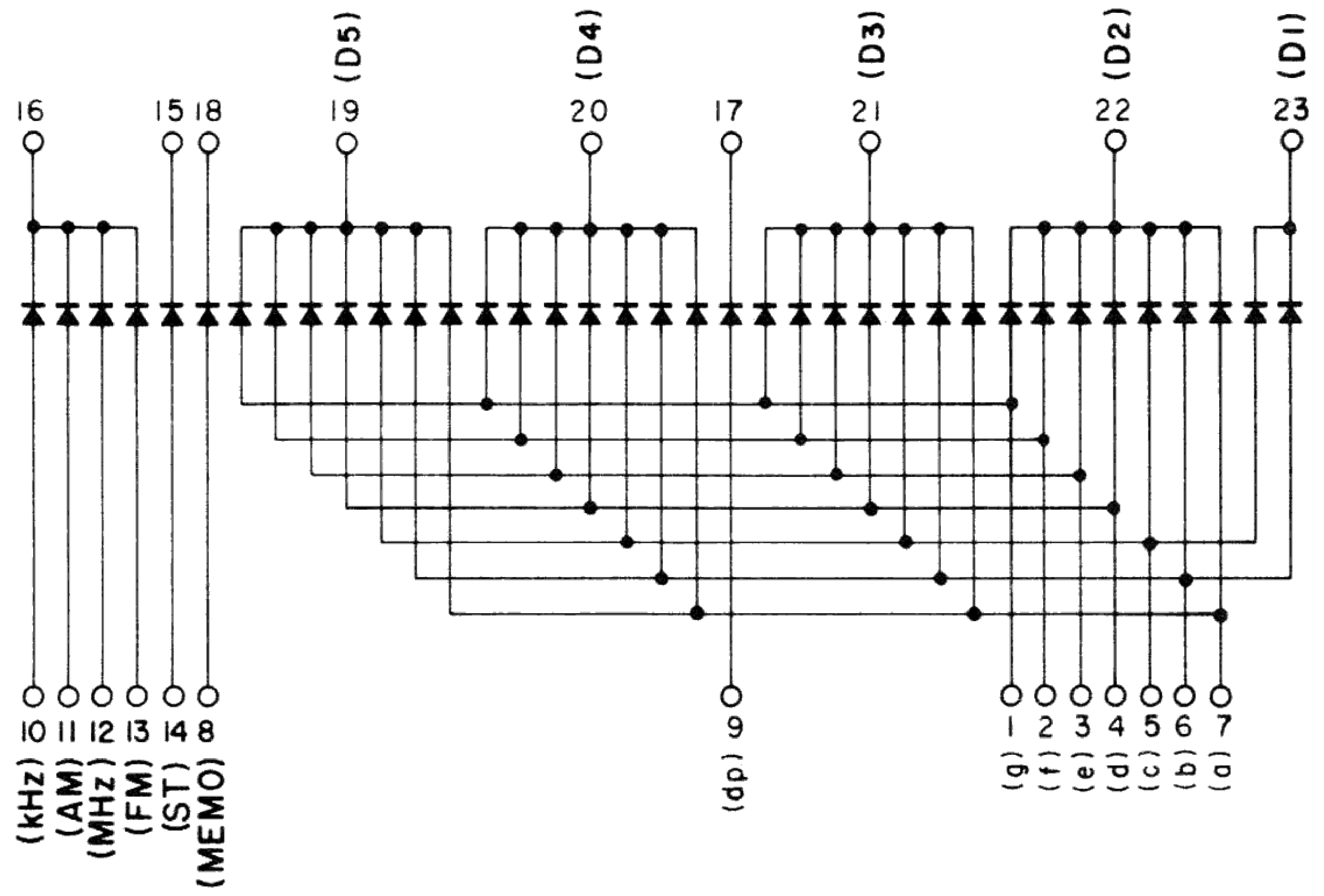
(Australian model)



CIRCUT 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)	P-6/14 (L56)	P-7/15 (L57)	P-8/16 (L58)
T0 [14 Pin]	MEMO	CSL (L12)	kHz	AM	MHz	FM		FINE (L13)

• MATRIX OF INPUT KEY

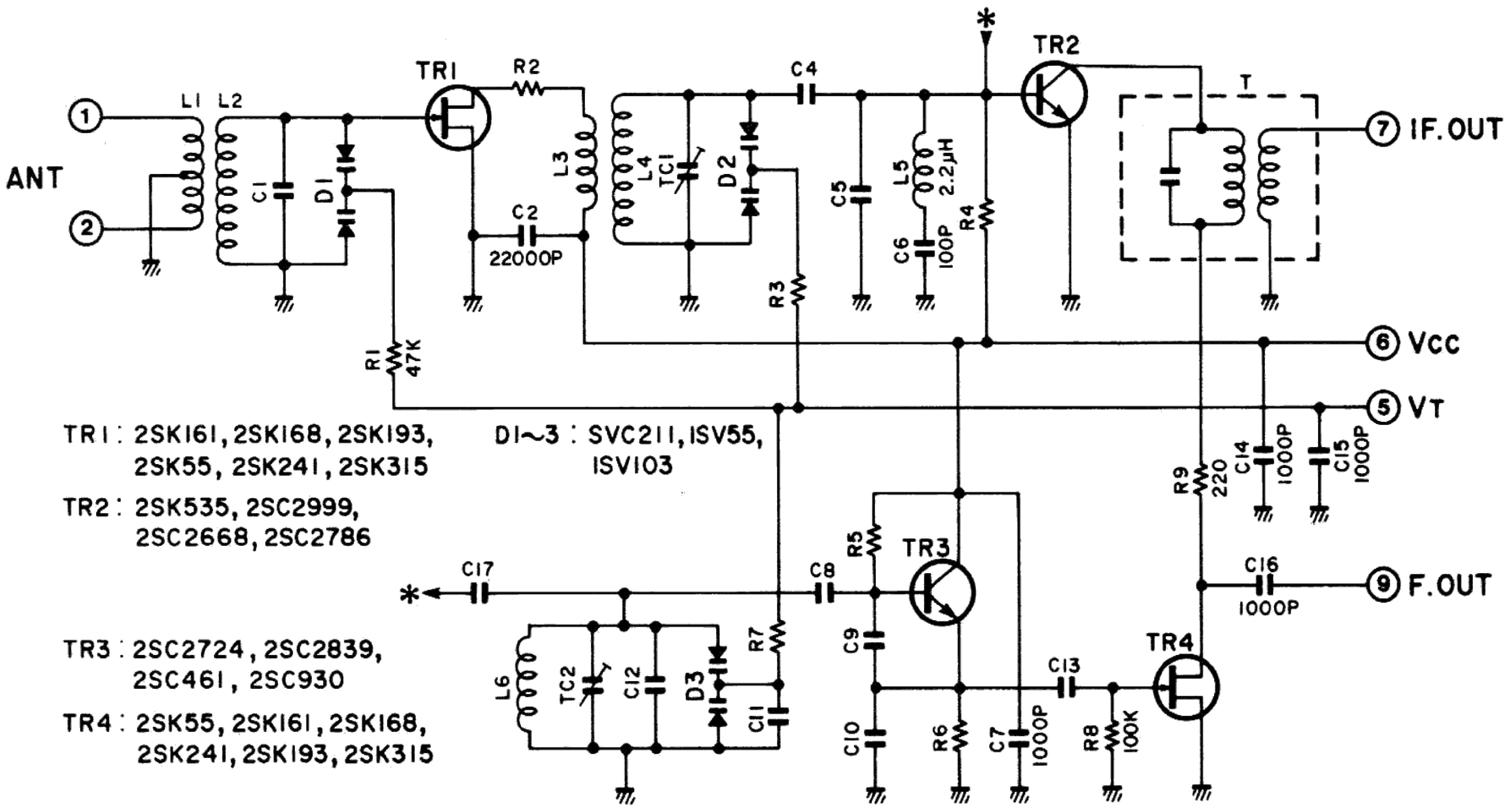
IC107 IC108	T1 [2 Pin]	T2 [15 Pin]	T3 [1 Pin]	T4 [6 Pin]	D5 [7 Pin]	T6 [4 Pin]
K1 [3 Pin]	P1/9	P5/13		UP	P1-8/ P9-16	
K2 [4 Pin]	P2/10	P6/14		DOWN	FM/AM	
K3 [5 Pin]	P3/11	P7/15	AUTO/ MAN'L	FINE UP	RECEIVING MODE	
K4 [6 Pin]	P4/12	P8/.6	MEMORY	FINE UP		TEST (OFFSET)

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



TR1 : 2SK161, 2SK168, 2SK193, 2SK55, 2SK241, 2SK315

TR2 : 2SK535, 2SC2999, 2SC2668, 2SC2786

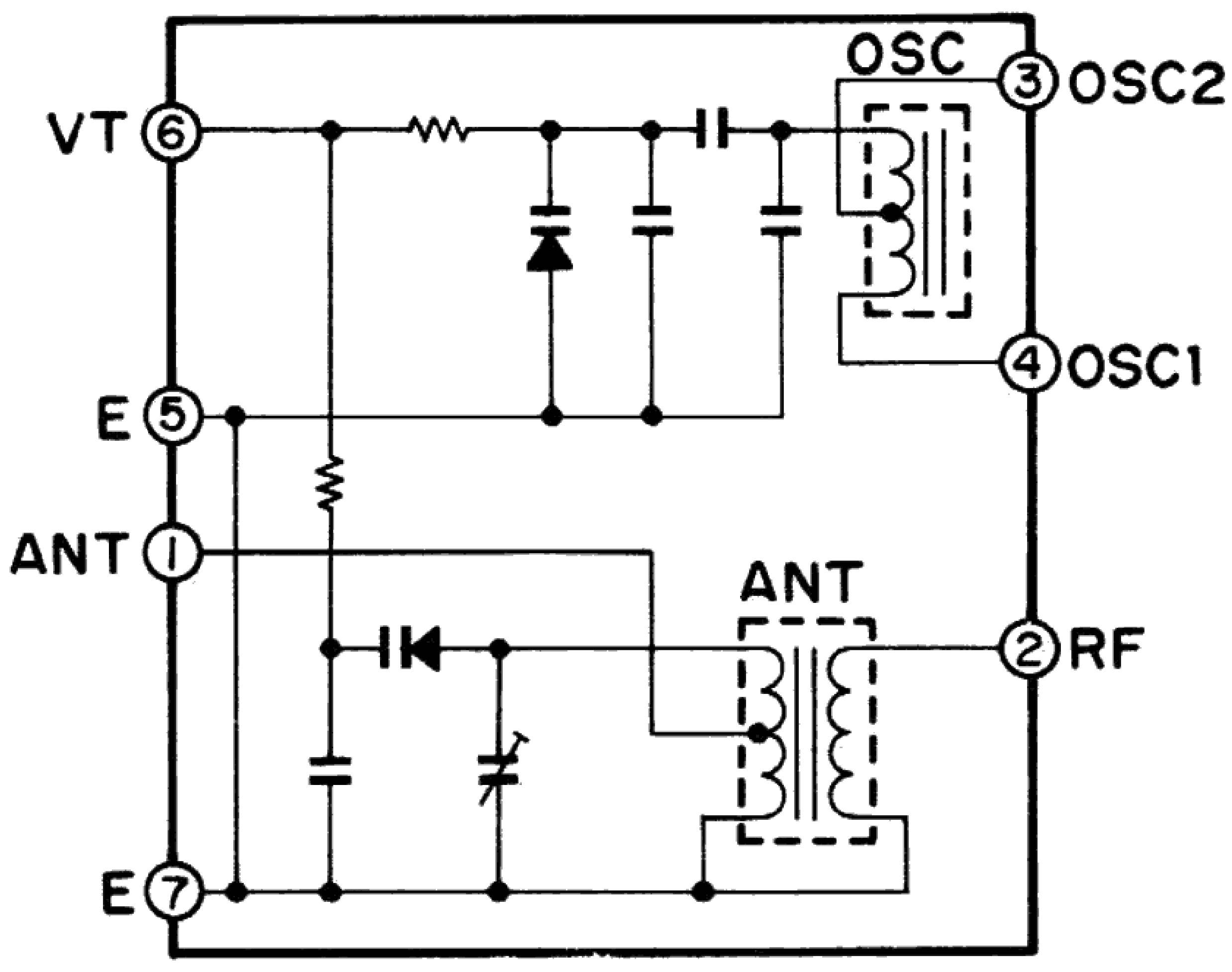
TR3 : 2SC2724, 2SC2839, 2SC461, 2SC930

TR4 : 2SK55, 2SK161, 2SK168, 2SK241, 2SK193, 2SK315

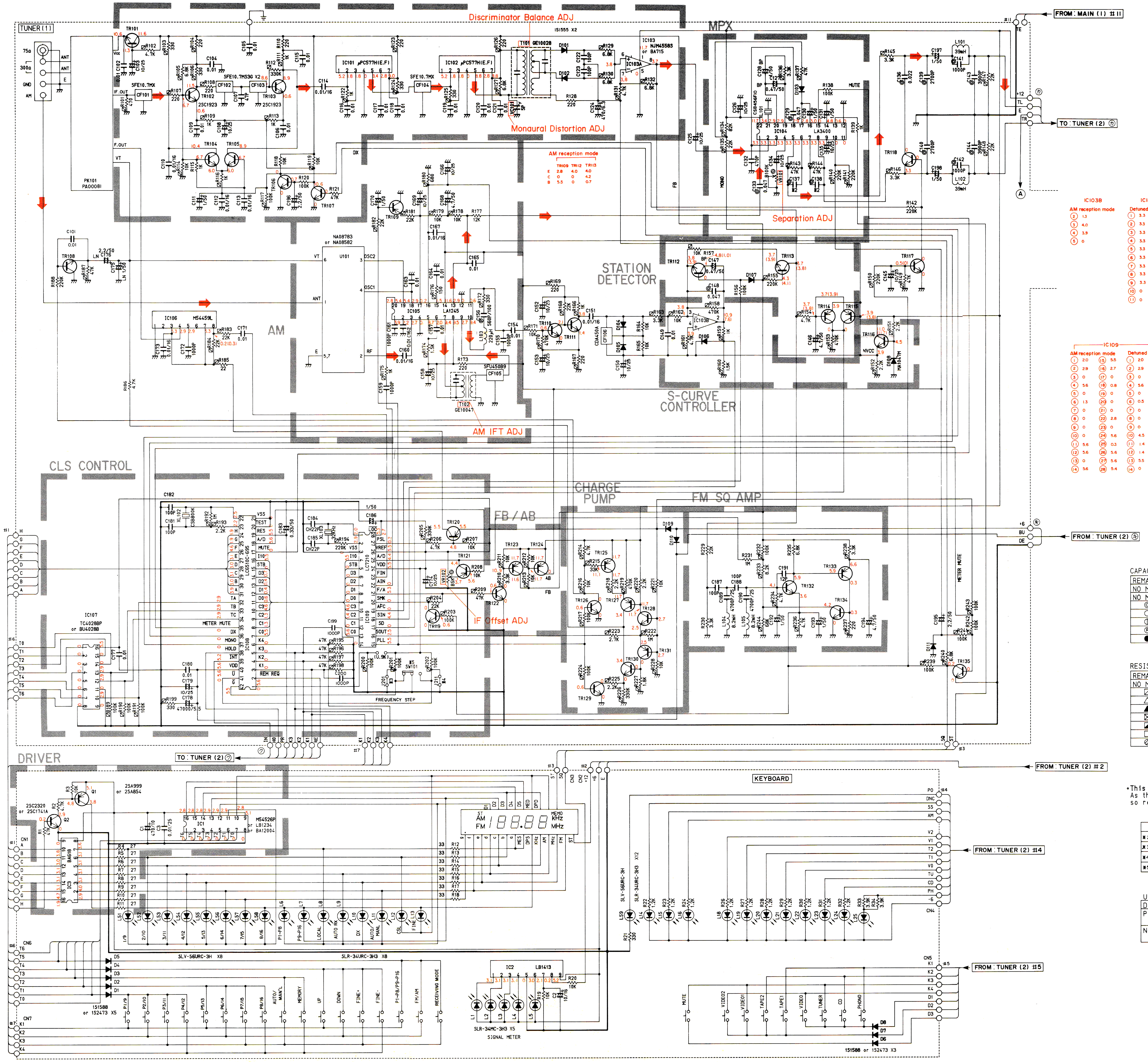
D1~3 : SVC211, ISV55, ISV103

AM Coil Pack (U101)

NA08582



■ SCHEMATIC DIAGRAM



IC103B

AM reception mode	
②	1.3
③	4.0
④	3.9
⑤	0

IC104

Detuned mode			
①	3.3	⑫	0
②	3.3	⑬	10.4
③	3.3	⑭	4.8
④	3.3	⑮	0
⑤	3.3	⑯	2.8
⑥	3.3	⑰	3.3
⑦	3.3	⑱	2.9
⑧	3.3	⑲	2.9
⑨	3.3	⑳	2.9
⑩	0	㉑	3.4
⑪	0	㉒	11.7

IC109

AM reception mode				Detuned mode			
①	2.0	⑮	5.5	①	2.0	⑮	5.5
②	2.9	⑯	2.7	②	2.9	⑯	2.5
③	0	⑰	0	③	0	⑰	0
④	5.6	⑱	0.8	④	5.6	⑱	4.3
⑤	0	⑲	0	⑤	0	⑲	0
⑥	1.3	⑳	0	⑥	0.5	⑳	5.5
⑦	0	㉑	0	⑦	0	㉑	5.5
⑧	0	㉒	2.8	⑧	0	㉒	0
⑨	0	㉓	0	⑨	0	㉓	2.7
⑩	0	㉔	5.6	⑩	4.5	㉔	5.5
⑪	5.6	㉕	0.3	⑪	1.4	㉕	1.3
⑫	5.6	㉖	5.6	⑫	1.4	㉖	5.5
⑬	0	㉗	5.6	⑬	5.5	㉗	0.2
⑭	5.6	㉘	5.4	⑭	0	㉘	5.4

IC108

AM reception mode				Detuned mode			
①	0	㉒	2.5	①	0	㉒	2.5
②	5.6	㉓	2.2	②	5.6	㉓	2.2
③	0	㉔	1.2	③	0	㉔	1.9
④	0	㉕	1.2	④	0	㉕	1.9
⑤	0	㉖	1.9	⑤	0	㉖	4.7
⑥	0	㉗	0	⑥	0	㉗	3.2
⑦	0	㉘	1.2	⑦	5.5	㉘	3.1
⑧	5.6	㉙	4.0	⑧	1.4	㉙	3.1
⑨	5.6	㉚	3.2	⑨	1.4	㉚	3.1
⑩	0	㉛	0	⑩	4.5	㉛	3.9
⑪	0.7	㉜	2.9	⑪	0.6	㉜	2.9
⑫	0.7	㉝	3.0	⑫	0.6	㉝	2.9
⑬	0.7	㉞	3.0	⑬	0.6	㉞	2.9
⑭	1.9	㉟	0	⑭	1.0	㉟	0
⑮	0	㊱	0	⑮	0	㊱	0
⑯	5.6	㊲	5.6	⑯	5.6	㊲	5.6
⑰	0	㊳	5.2	⑰	0	㊳	5.2
⑱	5.6	㊴	5.6	⑱	5.6	㊴	5.6
⑲	5.6	㊵	5.6	⑲	5.5	㊵	5.6
⑳	0	㊶	0	⑳	0	㊶	0
㉑	0	㊷	5.5	㉑	0	㊷	5.5

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.

		U.C	R	A
✱2	C137,138	1500P ◎	→	1000P ◎
✱3	J201	OPEN	→	SHORT
✱4	J211	SHORT	OPEN	→
✱5	SW101	OPEN	KA40169	OPEN

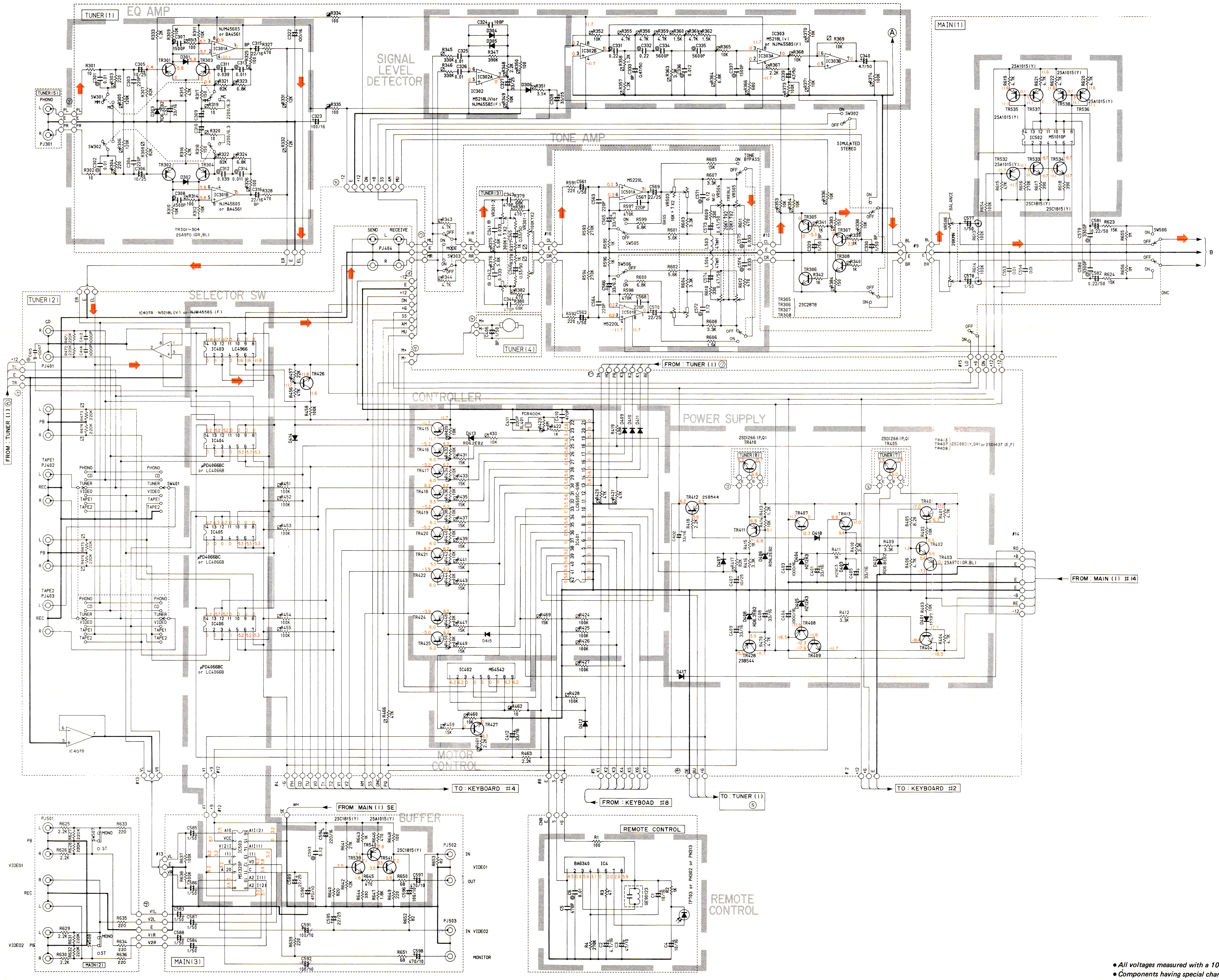
∘NOTICE
(U) ..... U.S.A model
(C) ..... Canadian model
(A) ..... Australian model
(R) ..... General model

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)

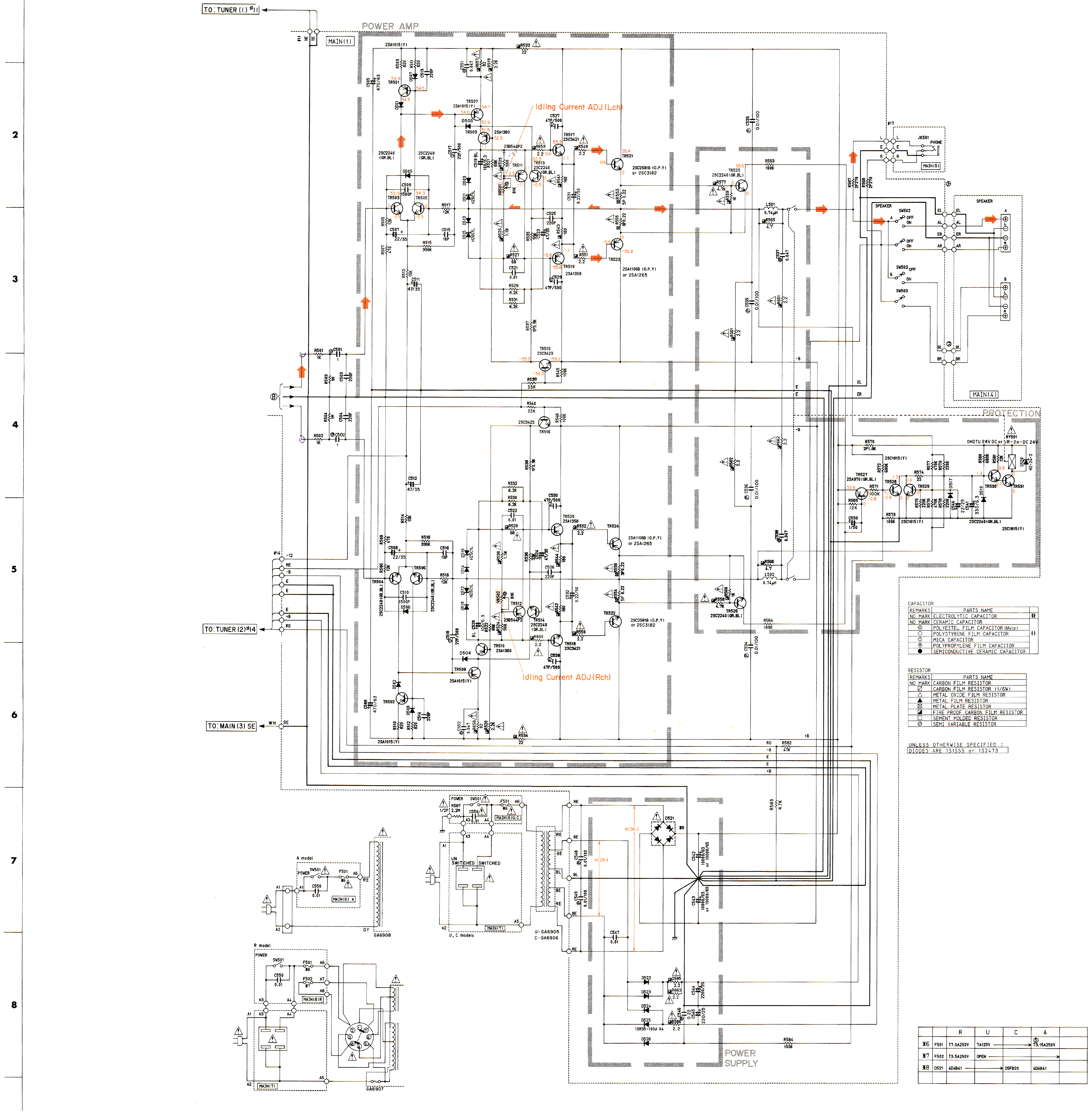
- *All voltages measured with a 10M Ω/VDC electric volt meter, under no-signal condition.*
- *The voltages are measured at FM reception mode. The voltage ( ) are at detuned mode, but the voltages at TR109 ~ TR111 and IC105 are at AM reception model.*
- *Components having special characteristics are marked ⚠ 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



CAPACITOR

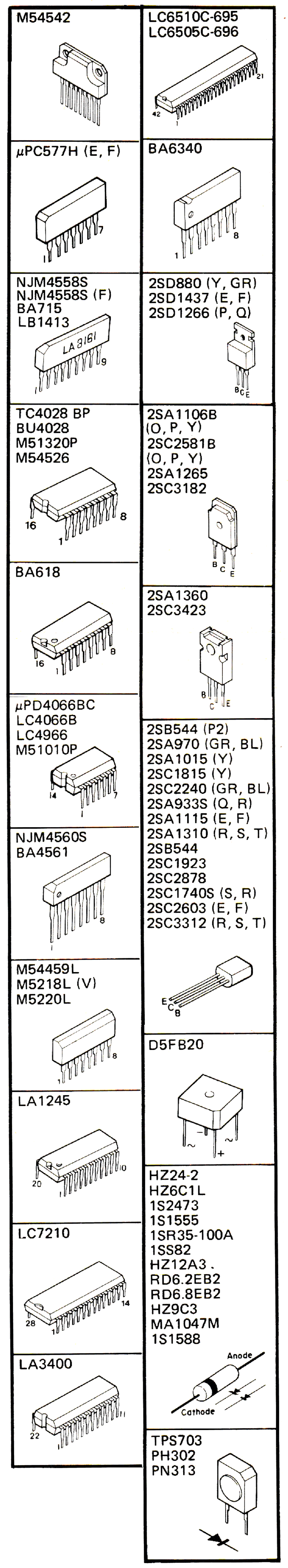
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊣⊢
NO MARK	CERAMIC CAPACITOR	⊣⊢
◎	POLYESTEL FILM CAPACITOR (Mylar)	
○	POLYSTYRENE FILM CAPACITOR	
⦶	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

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

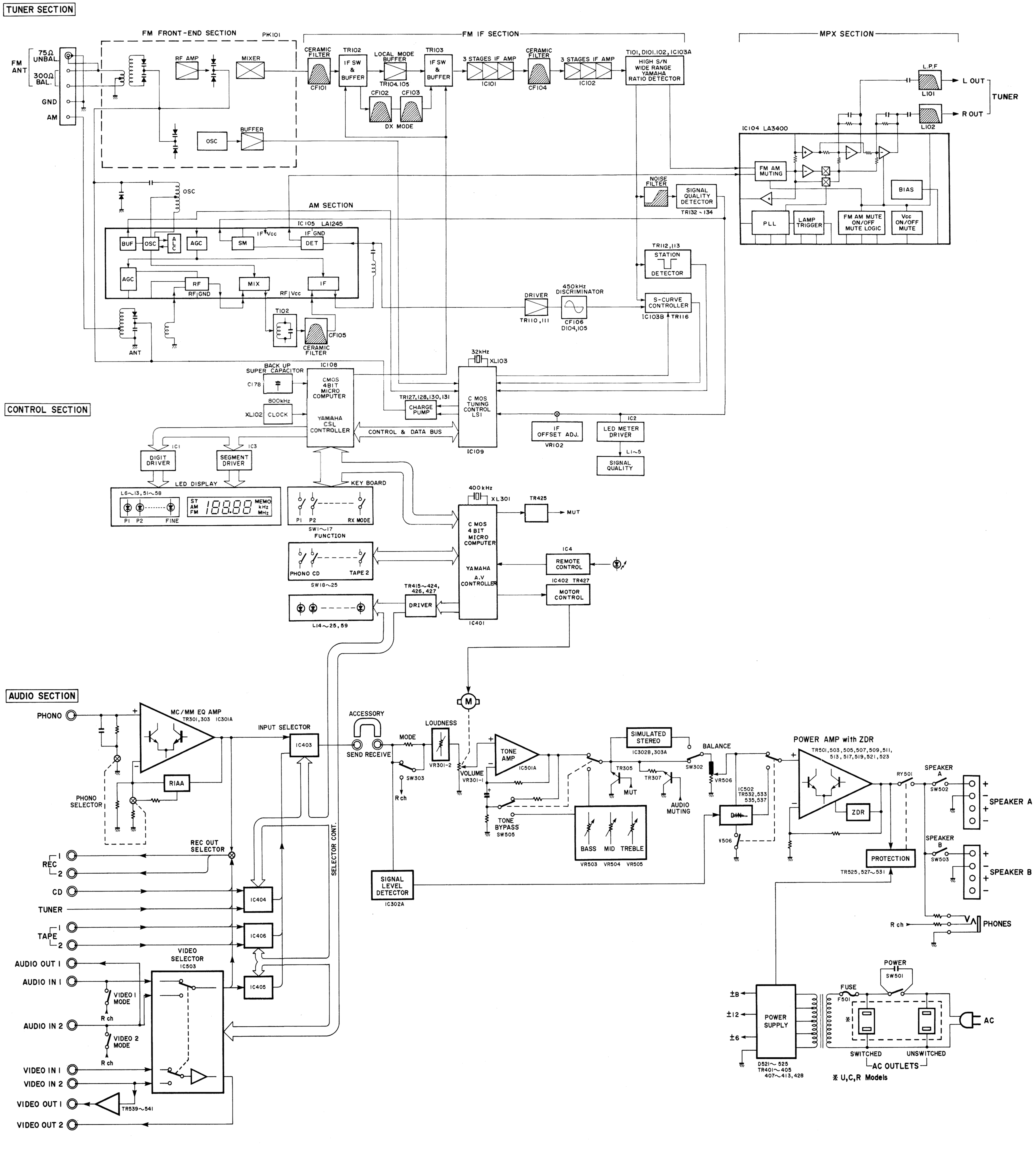
UNLESS OTHERWISE SPECIFIED :
DIODES ARE 1S1555 or 1S2473

		R	U	C	A	
✱6	F501	T7.0A250V	7A125V →		ⓢ T3.15A250V	
✱7	F502	T3.5A250V	OPEN →			
✱8	D521	4D4B41 →		D5FB20	4D4B41	



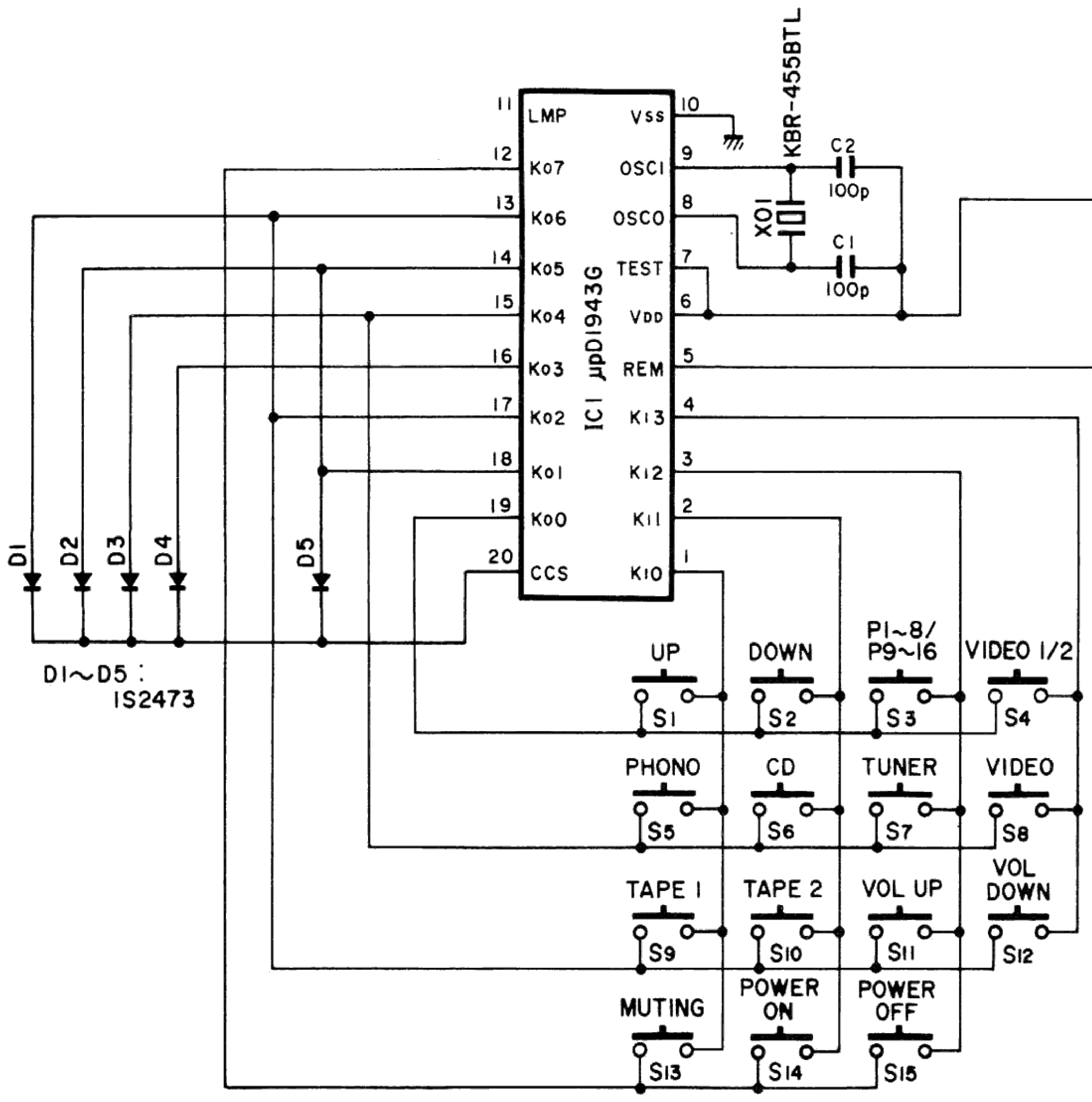
- *All voltages measured with a 10MΩ/VDC electric volt meter, under no-signal condition.*
- *Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.*
- *Schematic Diagram is subject to change without notice.*

■BLOCK DIAGRAM



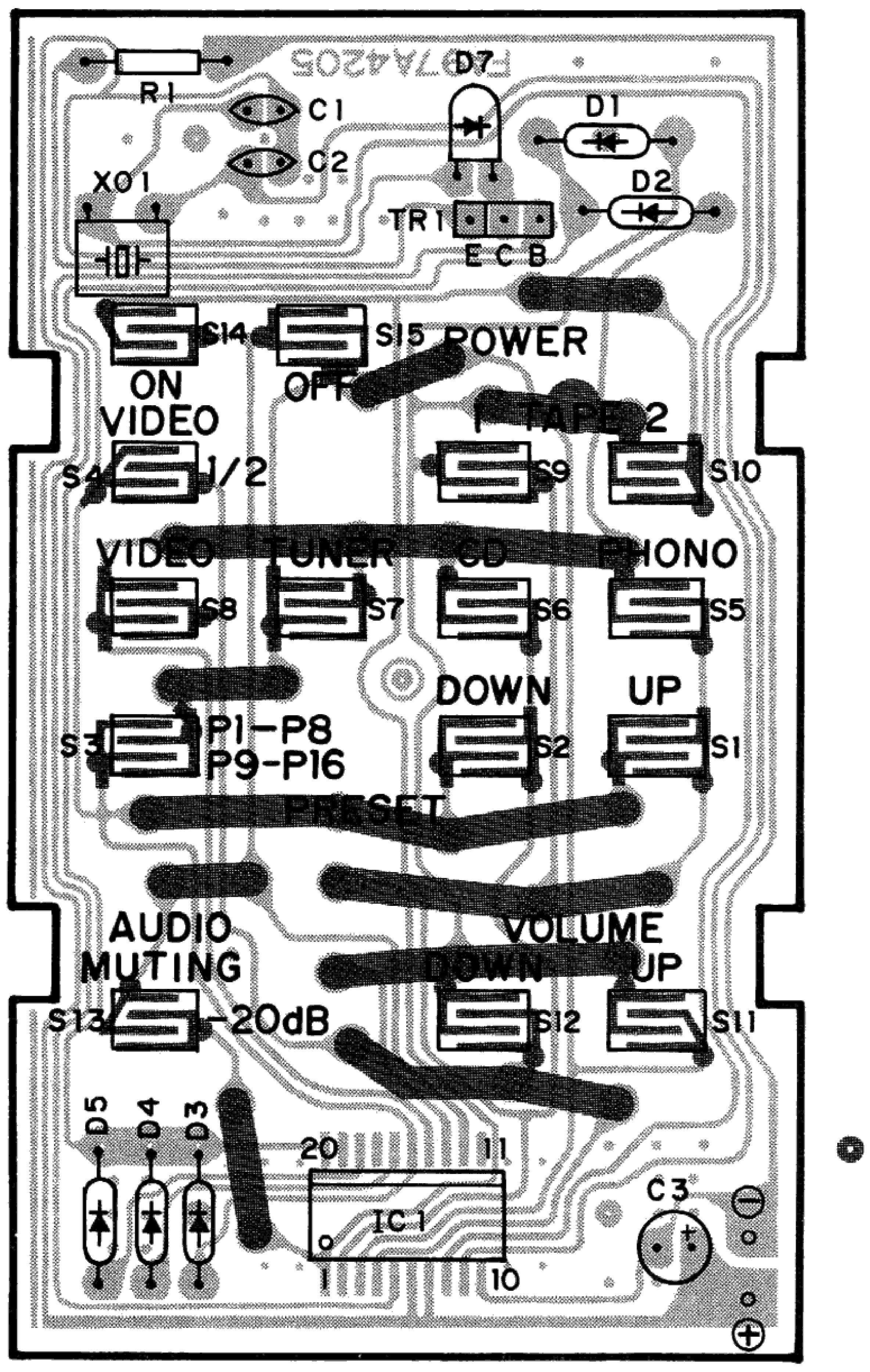
RS-9
REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM

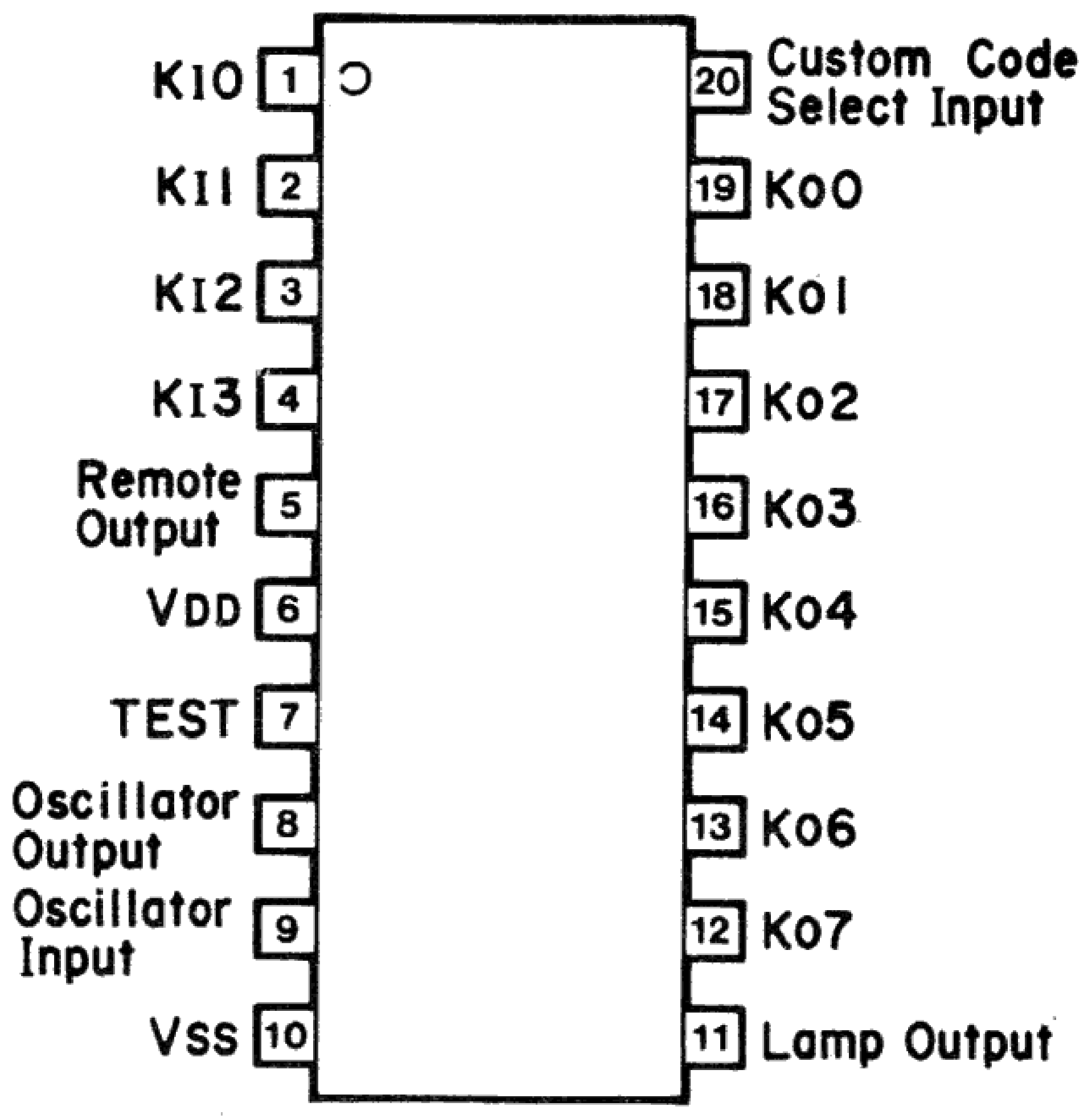


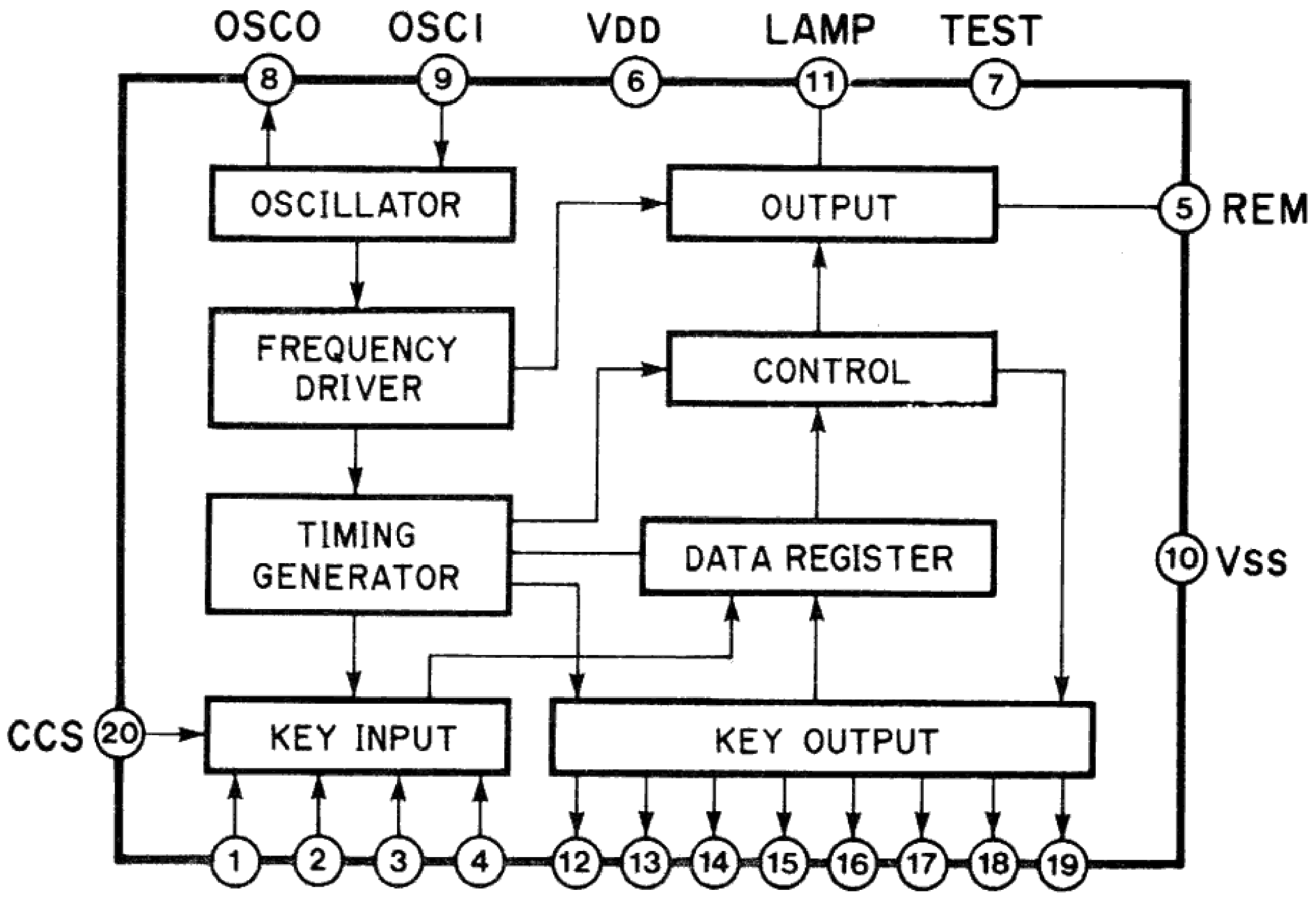
FUNCTION	CUSTOM CODE								DATA CODE							
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
UP	0	1	1	1	1	0	1	0	0	0	0	0	1	0	0	0
DOWN	0	1	1	1	1	0	1	0	1	0	0	0	1	0	0	0
P1-8/P9-16	0	1	1	1	1	0	1	0	0	1	0	0	1	0	0	0
VIDEO 1/2	0	1	1	1	1	0	1	0	1	1	0	0	1	0	0	0
PHONO	0	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
CD	0	1	1	1	1	0	1	0	1	0	1	0	1	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 75 70***	***Main Circuit Board***		メインシート			R	
※		***NA 08 75 90***	〃		〃			U	
※		***NA 08 76 10***	〃		〃			C	
※		***NA 08 76 30***	〃		〃			A	
		FG 21 11 00	Ceramic Cap.	10pF 50V	セラコン	C515,516			
		FG 21 22 20	〃	220pF 50V	〃	C503,504,513,514,525,526 563,564,567,568			
		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.	22pF500V	マイカコン	C517,518			
		FU 35 14 70	〃	47pF500V	〃	C527～530			
		FZ 00 28 90	Electrolytic Cap.	10000μF 63V	ブロックケミコン	C542,543 } Inter-changeable			
		FZ 00 42 00	〃	10000μF 65V	〃	〃			
		FZ 00 54 10	〃	100μF 6.3V	ブラックゲートコン	C519,520 ✓			
		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			
		UT 45 41 00	Polypropylene Film Cap.	0.01μF100V	ポリプロコン	C533～536,548,549			
		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			
		UW 95 74 70	〃	47μF 35V	〃	C511,512,523,524			
		UW 96 54 70	〃	0.47μF 50V	〃	C573,574			
		UJ 16 52 20	〃	0.22μF 50V	〃	C531,532,581,582			
		UJ 16 61 00	〃	1μF 50V	〃	C539,561,562,577,578 583～588			
		UW 82 84 70	〃	470μF 10V	〃	C597,598			
		UW 84 82 20	〃	220μF 25V	〃	C545			
		UW 84 92 20	〃	2200μF 25V	〃	C544			
		UW 67 84 70	〃	470μF 63V	〃	C505,506			
		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			
		HJ 35 53 90	〃	390Ω 〃	〃	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			
		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			

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部 品 名	Remarks	Common Model	Markets	ランク	
		HJ 35 63 30	Carbon Resistor	3.3kΩ 1/4W	カーボン抵抗	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 〃	〃	R505,506,517,518,569, 581,642				
		HJ 35 71 50	〃	15kΩ 〃	〃	R513,514,623,624				
		HJ 35 72 70	〃	27kΩ 〃	〃	R641				
		HJ 35 73 30	〃	33kΩ 〃	〃	R535,536,539,540				
		HJ 35 74 70	〃	47kΩ 〃	〃	R582				
		HJ 35 76 80	〃	68kΩ 〃	〃	R521,522				
		HJ 35 81 00	〃	100kΩ 〃	〃	R545,546,563,564,571,573,584, 613,614,637,638,654				
		HJ 35 82 20	〃	220kΩ 〃	〃	R575,578,579,627,628 631,632				
		HJ 35 82 70	〃	270kΩ 〃	〃	R593,594,616				
		HJ 35 83 90	〃	390kΩ 〃	〃	R515,516				
		HJ 35 84 70	〃	470kΩ 〃	〃	R576,577,597,598				
		HJ 35 86 80	〃	680kΩ 〃	〃	R572,580				
		HJ 35 91 00	〃	1MΩ 〃	〃	R503,504,655,656				
		HG 30 92 20	〃	2.2MΩ 1/2W	〃	R587		U,C		⚠
		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 RDF25SL	不燃化カーボン抵抗	R549~552,561,562,585, 586,659~663				⚠
		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				⚠
		HV 45 61 50	〃	1.5kΩ 〃	〃	R525,526				⚠
		HV 45 62 20	〃	2.2kΩ 〃	〃	R519,520				⚠
		HV 45 64 70	〃	4.7kΩ 〃	〃	R557,558				⚠
		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				⚠
※		HS 41 25 60	Potentiometer	20k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				
		iA 10 15 20	〃	2SA1015 (Y)	〃	TR501,502,507,508,532, 535~538,540				
		iA 13 60 00	〃	2SA1360	〃	TR509,510				
		iC 18 15 20	〃	2SC1815 (Y)	〃	TR528,529,531,533,534, 539,541				
		iC 22 40 00	〃	2SC2240 (GR,BL)	〃	TR503~506,513,514, 525,526,530				
※		iC 34 23 00	〃	2SC3423	〃	TR515,516				
※		iX 60 35 80	〃	2SA1358	〃	TR519,520				
※		iX 60 35 90	〃	2SC3421	〃	TR517,518				
		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				

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
		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 08 70	Diode Bridge	4D4B41	ダイオードブリッジ	D521		R,U,A		⚠
		iH 00 11 30	〃	D5FB20	〃	〃		C		⚠
		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	SW502,503 SPEAKER				
		KA 80 35 20	〃		〃	SW501 POWER				⚠
※		KA 80 51 80	〃		〃	SW505,506 TONE BYPASS				
		KB 00 03 70	Fuse	T3.5A 250V	ヒューズ	F502		R		⚠
		KB 00 07 60	〃	T3.15A 250V	〃	F501		A		⚠
		KB 00 13 00	〃	T7.0A 250V	〃	〃		R		⚠
		KB 00 15 20	〃	7A 125V	〃	〃		U,C		⚠
		KC 00 19 40	Relay	DH2TU24VDC	リレー	RY501 } Inter-changeable				⚠
		KC 00 20 00	〃	JR-2a-DC24V	〃	〃				⚠
		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 26 10	〃	P=5 2P L-Type	L型ラッピング端子板					
※		LA 00 56 20	Speaker Terminal	8P	スピーカーターミナル					
		LB 20 10 60	Fuse Holder Pin	YSH403T	ヒューズホルダーピン			A		
		LB 20 19 70	〃	23165081	〃			R,U,C		
※		LB 40 14 50	AC Outlet		ACアウトレット			R,U		
※		LB 40 14 60	〃		〃			C		
		BB 06 83 70	Ground Metal		アース金具					
		BB 07 07 00	〃		〃					
※		***NA 08 77 40***	***Tuner Circuit Board***		チューナーシート			R		
※		***NA 08 77 50***	〃		〃			U,C		
※		***NA 08 77 60***	〃		〃			A		
		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				
		FG 21 22 20	〃	220pF 50V	〃	C303,304,411				
		FG 21 24 70	〃	470pF 50V	〃	C132,343,344,410				
		FG 21 31 00	〃	1000pF 50V	〃	C159,172,413,414,199,200				
		FG 24 41 00	〃	0.01μF 50V	〃	C101,102,104～106,109,115～121,149,154,157,162～165,171,177,180,325,326				
		Fi 19 12 20	〃	22pF 50V(CH)	〃	C184,185				
		Fi 19 21 00	〃	100pF 50V	〃	C122,123				

※New Parts（新規部品）

Ref. No.	Part No.	Description		部　品　名	Remarks	Common Model	Markets	ランク
	FG 24 31 00	Ceramic Cap.	1000pF 50V	セラコン	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		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	〃	C334,335			
	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			
	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	〃	C322,323			
	UW 94 71 00	〃	10μF 25V	〃	C103,108,125,126,134,135,145,150,152,153, 158,166,169,174,179,305,306,407			
	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			
	UJ 16 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			
	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 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			
	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			
	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 Resonator	FCR400K	セラミック振動子	XL401			
	GG 00 07 40	〃	CSB456F10	〃	XL101			

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		GG 00 07 60	Ceramic Resonator	CSB800K	セラミック振動子	XL102			
		QU 00 39 00	Quartz Crystal Unit	32kHz	水晶発振器	XL103			
		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			
		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	不燃化カーボン抵抗	R462			
		HV 45 51 00	〃	100Ω 〃	〃	R334,335			
※		HS 31 26 60	Potentiometer with Motor	100kY×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, 133,401,408,411,415~422,424,425			
		iA 11 15 10	〃	2SA1115 (E, F)	〃	〃		Inter-changeable	
		iX 60 31 70	〃	2SA1310 (R, S, T)	〃	〃			
		iB 05 44 10	〃	2SB544	〃	TR412,428			
		iC 19 23 00	〃	2SC1923	〃	TR102,103			
		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			
		iC 26 03 10	〃	2SC2603 (E, F)	〃	〃		Inter-changeable	
		iX 60 31 80	〃	2SC3312 (R, S, T)	〃	〃			
		iD 08 80 10	〃	2SD880 (Y, GR)	〃	TR407,409,413	Inter-changeable		
※		iD 14 37 00	〃	2SD1437 (E, F)	〃	〃			
※		iD 12 66 00	〃	2SD1266 (P, Q)	〃	T405,410			
		iF 00 06 70	Diode	1S2473	ダイオード	D103~107,109~111,301,302,304~306, 407,409~412,414,415,417,418		Inter-changeable	
		iF 00 00 40	〃	1S1555	〃	〃			
		iF 00 00 40	〃	1S1555	〃	D101,102			
		iF 00 14 00	〃	1SS82	〃	D401			
		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			

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部 品 名	Remarks	Common Model	Markets	ランク	
		iG 03 45 00	IC	μPC577H (E,F)	I C	IC101,102				
		iG 07 68 00	〃	NJM4558S	〃	IC103 Inter-changeable				
		iG 13 22 00	〃	BA715	〃	〃				
		iG 03 55 00	〃	TC4028 (BP)	〃	IC107 Inter-changeable				
※		iG 14 87 00	〃	BU4028B	〃	〃				
		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	〃	〃				
		iG 12 18 00	〃	NJM4560S	〃	IC301 Inter-changeable				
		iG 13 30 00	〃	BA4561	〃	〃				
		iG 14 25 00	〃	LA3400	〃	IC104				
		iG 08 57 00	〃	M5218L (V)	〃	IC302,303,407 Inter-changeable				
		iG 14 50 00	〃	NJM4558S (F)	〃	〃				
※		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				
		LA 00 39 90	Antenna Terminal	5P	アンテナ端子板					
		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）

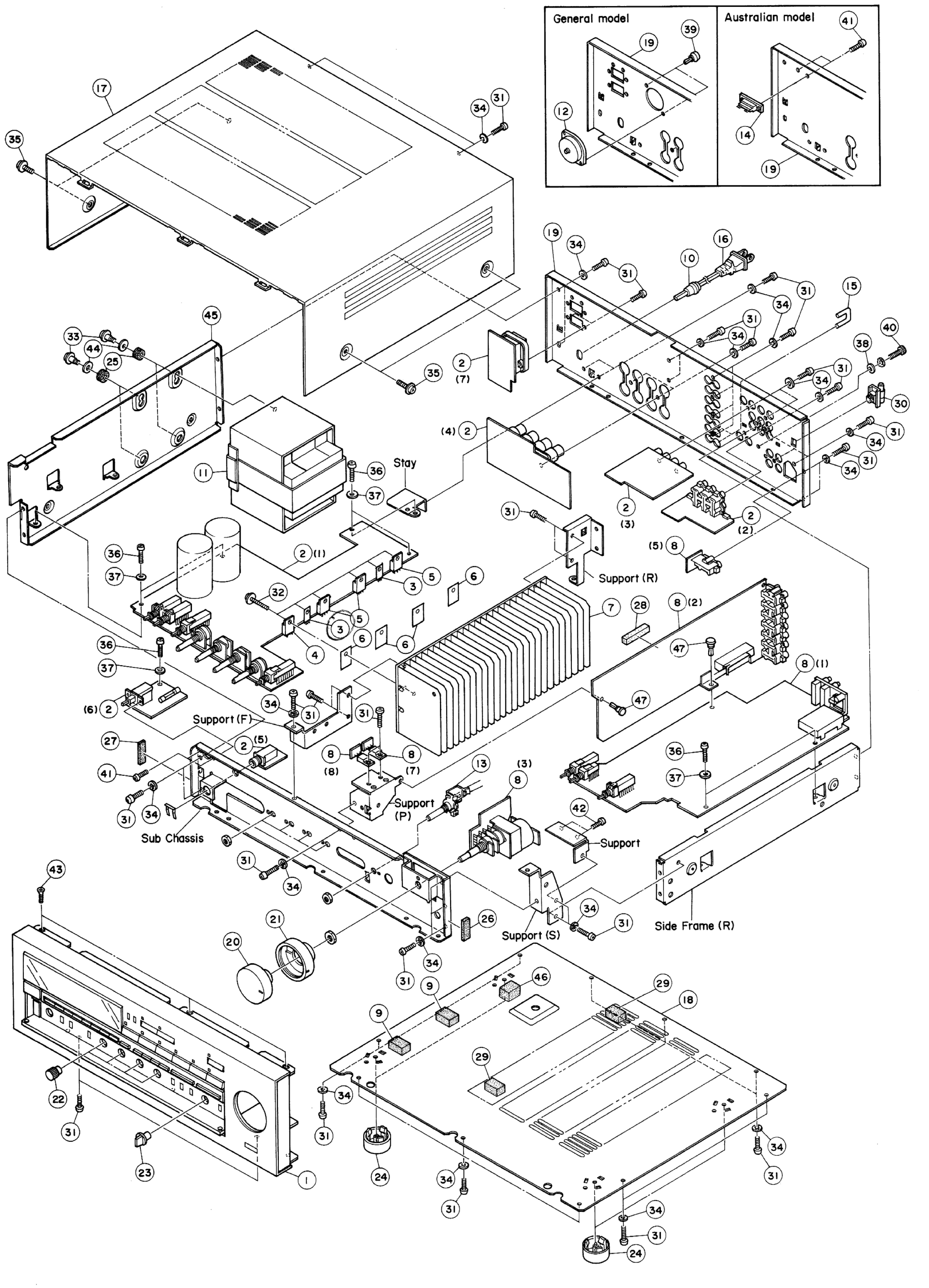
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		***NA 08 83 80***	***Keyboard Circuit Board***		キーボートシート				
		HJ 35 63 90	Carbon Resistor	3.9kΩ 1/4W	カーボン抵抗	R33,34			
		HJ 35 53 30	〃	330Ω 〃	〃	R21			
		HJ 35 74 70	〃	47kΩ 〃	〃	R1			
		HJ 35 71 00	〃	10kΩ 〃	〃	R3,19,20			
		HJ 35 42 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	〃	〃			
		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	〃	M54526P	〃	IC1			
		iG 14 54 00	〃	LB1234	〃	〃 Inter-changeable			
		iG 14 72 00	〃	BA12004	〃	〃			
		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	Interchangeable			
	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

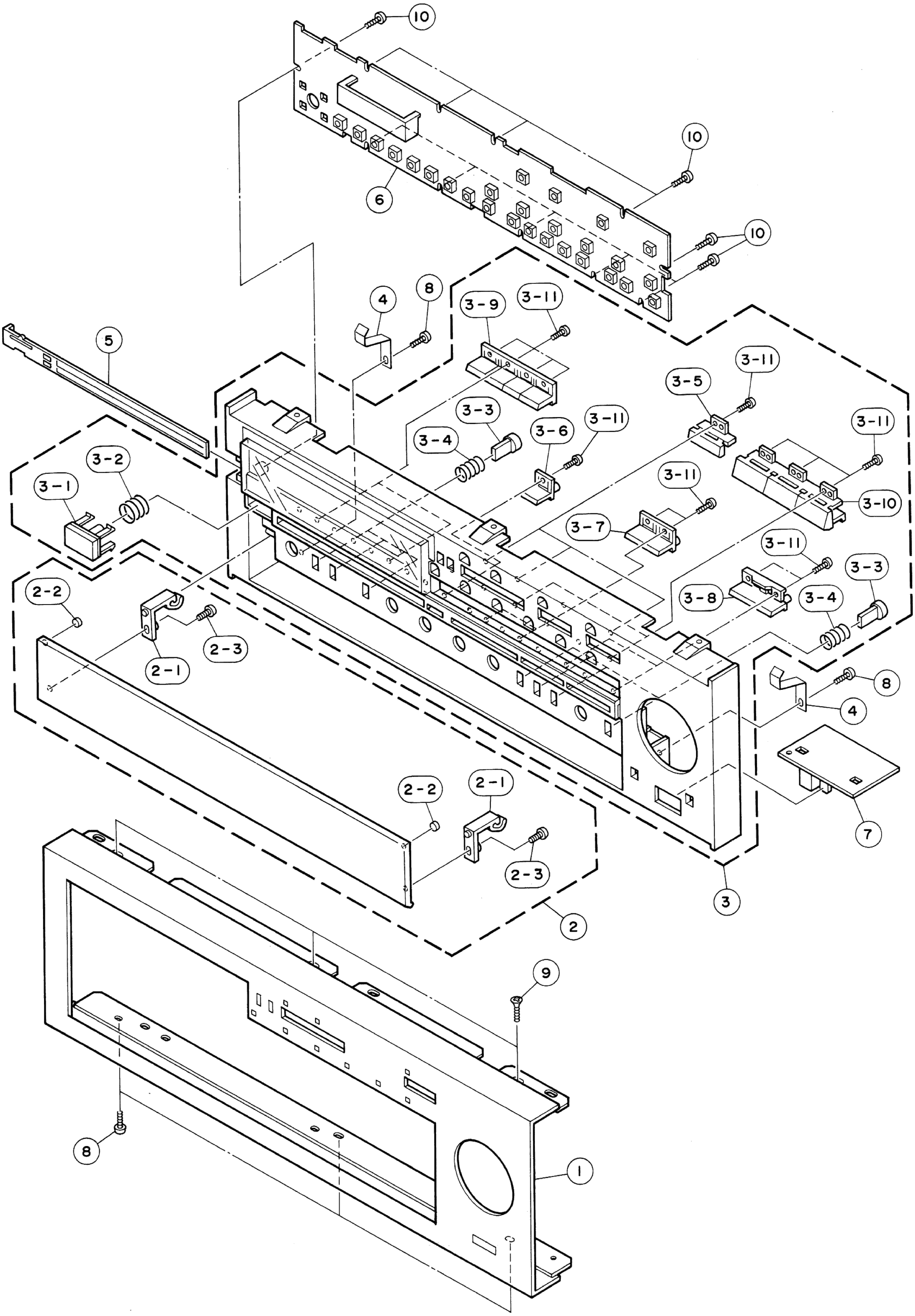
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
※	1	NB 62 64 50	Panel Unit		パネルユニット	Silver				
※	〃	NB 62 64 60	〃		〃	Black				
※	2	NA 08 75 70	Main Circuit Board		メインシート			R		
※	〃	NA 08 75 90	〃		〃			U		
※	〃	NA 08 76 10	〃		〃			C		
※	〃	NA 08 76 30	〃		〃			A		
	3	iB 05 44 10	Transistor	2SB544 (P2)	トランジスタ	TR511,512				
	4	iA 11 06 40	〃	2SA1106B (O,Y)	〃	TR523,524 Inter-changeable				
	〃	iA 12 65 30	〃	2SA1265	〃	〃				
	5	iC 25 81 40	〃	2SC2581B (O,Y)	〃	TR521,522 Inter-changeable				
	〃	iC 31 82 30	〃	2SC3182	〃	〃				
	6	iL 00 04 60	Mica Base	AC-238	マイカベース					
※	7	BA 09 24 70	Heat Sink		放熱板					
※	8	NA 08 77 40	Tuner Circuit Board		チューナーシート			R		
※	〃	NA 08 77 50	〃		〃			U,C		
※	〃	NA 08 77 60	〃		〃			A		
	9	CB 64 58 80	Spacer		スペーサー					
	10	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		
※	11	GA 69 05 00	Power Transformer		電源トランス			U		⚠
※	〃	GA 69 06 00	〃		〃			C		⚠
※	〃	GA 69 07 00	〃		〃			R		⚠
※	〃	GA 69 08 00	〃		〃			A		⚠
	12	LB 20 14 80	Voltage Selector		電圧切換器			R		⚠
※	13	KA 90 71 00	Remote Rotary Switch	ESA-33	リモートロータリースイッチ					
	14	LA 00 29 50	Terminal Board	2P	中継端子台			A		
	15	LB 10 11 10	Short Plug		ショートプラグ	ACCESSORY Terminal				
	16	MG 00 09 20	Power Cord	7.5A 250V 2.5m	電源コード	Inter-changeable		A		⚠
	〃	MG 00 14 90	〃	7.5A 250V 2.5m	〃			A		⚠
	〃	MG 00 14 50	〃	10A 125V 1.98m	〃	Inter-changeable		U		⚠
	〃	MG 00 14 60	〃	10A 125V 2m	〃			U		⚠
	〃	MG 00 16 30	〃	6A 250V 2m	〃			R		⚠
※	〃	MG 00 22 20	〃	10A 125V 1.98m	〃			C		⚠
※	17	AA 62 60 40	Top Cover		トップカバー	Silver				
※	〃	AA 62 60 60	〃		〃	Black				
※	18	AA 62 60 30	Bottom Cover		ボトムカバー					
※	19	AA 62 59 50	Rear Panel		リアパネル			R		
※	〃	AA 62 59 60	〃		〃			U,C		
※	〃	AA 62 59 70	〃		〃			A		
※	20	BA 09 25 10	Knob		ツマミ	Silver VOLUME				
※	〃	BA 09 25 20	〃		〃	Black 〃				
	21	BA 09 25 30	〃		〃	Silver LOUDNESS				
	〃	BA 09 25 40	〃		〃	Black 〃				
	22	CB 62 08 10	〃		〃	Silver TONE CON.				
	〃	CB 62 08 20	〃		〃	Black 〃				
	23	CB 62 08 30	Knob,Switch		スイッチツマミ	Silver REC OUT				
	〃	CB 62 08 40	〃 ,		〃	Black 〃				
	24	CB 62 07 30	Leg	TL-037	トランクレッグ					
	25	CB 09 99 10	Rubber,Cushion		防振ゴム					
	26	CB 61 93 10	Damper		ダンパー					
	27	CB 09 85 70	Spacer		スペーサー					
※	28	CB 64 42 40	Cushion		クッション					
※	29	CB 64 20 50	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 60 74 70	Holder,Antenna		アンテナホルダー				
	31	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCRM3-Bl	バインドタッピングネジ	PACK			
	32	EZ 00 13 50	Cup Screw	3×14FCRM3-Bl	カップスクリュー				
	33	AA 60 38 50	Screw		段付ネジ				
	34	EV 41 30 36	Toothed Lock Washer	φ3 FCRM3-Bl	歯付座金	PACK			
	35	EZ 00 13 10	Cup Tight Screw	4×8 FNM3-3g	カップタイトスクリュー	Silver			
	〃	EZ 00 13 20	〃	4×8 FCRM3-Bl	〃	Black			
	36	Ei 13 00 86	Binding Head Tapping Screw	3×8 FNM3-3g	バインドタッピングネジ	PACK			
	37	EV 20 10 36	Plain Washer	φ3 FNM3-3g	平座金	PACK			
	38	EV 90 13 60	Toothed Lock Washer	φ10×φ3.6×t0.8 FNM3-3g	セムス平座金				
	39	CB 06 88 80	Plastic Rivet		プラスチックリベット			R	
	40	AA 62 73 10	Ground Terminal Screw	3×13	アース端子ネジ				
	41	ED 33 00 66	Binding Head Screw	3×6 FCRM3-Bl	バインド小ネジ	PACK			
	42	Ei 33 00 66	Binding Head Tapping Screw	3×6 FCRM3-Bl	バインドタッピングネジ	PACK			
	43	EO 33 00 66	Flat Head Tapping Screw	3×6 FCRM3-Bl	皿タッピングネジ	PACK			
	44	EV 20 00 66	Plain Washer	φ6 ZMC2-Y	平座金	PACK			
※	45	AA 62 59 00	Side Frame (L)		サイドフレーム(L)				
	46	CB 61 03 70	Rubber,Cushion		防振ゴム				
	47	CB 60 56 20	Plastic Rivet		プラスチックリベット				
		CB 06 92 50	Binding Tie	BK-1	インシュロックタイ				
			Accessories		付属品				
※		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				
※		PB 06 47 60	Remote Control Transmitter	RS-9	リモコントランスミッター				
			Dry Cell	SUM-3 (AA,R6)	単3乾電池				

※New Parts（新規部品）

■EXPLODED VIEW(Panel Unit)

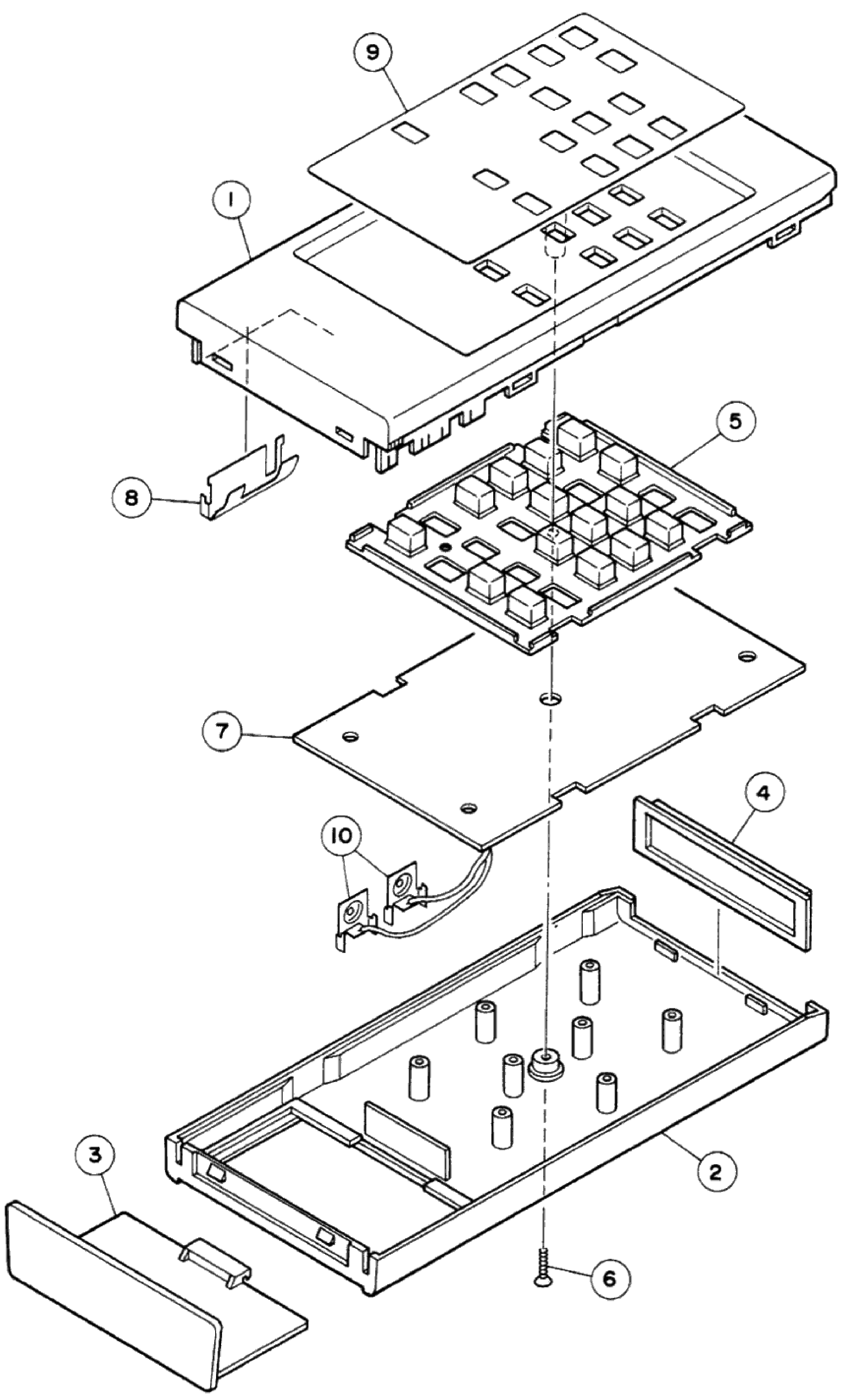


■MECHANISM PARTS(Panel Unit)

	Ref. No.	Part No.	Description		部　品　名	Remarks	Common Model	Markets	ランク
※		***NB 62 64 50***	***Panel Unit***		パネルユニット	Silver			
※		***NB 62 64 60***	〃		〃	Black			
※	1	NB 62 82 50	Front Panel Ass'y		フロントパネルAss'y	Silver			
※	〃	NB 62 82 60	〃		〃	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, Cam		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 64 70	Sub Chassis Unit		サブシャーシユニット	Silver			
※	〃	NB 62 64 80	〃		〃	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	Cell 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	Cell Terminal C		電極板C				

※New Parts (新規部品)

R-8

YAMAHA