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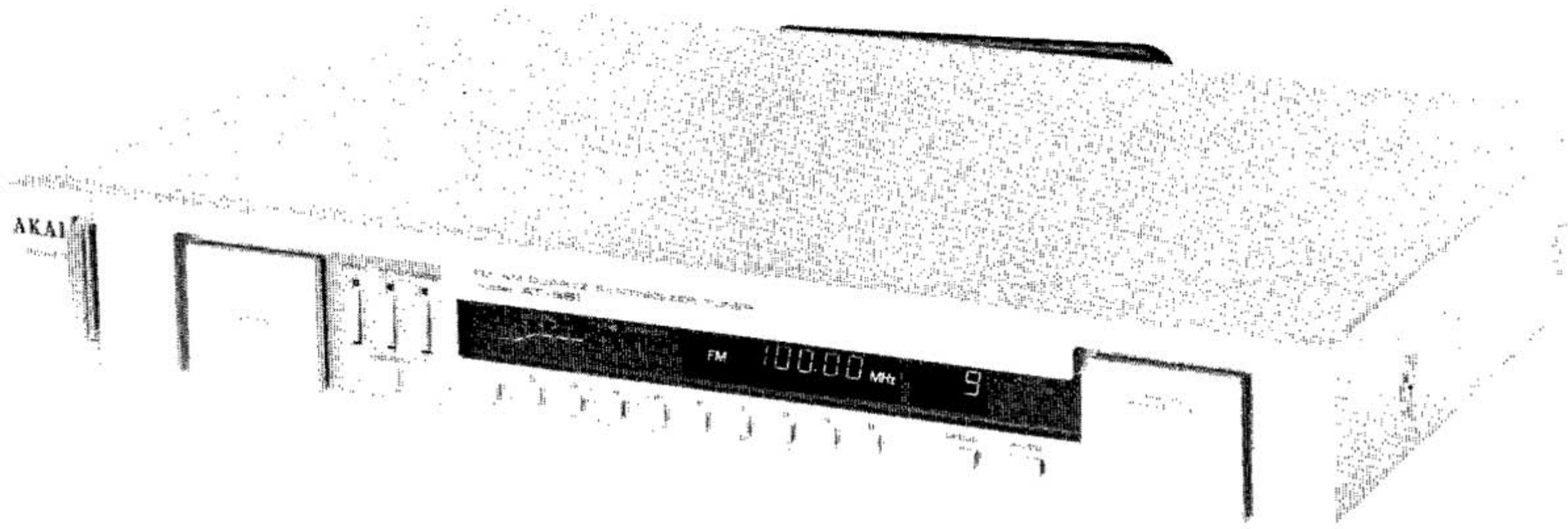

SECTION 1

SERVICE MANUAL

MODEL AT-S61/L/J

This manual is applicable to both silver and pearl shadow panel models.

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For basic adjustment, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

FM TUNER SECTION

TUNING FREQUENCY RANGE	87.4 to 108.1 MHz (Except JAPAN) 76 to 90 MHz
SENSITIVITY USABLE (S/N = 30 dB, MONO) QUIETING (S/N = 50 dB, Mono/Stereo)	 11.2 dBf 16.2/37.2 dBf
CAPTURE RATIO	1.0 dB
SELECTIVITY (±400 kHz)	75 dB
IMAGE REJECTION	95 dB
IF REJECTION	110 dB
SPURIOUS REJECTION	100 dB
AM SUPPRESSION	65 dB
SUB CARRIER SUPPRESSION	65 dB
S/N (Mono/Stereo)	78/70 dB
T.H.D. (±75 kHz DEVIATION, Mono/Stereo)	0.06/0.09%
STEREO SEPARATION (1 kHz)	55 dB
FREQUENCY RESPONSE	25 Hz to 15 kHz +0.5 dB, −1 dB
OUTPUT LEVEL (FM, 100% MODULATION)	 550 mV
ANTENNA INPUT IMPEDANCE	75 ohms

AM TUNER SECTION

	AM	LW
TUNING FREQUENCY RANGE	(MW for AT-S61L)	(AT-S61L only)
USA AND CANADA	530 to 1610 kHz	–
OTHERS	522 to 1611 kHz	137 to 362 kHz
USABLE SENSITIVITY (LOOP)	300 μV/m	800 μV/m
SELECTIVITY	35 dB	40 dB
IMAGE REJECTION	45 dB	45 dB
IF REJECTION	65 dB	65 dB
S/N	40 dB	34 dB
T.H.D.	1.0%	2.0%

OUTPUT SECTION

OUTPUT IMPEDANCE	3.3 k ohms

OTHERS

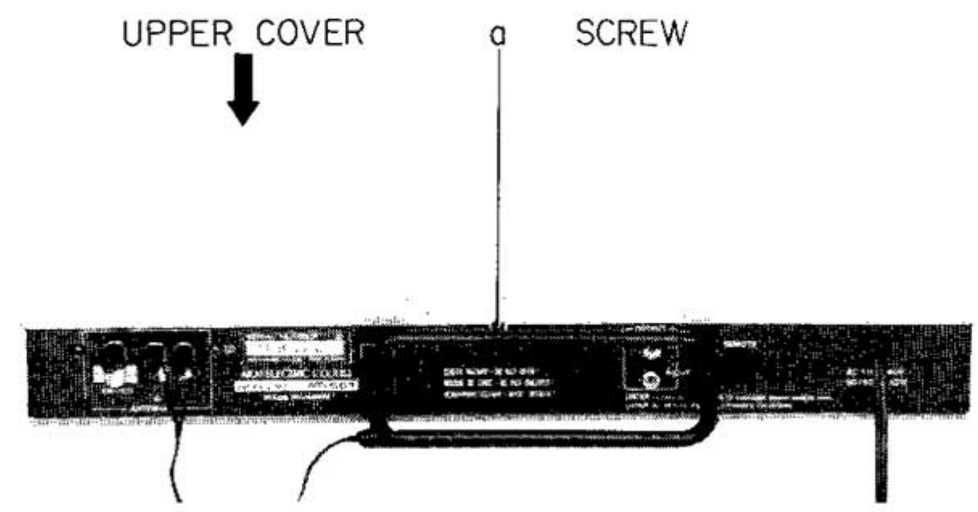
POWER REQUIREMENTS	100V, 50/60 Hz for Japan 120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/220V/240V, 50/60 Hz switchable for other countries
POWER CONSUMPTION	13W
DIMENSIONS	440 (W) × 63 (H) × 273 (D) mm (17.3 × 2.5 × 10.7 inches)
WEIGHT	3.3 kg (7.3 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

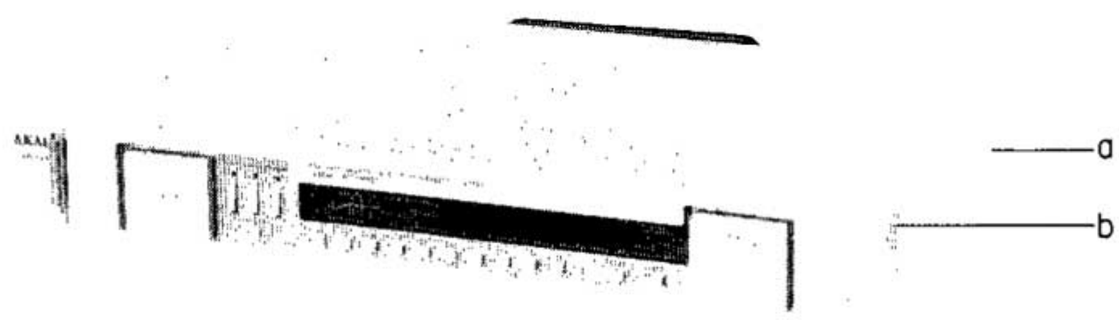
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

3



1



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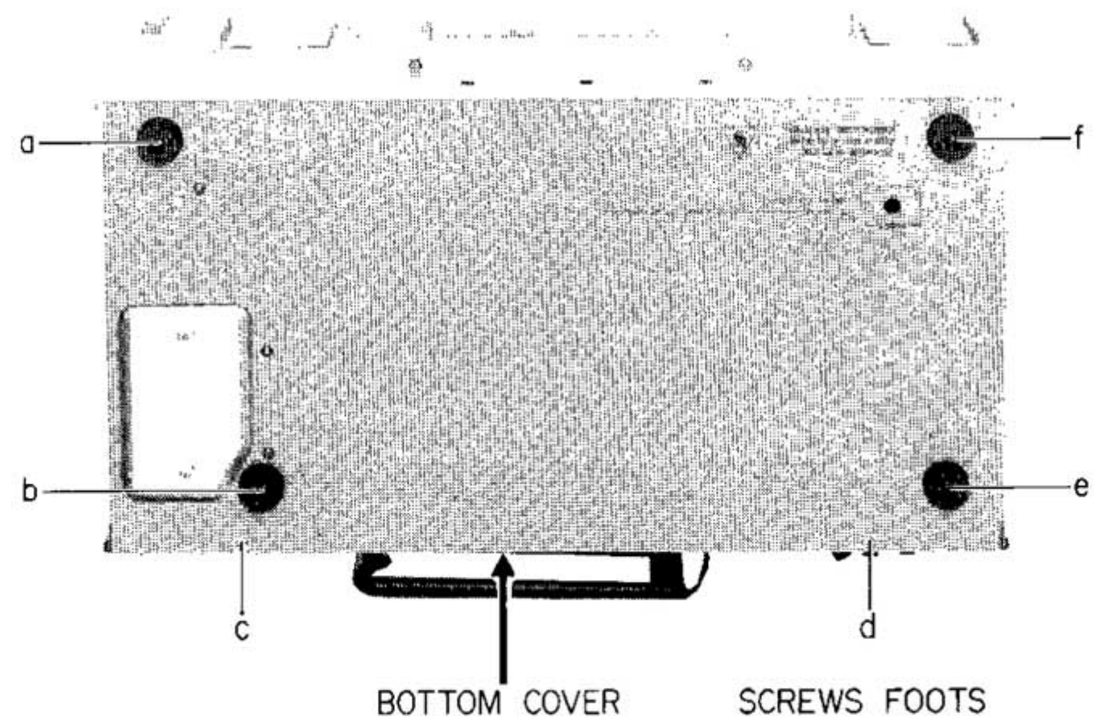

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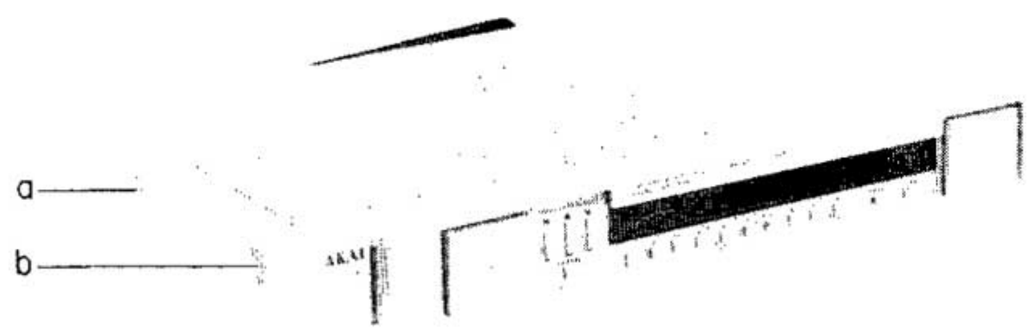

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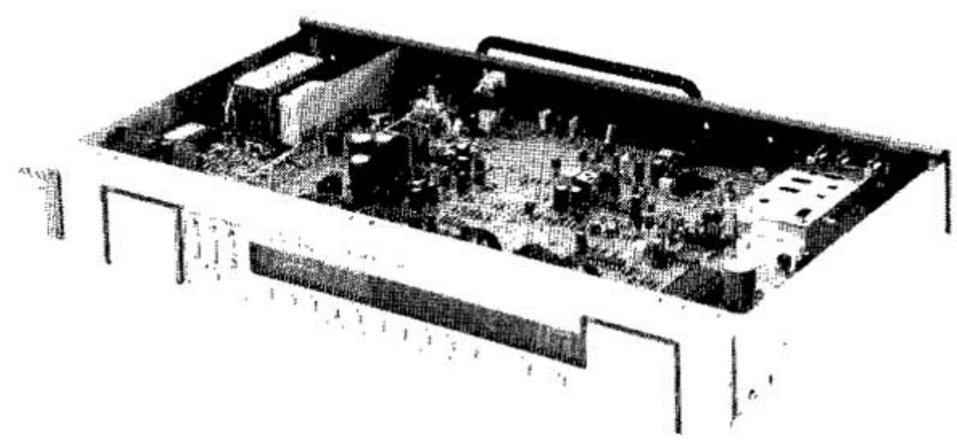


III. CONTROLS

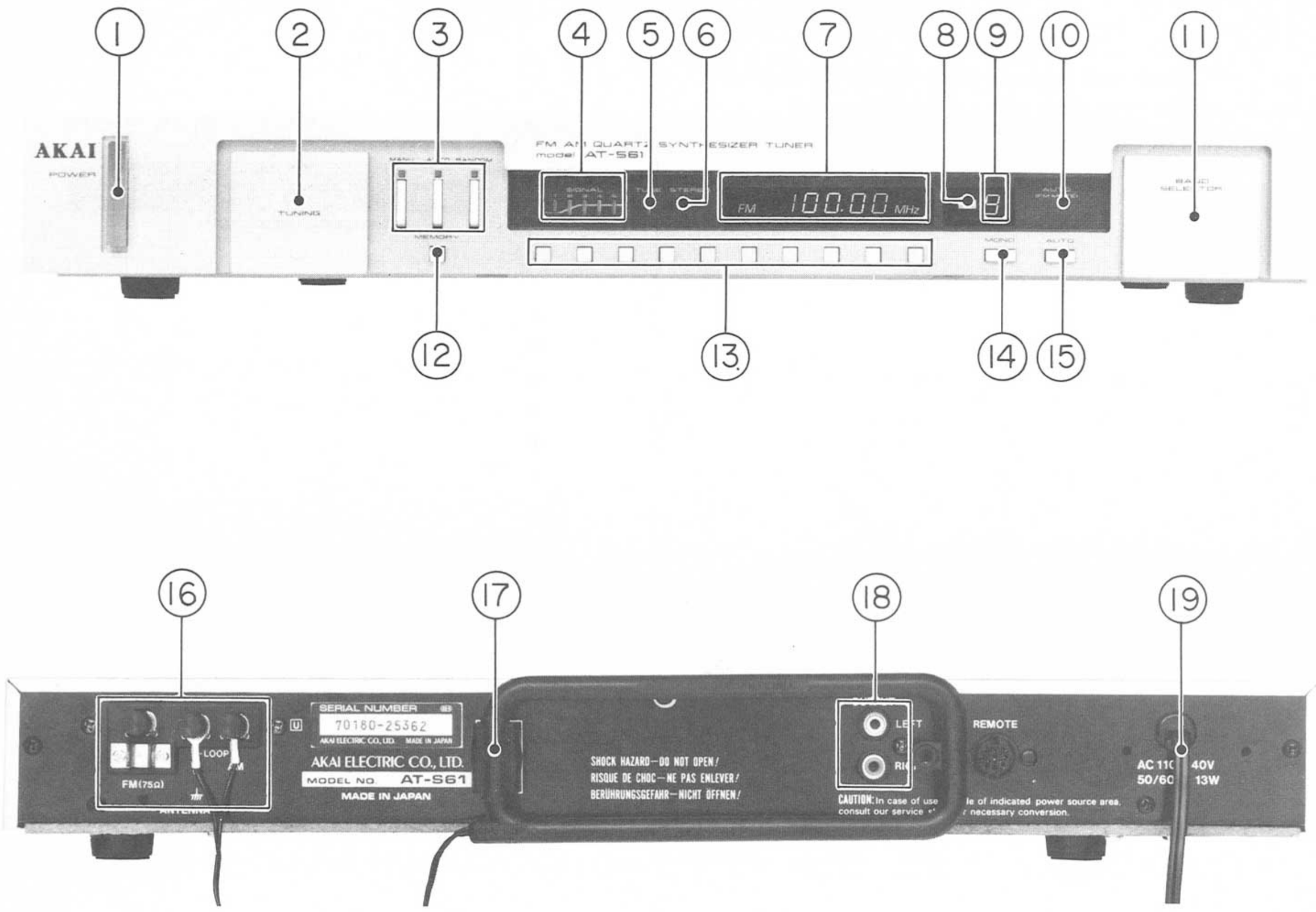
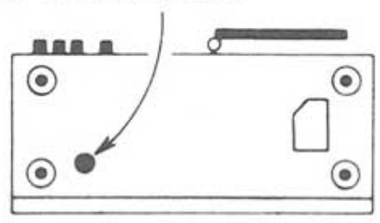


Fig. 1 Controls

1. POWER SWITCH
2. TUNING BUTTON
3. TUNING MODE BUTTONS WITH INDICATORS
4. SIGNAL STRENGTH INDICATORS
5. TUNE INDICATOR
6. STEREO INDICATOR
7. DIGITAL FL DISPLAY
8. MEMORY (ME) INDICATOR
9. PRESET STATION NUMBER DISPLAY
10. AUTO (FM MUTE) INDICATOR
11. BAND SELECTOR
12. MEMORY BUTTON
13. PRESET STATION BUTTONS
14. MONO BUTTON
    (CAL TONE BUTTON JAPAN Model)
15. FM AUTO BUTTON
    (MODE SELECTOR JAPAN Model)
16. FM, AM AND AM LOOP ANTENNA TERMINALS
17. AM LOOP ANTENNA HOLDER
18. OUTPUT JACKS
19. REMOTE JACK
20. POWER CORD

※ Reset button



Front panel

When the power to the AT-S61/L/J is turned on, the station that was tuned in before the power was turned off, will be tuned in again automatically. In case nothing is displayed or an unexpected frequency is displayed, turn the POWER switch on and off. If a proper frequency is still not displayed, depress the Reset button on the bottom of the unit. Do the same in case of malfunction.

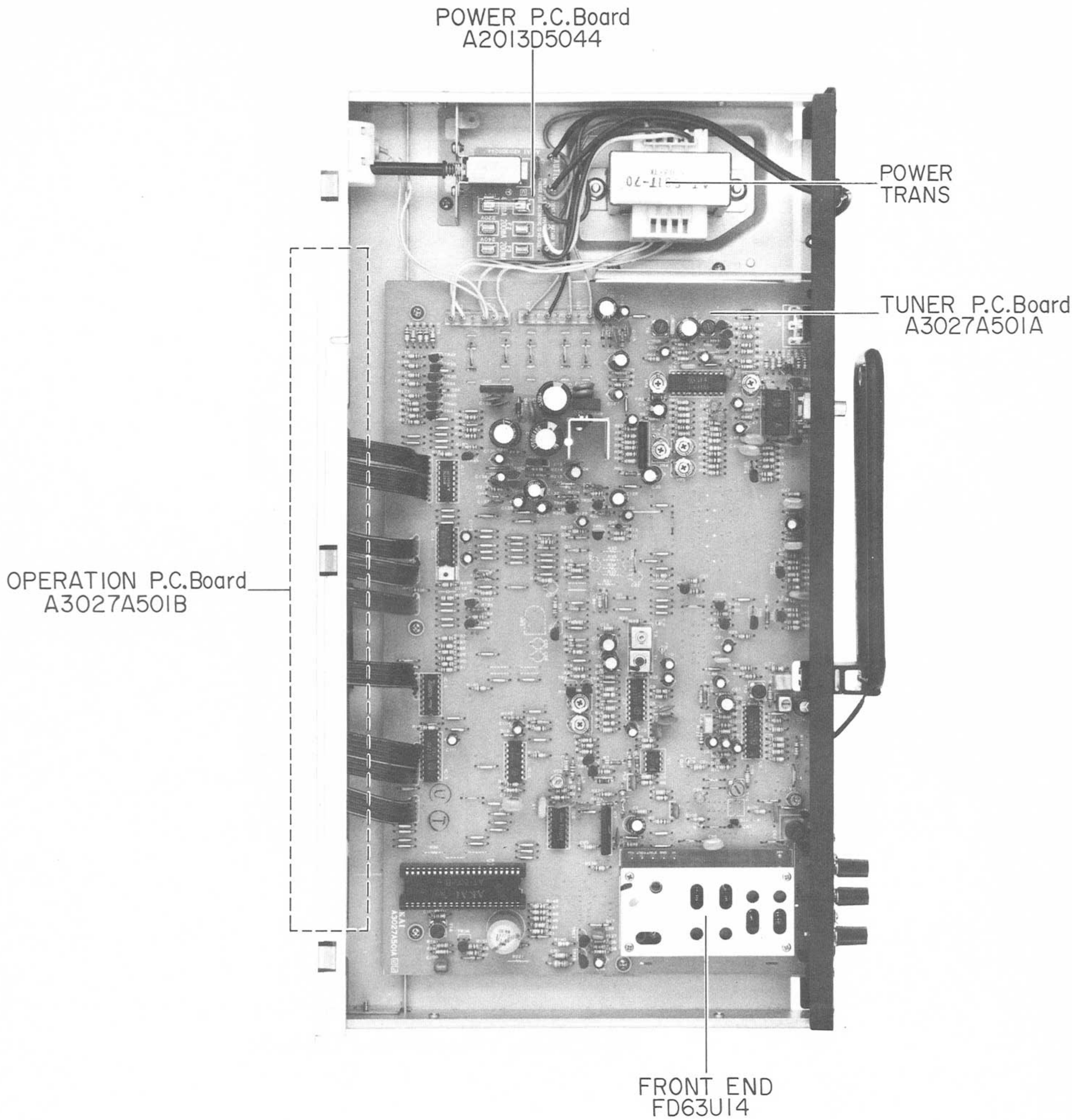
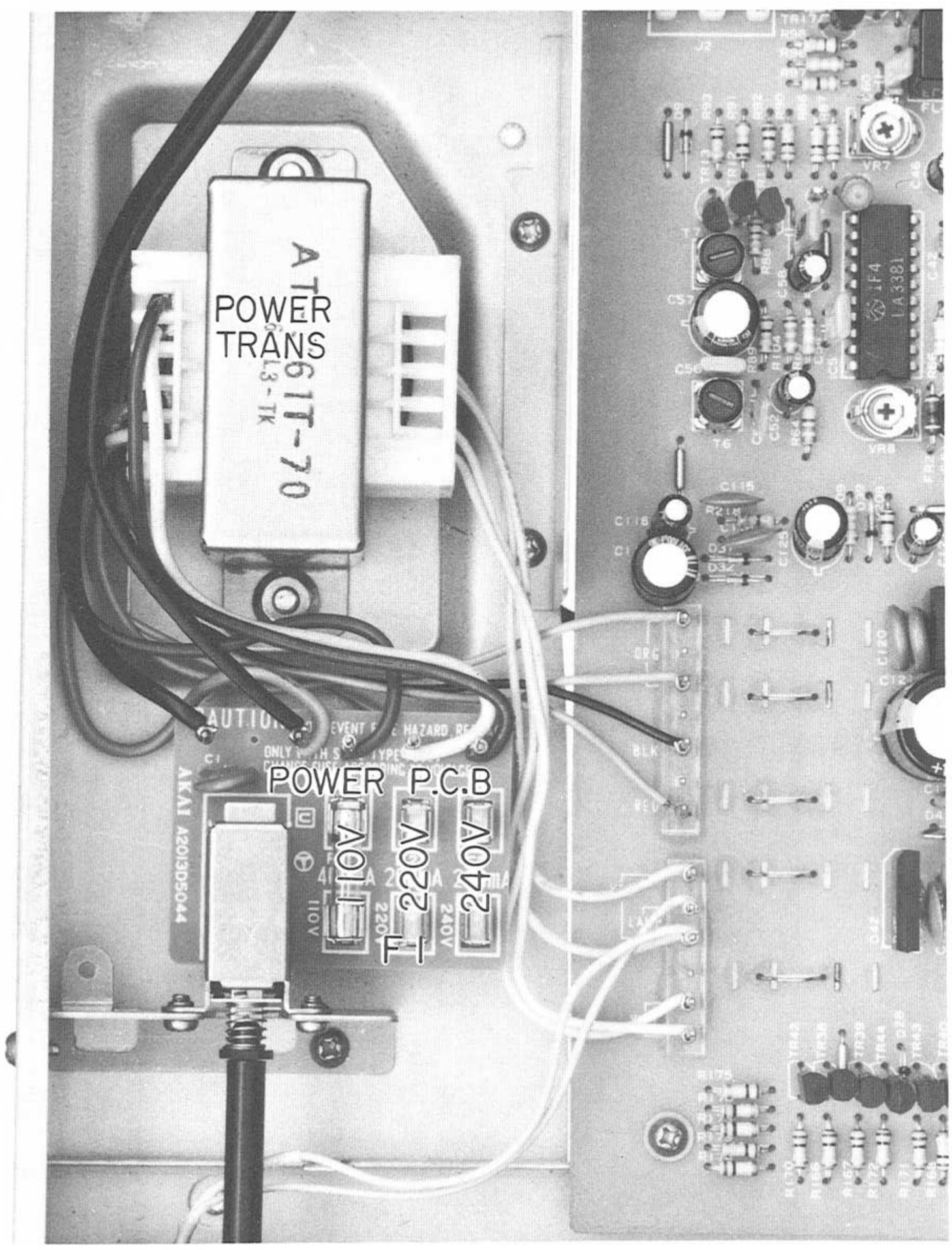


Fig. 2 Top View

V. VOLTAGE CONVERSION



110V AREA	:	250V 400mA
220V AREA	:	250V 200mA
240V AREA	:	250V 200mA

Fig. 3 Voltage Conversion (U Model Only)

Models for Japan, Canada, USA, Europe, UK and Australia are not equipped with this facility.
Each machine is preset at the factory according to destination, but some machines can be set to 110V, 220V or 240V as required. If voltage change is necessary, this can be accomplished as follows.

1. Disconnect the power cord.
2. Loosen the holding screws and remove the top panel.
3. Remove the Line Voltage Fuse and insert the required Line Voltage Fuse onto the proper Fuse Holder, explicitly following the printed instructions.

1. FM SYNTHESIZER BLOCK DIAGRAM

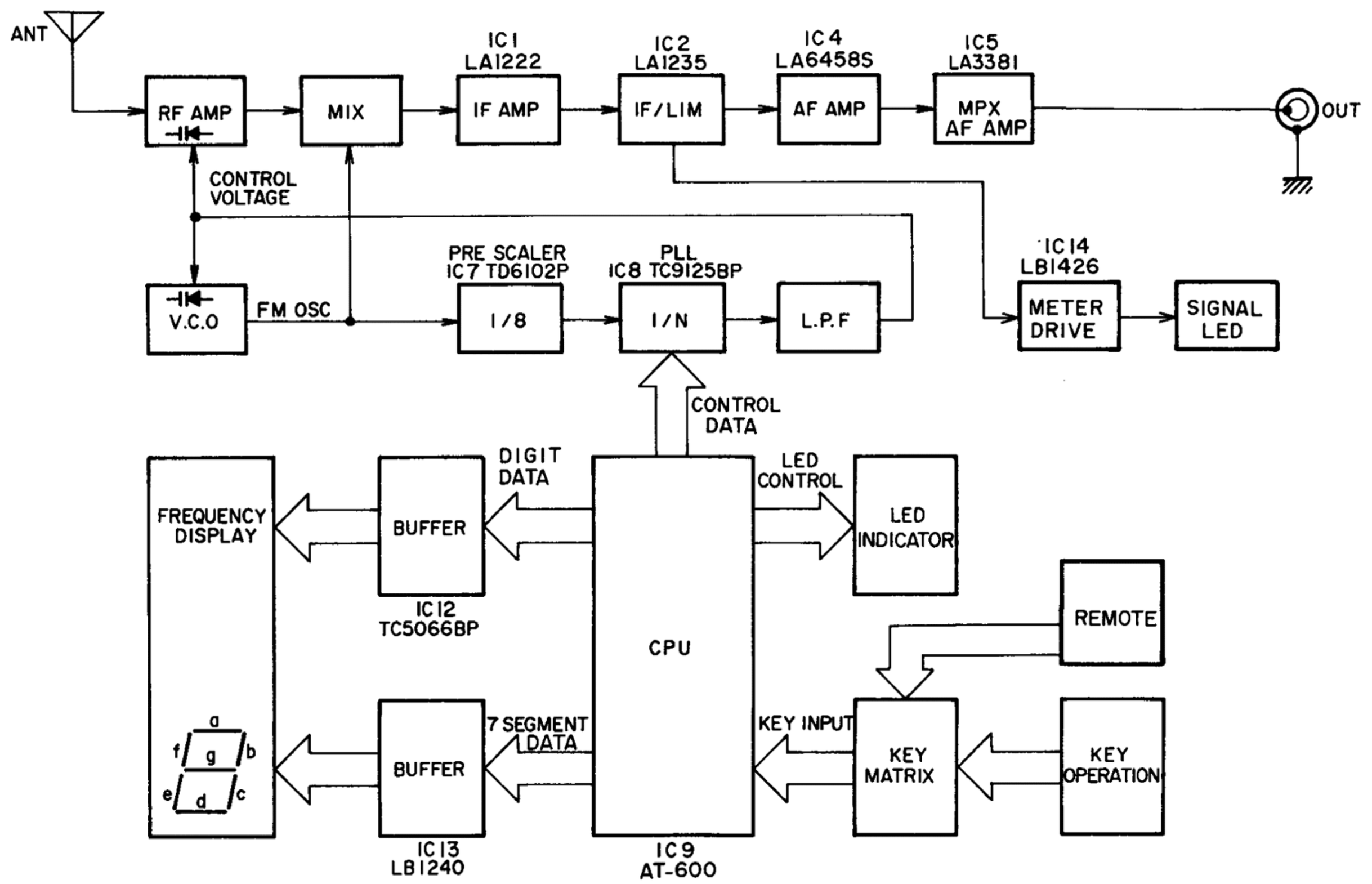


Fig. 4 FM Synthesizer Block Diagram

2. FUNCTION OF AT600 TERMINALS

No.	Terminal Description	Function
1	MUTING	H = Muting OFF L = Muting ON
2	FM	H = FM L = MW (AM) or LW
3	MW	H = MW (AM) L = FM or LW
4	LW	H = LW L = FM or MW
5	LED DATA	Light up the LED of MANUAL, AUTO, RANDOM
6	K1 SIGNAL	(1) EXCEPT JAPAN K1 SIGNAL becomes "H" when MONO KEY is depressed, and K1 SIGNAL becomes "L" when AUTO KEY is depressed. K2 SIGNAL is always "L". (2) JAPAN MODEL K1 SIGNAL is reversed every time MODE KEY is depressed ("H" at MONO), and K2 SIGNAL is reversed every time CAL TONE KEY is depressed ("H" when CAL TONE is ON). When K2 SIGNAL is "H", CAL is displayed on FREQUENCY DISPLAY, and all tuning modes are released. Therefore, any input other than the inputs by CAL TONE KEY and MODE KEY are not mode.
7	K2 SIGNAL	
9	a	a, b, c, d, e, f, g Frequency Display Segment Data
10	b	
11	c	
12	d	
13	e	
14	f	
15	g	
16		
8	T6	TIMING CONTROL Display Digit Select Key Matrix Led Select
17	T5	
18	T4	
19	T3	
20	T2	
22	T1	
21	GND	
23	K1	KEY Input Input...ACTIVE LOW
24	K2	
25	K3	
26	K4	
27	XIN	Connect a OSC Coil.
28	XOUT	
29	CK	CAL TONE Signal (Japan Model only)
30	TEST	
31	$\overline{\text{RESET}}$	ACTIVE LOW → Reset
32	$\overline{\text{INT}}$	Interrupt Signal
33	$\overline{\text{POF}}$	Power OFF manage.
34	PLL LOAD	PLL Load Signal
35	KD	Lock SW input. (Refer to KEY Matrix)
36	NC	
37	AUTO STOP	L = AUTO STOP
38	D	PLL Frequency Data
39	C	
40	B	
41	A	
42	VDD	Power terminal +5V

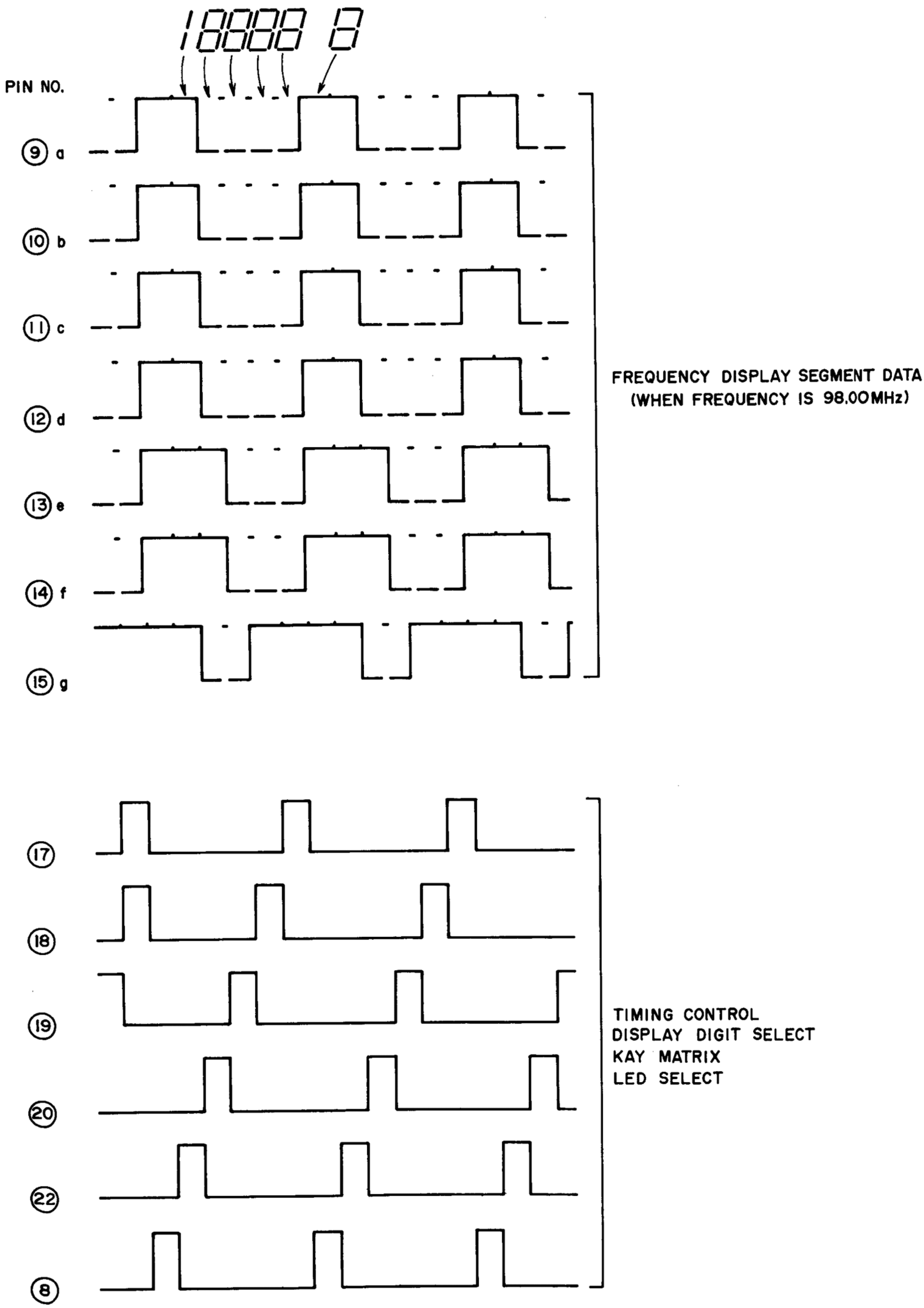


Fig. 5 Waveform of IC9(AT-600)

3. POWER OFF MANAGE AND RESET CIRCUIT

1) If power is ON, TR36 is turned ON. At the same time, C106 is charged through D21 and R221. If power is OFF, TR36 is turned OFF, and IC9 ㉝ becomes "H" by the electric charge of C106 and CPU is set to Hold.
2) Memory by Super Capacitor (C106, 0.22F) can be stored for about 20 days.
3) If power is ON while Super Capacitor is discharged, malfunction may be caused. In such a case, depress RESET Button (SW1) to reset Mi-Com. Reset operation should be performed while power is ON.

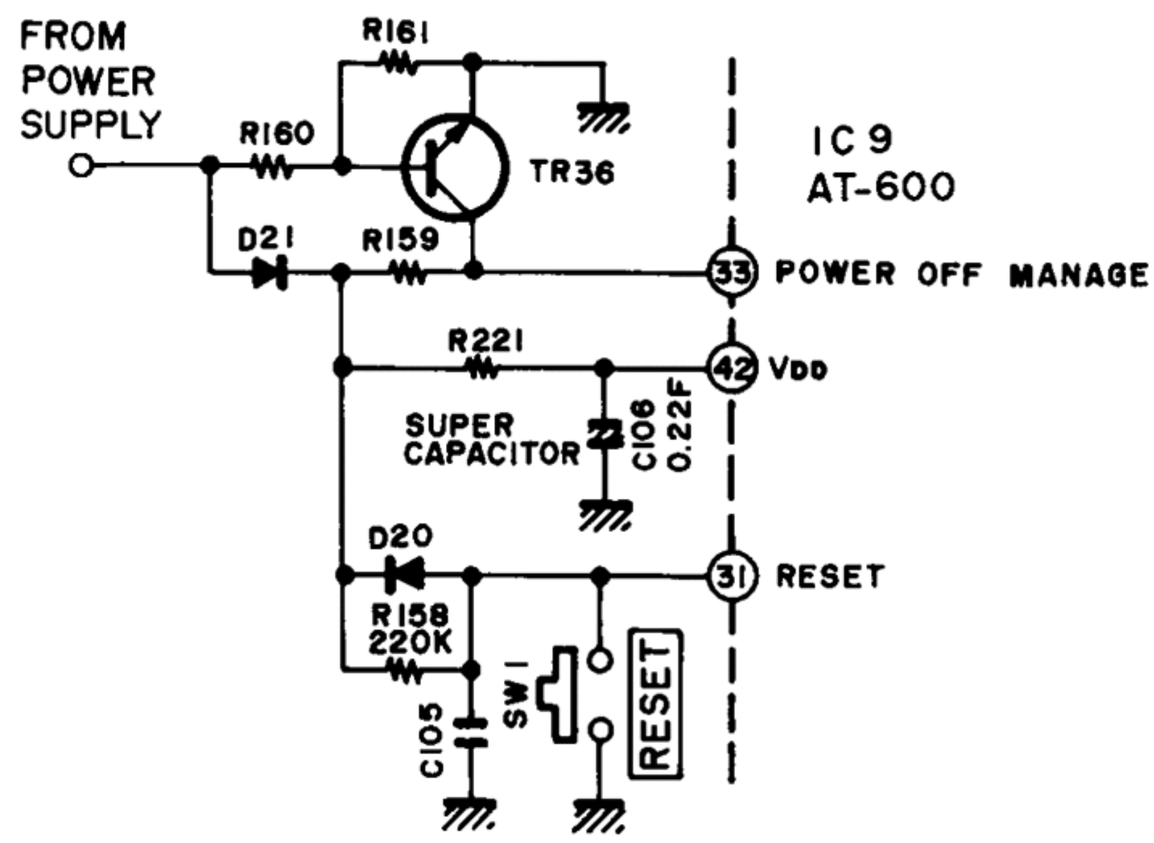


Fig. 6

4. MUTE CIRCUIT OPERATION

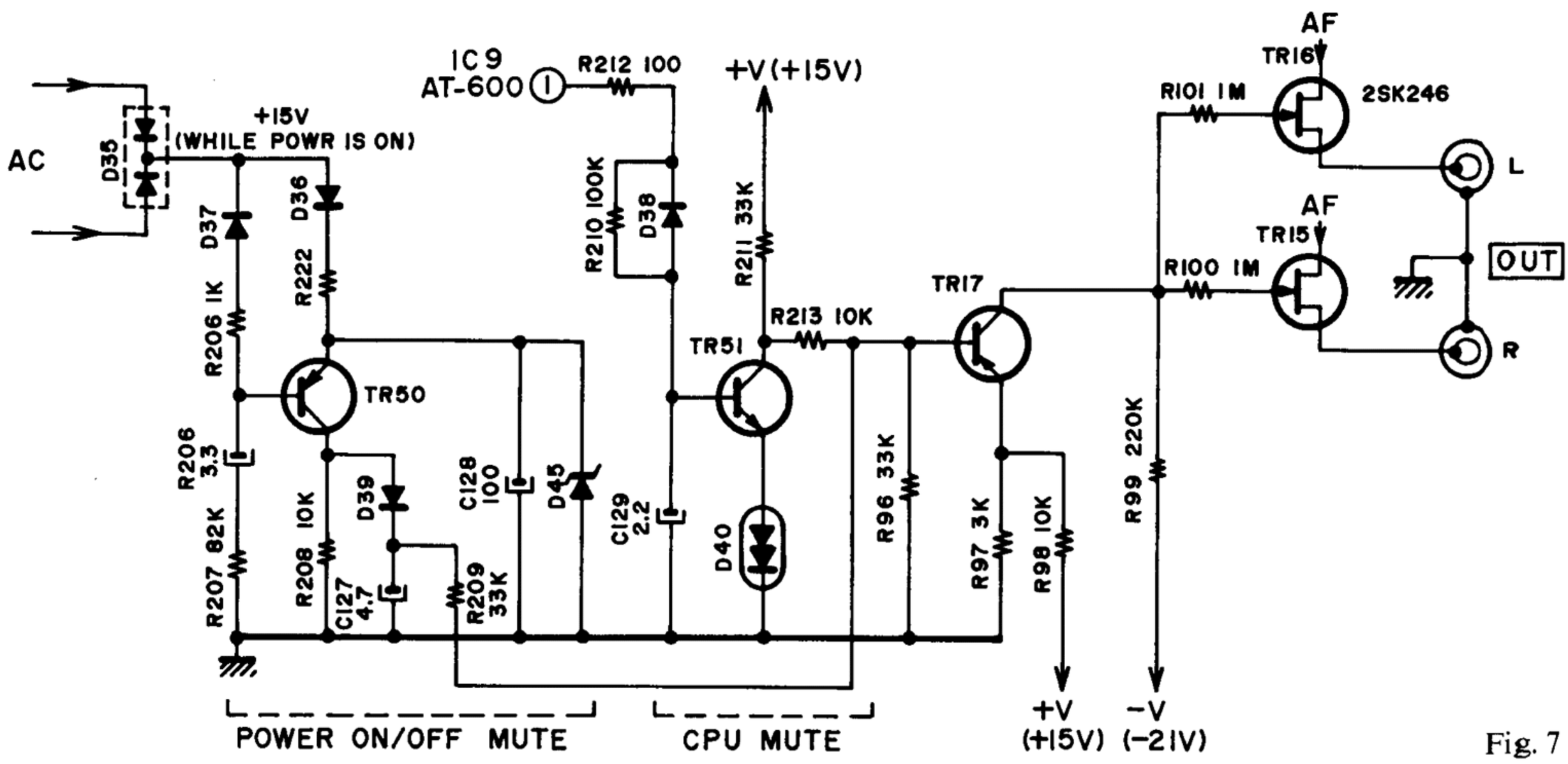


Fig. 7

AT-S61 has two mutes, one at the power ON/OFF operation, and the other by the signal from CPU IC (AT-600).

1) When the power switch is turn ON, the DC voltage rectified by D35 is applied to TR50 through D36 and R222. Since TR50 is kept ON until C126 is charged by base current, + voltage is applied to the base of TR17 through D39 and R209. As the base potential of TR17 becomes higher than that of the emitter, it is turned OFF. As – voltage is applied to Gate, TR15 and TR16 are turned OFF and AF signal is not sent to the output terminal. When the charging of C126 is completed, AF signal is output after TR50 → OFF, TR17 → ON and TR15 and TR16 → ON.
2) When the power switch is turned OFF, the potential of D35 is lowered faster than other power sources (+15, –21V) since the rectified output of D35 has no smoothing condenser. Moreover, as C126 discharges through R206 and D37, the base potential of TR50 is lowered. On the other hand, the emitter of TR50 comes to have a higher potential due to the electric charge C128, thus causing TR50 to be turned ON. Afterwards, as in the case where power is ON, TR17 → OFF, TR15 and TR16 → OFF, and AF signal is not output. This operation ends when the discharging of C128 is completed.
3) Terminal ① of IC9 (AT-600) is "H" at the time of normal reception. At time, TR51 is ON → TR17: ON → TR15 and TR16: ON, and AF signal is output from Line Out.
4) Terminal ① of IC9 (AT-600) becomes "L" during scanning when Preset Station Key is depressed at the time of Random Tuning and when Band Selector is depressed. At this time, the base bias is not applied to TR51 and it is turned OFF, while the base potential of TR17 becomes higher than that of the emitter to turn TR17 OFF. On the other hand, minus bias is applied to TR15 and TR16 to turn them OFF, and AF signal is not output.

5. STEREO NOISE REDUCTION CIRCUIT

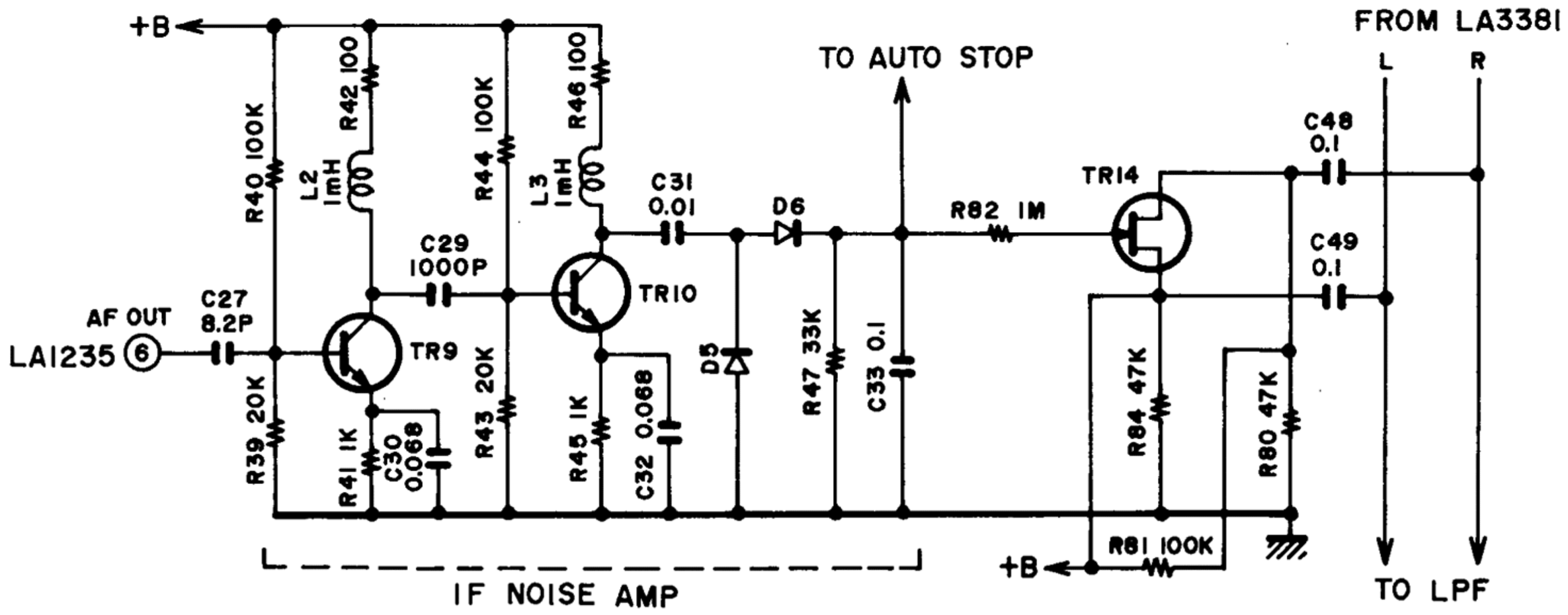


Fig. 8

The noise amplifier is a narrow-band amplifier that amplifies the frequency component of more than 100 kHz, and transforms the output into DC.
To prevent the noise containing a high-band component from increasing at the time of weak electric field, the gate potential of FET is controlled by amplifying the noise and transforming it into DC. Thus, the L-R separation can be deteriorated intentionally to reduce the noise.

6. AUTO STOP SIGNAL DETECTING CIRCUIT

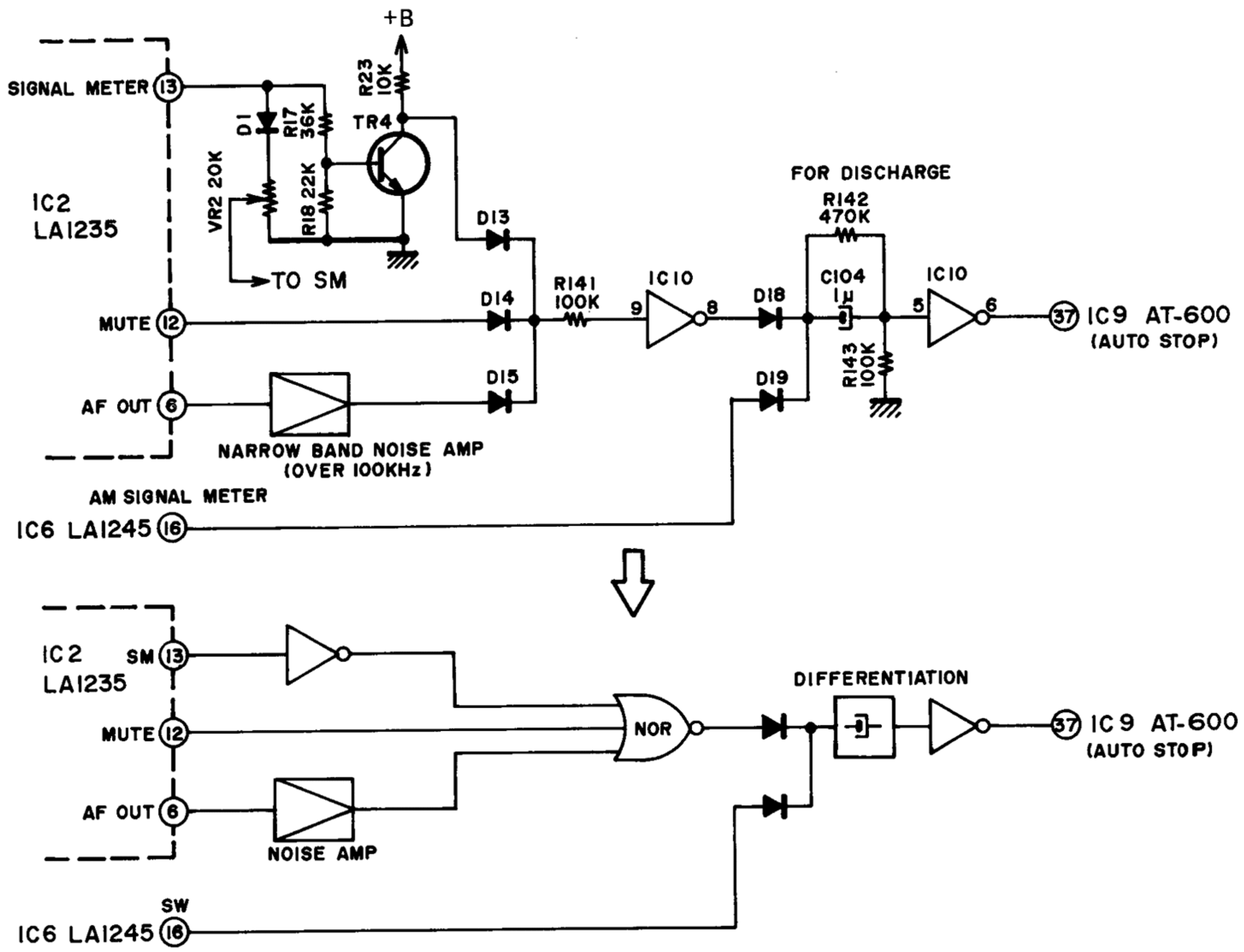


Fig. 9

1) During scanning in FM mode IC2 ⑬ is "L" and IC2 ⑫ is "H", and the output of Noise Amp. becomes "H" due to the detuning noise. Since NOR Gate consisting of diode and inverter performs "H" output only when all the inputs are "L", the present output is "L". If a broadcast is received, ⑬ becomes "H", ⑫ becomes "L" and the output of Noise Amp. becomes "L" since detuning noise disappears. Therefore, all the inputs of NOR Gate becomes "L" and the output becomes "H". "H" output of NOR Gate is differentiated and reversed to make ㊲ terminal of IC9 (AT-600) "L" and stop scanning. IC6 ⑯ is always "L" in FM mode. Auto Stop Signal in AM mode uses the signal meter output of IC6 ⑯ . IC6 ⑯ is "H" at the time of broadcast reception and is "L" on other occasions. Since IC2 ⑬ is always "H" in AM mode, the output of NOR Gate is "L".

7. KEY MATRIX

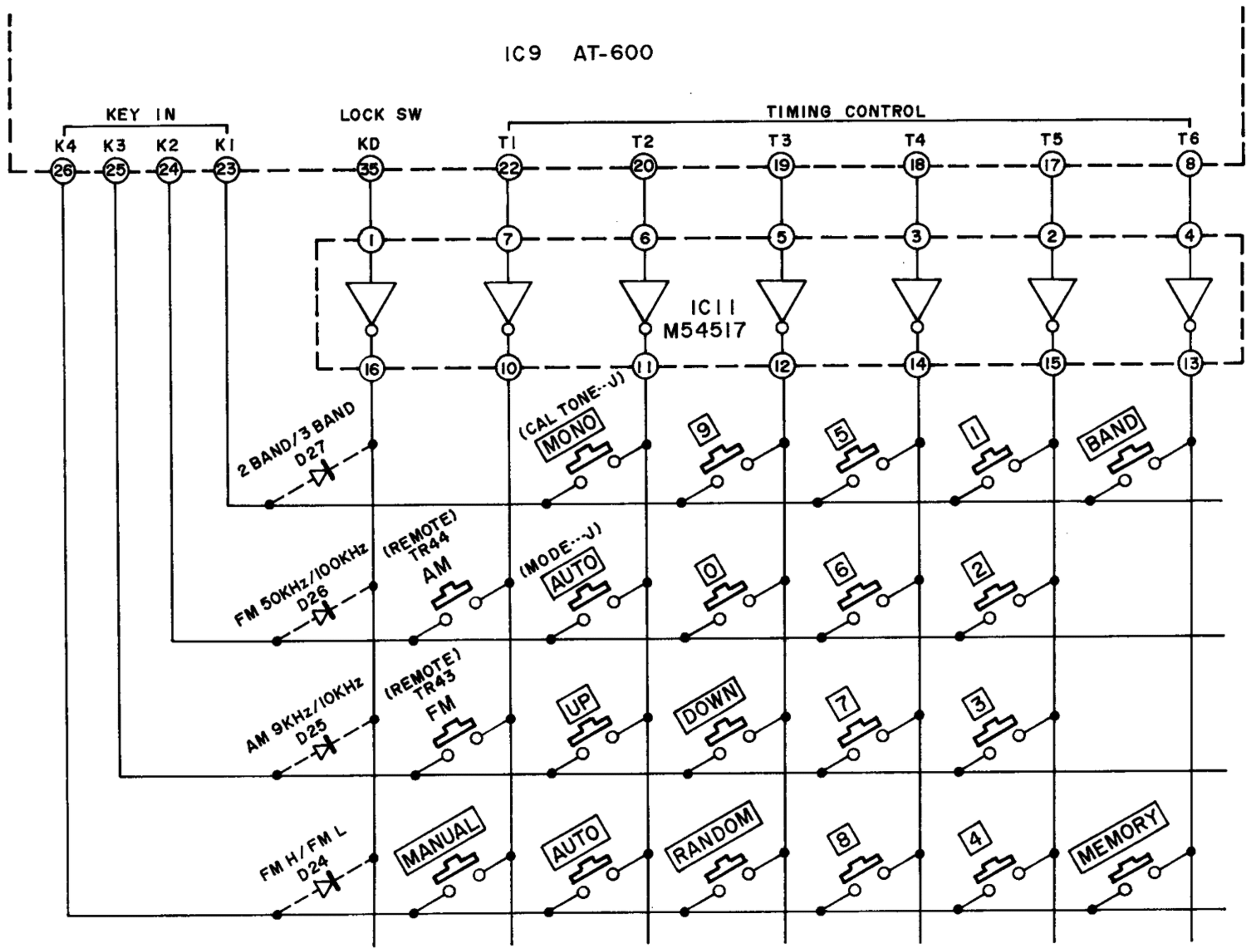


Fig. 10

Destination	AM	FM	Connected Diode
J C, A U, E, S, V	522 ~ 1611 kHz (9 kHz STEP) 530 ~ 1610 kHz (10 kHz STEP) 522 ~ 1611 kHz (9 kHz STEP)	76.00 ~ 90.00 MHz (100 kHz STEP) 87.40 ~ 108.10 MHz (100 kHz STEP) 87.40 ~ 108.10 MHz (50 kHz STEP)	D24 D25, D26 None
L BAND	LW 137 ~ 362 kHz (10 kHz STEP) MW 522 ~ 1611 kHz (9 kHz STEP)	87.40 ~ 108.10 MHz (50 kHz STEP)	D27

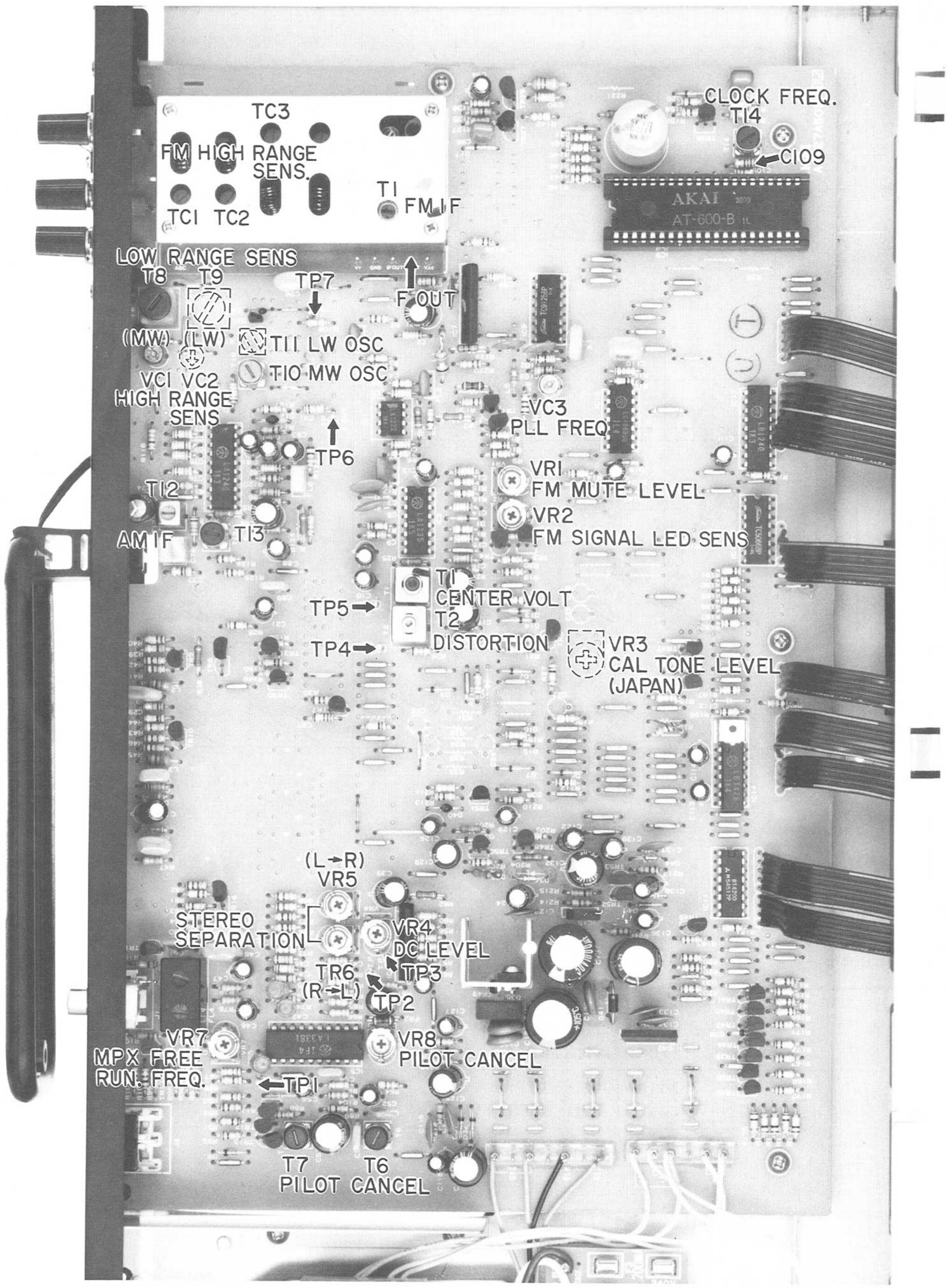


Fig. 11 Tuner P.C Board

1. AM (AT-S61L: MW) SECTION ADJUSTMENT (Refer to Fig. 4)

Unless otherwise specified, use the adjustment points provided on the Tuner P.C Board. (Fig. 4)

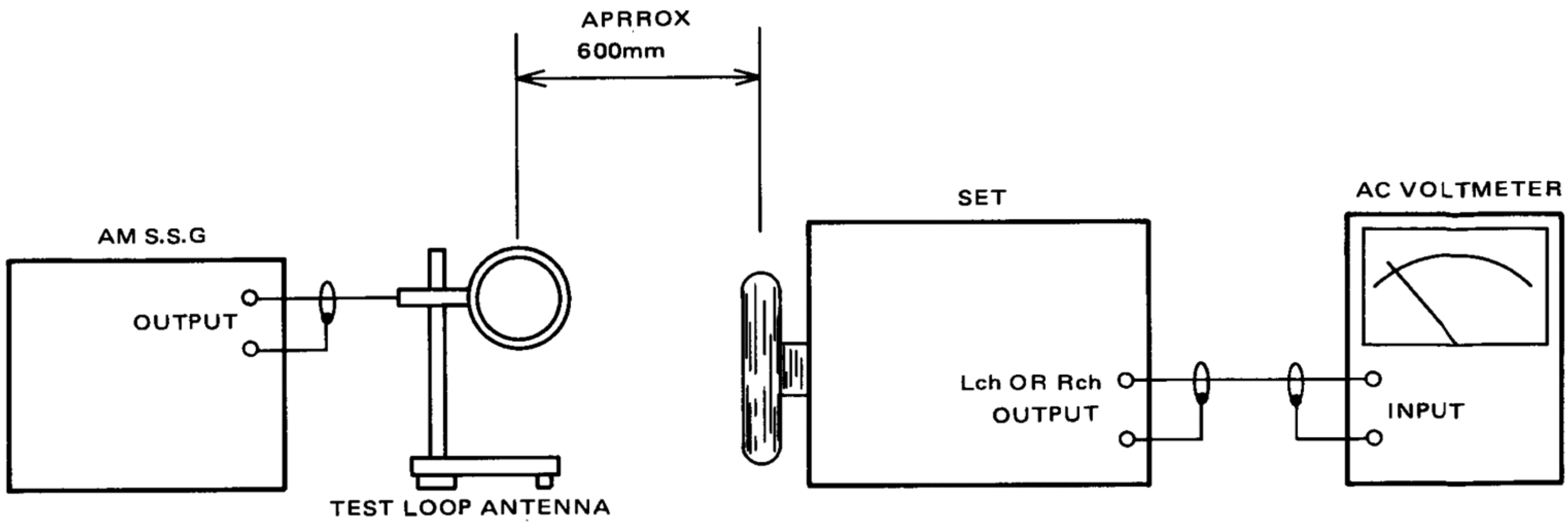


Fig. 12 Instrument Connections for AM Section Adjustment

STEP	ADJUSTMENT ITEM	ADJUSTMENT POINT	RESULT	REMARKS
1	Clock Frequency	T14 (BLK)	420 kHz	Connect a Frequency Counter between C109 (IC9 Pin 28) and GND on the Tuner P.C Board.
2	PLL Frequency	VC3	Digital Display Indicating Frequency +10.7 MHz	BAND switch to FM. Connect a Frequency Counter between F. OUT and GND on the FRONT END.
3	AM (MW) OSC	T10 (RED)	705 kHz	BAND switch to AM (MW). Short TP7 to GND and connect a Frequency Counter between TP6 and GND on the Tuner P.C Board.
4	OP. AMP. DC Level	VR4	4.80V	BAND switch to AM (MW). Connect a DC Voltmeter between TP3 and GND on the Tuner P.C Board.
5	AM IF Coil	T12 (YLW) T13 (BLK)	Maximum Output	1,000 kHz (1,008 kHz), 50 dB, 400 Hz (30%) input.
6	Low Range Sensitivity	T8	Maximum Output Distortion Factor: Less than 10%	600 kHz (603 kHz), 55 dB, 400 Hz (30%) input.
7	High Range Sensitivity	VC1	Maximum Output Distortion Factor: Less than 10%	1,400 kHz (1,404 kHz), 55 dB, 400 Hz (30%) input.
8				Readjust in Steps 6 and 7.

2. LW SECTION ADJUSTMENT (AT-S61L only)

STEP	ADJUSTMENT ITEM	ADJUSTMENT POINT	RESULT	REMARKS
1	LW OSC	T11	525 kHz	BAND switch to LW. Short TP5 to GND and connect a Frequency Counter between TP6 and GND on the Tuner P.C Board.
2	Low Range Sensitivity	T9	Maximum Output Distortion Factor: Less than 10%	164 kHz, 50 dB, 400 Hz (30%) input. (Refer to Fig. 5)
3	High Range Sensitivity	VC2	Maximum Output Distortion Factor: Less than 10%	308 kHz, 50 dB, 400 Hz (30%) input. (Refer to Fig. 5)

3. FM SECTION ADJUSTMENT

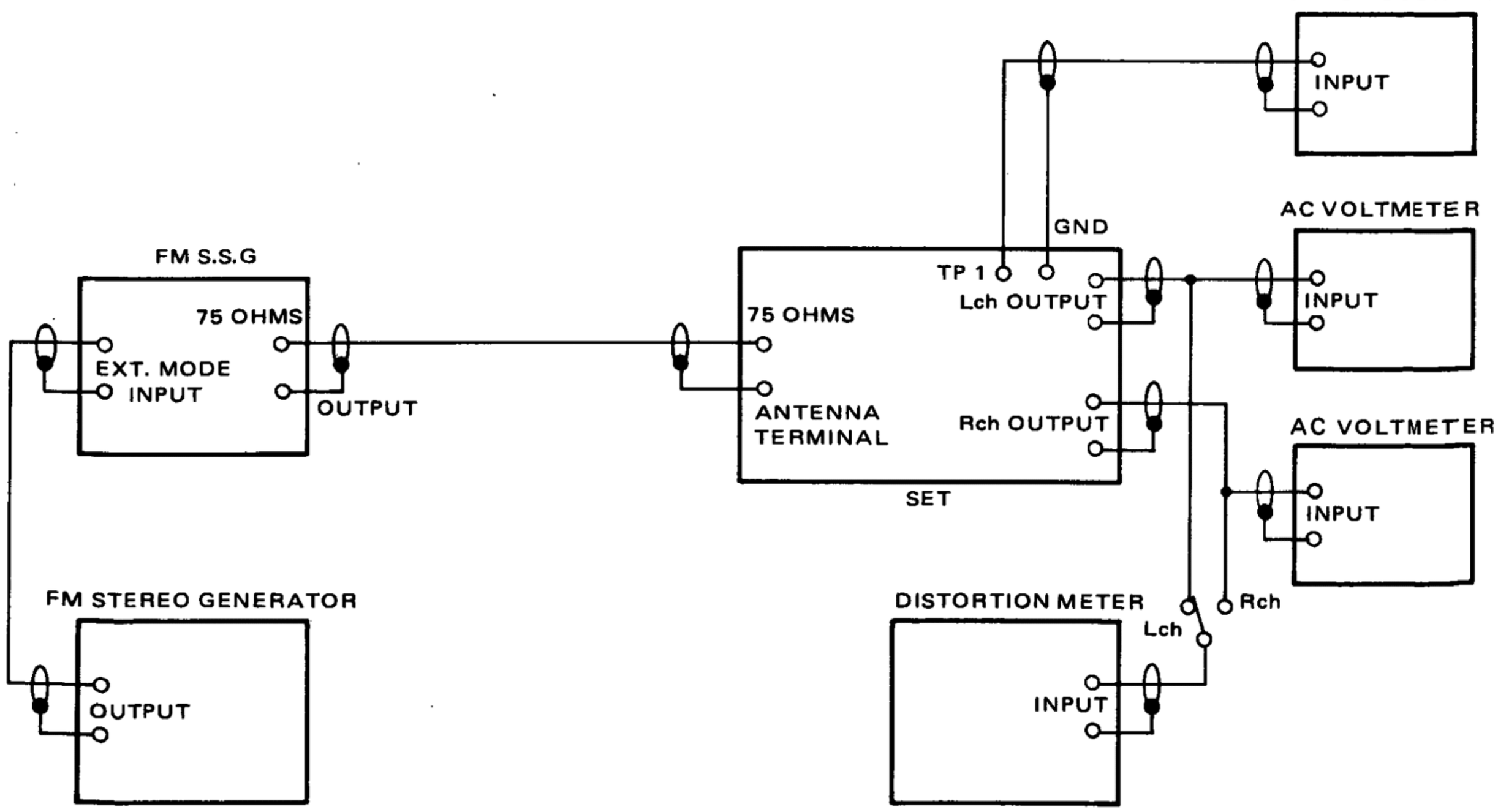


Fig. 13 Instruments Connection for FM Section Adjustment

STEP	ADJUSTMENT ITEM	ADJUSTMENT POINT	RESULT	REMARKS
1	FM IF Coil	T1 (BLK) (Front End)	Maximum Noise Level	BAND switch to FM, and MODE to MONO. Tunes only noise without interference from broadcasting.
2	Center Voltage	T1	Centered Tuning Meter Indication	Connect a Center Tuning Meter between TP4 and TP5 (See Note 1). Tunes only noise without interference from broadcasting.
3	Distortion Factor	T2	Distortion Factor: Less than 0.2%	98 MHz (84 MHz), 60 dB, 1 kHz (Mono 100%) input Less than 0.2% in both channels.
4				Readjust in Steps 2 and 3.
5	MPX Free Running Frequency	VR7	76 kHz ± 50 Hz	Connect a Frequency Counter between TP1 and GND on the Tuner P.C Board.
6	High Range Sensitivity	TC1, TC2 TC3 (Front End)	Distortion Factor: Less than 3%	MODE switch to MONO. 108 MHz (88 MHz), Less than 6 dB, 1 kHz, (MONO) input.
7	Confirmation of Low Range Sensitivity		Distortion Factor: Less than 3%	88 MHz (76 MHz), Less than 6 dB, 1 kHz, (MONO) input. (See Notes 2, 3)
8	Pilot Signal Cancel	VR8 (T6, T7)	Minimum Output	MODE switch to STEREO. 98 MHz (84 MHz), 60 dB (Stereo), Pilot signal only input.
9	Stereo Separation (Left → Right)	VR5	More than 45 dB	98 MHz (84 MHz), 60 dB, 1 kHz (Stereo 100%) Lch input. Minimum Output of Rch.
10	Stereo Separation (Right → Left)	VR6	More than 45 dB	98 MHz (84 MHz), 60 dB, 1 kHz (Stereo 100%) Rch input. Minimum output of Lch.
11	Confirmation of Stereo Distortion Factor		Distortion Factor: Less than 0.3%	98 MHz (84 MHz), 60 dB, 1 kHz (Stereo 100%) input. If distortion exceeds 0.5%, first check according to Steps 2, 3, 5, 9 and 10, and then readjust according to Step 1.
12	Signal LED Sensitivity	VR2		98 MHz (84 MHz), 40 dB input. Adjust VR2 to a point where 5th LED of SIGNAL LED light up. (See Note 4)
13	Muting Level	VR1	20 dB ± 6 dB	MODE switch to STEREO. 98 MHz, 20 dB, 1 kHz (Mono 100%) input. Adjust VR1 until the output signal is reduced to zero. Vary the SSG output by ± 6 dB and check muting operation.
14	CAL TONE Level	VR3	275 mV	AT-S61J only.

VIII. CLASSIFICATION OF VARIOUS P.C BOARDS

1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

1) Model AT-S61

P.C BOARD TITLE	P.C BOARD NUMBER	NOTES
TUNER P.C Board	A3027A501A	U
TUNER P.C Board	A3027A502A	E, V, S
TUNER P.C Board	A3027A503A	C, A
OPERATION P.C Board	A3027A501B	U
OPERATION P.C Board	A3027A502B	E, V, S
OPERATION P.C Board	A3027A503B	C, A
POWER P.C Board	A2013D5044	U
POWER P.C Board	A3027D5040	C, A, E, S
POWER P.C Board	A3033D509B	V
FILTER P.C Board	A3033D509A	V

2) Model AT-S61L

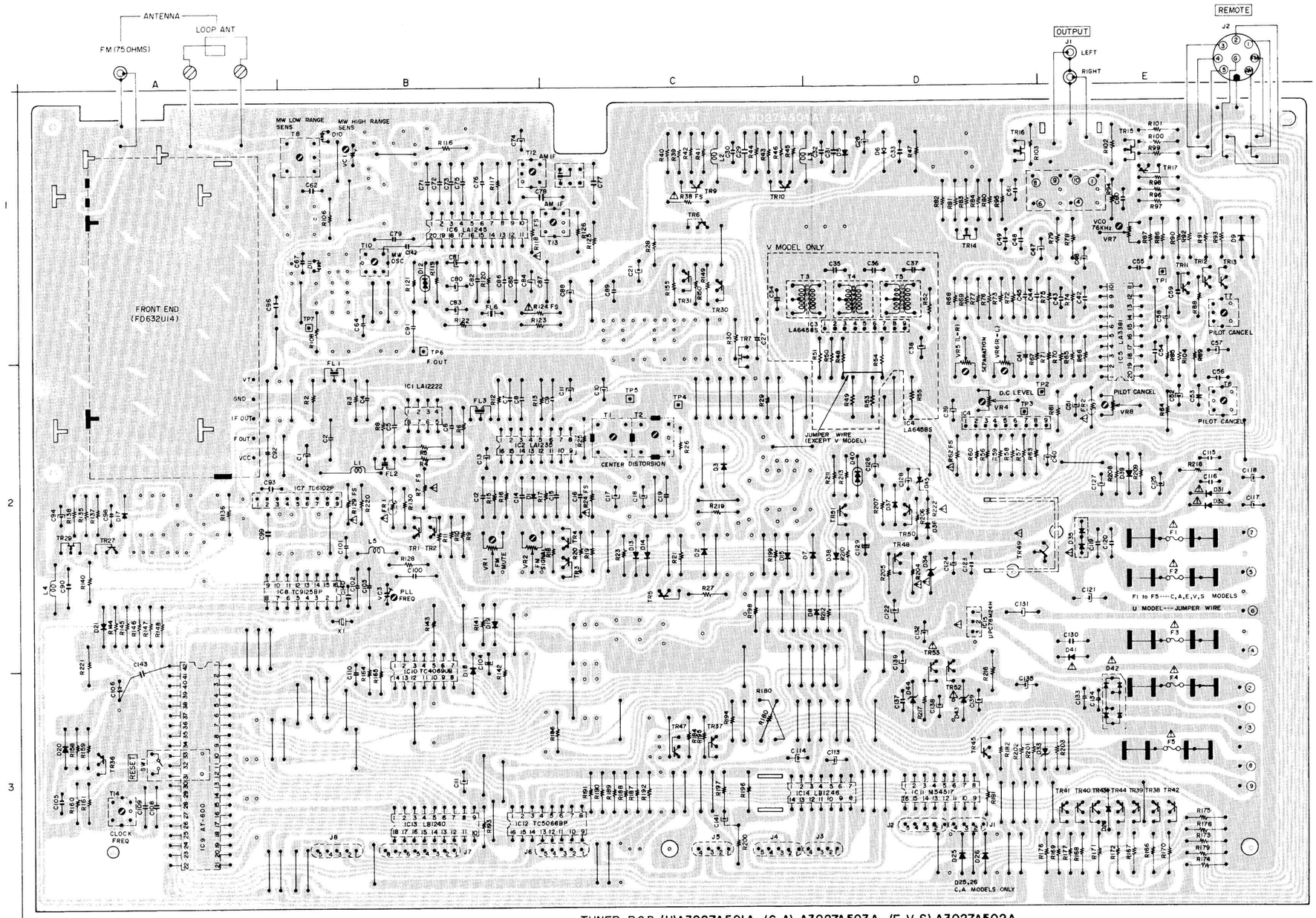
P.C BOARD TITLE	P.C BOARD NUMBER	NOTES
TUNER P.C Board	A3027A502A	
OPERATION P.C Board	A3027D502B	
POWER P.C Board	A3027D5050	

3) Model AT-S61J

P.C BOARD TITLE	P.C BOARD NUMBER	NOTES
TUNER P.C Board	A3027A501A	
OPERATION P.C Board	A3027A501B	
POWER P.C Board	A3027D5060	

2. COMPOSITION OF VARIOUS P.C BOARDS

1) Model AT-S61 Tuner P.C Board A3027A501A (U), A3027A502A (E, V, S), A3027A503A (C, A) and Operation P.C Board A3027A501B (U), A3027A502B (E, V, S), A3027A503B (C, A)



TUNER PCB (U)A3027A501A, (C,A) A3027A503A, (E,V,S) A3027A502A

LOCATION OF IC & TR & TERMINAL

TR1,2--B2
TR3 to 5--C2
TR6,7,9,10-C1
TR11 to 13--E1
TR14--D1
TR15--E1
TR16--D1
TR17--E1

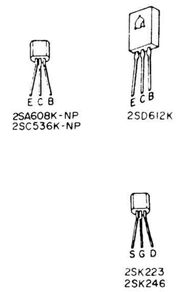
TR30 31----C1
TR36--A3
TR37--C3
TR38 to 44--E3
TR45--D3
TR46,47-C3
TR48--D2
TR49--E2
TR50,51-D2
TR52,53--D3

IC1,2--B2
IC4---D2
IC5---E1
IC6---B1
IC7---A2
IC8---B2
IC9---A3
IC10--B2
IC11---D3
IC12,13-B3
IC14---D3
IC15---D2

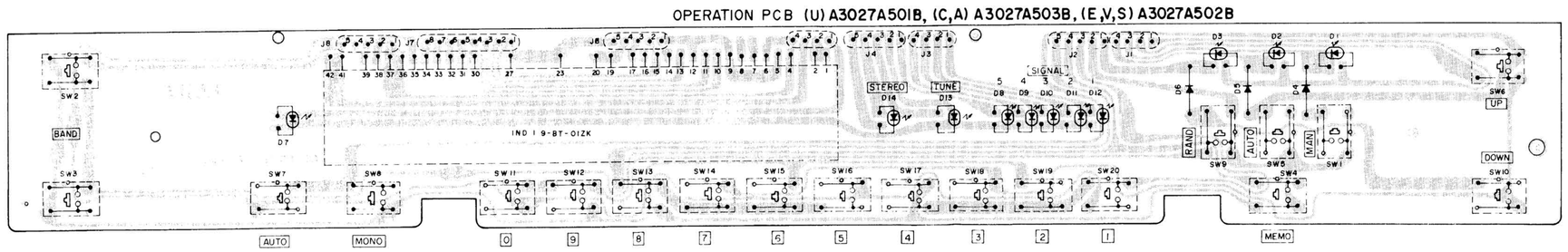
J1 to 3-D3
J4 to 6-C3
J7,8---B3
J9---C3

TR1, 6, 17---2SA608K-NP (E, F, G)
TR2 to 5----2SC536K-NP (F, G)
TR7, 14 to 16---2SK246 (Y)
TR9 to 13---2SC536K-NP (F, G)

TR26, 27, 31 to 44
48, 51, 52 --- 2SC536K-NP (F, G)
TR30, 45, 46, 47, 50 - 2SA608K-NP (E, F, G)
TR49, 53 - 2SD612K (D, E, F)
TR28, 29 - 2SK223 (F)



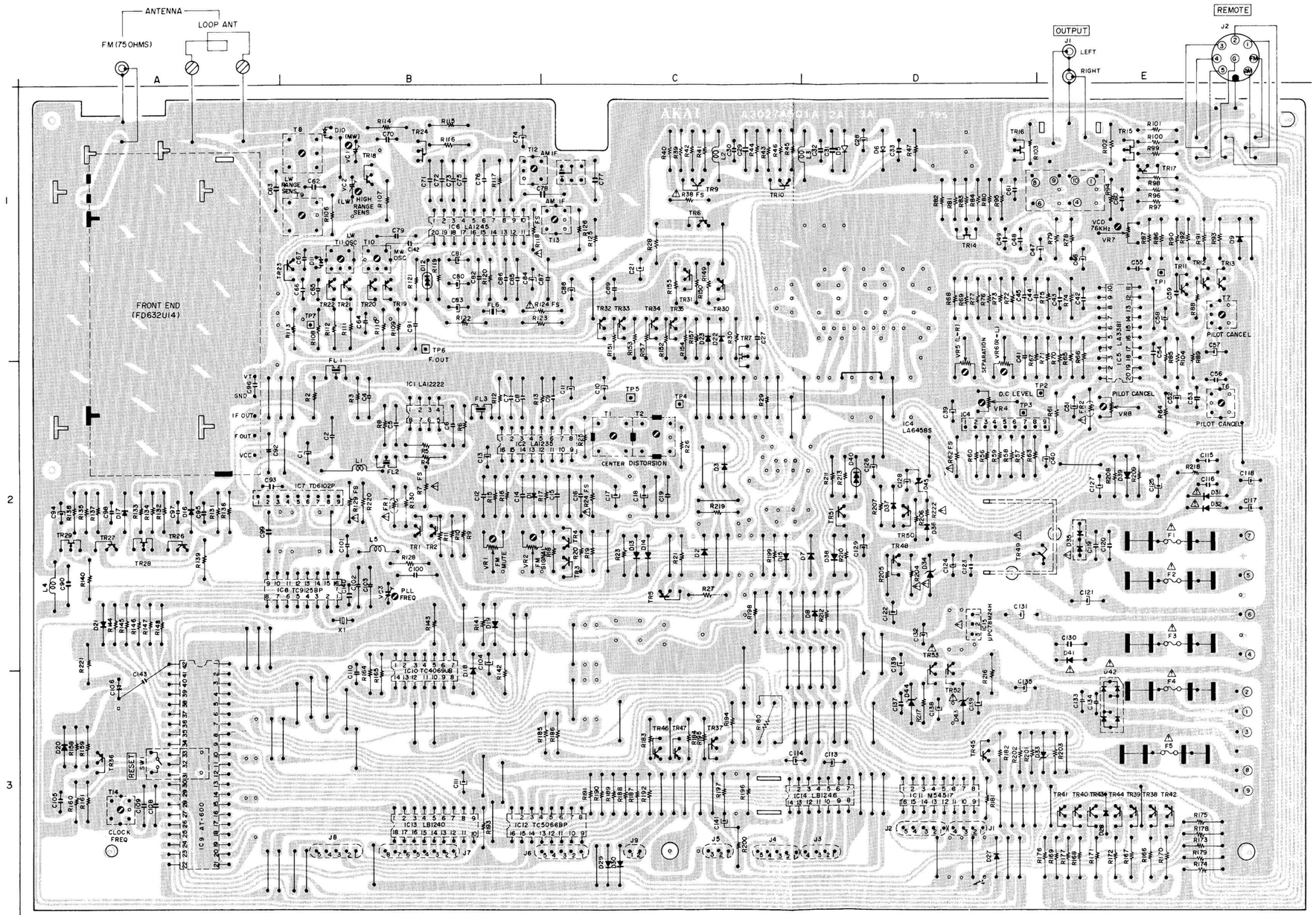
OPERATION PCB (U) A3027A501B, (C,A) A3027A503B, (E,V,S) A3027A502B



WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

2) Model AT-S61L Tuner P.C Board A3027A502A and Operation P.C Board A3027A502B



TUNER PCB A3027A502A(E)

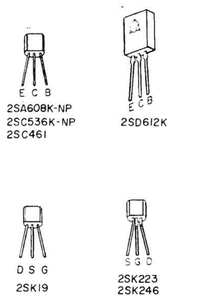
LOCATION OF IC & TR & TERMINAL

TR1,2--B2
TR3 to 5--C2
TR6,7,9,10-C1
TR11 to 13--E1
TR14--D1
TR15--E1
TR16--D1
TR17--E1
TR18 to 23--B1
TR24--B1
TR26 to 29--A2
TR30 to 35--C1
TR36--A3
TR37--C3
TR38 to 44--E3
TR45--D3
TR46,47-C3
TR48--D2
TR49--E2
TR50,51-D2
TR52,53--D3

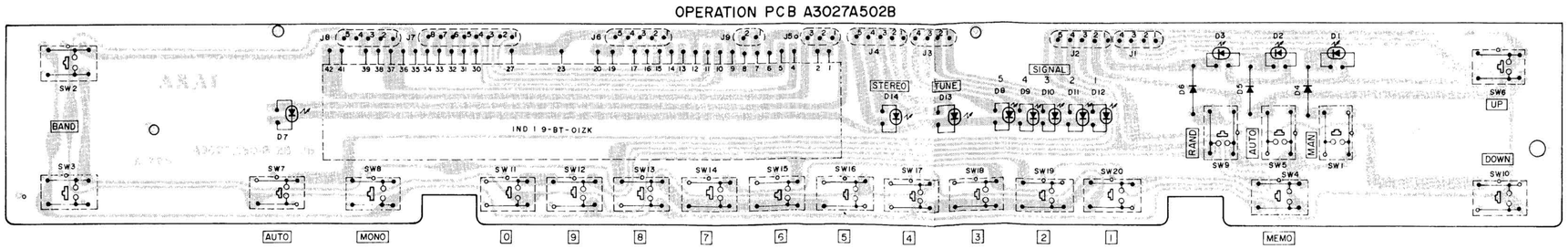
IC1,2--B2
IC4---D2
IC5---E1
IC6---B1
IC7---A2
IC8---B2
IC9---A3
IC10--B2
IC11---D3
IC12,13-B3
IC14---D3
IC15---D2

J1 to 3--D3
J4 to 6--C3
J7,8---B3
J9---C3

TR1,6,17---2SA608K-NP(E,F,G)
TR2 to 5----2SC536K-NP(F,G)
TR7,14 to 16---2SK246(Y)
TR9 to 13,18,23-2SC536K-NP(F,G)
TR19 to 22-----2SA608K-NP(E,F,G)
TR24 -------2SK19(Y)
TR26,27,31 to 44
48,51,52 ----2SC536K-NP(F,G)
TR30,45,46,47,50-2SA608K-NP(E,F,G)
TR49,53 - 2SD612K (D,E,F)
TR28,29 - 2SK223(F)



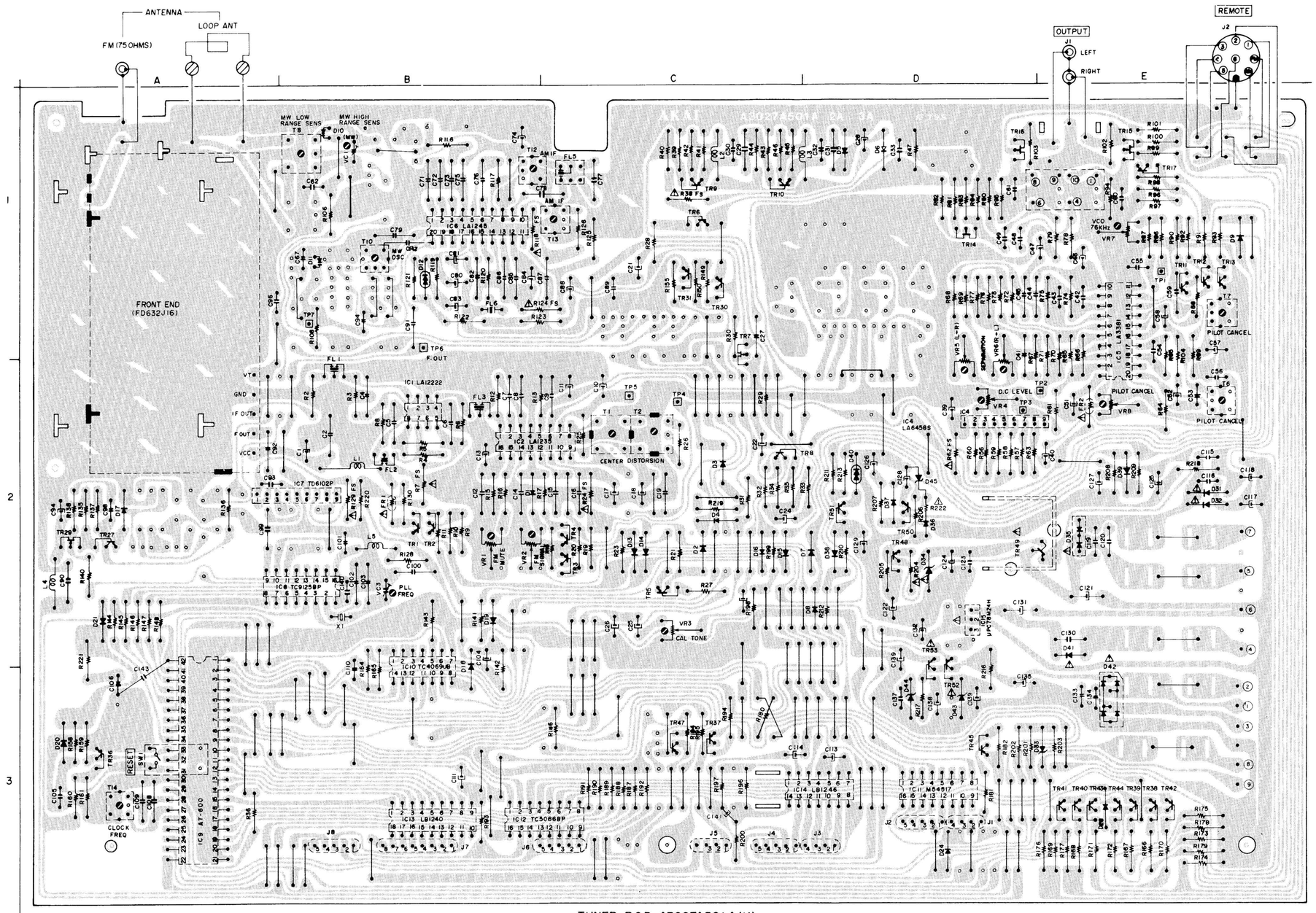
OPERATION PCB A3027A502B



WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

3) Model AT-S61J Tuner P.C Board A3027A501A and Operation P.C Board A3027A501A

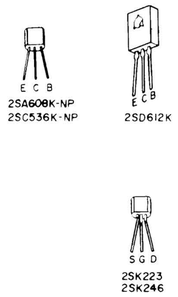


TUNER PCB A3027A501A(U)

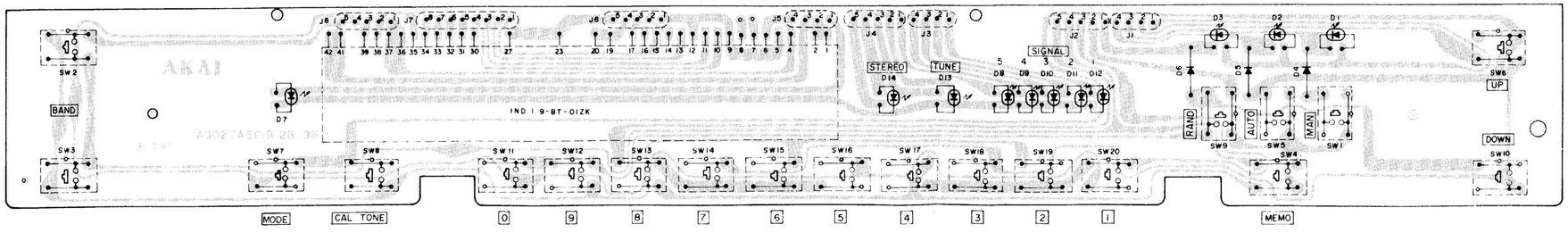
LOCATION OF IC & TR & TERMINAL

TR1,2--B2	IC1,2--B2	J1 to 3--D3
TR3 to 5--C2	IC4---D2	J4 to 6--C3
TR6,7,9,10-C1	IC5---E1	J7,8--B3
TR11 to 13--E1	IC6---B1	
TR14--D1	IC7---A2	
TR15--E1	IC8---B2	
TR16--D1	IC9---A3	
TR17--E1	IC10--B2	
TR8--C2	IC11--D3	
TR27-A2	IC12,13-B3	
TR29--A6	IC14---D3	
TR30,31--C1	IC15---D2	
TR36--A3		
TR37--C3		
TR38 to 44--E3		
TR45--D3		
TR47---C3		
TR48--D2		
TR50,51--D2		
TR52,53--D3		

TR1,6,17---2SA608K-NP(E,F,G)
TR2 to 5----2SC536K-NP(F,G)
TR7,8,14 to 16---2SK246(Y)
TR9 to 13,----2SC536K-NP(F,G)
TR27,31,36 to 44,51,52-2SC536K-NP(F,G)
TR29-------2SK223(F)
TR30,45,47,50-2SA608K-NP(E,F,G)
TR53-------2SD612K(D,E,F)



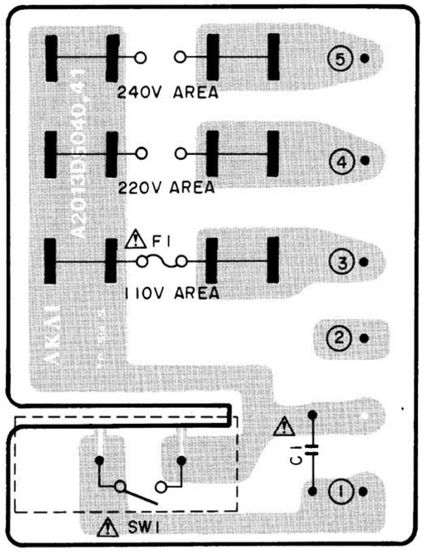
OPERATION PCB A3027A501B



WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

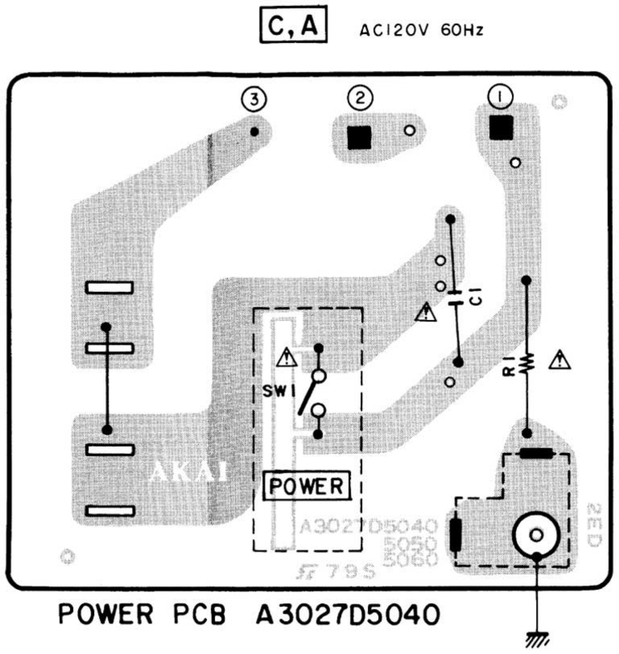
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÉCURITÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

4) Model AT-S61 Power P.C Board A2013D5044 (U)



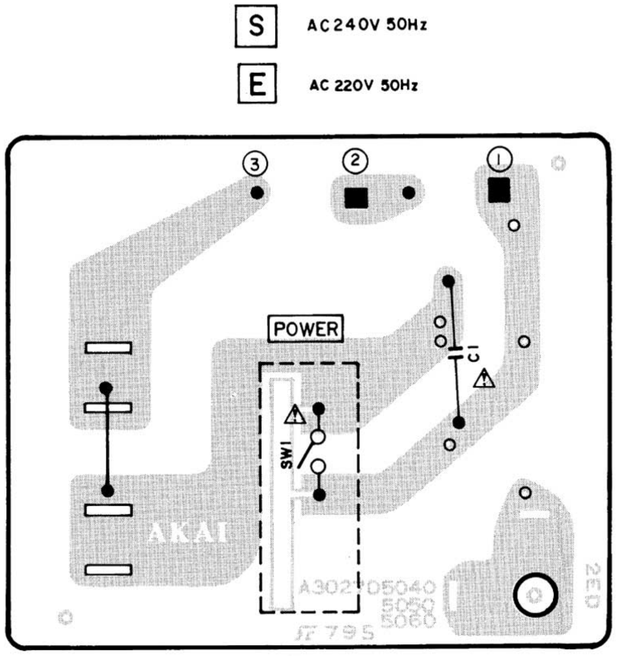
U
AC110V to 240V
50/60Hz

5) Model AT-S61 Power P.C Board (C, A) A3027D5040



POWER PCB A3027D5040

6) Model AT-S61/L Power P.C Board (E, S) A3027D5040

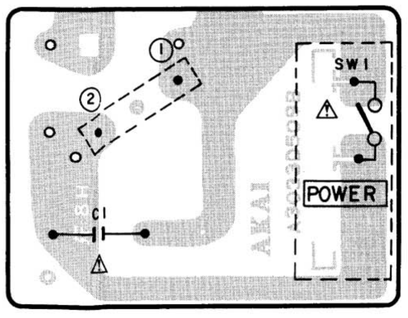


POWER PCB A3027D5040

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

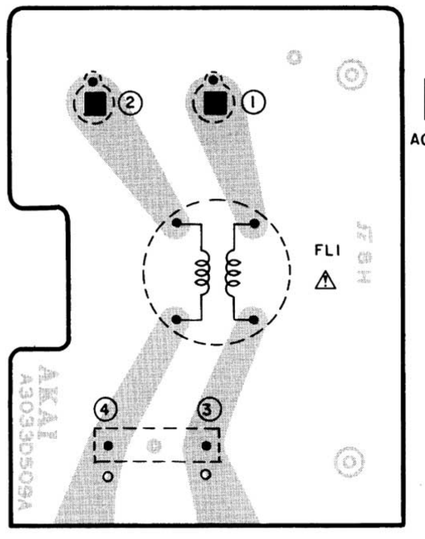
AVERTISSEMENT: ⚠IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

7) Model AT-S61 Power P.C Board A3033D509B and Filter P.C Board A3033D509A (V Model)



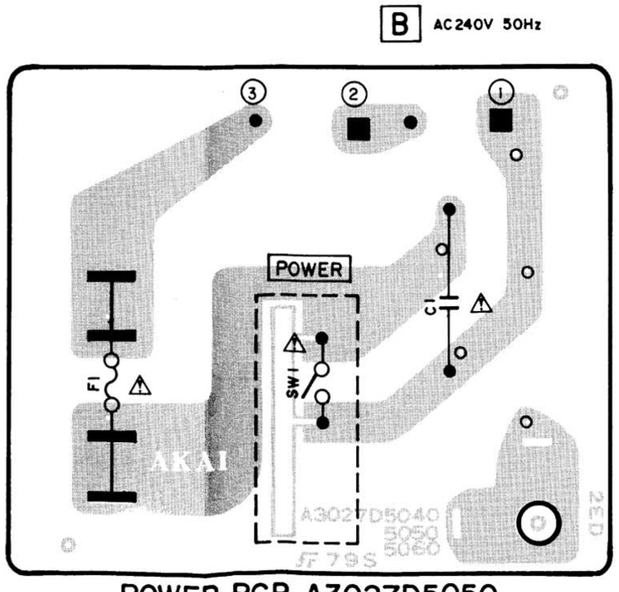
POWER PCB A3033D509B

FILTER PCB A3033D509A



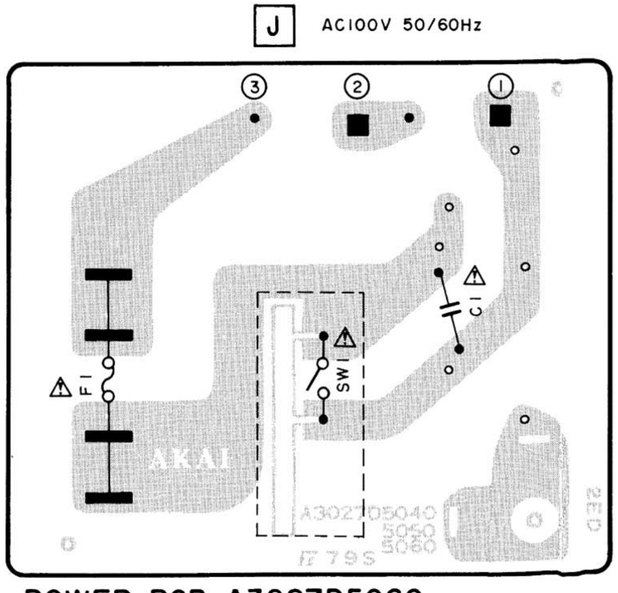
V
AC220V50Hz

8) Model AT-S61L Power P.C Board A3027D5050



POWER PCB A3027D5050

9) Model AT-S61J Power P.C Board A3027D5060



POWER PCB A3027D5060