

AKAI

MODEL AT-A2/L

SCHEMATIC DIAGRAM AND PC BOARD

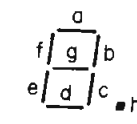
1. SCHEMATIC DIAGRAM OF ICs 1
2. AT-A2 NO.840821A SCHEMATIC DIAGRAM 2
3. CONTROL PC BOARD, POWER SW (1), (2), TUNER PC BOARD 3
4. CONTROL PC BOARD, POWER SW (2), TUNER PC BOARD 4
5. AT-A2 L NO.840822A SCHEMATIC DIAGRAM 5
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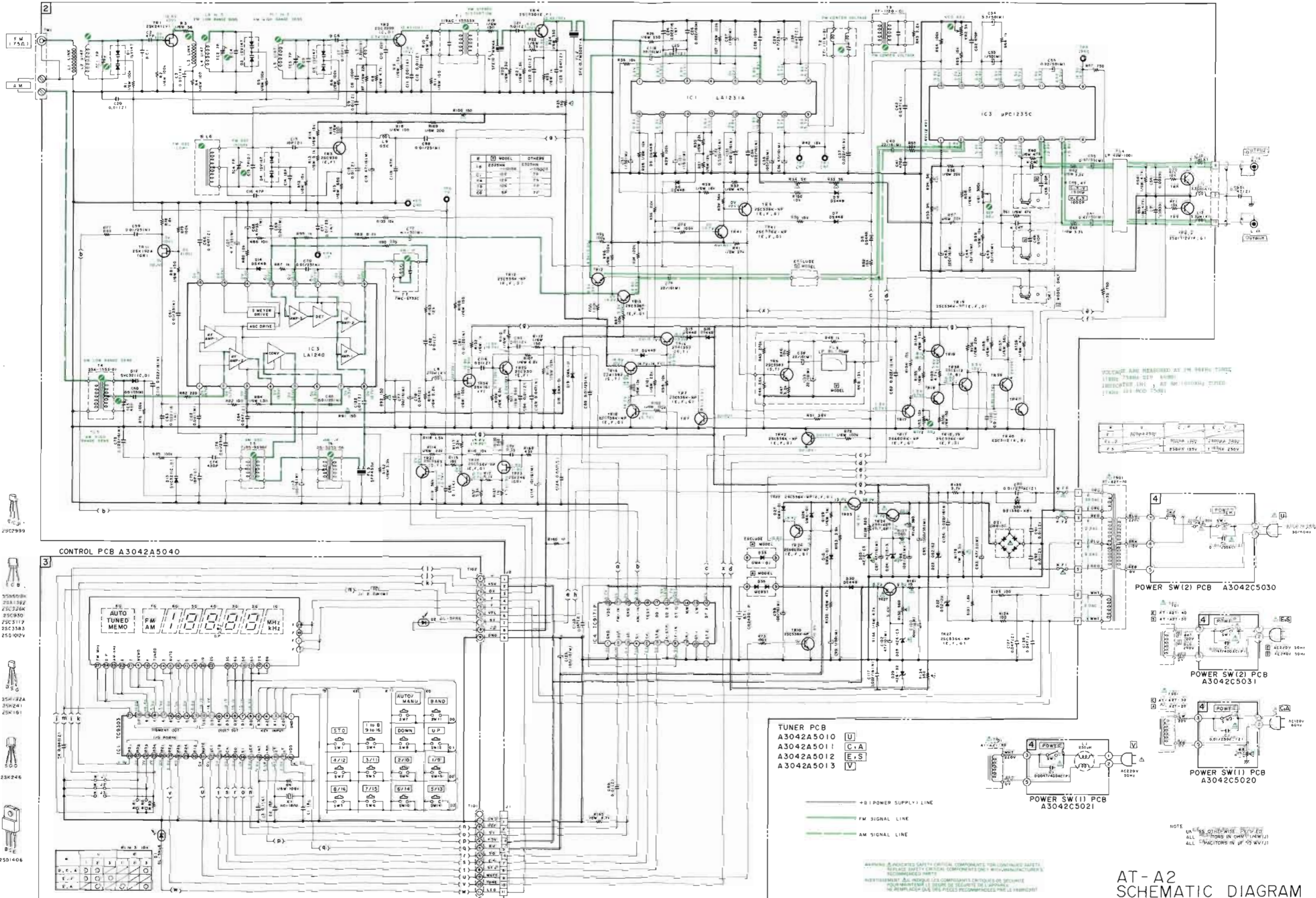
TC9171

Pin No.	Symbol	Description
1	GND	GND
2	REF	Reference Frequency/Input Terminal from U0COM (TC9303N)
3	SO	Serial Data Output Terminal to U-COM (TC93031N)
4	SI	Serial Data Input Terminal from U-COM (TC-9303N)
5	CK	Clock Signal Terminal
6	STB	Strobe signal Terminal
7	A-STP	Not used
8	IF-IN	AM/FM-IF signal Input Terminal (Auto scan stop DET)
9	IN1	
10	OT1	Not used
11	OT2	

Pin No.	Symbol	Description
12	OT3	Control output "H"-MONO/"L"-STEREO
13	OT4	Control output "H"-LW MODE AT-A2L only
14	OT5	Control output "H"-MW MODE AT-A2L only
15	OT6	Control output "H"-FM MODE/"L"-AM MODE
16	DO2	Not used
17	DO2	Control output of Tuning Voltage
18	TEST	Not used
19	AM-IN	AM OSC Signal Input Terminal
20	GND	GND
21	FM-IN	FM OSC Signal Input Terminal
22	VDD	+5V

TC9303

Pin. No.	Symbol	Description
2	K0	Key Matrix Data Input
3	K1	
5	K3	
6	D0	1G
7	D1	2G
12	D7	7G
13	a	 7 Segment and Dot FL drive
14	b	
19	g	
20	h	
21	-VFL	-B
22	P31	Disnation FM-AM step Frequency control FM OSC Frequency control
25	P34	
26	P21	P22 . . . FLD "TUNED" Control Input ("H"- "TUNED")
27	P22	
29	P23	
30	P12	Not used
31	MUTE	Mute Control "H": Mute - (scanning and cheng of bond)
32	TEST	Not used
33	STB	Strobe signal Terminal
34	CK	Clock signal Terminal
35	SO	Serial Data Output Terminal to PLL (TC9171)
36	SI	Serial data Input Terminal to PLL (TC9171)
37	REF	Reference Frequency Output Terminal to PLL (TC9171)
38	INT	
39	INH	
40	XT	X'tal Terminal
41	XT	
42	VDD	+5V
1	GND	GND



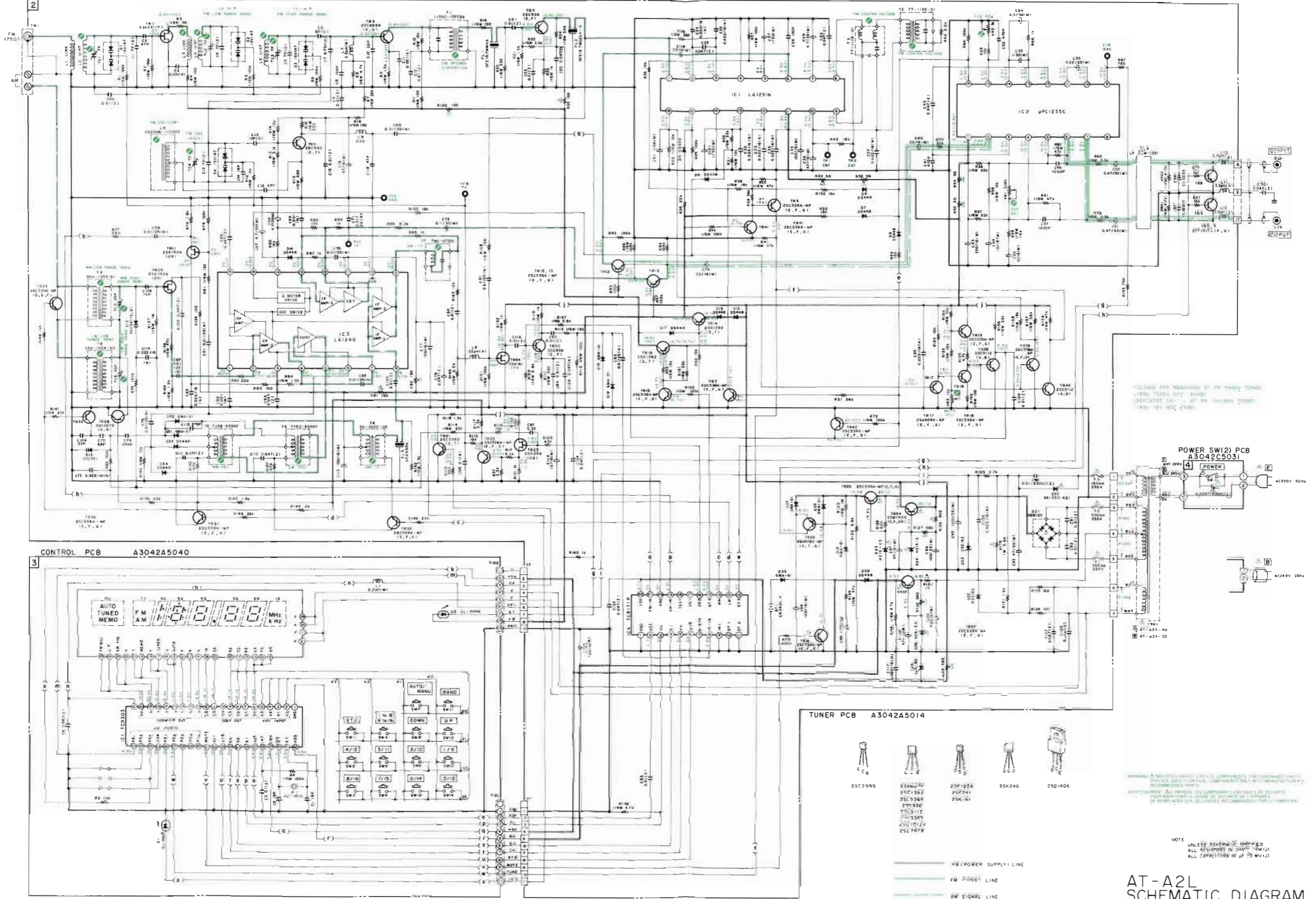
VOLTAGE AND RESISTANCE AT 24 HOURS TEMPERATURE
 1.000V ±0.005V (100Ω)
 1.000V ±0.005V (100Ω)
 1.000V ±0.005V (100Ω)

1	2000A 250V	C.P.	V
2	1000A 125V	2500VA 125V	
3	500A 62.5V	1250VA 62.5V	
4	250A 31.25V	625VA 31.25V	

- TUNER PCB
- A3042A5010 U
- A3042A5011 C.A
- A3042A5012 E.S
- A3042A5013 V



NOTE: UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE TO BE REPLACED WITH MANUFACTURER'S RECOMMENDED PARTS.
 ALL RESISTORS IN OHMS (Ω), KΩ (K), MΩ (M), AND GΩ (G).
 ALL CAPACITORS IN P.F. (P), μF (μ), AND nF (N).



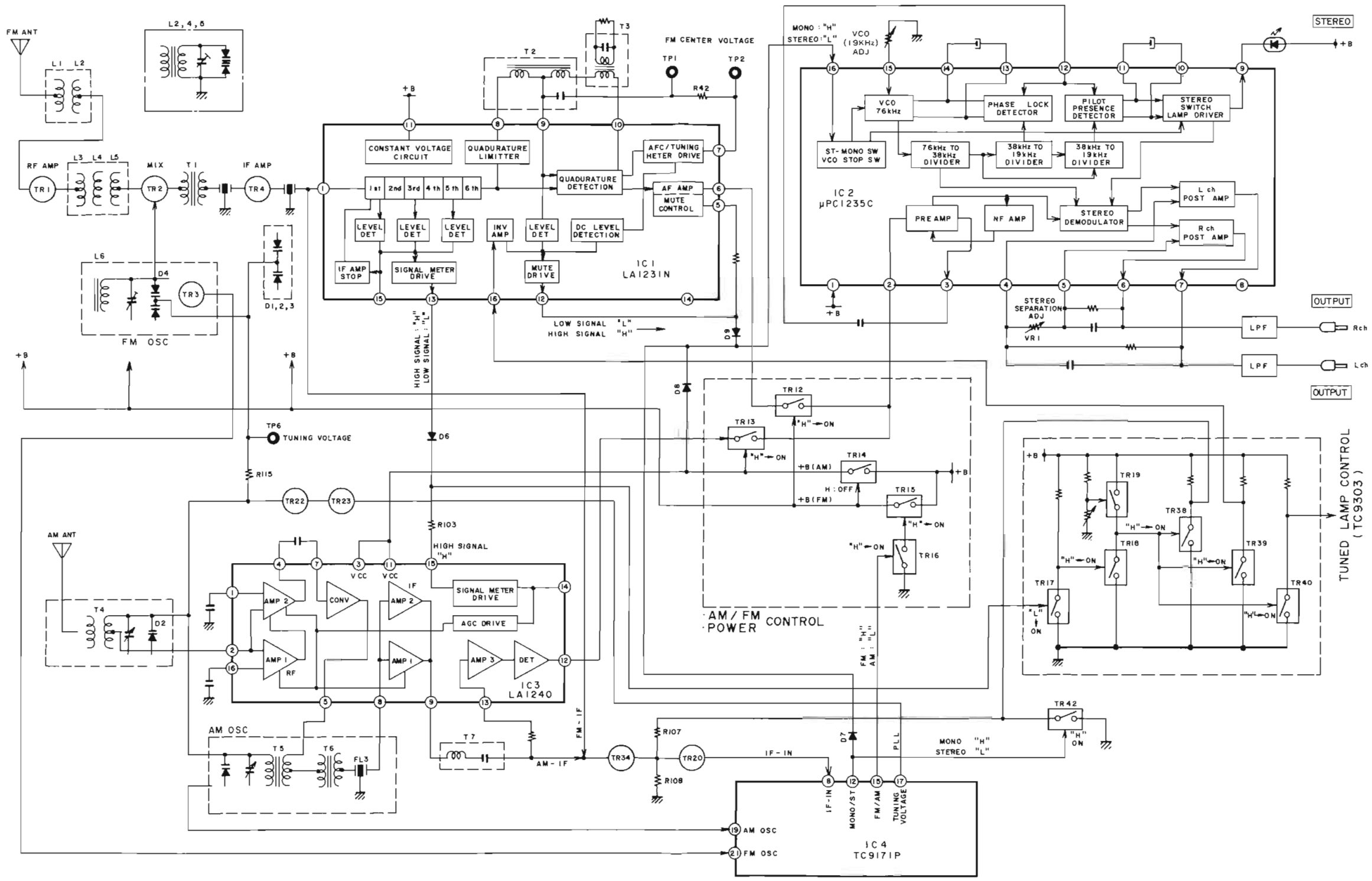
UNLESS OTHERWISE SPECIFIED:
 ALL RESISTORS IN OHMS (Ω), KΩ, MΩ, OR GΩ.
 ALL CAPACITORS IN PICO (p), NANO (n), MICRO (μ), OR MILLI (m) FARADS.

POWER SW(2) PCB
 A3042C5031

TUNER PCB A3042A5014

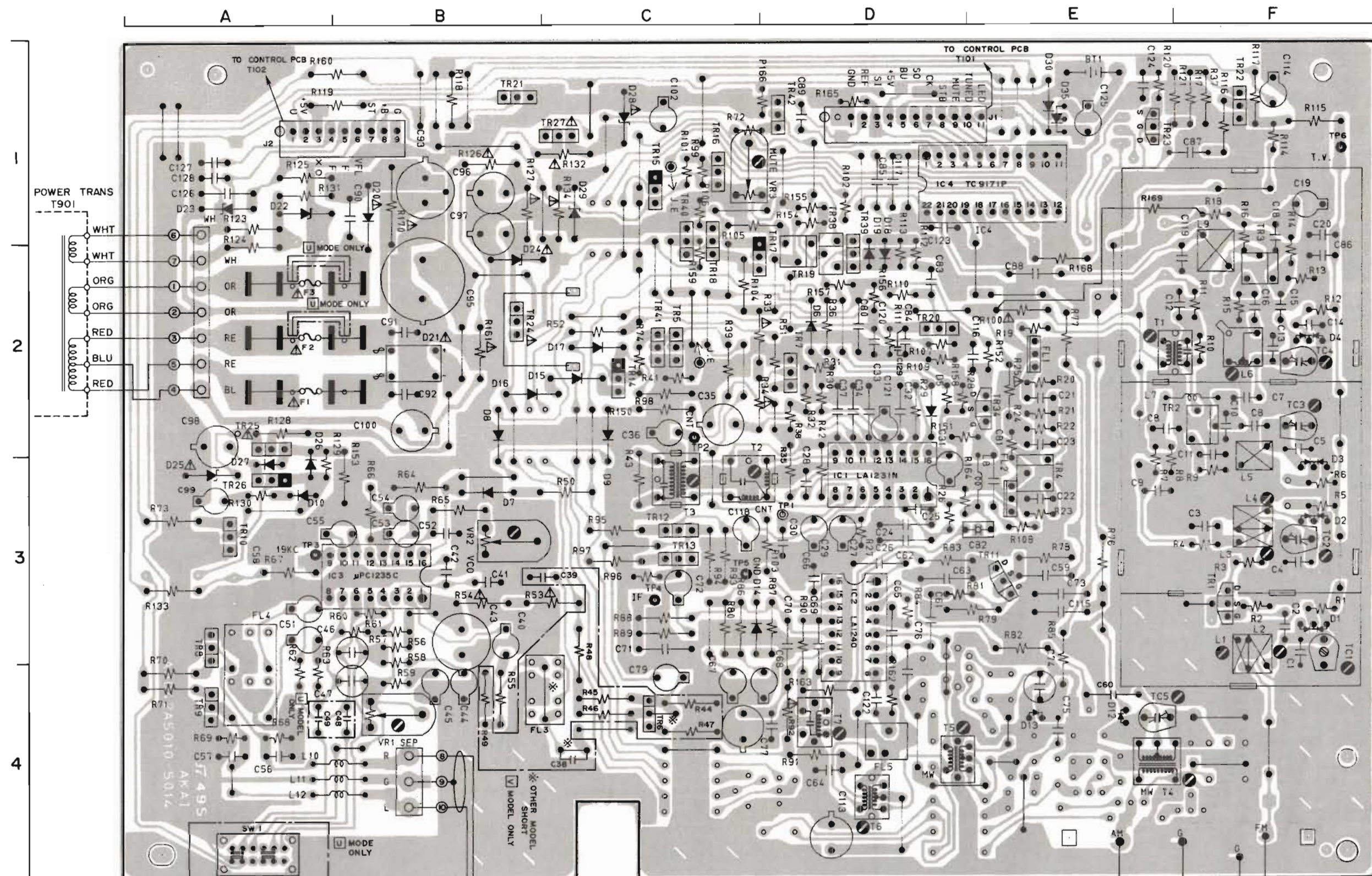


NOTE: UNLESS OTHERWISE SPECIFIED, ALL RESISTORS IN OHMS (Ω), KΩ, MΩ, OR GΩ. ALL CAPACITORS IN PICO (p), NANO (n), MICRO (μ), OR MILLI (m) FARADS.



AT-A2
BLOCK DIAGRAM
No. 840820A (A2)

	U	C	A	E	V	S
F1	200mA	250V				
F2	500mA	125V	1500mA	250V		
F3	250mA	125V	1600mA	250V		



TUNER PCB A3042A5010

5011 C A
5012 E S
5013 V

● = PNP TRANSISTOR
○ = NPN TRANSISTOR

ADJUSTMENT POINT
L2 to L5 ---- FM SENS (LOW)
TC1 to TC3 ---- FM SENS (HIGH)
T1 ---- FM STEREO DISTORTION
T2, T3 ---- FM CENTER VOLTAGE
L6 ---- FM OSC (LOW)
TC4 ---- FM OSC (HIGH)
VR1 ---- STEREO SEPARATION
VR2 ---- VCO (19KHz) ADJ
VR3 ---- MUTE ADJ
T4 ---- AM SENS (LOW)
TC5 ---- AM SENS (HIGH)
T5 ---- AM OSC
T6, T7 ---- AM - IF

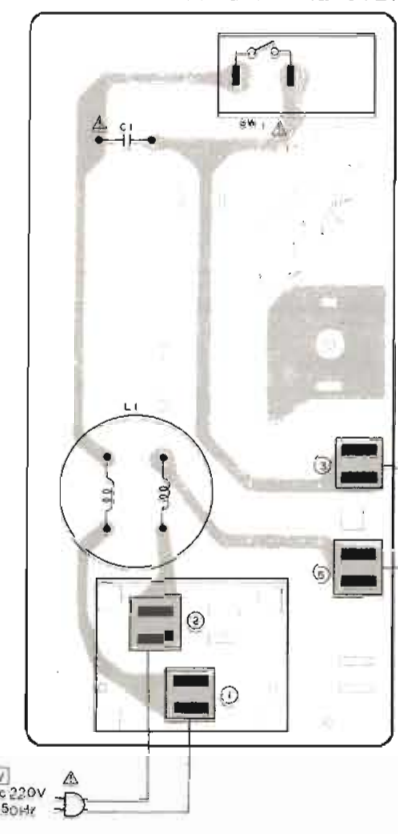
LOCATION OF COMPONENT

TRANSISTOR'S

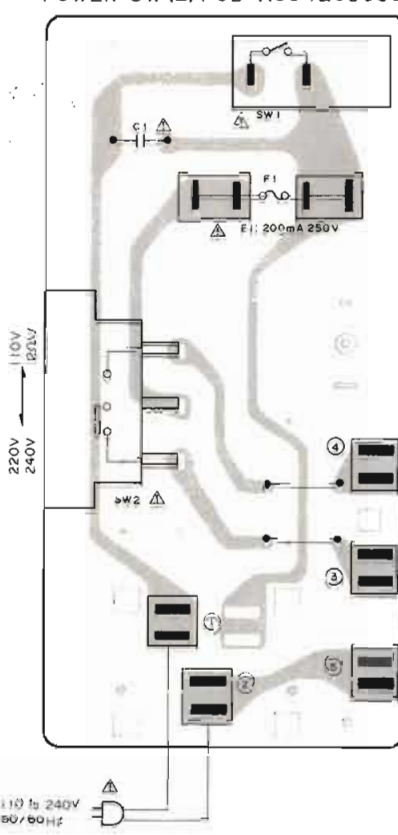
- | | |
|------------------|------------------|
| TR 1 ---- F3 | TR18 ---- C1 |
| TR2, 3 ---- F2 | TR19, 20 ---- D2 |
| TR4 ---- E3 | TR21 ---- B1 |
| TR5 ---- C2 | TR22 ---- F1 |
| TR6 ---- C4 | TR23 ---- E1 |
| TR7 ---- D2 | TR24 ---- B2 |
| TR8 ---- A3 | TR25 ---- A2 |
| TR9 ---- A4 | TR26 ---- A3 |
| TR10 ---- A3 | TR27 ---- C1 |
| TR11 ---- E3 | TR34 ---- E2 |
| TR12, 13 ---- C3 | TR38, 39 ---- D2 |
| TR14 ---- C2 | TR40 ---- C1 |
| TR15 ---- C1 | TR41 ---- C2 |
| TR16 ---- C1 | |
| TR17 ---- D2 | |

- IC'S
IC1 ---- D3
IC2 ---- B3
IC3 ---- D3
IC4 ---- E1

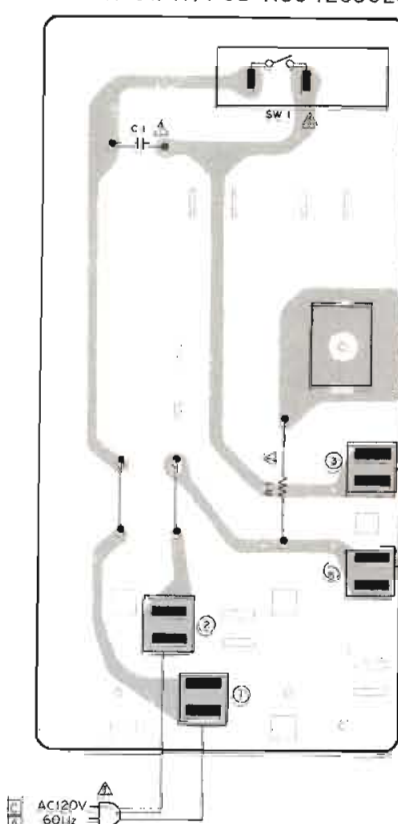
POWER SW (1) PCB A3042C5021



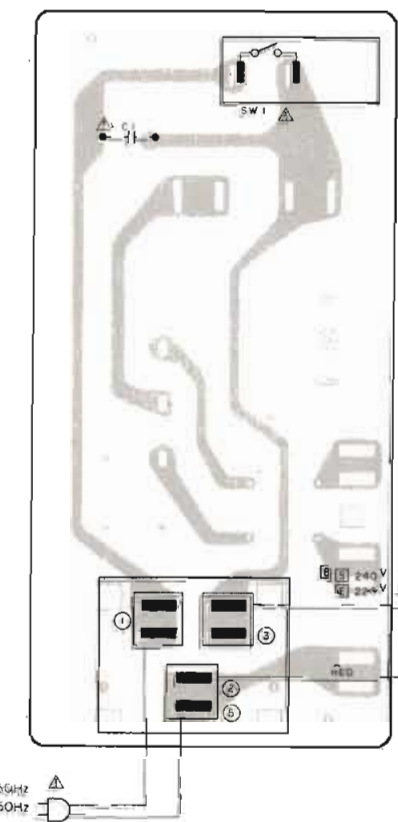
POWER SW (2) PCB A3042C5030



POWER SW (1) PCB A3042C5020



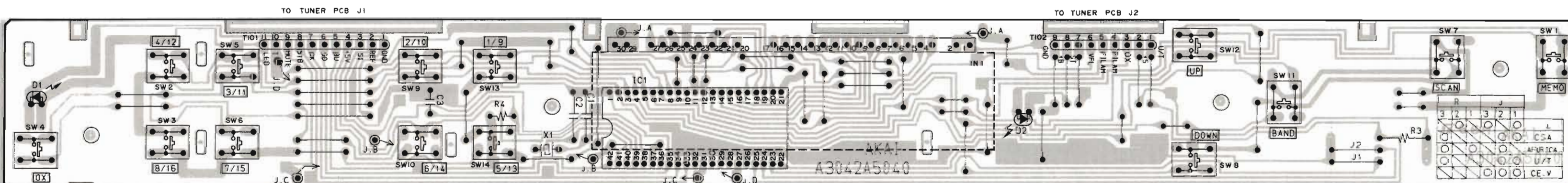
POWER SW (2) PCB A3042C5031



- TR 1 ---- 2SK241 (Y)
TR 2 ---- 2SC2999 (C, D)
TR 3, 4, 20 ---- 2SC930 (E, F)
TR 5, 7, 10, 12, 13, 16, 18
19 25 27 39 41 42 ---- 2SC536K - NP (E, F, G)
TR 6, 20, 21 ---- 2SC3383 (S, T)
TR 8, 9 ---- 2SD1012 V (F, G)
TR 11 ---- 2SK192A (G, R)
TR 14, 15 ---- 2SA1392 (S, T)
TR 17, 26 ---- 2SA608K - NP (E, F, G)
TR 23 ---- 2SK246 (G, R)
TR 24 ---- 2SD1406 (Q, Y, GR)
TR 34 ---- 2SK161 (Y)
TR 38, 40 ---- 2SC3112 (A, B)

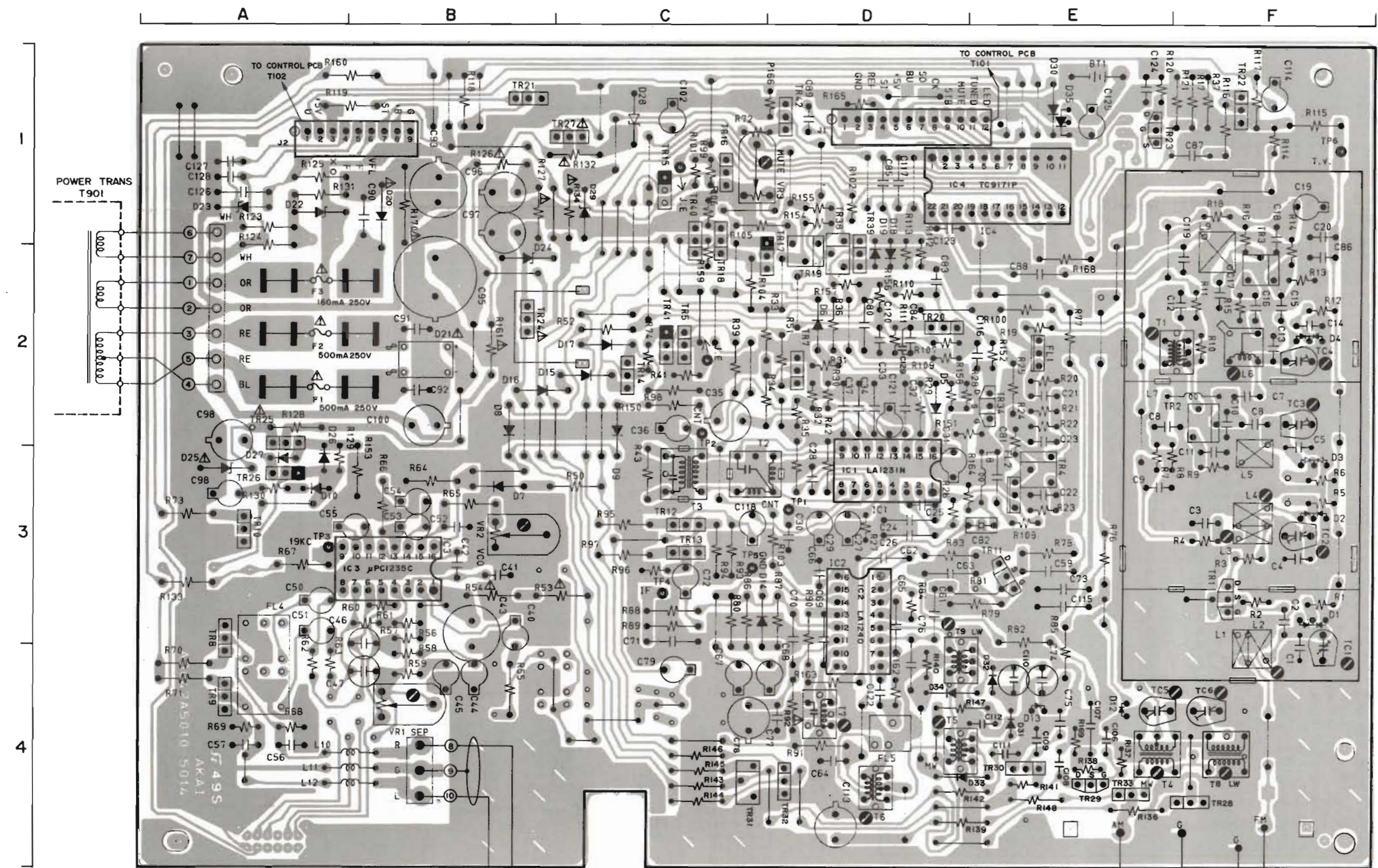
- | | | | | |
|---------|--|-----------------------------|--------|---------|
| | | | | |
| 2SC2999 | 2SA608K
2SA1392
2SC536K
2SC930
2SC3112
2SC3383
2SD1012 Y | 2SK192A
2SK241
2SK161 | 2SK246 | 2SD1406 |

WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

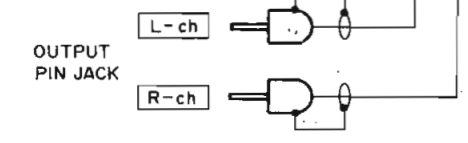


CONTROL PCB A3042A5040

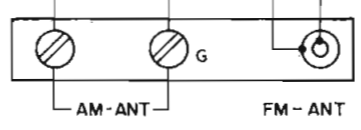
- AC220V 50Hz
AC240V 50Hz
AC240V 50Hz



TUNER PCB A3042A 5014 E B



B = PNP TRANSISTOR
 B = NPN TRANSISTOR



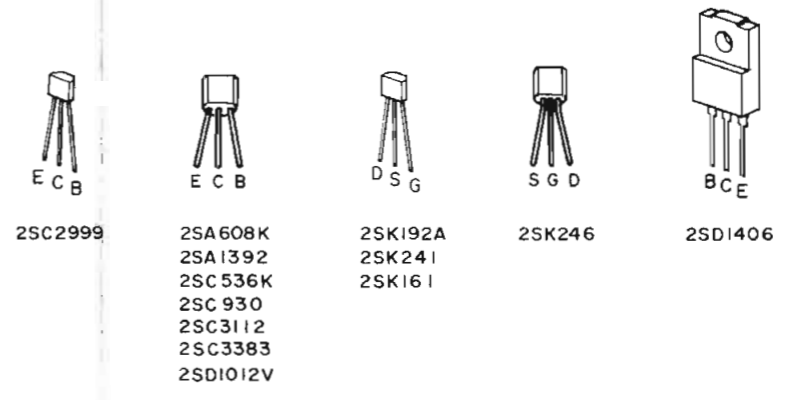
LOCATION OF COMPONENT

TRANSISTOR		ADJUSTMENT POINT
TR 1	F3	L2 to L5 ----- FM SENS (LOW)
TR 2,3	F2	TC 1 to TC3 ----- FM SENS (HIGH)
TR 4	E3	T1 ----- FM STEREO DISTORTION
TR 5	C2	T2, T3 ----- FM CENTER VOLTAGE
TR 7	D2	L6 ----- FM OSC (LOW)
TR 8	A4	TC 4 ----- FM OSC (HIGH)
TR 9	A3	VR 1 ----- STEREO SEPARATION
TR 10	A3	VR 2 ----- VCO (19KHz) ADJ
TR 11	E3	VR 3 ----- MUTE ADJ
TR 12,13	C3	T4 ----- MW SENS (LOW)
TR 14	C1	TC 5 ----- MW SENS (HIGH)
TR 15	C2	T8 ----- LW SENS (LOW)
TR 16	E1	TC 6 ----- LW SENS (HIGH)
TR 17	D1	T5 ----- MW OSC
TR 18	C1	T9 ----- LW OSC
TR 19,20	D2	T6, T7 ----- AM IF

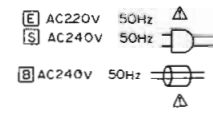
IC

IC 1	D3
IC 2	B3
IC 3	D3
IC 4	E1

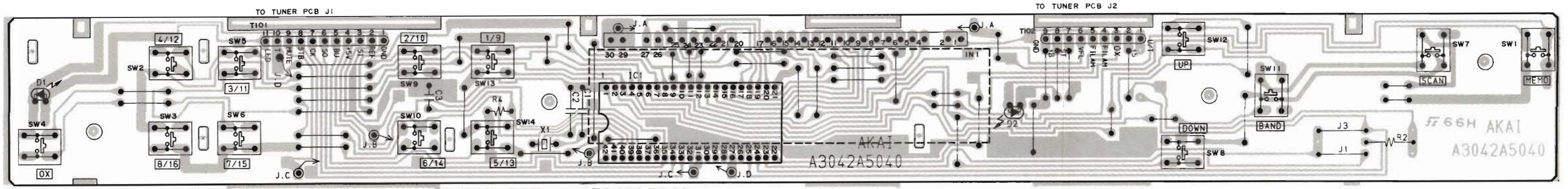
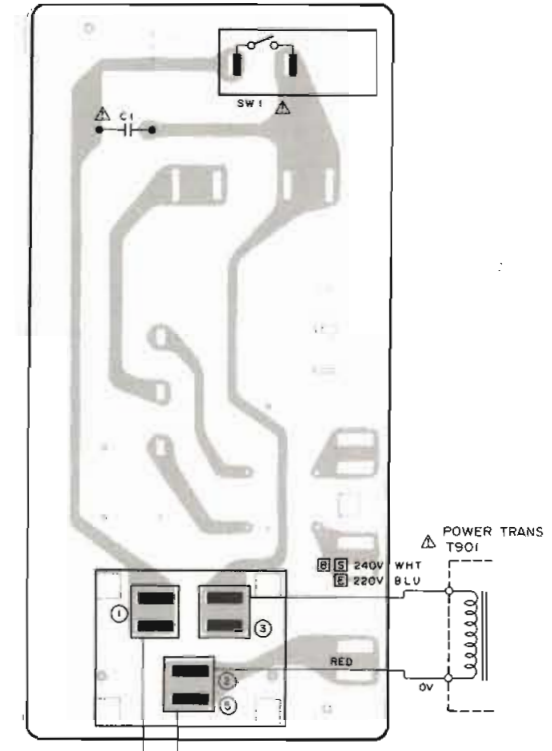
TR 1	2SK 241 (Y)
TR 2	2SC 2999 (C, D)
TR 3, 4, 20	2SC 930 (E, F)
TR 5, 7, 10, 12, 13, 16, 18, 19	2SC 536K-NP (E, F, G)
TR 8, 9	2SD 1012V (F, G)
TR 11, 29	2SK 192A (GR)
TR 14, 15	2SA 1392 (S, T)
TR 17, 26	2SA 608K-NP (E, F, G)
TR 20, 21	2SC 3383 (S, T)
TR 23	2SK 246 (G, R)
TR 24	2SD 1406 (O, Y, GR)
TR 28	2SC 2878 (A, B)
TR 34	2SK 161 (Y)
TR 38, 40	2SC 3112 (A, B)



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POWER SW (2) PCB A3042C5031



CONTROL PCB A3042A5040

66H AKA1
 A3042A5040