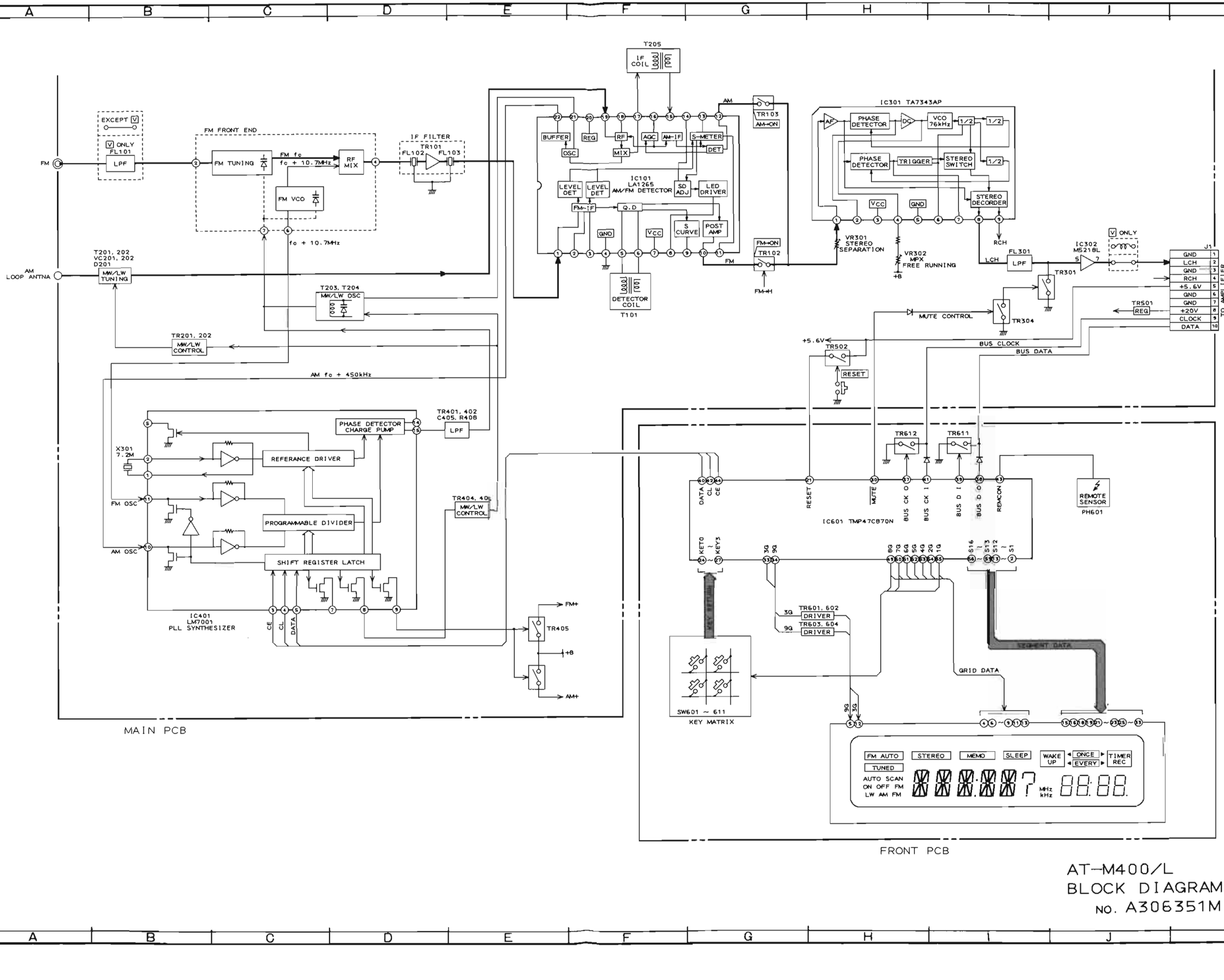
AKAI

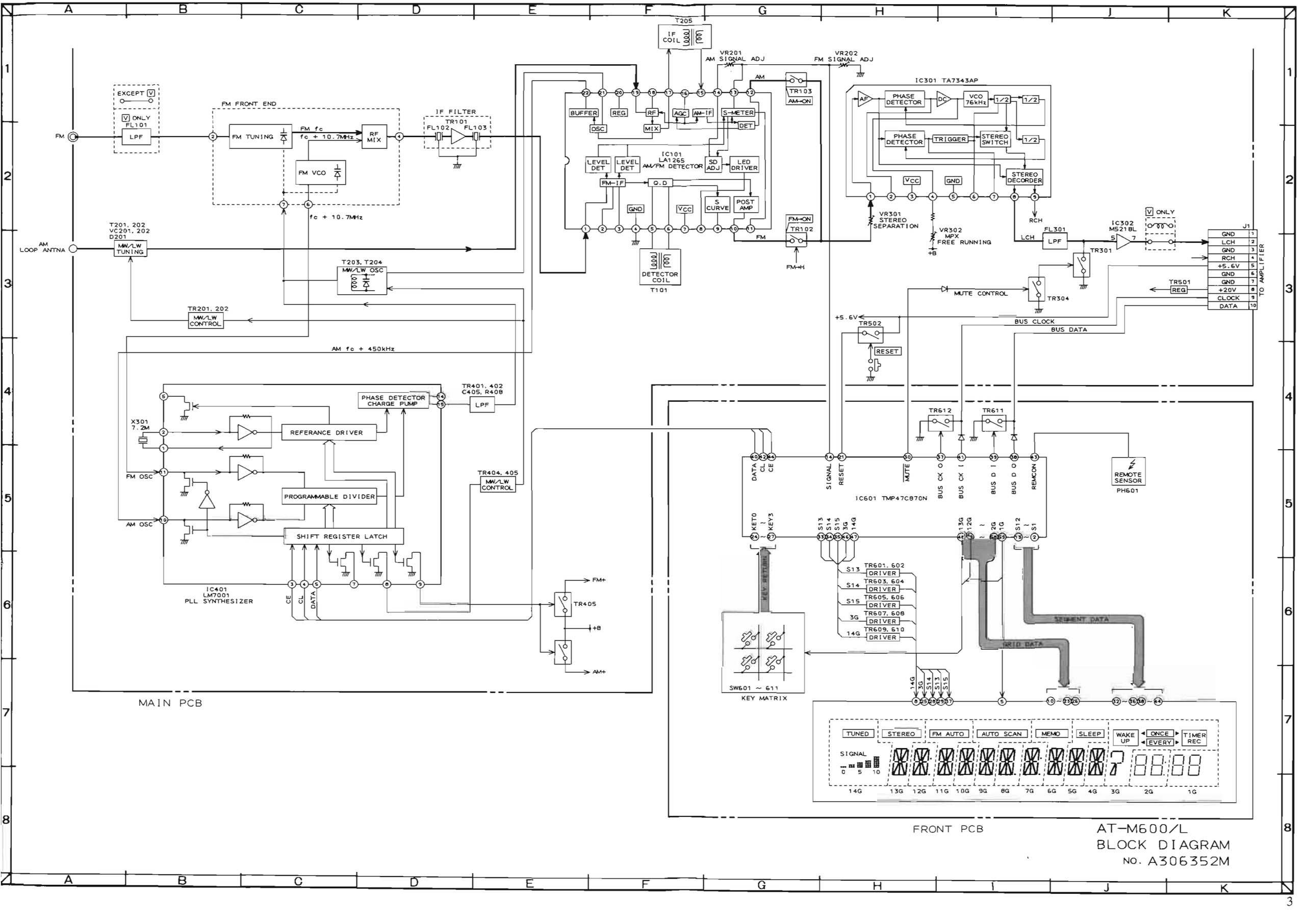
MODEL AT-M400/L
MODEL AT-M600/L

SCHEMATIC DIAGRAMS AND PC BOARDS

TABLE OF CONTENTS



AT-M400/L
BLOCK DIAGRAM
NO. A306351M



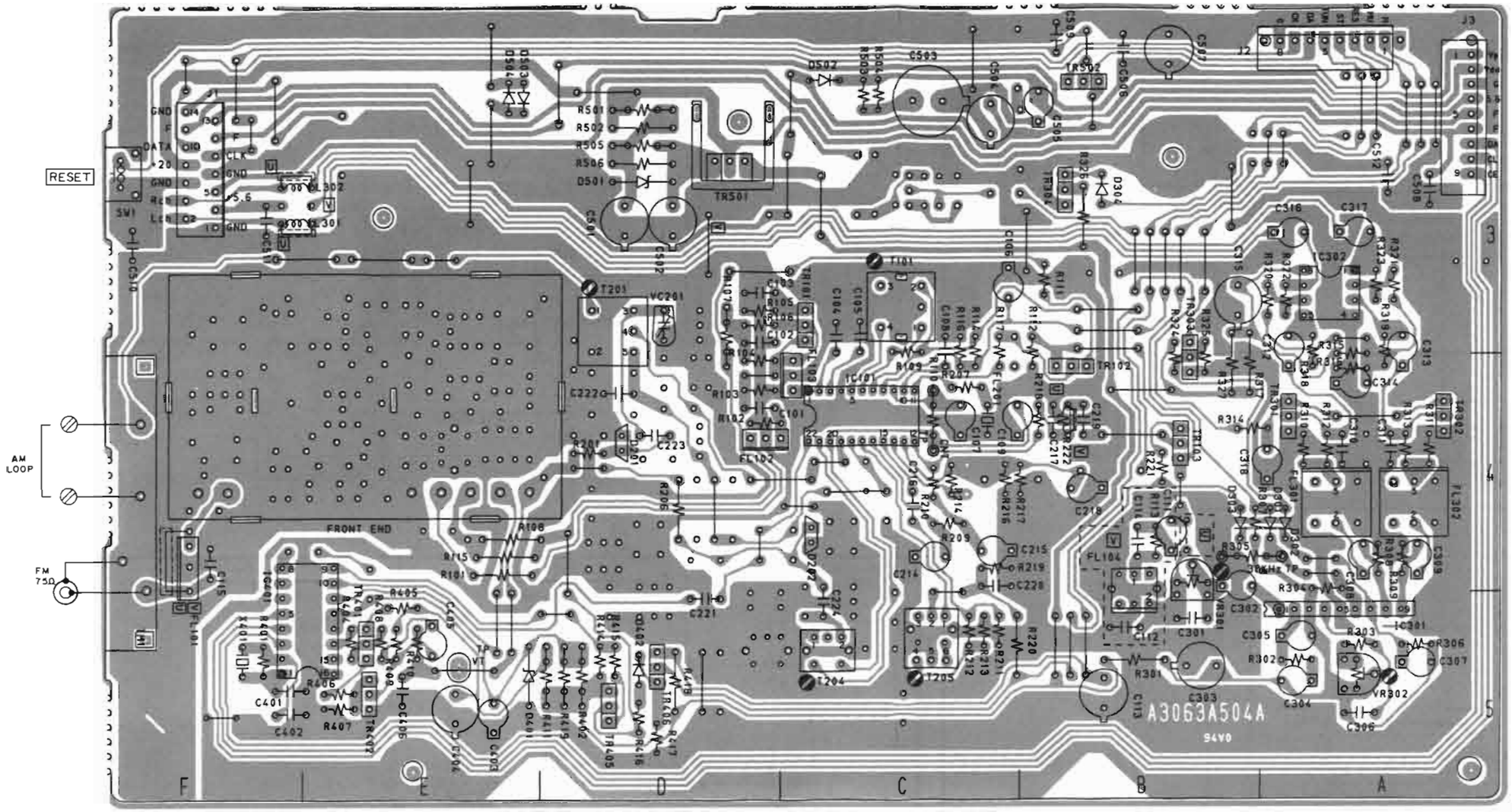
AT-M600/L
BLOCK DIAGRAM
NO. A306352M

PRINCIPAL PARTS LOCATION

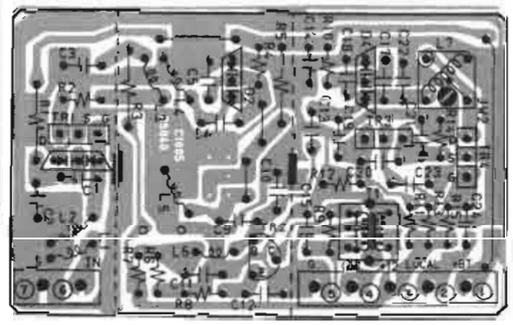
ICS
IC101.....C4
IC301.....A5
IC302.....A3
IC401.....E,F5

CONNECTORS
J1.....F3
J2.....A3
J3.....A3

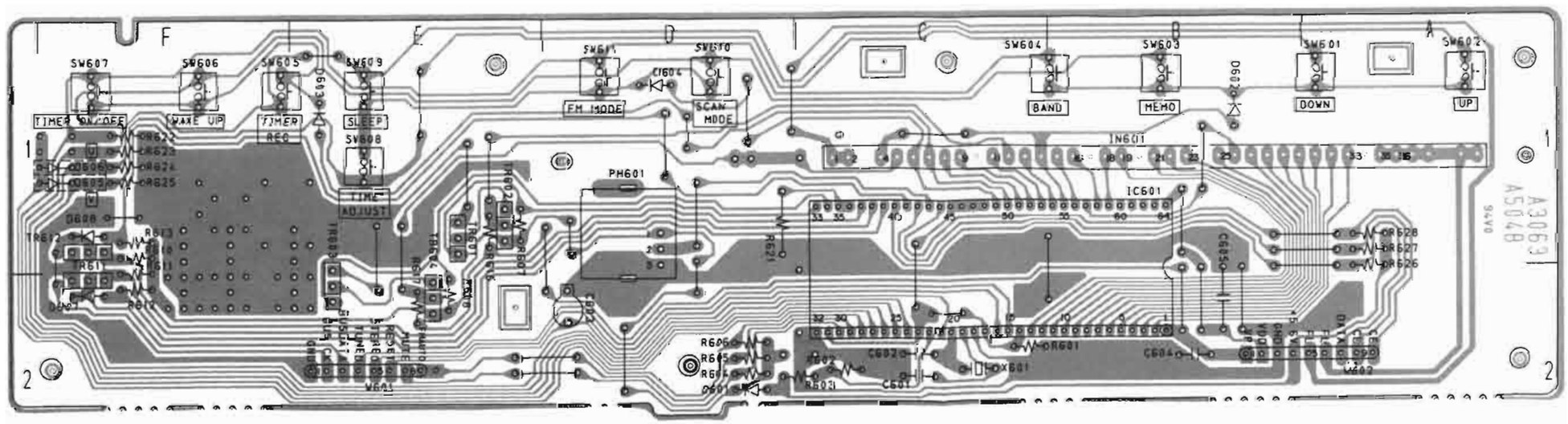
TRANSISTORS
TR101.....C3
TR102.....B4
TR103.....B4
TR301.....A4
TR302.....A4
TR303.....B3,4
TR304.....B3
TR401.....E5
TR402.....E5
TR405.....D5
TR406.....D5
TR501.....D3
TR502.....B3



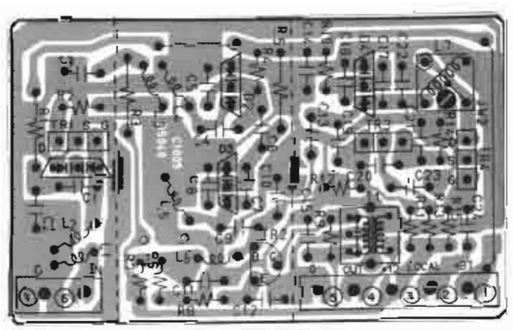
MAIN PCB A3063A504A [U] [V] Model



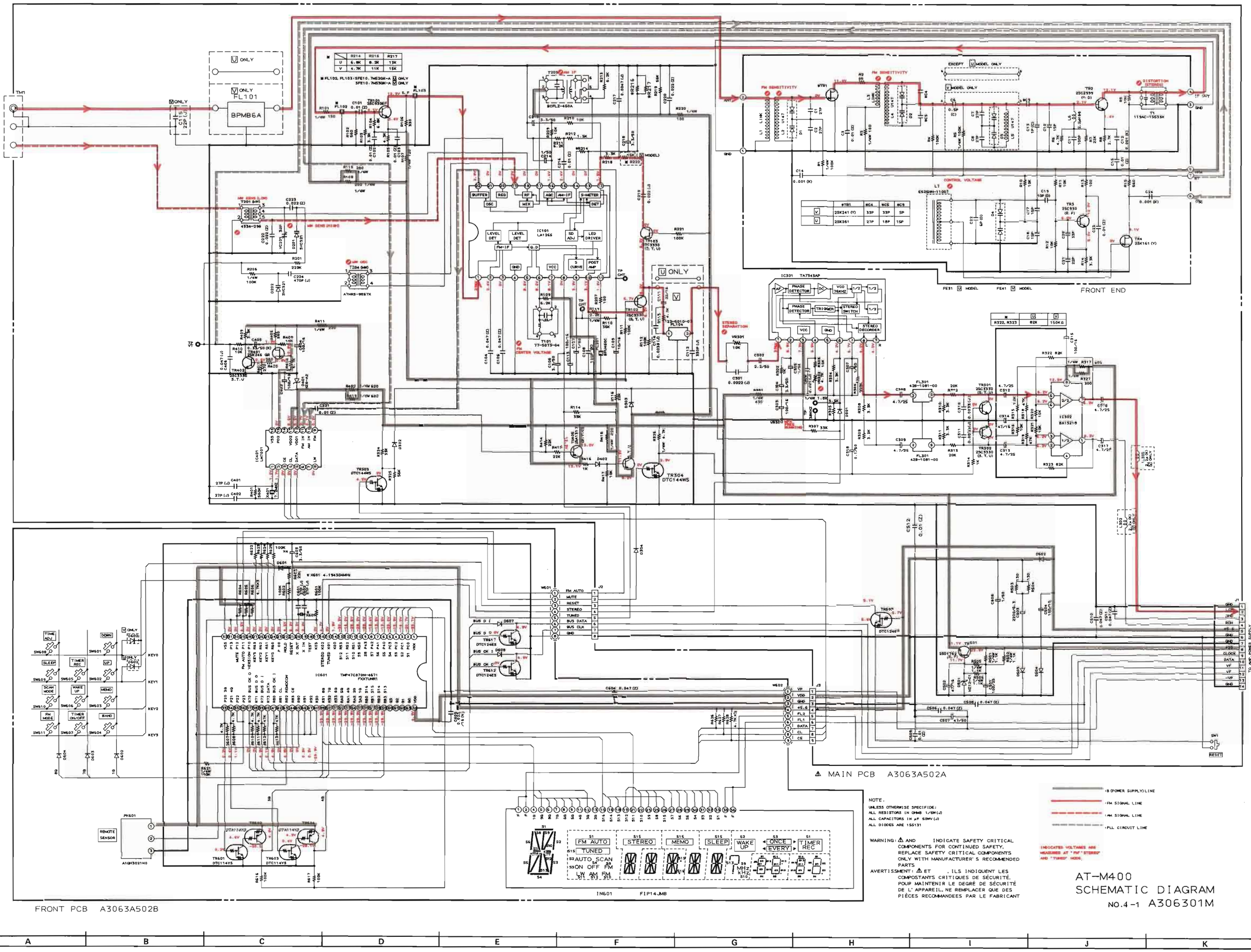
FRONT END PCB



FRONT PCB A3063A504B [U] [V] Model



FRONT END PCB
[V] MODEL ONLY


FRONT END
MAIN PCB A3063A502A
FRONT PCB A3063A502B
AT-M400
SCHEMATIC DIAGRAM
NO.4-1 A306301M
NOTE.
UNLESS OTHERWISE SPECIFIDE:
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)
ALL DIODES ARE 1SS131
WARNING: ⚠ AND INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSMENT: ⚠ ET , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT
B (POWER SUPPLY) LINE
FM SIGNAL LINE
AM SIGNAL LINE
PLL CIRCUIT LINE
INDICATED VOLTAGES ARE MEASURED AT "FM" STEREO AND "TUNED" MODE.

FRONT END

⚠ MAIN PCB A3063A502A

FRONT PCB A3063A502B

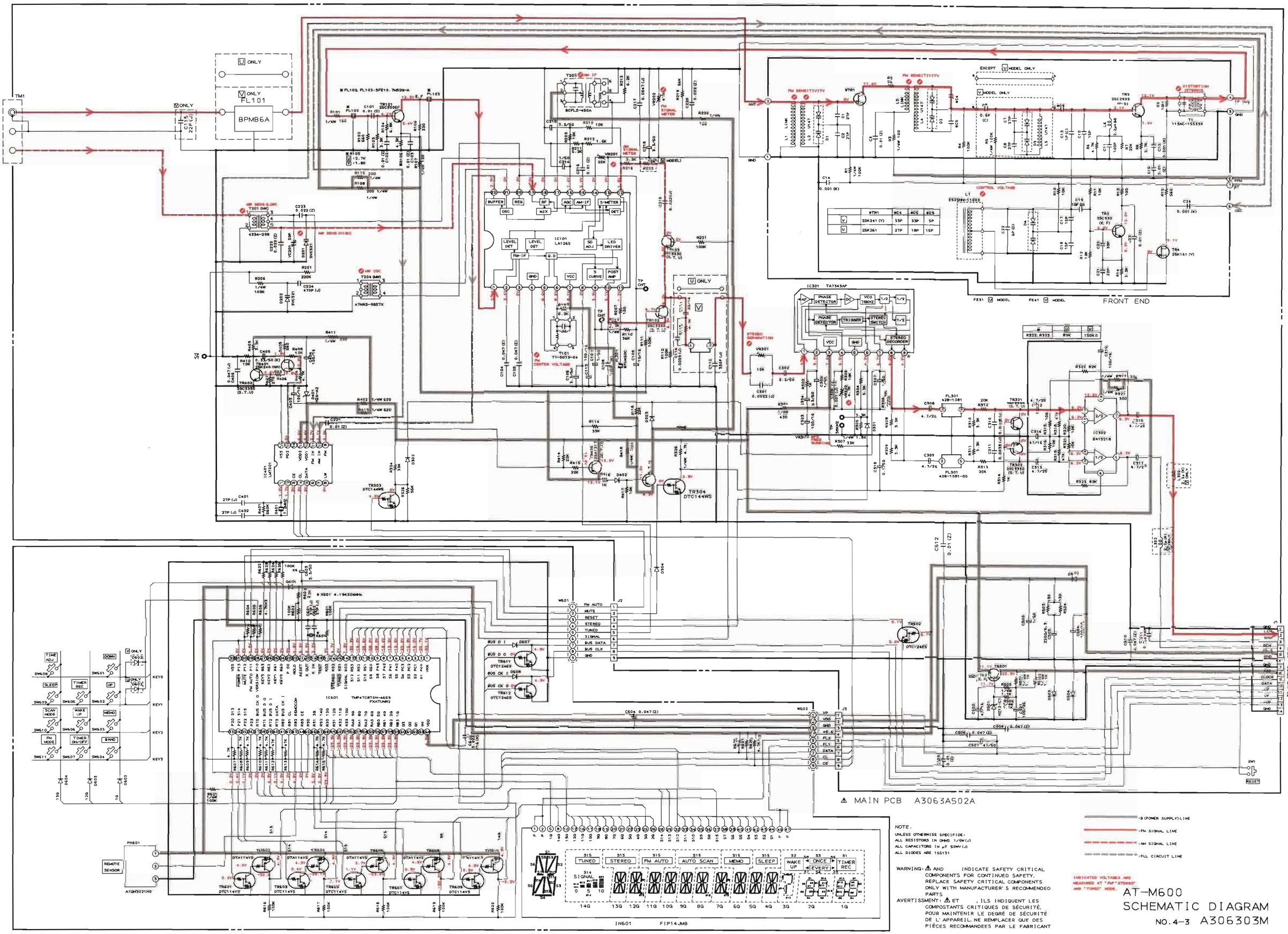
NOTE.
UNLESS OTHERWISE SPECIFIDE:
ALL RESISTORS IN OHMS 1/5W(J)
ALL CAPACITORS IN μF 50WV(J)
ALL DIODES ARE 1S1131

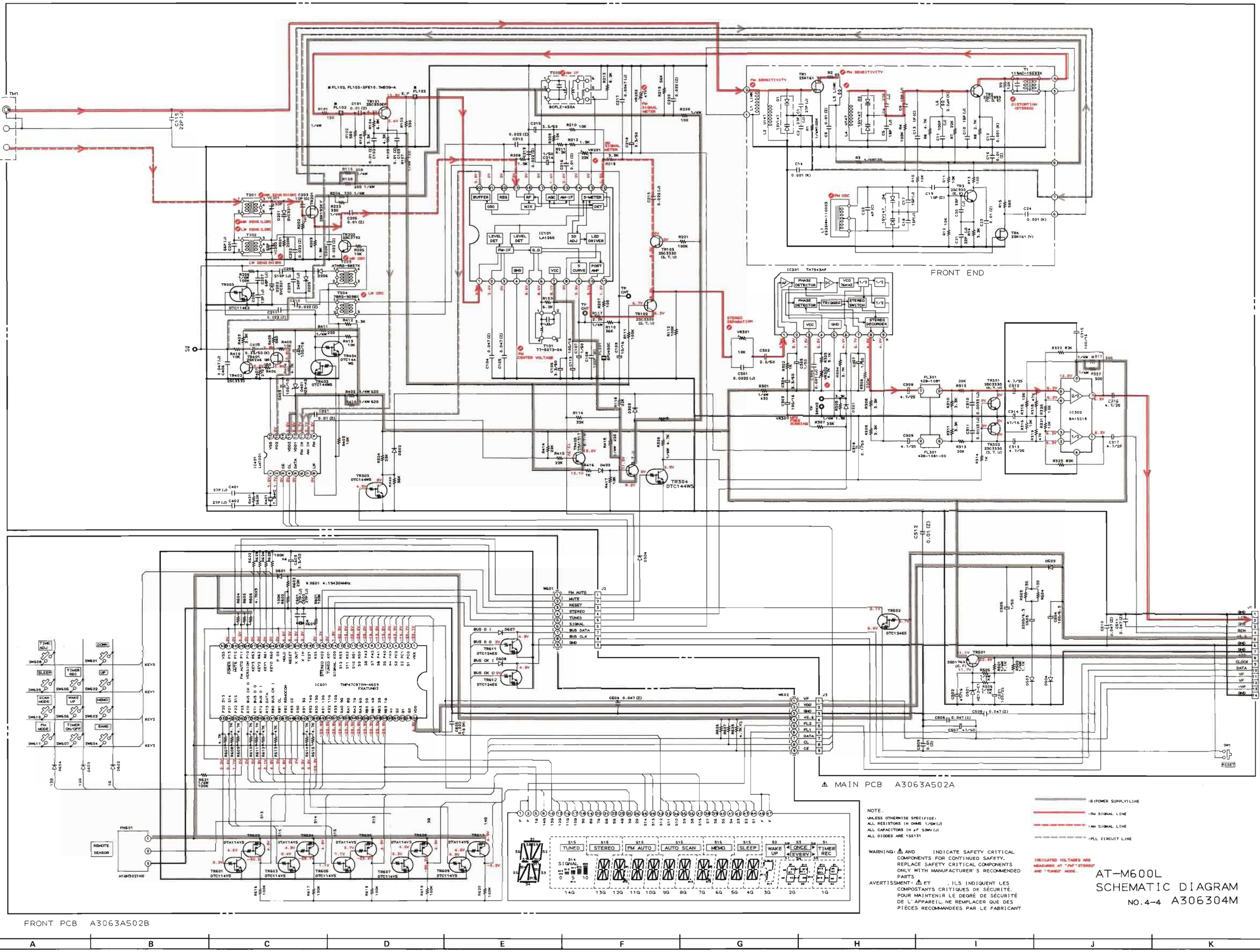
WARNING: ⚠ AND INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSMENT: ⚠ ET , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

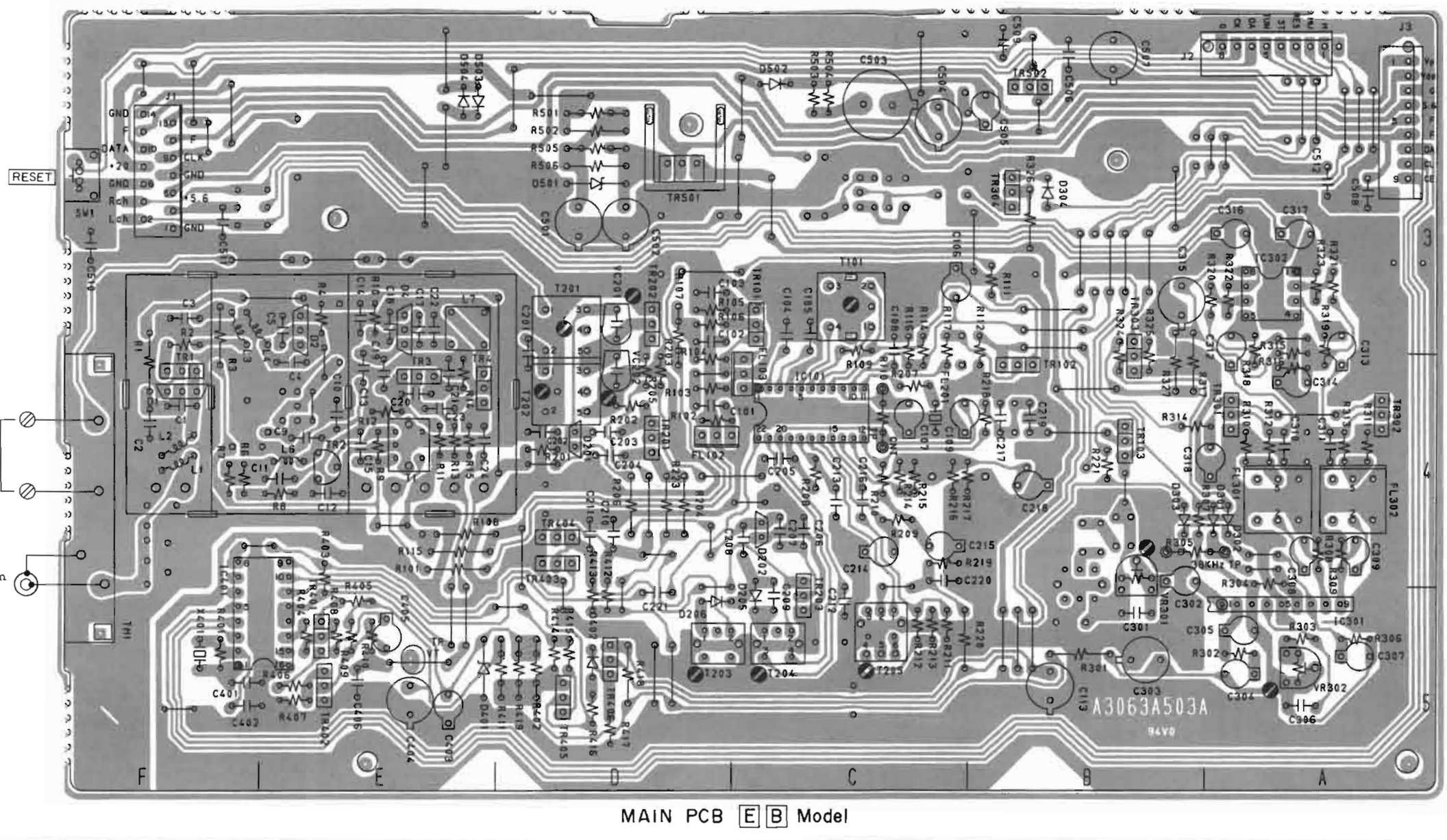
B (POWER SUPPLY) LINE
FM SIGNAL LINE
AM SIGNAL LINE
PLL CIRCUIT LINE

INDICATED VOLTAGES ARE MEASURED AT "FM" "STEREO" AND "TUNED" MODE.

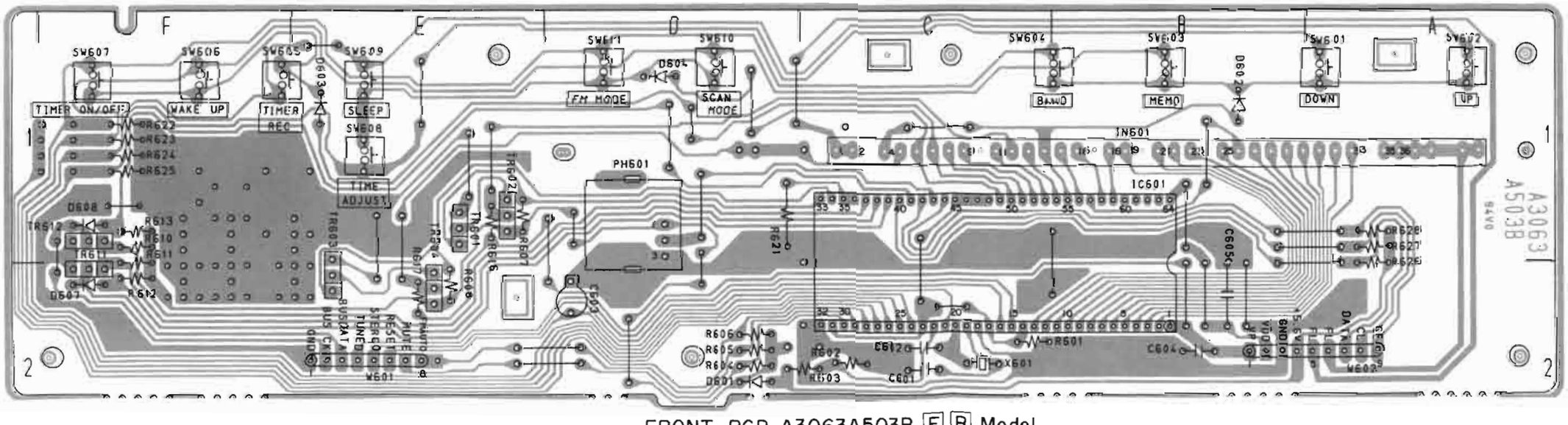
AT-M400L
SCHEMATIC DIAGRAM
NO.4-2 A306302M


FRONT END
MAIN PCB A3063A502A
FRONT PCB A3063A502B
AT-M600
SCHEMATIC DIAGRAM
NO.4-3 A306303M
NOTE.
UNLESS OTHERWISE SPECIFIDE:
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)
ALL DIODES ARE 1SS131
WARNING: ⚠ AND INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSMENT: ⚠ ET , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT
B (POWER SUPPLY) LINE
FM SIGNAL LINE
AM SIGNAL LINE
PLL CIRCUIT LINE
INDICATED VOLTAGES ARE MEASURED AT "FM" STEREO AND "TUNED" MODE


FRONT END
IC101 LA1265
IC301 TA7343AP
IC302 BA15218
IC601 TMP47C870N-4659 FXATUNR2
⚠ MAIN PCB A3063A502A
FRONT PCB A3063A502B
AT-M600L
SCHEMATIC DIAGRAM
NO.4-4 A306304M
NOTE.
UNLESS OTHERWISE SPECIFIDE:
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF 50WV (J)
ALL DIODES ARE 1SS131
WARNING: ⚠ AND INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSMENT: ⚠ ET . ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT
+B (POWER SUPPLY) LINE
FM SIGNAL LINE
AM SIGNAL LINE
PLL CIRCUIT LINE
INDICATED VOLTAGES ARE MEASURED AT "FM" "STEREO" AND "TUNED" MODE.



MAIN PCB [E] [B] Model



FRONT PCB A3063A503B [E] [B] Model

PRINCIPAL PARTS LOCATION

ICS
IC101.....C4
IC301.....A5
IC302.....A3
IC401.....E,F4,5

CONNECTORS
J1.....F3
J2.....A3
J3.....A3

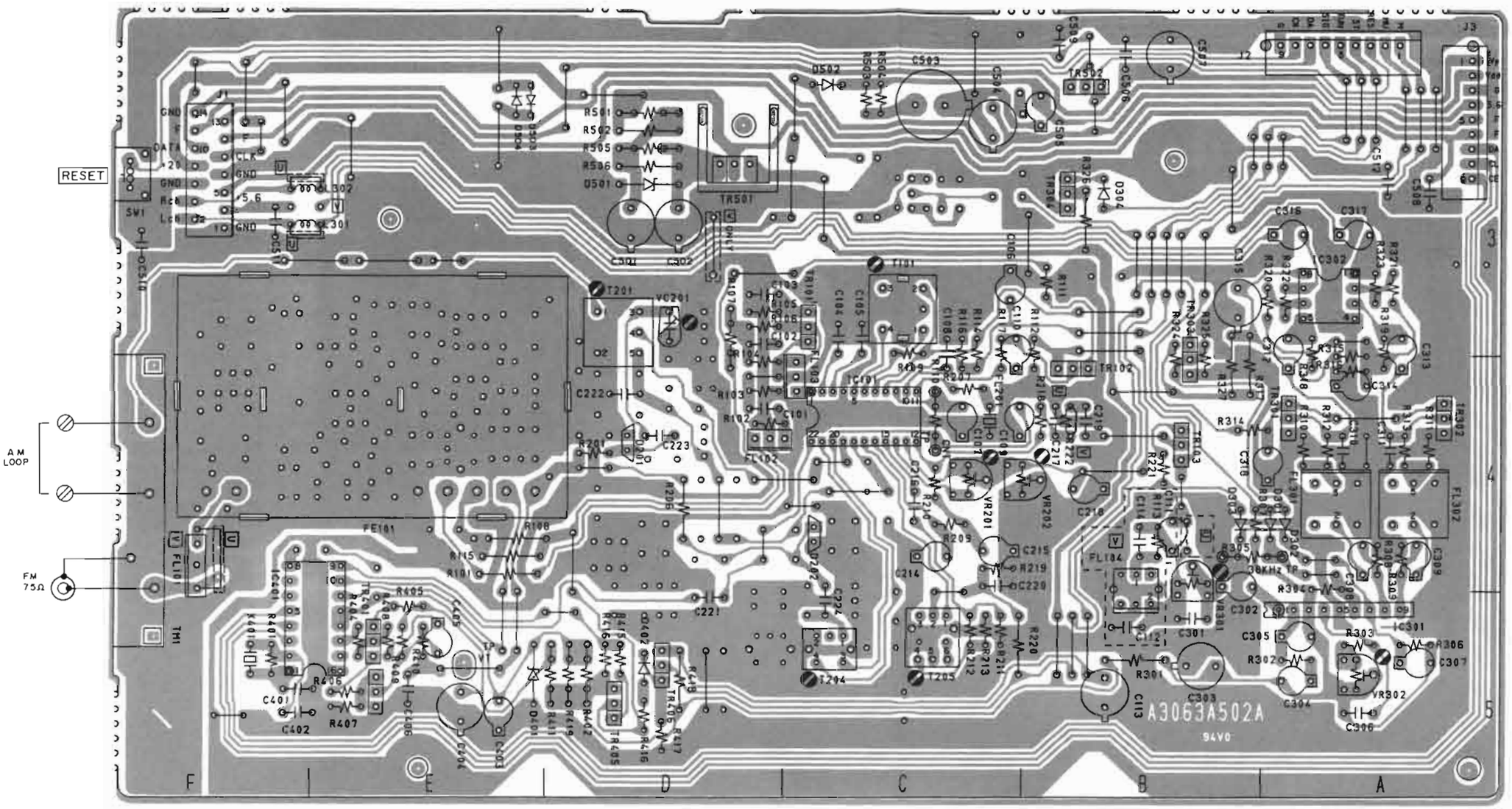
TRANSISTORS
TR1.....F4
TR2.....E4
TR3.....E4
TR4.....E4
TR101.....C3
TR102.....B4
TR103.....B4
TR201.....D4
TR202.....D3
TR203.....C5
TR301.....A4
TR302.....A4
TR303.....B3,4
TR304.....B3
TR401.....E5
TR402.....E5
TR403.....D4
TR404.....D4
TR405.....D5
TR406.....D5
TR501.....D3
TR502.....B3

PRINCIPAL PARTS LOCATION

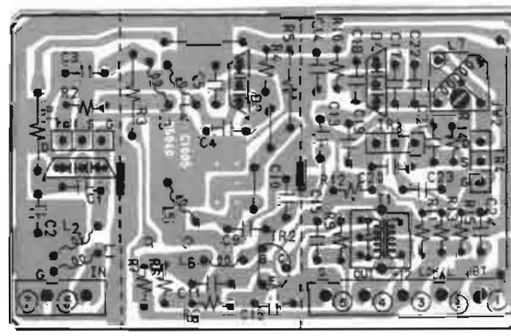
ICS
IC101.....C4
IC301.....A5
IC302.....A3
IC401.....E,F5

CONNECTORS
J1.....F3
J2.....A3
J3.....A3

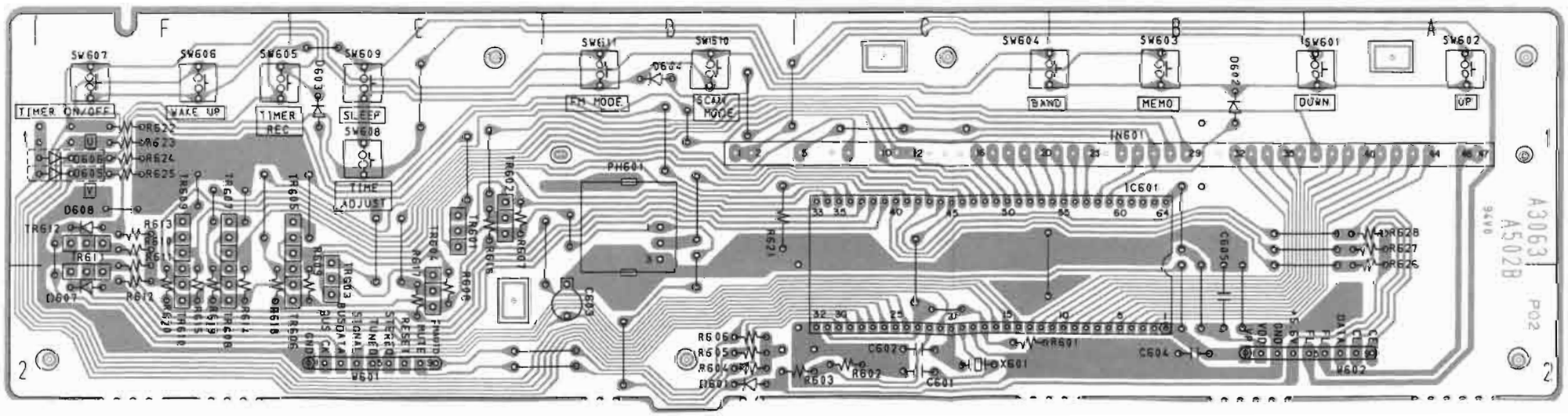
TRANSISTORS
TR101.....C3
TR102.....B4
TR103.....B4
TR301.....A4
TR302.....A4
TR303.....B3,4
TR304.....B3
TR401.....E5
TR402.....E5
TR405.....D5
TR406.....D5
TR501.....D3
TR502.....B3



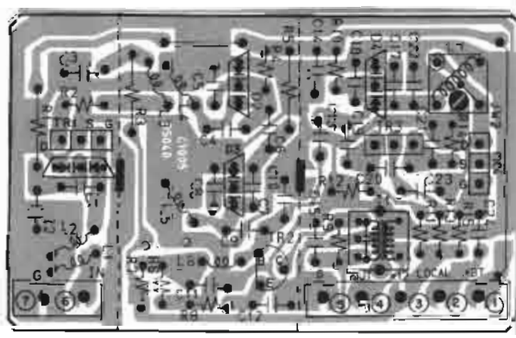
MAIN PCB A3063A502AJI [U] [V] Model



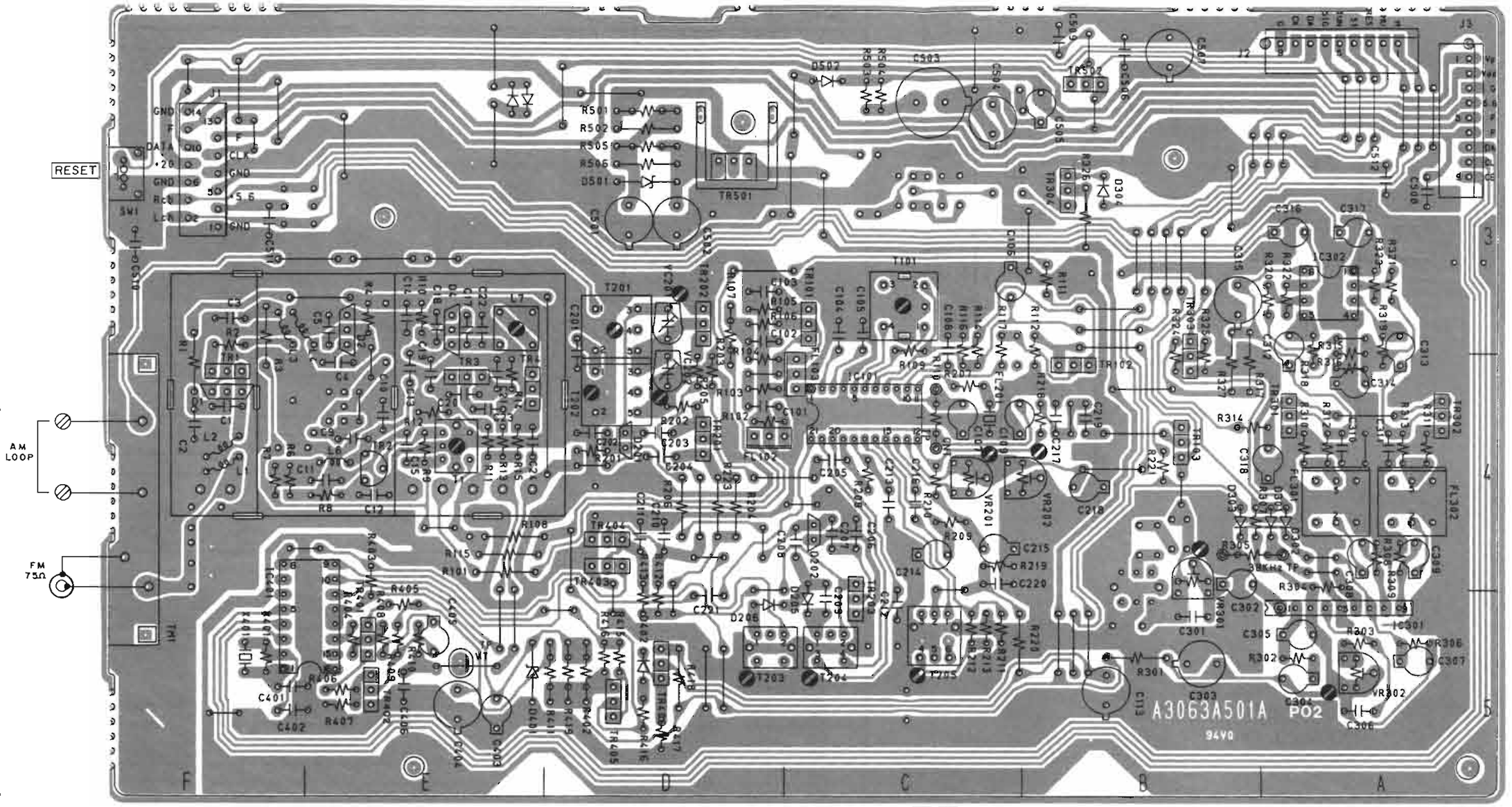
FRONT END



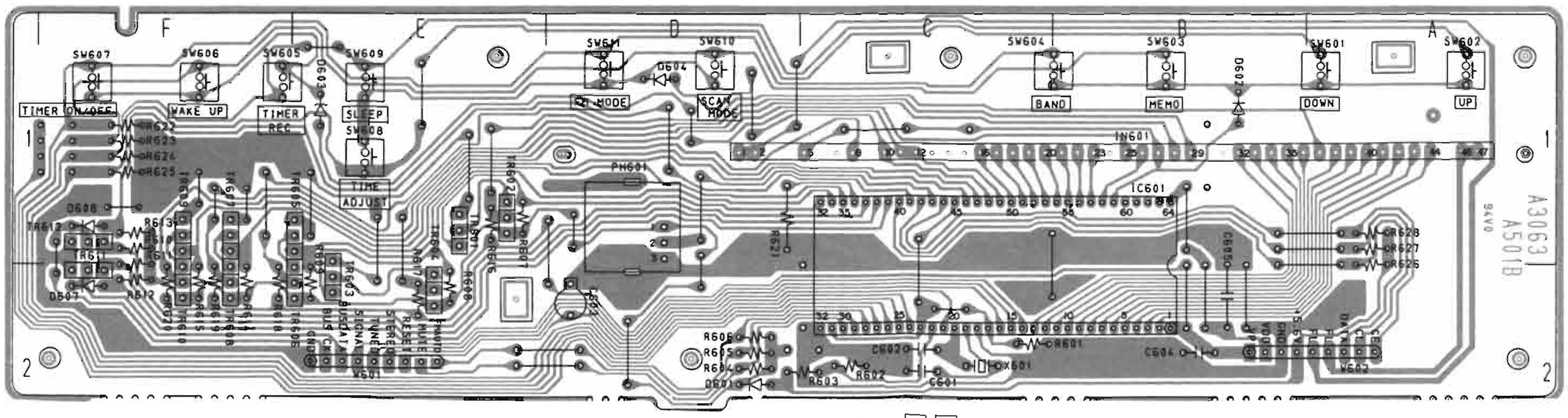
FRONT PCB A3063A502BJI



FRONT END PCB
[V] MODEL ONLY



MAIN PCB A3063A501AJI [B] [E] Model



FRONT PCB A3063A501BJI [B] [E] Model

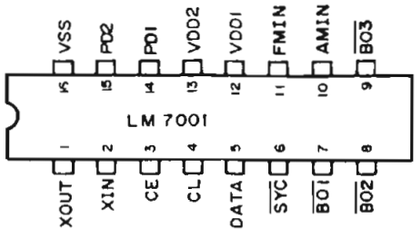
PRINCIPAL PARTS LOCATION

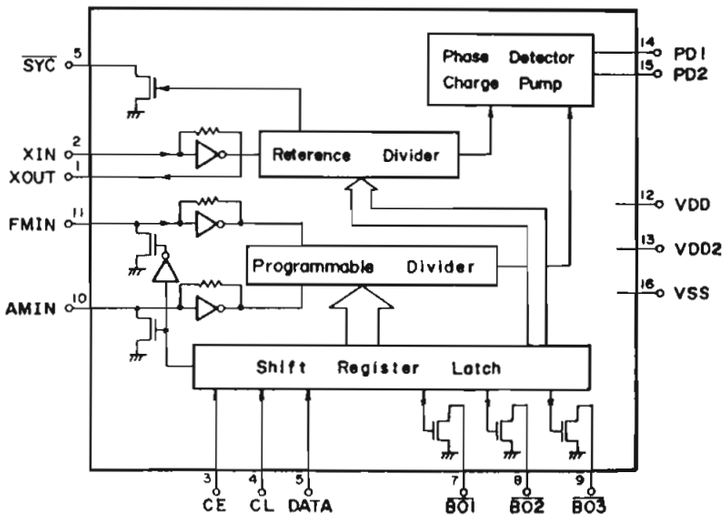
ICS
IC101.....C4
IC301.....A5

CONNECTORS
J1.....F3
J2.....A3
J3.....A3

TRANSISTORS
TR1.....F4
TR2.....E4
TR3.....E4
TR4.....E4
TR101.....C3
TR102.....B4
TR103.....B4
TR201.....D4
TR202.....D3
TR203.....C4,5
TR301.....A4
TR302.....A4
TR304.....B4
TR401.....E5
TR402.....E5
TR403.....D4
TR404.....D4
TR405.....D5
TR406.....D5
TR501.....D3
TR502.....B3

LM7001 (PLL SYNTHESIZER)





TMP47C870N-4659 (MI-COM)

PIN NO.	PORT NAME	I/O	DESCRIPTION
1	VKK	I	Power input (-30 V)
2	S 1	O	Segment output Indicator.
3	S 2	O	
4	S 3	O	
5	S 4	O	
6	S 5	O	
7	S 6	O	
8	S 7	O	
9	S 8	O	
10	S 9	O	
11	S 10	O	
12	S 11	O	
13	S 12	O	
14	SIGNAL	I	Signal mode input.
15	TUNED	I	Tuned mode input. L: TUNED
16	STEREO	I	Stereo mode input. L: STEREO
17	K 03	-	Not used.
18	TEST	-	
19	X IN	I	Oscillator for clock.
20	X OUT	O	
21	$\overline{\text{RESET}}$	I	Reset input.
22	$\overline{\text{HOLD}}$	I	Power down detect.
23	P 00	-	Not used.
24	KEY 0	I	Key scan input from key matrix.
25	KEY 1	I	
26	KEY 2	I	
27	KEY 3	I	
28	VERSION	O	Output for Version Judge.
29	FM AUTO	O	FM Auto control. L: FM MANUAL H: FM AUTO
30	$\overline{\text{MUTE}}$	O	Mute control. L: MUTE ON H: MUTE OFF
31	POWER	-	Not used.
32	VSS	-	GND
33	S 13	O	Segment output Indicator.
34	S 14	O	
35	S 15	O	
36	P23	-	Not used.
37	CK 0	O	Clock output.
38	DATA 0	O	Data output.
39	DATA I	I	Data input.
40	DATA	O	Transfer data to PLL IC.
41	CK I	I	Clock input.
42	CL	O	Clock output to PLL IC.
43	REMOCON	I	Remocon data input.
44	CE	O	Chip enable output for selecting PLL IC.
45	R 90	-	Not used.
46	3 G	O	Digit Data output for Indicator.
47	14 G	O	
48	13 G	O	
49	12 G	O	
50	11 G	O	
51	10 G	O	
52	9 G	O	
53	8 G	O	
54	7 G	O	
55	6 G	O	
56	5 G	O	
57	4 G	O	
58	2 G	O	
59	1 G	O	
60	Q 3	-	Not used.
61	Q 2	-	
62	Q 1	-	
63	Q D	-	
64	VDD	-	+B (+5 V)

PIN NO.	PORT NAME	I/O	DESCRIPTION
1	VKK	I	Power input (-30 V)
2	S 1	O	Segment output Indicator.
3	S 2	O	
4	S 3	O	
5	S 4	O	
6	S 5	O	
7	S 6	O	
8	S 7	O	
9	S 8	O	
10	S 9	O	
11	S 10	O	
12	S 11	O	
13	S 12	O	
14	K 00	-	Not used.
15	TUNED	I	Tuned mode input.
16	STEREO	I	Stereo mode input.
17	K 03	-	Not used.
18	TEST	-	
19	X IN	I	Oscillator for clock.
20	X OUT	O	
21	$\overline{\text{RESET}}$	I	Reset input.
22	$\overline{\text{HOLD}}$	I	Power down detect.
23	P 00	-	Not used.
24	KEY 0	I	Key scan input from key matrix.
25	KEY 1	I	
26	KEY 2	I	
27	KEY 3	I	
28	VERSION	O	Output for Version Judge.
29	FM AUTO	O	L: FM MANUAL H: FM AUTO
30	$\overline{\text{MUTE}}$	O	Mute control. L: MUTE ON H: MUTE OFF
31	P13	-	Not used.
32	VSS	-	GND
33	3 G	O	Digit Data output Indicator.
34	9 G	O	
35	P22	-	Not used.
36	P23	-	
37	CK 0	O	Clock output.
38	DATA OUT	O	Data output.
39	DATA IN	I	Data input.
40	DATA	O	Transfer data to PLL IC.
41	CLK I	I	Clock input.
42	CL	O	Clock output to PLL IC.
43	REMOCON	I	Remocon data input.
44	CE	O	Chip enable output for selecting PLL IC.
45	R 90	-	Not used.
46	R 91	-	
47	R 92	-	
48	R 30	-	
49	8 G	O	Digit Data output for Indicator and Key scanning.
50	7 G	O	
51	6 G	O	
52	5 G	O	
53	4 G	O	
54	2 G	O	
55	1 G	O	
56	S 16	O	Segment output for Indicator.
57	S 15	O	
58	S 14	O	
59	S 13	O	
60	G 3	-	Not used.
61	G 2	-	
62	G 1	-	
63	G D	-	
64	VDD	-	+B (+5 V)