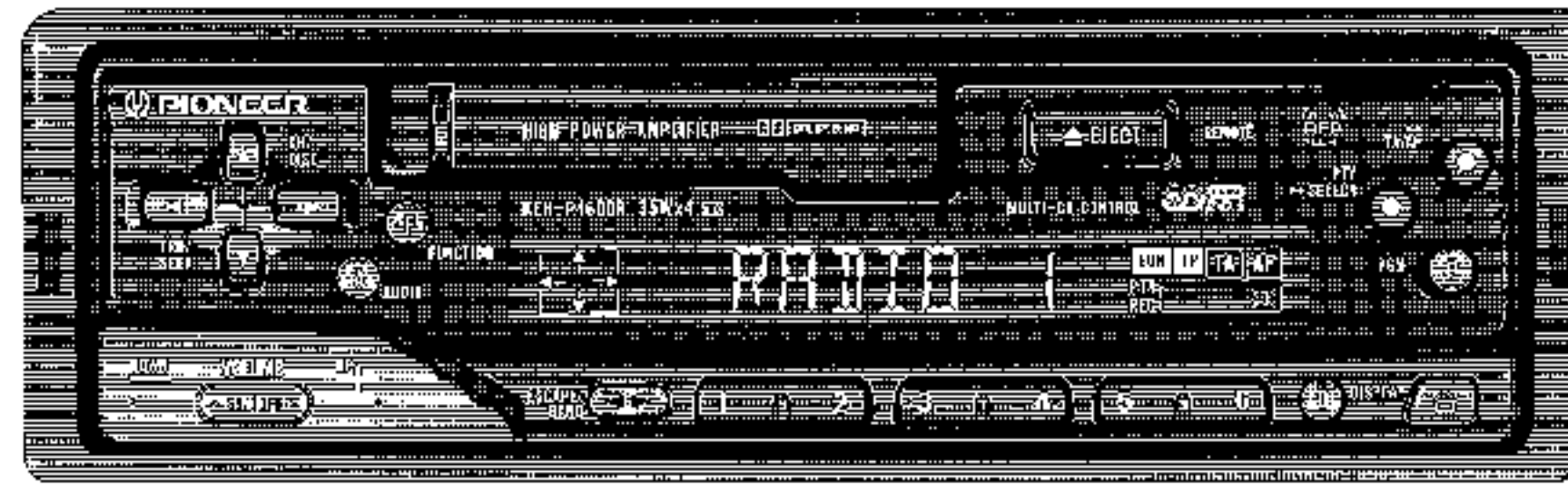


Service Manual

PIONEER
The Art of Entertainment

KEH-P4500R/X1M/EW



ORDER NO.
CRT2084

MULTI-CD CONTROL HIGH POWER CASSETTE PLAYER WITH RDS TUNER

KEH-P4500R X1M/EW

KEH-P4530R X1M/EW

MULTI-CD CONTROL HIGH POWER CASSETTE PLAYER WITH FM/MW/LW TUNER

KEH-P4510 X1M/EE

NOTE:

- See the separate manual CX-631(CRT1640) for the cassette mechanism description.
- The cassette mechanism assy employed in this model is one of X-2L series
- This service manual does not describe the CD test mode.

For the operations in the CD test mode, refer to the CD player's Service Manual.

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		8. OPERATIONS AND SPECIFICATIONS	68

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2.3 CASSETTE MECHANISM MODULE

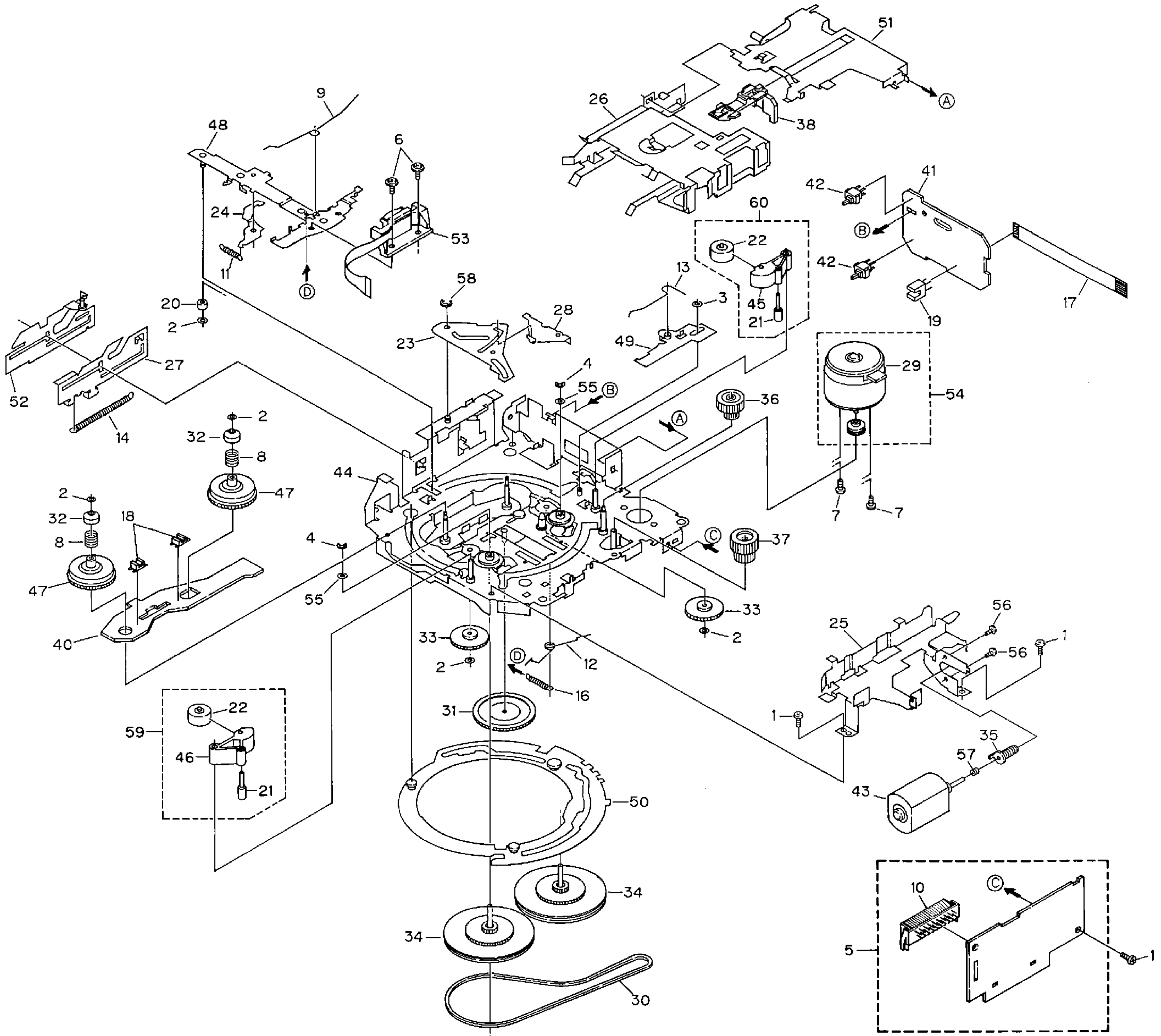


Fig. 5

● **CASSETTE MECHANISM MODULE SECTION PARTS LIST**

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC	31	Gear	ENV1347
2	Washer	CBF1037	32	Collar	ENV1508
3	Washer	CBF1038	33	Gear	ENV1350
4	Washer	CBG1003	34	Flywheel	ENV1410
5	Deck Unit	EWM1012	35	Worm Gear	ENV1439
6	Screw	EBA1028	36	Worm Wheel	ENV1440
7	Screw	EBA1037	37	Gear	ENR1028
8	Spring	EBH1531	38	Lever	ENV1442
9	Spring	EBH1575	39	.....
10	Plug(CN251)	CKS3540	40	Gathering PCB	ENX1037
11	Spring	EBH1515	41	Gathering PCB	ENX1042
12	Spring	EBH1587	42	Switch(S1,S2)	ESG1004
13	Spring	EBH1517	43	Motor Unit(M2)	EXA1485
14	Spring	EBH1518	44	Chassis Unit	EXA1511
15	.....		45	Pinch Holder	ENV1485
16	Spring	EBH1537	46	Pinch Holder	ENV1486
17	Cord	EDD1020	47	Reel Unit	EXA1537
18	Photo-interrupter(EGN2,3)	EGN1006	48	Head Base Unit	EXA1457
19	Photo-interrupter(EGN1)	EGN1005	49	Lever Unit	EXA1438
20	Roller	ENR1031	50	Gear Unit	EXA1437
21	Shaft	ELA1373	51	Frame Unit	EXA1458
22	Pinch Roller	ENV1518	52	Lever Unit	EXA1439
23	Arm	ENC1489	53	Head Assy(HD1)	EXA1506
24	Arm	ENC1397	54	Motor Unit(M1)	EXA1464
25	Guide	ENC1481	55	Washer	HBF-179
26	Holder	ENC1417	56	Screw	BMZ20P022FMC
27	Lever	ENC1448	57	Spring	EBH1545
28	Arm	ENC1488	58	Washer	YE20FUC
29	Motor	EXM1028	59	Pinch Holder Unit	EXA1529
30	Belt	ENT1027	60	Pinch Holder Unit	EXA1528

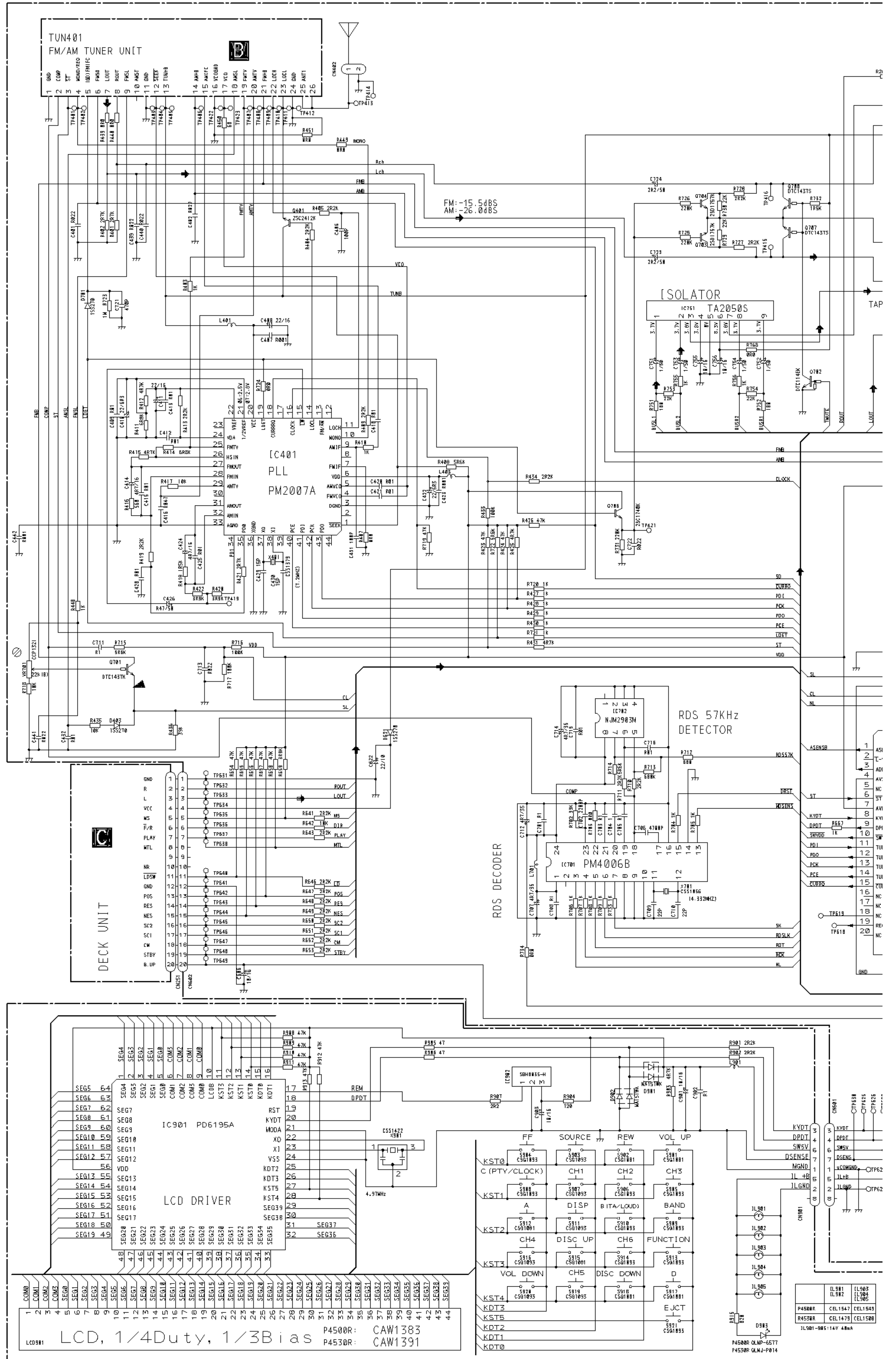
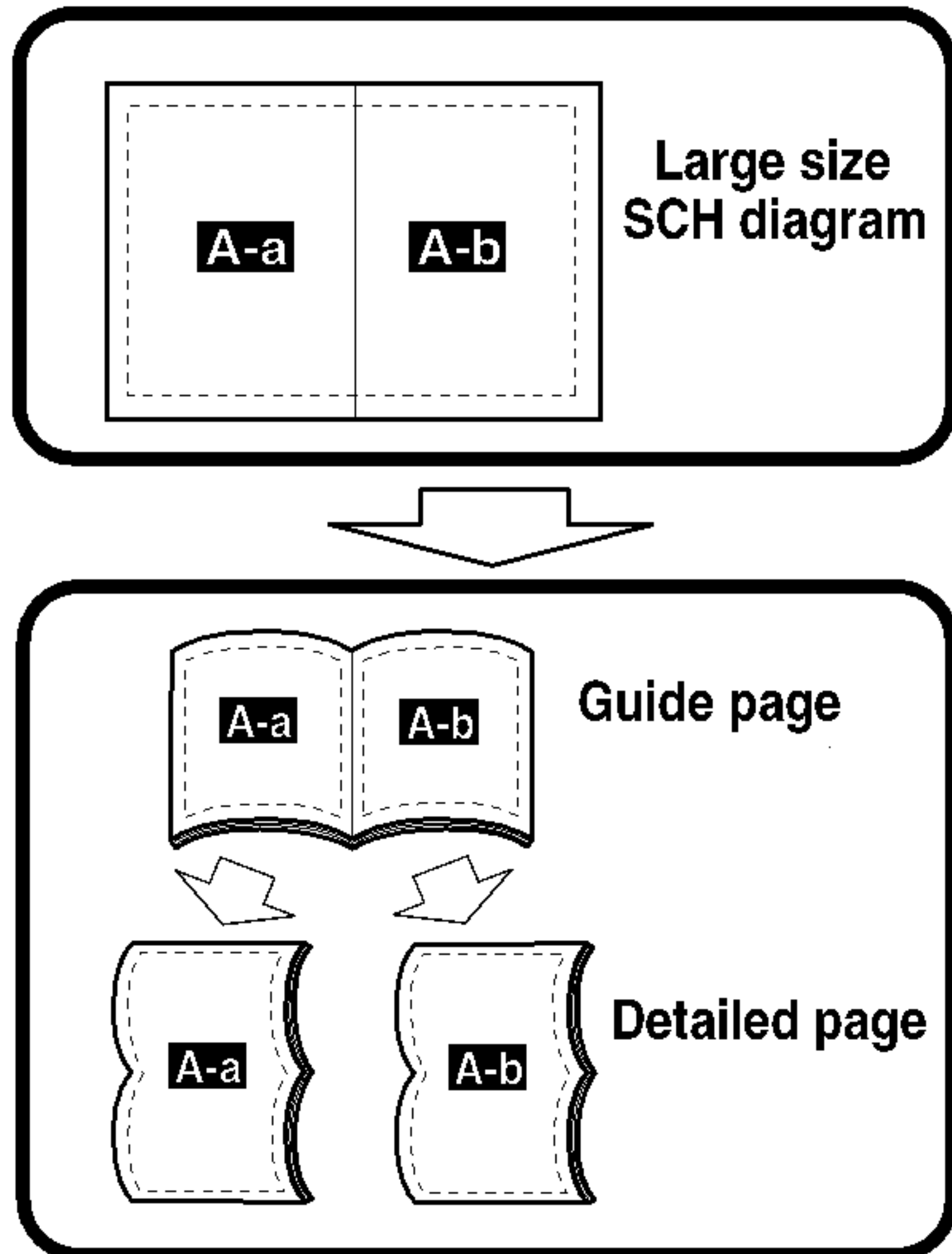
3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

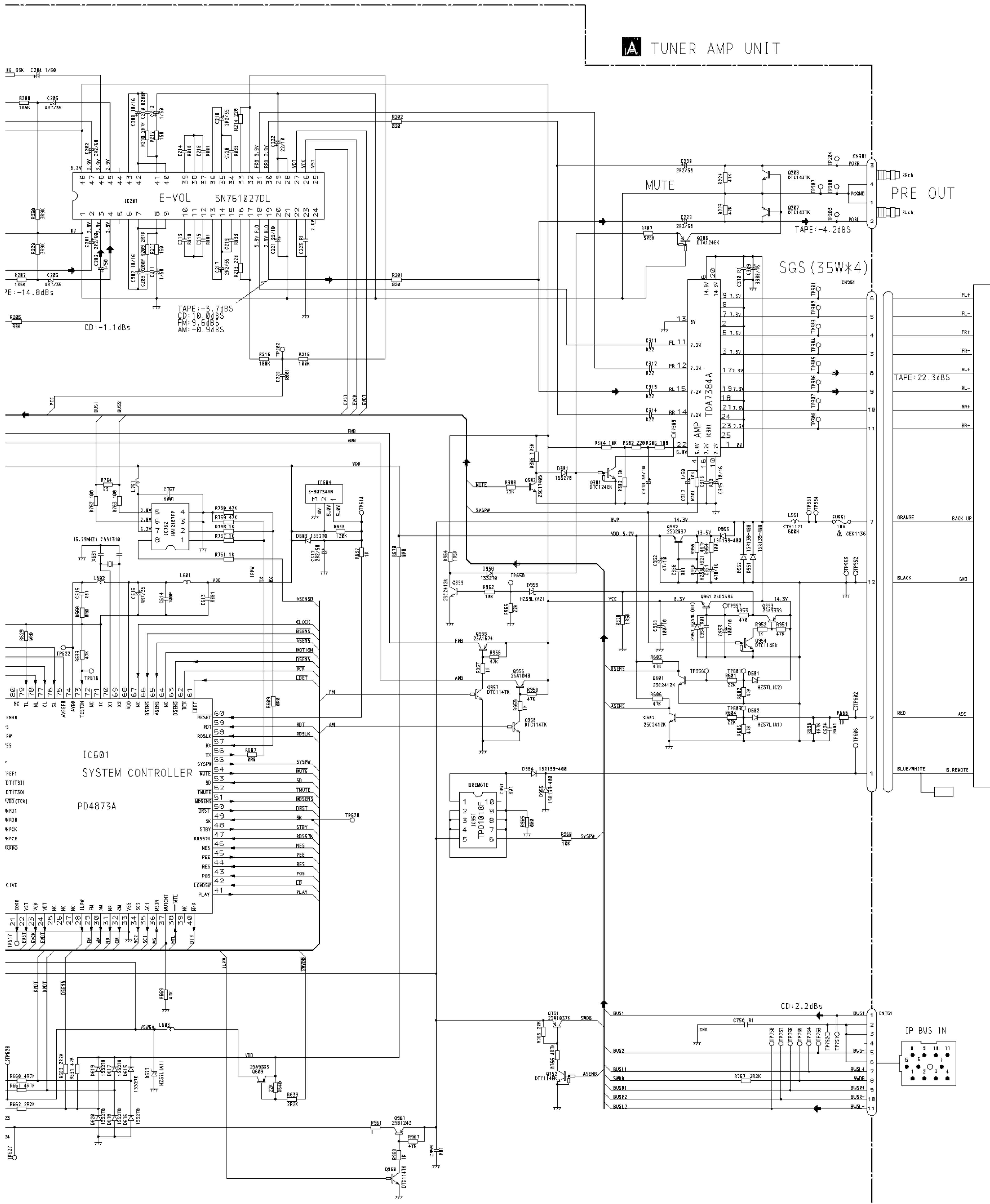
(KEH-P4500R/X1M/EW, P4530R/X1M/EW)

Note: When ordering service parts, be sure to refer to “EXPLODED VIEWS AND PARTS LIST” or “ELECTRICAL PARTS LIST”.

A-a



A-b



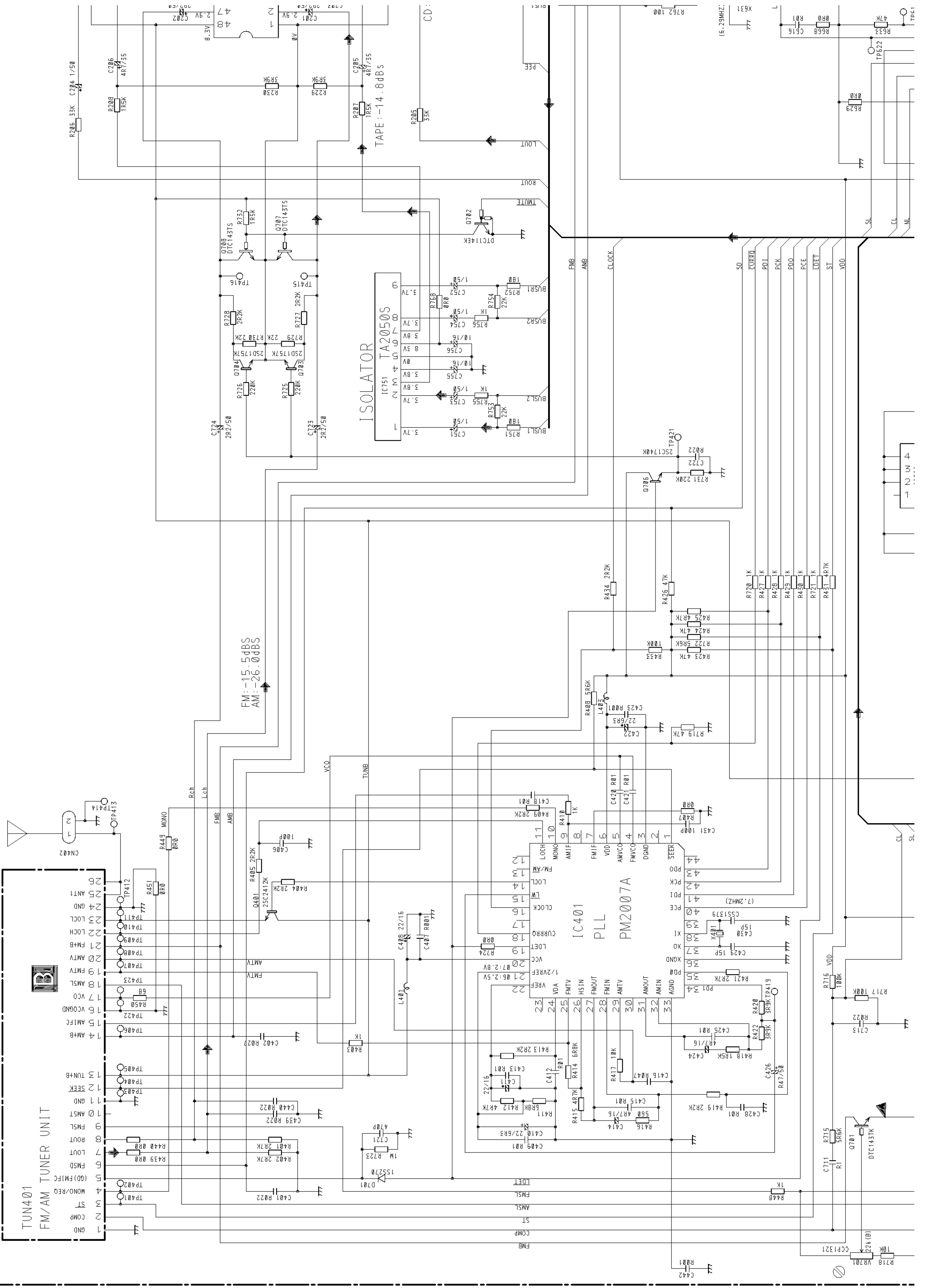
NOTE:
 □ Symbol indicates a resistor.
 No differentiation is made between chip resistors and discrete resistors.
 —|— Symbol indicates a capacitor.
 No differentiation is made between chip capacitors and discrete capacitors.
 The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 Decimal points for resistor and capacitor fixed values are expressed as:
 2.2-2R2
 0.022-R022

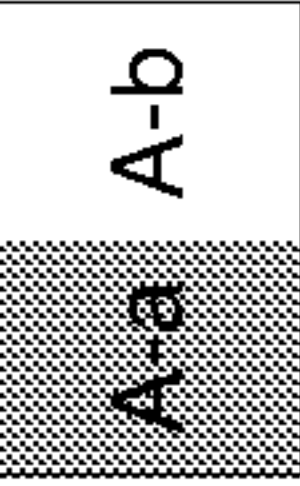
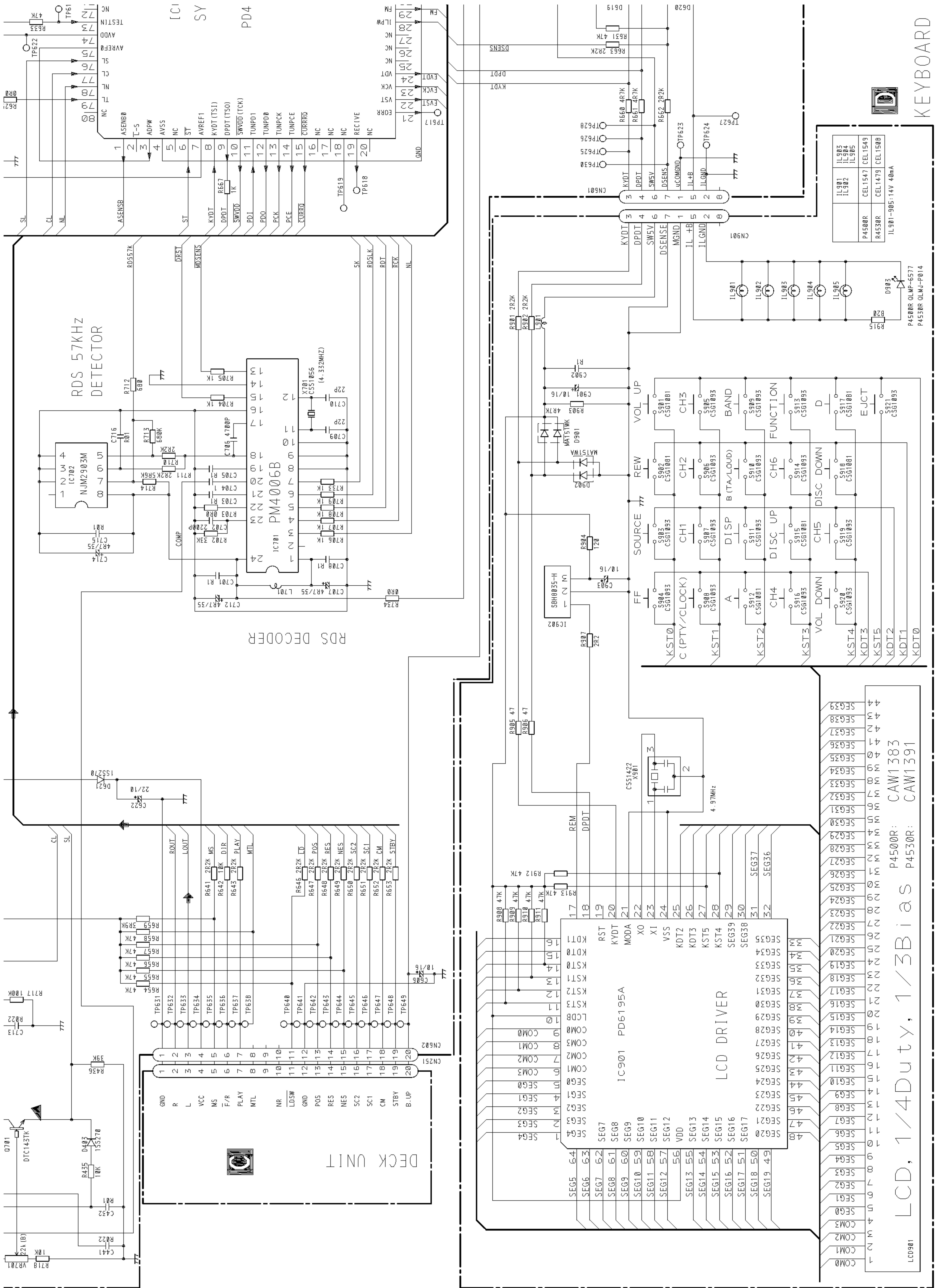
KEYBOARD UNIT

Fig. 6

A

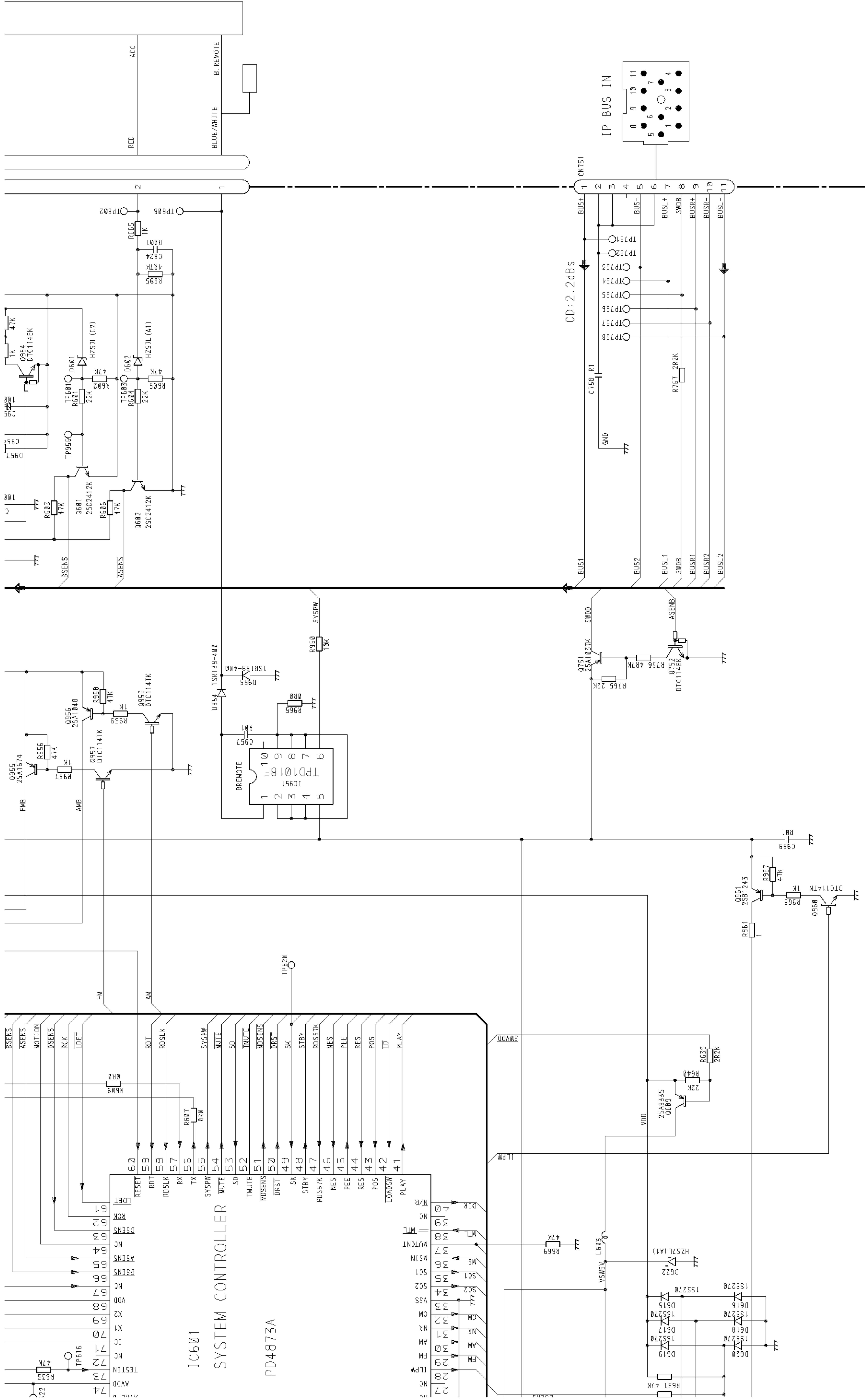
A-B A-b





A-a

Fig. 7



NOTE :

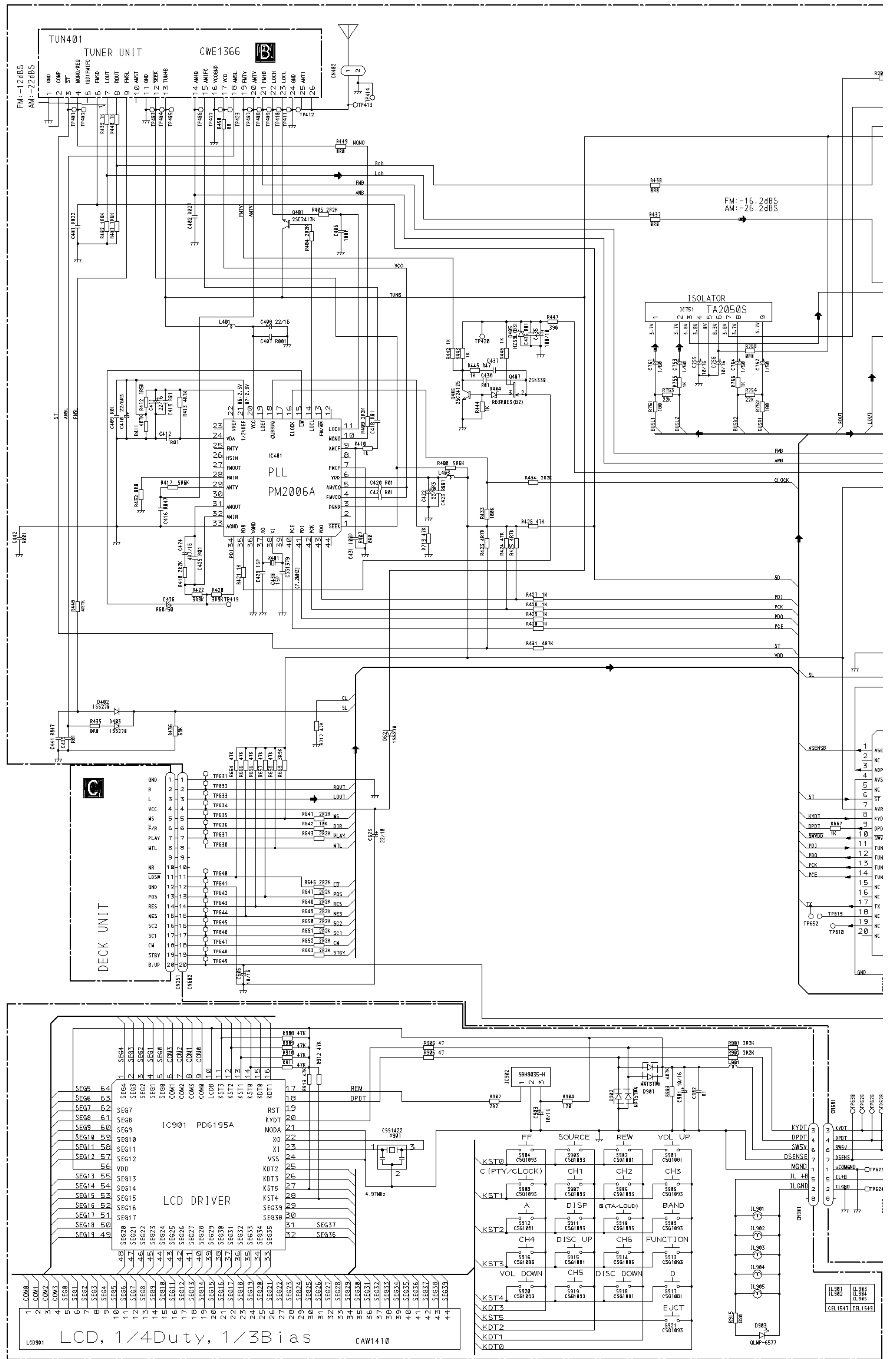
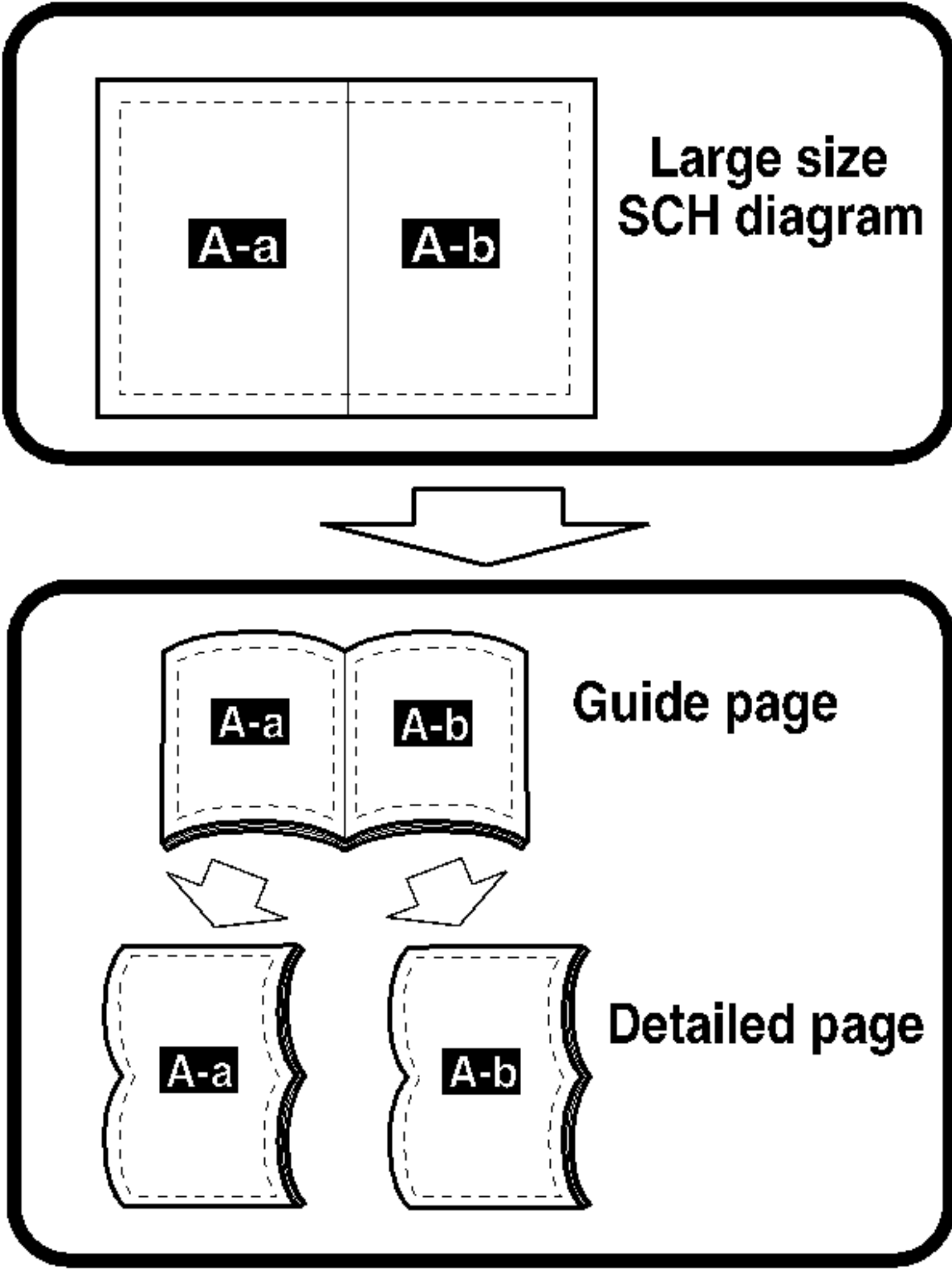
- Symbol indicates a resistor.
- Symbol indicates a capacitor.
- No differentiation is made between chip resistors and discrete resistors.
- No differentiation is made between chip capacitors and discrete capacitors.

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

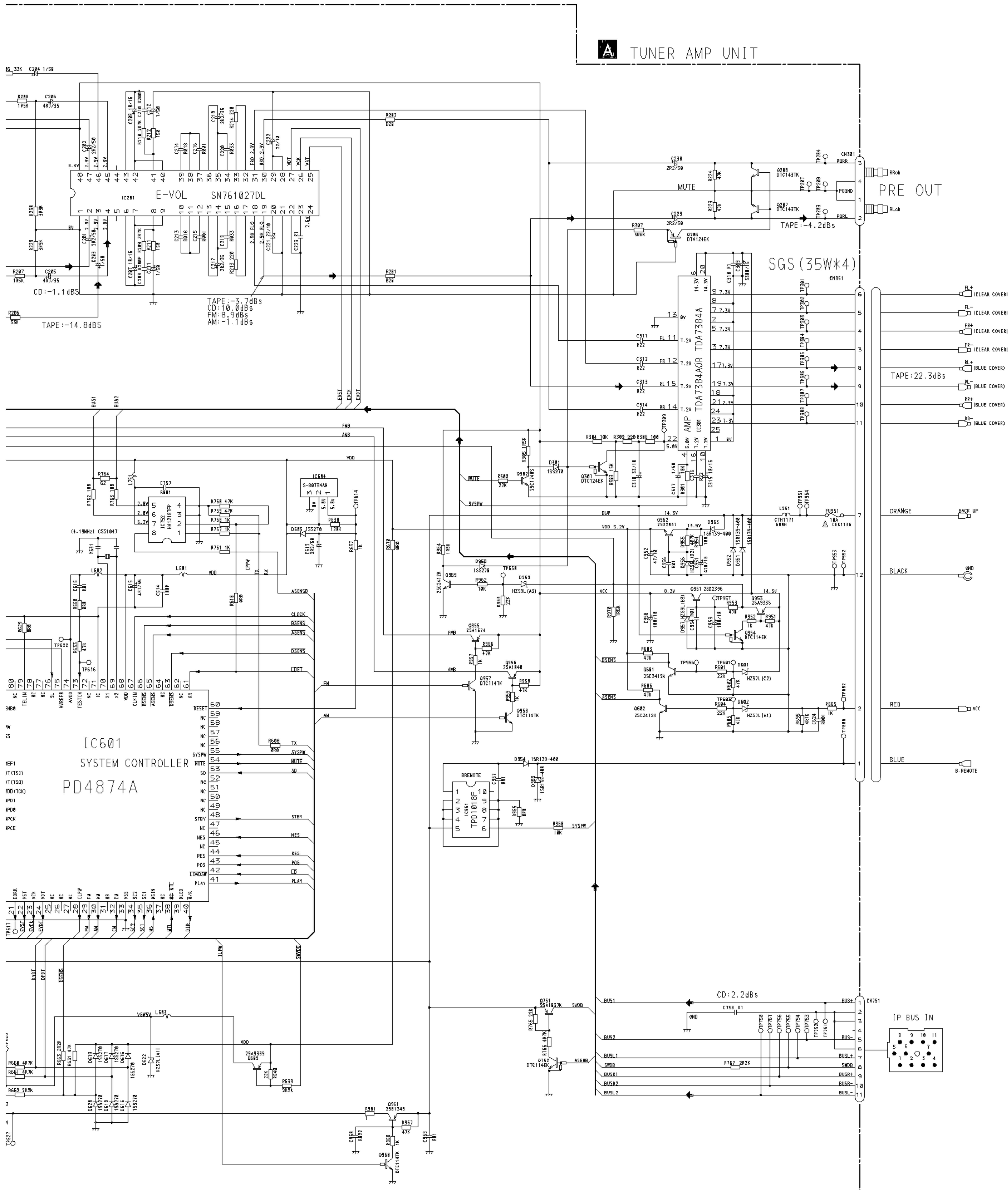
Decimal points for resistor and capacitor fixed values are expressed as:
 2.2→2R2
 0.022→R022

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)
(KEH-4510R/X1M/EE)

A-a



A-b

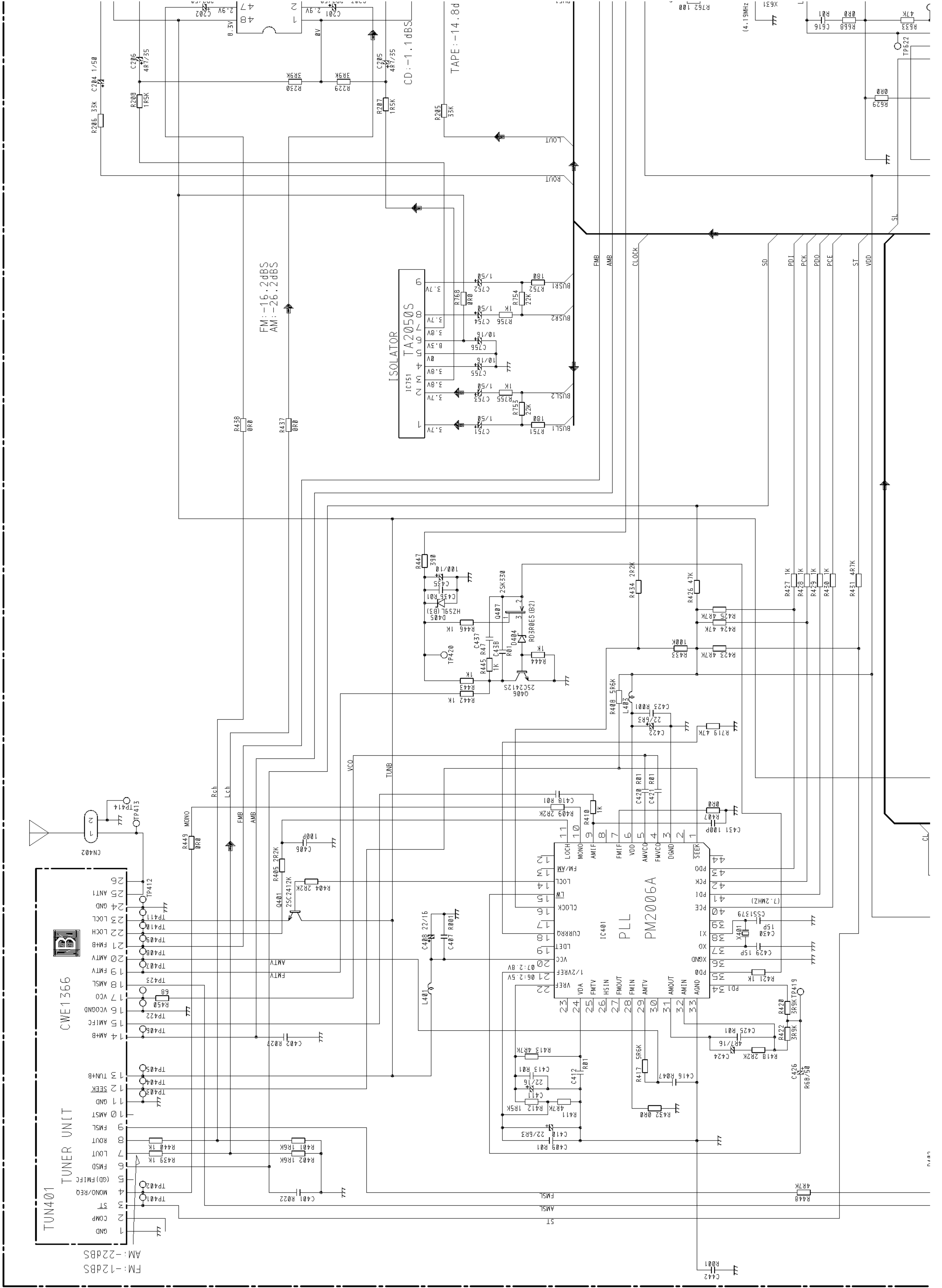


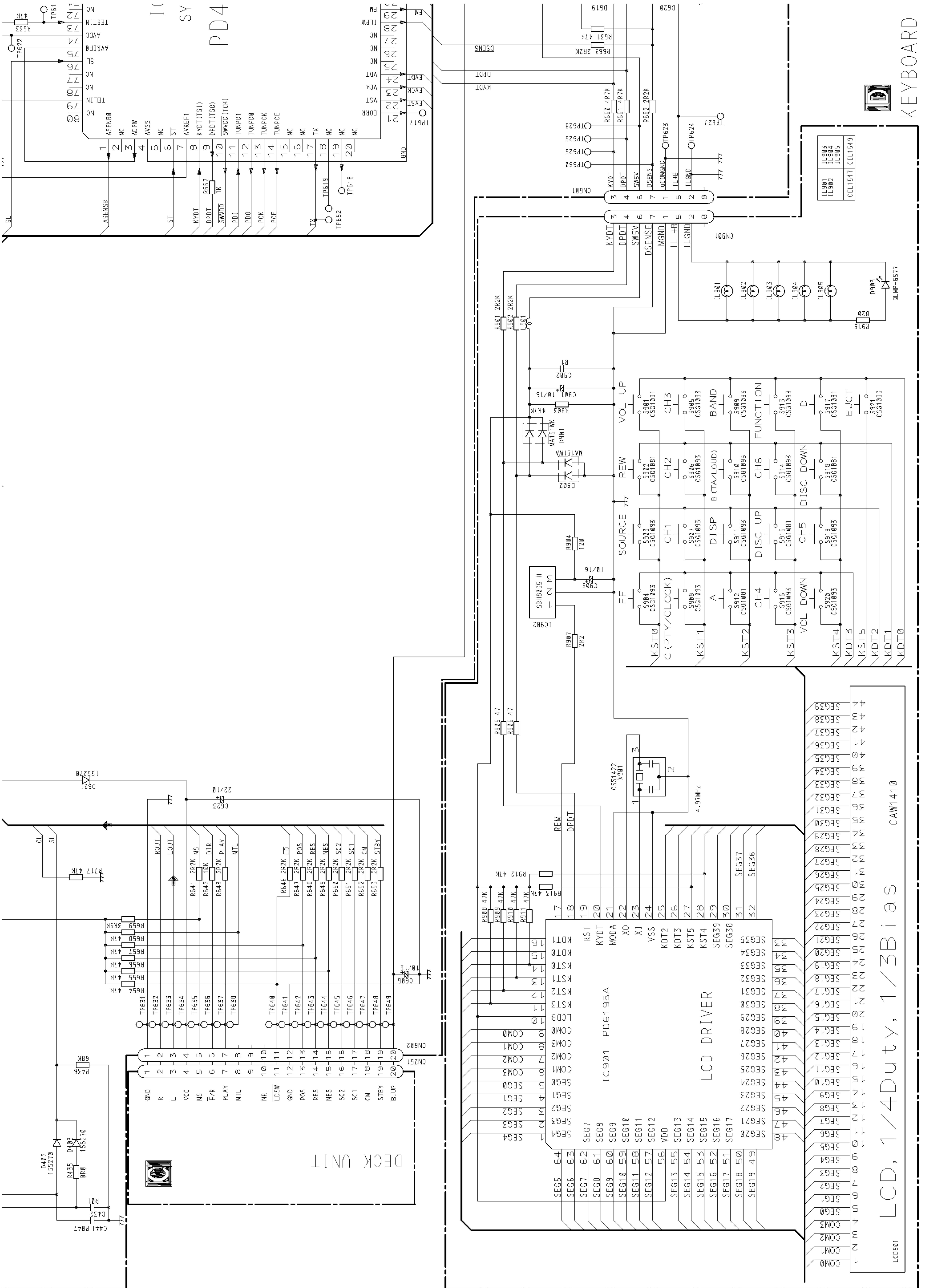
NOTE:
 □ Symbol indicates a resistor.
 No differentiation is made between chip resistors and discrete resistors.
 ⊥ Symbol indicates a capacitor.
 No differentiation is made between chip capacitors and discrete capacitors.
 The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 Decimal points for resistor and capacitor fixed values are expressed as:
 2.2→2R2
 0.022→R022

KEYBOARD UNIT

Fig. 9

A-a
A-b

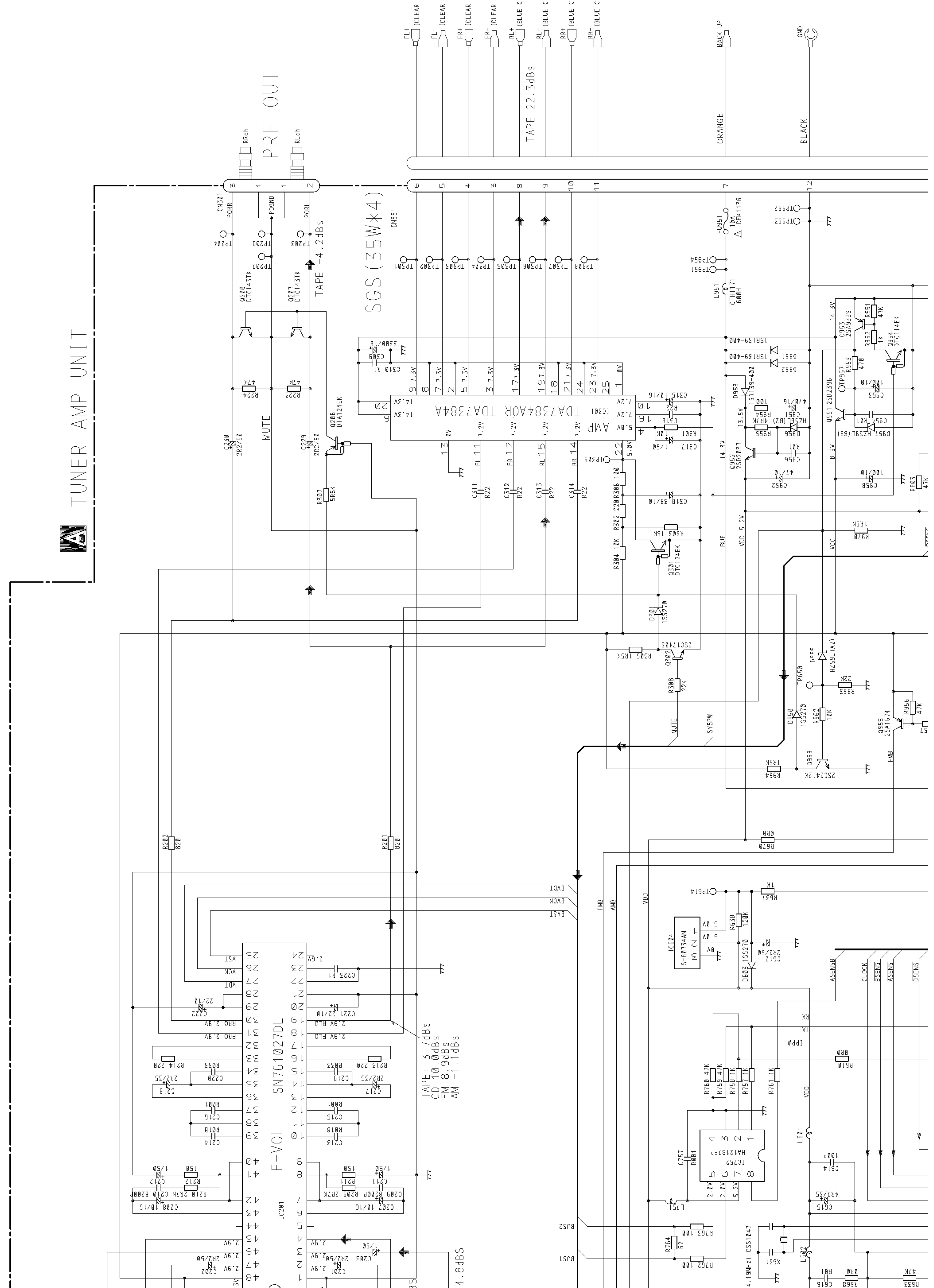
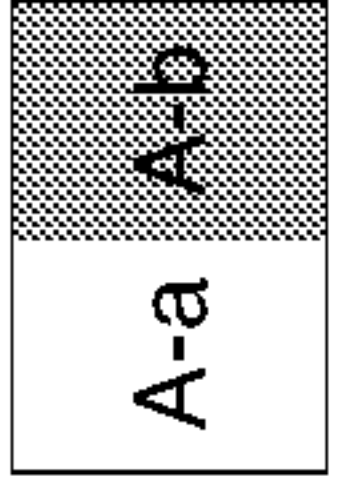




A-a A-b

Fig. 10

KEH-P4500R,P4530R,P4510



TUNER AMP UNIT



E-VOL SN761027DL

SGS (35W*4)

TAPE : -3.7dBs
 CD : 10.0dBs
 FM : 8.9dBs
 AM : -1.1dbS

PRE OUT

RRch
RLch

FL (CLEAR)
FL- (CLEAR)
FR (CLEAR)
FR- (CLEAR)
RL+ (BLUE C)
RL- (BLUE C)
RR+ (BLUE C)
RR- (BLUE C)

TAPE : 22.3dbS

ORANGE
BLACK

BACK UP
GND

TP954
TP951
TP952
TP953

L951
C1H1171
600R

0953
2S02396
0953
2S02396
0951
1S02437
0952
1S02437

0951
1S02437
0952
1S02437

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0952
1S02437

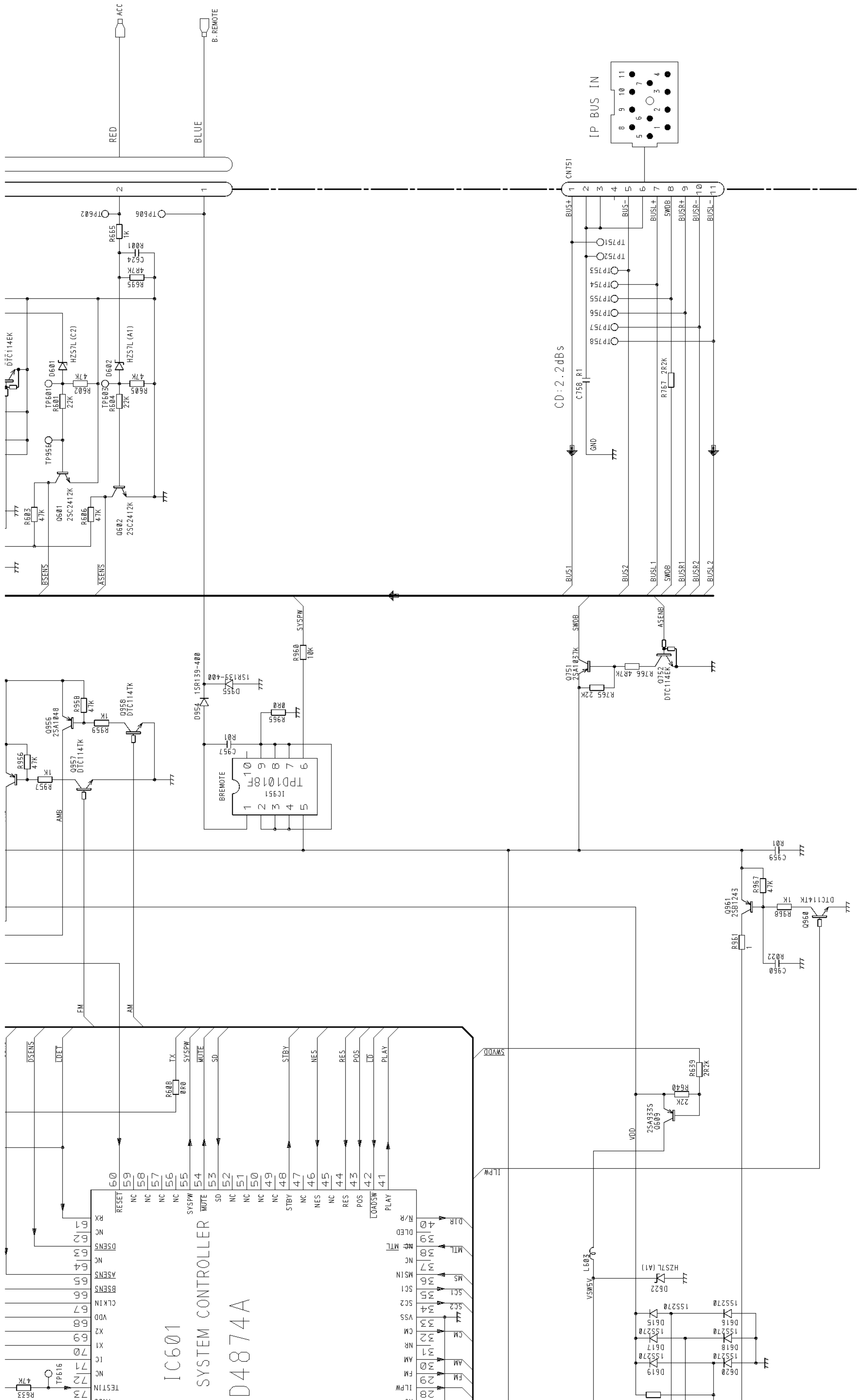
0951
1S02437
0952
1S02437

0951
1S02437
0952
1S02437

0951
1S02437
0952
1S02437

0951
1S02437
0952
1S02437

A-b



NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022

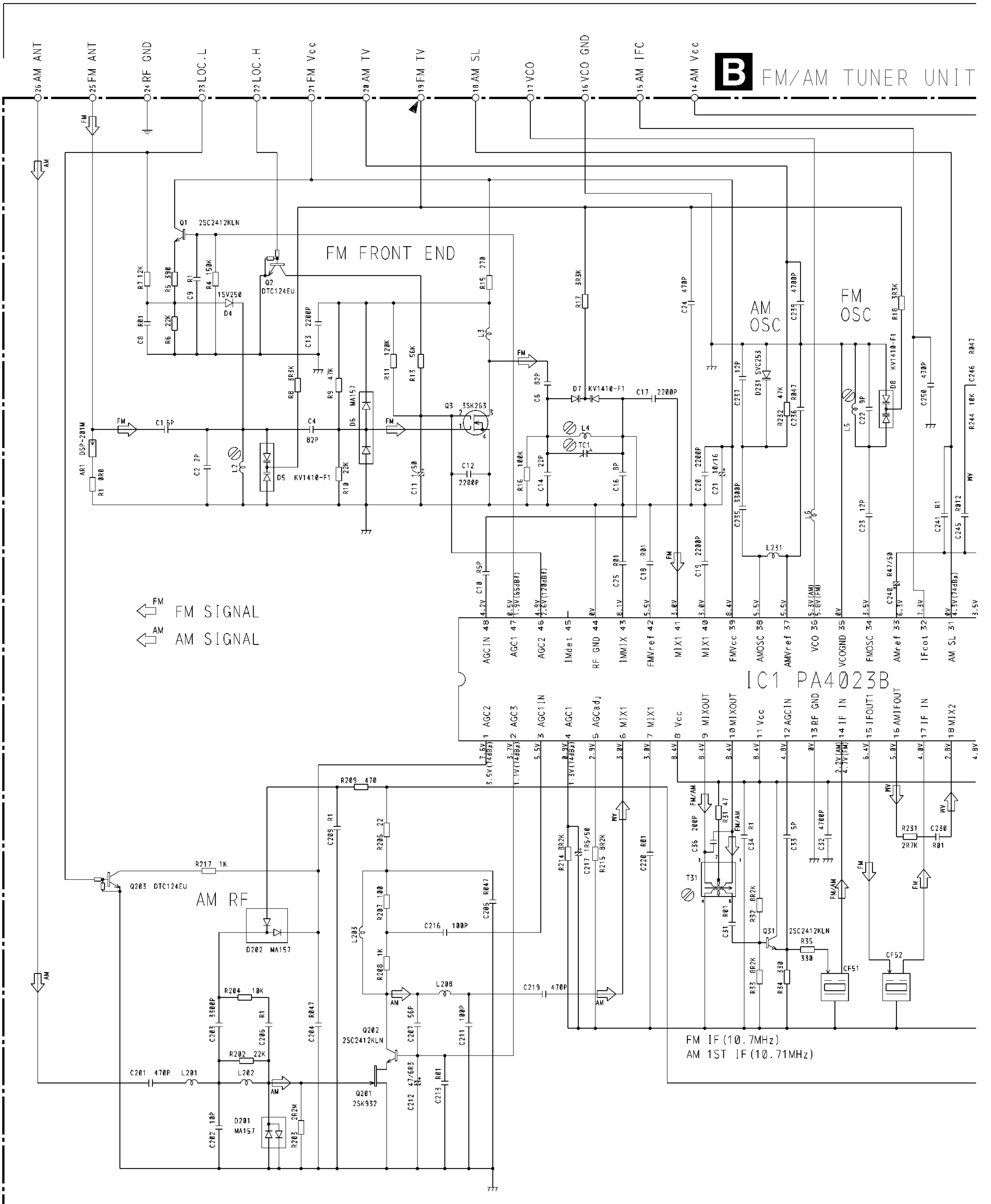
Fig. 11

3.3 FM/AM TUNER UNIT(KEH-P4500R/X1M/EW, P4530R/X1M/EW)

A

B

FM/AM TUNER UNIT



B

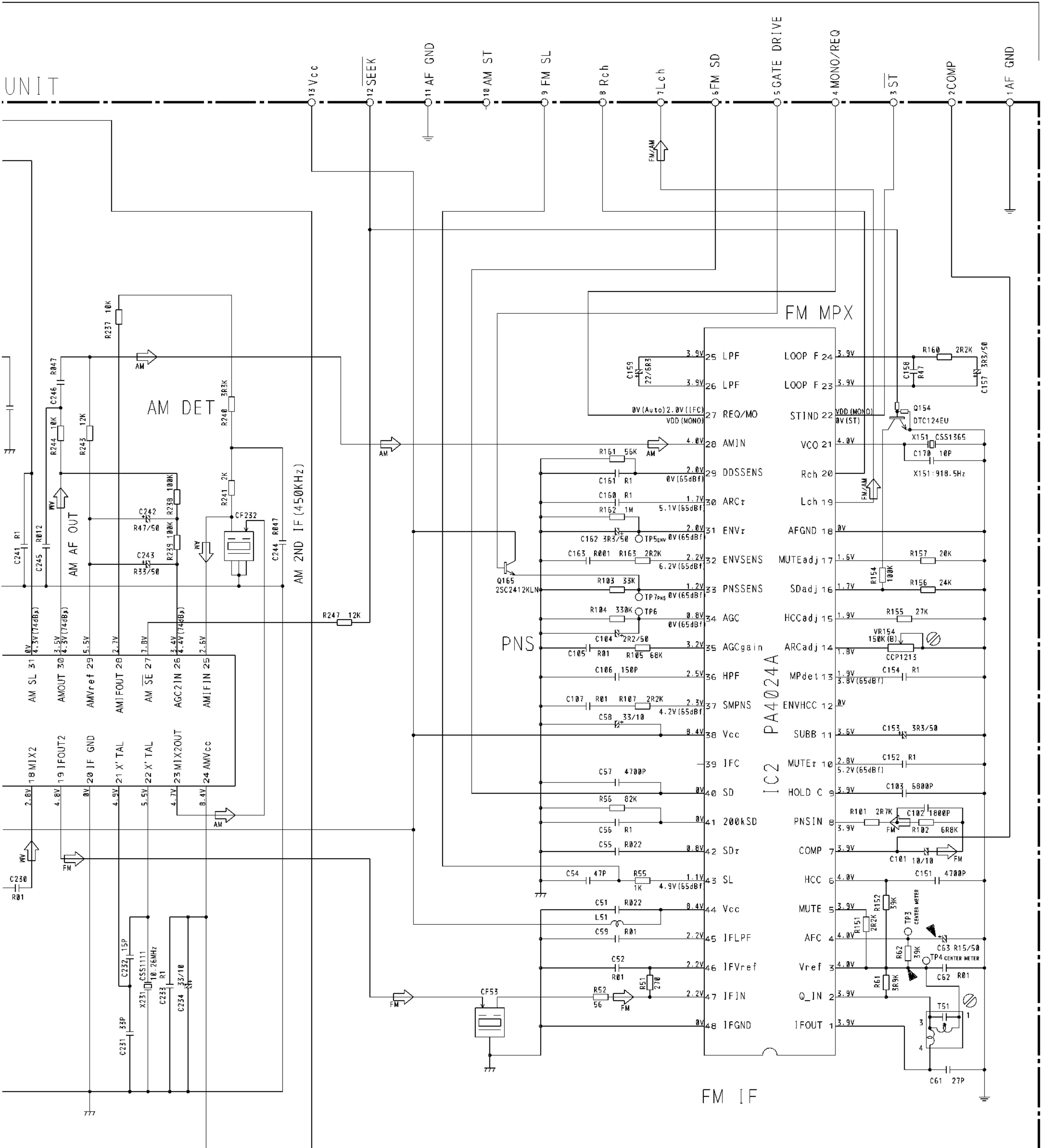
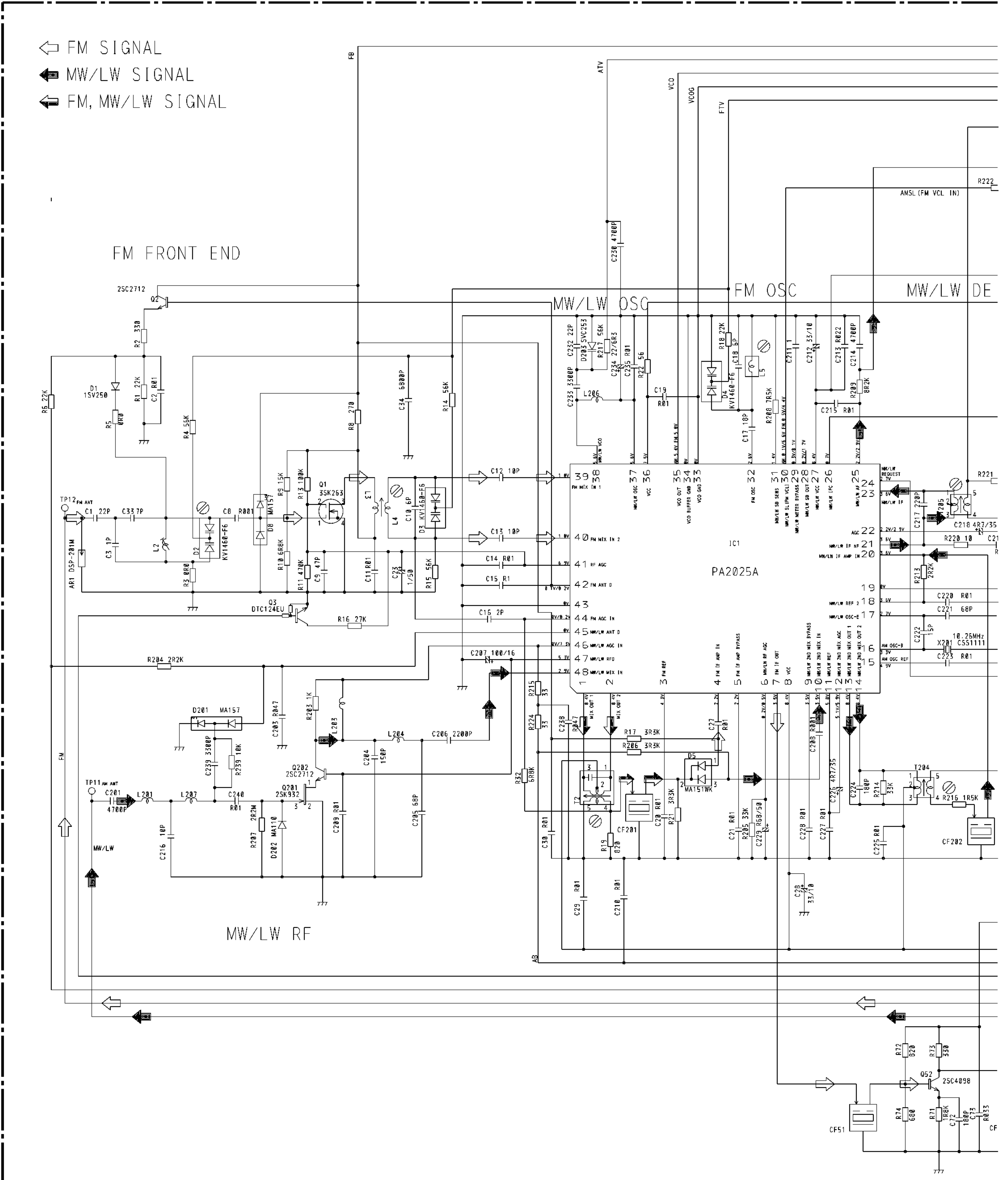


Fig. 12

3.4 TUNER UNIT(KEH-P4510/X1M/EE)

B TUNER UNIT



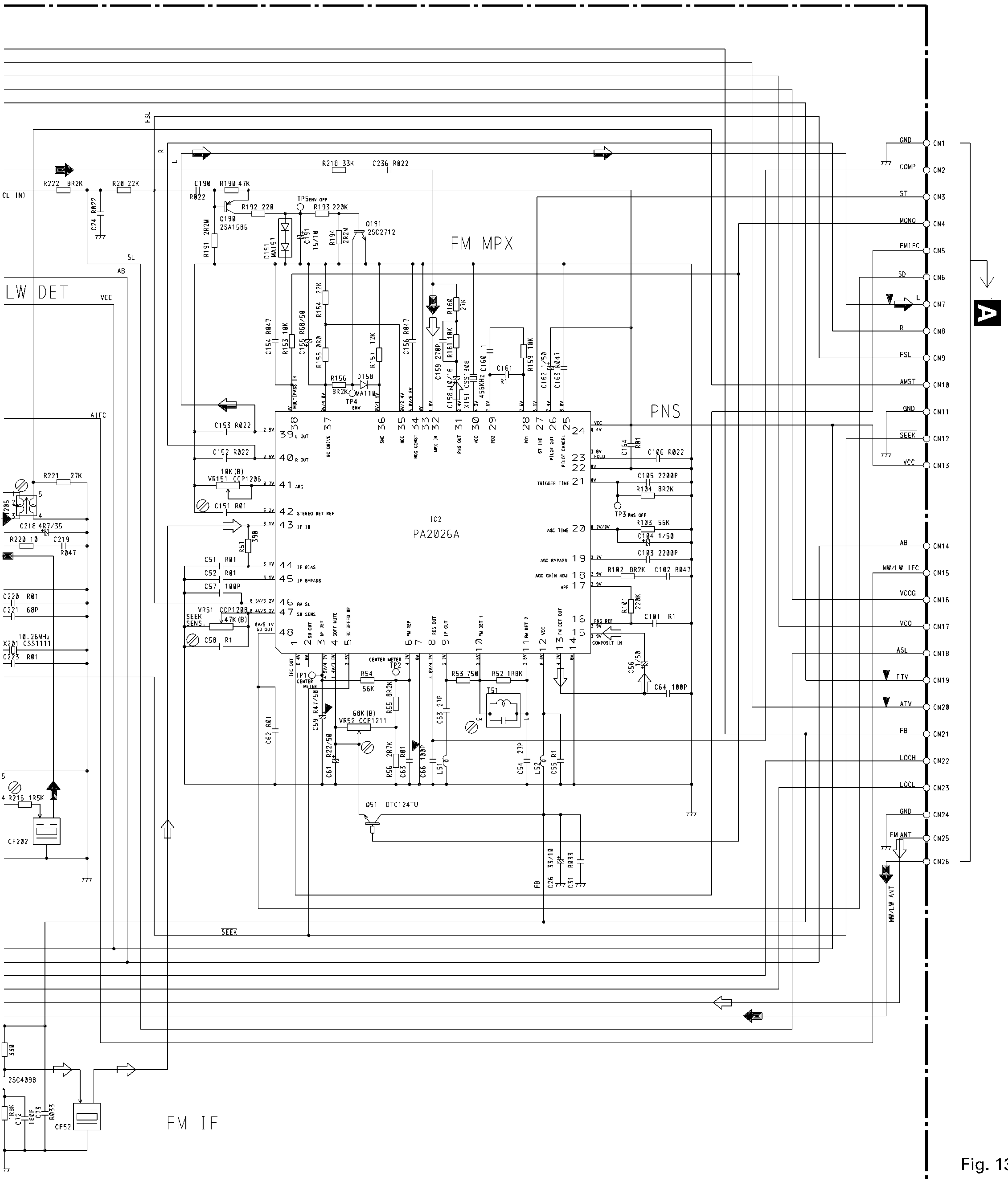
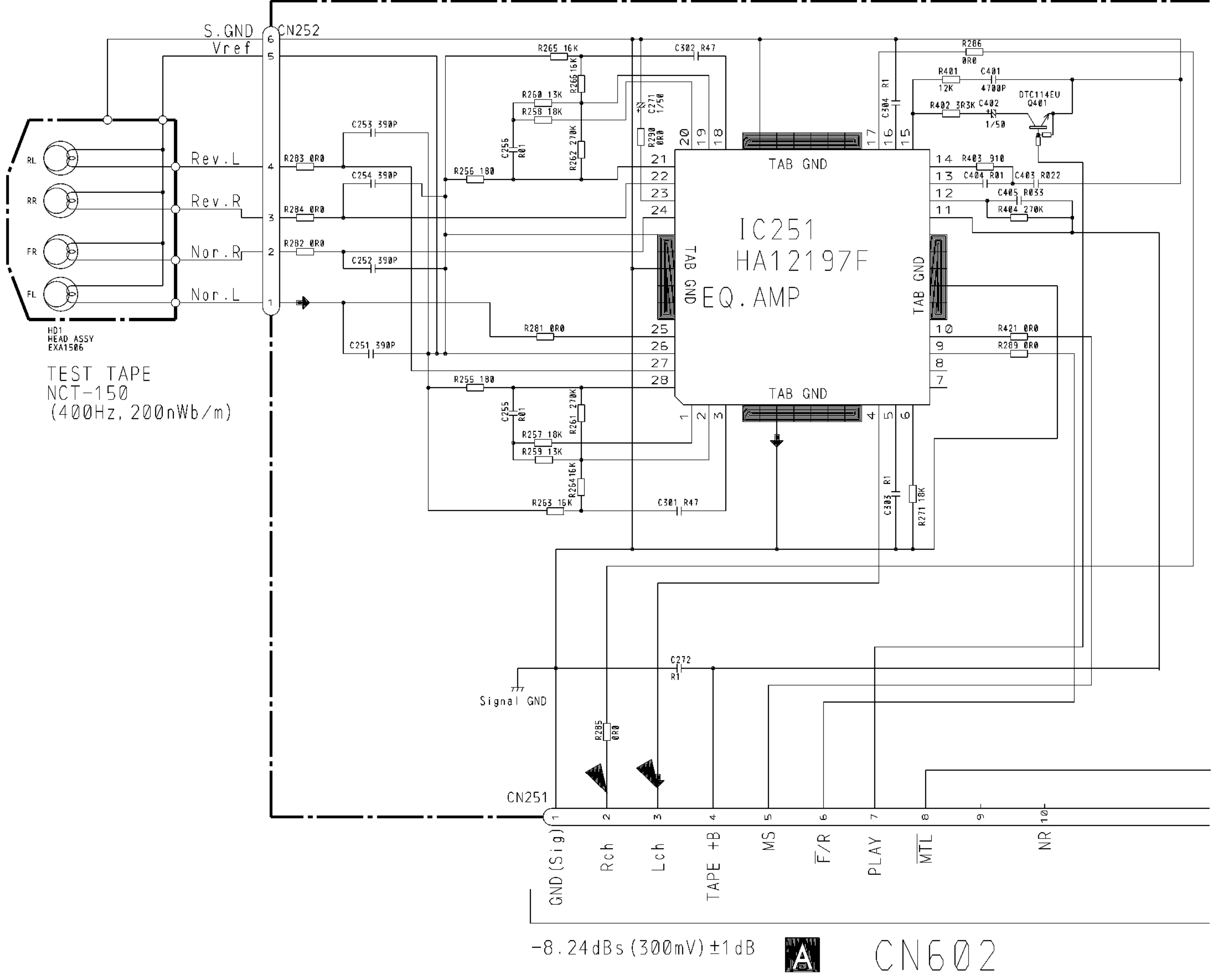


Fig. 13

3.5 CASSETTE MECHANISM MODULE

 DECK UNIT



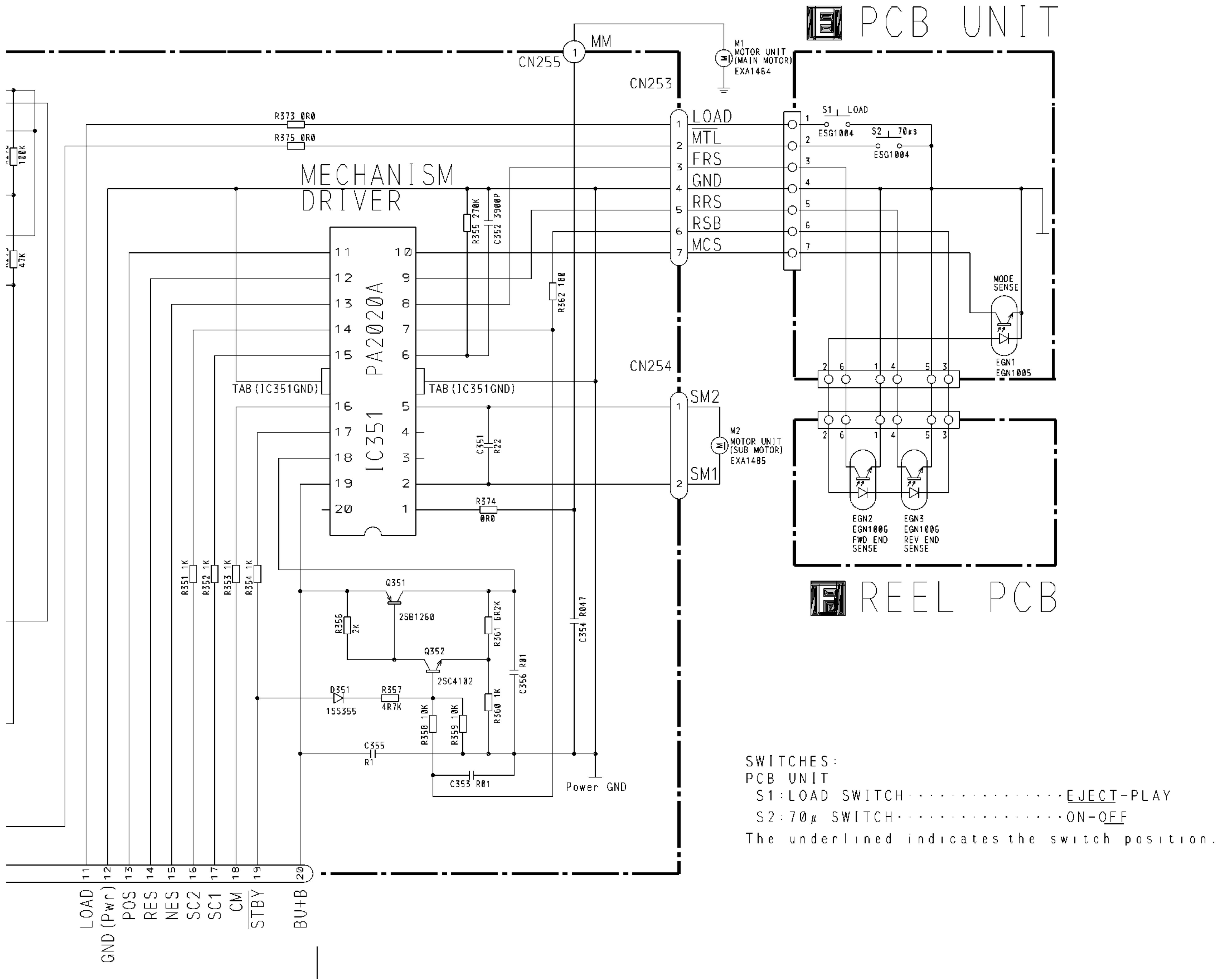


Fig. 14

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

====Circuit Symbol and No.====	Part Name	Part No.	====Circuit Symbol and No.====	Part Name	Part No.
B	Unit Number : CWE1416(KEH-P4500R/X1M/EW,P4530R/X1M/EW)		R	8	RS1/16S332J
	Unit Name : FM/AM Tuner Unit		R	9	RS1/16S473J
MISCELLANEOUS					
IC	1	IC			
		PA4023B			
IC	2	IC	R	15	RS1/16S271J
		PA4024A			
Q	1	Transistor	R	16	RS1/16S104J
		2SC2412KLN			
Q	2	Transistor	R	17	RS1/16S332J
		DTC124EU			
Q	3	FET	R	18	RS1/16S332J
		3SK263	R	31	RS1/16S470J
Q	31	Transistor			
		2SC2412KLN			
Q	154	Transistor	R	32	RS1/16S822J
		DTC124EU			
Q	165	Transistor	R	33	RS1/16S822J
		2SC2412KLN			
Q	201	FET	R	34	RS1/16S331J
		2SK932			
Q	202	Transistor	R	35	RS1/16S331J
		2SC2412KLN	R	51	RS1/16S271J
Q	203	Transistor			
		DTC124EU			
D	4	Diode	R	52	RS1/16S560J
		1SV250			
D	5	Diode	R	55	RS1/16S102J
		KV1410-F1			
D	6	Diode	R	56	RS1/16S823J
		MA157			
D	7	Diode	R	61	RS1/16S392J
		KV1410-F1	R	62	RS1/16S393J
D	8	Diode			
		KV1410-F1			
D	201	Diode	R	101	RS1/16S272J
		MA157			
D	202	Diode	R	102	RS1/16S682J
		MA157			
D	231	Diode	R	103	RS1/16S333J
		SVC253			
L	2	Coil	R	104	RS1/16S334J
		CTC1108	R	105	RS1/16S683J
L	3	Inductor			
		LCTB2R2K2125			
L	4	Coil	R	107	RS1/16S222J
		CTC1108			
L	5	Coil	R	151	RS1/16S222J
		CTC1107			
L	6	Inductor	R	152	RS1/16S393J
		LCTBR15K1608			
L	51	Ferri-Inductor	R	154	RS1/16S104J
		LAU150K	R	155	RS1/16S273J
L	201	Ferri-Inductor			
		LAU4R7K			
L	202	Ferri-Inductor	R	156	RS1/16S243J
		LAU330K			
L	203	Inductor	R	157	RS1/16S203J
		CTF1287			
L	208	Inductor	R	160	RS1/16S222J
		LAU121K			
L	231	Inductor	R	161	RS1/16S563J
		LCTA3R3J3225	R	162	RS1/16S105J
T	31	Coil			
		CTE1116			
T	51	Coil	R	163	RS1/16S222J
		CTC1136			
TC	1	Capacitor	R	202	RS1/16S223J
		CCL1038			
CF	51	Ceramic Filter	R	203	RS1/16S225J
		CTF1292			
CF	52	Ceramic Filter	R	204	RS1/16S103J
		CTF1292	R	206	RS1/16S220J
CF	53	Ceramic Filter			
		CTF1292			
CF	232	Ceramic Filter	R	207	RS1/16S101J
		CTF1348			
X	151	Resonator 920.5kHz	R	208	RS1/16S102J
		CSS1365			
X	231	Crystal Resonator 10.26MHz	R	209	RS1/16S471J
		CSS1111			
VR	154	Semi-fixed 150kΩ(B)	R	214	RS1/16S822J
		CCP1213	R	215	RS1/16S822J
AR	1	Capacitor with Discharge Gap			
		DSP-201M	R	217	RS1/16S102J
RESISTORS					
R	1		R	231	RS1/16S272J
R	4	RS1/16S0R0J	R	232	RS1/16S473J
R	5	RS1/16S154J	R	237	RS1/16S103J
R	6	RS1/16S391J	R	238	RS1/16S104J
R	7	RS1/16S223J	R	239	RS1/16S104J
		RS1/16S123J	R	240	RS1/16S332J
			R	241	RS1/16S202J
			R	243	RS1/16S123J
			R	244	RS1/16S103J

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 247	RS1/16S123J	C 212	CEJA470M6R3
CAPACITORS		C 213	CKSRYB103K25
C 1	CCSQCH6R0D50	C 216	CCSRCH101J50
C 2	CCSRCK2R0C50	C 217	CEJA1R5M50
C 4	CCSRCH820J50	C 219	CCSRCH471J50
C 6	CCSRCH820J50	C 220	CKSRYB103K25
C 8	CKSRYB103K25	C 230	CKSRYB103K25
C 9	CKSQYB104K16	C 231	CCSRCH330J50
C 10	CCSRCKR50C50	C 232	CCSRCH150J50
C 11	CEJA1R0M50	C 233	CKSQYB104K16
C 12	CKSRYB222K50	C 234	CEJA330M10
C 13	CKSRYB222K50	C 235	CKSRYB332K50
C 14	CCSRCH220J50	C 236	CKSQYB473K16
C 16	CCSRCH8R0D50	C 237	CCSRCH120J50
C 17	CKSRYB222K50	C 239	CKSRYB472K50
C 18	CKSRYB103K25	C 240	CEJAR47M50
C 19	CKSRYB222K50	C 241	CKSQYB104K16
C 20	CKSRYB222K50	C 242	CEJAR47M50
C 21	CEJA100M16	C 243	CEJAR33M50
C 22	CCSRTH9R0D50	C 244	CKSQYB473K16
C 23	CCSRTH120J50	C 245	CKSRYB123K25
C 24	CCSRCH471J50	C 246	CKSQYB473K16
C 25	CKSRYB103K25	C 250	CCSRCH471J50
C 31	CKSRYB103K25	B Unit Number : CWE1366(KEH-P4510/X1M/EE) Unit Name : Tuner Unit	
C 32	CKSQYB472K50		
C 33	CCSRCH5R0C50		
C 34	CKSQYB104K16		
C 36	CCSRRH201J50		
C 51	CKSRYB223K25	MISCELLANEOUS	
C 52	CKSRYB103K25	IC 1	IC PA2025A
C 54	CCSRCH470J50	IC 2	IC PA2026A
C 55	CKSQYB223K25	Q 1	FET 3SK263
C 56	CKSQYB104K16	Q 2	Transistor 2SC2712
C 57	CKSRYB472K50	Q 3	Transistor DTC124EU
C 58	CEJA330M10	Q 51	Transistor DTC124TU
C 59	CKSRYB103K25	Q 52	Transistor 2SC4098
C 61	CCSRCH270J50	Q 190	Transistor 2SA1586
C 62	CKSRYB103K25	Q 191	Transistor 2SC2712
C 63	CEJAR15M50	Q 201	FET 2SK932
C 101	CEJANP100M10	Q 202	Transistor 2SC2712
C 102	CKSRYB182K50	D 1	Diode 1SV250
C 103	CKSRYB682K25	D 2	Diode KV1460-F6
C 104	CEJA2R2M50	D 3	Diode KV1460-F6
C 105	CKSRYB103K25	D 4	Diode KV1460-F6
C 106	CCSRCH151J50	D 5	Chip Diode MA151WK
C 107	CKSRYB103K25	D 8	Diode MA157
C 151	CKSRYB472K50	D 158	Diode MA110
C 152	CKSQYB104K16	D 191	Diode MA157
C 153	CEJA3R3M50	D 201	Diode MA157
C 154	CKSQYB104K16	D 202	Diode MA110
C 157	CEJA3R3M50	D 203	Diode SVC253
C 158	CKSYB474K16	L 2	Coil CTC1112
C 159	CEJA220M6R3	L 3	Coil CTC1121
C 160	CKSQYB104K16	L 4	Coil CTC1122
C 161	CKSQYB104K16	L 5	Coil CTC1111
C 162	CEJA3R3M50	L 51	Ferri-Inductor LAU2R2K
C 163	CKSRYB102K50	L 52	Ferri-Inductor LAU150K
C 170	CCSRCH100D50	L 201	Ferri-Inductor LAU4R7K
C 201	CCSRCH471J50	L 203	Inductor 1mH CTF1026
C 202	CCSRCH100D50	L 204	Ferri-Inductor LAU151K
C 203	CKSRYB332K50	L 206	Inductor LAU3R3J
C 204	CKSQYB473K16	L 207	Ferri-Inductor LAU330K
C 205	CKSQYB473K16	T 2	Coil CTE1077
C 206	CKSQYB104K16	T 51	Coil CTC1119
C 207	CCSRCH560J50	T 204	Coil CTE1112
C 209	CKSQYB104K16	T 205	Coil CTE1118
C 211	CCSRCH101J50	CF 51	Ceramic Filter CTF1290
		CF 52	Ceramic Filter CTF1290
		CF 201	Ceramic Filter CTF1290

KEH-P4500R,P4530R,P4510

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
CF 202 Ceramic Filter	CTF1300	R 218	RS1/16S333J
X 151 Ceramic Resonator 456kHz	CSS1308	R 220	RS1/16S100J
X 201 Crystal Resonator 10.26MHz	CSS1111	R 221	RS1/16S273J
VR 51 Semi-fixed 22kΩ(B)	CCP1208	R 222	RS1/16S822J
VR 52 Semi-fixed 68kΩ(B)	CCP1211	R 224	RS1/16S330J
VR 151 Semi-fixed 10kΩ(B)	CCP1206	R 239	RS1/16S103J
AR 1 Capacitor with Discharge Gap	DSP-201M		
RESISTORS		CAPACITORS	
R 1	RS1/16S223J	C 1	CCSQCH220J50
R 2	RS1/16S331J	C 2	CKSRYB103K50
R 3	RS1/16S0R0J	C 3	CCSRCK1R0C50
R 4	RS1/16S563J	C 8	CKSRYB102K50
R 5	RS1/16S0R0J	C 9	CCSRCH470J50
R 6	RS1/16S223J	C 10	CCSRCH6R0D50
R 8	RS1/16S271J	C 11	CKSRYB103K50
R 9	RS1/16S153J	C 12	CCSRCH100D50
R 10	RS1/16S682J	C 13	CCSRCH100D50
R 11	RS1/16S474J	C 14	CKSRYB103K50
R 13	RS1/16S104J	C 15	CKSQYB104K16
R 14	RS1/16S563J	C 16	CCSRCK2R0D50
R 15	RS1/16S563J	C 17	CCSRCH180J50
R 16	RS1/16S273J	C 18	CCSRCH6R0D50
R 17	RS1/16S332J	C 19	CKSRYB103K50
R 18	RS1/16S223J	C 20	CKSRYB103K50
R 19	RS1/16S821J	C 21	CKSRYB103K50
R 20	RS1/16S223J	C 23	CEJA1R0M50
R 21	RS1/16S332J	C 24	CKSRYB223K25
R 22	RS1/16S560J	C 26	CEJA330M10
R 32	RS1/16S682J	C 27	CKSRYB103K50
R 51	RS1/16S391J	C 28	CEJA330M10
R 52	RS1/16S182J	C 29	CKSRYB103K50
R 53	RS1/16S751J	C 30	CKSRYB103K50
R 54	RS1/16S563J	C 31	CKSRYB333K16
R 55	RS1/16S822J	C 33	CCSRCH7R0D50
R 56	RS1/16S272J	C 34	CKSRYB682K50
R 71	RS1/16S182J	C 51	CKSRYB103K50
R 72	RS1/16S821J	C 52	CKSRYB103K50
R 73	RS1/16S331J	C 53	CCSRCH270J50
R 74	RS1/16S681J	C 54	CCSRCH270J50
R 101	RS1/16S224J	C 55	CKSQYB104K16
R 102	RS1/16S822J	C 56	CEJA1R0M50
R 103	RS1/16S563J	C 57	CCSRCH101J50
R 104	RS1/16S822J	C 58	CKSQYB104K16
R 153	RS1/16S103J	C 59	CEJAR47M50
R 154	RS1/16S223J	C 61	CEJAR22M50
R 155	RS1/16S0R0J	C 62	CKSRYB103K50
R 156	RS1/16S822J	C 63	CKSRYB103K50
R 157	RS1/16S123J	C 64	CCSRCH101J50
R 159	RS1/16S103J	C 66	CCSRCH101J50
R 160	RS1/16S273J	C 72	CCSRCH181J50
R 161	RS1/16S103J	C 73	CKSRYB333K16
R 190	RS1/16S473J	C 101	CKSQYB104K16
R 191	RS1/16S225J	C 102	CKSQYB473K16
R 192	RS1/16S221J	C 103	CKSRYB222K50
R 193	RS1/16S224J	C 104	CEJA1R0M50
R 194	RS1/16S225J	C 105	CKSRYB222K50
R 203	RS1/16S102J	C 106	CKSRYB223K25
R 204	RS1/16S222J	C 151	CKSRYB103K50
R 205	RS1/16S333J	C 152	CKSRYB223K25
R 206	RS1/16S332J	C 153	CKSRYB223K25
R 207	RS1/16S225J	C 154	CKSQYB473K16
R 208	RS1/16S752J	C 155	CEJAR68M50
R 209	RS1/16S822J	C 156	CKSQYB473K16
R 213	RS1/16S222J	C 158	CEJA100M16
R 214	RS1/16S333J	C 159	CCSRCH271J50
R 215	RS1/16S330J	C 160	CKSYB105K16
R 216	RS1/16S152J	C 161	CKSQYB104K16
R 217	RS1/16S563J	C 162	CEJA1R0M50

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
C 163	CKSQYB473K16	Q 708	Transistor DTC143TS
C 164	CKSRYB103K50	Q 751	Transistor 2SA1037K
C 190	CKSRYB223K25	Q 752	Transistor DTC114EK
C 191	CEAL150M10	Q 951	Transistor 2SD2396
C 201	CCSRCH471J50	Q 952	Transistor 2SD2037
C 203	CKSQYB473K16	Q 953	Transistor 2SA933S
C 204	CCSRCH151J50	Q 954	Transistor DTC114EK
C 205	CCSRCH680J50	Q 955	Transistor 2SA1674
C 206	CKSRYB222K50	Q 956	Transistor 2SA1048
C 207	CEJA101M16	Q 957	Transistor DTC114TK
C 208	CKSRYB102K50	Q 958	Transistor DTC114TK
C 209	CKSRYB103K50	Q 959	Transistor 2SC2412K
C 210	CKSRYB103K50	Q 960	Transistor DTC114TK
C 211	CKSYB105K16	Q 961	Transistor 2SB1243
C 212	CEJA330M10	D 301	Diode 1SS270
C 213	CKSRYB223K25	D 403	Diode 1SS270
C 214	CKSRYB472K50	D 601	Diode HZS7L(C2)
C 215	CKSRYB103K50	D 602	Diode HZS7L(A1)
C 216	CCSRCH100D50	D 603	Diode 1SS270
C 217	CCSRCH221J50	D 615	Diode 1SS270
C 218	CEJA4R7M35	D 616	Diode 1SS270
C 219	CKSQYB473K16	D 617	Diode 1SS270
C 220	CKSRYB103K50	D 618	Diode 1SS270
C 221	CCSRCH680J50	D 619	Diode 1SS270
C 222	CCSRCH150J50	D 620	Diode 1SS270
C 223	CKSRYB103K50	D 621	Diode 1SS270
C 224	CCSRUJ181J50	D 622	Diode HZS7L(A1)
C 225	CKSRYB103K50	D 701	Diode 1SS270
C 226	CEJA4R7M35	D 951	Diode 1SR139-400
C 227	CKSRYB103K50	D 952	Diode 1SR139-400
C 228	CKSRYB103K50	D 953	Diode 1SR139-400
C 229	CEJAR68M50	D 954	Diode 1SR139-400
C 230	CKSRYB472K50	D 955	Diode 1SR139-400
C 232	CCSRTH220J50	D 956	Diode HZS6L(B2)
C 233	CKSRYB332K50	D 957	Diode HZS9L(B3)
C 234	CEJA220M6R3	D 958	Diode 1SS270
C 235	CKSRYB103K50	D 959	Diode HZS9L(A2)
C 236	CKSRYB223K25	L 401	Ferri-Inductor LAU2R2K
C 238	CKSQYB473K16	L 403	Ferri-Inductor LAU2R2K
C 239	CKSRYB332K50	L 601	Ferri-Inductor LAU2R2K
C 240	CKSRYB103K50	L 602	Ferri-Inductor LAU2R2K
		L 603	Ferri-Inductor LAU2R2K
		L 701	Ferri-Inductor LAU101K
		L 751	Ferri-Inductor LAU2R2K
		L 951	Ferri-Inductor CTH1171
		X 401	Crystal Resonator 7.200MHz CSS1379
		X 631	Ceramic Resonator 6.29MHz CSS1310
		X 701	Crystal Resonator 4.332MHz CSS1056
		VR 701	Semi-fixed 22kΩ(B) CCP1321
A Unit Number : CWM5653 (KEH-P4500R/X1M/EW,P4530R/X1M/EW) Unit Name : Tuner Amp Unit		RESISTORS	
MISCELLANEOUS		R 201	RS1/10S821J
IC 201	IC SN761027DL	R 202	RS1/10S821J
IC 301	IC TDA7384A	R 205	RS1/8S333J
IC 401	IC PM2007A	R 206	RS1/10S333J
IC 601	IC PD4873A	R 207	RS1/10S152J
IC 604	IC S-80734AN	R 208	RS1/10S152J
IC 701	IC PM4006B	R 209	RS1/10S272J
IC 702	IC NJM2903M	R 210	RS1/10S272J
IC 751	IC TA2050S	R 211	RS1/10S151J
IC 752	IC HA12187FP	R 212	RS1/10S151J
IC 951	IC TPD1018F	R 213	RS1/10S221J
Q 206	Transistor DTA124EK	R 214	RS1/10S221J
Q 207	Transistor DTC143TK	R 215	RS1/10S104J
Q 208	Transistor DTC143TK	R 216	RS1/10S104J
Q 301	Transistor DTC124EK	R 223	RS1/10S473J
Q 302	Transistor 2SC1740S	R 224	RS1/10S473J
Q 401	Transistor 2SC2412K	R 229	RS1/10S392J
Q 601	Transistor 2SC2412K	R 230	RS1/10S392J
Q 602	Transistor 2SC2412K	R 301	RD1/4PU103J
Q 609	Transistor 2SA933S	R 302	RS1/10S221J
Q 701	Transistor DTC143TK	R 303	RS1/10S153J
Q 702	Transistor DTC114EK	R 304	RS1/10S103J
Q 703	Transistor 2SD1757K	R 305	RS1/10S152J
Q 704	Transistor 2SD1757K	R 306	RS1/10S101J
Q 706	Transistor 2SC2412K	R 307	RS1/10S562J
Q 707	Transistor DTC143TS		

KEH-P4500R,P4530R,P4510

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 308	RS1/8S223J	R 662	RS1/10S222J
R 401	RS1/10S272J	R 663	RS1/10S222J
R 402	RS1/10S272J	R 665	RD1/4PU102J
R 403	RS1/8S102J	R 667	RS1/10S102J
R 404	RS1/10S222J	R 668	RS1/8S0R0J
R 405	RS1/10S222J	R 669	RS1/10S473J
R 407	RS1/10S0R0J	R 670	RS1/8S0R0J
R 408	RS1/10S562J	R 695	RS1/10S472J
R 409	RS1/10S222J	R 702	RS1/10S333J
R 410	RS1/10S102J	R 703	RS1/10S0R0J
R 411	RS1/10S682J	R 704	RD1/4PU102J
R 412	RS1/10S472J	R 705	RD1/4PU102J
R 413	RS1/10S222J	R 706	RD1/4PU102J
R 414	RS1/10S682J	R 707	RD1/4PU102J
R 415	RS1/10S472J	R 708	RD1/4PU102J
R 416	RS1/10S561J	R 709	RD1/4PU102J
R 417	RS1/10S103J	R 710	RS1/10S222J
R 418	RS1/10S152J	R 711	RS1/10S222J
R 419	RS1/8S222J	R 712	RS1/10S681J
R 420	RS1/10S392J	R 713	RS1/10S684J
R 421	RS1/10S272J	R 714	RS1/10S562J
R 422	RS1/10S392J	R 715	RS1/10S562J
R 423	RS1/10S473J	R 716	RS1/10S104J
R 424	RS1/10S473J	R 717	RS1/10S104J
R 425	RS1/10S472J	R 718	RS1/10S103J
R 426	RS1/8S473J	R 719	RS1/10S473J
R 427	RD1/4PU102J	R 720	RD1/4PU102J
R 428	RD1/4PU102J	R 721	RD1/4PU102J
R 429	RD1/4PU102J	R 722	RS1/10S562J
R 430	RD1/4PU102J	R 723	RS1/10S105J
R 431	RS1/10S472J	R 724	RD1/4PU0R0J
R 433	RS1/10S104J	R 725	RS1/10S224J
R 434	RD1/4PU222J	R 726	RS1/10S224J
R 435	RS1/10S103J	R 727	RS1/10S222J
R 436	RS1/10S393J	R 728	RS1/10S222J
R 439	RD1/4PU0R0J	R 729	RS1/10S223J
R 440	RS1/8S0R0J	R 730	RS1/10S223J
R 448	RS1/10S102J	R 731	RS1/10S224J
R 449	RS1/8S0R0J	R 732	RD1/4PU152J
R 450	RS1/10S680J	R 733	RD1/4PU102J
R 451	RS1/8S0R0J	R 734	RS1/10S0R0J
R 601	RS1/10S223J	R 751	RS1/10S181J
R 602	RS1/10S473J	R 752	RS1/10S181J
R 603	RS1/10S473J	R 753	RS1/10S223J
R 604	RS1/10S223J	R 754	RS1/10S223J
R 605	RS1/10S473J	R 755	RS1/10S102J
R 606	RS1/10S473J	R 756	RS1/10S102J
R 607	RS1/10S0R0J	R 757	RS1/10S102J
R 609	RS1/10S0R0J	R 758	RS1/10S102J
R 629	RS1/10S0R0J	R 759	RS1/10S473J
R 631	RS1/10S473J	R 760	RS1/10S473J
R 633	RS1/10S473J	R 761	RS1/10S102J
R 637	RD1/4PU102J	R 762	RS1/10S101J
R 638	RS1/10S124J	R 763	RS1/10S101J
R 639	RD1/4PU222J	R 764	RS1/10S620J
R 640	RS1/10S223J	R 765	RS1/10S223J
R 641	RD1/4PU222J	R 766	RS1/10S472J
R 642	RS1/10S103J	R 767	RS1/10S222J
R 643	RS1/8S222J	R 768	RS1/10S0R0J
R 646	RS1/8S222J	R 951	RS1/10S473J
R 647	RS1/8S222J	R 952	RD1/4PU102J
R 648	RD1/4PU222J	R 953	RD1/4PU471J
R 649	RS1/10S222J	R 954	RD1/4PU101J
R 650	RD1/4PU222J	R 955	RS1/10S472J
R 651	RD1/4PU222J	R 956	RS1/10S473J
R 652	RD1/4PU222J	R 957	RS1/10S102J
R 653	RS1/10S222J	R 958	RS1/10S473J
R 654	RS1/10S473J	R 959	RS1/10S102J
R 655	RS1/10S473J	R 960	RS1/8S103J
R 656	RS1/10S473J	R 961	RS1/10S1R0J
R 657	RS1/10S473J	R 962	RS1/10S103J
R 658	RS1/10S473J	R 963	RS1/10S223J
R 659	RS1/10S392J	R 964	RS1/10S152J
R 660	RS1/10S472J	R 965	RS1/10S0R0J
R 661	RD1/4PU472J	R 967	RS1/10S473J
		R 968	RS1/10S102J
		R 970	RD1/4PU152J

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
CAPACITORS			
C 201	CEJA2R2M50	C 702	CKSQYB222K50
C 202	CEJA2R2M50	C 703	CKSQYB104K16
C 203	CEJA1R0M50	C 704	CKSYB105K16
C 204	CEJA1R0M50	C 705	CKSYB104K16
C 205	CEJA4R7M35	C 706	CKSQYB472K50
C 206	CEJA4R7M35	C 707	CEJA4R7M35
C 207	CEJA100M16	C 708	CKSQYB104K16
C 208	CEJA100M16	C 709	CCSQCH220J50
C 209	CKSQYB822K50	C 710	CCSQCH220J50
C 210	CKSQYB822K50	C 711	CKSQYB104K16
C 211	CEJA1R0M50	C 712	CEJA4R7M35
C 212	CEJA1R0M50	C 713	CKSQYB223K25
C 213	CKSQYB183K25	C 714	CEJA4R7M35
C 214	CKSQYB183K25	C 715	CKSQYB103K25
C 215	CKSQYB102K50	C 716	CKSQYB103K25
C 216	CKSQYB102K50	C 721	CKSQYB471K50
C 217	CEJA2R2M50	C 722	CKSQYB223K25
C 218	CEJA2R2M50	C 723	CEAL2R2M50
C 219	CKSQYB333K25	C 724	CEJA2R2M50
C 220	CKSQYB333K25	C 751	CEJA1R0M50
C 221	CEJA220M10	C 752	CEJA1R0M50
C 222	CEJA220M10	C 753	CEJA1R0M50
C 223	CKSQYF104Z25	C 754	CEJA1R0M50
C 226	CKSQYB102K50	C 755	CEJA100M16
C 229	CEJA2R2M50	C 756	CEJA100M16
C 230	CEJA2R2M50	C 757	CKSQYB102K50
C 309	CCH1018	C 758	CKSQYB104K16
C 310	CKSQYB104K16	C 951	CCH1183
C 311	CKSYB224K16	C 952	CEJA470M10
C 312	CKSQYB224K16	C 953	CEAS101M10
C 313	CKSQYB224K16	C 954	CKSQYB103K25
C 314	CKSQYB224K16	C 956	CKSQYB103K25
C 315	CEJA100M16	C 957	CKSQYB103K25
C 316	CKSQYB224K16	C 958	CEAS101M10
C 317	CEJA1R0M50	C 959	CKSYB103K50
C 318	CEJA330M10	<div style="border: 1px solid black; padding: 2px; display: inline-block; font-weight: bold; font-size: 1.2em;">A</div> Unit Number : CWM5655(KEH-P4510/X1M/EE) Unit Name : Tuner Amp Unit	
C 401	CKSQYB223K25		
C 402	CKSYB273K25	MISCELLANEOUS	
C 406	CCSQL101J50	IC 201	IC SN761027DL
C 407	CKSQYB102K50	IC 301	TDA7384A
C 408	CEJA220M16	IC 401	PM2006A
C 409	CKSQYB103K25	IC 601	PD4874A
C 410	CEJA220M6R3	IC 604	S-80734AN
C 411	CEJA220M16	IC 751	TA2050S
C 412	CKSQYB103K25	IC 752	HA12187FP
C 413	CKSQYB103K25	IC 951	TPD1018F
C 414	CCH1250	Q 206	DTA124EK
C 415	CKSQYB103K25	Q 207	DTC143TK
C 416	CKLSR473K16	Q 208	DTC143TK
C 418	CKSQYB103K25	Q 301	DTC124EK
C 420	CKSQYB103K25	Q 302	2SC1740S
C 421	CKSQYB103K25	Q 401	2SC2412K
C 422	CEJA220M6R3	Q 406	2SC2412K
C 423	CKSQYB102K50	Q 407	2SK330
C 424	CCH1250	Q 601	2SC2412K
C 425	CKSQYB103K25	Q 602	2SC2412K
C 426	CEJAR47M50	Q 609	2SA933S
C 428	CKSQYB103K25	Q 751	2SA1037K
C 429	CCSQCH150J50	Q 752	DTC114EK
C 430	CCSQCH150J50	Q 951	2SD2396
C 431	CCSQL101J50	Q 952	2SD2037
C 432	CKSQYB103K25	Q 953	2SA933S
C 439	CKSQYB223K25	Q 954	DTC114EK
C 440	CKSQYB223K25	Q 955	2SA1674
C 441	CKSQYB223K25	Q 956	2SA1048
C 442	CKSQYB102K50	Q 957	DTC114TK
C 606	CEJA100M16	Q 958	DTC114TK
C 612	CEAL2R2M50	Q 959	2SC2412K
C 613	CKSYB102K50	Q 960	DTC114TK
C 614	CCSQL101J50	Q 961	2SB1243
C 615	CEJA4R7M35	D 301	1SS270
C 616	CKSQYB103K25	D 402	1SS270
C 622	CEJA220M10	D 403	1SS270
C 624	CKSQYB102K50		
C 701	CKSQYF104Z25		

KEH-P4500R,P4530R,P4510

====Circuit Symbol and No.====	Part Name	Part No.	====Circuit Symbol and No.====	Part Name	Part No.
D 404	Diode	RD3R0ES(B2)	R 428		RD1/4PU102J
D 405	Diode	HZS9L(B3)	R 429		RD1/4PU102J
D 601	Diode	HZS7L(C2)	R 430		RD1/4PU102J
D 602	Diode	HZS7L(A1)	R 431		RS1/10S472J
D 603	Diode	1SS270	R 432		RS1/10S0R0J
D 615	Diode	1SS270	R 433		RS1/10S104J
D 616	Diode	1SS270	R 434		RD1/4PU222J
D 617	Diode	1SS270	R 435		RS1/10S0R0J
D 618	Diode	1SS270	R 436		RS1/10S683J
D 619	Diode	1SS270	R 437		RS1/10S0R0J
D 620	Diode	1SS270	R 438		RS1/10S0R0J
D 621	Diode	1SS270	R 439		RD1/4PU102J
D 622	Diode	HZS7L(A1)	R 440		RS1/8S102J
D 951	Diode	1SR139-400	R 442		RS1/10S102J
D 952	Diode	1SR139-400	R 443		RS1/10S102J
D 953	Diode	1SR139-400	R 444		RS1/10S102J
D 954	Diode	1SR139-400	R 445		RS1/10S102J
D 955	Diode	1SR139-400	R 446		RS1/10S102J
D 956	Diode	HZS6L(B2)	R 447		RD1/4PU391J
D 957	Diode	HZS9L(B3)	R 448		RS1/10S472J
D 958	Diode	1SS270	R 449		RS1/8S0R0J
D 959	Diode	HZS9L(A2)	R 450		RS1/10S680J
L 401	Ferri-Inductor	LAU2R2K	R 601		RS1/10S223J
L 403	Ferri-Inductor	LAU2R2K	R 602		RS1/10S473J
L 601	Ferri-Inductor	LAU2R2K	R 603		RS1/10S473J
L 602	Ferri-Inductor	LAU2R2K	R 604		RS1/10S223J
L 603	Ferri-Inductor	LAU2R2K	R 605		RS1/10S473J
L 751	Ferri-Inductor	LAU2R2K	R 606		RS1/10S473J
L 951		CTH1171	R 608		RD1/4PU0R0J
X 401	Crystal Resonator 7.200MHz	CSS1379	R 610		RD1/4PU0R0J
X 631	Ceramic Resonator 4.194MHz	CSS1047	R 629		RS1/10S0R0J
RESISTORS					
R 201		RS1/10S821J	R 631		RS1/10S473J
R 202		RS1/10S821J	R 633		RS1/10S473J
R 205		RS1/8S333J	R 637		RD1/4PU102J
R 206		RS1/10S333J	R 638		RS1/10S124J
R 207		RS1/10S152J	R 639		RD1/4PU222J
R 208		RS1/10S152J	R 640		RS1/10S223J
R 209		RS1/10S272J	R 641		RD1/4PU222J
R 210		RS1/10S272J	R 642		RS1/10S103J
R 211		RS1/10S151J	R 643		RS1/8S222J
R 212		RS1/10S151J	R 646		RS1/8S222J
R 213		RS1/10S221J	R 647		RS1/8S222J
R 214		RS1/10S221J	R 648		RD1/4PU222J
R 223		RS1/10S473J	R 649		RS1/10S222J
R 224		RS1/10S473J	R 650		RD1/4PU222J
R 229		RS1/10S392J	R 651		RD1/4PU222J
R 230		RS1/10S392J	R 652		RD1/4PU222J
R 301		RD1/4PU103J	R 653		RS1/10S222J
R 302		RS1/10S221J	R 654		RS1/10S473J
R 303		RS1/10S153J	R 655		RS1/10S473J
R 304		RS1/10S103J	R 656		RS1/10S473J
R 305		RS1/10S152J	R 657		RS1/10S473J
R 306		RS1/10S101J	R 658		RS1/10S473J
R 307		RS1/10S562J	R 659		RS1/10S392J
R 308		RS1/8S223J	R 660		RS1/10S472J
R 401		RS1/10S162J	R 661		RD1/4PU472J
R 402		RS1/10S162J	R 662		RS1/10S222J
R 404		RS1/10S222J	R 663		RS1/10S222J
R 405		RS1/10S222J	R 665		RD1/4PU102J
R 407		RS1/10S0R0J	R 667		RS1/10S102J
R 408		RS1/10S562J	R 668		RS1/8S0R0J
R 409		RS1/10S222J	R 670		RS1/8S0R0J
R 410		RS1/10S102J	R 695		RS1/10S472J
R 411		RS1/10S472J	R 717		RS1/10S473J
R 412		RS1/10S152J	R 719		RS1/10S473J
R 413		RS1/10S472J	R 751		RS1/10S181J
R 417		RS1/10S562J	R 752		RS1/10S181J
R 418		RS1/10S222J	R 753		RS1/10S223J
R 420		RS1/10S392J	R 754		RS1/10S223J
R 421		RS1/10S102J	R 755		RS1/10S102J
R 422		RS1/10S392J	R 756		RS1/10S102J
R 423		RS1/10S472J	R 757		RS1/10S102J
R 424		RS1/10S473J	R 758		RS1/10S102J
R 425		RS1/10S472J	R 759		RS1/10S473J
R 426		RS1/8S473J	R 760		RS1/10S473J
R 427		RD1/4PU102J			

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 761	RS1/10S102J	C 423	CKSQYB102K50
R 762	RS1/10S101J	C 424	CCH1250
R 763	RS1/10S101J	C 425	CKSQYB103K25
R 764	RS1/10S620J	C 426	CEJAR68M50
R 765	RS1/10S223J	C 429	CCSQCH150J50
R 766	RS1/10S472J	C 430	CCSQCH150J50
R 767	RS1/10S222J	C 431	CCSQSL101J50
R 768	RS1/10S0R0J	C 432	CKSQYB103K25
R 951	RS1/10S473J	C 435	CEJA101M10
R 952	RD1/4PU102J	C 436	CKSQYB103K25
R 953	RD1/4PU471J	C 437	CFTLA474J50
R 954	RD1/4PU101J	C 438	CKSQYB103K25
R 955	RS1/10S472J	C 441	CKSQYB473K16
R 956	RS1/10S473J	C 442	CKSQYB102K50
R 957	RS1/10S102J	C 606	CEJA100M16
R 958	RS1/10S473J	C 612	CEAL2R2M50
R 959	RS1/10S102J	C 614	CCSQSL101J50
R 960	RS1/8S103J	C 615	CEJA4R7M35
R 961	RS1/10S1R0J	C 616	CKSQYB103K25
R 962	RS1/10S103J	C 623	CEJA220M10
R 963	RS1/10S223J	C 624	CKSQYB102K50
R 964	RS1/10S152J	C 751	CEJA1R0M50
R 965	RS1/10S0R0J	C 752	CEJA1R0M50
R 967	RS1/10S473J	C 753	CEJA1R0M50
R 968	RS1/10S102J	C 754	CEJA1R0M50
R 970	RD1/4PU152J	C 755	CEJA100M16
		C 756	CEJA100M16
		C 757	CKSQYB102K50
		C 758	CKSQYB104K16
		C 951	CCH1183
CAPACITORS			
C 201	CEJA2R2M50	C 952	CEJA470M10
C 202	CEJA2R2M50	C 953	CEAS101M10
C 203	CEJA1R0M50	C 954	CKSQYB103K25
C 204	CEJA1R0M50	C 956	CKSQYB103K25
C 205	CEJA4R7M35	C 957	CKSQYB103K25
C 206	CEJA4R7M35		
C 207	CEJA100M16		
C 208	CEJA100M16	C 958	CEAS101M10
C 209	CKSQYB822K50	C 959	CKSYB103K50
C 210	CKSQYB822K50	C 960	CKSQYB223K25
C 211	CEJA1R0M50		
C 212	CEJA1R0M50		
C 213	CKSQYB183K25		
C 214	CKSQYB183K25		
C 215	CKSQYB102K50		
C 216	CKSQYB102K50	IC 901	IC PD6195A
C 217	CEJA2R2M50	IC 902	IC SBX8035-H
C 218	CEJA2R2M50	D 901	Chip Diode MA151WK
C 219	CKSQYB333K25	D 902	Diode MA151WA
C 220	CKSQYB333K25	D 903	LED See Contrast table
C 221	CEJA220M10	L 901	Ferri-Inductor LAU101K
C 222	CEJA220M10	X 901	Ceramic Resonator 4.97MHz CSS1422
C 223	CKSQYF104Z25	S 901	Switch CSG1081
C 229	CEJA2R2M50	S 902	Switch CSG1081
C 230	CEJA2R2M50	S 903	Push Switch CSG1093
C 309	CCH1018	S 904	Push Switch CSG1093
C 310	CKSQYB104K16	S 905	Push Switch CSG1093
C 311	CKSYB224K16	S 906	Push Switch CSG1093
C 312	CKSQYB224K16	S 907	Push Switch CSG1093
C 313	CKSQYB224K16	S 908	Push Switch CSG1093
C 314	CKSQYB224K16	S 909	Push Switch CSG1093
C 315	CEJA100M16	S 910	Push Switch CSG1093
C 316	CKSQYB224K16	S 911	Push Switch CSG1093
C 317	CEJA1R0M50	S 912	Switch CSG1081
C 318	CEJA330M10	S 913	Push Switch CSG1093
C 401	CKSQYB223K25	S 914	Push Switch CSG1093
C 402	CKSYB273K25	S 915	Switch CSG1081
C 406	CCSQSL101J50	S 916	Push Switch CSG1093
C 407	CKSQYB102K50	S 917	Switch CSG1081
C 408	CEJA220M16	S 918	Switch CSG1081
C 409	CKSQYB103K25	S 919	Push Switch CSG1093
C 410	CEJA220M6R3	S 920	Push Switch CSG1093
C 411	CEJA220M16	S 921	Push Switch CSG1093
C 412	CKSQYB103K25	IL 901	Lamp 14V 40mA See Contrast table
C 413	CKSQYB103K25	IL 902	Lamp 14V 40mA See Contrast table
C 416	CKLSR473K16		
C 418	CKSQYB103K25		
C 420	CKSQYB103K25		
C 421	CKSQYB103K25		
C 422	CEJA220M6R3		

D Unit Number : CWM5656(KEH-P4500R/X1M/EW)
Unit Name : Keyboard Unit

MISCELLANEOUS

IC 901	IC	PD6195A
IC 902	IC	SBX8035-H
D 901	Chip Diode	MA151WK
D 902	Diode	MA151WA
D 903	LED	See Contrast table
L 901	Ferri-Inductor	LAU101K
X 901	Ceramic Resonator 4.97MHz	CSS1422
S 901	Switch	CSG1081
S 902	Switch	CSG1081
S 903	Push Switch	CSG1093
S 904	Push Switch	CSG1093
S 905	Push Switch	CSG1093
S 906	Push Switch	CSG1093
S 907	Push Switch	CSG1093
S 908	Push Switch	CSG1093
S 909	Push Switch	CSG1093
S 910	Push Switch	CSG1093
S 911	Push Switch	CSG1093
S 912	Switch	CSG1081
S 913	Push Switch	CSG1093
S 914	Push Switch	CSG1093
S 915	Switch	CSG1081
S 916	Push Switch	CSG1093
S 917	Switch	CSG1081
S 918	Switch	CSG1081
S 919	Push Switch	CSG1093
S 920	Push Switch	CSG1093
S 921	Push Switch	CSG1093
IL 901	Lamp 14V 40mA	See Contrast table
IL 902	Lamp 14V 40mA	See Contrast table

KEH-P4500R,P4530R,P4510

====Circuit Symbol and No.====Part Name	Part No.
IL 903 Lamp 14V 40mA	See Contrast table
IL 904 Lamp 14V 40mA	See Contrast table
IL 905 Lamp 14V 40mA	See Contrast table
LCD 901 LCD	See Contrast table

RESISTORS

R 901	RS1/10S222J
R 902	RS1/10S222J
R 903	RS1/10S472J
R 904	RS1/10S121J
R 905	RS1/10S470J
R 906	RS1/10S470J
R 907	RS1/10S2R2J
R 908	RS1/10S473J
R 909	RS1/10S473J
R 910	RS1/10S473J
R 911	RS1/10S473J
R 912	RS1/10S473J
R 913	RS1/10S473J
R 915	RS1/4S821J

CAPACITORS

C 901	CEAL100M16
C 902	CKSQYF104Z25
C 903	CEAL100M16

C Unit Number : EWM10102
Unit Name : Deck Unit

MISCELLANEOUS

IC 251	IC	HA12197F
IC 351	IC	PA2020A
Q 351	Transistor	2SB1260
Q 352	Transistor	2SC4102
Q 401	Transistor	DTC114EU
D 351	Diode	1SS355

RESISTORS

R 255	RS1/16S181J
R 256	RS1/16S181J
R 257	RS1/16S183J
R 258	RS1/16S183J
R 259	RS1/16S133J
R 260	RS1/16S133J
R 261	RS1/16S274J
R 262	RS1/16S274J
R 263	RS1/16S163J
R 264	RS1/16S163J
R 265	RS1/16S163J
R 266	RS1/16S163J
R 271	RS1/16S183J
R 281	RS1/8S0R0J
R 282	RS1/8S0R0J
R 283	RS1/8S0R0J
R 284	RS1/8S0R0J
R 285	RS1/16S0R0J
R 286	RS1/16S0R0J
R 289	RS1/8S0R0J
R 290	RS1/8S0R0J
R 351	RS1/16S102J
R 352	RS1/16S102J
R 353	RS1/16S102J
R 354	RS1/16S102J

====Circuit Symbol and No.====Part Name	Part No.
R 355	RS1/10S274J
R 356	RS1/10S202J
R 357	RS1/10S472J
R 358	RS1/10S103J
R 359	RS1/10S103J

R 360	RS1/10S102J
R 361	RS1/10S622J
R 362	RS1/8S181J
R 373	RS1/8S0R0J
R 374	RS1/8S0R0J

R 375	RS1/8S0R0J
R 401	RS1/16S123J
R 402	RS1/16S332J
R 403	RS1/16S911J
R 404	RS1/16S274J

R 421	RS1/8S0R0J
-------	------------

CAPACITORS

C 251	CKSRYB391K50
C 252	CKSRYB391K50
C 253	CKSRYB391K50
C 254	CKSRYB391K50
C 255	CKSRYB103K50

C 256	CKSRYB103K50
C 271	CEJA1R0M50
C 272	CKSQYB104K16
C 301	CKSYB474K16
C 302	CKSYB474K16

C 303	CKSQYB104K16
C 304	CKSQYB104K16
C 351	CKSYB224K25
C 352	CKSQYB392K50
C 353	CKSQYB103K50

C 354	CKSQYB473K50
C 355	CKSYB104K50
C 356	CKSQYB103K50
C 401	CKSRYB472K50
C 402	CEJA1R0M50

C 403	CKSRYB223K25
C 404	CKSRYB103K50
C 405	CKSRYB333K16

E Unit Number :
Unit Name : PCB Unit

S 1	Switch (Load)	ESG1004
S 2	Switch (70µS)	ESG1004
EGN 1	Photo-Interrupter	EGN1005

F Unit Number :
Unit Name : Reel PCB

EGN 2	Photo-Interrupter	EGN1006
EGN 3	Photo-Interrupter	EGN1006

Miscellaneous Parts List

M 1	Motor Unit (Main)	EXA1464
M 2	Motor Unit (Sub)	EXA1485
HD 1	Head Assy	EXA1506

CONTRAST TABLE of KEYBOARD UNIT

KEH-P4500R/X1M/EW,KEH-P4530R/X1M/EW and KEH-P4510/X1M/EE have the same construction except for the following:

Symbol and Description	Part No.		
	KEH-P4500R/X1M/EW	KEH-P4530R/X1M/EW	KEH-P4510/X1M/EE
Keyboard Unit	CWM5656	CWM5657	CWM5658
D 903 Diode	QLMP-6577	QLMJ-P014	QLMP-6577
IL 901,902 Lamp 14V 40mA	CEL1547	CEL1477	CEL1547
IL 903,904,905 Lamp 14V 40mA	CEL1549	CEL1508	CEL1549
LCD 901 LCD	CAW1383	CAW1391	CAW1410

6. ADJUSTMENT

● Connection Diagram (KEH-P4500R/X1M/EW, P4530R/X1M/EW)

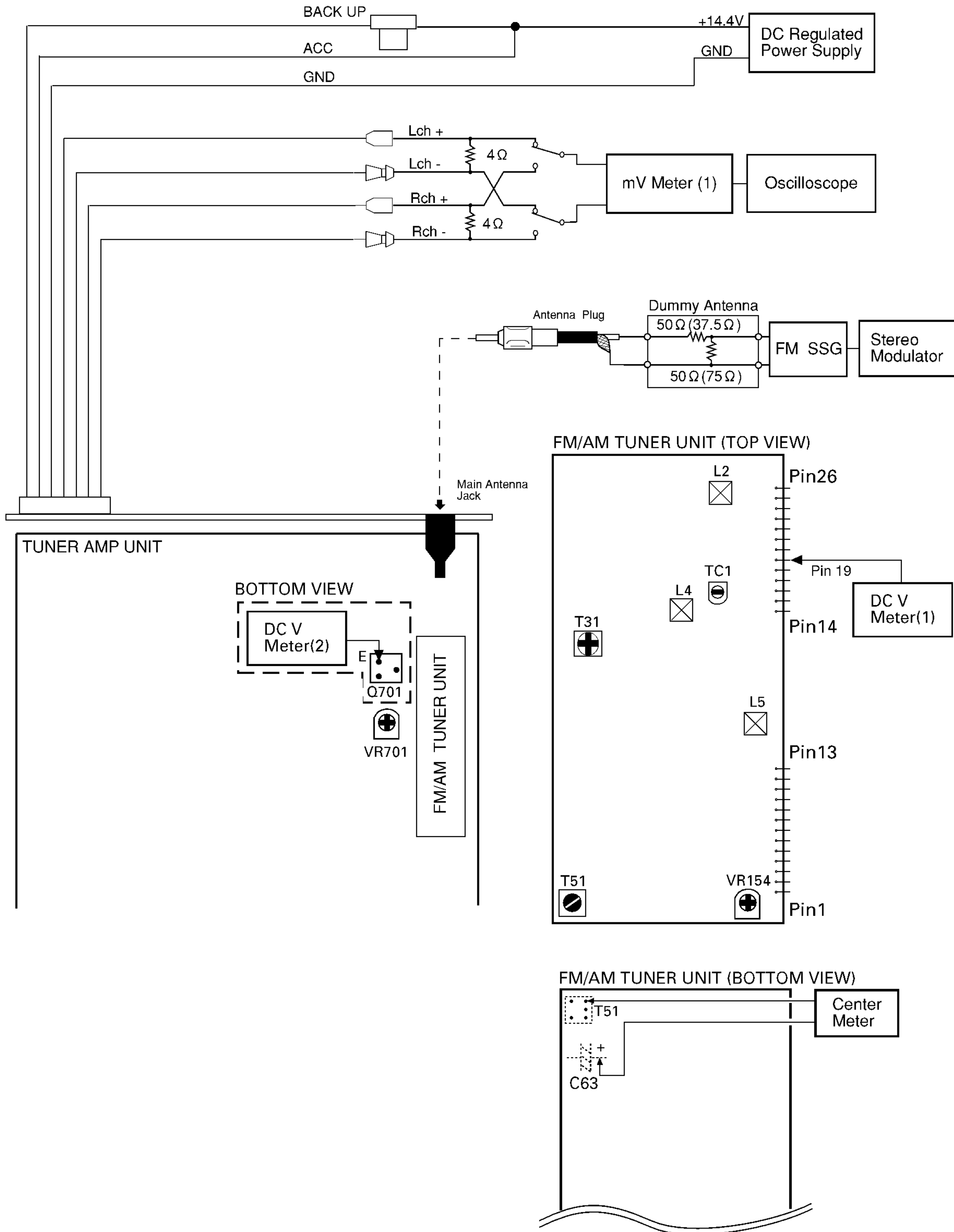


Fig. 28

● **KEH-P4500R/X1M/EW, P4530R/X1M/EW**

FM ADJUSTMENT

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)

S1:STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)

S2:STEREO MOD., 400Hz, L or R=60%(40.50kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	.....	.....	108.0	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
Image	5	129.3 M	60—80	107.9	TC1	mV Meter(1) : Minimum
IFT	6	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	7	98.1 S1	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

RDS SL ADJUSTMENT

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
	1	104.0 S2	35	104.0	VR701	DC V Meter(2) : 1.75V±0.05V

● **For Repair of the Detach Grille Assy, Use the Extension-Cord Tool GGD1056.**

● **For Repair of the Cassette Mechanism Module, Use the Extension-Cord Tool GGD1121.**

KEH-P4500R, P4530R, P4510

● Connection Diagram (KEH-P4510/X1M/EE)

NOTE:

Select C1 so that total capacity of 80pF is attained from the direction of the receiver jack.

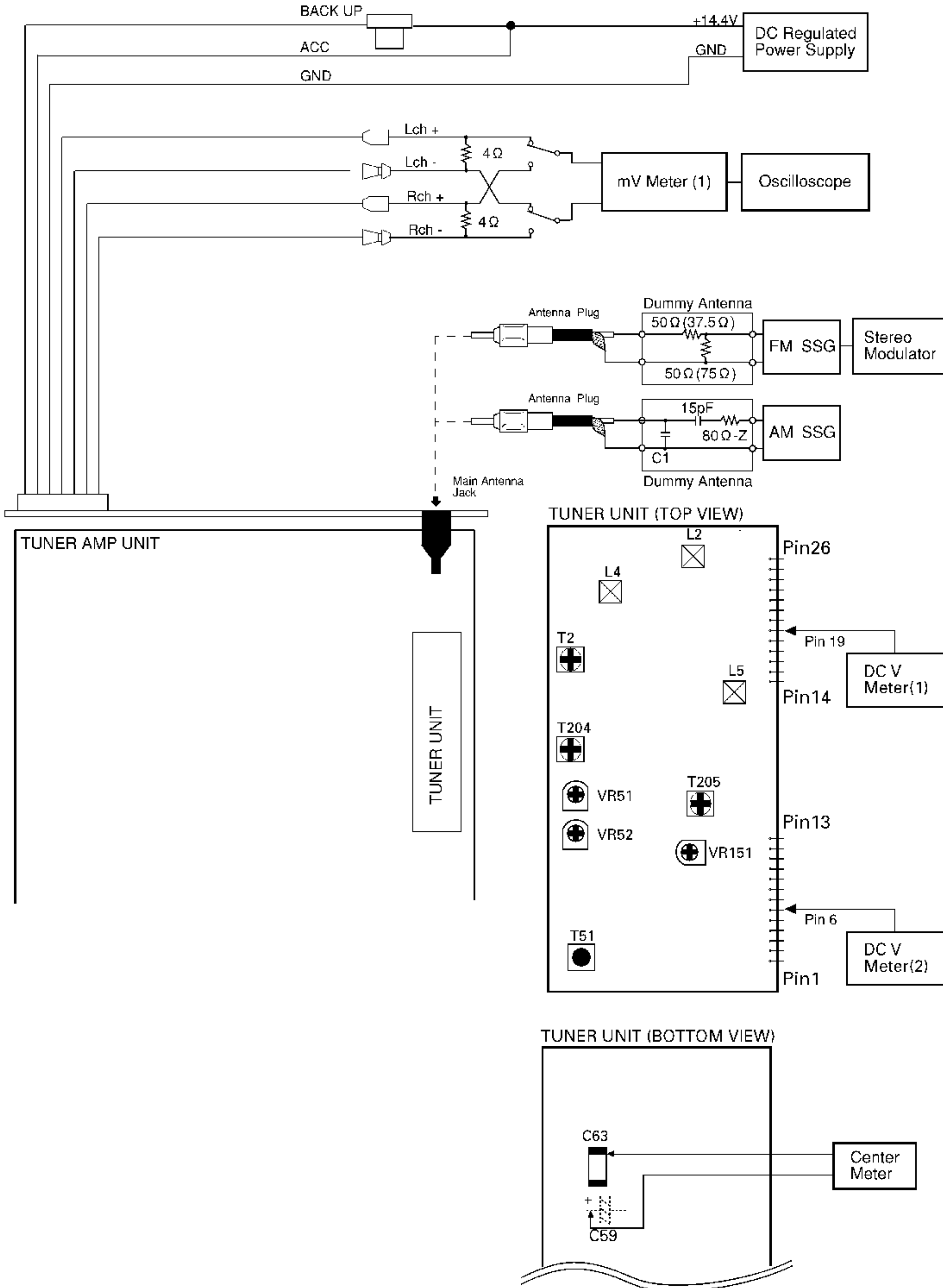


Fig. 29

● **KEH-P4510/X1M/EE**

FM ADJUSTMENT

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)

S:STEREO MOD., 1kHz, L or R=100%(67.5kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	108.0 M	65	108.0	L5	DC V Meter(1) : 8.0V±0.1V
IF	1	98.1 M	65	98.1	T51	Center Meter : 0
ANT,RF	1	106.1 M	10	106.1 M	L2,L4	mV Meter(1) : Maximum
IFT	1	98.1 M	10	98.1	T2	mV Meter(1) : Maximum (STEREO MODE)
Soft Mute	1	98.1 M	65	98.1	—	mV Meter(1) : Maximum (STEREO MODE)
	2	98.1 M	10	98.1	VR52	mV Meter(1) : A-3dB
ARC	1	98.1 S	40	98.1	VR151	mV Meter(1) : Separation 5dB
SD	1	98.1 S	22	98.1	VR51	DC V Meter(2) : Approx. 5V

AM ADJUSTMENT

	No.	AM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
IF	1	999	20	999	T204,T205	mV Meter(1) : Maximum

● **For Repair of the Detach Grille Assy, Use the Extension-Cord Tool GGD1056.**

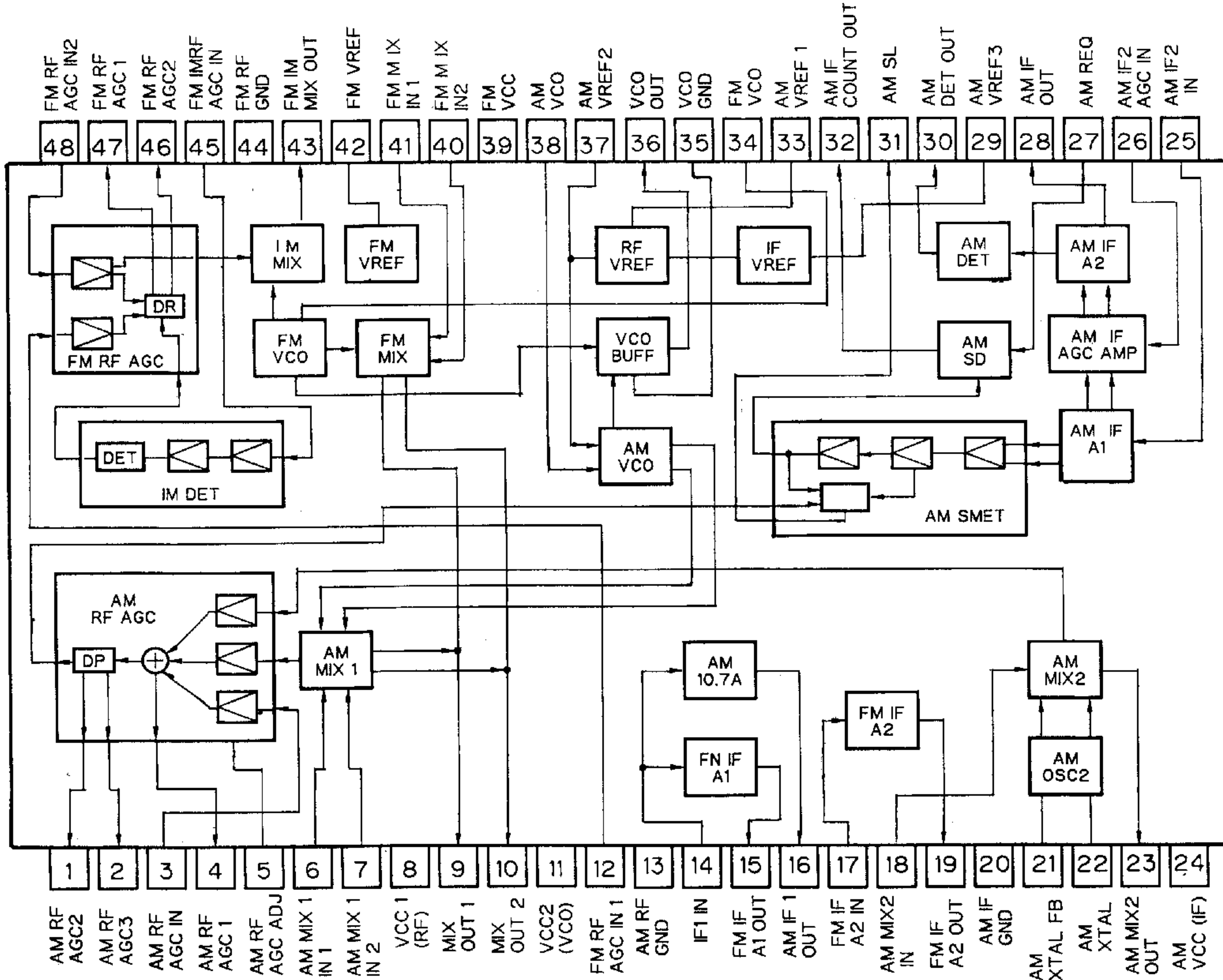
● **For Repair of the Cassette Mechanism Module, Use the Extension-Cord Tool GGD1121.**

7. GENERAL INFORMATION

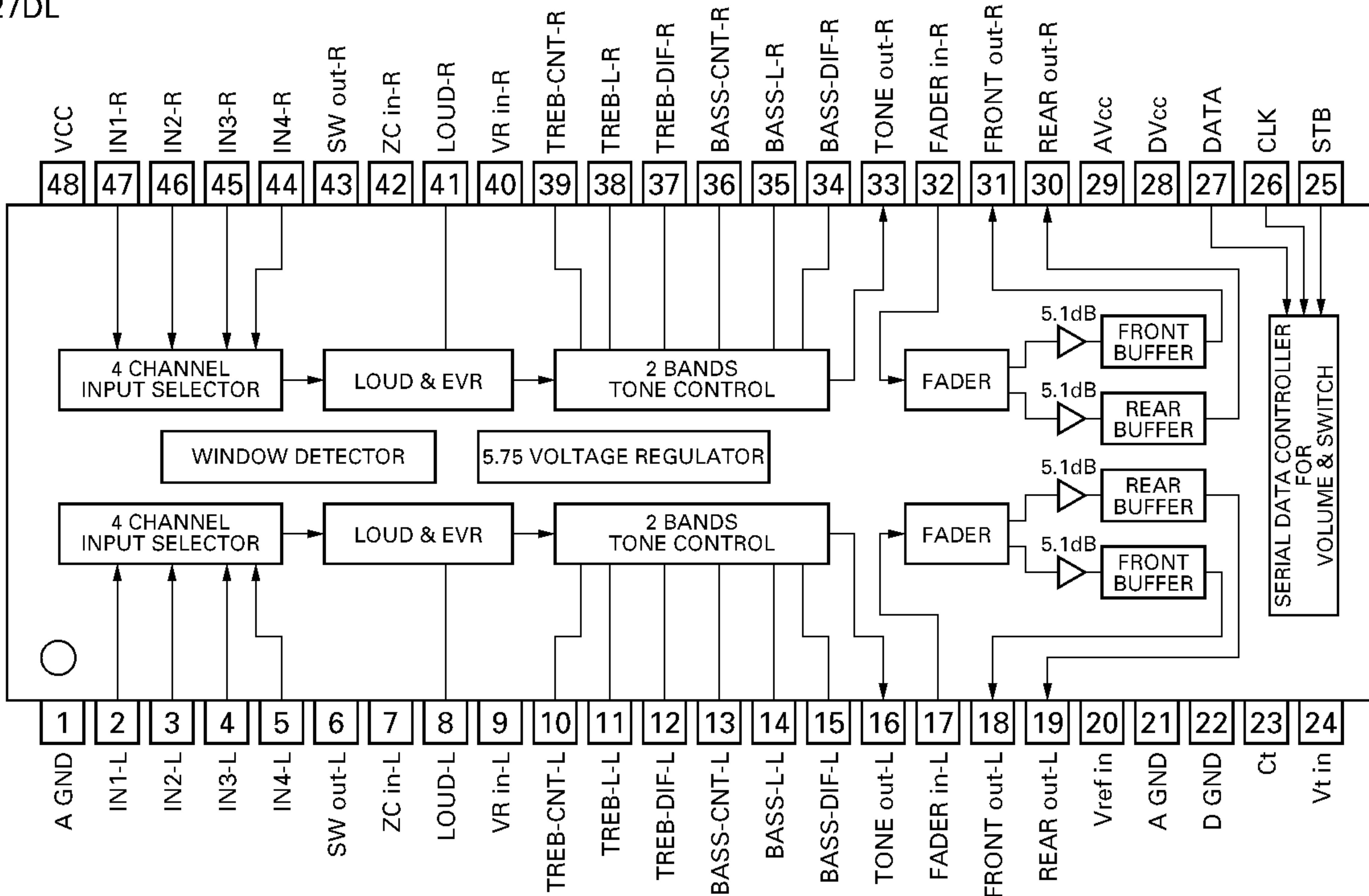
7.1 PARTS

7.1.1 IC

PA4023B



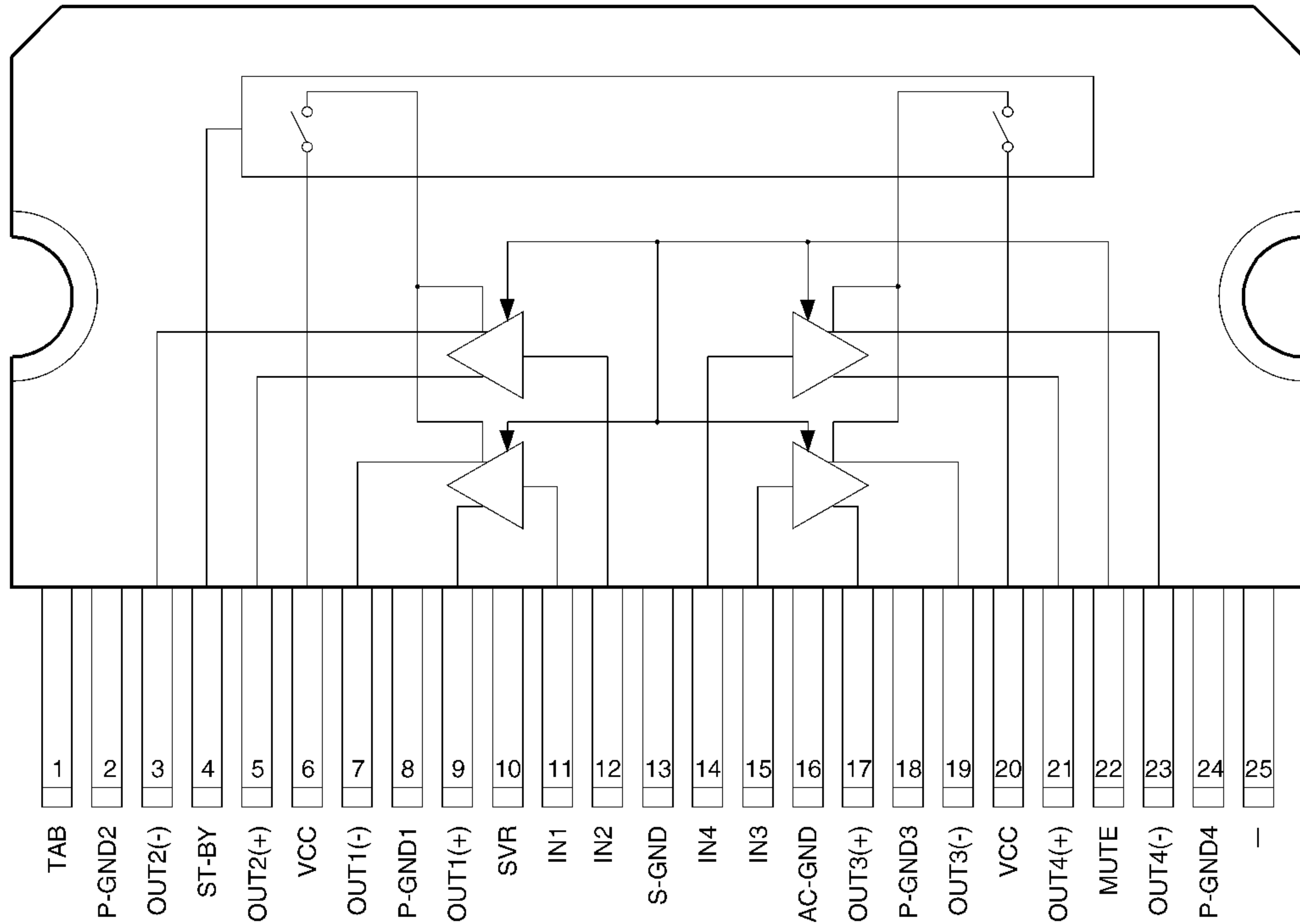
*SN761027DL



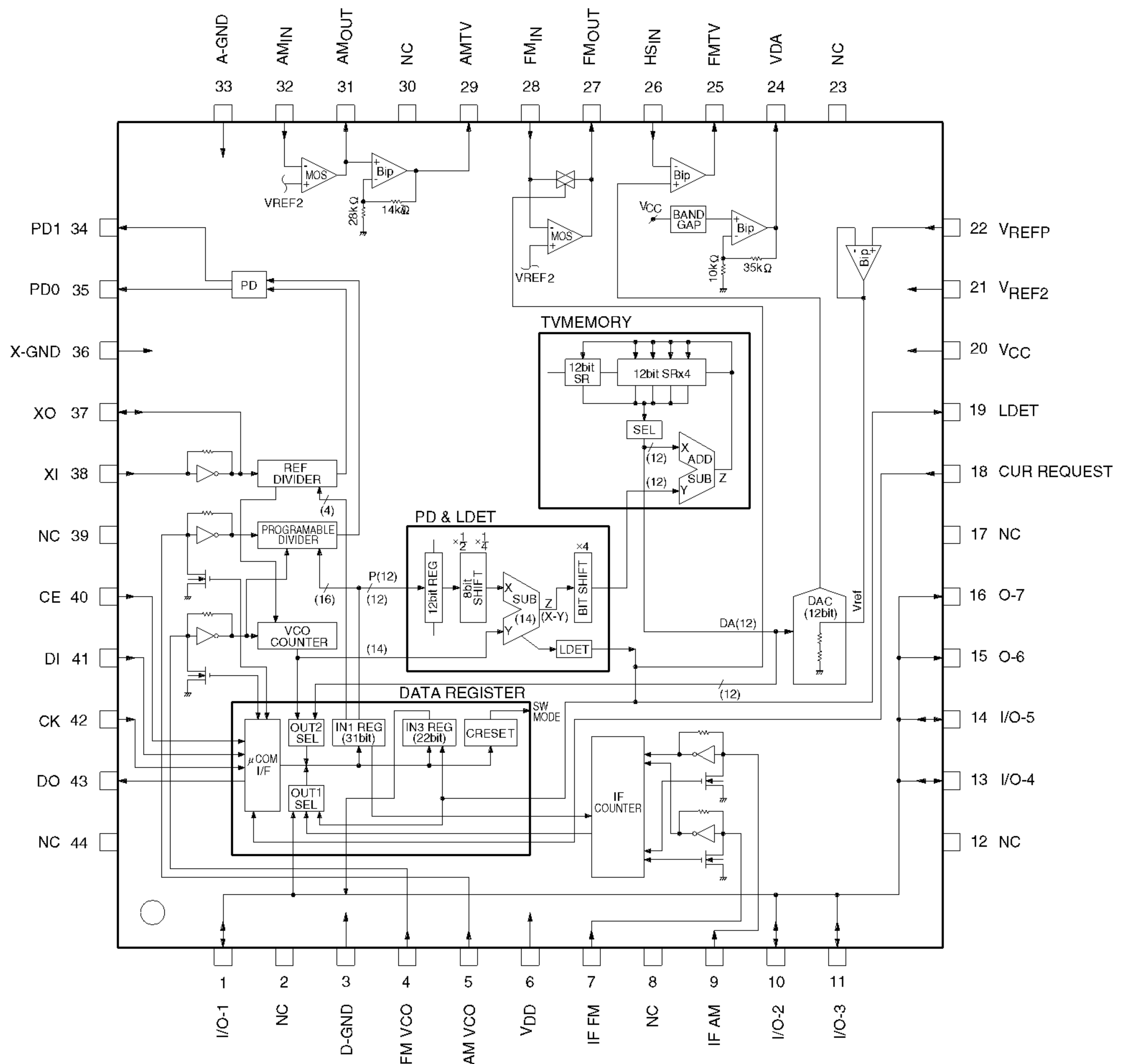
IC's marked by* are MOS type.

Be careful in handling them because they are very liable to be damaged by electrostatic induction.

TDA7384A



*PM2006A,*PM2007A



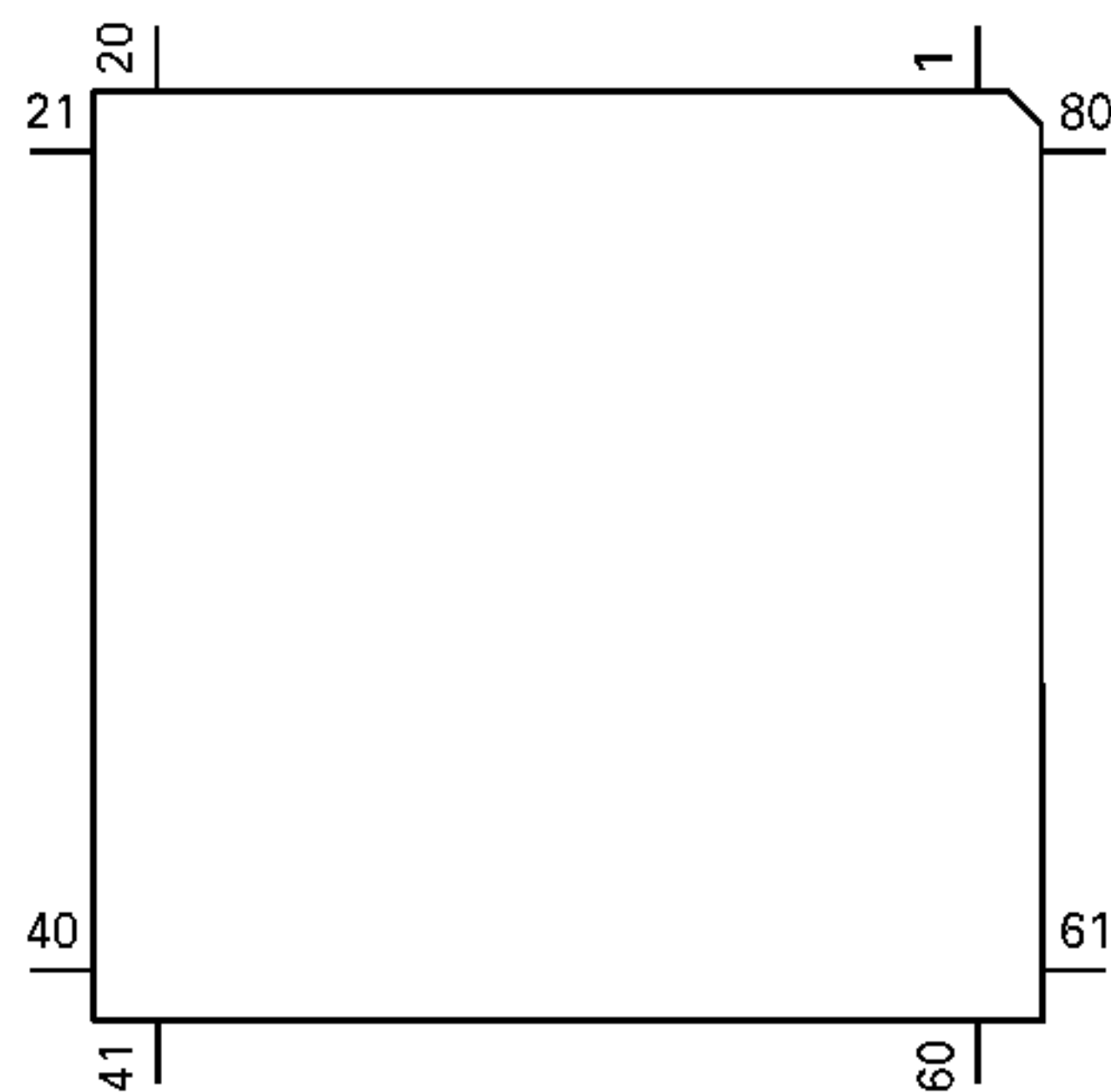
KEH-P4500R,P4530R,P4510

● Pin Functions (PD4873A:EW,PD4874A:EE)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	ASENB	O	C	ASENB output
2	NC			Not used
3	ADPW	O	C	Control output for analog input reference power
4	AVSS			A/D GND
5	FIEOUT	O	C	LPF switch
6	ST	I		FM stereo input
7	AVREF1			(D/A converter standard voltage)
8	KYDT	I		Key data input
9	DPDT	O	C	Key data output
10	SWVDD	O	C	Grille power supply control output
11	TUNPD1	I		PLL IC data input
12	TUNPD0	O	C	PLL IC data output
13	TUNPCK	O	C	PLL IC clock
14	TUNPCE	O	C	PLL IC chip enable
15	CURRRQ	O	C	Tuner voltage FIX output
16	NC			Not used
17	TX2	O	C	IP BUS data output
18	NC			Not used
19	RECIIVE	O	C	RDS decoder receive output
20	NC			Not used
21	EORR	O	C	CorrectRDS error output
22	VST	O	C	Strobe pulse output for electronic volume
23	VCK	O	C	Clock output for electronic volume
24	VDT	O	C	Data output for electronic volume
25	NC			Not used
26	DRSYS	O	C	Door system select output
27	DRSENS	I		Door open/close sense input
28	ILPW	O	C	Illumination power
29	FM	O	C	FM power control output
30	AM	O	C	AM power control output
31	NR	O	C	Cassette mechanism noise reduction output
32	CM	O	C	Cassette mechanism capstan motor control output
33	VSS			GND
34	SC2	O	C	Cassette mechanism sub motor control output
35	SC1	O	C	Cassette mechanism sub motor control output
36	MSIN	I		Cassette mechanism MS sense input
37	MUTCNT			GND
38	MTL	I		Cassette mechanism tape select input
39	DLED	O	N	Alarm LED output
40	N/R	O	C	Normal reverse input
41	PLAY	O	C	MS gain select output
42	LOADSW	I		Tape loading input
43	POS	I		Cassette mechanism position sense input
44	RES	I		Cassette mechanism reverse end sense input
45	PEE	O	C	Beep tone output
46	NES	I		Cassette mechanism forward end sense input
47	RDS57K	I		57kHzBP-OUT sense input
48	STBY	O	C	Stand-by output terminal
49	SK	I		SK signal input
50	DRST	O	C	RDS decoder reset output
51	TMUTE	O	C	Tuner mute output
52	NC			Not used
53	SD	I		SD input
54	MUTE	O	C	System mute output
55	SYSPW	O	C	System power supply control output
56	TX1	O	C	IP-BUS output
57	RX	I		IP-BUS input

Pin No.	Pin Name	I/O	Format	Function and Operation
58	RDSLK	I		RDSLK input
59	RDT	I		RDS data input
60	RESET	I		Reset input
61	RX	I		IP BUS input
62	NC			Not used
63	$\overline{\text{DSENS}}$	I		Grille detach sense
64	NC			Not used
65	$\overline{\text{ASENS}}$	I		ACC power sense input
66	$\overline{\text{BSENS}}$	I		Back up power sense input
67	CKIN	I		Clock input
68	VDD			Power supply
69	X2			Crystal oscillator connection pin
70	X1			Crystal oscillator connection pin
71	IC			GND
72	NC			Not used
73	TESTIN	I		Test program mode input
74	AVDD			Positive power supply terminal for analog circuit
75	AVREF0			GND
76	SL	I		SD level input from tuner
77	CL	I		Synchronizing signal input of display data latch
78	NL	I		RDS noise level input
79	TL	I		Trigger level input
80	NC			Not used

*PD4873A,PD4874A



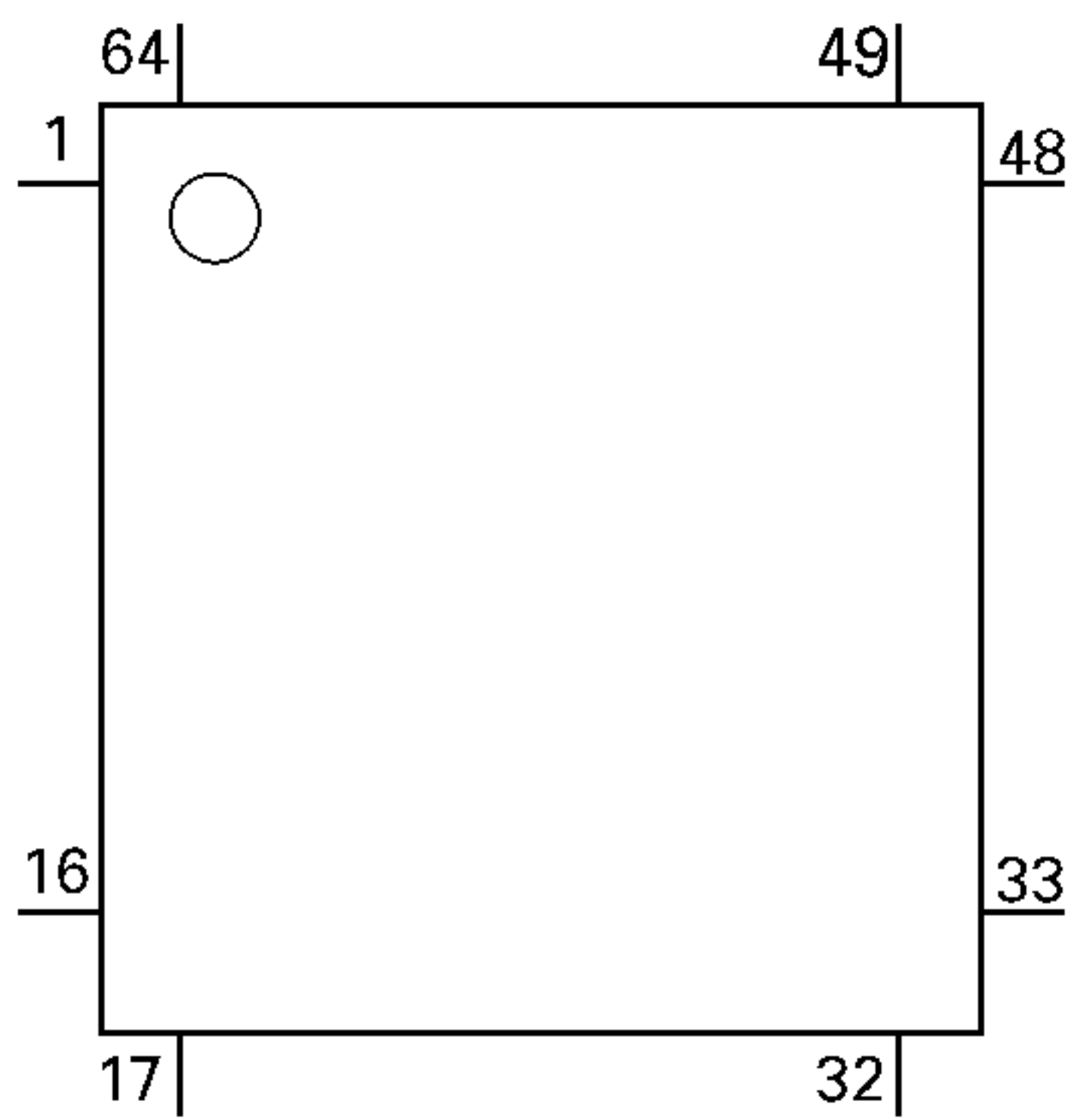
Format	Meaning
C	C MOS
N	N channel open drain

KEH-P4500R,P4530R,P4510

● Pin Functions (PD6195A)

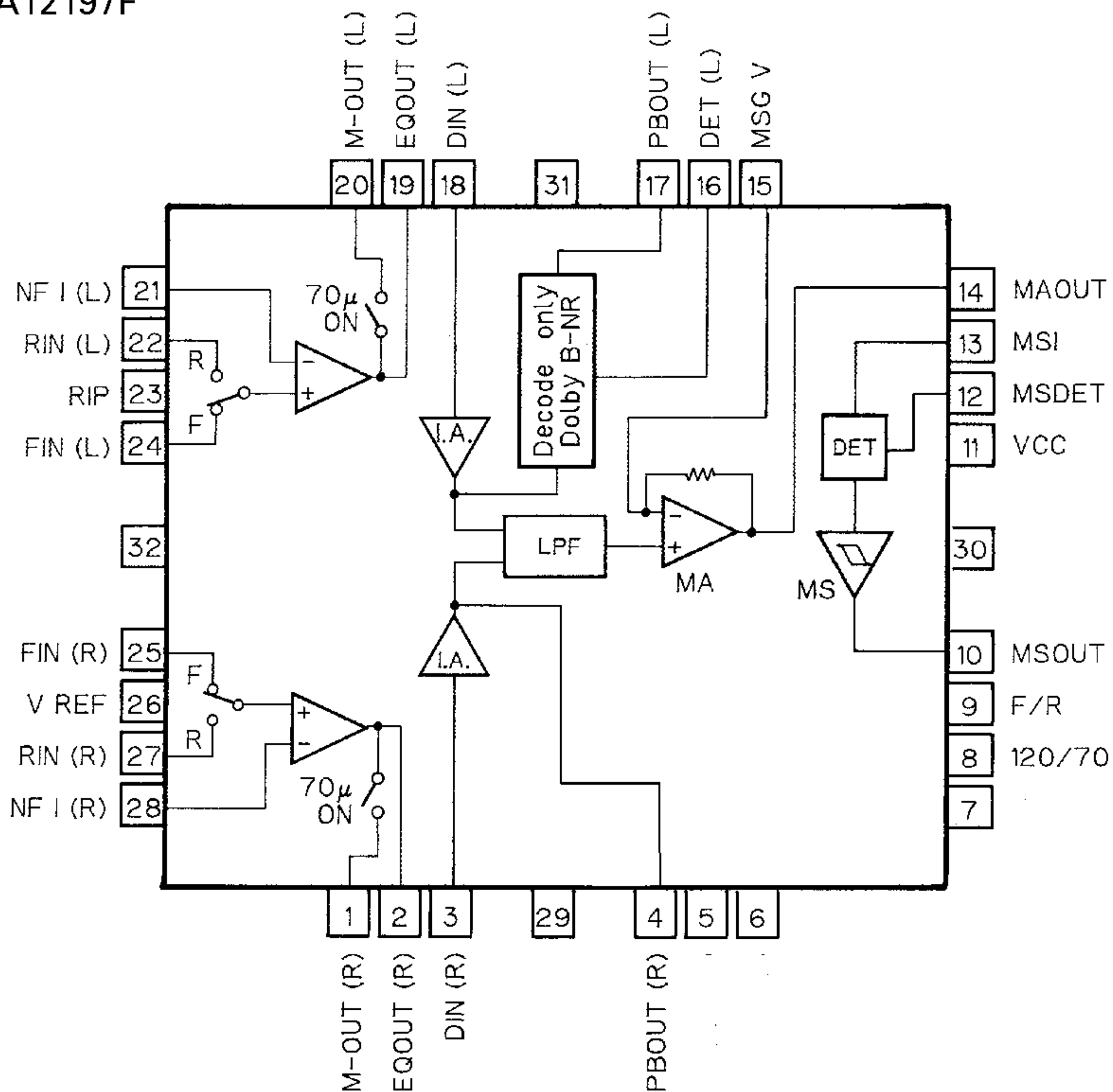
Pin No.	Pin Name	I/O	Format	Function and Operation
1-5	SEG4-0	O		LCD segment output
6-9	COM3-0	O		LCD Common driver output
10	LCDB			LCD bias power supply
11-14	KS4-1	O	N	Key strobe output
15,16	KD0,1	I		Key data input
17	REM	I		Remote control reception
18	DPDT	I		UART input
19	RST	I		System reset
20	SO	O	C	UART output
21	KYDT			(VSS)
22	X0			Crystal oscillator connection pin
23	X1			Crystal oscillator connection pin
24	VSS			GND
25,26	KD2,3	I		Key data input
27,28	KS5,4	O	N	Key strobe output
29-55	SEG39-13	O		LCD segment output
56	VDD			Power
57-64	SEG12-5	O		LCD segment output

*PD6195A



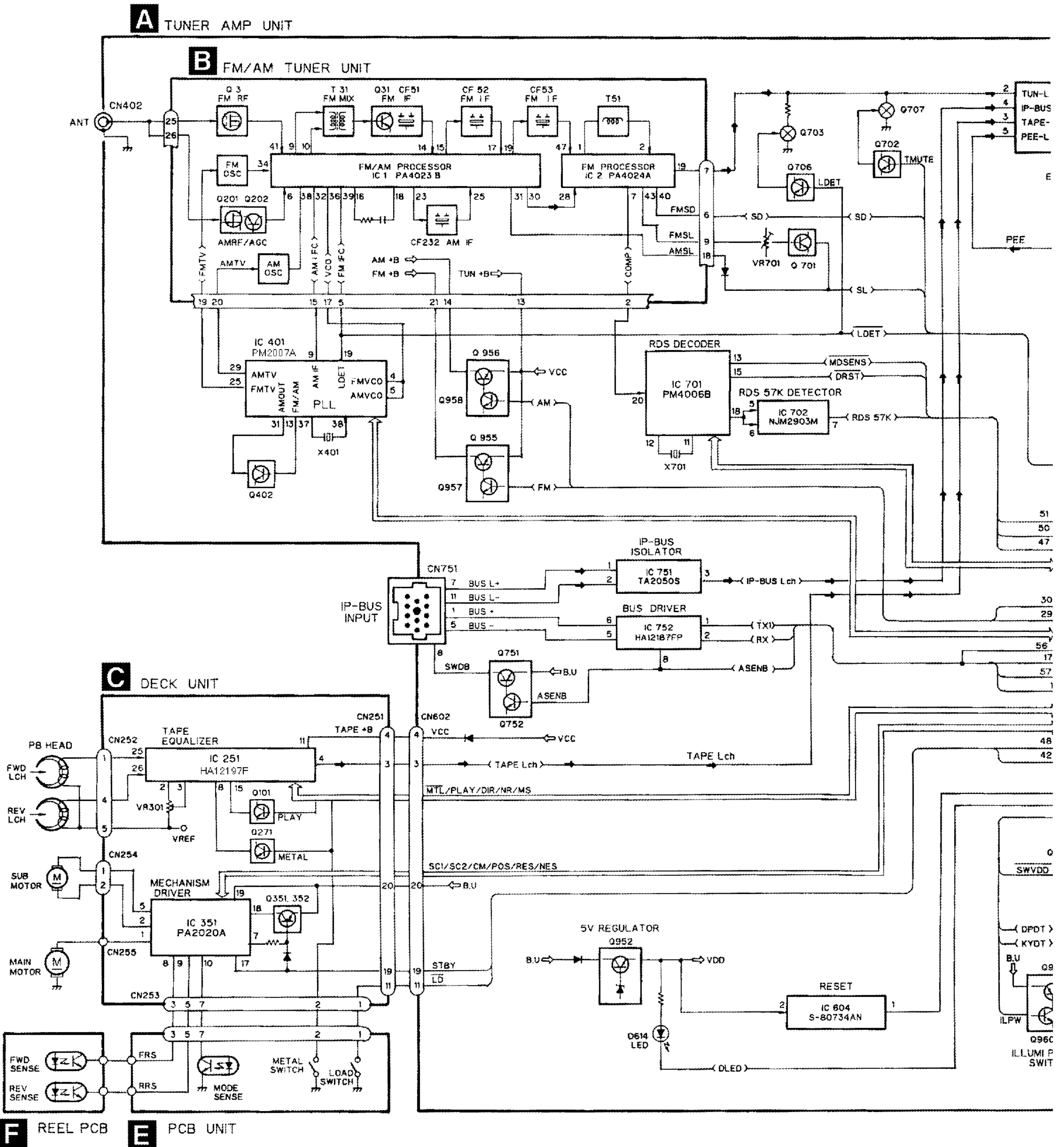
Format	Meaning
C	C MOS
N	N channel open drain

HA12197F



7.3 BLOCK DIAGRAM

● KEH-P4500R/X1M/EW



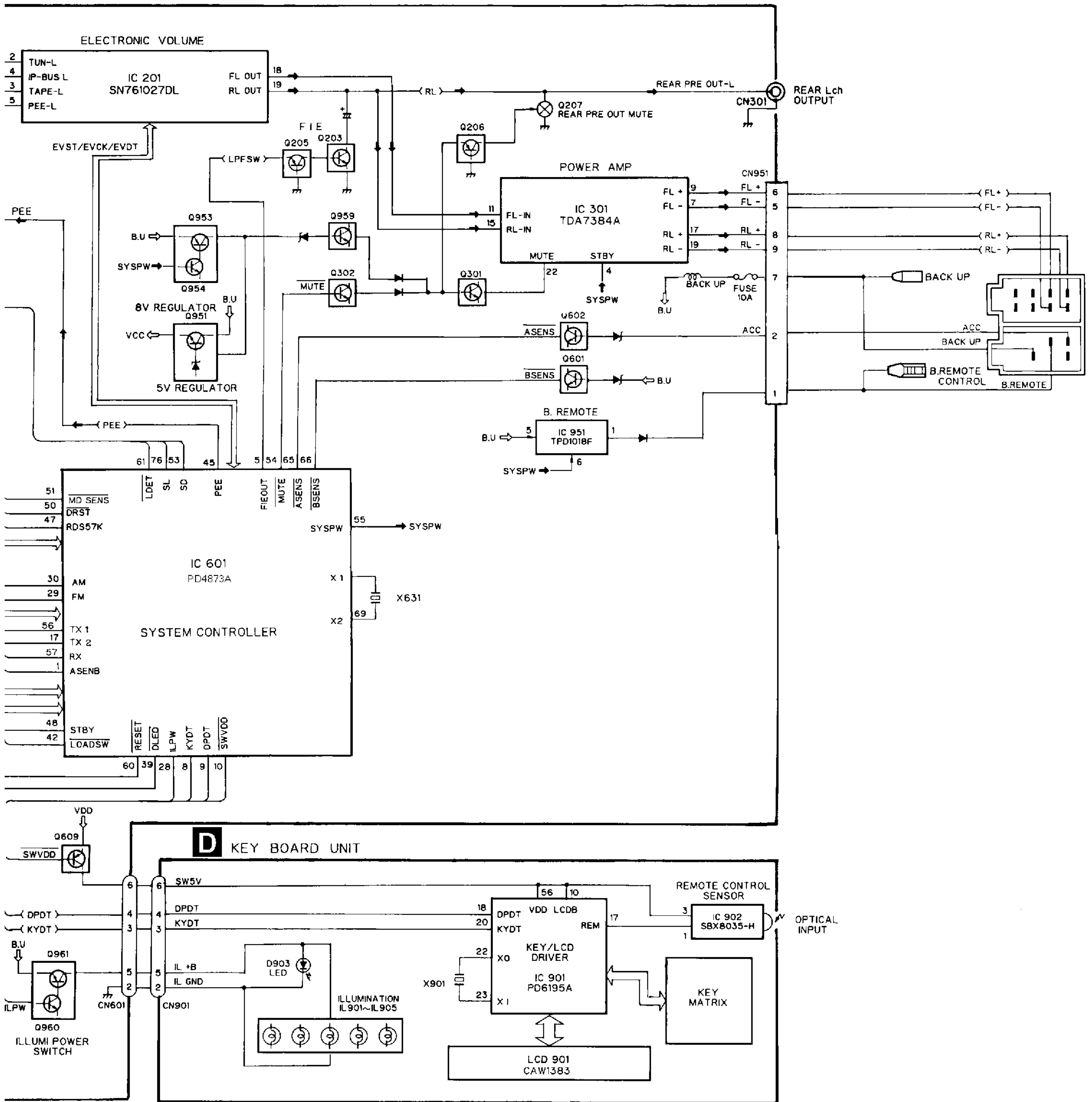
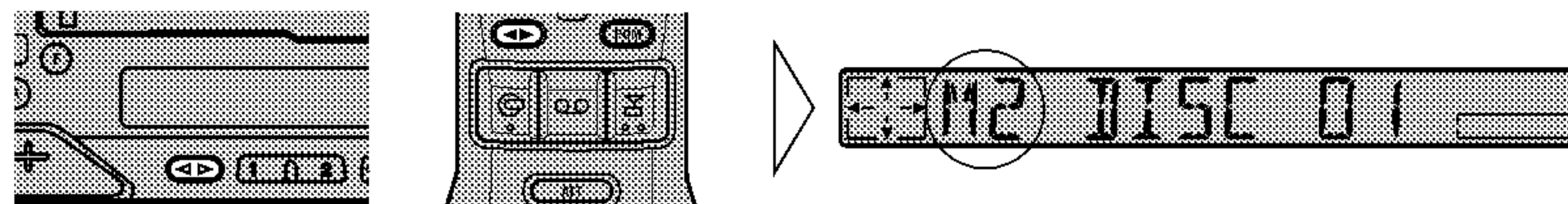


Fig. 37

Switching the Multi-CD Player

It is possible to connect up to three multi-CD players by means of a multiple installation adapter. When two or more multi-CD players are installed, their priorities must be specified. Follow the multi-CD player instructions carefully, and set the address switches properly.

- Select the multi-CD player you want to use.



M1 → M2 → M3

Disc Number Search

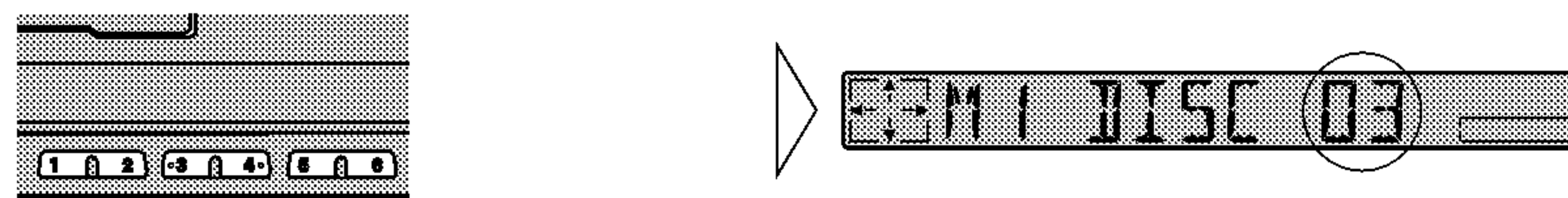
■ Disc Number Search (for 6-Disc, 12-Disc types)

You can select discs directly with the 1 to 6 buttons. Just press the number corresponding to the disc you want to listen to.

Note:

- When a 12-Disc Multi-CD Player is connected and you want to select disc 7 to 12, press the 1 to 6 buttons for 2 seconds or longer.

- Select the desired disc. (eg. Press button 3.)



■ Disc Number Rough Search (for 50-Disc type only)

This handy function lets you select discs loaded in a 50-Disc Multi-CD Player using the 1 to 5 buttons. The 50 discs are divided into five blocks, with each of the 1 to 5 buttons assigned to a block.

For example, if you press button 1, discs 10 through 19 are searched in order, and then the disc with the lowest disc number is selected.

Note:

- Pressing button 5 lets you select the 50th disc only.
- Button 6 does not operate.
- Rough search of discs 1 to 9 is not possible. Use the ▲/▼ buttons to select a desired disc.

Specifications

General

Power source	14.4 V DC (10.8 – 15.1 V allowable)
Grounding system	Negative type
Max. current consumption	8.5 A
Dimensions	
(mounting size)	178 (W) × 50 (H) × 150 (D) mm
(front face)	188 (W) × 58 (H) × 19 (D) mm
Weight	1.2 kg

Amplifier

Maximum power output	35 W × 4
Continuous power output	22 W × 4 (DIN45324, +B = 14.4 V)
Load impedance	4 Ω (4 – 8 Ω allowable)
Preout output level/output impedance	500 mV/1 kΩ
Tone controls	
(Bass)	±12 dB (100 Hz)
(Treble)	±12 dB (10 kHz)
Loudness contour	+10 dB (100 Hz), +7 dB (10 kHz) (volume: -30 dB)

Cassette player

Tape	Compact cassette tape (C-30 – C-90)
Tape speed	4.7 cm/sec. (+0.14cm/sec., -0.05cm/sec.)
Fast forward/rewinding time	Approx. 100 sec. for C-60
Wow & flutter	0.09% (WRMS)
Frequency response	30 – 16,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	61 dB (IEC-A network)

FM tuner

Frequency range	
(KEX-P400R, P4530R)	87.5 – 108 MHz
(KEX-P4510)	65 – 74 MHz
	87.5 – 108 MHz
Usable sensitivity	
	11 dBf (1.0 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 – 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)

MW tuner

Frequency range	531 – 1,602 kHz
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (±9 kHz)

LW tuner

Frequency range	153 – 281 kHz
Usable sensitivity	30 μV (30 dB) (S/N: 20 dB)
Selectivity	50 dB (±9 kHz)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.