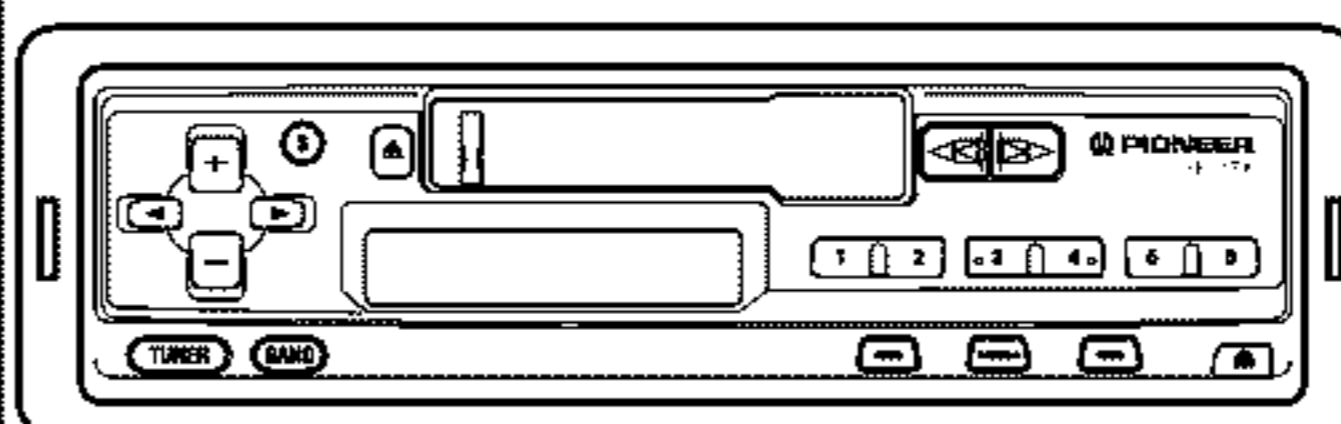


# Service Manual

**PIONEER®**  
The Art of Entertainment

KEH-1700/X1M/EW



ORDER NO.  
**CRT2133**

HIGH POWER CASSETTE PLAYER WITH FM/MW/LW TUNER

# KEH-1700

**X1M/EW**

# KEH-1730

**X1M/EW**

## NOTE:

- See the separate manual CRT2145 for the cassette mechanism description.

## CONTENTS

1. SAFETY INFORMATION .....	2	7. GENERAL INFORMATION .....	34
2. EXPLODED VIEWS AND PARTS LIST .....	2	7.1 PARTS .....	34
3. SCHEMATIC DIAGRAM .....	10	7.1.1 IC .....	34
4. PCB CONNECTION DIAGRAM .....	19	7.1.2 DISPLAY .....	37
5. ELECTRICAL PARTS LIST .....	27	7.2 DISASSEMBLY .....	38
6. ADJUSTMENT .....	32	7.3 BLOCK DIAGRAM .....	39
		8. OPERATIONS AND SPECIFICATIONS .....	40

**PIONEER ELECTRONIC CORPORATION** 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan  
**PIONEER ELECTRONICS SERVICE INC.** P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.  
**PIONEER ELECTRONIC [EUROPE] N.V.** Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium  
**PIONEER ELECTRONICS ASIACENTRE PTE.LTD.** 501 Orchard Road, #10-00, Wheelock Place, Singapore 238880

© PIONEER ELECTRONIC CORPORATION 1997

K-ZEM. DEC.1997 Printed in Belgium

## 1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

## 2. EXPLODED VIEWS AND PARTS LIST

### 2.1 PACKING

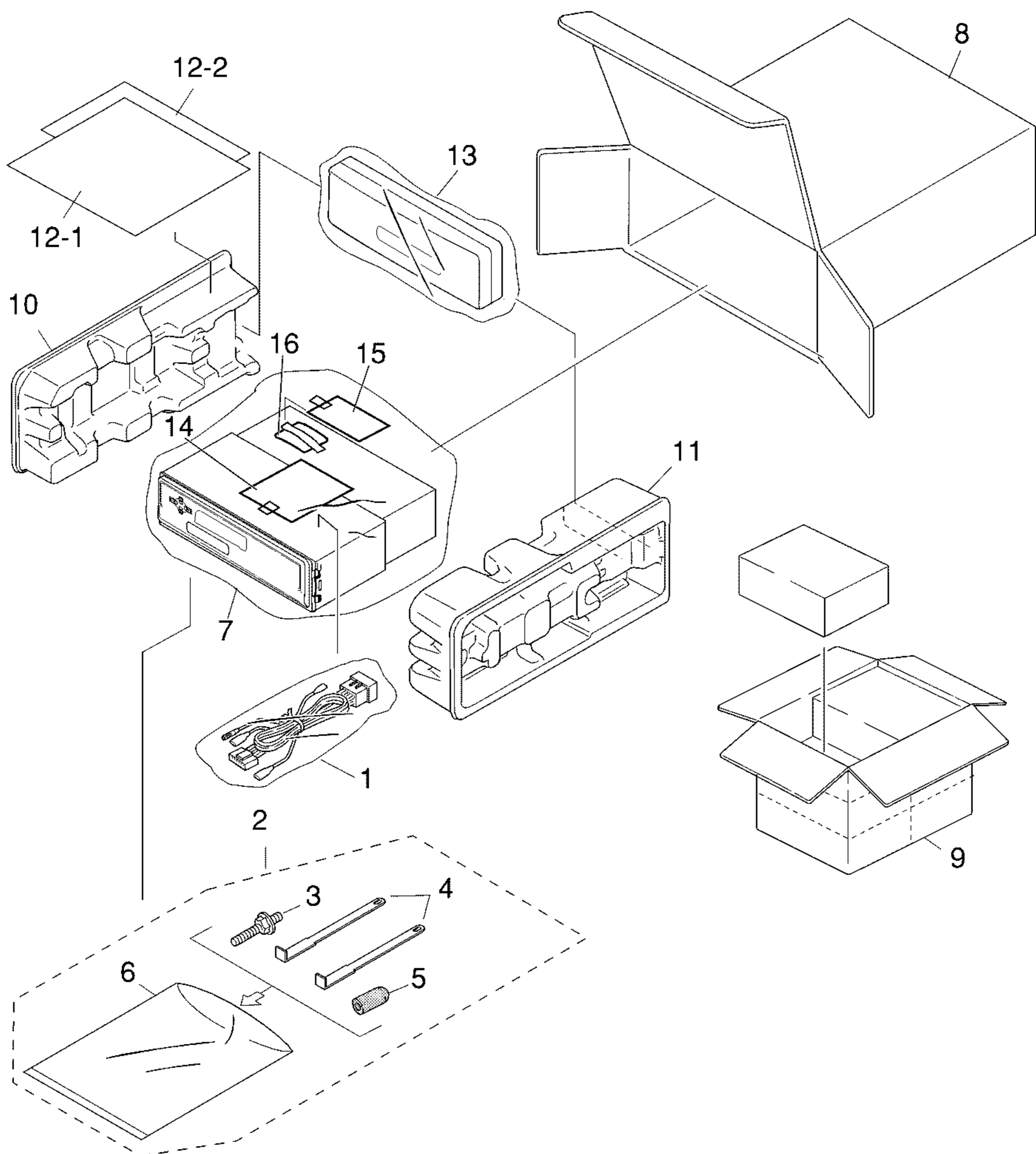


Fig. 1

**NOTE:**

- Parts marked by "\*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

**● PACKING SECTION PARTS LIST**

Mark	No.	Description	Part No.	
			KEH-1700/X1M/EW	KEH-1730/X1M/EW
	1	Cord Assy	CDE5498	CDE5498
	2	Accessory Assy	CEA2397	CEA2397
	3	Screw	CBA1002	CBA1002
	4	Handle(x2)	CNC5395	CNC5395
	5	Bush	CNV3930	CNV3930
*	6	Polyethylene Bag	E36-615	E36-615
	7	Polyethylene Bag	CEG-162	CEG-162
	8	Carton	CHG3452	CHG3453
	9	Contain Box	CHL3452	CHL3453
	10	Protector	CHP1622	CHP1622
	11	Protector	CHP1623	CHP1623
	12-1	Owner's Manual	CRD2552	CRD2552
*	12-2	Warranty Card	CRY1087	CRY1087
	13	Case Assy	CXB1063	CXB1063
*	14	Caution Card	CRP1174	CRP1174
*	15	Caution Card	CRP1176	CRP1176
*	16	Silica Gel	AEN7001	AEN7001

**● Owner's Manual**

Part No.	Language
CRD2552	English,Spanish,German French,Italian,Dutch

## 2. EXPLODED VIEWS AND PARTS LIST

### 2.1 EXTERIOR

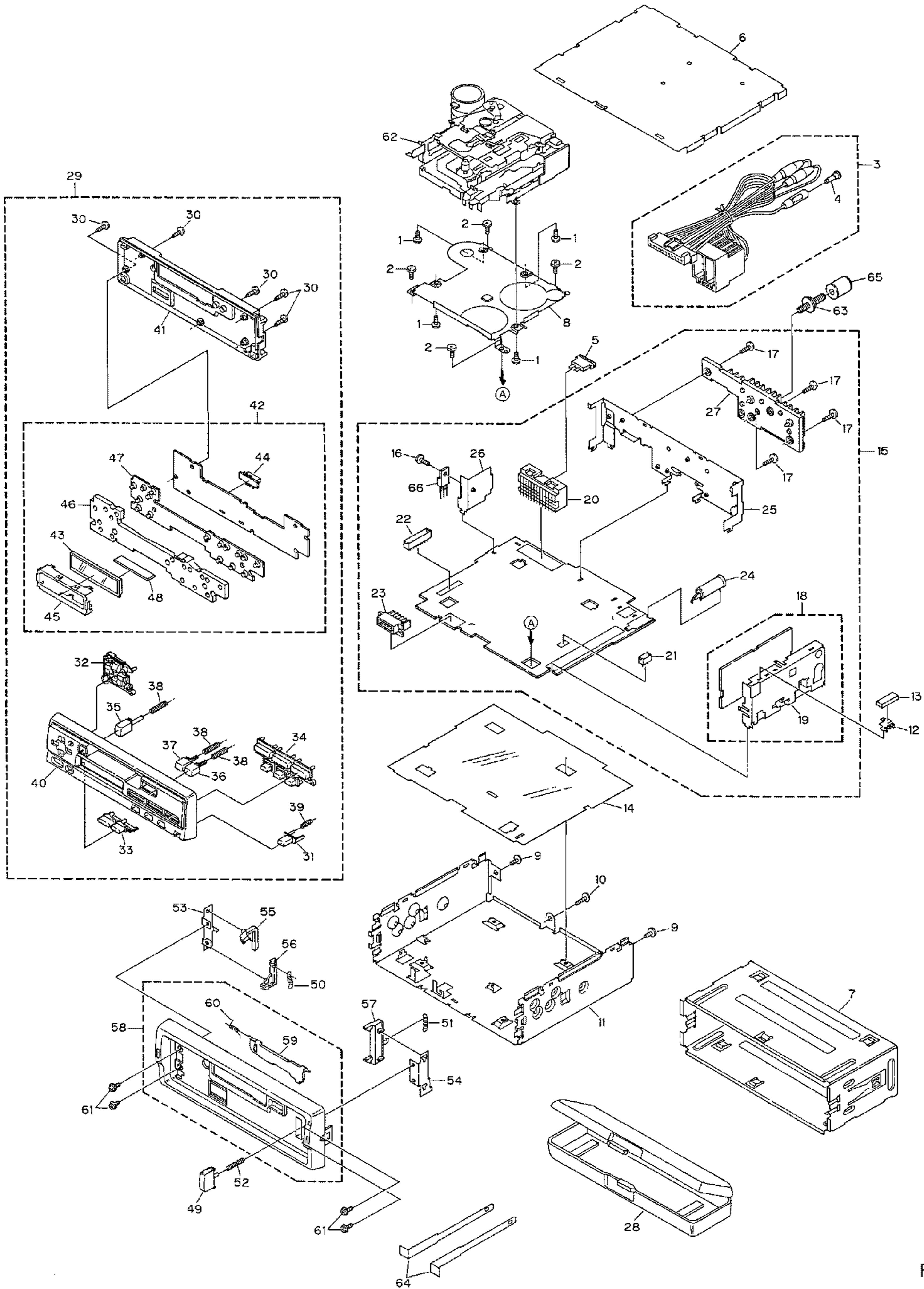




Fig. 2

## (1) EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ26P040FMC	36	Button(FF)	See Contrast table(2)
2	Screw	BSZ30P050FMC	37	Button(REW)	See Contrast table(2)
3	Cord Assy	CDE5498	38	Spring	CBH2074
4	Terminal Cover	CKX-003	39	Spring	CBH2103
5	Fuse	CEK1136	40	Grille	See Contrast table(2)
6	Case	CNB2251	41	Cover	See Contrast table(2)
7	Holder	CNC6798	42	Keyboard Unit	See Contrast table(2)
8	Holder	CNC7450	43	LCD(LCD901)	CAW1462
9	Screw	BSZ30P050FMC	44	Connector(CN901)	CKS3580
10	Screw	BSZ30P120FMC	45	Holder	CNC7313
11	Chassis	CNA1978	46	Lighting Conductor	CNV5105
12	Holder	CNC5704	47	Rubber	CNV5194
13	Cushion	CNM4870	48	Connector	CNV5209
14	Insulator	CNM5564	49	Button	CAC4836
15	Tuner Amp Unit	CWM5703	50	Spring	CBH1834
16	Screw	BSZ30P080FMC	51	Spring	CBH1835
17	Screw	BSZ30P100FMC	52	Spring	CBH1996
18	FM/AM Tuner Unit	CWE1466	53	Bracket	CNC6135
19	Holder	CNC6554	54	Bracket	CNC6791
20	Plug(CN601)	CKM1270	55	Arm	CNV4692
21	Plug(CN604)	CKS-567	56	Arm	CNV4693
22	Plug(CN605)	CKS-572	57	Arm	CNV4728
23	Connector(CN902)	CKS3581	58	Panel Unit	See Contrast table(2)
24	Antenna Jack(CN501)	CKX1056	59	Door	CAT1765
25	Panel	CNB2252	60	Spring	CBH2126
26	Holder	CNC7470	61	Screw	IMS20P030FZK
27	Heat Sink	CNR1460	62	Mechanism Assy	CZX3050
28	Case Assy	CXB1063	63	Screw	CBA1002
29	Detach Grille Assy	See Contrast table(2)	64	Handle	CNC5395
30	Screw	BPZ20P120FZK	65	Bush	CNV3930
31	Button(  )	See Contrast table(2)	66	Transistor(Q959)	2SD2395
32	Button(+,-,◀,▶)	See Contrast table(2)			
33	Button(TUNER,BAND)	CAC5455			
34	Button(1,2,3,4,5,6)	See Contrast table(2)			
35	Button(  )	See Contrast table(2)			

# KEH-1700,1730

## (2) CONTRAST TABLE

KEH-1700/X1M/EW and KEH-1730/X1M/EW are constructed the same except for the following:

Mark No.	Description	Part No.	
		KEH-1700/X1M/EW	KEH-1730/X1M/EW
29	Detach Grille Assy	CXB1629	CXB1630
31	Button(⏏)	CAC4870	CAC4993
32	Button(+,-,◀,▶)	CAC5454	CAC5330
34	Button(1,2,3,4,5,6)	CAC5456	CAC5326
35	Button(⏏)	CAC5457	CAC5327
36	Button(FF)	CAC5458	CAC5328
37	Button(REW)	CAC5459	CAC5329
40	Grille	CNS4632	CNS4634
41	Cover	CNS4633	CNS4645
42	Keyboard Unit	CWM5710	CWM5711
58	Panel Unit	CXB2090	CXB2091

2.2 MECHANISM ASSY

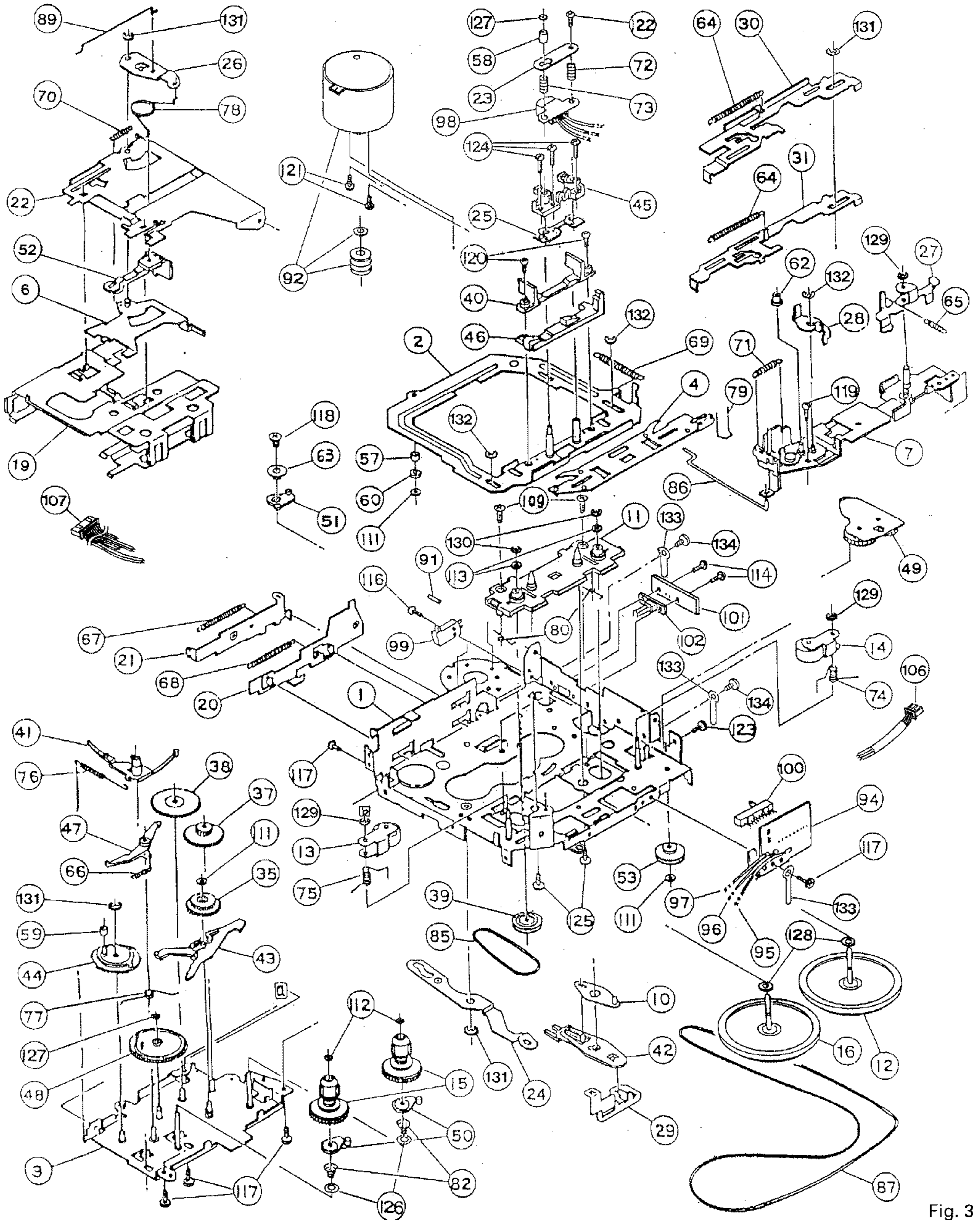


Fig. 3

# KEH-1700,1730

## ● MECHANISM ASSY SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Main Chassis Assy	X-0036-1001	46	Adjuster Link (X)	1-0138-2004
2	Head Plate Assy (S)	X-0036-6082	47	Gear Lock Arm	1-0038-2014
3	Reel Base Assy	X-0036-1009	48	Detector Gear	1-0036-2014
4	FR Changing Arm Assy	X-0036-1010	49	TU Gear Arm Assy	X-0036-2015
5	.....		50	Detector Cam Assy	X-0136-2001
6	Eject Cam Lock Assy	X-0036-1019	51	Mute Arm (N)	1-0038-2034
7	Lever Bracket Assy (D)	X-0036-6077	52	Tape Hooker	1-0058-2004
8	.....		53	Idle Pulley (A)	10058-2021-5
9	.....		54	.....	
10	FR Arm (A) Assy	X-0036-1025	55	.....	
11	CM Bracket Assy (PH)	X0138-2006-5	56	.....	
12	Flywheel Assy (BF)	10036-6010-0	57	HP Roller (B)	1-0036-3024
13	Pinch Arm (R) Assy (PS)	1-0036-6013	58	FF Roller (C)	1-0038-3071
14	Pinch Arm (F) Assy (PS)	1-0036-6014	59	Collar	1-0036-3018
15	Reel Spindle Assy (D)	X-0036-6081	60	HP Roller (A)	1-0036-3002
16	Flywheel Assy (BR)	10036-6010-1	61	.....	
17	.....		62	Program Roller	1-0038-3012
18	.....		63	Mute Arm Collar	1-0038-3015
19	Cassette Holder (X)	1-0138-1010	64	FF/REW Lever Spring	1-0036-4001
20	Eject Cam	1-0036-1006	65	Lock Lever Spring (A)	1-0036-4022
21	Eject Lever	1-0036-1007	66	Gear Lock Arm Spring	1-0036-4003
22	Cassette Hanger (X)	1-0138-1002	67	Eject Lever Spring	1-0036-4004
23	SPG Support Plate	1-0036-1015	68	Eject Cam Spring	1-0036-4005
24	Conversion Lever	1-0036-1016	69	Head Plate Spring	1-0036-4006
25	Adjuster Shim (X)	1-0138-1006	70	Eject Cam Lock Spring	1-0036-4007
26	Center Plate	1-0036-1018	71	Program Arm Spring	1-0036-4008
27	Lock Arm (A)	1-0036-1029	72	Adjuster Arm Spring (A)	1-0036-4010
28	Change Lever (B)	1-0036-1023	73	Adjuster Arm Spring (B)	1-0036-4011
29	FR Arm (B)	1-0036-1026	74	Pinch Arm Spring (F)	1-0036-4012
30	FF Lever (AT)	1-0036-1051	75	Pinch Arm Spring (R)	1-0036-4013
31	REW Lever (AT)	1-0036-1053	76	Ratchet Spring	1-0038-4014
32	.....		77	Dash Spring	1-0036-4015
33	.....		78	Center Plate Spring (B)	1-0036-4023
34	.....		79	Changing Arm Spring	1-0036-4017
35	Idle Gear	1-0036-2001	80	Earth Spring (R)	1-0036-4018
36	.....		81	.....	
37	Reduction Gear (A)	10036-2004-0	82	Back Tension Spring	1-0138-4001
38	Reduction Gear (B)	1-0036-2003	83	.....	
39	Pulley Gear	10036-2005-0	84	.....	
40	Tape Guide	1-0038-2018	85	Sub Belt (C)	1-0036-5018
41	Ratchet	1-0036-2007	86	Selector Link (B)	1-0138-5001
42	FF Arm	1-0036-2008	87	Main Belt	1-0036-5020
43	Sensor Arm	1-0036-2009	88	.....	
44	Selector Gear	1-0036-2010	89	Return Link	1-0036-5006
45	Adjuster Arm (B)	10138-2005-3	90	.....	

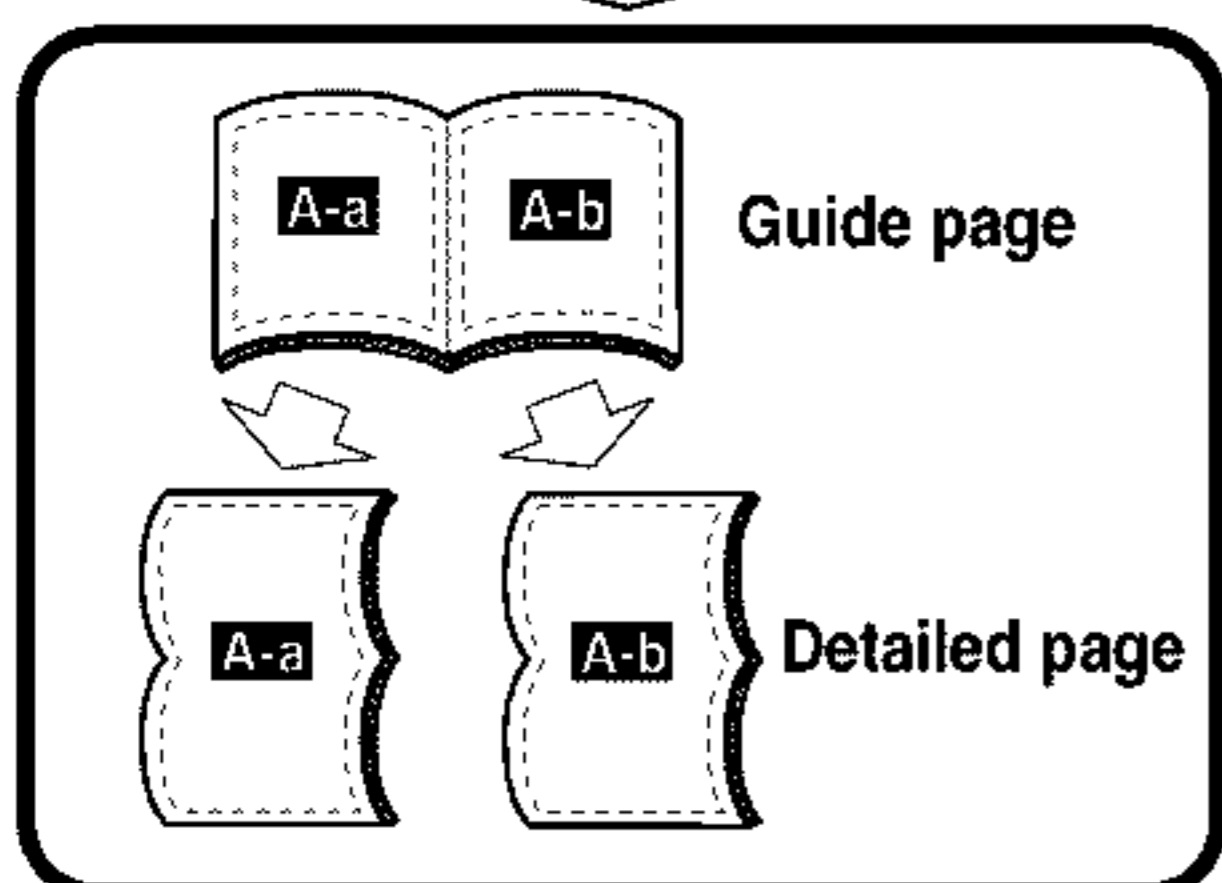
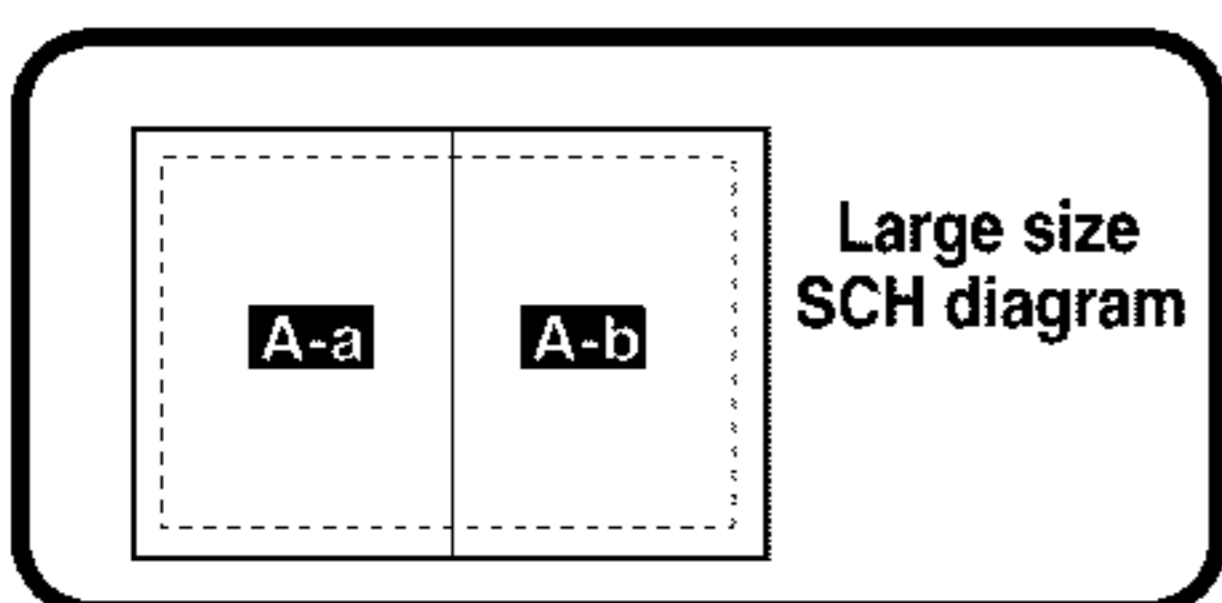


Mark No.	Description	Part No.	Mark No.	Description	Part No.
91	Insulate Tube	1-0058-5016	116	Screw(M1.7×6)	213317060-C2
92	Motor Assy(M1)	X-0036-6075	117	Screw(M2×3)	213820030-C2
93	.....		118	Screw(M2×4)	213620040-F2
94	SW PWB	1-0036-7001	119	Screw(M2×4)	213320040-C1
95	Wire (A)	1-0036-7002	120	Screw	JGZ20P070FZK
96	Wire (B)	1-0036-7003	121	Screw	JGZ20P025FZK
97	Wire (C)	1-0036-7004	122	Screw	JFZ20P040FZK
98	Head(HD1)	10036-7016-1	123	Screw	UFZ20P030FZK
99	Power Switch(SW1)	1-0036-7034	124	Screw(M2×5)	1-0138-5002
100	Slide Switch(SW3)	1-0036-7007	125	Screw(M2×5)	1-0036-5005
101	Mute PWB	1-0138-7002	126	Washer	1-0136-5001
102	Mute Switch(SW2)	1-0138-7087	127	Washer	1-0036-5024
103	.....		128	Washer	1-0036-5028
104	.....		129	Washer	YE15FUC
105	.....		130	Washer	217116032-96
106	Head Wire Assy (PN)	1-0036-7107	131	Washer	YE20FUC
107	Wire Assy (SP)	1-0036-7108	132	Washer	YE25FUC
108	.....		133	Lug Plate	217326280-36
109	Screw(M1.7×3)	213317030-C2	134	Screw(M2.6×2.5)	213326025-C2
110	.....				
111	Washer	WT12D030D025			
112	Washer	1-0036-5023			
113	Washer	WA21D032D025			
114	Screw(M1.7×4)	213317040-C2			
115	.....				

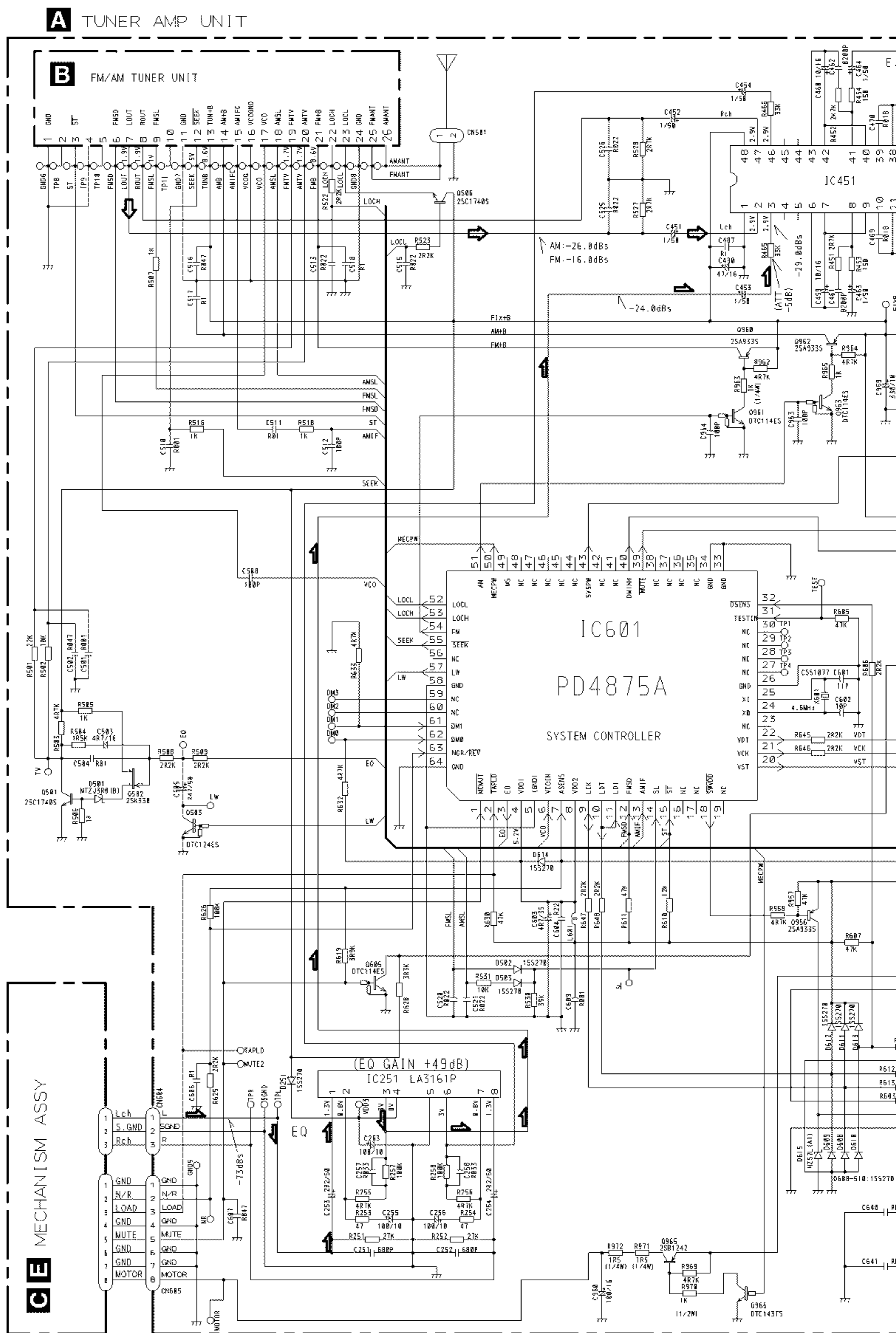
### 3. SCHEMATIC DIAGRAM

#### 3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

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



**A-a**



# A-b

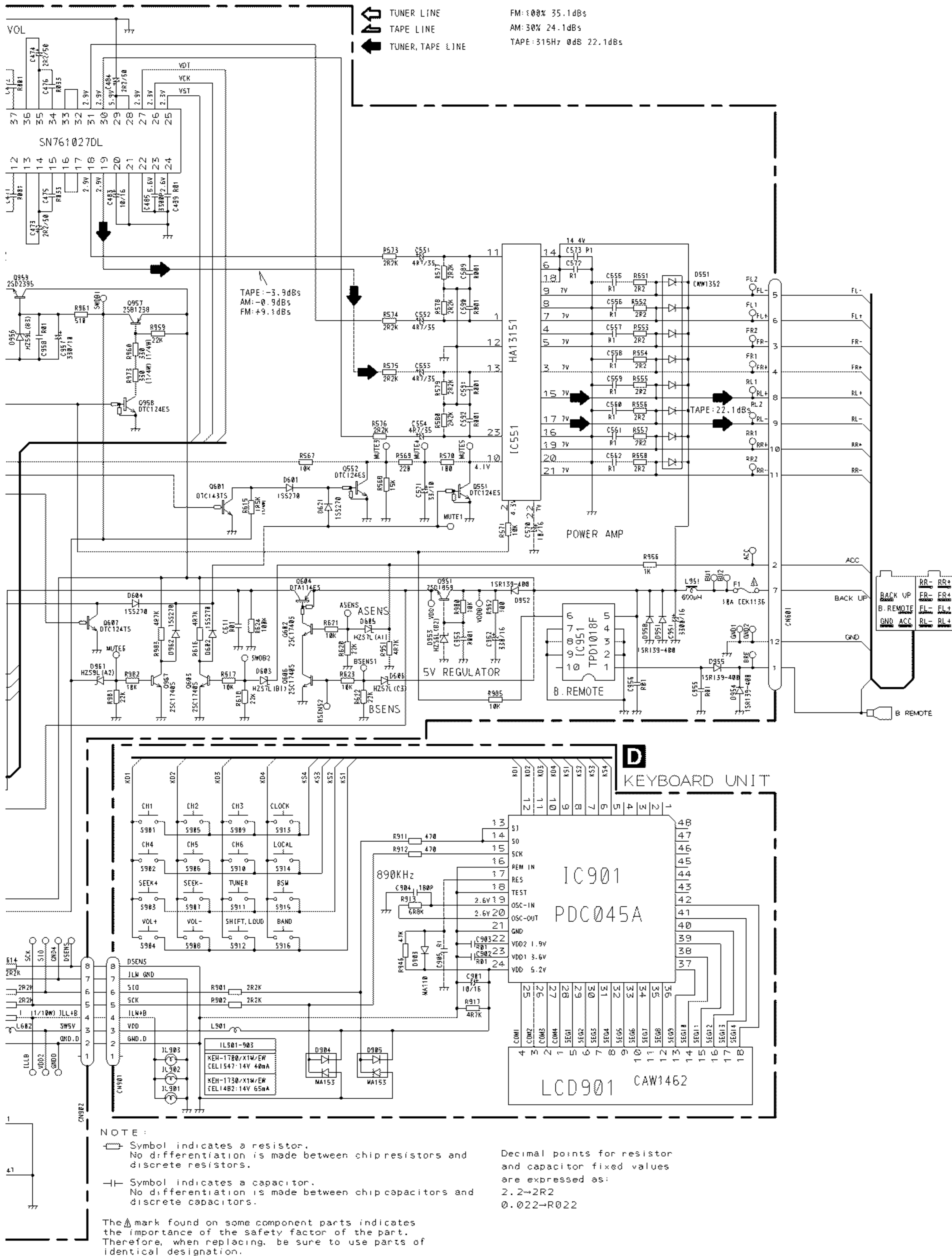


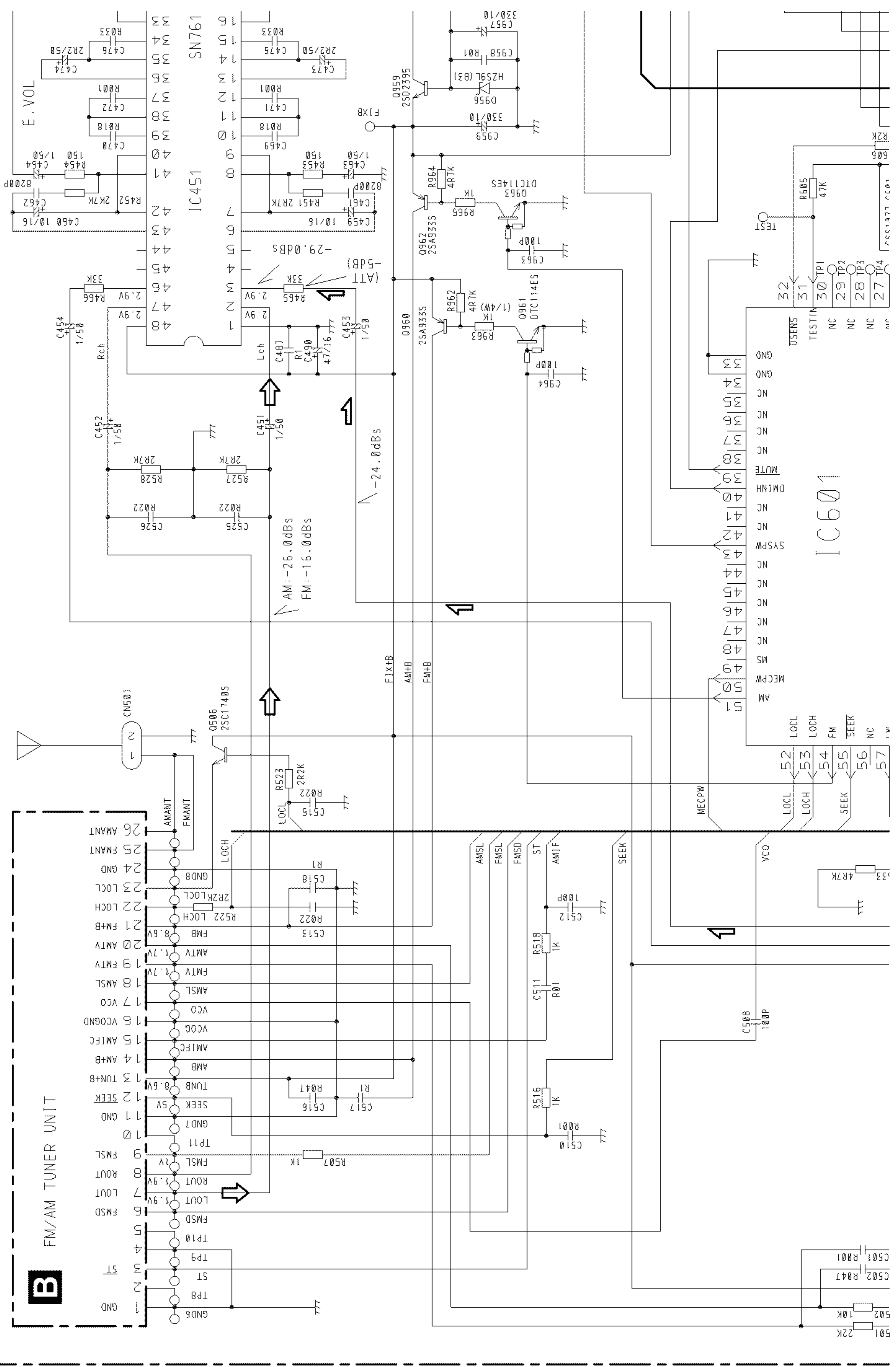
Fig. 4



A-a A-b

**A** TUNER AMP UNIT

**B** FM/AM TUNER UNIT



A

B

C

D

2

3

4

2

3

4

501 22K  
502 10K  
C501 R001  
C502 R047

53 4R7K

32  
31  
30 TP1  
29 TP2  
28 TP3  
27 TP4

605  
R605 47K  
TEST

RZK  
ACCAATT R601

IC601

51 AM  
50 MECPW  
49 MS  
48 NC  
47 NC  
46 NC  
45 NC  
44 NC  
43 SYS PW  
42 NC  
41 NC  
40 DMINH  
39 MUTE  
38 NC  
37 NC  
36 NC  
35 NC  
34 GND  
33 GND

57 NC  
56 SEEK  
55 FM  
54 LOCH  
53 LOCH  
52 LOCH

MECPW  
VCO

51  
50  
49  
48  
47  
46  
45  
44  
43  
42  
41  
40  
39  
38  
37  
36  
35  
34  
33  
32  
31  
30  
29  
28  
27

57  
56  
55  
54  
53  
52

51  
50  
49  
48  
47  
46  
45  
44  
43  
42  
41  
40  
39  
38  
37  
36  
35  
34  
33  
32  
31  
30  
29  
28  
27

57  
56  
55  
54  
53  
52

51  
50  
49  
48  
47  
46  
45  
44  
43  
42  
41  
40  
39  
38  
37  
36  
35  
34  
33  
32  
31  
30  
29  
28  
27

A-a A-b

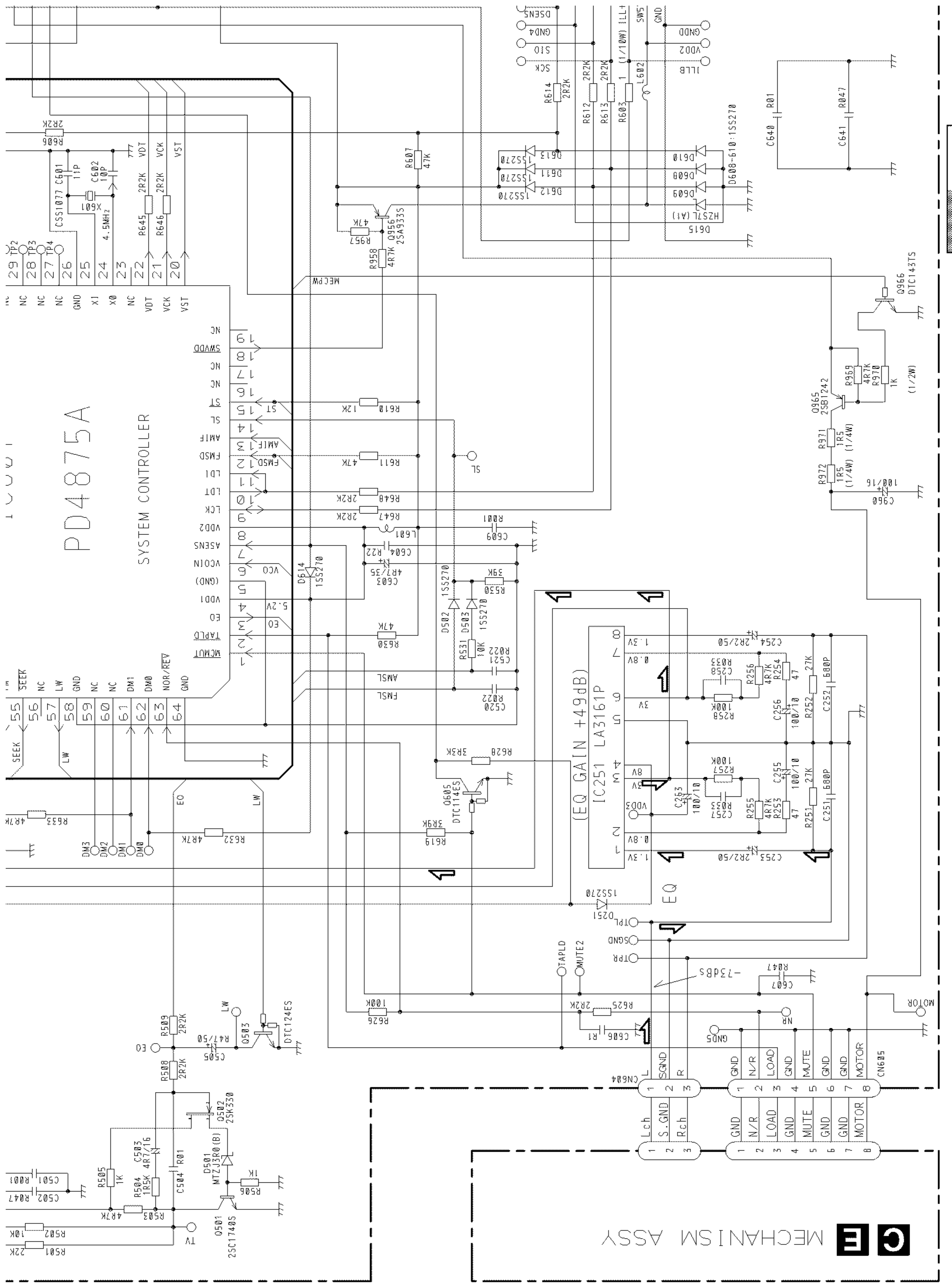
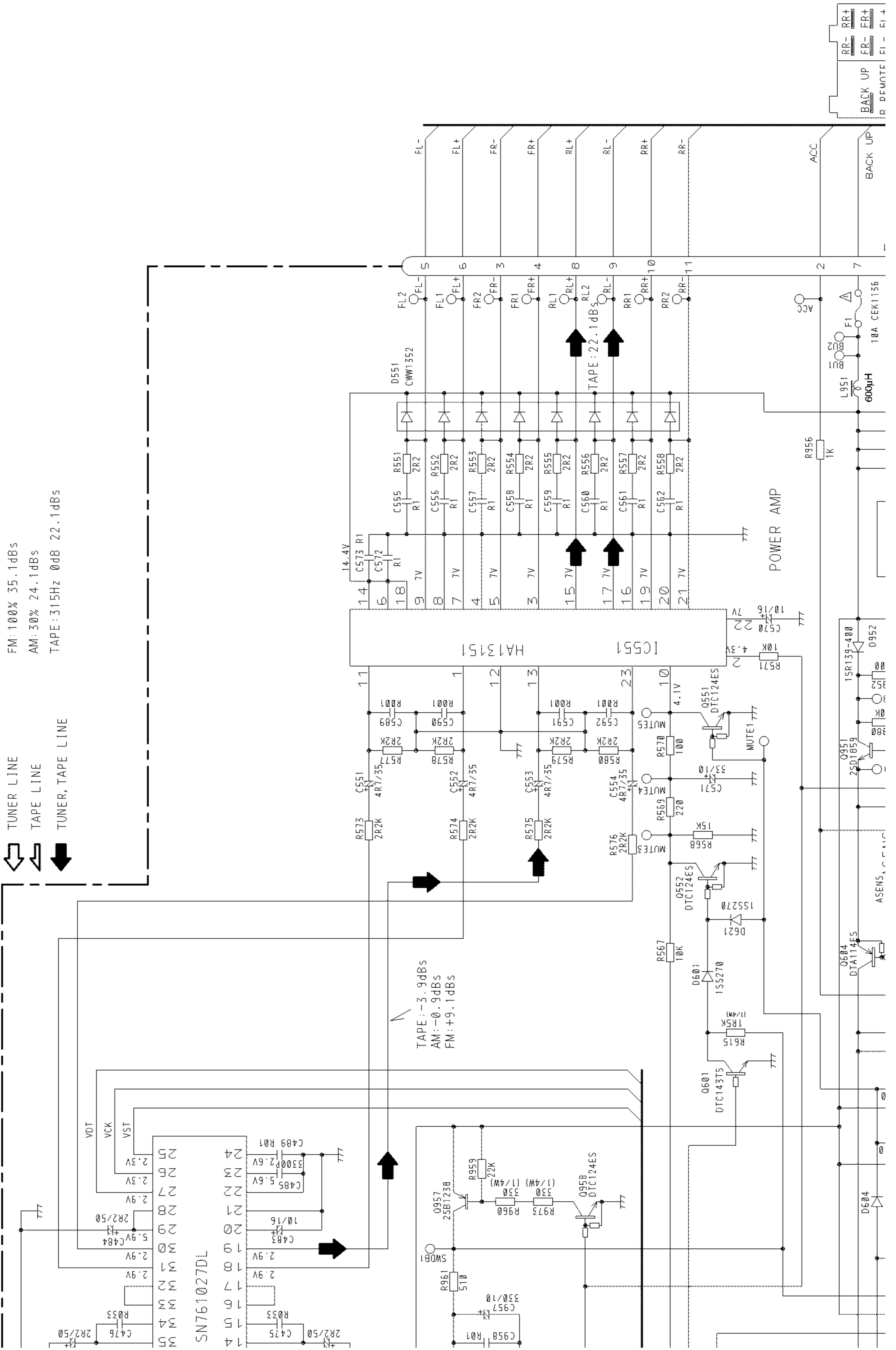
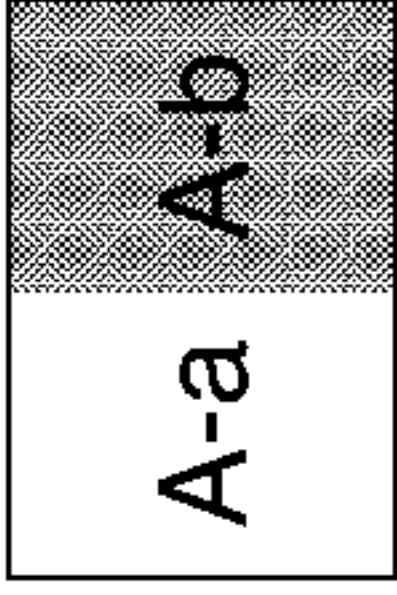


Fig. 5

A-a

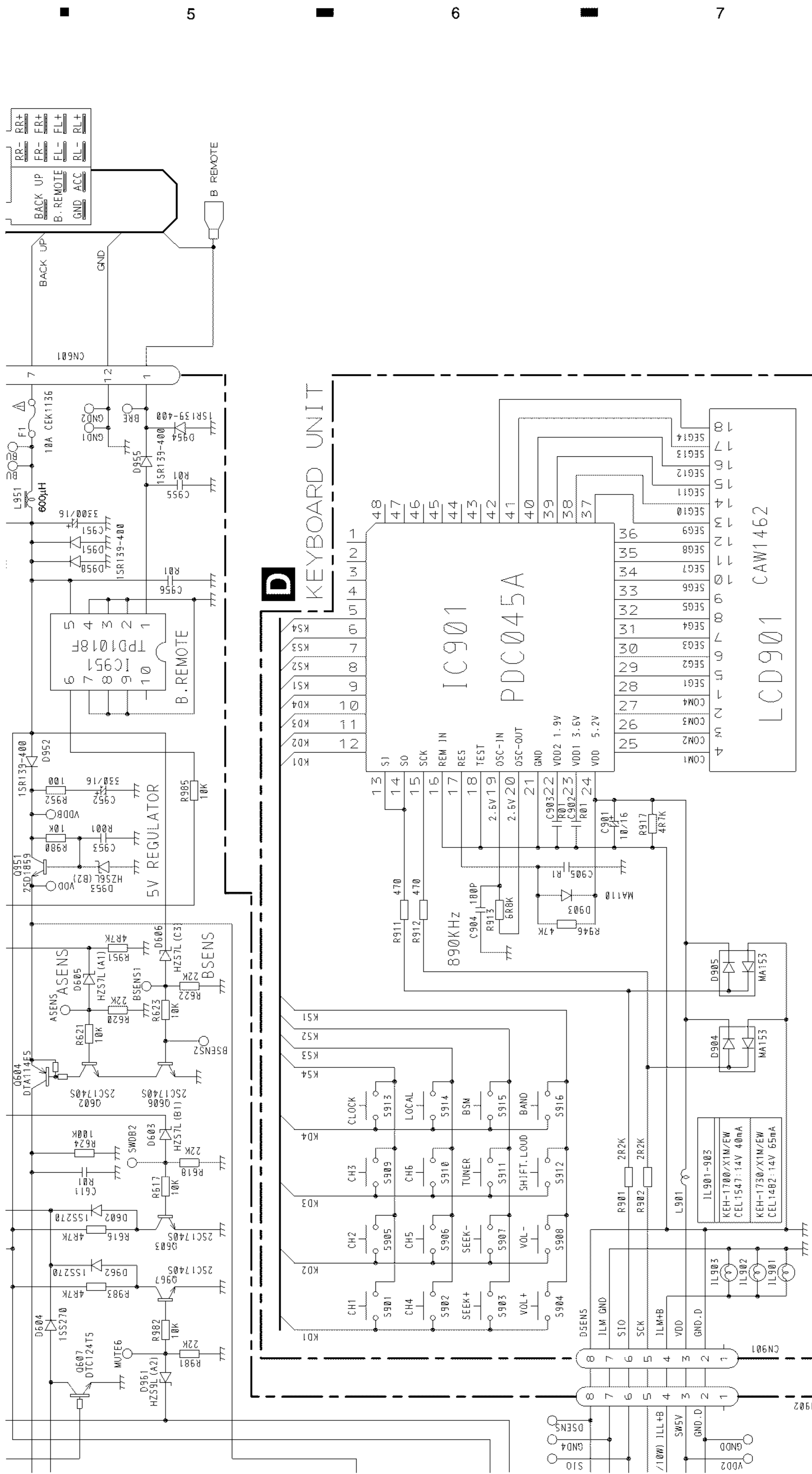


← TUNER LINE  
 ← TAPE LINE  
 → TUNER, TAPE LINE

FM: 100% 35.1dBs  
 AM: 30% 24.1dBs  
 TAPE: 315Hz 0dB 22.1dBs

TAPE: -3.9dBs  
 AM: -0.9dBs  
 FM: +9.1dBs

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.

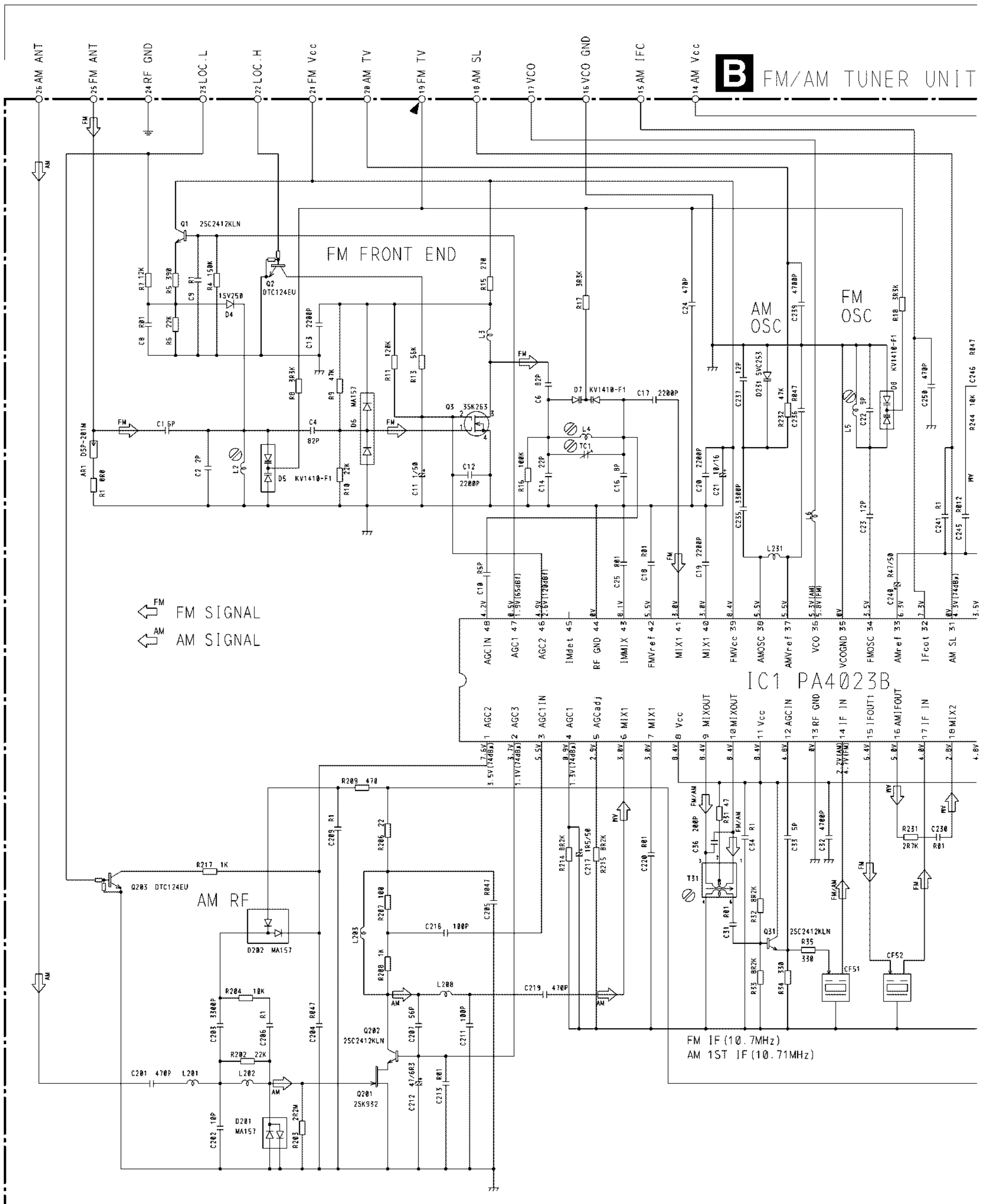
The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 6

D A-b

### 3.2 FM/AM TUNER UNIT

#### B FM/AM TUNER UNIT





A

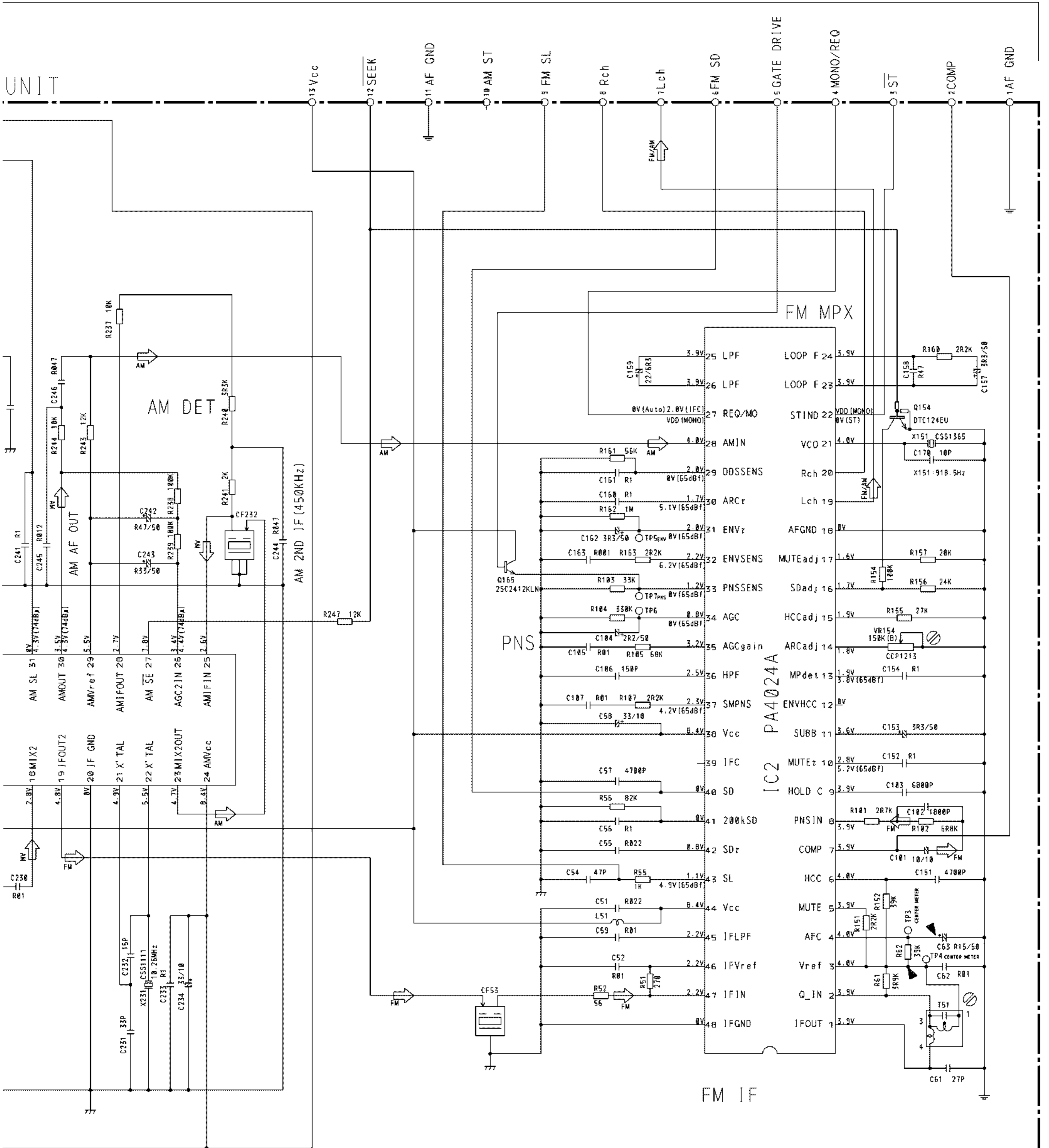
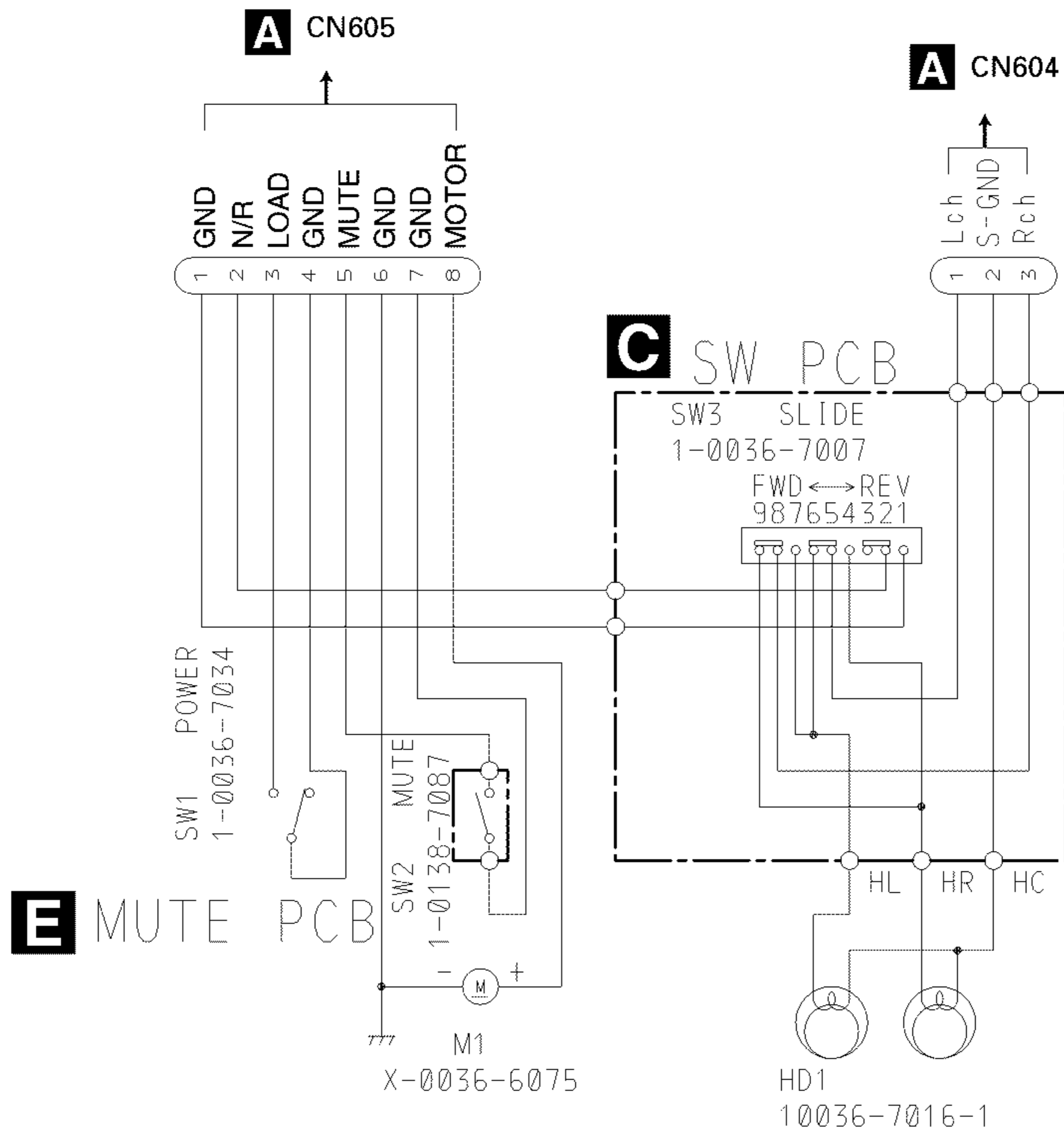


Fig. 7

B

### 3.3 MECHANISM ASSY



SWITCHES :  
MUTE PCB  
SW2 : MUTE SWITCH ..... ON-OFF  
MISCELLANEOUS  
SW1 : POWER SWITCH ..... ON-OFF

The underlined indicates the switch position.

Fig. 8

### 4. PCB CONNECTION DIAGRAM

#### 4.1 MECHANISM ASSY

##### NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.

For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams

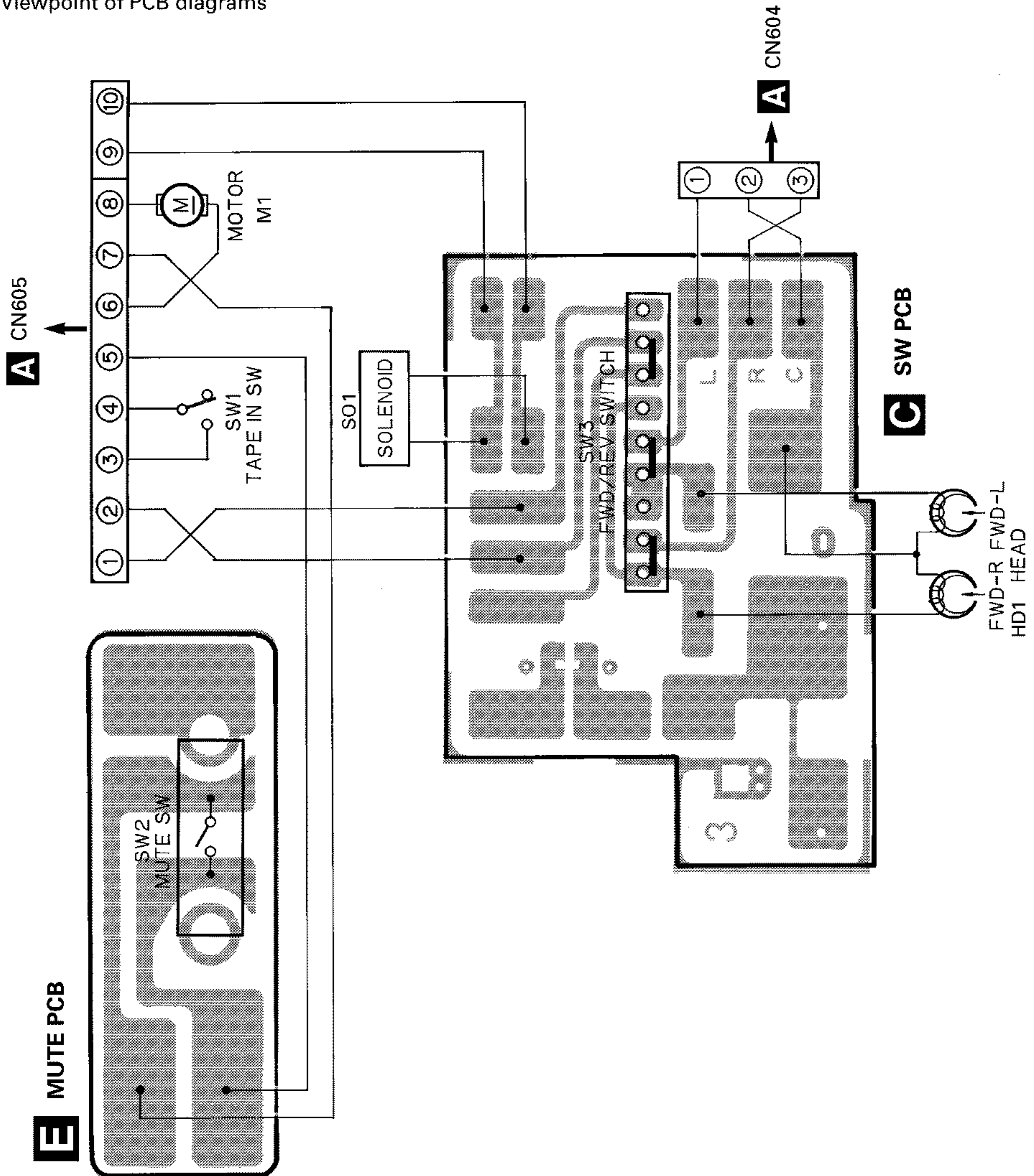
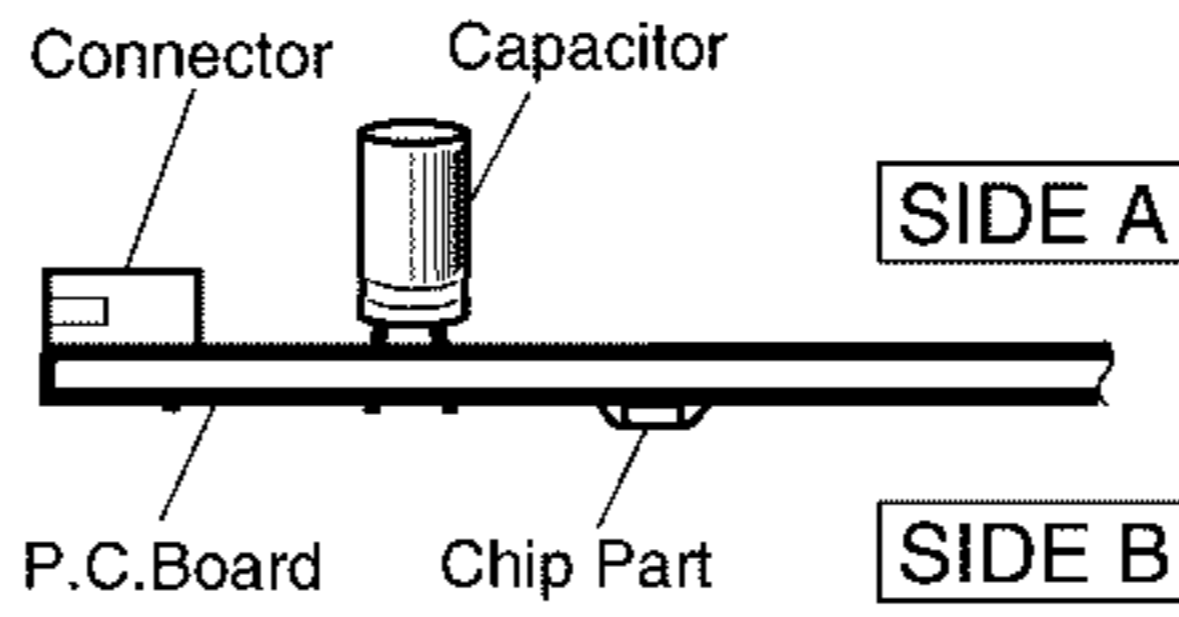
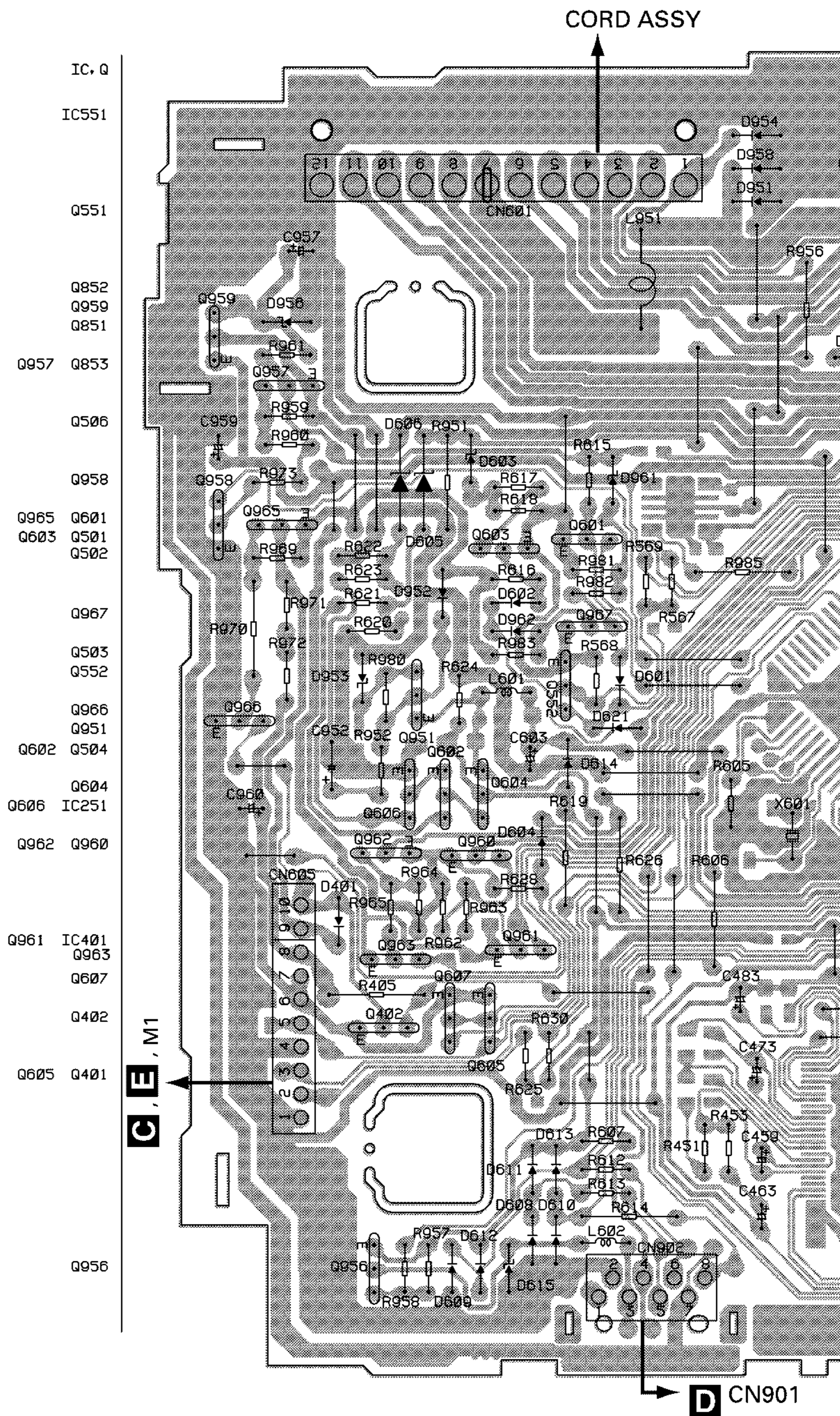


Fig. 9

### 4.2 TUNER AMP UNIT

#### **A** TUNER AMP UNIT



SIDE A

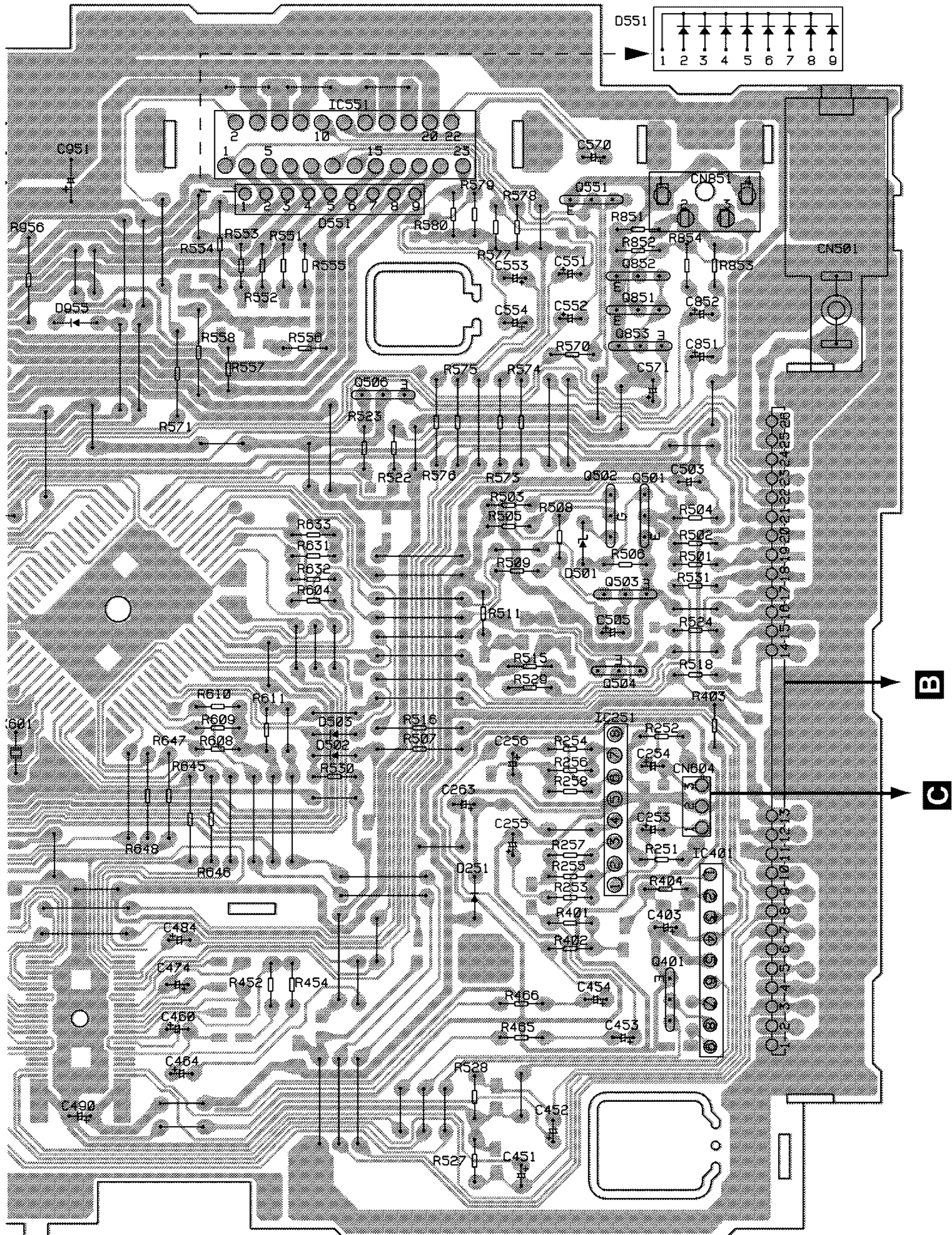


Fig. 10

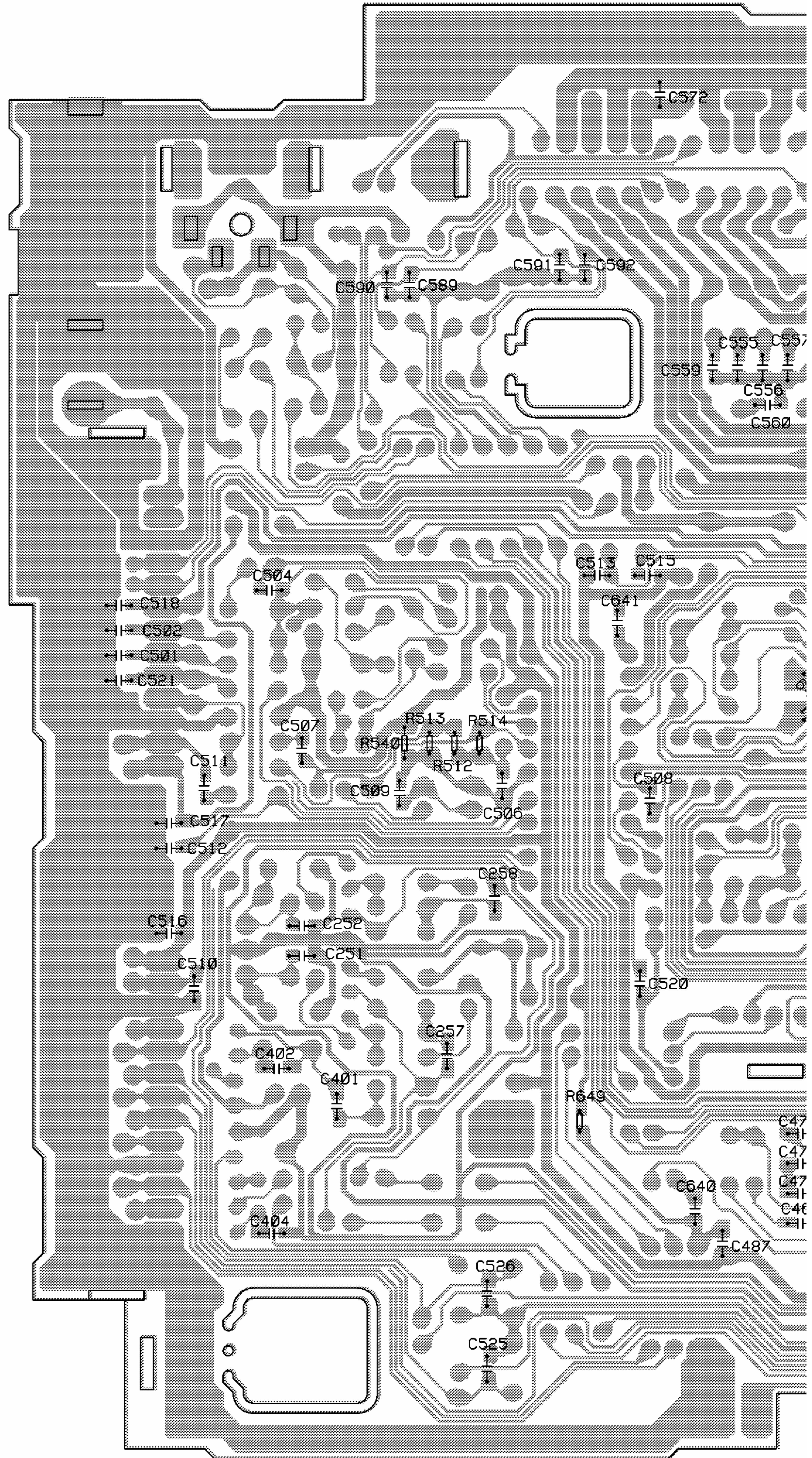
**A** TUNER AMP UNIT

A

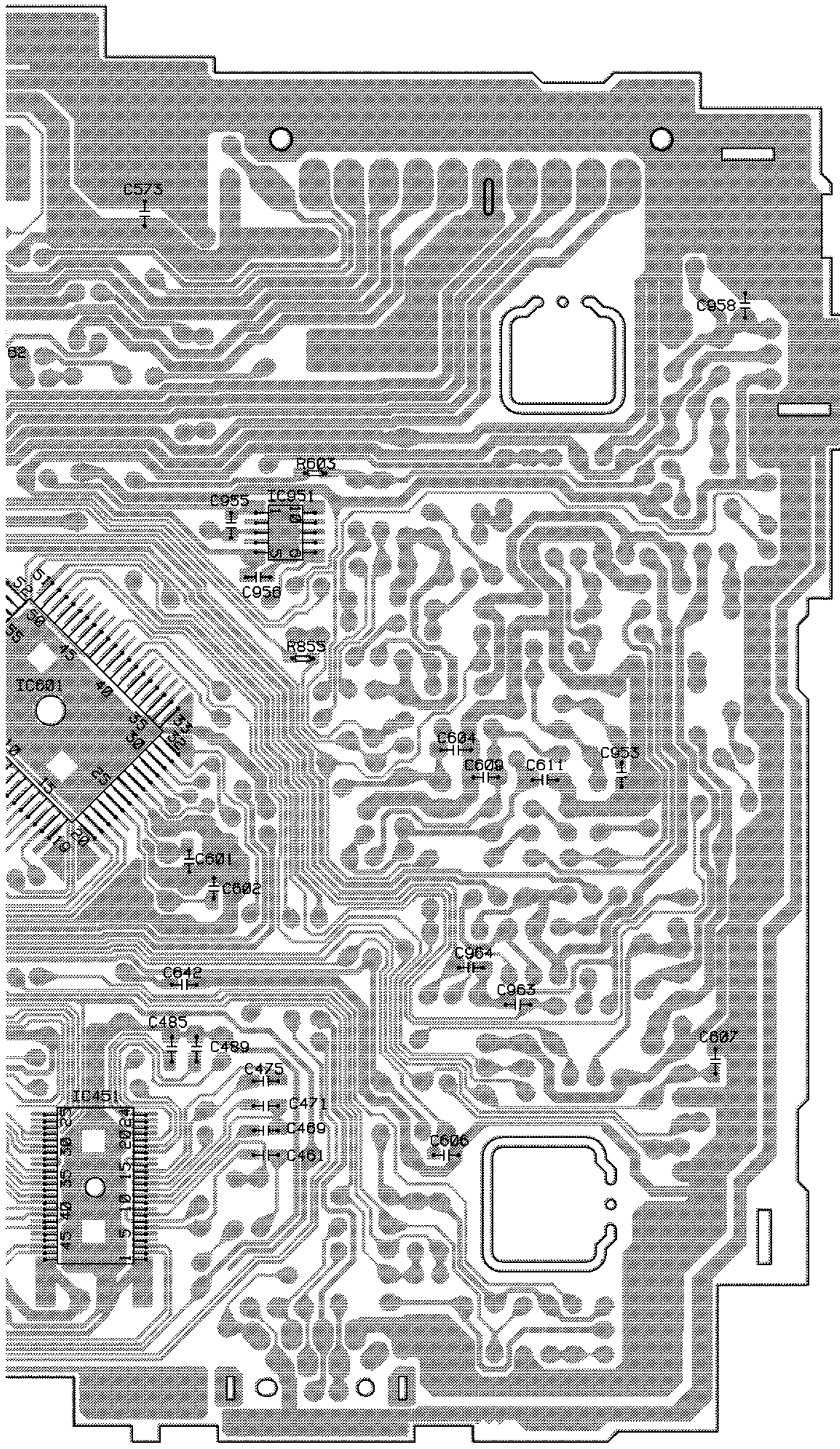
B

C

D



SIDE B



IC, Q  
 IC951  
 IC601  
 IC451

Fig. 11

4.3 FM/AM TUNER UNIT

SIDE A

A

B

C

D

B FM/AM TUNER UNIT

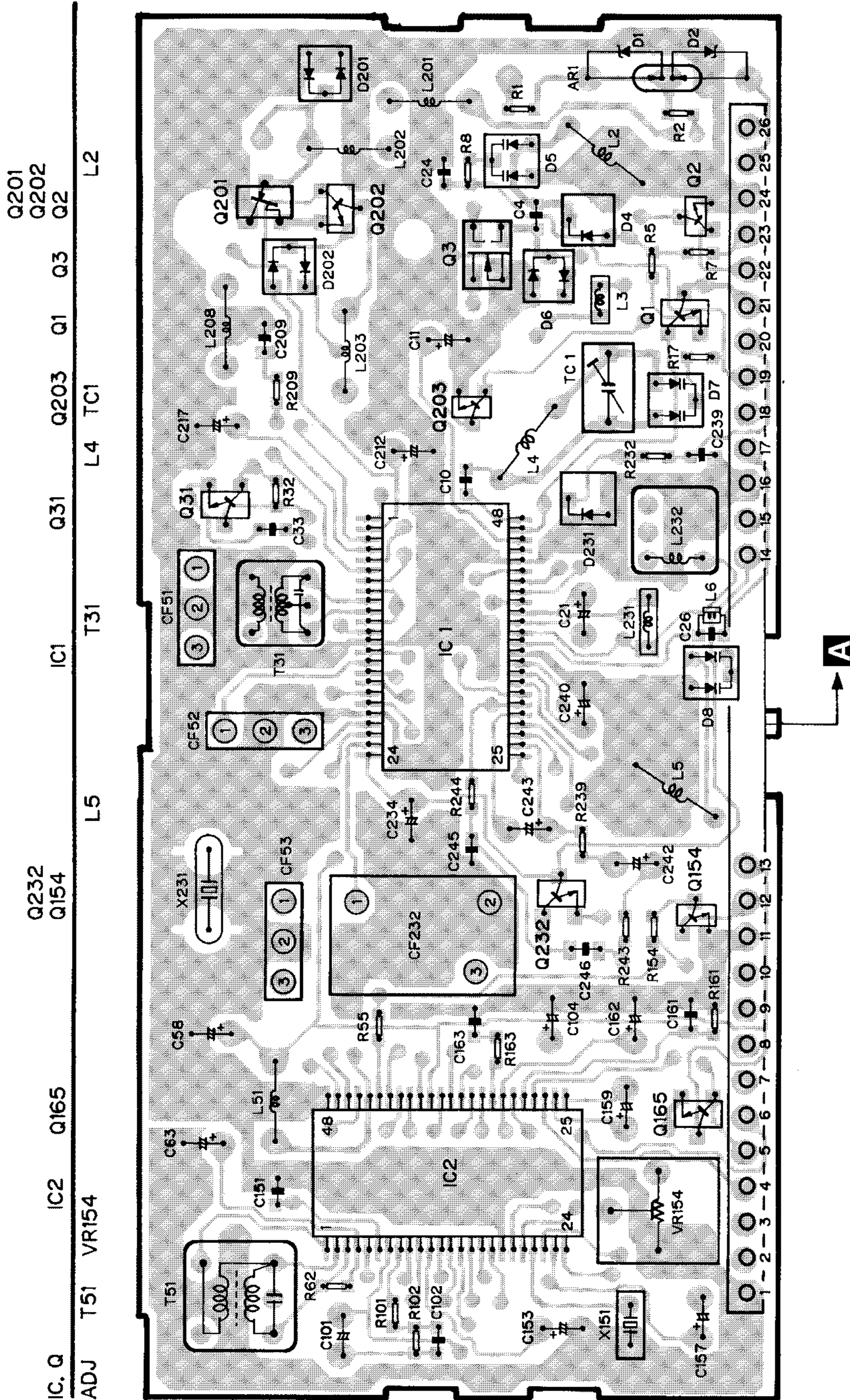


Fig. 12



SIDE B

B FM/AM TUNER UNIT

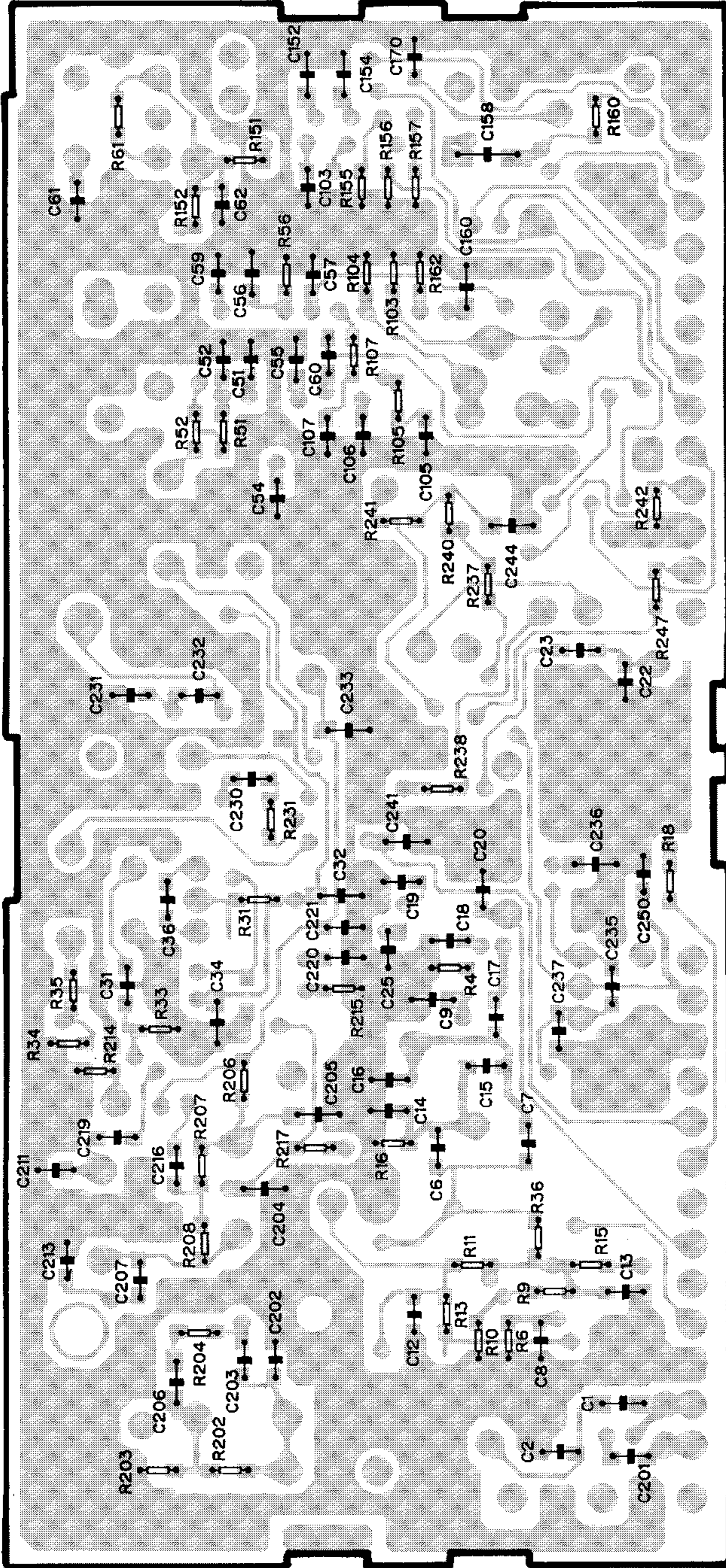


Fig. 13

B

4.4 KEYBOARD UNIT

SIDE A

SIDE B

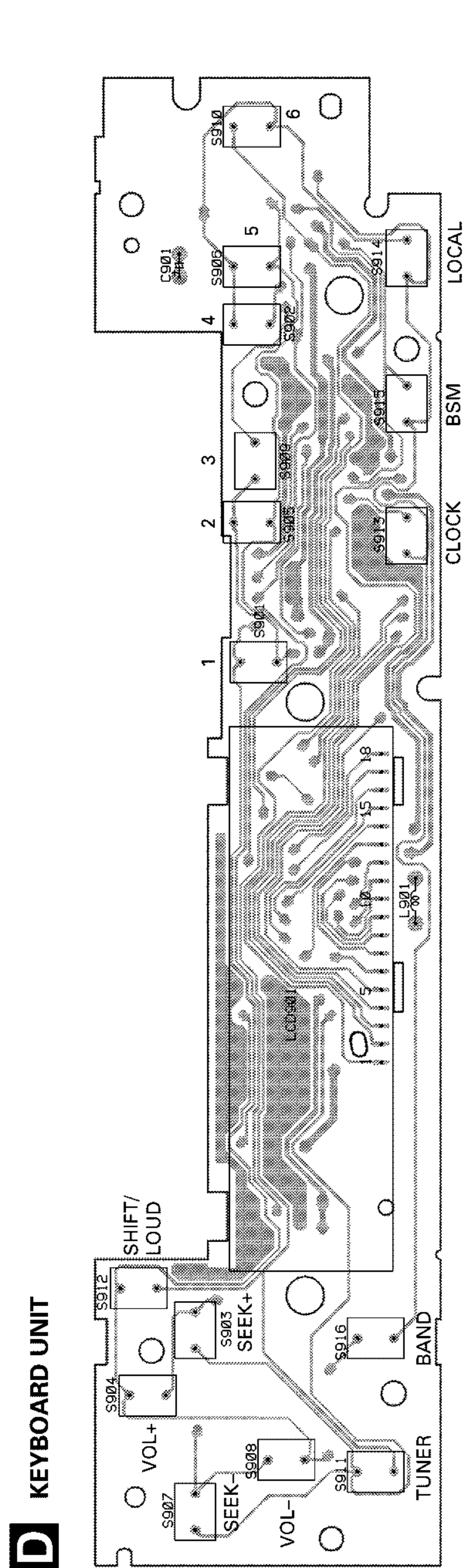


Fig. 14

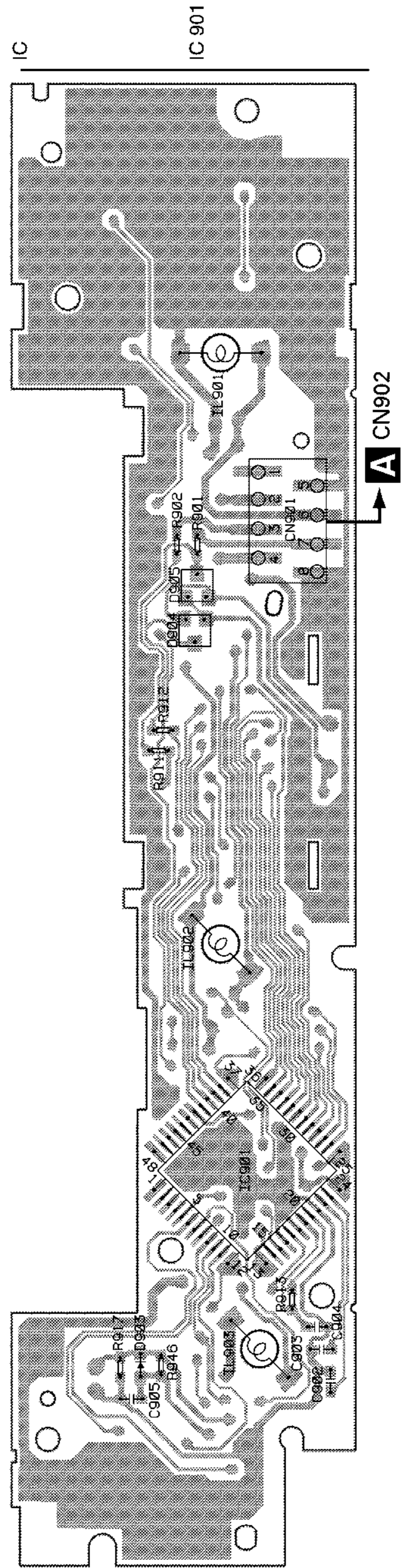


Fig. 15



# 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/OSOOOJ,RS1/OOSOOOJ

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>A</b> Unit Number : CWM5703		D 951 Diode	1SR139-400
Unit Name : Tuner Amp Unit		D 952 Diode	1SR139-400
MISCELLANEOUS		D 953 Diode	HZS6L(B2)
IC 251 IC	LA3161P	D 954 Diode	1SR139-400
IC 451 IC	SN761027DL	D 955 Diode	1SR139-400
IC 551 IC	HA13151	D 956 Diode	HZS9L(B3)
IC 601 IC	PD4875A	D 958 Diode	1SR139-400
IC 951 IC	TPD1018F	D 961 Diode	HZS9L(A2)
Q 501 Transistor	2SC1740S	D 962 Diode	1SS270
Q 502 Transistor	2SK330	L 601 Ferri-Inductor	LAU2R2K
Q 503 Transistor	DTC124ES	L 602 Ferri-Inductor	LAU2R2K
Q 506 Transistor	2SC1740S	L 951 Choke Coil 600µH	CTH1168
Q 551 Transistor	DTC124ES	X 601 Crystal Resonator 4.500MHz	CSS1077
Q 552 Transistor	DTC124ES		CWE1466
Q 601 Transistor	DTC143TS	RESISTORS	
Q 602 Transistor	2SC1740S	R 251	RD1/4PU273J
Q 603 Transistor	2SC1740S	R 252	RD1/4PU273J
Q 604 Transistor	DTA114ES	R 253	RD1/4PU470J
Q 605 Transistor	DTC114ES	R 254	RD1/4PU470J
Q 606 Transistor	2SC1740S	R 255	RD1/4PU472J
Q 607 Transistor	DTC124TS	R 256	RD1/4PU472J
Q 951 Transistor	2SD1859	R 257	RD1/4PU104J
Q 956 Transistor	2SA933S	R 258	RD1/4PU104J
Q 957 Transistor	2SB1238	R 451	RD1/4PU272J
Q 958 Transistor	DTC124ES	R 452	RD1/4PU272J
Q 959 Transistor	2SD2395	R 453	RD1/4PU151J
Q 960 Transistor	2SA933S	R 454	RD1/4PU151J
Q 961 Transistor	DTC114ES	R 465	RD1/4PU333J
Q 962 Transistor	2SA933S	R 466	RD1/4PU333J
Q 963 Transistor	DTC114ES	R 501	RD1/4PU223J
Q 965 Transistor	2SB1242	R 502	RD1/4PU103J
Q 966 Transistor	DTC143TS	R 503	RD1/4PU472J
Q 967 Transistor	2SC1740S	R 504	RD1/4PU152J
D 251 Diode	1SS270	R 505	RD1/4PU102J
D 501 Diode	MTZJ3R0(B)	R 506	RD1/4PU102J
D 502 Diode	1SS270	R 507	RD1/4PU102J
D 503 Diode	1SS270	R 508	RD1/4PU222J
D 551 Diode	CWW1352	R 509	RD1/4PU222J
D 601 Diode	1SS270	R 516	RD1/4PU102J
D 602 Diode	1SS270	R 518	RD1/4PU102J
D 603 Diode	HZS7L(B1)	R 522	RD1/4PU222J
D 604 Diode	1SS270	R 523	RD1/4PU222J
D 605 Diode	HZS7L(A1)	R 527	RD1/4PU272J
D 606 Diode	HZS7L(C3)	R 528	RD1/4PU272J
D 608 Diode	1SS270	R 530	RD1/4PU393J
D 609 Diode	1SS270	R 531	RD1/4PU103J
D 610 Diode	1SS270	R 551	RD1/4PU2R2J
D 611 Diode	1SS270	R 552	RD1/4PU2R2J
D 612 Diode	1SS270	R 553	RD1/4PU2R2J
D 613 Diode	1SS270	R 554	RD1/4PU2R2J
D 614 Diode	1SS270	R 555	RD1/4PU2R2J
D 615 Diode	HZS7L(A1)	R 556	RD1/4PU2R2J
D 621 Diode	1SS270	R 557	RD1/4PU2R2J
		R 558	RD1/4PU2R2J
		R 567	RD1/4PU103J

# KEH-1700,1730

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 568	RD1/4PU153J	CAPACITORS	
R 569	RD1/4PU221J	C 251	CKSQYB681K50
R 570	RD1/4PU101J	C 252	CKSQYB681K50
R 571	RD1/4PU103J	C 253	CEJA2R2M50
R 573	RD1/4PU222J	C 254	CEJA2R2M50
R 574	RD1/4PU222J	C 255	CEAL101M10
R 575	RD1/4PU222J	C 256	CEAL101M10
R 576	RD1/4PU222J	C 257	CKSQYB333K25
R 577	RD1/4PU222J	C 258	CKSQYB333K25
R 578	RD1/4PU222J	C 263	CEAL101M10
R 579	RD1/4PU222J	C 451	CEAL1R0M50
R 580	RD1/4PU222J	C 452	CEAL1R0M50
R 603	RS1/10S1R0J	C 453	CEAL1R0M50
R 605	RD1/4PU473J	C 454	CEAL1R0M50
R 606	RD1/4PU222J	C 459	CEAL100M16
R 607	RD1/4PU473J	C 460	CEAL100M16
R 610	RD1/4PU123J	C 461	CKSQYB822K50
R 611	RD1/4PU473J	C 462	CKSQYB822K50
R 612	RD1/4PU222J	C 463	CEAL1R0M50
R 613	RD1/4PU222J	C 464	CEAL1R0M50
R 614	RD1/4PU222J	C 469	CKSQYB183K25
R 615	RD1/4PU152J	C 470	CKSQYB183K25
R 616	RD1/4PU472J	C 471	CKSQYB102K50
R 617	RD1/4PU103J	C 472	CKSQYB102K50
R 618	RD1/4PU223J	C 473	CEAL2R2M50
R 619	RD1/4PU392J	C 474	CEAL2R2M50
R 620	RD1/4PU223J	C 475	CKSQYB333K25
R 621	RD1/4PU103J	C 476	CKSQYB333K25
R 622	RD1/4PU223J	C 483	CEAL100M16
R 623	RD1/4PU103J	C 484	CEAL2R2M50
R 624	RD1/4PU104J	C 485	CKSQYB332K50
R 625	RD1/4PU222J	C 487	CKSQYB104K16
R 626	RD1/4PU104J	C 489	CKSQYB103K25
R 628	RD1/4PU332J	C 490	CEAL470M16
R 630	RD1/4PU473J	C 501	CKSQYB102K50
R 632	RD1/4PU472J	C 502	CKSQYB473K16
R 633	RD1/4PU472J	C 503	4.7µF/16V
R 645	RD1/4PU222J	C 504	CCH1250
R 646	RD1/4PU222J	C 505	CKSQYB103K25
R 647	RD1/4PU222J	C 508	CEJAR47M50
R 648	RD1/4PU222J	C 510	CCSQCH101J50
R 951	RD1/4PU472J	C 511	CKSQYB102K50
R 952	RD1/4PU101J	C 512	CKSQYB103K25
R 956	RD1/4PU102J	C 513	CCSQCH101J50
R 957	RD1/4PU473J	C 515	CKSQYB223K25
R 958	RD1/4PU472J	C 516	CKSQYB223K25
R 959	RD1/4PU223J	C 517	CKSQYB473K16
R 960	RD1/4PU331J	C 518	CKSQYB104K16
R 961	RD1/4PU511J	C 520	CKSQYB104K16
R 962	RD1/4PU472J	C 521	CKSQYB223K25
R 963	RD1/4PU102J	C 525	CKSQYB223K25
R 964	RD1/4PU472J	C 526	CKSQYB223K25
R 965	RD1/4PU102J	C 551	CEJA4R7M35
R 969	RD1/4PU472J	C 552	CEJA4R7M35
R 970	RD1/4PU102J	C 553	CEJA4R7M35
R 971	RD1/4PU1R5J	C 554	CEJA4R7M35
R 972	RD1/4PU1R5J	C 555	CKSQYB104K16
R 973	RD1/4PU331J	C 556	CKSQYB104K16
R 980	RD1/4PU103J	C 557	CKSQYB104K16
R 981	RD1/4PU223J	C 558	CKSQYB104K16
R 982	RD1/4PU103J	C 559	CKSQYB104K16
R 983	RD1/4PU472J	C 560	CKSQYB104K16
R 985	RD1/4PU103J	C 561	CKSQYB104K16
		C 562	CKSQYB104K16
		C 570	CEAS100M16
		C 571	CEAS330M10

====Circuit Symbol and No.====	Part Name	Part No.
C 572		CKSQYB104K25
C 573		CKSQYB104K25
C 589		CKSQYB102K50
C 590		CKSQYB102K50
C 591		CKSQYB102K50
C 592		CKSQYB102K50
C 601		CCSQCH110J50
C 602		CCSQCH100D50
C 603		CEJA4R7M35
C 604		CKSYB224K16
C 606		CKSQYB104K16
C 607		CKSQYB473K16
C 609		CKSQYB102K50
C 611		CKSQYB103K25
C 640		CKSQYB103K25
C 641		CKSQYB473K16
C 951	3300µF/16V	CCH1018
C 952		CEAS331M16
C 953		CKSQYB102K50
C 955		CKSQYB103K50
C 956		CKSQYB103K50
C 957	330µF/10V	CCH1181
C 958		CKSQYB103K25
C 959	330µF/10V	CCH1181
C 960		CEAS101M16
C 963		CCSQCH101J50
C 964		CCSQCH101J50

**D** Unit Number : CWM5710(KEH-1700/X1M/EW)  
 : CWM5711(KEH-1730/X1M/EW)  
 Unit Name : Keyboard Unit

MISCELLANEOUS

D 903	Diode	MA110
D 904	Diode	MA153
D 905	Diode	MA153
IC 901	IC	PDC045A
L 901	Inductor	LAU150K
IL 901	Lamp 14V 40mA(KEH-1700/X1M/EW)	CEL1547
IL 901	Lamp 14V 65mA(KEH-1730/X1M/EW)	CEL1482
IL 902	Lamp 14V 40mA(KEH-1700/X1M/EW)	CEL1547
IL 902	Lamp 14V 65mA(KEH-1730/X1M/EW)	CEL1482
IL 903	Lamp 14V 40mA(KEH-1700/X1M/EW)	CEL1547
IL 903	Lamp 14V 65mA(KEH-1730/X1M/EW)	CEL1482
LCD 901	LCD	CAW1462

RESISTORS

R 901	RS1/10S222J
R 902	RS1/10S222J
R 911	RS1/10S471J
R 912	RS1/10S471J
R 913	RS1/10S682J
R 917	RS1/10S472J
R 946	RS1/10S473J

CAPACITORS

C 901	CEAL100M16
C 902	CKSQYB103K25
C 903	CKSQYB103K25
C 904	CCSQCH181J50
C 905	CKSQYB104K16

====Circuit Symbol and No.====	Part Name	Part No.
--------------------------------	-----------	----------

**B** Unit Number : CWE1466  
 Unit Name : FM/AM Tuner Unit

MISCELLANEOUS

IC 1	IC	PA4023B
IC 2	IC	PA4024A
Q 1	Transistor	2SC2412KLN
Q 2	Transistor	DTC124EU
Q 3	FET	3SK263
Q 31	Transistor	2SC2412KLN
Q 154	Transistor	DTC124EU
Q 165	Transistor	2SC2412KLN
Q 201	FET	2SK932
Q 202	Transistor	2SC2412KLN
Q 203	Transistor	DTC124EU
D 4	Diode	1SV250
D 5	Diode	KV1410-F1
D 6	Diode	MA157
D 7	Diode	KV1410-F1
D 8	Diode	KV1410-F1
D 201	Diode	MA157
D 202	Diode	MA157
D 231	Diode	SVC253
L 2	Coil	CTC1133
L 3	Inductor	LCTB2R2K2125
L 4	Coil	CTC1133
L 5	Coil	CTC1132
L 6	Inductor	LCTBR15K1608
L 51	Ferri-Inductor	LAU150K
L 201	Ferri-Inductor	LAU4R7K
L 202	Ferri-Inductor	LAU330K
L 203	Inductor	CTF1287
L 208	Inductor	LAU121K
L 231	Inductor	LCTA3R3J3225
T 31	Coil	CTE1116
T 51	Coil	CTC1136
TC 1	Capacitor	CCL1038
CF 51	Ceramic Filter	CTF1292
CF 52	Ceramic Filter	CTF1292
CF 53	Ceramic Filter	CTF1292
CF 232	Ceramic Filter	CTF1348
X 151	Resonator 920.5kHz	CSS1365
X 231	Crystal Resonator 10.26MHz	CSS1111
VR 154	Semi-fixed 150kΩ(B)	CCP1213
AR 1	Capacitor with Discharge Gap	DSP-201M

RESISTORS

R 1	RS1/16S0R0J
R 4	RS1/16S154J
R 5	RS1/16S391J
R 6	RS1/16S223J
R 7	RS1/16S123J
R 8	RS1/16S332J
R 9	RS1/16S473J
R 10	RS1/16S223J
R 11	RS1/16S124J
R 13	RS1/16S563J
R 15	RS1/16S271J
R 16	RS1/16S104J
R 17	RS1/16S332J
R 18	RS1/16S332J
R 31	RS1/16S470J
R 32	RS1/16S822J
R 33	RS1/16S822J
R 34	RS1/16S331J
R 35	RS1/16S331J
R 51	RS1/16S271J

# KEH-1700,1730

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 52	RS1/16S560J	C 36	CCSRH201J50
R 55	RS1/16S102J	C 51	CKSRYB223K25
R 56	RS1/16S823J	C 52	CKSRYB103K25
R 61	RS1/16S392J	C 54	CCSRCH470J50
R 62	RS1/16S393J	C 55	CKSQYB223K25
R 101	RS1/16S272J	C 56	CKSQYB104K16
R 102	RS1/16S682J	C 57	CKSRYB472K50
R 103	RS1/16S333J	C 58	CEJA330M10
R 104	RS1/16S334J	C 59	CKSRYB103K25
R 105	RS1/16S683J	C 61	CCSRCH270J50
R 107	RS1/16S222J	C 62	CKSRYB103K25
R 151	RS1/16S222J	C 63	CEJAR15M50
R 152	RS1/16S393J	C 101	CEJANP100M10
R 154	RS1/16S104J	C 102	CKSRYB182K50
R 155	RS1/16S273J	C 103	CKSRYB682K25
R 156	RS1/16S243J	C 104	CEJA2R2M50
R 157	RS1/16S203J	C 105	CKSRYB103K25
R 160	RS1/16S222J	C 106	CCSRCH151J50
R 161	RS1/16S563J	C 107	CKSRYB103K25
R 162	RS1/16S105J	C 151	CKSRYB472K50
R 163	RS1/16S222J	C 152	CKSQYB104K16
R 202	RS1/16S223J	C 153	CEJA3R3M50
R 203	RS1/16S225J	C 154	CKSQYB104K16
R 204	RS1/16S103J	C 157	CEJA3R3M50
R 206	RS1/16S220J	C 158	CKSYB474K16
R 207	RS1/16S101J	C 159	CEJA220M6R3
R 208	RS1/16S102J	C 160	CKSQYB104K16
R 209	RS1/16S471J	C 161	CKSQYB104K16
R 214	RS1/16S822J	C 162	CEJA3R3M50
R 215	RS1/16S822J	C 163	CKSRYB102K50
R 217	RS1/16S102J	C 170	CCSRCH100D50
R 231	RS1/16S272J	C 201	CCSRCH471J50
R 232	RS1/16S473J	C 202	CCSRCH100D50
R 237	RS1/16S103J	C 203	CKSRYB332K50
R 238	RS1/16S104J	C 204	CKSQYB473K16
R 239	RS1/16S104J	C 205	CKSQYB473K16
R 240	RS1/16S332J	C 206	CKSQYB104K16
R 241	RS1/16S202J	C 207	CCSRCH560J50
R 243	RS1/16S123J	C 209	CKSQYB104K16
R 244	RS1/16S103J	C 211	CCSRCH101J50
R 247	RS1/16S123J	C 212	CEJA470M6R3
		C 213	CKSRYB103K25
		C 216	CCSRCH101J50
		C 217	CEJA1R5M50
		C 219	CCSRCH471J50
CAPACITORS			
C 1	CCSQCH6R0D50		
C 2	CCSRCK2R0C50		
C 4	CCSRCH820J50	C 220	CKSRYB103K25
C 6	CCSRCH820J50	C 230	CKSRYB103K25
C 8	CKSRYB103K25	C 231	CCSRCH330J50
		C 232	CCSRCH150J50
		C 233	CKSQYB104K16
C 9	CKSQYB104K16		
C 10	CCSRCKR50C50		
C 11	CEJA1R0M50	C 234	CEJA330M10
C 12	CKSRYB222K50	C 235	CKSRYB332K50
C 13	CKSRYB222K50	C 236	CKSQYB473K16
		C 237	CCSRCH120J50
		C 239	CKSRYB472K50
C 14	CCSRCH220J50		
C 16	CCSRCH8R0D50		
C 17	CKSRYB222K50	C 240	CEJAR47M50
C 18	CKSRYB103K25	C 241	CKSQYB104K16
C 19	CKSRYB222K50	C 242	CEJAR47M50
		C 243	CEJAR33M50
		C 244	CKSQYB473K16
C 20	CKSRYB222K50		
C 21	CEJA100M16		
C 22	CCSRTH9R0D50	C 245	CKSRYB123K25
C 23	CCSRTH120J50	C 246	CKSQYB473K16
C 24	CCSRCH471J50	C 250	CCSRCH471J50
C 25	CKSRYB103K25		
C 31	CKSRYB103K25		
C 32	CKSQYB472K50		
C 33	CCSRCH5R0C50		
C 34	CKSQYB104K16		

====Circuit Symbol and No.====Part Name                   Part No.  
-----

**E** Unit Number :  
Unit Name : Mute PCB

SW    2    Mute Switch                                   1-0138-7087

**C** Unit Number :  
Unit Name : SW PCB

SW    3    Slide Switch                                   1-0036-7007

Miscellaneous Parts List

HD    1    Head   10036-7016-1  
M     1    Motor Assy   X-0036-6075  
SW    1    Power Switch   1-0036-7034

## 6. ADJUSTMENT

### ● Connection Diagram

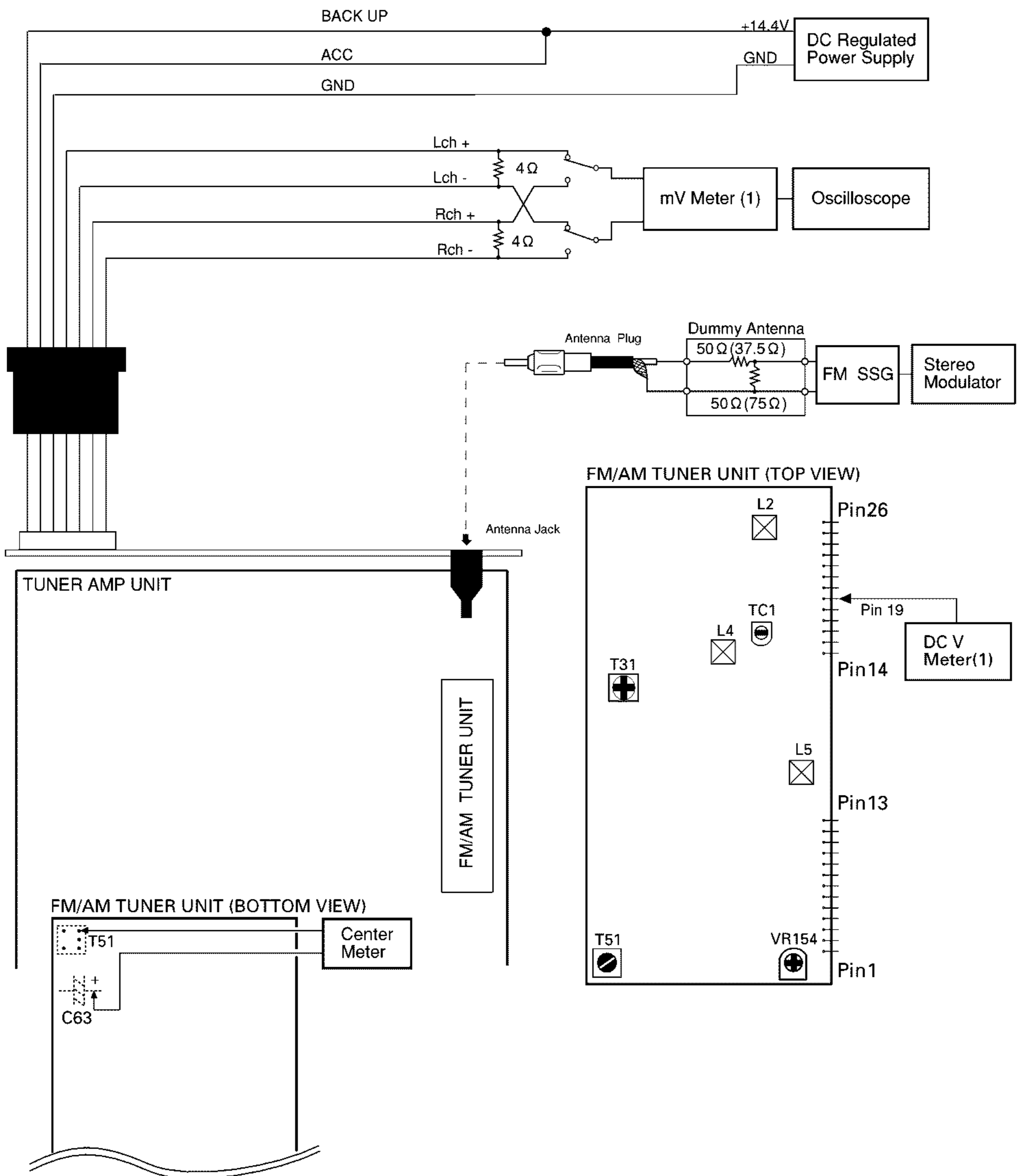


Fig. 16



**FM ADJUSTMENT**

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

S:STEREO MOD., 1kHz, L or R=30%(20.25kHz+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.

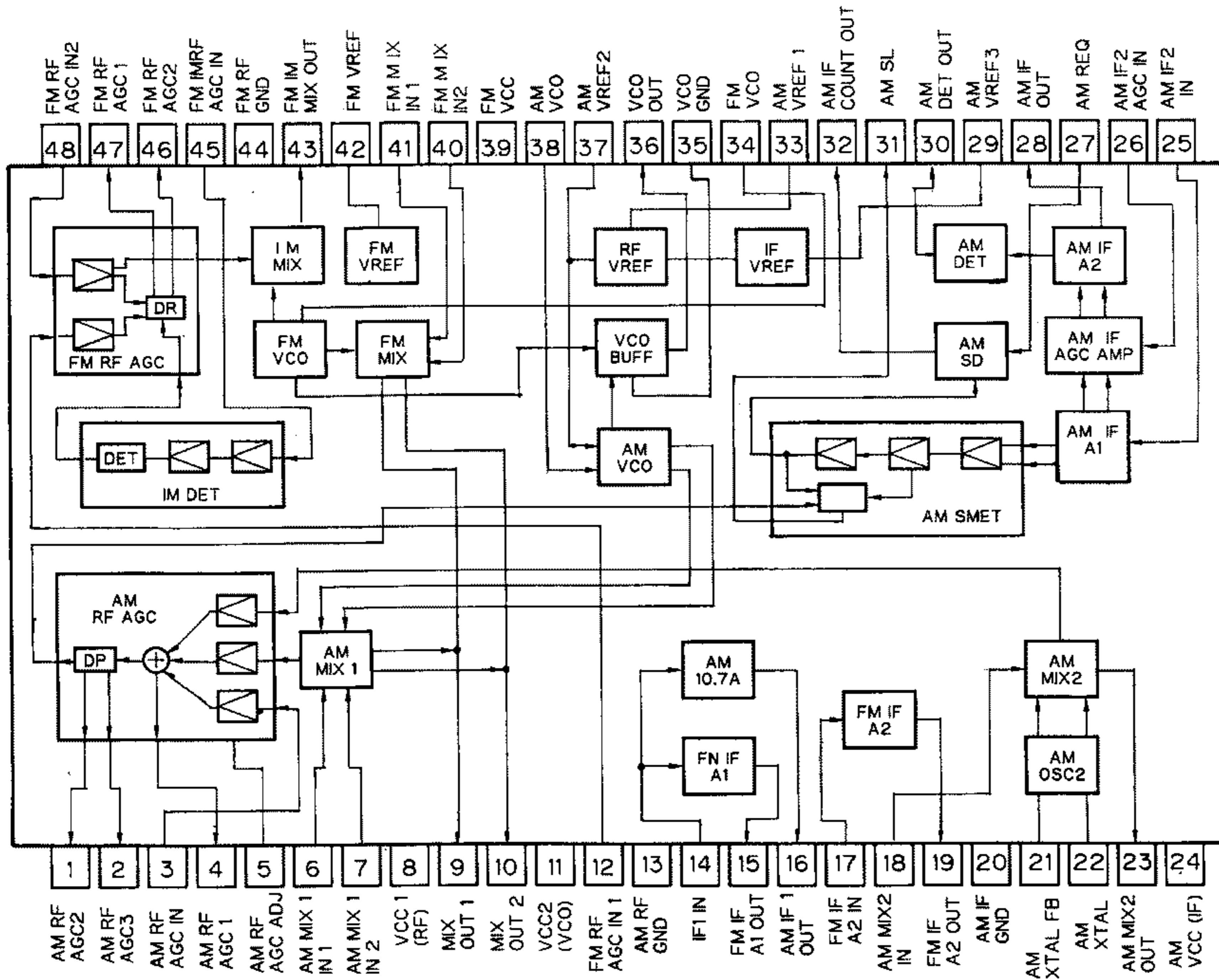
	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	*****	*****	108.0	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : 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 S	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

## 7. GENERAL INFORMATION

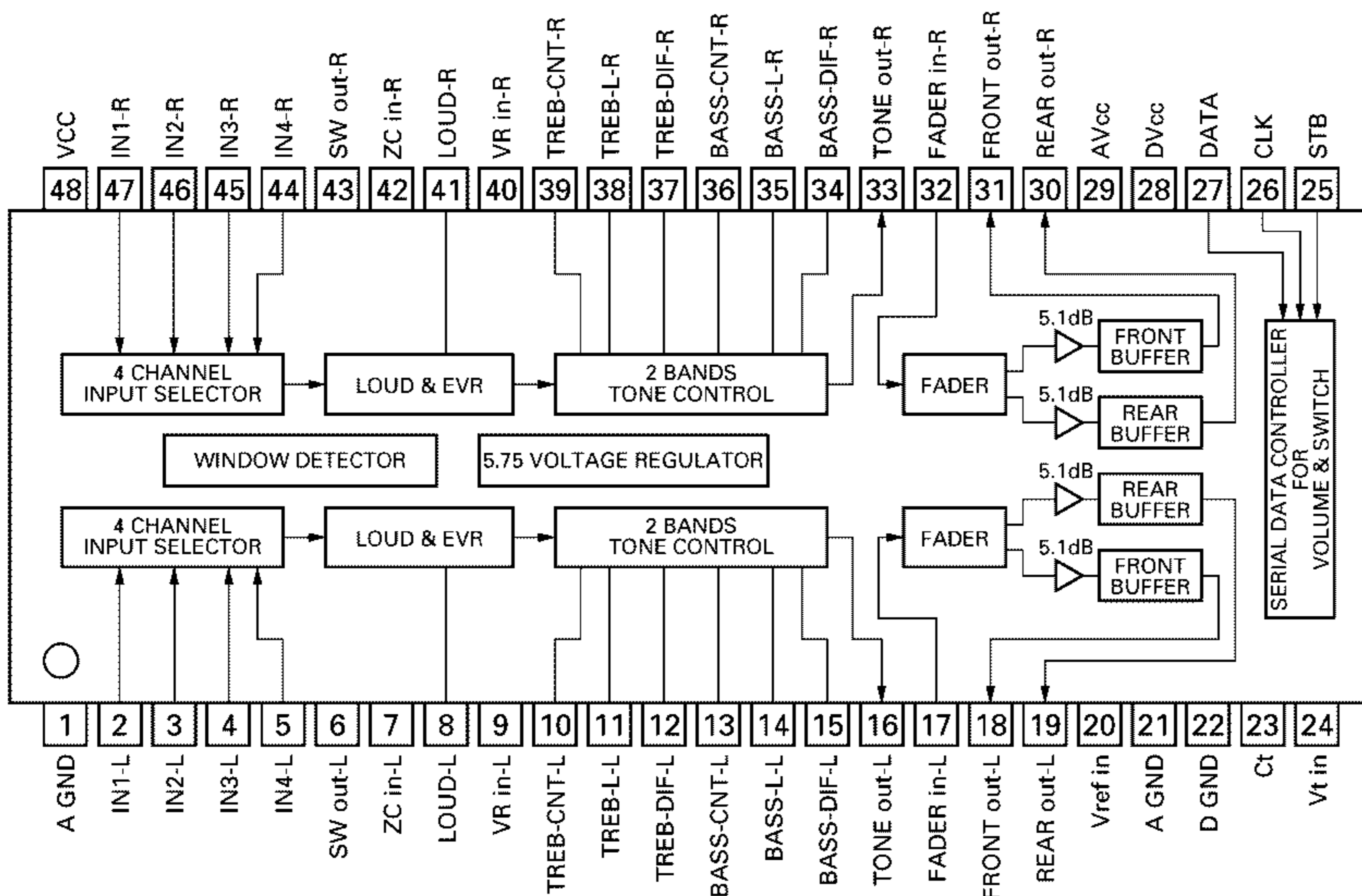
### 7.1 PARTS

#### 7.1.1 IC

PA4023B



SN761027DL

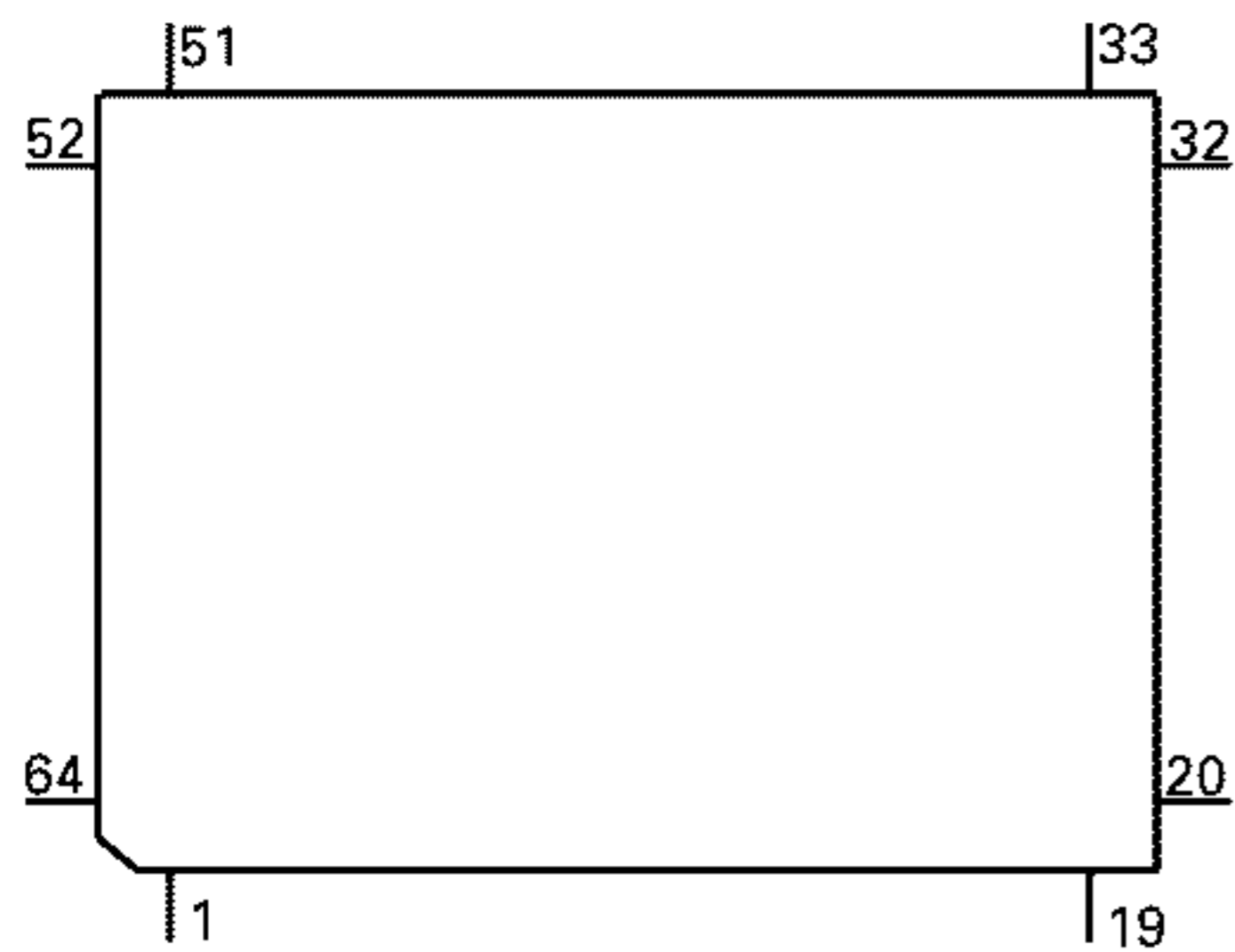


● Pin Functions (PD4875A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	MCMUTE	I		Cassette mechanism mute input
2	TAPLD	I		Tape loading input
3	EO	O	C	Error output
4	VDD1			Power supply
5	GND			GND
6	VCOIN	I		AM/FM VCO input
7	ASENS	I		ACC power sense input
8	VDD2			Power supply
9	LCK	I/O	C	Serial clock output for LCD driver
10	LDT	O	C	Data output for LCD driver
11	LDI	I		Key/LCD driver data input
12	FMSD	I		FM SD input
13	AMIF	I		AM IF signal input
14	SL	I		Signal level input
15	ST	I		FM stereo input
16,17	NC			Not used
18	SWVDD	O	C	Grille power supply control output
19	NC			Not used
20	VST	O	C	Strobe pulse output for electronic volume
21	VCK	O	C	Clock output for electronic volume
22	VDT	O	C	Data output for electronic volume
23	NC			Not used
24	XO	O		Crystal oscillator connection pin
25	XI	I		Crystal oscillator connection pin
26	GND			GND
27-30	NC			Not used
31	TESTIN	I		Test program mode input
32	DSNS	I		Grille detach sense input
33,34	GND			GND
35-38	NC			Not used
39	MUTE	O	C	System mute output
40	DMINH	O		Mechanism mute cancel output
41,42	NC			Not used
43	SYSPW	O	C	System power supply control output
44-48	NC			Not used
49	MS			Not used
50	MECPW	O	C	Cassette mechanism power output
51	AM	O	C	AM power control output
52	LOCL	O	C	LOC "L" output
53	LOCH	O	C	LOC "H" output
54	FM	O	C	FM power control output
55	SEEK	O	C	Seek output
56	NC			Not used
57	LW	O	C	LW output
58	GND			GND
59,60	NC			Not used
61	DM1	I		Model,function input
62	DM0	I		Model,function input
63	NOR/REV	I		Tape running input
64	GND			GND

# KEH-1700,1730

\*PD4875A



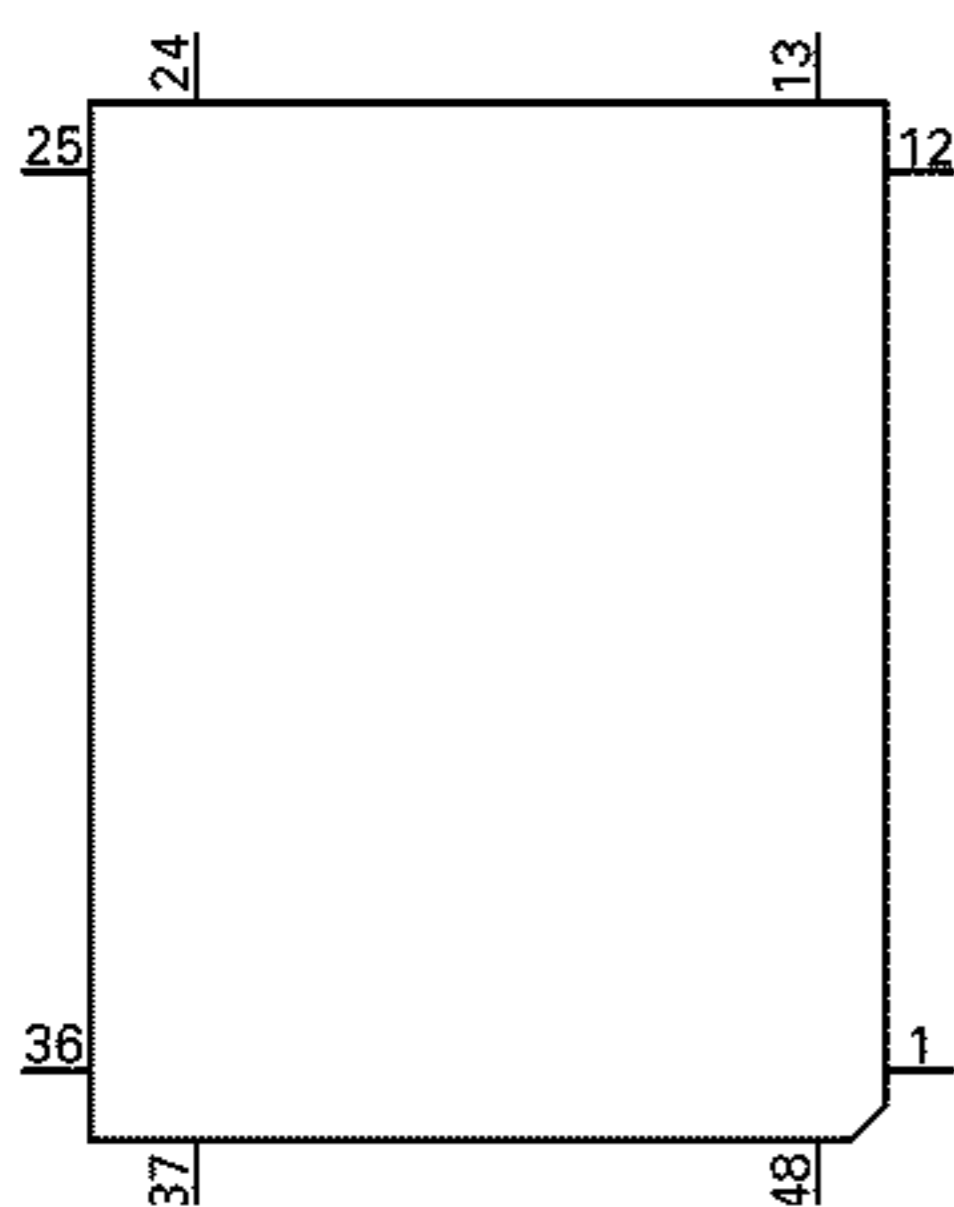
IC's marked by\* are MOS type.  
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

Format	Meaning
C	C MOS

## ● Pin Functions(PDC045A)

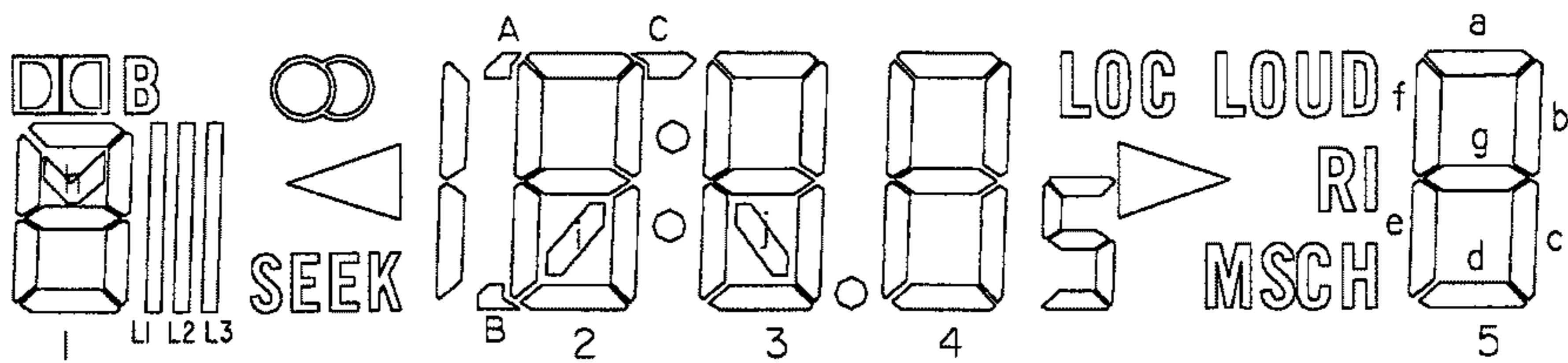
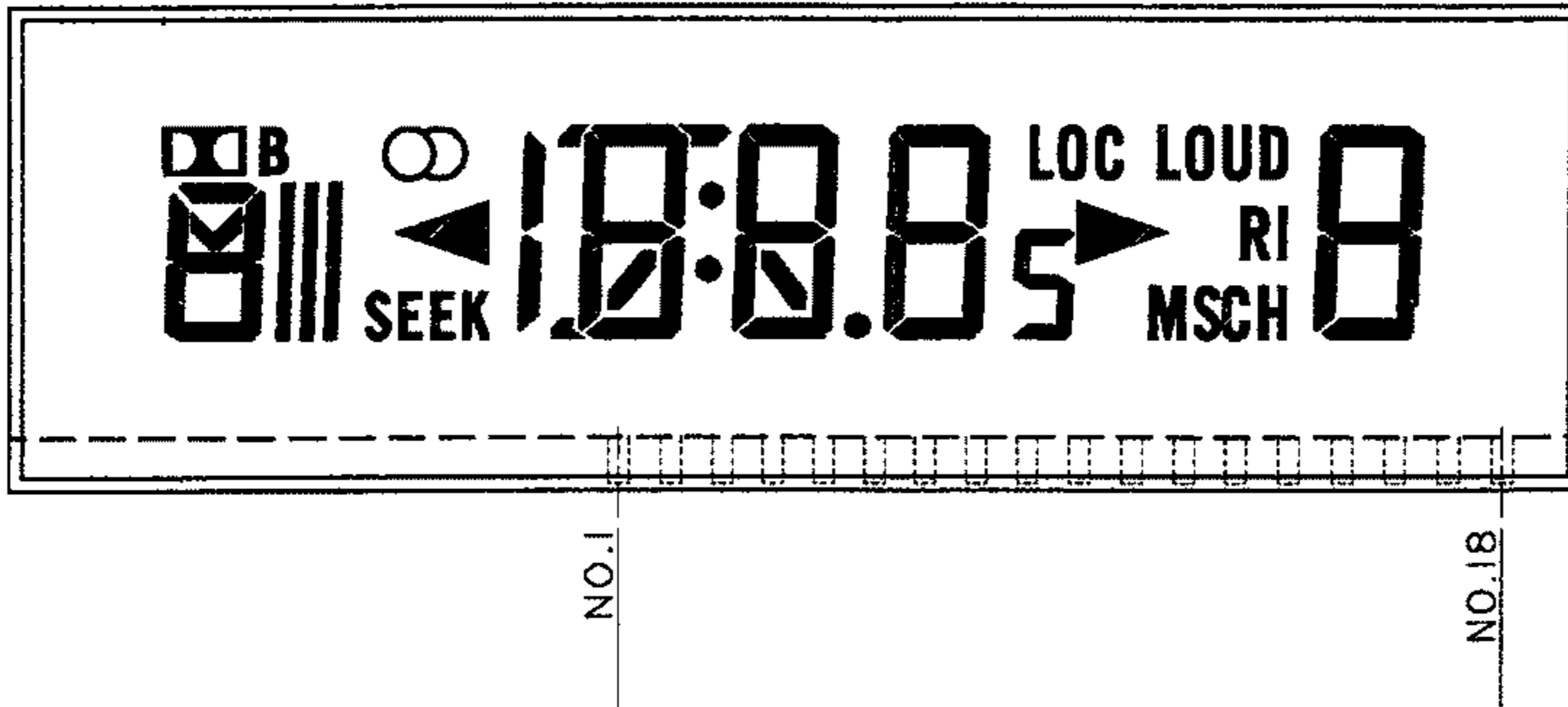
Pin No.	Pin Name	I/O	Function and Operation
1-4	NC		Not used
5-8	KS4-1	O	Key strobe output
9-12	KD4-1	I	Key data input
13	SI	I	Display data input
14	SO	O	Key data output
15	SCK	I/O	Clock input terminal for serial data input and output
16	REMIN	I	Remote control reception
17	RES	I	Reset input
18	TEST	I	Test input
19	OSC-IN	I	System clock input
20	OSC-OUT	O	System clock output
21	GND		GND
22,23	VDD2,1		LCD power supply
24	VDD		Power supply
25-28	COM1-4	O	LCD common signal
29-42	SEG1-14	O	LCD segment signal
43-48	NC		Not used

\*PDC045A



7.1.2 DISPLAY

● CAW1462



NO.	COM.1	COM.2	COM.3	COM.4
1				COM.4
2			COM.3	
3		COM.2		
4	COM.1			
5	1f	1h	1a	DDB
6	1e	1g	1b	∞
7	1d	1c	L1	L2, L3
8	SEEK	◁	∩	A, B
9	2i	2e	2f	2a
10	2d	2c	2g	2b
11	3j	3e	3f	3a
12	3d	3c	3g	3b
13	°	4e	4f	4a
14	4d	4c	4g	4b
15	▷	5	°	C
16	MS	RI	LOUD	LOC
17	CH	5e	5f	5a
18	5d	5c	5g	5b

Fig. 17

**7.2 DISASSEMBLY**

● **Removing the Case(not shown)**

1.Insert and turn a screwdriver to remove the case.

● **Removing the Mechanism Assy  
(not shown)**

1.Remove the four screws.

2.Disconnect the connector, and then removing the Mechanism Assy.

● **Removing the Detach Grille Assy(Fig.18)**

1.Disengage the stopper at two locations indicated by arrows.

2.Remove the Detach Grille Assy.

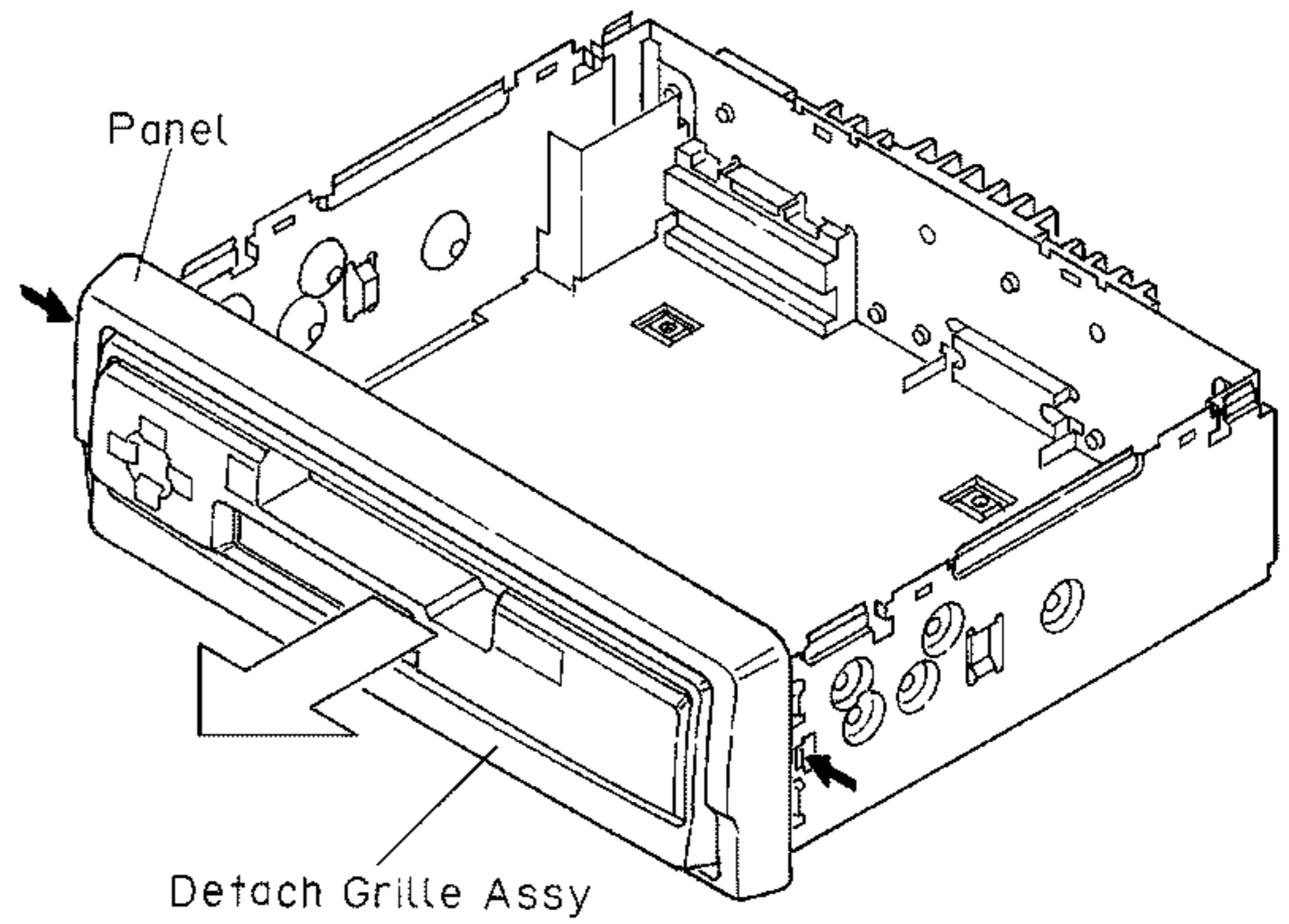


Fig. 18

● **Removing the Tuner Amp Unit(Fig.19)**

1.Removing the three screws A.

2.Unbend the tabs at four locations indicated by arrows until straight.

3.Remove the Tuner Amp Unit.

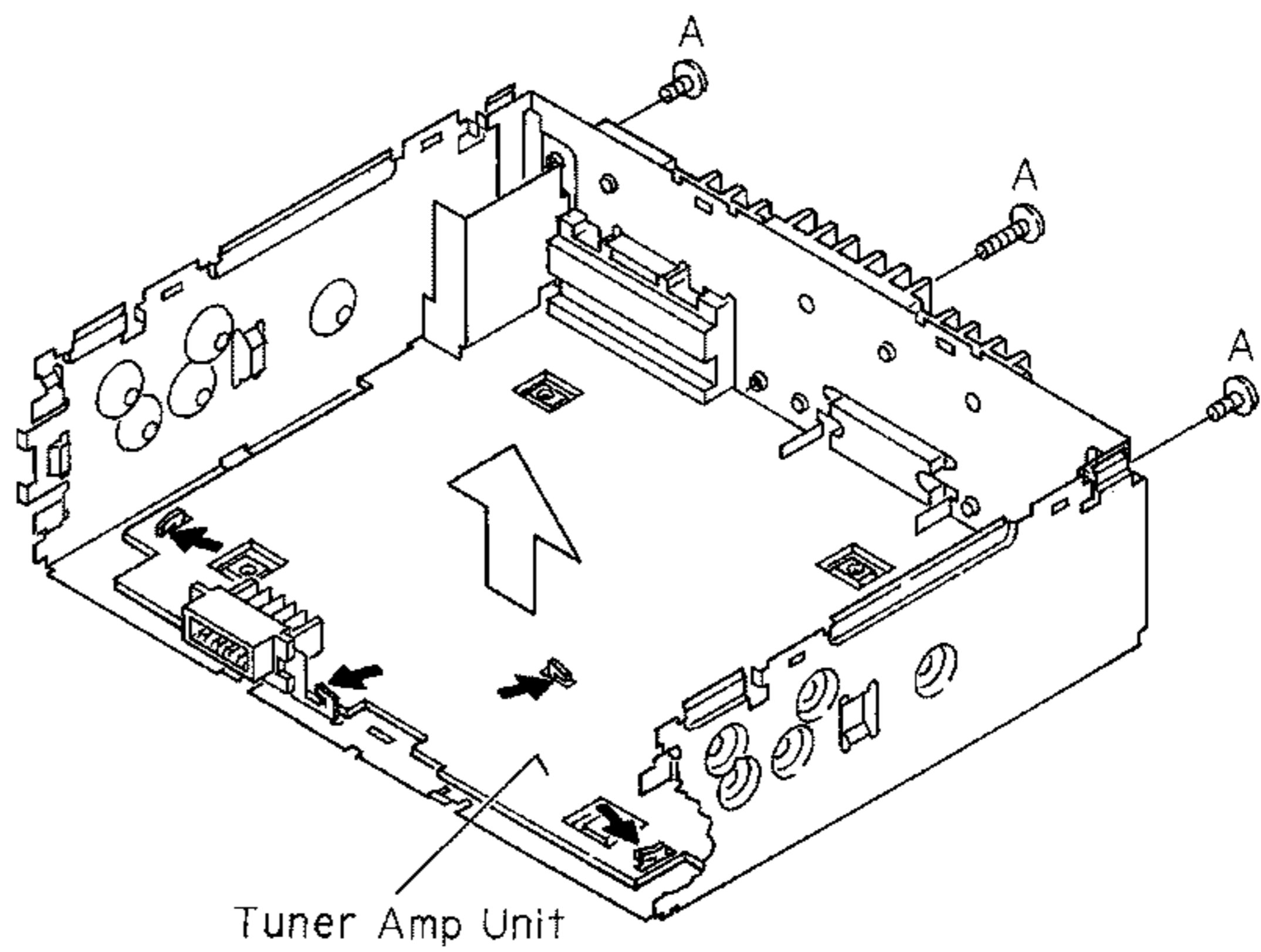


Fig. 19

# 7.3 BLOCK DIAGRAM

● KEH-1700/X1M/EW

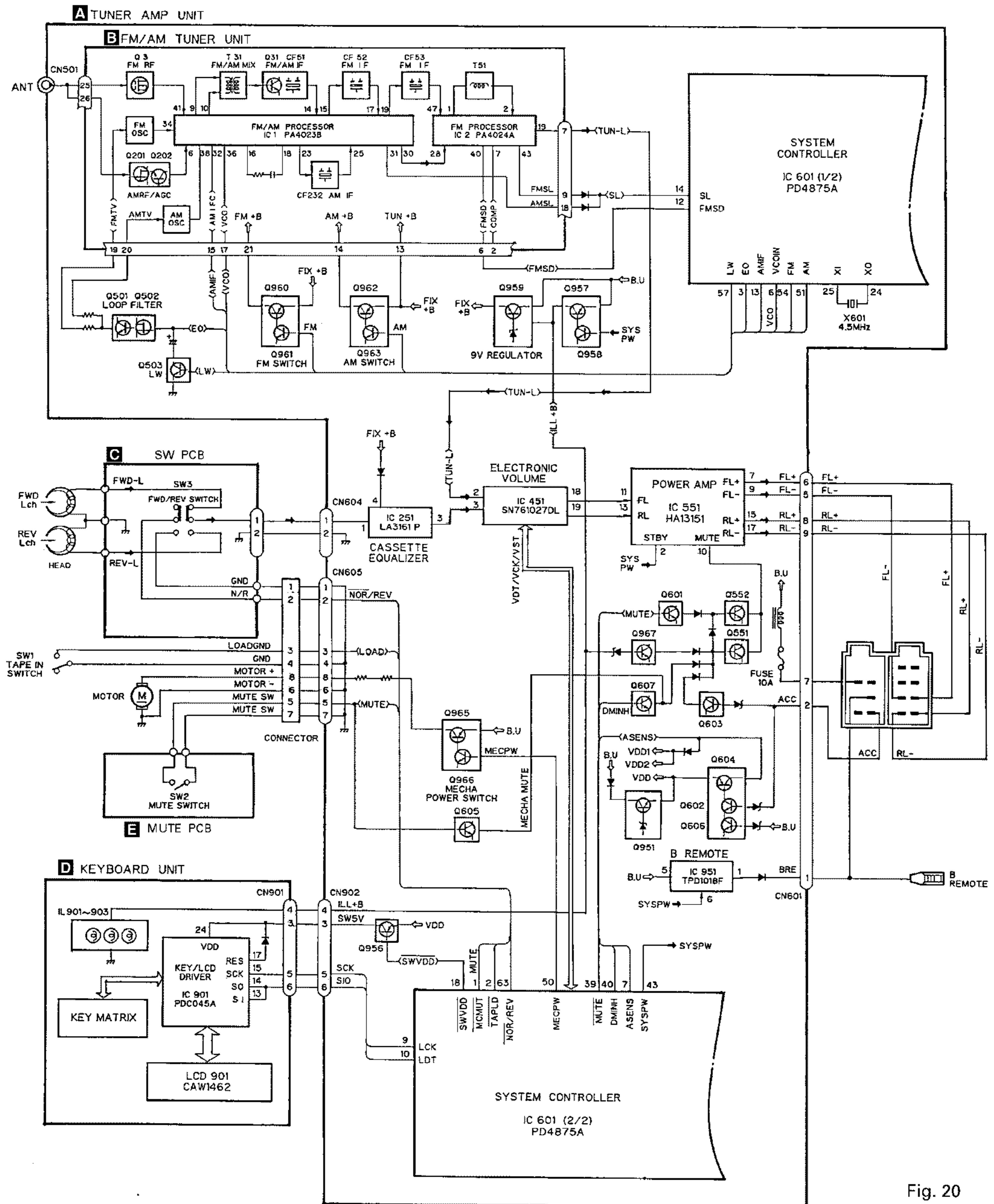


Fig. 20

8. OPERATIONS AND SPECIFICATIONS

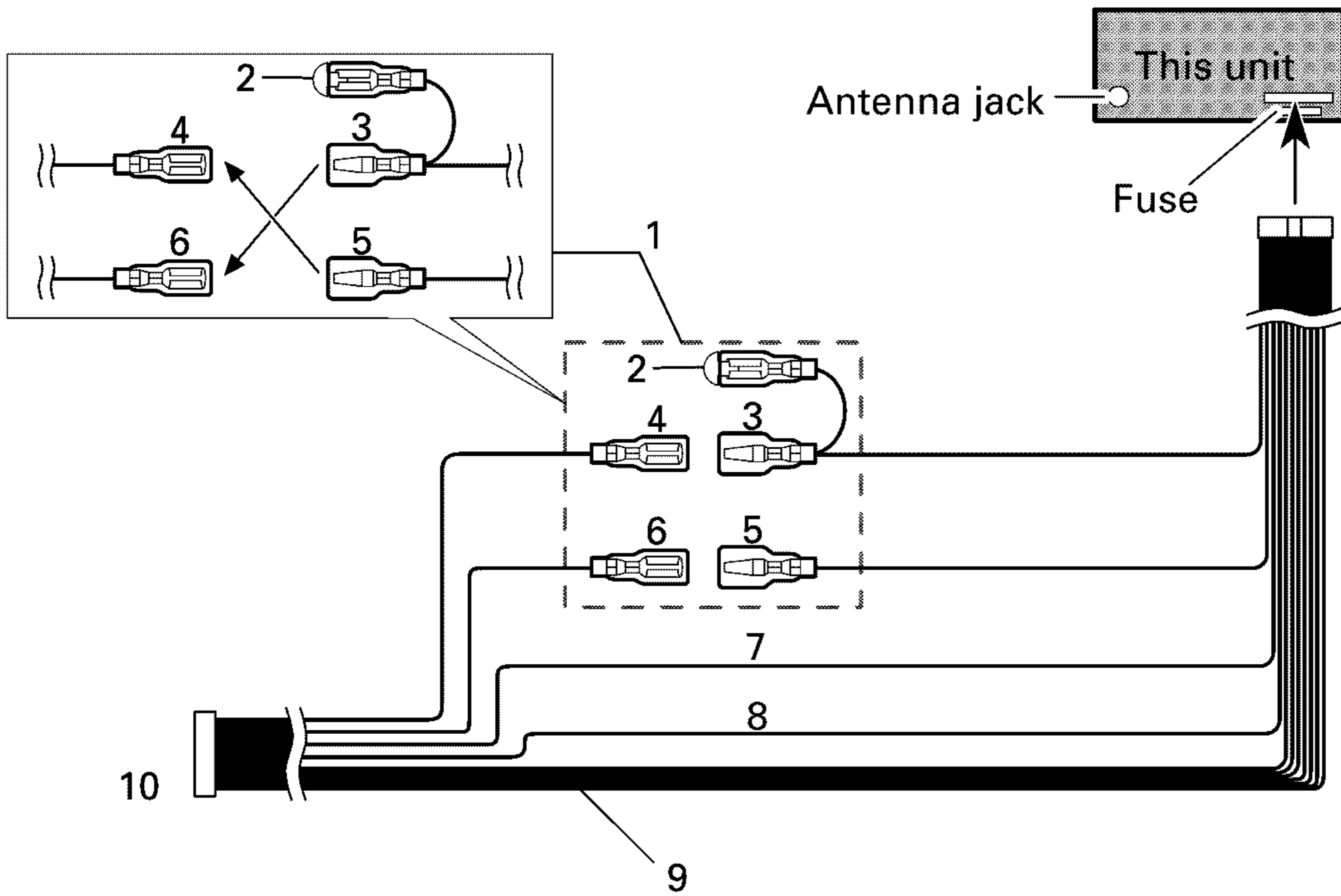


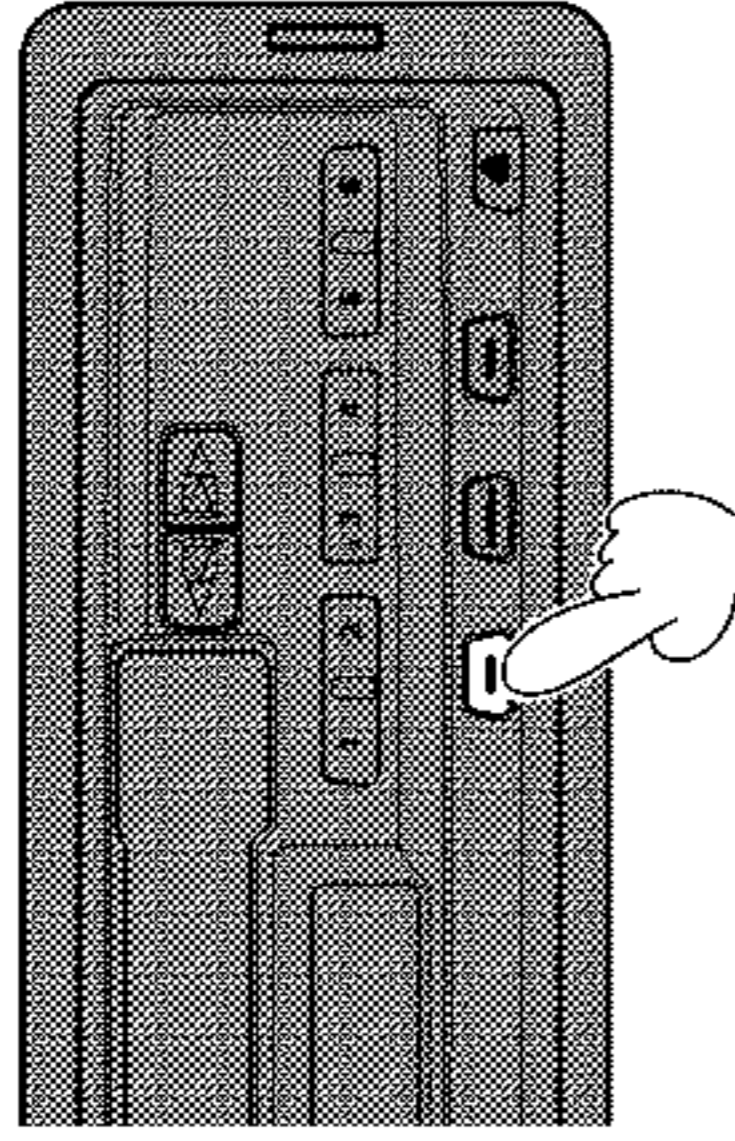
Fig. 21



## 8.1 OPERATIONS

### Using the Clock

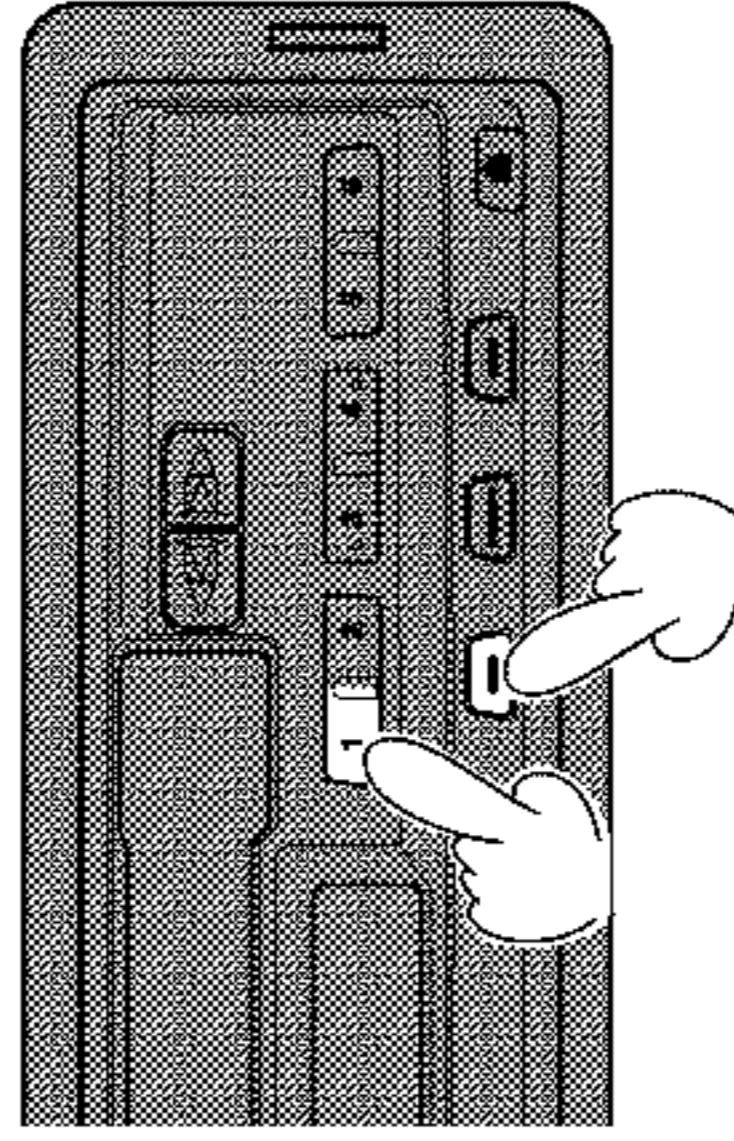
#### Displaying the Time



Press the [CLOCK] button to turn the clock ON/OFF.

- The clock cannot be displayed when the POWER is OFF.
- When you perform another operation, the clock temporarily disappears from the display. The clock display is restored approximately 25 seconds after the operation.

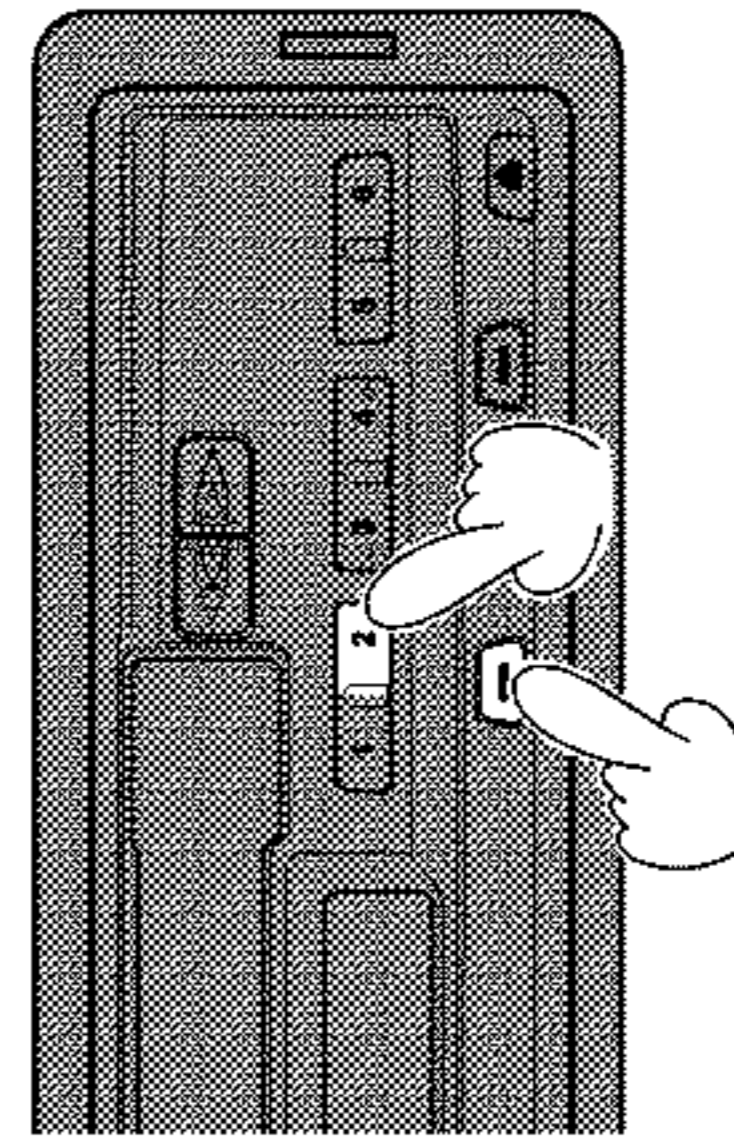
#### To adjust the hour



Hold down the [CLOCK] button and press the [1] button while the clock is displayed.

- You can adjust the hour successively by pressing the [1] buttons while holding down the [CLOCK] button.

#### To adjust the minute

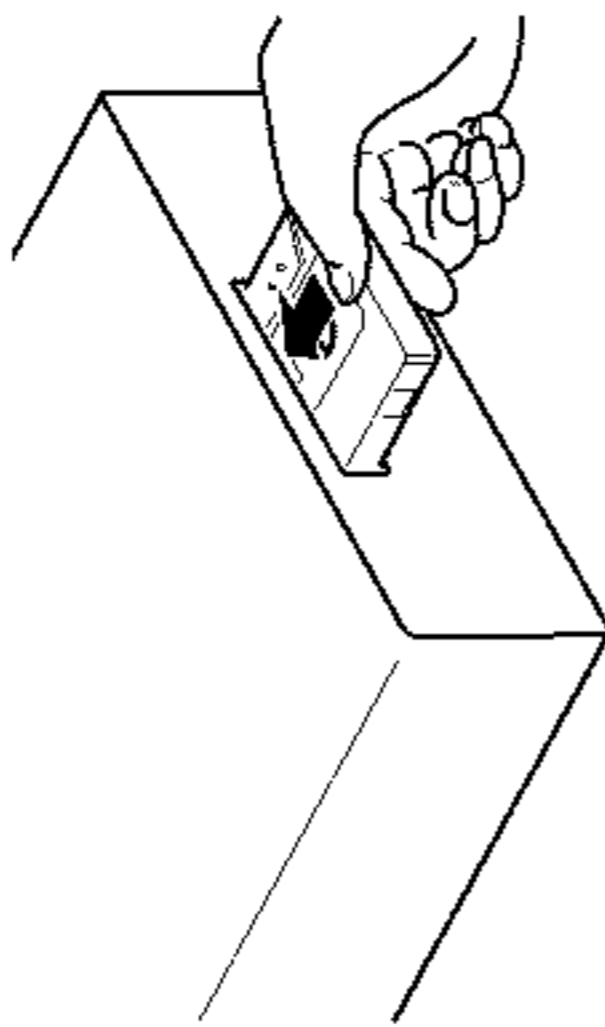


Hold down the [CLOCK] button and press the [2] button while the clock is displayed.

- You can adjust the minute successively by pressing the [2] buttons while holding down the [CLOCK] button.
- The seconds start at "0". When you release the [CLOCK] button.

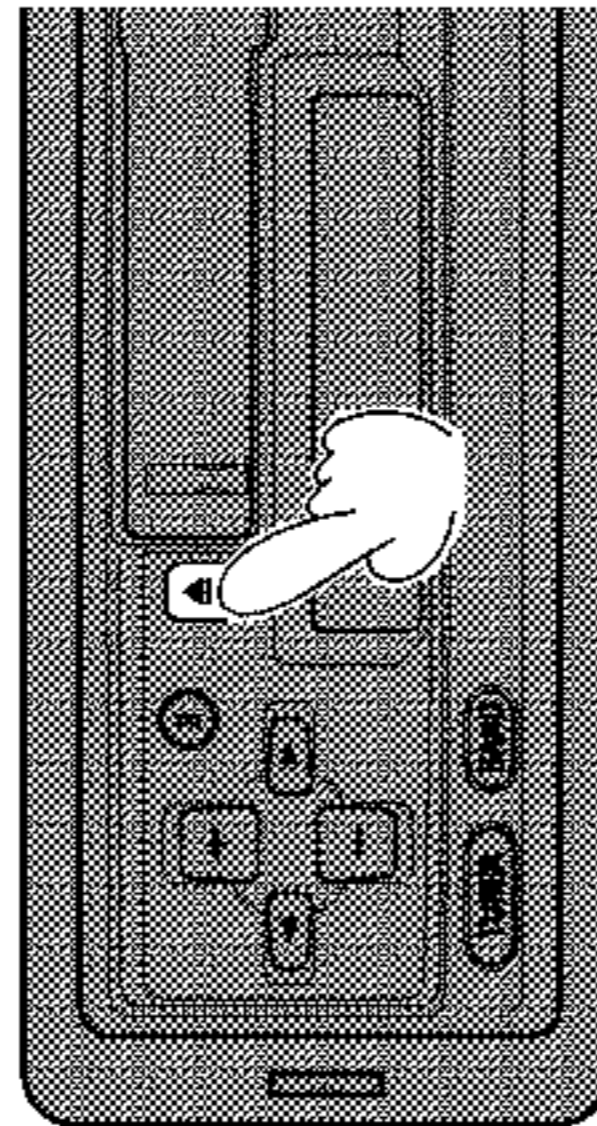
### Power ON/OFF

#### Tape To play



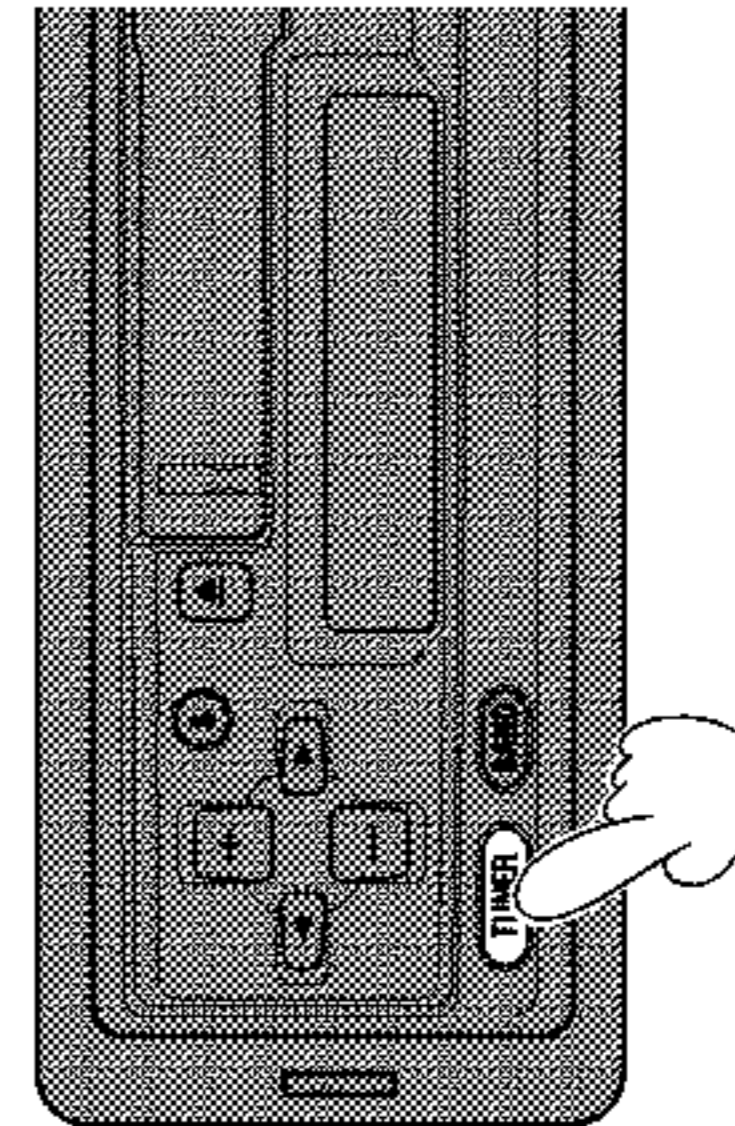
Insert a cassette tape through the cassette door, the power comes on and the tape starts to play automatically.

#### Eject



Press the [EJECT] button.

#### Radio

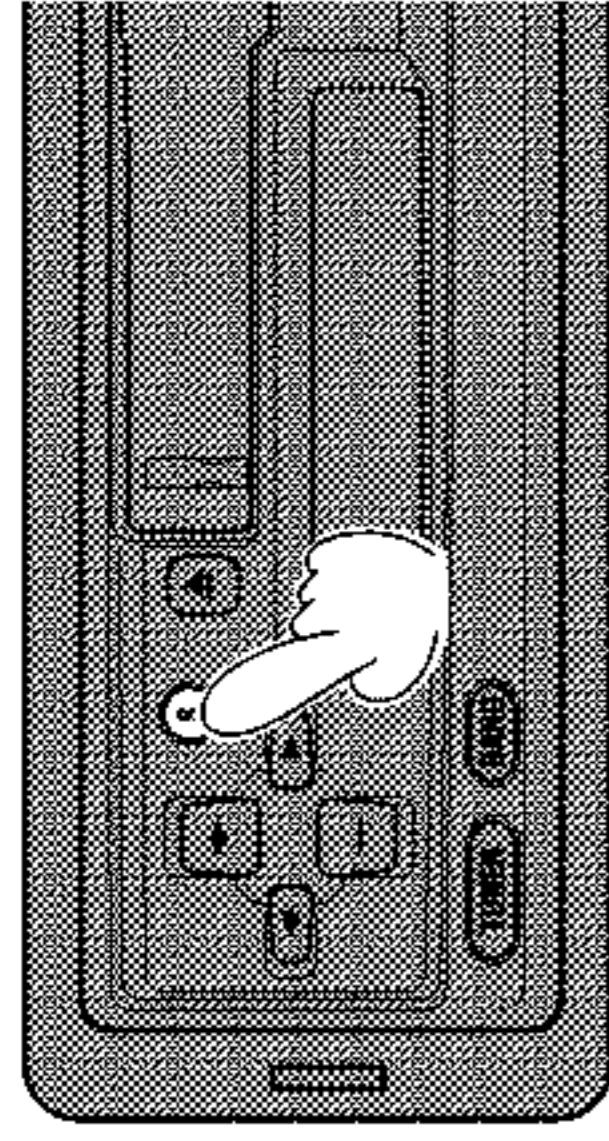


Press the [TUNER] button to switch the tuner ON/OFF.

- You cannot switch to "TUNER" when a tape is loaded.

## Adjusting Volume and Tone

### Mode Selection

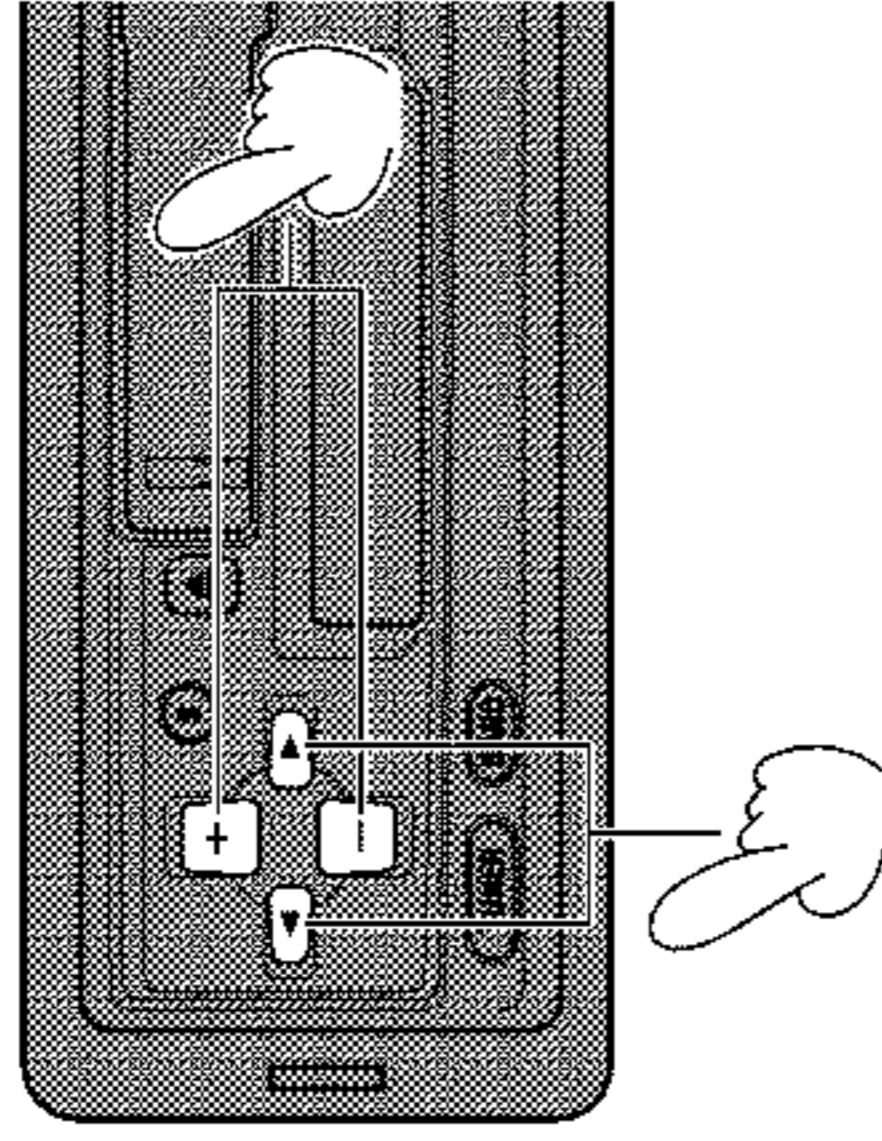


Each press of the [S] button changes the mode as follows:

**Fader adjustment (F):** — Tone adjustment (T) — Volume adjustment (V):

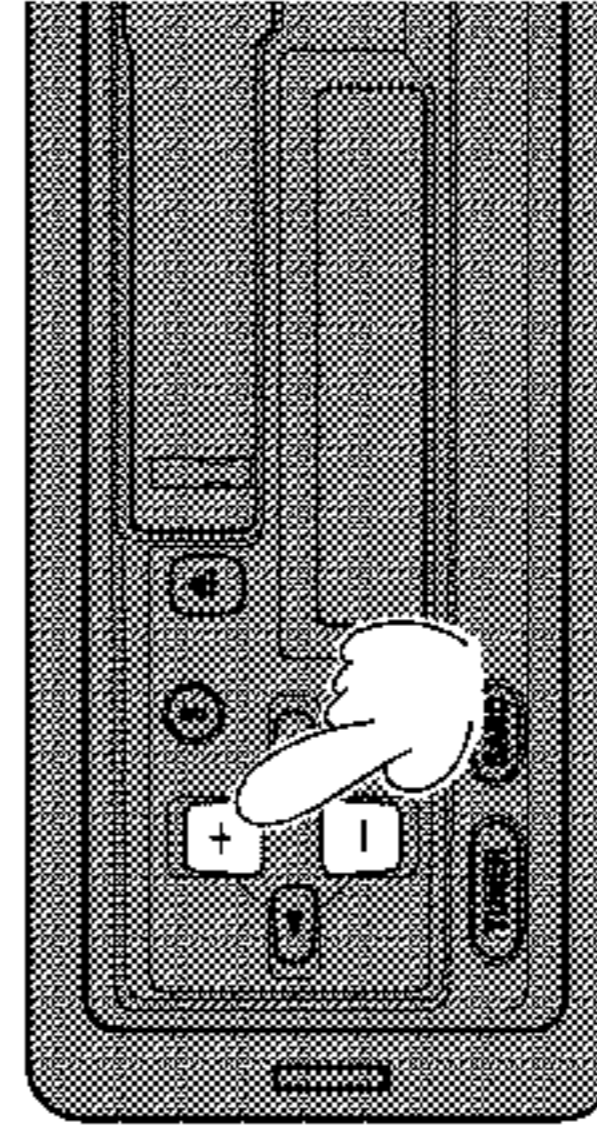
- Fader, Balance, Treble and Bass settings stop temporarily at the center position.
- If no operations are performed within 8 seconds, adjustment modes are cancelled. Make adjustments within 8 seconds.

### Fader/Balance



Press the [◀] or [▶] button when in the Fader mode, and the Balance mode "B:" is indicated in the display. Press the [+] or [-] button when in the Balance mode, and the display changes to "F:", indicating that you have switched to the Fader mode.

### Fader



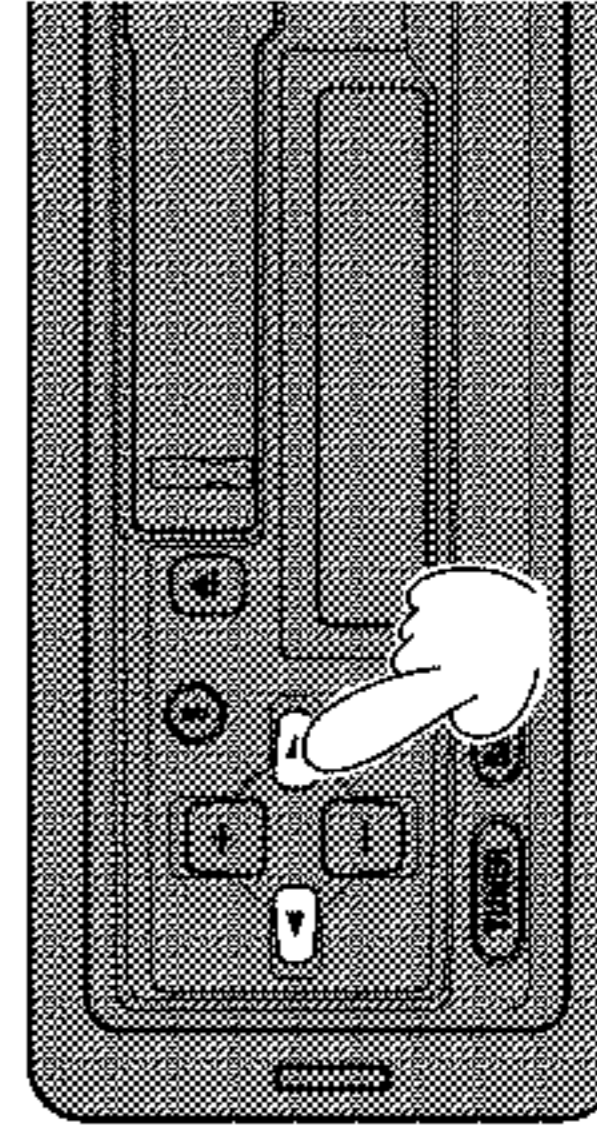
[+]: Shifts the sound toward the front speakers.

[-]: Shifts the sound toward the rear speakers.

(Display shows "F:F9" ~ "F:R9".)

- Please set to "F: 0" when using a 2 speaker system.

### Balance

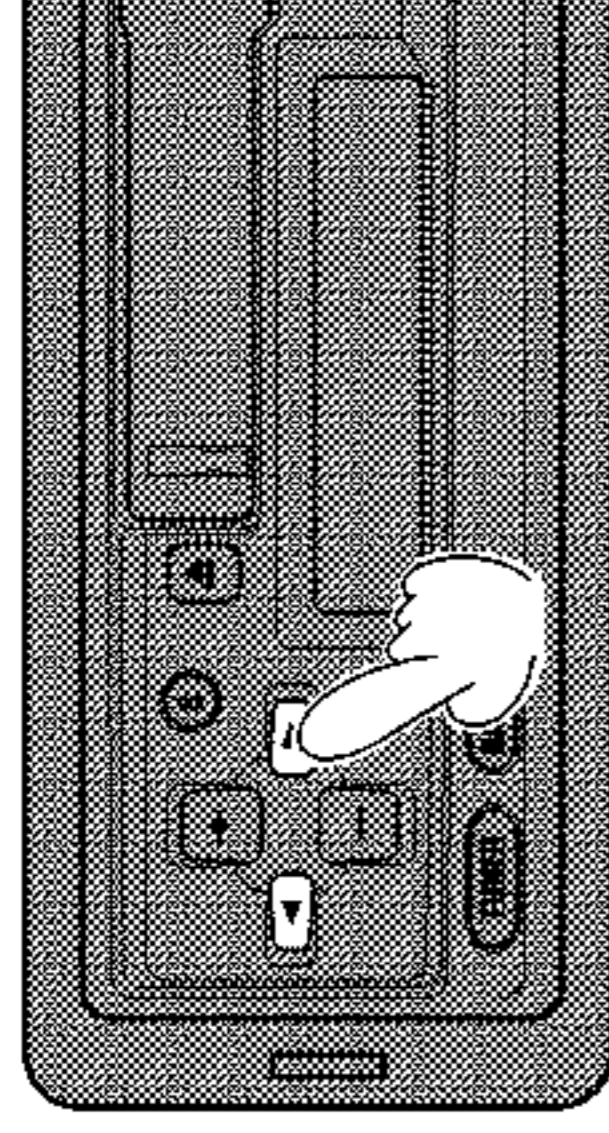


[▶]: Shifts the sound toward the right speakers.

[◀]: Shifts the sound toward the left speakers.

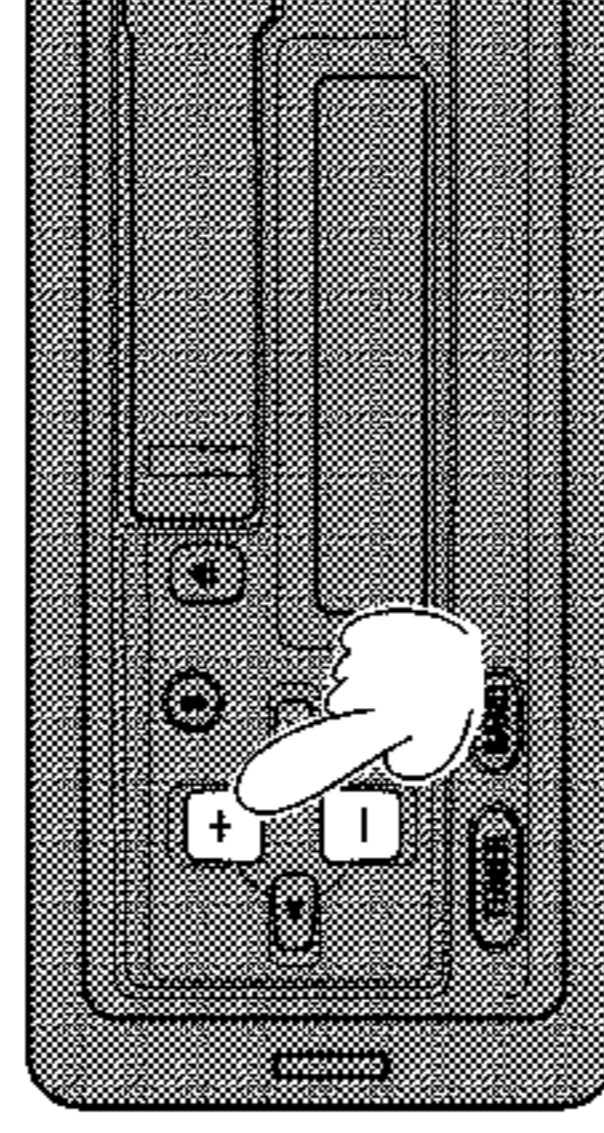
(Display shows "B:L9" ~ "B:R9".)

### Bass/Treble



Press the [▼] button when in the Treble mode, and the Bass mode "B:" is indicated in the display. Press the [▲] button when in the Bass mode, and the display changes to "T:", indicating that you have switched to the Treble mode.

### Adjusting Bass/Treble

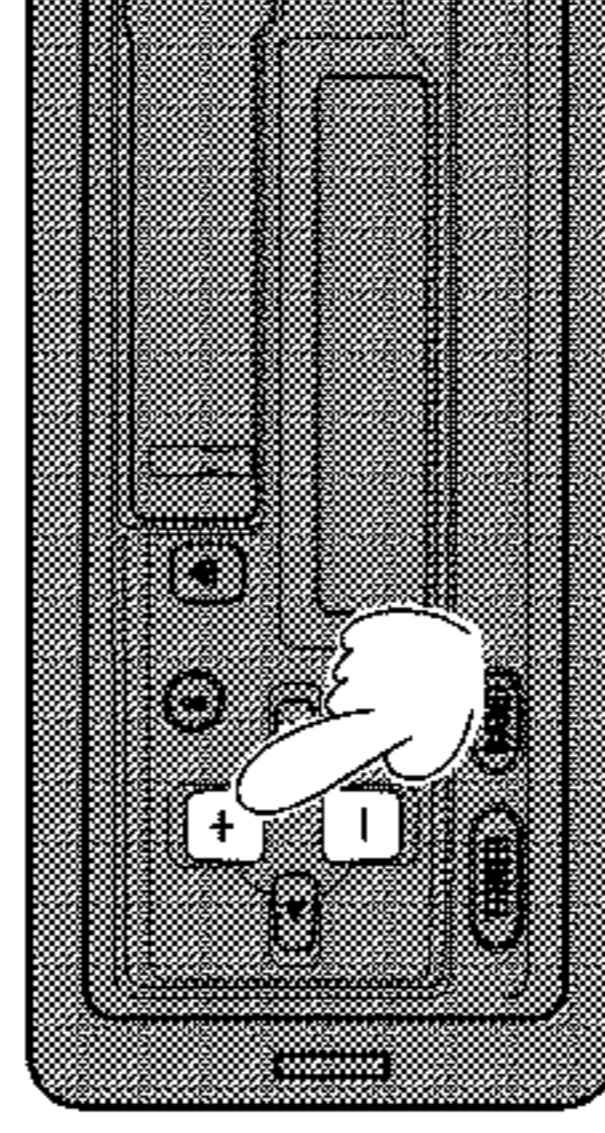


[+]: Boosts

[-]: Attenuates

(When in the Treble mode, the display shows "T:-6" ~ "T: 6". When in the Bass mode, it shows "B:-6" ~ "B: 6".)

### Volume

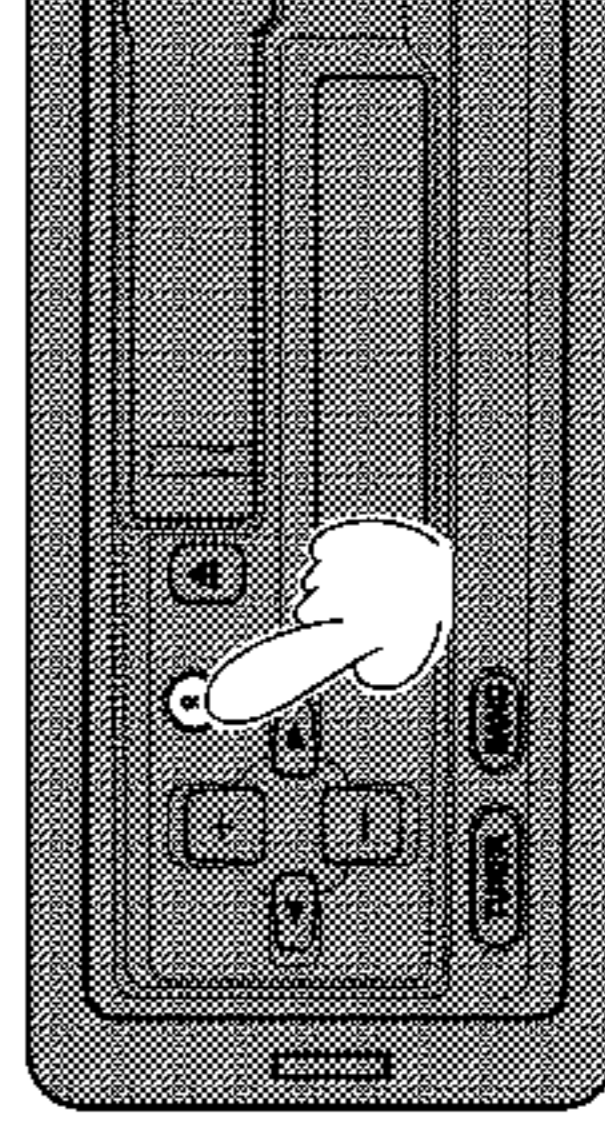


Pressing the [+] button increases the volume, while the [-] button decreases it. (Display shows "V: 0" ~ "V: 31".)

- When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from outside.

### Loudness

This function enhances both the high and low ranges of sound to give even more power to output at low volume.



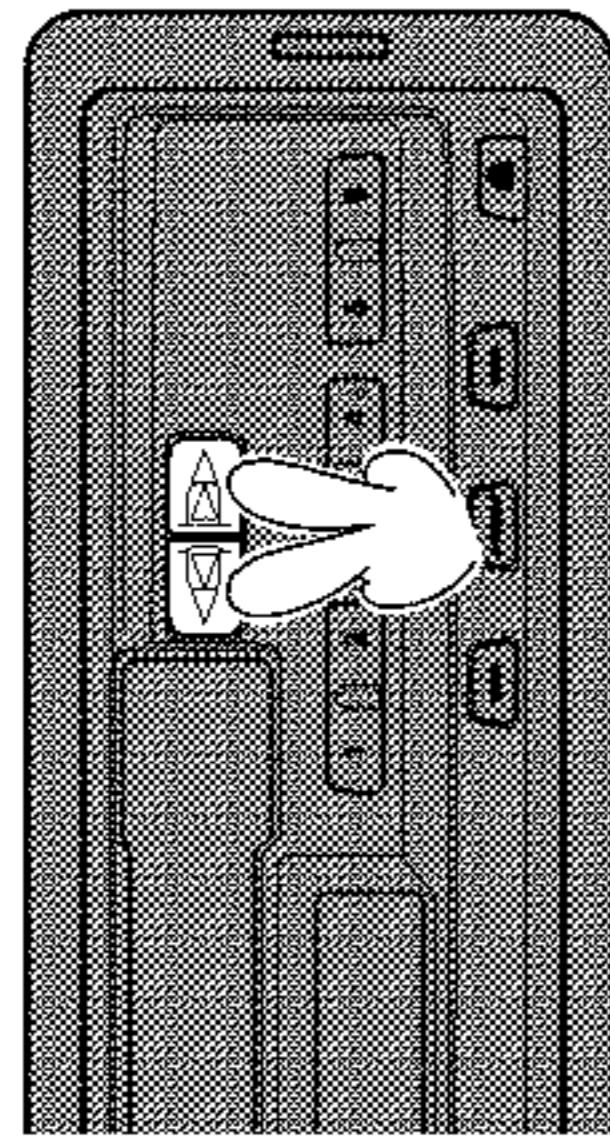
Press the [S] button for 2 seconds to turn Loudness ON/OFF.

"LOUD" appears in the display when the Loudness function is turned ON.

"LOUD" goes out when the Loudness function is turned OFF.

## Using the Tape Deck

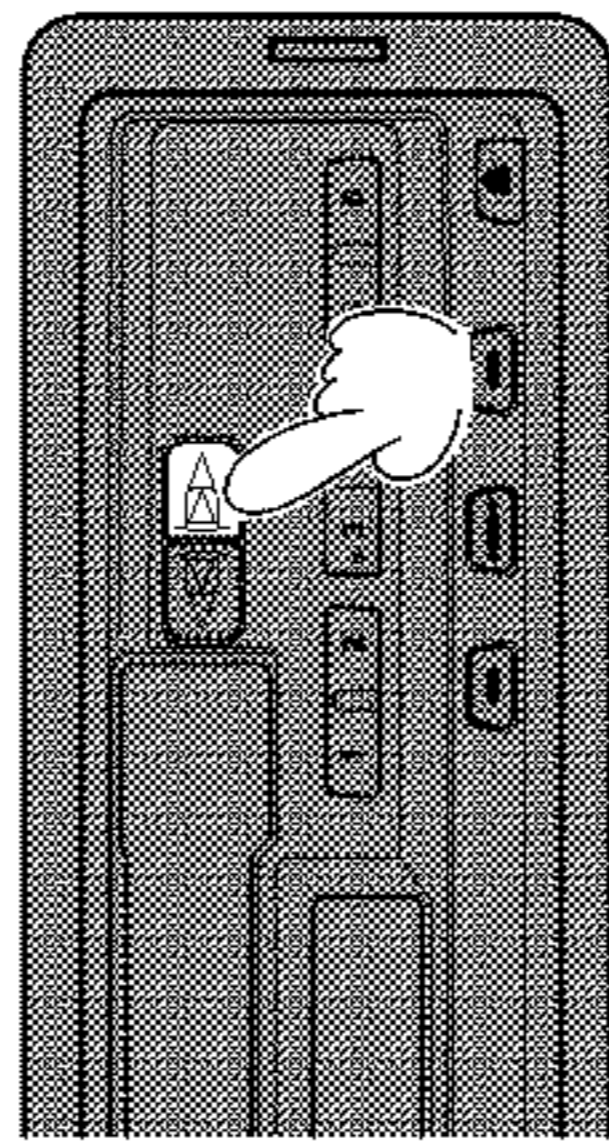
### To Change Sides



Press the [◀] and [▶] buttons at the same time.

### Fast Forward/Rewind

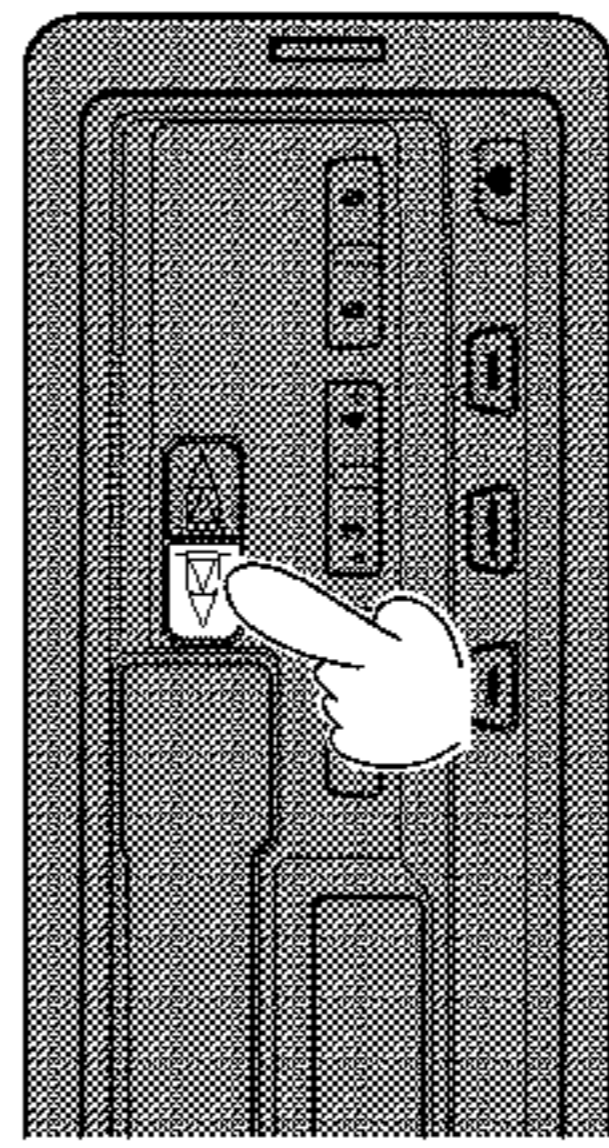
Fast forward



Press the button for the same direction as the tape play indicator.



Rewind



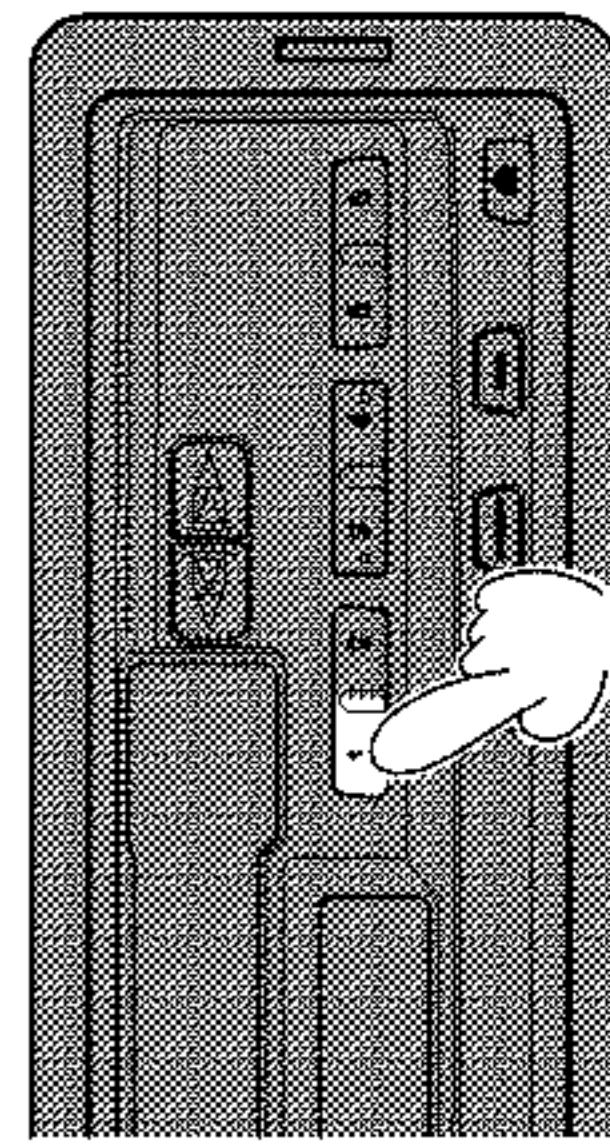
Press the button for the opposite direction as the tape play indicator.



- To release fast forward/rewind, lightly press the [◀] or [▶] button located on the opposite side of the one you pressed to fast forward or rewind.
- "◀" or "▶" flashes when the tape is fast forwarding or rewinding.

### Radio Intercept

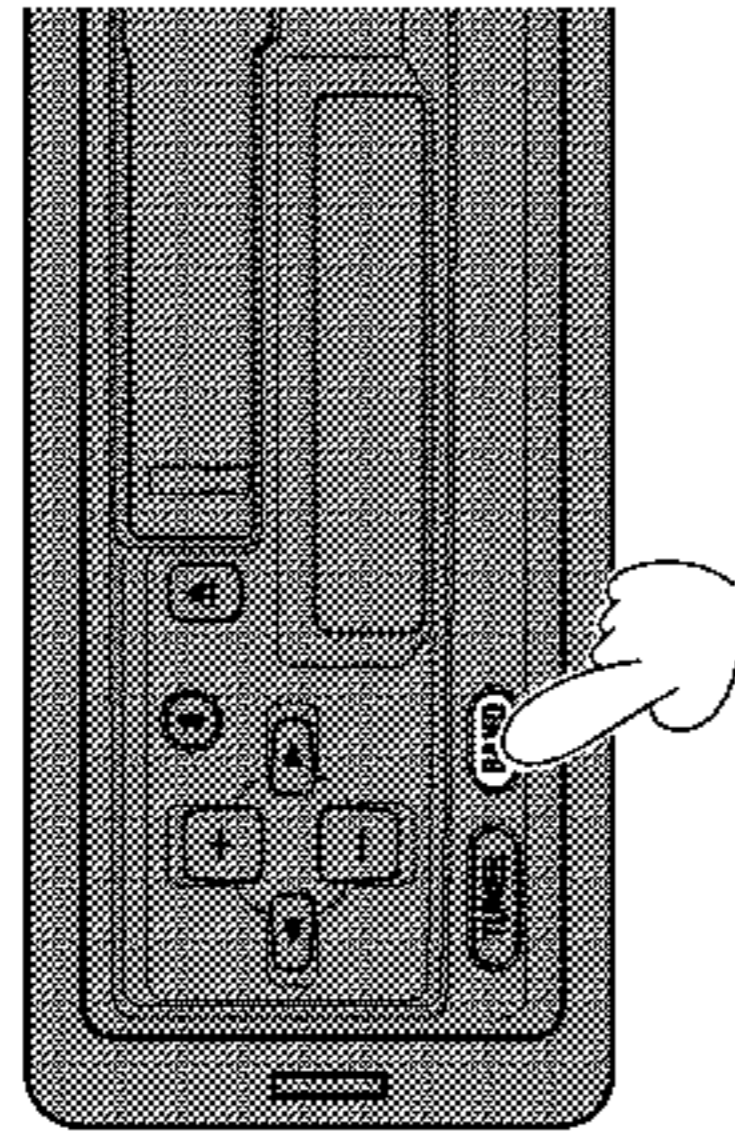
This function lets you listen to the radio while playing, fast forwarding, or rewinding a tape.



Press the [1] button to turn radio intercept ON/OFF. "RI" appears in the display when the radio intercept function is turned ON. "RI" goes out when the radio intercept function is turned OFF.

## Using the Radio

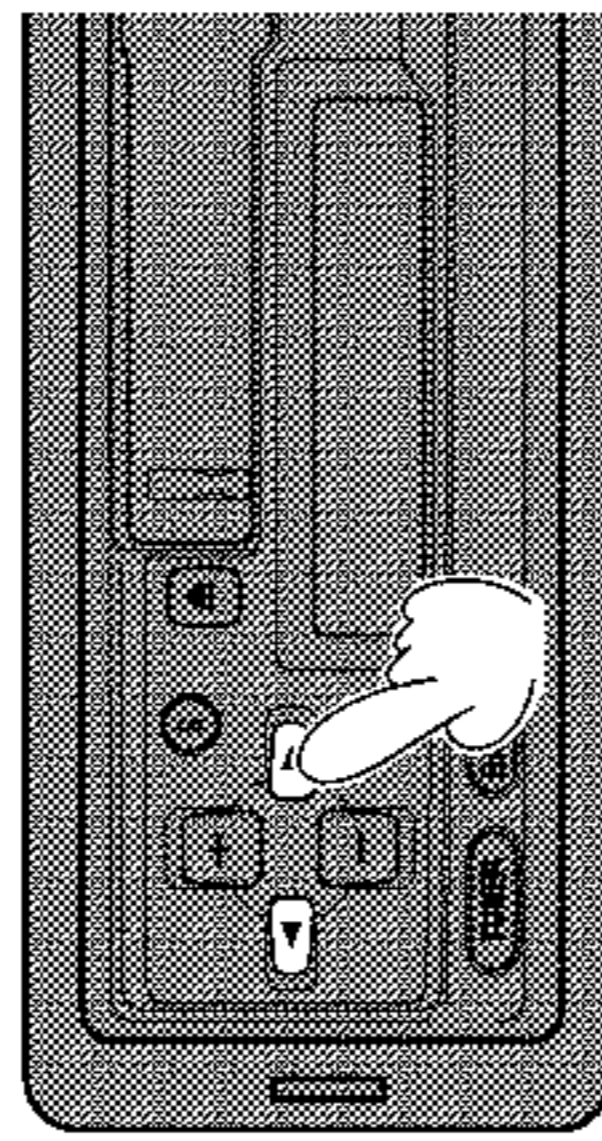
### Selecting a Band



Press the [BAND] button to select a band.

Use the [◀] and [▶] buttons to switch between MW and LW.  
 MW : 531 — 1,602 kHz  
 LW : 153 — 281 kHz

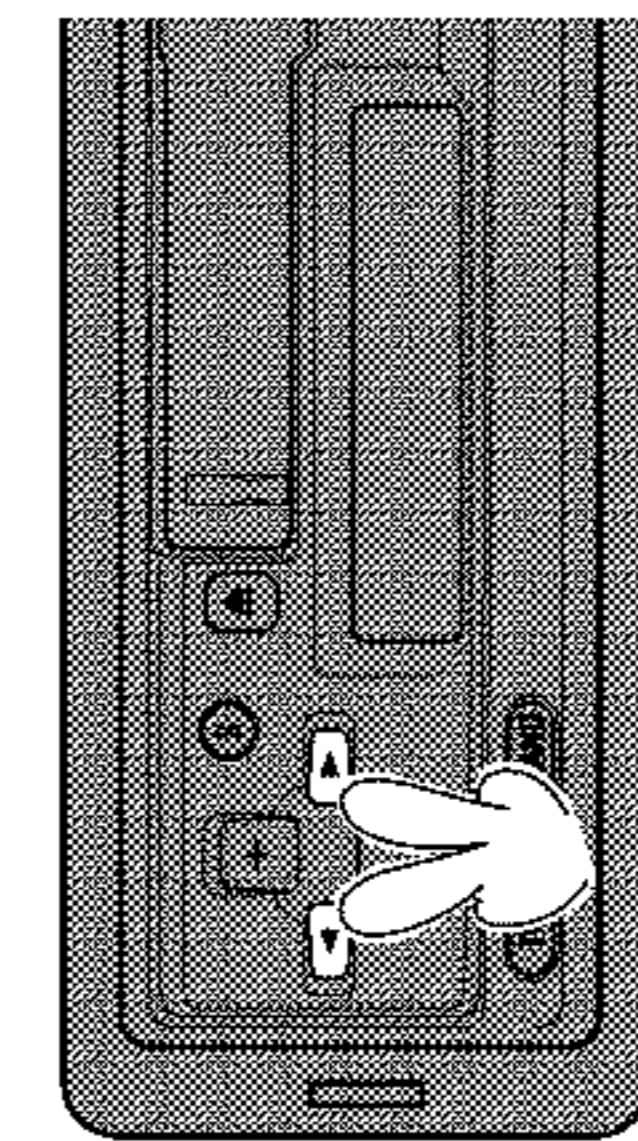
### Seek Tuning



[◀]: Automatically selects a lower frequency station.

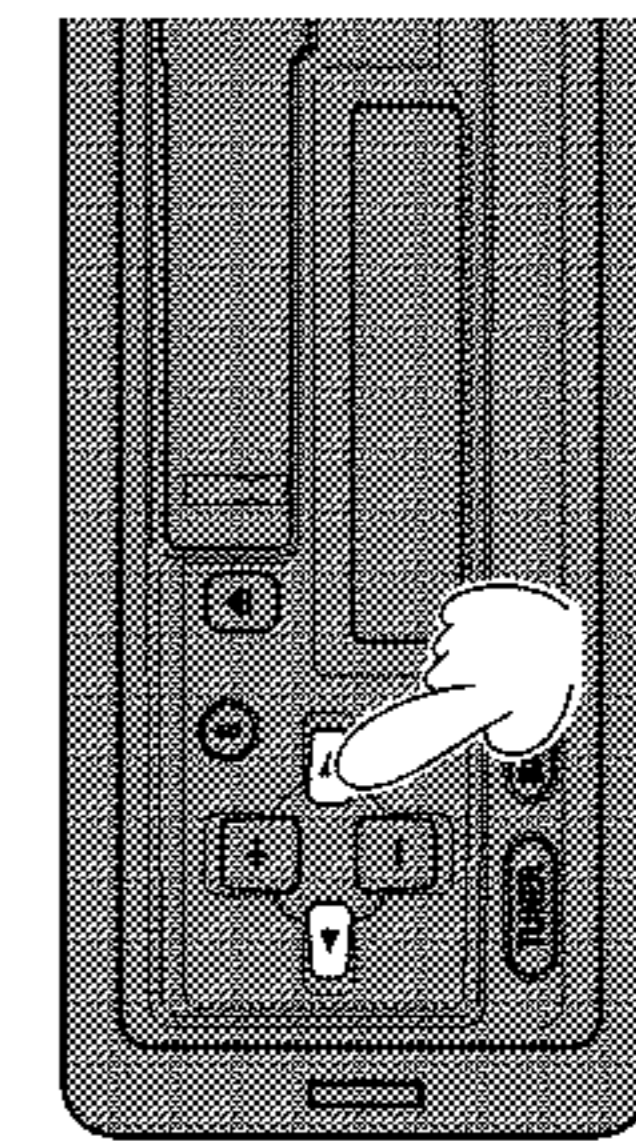
[▶]: Automatically selects a higher frequency station.  
 ("SEEK" lights in the display.)

### Manual Tuning



1. Press both [◀] and [▶] buttons at same time.

- ("SEEK" goes out from the display.)
- Each time you repeat this operation, "SEEK" either lights or goes out.



2. [◀]: Use to select lower frequencies.  
 [▶]: Use to select higher frequencies.  
 Continue pressing the button to move up or down continuously through frequencies.

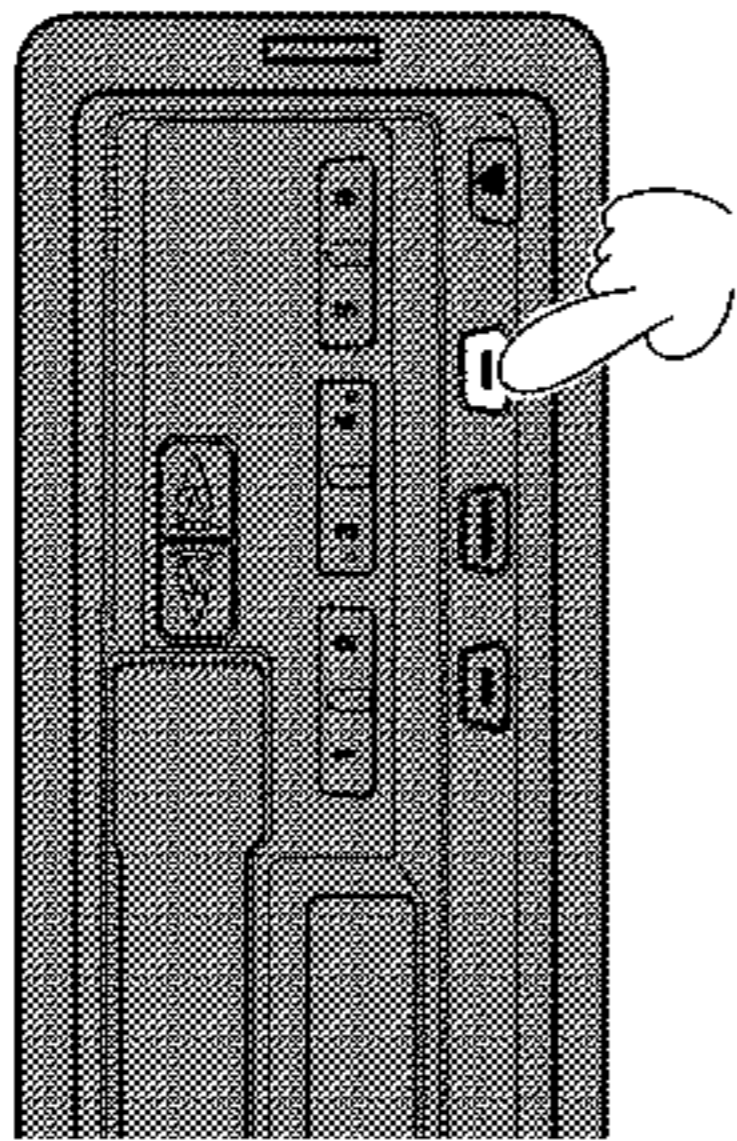
- Tuning moves up or down in 50 kHz steps for FM, 9 kHz steps for MW and 1 kHz steps for LW.

**Adjusting Seek Sensitivity**

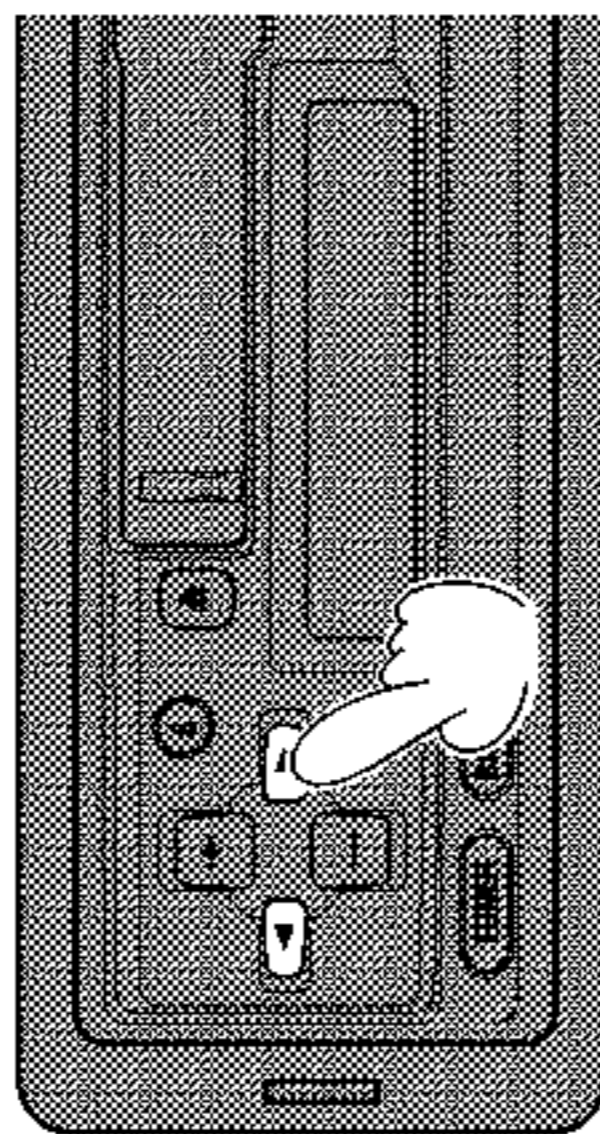
The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations.

The local setting also has 4 seek tuning sensitivity levels for FM and 2 levels for MW/LW to match local conditions

**Changing the local seek sensitivity**



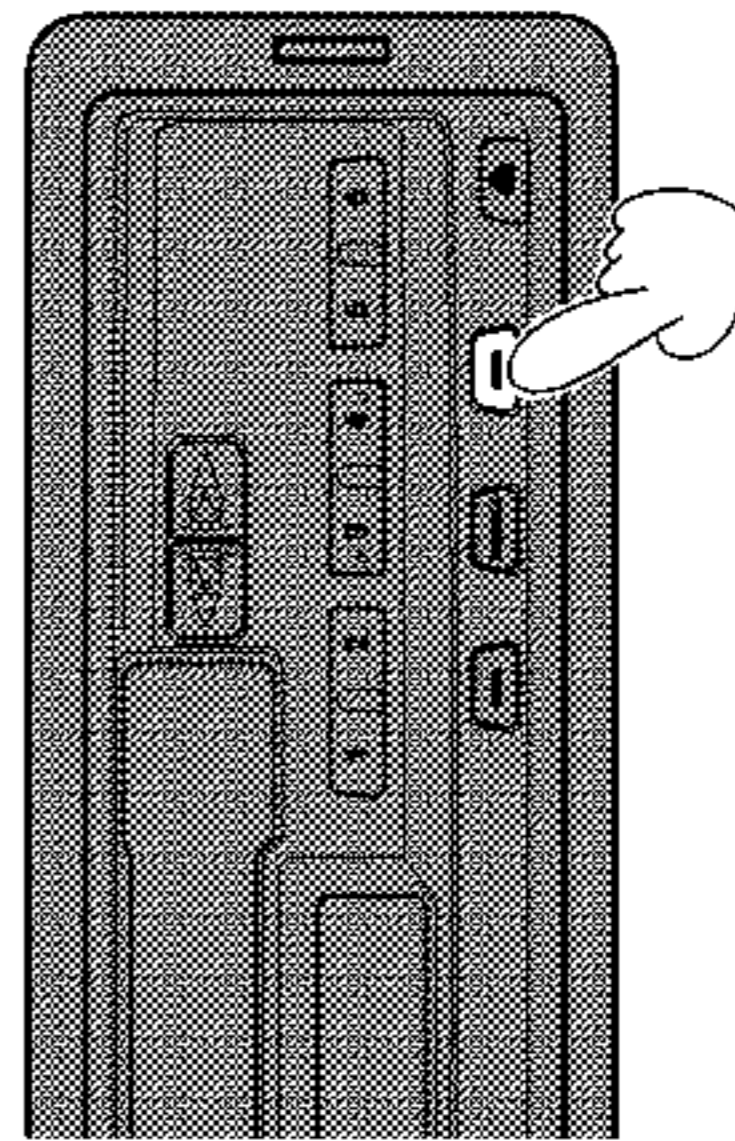
2.



**Select the desired band, and press the [LOC] button for more than 2 seconds.**  
(The local seek level is indicated in the display for about 5 seconds.)

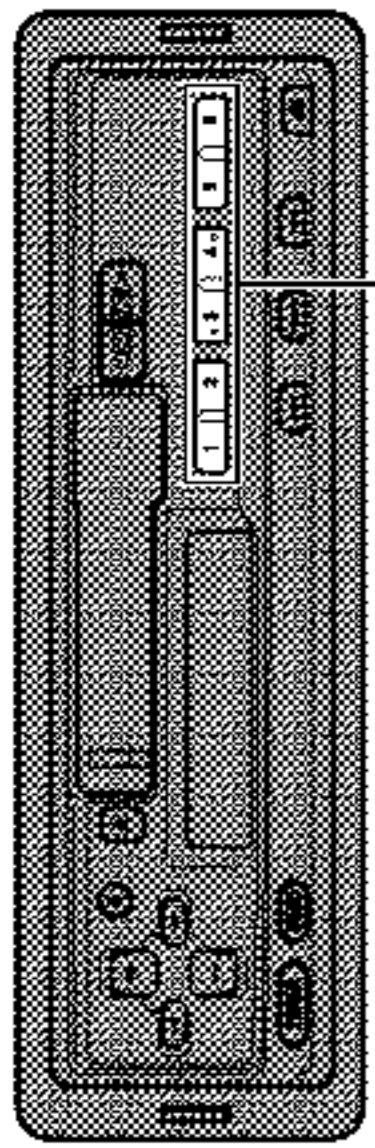
**[▶]: Raises the sensitivity level.**  
**[◀]: Lowers the sensitivity level.**  
FM :L-1 ≡ L-2 ≡ L-3 ≡ L-4  
MW/LW:L-1 ≡ L-2  
The L-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations. Adjust the sensitivity while the local seek indication is displayed (5 seconds).

**Switching between local and DX**



**Press the [LOC] button.**  
Each time you press the button, you switch between local and DX.  
Local position: "LOC" is displayed.  
DX position : "LOC" is not displayed.

**Preset Memory**



Preset buttons

**Tune into the station you want to memorize, and press the desired preset button for 2 seconds or more.**

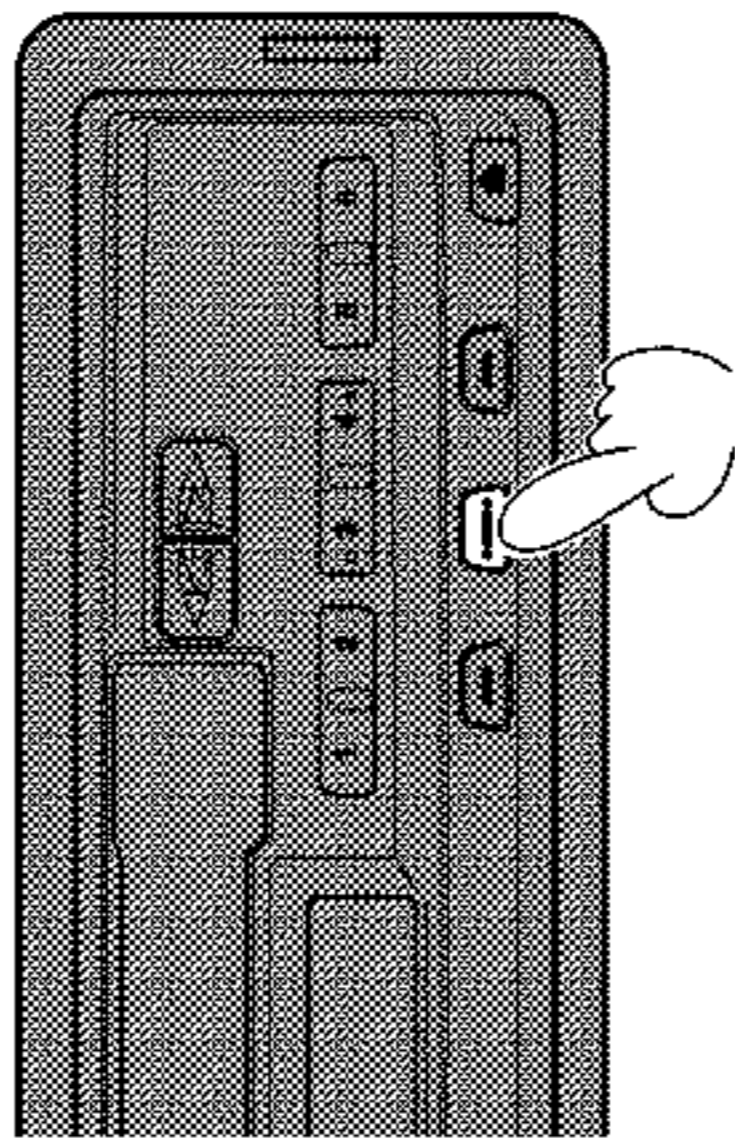
FM :18 stations can be memorized  
(6 stations each for FM1/FM2/FM3.)  
MW/LW :6 stations can be memorized.

To recall a memorized station, briefly press the preset button for the station you desire. (The selected preset number lights in the display.)

It comes in handy when trying to find local stations while driving.

**BSM (Best Stations Memory)**

This function automatically locates stronger stations and automatically assigns their frequencies to preset buttons [1 - 6], in order of strength.



**Select the desired band, and press the [BSM] button for 2 seconds or more.**  
(" — " flashes in the display until BSM operation is completed.)

• If there are fewer than 6 strong stations in the area, some of the preset buttons will not be assigned frequencies, so they will retain any frequencies assigned to them previously.

## Specifications

---

### General

Power source .....	14.4 V DC (10.8 — 15.1 V allowable)
Grounding system .....	Negative type
Max. current consumption .....	6.0 A
Dimensions (chassis) .....	178 (W) × 50 (H) × 150 (D) mm
(front face) .....	188 (W) × 58 (H) × 19 (D) mm
Weight .....	1.4 kg

### Amplifier

Maximum power output .....	22 W × 4
Continuous power output .....	14 W × 4 (DIN45324, +B = 14.4 V)
Load impedance .....	4 Ω (4 — 8 Ω allowable)
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)

### Tape player

Tape .....	Compact cassette tape (C-30 — C-90)
Tape speed .....	4.76 cm/sec. (+0.14 cm/sec., -0.05 cm/sec.)
Fast forward/rewind time .....	Approx. 160 sec. for C-60
Wow & flutter .....	0.13 % (WRMS)
Frequency response .....	40 — 14,000 Hz (±3 dB)
Stereo separation .....	45 dB
Signal-to-noise ratio .....	52 dB (IEC-A network)

### FM tuner

Frequency range .....	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 (S/N: 20 dB)
Selectivity .....	50 dB (±9 kHz)

### LW tuner

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

### Note:

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

