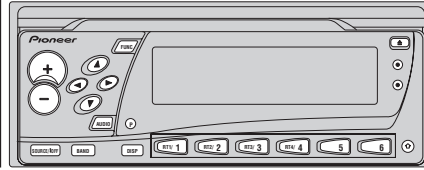


# Service Manual

Pioneer

DEH-P86DHR/UC



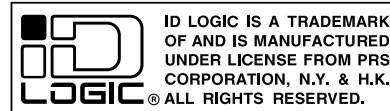
ORDER NO.  
CRT2302

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH RDS/ID-LOGIC TUNER

# DEH-P86DHR UC

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH ID-LOGIC TUNER

# DEH-P76DH UC



- See the separate manual CX-597(CRT1829) for the CD mechanism description, disassembly and circuit description.
- The CD mechanism employed in this model is one of S7 series.
- CD Player Service Precautions
  1. For pickup unit(CXX1230) handling, please refer to"Disassembly"(CX-597 Service Manual CRT1829). During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
  2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
  3. Please checking the grating after changing the service pickup unit(see page 57).

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**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.** 253 Alexandra Road, #04-01, Singapore 159936

# 1. SAFETY INFORMATION

## CAUTION

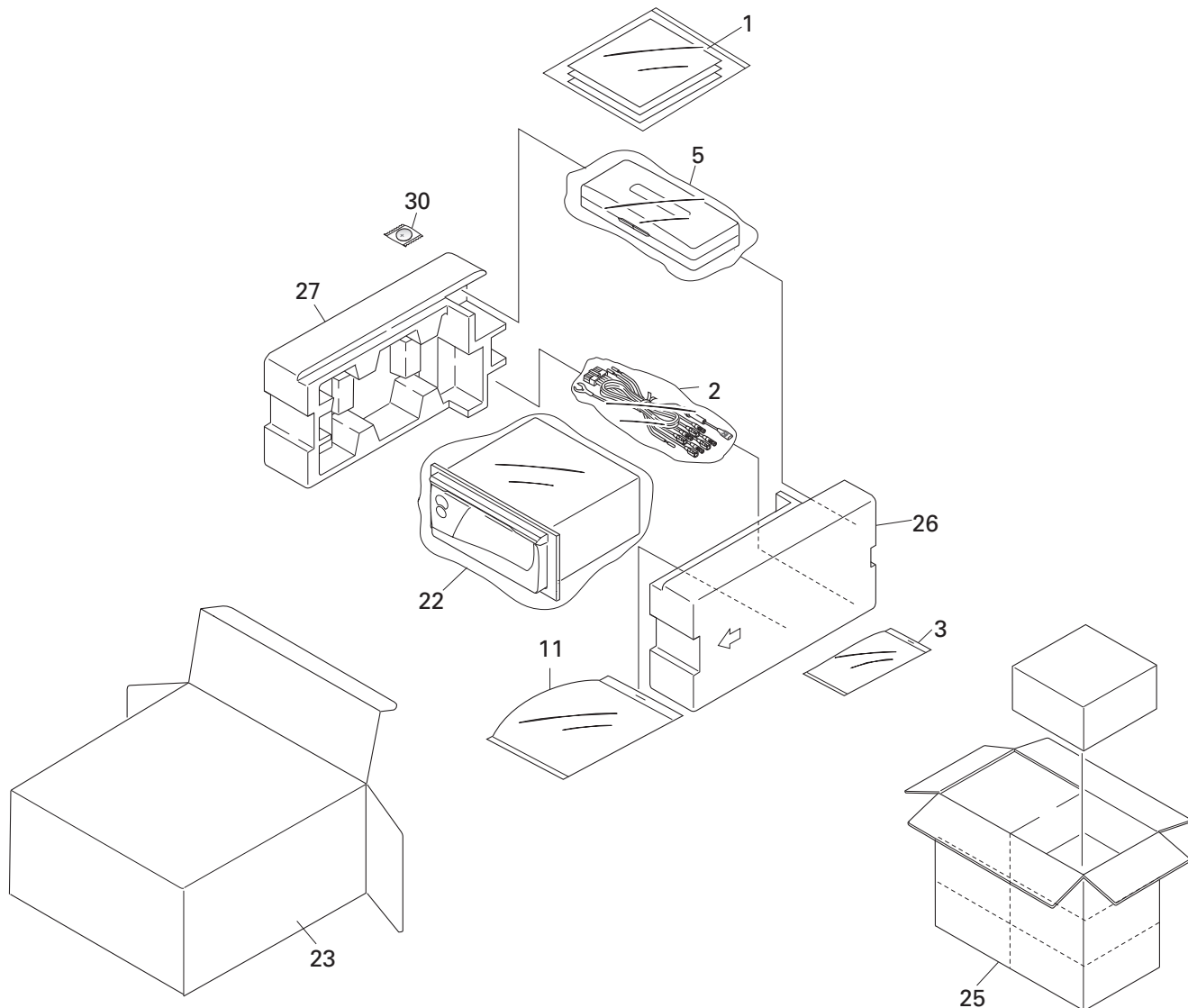
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly 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.

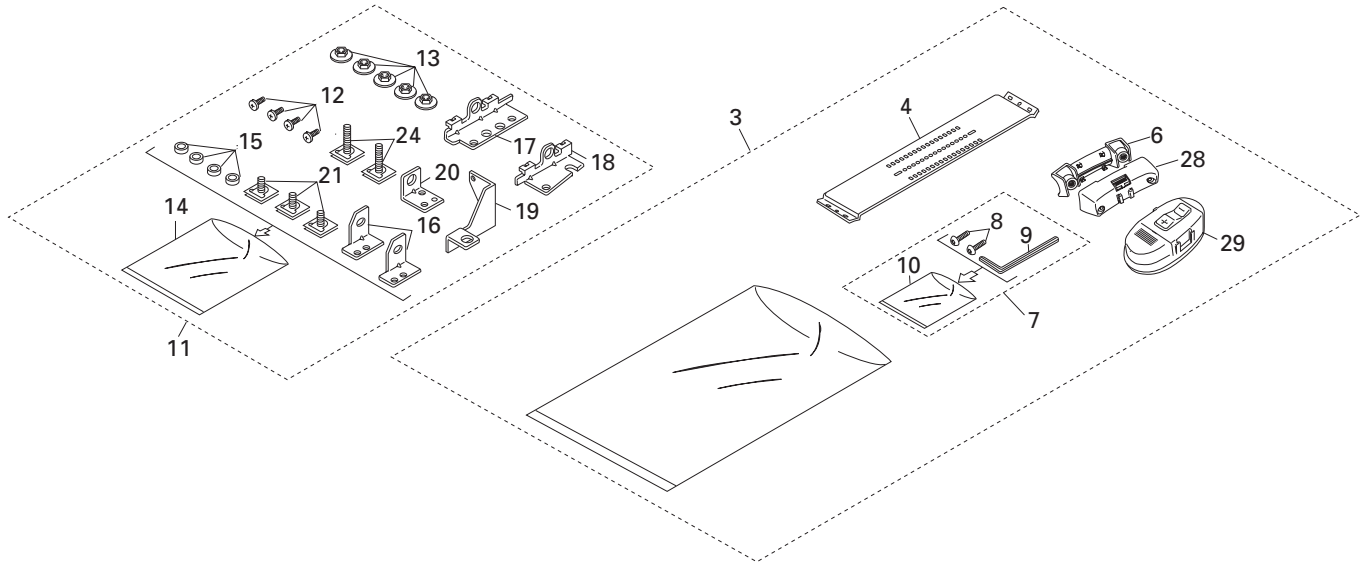
## WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.  
Health & Safety Code Section 25249.6 - Proposition 65

# 2. EXPLODED VIEWS AND PARTS LIST

## 2.1 PACKING





**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.

**(1)PACKING SECTION PARTS LIST**

Mark No.	Description	Part No.	Mark No.	Description	Part No.
* 1-1	Card	ARY1048	15	Spacer	CLA2598
1-2	Owner's Manual	See Contrast table(2)	16	Bracket	CNC6767
1-3	Installation Manual	See Contrast table(2)	17	Bracket	CNC5506
1-4	Polyethylene Bag	CEG1116	18	Bracket	CNC5507
* 1-5	Caution Card	CRP1158	19	Bracket	CNC5686
* 1-6	Label	CRW1343	20	Bracket	CNC5687
* 1-7	Caution Card	See Contrast table(2)	21	Bolt Unit	CXA7960
2	Cord	CDE5885	22	Cover	CEG1228
3	Remote Control Assy	CXB3488	23	Carton	See Contrast table(2)
4	Belt	CZN6416	24	Bolt Unit	CXA7961
5	Detach Case Assy	CXB3705	25	Contain Box	See Contrast table(2)
6	Holder Assy	CZX3173	26	Protector	CHP2113
7	Screw Assy	CZE3169	27	Protector	CHP2114
* 8	Screw	RMZ30H060FBK	28	Holder Assy	CZX3172
* 9	Hexagonal Wrench	CZE3176	29	Remote Control Assy	CZX3231
* 10	Polyethylene Bag	CEG-127	30	Battery	CEX1030
11	Accessory Assy	CEA2006			
12	Screw	BSZ30P050FMC			
13	Nut	CBN1012			
* 14	Polyethylene Bag	CEG1101			

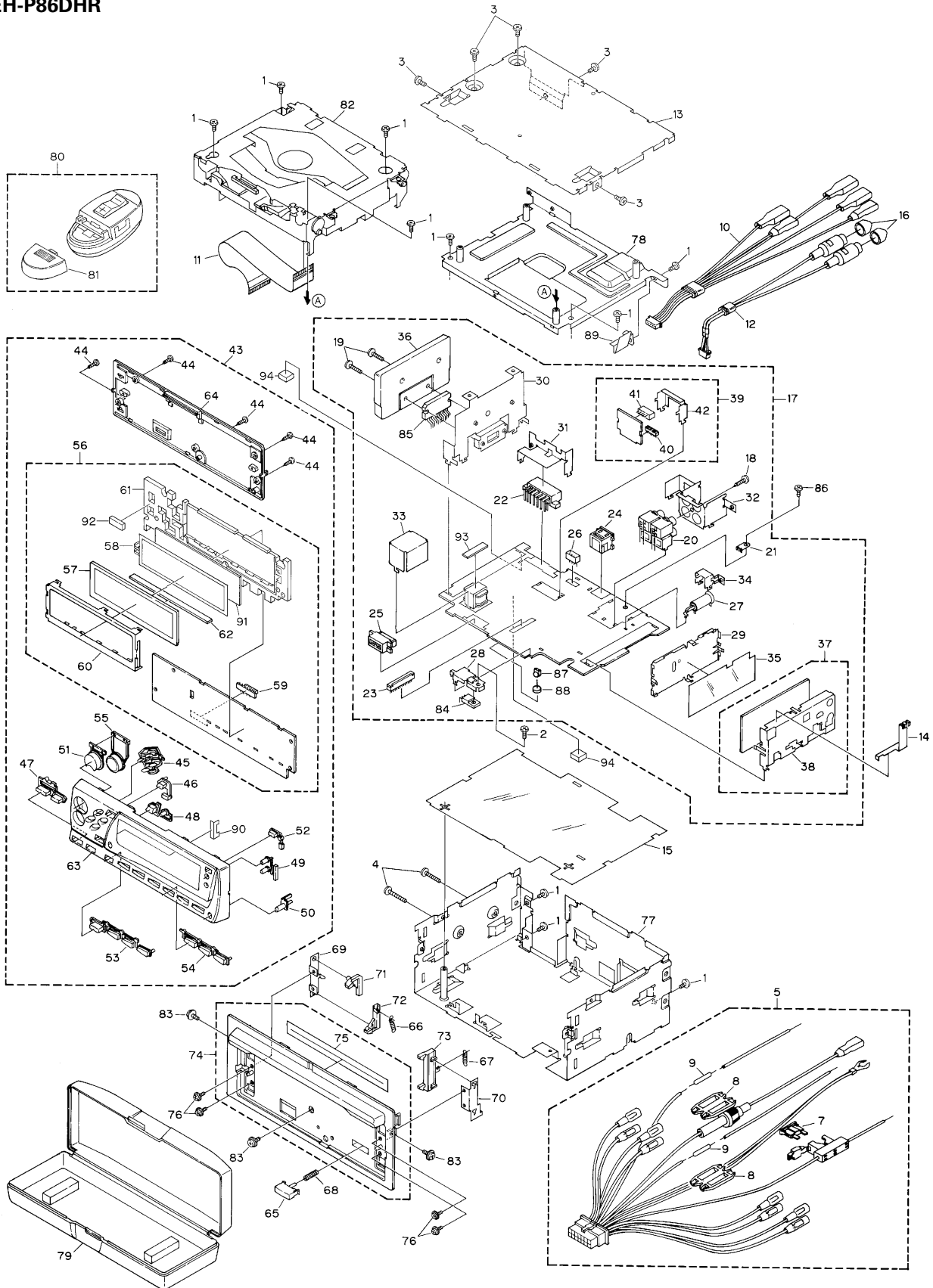
**(2) CONTRAST TABLE**

DEH-P86DHR/UC and DEH-P76DH/UC have the same construction except for the following:

Mark No.	Description	Part No.	
		DEH-P86DHR/UC	DEH-P76DH/UC
1-2	Owner's Manual	CRB1530(English)	CRD2867(English, French)
1-3	Installation Manual	CRB1531(English)	CRD2868(English, French)
* 1-7	Caution Card	CRN1051	Not used
23	Carton	CHG3675	CHG3676
25	Contain Box	CHL3675	CHL3676

## 2.2 EXTERIOR

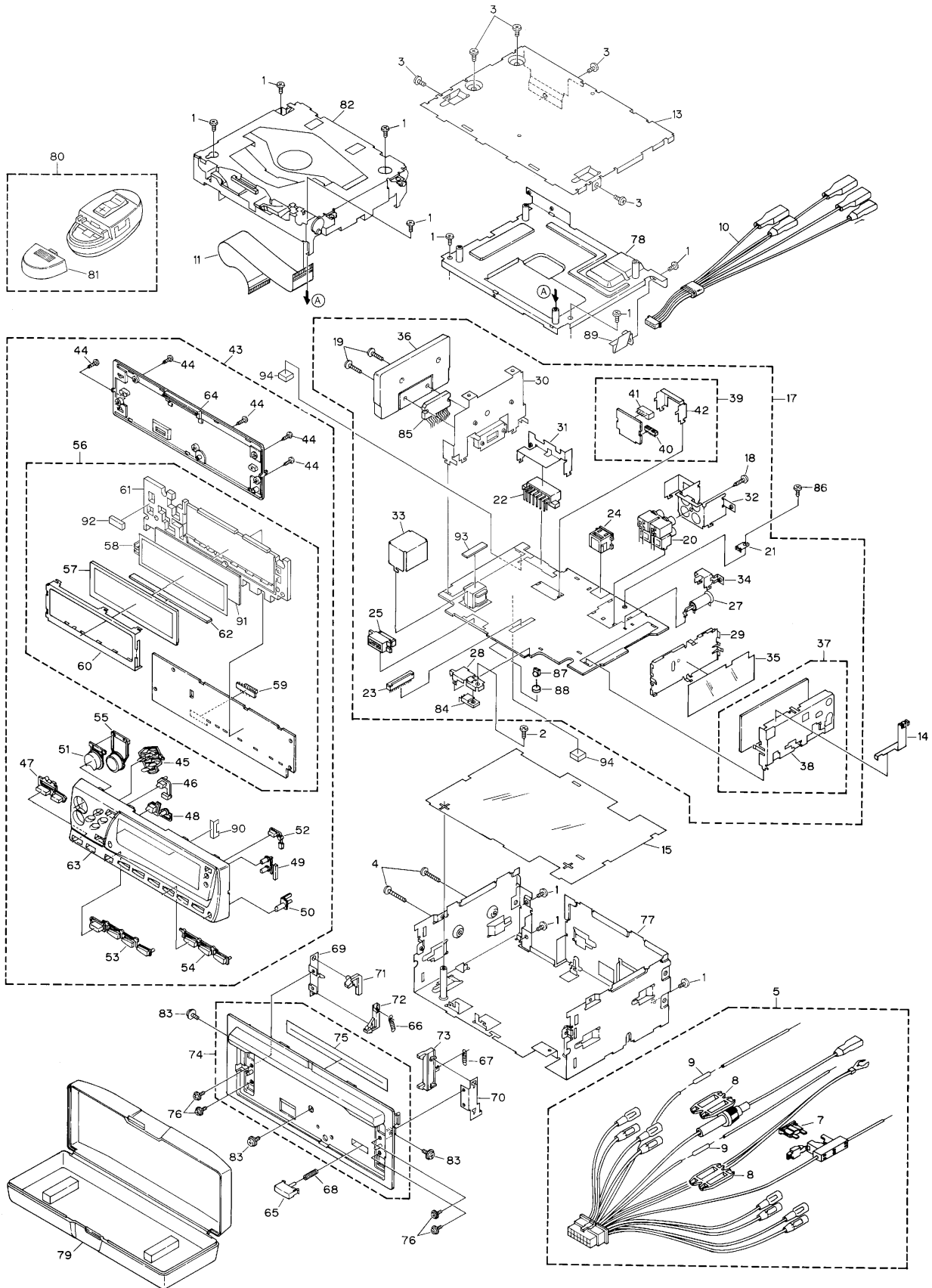
### ● DEH-P86DHR



## ● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ26P060FMC	46	Button(FUNC)	CAC4887
2	Screw	BSZ26P080FMC	47	Button(SOURCE)	CAC4888
3	Screw	BSZ30P050FMC	48	Button(AUDIO)	CAC4889
4	Screw	BSZ30P200FMC	49	Button(LOUD,CLOCK)	CAC4893
5	Cord Assy	CDE5885	50	Button(DETACH)	CAC5951
6	.....		51	Button(+)	CAC6033
7	Fuse(10A)	CEK1136	52	Button(EJECT)	CAC6035
8	Cap	CNS1472	53	Button(1,2,3,DISP)	CAC6093
9	Resistor	RS1/2PMF102J	54	Button(4,5,6)	CAC6094
10	Cord Assy	CDE5997	55	Button(-)	CAC6034
11	Cable	CDE5269	56	Keyboard Unit	CWX2069
12	Cord Assy	CDE5297	57	LCD	CAW1389
13	Case	CNB2468	58	EL	CEL1488
14	Holder	CNC7005	59	Connector(CN1901)	CKS3580
15	Insulator	CNM5076	60	Holder	CNC7198
16	Cap	CNV2680	61	Holder	CNV4772
17	Tuner Amp Unit	CWM6379	62	Connector	CNV4791
18	Screw	BPZ26P100FMC	63	Grille Unit	CXB3509
19	Screw	BSZ26P160FMC	64	Cover Unit	CXB3513
20	Pin Jack(CN251)	CKB1031	65	Button	CAC5180
21	Terminal(CN504)	CKF1059	66	Spring	CBH1834
22	Plug(CN901)	CKM1304	67	Spring	CBH1835
23	Connector(CN651)	CKS2255	68	Spring	CBH1996
24	Connector(CN101)	CKS3408	69	Bracket	CNC6135
25	Connector(CN801)	CKS3581	70	Bracket	CNC6791
26	Connector(CN271)	CKS3584	71	Arm	CNV4692
27	Antenna Jack(CN503)	CKX1056	72	Arm	CNV4693
28	Holder	CNC5013	73	Arm	CNV4951
29	Holder	CNC8021	74	Panel Unit	CXB3507
30	Holder	CNC8278	75	Cover	CNM4875
31	Holder	CNC6880	76	Screw	IMS20P040FZK
32	Holder	CNC7196	77	Chassis Unit	CXA9714
33	Holder	CNC6889	78	Chassis Unit	CXA9718
34	Holder	CNC7001	79	Detach Case Assy	CXB3705
35	Insulator	CNM4684	80	Remote Control Assy	CZX3231
36	Heat Sink	CNR1435	81	Cover	CZN6410
37	FM/AM Tuner Unit	CWE1472	82	CD Mechanism Module	CXK5005
38	Holder	CNC6554	83	Screw	ISS26P060FZK
39	Detach Alarm Unit	CWM5291	84	Transistor(Q971)	2SD2396
40	Plug(CN852)	CKS1617	85	IC(IC201)	PAL005A
41	Connector(CN851)	CKS3585	86	Screw	ISS26P060FMC
42	Holder	CNC6912	87	LED(D851)	BR4361F
43	Detach Grille Assy	CXB3728	88	Bush	CNV-724
44	Screw	BPZ20P100FZK	89	Holder	CNC8190
45	Button	CAC5947	90	Spacer	CNM5385
			*	91 Cushion	CNM5316
			*	92 Cushion	CNM5315
			*	93 Cushion	CNM6297
				94 Spacer	CNM4154

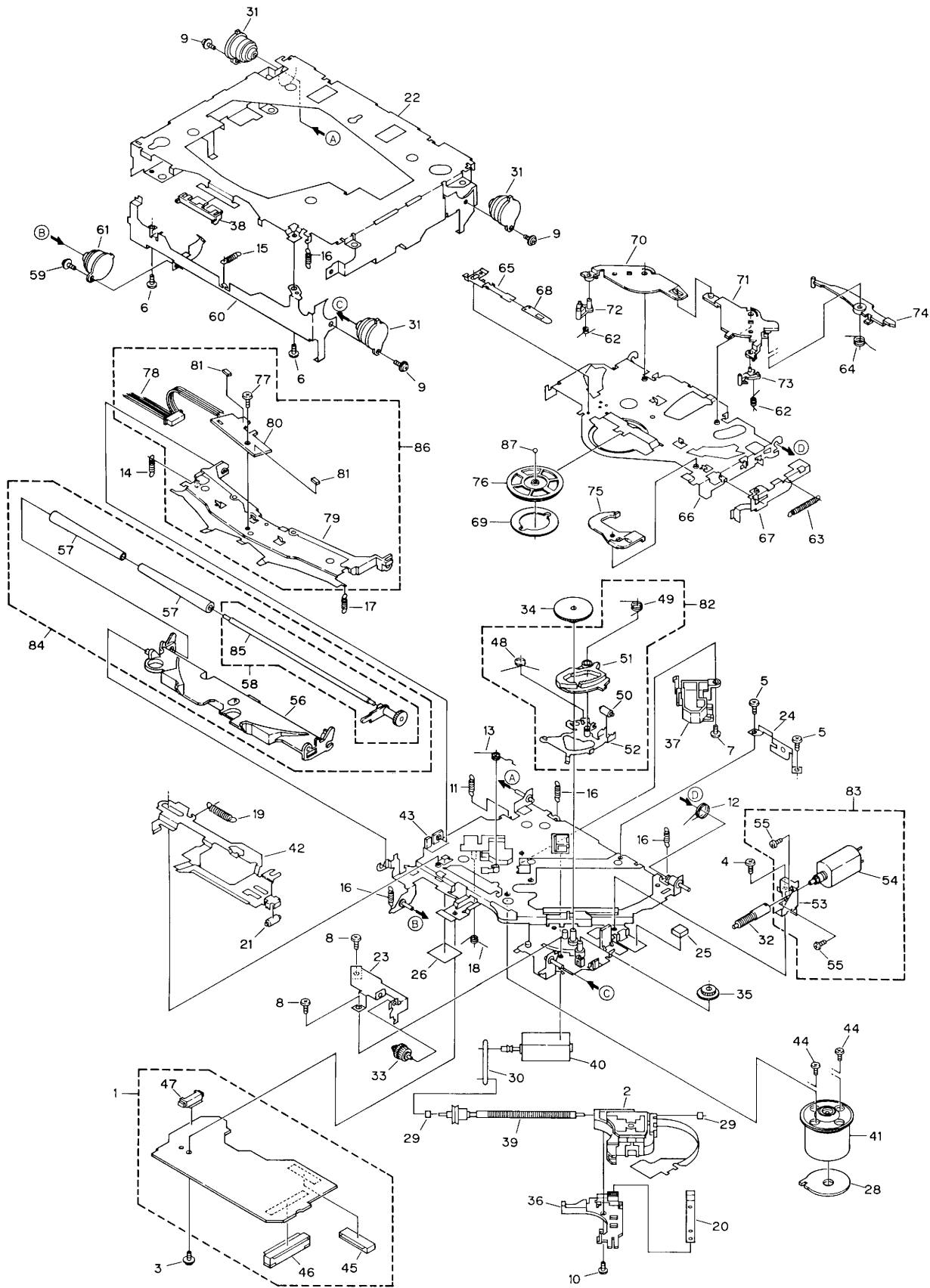
● DEH-P76DH



## ● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ26P060FMC	46	Button(FUNC)	CAC4887
2	Screw	BSZ26P080FMC	47	Button(SOURCE)	CAC4888
3	Screw	BSZ30P050FMC	48	Button(AUDIO)	CAC4889
4	Screw	BSZ30P200FMC	49	Button(LOUD,CLOCK)	CAC4893
5	Cord Assy	CDE5885	50	Button(DETACH)	CAC5951
6	.....		51	Button(+)	CAC6033
7	Fuse(10A)	CEK1136	52	Button(EJECT)	CAC6035
8	Cap	CNS1472	53	Button(1,2,3,DISP)	CAC6036
9	Resistor	RS1/2PMF102J	54	Button(4,5,6)	CAC6037
10	Cord Assy	CDE5997	55	Button(-)	CAC6034
11	Cable	CDE5269	56	Keyboard Unit	CWX2070
12	.....		57	LCD	CAW1390
13	Case	CNB2468	58	EL	CEL1488
14	Holder	CNC7005	59	Connector(CN1901)	CKS3580
15	Insulator	CNM5076	60	Holder	CNC7198
16	.....		61	Holder	CNV4772
17	Tuner Amp Unit	CWM6380	62	Connector	CNV4791
18	Screw	BPZ26P100FMC	63	Grille Unit	CXB3510
19	Screw	BSZ26P160FMC	64	Cover Unit	CXB3513
20	Pin Jack(CN251)	CKB1031	65	Button	CAC5180
21	Terminal(CN504)	CKF1059	66	Spring	CBH1834
22	Plug(CN901)	CKM1304	67	Spring	CBH1835
23	Connector(CN651)	CKS2255	68	Spring	CBH1996
24	Connector(CN101)	CKS3408	69	Bracket	CNC6135
25	Connector(CN801)	CKS3581	70	Bracket	CNC6791
26	.....		71	Arm	CNV4692
27	Antenna Jack(CN503)	CKX1056	72	Arm	CNV4693
28	Holder	CNC5013	73	Arm	CNV4951
29	Holder	CNC8021	74	Panel Unit	CXB3507
30	Holder	CNC8278	75	Cover	CNM4875
31	Holder	CNC6892	76	Screw	IMS20P040FZK
32	Holder	CNC7196	77	Chassis Unit	CXA9714
33	Holder	CNC6889	78	Chassis Unit	CXA9718
34	Holder	CNC7001	79	Detach Case Assy	CXB3705
35	Insulator	CNM4684	80	Remote Control Assy	CZX3231
36	Heat Sink	CNR1435	81	Cover	CZN6510
37	FM/AM Tuner Unit	CWE1417	82	CD Mechanism Module	CXK5005
38	Holder	CNC6555	83	Screw	ISS26P060FZK
39	Detach Alarm Unit	CWM5291	84	Transistor(Q971)	2SD2396
40	Plug(CN852)	CKS1617	85	IC(IC201)	PAL005A
41	Connector(CN851)	CKS3585	86	Screw	ISS26P060FMC
42	Holder	CNC6912	87	LED(D851)	BR4361F
43	Detach Grille Assy	CXB3729	88	Bush	CNV-724
44	Screw	BPZ20P100FZK	89	Holder	CNC8190
45	Button	CAC5947	90	Spacer	CNM5385
			*	91 Cushion	CNM5316
			*	92 Cushion	CNM5315
			*	93 Cushion	CNM6297
				94 Spacer	CNM4154

### 2.3 CD MECHANISM MODULE





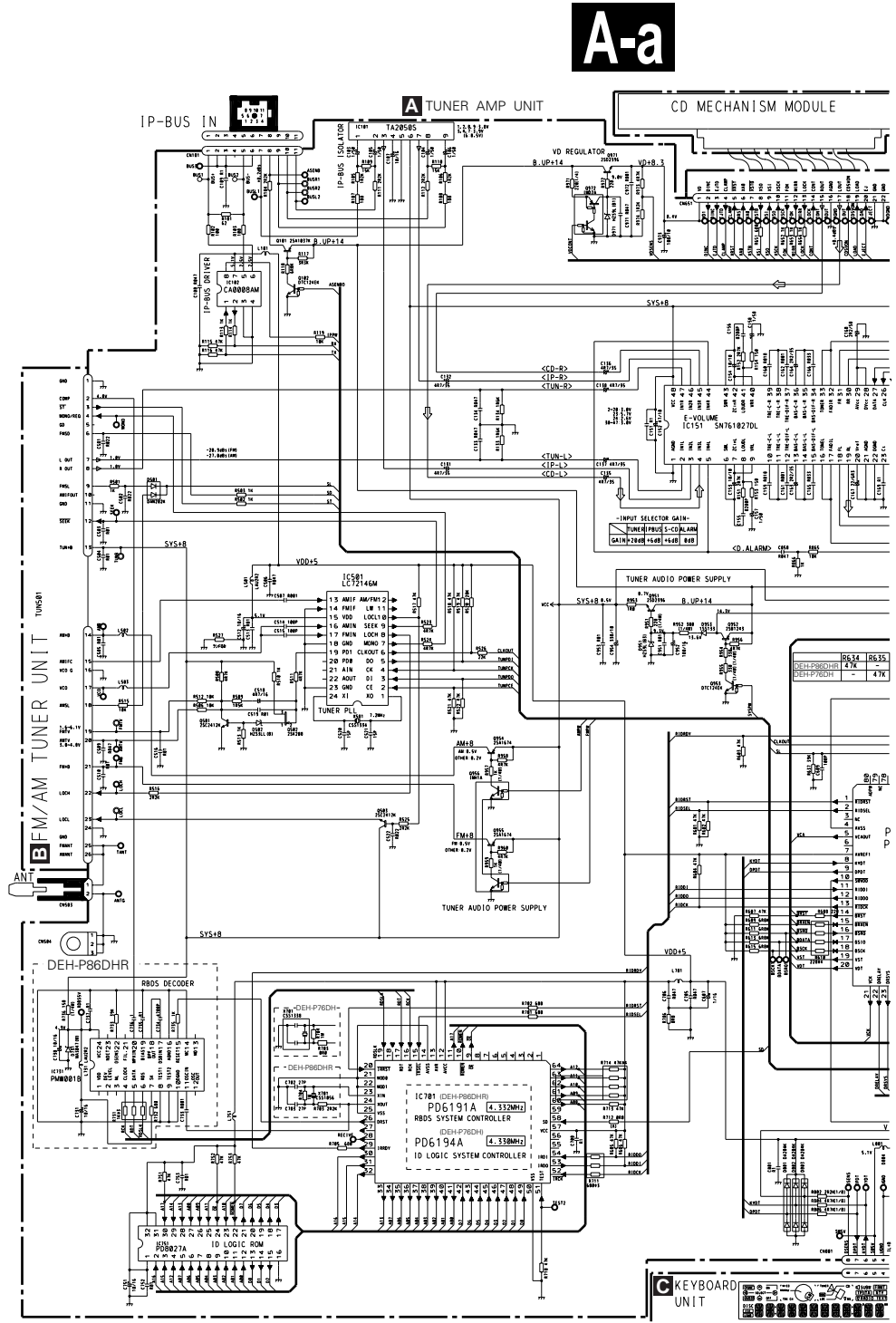
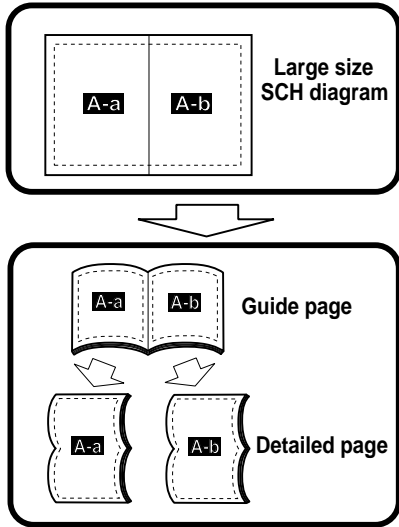
### ● CD MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Control Unit	CWX2268	46	Connector(CN701)	CKS2774
2	Pickup Unit(Service)	CXX1230	47	Connector(CN801)	CKS2196
3	Screw	IMS26P035FMC	48	Spring	CBH1832
4	Screw	BMZ20P025FMC	49	Spring	CBH1833
5	Screw	BMZ20P040FMC	50	Roller	CLA2627
6	Screw	BSZ20P040FMC	51	Arm	CNV4136
7	Screw	CBA1077	52	Arm Unit	CXA8565
8	Screw	CBA1250	53	Bracket	CNC6056
9	Screw	CBA1296	54	Load Motor Unit(S7)(M3)	CXA8702
10	Screw	CBA1362	55	Screw	JFZ20P025FMC
11	Spring	CBH1724	56	Arm	CNV4120
12	Spring	CBH1729	57	Roller	CNV4509
13	Spring	CBH1730	58	Gear Unit(S7)	CXA8701
14	Spring	CBH1731	59	Screw	CBA1455
15	Spring	CBH1732	60	Frame	CNC5797
16	Spring	CBH1745	61	Damper	CNV3974
17	Spring	CBH1848	62	Spring	CBH1736
18	Spring	CBH1849	63	Spring	CBH1863
19	Spring	CBH1939	64	Spring	CBH1945
20	Spring	CBL1214	65	Spring	CBL1326
21	Roller	CLA2627	66	Arm	CNC8364
22	Frame	CNC5796	67	Lever	CNC6054
23	Bracket	CNC5871	68	Spacer	CNM3315
* 24	Bracket	CNC6376	69	Sheet	CNM4849
25	Cushion	CNM3917	70	Arm	CNV5031
26	Sheet	CNM4873	71	Arm	CNV4123
27	.....		72	Arm	CNV4124
* 28	PCB	CNP4230	73	Arm	CNV4125
29	Bearing	CNR1415	74	Arm	CNV4138
30	Belt	CNT1071	75	Arm	CNV5032
31	Damper	CNV3974	76	Clamper	CNV5308
32	Gear	CNV5789	77	Screw	CBA1250
33	Gear	CNV5820	78	Connector(CN1)	CDE4576
34	Gear	CNV4857	79	Arm	CNC7383
35	Gear	CNV5821	* 80	Gathering PCB	CNX2445
36	Holder	CNV4663	81	Photo-transistor(Q1, 2)	CPT-230S-X
37	Holder	CNV5071	82	Elbow Arm Assy(S7)	CXA8889
38	Guide	CNV5823	83	Load Motor Assy(S7)	CXA8891
39	Screw Unit(S7)	CXA8699	84	LO Arm Assy(S7)	CXA8892
40	CRG Motor Unit(S7)(M2)	CXB3043	85	Shaft	CLA3133
41	Motor Unit(M1)	CXA8912	86	Guide Arm Assy(S7)	CXB1850
42	Lever Unit	CXA9300	87	Ball	CNR1189
43	Chassis Unit	CXB2574			
44	Screw	JFZ20P025FMC			
45	Connector(CN101)	CKS1953			

### 3. SCHEMATIC DIAGRAM

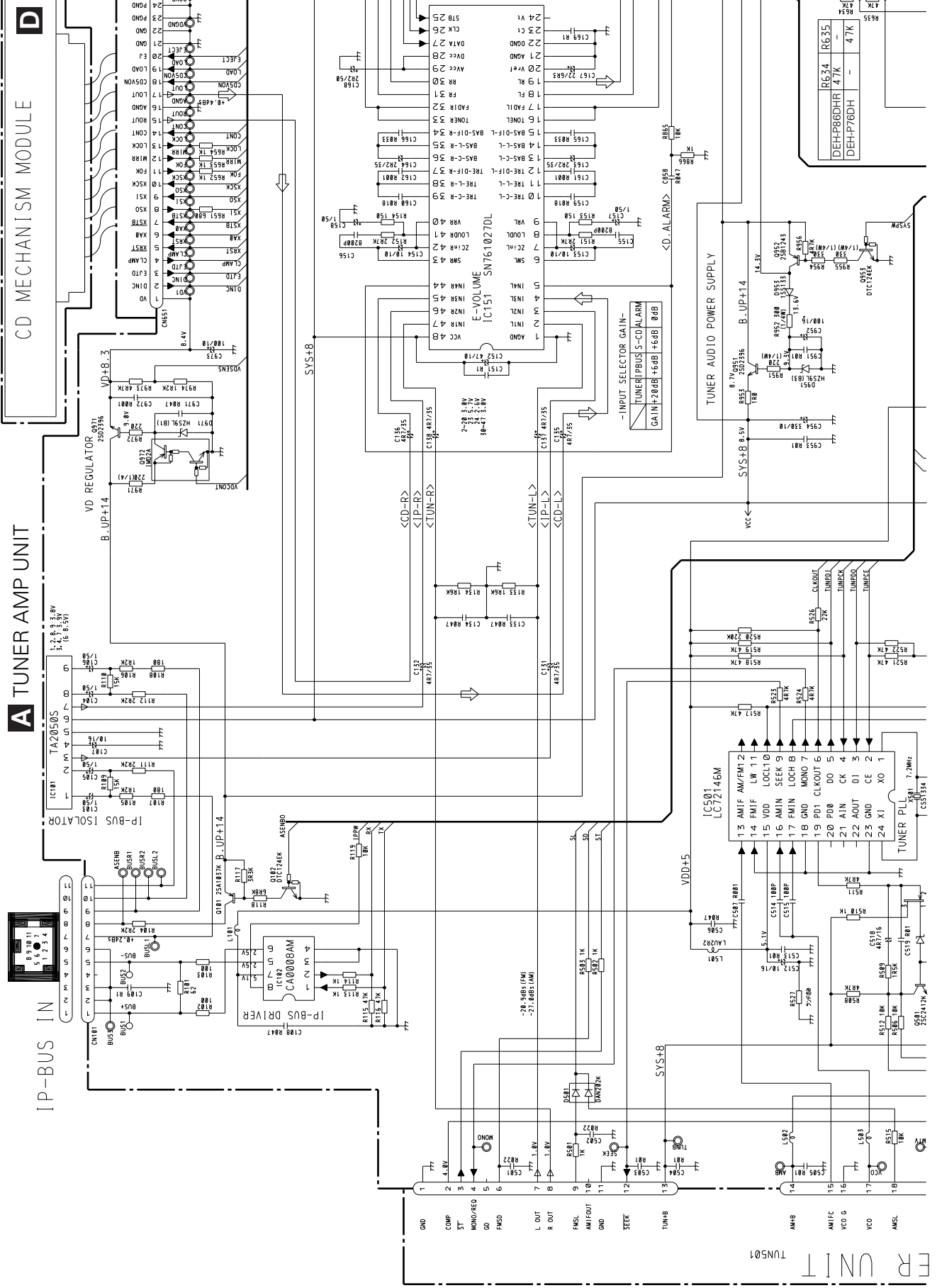
#### 3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

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





A-a A-b



A TUNER AMP UNIT

D CD MECHANISM MODULE

A

B

C

D



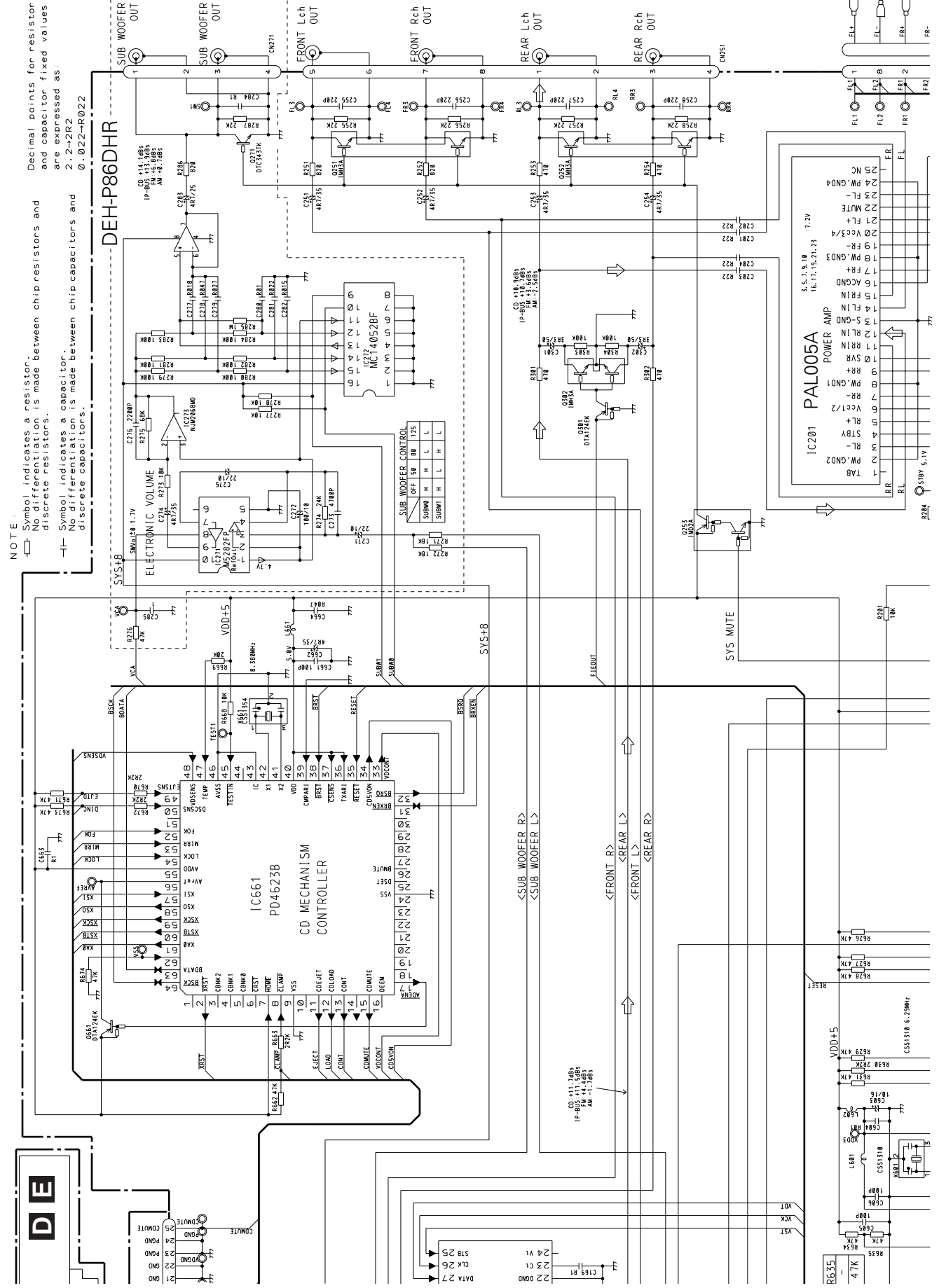
A

B

C

D

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.

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

SYSTEM 1.7V  
 ELECTRONIC VOLUME  
 SUB WOOFER CONTROL  
 CD MECHANISM CONTROLLER  
 POWER AMP

SUB WOOFER CONTROL

OFF	50	80	125
SUBWO	H	H	L
SUBWT	H	H	L

IC201 PAL005A

25	NC
24	PW.GND4
23	FL-
22	MUTE
21	FL+
20	VCC3/4
19	FR-
18	PW.GND3
17	FR+
16	ACND
15	FRIN
14	FLIN
13	GND
12	RLIN
11	SVR
10	SVR
9	PW.GND1
8	RL+
7	RL-
6	VCC1/2
5	STRB
4	STRB
3	RL
2	PW.GND2
1	TAB



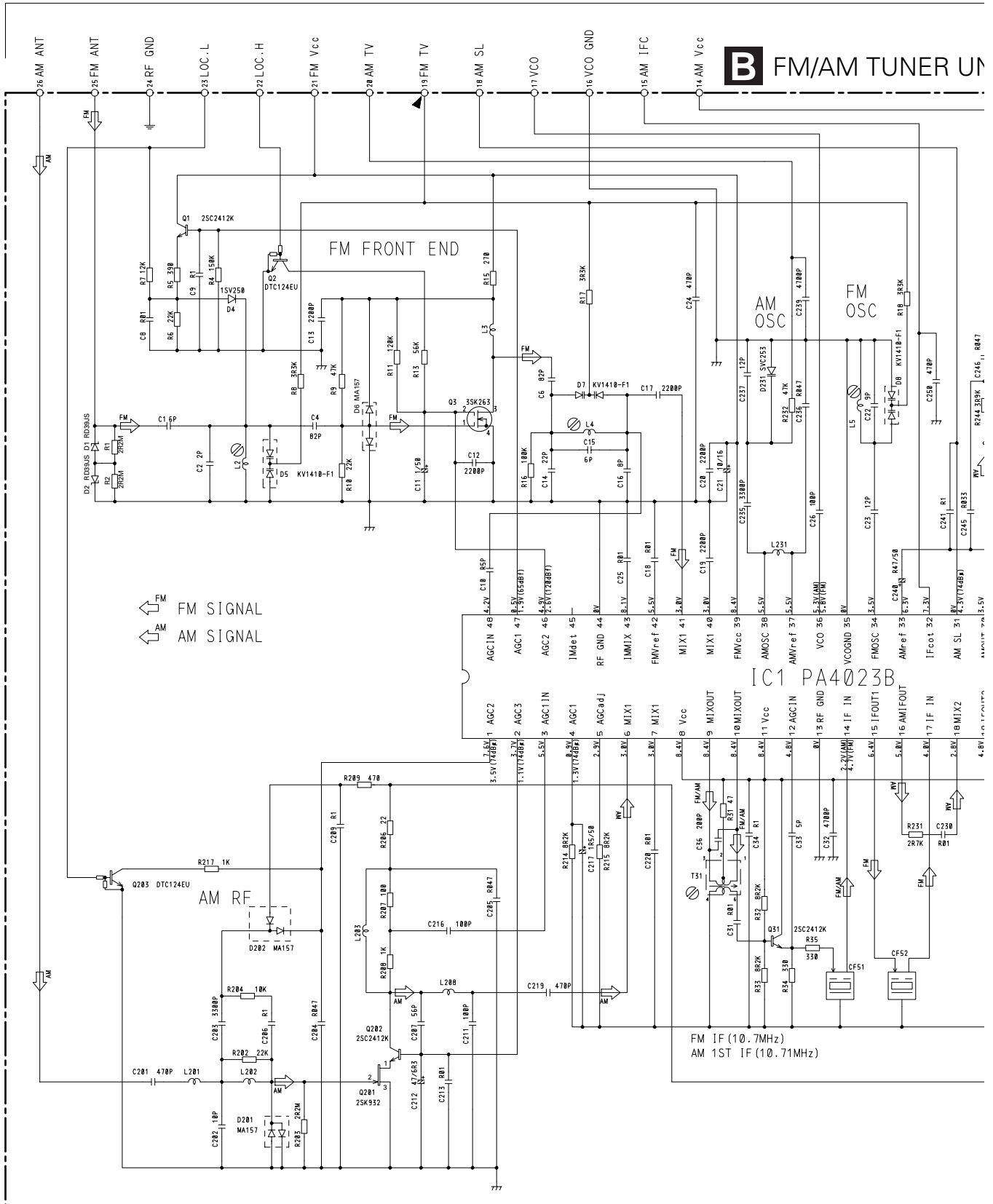
### 3.2 FM/AM TUNER UNIT(CWE1472)

A

B

C

D

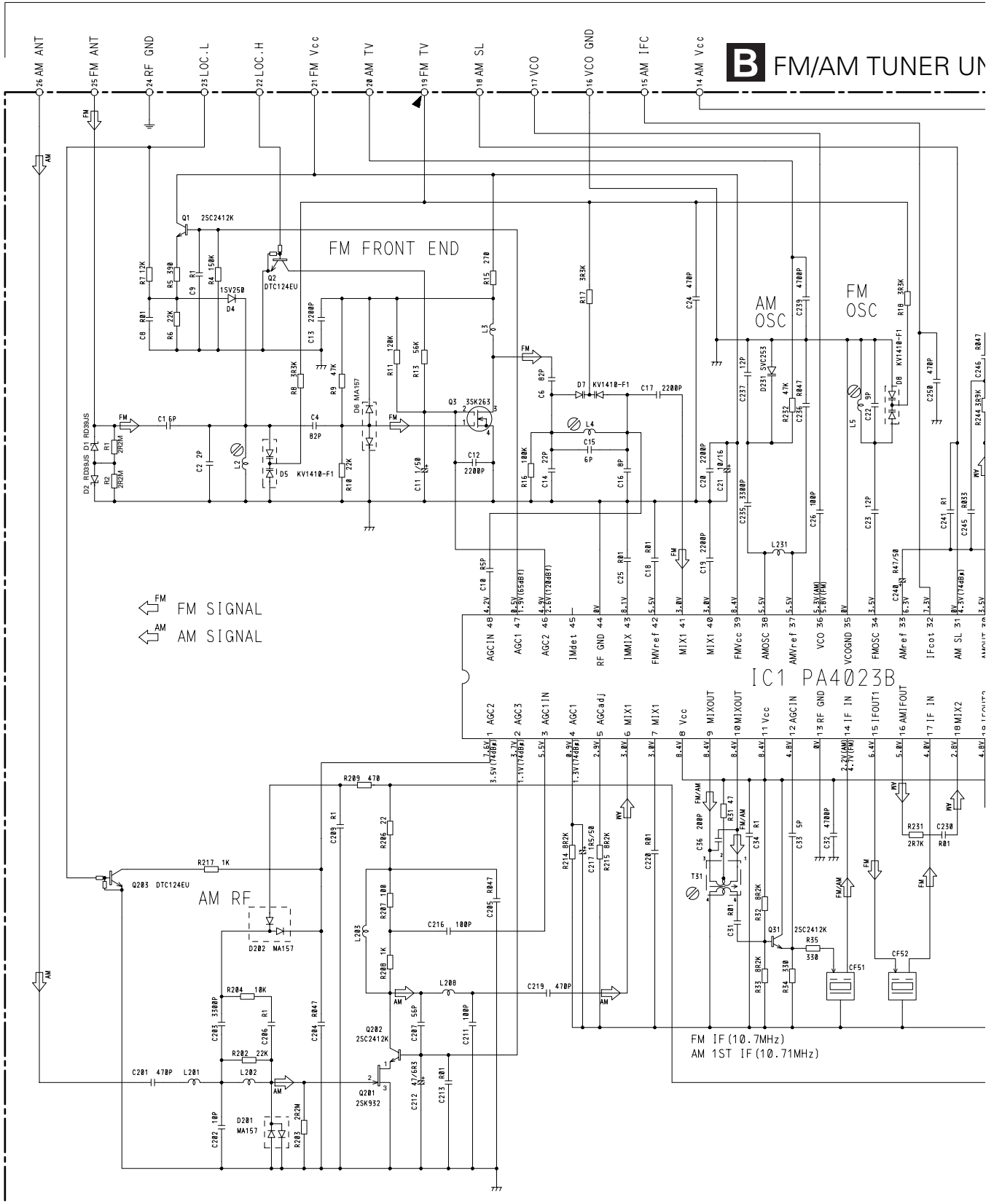


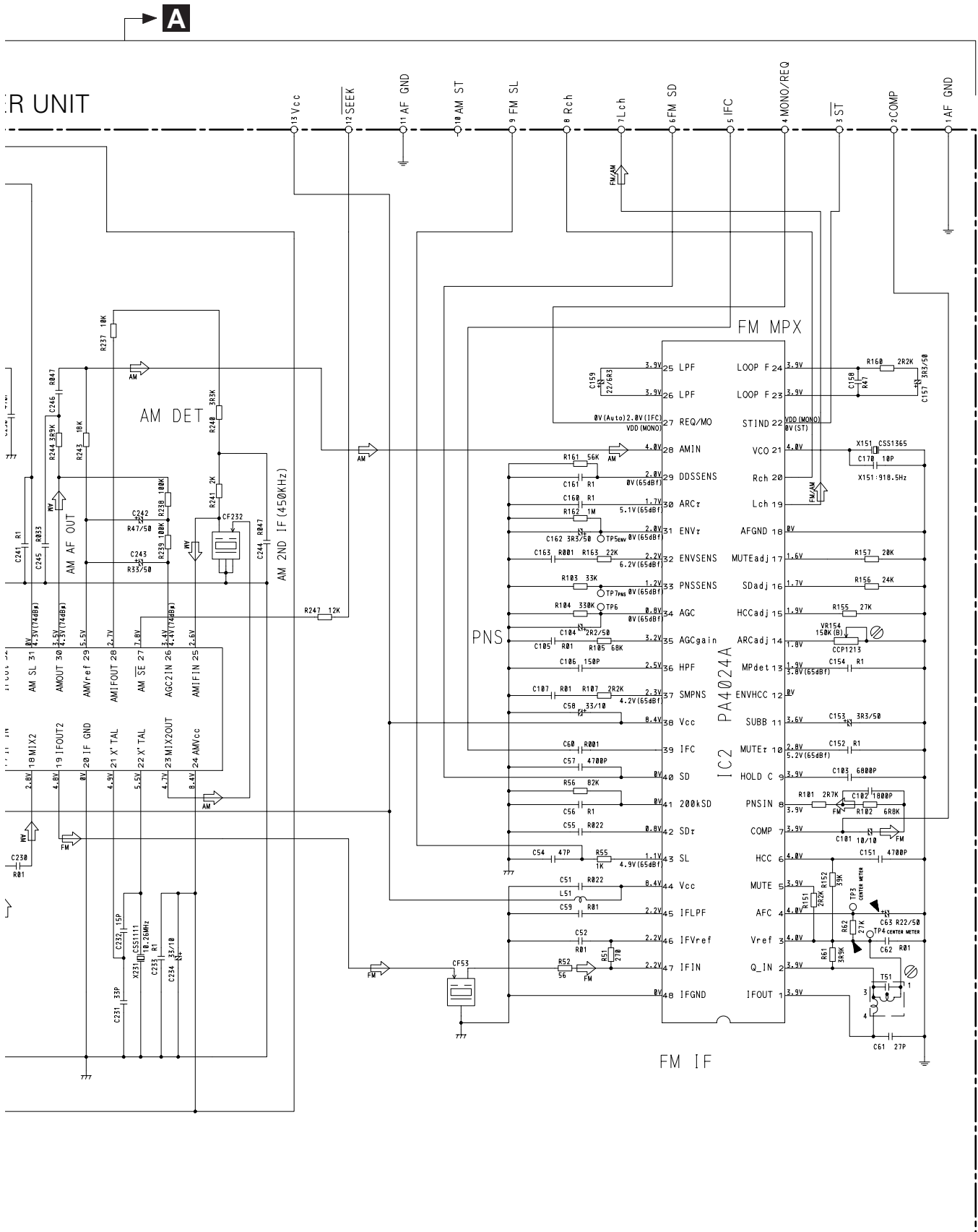




### 3.3 FM/AM TUNER UNIT(CWE1417)

**B** FM/AM TUNER UNIT





**A**

A

B

C

D

**B**

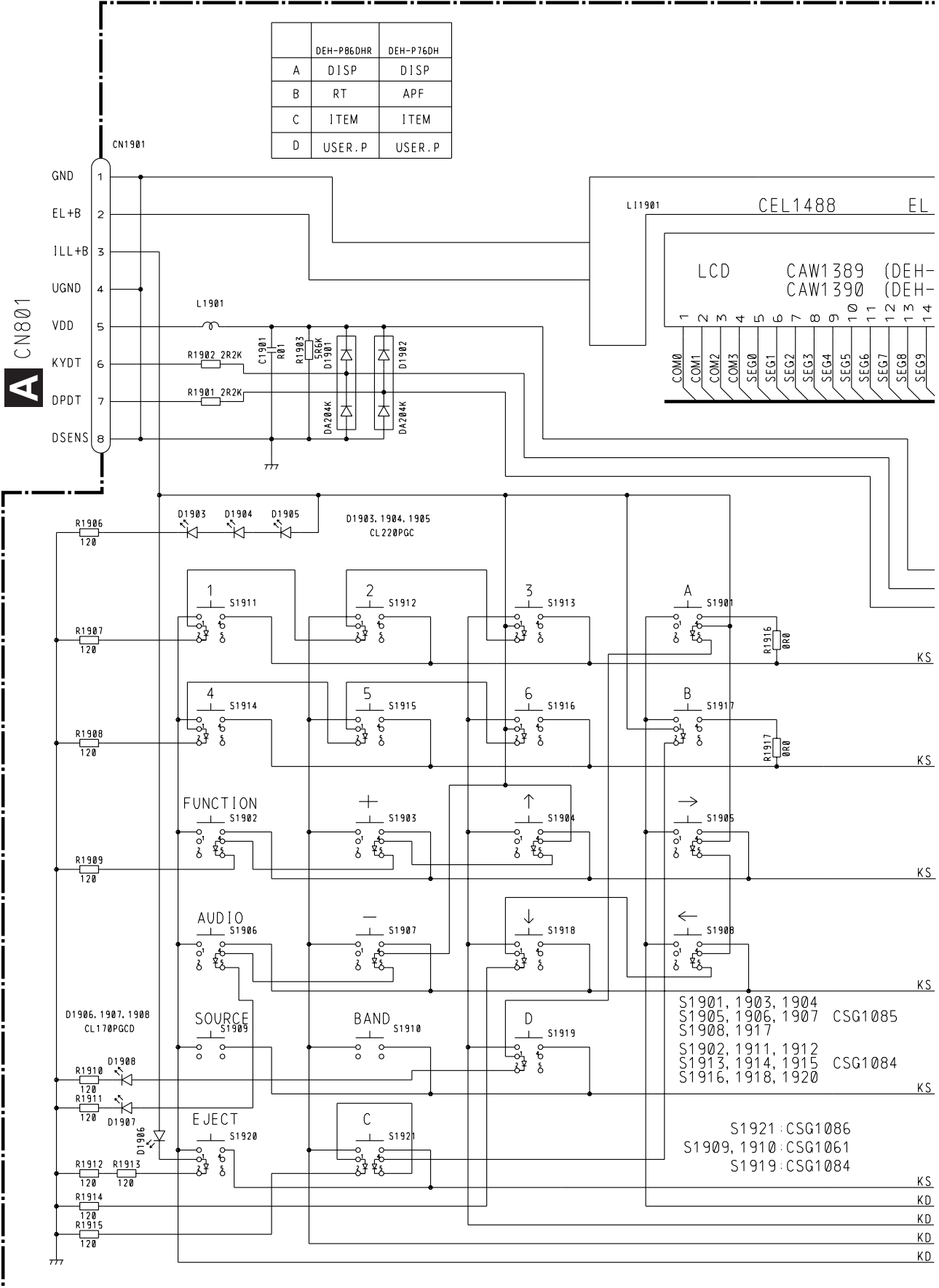
### 3.4 KEYBOARD UNIT

A

B

C

D

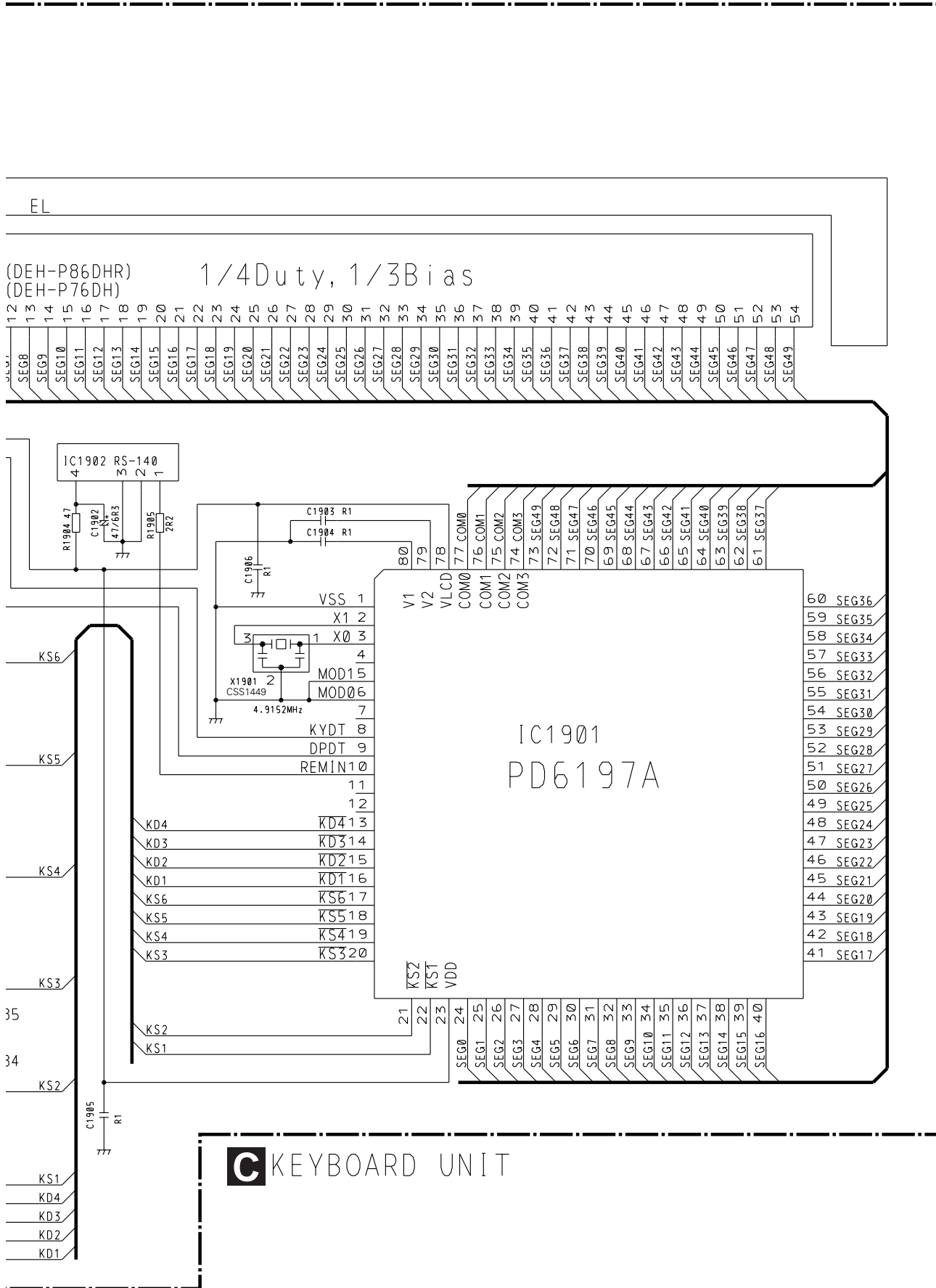


1

2

3

4



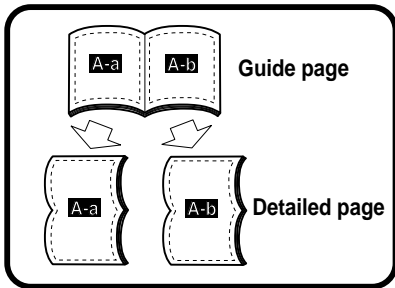
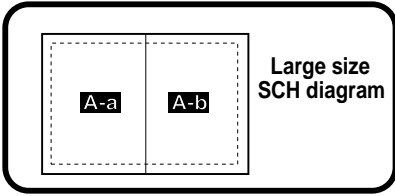
A  
B  
C  
D

**C** KEYBOARD UNIT



### 3.5 CD MECHANISM MODULE(GUIDE PAGE)

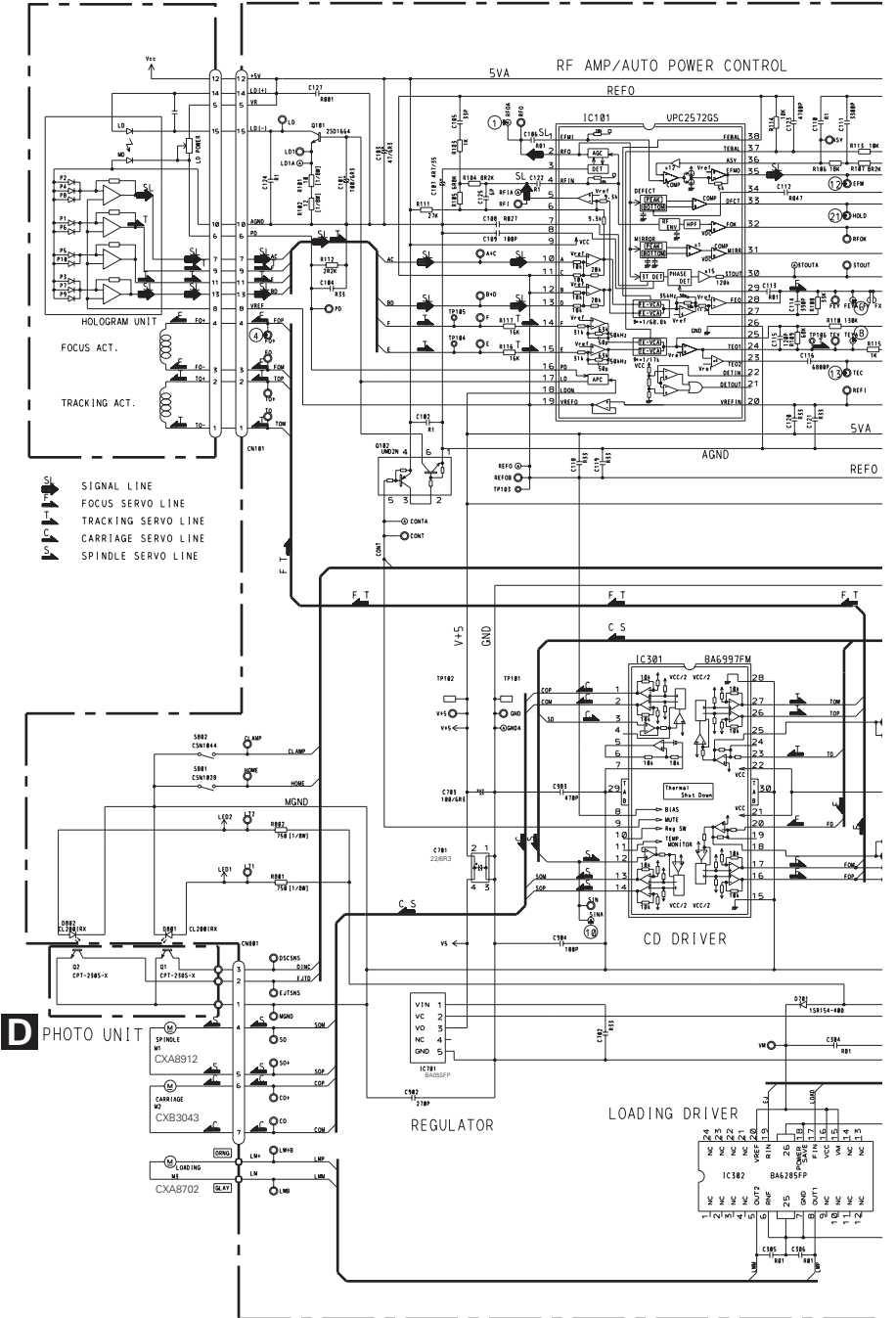
A



B

**E-a**

SERVICE PICKUP UNIT(CXX1230) **E** CONTROL UNIT

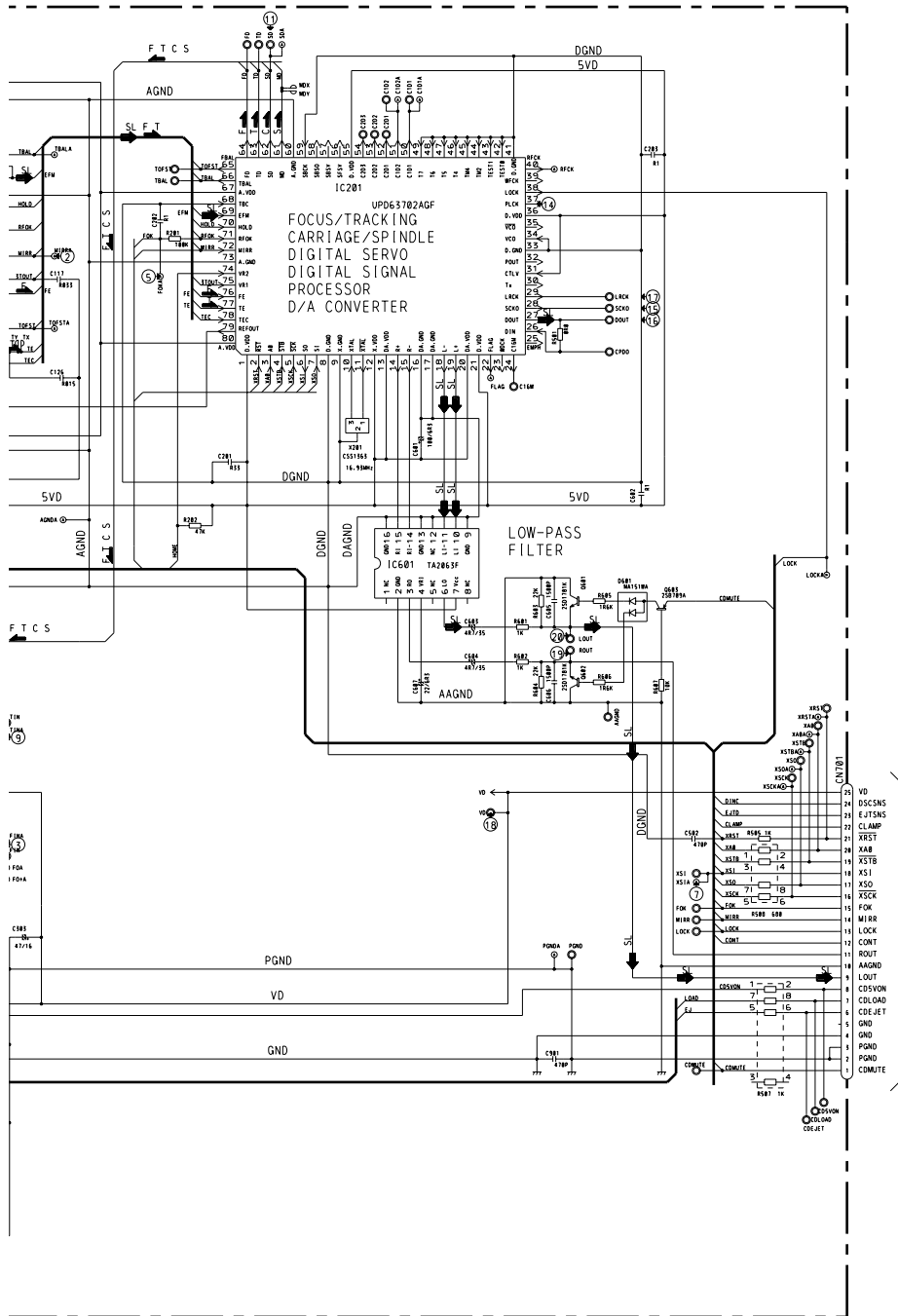


C

**D** PHOTO UNIT

SWITCHES:  
CONTROL UNIT  
SB01-HOME SWITCH.....ON-OFF  
SB02-CLAMP SWITCH.....ON-OFF  
The underlined indicates the switch position.

# E-b

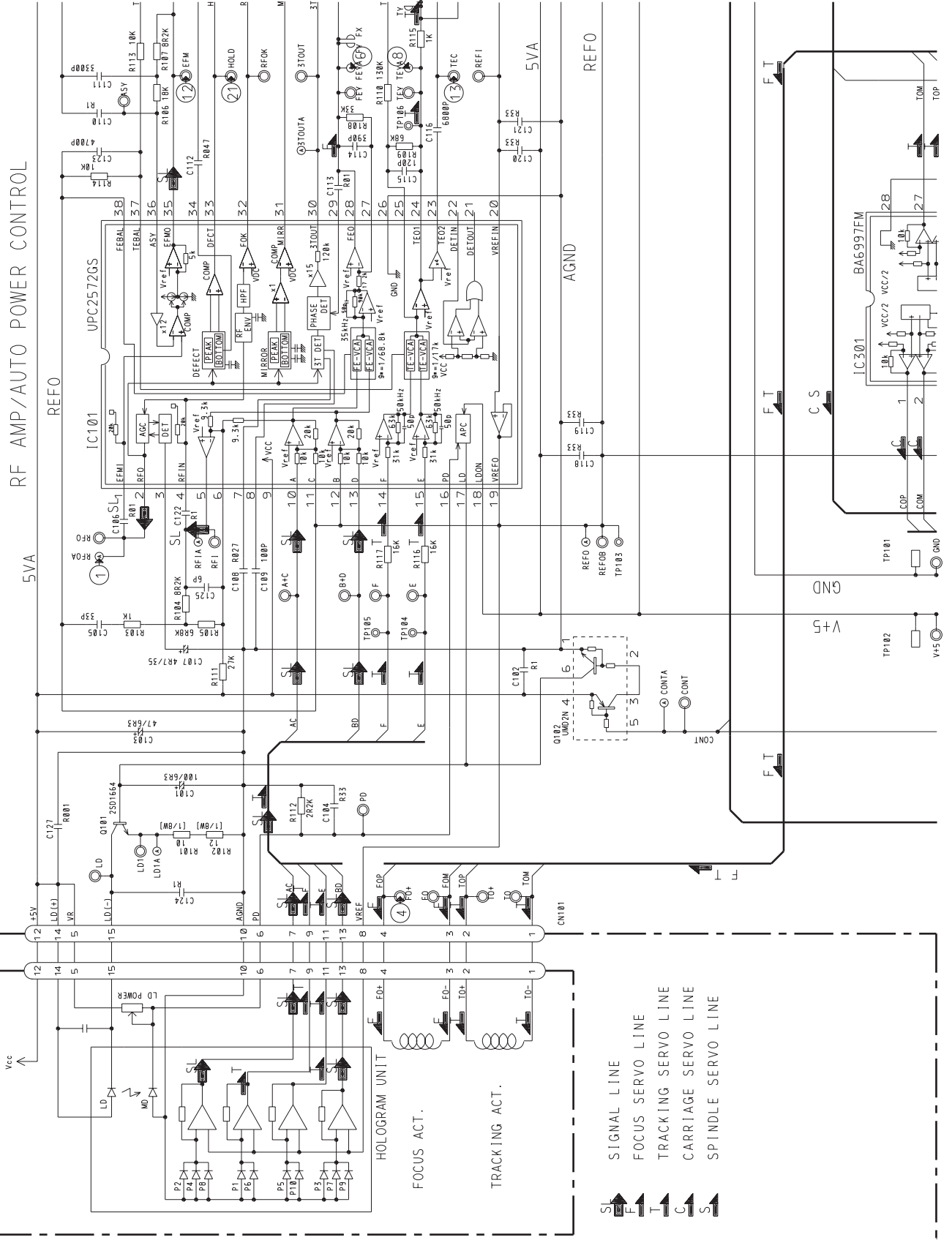


SERVICE PICKUP UNIT(CXX1230) CONTROL UNIT

SERVICE PICKUP UNIT(CXX1230)

E-a E-b

E-a



- SIGNAL LINE
- FOCUS SERVO LINE
- TRACKING SERVO LINE
- CARRIAGE SERVO LINE
- SPINDLE SERVO LINE



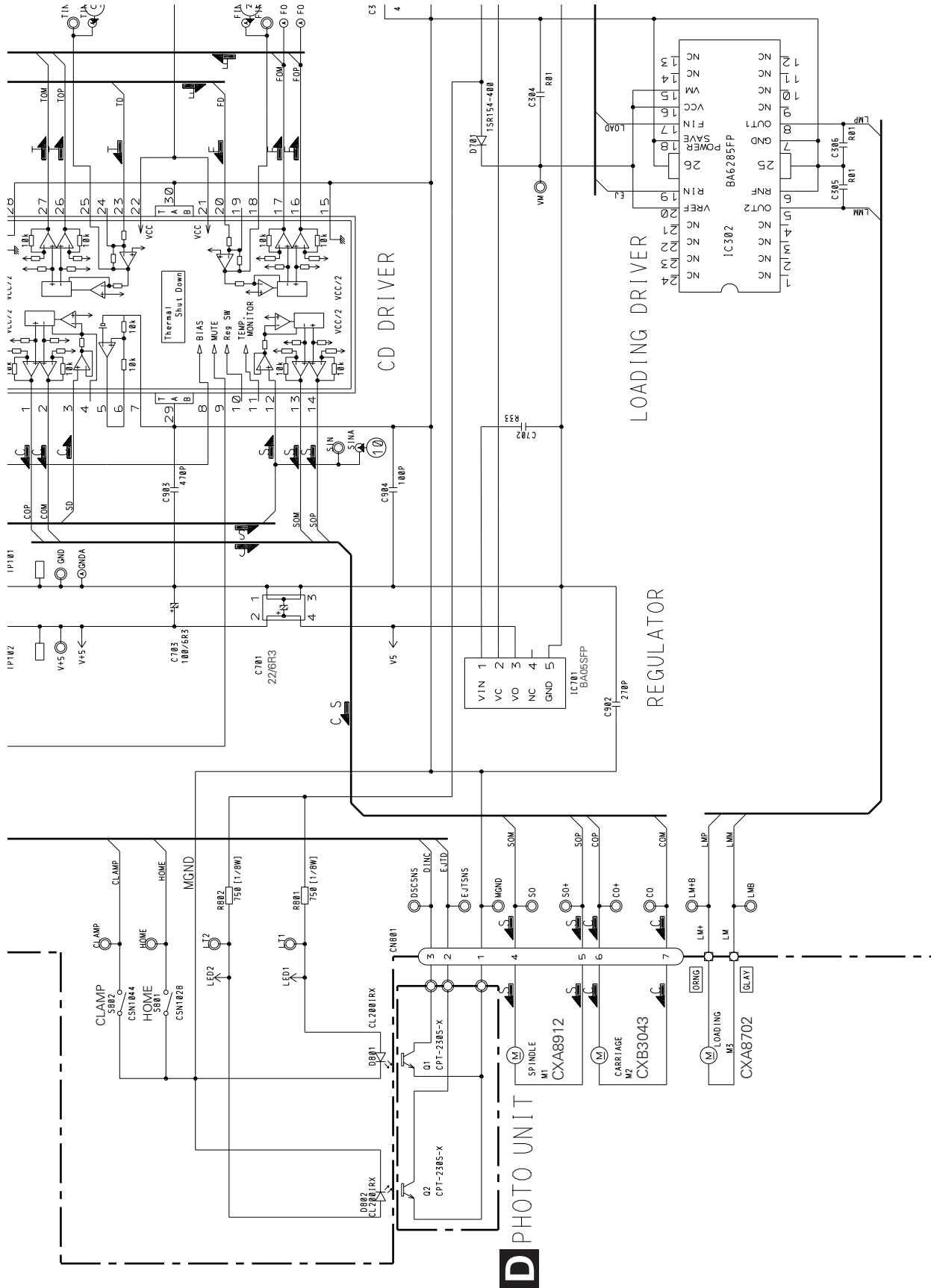
A

B

C

D



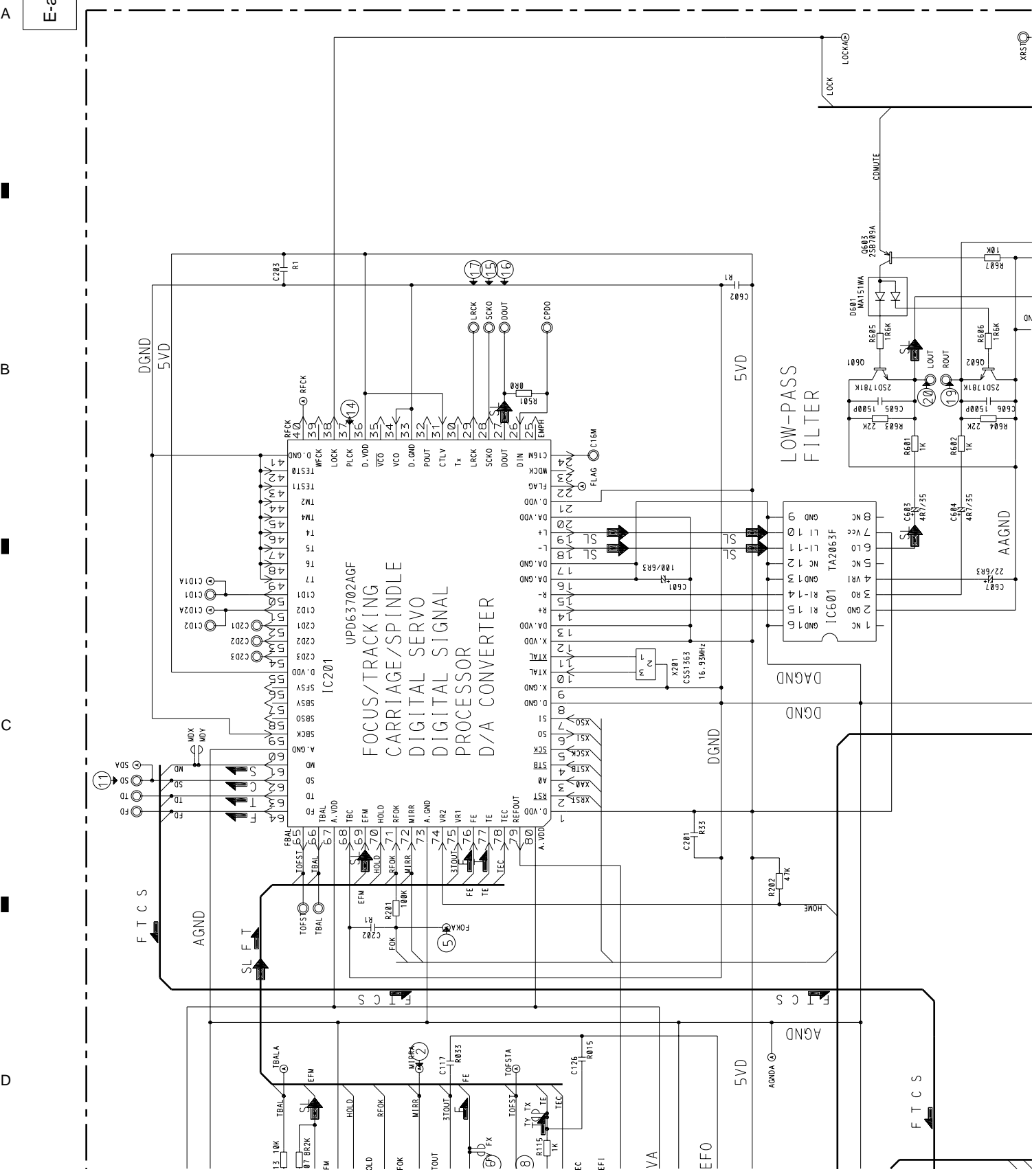


SWITCHES:  
 CONTROL UNIT  
 S801: HOME SWITCH.....ON-OFF  
 S802: CLAMP SWITCH.....ON-OFF  
 The underlined indicates the switch position.

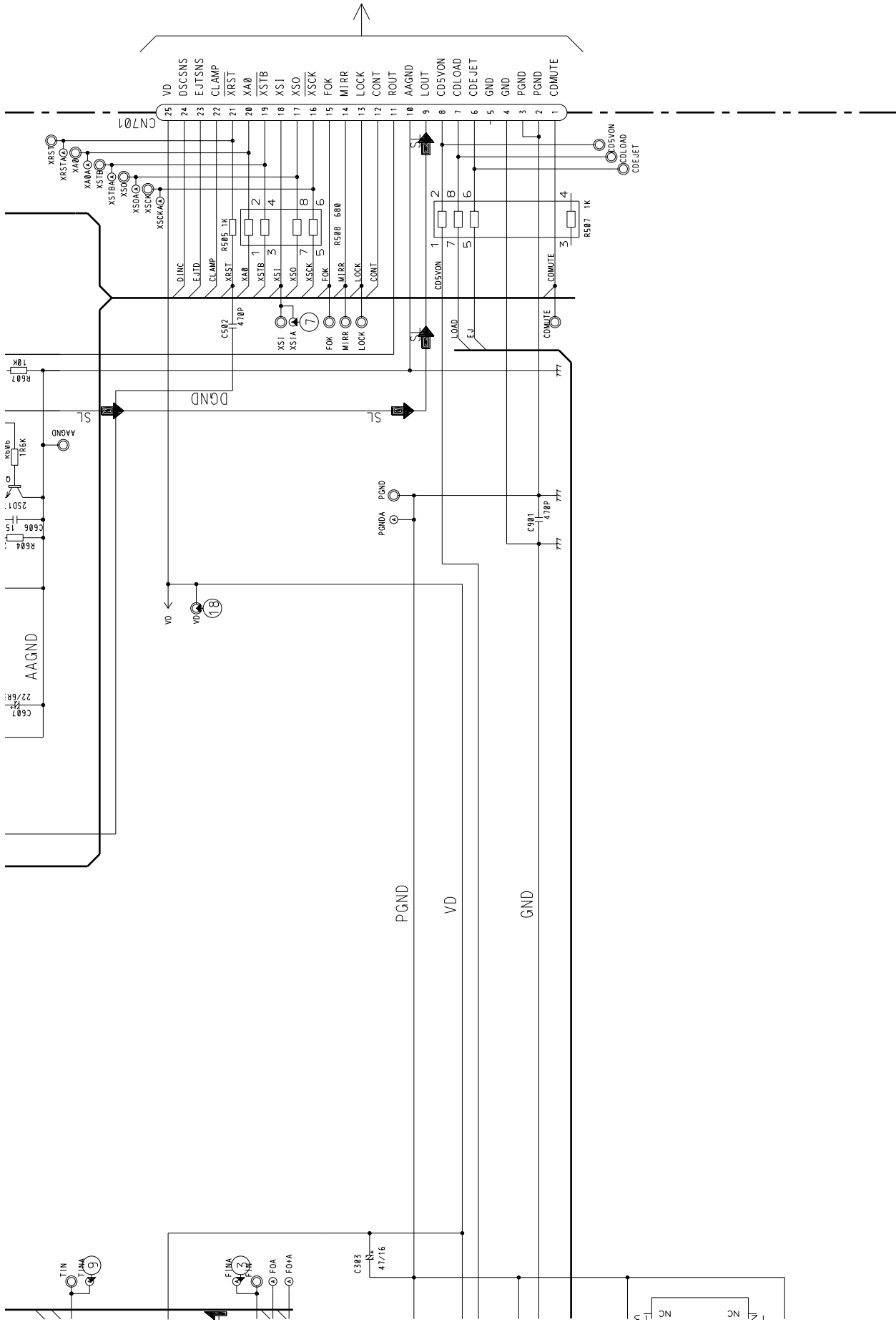
E-a E-b

E-a D

E-a E-b



**A** CN651



E-a E-b

A

B

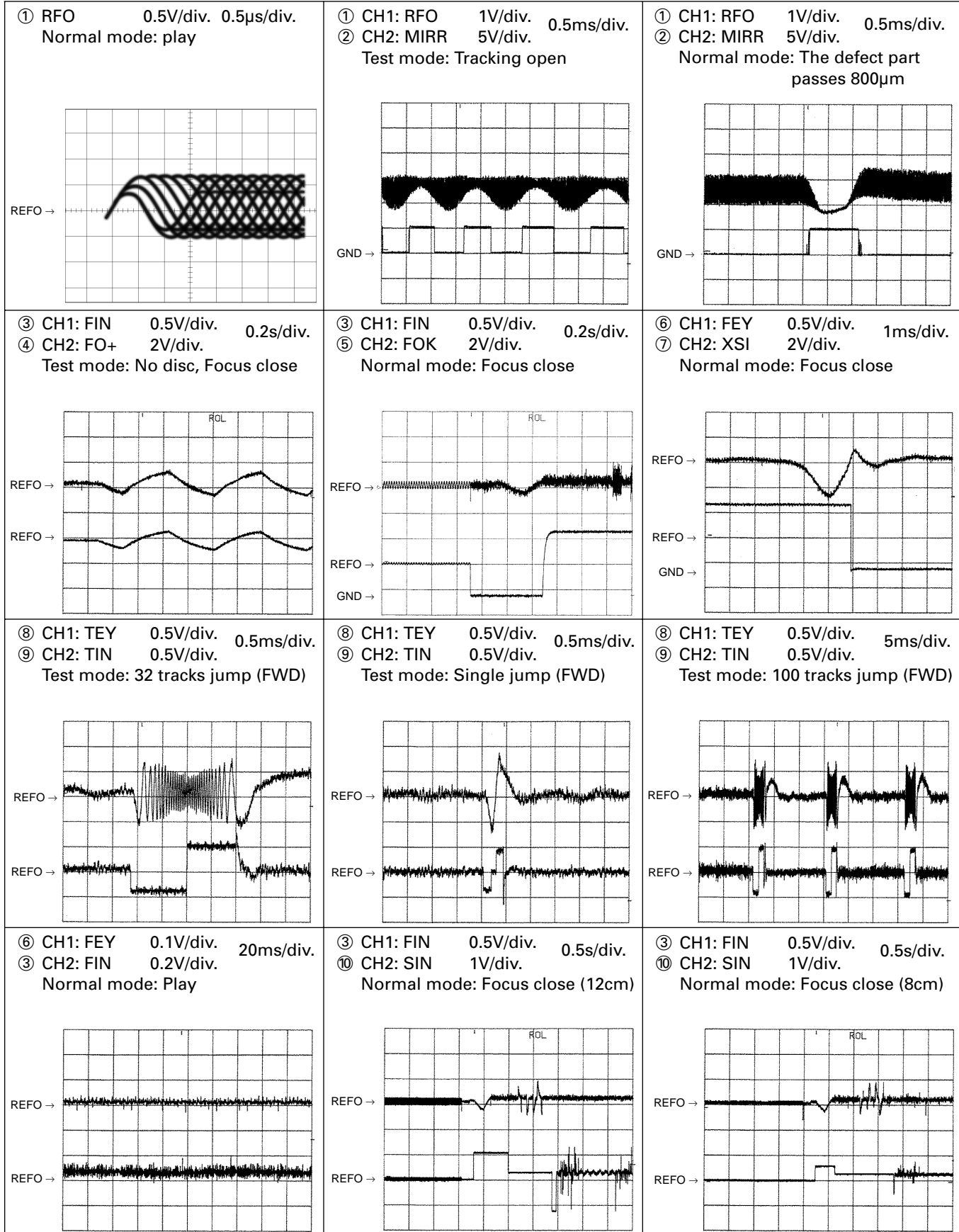
C

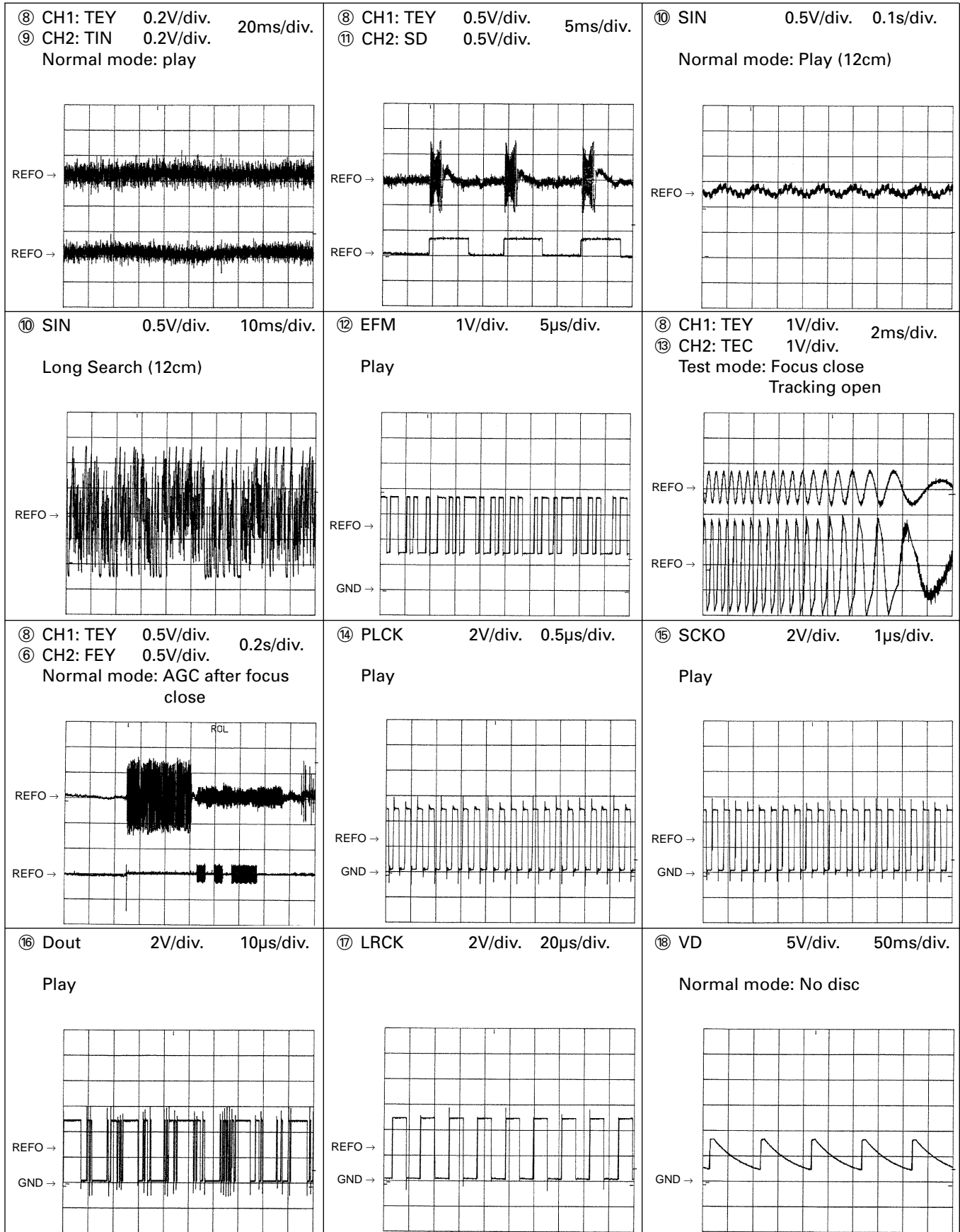
D

**E-b**

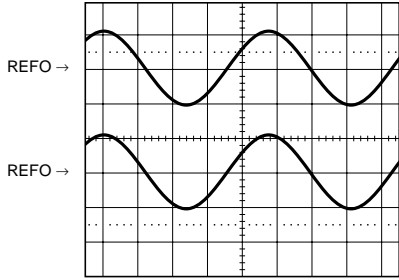
Note:1. The encircled numbers denote measuring pointes in the circuit diagram.  
 2. Reference voltage  
 REFO:2.5V

● Waveforms

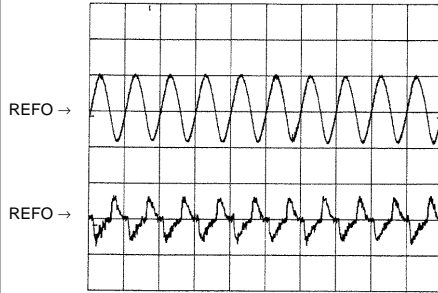




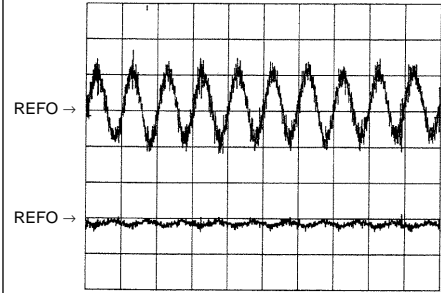
⑱ CH1: R OUT 1V/div. 0.2ms/div.  
 ⑳ CH2: L OUT 1V/div. 0.2ms/div.  
 Normal mode: Play (1kHz 0dB)



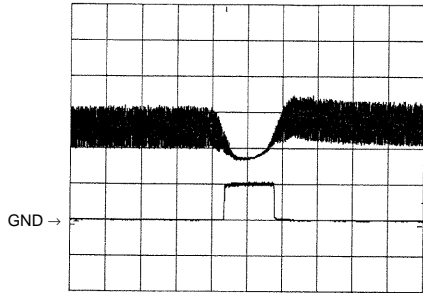
⑥ CH1: FEY 0.2V/div. 1ms/div.  
 ③ CH2: FIN 0.5V/div. 1ms/div.  
 Normal mode: During AGC



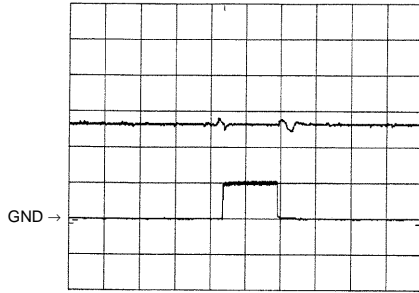
⑧ CH1: TEY 0.2V/div. 1ms/div.  
 ⑨ CH2: TIN 0.5V/div. 1ms/div.  
 Normal mode: During AGC



① CH1: RFO 1V/div. 0.5ms/div.  
 ② CH2: HOLD 5V/div. 0.5ms/div.  
 Normal mode: The defect part passes 800μm



③ CH1: FIN 1V/div. 0.5ms/div.  
 ② CH2: HOLD 5V/div. 0.5ms/div.  
 Normal mode: The defect part passes 800μm



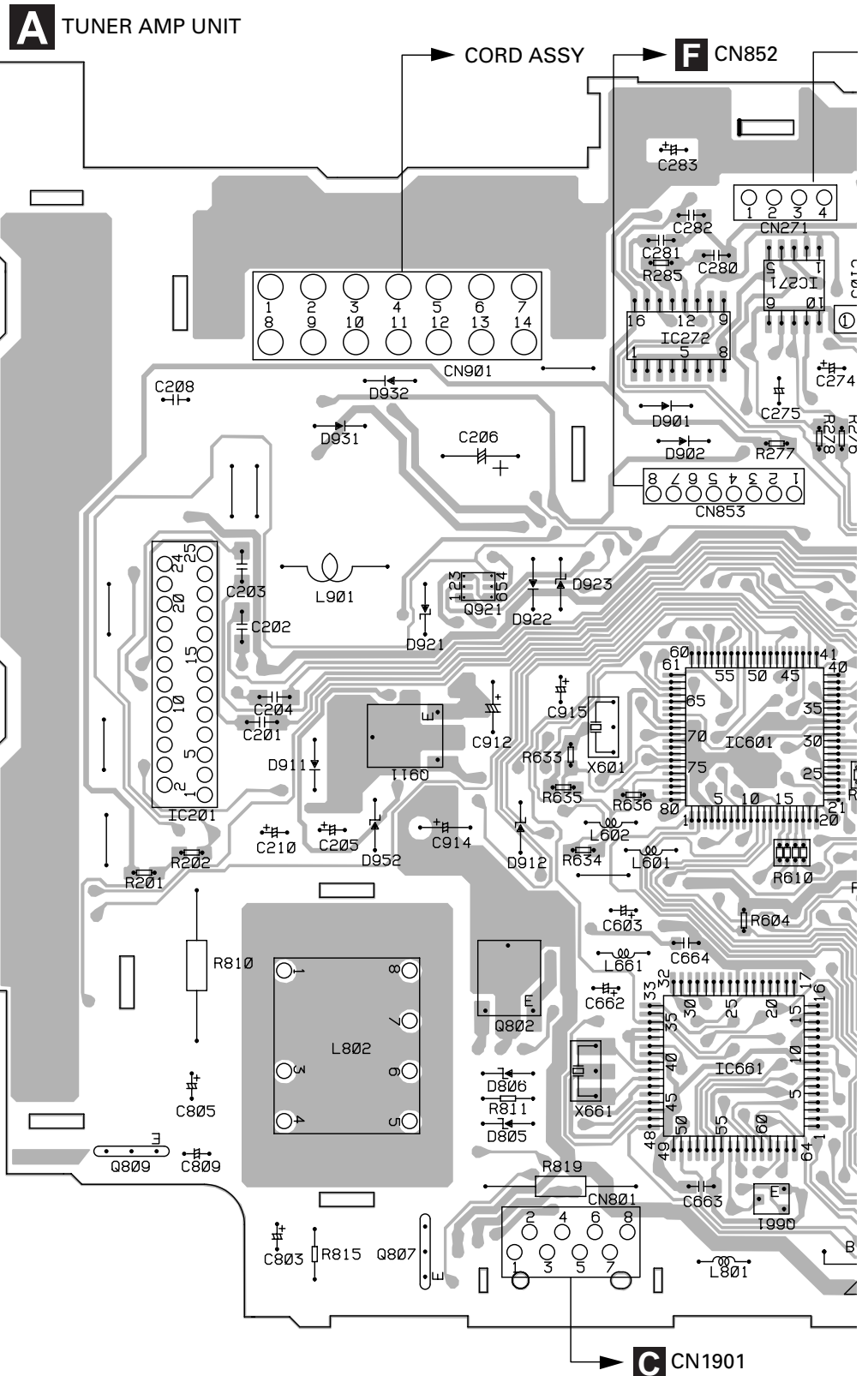
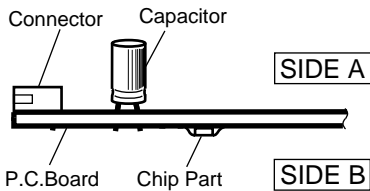


# 4. PCB CONNECTION DIAGRAM

## 4.1 TUNER AMP UNIT

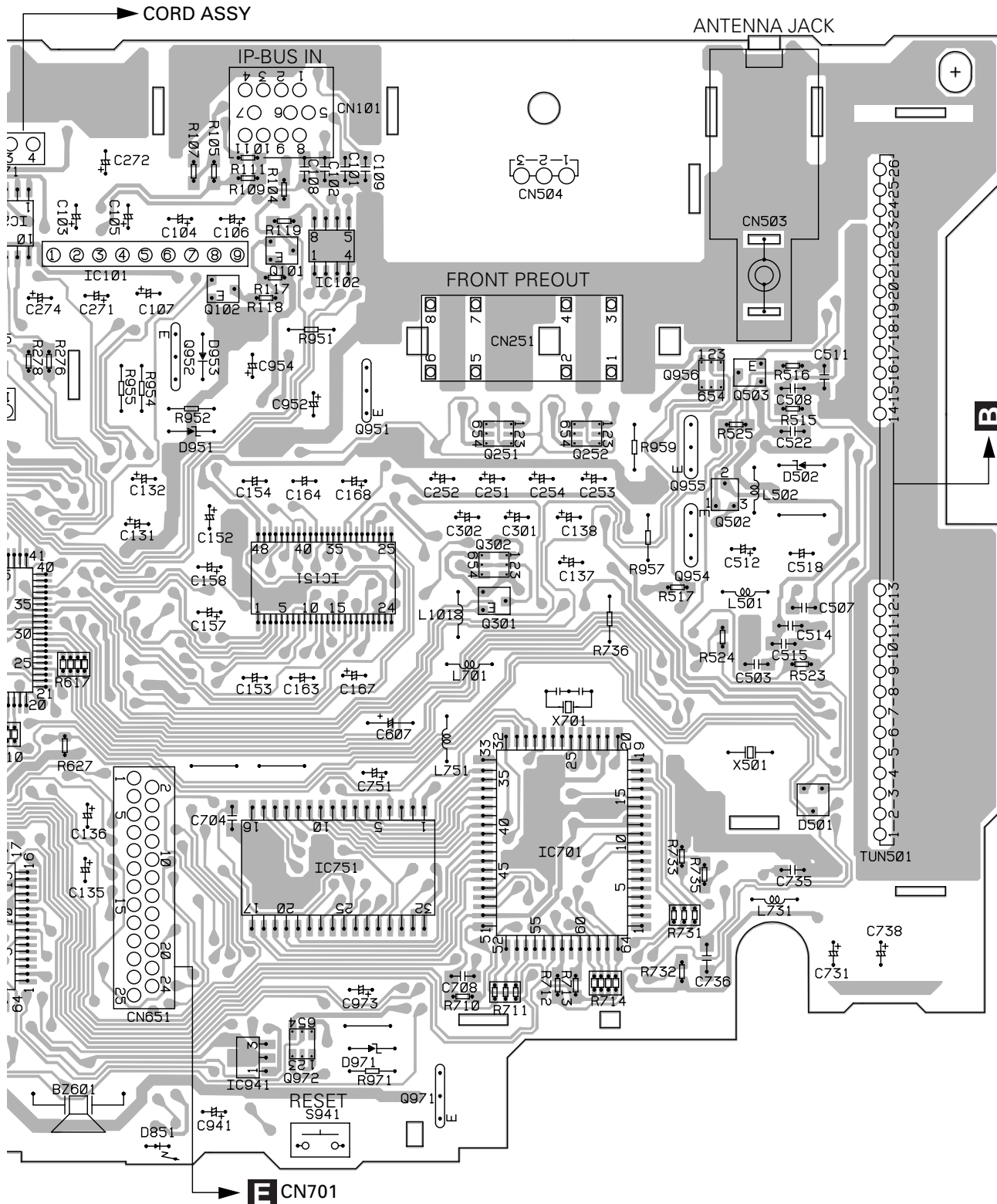
### NOTE FOR PCB DIAGRAMS

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





SIDE A



- IC, Q
- IC271
- Q101 IC102
- IC272 IC101
- Q102
- Q952
- Q956
- Q503
- Q951
- Q251 Q252
- Q955
- Q921 Q502
- Q302
- IC151 Q954
- IC601 Q301
- Q911
- IC201
- IC701
- IC751
- Q802
- IC661
- Q809
- Q661
- IC941 Q972
- Q807 Q971

B

E

A



SIDE B

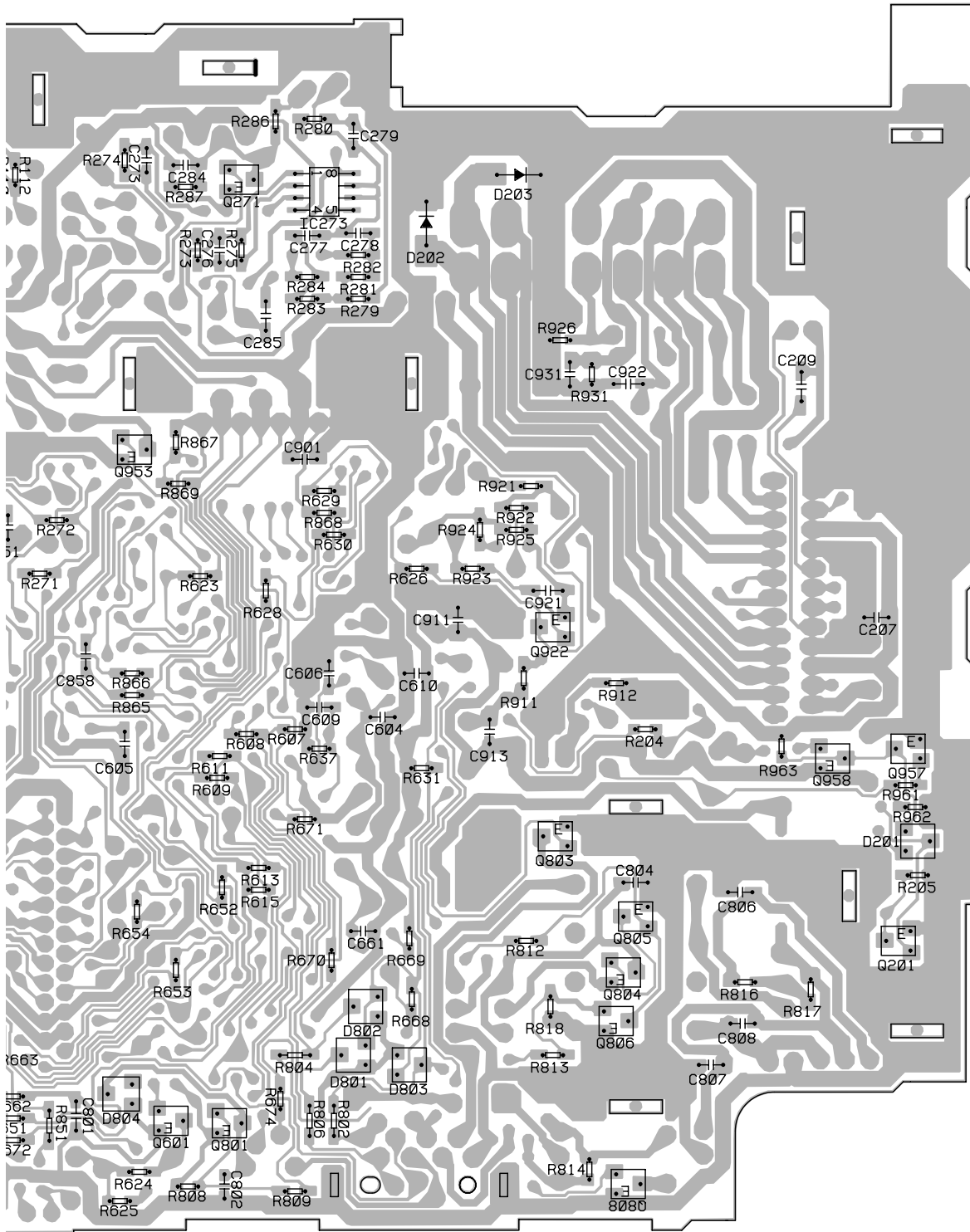
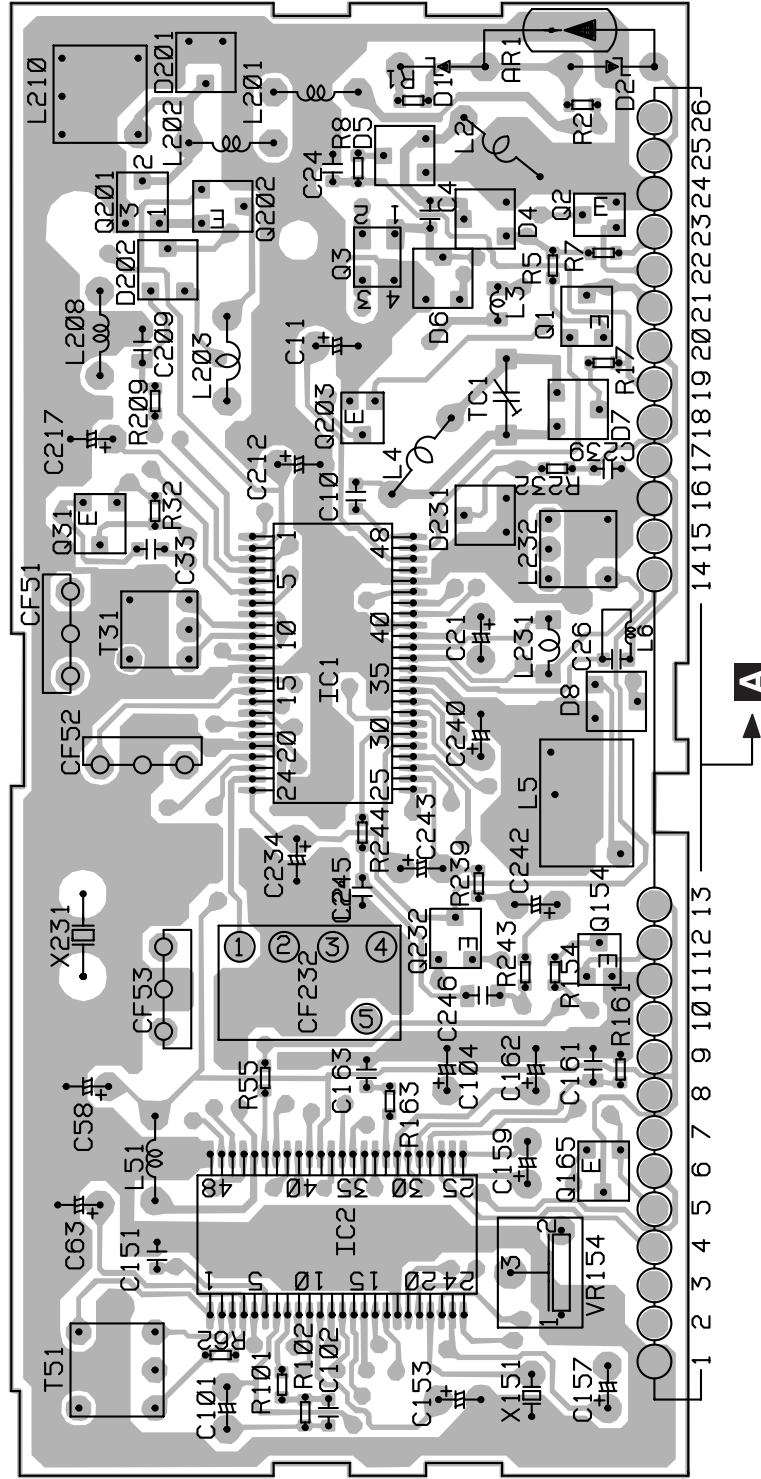


Fig. 16

4.2 FM/AM TUNER UNIT

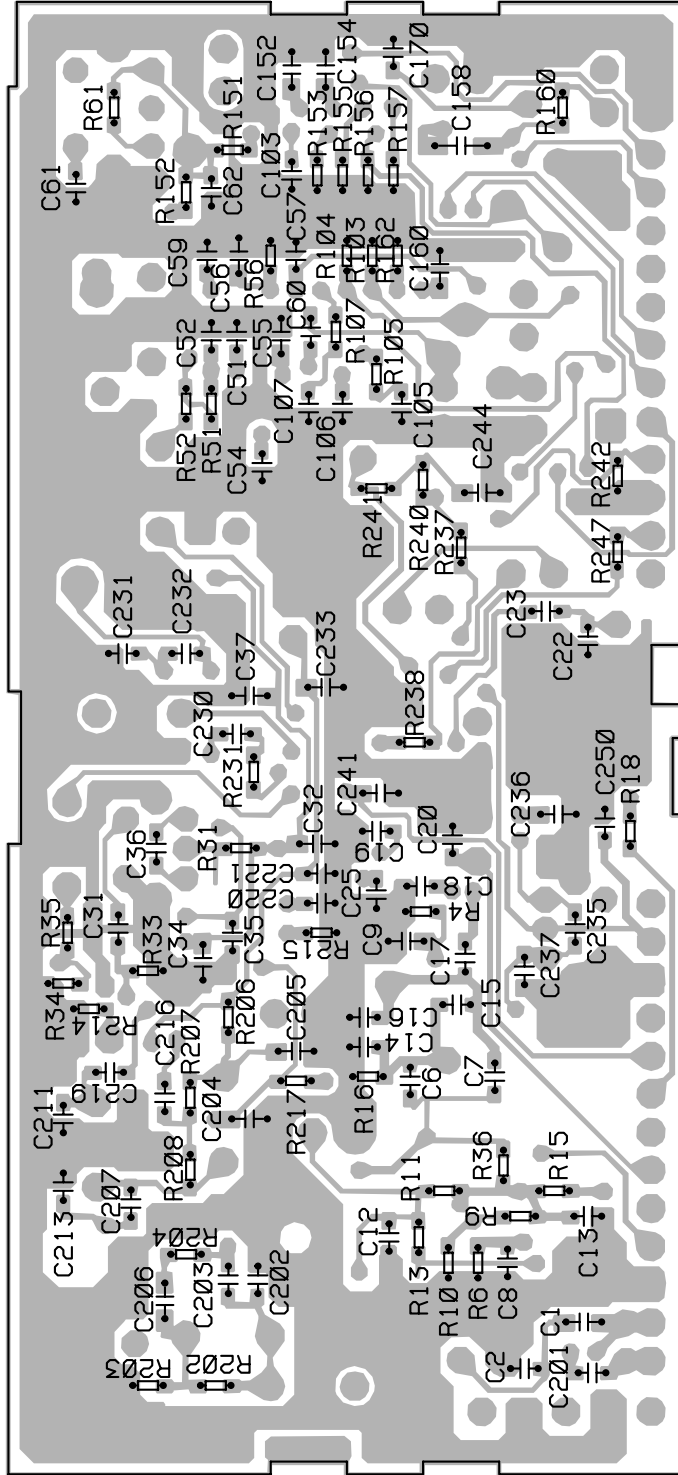
SIDE A



B FM/AM TUNER UNIT

IC, Q	ADJ
Q31	T51
Q201	T31
Q202	L4
Q203	L2
IC2	TC1
Q232	L5
Q1	VR154
Q2	
Q154	

SIDE B



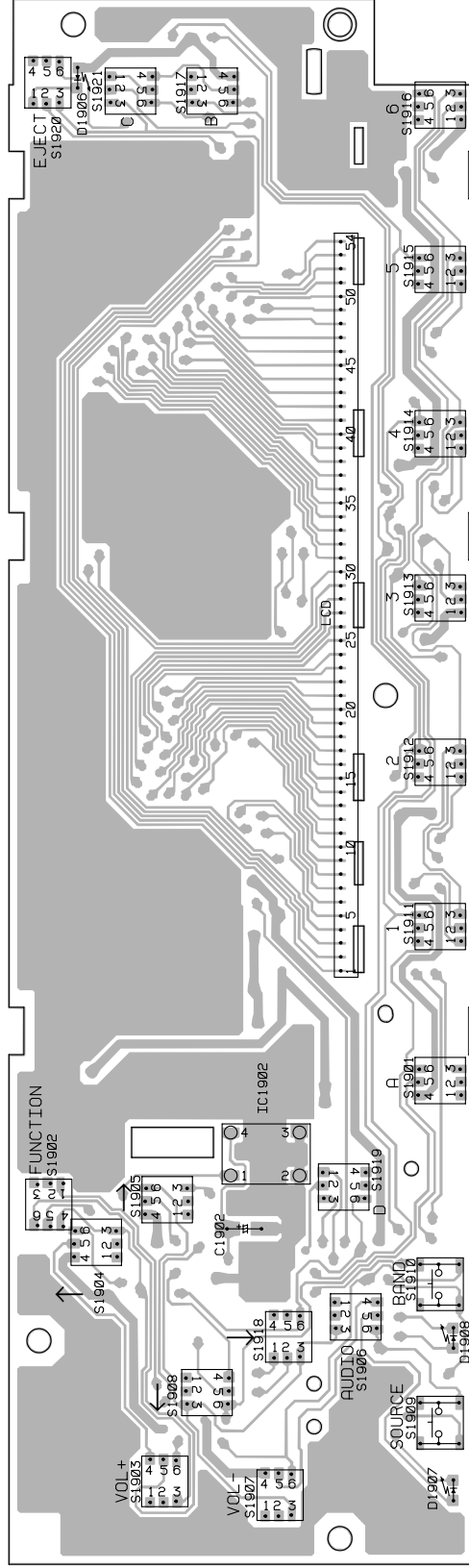
**B** FM/AM TUNER UNIT

A  
B  
C  
D

### 4.3 KEYBOARD UNIT

SIDE A

**C** KEYBOARD UNIT



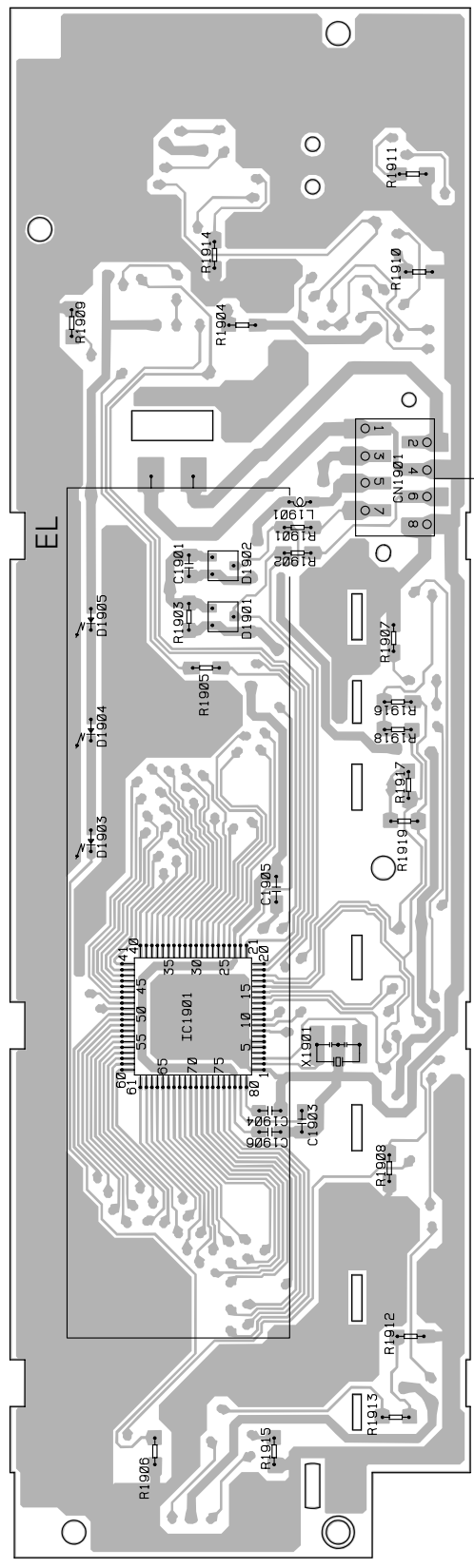
IC.0

IC1902



**C** KEYBOARD UNIT

**SIDE B**



IC.0

IC1901

**A** CN1901

EL

A

B

C

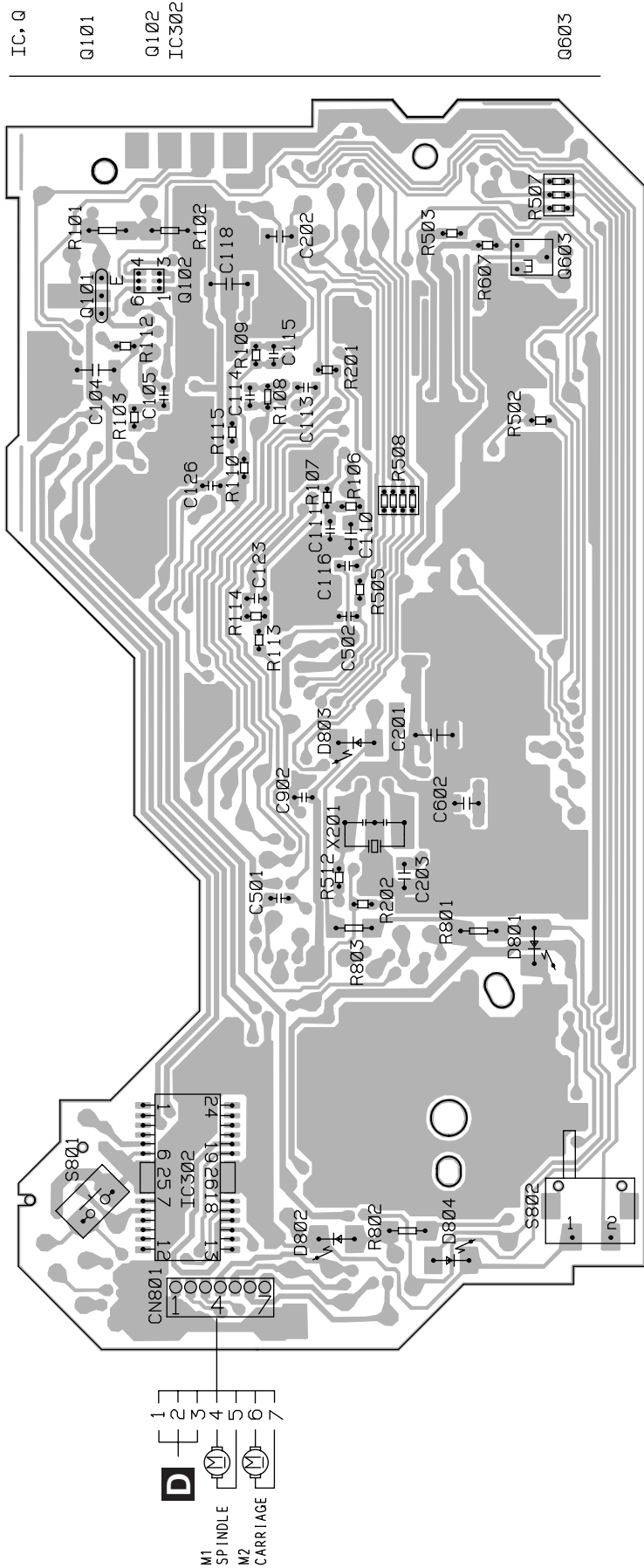
D







**E** CONTROL UNIT



**SIDE B**

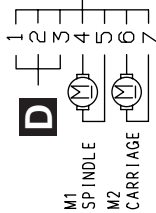
IC, Q

Q101

Q102

IC302

Q603



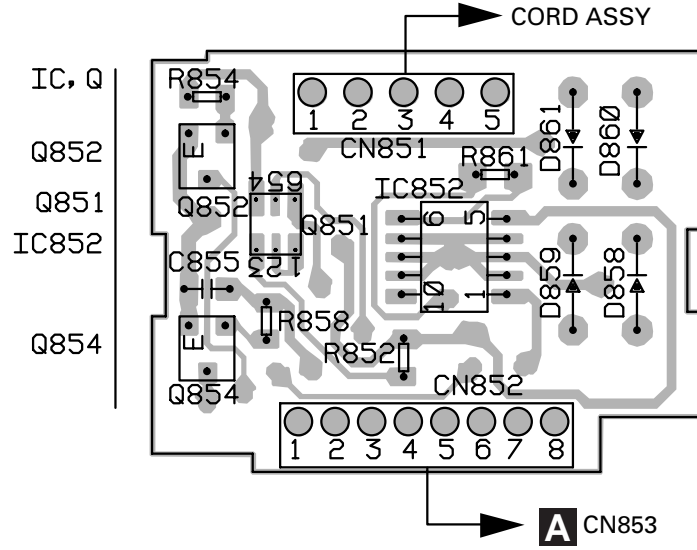
A B C D



### 4.5 DETACH ALARM UNIT

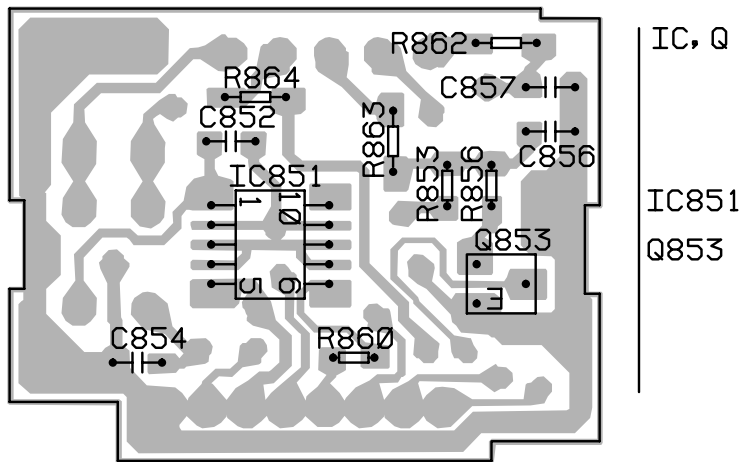
**F** DETACH ALARM UNIT

**SIDE A**



**F** DETACH ALARM UNIT

**SIDE B**



## 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/OSOOOJ,RS1/OOSOOOJ

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

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

====Circuit Symbol and No. Part Name====	Part No.	====Circuit Symbol & No. Part Name====	Part No.
<b>B</b> Unit Number : CWE1472 (DEH-P86DHR)		<b>RESISTORS</b>	
Unit Number : CWE1417 (DEH-P76DH)		R 1	RS1/16S225J
Unit Name : FM/AM Tuner Unit		R 2	RS1/16S225J
<b>MISCELLANEOUS</b>		R 4	RS1/16S154J
IC 1 IC PA4023B		R 5	RS1/16S391J
IC 2 IC PA4024A		R 6	RS1/16S223J
Q 1 Transistor 2SC2412K		R 7	RS1/16S123J
Q 2 Transistor DTC124EU		R 8	RS1/16S332J
Q 3 FET 3SK263		R 9	RS1/16S473J
Q 31 Transistor 2SC2412K		R 10	RS1/16S223J
Q 201 FET 2SK932		R 11	RS1/16S124J
Q 202 Transistor 2SC2412K		R 13	RS1/16S563J
Q 203 Transistor DTC124EU		R 15	RS1/16S271J
D 1 Diode RD39JS		R 16	RS1/16S104J
D 2 Diode RD39JS		R 17	RS1/16S332J
D 4 Diode 1SV250		R 18	RS1/16S332J
D 5 Diode KV1410-F1		R 31	RS1/16S470J
D 6 Diode MA157		R 32	RS1/16S822J
D 7 Diode KV1410-F1		R 33	RS1/16S822J
D 8 Diode KV1410-F1		R 34	RS1/16S331J
D 201 Diode MA157		R 35	RS1/16S331J
D 202 Diode MA157		R 51	RS1/16S271J
D 231 Diode SVC253		R 52	RS1/16S560J
L 2 Coil(DEH-P86DHR) CTC1126		R 55	RS1/16S102J
L 2 Coil(DEH-P76DH) CTC1108		R 56	RS1/16S823J
L 3 Inductor LCTB2R2K2125		R 61	RS1/16S392J
L 4 Coil(DEH-P86DHR) CTC1126		R 62	RS1/16S273J
L 4 Coil(DEH-P76DH) CTC1108		R 101	RS1/16S272J
L 5 Coil(DEH-P86DHR) CTC1125		R 102	RS1/16S682J
L 5 Coil(DEH-P76DH) CTC1107		R 103	RS1/16S333J
L 51 Ferri-Inductor LAU150K		R 104	RS1/16S334J
L 201 Ferri-Inductor LAU4R7K		R 105	RS1/16S683J
L 202 Ferri-Inductor LAU330K		R 107	RS1/16S222J
L 203 Inductor CTF1287		R 151	RS1/16S222J
L 208 Inductor LAU121K		R 152	RS1/16S393J
L 231 Inductor LCTA3R3J3225		R 155	RS1/16S273J
T 31 Coil CTE1116		R 156	RS1/16S243J
T 51 Coil(DEH-P86DHR) CTC1159		R 157	RS1/16S203J
T 51 Coil(DEH-P76DH) CTC1136		R 160	RS1/16S222J
CF 51 Ceramic Filter(DEH-P86DHR) CTF1442		R 161	RS1/16S563J
CF 51 Ceramic Filter(DEH-P76DH) CTF1441		R 162	RS1/16S105J
CF 52 Ceramic Filter(DEH-P86DHR) CTF1442		R 163	RS1/16S223J
CF 52 Ceramic Filter(DEH-P76DH) CTF1441		R 202	RS1/16S223J
CF 53 Ceramic Filter(DEH-P86DHR) CTF1442		R 203	RS1/16S225J
CF 53 Ceramic Filter(DEH-P76DH) CTF1441		R 204	RS1/16S103J
CF 232 Ceramic Filter CTF1348		R 206	RS1/16S220J
X 151 Resonator 920.5kHz CSS1365		R 207	RS1/16S101J
X 231 Crystal Resonator 10.26MHz CSS1111		R 208	RS1/16S102J
VR 154 Semi-fixed 150kΩ(B) CCP1213		R 209	RS1/16S471J
		R 214	RS1/16S822J
		R 215	RS1/16S822J

# DEH-P86DHR,P76DH

====Circuit Symbol and No. Part Name====	Part No.	====Circuit Symbol and No. Part Name====	Part No.
R 217	RS1/16S102J	C 161	CKSQYB104K16
R 231	RS1/16S272J	C 162	CEJA3R3M50
R 232	RS1/16S473J	C 163	CKSRYB102K50
R 237	RS1/16S103J	C 170	CCSRCH100D50
R 238	RS1/16S104J	C 201	CCSRCH471J50
R 239	RS1/16S104J	C 202	CCSRCH100D50
R 240	RS1/16S332J	C 203	CKSRYB332K50
R 241	RS1/16S202J	C 204	CKSQYB473K16
R 243	RS1/16S183J	C 205	CKSQYB473K16
R 244	RS1/16S392J	C 206	CKSQYB104K16
R 247	RS1/16S123J	C 207	CCSRCH560J50
CAPACITORS		C 209	CKSQYB104K16
C 1	CCSQCH6R0D50	C 211	CCSRCH101J50
C 2	CCSRCK2R0C50	C 212	CEJA470M6R3
C 4	CCSRCH820J50	C 213	CKSRYB103K25
C 6	CCSRCH820J50	C 216	CCSRCH101J50
C 8	CKSRYB103K25	C 217	CEJA1R5M50
C 9	CKSQYB104K16	C 219	CCSRCH471J50
C 10	CCSRCKR50C50	C 220	CKSRYB103K25
C 11	CEJA1R0M50	C 230	CKSRYB103K25
C 12	CKSRYB222K50	C 231	CCSRCH330J50
C 13	CKSRYB222K50	C 232	CCSRCH150J50
C 14	CCSRCH220J50	C 233	CKSQYB104K16
C 15	CCSRCH6R0D50	C 234	CEJA330M10
C 16	CCSRCH8R0D50	C 235	CKSRYB332K50
C 17	CKSRYB222K50	C 236	CKSQYB473K16
C 18	CKSRYB103K25	C 237	CCSRCH120J50
C 19	CKSRYB222K50	C 239	CKSRYB472K50
C 20	CKSRYB222K50	C 240	CEJAR47M50
C 21	CEJA100M16	C 241	CKSQYB104K16
C 22	CCSRTH9R0D50	C 242	CEJAR47M50
C 23	CCSRTH120J50	C 243	CEJAR33M50
C 24	CCSRCH471J50	C 244	CKSQYB473K16
C 25	CKSRYB103K25	C 245	CKSRYB333K16
C 26	CCSRCH101J50	C 246	CKSQYB473K16
C 31	CKSRYB103K25	C 250	CCSRCH471J50
C 32	CKSQYB472K50		
C 33	CCSRCH5R0C50		
C 34	CKSQYB104K16		
C 36	CCSRRH201J50		
C 51	CKSRYB223K25		
C 52	CKSRYB103K25		
C 54	CCSRCH470J50		
C 55	CKSQYB223K25		
C 56	CKSQYB104K16		
C 57	CKSRYB472K50		
C 58	CEJA330M10		
C 59	CKSRYB103K25		
C 60 (DEH-P76DH)	CKSRYB102K50		
C 61	CCSRCH270J50		
C 62	CKSRYB103K25		
C 63	CEJAR22M50		
C 101	CEJANP100M10		
C 102	CKSRYB182K50		
C 103	CKSRYB682K25		
C 104	CEJA2R2M50		
C 105	CKSRYB103K25		
C 106	CCSRCH151J50		
C 107	CKSRYB103K25		
C 151	CKSRYB472K50		
C 152	CKSQYB104K16		
C 153	CEJA3R3M50		
C 154	CKSQYB104K16		
C 157	CEJA3R3M50		
C 158	CKSYB474K16		
C 159	CEJA220M6R3		
C 160	CKSQYB104K16		

**E** Unit Number : CWX2268  
Unit Name : Control Unit

## MISCELLANEOUS

IC 101	IC	UPC2572GS
IC 201	IC	UPD63702AGF
IC 301	IC	BA6997FM
IC 302	IC	BA6285FP
IC 601	IC	TA2063F
IC 701	IC	BA05SFP
Q 101	Transistor	2SD1664
Q 102	Transistor	MA151WA
Q 601	Transistor	2SD1781K
Q 602	Transistor	2SD1781K
Q 603	Transistor	2SB709A
D 601	Diode	MA151WA
D 701	Diode	1SR154-400
D 801	Chip LED	CL200IRX
D 802	Chip LED	CL200IRX
X 201	Ceramic Resonator 16.93MHz	CSS1363
S 801	Switch (Home)	CSN1028
S 802	Spring Switch (Clamp)	CSN1044

## RESISTORS

R 101	RS1/8S100J
R 102	RS1/8S120J
R 103	RS1/16S102J
R 104	RS1/16S822J
R 105	RS1/16S682J

====Circuit Symbol and No. Part Name=====	Part No.	====Circuit Symbol and No. Part Name=====	Part No.
R 106	RS1/16S183J	C 605	CKSRYP152K50
R 107	RS1/16S822J	C 606	CKSRYP152K50
R 108	RS1/16S333J	C 607	CEV220M6R3
R 109	RS1/16S683J	C 701	CCH1300
R 110	RS1/16S134J	C 702	CKSYB334K16
R 111	RS1/16S273J	C 703	CEV101M6R3
R 112	RS1/16S222J	C 901	CCSRCH471J50
R 113	RS1/16S103J	C 902	CCSRCH271J50
R 114	RS1/16S103J	C 903	CCSRCH471J50
R 115	RS1/16S102J	C 904	CCSRCH101J50
R 116	RS1/16S163J	<b>F</b> Unit Number : CWM5291	
R 117	RS1/16S163J	Unit Name : Detach Alarm Unit	
R 201	RS1/16S104J	<b>MISCELLANEOUS</b>	
R 202	RS1/16S473J	IC 851	IC
R 501	RS1/16S0R0J	IC 852	IC
R 505	RS1/16S102J	Q 851	Transistor
R 507	RA3C102J	Q 852	Transistor
R 508	RA4C681J	Q 853	Transistor
R 601	RS1/16S102J	Q 854	Transistor
R 602	RS1/16S102J	D 858	Diode
R 603	RS1/16S223J	D 859	Diode
R 604	RS1/16S223J	D 860	Diode
R 605	RS1/16S162J	D 861	Diode
R 606	RS1/16S162J	<b>RESISTORS</b>	
R 607	RS1/16S103J	R 852	RS1/10S103J
R 801	RS1/8S751J	R 853	RS1/10S103J
R 802	RS1/8S751J	R 854	RS1/10S223J
<b>CAPACITORS</b>		R 855	RS1/10S163J
C 101	CEV101M6R3	R 856	RS1/10S163J
C 102	CKSQYB104K16	R 858	RS1/10S163J
C 103	CEV470M6R3	R 860	RS1/10S103J
C 104	CKSYB334K16	R 861	RS1/10S103J
C 105	CCSRCH330J50	R 862	RS1/8S102J
C 106	CKSRYP103K25	R 863	RS1/8S102J
C 107	CEV4R7M35	R 864	RS1/8S102J
C 108	CKSQYB273K50	<b>CAPACITORS</b>	
C 109	CCSRCH101J50	C 852	CKSQYB473K25
C 110	CKSQYB104K16	C 854	CKSQYB473K25
C 111	CKSRYP332K50	C 855	CKSQYB103K50
C 112	CKSQYB473K16	C 856	CKSQYB103K50
C 113	CKSRYP103K25	C 857	CKSQYB103K50
C 114	CKSRYP391K50	<b>MISCELLANEOUS</b>	
C 115	CCSRCH121J50	IC 101	IC
C 116	CKSRYP682K50	IC 102	IC
C 117	CKSRYP333K16	IC 151	IC
C 118	CKSYB334K16	IC 201	IC
C 119	CKSYB334K16	IC 271	IC
C 120	CKSYB334K16	IC 272	IC
C 121	CKSYB334K16	IC 273	IC
C 122	CKSQYB104K16	IC 501	IC
C 123	CKSRYP472K50	IC 601	IC
C 124	CKSQYB104K16	IC 661	IC
C 125	CCSRCH6R0D50	IC 701	IC
C 126	CKSRYP153K25	IC 731	IC
C 127	CCSRCH102J25	IC 751	IC
C 201	CKSYB334K16	IC 941	IC
C 202	CKSQYB104K16	Q 101	Transistor
C 203	CKSQYB104K16	Q 102	Transistor
C 303	CEV470M16	Q 201	Transistor
C 304	CKSRYP103K25	Q 251	Transistor
C 305	CKSRYP103K25	Q 252	Transistor
C 306	CKSRYP103K25	Q 253	Transistor
C 307	CEV100M25	<b>MISCELLANEOUS</b>	
C 502	CKSRYP471K50	DTC124EK	DTC124EK
C 601	CEV101M6R3	IMH3A	IMH3A
C 602	CKSQYB104K16	IMH3A	IMH3A
C 603	CEV4R7M35	IMD2A	IMD2A
C 604	CEV4R7M35		

# DEH-P86DHR,P76DH

====Circuit Symbol and No. Part Name====	Part No.	====Circuit Symbol and No. Part Name====	Part No.
Q 271 Transistor	DTC343TK	L 751 Inductor	LAU100K
Q 301 Transistor	DTA124EK	L 801 Ferri-Inductor	LAU2R2K
Q 302 Transistor	IMH3A	L 802 Transformer	MTX9005
Q 501 Transistor	2SC2412K	L 901 Choke Coil 600μH	CTH1171
Q 502 Transistor	2SK208	X 501 Crystal Resonator 7.2MHz	CSS1334
Q 503 Transistor	2SC2412K	X 601 Ceramic Resonator 6.29MHz	CSS1310
Q 601 Transistor	DTC124EK	X 661 Resonator 8.380MHz	CSS1354
Q 661 Transistor	DTA124EK	X 701 Crystal Resonator 4.332MHz	CSS1056
Q 801 Transistor	2SA1037K	S 941 Switch(Reset)	CSG1059
Q 802 Transistor	2SD1760F5		CWE1472
Q 803 Transistor	DTC114EK		CWM5291
Q 804 Transistor	DTA143EK	BZ 601 Detach Alarm Unit Buzzer	CPV1011
Q 805 Transistor	DTC114EK		
Q 806 Transistor	2SC2412K		
Q 807 Transistor	2SB1238	RESISTORS	
Q 808 Transistor	DTC143EK	R 101	RS1/10S620J
Q 809 Transistor	2SD1864	R 102	RS1/10S101J
Q 911 Transistor	2SD1760F5	R 103	RS1/10S101J
Q 921 Transistor	IMX1	R 104	RS1/10S222J
Q 922 Transistor	DTC114EK	R 105	RS1/10S122J
Q 941 Transistor	DTA144TK	R 106	RS1/10S122J
Q 951 Transistor	2SD2396	R 107	RS1/10S181J
Q 952 Transistor	2SB1243	R 108	RS1/10S181J
Q 953 Transistor	DTC124EK	R 109	RS1/10S153J
Q 954 Transistor	2SA1674	R 110	RS1/10S153J
Q 955 Transistor	2SA1674	R 111	RS1/10S222J
Q 956 Transistor	IMH1A	R 112	RS1/10S222J
Q 957 Transistor	2SC2412K	R 113	RS1/10S102J
Q 958 Transistor	DTC144EK	R 114	RS1/10S102J
Q 971 Transistor	2SD2396	R 115	RS1/10S473J
Q 972 Transistor	IMD2A	R 116	RS1/10S473J
D 201 Diode	DAN202K	R 117	RS1/10S332J
D 501 Diode	DAN202K	R 118	RS1/10S682J
D 502 Diode	HZS3LL(B)	R 119	RS1/10S103J
D 731 Diode	MA3047(M)	R 133	RS1/10S162J
D 801 Diode	DA204K	R 134	RS1/10S162J
D 802 Diode	DA204K	R 151	RS1/10S272J
D 803 Diode	DA204K	R 152	RS1/10S272J
D 804 Diode	MA3062(M)	R 153	RS1/10S151J
D 805 Diode	HZS9L(B3)	R 154	RS1/10S151J
D 806 Diode	HZS5LL(A)	R 201	RS1/10S103J
D 851 LED	BR4361F	R 202	RS1/10S331J
D 901 Diode	ERA15-02VH	R 204	RS1/10S103J
D 902 Diode	ERA15-02VH	R 205	RS1/10S103J
D 911 Diode	ERA15-02VH	R 251	RS1/10S821J
D 912 Diode	HZS6L(B1)	R 252	RS1/10S821J
D 921 Diode	HZS7L(C3)	R 253	RS1/10S471J
D 922 Diode	1SS133	R 254	RS1/10S471J
D 923 Diode	HZS7L(A1)	R 255	RS1/10S223J
D 931 Diode	ERA15-02VH	R 256	RS1/10S223J
D 932 Diode	ERA15-02VH	R 257	RS1/10S223J
D 941 Diode	DAN212K	R 258	RS1/10S223J
D 951 Diode	HZS9L(B3)	R 271	RS1/10S183J
D 952 Diode	HZS9L(A2)	R 272	RS1/10S183J
D 953 Diode	1SS133	R 273	RS1/10S103J
D 971 Diode	HZS9L(B1)	R 274	RS1/10S243J
L 101 Inductor	LAU3R3K	R 275	RS1/10S683J
L 501 Ferri-Inductor	LAU2R2K	R 276	RS1/10S473J
L 502 Ferri-Inductor	LAU220K	R 277	RS1/10S103J
L 503 Inductor	LCTBR39K2125	R 278	RS1/10S103J
L 601 Ferri-Inductor	LAU2R2K	R 279	RS1/10S104J
L 602 Inductor	LAU100K	R 280	RS1/10S104J
L 661 Ferri-Inductor	LAU2R2K	R 281	RS1/10S104J
L 701 Inductor	LAU100K	R 282	RS1/10S104J
L 731 Ferri-Inductor	LAU2R2K	R 283	RS1/10S104J

====Circuit Symbol and No. Part Name=====	Part No.	====Circuit Symbol and No. Part Name=====	Part No.
R 284	RS1/10S104J	R 671	RS1/10S473J
R 285	RS1/10S105J	R 672	RS1/10S222J
R 286	RS1/10S821J	R 673	RS1/10S473J
R 287	RS1/10S223J	R 674	RS1/10S473J
R 301	RS1/10S471J	R 701	RS1/10S681J
R 302	RS1/10S471J	R 702	RS1/10S681J
R 303	RS1/10S104J	R 703	RS1/10S222J
R 304	RS1/10S104J	R 704	RS1/10S105J
R 501	RS1/10S102J	R 705	RS1/10S681J
R 502	RS1/10S102J	R 706	RS1/10SOR0J
R 503	RS1/10S102J	R 710	RS1/10S473J
R 506	RS1/10S103J	R 711	RA3C681J
R 508	RS1/10S472J	R 712	RS1/10SOR0J
R 509	RS1/10S152J	R 713	RS1/10S473J
R 510	RS1/10S102J	R 714	RA4C473J
R 511	RS1/10S472J	R 731	RA3C102J
R 512	RS1/10S103J	R 732	RS1/10S681J
R 513	RS1/10S102J	R 733	RS1/10S393J
R 515	RS1/10S103J	R 735	RS1/10S102J
R 516	RS1/10S222J	R 736	RD1/4PU151J
R 517	RS1/10S473J	R 751	RS1/10S473J
R 518	RS1/10S473J	R 752	RS1/10S473J
R 519	RS1/10S473J	R 753	RS1/10S473J
R 520	RS1/10S224J	R 802	RS1/8S222J
R 521	RS1/10S473J	R 804	RS1/8S472J
R 522	RS1/10S473J	R 806	RS1/8S472J
R 523	RS1/10S472J	R 808	RS1/10S472J
R 524	RS1/10S472J	R 809	RS1/10S472J
R 525	RS1/10S222J	R 810	RS2PMF100J
R 526	RS1/10S223J	R 811	RD1/4PU471J
R 601	RS1/10S473J	R 812	RS1/10S103J
R 602	RS1/10S473J	R 813	RS1/10S224J
R 603	RS1/10S473J	R 814	RS1/10S222J
R 604	RS1/10S473J	R 815	RD1/4PU102J
R 605	RS1/10S473J	R 816	RS1/10S391J
R 606	RS1/10S473J	R 817	RS1/10S752J
R 607	RS1/10S473J	R 818	RS1/10S104J
R 608	RS1/10S221J	R 819	RS2P300JL
R 609	RS1/10S682J	R 851	RS1/8S331J
R 610	RA4C221J	R 865	RS1/10S103J
R 611	RS1/10S682J	R 866	RS1/10S102J
R 613	RS1/10S682J	R 867	RS1/10S473J
R 615	RS1/10S682J	R 868	RS1/10S473J
R 617	RA4C681J	R 869	RS1/10S473J
R 623	RS1/10S473J	R 911	RS1/10S332J
R 624	RS1/10S102J	R 912	RS1/10S101J
R 625	RS1/10S202J	R 921	RS1/10S103J
R 626	RS1/10S473J	R 922	RS1/10S473J
R 627	RS1/10S473J	R 923	RS1/10S103J
R 628	RS1/10S473J	R 924	RS1/10S103J
R 629	RS1/10S473J	R 925	RS1/10S473J
R 630	RS1/10S222J	R 926	RS1/10S472J
R 631	RS1/10S473J	R 931	RS1/10S103J
R 633	RS1/10S473J	R 941	RS1/10S102J
R 634	RS1/10S473J	R 942	RS1/10S822J
R 637	RS1/10S393J	R 943	RS1/8S471J
R 651	RS1/10S681J	R 944	RS1/10S473J
R 652	RS1/10S102J	R 951	RD1/4PU221J
R 653	RS1/10S102J	R 952	RD1/4PU301J
R 654	RS1/10S102J	R 953	RS1/10S1R0J
R 662	RS1/10S473J	R 954	RD1/4PU331J
R 663	RS1/10S222J	R 955	RD1/4PU331J
R 668	RS1/10S103J	R 956	RS1/8S472J
R 669	RS1/10S203J	R 957	RD1/4PU102J
R 670	RS1/10S222J	R 958	RS1/10S472J

# DEH-P86DHR,P76DH

====Circuit Symbol and No. Part	Name=====	Part No.	====Circuit Symbol and No. Part	Name=====	Part No.
R 959		RD1/4PU102J	C 274		CEJA4R7M35
R 960		RS1/10S472J	C 275		CEJANP220M10
R 961		RS1/10S103J	C 276		CKSQYB222K50
R 962		RS1/10S473J	C 277		CKSQYB183K25
R 963		RS1/10S473J	C 278		CKSQYB473K25
R 971		RD1/4PU221J	C 279		CKSQYB273K25
R 972		RS1/10S221J	C 280		CKSQYB103K50
R 973		RS1/10S472J	C 281		CKSQYB223K25
R 974		RS1/8S122J	C 282		CKSQYB153K50
			C 283		CEAS4R7M25
CAPACITORS					
C 103		CEJA1R0M50	C 284		CKSQYB104K16
C 104		CEJA1R0M50	C 285		CKSYB105K16
C 105		CEJA1R0M50	C 301		CEJA3R3M50
C 106		CEJA1R0M50	C 302		CEJA3R3M50
C 107		CEJA100M16	C 501		CKSQYB223K25
C 108		CKSQYB473K25	C 502		CKSQYB223K25
C 109		CKSQYB104K16	C 503		CKSQYB103K50
C 131		CEJA4R7M35	C 504		CKSQYB103K50
C 132		CEJA4R7M35	C 505		CKSQYB103K50
C 133		CKSQYB473K25	C 506		CKSQYB473K25
C 134		CKSQYB473K25	C 507		CKSQYB102K50
C 135		CEJA4R7M35	C 509		CKLSR473K16
C 136		CEJA4R7M35	C 510		CKSQYB103K50
C 137		CEJA4R7M35	C 512		CEJA100M16
C 138		CEJA4R7M35	C 513		CKSQYB103K50
C 151		CKSQYB104K16	C 514		CCSQCH101J50
C 152		CEAS470M10	C 515		CCSQCH101J50
C 153		CEJANP100M10	C 516		CKSQYB103K50
C 154		CEJANP100M10	C 518	4.7μF/16V	CCH1250
C 155		CKSQYB822K50	C 519		CKSQYB103K50
C 156		CKSQYB822K50	C 520		CCSQCH150J50
C 157		CEJA1R0M50	C 521		CCSQCH150J50
C 158		CEJA1R0M50	C 522		CKSQYB223K25
C 159		CKSQYB183K25	C 603		CEJA100M16
C 160		CKSQYB183K25	C 604		CKSQYB103K50
C 161		CKSQYB102K50	C 605		CCSQCH101J50
C 162		CKSQYB102K50	C 606		CCSQCH101J50
C 163		CEJANP2R2M35	C 607		CASA1R0M16
C 164		CEJANP2R2M35	C 609		CCSQCH101J50
C 165		CKSQYB333K25	C 661		CCSQCH101J50
C 166		CKSQYB333K25	C 662		CEJA4R7M35
C 167		CEJA220M6R3	C 663		CKSQYB104K16
C 168		CEJA2R2M50	C 664		CKSQYB473K25
C 169		CKSQYB104K16	C 702		CCSQCH270J50
C 201		CKSYB224K16	C 703		CCSQCH270J50
C 202		CKSYB224K16	C 705		CKSYB473K16
C 203		CKSYB224K16	C 706		CKSQYB473K25
C 204		CKSYB224K16	C 708		CKSQYB104K16
C 205		CEHAR010M50	C 731		CEJA100M16
C 206	3300μF/16V	CCH1163	C 733		CKSQYB102K50
C 207		CKSQYB103K50	C 734		CKSQYB472K50
C 208		CEHAR100M16	C 735		CKSQYB104K16
C 209		CKSYB105K16	C 736		CKSYB105K16
C 210		CEHAR330M10	C 737		CKSQYB104K16
C 251		CEJA4R7M35	C 738		CEJA100M16
C 252		CEJA4R7M35	C 751		CEJA100M16
C 253		CEJA4R7M35	C 752		CKSQYB103K50
C 254		CEJA4R7M35	C 753		CKSYB103K50
C 255		CKSQYB221K50	C 801		CKSYB104K16
C 256		CKSQYB221K50	C 802		CCSQCH101J50
C 257		CKSQYB221K50	C 803		CEHAR100M16
C 258		CKSQYB221K50	C 804		CKSQYB103K50
C 271		CEAS220M10	C 805		CEHAR100M16
C 272		CEAS101M10	C 806		CKSQYB103K50
C 273		CKSQYB472K50	C 807		CKSQYB333K25



====Circuit Symbol and No. Part Name=====	Part No.	====Circuit Symbol and No. Part Name=====	Part No.
C 808	CKSQYB333K25	Q 955	Transistor
C 809	CEJANP4R7M16	Q 956	Transistor
C 858	CKSQYB473K25	Q 957	Transistor
C 901	CKSQYB103K50	Q 958	Transistor
C 911	CKSQYB103K50	Q 971	Transistor
C 912	0.22F/5.5V CCL1037		
C 913	CKSQYB472K50	Q 972	Transistor
C 914	CEHAQ102M16	D 201	Diode
C 915	CEAS470M10	D 501	Diode
C 921	CKSYB105K16	D 502	Diode
C 922	CKSYB102K50	D 801	Diode
C 931	CKSQYB473K25	D 802	Diode
C 941	CEJA2R2M50	D 803	Diode
C 951	CKSQYB103K50	D 804	Diode
C 952	CEHAQ101M16	D 805	Diode
C 953	CKSQYB103K50	D 806	Diode
C 954	330μF/10V	D 851	LED
C 971	CCH1181	D 901	Diode
C 972	CKSQYB473K25	D 902	Diode
C 973	CKSQYB102K50	D 911	Diode
	CEAS101M10	D 912	Diode

**A** Unit Number : CWM6380(DEH-P76DH)  
Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC 101	IC	TA2050S	D 941	Diode	DAN212K
IC 102	IC	CA0008AM	D 951	Diode	HZS9L(B3)
IC 151	IC	SN761027DL	D 952	Diode	HZS9L(A2)
IC 201	IC	PAL005A	D 953	Diode	1SS133
IC 501	IC	LC72146M	D 971	Diode	HZS9L(B1)
IC 601	IC	PD4754B	L 101	Inductor	LAU3R3K
IC 661	IC	PD4623B	L 501	Ferri-Inductor	LAU2R2K
IC 701	IC	PD6194A	L 502	Ferri-Inductor	LAU220K
IC 751	IC	PD8027A	L 503	Inductor	LCTBR39K2125
IC 941	IC	S-80734ANDYI	L 601	Ferri-Inductor	LAU2R2K
Q 101	Transistor	2SA1037K	L 602	Inductor	LAU100K
Q 102	Transistor	DTC124EK	L 661	Ferri-Inductor	LAU2R2K
Q 201	Transistor	DTC124EK	L 701	Inductor	LAU100K
Q 251	Transistor	IMH3A	L 751	Inductor	LAU100K
Q 252	Transistor	IMH3A	L 801	Ferri-Inductor	LAU2R2K
Q 253	Transistor	IMD2A	L 802	Transformer	MTX9005
Q 301	Transistor	DTA124EK	L 901	Choke Coil 600μH	CTH1171
Q 302	Transistor	IMH3A	X 501	7.2MHz	CSS1334
Q 501	Transistor	2SC2412K	X 601	Ceramic Resonator 6.29MHz	CSS1310
Q 502	Transistor	2SK208	X 661	Resonator 8.380MHz	CSS1354
Q 503	Transistor	2SC2412K	X 701	Crystal Resonator 4.330MHz	CSS1338
Q 601	Transistor	DTC124EK	S 941	Switch(Reset)	CSG1059
Q 661	Transistor	DTA124EK		FM/AM Tuner Unit	CWE1417
Q 801	Transistor	2SA1037K		Detach Alarm Unit	CWM5291
Q 802	Transistor	2SD1760F5	BZ 601	Buzzer	CPV1011

RESISTORS

Q 803	Transistor	DTC114EK	R 101		RS1/10S620J
Q 804	Transistor	DTA143EK	R 102		RS1/10S101J
Q 805	Transistor	DTC114EK	R 103		RS1/10S101J
Q 806	Transistor	2SC2412K	R 104		RS1/10S222J
Q 807	Transistor	2SB1238	R 105		RS1/10S122J
Q 808	Transistor	DTC143EK	R 106		RS1/10S122J
Q 809	Transistor	2SD1864	R 107		RS1/10S181J
Q 911	Transistor	2SD1760F5	R 108		RS1/10S181J
Q 921	Transistor	IMX1	R 109		RS1/10S153J
Q 922	Transistor	DTC114EK	R 110		RS1/10S153J
Q 941	Transistor	DTA144TK	R 111		RS1/10S222J
Q 951	Transistor	2SD2396	R 112		RS1/10S222J
Q 952	Transistor	2SB1243	R 113		RS1/10S102J
Q 953	Transistor	DTC124EK	R 114		RS1/10S102J
Q 954	Transistor	2SA1674	R 115		RS1/10S473J

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====Circuit Symbol and No. Part	Name=====	Part No.	====Circuit Symbol and No. Part	Name=====	Part No.
R	116	RS1/10S473J	R	626	RS1/10S473J
R	117	RS1/10S332J	R	627	RS1/10S473J
R	118	RS1/10S682J	R	628	RS1/10S473J
R	119	RS1/10S103J	R	629	RS1/10S473J
R	133	RS1/10S162J	R	630	RS1/10S222J
R	134	RS1/10S162J	R	631	RS1/10S473J
R	151	RS1/10S272J	R	633	RS1/10S473J
R	152	RS1/10S272J	R	635	RS1/10S473J
R	153	RS1/10S151J	R	637	RS1/10S393J
R	154	RS1/10S151J	R	651	RS1/10S681J
R	201	RS1/10S103J	R	652	RS1/10S102J
R	202	RS1/10S331J	R	653	RS1/10S102J
R	204	RS1/10S103J	R	654	RS1/10S102J
R	205	RS1/10S103J	R	662	RS1/10S473J
R	251	RS1/10S821J	R	663	RS1/10S222J
R	252	RS1/10S821J	R	668	RS1/10S103J
R	253	RS1/10S471J	R	669	RS1/10S203J
R	254	RS1/10S471J	R	670	RS1/10S222J
R	255	RS1/10S223J	R	671	RS1/10S473J
R	256	RS1/10S223J	R	672	RS1/10S222J
R	257	RS1/10S223J	R	673	RS1/10S473J
R	258	RS1/10S223J	R	674	RS1/10S473J
R	301	RS1/10S471J	R	701	RS1/10S681J
R	302	RS1/10S471J	R	702	RS1/10S681J
R	303	RS1/10S104J	R	703	RS1/10S0R0J
R	304	RS1/10S104J	R	704	RS1/10S105J
R	501	RS1/10S102J	R	705	RS1/10S681J
R	502	RS1/10S102J	R	706	RS1/10S0R0J
R	503	RS1/10S102J	R	710	RS1/10S473J
R	506	RS1/10S103J	R	711	RA3C681J
R	508	RS1/10S472J	R	713	RS1/10S473J
R	509	RS1/10S152J	R	714	RA4C473J
R	510	RS1/10S102J	R	751	RS1/10S473J
R	511	RS1/10S472J	R	752	RS1/10S473J
R	512	RS1/10S103J	R	753	RS1/10S473J
R	513	RS1/10S102J	R	802	RS1/8S222J
R	515	RS1/10S103J	R	804	RS1/8S472J
R	516	RS1/10S222J	R	806	RS1/8S472J
R	517	RS1/10S473J	R	808	RS1/10S472J
R	518	RS1/10S473J	R	809	RS1/10S472J
R	519	RS1/10S473J	R	810	RS2PMF100J
R	520	RS1/10S224J	R	811	RD1/4PU471J
R	521	RS1/10S473J	R	812	RS1/10S103J
R	522	RS1/10S473J	R	813	RS1/10S224J
R	523	RS1/10S472J	R	814	RS1/10S222J
R	524	RS1/10S472J	R	815	RD1/4PU102J
R	525	RS1/10S222J	R	816	RS1/10S391J
R	526	RS1/10S223J	R	817	RS1/10S752J
R	601	RS1/10S473J	R	818	RS1/10S104J
R	602	RS1/10S473J	R	819	RS2P300JL
R	603	RS1/10S473J	R	851	RS1/8S331J
R	604	RS1/10S473J	R	865	RS1/10S103J
R	605	RS1/10S473J	R	866	RS1/10S102J
R	606	RS1/10S473J	R	867	RS1/10S473J
R	607	RS1/10S473J	R	868	RS1/10S473J
R	608	RS1/10S221J	R	869	RS1/10S473J
R	609	RS1/10S682J	R	911	RS1/10S332J
R	610	RA4C221J	R	912	RS1/10S101J
R	611	RS1/10S682J	R	921	RS1/10S103J
R	613	RS1/10S682J	R	922	RS1/10S473J
R	615	RS1/10S682J	R	923	RS1/10S103J
R	617	RA4C681J	R	924	RS1/10S103J
R	623	RS1/10S473J	R	925	RS1/10S473J
R	624	RS1/10S102J	R	926	RS1/10S472J
R	625	RS1/10S202J	R	931	RS1/10S103J

====Circuit Symbol and No. Part Name====	Part No.	====Circuit Symbol and No. Part Name====	Part No.
R 941	RS1/10S102J	C 252	CEJA4R7M35
R 942	RS1/10S822J	C 253	CEJA4R7M35
R 943	RS1/8S471J	C 254	CEJA4R7M35
R 944	RS1/10S473J	C 255	CKSQYB221K50
R 951	RD1/4PU221J	C 256	CKSQYB221K50
R 952	RD1/4PU301J	C 257	CKSQYB221K50
R 953	RS1/10S1R0J	C 258	CKSQYB221K50
R 954	RD1/4PU331J	C 301	CEJA3R3M50
R 955	RD1/4PU331J	C 302	CEJA3R3M50
R 956	RS1/8S472J	C 501	CKSQYB223K25
R 957	RD1/4PU102J	C 502	CKSQYB223K25
R 958	RS1/10S472J	C 503	CKSQYB103K50
R 959	RD1/4PU102J	C 504	CKSQYB103K50
R 960	RS1/10S472J	C 505	CKSQYB103K50
R 961	RS1/10S103J	C 506	CKSQYB473K25
R 962	RS1/10S473J	C 507	CKSQYB102K50
R 963	RS1/10S473J	C 509	CKLSR473K16
R 971	RD1/4PU221J	C 510	CKSQYB103K50
R 972	RS1/10S221J	C 512	CEJA100M16
R 973	RS1/10S472J	C 513	CKSQYB103K50
R 974	RS1/8S122J	C 514	CCSQCH101J50
		C 515	CCSQCH101J50
CAPACITORS		C 516	CKSQYB103K50
		C 518	CCH1250
		C 519	CKSQYB103K50
C 103	CEJA1R0M50		
C 104	CEJA1R0M50		
C 105	CEJA1R0M50	C 520	CCSQCH150J50
C 106	CEJA1R0M50	C 521	CCSQCH150J50
C 107	CEJA100M16	C 522	CKSQYB223K25
		C 603	CEJA100M16
C 108	CKSQYB473K25	C 604	CKSQYB103K50
C 109	CKSQYB104K16		
C 131	CEJA4R7M35	C 605	CCSQCH101J50
C 132	CEJA4R7M35	C 606	CCSQCH101J50
C 133	CKSQYB473K25	C 607	CASA1R0M16
		C 609	CCSQCH101J50
C 134	CKSQYB473K25	C 661	CCSQCH101J50
C 135	CEJA4R7M35		
C 136	CEJA4R7M35	C 662	CEJA4R7M35
C 137	CEJA4R7M35	C 663	CKSQYB104K16
C 138	CEJA4R7M35	C 664	CKSQYB473K25
		C 705	CKSYB473K16
C 151	CKSQYB104K16	C 706	CKSQYB473K25
C 152	CEAS470M10		
C 153	CEJANP100M10	C 708	CKSQYB104K16
C 154	CEJANP100M10	C 751	CEJA100M16
C 155	CKSQYB822K50	C 752	CKSQYB103K50
		C 753	CKSYB103K50
C 156	CKSQYB822K50	C 801	CKSYB104K16
C 157	CEJA1R0M50		
C 158	CEJA1R0M50	C 802	CCSQCH101J50
C 159	CKSQYB183K25	C 803	CEHAR100M16
C 160	CKSQYB183K25	C 804	CKSQYB103K50
		C 805	CEHAR100M16
C 161	CKSQYB102K50	C 806	CKSQYB103K50
C 162	CKSQYB102K50		
C 163	CEJANP2R2M35	C 807	CKSQYB333K25
C 164	CEJANP2R2M35	C 808	CKSQYB333K25
C 165	CKSQYB333K25	C 809	CEJANP4R7M16
		C 858	CKSQYB473K25
C 166	CKSQYB333K25	C 901	CKSQYB103K50
C 167	CEJA220M6R3		
C 168	CEJA2R2M50	C 911	CKSQYB103K50
C 169	CKSQYB104K16	C 912	CCL1037
C 201	CKSYB224K16	C 913	CKSQYB472K50
		C 914	CEHAQ102M16
C 202	CKSYB224K16	C 915	CEAS470M10
C 203	CKSYB224K16		
C 204	CKSYB224K16	C 921	CKSYB105K16
C 205	CEHAR010M50	C 922	CKSYB102K50
C 206	CCH1163	C 931	CKSQYB473K25
		C 941	CEJA2R2M50
C 207	CKSQYB103K50	C 951	CKSQYB103K50
C 208	CEHAR100M16		
C 209	CKSYB105K16		
C 210	CEHAR330M10		
C 251	CEJA4R7M35		

4.7μF/16V

3300μF/16V

0.22F/5.5V

# DEH-P86DHR,P76DH

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

C	952		CEHAQ101M16
C	953		CKSQYB103K50
C	954	330μF/10V	CCH1181
C	971		CKSQYB473K25
C	972		CKSQYB102K50
C	973		CEAS101M10

**C** Unit Number : CWX2069(DEH-P86DHR)  
 Unit Number : CWX2070(DEH-P76DH)  
 Unit Name : Keyboard Unit

## MISCELLANEOUS

IC	1901	IC	PD6197A
IC	1902	IC	RS-140
D	1901	Diode	DA204K
D	1902	Diode	DA204K
D	1903	LED	CL220PGC
D	1904	LED	CL220PGC
D	1905	LED	CL220PGC
D	1906	LED	CL170PGCD
D	1907	LED	CL170PGCD
D	1908	LED	CL170PGCD
L	1901	Inductor	LCTB1R0K2125
X	1901	Ceramic Resonator 4.9152MHz	CSS1449
S	1901	Switch	CSG1085
S	1902	Switch	CSG1084
S	1903	Switch	CSG1085
S	1904	Switch	CSG1085
S	1905	Switch	CSG1085
S	1906	Switch	CSG1085
S	1907	Switch	CSG1085
S	1908	Switch	CSG1085
S	1909	Switch	CSG1061
S	1910	Switch	CSG1061
S	1911	Switch	CSG1084
S	1912	Switch	CSG1084
S	1913	Switch	CSG1084
S	1914	Switch	CSG1084
S	1915	Switch	CSG1084
S	1916	Switch	CSG1084
S	1917	Switch	CSG1085
S	1918	Switch	CSG1084
S	1919	Switch	CSG1084
S	1920	Switch	CSG1084
S	1921	Switch	CSG1086
		LCD(DEH-P86DHR)	CAW1389
		LCD(DEH-P76DH)	CAW1390
	EL		CEL1488

## RESISTORS

R	1901		RS1/8S222J
R	1902		RS1/8S222J
R	1903		RS1/8S562J
R	1904		RS1/8S470J
R	1905		RS1/8S2R2J
R	1906		RS1/8S121J
R	1907		RS1/8S121J
R	1908		RS1/8S121J
R	1909		RS1/8S121J
R	1910		RS1/8S121J
R	1911		RS1/8S121J
R	1912		RS1/8S121J
R	1913		RS1/8S121J
R	1914		RS1/8S121J
R	1915		RS1/8S121J

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

R	1916		RS1/8S0R0J
R	1917		RS1/8S0R0J
CAPACITORS			
C	1901		CKSQYB103K50
C	1902		CEV470M6R3
C	1903		CKSQYB104K16
C	1904		CKSQYB104K16
C	1905		CKSYB104K25
C	1906		CKSQYB104K16

**D** Unit Number :  
 Unit Name : Photo Unit

Q	1	Photo-transistor	CPT-230S-X
Q	2	Photo-transistor	CPT-230S-X

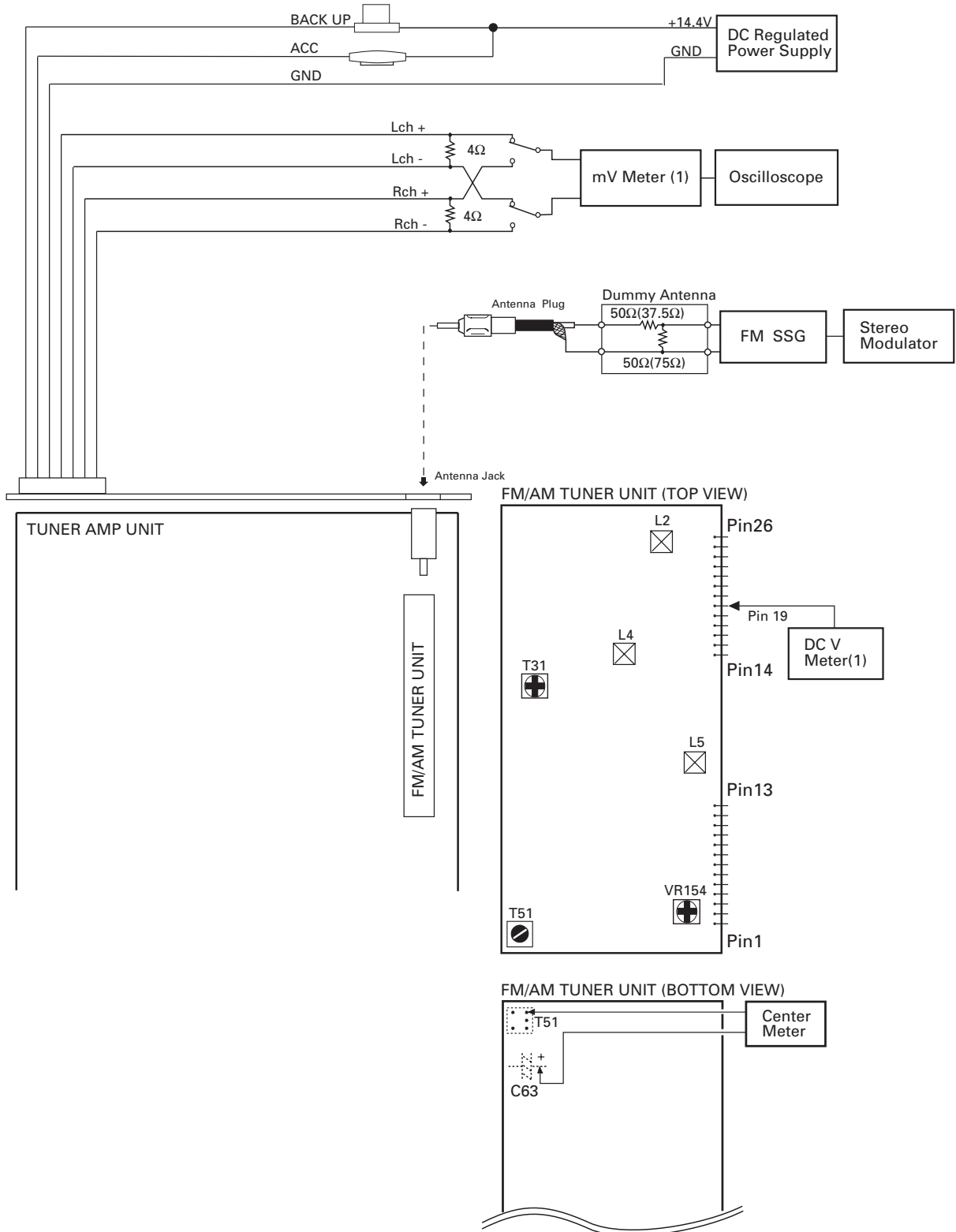
## Miscellaneous Parts List

		Pickup Unit(SERVICE)	CXX1230
M	1	Motor Unit(Spindle)	CXA8912
M	2	CRG Motor Unit(Carriage)	CXB3043
M	3	Load Motor Unit>Loading)	CXA8702

## 6. ADJUSTMENT

### 6.1 TUNER ADJUSTMENT

● Connection Diagram



**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.

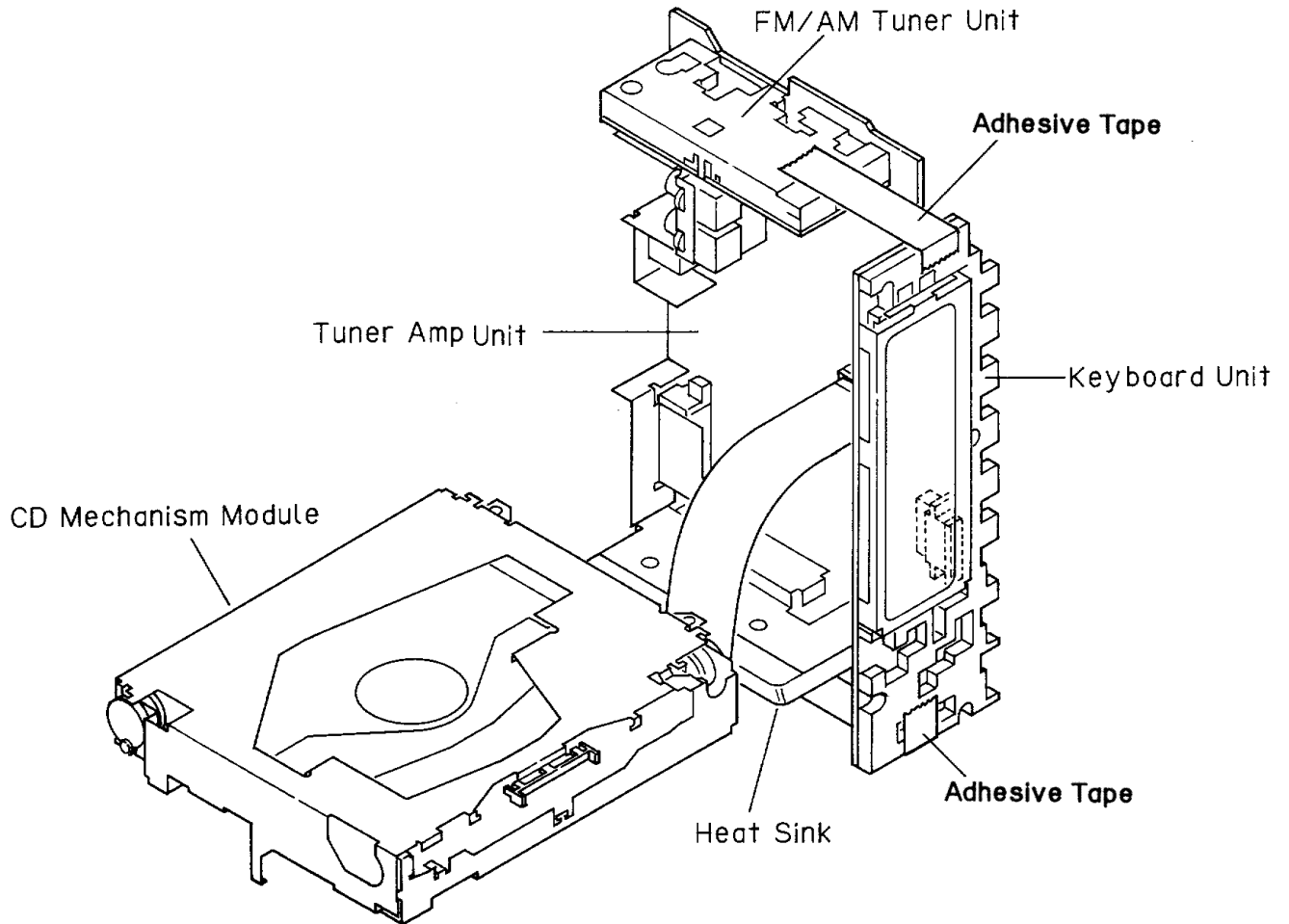
	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	.....	.....	107.9	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60—100	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
IFT	5	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	6	98.1 S	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

## 6.2 CHECKING THE KEYBOARD UNIT

When checking the Keyboard Unit and Tuner Amp Unit, set the unit as shown in the figure. Secure the Keyboard unit by using adhesive tape to prevent it from becoming unstable during the check.

Even without the CD mechanism module, the minimum necessary items, such as the EL check, can be checked.

In the Keyboard Unit and Tuner Amp Unit, there are EL high-voltage sections with the description of "HIGH VOLTAGE". Therefore, special care should be taken when handling them to prevent electrical shock.



## 6.3 CD ADJUSTMENT

### 1)Precautions

- This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to REFO(approx. 2.5V) instead of GND. If REFO and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.  
Do not connect the negative probe of the measuring equipment to REFO and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to REFO with the channel 2 negative probe connected to GND.  
Since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.  
If by accident REFO comes in contact with GND, immediately switch the regulator or power OFF.
- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.
- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.
- Test mode starting procedure  
Switch ACC, back-up ON while pressing the **4** and **6** keys together.

- Test mode cancellation  
Switch ACC, back-up OFF.
- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit. Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.  
\*During PLAY, even if the eject button is pressed, the disc will not be ejected and the unit will remain in the PLAY mode.  
\*The unit will not load a disc.  
When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.
- When loading and unloading discs during adjustment procedures, always wait for the disc to be properly clamped or ejected before pressing another key. Otherwise, there is a risk of the actuator being destroyed.
- Turn power off when pressing the button **TR+** or the button **TR-** key for focus search in the test mode. (Or else lens may stick and the actuator may be damaged.)
- SINGLE/4TRK/10TRK/32TRK will continue to operate even after the key is released. Tracking is closed the moment C-MOVE is released.
- JUMP MODE resets to SINGLE as soon as power is switched OFF.



## 6.4 CHECKING THE GRATING

### ● Checking the Grating After Changing the Pickup Unit

• **Note :**

Unlike previous CD mechanism modules the grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

• **Purpose :**

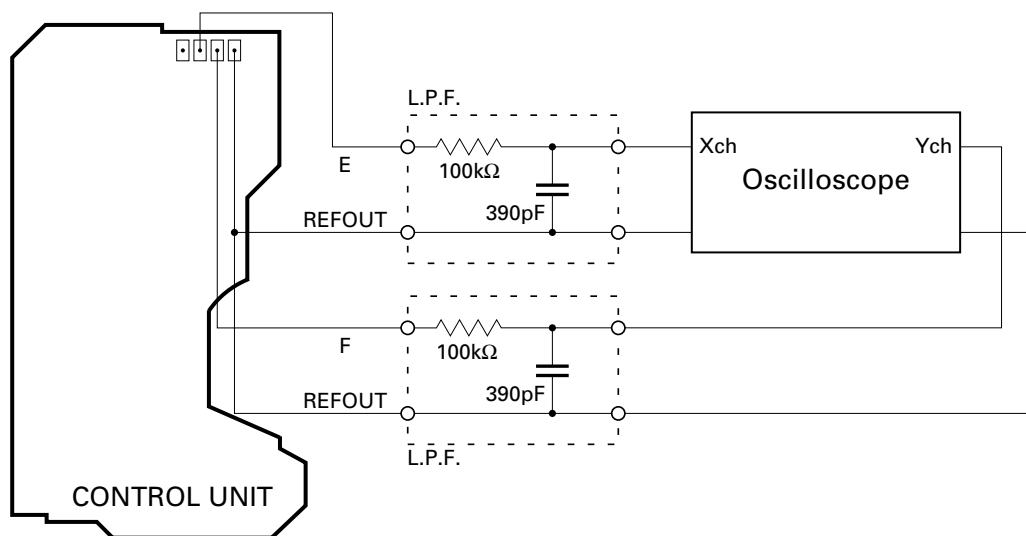
To check that the grating is within an acceptable range.

• **Symptoms of Mal-adjustment :**

If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or track searching taking a long time, may appear.

• **Method :**

- |                       |                            |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points    | • E, F, REFOUT             |
| • Disc                | • ABEX TCD-784             |
| • Mode                | • TEST MODE                |



• **Checking Procedure**

1. In test mode, load the disc and switch the 5V regulator on.
2. Using the **TR+** and **TR-** buttons, move the PU unit to the innermost track.
3. Press key **3** to close focus, the display should read "91". Press key **2** to implement the tracking balance adjustment the display should now read "81". Press key **3** 4 times. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75°. Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

• **Note**

Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" ( the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**

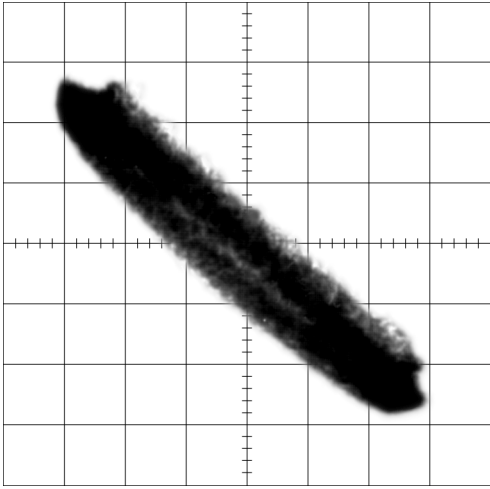
Reloading the disc changes the clamp position and may decrease the "wobble".

**Grating waveform**

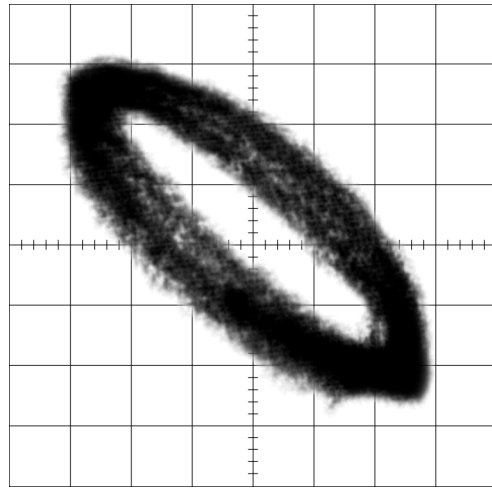
Ech → Xch 20mV/div, AC

Fch → Ych 20mV/div, AC

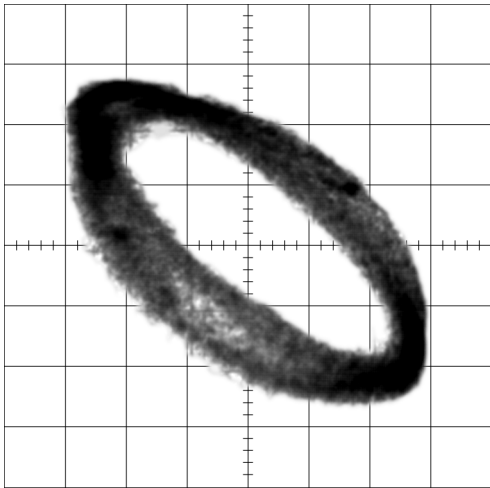
0°



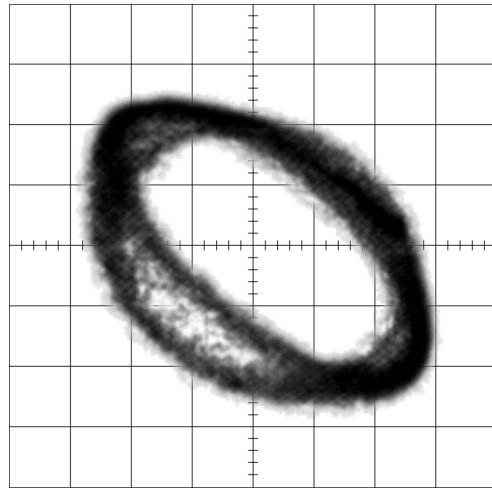
30°



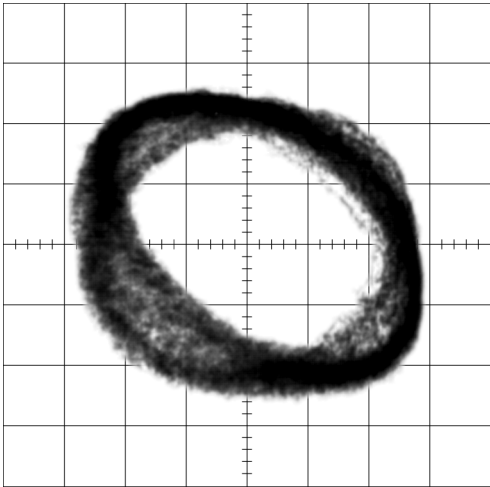
45°



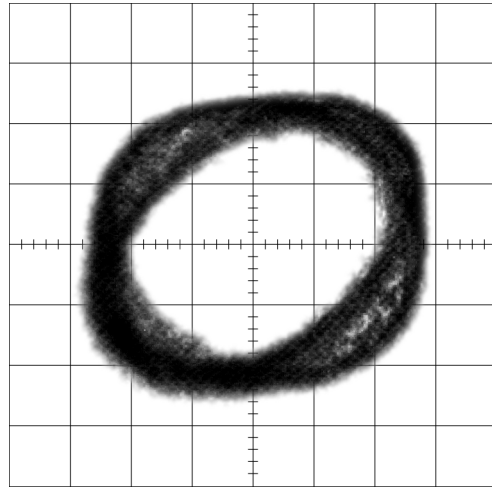
60°



75°

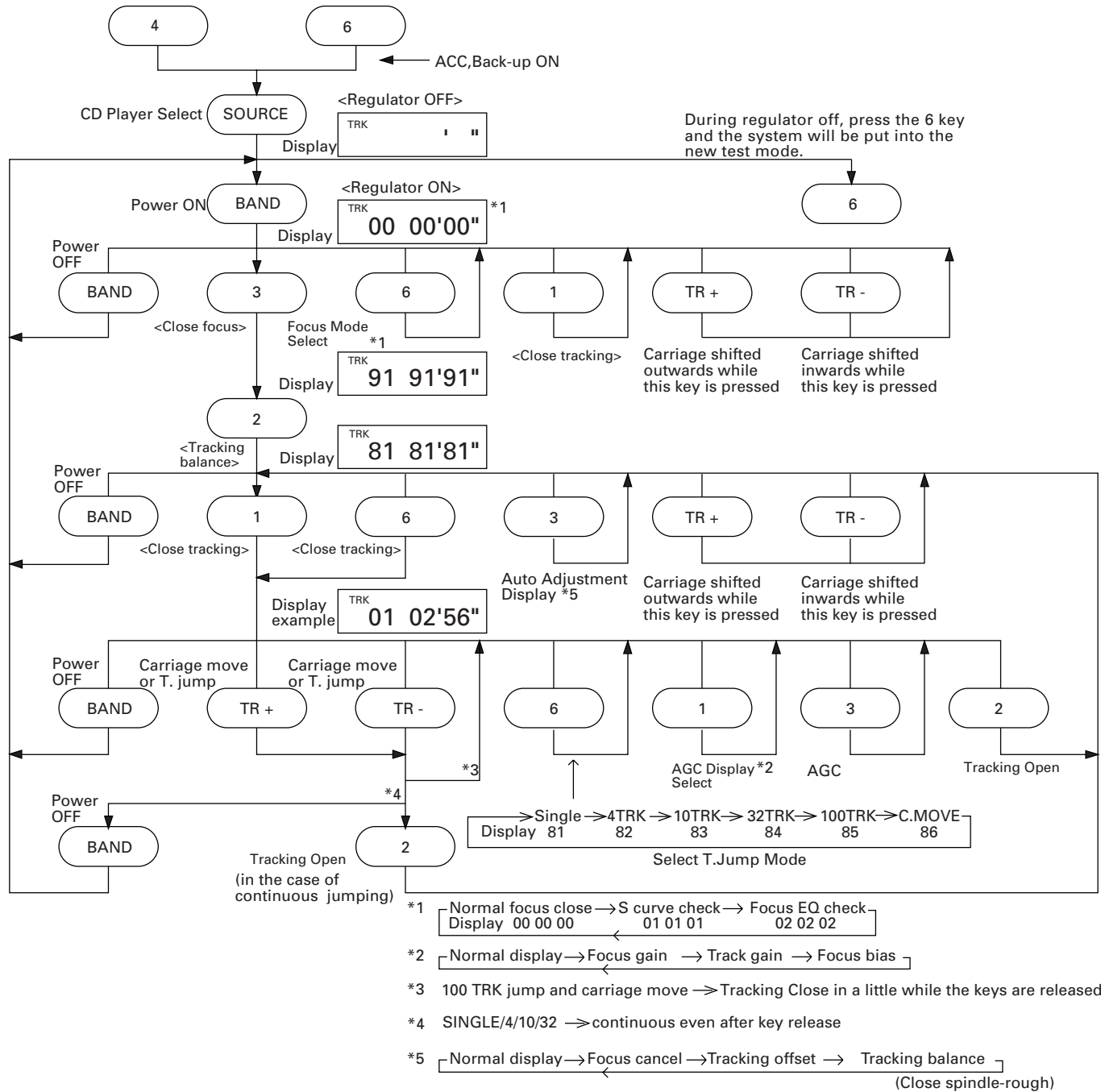


90°



## 6.5 TEST MODE

### ● Flow Chart



## 7. GENERAL INFORMATION

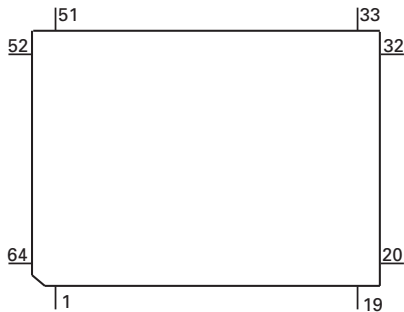
### 7.1 PARTS

#### 7.1.1 IC

##### ● Pin Functions (PD6191A)

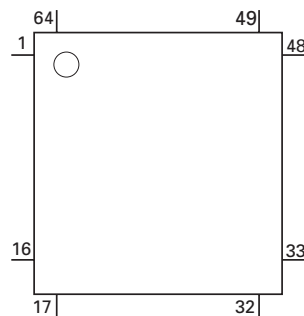
Pin No.	Pin Name	I/O	Format	Function and Operation
1-8	OPEN			Open
9	$\overline{OE}$	O		ROM output control
10	$\overline{ROMEN}$	O		ROM enable
11	ADD17	O		ROM address
12	AVCC			Analog power supply
13	AVR			5V power supply
14	AVSS			Connect to GND
15	$\overline{IRSEL}$	I		Select input
16	RCK	I		RDS demodulation clock input
17	RDT	I		RDS demodulation data input
18	OPEN			Open
19	$\overline{RDSLK}$	I		RDS LK signal input
20	$\overline{IRRST}$	I		Reset input
21	MOD0	I		Connect to GND
22	MOD1	I		Connect to GND
23	XIN	I		Crystal oscillating element connection pin
24	XOUT	O		Crystal oscillating element connection pin
25	VSS			GND
26	$\overline{DRST}$	O	C	Reset output
27,28	OPEN			Open
29	IRRDY	O	C	Communication ready output
30-33	ADD16-13	O		ROM address
34-41	ADD7-0	O		ROM address
42-49	DT7-0	I		ROM data input
50	VSS			GND
51	TEST	I		Test terminal
52	$\overline{IRSCK}$			Communication clock input
53	IRDO	O	C	Communication data output
54	IRDI	I		Communication data input
55,56	OPEN			Open
57	VCC			5V
58	SD	I		SD signal input
59	OPEN			Open
60-64	ADD8-12	O		ROM address

\*PD6191A



Format	Meaning
C	C MOS

\*PD4623B



IC's marked by\* are MOS type.

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

● Pin Functions (PD4623B)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	NC			Not used
2	$\overline{\text{XRST}}$	O	C	CD LSI reset output
3,4	NC			Not used
5	DCE	O	C	Chip enable output
6	$\overline{\text{CRST}}$	O	C	IP-BUS reset output
7	HOME			Connect to VDD
8	$\overline{\text{CLAMP}}$	I		Disc clamp input
9	VSS			GND
10	NC			Not used
11	CDEJET	O	C	Load motor eject control output
12	CDLOAD	O	C	LOAD motor loading control output
13	CONT	O	C	Servo driver power supply control
14	NC			Not used
15	CDMUTE	O	C	CD mute control output
16	DEEM			Not used
17	ADENA	O	C	A/D reference voltage control output
18-23	NC			Not used
24	VSS			GND
25	DSET			Not used
26	BMUTE			Not used
27-30	NC			Not used
31	$\overline{\text{BRXEN}}$	I/O	C	Reception enable input/output
32	$\overline{\text{BSRQ}}$	I		P-BUS serial pole request input
33	VDCONT	O	C	VD power control output
34	CD5VON	O	C	CD +5V power control output
35	$\overline{\text{RESET}}$	I		Reset input
36	TXARI	I		VDD
37	$\overline{\text{CSENS}}$	I		Flap close sense input
38	$\overline{\text{BRST}}$	I		P-BUS reset input
39	CMPARI	I		GND
40	VDD			Power supply
41	X2			Crystal oscillator connection pin
42	X1	I		Crystal oscillator connection pin
43	IC			Connect to GND
44	NC			Not used
45	$\overline{\text{TESTIN}}$	I		Test program start input
46	AVSS	I		A/D GND
47	TEMP	I		Temperature sense input
48	VDSNS	I		VD short detection input
49	EJTSNS	I		Disc EJECT position detect
50	DSCSNS	I		Disc detect
51	NC			Not used
52	FOK	I		FOK signal input
53	MIRR	I		Mirror detection input
54	LOCK	I		Spindle lock detector input
55	AVDD			Power supply
56	AVREF	I		A/D converter reference voltage
57	XSI	I		Serial data input
58	XSO	O	C	Serial data output
59	XSCK	O	C	Serial clock output
60	$\overline{\text{XSTB}}$	O	C	CD LSI strobe output
61	XA0	O		Control signal distinguishing data from microcomputer
62	NC			Not used
63	BDATA	I/O	C	P-BUS serial data input/output
64	BCK	I/O	C	P-BUS serial clock input/output

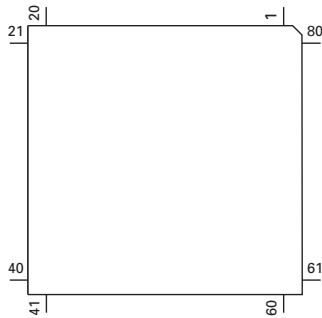
Format	Meaning
C	C MOS

## ● Pin Functions (PD4722B, PD4754B)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	RIDRST	O	C	RBDS/IDLOGIC reset output
2	RIDSEL	O	C	RBDS/IDLOGIC select output
3	NC			Not used
4	AVSS			A/D converter ground potential
5	VCAOUT	O		Sub woofer volume control
6	NC			Not used
7	AVREF	I		D/A converter reference voltage
8	KYDT	I		Communication data input
9	DPDT	O	C	Communication data output
10	SWVDD	O	C	Power supply output
11	RIDDI			RBDS/ID LOGIC communication data
12	RIDDO	O	C	RBDS/ID LOGIC communication data output
13	RIDCK	O	C	RBDS/ID LOGIC communication clock output
14	BRST	O	C	P-BUS reset output
15	BRXEN	I/O	C	P-BUS enable input/output
16	BSRQ	I		P-BUS serial pole request input
17	BSIO	I/O	C	P-BUS serial data input/output
18	BSCK	I/O	C	P-BUS serial clock input/output
19	VST	O	C	Strobe pulse output for electronic volume
20	VDT	O	C	Data output for electronic volume
21	VCK	O	C	Clock output for electronic volume
22	DRELAY	O	C	External relay output
23	DRSYS	O	C	Door system select output
24	STOUT	O	C	Starter cut output
25,26	NC			Not used
27	TUNPCK	O	C	PLL IC clock
28	TUNPDO	O	C	PLL IC data output
29	TUNPCE	O	C	PLL IC chip enable
30	TUNPDI	I		PLL IC data input
31	DRSENS			Door open/close sense
32	DLSENS			Door lock sense
33	VSS			GND
34	MUTE	O	C	Mute output
35	FIEOUT	O	C	FIE ON/OFF control output
36	SUBW0	O	N	Sub woofer control 0
37	SUBW1	O	N	Sub woofer control 1
38	DLED	O	N	Alarm LED output
39	TMUTE	O	N	Tuner mute output
40	BMUTE	O	C	Bus mute output
41	ASENBO	O	C	Slave power supply control output
42	ILMPW	O	C	Illumination power supply control output
43	FM	O	C	FM power control output
44	AM	O	C	AM power control output
45	PEE	O	C	Beep tone output
46	TUNPW	O	C	Tuner power control output
47	SYSPW	O	C	System power control output
48	CDPW	O	C	CD power control
49	PCL	O	C	Clock adjustment output
50	LCDPW	O	C	LCD back light power supply control output
51	DIMMER	O	C	Dimmer output
52	SD	I		FM SD input
53	ST	I		FM stereo input
54	TSSENS	I		Illumination sense input
55	NC			Not used
56	TX	O	C	IP BUS data output
57	RX	I		IP BUS data input
58	IPPW	O	C	Power supply control output for IP BUS interface IC
59	NC			Not used

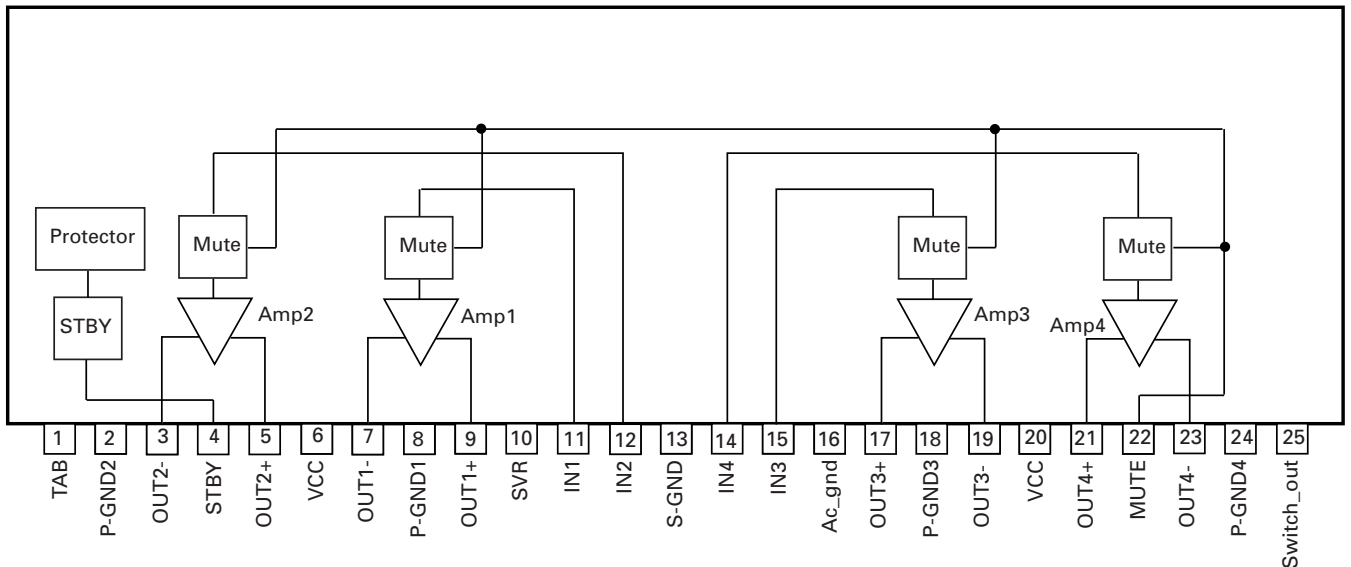
Pin No.	Pin Name	I/O	Format	Function and Operation
60	RESET	I		Reset input
61	RIDRDY	I		Ready input
62	BSENS	I		Back up power sense input
63	ASENS	I		ACC power sense input
64	DSENS	I		Grille detach sense
65	MOSENS	I		Sensor input
66	NC			Not used
67	CLKIN	I	C	Clock input
68	VDD			Power supply
69	X2			Crystal oscillator connection pin
70	X1			Crystal oscillator connection pin
71	IC			GND
72	XT2			Not used
73	TESTIN	I	C	Test program mode input
74	AVDD			A/D converter power supply
75	AVREF0			A/D converter standard voltage input
76	SL	I		Signal level input
77	SELO	I		Model select pin
78,79	NC			Not used
80	ADPW	O	C	Control output for analog input reference power

\*PD4722B,PD4754B



Format	Meaning
C	C MOS
N	Nch open drain

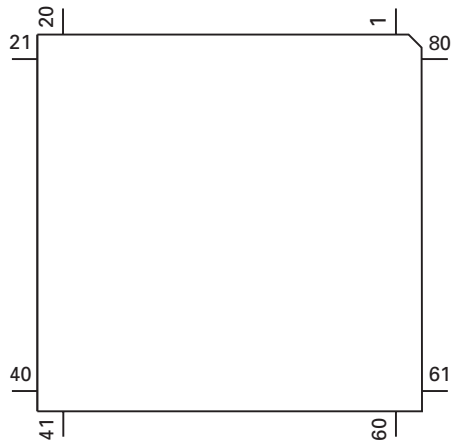
PAL005A



● Pin Functions (PD6197A)

Pin No.	Pin Name	I/O	Function and Operation
1	VSS		GND
2	X1		Crystal oscillator connection pin
3	X0		Crystal oscillator connection pin
4	NC		Not used
5,6	MOD1,0	I	Connect to GND
7	NC		Not used
8	KYDT	O	Display/key data output
9	DPDT	I	Display/key data input
10	REMIN	I	Remote control pulse input
11,12	NC		Not used
13-16	$\overline{KD4-KD1}$	I	Key data input
17-21	$\overline{KS6-KS2}$	O	Key strobe output
22	NC		Not used
23	VDD		VDD
24-73	SEG0-49	O	LCD segment output
74-77	COM3-0	O	LCD common output
78	VLCD	I	LCD voltage input
79,80	V2,V1		Power supply terminal

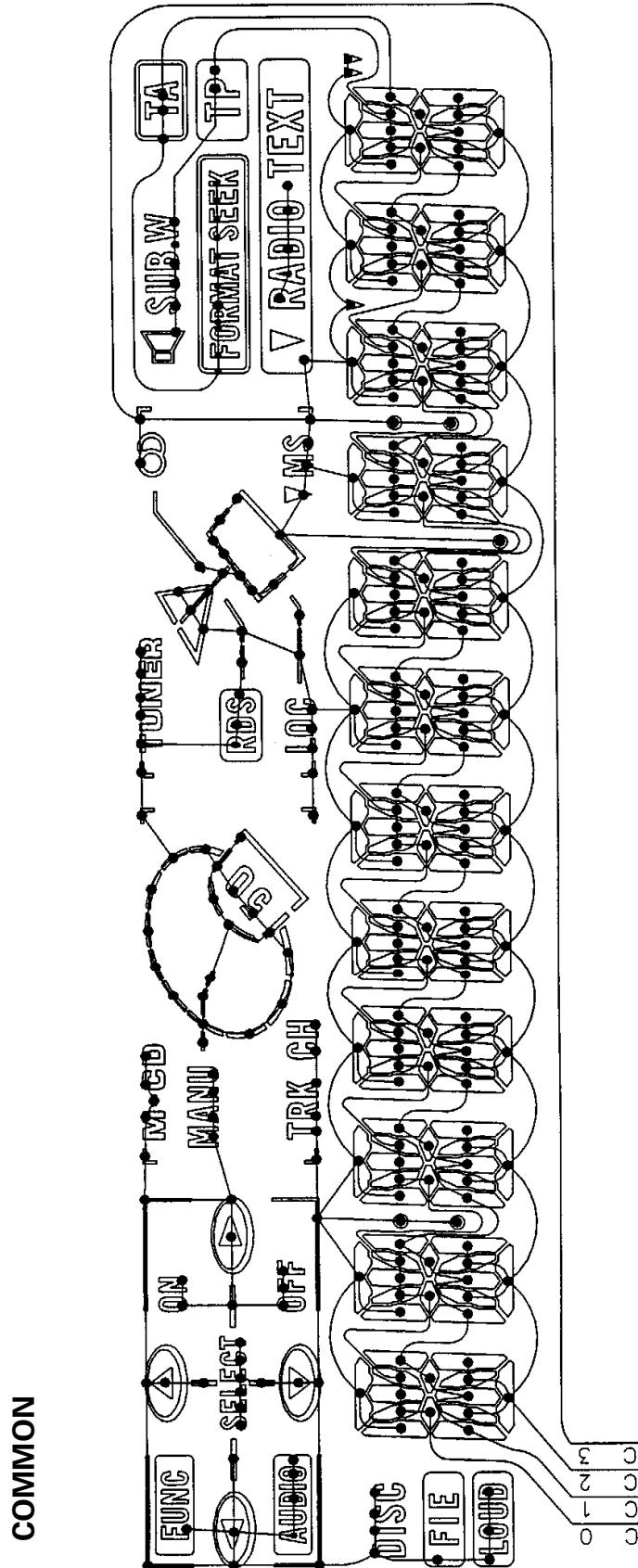
\*PD6197A



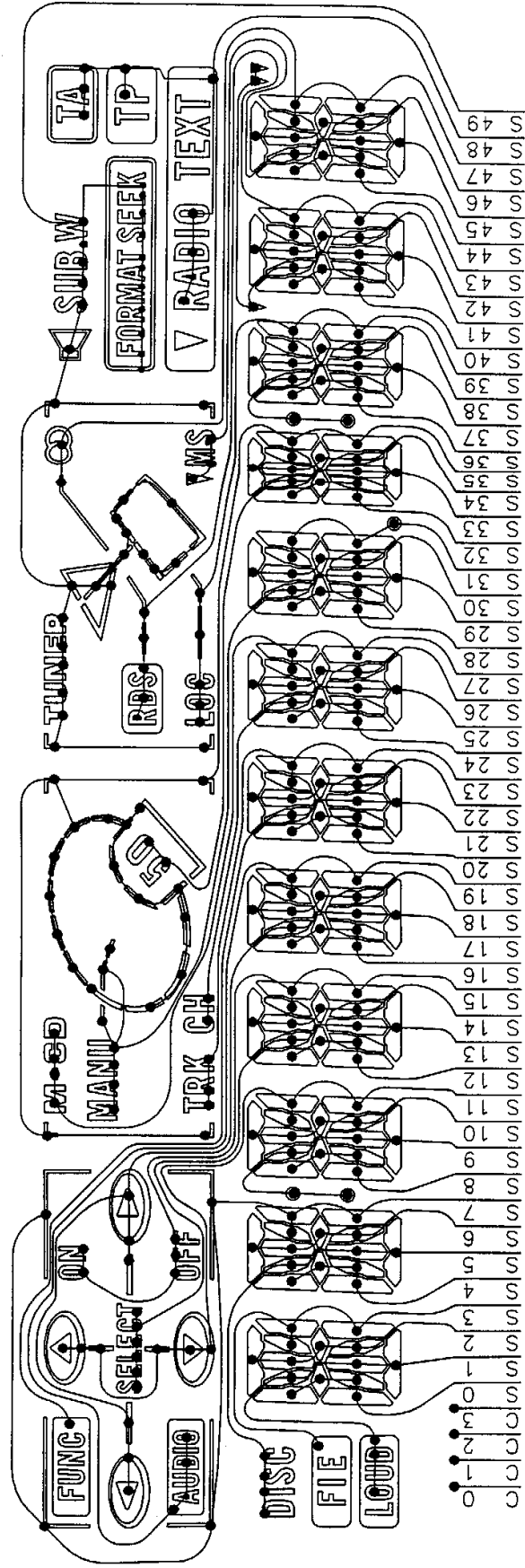


7.1.2 DISPLAY

- LCD(CAW1389, CAW1390)



SEGMENT



## 7.2 DIAGNOSIS

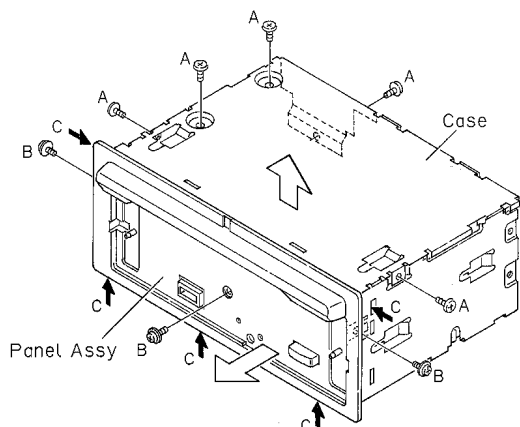
### 7.2.1 DISASSEMBLY

#### ● Removing the Case

1.Remove the five screws A, and then remove the case.

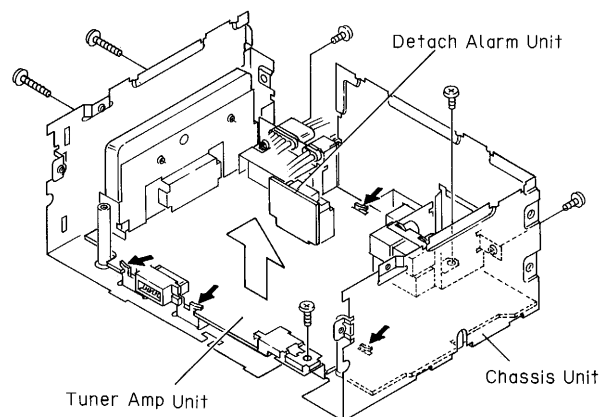
#### ● Removing the Panel Assy

1.Remove the three screws B.  
2.Disconnect the five stoppers C, and then remove the panel assy.



#### ● Removing the Tuner Amp Unit

1.Remove the six screws.  
2.Stretch the four claws, and then remove the tuner amp unit.

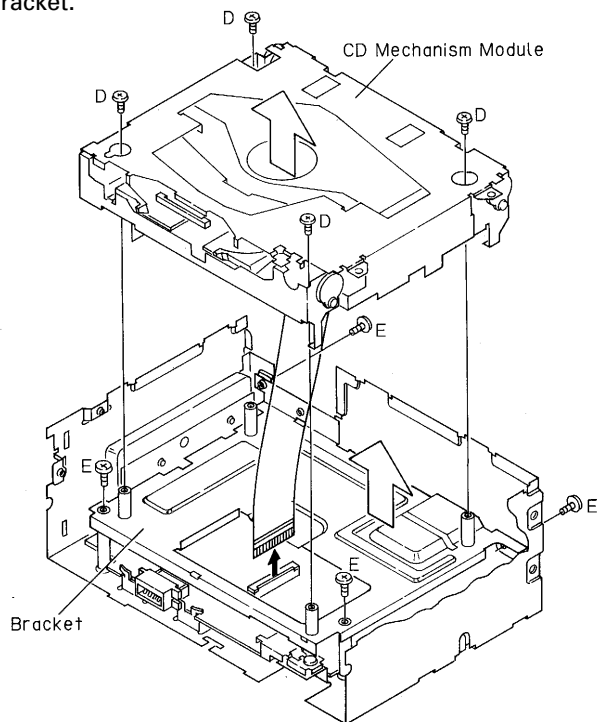


#### ● Removing the CD Mechanism Module

1.Remove the four screws D.  
2.Disconnect the connector indicated by arrow.  
3.Remove the CD mechanism module.

#### ● Removing the Bracket

1.Remove the four screws E, and then remove the bracket.



## 7.2.2 TEST MODE

### ● Error Number Indication

If the CD should fail to operate or if an error has taken place during operation the player will enter into the error mode, and the cause of the error will be numerically indicated.

This is aimed at assisting in analysis or repair.

#### (1) Examples of Display

- ERROR- XX

#### (2) Error Codes

Error Code	Classification	Description	Cause/Detail
10	ELECTRIC	Carriage home failure	Carriage doesn't move to or from the innermost position — Home switch failed and/or carriage immobile
11	ELECTRIC	Focus failure	Focus failed — Defects, disc upside-down, severe vibration
12	ELECTRIC	Spindle lock failure Subcode failure	Spindle failed to lock or subcode unreadable — Spindle defective, defect, severe vibration
14	ELECTRIC	Mirror failure	Unrecorded CD-R The disc is upside-down, defects, vibration
17	ELECTRIC	Set up failure	AGC protect failed — Defects, disc upside-down, severe vibration
19	ELECTRIC	Set up failure	Tracking error waveform is too unbalanced (>50%) or level is too small — The P.U.unit or tracking error circuitry is N.G.
30	ELECTRIC	Search time out	Failed to reach target address — Carriage/tracking defective and/or defects
A0	SYSTEM	Power failure	Power overvoltage or short circuit detected — Switching transistor defective and/or power abnormal

### ● New Test Mode(aging operation and setup analysis)

The single CD player plays in normal mode. After being set up, it will display FOK (focus), LOCK (spindle), subcode, sound skip, protection against a mechanical error or the like, occurrence of an error, cause and time of an expiry, if any, (and disk number)

During the setup, the CD software operation status (internal RAM and C-point)is displayed.

#### (1) How to enter NEW TEST Mode

See the test mode flow chart Page 59.

**(2) Relations of keys between TEST and NEW TEST Modes**

Keys	Test Mode		New Test Mode	
	Regulator OFF	Regulator ON	PLAY in progress	Error Occurred, Protection Activated
BAND	Regulator ON	Regulator OFF	—	Time of occurrence / cause of error select
TR+	—	FWD-Kick	TRACK UP / FF	—
TR-	—	REV-Kick	TRACK DOWN /REV	—
1	—	Tracking close	SCAN	—
2	—	Tracking open	REPEAT	—
3	—	Focus close	RANDOM	—
6	To New Test Mode	Focus Mode Select	AUTO/MANU	—

Operations, such as EJECT, CD ON/OFF, etc. are performed normally

**(3) Error Cause (Error Number) Code**

Error Code	Classification	Mode	Description	Cause	Detail
40	ELECTRIC	PLAY	FOK=L 100ms	Put out of focus	Scratch, Stain, Vibration, Servo defect, etc...
41	ELECTRIC	PLAY	LOCK=L 100ms	Spindle unlock	
42	ELECTRIC	PLAY	Subcode unacceptable 500ms	Failed to read subcode	
43	ELECTRIC	PLAY	Sound skipped	Last address memory operated	

**(4) Indicating an Operation Status During Setup**

Status No.	Description	Protection operation
01	Carriage home mode started	None
02	Carriage moving inwards	10-second time out, Home switch failed
03	Carriage moving outwards	10-second time out, Home switch failed
05	Carriage moving outwards	None
11	Setup started	None
12	Spindle turn/Focus search started	None
13	Waiting for focus closure (XSI=L)	Failure to close focus
10,14	Waiting for focus closure (FOK=H)	Failure to close focus
15, 16, 17	Focus closed, Tracking open	Focus disrupted
18	During focus AGC Subcode waiting	Focus disrupted
19	During tracking AGC	Disrupted focus
20	Waiting for MIRR, LOCK or subcode read Carriage closed, SPINDLE=ADAPTIVE	Focus disrupted, MIRR NG, Failure to lock, Failed to read subcode

**(5) Example of Display.**

- SET UP in progress  
8 digits display LCD

TNo.	Min	Sec
11	11	11

- Operation (PLAY, SEARCH, etc.) in progress perfectly identical with that in the normal mode.

- Protection/Error upon occurrence(8 digits display LCD)

(a) Error number indicated

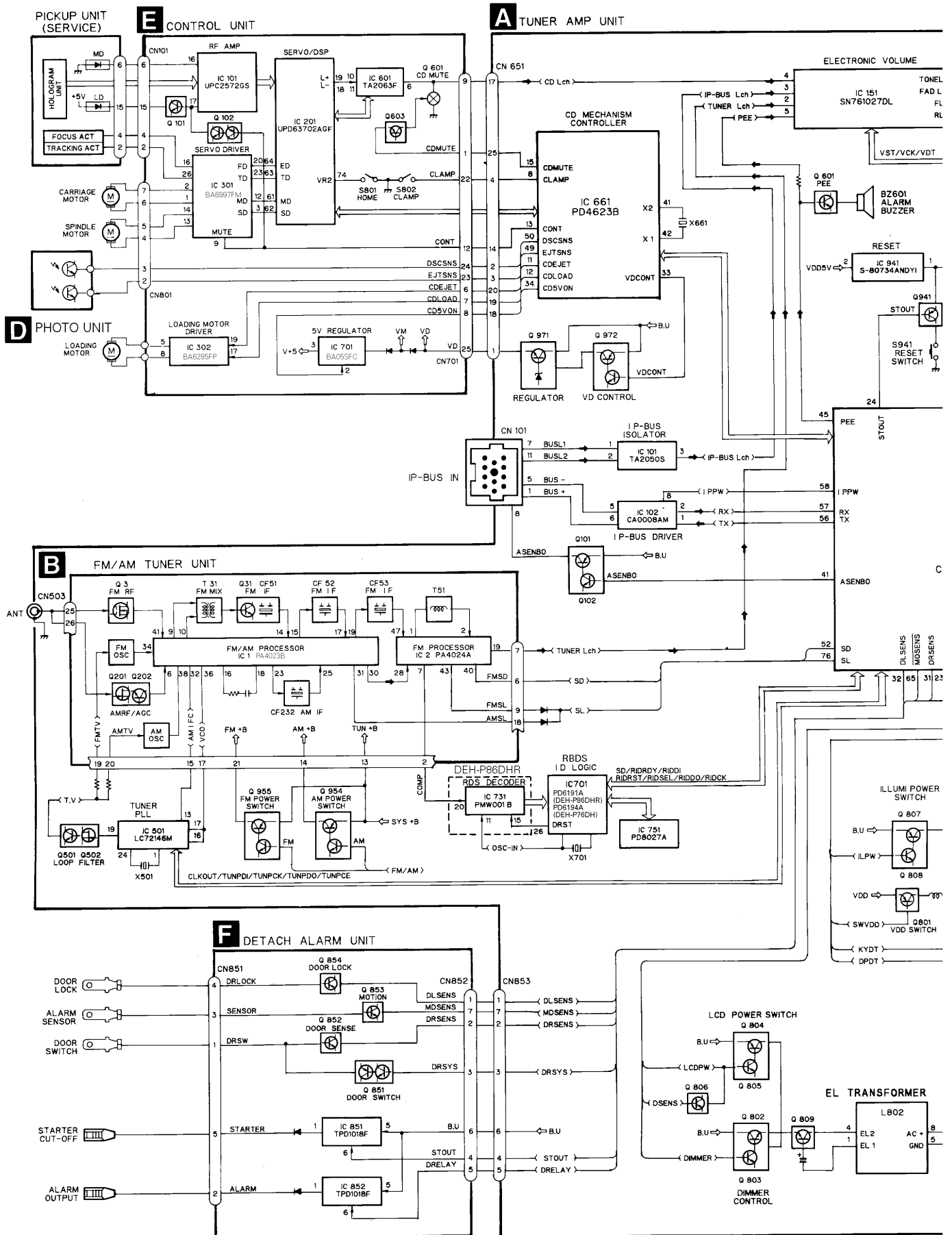
ERROR-xx
----------

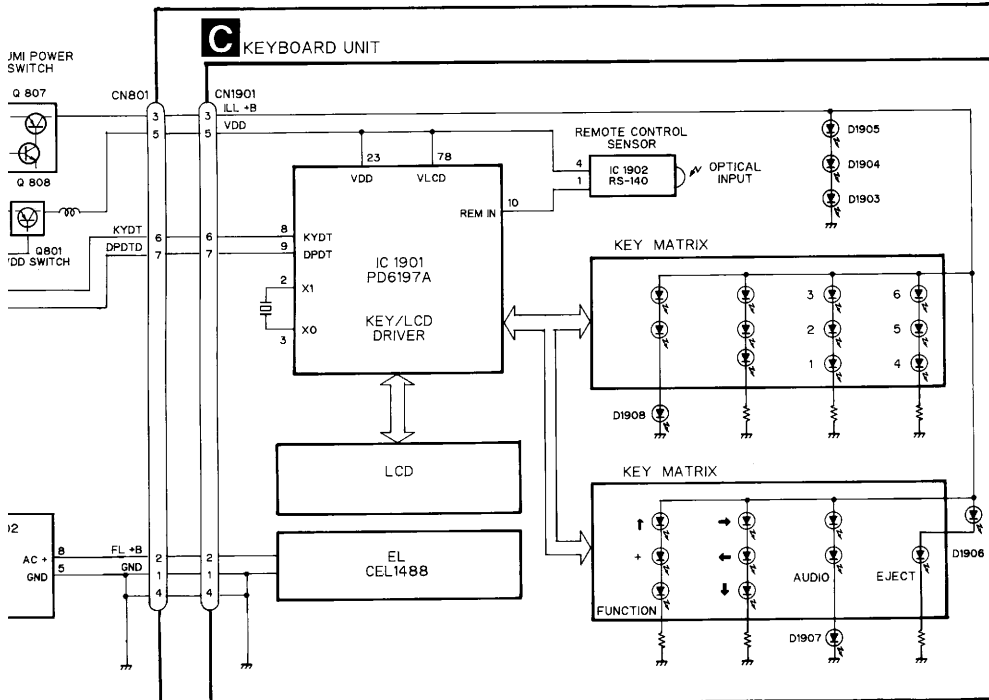
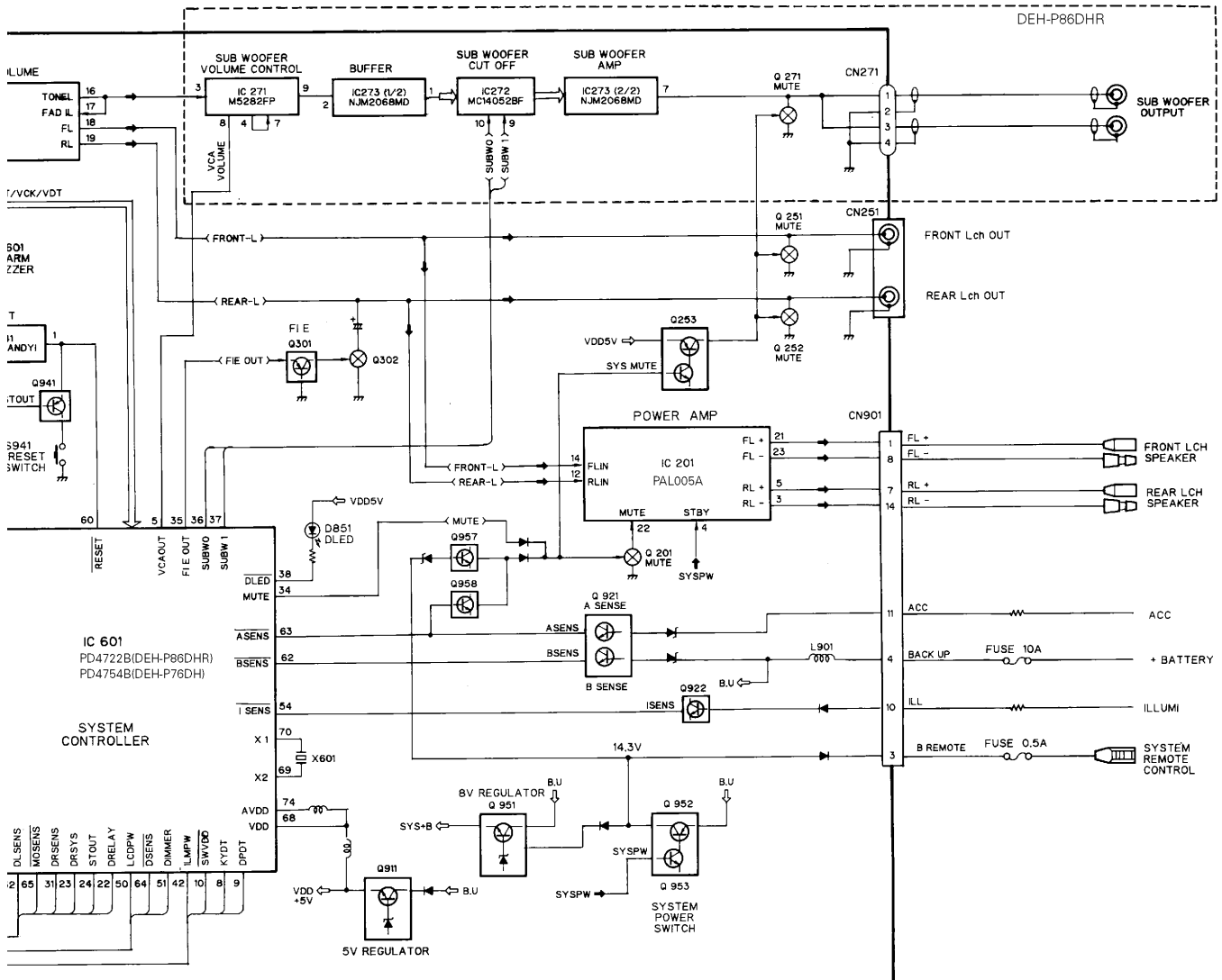
Select the display with the  
BAND key.

(b) Track number and  
absolute time indicated

TNo.	Min	Sec
10	40	05

### 7.3 BLOCK DIAGRAM

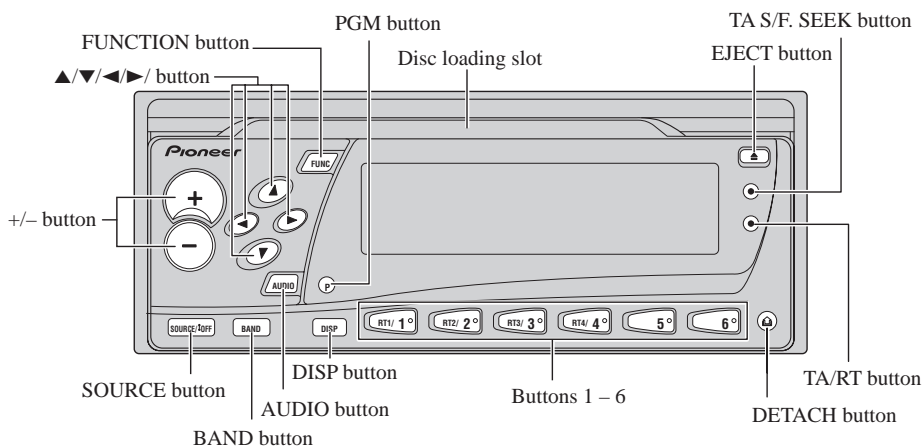




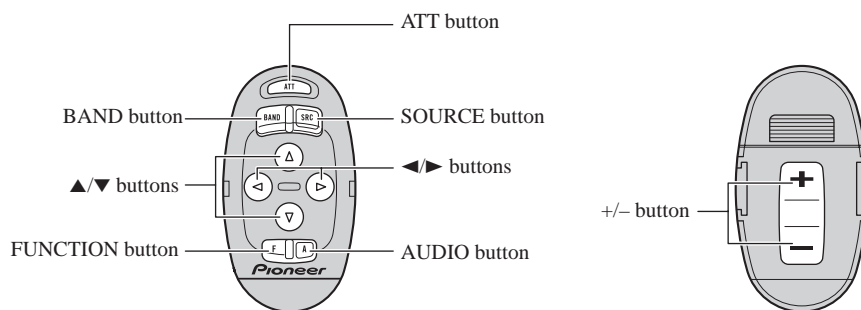
## 8. OPERATIONS AND SPECIFICATIONS

### *Key Finder*

#### Head Unit (DEH-P86DHR)



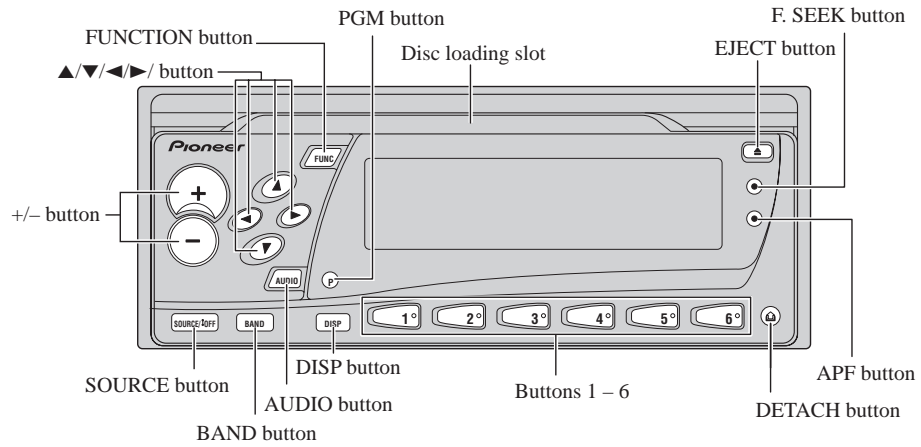
#### Steering Remote Controller



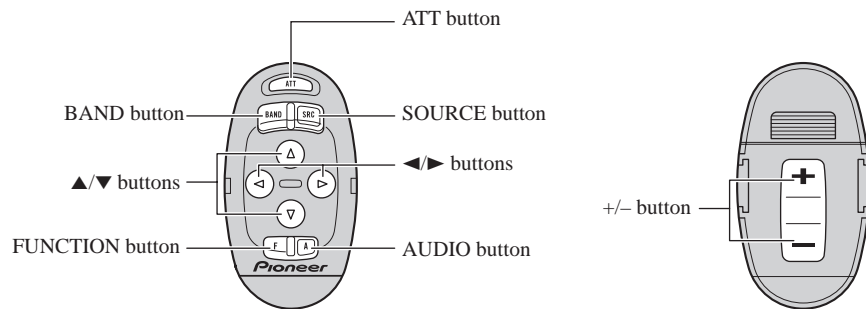


**Key Finder**

**Head Unit(DEH-P76DH)**



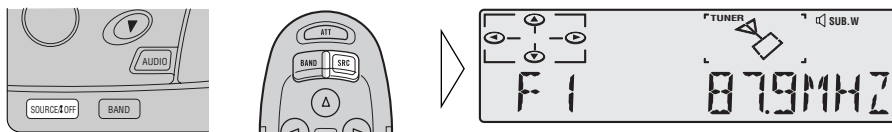
**Steering Remote Controller**



## Basic Operation

### Switching Power ON/OFF

- Select the desired source (such as the tuner).



Each press of the SOURCE button selects the desired source in the following order:

Built-in CD player → Tuner → Multi-CD player → AUX

To switch the sources OFF, hold down the SOURCE button for 1 second or more.

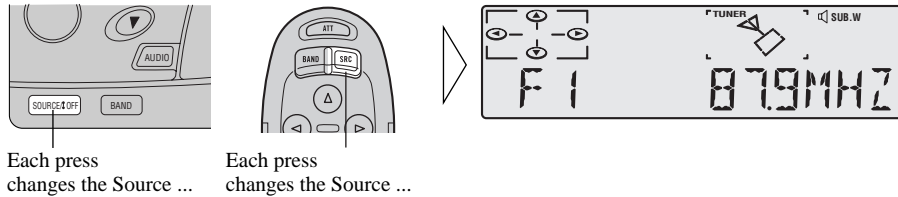
**Note:**

- In the following cases, the sound source will not change:
  - \* No disc is set in this product.
  - \* No Multi-CD player is connected to this product. (When “M-CD” display is OFF)
  - \* No magazine is set in the Multi-CD player.
  - \* AUX (external input) is set to OFF.

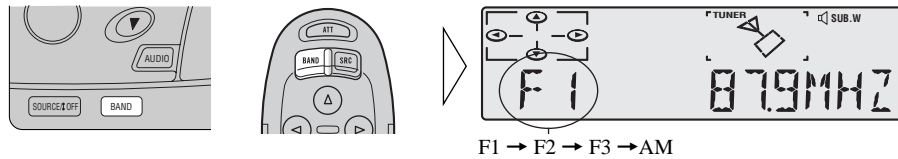
## Tuner Operation

### Basic Operation of Tuner

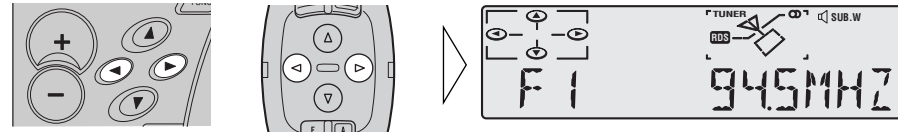
**1. Select Tuner.**



**2. Select the desired band.**




**3. Tune the receiver to a higher or lower frequency.**



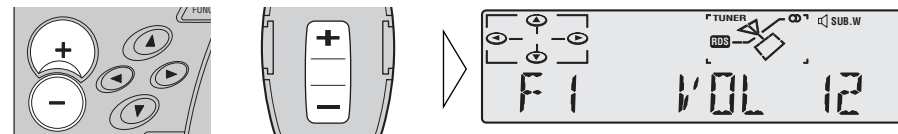
This product's tuner lets you select the tuning by changing the length of the time you press the button.

Manual Tuning (step by step)	0.3 seconds or less
Seek Tuning (automatically)	0.3 – 2 seconds
Manual Tuning (continuously)	2 seconds or more

**Note:**

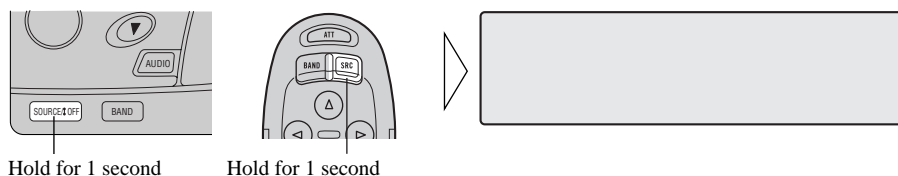
- “” indicator lights when a stereo station is selected.
- “RDS” indicator lights when a RDS station is selected.

**4. Raise or lower the volume.**



Continued overleaf

**5. Turn the source OFF.**

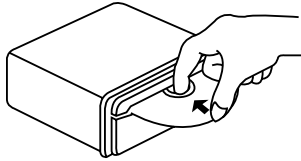


## Using the Built-in CD Player

### Basic Operation of Built-in CD Player

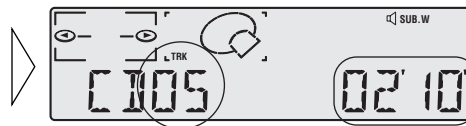
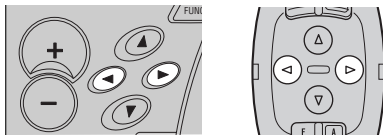
The built-in CD player plays one standard 12 cm or 8 cm (single) CD at a time. Do not use an adapter when playing 8 cm CD.

**1. Insert the disc with the recorded (iridescent) surface down.**



**desired track (and phrase).**

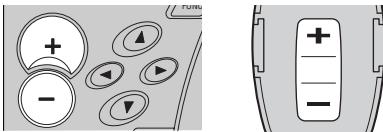
**2. Select the**



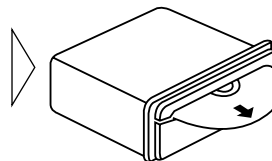
This product's built-in CD player lets you select the track search function or fast-forward/reverse function by changing the length of the time you press the button.

Track Search	0.5 seconds or less
Fast-forward/Reverse	Continue pressing

**3. Raise or lower the volume.**



**4. Remove the disc.**



**Note:**

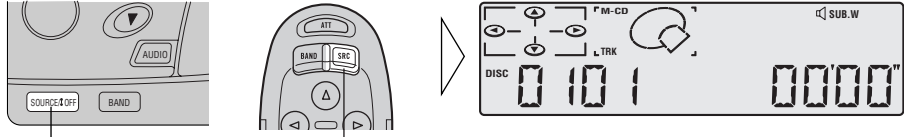
- The CD function can be turned ON/OFF with the disc remaining in this product.
- Discs left partially inserted after ejection may incur damage or fall out.
- If a disc cannot be inserted fully or playback fails, make sure the recorded side is down, push the EJECT button and check the disc for damage before reinserting it.
- If a CD is inserted with the recorded side up, it will be ejected automatically after a few moments.
- If the built-in CD player cannot operate properly, an error message (such as "ERROR-14") appears on the display.

## Using Multi-CD Players

### Basic Operation of Multi-CD Players

This product can control one or more multi-CD players.

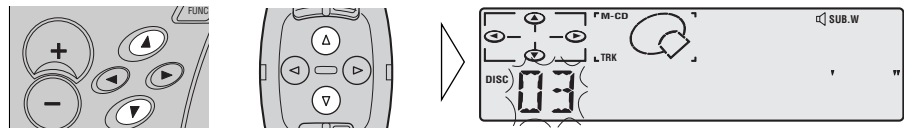
**1. Select the multi-CD player source.**



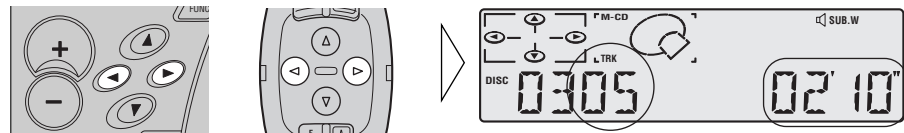
Each press changes the Source ...      Each press changes the Source ...

- Note:**
- The multi-CD player may perform a preparatory operation, such as verifying the presence of a disc or reading disc information, when the power is turned ON or a new disc is selected for playback. "READY" is displayed.
  - If the multi-CD player cannot operate properly, an error message such as "ERROR-14" is displayed. Refer to the multi-CD player owner's manual.
  - If there are no discs in the multi-CD player magazine, "NO DISC" is displayed.

**2. Select the desired disc.**



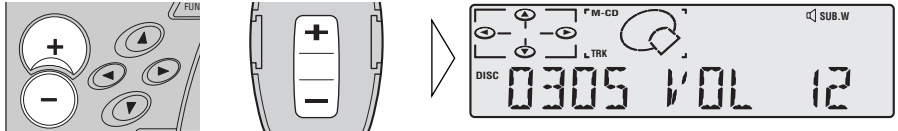
**3. Select the desired track (and phrase).**



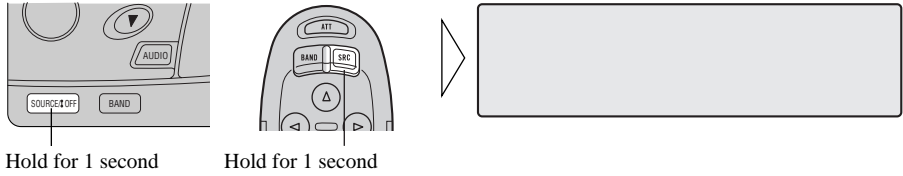
This product lets you select the track search function or fast-forward/reverse function by changing the length of the time you press the button.

Track search	0.5 seconds or less
Fast-forward/Reverse	Continue pressing

**4. Raise or lower the volume.**



**5. Turn the source OFF.**



**Playing Discs on a 50-Disc Type Multi-CD Player**

When a magazine is loaded into a 50-Disc type Multi-CD Player, information on all the discs in the magazine is read.

If you start playing a disc on a 50-Disc type Multi-CD Player before reading of information on all discs has been completed, reading of information stops part way through. This will prevent you from using a number of functions. (If you try and use these functions, "NOT RDY" is displayed.)

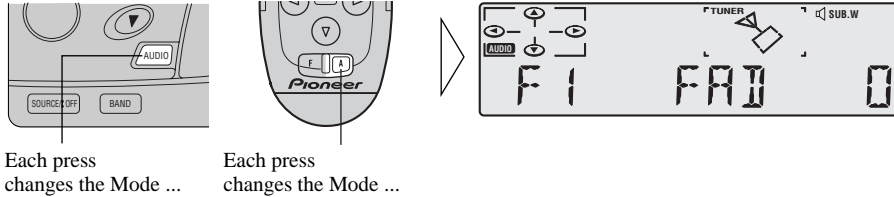
If this happens, reading of information begins again when you switch to a component other than the 50-Disc type Multi-CD Player.

## Audio adjustment

### Entering the Audio Menu

In this menu, you can adjust sound quality such as fader/balance, bass/treble and sub-woofer settings.

- **Select the mode you want to adjust in Audio Menu.**



Each press of the AUDIO button selects the mode in the following order:  
 FAD → BAS → TRE → LOUD → SUB.W → (80HZ 0) → FIE

To cancel the Audio Menu, press the BAND button.

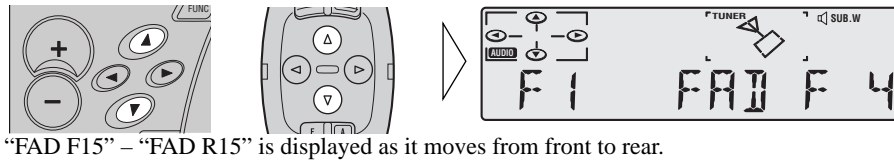
**Note:**

- You can select the “80HZ 0” mode only when sub-woofer output is switched ON in the SUB.W mode. Initially, sub-woofer output is ON.
- After entering the Audio Menu, if you do not perform an operation within 30 seconds, the Audio Menu is automatically canceled.

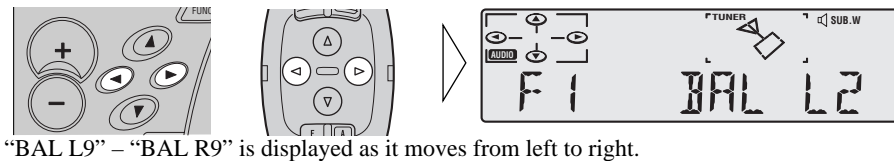
### Balance Adjustment

This function allows you to select a Fader/Balance setting that provides ideal listening conditions in all occupied seats.

1. **Select the Fader/Balance mode (FAD) in the Audio Menu.**
2. **Shift the balance progressively to the front or rear speakers.**



3. **Shift the balance to the left or right speaker, respectively.**



To cancel the Audio Menu, press the BAND button.

**Note:**

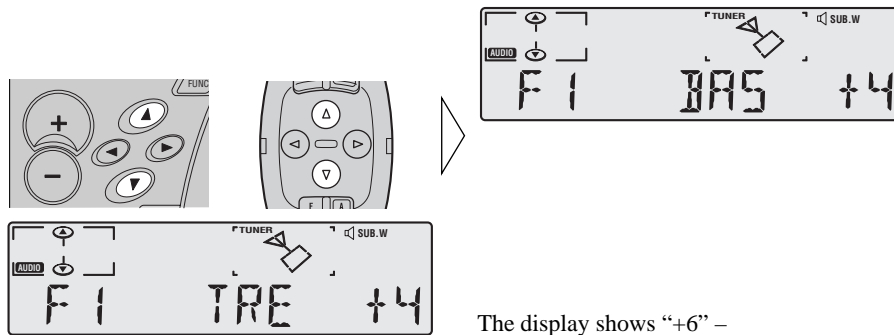
- “FAD 0” is the proper setting when 2 speakers are in use.

## Audio adjustment

### Bass/Treble Adjustment

This product is equipped with two tone adjustment modes, the Bass (BAS) and Treble (TRE) modes.

1. Select bass mode (BAS) or treble mode (TRE) in the Audio Menu.
2. Increase or decrease the intensity of the bass or treble, whichever is selected.



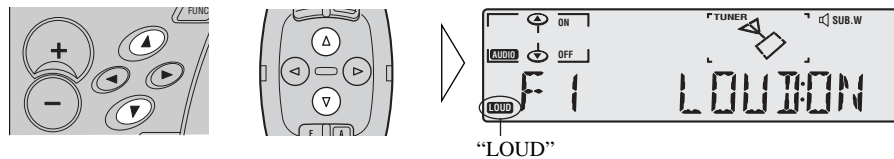
3. Repeat steps 1 – 2 above for the other Bass or Treble adjustment.

To cancel the Audio Menu, press the BAND button.

### Loudness Adjustment

The Loudness function compensates for deficiencies in the low and high sound ranges at low volume.

1. Select the Loudness mode (LOUD) in the Audio Menu.
2. Switch the Loudness function ON or OFF.



To cancel the Audio Menu, press the BAND button.



## Specifications

### General

Power source	14.4 V DC (10.8 – 15.1 V allowable)
Grounding system	Negative type
Max. current consumption	10.0 A
Dimensions	
(mounting size)	198 (W) × 78 (H) × 135 (D) mm [7-3/4 (W) × 3-1/8 (H) × 5-3/8 (D) in.]
(nose)	190 (W) × 62 (H) × 21 (D) mm [7-1/2 (W) × 2-1/2 (H) × 7/8 (D) in.]
Weight	2.1 kg (4.6 lbs)

### Amplifier

Continuous power output is 22 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Maximum power output	45 W × 4
Load impedance	4 Ω (4 – 8 Ω allowable)
Preout maximum output level/ output impedance	1.8 V/1 kΩ
Sub-woofer output	
Crossover frequency	50 Hz, 80 Hz, 125 Hz
Crossover slope	-12 dB/oct
Tone controls	
(Bass)	±12 dB (100 Hz)
(Treble)	±12 dB (10 kHz)
Loudness contour	+10 dB (100 Hz), +6.5 dB (10 kHz) (volume: -30 dB)

### CD player

System	Compact disc audio system
Usable discs	Compact disc
Signal format	Sampling frequency: 44.1 kHz Number of quantization bits: 16; linear
Frequency characteristics	5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio	94 dB (1 kHz) (IHF-A network)
Dynamic range	90 dB (1 kHz)
Number of channels	2 (stereo)

### FM tuner

Frequency range	87.9 – 107.9 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 (IHF-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)
Selectivity	70 dB (2ACA)
Three-signal intermodulation (desired signal level)	50 dBf
(two undesired signal level)	110 dBf

### AM tuner

Frequency range	530 – 1,710 kHz
Usable sensitivity	18 μV (S/N: 20 dB)
Selectivity	50 dB (±10 kHz)

### Note:

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

**Connection Diagram**

