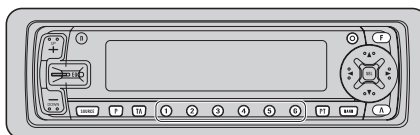


# Service Manual

**Pioneer**

DEH-P7000R/EW



ORDER NO.  
**CRT2375**

MULTI-CD/MD/DAB CONTROL HIGH POWER CD PLAYER WITH RDS TUNER

# DEH-P7000R

EW

# DEH-P7000R-W

EW

# DEH-P6000R

EW

**COMPACT**  
**disc**  
DIGITAL AUDIO

- See the separate manual CX-916(CRT2300) for the CD mechanism description, disassembly and circuit description.
- The CD mechanism employed in this model is one of S8 series.
- This device employs an inverter as the power supply for EL. The inverter has an output voltage reach approximately 500 volts(AC). Utmost care should be used not to suffer from a possible electric shock, accordingly.
- When executing an operation, be aware that the in around IC651 can become quite hot to the touch.

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### ● CD Player Service Precautions

1. For pickup unit(CXX1285) handling, please refer to "Disassembly"(see page 77).  
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 66).

## 1. SAFETY INFORMATION

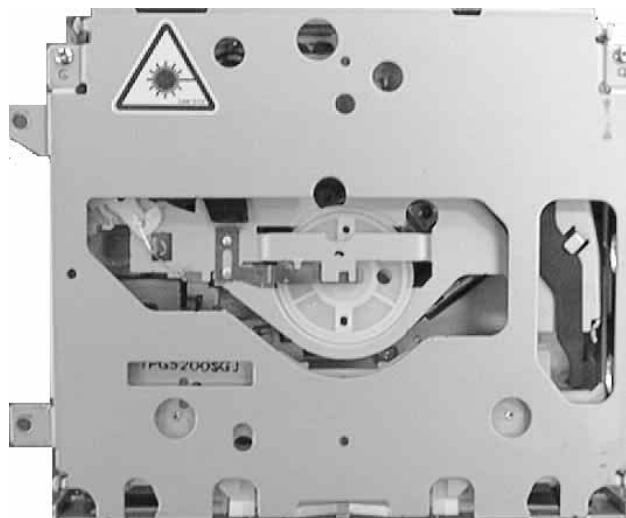
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly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

### 1. Safety Precautions for those who Service this Unit.

- When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

#### Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
  2. During repair or tests, do not view laser beam for 10 seconds or longer.
2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.
  3. The triangular label is attached to the mechanism unit frame.



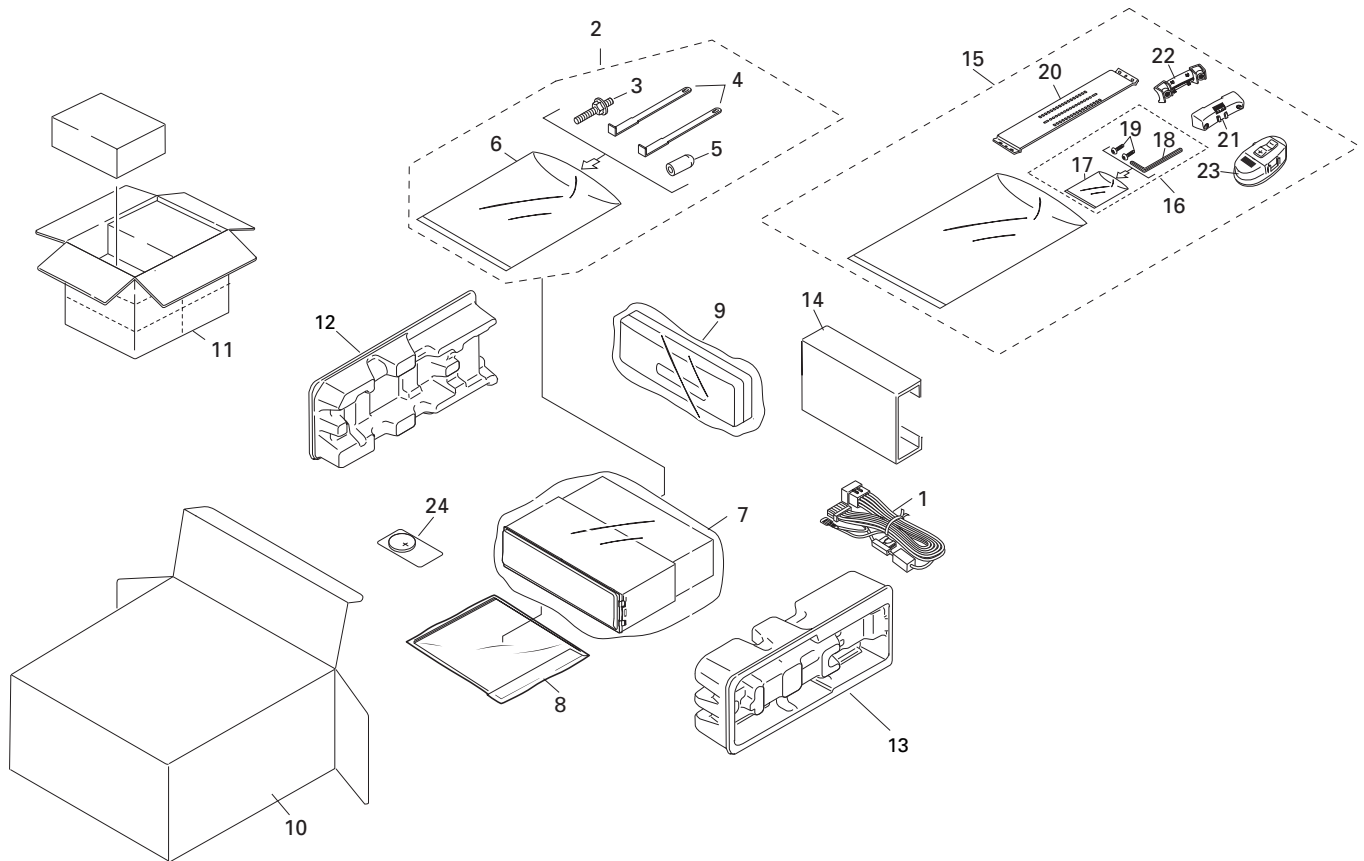
### 4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.

Wavelength = 800 nanometers

## 2. EXPLODED VIEWS AND PARTS LIST

### 2.1 PACKING(DEH-P7000R/EW, DEH-P7000R-W/EW)



#### 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	Cord Assy	CDE5824		9	Case Assy	CXB3520
*	2	Accessory Assy	CEA2397		10	Carton	See Contrast table(2)
	3	Screw	CBA1002		11	Contain Box	See Contrast table(2)
	4	Handle	CNC5395		12	Protector	CHP2101
	5	Bush	CNV3930		13	Protector	CHP2102
*	6	Polyethylene Bag	E36-615		14	Inner Box	CHW1754
	7	Polyethylene Bag	CEG-162		15	Remote Control Assy	CXB3488
	8-1	Owner's Manual	CRD2910		16	Screw Assy	CZE3169
	8-2	Owner's Manual	CRD2911	*	17	Polyethylene Bag	CEG-127
	8-3	Owner's Manual	CRD2912				
	8-4	Installation Manual	CRD2913	*	18	Hexagonal Wrench	CZE3176
	8-5	Passport	CRY1013	*	19	Screw	RMZ30H060FBK
*	8-6	Warranty Card	CRY1087		20	Belt	CZN6416
	8-7	Polyethylene Bag	CEG1116		21	Holder Assy	CZX3172
*	8-8	Label	CRW1343		22	Holder Assy	CZX3173
					23	Remote Control Assy	CZX3231
					24	Battery	CEX1030

(2) CONTRAST TABLE

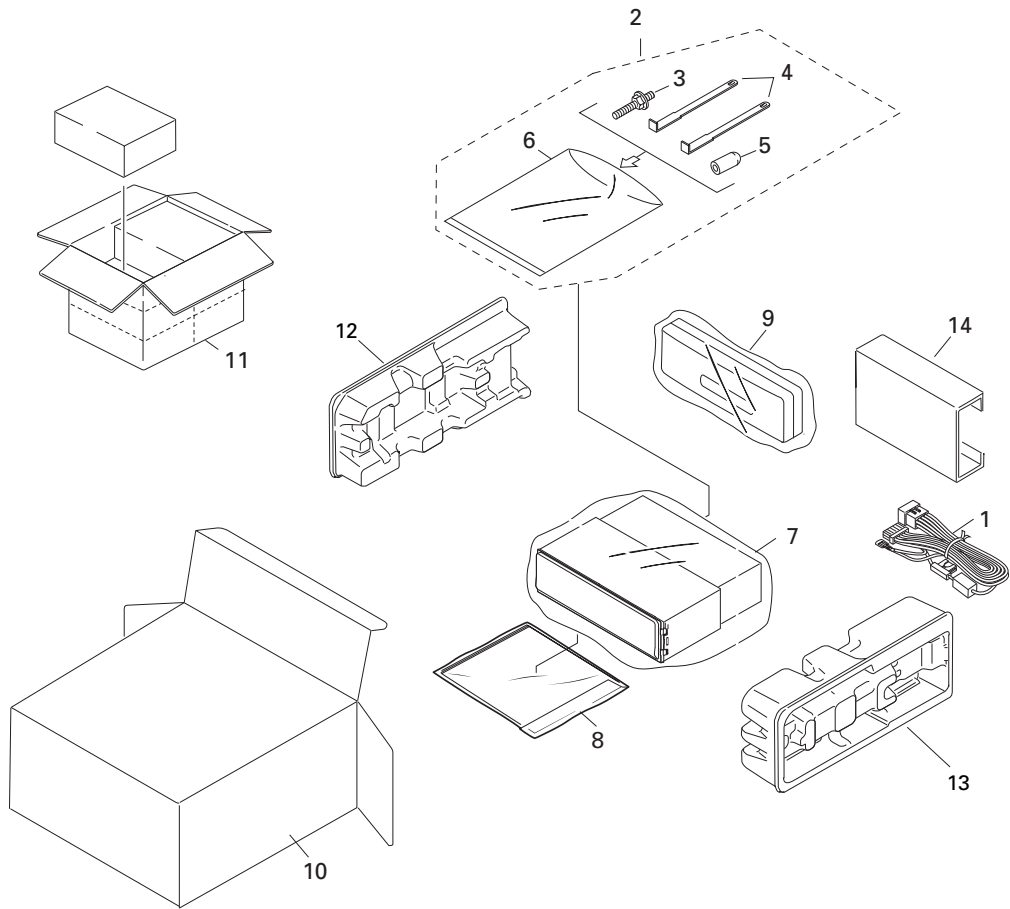
DEH-P7000R/EW and DEH-P7000R-W are constructed the same except for the following:

Mark No.	Symbol and Description	Part No.	
		DEH-P7000R/EW	DEH-P7000R-W/EW
10	Carton	CHG3750	CHG3808
11	Contain Box	CHL3750	CHL3808

● Owner's Manual, Installation Manual

Model	Part No.	Language
DEH-P7000R/EW	CRD2910	English, Spanish
DEH-P7000R-W/EW	CRD2911	German, French
	CRD2912	Italian, Dutch
	CRD2913	English, Spanish, German, French, Italian, Dutch

2.2 PACKING(DEH-P6000R/EW)



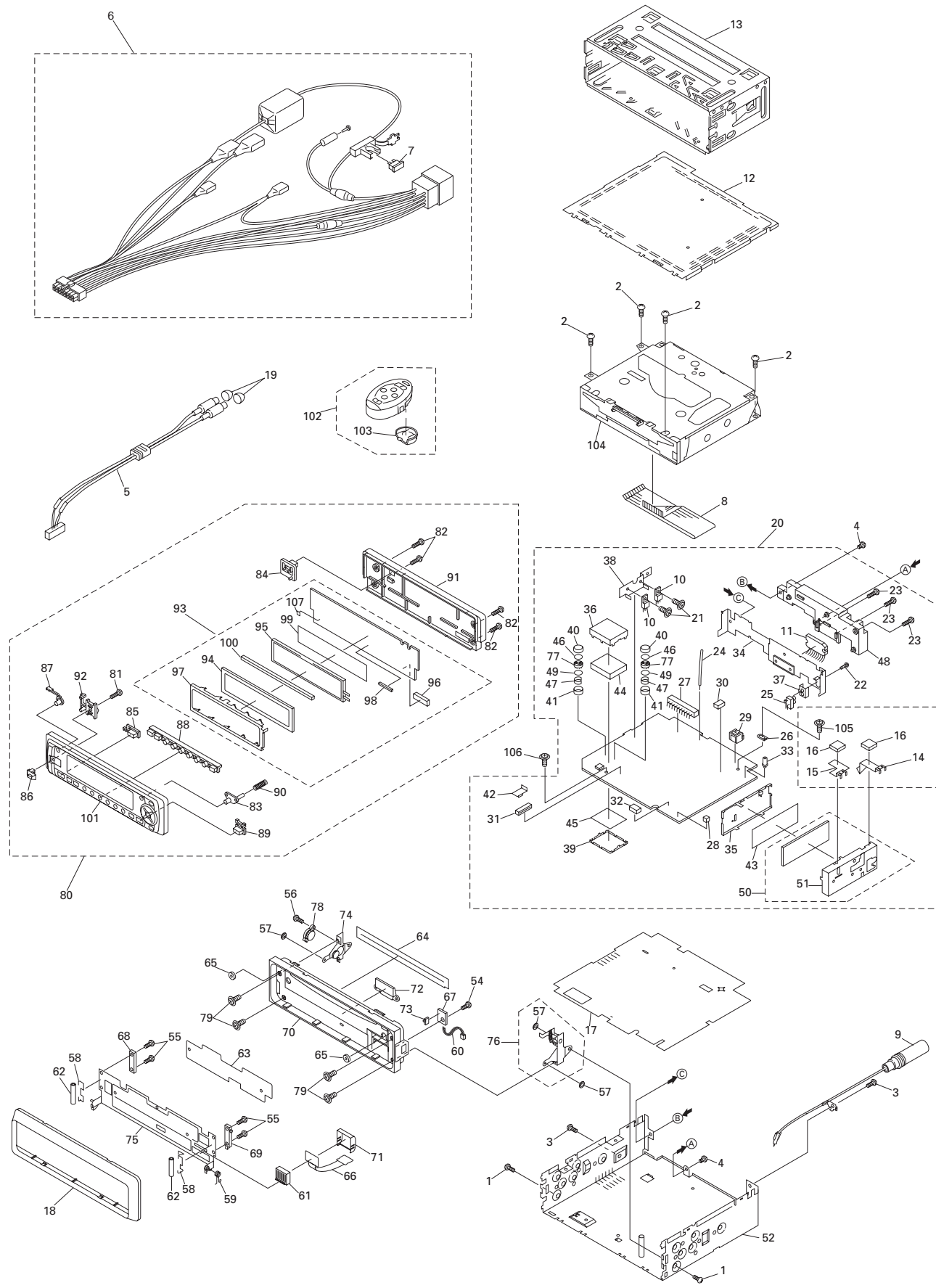
● **PACKING SECTION PARTS LIST**

Mark No.	Description	Part No.	Mark No.	Description	Part No.
	1 Cord Assy	CDE5825		8-4 Installation Manual	CRD2921
*	2 Accessory Assy	CEA2397		8-5 Passport	CRY1013
	3 Screw	CBA1002	*	8-6 Warranty Card	CRY1087
	4 Handle	CNC5395		8-7 Polyethylene Bag	CEG1116
	5 Bush	CNV3930		9 Case Assy	CXB3520
*	6 Polyethylene Bag	E36-615		10 Carton	CHG3753
	7 Polyethylene Bag	CEG-162		11 Contain Box	CHL3753
	8-1 Owner's Manual	CRD2918		12 Protector	CHP2101
	8-2 Owner's Manual	CRD2919		13 Protector	CHP2102
	8-3 Owner's Manual	CRD2920		14 Inner Box	CHW1754

● **Owner's Manual, Installation Manual**

Model	Part No.	Language
DEH-P6000R/EW	CRD2918	English, Spanish
	CRD2919	German, French
	CRD2920	Italian, Dutch
	CRD2921	English, Spanish, German, French, Italian, Dutch

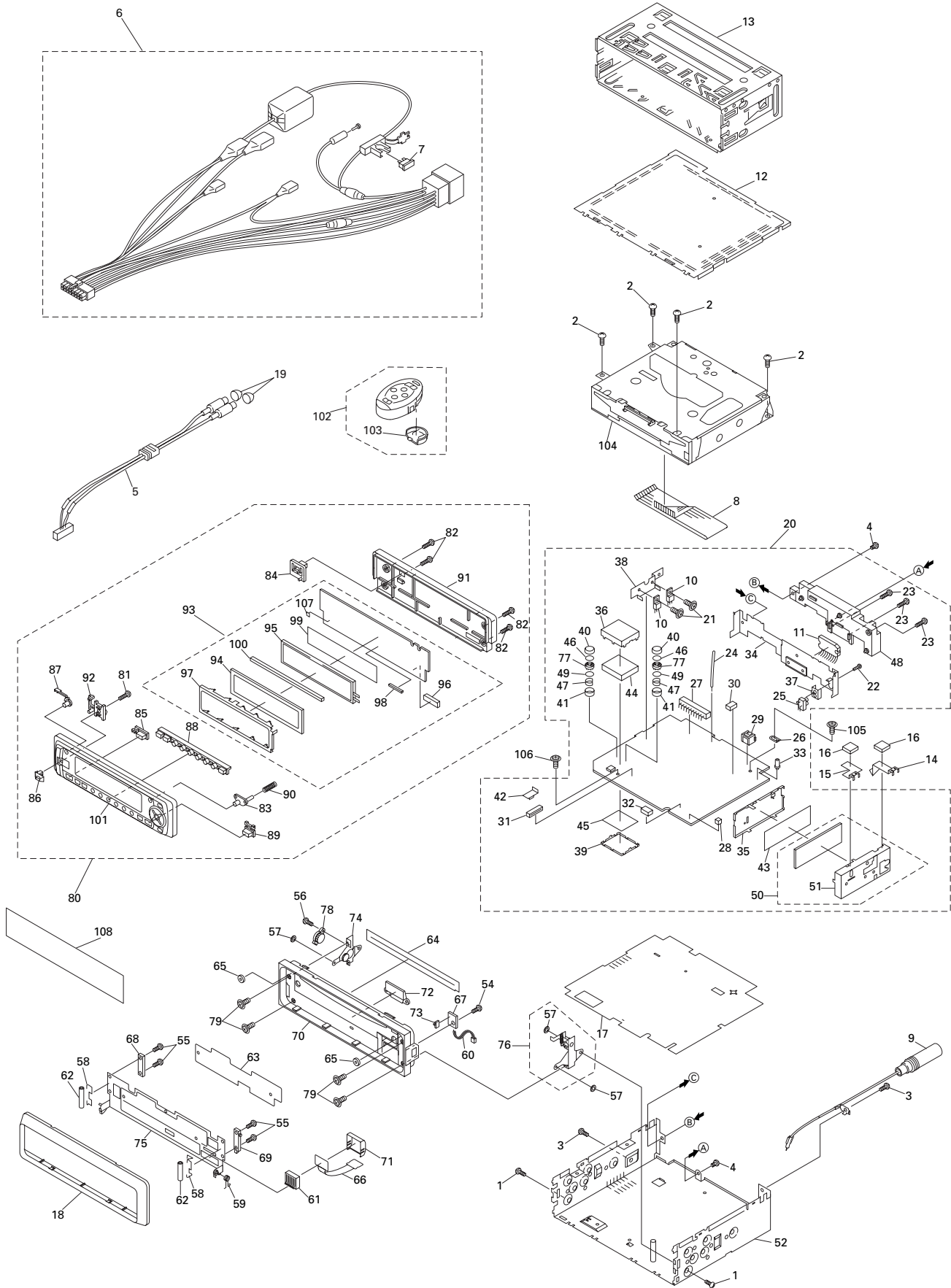
2.3 EXTERIOR(DEH-P7000R/EW)



# ● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ30P040FMC	56	Screw	CBA1176
2	Screw	BSZ26P060FMC	57	Washer	CBF1001
3	Screw	BSZ30P060FMC	58	Spring	CBH2063
4	Screw	BSZ30P100FMC	59	Spring	CBH2204
5	Cord Assy	CDE5822	60	Cord	CDE5800
6	Cord Assy	CDE5824	61	Connector	CKS2780
7	Fuse(10A)	CEK1136	62	Roller	CLA3386
8	Connector	CDE6049	63	Sheet	CNM6109
9	Antenna Cable	CDH1266	64	Cover	CNM6118
10	Transistor(Q954,991)	2SD2396	65	Cushion	CNM6376
11	IC(IC551)	PAL005A	66	PCB	CNP5383
12	Case	CNB2508	67	PCB	CNP5430
13	Holder	CNC6798	68	Holder	CNS5157
14	Holder	CNC8300	69	Holder	CNS5165
15	Holder	CNC8357	70	Panel	CNS5280
16	Spacer	CNM4913	71	Cover	CNS5389
17	Insulator	CNM6075	72	Lighting Conductor	CNV5540
18	Panel	CNS5148	73	Switch(S651)	CSN1027
19	Cap	CNV2680	74	Holder Unit	CXB3049
20	Tuner Amp Unit	CWM6190	75	Holder Unit	CXB3050
21	Screw	ASZ26P080FMC	76	Holder Unit	CXB3051
22	Screw	BPZ26P060FMC	77	Coil(L652,L653)	CTH1228
23	Screw	BSZ26P160FMC	78	Damper Unit	CXB3180
24	Clamper	CEF1009	79	Screw	IMS20P040FZK
25	Pin Jack(CN431)	CKB1028	80	Detach Grille Assy	CXB3686
26	Terminal(CN501)	CKF1059	81	Screw	BPZ20P060FMC
27	Plug(CN952)	CKM1294	82	Screw	BPZ20P080FZK
28	Plug(CN652)	CKS-783	83	Button(OPEN)	CAC5804
29	Connector(CN411)	CKS3408	84	Button(EJECT)	CAC5805
30	Connector(CN432)	CKS3598	85	Button(SOURCE)	CAC5806
31	Connector(CN681)	CKS3838	86	Button(EQ)	CAC5808
32	Connector(CN651)	CKS4077	87	Button(DISP)	CAC5809
33	Mini Pin Jack(CN502)	CKX1046	88	Button(1-6)	CAC5821
34	Panel	CNB2378	89	Button(BAND)	CAC5936
35	Holder	CNC7533	90	Spring	CBH2205
36	Case	CNC8138	91	Cover	CNS5146
37	Holder	CNC8298	92	Holder	CNV5537
38	Holder	CNC8299	93	Keyboard Unit	CWM6198
39	Case	CNC8301	94	LCD	CAW1517
40	Case	CNC8376	95	EL	CEL1592
41	Case	CNC8377	96	Connector(CN901)	CKS2733
42	Heat Sink	CNC8437	97	Holder	CNC8157
43	Insulator	CNM5967	98	Spacer	CNM6379
44	Insulator	CNM6249	99	Double Sided Tape	CNM6380
45	Insulator	CNM6250	100	Connector	CNV5539
46	Insulator	CNM6298	101	Grille Unit	CXB4092
47	Insulator	CNM6299	102	Remote Control Assy	CZX3231
48	Heat Sink	CNR1550	103	Cover	CZN6410
49	Insulator	CNV5816	104	CD Mechanism Module	CXK5200
50	FM/AM Tuner Unit	CWE1500	105	Screw	ISS26P055FUC
51	Holder	CNC7532	106	Screw	CBA1492
52	Chassis Unit	CXB3307	107	Spacer	CNM6421
53	.....				
54	Screw	BPZ20P060FMC			
55	Screw	CBA1082			

2.4 EXTERIOR(DEH-P7000R-W/EW)



# ● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ30P040FMC	56	Screw	CBA1176
2	Screw	BSZ26P060FMC	57	Washer	CBF1001
3	Screw	BSZ30P060FMC	58	Spring	CBH2063
4	Screw	BSZ30P100FMC	59	Spring	CBH2204
5	Cord Assy	CDE5822	60	Cord	CDE5800
6	Cord Assy	CDE5824	61	Connector	CKS2780
7	Fuse(10A)	CEK1136	62	Roller	CLA3386
8	Connector	CDE6049	63	Sheet	CNM6109
9	Antenna Cable	CDH1266	64	Cover	CNM6118
10	Transistor(Q954,991)	2SD2396	65	Cushion	CNM6376
11	IC(IC551)	PAL005A	66	PCB	CNP5383
12	Case	CNB2508	67	PCB	CNP5430
13	Holder	CNC6798	68	Holder	CNS5157
14	Holder	CNC8300	69	Holder	CNS5165
15	Holder	CNC8357	70	Panel	CNS5280
16	Spacer	CNM4913	71	Cover	CNS5389
17	Insulator	CNM6075	72	Lighting Conductor	CNV5540
18	Panel	CNS5540	73	Switch(S651)	CSN1027
19	Cap	CNV2680	74	Holder Unit	CXB3049
20	Tuner Amp Unit	CWM6547	75	Holder Unit	CXB3050
21	Screw	ASZ26P080FMC	76	Holder Unit	CXB3051
22	Screw	BPZ26P060FMC	77	Coil(L652,L653)	CTH1228
23	Screw	BSZ26P160FMC	78	Damper Unit	CXB3180
24	Clamper	CEF1009	79	Screw	IMS20P040FZK
25	Pin Jack(CN431)	CKB1028	80	Detach Grille Assy	CXB4197
26	Terminal(CN501)	CKF1059	81	Screw	BPZ20P060FMC
27	Plug(CN952)	CKM1294	82	Screw	BPZ20P080FZK
28	Plug(CN652)	CKS-783	83	Button(OPEN)	CAC5804
29	Connector(CN411)	CKS3408	84	Button(EJECT)	CAC5805
30	Connector(CN432)	CKS3598	85	Button(SOURCE)	CAC5806
31	Connector(CN681)	CKS3838	86	Button(EQ)	CAC5808
32	Connector(CN651)	CKS4077	87	Button(DISP)	CAC5809
33	Mini Pin Jack(CN502)	CKX1046	88	Button(1-6)	CAC6141
34	Panel	CNB2378	89	Button(BAND)	CAC5936
35	Holder	CNC7533	90	Spring	CBH2205
36	Case	CNC8138	91	Cover	CNS5538
37	Holder	CNC8298	92	Holder	CNV5537
38	Holder	CNC8299	93	Keyboard Unit	CWM6548
39	Case	CNC8301	94	LCD	CAW1550
40	Case	CNC8376	95	EL	CEL1592
41	Case	CNC8377	96	Connector(CN901)	CKS2733
42	Heat Sink	CNC8437	97	Holder	CNC8157
43	Insulator	CNM5967	98	Spacer	CNM6379
44	Insulator	CNM6249	99	Double Sided Tape	CNM6380
45	Insulator	CNM6250	100	Connector	CNV5539
46	Insulator	CNM6298	101	Grille Unit	CXB4084
47	Insulator	CNM6299	102	Remote Control Assy	CZX3231
48	Heat Sink	CNR1550	103	Cover	CZN6410
49	Insulator	CNV5816	104	CD Mechanism Module	CXK5200
50	FM/AM Tuner Unit	CWE1500	105	Screw	ISS26P055FUC
51	Holder	CNC7532	106	Screw	CBA1492
52	Chassis Unit	CXB4183	107	Spacer	CNM6421
53	.....		108	Cover	CNM4710
54	Screw	BPZ20P060FMC			
55	Screw	CBA1082			



# ● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ30P040FMC	56	Screw	CBA1176
2	Screw	BSZ26P060FMC	57	Washer	CBF1001
3	Screw	BSZ30P060FMC	58	Spring	CBH2063
4	Screw	BSZ30P100FMC	59	Spring	CBH2204
5	.....		60	Cord	CDE5800
6	Cord Assy	CDE5825	61	Connector	CKS2780
7	Fuse(10A)	CEK1136	62	Roller	CLA3386
8	Connector	CDE6049	63	Sheet	CNM6109
9	Antenna Cable	CDH1266	64	Cover	CNM6118
10	Transistor(Q954,991)	2SD2396	65	Cushion	CNM6376
11	IC(IC551)	PAL005A	66	PCB	CNP5383
12	Case	CNB2508	67	PCB	CNP5430
13	Holder	CNC6798	68	Holder	CNS5157
14	Holder	CNC8300	69	Holder	CNS5165
15	Holder	CNC8357	70	Panel	CNS5280
16	Spacer	CNM4913	71	Cover	CNS5389
17	Insulator	CNM6075	72	Lighting Conductor	CNV5540
18	Panel	CNS5148	73	Switch(S651)	CSN1027
19	Cap	CNV2680	74	Holder Unit	CXB3049
20	Tuner Amp Unit	CWM6194	75	Holder Unit	CXB3050
21	Screw	ASZ26P080FMC	76	Holder Unit	CXB3051
22	Screw	BPZ26P060FMC	77	Coil(L652,L653)	CTH1228
23	Screw	BSZ26P160FMC	78	Damper Unit	CXB3180
24	Clamper	CEF1009	79	Screw	IMS20P040FZK
25	Pin Jack(CN431)	CKB1028	80	Detach Grille Assy	CXB3690
26	Terminal(CN501)	CKF1059	81	Screw	BPZ20P060FMC
27	Plug(CN952)	CKM1294	82	Screw	BPZ20P080FZK
28	Plug(CN652)	CKS-783	83	Button(OPEN)	CAC5804
29	Connector(CN411)	CKS3408	84	Button(EJECT)	CAC5805
30	.....		85	Button(SOURCE)	CAC5806
31	Connector(CN681)	CKS3838	86	Button(EQ)	CAC5808
32	Connector(CN651)	CKS4077	87	Button(DISP)	CAC5809
33	Mini Pin Jack(CN502)	CKX1046	88	Button(1-6)	CAC5921
34	Panel	CNB2477	89	Button(BAND)	CAC5936
35	Holder	CNC7533	90	Spring	CBH2205
36	Case	CNC8138	91	Cover	CNS5146
37	Holder	CNC8298	92	Holder	CNV5537
38	Holder	CNC8299	93	Keyboard Unit	CWM6198
39	Case	CNC8301	94	LCD	CAW1517
40	Case	CNC8376	95	EL	CEL1592
41	Case	CNC8377	96	Connector(CN901)	CKS2733
42	Heat Sink	CNC8437	97	Holder	CNC8157
43	Insulator	CNM5967	98	Spacer	CNM6379
44	Insulator	CNM6249	99	Double Sided Tape	CNM6380
45	Insulator	CNM6250	100	Connector	CNV5539
46	Insulator	CNM6298	101	Grille Unit	CXB4096
47	Insulator	CNM6299	102	.....	
48	Heat Sink	CNR1550	103	.....	
49	Insulator	CNV5816	104	CD Mechanism Module	CXK5200
50	FM/AM Tuner Unit	CWE1500	105	Screw	ISS26P055FUC
51	Holder	CNC7532	106	Screw	CBA1492
52	Chassis Unit	CXB3519	107	Spacer	CNM6421
53	.....				
54	Screw	BPZ20P060FMC			
55	Screw	CBA1082			

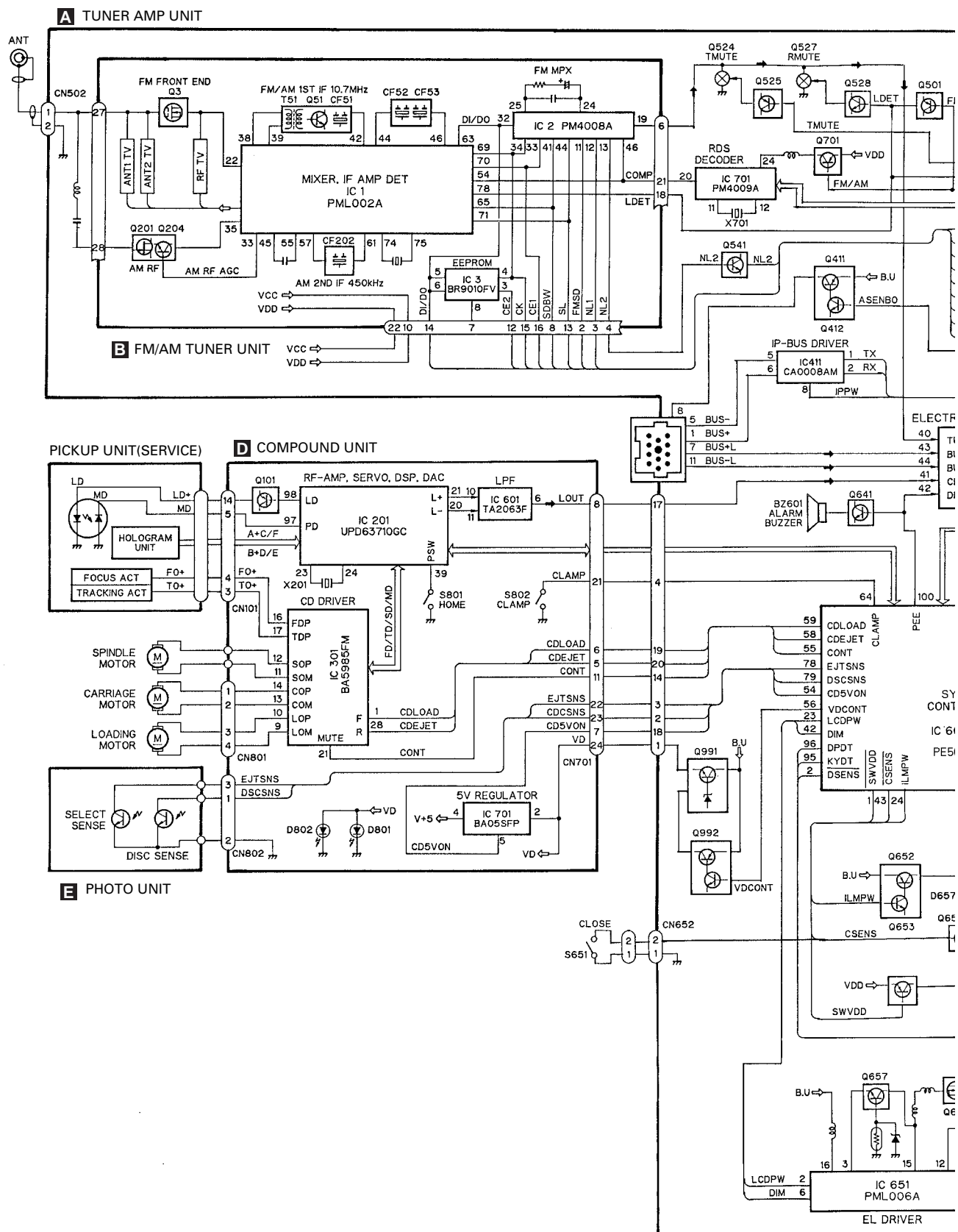


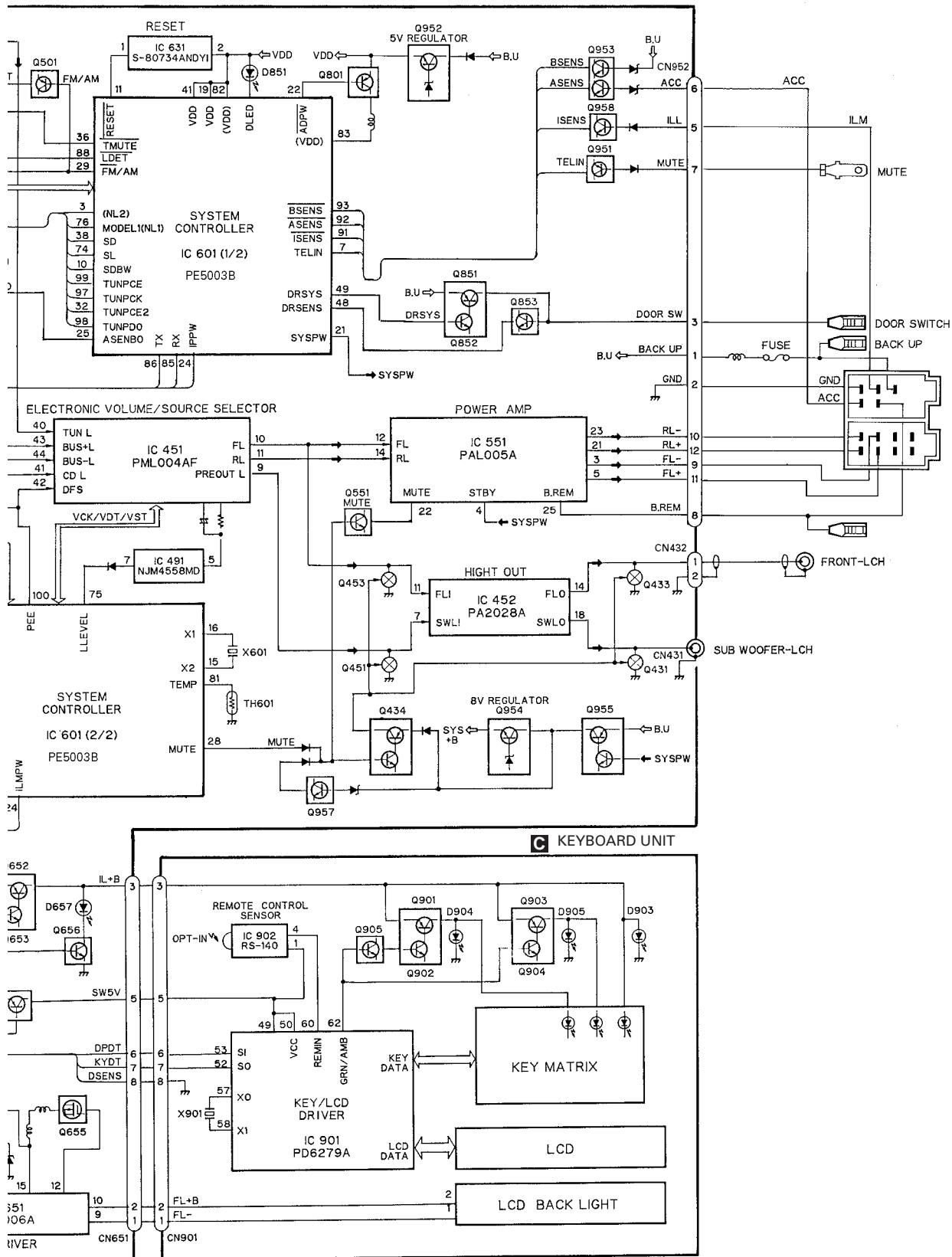
# ● CD MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Compound Unit	CWX2235	46	Sheet	CNM6215
2	Connector(CN802)	CKS2192	47	Ball	CNR1189
3	Connector(CN801)	CKS2193	48	Belt	CNT1086
4	Connector(CN701)	CKS2773	49	Roller	CNV4509
5	Connector(CN101)	CKS3486	50	Arm	CNV5246
6	Screw	BMZ20P030FZK	51	Arm	CNV5247
7	Screw	BSZ20P040FZK	52	Arm	CNV5248
8	Screw(M2×3)	CBA1077	53	Arm	CNV5249
9	Screw(M2×6)	CBA1230	54	Guide	CNV5254
10	Screw	CBA1243	55	Guide	CNV5255
11	Screw(M2×4)	CBA1362	56	Gear	CNV5257
12	Washer	CBF1037	57	Gear	CNV5256
13	Washer	CBF1038	58	Guide	CNV5869
14	Washer	CBF1060	59	Damper	CNV5266
* 15	Washer	CBF1075	60	Arm	CNV5359
16	Spring	CBH2079	61	Arm	CNV5360
17	Spring	CBH2117	62	Arm	CNV5361
18	Spring	CBH2278	63	Guide	CNV5509
19	Spring	CBH2110	64	Guide	CNV5510
20	Spring	CBH2282	65	Holder	CNV5578
21	Spring	CBH2114	66	Guide	CNV5751
22	Spring	CBH2115	67	Clamper	CNV5758
23	Spring	CBH2080	68	Gear	CNV5813
24	Spring	CBH2118	69	Motor Unit(M1)	CXB2190
25	Spring	CBH2161	70	Screw Unit	CXB2191
26	Spring	CBH2163	71	Chassis Unit	CXB2192
27	Spring	CBH2189	72	Gear Unit	CXB2193
28	Spring	CBH2249	73	Arm Unit	CXB2194
29	Spring	CBH2260	74	Motor Unit(M2)	CXB2195
30	Spring	CBH2262	75	Lever Unit	CXB2553
31	Spring	CBL1367	76	Arm Unit	CXB2554
32	Spring	CBL1369	77	Motor Unit(M3)	CXB2562
33	Connector	CDE5531	78	Arm Unit	CXB2795
34	Connector	CDE5532	79	Bracket Unit	CXB4071
35	Shaft	CLA3304	80	Screw	JFZ20P025FMC
36	Screw(M2.6×6)	CBA1458	81	Screw	JGZ17P025FZK
37	Frame	CNC7544	82	Washer	YE15FUC
38	Frame	CNC7545	83	Pickup Unit(Service)(P8)	CXX1285
39	Lever	CNC7546	84	Screw	IMS26P030FMC
40	Arm	CNC7739	* 85	PCB	CNX2982
41	Bracket	CNC7798	86	Photo-transistor(Q1, 2)	CPT230SX-TU
42	Plate	CNC8090			
43	Spacer	CNM3315			
44	Sheet	CNM6170			
45	Cushion	CNM6204			

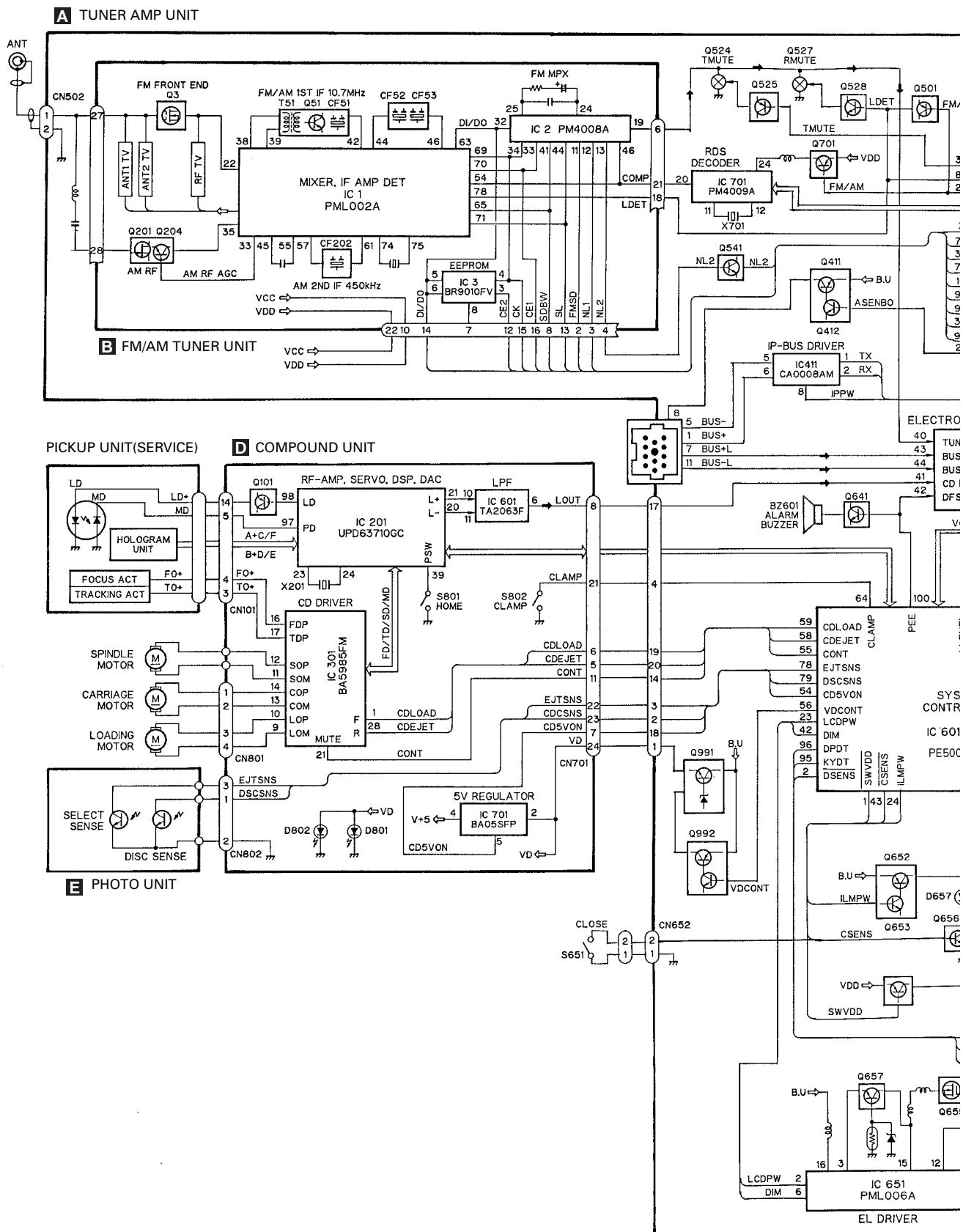
### 3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

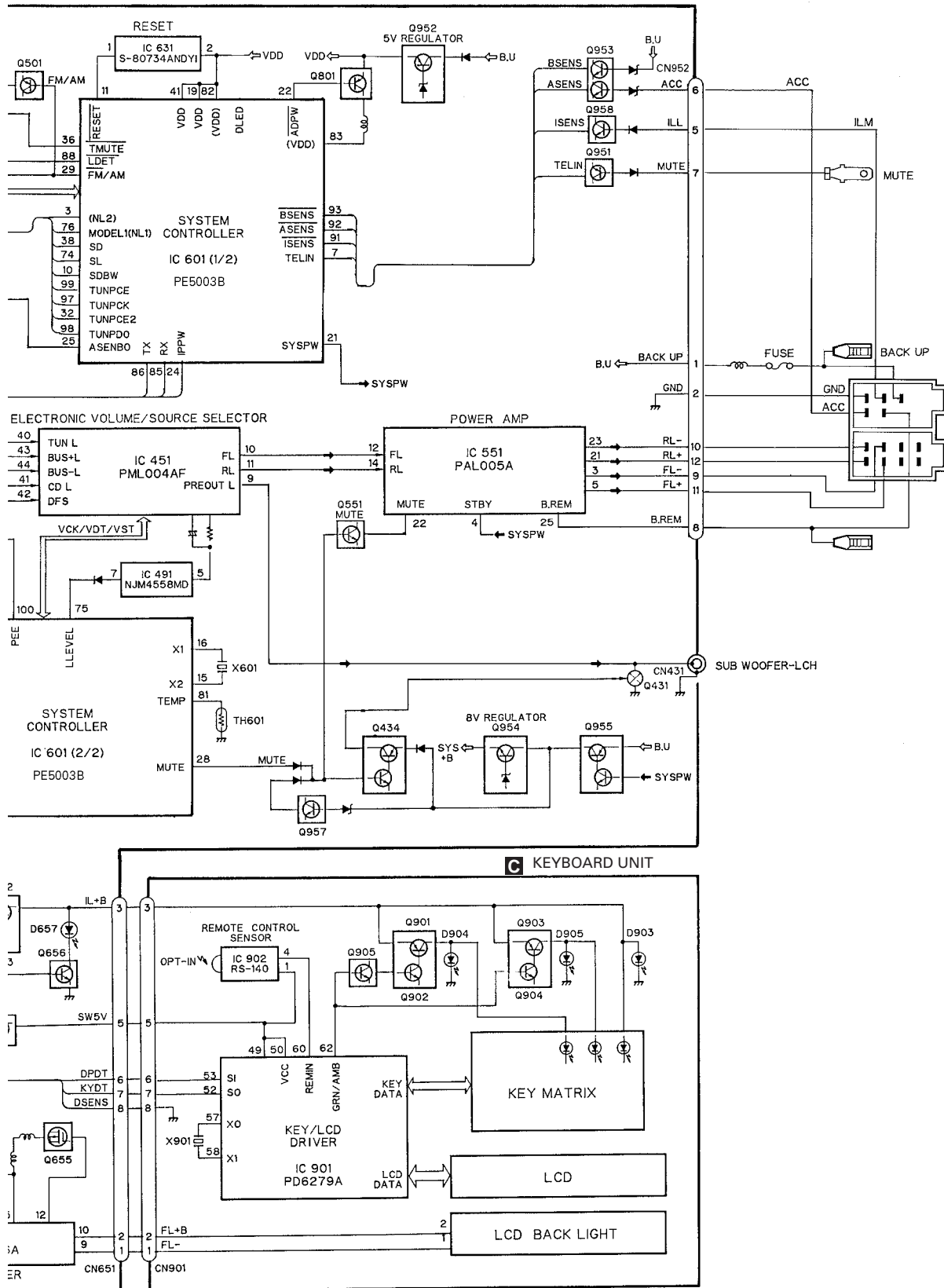
#### 3.1 BLOCK DIAGRAM(DEH-P7000R/EW, DEH-P7000R-W/EW)





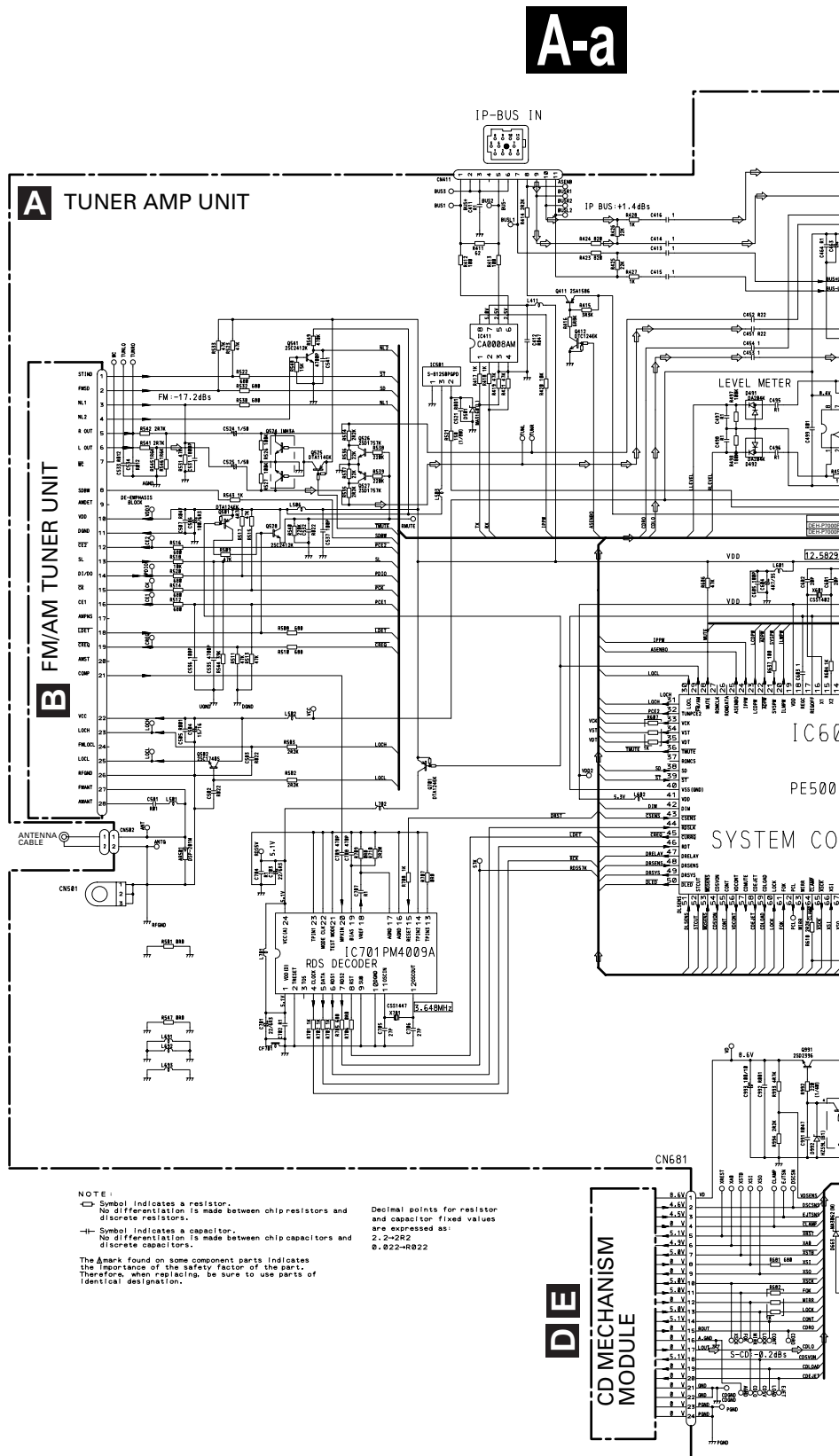
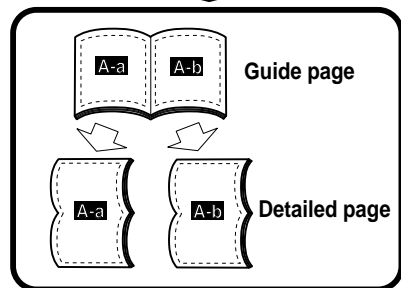
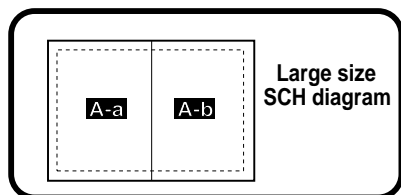
### 3.2 BLOCK DIAGRAM(DEH-P6000R/EW)



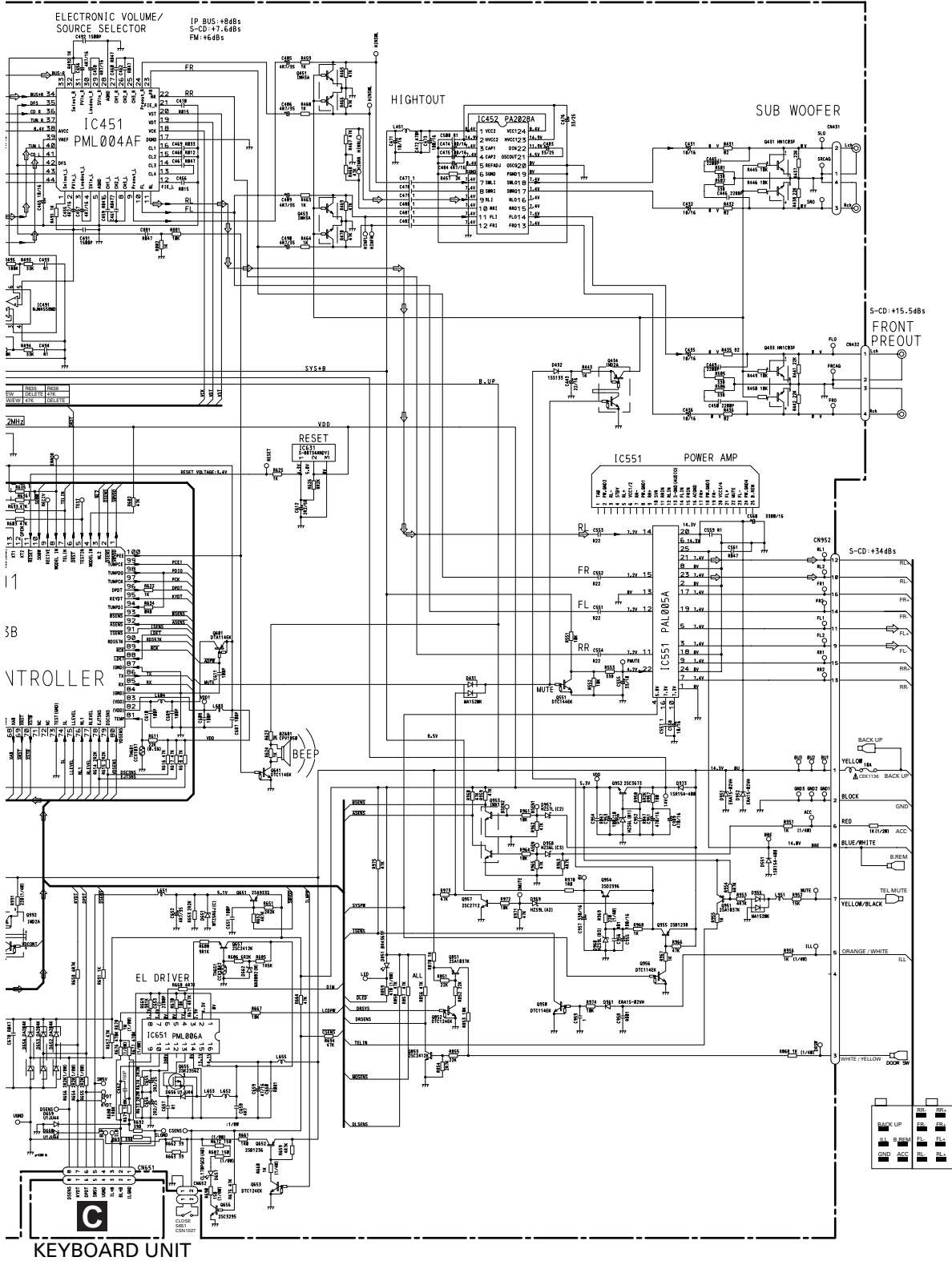


### 3.3 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)(DEH-P7000R/EW, DEH-P7000R-W/EW)

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



A-b



A

A

B

C

D

A-a

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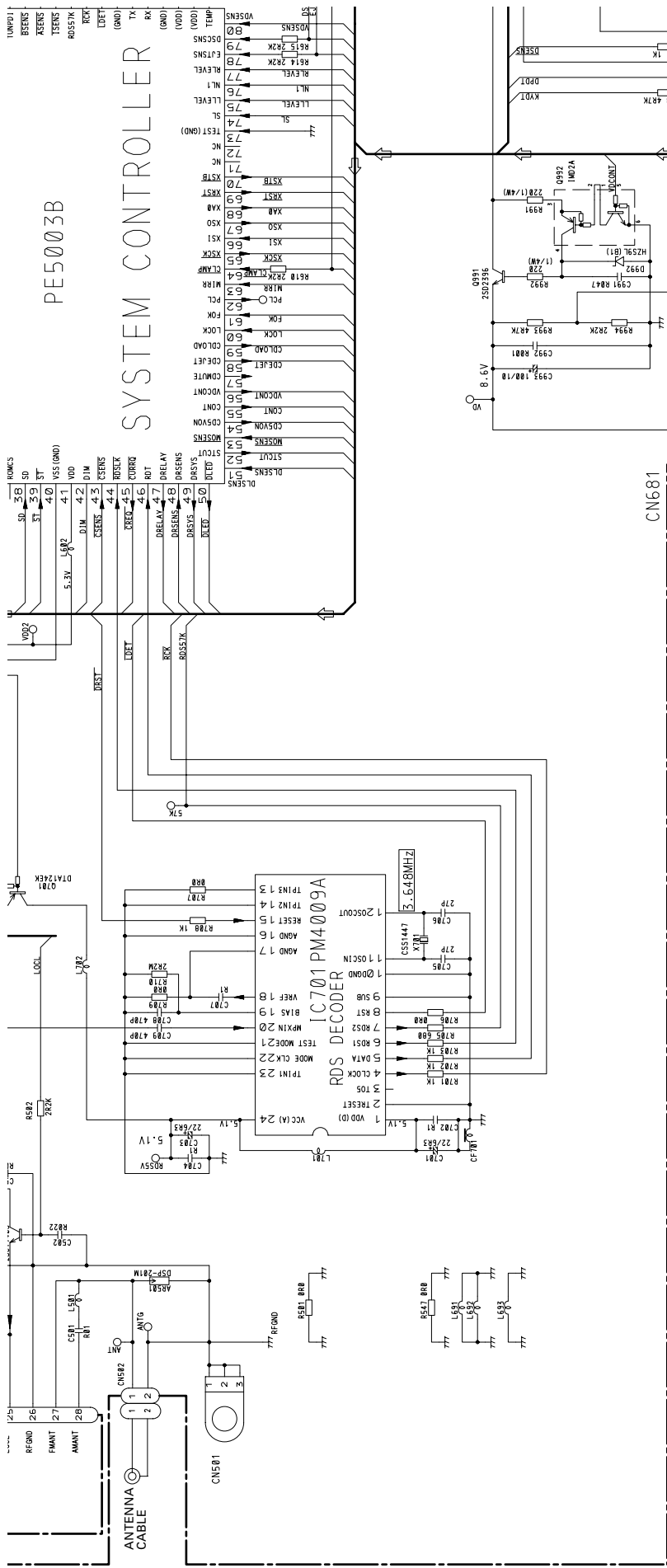
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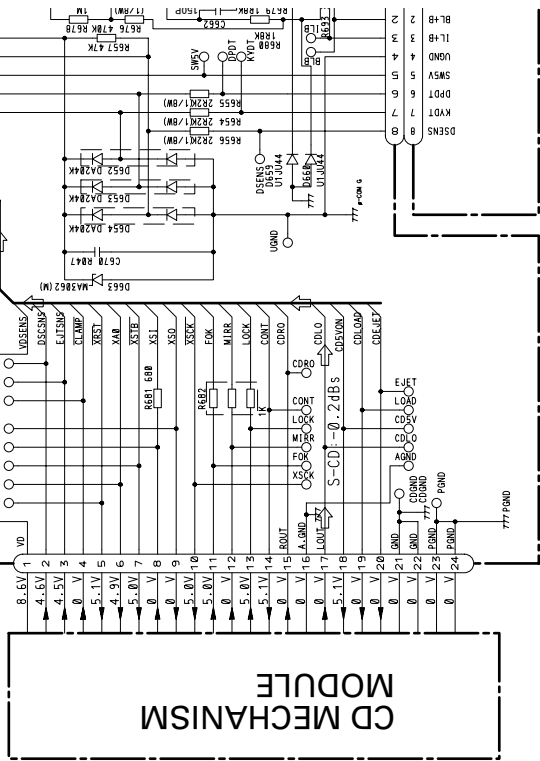
360



NOTE :

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

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



A-a A-b

CD MECHANISM MODULE

8.6V 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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

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

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

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

NOTE :

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

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

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

NOTE :

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

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

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

NOTE :

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

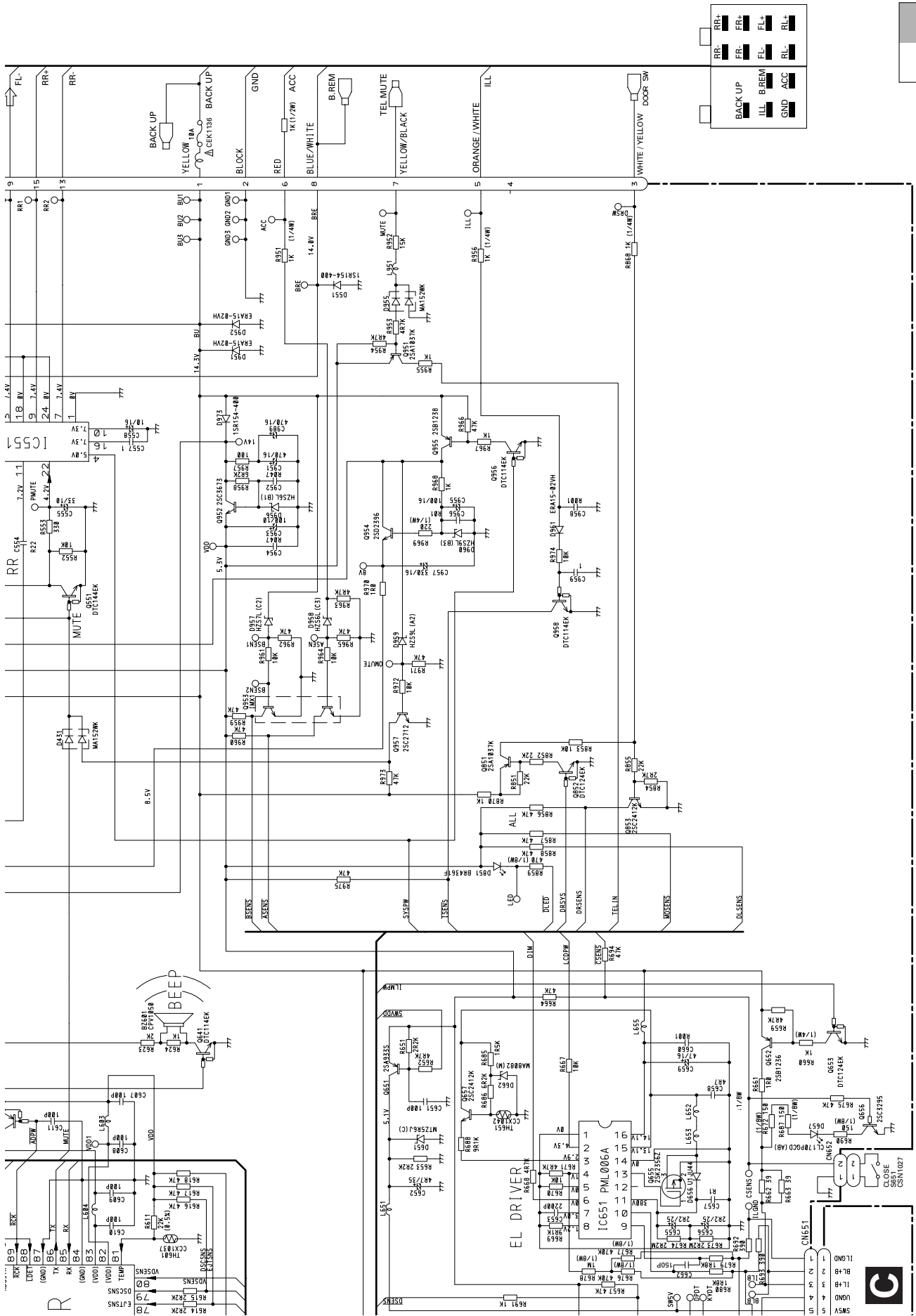
Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

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

NOTE :

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





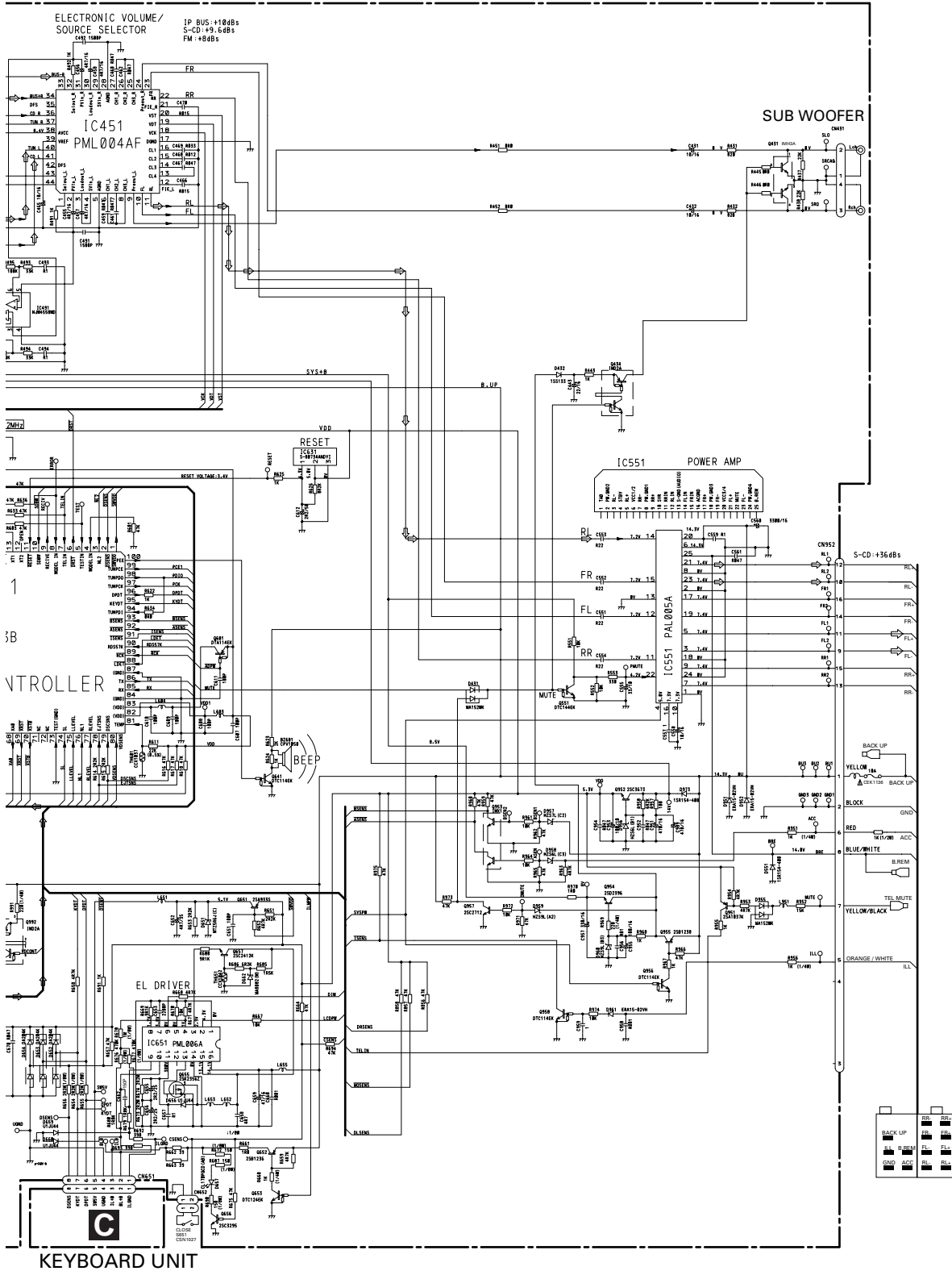
A-a A-b

## KEYBOARD UNIT

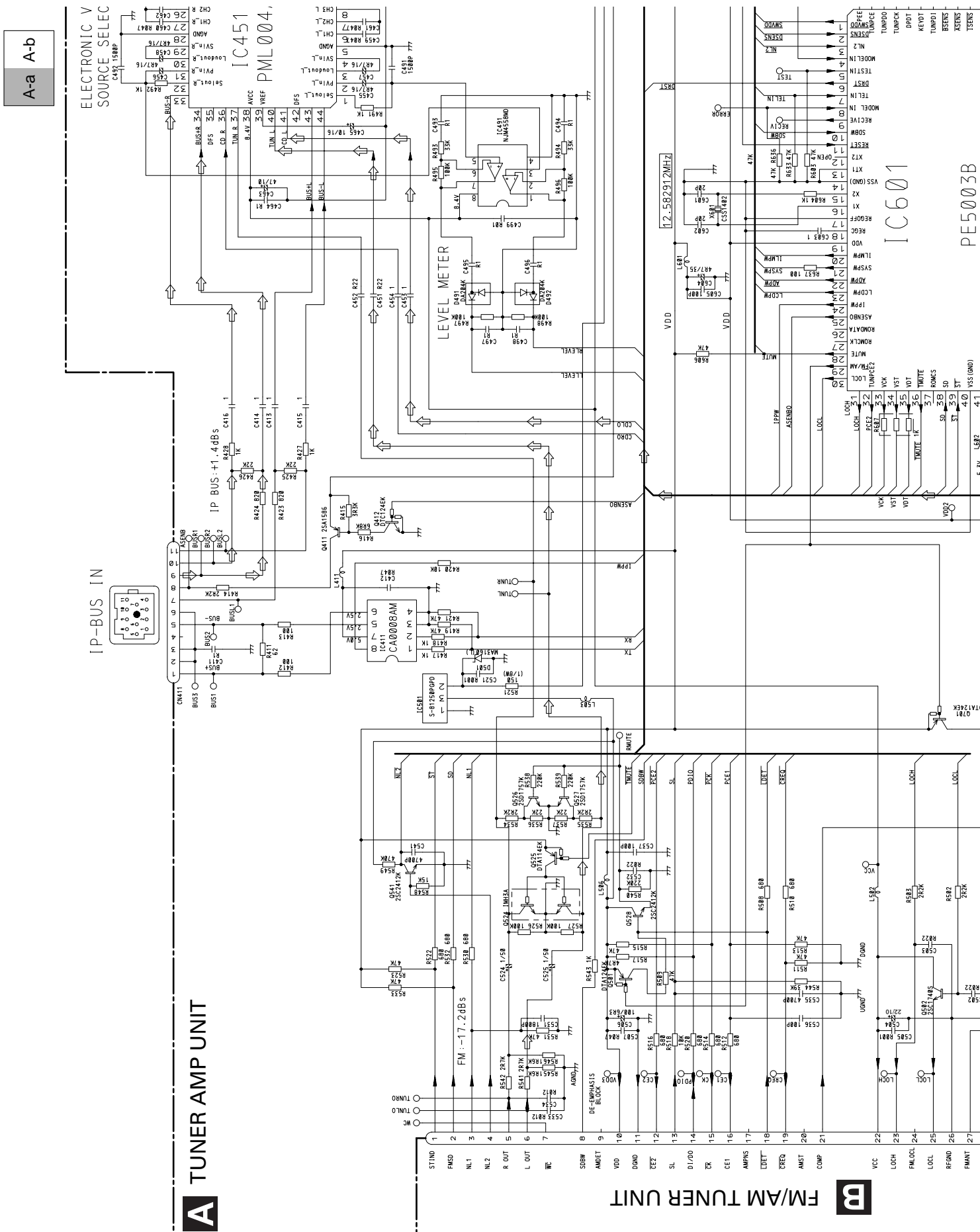
**A-b**

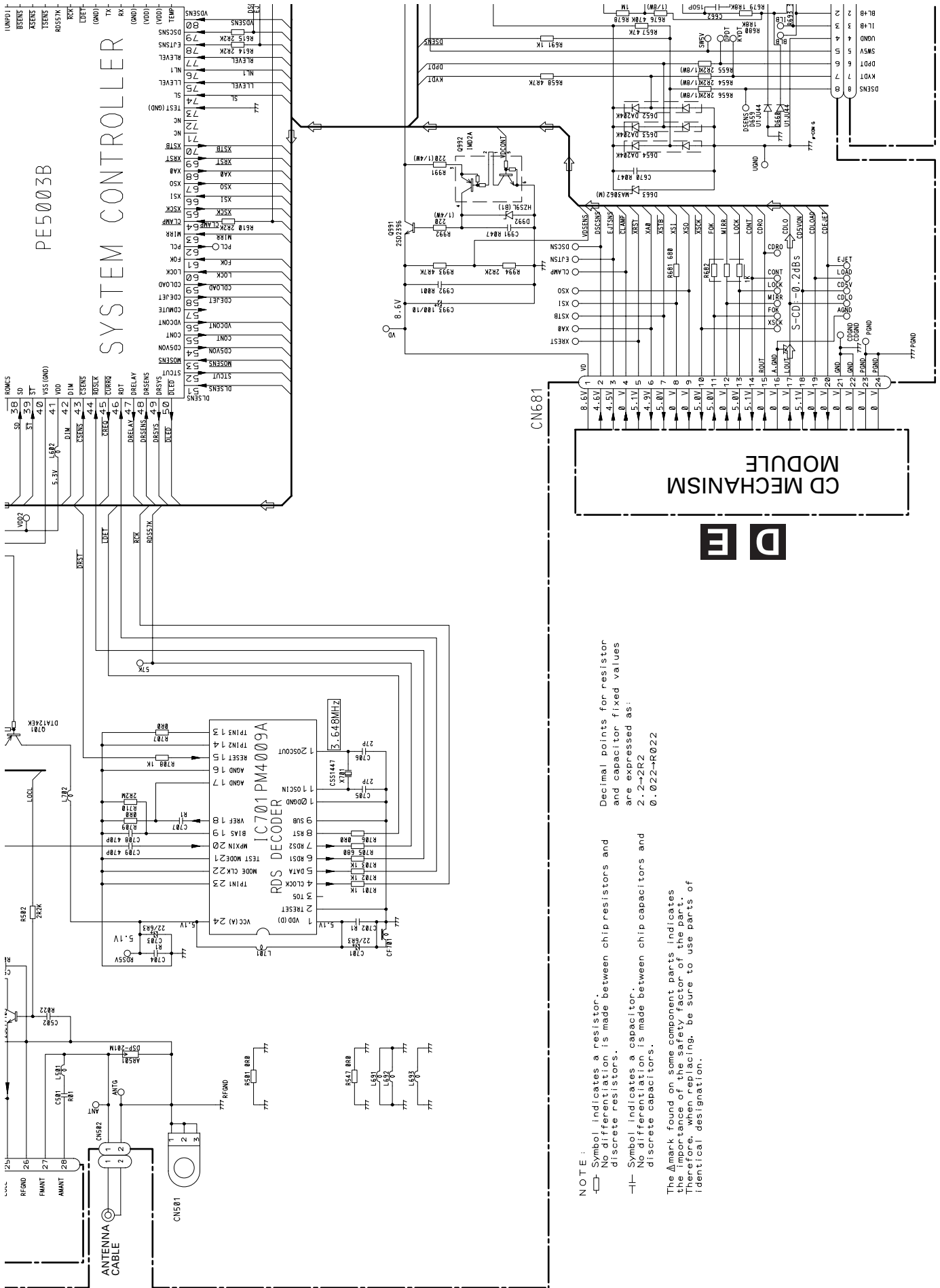



A-b



A





NOTE :	Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.	Decimal points for resistor and capacitor fixed values are expressed as: 2.2→R2 0.022→R022
	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.

A-a

ONIC VOLUME/  
SELECTOR  
IP BUS: +10dBs  
S-CD: +9.6dBs  
FM: +8dBs

29

A-b

SUB WOOFER

CN431

SLO

Q431 1N431

SRAG

22K

8437

8438 22K

8439 22K

8440 22K

8441 22K

8442 22K

8443 22K

8444 22K

8445 22K

8446 22K

8447 22K

8448 22K

8449 22K

8450 22K

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8719 22K

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8721 22K

8722 22K

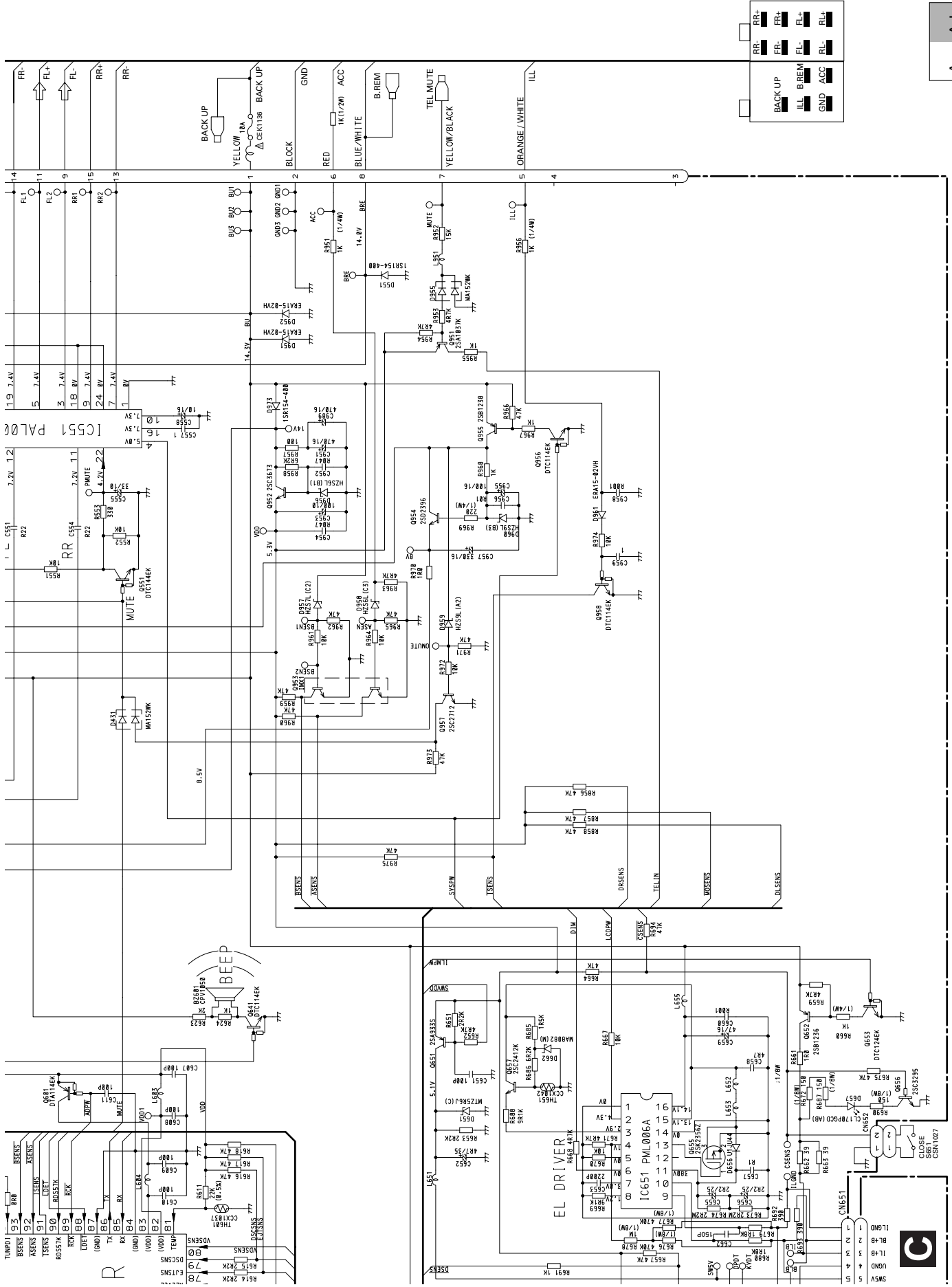
8723 22K

8724 22K

8725 22K

8726 22K

8727 22K



KEYBOARD UNIT

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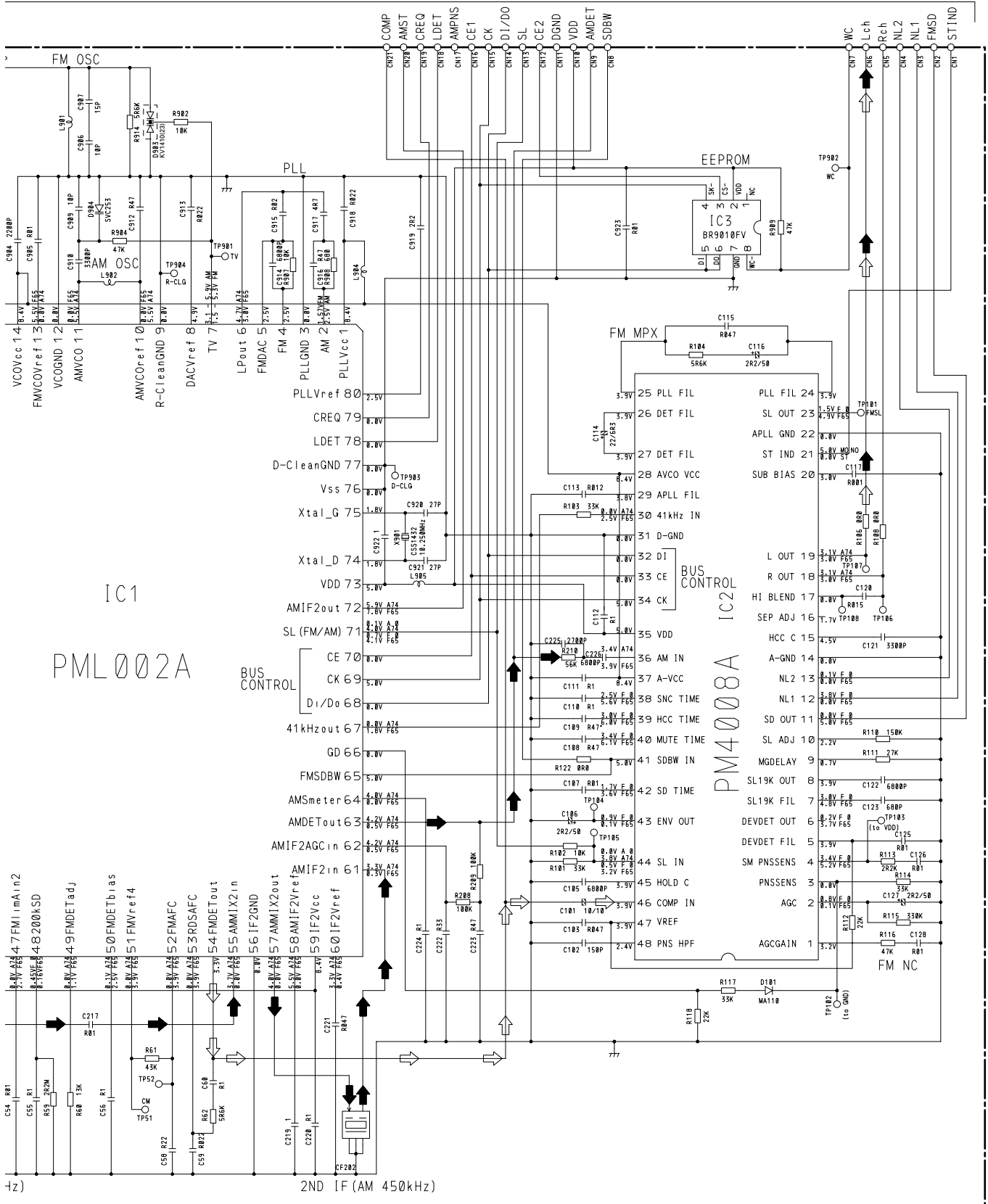
277

## A



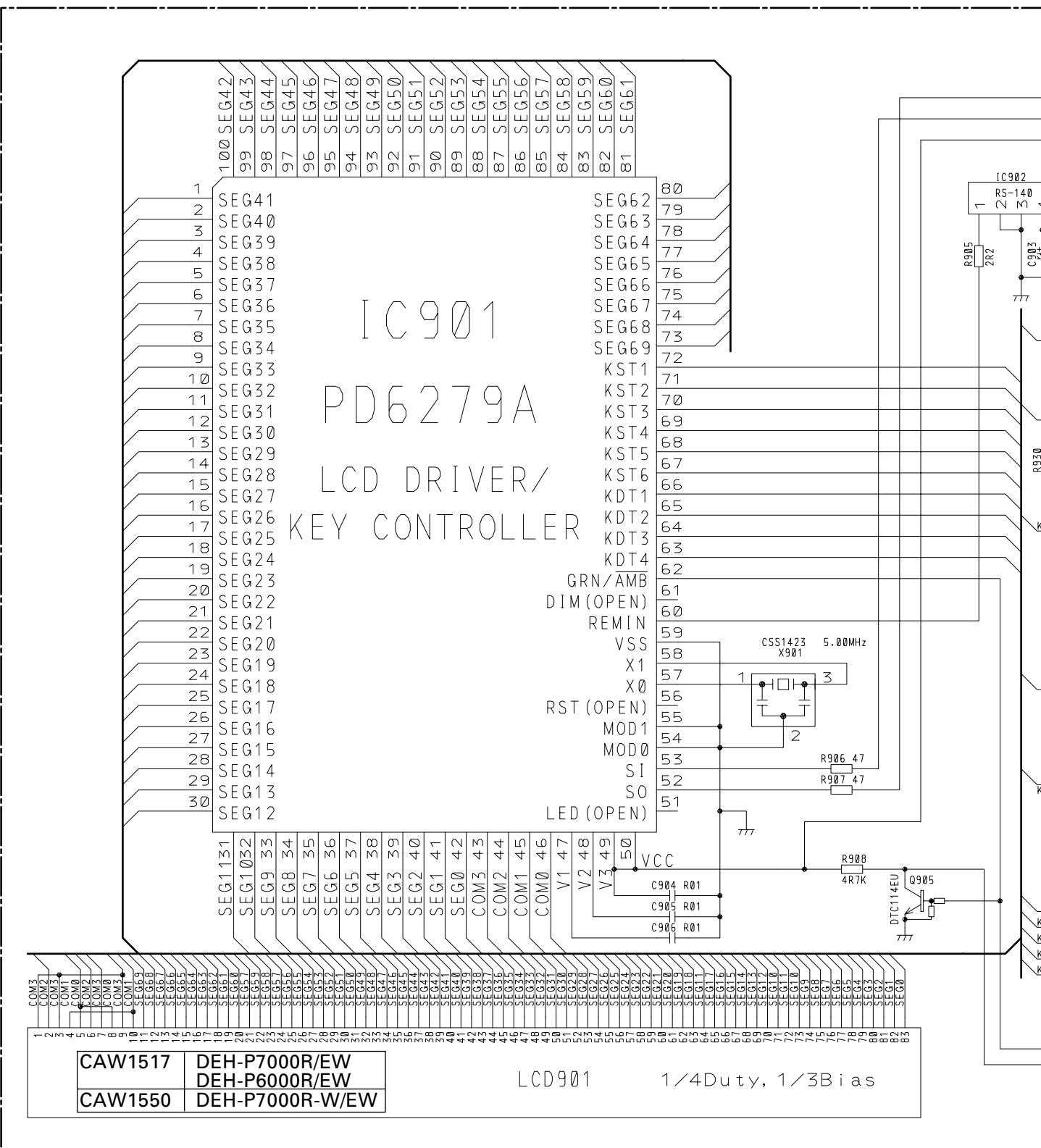
C

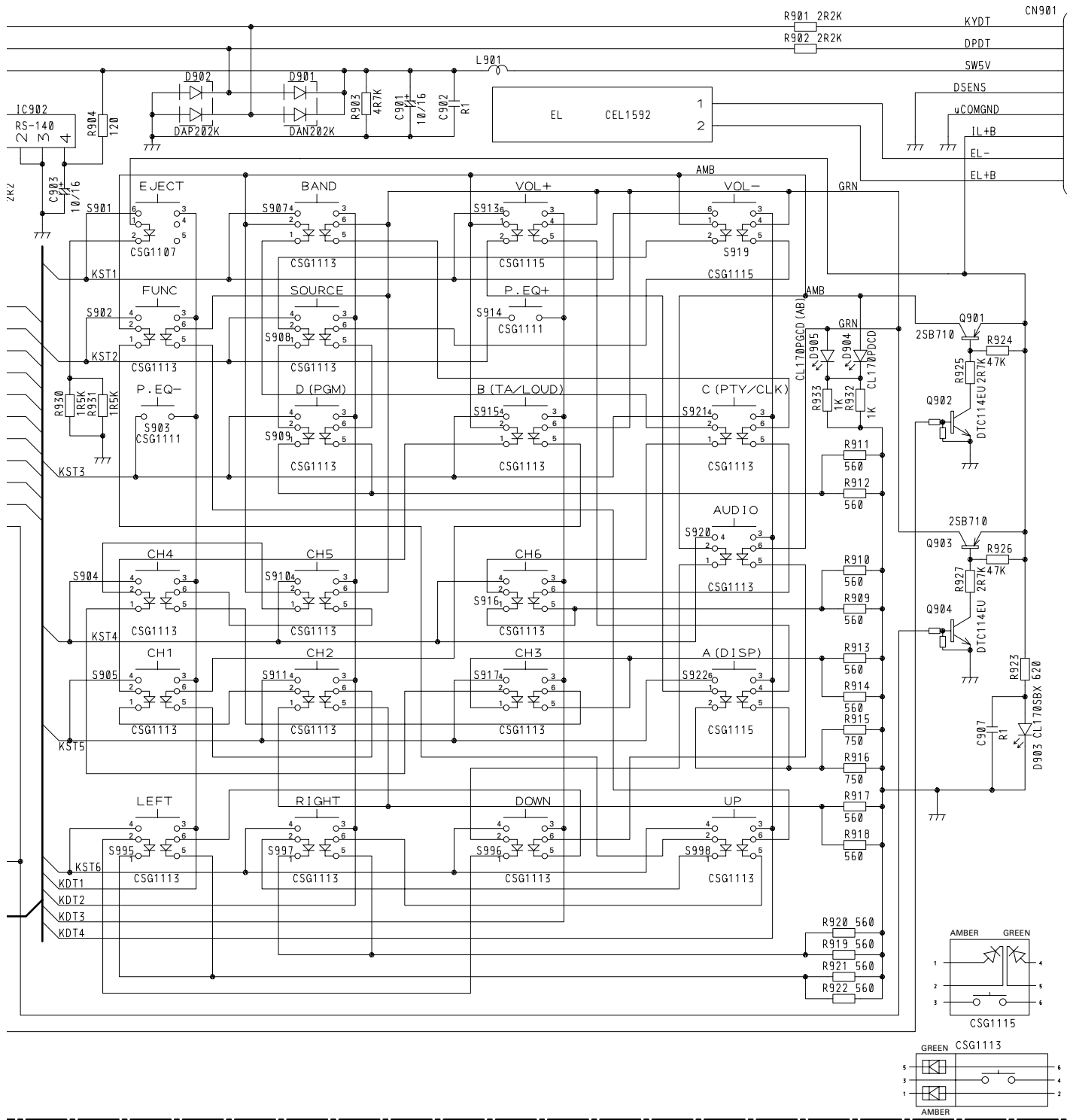
D



3.6 KEYBOARD UNIT

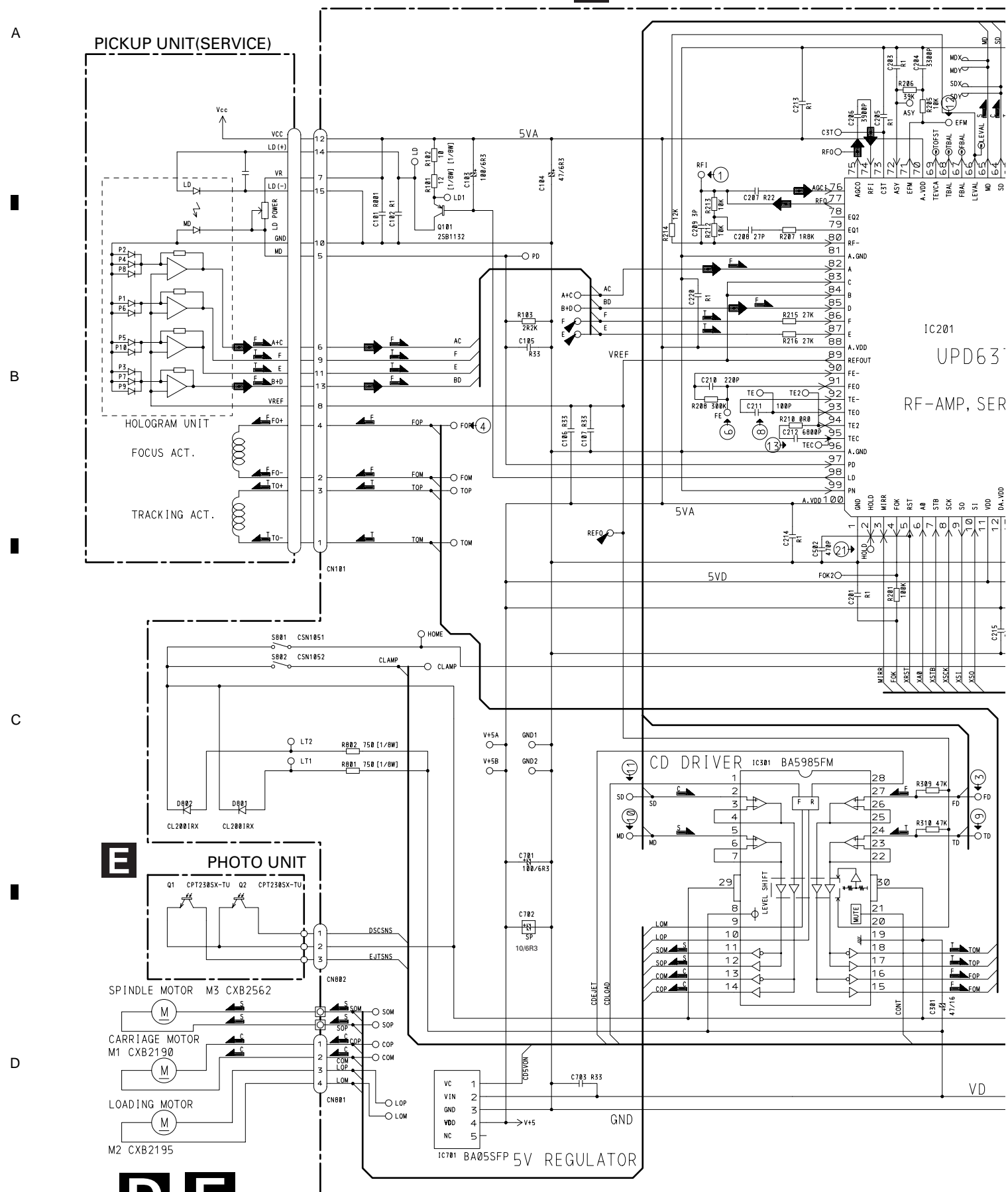
C KEYBOARD UNIT

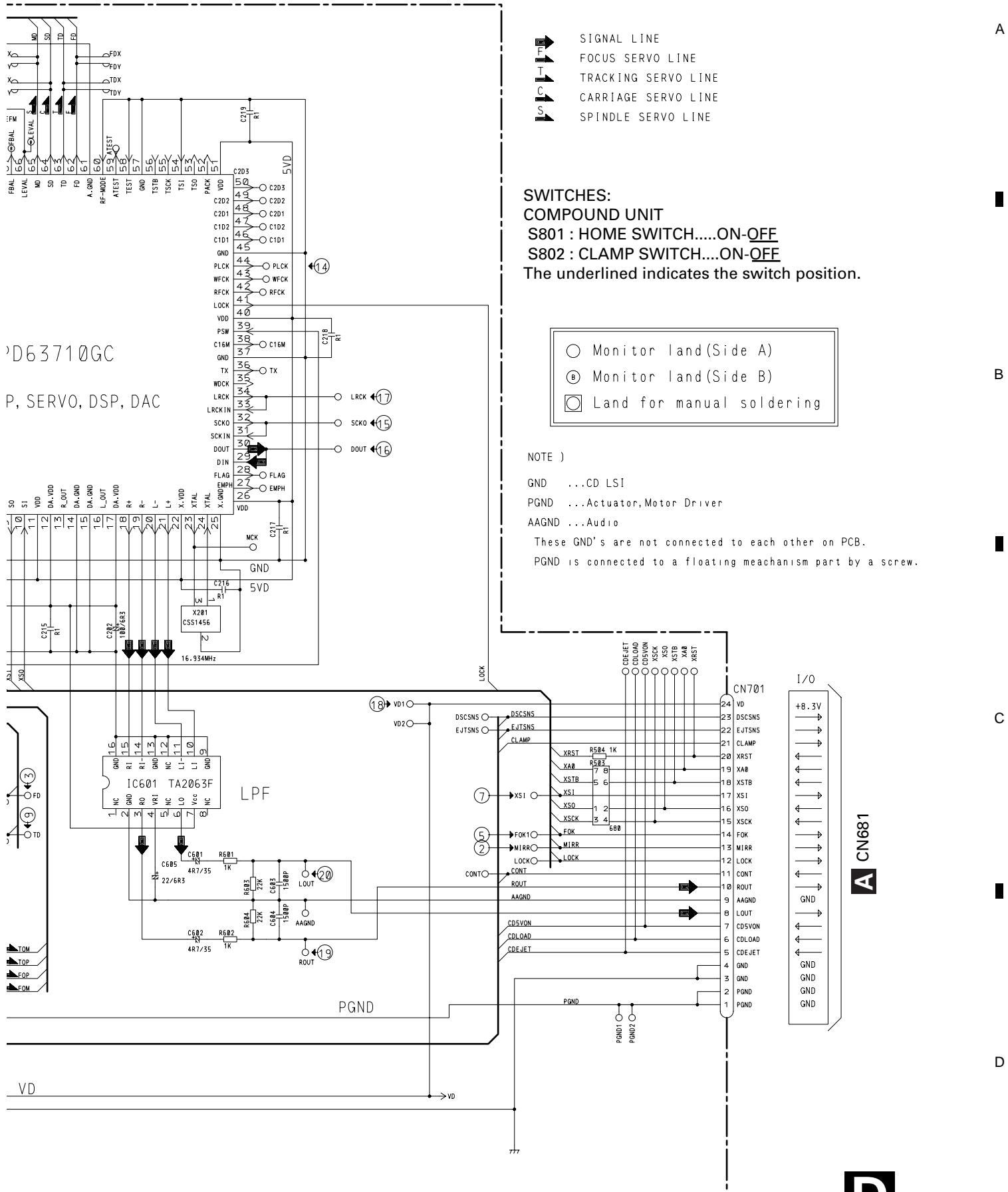




### 3.7 CD MECHANISM MODULE

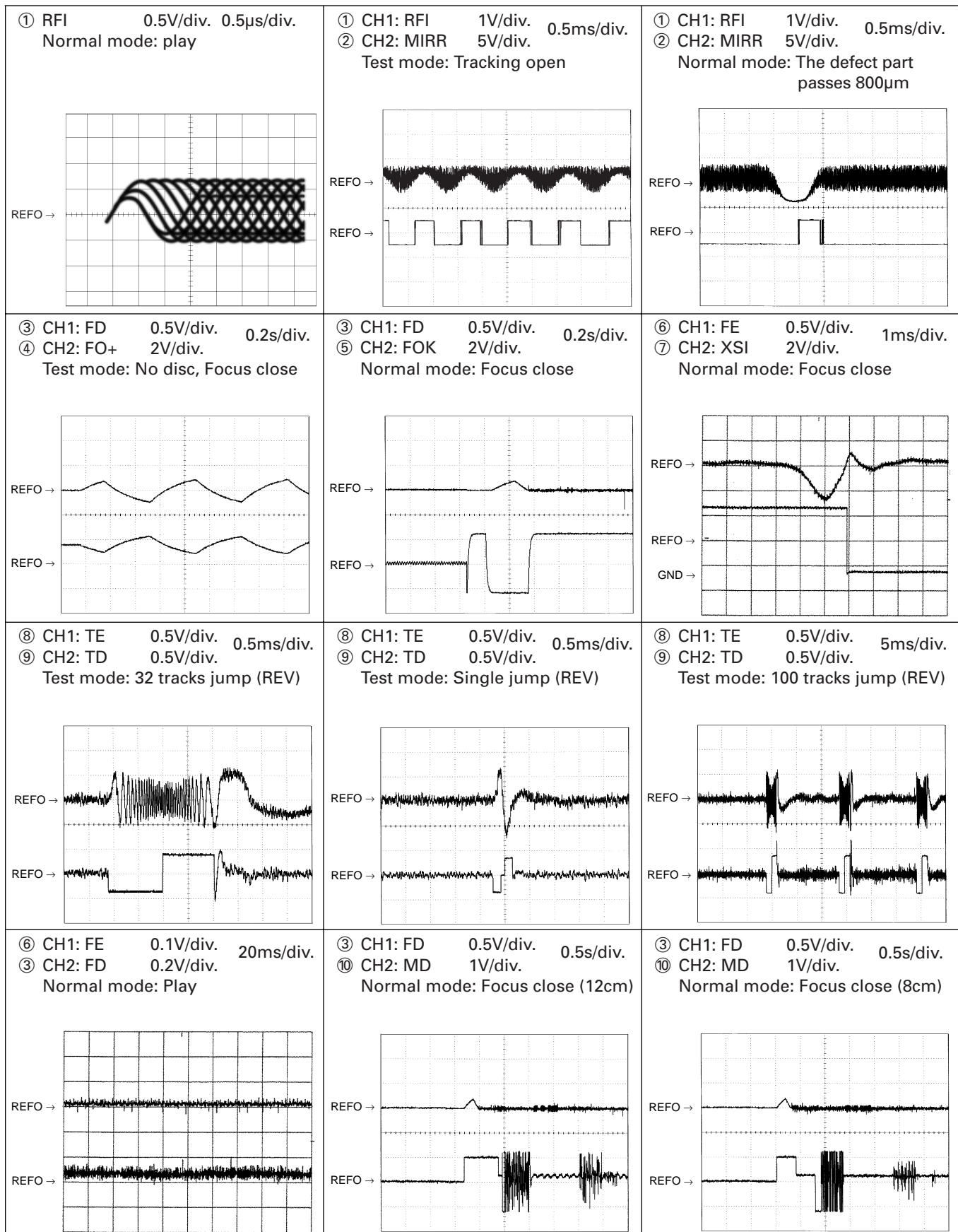
**D** COMPOUND UNIT

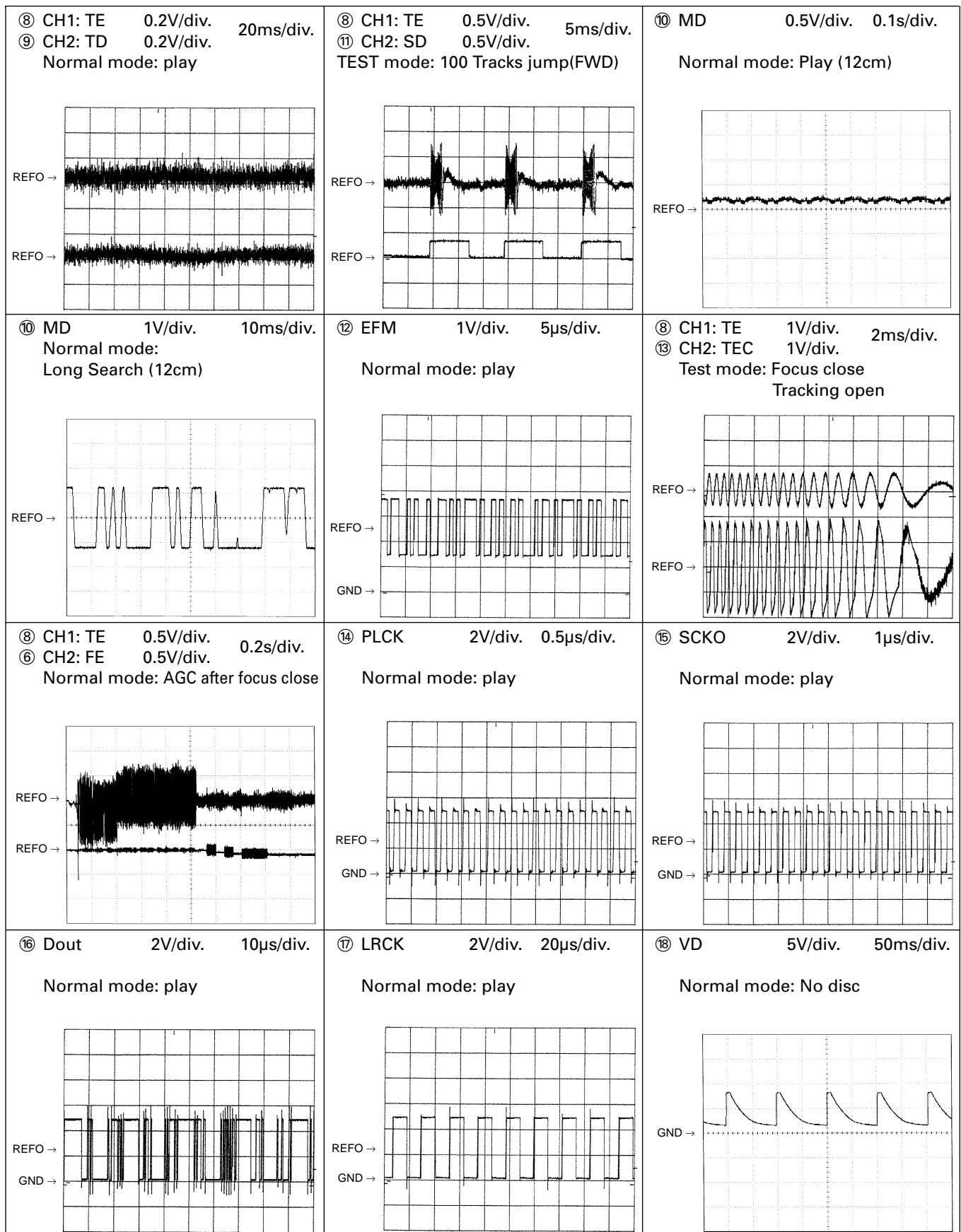


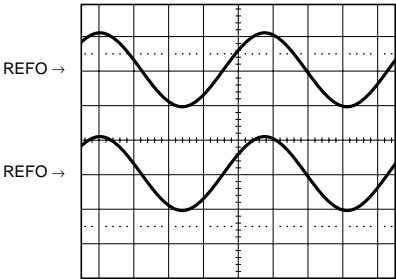
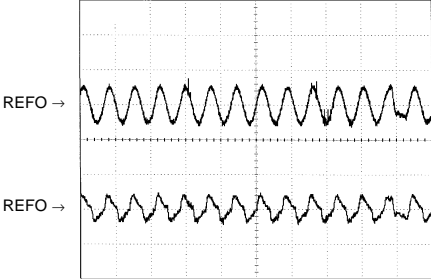
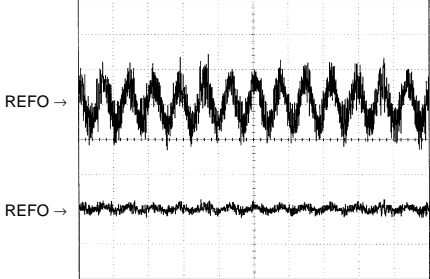
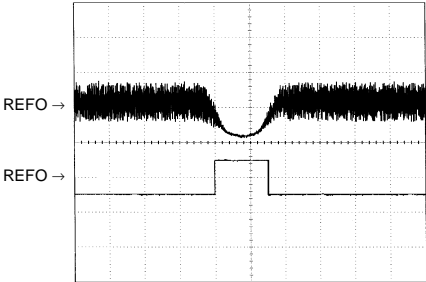
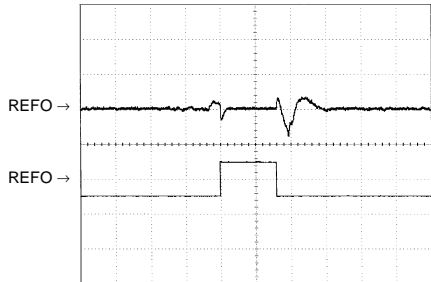
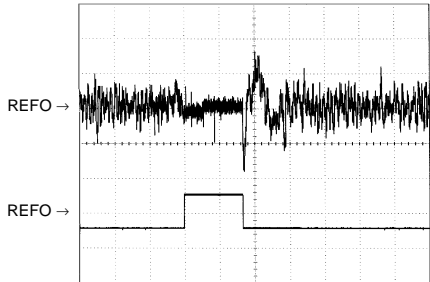


Note:1. The encircled numbers denote measuring points in the circuit diagram.  
2. Reference voltage  
REFO:2.5V

● Waveforms

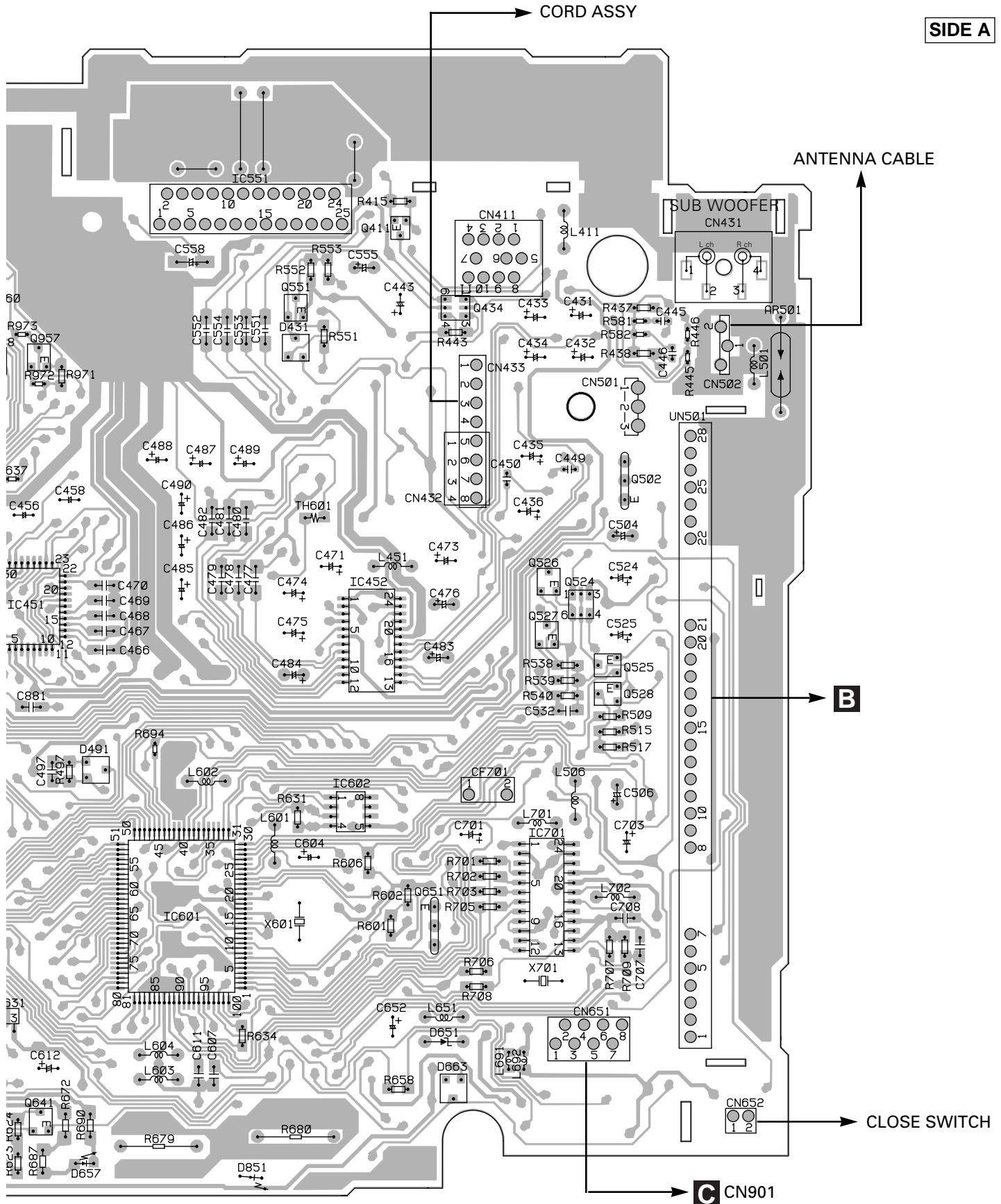




<div><div><div>⑰ CH1: R OUT 1V/div. 0.2ms/div.</div><div>⑳ CH2: L OUT 1V/div.</div><div>Normal mode: Play (1kHz 0dB)</div></div><div></div></div>	<div><div><div>⑥ CH1: FE 0.2V/div. 1ms/div.</div><div>③ CH2: FD 0.5V/div.</div><div>Normal mode: During AGC</div></div><div></div></div>	<div><div><div>⑧ CH1: TE 0.2V/div. 1ms/div.</div><div>⑨ CH2: TD 0.5V/div.</div><div>Normal mode: During AGC</div></div><div></div></div>
<div><div><div>① CH1: RFI 1V/div. 0.5ms/div.</div><div>② CH2: HOLD 5V/div.</div><div>Normal mode: The defect part passes 800μm(B.D)</div></div><div></div></div>	<div><div><div>③ CH1: FD 1V/div. 0.5ms/div.</div><div>② CH2: HOLD 5V/div.</div><div>Normal mode: The defect part passes 800μm(B.D)</div></div><div></div></div>	<div><div><div>⑨ CH1: TD 0.1V/div. 0.5ms/div.</div><div>② CH2: HOLD 5V/div.</div><div>Normal mode: The defect part passes 800μm(B.D)</div></div><div></div></div>





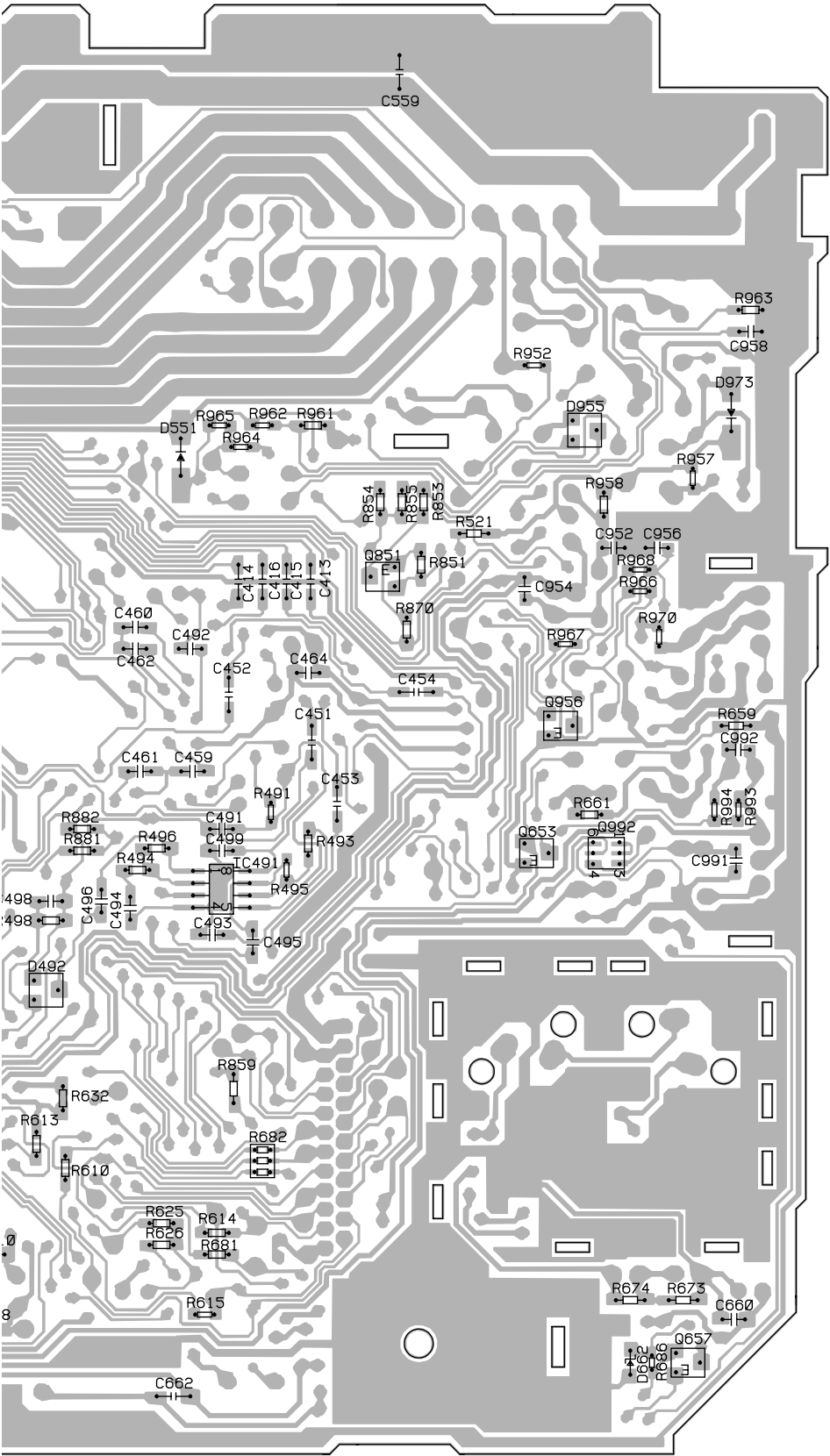


**A**

## TUNER AMP UNIT



SIDE B



IC, Q

IC411

Q431 Q412

Q432

Q452

Q453 Q851  
Q433

Q451

Q956

Q653 Q992

Q501  
IC491

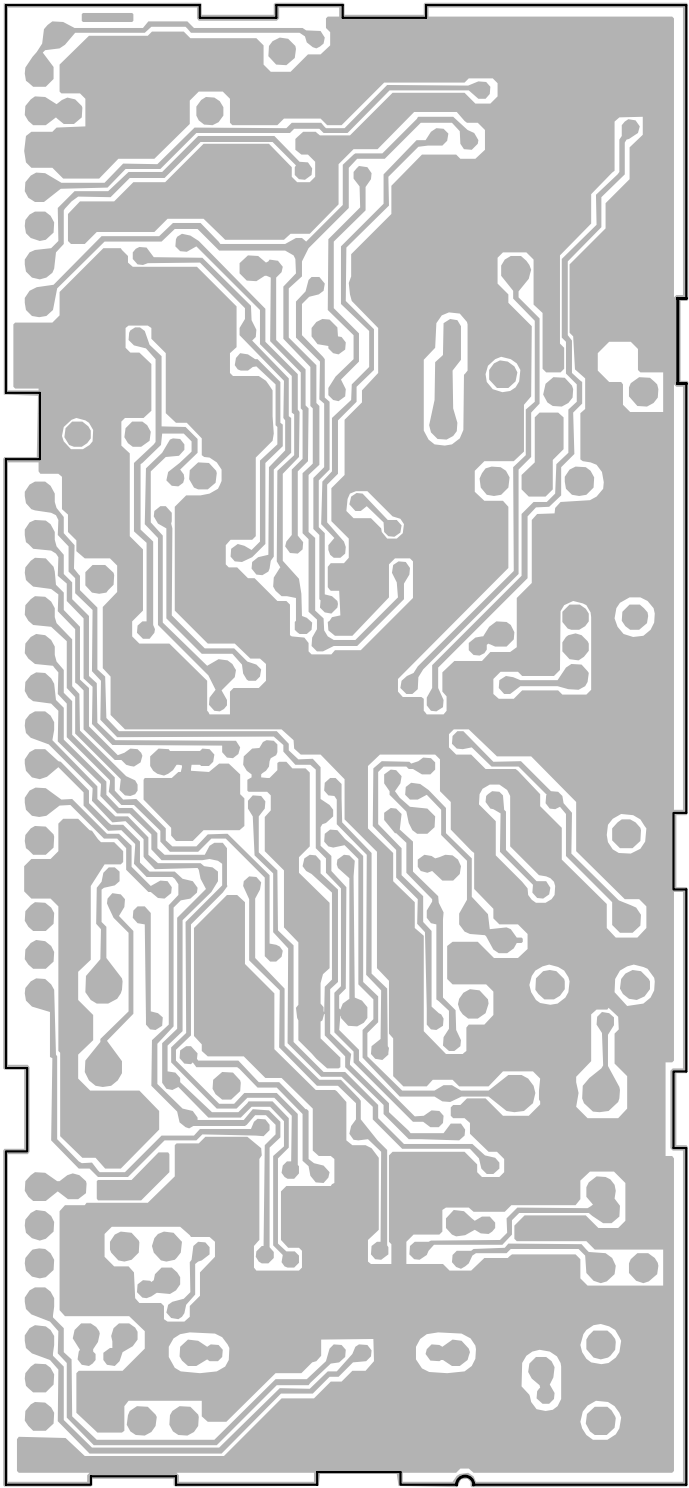
Q541 Q701

Q601

Q657



SIDE B



**B** FM/AM TUNER UNIT

## A

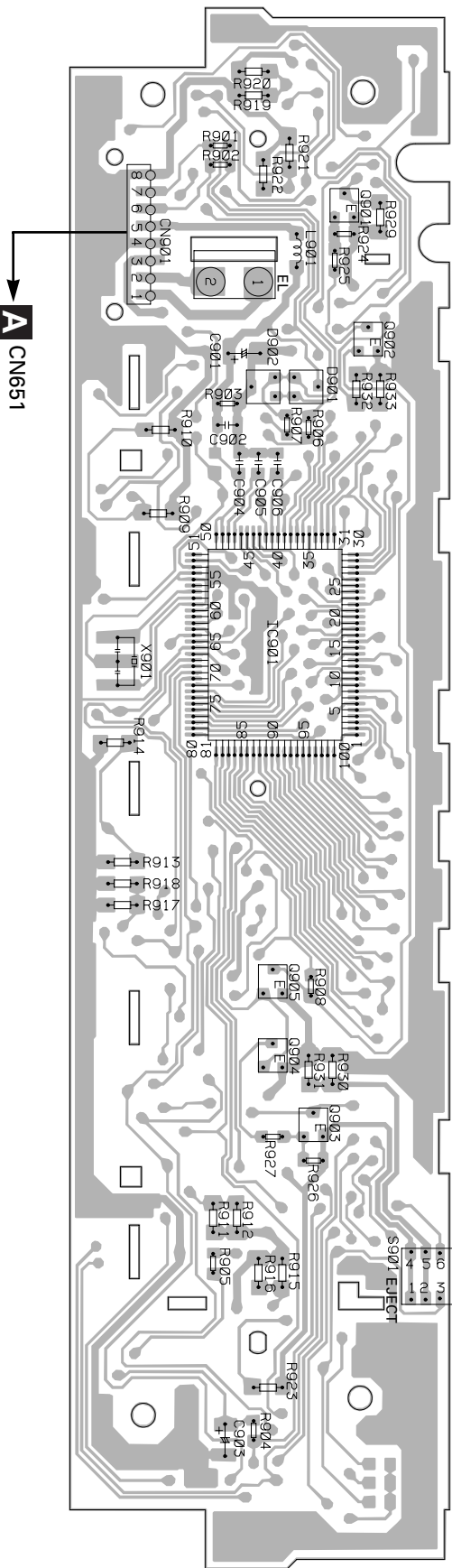


IC902



KEYBOARD UNIT

SIDE B



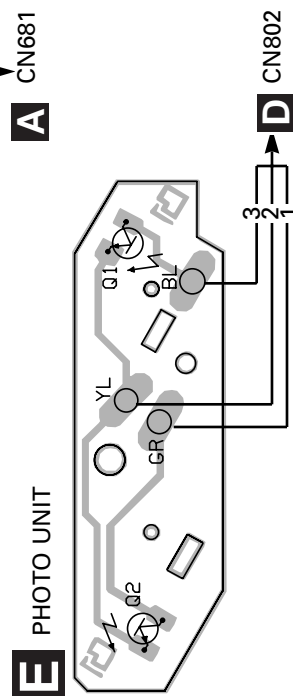
A CN651

IC-0

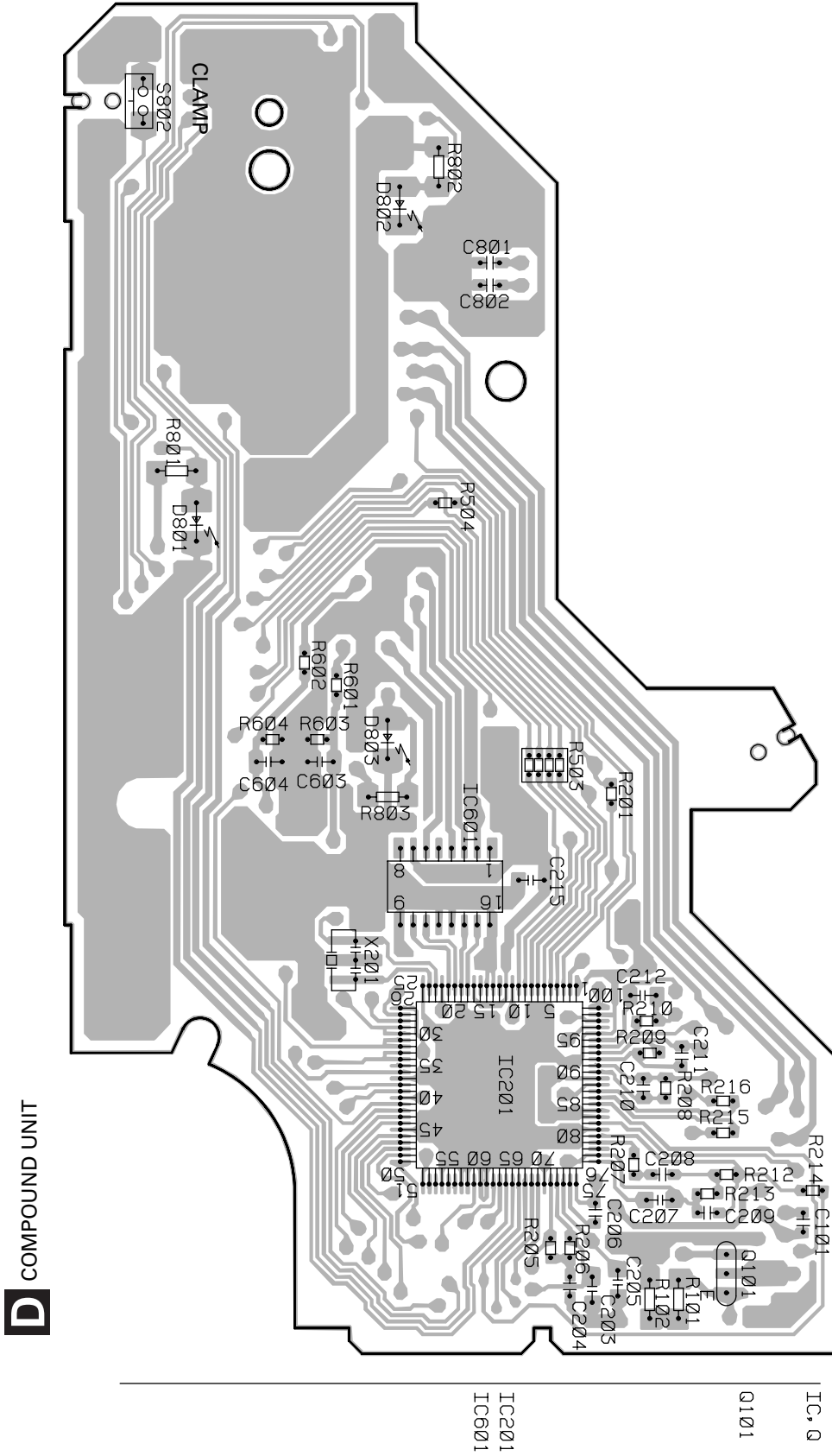
- 0902
- 0901
- 0903
- 0905
- 0904
- IC901



32  CN802



**SIDE B**



## 5. ELECTRICAL PARTS LIST

### NOTES:

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

Chip Resistor

RS1/○S○○○○J,RS1/○○S○○○○J

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

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

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
<b>A</b> Unit Number : CWM6190(DEH-P7000R/EW) Unit Name : Tuner Amp Unit		D 491 Diode	DA204K
		D 492 Diode	DA204K
		D 501 Diode	MA3160(L)
		D 551 Diode	1SR154-400
		D 651 Diode	MTZ5R6J(C)
MISCELLANEOUS		D 652 Diode	DA204K
IC 411 IC	CA0008AM	D 653 Diode	DA204K
IC 451 IC	PML004AF	D 654 Diode	DA204K
IC 452 IC	PA2028A	D 656 Diode	U1JU44
IC 491 IC	NJM4558MD	D 657 LED	CL170PGCD(AB)
IC 501 IC	S-81250PGPD		
IC 551 IC	PAL005A	D 659 Diode	U1JU44
IC 601 IC	PE5003B	D 660 Diode	U1JU44
IC 631 IC	S-80734ANDYI	D 662 Diode	MA8082(M)
IC 651 IC	PML006A	D 663 Diode	MA3062(M)
IC 701 IC	PM4009A	D 851 LED	BR4361F
Q 411 Transistor	2SA1586	D 951 Diode	ERA15-02VH
Q 412 Transistor	DTC124EK	D 952 Diode	ERA15-02VH
Q 431 Transistor	HN1C03F	D 955 Diode	MA152WK
Q 433 Transistor	HN1C03F	D 956 Diode	HZS6L(B1)
Q 434 Transistor	IMD2A	D 957 Diode	HZS7L(C2)
Q 451 Transistor	IMH3A	D 958 Diode	HZS6L(C3)
Q 453 Transistor	IMH3A	D 959 Diode	HZS9L(A2)
Q 501 Transistor	DTA124EK	D 960 Diode	HZS9L(B3)
Q 502 Transistor	2SC1740S	D 961 Diode	ERA15-02VH
Q 524 Transistor	IMH3A	D 973 Diode	1SR154-400
Q 525 Transistor	DTA114EK	D 992 Diode	HZS9L(B1)
Q 526 Transistor	2SD1757K	L 411 Inductor	LAU3R3J
Q 527 Transistor	2SD1757K	L 451 Ferri-Inductor	LAU101K
Q 528 Transistor	2SC2412K	L 501 Ferri-Inductor	LAU4R7K
Q 541 Transistor	2SC2412K	L 502 Inductor	CTF1399
Q 551 Transistor	DTC144EK	L 503 Inductor	CTF1399
Q 601 Transistor	DTA114EK	L 601 Inductor	LAU100K
Q 641 Transistor	DTC114EK	L 602 Ferri-Inductor	LAU2R2K
Q 651 Transistor	2SA933S	L 603 Ferri-Inductor	LAU2R2K
Q 652 Transistor	2SB1236	L 604 Ferri-Inductor	LAU2R2K
Q 653 Transistor	DTC124EK	L 651 Ferri-Inductor	LAU101K
Q 655 FET	2SK2356Z	L 652 Coil	CTH1228
Q 656 Transistor	2SC3295	L 653 Coil	CTH1228
Q 657 Transistor	2SC2412K	L 655 Inductor	CTF1483
Q 701 Transistor	DTA124EK	L 691 Inductor	CTF1399
Q 851 Transistor	2SA1037K	L 692 Inductor	CTF1399
Q 852 Transistor	DTC124EK	L 693 Inductor	CTF1399
Q 853 Transistor	2SC2412K	L 701 Ferri-Inductor	LAU101K
Q 951 Transistor	2SA1037K	L 702 Ferri-Inductor	LAU101K
Q 952 Transistor	2SC3673	L 951 Ferri-Inductor	LAU2R2K
Q 953 Transistor	IMX1	TH 601 Thermistor	CCX1037
Q 954 Transistor	2SD2396	TH 651 Posistor	CCX1042
Q 955 Transistor	2SB1238	CF 701 Filter	CTF1071
Q 956 Transistor	DTC114EK	X 601 Radiator 12.58291MHz	CSS1402
Q 957 Chip Transistor	2SC2712	X 701 Crystal Resonator 3.648MHz	CSS1447
Q 958 Transistor	DTC114EK		
Q 991 Transistor	2SD2396	BZ 601 FM/AM Tuner Unit	CWE1500
Q 992 Transistor	IMD2A	AR 501 Buzzer	CPV1050
D 431 Diode	MA152WK		DSP-201M
D 432 Diode	1SS133		

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
RESISTORS			
R 411	RS1/10S620J	R 522	RS1/10S681J
R 412	RS1/10S101J	R 523	RS1/10S473J
R 413	RS1/10S101J	R 526	RS1/10S104J
R 414	RS1/10S222J	R 527	RS1/10S104J
R 415	RS1/10S332J	R 530	RS1/10S681J
R 416	RS1/10S682J	R 531	RS1/10S473J
R 417	RS1/10S102J	R 532	RS1/10S681J
R 418	RS1/10S102J	R 533	RS1/10S473J
R 419	RS1/10S473J	R 534	RS1/10S222J
R 420	RS1/10S103J	R 535	RS1/10S222J
R 421	RS1/10S473J	R 536	RS1/10S223J
R 423	RS1/10S821J	R 537	RS1/10S223J
R 424	RS1/10S821J	R 538	RS1/10S224J
R 425	RS1/10S223J	R 539	RS1/10S224J
R 426	RS1/10S223J	R 540	RS1/10S224J
R 427	RS1/10S102J	R 541	RS1/10S162J
R 428	RS1/10S102J	R 542	RS1/10S162J
R 431	RS1/10S820J	R 543	RS1/10S102J
R 432	RS1/10S820J	R 544	RS1/10S393J
R 435	RS1/10S820J	R 545	RS1/10S272J
R 436	RS1/10S820J	R 546	RS1/10S272J
R 437	RS1/10S223J	R 547	RS1/10S0R0J
R 438	RS1/10S223J	R 548	RS1/16S153J
R 441	RS1/10S223J	R 549	RS1/16S474J
R 442	RS1/10S223J	R 551	RS1/10S103J
R 443	RS1/10S102J	R 552	RS1/10S103J
R 445	RS1/16S103J	R 553	RS1/10S331J
R 446	RS1/16S103J	R 581	RS1/16S331J
R 449	RS1/16S103J	R 582	RS1/16S331J
R 450	RS1/16S103J	R 585	RS1/16S331J
R 457	RS1/10S203J	R 586	RS1/16S331J
R 459	RS1/10S102J	R 602	RS1/10S473J
R 460	RS1/10S102J	R 603	RS1/10S473J
R 463	RS1/10S102J	R 604	RS1/10S102J
R 464	RS1/10S102J	R 606	RS1/10S473J
R 465	RS1/10S473J	R 607	RA3C102J
R 466	RS1/10S473J	R 610	RS1/10S222J
R 467	RS1/10S473J	R 611	RN1/10SE2202D
R 468	RS1/10S473J	R 614	RS1/10S222J
R 469	RS1/10S473J	R 615	RS1/10S222J
R 470	RS1/10S473J	R 616	RS1/10S473J
R 491	RS1/10S102J	R 617	RS1/10S473J
R 492	RS1/10S102J	R 618	RS1/10S473J
R 493	RS1/10S333J	R 622	RS1/10S102J
R 494	RS1/10S333J	R 623	RS1/10S202J
R 495	RS1/10S104J	R 624	RS1/10S102J
R 496	RS1/10S104J	R 625	RS1/10S102J
R 497	RS1/10S104J	R 626	RS1/10S822J
R 498	RS1/10S104J	R 633	RS1/8S473J
R 501	RS1/16S0R0J	R 634	RS1/10S0R0J
R 502	RS1/10S222J	R 636	RS1/10S473J
R 503	RS1/10S222J	R 637	RS1/16S101J
R 508	RS1/10S681J	R 651	RS1/10S222J
R 509	RS1/10S473J	R 652	RS1/10S472J
R 510	RS1/10S681J	R 653	RS1/10S222J
R 511	RS1/10S473J	R 654	RS1/8S222J
R 512	RS1/10S681J	R 655	RS1/8S222J
R 513	RS1/10S473J	R 656	RS1/8S222J
R 514	RS1/10S681J	R 657	RS1/10S473J
R 515	RS1/10S473J	R 658	RS1/10S472J
R 516	RS1/10S681J	R 659	RS1/8S472J
R 517	RS1/10S472J	R 660	RD1/4PU102J
R 518	RS1/10S103J	R 661	RS1/10S1R0J
R 520	RS1/10S681J	R 662	RD1/2PM390J
R 521	RS1/8S151J	R 663	RD1/2PM390J

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====Circuit Symbol and No.===Part Name	Part No.	====Circuit Symbol and No.===Part Name	Part No.
R 664	RS1/16S473J	R 968	RS1/10S102J
R 667	RS1/10S103J	R 969	RD1/4PU221J
R 668	RS1/10S472J	R 970	RS1/10S1R0J
R 669	RS1/16S912J	R 971	RS1/10S473J
R 670	RS1/10S103J	R 972	RS1/16S103J
R 671	RS1/10S472J	R 973	RS1/16S473J
R 672	RS1/8S151J	R 974	RS1/10S103J
R 673	RS1/8S225J	R 975	RS1/16S473J
R 674	RS1/8S225J	R 991	RD1/4PU221J
R 675	RS1/16S473J	R 992	RD1/4PU221J
R 676	RS1/8S474J	R 993	RS1/10S472J
R 677	RS1/8S474J	R 994	RS1/10S222J
R 678	RS1/8S105J		
R 679	RD1/2PM182J	CAPACITORS	
R 680	RD1/2PM182J		
R 681	RS1/10S681J	C 411	CKSQYB104K25
R 682	RA3C102J	C 412	CKSQYB473K25
R 685	RS1/10S152J	C 413	CKSYB105K16
R 686	RS1/16S622J	C 414	CKSYB105K16
R 687	RS1/8S151J	C 415	CKSYB105K16
R 688	RS1/16S912J	C 416	CKSYB105K16
R 690	RS1/8S151J	C 431	CEJA100M16
R 691	RS1/10S102J	C 432	CEJA100M16
R 692	RS1/8S391J	C 435	CEJA100M16
R 693	RS1/8S391J	C 436	CEJA100M16
R 694	RS1/16S473J	C 443	CEJA220M16
R 701	RS1/10S102J	C 445	CKLSRB222K50
R 702	RS1/10S102J	C 446	CKLSRB222K50
R 703	RS1/10S102J	C 449	CKLSRB222K50
R 705	RS1/10S681J	C 450	CKLSRB222K50
R 706	RS1/10S0R0J	C 451	CKSYB224K25
R 707	RS1/10S0R0J	C 452	CKSYB224K25
R 708	RS1/10S102J	C 453	CKSYB105K16
R 709	RS1/10S0R0J	C 454	CKSYB105K16
R 710	RS1/10S225J	C 455	CEJANP4R7M16
R 851	RS1/10S223J	C 456	CEJANP4R7M16
R 852	RS1/16S223J	C 457	CEJANP4R7M16
R 853	RS1/10S103J	C 458	CEJANP4R7M16
R 854	RS1/10S272J	C 459	CKSQYB473K25
R 855	RS1/10S223J	C 460	CKSQYB473K25
R 856	RS1/10S473J	C 461	CKSQYB473K25
R 857	RS1/16S473J	C 462	CKSQYB473K25
R 858	RS1/16S473J	C 463	CEJA470M10
R 859	RS1/8S471J	C 464	CKSQYB104K25
R 868	RD1/4PU102J	C 465	CEJA100M16
R 870	RS1/10S102J	C 466	CKSQYB153K50
R 881	RS1/10S103J	C 467	CKSQYB473K25
R 882	RS1/10S102J	C 468	CKSQYB123K50
R 951	RD1/4PU102J	C 469	CKSQYB333K50
R 952	RS1/10S153J	C 470	CKSQYB153K50
R 953	RS1/16S472J	C 471	CEJA100M16
R 954	RS1/16S472J	C 472	CKSQYB471K50
R 955	RS1/10S102J	C 473	CEJA100M16
R 956	RD1/4PU102J	C 474	CEJA100M16
R 957	RS1/10S101J	C 475	CEJA100M16
R 958	RS1/10S622J	C 476	CEAL330M25
R 959	RS1/10S473J	C 477	CKSYB105K16
R 960	RS1/16S473J	C 478	CKSYB105K16
R 961	RS1/10S103J	C 479	CKSYB105K16
R 962	RS1/10S473J	C 480	CKSYB105K16
R 963	RS1/10S472J	C 481	CKSYB105K16
R 964	RS1/10S103J	C 482	CKSYB105K16
R 965	RS1/10S473J	C 483	CEAL330M25
R 966	RS1/10S473J	C 484	CASQA4R7M16
R 967	RS1/10S102J	C 485	CEAL4R7M35

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# DEH-P7000R,P7000R-W,P6000R

====Circuit Symbol and No.==Part Name			Part No.	====Circuit Symbol and No.==Part Name			Part No.
Q	953	Transistor	IMX1	RESISTORS			
Q	954	Transistor	2SD2396				
Q	955	Transistor	2SB1238	R	411		RS1/10S620J
Q	956	Transistor	DTC114EK	R	412		RS1/10S101J
Q	957	Chip Transistor	2SC2712	R	413		RS1/10S101J
				R	414		RS1/10S222J
				R	415		RS1/10S332J
Q	958	Transistor	DTC114EK				
Q	991	Transistor	2SD2396				
Q	992	Transistor	IMD2A	R	416		RS1/10S682J
D	431	Diode	MA152WK	R	417		RS1/10S102J
D	432	Diode	1SS133	R	418		RS1/10S102J
				R	419		RS1/10S473J
				R	420		RS1/10S103J
D	491	Diode	DA204K				
D	492	Diode	DA204K				
D	501	Diode	MA3160(L)	R	421		RS1/10S473J
D	551	Diode	1SR154-400	R	423		RS1/10S821J
D	651	Diode	MTZ5R6J(C)	R	424		RS1/10S821J
				R	425		RS1/10S223J
				R	426		RS1/10S223J
D	652	Diode	DA204K				
D	653	Diode	DA204K				
D	654	Diode	DA204K	R	427		RS1/10S102J
D	656	Diode	U1JU44	R	428		RS1/10S102J
D	657	LED	CL170PGCD(AB)	R	431		RS1/10S820J
				R	432		RS1/10S820J
				R	435		RS1/10S820J
D	659	Diode	U1JU44				
D	660	Diode	U1JU44				
D	662	Diode	MA8082(M)	R	436		RS1/10S820J
D	663	Diode	MA3062(M)	R	437		RS1/10S223J
D	851	LED	BR4361F	R	438		RS1/10S223J
				R	441		RS1/10S223J
				R	442		RS1/10S223J
D	951	Diode	ERA15-02VH				
D	952	Diode	ERA15-02VH				
D	955	Diode	MA152WK	R	443		RS1/10S102J
D	956	Diode	HZS6L(B1)	R	445		RS1/16S103J
D	957	Diode	HZS7L(C2)	R	446		RS1/16S103J
				R	449		RS1/16S103J
				R	450		RS1/16S103J
D	958	Diode	HZS6L(C3)				
D	959	Diode	HZS9L(A2)				
D	960	Diode	HZS9L(B3)	R	457		RS1/10S203J
D	961	Diode	ERA15-02VH	R	459		RS1/10S102J
D	973	Diode	1SR154-400	R	460		RS1/10S102J
				R	463		RS1/10S102J
				R	464		RS1/10S102J
D	992	Diode	HZS9L(B1)				
L	411	Inductor	LAU3R3J				
L	451	Ferri-Inductor	LAU101K	R	465		RS1/10S473J
L	501	Ferri-Inductor	LAU4R7K	R	466		RS1/10S473J
L	502	Inductor	CTF1399	R	467		RS1/10S473J
				R	468		RS1/10S473J
				R	469		RS1/10S473J
L	503	Inductor	CTF1399				
L	601	Inductor	LAU100K				
L	602	Ferri-Inductor	LAU2R2K	R	470		RS1/10S473J
L	603	Ferri-Inductor	LAU2R2K	R	491		RS1/10S102J
L	604	Ferri-Inductor	LAU2R2K	R	492		RS1/10S102J
				R	493		RS1/10S333J
				R	494		RS1/10S333J
L	651	Ferri-Inductor	LAU101K				
L	652	Coil	CTH1228				
L	653	Coil	CTH1228	R	495		RS1/10S104J
L	655	Inductor	CTF1483	R	496		RS1/10S104J
L	691	Inductor	CTF1399	R	497		RS1/10S104J
				R	498		RS1/10S104J
				R	501		RS1/16S0R0J
L	692	Inductor	CTF1399				
L	693	Inductor	CTF1399				
L	701	Ferri-Inductor	LAU101K	R	502		RS1/10S222J
L	702	Ferri-Inductor	LAU101K	R	503		RS1/10S222J
L	951	Ferri-Inductor	LAU2R2K	R	508		RS1/10S681J
				R	509		RS1/10S473J
				R	510		RS1/10S681J
TH	601	Thermistor	CCX1037				
TH	651	Posistor	CCX1042				
CF	701	Filter	CTF1071	R	511		RS1/10S473J
X	601	Radiator 12.58291MHz	CSS1402	R	512		RS1/10S681J
X	701	Crystal Resonator 3.648MHz	CSS1447	R	513		RS1/10S473J
				R	514		RS1/10S681J
				R	515		RS1/10S473J
BZ	601	FM/AM Tuner Unit	CWE1500				
AR	501	Buzzer	CPV1050				
			DSP-201M	R	516		RS1/10S681J
				R	517		RS1/10S472J
				R	518		RS1/10S103J
				R	520		RS1/10S681J
				R	521		RS1/8S151J

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 522	RS1/10S681J	R 664	RS1/16S473J
R 523	RS1/10S473J	R 667	RS1/10S103J
R 526	RS1/10S104J	R 668	RS1/10S472J
R 527	RS1/10S104J	R 669	RS1/16S912J
R 530	RS1/10S681J	R 670	RS1/10S103J
R 531	RS1/10S473J	R 671	RS1/10S472J
R 532	RS1/10S681J	R 672	RS1/8S151J
R 533	RS1/10S473J	R 673	RS1/8S225J
R 534	RS1/10S222J	R 674	RS1/8S225J
R 535	RS1/10S222J	R 675	RS1/16S473J
R 536	RS1/10S223J	R 676	RS1/8S474J
R 537	RS1/10S223J	R 677	RS1/8S474J
R 538	RS1/10S224J	R 678	RS1/8S105J
R 539	RS1/10S224J	R 679	RD1/2PM182J
R 540	RS1/10S224J	R 680	RD1/2PM182J
R 541	RS1/10S162J	R 681	RS1/10S681J
R 542	RS1/10S162J	R 682	RA3C102J
R 543	RS1/10S102J	R 685	RS1/10S152J
R 544	RS1/10S393J	R 686	RS1/16S622J
R 545	RS1/10S272J	R 687	RS1/8S151J
R 546	RS1/10S272J	R 688	RS1/16S912J
R 547	RS1/10S0R0J	R 690	RS1/8S151J
R 548	RS1/16S153J	R 691	RS1/10S102J
R 549	RS1/16S474J	R 692	RS1/8S391J
R 551	RS1/10S103J	R 693	RS1/8S391J
R 552	RS1/10S103J	R 694	RS1/16S473J
R 553	RS1/10S331J	R 701	RS1/10S102J
R 581	RS1/16S331J	R 702	RS1/10S102J
R 582	RS1/16S331J	R 703	RS1/10S102J
R 585	RS1/16S331J	R 705	RS1/10S681J
R 586	RS1/16S331J	R 706	RS1/10S0R0J
R 602	RS1/10S473J	R 707	RS1/10S0R0J
R 603	RS1/10S473J	R 708	RS1/10S102J
R 604	RS1/10S102J	R 709	RS1/10S0R0J
R 606	RS1/10S473J	R 710	RS1/10S225J
R 607	RA3C102J	R 851	RS1/10S223J
R 610	RS1/10S222J	R 852	RS1/16S223J
R 611	RN1/10SE2202D	R 853	RS1/10S103J
R 614	RS1/10S222J	R 854	RS1/10S272J
R 615	RS1/10S222J	R 855	RS1/10S223J
R 616	RS1/10S473J	R 856	RS1/10S473J
R 617	RS1/10S473J	R 857	RS1/16S473J
R 618	RS1/10S473J	R 858	RS1/16S473J
R 622	RS1/10S102J	R 859	RS1/8S471J
R 623	RS1/10S202J	R 868	RD1/4PU102J
R 624	RS1/10S102J	R 870	RS1/10S102J
R 625	RS1/10S102J	R 881	RS1/10S103J
R 626	RS1/10S822J	R 882	RS1/10S102J
R 633	RS1/8S473J	R 951	RD1/4PU102J
R 634	RS1/10S0R0J	R 952	RS1/10S153J
R 635	RS1/10S473J	R 953	RS1/16S472J
R 637	RS1/16S101J	R 954	RS1/16S472J
R 651	RS1/10S222J	R 955	RS1/10S102J
R 652	RS1/10S472J	R 956	RD1/4PU102J
R 653	RS1/10S222J	R 957	RS1/10S101J
R 654	RS1/8S222J	R 958	RS1/10S622J
R 655	RS1/8S222J	R 959	RS1/10S473J
R 656	RS1/8S222J	R 960	RS1/16S473J
R 657	RS1/10S473J	R 961	RS1/10S103J
R 658	RS1/10S472J	R 962	RS1/10S473J
R 659	RS1/8S472J	R 963	RS1/10S472J
R 660	RD1/4PU102J	R 964	RS1/10S103J
R 661	RS1/10S1R0J	R 965	RS1/10S473J
R 662	RD1/2PM390J	R 966	RS1/10S473J
R 663	RD1/2PM390J	R 967	RS1/10S102J

# DEH-P7000R,P7000R-W,P6000R

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 968	RS1/10S102J	C 493	CKSQYB104K25
R 969	RD1/4PU221J	C 494	CKSQYB104K25
R 970	RS1/10S1R0J	C 495	CKSQYB104K25
R 971	RS1/10S473J	C 496	CKSQYB104K25
R 972	RS1/16S103J	C 497	CKSQYB104K25
R 973	RS1/16S473J	C 498	CKSQYB104K25
R 974	RS1/10S103J	C 499	CKSQYB103K25
R 975	RS1/16S473J	C 500	CKSQYB104K25
R 991	RD1/4PU221J	C 501	CKSQYB103K25
R 992	RD1/4PU221J	C 502	CKSQYB223K50
R 993	RS1/10S472J	C 503	CKSQYB223K50
R 994	RS1/10S222J	C 504	CASQA150K16
CAPACITORS		C 505	CKSQYB102K50
C 411	CKSQYB104K25	C 506	CEAL101M6R3
C 412	CKSQYB473K25	C 507	CKSQYB473K25
C 413	CKSYB105K16	C 521	CKSRYB102K50
C 414	CKSYB105K16	C 524	CEAL1R0M50
C 415	CKSYB105K16	C 525	CEAL1R0M50
C 416	CKSYB105K16	C 531	CKSQYB182K50
C 431	CEJA100M16	C 532	CKSQYB223K50
C 432	CEJA100M16	C 533	CKSQYB123K50
C 435	CEJA100M16	C 534	CKSQYB123K50
C 436	CEJA100M16	C 535	CKSQYB472K50
C 443	CEJA220M16	C 536	CCSQCH101J50
C 445	CKLSRB222K50	C 537	CCSQCH101J50
C 446	CKLSRB222K50	C 541	CKSQYB472K50
C 449	CKLSRB222K50	C 551	CKSYB224K25
C 450	CKLSRB222K50	C 552	CKSYB224K25
C 451	CKSYB224K25	C 553	CKSYB224K25
C 452	CKSYB224K25	C 554	CKSYB224K25
C 453	CKSYB105K16	C 555	CEJA330M10
C 454	CKSYB105K16	C 557	CKSYB105K16
C 455	CEJANP4R7M16	C 558	CCH1219
C 456	CEJANP4R7M16	C 559	CKSYB104K50
C 457	CEJANP4R7M16	C 560	CCH1330
C 458	CEJANP4R7M16	C 561	CKSQYB473K25
C 459	CKSQYB473K25	C 601	CCSQCH200J50
C 460	CKSQYB473K25	C 602	CCSQCH200J50
C 461	CKSQYB473K25	C 603	CKSYB105K16
C 462	CKSQYB473K25	C 604	CEAL4R7M35
C 463	CEJA470M10	C 605	CCSQCH101J50
C 464	CKSQYB104K25	C 607	CCSQCH101J50
C 465	CEJA100M16	C 608	CCSQCH101J50
C 466	CKSQYB153K50	C 609	CCSQCH101J50
C 467	CKSQYB473K25	C 610	CCSQCH101J50
C 468	CKSQYB123K50	C 611	CCSQCH101J50
C 469	CKSQYB333K50	C 612	CEAL2R2M50
C 470	CKSQYB153K50	C 651	CCSQCH101J50
C 471	CEJA100M16	C 652	CEAL4R7M35
C 472	CKSQYB471K50	C 653	CKSRYB222K50
C 473	CEJA100M16	C 655	CCH1327
C 474	CEJA100M16	C 656	CCH1327
C 475	CEJA100M16	C 657	CCG1096
C 476	CEAL330M25	C 658	CCG1089
C 477	CKSYB105K16	C 659	CEJA470M16
C 478	CKSYB105K16	C 660	CKSQYB102K50
C 479	CKSYB105K16	C 662	CCG1095
C 480	CKSYB105K16	C 670	CKSQYB473K25
C 481	CKSYB105K16	C 701	CEJA220M6R3
C 482	CKSYB105K16	C 702	CKSQYB104K25
C 483	CEAL330M25	C 703	CEJA220M6R3
C 484	CASQA4R7M16	C 704	CKSQYB104K25
C 485	CEAL4R7M35	C 705	CCSQCH270J50
C 486	CEAL4R7M35	C 706	CCSQCH270J50
C 489	CEAL4R7M35	C 707	CKSQYB104K25
C 490	CEAL4R7M35	C 708	CKSQYB471K50
C 491	CKLSQB152K50	C 709	CKSQYB471K50
C 492	CKLSQB152K50	C 881	CKSQYB473K25
		C 951	CCH1325
		C 952	CKSQYB473K25


====Circuit Symbol and No.==Part Name			Part No.	====Circuit Symbol and No.==Part Name			Part No.
C	953		CEJA101M10	D	654	Diode	DA204K
C	954		CKSQYB473K25	D	656	Diode	U1JU44
C	955		CEJA101M16	D	657	LED	CL170PGCD(AB)
C	956		CKSQYB103K25	D	659	Diode	U1JU44
C	957	330μF/16V	CCH1326	D	660	Diode	U1JU44
C	958		CKSQYB102K50	D	662	Diode	MA8082(M)
C	959		CKSQYB105K16	D	663	Diode	MA3062(M)
C	989	470μF/16V	CCH1183	D	951	Diode	ERA15-02VH
C	991		CKSQYB473K25	D	952	Diode	ERA15-02VH
C	992		CKSQYB102K50	D	955	Diode	MA152WK
C	993		CEJA101M10	D	956	Diode	HZS6L(B1)
<div>A</div>	Unit Number : CWM6194(DEH-P6000R/EW)			D	957	Diode	HZS7L(C2)
	Unit Name : Tuner Amp Unit			D	958	Diode	HZS6L(C3)
				D	959	Diode	HZS9L(A2)
				D	960	Diode	HZS9L(B3)
				D	961	Diode	ERA15-02VH
MISCELLANEOUS				D	973	Diode	1SR154-400
IC	411	IC	CA0008AM	D	992	Diode	HZS9L(B1)
IC	451	IC	PML004AF	L	411	Inductor	LAU3R3J
IC	491	IC	NJM4558MD	L	501	Ferri-Inductor	LAU4R7K
IC	501	IC	S-81250PGPD				
IC	551	IC	PAL005A	L	502	Inductor	CTF1399
IC	601	IC	PE5003B	L	503	Inductor	CTF1399
IC	631	IC	S-80734ANDYI	L	601	Inductor	LAU100K
IC	651	IC	PML006A	L	602	Ferri-Inductor	LAU2R2K
IC	701	IC	PM4009A	L	603	Ferri-Inductor	LAU2R2K
Q	411	Transistor	2SA1586	L	604	Ferri-Inductor	LAU2R2K
Q	412	Transistor	DTC124EK	L	651	Ferri-Inductor	LAU101K
Q	431	Transistor	IMH3A	L	652	Coil	CTH1228
Q	434	Transistor	IMD2A	L	653	Coil	CTH1228
Q	501	Transistor	DTA124EK	L	655	Inductor	CTF1483
Q	502	Transistor	2SC1740S				
Q	524	Transistor	IMH3A	L	691	Inductor	CTF1399
Q	525	Transistor	DTA114EK	L	692	Inductor	CTF1399
Q	526	Transistor	2SD1757K	L	693	Inductor	CTF1399
Q	527	Transistor	2SD1757K	L	701	Ferri-Inductor	LAU101K
Q	528	Transistor	2SC2412K	L	702	Ferri-Inductor	LAU101K
Q	541	Transistor	2SC2412K	L	951	Ferri-Inductor	LAU2R2K
Q	551	Transistor	DTC144EK	TH	601	Thermistor	CCX1037
Q	601	Transistor	DTA114EK	TH	651	Posistor	CCX1042
Q	641	Transistor	DTC114EK	CF	701	Filter	CTF1071
Q	651	Transistor	2SA933S	X	601	Radiator 12.58291MHz	CSS1402
Q	652	Transistor	2SB1236	X	701	Crystal Resonator 3.648MHz	CSS1447
Q	653	Transistor	DTC124EK			FM/AM Tuner Unit	CWE1500
Q	655	FET	2SK2356Z	BZ	601	Buzzer	CPV1050
Q	656	Transistor	2SC3295	AR	501		DSP-201M
Q	657	Transistor	2SC2412K	RESISTORS			
Q	701	Transistor	DTA124EK	R	411		RS1/10S620J
Q	951	Transistor	2SA1037K	R	412		RS1/10S101J
Q	952	Transistor	2SC3673	R	413		RS1/10S101J
Q	953	Transistor	IMX1	R	414		RS1/10S222J
Q	954	Transistor	2SD2396	R	415		RS1/10S332J
Q	955	Transistor	2SB1238	R	416		RS1/10S682J
Q	956	Transistor	DTC114EK	R	417		RS1/10S102J
Q	957	Chip Transistor	2SC2712	R	418		RS1/10S102J
Q	958	Transistor	DTC114EK	R	419		RS1/10S473J
Q	991	Transistor	2SD2396	R	420		RS1/10S103J
Q	992	Transistor	IMD2A	R	421		RS1/10S473J
D	431	Diode	MA152WK	R	423		RS1/10S821J
D	432	Diode	1SS133	R	424		RS1/10S821J
D	491	Diode	DA204K	R	425		RS1/10S223J
D	492	Diode	DA204K	R	426		RS1/10S223J
D	501	Diode	MA3160(LMH)	R	427		RS1/10S102J
D	551	Diode	1SR154-400	R	428		RS1/10S102J
D	651	Diode	MTZ5R6J(C)	R	431		RS1/10S821J
D	652	Diode	DA204K	R	432		RS1/10S821J
D	653	Diode	DA204K	R	437		RS1/10S223J

# DEH-P7000R,P7000R-W,P6000R

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 438	RS1/10S223J	R 615	RS1/10S222J
R 443	RS1/10S102J	R 616	RS1/10S473J
R 445	RS1/16S0R0J	R 617	RS1/10S473J
R 446	RS1/16S0R0J	R 618	RS1/10S473J
R 451	RS1/10S0R0J	R 622	RS1/10S102J
R 452	RS1/10S0R0J	R 623	RS1/10S202J
R 491	RS1/10S102J	R 624	RS1/10S102J
R 492	RS1/10S102J	R 625	RS1/10S102J
R 493	RS1/10S333J	R 626	RS1/10S822J
R 494	RS1/10S333J	R 633	RS1/8S473J
R 495	RS1/10S104J	R 634	RS1/10S0R0J
R 496	RS1/10S104J	R 636	RS1/10S473J
R 497	RS1/10S104J	R 637	RS1/16S101J
R 498	RS1/10S104J	R 651	RS1/10S222J
R 501	RS1/16S0R0J	R 652	RS1/10S472J
R 502	RS1/10S222J	R 653	RS1/10S222J
R 503	RS1/10S222J	R 654	RS1/8S222J
R 508	RS1/10S681J	R 655	RS1/8S222J
R 509	RS1/10S473J	R 656	RS1/8S222J
R 510	RS1/10S681J	R 657	RS1/10S473J
R 511	RS1/10S473J	R 658	RS1/10S472J
R 512	RS1/10S681J	R 659	RS1/8S472J
R 513	RS1/10S473J	R 660	RD1/4PU102J
R 514	RS1/10S681J	R 661	RS1/10S1R0J
R 515	RS1/10S473J	R 662	RD1/2PM390J
R 516	RS1/10S681J	R 663	RD1/2PM390J
R 517	RS1/10S472J	R 664	RS1/16S473J
R 518	RS1/10S103J	R 667	RS1/10S103J
R 520	RS1/10S681J	R 668	RS1/10S472J
R 521	RS1/8S151J	R 669	RS1/16S912J
R 522	RS1/10S681J	R 670	RS1/10S103J
R 523	RS1/10S473J	R 671	RS1/10S472J
R 526	RS1/10S104J	R 672	RS1/8S151J
R 527	RS1/10S104J	R 673	RS1/8S225J
R 530	RS1/10S681J	R 674	RS1/8S225J
R 531	RS1/10S473J	R 675	RS1/16S473J
R 532	RS1/10S681J	R 676	RS1/8S474J
R 533	RS1/10S473J	R 677	RS1/8S474J
R 534	RS1/10S222J	R 678	RS1/8S105J
R 535	RS1/10S222J	R 679	RD1/2PM182J
R 536	RS1/10S223J	R 680	RD1/2PM182J
R 537	RS1/10S223J	R 681	RS1/10S681J
R 538	RS1/10S224J	R 682	RA3C102J
R 539	RS1/10S224J	R 685	RS1/10S152J
R 540	RS1/10S224J	R 686	RS1/16S622J
R 541	RS1/10S162J	R 687	RS1/8S151J
R 542	RS1/10S162J	R 688	RS1/16S912J
R 543	RS1/10S102J	R 690	RS1/8S151J
R 544	RS1/10S393J	R 691	RS1/10S102J
R 545	RS1/10S272J	R 692	RS1/8S391J
R 546	RS1/10S272J	R 693	RS1/8S391J
R 547	RS1/10S0R0J	R 694	RS1/16S473J
R 548	RS1/16S153J	R 701	RS1/10S102J
R 549	RS1/16S474J	R 702	RS1/10S102J
R 551	RS1/10S103J	R 703	RS1/10S102J
R 552	RS1/10S103J	R 705	RS1/10S681J
R 553	RS1/10S331J	R 706	RS1/10S0R0J
R 601	RS1/10S473J	R 707	RS1/10S0R0J
R 603	RS1/10S473J	R 708	RS1/10S102J
R 604	RS1/10S102J	R 709	RS1/10S0R0J
R 606	RS1/10S473J	R 710	RS1/10S225J
R 607	RA3C102J	R 856	RS1/10S473J
R 610	RS1/10S222J	R 857	RS1/16S473J
R 611	RN1/10SE2202D	R 858	RS1/16S473J
R 614	RS1/10S222J	R 951	RD1/4PU102J

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 952	RS1/10S153J	C 497	CKSQYB104K25
R 953	RS1/16S472J	C 498	CKSQYB104K25
R 954	RS1/16S472J	C 499	CKSQYB103K25
R 955	RS1/10S102J	C 501	CKSQYB103K25
R 956	RD1/4PU102J	C 502	CKSQYB223K50
R 957	RS1/10S101J	C 503	CKSQYB223K50
R 958	RS1/10S622J	C 504	CEJA220M10
R 959	RS1/10S473J	C 505	CKSQYB102K50
R 960	RS1/16S473J	C 506	CEAL101M6R3
R 961	RS1/10S103J	C 507	CKSQYB473K25
R 962	RS1/10S473J	C 521	CKSRYB102K50
R 963	RS1/10S472J	C 524	CEAL1R0M50
R 964	RS1/10S103J	C 525	CEAL1R0M50
R 965	RS1/10S473J	C 531	CKSQYB182K50
R 966	RS1/10S473J	C 532	CKSQYB223K50
R 967	RS1/10S102J	C 533	CKSQYB123K50
R 968	RS1/10S102J	C 534	CKSQYB123K50
R 969	RD1/4PU221J	C 535	CKSQYB472K50
R 970	RS1/10S1R0J	C 536	CCSQCH101J50
R 971	RS1/10S473J	C 537	CCSQCH101J50
R 972	RS1/16S103J	C 541	CKSQYB472K50
R 973	RS1/16S473J	C 551	CKSYB224K25
R 974	RS1/10S103J	C 552	CKSYB224K25
R 975	RS1/16S473J	C 553	CKSYB224K25
R 991	RD1/4PU221J	C 554	CKSYB224K25
R 992	RD1/4PU221J	C 555	CEJA330M10
R 993	RS1/10S472J	C 557	CKSYB105K16
R 994	RS1/10S222J	C 558	CCH1219
CAPACITORS		C 559	CKSYB104K50
		C 560	CCH1330
C 411	CKSQYB104K25	C 561	CKSQYB473K25
C 412	CKSQYB473K25	C 601	CCSQCH200J50
C 413	CKSYB105K16	C 602	CCSQCH200J50
C 414	CKSYB105K16	C 603	CKSYB105K16
C 415	CKSYB105K16	C 604	CEAL4R7M35
C 416	CKSYB105K16	C 605	CCSQCH101J50
C 431	CEJA100M16	C 607	CCSQCH101J50
C 432	CEJA100M16	C 608	CCSQCH101J50
C 443	CEJA220M16	C 609	CCSQCH101J50
C 451	CKSYB224K25	C 610	CCSQCH101J50
C 452	CKSYB224K25	C 611	CCSQCH101J50
C 453	CKSYB105K16	C 612	CEAL2R2M50
C 454	CKSYB105K16	C 651	CCSQCH101J50
C 455	CEJANP4R7M16	C 652	CEAL4R7M35
C 456	CEJANP4R7M16	C 653	CKSRYB222K50
C 457	CEJANP4R7M16	C 655	2.2μF/25V
C 458	CEJANP4R7M16	C 656	2.2μF/25V
C 459	CKSQYB473K25	C 657	0.1μF
C 460	CKSQYB473K25	C 658	4.7μF
C 461	CKSQYB473K25	C 659	CEJA470M16
C 462	CKSQYB473K25	C 660	CKSQYB102K50
C 463	CEJA470M10	C 662	CCG1095
C 464	CKSQYB104K25	C 670	CKSQYB473K25
C 465	CEJA100M16	C 701	CEJA220M6R3
C 466	CKSQYB153K50	C 702	CKSQYB104K25
C 467	CKSQYB473K25	C 703	CEJA220M6R3
C 468	CKSQYB123K50	C 704	CKSQYB104K25
C 469	CKSQYB333K50	C 705	CCSQCH270J50
C 470	CKSQYB153K50	C 706	CCSQCH270J50
C 491	CKLSQB152K50	C 707	CKSQYB104K25
C 492	CKLSQB152K50	C 708	CKSQYB471K50
C 493	CKSQYB104K25	C 709	CKSQYB471K50
C 494	CKSQYB104K25	C 951	CCH1325
C 495	CKSQYB104K25	C 952	CKSQYB473K25
C 496	CKSQYB104K25	C 953	CEJA101M10

====Circuit Symbol and No.==Part Name			Part No.	====Circuit Symbol and No.==Part Name			Part No.
C	954		CKSQYB473K25	R	51		RS1/16S470J
C	955		CEJA101M16	R	52		RS1/16S103J
C	956		CKSQYB103K25	R	53		RS1/16S103J
C	957	330μF/16V	CCH1326	R	54		RS1/16S331J
C	958		CKSQYB102K50	R	55		RS1/16S331J
C	959		CKSQYB105K16	R	56		RS1/16S560J
C	989	470μF/16V	CCH1183	R	57		RS1/16S560J
C	991		CKSQYB473K25	R	58		RS1/16S102J
C	992		CKSQYB102K50	R	59		RS1/16S225J
C	993		CEJA101M10	R	60		RS1/16S133J
<b>B</b> Unit Number : CWE1500 Unit Name : FM/AM Tuner Unit				R	61		RS1/16S433J
				R	62		RS1/16S562J
				R	101		RS1/16S333J
				R	102		RS1/16S103J
				R	103		RS1/16S333J
MISCELLANEOUS							
IC	1	IC	PML002A	R	104		RS1/16S562J
IC	2	IC	PM4008A	R	106		RS1/16S0R0J
IC	3	IC	BR9010FV	R	108		RS1/16S0R0J
Q	1	Transistor	2SC4081	R	110		RS1/16S154J
Q	2	Transistor	DTC124EU	R	111		RS1/16S273J
Q	3	FET	3SK263	R	112		RS1/16S223J
Q	51	Transistor	2SC4081	R	113		RS1/16S222J
Q	201	FET	2SK932	R	114		RS1/16S333J
Q	202	Transistor	DTC124EU	R	115		RS1/16S334J
Q	204	Transistor	2SC4081	R	116		RS1/16S473J
D	1	Diode	KV1410(23)	R	117		RS1/16S333J
D	2	Diode	1SV248	R	118		RS1/16S223J
D	4	Diode	KV1410(23)	R	122		RS1/16S0R0J
D	6	Diode	KV1410(23)	R	202		RS1/16S472J
D	101	Diode	MA110	R	203		RS1/16S225J
D	201	Diode	MA143	R	204		RS1/16S102J
D	202	Diode	MA147	R	205		RS1/16S220J
D	903	Diode	KV1410(23)	R	206		RS1/16S471J
D	904	Diode	SVC253	R	208		RS1/16S104J
L	1	Coil	CTC1155	R	209		RS1/16S104J
L	2	Coil	CTC1155	R	210		RS1/16S563J
L	3	Inductor	LCTB100K2125	R	213		RS1/16S223J
L	4	Coil	CTC1155	R	902		RS1/16S103J
L	201	Inductor	LCTB330K1608	R	904		RS1/16S473J
L	202	Inductor	CTF1287	R	907		RS1/16S103J
L	203	Inductor	LCTA121J3225	R	908		RS1/16S681J
L	901	Coil	CTC1154	R	909		RS1/16S473J
L	902	Inductor	LCTA3R3J3225	R	914		RS1/16S562J
L	904	Inductor	LCTBR47K1608	CAPACITORS			
L	905	Inductor	LCTBR47K1608				
T	51	Coil	CTE1132	C	1		CCSQCH5R0C50
CF	51	Ceramic Filter	CTF1442	C	2		CCSRCH5R0C50
CF	52	Ceramic Filter	CTF1442	C	4		CCSRCJ3R0C50
CF	53	Ceramic Filter	CTF1442	C	6		CKSQYB105K10
CF	202	Ceramic Filter	CTF1476	C	8		CKSRYB222K50
X	901	Crystal Resonator 10.250MHz	CSS1432	C	10		CCSRCH220J50
RESISTORS				C	11		CCSRCH150J50
R	1		RS1/16S153J	C	12		CCSRCH8R0D50
R	2		RS1/16S103J	C	14		CCSRCJ3R0C50
R	6		RS1/16S103J	C	15		CKSRYB103K50
R	7		RS1/16S273J	C	16		CKSRYB222K50
R	8		RS1/16S473J	C	17		CKSRYB222K50
R	9		RS1/16S223J	C	18		CCSRCJ3R0C50
R	10		RS1/16S473J	C	19		CKSRYB103K50
R	11		RS1/16S221J	C	20		CKSRYB103K50
R	12		RS1/16S103J	C	21		CKSRYB103K50
R	13		RS1/16S104J	C	24		CKSQYB334K16
R	16		RS1/16S223J	C	31		CKSRYB222K50
R	17		RS1/16S221J	C	32		CCSRCH470J50
R	18		RS1/16S221J	C	35		CKSRYB103K50
R	19		RS1/16S473J				
R	20		RS1/16S470J				

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
C 51	CKSRYP103K50	C 914	CKSRYP682K25
C 52	CKSRYP473K16	C 915	CKSQYB223K25
C 53	CCSRCK2R0C50	C 916	CKSQYB474K16
C 54	CKSRYP103K50	C 917	CKSYB475K10
C 55	CKSRYP104K16	C 918	CKSRYP223K25
C 56	CKSRYP104K16	C 919	CKSQYB225K10
C 58	CKSQYB224K16	C 920	CCSRCH270J50
C 59	CKSRYP223K25	C 921	CCSRCH270J50
C 60	CKSRYP104K16	C 922	CKSYB105K16
C 101	CEALNP100M10	C 923	CKSRYP103K50
C 102	CCSRCH151J50	 Unit Number : CWM6198(DEH-P7000R/EW, DEH-P6000R/EW) Unit Name : Keyboard Unit	
C 103	CKSRYP473K16		
C 105	CKSRYP682K25	MISCELLANEOUS	
C 106	CEAL2R2M50	IC 901	IC
C 107	CKSRYP103K50	IC 902	IC
C 108	CKSQYB474K16	Q 901	Transistor
C 109	CKSQYB474K16	Q 902	Transistor
C 110	CKSRYP104K16	Q 903	Transistor
C 111	CKSRYP104K16	Q 904	Transistor
C 112	CKSRYP104K16	Q 905	Transistor
C 113	CKSRYP123K25	D 901	Diode
C 114	CEAL220M6R3	D 902	Diode
C 115	CKSRYP473K16	D 903	LED
C 116	CEAL2R2M50	D 904	LED
C 117	CKSRYP102K50	D 905	LED
C 120	CKSRYP153K25	L 901	Inductor
C 121	CKSRYP332K50	X 901	Radiator 5.00MHz
C 122	CKSRYP682K25	S 901	Switch
C 123	CKSRYP681K50	S 902	Switch
C 125	CKSRYP103K50	S 903	Switch
C 126	CKSRYP103K50	S 904	Switch
C 127	CEAL2R2M50	S 905	Switch
C 128	CKSRYP103K50	S 907	Switch
C 201	CCSRCH471J50	S 908	Switch
C 202	CCSRCH100D50	S 909	Switch
C 203	CKSRYP104K16	S 910	Switch
C 204	CKSRYP332K50	S 911	Switch
C 205	CKSRYP103K50	S 913	Switch
C 206	CKSRYP104K16	S 914	Switch
C 207	CKSRYP473K16	S 915	Switch
C 208	CCSRCH560J50	S 916	Switch
C 209	CEAL470M6R3	S 917	Switch
C 210	CKSRYP103K50	S 919	Switch
C 211	CKSRYP103K50	S 920	Switch
C 212	CCSRCH101J50	S 921	Switch
C 215	CKSRYP223K25	S 922	Switch
C 216	CKSQYB334K16	S 995	Switch
C 217	CKSRYP103K50	S 996	Switch
C 219	CKSQYB105K10	S 997	Switch
C 220	CKSRYP104K16	S 998	Switch
C 221	CKSRYP473K16		LCD
C 222	CKSQYB334K16		EL
C 223	CKSQYB474K16	RESISTORS	
C 224	CKSRYP104K16	R 901	RS1/10S222J
C 225	CKSRYP272K50	R 902	RS1/10S222J
C 226	CKSRYP682K25	R 903	RS1/10S472J
C 902	CCSRCH270J50	R 904	RS1/10S121J
C 904	CKSRYP223K25	R 905	RS1/10S2R2J
C 905	CKSRYP103K50	R 906	RS1/10S470J
C 906	CCSRTH100D50	R 907	RS1/10S470J
C 907	CCSRTH150J50	R 908	RS1/10S472J
C 909	CCSRTH100D50	R 909	RS1/8S561J
C 910	CKSRYP332K50	R 910	RS1/8S561J
C 912	CKSQYB474K16		
C 913	CKSRYP223K25		

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

Part No.

R	911	RS1/8S561J
R	912	RS1/8S561J
R	913	RS1/8S561J
R	914	RS1/8S561J
R	915	RS1/8S751J

R	916	RS1/8S751J
R	917	RS1/8S561J
R	918	RS1/8S561J
R	919	RS1/8S561J
R	920	RS1/8S561J

R	921	RS1/8S561J
R	922	RS1/8S561J
R	923	RS1/8S621J
R	924	RS1/10S473J
R	925	RS1/10S272J

R	926	RS1/10S473J
R	927	RS1/10S272J
R	930	RS1/8S152J
R	931	RS1/8S152J
R	932	RS1/8S102J

R	933	RS1/8S102J
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## CAPACITORS

C	901	CSZSR100M16
C	902	CKSQYB104K50
C	903	CSZSR100M16
C	904	CKSQYB103K50
C	905	CKSQYB103K50

C	906	CKSQYB103K50
C	907	CKSQYB104K50

**C** Unit Number : CWM6548(DEH-P7000R-W/EW)  
Unit Name : Keyboard Unit

## MISCELLANEOUS

IC	901	IC	PD6279A
IC	902		RS-140
Q	901	Transistor	2SB710
Q	902	Transistor	DTC114EK
Q	903	Transistor	2SB710
Q	904	Transistor	DTC114EK
Q	905	Transistor	DTC114EK
D	901	Diode	DAN202K
D	902	Diode	DAP202K
D	903	LED	CL170SBX
D	904	LED	CL170DCD
D	905	LED	CL170PGCD(AB)
L	901	Inductor	LCTA101J3225
X	901	Radiator 5.00MHz	CSS1423
S	901	Switch	CSG1107

S	902	Switch	CSG1113
S	903	Switch	CSG1111
S	904	Switch	CSG1113
S	905	Switch	CSG1113
S	907	Switch	CSG1113

S	908	Switch	CSG1113
S	909	Switch	CSG1113
S	910	Switch	CSG1113
S	911	Switch	CSG1113
S	913	Switch	CSG1115

S	914	Switch	CSG1111
S	915	Switch	CSG1113
S	916	Switch	CSG1113
S	917	Switch	CSG1113
S	919	Switch	CSG1115

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

Part No.

S	920	Switch	CSG1113
S	921	Switch	CSG1113
S	922	Switch	CSG1115
S	995		CSG1113
S	996		CSG1113

S	997		CSG1113
S	998		CSG1113
		LCD	CAW1550
		EL	CEL1592

## RESISTORS

R	901	RS1/10S222J
R	902	RS1/10S222J
R	903	RS1/10S472J
R	904	RS1/10S121J
R	905	RS1/10S2R2J

R	906	RS1/10S470J
R	907	RS1/10S470J
R	908	RS1/10S472J
R	909	RS1/8S561J
R	910	RS1/8S561J

R	911	RS1/8S561J
R	912	RS1/8S561J
R	913	RS1/8S561J
R	914	RS1/8S561J
R	915	RS1/8S751J

R	916	RS1/8S751J
R	917	RS1/8S561J
R	918	RS1/8S561J
R	919	RS1/8S561J
R	920	RS1/8S561J

R	921	RS1/8S561J
R	922	RS1/8S561J
R	923	RS1/8S621J
R	924	RS1/10S473J
R	925	RS1/10S272J

R	926	RS1/10S473J
R	927	RS1/10S272J
R	930	RS1/8S152J
R	931	RS1/8S152J
R	932	RS1/8S102J

R	933	RS1/8S102J
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## CAPACITORS

C	901	CSZSR100M16
C	902	CKSQYB104K50
C	903	CSZSR100M16
C	904	CKSQYB103K50
C	905	CKSQYB103K50

C	906	CKSQYB103K50
C	907	CKSQYB104K50

**D** Unit Number : CWX2235  
Unit Name : Compound Unit

## MISCELLANEOUS

IC	201	IC	UPD63710GC
IC	301	IC	BA5985FM
IC	601	IC	TA2063F
IC	701	IC	BA05SFP
Q	101	Transistor	2SB1132

D	801	LED	CL200IRX
D	802	LED	CL200IRX
X	201	Ceramic Oscillator 16.934MHz	CSS1456
S	801	Spring Switch(HOME)	CSN1051
S	802	Spring Switch(CLAMP)	CSN1052

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

Part No.

## RESISTORS

R	101	RS1/8S120J
R	102	RS1/8S100J
R	103	RS1/16S222J
R	201	RS1/16S104J
R	205	RS1/16S103J
R	206	RS1/16S393J
R	207	RS1/16S182J
R	208	RS1/16S304J
R	210	RS1/16S0R0J
R	212	RS1/16S103J
R	213	RS1/16S103J
R	214	RS1/16S123J
R	215	RS1/16S273J
R	216	RS1/16S273J
R	309	RS1/16S473J
R	310	RS1/16S473J
R	503	RA4C681J
R	504	RS1/16S102J
R	601	RS1/16S102J
R	602	RS1/16S102J
R	603	RS1/16S223J
R	604	RS1/16S223J
R	801	RS1/8S751J
R	802	RS1/8S751J

## CAPACITORS

C	101	CCSRCH102J25
C	102	CKSQYB104K16
C	103	CEV101M6R3
C	104	CEV470M6R3
C	105	CKSQYB334K16
C	106	CKSQYB334K16
C	107	CKSQYB334K16
C	201	CKSQYB104K16
C	202	CEV101M6R3
C	203	CKSQYB104K16
C	204	CKSRYB332K50
C	205	CKSQYB104K16
C	206	CKSRYB392K50
C	207	CKSQYB224K16
C	208	CCSRCH270J50
C	209	CCSRCJ3R0C50
C	210	CCSRCH221J50
C	211	CCSRCH101J50
C	212	CKSQYB682K50
C	213	CKSQYB104K16
C	214	CKSQYB104K16
C	215	CKSQYB104K16
C	216	CKSQYB104K16
C	217	CKSQYB104K16
C	218	CKSQYB104K16
C	219	CKSQYB104K16
C	220	CKSQYB104K16
C	301	CEV470M16
C	502	CKSRYB471K50
C	601	CEV4R7M35
C	602	CEV4R7M35
C	603	CCSOSL152J50
C	604	CCSOSL152J50
C	605	CEV220M6R3
C	701	CEV101M6R3
C	702	CCH1338
C	703	CKSQYB334K16

10μF/6.3V

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

Part No.



Unit Number :

Unit Name : Photo Unit

Q	1	Photo-transistor
Q	2	Photo-transistor

CPT230SX-TU
CPT230SX-TU

## Miscellaneous Parts List

		Pickup Unit(Service)(P8)	CXX1285
M	1	Motor Unit(CARRIAGE)	CXB2190
M	2	Motor Unit(LOADING)	CXB2195
M	3	Motor Unit(SPINDELE)	CXB2562
S	651	Switch(CLOSE)	CSN1027

## 6. ADJUSTMENT

### 6.1 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.
- 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.

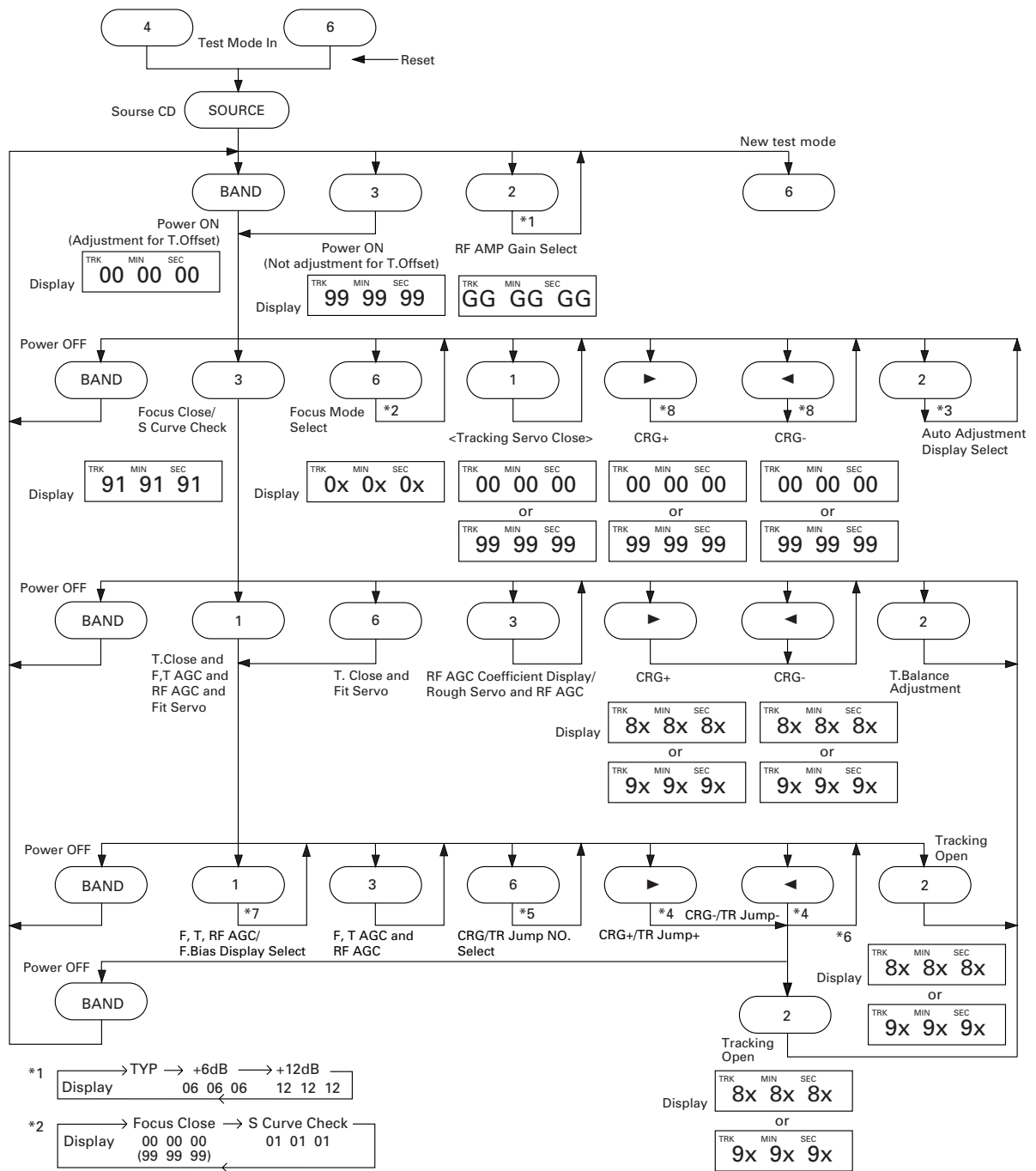
When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

#### 2) Test Mode

This mode is used for adjusting the CD mechanism module of the device.

- Test mode starting procedure  
Reset while pressing the **4** and **6** keys together.
- Test mode cancellation  
Switch ACC, back-up OFF.
- After pressing the EJECT key, do not press any other key until the disk is completely ejected.
- If the ► or ◀ key is pressed while focus search is in progress, immediately turn the power off (otherwise the actuator may be damaged due to adhesion of the lenses).
- Jump operation of TRs other than 100TR continues after releasing the key. CRG move and 100TR jump operations are brought into the "Tracking close" status when the key is released.
- Powering Off/On resets the jump mode to "Single TR (91)", the RF AMP gain setting to 0 dB, and the automatic adjustment value to the initial value.

# Flow Chart



\*1 → TYP → +6dB → +12dB  
Display 06 06 06 12 12 12

\*2 → Focus Close → S Curve Check  
Display 00 00 00 01 01 01  
(99 99 99)

\*3 → F.Offset Display → RF.Offset Display → F.Cansel Display  
[ F.Cansel Value = (Top Rank 8bit of Set Value (7F [H] to 80 [H]) + 128) / 4  
= 63 [D] to (32 [D]) to 00 [D]

\*4 Single TR/32TR/100TR

\*5 → Single TR → 32TRK → 100TRK → CRG Move  
Display 9x(8x):91(81) 92(82) 93(83) 94(84)

\*6 CRG Move, 100TR Jump Only

\*7 → TRK, MIN, SEC → F.AGC Gain → T.AGC Gain → RF AGC Gain  
(F,T.AGC Gain = (Present Value/Initial Value) ¥ 20)

\*8 Voltage of CRG Motor = 2 [V]

## 6.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

### • Note :

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 :

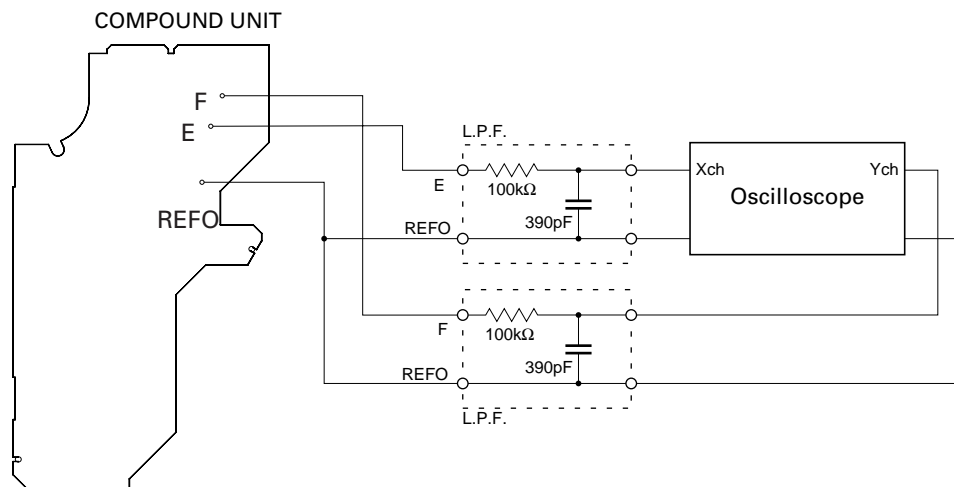
To check that the grating is within an acceptable range when the PU unit is changed.

### • 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 taking a long time for track searching.

### • Method :

- |                       |                            |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points    | • E, F, REFO               |
| • 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 ► and ◄ 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 2 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

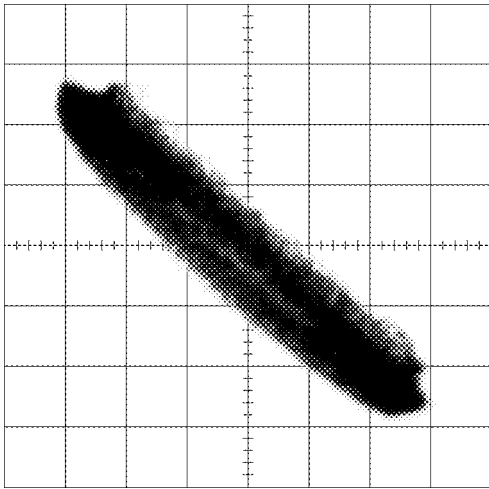
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" ( the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

### • Hint

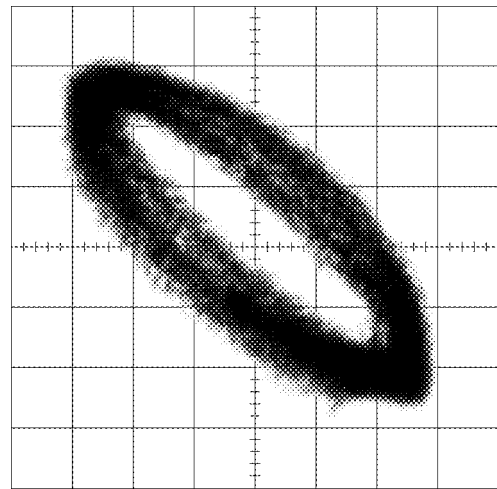
Reloading the disc changes the clamp position and may decrease the "wobble".

**Grating waveform**Ech  $\rightarrow$  Xch 20mV/div, ACFch  $\rightarrow$  Ych 20mV/div, AC

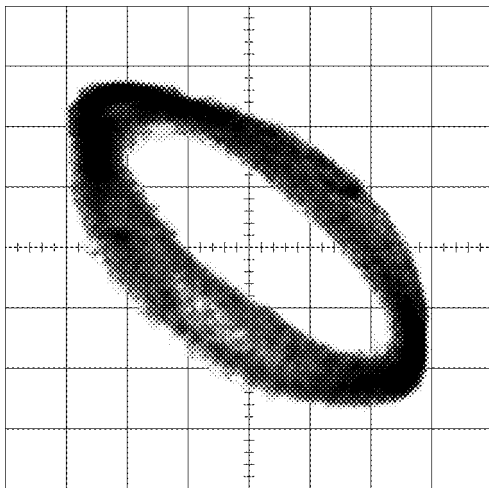
0°



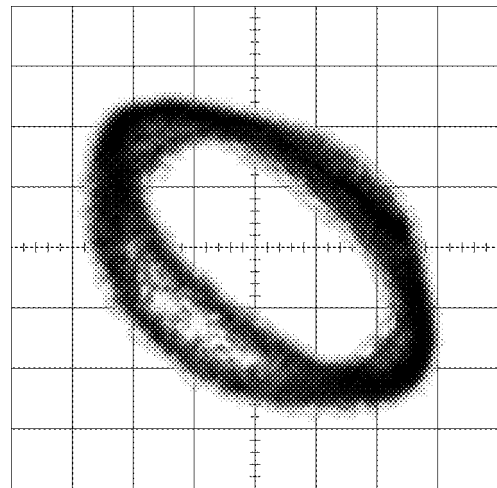
30°



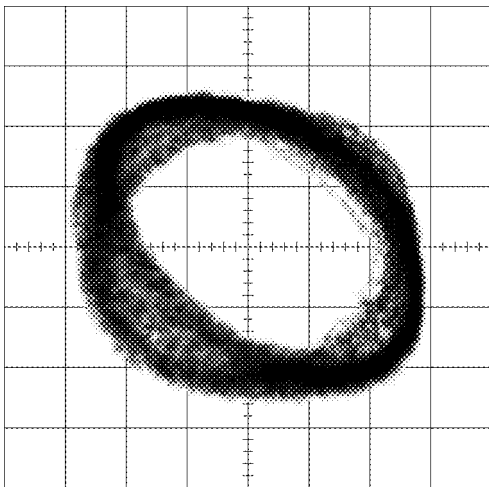
45°



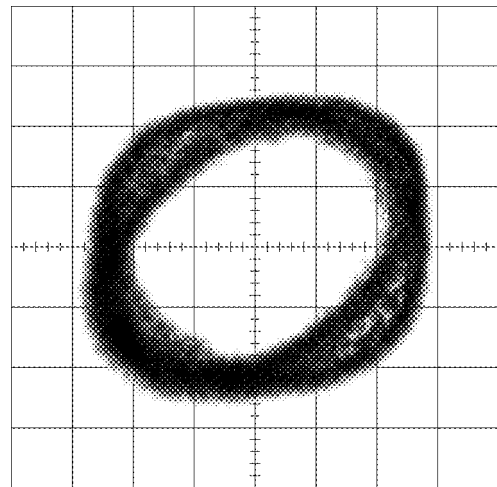
60°



75°



90°



## 7. GENERAL INFORMATION

### 7.1 PARTS

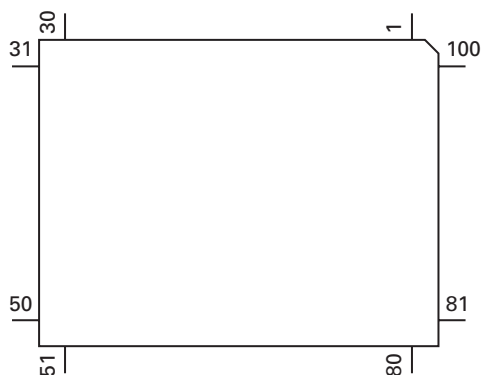
#### 7.1.1 IC

##### ● Pin Functions (PE5003B)

Pin No.	Pin Name	I/O	Function and Operation
1	SWVDD	O	Keyboard unit power supply control output
2	DSNS	I	Grille detach sense input
3	NL2	I	RDS noise level 2 input
4	MODELIN	I	Model select input
5	TESTIN	I	Test program mode input
6	DRST	O	RDS decoder reset output
7	TELIN	I	Telephone mute input
8	MODELIN	I	Model select input
9	RECIVE	O	During RDS data reception output
10	SDBW	I	SDBW input
11	RESET	I	Reset input
12	XT2		Not used (open)
13	XT1		Connect to GND
14	VSS		GND
15	X2		Crystal oscillator connection pin
16	X1		Crystal oscillator connection pin
17	REGOFF		Connect to VSS
18	REGC		Capacitor for regulator connect pin
19	VDD		Power supply
20	ILMPW	O	Illumination power supply control output
21	SYSPW	O	System power control output
22	ADPW	O	A/D converter power
23	LCDPW	O	LCD back light power supply control output
24	IPPW	O	Power supply control output for IP BUS interface IC
25	ASENBO	O	Slave power supply control output
26	ROMDATA	O	ROM correction data output
27	ROMCLK	O	ROM correction clock output
28	MUTE	O	System mute output
29	FM/AM	O	RDS decoder power supply control output
30	LOCL	O	Local L output
31	LOCH	O	Local H output
32	TUNPCE2	O	EEPROM chip enable output
33	VCK	O	Clock output for electronic volume
34	VST	O	Strobe pulse output for electronic volume
35	VDT	O	Data output for electronic volume
36	TMUTE	O	Tuner mute output
37	ROMCS	O	ROM correction chip select output
38	SD	I	Station detector input
39	ST	I	FM stereo input
40	VSS		GND
41	VDD		Power supply
42	DIM	O	DIMMER select output
43	CSNS	I	Flap close sense input
44	RDSLK	I	RDS LK signal input
45	CURRQ	O	Tuner voltage FIX output
46	RDT	I	RDS demodulation data input
47	DRELAY	O	External relay control output
48	DRSENS	I	Door open/close sense input
49	DRSYS	O	Door system select output
50	DLED	O	Alarm LED output
51	DLSNS	I	Door lock sense input
52	STCUT	O	Starter cut output
53	MOSENS	I	Motion/window damage sensor input

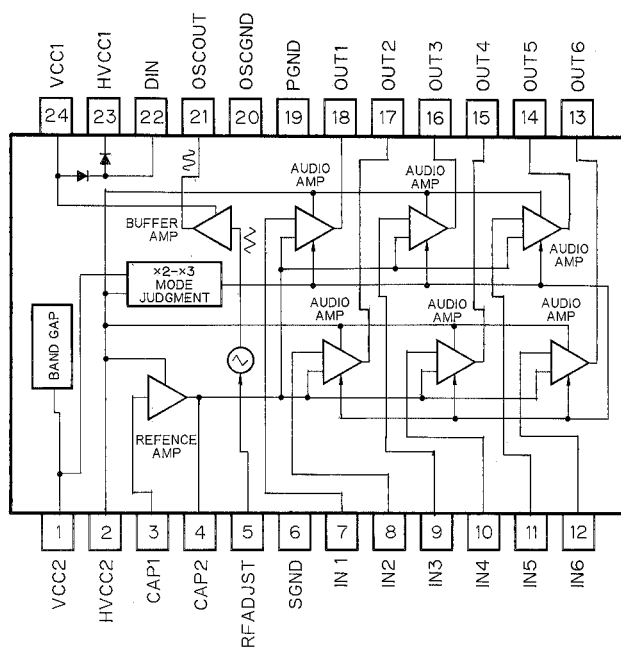
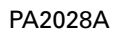
Pin No.	Pin Name	I/O	Function and Operation
54	CD5VON	O	CD +5V power supply control output
55	CONT	O	CD servo driver power supply control
56	VDCONT	O	CD VD power control output
57	CDMUTE	O	CD mute control output
58	CDEJET	O	CD load motor eject control output
59	CDLOAD	O	CD LOAD motor loading control output
60	LOCK	I	CD spindle lock detector input
61	FOK	I	CD focus OK signal input
62	PCL	O	Clock adjustment output
63	MIRR	I	CD mirror detection input
64	CLAMP	I	CD disc clamp input
65	XSCK	O	CD clock output
66	XSI	I	CD LSI data input
67	XSO	O	CD LSI data output
68	XA0	O	CD LSI command / data control output
69	XRST	O	CD LSI reset output
70	XSTB	O	CD LSI strobe output
71,72	NC		Not used
73	TEST	I	Test input terminal
74	SL	I	Signal level input from tuner
75	LLEVEL	I	Level indicator L channel input
76	NL1	I	RDS noise level input
77	RLEVEL	I	Level indicator R channel input
78	EJTSNS	I	CD disc EJECT position detect
79	DSCSNS	I	CD disc insert sense input
80	VDSNS	I	VD voltage sense input
81	TEMP	I	Temperature sense input (CD)
82	VDD		A/D converter power supply terminal
83	VDD		A/D converter reference voltage terminal
84	GND		GND
85	RX	I	IP BUS data input
86	TX	O	IP BUS data output
87	GND		GND
88	LDET	I	PLL lock sense input
89	RCK	I	RDS demodulation clock input
90	RDS57K	I	RDS 57kHzBP-OUT sense input
91	ISENS	I	Illumination sense input
92	ASENS	I	ACC power sense input
93	BSENS	I	Back up power sense input
94	TUNPDI	I	PLL IC data input
95	KYDT	I	Key data input
96	DPDT	O	Display data output
97	TUNPCK	O	PLL IC clock output
98	TUNPDO	O	PLL IC data output
99	TUNPCE	O	PLL IC chip enable output
100	PEE	O	Beep tone output

\*PE5003B

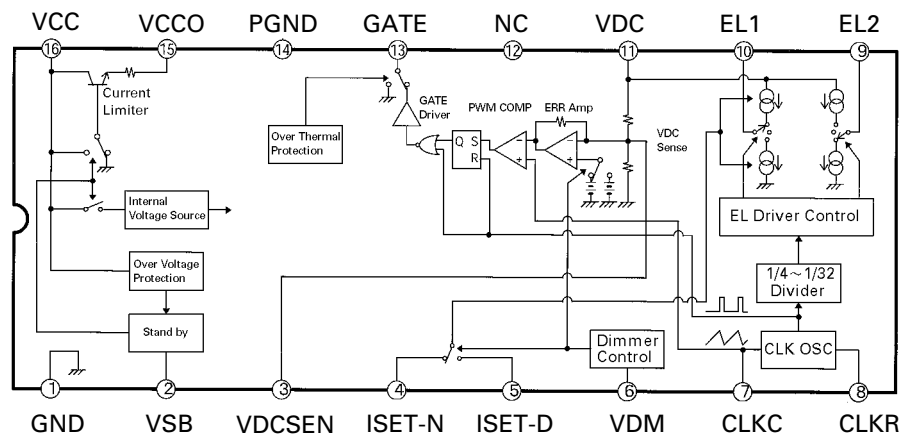


IC's marked by\* are MOS type.

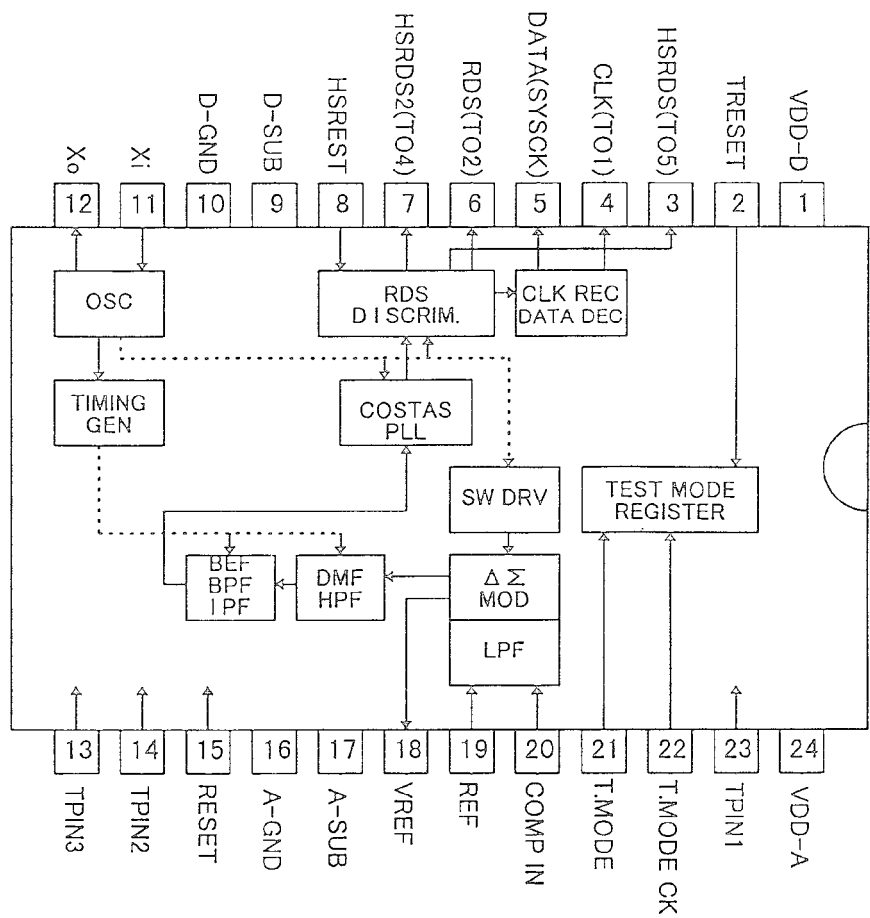
Be careful in handling them because they are very liable to be damaged by electrostatic induction.



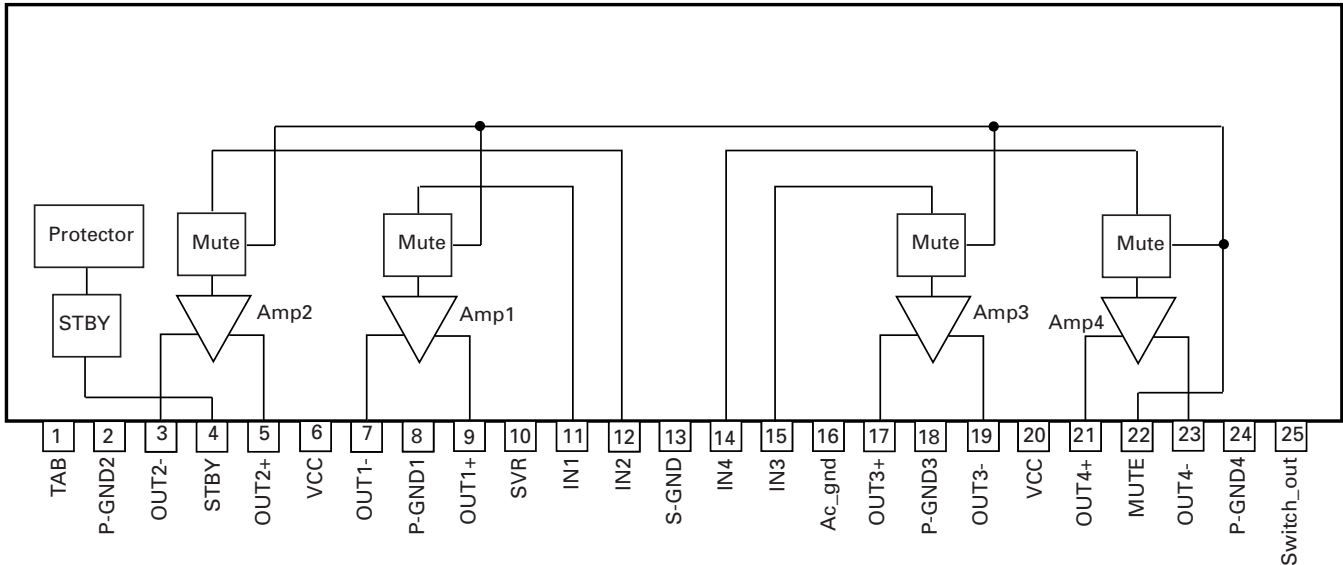
PML006A



PM4009A



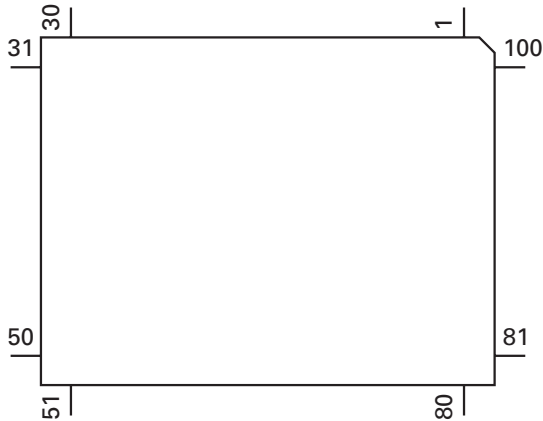
PAL005A



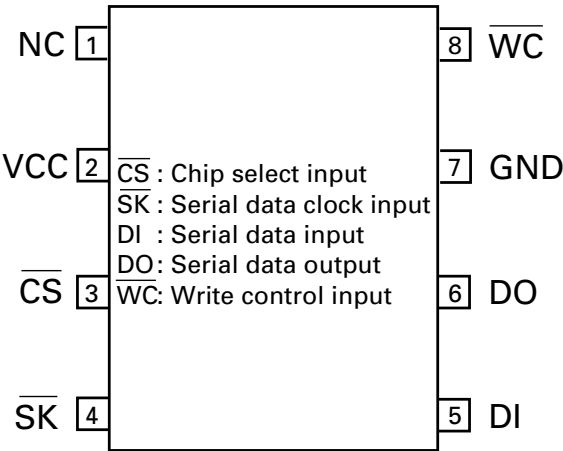
● Pin Functions (PD6279A)

Pin No.	Pin Name	I/O	Function and Operation
1-42	SEG41-0	O	LCD segment output
43-46	COM3-0	O	LCD common output
47-49	V1-V3		LCD bias power supply
50	VCC		Power supply terminal
51	LED	O	LED control output
52	SO	O	System micro computer UART communication data output
53	SI	I	System micro computer UART communication data input
54,55	MOD0,1		GND
56	RST	I	Reset signal input terminal
57	X0		Crystal oscillator connection pin
58	X1		Crystal oscillator connection pin
59	VSS		GND
60	REMIN	I	Remote control reception input
61	DIM	O	Dimmer select output
62	GRN/AMB	O	Illumination color select output
63-66	KDT4-1	I	Key data input
67-72	KST6-1	O	Key strobe output
73-100	SEG69-42	O	LCD segment output

\*PD6279A



BR9010FV

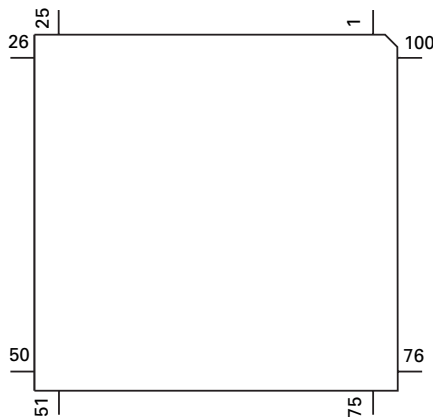


● Pin Functions (UPD63710GC)

Pin No.	Pin Name	I/O	Function and Operation
1	GND		Logic circuit GND
2	HOLD	I/O	Defect detection output
3	MIRR	I/O	MIRR output
4	FOK	O	RFOK signal output
5	RST	I	Reset signal input
6	A0	I	Command/parameter identification signal input
7	STB	I	Data strobe signal input
8	SCK	I	Clock signal input for serial data input/output
9	SO	O	Serial data and status signal output
10	SI	I	Serial data input
11	VDD		Positive power supply terminal to logic circuit
12	DA.VDD		Positive power supply terminal to D/A converter
13	NC		Not used
14, 15	DA.GND		D/A converter GND
16	NC		Not used
17	DA.VDD		Positive power supply terminal to D/A converter
18	R+	O	Right channel audio data output
19	R-	O	Right channel audio data output
20	L-	O	Left channel audio data output
21	L+	O	Left channel audio data output
22	X.VDD		Positive power supply terminal to crystal oscillation circuit
23	XTAL	O	Crystal oscillator connect pin
24	XTAL	I	Crystal oscillator connect pin
25	X.GND		Crystal oscillation circuit GND
26	VDD		Positive power supply terminal to logic circuit
27	EMPH	O	Output pin for the pre-emphasis data in the sub-Q code
28	FLAG	O	Flag output pin to indicate that audio data currently being output consists of noncorrectable data
29	DIN	I	Serial data input to internal DAC
30	DOUT	O	Serial audio data output
31	SCKIN	I	Serial clock input to internal DAC
32	SCKO	O	Audio data that is output from DOUT changes at rising edge of this clock
33	LRCKIN	I	LRCK signal input to internal DAC
34	LRCK	O	Signals to distinguish the right and left channels of the audio data output from DOUT
35	WDCK	O	Output double the frequency of LRCK
36	TX	O	Digital audio interface data output
37	GND		Logic circuit GND
38	C16M	O	Oscillator clock buffering output
39	LIMIT	I	Status of the pin is output at Bit 5 of the status output
40	VDD		Positive power supply terminal to logic circuit
41	LOCK	O	EFM synchronous detection signal
42	RFCK	O	Frame synchronous signal of XTAL-system
43	WFCK	O	Frame synchronous signal of PLL-system
44	PLCK	O	Monitor pin of bit clock
45	GND		Logic circuit GND
46	C1D1	O	Output pin for indicating the C1 error correction results
47	C1D2	O	Output pin for indicating the C1 error correction results
48	C2D1	O	Output pin for indicating the C2 error correction results
49	C2D2	O	Output pin for indicating the C2 error correction results
50	C2D3	O	Output pin for indicating the C2 error correction results
51	VDD		Positive power supply terminal to logic circuit
52	PACK	O	CD-TEXT PACK synchronous signal
53	TSO	O	CD-TEXT data serial output
54	TSI	I	CD-TEXT control parameter serial input
55	TSCK	I	CD-TEXT serial clock input
56	TSTB	I	CD-TEXT parameter strobe signal input
57	GND		Logic circuit GND
58	TEST	I	Test pin

Pin No.	Pin Name	I/O	Function and Operation
59	ATEST	I/O	Test pin
60	RFMODE	I	Use/not use select for internal RF amplifier
61	A.GND		Analog circuit GND
62	FD	O	Focus drive output
63	TD	O	Tracking drive output
64	SD	O	Sled drive output
65	MD	O	Spindle drive output
66	DACO	O	DAC output for adjustment
67	FBAL	O	DAC output for adjustment
68	TBAL	O	DAC output for adjustment
69	TEVCA	O	DAC output for adjustment
70	A.VDD		Power supply terminal to analog circuit
71	EFM	O	EFM signal output
72	ASY	I	EFM comparator reference voltage input
73	C3T		3T detection capacitor additional pin
74	RFI	I	RF signal input for EFM data regulation
75	AGCO	O	RF signal output of after gain adjustment
76	AGCI	I	RF-AGC amplifier input
77	RFO	O	RF summing amplifier output
78	EQ2		RF amplifier equalizer parts additional pin
79	EQ1		RF amplifier equalizer parts additional pin
80	RF-	I	RF summing amplifier inverted input
81	A.GND		Analog circuit GND
82	A	I	Photo detector A input
83	C	I	Photo detector C input
84	B	I	Photo detector B input
85	D	I	Photo detector D input
86	F	I	Photo detector F input
87	E	I	Photo detector E input
88	A.VDD		Positive power supply terminal to analog circuit
89	REFOUT	O	Reference electric potential output
90	FE-	I	Focus error amplifier inverted input
91	FEO	I/O	Focus error amplifier output
92	TE-	I	Tracking error amplifier inverted input
93	TEO	I/O	Tracking error amplifier output
94	TE2	I/O	Tracking error output of after amplification
95	TEC	I	Tracking comparator input
96	A.GND		Analog circuit GND
97	PD	I	PD detection signal input for LD output monitor
98	LD	O	LD control current output
99	PN	I	APC circuit control polarity set pin
100	A.VDD		Positive power supply terminal to analog circuit

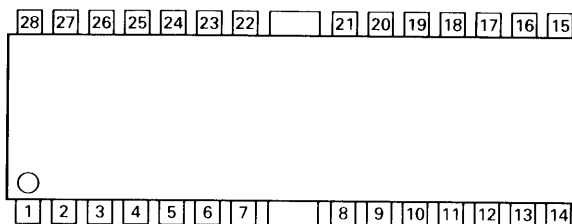
\*UPD63710GC



● Pin Functions (BA5985FM)

Pin No.	Pin Name	I/O	Function and Operation
1	FWD	I	Loading driver FWD input
2	OPIN1(+)	I	CH1 pre-amplifier input
3	OPIN1(-)	I	CH1 pre-amplifier inverted input
4	OPOUT1	O	CH1 pre-amplifier output
5	OPIN2(+)	I	CH2 pre-amplifier input
6	OPIN2(-)	I	CH2 pre-amplifier inverted input
7	OPOUT2	O	CH2 pre-amplifier output
8	VCC		Power supply
9	VOL(-)	O	Loading driver negative output
10	VOL(+)	O	Loading driver positive output
11	VO2(-)	O	Driver CH2 negative output
12	VO2(+)	O	Driver CH2 positive output
13	VO1(-)	O	Driver CH1 negative output
14	VO1(+)	O	Driver CH1 positive output
15	VO4(+)	O	Driver CH4 positive output
16	VO4(-)	O	Driver CH4 negative output
17	VO3(+)	O	Driver CH3 positive output
18	VO3(-)	O	Driver CH3 negative output
19	GND		GND
20	BIAS	I	Bias input
21	MUTE		Mute control
22	OPOUT3	O	CH3 pre-amplifier output
23	OPIN3(-)	I	CH3 pre-amplifier inverted input
24	OPIN3(+)	I	CH3 pre-amplifier input
25	OPOUT4	O	CH4 pre-amplifier output
26	OPIN4(-)	I	CH4 pre-amplifier inverted input
27	OPIN4(+)	I	CH4 pre-amplifier input
28	REV	I	Loading driver REV input

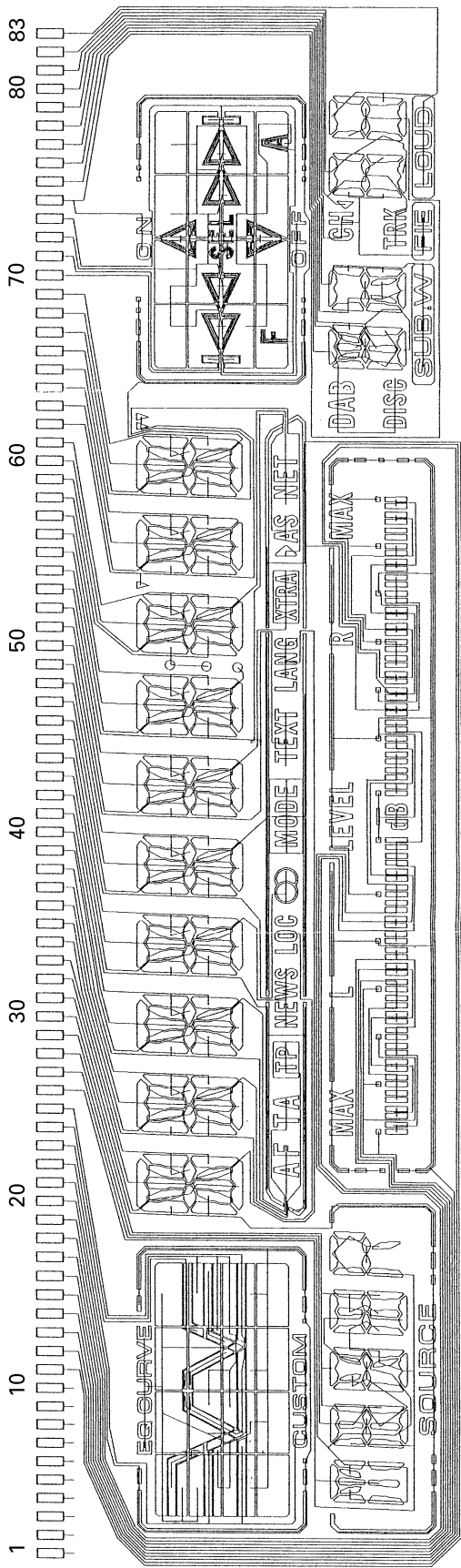
BA5985FM



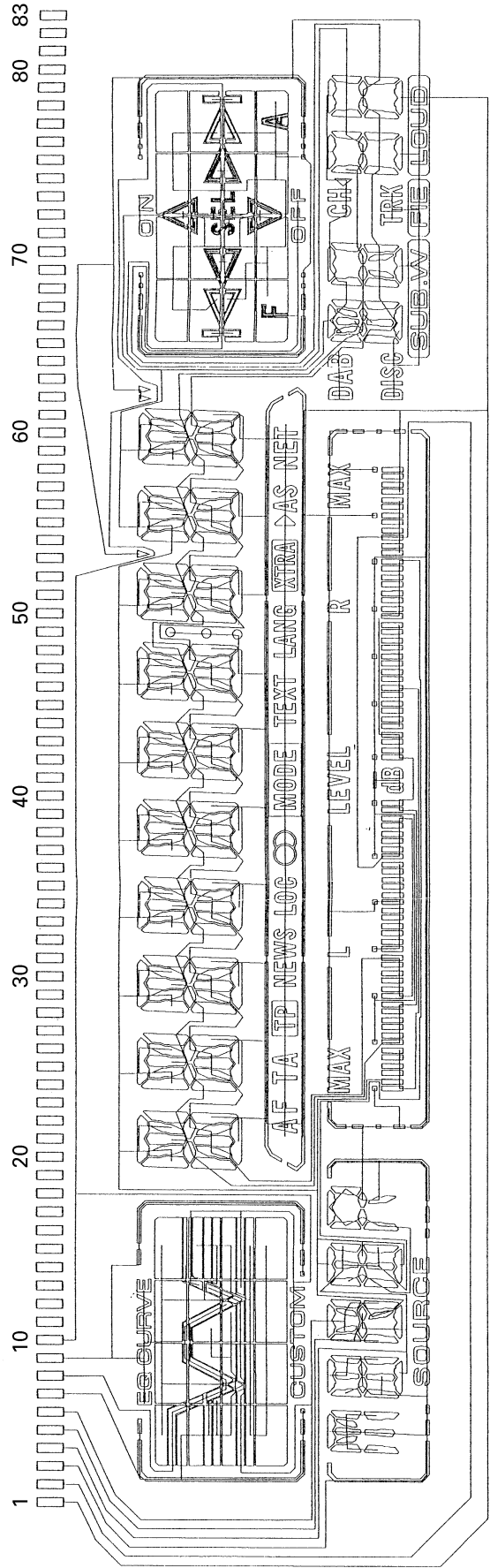
7.1.2 DISPLAY

● CAW1517(DEH-P7000R/EW, DEH-P6000R/UC), CAW1550(DEH-P7000R-W/EW)

SEGMENT



COMMON



## 7.2 DIAGNOSIS

### 7.2.1 DISASSEMBLY

#### ● Removing the Case Unit(not shown)

1.Remove the Case Unit.

#### ● Removing the Panel Assy(Fig.1)

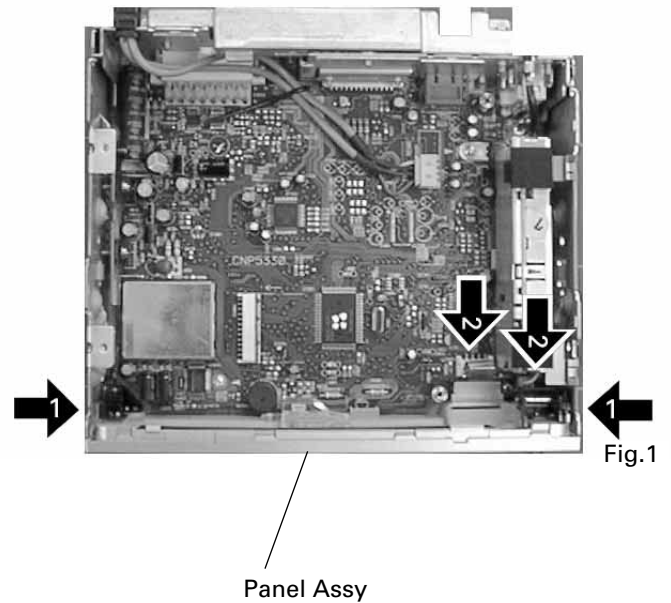
➡1 Remove the two screws.

➡2 Disconnect the connectors and then remove the Panel Assy.

#### ● Removing the CD Mechanism Module (not shown)

1.Remove the four screws.

2.Disconnect the connector, and then remove the CD Mechanism Module.



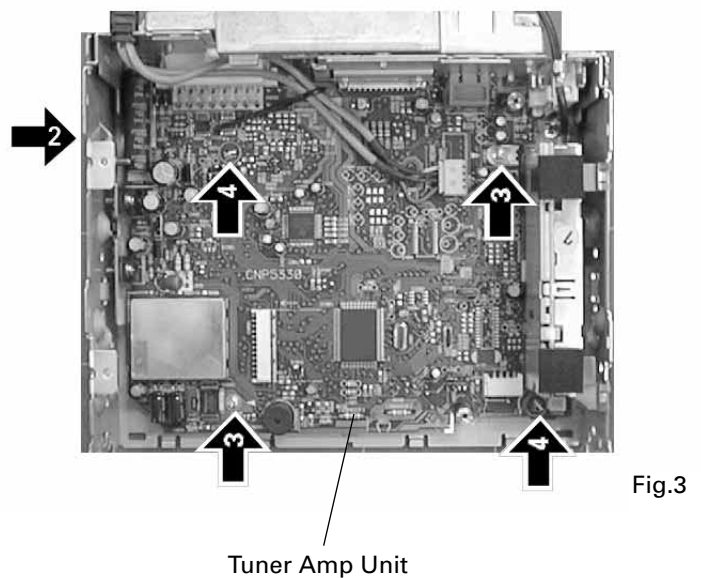
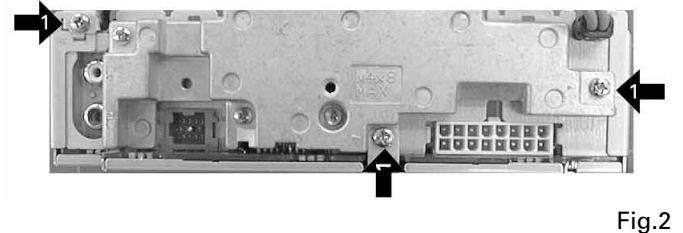
#### ● Removing the Tuner Amp Unit(Fig.2,3)

➡1 Remove the three screws.

➡2 Remove the screw.

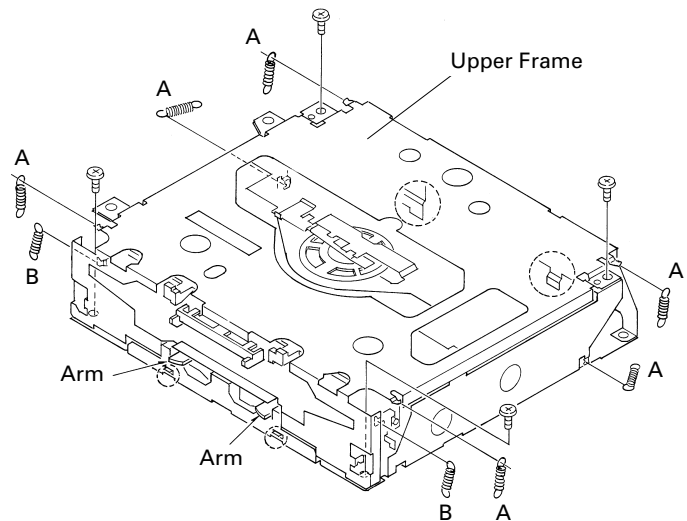
➡3 Remove the two screws.

➡4 Straighten the tabs at two locations indicated. Remove the Tuner Amp Unit.



### ● Removing the Upper Frame

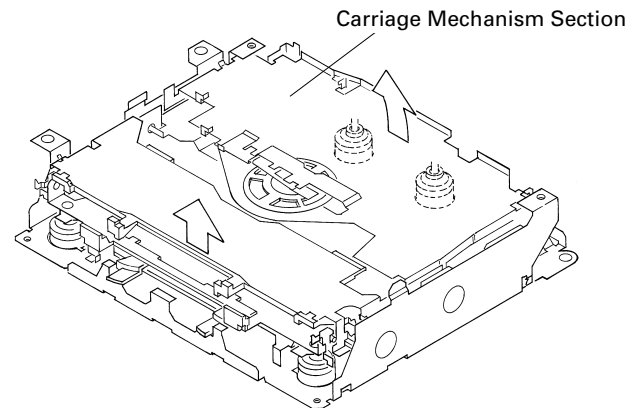
1. Remove six Springs A, two Springs B and four Screws.
2. Remove two Tabs situated on rear side of the Upper Frame, remove two Arms on the front side, then remove two Tabs on the front side.



### ● Removing the Carriage Mechanism

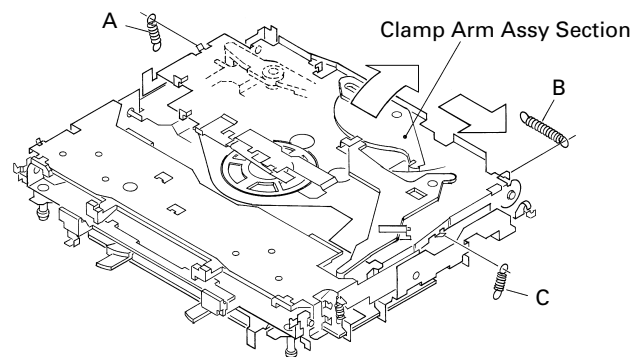
1. Disengage the Carriage Mechanism from the two dampers situated in the front side by driving it up, then disengage and remove the mechanism from the two dampers by driving it up aslant into front side direction.

Note : When assembling the Carriage Mechanism, coat the dampers with alcohol prior to the assembly.



### ● Removing the Clamp Arm Assy

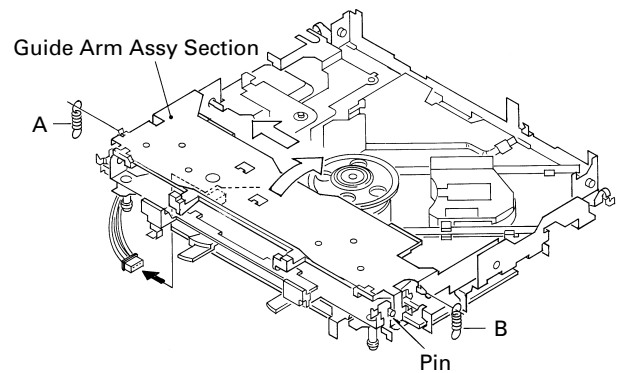
1. Remove a Spring A, a B and a Spring C.
2. Drive the Clamp Arm Assy up into rear side direction, then disengage the arm from its current position. Finally, drive the assembly approximately 45 degrees upward, then slide the assembly toward right side to remove it.



### ● Removing the Guide Arm Assy

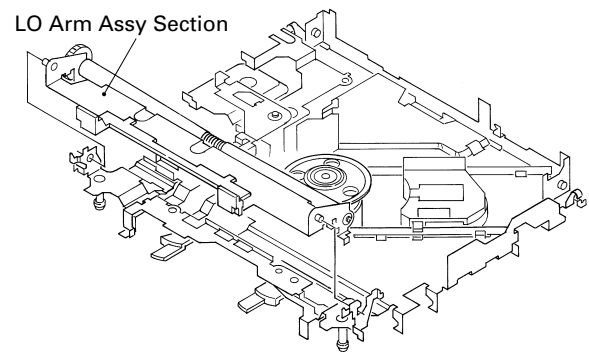
1. Remove a connector, a spring A and B
2. Drive the Guide Arm Assy up aslant into rear side direction, then remove it from a Pin. Finally, drive the assembly approximately 45 degrees upward, then slide the assembly toward left side to remove it.

Note : When assembling the guide arm assembly, route the cord inside the assembly. In this operation, care must be exercised so that cord may be caught by the gear.



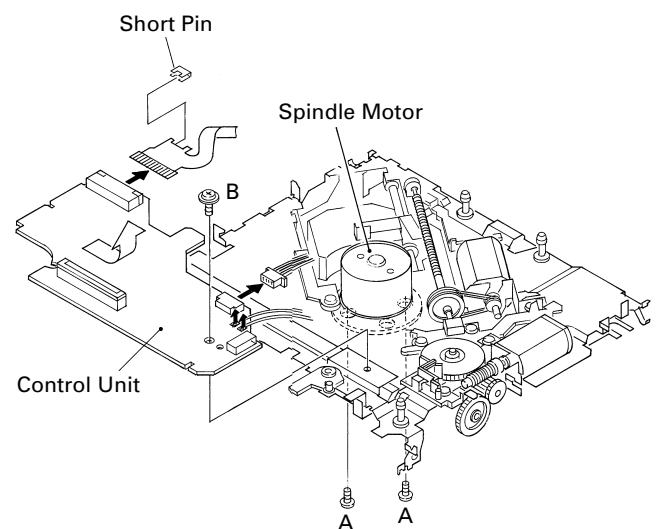
### ● Removing the LO Arm Assy

1. Remove two Pins to dismount the LO Arm Assy.



### ● Removing the Control Unit and the Spindle Motor

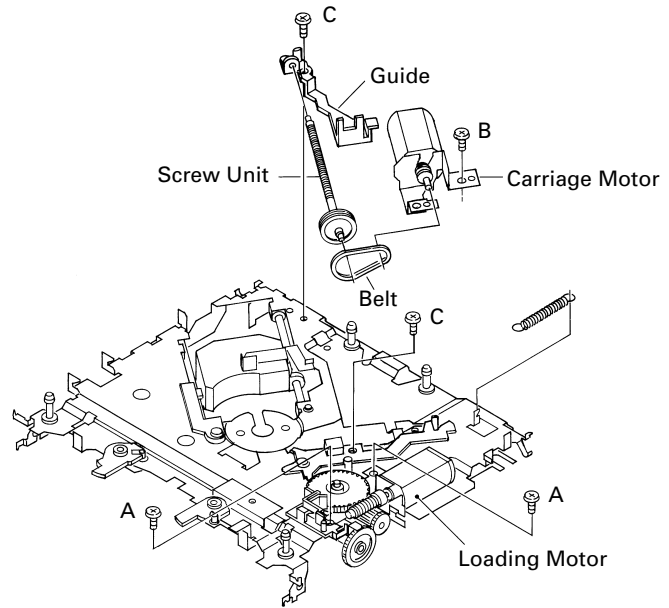
1. Remove from the connector after mounting the short pin on the flexible PCB of the pickup unit.
2. Remove two Soldered joints, then remove two Screws A.
3. Remove two connectors and a Screw B.
4. Disengage the Control Unit from two Tabs, then dismount the unit by sliding it toward left.
5. Dismount the Spindle Motor.



### ● Removing the Loading Motor and Carriage Motor

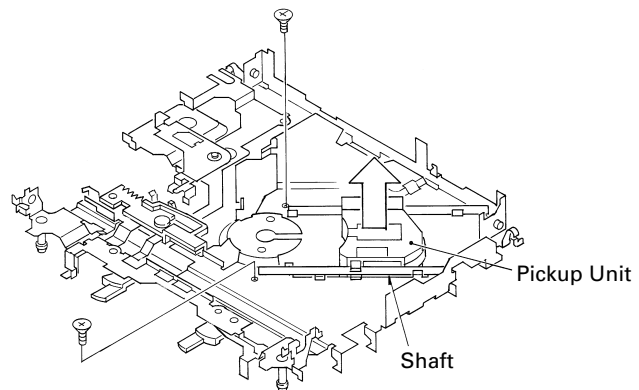
1. Remove the Spring and two Screws A.
2. Dismount the Loading Motor.
3. Remove the Belt, a Screw B, two Screws C, a Guide and a Screw Unit.
4. Dismount the Carriage Motor.

Note : When assembling the Belt, use care so that it may not be contaminated by grease.



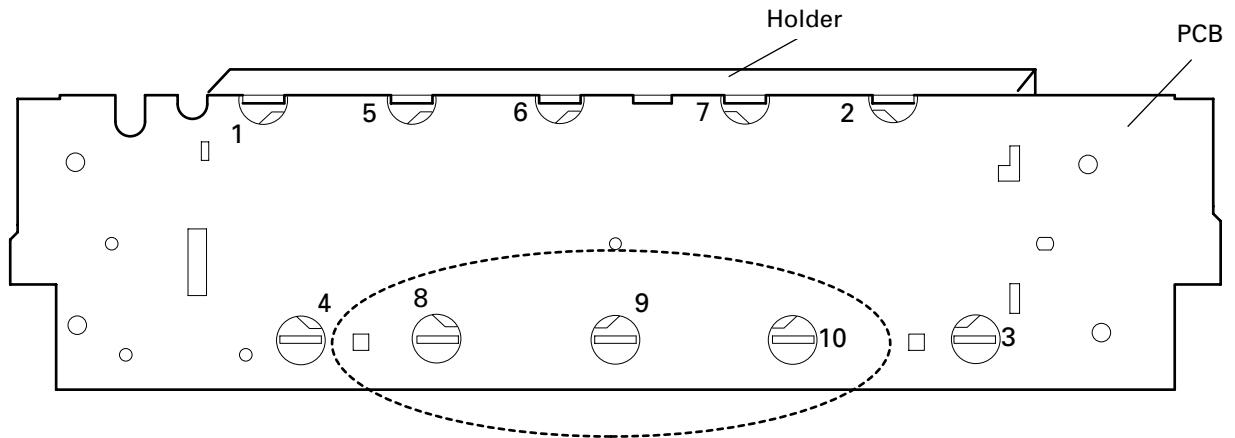
### ● Removing the Pickup Unit

1. Remove two Screws and a Shaft.
2. Dismount the Pickup Unit.



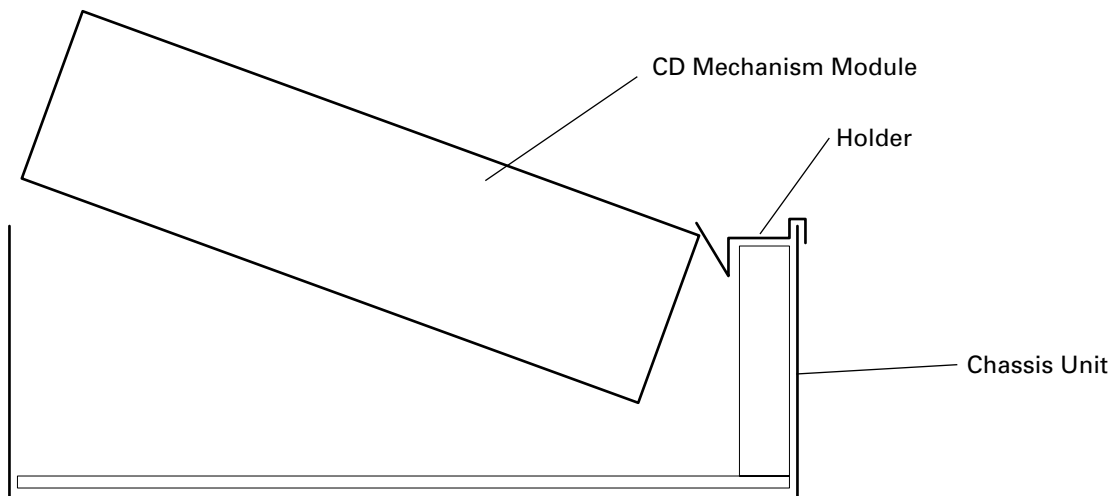
### ● Precautions on Holder mounting

When mounting a holder on the keyboard unit PCB, do not bend the claws 8 to 10. Otherwise, an unstable LCD indication may result when pressing a button.



### ● Precautions on CD Mechanism Module mounting

When mounting a CD mechanism module on the chassis unit, mount it with an angle, as shown in the figure, in order to prevent the holder from being bent. When mounting is completed, make sure that the holder is contacting the CD mechanism module.



## 7.2.2 TEST MODE

### ● Error Messages

If a CD is not operative or stopped during operation due to an error, the error mode is turned on and cause(s) of the error is indicated with a corresponding number. This arrangement is intended at reducing nonsense calls from the users and also for facilitating trouble analysis and repair work in servicing.

#### (1) Basic Indication Method

1) When SERRORM is selected for the CSMOD (CD mode area for the system), error codes are written to DMIN (minutes display area) and DSEC (seconds display area). The same data is written to DMIN and DSEC. DTNO remains in blank as before.

#### 2) Head unit display examples

Depending on display capability of LCD used, display will vary as shown below. xx contains the error number.

8-digit display	6-digit display	4-digit display
ERROR-xx	ERR-xx	E-xx
	OR	
	Err-xx	

#### (2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. → Failure on home switch or CRG move mechanism.
11	Electricity	Focus Servo NG	Focusing not available. → Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG	Spindle not locked. Sub-code is strange (not readable). → Failure on spindle, stains or damages on disc, or excessive vibrations.
		Subcode NG	A disc not containing CD-R data is found. Turned over disc are found, though rarely. → Failure on home switch or CRG move mechanism.
		RF AMP NG	An appropriate RF AMP gain can't be determined. → CD signal error.
17	Electricity	Setup NG	APC protection doesn't work. Focus can be easily lost. → Damages or stains on disc, or excessive vibrations.
30	Electricity	Search Time Out	Failed to reach target address. → CRG tracking error or damages on disc.
A0	System	Power Supply NG	Power (VD) is ground faulted. → Failure on SW transistor or power supply (failure on connector).

Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).

Unreadable TOC does not constitute an error. An intended operation continues in this case.

A newly designed head unit must conform to the example given above.

Upper digits of an error code are subdivided as shown below:

1x: Setup relevant errors, 3x: Search relevant errors, 3x: Search relevant errors, Ax: Other errors.

## ● New Test Mode

S-CD plays the same way as before.

If an error such as off focus, spindle unlocking, unreadable sub-code, or sound skipping occurs after setup, its cause and time occurred (in absolute time) are displayed.

During setup, operational status of the control software (internal RAM: CPOINT) is displayed.

These displays and functions are prepared for enhancing aging in the servicing and efficiency of trouble analysis.

### (1) Shifting to the New Test Mode

- ① Turn on the current test mode by starting the reset from the key (it varies between the products).
- ② Select S-CD for the source through the specified procedure including use of the [SOURCE] key, and inserting the disc. Then, press the [Jump Mode Selector] key while maintaining the regulator turned off.
- ③ After the above operations, the new test mode remains on irrespective of whether the S-CD is turned on or off.

You can reset the new test mode by turning on the reset start.

- \* With some products, the new test mode can be reset through the same operations as that employed for shifting to the STBY mode (while maintaining the Acc turned off).

### (2) Key Correspondence

Key (Example)	Test mode		New test mode	
	Power Off	Power On	In-play	Error Production
BAND	To power on (offset adjustment performed)	To power off	—	Time/Err.No. switching
▶	—	FWD-Kick	FF/TR+	—
◀	—	REV-Kick	REV/TR-	—
1	—	T.Close (AGC performed) /parameter display switching	Scan	—
2	RF AMP gain switching	Parameter display switching /T.BAL adjustment/T.Open	Mode	—
3	To power on (offset adjustment not performed)	F.Close/RF AGC/F.T.AGC	—	—
6	—	F.Mode switching /T.Close (no AGC)/Jump switching	Auto/Manu	T.No./Time switching

Note: Eject and CD on/off is performed in the same procedure as that for the normal mode.

### (3) Cause of Error and Error Code

Code	Class	Contents	Description and cause
40	Electricity	Off focus detected.	FOK goes low. → Damages/stains on disc, vibrations or failure on servo.
41	Electricity	Spindle unlocked.	FOK = Low continued for 50 msec. → Damages/stains on disc, vibrations or failure on servo.
42	Electricity	Sub-code unreadable.	Sub-code was unreadable for 50 msec. → Damages/stains on disc, vibrations or failure on servo.
43	Electricity	Sound skipping detected.	Last address memory function was activated. → Damages/stains on disc, vibrations or failure on servo.

Note: Mechanical errors during aging are not displayed.

The error codes should be indicated in the same way as in the normal mode.

## (4) Display of Operational Status (CPOINT) during Setup

Status No.	Contents	Protective action
00	CD+5V ON process in progress.	None
01	Servo LSI initialization (1/3) in progress.	None
02	Servo LSI CRAM initialization in progress.	None
03	Servo LSI initialization (2/3) in progress.	None
04	Offset adjustment (1/3) in progress.	None
05	Offset adjustment (2/3) in progress.	None
06	Offset adjustment (3/3) in progress.	None
07	FZD adjustment in progress.	None
08	Servo LSI initialization (3/3) in progress.	None
10	Carriage move to home position started.	None
11	Carriage move to home position started.	None
12	Carriage is moving toward inner diameter.	Specified 10 seconds has been passed or failure on home switch.
13	Carriage is moving toward outer diameter.	Specified 10 seconds has been passed or failure on home switch.
14	Carriage outer kick in progress.	None
15	Carriage outer diameter feed (1 second) in progress.	None
20	Servo close started.	None
21	Pre-processing for focus search started.	None
22	Spindle rotation and focus search started.	None
23	Waiting for focus close (XSI=Low).	Specified focus search time has been passed.
24	Standing by after focus close is over.	Specified focus search time has been passed.
25	Focus search preprocessing is in progress while setup protection is turned on.	None
26	Focus search preprocessing is in progress while focus recovery is turned on.	None
27	Wait time after focus close is set up.	Off focus.
28	Standing by after focus close is over.	Off focus.
29	Setup (1/2) before T balance adjustment is started.	Off focus.
30	Setup (2/2) before T balance adjustment is started.	Off focus.
31	T balance adjustment started.	Off focus.
32	T balance adjustment (1/2).	Off focus.
33	T balance adjustment (2/2).	Off focus.
34	Waiting for spindle rotation to end. Spindle rough servo.	Off focus.
35	Standing by after spindle rough servo is over.	Off focus.
36	RF AGC started.	Off focus.
37	RF AGC started.	Off focus.
38	RF AGC ending process in progress.	Off focus.
39	Tracking close in progress.	Off focus.
40	Standing by after tracking is closed. Carriage closing in progress.	Off focus.
41	Focus/tracking AGC started.	Off focus.
42	Focus AGC started.	Off focus.
43	Focus AGC in progress.	Off focus.
44	Tracking AGC in progress.	Off focus.
45	Standing by after focus/tracking AGC are over.	Off focus.
46	Spindle processes applicable servo.	Off focus.
47	Check for servo close is started.	Off focus.
48	Check of LOCK pin started.	Off focus or spindle not locked.
49	RF AGC started.	Off focus.
50	RF AGC in progress.	Off focus.
51	Standing by after RF AGC is over.	Off focus.

## (5) Display Examples

## 1) During Setup (When status no. = 11)

TRK No.	MIN.	SEC.
11	11'	11"

## 2) During Operation (TOC read, TRK search, Play, FF and REV)

The same as in the normal mode.

## 3) When a Protection Error Occurred

Switch to the following displays (A) and (B) using the [BAND] switch:

(A) Error occurrence timing display in absolute time.

An example: Error occurred in 12th tune at 34'56" in absolute time.

TRK No.	MIN.	SEC.
12	34'	56"

(B) Error No. display

An example: Error #40 (Off focus is detected)

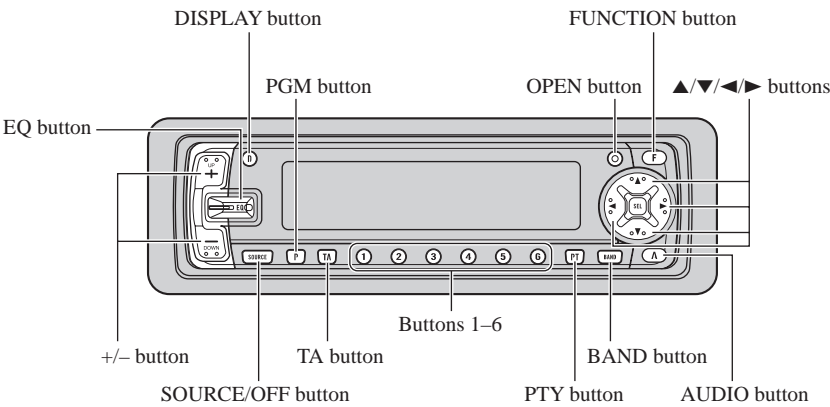
ERROR-40

8. OPERATIONS AND SPECIFICATIONS

8.1 OPERATIONS

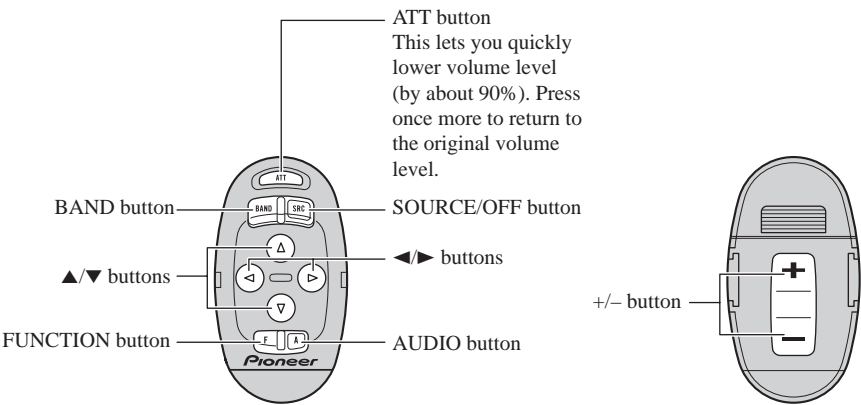
Key Finder

Head Unit



Steering Remote Controller(DEH-P7000R/EW, DEH-P7000R-W/EW)

A steering remote controller that enables remote operation of the head unit is supplied. Operation is the same as when using buttons on the head unit.



## Basic Operation

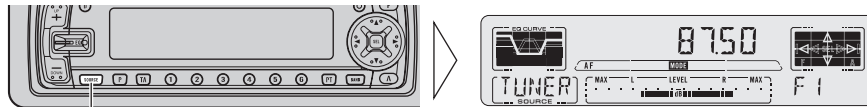
### To Listen to Music

The following explains the initial of operations required before you can listen to music.

**Note:**

- Loading a disc in this product.

#### 1. Select the desired source (e.g. tuner).



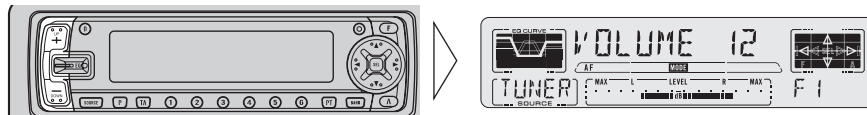
Each press changes the Source ...

Each press of the SOURCE/OFF button selects the desired source in the following order:  
Built-in CD player → Tuner → DAB (Digital Audio Broadcasting) → Multi-MD player  
→ Multi-CD player → AUX

**Note:**

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

#### 2. Raise or lower the volume.



#### 3. Source OFF.



Hold for 1 second or more

Basic Operation

Basic Operation of Built-in CD Player

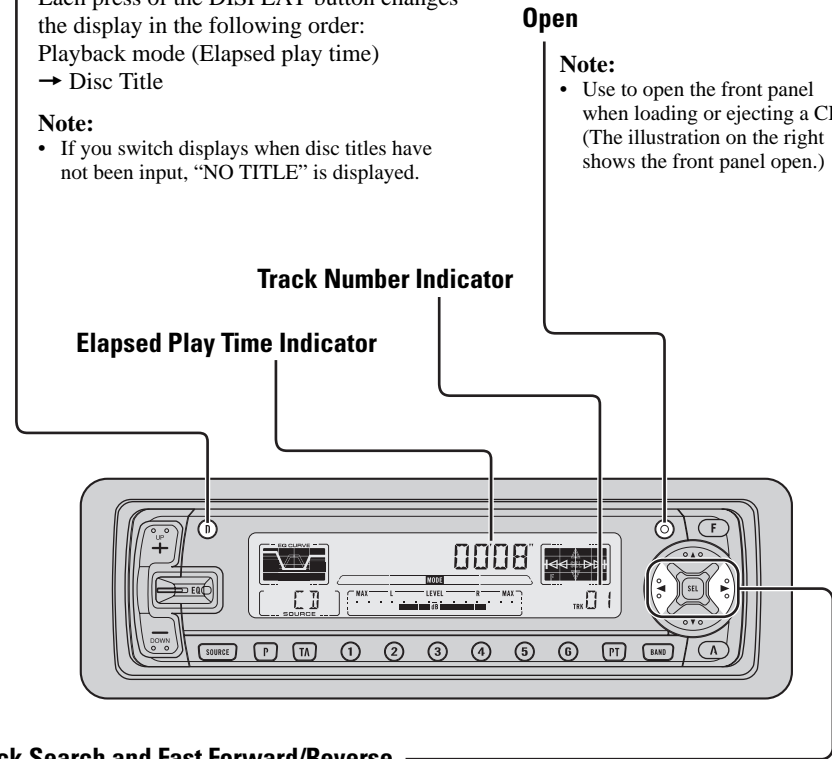
Switching the Display

Each press of the DISPLAY button changes the display in the following order:  
Playback mode (Elapsed play time)  
→ Disc Title

- Note:**
- If you switch displays when disc titles have not been input, “NO TITLE” is displayed.

Open

- Note:**
- Use to open the front panel when loading or ejecting a CD.  
(The illustration on the right shows the front panel open.)



Track Search and Fast Forward/Reverse

- You can select between Track Search or Fast forward/Reverse by pressing the ◀▶ button for a different length of time.

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

- Note:**
- 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 the built-in CD player cannot operate properly, an error message (such as “ERROR-14”) appears on the display.



### Disc Loading Slot

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.



### Eject

#### 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.

*Basic Operation*

**Basic Operation of Multi-CD Player**

This product can control a multi-CD player. (With certain old type multi-CD players, using a multiple connection adapter lets you connect multiple units which you can control with this product.)

**Track Search and Fast Forward/Reverse**

- You can select between Track Search or Fast forward/Reverse by pressing the ◀▶ button for a different length of time.

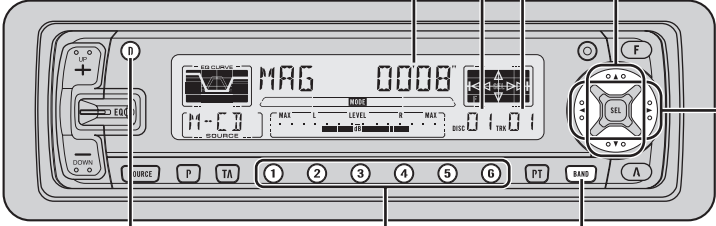
Track Search	0.5 seconds or less
Fast forward/Reverse	Continue pressing

**Disc Number Indicator**

**Elapsed Play Time Indicator**

**Track Number Indicator**

**Disc Search**



The diagram shows a car stereo unit with a digital display and various buttons. Labels with leader lines point to the following features: 'Elapsed Play Time Indicator' points to the left side of the digital display; 'Disc Number Indicator' points to the right side of the digital display; 'Track Number Indicator' points to the track selection buttons (1-6) below the display; 'Disc Search' points to the 'SEL' button on the right side of the unit.

**Switching the Display**

Each press of the DISPLAY button changes the display in the following order:  
Playback mode (Elapsed play time)  
→ Disc Title

**Note:**

- If you switch displays when disc titles have not been input, "NO TITLE" is displayed.

**Switching the Multi-CD Player**

Using a multiple connection adapter lets you connect up to three Multi-CD players.

M-CD 1 → M-CD 2 → M-CD 3  
(Displayed about for 2 seconds.)

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

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

**Note:**

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

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

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

- Select the desired block with the 1 to 5 buttons.

**Note:**

- After completing a rough search, use the ▲ and ▼ buttons to select a desired disc.

**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.
- 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 the ITS function. (If you try and use this function, "NOT READY" 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.
- 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.
- "LOAD" will be displayed in the following cases:
  - \* If the disc in the extra tray is selected.
  - \* If the disc is moved from the extra tray to the magazine.  
(Refer to the 50-Disc type multi-CD player owner's manual.)
- You cannot use the "Ejecting a Single Disc", "Frequency Play", "Music Group Play" or "ABC Disc Title Search" functions with this product.

**When playing a CD TEXT disc on a CD TEXT compatible Multi-CD Player:**

- You can use the following two functions. Refer to Multi-CD Player's Owner's Manual for operation details.
  - \* Title display switching
  - \* Title scroll
- You cannot switch to the Disc Title Input mode in the Detailed Setting Menu.

Basic Operation of Tuner

This product’s AF function can be switched ON and OFF. AF should be switched OFF for normal tuning operations.

Manual and Seek Tuning

- You can select the tuning method by changing the length of time you press the ◀/▶ button.

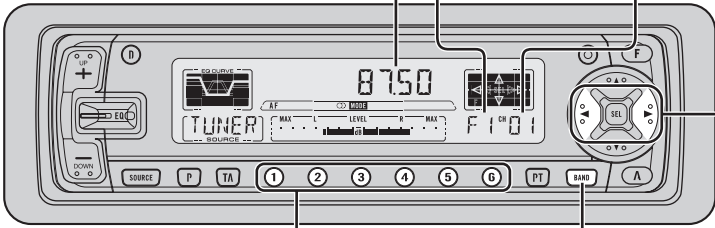
Manual Tuning (step by step)	0.5 seconds or less
Seek Tuning	0.5 seconds or more

- Note:**
- If you continue pressing the button for longer than 0.5 seconds, you can skip broadcast stations. Seek Tuning starts as soon as you stop pressing the button.
  - “◯” stereo indicator lights when a stereo station is selected.

**Frequency Indicator**

**Band Indicator**

**Preset Number Indicator**



**Preset Tuning**

**Band**

F1 (FM1) → F2 (FM2)  
→ F3 (FM3) → MW/LW

- You can memorize broadcast stations in buttons 1 through 6 for easy, one-touch station recall.

Preset station recall	2 seconds or less
Broadcast station preset memory	2 seconds or more

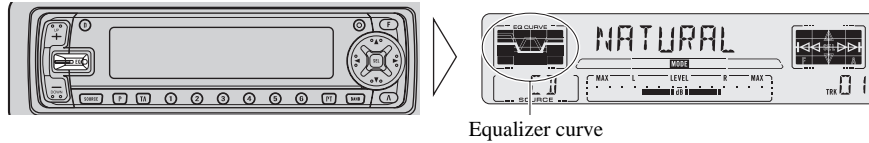
- Note:**
- Up to 18 FM stations (6 in FM1, FM2 and FM3) and 6 MW/LW stations can be stored in memory.
  - You can also use the ▲ or ▼ buttons to recall broadcast stations memorized in buttons 1 through 6.

## Audio Adjustment

### Selecting the Equalizer Curve

You can switch between Equalizer curves.

- Move the EQ button up or down to select the desired Equalizer curve.



POWERFUL ↔ NATURAL ↔ VOCAL ↔ CUSTOM ↔ EQ FLAT  
↔ SUPER BASS

**Note:**

- "CUSTOM" stores an equalizer curve you have made adjustments to.
- You can create different "CUSTOM" curves for different sources. (The built-in CD player and multi-CD player are set to the same Equalizer Curve Adjustment setting automatically.)

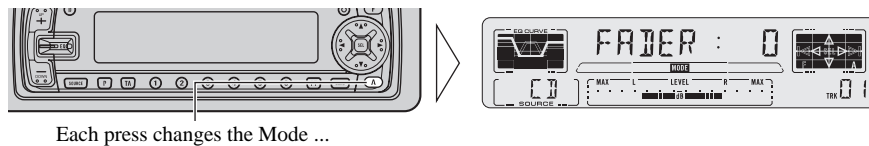
### Entering the Audio Menu

With this Menu, you can adjust the sound quality.

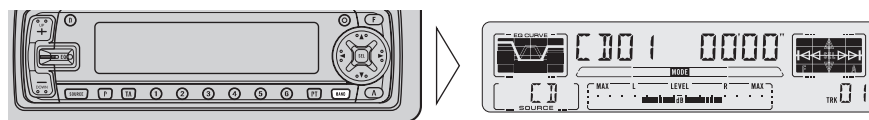
**Note:**

- After entering the Audio Menu, if you do not perform an operation within about 30 seconds, the Audio Menu is automatically canceled.
- Audio Menu functions change depending on the Rear Speaker Lead and Subwoofer Controller setting in the Initial Setting Menu.

1. Select the desired mode in the Audio Menu.



2. Operate a mode.
3. Cancel the Audio Menu.



## Audio Menu Functions

The Audio Menu features the following functions.

### Balance Adjustment (FADER)

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

1. Press the **AUDIO** button and select Fader/Balance mode (**FADER**) in the Audio Menu.

2. Adjust front/rear speaker balance with the **▲/▼** buttons.

“FADER F15” – “FADER R15” is displayed as it moves from front to rear.



3. Adjust left/right speaker balance with the **◀/▶** buttons.

“BAL L 9” – “BAL R 9” is displayed as it moves from left to right.



**Note:**

- When the Rear Speaker Lead setting is “REAR SP:S/W”, you cannot adjust front/rear speaker balance.
- “FADER 0” is the proper setting when 2 speakers are in use.

### Equalizer Curve Adjustment (EQ-LOW/MID/HIGH)

You can adjust equalizer curve settings as desired. Adjusted equalizer curve settings are memorized in “CUSTOM”.

1. Press the **AUDIO** button and select the Equalizer mode (**EQ-LOW/MID/HIGH**) in the Audio Menu.

2. Select the band you want to adjust with the **◀/▶** buttons.  
EQ-LOW ↔ EQ-MID ↔ EQ-HIGH



3. Boost or attenuate the selected band with the **▲/▼** buttons.

The display shows “+6” – “-6”.

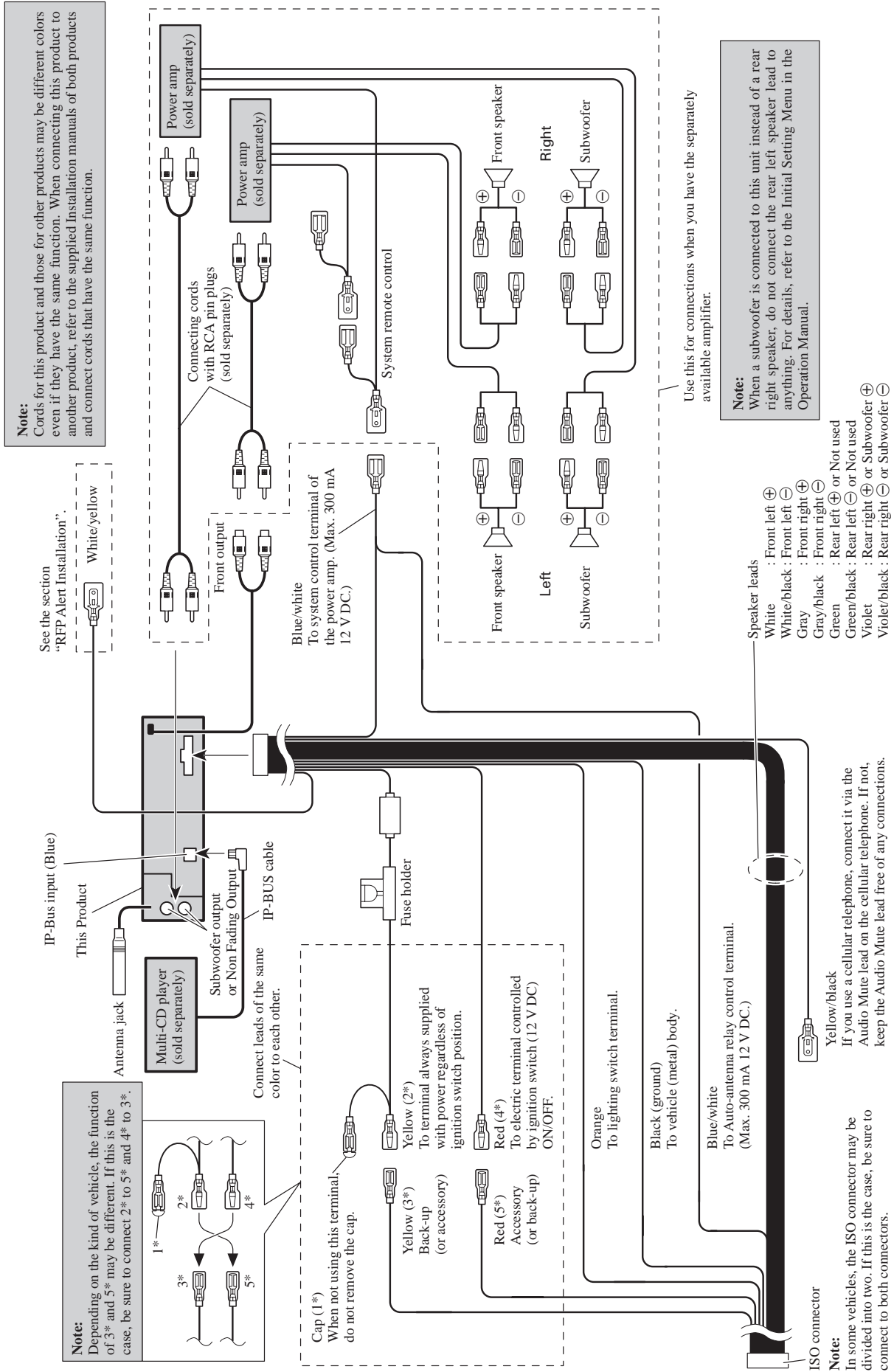


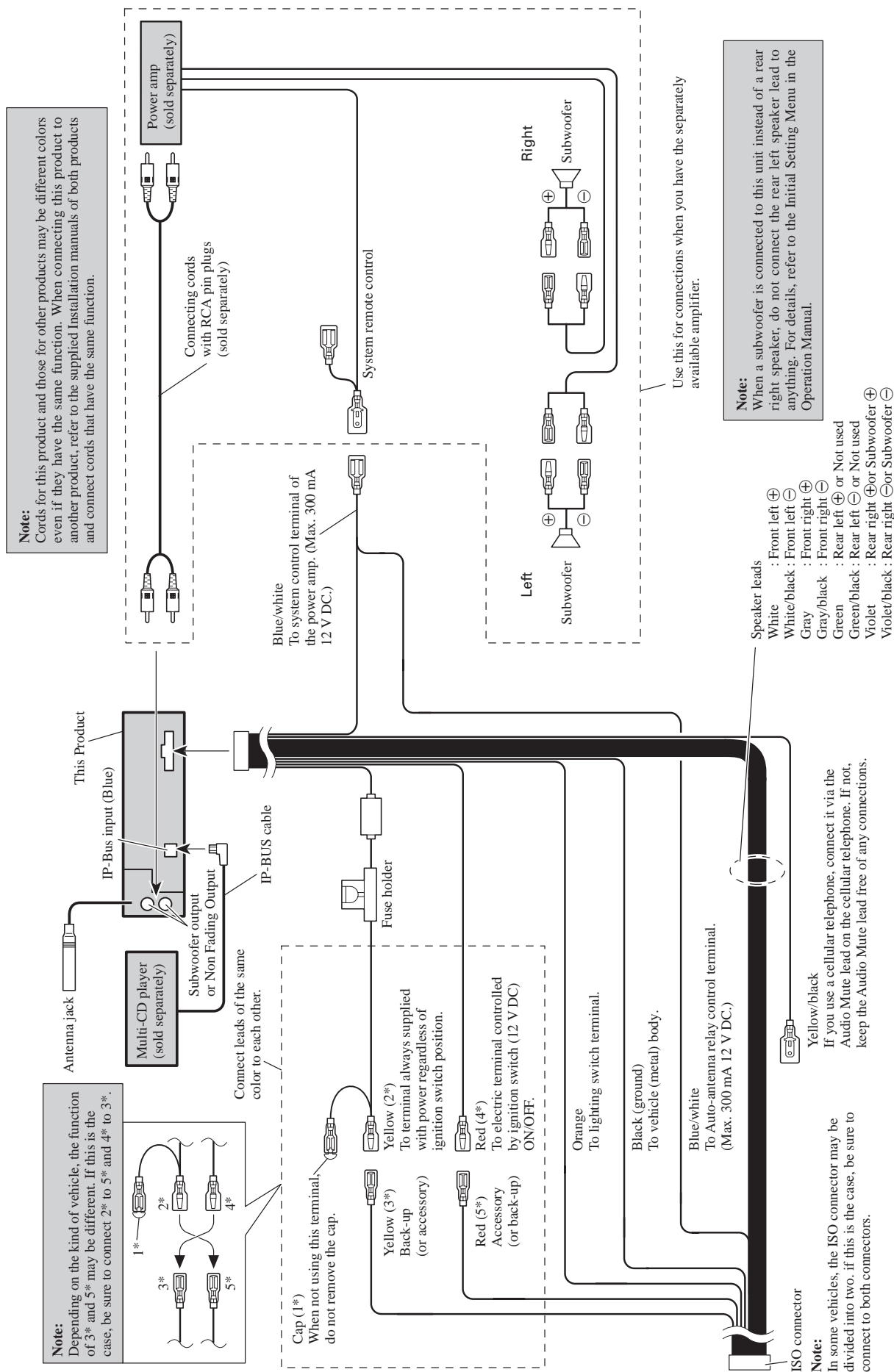
“CUSTOM”

**Note:**

- If you make adjustments when a curve other than “CUSTOM” is selected, the adjusted curve is stored in memory as a “CUSTOM” curve. Also, the displayed curve switches to that selected before adjustments were made.

# DEH-P7000R/EW, DEH-P7000R-W/EW





## 8.2 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)	178 (W) × 50 (H) × 157 (D) mm
(front face)	188 (W) × 58 (H) × 18 (D) mm
Weight	1.6 kg

### Amplifier

Maximum power output	45 W × 4 45 W × 2 ch/4 Ω + 70 W × 1 ch/2 Ω (for Subwoofer)
Continuous power output	27 W × 4 (DIN45324, +B = 14.4 V)
Load impedance	4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout maximum output	
level/output impedance	4.0 V/100 Ω
Equalizer (3-Band Parametric Equalizer)	
(Low)	Frequency: 40/80/100/160 Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ±12 dB
(Mid)	Frequency: 200/500/1k/2k Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ±12 dB
(High)	Frequency: 3.15k/8k/10k/12.5k Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ±12 dB
Loudness contour	
(Low)	+3.5 dB (100 Hz), +3 dB (10 kHz)
(Mid)	+10 dB (100 Hz), +6.5 dB (10 kHz)
(High)	+11 dB (100 Hz), +11 dB (10 kHz) (volume: –30 dB)
HPF	
Frequency	50/80/125 Hz
Slope	–12 dB/oct.
Subwoofer output	
Frequency	50/80/125 Hz
Slope	–18 dB/oct.
Level	±12 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) (IEC-A network)
Dynamic range	90 dB (1 kHz)
Number of channels	2 (stereo)

### 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 the design are subject to possible modification without notice due to improvements.