

Service Manual

PIONEER®
The Art of Entertainment

DEH-P645R



ORDER NO.
CRT2148

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH RDS TUNER

DEH-P645R

EW

DEH-P545R

EW

DEH-P544R

EW

DEH-P443R

EW

COMPACT
disc
DIGITAL AUDIO

- See the separate manual CX-597(CRT1829) for the CD mechanism description, disassembly and circuit description.
- The CD mechanism employed in this model is one of S7 series.

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● **CD Player Service Precautions**

1. For pickup unit(CXX1230) handling, please refer to "Disassembly"(CX-597 Service Manual CRT1829). During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
3. Please checking the grating after changing the service pickup unit(see page 71).

1. SAFETY INFORMATION

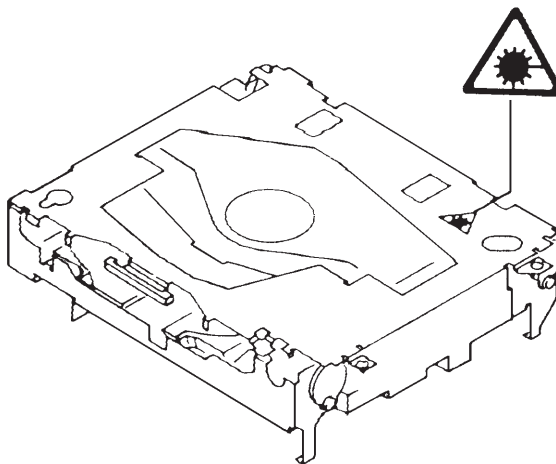
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly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

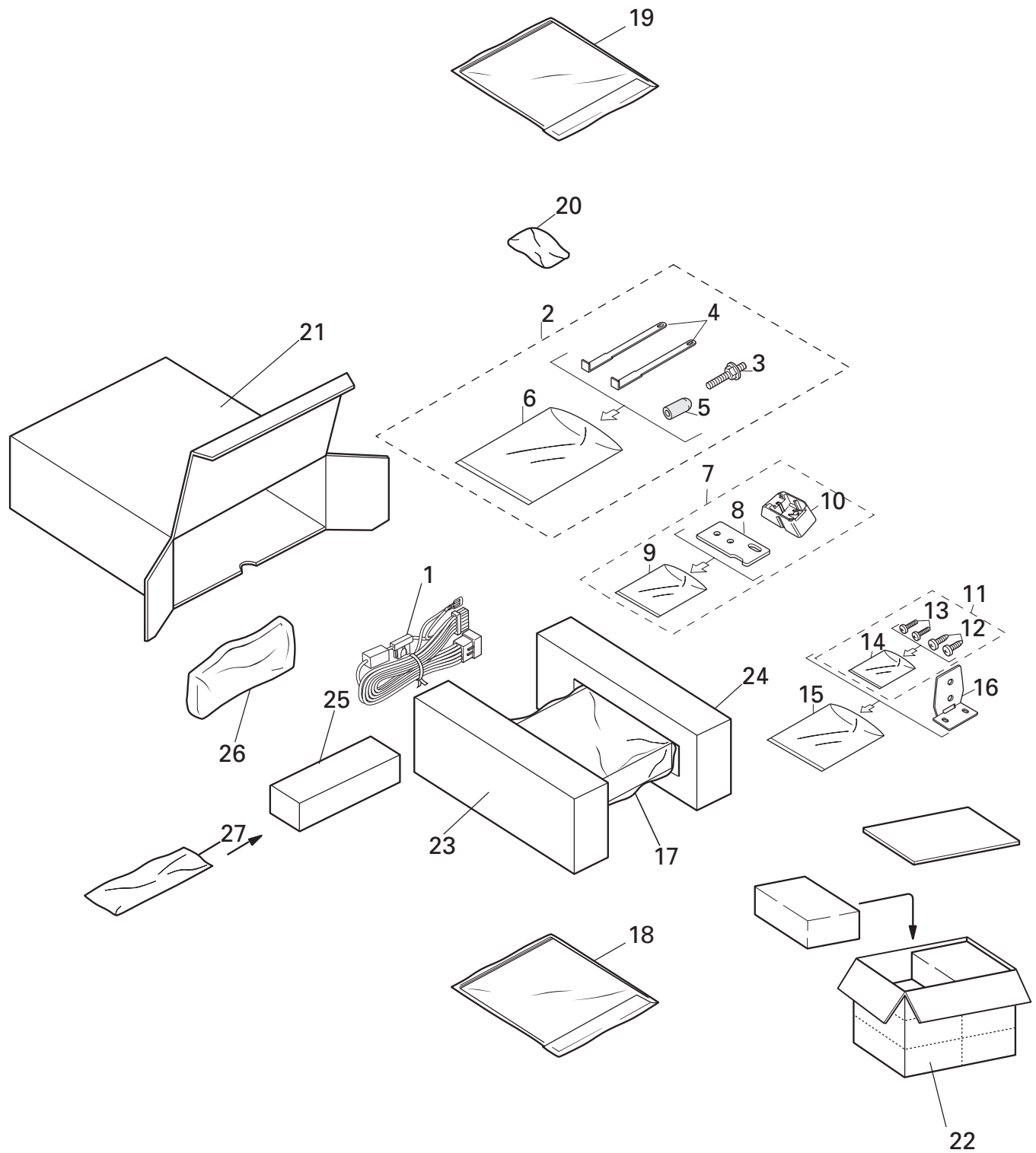


Fig. 1

NOTE:

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

● PACKING SECTION PARTS LIST

(1) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Cord Assy	See Contrast table(2)		18-4	Owner's Manual	See Contrast table(2)
	2	Accessory Assy	CEA1917		18-5	Owner's Manual	See Contrast table(2)
	3	Screw	CBA1284		18-6	Installation Manual	See Contrast table(2)
	4	Handle	CNC5395		18-7	Label	See Contrast table(2)
	5	Bush	CNV1009		18-8	Passport	See Contrast table(2)
*	6	Polyethylene Bag	E36-615		18-9	Warranty Card	See Contrast table(2)
	7	Base Assy	See Contrast table(2)		18-10	Caution Card	See Contrast table(2)
*	8	Sheet	See Contrast table(2)		19-1	Polyethylene Bag	See Contrast table(2)
	9	Polyethylene Bag	See Contrast table(2)		19-2	Installation Manual	See Contrast table(2)
*	10	Base	See Contrast table(2)	*	19-3	Label	See Contrast table(2)
	11	Screw Assy	See Contrast table(2)		19-4	Passport	See Contrast table(2)
	12	Screw	See Contrast table(2)	*	19-5	Warranty Card	See Contrast table(2)
	13	Screw	See Contrast table(2)		20	Battery	See Contrast table(2)
*	14	Polyethylene Bag	See Contrast table(2)		21	Carton	See Contrast table(2)
*	15	Polyethylene Bag	See Contrast table(2)		22	Contain Box	See Contrast table(2)
	16	Bracket	See Contrast table(2)		23	Protector	CHP1766
	17	Polyethylene Bag	CEG-162		24	Protector	CHP1767
	18-1	Polyethylene Bag	CEG1116		25	Spacer	See Contrast table(2)
	18-2	Owner's Manual	See Contrast table(2)		26	Case Assy	CXB1063
	18-3	Owner's Manual	See Contrast table(2)		27	Remote Control Assy	See Contrast table(2)

● Owner's Manual

Model	Part No.	Language
DEH-P645R/EW	CRD2557	English, Spanish
	CRD2558	German, French
	CRD2559	Italian, Dutch
DEH-P545R/EW	CRD2568	English, Spanish
	CRD2569	German, French
	CRD2570	Italian, Dutch
DEH-P544R/EW	CRD2631	English, Spanish, Italian
DEH-P443R/EW	CRD2633	German, French, Dutch

● Installation Manual

Model	Part No.	Language
DEH-P645R/EW	CRD2560	English, Spanish, German, French, Italian, Dutch
DEH-P545R/EW	CRD2571	English, Spanish, German, French, Italian, Dutch
DEH-P544R/EW	CRD2632	English, Spanish, Italian
DEH-P443R/EW	CRD2634	German, French, Dutch

(2) CONTRAST TABLE

DEH-P645R/EW, DEH-P545R/EW, DEH-P544R/EW and DEH-P443R/EW are constructed same except for the following:

Mark No.	Symbol and Description	Part No.	
		DEH-P645R/EW	DEH-P545R/EW
1	Cord Assy	CDE5485	CDE5486
7	Base Assy	CEA2344	Not used
* 8	Sheet	CZA3371	Not used
9	Polyethylene Bag	CZE3188	Not used
* 10	Base	CZN6466	Not used
11	Screw Assy	CZE3198	Not used
12	Screw	BNC40P120FZK	Not used
13	Screw	BPZ30P100FZK	Not used
* 14	Polyethylene Bag	CEG-127	Not used
* 15	Polyethylene Bag	CZE3201	Not used
16	Bracket	CZN6467	Not used
18-2	Owner's Manual	CRD2557	CRD2568
18-3	Owner's Manual	CRD2558	CRD2569
18-4	Owner's Manual	CRD2559	CRD2570
19-2	Installation Manual	CRD2560	CRD2571
20	Battery	CEX1006	Not used
21	Carton	CHG3436	CHG3440
22	Contain Box	CHL3436	CHL3440
25	Spacer	CHW1433	Not used
27	Remote Control Assy	CXB1160	Not used

DEH-P645R,P545R,P544R,P443R

Mark No.	Symbol and Description	Part No.	
		DEH-P645R/EW	DEH-P544R/EW
	1 Cord Assy	CDE5485	CDE5486
	7 Base Assy	CEA2344	Not used
*	8 Sheet	CZA3371	Not used
	9 Polyethylene Bag	CZE3188	Not used
*	10 Base	CZN6466	Not used
	11 Screw Assy	CZE3198	Not used
	12 Screw	BNC40P120FZK	Not used
	13 Screw	BPZ30P100FZK	Not used
*	14 Polyethylene Bag	CEG-127	Not used
*	15 Polyethylene Bag	CZE3201	Not used
	16 Bracket	CZN6467	Not used
	18-2 Owner's Manual	CRD2557	Not used
	18-3 Owner's Manual	CRD2558	Not used
	18-4 Owner's Manual	CRD2559	Not used
	18-5 Owner's Manual	Not used	CRD2631
	18-6 Installation Manual	Not used	CRD2632
*	18-7 Label	Not used	CRW1343
*	18-9 Warranty Card	Not used	CRY1087
	18-10 Caution Card	CRP1182	Not used
	19-1 Polyethylene Bag	CEG1116	Not used
	19-2 Installation Manual	CRD2560	Not used
*	19-3 Label	CRW1343	Not used
	19-4 Passport	CRY1013	Not used
*	19-5 Warranty Card	CRY1087	Not used
	20 Battery	CEX1006	Not used
	21 Carton	CHG3436	CHG3441
	22 Contain Box	CHL3436	CHL3441
	25 Spacer	CHW1433	Not used
	27 Remote Control Assy	CXB1160	Not used

Mark No.	Symbol and Description	Part No.	
		DEH-P645R/EW	DEH-P443R/EW
	1 Cord Assy	CDE5485	CDE5627
	7 Base Assy	CEA2344	Not used
*	8 Sheet	CZA3371	Not used
	9 Polyethylene Bag	CZE3188	Not used
*	10 Base	CZN6466	Not used
	11 Screw Assy	CZE3198	Not used
	12 Screw	BNC40P120FZK	Not used
	13 Screw	BPZ30P100FZK	Not used
*	14 Polyethylene Bag	CEG-127	Not used
*	15 Polyethylene Bag	CZE3201	Not used
	16 Bracket	CZN6467	Not used
	18-2 Owner's Manual	CRD2557	Not used
	18-3 Owner's Manual	CRD2558	Not used
	18-4 Owner's Manual	CRD2559	Not used
	18-5 Owner's Manual	Not used	CRD2633
	18-6 Installation Manual	Not used	CRD2634
*	18-7 Label	Not used	CRW1343
	18-8 Passport	Not used	CRY1013
*	18-9 Warranty Card	Not used	CRY1087
	18-10 Caution Card	CRP1182	Not used
	19-1 Polyethylene Bag	CEG1116	Not used
	19-2 Installation Manual	CRD2560	Not used
*	19-3 Label	CRW1343	Not used
	19-4 Passport	CRY1013	Not used
*	19-5 Warranty Card	CRY1087	Not used
	20 Battery	CEX1006	Not used
	21 Carton	CHG3436	CHG3442
	22 Contain Box	CHL3436	CHL3442
	25 Spacer	CHW1433	Not used
	27 Remote Control Assy	CXB1160	Not used

2.2 EXTERIOR

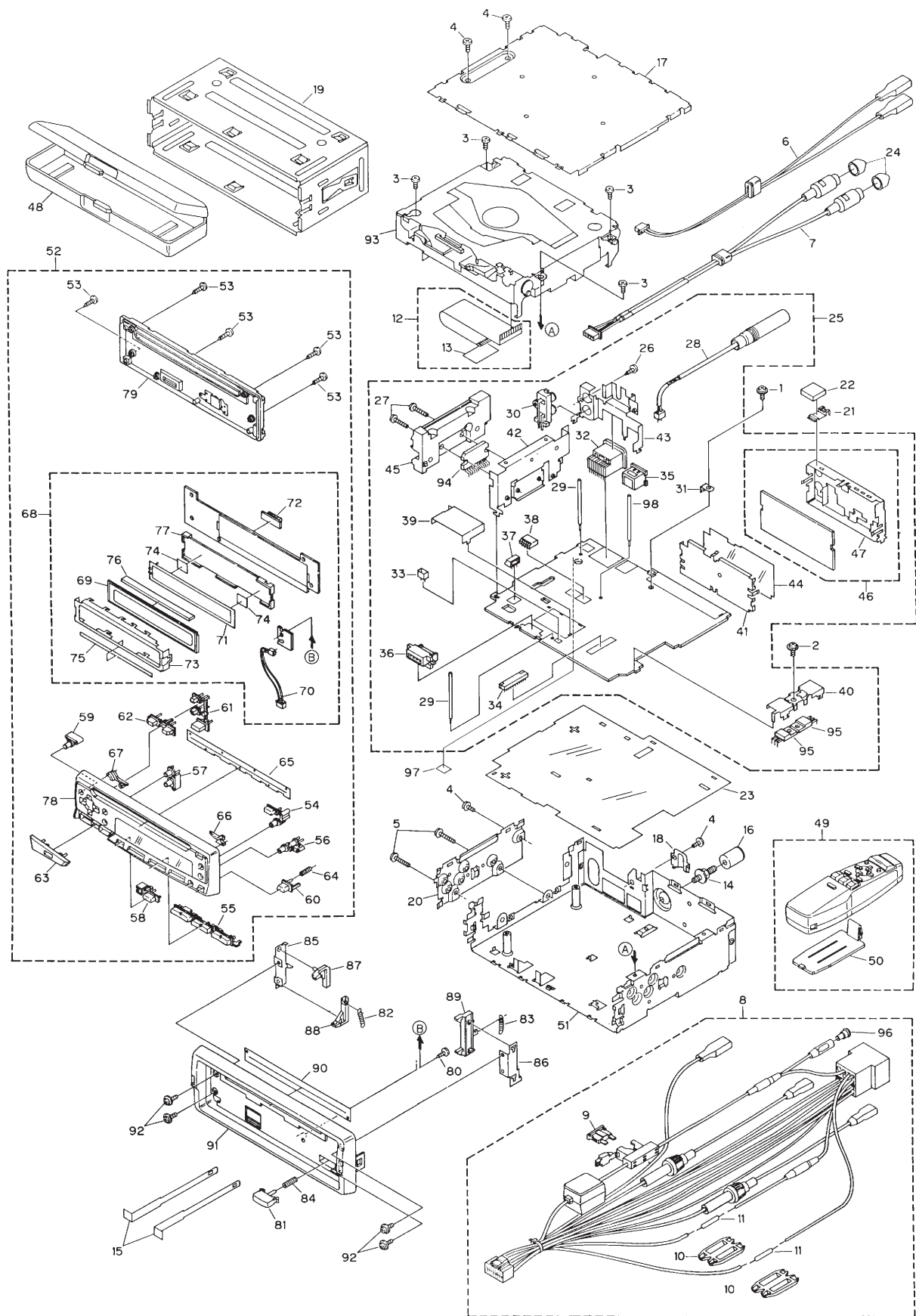


Fig. 2

● EXTERIOR SECTION PARTS LIST

(1) PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	ASZ26P055FUC	46	FM/AM Tuner Unit	See Contrast table(2)
2	Screw	ASZ26P080FMC	47	Holder	CNC6555
3	Screw	BSZ26P050FMC	48	Case Assy	CXB1063
4	Screw	BSZ30P060FMC	49	Remote Control Assy	See Contrast table(2)
5	Screw	BSZ30P180FMC	50	Battery Cover	See Contrast table(2)
6	Cord Assy	See Contrast table(2)	51	Chassis Unit	See Contrast table(2)
7	Cord Assy	See Contrast table(2)	52	Detach Grille Assy	See Contrast table(2)
8	Cord Assy	See Contrast table(2)	53	Screw	BPZ20P100FZK
9	Fuse	CEK1136	54	Button	See Contrast table(2)
10	Cap	CNS1472	55	Button	See Contrast table(2)
11	Resistor	RS1/2PMF102J	56	Button	CAC5399
12	Cable	CDE5635	57	Button	CAC5403
13	Insulator	CNM5761	58	Button	CAC5404
14	Screw	CBA1284	59	Button	See Contrast table(2)
15	Handle	CNC5395	60	Button	See Contrast table(2)
16	Bush	CNV1009	61	Button	See Contrast table(2)
17	Case	CNB2119	62	Button	See Contrast table(2)
18	Holder	CNC4963	63	Button	See Contrast table(2)
19	Holder	CNC6798	64	Spring	CBH2103
20	Holder	CNC6862	65	Cover	CNM4704
21	Earth Terminal	CNC7358	66	Lighting Conductor	CNV5180
22	Spacer	CNM4913	67	Lighting Conductor	CNV5181
23	Insulator	CNM5535	68	Keyboard Unit	See Contrast table(2)
24	Cap	See Contrast table(2)	69	LCD	See Contrast table(2)
25	Tuner Amp Unit	See Contrast table(2)	70	Cord	CDE5665
26	Screw	BPZ26P080FMC	71	EL	CEL1536
27	Screw	BSZ26P140FMC	72	Connector(CN1801)	CKS3580
28	Antenna Cord	CDH1234	73	Holder	CNC7435
29	Clamper	CEF1009	74	Film	CNM4349
30	Pin Jack(CN253)	CKB1028	75	Spacer	CNM5449
31	Terminal(CN501)	CKF1059	76	Connector	CNV5182
32	Plug(CN901)	CKM1278	77	Housing	CNV5183
33	Plug(CN802)	CKS-783	78	Grille Unit	See Contrast table(2)
34	Connector(CN651)	CKS2228	79	Cover Unit	See Contrast table(2)
35	Connector(CN101)	CKS3408	80	Screw	BPZ20P060FMC
36	Connector(CN801)	CKS3581	81	Button	CAC5180
37	Connector(CN851)	See Contrast table(2)	82	Spring	CBH1834
38	Connector(CN254)	See Contrast table(2)	83	Spring	CBH1835
39	Holder	CNC5968	84	Spring	CBH1996
40	Holder	CNC6132	85	Bracket	CNC6135
41	Holder	CNC6356	86	Bracket	CNC6791
42	Holder	CNC7429	87	Arm	CNV4692
43	Holder	See Contrast table(2)	88	Arm	CNV4693
44	Insulator	CNM4684	89	Arm	CNV4951
45	Heat Sink	CNR1458	90	Cover	CNM4875

DEH-P645R,P545R,P544R,P443R

Mark No.	Description	Part No.
91	Panel	See Contrast table(2)
92	Screw	IMS20P030FZK
93	CD Mechanism Module	CXK5004
94	IC(IC201)	See Contrast table(2)
95	Transistor(Q951, 971)	2SD2396
96	Terminal Cover	CKX-003
97	Spacer	CNM5875
98	Clamper	See Contrast table(2)

(2) CONTRAST TABLE

DEH-P645R/EW, DEH-P545R/EW, DEH-P544R/EW and DEH-P443R/EW are constructed same except for the following:

Mark No.	Symbol and Description	Part No.	
		DEH-P645R/EW	DEH-P443R/EW
6	Cord Assy	CDE5185	Not used
7	Cord Assy	CDE5209	Not used
8	Cord Assy	CDE5485	CDE5627
24	Cap	CNV2680	Not used
25	Tuner Amp Unit	CWM5619	CWM5621
37	Connector(CN851)	CKS3597	Not used
38	Connector(CN254)	CKS3598	Not used
43	Holder	CNC7430	CNC7434
46	FM/AM Tuner Unit	CWE1416	CWE1470
49	Remote Control Assy	CXB1160	Not used
50	Battery Cover	CNS4406	Not used
51	Chassis Unit	CXB1981	CXB1990
52	Detach Grille Assy	CXB1992	CXB2002
54	Button	CAC5397	CAC5406
55	Button	CAC5398	CAC5449
59	Button	CAC5405	CAC5411
60	Button	CAC5430	CAC5514
61	Button	CAC5450	CAC5544
62	Button	CAC5451	CAC5545
63	Button	CAC5536	CAC5417
68	Keyboard Unit	CWM5632	CWM5635
69	LCD	CAW1458	CAW1464
78	Grille Unit	CXB1965	CXB1967
79	Cover Unit	CXB2480	CXB2481
91	Panel	CNS4870	CNS4908
94	IC(IC201)	TDA7386	TDA7384
98	Clamper	CEF1009	Not used

Mark No.	Symbol and Description	Part No.	
		DEH-P645R/EW	DEH-P545R/EW
6	Cord Assy	CDE5185	Not used
7	Cord Assy	CDE5209	Not used
8	Cord Assy	CDE5485	CDE5486
24	Cap	CNV2680	Not used
25	Tuner Amp Unit	CWM5619	CWM5624
37	Connector(CN851)	CKS3597	Not used
38	Connector(CN254)	CKS3598	Not used
43	Holder	CNC7430	CNC7434
49	Remote Control Assy	CXB1160	Not used
50	Battery Cover	CNS4406	Not used
51	Chassis Unit	CXB1981	CXB1986
52	Detach Grille Assy	CXB1992	CXB1998
68	Keyboard Unit	CWM5632	CWM5638
69	LCD	CAW1458	CAW1461
78	Grille Unit	CXB1965	CXB1971
98	Clamper	CEF1009	Not used

Mark No.	Symbol and Description	Part No.	
		DEH-P645R/EW	DEH-P544R/EW
6	Cord Assy	CDE5185	Not used
7	Cord Assy	CDE5209	Not used
8	Cord Assy	CDE5485	CDE5486
24	Cap	CNV2680	Not used
25	Tuner Amp Unit	CWM5619	CWM5624
37	Connector(CN851)	CKS3597	Not used
38	Connector(CN254)	CKS3598	Not used
43	Holder	CNC7430	CNC7434
49	Remote Control Assy	CXB1160	Not used
50	Battery Cover	CNS4406	Not used
51	Chassis Unit	CXB1981	CXB1987
52	Detach Grille Assy	CXB1992	CXB1999
54	Button	CAC5397	CAC5406
55	Button	CAC5398	CAC5449
59	Button	CAC5405	CAC5411
60	Button	CAC5430	CAC5514
61	Button	CAC5450	CAC5544
62	Button	CAC5451	CAC5545
63	Button	CAC5536	CAC5417
68	Keyboard Unit	CWM5632	CWM5639
69	LCD	CAW1458	CAW1464
78	Grille Unit	CXB1965	CXB1972
79	Cover Unit	CXB2480	CXB2481
91	Panel	CNS4870	CNS4780
98	Clamper	CEF1009	Not used

2.3 CD MECHANISM MODULE

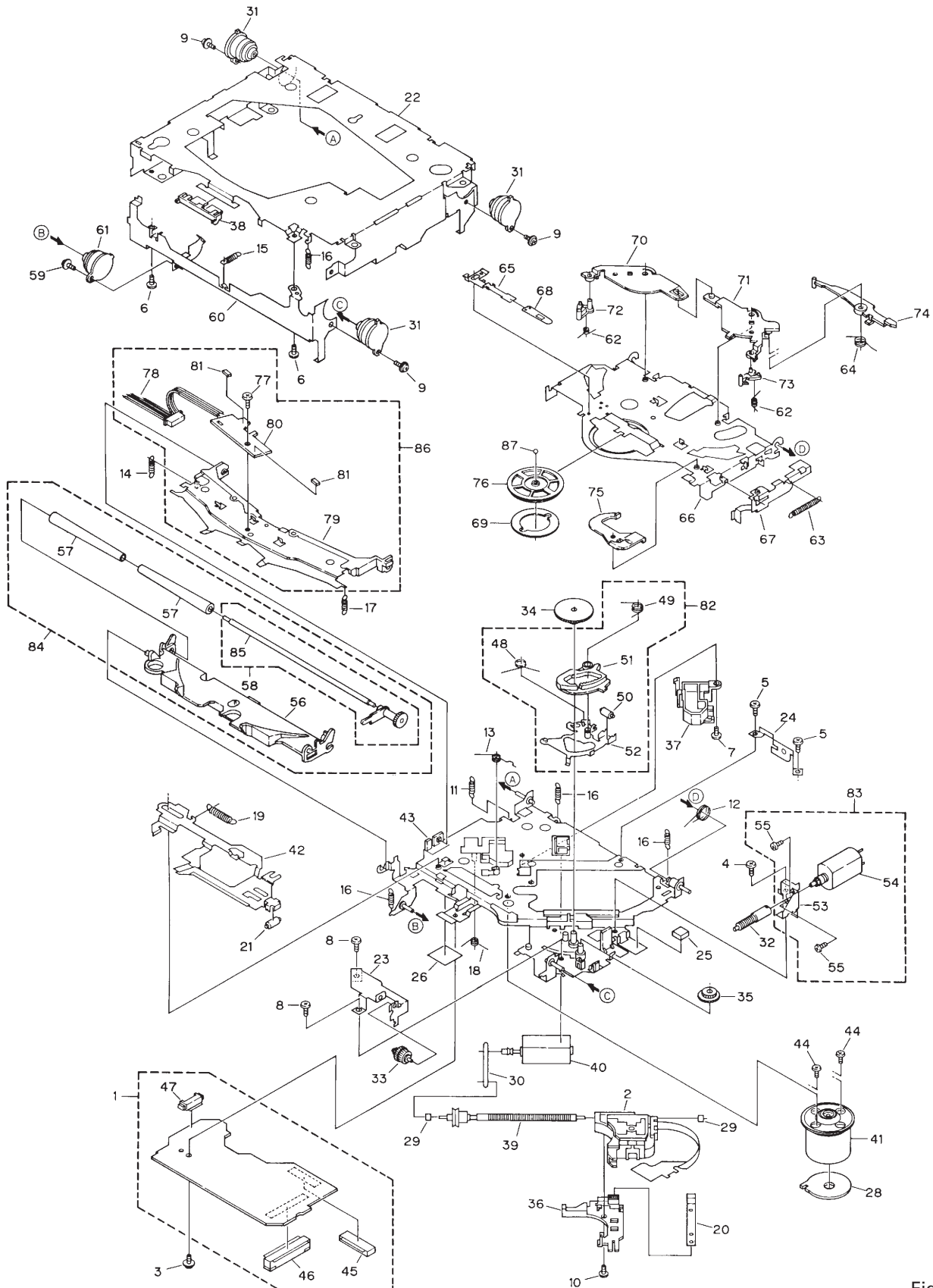


Fig. 3

● CD MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Control Unit	CWX2224	46	Connector(CN701)	CKS2774
2	Pickup Unit(Service)	CXX1230	47	Connector(CN801)	CKS2196
3	Screw	IMS26P035FMC	48	Spring	CBH1832
4	Screw	BMZ20P025FMC	49	Spring	CBH1833
5	Screw	BMZ20P040FMC	50	Roller	CLA2627
6	Screw	BSZ20P040FMC	51	Arm	CNV4136
7	Screw	CBA1077	52	Arm Unit	CXA8565
8	Screw	CBA1250	53	Bracket	CNC6056
9	Screw	CBA1296	54	Load Motor Unit(S7)	CXA8702
10	Screw	CBA1362	55	Screw	JFZ20P025FMC
11	Spring	CBH1724	56	Arm	CNV4120
12	Spring	CBH1729	57	Roller	CNV4509
13	Spring	CBH1730	58	Gear Unit(S7)	CXA8701
14	Spring	CBH1731	59	Screw	CBA1296
15	Spring	CBH1732	60	Frame	CNC5797
16	Spring	CBH1745	61	Damper	CNV3974
17	Spring	CBH1848	62	Spring	CBH1736
18	Spring	CBH1849	63	Spring	CBH1863
19	Spring	CBH1939	64	Spring	CBH1945
20	Spring	CBL1214	65	Spring	CBL1269
21	Roller	CLA2627	66	Arm	CNC5799
22	Frame	CNC5796	67	Lever	CNC6054
23	Bracket	CNC5871	68	Spacer	CNM3315
* 24	Bracket	CNC6376	69	Sheet	CNM4849
25	Cushion	CNM3917	70	Arm	CNV5436
26	Sheet	CNM4873	71	Arm	CNV4123
27		72	Arm	CNV4124
28	PCB	CNP4230	73	Arm	CNV4125
29	Bearing	CNR1415	74	Arm	CNV4138
30	Belt	CNT1071	75	Arm	CNV4139
31	Damper	CNV3974	76	Clamper	CNV5308
32	Gear	CNV4128	77	Screw	CBA1250
33	Gear	CNV4129	78	Connector(CN1)	CDE4576
34	Gear	CNV4130	79	Arm	CNC7383
35	Gear	CNV4131	* 80	Gathering PCB	CNX2445
36	Holder	CNV4663	81	Photo-transistor(Q1, 2)	CPT-230S-X
37	Holder	CNV5071	82	ELBO Arm Assy(S7)	CXA8889
38	Guide	CNV4484	83	Load Motor Assy(S7)	CXA8891
39	Screw Unit(S7)	CXA8699	84	LO Arm Assy(S7)	CXA8892
40	CRG Motor Unit(S7)	CXA8986	85	Shaft	CLA3133
41	Motor Unit	CXA8912	86	Guide Arm Assy(S7)	CXB1850
42	Lever Unit	CXA9300	87	Ball	CNR1189
43	Chassis Unit	CXB2574			
44	Screw	JFZ20P025FMC			
45	Connector(CN101)	CKS1953			

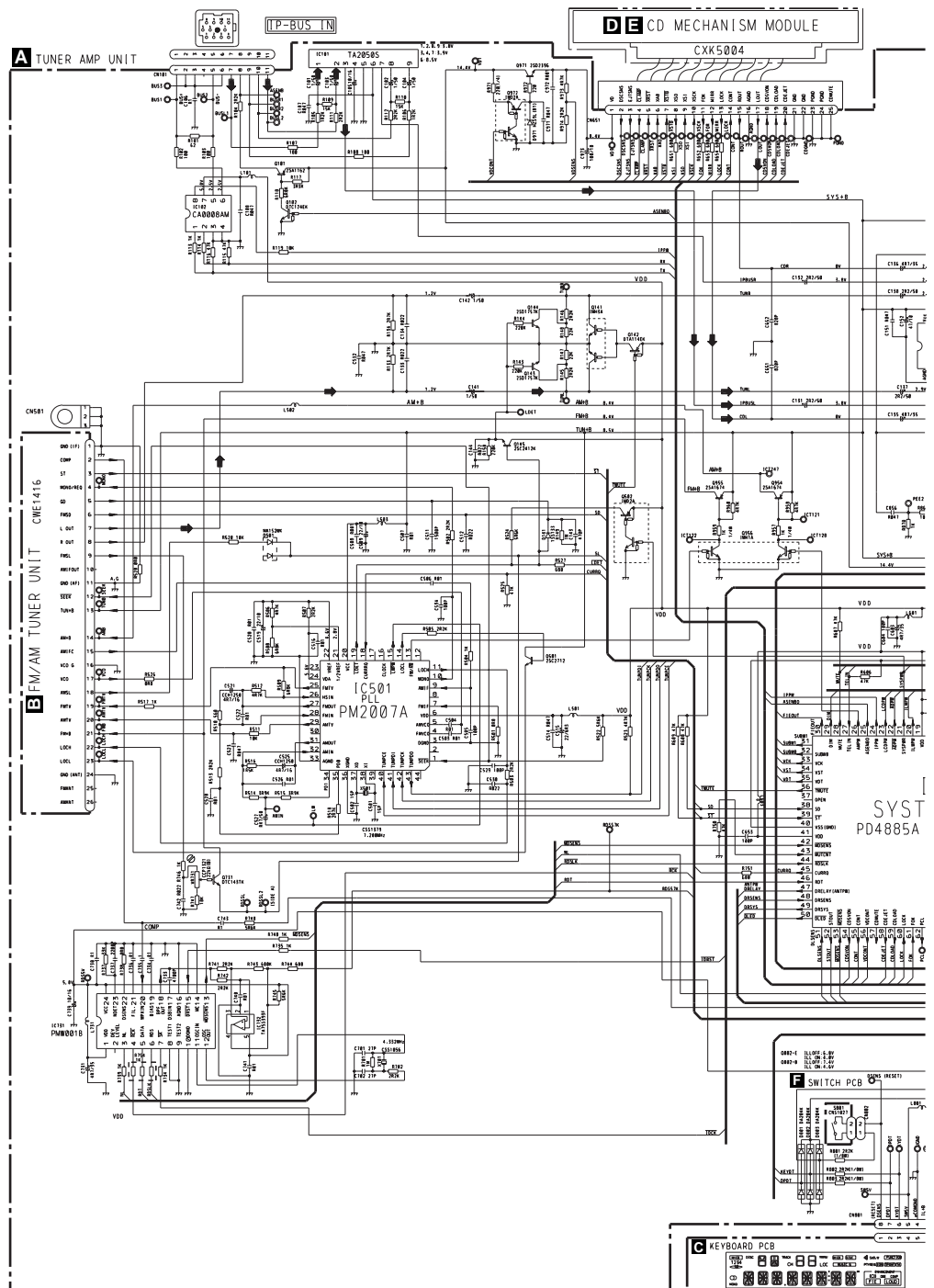
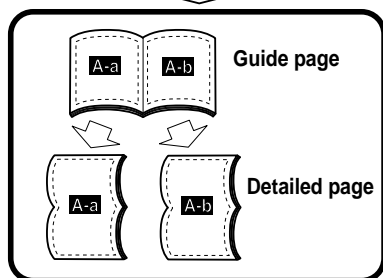
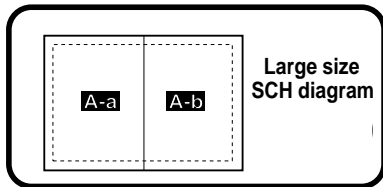
3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

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

● DEH-P645R/EW,DEH-P545R/EW,DEH-P544R/EW

A-a



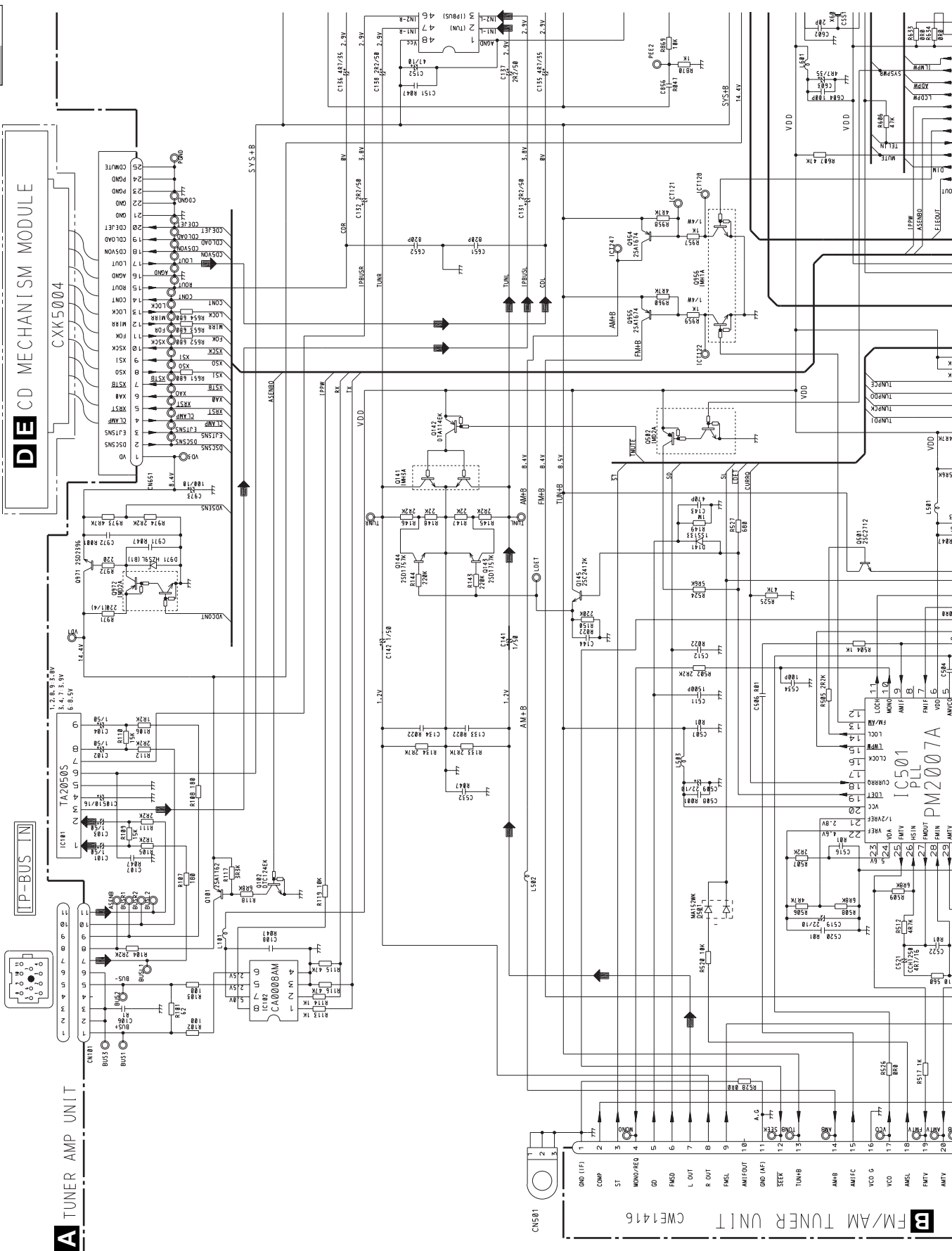
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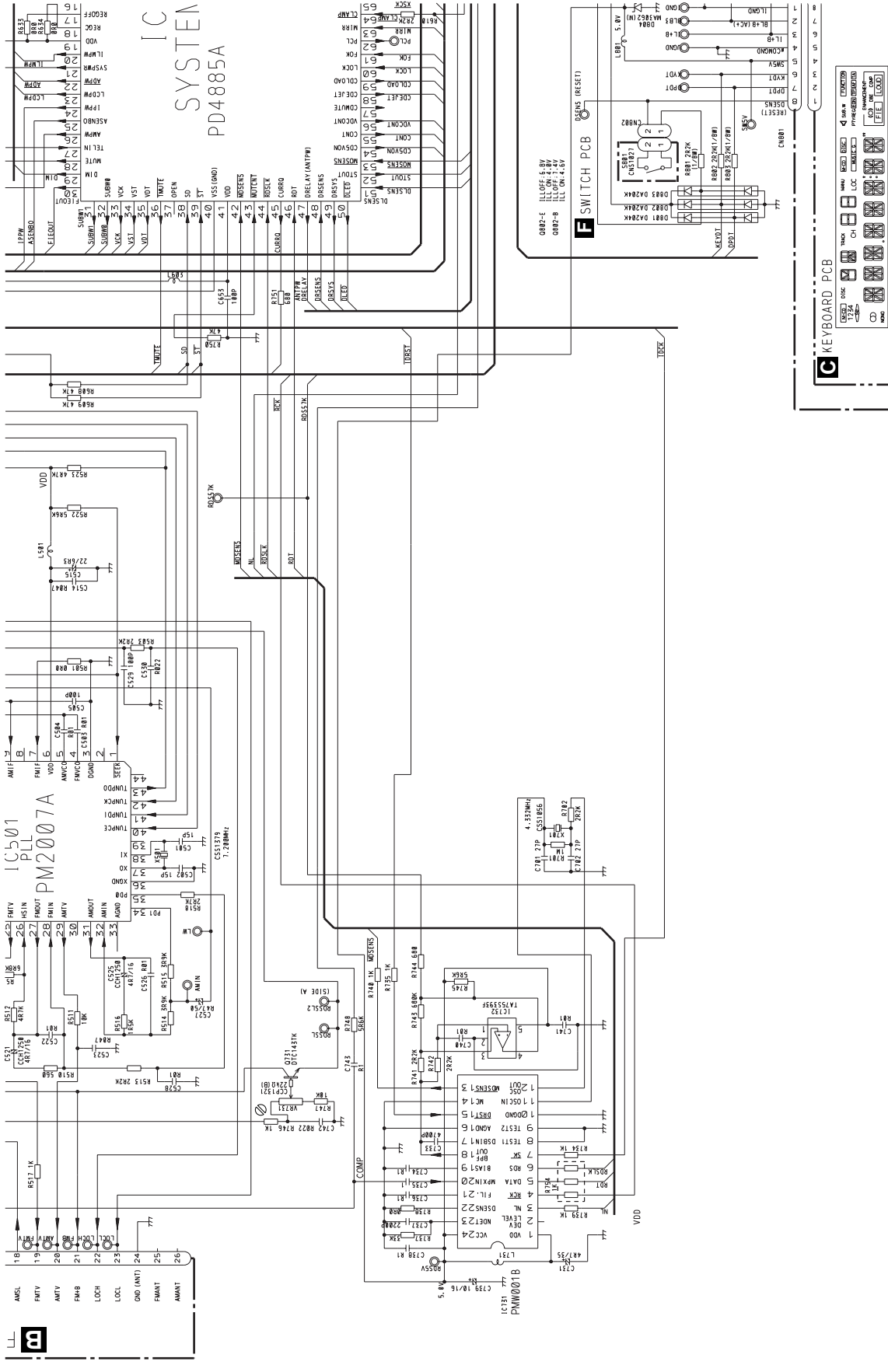


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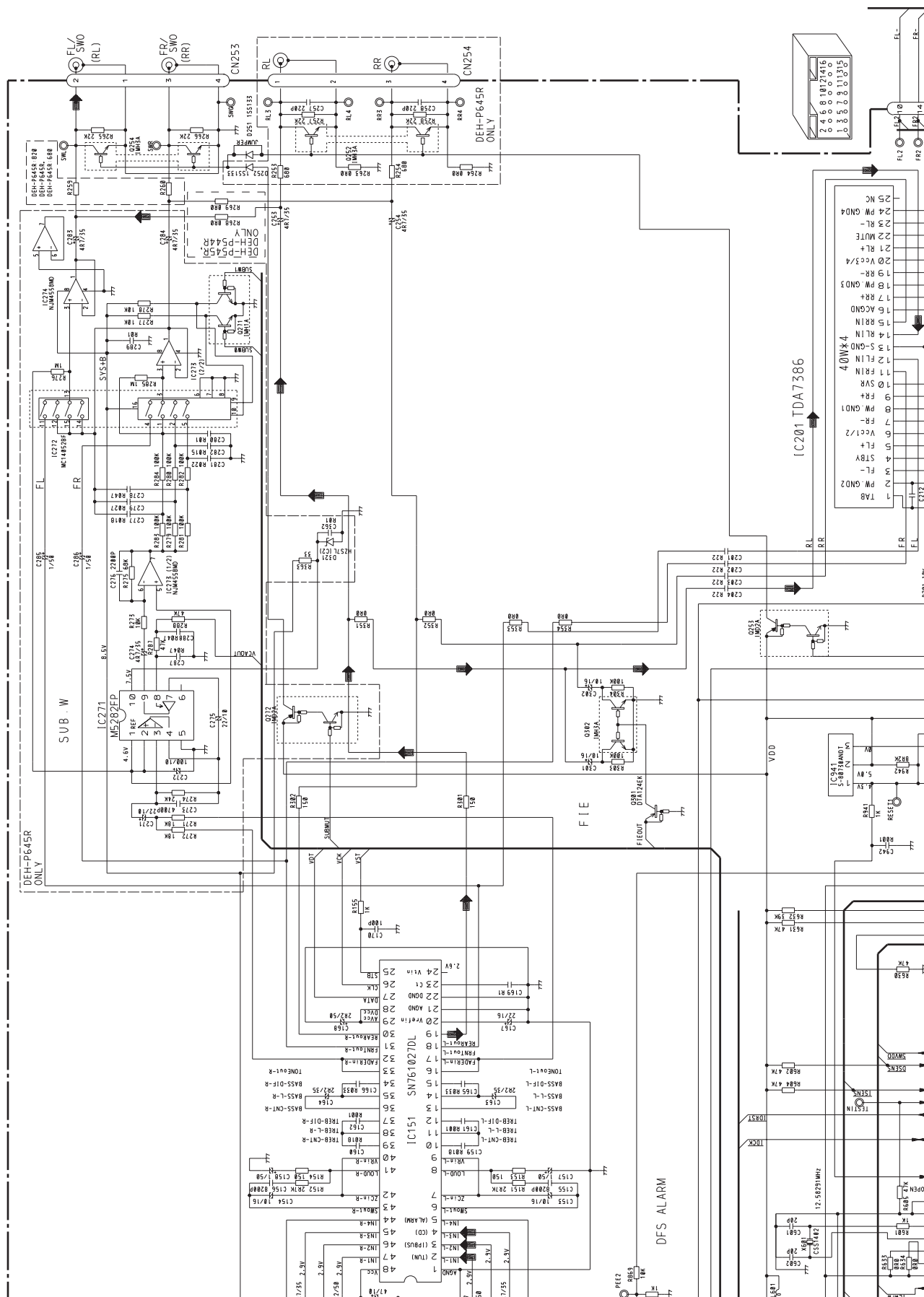
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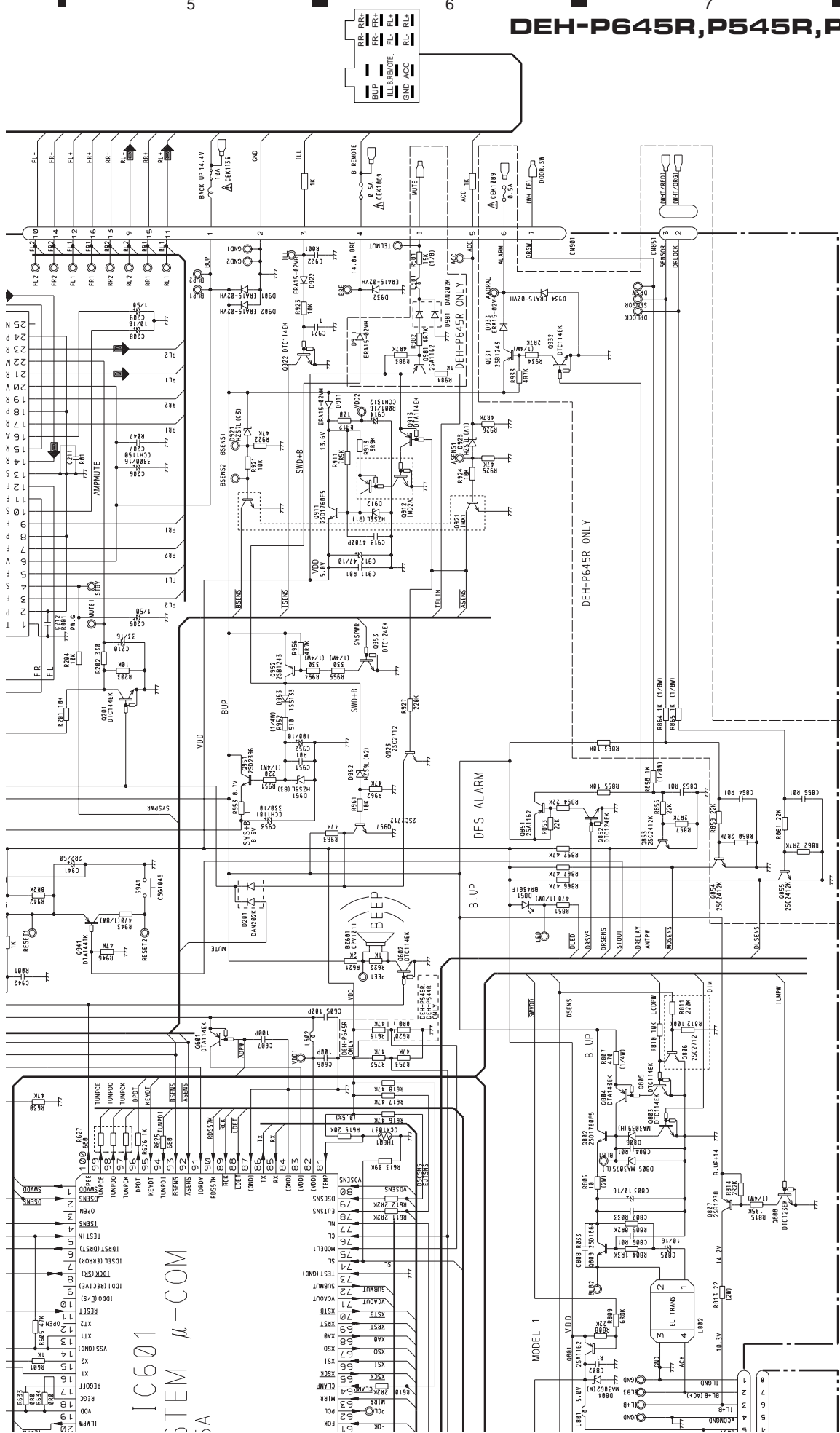
A-a A-b





A-a A-b





NOTE :

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

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

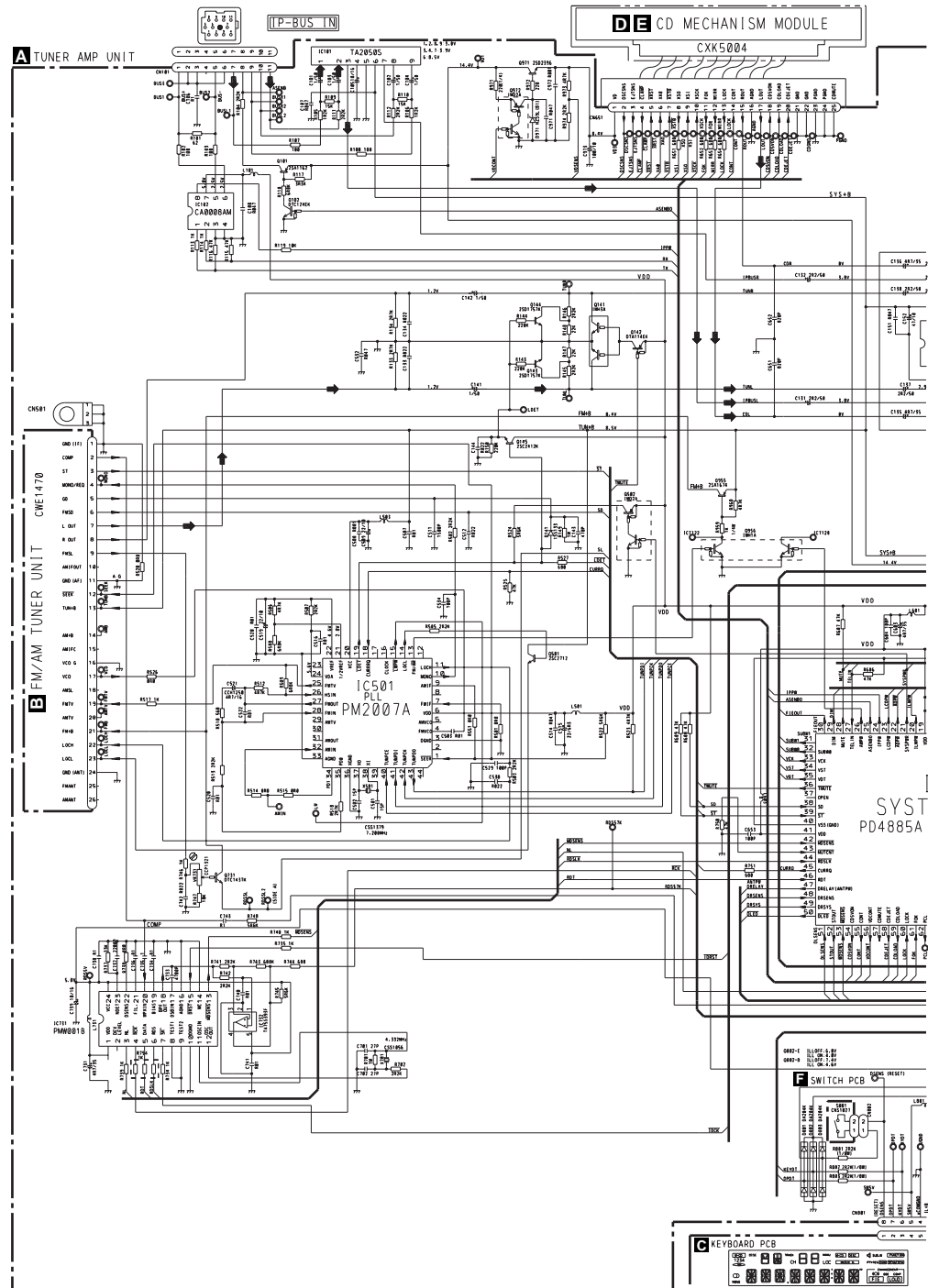
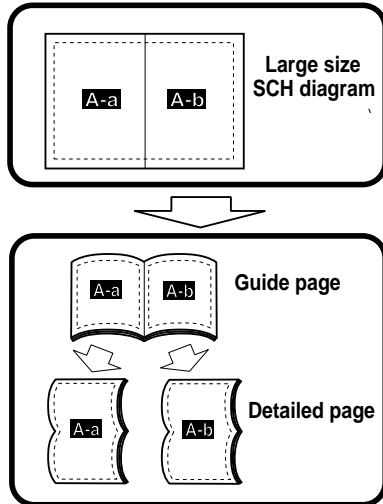
Decimal points for resistor and capacitor fixed values are expressed as:
2.2-2R2
0.022-R022

Fig. 6

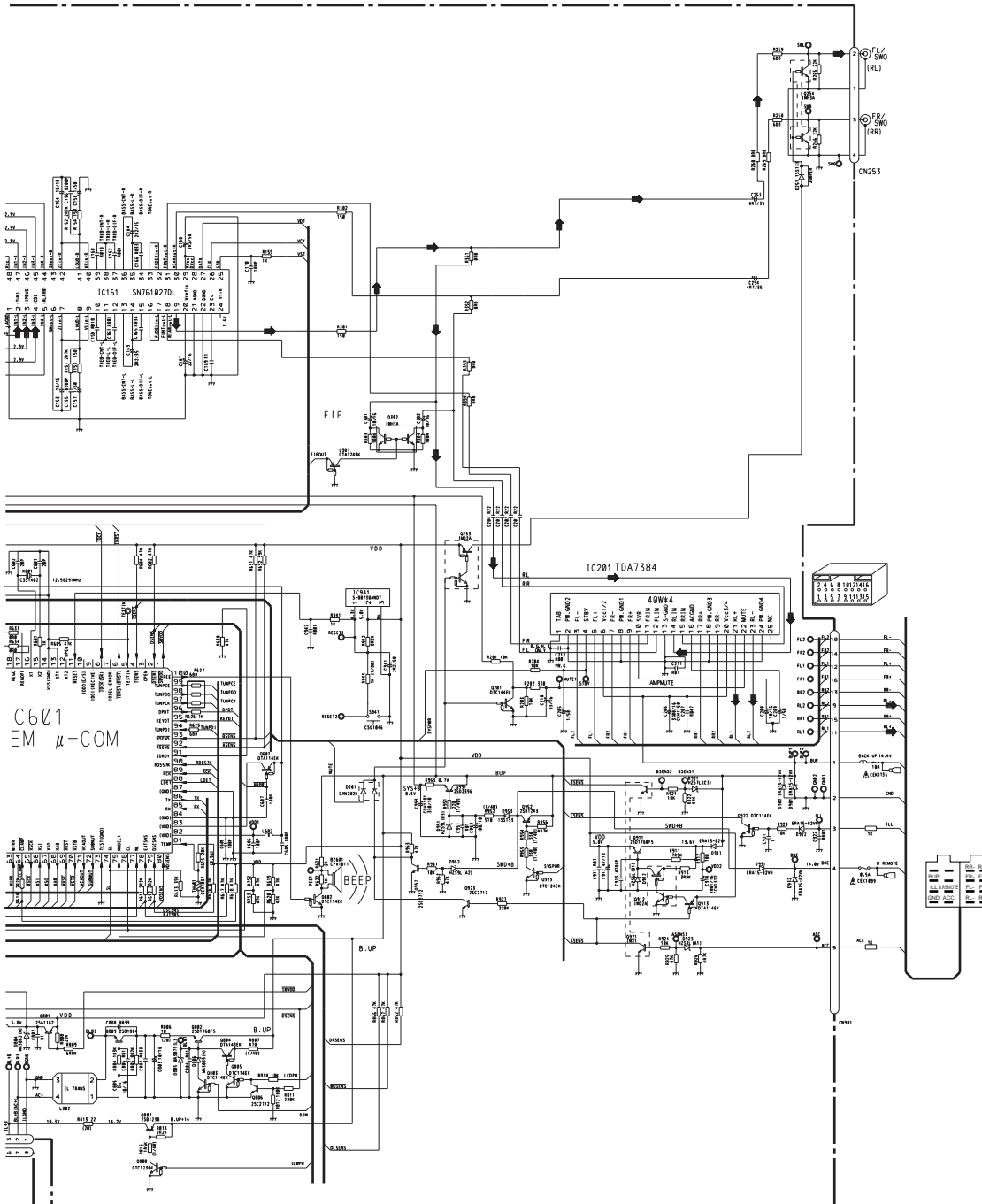
3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

● DEH-P443R/EW

A-a

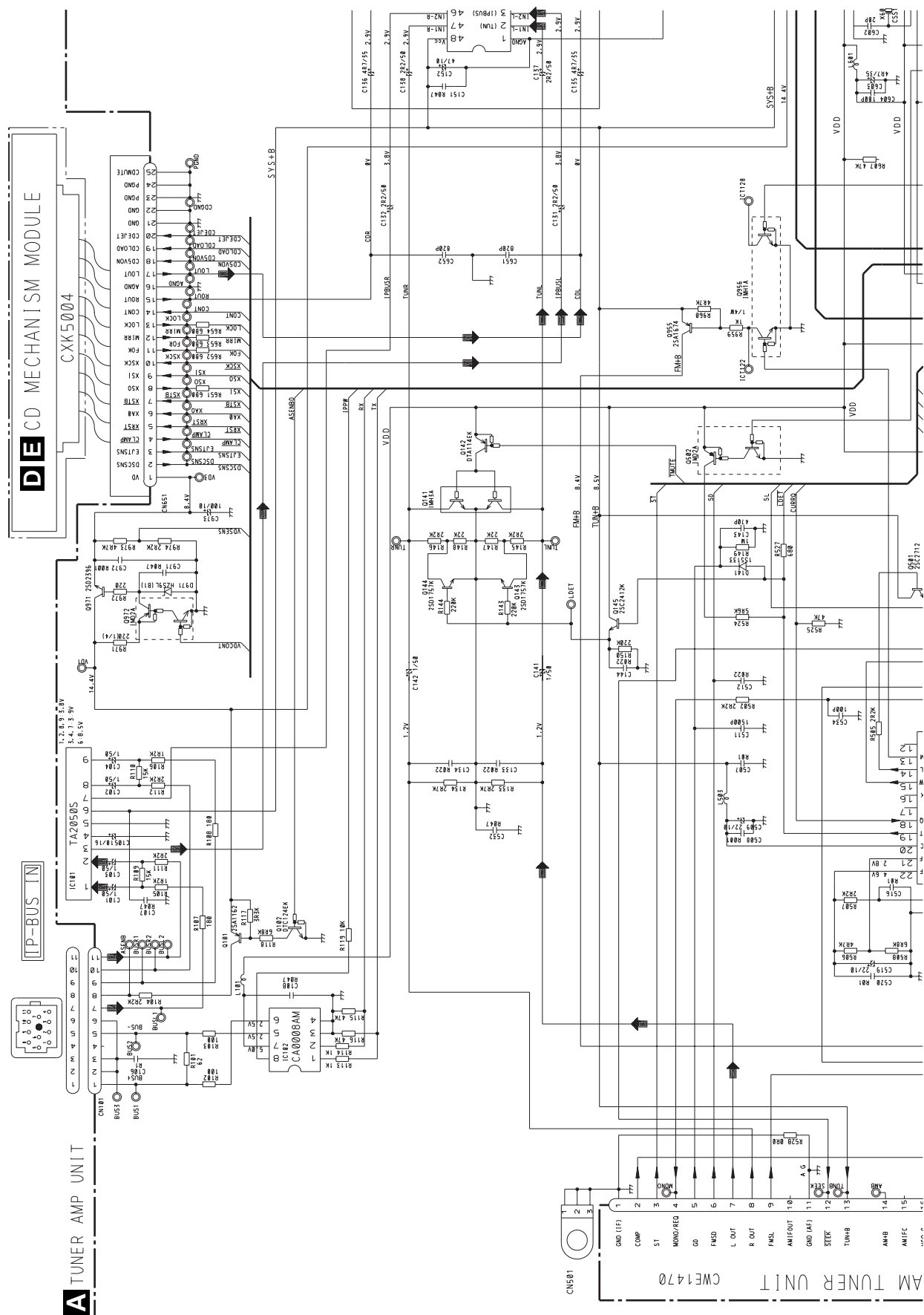


A-b



NOTE:
 □ Symbol indicates a resistor.
 No differentiation is made between chip resistors and discrete resistors.
 □ Symbol indicates a capacitor.
 No differentiation is made between chip capacitors and discrete capacitors.
 Decimal points for resistor and capacitor fixed values are expressed as 2.2-2R2 0.022-0022
 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.

Fig. 7



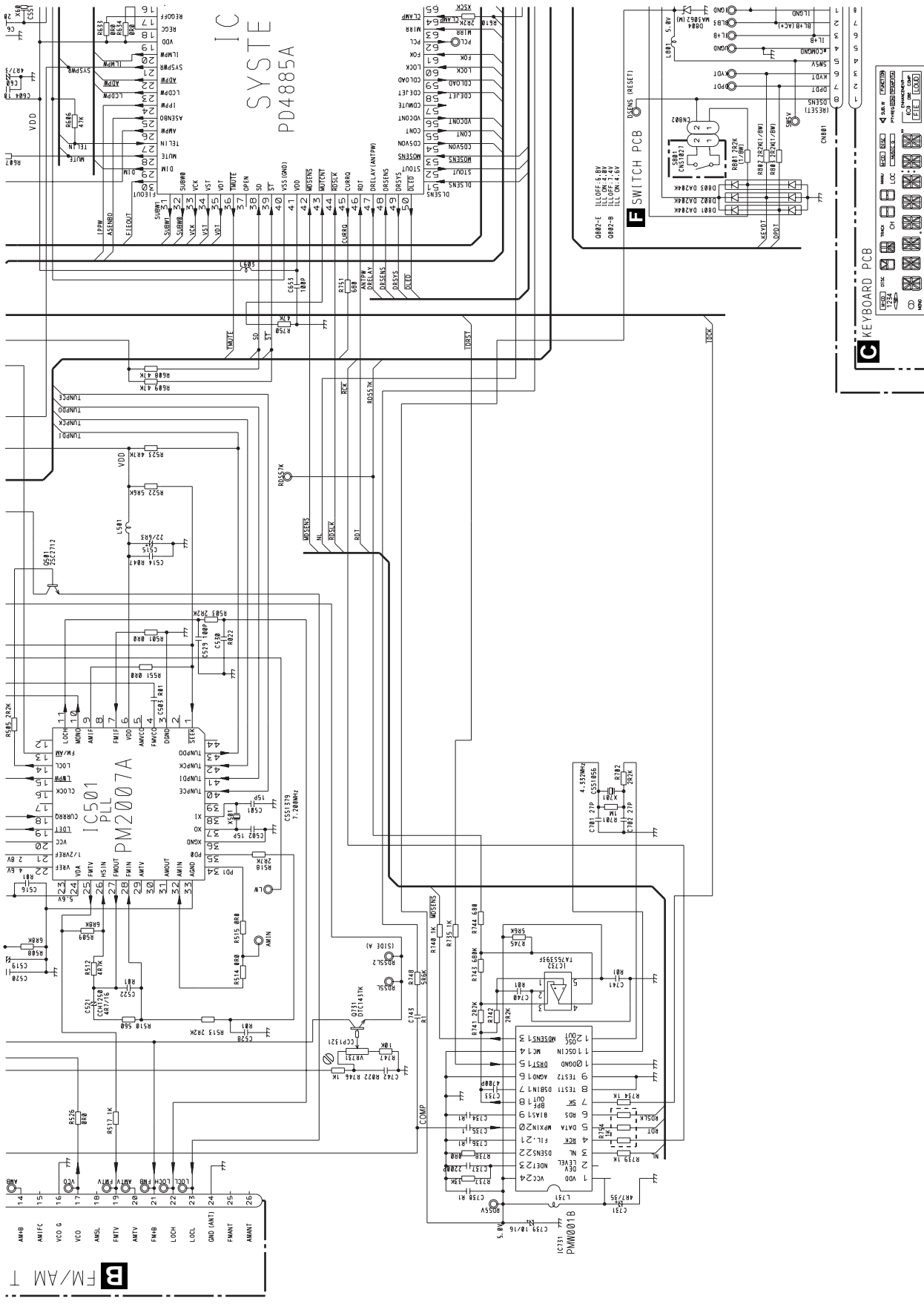
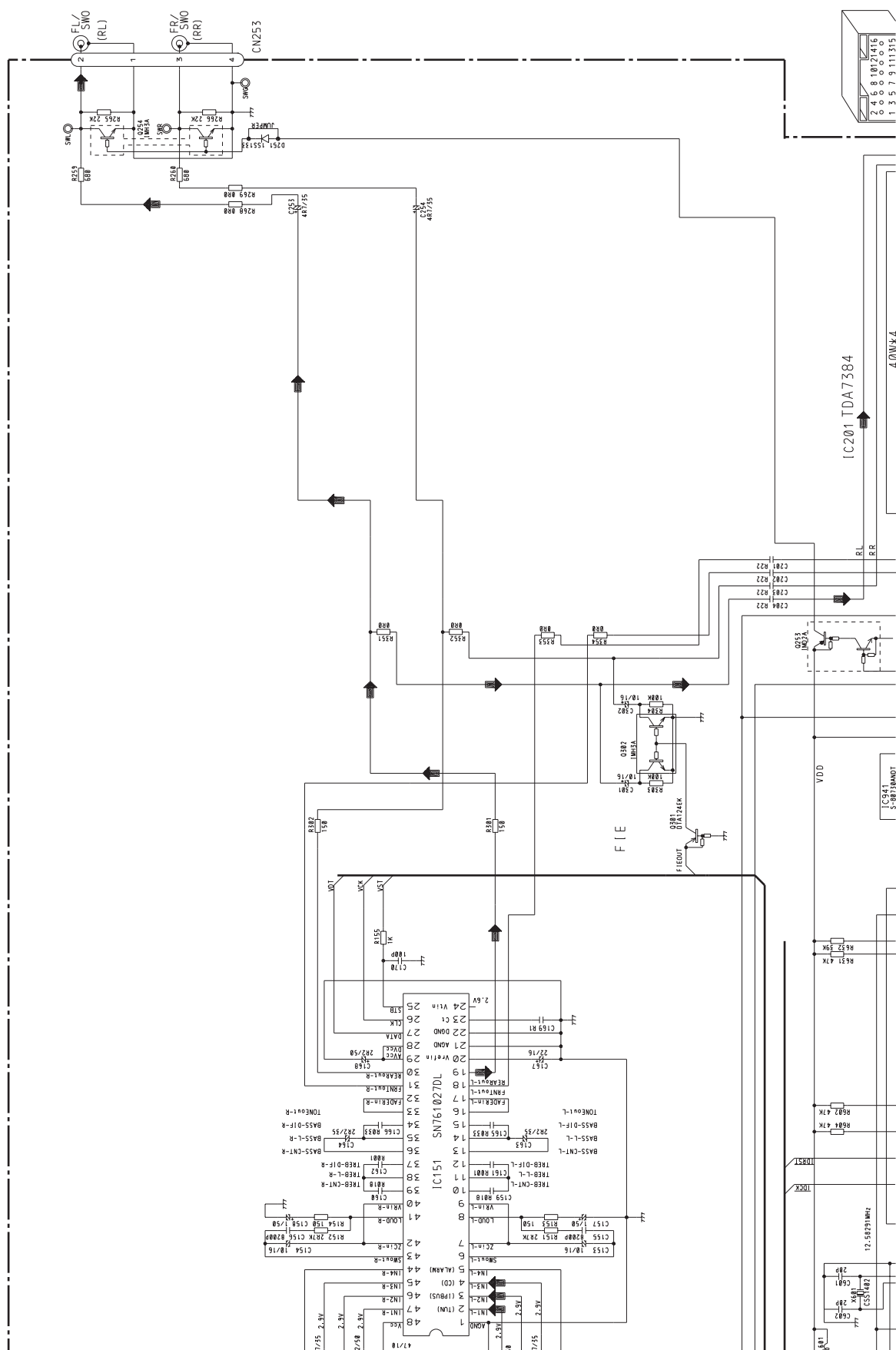
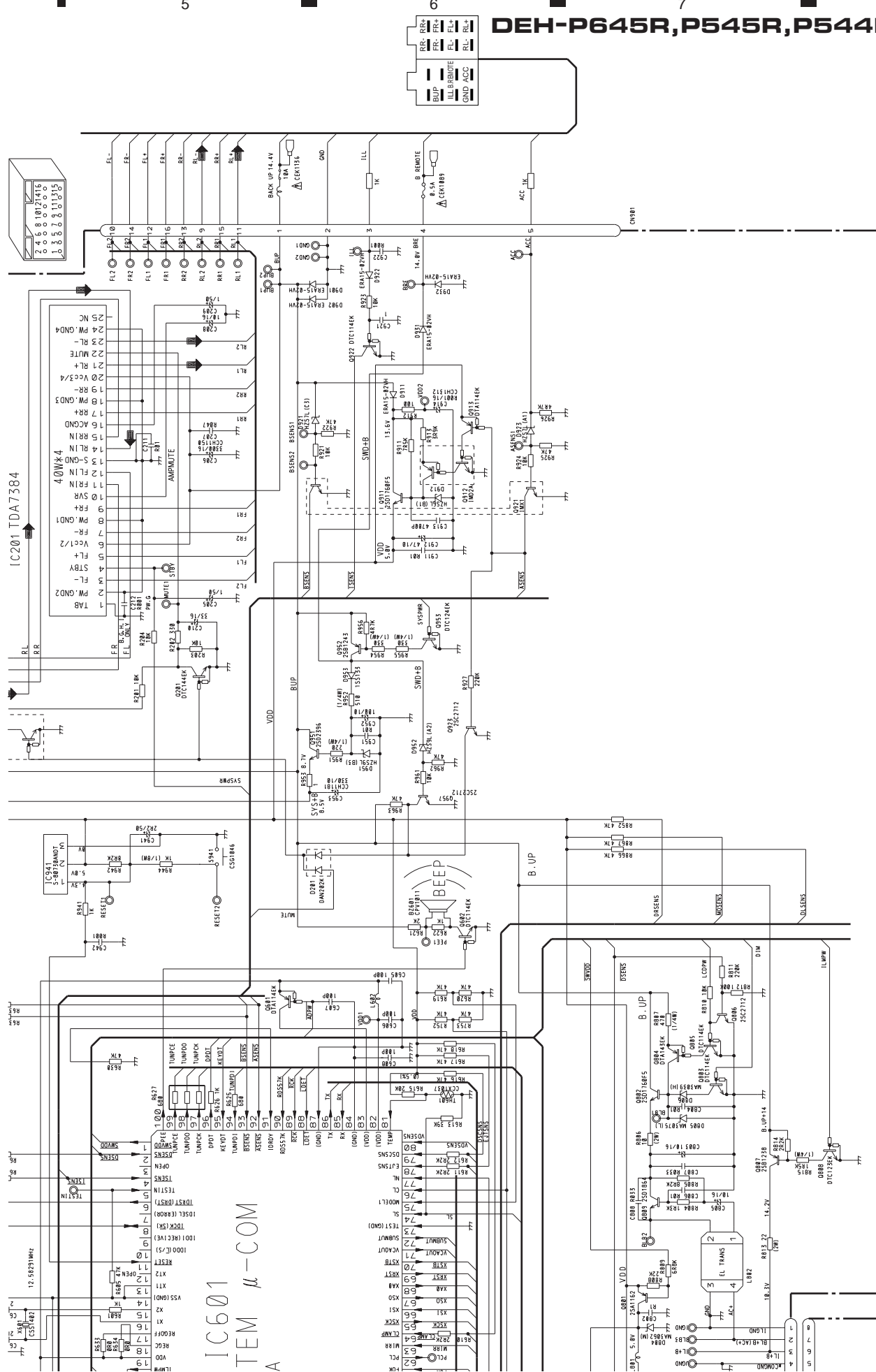


Fig. 8

A-a A-b





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

Decimal points for resistor and capacitor fixed values are expressed as:
 2.2→R22
 0.022→R022

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

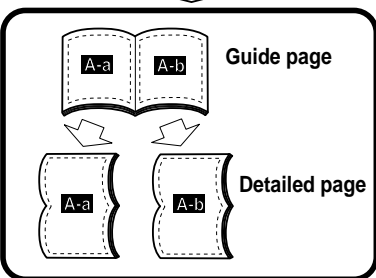
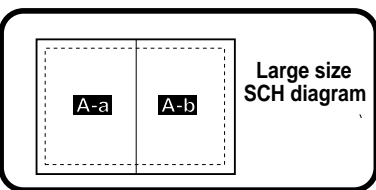
Fig. 9

A-b

DEH-P645R,P545R,P544R,P443R

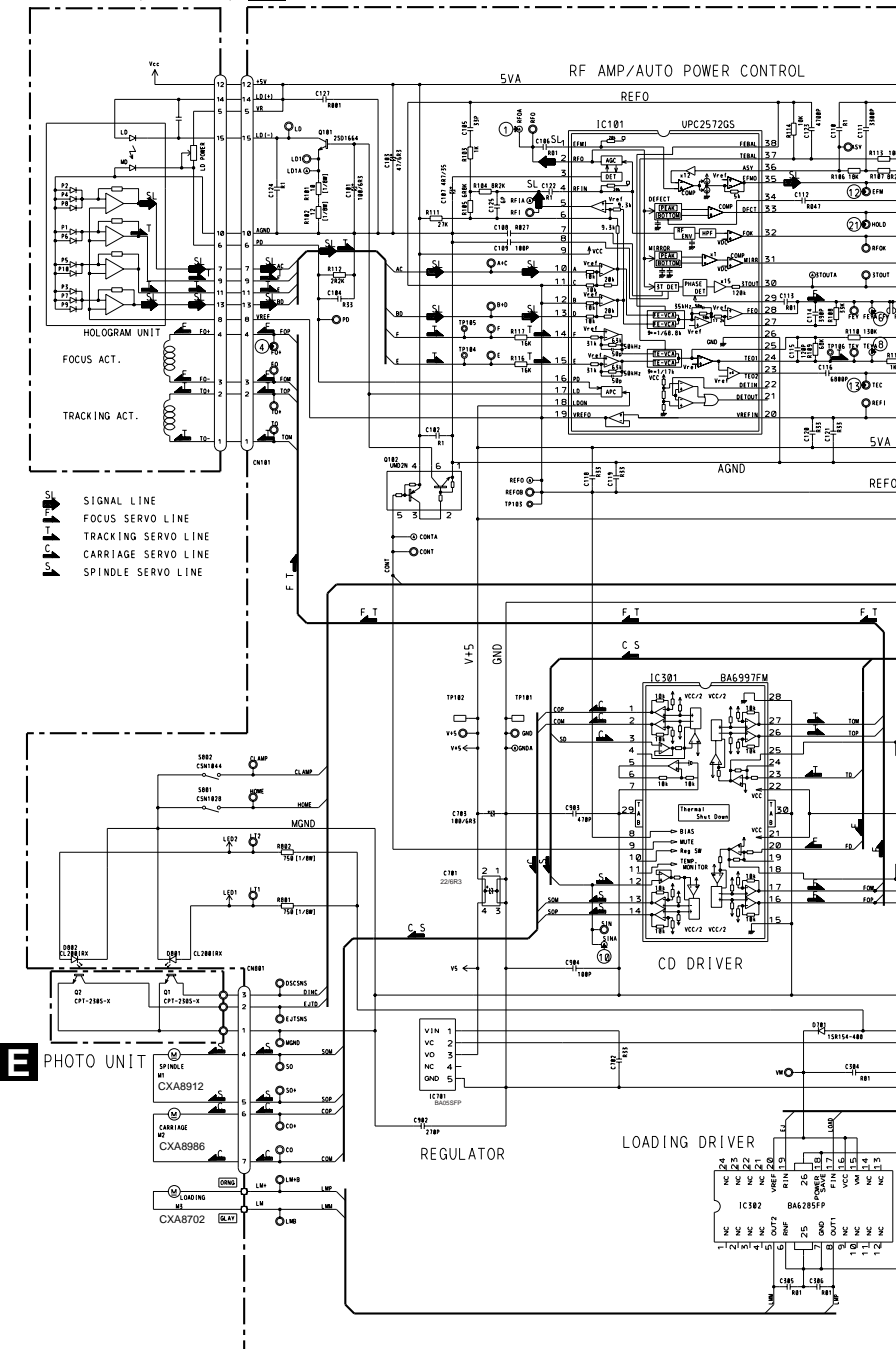
A-a A-b

3.3 CD MECHANISM MODULE(GUIDE PAGE)



D-a

SERVICE PICKUP UNIT(CXX1230) CONTROL UNIT



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

D-b

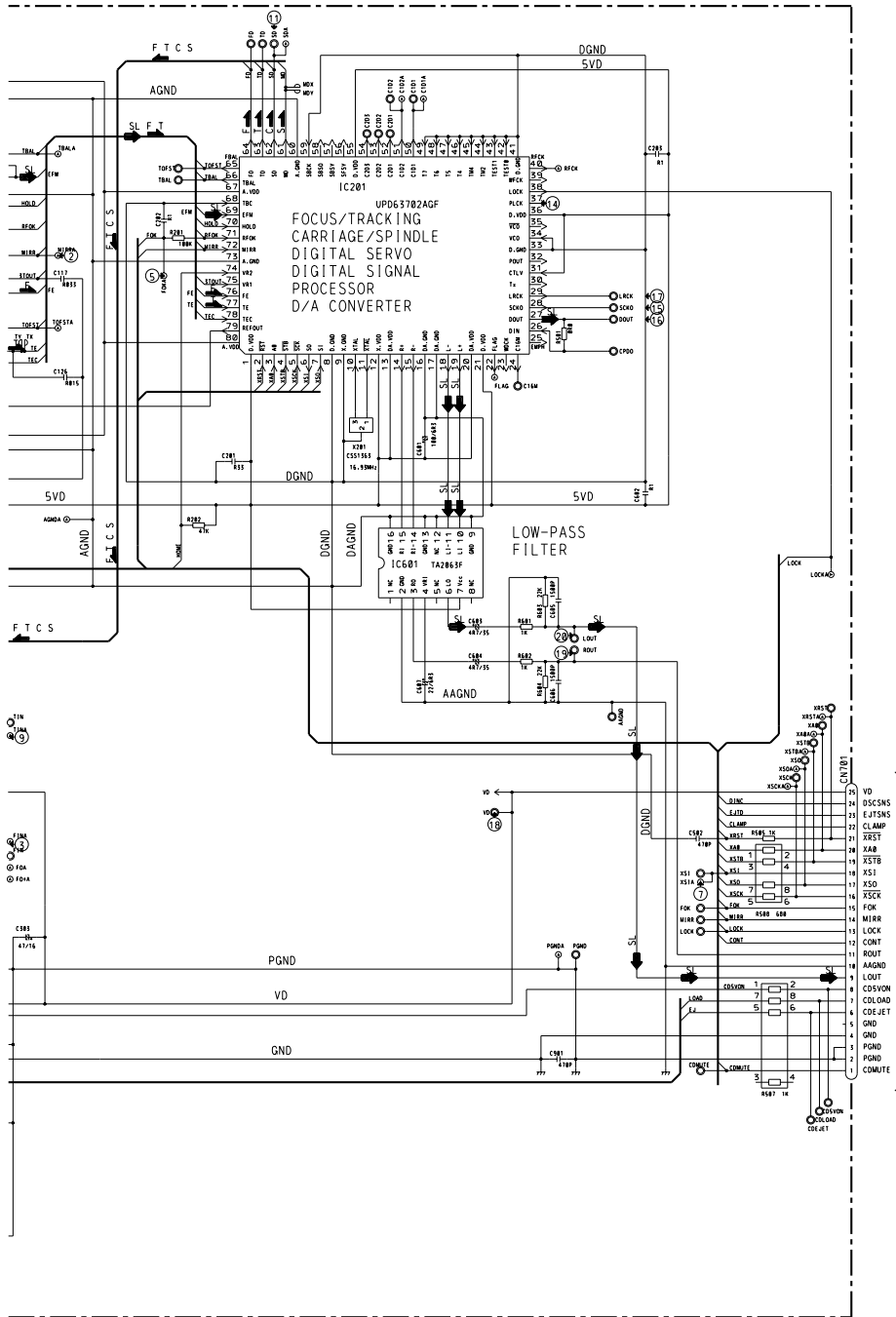
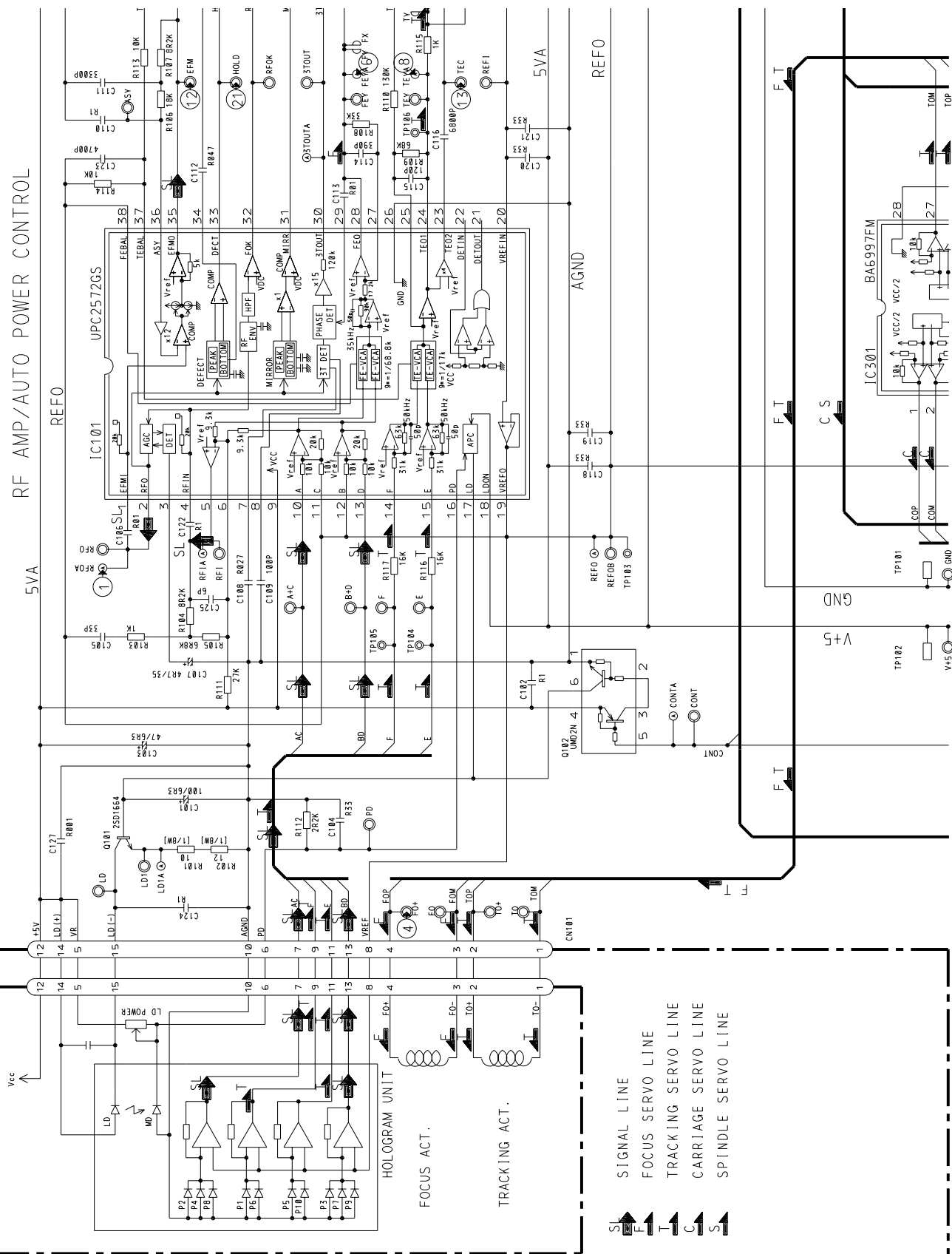


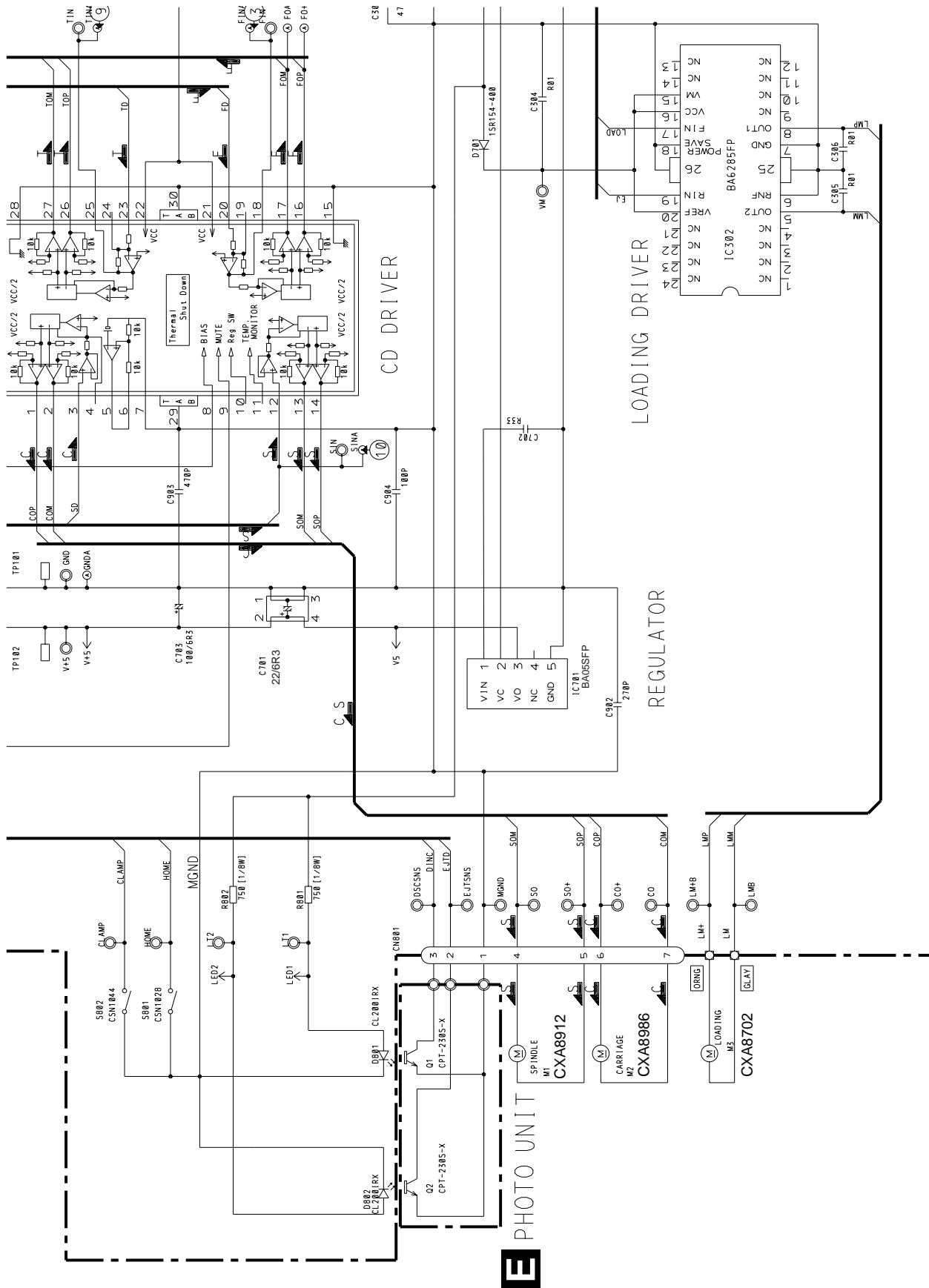
Fig. 10

SERVICE PICKUP UNIT(CXX1230)

D CONTROL UNIT

D-a D-b





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

Fig. 11



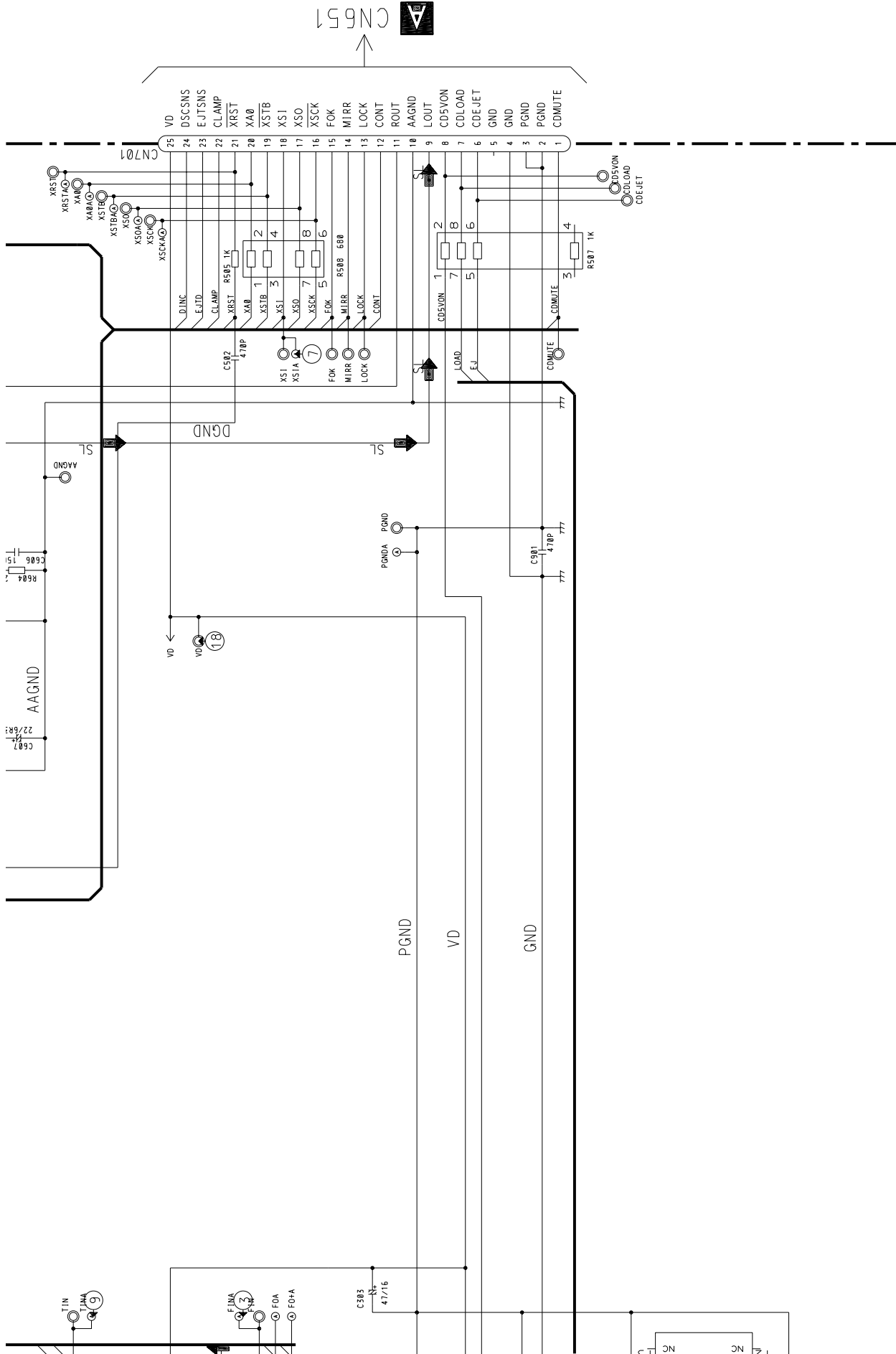


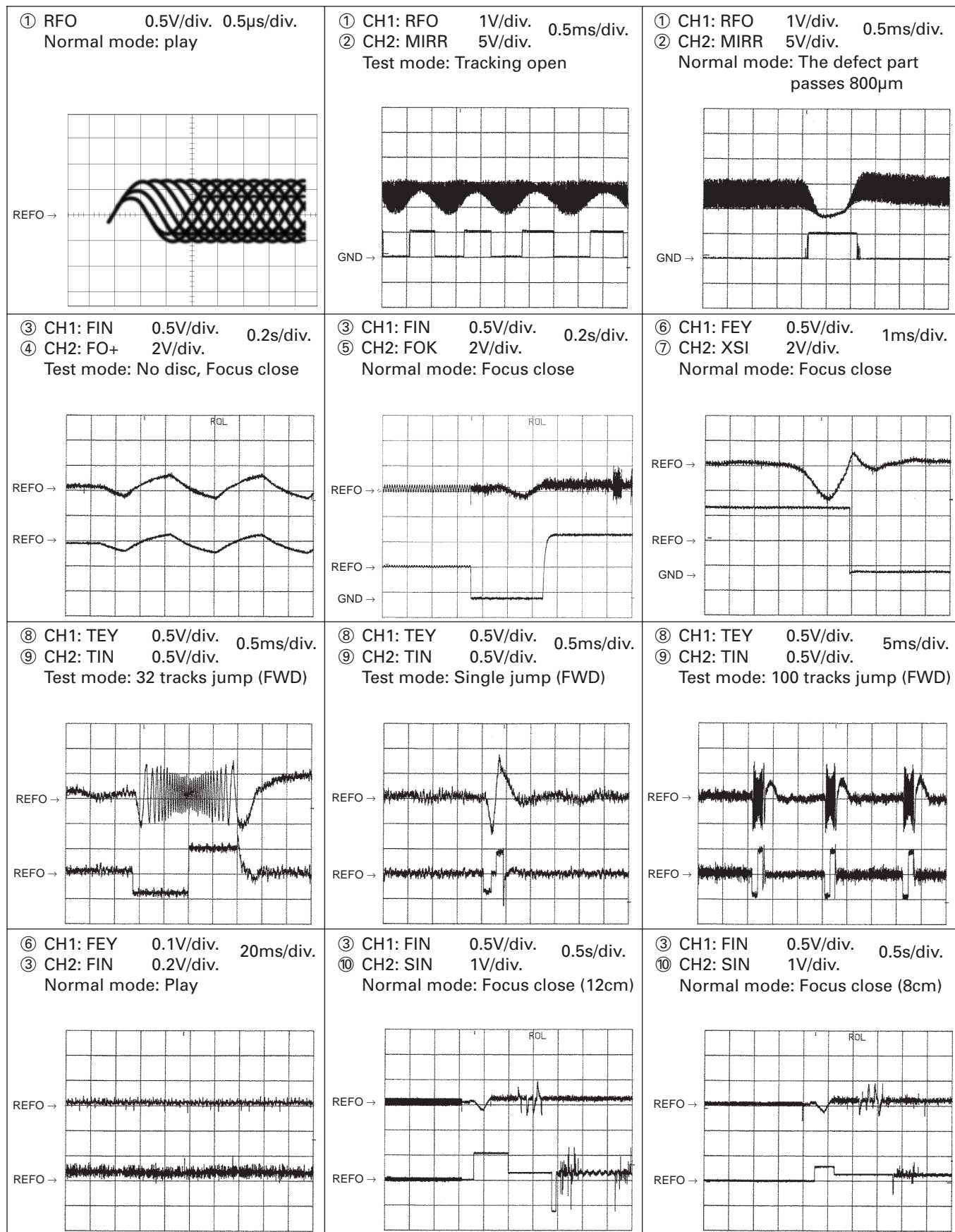
Fig. 12

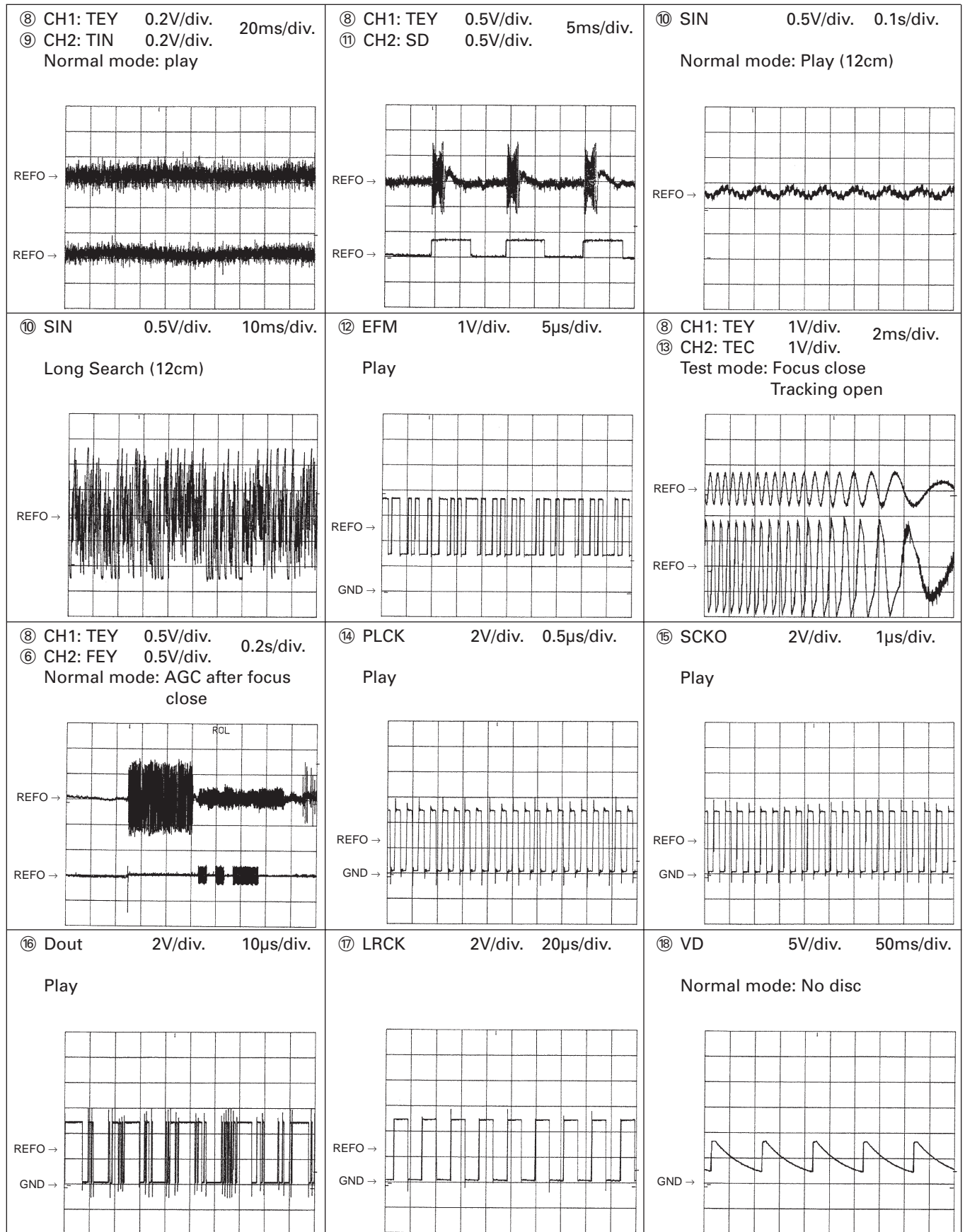
Note:1. The encircled numbers denote measuring points in the circuit diagram.

2. Reference voltage

REFO:2.5V

● Waveforms



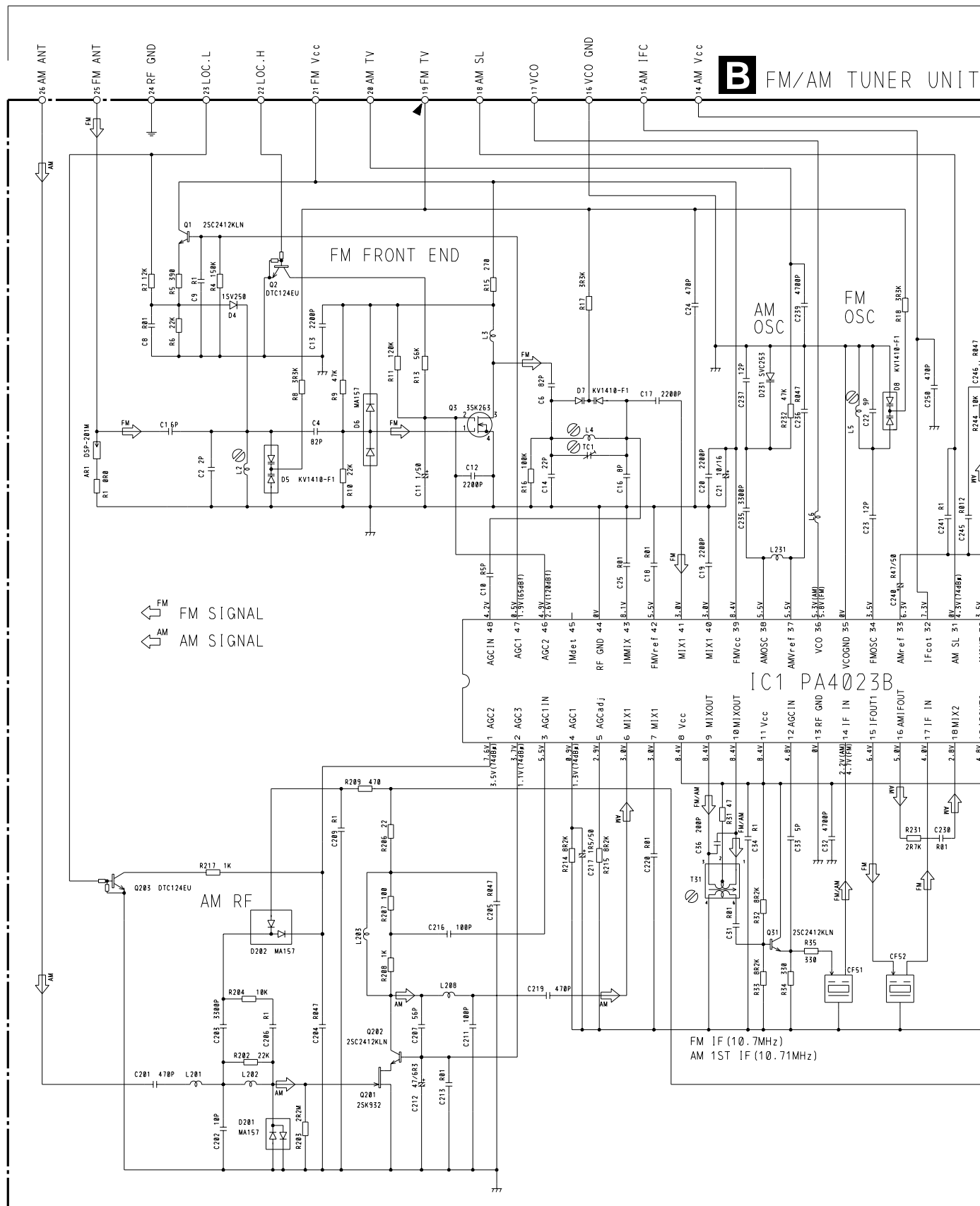


<div><div><div>⑰ CH1: R OUT 1V/div. 0.2ms/div.</div><div>⑳ CH2: L OUT 1V/div.</div><div>Normal mode: Play (1kHz 0dB)</div></div><div><div>REFO →</div><div>REFO →</div></div></div>	<div><div><div>⑥ CH1: FEY 0.2V/div. 1ms/div.</div><div>③ CH2: FIN 0.5V/div.</div><div>Normal mode: During AGC</div></div><div><div>REFO →</div><div>REFO →</div></div></div>	<div><div><div>⑧ CH1: TEY 0.2V/div. 1ms/div.</div><div>⑨ CH2: TIN 0.5V/div.</div><div>Normal mode: During AGC</div></div><div><div>REFO →</div><div>REFO →</div></div></div>
<div><div><div>① CH1: RFO 1V/div. 0.5ms/div.</div><div>⑫ CH2: HOLD 5V/div.</div><div>Normal mode: The defect part passes 800μm</div></div><div><div>GND →</div></div></div>	<div><div><div>③ CH1: FIN 1V/div. 0.5ms/div.</div><div>⑫ CH2: HOLD 5V/div.</div><div>Normal mode: The defect part passes 800μm</div></div><div><div>GND →</div></div></div>	

3.4 FM/AM TUNER UNIT

A

B FM/AM TUNER UNIT



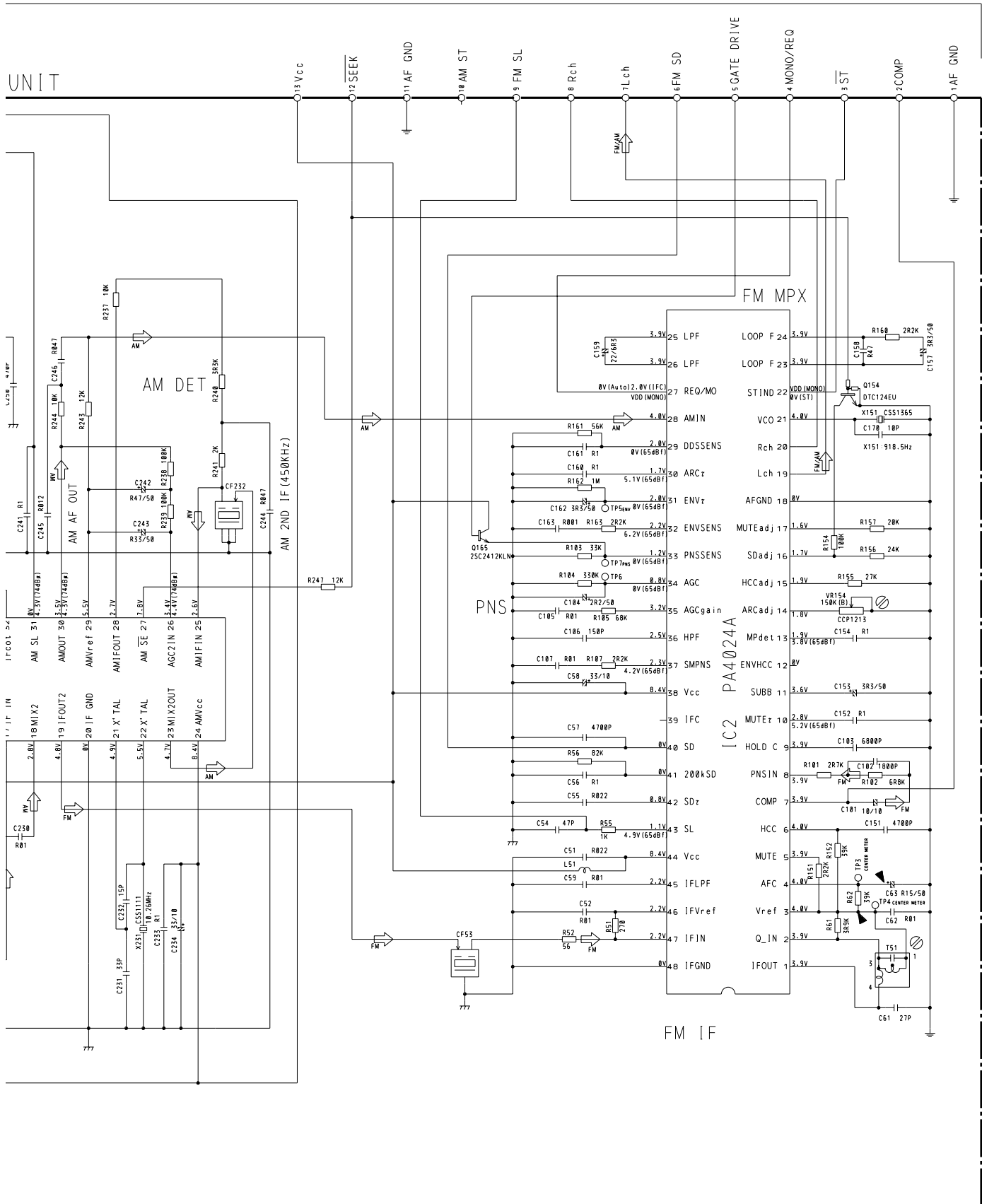
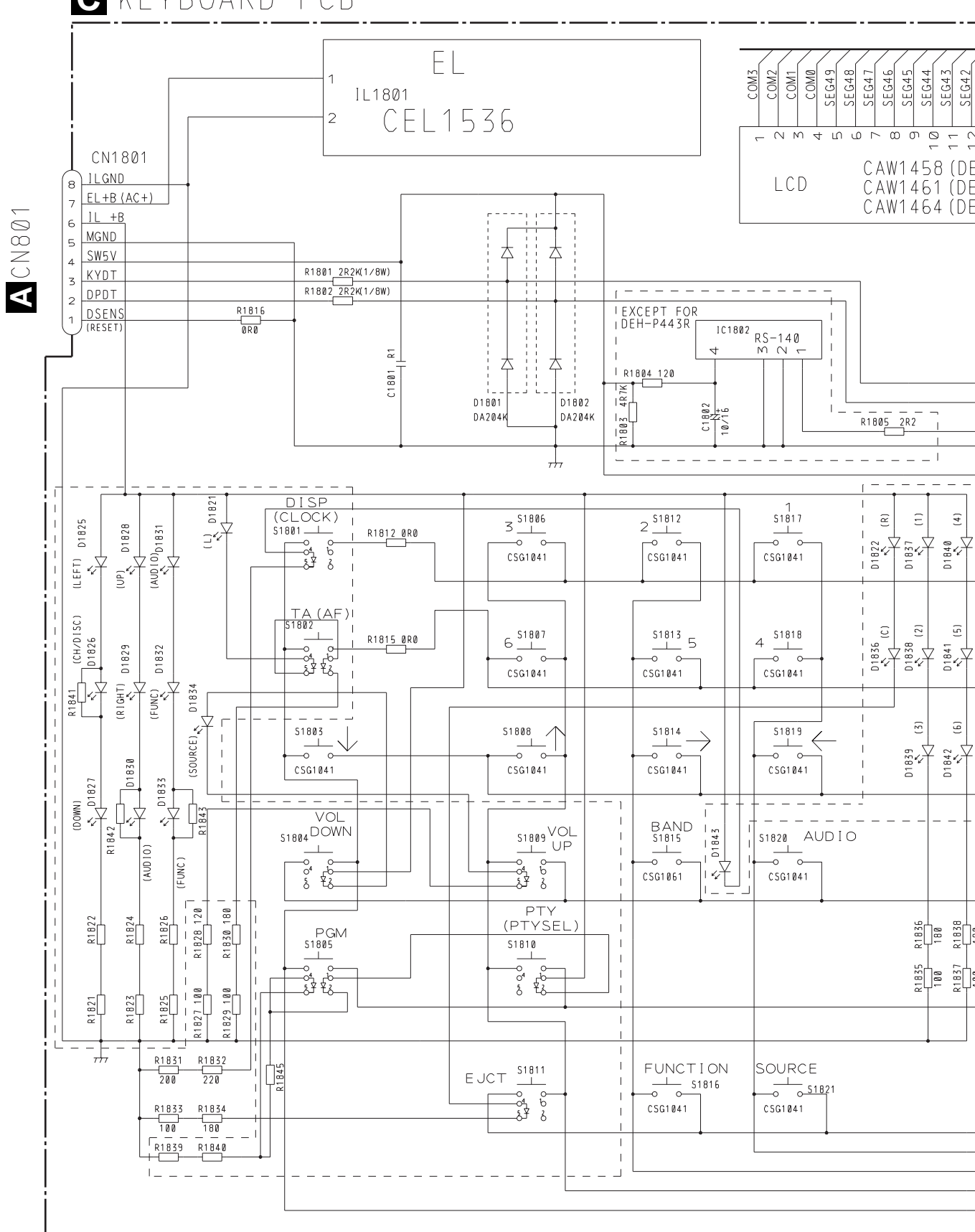


Fig. 13

3.5 KEYBOARD PCB

C KEYBOARD PCB



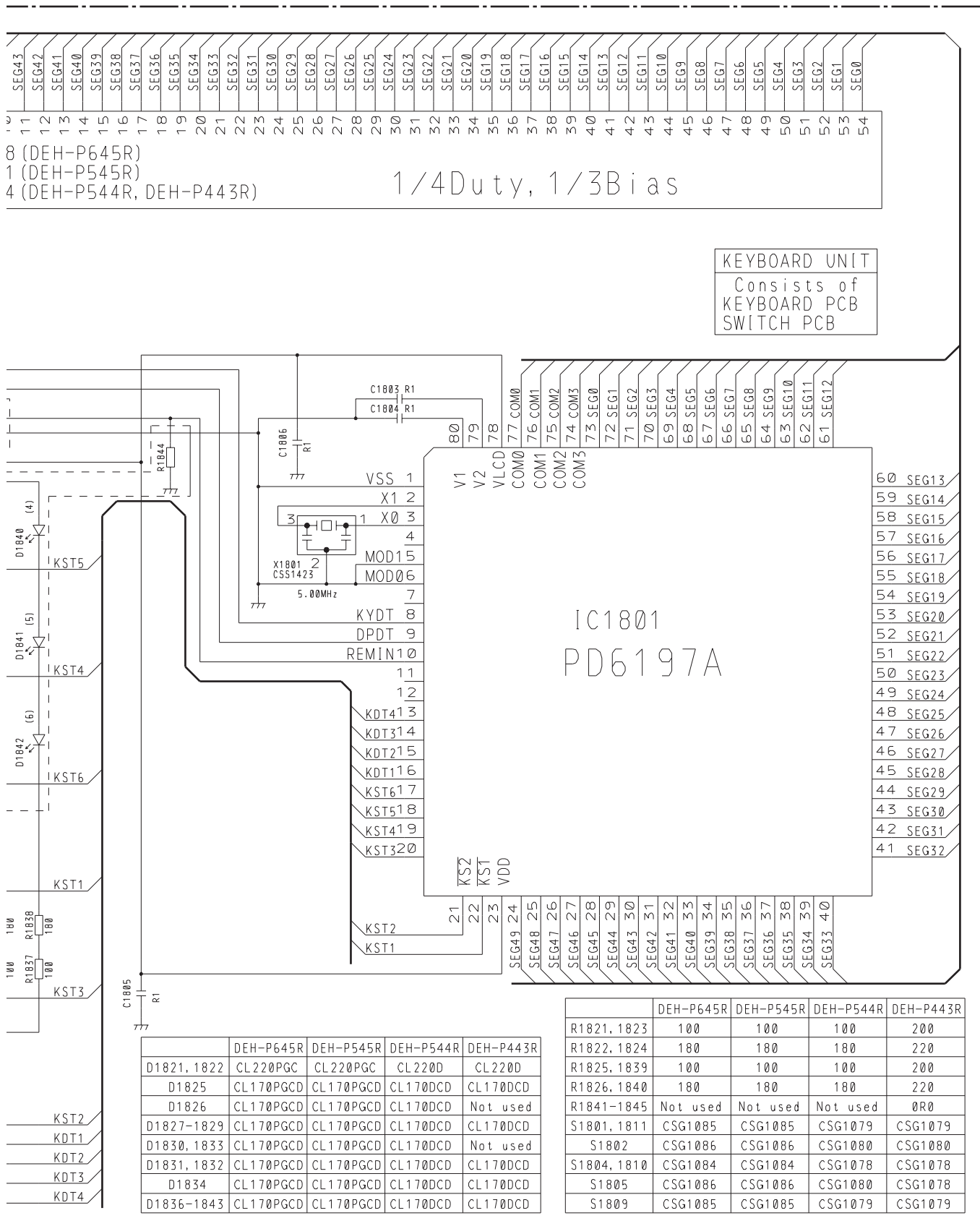


Fig. 14

SIDE A

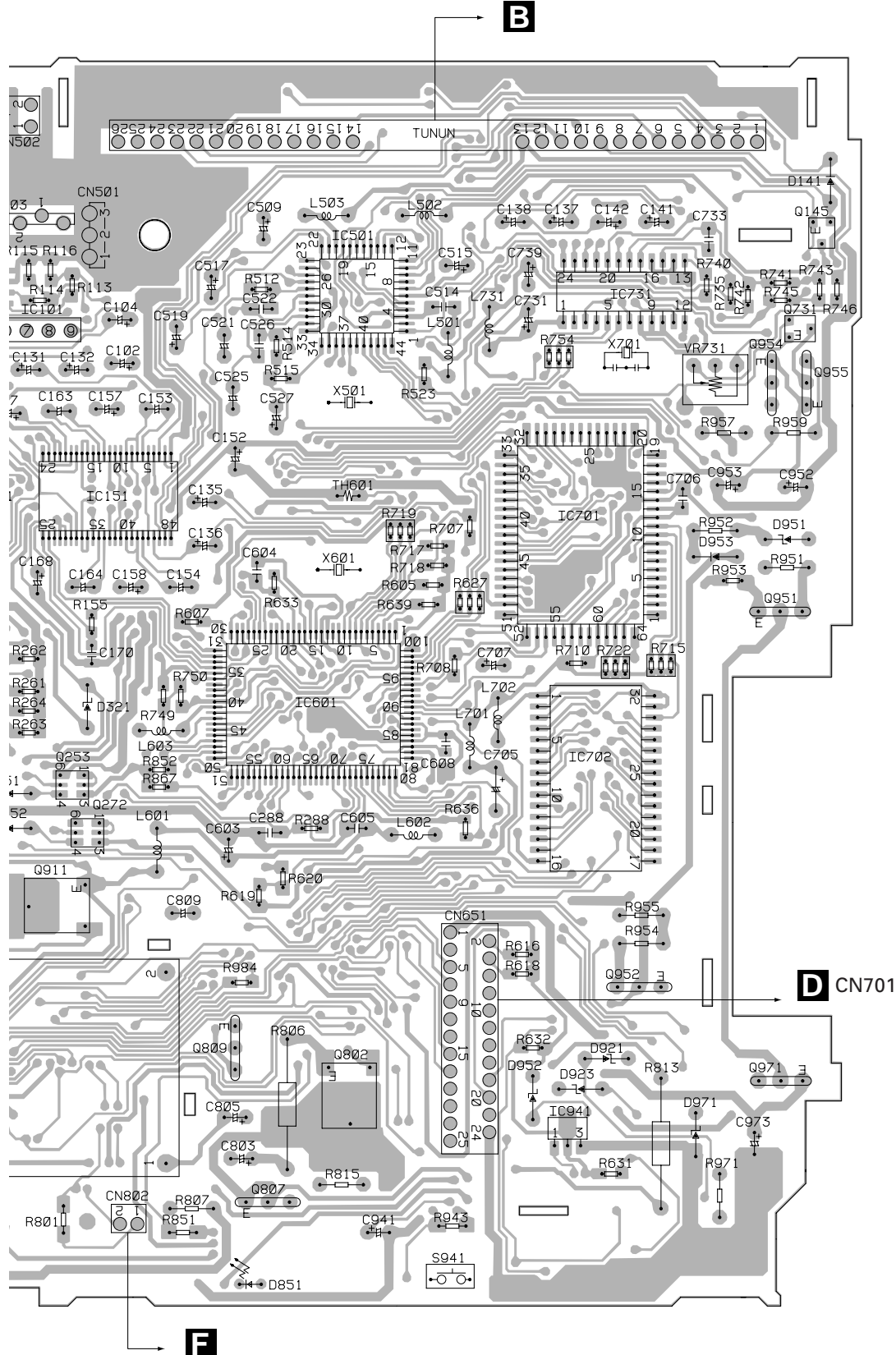
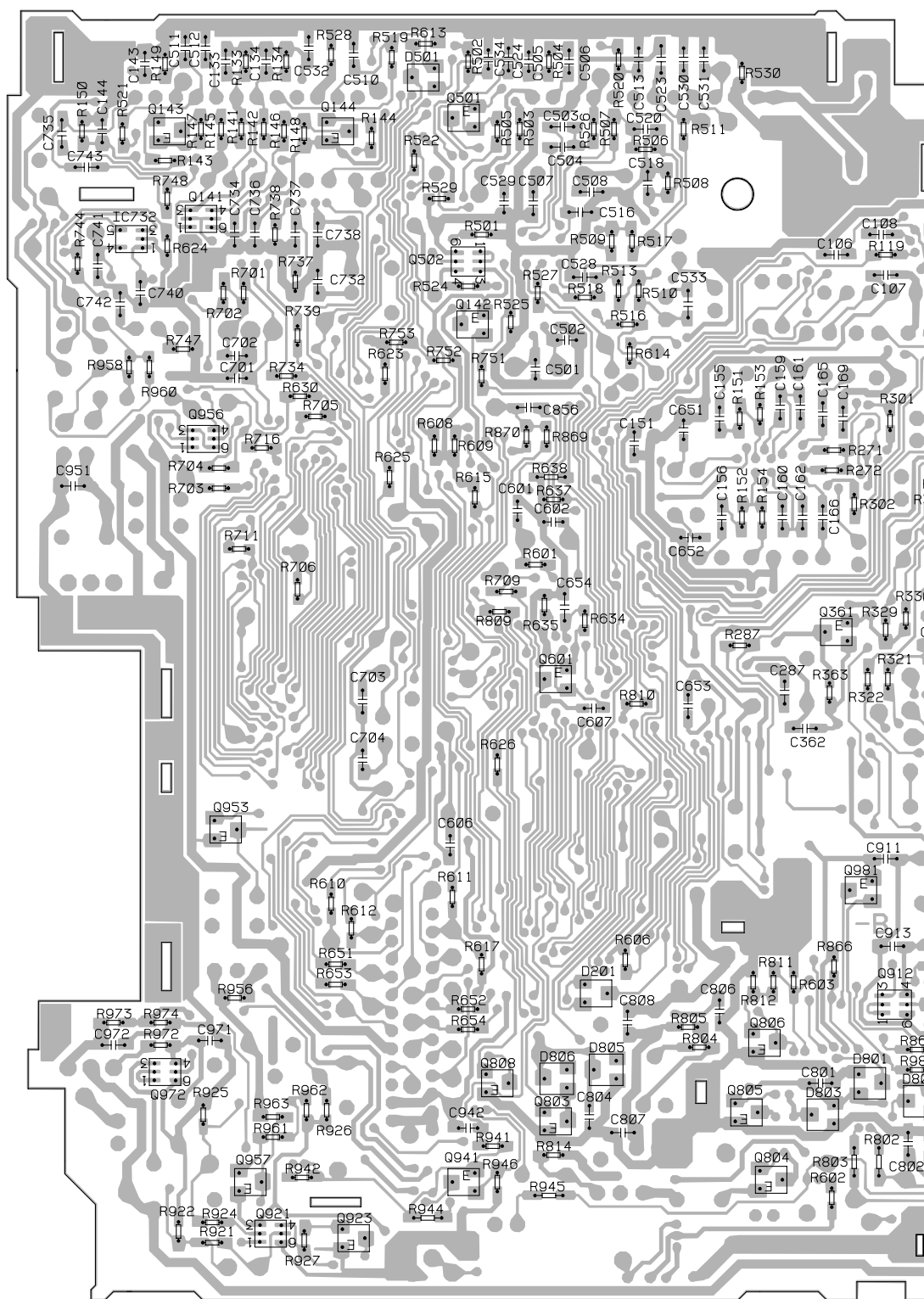
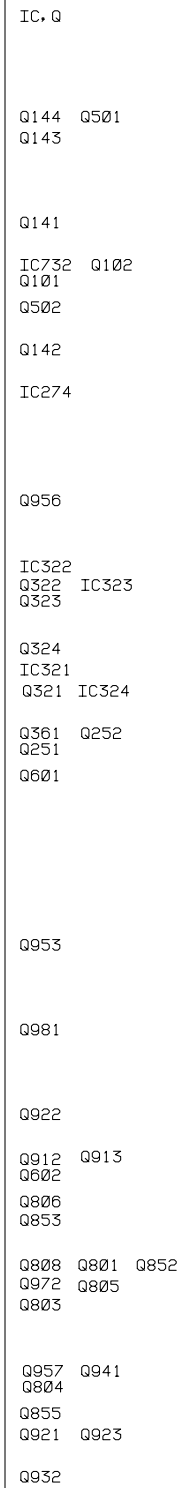


Fig. 15

A TUNER AMP UNIT





A

B FM/AM TUNER UNIT

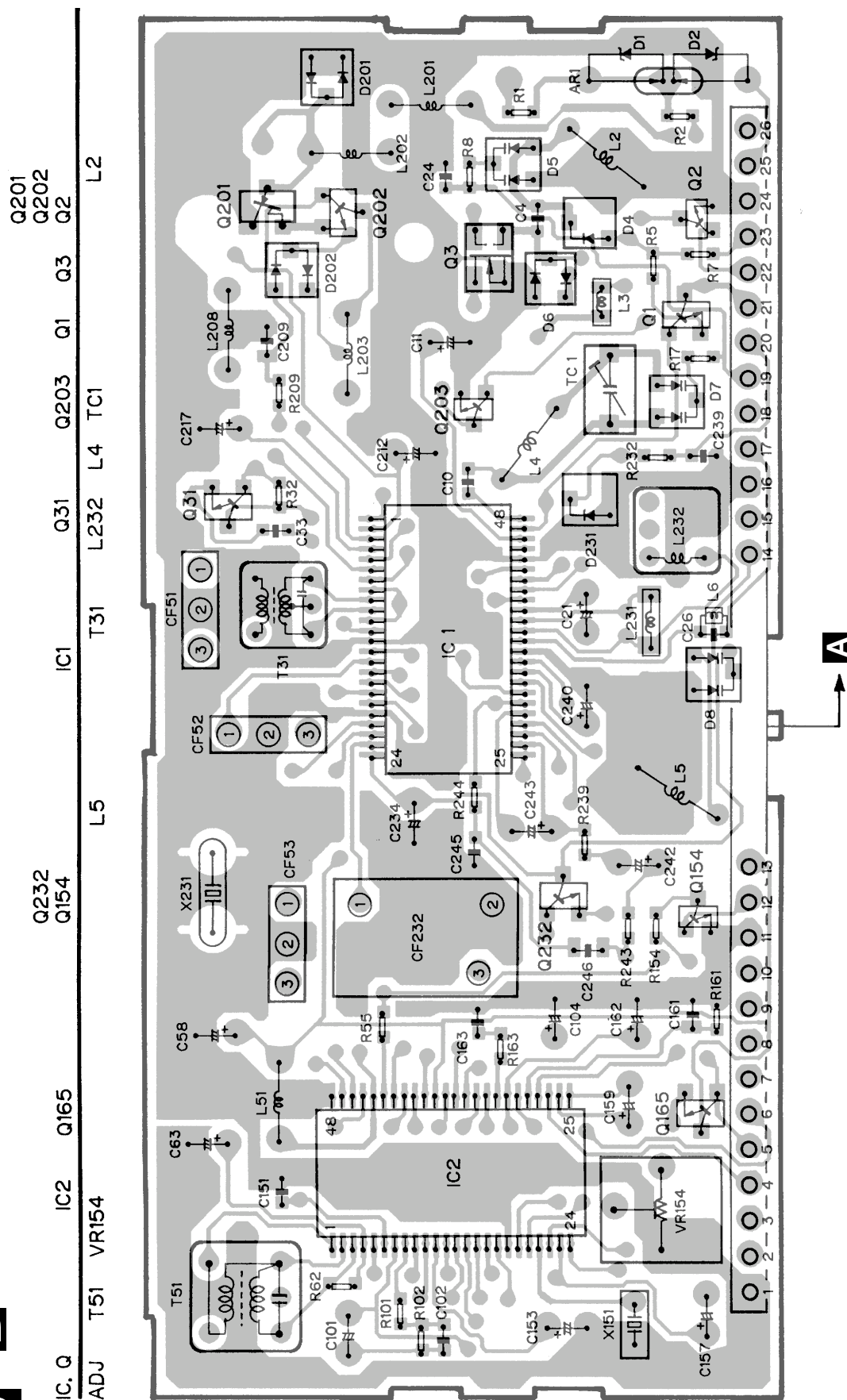
B

Fig. 17

SIDE A

SIDE B

B FM/AM TUNER UNIT

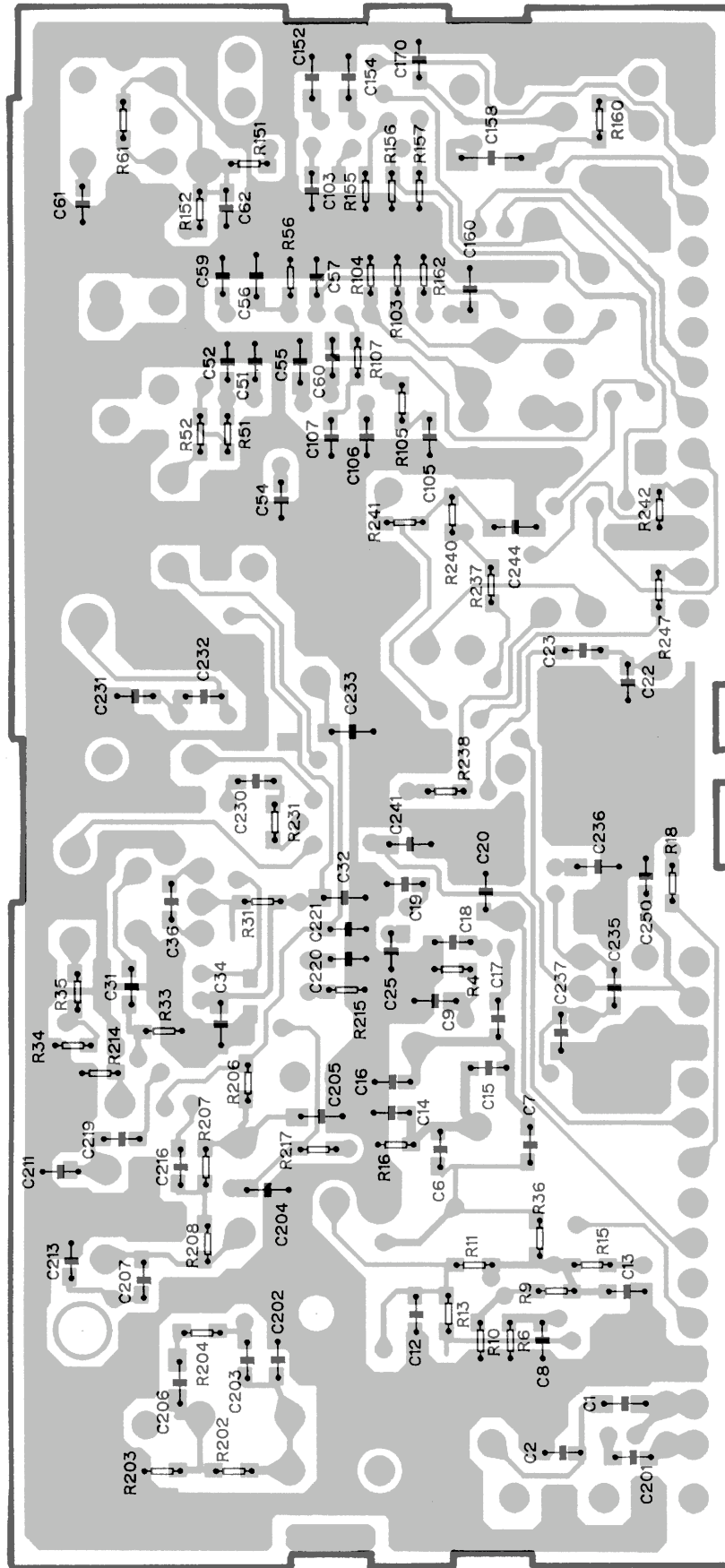


Fig. 18

4.3 CD MECHANISM MODULE

SIDE A

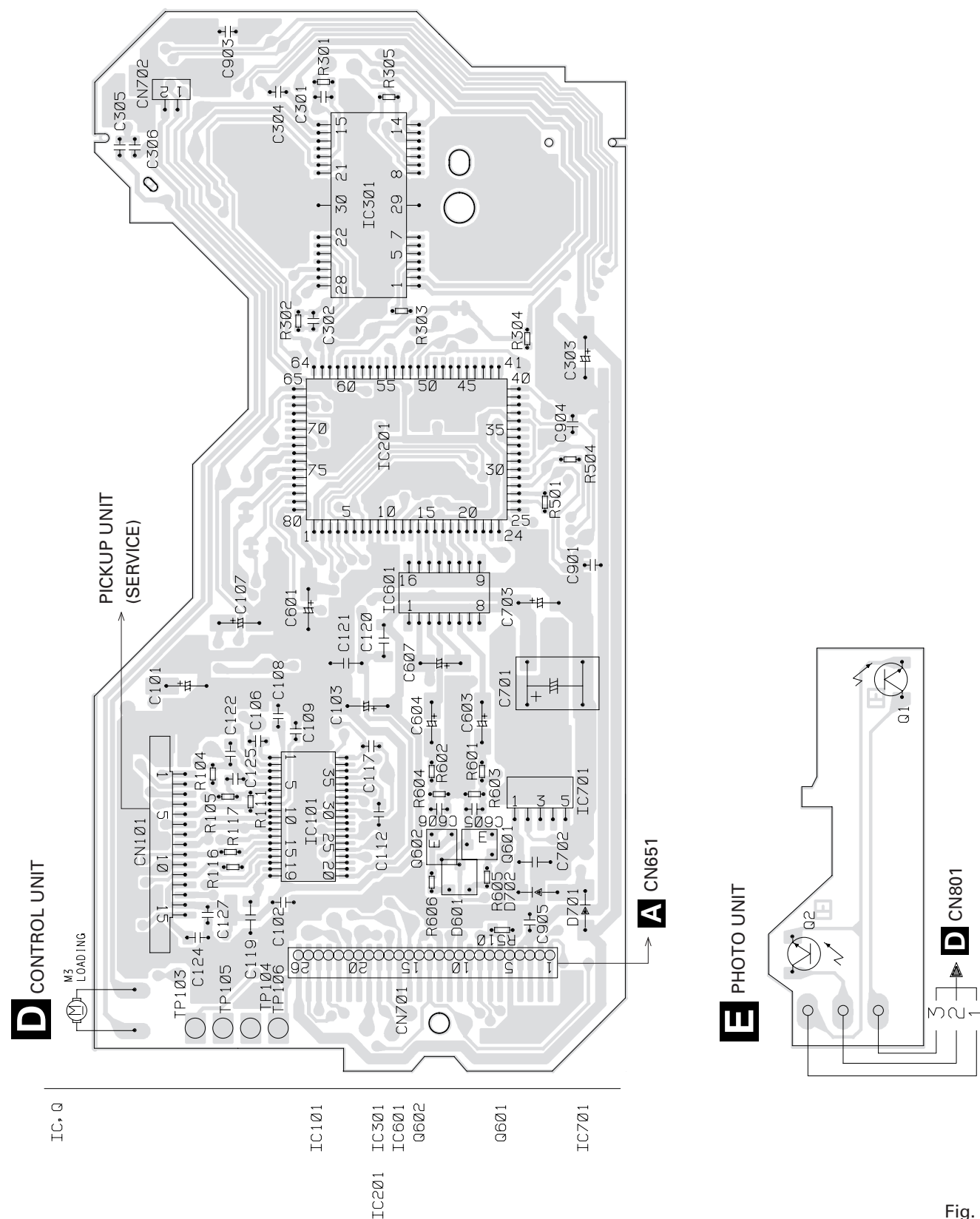


Fig. 19

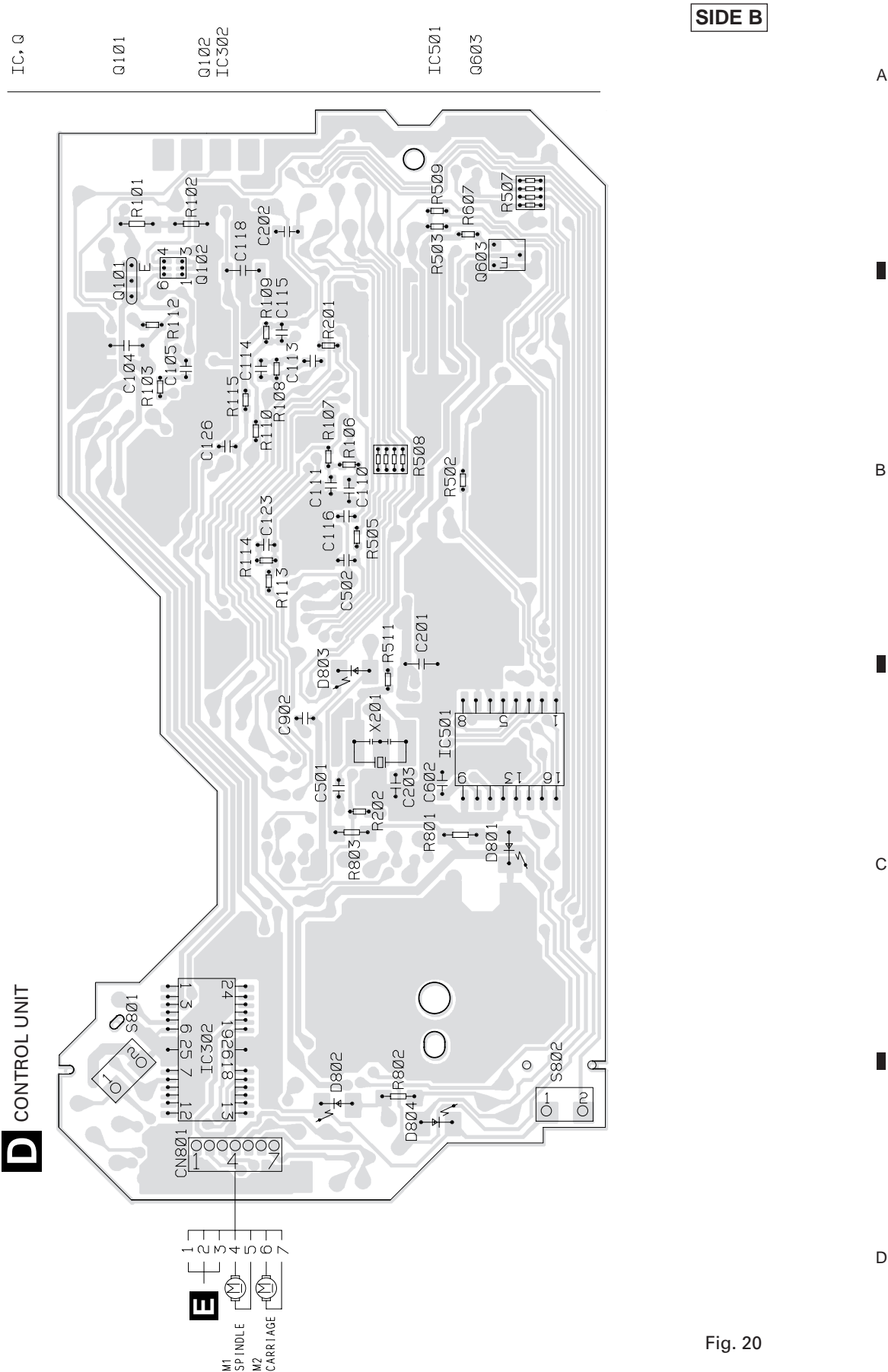


Fig. 20

4.4 KEYBOARD PCB, SWITCH PCB

SIDE A

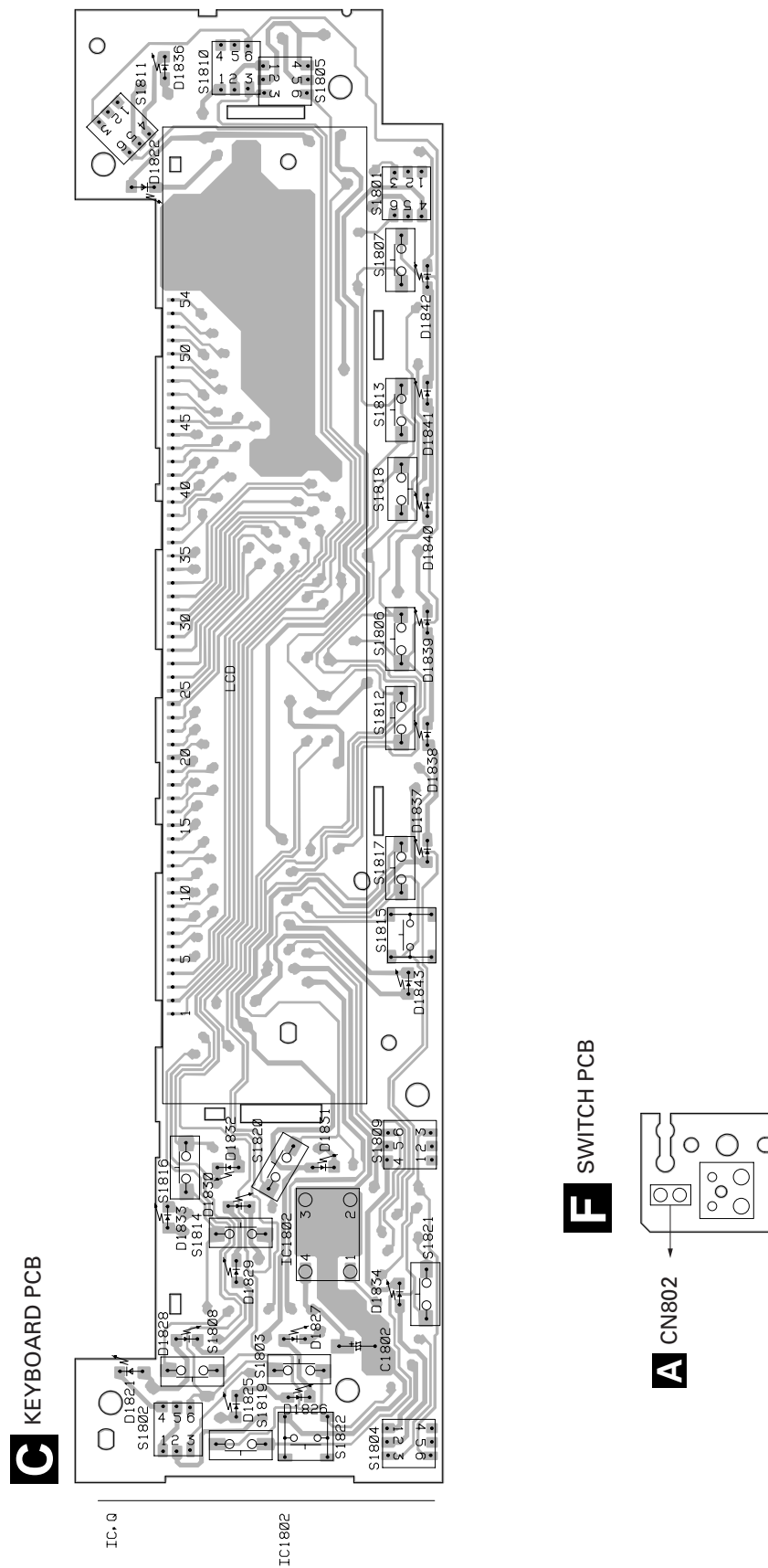
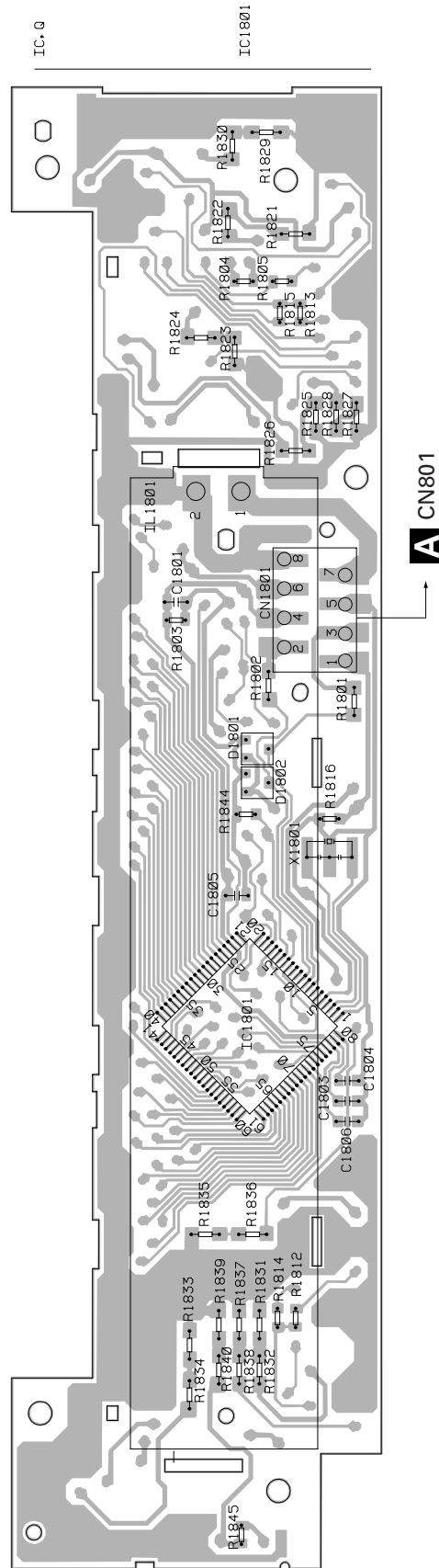


Fig. 21

SIDE B

C KEYBOARD PCB



F SWITCH PCB

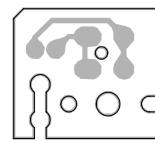


Fig. 22

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	Unit Number : CWE1416			R	8		RS1/16S332J
	Unit Name : FM/AM Tuner Unit			R	9		RS1/16S473J
	(DEH-P645R/EW, DEH-P545R/EW, DEH-P544R/EW)			R	10		RS1/16S223J
				R	11		RS1/16S124J
MISCELLANEOUS				R	13		RS1/16S563J
IC	1	IC	PA4023B	R	15		RS1/16S271J
IC	2	IC	PA4024A	R	16		RS1/16S104J
Q	1	Transistor	2SC2412KLN	R	17		RS1/16S332J
Q	2	Transistor	DTC124EU	R	18		RS1/16S332J
Q	3	FET	3SK263	R	31		RS1/16S470J
Q	31	Transistor	2SC2412KLN	R	32		RS1/16S822J
Q	154	Transistor	DTC124EU	R	33		RS1/16S822J
Q	165	Transistor	2SC2412KLN	R	34		RS1/16S331J
Q	201	FET	2SK932	R	35		RS1/16S331J
Q	202	Transistor	2SC2412KLN	R	51		RS1/16S271J
Q	203	Transistor	DTC124EU	R	52		RS1/16S560J
D	4	Diode	1SV250	R	55		RS1/16S102J
D	5	Diode	KV1410-F1	R	56		RS1/16S823J
D	7	Diode	KV1410-F1	R	61		RS1/16S392J
D	8	Diode	KV1410-F1	R	62		RS1/16S393J
D	201	Diode	MA157	R	101		RS1/16S272J
D	202	Diode	MA157	R	102		RS1/16S682J
D	231	Diode	SVC253	R	103		RS1/16S333J
L	2	Coil	CTC1108	R	104		RS1/16S334J
L	3	Inductor	LCTB2R2K2125	R	105		RS1/16S683J
L	4	Coil	CTC1108	R	107		RS1/16S222J
L	5	Coil	CTC1107	R	151		RS1/16S222J
L	6	Inductor	LCTBR15K1608	R	152		RS1/16S393J
L	51	Ferri-Inductor	LAU150K	R	154		RS1/16S104J
L	201	Ferri-Inductor	LAU4R7K	R	155		RS1/16S273J
L	202	Ferri-Inductor	LAU330K	R	156		RS1/16S243J
L	203	Inductor	CTF1287	R	157		RS1/16S203J
L	208	Inductor	LAU121K	R	160		RS1/16S222J
L	231	Inductor	LCTA3R3J3225	R	161		RS1/16S563J
T	31	Coil	CTE1116	R	162		RS1/16S105J
T	51	Coil	CTC1136	R	163		RS1/16S222J
TC	1		CCL1046	R	202		RS1/16S223J
CF	51	Ceramic Filter	CTF1292	R	203		RS1/16S225J
CF	52	Ceramic Filter	CTF1292	R	204		RS1/16S103J
CF	53	Ceramic Filter	CTF1292	R	206		RS1/16S220J
CF	232	Ceramic Filter	CTF1348	R	207		RS1/16S101J
X	151	Resonator 920.5kHz	CSS1365	R	208		RS1/16S102J
X	231	Crystal Resonator 10.26MHz	CSS1111	R	209		RS1/16S471J
VR	154	Semi-fixed 150kΩ(B)	CCP1213	R	214		RS1/16S822J
AR	1		DSP-201M-A11F	R	215		RS1/16S822J
RESISTORS				R	217		RS1/16S102J
R	1		RS1/16S0R0J	R	231		RS1/16S272J
R	4		RS1/16S154J	R	232		RS1/16S473J
R	5		RS1/16S391J	R	237		RS1/16S103J
R	6		RS1/16S223J	R	238		RS1/16S104J
R	7		RS1/16S123J	R	239		RS1/16S104J
				R	240		RS1/16S332J
				R	241		RS1/16S202J
				R	243		RS1/16S123J
				R	244		RS1/16S103J
				R	247		RS1/16S123J

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

Part No.

CAPACITORS

C	1	CCSQCH6R0D50
C	2	CCSRCK2R0C50
C	4	CCSRCH820J50
C	6	CCSRCH820J50
C	8	CKSRYB103K25
C	9	CKSQYB104K16
C	10	CCSRCKR50C50
C	11	CEJA1R0M50
C	12	CKSRYB222K50
C	13	CKSRYB222K50
C	14	CCSRCH220J50
C	16	CCSRCH8R0D50
C	17	CKSRYB222K50
C	18	CKSRYB103K25
C	19	CKSRYB222K50
C	20	CKSRYB222K50
C	21	CEJA100M16
C	22	CCSRTH9R0D50
C	23	CCSRTH120J50
C	24	CCSRCH471J50
C	25	CKSRYB103K25
C	31	CKSRYB103K25
C	32	CKSQYB472K50
C	33	CCSRCH5R0C50
C	34	CKSQYB104K16
C	36	CCSRRH201J50
C	51	CKSRYB223K25
C	52	CKSRYB103K25
C	54	CCSRCH470J50
C	55	CKSQYB223K25
C	56	CKSQYB104K16
C	57	CKSRYB472K50
C	58	CEJA330M10
C	59	CKSRYB103K25
C	61	CCSRCH270J50
C	62	CKSRYB103K25
C	63	CEJAR15M50
C	101	CEJANP100M10
C	102	CKSRYB182K50
C	103	CKSRYB682K25
C	104	CEJA2R2M50
C	105	CKSRYB103K25
C	106	CCSRCH151J50
C	107	CKSRYB103K25
C	151	CKSRYB472K50
C	152	CKSQYB104K16
C	153	CEJA3R3M50
C	154	CKSQYB104K16
C	157	CEJA3R3M50
C	158	CKSYB474K16
C	159	CEJA220M6R3
C	160	CKSQYB104K16
C	161	CKSQYB104K16
C	162	CEJA3R3M50
C	163	CKSRYB102K50
C	170	CCSRCH100D50
C	201	CCSRCH471J50
C	202	CCSRCH100D50
C	203	CKSRYB332K50
C	204	CKSQYB473K16
C	205	CKSQYB473K16
C	206	CKSQYB104K16
C	207	CCSRCH560J50
C	209	CKSQYB104K16
C	211	CCSRCH101J50
C	212	CEJA470M6R3
C	213	CKSRYB103K25

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

Part No.

C	216	CCSRCH101J50
C	217	CEJA1R5M50
C	219	CCSRCH471J50
C	220	CKSRYB103K25
C	230	CKSRYB103K25
C	231	CCSRCH330J50
C	232	CCSRCH150J50
C	233	CKSQYB104K16
C	234	CEJA330M10
C	235	CKSRYB332K50
C	236	CKSQYB473K16
C	237	CCSRCH120J50
C	239	CKSRYB472K50
C	240	CEJAR47M50
C	241	CKSQYB104K16
C	242	CEJAR47M50
C	243	CEJAR33M50
C	244	CKSQYB473K16
C	245	CKSRYB123K25
C	246	CKSQYB473K16
C	250	CCSRCH471J50



Unit Number : CWE1470

Unit Name : FM/AM Tuner Unit(DEH-P443R/EW)

MISCELLANEOUS

IC	1	IC	PA4023B
IC	2	IC	PA4024A
Q	1	Transistor	2SC2412KLN
Q	2	Transistor	DTC124EU
Q	3	FET	3SK263
Q	31	Transistor	2SC2412KLN
Q	154	Transistor	DTC124EU
Q	165	Transistor	2SC2412KLN
D	4	Diode	1SV250
D	5	Diode	KV1410-F1
D	7	Diode	KV1410-F1
D	8	Diode	KV1410-F1
L	2	Coil	CTC1133
L	3	Inductor	LCTB2R2K2125
L	4	Coil	CTC1133
L	5	Coil	CTC1132
L	6	Inductor	LCTBR15K1608
L	51	Ferri-Inductor	LAU150K
T	31	Coil	CTE1117
T	51	Coil	CTC1136
TC	1		CCL1046
CF	51	Ceramic Filter	CTF1292
CF	52	Ceramic Filter	CTF1292
CF	53	Ceramic Filter	CTF1292
X	151	Resonator 920.5kHz	CSS1365
X	231	Crystal Resonator 10.26MHz	CSS1111
VR	154	Semi-fixed 150kΩ(B)	CCP1213
AR	1		DSP-201M

RESISTORS

R	1	RS1/16S0R0J
R	4	RS1/16S154J
R	5	RS1/16S391J
R	6	RS1/16S223J
R	7	RS1/16S123J
R	8	RS1/16S332J
R	9	RS1/16S473J
R	10	RS1/16S223J
R	11	RS1/16S124J
R	13	RS1/16S563J

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 15	RS1/16S271J	C 62	CKSRYB103K25
R 16	RS1/16S104J	C 63	CEJAR15M50
R 17	RS1/16S332J	C 101	CEJANP100M10
R 18	RS1/16S332J	C 102	CKSRYB182K50
R 31	RS1/16S470J	C 103	CKSRYB682K25
R 32	RS1/16S822J	C 104	CEJA2R2M50
R 33	RS1/16S822J	C 105	CKSRYB103K25
R 34	RS1/16S331J	C 106	CCSRCH151J50
R 35	RS1/16S331J	C 107	CKSRYB103K25
R 51	RS1/16S271J	C 151	CKSRYB472K50
R 52	RS1/16S560J	C 152	CKSQYB104K16
R 55	RS1/16S102J	C 153	CEJA3R3M50
R 56	RS1/16S823J	C 154	CKSQYB104K16
R 61	RS1/16S392J	C 157	CEJA3R3M50
R 62	RS1/16S393J	C 158	CKSYB474K16
R 101	RS1/16S272J	C 159	CEJA220M6R3
R 102	RS1/16S682J	C 160	CKSQYB104K16
R 103	RS1/16S333J	C 161	CKSQYB104K16
R 104	RS1/16S334J	C 162	CEJA3R3M50
R 105	RS1/16S683J	C 163	CKSRYB102K50
R 107	RS1/16S222J	C 170	CCSRCH100D50
R 151	RS1/16S222J		
R 152	RS1/16S393J		
R 154	RS1/16S104J		
R 155	RS1/16S273J		
R 156	RS1/16S243J		
R 157	RS1/16S203J		
R 160	RS1/16S222J		
R 161	RS1/16S563J		
R 162	RS1/16S105J		
R 163	RS1/16S222J		
CAPACITORS		MISCELLANEOUS	
C 1	CCSQCH6R0D50	IC 101	IC
C 2	CCSRCK2R0C50	IC 102	IC
C 4	CCSRCH820J50	IC 151	IC
C 6	CCSRCH820J50	IC 201	IC
C 8	CKSRYB103K25	IC 271	IC
C 9	CKSQYB104K16	IC 272	IC
C 10	CCSRCKR50C50	IC 273	IC
C 11	CEJA1R0M50	IC 274	IC
C 12	CKSRYB222K50	IC 501	IC
C 13	CKSRYB222K50	IC 601	IC
C 14	CCSRCH220J50	IC 731	IC
C 16	CCSRCH8R0D50	IC 732	IC
C 17	CKSRYB222K50	IC 941	IC
C 18	CKSRYB103K25	Q 101	Chip Transistor
C 19	CKSRYB222K50	Q 102	Transistor
C 20	CKSRYB222K50	Q 141	Transistor
C 21	CEJA100M16	Q 142	Transistor
C 22	CCSRTH9R0D50	Q 143	Transistor
C 23	CCSRTH120J50	Q 144	Transistor
C 24	CCSRCH471J50	Q 145	Transistor
C 25	CKSRYB103K25	Q 201	Transistor
C 31	CKSRYB103K25	Q 252	Transistor
C 32	CKSQYB472K50	Q 253	Transistor
C 33	CCSRCH5R0C50	Q 254	Transistor
C 34	CKSQYB104K16	Q 271	Transistor
C 36	CCSRRH201J50	Q 272	Transistor
C 51	CKSRYB223K25	Q 301	Transistor
C 52	CKSRYB103K25	Q 302	Transistor
C 54	CCSRCH470J50	Q 501	Transistor
C 55	CKSQYB223K25	Q 502	Transistor
C 56	CKSQYB104K16	Q 601	Transistor
C 57	CKSRYB472K50	Q 602	Transistor
C 58	CEJA330M10	Q 731	Transistor
C 59	CKSRYB103K25	Q 801	Chip Transistor
C 61	CCSRCH270J50	Q 802	Transistor
		Q 803	Transistor
		Q 804	Transistor
		Q 805	Transistor
		Q 806	Transistor
		Q 807	Transistor
			TA2050S
			CA0008AM
			SN761027DL
			TDA7386
			M5282FP
			MC14052BF
			NJM4558MD
			NJM4558MD
			PM2007A
			PD4885A
			PMW001B
			TA75S393F
			S-80730ANDT
			2SA1162
			DTC124EK
			IMH3A
			DTA114EK
			2SD1757K
			2SD1757K
			2SC2412K
			DTC144EK
			IMH3A
			IMD2A
			IMH3A
			IMH3A
			IMH1A
			IMD2A
			DTA124EK
			IMH3A
			2SC2712
			IMD2A
			DTA114EK
			DTC114EK
			DTC143TK
			2SA1162
			2SD1760F5
			DTC114EK
			DTA143EK
			DTC114EK
			2SC2712
			2SB1238


====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
Q 808 Transistor	DTC123EK	L 981 Ferri-Inductor	LAU2R2K
Q 809 Transistor	2SD1864	TH 601 Thermistor	CCX1037
Q 851 Chip Transistor	2SA1162	X 501 Crystal Resonator 7.200MHz	CSS1379
Q 852 Transistor	DTC124EK	X 601 Resonator 12.58291MHz	CSS1402
Q 853 Transistor	2SC2412K	X 701 Crystal Resonator 4.332MHz	CSS1056
Q 854 Transistor	2SC2412K	S 941 Switch	CSG1046
Q 855 Transistor	2SC2412K	VR 731 Semi-fixed 22kΩ(B)	CCP1321
Q 911 Transistor	2SD1760F5	BZ 601 FM/AM Tuner Unit	CWE1416
Q 912 Transistor	IMD2A	BZ 601 Buzzer	CPV1011
Q 913 Transistor	DTA114EK		
Q 921 Transistor	IMX1	RESISTORS	
Q 922 Transistor	DTC114EK	R 101	RS1/10S620J
Q 923 Transistor	2SC2712	R 102	RS1/10S101J
Q 931 Transistor	2SB1243	R 103	RS1/10S101J
Q 932 Transistor	DTC114EK	R 104	RS1/10S222J
Q 941 Transistor	DTA144TK	R 105	RS1/10S122J
Q 951 Transistor	2SD2396	R 106	RS1/10S122J
Q 952 Transistor	2SB1243	R 107	RS1/10S181J
Q 953 Transistor	DTC124EK	R 108	RS1/10S181J
Q 954 Transistor	2SA1674	R 109	RS1/10S153J
Q 955 Transistor	2SA1674	R 110	RS1/10S153J
Q 956 Transistor	IMH1A	R 111	RS1/10S222J
Q 957 Transistor	2SC2712	R 112	RS1/10S222J
Q 971 Transistor	2SD2396	R 113	RS1/10S102J
Q 972 Transistor	IMD2A	R 114	RS1/10S102J
Q 981 Chip Transistor	2SA1162	R 115	RS1/10S473J
D 141 Diode	1SS133	R 116	RS1/10S473J
D 201 Diode	DAN202K	R 117	RS1/10S332J
D 251 Diode	1SS133	R 118	RS1/10S682J
D 252 Diode	1SS133	R 119	RS1/10S103J
D 321 Diode	HZS7L(C2)	R 133	RS1/10S272J
D 501 Diode	MA152WK	R 134	RS1/10S272J
D 801 Diode	DA204K	R 143	RS1/10S224J
D 802 Diode	DA204K	R 144	RS1/10S224J
D 803 Diode	DA204K	R 145	RS1/10S222J
D 804 Diode	MA3062(M)	R 146	RS1/10S222J
D 805 Diode	MA3075(L)	R 147	RS1/10S223J
D 806 Diode	MA3039(H)	R 148	RS1/10S223J
D 851 LED	BR4361F	R 149	RS1/10S105J
D 901 Diode	ERA15-02VH	R 150	RS1/10S224J
D 902 Diode	ERA15-02VH	R 151	RS1/10S272J
D 911 Diode	ERA15-02VH	R 152	RS1/10S272J
D 912 Diode	HZS6L(B1)	R 153	RS1/10S151J
D 921 Diode	HZS7L(C3)	R 154	RS1/10S151J
D 922 Diode	ERA15-02VH	R 155	RS1/10S102J
D 923 Diode	HZS7L(A1)	R 201	RS1/10S103J
D 931 Diode	ERA15-02VH	R 202	RS1/10S331J
D 932 Diode	ERA15-02VH	R 203	RS1/10S103J
D 933 Diode	ERA15-02VH	R 204	RS1/10S103J
D 934 Diode	ERA15-02VH	R 253	RS1/10S681J
D 951 Diode	HZS9L(B3)	R 254	RS1/10S681J
D 952 Diode	HZS9L(A2)	R 257	RS1/10S223J
D 953 Diode	1SS133	R 258	RS1/10S223J
D 971 Diode	HZS9L(B1)	R 259	RS1/10S821J
D 981 Diode	DAN202K	R 260	RS1/10S821J
L 101 Inductor	LAU3R3J	R 263	RS1/10S0R0J
L 501 Ferri-Inductor	LAU2R2K	R 264	RS1/10S0R0J
L 502 Ferri-Inductor	LAU2R2K	R 265	RS1/10S223J
L 503 Ferri-Inductor	LAU2R2K	R 266	RS1/10S223J
L 601 Inductor	LAU100K	R 271	RS1/10S183J
L 602 Ferri-Inductor	LAU2R2K	R 272	RS1/10S183J
L 603 Ferri-Inductor	LAU2R2K	R 273	RS1/10S103J
L 731 Ferri-Inductor	LAU101K	R 274	RS1/10S243J
L 801 Ferri-Inductor	LAU2R2K	R 275	RS1/10S683J
L 802 Transformer	MTX9006	R 276	RS1/10S105J
		R 277	RS1/10S103J

DEH-P645R,P545R,P544R,P443R

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 278	RS1/10S103J	R 626	RS1/10S102J
R 279	RS1/10S104J	R 627	RA3C681J
R 280	RS1/10S104J	R 630	RS1/10S473J
R 281	RS1/10S104J	R 631	RS1/10S473J
R 282	RS1/10S104J	R 632	RS1/10S393J
R 283	RS1/10S104J	R 633	RS1/10S0R0J
R 284	RS1/10S104J	R 634	RS1/10S0R0J
R 285	RS1/10S105J	R 651	RS1/10S681J
R 287	RS1/10S473J	R 652	RS1/10S681J
R 288	RS1/10S473J	R 653	RS1/10S681J
R 301	RS1/10S151J	R 654	RS1/10S681J
R 302	RS1/10S151J	R 701	RS1/10S105J
R 303	RS1/10S104J	R 702	RS1/10S222J
R 304	RS1/10S104J	R 734	RS1/10S102J
R 351	RS1/10S0R0J	R 735	RS1/10S102J
R 352	RS1/10S0R0J	R 737	RS1/10S333J
R 353	RS1/10S0R0J	R 738	RS1/10S0R0J
R 354	RS1/10S0R0J	R 739	RS1/10S102J
R 363	RS1/10S330J	R 740	RS1/10S102J
R 501	RS1/10S0R0J	R 741	RS1/10S222J
R 502	RS1/10S222J	R 742	RS1/10S222J
R 503	RS1/10S222J	R 743	RS1/10S684J
R 504	RS1/10S102J	R 744	RS1/10S681J
R 505	RS1/10S222J	R 745	RS1/10S562J
R 506	RS1/10S472J	R 746	RS1/10S102J
R 507	RS1/10S222J	R 747	RS1/10S103J
R 508	RS1/10S682J	R 748	RS1/10S562J
R 509	RS1/10S682J	R 750	RS1/10S473J
R 510	RS1/10S561J	R 751	RS1/10S681J
R 511	RS1/10S103J	R 752	RS1/10S473J
R 512	RS1/10S472J	R 753	RS1/10S473J
R 513	RS1/10S222J	R 754	RA3C102J
R 514	RS1/10S392J	R 801	RS1/8S222J
R 515	RS1/10S392J	R 802	RS1/8S222J
R 516	RS1/10S152J	R 803	RS1/8S222J
R 517	RS1/10S102J	R 804	RS1/10S132J
R 518	RS1/10S272J	R 805	RS1/10S822J
R 520	RS1/10S103J	R 806	RS2PMF100J
R 522	RS1/10S562J	R 807	RD1/4PU471J
R 523	RS1/10S472J	R 808	RS1/10S223J
R 524	RS1/10S562J	R 809	RS1/10S682J
R 525	RS1/10S473J	R 810	RS1/10S103J
R 526	RS1/10S0R0J	R 811	RS1/10S224J
R 527	RS1/10S681J	R 812	RS1/10S104J
R 528	RS1/10S0R0J	R 813	RS2PMF220J
R 601	RS1/10S102J	R 814	RS1/10S222J
R 602	RS1/10S473J	R 815	RD1/4PU152J
R 604	RS1/10S473J	R 851	RS1/8S471J
R 605	RS1/10S473J	R 852	RS1/10S473J
R 606	RS1/10S473J	R 853	RS1/10S223J
R 607	RS1/10S473J	R 854	RS1/10S223J
R 608	RS1/10S473J	R 855	RS1/10S103J
R 609	RS1/10S473J	R 856	RS1/10S223J
R 610	RS1/10S222J	R 857	RS1/10S272J
R 611	RS1/10S222J	R 858	RS1/8S102J
R 612	RS1/10S222J	R 859	RS1/10S223J
R 613	RS1/10S393J	R 860	RS1/10S272J
R 615	RN1/10SE2002D	R 861	RS1/10S223J
R 616	RS1/10S473J	R 862	RS1/10S272J
R 617	RS1/10S473J	R 863	RS1/10S103J
R 618	RS1/10S473J	R 864	RS1/8S102J
R 619	RS1/10S473J	R 865	RS1/8S102J
R 621	RS1/10S202J	R 866	RS1/10S473J
R 622	RS1/10S102J	R 867	RS1/10S473J
R 625	RS1/10S681J	R 869	RS1/10S103J

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 870	RS1/10S102J	C 156	CKSQYB822K50
R 911	RS1/10S752J	C 157	CEJA1R0M50
R 912	RS1/10S101J	C 158	CEJA1R0M50
R 913	RS1/10S392J	C 159	CKSQYB183K50
R 921	RS1/10S103J	C 160	CKSQYB183K50
R 922	RS1/10S473J	C 161	CKSQYB102K50
R 923	RS1/10S103J	C 162	CKSQYB102K50
R 924	RS1/10S103J	C 163	CEJANP2R2M35
R 925	RS1/10S473J	C 164	CEJANP2R2M35
R 926	RS1/10S472J	C 165	CKSQYB333K25
R 927	RS1/10S224J	C 166	CKSQYB333K25
R 933	RS1/10S472J	C 167	CEJA220M16
R 934	RD1/4PU272J	C 168	CEJA2R2M50
R 941	RS1/10S102J	C 169	CKSQYB104K25
R 942	RS1/10S822J	C 170	CCSQCH101K50
R 943	RS1/8S471J	C 201	CKSQYB224K16
R 946	RS1/10S473J	C 202	CKSQYB224K16
R 951	RD1/4PU221J	C 203	CKSQYB224K16
R 952	RD1/4PU511J	C 204	CKSQYB224K16
R 953	RS1/10S1R0J	C 205	CEJA1R0M50
R 954	RD1/4PU331J	C 206	CCH1150
R 955	RD1/4PU331J	C 207	CKSQYB473K50
R 956	RS1/10S472J	C 208	CEJA100M16
R 957	RD1/4PU102J	C 209	CEJA1R0M50
R 958	RS1/10S472J	C 210	CEJA330M16
R 959	RD1/4PU102J	C 211	CKSQYB103K50
R 960	RS1/10S472J	C 212	CKSQYB102K50
R 961	RS1/10S103J	C 253	CEJA4R7M35
R 962	RS1/10S473J	C 254	CEJA4R7M35
R 963	RS1/10S473J	C 257	CKSQYB221K50
R 971	RD1/4PU221J	C 258	CKSQYB221K50
R 972	RS1/10S221J	C 271	CEJA220M10
R 973	RS1/10S472J	C 272	CEJA101M10
R 974	RS1/10S222J	C 273	CKSQYB472K50
R 981	RS1/8S153J	C 274	CEJA4R7M35
R 982	RS1/10S472J	C 275	CEJANP220M10
R 983	RS1/10S472J	C 276	CKSQYB222K50
R 984	RS1/10S102J	C 277	CKSQYB183K50
CAPACITORS		C 278	CKSQYB473K25
		C 279	CKSQYB273K25
C 101	CEJA1R0M50	C 280	CKSQYB103K50
C 102	CEJA1R0M50	C 281	CKSQYB223K50
C 103	CEJA1R0M50	C 282	CKSQYB153K50
C 104	CEJA1R0M50	C 283	CEJA4R7M35
C 105	CEJA100M16	C 284	CEJA4R7M35
C 106	CKSQYB104K25	C 285	CEJA1R0M50
C 107	CKSQYB473K25	C 286	CEJA1R0M50
C 108	CKSQYB473K25	C 287	CKSQYB473K25
C 131	CEJA2R2M50	C 288	CKSQYB473K16
C 132	CEJA2R2M50	C 289	CKSQYB103K50
C 133	CKSQYB223K50	C 301	CEJA100M16
C 134	CKSQYB223K50	C 302	CEJA100M16
C 135	CEJA4R7M35	C 362	CKSQYB103K50
C 136	CEJA4R7M35	C 501	CCSQCH150K50
C 137	CEJA2R2M50	C 502	CCSQCH150K50
C 138	CEJA2R2M50	C 503	CKSQYB103K50
C 141	CEJA1R0M50	C 504	CKSQYB103K50
C 142	CEJA1R0M50	C 505	CCSQCH101K50
C 143	CKSQYB471K50	C 506	CKSQYB103K50
C 144	CKSQYB223K50	C 507	CKSQYB103K50
C 151	CKSQYB473K25	C 508	CKSQYB102K50
C 152	CEJA470M10	C 509	CEJA220M10
C 153	CEJANP100M16	C 511	CKSQYB152K50
C 154	CEJANP100M16	C 512	CKSQYB223K50
C 155	CKSQYB822K50	C 514	CKSQYB473K16

DEH-P645R,P545R,P544R,P443R

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
C 515	CEJA220M6R3	 Unit Number : CWM5624	
C 516	CKSQYB103K50	Unit Name : Tuner Amp Unit(DEH-P545R/EW, P544R/EW)	
C 519	CEJA220M10		
C 520	CKSQYB103K50	MISCELLANEOUS	
C 521 4.7μF/16V	CCH1250	IC 101 IC	TA2050S
C 522	CKSQYB103K50	IC 102 IC	CA0008AM
C 523	CKLSR473K16	IC 151 IC	SN761027DL
C 525 4.7μF/16V	CCH1250	IC 201 IC	TDA7386
C 526	CKSQYB103K50	IC 501 IC	PM2007A
C 527	CEJAR47M50		
C 528	CKSQYB103K50	IC 601 IC	PD4885A
C 529	CCSQCH101K50	IC 731 IC	PMW001B
C 530	CKSQYB223K50	IC 732 IC	TA75S393F
C 532	CKSQYB473K16	IC 941 IC	S-80730ANDT
C 534	CCSQCH101K50	Q 101 Chip Transistor	2SA1162
C 601	CCSQCH200J50	Q 102 Transistor	DTC124EK
C 602	CCSQCH200J50	Q 141 Transistor	IMH3A
C 603	CEJA4R7M35	Q 142 Transistor	DTA114EK
C 604	CCSQCH101J50	Q 143 Transistor	2SD1757K
C 605	CCSQCH101J50	Q 144 Transistor	2SD1757K
C 606	CCSQCH101K50	Q 145 Transistor	2SC2412K
C 607	CCSQCH101K50	Q 201 Transistor	DTC144EK
C 608	CCSQCH101K50	Q 253 Transistor	IMD2A
C 651	CCSQCH821J50	Q 254 Transistor	IMH3A
C 652	CCSQCH821J50	Q 301 Transistor	DTA124EK
C 653	CCSQCH101J50	Q 302 Transistor	IMH3A
C 701	CCSQCH270J50	Q 501 Transistor	2SC2712
C 702	CCSQCH270J50	Q 502 Transistor	IMD2A
C 731	CEJA4R7M35	Q 601 Transistor	DTA114EK
C 733	CKSQYB472K50	Q 602 Transistor	DTC114EK
C 734	CKSQYB104K25	Q 731 Transistor	DTC143TK
C 735	CKSYB105K16	Q 801 Chip Transistor	2SA1162
C 736	CKSQYB104K25	Q 802 Transistor	2SD1760F5
C 737	CKSQYB222K50	Q 803 Transistor	DTC114EK
C 738	CKSQYB104K25	Q 804 Transistor	DTA143EK
C 739	CEJA100M16	Q 805 Transistor	DTC114EK
C 740	CKSQYB103K50	Q 806 Transistor	2SC2712
C 741	CKSQYB103K50	Q 807 Transistor	2SB1238
C 742	CKSQYB223K50	Q 808 Transistor	DTC123EK
C 743	CKSQYB104K25	Q 809 Transistor	2SD1864
C 802	CKSQYB104K25	Q 851 Chip Transistor	2SA1162
C 803	CEJA100M16	Q 852 Transistor	DTC124EK
C 804	CKSQYB103K50	Q 853 Transistor	2SC2412K
C 805	CEJA100M16	Q 911 Transistor	2SD1760F5
C 806	CKSQYB103K50	Q 912 Transistor	IMD2A
C 807	CKSQYB333K25	Q 913 Transistor	DTA114EK
C 808	CKSQYB333K25	Q 921 Transistor	IMX1
C 853	CKSQYB103K50	Q 922 Transistor	DTC114EK
C 854	CKSQYB103K50	Q 923 Transistor	2SC2712
C 855	CKSQYB103K50	Q 931 Transistor	2SB1243
C 856	CKSQYB473K25	Q 941 Transistor	DTA144TK
C 911	CKSQYB103K50	Q 951 Transistor	2SD2396
C 912	CEJA470M10	Q 952 Transistor	2SB1243
C 913	CKSQYB472K50	Q 953 Transistor	DTC124EK
C 914 1000μF/16V	CCH1312	Q 954 Transistor	2SA1674
C 921	CKSYB105K16	Q 955 Transistor	2SA1674
C 922	CKSQYB102K50	Q 956 Transistor	IMH1A
C 941	CEJA2R2M50	Q 957 Transistor	2SC2712
C 942	CKSQYB102K50	Q 971 Transistor	2SD2396
C 951	CKSQYB103K50	Q 972 Transistor	IMD2A
C 952	CEJA101M10	D 141 Diode	1SS133
C 953 330μF/10V	CCH1181	D 201 Diode	DAN202K
C 971	CKSQYB473K25	D 251 Diode	1SS133
C 972	CKSQYB102K50	D 501 Diode	MA152WK
C 973	CEJA101M10	D 801 Diode	DA204K

====Circuit Symbol and No.==Part Name			Part No.	====Circuit Symbol and No.==Part Name			Part No.
D	802	Diode	DA204K	R	152		RS1/10S272J
D	803	Diode	DA204K	R	153		RS1/10S151J
D	804	Diode	MA3062(M)	R	154		RS1/10S151J
D	805	Diode	MA3075(L)	R	155		RS1/10S102J
D	806	Diode	MA3039(H)	R	201		RS1/10S103J
D	851	LED	BR4361F	R	202		RS1/10S331J
D	901	Diode	ERA15-02VH	R	203		RS1/10S103J
D	902	Diode	ERA15-02VH	R	204		RS1/10S103J
D	911	Diode	ERA15-02VH	R	259		RS1/10S681J
D	912	Diode	HZS6L(B1)	R	260		RS1/10S681J
D	921	Diode	HZS7L(C3)	R	265		RS1/10S223J
D	922	Diode	ERA15-02VH	R	266		RS1/10S223J
D	923	Diode	HZS7L(A1)	R	268		RS1/10S0R0J
D	932	Diode	ERA15-02VH	R	269		RS1/10S0R0J
D	951	Diode	HZS9L(B3)	R	301		RS1/10S151J
D	952	Diode	HZS9L(A2)	R	302		RS1/10S151J
D	953	Diode	1SS133	R	303		RS1/10S104J
D	971	Diode	HZS9L(B1)	R	304		RS1/10S104J
L	101	Inductor	LAU3R3J	R	351		RS1/10S0R0J
L	501	Ferri-Inductor	LAU2R2K	R	352		RS1/10S0R0J
L	502	Ferri-Inductor	LAU2R2K	R	353		RS1/10S0R0J
L	503	Ferri-Inductor	LAU2R2K	R	354		RS1/10S0R0J
L	601	Inductor	LAU100K	R	501		RS1/10S0R0J
L	602	Ferri-Inductor	LAU2R2K	R	502		RS1/10S222J
L	603	Ferri-Inductor	LAU2R2K	R	503		RS1/10S222J
L	731	Ferri-Inductor	LAU101K	R	504		RS1/10S102J
L	801	Ferri-Inductor	LAU2R2K	R	505		RS1/10S222J
L	802	Transformer	MTX9006	R	506		RS1/10S472J
TH	601	Thermistor	CCX1037	R	507		RS1/10S222J
X	501	Crystal Resonator 7.200MHz	CSS1379	R	508		RS1/10S682J
X	601	Resonator 12.58291MHz	CSS1402	R	509		RS1/10S682J
X	701	Crystal Resonator 4.332MHz	CSS1056	R	510		RS1/10S561J
S	941	Switch	CSG1046	R	511		RS1/10S103J
VR	731	Semi-fixed 22kΩ(B)	CCP1321	R	512		RS1/10S472J
		FM/AM Tuner Unit	CWE1416	R	513		RS1/10S222J
BZ	601	Buzzer	CPV1011	R	514		RS1/10S392J
RESISTORS				R	515		RS1/10S392J
				R	516		RS1/10S152J
R	101		RS1/10S620J	R	517		RS1/10S102J
R	102		RS1/10S101J	R	518		RS1/10S272J
R	103		RS1/10S101J	R	520		RS1/10S103J
R	104		RS1/10S222J	R	522		RS1/10S562J
R	105		RS1/10S122J	R	523		RS1/10S472J
				R	524		RS1/10S562J
R	106		RS1/10S122J	R	525		RS1/10S473J
R	107		RS1/10S181J				
R	108		RS1/10S181J	R	526		RS1/10S0R0J
R	109		RS1/10S153J	R	527		RS1/10S681J
R	110		RS1/10S153J	R	528		RS1/10S0R0J
				R	601		RS1/10S102J
R	111		RS1/10S222J	R	602		RS1/10S473J
R	112		RS1/10S222J				
R	113		RS1/10S102J	R	604		RS1/10S473J
R	114		RS1/10S102J	R	605		RS1/10S473J
R	115		RS1/10S473J	R	606		RS1/10S473J
				R	607		RS1/10S473J
R	116		RS1/10S473J	R	608		RS1/10S473J
R	117		RS1/10S332J				
R	118		RS1/10S682J	R	609		RS1/10S473J
R	119		RS1/10S103J	R	610		RS1/10S222J
R	133		RS1/10S272J	R	611		RS1/10S222J
				R	612		RS1/10S222J
R	134		RS1/10S272J	R	613		RS1/10S393J
R	143		RS1/10S224J				
R	144		RS1/10S224J	R	615		RN1/10SE2002D
R	145		RS1/10S222J	R	616		RS1/10S473J
R	146		RS1/10S222J	R	617		RS1/10S473J
				R	618		RS1/10S473J
R	147		RS1/10S223J	R	620		RS1/10S0R0J
R	148		RS1/10S223J				
R	149		RS1/10S105J				
R	150		RS1/10S224J				
R	151		RS1/10S272J				

DEH-P645R,P545R,P544R,P443R

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 621	RS1/10S202J	R 921	RS1/10S103J
R 622	RS1/10S102J	R 922	RS1/10S473J
R 625	RS1/10S681J	R 923	RS1/10S103J
R 626	RS1/10S102J	R 924	RS1/10S103J
R 627	RA3C681J	R 925	RS1/10S473J
R 630	RS1/10S473J	R 926	RS1/10S472J
R 631	RS1/10S473J	R 927	RS1/10S224J
R 632	RS1/10S393J	R 941	RS1/10S102J
R 633	RS1/10S0R0J	R 942	RS1/10S822J
R 634	RS1/10S0R0J	R 943	RS1/8S471J
R 651	RS1/10S681J	R 946	RS1/10S473J
R 652	RS1/10S681J	R 951	RD1/4PU221J
R 653	RS1/10S681J	R 952	RD1/4PU511J
R 654	RS1/10S681J	R 953	RS1/10S1R0J
R 701	RS1/10S105J	R 954	RD1/4PU331J
R 702	RS1/10S222J	R 955	RD1/4PU331J
R 734	RS1/10S102J	R 956	RS1/10S472J
R 735	RS1/10S102J	R 957	RD1/4PU102J
R 737	RS1/10S333J	R 958	RS1/10S472J
R 738	RS1/10S0R0J	R 959	RD1/4PU102J
R 739	RS1/10S102J	R 960	RS1/10S472J
R 740	RS1/10S102J	R 961	RS1/10S103J
R 741	RS1/10S222J	R 962	RS1/10S473J
R 742	RS1/10S222J	R 963	RS1/10S473J
R 743	RS1/10S684J	R 971	RD1/4PU221J
R 744	RS1/10S681J	R 972	RS1/10S221J
R 745	RS1/10S562J	R 973	RS1/10S472J
R 746	RS1/10S102J	R 974	RS1/10S222J
R 747	RS1/10S103J		
R 748	RS1/10S562J		
		CAPACITORS	
R 750	RS1/10S473J	C 101	CEJA1R0M50
R 751	RS1/10S681J	C 102	CEJA1R0M50
R 752	RS1/10S473J	C 103	CEJA1R0M50
R 753	RS1/10S473J	C 104	CEJA1R0M50
R 754	RA3C102J	C 105	CEJA100M16
R 801	RS1/8S222J	C 106	CKSQYB104K25
R 802	RS1/8S222J	C 107	CKSQYB473K25
R 803	RS1/8S222J	C 108	CKSQYB473K25
R 804	RS1/10S132J	C 131	CEJA2R2M50
R 805	RS1/10S822J	C 132	CEJA2R2M50
R 806	RS2PMF100J	C 133	CKSQYB223K50
R 807	RD1/4PU471J	C 134	CKSQYB223K50
R 808	RS1/10S223J	C 135	CEJA4R7M35
R 809	RS1/10S682J	C 136	CEJA4R7M35
R 810	RS1/10S103J	C 137	CEJA2R2M50
R 811	RS1/10S224J	C 138	CEJA2R2M50
R 812	RS1/10S104J	C 141	CEJA1R0M50
R 813	RS2PMF220J	C 142	CEJA1R0M50
R 814	RS1/10S222J	C 143	CKSQYB471K50
R 815	RD1/4PU152J	C 144	CKSQYB223K50
R 851	RS1/8S471J	C 151	CKSQYB473K25
R 852	RS1/10S473J	C 152	CEJA470M10
R 853	RS1/10S223J	C 153	CEJANP100M16
R 854	RS1/10S223J	C 154	CEJANP100M16
R 855	RS1/10S103J	C 155	CKSQYB822K50
R 856	RS1/10S223J	C 156	CKSQYB822K50
R 857	RS1/10S272J	C 157	CEJA1R0M50
R 858	RS1/8S102J	C 158	CEJA1R0M50
R 866	RS1/10S473J	C 159	CKSQYB183K50
R 867	RS1/10S473J	C 160	CKSQYB183K50
R 869	RS1/10S103J	C 161	CKSQYB102K50
R 870	RS1/10S102J	C 162	CKSQYB102K50
R 911	RS1/10S752J	C 163	CEJANP2R2M35
R 912	RS1/10S101J	C 164	CEJANP2R2M35
R 913	RS1/10S392J	C 165	CKSQYB333K25

Unit Number : CWM5621

Unit Name : Tuner Amp Unit(DEH-P443R/EW)

MISCELLANEOUS

IC	101	IC	TA2050S
IC	102	IC	CA0008AM
IC	151	IC	SN761027DL
IC	201	IC	TDA7384
IC	501	IC	PM2007A
IC	601	IC	PD4885A
IC	731	IC	PMW001B
IC	732	IC	TA75S393F
IC	941	IC	S-80730ANDT
Q	101	Chip Transistor	2SA1162
Q	102	Transistor	DTC124EK
Q	141	Transistor	IMH3A
Q	142	Transistor	DTA114EK
Q	143	Transistor	2SD1757K
Q	144	Transistor	2SD1757K
Q	145	Transistor	2SC2412K
Q	201	Transistor	DTC144EK
Q	253	Transistor	IMD2A
Q	254	Transistor	IMH3A
Q	301	Transistor	DTA124EK
Q	302	Transistor	IMH3A
Q	501	Transistor	2SC2712
Q	502	Transistor	IMD2A
Q	601	Transistor	DTA114EK
Q	602	Transistor	DTC114EK
Q	731	Transistor	DTC143TK
Q	801	Chip Transistor	2SA1162
Q	802	Transistor	2SD1760F5
Q	803	Transistor	DTC114EK
Q	804	Transistor	DTA143EK

DEH-P645R,P545R,P544R,P443R

====Circuit Symbol and No.==Part Name			Part No.	====Circuit Symbol and No.==Part Name			Part No.
Q	805	Transistor	DTC114EK	R	106	RS1/10S122J	
Q	806	Transistor	2SC2712	R	107	RS1/10S181J	
Q	807	Transistor	2SB1238	R	108	RS1/10S181J	
Q	808	Transistor	DTC123EK	R	109	RS1/10S153J	
Q	809	Transistor	2SD1864	R	110	RS1/10S153J	
Q	911	Transistor	2SD1760F5	R	111	RS1/10S222J	
Q	912	Transistor	IMD2A	R	112	RS1/10S222J	
Q	913	Transistor	DTA114EK	R	113	RS1/10S102J	
Q	921	Transistor	IMX1	R	114	RS1/10S102J	
Q	922	Transistor	DTC114EK	R	115	RS1/10S473J	
Q	923	Transistor	2SC2712	R	116	RS1/10S473J	
Q	951	Transistor	2SD2396	R	117	RS1/10S332J	
Q	952	Transistor	2SB1243	R	118	RS1/10S682J	
Q	953	Transistor	DTC124EK	R	119	RS1/10S103J	
Q	955	Transistor	2SA1674	R	133	RS1/10S272J	
Q	956	Transistor	IMH1A	R	134	RS1/10S272J	
Q	957	Transistor	2SC2712	R	143	RS1/10S224J	
Q	971	Transistor	2SD2396	R	144	RS1/10S224J	
Q	972	Transistor	IMD2A	R	145	RS1/10S222J	
D	141	Diode	1SS133	R	146	RS1/10S222J	
D	201	Diode	DAN202K	R	147	RS1/10S223J	
D	251	Diode	1SS133	R	148	RS1/10S223J	
D	801	Diode	DA204K	R	149	RS1/10S105J	
D	802	Diode	DA204K	R	150	RS1/10S224J	
D	803	Diode	DA204K	R	151	RS1/10S272J	
D	804	Diode	MA3062(M)	R	152	RS1/10S272J	
D	805	Diode	MA3075(L)	R	153	RS1/10S151J	
D	806	Diode	MA3039(H)	R	154	RS1/10S151J	
D	901	Diode	ERA15-02VH	R	155	RS1/10S102J	
D	902	Diode	ERA15-02VH	R	201	RS1/10S103J	
D	911	Diode	ERA15-02VH	R	202	RS1/10S331J	
D	912	Diode	HZS6L(B1)	R	203	RS1/10S103J	
D	921	Diode	HZS7L(C3)	R	204	RS1/10S103J	
D	922	Diode	ERA15-02VH	R	259	RS1/10S681J	
D	923	Diode	HZS7L(A1)	R	260	RS1/10S681J	
D	931	Diode	ERA15-02VH	R	265	RS1/10S223J	
D	932	Diode	ERA15-02VH	R	266	RS1/10S223J	
D	951	Diode	HZS9L(B3)	R	268	RS1/10S0R0J	
D	952	Diode	HZS9L(A2)	R	269	RS1/10S0R0J	
D	953	Diode	1SS133	R	301	RS1/10S151J	
D	971	Diode	HZS9L(B1)	R	302	RS1/10S151J	
L	101	Inductor	LAU3R3J	R	303	RS1/10S104J	
L	501	Ferri-Inductor	LAU2R2K	R	304	RS1/10S104J	
L	503	Ferri-Inductor	LAU2R2K	R	351	RS1/10S0R0J	
L	601	Inductor	LAU100K	R	352	RS1/10S0R0J	
L	602	Ferri-Inductor	LAU2R2K	R	353	RS1/10S0R0J	
L	603	Ferri-Inductor	LAU2R2K	R	354	RS1/10S0R0J	
L	731	Ferri-Inductor	LAU101K	R	501	RS1/10S0R0J	
L	801	Ferri-Inductor	LAU2R2K	R	502	RS1/10S222J	
L	802	Transformer	MTX9006	R	503	RS1/10S222J	
TH	601	Thermistor	CCX1037	R	505	RS1/10S222J	
X	501	Crystal Resonator 7.200MHz	CSS1379	R	506	RS1/10S472J	
X	601	Resonator 12.58291MHz	CSS1402	R	507	RS1/10S222J	
X	701	Crystal Resonator 4.332MHz	CSS1056	R	508	RS1/10S682J	
S	941	Switch	CSG1046	R	509	RS1/10S682J	
VR	731	Semi-fixed 22kΩ(B)	CCP1321	R	510	RS1/10S561J	
		FM/AM Tuner Unit	CWE1470	R	512	RS1/10S472J	
BZ	601	Buzzer	CPV1011	R	513	RS1/10S222J	
				R	514	RS1/10S0R0J	
RESISTORS				R	515	RS1/10S0R0J	
R	101		RS1/10S620J	R	517	RS1/10S102J	
R	102		RS1/10S101J	R	518	RS1/10S272J	
R	103		RS1/10S101J	R	522	RS1/10S562J	
R	104		RS1/10S222J	R	523	RS1/10S472J	
R	105		RS1/10S122J	R	524	RS1/10S562J	

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 525	RS1/10S473J	R 808	RS1/10S223J
R 526	RS1/10S0R0J	R 809	RS1/10S682J
R 527	RS1/10S681J	R 810	RS1/10S103J
R 528	RS1/10S0R0J	R 811	RS1/10S224J
R 550	RS1/10S0R0J	R 812	RS1/10S104J
R 601	RS1/10S102J	R 813	RS2PMF220J
R 602	RS1/10S473J	R 814	RS1/10S222J
R 604	RS1/10S473J	R 815	RD1/4PU152J
R 605	RS1/10S473J	R 852	RS1/10S473J
R 606	RS1/10S473J	R 866	RS1/10S473J
R 607	RS1/10S473J	R 867	RS1/10S473J
R 608	RS1/10S473J	R 911	RS1/10S752J
R 609	RS1/10S473J	R 912	RS1/10S101J
R 610	RS1/10S222J	R 913	RS1/10S392J
R 611	RS1/10S222J	R 921	RS1/10S103J
R 612	RS1/10S222J	R 922	RS1/10S473J
R 613	RS1/10S393J	R 923	RS1/10S103J
R 615	RN1/10SE2002D	R 924	RS1/10S103J
R 616	RS1/10S473J	R 925	RS1/10S473J
R 617	RS1/10S473J	R 926	RS1/10S472J
R 618	RS1/10S473J	R 927	RS1/10S224J
R 619	RS1/10S473J	R 941	RS1/10S102J
R 620	RS1/10S473J	R 942	RS1/10S822J
R 621	RS1/10S202J	R 944	RS1/8S102J
R 622	RS1/10S102J	R 951	RD1/4PU221J
R 625	RS1/10S681J	R 952	RD1/4PU511J
R 626	RS1/10S102J	R 953	RS1/10S1R0J
R 627	RA3C681J	R 954	RD1/4PU331J
R 630	RS1/10S473J	R 955	RD1/4PU331J
R 631	RS1/10S473J	R 956	RS1/10S472J
R 632	RS1/10S393J	R 959	RD1/4PU102J
R 633	RS1/10S0R0J	R 960	RS1/10S472J
R 634	RS1/10S0R0J	R 961	RS1/10S103J
R 651	RS1/10S681J	R 962	RS1/10S473J
R 652	RS1/10S681J	R 963	RS1/10S473J
R 653	RS1/10S681J	R 971	RD1/4PU221J
R 654	RS1/10S681J	R 972	RS1/10S221J
R 701	RS1/10S105J	R 973	RS1/10S472J
R 702	RS1/10S222J	R 974	RS1/10S222J
R 734	RS1/10S102J		
R 735	RS1/10S102J	CAPACITORS	
R 737	RS1/10S333J	C 101	CEJA1R0M50
R 738	RS1/10S0R0J	C 102	CEJA1R0M50
R 739	RS1/10S102J	C 103	CEJA1R0M50
R 740	RS1/10S102J	C 104	CEJA1R0M50
		C 105	CEJA100M16
R 741	RS1/10S222J		
R 742	RS1/10S222J	C 106	CKSQYB104K25
R 743	RS1/10S684J	C 107	CKSQYB473K25
R 744	RS1/10S681J	C 108	CKSQYB473K25
R 745	RS1/10S562J	C 131	CEJA2R2M50
		C 132	CEJA2R2M50
R 746	RS1/10S102J		
R 747	RS1/10S103J	C 133	CKSQYB223K50
R 748	RS1/10S562J	C 134	CKSQYB223K50
R 750	RS1/10S473J	C 135	CEJA4R7M35
R 751	RS1/10S681J	C 136	CEJA4R7M35
		C 137	CEJA2R2M50
R 752	RS1/10S473J		
R 753	RS1/10S473J	C 138	CEJA2R2M50
R 754	RA3C102J	C 141	CEJA1R0M50
R 801	RS1/8S222J	C 142	CEJA1R0M50
R 802	RS1/8S222J	C 143	CKSQYB471K50
		C 144	CKSQYB223K50
R 803	RS1/8S222J		
R 804	RS1/10S132J	C 151	CKSQYB473K25
R 805	RS1/10S822J	C 152	CEJA470M10
R 806	RS2PMF100J	C 153	CEJANP100M16
R 807	RD1/4PU471J	C 154	CEJANP100M16
		C 155	CKSQYB822K50

====Circuit Symbol and No.==Part Name			Part No.	====Circuit Symbol and No.==Part Name			Part No.
C	156		CKSQYB822K50	C	733		CKSQYB472K50
C	157		CEJA1R0M50	C	734		CKSQYB104K25
C	158		CEJA1R0M50	C	735		CKSYB105K16
C	159		CKSQYB183K50	C	736		CKSQYB104K25
C	160		CKSQYB183K50	C	737		CKSQYB222K50
C	161		CKSQYB102K50	C	738		CKSQYB104K25
C	162		CKSQYB102K50	C	739		CEJA100M16
C	163		CEJANP2R2M35	C	740		CKSQYB103K50
C	164		CEJANP2R2M35	C	741		CKSQYB103K50
C	165		CKSQYB333K25	C	742		CKSQYB223K50
C	166		CKSQYB333K25	C	743		CKSQYB104K25
C	167		CEJA220M16	C	802		CKSQYB104K25
C	168		CEJA2R2M50	C	803		CEJA100M16
C	169		CKSQYB104K25	C	804		CKSQYB103K50
C	170		CCSQCH101K50	C	805		CEJA100M16
C	201		CKSQYB224K16	C	806		CKSQYB103K50
C	202		CKSQYB224K16	C	807		CKSQYB333K25
C	203		CKSQYB224K16	C	808		CKSQYB333K25
C	204		CKSQYB224K16	C	911		CKSQYB103K50
C	205		CEJA1R0M50	C	912		CEJA470M10
C	206	3300μF/16V	CCH1150	C	913		CKSQYB472K50
C	207		CKSQYB473K50	C	914	1000μF/16V	CCH1312
C	208		CEJA100M16	C	921		CKSYB105K16
C	209		CEJA1R0M50	C	922		CKSQYB102K50
C	210		CEJA330M16	C	941		CEJA2R2M50
C	211		CKSQYB103K50	C	942		CKSQYB102K50
C	212		CKSQYB102K50	C	951		CKSQYB103K50
C	253		CEJA4R7M35	C	952		CEJA101M10
C	254		CEJA4R7M35	C	953	330μF/10V	CCH1181
C	301		CEJA100M16	C	971		CKSQYB473K25
C	302		CEJA100M16	C	972		CKSQYB102K50
C	501		CCSQCH150K50	C	973		CEJA101M10
C	502		CCSQCH150K50				
C	503		CKSQYB103K50				
C	507		CKSQYB103K50				
C	508		CKSQYB102K50				
C	509		CEJA220M10				
C	511		CKSQYB152K50				
C	512		CKSQYB223K50				
C	514		CKSQYB473K16				
C	515		CEJA220M6R3				
C	516		CKSQYB103K50				
C	519		CEJA220M10				
C	520		CKSQYB103K50				
C	521	4.7μF/16V	CCH1250				
C	522		CKSQYB103K50				
C	528		CKSQYB103K50				
C	529		CCSQCH101K50				
C	530		CKSQYB223K50				
C	532		CKSQYB473K16				
C	534		CCSQCH101K50				
C	601		CCSQCH200J50				
C	602		CCSQCH200J50				
C	603		CEJA4R7M35				
C	604		CCSQCH101J50				
C	605		CCSQCH101J50				
C	606		CCSQCH101K50				
C	607		CCSQCH101K50				
C	608		CCSQCH101K50				
C	651		CCSQCH821J50				
C	652		CCSQCH821J50				
C	653		CCSQCH101J50				
C	701		CCSQCH270J50				
C	702		CCSQCH270J50				
C	731		CEJA4R7M35				

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

Part No.

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

Part No.

R 116
R 117
R 201
R 202
R 501

RS1/16S163J
RS1/16S163J
RS1/16S104J
RS1/16S473J
RS1/16S0R0J

KEYBOARD UNIT
Consists of
Keyboard PCB
Switch PCB

R 505
R 507
R 508
R 601
R 602

RS1/16S102J
RA3C102J
RA4C681J
RS1/16S102J
RS1/16S102J



Unit Number : CWM5632
Unit Name : Keyboard Unit(DEH-P645R/EW)

MISCELLANEOUS

R 603
R 604
R 801
R 802

RS1/16S223J
RS1/16S223J
RS1/8S751J
RS1/8S751J

IC 1801 IC
IC 1802
D 1801 Diode
D 1802 Diode
D 1821 LED

PD6197A
RS-140
DA204K
DA204K
CL220PGC

CAPACITORS

C 101
C 102
C 103
C 104
C 105

CEV101M6R3
CKSQYB104K16
CEV470M6R3
CKSYB334K16
CCSRCH330J50

D 1822 LED
D 1825 LED
D 1826 LED
D 1827 LED
D 1828 LED

CL220PGC
CL170PGCD
CL170PGCD
CL170PGCD
CL170PGCD

C 106
C 107
C 108
C 109
C 110

CKSRYB103K25
CEV4R7M35
CKSQYB273K50
CCSRCH101J50
CKSQYB104K16

D 1829 LED
D 1830 LED
D 1831 LED
D 1832 LED
D 1833 LED

CL170PGCD
CL170PGCD
CL170PGCD
CL170PGCD
CL170PGCD

C 111
C 112
C 113
C 114
C 115

CKSRYB332K50
CKSQYB473K16
CKSRYB103K25
CKSRYB391K50
CCSRCH121J50

D 1834 LED
D 1836 LED
D 1837 LED
D 1838 LED
D 1839 LED

CL170PGCD
CL170PGCD
CL170PGCD
CL170PGCD
CL170PGCD

C 116
C 117
C 118
C 119
C 120

CKSRYB682K25
CKSRYB333K16
CKSYB334K16
CKSYB334K16
CKSYB334K16

D 1840 LED
D 1841 LED
D 1842 LED
D 1843 LED
X 1801 Resonator 5.00MHz

CL170PGCD
CL170PGCD
CL170PGCD
CL170PGCD
CSS1423

C 121
C 122
C 123
C 124
C 125

CKSYB334K16
CKSQYB104K16
CKSRYB472K50
CKSQYB104K16
CCSRCH6R0D50

S 801 Switch
S 1801
S 1802
S 1803 Switch
S 1804

CSN1027
CSG1085
CSG1086
CSG1041
CSG1084

C 126
C 127
C 201
C 202
C 203

CKSRYB153K25
CCSRCH102J25
CKSYB334K16
CKSQYB104K16
CKSQYB104K16

S 1805
S 1806 Switch
S 1807 Switch
S 1808 Switch
S 1809

CSG1086
CSG1041
CSG1041
CSG1041
CSG1085

C 303
C 304
C 305
C 306
C 307

CEV470M16
CKSRYB103K25
CKSRYB103K25
CKSRYB103K25
CEV100M25

S 1810
S 1811
S 1812 Switch
S 1813 Switch
S 1814 Switch

CSG1084
CSG1085
CSG1041
CSG1041
CSG1041

C 502
C 601
C 602
C 603
C 604

CKSRYB471K50
CEV101M6R3
CKSQYB104K16
CEV4R7M35
CEV4R7M35

S 1815
S 1816 Switch
S 1817 Switch
S 1818 Switch
S 1819 Switch

CSG1061
CSG1041
CSG1041
CSG1041
CSG1041

C 605
C 606
C 607
C 701
C 702

22μF/6.3V

CKSRYB152K50
CKSRYB152K50
CEV220M6R3
CCH1300
CKSYB334K16

S 1820 Switch
S 1821 Switch
LCD

CSG1041
CSG1041
CAW1458

RESISTORS

C 703
C 901
C 902
C 903
C 904

CEV101M6R3
CCSRCH471J50
CCSRCH271J50
CCSRCH471J50
CCSRCH101J50

R 1801
R 1802
R 1803
R 1804
R 1805

RS1/8S222J
RS1/8S222J
RS1/10S472J
RS1/10S121J
RS1/10S2R2J

R 1812
R 1815
R 1816
R 1821
R 1822

RS1/10S0R0J
RS1/10S0R0J
RS1/10S0R0J
RS1/8S101J
RS1/8S181J

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

Part No.

KEYBOARD UNIT	
Consists of	
Keyboard PCB	
Switch PCB	



Unit Number : CWM5639
Unit Name : Keyboard Unit(DEH-P544R/EW)

MISCELLANEOUS

IC 1801	IC	PD6197A
IC 1802		RS-140
D 1801	Diode	DA204K
D 1802	Diode	DA204K
D 1821	LED	CL220D
D 1822	LED	CL220D
D 1825	LED	CL170DCD
D 1826	LED	CL170DCD
D 1827	LED	CL170DCD
D 1828	LED	CL170DCD
D 1829	LED	CL170DCD
D 1830	LED	CL170DCD
D 1831	LED	CL170DCD
D 1832	LED	CL170DCD
D 1833	LED	CL170DCD
D 1834	LED	CL170DCD
D 1836	LED	CL170DCD
D 1837	LED	CL170DCD
D 1838	LED	CL170DCD
D 1839	LED	CL170DCD
D 1840	LED	CL170DCD
D 1841	LED	CL170DCD
D 1842	LED	CL170DCD
D 1843	LED	CL170DCD
X 1801	Resonator 5.00MHz	CSS1423
S 801	Switch	CSN1027
S 1801		CSG1079
S 1802		CSG1080
S 1803	Switch	CSG1041
S 1804		CSG1078
S 1805		CSG1080
S 1806	Switch	CSG1041
S 1807	Switch	CSG1041
S 1808	Switch	CSG1041
S 1809		CSG1079
S 1810		CSG1078
S 1811		CSG1079
S 1812	Switch	CSG1041
S 1813	Switch	CSG1041
S 1814	Switch	CSG1041
S 1815		CSG1061
S 1816	Switch	CSG1041
S 1817	Switch	CSG1041
S 1818	Switch	CSG1041
S 1819	Switch	CSG1041
S 1820	Switch	CSG1041
S 1821	Switch	CSG1041
	LCD	CAW1464
RESISTORS		
R 1801		RS1/8S222J
R 1802		RS1/8S222J
R 1803		RS1/10S472J
R 1804		RS1/10S121J
R 1805		RS1/10S2R2J

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

Part No.

R 1812	RS1/10S0R0J
R 1815	RS1/10S0R0J
R 1816	RS1/10S0R0J
R 1821	RS1/8S101J
R 1822	RS1/8S181J
R 1823	RS1/8S101J
R 1824	RS1/8S181J
R 1825	RS1/8S101J
R 1826	RS1/8S181J
R 1827	RS1/8S101J
R 1828	RS1/8S121J
R 1829	RS1/8S101J
R 1830	RS1/8S181J
R 1831	RS1/8S201J
R 1832	RS1/8S221J
R 1833	RS1/8S101J
R 1834	RS1/8S181J
R 1835	RS1/8S101J
R 1836	RS1/8S181J
R 1837	RS1/8S101J
R 1838	RS1/8S181J
R 1839	RS1/8S101J
R 1840	RS1/8S181J

CAPACITORS

C 1801	CKSQYB104K50
C 1802	CEV100M16
C 1803	CKSQYB104K25
C 1804	CKSQYB104K25
C 1805	CKSQYB104K50
C 1806	CKSQYB104K25

KEYBOARD UNIT	
Consists of	
Keyboard PCB	
Switch PCB	




Unit Number : CWM5635
Unit Name : Keyboard Unit(DEH-P443R/EW)

MISCELLANEOUS

IC 1801	IC	PD6197A
D 1801	Diode	DA204K
D 1802	Diode	DA204K
D 1821	LED	CL220D
D 1822	LED	CL220D
D 1825	LED	CL170DCD
D 1827	LED	CL170DCD
D 1828	LED	CL170DCD
D 1829	LED	CL170DCD
D 1831	LED	CL170DCD
D 1832	LED	CL170DCD
D 1834	LED	CL170DCD
D 1836	LED	CL170DCD
D 1837	LED	CL170DCD
D 1838	LED	CL170DCD
D 1839	LED	CL170DCD
D 1840	LED	CL170DCD
D 1841	LED	CL170DCD
D 1842	LED	CL170DCD
D 1843	LED	CL170DCD
X 1801	Resonator 5.00MHz	CSS1423
S 801	Switch	CSN1027
S 1801		CSG1079
S 1802		CSG1080
S 1803	Switch	CSG1041

DEH-P645R,P545R,P544R,P443R

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
S 1804	CSG1078	 Unit Number :	
S 1805	CSG1078	Unit Name : Photo Unit	
S 1806 Switch	CSG1041		
S 1807 Switch	CSG1041	Q 1 Photo-transistor	CPT-230S-X
S 1808 Switch	CSG1041	Q 2 Photo-transistor	CPT-230S-X
S 1809	CSG1079	Miscellaneous Parts List	
S 1810	CSG1078		
S 1811	CSG1079		
S 1812 Switch	CSG1041	M 1 Pickup Unit(Service)	CXX1230
S 1813 Switch	CSG1041	M 2 Motor Unit	CXA8912
		M 3 CRG Motor Unit	CXA8986
			CXA8702
S 1814 Switch	CSG1041		
S 1815	CSG1061		
S 1816 Switch	CSG1041		
S 1817 Switch	CSG1041		
S 1818 Switch	CSG1041		
S 1819 Switch	CSG1041		
S 1820 Switch	CSG1041		
S 1821 Switch	CSG1041		
LCD	CAW1464		
RESISTORS			
R 1801	RS1/8S222J		
R 1802	RS1/8S222J		
R 1812	RS1/10S0R0J		
R 1815	RS1/10S0R0J		
R 1816	RS1/10S0R0J		
R 1821	RS1/8S201J		
R 1822	RS1/8S221J		
R 1823	RS1/8S201J		
R 1824	RS1/8S221J		
R 1825	RS1/8S201J		
R 1826	RS1/8S221J		
R 1827	RS1/8S101J		
R 1828	RS1/8S121J		
R 1829	RS1/8S101J		
R 1830	RS1/8S181J		
R 1831	RS1/8S201J		
R 1832	RS1/8S221J		
R 1833	RS1/8S101J		
R 1834	RS1/8S181J		
R 1835	RS1/8S101J		
R 1836	RS1/8S181J		
R 1837	RS1/8S101J		
R 1838	RS1/8S181J		
R 1839	RS1/8S201J		
R 1840	RS1/8S221J		
R 1841	RS1/10S0R0J		
R 1842	RS1/10S0R0J		
R 1843	RS1/10S0R0J		
R 1844	RS1/10S0R0J		
R 1845	RS1/10S0R0J		
CAPACITORS			
C 1801	CKSQYB104K50		
C 1803	CKSQYB104K25		
C 1804	CKSQYB104K25		
C 1805	CKSQYB104K50		
C 1806	CKSQYB104K25		

6. ADJUSTMENT

6.1 TUNER ADJUSTMENT

● Connection Diagram

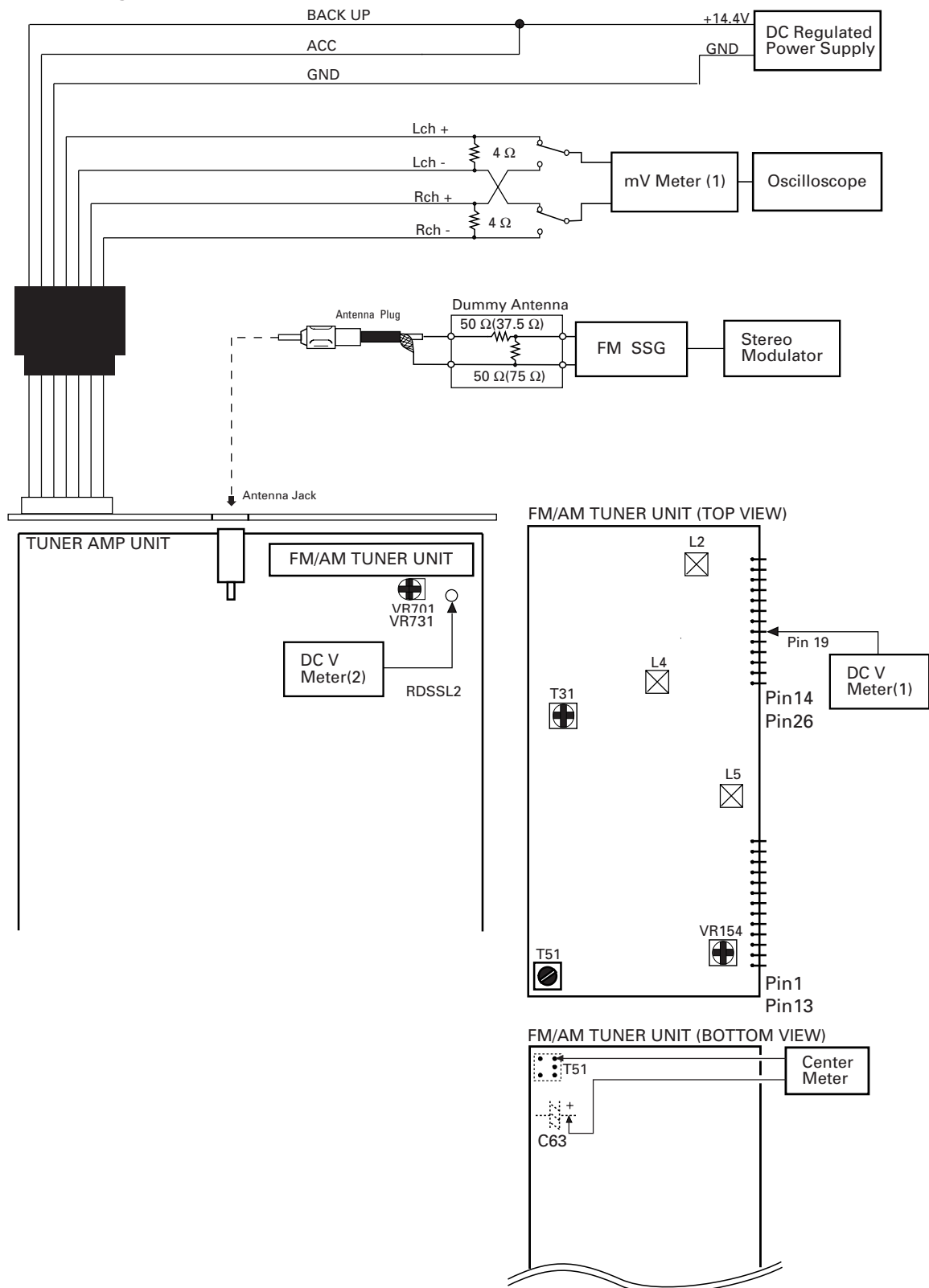


Fig. 23

FM ADJUSTMENT

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

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

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

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	108.0	L5	DC V Meter(1) : 6V
IF	1	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	1	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	1	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
Image	1	129.3 M	60—80	107.9	TC1	mV Meter(1) : Minimum
IFT	1	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	1	98.1 S	39	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

RDS SL ADJUSTMENT

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
	1	106.1 M	52	106.1	VR731	DC V Meter(2) : 2.25V±0.05V

6.2 CD SECTION

1)Precautions

This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to REFO(approx. 2.5V) instead of GND.

If REFO and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to REFO and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to REFO with the channel 2 negative probe connected to GND.

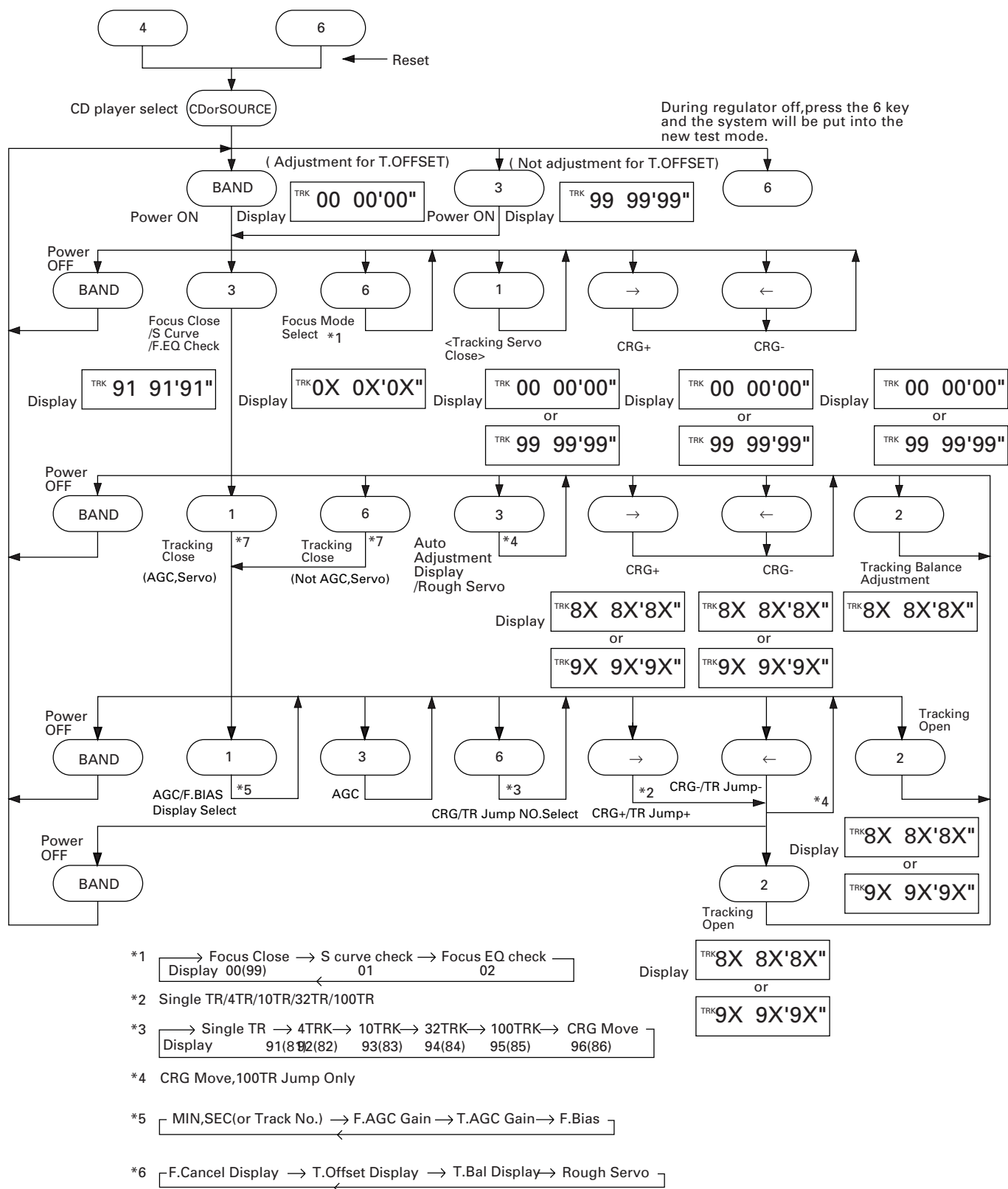
Since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

If by accident REFO comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.
- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.
- Test mode starting procedure
Switch ACC, back-up ON while pressing the **4** and **6** keys together.

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

● Flow Chart



6.3 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

• Note :

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

• Purpose :

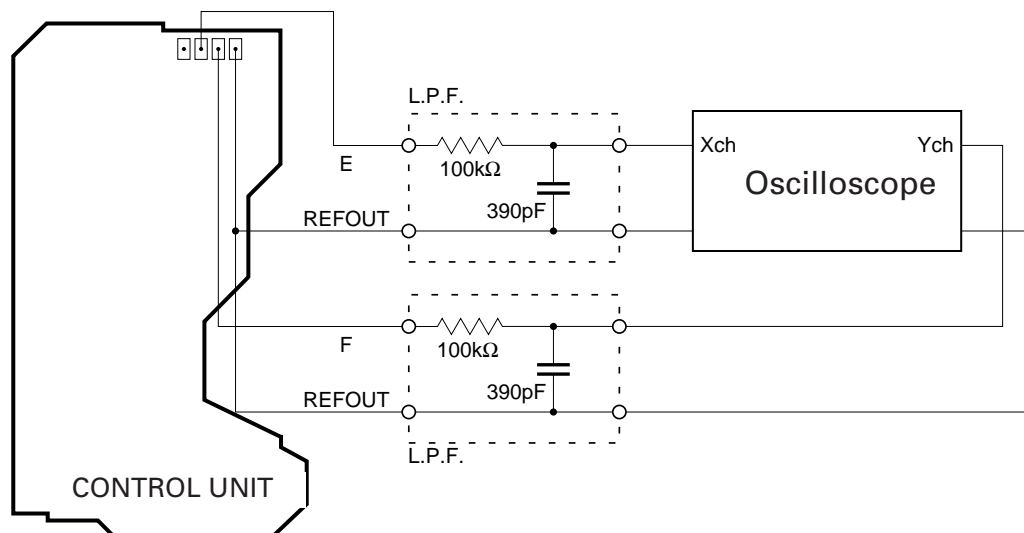
To check that the grating is within an acceptable range.

• Symptoms of Mal-adjustment :

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

• Method :

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



• Checking Procedure

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

• Note

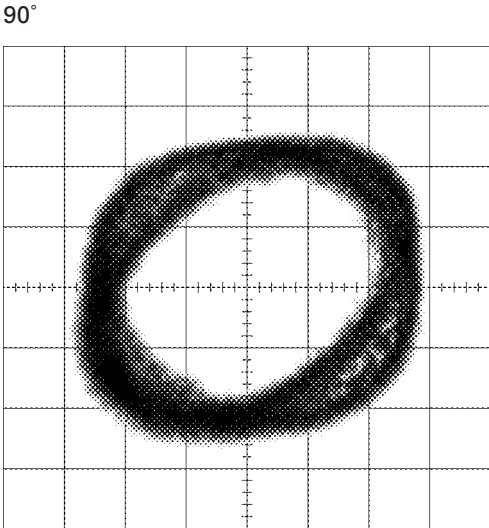
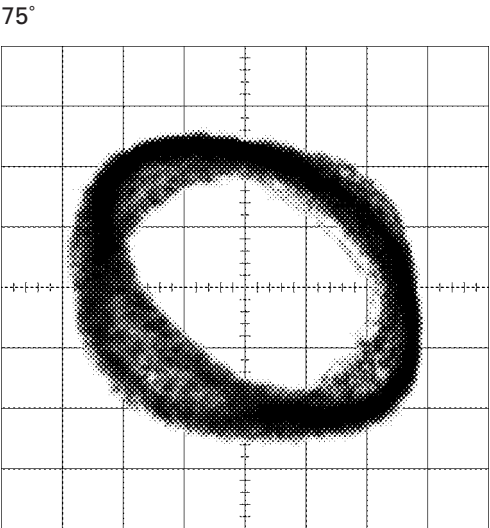
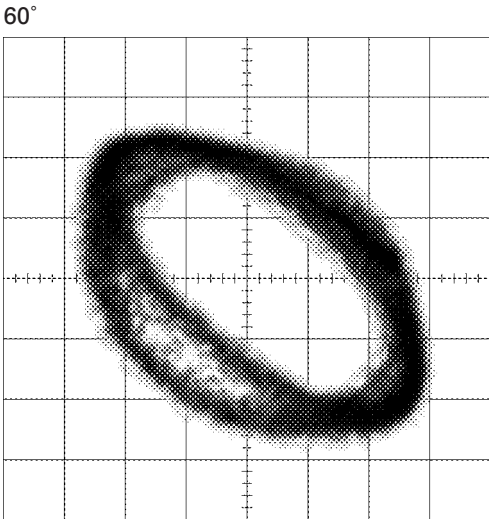
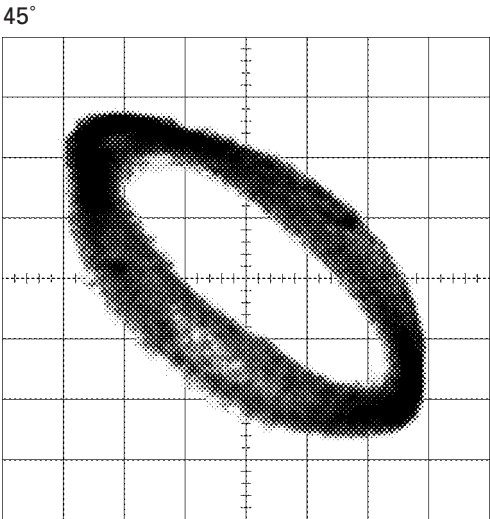
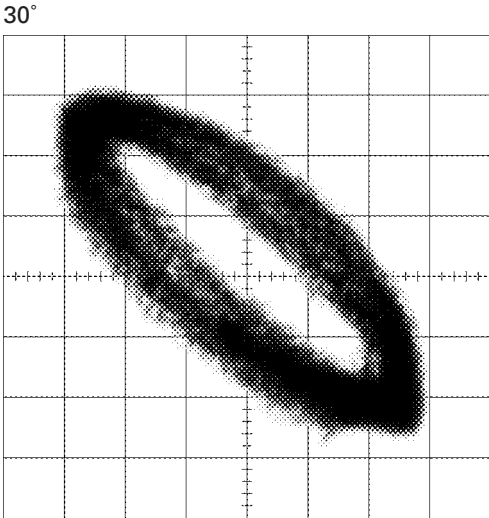
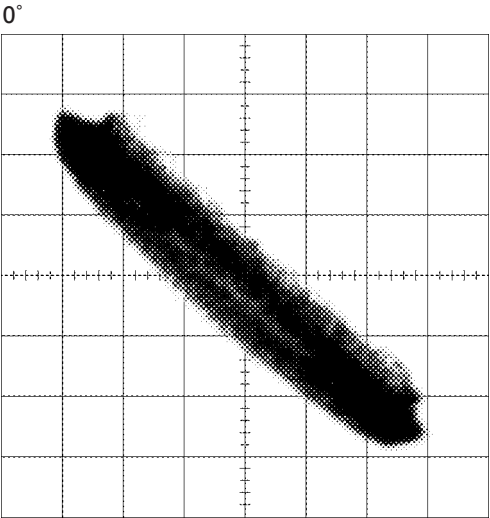
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• Hint

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

Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC



7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

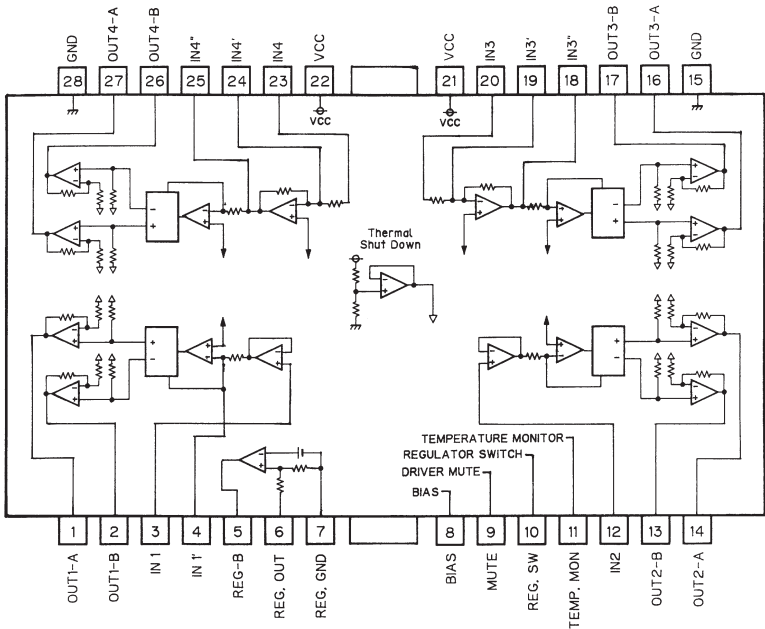
● Pin Functions (UPD63702AGF)

Pin No.	Pin Name	I/O	Function and Operation
1	D.VDD		Supplies current of positive voltage to the logic circuits
2	RST	I	System reset input pin
3	AO	I	Microcomputer interface AO="L": STB active and set to address register AO="H": STB active and set to parameter
4	STB	I	Signal to latch serial data within the LSI
5	SCK	I	Clock input pin to input and output serial data
6	SO	O	Outputs serial data and status signal
7	SI	I	Serial data input pin
8	D.GND		Logic circuit GND
9	X.GND		Crystal oscillation circuit GND
10	XTAL	I	Crystal oscillator connection pin
11	XTAL	O	Crystal oscillator connection pin
12	X.VDD		Supplies current of positive voltage to the crystal oscillation circuit
13	DA.VDD		Supplies current of positive voltage to the D/A converter
14	R+	O	Right channel analog audio data output pin
15	R-	O	Right channel analog audio data output pin
16,17	DA.GND		D/A converter GND
18	L-	O	Left channel analog audio data output pin
19	L+	O	Left channel analog audio data output pin
20	DA.VDD		Supplies current of positive voltage to the D/A converter
21	D.VDD		Supplies current of positive voltage to logic circuit
22	FLAG	O	Flag output pin to indicate that audio data currently being output consists of noncorrectable data
23	WDCK	O	Pin to output double the frequency of LRCK
24	C16M	O	Pin to output the clock
25	EMPH	O	Output pin for the pre-emphasis data in the sub-Q code
26	DIN	I	Input pin for serial audio data
27	DOUT	O	Output pin for the serial audio data
28	SCKO	O	Output pin for the clock for the serial audio data
29	LRCK	O	Signals to distinguish the right and left channels of the audio data output from DOUT. Frequency is 44.1kHz at 50% duty at normal regeneration
30	TX	O	Output pin for the digital audio interface data
31	CTLV	I	Oscillation control pin for high-frequency clock generation VCO used for the digital PLL upon regeneration at fast speed of 2- or 4-fold
32	POUT	O	Output point for phase comparison
33	D.GND		GND for the logic circuit
34	VCO	I	Input pin for the inverter
35	VCO	O	Output pin for the inverter
36	D.VDD		Supplies current of positive voltage to the logic circuit
37	PLCK	O	Pin for monitoring the bit clock
38	LOCK	O	Indicates "H" when the synchronized pattern detection signal matches the frame counter output at the EFM recovery modulation, and "L" when they don't match
39	WFCK	O	Minute-cycle signal for the bit clock, the signal indicates the cycle of 1 frame (approx. 7.35kHz)
40	RFCK	O	Minute-cycle signal for the clock, the signal indicates cycle of 1 frame (approx. 7.35kHz)
41	D.GND		GND for the logic circuit
42,43	TEST0,1	I	Test pins
44,45	TM2, TM4	I	Pins for controlling regeneration at fast speed of 2- or 4-fold
46-49	T4-T7	I	Test pins
50,51	C1D1, C1D2	O	Output pin for indicating the C1 error correction results

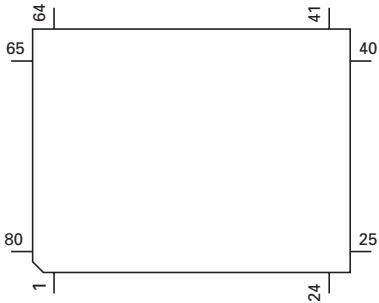
Pin No.	Pin Name	I/O	Function and Operation
52-54	C2D1-C2D3	O	Output pin for indicating the C2 error correction results
55	D.VDD		Supplies current of positive voltage to the logic circuit
56	SFSY	O	Outputs 1 word of the subcode. Generally, 1 cycle is approx 136 micro seconds
57	SBSY	O	The signal indicates the beginning of the subcode block. The SFSY signal is output at high level every 98 times
58	SBSO	O	Output pin for the subcode data
59	SBCK	I	Input pin for the clock signal for read-out of the subcode data
60	A.GND		GND for the analog circuit
61	MD	O	Output pin for the spindle drive
62	SD	O	Output pin for the sled drive
63	TD	O	Output pin for the tracking drive
64	FD	O	Output pin for the focus drive
65	FBAL	O	Output pin for the focus balance control
66	TBAL	O	Output pin for the tracking balance control
67	A.VDD		Supplies current of positive voltage to the analog circuit
68	TBC	I	Switches coefficient banks for the tracking filter
69	EFM	I	Input pin for the EFM signal
70	HOLD	I	Input pin for the hold control signal
71	RFOK	I	Input pin for the RFOK signal
72	MIRR	I	Input pin for the MIRR signal
73	A.GND		GND for the analog circuit
74	HOME	I	Home position detector input
75	VR1	I	The signal input through these pins is digitized to 8-bit by the A/D converter, which by operation of the assigned register, can be read into the microcomputer
76	FE	I	Inputs a focus-error signal from the RF amplifier
77	TE	I	Inputs a tracking-error signal from the RF amplifier
78	TEC	I	Input pin for the tracking comparator
79	REFOUT	O	Output point for midpoint potential for the A/D converter for the LSI portion
80	A.VDD		Supplies current of accurate voltage to the analog circuit

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

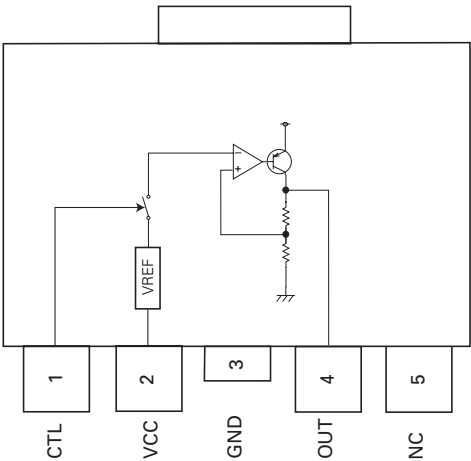
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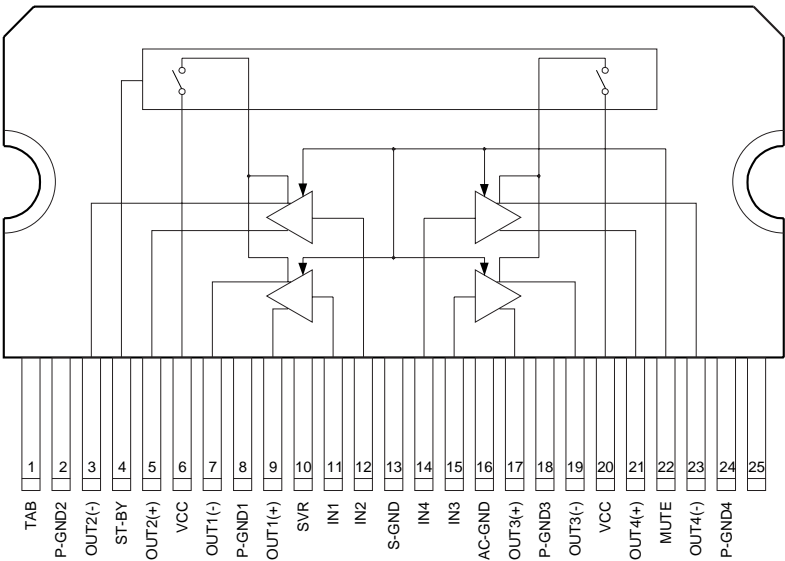
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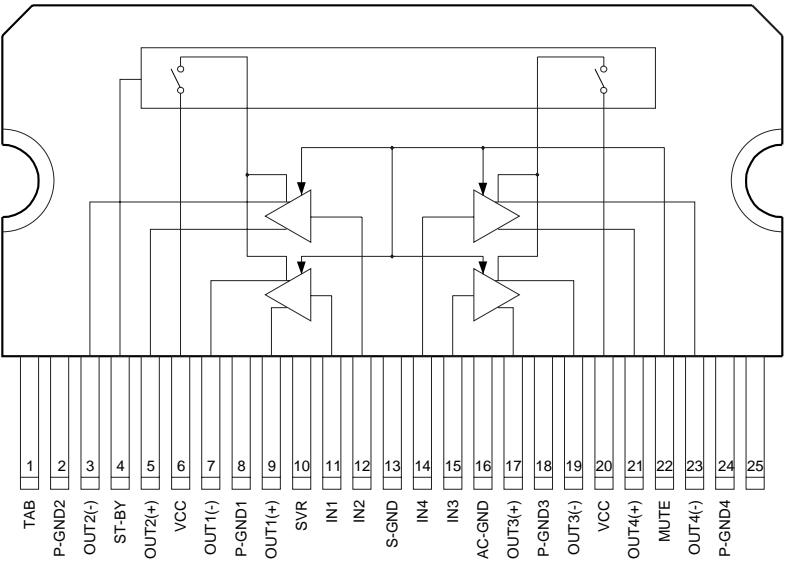
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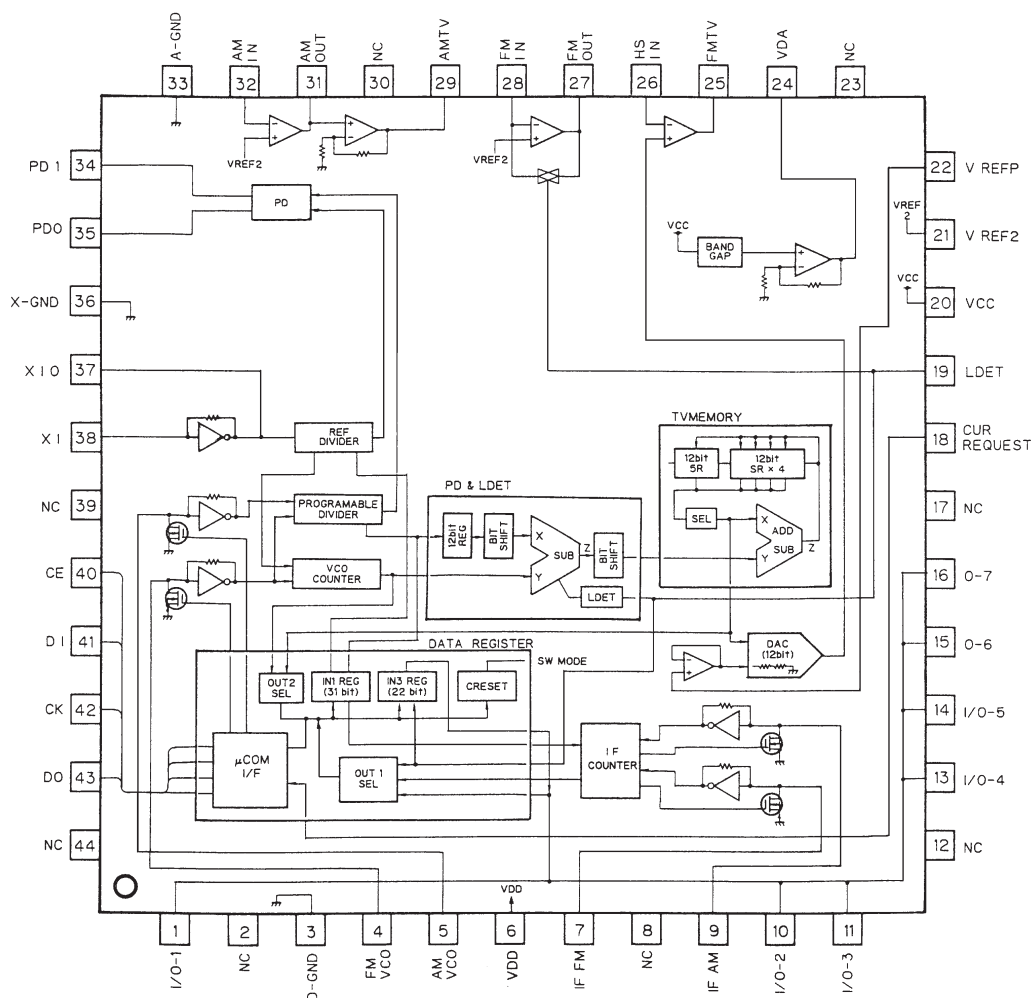


TDA7386



TDA7384





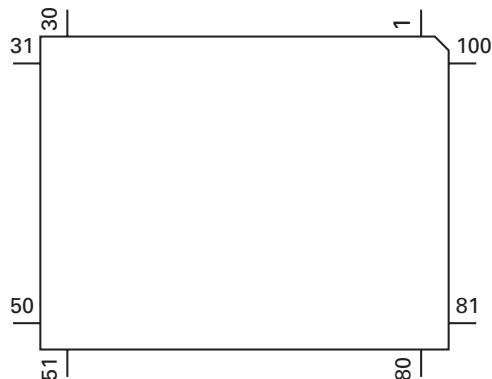
● Pin Functions(PD4885A)

Pin No.	Pin Name	I/O	Function and Operation
1	SWVDD	O	Grille power supply control output
2	DSNS	I	Grille detach sense input
3	NC		Not used
4	ISNS	I	Illumination sense input
5	TESTIN	I	Test program mode input
6	DRST	O	Reset output
7	ERROR	O	Disapprove of error correction output
8	SK	I	SK signal input
9	RECIVE	I	During RDS data reception input
10	L/S	O	Time constant control output
11	RESET	I	Reset input
12	XT2		Open
13	XT1	I	Connect to VSS
14	VSS		GND
15	X2		Crystal oscillator connection pin
16	X1	I	Crystal oscillator connection pin (12.582912MHz)
17	REGC		Connect to VDD
18	REGOFF		Connect to VDD
19	VDD		Power supply
20	ILMPW	O	Illumination power supply control output
21	SYSPWR	O	System power control output
22	ADPW	O	A/D converter power output
23	LCDPW	O	LCD back light power supply control output

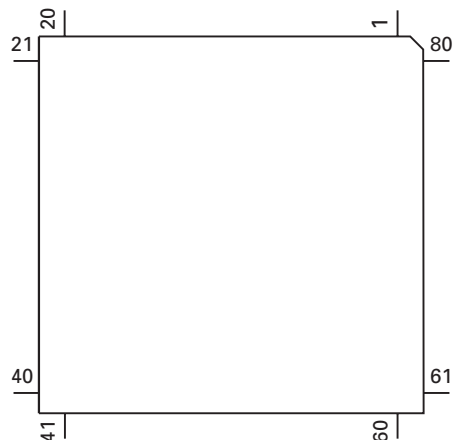
Pin No.	Pin Name	I/O	Function and Operation
24	IPPW	O	Power supply control output for IP BUS interface IC
25	ASENBO	O	Slave power supply control output
26	AMPW	O	AM power output
27	TELIN	I	TEL mute signal input
28	MUTE	O	Mute output
29	DIM	O	Dimmer select output
30	FIEOUT	O	FIE ON/OFF control output
31	SUBW1	O	Sub woofer control 1 output
32	SUBW0	O	Sub woofer control 0 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	NC		Not used
38	SD	I	SD input
39	ST	I	FM stereo input
40	VSS		GND
41	VDD		Power supply
42	MDSENS	I	Modulation detect input
43	MUTCNT	I	NF mute control input
44	RDSLK	I	RDS LK signal input
45	CURRQ	O	Tuner voltage FIX output
46	RDT	I	Data input
47	DRELAY	O	External relay output
48	DRSENS	I	Door open/close sense input
49	DRSYS	O	Door system select output
50	DLED	O	Alarm LED output
51	DLENS	I	Door lock sense input
52	STCUT	O	Ignition cut off output
53	MOSENS	I	Motion/window damage sensor input
54	CD5VON	O	CD +5V power supply control output
55	CONT	O	Servo driver power supply control output
56	VDCONT	O	VD control output
57	CDMUTE	O	CD mute output
58	CDEJET	O	Load motor eject control output
59	CDLOAD	O	LOAD motor loading control output
60	LOCK	I	Spindle lock detector input
61	FOK	I	FOK signal input
62	PCL	O	Clock adjustment output
63	MIRR	I	Mirror detector input
64	CLAMP	I	Disc clamp sense input
65	XSCK	O	LSI clock output
66	XSI	I	LSI data input
67	XSO	O	LSI data output
68	XAO	O	CD LSI data discernment control signal output
69	XRST	O	CD LSI reset output
70	XSTB	O	CD LSI strobe output
71	VCAOUT	O	Sub woofer volume control output
72	SUBMUTE	O	Sub woofer mute output
73	TEST	I	Test terminal
74	SL	I	Signal level input
75	MODEL1	I	Model select input
76	CL	I	Synchronizing signal input of display data latch
77	NL	I	Noise level input
78	EJTSNS	I	Disc EJECT position detect input
79	DSCSNS	I	Disc detect input
80	VDSNS	I	VD over voltage sense input
81	TEMP	I	Temperature detector input
82,83	VDD		Power supply

Pin No.	Pin Name	I/O	Function and Operation
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 clock input
90	RDS57K	I	57kHzBP-OUT sense input
91	NC		Not used
92	ASENS	I	ACC power sense input
93	BSENS	I	Back up power sense input
94	TUNPDI	I	PLL IC data input
95	KEYDT	I	Display 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

*PD4885A



*PD6197A



● Pin Functions (PD6197A)

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

7.1.2 DISPLAY

- CAW1458(DEH-P645R/EW)
- CAW1461(DEH-P545R/EW)
- CAW1464(DEH-P544R/EW,DEH-P443R/EW)

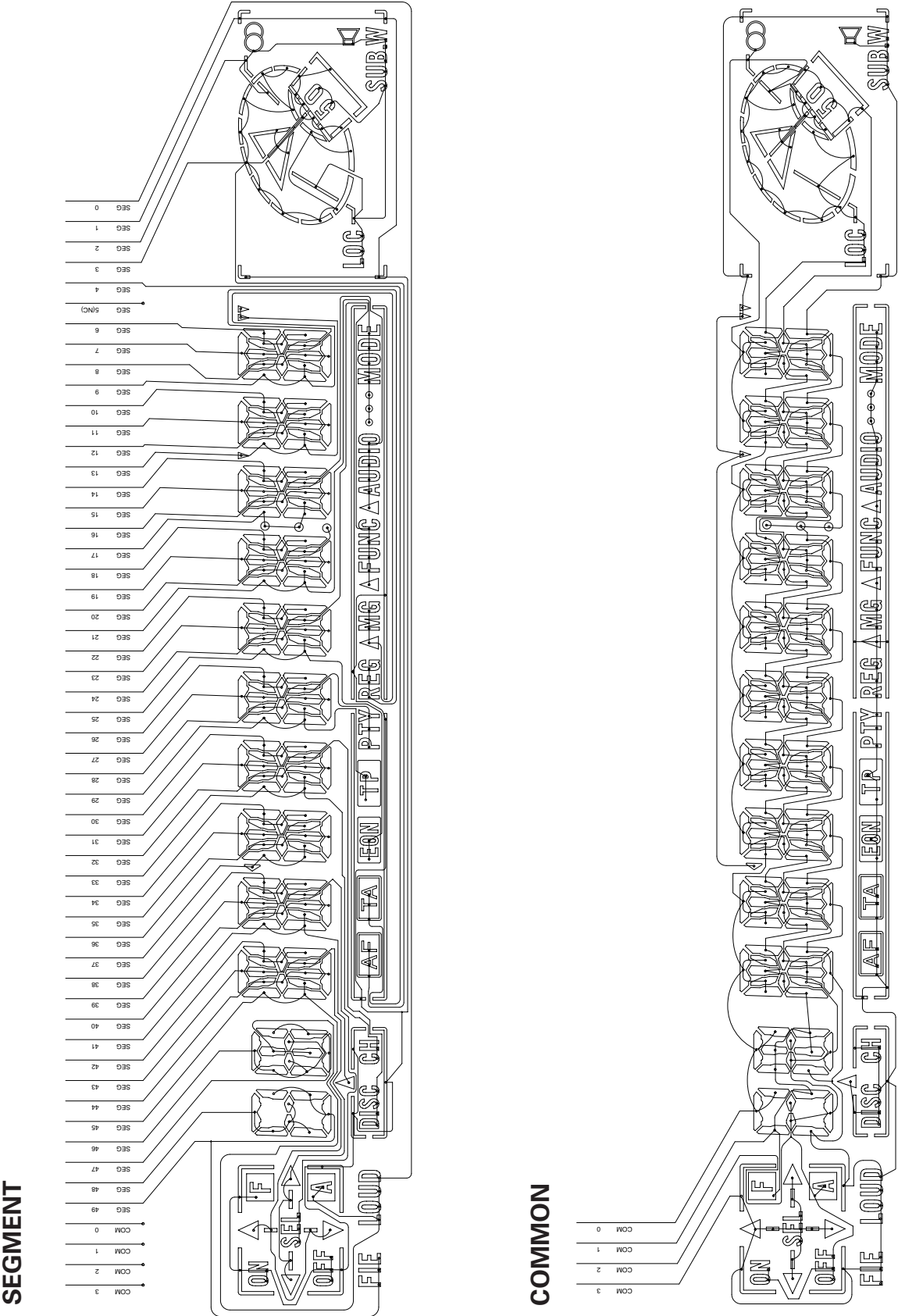


Fig. 24

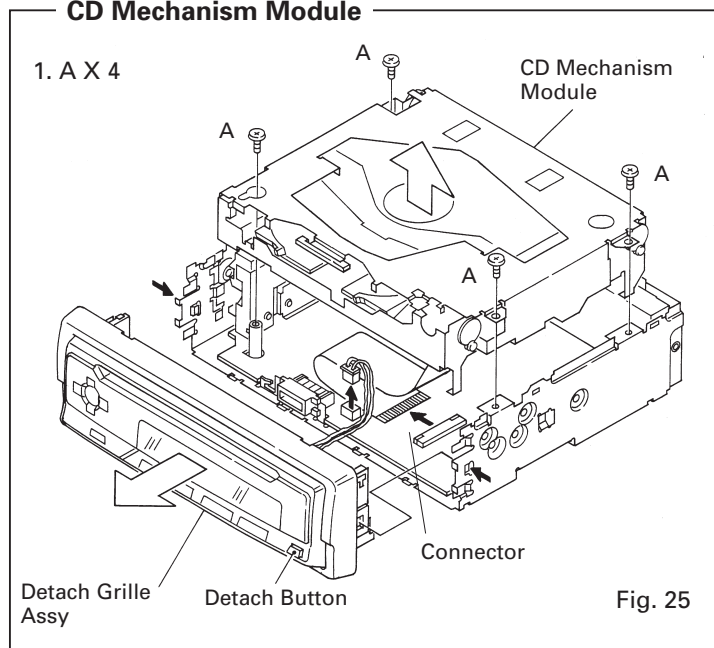
7.2 DIAGNOSIS

7.2.1 DISASSEMBLY

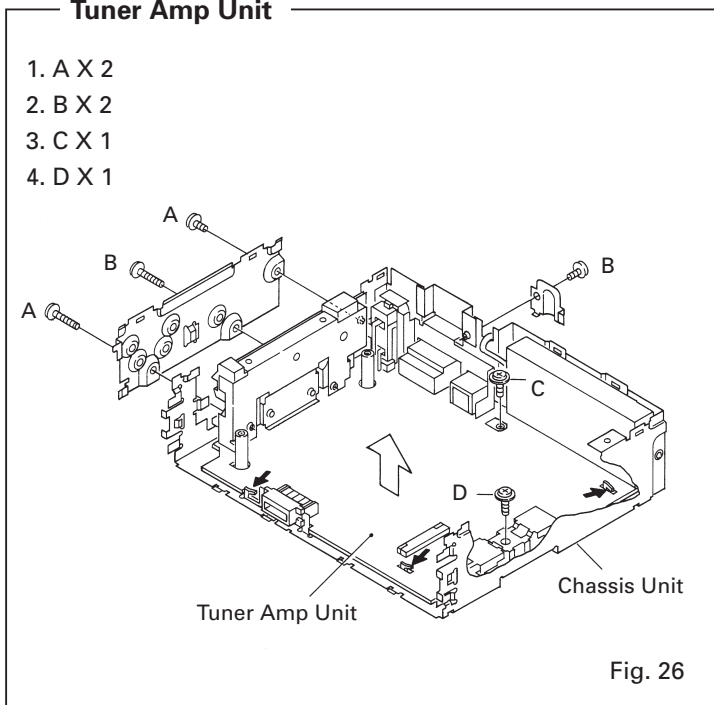
● Removing the Case(Not shown)

Removing the two screws.

● Removing the Detach Grille Assy and CD Mechanism Module



● Removing the Chassis Unit and Tuner Amp Unit



7.2.2 TEST MODE

● Error Number Indication

The system enters error mode to display the cause of error with a number when the system cannot operate CD or stops operation because of an error. The purpose of this measure is to reduce frequency of calls from users asking help for problems that are caused by incorrect operation by user, as well as to assist analysis and repair in servicing.

(1) Basic means of display

An error code will be written on DMIN (minute area for display) and DSEC (second area for display) when CSMOD (CD mode area for system) is SERBORM.

The same data will be written on DMIN and DSEC.

DTNO shall be blank as before.

Display examples of the head unit

Error codes will be displayed as shown below, depending on the capability of LCD. An error number will be displayed in the place of "xx."

8-digit display ERROR-XX

6-digit display ERR-XX or Err-XX

4-digit display E-XX

With OEM products, display of error codes shall be according to the specifications of the manufacturer.

(2) Error codes

Error code	Classification	Description	Cause / Detail
10	ELECTRIC	Carriage home failure	Carriage doesn't move to or from the innermost position →Home switch failed and/or carriage immobile
11	ELECTRIC	Focus failure	Focus failed →Defects, disc upside-down, severe vibration
12	ELECTRIC	SETUP failure Subcode failure	Spindle failed to lock or subcode unreadable →Spindle defective, defect, severe vibration
14	ELECTRIC	Mirror failure	Unrecorded CD-R The disc is upside-down, defects, vibration
17	ELECTRIC	Set up failure	AGC protect failed →Defects, disc upside-down, severe vibration
19	ELECTRIC	Improper T.BAL adjustment	Value of T.BAL adjustment is out of parameter.
30	ELECTRIC	Search time out	Failed to reach target address →Carriage / tracking defective and/or defects
A0	SYSTEM	Power failure	Power overvoltage or short circuit detected →Switching transistor defective and/or power abnormal

(4) Number of error codes

One hundred error codes (00 to 99) will be available.

(5) Remarks

Error codes are not displayed for the mechanism alone (because CD is OFF when an mechanical error is generated).

When the system cannot read TOC, it is not deemed as an error, and the system continues operation to a certain extent.

Be sure to take measures as shown in the display examples whenever designing a new head unit.

The first digit of an error code has a meaning as follows:

1X : Error related to setup

3X : Error related to the search function

AX : Other errors

● New Test Mode

When S-CD is specified as the source, basically the system plays as normal operation. After setup, the system displays the cause and time (absolute time) of an error if focus search is improper, spindle lock is removed, subcode cannot be read, or sound is skipped. During setup, the system displays the operation status of CD control software (internal RAM : CPOINT). The purpose of these displays and functions are to detect aging of servicing, as well as to improve efficiency of defect analysis.

(1) How to enter NEW TEST Mode

1. Reset the system by pressing keys (depending on the product) to enter the conventional Test mode.
 2. Select S-CD as the source by pressing the source or CD key, then inserting a disc. Confirm that the regulator is OFF. Press the Switch Jump Mode key.
 3. After that, the system will stay in the new Test mode, regardless of whether S-CD is OFF or ON.
- To exit from the new Test mode, reset the system.
See the test mode flow chart Page 70.

(2) Relations of keys

keys	Test Mode		New Test Mode	
	Regulator OFF	Regulator ON	PLAY in progress	Error Protection
BAND	To Regulator ON	To Regulator OFF	—	Time / Err No.select
→	—	FWD-Kick	FF / TR+	—
←	—	REV-Kick	REV / TR-	—
1	—	Tracking Close	Scan	—
2	—	Tracking Open	RPT	—
3	—	Focus Close	RDM	—
—	—	Focus Open	—	—
—	—	Jump Off	—	—
6	To New Test Mode	Jump Mode select	Auto / Manu	T.No. / Time select

Operations, such as EJECT, CD ON/OFF are performed normal mode.

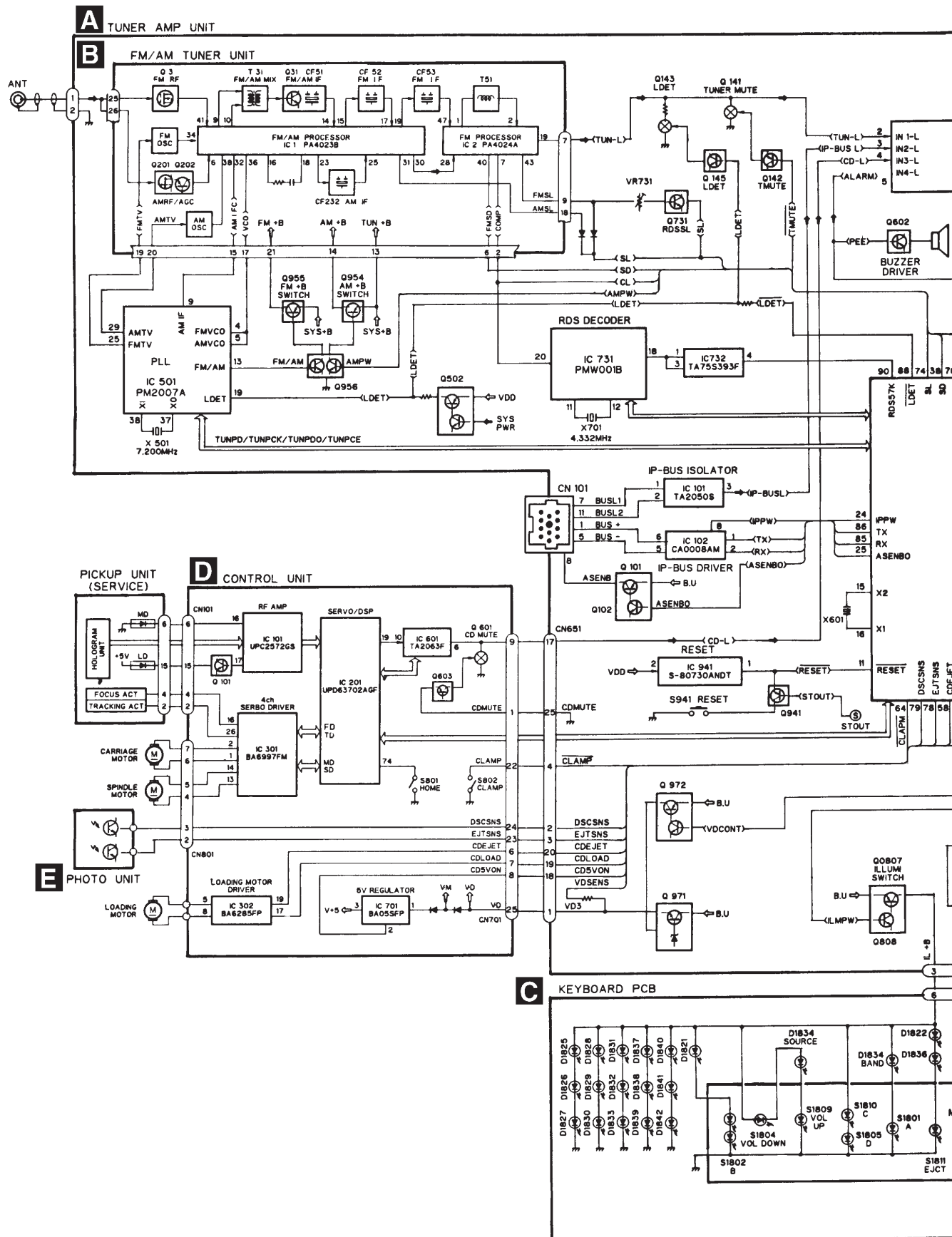
(3) Error Cause, Error Code

Code	Classification	Description	Cause / Details
40	ELECTRIC	Put out of focus	FOK=Low has continued for 100 msec →Damaged or soiled disc. vibration, or detective servo
41	ELECTRIC	Spindle unlock	LOCK=has continued for 100 msec →Damaged or soiled disc. vibration, or detective servo
42	ELECTRIC	Failed to read subcode	The system could not read subcode for 100 msec →Damaged or soiled disc. vibration, or detective servo
43	ELECTRIC	Sound skipped	The last-address-memory function activated →Damaged or soiled disc. vibration, or detective servo

There will be no mechanical error during aging. Error codes should be displayed in the same manner as in Normal mode.

7.3 BLOCK DIAGRAM

● DEH-P645R/EW



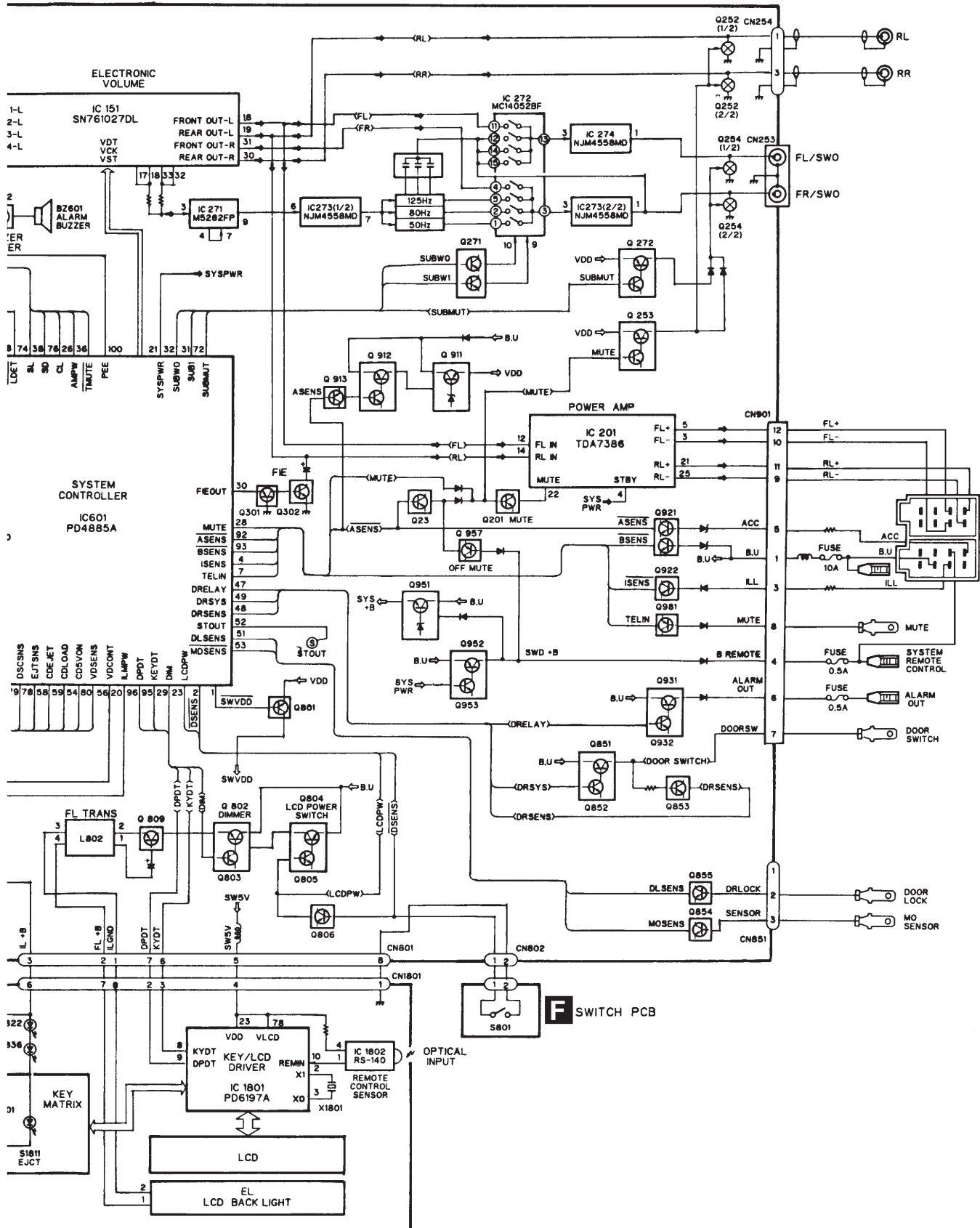


Fig. 27

8. OPERATIONS AND SPECIFICATIONS

8.1 OPERATIONS

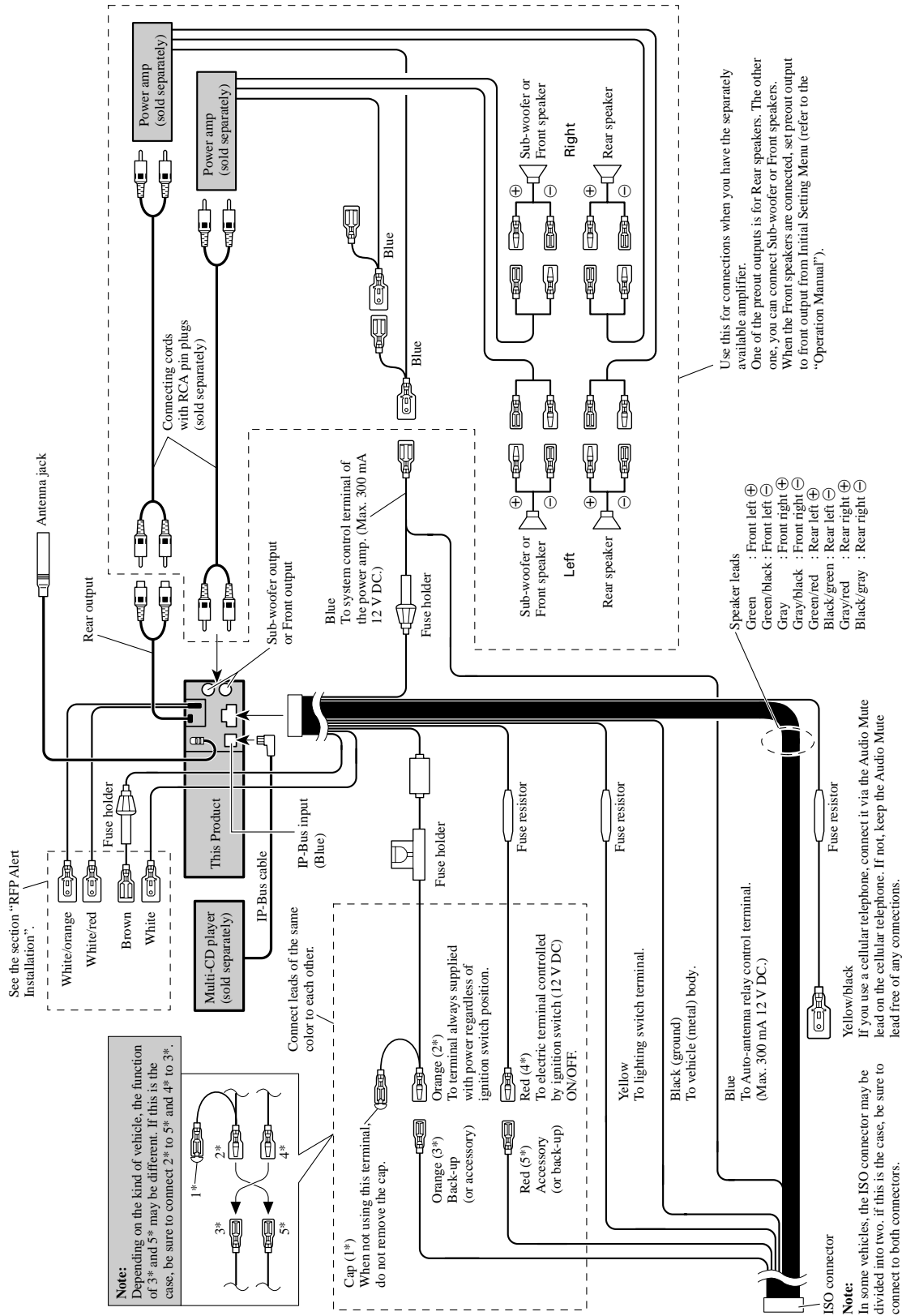


Fig. 28

RFP Alert Installation

⚠ CAUTION

- Because of the complexity of today's technically advanced vehicle wiring systems, we recommend that your RFP Alert be installed **ONLY** by a professional Pioneer installer.

Affix the included deterrent stickers to the inside of the front door windows.

Description

- **White (DOOR SWITCH)** (Fig. 29, 30)
This lead is used to trigger RFP Alert when any door is opened and may be connected to either positive or negative (+/-) type door pin switches.
- **Brown (ALARM OUTPUT)** (Fig. 31)
This lead is a selectable constant or pulsed positive (+) output capable of driving up to 2 relays (500 mA) max. Use this lead to trigger relays for siren, horn, honk or flashing lights.
- **White/Red (ALARM SENSOR)** (Fig. 32)
This lead is a negative (-) input and is provided for hookup of negative triggering sensors such as shock, or glass sensors (sold separately).
- **White/Orange (DOOR LOCK)** (Fig. 33)
This lead is used to disarm RFP Alert from power door lock systems or alert systems with remote unlock. This lead may be connected to door lock systems with either positive or negative (+/-) unlock triggers.

Door Switches

The RFP Alert's door trigger input is designed to work with either positive or negative door pin switches. After hookup, simply set door system type from RFP Alert Setting Menu.
Dome/night Delay-RFP Alert will wait for last door to close and courtesy light to turn off before Exit Delay Timer Starts.

DOOR SWITCH (White)

Grounding Type Switch:

Most European, Japanese, GM and Chrysler vehicles.

Note:

- Set RFP Alert to recognize ground trigger from RFP Alert Setting Menu. Set Door System to "DOOR-L:CLS".

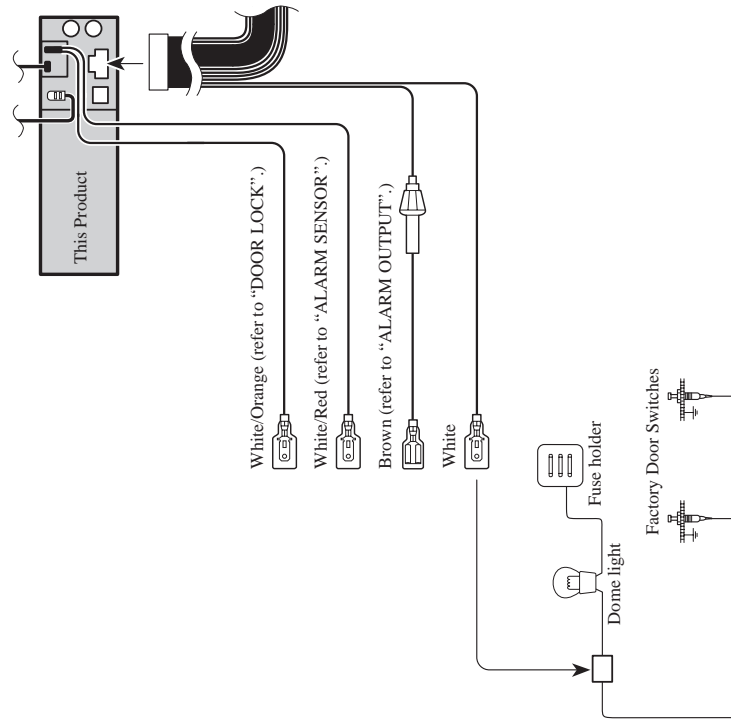


Fig. 29

RFP Alert Installation

Positive (Non-grounding) Type Switch:

Jaguar, Mercedes, Ford

Note:

- Set RFP Alert to recognize positive trigger from RFP Alert Setting Menu. Set Door System to "DOOR-H :CLS".

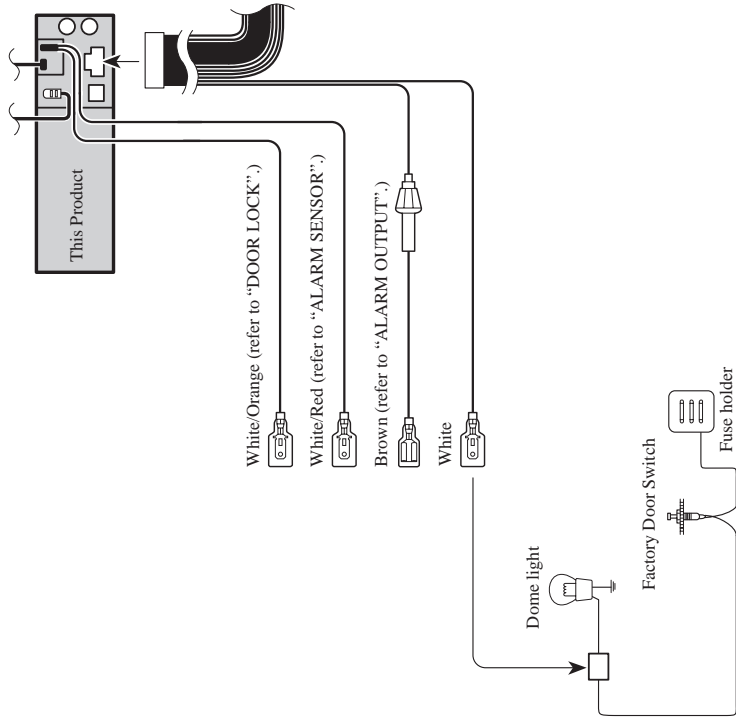


Fig. 30

Installing New Pin Switches

Separately sold pin switches are available that can be used to protect your vehicle's trunk, hood etc. When you purchase these, make sure that you first confirm that they can be used with your vehicle's door system type. Follow the makers instructions as to installation and wiring.

ALARM OUTPUT (Brown)

The brown lead provides a +12 V, constant or pulsed output while alert is sounding. This lead has a maximum current capability of 500 mA and can be used to trigger a relay to sound a siren, horn or flash lights.

Recommended Wiring:

- 30 amp relay (sold separately) required to operate siren, horn or lights.
- Connect Brown wire to one side of relay coil.
- Connect ground to other side of coil.

For sirens, horns or lights requiring +12 V trigger

- Connect normally open to fused, constant +12 V source.

For horns or lights requiring ground trigger

- Connect normally open pin to ground.

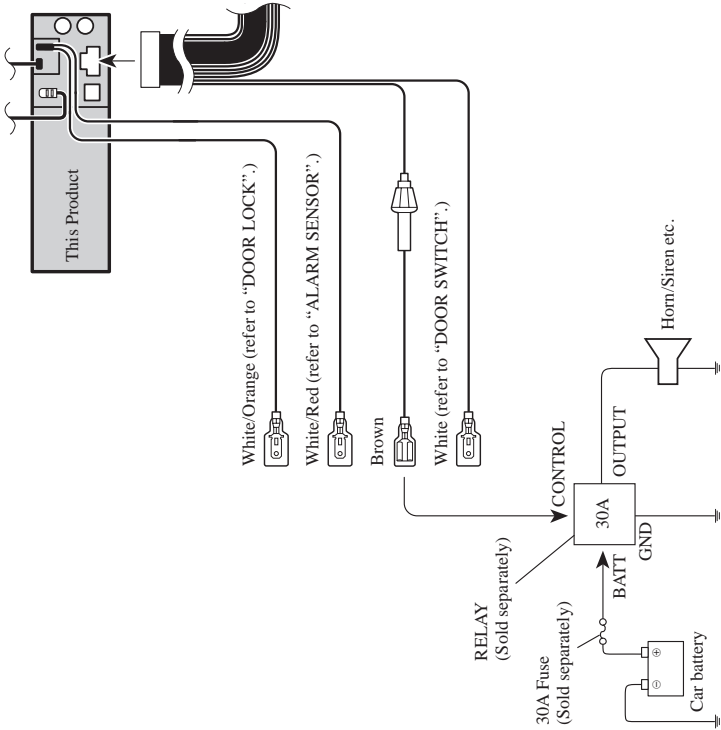


Fig. 31

RFP Alert Installation

ALARM SENSOR (White/Red)

The white/red lead is a negative triggered (Grounding) input that can be connected to various separately sold shock or glass sensors. There is no limit as to how many sensors are connected, so you can ensure total protection of your vehicle. Follow the makers instructions as to installation and wiring.

Note:

- If the shock sensor detects vehicle vibrations, use the negative (-) output type. If you use the positive (+) output type, the alert will sound continually, and the shock sensor will not operate correctly.

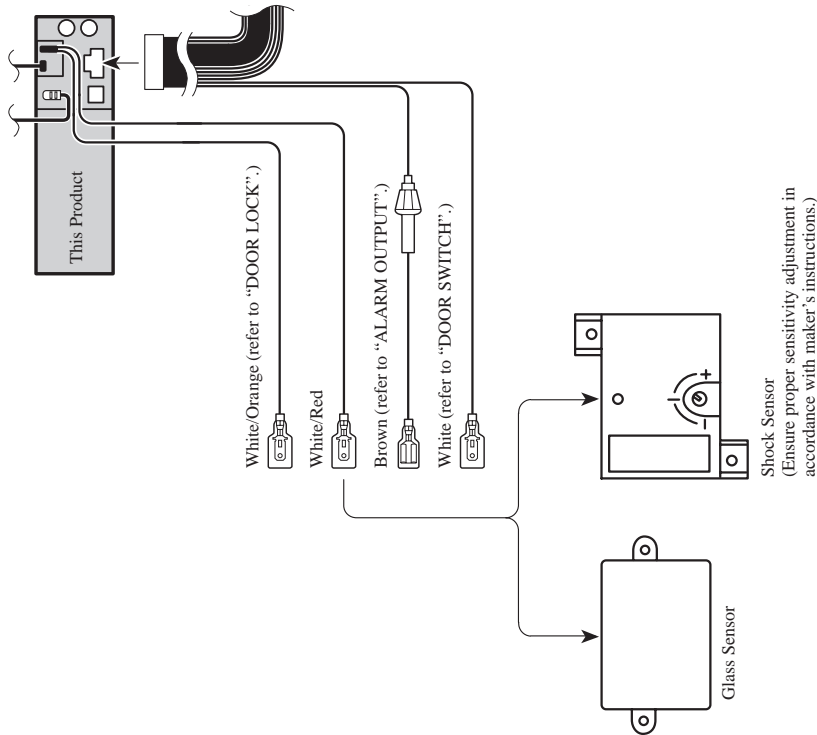


Fig. 32

- To ensure full proper operation of RFP Alert, Pioneer suggests using only White/Red wire, electronic sensors capable of providing a pulse width greater than 64 ms.

DOOR LOCK (White/Orange)

The white/orange lead should be connected to the "unlock" lead for your vehicles door locking system, so that when you open the driver's door by your vehicle's remote control, your Pioneer RFP Alert is deactivated.

First, locate the two wires from the lock/unlock switch that operate the factory door lock solenoids for the driver's side. Using a meter, determine which lead is used to unlock the door; connect this to the white/orange lead of your Pioneer Car Stereo. In the RFP Alert Setting Menu, select the door-lock system type according to your vehicle (grounding or non-grounding).

If you have difficulty wiring this connection, please consult your nearest Installation specialist.

Note:

- If your vehicle is equipped with a central door lock but the glass or shock sensor is not connected, if the window is broken and the central door lock is released, this unit's RFP Alert will not operate.
- Pioneer recommends that both a shock sensor and glass sensor be installed when you are using the "Remote Disarming" feature.

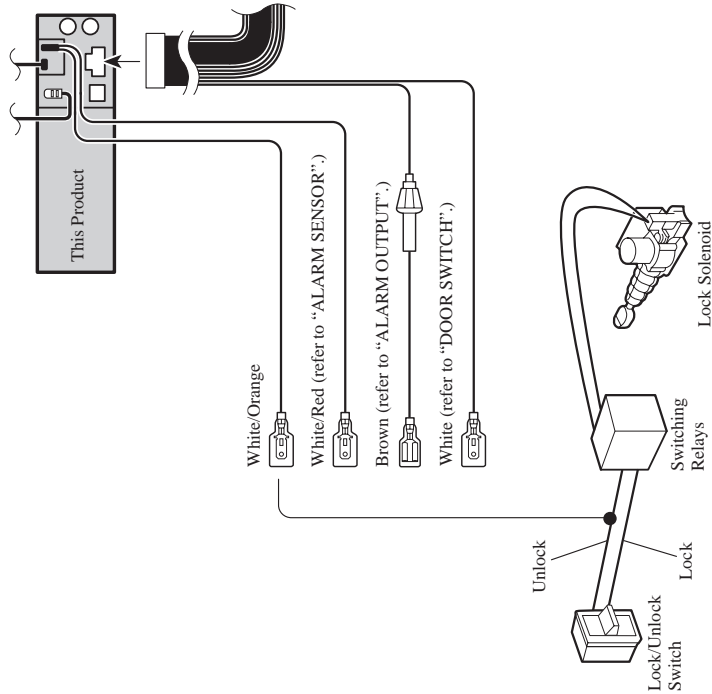
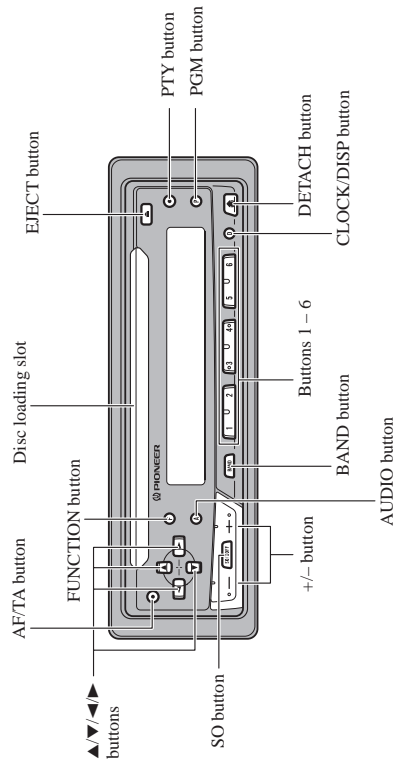


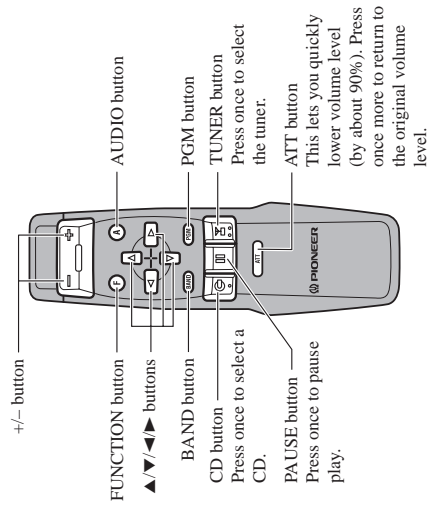
Fig. 33

Head Unit



Remote Controller

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



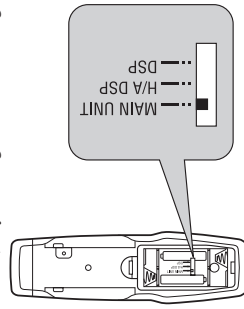
Using the Remote Controller

This product is equipped with a remote controller for convenient operation.

- Point the controller in the direction of the front panel to operate.
- When the controller is not in use, attach it firmly to the provided mounting base.

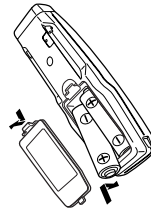
Precaution:

- Do not store the remote controller in high temperatures or direct sunlight.
- The controller may not function properly in direct sunlight.
- Do not let the remote controller fall onto the floor, where it may become jammed under the brake or accelerator pedal.
- Open the cover on the rear of the remote control, and you'll find a switch. Do not change this switch's position from the MAIN UNIT position. (Initially, the switch is set to the MAIN UNIT position.) If you change the switch setting, correct operation of this product will not be possible.



Batteries

- Remove the cover on the back of the remote controller and insert the batteries with the (+) and (-) poles pointing in the proper direction.



Precaution:

- Use only AAA or IEC R03 1.5 V batteries.
- Remove the batteries if the remote controller is not used for a month or longer.
- Do not attempt to recharge the supplied batteries.
- Do not mix new and used batteries.
- If the event of battery leakage, wipe the remote controller completely clean and install new batteries.

Basic Operation

Basic Operation of Tuner

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

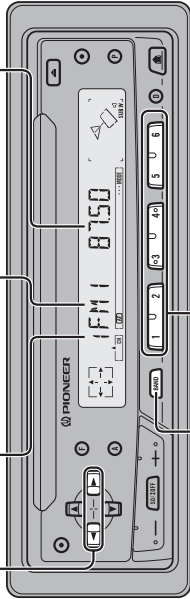
Manual and Seek Tuning

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

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

- Note:**
- "CD" stereo indicator lights when a stereo station is selected.

Preset Number Indicator Band Indicator Frequency Indicator



Band

FM 1 → FM 2 → FM 3 →
MW/LW

Preset Tuning

- 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.

Basic Operation of Built-in CD Player

Disc Loading Slot

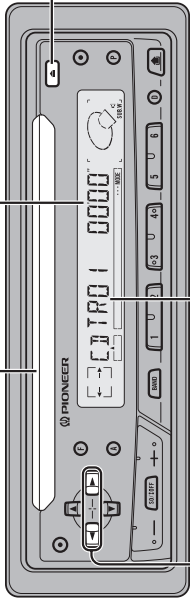
The built-in CD player plays one standard 12 cm or 8 cm (single) CD at a time. Do not use an adapter when playing 8 cm CD.

Eject

Note:

- The CD function can be turned ON/OFF with the disc remaining in this product. (See page 7.)
- Discs left partially inserted after ejection may incur damage or fall out.

Elapsed Play Time Indicator



Track Number Indicator

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 a CD is inserted with the recorded side up, it will be ejected automatically after a few moments.
- If the built-in CD player cannot operate properly, an error message (such as "ERROR-14") appears on the display. Refer to "Built-in CD Player's Error Message" on page 57.

Basic Operation

Basic Operation of Multi-CD Player

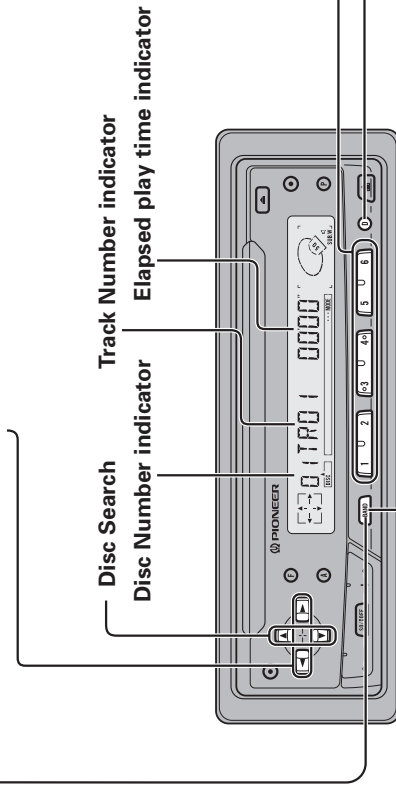
This product can control one or more multi-CD players. (There are some types of Multi-CD players such as CDX-P630S which you cannot connect more than one.)

Switching the Multi-CD Player

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.

M-CD 1 → M-CD 2 → M-CD 3 (Displayed for about 2 seconds.)	Track Search	0.5 seconds or less
	Fast forward/Reverse	Continue pressing



Ejecting a Single Disc (for 50-Disc type only)

- Press the BAND button for 2 seconds or more, and you can eject the currently playing disc from the extra tray.

(Refer to the operation manual for the 50-Disc type Multi-CD player for details concerning disc ejection from the extra tray.)

Note:

- This function does not operate if a disc is already loaded in the extra tray.

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.

Switching Between Displays

- Each time you press the CLOCK/DISP button, the display switches between Disc Title and Group indications for the disc currently playing. Playback mode (Elapsed play time) → Disc Title → Music Group

Note:

- Music Group display is a 50-Disc type Multi-CD player function. You cannot switch to this display with 6-Disc and 12-Disc type Multi-CD players.
- If you switch displays when disc titles have not been input or when discs have not been allocated to a music group, "NO TITLE" or "NO GROUP" is displayed for about 8 seconds.

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 a number of functions. (If you try and use these functions, "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.)

Tuner Operation

Local Seek Tuning (LOCAL)

When Local mode is ON, you can only select broadcast stations providing strong reception.

1. Press the **FUNCTION** button and select the **Local mode (LOCAL)** in the Function Menu.

2. Switch the Local ON/OFF with the **▲ / ▼** buttons.



3. Select the desired Local Seek sensitivity with the **◀▶** buttons.



FM : LOCAL 1 ↔ LOCAL 2 ↔ LOCAL 3 ↔ LOCAL 4
MW/LW : LOCAL 1 ↔ LOCAL 2

Note:

- The LOCAL 4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.

Best Stations Memory (BSM)

The BSM (Best Stations Memory) function stores stations in memory automatically.

1. Press the **FUNCTION** button and select the **BSM mode (BSM)** in the Function Menu.

2. Switch the BSM ON with the **▲** button.



The stations with the strongest signals will be stored under buttons 1–6 and in order of their signal.

- To cancel the process, press the **▼** button in the Function Menu before memorization is complete.



Using RDS Functions

What is RDS?

RDS (Radio Data System) is a system for transmitting data along with FM programs. This data, which is inaudible, provides a variety of features such as: program service name, program type display, traffic announcement standby, automatic tuning and program type tuning, intended to aid radio listeners in tuning to a desired station.

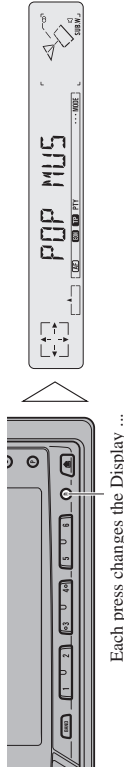
Note:

- RDS service may not be provided by all stations.
- RDS functions, like AF (Alternative frequencies search) and TA (Traffic Announcement standby), are only active when your radio is tuned to RDS stations.

Program Service Name Display

With this function, the names of networks/stations providing RDS services replace the frequency on the display a few seconds after they are tuned in.

- **When you want to know PTY Information or the frequency of the current station, change the display.**



Each press of the CLOCK/DISP button selects the display in the following order:

Program Service Name → PTY Information → Frequency

Note:

- After switching displays, if you do not perform an operation within 8 seconds, the Program Service Name is automatically displayed.

PTY Information

PTY (Program Type ID code) information for the currently tuned station appears on the display for 8 seconds. The information is correlated with the list in the section "PTY Function" on page 24.

Frequency

The frequency of the current station appears on the display.

AF Function (AF)

The AF (Alternative Frequencies search) function is used to search for other frequencies in the same network as the currently tuned station. It automatically retunes the receiver to another frequency in the network which is broadcasting a stronger signal when there are problems with reception of the currently tuned station or better reception is possible on a different frequency.

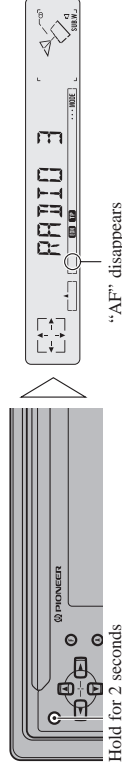
Note:

- AF tunes the receiver only to RDS stations when you use Seek tuning or BSM Auto Memory with the "AF" indicator ON.
- When you recall a preset station, the tuner may update the preset station with a new frequency from the station's AF list. (This is only available when using presets on the FM1 band.) No preset number appears on the display if the RDS data for the station received differs from that for the originally stored station.
- Sound may be temporarily interrupted by another program during an AF frequency search.
- When the tuner is tuned to a non-RDS station, the "AF" indicator flashes.
- AF can be switched ON or OFF independently for each FM band.

Activating/Deactivating the AF Function

AF is set to ON by default.

- **Turn AF to OFF.**



To turn AF back ON, repeat the preceding operation.

Note:

- You can also switch the AF Function ON/OFF in the Function Menu.

Using RDS Functions

PI Seek Function

The tuner searches for another frequency broadcasting the same programming. "PI SEEK" appears on the display and the radio volume is muted during a PI Seek. The muting is discontinued after completion of the PI Seek, whether or not the PI seek has succeeded. If the PI Seek is unsuccessful, the tuner returns to the previous frequency.

PI Seek

If the tuner fails to locate a suitable alternative frequency or if the broadcasting signal is too weak for proper reception, the PI Seek will automatically start.

Auto PI Seek (for preset station)

When preset stations cannot be recalled, as when traveling long distances, the product can be set to perform PI Seek also during preset recall. The default setting for Auto PI Seek is OFF.

Note:

- Refer to "Initial Setting Menu" for details on how to switch Auto PI Seek ON/OFF.

Regional Function (REG)

When AF is used to retune the tuner automatically, REG (regional) limits the selection to stations broadcasting regional programs.

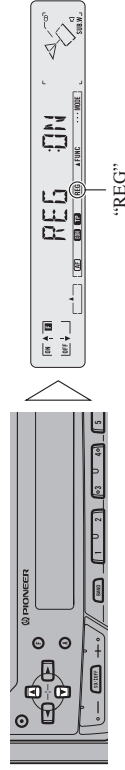
Note:

- Regional programming and regional networks are organized differently depending on the country (i.e., they may change according to the hour, state or broadcast area).
- The preset number may disappear on the display if the tuner tunes in a regional station which differs from the originally set station.

Activating REG

The REG function can be turned ON independently for each FM band.

- Press the **FUNCTION** button and select the **REG mode (REG)** in the Function Menu.
- Activate or deactivate REG while in an FM band.



To cancel the Function Menu, press the BAND button.

TA Function (TA)

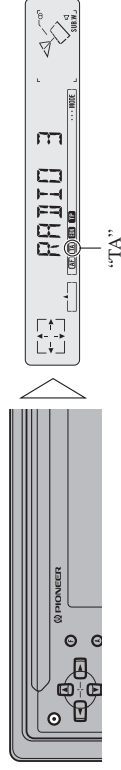
The TA (Traffic Announcement standby) function lets you receive traffic announcements automatically, no matter what source (tuner, built-in CD player or multi-CD player) you are listening to. The TA function can be activated for either a TP station (a station that broadcasts traffic information) or an EON TP station (a station carrying information which cross-references TP stations).

Activating/Deactivating the TA Function

- Tune in a TP or EON TP station.

The "TP" indicator lights when the tuner is tuned to a TP station, and both the "EON" and "TP" indicators light when it is tuned to an EON TP station.

- Activate the TA function.



The "TA" indicator lights, indicating that the tuner is waiting for traffic announcements. Repeat the preceding operation when no traffic announcement is being received to deactivate the TA function.

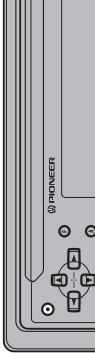
Note:

- You can also switch the TA Function ON/OFF in the Function Menu.
- Only the (+), (-), AF/TA, AUDIO, CLOCK/DISP and SO buttons can be used during traffic announcement reception.
- The system switches back to the original source following traffic announcement reception.
- The TA function can be activated from the built-in CD player or multi-CD player mode if the tuner was last set to the FM band but not if it was last set to the MW/LW band.
- If the tuner was last set to FM, turning on the TA function lets you operate other tuning functions while listening to a CD.
- Only TP or EON-TP stations are tuned in during the Seek Tuning mode when the "TA" indicator is ON.
- Only TP or EON-TP stations are stored by BSM when the "TA" indicator is ON.

Using RDS Functions

Canceling Traffic Announcements

- Press the AF/TA button while a traffic announcement is being received to cancel the announcement and return to the original source.

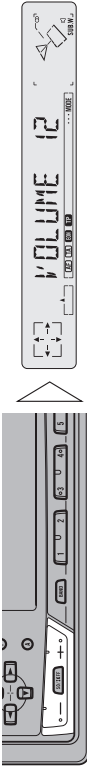


The announcement is canceled but the tuner remains in the TA mode until the AF/TA button is pressed again.

Adjusting the TA Volume

When a traffic announcement begins, the volume adjusts automatically to a preset level to enable you to hear the announcement clearly.

- Set the volume by adjusting it during reception of a traffic announcement.



The newly set volume is stored in memory and recalled for subsequent traffic announcements.

TP Alarm function

About 30 seconds after the “TP” or “EON” indicator is extinguished due to a weak signal, a 5 second beep sounds to remind you to select another TP or EON-TP station.

- If you are listening to the tuner, tune in another TP station or EON-TP station.

In the built-in CD player or multi-CD player mode, the tuner automatically seeks out the TP station with the strongest signal in the current area 10 (or 30)* seconds after “TP” disappears from the display.

* Time taken before Seek begins.

TA function ON	10 seconds
TA, AF functions ON	30 seconds

PTY Function

The PTY function enables you to select stations by the type of programming they broadcast (PTY Search). It also provides automatic tuning to emergency broadcasts (PTY Alarm).

Note:

- PTY code program types are as follows:
 1. NEWS: News.
 2. AFFAIRS: Current affairs.
 3. INFO: General information and advice.
 4. SPORT: Sports programs.
 5. EDUCATE: Educational programs.
 6. DRAMA: All radio plays and serials.
 7. CULTURE: Programs concerned with any aspect of national or regional culture.
 8. SCIENCE: Programs about nature, science and technology.
 9. VARIED: Light entertainment programs.
 10. POP MUS: Popular music.
 11. ROCK MUS: Contemporary modern music.
 12. EASY MUS: Easy listening music.
 13. L. CLASS: Light classical music.
 14. CLASSICS: Serious classical music.
 15. OTH MUS: Other types of music, which can't be categorized.
 16. WEATHER: Weather reports/Meteorological information.
 17. FINANCE: Stock market reports, commerce, trading etc.
 18. CHILDREN: Children's programs.
 19. SOCIAL: Social affairs programs.
 20. RELIGION: Religion affairs programs or services.
 21. PHONE IN: Phone in based programs.
 22. TOURING: Travel programs, not for announcements about traffic problem.
 23. LEISURE: Programs about hobbies and recreational activities.
 24. JAZZ: Jazz music based programs.
 25. COUNTRY: Country music based programs.
 26. NAT MUS: National music based programs.
 27. OLDIES: Oldies music, 'Golden age' based programs.
 28. FOLK MUS: Folk music based programs.
 29. DOCUMENT: Documentary programs.
- If a PTY code of zero is received from a station, “NONE” will be displayed. This indicates that the station has not defined its program contents.
- If the signal is too weak for this product to pick up the PTY code, “NO PTY” will be displayed.

Using the Built-in CD Player

Repeat Play (REPEAT)

Repeat Play plays the same track repeatedly.

1. Press the **FUNCTION** button and select the **Repeat mode (REPEAT)** in the Function Menu.

2. Switch Repeat Play ON/OFF with the **▲ / ▼** buttons.



Note:

- If you perform Track Search or Fast forward/Reverse, Repeat Play is automatically canceled.

Random Play (RANDOM)

Random Play plays the tracks on a CD in random order for variety.

1. Press the **FUNCTION** button and select the **Random mode (RANDOM)** in the Function Menu.

2. Switch Random Play ON/OFF with the **▲ / ▼** buttons.



Scan Play (T-SCAN)

Scan Play plays the first 10 seconds or so of each track on a CD in succession.

1. Press the **FUNCTION** button and select the **Scan mode (T-SCAN)** in the Function Menu.

2. Switch the Scan Play ON with the **▲** button.



3. When you find the desired track, cancel scan play with the **▼** button.

If the Function Menu is automatically canceled at this time, select the Scan mode in the Function Menu once more.



Note:

- Scan Play is canceled automatically after all the tracks on a disc have been scanned.

Pause (PAUSE)

Let's you pause play of the track currently playing.

1. Press the **FUNCTION** button and select the **Pause mode (PAUSE)** in the Function Menu.

2. Switch the Pause ON/OFF with the **▲ / ▼** buttons.



Note:

- One-touch operation is possible with the remote controller.

Disc Title Input (TITLE IN)

The built-in CD player's Disc Title Input function permits entry of up to 100 disc titles comprising up to 10 letters when one or more multi-CD players is installed. (Refer to "Disc Title Input" on page 36 under "Using Multi-CD Players".)

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