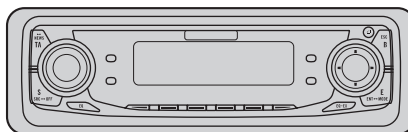


Service Manual



DEH-P7600MP/XN/EW

ORDER NO.
CRT3188

MULTI-CD/DAB CONTROL HIGH POWER CD/MP3/WMA PLAYER WITH RDS TUNER

DEH-P7600MP /XN/EW

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH RDS TUNER

DEH-P6600R /XN/EW

This service manual should be used together with the following manual(s):

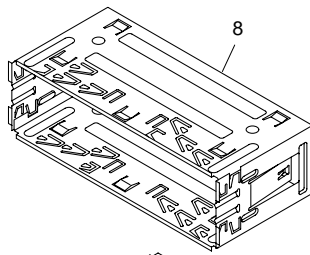
Model No.	Order No.	Mech.Module	Remarks
CX-3098	CRT3179	S10WMAcode2	CD Mech. Module:Circuit Description, Mech. Description, Disassembly
CX-3110	CRT3178	S10.1	CD Mech. Module:Circuit Description, Mech. Description, Disassembly



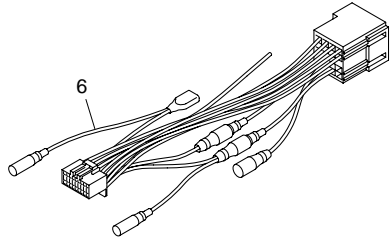
For details, refer to "Important symbols for good services".

2.2 EXTERIOR(DEH-P7600MP)

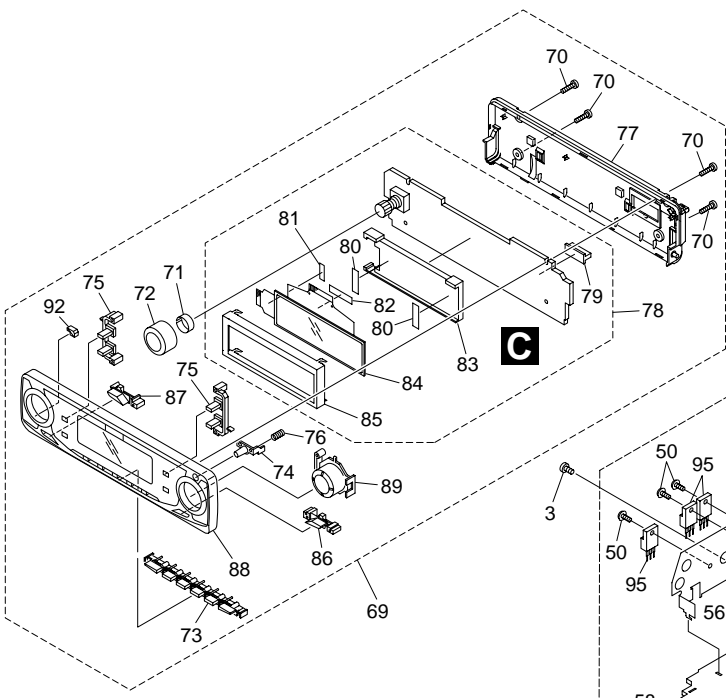
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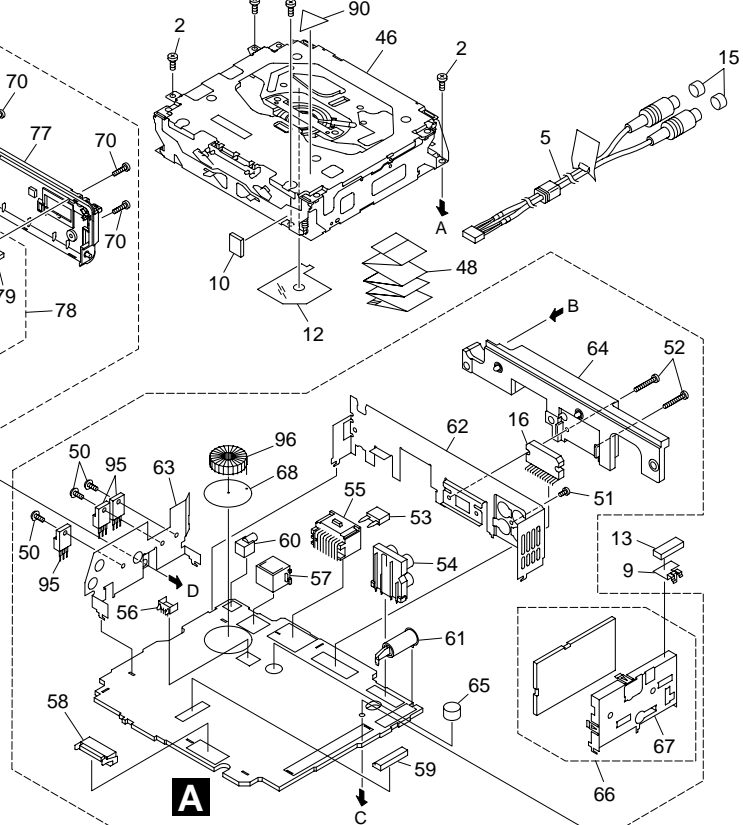
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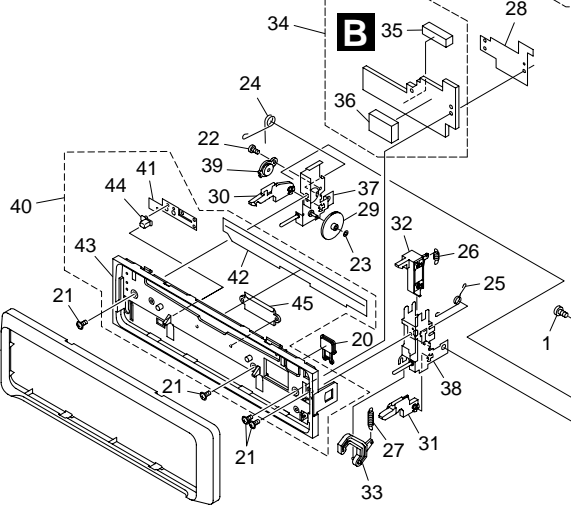
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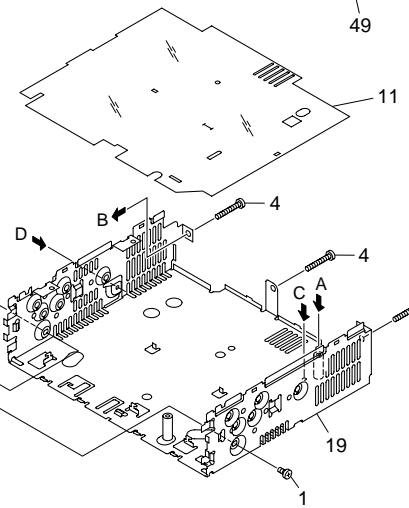
D



E



F

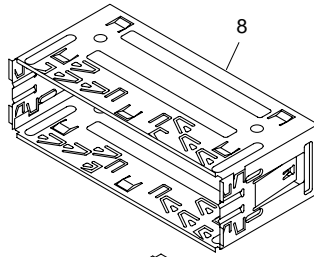


EXTERIOR(DEH-P7600MP) SECTION PARTS LIST

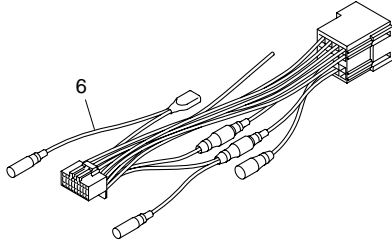
Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	Screw	BMZ30P040FZK	51	Screw	BPZ26P080FTC	A
2	Screw	BSZ26P060FTC	52	Screw	BSZ26P160FTC	
3	Screw	BSZ30P060FTC	53	Fuse(10A)	CEK1208	
4	Screw	BSZ30P200FTC	54	Pin Jack(CN352)	CKB1051	
5	Cord Assy	CDE7129	55	Plug(CN901)	CKM1376	
6	Cord Assy	CDE7153	56	Plug(CN351)	CKS1238	
7	Case	CNB2870	57	Connector(CN101)	CKS3408	
8	Holder	CNC8659	58	Plug(CN801)	CKS3537	
9	Earth Plate	CNC8915	59	Connector(CN651)	CKS3837	
10	Insulator	CNM7682	60	Connector(CN161)	CKS4124	B
11	Insulator	CNM7935	61	Antenna Jack(CN401)	CKX1056	
12	Insulator	CNM8174	62	Holder	CND1270	
13	Cushion	CNM8890	63	Holder	CND1352	
14	Panel	XNS7070	64	Heat Sink	CNR1668	
15	Cap	CNV6727	65	Microphone(CN751)	CPM1011	
16	Case Assy	CXB3520	66	FM/AM Tuner Unit	CWE1645	
17	.....		67	Holder	CND1054	
18	.....		68	Insulator	XNM7031	
19	Chassis Unit	XXA7222	69	Detachable Assy	XXA7166	C
20	Button(EJECT)	CAC7752	70	Screw	BPZ20P100FZK	
21	Screw(M2x4.5)	CBA1647	71	Spring	CBL1470	
22	Screw(M2x4)	CBA1649	72	Knob	XAA7018	
23	Washer	CBF1038	73	Button(1-6)	XAC7005	
24	Spring	CBH2650	74	Button(OPEN)	XAC7012	
25	Spring	CBH2651	75	Button(TEXT/SCRL/AUDIO/FUNC)	XAC7041	
26	Spring	CBH2652	76	Spring	XBH7001	
27	Spring	CBH2653	77	Cover	XNS7013	
28	Holder	CND1254	78	Keyboard Unit	XWM7051	D
29	Gear	CNV5997	79	Connector(CN1901)	CKS4524	
30	Arm	CNV7400	80	Cushion	CNM6633	
31	Arm	CNV7401	81	Spacer	CNM7697	
32	Arm	CNV7402	82	Spacer	CNM7698	
33	Arm	CNV7403	83	Holder	CNV6910	
34	Panel Unit	CWM8758	84	OEL Unit	MXS8201	
35	Socket(CN1950)	CKS3550	85	Holder	XNC7006	
36	Connector(CN1951)	CKS4806	86	Button Unit(EQ-EX)	XXA7007	
37	Holder Unit	CXB9501	87	Button Unit(EQ)	XXA7008	E
38	Holder Unit	CXB9502	88	Sub Grille Assy	XXA7159	
39	Damper Unit	CXB9503	89	Sub Button Assy	XXA7227	
40	Panel Unit(Service)	CXX1691	90	Lavel	VRW-329	
41	Spring	CBL1512	91	.....	
42	Cover	CNM6854	92	Cushion	XNM7041	
43	Panel	CNS7245	93,94	.....	
44	Pin	CNV6486	95	Transistor(Q651,911,921)	2SD2396	
45	Lighting Conductor	CNV6487	96	Choke Coil(L301)	CTH1280	
46	CD Mechanism Module(S10CODE2)	CXK5665				F
47	Screw	ISS26P055FTC				
48	Cable	XDE7002				
49	Tuner Amp Unit	XWM7044				
50	Screw	ASZ26P060FTC				

2.3 EXTERIOR(DEH-P6600R)

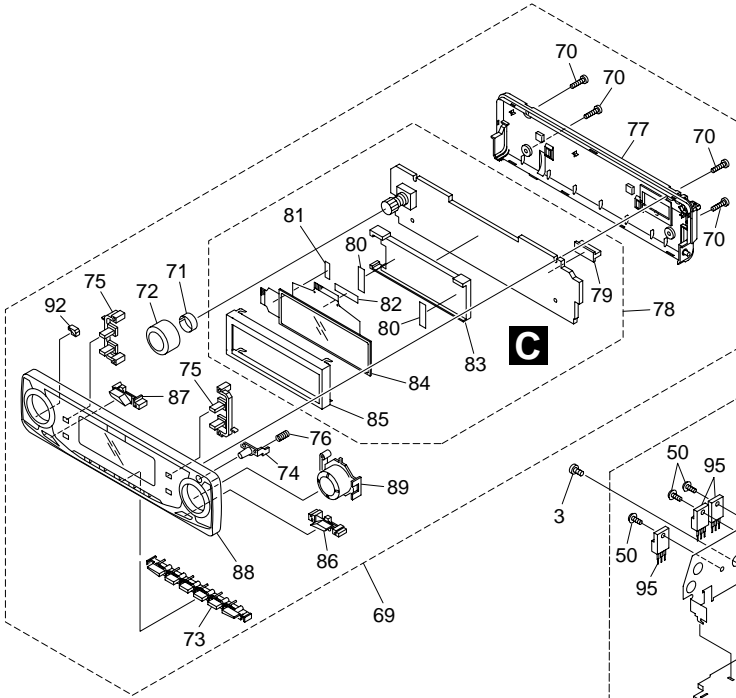
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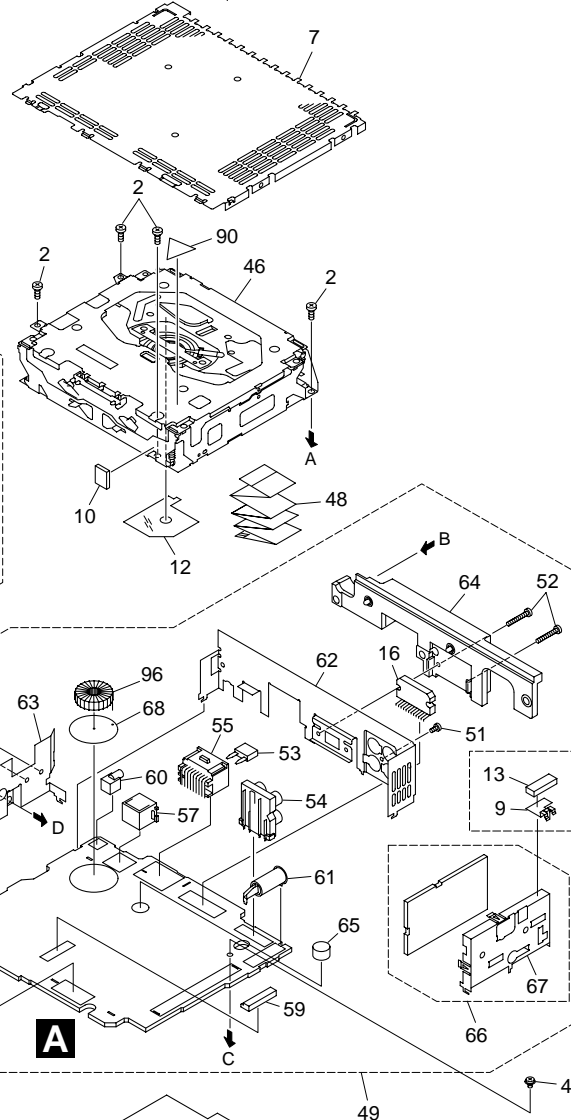
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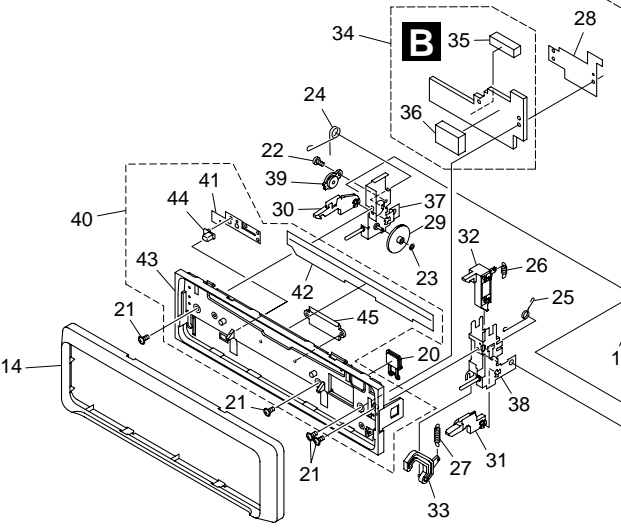
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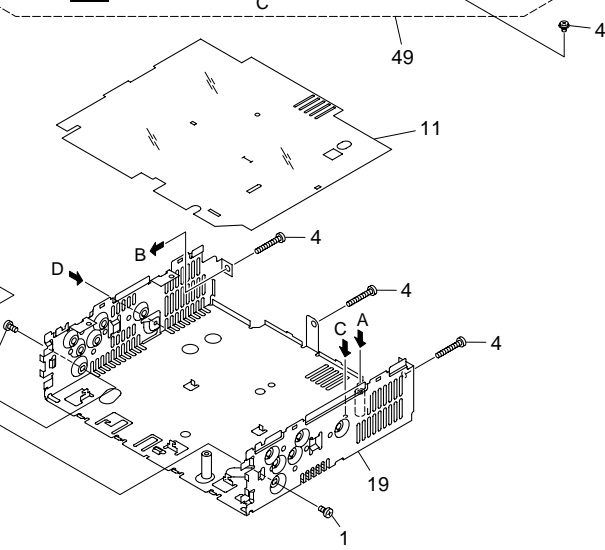
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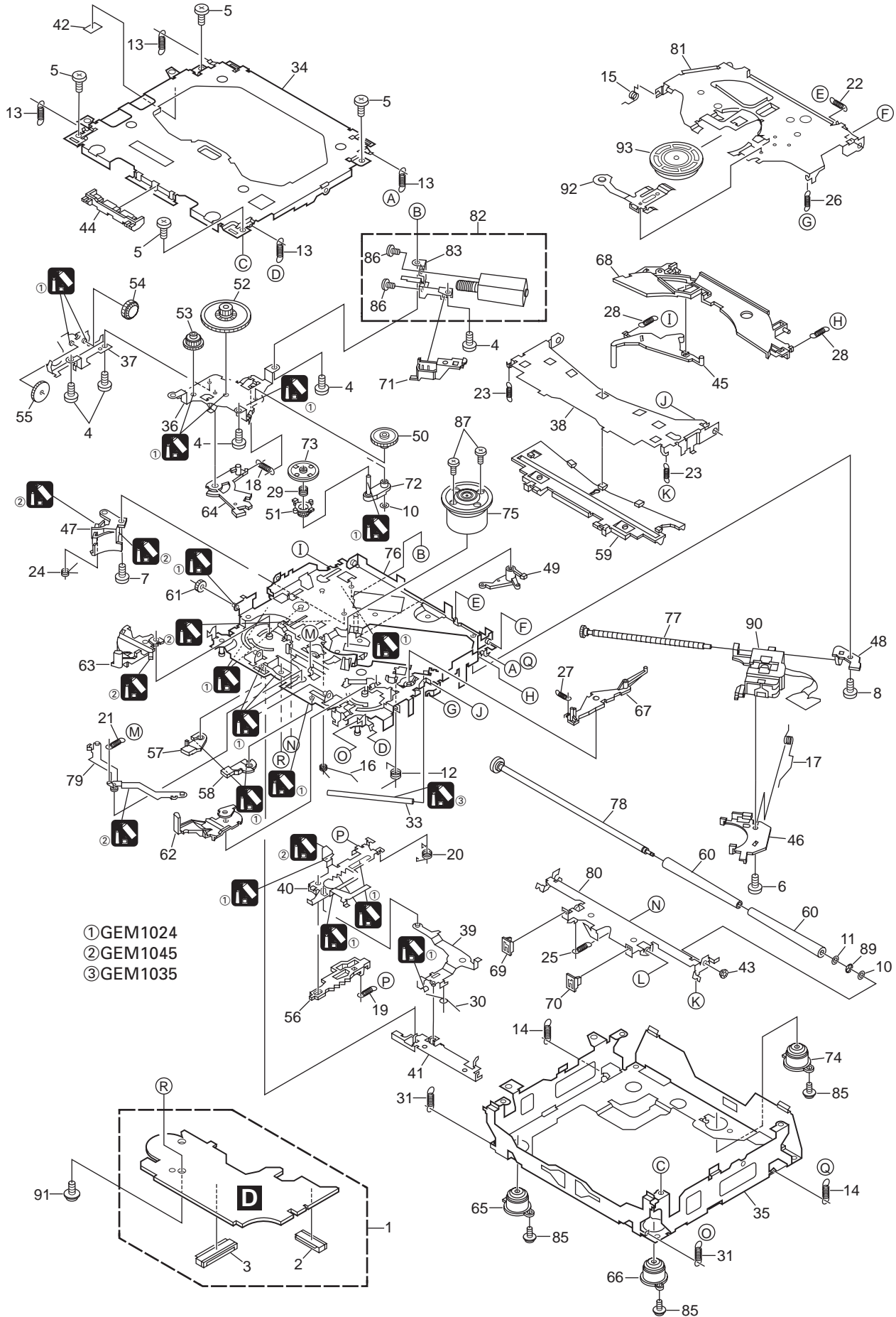


EXTERIOR(DEH-P6600R) SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	Screw	BMZ30P040FZK				
2	Screw	BSZ26P060FTC	51	Screw	BPZ26P080FTC	A
3	Screw	BSZ30P060FTC	52	Screw	BSZ26P160FTC	
4	Screw	BSZ30P200FTC	53	Fuse	CEK1208	
5	.....		54	Pin Jack(CN352)	CKB1051	
			55	Plug(CN901)	CKM1376	
6	Cord Assy	CDE7153				
7	Case	CNB2793	56	.....	
8	Holder	CNC8659	57	Connector(CN101)	CKS3408	
9	Earth Plate	CNC8915	58	Plug(CN801)	CKS3537	
10	Insulator	CNM7682	59	Connector(CN651)	CKS3835	
			60	Connector(CN161)	CKS4124	B
11	Insulator	CNM7935				
12	Insulator	CNM8174	61	Antenna Jack(CN401)	CKX1056	
13	Cushion	CNM8890	62	Holder	XNC7003	
14	Panel	XNS7070	63	Holder	CND1352	
15	.....		64	Heat Sink	CNR1668	
			65	Microphone(CN751)	CPM1011	
16	IC(IC301)	PAL007A				
17	.....		66	FM/AM Tuner Unit	CWE1645	
18	.....		67	Holder	CND1054	
19	Chassis Unit	XXA7223	68	Insulator	XNM7031	
20	Button(EJECT)	CAC7752	69	Detachable Assy	XXA7170	C
			70	Screw	BPZ20P100FZK	
21	Screw(M2x4.5)	CBA1647				
22	Screw(M2x4)	CBA1649	71	Spring	CBL1470	
23	Washer	CBF1038	72	Knob	XAA7003	
24	Spring	CBH2650	73	Button(1-6)	XAC7005	
25	Spring	CBH2651	74	Button(OPEN)	XAC7012	
			75	Button(TEXT/SCRL/AUDIO/FUNC)	XAC7041	
26	Spring	CBH2652				
27	Spring	CBH2653	76	Spring	XBH7001	
28	Holder	CND1254	77	Cover	XNS7013	
29	Gear	CNV5997	78	Keyboard Unit	XWM7054	D
30	Arm	CNV7400	79	Connector(CN1901)	CKS4524	
			80	Cushion	CNM6633	
31	Arm	CNV7401				
32	Arm	CNV7402	81	Spacer	CNM7697	
33	Arm	CNV7403	82	Spacer	CNM7698	
34	Panel Unit	CWM8758	83	Holder	CNV6910	
35	Socket(CN1950)	CKS3550	84	OEL Unit	MXS8201	
			85	Holder	XNC7006	
36	Connector(CN1951)	CKS4806				
37	Holder Unit	CXB9501	86	Button Unit(EQ-EX)	XXA7007	
38	Holder Unit	CXB9502	87	Button Unit(EQ)	XXA7008	E
39	Damper Unit	CXB9503	88	Sub Grille Assy	XXA7163	
40	Panel Unit(Service)	CXX1691	89	Sub Button Assy	XXA7224	
			90	Lavel	VRW-329	
41	Spring	CBL1512				
42	Cover	CNM6854	91	.....	
43	Panel	CNS7245	92	Cushion	XNM7041	
44	Pin	CNV6486	93,94	.....	
45	Lighting Conductor	CNV6487	95	Transistor(Q651,911,921)	2SD2396	
			96	Choke Coil(L301)	CTH1280	
46	CD Mechanism Module(S10)	CXK5602				
47	Screw	ISS26P055FTC				F
48	Cable	XDE7003				
49	Tuner Amp Unit	XWM7048				
50	Screw	ASZ26P060FTC				

2.4 CD MECHANISM MODULE(DEH-P7600MP)

A
B
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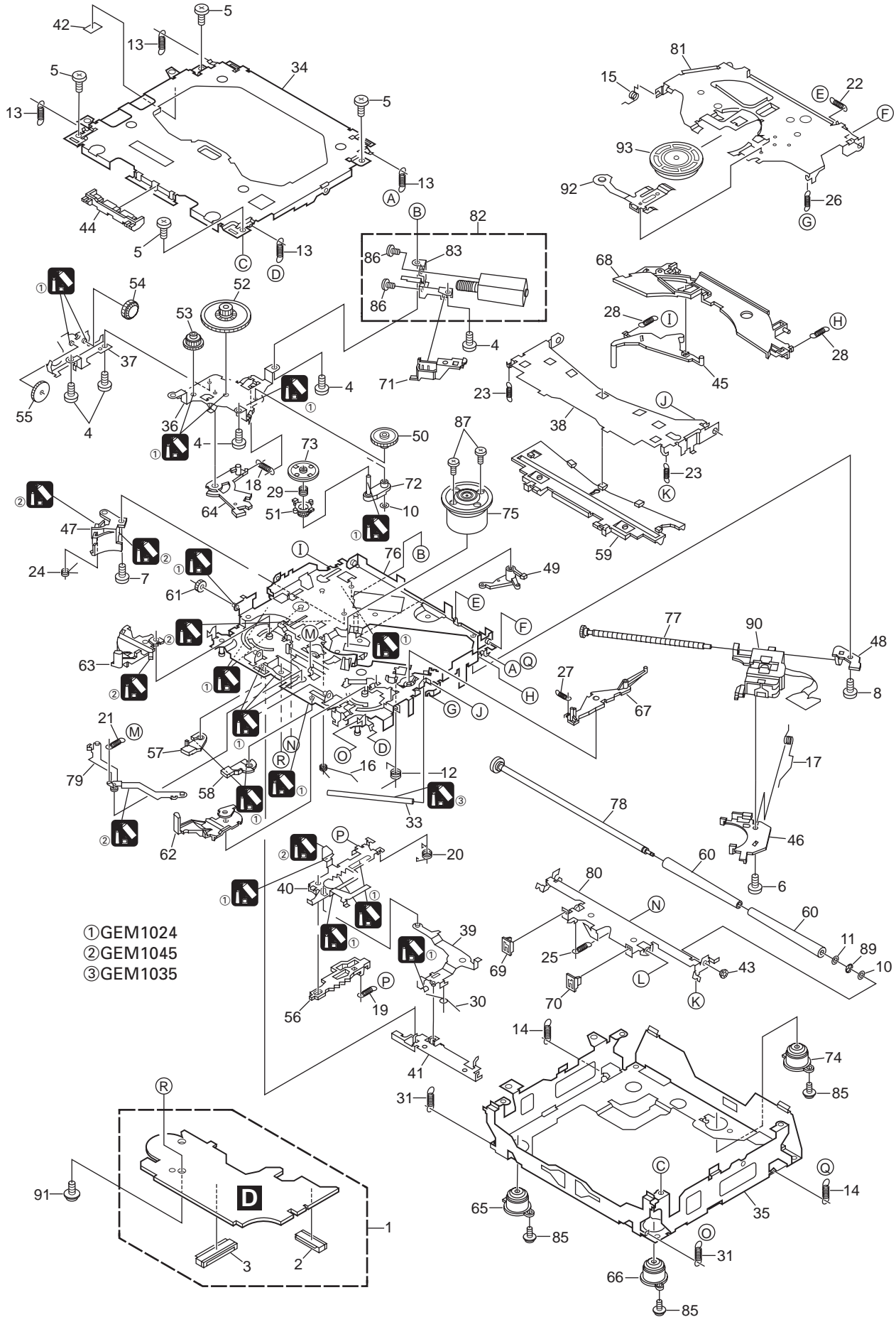
- ① GEM1024
- ② GEM1045
- ③ GEM1035

CD MECHANISM MODULE(DEH-P7600MP) SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	CD Core Unit(S10WMA)	CWX2851			
2	Connector(CN101)	CKS4182	51	Gear	CNV7208
3	Connector(CN901)	CKS4017	52	Gear	CNV7209
4	Screw	BMZ20P035FTC	53	Gear	CNV7210
5	Screw	BSZ20P040FTC	54	Gear	CNV7211
			55	Gear	CNV7212
6	Screw(M2x4)	CBA1362			
7	Screw(M2x3)	CBA1511	56	Rack	CNV7214
8	Screw(M2x3)	CBA1527	57	Arm	CNV7215
9	*****		58	Arm	CNV7216
10	Washer	CBF1038	59	Guide	CNV7217
			60	Roller	CNV7218
11	Washer	CBF1060			
12	Spring	CBH2390	61	Gear	CNV7219
13	Spring	CBH2606	62	Arm	CNV7221
14	Spring	CBH2607	63	Arm	CNV7220
15	Spring	CBH2608	64	Arm	CNV7222
			65	Damper	CNV7313
16	Spring	CBH2609			
17	Spring	CBH2610	66	Damper	CNV7314
18	Spring	CBH2735	67	Arm	CNV7341
19	Spring	CBH2612	68	Arm	CNV7342
20	Spring	CBH2613	69	Guide	CNV7360
			70	Guide	CNV7361
21	Spring	CBH2614			
22	Spring	CBH2615	71	Holder	CNV7437
23	Spring	CBH2616	72	Arm	CNV7805
24	Spring	CBH2617	73	Gear	CNV7595
25	Spring	CBH2620	74	Damper	CNV7618
			75	Motor Unit(M1)	CXB6007
26	Spring	CBH2621			
27	Spring	CBH2641	76	Chassis Unit	CXC2318
28	Spring	CBH2642	77	Screw Unit	CXB8729
29	Spring	CBH2643	78	Gear Unit	CXC2397
30	Spring	CBH2659	79	Arm Unit	CXC2316
			80	Arm	CND1896
31	Spring	CBH2688			
32	*****		81	Arm	CND1894
33	Shaft	CLA4441	82	Motor Unit(M2)	CXB8933
34	Frame	CNC9962	83	Bracket	CNC9985
35	Frame	CNC9963	84	*****	
			85	Screw(M2x5)	EBA1028
36	Bracket	CNC9966			
37	Bracket	CND1895	86	Screw	JFZ20P020FTC
38	Arm	CNC9968	87	Screw	JGZ17P022FTC
39	Arm	CND1909	88	*****	
40	Lever	CND2032	89	Washer	YE20FTC
			90	Pickup Unit(P10)(Service)	CXX1641
41	Lever	CNC9984			
42	Sheet	CNM8134	91	Screw	IMS26P030FTC
43	Collar	CNV7798	92	Spring	CBL1635
44	Guide	CNV7799	93	Clamper	CNV7197
45	Arm	CNV7800			
46	Rack	CNV7199			
47	Holder	CNV7201			
48	Holder	CNV7202			
49	Arm	CNV7203			
50	Gear	CNV7207			

2.5 CD MECHANISM MODULE(DEH-P6600R)

A
B
C
D
E
F



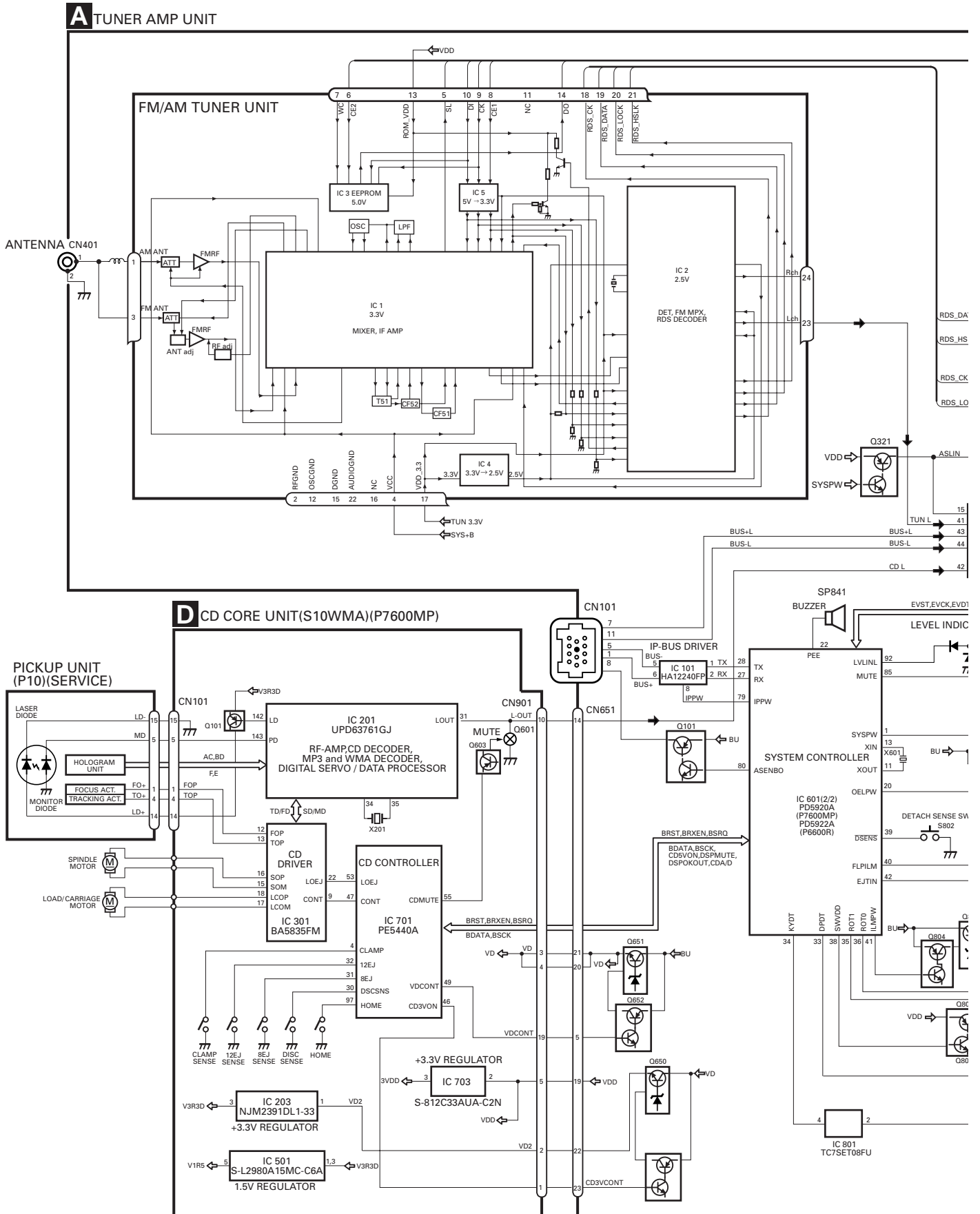
- ① GEM1024
- ② GEM1045
- ③ GEM1035

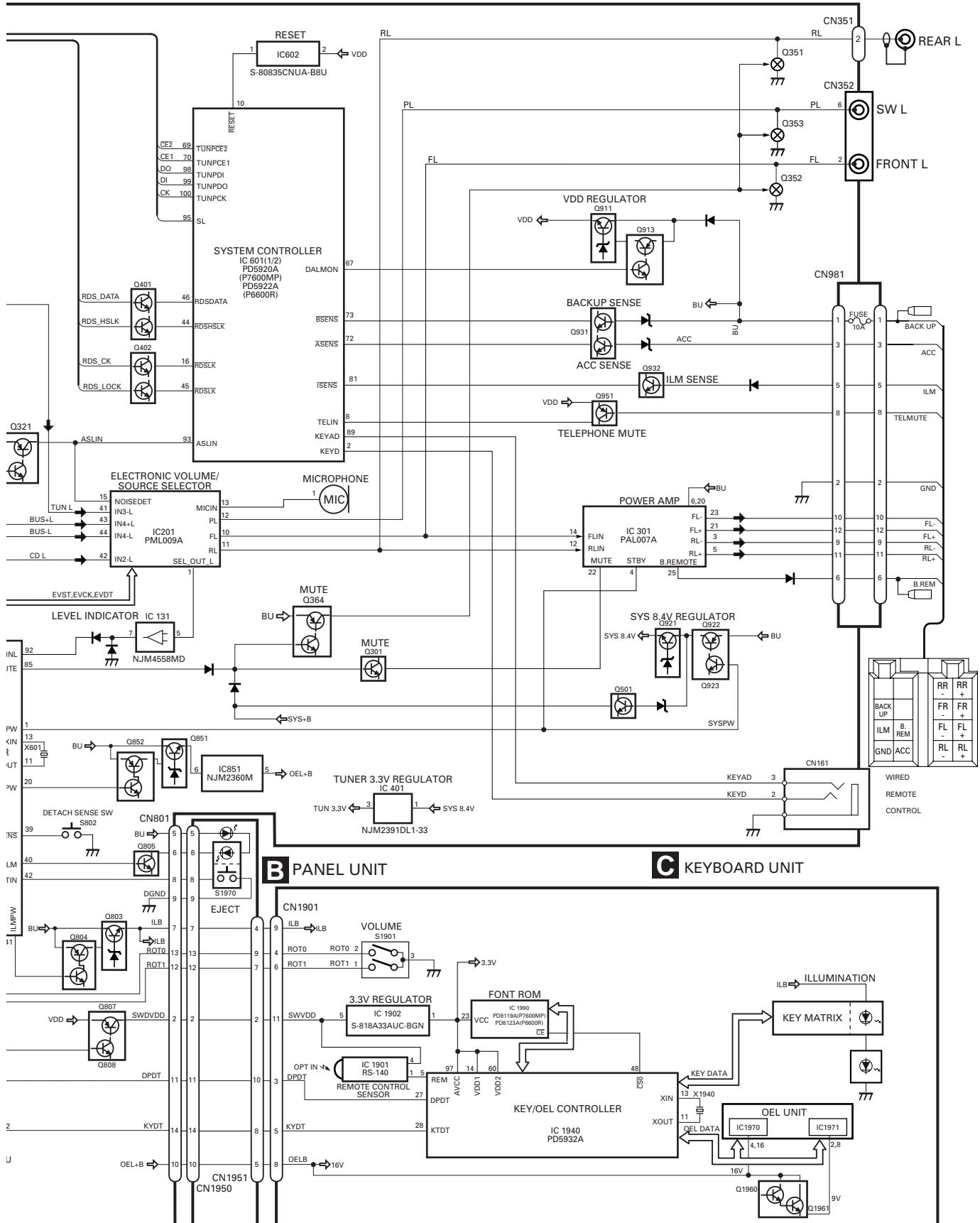
CD MECHANISM MODULE(DEH-P6600R) SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	CD Core Unit(S10)	CWX2947			
2	Connector(CN101)	CKS4182	51	Gear	CNV7208
3	Connector(CN701)	CKS4188	52	Gear	CNV7209
4	Screw	BMZ20P035FTC	53	Gear	CNV7210
5	Screw	BSZ20P040FTC	54	Gear	CNV7211
			55	Gear	CNV7212
6	Screw(M2x4)	CBA1362			
7	Screw(M2x3)	CBA1511	56	Rack	CNV7214
8	Screw(M2x3)	CBA1527	57	Arm	CNV7215
9	*****		58	Arm	CNV7216
10	Washer	CBF1038	59	Guide	CNV7217
			60	Roller	CNV7218
11	Washer	CBF1060			
12	Spring	CBH2390	61	Gear	CNV7219
13	Spring	CBH2606	62	Arm	CNV7221
14	Spring	CBH2607	63	Arm	CNV7220
15	Spring	CBH2608	64	Arm	CNV7222
			65	Damper	CNV7313
16	Spring	CBH2609			
17	Spring	CBH2610	66	Damper	CNV7314
18	Spring	CBH2735	67	Arm	CNV7341
19	Spring	CBH2612	68	Arm	CNV7342
20	Spring	CBH2613	69	Guide	CNV7360
			70	Guide	CNV7361
21	Spring	CBH2614			
22	Spring	CBH2615	71	Holder	CNV7437
23	Spring	CBH2616	72	Arm	CNV7805
24	Spring	CBH2617	73	Gear	CNV7595
25	Spring	CBH2620	74	Damper	CNV7618
			75	Motor Unit(M1)	CXB6007
26	Spring	CBH2621			
27	Spring	CBH2641	76	Chassis Unit	CXC2318
28	Spring	CBH2642	77	Screw Unit	CXB8729
29	Spring	CBH2643	78	Gear Unit	CXC2397
30	Spring	CBH2659	79	Arm Unit	CXC2316
			80	Arm	CND1896
31	Spring	CBH2688			
32	*****		81	Arm	CND1894
33	Shaft	CLA4441	82	Motor Unit(M2)	CXB8933
34	Frame	CNC9962	83	Bracket	CNC9985
35	Frame	CNC9963	84	*****	
			85	Screw(M2x5)	EBA1028
36	Bracket	CNC9966			
37	Bracket	CND1895	86	Screw	JFZ20P020FTC
38	Arm	CNC9968	87	Screw	JGZ17P022FTC
39	Arm	CND1909	88	*****	
40	Lever	CND2032	89	Washer	YE20FTC
			90	Pickup Unit(P10)(Service)	CXX1641
41	Lever	CNC9984			
42	Sheet	CNM8134	91	Screw	IMS26P030FTC
43	Collar	CNV7798	92	Spring	CBL1635
44	Guide	CNV7799	93	Clamper	CNV7197
45	Arm	CNV7800			
46	Rack	CNV7199			
47	Holder	CNV7201			
48	Holder	CNV7202			
49	Arm	CNV7203			
50	Gear	CNV7207			

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

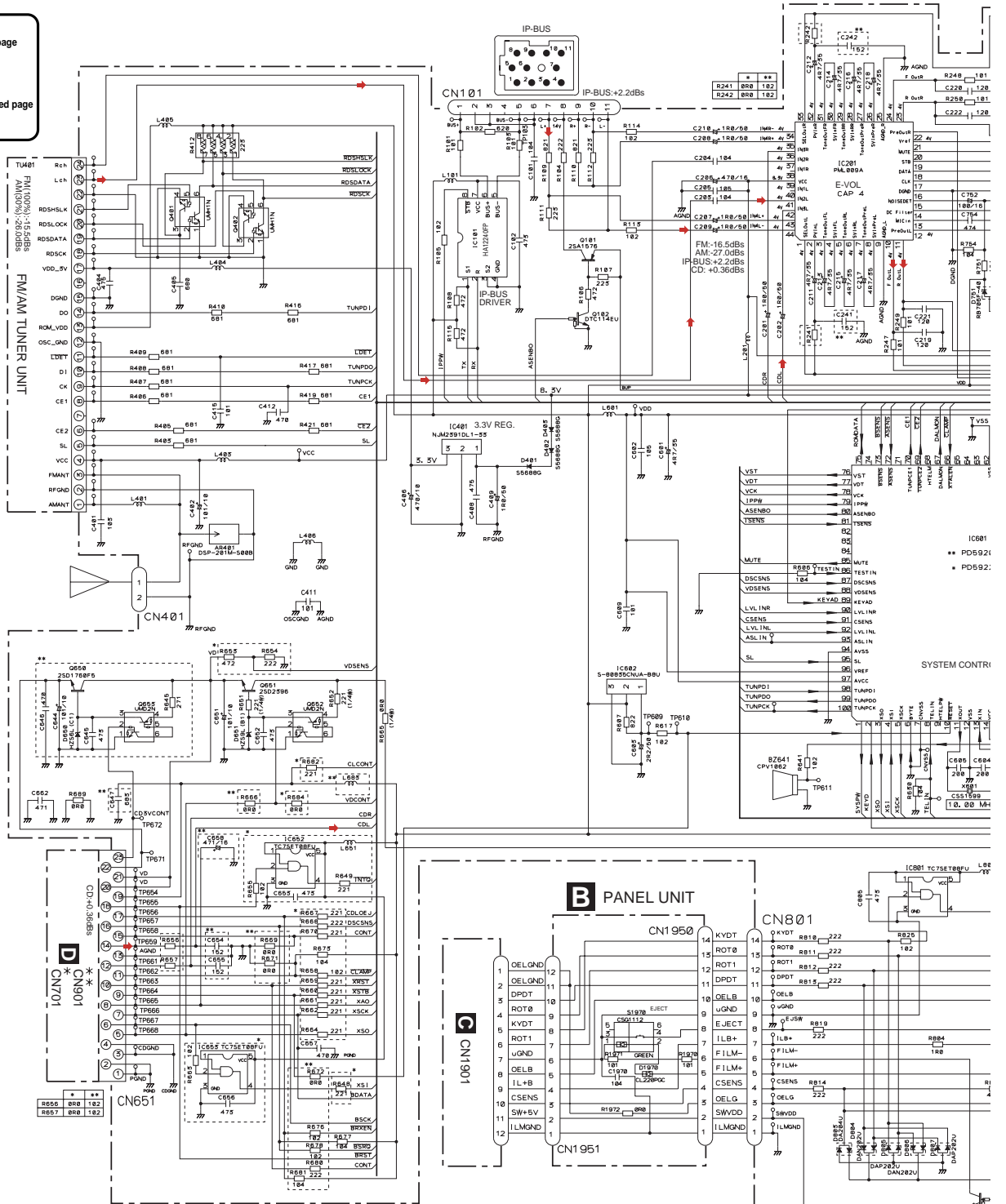
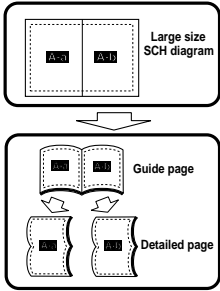




3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

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

A-a



* : DEH-P7600MP/XN/EW
 * : DEH-P6600R/XN/EW

PIN	S10	S10 WITH
25	NC	MP & MM
22	NC	CDSPVCONT
21	V01 (8.5V)	V01 (8.5V)
20	V01 (8.5V)	V01 (8.5V)
19	CLCONT	V01 (8.5V)
18	INTV	INTV
17	CD-DEJ	BRKRN
16	DISCKR	AGND
15	CON	AGND
14	CON	AGND
13	CON	AGND
12	CLAMP	AGND
11	XAO	AGND
10	X57B	RESET
9	XAO	V01 (8.5V)
8	X57B	V01 (8.5V)
7	X57B	V01 (8.5V)
6	X57B	V01 (8.5V)
5	X57B	V01 (8.5V)
4	X57B	V01 (8.5V)
3	AGND	AGND
2	PGND	PGND
1	PGND	PGND

For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

*Resistors			*Capacitors		
Code	Practical value		Code	Practical value	
123	12k ohms		103	0.01uF	
103	10k ohms		101/10	100uF/10V	

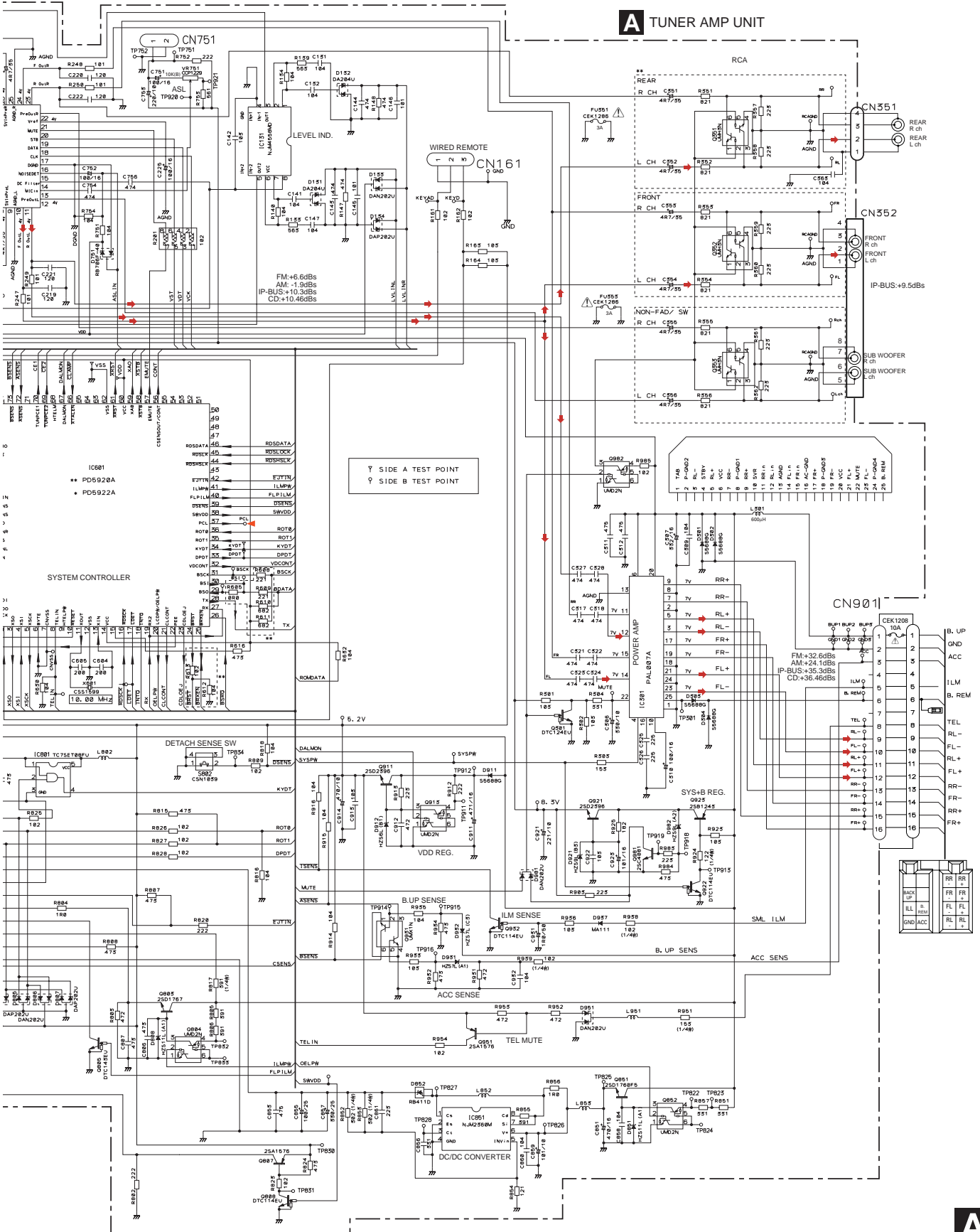
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A B

ND PARTS LIST" or

A-b

A TUNER AMP UNIT



A
B
C
D
E
F



A

B

C

D

E

F

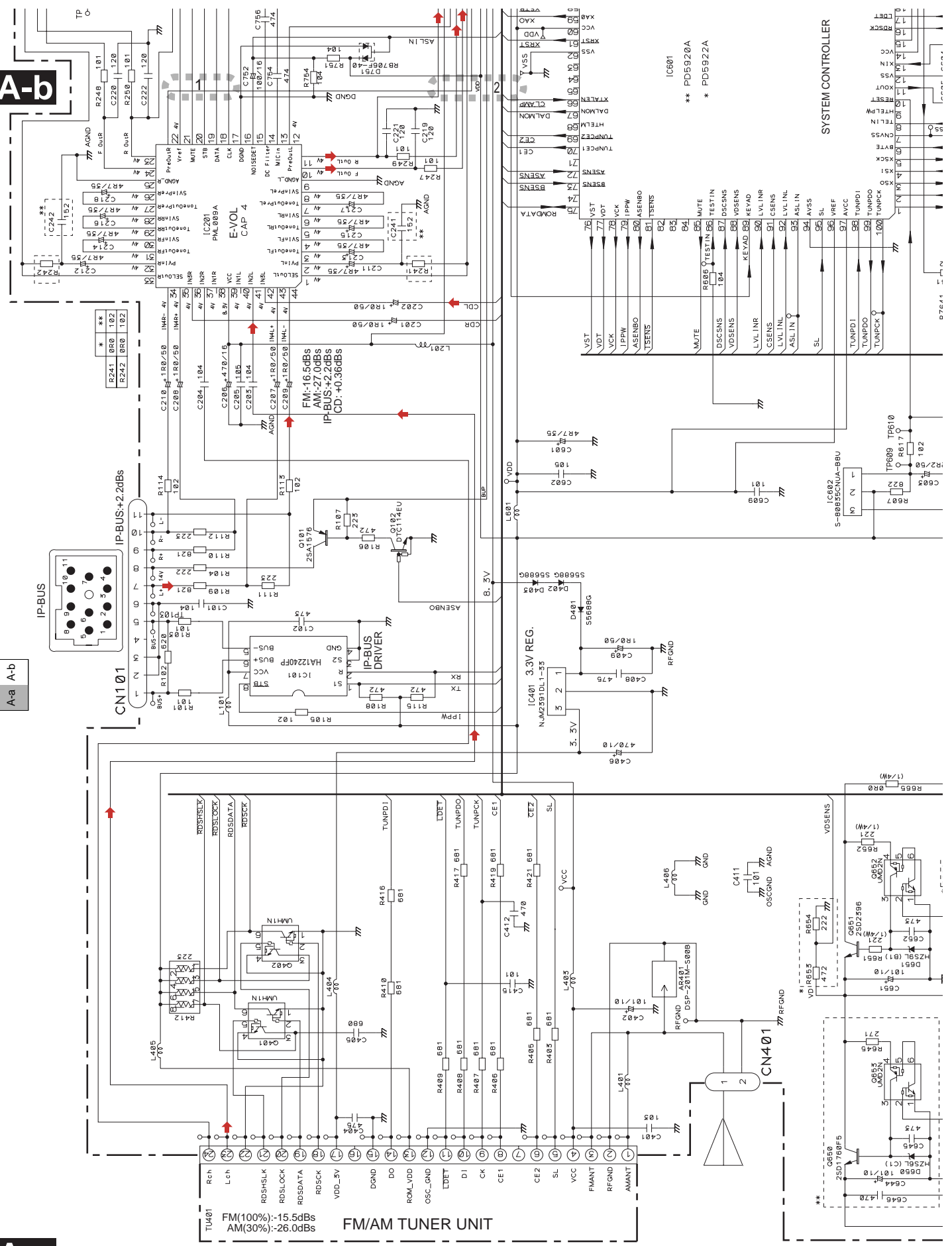
A-b

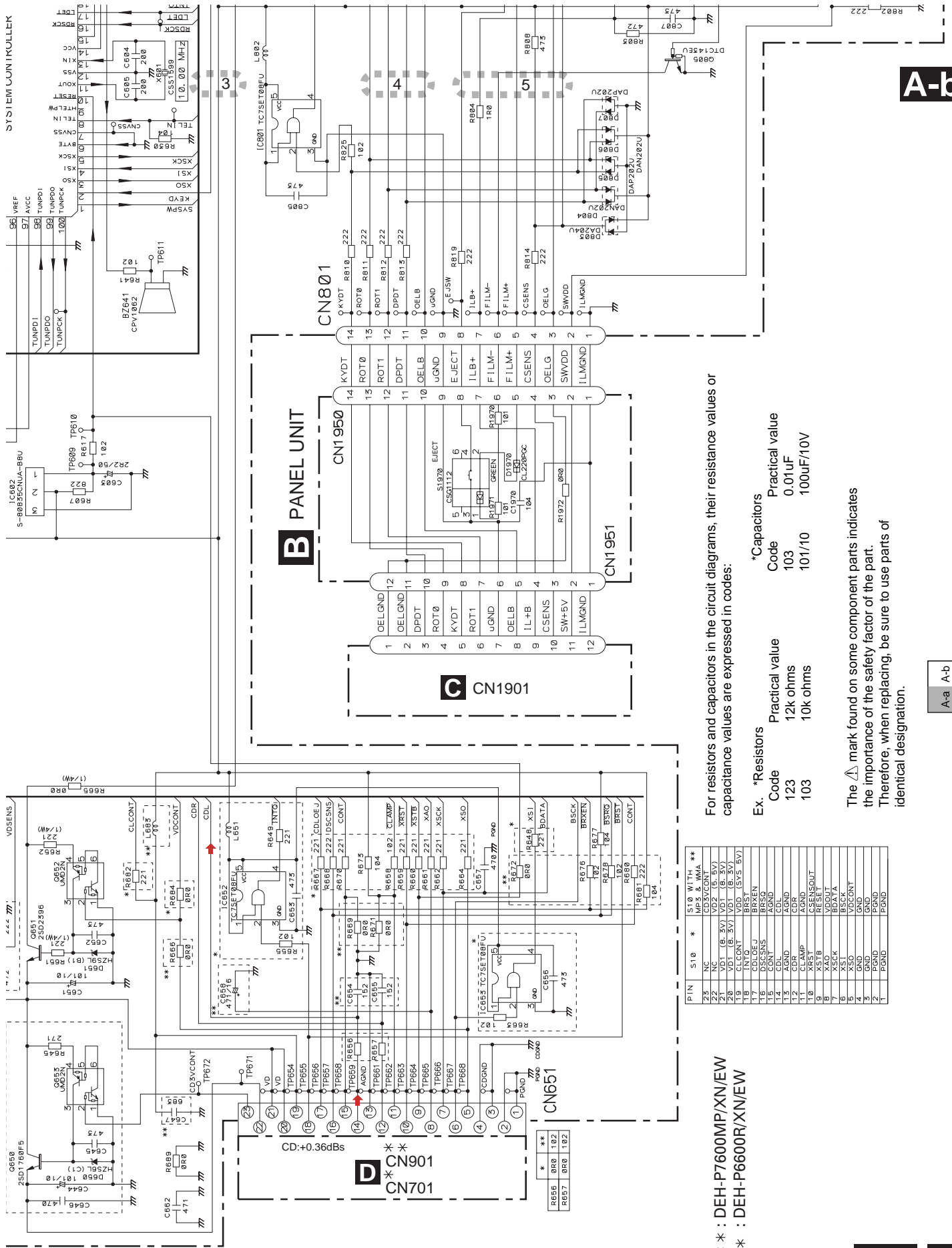
A-a A-b

A-a

FM/AM TUNER UNIT

DEH-P7600MP/XN/EW





For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

- Ex. *Resistors
- | Code | Practical value |
|------|-----------------|
| 123 | 12k ohms |
| 103 | 10k ohms |
- *Capacitors
- | Code | Practical value |
|--------|-----------------|
| 103 | 0.01uF |
| 101/10 | 100uF/10V |

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.

PIN	S10	S10 WITH **
23	NC	CD3VCONT
22	NC	VD2 (5-5V)
21	VD1 (8-3V)	VD1 (8-3V)
20	VD1 (8-3V)	VD1 (8-3V)
19	CLCONT	VDD (SVS-5V)
18	INTQ	BRST
17	COLDEJ	BRXEN
16	CONSENS	AGND
15	CON	AGND
14	CDL	CDL
13	AGND	AGND
12	CLAMP	AGND
11	CLAMP	AGND
10	XRST	CSENSOUT
9	XSTB	RESET
8	XSTB	BDATA
7	X2CK	BDATA
6	X51	B5CK
5	X50	VDCONT
4	AGND	AGND
3	AGND	AGND
2	PGND	PGND
1	PGND	PGND

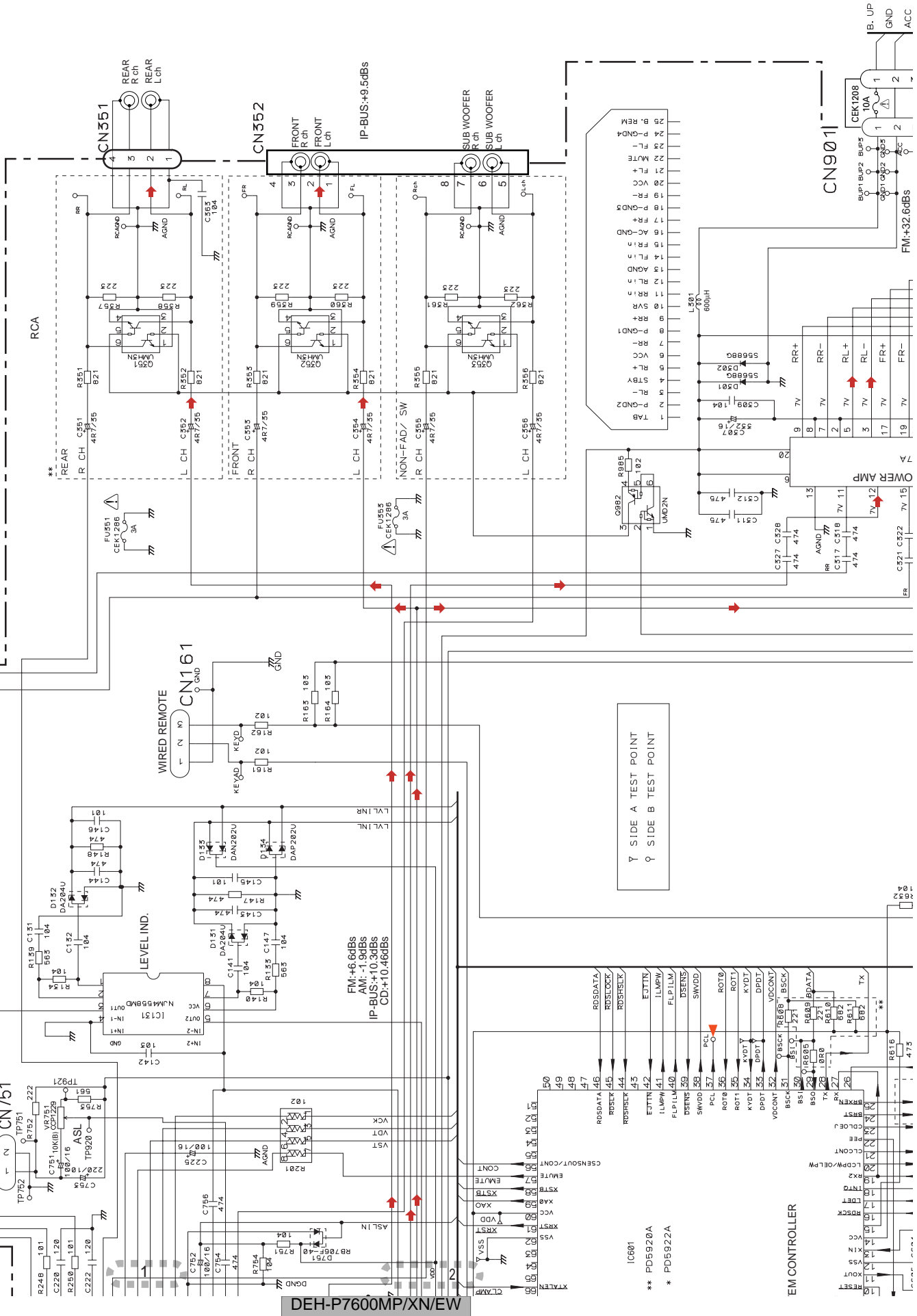
** : DEH-P7600MP/XN/EW
 * : DEH-P6600R/XN/EW

A-a B

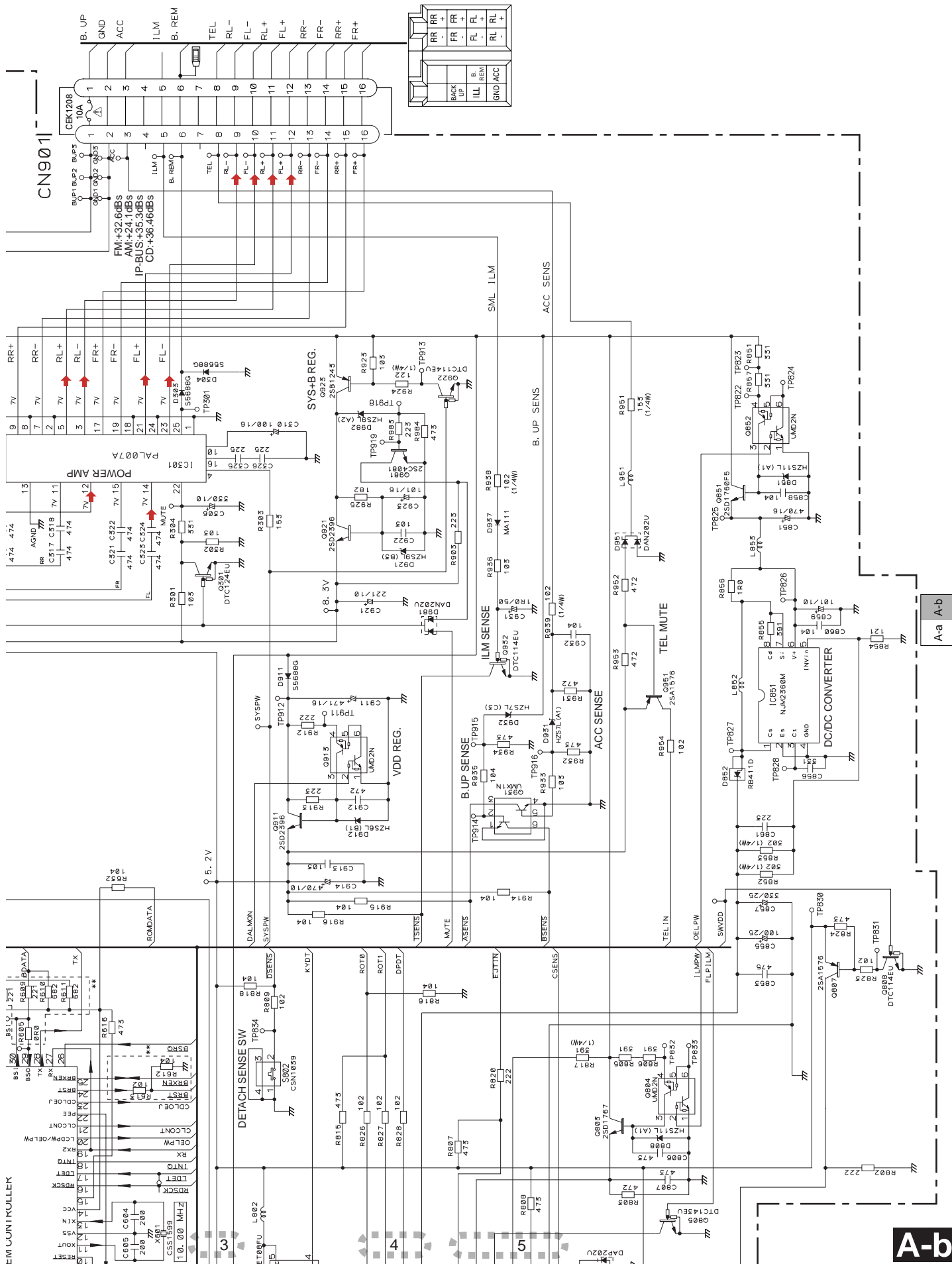
A-a A-b

A-b

A TUNER AMP UNIT



DEH-P7600MP/XN/EW



EMUONI KOLLER

DEH-P7600MP/XN/EW

A-b

A
B
C
D
E
F

5

6

7

8

5

6

7

8

3.3 KEYBOARD UNIT(DEH-P7600MP)

A

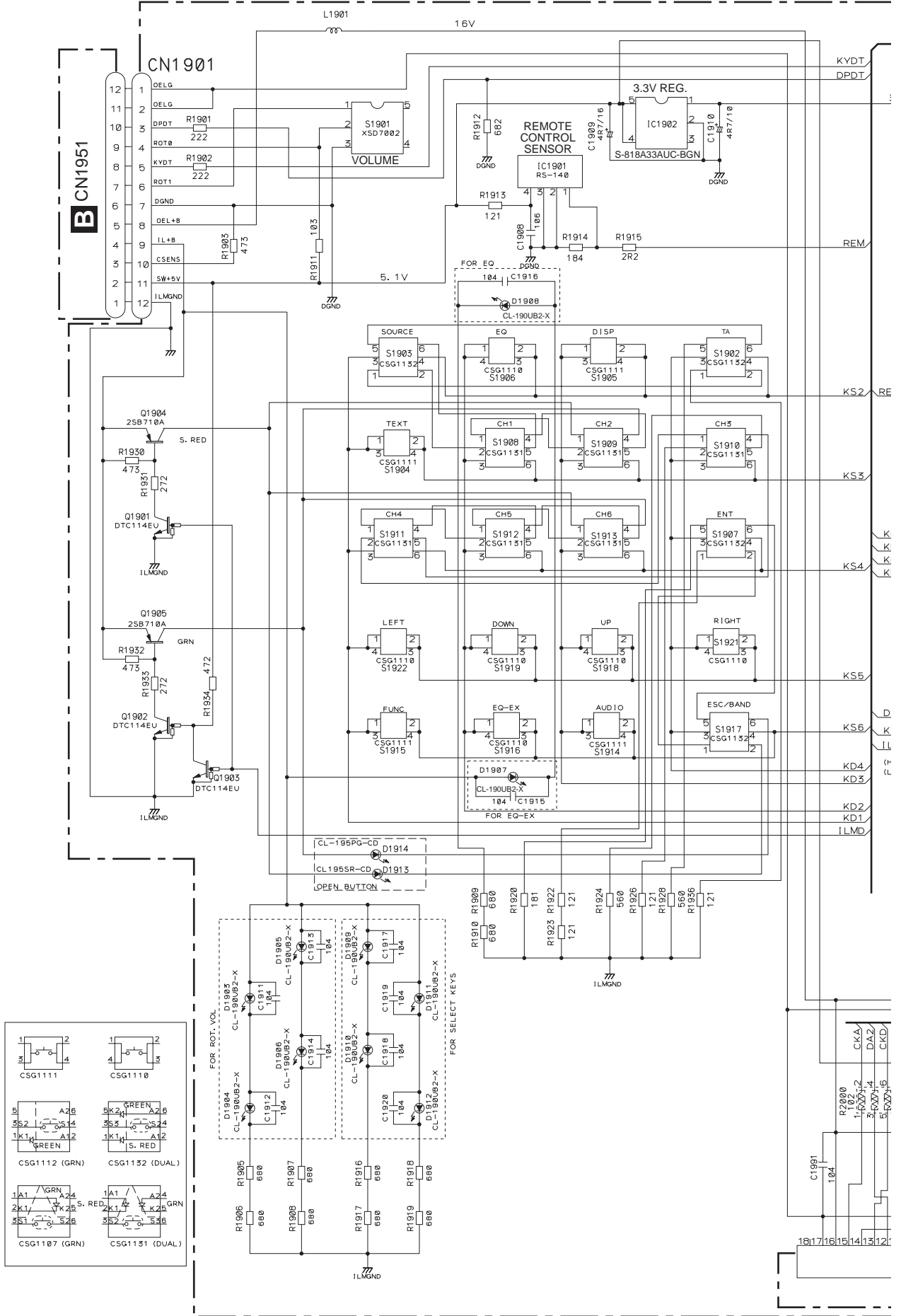
B

C

D

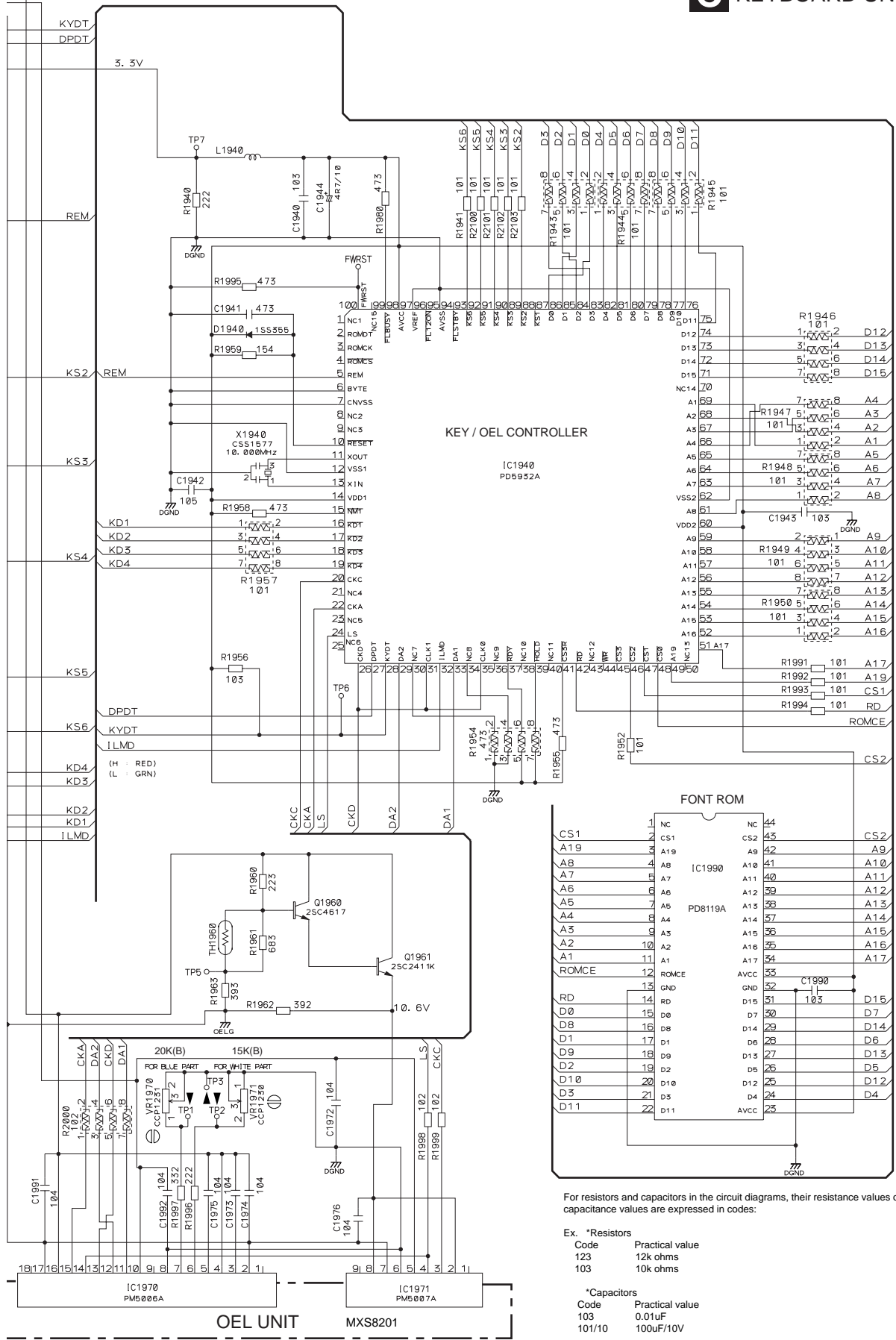
E

F



C

C KEYBOARD UNIT



For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors

Code	Practical value
123	12k ohms
103	10k ohms

*Capacitors

Code	Practical value
103	0.01uF
101/10	100uF/10V



3.4 KEYBOARD UNIT(DEH-P6600R)

A

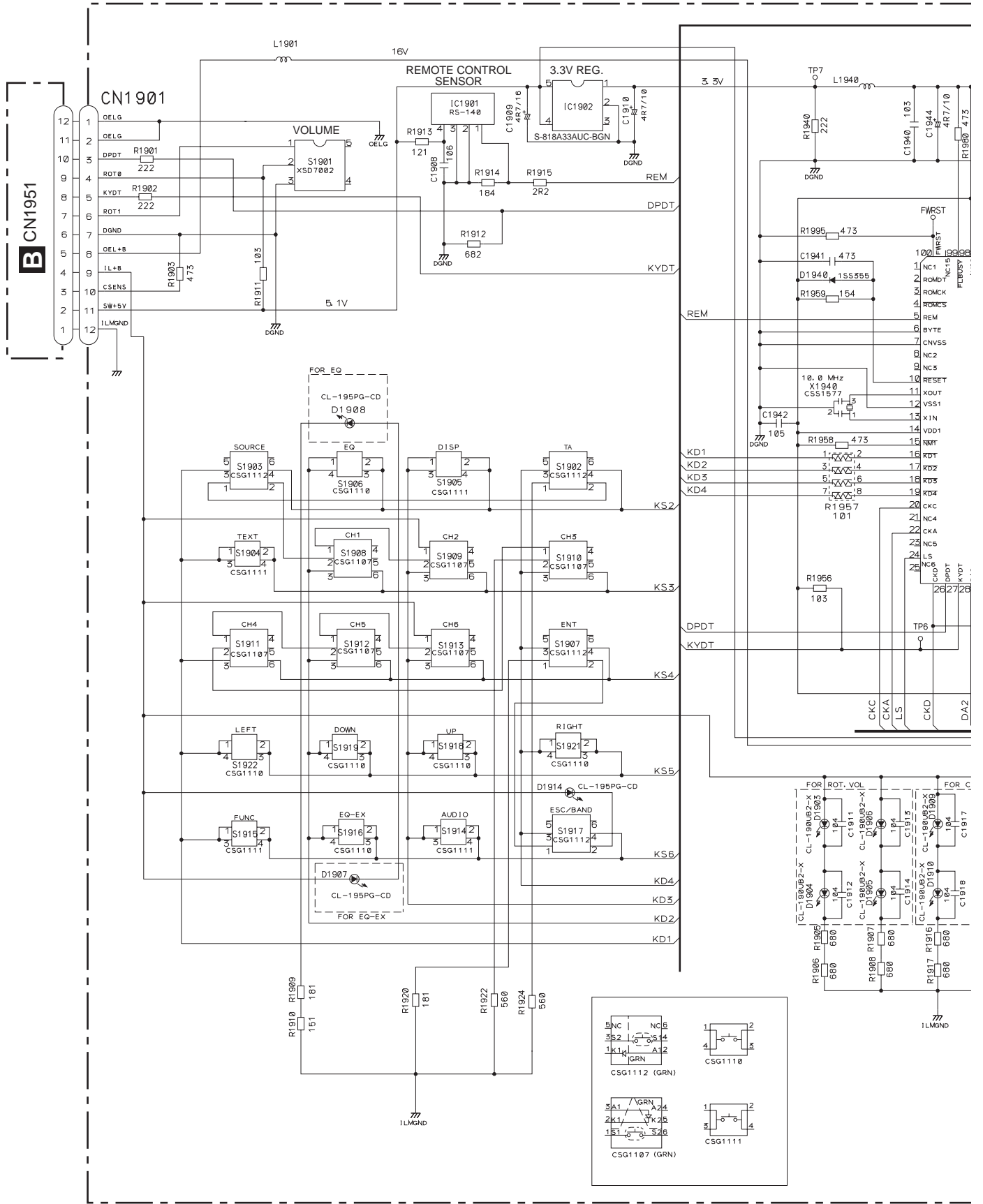
B

C

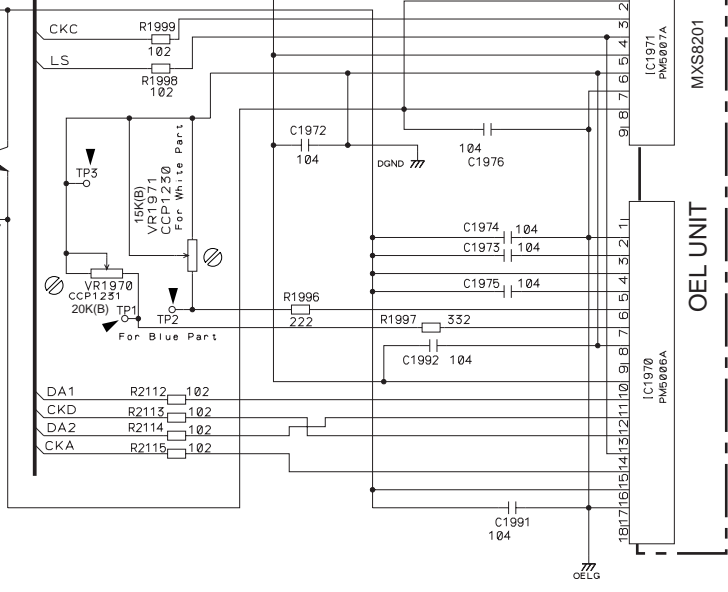
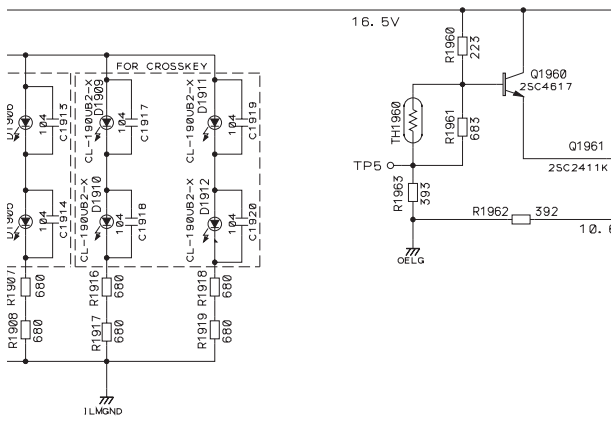
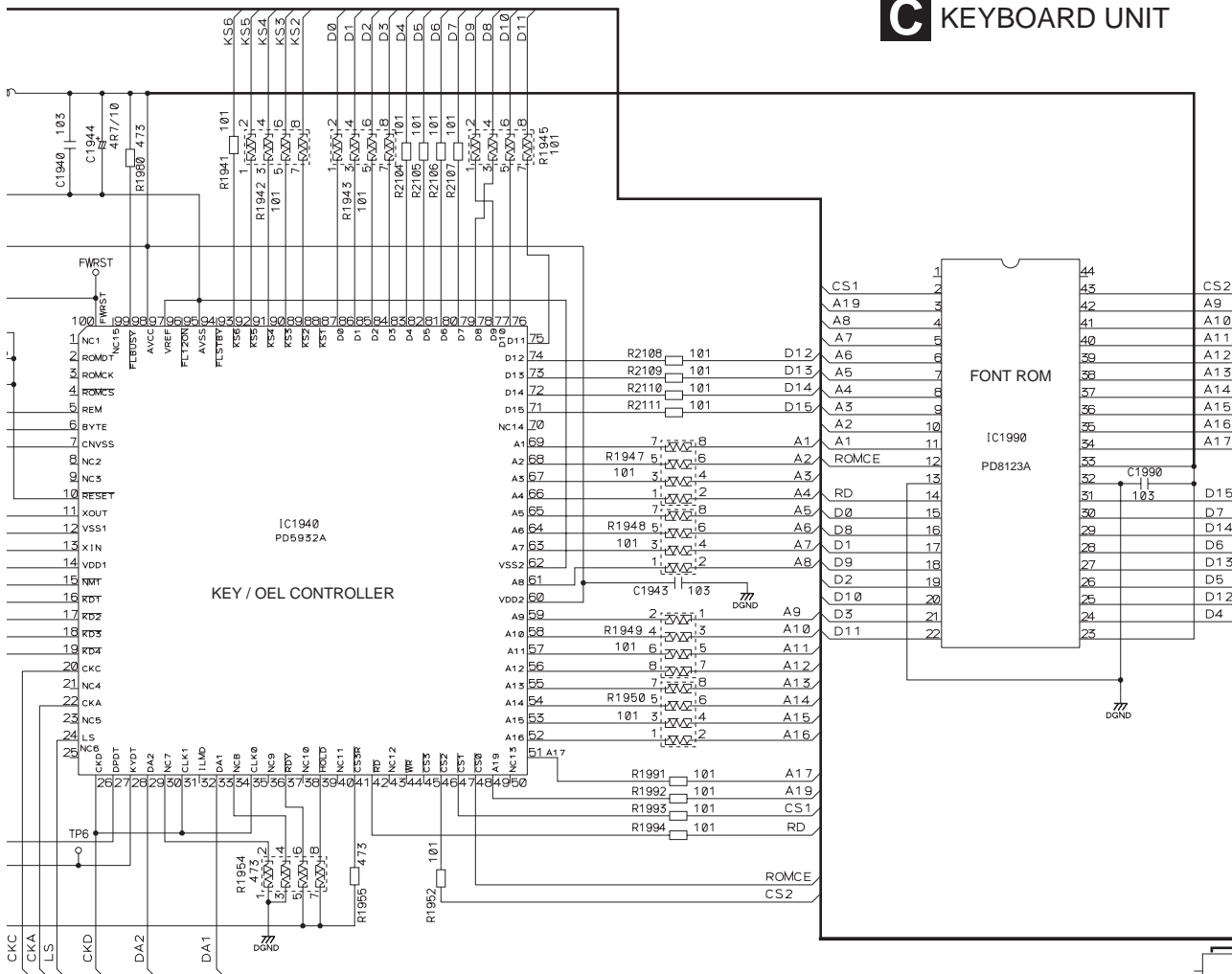
D

E

F



C KEYBOARD UNIT



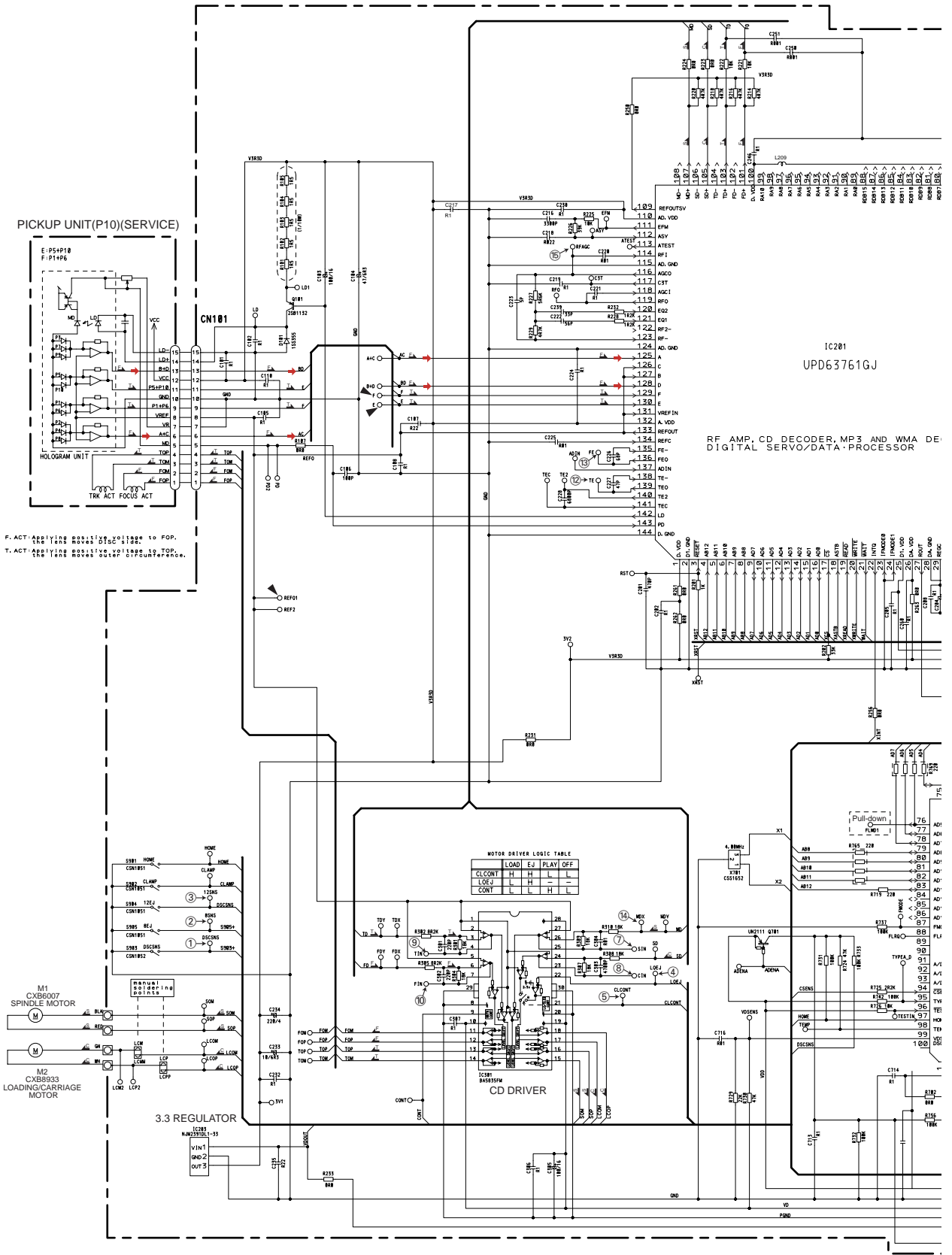
For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors
 Code Practical value
 123 12k ohms
 103 10k ohms

*Capacitors
 Code Practical value
 103 0.01uF
 101/10 100uF/10V

3.5 CD MECHANISM MODULE(GUIDE PAGE)(DEH-P7600MP)

D-a



MOTOR DRIVER LOGIC TABLE

	LOAD	EJ	PLAY	OFF
CLOUNT	H	H	L	L
LOEJ	L	H	-	-
CONT	L	L	H	L

RF AMP, CD DECODER, MP3 AND WMA DE
 DIGITAL SERVO/DATA PROCESSOR

IC301
 BAS455PM
 CD DRIVER

3.3 REGULATOR

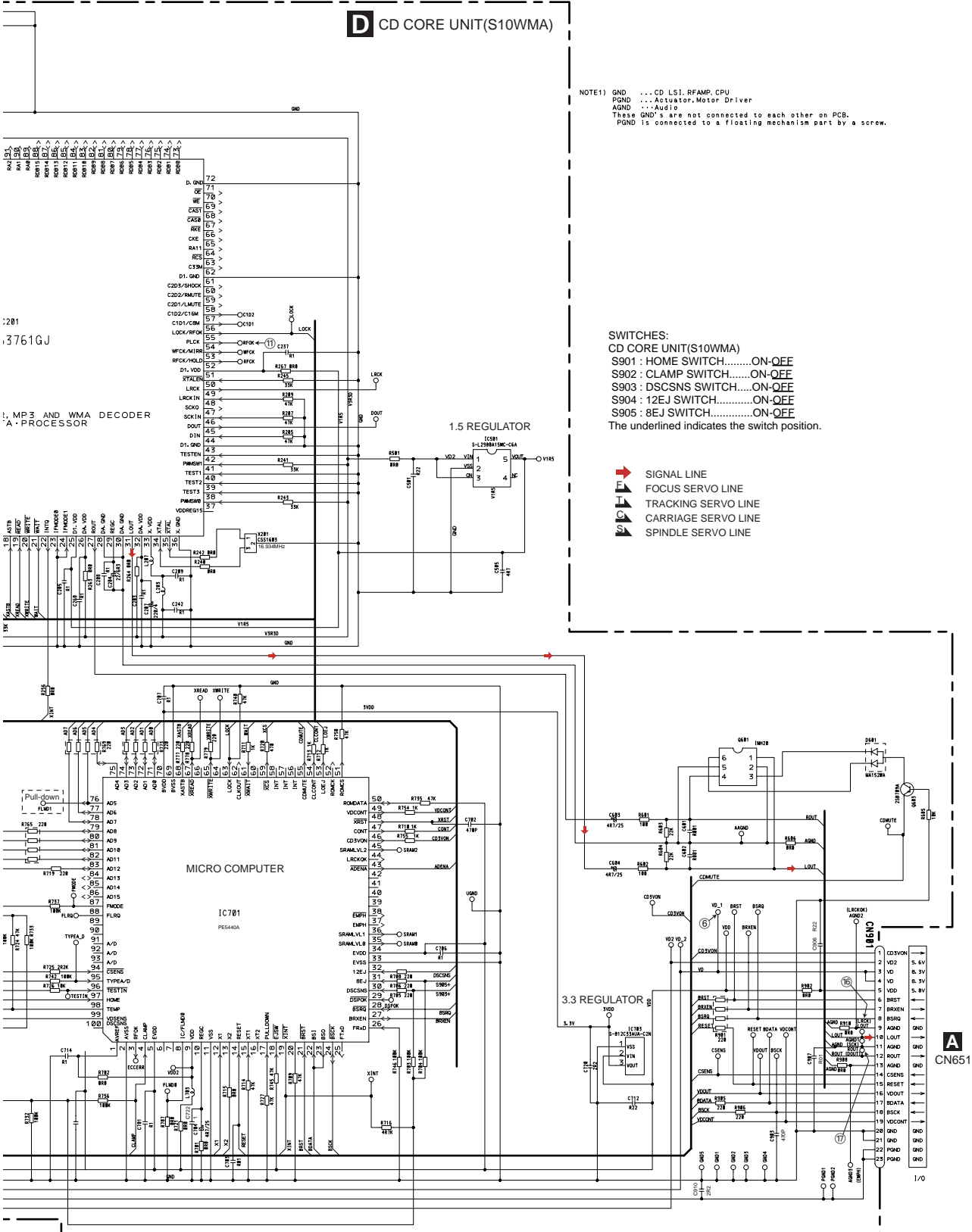
M1
 CXB6007
 SPINDLE MOTOR

M2
 CXB8933
 LOADING/CARRIAGE MOTOR

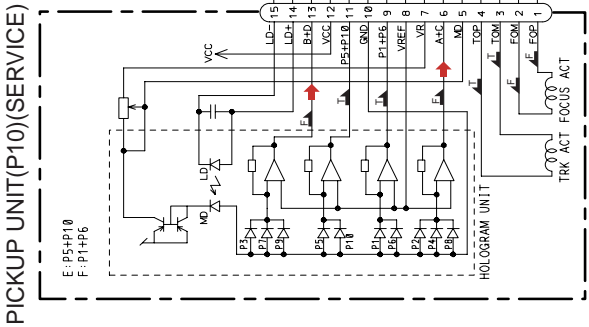
D

D-b

D CD CORE UNIT(S10WMA)

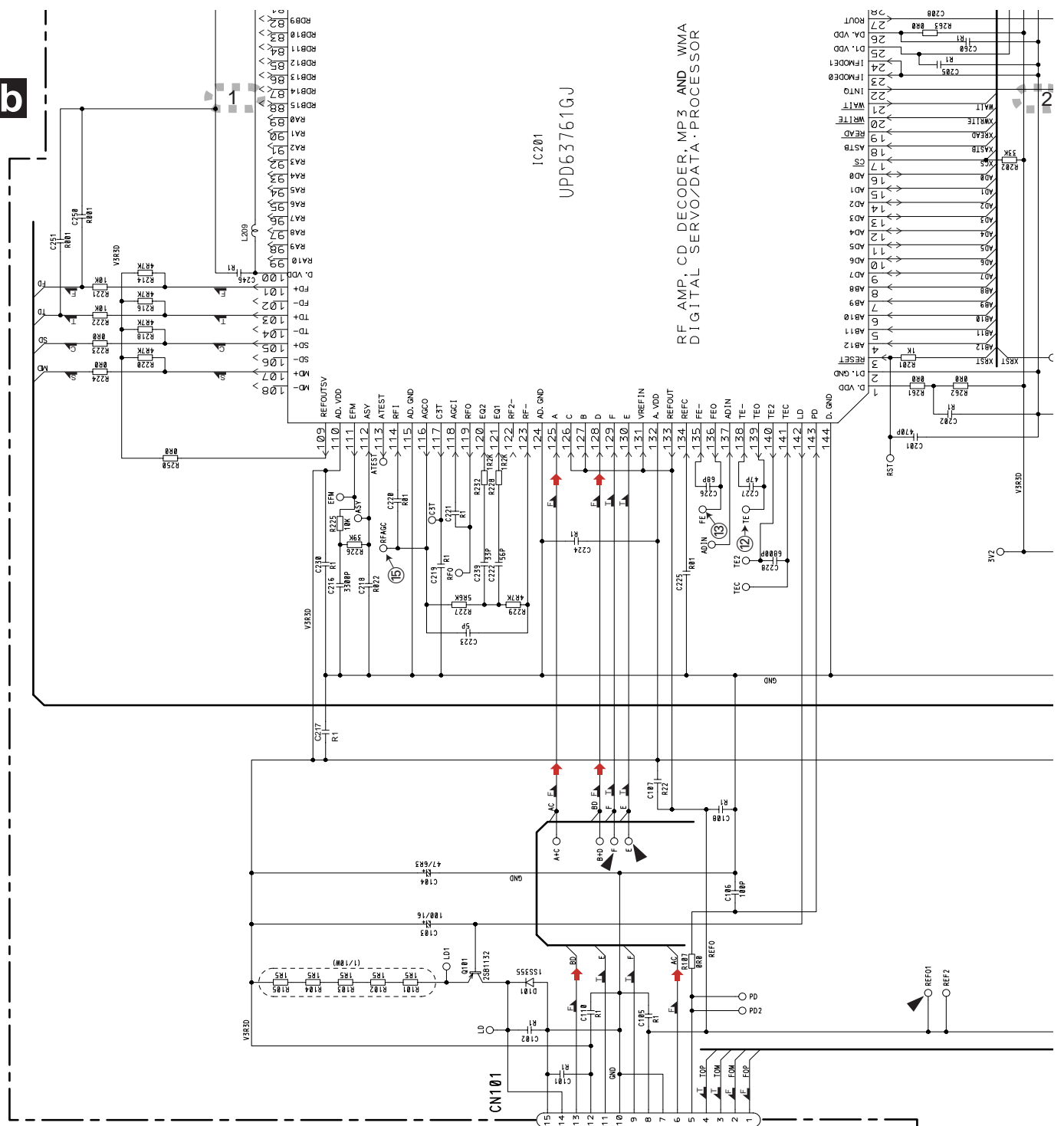


D-a



F. ACT: Applying positive voltage to FOP, the lens moves DISC side.
 T. ACT: Applying positive voltage to TOP, the lens moves outer circumference.

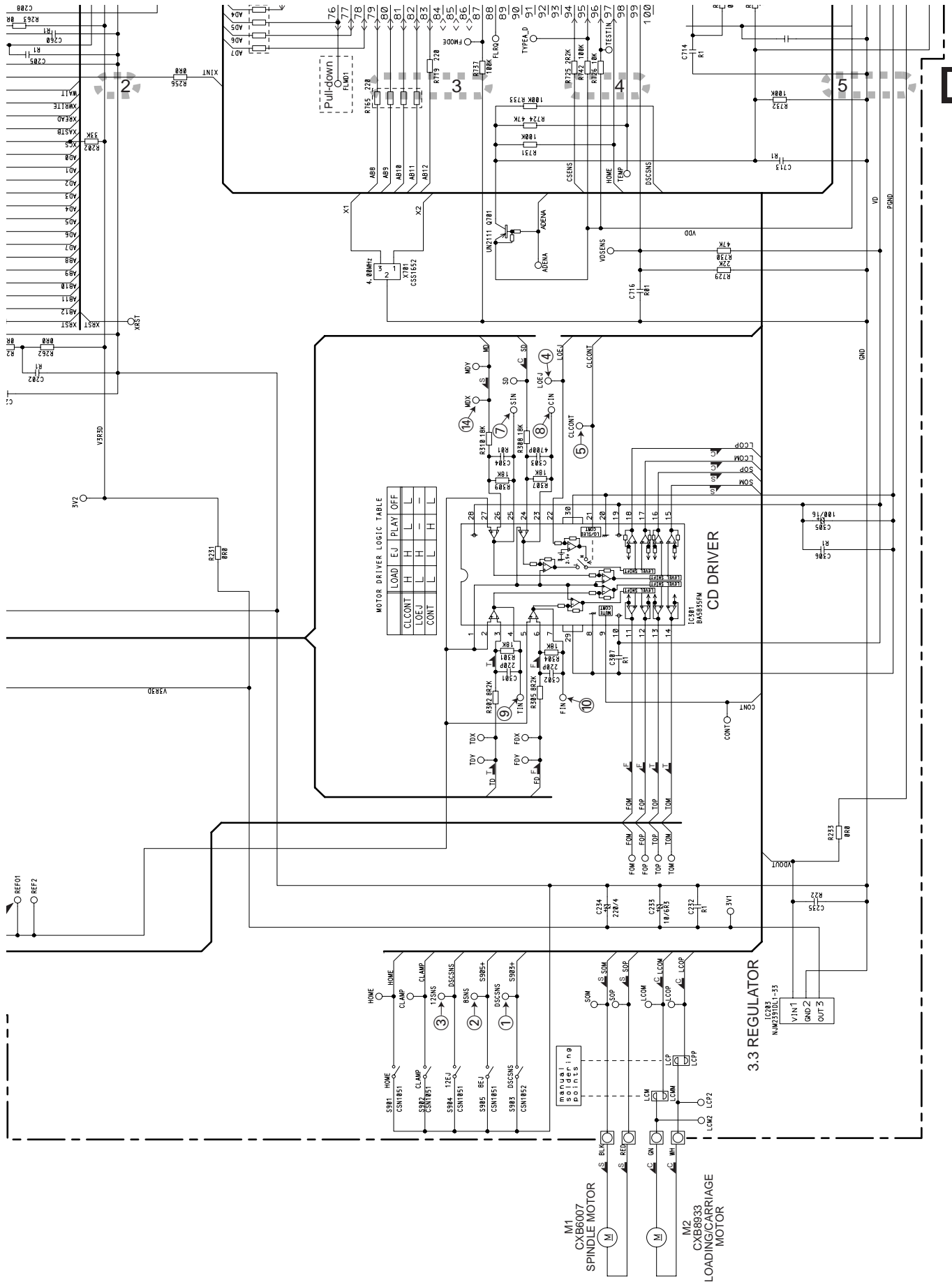
D-a D-b



D-b

A
B
C
D
E
F

1
2
3
4



D-b

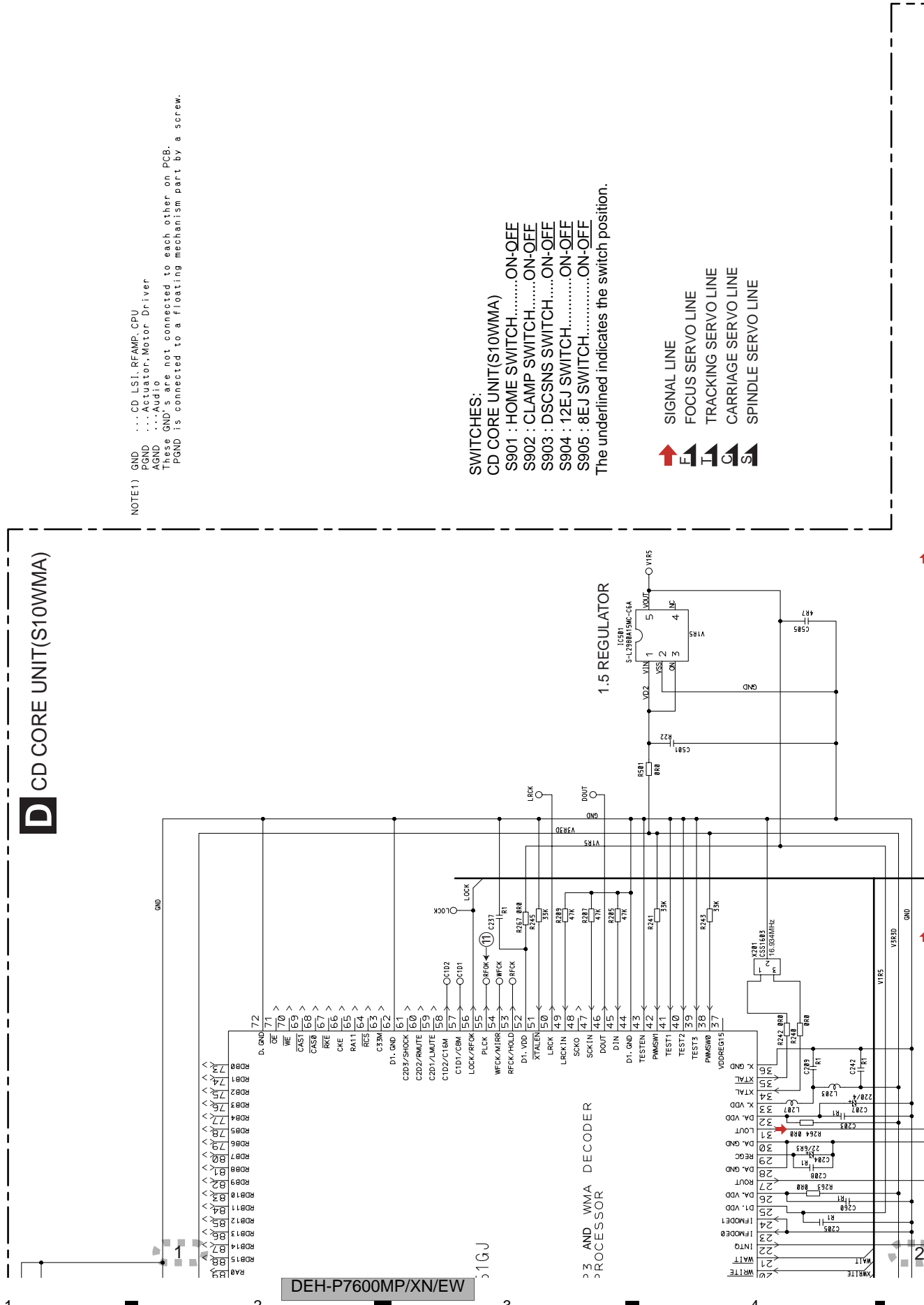
D-a D-b

D-a

D-a D-b

D-b

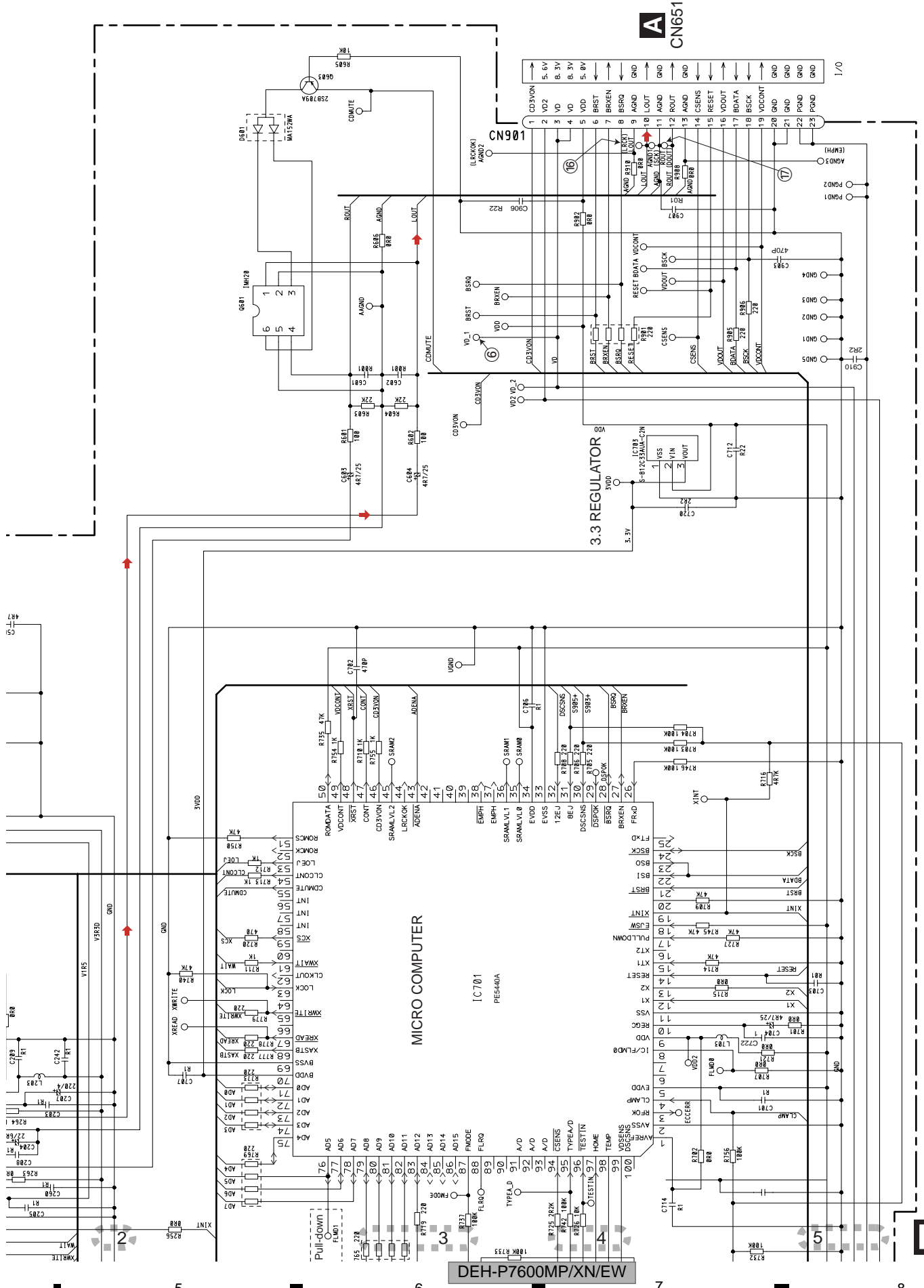
D CD CORE UNIT(S10WMA)



NOTE1) GND ...CD LSI, RFAMP, CPU
 PGND ...Actuator, Motor Driver
 AGND ...Audio
 These GND's are not connected to each other on PCB.
 PGND is connected to a floating mechanism part by a screw.

SWITCHES:
 CD CORE UNIT(S10WMA)
 S901 : HOME SWITCH.....ON-OFF
 S902 : CLAMP SWITCH.....ON-OFF
 S903 : DSCNS SWITCH.....ON-OFF
 S904 : 12EJ SWITCH.....ON-OFF
 S905 : 8EJ SWITCH.....ON-OFF
 The underlined indicates the switch position.

↑ **E1** SIGNAL LINE
 ↓ **I1** FOCUS SERVO LINE
 ↓ **C1** TRACKING SERVO LINE
 ↓ **S1** CARRIAGE SERVO LINE
 ↓ SPINDLE SERVO LINE



D-a D-b

D-b

DEH-P7600MP/XN/EW

● Waveforms

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
 2. Reference voltage REFO1(1.65V)

A

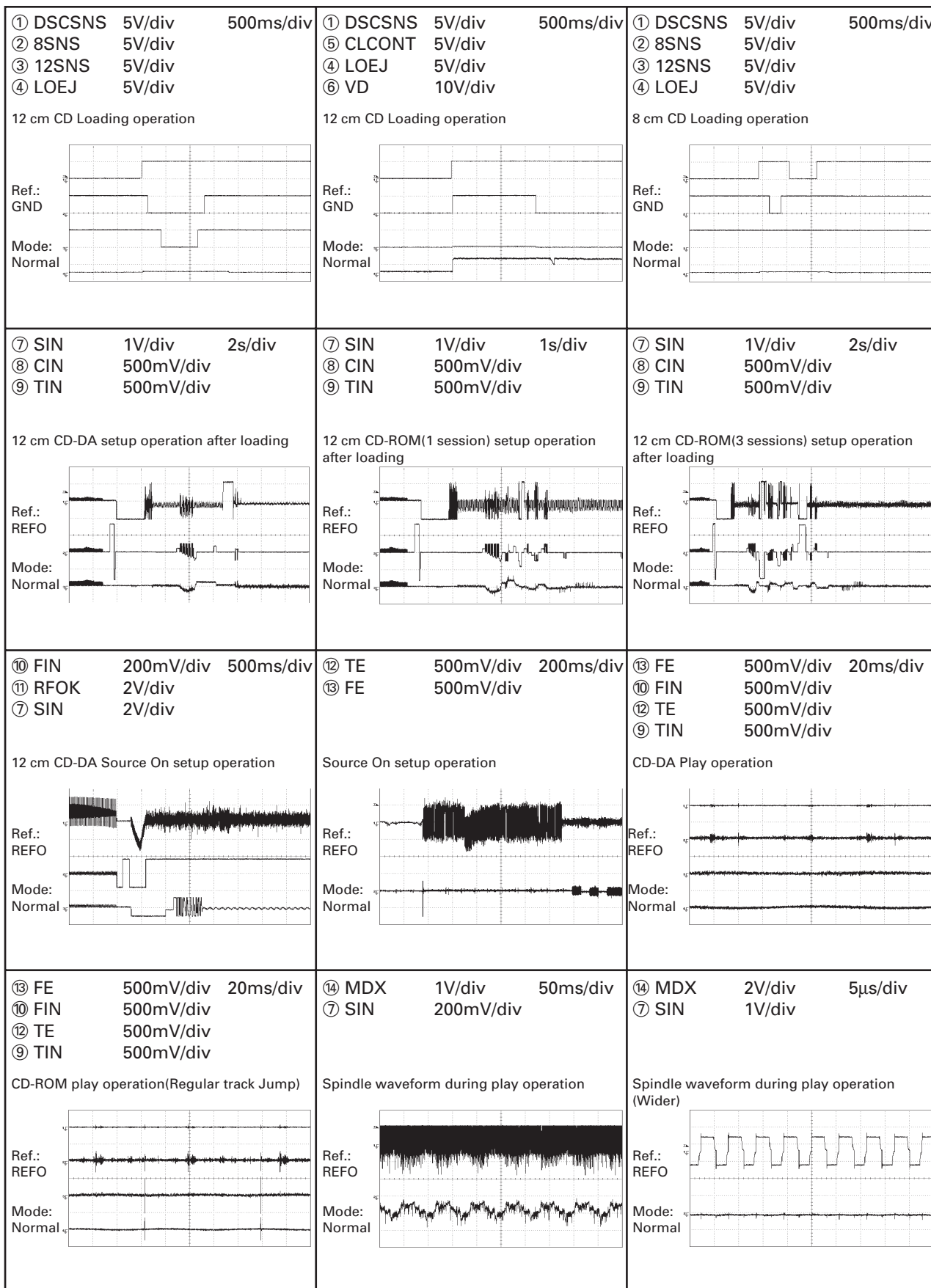
B

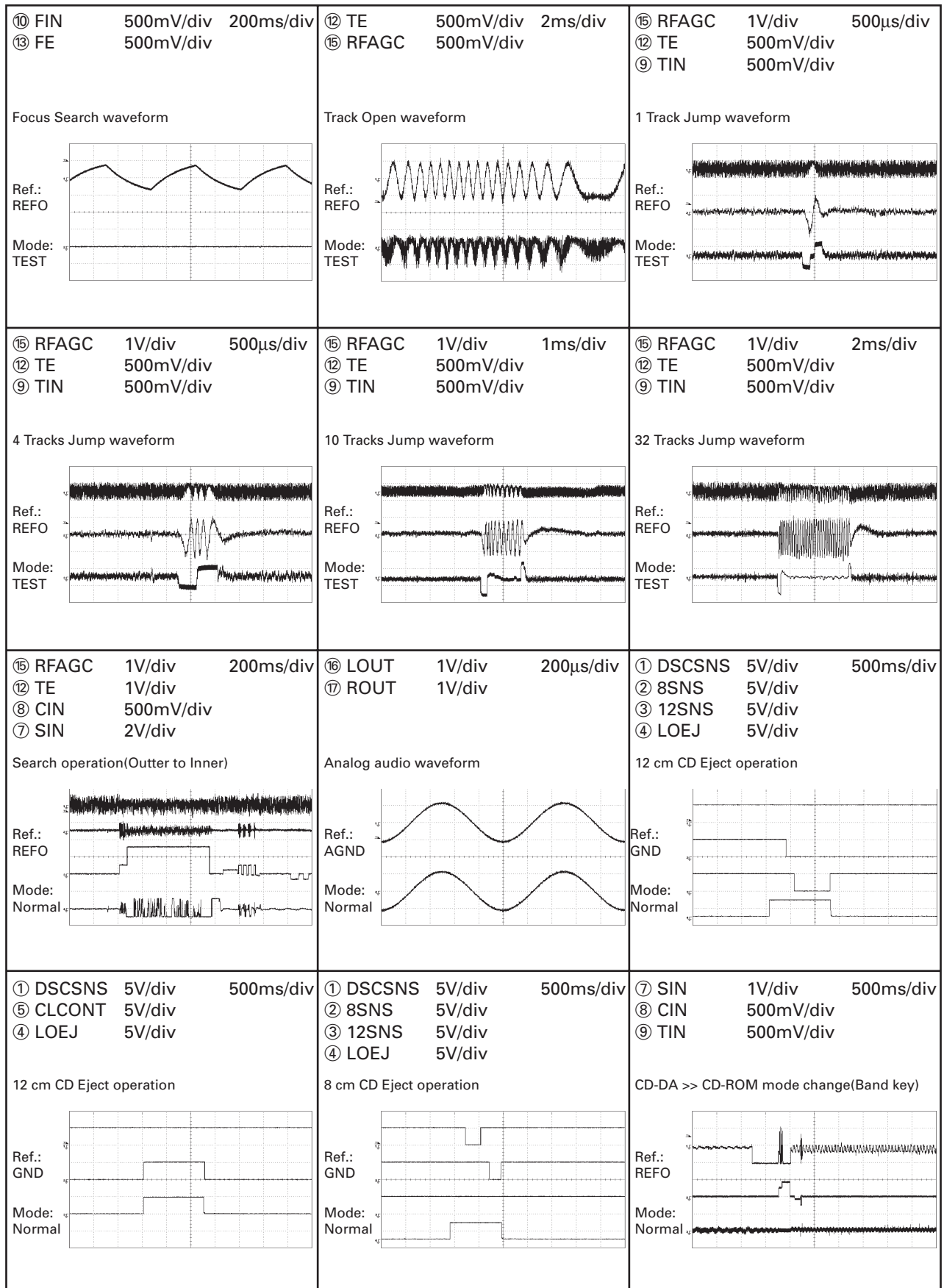
C

D

E

F

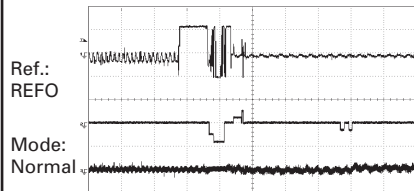




A

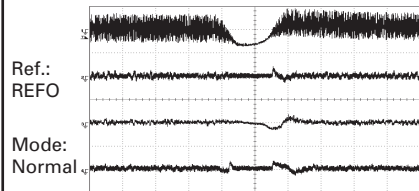
⑦ SIN 1V/div 500ms/div
 ⑧ CIN 500mV/div
 ⑨ TIN 500mV/div

CD-ROM >> CD-DA mode change(Band key)



⑮ RFAGC 1V/div 500μs/div
 ⑨ TIN 1V/div
 ⑫ TE 1V/div
 ⑩ FIN 1V/div

Black dot(800μm) during play



B

C

D

E

F

A

B

C

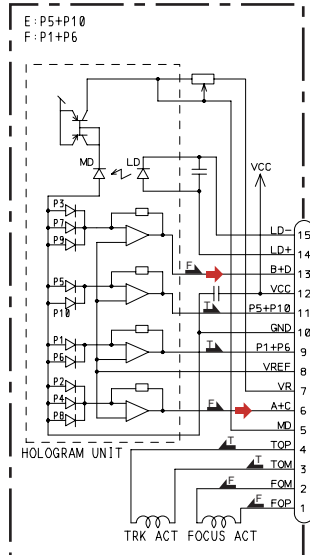
D

E

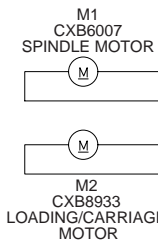
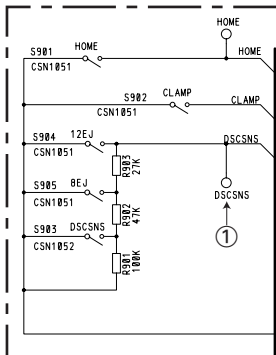
F

3.6 CD MECHANISM MODULE(DEH-P6600R)

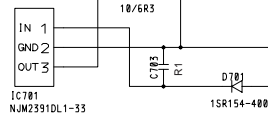
PICKUP UNIT(P10)(SERVICE)



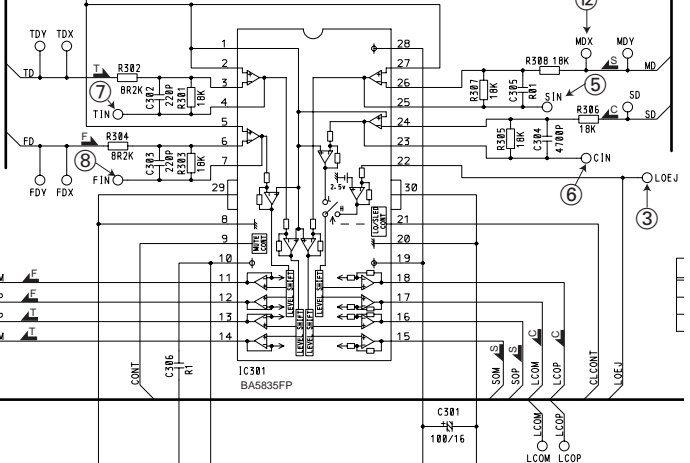
F. ACT: Applying positive voltage to FOP, the lens moves DISC side.
 T. ACT: Applying positive voltage to TOP, the lens moves outer circumference.



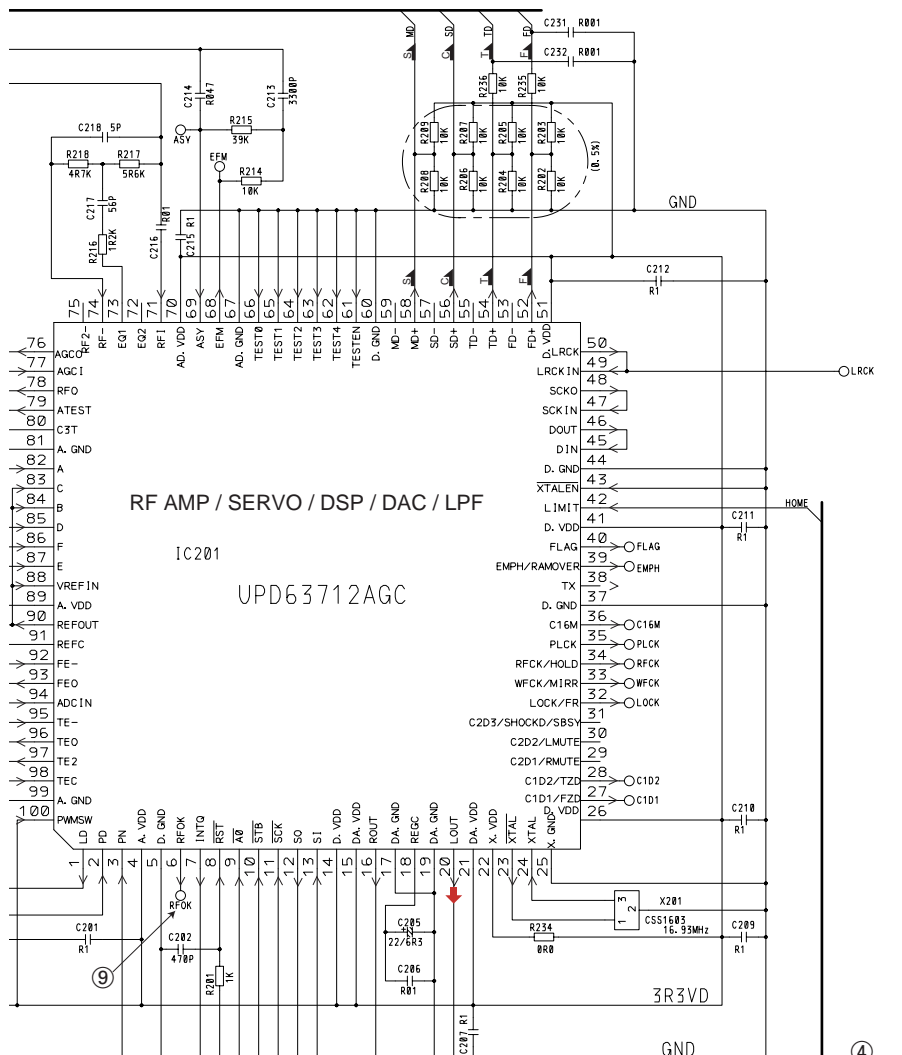
3.3V REGULATOR



MOTOR DRIVER



D CD CORE UNIT(S10)

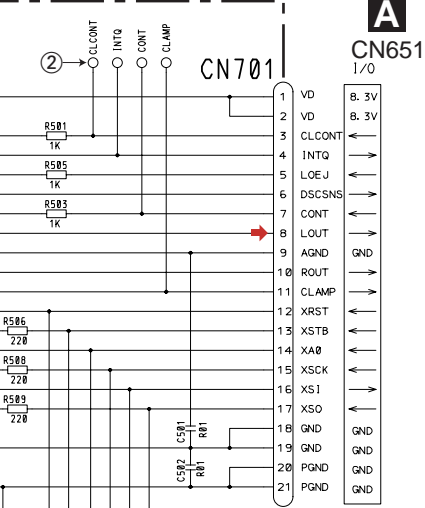
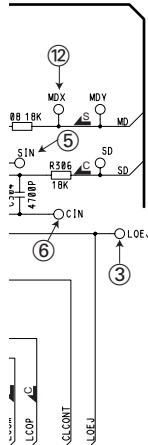


- SIGNAL LINE
- FOCUS SERVO LINE
- TRACKING SERVO LINE
- CARRIAGE SERVO LINE
- SPINDLE SERVO LINE

SWITCHES:

CD CORE UNIT (S10)
 S901 : HOME SWITCH.....ON-OFF
 S902 : CLAMP SWITCH.....ON-OFF
 S903 : DSCSNS SWITCH.....ON-OFF
 S904 : 12EJ SWITCH.....ON-OFF
 S905 : 8EJ SWITCH.....ON-OFF
 The underlined indicates the switch position.

- Monitor land (side A)
- Monitor land (side B)
- Land for manual soldering

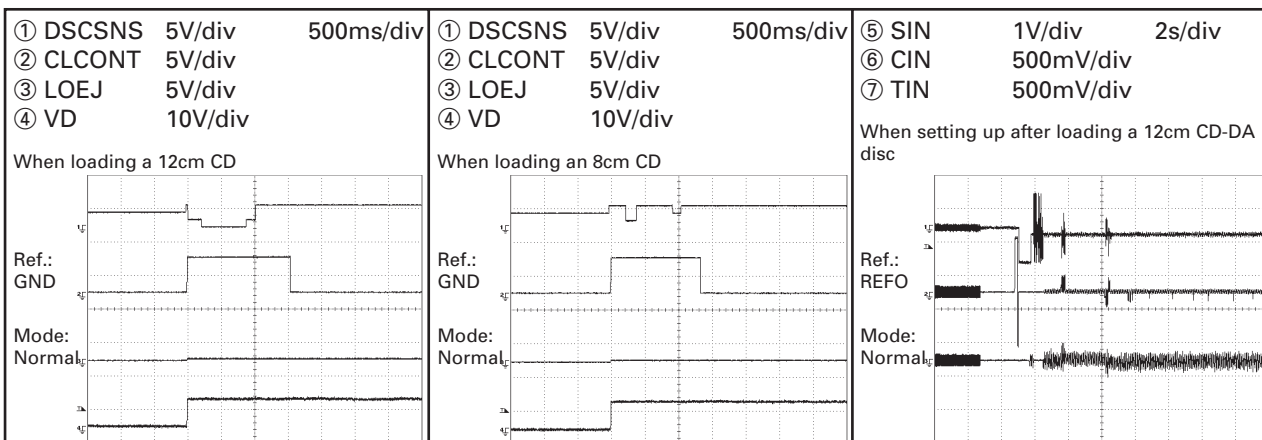


NOTE1) GND ... CD LSI
 PGND ... Actuator, Motor Driver
 AGND ... Audio
 These GND's are not connected to each other on PCB.
 PGND is connected to a floating mechanism part by a screw.

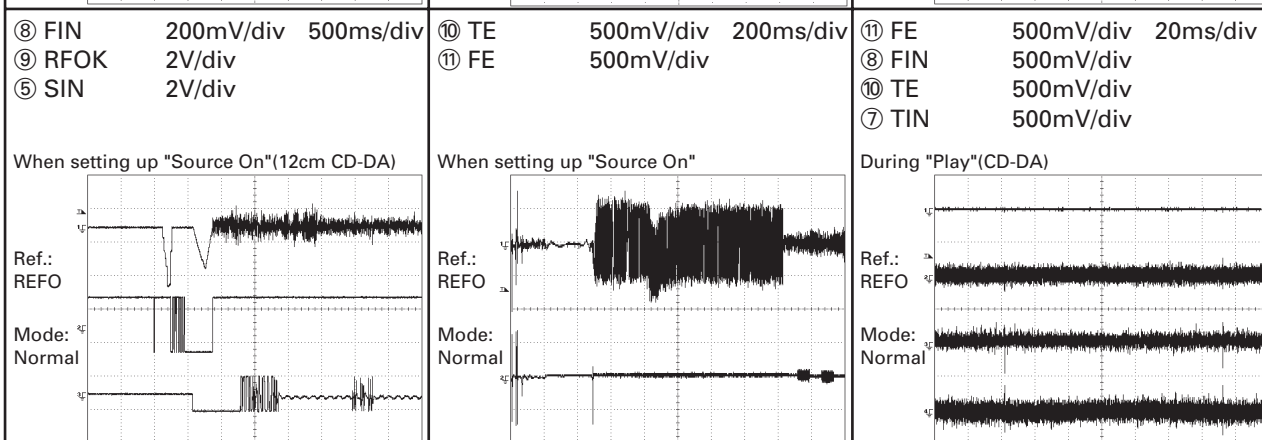
Waveforms

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65V)

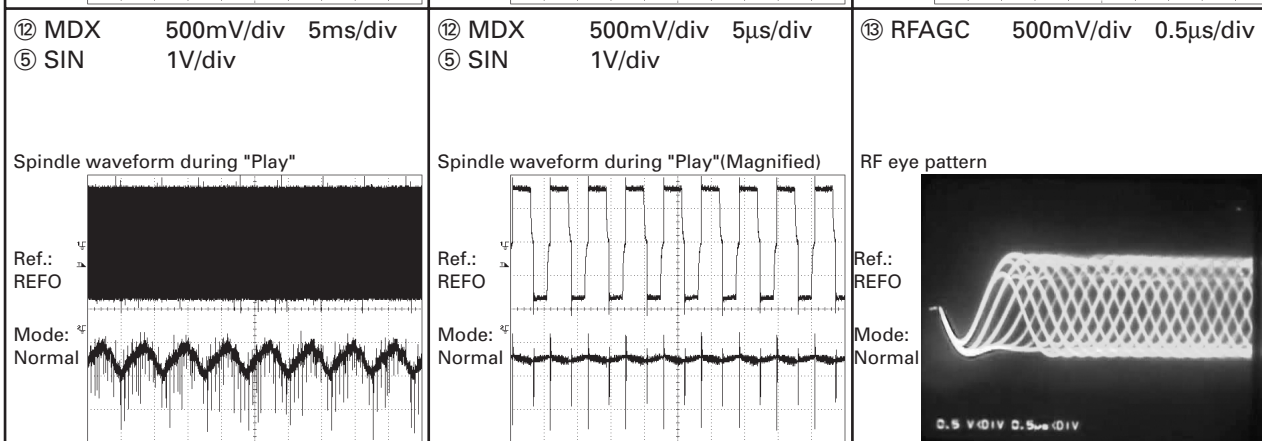
A



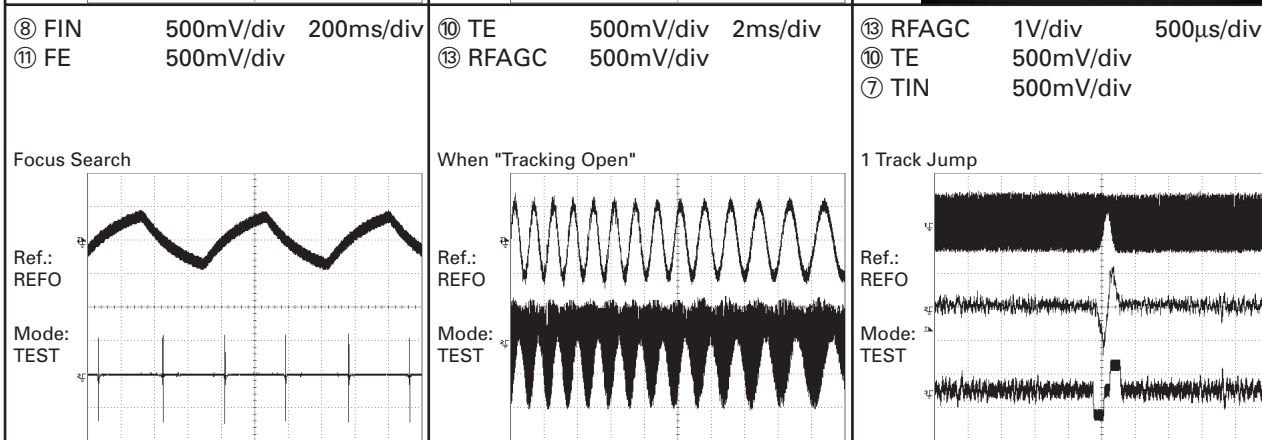
B



C

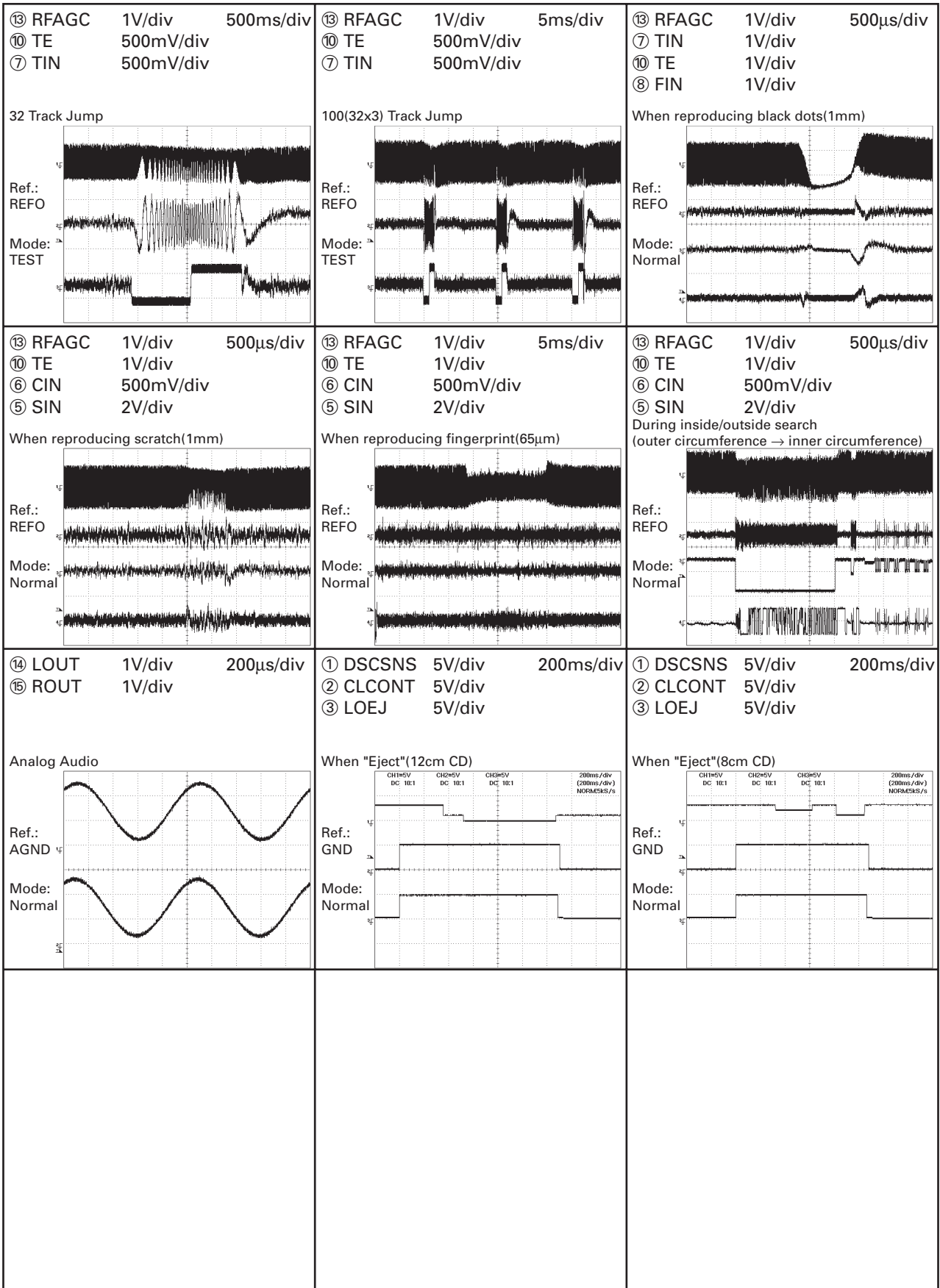


D



E

F



A
B
C
D
E
F

5. ELECTRICAL PARTS LIST

NOTE:

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

Chip Resistor

RS1/○S○○○○J,RS1/○○S○○○○J

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

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

Circuit Symbol and No.

Part No.

Circuit Symbol and No.

Part No.

A

Unit Number: XWM7044(P7600MP)

Unit Name: Tuner Amp Unit

MISCELLANEOUS

IC 101	IC	HA12240FP	D 134	Diode	DAP202U
IC 131	IC	NJM4558MD	D 301	Diode	S5688G
IC 201	IC	PML009A	D 302	Diode	S5688G
IC 301	IC	PAL007A	D 303	Diode	S5688G
IC 401	IC	NJM2391DL1-33	D 304	Diode	S5688G
IC 601	IC	PD5920A	D 401	Diode	S5688G
IC 602	IC	S-80835CNUA-B8U	D 402	Diode	S5688G
IC 801	IC	TC7SET08FU	D 403	Diode	S5688G
IC 851	IC	NJM2360M	D 650	Diode	HZS6L(C1)
Q 101	Transistor	2SA1576	D 651	Diode	HZS9L(B1)
Q 102	Transistor	DTC114EU	D 751	Diode	RB706F-40
Q 301	Transistor	DTC124EU	D 803	Diode Network	DA204U
Q 351	Transistor	UMH3N	D 804	Diode	DAN202U
Q 352	Transistor	UMH3N	D 805	Diode	DAP202U
Q 353	Transistor	UMH3N	D 806	Diode	DAN202U
Q 401	Transistor	UMH1N	D 807	Diode	DAP202U
Q 402	Transistor	UMH1N	D 808	Diode	HZS11L(A1)
Q 650	Transistor	2SD1760F5	D 851	Diode	HZS11L(A1)
Q 651	Transistor	2SD2396	D 852	Diode	RB411D
Q 652	Transistor	UMD2N	D 911	Diode	S5688G
Q 653	Transistor	UMD2N	D 912	Diode	HZS6L(B1)
Q 803	Transistor	2SD1767	D 921	Diode	HZS9L(B3)
Q 804	Transistor	UMD2N	D 931	Diode	HZS7L(A1)
Q 805	Transistor	DTC143EU	D 932	Diode	HZS7L(C3)
Q 807	Transistor	2SA1576	D 937	Diode	MA111
Q 808	Transistor	DTC114EU	D 951	Diode	DAN202U
Q 851	Transistor	2SD1760F5	D 981	Diode	DAN202U
Q 852	Transistor	UMD2N	D 982	Diode	HZS9L(A2)
Q 911	Transistor	2SD2396	L 101	Inductor	LAU2R2K
Q 913	Transistor	UMD2N	L 201	Ferri-Inductor	LAU4R7K
Q 921	Transistor	2SD2396	L 301	Choke Coil 600μ H	CTH1280
Q 922	Transistor	DTC114EU	L 401	Ferri-Inductor	LAU4R7K
Q 923	Transistor	2SB1243	L 403	Inductor	LAU1R0K
Q 931	Transistor	UMX1N	L 404	Inductor	LAU1R0K
Q 932	Transistor	DTC114EU	L 405	Inductor	LAUR47K
Q 951	Transistor	2SA1576	L 406	Inductor	CTF1385
Q 981	Transistor	2SC4081	L 601	Ferri-Inductor	LAU100K
Q 982	Transistor	UMD2N	L 683	Ferri-Inductor	LAU100K
D 131	Diode Network	DA204U	L 802	Inductor	CTF1382
D 132	Diode Network	DA204U	L 852	Inductor	CTF1510
D 133	Diode	DAN202U	L 853	Inductor	CTF1489
			L 951	Inductor	LAU2R2K
			X 601	Radiator 10.00MHz	CSS1599
			S 802	Switch(DETACH SENSE)	CSN1039
			VR751	Semi-fixed 10kΩ(B)	CCP1229
			FU351	Fuse 3A	CEK1286
			FU353	Fuse 3A	CEK1286
			BZ641	Buzzer	CPV1062
			AR401	Surge Protector	DSP-201M-S00B

<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
Fuse 10A	CEK1208	R 410	RS1/16S681J
		R 412	RAB4C223J
FM/AM Tuner Unit	CWE1645	R 416	RS1/16S681J
		R 417	RS1/16S681J
		R 419	RS1/16S681J
<u>RESISTORS</u>			
R 101	RS1/16S101J	R 421	RS1/16S681J
R 102	RS1/16S620J	R 605	RS1/16S0R0J
R 103	RS1/16S101J	R 606	RS1/16S104J
R 104	RS1/16S222J	R 607	RS1/16S822J
R 105	RS1/16S102J	R 608	RS1/16S221J
R 106	RS1/16S472J	R 609	RS1/16S221J
R 107	RS1/16S223J	R 610	RS1/16S682J
R 108	RS1/16S472J	R 611	RS1/16S682J
R 109	RS1/16S821J	R 612	RS1/16S104J
R 110	RS1/16S821J	R 613	RS1/16S102J
R 111	RS1/16S223J	R 616	RS1/16S473J
R 112	RS1/16S223J	R 617	RS1/16S102J
R 113	RS1/16S102J	R 630	RS1/16S104J
R 114	RS1/16S102J	R 632	RS1/16S104J
R 115	RS1/16S472J	R 641	RS1/16S102J
R 133	RS1/16S563J	R 645	RS1/16S271J
R 134	RS1/16S104J	R 651	RD1/4PU221J
R 139	RS1/16S563J	R 652	RD1/4PU221J
R 140	RS1/16S104J	R 656	RS1/16S102J
R 147	RS1/16S474J	R 657	RS1/16S102J
R 148	RS1/16S474J	R 665	RD1/4PU0R0J
R 161	RS1/16S102J	R 666	RS1/16S0R0J
R 162	RS1/16S102J	R 669	RS1/16S0R0J
R 163	RS1/16S103J	R 671	RS1/16S0R0J
R 164	RS1/16S103J	R 672	RS1/16S0R0J
R 201	RAB4C102J	R 676	RS1/16S102J
R 241	RS1/16S102J	R 677	RS1/16S104J
R 242	RS1/16S102J	R 678	RS1/16S102J
R 247	RS1/16S101J	R 680	RS1/16S222J
R 248	RS1/16S101J	R 681	RS1/16S104J
R 249	RS1/16S101J	R 689	RS1/16S0R0J
R 250	RS1/16S101J	R 751	RS1/16S104J
R 301	RS1/16S103J	R 752	RS1/16S222J
R 302	RS1/16S103J	R 753	RS1/16S561J
R 303	RS1/16S153J	R 754	RS1/16S104J
R 304	RS1/16S331J	R 802	RS1/16S222J
R 351	RS1/16S821J	R 803	RS1/16S472J
R 352	RS1/16S821J	R 804	RS1/16S1R0J
R 353	RS1/16S821J	R 805	RS1/16S391J
R 354	RS1/16S821J	R 806	RS1/16S391J
R 355	RS1/16S821J	R 807	RS1/16S473J
R 356	RS1/16S821J	R 808	RS1/16S473J
R 357	RS1/16S223J	R 809	RS1/16S102J
R 358	RS1/16S223J	R 810	RS1/16S222J
R 359	RS1/16S223J	R 811	RS1/16S222J
R 360	RS1/16S223J	R 812	RS1/16S222J
R 361	RS1/16S223J	R 813	RS1/16S222J
R 362	RS1/16S223J	R 814	RS1/16S222J
R 403	RS1/16S681J	R 815	RS1/16S473J
		R 816	RS1/16S104J
R 405	RS1/16S681J	R 817	RD1/4PU391J
R 406	RS1/16S681J	R 818	RS1/16S104J
R 407	RS1/16S681J	R 819	RS1/16S222J
R 408	RS1/16S681J	R 820	RS1/16S222J
R 409	RS1/16S681J	R 823	RS1/16S102J

Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.**

R 824	RS1/16S473J	C 211	CEJQ4R7M35
R 825	RS1/16S102J	C 212	CEJQ4R7M35
R 826	RS1/16S102J	C 213	CEJQ4R7M35
R 827	RS1/16S102J	C 214	CEJQ4R7M35
R 828	RS1/16S102J	C 215	CEJQ4R7M35
R 851	RS1/16S331J	C 216	CEJQ4R7M35
R 852	RD1/4PU302J	C 217	CEJQ4R7M35
R 853	RD1/4PU302J	C 218	CEJQ4R7M35
R 854	RS1/16S121J	C 219	CCSRCH120J50
R 855	RS1/16S391J	C 220	CCSRCH120J50
R 856	RS1/16S1R0J	C 221	CCSRCH120J50
R 857	RS1/16S331J	C 222	CCSRCH120J50
R 903	RS1/16S223J	C 225	CEJQ100M16
R 912	RS1/16S222J	C 241	CKSRYB152K50
R 913	RS1/16S223J	C 242	CKSRYB152K50
R 914	RS1/16S104J	C 306	CEJQ330M10
R 915	RS1/16S104J	C 307	CCH1486
R 916	RS1/16S104J	C 309	CKSRYB104K16
R 923	RS1/16S103J	C 310	CEJQ100M16
R 924	RD1/4PU122J	C 311	CKSYB475K16
R 925	RS1/16S182J	C 312	CKSYB475K16
R 931	RS1/16S472J	C 317	CKSRYB474K10
R 932	RS1/16S473J	C 318	CKSRYB474K10
R 933	RS1/16S103J	C 321	CKSRYB474K10
R 934	RS1/16S473J	C 322	CKSRYB474K10
R 935	RS1/16S104J	C 323	CKSRYB474K10
R 936	RS1/16S103J	C 324	CKSRYB474K10
R 938	RD1/4PU102J	C 325	CKSQYB225K10
R 939	RD1/4PU102J	C 326	CKSQYB225K10
R 951	RD1/4PU153J	C 327	CKSRYB474K10
R 952	RS1/16S472J	C 328	CKSRYB474K10
R 953	RS1/16S472J	C 351	CEJQ4R7M35
R 954	RS1/16S102J	C 352	CEJQ4R7M35
R 983	RS1/16S223J	C 353	CEJQ4R7M35
R 984	RS1/16S473J	C 354	CEJQ4R7M35
R 985	RS1/16S102J	C 355	CEJQ4R7M35

3300 μ F/16V**CAPACITORS**

C 101	CKSRYB104K16	C 401	CKSRYB104K16
C 102	CKSRYB473K25	C 402	CEJQ101M10
C 131	CKSRYB104K16	C 404	CKSYB475K16
C 132	CKSRYB104K16	C 405	CCSRCH680J50
C 141	CKSRYB104K16	C 406	CEJQ470M10
		C 408	CKSYB475K16
C 142	CKSRYB103K50	C 409	CEJQ1R0M50
C 143	CKSRYB474K10	C 411	CCSRCH101J50
C 144	CKSRYB474K10	C 412	CCSRCH470J50
C 145	CCSRCH101J50	C 415	CCSRCH101J50
C 146	CCSRCH101J50	C 601	CEJQ4R7M35
C 147	CKSRYB104K16	C 602	CKSQYB105K16
C 201	CEJQ1R0M50	C 603	CEJQ2R2M50
C 202	CEJQ1R0M50	C 604	CCSRCH200J50
C 203	CKSRYB104K16	C 605	CCSRCH200J50
C 204	CKSRYB104K16	C 609	CCSRCH101J50
C 205	CKSRYB105K10	C 644	CEJQ101M10
C 206	CEJQ470M16	C 645	CKSRYB473K16
C 207	CEJQ1R0M50	C 646	CCSRCH470J50
C 208	CEJQ1R0M50	C 647	CKSRYB683K16
C 209	CEJQ1R0M50	C 651	CEJQ101M10
C 210	CEJQ1R0M50	C 652	CKSRYB473K25

<u>Circuit Symbol and No.</u>		<u>Part No.</u>	<u>Circuit Symbol and No.</u>		<u>Part No.</u>
C 654		CKSRYB152K50	Q 804	Transistor	UMD2N
C 655		CKSRYB152K50	Q 805	Transistor	DTC143EU
C 657		CCSRCH470J50	Q 807	Transistor	2SA1576
C 658	470µ F/16V	CCH1183	Q 808	Transistor	DTC114EU
C 662		CCSRCH471J50	Q 851	Transistor	2SD1760F5
C 751		CEJQ100M16	Q 852	Transistor	UMD2N
C 752		CEJQNP100M16	Q 911	Transistor	2SD2396
C 753		CEJQ220M10	Q 913	Transistor	UMD2N
C 754		CKSRYB474K10	Q 921	Transistor	2SD2396
C 756		CKSRYB474K10	Q 922	Transistor	DTC114EU
C 805		CKSRYB473K25	Q 923	Transistor	2SB1243
C 806		CKSRYB473K25	Q 931	Transistor	UMX1N
C 807		CKSRYB473K25	Q 932	Transistor	DTC114EU
C 851		CEJQ470M16	Q 951	Transistor	2SA1576
C 853	4.7µ F	CCG1111	Q 981	Transistor	2SC4081
C 855		CEJQ100M25	Q 982	Transistor	UMD2N
C 856		CCSRCH331J50	D 131	Diode Network	DA204U
C 857		CEJQ330M25	D 132	Diode Network	DA204U
C 858		CKSRYB104K16	D 133	Diode	DAN202U
C 859		CEJQ101M10	D 134	Diode	DAP202U
C 860		CKSRYB104K16	D 301	Diode	S5688G
C 861		CKSRYB223K50	D 302	Diode	S5688G
C 911	470µ F/16V	CCH1331	D 303	Diode	S5688G
C 912		CKSRYB472K50	D 304	Diode	S5688G
C 913		CKSRYB103K50	D 401	Diode	S5688G
C 914		CEJQ470M10	D 402	Diode	S5688G
C 921		CEJQ221M10	D 403	Diode	S5688G
C 922		CKSRYB103K50	D 651	Diode	HZS9L(B1)
C 923		CEJQ101M16	D 751	Diode	RB706F-40
C 931		CEJQ1R0M50	D 803	Diode Network	DA204U
C 932		CKSRYB104K16	D 804	Diode	DAN202U
			D 805	Diode	DAP202U
			D 806	Diode	DAN202U
			D 807	Diode	DAP202U
			D 808	Diode	HZS11L(A1)
			D 851	Diode	HZS11L(A1)
			D 852	Diode	RB411D
			D 911	Diode	S5688G
			D 912	Diode	HZS6L(B1)
IC 101	IC	HA12240FP	D 921	Diode	HZS9L(B3)
IC 131	IC	NJM4558MD	D 931	Diode	HZS7L(A1)
IC 201	IC	PML009A	D 932	Diode	HZS7L(C3)
IC 301	IC	PAL007A	D 937	Diode	MA111
IC 401	IC	NJM2391DL1-33	D 951	Diode	DAN202U
IC 601	IC	PD5922A	D 981	Diode	DAN202U
IC 602	IC	S-80835CNUA-B8U	D 982	Diode	HZS9L(A2)
IC 652	IC	TC7SET08FU	L 101	Inductor	LAU2R2K
IC 653	IC	TC7SET08FU	L 201	Ferri-Inductor	LAU4R7K
IC 801	IC	TC7SET08FU	L 301	Choke Coil 600µ H	CTH1280
IC 851	IC	NJM2360M	L 401	Ferri-Inductor	LAU4R7K
Q 101	Transistor	2SA1576	L 403	Inductor	LAU1R0K
Q 102	Transistor	DTC114EU	L 404	Inductor	LAU1R0K
Q 301	Transistor	DTC124EU	L 405	Inductor	LAUR47K
Q 352	Transistor	UMH3N	L 406	Inductor	CTF1385
			L 601	Ferri-Inductor	LAU100K
Q 353	Transistor	UMH3N	L 651	Inductor	CTF1382
Q 401	Transistor	UMH1N	L 802	Inductor	CTF1382
Q 402	Transistor	UMH1N	L 852	Inductor	CTF1510
Q 651	Transistor	2SD2396	L 853	Inductor	CTF1489
Q 652	Transistor	UMD2N	L 951	Inductor	LAU2R2K
Q 803	Transistor	2SD1767			

A**Unit Number:XWM7048(P6600R)****Unit Name:Tuner Amp Unit****MISCELLANEOUS**

Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.**

X 601 Radiator 10.00MHz
 S 802 Switch(DETACH SENSE)
 VR751 Semi-fixed 10kΩ(B)
 FU353 Fuse 3A
 BZ641 Buzzer

CSS1599
 CSN1039
 CCP1229
 CEK1286
 CPV1062

R 409
 R 410
 R 412
 R 416
 R 417

RS1/16S681J
 RS1/16S681J
 RAB4C223J
 RS1/16S681J
 RS1/16S681J

AR401 Surge Protector
 Fuse 10A
 FM/AM Tuner Unit

DSP-201M-S00B
 CEK1208
 CWE1645

R 419
 R 421
 R 606
 R 607
 R 616

RS1/16S681J
 RS1/16S681J
 RS1/16S104J
 RS1/16S822J
 RS1/16S473J

RESISTORS

R 101
 R 102
 R 103
 R 104
 R 105

RS1/16S101J
 RS1/16S620J
 RS1/16S101J
 RS1/16S222J
 RS1/16S102J

R 617
 R 630
 R 632
 R 641
 R 648

RS1/16S102J
 RS1/16S104J
 RS1/16S104J
 RS1/16S102J
 RS1/16S221J

R 106
 R 107
 R 108
 R 109
 R 110

RS1/16S472J
 RS1/16S223J
 RS1/16S472J
 RS1/16S821J
 RS1/16S821J

R 649
 R 651
 R 652
 R 653
 R 654

RS1/16S221J
 RD1/4PU221J
 RD1/4PU221J
 RS1/16S472J
 RS1/16S222J

R 111
 R 112
 R 113
 R 114
 R 115

RS1/16S223J
 RS1/16S223J
 RS1/16S102J
 RS1/16S102J
 RS1/16S472J

R 655
 R 656
 R 657
 R 658
 R 659

RS1/16S102J
 RS1/16S0R0J
 RS1/16S0R0J
 RS1/16S102J
 RS1/16S221J

R 133
 R 134
 R 139
 R 140
 R 147

RS1/16S563J
 RS1/16S104J
 RS1/16S563J
 RS1/16S104J
 RS1/16S474J

R 660
 R 661
 R 662
 R 663
 R 664

RS1/16S221J
 RS1/16S221J
 RS1/16S221J
 RS1/16S102J
 RS1/16S221J

R 148
 R 161
 R 162
 R 163
 R 164

RS1/16S474J
 RS1/16S102J
 RS1/16S102J
 RS1/16S103J
 RS1/16S103J

R 665
 R 667
 R 668
 R 670
 R 673

RD1/4PU0R0J
 RS1/16S221J
 RS1/16S222J
 RS1/16S221J
 RS1/16S104J

R 201
 R 241
 R 242
 R 247
 R 248

RAB4C102J
 RS1/16S0R0J
 RS1/16S0R0J
 RS1/16S101J
 RS1/16S101J

R 677
 R 682
 R 684
 R 689
 R 751

RS1/16S104J
 RS1/16S221J
 RS1/16S0R0J
 RS1/16S0R0J
 RS1/16S104J

R 249
 R 250
 R 301
 R 302
 R 303

RS1/16S101J
 RS1/16S101J
 RS1/16S103J
 RS1/16S103J
 RS1/16S153J

R 752
 R 753
 R 754
 R 802
 R 803

RS1/16S222J
 RS1/16S561J
 RS1/16S104J
 RS1/16S222J
 RS1/16S472J

R 304
 R 353
 R 354
 R 355
 R 356

RS1/16S331J
 RS1/16S821J
 RS1/16S821J
 RS1/16S821J
 RS1/16S821J

R 804
 R 805
 R 806
 R 807
 R 808

RS1/16S1R0J
 RS1/16S391J
 RS1/16S391J
 RS1/16S473J
 RS1/16S473J

R 359
 R 360
 R 361
 R 362
 R 403

RS1/16S223J
 RS1/16S223J
 RS1/16S223J
 RS1/16S223J
 RS1/16S681J

R 809
 R 810
 R 811
 R 812
 R 813

RS1/16S102J
 RS1/16S222J
 RS1/16S222J
 RS1/16S222J
 RS1/16S222J

R 405
 R 406
 R 407
 R 408

RS1/16S681J
 RS1/16S681J
 RS1/16S681J
 RS1/16S681J

R 814
 R 815
 R 816
 R 817
 R 818

RS1/16S222J
 RS1/16S473J
 RS1/16S104J
 RD1/4PU391J
 RS1/16S104J

<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
R 819	RS1/16S222J	C 209	CEJQ1R0M50
R 820	RS1/16S222J		
R 823	RS1/16S102J	C 210	CEJQ1R0M50
R 824	RS1/16S473J	C 211	CEJQ4R7M35
R 825	RS1/16S102J	C 212	CEJQ4R7M35
		C 213	CEJQ4R7M35
R 826	RS1/16S102J	C 214	CEJQ4R7M35
R 827	RS1/16S102J		
R 828	RS1/16S102J	C 215	CEJQ4R7M35
R 851	RS1/16S331J	C 216	CEJQ4R7M35
R 852	RD1/4PU302J	C 217	CEJQ4R7M35
		C 218	CEJQ4R7M35
R 853	RD1/4PU302J	C 219	CCSRCH120J50
R 854	RS1/16S121J		
R 855	RS1/16S391J	C 220	CCSRCH120J50
R 856	RS1/16S1R0J	C 221	CCSRCH120J50
R 857	RS1/16S331J	C 222	CCSRCH120J50
		C 225	CEJQ100M16
R 903	RS1/16S223J	C 306	CEJQ330M10
R 912	RS1/16S222J		
R 913	RS1/16S223J	C 307	3300µ F/16V CCH1486
R 914	RS1/16S104J	C 309	CKSRYB104K16
R 915	RS1/16S104J	C 310	CEJQ100M16
		C 311	CKSYB475K16
R 916	RS1/16S104J	C 312	CKSYB475K16
R 923	RS1/16S103J		
R 924	RD1/4PU122J	C 317	CKSRYB474K10
R 925	RS1/16S182J	C 318	CKSRYB474K10
R 931	RS1/16S472J	C 321	CKSRYB474K10
		C 322	CKSRYB474K10
R 932	RS1/16S473J	C 323	CKSRYB474K10
R 933	RS1/16S103J		
R 934	RS1/16S473J	C 324	CKSRYB474K10
R 935	RS1/16S104J	C 325	CKSQYB225K10
R 936	RS1/16S103J	C 326	CKSQYB225K10
		C 327	CKSRYB474K10
R 938	RD1/4PU102J	C 328	CKSRYB474K10
R 939	RD1/4PU102J		
R 951	RD1/4PU153J	C 353	CEJQ4R7M35
R 952	RS1/16S472J	C 354	CEJQ4R7M35
R 953	RS1/16S472J	C 355	CEJQ4R7M35
		C 356	CEJQ4R7M35
R 954	RS1/16S102J	C 401	CKSRYB103K50
R 983	RS1/16S223J		
R 984	RS1/16S473J	C 402	CEJQ101M10
R 985	RS1/16S102J	C 404	CKSYB475K16
		C 405	CCSRCH680J50
		C 406	CEJQ470M10
		C 408	CKSYB475K16
<u>CAPACITORS</u>			
C 101	CKSRYB104K16		
C 102	CKSRYB473K25	C 409	CEJQ1R0M50
C 131	CKSRYB104K16	C 411	CCSRCH101J50
C 132	CKSRYB104K16	C 412	CCSRCH470J50
C 141	CKSRYB104K16	C 415	CCSRCH101J50
		C 601	CEJQ4R7M35
C 142	CKSRYB103K50		
C 143	CKSRYB474K10	C 602	CKSQYB105K16
C 144	CKSRYB474K10	C 603	CEJQ2R2M50
C 145	CCSRCH101J50	C 604	CCSRCH200J50
C 146	CCSRCH101J50	C 605	CCSRCH200J50
		C 609	CCSRCH101J50
C 147	CKSRYB104K16		
C 201	CEJQ1R0M50	C 651	CEJQ101M10
C 202	CEJQ1R0M50	C 652	CKSRYB473K25
C 203	CKSRYB104K16	C 653	CKSRYB473K25
C 204	CKSRYB104K16	C 656	CKSRYB473K25
		C 657	CCSRCH470J50
C 205	CKSRYB105K10		
C 206	CEJQ470M16	C 662	CCSRCH471J50
C 207	CEJQ1R0M50	C 751	CEJQ100M16
C 208	CEJQ1R0M50	C 752	CEJQNP100M16
		C 753	CEJQ220M10

Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.**

C 754		CKSRYB474K10	S 1902	Push Switch	CSG1132
A C 756		CKSRYB474K10	S 1903	Push Switch	CSG1132
C 805		CKSRYB473K25	S 1904	Push Switch	CSG1111
C 806		CKSRYB473K25	S 1905	Push Switch	CSG1111
C 807		CKSRYB473K25	S 1906	Switch	CSG1110
C 851		CEJQ470M16	S 1907	Push Switch	CSG1132
C 853	4.7μ F	CCG1111	S 1908	Push Switch	CSG1131
C 855		CEJQ100M25	S 1909	Push Switch	CSG1131
C 856		CCSRCH331J50	S 1910	Push Switch	CSG1131
C 857		CEJQ330M25	S 1911	Push Switch	CSG1131
C 858		CKSRYB104K16	S 1912	Push Switch	CSG1131
C 859		CEJQ101M10	S 1913	Push Switch	CSG1131
B C 860		CKSRYB104K16	S 1914	Push Switch	CSG1111
C 861		CKSRYB223K50	S 1915	Push Switch	CSG1111
C 911	470μ F/16V	CCH1331	S 1916	Switch	CSG1110
C 912		CKSRYB472K50	S 1917	Push Switch	CSG1132
C 913		CKSRYB103K50	S 1918	Switch	CSG1110
C 914		CEJQ470M10	S 1919	Switch	CSG1110
C 921		CEJQ221M10	S 1921	Switch	CSG1110
C 922		CKSRYB103K50	S 1922	Switch	CSG1110
C 923		CEJQ101M16	VR1970	Semi-fixed 20kΩ(B)	CCP1231
C 931		CEJQ1R0M50	VR1971	Semi-fixed 15kΩ(B)	CCP1230
C 932		CKSRYB104K16			

RESISTORS

R 1901	RS1/16S222J
R 1902	RS1/16S222J
R 1903	RS1/16S473J
R 1905	RS1/16S680J
R 1906	RS1/16S680J
R 1907	RS1/16S680J
R 1908	RS1/16S680J
R 1909	RS1/16S680J
R 1910	RS1/16S680J
R 1911	RS1/16S103J
R 1912	RS1/16S682J
R 1913	RS1/16S121J
R 1914	RS1/16S184J
R 1915	RS1/16S2R2J
R 1916	RS1/16S680J
R 1917	RS1/16S680J
R 1918	RS1/16S680J
R 1919	RS1/16S680J
R 1920	RS1/16S181J
R 1922	RS1/16S121J
R 1923	RS1/16S121J
R 1924	RS1/16S560J
R 1926	RS1/16S121J
R 1928	RS1/16S560J
R 1930	RS1/16S473J
R 1931	RS1/16S272J
R 1932	RS1/16S473J
R 1933	RS1/16S272J
R 1934	RS1/16S472J
R 1936	RS1/16S121J
R 1940	RS1/16S222J
R 1941	RS1/16S101J
R 1943	RAB4C101J
R 1944	RAB4C101J
R 1945	RAB4C101J

C**Unit Number:XWM7051(P7600MP)****Unit Name:Keyboard Unit****MISCELLANEOUS**

IC 1901	IC	RS-140
IC 1902	IC	S-818A33AUC-BGN
IC 1940	IC	PD5932A
IC 1990	IC	PD8119A
D Q 1901	Transistor	DTC114EU
Q 1902	Transistor	DTC114EU
Q 1903	Transistor	DTC114EU
Q 1904	Transistor	2SB710A
Q 1905	Transistor	2SB710A
Q 1960	Transistor	2SC4617
Q 1961	Transistor	2SC2411K
D 1903	LED	CL-190UB2-X
D 1904	LED	CL-190UB2-X
D 1905	LED	CL-190UB2-X
D 1906	LED	CL-190UB2-X
D 1907	LED	CL-190UB2-X
D 1908	LED	CL-190UB2-X
D 1909	LED	CL-190UB2-X
D 1910	LED	CL-190UB2-X
D 1911	LED	CL-190UB2-X
D 1912	LED	CL-190UB2-X
D 1913	LED	CL-195SR-CD
D 1914	LED	CL-195PG-CD
D 1940	Diode	1SS355
L 1901	Inductor	CTF1530
L 1940	Inductor	CTF1530
TH1960	Thermistor	CCX1037
X 1940	Radiator 10.0MHz	CSS1577
S 1901	Encoder(VOLUME)	XSD7002

Circuit Symbol and No.**Part No.**

R 1946	RAB4C101J
R 1947	RAB4C101J
R 1948	RAB4C101J
R 1949	RAB4C101J
R 1950	RAB4C101J
R 1952	RS1/16S101J
R 1954	RAB4C473J
R 1955	RS1/16S473J
R 1956	RS1/16S103J
R 1957	RAB4C101J
R 1958	RS1/16S473J
R 1959	RS1/16S154J
R 1960	RS1/16S223J
R 1961	RS1/16S683J
R 1962	RS1/16S392J
R 1963	RS1/16S393J
R 1980	RS1/16S473J
R 1991	RS1/16S101J
R 1992	RS1/16S101J
R 1993	RS1/16S101J
R 1994	RS1/16S101J
R 1995	RS1/16S473J
R 1996	RS1/16S222J
R 1997	RS1/16S332J
R 1998	RS1/16S102J
R 1999	RS1/16S102J
R 2000	RAB4C102J
R 2100	RS1/16S101J
R 2101	RS1/16S101J
R 2102	RS1/16S101J
R 2103	RS1/16S101J

CAPACITORS

C 1908	CKSYF106Z10
C 1909	CSZSR4R7M16
C 1910	CSZSR4R7M10
C 1911	CKSRYB104K16
C 1912	CKSRYB104K16
C 1913	CKSRYB104K16
C 1914	CKSRYB104K16
C 1915	CKSRYB104K16
C 1916	CKSRYB104K16
C 1917	CKSRYB104K16
C 1918	CKSRYB104K16
C 1919	CKSRYB104K16
C 1920	CKSRYB104K16
C 1940	CKSRYB103K50
C 1941	CKSRYB473K25
C 1942	CKSRYB105K10
C 1943	CKSRYB103K50
C 1944	CSZSR4R7M10
C 1972	CKSRYB104K16
C 1973	CKSRYB104K25
C 1974	CKSRYB104K25
C 1975	CKSRYB104K25
C 1976	CKSRYB104K25
C 1990	CKSRYB103K50
C 1991	CKSRYB104K25

Circuit Symbol and No.**Part No.**

C 1992

CKSRYB104K25

**Unit Number:XWM7054(P6600R)****Unit Name:Keyboard Unit****MISCELLANEOUS**

IC 1901	IC	RS-140
IC 1902	IC	S-818A33AUC-BGN
IC 1940	IC	PD5932A
IC 1990	IC	PD8123A
Q 1901	Transistor	DTC114EU
Q 1902	Transistor	DTC114EU
Q 1903	Transistor	DTC114EU
Q 1904	Transistor	2SB710A
Q 1905	Transistor	2SB710A
Q 1960	Transistor	2SC4617
Q 1961	Transistor	2SC2411K
D 1903	LED	CL-190UB2-X
D 1904	LED	CL-190UB2-X
D 1905	LED	CL-190UB2-X
D 1906	LED	CL-190UB2-X
D 1907	LED	CL-195PG-CD
D 1908	LED	CL-195PG-CD
D 1909	LED	CL-190UB2-X
D 1910	LED	CL-190UB2-X
D 1911	LED	CL-190UB2-X
D 1912	LED	CL-190UB2-X
D 1913	LED	CL-195SR-CD
D 1914	LED	CL-195PG-CD
D 1940	Diode	1SS355
L 1901	Inductor	CTF1530
L 1940	Inductor	CTF1530
TH1960	Thermistor	CCX1037
X 1940	Radiator 10.0MHz	CSS1577
S 1901	Encoder(VOLUME)	XSD7002
S 1902	Push Switch	CSG1132
S 1903	Push Switch	CSG1132
S 1904	Push Switch	CSG1111
S 1905	Push Switch	CSG1111
S 1906	Switch	CSG1110
S 1907	Push Switch	CSG1132
S 1908	Push Switch	CSG1131
S 1909	Push Switch	CSG1131
S 1910	Push Switch	CSG1131
S 1911	Push Switch	CSG1131
S 1912	Push Switch	CSG1131
S 1913	Push Switch	CSG1131
S 1914	Push Switch	CSG1111
S 1915	Push Switch	CSG1111
S 1916	Switch	CSG1110
S 1917	Push Switch	CSG1132
S 1918	Switch	CSG1110
S 1919	Switch	CSG1110
S 1921	Switch	CSG1110
S 1922	Switch	CSG1110
VR1970	Semi-fixed 20kΩ(B)	CCP1231
VR1971	Semi-fixed 15kΩ(B)	CCP1230

Circuit Symbol and No.Part No.Circuit Symbol and No.Part No.**RESISTORS**

R 1996

RS1/16S222J

R 1997

RS1/16S332J

R 1998

RS1/16S102J

R 1999

RS1/16S102J

R 2000

RAB4C102J

R 2100

RS1/16S101J

R 2101

RS1/16S101J

R 2102

RS1/16S101J

R 2103

RS1/16S101J

CAPACITORS

C 1908

CKSYF106Z10

C 1909

CSZSR4R7M16

C 1910

CSZSR4R7M10

C 1911

CKSRYB104K16

C 1912

CKSRYB104K16

C 1913

CKSRYB104K16

C 1914

CKSRYB104K16

C 1917

CKSRYB104K16

C 1918

CKSRYB104K16

C 1919

CKSRYB104K16

C 1920

CKSRYB104K16

C 1940

CKSRYB103K50

C 1941

CKSRYB473K25

C 1942

CKSRYB105K10

C 1943

CKSRYB103K50

C 1944

CSZSR4R7M10

C 1972

CKSRYB104K16

C 1973

CKSRYB104K25

C 1974

CKSRYB104K25

C 1975

CKSRYB104K25

C 1976

CKSRYB104K25

C 1990

CKSRYB103K50

C 1991

CKSRYB104K25

C 1992

CKSRYB104K25

B**Unit Number:CWM8758****Unit Name:Panel Unit****MISCELLANEOUS**

D 1970

LED

CL220PGC

S 1970

Push Switch(EJECT)

CSG1112

RESISTORS

R 1970

RS1/16S101J

R 1971

RS1/16S101J

R 1972

RS1/16S0R0J

CAPACITORS

C 1970

CKSRYB104K16

D**Unit Number:CWX2851(DEH-P7600MP)****Unit Name:CD CORE UNIT(S10WMA)****MISCELLANEOUS**R 1901
R 1902
R 1903
R 1905
R 1906RS1/16S222J
RS1/16S222J
RS1/16S473J
RS1/16S680J
RS1/16S680JR 1907
R 1908
R 1909
R 1910
R 1911RS1/16S680J
RS1/16S680J
RS1/16S181J
RS1/16S151J
RS1/16S103JR 1912
R 1913
R 1914
R 1915
R 1916RS1/16S682J
RS1/16S121J
RS1/16S184J
RS1/16S2R2J
RS1/16S680JR 1917
R 1918
R 1919
R 1920
R 1922RS1/16S680J
RS1/16S680J
RS1/16S680J
RS1/16S181J
RS1/16S121JR 1923
R 1924
R 1926
R 1928
R 1930RS1/16S121J
RS1/16S560J
RS1/16S121J
RS1/16S560J
RS1/16S473JR 1931
R 1932
R 1933
R 1934
R 1936RS1/16S272J
RS1/16S473J
RS1/16S272J
RS1/16S472J
RS1/16S121JR 1940
R 1941
R 1943
R 1944
R 1945RS1/16S222J
RS1/16S101J
RAB4C101J
RAB4C101J
RAB4C101JR 1946
R 1947
R 1948
R 1949
R 1950RAB4C101J
RAB4C101J
RAB4C101J
RAB4C101J
RAB4C101JR 1952
R 1954
R 1955
R 1956
R 1957RS1/16S101J
RAB4C473J
RS1/16S473J
RS1/16S103J
RAB4C101JR 1958
R 1959
R 1960
R 1961
R 1962RS1/16S473J
RS1/16S154J
RS1/16S223J
RS1/16S683J
RS1/16S392JR 1963
R 1980
R 1991
R 1992
R 1993RS1/16S393J
RS1/16S473J
RS1/16S101J
RS1/16S101J
RS1/16S101JR 1994
R 1995RS1/16S101J
RS1/16S473J

<u>Circuit Symbol and No.</u>		<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
IC 201	IC	UPD63761GJ	R 261	RS1/16S0R0J
IC 203	IC	NJM2391DL1-33	R 262	RS1/16S0R0J
IC 301	IC	BA5835FM	R 263	RS1/16S0R0J
IC 501	IC	S-L2980A15MC-C6A	R 264	RS1/16S0R0J
IC 701	IC	PE5440A	R 267	RS1/16S0R0J
			R 301	RS1/16SS183J
IC 703	IC	S-812C33AUA-C2N		
Q 101	Transistor	2SB1132	R 302	RS1/16SS822J
Q 601	Transistor	IMH20	R 304	RS1/16SS183J
Q 603	Transistor	2SB709A	R 305	RS1/16SS822J
Q 701	Transistor	UN2111	R 307	RS1/16SS183J
			R 308	RS1/16SS183J
D 101	Diode	1SS355		
D 601	Diode	MA152WA	R 309	RS1/16SS183J
L 203	Inductor	CTF1389	R 310	RS1/16SS183J
L 207	Inductor	CTF1389	R 501	RS1/16SS0R0J
L 209	Inductor	CTF1389	R 601	RS1/16S101J
			R 602	RS1/16S101J
L 703	Inductor	CTF1389		
X 201	Ceramic Resonator 16.934MHz	CSS1603	R 603	RS1/16S223J
X 701	Ceramic Resonator 4.00MHz	CSS1652	R 604	RS1/16S223J
S 901	Switch(HOME)	CSN1051	R 605	RS1/16SS103J
S 902	Switch(CLAMP)	CSN1051	R 606	RS1/16S0R0J
			R 701	RS1/16S0R0J
S 903	Spring Switch(DSCSNS)	CSN1052		
S 904	Switch(12EJ)	CSN1051	R 702	RS1/16SS0R0J
S 905	Switch(8EJ)	CSN1051	R 703	RS1/16SS104J
			R 704	RS1/16SS104J
			R 705	RS1/16SS221J
			R 706	RS1/16SS221J
RESISTORS				
R 101		RS1/10S1R5J		
R 102		RS1/10S1R5J	R 707	RS1/16SS0R0J
R 103		RS1/10S1R5J	R 708	RS1/16SS221J
R 104		RS1/10S1R5J	R 709	RS1/16SS473J
R 105		RS1/10S1R5J	R 710	RS1/16SS102J
			R 711	RS1/16SS102J
R 107		RS1/16SS0R0J		
R 201		RS1/16SS102J	R 712	RS1/16SS102J
R 202		RS1/16SS333J	R 713	RS1/16SS102J
R 205		RS1/16SS473J	R 714	RS1/16SS473J
R 207		RS1/16SS473J	R 715	RS1/16SS0R0J
			R 716	RS1/16SS472J
R 209		RS1/16SS473J		
R 214		RS1/16SS472J	R 719	RS1/16SS221J
R 216		RS1/16SS472J	R 720	RS1/16SS471J
R 218		RS1/16SS472J	R 721	RS1/16S0R0J
R 220		RS1/16SS472J	R 724	RS1/16S473J
			R 725	RS1/16SS222J
R 221		RS1/16SS103J		
R 222		RS1/16SS103J	R 726	RS1/16SS103J
R 223		RS1/16SS0R0J	R 727	RS1/16SS473J
R 224		RS1/16SS0R0J	R 729	RS1/16SS223J
R 225		RS1/16SS103J	R 730	RS1/16SS473J
			R 731	RS1/16SS104J
R 226		RS1/16SS393J		
R 227		RS1/16SS562J	R 732	RS1/16SS104J
R 228		RS1/16SS122J	R 733	RS1/16SS104J
R 229		RS1/16SS472J	R 735	RS1/16SS473J
R 231		RS1/16SS0R0J	R 737	RS1/16SS104J
			R 740	RS1/16SS473J
R 232		RS1/16SS122J		
R 233		RS1/16SS0R0J	R 742	RS1/16SS104J
R 240		RS1/16SS0R0J	R 745	RS1/16SS473J
R 241		RS1/16SS333J	R 746	RS1/16SS104J
R 242		RS1/16SS0R0J	R 750	RS1/16SS473J
			R 754	RS1/16SS102J
R 243		RS1/16SS333J		
R 245		RS1/16SS333J	R 755	RS1/16SS102J
R 250		RS1/16SS0R0J	R 756	RS1/16SS104J
R 256		RS1/16SS0R0J	R 765	RAB4CQ221J
			R 769	RAB4CQ221J

Circuit Symbol and No.Part No.Circuit Symbol and No.Part No.

R 773		RAB4CQ221J
R 777		RS1/16SS221J
R 778		RS1/16SS221J
R 779		RS1/16SS221J
R 901		RAB4CQ221J
R 902		RS1/16S0R0J
R 905		RS1/16SS221J
R 906		RS1/16SS221J
R 908		RS1/16SS0R0J
R 910		RS1/16SS0R0J

C 306		CKSSYB104K10
C 307		CKSSYB104K10
C 501		CKSRYB224K16
C 505		CKSQYB475K6R3
C 601		CCSRCH102J50
C 602		CCSRCH102J50
C 603	4.7μF/25V	CCH1568
C 604	4.7μF/25V	CCH1568
C 701		CKSSYB104K10
C 702		CKSSYB471K50
C 703		CKSSYB103K16
C 704	4.7μF/25V	CCH1592
C 706		CKSSYB104K10

CAPACITORS

C 101		CKSSYB104K10
C 102		CKSSYB104K10
C 103	100μF/16V	CCH1504
C 104	47μF/6.3V	CCH1506
C 105		CKSSYB104K10

C 106		CCSSCH101J50
C 107		CKSRYB224K16
C 108		CKSSYB104K10
C 110		CKSSYB104K10
C 201		CKSSYB471K50

C 202		CKSSYB104K10
C 203		CKSSYB104K10
C 204	22μF/6.3V	CCH1507
C 205		CKSSYB104K10
C 207	220μF/4V	CCH1590

C 208		CKSSYB104K10
C 209		CKSSYB104K10
C 216		CKSSYB332K50
C 217		CKSSYB104K10
C 218		CKSSYB223K16

C 219		CKSSYB104K10
C 220		CKSSYB103K16
C 221		CKSSYB104K10
C 222		CCSSCH560J50
C 223		CCSSCH5R0C50

C 224		CKSSYB104K10
C 225		CKSSYB103K16
C 226		CCSSCH680J50
C 227		CCSSCH470J50
C 228		CKSSYB682K25

C 230		CKSSYB104K10
C 232		CKSSYB104K10
C 233	10μF/6.3V	CCH1470
C 234	220μF/4V	CCH1590
C 235		CKSRYB224K16

C 237		CKSSYB104K10
C 239		CCSSCH330J50
C 242		CKSSYB104K10
C 246		CKSSYB104K10
C 250		CKSRYB102K50

C 251		CKSRYB102K50
C 260		CKSSYB104K10
C 301		CKSSYB221K50
C 302		CKSSYB221K50
C 303		CKSSYB472K25

C 304		CKSSYB103K16
C 305	100μF/16V	CCH1504

D

Unit Number: CWX2947(DEH-P6600R)

Unit Name: CD Core Unit(S10)

MISCELLANEOUS

IC 201	IC	UPD63712AGC
IC 301	IC	BA5835FP
IC 701	IC	NJM2391DL1-33
Q 101	Transistor	2SB1132
D 101	Diode	1SS355
D 701	Diode	1SR154-400
X 201	Ceramic Resonator	16.934MHzCSS1603
S 901	Switch(HOME)	CSN1051
S 902	Switch(CLAMP)	CSN1051
S 903	Spring Switch(DSCSNS)	CSN1052
S 904	Switch(12EJ)	CSN1051
S 905	Switch(8EJ)	CSN1051

RESISTORS

R 101		RS1/10S1R5J
R 102		RS1/10S1R5J
R 103		RS1/10S1R5J
R 104		RS1/10S1R5J
R 105		RS1/10S1R5J
R 201		RS1/16S102J
R 202		RS1/16S1002D
R 203		RS1/16S1002D
R 204		RS1/16S1002D
R 205		RS1/16S1002D
R 206		RS1/16S1002D
R 207		RS1/16S1002D
R 208		RS1/16S1002D
R 209		RS1/16S1002D
R 214		RS1/16S103J

<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
R 215	RS1/16S393J	C 232	CKSRYB102K50
R 216	RS1/16S122J	C 301	100µF/16V CCH1504
R 217	RS1/16S562J	C 302	CCSRCH221J50
R 218	RS1/16S472J	C 303	CCSRCH221J50
R 234	RS1/16S0R0J	C 304	CKSRYB472K50
		C 305	CKSRYB103K25
R 235	RS1/16S103J		
R 236	RS1/16S103J	C 306	CKSRYB104K16
R 301	RS1/16S183J	C 501	CKSRYB103K25
R 302	RS1/16S822J	C 502	CKSRYB103K25
R 303	RS1/16S183J	C 702	100µF/16V CCH1504
		C 703	CKSRYB104K16
R 304	RS1/16S822J		
R 305	RS1/16S183J	C 705	10µF/6.3V CCH1470
R 306	RS1/16S183J		
R 307	RS1/16S183J		
R 308	RS1/16S183J		
R 501	RS1/16S102J		
R 503	RS1/16S102J	M 1	Pickup Unit(P10)(Service) CXX1641
R 505	RS1/16S102J	M 2	Motor Unit(SPINDLE) CXB6007
R 506	RS1/16S221J		Motor Unit(LOADING/CARRIAGE)CXB8933
R 507	RS1/16S221J		
R 508	RS1/16S221J		
R 509	RS1/16S221J		
R 601	RS1/16S101J		
R 602	RS1/16S101J		
R 603	RS1/16S0R0J		
R 901	RS1/16S104J		
R 902	RS1/16S473J		
R 903	RS1/16S273J		

Miscellaneous Parts List

M 1	Pickup Unit(P10)(Service)	CXX1641
M 2	Motor Unit(SPINDLE)	CXB6007
	Motor Unit(LOADING/CARRIAGE)	CXB8933

CAPACITORS

C 101		CKSRYB104K16
C 102		CKSRYB104K16
C 103	100µF/16V	CCH1504
C 104	47µF/6.3V	CCH1506
C 108		CKSRYB104K16
C 109		CKSRYB104K16
C 201		CKSRYB104K16
C 202		CKSRYB471K50
C 205	22µF/6.3V	CCH1507
C 206		CKSRYB103K25
C 207		CKSRYB104K16
C 209		CKSRYB104K16
C 210		CKSRYB104K16
C 211		CKSRYB104K16
C 212		CKSRYB104K16
C 213		CKSRYB332K50
C 214		CKSRYB473K25
C 215		CKSRYB104K16
C 216		CKSRYB103K25
C 217		CCSRCH560J50
C 218		CCSRCH5R0C50
C 219		CKSRYB104K16
C 220		CKSRYB104K16
C 221		CKSRYB104K16
C 222		CKSRYB103K25
C 223		CCSRCH680J50
C 224		CCSRCH470J50
C 225		CKSRYB682K50
C 231		CKSRYB102K50

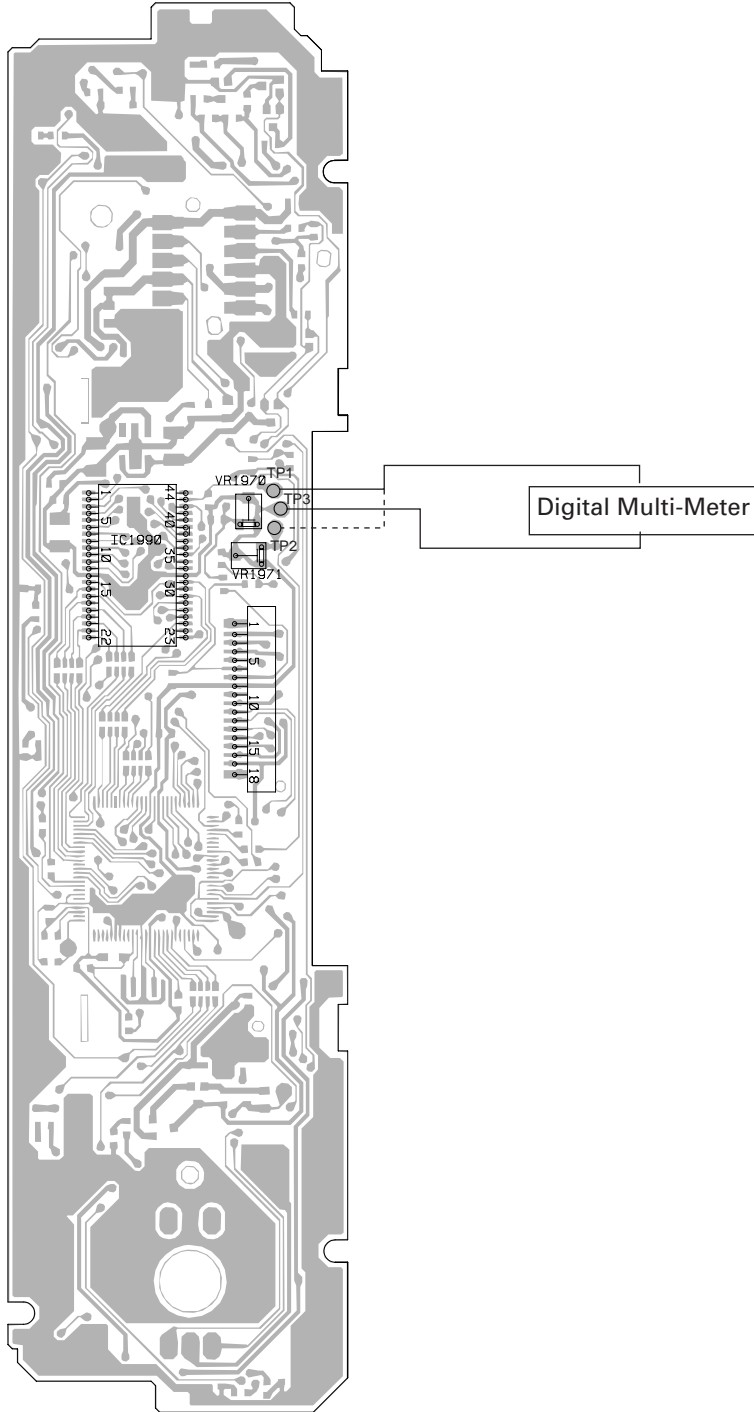
6. ADJUSTMENT

6.1 OEL UNIT ADJUSTMENT



● Adjustment point

KEYBOARD UNIT(SIDE B)



<When the OEL Unit has been replaced>

1. Use VR1970 to adjust the resistance between TP1 and TP3 to 11.4kΩ.
2. Use VR1971 to adjust the resistance between TP2 and TP3 to 5.8kΩ.

6.2 CD ADJUSTMENT

1) Cautions on adjustments

• In this product the single voltage (3.3V) is used for the regulator. The reference voltage is the REFO1 (1.65V) instead of the GND.

If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:

a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.

b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.

c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

• The load and eject operation is not guaranteed with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.

• To enter the test mode.

While pressing the 4 and 6 keys at the same time, reset.

• To exit from the test mode.

Turn off the ACC and back up.

Notes:

a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.

b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.

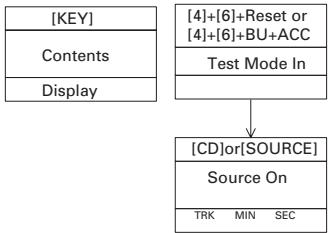
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.

d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.

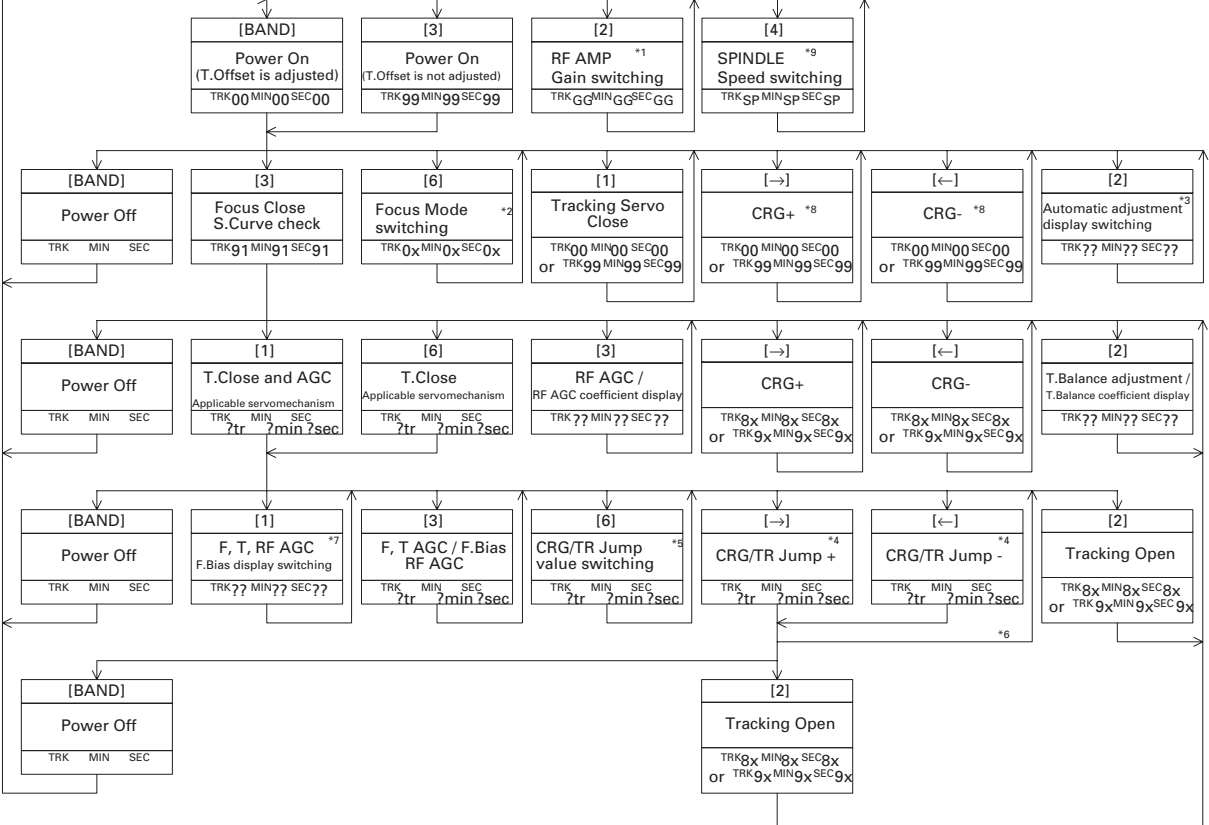
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0dB, and the auto-adjustment values are reset to the default settings.

Flow Chart(DEH-P7600MP)

A



B



C

D

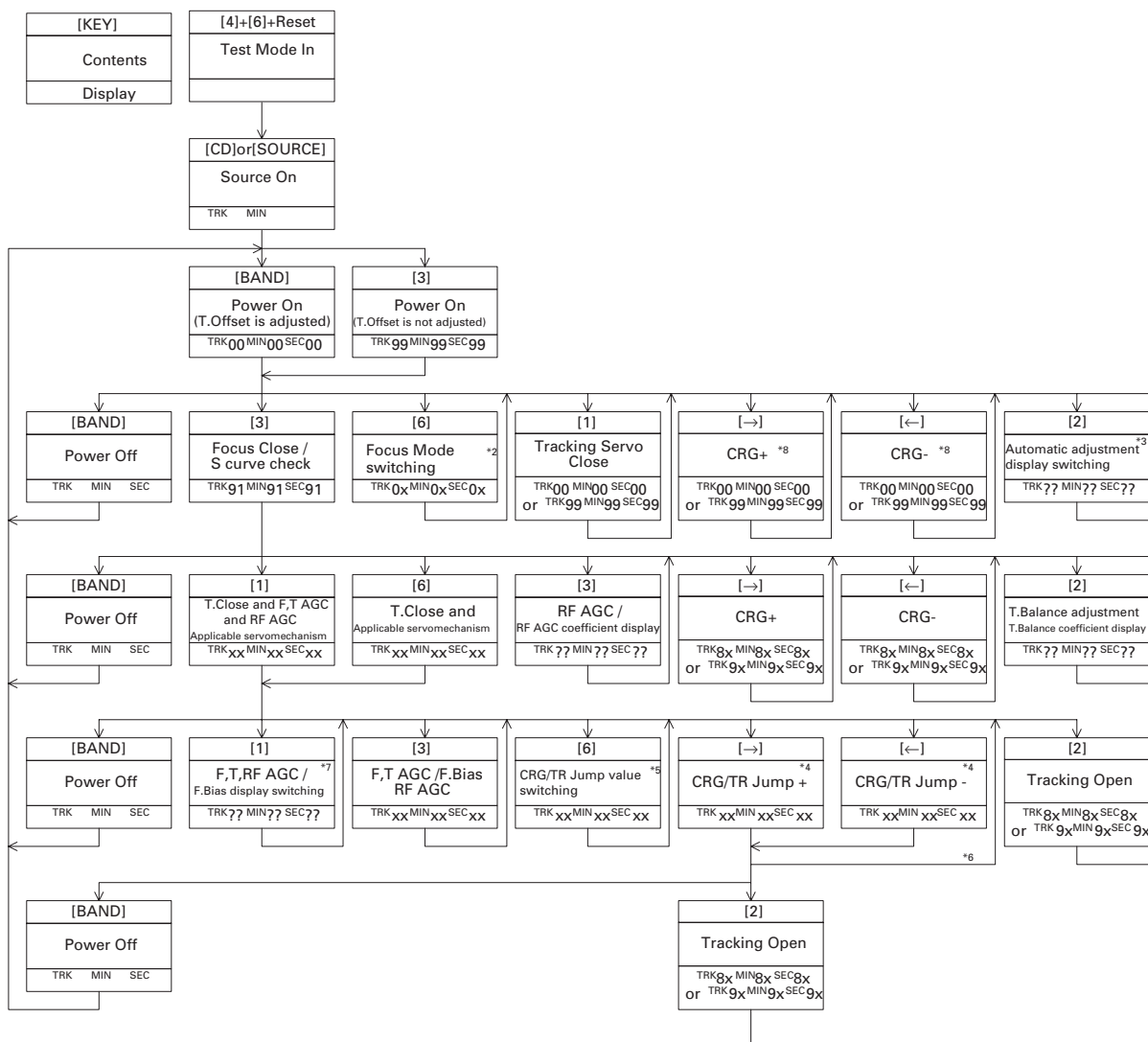
- *1) TYP → -6dB → -12dB
TRK MIN SEC → TRK 06 MIN 06 SEC 06 → TRK 12 MIN 12 SEC 12
 - *2) Focus Close → S.Curve cck setting → F EQ measurement setting
TRK 00 MIN 00 SEC 00 (TRK 99 MIN 99 SEC 99) → TRK 01 MIN 01 SEC 01 → TRK 02 MIN 02 SEC 02
 - *3) F.Offset Display → T.Offset Display → Switch to the order of the original display
 - *4) 1TR / 32TR / 100TR
 - *5) Single TR → 32TR → 100TR → CRG Move
9x(8x) : 91(81) 92(82) 93(83) 94(84)
 - *6) Only at the time of CRG Move, 100TR Jump
 - *7) TRK/MIN/SEC → F.AGC → T.AGC → F.Bias → RF AGC
 - *8) CRG motor voltage = 2[V]
 - *9) TYP(1X) → 2X → 1X
TRK MIN SEC → TRK 22 MIN 22 SEC 22 → TRK 11 MIN 11 SEC 11
- As for the double speed (2x), audio output cannot be supported.
- TYP(2X) → 1X → 2X
TRK MIN SEC → TRK 11 MIN 11 SEC 11 → TRK 22 MIN 22 SEC 22

E

F

[Key]	Operation
[BAND]	Power On/Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	T.CLS and AGC and Applicable servomechanism / AGC, AGC display switching
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[3]	F.Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
[4]	SPDL 1X/2X switching As for the double speed (2x), audio output cannot be supported.
[5]	Error Rate measurement 1st-ON : ERR count beginning(30Sec) 2nd-ON : BER display data[%]
[6]	F. Mode switching / Tracking Close / CRG, TR Jump switching

● Flow Chart(DEH-P6600R)



*1) $\begin{matrix} \text{TYP} & \rightarrow & -12\text{dB} \\ \text{TRK} & \text{MIN} & \text{SEC} \\ & \uparrow & \text{TRK 12 MIN 12 SEC 12} \end{matrix}$

*2) Focus Close → S.Curve → F.EQ measurement setting
 TRK 00 MIN 00 SEC 00 TRK 01 MIN 01 SEC 01 TRK 02 MIN 02 SEC 02
 (TRK 99 MIN 99 SEC 99)

*3) F.Offset Display → RF.Offset Display → T.Offset Display

*4) 1TR/32TR/100TR

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

*6) Only at the time of CRG Move or 100TR Jump
 *7) TRK/MIN/SEC → F.AGC → T.AGC Gain → F.bias → RF AGC

*8) CRG motor voltage = 2[V]

[Key]	Operation
[Key]	Test Mode
[BAND]	Power On / Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	CLS and AGC and Applicable servomechanism / AGC, AGC display switching
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[3]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
-	SPDL 1X / 2X switching (Double-speed compatibility only)
-	Gop measurement
[6]	Focus Mode switching / Tracking Close / CRG, TR Jump switching

6.3 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT



(DEH-P7600MP)

• Note :

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

• Purpose :

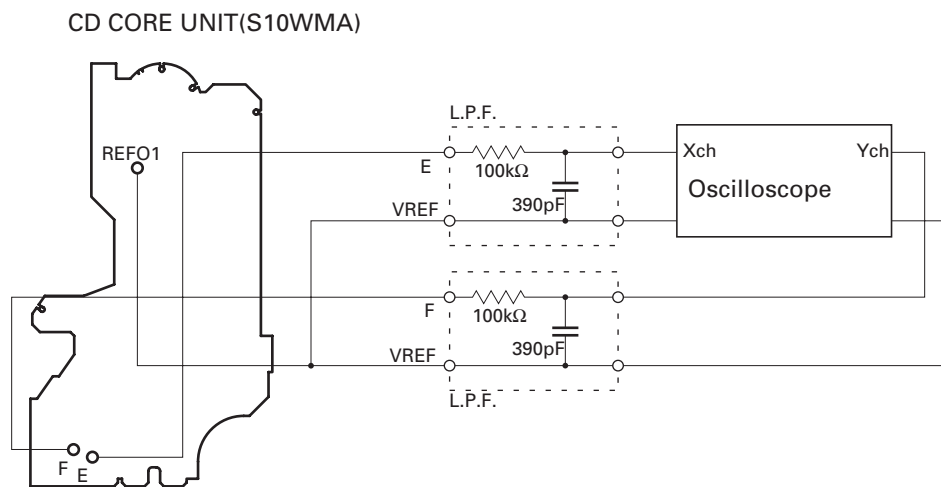
To check that the grating is within an acceptable range when the PU unit is changed.

• Symptoms of Mal-adjustment :

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

• Method :

- | | |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points | • E, F, REFO1 |
| • Disc | • ABEX TCD-782 |
| • Mode | • TEST MODE |



• Checking Procedure

1. In test mode, load the disc and switch the 3V regulator on.
2. Using the → and ← buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. 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".



(DEH-P6600R)

• **Note :**

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

• **Purpose :**

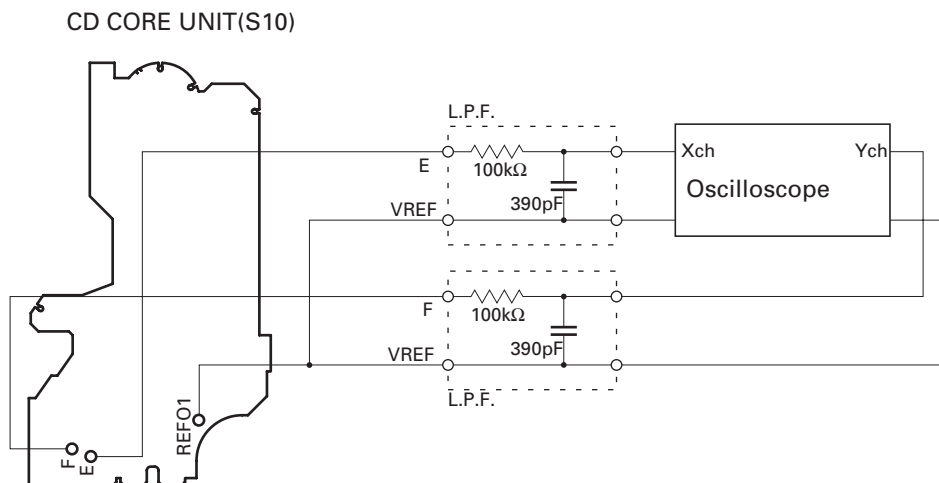
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**

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

• **Method :**

- | | |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points | • E, F, REFO1 |
| • Disc | • ABEX TCD-782 |
| • Mode | • TEST MODE |



• **Checking Procedure**

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

• **Note**

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

• **Hint**

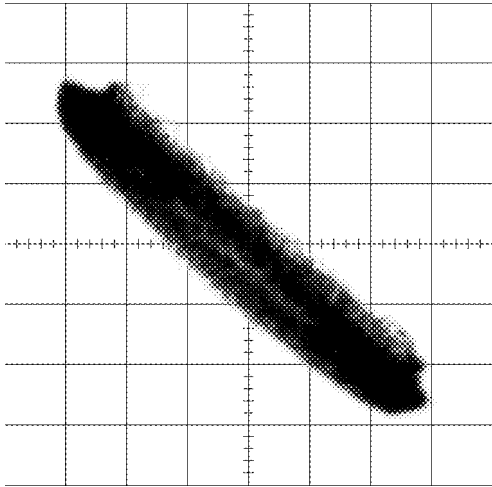
Reloading the disc changes the clamp position and may decrease the "wobble".

Grating waveform

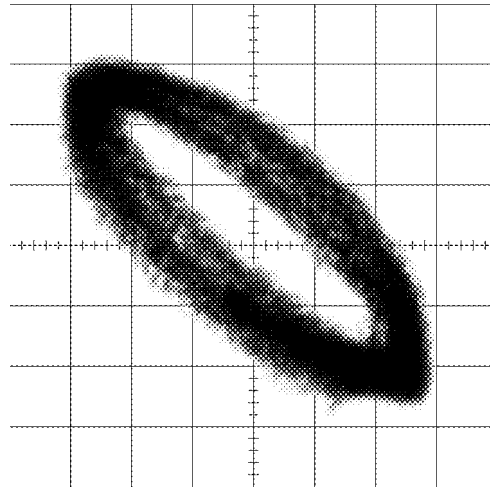
Ech → Xch 20mV/div, AC

Fch → Ych 20mV/div, AC

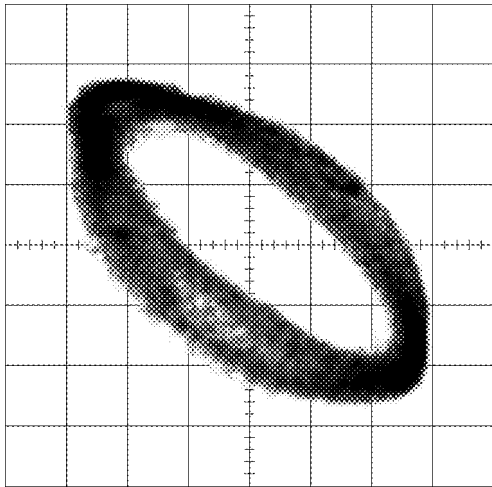
0°



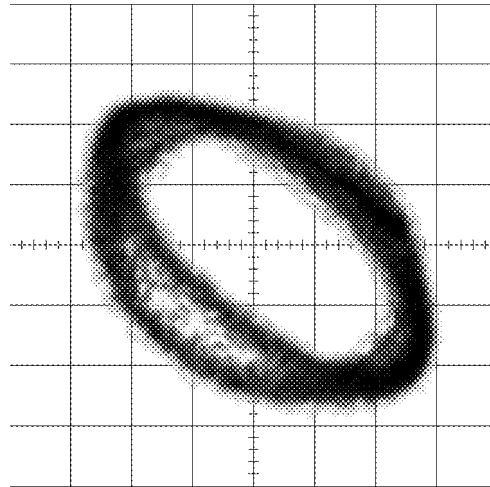
30°



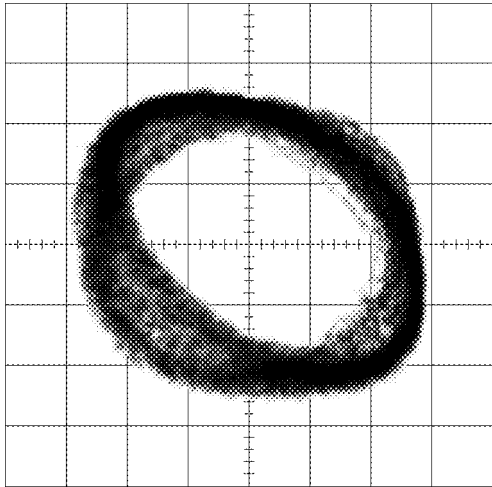
45°



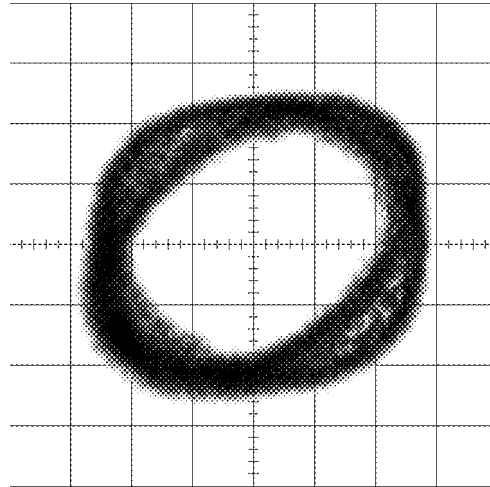
60°



75°



90°



6.4 ERROR MODE

● Error Messages

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

(1) Basic Indication Method

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

2) Head unit display examples

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

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

(2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG SERVO LSI Com- munication Error	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. → Failure on home switch or CRG move mechanism. Communication error between microcomputer and SERVO LSI.
11	Electricity	Focus Servo NG	Focusing not available. → Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG Subcode NG	Spindle not locked. Sub-code is strange (not readable). → Failure on spindle, stains or damages on disc, or excessive vibrations. A disc not containing CD-R data is found. Turned over disc are found, though rarely. CD signal error.
17	Electricity	Setup NG	AGC protection doesn't work. Focus can be easily lost. → Damages or stains on disc, or excessive vibrations on REWRITABLE.
30	Electricity	Search Time Out	Failed to reach target address. → CRG tracking error or damages on disc.
44	Electricity	ALL Skip	Skip setting for all track. (CD-R/RW)
50	Mechanism	CD On Mech Error	Mechanical error during CD ON. → Defective loading motor, mechanical lock and mechanical sensor.
A0	System	Power Supply NG	Power (VD) is ground faulted. → Failure on SW transistor or power supply (failure on connector).

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

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

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

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

6.5 FREQUENCY CHECK FOR CLOCK



● PCL output

In the normal operation mode (with the detachable panel installed, the ACC switched ON, the standby mode cancelled), shift the TESTIN (Pin 86) terminal to H.

The clock signal is output from the PCL terminal (Pin 37).

The frequency of the clock signal is 312.5kHz that is one 32th of the fundamental frequency.

The clock signal should be 312.5kHz.

If the clock signal is out of the range, the X'tal (X601) should be replaced with new one.

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7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the Case.

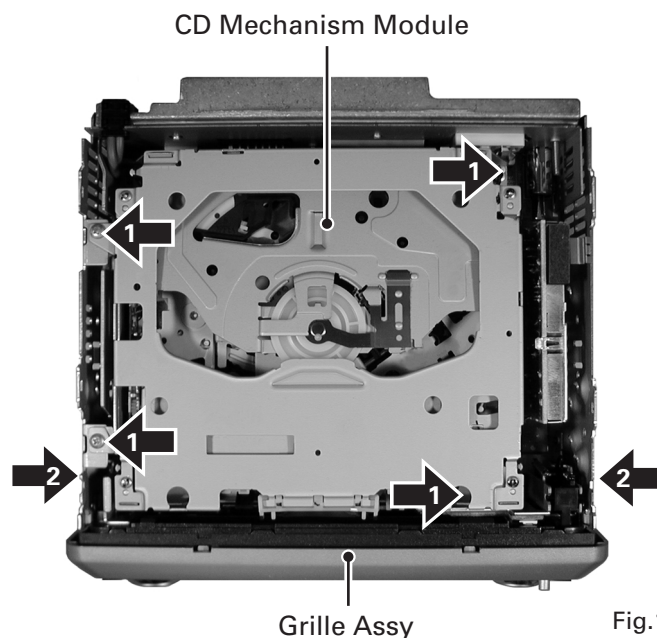
● **Removing the CD Mechanism Module (Fig.1)**

➔ **1** Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

● **Removing the Grille Assy (Fig.1)**

➔ **2** Remove the two screws and then remove the Grille Assy.



CD Mechanism Module

Grille Assy

Fig.1

Detailed description: This diagram shows the internal chassis of the device. Four screws are marked with arrow '1' pointing to the CD Mechanism Module. Two screws are marked with arrow '2' pointing to the Grille Assy. Labels 'CD Mechanism Module' and 'Grille Assy' are connected to their respective parts by thin lines.

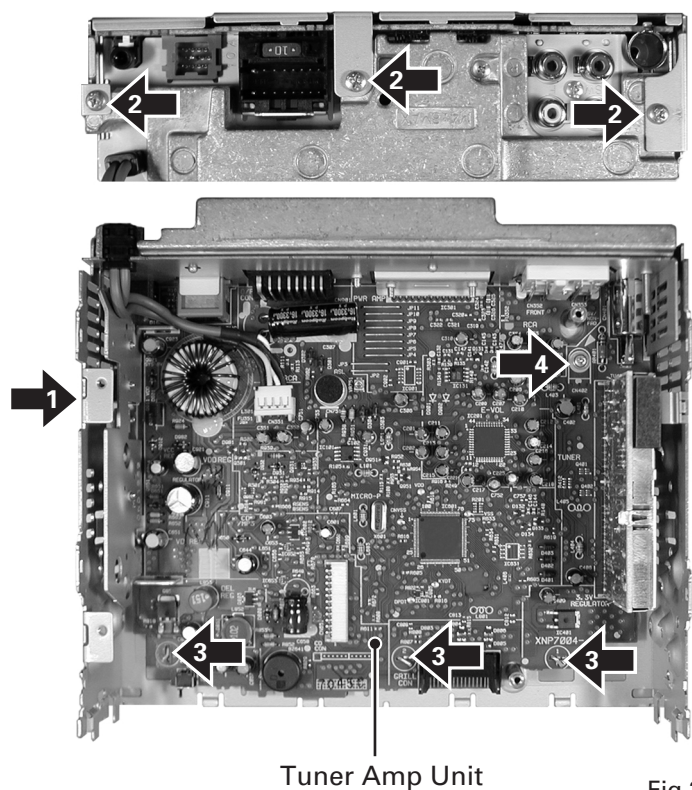
● **Removing the Tuner Amp Unit (Fig.2)**

➔ **1** Remove the screw.

➔ **2** Remove the three screws.

➔ **3** Straighten the tabs at three locations indicated.

➔ **4** Remove the screw and then remove the Tuner Amp Unit.



Tuner Amp Unit

Fig.2

Detailed description: This diagram shows the internal chassis with the CD mechanism removed. Step 1: A screw is marked with arrow '1' on the left side. Step 2: Three screws are marked with arrow '2' on the right side. Step 3: Three tabs on the bottom edge are marked with arrow '3'. Step 4: A screw on the right side is marked with arrow '4'. A label 'Tuner Amp Unit' is connected to the main board area by a thin line.

DEH-P7600MP/XN/EW

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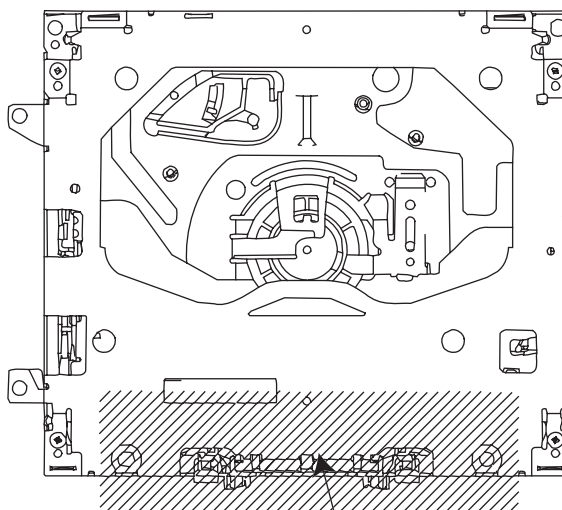
7

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● **How to hold the Mechanism Unit**

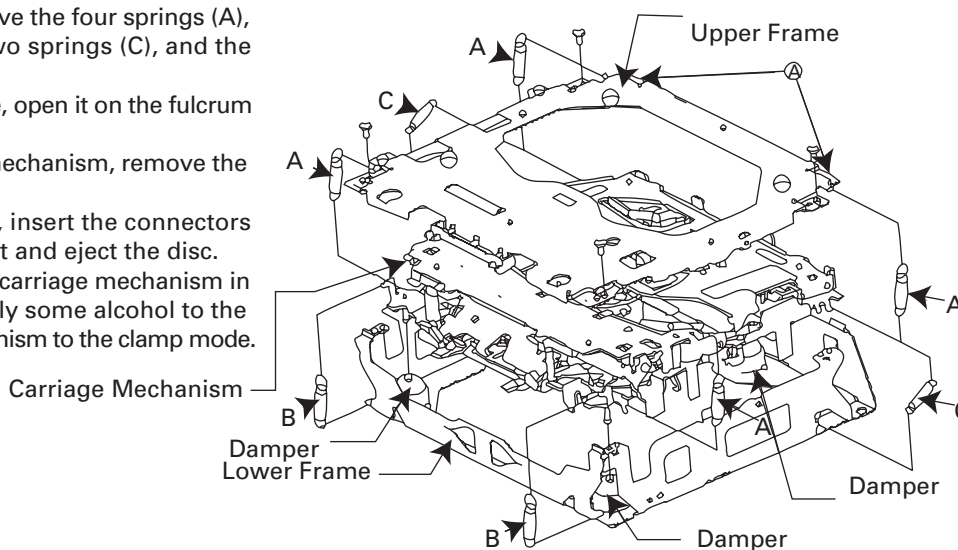
- 1. Hold the top and bottom frame.
- 2. Do not squeeze top frame's front portion too tight, because it is fragile.



Do not squeeze.

● **Removing the Upper and Lower Frames**

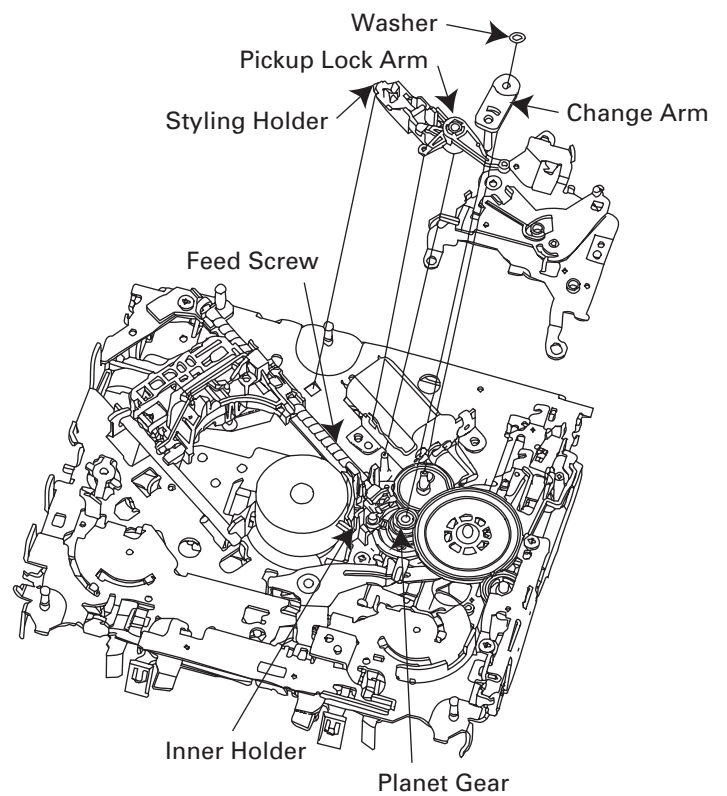
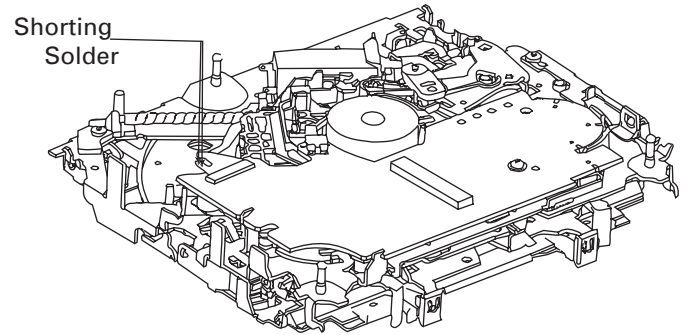
- 1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
 - 2. To remove the upper frame, open it on the fulcrum A.
 - 3. While lifting the carriage mechanism, remove the three dampers.
 - 4. With the frames removed, insert the connectors coming from the main unit and eject the disc.
- Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.



● Removing the Pickup Unit

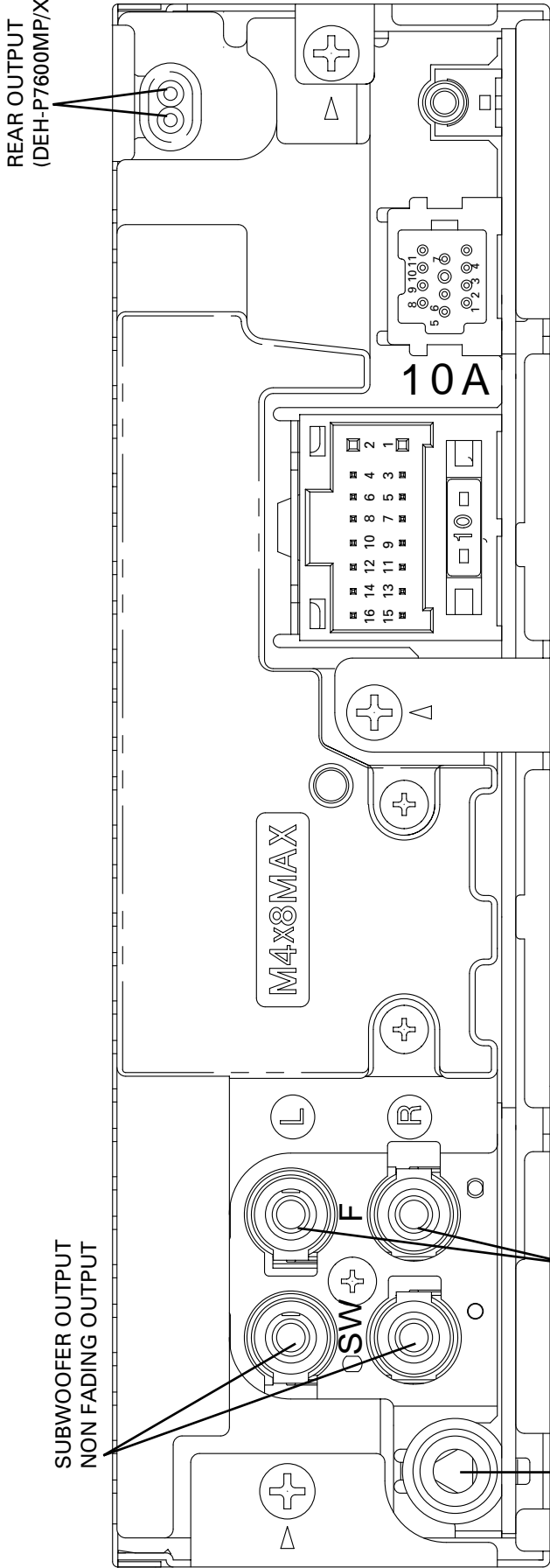
1. Apply shorting solder to the Pickup flexible cable.
Disconnect the cable.
2. Set the mechanism to the clamp mode.
3. Remove the lead wires from the inner holder.
4. Remove the washer, styling holder, change arm, and pickup lock arm.
5. While releasing from the hook of the inner holder, lift the end of the feed screw.

Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.



7.1.2 CONNECTOR FUNCTION DESCRIPTION

REAR OUTPUT
(DEH-P7600MP/XN/EW)



POWER SUPPLY, SPEAKER OUTPUT IP-BUS WIRED REMOTE CONTROL

- | | | |
|-------------|---------|------------------|
| 1. BACK UP | 9. RL- | 1. BUS+ |
| 2. GND | 10. FL- | 2. GND |
| 3. ACC | 11. RL+ | 3. GND |
| 4. NC | 12. FL+ | 4. NC |
| 5. ILM | 13. RR- | 5. BUS- |
| 6. B.REM | 14. FR- | 6. GND |
| 7. NC | 15. RR+ | 7. BUS L+ INPUT |
| 8. TEL MUTE | 16. FR+ | 8. ASEN B |
| | | 9. BUS R+ INPUT |
| | | 10. BUS R- INPUT |
| | | 11. BUS L- INPUT |

7.2 IC

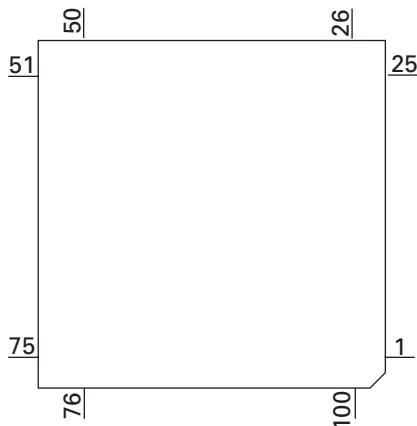
PD5920A	PD8123A	PE5440A
PD5922A	BA5835FM	UPD63712AGC
S-80835CNUA-B8U	BA5835FP	
PD5932A	UPD63761GJ	
HA12240FP	S-L2980A15MC-C6A	
PD8119A	S-812C33AUA-C2N	

● Pin Functions(PD5920A,PD5922A)

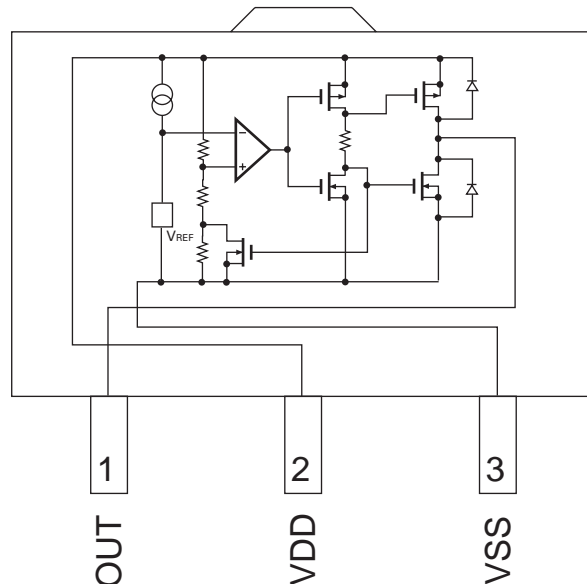
Pin No.	Pin Name	I/O	Function and Operation
1	SYSPW	O	System power control output
2	KEYD	I	Key data input
3	XSO	O	S10 : Serial data output
4	XSI	I	S10 : Serial data input
5	XSCK	O	S10 : Clock output for serial communication
6	BYTE	I	External data bus width change input
7	CNVSS		Processor mode change input
8	TELIN	I	TEL : Cellular mute input
9	HTELPW	O	Not used
10	RESET	I	Reset input
11	XOUT	O	Clock output
12	VSS		GND
13	XIN	I	Clock input
14	VCC		Power supply input
15	NC		Not used
16	RD $\overline{\text{SCK}}$	I	RDS clock input
17	LDET	I	PLL clock detection input
18	INT $\overline{\text{Q}}$		CD-TEXT PACK interruption
19	RX2	I	IPBUS : Input 2
20	OELPW	O	OEL power supply output
21	CLCONT	O	S10 : Driver control change output
22	PEE	O	PEE sound output
23	CDLOEJ	O	S10 : Road/eject output
24	BRST	O	Communication reset output
25	BRXEN	I/O	Communication input/output
26	BSRQ	I	Communication request input
27	RX	I	IPBUS : Input
28	TX	O	IPBUS : Output
29	BSO	O	PBUS output
30	BSI	I	PBUS input
31	BSCK	O	PBUS clock output
32	VDCONT	O	S10 : VD power supply control output
33	DPDT	O	GRILLE : Data output
34	KYDT	I	GRILLE : Data input
35,36	ROT1, 0	I	Rotary encoder pulse input1, 0
37	PCL	O	Output for clock adjustment
38	SWVDD	O	GRILLE : Chip enable output
39	DSENS	I	Detach sense input
40	FLPILM	O	Illumination output inside flap
41	ILMPW	O	Illumination output
42	EJTIN	I	Eject key input
43	NC		Not used
44	RD $\overline{\text{SHSLK}}$	I	Connect with HSLK
45	RD $\overline{\text{SLK}}$	I	RDS data input
46	RDSDATA	I	RDS data input
47-55	NC		Not used
56	CONT	O	S10 : Servo driver control output
57	EMUTE	O	EVOL : Mute output
58	XSTB	O	S10 : Data strobe signal output
59	XA0	O	S10 : Command/parameter discernment signal output
60	VCC		Power supply input

Pin No.	Pin Name	I/O	Function and Operation
61	XRST	O	S10 : Reset signal output
62	VSS		GND
63-65	NC		Not used
66	XTALEN	I	Clamp signal input
67	DALMON	O	For consumption current reduction output
68	NC		Not used
69	TUNPCE2	O	TUNER : Chip enable output(EEPROM)
70	TUNPCE1	O	TUNER : Chip enable output(PLL)
71	NC		Not used
72	ASENS	I	ACC sense input
73	BSENS	I	Back up sense input
74	NC		Not used
75	ROMDATA	I/O	ROM correction : Data input/output
76	VST	O	EVOL : Strobe output
77	VDT	O	EVOL : Data output
78	VCK	O	EVOL : Clock output
79	IPPW	O	IPBUS : Driver power supply control output
80	ASENBO	O	IPBUS : Slave ACC sense output
81	ISENS	I	Illumination sense input
82	NC		Not used
83	NC		Not used
84	NC		Not used
85	MUTE	O	MUTE output
86	TESTIN	I	Test program input
87	DSCSNS	I	S10 : Disc position detection input
88	VDSSENS	I	S10 : VD power supply short sense input
89	KEYAD	I	Key data input
90	LVLINR	I	Level indicator Rch input
91	CSSENS	I	Flap opening-and-closing sense input
92	LVLINL	I	Level indicator Lch input
93	ASLIN	I	ASL input
94	AVSS		AD translation power supply input terminal
95	SL	I	TUNER : Signal level input
96	VREF		AD translation reference voltage
97	AVCC		AD translation power supply input terminal
98	TUNPDI	I	TUNER : PLL communication
99	TUNPDO	O	TUNER : Data output(PLL)
100	TUNPCK	O	TUNER : Clock output(PLL)

* PD5920A,PD5922A



* S-80835CNUA-B8U



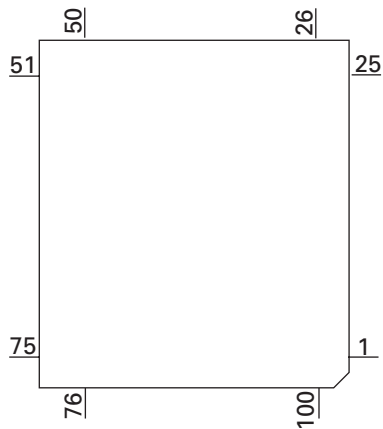
IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

● Pin Functions (PD5932A)

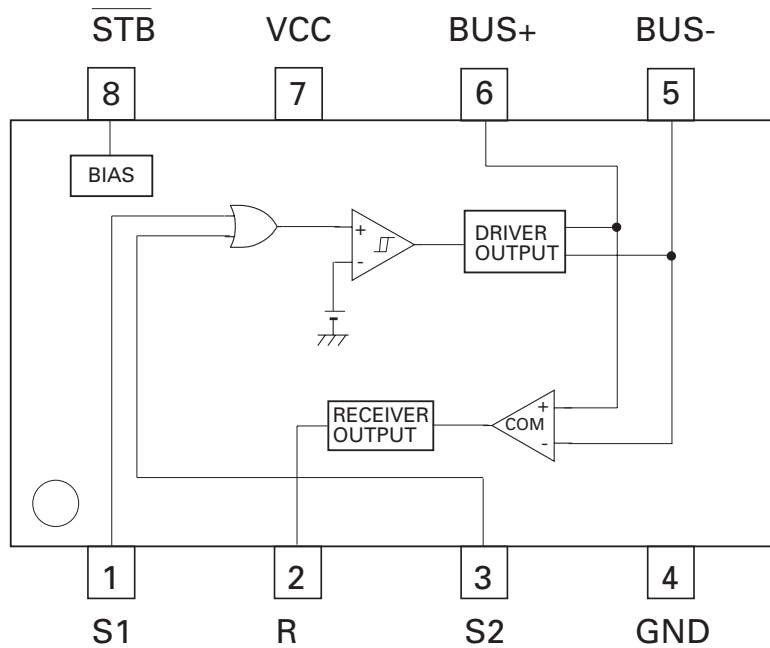
Pin No.	Pin Name	I/O	Format	Function and Operation
1-4	NC			Not used OPEN
5	REM	I		Remote control reception
6	BYTE	I		GND connection
7	CNVSS	I		GND connection
8, 9	NC			Not used OPEN
10	RESET	I		Pull up
11	XOUT	O		Crystal oscillating element connection pin
12	VSS1			GND connection
13	XIN	I		Crystal oscillating element connection pin
14	VDD1			VDD connection
15	NMI	I		Pull up
16-19	KD1-4	I		Key data 1-4
20	CKC	O	C	Cathode driver pulse
21	NC			Not used OPEN
22	CKA	O	C	Anode driver pulse
23	NC			Not used OPEN
24	LS	O	C	Line synchronous signal
25	NC			Not used OPEN
26	CKD	O	C	Data transfer and driver clock
27	DPDT	I		Display data communication
28	KYDT	O	N	Key data communication
29	DA2	O	C	Display data MSB
30	NC			Not used
31	CLK1	I		UART1 clock input
32	ILMD	O	C	Dual illumination
33	DA1	O	C	Display data LSB
34	NC			Not used
35	CLK0	I		UART0 clock input
36	NC	O		Not used OPEN
37	RDY	I		Not used Pull up
38	NC			Not used OPEN
39	HOLD	I		Pull up
40	NC			OPEN
41	CS3R			Not used Pull up
42	RD	O	C	Read strobe
43	NC			OPEN
44	WR	O	C	Not used OPEN
45	CS3	O	C	Not used OPEN
46	CS2	O	C	Bank address
47	CS1	O	C	Bank address
48	CS0	O	C	External ROM chip select
49	A19	O	C	Address bus 19
50	NC	O	C	OPEN
51-59	A17-9	O	C	Address bus 17-9
60	VDD2			VDD connection
61	A8	O	C	Address bus 8
62	VSS2			GND connection
63-69	A7-1	O	C	Address bus 7-0
70	NC	O	C	OPEN
71-86	D15-0	I/O	C	Data bus 15-0
87-92	KS1-6	I/O	C	key strobe
93	FLSTBY	O	C	FLASH memory stand-by signal
94	AVSS			GND connection
95	FL12ON	O	C	Not used OPEN
96	VREF			GND connection
97	AVCC			VCC connection
98	FLBUSY	I		FLASH memory busy signal
99	NC			OPEN
100	FWRST			GND connection

* PD5932A

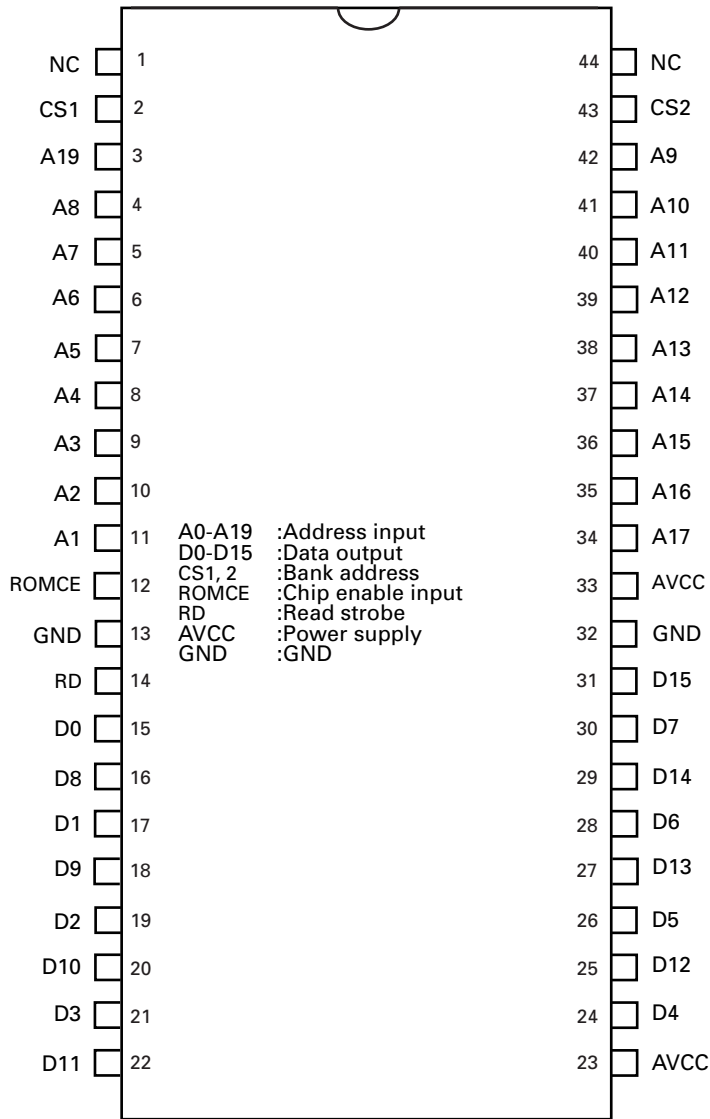
Format	Meaning
C	CMOS
N	Nch open drain



HA12240FP



* PD8119A,
* PD8123A

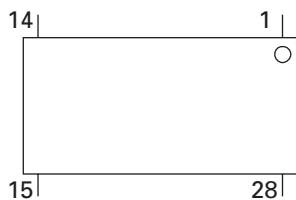


A
B
C
D
E
F

● Pin Functions(BA5835FM,BA5835FP)

Pin No.	Pin Name	Function and Operation
1	VR	Input pin for reference voltage
2	OPIN2(+)	Input pin for non-inverting input for CH2 preamplifier
3	OPIN2(-)	Input pin for inverting input for CH2 preamplifier
4	OPOUT2	Output pin for CH2 preamplifier
5	OPIN1(+)	Input pin for non-inverting input for CH1 preamplifier
6	OPIN1(-)	Input pin for inverting input from CH1 preamplifier
7	OPOUT1	Output pin for CH1 preamplifier
8	GND	Ground pin
9	MUTE	Mute control pin
10	POWVCC1	Power supply pin for CH1, CH2, and CH3 at "Power" stage
11	VO1(-)	Driver CH1 - Negative output
12	VO1(+)	Driver CH2 - Positive output
13	VO2(-)	Driver CH2 - Negative output
14	VO2(+)	Driver CH2 - Positive output
15	VO3(+)	Driver CH2 - Positive output
16	VO3(-)	Driver CH2 - Negative output
17	VO4(+)	Driver CH4 - Positive output
18	VO4(-)	Driver CH4 - Negative output
19	POWVCC2	Power supply pin for CH4 at "Power" stage
20	GND	Ground pin
21	CNT	Control pin
22	LDIN	Loading input
23	OPOUTSL	Output pin for preamplifier for thread
24	OPINLSL	Input pin for preamplifier for thread
25	OPOUT3	CH3 preamplifier output pin
26	OPIN3(-)	Input pin for inverting input for CH3 preamplifier
27	OPIN3(+)	Input pin for non-inverting input for CH3 preamplifier
28	PREVCC	PreVcc

BA5835FM,BA5835FP

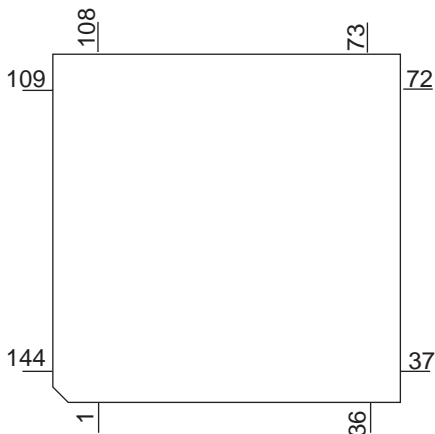


● Pin Functions(UPD63761GJ)

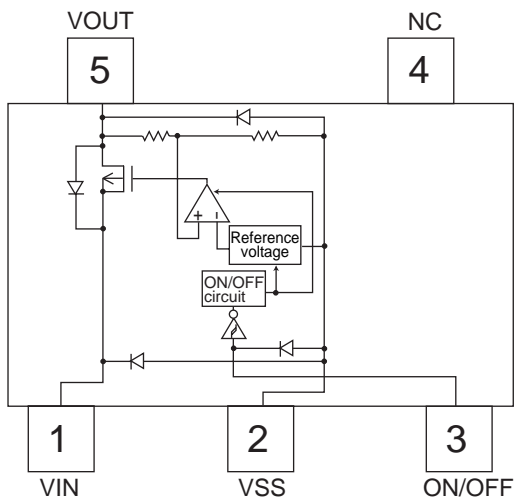
Pin No.	Pin Name	I/O	Function and Operation
1	D.VDD		Power supply for digital circuits
2	D1.GND		GND for 1.6V digital circuits
3	RESET	I	Input of reset
4-8	AB12-8	I	Address bus 12-8 from the microcomputer
9-16	AD7-0	I/O	Address/data bus 7-0 to the microcomputer
17	\overline{CS}	I	Chip selection
18	ASTB	I	Address strobe
19	\overline{READ}	I	Control signals(read)
20	\overline{WRITE}	I	Control signals(write)
21	\overline{WAIT}	O	Control signals(wait)
22	INTQ	O	Interruption signals to the external microcomputer
23, 24	IFMODE0, 1	I	Switching the microcomputer I/F 0, 1
25	D1.VDD		Power supply for 1.6V digital circuits
26	DA.VDD		Power supply for DAC
27	ROUT	O	Output of audio for the right channel
28	DA.GND		GND for DAC
29	REGC		Connected to the capacitor for band gap
30	DA.GND		GND for DAC
31	LOUT	O	Output of audio for the left channel
32	DA.VDD		Power supply for DAC
33	X.VDD		Power supply for the crystal oscillator
34	XTAL	I	Connected to the crystal oscillator(16.9344MHz)
35	\overline{XTAL}	O	Connected to the crystal oscillator(16.9344MHz)
36	X.GND		Ground for the crystal oscillator
37	VDDREG15		Control of 1.6V regulator
38	PWMSW0	I	Setup 0 for PWM output(SD, MD)
39-41	TEST3-1	I	Connected to GND
42	PWMSW1	I	Setup 1 for PWM output(FD, TD)
43	TESTEN	I	Connected to GND
44	D1.GND		GND for 1.6V digital circuits
45	DIN	I	Input of audio data
46	DOUT	O	Output of audio data
47	SCKIN	I	Clock input for audio data
48	SCKO	O	Clock output for audio data
49	LRCKIN	I	Input of LRCK for audio data
50	LRCK	O	Output LRCK for audio data
51	\overline{XTALEN}	I	Permission to oscillate 16.9344MHz
52	D1.VDD		Power supply for 1.6V digital circuits
53	RFCK/HOLD	O	Output of RFCK/HOLD signal
54	WFCK/MIRR	O	Output of WFCK/MIRR signal
55	PLCK	O	Output of PLCK
56	LOCK/RFOK	O	Output of LRCK/Output of RFOK
57	C1D1/C8M	O	Information on error correction/C8M : 8MHz
58	C1D2/C16M	O	Information on error correction/C16M : 16MHz
59	C2D1/RMUTE	O	Information on error correction/Mute for Rch
60	C2D2/LMUTE	O	Information on error correction/Mute for Lch
61	C2D3/SHOCK	O	Information on error correction/Detection of vibration
62	D1.GND		GND for 1.6V digital circuits
63	C33M	O	Output of 33.8688MHz(CLK for SDRAM)
64	(RCS)	O	DRAM \overline{CS}
65	RA11	O	Output of DRAM address 11
66	(CKE)	O	Output of DRAM CKE
67	\overline{RAS}	O	Output of DRAM \overline{RAS}
68	$\overline{CAS0}$ (LDQM)	O	Output of DRAM lower \overline{CAS} (LDQM)
69	$\overline{CAS1}$ (UDQM)	O	Output of DRAM upper \overline{CAS} (UDQM)
70	\overline{WE}	O	Output of DRAM \overline{WE}
71	OE(CAS)	O	Output of DRAM OE(CAS)
72	D.GND		Ground for digital circuits
73-88	RDB0-15	I/O	Input/output of DRAM data0-15
89-99	RA0-10	O	Output of DRAM address0-10

Pin No.	Pin Name	I/O	Function and Operation
100	D.VDD		Power supply for digital circuits
101	FD+	O	Output of focus drive PWM +
102	FD-	O	Output of focus drive PWM -
103	TD+	O	Output of tracking drive PWM +
104	TD-	O	Output of tracking drive PWM -
105	SD+	O	Output of thread drive PWM +
106	SD-	O	Output of thread drive PWM -
107	MD+	O	Output of spindle drive PWM +
108	MD-	O	Output of spindle drive PWM -
109	REFOUTSV	O	REFOUT for servo
110	AD.VDD		Power supply for ADC
111	EFM	O	Output of EFM signals
112	ASY	I	Input of asymmetry
113	ATEST	O	Analog tests
114	RFI	I	Input of RF
115	AD.GND		Ground for the analog system
116	AGCO	O	Output of RF
117	C3T	O	Connection to the capacitor for detecting 3T
118	AGCI	I	Input of AGC
119	RFO	O	Output of RF(AGC)
120, 121	EQ2, 1	I	Equalizer 2, 1
122	RF2-	I	Reversal input of RF2
123	RF-	I	Reversal input of RF
124	A.GND		Ground for the analog system
125	A	I	Input of A
126	C	I	Input of C
127	B	I	Input of B
128	D	I	Input of D
129	F	I	Input of F
130	E	I	Input of E
131	VREFIN	I	Input of reference voltage
132	A.VDD		Power supply for the analog system
133	REFOUT	O	Output of reference voltage
134	REFC	I	Connected to the capacitor for output of REFOUT
135	FE-	I	Reversal input of FE
136	FEO	O	Output of FE
137	ADIN	I	Input of FE, TE A/D converter
138	TE-	I	Reversal input of TE
139	TEO	O	Output of TE
140	TE2	O	TE2
141	TEC	I	TEC
142	LD	O	Output of LD
143	PD	I	Input of PD
144	D.GND		Ground for digital circuits

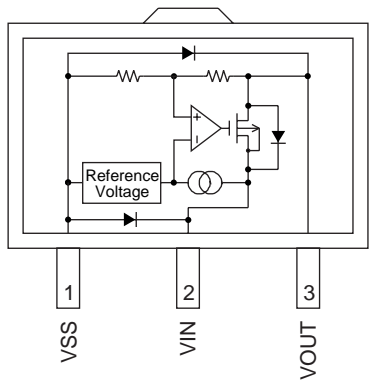
* UPD63761GJ



* S-L2980A15MC-C6A



* S-812C33AUA-C2N

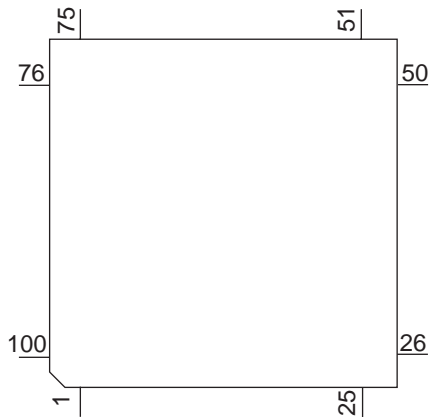


● Pin Functions(PE5440A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	AVREF			A power supply Positive power supply(5V)
2	AVSS			A power supply GND
3	RFOK	O	C	Output of state of RFOK
4	CLAMP	I	C	CLAMP SW sense input
5	EVDD			E power supply Positive power supply
6	PWM			For changer(PWM)
7	NC			Not used
8	IC/FLMD0			IC : VSS direct connection/FLMOD0 : Pull-down
9	VDD			Positive power supply(5V)
10	REGC			Connected to the capacity stabilizing output of the regulator
11	VSS			GND
12	X1	I		Oscillator connection for mainclock
13	X2			Oscillator connection for mainclock
14	RESET	I		System reset input
15	XT1	I		Connected to the oscillator for subclock (connected to VSS via the resistor)
16	XT2			Connected to the oscillator for subclock(Open)
17	PULLDOWN	I		Connected to EVDD or EVSS via the resistor
18	EJSW	I	C	Eject key input
19	XINT		C	CD LSI interruption signal input
20	NC			Not used
21	BRST	I		P-Bus reset input
22	BSI	I		P-Bus serial data input
23	BSO	O	C	P-Bus serial data output
24	BSCK	I/O	/C	P-Bus serial clock input/output
25	FTXD	O	C	For flash rewriting(transmitted signal)
26	FRXD	I		For flash rewriting(received signal)
27	BRXEN	I/O	/C	It is possible to receive P-Bus
28	BSRQ	I/O	/C	P-Bus service request demand
29	DSPOK	I		DSP microcomputer initialization OK input
30	DSCSNS(S903)	I		Disc state sense input
31	8EJ(S905)	I		Input of detection of 8 cm disc ejection
32	12EJ(S904)	I		Input of detection of 12 cm disc ejection
33	EVSS			E power supply GND
34	EVDD			E power supply Positive power supply
35, 36	SRAMLEVEL0, 1	O	C	SRAM level meter output
37	EMPH	O	C	Emphasis information output
38	EMPH	O	C	Emphasis information output
39-42	NC			Not used
43	ADENA	O	C	A/D reference voltage supply control output
44	LRCKOK	O	C	(DOUT mute output)
45	SRAMLEVEL2	O	C	SRAM level meter output
46	CD3VON	O	C	CD +3.3V power supply control output
47	CONT	O	C	Servo driver power supply control output
48	XRST	O	C	CD LSI reset control output
49	VDCONT	O	C	VD power supply control output
50	ROMDATA	I/O	/C	E2PROM data input/output
51	ROMCS	O	C	E2PROM chip selection output
52	ROMCK	O	C	E2PROM clock output
53	LOEJ	O	C	The direction change output of LOAD/EJECT
54	CLCONT	O	C	Driver input change output
55	CDMUTE	O	C	CD mute control output
56-58	INT			For changer(Interruption at the edge)
59	XCS	O	C	CD LSI chip selection output
60	NC			Not used
61	XWAIT	I		CD LSI write control signal output
62	CLKOUT	O	C	Internal system clock output(Open)
63	LOCK	I		Spindle lock input
64	NC			Not used
65	XWRITE	O		CD LSI write control signal output

Pin No.	Pin Name	I/O	Format	Function and Operation
66	NC			Not used
67	XREAD	O		CD LSI read control signal output
68	XASTB	O		CD LSI address strobe output
69	BVSS			B power supply GND
70	BVDD			B power supply Positive power supply
71-86	AD0-15	I/O	/C	Address/data Bus 0-15
87-90	NC			Not used
91-93	A/D			For changer(A/D)
94	CSENS	I		Flap closing sense input
95	TYPE_A/D	I		CD-DA analog/digital output change setup
96	TESTIN	I		Chip check test program starting input
97	HOME	I		Home SW sense input
98	TEMP			Temperature information sense input
99	VDSSENS			VD power supply short sense input
100	NC			Not used

* PE5440A



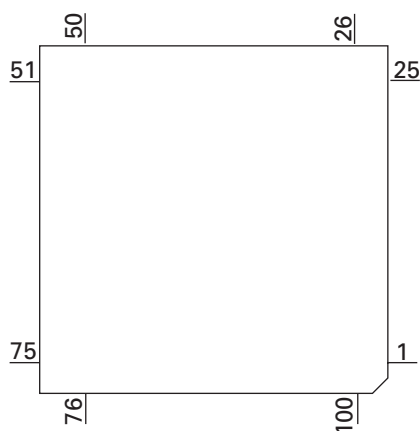
Format	Meaning
C	CMOS

● Pin Functions(UPD63712AGC)

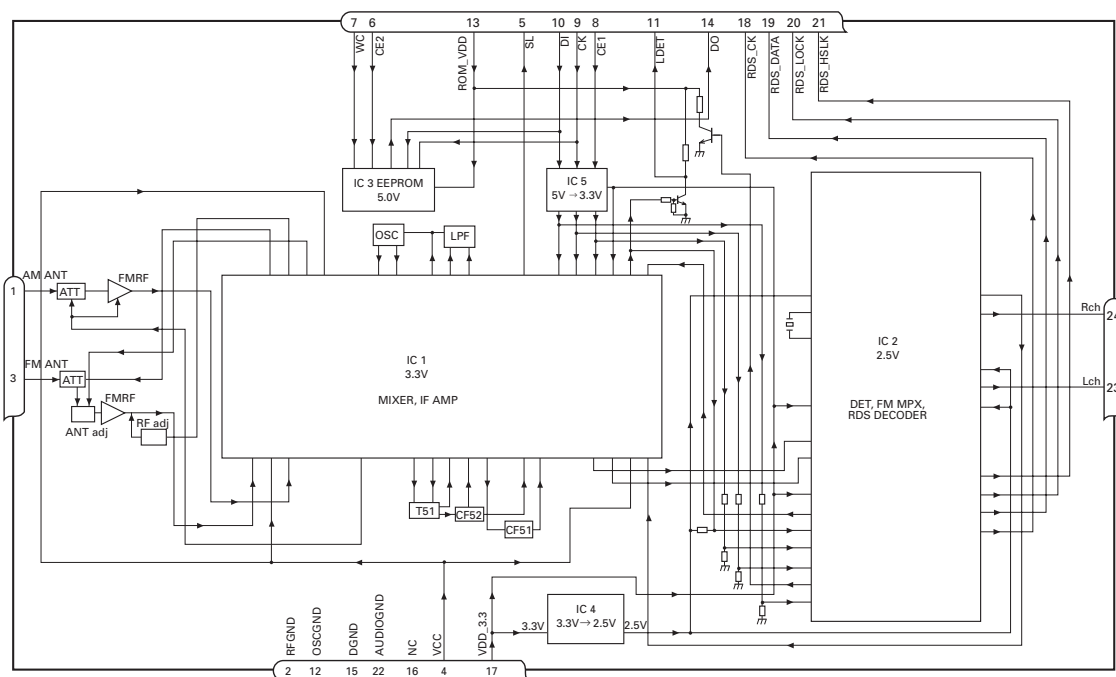
Pin No.	Pin Name	I/O	Function and Operation
1	LD	O	Output of LD
2	PD	I	Input of PD
3	PN	I	Assignment of pickup polarity
4	AVDD		Power supply for the analog system
5	DGND		Ground for digital circuits
6	RFOK	O	Output of RFOK
7	INTQ	O	Interruption signals to the external microcomputer
8	RST	I	Input of reset
9	A0	I	Command/Parameter discrimination signal input
10	STB	I	Data strobe signal input
11	SCK	I	Serial data clock input
12	SO	O	Serial data output
13	SI	I	Serial data input
14	DVDD		Power supply for digital circuits
15	DAVDD		Power supply for DAC
16	ROUT	O	Output of audio for the right channel
17	DAGND		GND for DAC
18	REGC		Connected to the capacitor for band gap
19	DAGND		GND for DAC
20	LOUT	O	Output of audio for the left channel
21	DAVDD		Power supply for DAC
22	XVDD		Power supply for the crystal oscillator
23	XTAL	O	Connected to the crystal oscillator
24	XTAL	I	Connected to the crystal oscillator
25	XGND		Ground for the crystal oscillator
26	DVDD		Power supply for digital circuits
27	C1D1	O	Information on error correction
28	C1D2	O	Information on error correction
29	C2D1	O	Information on error correction
30	C2D2	O	Information on error correction
31	C2D3	O	Information on error correction
32	LOCK	O	Output of LOCK
33	MIRR	O	MIRR signal
34	HOLD	O	HOLD signal
35	PLCK	O	Output of PLCK
36	C16M	O	Output of 16.9344MHz
37	DGND		Ground for digital circuits
38	TX	O	DAI output
39	EMPH	O	Pre-emphasis information output
40	FLAG	O	The flag for which output sound data cannot be corrected is outputted
41	DVDD		Power supply for digital circuits
42	LIMIT	I	Signal is inputted when the register can be read
43	XTALEN	I	Permission to oscillate
44	DGND		Ground for digital circuits
45	DIN	I	Input of audio data
46	DOUT	O	Output of audio data
47	SCKIN	I	Clock input for audio data
48	SCKO	O	Clock output for audio data
49	LRCKIN	I	Input of LRCK for audio data
50	LRCK	O	Output LRCK for audio data
51	DVDD		Power supply for digital circuits
52	FD+	O	Output of focus drive PWM
53	FD-	O	Output of focus drive PWM
54	TD+	O	Output of tracking drive PWM
55	TD-	O	Output of tracking drive PWM
56	SD+	O	Output of thread drive PWM
57	SD-	O	Output of thread drive PWM
58	MD+	O	Output of spindle drive PWM
59	MD-	O	Output of spindle drive PWM
60	DGND		Ground for digital circuits

Pin No.	Pin Name	I/O	Function and Operation
61	TESTEN	I	Connected to GND
62-66	TEST4-0	I	Connected to GND
67	ADGND		GND for DAC
68	EFM	O	Output of EFM signals
69	ASY	I	Input of asymmetry
70	ADVDD		Power supply for DAC
71	RFI	I	Input of RF
72, 73	EQ2, 1		Equalizer 2, 1
74	RF-	I	Reversal input of RF
75	RF2-	I	Reversal input of RF2
76	AGCO	O	Output of RF
77	AGCI	I	Input of AGC
78	RFO	O	Output of RF
79	ATEST	O	Analog tests
80	C3T		Connection to the capacitor for detecting 3T
81	AGND		Ground for the analog system
82	A	I	Input of A
83	C	I	Input of C
84	B	I	Input of B
85	D	I	Input of D
86	F	I	Input of F
87	E	I	Input of E
88	VREFIN	I	Photo-detector input bias voltage
89	AVDD		Power supply for the analog system
90	REFOUT	O	Output of reference voltage
91	REFC		Connected to the capacitor for output of REFOUT
92	FE-	I	Reversal input of FE
93	FEO	O	Output of FE
94	ADCIN	I	TEST
95	TE-	I	Reversal input of TE
96	TEO	O	Output of TE
97	TE2	O	TE2
98	TEC	I	TEC
99	AGND		Ground for the analog system
100	PWMSW	I	Servo PWM mode switching

* UPD63712AGC

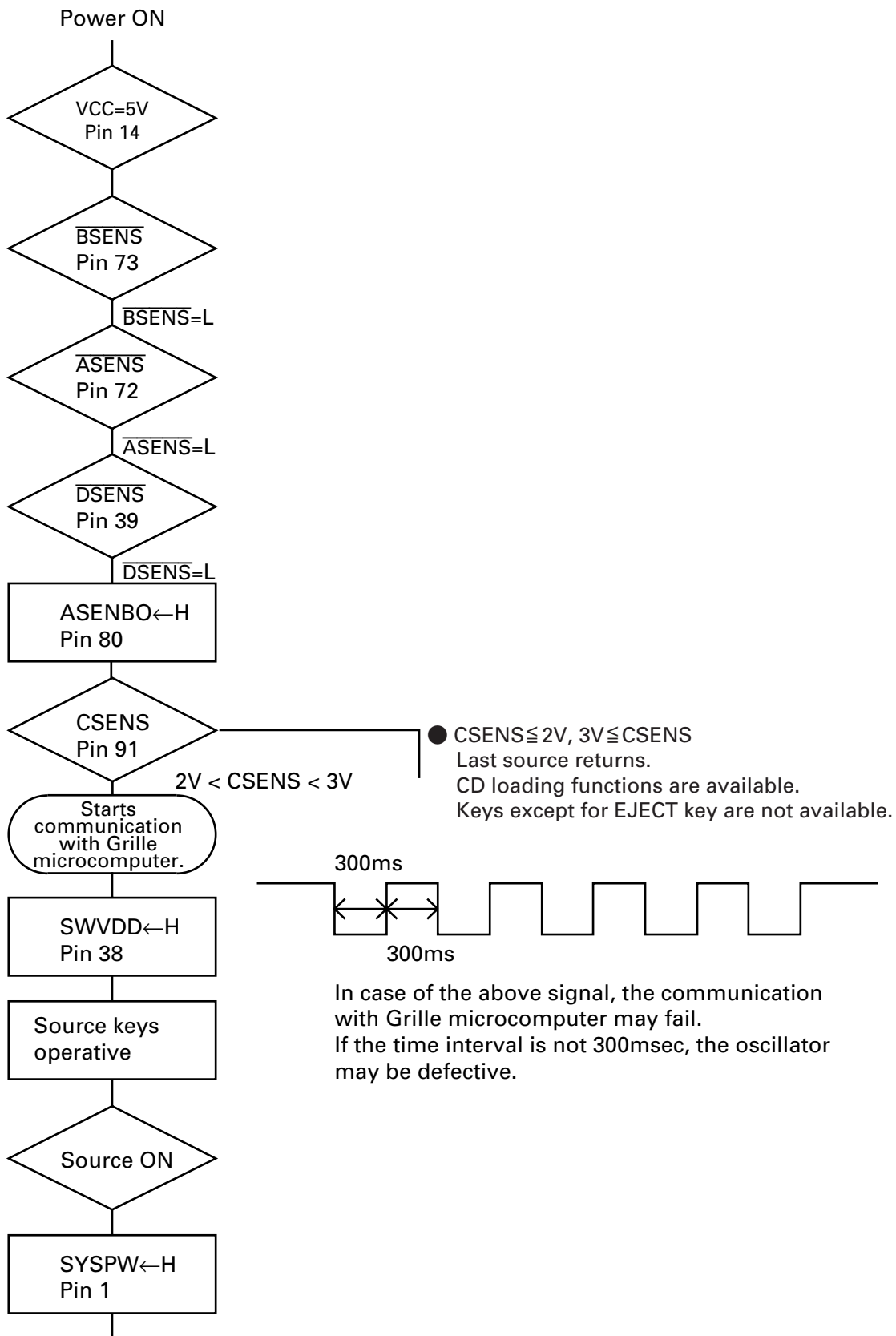


FM/AM Tuner Unit



No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM "Low" active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is "Low". Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF "High" active
9	CK	I	clock	Clock
10	DI	I	data in	Data input
11	LDET	O	lock detector	"Low" active
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3V ± 0.2V
18	RDS_CK	O	RDS clock	Output of RDS clock(2.5V)
19	RDS_DATA	O	RDS data	Output of RDS data(2.5V)
20	RDS_LOCK	O	RDS lock	Output unit "High" active(2.5V) (RDS_LOCK turns over by the external transistor. "Low" active)
21	RDS_HSLK	O	RDS high speed lock	Output unit "High" active(2.5V)(RDS_HSLK turns over by the external transistor. "Low" active)
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo "L-ch" signal output or AM audio output
24	R ch	O	R channel output	FM stereo "R-ch" signal output or AM audio output

7.3 OPERATIONAL FLOW CHART



Completes power-on operation.
(After that, proceed to each source operation)

7.4 CLEANING

A



Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

B

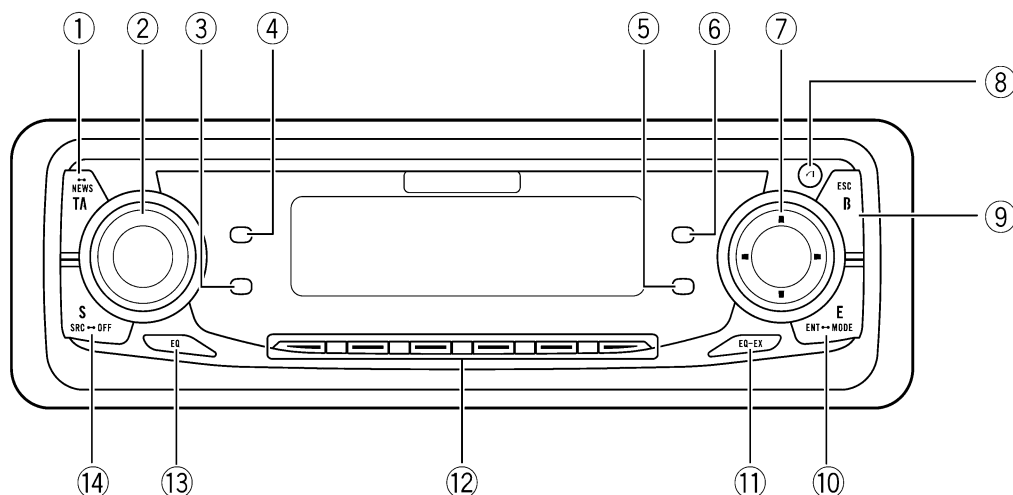
C

D

E

F

8. OPERATIONS



Head unit

① TA button

Press to turn traffic announcements function on or off.

② VOLUME

When you press **VOLUME**, it extends outward so that it becomes easier to turn. To retract **VOLUME**, press it again. Rotate to increase or decrease the volume.

③ DISPLAY button

Press to select different displays.

④ TEXT button

Press to turn radio text function on or off.

⑤ FUNCTION button

Press to select functions.

⑥ AUDIO button

Press to select various sound quality controls.

⑦ ▲/▼/◀/▶ buttons

Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.

⑧ OPEN button

Press to open the front panel.

⑨ BAND button

Press to select among three FM and MW/LW bands and cancel the control mode of functions.

⑩ ENTERTAINMENT button

Press to change to the entertainment display.

⑪ EQ-EX button

Press and hold to switch between EQ-EX and SFEQ functions. Press to operate each function.


⑫ 1-6 buttons

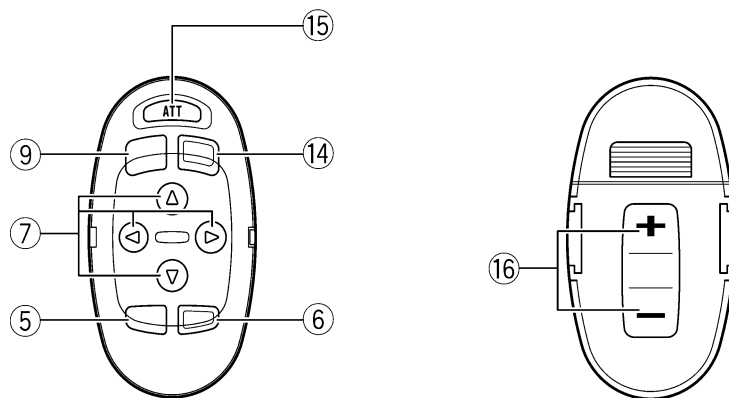
Press for preset tuning and disc number search when using a multi-CD player.

⑬ EQ button

Press to select various equalizer curves.

⑭ SOURCE button

This unit is turned on by selecting a source. Press to cycle through all of the available sources. 



Optional remote control

The steering remote control CD-SR100 is sold separately.

Operation is the same as when using the button on the head unit. See the explanation of the head unit about the operation of each button with the exception of **ATT**, which is explained below.

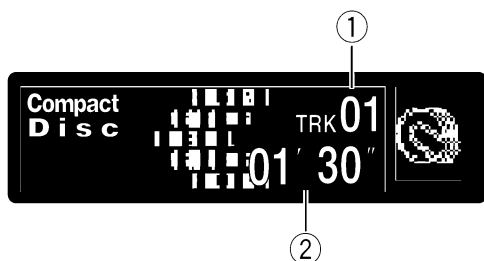
⑮ **ATT button**

Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑯ **VOLUME button**

Press to increase or decrease the volume.

Playing a CD



These are the basic steps necessary to play a CD with your built-in CD player.

① Track number indicator

Shows the track currently playing.

② Play time indicator

Shows the elapsed playing time of the current track.

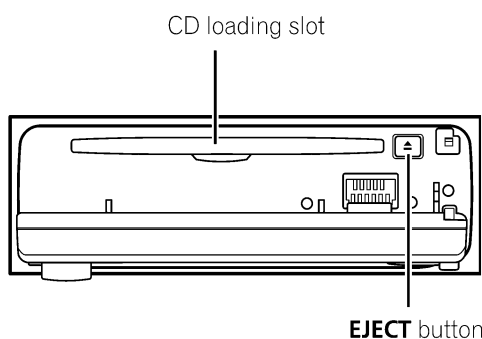
1 Press OPEN to open the front panel.

CD loading slot appears.

- After a CD has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD into the CD loading slot.

Playback will automatically start.



- You can eject a CD by pressing **EJECT**.
- To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

4 Use VOLUME to adjust the sound level.

Rotate to increase or decrease the volume.

5 To perform fast forward or reverse, press and hold ◀ or ▶.

- If you select the search method to **ROUGH SEARCH**, pressing and holding ◀ or ▶ enables you to search every ten track in the current disc.

6 To skip back or forward to another track, press ◀ or ▶.

Pressing ▶ skips to the start of the next track. Pressing ◀ once skips to the start of the current track. Pressing again will skip to the previous track.



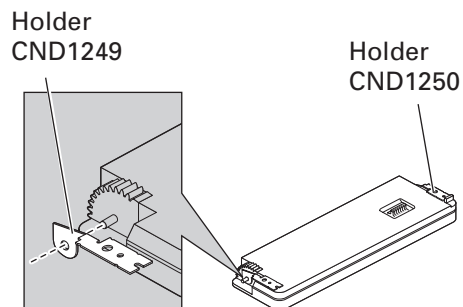
Notes

- 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 CDs.
- Do not insert anything other than a CD into the CD loading slot.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed.
- When a CD TEXT disc is inserted, the disc and track titles automatically begin to scroll in the display. When Ever Scroll is set to ON at the initial setting, the disc and track titles scroll continuously. ■

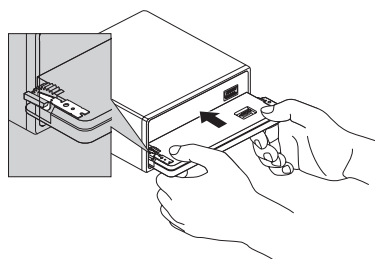
A Fixing the front panel

If you do not operate the removing and attaching the front panel function, use the supplied fixing screws and holders to fix the front panel to this unit.

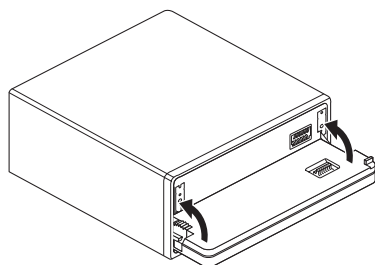
1. Attach the holders to both sides of the front panel.



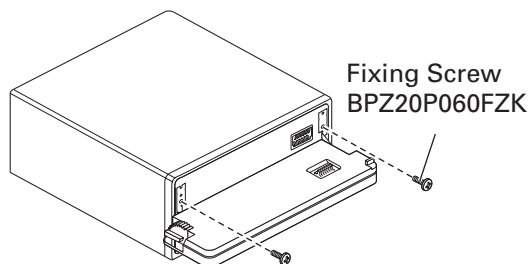
2. Replace the front panel to the unit.



3. Flip the holders into upright positions.



4. Fix the front panel to the unit using fixing screws.



CONNECTION DIAGRAM

