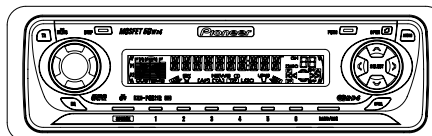


Service Manual

KEH-P6021R/XN/EE



ORDER NO.
CRT2804

MULTI-CD CONTROL HIGH POWER CASSETTE PLAYER WITH RDS TUNER

KEH-P6021R

XN/EE

MULTI-CD CONTROL HIGH POWER CASSETTE PLAYER WITH FM/AM TUNER

KEH-P6025

XN/ES

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

Model No.	Order No.	Mech. Module	Remarks
CX-1011	CRT2406	3L	Cassette Mech. Module:Mech.Description, Disassembly, Adjustment

NOTE:

- This service manual does not describe the CD test mode.

For the operations in the CD test mode, refer to the CD player's Service manual.

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For details, refer to "Important symbols for good services" on the next page.

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

[Important symbols for good services]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely. When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts



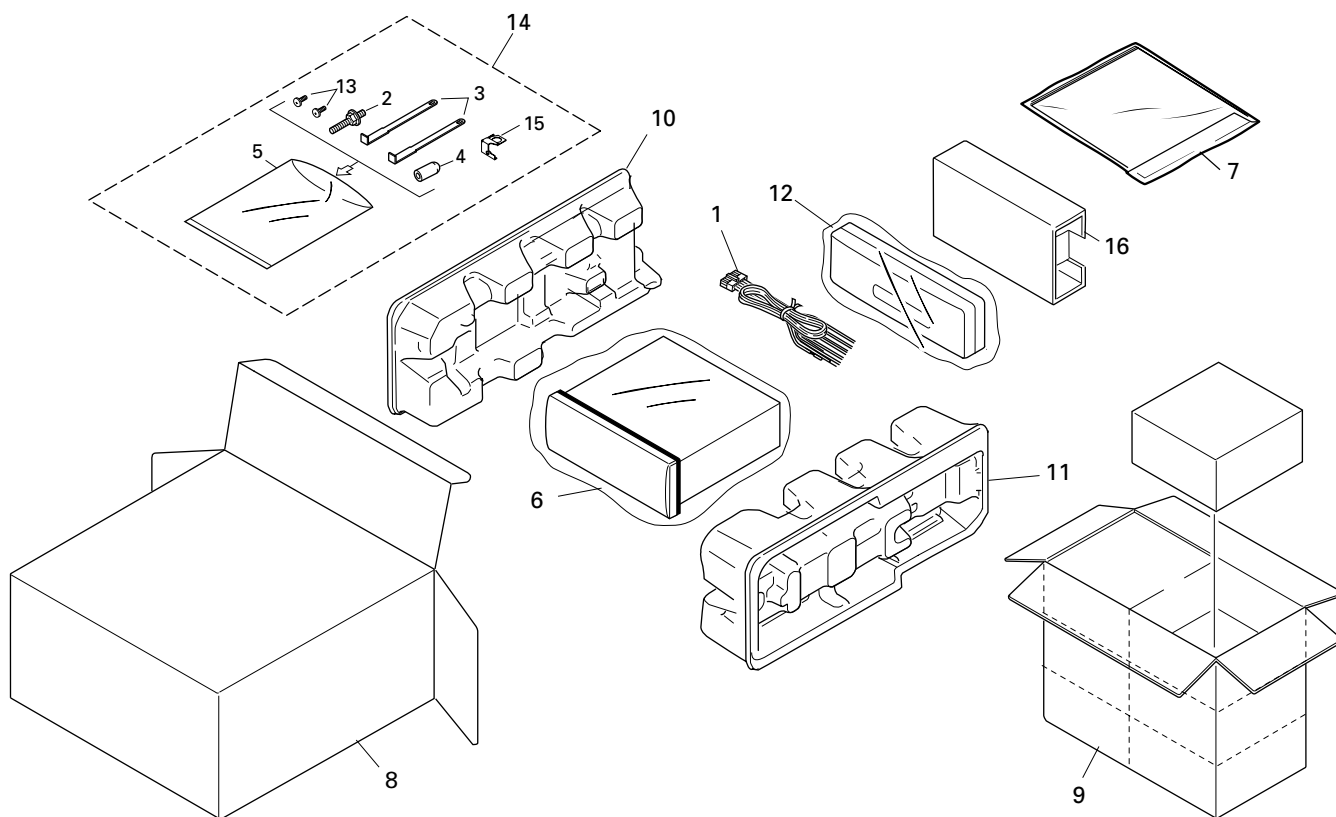
Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount. For replacement parts or tools, the prescribed ones should be used.

1. SAFETY INFORMATION

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

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING(KEH-P6021R)



NOTE:

- Parts marked by “*” are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

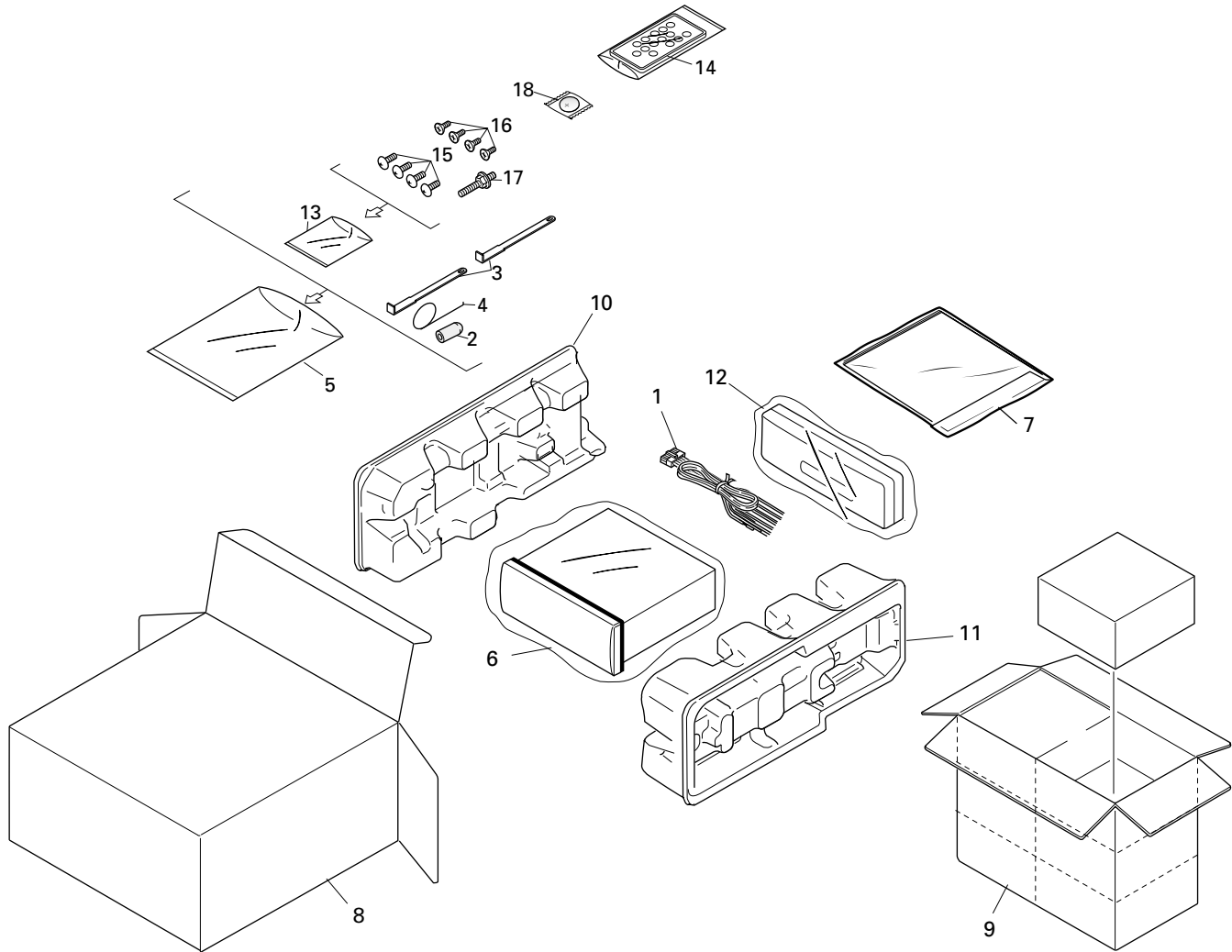
● PACKING SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Cord Assy	CDE6438	8	Carton	CHG4559
2	Screw	CBA1002	9	Contain Box	CHL4559
3	Handle	CNC5395	10	Protector	CHP2251
4	Bush	CNV3930	11	Protector	CHP2252
*	5 Polyethylene Bag	E36-615	12	Case Assy	CXB3520
6	Polyethylene Bag	CEG-162	13	Screw	BPZ20P060FZK
7-1	Polyethylene Bag	CEG1116	14	Accessory Assy	CEA3062
7-2	Owner's Manual	CRD3539	15	Earth Plate	CNC9450
7-3	Installation Manual	CRD3554	16	Inner Box	CHW1754
*	7-4 Warranty Card	CRY1157			

● Owner's Manual, Installation Manual

Model	Part No.	Language
KEH-P6021R/XN/EE	CRD3539	English, Russian
	CRD3554	

2.2 PACKING(KEH-P6025)



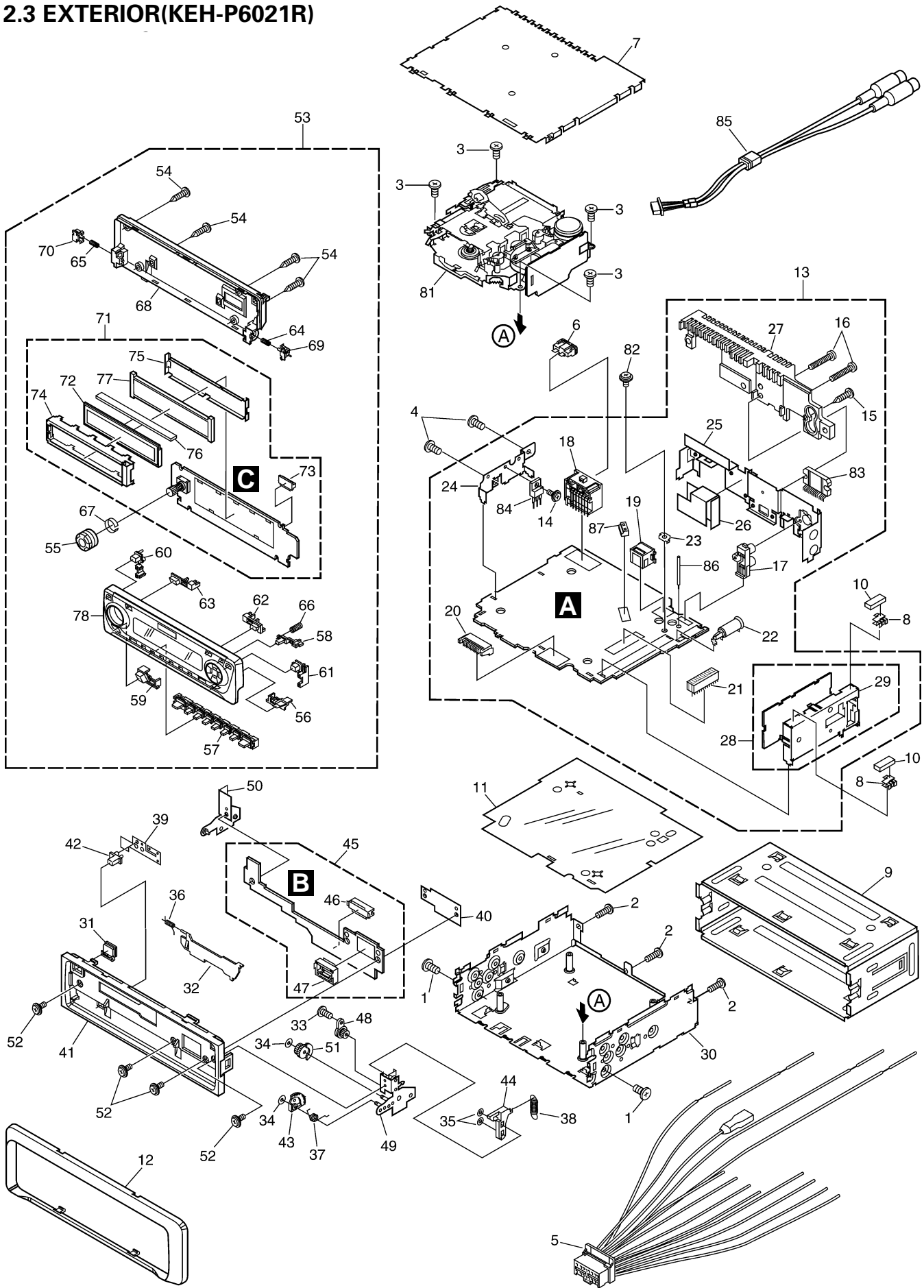
● PACKING SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Cord Assy	CDE6436	8	Carton	CHG4558
2	Bush	CNV3930	9	Contain Box	CHL4558
3	Handle	CNC5395	10	Protector	CHP2251
4	Spring	CBH1650	11	Protector	CHP2252
*	5 Polyethylene Bag	CEG-158	12	Case Assy	CXB3520
6	Polyethylene Bag	CEG-162	*	13 Polyethylene Bag	CEG-127
7-1	Polyethylene Bag	CEG1116	14	Remote Control Unit	CXB8744
7-2	Owner's Manual	CRD3535	15	Screw	TRZ50P080FMC
7-3	Owner's Manual	CRD3536	16	Screw	CRZ50P090FMC
7-4	Installation Manual	CRD3552	17	Screw	CBA1002
			*	18 Battery	CEX1065

● Owner's Manual, Installation Manual

Model	Part No.	Language
KEH-P6025/XN/ES	CRD3535	English, Spanish, Portuguese(B), Chinese, Arabic
	CRD3536	
	CRD3552	

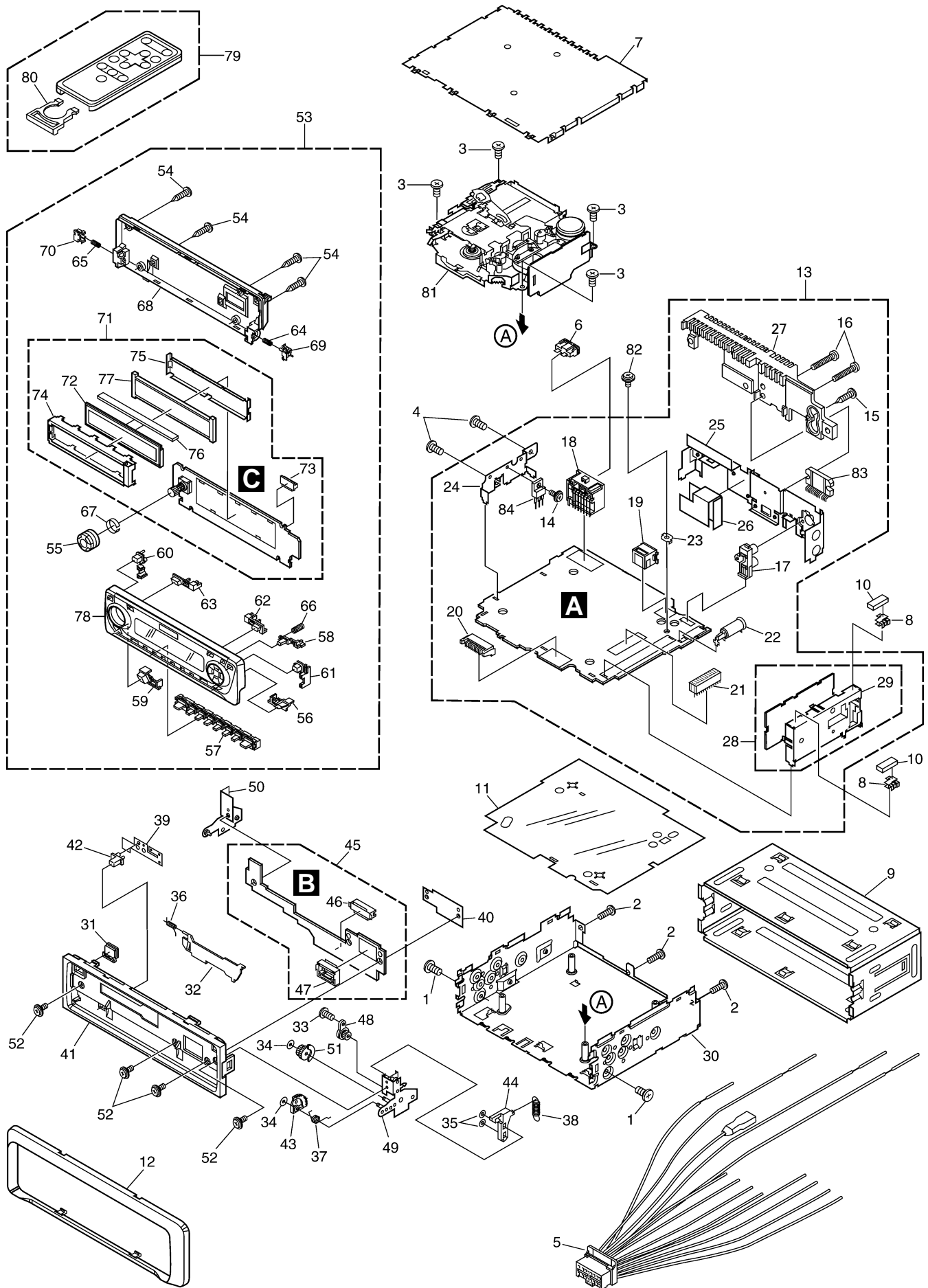
2.3 EXTERIOR(KEH-P6021R)



● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ30P040FZK	46	Socket(CN1950)	CKS3550
2	Screw	BMZ30P100FMC	47	Connector(CN1951)	CKS4206
3	Screw	BSZ26P050FMC	48	Damper Unit	CXB5070
4	Screw	BSZ30P060FMC	49	Holder Unit	CXB6356
5	Cord Assy	CDE6438	50	Holder Unit	CXB6357
6	Fuse(10A)	CEK1136	51	Clutch Unit	CXB6358
7	Case	CNB2686	52	Screw	IMS20P045FZK
8	Holder	CNC5704	53	Detach Grille Assy	CXB8414
9	Holder	CNC8659	54	Screw	BPZ20P100FZK
10	Cushion	CNM4870	55	Knob	CAA2699
11	Insulator	CNM6948	56	Button(SFEQ)	CAC7221
12	Panel	CNS6934	57	Button(1-6)	CAC7225
13	Tuner Amp Unit	CWM8021	58	Button(OPEN)	CAC7227
14	Screw	ASZ26P060FMC	59	Button(EQ)	CAC7231
15	Screw	BPZ26P120FMC	60	Button(TA)	CAC7232
16	Screw	BSZ26P160FMC	61	Button(AUDIO)	CAC7234
17	Pin Jack(CN351)	CKB1035	62	Button(FUNC)	CAC7235
18	Plug(CN901)	CKM1330	63	Button(DISP)	CAC7236
19	Connector(CN701)	CKS3408	64	Spring	CBH2430
20	Plug(CN750)	CKS3537	65	Spring	CBH2431
21	Connector(CN551)	CKS3568	66	Spring	CBH2630
22	Antenna Jack(CN402)	CKX1056	67	Spring	CBL1470
23	Holder(CN403)	CNC5399	68	Cover	CNS6740
24	Holder	CNC8615	69	Holder	CNV6505
25	Holder	CNC9470	70	Holder	CNV6506
26	Insulator	CNM6949	71	Keyboard Unit	CWM8311
27	Heat Sink	CNR1583	72	LCD	CAW1627
28	FM/AM Tuner Unit	CWE1566	73	Connector(CN1901)	CKS4524
29	Holder	CNC8815	74	Holder	CNC9053
30	Chassis Unit	CXB6106	75	Sheet	CNM7647
31	Button(EJECT)	CAC6839	76	Connector	CNV6440
32	Door	CAT2109	77	Lighting Conductor	CNV6441
33	Screw(M2x2)	CBA1176	78	Sub Grille Assy	CXB8623
34	Washer	CBF1038	79	
35	Washer	CBF1039	80	
36	Spring	CBH1838	81	Cassette Mechanism Module	EXK4050
37	Spring	CBH2428	82	Screw	ISS26P055FUC
38	Spring	CBH2429	83	IC(IC361)	PAL007A
39	Spring	CBL1512	84	Transistor(Q910)	2SD2396
40	Holder	CNC9096	85	Cord Assy	CDE6494
41	Panel	CNS6280	86	Clamper	CEF1007
42	Pin	CNV6486	87	Connector(CN331)	CKS3598
43	Gear	CNV6507			
44	Arm	CNV6508			
45	Panel Unit	CWM7627			


2.4 EXTERIOR(KEH-P6025)

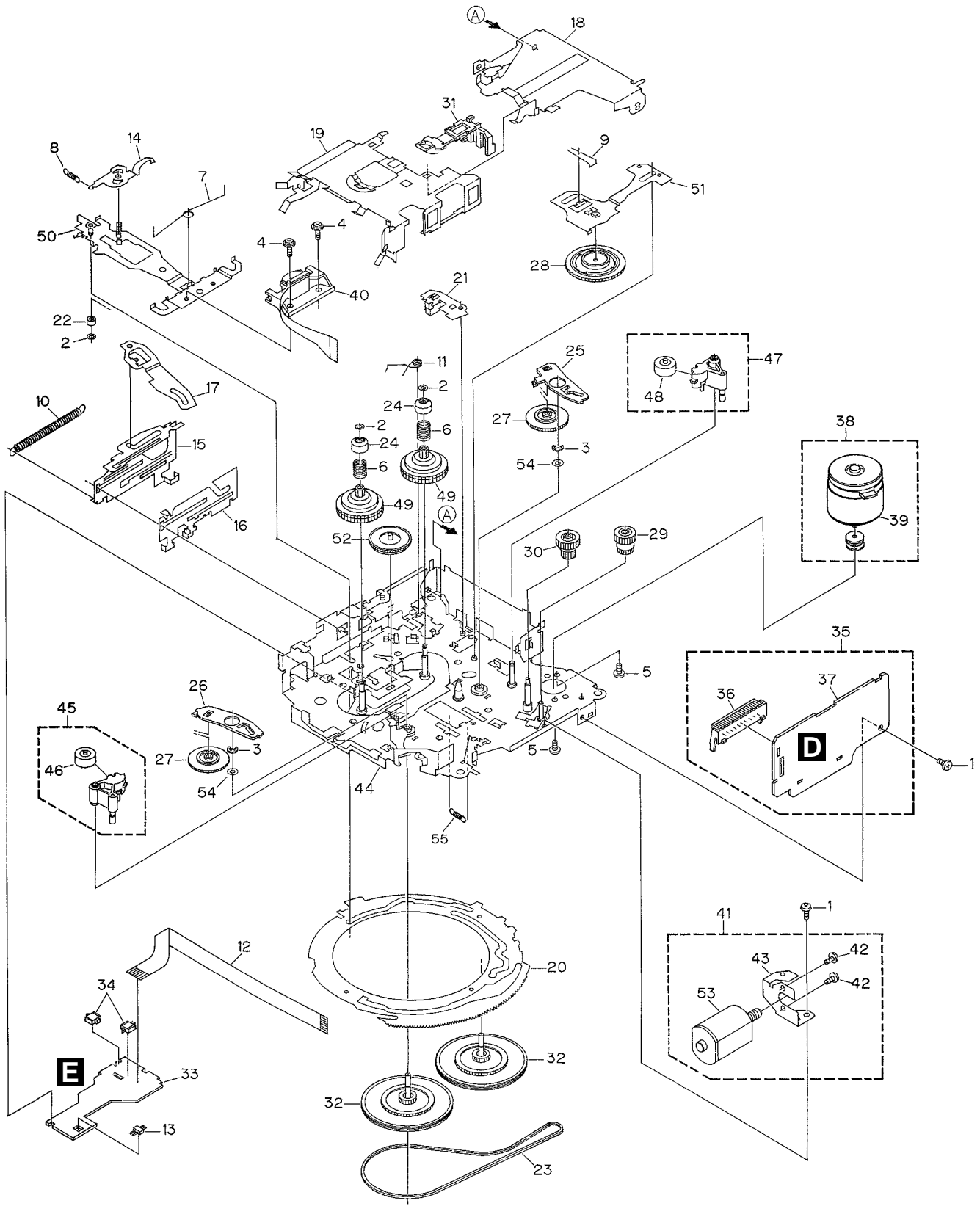


● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ30P040FZK	46	Socket(CN1950)	CKS3550
2	Screw	BMZ30P100FMC	47	Connector(CN1951)	CKS4206
3	Screw	BSZ26P050FMC	48	Damper Unit	CXB5070
4	Screw	BSZ30P060FMC	49	Holder Unit	CXB6356
5	Cord Assy	CDE6436	50	Holder Unit	CXB6357
6	Fuse(10A)	CEK1136	51	Clutch Unit	CXB6358
7	Case	CNB2686	52	Screw	IMS20P045FZK
8	Holder	CNC5704	53	Detach Grille Assy	CXB8411
9	Holder	CNC8659	54	Screw	BPZ20P100FZK
10	Cushion	CNM4870	55	Knob	CAA2725
11	Insulator	CNM6948	56	Button(SFEQ)	CAC7221
12	Panel	CNS6935	57	Button(1-6)	CAC7225
13	Tuner Amp Unit	CWM8020	58	Button(OPEN)	CAC7227
14	Screw	ASZ26P060FMC	59	Button(EQ)	CAC7231
15	Screw	BPZ26P120FMC	60	Button(CLOCK)	CAC7233
16	Screw	BSZ26P160FMC	61	Button(AUDIO)	CAC7234
17	Pin Jack(CN351)	CKB1035	62	Button(FUNC)	CAC7235
18	Plug(CN901)	CKM1330	63	Button(DISP)	CAC7236
19	Connector(CN701)	CKS3408	64	Spring	CBH2430
20	Plug(CN750)	CKS3537	65	Spring	CBH2431
21	Connector(CN551)	CKS3568	66	Spring	CBH2630
22	Antenna Jack(CN402)	CKX1056	67	Spring	CBL1470
23	Holder(CN403)	CNC5399	68	Cover	CNS6740
24	Holder	CNC8615	69	Holder	CNV6505
25	Holder	CNC9472	70	Holder	CNV6506
26	Insulator	CNM6949	71	Keyboard Unit	CWM8313
27	Heat Sink	CNR1583	72	LCD	CAW1628
28	FM/AM Tuner Unit	CWE1563	73	Connector(CN1901)	CKS4524
29	Holder	CNC8815	74	Holder	CNC9053
30	Chassis Unit	CXB6106	75	Sheet	CNM7647
31	Button(EJECT)	CAC6839	76	Connector	CNV6440
32	Door	CAT2109	77	Lighting Conductor	CNV6441
33	Screw(M2x2)	CBA1176	78	Sub Grille Assy	CXB8620
34	Washer	CBF1038	79	Remote Control Unit	CXB8744
35	Washer	CBF1039	80	Cover	CNS7068
36	Spring	CBH1838	81	Cassette Mechanism Module	EXK4050
37	Spring	CBH2428	82	Screw	ISS26P055FUC
38	Spring	CBH2429	83	IC(IC361)	PAL007A
39	Spring	CBL1512	84	Transistor(Q910)	2SD2396
40	Holder	CNC9096			
41	Panel	CNS6280			
42	Pin	CNV6486			
43	Gear	CNV6507			
44	Arm	CNV6508			
45	Panel Unit	CWM7627			

2.5 CASSETTE MECHANISM MODULE

 For grease application, refer to the service manual for CX-1011 (CRT2406).



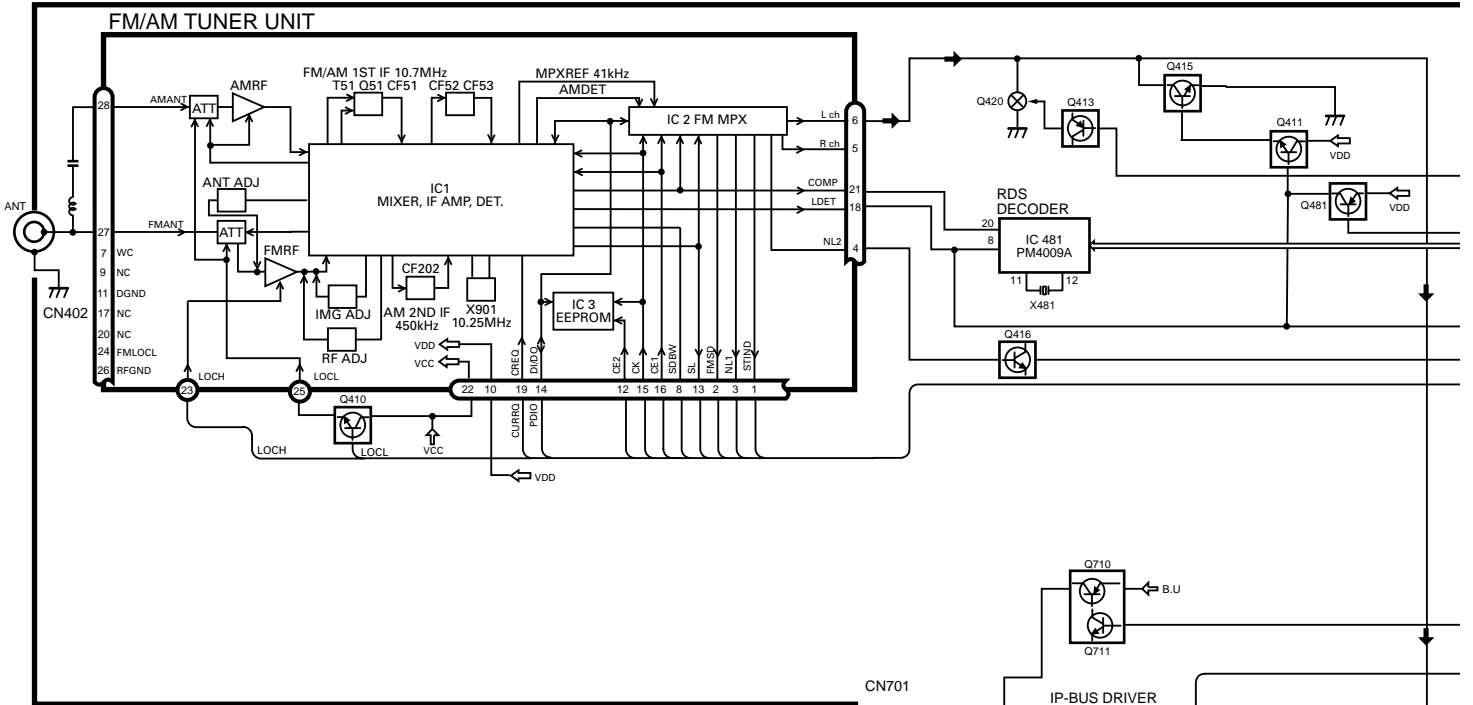
● CASSETTE MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC	46	Pinch Roller	ENV1518
2	Washer	CBF1037	47	Pinch Holder Unit	EXA1607
3	Washer	CBG1003	48	Pinch Roller	ENV1518
4	Screw	EBA1028	49	Reel Unit	EXA1585
5	Screw	CBA1037	50	Head Base Unit	EXA1611
6	Spring	EBH1531	51	Lever Unit	EXA1587
7	Spring	EBH1642	52	Gear Unit	EXA1596
8	Spring	EBH1641	53	Motor Unit(Service)	EXX1055
9	Spring	EBH1626	54	Washer	HBF-179
10	Spring	EBH1627	55	Spring	EBH1537
11	Spring	EBH1649			
12	Cord	EDD1024			
13	Photo-reflector(EGN1)	EGN1004			
14	Arm	ENC1526			
* 15	Lever	ENC1544			
16	Lever	ENC1543			
17	Arm	ENC1532			
18	Frame	ENC1533			
19	Holder	ENC1534			
20	Gear	ENC1535			
21	Arm	ENC1550			
22	Roller	ENR1040			
23	Belt	ENT1027			
24	Collar	ENV1508			
25	Arm	ENV1539			
26	Arm	ENV1540			
27	Gear	ENV1544			
28	Gear	ENV1547			
29	Gear	ENV1560			
30	Worm Wheel	ENV1566			
31	Lever	ENV1551			
32	Flywheel	ENV1554			
33	Gathering PCB	ENX1068			
34	Switch(S1,S2)	ESG1007			
35	Deck Unit	EWM1032			
36	Plug(CN251)	CKS3540			
37	Gathering PCB	ENX1067			
38	Motor Unit(M1)	EXA1491			
39	Motor	EXM1028			
40	Head Assy(HD1)	EXA1592			
41	Motor Unit(M2)	EXA1580			
42	Screw	BMZ20P022FMC			
43	Bracket	ENC1528			
44	Chassis Unit	EXA1615			
45	Pinch Holder Unit	EXA1608			

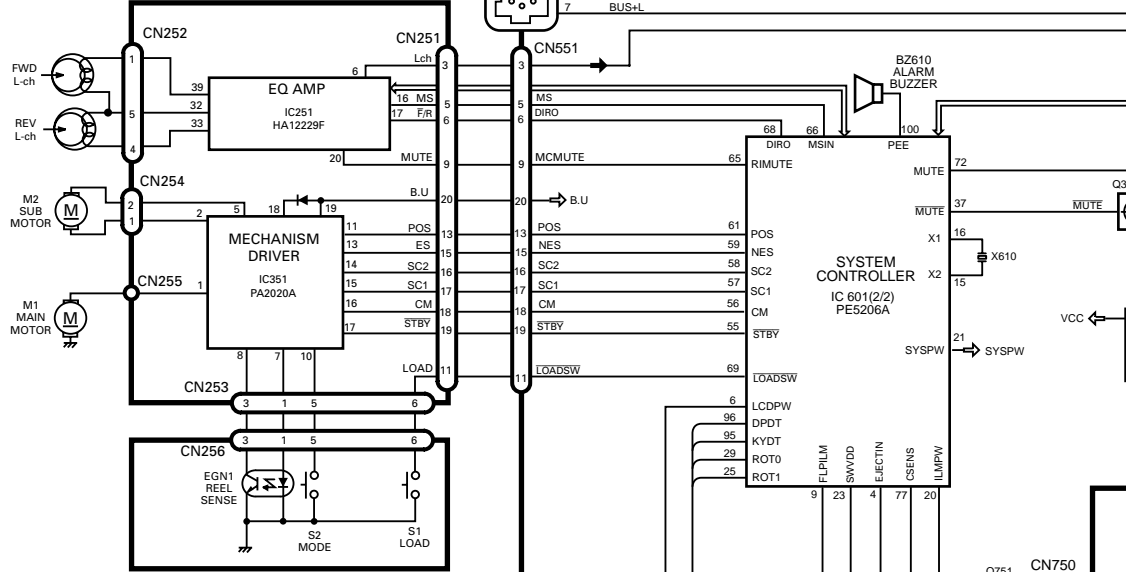
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM(KEH-P6021R)

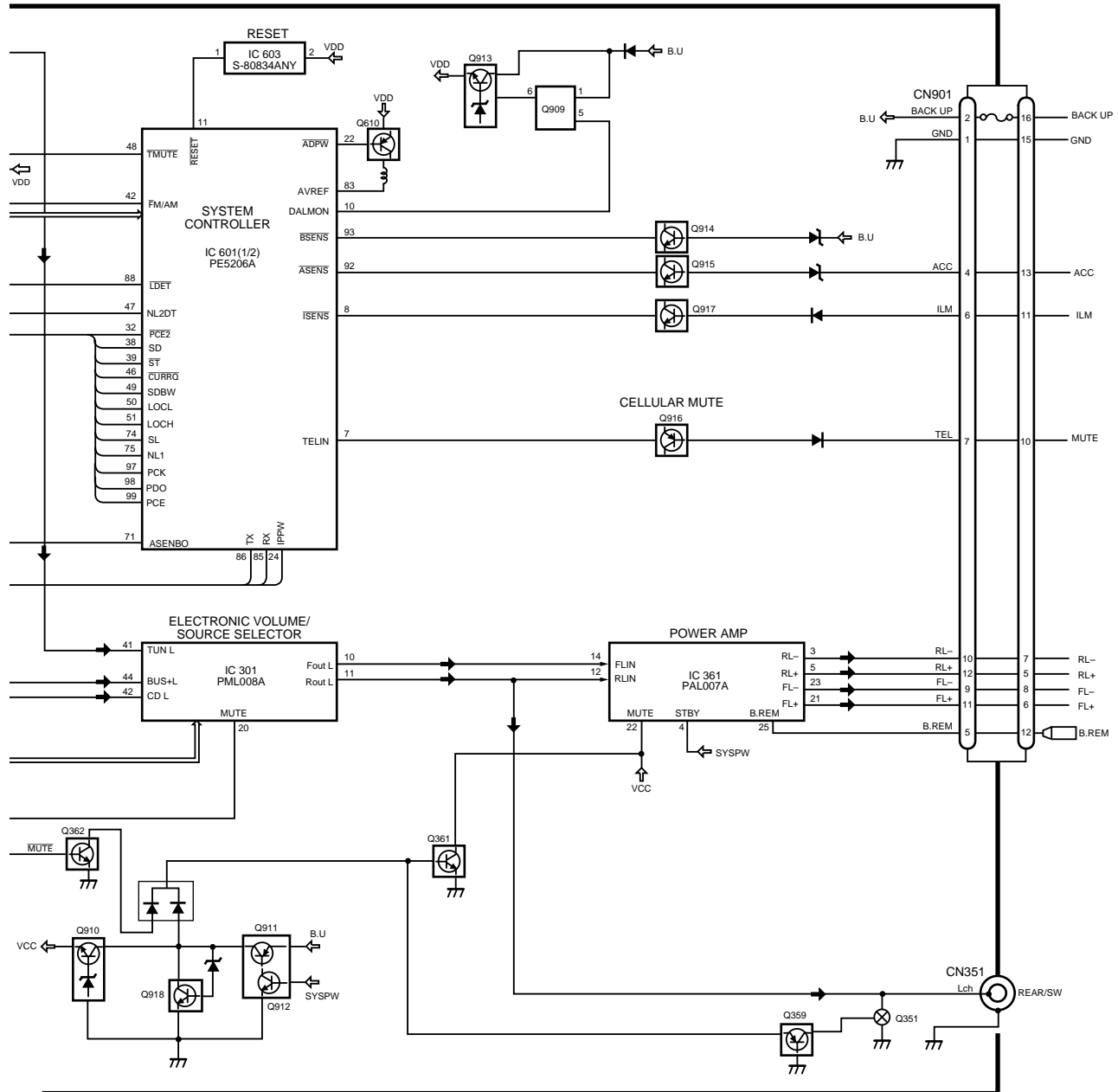
A TUNER AMP UNIT



D DECK UNIT



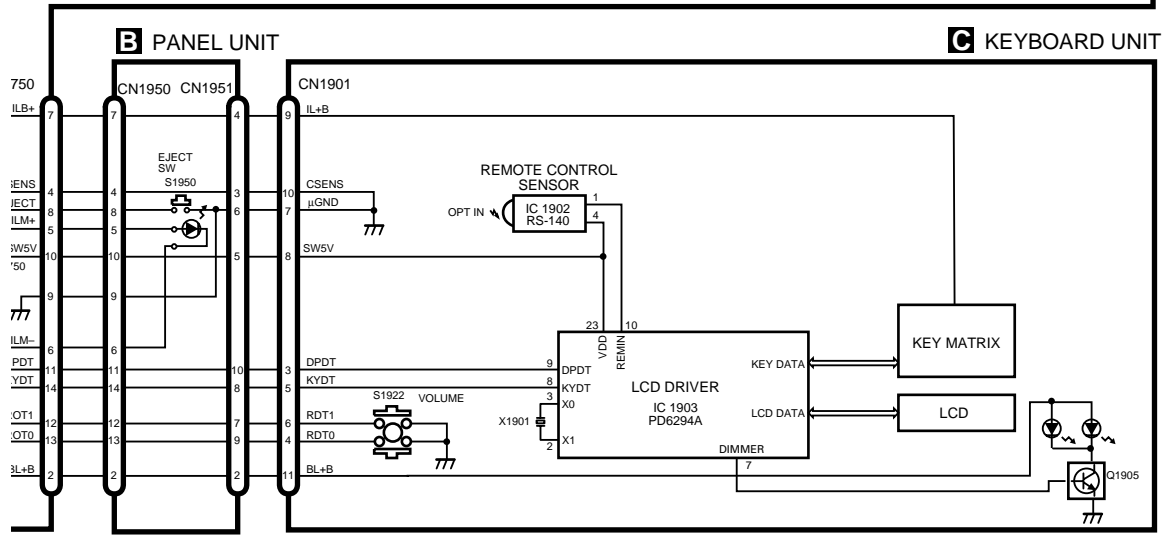
E REEL SENSE PCB



A

B

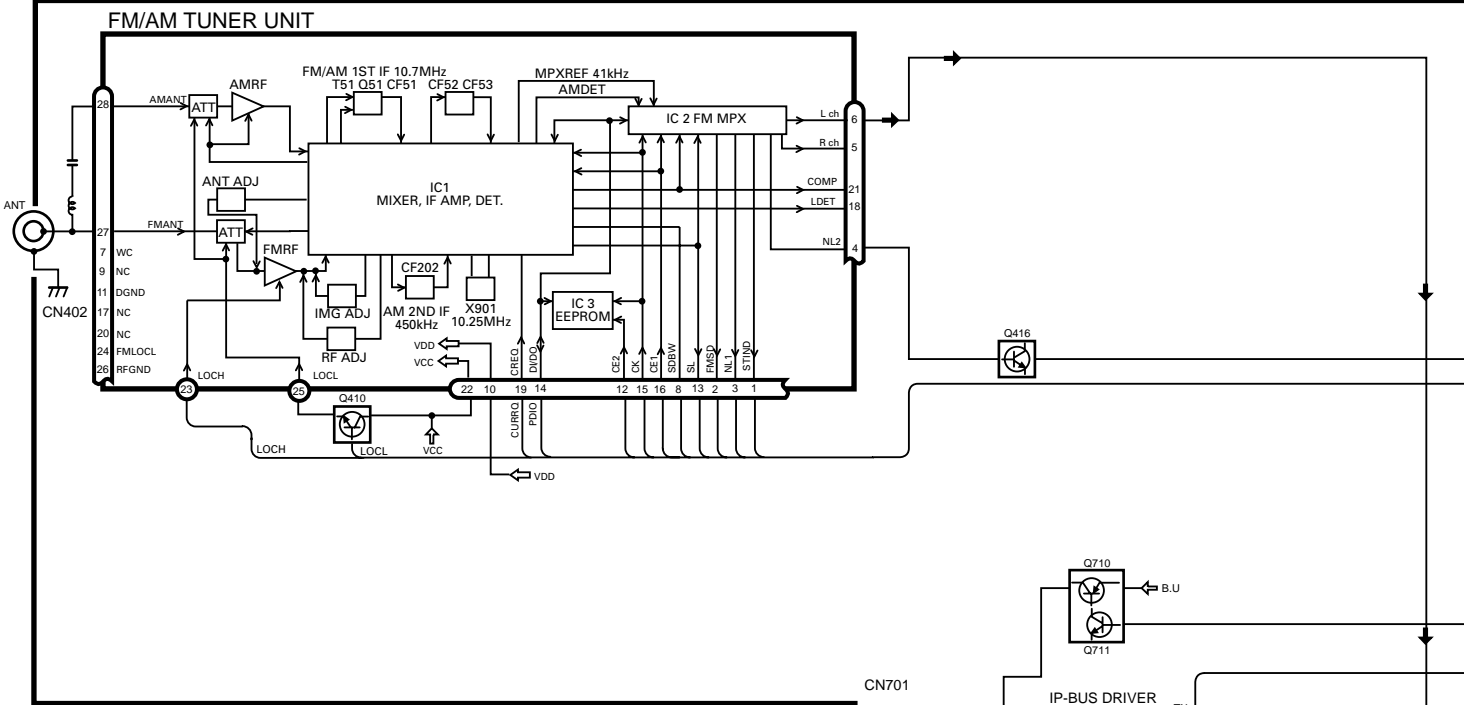
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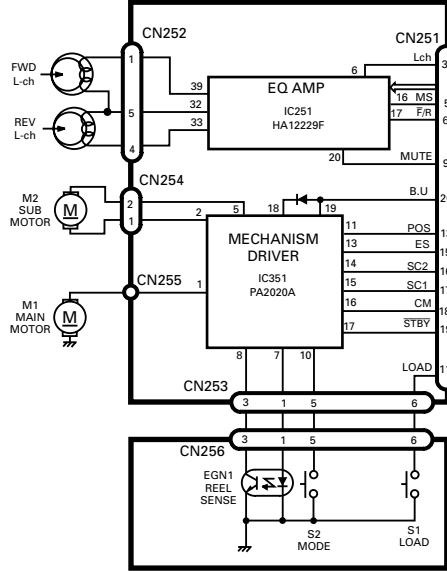
D

3.2 BLOCK DIAGRAM(KEH-P6025)

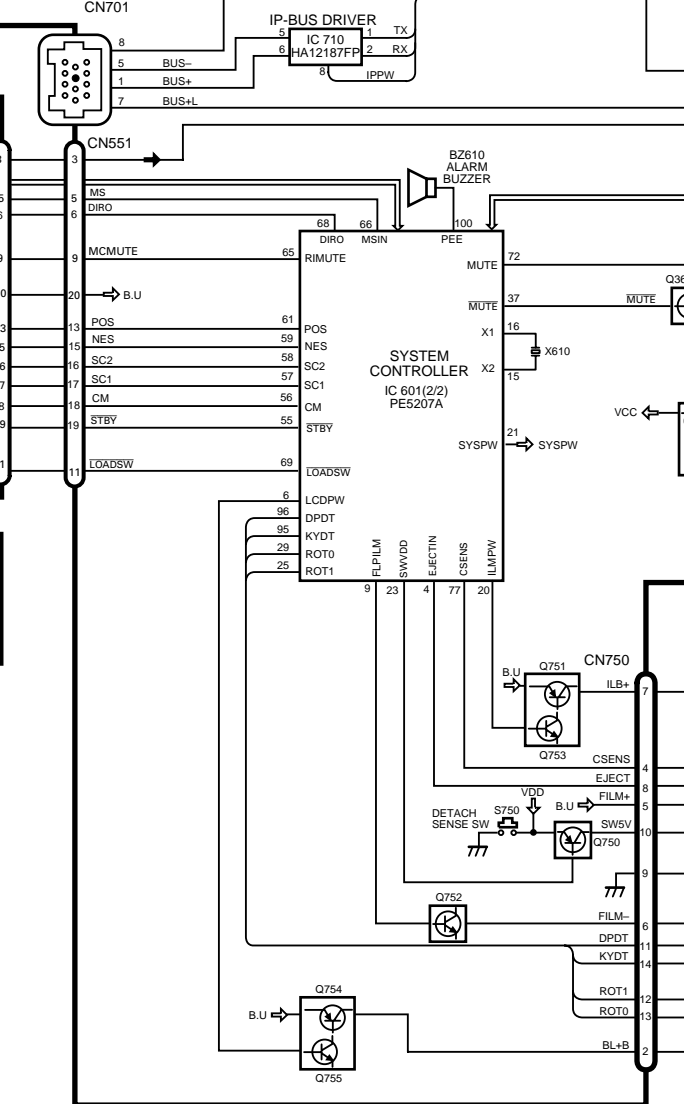
A TUNER AMP UNIT

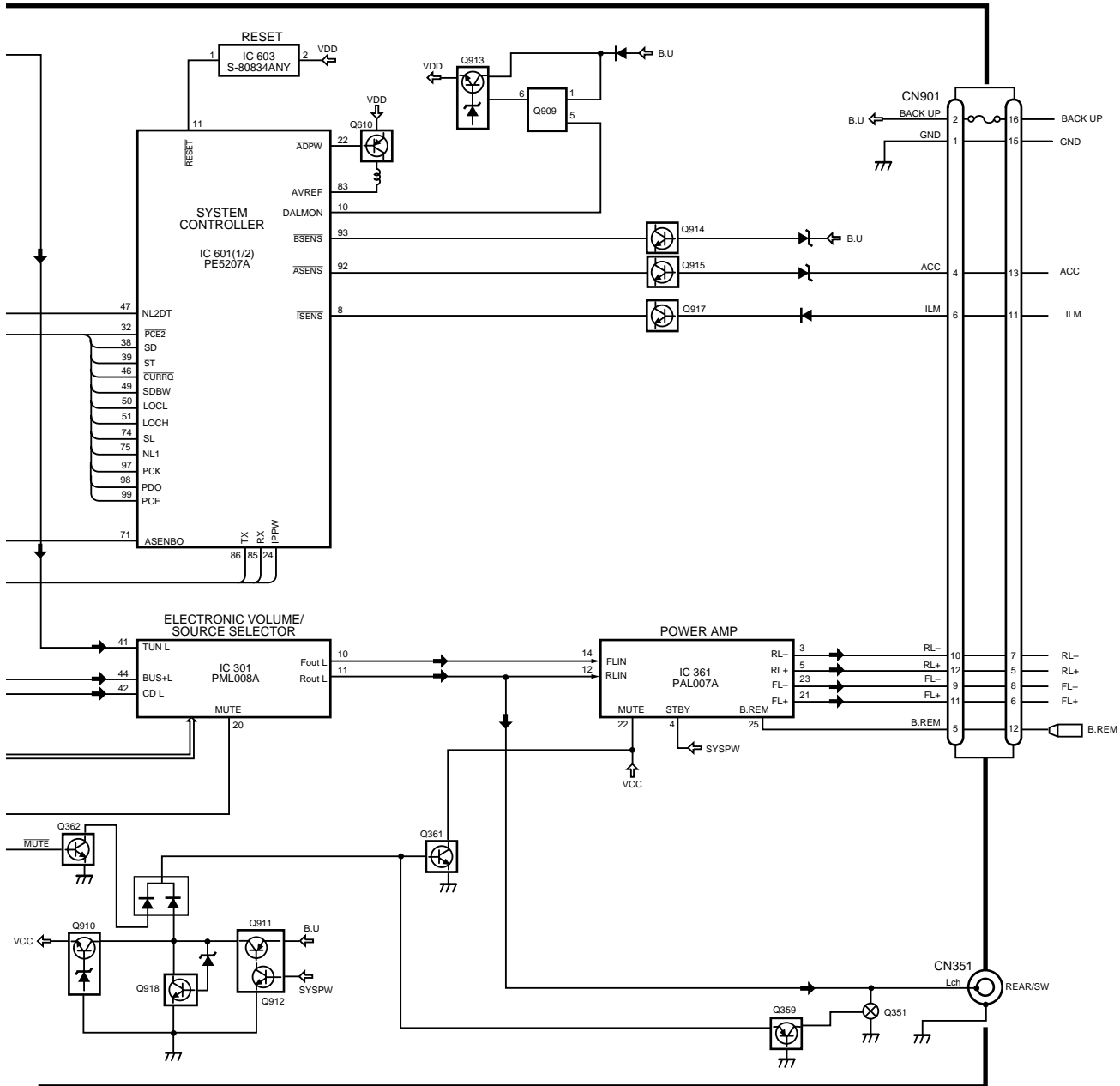


D DECK UNIT



E REEL SENSE PCB

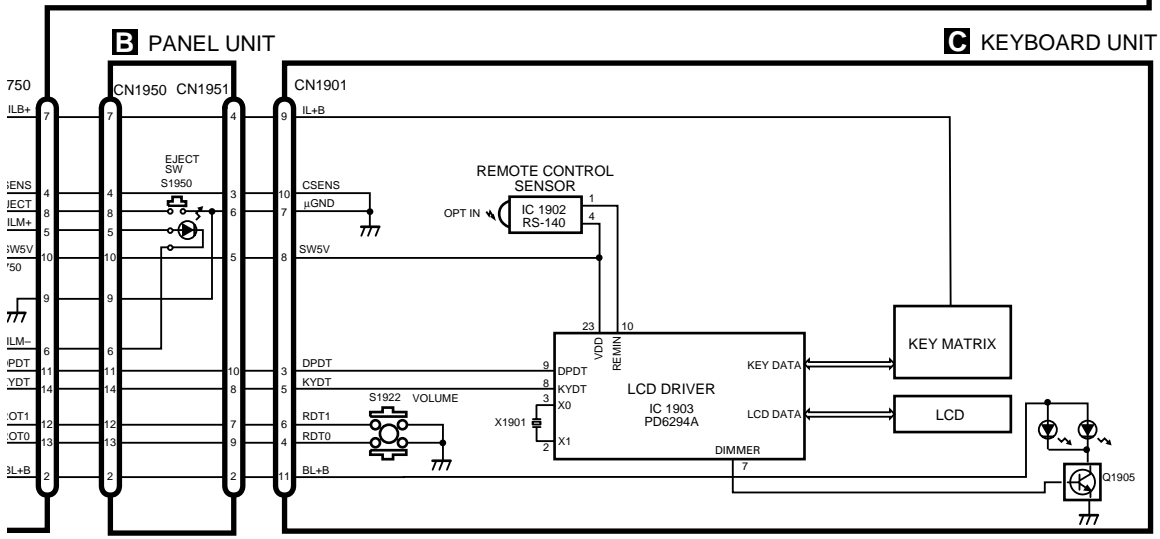




A

B

C



D

3.3 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)(KEH-P6021R)

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

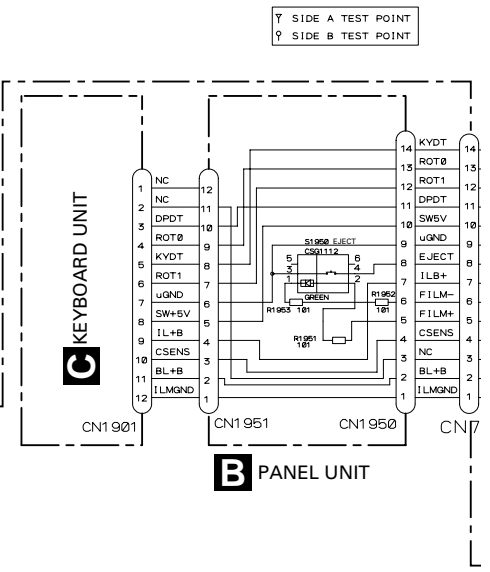
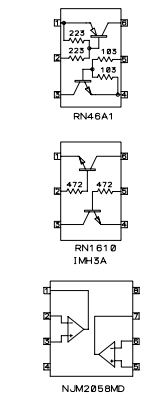
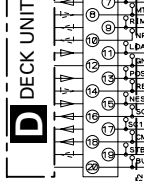
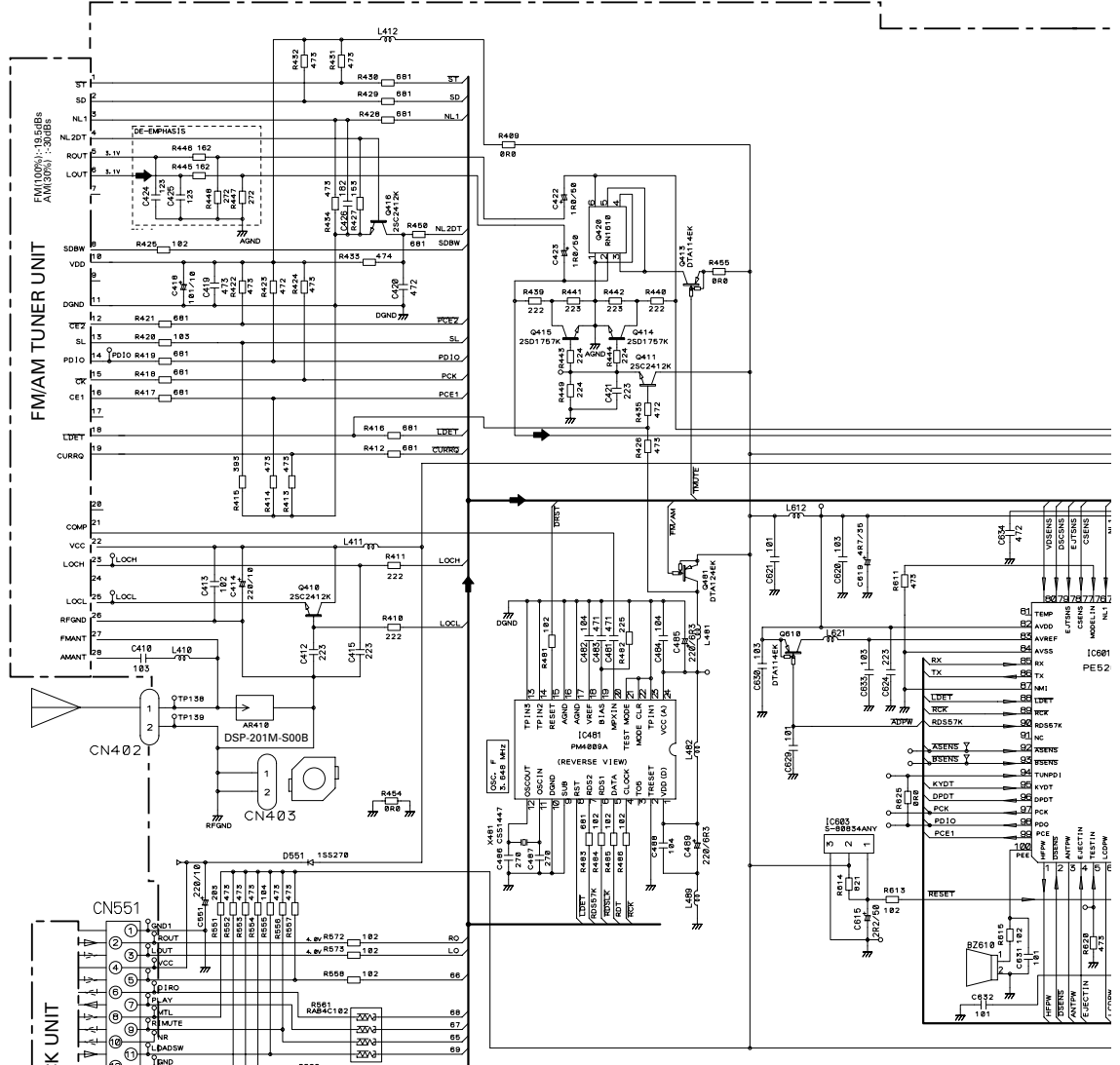
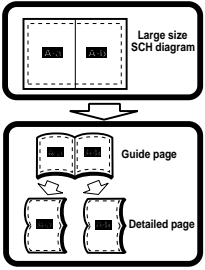
A-a

A

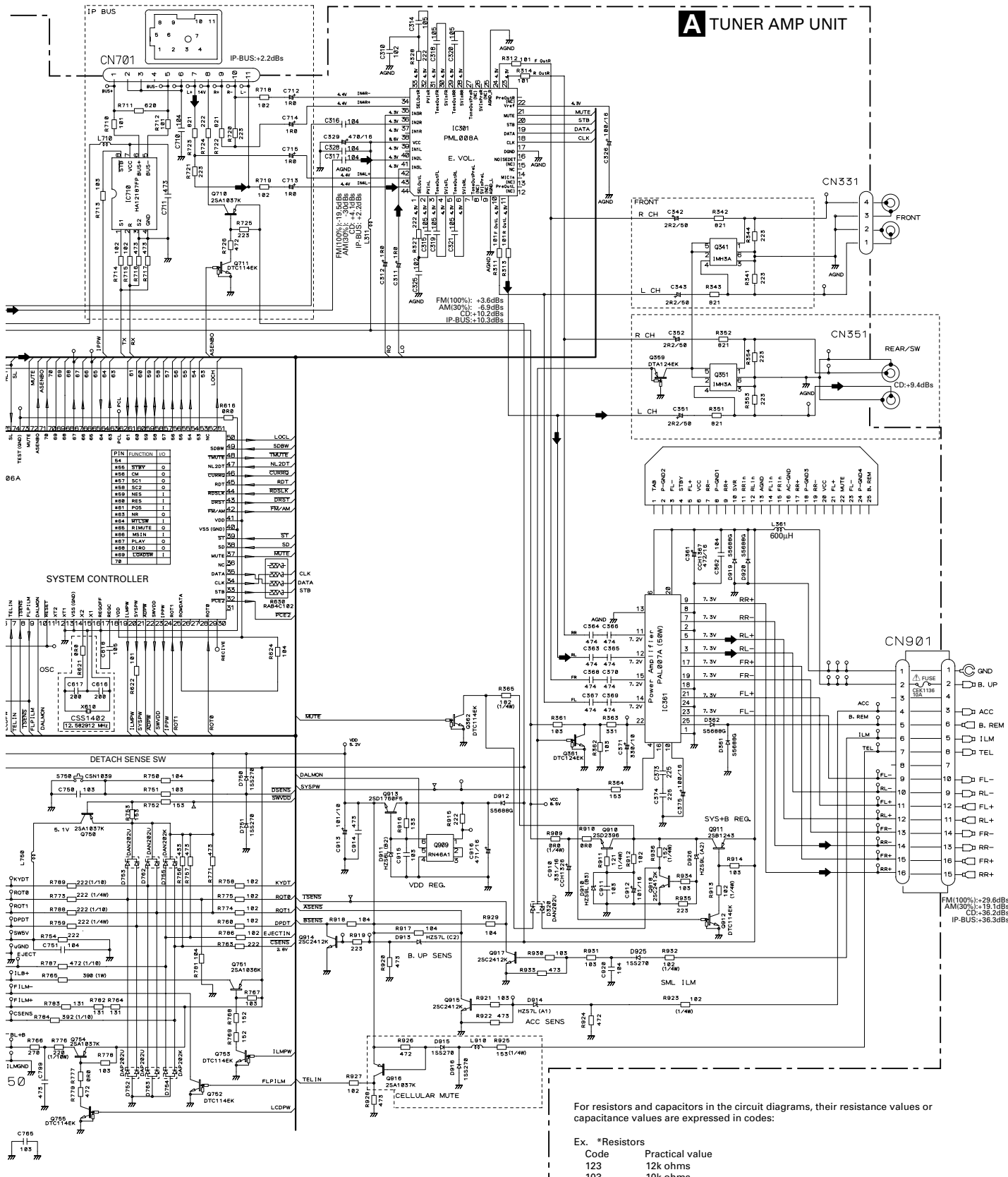
B

C

D



A-b



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.



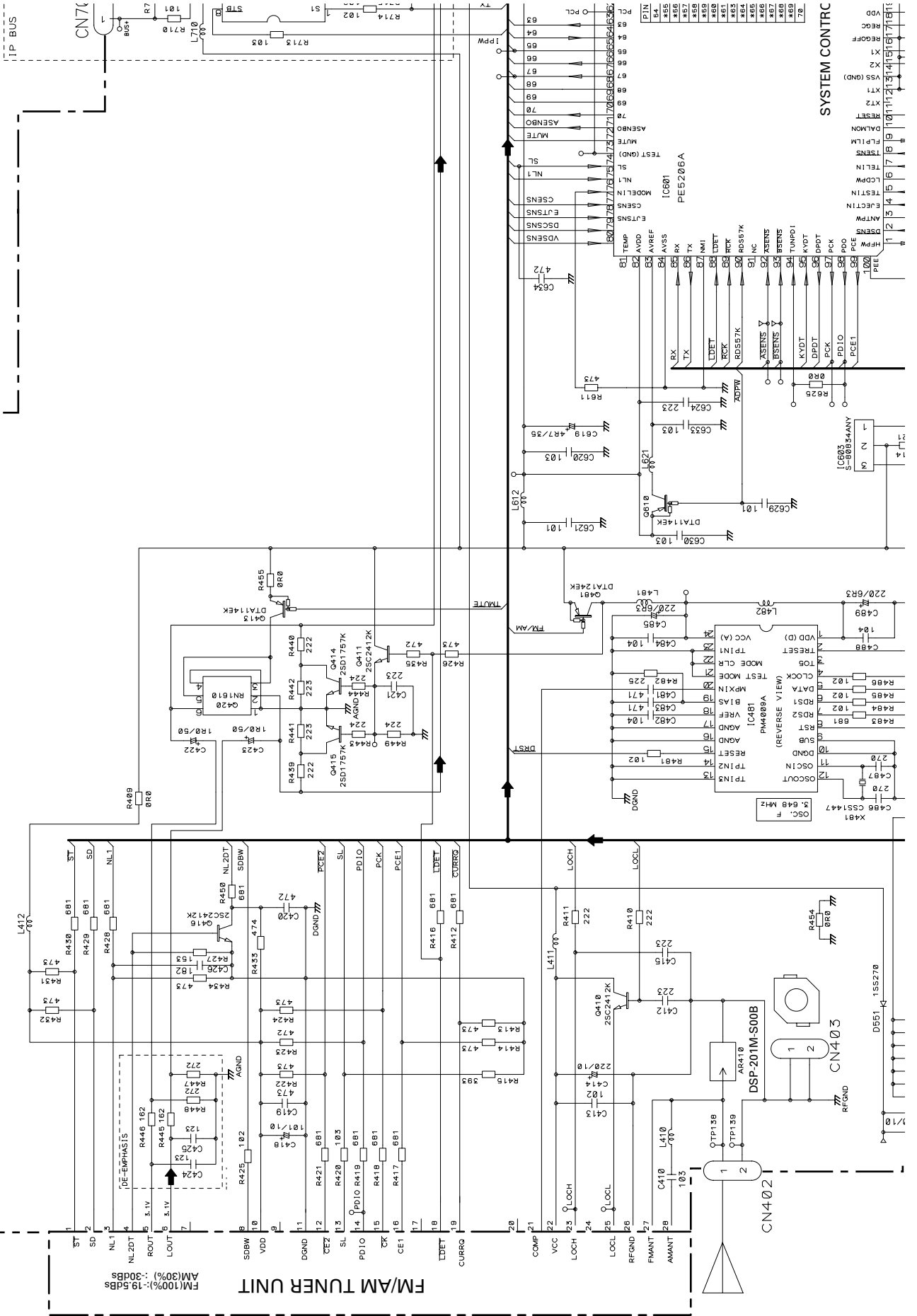
A

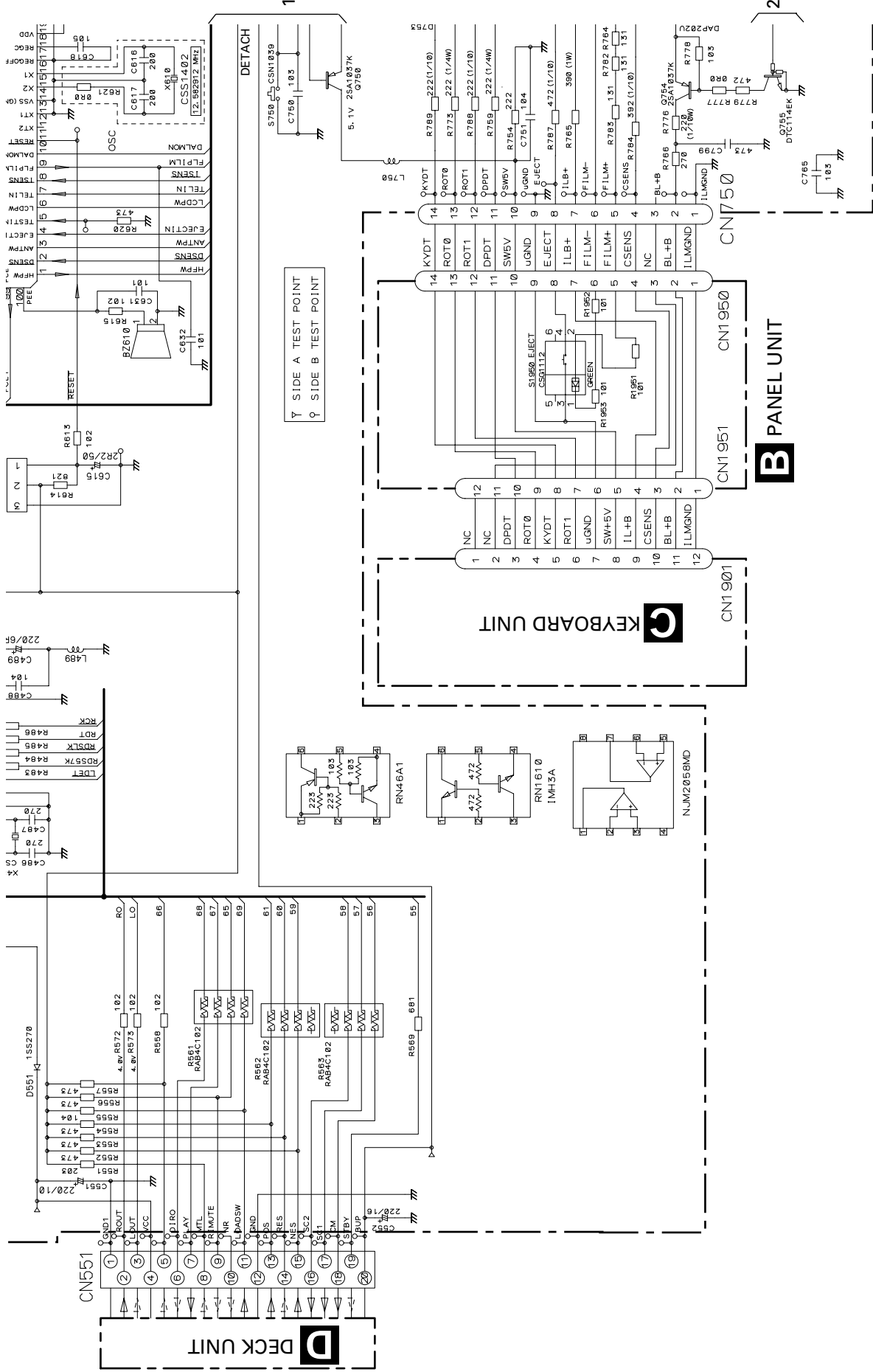
B

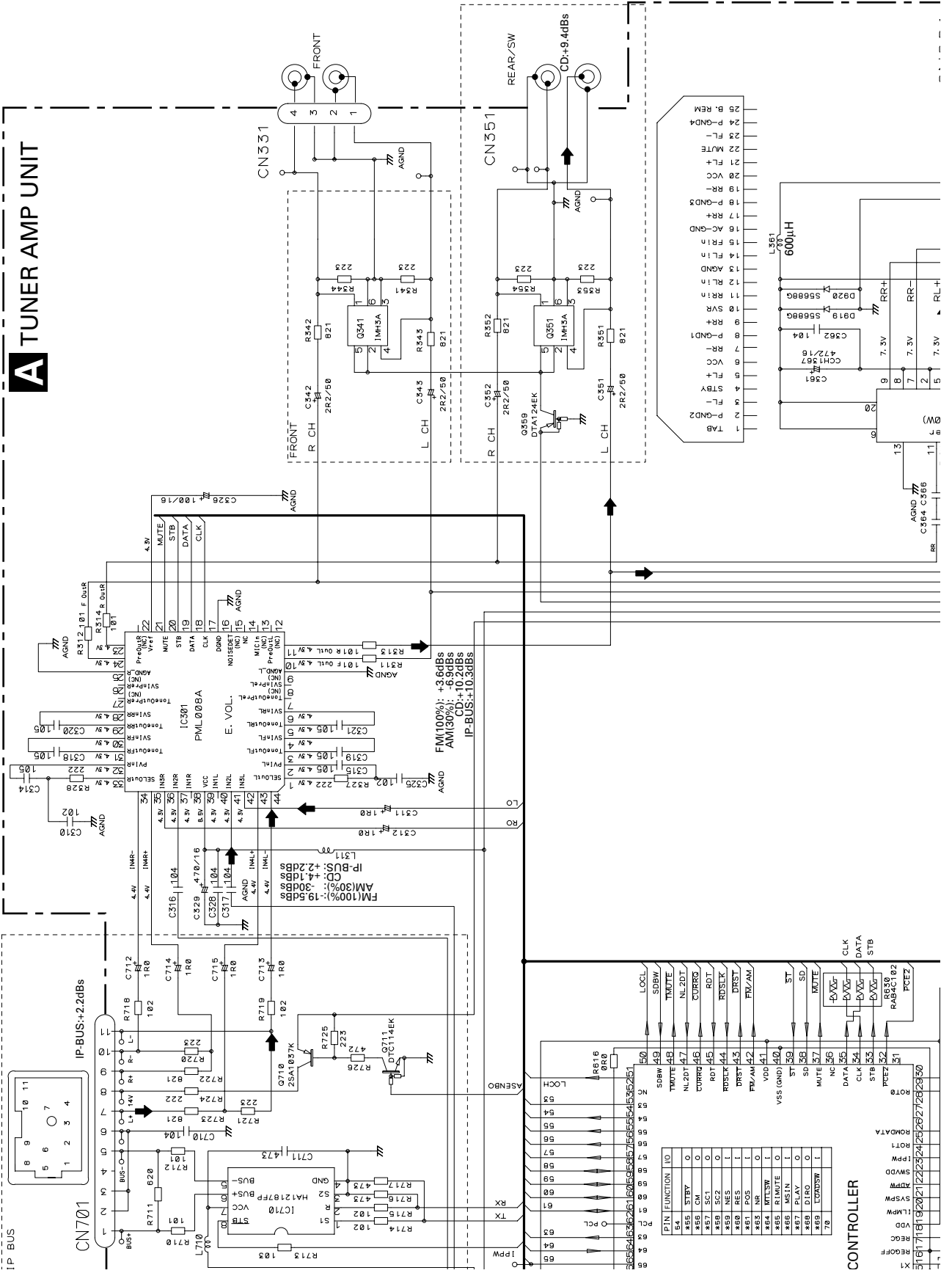
C

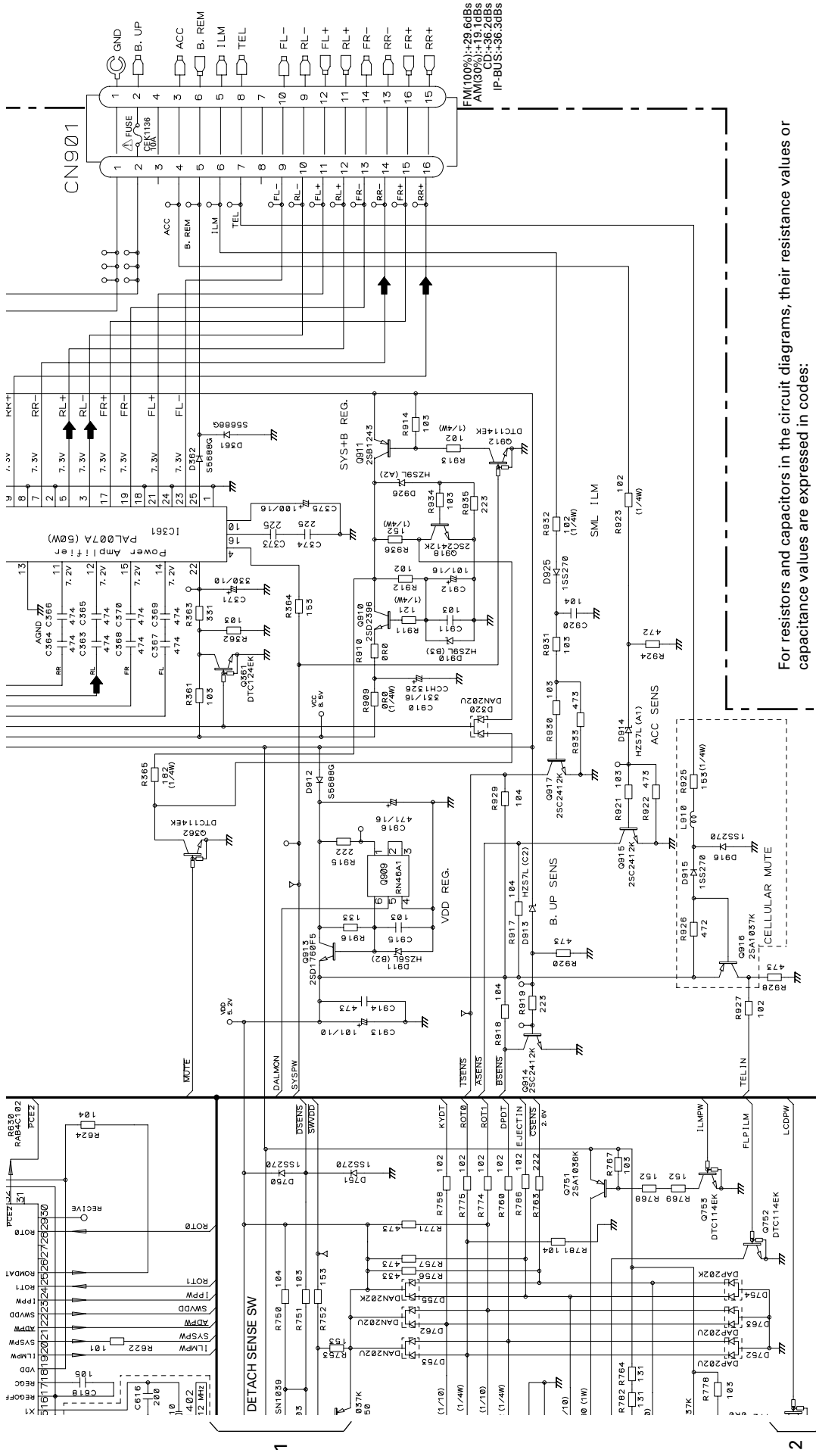
D

A-a A-b









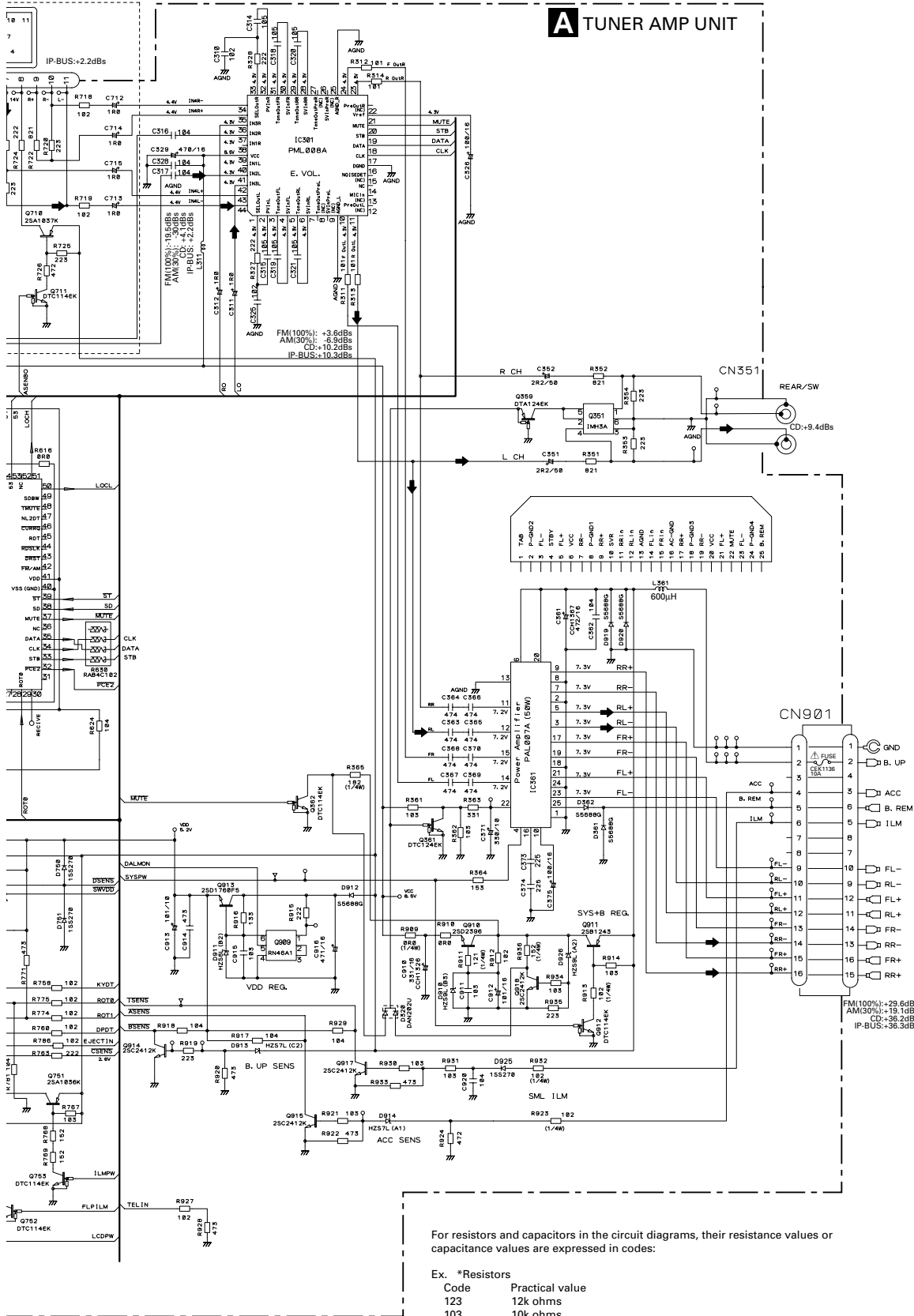
For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

*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

A TUNER AMP 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	0.01µF
101/10	100µF/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.



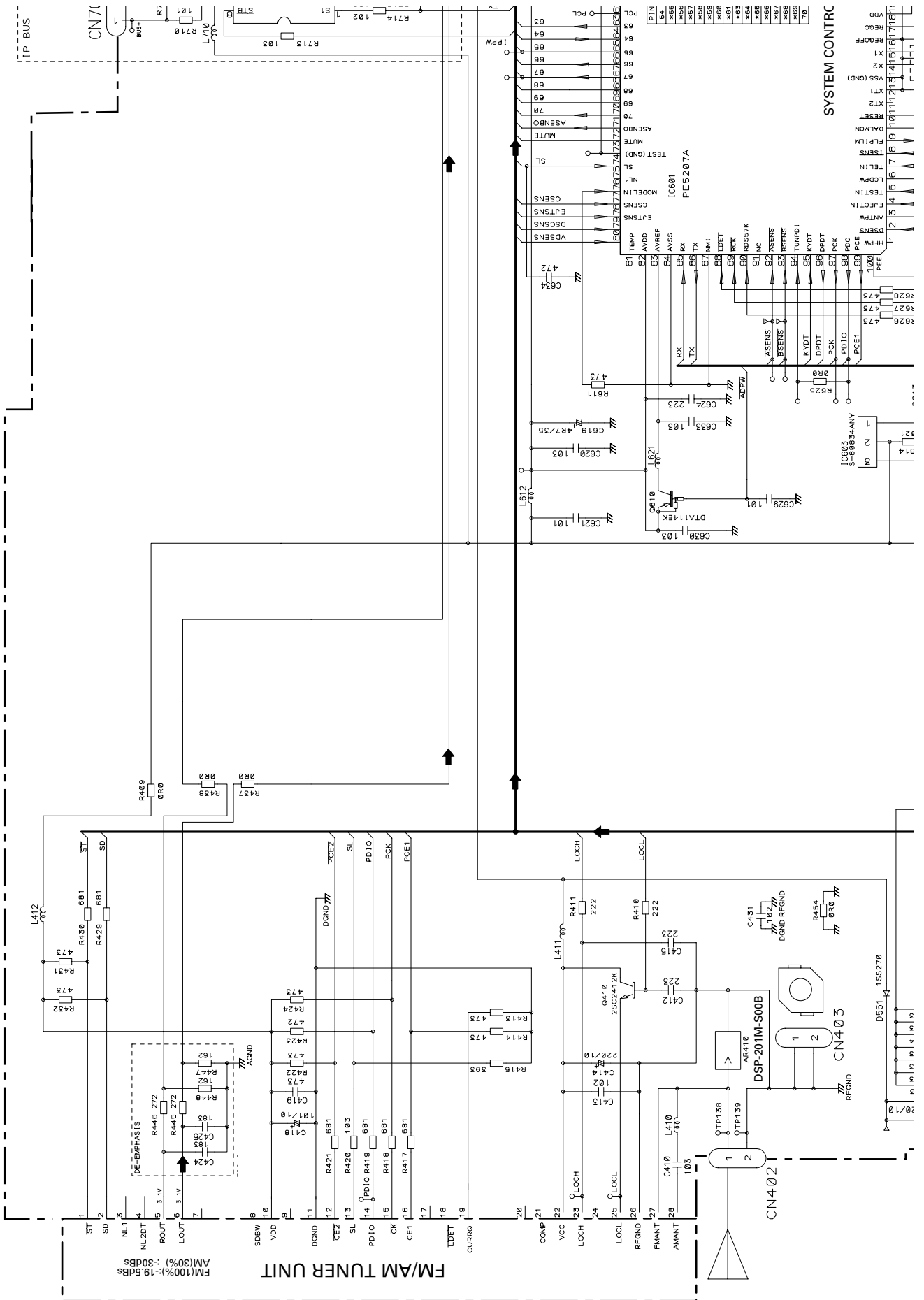
A

B

C

D

A-a A-b



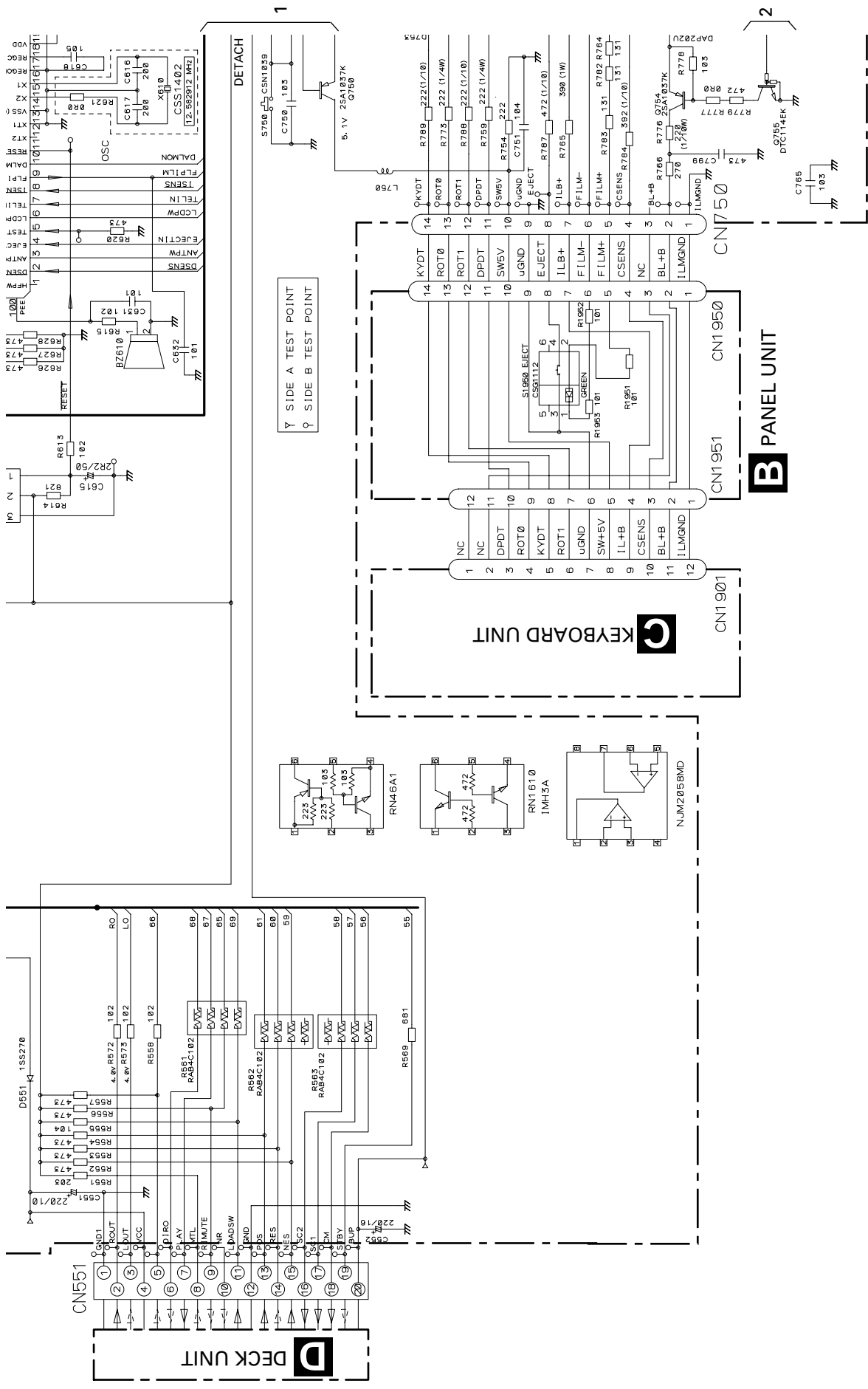
1

2

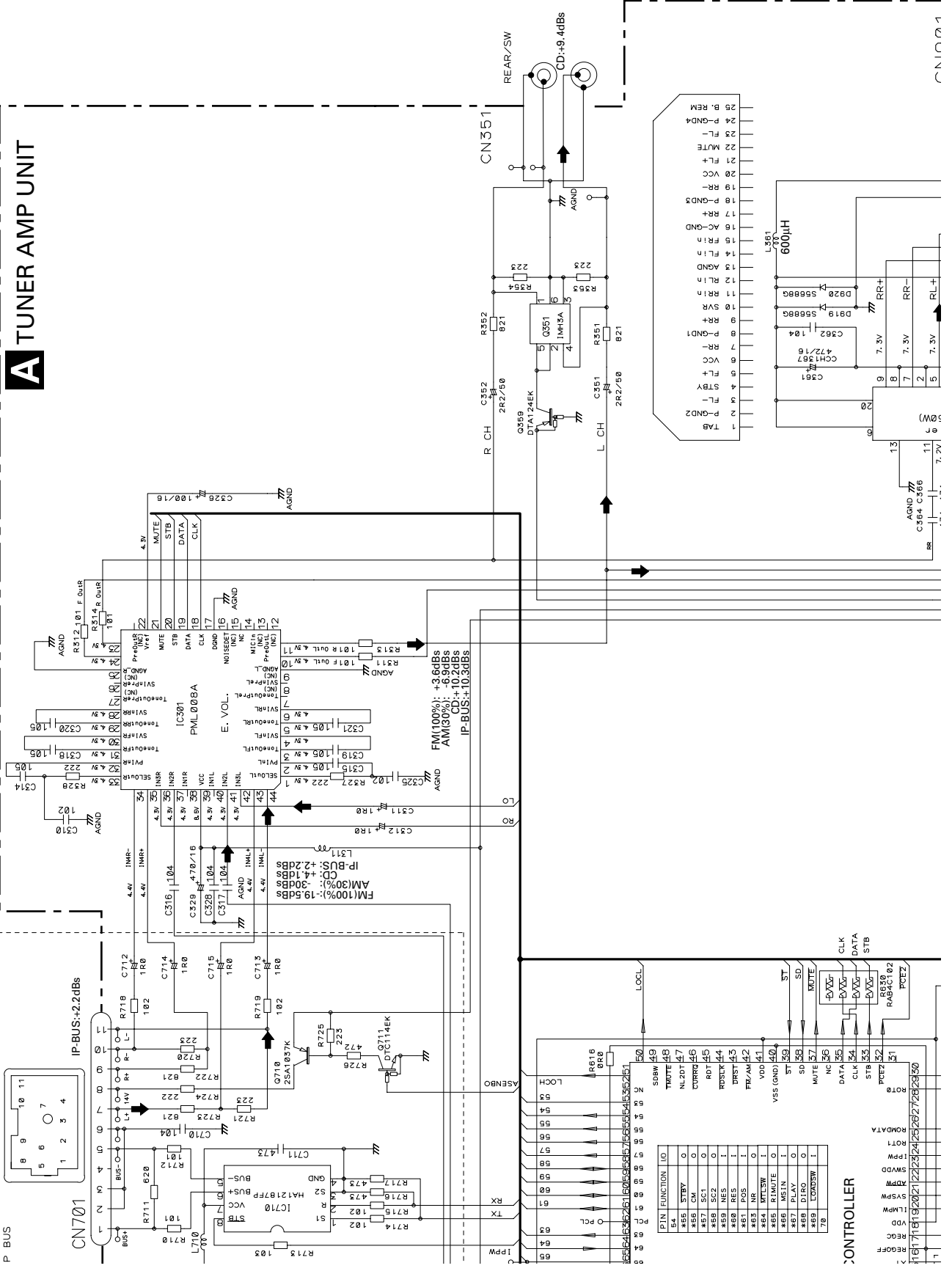
3

4

A-a A-b

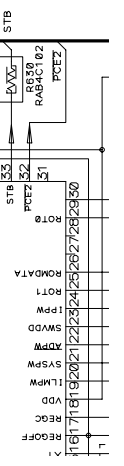


A TUNER AMP UNIT



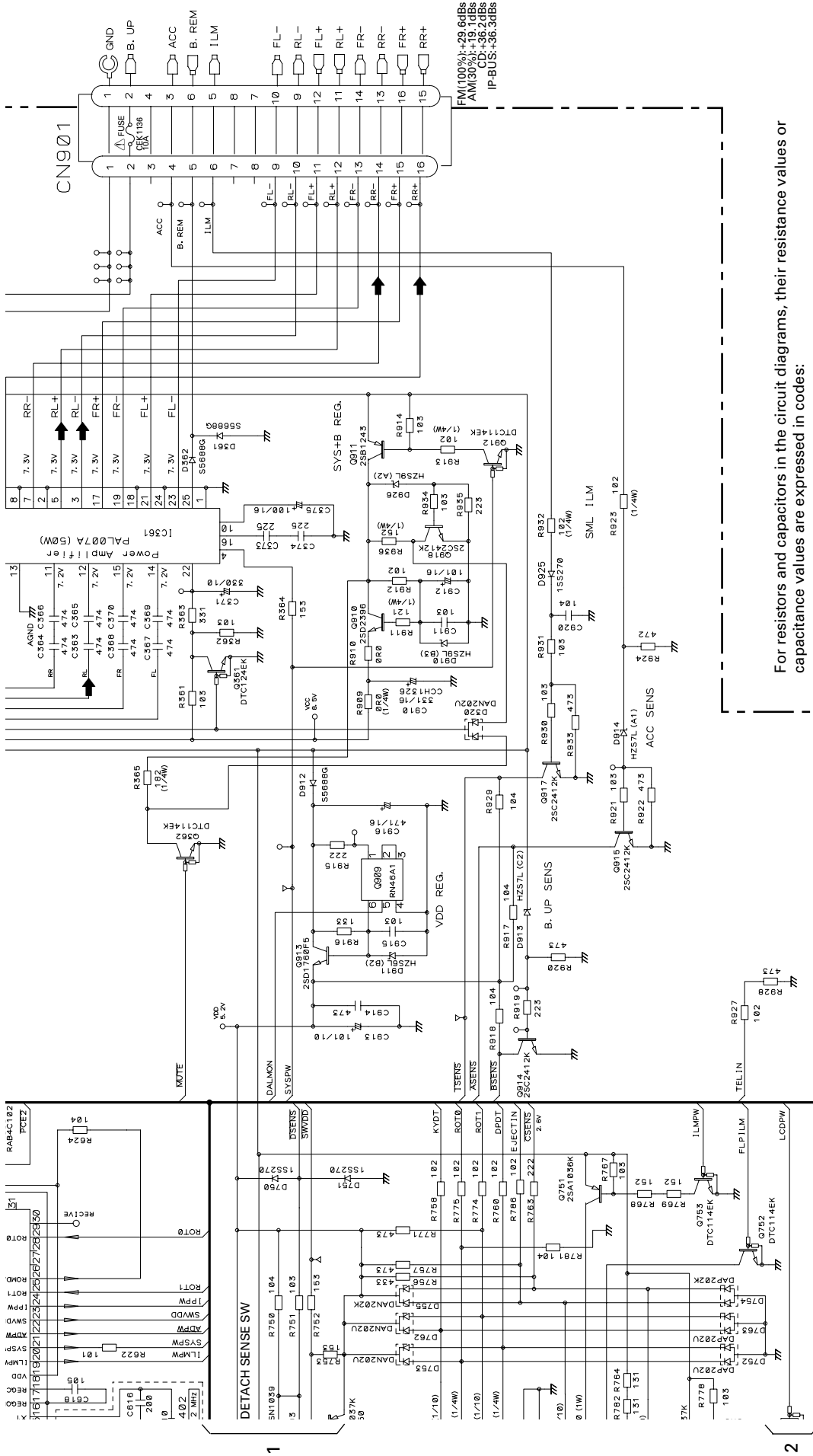
PIN	FUNCTION	IO
50	SDBN	I
49	TRMUT	I
48	NL20	I
47	CORRC	I
46	ROT	I
45	ROT	I
44	ROSTX	I
43	DIRSX	I
42	FR/AN	I
41	VDD	I
40	VSS (GND)	I
39	ST	O
38	SD	O
37	MUTE	O
36	NC	O
35	DATA	O
34	CLK	O
33	DATA	O
32	STB	O
31	PREZ	O
30	RAB3C02	O
29	PCEZ	O

CONTROLLER



A-a A-b

26 A-b



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.

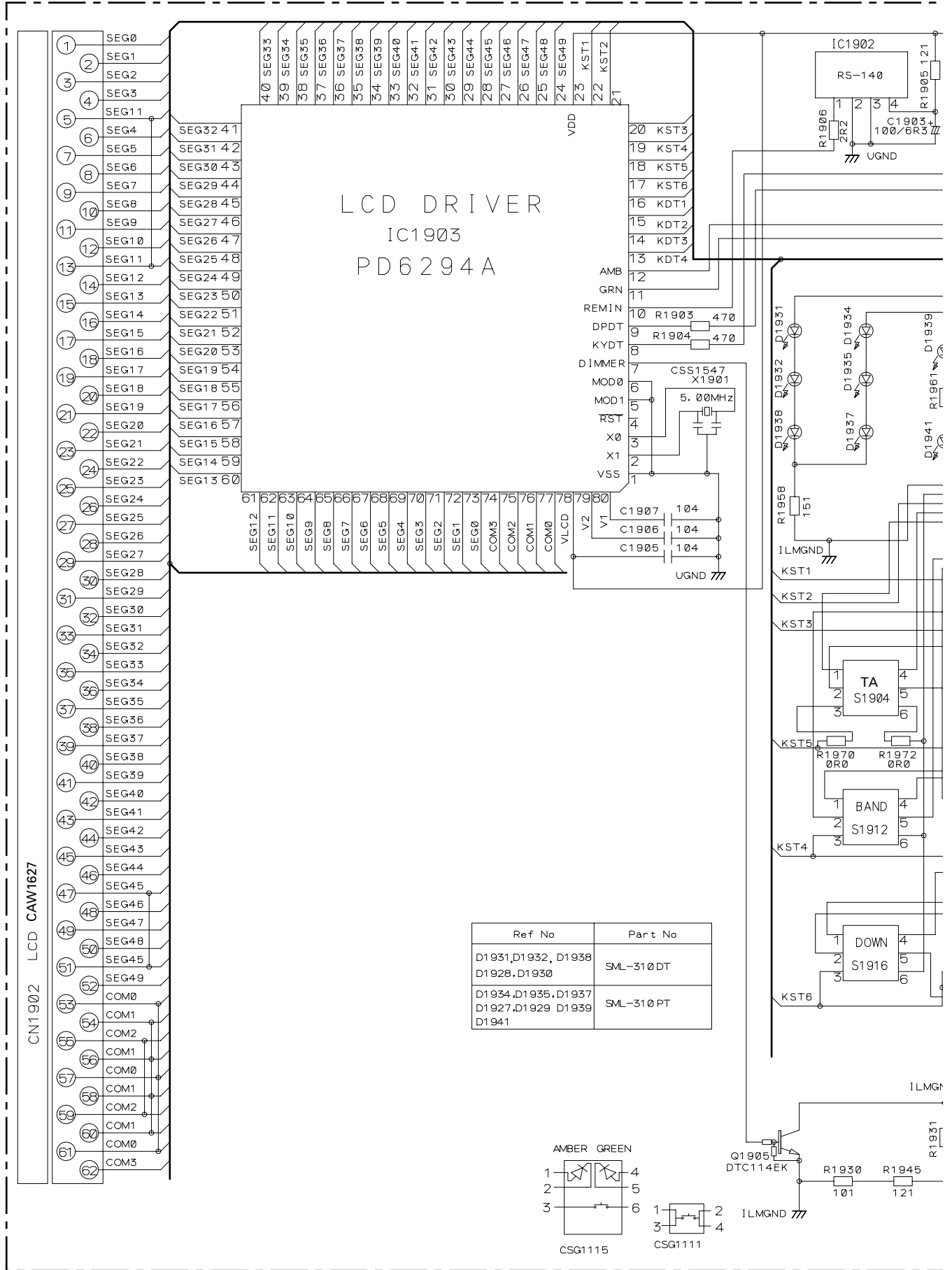
3.5 KEYBOARD UNIT(KEH-P6021R)

A

B

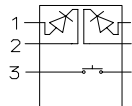
C

D

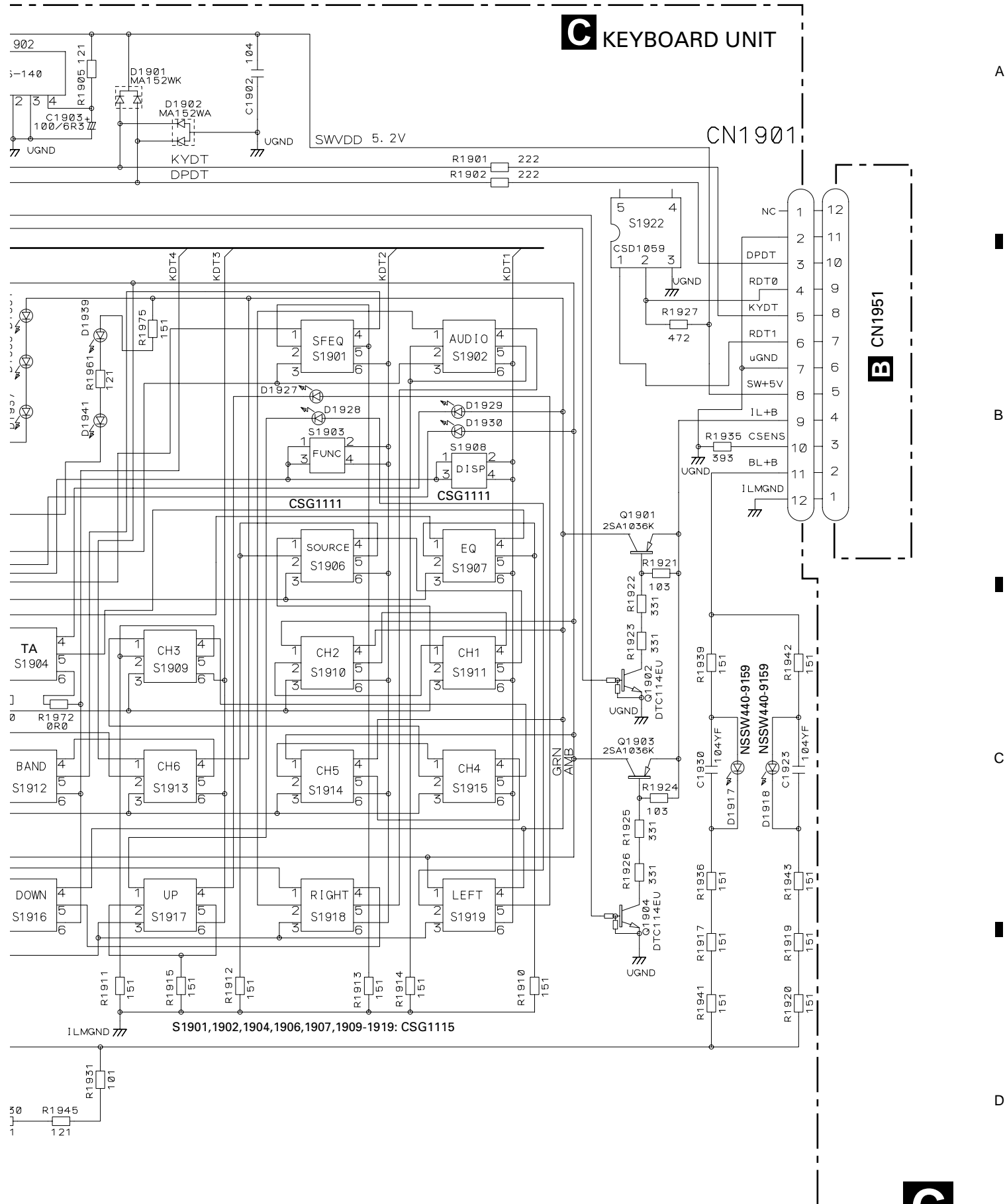


Ref No	Part No
D1931,D1932, D1938 D1928, D1930	SML-310DT
D1934,D1935,D1937 D1927,D1929 D1939 D1941	SML-310PT

AMBER GREEN



CSG1111



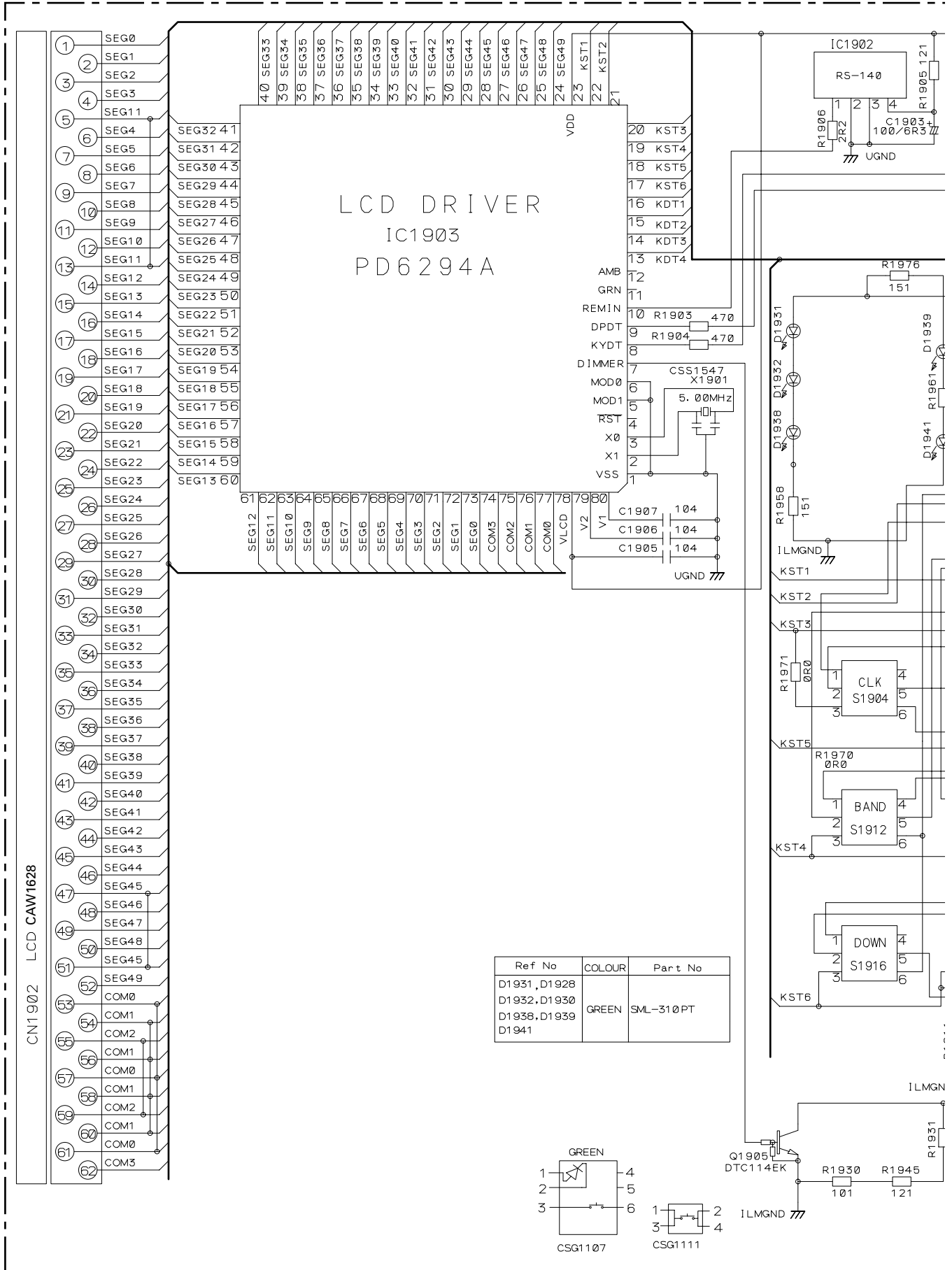
3.6 KEYBOARD UNIT(KEH-P6025)

A

B

C

D

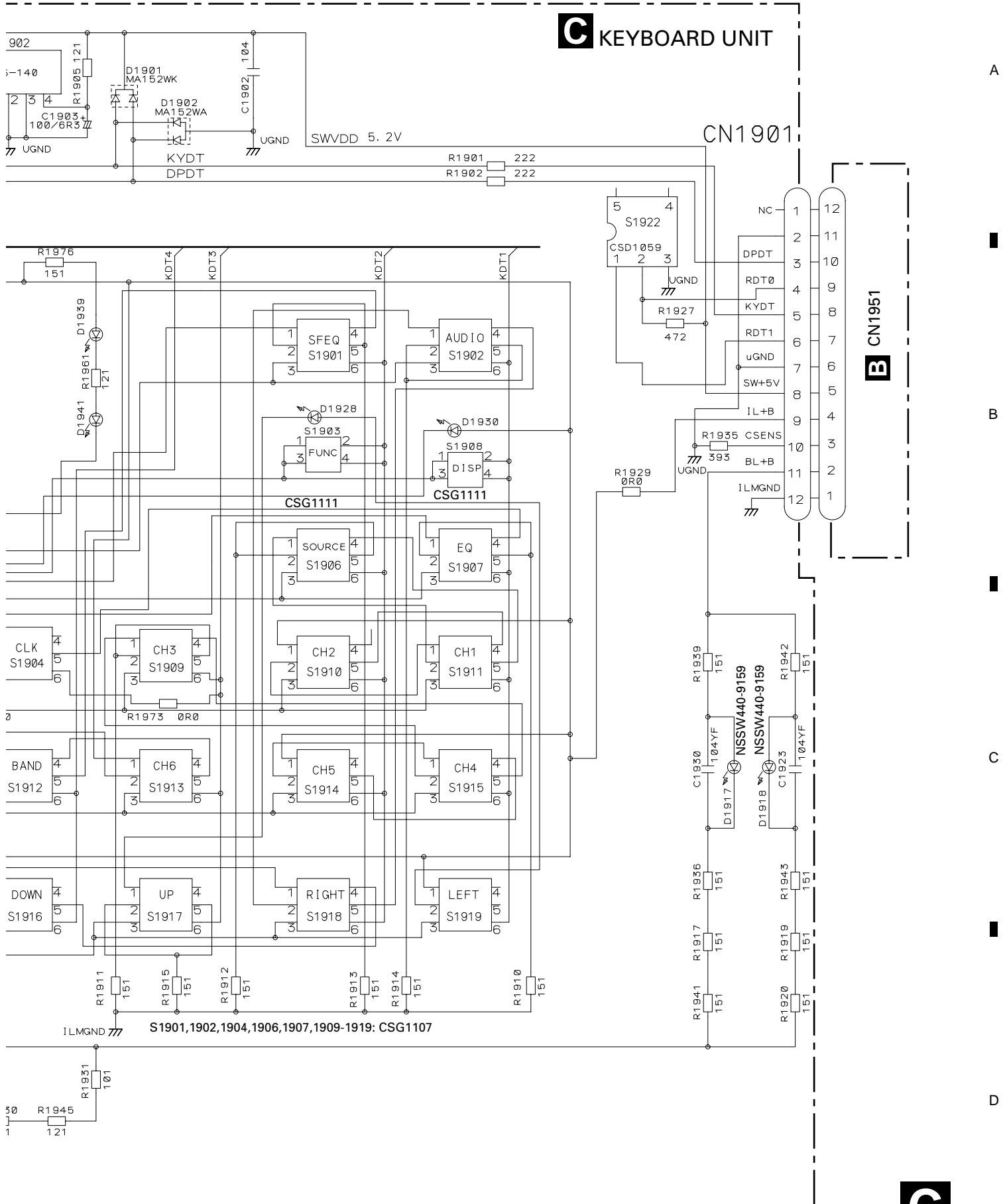


1

2

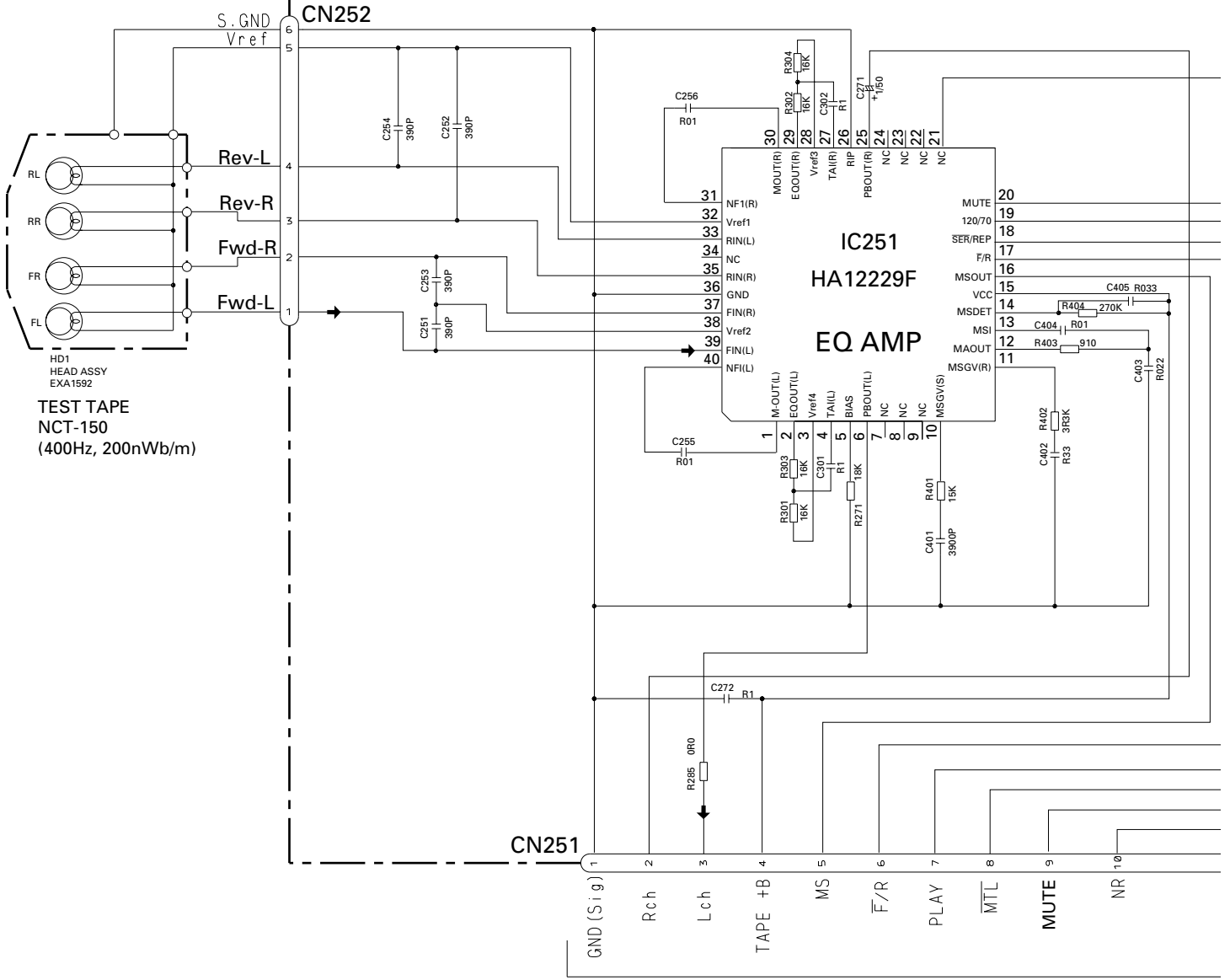
3

4



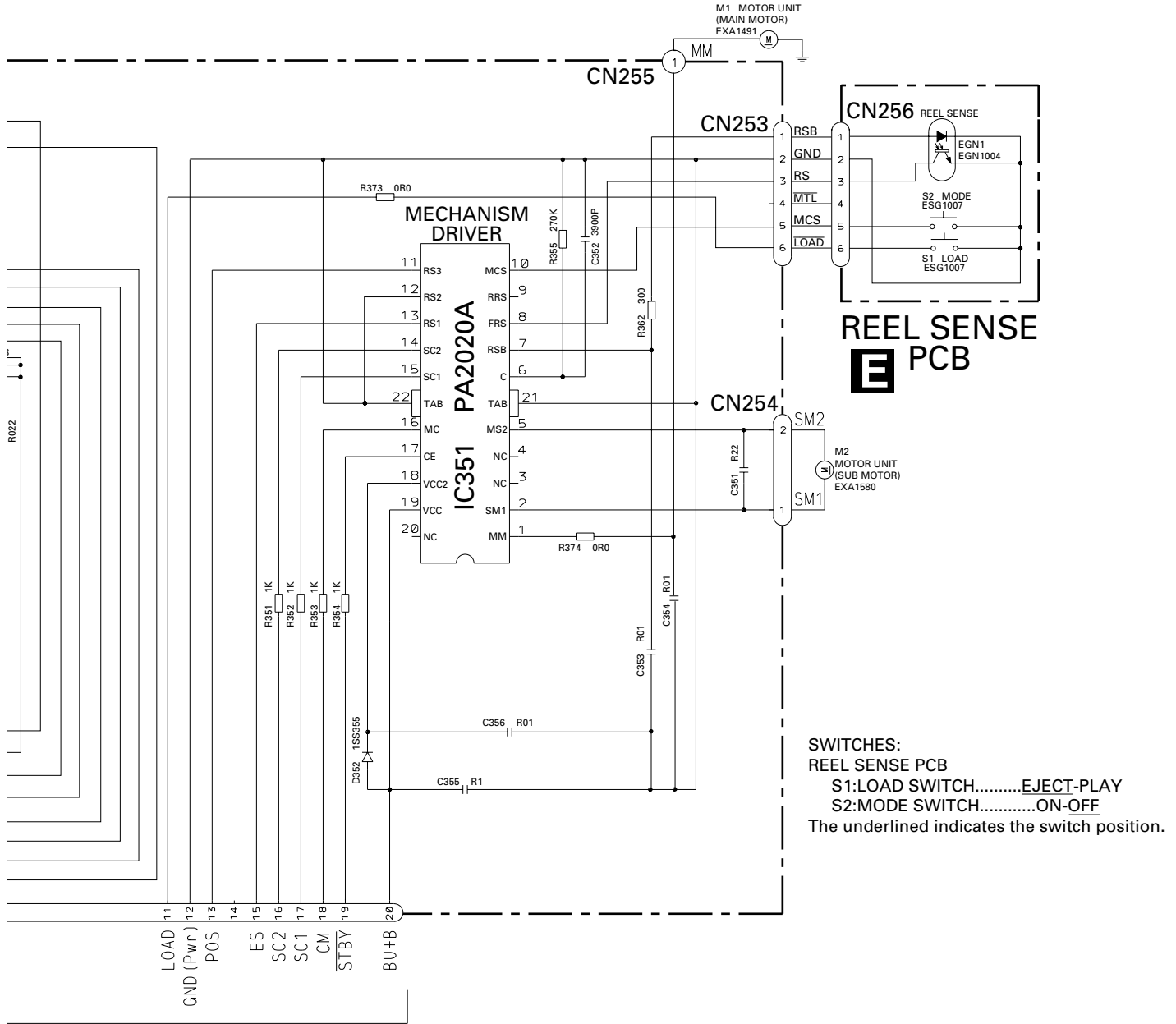
3.7 CASSETTE MECHANISM MODULE

D DECK UNIT



-8.24dBs±4dB

A CN551

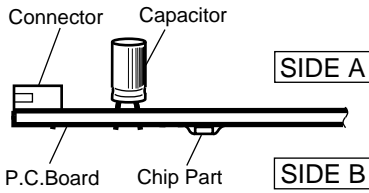


4. PCB CONNECTION DIAGRAM

4.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

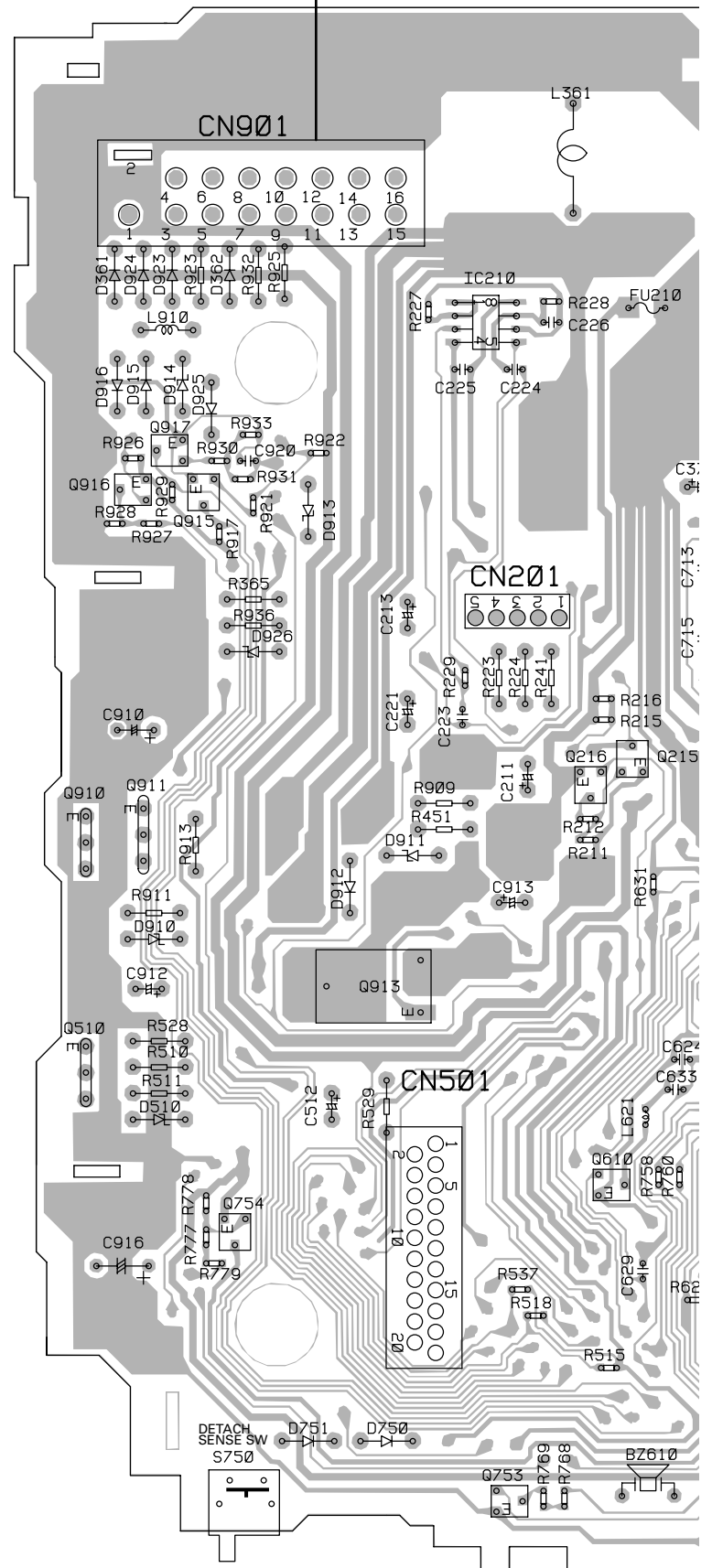
- The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
- Viewpoint of PCB diagrams

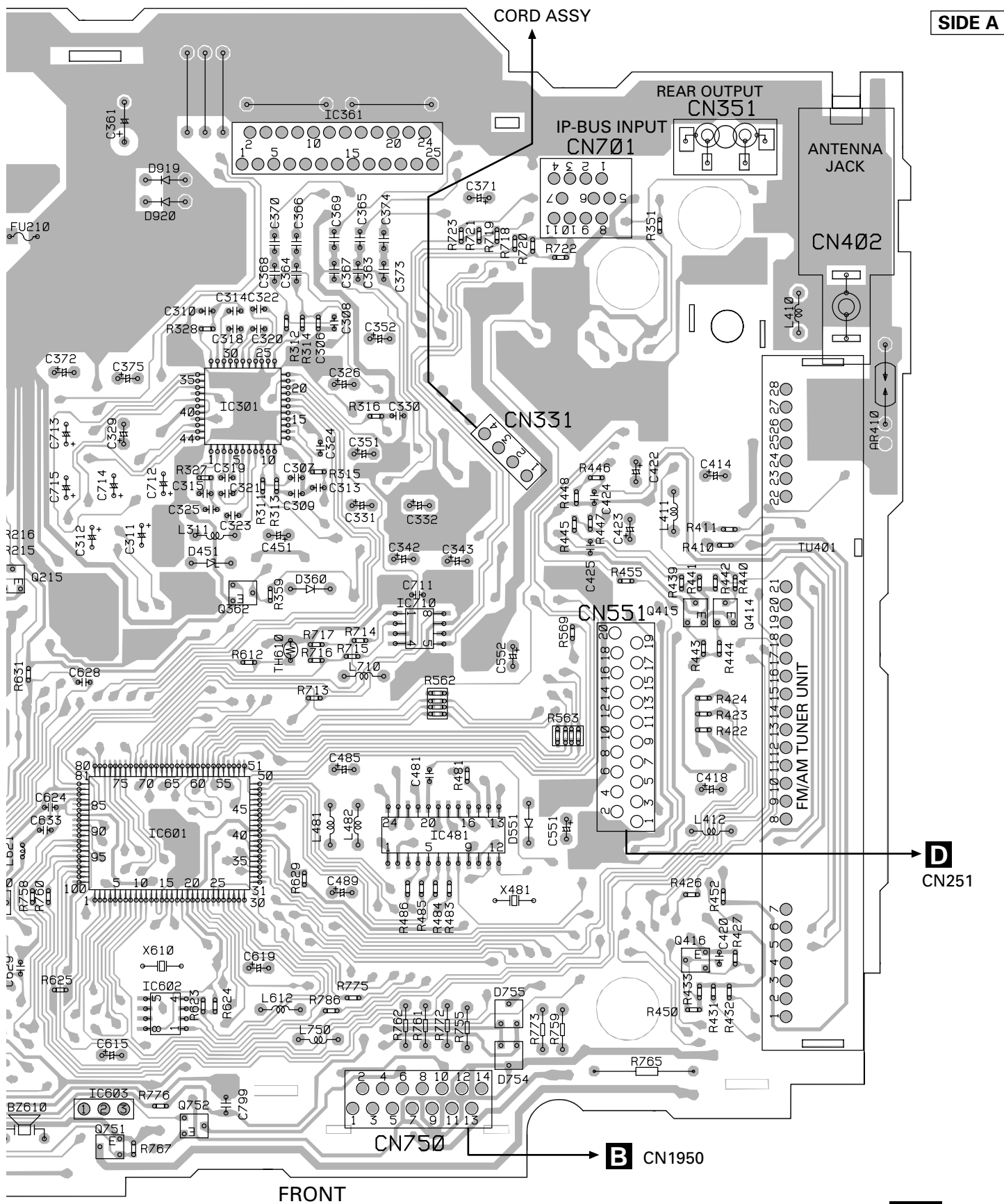


A TUNER AMP UNIT

CORD ASSY

- IC. Q
- IC361
- IC210
- Q917
- Q916
- Q915 IC301
- Q216 Q215
- Q911 IC710
- Q362 Q415
- Q910 Q414
- Q913
- Q510
- IC601 IC481
- Q610
- Q754
- Q416
- IC602
- IC603
- Q752
- Q753 Q751





SIDE A

CORD ASSY

REAR OUTPUT

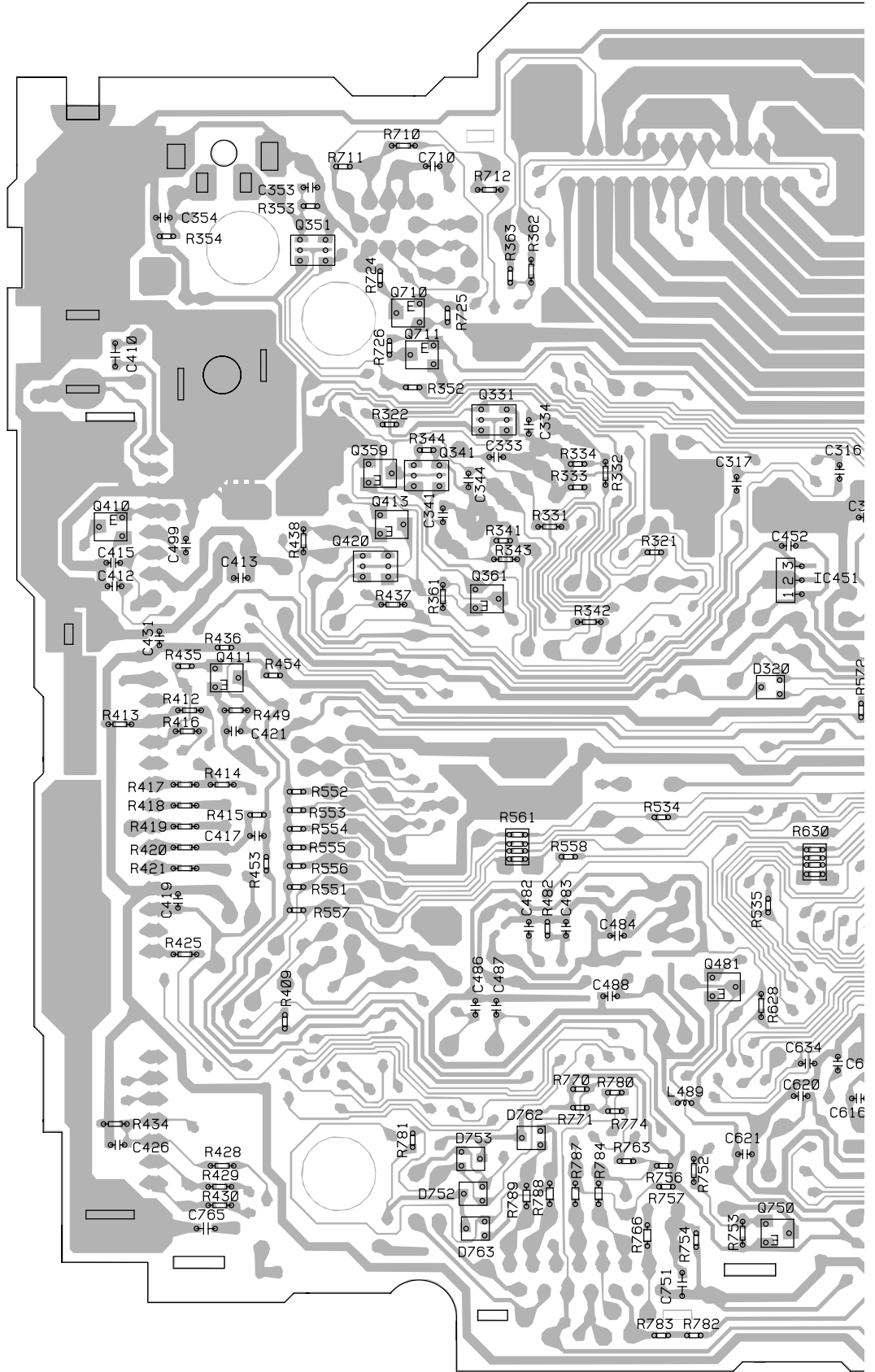
IP-BUS INPUT

ANTENNA JACK

FRONT

A

A TUNER AMP UNIT



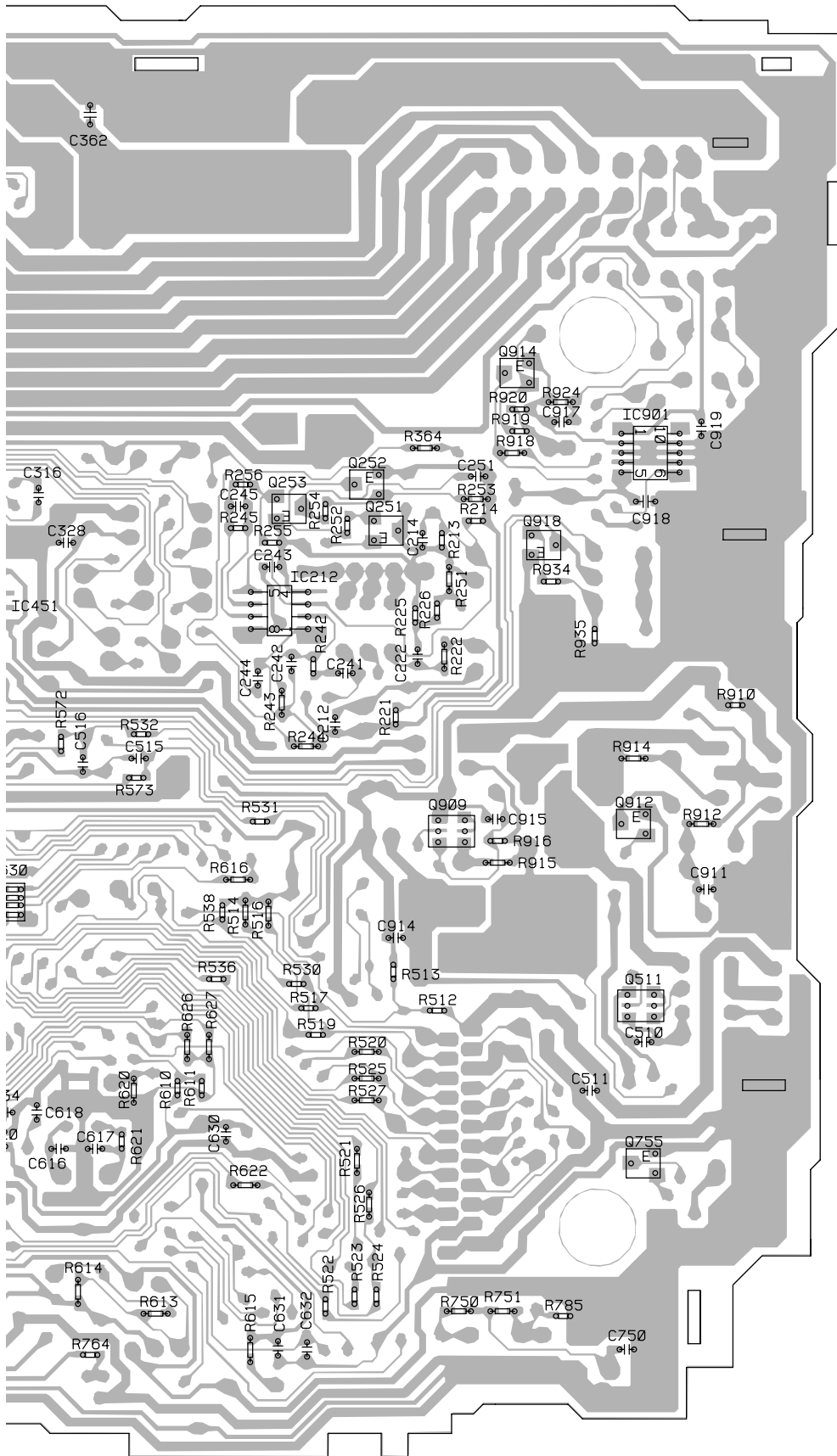
A

B

C

D

SIDE B



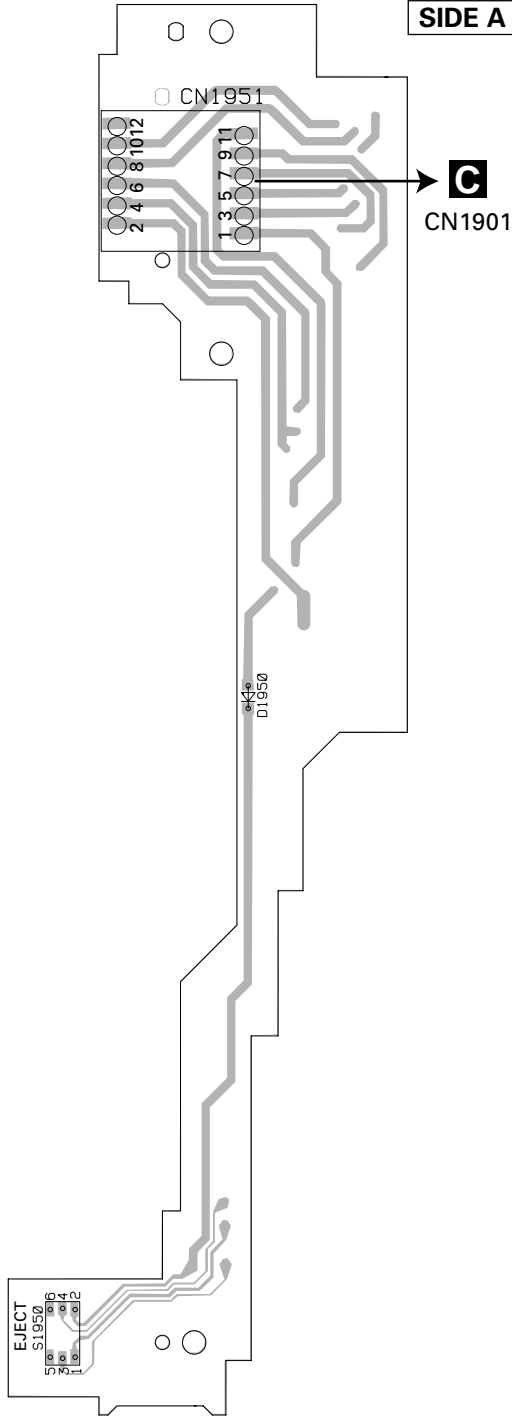
IC. Q	
Q351	
Q710	
Q711	Q914
Q331	IC901
Q252	
Q359	Q341
Q253	
Q251	Q918
Q410	Q413
Q420	IC212
Q361	IC451
Q411	
Q909	Q912
Q511	
Q481	
Q755	
Q750	

4.2 PANEL UNIT

A

B PANEL UNIT

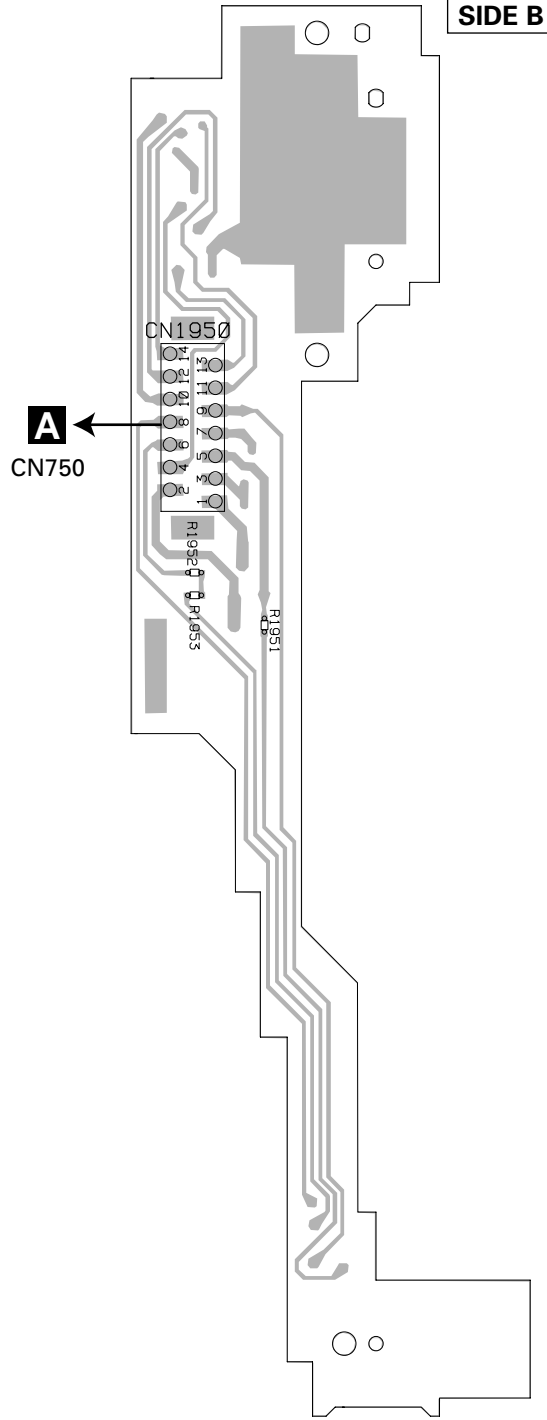
SIDE A



B

B PANEL UNIT

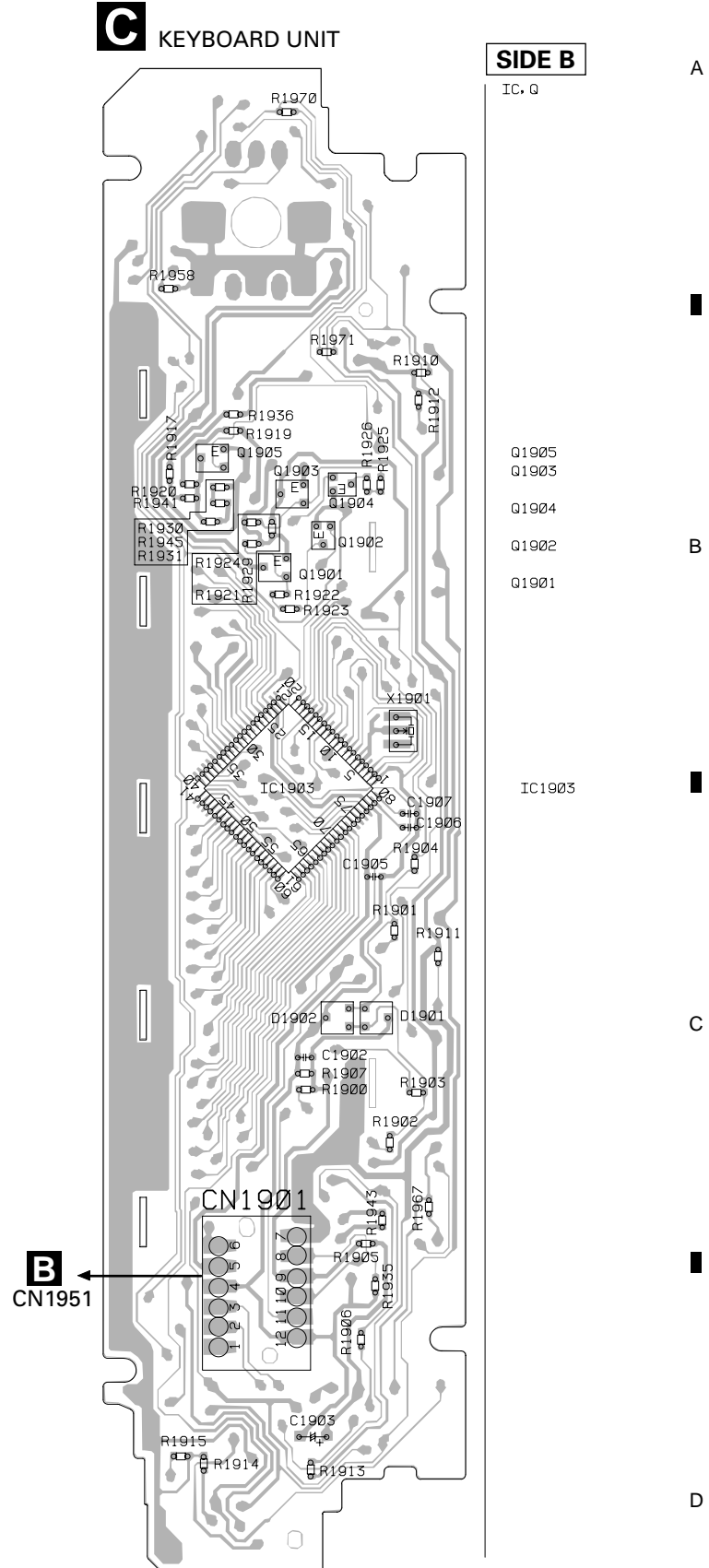
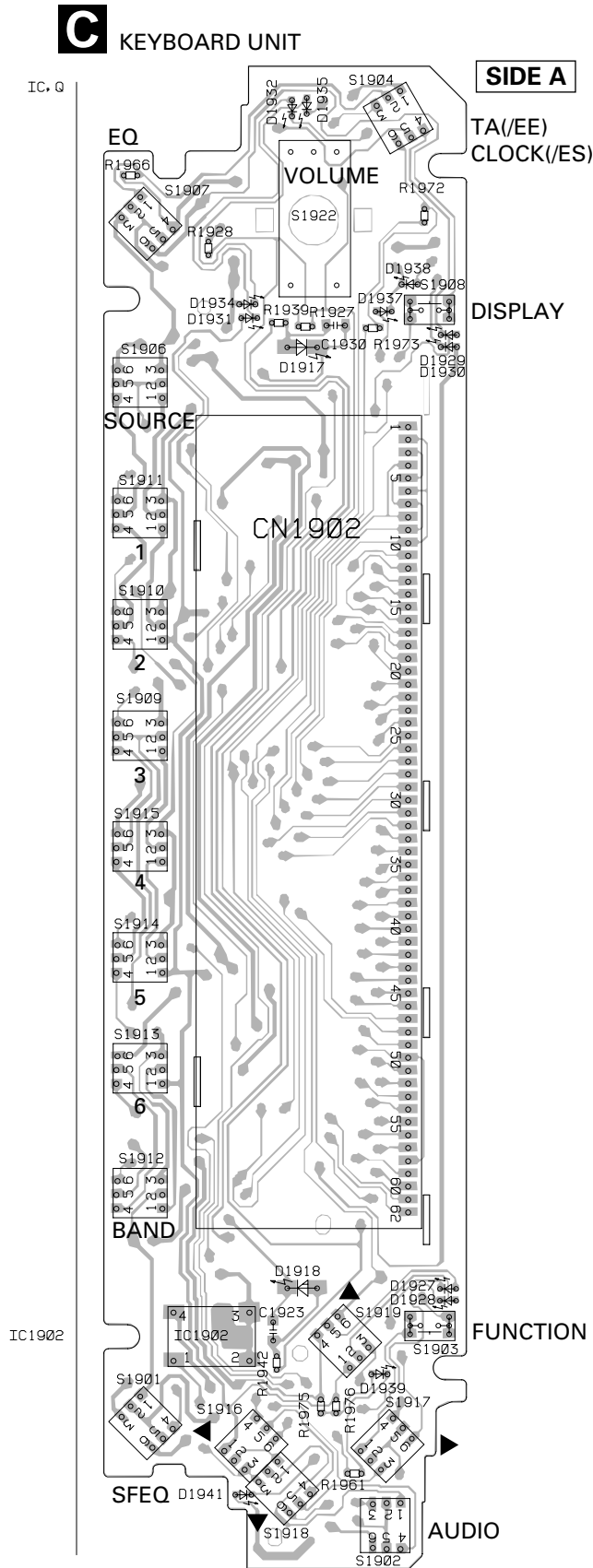
SIDE B



C

D

4.3 KEYBOARD UNIT

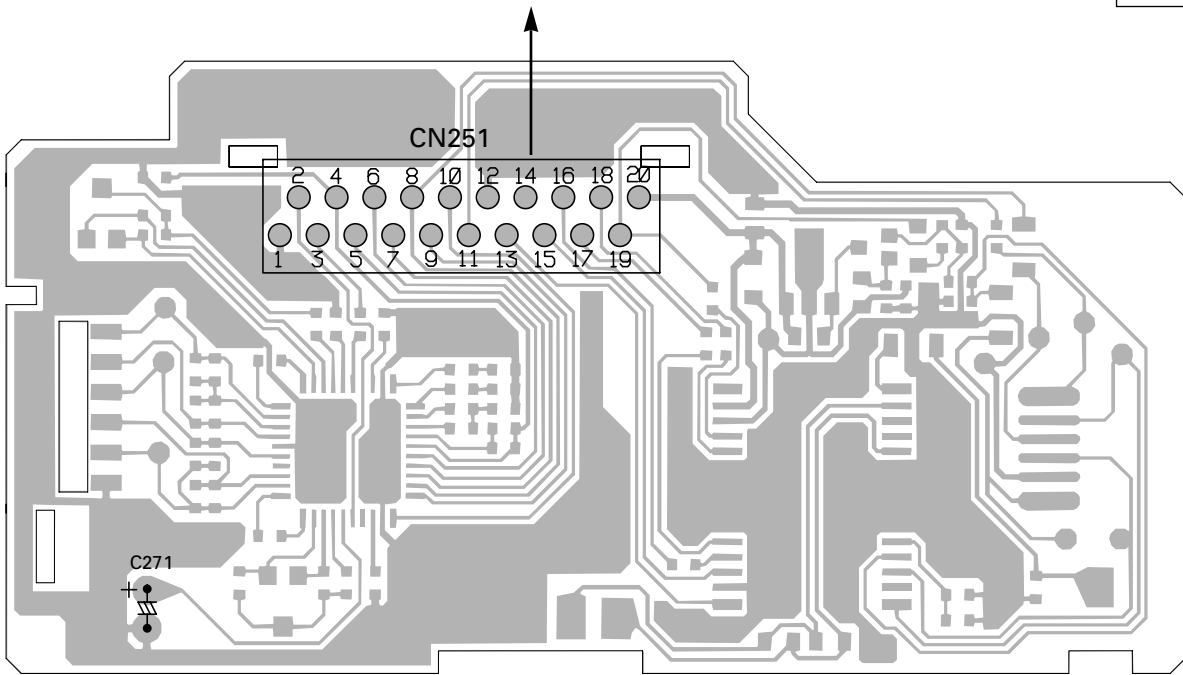


4.4 CASSETTE MECHANISM MODULE

D DECK UNIT

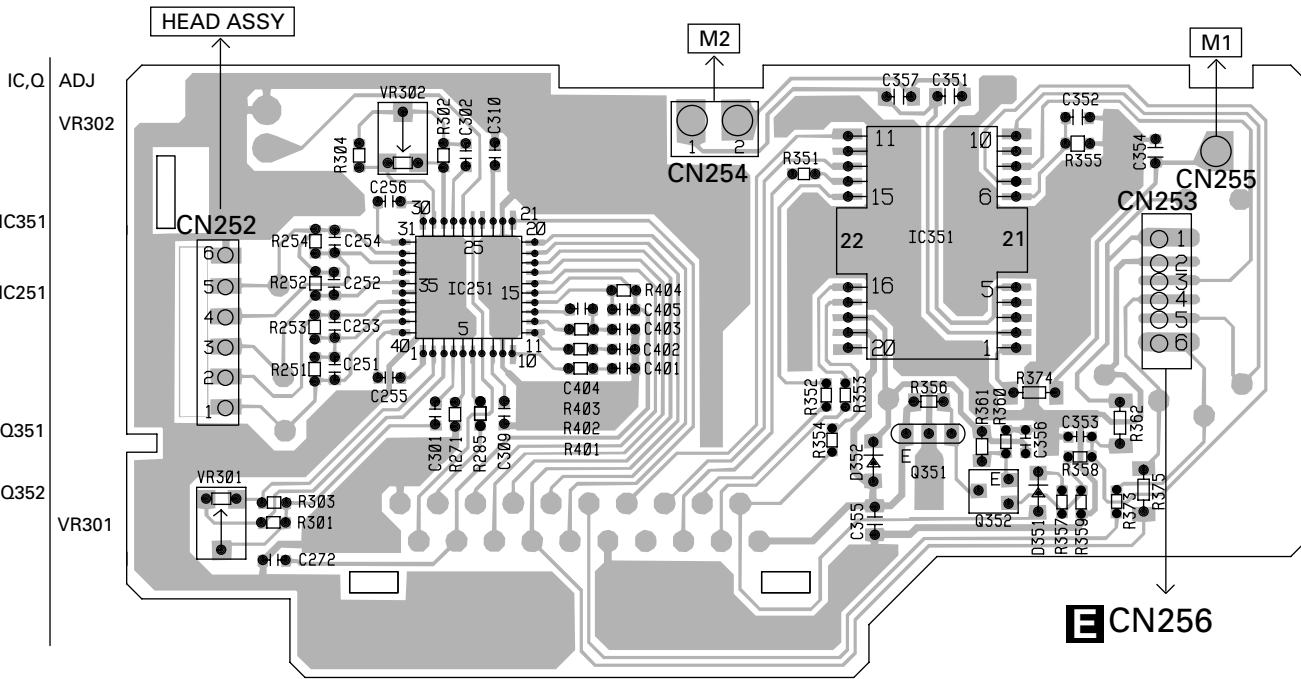
A CN551

SIDE A



D DECK UNIT

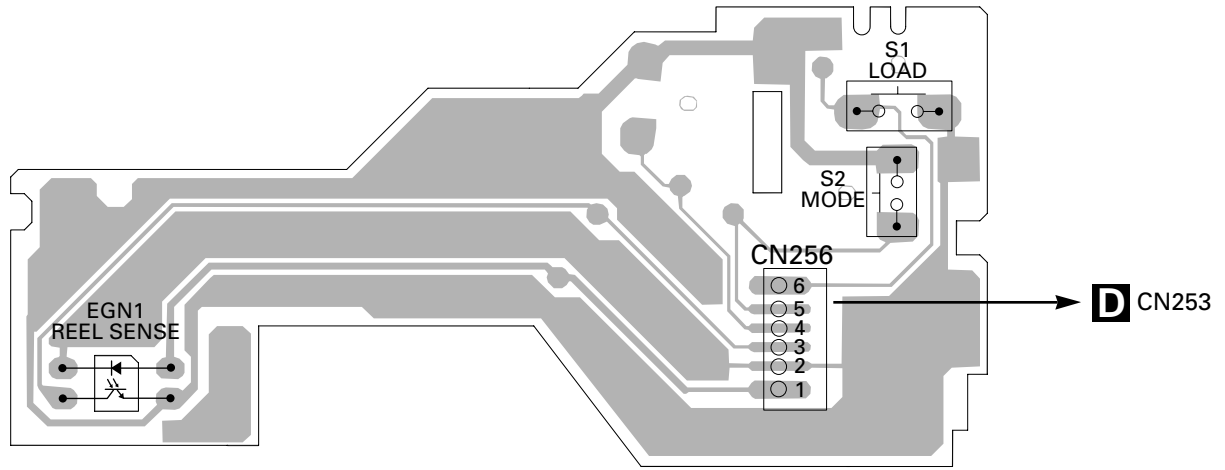
SIDE B



E CN256

D

E REEL SENSE PCB



A

B

C

D

5. ELECTRICAL PARTS LIST

NOTES:

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

Chip Resistor

RS1/OSOOOJ,RS1/OOSOOOJ

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

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

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

D Unit Number : EWM1032
Unit Name : Deck Unit

MISCELLANEOUS

IC 251	IC	HA12229F
IC 351	IC	PA2020A
D 352	Diode	1SS355

RESISTORS

R 271	RS1/16S183J
R 285	RS1/16S0R0J
R 301	RS1/16S163J
R 302	RS1/16S163J
R 303	RS1/16S163J
R 304	RS1/16S163J
R 351	RS1/16S102J
R 352	RS1/16S102J
R 353	RS1/16S102J
R 354	RS1/16S102J
R 355	RS1/16S274J
R 362	RS1/8S301J
R 373	RS1/16S0R0J
R 374	RS1/8S0R0J
R 401	RS1/16S153J
R 402	RS1/16S332J
R 403	RS1/16S911J
R 404	RS1/16S274J

CAPACITORS

C 251	CKSRYB391K50
C 252	CKSRYB391K50
C 253	CKSRYB391K50
C 254	CKSRYB391K50
C 255	CKSRYB103K50
C 256	CKSRYB103K50
C 271	ECH0002
C 272	CKSRYB104K16
C 301	CKSRYB104K16
C 302	CKSRYB104K16
C 351	CKSQYB224K25
C 352	CKSRYB392K50
C 353	CKSRYB103K50
C 354	CKSRYB103K50
C 355	CKSQYB104K50
C 356	CKSRYB103K50
C 401	CKSRYB392K50
C 402	CKSRYB334K10
C 403	CKSRYB223K25
C 404	CKSRYB103K50
C 405	CKSRYB333K16

1μF/50V

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

A Unit Number : CWM8021(KEH-P6021R)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC 301	IC	PML008A
IC 361	IC	PAL007A
IC 481	IC	PM4009A
IC 601	IC	PE5206A
IC 603	IC	S-80834ANY

IC 710	IC	HA12187FP
Q 341	Transistor	IMH3A
Q 351	Transistor	IMH3A
Q 359	Transistor	DTA124EK
Q 361	Transistor	DTC124EK
Q 362	Transistor	DTC114EK
Q 410	Transistor	2SC2412K
Q 411	Transistor	2SC2412K
Q 413	Transistor	DTA114EK
Q 414	Transistor	2SD1757K
Q 415	Transistor	2SD1757K
Q 416	Transistor	2SC2412K
Q 420	Transistor	RN1610
Q 481	Transistor	DTA124EK
Q 610	Transistor	DTA114EK
Q 710	Transistor	2SA1037K
Q 711	Transistor	DTC114EK
Q 750	Transistor	2SA1037K
Q 751	Transistor	2SA1036K
Q 752	Transistor	DTC114EK

Q 753	Transistor	DTC114EK
Q 754	Transistor	2SA1037K
Q 755	Transistor	DTC114EK
Q 909	Transistor	RN46A1
Q 910	Transistor	2SD2396
Q 911	Transistor	2SB1243
Q 912	Transistor	DTC114EK
Q 913	Transistor	2SD1760F5
Q 914	Transistor	2SC2412K
Q 915	Transistor	2SC2412K
Q 916	Transistor	2SA1037K
Q 917	Transistor	2SC2412K
Q 918	Transistor	2SC2412K
D 320	Diode	DAN202U
D 361	Diode	S5688G
D 362	Diode	S5688G
D 551	Diode	1SS270
D 750	Diode	1SS270
D 751	Diode	1SS270
D 752	Diode	DAP202U
D 753	Diode	DAN202U
D 754	Diode	DAP202K
D 755	Diode	DAN202K
D 762	Diode	DAN202U
D 763	Diode	DAP202U

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
D 910 Diode	HZS9L(B3)	R 425	RS1/16S102J
D 911 Diode	HZS6L(B2)	R 426	RS1/16S473J
D 912 Diode	S5688G	R 427	RS1/16S153J
D 913 Diode	HZS7L(C2)	R 428	RS1/16S681J
D 914 Diode	HZS7L(A1)	R 429	RS1/16S681J
D 915 Diode	1SS270	R 430	RS1/16S681J
D 916 Diode	1SS270	R 431	RS1/16S473J
D 919 Diode	S5688G	R 432	RS1/16S473J
D 920 Diode	S5688G	R 433	RS1/16S474J
D 925 Diode	1SS270	R 434	RS1/16S473J
D 926 Diode	HZS9L(A2)	R 435	RS1/16S472J
L 311 Ferri-Inductor	LAU4R7K	R 439	RS1/16S222J
L 361 Choke Coil 600μH	CTH1221	R 440	RS1/16S222J
L 410 Ferri-Inductor	LAU4R7K	R 441	RS1/16S223J
L 411 Ferri-Inductor	LAU2R2K	R 442	RS1/16S223J
L 412 Ferri-Inductor	LAU2R2K	R 443	RS1/16S224J
L 481 Inductor	LAU100K	R 444	RS1/16S224J
L 482 Ferri-Inductor	LAU101K	R 445	RS1/16S162J
L 489 Inductor	CTF1346	R 446	RS1/16S162J
L 612 Inductor	LAU100K	R 447	RS1/16S272J
L 621 Inductor	CTF1346	R 448	RS1/16S272J
L 710 Ferri-Inductor	LAU2R2K	R 449	RS1/16S224J
L 750 Ferri-Inductor	LAU2R2K	R 450	RS1/16S681J
L 910 Ferri-Inductor	LAU2R2K	R 454	RS1/16S0R0J
X 481 Crystal Resonator 3.648MHz	CSS1447	R 455	RS1/16S0R0J
X 610 Radiator 12.58291MHz	CSS1402	R 481	RS1/16S102J
S 750 Switch(DETACH SENSE) FM/AM Tuner Unit	CSN1039	R 482	RS1/16S225J
BZ 610 Buzzer	CWE1566	R 483	RS1/16S681J
AR 410 Surge Absorber	CPV1050	R 484	RS1/16S102J
	DSP-201M	R 485	RS1/16S102J
RESISTORS		R 486	RS1/16S102J
R 311	RS1/16S101J	R 551	RS1/16S203J
R 312	RS1/16S101J	R 552	RS1/16S473J
R 313	RS1/16S101J	R 553	RS1/16S473J
R 314	RS1/16S101J	R 554	RS1/16S473J
R 327	RS1/16S222J	R 555	RS1/16S104J
R 328	RS1/16S222J	R 556	RS1/16S473J
R 341	RS1/16S223J	R 557	RS1/16S473J
R 342	RS1/16S821J	R 558	RS1/16S102J
R 343	RS1/16S821J	R 561	RAB4C102J
R 344	RS1/16S223J	R 562	RAB4C102J
R 351	RS1/16S821J	R 563	RAB4C102J
R 352	RS1/16S821J	R 569	RS1/16S681J
R 353	RS1/16S223J	R 572	RS1/16S102J
R 354	RS1/16S223J	R 573	RS1/16S102J
R 361	RS1/16S103J	R 611	RS1/16S473J
R 362	RS1/16S103J	R 613	RS1/16S102J
R 363	RS1/16S331J	R 614	RS1/16S821J
R 364	RS1/16S153J	R 615	RS1/16S102J
R 365	RD1/4PU182J	R 616	RS1/16S0R0J
R 409	RS1/16S0R0J	R 620	RS1/16S473J
R 410	RS1/16S222J	R 621	RS1/16S0R0J
R 411	RS1/16S222J	R 622	RS1/16S101J
R 412	RS1/16S681J	R 624	RS1/16S104J
R 413	RS1/16S473J	R 625	RS1/16S0R0J
R 414	RS1/16S473J	R 630	RAB4C102J
R 415	RS1/16S393J	R 710	RS1/16S101J
R 416	RS1/16S681J	R 711	RS1/16S620J
R 417	RS1/16S681J	R 712	RS1/16S101J
R 418	RS1/16S681J	R 713	RS1/16S103J
R 419	RS1/16S681J	R 714	RS1/16S102J
R 420	RS1/16S103J	R 715	RS1/16S102J
R 421	RS1/16S681J	R 716	RS1/16S473J
R 422	RS1/16S473J	R 717	RS1/16S473J
R 423	RS1/16S472J	R 718	RS1/16S102J
R 424	RS1/16S473J		

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 719	RS1/16S102J	R 933	RS1/16S473J
R 720	RS1/16S223J	R 934	RS1/16S103J
R 721	RS1/16S223J	R 935	RS1/16S223J
R 722	RS1/16S821J	R 936	RD1/4PU152J
R 723	RS1/16S821J		
		CAPACITORS	
R 724	RS1/16S222J	C 310	CKSRYB102K50
R 725	RS1/16S223J	C 311	CEJA1R0M50
R 726	RS1/16S472J	C 312	CEJA1R0M50
R 750	RS1/16S104J	C 314	CKSRYB105K6R3
R 751	RS1/16S103J	C 315	CKSRYB105K6R3
		C 316	CKSRYB104K16
R 752	RS1/16S153J	C 317	CKSRYB104K16
R 753	RS1/16S153J	C 318	CKSRYB105K6R3
R 754	RS1/16S222J	C 319	CKSRYB105K6R3
R 756	RS1/16S433J	C 320	CKSRYB105K6R3
R 757	RS1/16S473J		
		C 321	CKSRYB105K6R3
R 758	RS1/16S102J	C 325	CKSRYB102K50
R 759	RD1/4PU222J	C 326	CEJA100M16
R 760	RS1/16S102J	C 328	CKSRYB104K16
R 763	RS1/16S222J	C 329	CEJA470M10
R 764	RS1/16S131J		
		C 342	CEJA2R2M50
R 765	RS1PMF390J	C 343	CEJA2R2M50
R 766	RS1/10S270J	C 351	CEJA2R2M50
R 767	RS1/16S103J	C 352	CEJA2R2M50
R 768	RS1/16S152J	C 361	CCH1367
R 769	RS1/16S152J		
		C 362	CKSQYB104K16
R 771	RS1/16S473J	C 363	CKSQYB474K16
R 773	RD1/4PU222J	C 364	CKSQYB474K16
R 774	RS1/16S102J	C 365	CKSQYB474K16
R 775	RS1/16S102J	C 366	CKSQYB474K16
R 776	RS1/16S220J		
		C 367	CKSQYB474K16
R 777	RS1/16S0R0J	C 368	CKSQYB474K16
R 778	RS1/16S103J	C 369	CKSQYB474K16
R 779	RS1/16S472J	C 370	CKSQYB474K16
R 781	RS1/16S104J	C 371	CEJA330M10
R 782	RS1/16S131J		
		C 373	CKSQYB225K10
R 783	RS1/16S131J	C 374	CKSQYB225K10
R 784	RS1/10S392J	C 375	CEJA100M16
R 786	RS1/16S102J	C 410	CKSQYB103K50
R 787	RS1/10S472J	C 412	CKSRYB223K25
R 788	RS1/10S222J		
		C 413	CKSRYB102K50
R 789	RS1/10S222J	C 414	CEJA220M10
R 909	RD1/4PU0R0J	C 415	CKSRYB223K25
R 910	RS1/16S0R0J	C 418	CEAL101M10
R 911	RD1/4PU121J	C 419	CKSRYB473K16
R 912	RS1/16S102J		
		C 420	CKSRYB472K50
R 913	RD1/4PU102J	C 421	CKSRYB223K25
R 914	RS1/16S103J	C 422	CEJA1R0M50
R 915	RS1/16S222J	C 423	CEJA1R0M50
R 916	RS1/16S133J	C 424	CKSRYB123K25
R 917	RS1/16S104J		
		C 425	CKSRYB123K25
R 918	RS1/16S104J	C 426	CKSRYB182K50
R 919	RS1/16S223J	C 481	CCSRCH471J50
R 920	RS1/16S473J	C 482	CKSRYB104K16
R 921	RS1/16S103J	C 483	CKSRYB471K50
R 922	RS1/16S473J		
		C 484	CKSRYB104K16
R 923	RD1/4PU102J	C 485	CEAL220M6R3
R 924	RS1/16S472J	C 486	CCSRCH270J50
R 925	RD1/4PU153J	C 487	CCSRCH270J50
R 926	RS1/16S472J	C 488	CKSRYB104K16
R 927	RS1/16S102J		
		C 489	CEAL220M6R3
R 928	RS1/16S473J	C 551	CEJA220M10
R 929	RS1/16S104J	C 552	CEJA220M16
R 930	RS1/16S103J	C 615	CEAL2R2M50
R 931	RS1/16S103J	C 616	CCSRCH200J50
R 932	RD1/4PU102J		

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
C 617	CCSRCH200J50	D 753 Diode	DAN202U
C 618	CKSRYP105K6R3	D 754 Diode	DAP202K
C 619	CEAL4R7M35	D 755 Diode	DAN202K
C 620	CKSRYP103K50	D 762 Diode	DAN202U
C 621	CCSRCH101J50	D 763 Diode	DAP202U
C 624	CKSRYP223K25	D 910 Diode	HZS9L(B3)
C 629	CCSRCH101J50	D 911 Diode	HZS6L(B2)
C 630	CKSRYP103K50	D 912 Diode	S5688G
C 631	CCSRCH101J50	D 913 Diode	HZS7L(C2)
C 632	CCSRCH101J50	D 914 Diode	HZS7L(A1)
C 633	CKSRYP103K50	D 919 Diode	S5688G
C 634	CKSRYP472K50	D 920 Diode	S5688G
C 710	CKSRYP104K16	D 925 Diode	1SS270
C 711	CKSRYP473K16	D 926 Diode	HZS9L(A2)
C 712	CEJA1R0M50	L 311 Ferri-Inductor	LAU4R7K
C 713	CEJA1R0M50	L 361 Choke Coil 600µH	CTH1221
C 714	CEJA1R0M50	L 410 Ferri-Inductor	LAU4R7K
C 715	CEJA1R0M50	L 411 Ferri-Inductor	LAU2R2K
C 750	CKSRYP103K25	L 412 Ferri-Inductor	LAU2R2K
C 751	CKSQYB104K16	L 612 Inductor	LAU100K
C 765	CKSQYB103K50	L 621 Inductor	CTF1346
C 799	CKSQYB473K16	L 710 Ferri-Inductor	LAU2R2K
C 910 330µF/16V	CCH1326	L 750 Ferri-Inductor	LAU2R2K
C 911	CKSRYP103K25	X 610 Radiator 12.58291MHz	CSS1402
C 912	CEJA101M16	S 750 Switch(DETACH SENSE)	CSN1039
C 913	CEJA101M10		FM/AM Tuner Unit
C 914	CKSRYP473K16	BZ 610 Buzzer	CWE1563
C 915	CKSRYP103K25	AR 410 Surge Absorber	CPV1050
C 916 470µF/16V	CCH1331		DSP-201M
C 920	CKSRYP104K16		

A Unit Number : CWM8020(KEH-P6025)
 Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC 301 IC	PML008A	R 311	RS1/16S101J
IC 361 IC	PAL007A	R 312	RS1/16S101J
IC 601 IC	PE5207A	R 313	RS1/16S101J
IC 603 IC	S-80834ANY	R 314	RS1/16S101J
IC 710 IC	HA12187FP	R 327	RS1/16S222J
Q 351 Transistor	IMH3A	R 328	RS1/16S222J
Q 359 Transistor	DTA124EK	R 351	RS1/16S821J
Q 361 Transistor	DTC124EK	R 352	RS1/16S821J
Q 362 Transistor	DTC114EK	R 353	RS1/16S223J
Q 410 Transistor	2SC2412K	R 354	RS1/16S223J
Q 610 Transistor	DTA114EK	R 361	RS1/16S103J
Q 710 Transistor	2SA1037K	R 362	RS1/16S103J
Q 711 Transistor	DTC114EK	R 363	RS1/16S331J
Q 750 Transistor	2SA1037K	R 364	RS1/16S153J
Q 751 Transistor	2SA1036K	R 365	RD1/4PU182J
Q 752 Transistor	DTC114EK	R 409	RS1/16S0R0J
Q 753 Transistor	DTC114EK	R 410	RS1/16S222J
Q 754 Transistor	2SA1037K	R 411	RS1/16S222J
Q 755 Transistor	DTC114EK	R 413	RS1/16S473J
Q 909 Transistor	RN46A1	R 414	RS1/16S473J
Q 910 Transistor	2SD2396	R 415	RS1/16S393J
Q 911 Transistor	2SB1243	R 417	RS1/16S681J
Q 912 Transistor	DTC114EK	R 418	RS1/16S681J
Q 913 Transistor	2SD1760F5	R 419	RS1/16S681J
Q 914 Transistor	2SC2412K	R 420	RS1/16S103J
Q 915 Transistor	2SC2412K	R 421	RS1/16S681J
Q 917 Transistor	2SC2412K	R 422	RS1/16S473J
Q 918 Transistor	2SC2412K	R 423	RS1/16S472J
D 320 Diode	DAN202U	R 424	RS1/16S473J
D 361 Diode	S5688G	R 429	RS1/16S681J
D 362 Diode	S5688G	R 430	RS1/16S681J
D 551 Diode	1SS270	R 431	RS1/16S473J
D 750 Diode	1SS270	R 432	RS1/16S473J
D 751 Diode	1SS270	R 437	RS1/16S0R0J
D 752 Diode	DAP202U	R 438	RS1/16S0R0J
		R 445	RS1/16S272J
		R 446	RS1/16S272J
		R 447	RS1/16S162J
		R 448	RS1/16S162J
		R 454	RS1/16S0R0J

====Circuit Symbol and No.===Part Name		Part No.	====Circuit Symbol and No.===Part Name		Part No.
R 551		RS1/16S203J	R 781		RS1/16S104J
R 552		RS1/16S473J	R 782		RS1/16S131J
R 553		RS1/16S473J	R 783		RS1/16S131J
R 554		RS1/16S473J	R 784		RS1/10S392J
R 555		RS1/16S104J	R 786		RS1/16S102J
R 556		RS1/16S473J	R 787		RS1/10S472J
R 557		RS1/16S473J	R 788		RS1/10S222J
R 558		RS1/16S102J	R 789		RS1/10S222J
R 561		RAB4C102J	R 909		RD1/4PU0R0J
R 562		RAB4C102J	R 910		RS1/16S0R0J
R 563		RAB4C102J	R 911		RD1/4PU121J
R 569		RS1/16S681J	R 912		RS1/16S102J
R 572		RS1/16S102J	R 913		RD1/4PU102J
R 573		RS1/16S102J	R 914		RS1/16S103J
R 611		RS1/16S473J	R 915		RS1/16S222J
R 613		RS1/16S102J	R 916		RS1/16S133J
R 614		RS1/16S821J	R 917		RS1/16S104J
R 615		RS1/16S102J	R 918		RS1/16S104J
R 616		RS1/16S0R0J	R 919		RS1/16S223J
R 620		RS1/16S473J	R 920		RS1/16S473J
R 621		RS1/16S0R0J	R 921		RS1/16S103J
R 622		RS1/16S101J	R 922		RS1/16S473J
R 624		RS1/16S104J	R 923		RD1/4PU102J
R 625		RS1/16S0R0J	R 924		RS1/16S472J
R 626		RS1/16S473J	R 927		RS1/16S102J
R 627		RS1/16S473J	R 928		RS1/16S473J
R 628		RS1/16S473J	R 929		RS1/16S104J
R 630		RAB4C102J	R 930		RS1/16S103J
R 710		RS1/16S101J	R 931		RS1/16S103J
R 711		RS1/16S620J	R 932		RD1/4PU102J
R 712		RS1/16S101J	R 933		RS1/16S473J
R 713		RS1/16S103J	R 934		RS1/16S103J
R 714		RS1/16S102J	R 935		RS1/16S223J
R 715		RS1/16S102J	R 936		RD1/4PU152J
R 716		RS1/16S473J			
R 717		RS1/16S473J			
R 718		RS1/16S102J	C 310		CKSRYB102K50
R 719		RS1/16S102J	C 311		CEJA1R0M50
R 720		RS1/16S223J	C 312		CEJA1R0M50
R 721		RS1/16S223J	C 314		CKSRYB105K6R3
R 722		RS1/16S821J	C 315		CKSRYB105K6R3
R 723		RS1/16S821J	C 316		CKSRYB104K16
R 724		RS1/16S222J	C 317		CKSRYB104K16
R 725		RS1/16S223J	C 318		CKSRYB105K6R3
R 726		RS1/16S472J	C 319		CKSRYB105K6R3
R 750		RS1/16S104J	C 320		CKSRYB105K6R3
R 751		RS1/16S103J	C 321		CKSRYB105K6R3
R 752		RS1/16S153J	C 325		CKSRYB102K50
R 753		RS1/16S153J	C 326		CEJA100M16
R 754		RS1/16S222J	C 328		CKSRYB104K16
R 756		RS1/16S433J	C 329		CEJA470M10
R 757		RS1/16S473J	C 351		CEJA2R2M50
R 758		RS1/16S102J	C 352		CEJA2R2M50
R 759		RD1/4PU222J	C 361	4700µF/16V	CCH1367
R 760		RS1/16S102J	C 362		CKSQYB104K16
R 763		RS1/16S222J	C 363		CKSQYB474K16
R 764		RS1/16S131J	C 364		CKSQYB474K16
R 765		RS1PMF390J	C 365		CKSQYB474K16
R 766		RS1/10S270J	C 366		CKSQYB474K16
R 767		RS1/16S103J	C 367		CKSQYB474K16
R 768		RS1/16S152J	C 368		CKSQYB474K16
R 769		RS1/16S152J	C 369		CKSQYB474K16
R 771		RS1/16S473J	C 370		CKSQYB474K16
R 773		RD1/4PU222J	C 371		CEJA330M10
R 774		RS1/16S102J	C 373		CKSQYB225K10
R 775		RS1/16S102J	C 374		CKSQYB225K10
R 776		RS1/16S220J			
R 777		RS1/16S0R0J			
R 778		RS1/16S103J			
R 779		RS1/16S472J			

====Circuit Symbol and No.===Part Name	Part No.	====Circuit Symbol and No.===Part Name	Part No.
C 375	CEJA100M16	D 1938	LED
C 410	CKSQYB103K50	D 1939	LED
C 412	CKSRYB223K25	D 1941	LED
C 413	CKSRYB102K50	X 1901	Ceramic Resonator 5.00MHz
C 414	CEJA220M10	S 1901	Push Switch
C 415	CKSRYB223K25	S 1902	Push Switch
C 418	CEAL101M10	S 1903	Push Switch
C 419	CKSRYB473K16	S 1904	Push Switch
C 424	CKSRYB183K25	S 1906	Push Switch
C 425	CKSRYB183K25	S 1907	Push Switch
C 431	CKSRYB102K50	S 1908	Push Switch
C 551	CEJA220M10	S 1909	Push Switch
C 552	CEJA220M16	S 1910	Push Switch
C 615	CEAL2R2M50	S 1911	Push Switch
C 616	CCSRCH200J50	S 1912	Push Switch
C 617	CCSRCH200J50	S 1913	Push Switch
C 618	CKSRYB105K6R3	S 1914	Push Switch
C 619	CEAL4R7M35	S 1915	Push Switch
C 620	CKSRYB103K50	S 1916	Push Switch
C 621	CCSRCH101J50	S 1917	Push Switch
C 624	CKSRYB223K25	S 1918	Push Switch
C 629	CCSRCH101J50	S 1919	Push Switch
C 630	CKSRYB103K50	S 1922	Encoder
C 631	CCSRCH101J50		LCD
C 632	CCSRCH101J50		CAW1627
C 633	CKSRYB103K50	RESISTORS	
C 634	CKSRYB472K50	R 1901	RS1/16S222J
C 710	CKSRYB104K16	R 1902	RS1/16S222J
C 711	CKSRYB473K16	R 1903	RS1/16S470J
C 712	CEJA1R0M50	R 1904	RS1/16S470J
C 713	CEJA1R0M50	R 1905	RS1/16S121J
C 714	CEJA1R0M50	R 1906	RS1/16S2R2J
C 715	CEJA1R0M50	R 1910	RS1/16S151J
C 750	CKSRYB103K25	R 1911	RS1/16S151J
C 751	CKSQYB104K16	R 1912	RS1/16S151J
C 751	CKSQYB104K16	R 1913	RS1/16S151J
C 765	CKSQYB103K50	R 1914	RS1/16S151J
C 799	CKSQYB473K16	R 1915	RS1/16S151J
C 910	330µF/16V	CCH1326	RS1/16S151J
C 911	CKSRYB103K25	R 1917	RS1/16S151J
C 912	CEJA101M16	R 1919	RS1/16S151J
C 912	CEJA101M16	R 1920	RS1/16S151J
C 913	CEJA101M10	R 1921	RS1/16S103J
C 914	CKSRYB473K16	R 1922	RS1/16S331J
C 915	CKSRYB103K25	R 1923	RS1/16S331J
C 916	470µF/16V	CCH1331	RS1/16S103J
C 920	CKSRYB104K16	R 1924	RS1/16S331J
C 920	CKSRYB104K16	R 1925	RS1/16S331J
		R 1926	RS1/16S331J
		R 1927	RS1/16S472J
		R 1930	RS1/16S101J
		R 1931	RS1/16S101J
		R 1935	RS1/16S393J
		R 1936	RS1/16S151J
		R 1939	RS1/16S151J
		R 1941	RS1/16S151J
		R 1942	RS1/16S151J
		R 1943	RS1/16S151J
		R 1945	RS1/16S121J
		R 1958	RS1/16S151J
		R 1961	RS1/16S121J
		R 1970	RS1/16SOR0J
		R 1972	RS1/16SOR0J
		R 1975	RS1/16S151J
		CAPACITORS	
D 1931	LED	C 1902	CKSRYB104K16
D 1932	LED	C 1903	CSZS100M6R3
D 1934	LED	C 1905	CKSRYB104K16
D 1935	LED	C 1906	CKSRYB104K16
D 1937	LED	C 1907	CKSRYB104K16
			CKSRYB104K16



Unit Number : CWM8311(KEH-P6021R)
Unit Name : Keyboard Unit

MISCELLANEOUS

IC 1902	IC	RS-140	
IC 1903	IC	PD6294A	
Q 1901	Transistor	2SA1036K	
Q 1902	Transistor	DTC114EU	
Q 1903	Transistor	2SA1036K	
Q 1904	Transistor	DTC114EU	
Q 1905	Transistor	DTC114EK	
D 1901	Diode	MA152WK	
D 1902	Diode	MA152WA	
D 1917	LED	NSSW440-9159	
D 1918	LED	NSSW440-9159	
D 1927	LED	SML-310PT	
D 1928	LED	SML-310DT	
D 1929	LED	SML-310PT	
D 1930	LED	SML-310DT	
D 1931	LED	SML-310DT	
D 1932	LED	SML-310DT	
D 1934	LED	SML-310PT	
D 1935	LED	SML-310PT	
D 1937	LED	SML-310PT	

====Circuit Symbol and No.====Part Name	Part No.
C 1923	CKSQYF104Z50
C 1930	CKSQYF104Z50

C Unit Number : CWM8313(KEH-P6025)
 Unit Name : Keyboard Unit

MISCELLANEOUS

IC 1902	IC	RS-140
IC 1903	IC	PD6294A
Q 1905	Transistor	DTC114EK
D 1901	Diode	MA152WK
D 1902	Diode	MA152WA
D 1917	LED	NSSW440-9159
D 1918	LED	NSSW440-9159
D 1928	LED	SML-310PT
D 1930	LED	SML-310PT
D 1931	LED	SML-310PT
D 1932	LED	SML-310PT
D 1938	LED	SML-310PT
D 1939	LED	SML-310PT
D 1941	LED	SML-310PT
X 1901	Ceramic Resonator 5.00MHz	CSS1547
S 1901	Switch	CSG1107
S 1902	Switch	CSG1107
S 1903	Push Switch	CSG1111
S 1904	Switch	CSG1107
S 1906	Switch	CSG1107
S 1907	Switch	CSG1107
S 1908	Push Switch	CSG1111
S 1909	Switch	CSG1107
S 1910	Switch	CSG1107
S 1911	Switch	CSG1107
S 1912	Switch	CSG1107
S 1913	Switch	CSG1107
S 1914	Switch	CSG1107
S 1915	Switch	CSG1107
S 1916	Switch	CSG1107
S 1917	Switch	CSG1107
S 1918	Switch	CSG1107
S 1919	Switch	CSG1107
S 1922	Encoder LCD	CSD1059 CAW1628

RESISTORS

R 1901	RS1/16S222J
R 1902	RS1/16S222J
R 1903	RS1/16S470J
R 1904	RS1/16S470J
R 1905	RS1/16S121J
R 1906	RS1/16S2R2J
R 1910	RS1/16S151J
R 1911	RS1/16S151J
R 1912	RS1/16S151J
R 1913	RS1/16S151J
R 1914	RS1/16S151J
R 1915	RS1/16S151J
R 1917	RS1/16S151J
R 1919	RS1/16S151J
R 1920	RS1/16S151J

====Circuit Symbol and No.====Part Name	Part No.
R 1927	RS1/16S472J
R 1929	RS1/16S0R0J
R 1930	RS1/16S101J
R 1931	RS1/16S101J
R 1935	RS1/16S393J

R 1936	RS1/16S151J
R 1939	RS1/16S151J
R 1941	RS1/16S151J
R 1942	RS1/16S151J
R 1943	RS1/16S151J

R 1945	RS1/16S121J
R 1958	RS1/16S151J
R 1961	RS1/16S121J
R 1971	RS1/16S0R0J
R 1973	RS1/16S0R0J

R 1976	RS1/16S151J
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CAPACITORS

C 1902	CKSRYB104K16
C 1903	CSZS100M6R3
C 1905	CKSRYB104K16
C 1906	CKSRYB104K16
C 1907	CKSRYB104K16

C 1923	CKSQYF104Z50
C 1930	CKSQYF104Z50

B Unit Number : CWM7627
 Unit Name : Panel Unit

S 1950	Push Switch(EJECT)	CSG1112
R 1951		RS1/16S101J
R 1952		RS1/16S101J
R 1953		RS1/16S101J

E Unit Number :
 Unit Name : Reel Sense PCB

S 1	Switch(LOAD)	ESG1007
S 2	Switch(MODE)	ESG1007
EGN 1	Photo-reflector	EGN1004

Miscellaneous Parts List

M 1	Motor Unit(MAIN)	EXA1491
M 2	Motor Unit(SUB)	EXA1580
HD 1	Head Assy	EXA1592

6. ADJUSTMENT

There is no information to be shown in this chapter.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● Removing the Case (not shown)

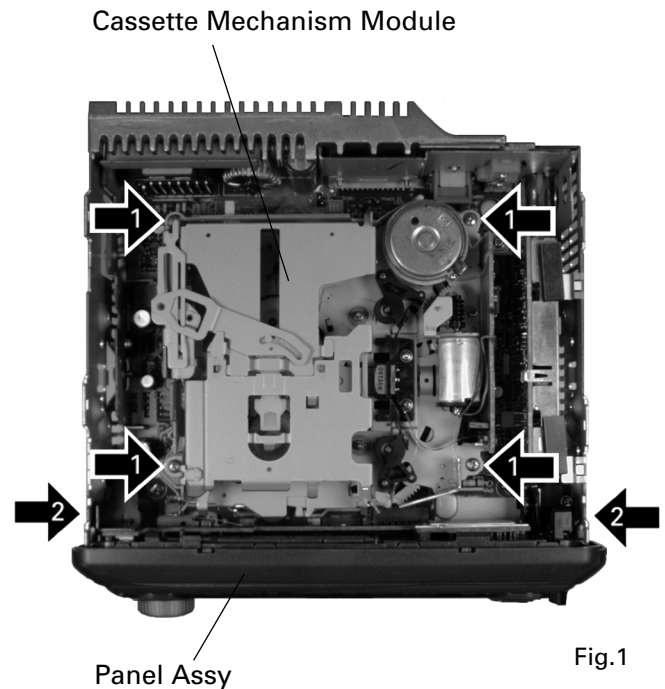
1. Remove the Case.

● Removing the Cassette Mechanism Module (Fig.1)

1 Remove the four screws and then remove the Cassette Mechanism Module.

● Removing the Panel Assy (Fig.1)

2 Remove the two screws and then remove the Panel Assy.



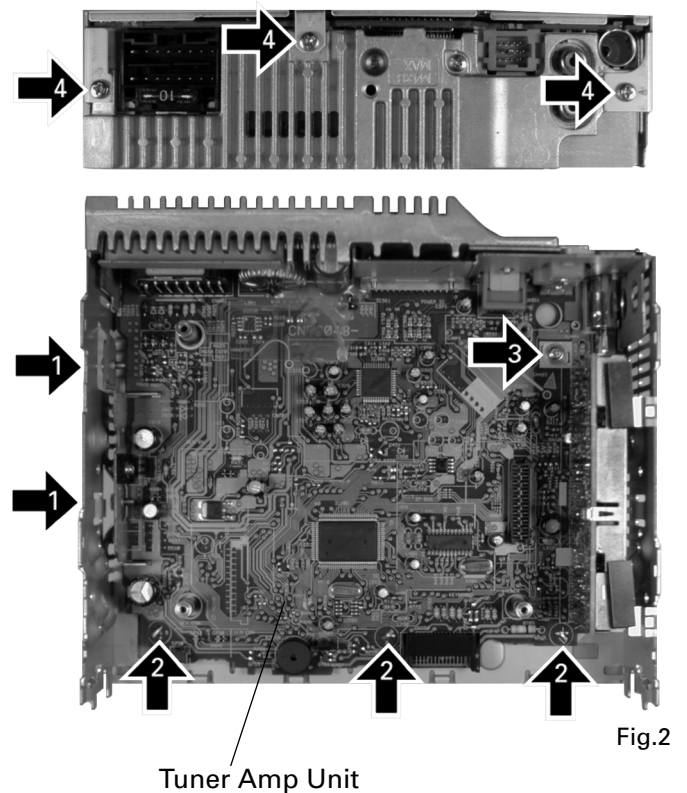
● Removing the Tuner Amp Unit (Fig.2)

1 Remove the two screws.

2 Straight the tabs at three locations indicated.

3 Remove the screw.

4 Remove the three screws and then remove the Tuner Amp Unit.

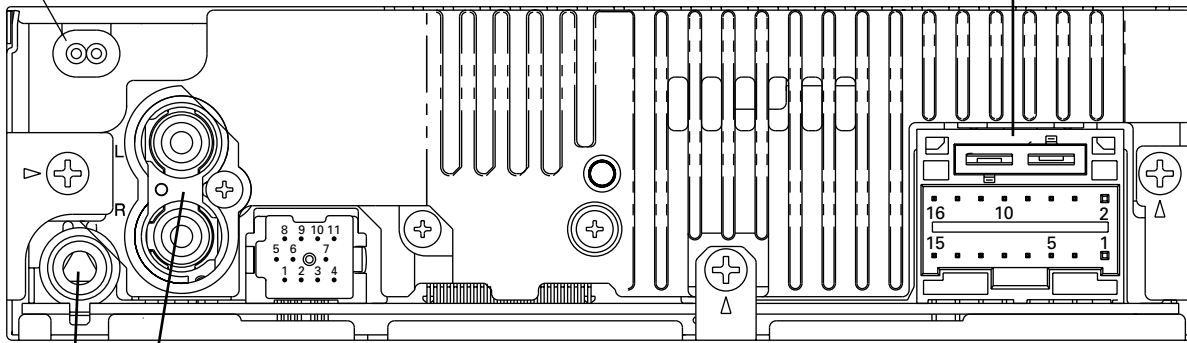


7.1.2 CONNECTOR FUNCTION DESCRIPTION

● KEH-P6021R

FRONT OUTPUT

FUSE 10A



- 1. BUS+
- 2. GND
- 3. GND
- 4. NC
- 5. BUS-
- 6. GND
- 7. BUS L+ INPUT
- 8. ASEN B
- 9. BUS R+ INPUT
- 10. BUS R- INPUT
- 11. BUS L- INPUT

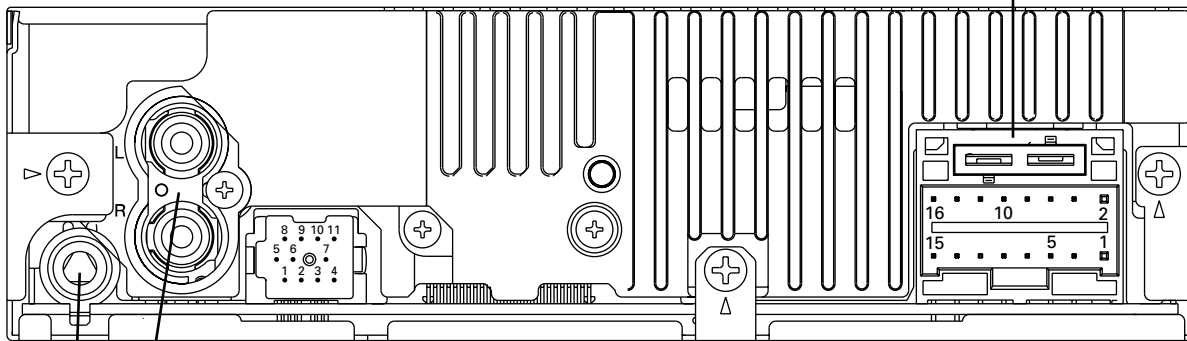
- 1. GND
- 2. B.UP
- 3. ACC
- 4. NC
- 5. ILM
- 6. B.REM
- 7. NC
- 8. TEL MUTE
- 9. RL-
- 10. FL-
- 11. RL+
- 12. FL+
- 13. RR-
- 14. FR-
- 15. RR+
- 16. FR+

REAR OUTPUT

ANTENNA

● KEH-P6025

FUSE 10A



- 1. BUS+
- 2. GND
- 3. GND
- 4. NC
- 5. BUS-
- 6. GND
- 7. BUS L+ INPUT
- 8. ASEN B
- 9. BUS R+ INPUT
- 10. BUS R- INPUT
- 11. BUS L- INPUT

- 1. GND
- 2. B.UP
- 3. ACC
- 4. NC
- 5. ILM
- 6. B.REM
- 7. NC
- 8. NC
- 9. RL-
- 10. FL-
- 11. RL+
- 12. FL+
- 13. RR-
- 14. FR-
- 15. RR+
- 16. FR+

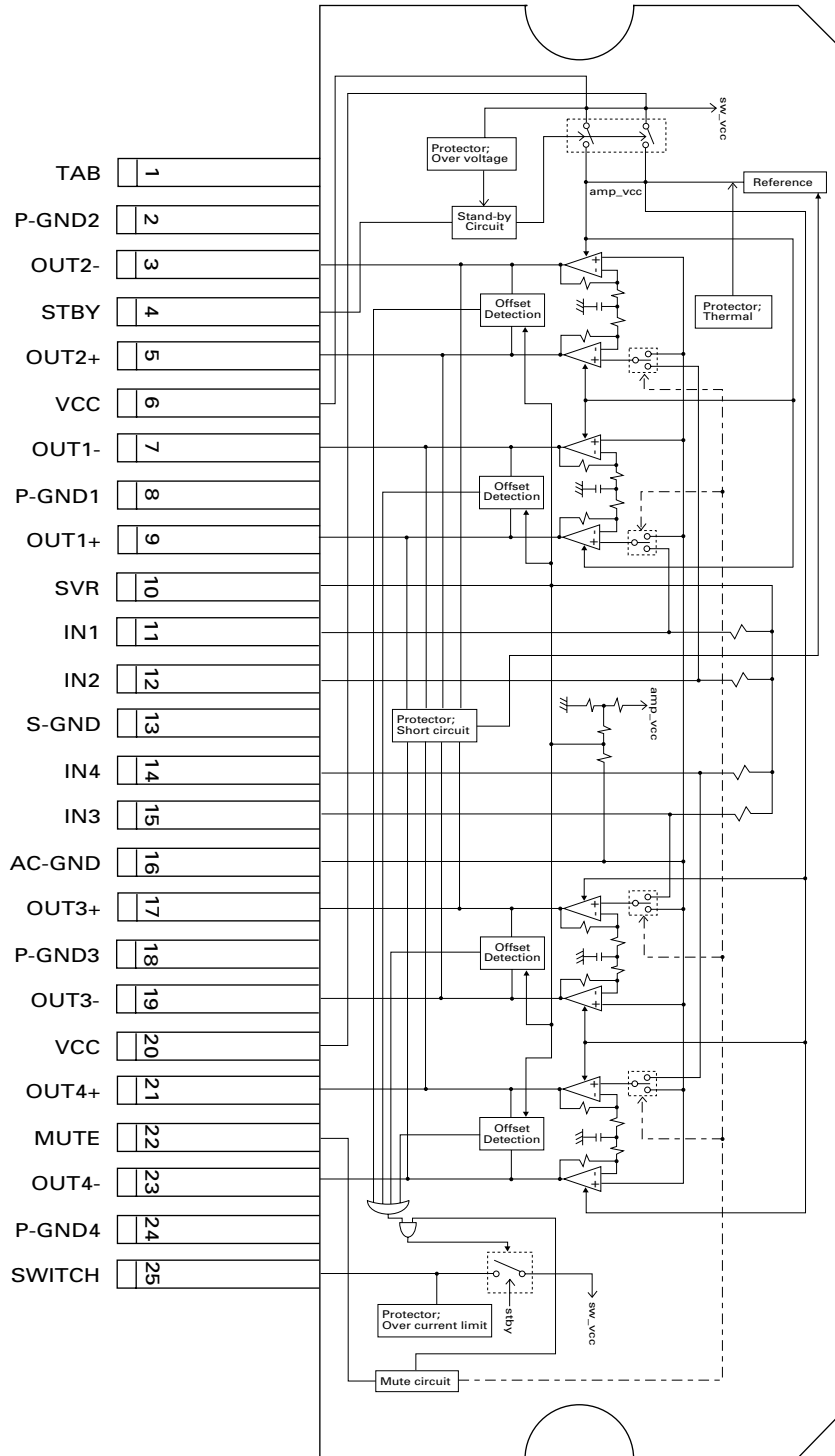
REAR OUTPUT

ANTENNA

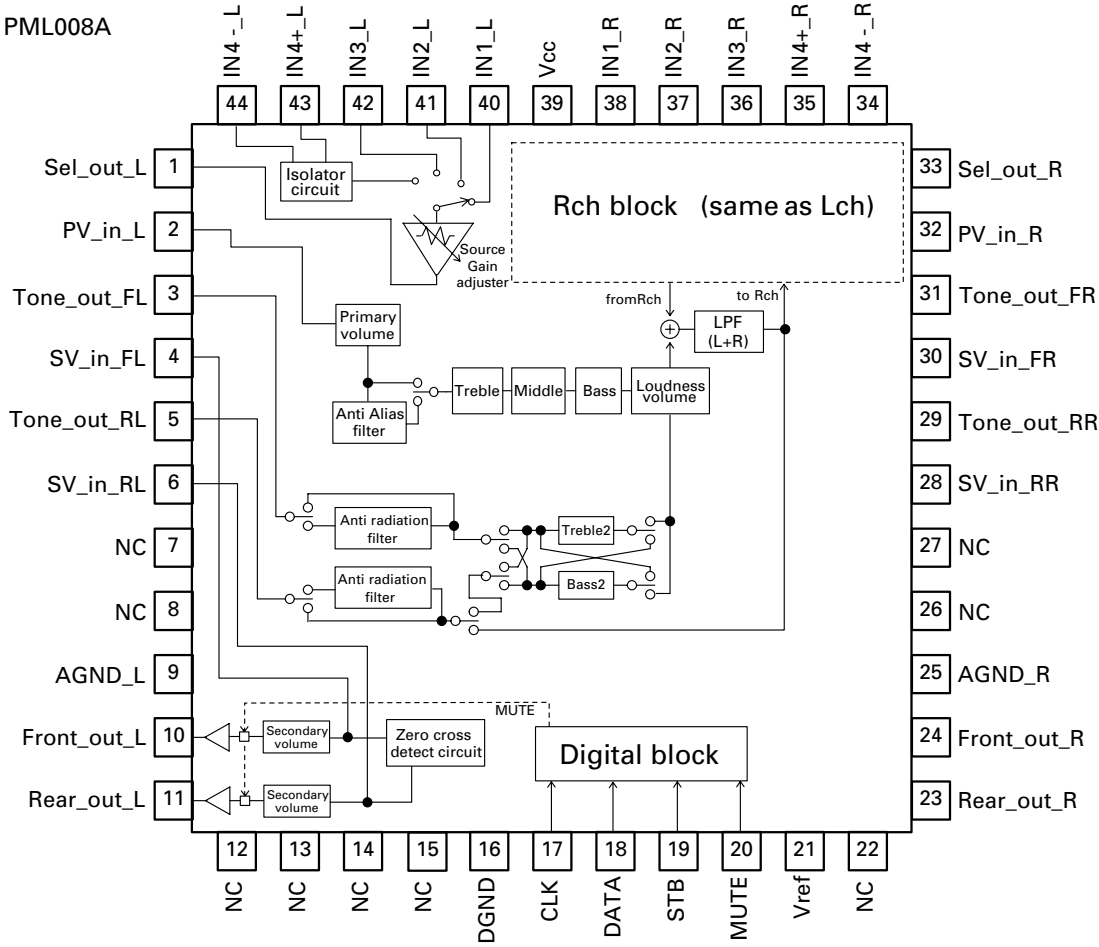
7.2 PARTS

7.2.1 IC

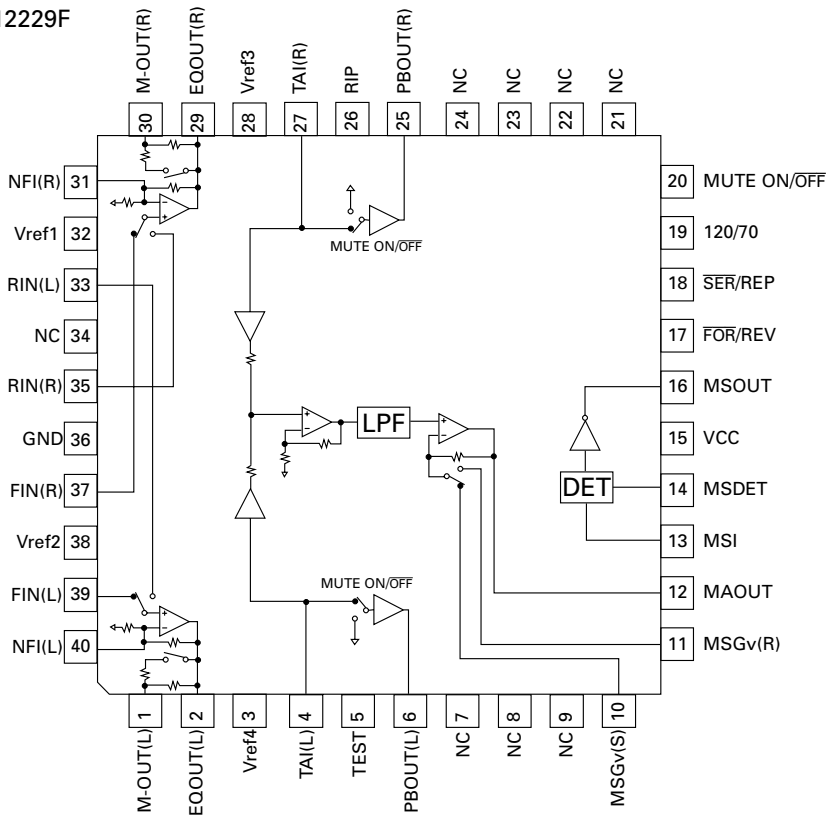
PAL007A



PML008A



HA12229F

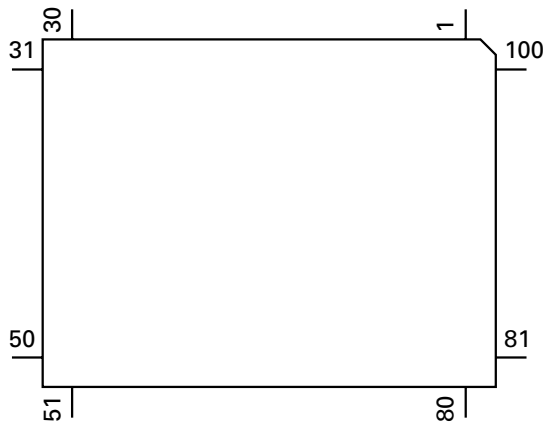


● Pin Functions (PE5206A)

Pin No.	Pin Name	I/O	Function and Operation
1	HFPW	O	Hand free circuit ON
2	$\overline{\text{DSENS}}$	I	Grille detach sense input
3	NC		Not used
4	EJECTIN	I	Eject sense input
5	TESTIN	I	Test program mode input
6	LCDPW	O	LCD back light power supply control output
7	TELIN	I	Telephone mute input
8	$\overline{\text{ISENS}}$	I	Illumination sense input
9	FLPILM	O	Flap illumination input
10	DALMON		For consumption current decrease
11	$\overline{\text{RESET}}$	I	Reset input
12	XT2		Not used (open)
13	XT1		Clock connection pin
14	VSS(GND)		GND
15	X2		Crystal oscillator connection pin
16	X1		Crystal oscillator connection pin
17	REGOFF		Regulator operation specification signal
18	REGC		Capacitor for regulator connect pin
19	VDD		Power supply
20	ILMPW	O	Illumination power supply control output
21	SYSPW	O	System power control output
22	ADPW	O	A/D converter power supply control output
23	SWVDD	O	Grille:Chip enable output
24	IPPW	O	Power supply control output for IP BUS interface IC
25	ROT1	I	Rotary encoder input 1
26	ROMDATA	O	ROM collection data output
27,28	NC		Not used
29	ROT0	I	Rotary encoder input 0
30	RECIVE	O	During RDS data reception output
31	NC		Not used
32	$\overline{\text{PCE2}}$	O	EEPROM chip enable output
33	STB	O	Strobe pulse output for electronic volume
34	CLK	O	Clock output for electronic volume
35	DATA	O	Data output for electronic volume
36	NC		Not used
37	MUTE	O	System mute output
38	SD	I	Station detector input
39	ST	I	FM stereo input
40	VSS(GND)		GND
41	VDD		Power supply
42	$\overline{\text{FM/AM}}$	O	TUNER:Decoder power supply control output
43	$\overline{\text{DRST}}$	O	RDS:Decoder reset output
44	$\overline{\text{RDSLK}}$	I	RDS:Decoder clock input
45	RDT	I	RDS:Decoder data input
46	$\overline{\text{CURRO}}$	O	RDS:Tuner voltage FIX output
47	NL2DT	I	RDS:Noise level input 2
48	$\overline{\text{TMUTE}}$	O	RDS:Tuner mute output
49	SDBW	I	RDS:SD input
50	LOCL	O	Local L output
51	LOCH	O	Local H output
52-54	NC		Not used
55	STBY	O	CASSETTE:Drive IC control output
56	CM	O	CASSETTE:Capstan control output
57	SC1	O	CASSETTE:Sub motor control output
58	SC2	O	CASSETTE:Sub motor control output
59	NES	I	CASSETTE:Normal reel sense input
60	RES	I	CASSETTE:Reverse reel sense input
61	POS	I	CASSETTE:Position sense input

Pin No.	Pin Name	I/O	Function and Operation
62	PCL		Clock adjustment
63,64	NC		Not used
65	RIMUTE	O	CASSETTE:RI mute output
66	MSIN	I	CASSETTE:MS sense input
67	PLAY	O	CASSETTE:Gain select output
68	DIRO	O	CASSETTE:Tape direction forward/reverse select output
69	LOADSW	I	CASSETTE>Loading switch sense input
70	NC		Not used
71	ASENBO	O	IP-BUS:Slave power supply control output
72	MUTE	O	E.VOL:Mute control output
73	TEST(GND)	I	GND
74	SL	I	TUNER:Signal level input
75	NL1	I	RDS:Noise level input 1
76	MODELIN	I	Model select input
77	CESENS	I	Flap close sense input
78-81	NC		Not used
82	AVDD		A/D converter power supply terminal
83	AVREF		A/D converter reference voltage terminal
84	AVSS		GND
85	RX	I	IP-BUS:data input
86	TX	O	IP-BUS:data output
87	NMI		GND
88	LDET	I	PLL lock sense input
89	RCK	I	RDS:clock input
90	RDS57K	I	RDS:57kHz count pulse input
91	NC		Not used
92	ASENS	I	ACC power sense input
93	BSSENS	I	Back up power sense input
94	TUNPDI	I	PLL IC data input
95	KYDT	I	Grille data input
96	DPDT	O	Grille data output
97	PCK	O	PLL IC clock output
98	PDO	O	PLL IC data output
99	PCE	O	PLL IC chip enable output
100	PEE	O	Beep tone output

*PE5206A



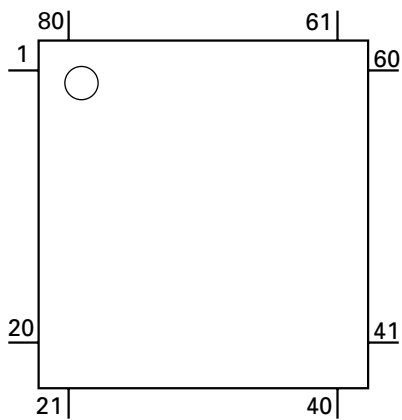
IC's marked by * are MOS type.

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

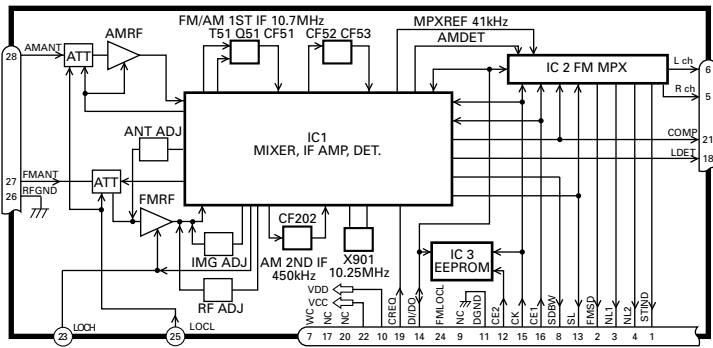
● Pin Functions (PD6294A)

Pin No.	Pin Name	I/O	Function and Operation
1	VSS		GND
2	X1		Crystal oscillator connection pin
3	X0		Crystal oscillator connection pin
4	NC		Not used
5,6	MOD1,0	I	Connect to GND
7	DIMMER	O	Dimmer select output
8	KYDT	O	Key data output
9	DPDT	I	Display data input
10	REMIN	I	Remote control pulse input
11	GRN		Dual Illumination (Green)
12	AMB		Dual Illumination (Amber)
13-16	KD4-KD1	I	Key data input
17-22	KST6-KST1	O	Key strobe output
23	VDD		VDD
24-73	SEG49-0	O	LCD segment output
74-77	COM3-0	O	LCD common output
78	VLCD	I	LCD voltage input
79,80	V2,V1		Power supply terminal

*PD6294A



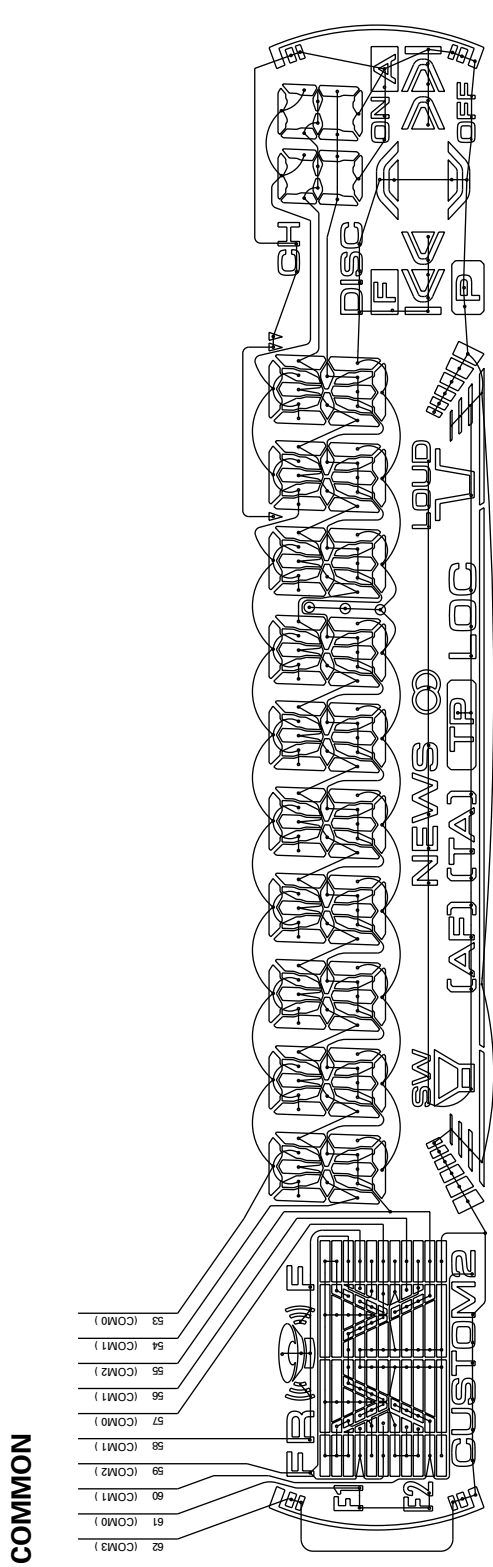
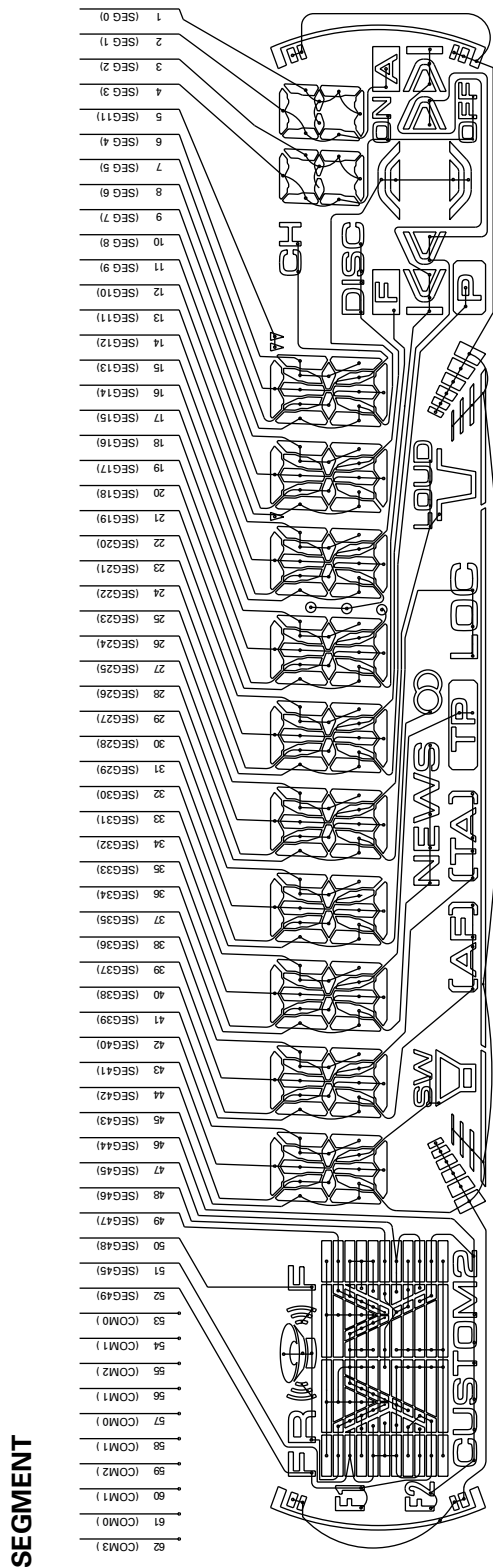
● FM/AM Tuner Unit



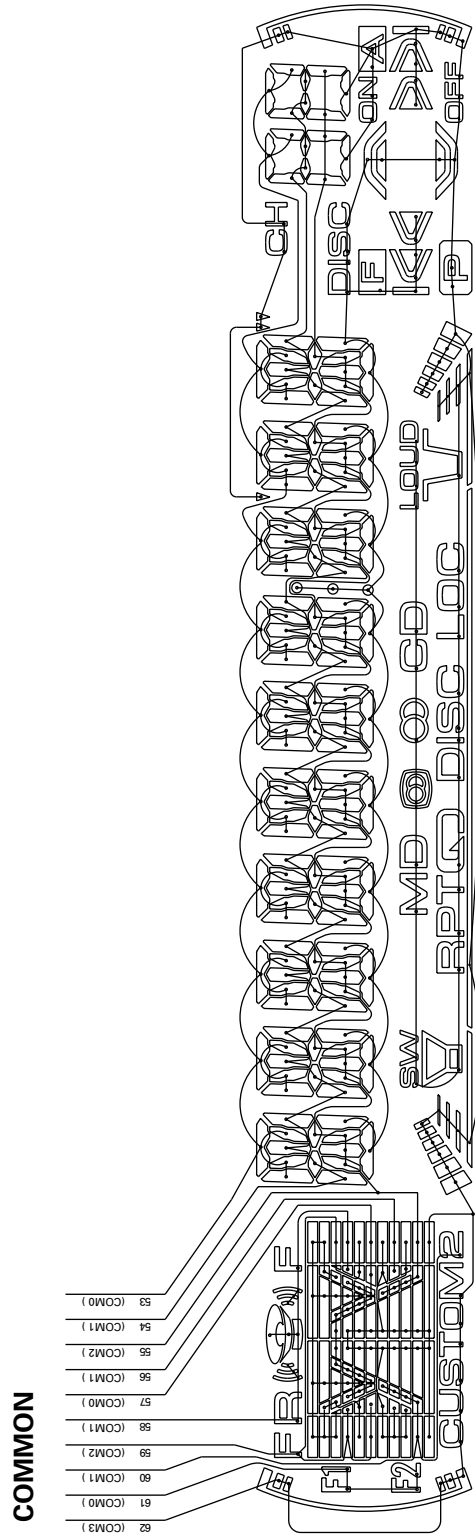
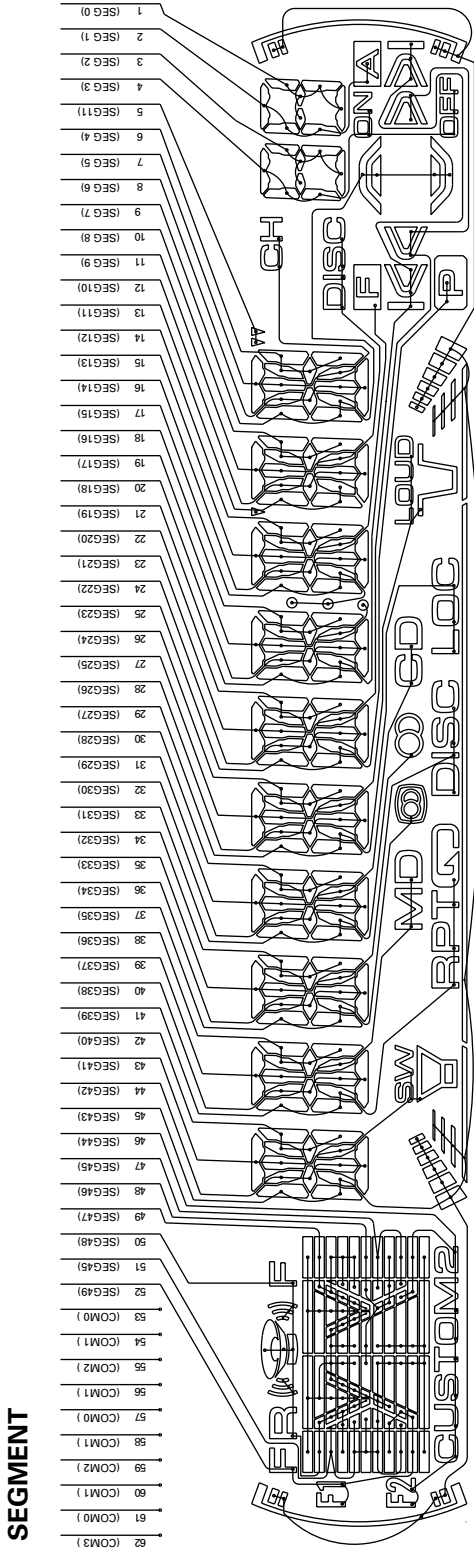
No.	Symbol	I/O	Explain
1	STIND	O	stereo indicator "Low" when the FM stereo signals are received. To be pulled up to the "VDD" at 47kΩ.
2	FMSD	O	FM station detector "High" when signals are received. To be pulled up to the "VDD" at 47kΩ Meanwhile, 10kΩ should be used when taking diver FIX trigger from here and "High: 0.9VDD or more" and "Low: 250mV or less". (Should satisfy the diver IC specifications)
3	NL1	O	noise level-1 "High" when noise is received. Output for the RDS. GND at 47kΩ //1,800pF.
4	NL2	O	noise level-2 "High" when noise is received. Output for the RDS. GND at 36kΩ //330pF.
5	Rch	O	R channel output FM stereo "R-ch" signal output or AM audio output. Add the specified de-emphasis constant.
6	Lch	O	L channel output FM stereo "L-ch" signal output or AM audio output. Add the specified de-emphasis constant.
7	WC		write control EEPROM write control. Writing permissible at "Low". Normally open.
8	SDBW	O	SD bandwidth SD bandwidth signal output. For detection of detuning data for the RDS.
9	NC		Not used
10	VDD		power supply Power supply pin for the digital section. DC 5V +/- 0.25V. Be careful about overlapping noise in the logic section.
11	DGND		digital ground Grounding for the digital section.
12	CE2	I	chip enable-2 EEPROM chip enable. Active a "Low" To be pulled up to the "VDD" at 47kΩ
13	SL	I/O	signal level Received FM/AM signal level (strength) output. Connect the specified load resistor and capacitor (10k Ω + 39k Ω //4,700pF)
14	DI/DO	I/O	data input/ data output Data input/Data output To be pulled up to the "VDD" at 47kΩ
15	CK	I	clock Clock input To be pulled up to the "VDD" at 47kΩ
16	CE1	I	chip enable-1 AF-RF chip enable. Active at "High" To be grounded at 47kΩ
17	NC		Not used
18	LDET	O	lock detector Active at "Low". To be pulled up to the "VDD" at 47kΩ
19	CREQ	I	current request Active at "Low". To be grounded at 47kΩ
20	NC		Not used
21	COMP	O	composite signal FM composite signal output. r out < 100Ω
22	VCC		power supply Analog section power supply pin.DC 8.4V +/- 0.3V
23	LOCH	I	local high FM local high pin. When seeking local high, apply 5V together with "LOCL".
24	FMLOCL	I	FM local low FM local low pin. When seeking local low, apply 5V to the base of the NPN transistor with which the specified resistor is being connected to the emitter. Keep it open in case of ordinary marketed models.
25	LOCL	I	local low FM/AM local low pin. When seeking local low, apply 5V to the base of the NPN transistor. Since this pin is exclusive for AM when the FMLOCL is in use, do not drive it under FM.
26	RFGND		RF ground Grounding for the antenna section.
27	FMANT	I	FM antenna input FM antenna input. 75Ω. Surge absorber (DSP-201M-S00B) is necessary.
28	AMANT	I	AM antenna input AM antenna input. High impedance. Connect to the antenna through an L (LAU type) of 4.7μH.To cope with the power transmission line hums, insert a series circuit consisting of an L (a coil of about 100mH) + R (a resistor of 470 Ω to 2.2kΩ) between the GND.

7.2.2 DISPLAY

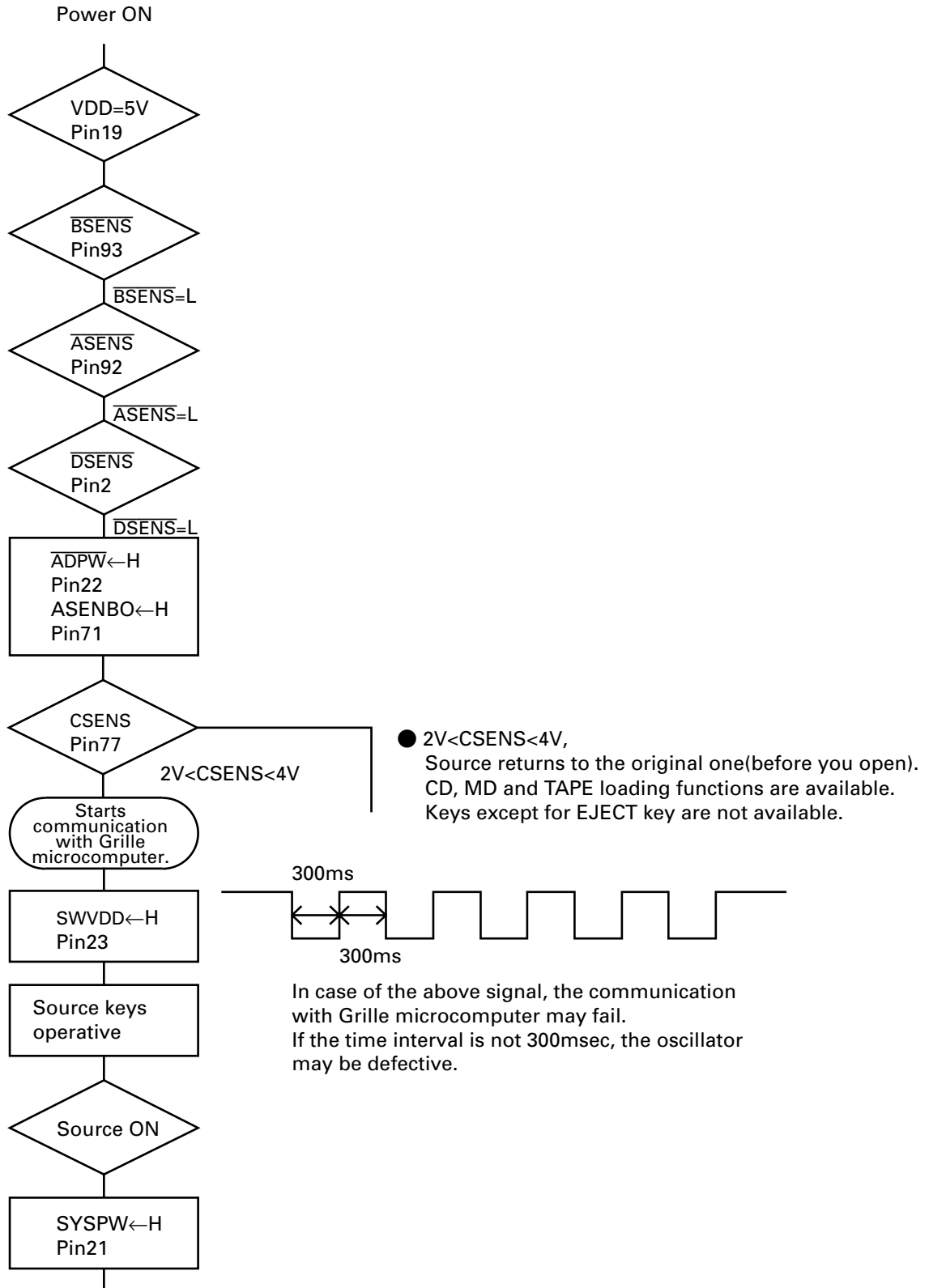
● CAW1627(KEH-P6021R)



● CAW1628(KEH-P6025)



7.3 OPERATIONAL FLOW CHART



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

7.4 CLEANING



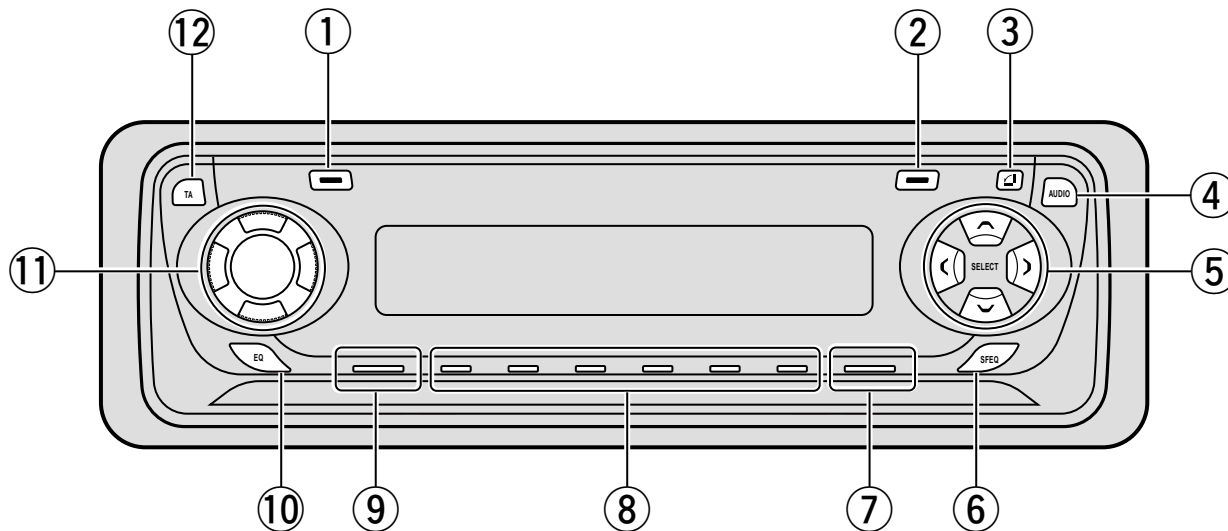
Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
Cassette heads Pinch rollers Capstans	Cleaning paper : GED-008

8. OPERATIONS AND SPECIFICATIONS

8.1 OPERATIONS

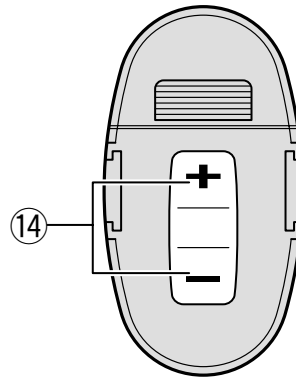
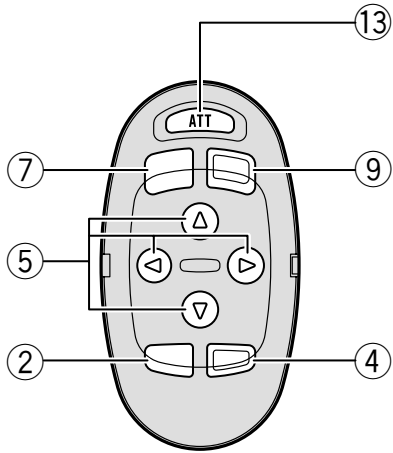
● KEH-P6021R/XN/EE



What's What

Head unit

- | | |
|---|--|
| <p>1 DISPLAY button
Press to select different displays.</p> <p>2 FUNCTION button
Press to select functions.</p> <p>3 OPEN button
Press to open the front panel.</p> <p>4 AUDIO button
Press to select various sound quality controls.</p> <p>5 ▲/▼/◀/▶ buttons
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.</p> <p>6 SFEQ button
Press to select a natural sound with presence.</p> <p>7 BAND/ESC button
Press to select among three FM or MW/LW bands and cancel the control mode of functions.</p> | <p>8 1-6 (PRESET TUNING) buttons
Press for preset tuning and disc number search when using a multi-CD player.</p> <p>9 SOURCE button
This unit is switched on by selecting a source. Press to cycle through all of the available sources.</p> <p>10 EQ button
Press to select various equalizer curves.</p> <p>11 VOLUME button
When you press VOLUME, it extends outward so that it becomes easier to turn.
To retract the VOLUME, press it again.
Rotate to increase or decrease the volume.</p> <p>12 TA button
Press to switch traffic announcements function on or off.</p> |
|---|--|



Optional remote control

The steering remote control CD-SR80 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.

13 ATT button

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

14 VOLUME button

Press to increase or decrease the volume.

Using the remote control with PGM button

The remote control CD-R600, which is sold separately, can also operate this unit. It has a PGM (program) button in which frequently used functions are preprogrammed for each source. Press PGM to active functions as follows:

Source	Function name
Tuner	BSM (on/off) (Hold for 2 seconds)
Cassette player	Blank skip (on/off)
Multi-CD player	Pause (on/off)



Turning the unit on

Press SOURCE to turn the unit on.

When you select a source the unit is turned on. 

Selecting a source

You can select a source you want to listen to. To switch to the cassette player, load a cassette tape in this unit.

Press SOURCE to select a source.

Press SOURCE repeatedly to switch between the following sources:

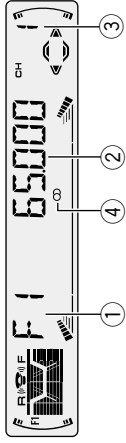
Tuner—Cassette player—Multi-CD player—External unit—AUX



Notes

- In the following cases, the sound source will not change:
 - When a product corresponding to each source is not connected to this unit.
 - When no cassette is set in this unit.
 - When no magazine is set in the multi-CD player.
- When the AUX (auxiliary) is set to off.

Listening to the radio



These are the basic steps necessary to operate the radio.

This unit's AF (alternative frequencies search) function can be switched on and off. AF should be off for normal tuning operation.

- BAND indicator**
Shows which band the radio is tuned to, MW, LW or FM.
- FREQUENCY indicator**
Shows to which frequency the tuner is tuned.
- PRESET NUMBER indicator**
Shows what preset has been selected.
- STEREO (CO) indicator**
Shows that the frequency selected is being broadcast in stereo.

- Press SOURCE to select the tuner.
- Use VOLUME to adjust the sound level. Rotate to increase or decrease the volume.

- Press BAND/ESC to select a band. Press BAND/ESC until the desired band is displayed, F1, F2, F3 for FM or MW/LW.
 - The FM bands cover different frequency ranges as below:
 - F1 (FM1): 65 — 74 MHz
 - F2 (FM2), F3 (FM3): 87.5 — 108 MHz


- To perform manual tuning, press 2 or 3 with quick presses. The frequencies move up or down step by step.

- To perform seek tuning, press and hold 2 or 3 for about one second and release. The tuner will scan the frequencies until a broadcast strong enough for good reception is found.

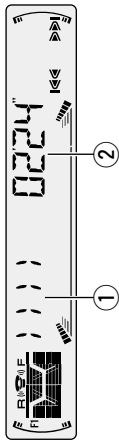
- You can cancel seek tuning by pressing either 2 or 3 with a quick press.
- If you press and hold 2 or 3 you can skip broadcasting stations. Seek tuning starts as soon as you release the buttons.



Note

- When the frequency selected is being broadcast in stereo the STEREO (CO) indicator will light. 

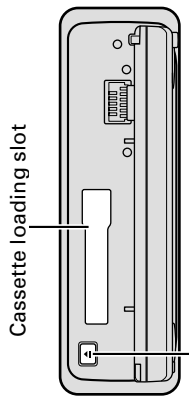
Playing a tape



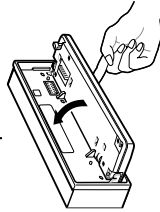
These are the basic steps necessary to play a tape with your cassette player.

- 1 **TAPE DIRECTION indicator**
Shows the direction of the tape transport.
- 2 **PLAY TIME indicator**
Shows the elapsed playing time of the current side of the tape.
- 1 Press OPEN to open the front panel.
Cassette loading slot appears.

- 2 Insert a cassette tape into the cassette loading slot.
Playback will automatically start.



- 3 Close the front panel.
- You can eject a cassette tape by pressing TAPE EJECT.



- After a cassette tape has been inserted, press SOURCE to select the cassette player.

- 4 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.


- 5 To perform fast forward or rewind, press 2 or 3.
FF or REW appears in the display.
 - To cancel fast forward or rewind and return to playback, press BAND/ESC.
 - You can cancel fast forward or rewind by pressing 2 or 3 in the same direction twice.

- 6 To perform forward or rewind music search, press 2 or 3 twice.
F-MS (forward music search) or R-MS (rewind music search) appears in the display. The cassette player will fast forward or rewind to the next or previous blank spot on the tape and begin to play.
 - To cancel music search and return to playback, press BAND/ESC.
 - You can cancel music search by pressing 2 or 3 in the same direction again.

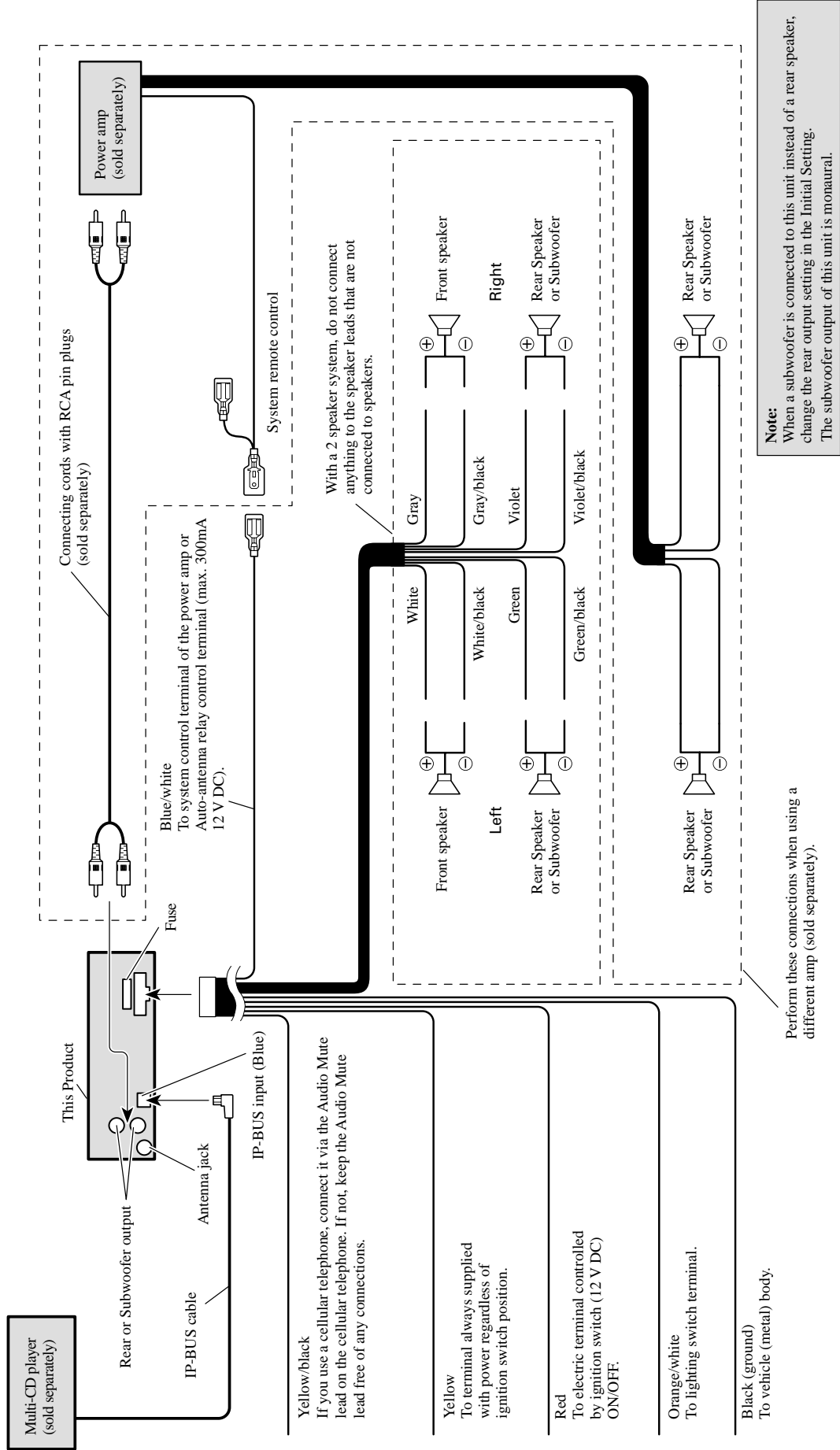
- 7 To change the direction of the tape transport, press BAND/ESC.



Notes

- Do not insert anything other than a cassette tape into the cassette loading slot.
- PLAY TIME indicator starts from 00'00" in the following cases:
 - When a tape is inserted
 - When the tape direction is changed
 - When you rewind the tape to the beginning
- PLAY TIME indicator is halted when fast forward, rewind or music search is operating. 

● CONNECTION DIAGRAM



8.2 SPECIFICATIONS

● KEH-P6021R/XN/EE

General

Power source	14.4 V DC (10.8 – 15.1 V allowable)
Grounding system	Negative type
Max. current consumption	10.0 A
Backup current	Less than 5 mA
Dimensions (W x H x D):	
Mounting size	178 x 50 x 157 mm
Nose	188 x 58 x 19 mm
Weight	1.4 kg

Audio/DSP

Maximum power output	50 W x 4, 50 W x 2/4 W + 70 W x 1/2 W (for subwoofer)
Continuous power output	27 W x 4 (DIN45324, +B = 14.4 V)
Load impedance	4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout maximum output level/output impedance	2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer)	
(Low)	Frequency: 40/80/100/160 Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ±12 dB
(Mid)	Frequency: 200/500/1k/2k Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ±12 dB
(High)	Frequency: 3.15k/8k/10k/12.5k Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ±12 dB
Loudness contour	
(Low)	+3.5 dB (100 Hz), +3 dB (10 kHz)
(Mid)	+10 dB (100 Hz), +6.5 dB (10 kHz)
(High)	+11 dB (100 Hz), +11 dB (10 kHz) (volume: -30 dB)
Tone controls	
(Bass)	Frequency: 40/63/100/160 Hz Level: ±12 dB
(Treble)	Frequency: 2.5k/4k/6.3k/10k Hz Level: ±12 dB
Subwoofer output	
Frequency	50/80/125 Hz
Slope	-12 dB/oct.
Level	±12 dB

Cassette player

Tape	Compact cassette tape (C-30 – C-90)
Tape speed	4.76 cm/sec. (+0.14cm/sec., -0.05cm/sec.)
Fast forward/rewinding time	Approx. 100 sec (C-60)
Wow & flutter	0.09% (WRMS)
Frequency response:	
Metal	30 – 16,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	
Metal:	
Dolby NR OUT ..	61 dB (IEC-A network)

FM tuner

Frequency range	65 – 74 MHz 87.5 – 108 MHz
Usable sensitivity	10 dBf (0.9 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	15 dBf (1.5 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 – 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)

MW tuner


Frequency range	531 – 1,602 kHz (9 kHz)
Usable sensitivity	18 μV (S/N: 20 dB)
Selectivity	50 dB (±9 kHz)

LW tuner

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



Note

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

● KEH-P6025/XN/ES

General

Power source	14.4 V DC (10.8 – 15.1 V allowable)
Grounding system	Negative type
Max. current consumption	10.0 A
Backup current	Less than 5 mA
Dimensions (W x H x D): (DIN)	
Chassis	178 x 50 x 157 mm
Nose	188 x 58 x 19 mm
(D)	
Chassis	178 x 50 x 162 mm
Nose	170 x 46 x 14 mm
Weight	1.4 kg

Amplifier

Continuous power output is 22 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.

Maximum power output	50 W x 4, 50 W x 2/4 Ω + 70 W x 1/2 Ω (for subwoofer)
Load impedance	4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance	2.2 V/1 k Ω
Equalizer (3-Band Parametric Equalizer)	
(Low)	Frequency: 40/80/100/160 Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ± 12 dB
(Mid)	Frequency: 200/500/1k/2k Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ± 12 dB
(High)	Frequency: 3.15k/8k/10k/12.5k Hz Q Factor: 0.35/0.59/0.95/1.15 (+6 dB when boosted) Level: ± 12 dB

Loudness contour

(Low)	+3.5 dB (100 Hz), +3 dB (10 kHz)
(Mid)	+10 dB (100 Hz), +6.5 dB (10 kHz)
(High)	+11 dB (100 Hz), +11 dB (10 kHz) (volume : -30 dB)

Tone controls

(Bass)	Frequency: 40/63/100/160 Hz Level: ± 12 dB
(Treble)	Frequency: 2.5k/4k/6.3k/10k Hz Level: ± 12 dB

Subwoofer output

Frequency	50/80/125 Hz
Slope	-12 dB/oct.
Gain	± 12 dB

Cassette player

Tape	Compact cassette tape (C-30 – C-90)
Tape speed	4.76 cm/sec.(+0.14cm/sec.,-0.05cm/sec.)
Fast forward/rewinding time	Approx. 100 sec (C-60)
Wow & flutter	0.09% (WRMS)
Frequency response	30 – 16,000 Hz (± 3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	61 dB (IEC-A network)

FM tuner

Frequency range	87.5 – 108.0 MHz
Usable sensitivity	9 dBf (0.8 μ V/75 Ω , mono, S/N: 30 dB)
50 dB quieting sensitivity	15 dBf (1.5 μ V/75 Ω , mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 – 15,000 Hz (± 3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range	530 – 1,640 kHz (10 kHz) 531 – 1,602 kHz (9 kHz)
Usable sensitivity	18 μ V (S/N: 20 dB)
Selectivity	50 dB (± 9 kHz) 50 dB (± 10 kHz)

Infrared remote control

Wavelength	940 nm ± 50 nm
Output	typ; 12 mw/sr per infrared LED



Note

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