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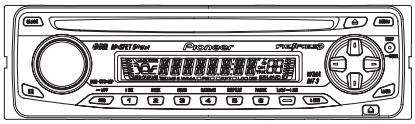
Service Manual



DEH-3750MP/XU/GS

ORDER NO.
CRT3399

HIGH POWER CD/MP3/WMA PLAYER WITH FM/AM TUNER

DEH-3750MP/XU/GS
DEH-3770MP/XU/CS
DEH-3750MP/XU/CN

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

Model No.	Order No.	Mech.Module	Remarks
CX-3158	CRT3394	S10.1AAC	CD Mech. Module : Circuit Description, Mech. Description, Disassembly

For details, refer to "Important Check Points for Good Servicing".

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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.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replaced only with the same or equivalent type recommended by the manufacture.
Discord used batteries according to the manufacture's instructions.

● Service Precaution

1. 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. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
4. After replacing the pickup unit, be sure to check the grating.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

1. SPECIFICATIONS

● DEH-3750MP/XU/GS

General

Rated power source ..... 14.4 V DC (allowable voltage range: 12.0 – 14.4 V DC)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Backup current ..... 5 mA or less
Dimensions (W × H × D):
DIN
Chassis ..... 178 × 50 × 157 mm
Nose ..... 188 × 58 × 19 mm
D
Chassis ..... 178 × 50 × 162 mm
Nose ..... 170 × 48 × 14 mm
Weight ..... 1.3 kg

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout max 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)
Gain ..... ±12dB
Mid
Frequency ..... 200/500/1k/2k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
High
Frequency ..... 3.15k/8k/10k/12.5k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
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)

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format:
Sampling frequency ..... 44.1 kHz
Number of quantization bits ..... 16; linear
Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)
MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3
WMA decoding format ..... Ver. 7, 7.1, 8, 9 (2ch audio)
WAV signal format ..... Linear PCM & MS ADPCM

FM tuner

Frequency range ..... 87.5 – 108.0 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio ..... 75 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range ..... 531 – 1,602 kHz (9 kHz)
530 – 1,640 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IEC-A network)

Infrared remote control

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

● DEH-3770MP/XU/CS

General

Rated power source ..... 14.4 V DC (allowable voltage range: 12.0 – 14.4 V DC)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Backup current ..... 5 mA or less
Dimensions (W × H × D):
- DIN
  - Chassis ..... 178 × 50 × 157 mm
  - Nose ..... 188 × 58 × 19 mm
- D
  - Chassis ..... 178 × 50 × 162 mm
  - Nose ..... 170 × 48 × 14 mm

Weight ..... 1.3 kg

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout max 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)
  - Gain ..... ±12dB
- Mid
  - Frequency ..... 200/500/1k/2k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB
- High
  - Frequency ..... 3.15k/8k/10k/12.5k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB

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)

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format:
- Sampling frequency ..... 44.1 kHz
- Number of quantization bits ..... 16; linear

Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)
MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3
WMA decoding format ..... Ver. 7, 7.1, 8, 9 (2ch audio)
WAV signal format ..... Linear PCM & MS ADPCM

FM tuner

Frequency range ..... 87.5 – 108.0 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio ..... 75 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range ..... 530 – 1,640 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IEC-A network)

Infrared remote control

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

● **DEH-3750MP/XU/CN**

规格

一般

额定电源 ..... 14.4 V DC
（容许电压范围： 12.0－14.4 V DC）
接地系统 ..... 负极型
最大电流消耗 ..... 10.0 A
Backup current ..... 5 mA or less
尺寸（宽×高×深）：
DIN
机身 ..... 178×50×157 毫米
前端部分 ..... 188×58×19 毫米
D
机身 ..... 178×50×162 毫米
前端部分 ..... 170×48×14 毫米
重量 ..... 1.3 公斤

音频

各声道连续输出功率为22 W，最小负荷4欧姆，声道范围50至15,000 Hz，仅5%THD。
最大输出功率 ..... 50 W×4
负载阻抗 ..... 4Ω（容许范围4－8Ω）
前输出最大输出电平 / 输出阻抗 ..... 2.2 V / 1 kΩ
均衡器（3频带参量均衡器）：
低频
频率 ..... 40/80/100/160 Hz
Q因子 ..... 0.35/0.59/0.95/1.15（加强后+6 dB）
增益 ..... ±12 dB
中频
频率 ..... 200/500/1k/2k Hz
Q因子 ..... 0.35/0.59/0.95/1.15（加强后+6 dB）
增益 ..... ±12 dB
高频
频率 ..... 3.15k/8k/10k/12.5k Hz
Q因子 ..... 0.35/0.59/0.95/1.15（加强后+6 dB）
增益 ..... ±12 dB
响度等高线
低 ..... +3.5 dB（100 Hz），+3 dB（10 kHz）
中 ..... +10 dB（100 Hz），+6.5 dB（10 kHz）
高 ..... +11 dB（100 Hz），+11 dB（10 kHz）
（音量： -30 dB）

CD 播放机

系统 ..... CD音频系统
可用碟片 ..... CD
信号格式：
取样频率 ..... 44.1 kHz
量化比特数 ..... 16；线性
频率特性 ..... 5－20,000 Hz（±1 dB）
信噪比 ..... 94 dB（1 kHz）（IEC-A网络）
动态范围 ..... 92 dB（1 kHz）
声道数 ..... 2（立体声）
MP3解码格式 ..... MPEG-1 & 2 Audio Layer 3
WMA解码格式 ..... 第7、7.1、8、9版本（2声道音频）
WAV信号格式 ..... 线性PCM&MS ADPCM

FM调谐器

频率范围 ..... 87.5－108.0 MHz
有效灵敏度 ..... 8 dBf（0.7 μV/75Ω，单声道，S/N： 30 dB）
50 dB静噪灵敏度 ..... 10 dBf（0.9 μV/75Ω，单声道）
信噪比 ..... 75 dB（IEC-A网络）
失真 ..... 0.3％（65 dBf，1 kHz，立体声时）
0.1％（65 dBf，1 kHz，单声道时）
频率响应 ..... 30－15,000 Hz（±3 dB）
立体声分离度 ..... 45 dB（65 dBf，1 kHz时）

AM调谐器

频率范围 ..... 531－1,602 kHz （9 kHz）
530－1,640 kHz （10 kHz）
有效灵敏度 ..... 18 μV（S/N: 20 dB）
信噪比 ..... 65 dB（IEC-A网络）

2. EXPLODED VIEWS AND PARTS LIST

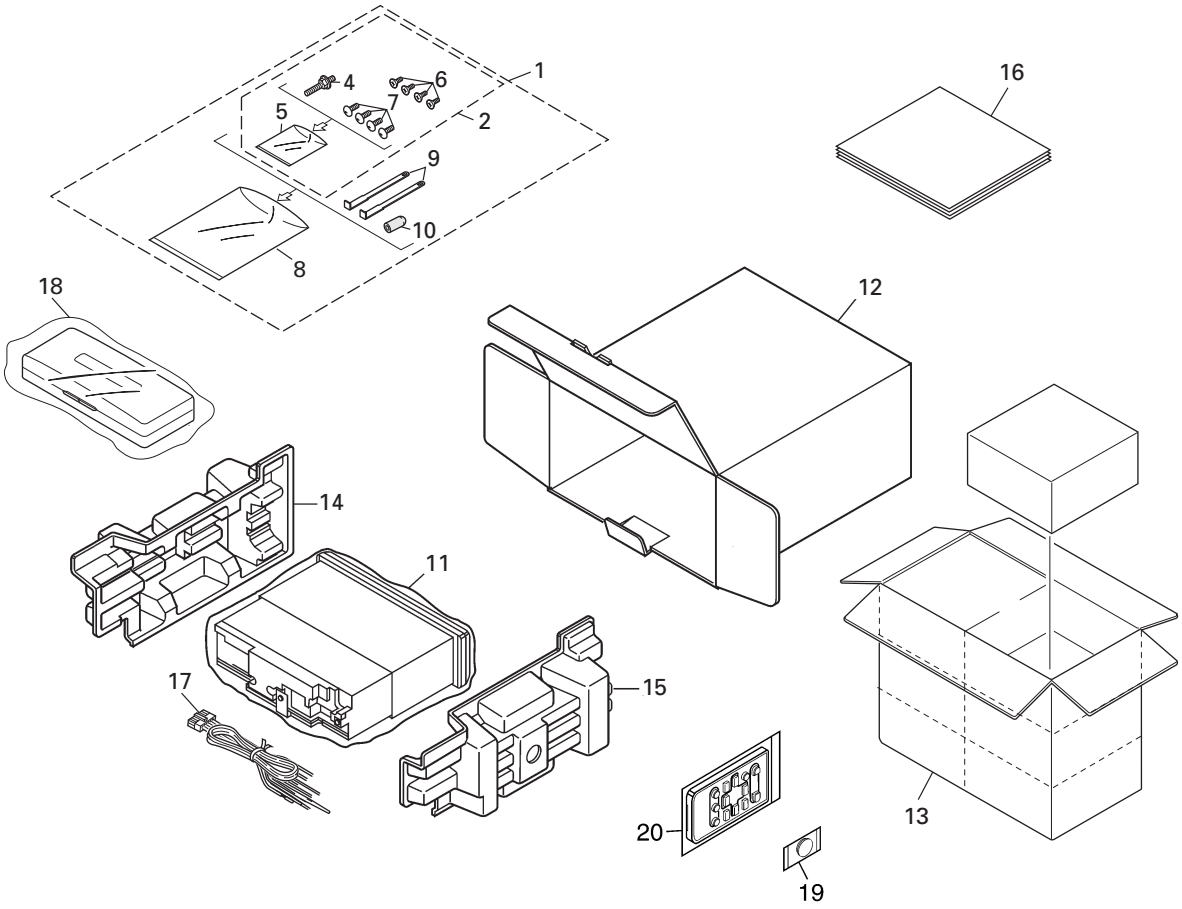
*NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*

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

• Screw adjacent to▽mark on the product are used for disassembly.

• For the applying amount of lobricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)

2.1 PACKING



(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Accessory Assy	CEA4850
	2	Screw Assy	CEA3849
	3	•••••	
	4	Screw	CBA1650
*	5	Polyethylene Bag	CEG-127
	6	Screw	CRZ50P090FTC
	7	Screw	TRZ50P080FTC
*	8	Polyethylene Bag	CEG-158
	9	Handle	CNC5395
	10	Bush	CNV3930
	11	Polyethylene Bag	CEG-162
	12	Carton	See Contrast table(2)
	13	Contain Box	See Contrast table(2)
	14	Protector	XHP7004
	15	Protector	XHP7003
	16-1	Owner's Manual	See Contrast table(2)
	16-2	Installation Manual	See Contrast table(2)
	16-3	Caution Card	See Contrast table(2)
*	16-4	Warranty Card	See Contrast table(2)
	17	Cord Assy	XDE7008
	18	Case Assy	YXB5005
*	19	Battery	CEX1065
	20	Remote Control Unit	CXC3173

(2) CONTRAST TABLE

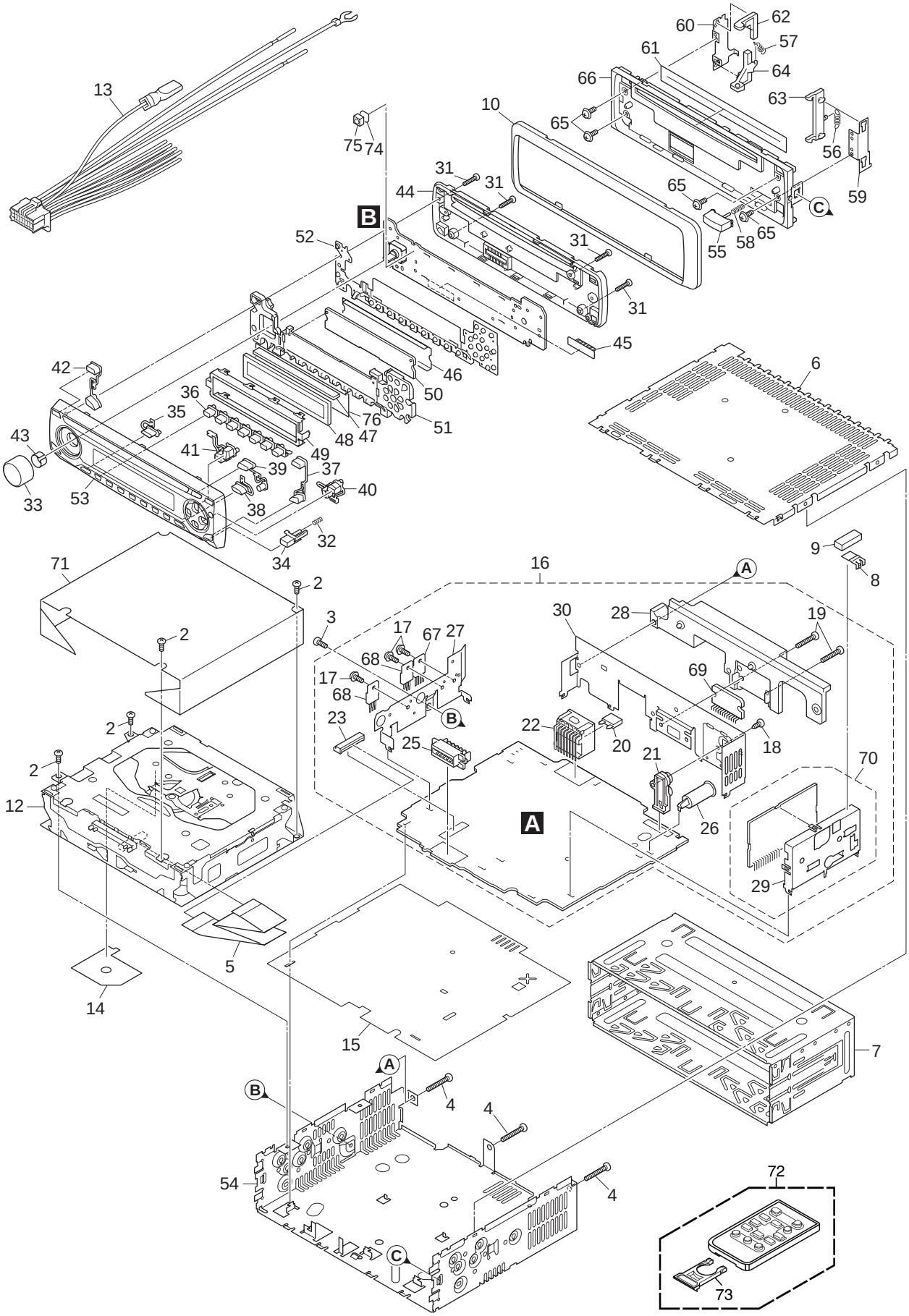
DEH-3750MP/XU/GS, DEH-3770MP/XU/CS and DEH-3750MP/XU/CN are constructed the same except for the following:

Mark	No.	Description	DEH-3750MP/XU/GS	DEH-3770MP/XU/CS	DEH-3750MP/XU/CN
	12	Carton	YHG5020	YHG5019	YHG5023
	13	Contain Box	YHL5020	YHL5019	YHL5023
	16-1	Owner's Manual	YRD5021	YRD5025	YRB5011
	16-2	Installation Manual	YRD5024	YRD5026	YRB5013
	16-3	Caution Card	CRP1310	CRP1310	Not used
*	16-4	Warranty Card	Not used	Not used	ARY7046

Owner's Manual,Installation Manual

Part No.	Language
YRD5021	English, Traditional Chinese, Arabic
YRD5024	English, Traditional Chinese, Arabic
YRD5025	English, Spanish, Portuguese(B)
YRD5026	English, Spanish, Portuguese(B)
YRB5011	Casual Chinese
YRB5013	Casual Chinese

2.2 EXTERIOR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(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	•••••	
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Cable	YDE5008
	6	Case	CNB2793
	7	Holder	CNC8659
	8	Earth Plate	CNC8915
	9	Cushion	CNM8890
	10	Panel	See Contrast table(2)
	11	•••••	
	12	CD Mechanism Module(S10.1AACA)	See Contrast table(2)
	13	Cord Assy	XDE7008
	14	Insulator	XNM7106
	15	Insulator	YNM5012
	16	Tuner Amp Unit	See Contrast table(2)
	17	Screw	ASZ26P060FTC
	18	Screw	BPZ26P080FTC
	19	Screw	BSZ26P160FTC
⚠	20	Fuse(10A)	CEK1208
	21	Pin Jack(CN352)	CKB1057
	22	Plug(CN901)	CKM1376
	23	Connector(CN721)	CKS3837
	24	•••••	
	25	Connector(CN831)	CKS4944
	26	Antenna Jack(CN401)	CKX1056
	27	Holder	CND1328
	28	Heat Sink	CNR1668
	29	Holder	CND1054
	30	Holder	YNC5004
	31	Screw	BPZ20P100FZK
	32	Spring	CBH2210
	33	Knob(VOLUME)	See Contrast table(2)
	34	Button(DETACH)	YAC5027
	35	Button(SOURCE)	YAC5030
	36	Button(1-6, LOCAL/BSM)	YAC5031
	37	Button(AUDIO, LOUDNESS)	YAC5032
	38	Button(BAND)	YAC5033
	39	Button(EJECT, DISPLAY)	YAC5034
	40	Button(DOWN, RIGHT)	See Contrast table(2)
	41	Button(UP, LEFT)	See Contrast table(2)
	42	Button(CLOCK, EQ)	YAC5039
	43	Spring	YBL5001
	44	Cover	YNS5038
	45	Connector(CN1801)	CKS4943
	46	Sheet	CNM7932
	47	Connector	CNV7369
	48	LCD(LCD1801)	See Contrast table(2)
	49	Holder	YNC5005
	50	Lighting Conductor	YNV5004
	51	Lighting Conductor	YNV5005
	52	Rubber Contact	YNV5006
	53	Grille Unit	See Contrast table(2)
	54	Chassis Unit	YXA5080
	55	Button(DETACH)	CAC4836
	56	Spring	CBH1835
	57	Spring	CBH2208
	58	Spring	CBH2367
	59	Bracket	CNC6791
	60	Holder	CNC8042
	61	Cover	CNM6276
	62	Arm	CNV4692
	63	Arm	CNV4728
	64	Arm	CNV5576
	65	Screw	IMS20P030FZK
	66	Panel	YNS5046
	67	IC(IC921)	NJM2388F84
	68	Transistor(Q911, 991)	2SD2396
	69	IC(IC302)	PAL007A
	70	FM/AM Tuner Unit(Z401)	CWE1646
	71	Sheet	See Contrast table(2)
	72	Remote Control Unit	CXC3173
	73	Cover	CNS7068
	74	Cushion	YNM5004
	75	IC(IC1802)	TSOP4840SB1
	76	Sheet	See Contrast table(2)

(2) CONTRAST TABLE

DEH-3750MP/XU/GS, DEH-3770MP/XU/CS and DEH-3750MP/XU/CN are constructed the same except for the following:

Mark	No.	Description	DEH-3750MP/XU/GS	DEH-3770MP/XU/CS	DEH-3750MP/XU/CN
	10	Panel	YNS5045	YNS5045	CNS8046
	12	CD Mechanism Module(S10.1AACA)	CXK5668	CXK5668	CXK5669
	16	Tuner Amp Unit	YWM5037	YWM5073	YWM5039
	33	Knob(VOLUME)	YAA5002	YAA5002	YAA5001
	40	Button(DOWN, RIGHT)	YAC5038	YAC5038	YAC5035
	41	Button(UP, LEFT)	YAC5037	YAC5037	YAC5036
	48	LCD(LCD1801)	YAW5027	YAW5015	YAW5027
	53	Grille Unit	YXA5082	YXA5051	YXA5052
	71	Sheet	Not used	Not used	CNM9404
	76	Sheet	YNM5011	Not used	YNM5011

A

B

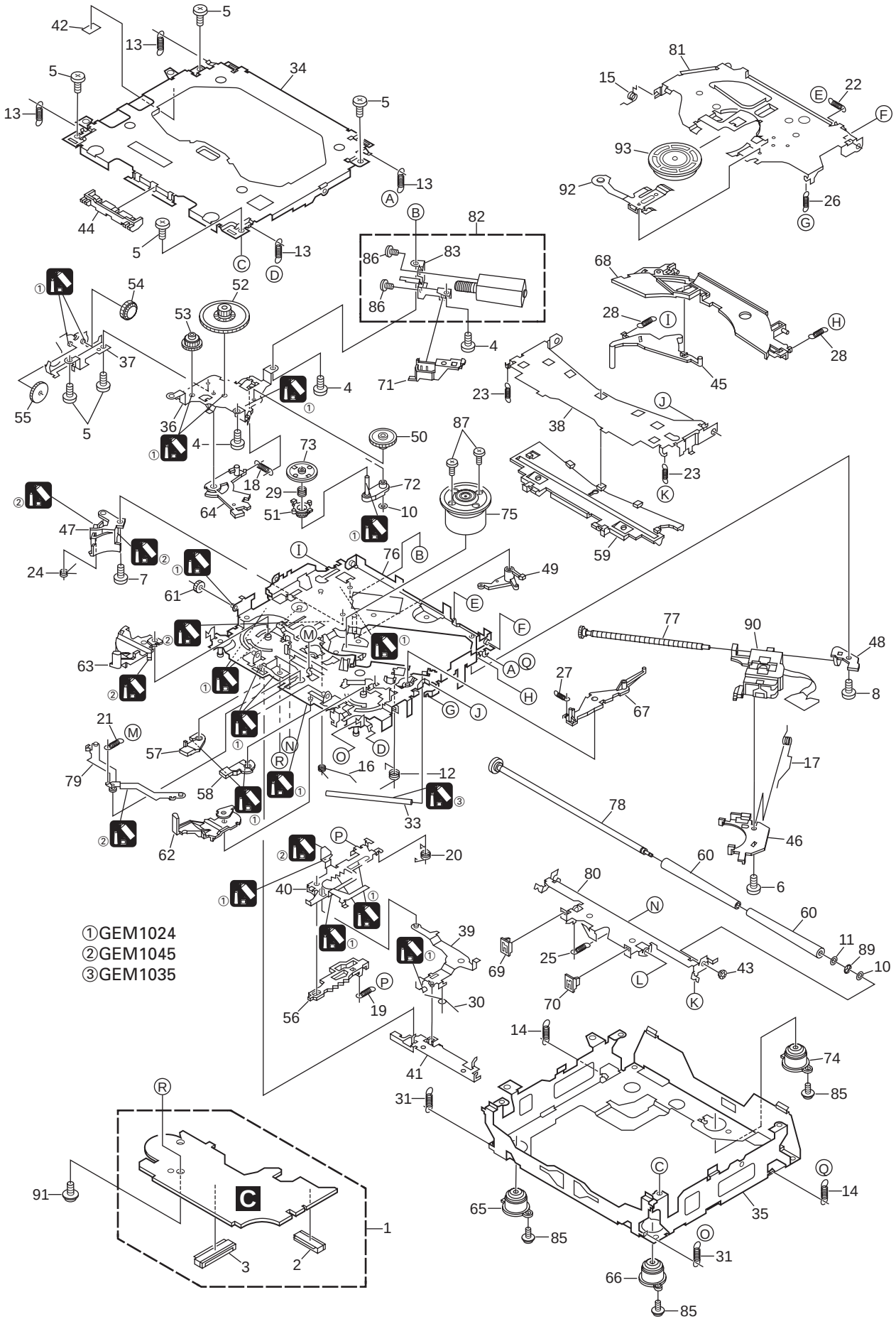
C

D

E

F

2.3 CD MECHANISM MODULE

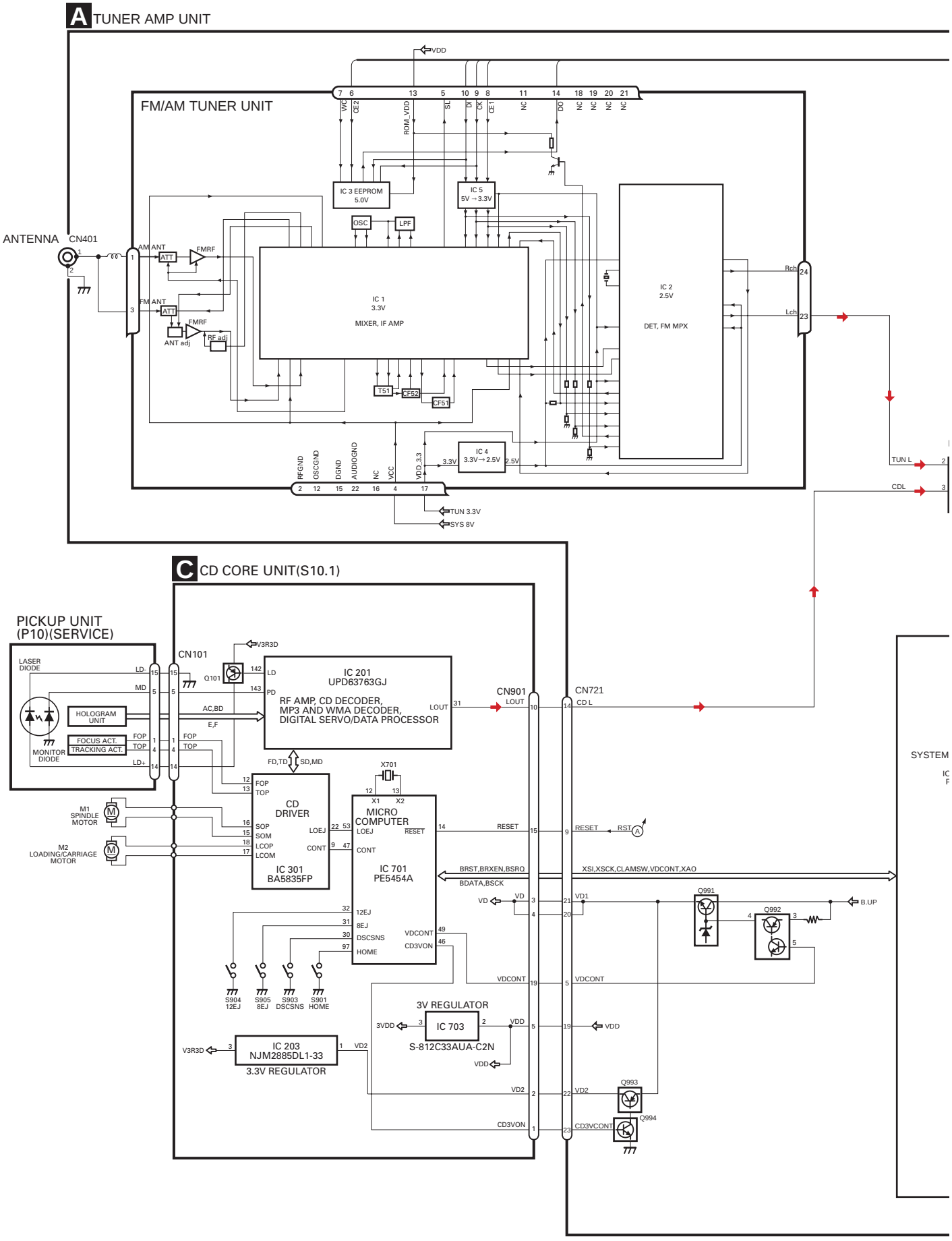


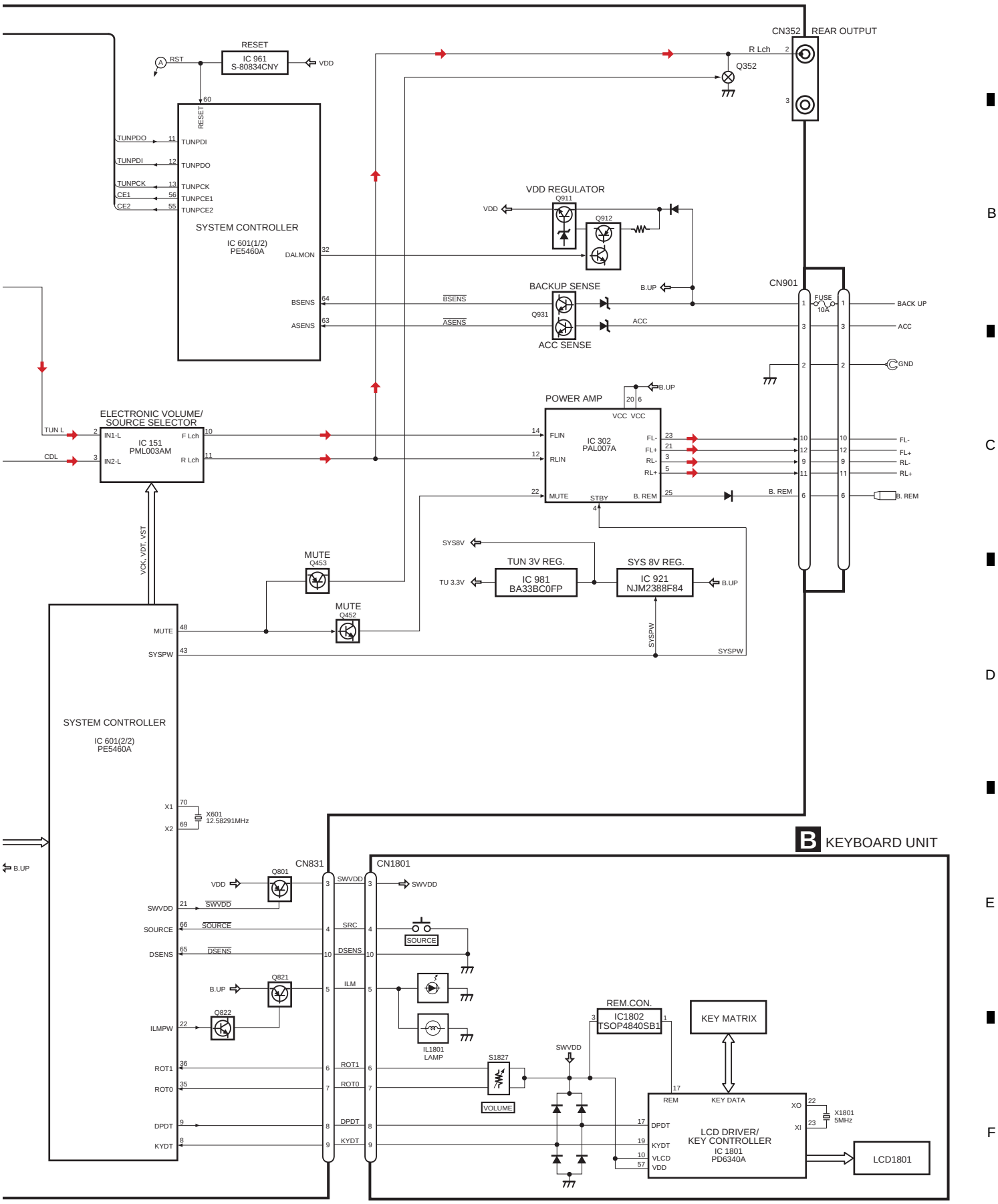
CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S10.1)	CWX3096
	2	Connector(CN101)	CKS4182
	3	Connector(CN901)	CKS4017
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x3)	CBA1824
	8	Screw(M2x3)	CBA1825
	9	•••••	
	10	Washer	CBF1038
	11	Washer	CBF1060
	12	Spring	CBH2390
	13	Spring	CBH2606
	14	Spring	CBH2607
	15	Spring	CBH2608
	16	Spring	CBH2609
	17	Spring	CBH2610
	18	Spring	CBH2735
	19	Spring	CBH2612
	20	Spring	CBH2613
	21	Spring	CBH2614
	22	Spring	CBH2615
	23	Spring	CBH2616
	24	Spring	CBH2617
	25	Spring	CBH2620
	26	Spring	CBH2621
	27	Spring	CBH2641
	28	Spring	CBH2642
	29	Spring	CBH2643
	30	Spring	CBH2659
	31	Spring	CBH2688
	32	•••••	
	33	Shaft	CLA4441
	34	Frame	CND2443
	35	Frame	CNC9963
	36	Bracket	CND2712
	37	Bracket	CND1895
	38	Arm	CNC9968
	39	Arm	CND1909
	40	Lever	CND2032
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV8447
	44	Guide	CNV8448
	45	Arm	CNV8403
	46	Rack	CNV8374
	47	Holder	CNV8376
	48	Holder	CNV8377
	49	Arm	CNV8378
	50	Gear	CNV8379
	51	Gear	CNV8380
	52	Gear	CNV8381
	53	Gear	CNV8382
	54	Gear	CNV8383
	55	Gear	CNV8384
	56	Rack	CNV8385
	57	Arm	CNV8386
	58	Arm	CNV8387
	59	Guide	CNV8388
	60	Roller	CNV8189
	61	Gear	CNV8389
	62	Arm(GS, CS)	CNV8391
		Arm Unit(CN)	CXC3865
	63	Arm(GS, CS)	CNV8390
		Arm Unit(CN)	CXC3864
	64	Arm	CNV8392
	65	Damper	CNV7313
	66	Damper	CNV7314
	67	Arm	CNV8394
	68	Arm	CNV8395
	69	Guide	CNV8396
	70	Guide	CNV8397
	71	Holder	CNV8398
	72	Arm	CNV8402
	73	Gear	CNV8400
	74	Damper	CNV7618
	75	Motor Unit(M1)	CXC4440
	76	Chassis Unit	CXC2318
	77	Screw Unit	CXB8729
	78	Gear Unit	CXC2397
	79	Arm Unit	CXC2316
	80	Arm	CND1896
	81	Arm	CND1894
	82	Motor Unit(M2)	CXB8933
	83	Bracket	CNC9985
	84	•••••	
	85	Screw(M2x5)	EBA1028
	86	Screw	JFZ20P020FTC
	87	Screw	JGZ17P022FTC
	88	•••••	
	89	Washer	YE20FTC
	90	Pickup Unit(P10)(Service)	CXX1647
	91	Screw	IMS26P030FTC
	92	Spring	CBL1635
	93	Clamper	CNV8372

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

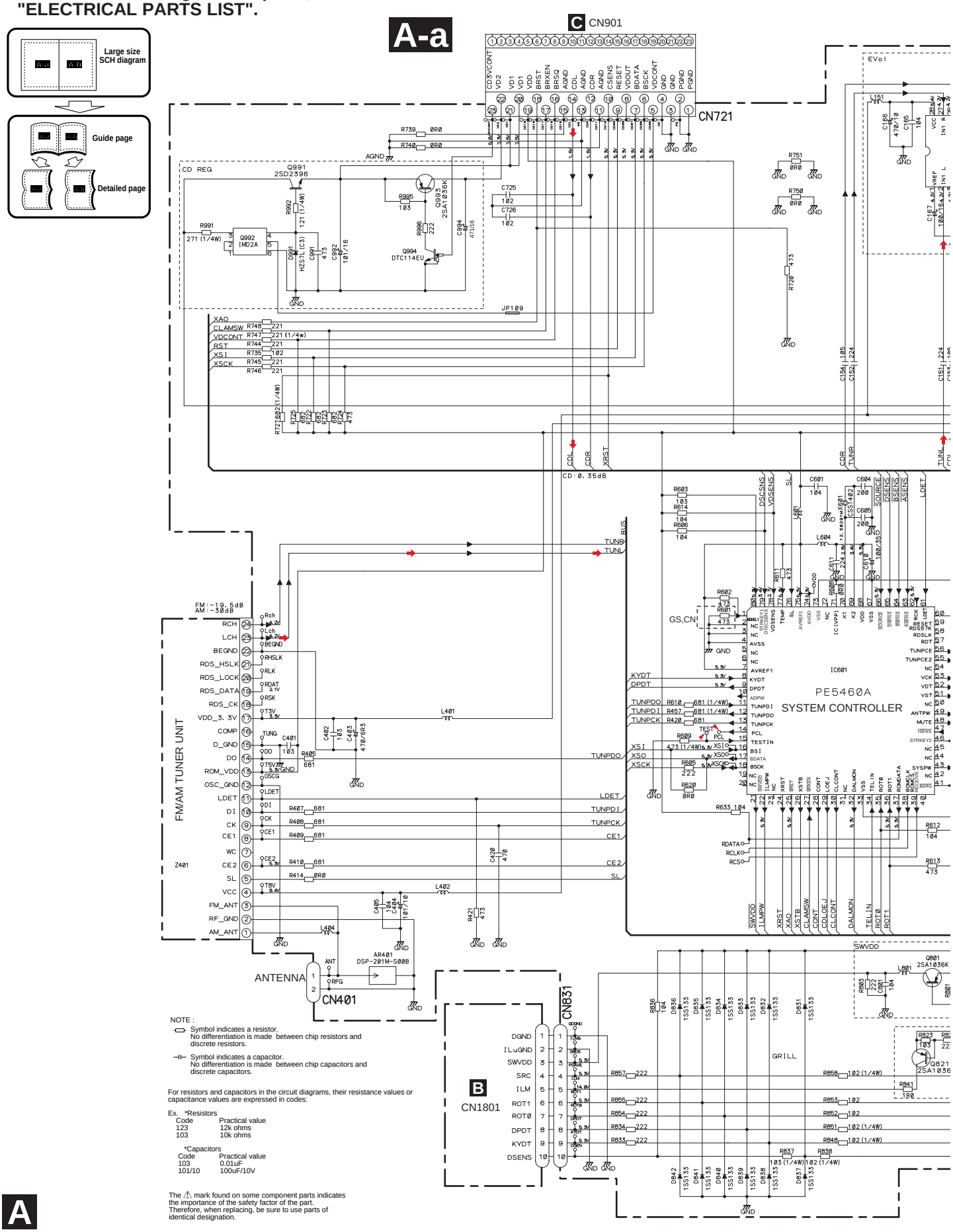
3.1 BLOCK DIAGRAM

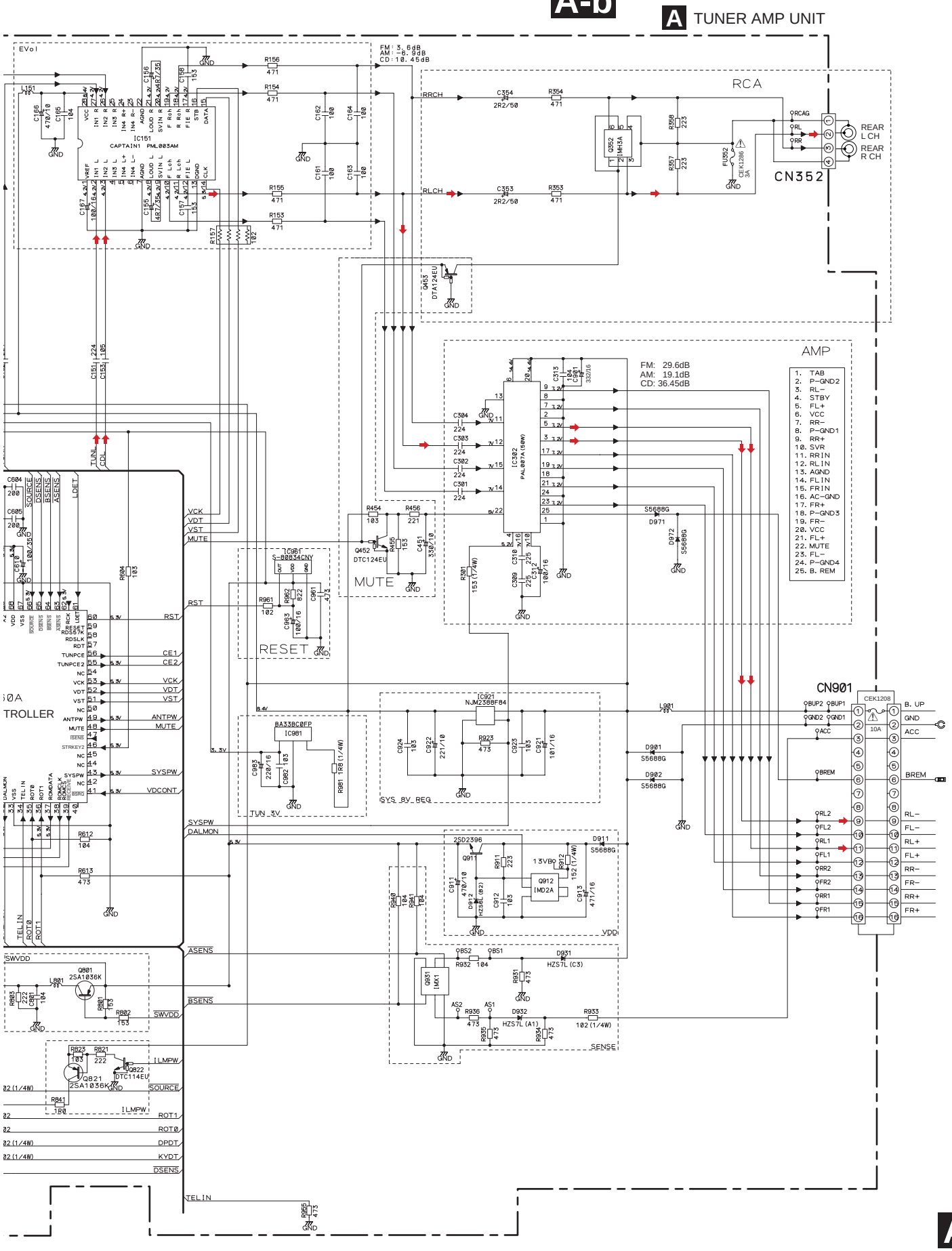


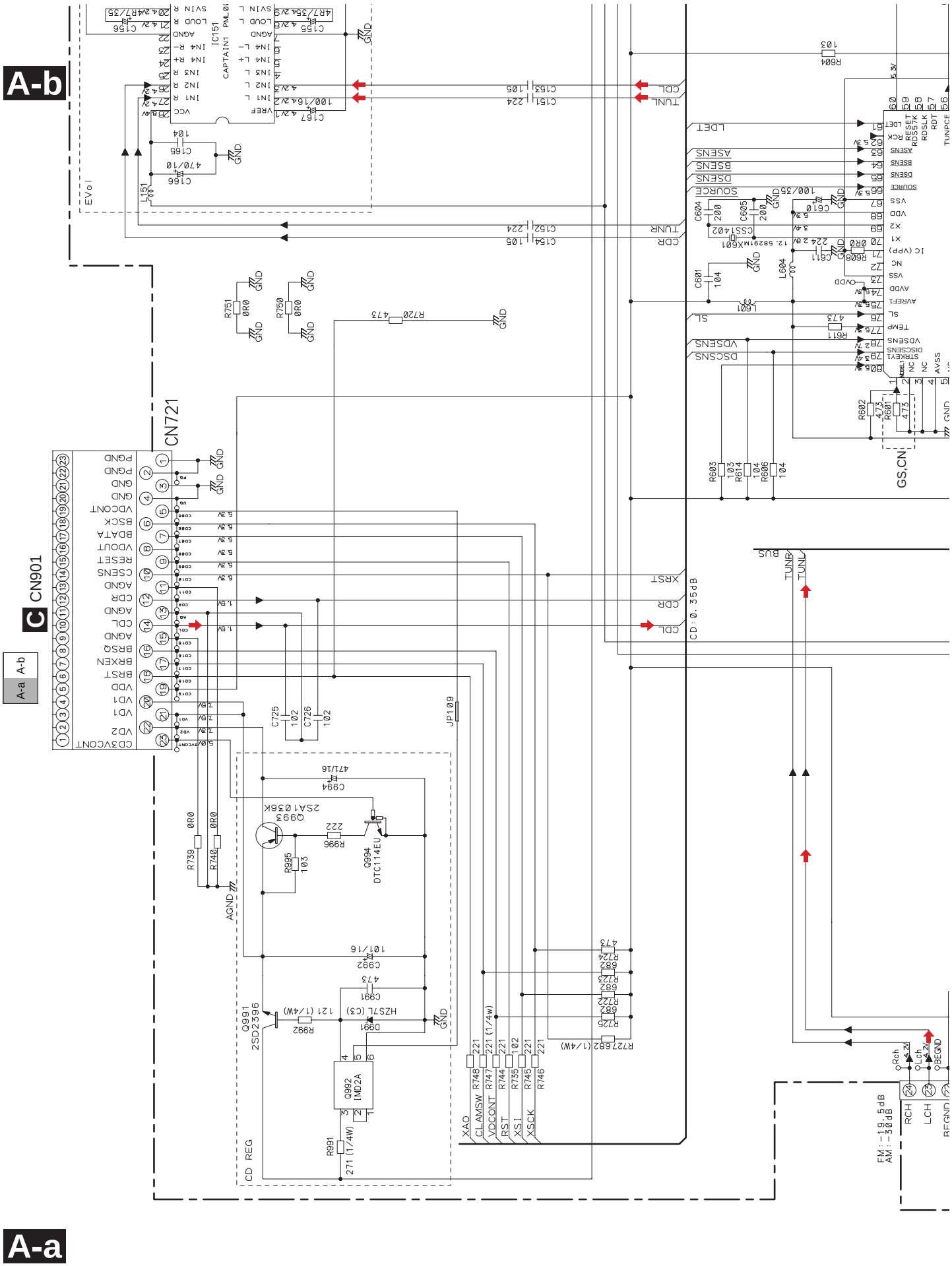

CN352 REAR OUTPUT
R Lch
Q352
RESET
IC 961
S-80834CNY
RST
VDD
SYSTEM CONTROLLER
IC 601(1/2)
PE5460A
TUNPDO
TUNPDI
TUNPCK
CE1
CE2
TUNPCE1
TUNPCE2
DALMON
BSENS
ASENS
VDD REGULATOR
Q911
Q912
BACKUP SENSE
Q931
ACC SENSE
B.UP
ACC
CN901
FUSE
10A
BACK UP
GND
POWER AMP
IC 302
PAL007A
VCC VCC
FLIN
RLIN
MUTE
STBY
B. REM
FL-
FL+
RL-
RL+
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC 151
PML003AM
TUN L
CDL
IN1-L
IN2-L
F Lch
R Lch
VCK, VDT, VST
MUTE
Q453
Q452
SYS8V
TUN 3V REG.
IC 981
BA33BC0FP
TU 3.3V
SYS 8V REG.
IC 921
NJM2388F84
SYSPW
SYSTEM CONTROLLER
IC 601(2/2)
PE5460A
X1
X2
X601
12.58291MHz
B KEYBOARD UNIT
CN831
CN1801
Q801
Q821
Q822
SWVDD
SOURCE
DSENS
ILMPW
ILM
SRC
ROT1
ROT0
DPDT
KYDT
IL1801
LAMP
S1827
VOLUME
REM.CON.
IC1802
TSOP4840SB1
KEY MATRIX
REM
KEY DATA
LCD DRIVER/
KEY CONTROLLER
IC 1801
PD6340A
VLCD
XO
XI
X1801
5MHz
LCD1801

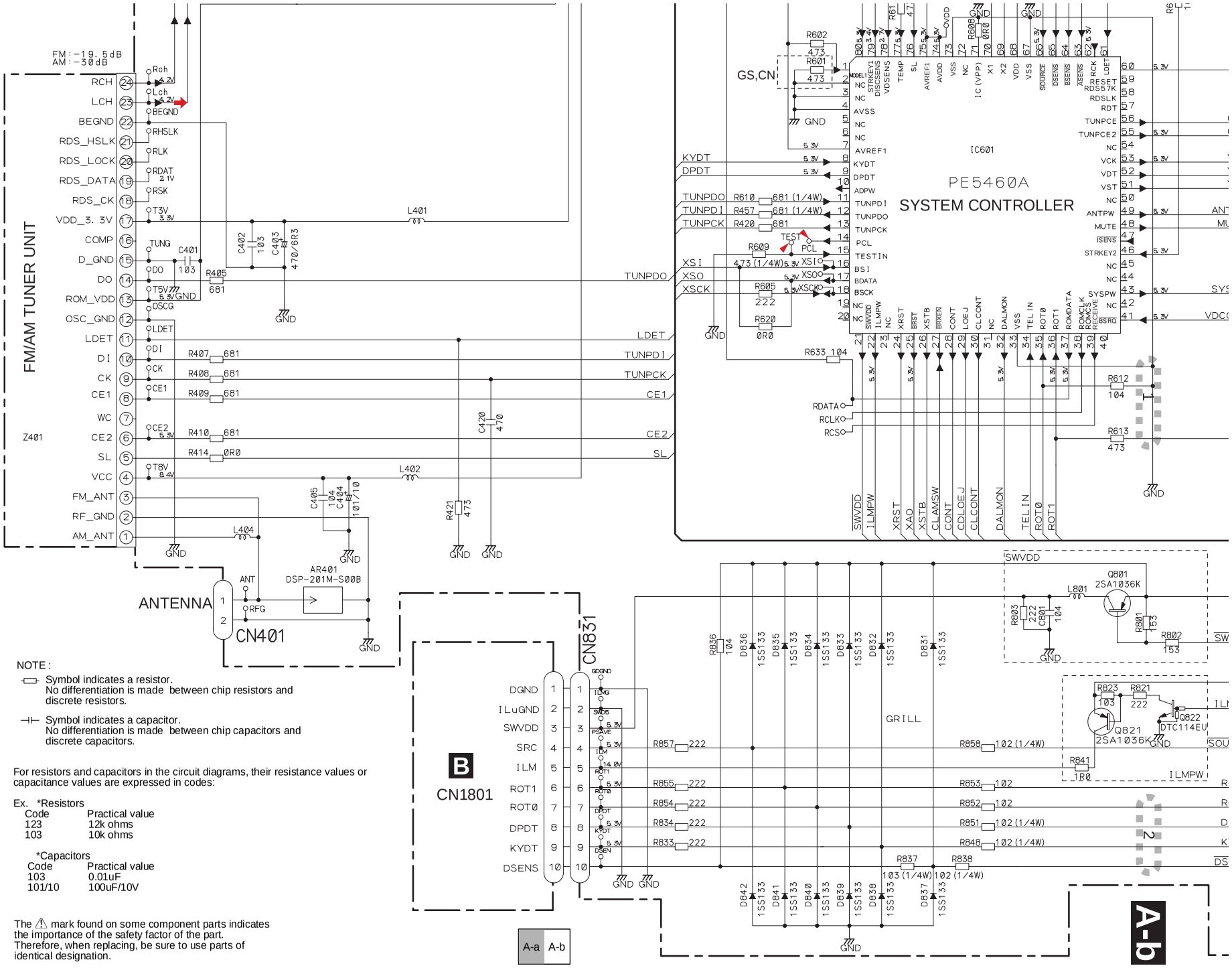
3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

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




A TUNER AMP UNIT
RCA
CN352
REAR L CH
REAR R CH
AMP
1. TAB
2. P-GND2
3. RL-
4. STBY
5. FL+
6. VCC
7. RR-
8. P-GND1
9. RR+
10. SVR
11. RRIN
12. RLIN
13. AGND
14. FLIN
15. FRIN
16. AC-GND
17. FR+
18. P-GND3
19. FR-
20. VCC
21. FL+
22. MUTE
23. FL-
24. P-GND4
25. B. REM
FM: 29.6dB
AM: 19.1dB
CD: 36.45dB
MUTE
RESET
CN901
B. UP
GND
ACC
BREM
RL-
FL-
RL+
FL+
RR-
FR-
RR+
FR+
TROLLER
SYS_8V_REG
TUN_3V
SENSE
VDD
DEH-3750MP/XU/GS
19


A-b
A-a
CN721
CN901
CD REG
GS,CN



NOTE :

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

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

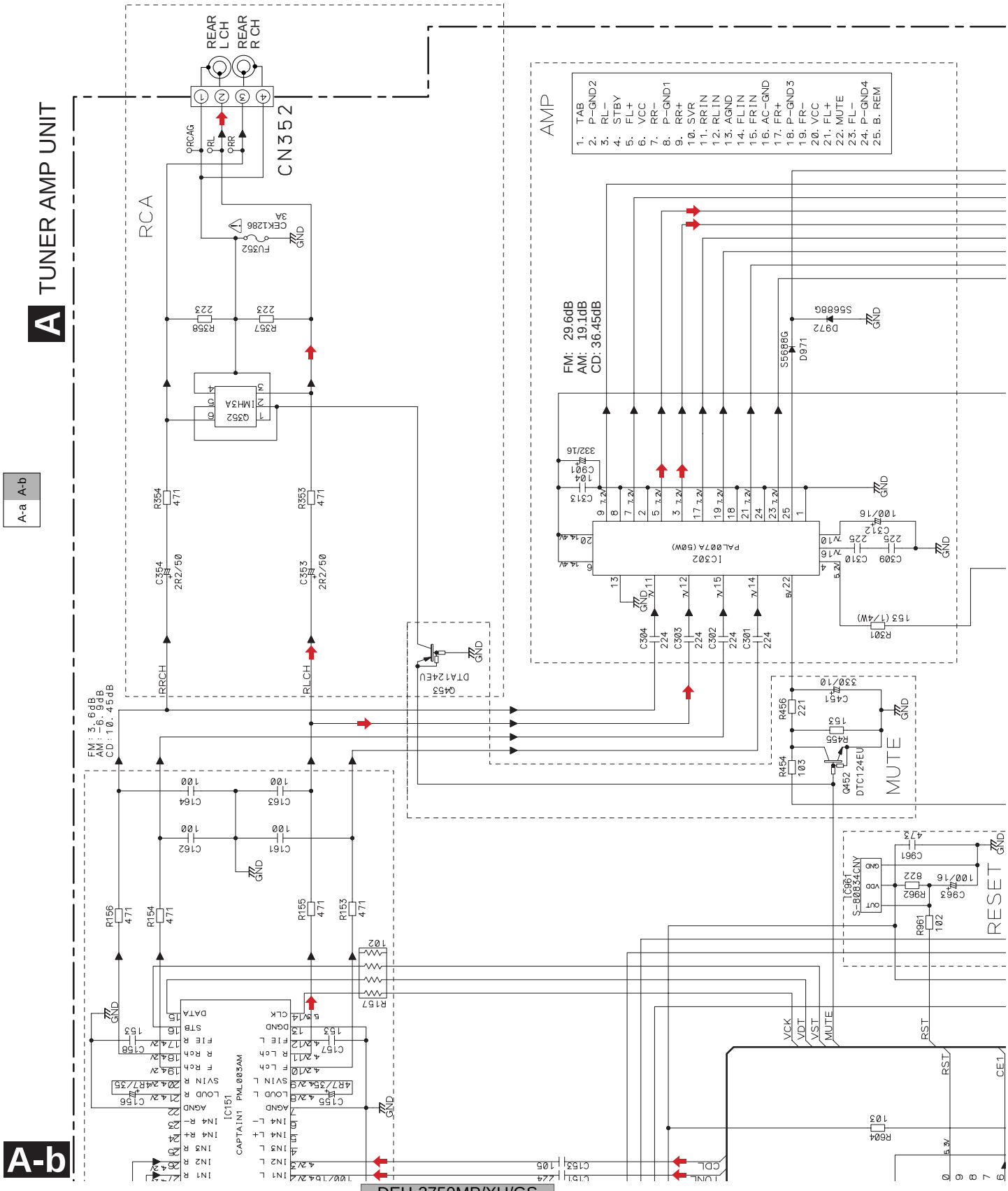
Ex. *Resistors

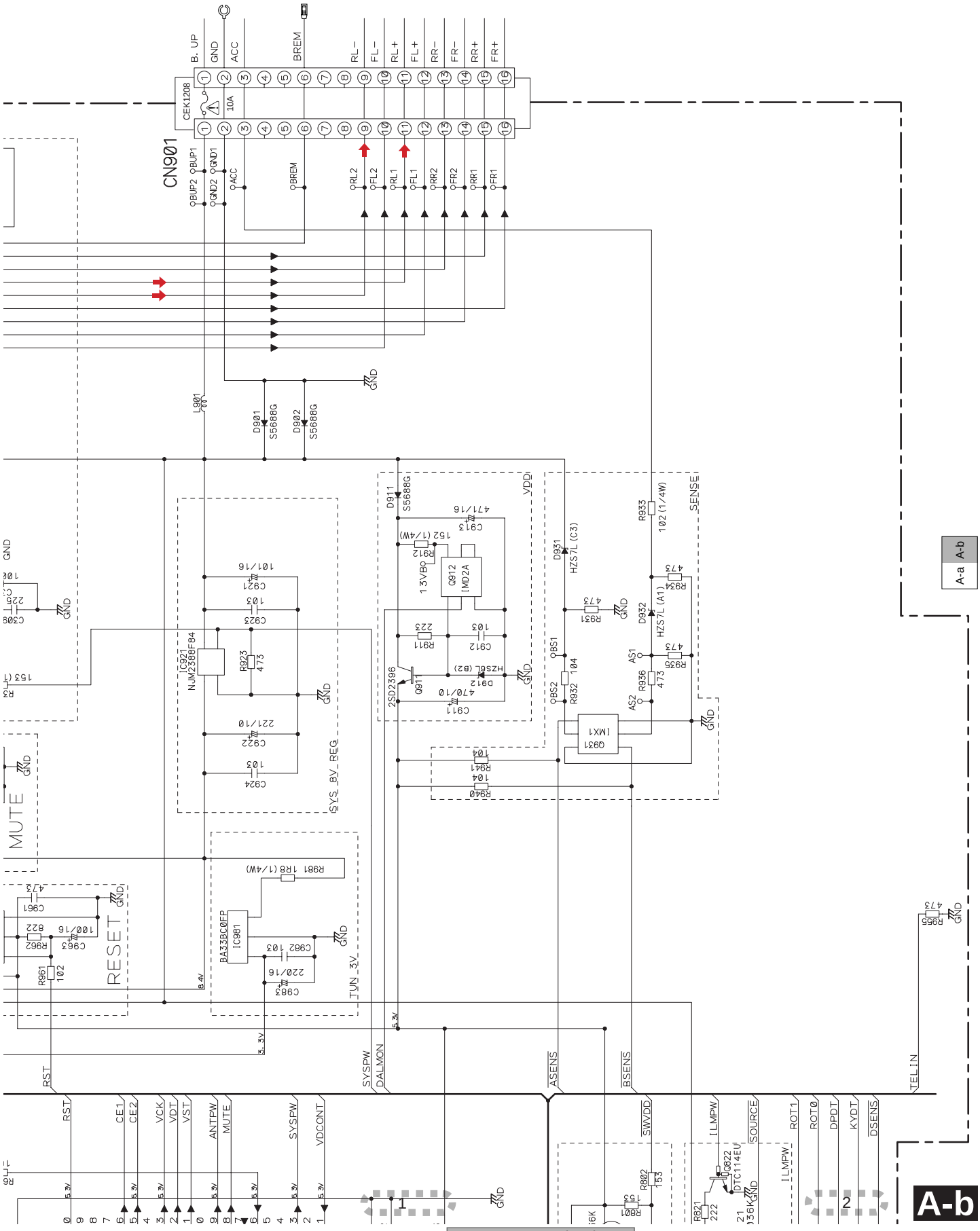
Code	Practical value
123	12k ohms
103	10k ohms

*Capacitors

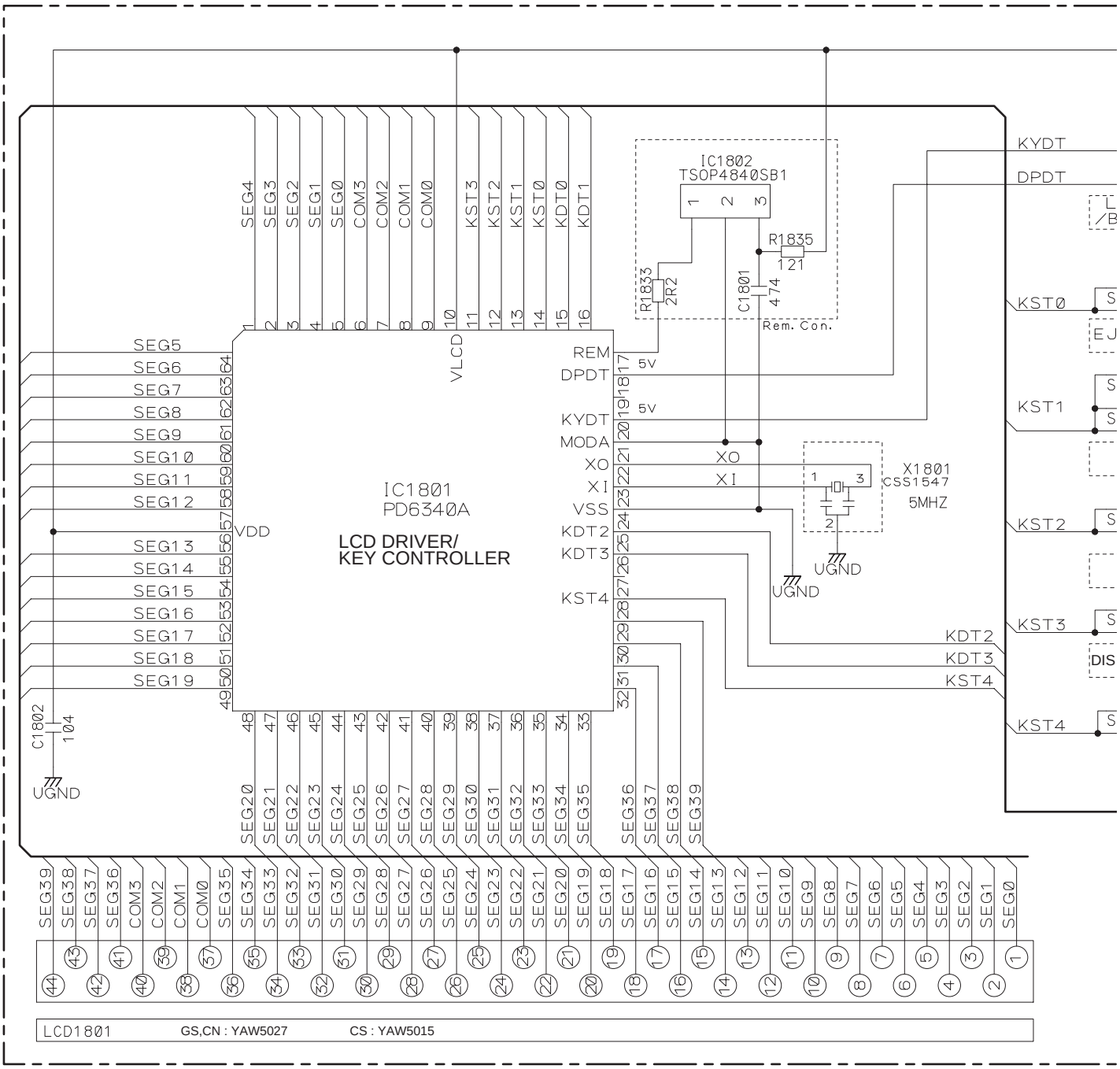
Code	Practical value
103	0.01uF
101/10	100uF/10V

The ⚠ 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.

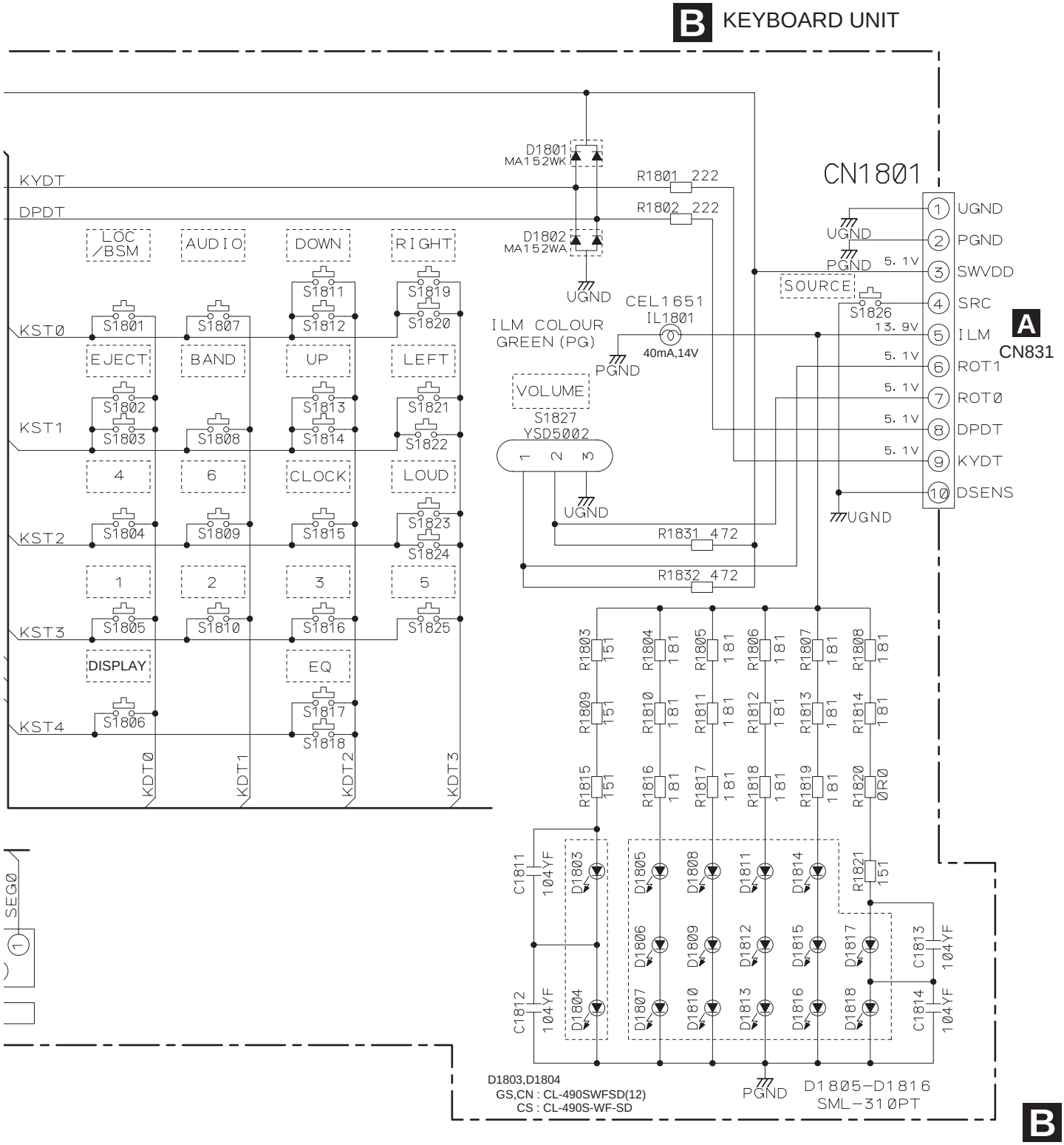

A TUNER AMP UNIT
A-b
A-a
CN352
REAR L CH
REAR R CH
RCA
AMP
MUTE
RESET
IC151
PML003AM
CAPTAIN1
IC302
PAL007A (50W)
IC961
S-80834CNY
Q452
DTC124EU
Q453
DTA124EU
D971
S5688G
D972
S5688G
FM: 29.6dB
AM: 19.1dB
CD: 36.45dB
FM: 3.6dB
AM: -6.9dB
CD: 10.45dB
1. TAB
2. P-GND2
3. RL-
4. STBY
5. FL+
6. VCC
7. RR-
8. P-GND1
9. RR+
10. SVR
11. RRIN
12. RLIN
13. AGND
14. FLIN
15. FRIN
16. AC-GND
17. FR+
18. P-GND3
19. FR-
20. VCC
21. FL+
22. MUTE
23. FL-
24. P-GND4
25. B. REM
RRCH
RLCH
VCK
VDT
VST
MUTE
RST
CDL
CDCL
CE1
GND


CN901
CEK1208
B. UP
GND
ACC
BREM
RL−
FL−
RL+
FL+
RR−
FR−
RR+
FR+
10A
SYS_8V_REG
TUN_3V
RESET
MUTE
SENSE
VDD
IC921
NJM2388F84
IC981
BA33BC0FP
Q911
2SD2396
Q912
IMD2A
Q931
IMX1
D931
HZS7L (C3)
D932
HZS7L (A1)
D901
S5688G
D902
S5688G
D911
S5688G
L901
RST
CE1
CE2
VCK
VDT
VST
ANTPW
MUTE
SYSPW
VDCONT
DALMON
ASENS
BSENS
SWVDD
ILMPW
SOURCE
ROT1
ROT0
DPDT
KYDT
DSENS
TELIN
Q822
DTC114EU
A-a
A-b
A-b
1
2

3.3 KEYBOARD UNIT

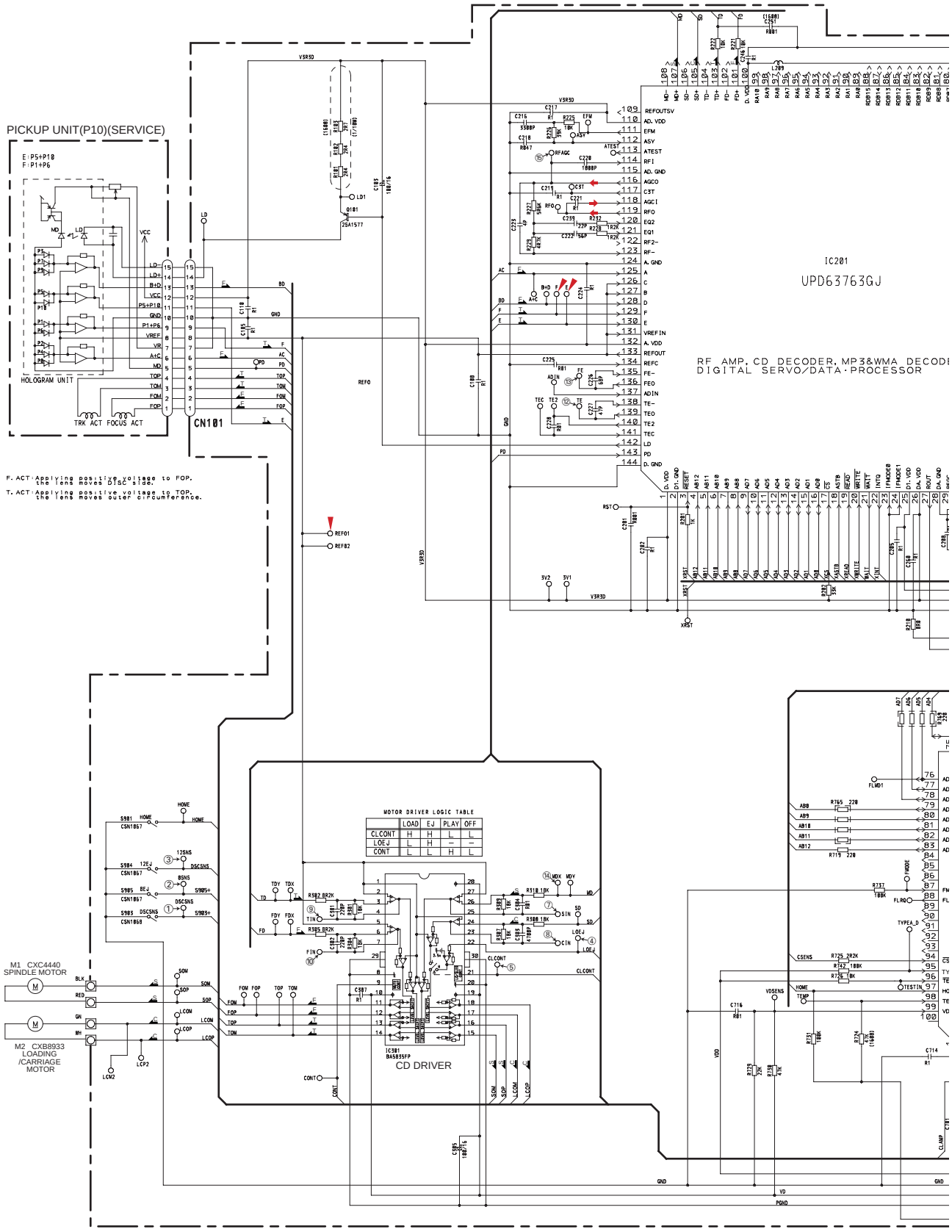


B KEYBOARD UNIT



3.4 CD MECHANISM MODULE(GUIDE PAGE)

C-a



C

C-b

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.

Ⓟ Monitor land(ø1.2mm)
#:Monitor land(ø0.8mm)
Land for manual soldering

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

SWITCHES:
CD CORE UNIT(S10.1)
S901:HOME SWITCH.....ON-OFF
S903:DSCSNS SWITCH.....ON-OFF
S904:12EJ SWITCH.....ON-OFF
S905:8EJ SWITCH.....ON-OFF

The underlined indicates the switch position.

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

C CD CORE UNIT(S10.1)

MP3&WMA DECODER ・PROCESSOR

3.3V REGULATOR

MICRO COMPUTER

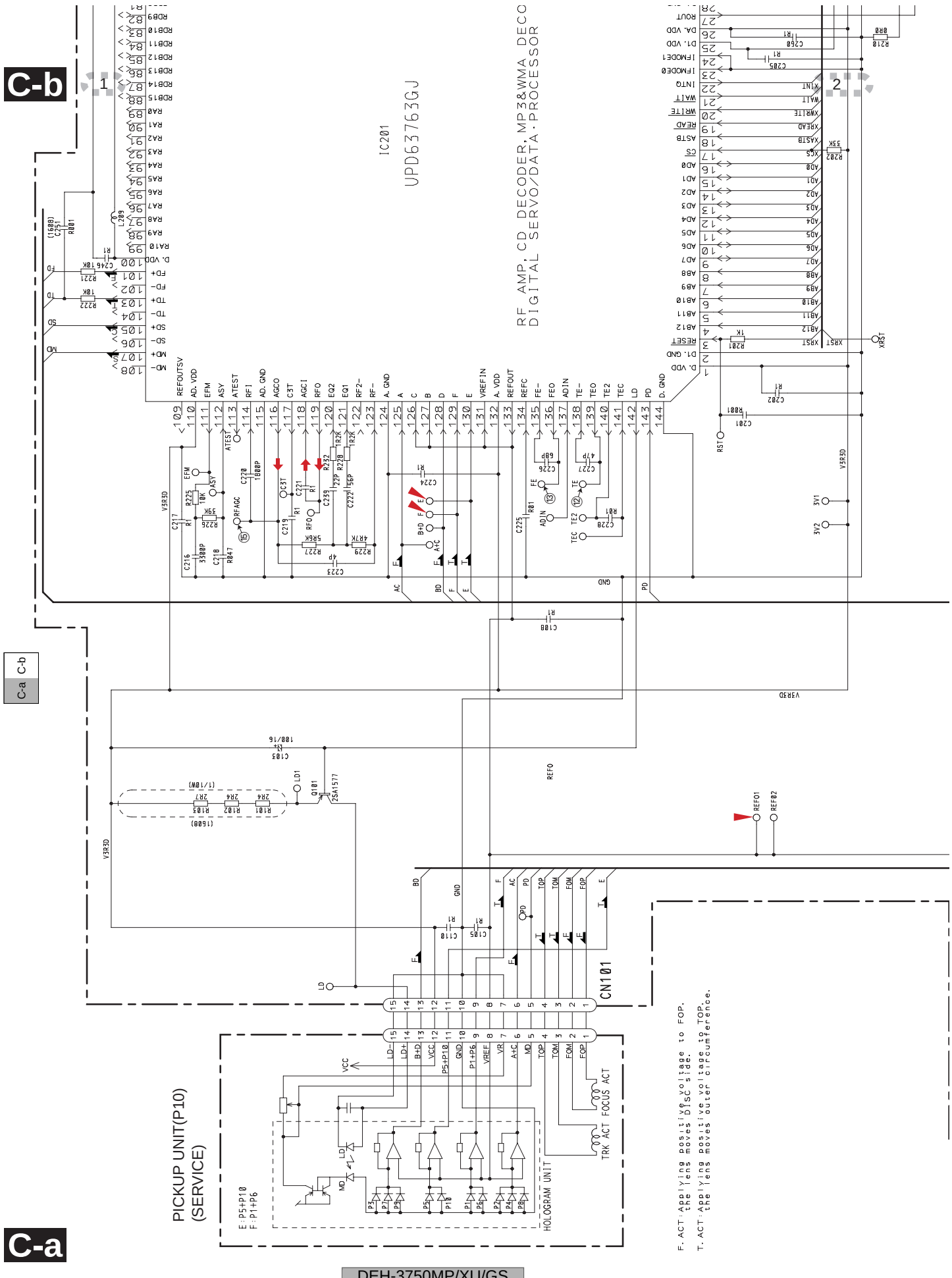
IC701

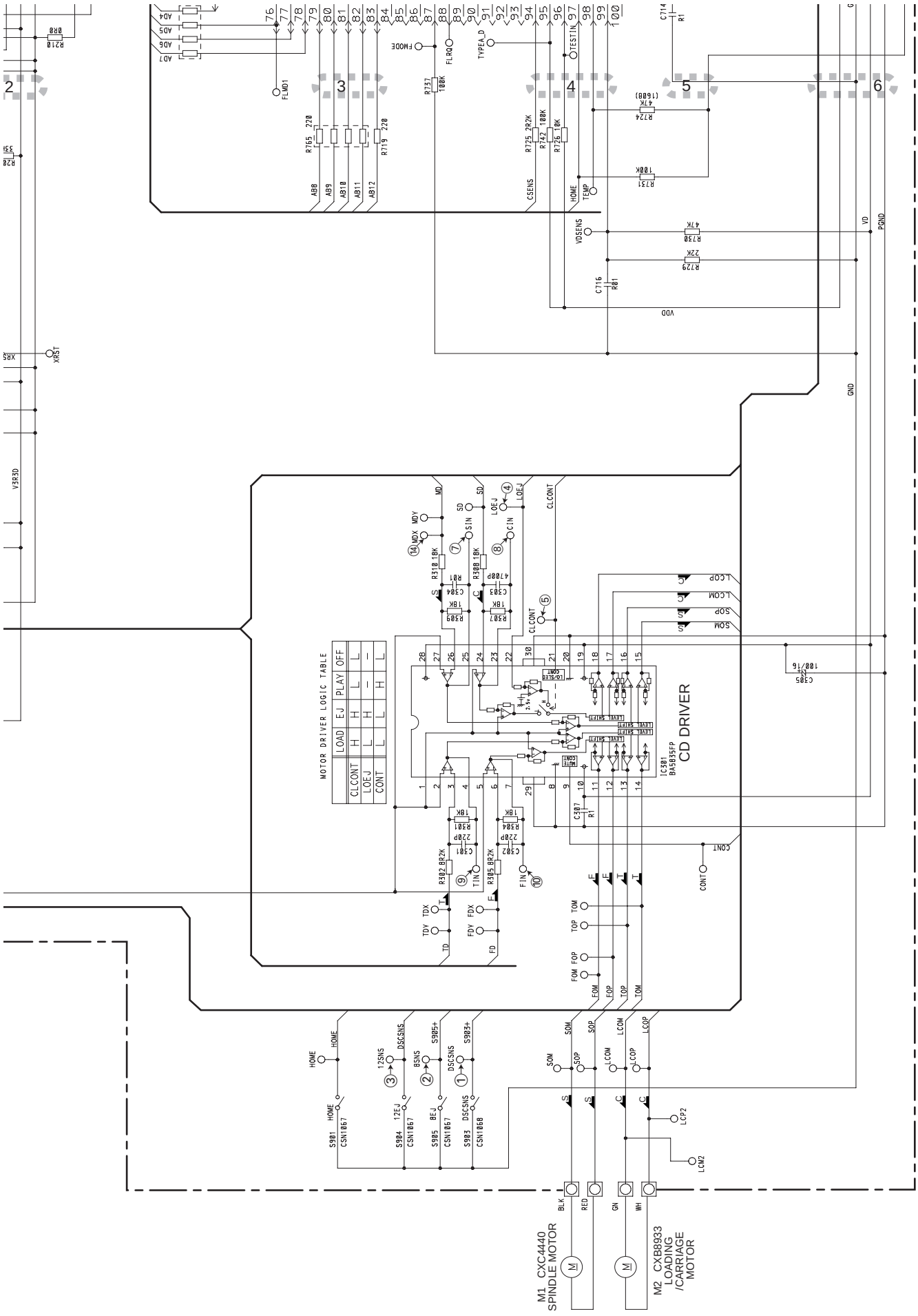
PE5454A

3V REGULATOR

A CN721

CN901


C-b
C-a
IC201
UPD63763GJ
RF AMP, CD DECODER, MP3&WMA DECO
DIGITAL SERVO/DATA PROCESSOR
PICKUP UNIT(P10)
(SERVICE)
E: P5+P10
F: P1+P6
HOLOGRAM UNIT
TRK ACT FOCUS ACT
CN101
F. ACT : Applying positive voltage to FOP.
the lens moves DISC side.
T. ACT : Applying positive voltage to TOP.
the lens moves outer circumference.


C-b
C-a
C-b
CD DRIVER
IC301
BA5835FP
MOTOR DRIVER LOGIC TABLE
LOAD
CLCONT
LOEJ
CONT
EJ
PLAY
OFF
M1 CXC4440
SPINDLE MOTOR
M2 CXB8933
LOADING
/CARRIAGE
MOTOR
C-a

C-a C-b

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.

Ⓑ Monitor land(φ1.2mm)
Monitor land(φ0.8mm)
◯ Land for manual soldering

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

SWITCHES:
CD CORE UNIT(S10.1)
S901:HOME SWITCH.....ON-OFF
S903:DSCSNS SWITCH.....ON-OFF
S904:12EJ SWITCH.....ON-OFF
S905:8EJ SWITCH.....ON-OFF

The underlined indicates the switch position.

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

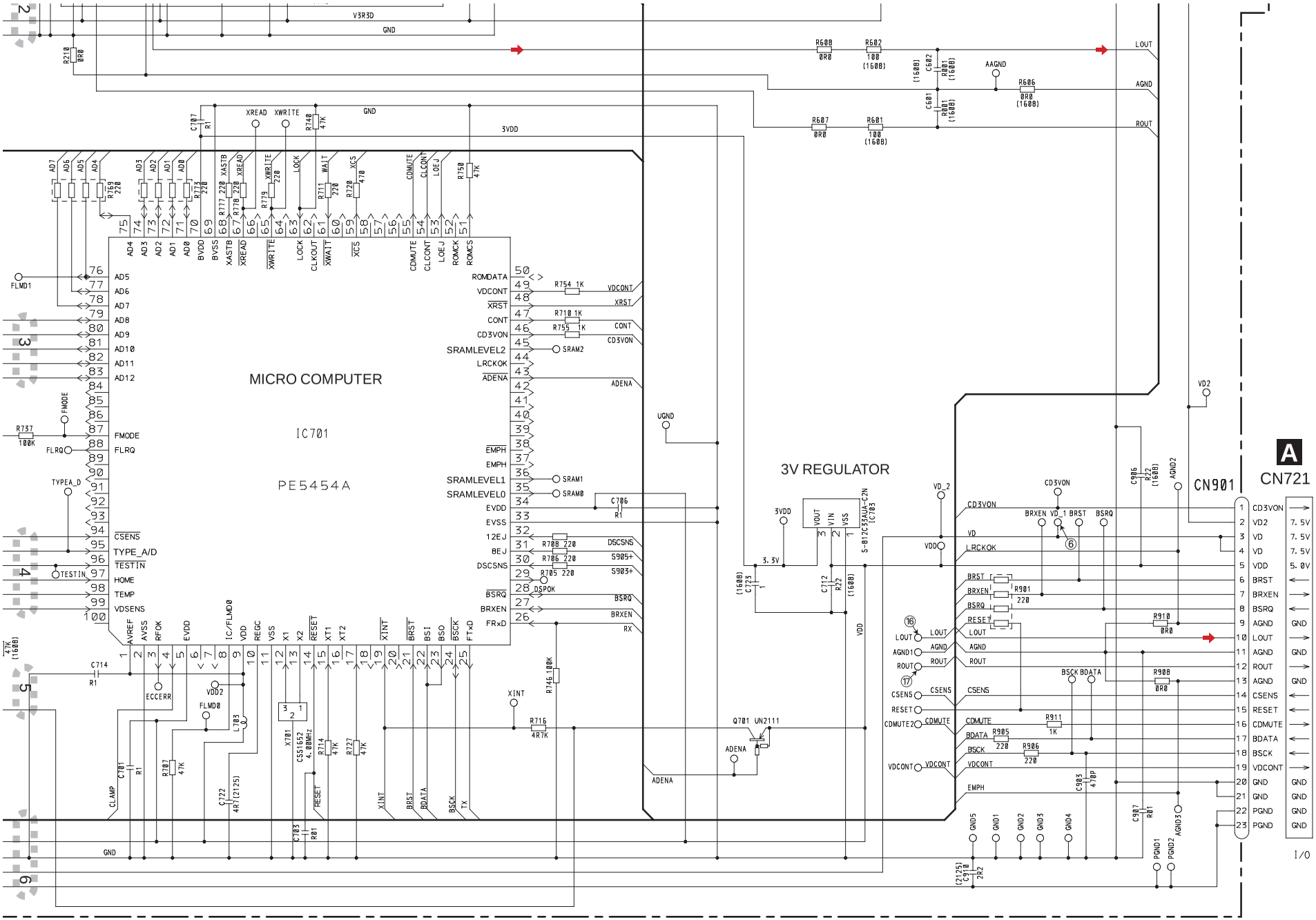
C CD CORE UNIT(S10.1)

DEH-3750MP/XU/GS

3.3V REGULATOR

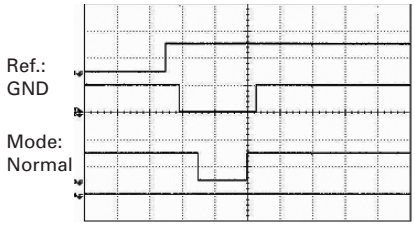
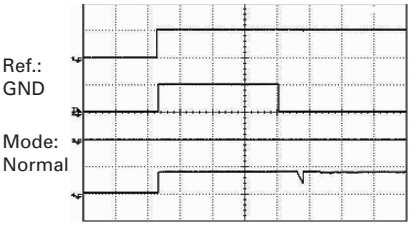
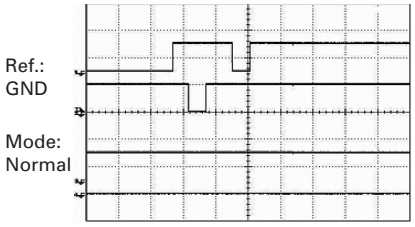
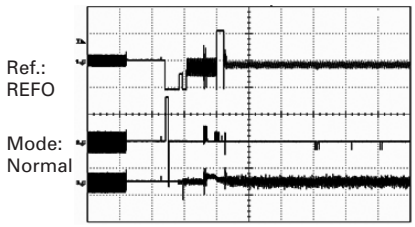
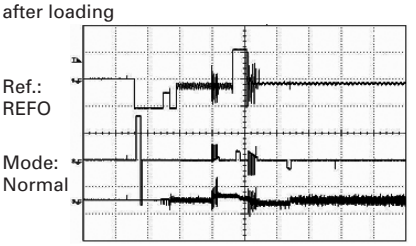
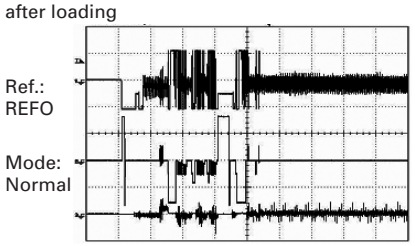
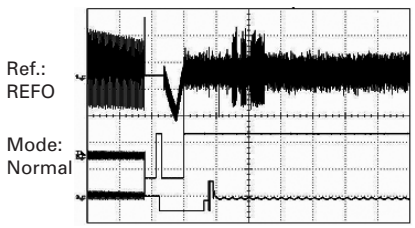
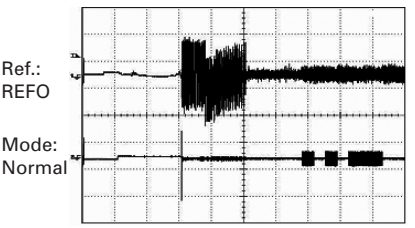
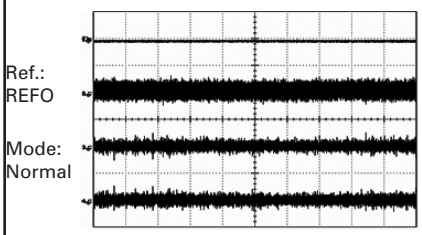
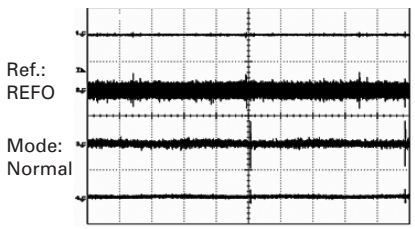
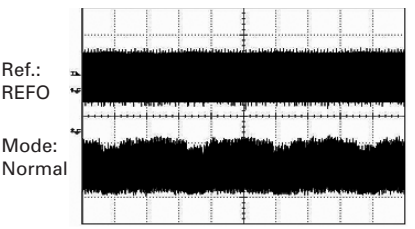
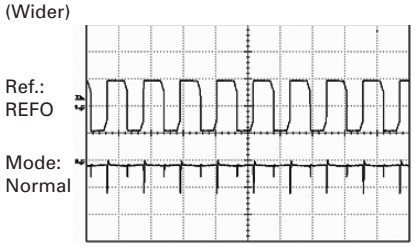
IC203 NJW2885DL1-33

GND
D. GND
D1. GND
D1. VDD
DA. VDD
DA. GND
REGC
LOUT
ROUT
X. VDD
X. GND
XTAL
V1R5
V3R3D
LOCK
RFOK
WFCK
RFCK
LRCK
DOUT
AGND
AAGND
XREAD
XWRITE


MICRO COMPUTER
IC701
PE5454A
3V REGULATOR
CN901
CN721
DEH-3750MP/XU/GS
C-b
C-a C-b
I/O

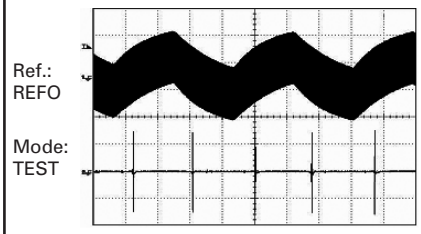
● Waveforms

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

① DSCSNS 5V/div 500ms/div ② 8SNS 5V/div ③ 12SNS 5V/div ④ LOEJ 5V/div 12 cm CD Loading operation  	① DSCSNS 5V/div 500ms/div ⑤ CLCONT 5V/div ④ LOEJ 5V/div ⑥ VD 10V/div 12 cm CD Loading operation  	① DSCSNS 5V/div 500ms/div ② 8SNS 5V/div ③ 12SNS 5V/div ④ LOEJ 5V/div 8 cm CD Loading operation 
⑦ SIN 1V/div 2s/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div 12 cm CD-DA setup operation after loading  	⑦ SIN 1V/div 1s/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div 12 cm CD-ROM(1 session) setup operation after loading  	⑦ SIN 1V/div 2s/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div 12 cm CD-ROM(3 sessions) setup operation after loading 
⑩ FIN 200mV/div 500ms/div ⑪ RFOK 2V/div ⑦ SIN 2V/div 12 cm CD-DA Source On setup operation  	⑫ TE 500mV/div 200ms/div ⑬ FE 500mV/div Source On setup operation  	⑬ FE 500mV/div 20ms/div ⑩ FIN 500mV/div ⑫ TE 500mV/div ⑨ TIN 500mV/div CD-DA Play operation 
⑬ FE 500mV/div 20ms/div ⑩ FIN 500mV/div ⑫ TE 500mV/div ⑨ TIN 500mV/div CD-ROM play operation(Regular track Jump)  	⑭ MDX 1V/div 50ms/div ⑦ SIN 200mV/div Spindle waveform during play operation  	⑭ MDX 2V/div 5µs/div ⑦ SIN 1V/div Spindle waveform during play operation (Wider) 

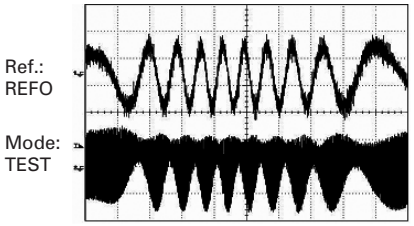
⑩ FIN 500mV/div 200ms/div
⑬ FE 500mV/div

Focus Search waveform



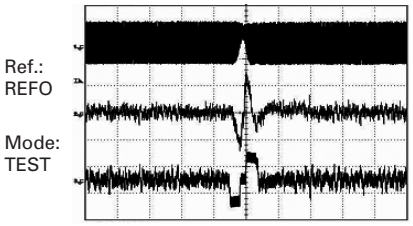
⑫ TE 500mV/div 2ms/div
⑮ RFAGC 500mV/div

Track Open waveform



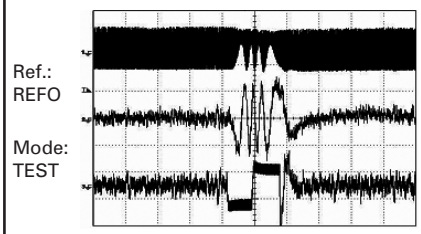
⑮ RFAGC 1V/div 500µs/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

1 Track Jump waveform



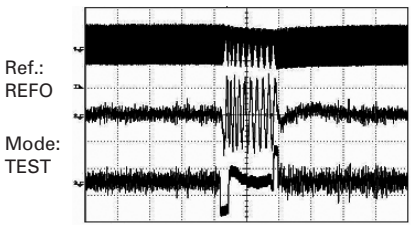
⑮ RFAGC 1V/div 500µs/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

4 Tracks Jump waveform



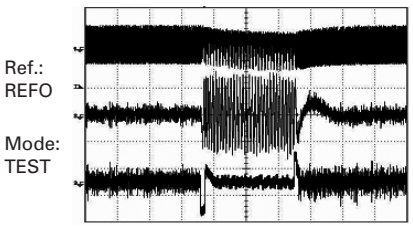
⑮ RFAGC 1V/div 1ms/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

10 Tracks Jump waveform



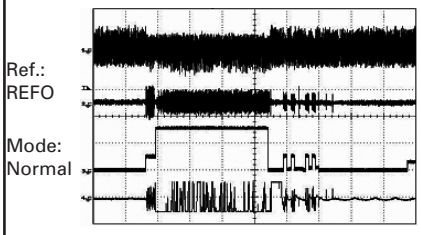
⑮ RFAGC 1V/div 2ms/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

32 Tracks Jump waveform



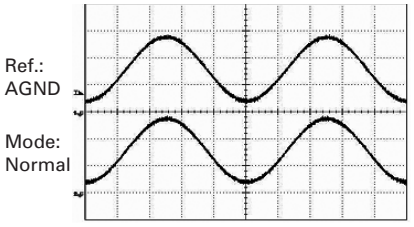
⑮ RFAGC 1V/div 200ms/div
⑫ TE 1V/div
⑧ CIN 500mV/div
⑦ SIN 2V/div

Search operation(Outter to Inner)



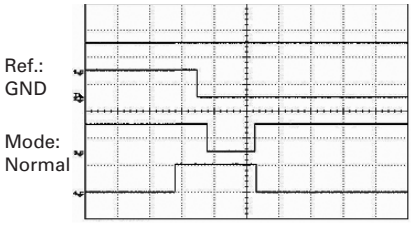
⑯ LOUT 1V/div 200µs/div
⑰ ROUT 1V/div

Analog audio waveform



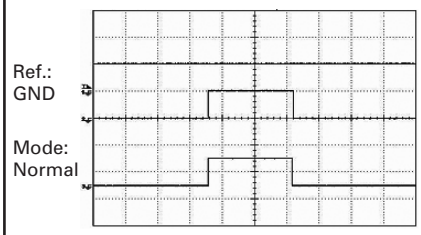
① DSCSNS 5V/div 500ms/div
② 8SNS 5V/div
③ 12SNS 5V/div
④ LOEJ 5V/div

12 cm CD Eject operation



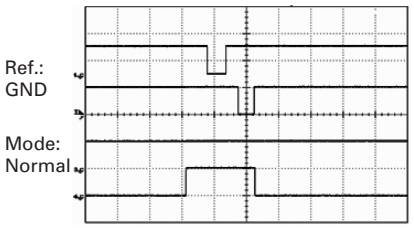
① DSCSNS 5V/div 500ms/div
⑤ CLCONT 5V/div
④ LOEJ 5V/div

12 cm CD Eject operation



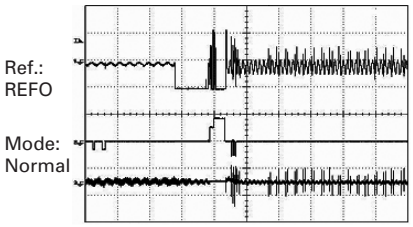
① DSCSNS 5V/div 500ms/div
② 8SNS 5V/div
③ 12SNS 5V/div
④ LOEJ 5V/div

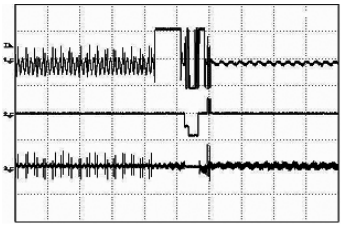
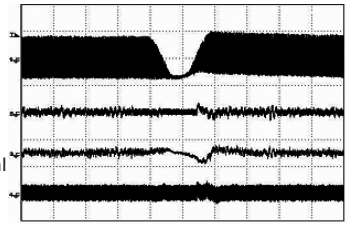
8 cm CD Eject operation



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

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



⑦ SIN 1V/div 500ms/div ⑧ CIN 500mV/div ⑨ TIN 500mV/div CD-ROM >> CD-DA mode change(Band key) Ref.: REFO Mode: Normal 	⑮ RFAGC 1V/div 500µs/div ⑨ TIN 1V/div ⑫ TE 1V/div ⑩ FIN 1V/div Black dot(800µm) during play Ref.: REFO Mode: Normal 	

A

B

C

D

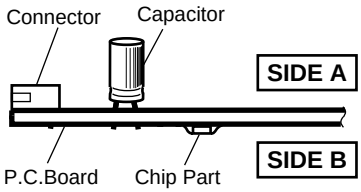
E

F

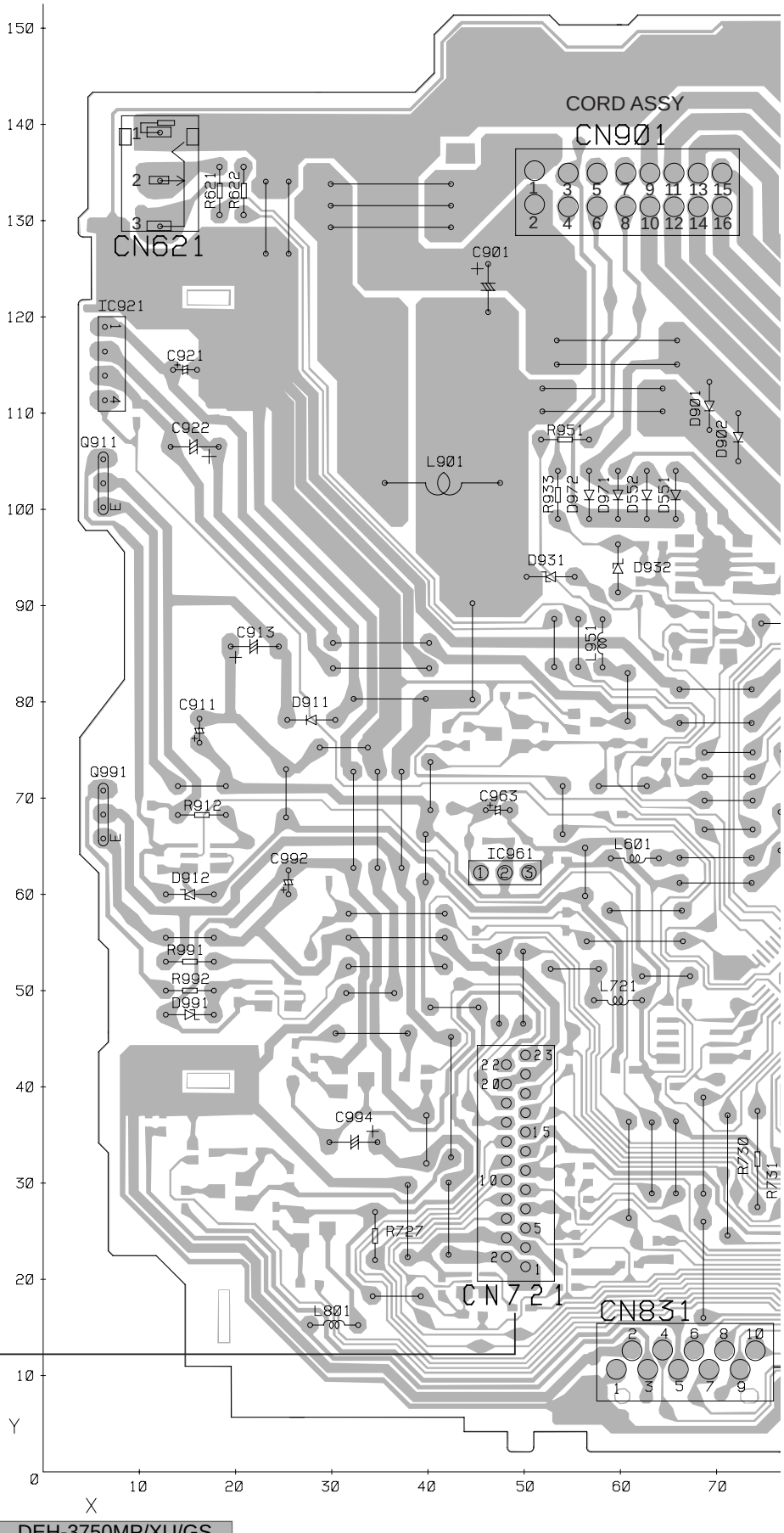
4. PCB CONNECTION DIAGRAM
4.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

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

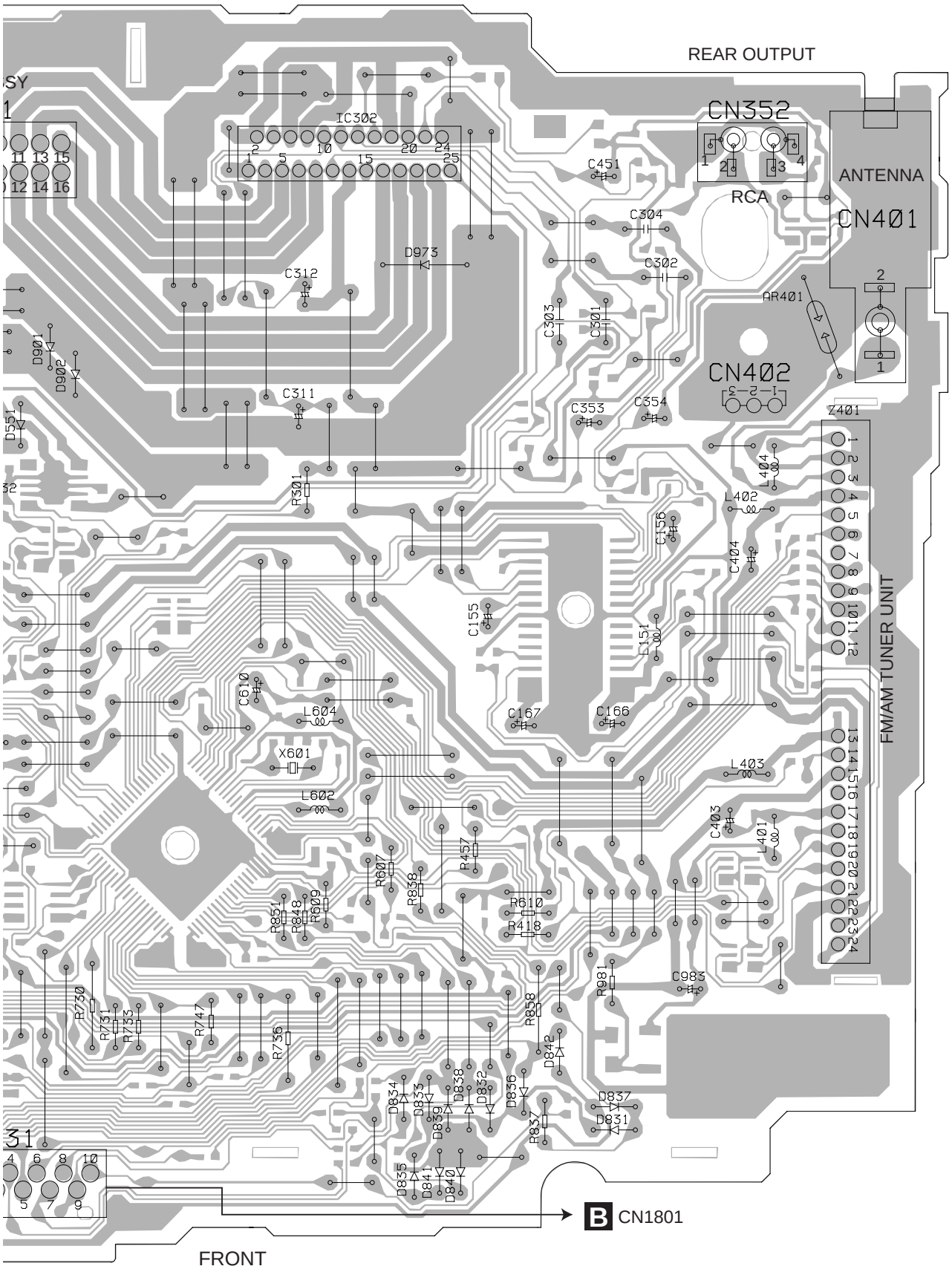


A TUNER AMP UNIT

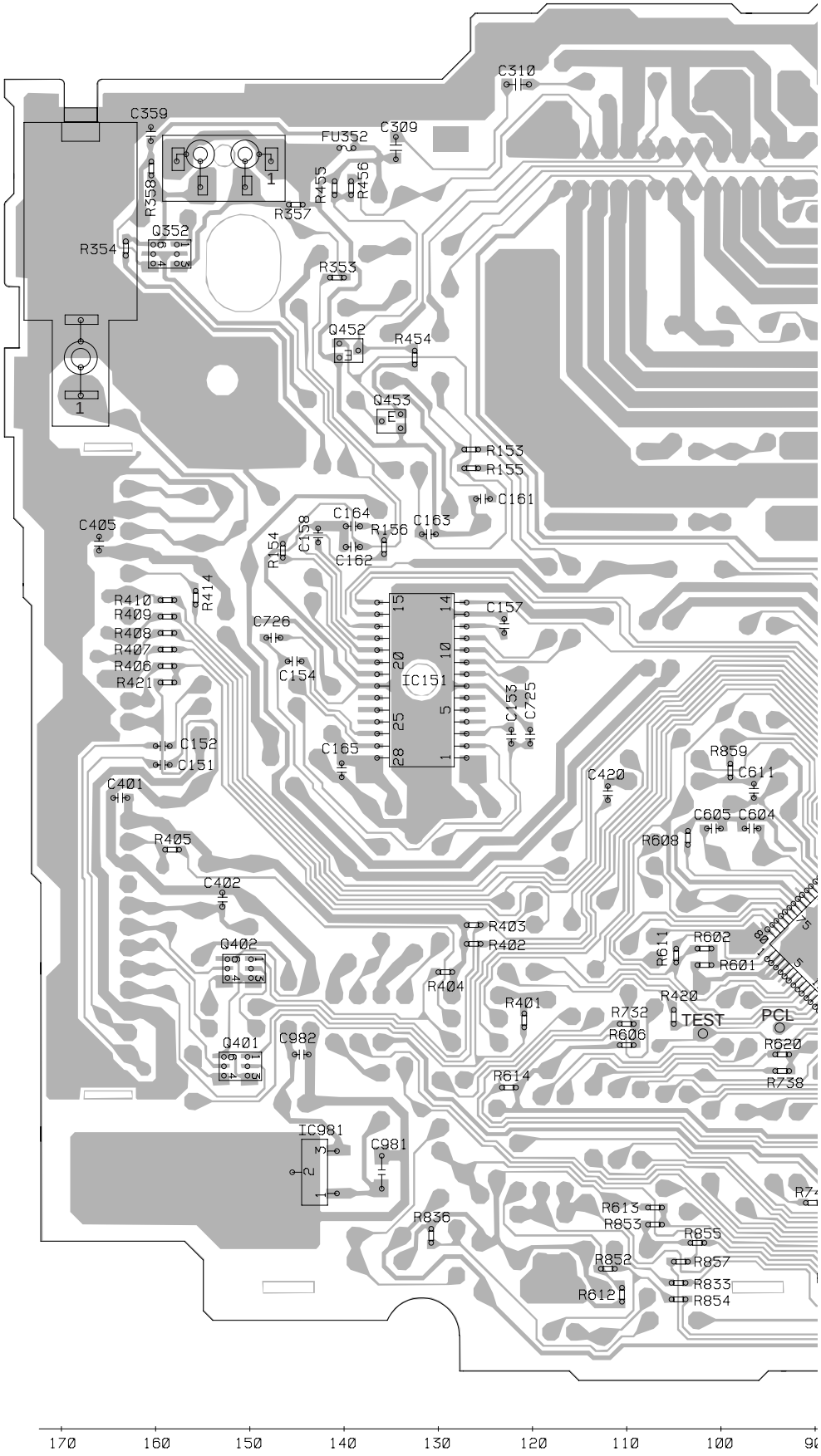


C CN901

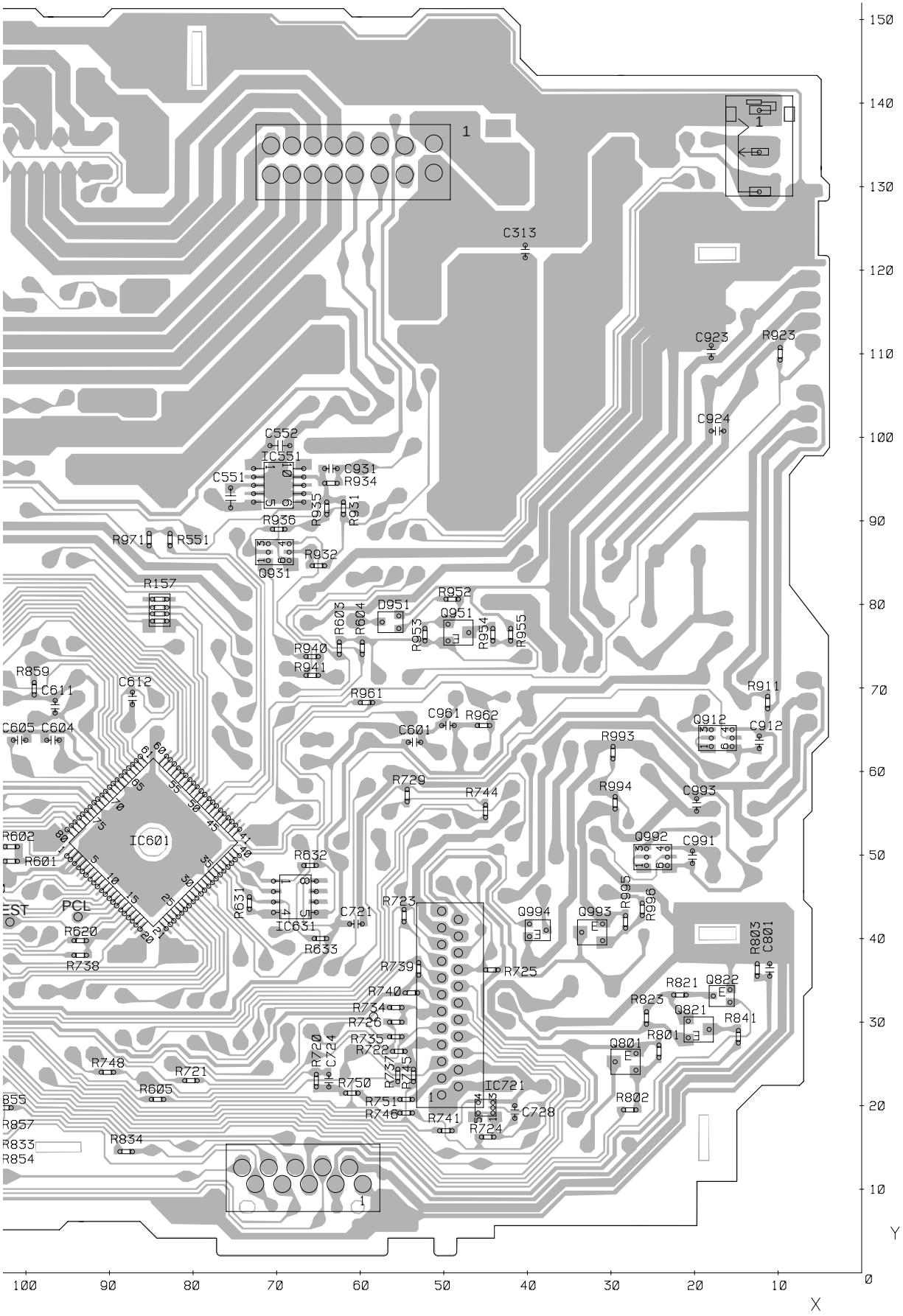
SIDE A


REAR OUTPUT
CN352
ANTENNA
RCA
CN401
CN402
AR401
IC302
C451
C304
C302
D973
C312
C303
C301
C311
C353
C354
Z401
L404
L402
C156
C404
C155
L151
C610
L604
C167
C166
X601
L602
L403
C403
L401
R457
R607
R838
R851
R848
R609
R610
R418
R981
C983
R858
D842
R730
R731
R733
R747
R736
D834
D833
D839
D838
D832
D836
D837
D831
R837
D835
D841
D840
FM/AM TUNER UNIT
B CN1801
FRONT

A TUNER AMP UNIT



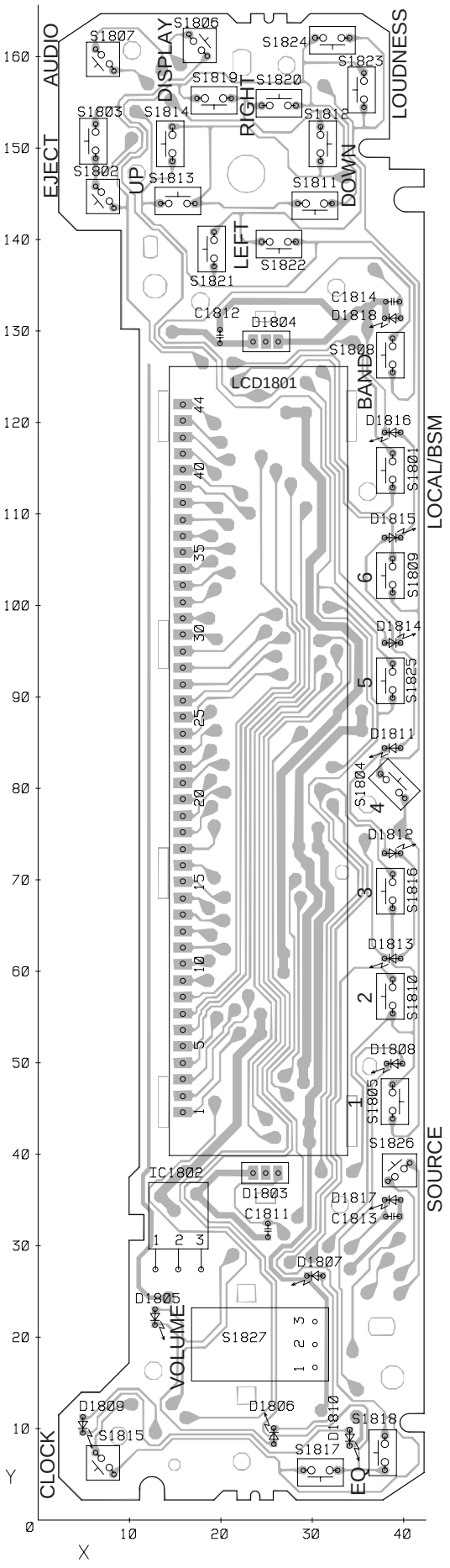
SIDE B


C313
C923
R923
C924
C552
IC551
C551
C931
R934
R935
R931
R936
R971
R551
R932
Q931
R157
R952
D951
R603
R604
Q951
R953
R954
R955
R940
R941
R961
R859
C611
C612
C605
C604
C961
R962
C601
R911
Q912
C912
R993
R729
R744
R994
C993
IC601
R602
R601
R632
R631
IC631
C721
R723
R633
R620
R738
PCL
Q992
C991
R995
R996
Q994
Q993
R803
C801
R739
R725
R740
R734
R726
R735
R722
R737
R736
R720
C724
R750
R751
R746
IC721
C728
R741
R724
R821
Q822
R823
Q821
R841
R801
Q801
R802
R748
R721
R605
R855
R857
R833
R854
R834
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
100
90
80
70
60
50
40
30
20
10
0
X
Y

4.2 KEYBOARD UNIT

B KEYBOARD UNIT

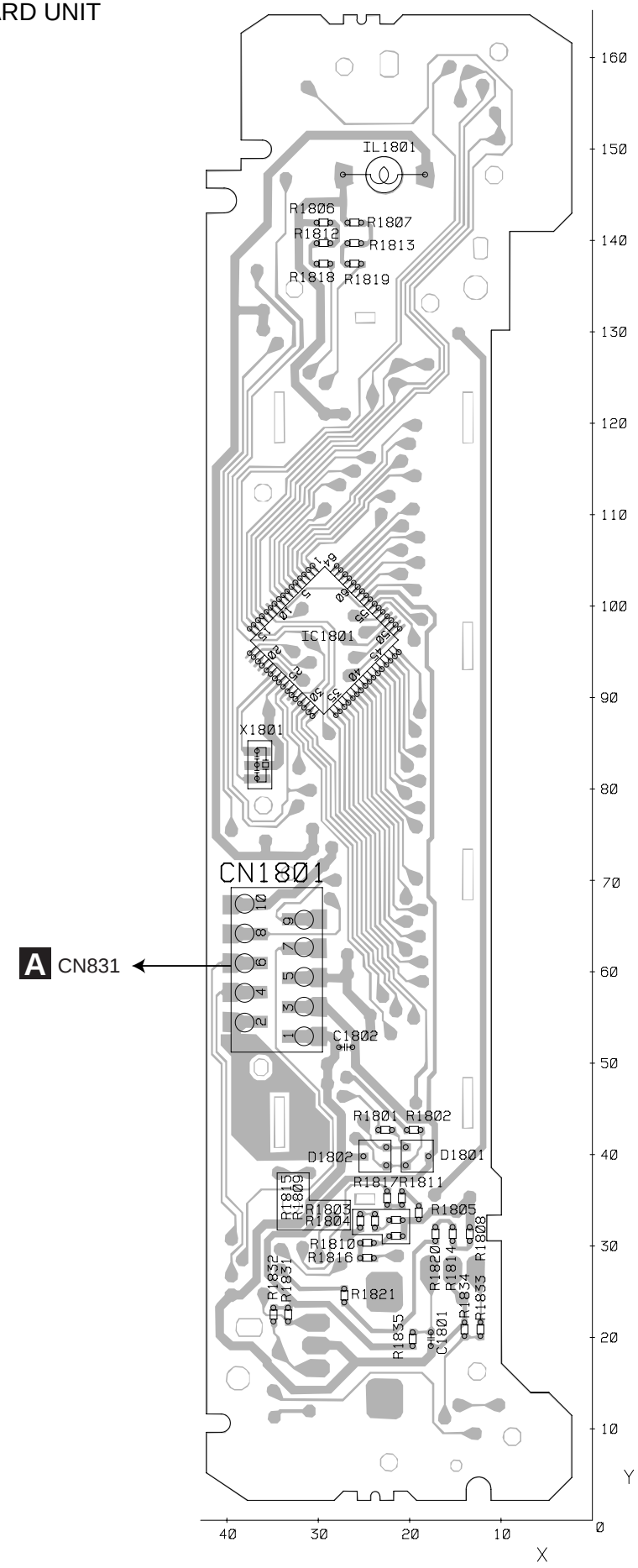
SIDE A



B

B KEYBOARD UNIT

SIDE B

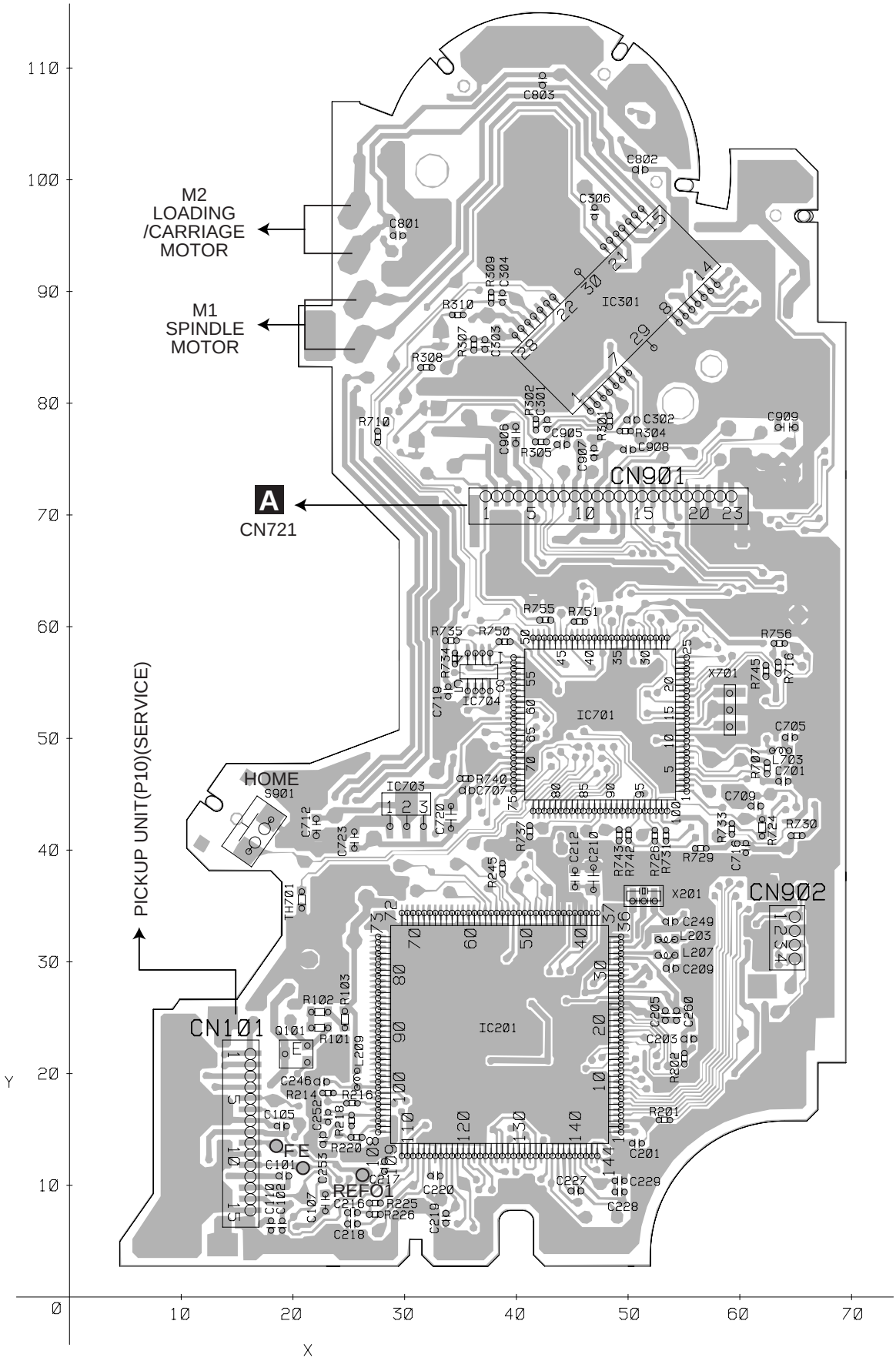


A CN831

4.3 CD CORE UNIT(S10.1)

C CD CORE UNIT(S10.1)

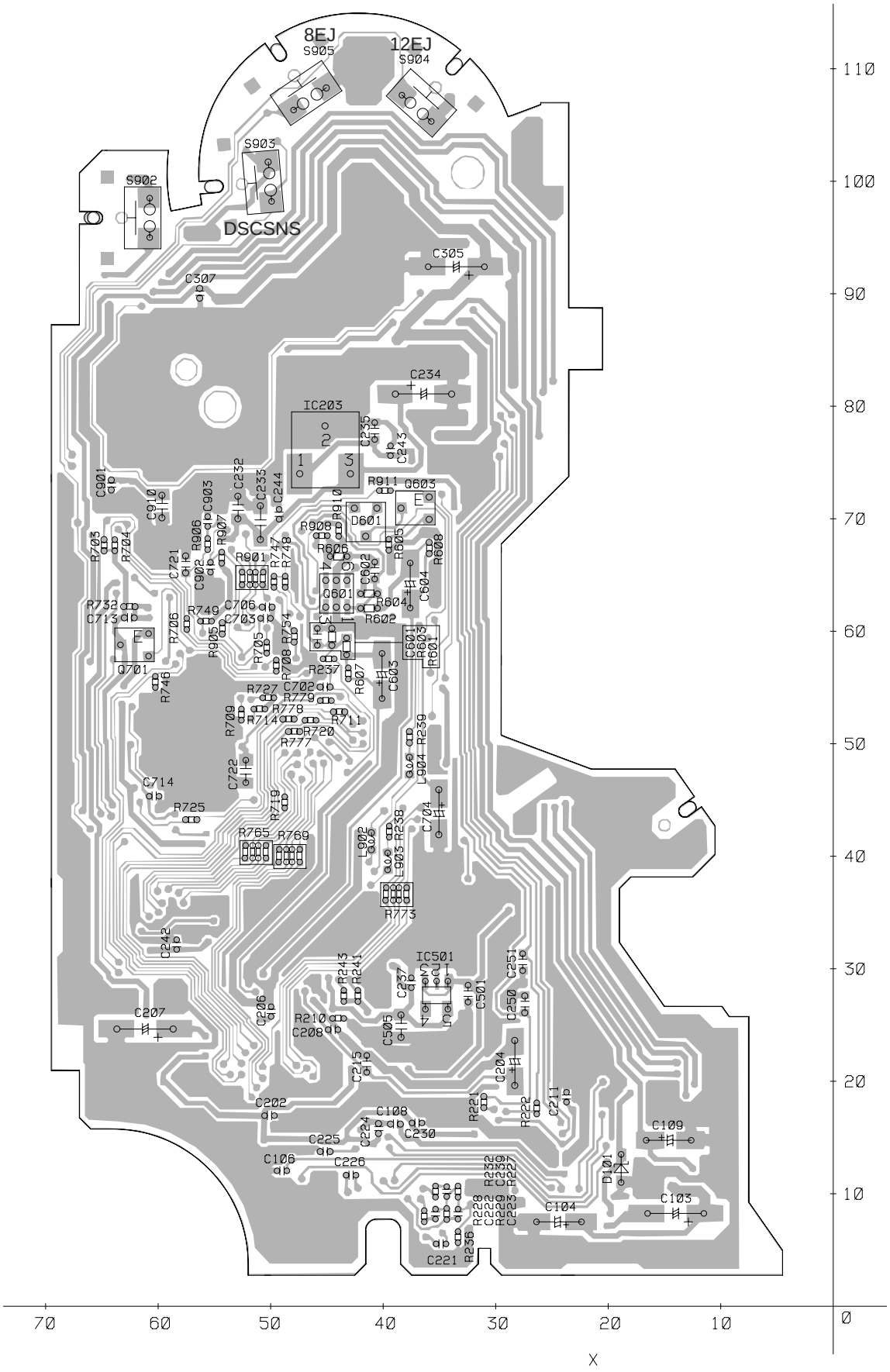
SIDE A



C

C CD CORE UNIT(S10.1)

SIDE B



5. ELECTRICAL PARTS LIST

NOTE:

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

  Chip Resistor

  RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J

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

  CKS....., CCS....., CSZS.....
- *The ⚠ mark found on some component parts indicatesthe importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

A

Unit Number:YWM5037(GS)
Unit Number:YWM5073(CS)
Unit Number:YWM5039(CN)
Unit Name:Tuner Amp Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 151	(B,132,80) IC	PML003AM
IC 302	(A,93,132) IC	PAL007A
IC 601	(B,85,52) IC	PE5460A
IC 921	(A,6,119) IC	NJM2388F84
IC 961	(A,46,62) IC	S-80834CNY
IC 981	(B,146,27) IC	BA33BC0FP
Q 352	(B,159,125) Transistor	IMH3A
Q 452	(B,140,115) Transistor	DTC124EU
Q 453	(B,135,107) Transistor	DTA124EU
Q 801	(B,28,25) Transistor	2SA1036K
Q 821	(B,20,29) Transistor	2SA1036K
Q 822	(B,17,33) Transistor	DTC114EU
Q 911	(A,6,100) Transistor	2SD2396
Q 912	(B,17,64) Transistor	IMD2A
Q 931	(B,70,86) Transistor	IMX1
Q 991	(A,6,66) Transistor	2SD2396
Q 992	(B,25,50) Transistor	IMD2A
Q 993	(B,32,41) Transistor	2SA1036K
Q 994	(B,39,41) Transistor	DTC114EU
D 831	(A,139,18) Diode	1SS133
D 832	(A,122,23) Diode	1SS133
D 833	(A,114,24) Diode	1SS133
D 834	(A,111,19) Diode	1SS133
D 835	(A,113,10) Diode	1SS133
D 836	(A,126,25) Diode	1SS133
D 837	(A,134,21) Diode	1SS133
D 838	(A,119,18) Diode	1SS133
D 839	(A,117,18) Diode	1SS133
D 840	(A,118,15) Diode	1SS133
D 841	(A,116,15) Diode	1SS133
D 842	(A,130,25) Diode	1SS133
D 901	(A,69,113) Diode	S5688G
D 902	(A,72,110) Diode	S5688G
D 911	(A,30,78) Diode	S5688G
D 912	(A,18,60) Diode	HZS6L(B2)
D 931	(A,55,93) Diode	HZS7L(C3)
D 932	(A,60,91) Diode	HZS7L(A1)
D 971	(A,60,104) Diode	S5688G
D 972	(A,57,104) Diode	S5688G
D 991	(A,13,48) Diode	HZS7L(C3)
L 151	(A,141,79) Inductor	LAU2R2K
L 401	(A,155,55) Inductor	LAU1R0K
L 402	(A,155,92) Inductor	LAU1R0K
L 404	(A,155,99) Ferri-Inductor	LAU4R7K
L 601	(A,64,64) Inductor	LAU1R0K
L 604	(A,104,66) Inductor	LAU1R0K
L 801	(A,28,15) Inductor	LAU2R2K
L 901	(A,35,103) Choke Coil 600µH	CTH1280
X 601	(A,101,61) Radiator 12.58291MHz	CSS1402
⚠FU352	(B,140,136) Fuse 3A	CEK1286
Z 401	(A,163,100) FM/AM Tuner Unit	CWE1646
AR401	(A,159,119) Surge Protector	DSP-201M-S00B
⚠	Fuse 10A	CEK1208

RESISTORS

R 153	(B,127,104)	RS1/16S471J
R 154	(B,147,93)	RS1/16S471J
R 155	(B,127,102)	RS1/16S471J
R 156	(B,136,94)	RS1/16S471J
R 157	(B,84,79)	RAB4C102J
R 301	(A,100,96)	RD1/4PU153J
R 353	(B,141,122)	RS1/16S471J
R 354	(B,163,125)	RS1/16S471J
R 357	(B,145,130)	RS1/16S223J
R 358	(B,160,134)	RS1/16S223J
R 405	(B,158,62)	RS1/16S681J
R 407	(B,159,83)	RS1/16S681J
R 408	(B,159,85)	RS1/16S681J
R 409	(B,159,86)	RS1/16S681J
R 410	(B,159,88)	RS1/16S681J
R 414	(B,156,88)	RS1/16S0R0J
R 420	(B,105,44)	RS1/16S681J
R 421	(B,159,79)	RS1/16S473J
R 454	(B,133,114)	RS1/16S103J
R 455	(B,141,132)	RS1/16S153J
R 456	(B,139,132)	RS1/16S221J
R 457	(A,120,54)	RD1/4PU681J
R 601	(B,102,49) (GS,CN)	RS1/16S473J
R 602	(B,102,51)	RS1/16S473J
R 603	(B,63,75)	RS1/16S103J
R 604	(B,60,75)	RS1/16S103J

Circuit Symbol and No.		Part No.
R 605	(B,84,21)	RS1/16S222J
R 606	(B,110,41)	RS1/16S104J
R 608	(B,104,63)	RS1/16S0R0J
R 609	(A,102,47)	RD1/4PU473J
R 610	(A,129,44)	RD1/4PU681J
R 611	(B,105,50)	RS1/16S473J
R 612	(B,111,14)	RS1/16S104J
R 613	(B,107,24)	RS1/16S473J
R 614	(B,123,36)	RS1/16S104J
R 620	(B,94,40)	RS1/16S0R0J
R 633	(B,65,40)	RS1/16S104J
R 720	(B,65,23)	RS1/16S473J
R 722	(B,55,27)	RS1/16S682J
R 723	(B,55,43)	RS1/16S682J
R 724	(B,45,16)	RS1/16S473J
R 725	(B,44,36)	RS1/16S682J
R 727	(A,35,22)	RD1/4PU682J
R 735	(B,56,28)	RS1/16S102J
R 739	(B,53,36)	RS1/16S0R0J
R 740	(B,54,34)	RS1/16S0R0J
R 744	(B,45,55)	RS1/16S221J
R 745	(B,54,24)	RS1/16S221J
R 746	(B,55,19)	RS1/16S221J
R 747	(A,88,33)	RD1/4PU221J
R 748	(B,90,24)	RS1/16S221J
R 750	(B,61,22)	RS1/16S0R0J
R 751	(B,55,21)	RS1/16S0R0J
R 801	(B,24,27)	RS1/16S153J
R 802	(B,28,20)	RS1/16S153J
R 803	(B,13,36)	RS1/16S222J
R 821	(B,22,33)	RS1/16S222J
R 823	(B,26,31)	RS1/16S103J
R 833	(B,105,16)	RS1/16S222J
R 834	(B,88,15)	RS1/16S222J
R 836	(B,131,21)	RS1/16S104J
R 837	(A,128,21)	RD1/4PU103J
R 838	(A,113,44)	RD1/4PU102J
R 841	(B,15,28)	RS1/16S1R0J
R 848	(A,100,41)	RD1/4PU102J
R 851	(A,97,41)	RD1/4PU102J
R 852	(B,112,17)	RS1/16S102J
R 853	(B,107,22)	RS1/16S102J
R 854	(B,105,14)	RS1/16S222J
R 855	(B,103,20)	RS1/16S222J
R 857	(B,104,18)	RS1/16S222J
R 858	(A,127,27)	RD1/4PU102J
R 911	(B,11,68)	RS1/16S223J
R 912	(A,14,68)	RD1/4PU152J
R 923	(B,10,110)	RS1/16S473J
R 931	(B,62,92)	RS1/16S473J
R 932	(B,65,85)	RS1/16S104J
R 933	(A,54,99)	RD1/4PU102J
R 934	(B,64,95)	RS1/16S473J
R 935	(B,64,92)	RS1/16S473J
R 936	(B,70,89)	RS1/16S473J
R 940	(B,66,74)	RS1/16S104J
R 941	(B,66,72)	RS1/16S104J
R 955	(B,42,76)	RS1/16S473J
R 961	(B,59,68)	RS1/16S102J
R 962	(B,45,66)	RS1/16S822J
R 981	(A,136,38)	RD1/4PU1R8J
R 991	(A,13,53)	RD1/4PU271J
R 992	(A,18,50)	RD1/4PU121J
R 995	(B,28,42)	RS1/16S103J
R 996	(B,26,44)	RS1/16S222J

CAPACITORS

C 151	(B,159,71)	CKSRYB224K16
C 152	(B,159,73)	CKSRYB224K16
C 153	(B,122,74)	CKSRYB105K10
C 154	(B,145,82)	CKSRYB105K10
C 155	(A,121,78)	CEJQ4R7M35
C 156	(A,143,88)	CEJQ4R7M35
C 157	(B,123,85)	CKSRYB153K50
C 158	(B,143,95)	CKSRYB153K50
C 161	(B,125,99)	CCSRCH100D50
C 162	(B,139,94)	CCSRCH100D50
C 163	(B,131,95)	CCSRCH100D50
C 164	(B,139,96)	CCSRCH100D50
C 165	(B,140,70)	CKSRYB104K16
C 166	(A,135,66)	CEJQ470M10
C 167	(A,124,66)	CEJQ100M16
C 301	(A,135,111)	CFTNA224J50
C 302	(A,145,119)	CFTNA224J50
C 303	(A,130,111)	CFTNA224J50
C 304	(A,143,125)	CFTNA224J50
C 309	(B,135,136)	CKSQYB225K10
C 310	(B,122,143)	CKSQYB225K10
C 312	(A,100,118)	CEJQ100M16
C 313	(B,40,122)	CKSRYB104K16
C 353	(A,132,102)	CEJQ2R2M50
C 354	(A,140,102)	CEJQ2R2M50
C 401	(B,164,67)	CKSRYB103K50
C 402	(B,153,56)	CKSRYB103K50
C 403	(A,150,53)	CEJQ470M6R3
C 404	(A,153,87)	CEJQ101M10
C 405	(B,166,94)	CKSRYB104K25
C 420	(B,112,68)	CCSRCH470J50
C 451	(A,134,131)	CEJQ330M10
C 601	(B,54,64)	CKSRYB104K25
C 604	(B,97,64)	CCSRCH200J50
C 605	(B,101,64)	CCSRCH200J50
C 610	(A,94,71)	CEJQ100M16
C 611	(B,97,68)	CKSRYB224K16
C 725	(B,120,74)	CKSRYB102K50
C 726	(B,148,84)	CKSRYB102K50
C 801	(B,11,36)	CKSRYB104K16
C 901	(A,46,121) 3300µF/16V	CCH1494
C 911	(A,16,76)	CEJQ470M10
C 912	(B,12,64)	CKSRYB103K50
C 913	(A,25,86) 470µF/16V	CCH1331
C 921	(A,14,115)	CEJQ101M16
C 922	(A,18,107)	CEJQ221M10
C 923	(B,18,110)	CKSRYB103K50
C 924	(B,17,101)	CKSRYB103K50
C 961	(B,50,66)	CKSRYB473K50
C 963	(A,46,69)	CEJQ100M16
C 982	(B,145,40)	CKSRYB103K50
C 983	(A,147,35)	CEJQ220M16

Circuit Symbol and No.		Part No.
C 991	(B,20,50)	CKSRYB473K50
C 992	(A,26,60)	CEJQ101M16
C 994	(A,30,34) 470µF/16V	CCH1331

B
Unit Number:
Unit Name:Keyboard Unit

MISCELLANEOUS

IC 1801	(B,29,96) IC	PD6340A
IC 1802	(A,15,27) IC	TSOP4840SB1
D 1801	(B,19,40) Diode	MA152WK
D 1802	(B,24,40) Diode	MA152WA
D 1803	(A,25,38) (GS,CN) LED	CL-490SWFSD(12)
	(A,25,38) (CS) LED	CL-490S-WF-SD
D 1804	(A,25,128) (GS,CN) LED	CL-490SWFSD(12)
	(A,25,128) (CS) LED	CL-490S-WF-SD
D 1805	(A,13,22) LED	SML-310PT
D 1806	(A,26,9) LED	SML-310PT
D 1807	(A,30,27) LED	SML-310PT
D 1808	(A,39,50) LED	SML-310PT
D 1809	(A,5,10) LED	SML-310PT
D 1810	(A,34,9) LED	SML-310PT
D 1811	(A,39,84) LED	SML-310PT
D 1812	(A,39,73) LED	SML-310PT
D 1813	(A,39,61) LED	SML-310PT
D 1814	(A,39,96) LED	SML-310PT
D 1815	(A,39,107) LED	SML-310PT
D 1816	(A,39,119) LED	SML-310PT
D 1817	(A,39,35) LED	CL-190UB2-X
D 1818	(A,39,131) LED	CL-190UB2-X
X 1801	(B,37,83) Ceramic Resonator 5.00MHz	CSS1547
S 1827	(A,23,19) Encoder(VOLUME)	YSD5002
IL 1801	(B,23,147) Lamp 40mA,14V	CEL1651
LCD1801	(A,16,45) (GS,CN) LCD	YAW5027
	(A,16,45) (CS) LCD	YAW5015

RESISTORS

R 1801	(B,23,43)	RS1/16S222J
R 1802	(B,20,43)	RS1/16S222J
R 1803	(B,22,33)	RS1/16S151J
R 1804	(B,22,31)	RS1/16S181J
R 1805	(B,19,34)	RS1/16S181J
R 1806	(B,29,142)	RS1/16S181J
R 1807	(B,26,142)	RS1/16S181J
R 1808	(B,13,31)	RS1/16S181J
R 1809	(B,24,33)	RS1/16S151J
R 1810	(B,25,30)	RS1/16S181J
R 1811	(B,21,35)	RS1/16S181J
R 1812	(B,29,140)	RS1/16S181J
R 1813	(B,26,140)	RS1/16S181J
R 1814	(B,15,31)	RS1/16S181J
R 1815	(B,25,33)	RS1/16S151J
R 1816	(B,25,29)	RS1/16S151J
R 1817	(B,22,35)	RS1/16S151J
R 1818	(B,29,137)	RS1/16S151J
R 1819	(B,26,137)	RS1/16S151J
R 1820	(B,17,31)	RS1/16S0R0J
R 1821	(B,27,25)	RS1/16S151J
R 1831	(B,33,23)	RS1/16S472J
R 1832	(B,35,23)	RS1/16S472J
R 1833	(B,12,21)	RS1/16S2R2J
R 1835	(B,20,20)	RS1/16S121J

CAPACITORS

C 1801	(B,18,20)	CKSRYB474K10
C 1802	(B,27,52)	CKSRYF104Z25
C 1811	(A,25,32)	CKSRYF104Z25
C 1812	(A,20,129)	CKSRYF104Z25
C 1813	(A,39,33)	CKSRYF104Z25
C 1814	(A,39,133)	CKSRYF104Z25

C
Unit Number:CWX3096
Unit Name:CD Core Unit(S10.1)

MISCELLANEOUS

IC 201	(A,39,24) IC	UPD63763GJ
IC 203	(B,45,78) IC	NJM2885DL1-33
IC 301	(A,49,88) IC	BA5835FP
IC 701	(A,48,51) IC	PE5454A
IC 703	(A,30,44) IC	S-812C33AUA-C2N
Q 101	(A,20,22) Transistor	2SA1577
Q 701	(B,62,59) Transistor	UN2111
L 203	(A,53,32) Inductor	CTF1389
L 207	(A,53,31) Inductor	CTF1389
L 209	(A,26,20) Inductor	CTF1389
L 703	(A,64,49) Inductor	CTF1389
X 201	(A,51,35) Ceramic Resonator 16.934MHz	CSS1603
X 701	(A,59,53) Ceramic Resonator 4.00MHz	CSS1652
S 901	(A,15,43) Switch(HOME)	CSN1067
S 903	(B,53,100) Switch(DSCSNS)	CSN1068
S 904	(B,35,108) Switch(12EJ)	CSN1067
S 905	(B,48,109) Switch(8EJ)	CSN1067

RESISTORS

R 101	(A,22,24)	RS1/10SR2R4J
R 102	(A,22,26)	RS1/10SR2R4J
R 103	(A,25,25)	RS1/10SR2R7J
R 201	(A,53,16)	RS1/16SS102J
R 202	(A,55,21)	RS1/16SS333J
R 221	(B,31,18)	RS1/16SS103J
R 222	(B,26,18)	RS1/16SS103J
R 225	(A,27,8)	RS1/16SS103J
R 226	(A,27,7)	RS1/16SS393J
R 227	(B,33,10)	RS1/16SS562J
R 228	(B,36,8)	RS1/16SS122J
R 229	(B,34,8)	RS1/16SS472J
R 232	(B,35,10)	RS1/16SS122J
R 241	(B,42,28)	RS1/16SS333J
R 243	(B,44,28)	RS1/16SS333J
R 245	(A,39,38)	RS1/16SS333J
R 301	(A,48,78)	RS1/16SS183J
R 302	(A,42,78)	RS1/16SS822J
R 304	(A,50,78)	RS1/16SS183J
R 305	(A,42,77)	RS1/16SS822J
R 307	(A,36,85)	RS1/16SS183J

Circuit Symbol and No.		Part No.
R 308	(A,32,83)	RS1/16SS183J
R 309	(A,38,89)	RS1/16SS183J
R 310	(A,35,88)	RS1/16SS183J
R 601	(B,43,59)	RS1/16S101J
R 602	(B,41,62)	RS1/16S101J
R 606	(B,44,67)	RS1/16S0R0J
R 607	(B,43,56)	RS1/16SS0R0J
R 608	(B,36,67)	RS1/16SS0R0J
R 705	(B,50,59)	RS1/16SS221J
R 706	(B,57,61)	RS1/16SS221J
R 707	(A,62,47)	RS1/16SS473J
R 708	(B,50,57)	RS1/16SS221J
R 710	(A,28,77)	RS1/16SS102J
R 711	(B,44,53)	RS1/16SS221J
R 714	(B,51,53)	RS1/16SS473J
R 716	(A,63,56)	RS1/16SS472J
R 719	(B,49,45)	RS1/16SS221J
R 720	(B,46,52)	RS1/16SS471J
R 724	(A,62,42)	RS1/16S473J
R 725	(B,57,43)	RS1/16SS222J
R 726	(A,52,41)	RS1/16SS103J
R 727	(B,50,54)	RS1/16SS473J
R 729	(A,57,40)	RS1/16SS223J
R 730	(A,65,41)	RS1/16SS473J
R 731	(A,53,41)	RS1/16SS104J
R 737	(A,41,42)	RS1/16SS104J
R 740	(A,35,46)	RS1/16SS473J
R 742	(A,50,41)	RS1/16SS104J
R 746	(B,60,56)	RS1/16SS104J
R 750	(A,39,59)	RS1/16SS473J
R 754	(B,48,60)	RS1/16SS102J
R 755	(A,43,61)	RS1/16SS102J
R 765	(B,51,40)	RAB4CQ221J
R 769	(B,48,40)	RAB4CQ221J
R 773	(B,39,37)	RAB4CQ221J
R 777	(B,48,51)	RS1/16SS221J
R 778	(B,48,52)	RS1/16SS221J
R 779	(B,45,54)	RS1/16SS221J
R 901	(B,52,65)	RAB4CQ221J
R 905	(B,54,60)	RS1/16SS221J
R 906	(B,56,68)	RS1/16SS221J
R 908	(B,45,69)	RS1/16SS0R0J
R 910	(B,44,69)	RS1/16SS0R0J
R 911	(B,40,73)	RS1/16SS102J

CAPACITORS

C 103	(B,14,8) 100µF/16V	CCH1504
C 105	(A,19,15)	CKSSYB104K10
C 108	(B,39,16)	CKSSYB104K10
C 110	(A,18,6)	CKSSYB104K10
C 201	(A,51,14)	CKSSYB102K50
C 202	(B,50,17)	CKSSYB104K10
C 203	(A,55,23)	CKSSYB104K10
C 204	(B,28,22)	CEVW220M6R3
C 205	(A,53,25)	CKSSYB104K10
C 208	(B,44,25)	CKSSYB104K10
C 209	(A,54,29)	CKSSYB104K10
C 212	(A,45,37)	CKSRYB105K10
C 216	(A,25,8)	CKSSYB332K50
C 217	(A,28,12)	CKSSYB104K10
C 218	(A,25,7)	CKSSYB473K10
C 219	(A,34,7)	CKSSYB104K10
C 220	(A,33,11)	CKSSYB182K50
C 221	(B,35,6)	CKSSYB104K10
C 222	(B,35,8)	CCSSCH560J50
C 223	(B,33,8)	CCSSCH4R0C50
C 224	(B,40,16)	CKSSYB104K10
C 225	(B,45,14)	CKSSYB103K16
C 226	(B,43,12)	CCSSCH680J50
C 227	(A,45,10)	CCSSCH470J50
C 228	(A,49,9)	CKSSYB103K16
C 234	(B,36,81)	CEVW221M4
C 237	(B,38,29)	CKSSYB104K10
C 239	(B,34,10)	CCSSCH220J50
C 242	(B,58,32)	CKSSYB104K10
C 243	(B,39,76)	CKSSYB104K10
C 244	(B,49,70)	CKSSYB104K10
C 246	(A,23,19)	CKSSYB104K10
C 251	(B,28,31)	CKSRYB102K50
C 260	(A,54,25)	CKSSYB104K10
C 301	(A,43,78)	CKSSYB221K50
C 302	(A,50,79)	CKSSYB221K50
C 303	(A,37,85)	CKSSYB472K25
C 304	(A,39,89)	CKSSYB103K16
C 305	(B,34,92)	CEVW101M16
C 307	(B,56,90)	CKSSYB104K10
C 601	(B,46,60)	CCSRCH102J50
C 602	(B,41,65)	CCSRCH102J50
C 701	(A,64,46)	CKSSYB104K10
C 703	(B,50,61)	CKSSYB103K16
C 706	(B,50,62)	CKSSYB104K10
C 707	(A,36,45)	CKSSYB104K10
C 712	(A,22,42)	CKSRYB224K16
C 714	(B,60,45)	CKSSYB104K10
C 716	(A,61,40)	CKSSYB103K16
C 722	(B,52,48)	CKSQYB475K6R3
C 723	(A,26,41)	CKSRYB105K10
C 903	(B,56,70)	CKSSYB471K50
C 906	(A,40,77)	CKSRYB224K16
C 907	(A,47,76)	CKSSYB103K16
C 910	(B,60,71)	CKSQYB225K10

Miscellaneous Parts List

	Pickup Unit(P10)(Service)	CXX1647
M 1	Motor Unit(SPINDLE)	CXC4440
M 2	Motor Unit(LOADING/CARRIAGE)	CXB8933

6. ADJUSTMENT
6.1 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.

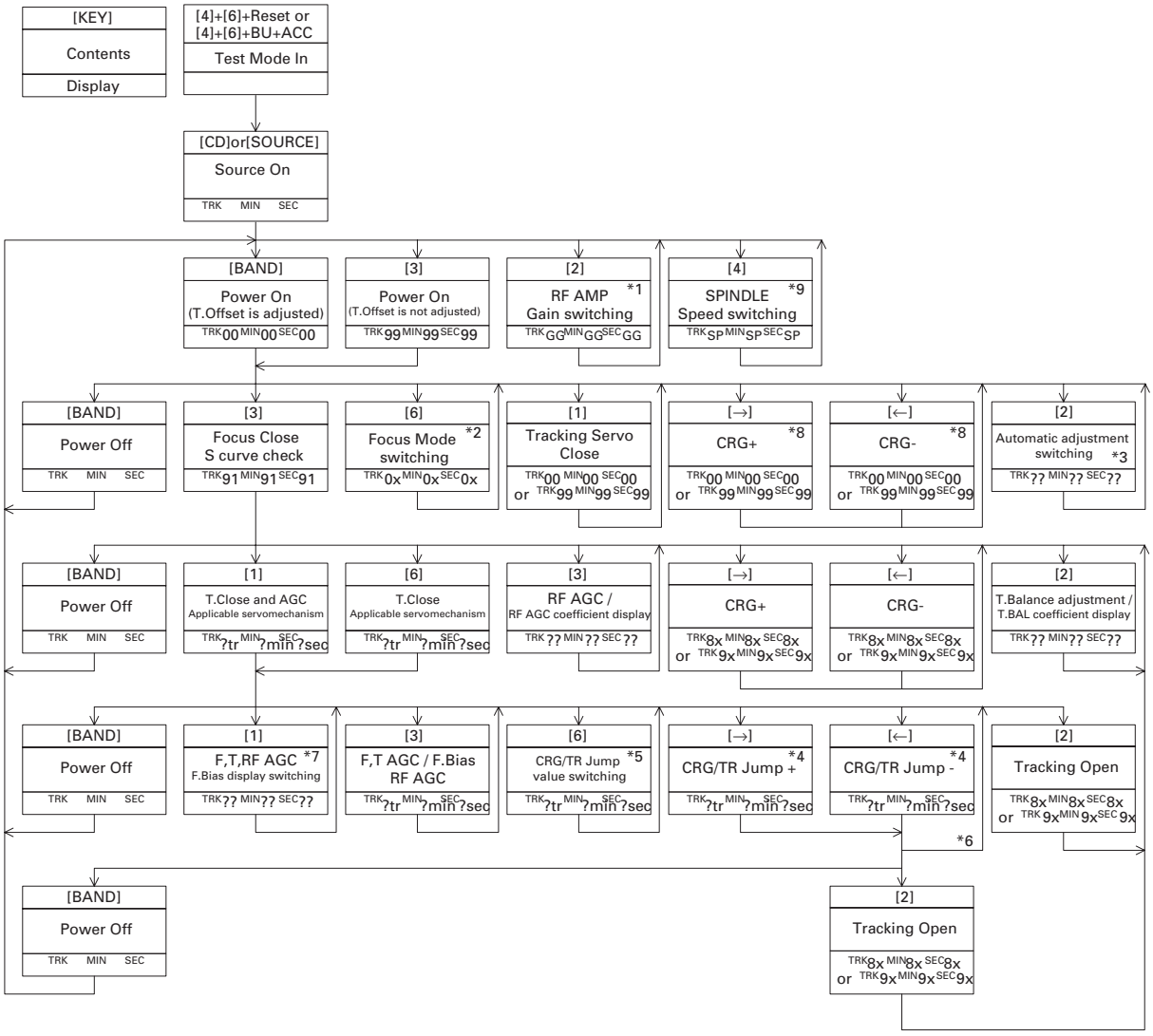
• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

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



*1) TYP (TRK MIN SEC) → -6dB (TRK 06 MIN 06 SEC 06) → -12dB (TRK 12 MIN 12 SEC 12)

*2) Focus Close (TRK 00 MIN 00 SEC 00 / (TRK 99 MIN 99 SEC 99)) → S.Curve check setting (TRK 01 MIN 01 SEC 01) → F EQ measurement setting (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) Applicability : A, B, C, D, E, F
TYP(1X) (TRK MIN SEC) → 2X (TRK 22 MIN 22 SEC 22) → 1X (TRK 11 MIN 11 SEC 11)
As for the double speed (2x), audio output cannot be supported

Applicability : G
TYP(2X) (TRK MIN SEC) → 1X (TRK 11 MIN 11 SEC 11) → 2X (TRK 22 MIN 22 SEC 22)

[Key]	Operation Test Mode
[BAND]	Power On / Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	U.CLS and AGC and Applicable servomechanism / AGC, AGC display setting
[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
[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

6.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

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

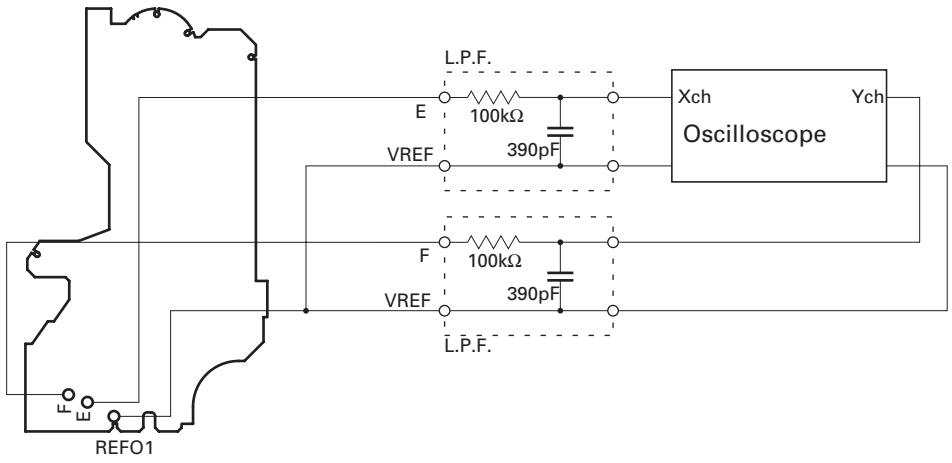
• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

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

CD CORE UNIT(S10.1)



• **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.

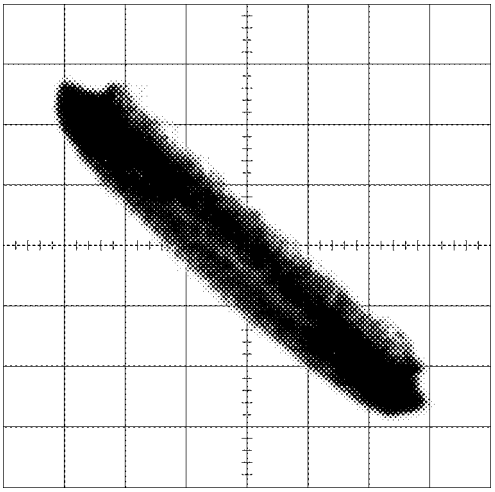
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

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

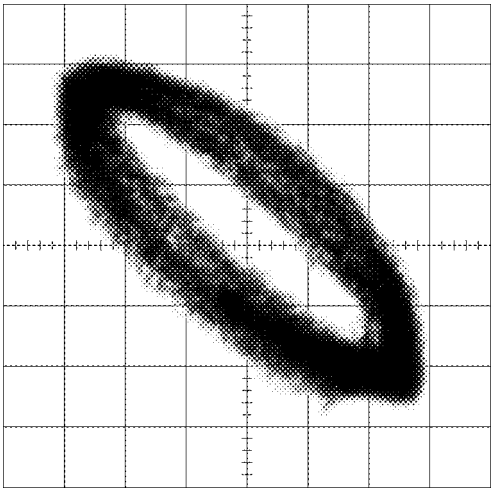
Grating waveform

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

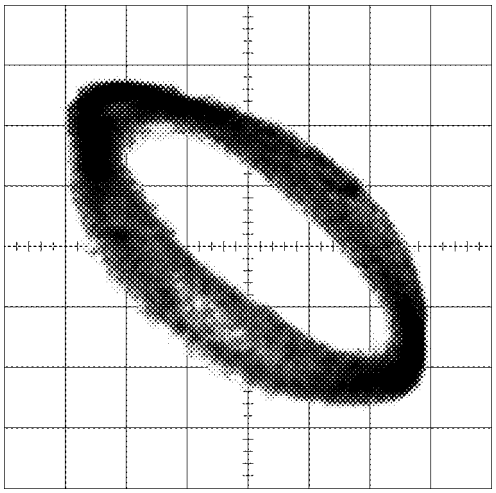
0°



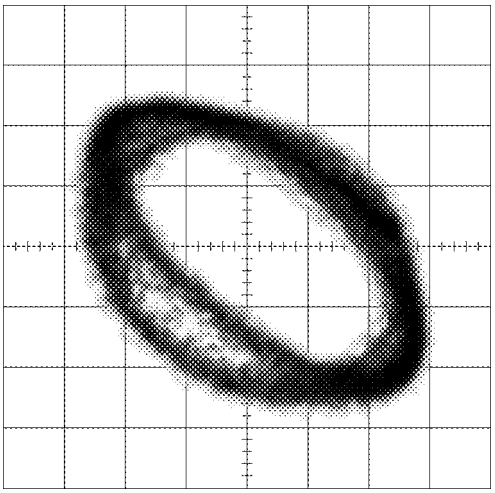
30°



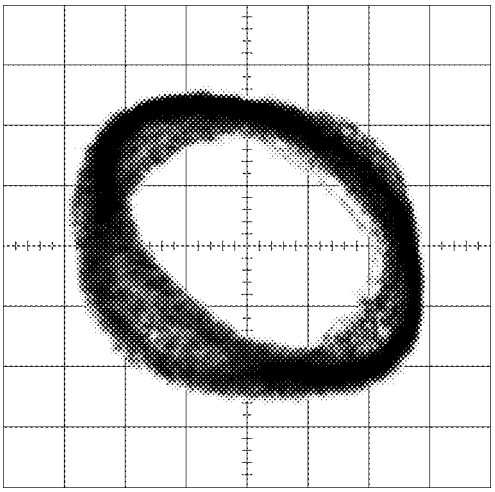
45°



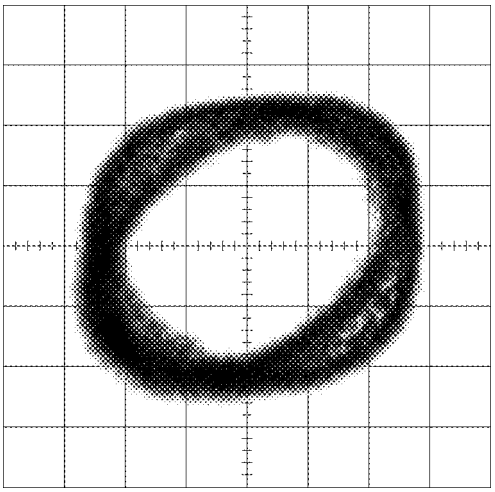
60°



75°



90°



6.3 ERROR MODE

● Error Messages

Error is displayed with number for Error cause when CD is inoperative or stops with Error during operation. The purpose is to reduce nonsense calls from users as well as to assist all related analysis and repair for defects at service station.

(1) Basic Display Method

1) When CSMOD (CD mode area for system) is SERRORM, Error code will be written in DMIN (minutes area for display), DSEC (seconds area for display). The same data shall be written in DMIN and DSEC. DTNO is blank as usual.

2) Display Example of Head Unit

The following is about LCD display ability. xx is Error number.

8 digits	6 digits	4 digits
ERROR–xx	ERR–xx OR Err–xx	E–xx

(2) Error Code List

No.	Classification	Contents	Details • Cause
10	Electricity	Carriage Home NG	CRG can't move to the inner. CRG can't move from the inner. → HOME SW failure, CRG movement failure.
11	Electricity	Focus Search NG	Focus can't be caught. → Back of Disc / Severe dirt and vibration.
12	Electricity	Spindle Lock NG Subcode NG RF-amp NG	Not spindle, lock. Wrong subcode (can't read). → Defective Spindle. Scratch and dirt on Disc. Intense vibration. The appropriate gain of the RF amp cannot be obtained. → Defective spindle. → Scratched or dirty disc. Severe vibration. Abnormal CD signals. → Blanc CD-R disc. Disc inserted upside down.
17	Electricity	Setup NG	AGC protection doesn't work, out of Focus soon. → Scratch on Disc/Severe dirt and vibration.
22	Disc	Impossible to play	There is no playable MP3 or WMA file present in a disc. → No MP3 or WMA file exists in a CD-ROM disc inserted.
23	Disc	File Format NG	Contents are stored in an incompatible file format. → The contents in a CD-ROM disc inserted are recorded in a file format other than ISO9660 Level-1 and 2.
30	Electricity	Search Time Out	Can't reach the target address. → Defective CRG/tracking, or scratch on Disc.
44	Disc	Impossible to play	There is no playable TRK No. present in a disc. → All TRK Nos. In a disc inserted are specified as a track which should be skipped, in the track skip information.
50	Mecha	Disc Load / Eject NG	Disc loading/ejection cannot be complete. → Foreign objects entered into the mechanism. Disc caught in between during loading/ejection.
A0	System	Power NG	Power supply (VD) isn't connected to the ground. → Defective SW transistor. Abnormal power (failed connector)

Note : Error doesn't display in mechanism only. (CD off causes mechanism off)
If TOC can't be read, error wouldn't occur, but mechanism still continues its operation.
The upper digits of error code is mainly classified by 3 kinds as follows:
1x: Setup related error, 3x: Search related error, Ax: Other errors.

6.4 SYSTEM MICROCOMPUTER TEST PROGRAM

● PCL Output

In the normal operation mode (with the detachable panel installed, the ACC switched ON, the standby mode cancelled), shift the TESTIN (Pin 15) terminal to H. The clock signal is output from the PCL terminal (Pin 14). The frequency of the clock signal is 786.432kHz that is one 16th of the fundamental frequency. The clock signal should be 786.432kHz ± 31.5Hz. If the clock signal is out of the range, the X'tal (X601) should be replaced with new one.

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 Release the two latchs and then remove the Grille Assy.

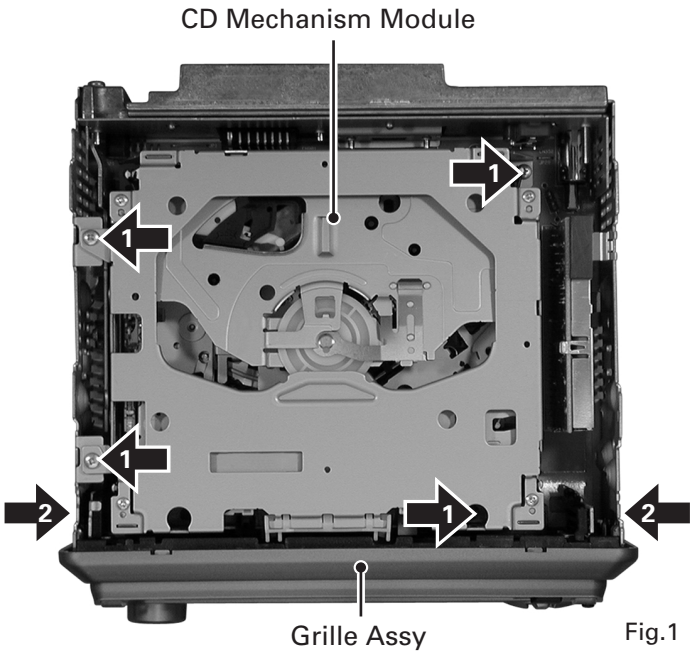


Fig.1

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

1 Remove the screw.

2 Straighten the tabs at three locations indicated.

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

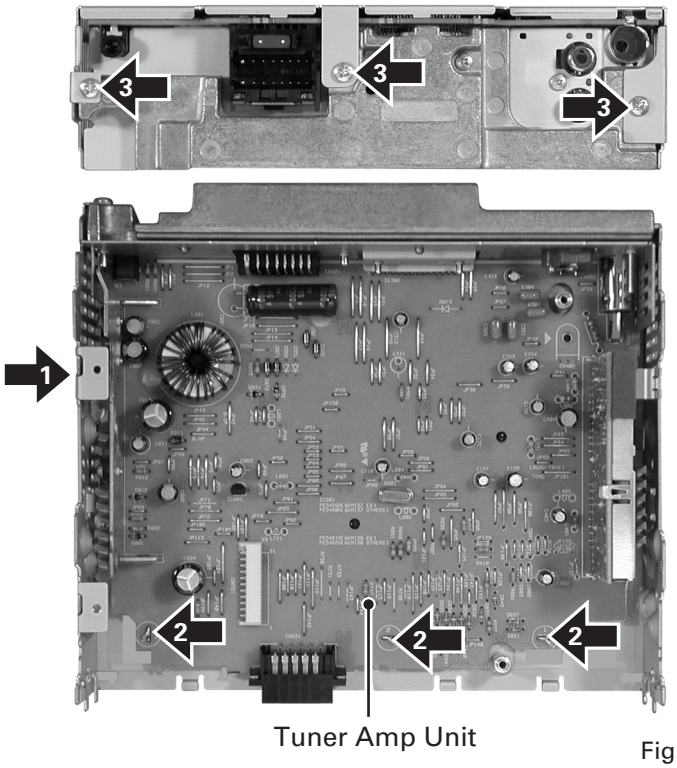
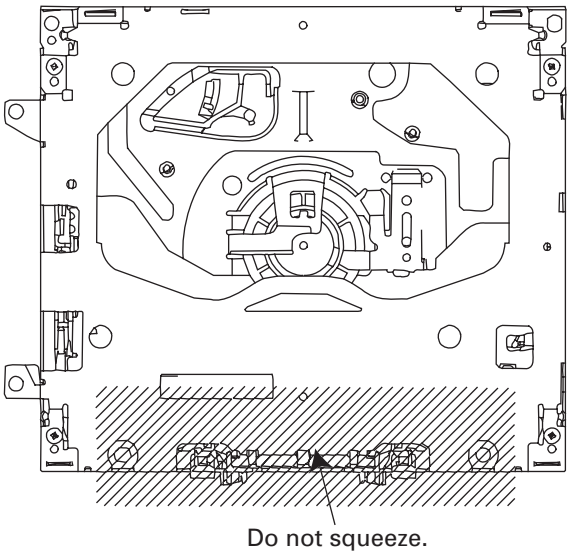


Fig.2

● How to hold the Mechanism Unit

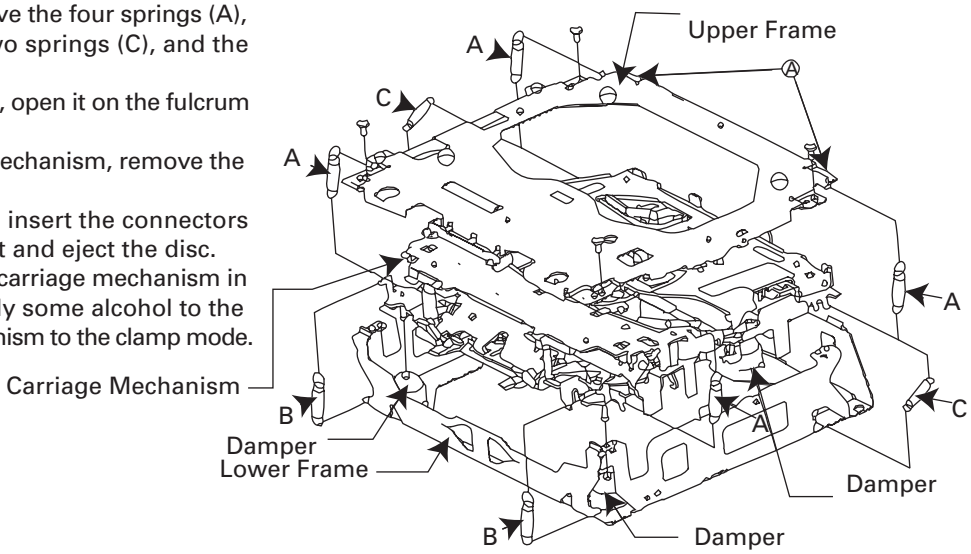
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● 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.

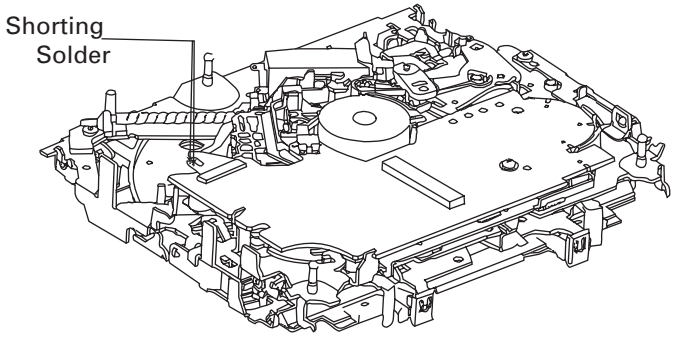
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.

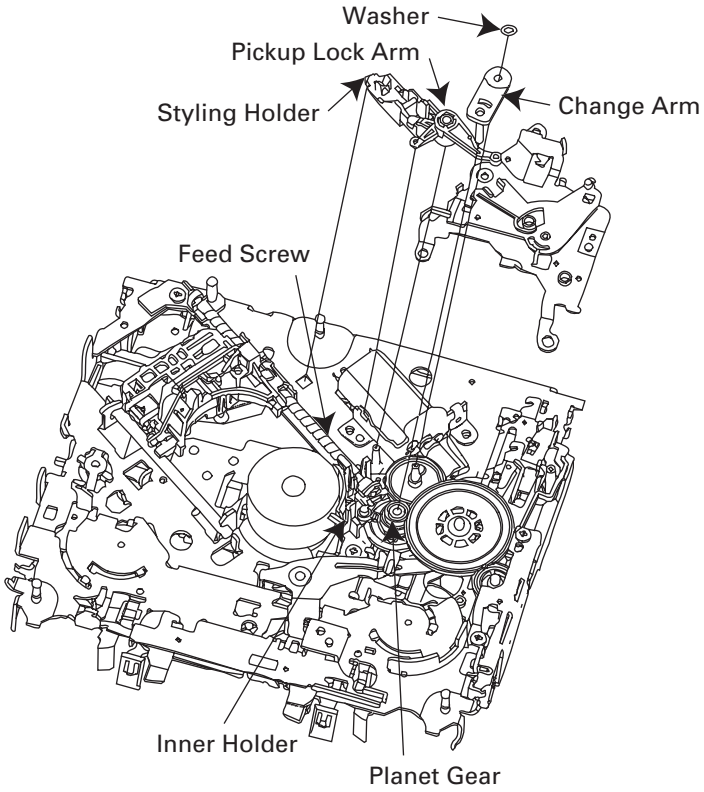


● Removing the Pickup Unit

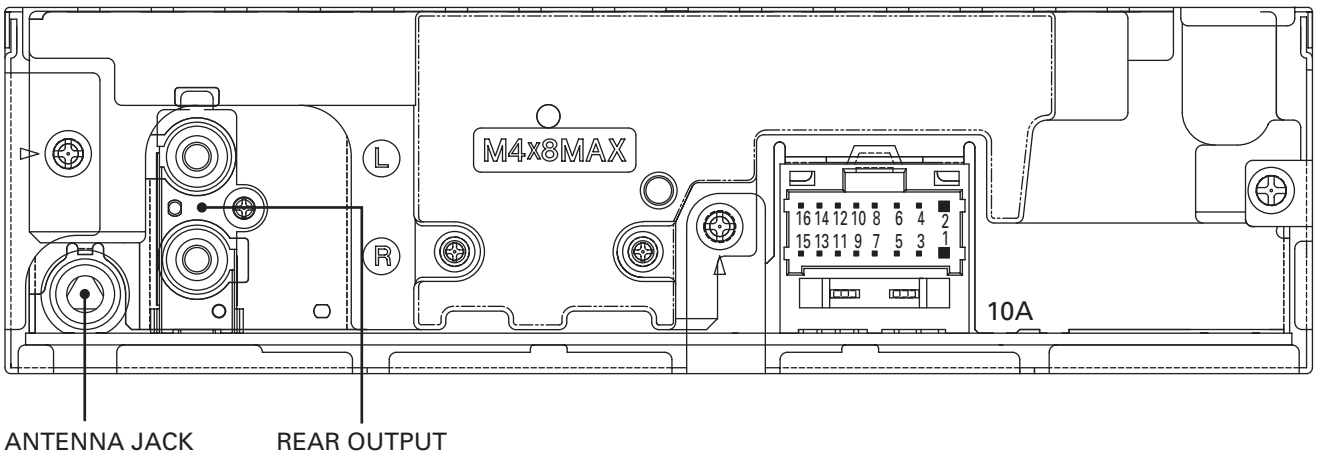
1. Apply shorting solder to the Pickup flexible cable. Disconnect the cable.
2. Set the mechanism to the clamp mode.
3. Remove the lead wires from the inner holder.
4. Remove the washer, styling holder, change arm, and pickup lock arm.
5. While releasing from the hook of the inner holder, lift the end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



Pin No.		Pin No.	
1	B.UP	9	RL-
2	GND	10	FL-
3	ACC	11	RL+
4	NC	12	FL+
5	NC	13	RR-
6	B.REM	14	FR-
7	NC	15	RR+
8	NC	16	FR+

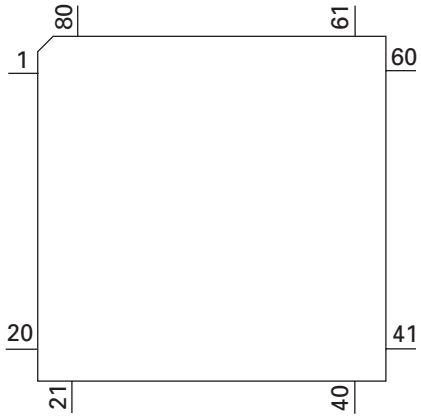
7.2 PARTS
7.2.1 IC

● **Pin Functions(PE5460A)**

Pin No.	Pin Name	I/O	Function and Operation
1	MODEL1	I	Model select input
2, 3	NC		Not used
4	AVSS		GND
5, 6	NC		Not used
7	AVREF1		VDD
8	KYDT	I	Display microcomputer data input
9	DPDT	O	Display microcomputer communication data output
10	ADPW	O	A/D converter power supply output
11	TUNPDI	I	PLL data input
12	TUNPDO	O	PLL data output
13	TUNPCK	O	PLL clock output
14	PCL	O	Clock adjustment output
15	TESTIN	I	Test program input
16	BSI	I	P-BUS serial data input
17	BDATA	O	P-BUS serial data output
18	BSCK	I/O	P-BUS serial clock input/output
19, 20	NC		Not used
21	$\overline{\text{SWVDD}}$	O	Display microcomputer chip select output
22	ILMPW	O	Illumination power output
23	NC		Not used
24	XRST	O	CD LSI reset control output
25	$\overline{\text{BRST}}$	O	P-PUS reset signal output
26	XSTB	O	CD LSI strobe output
27	$\overline{\text{BRXEN}}$	I/O	P-BUS reception enable signal input/output
28	CONT	O	Driver output
29	LOEJ	O	Load/eject output
30	CLCONT	O	Driver control output
31	NC		Not used
32	DALMON	O	Output for dark current reduction circuit
33	VSS		GND
34	TELIN	I	TEL mute input
35, 36	ROT0, 1	I	Rotary volume input 0, 1
37	ROMDATA	O	ROM collection data output
38	ROMCLK	O	ROM collection clock output
39	ROMCS	O	ROM collection chip select output
40	RECEIVE		RDS decoder receiving output (Not used)
41	$\overline{\text{BSRQ}}$	I	P-BUS serial pole request input
42	NC		Not used
43	SYSPW	O	System power output
44, 45	NC		Not used
46	STRKEY2	I	Wired remote control input
47	$\overline{\text{ISENS}}$	I	Illumination input
48	MUTE	O	System mute output
49	ANTPW	O	Auto antenna control output
50	NC		Not used
51	VST	O	E.VOL strobe output
52	VDT	O	E.VOL data output
53	VCK	O	E.VOL clock output
54	NC		Not used
55	TUNPCE2	O	PLL chip enable output 2
56	TUNPCE	O	PLL chip enable output
57	RDT		RDS LK input (Not used)
58	RDSLK		RDS clock input (Not used)
59	RDS57K		RDS 57K input (Not used)
60	RESET		Reset
61	LDET	I	PLL lock detection input
62	RCK	I	RDS clock input

Pin No.	Pin Name	I/O	Function and Operation
63	$\overline{\text{ASENS}}$	I	ACC sense input
64	$\overline{\text{BSENS}}$	I	Back up sense input
65	$\overline{\text{DSENS}}$	I	Grille detach sense input
66	$\overline{\text{SOURCE}}$	I	Source sense input
67	VSS		GND
68	VDD		VDD
69, 70	X2, 1		Crystal oscillator connection pin
71	IC(VPP)		GND
72	NC		Not used
73	VSS		VSS
74	AVDD		VDD
75	AVREF1		VDD
76	SL	I	Signal level input
77	TEMP	I	Temperature detection input
78	VDSENS	I	VD power supply short circuit input
79	DISCSENS	I	DISC loading detection input
80	STRKEY1	I	Wired remote control input

* PE5460A



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

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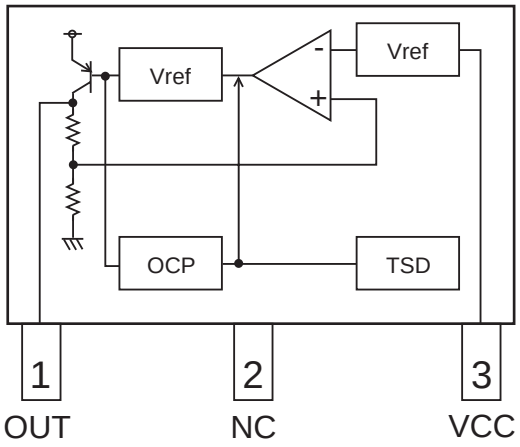
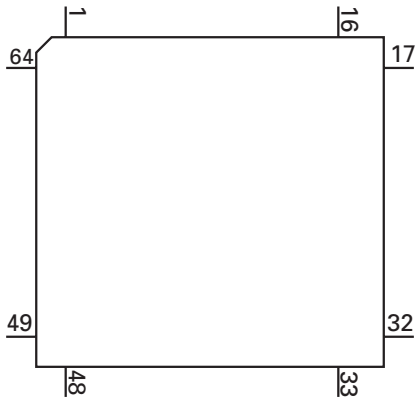


● Pin Functions(PD6340A)

Pin No.	Pin Name	I/O	Function and Operation
1-5	SEG4-0	O	LCD segment output
6-9	COM3-0	O	LCD common output
10	VLCD		LCD drive power supply
11-14	KST3-0	O	Key strobe output
15,16	KDT0,1	I	Key data input (analogue input)
17	REW	I	Remote control reception input
18	DPDT	I	Display data input
19	NC		Not used
20	KYDT	O	Key data output
21	MODA		GND
22	X0		Crystal oscillator connection pin
23	X1		Crystal oscillator connection pin
24	VSS		GND
25,26	KDT2,3	I	Key data input
27	NC		Not used
28	KST4	O	Key strobe output
29-32	NC		Not used
33-55	SEG35-13	O	LCD segment output
56	VDD		Power supply
57-64	SEG12-5	O	LCD segment output

* PD6340A



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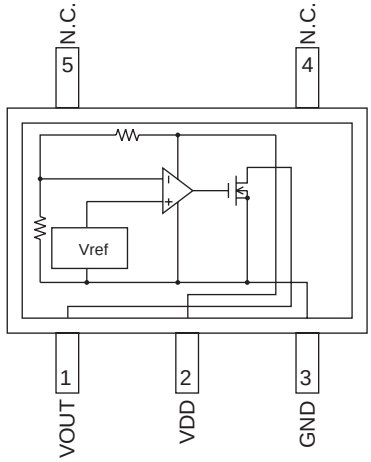
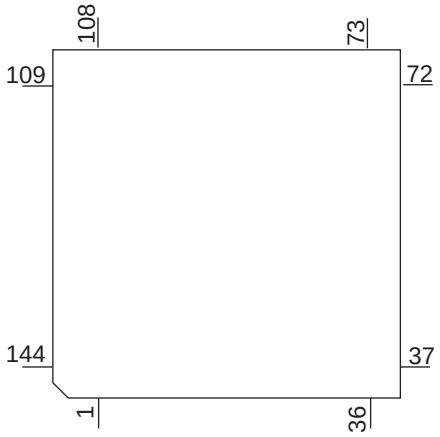


● Pin Functions(UPD63763GJ)

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	$\overline{\text{RESET}}$	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	$\overline{\text{CS}}$	I	Chip selection
18	ASTB	I	Address strobe
19	$\overline{\text{READ}}$	I	Control signals(read)
20	$\overline{\text{WRITE}}$	I	Control signals(write)
21	$\overline{\text{WAIT}}$	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	$\overline{\text{XTAL}}$	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	$\overline{\text{XTALEN}}$	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/RFOK	O	Output of PLCK/Output of RFOK
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	($\overline{\text{RCS}}$)	O	DRAM $\overline{\text{CS}}$
65	RA11	O	Output of DRAM address 11
66	(CKE)	O	Output of DRAM CKE
67	$\overline{\text{RAS}}$	O	Output of DRAM $\overline{\text{RAS}}$
68	$\overline{\text{CAS0}}$(LDQM)	O	Output of DRAM lower $\overline{\text{CAS}}$(LDQM)
69	$\overline{\text{CAS1}}$(UDQM)	O	Output of DRAM upper $\overline{\text{CAS}}$(UDQM)
70	$\overline{\text{WE}}$	O	Output of DRAM $\overline{\text{WE}}$
71	$\overline{\text{OE}}$($\overline{\text{CAS}}$)	O	Output of DRAM $\overline{\text{OE}}$($\overline{\text{CAS}}$)
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

* UPD63763GJ

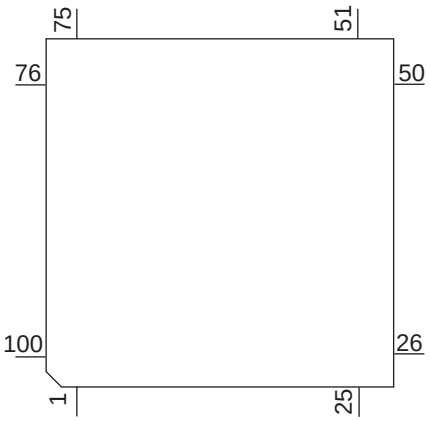


● Pin Functions(PE5454A)

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	NC			Not used
5	EVDD			E power supply Positive power supply
6, 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	$\overline{\text{RESET}}$	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	NC			Connected to EVDD or EVSS via the resistor
18	NC			Not used
19	$\overline{\text{XINT}}$	I	C	CD LSI interruption signal input
20	NC			Connected to VSS via the resistor
21	$\overline{\text{BRST}}$	I		P-Bus reset input
22	BSI	I		P-Bus serial data input
23	BSO	O	C	P-Bus serial data output
24	$\overline{\text{BSCK}}$	I/O	/C	P-Bus serial clock input/output
25	FTXD	O	C	For flash rewriting output(transmitted signal)
26	FRXD	I		For flash rewriting input(received signal)
27	BRXEN	I/O	/C	It is possible to receive P-Bus input/output
28	$\overline{\text{BSRQ}}$	I/O	/C	P-Bus service request demand input/output
29	NC			Not used
30	DSCSNS	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	$\overline{\text{EMPH}}$	O	C	Emphasis information output
39-42	NC			Not used
43	$\overline{\text{ADENA}}$	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	$\overline{\text{XRST}}$	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	NC			Not used
59	$\overline{\text{XCS}}$	O	C	CD LSI chip selection output
60	NC			Not used
61	$\overline{\text{XWAIT}}$	I		CD LSI write control signal input
62	CLKOUT	O	C	Internal system clock output(Open)
63	LOCK	I		Spindle lock input
64	NC			Not used
65	$\overline{\text{XWRITE}}$	O		CD LSI write control signal output
66	NC			Not used

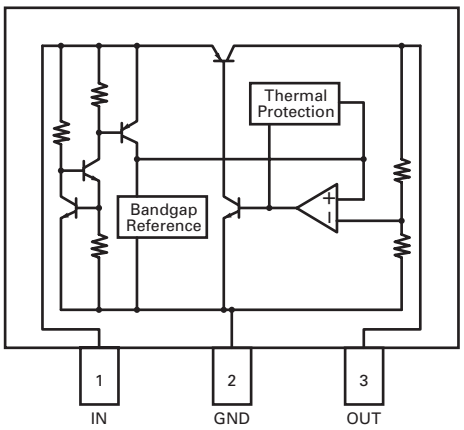
Pin No.	Pin Name	I/O	Format	Function and Operation
67	$\overline{\text{XREAD}}$	O		CD LSI read control signal output
68	XASTB	O		CD LSI address strobe output
69	BVSS			B power supply GND
70	BVDD			B power supply Positive power supply
71-83	AD0-12	I/O	/C	Address/data Bus 0-12
84-86	NC			Not used
87	FMODE	I		For flash rewriting Connected to VSS via the resistor
88	FLRQ	O	C	For flash rewriting
89-93	NC			Not used
94	$\overline{\text{CSENS}}$	I		Flap closing sense input
95	TYPE_A/D	I		CD-DA analog/digital output change setup
96	$\overline{\text{TESTIN}}$	I		Chip check test program starting input
97	HOME	I		Home SW sense input
98	TEMP	I		Temperature information sense input
99	VDSENS	I		VD power supply short sense input
100	NC			Not used

* PE5454A

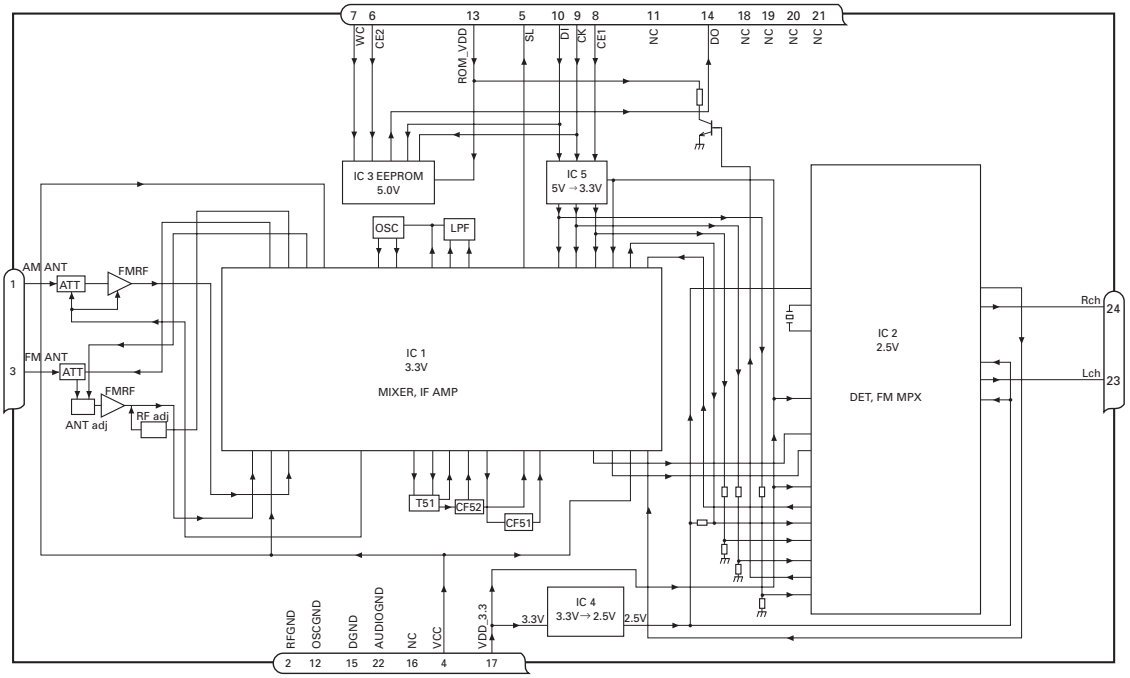


Format	Meaning
C	CMOS

NJM2885DL1-33



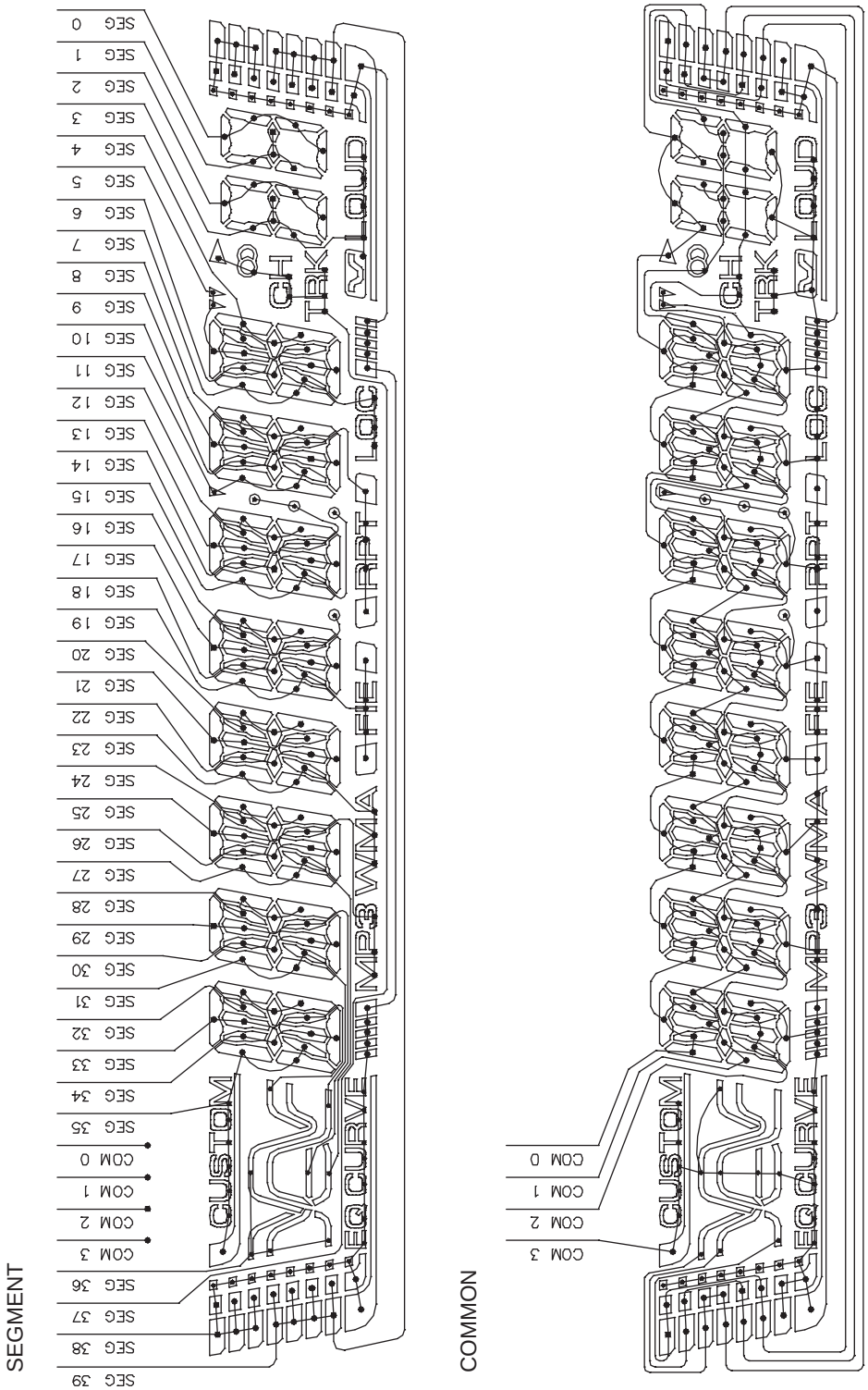
● FM/AM Tuner Unit



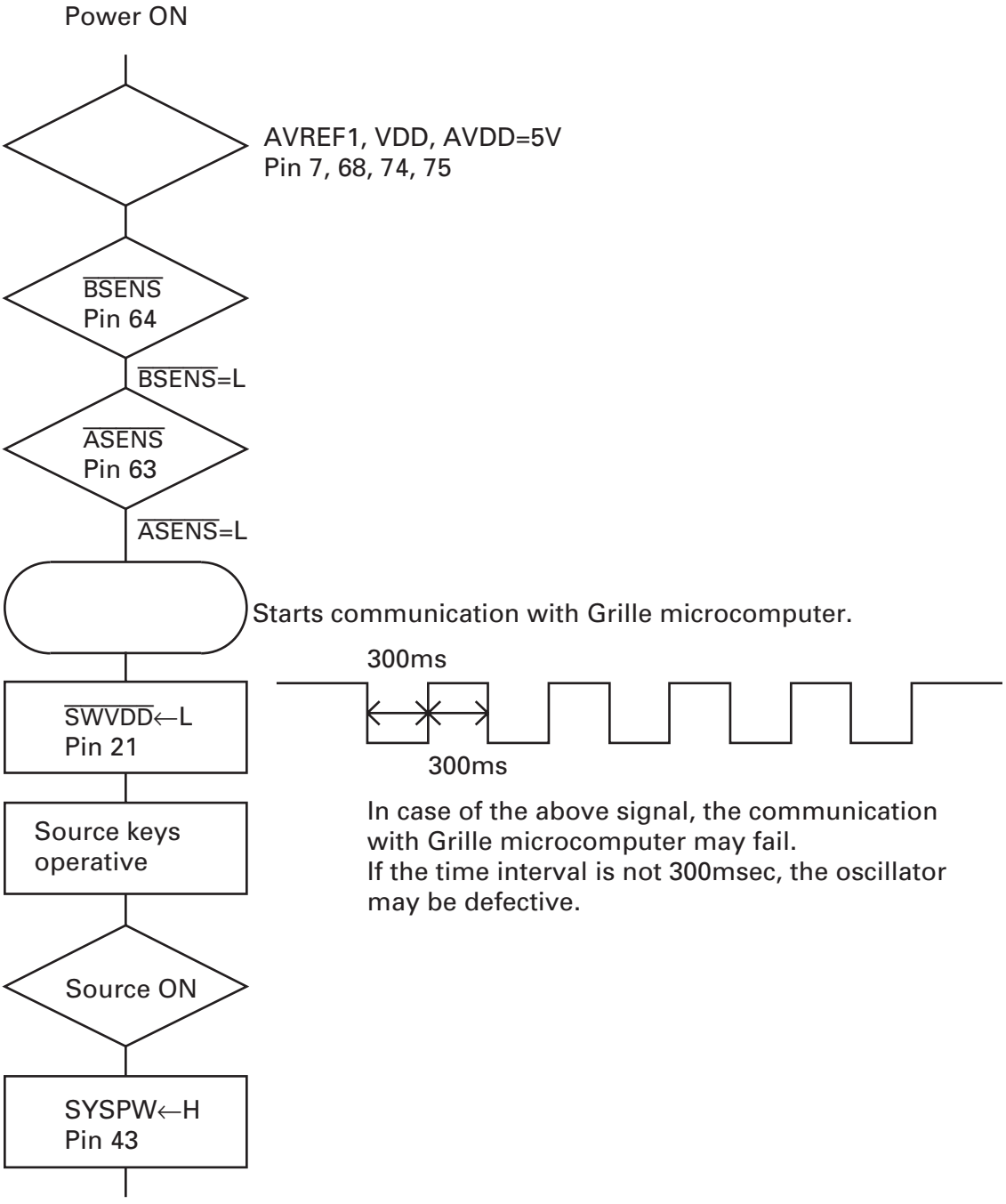
No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission 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	NC		non connection	Not used
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	NC		non connection	Not used
19	NC		non connection	Not used
20	NC		non connection	Not used
21	NC		non connection	Not used
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

7.2.2 DISPLAY

● **LCD(YAW5027)(DEH-3750MP/XU/GS, DEH-3750MP/XU/CN)**
● **LCD(YAW5015)(DEH-3770MP/XU/CS)**



7.3 OPERATIONAL FLOW CHART



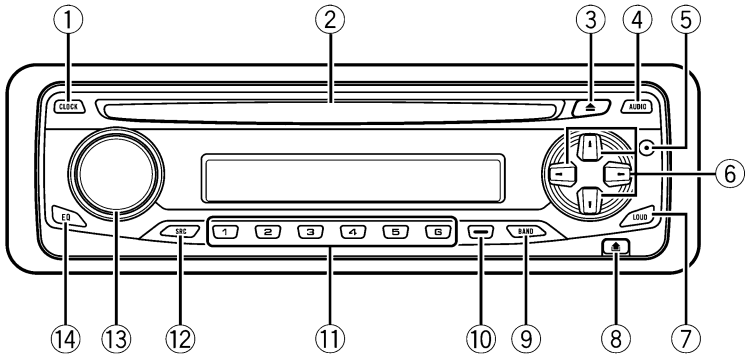
Completes power-on operation.(After that, proceed to each source operation.)

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
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

8. OPERATIONS



Head unit

① **CLOCK button**
Press to change to the clock display.

② **Disc loading slot**
Insert a disc to play.

③ **EJECT button**
Press to eject a CD from your built-in CD player.

④ **AUDIO button**
Press to select various sound quality controls.

⑤ **DISPLAY button**
Press to select different displays.

⑥ **▲/▼/◄/► buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.

⑦ **LOUDNESS button**
Press to turn loudness on or off.

⑧ **DETACH button**
Press to remove the front panel from the head unit.

⑨ **BAND button**
Press to select among three FM bands and one AM band and to cancel the control mode of functions.

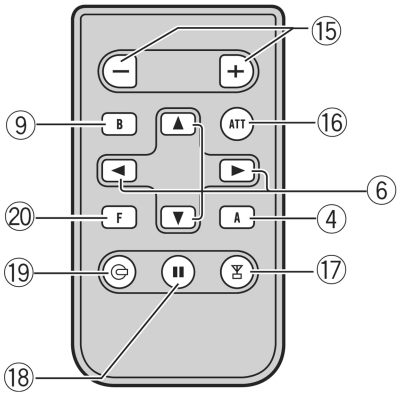
⑩ **LOCAL/BSM button**
Press to turn local function on or off.
Press and hold to turn BSM function on or off.

⑪ **1–6 buttons**
Press for preset tuning.

⑫ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all the available sources.

⑬ **VOLUME**
Rotate it to increase or decrease the volume.

⑭ **EQ button**
Press to select various equalizer curves. ▣



Remote control

Operation is the same as when using the buttons 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 **VOLUME button**
Press to increase or decrease the volume.

⑯ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

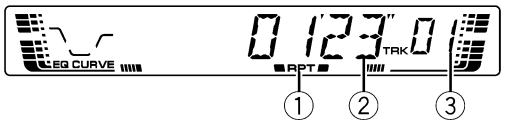
⑰ **TUNER button**
Press to select the tuner as the source.

⑱ **PAUSE button**
Press to turn pause on or off.

⑲ **CD button**
Press to select the built-in CD player as the source.

⑳ **FUNCTION button**
Not used. ▣

Playing a CD



① **RPT indicator**
Shows when repeat play is turned on.

② **Play time indicator**
Shows the elapsed playing time of the current track.

③ **Track number indicator**
Shows the track currently playing.

1 Insert a CD into the CD loading slot.
Playback will automatically start.
- **Be sure to turn up the label side of a disc.**
- After a CD has been inserted, press **SOURCE** to select the built-in CD player.
- You can eject a CD by pressing **EJECT**.

2 Use VOLUME to adjust the sound level.

3 To perform fast forward or reverse, press and hold ◄ or ►.
- If you select **ROUGH**, pressing and holding ◄ or ► enables you to search every 10 tracks in the current disc. (Refer to *Selecting the search method* on the next page.)

4 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 an error message such as **ERROR-11** is displayed.▣

Repeating play

Repeat play lets you hear the same track over again.

● **Press 5 repeatedly to turn repeat play on or off.**
When repeat play is on, **RPT** appears in the display.
- If you perform track search or fast forward/reverse, repeat play is automatically cancelled.▣

Playing tracks in a random order

Random play lets you play back tracks on the CD in a random order.

● **Press 4 repeatedly to turn random play on or off.**
When random play is on, **RDM** appears in the display.▣

Scanning tracks of a CD

Scan play lets you hear the first 10 seconds of each track on the CD.

1 Press 3 to turn scan play on.
SCAN appears in the display. The first 10 seconds of each track is played.

2 When you find the desired track press 3 to turn scan play off.
- After scanning of a CD is finished, normal playback of the tracks will begin again.

Pausing CD playback

Pause lets you temporarily stop playback of the CD.

● **Press 6 repeatedly to turn pause on or off.**
When pause is on, **PAUSE** appears in the display.
- You can also turn pause on or off by pressing **PAUSE**.

Selecting the search method

You can switch the search method between fast forward/reverse and searching every 10 tracks.

● **Press 2 to select the search method.**
Press **2** until the desired search method appears in the display.
- **FF/REV** – Fast forward and reverse
- **ROUGH** – Searching every 10 tracks

Searching every 10 tracks in the current disc

If a disc contains over 10 tracks, you can search every 10 tracks. When a disc contains a lot of tracks, you can roughly search for the track you want to play.

1 Select the search method ROUGH.
Refer to *Selecting the search method* on this page.

2 Press and hold ◄ or ► to search every 10 tracks on a disc.
- If a disc contains less than 10 tracks, pressing and holding ► recalls the last track of the disc. Also, if the remaining number of tracks after searching every 10 tracks is less than 10, pressing and holding ► recalls the last track of the disc.
- If a disc contains less than 10 tracks, pressing and holding ◄ recalls the first track of the disc. Also, if the remaining number of tracks after searching every 10 tracks is less than 10, pressing and holding ◄ recalls the first track of the disc.

Using compression and BMX

Using the COMP (compression) and BMX functions let you adjust the sound playback quality of this player. Each of the functions have a two-step adjustment. The COMP function balances the output of louder and softer sounds at higher volumes. BMX controls sound reverberations to give playback a fuller sound. Listen to each of the effects as you select through them and use the one that best enhances the playback of the track or CD that you are listening to.

● **Press 1 to select your favorite setting.**
Press **1** repeatedly to switch between the following settings:
COMP OFF—COMP 1—COMP 2—COMP OFF—BMX 1—BMX 2

Using CD TEXT functions

Some discs have certain information encoded on the disc during manufacture. These discs may contain such information as the CD title, track title, artist's name and playback time and are called CD TEXT discs. Only these specially encoded CD TEXT discs support the functions listed below.

- **Press DISPLAY.**

Press **DISPLAY** repeatedly to switch between the following settings:
Play time—**DISC TTL** (disc title)—**ART NAME** (disc artist name)—**TRK TTL** (track title)
—**ART NAME** (track artist name)

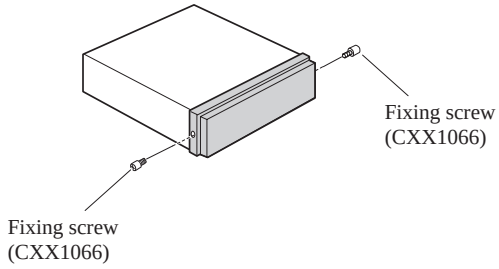
- If specific information has not been recorded on a CD TEXT disc, **NO XXXX** will be displayed (e.g., **NO T-TTL**).

Note

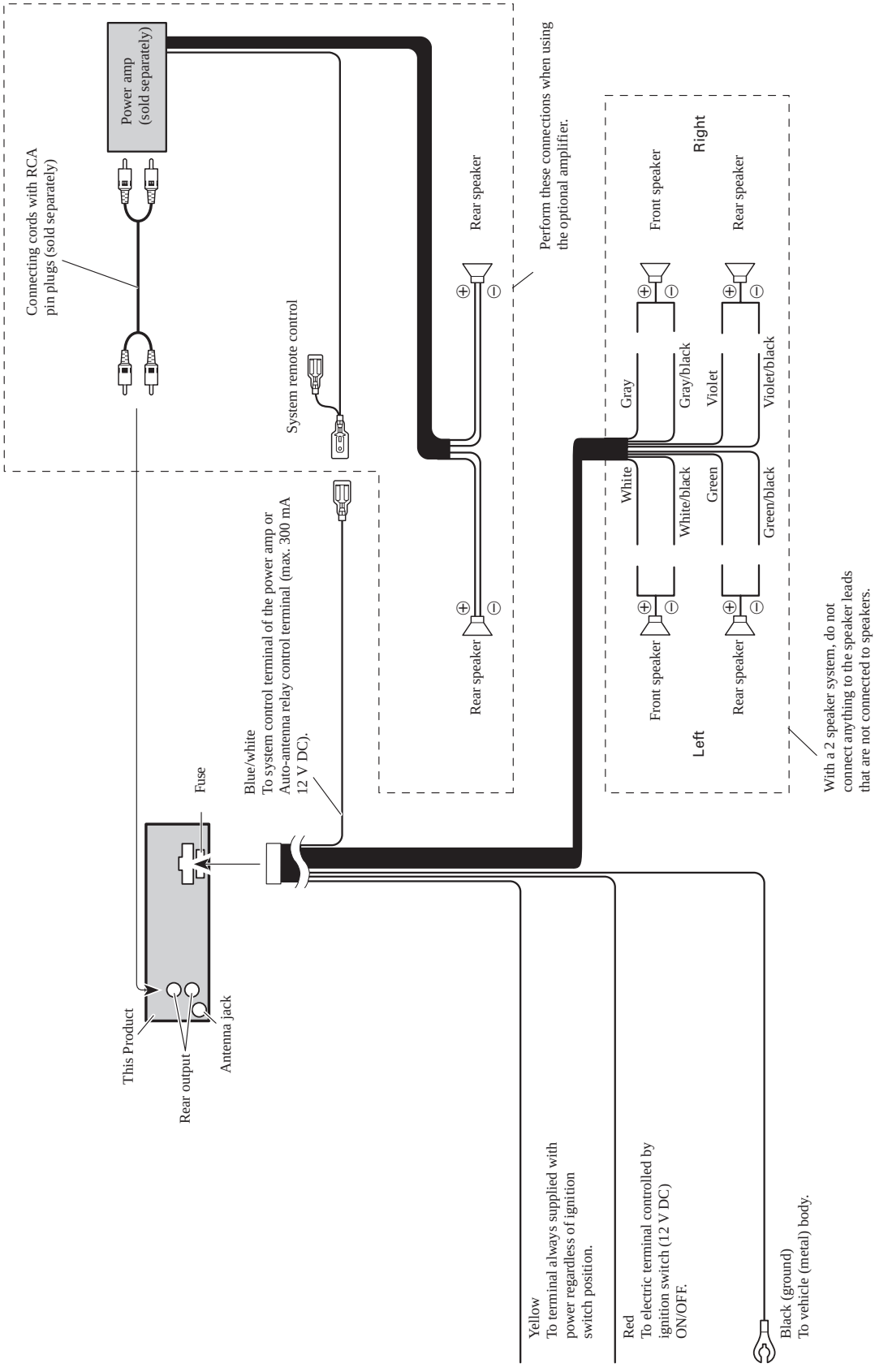
You can scroll to the left the title by pressing and holding **DISPLAY**.

About the fixing screws for the front panel

If you do not operate the Detaching and Replacing the Front Panel Function, use the supplied fixing screws and fix the front panel to this unit.



Connection Diagram



A

B

C

D

E

F

● Jigs List

Name	Jig No.	Remarks
Test Disc	TCD-782	Checking the grating
L.P.F.		Checking the grating (Two pieces)