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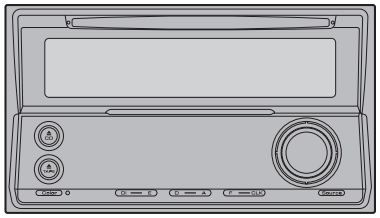
Service Manual



FH-P5000MP/XM/UC

ORDER NO.
CRT3222

MULTI-CD CONTROL DSP HIGH POWER CD/MP3/WMA/ CASSETTE PLAYER WITH FM/AM TUNER

FH-P5000MP/XM/UC
FH-P5000MP/XM/ES

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

Model No.	Order No.	Mech.Module	Remarks
CX-3098	CRT3179	S10WMAcode2	CD Mech. Module : Circuit Description, Mech. Description, Disassembly
CX-1011	CRT2406	3L	Cassette Mech. Module : Mech. Description, Disassembly, Adjustment

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

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

K-ZZA. APR. 2004 printed in Japan

SAFETY INFORMATION

CAUTION

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.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

● 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" on page 78.
4. After replacing the pickup unit, be sure to check the grating. (See page 74.)
5. When replacing the power IC or heat sink, apply silicon grease (GEM1057). At this time, apply as thin and uniformly as possible on the entire power IC surface. Do not let air get trapped between the power IC and heat sink.

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

1. Product safety

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

2. Adjustments

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

3. Cleaning

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

4. Shipping mode and shipping screws

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

5. Lubricants, glues, and replacement parts

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

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1. SPECIFICATIONS

● FH-P5000MP/XM/UC

General

Rated power source ..... 14.4 V DC (allowable voltage range: 10.8 – 15.1 V DC)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A

Backup current ..... 5 mA or less

Dimensions (W × H × D):
Chassis ..... 178 × 100 × 161 mm
Nose ..... 169 × 94 × 28 mm
Weight ..... 2.3 kg

Audio/DSP

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 ..... 1.8 V/1 kΩ
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz) (volume: –30 dB)
Equalizer (13-Band Graphic Equalizer):
Frequency ..... 50/80/125/200/315/500/800 Hz
1.25/2/3.15/5/8/12.5 kHz
Equalization range ..... ±12 dB
Network:
HPF (Front/rear):
Frequency ..... 50/63/80/100/125/160/200 Hz
Slope ..... –6 dB/oct, –12 dB/oct, 0 dB/oct
Gain ..... 0 – –24 dB
Subwoofer:
Frequency ..... 50/63/80/100/125/160/200 Hz
Slope ..... -6 dB/oct, –12 dB/oct, –18 dB/oct
Gain ..... +6 – –24 dB
Phase ..... Normal/Reverse

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) (IHF-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
WAV signal format ..... Linear PCM & MS ADPCM

Cassette player

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed ..... 4.76cm/sec.(+0.14cm/sec., -0.05cm/sec.)
Fast forward/rewinding time ..... Approx. 100 sec (C-60)
Wow & flutter ..... 0.09 % (WRMS)
Frequency response:
Metal ..... 30 – 19,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio:
Metal:
Dolby B NR IN ..... 67 dB (IHF-A network)
Dolby NR OUT ..... 61 dB (IHF-A network)

FM tuner

Frequency range ..... 87.9 – 107.9 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 (IHF-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)
Selectivity ..... 80 dB (±200 kHz)
Three-signal intermodulation (desired signal level) ..... 30 dBf (two undesired signal level: 100 dBf)

AM tuner

Frequency range ..... 530 – 1,710 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IHF-A network)

Note

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

● FH-P5000MP/XM/ES

General

Rated power source ..... 14.4 V DC (allowable voltage range: 10.8 – 15.1 V DC)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Backup current ..... 5 mA or less

Dimensions (W × H × D):
- Chassis ..... 178 × 100 × 161 mm
- Nose ..... 169 × 94 × 28 mm

Weight ..... 2.3 kg

Audio/DSP

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 ..... 1.8 V/1 kΩ
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz) (volume: –30 dB)
Equalizer (13-Band Graphic Equalizer):
- Frequency ..... 50/80/125/200/315/500/800 Hz 1.25/2/3.15/5/8/12.5 kHz
- Equalization range ..... ±12 dB

Network:
- HPF (Front/rear):
  - Frequency ..... 50/63/80/100/125/160/200 Hz
  - Slope ..... –6 dB/oct, –12 dB/oct, 0 dB/oct
  - Gain ..... 0 – –24 dB
- Subwoofer:
  - Frequency ..... 50/63/80/100/125/160/200 Hz
  - Slope ..... -6 dB/oct, –12 dB/oct, –18 dB/oct
  - Gain ..... +6 – –24 dB
  - Phase ..... Normal/Reverse

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
WAV signal format ..... Linear PCM & MS ADPCM

Cassette player

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed ..... 4.76cm/sec.(+0.14cm/sec., -0.05cm/sec.)
Fast forward/rewinding time ..... Approx. 100 sec (C-60)
Wow & flutter ..... 0.09 % (WRMS)
Frequency response:
- Metal ..... 30 – 19,000 Hz (±3 dB)

Stereo separation ..... 45 dB
Signal-to-noise ratio:
- Metal:
  - Dolby B NR IN ..... 67 dB (IEC-A network)
  - Dolby NR OUT ..... 61 dB (IEC-A network)

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

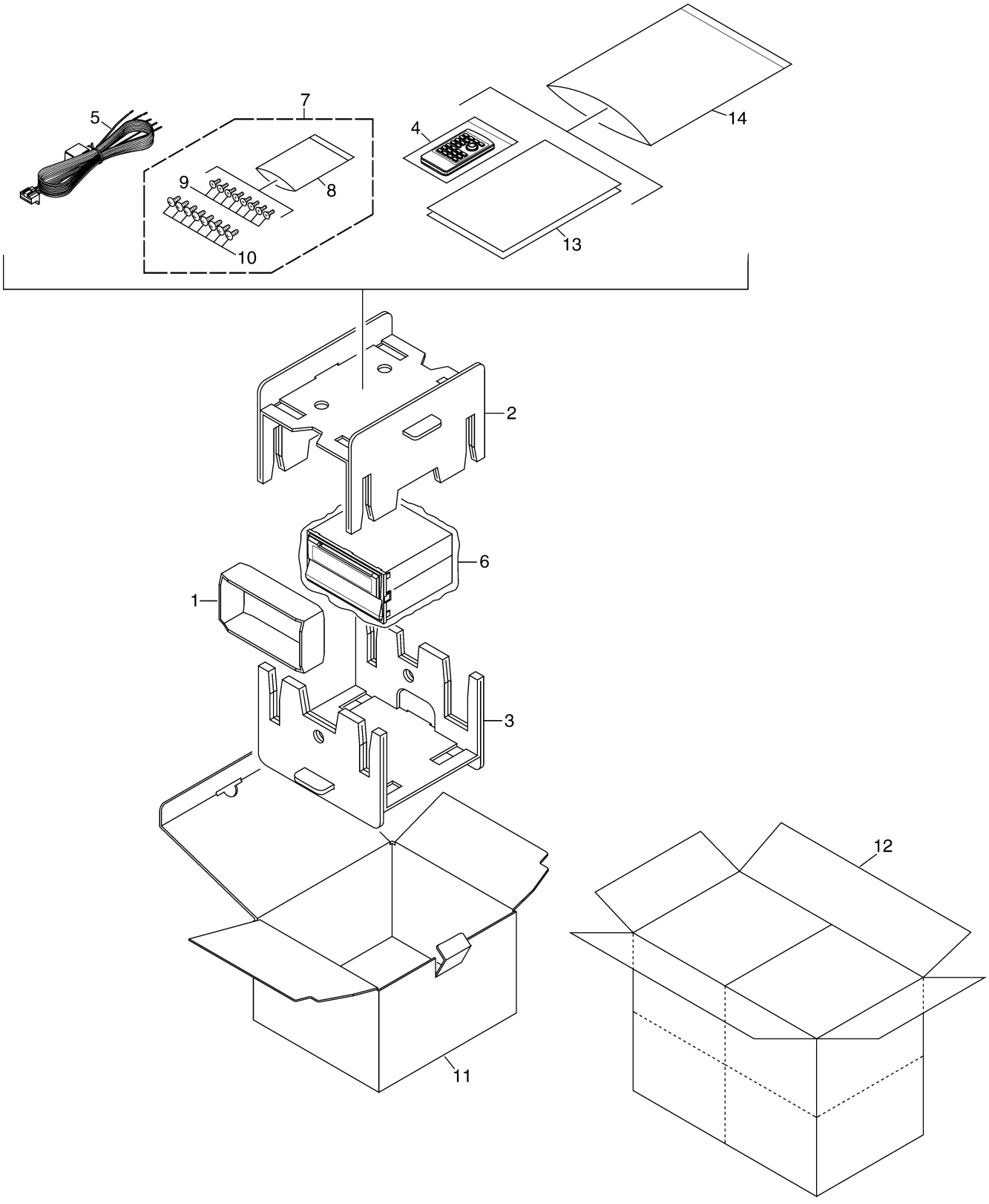
Note

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

2. EXPLODED VIEWS AND PARTS LIST

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

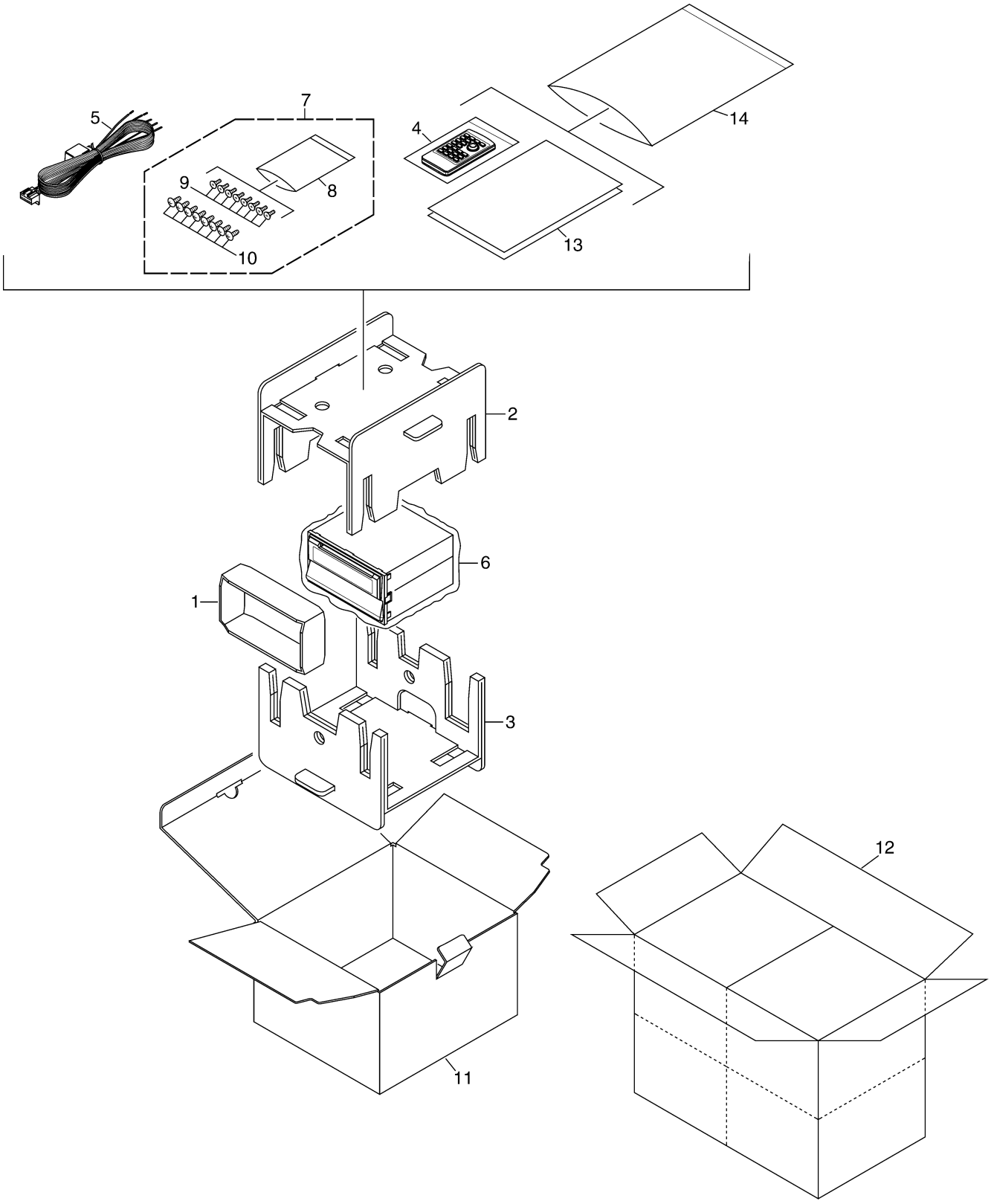
2.1 PACKING(UC)



PACKING(UC) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Protector(F)	CZH6613
	2	Protector(T)	CZH6614
	3	Protector(B)	CZH6615
	4	Remote Control Unit	CXC2667
	5	DC Cord Assy(UC)	CZD2983
	6	Protection Bag	CZE2959
	7	Attachment Screw KIT NO.125	CZE2960
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P080FTC
	10	Screw	TRZ50P080FTC
	11	Carton	CZH6618
	12	Contain Box	CZH6619
	13-1	Owner's Manual (English, French)	CZR2971
	13-2	Installation Manual (English, French)	CZR2972
	14	Polyethylene Bag	CEG1116

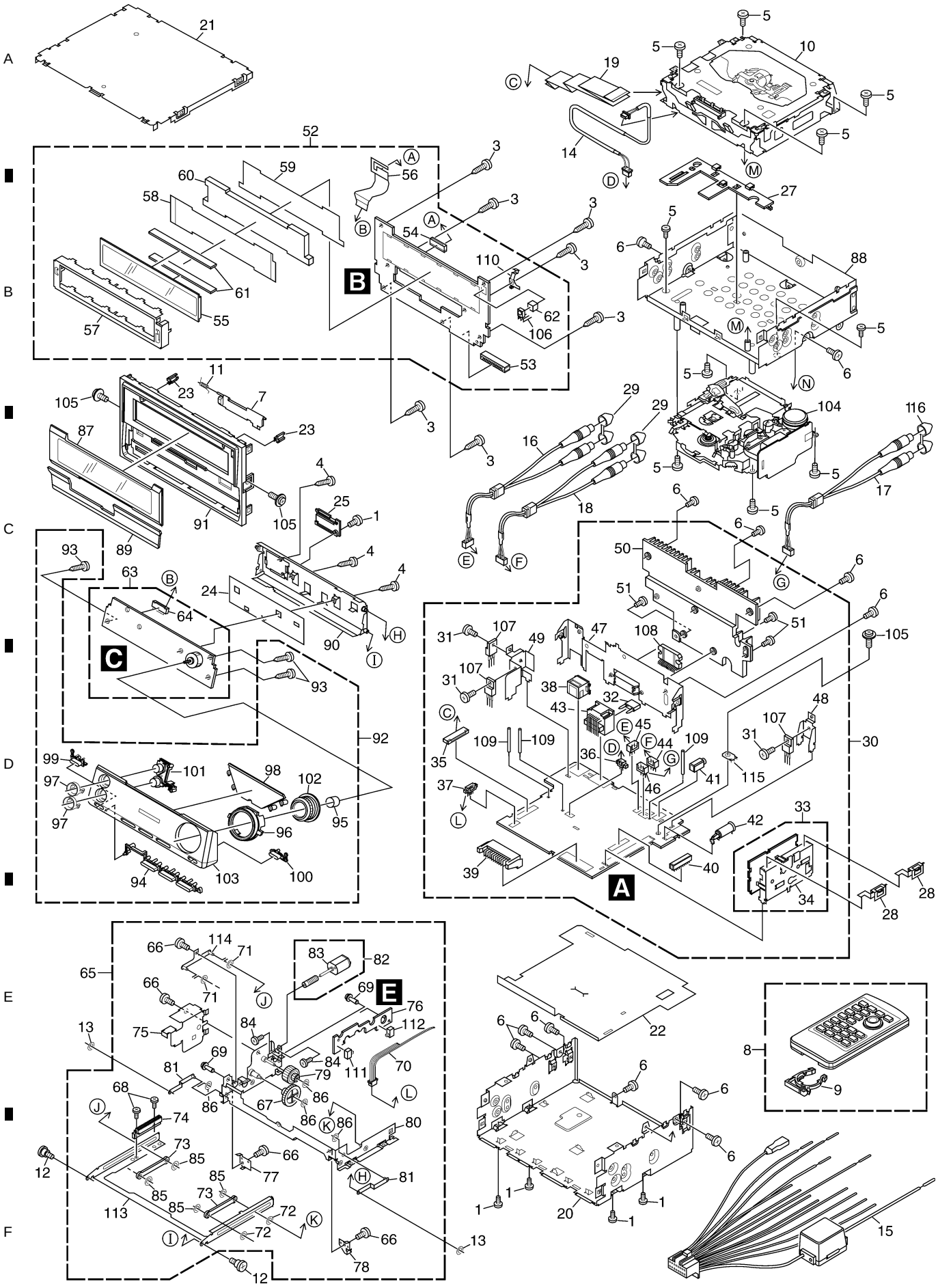
2.2 PACKING(ES)



PACKING(ES) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Protector(F)	CZH6613
	2	Protector(T)	CZH6614
	3	Protector(B)	CZH6615
	4	Remote Control Unit	CXC2667
	5	DC Cord Assy(ES)	CZD2984
	6	Protection Bag	CZE2959
	7	Attachment Screw KIT NO.125	CZE2960
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P080FTC
	10	Screw	TRZ50P080FTC
	11	Carton	CZH6620
	12	Contain Box	CZH6621
	13-1	Owner's Manual (English, Spanish, Korean)	CZR2973
	13-2	Installation Manual (English, Spanish, Korean)	CZR2974
	14	Polyethylene Bag	CEG1116

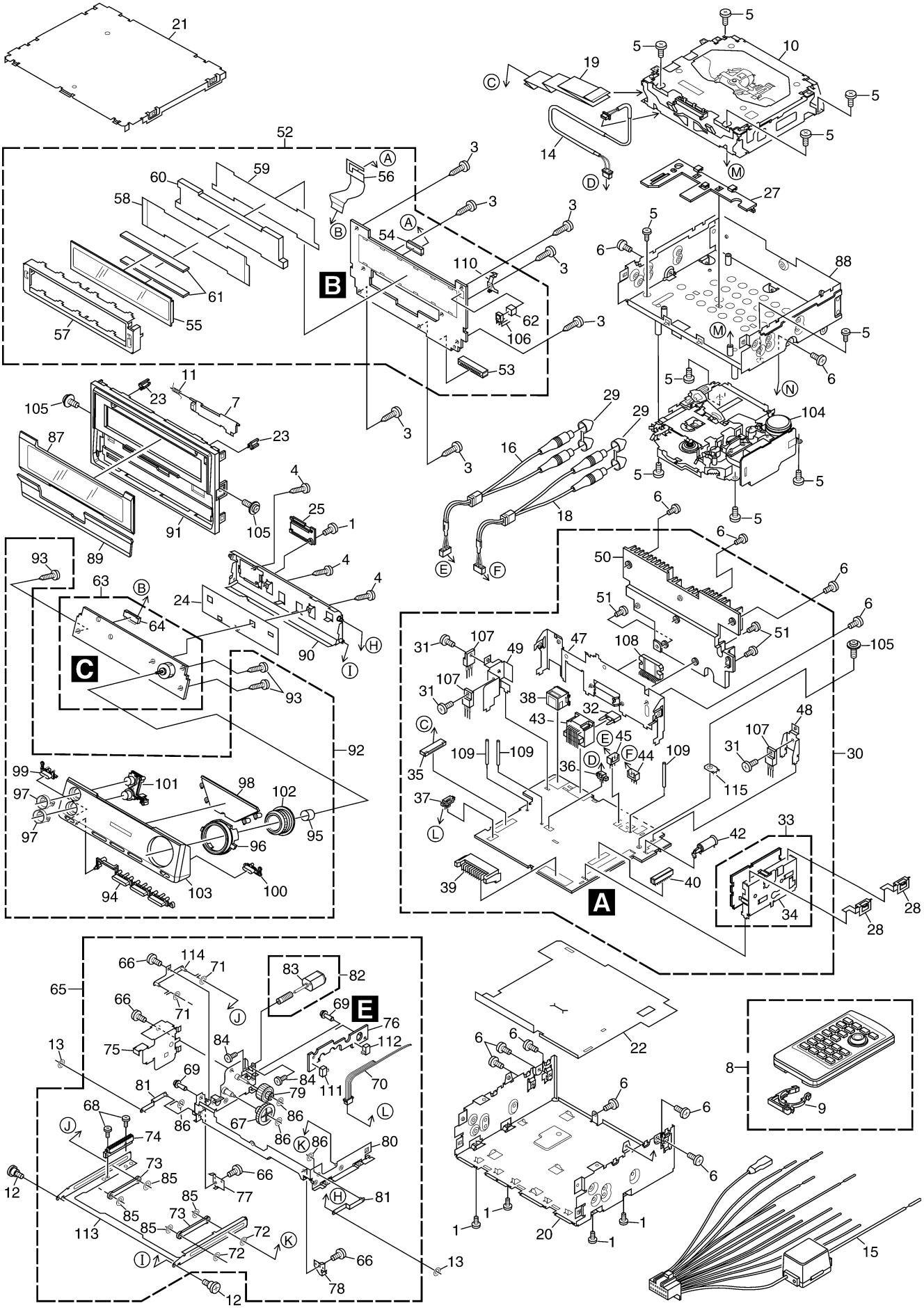
2.3 EXTERIOR(UC)



EXTERIOR(UC) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ20P040FTC
	2	Screw	BMZ26P040FTC
	3	Screw	BPZ20P060FTC
	4	Screw	BPZ20P080FTC
	5	Screw	BSZ26P060FZK
	6	Screw	BSZ26P080FTC
	7	Door	CAT2593
	8	Remote Control Unit	CXC2667
	9	Cover	CZN5357
	10	CD Mechanism Module(S10CODE2)	CXK5675
	11	Spring(CA)	CZB2985
	12	Screw(M2x1)	CZB2986
	13	C Washer	CZB2987
	14	Cord Assy	CZD2985
	15	DC Cord Assy(UC)	CZD2983
	16	Front RCA Cord Assy	CZD2986
	17	Rear RCA Cord Assy	CZD2987
	18	SW RCA Cord Assy	CZD2989
	19	Flat Cable	CZD2991
	20	Chassis(BOTTOM)	CZN6884
	21	Upper Cover	CZN6886
	22	Insulator(MAIN)	CZN6896
	23	Indicator	CZN6906
	24	Insulator(Grille)	CZN6918
	25	Cover	CZN6927
	26	Rear Cover	CZN6928
	27	Cord Guide	CZN6935
	28	Tuner Earth	CZN6945
	29	Jack Cover	CZN6950
	30	Main PWB Unit	CZW5546
	31	Screw	BSZ26P080FTC
	32	Fuse(10A)	CEK1208
	33	FM/AM Tuner Unit	CWE1646
	34	Holder	CND1054
	35	Connector(CN250)	CKS1961
	36	Connector(CN251)	CKS3124
	37	Connector(CN80)	CKS3127
	38	Connector(CN400)	CKS3408
	39	Plug(CN60)	CKS3542
	40	Connector(CN220)	CKS3568
	41	Connector(CN602)	CKS4124
	42	Antenna Jack(CN100)	CKX1056
	43	Connector(CN600)	CZK2943
	44	Connector(CN450)	CZK2955
	45	Connector(CN460)	CZK2955
	46	Connector(CN470)	CZK2955
	47	Rear Chassis	CZN6889
	48	Leg Holder(A)	CZN6890
	49	Leg Holder(B)	CZN6891
	50	Heat Sink	CZN6892
	51	Screw	PMZ26P060FZK
	52	DISP PWB Unit	CZW5549
	53	Connector(CN800)	CKS3570
	54	Connector(CN801)	CKS3749
	55	LCD(LCD1)	CZA5598
	56	Flexible PWB	CZD2992
	57	LCD Holder	CZN6897
	58	Diffusion Sheet	CZN6898
	59	Reflection Sheet	CZN6899
	60	Illuminator(LCD)	CZN6901
	61	Zebra Contact	CZN6913
	62	Cushion(REMO)	CZN6931
	63	KEY PWB Unit	CZW5551
	64	Connector(CN900)	CKS3749
	65	Grille Mechanism Unit	CZX5559
	66	Screw	BMZ20P030FTC
	67	Gear	CNV5698
	68	Screw(M1.7x5)	CZM2988
	69	Push Rivet	CZB2989
	70	5P Wire Assy	CZD2981
	71	Spacer A	CZN6877
	72	Spacer B	CZN6878
	73	Guide	CZN6881
	74	Rack	CZN6882
	75	Gear Cover	CZN6883
	76	PWP	CZN6938
	77	Tension Spring L	CZN6939
	78	Tension Spring R	CZN6940
	79	Torque Limiter Unit	CZN6943
	80	Frame Main Assy	CZX5556
	81	Arm Assy	CZX5557
	82	Motor Assy(M1)	CZX5579
	83	Motor	CXM1217
	84	Screw	JFZ20P030FTC
	85	Washer	WA16D035D025
	86	Washer	WA21D040D025
	87	Window(LCD) Assy	CZX5561
	88	Chassis(TOP) Assy	CZX5569
	89	Window(CA) Assy	CZX5570
	90	Holder(Grille) Assy	CZX5572
	91	Sub Panel(CA) Assy	CZX5575
	92	Grille Unit	CZX5581
	93	Screw	BPZ20P080FTC
	94	Button(FUNC)	CZA5585
	95	Spring(Knob)	CZB2983
	96	Ring(Knob)	CZN6923
	97	Ring(CD)	CZN6924
	98	Illuminator	CZN6925
	99	Button(COLOR) Assy	CZX5564
	100	Button(SOURCE) Assy	CZX5565
	101	Button(CD) Assy	CZX5567
	102	Knob Assy	CZX5573
	103	Grille(P) Assy	CZX5577
	104	Cassette Mechanism Module	EXK4060
	105	Screw	ISS26P055FTC
	106	IC(IC830)	TSOP4840SB1
	107	Transistor(Q270, 633, 650)	2SD2396
	108	IC(IC500)	PAL007A
	109	Clamper(SP1, 2, 3)	CZE2961
	110	Earth Plate	CZN6951
	111	Switch(S1)	CZS2921
	112	Switch(S2)	CZS2922
*	113	Frame Rail	CZN6879
*	114	Plate Guide Assy	CZX5558
	115	Connector(E100)	CZK2954
	116	Jack Cover	CZN6950

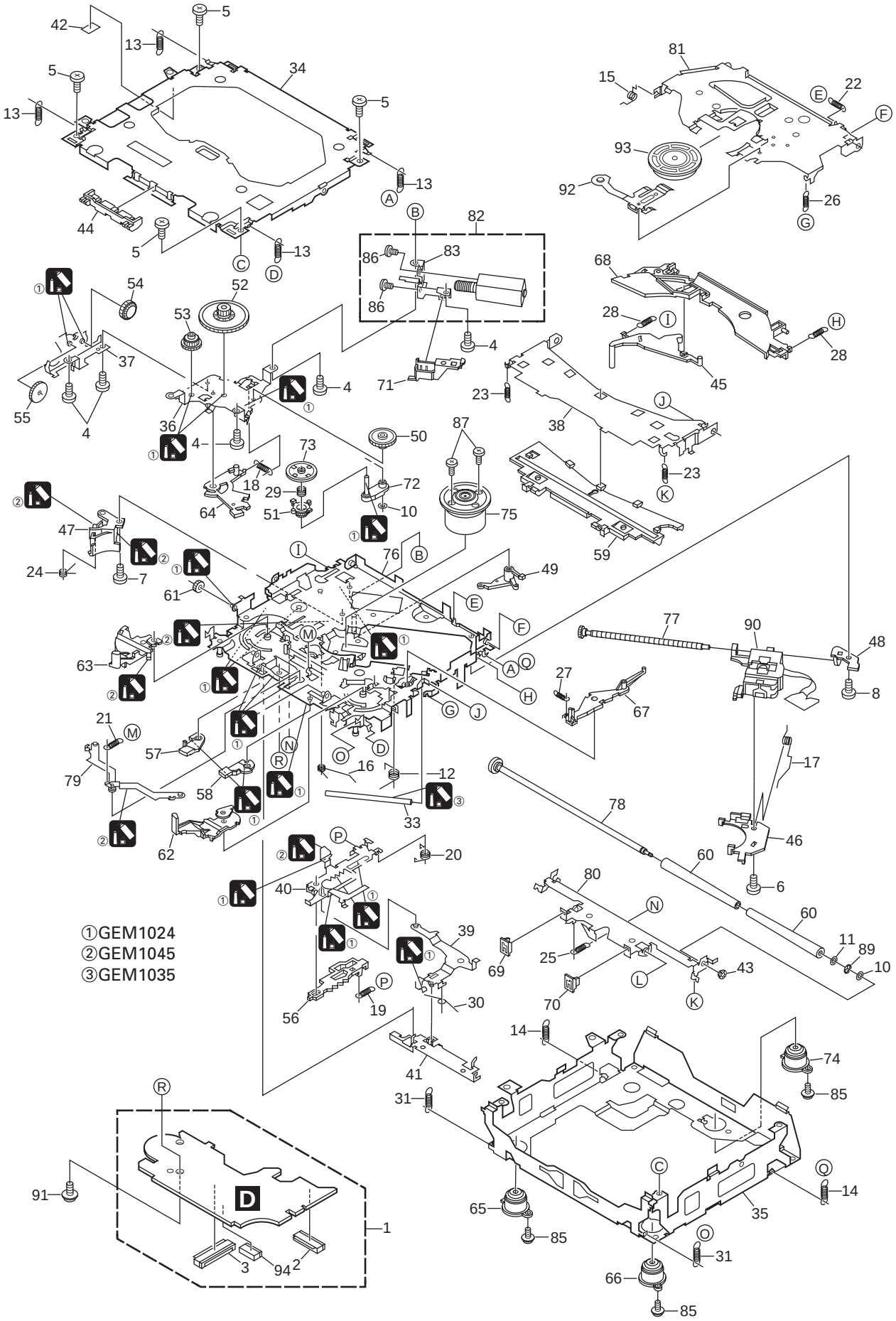
2.4 EXTERIOR(ES)



EXTERIOR(ES) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ20P040FTC
	2	Screw	BMZ26P040FTC
	3	Screw	BPZ20P060FTC
	4	Screw	BPZ20P080FTC
	5	Screw	BSZ26P060FZK
	6	Screw	BSZ26P080FTC
	7	Door	CAT2593
	8	Remote Control Unit	CXC2667
	9	Cover	CZN5357
	10	CD Mechanism Module(S10CODE2)	CXK5675
	11	Spring(CA)	CZB2985
	12	Screw(M2x1)	CZB2986
	13	C Washer	CZB2987
	14	Cord Assy	CZD2985
	15	DC Cord Assy(ES)	CZD2984
	16	Front RCA Cord Assy	CZD2986
	17	•••••	
	18	SW/REAR RCA Cord Assy	CZD2988
	19	Flat Cable	CZD2991
	20	Chassis(BOTTOM)	CZN6884
	21	Upper Cover	CZN6886
	22	Insulator(MAIN)	CZN6896
	23	Indicator	CZN6906
	24	Insulator(Grille)	CZN6918
	25	Cover	CZN6927
	26	Rear Cover	CZN6928
	27	Cord Guide	CZN6935
	28	Tuner Earth	CZN6945
	29	Jack Cover	CZN6950
	30	Main PWB Unit	CZW5547
	31	Screw	BSZ26P080FTC
	32	Fuse(10A)	CEK1208
	33	FM/AM Tuner Unit	CWE1646
	34	Holder	CND1054
	35	Connector(CN250)	CKS1961
	36	Connector(CN251)	CKS3124
	37	Connector(CN80)	CKS3127
	38	Connector(CN400)	CKS3408
	39	Plug(CN60)	CKS3542
	40	Connector(CN220)	CKS3568
	41	•••••	
	42	Antenna Jack(CN100)	CKX1056
	43	Connector(CN600)	CZK2943
	44	Connector(CN450)	CZK2955
	45	Connector(CN460)	CZK2955
	46	•••••	
	47	Rear Chassis	CZN6888
	48	Leg Holder(A)	CZN6890
	49	Leg Holder(B)	CZN6891
	50	Heat Sink	CZN6892
	51	Screw	PMZ26P060FZK
	52	DISP PWB Unit	CZW5549
	53	Connector(CN800)	CKS3570
	54	Connector(CN801)	CKS3749
	55	LCD(LCD1)	CZA5598
	56	Flexible PWB	CZD2992
	57	LCD Holder	CZN6897
	58	Diffusion Sheet	CZN6898
	59	Reflection Sheet	CZN6899
	60	Illuminator(LCD)	CZN6901
	61	Zebra Contact	CZN6913
	62	Cushion(REMO)	CZN6931
	63	KEY PWB Unit	CZW5551
	64	Connector(CN900)	CKS3749
	65	Grille Mechanism Unit	CZX5559
	66	Screw	BMZ20P030FTC
	67	Gear	CNV5698
	68	Screw(M1.7x5)	CZM2988
	69	Push Rivet	CZB2989
	70	5P Wire Assy	CZD2981
	71	Spacer A	CZN6877
	72	Spacer B	CZN6878
	73	Guide	CZN6881
	74	Rack	CZN6882
	75	Gear Cover	CZN6883
	76	PWP	CZN6938
	77	Tension Spring L	CZN6939
	78	Tension Spring R	CZN6940
	79	Torque Limiter Unit	CZN6943
	80	Frame Main Assy	CZX5556
	81	Arm Assy	CZX5557
	82	Motor Assy(M1)	CZX5579
	83	Motor	CXM1217
	84	Screw	JFZ20P030FTC
	85	Washer	WA16D035D025
	86	Washer	WA21D040D025
	87	Window(LCD) Assy	CZX5562
	88	Chassis(TOP) Assy	CZX5569
	89	Window(CA) Assy	CZX5570
	90	Holder(Grille) Assy	CZX5572
	91	Sub Panel(CA) Assy	CZX5575
	92	Grille Unit	CZX5582
	93	Screw	BPZ20P080FTC
	94	Button(FUNC)	CZA5585
	95	Spring(Knob)	CZB2983
	96	Ring(Knob)	CZN6923
	97	Ring(CD)	CZN6924
	98	Illuminator	CZN6925
	99	Button(COLOR) Assy	CZX5564
	100	Button(SOURCE) Assy	CZX5565
	101	Button(CD) Assy	CZX5567
	102	Knob Assy	CZX5573
	103	Grille(P) Assy	CZX5578
	104	Cassette Mechanism Module	EXK4060
	105	Screw	ISS26P055FTC
	106	IC(IC830)	TSOP4840SB1
	107	Transistor(Q270, 633, 650)	2SD2396
	108	IC(IC500)	PAL007A
	109	Clamper(SP1, 2, 3)	CZE2961
	110	Earth Plate	CZN6951
	111	Switch(S1)	CZS2921
	112	Switch(S2)	CZS2922
*	113	Frame Rail	CZN6879
*	114	Plate Guide Assy	CZX5558
	115	Connector(E100)	CZK2954

2.5 CD MECHANISM MODULE

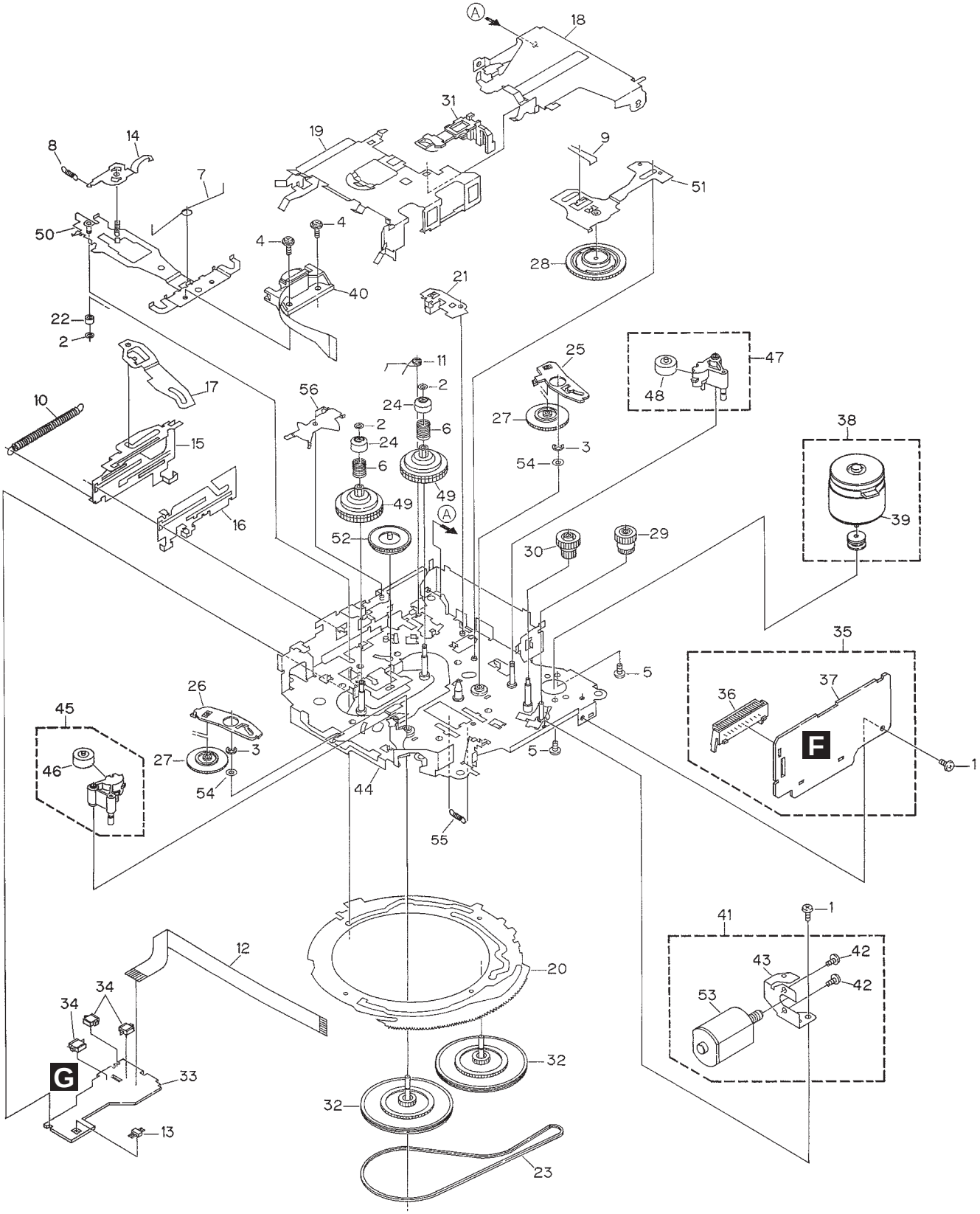


CD MECHANISM MODULE PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S10WMA)	CWX2931
	2	Connector(CN101)	CKS4182
	3	Connector(CN901)	CKS4017
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x3)	CBA1511
	8	Screw(M2x3)	CBA1527
	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	CNC9962
	35	Frame	CNC9963
	36	Bracket	CNC9966
	37	Bracket	CND1895
	38	Arm	CNC9968
	39	Arm	CND1909
	40	Lever	CND2032
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV7798
	44	Guide	CNV7799
	45	Arm	CNV7800
	46	Rack	CNV7199
	47	Holder	CNV7201
	48	Holder	CNV7202
	49	Arm	CNV7203
	50	Gear	CNV7207
	51	Gear	CNV7208
	52	Gear	CNV7209
	53	Gear	CNV7210
	54	Gear	CNV7211
	55	Gear	CNV7212
	56	Rack	CNV7214
	57	Arm	CNV7215
	58	Arm	CNV7216
	59	Guide	CNV7217
	60	Roller	CNV7218
	61	Gear	CNV7219
	62	Arm	CNV7221
	63	Arm	CNV7220
	64	Arm	CNV7222
	65	Damper	CNV7313
	66	Damper	CNV7314
	67	Arm	CNV7341
	68	Arm	CNV7342
	69	Guide	CNV7360
	70	Guide	CNV7361
	71	Holder	CNV7437
	72	Arm	CNV7805
	73	Gear	CNV7595
	74	Damper	CNV7618
	75	Motor Unit(M1)	CXB6007
	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)	CXX1641
	91	Screw	IMS26P030FTC
	92	Spring	CBL1635
	93	Clamper	CNV7197
	94	Connector(CN902)	CKS2193

2.6 CASSETTE MECHANISM MODULE

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

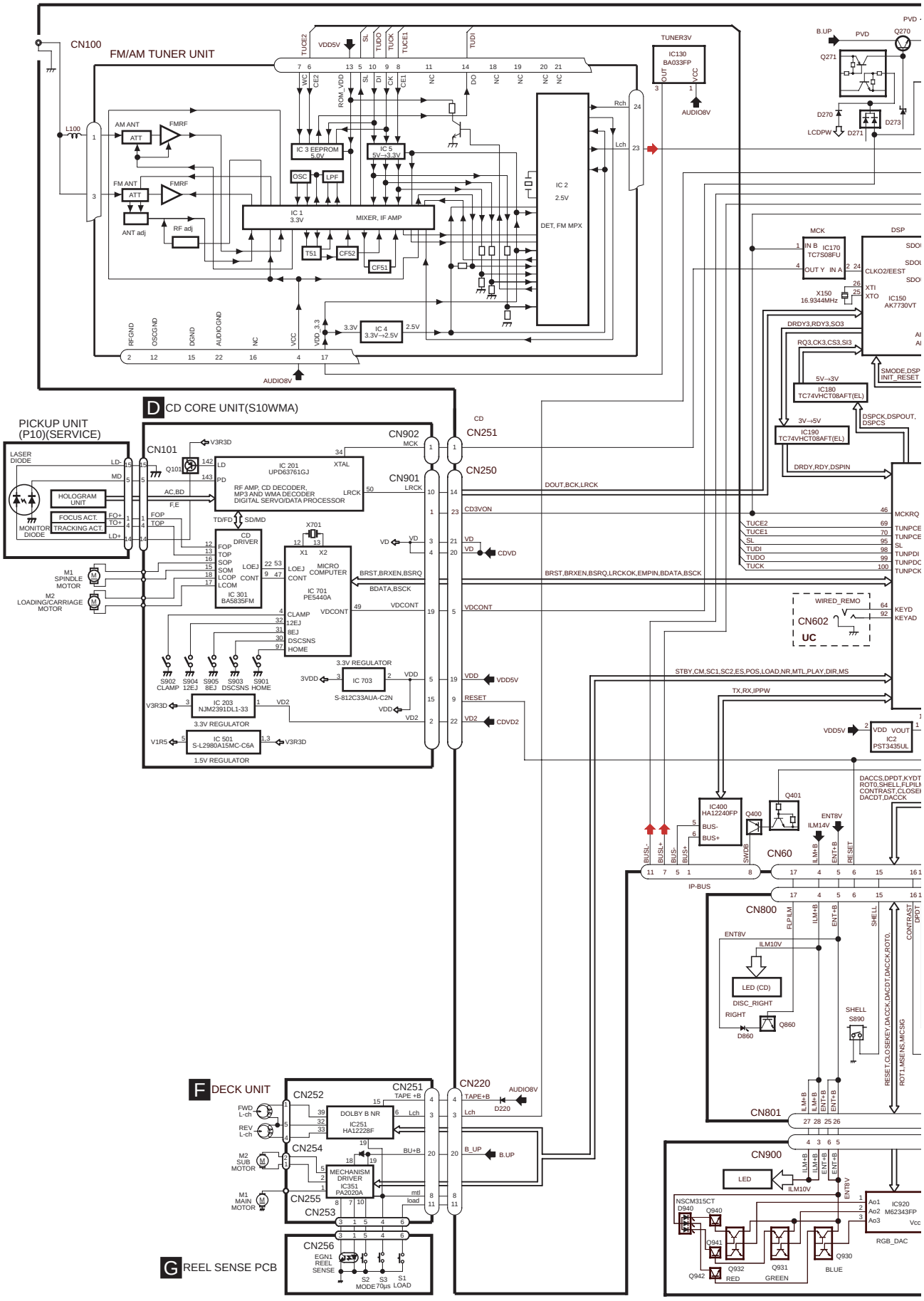


CASSETTE MECHANISM MODULE SECTION PARTS LIST

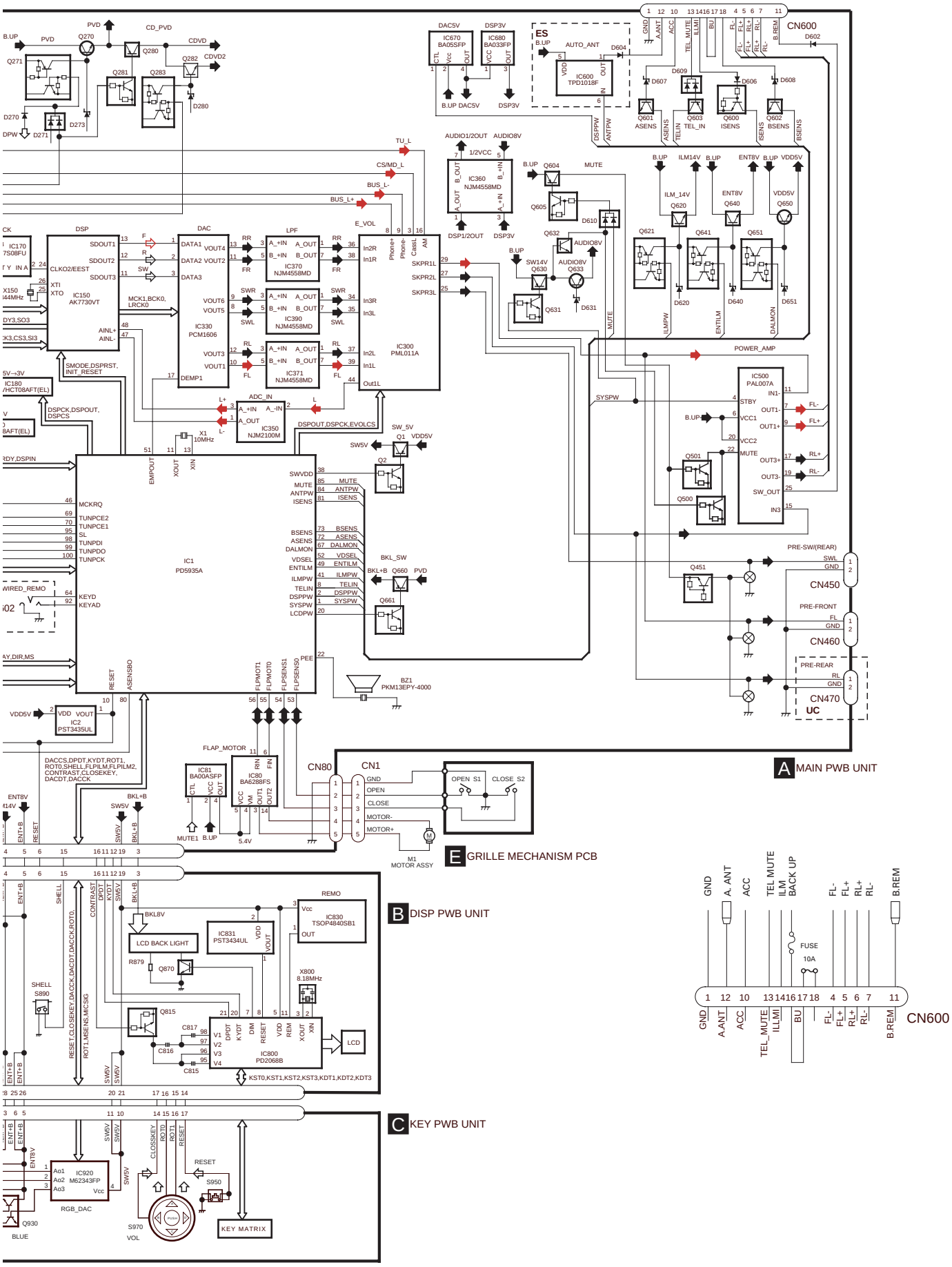
Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC
2	Washer	CBF1037
3	Washer	CBG1003
4	Screw(M2x5)	EBA1028
5	Screw(M2x2.5)	CBA1037
6	Spring	EBH1531
7	Spring	EBH1642
8	Spring	EBH1641
9	Spring	EBH1626
10	Spring	EBH1627
11	Spring	EBH1648
12	Cord	EDD1024
13	Photo-reflector(EGN1)	EGN1004
14	Arm	ENC1526
15	Lever	ENC1544
16	Lever	ENC1543
17	Arm	ENC1532
18	Frame	ENC1533
19	Holder	ENC1534
20	Gear	ENC1535
21	Arm	ENC1550
22	Roller	ENR1040
23	Belt	ENT1027
24	Collar	ENV1508
25	Arm	ENV1539
26	Arm	ENV1540
27	Gear	ENV1544
28	Gear	ENV1547
29	Gear	ENV1560
30	Worm Wheel	ENV1566
31	Lever	ENV1551
32	Flywheel	ENV1554
33	Gathering PCB	ENX1068
34	Switch(S1, S2, S3)	ESG1007
35	Deck Unit	EWM1033
36	Plug(CN251)	CKS3540
37	Gathering PCB	ENX1067
38	Motor Unit(M1)	EXA1490
39	Motor	EXM1027
40	Head Assy(HD1)	EXA1589
41	Motor Unit(M2)	EXA1580
42	Screw	BMZ20P022FMC
43	Bracket	ENC1528
44	Chassis Unit	EXA1615
45	Pinch Holder Unit	EXA1608
46	Pinch Roller	ENV1518
47	Pinch Holder Unit	EXA1607
48	Pinch Roller	ENV1518
49	Reel Unit	EXA1585
50	Head Base Unit	EXA1611
51	Lever Unit	EXA1587
52	Gear Unit	EXA1596
53	Motor Unit(Service)	EXX1055
54	Washer	HBF-179
55	Spring	EBH1537
56	Arm	ENC1537

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

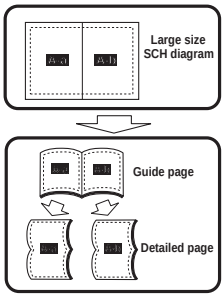


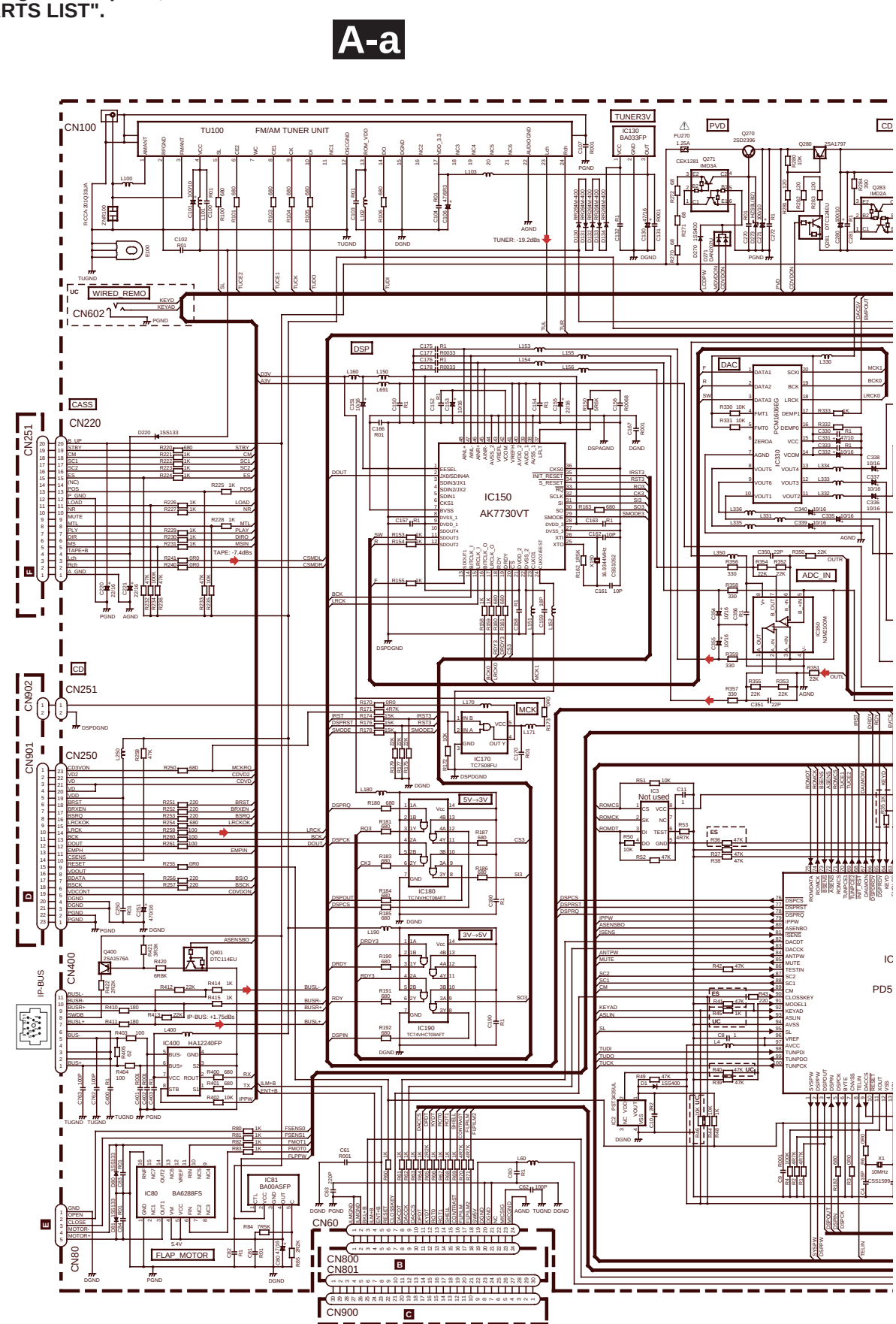
FH-P5000MP/XM/UC

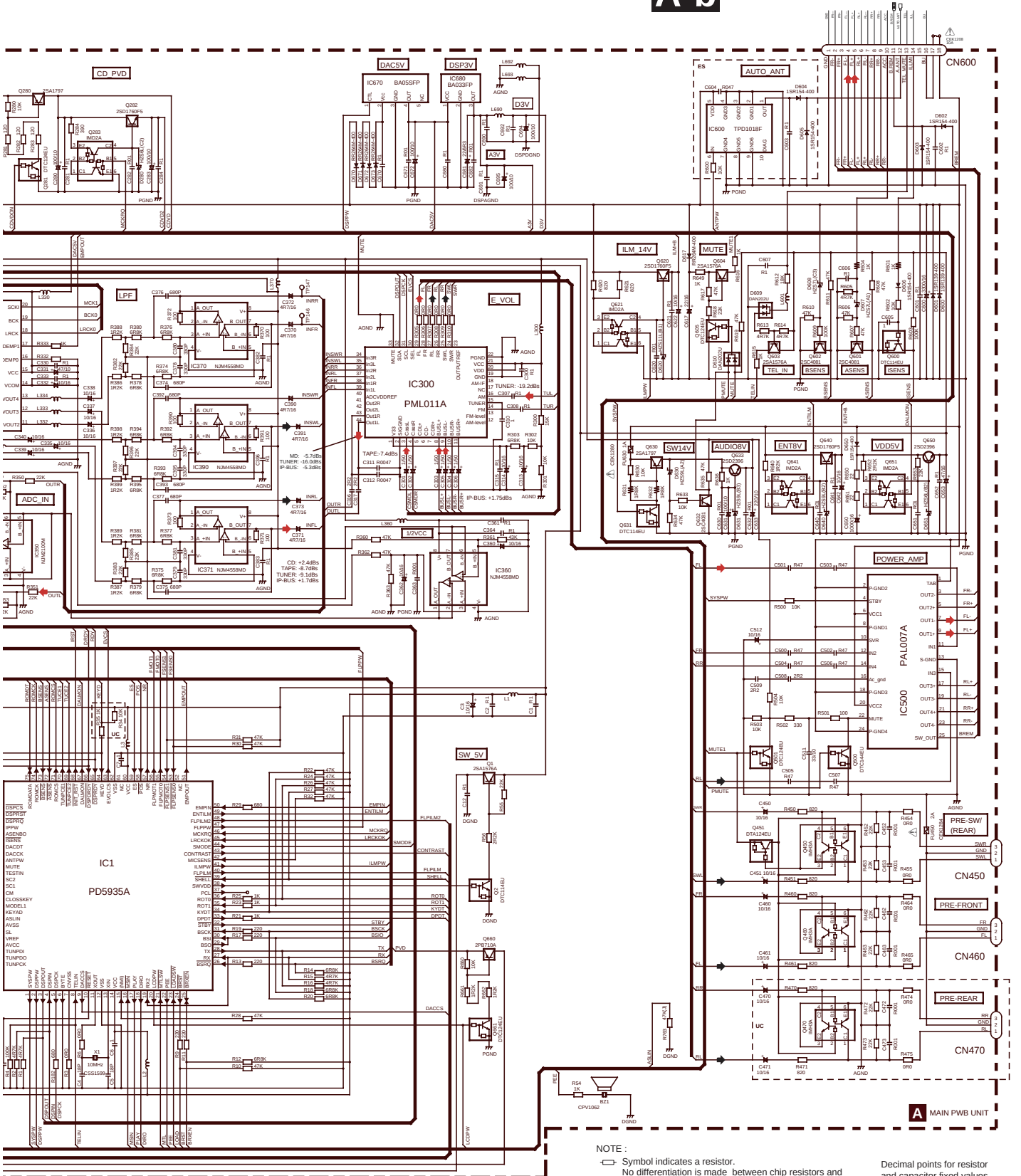

A MAIN PWB UNIT
B DISP PWB UNIT
C KEY PWB UNIT
E GRILLE MECHANISM PCB
CN600
GND
A.ANT
ACC
TEL MUTE
ILM
BACK UP
FUSE
10A
B.REM
FL-
FL+
RL+
RL-
BU

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".





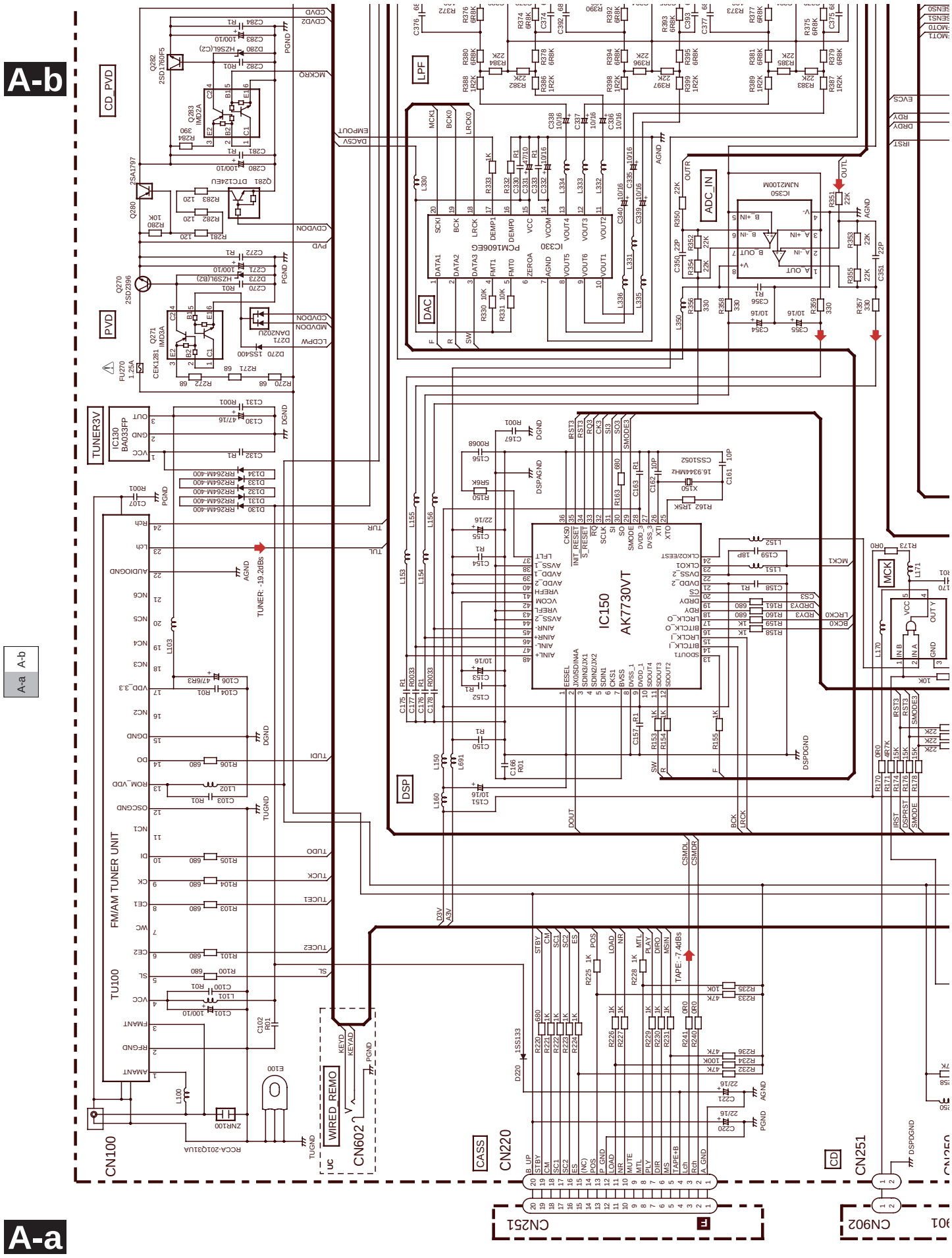


NOTE :

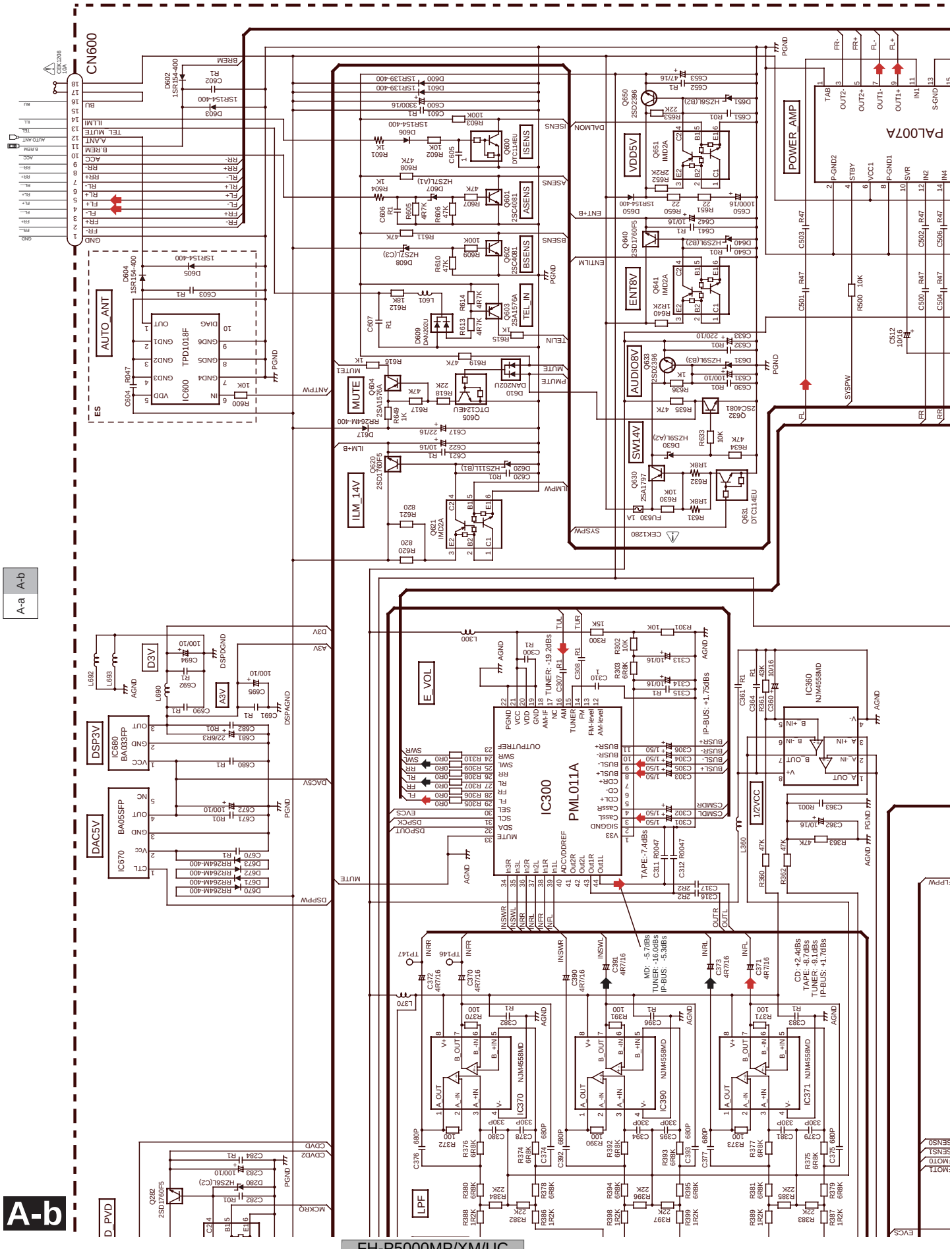
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

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

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

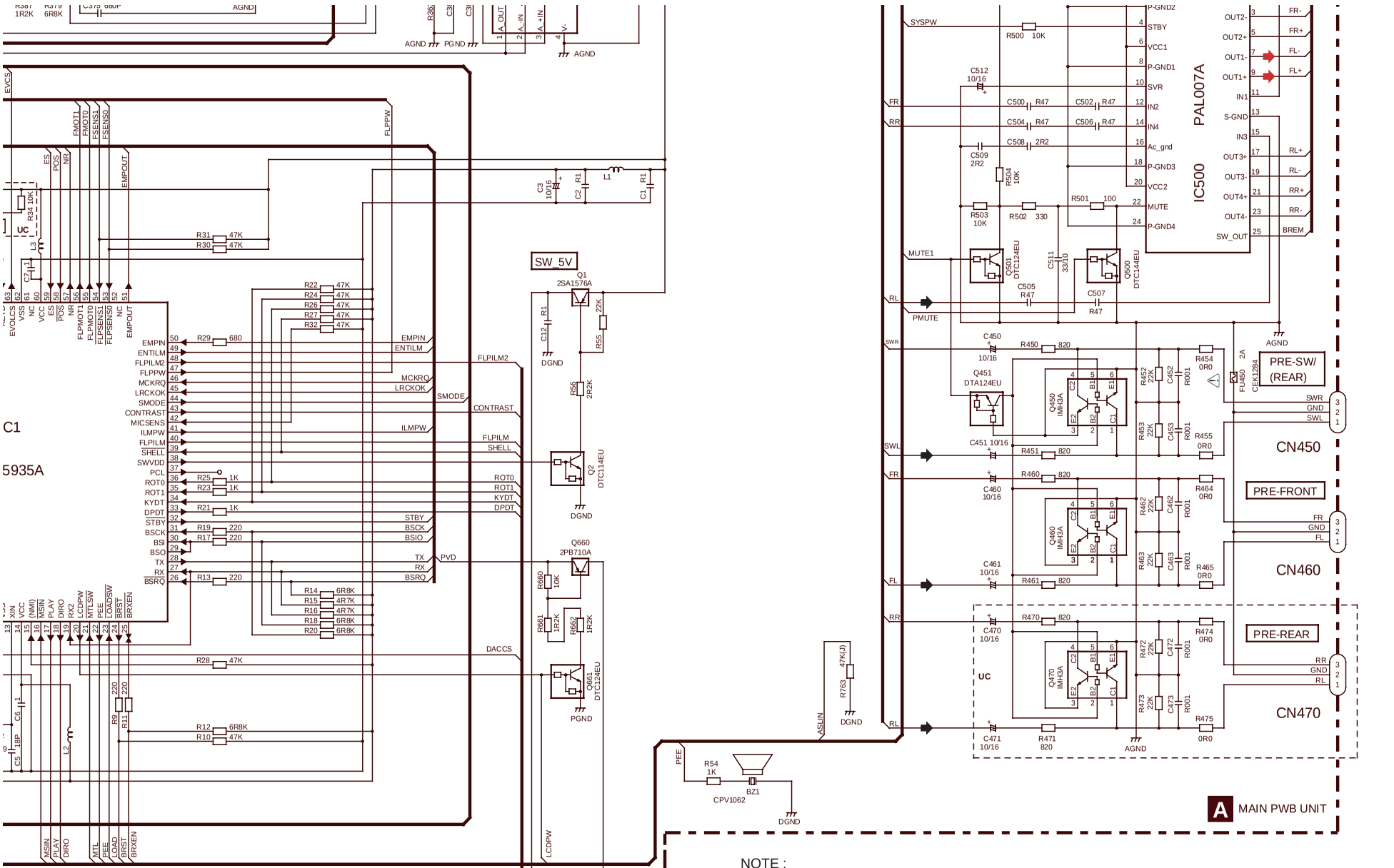

A-b
A-a
CD_PVD
PVD
TUNER3V
IC130 BA033FP
FM/AM TUNER UNIT
TU100
TUNER: -19.2dBs
LPF
DAC
PCM1606EG
IC330
ADC_IN
NJM2100M
IC350
DSP
IC150 AK7730VT
CN100
CN602
WIRED_REMO
CASS
CN220
CD
CN251
CN902
FH-P5000MP/XM/UC
24

A-b
A-a
IC1
PD5935A
CN60
CN800
CN801
CN900
CN251
CN250
CN400
CN80
CN901
CN902
IP-BUS
FLAP_MOTOR
IC170
TC7S08FU
IC180
TC74VHCT08AFT
IC190
TC74VHCT08AFT
IC81
BA00ASFP
IC80
BA6288FS
IC400
HA12240FP
IC2
PST3435UL
IC3
Not used


CN600
AUTO_ANT
IC680 BA033FP
IC670 BA05SFP
IC600 TPD1018F
IC300 PML011A
IC360 NJM4558MD
IC370 NJM4558MD
IC390 NJM4558MD
IC371 NJM4558MD
PAL007A
POWER_AMP
VDD5V
ENT8V
AUDIO8V
SW14V
ILM_14V
MUTE
ISENS
ASENS
BSENS
TEL_IN
E_VOL
LPF
D_PVD
DSP3V
DAC5V
D3V
A3V
DSPDGND
DSP-AGND
AGND
PGND
SYSPW
ANTPW
ILM+B
ENT+B
DALMON
ISENS
ASENS
BSENS
TELIN
PMUTE
ILMPW
MUTE
DSPPW
DACSV
CDVD
MCKRQ
TUNER: -19.2dBs
IP-BUS: +1.75dBs
TAPE: -7.4dBs
MD: -5.7dBs
TUNER: -16.0dBs
IP-BUS: -5.3dBs
CD: +2.4dBs
TAPE: -8.7dBs
TUNER: -9.1dBs
IP-BUS: +1.7dBs

A-a A-b

A-b



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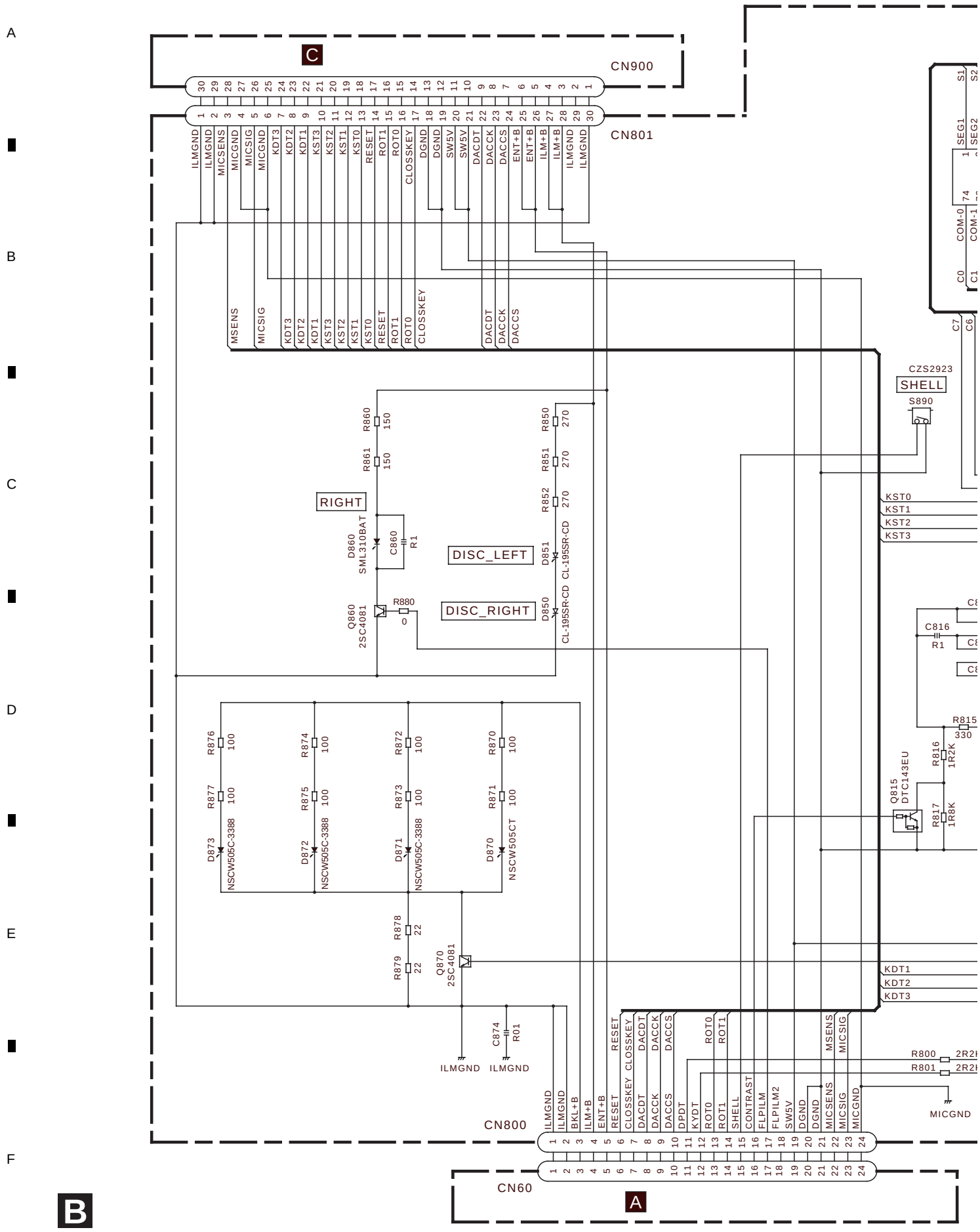
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

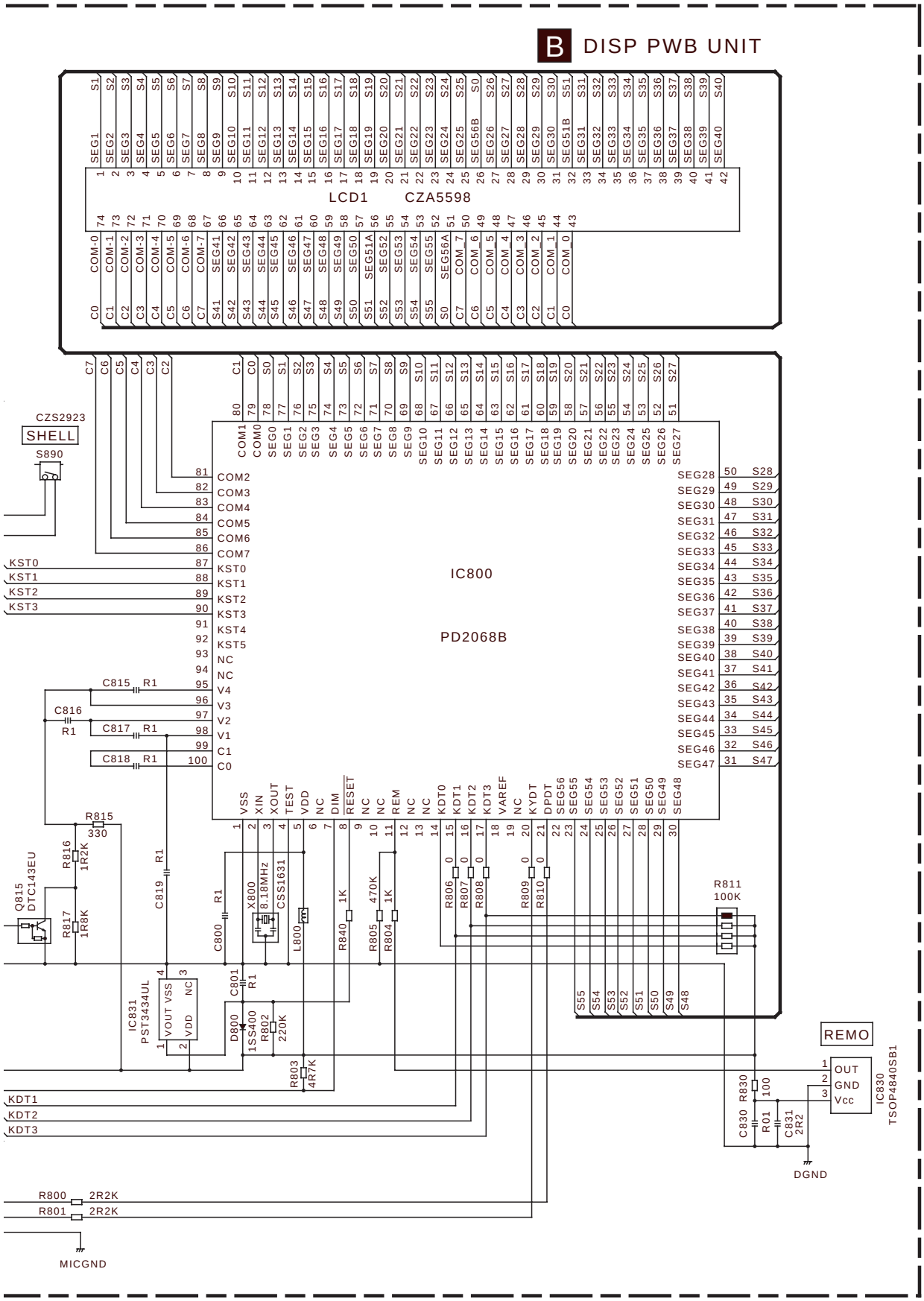
A-a A-b

A-b

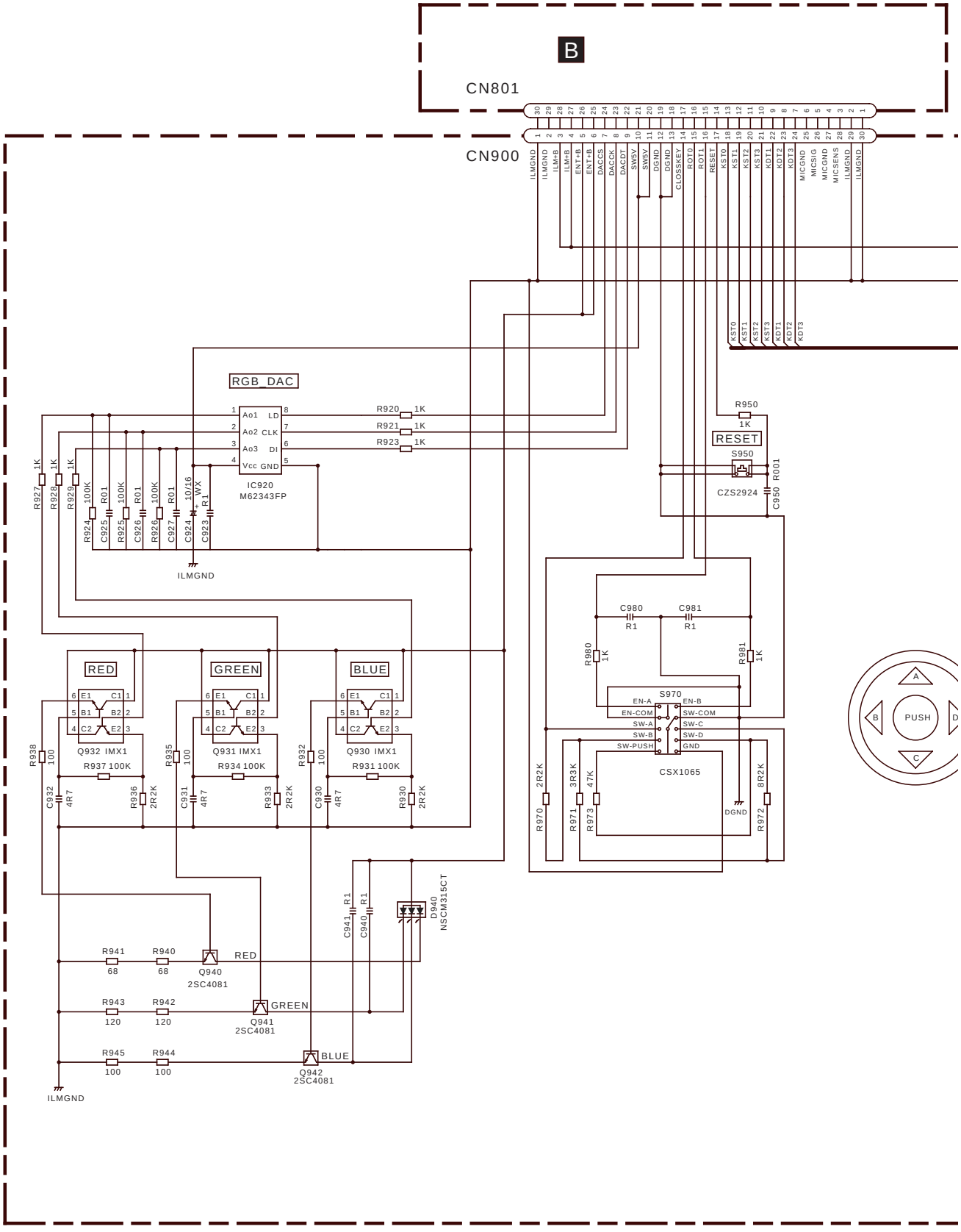
3.3 DISP PWB UNIT



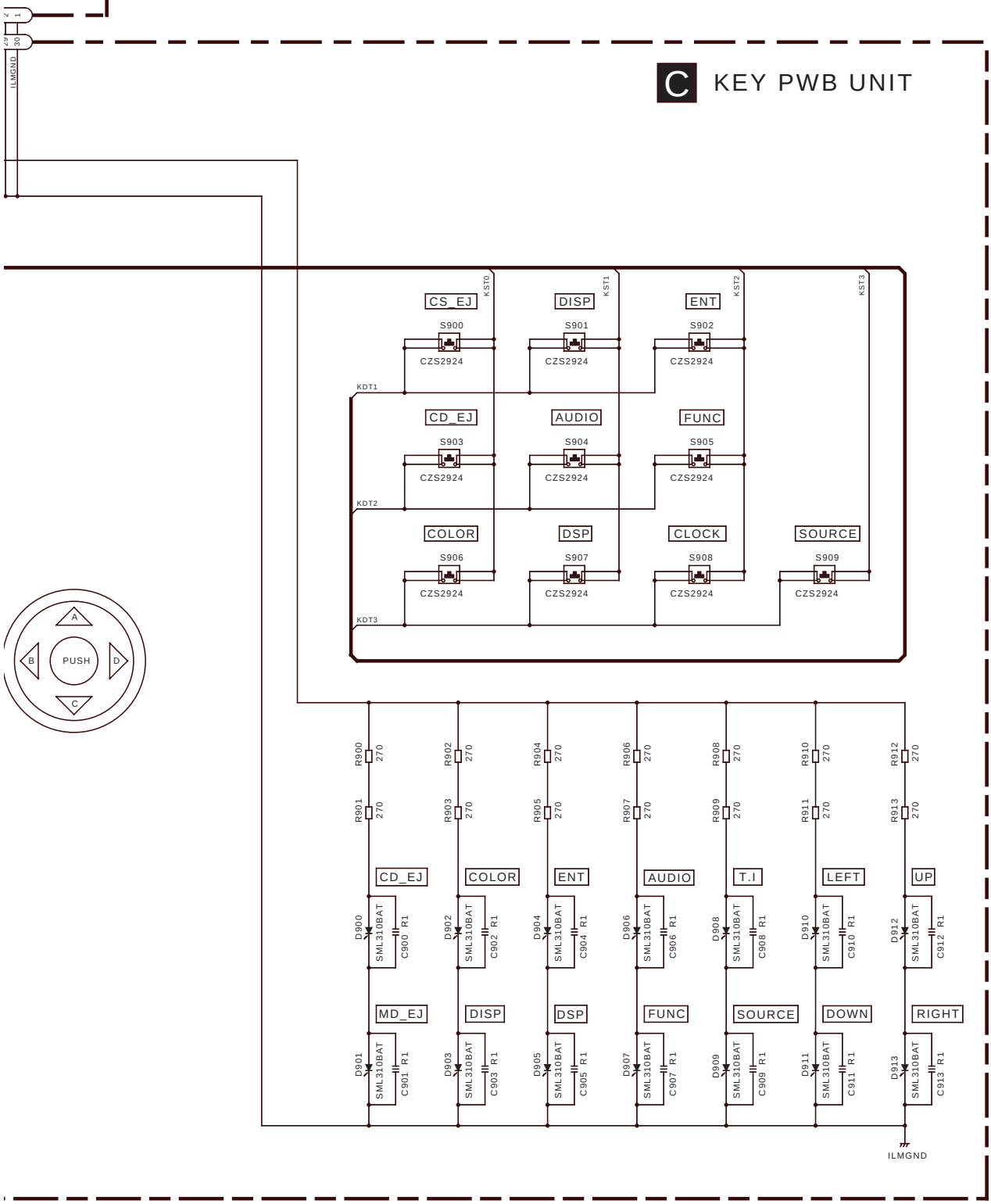
B DISP PWB UNIT



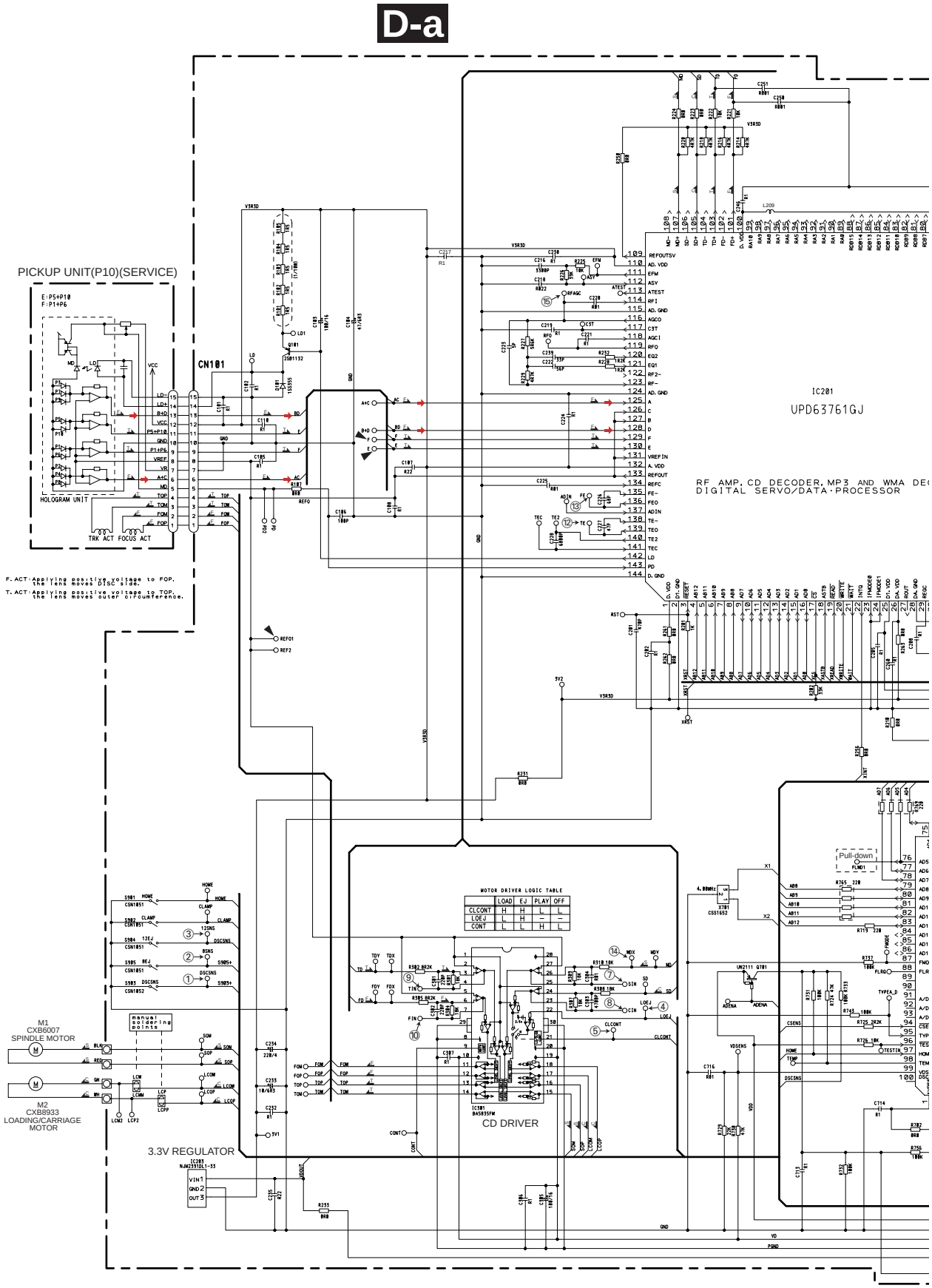
3.4 KEY PWB UNIT

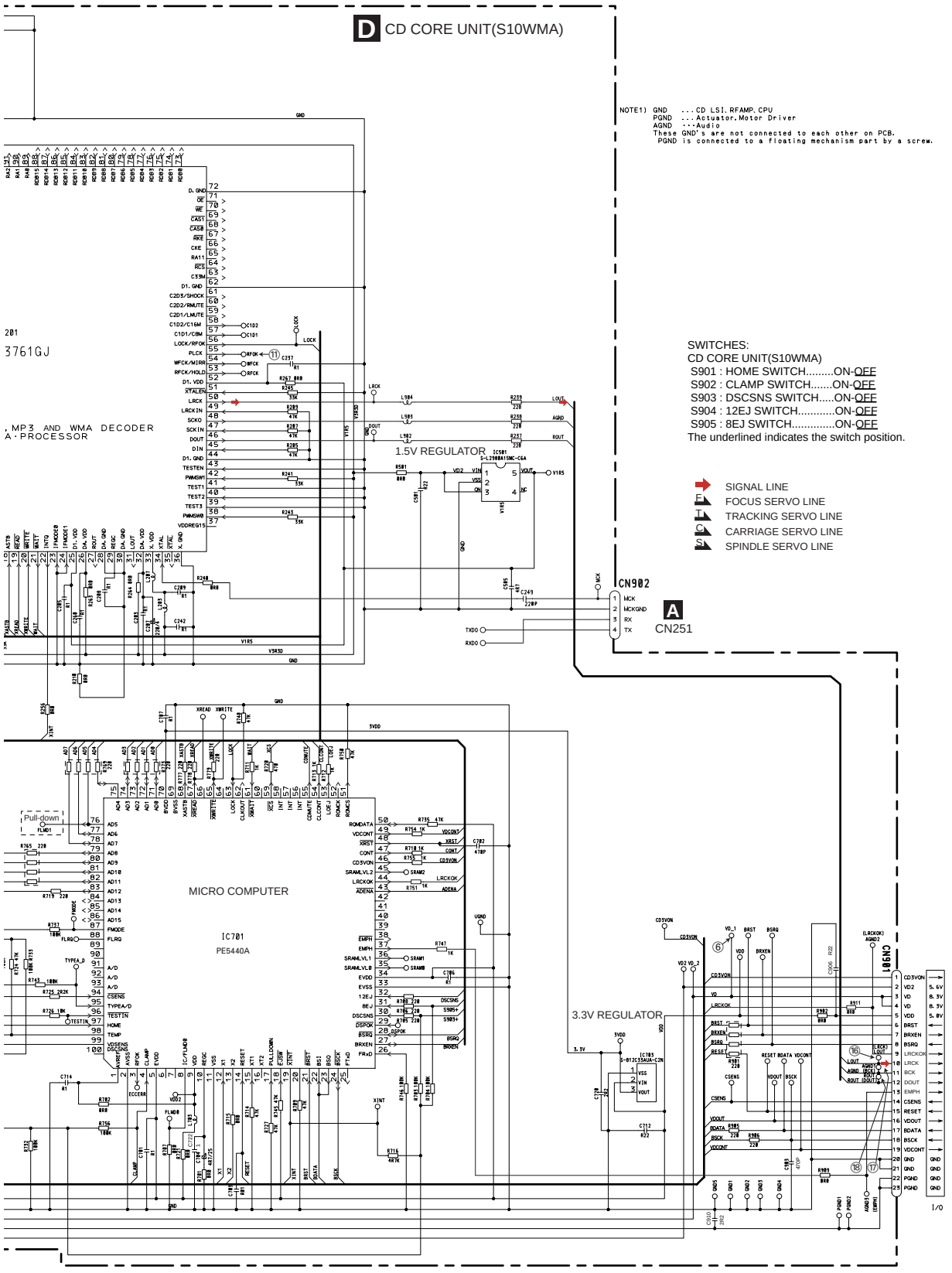


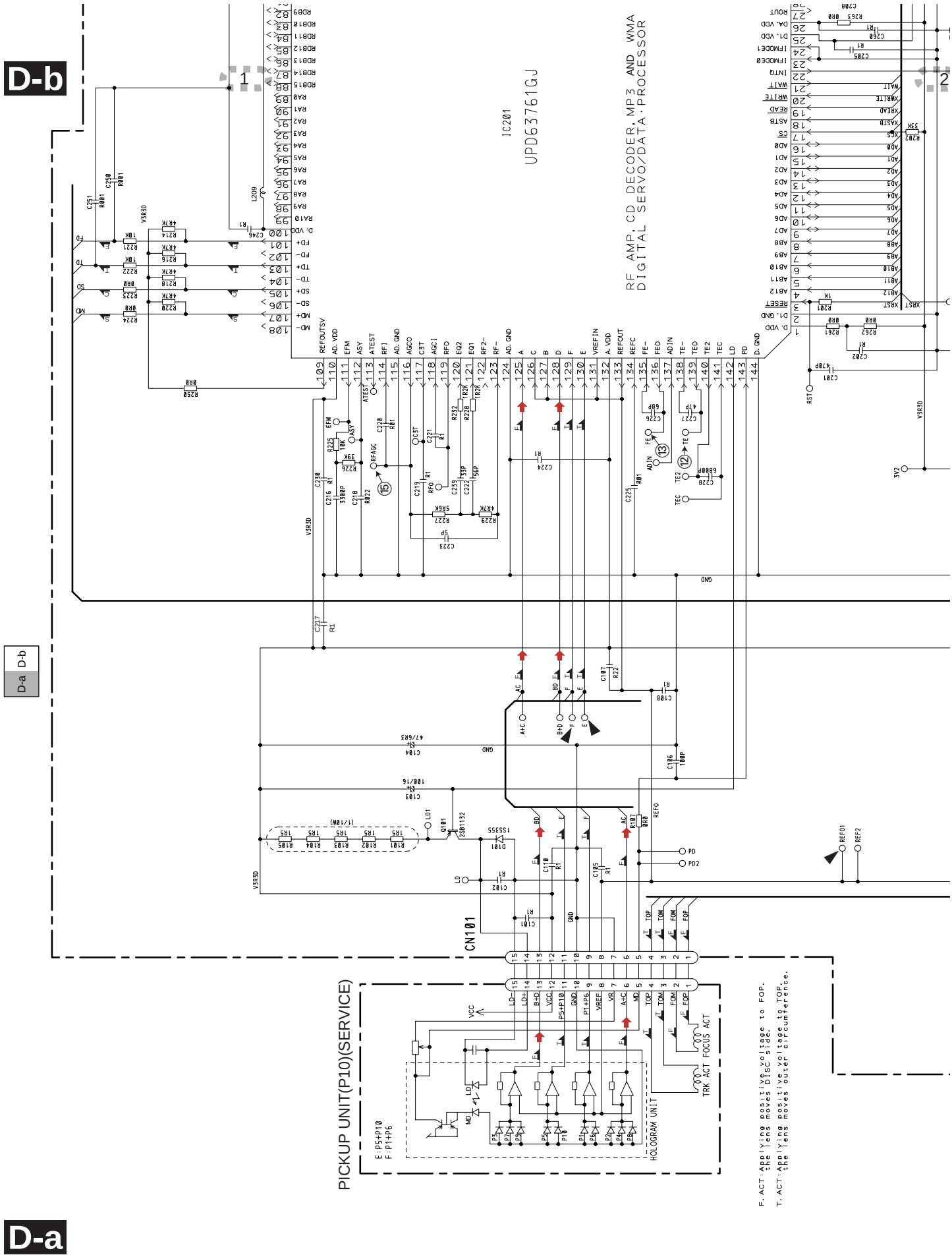
C KEY PWB UNIT

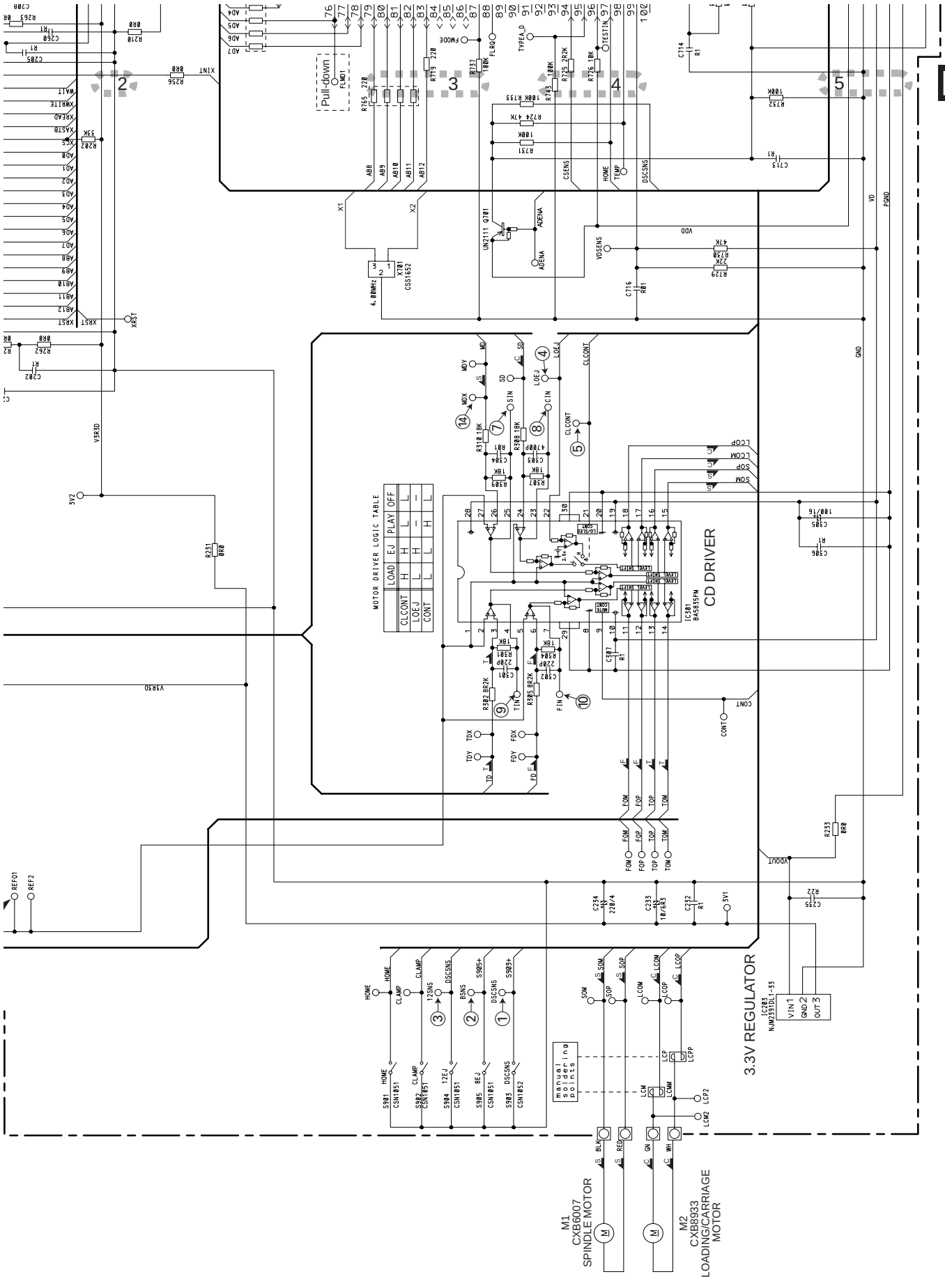


3.5 CD MECHANISM MODULE(GUIDE PAGE)

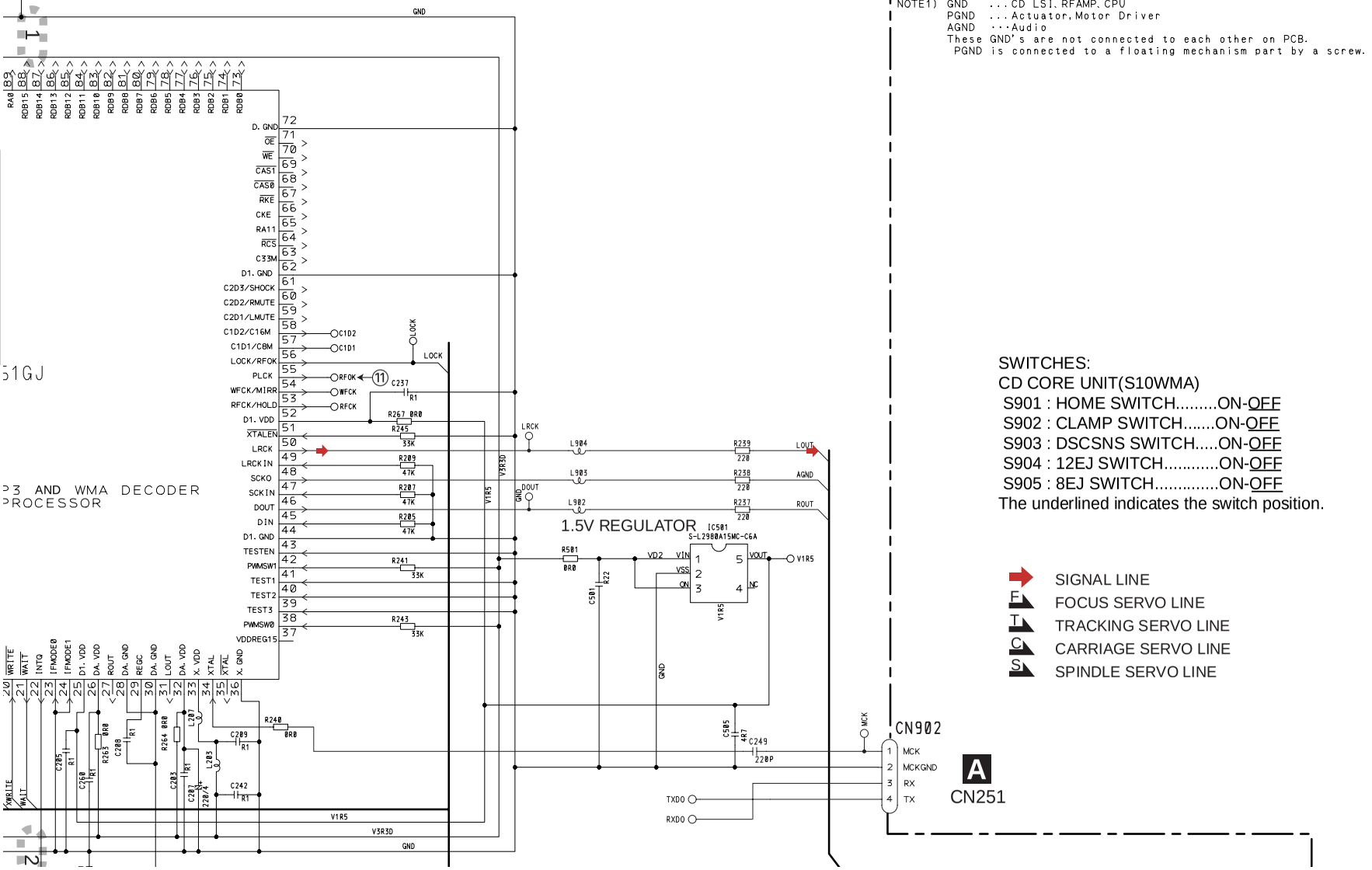



D CD CORE UNIT(S10WMA)
NOTE1) GND ...CD LSI,RFAMP,CPU
PGND ...Actuator,Motor Driver
AGND ...Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.
SWITCHES:
CD CORE UNIT(S10WMA)
S901 : HOME SWITCH.....ON-OFF
S902 : CLAMP SWITCH.....ON-OFF
S903 : 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
201
3761GJ
, MP3 AND WMA DECODER
A·PROCESSOR
1.5V REGULATOR
3.3V REGULATOR
MICRO COMPUTER
IC701
PE5440A
Pull-down
CN902
CN251
CN250
CN901
1/0


D-b
D-a
IC201
UPD63761GJ
RF AMP, CD DECODER, MP3 AND WMA
DIGITAL SERVO/DATA PROCESSOR
CN101
PICKUP UNIT(P10)(SERVICE)
HOLOGRAM UNIT
E:P5+P10
F:P1+P6
F. ACT Applying positive voltage to FOP.
the lens moves DISC side.
T. ACT Applying positive voltage to TOP.
the lens moves outer circumference.


D-b
D-a
CD DRIVER
3.3V REGULATOR
MOTOR DRIVER LOGIC TABLE
M1
CXB6007
SPINDLE MOTOR
M2
CXB8933
LOADING/CARRIAGE
MOTOR

D CD CORE UNIT(S10WMA)



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PGND is connected to a floating mechanism part by a screw.

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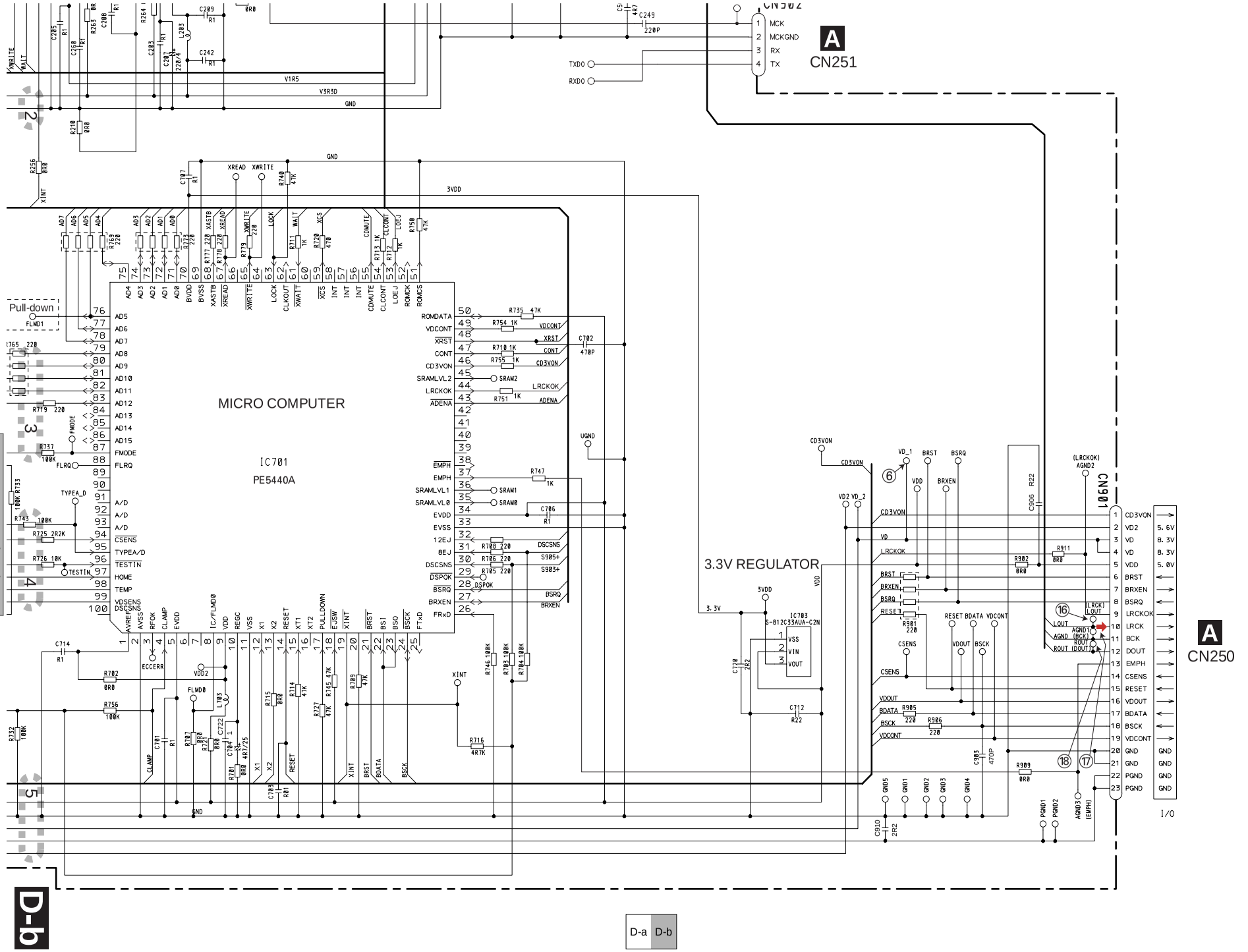
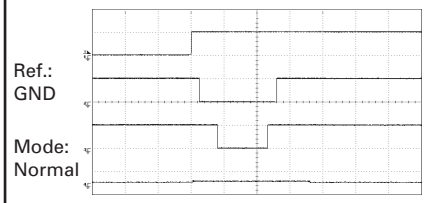
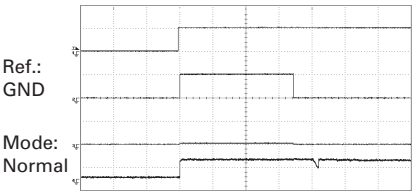
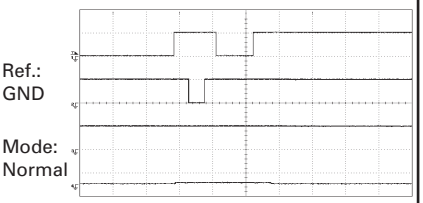
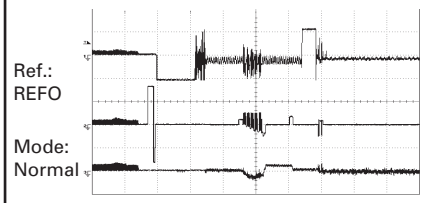
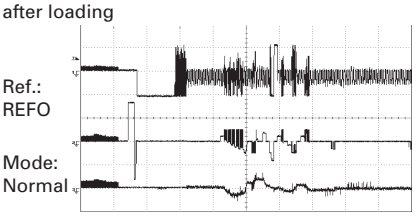
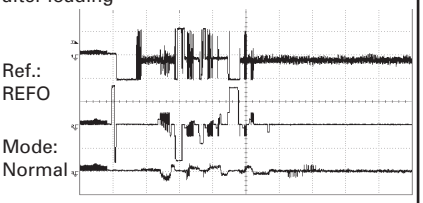
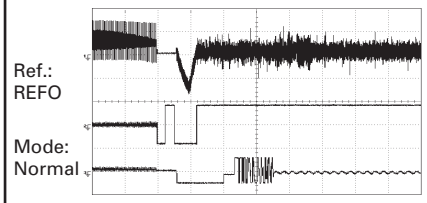
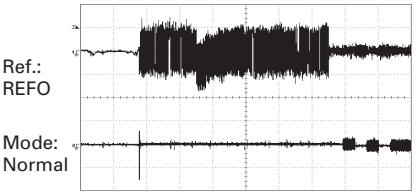
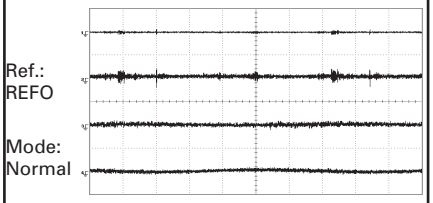
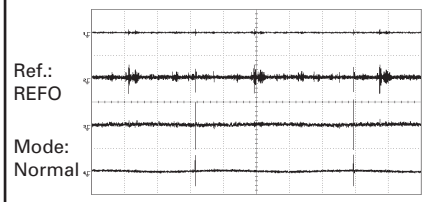
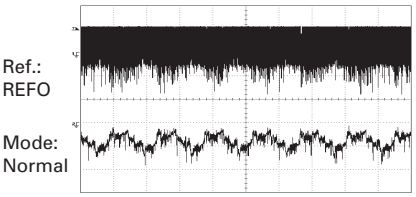
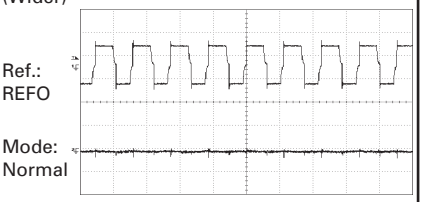
S902 : CLAMP SWITCH.....ON-OFF
S903 : DSCSNS SWITCH.....ON-OFF
S904 : 12EJ SWITCH.....ON-OFF
S905 : 8EJ SWITCH.....ON-OFF
The underlined indicates the switch position.

SIGNAL LINE
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE


MICRO COMPUTER
IC701
PE5440A
3.3V REGULATOR
IC703
S-812C33AUA-C2N
CN251
CN250
CN901
I/O
Pull-down
FH-P5000MP/XM/UC
D-b
D-a
D-b

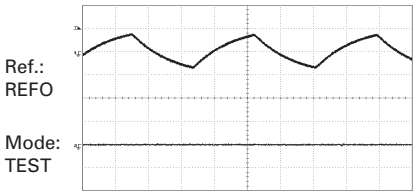
● Waveforms

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) 

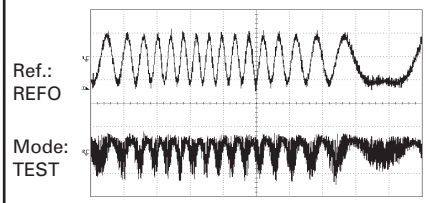
⑩ FIN 500mV/div 200ms/div
⑬ FE 500mV/div

Focus Search waveform



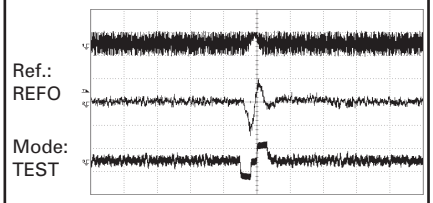
⑫ TE 500mV/div 2ms/div
⑮ RFAGC 500mV/div

Track Open waveform



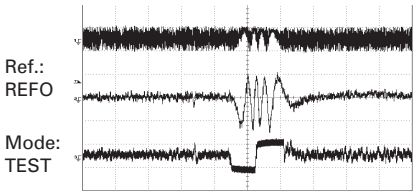
⑮ RFAGC 1V/div 500µs/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

1 Track Jump waveform



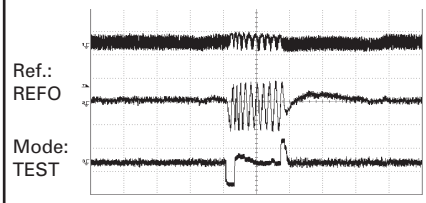
⑮ RFAGC 1V/div 500µs/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

4 Tracks Jump waveform



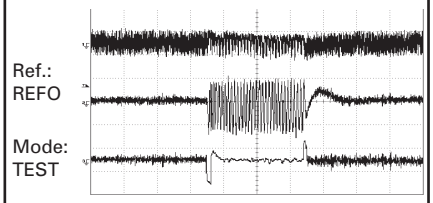
⑮ RFAGC 1V/div 1ms/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

10 Tracks Jump waveform



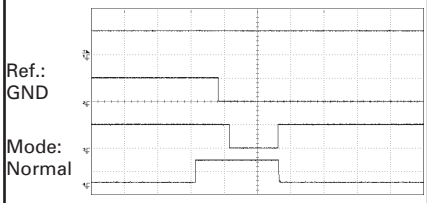
⑮ RFAGC 1V/div 2ms/div
⑫ TE 500mV/div
⑨ TIN 500mV/div

32 Tracks Jump waveform



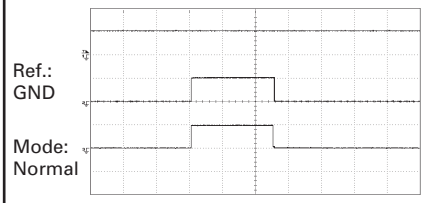
① DSCSNS 5V/div 500ms/div
② 8SNS 5V/div
③ 12SNS 5V/div
④ LOEJ 5V/div

12 cm CD Eject operation



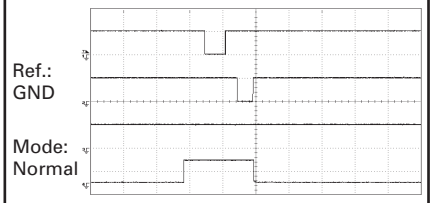
① DSCSNS 5V/div 500ms/div
⑤ CLCONT 5V/div
④ LOEJ 5V/div

12 cm CD Eject operation



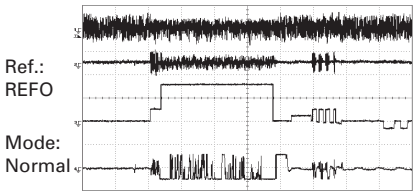
① DSCSNS 5V/div 500ms/div
② 8SNS 5V/div
③ 12SNS 5V/div
④ LOEJ 5V/div

8 cm CD Eject operation



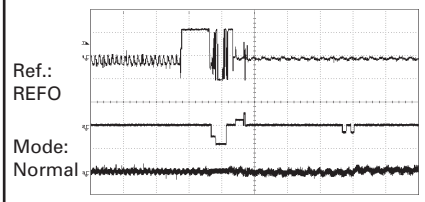
⑮ RFAGC 1V/div 200ms/div
⑫ TE 1V/div
⑧ CIN 500mV/div
⑦ SIN 2V/div

Search operation(Outter to Inner)



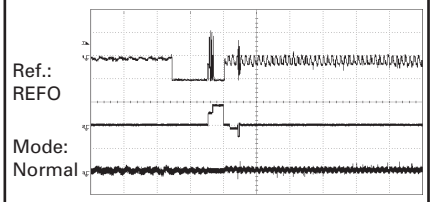
⑦ SIN 1V/div 500ms/div
⑧ CIN 500mV/div
⑨ TIN 500mV/div

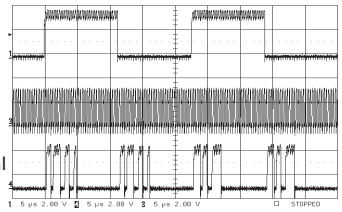
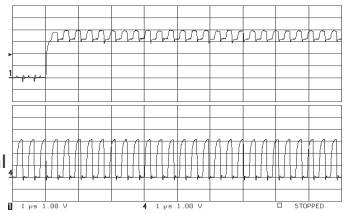
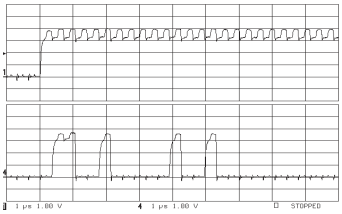
CD-ROM >> CD-DA mode change(Band key)



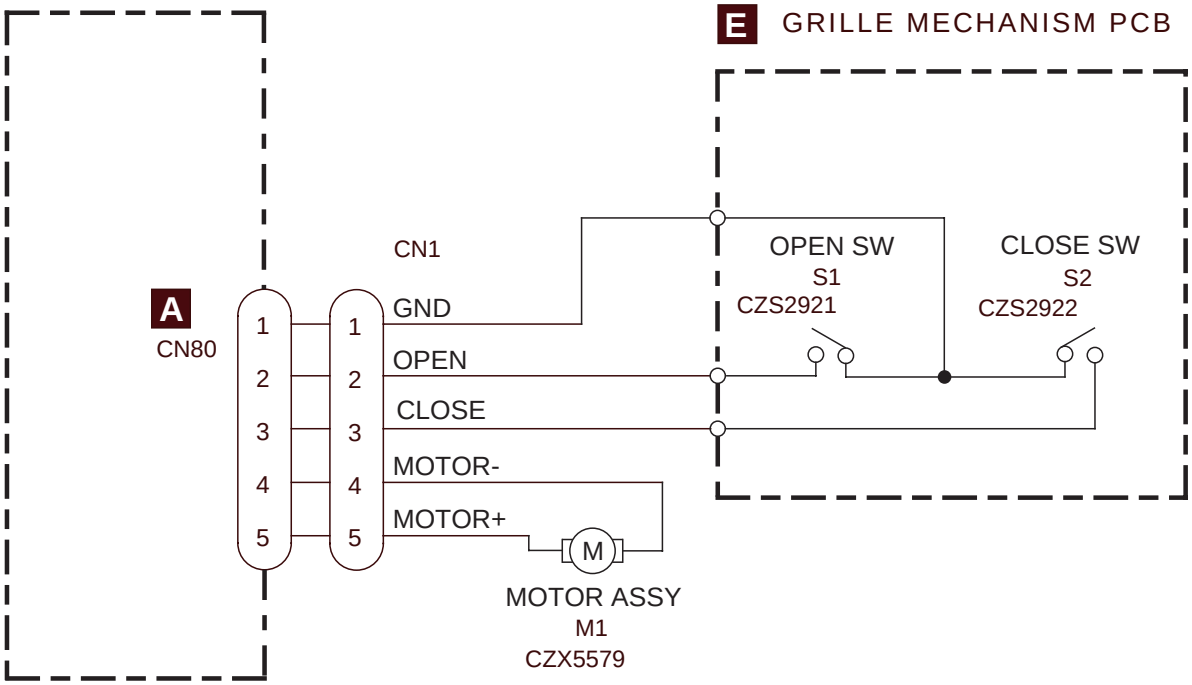
⑦ SIN 1V/div 500ms/div
⑧ CIN 500mV/div
⑨ TIN 500mV/div

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

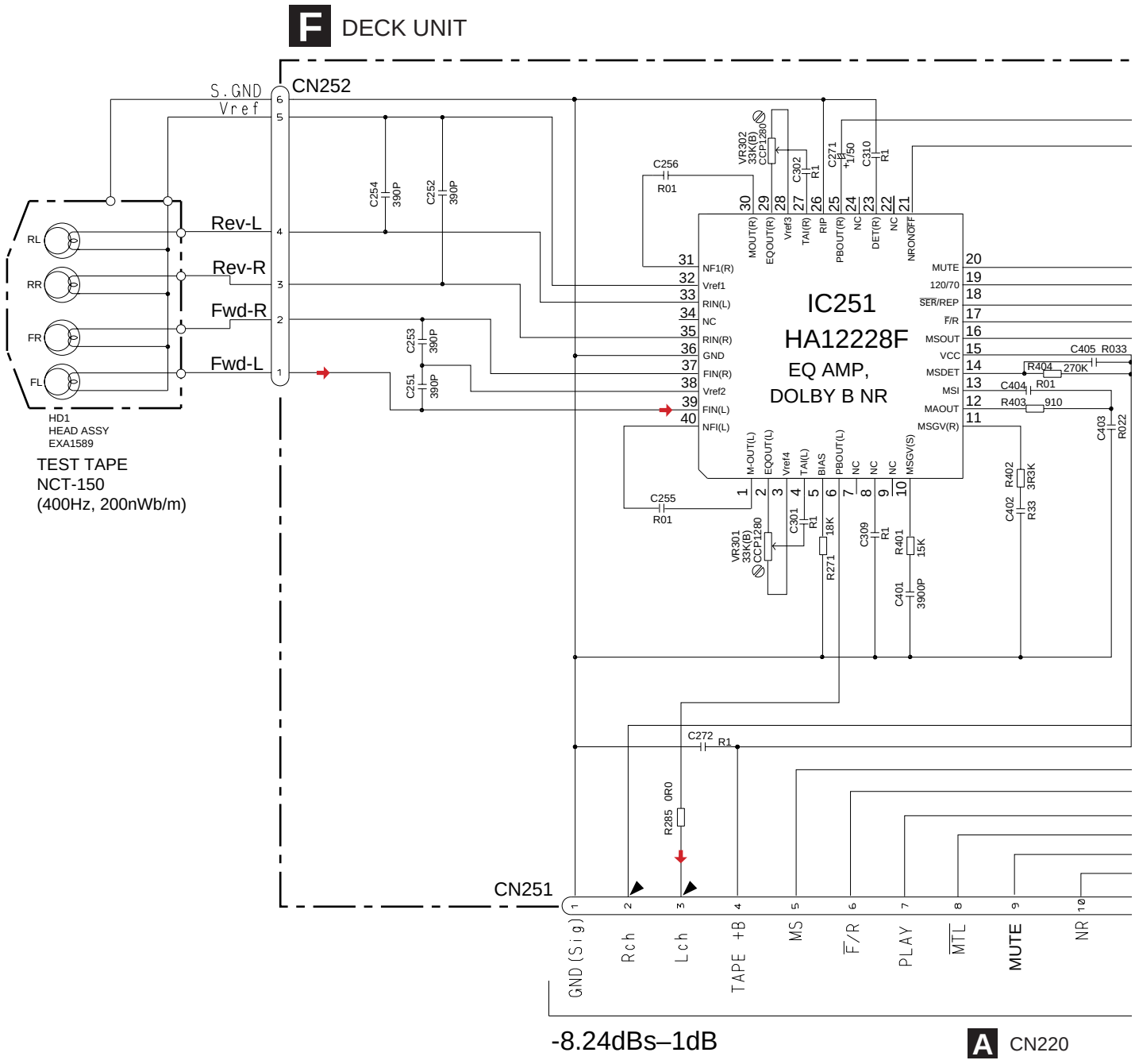


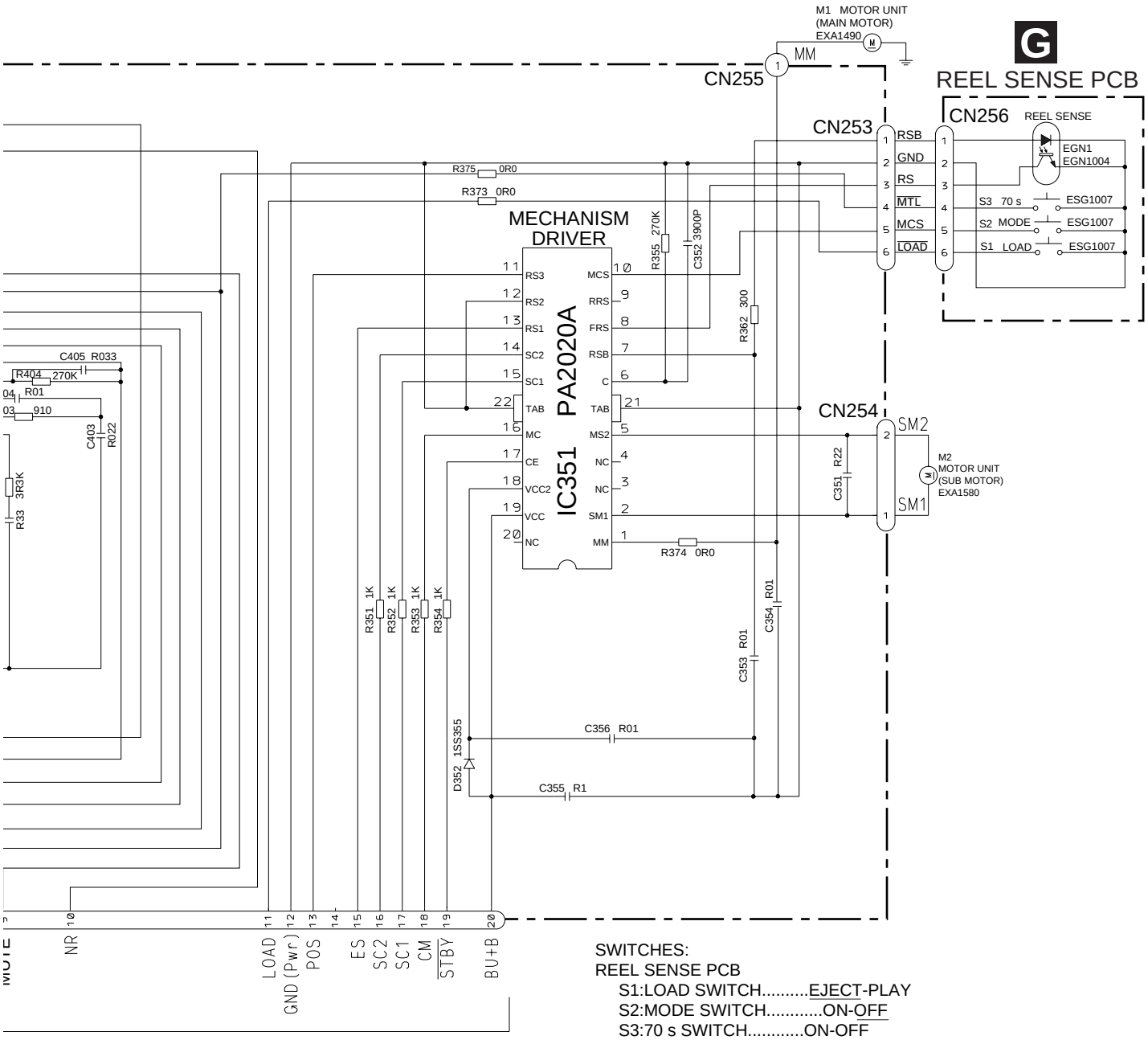
⑯ LRCK 2V/div 5µs/div ⑰ BCK 2V/div ⑱ DOUT 2V/div Digtal audio waveform Ref.: GND Mode: Normal 	⑯ LRCK 1V/div 1µs/div ⑰ BCK 1V/div Digtal audio waveform Ref.: GND Mode: Normal 	⑯ LRCK 1V/div 1µs/div ⑱ DOUT 1V/div Analog audio waveform Ref.: AGND Mode: Normal 

3.6 GRILLE MECHANISM PCB



3.7 CASSETTE MECHANISM MODULE





SWITCHES:
REEL SENSE PCB
S1:LOAD SWITCH.....EJECT-PLAY
S2:MODE SWITCH.....ON-OFF
S3:70 s SWITCH.....ON-OFF

The underlined indicates the switch position.

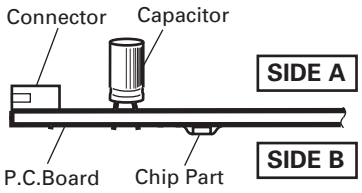
F G

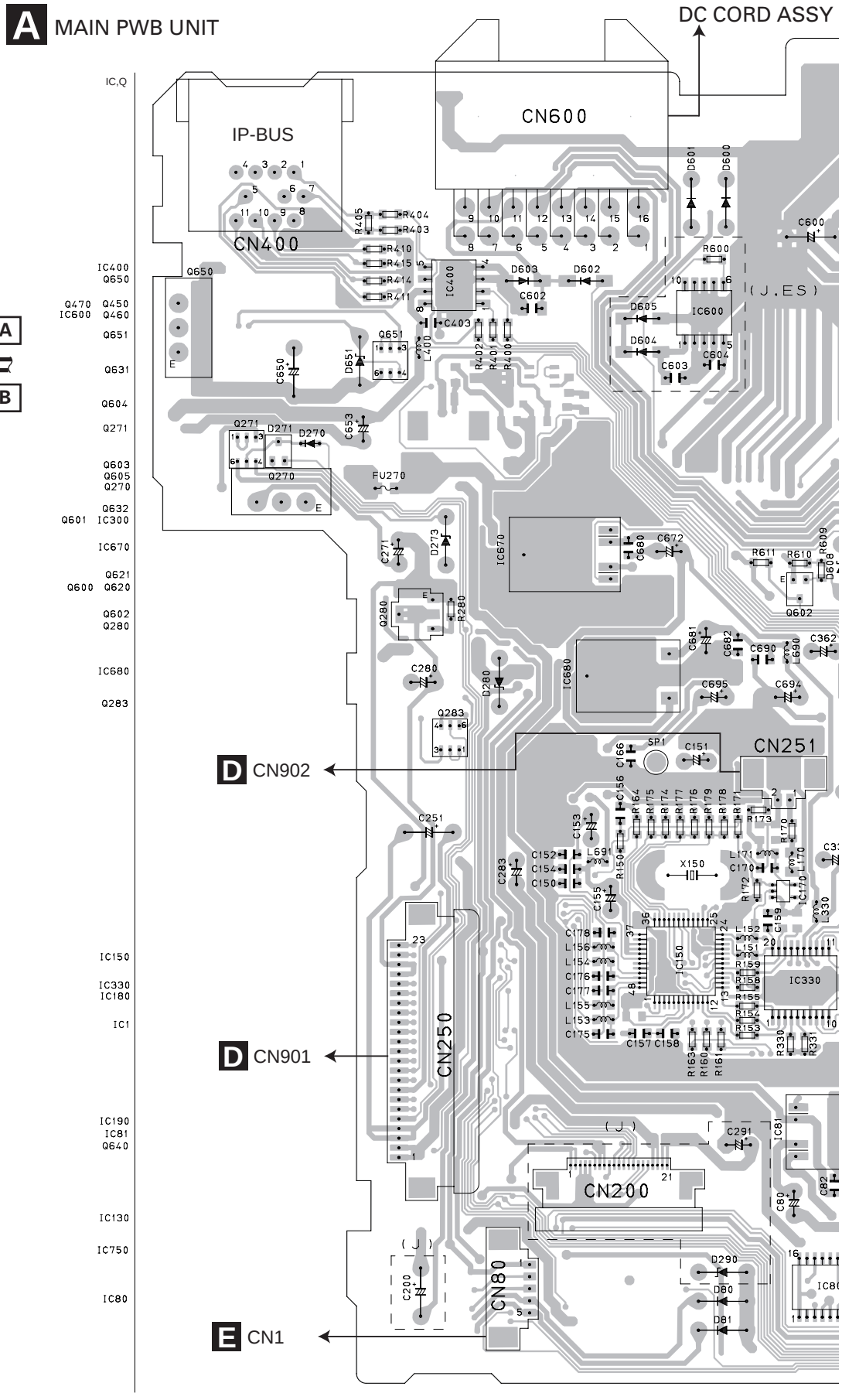
4. PCB CONNECTION DIAGRAM
4.1 MAIN PWB UNIT

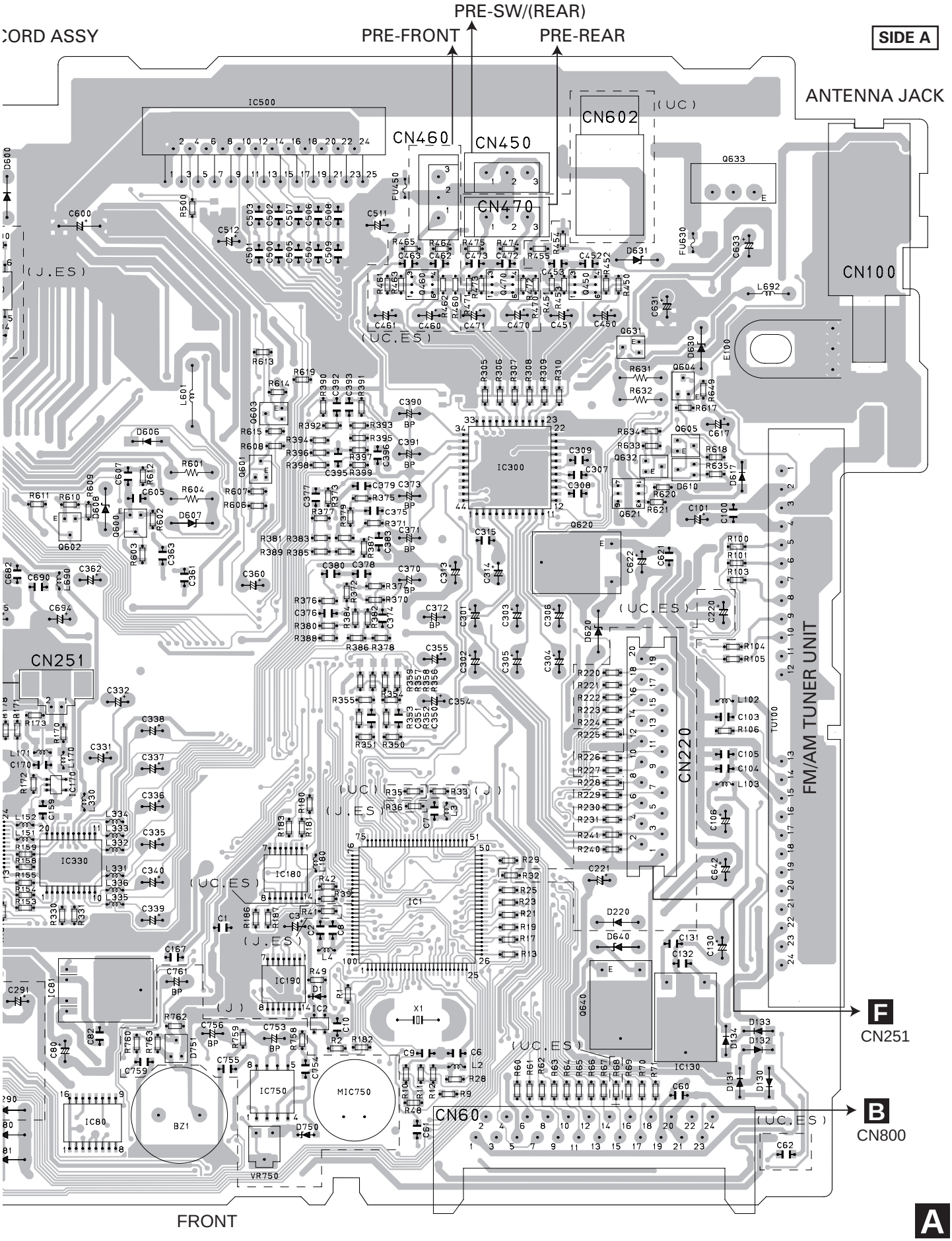
NOTE FOR PCB DIAGRAMS

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

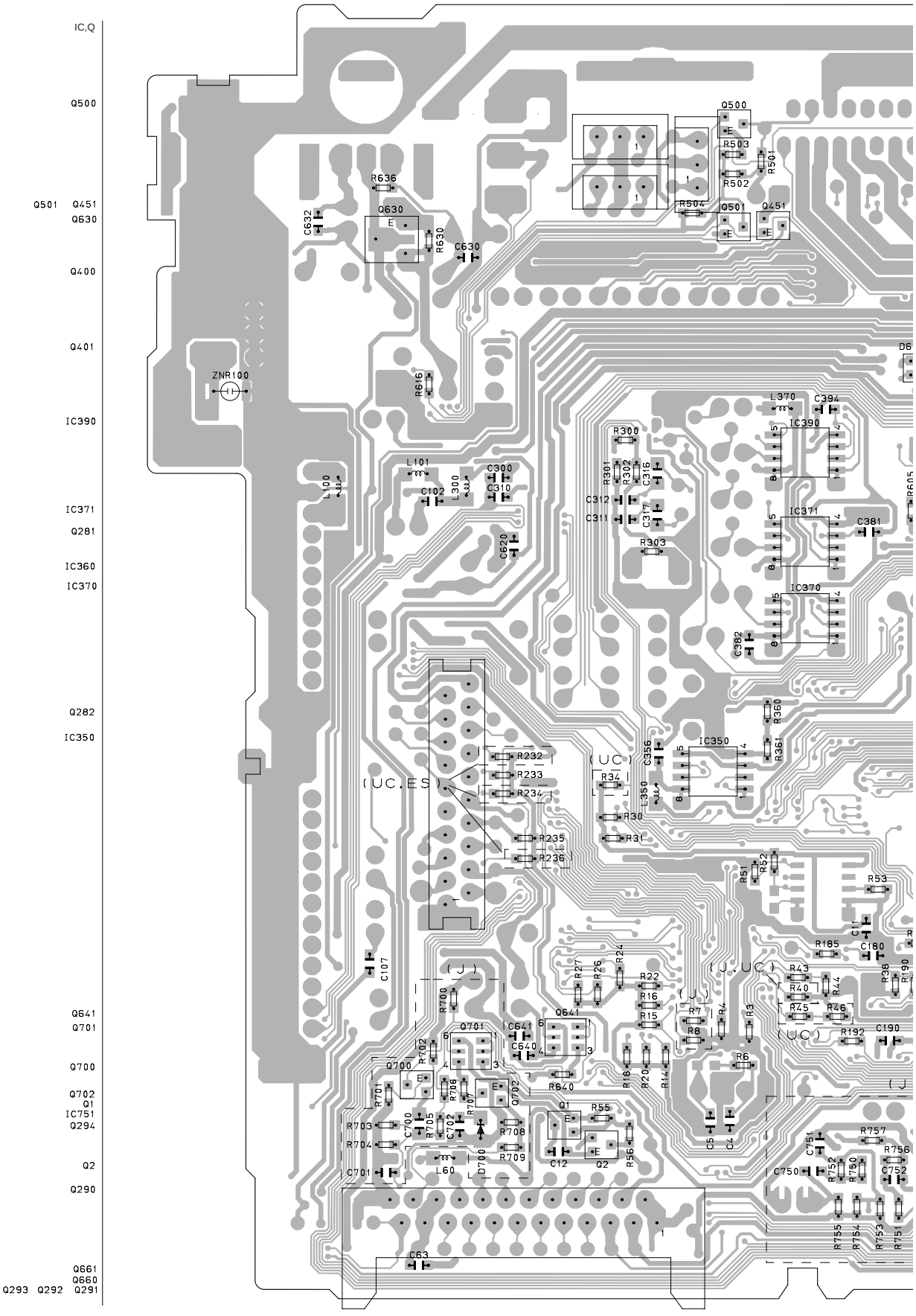





PRE-SW/(REAR)
CORD ASSY
PRE-FRONT
PRE-REAR
SIDE A
ANTENNA JACK
CN602
(UC)
CN460
CN450
CN470
CN100
(J.ES)
(UC.ES)
IC500
IC300
IC330
IC180
IC190
IC750
IC80
IC130
IC1
IC2
CN251
CN220
FM/AM TUNER UNIT
TU100
CN60
CN800
MIC750
BZ1
X1
VR750
FRONT
F
B
A

A

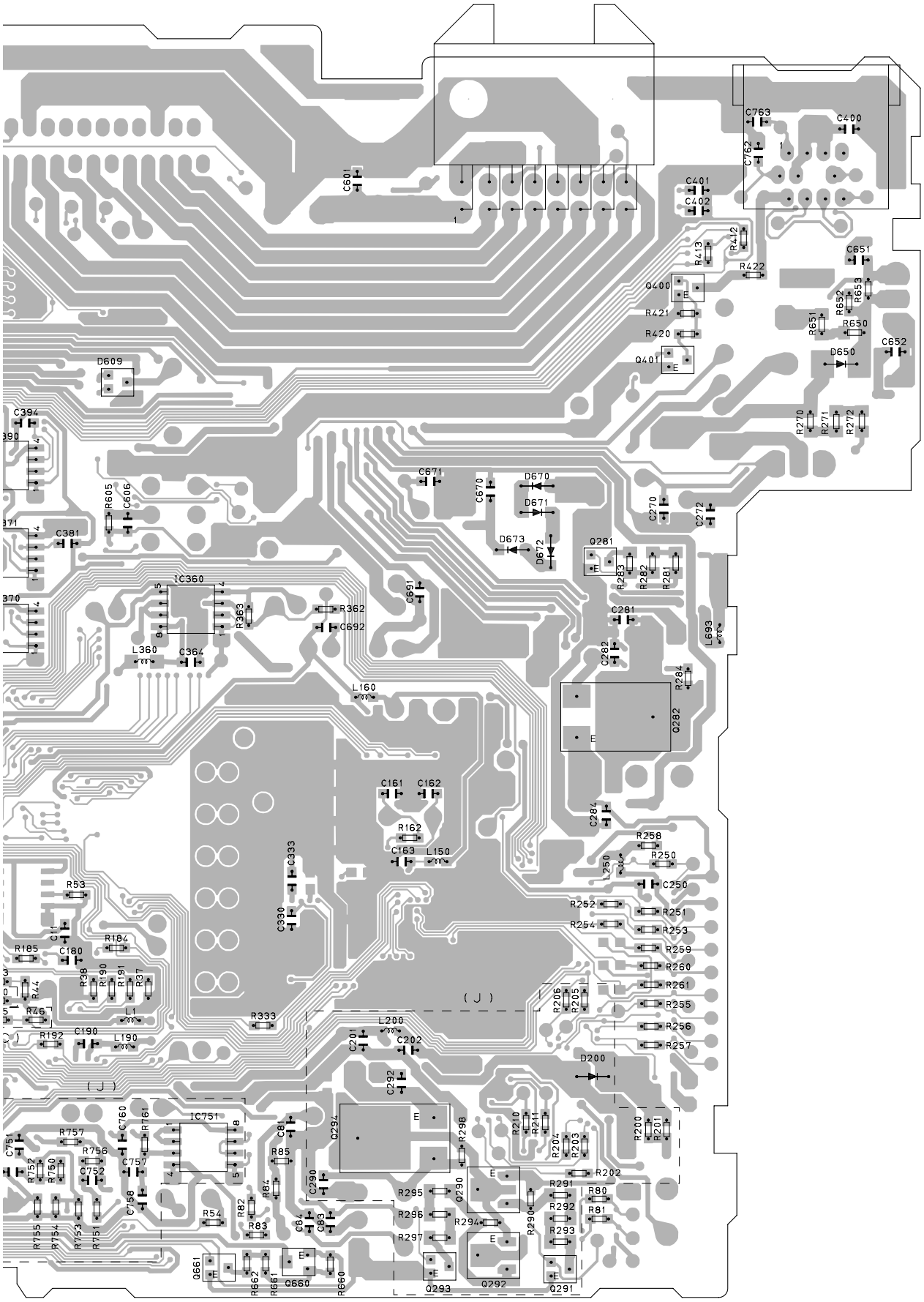
A MAIN PWB UNIT



A

FH-P5000MP/XM/UC

SIDE B

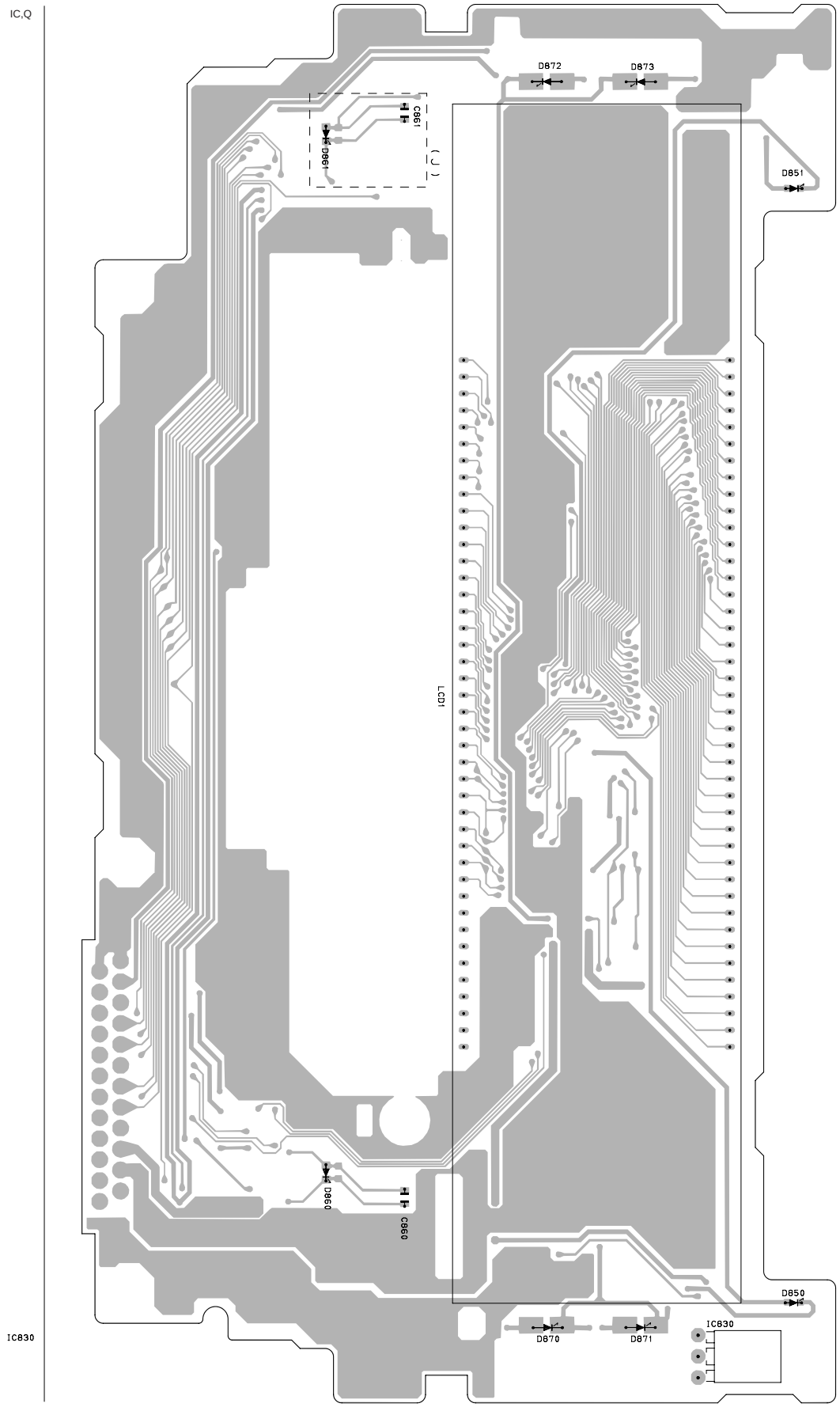

C601
C763
C400
C752
C401
C402
R412
R413
R422
C651
R652
R653
Q400
R421
R420
Q401
R651
R650
C652
D650
D609
C394
R270
R271
R272
C671
C670
D670
D671
D673
D672
C270
C272
Q281
R283
R282
R281
R605
C606
C381
IC360
R363
R362
C692
C691
C281
L693
L360
C364
C282
R284
L160
Q282
C161
C162
R162
C163
L150
C284
R258
R250
L250
C250
R252
R251
R254
R253
R259
R260
R261
R255
R256
R257
C333
C330
R53
C11
R184
R185
C180
R38
R190
R191
R37
R44
R46
L1
R333
R192
C190
L190
L200
C201
C202
D200
C292
Q294
R298
R210
R211
R204
R203
R200
R201
R202
IC751
C751
R757
R756
C760
R761
R752
R750
C757
C758
C81
R85
R84
C290
R82
R54
R83
C84
C83
R295
Q290
R296
R294
R297
R291
R80
R292
R81
R290
R293
Q660
Q661
R662
R661
R660
Q293
Q292
Q291

5 6 7 8

4.2 DISP PWB UNIT

B DISP PWB UNIT

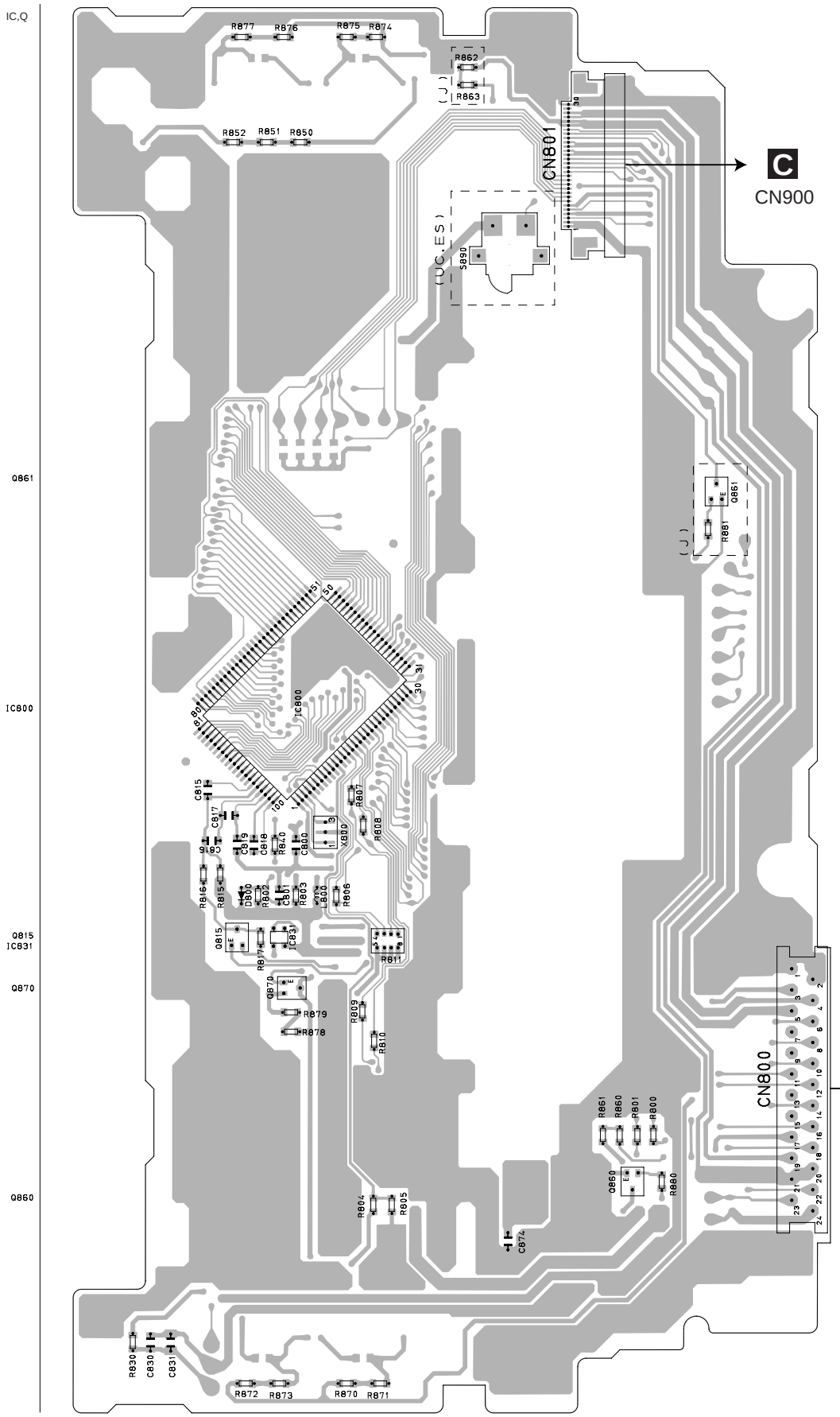
SIDE A



B

B DISP PWB UNIT

SIDE B

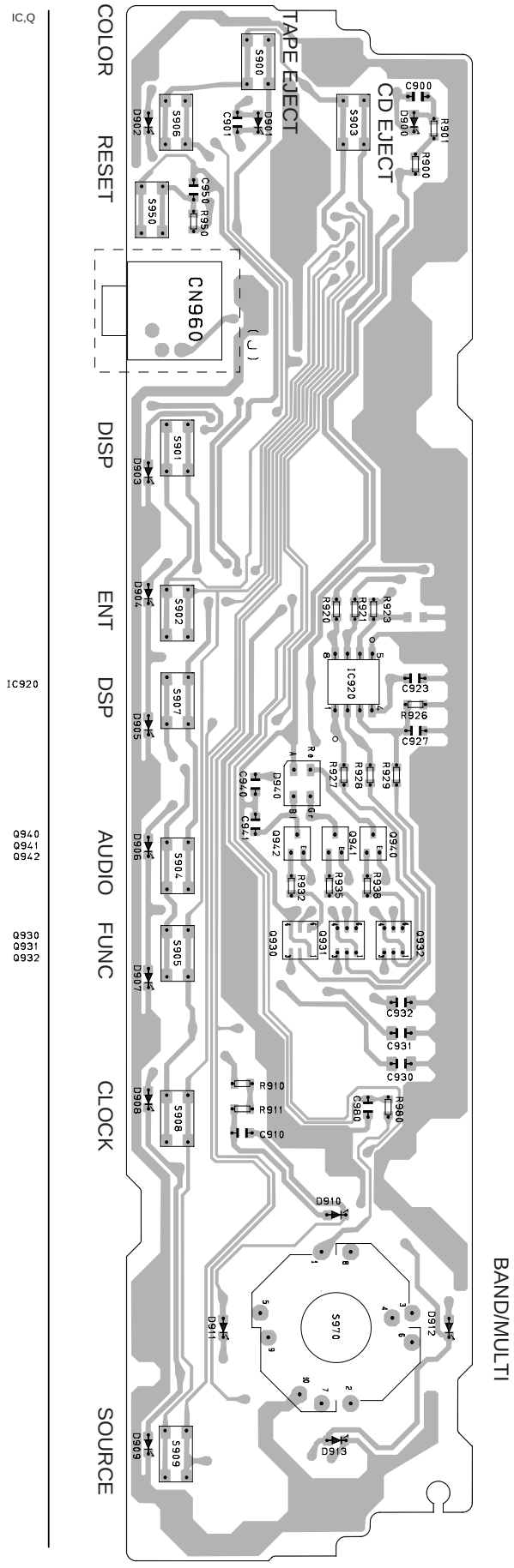


B

4.3 KEY PWB UNIT

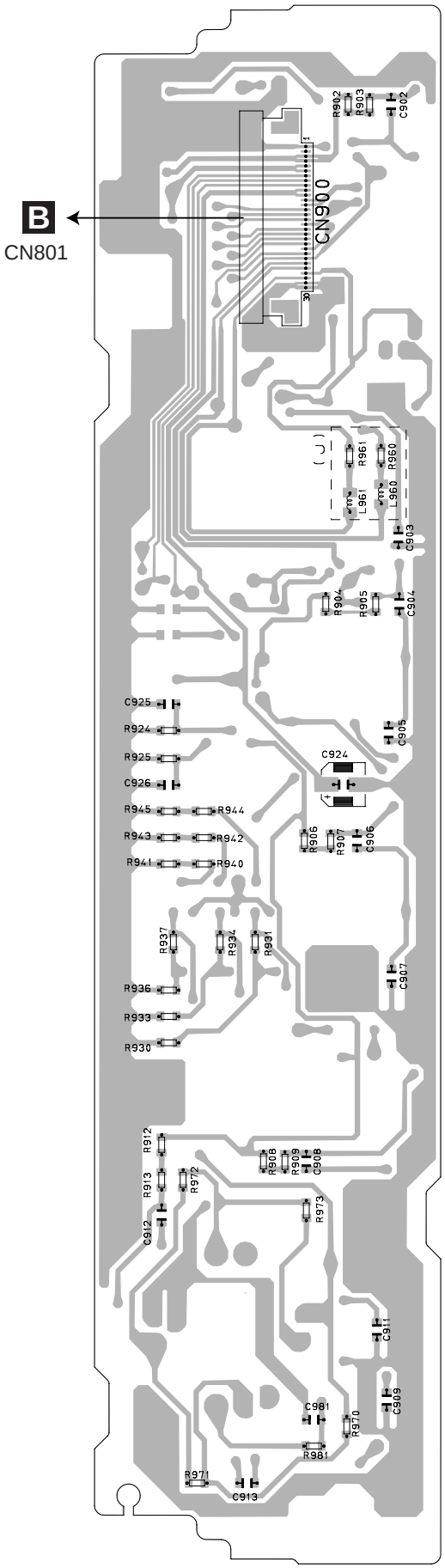
C KEY PWB UNIT

SIDE A



C KEY PWB UNIT

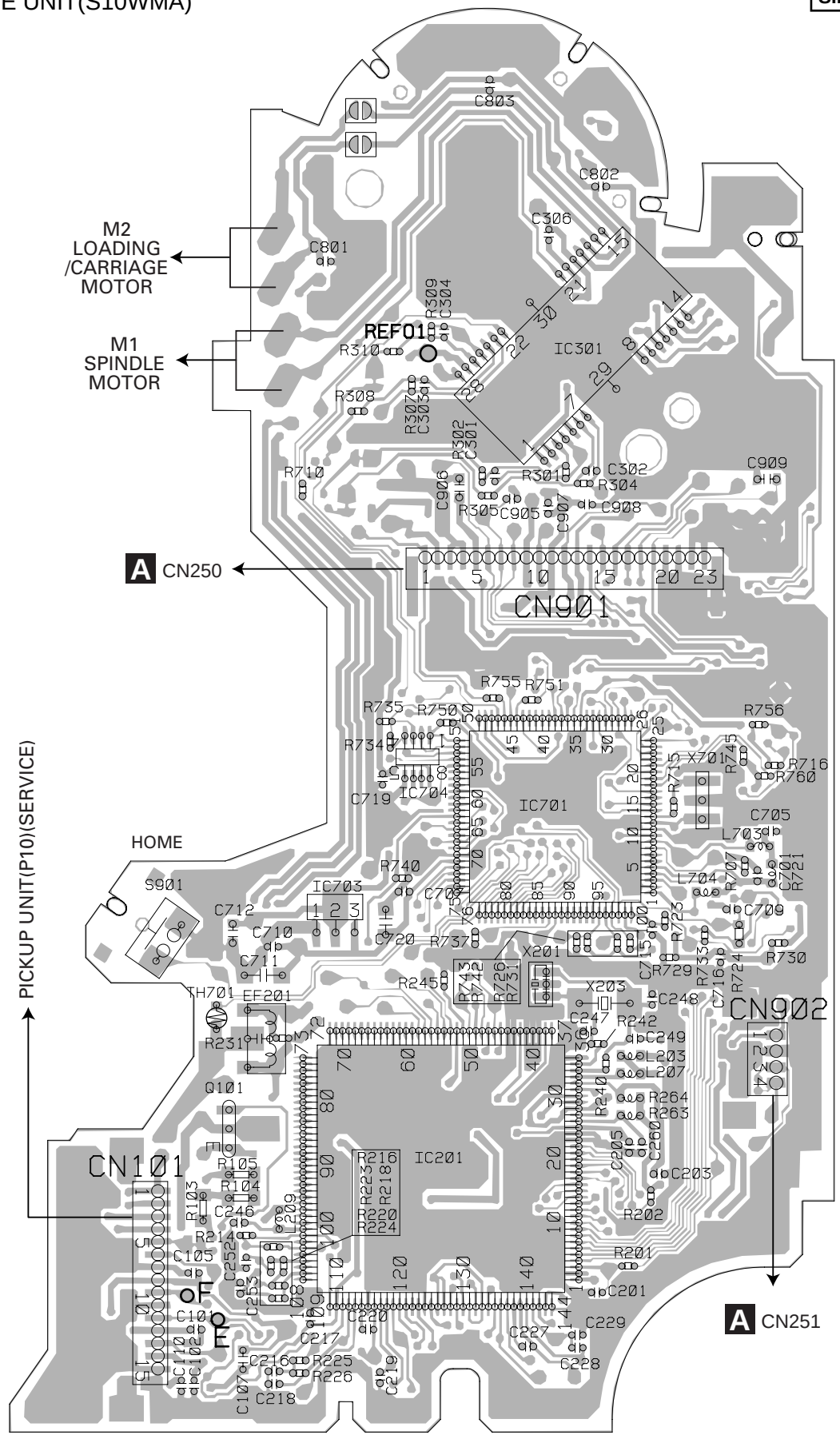
SIDE B



4.4 CD MECHANISM MODULE

D CD CORE UNIT(S10WMA)

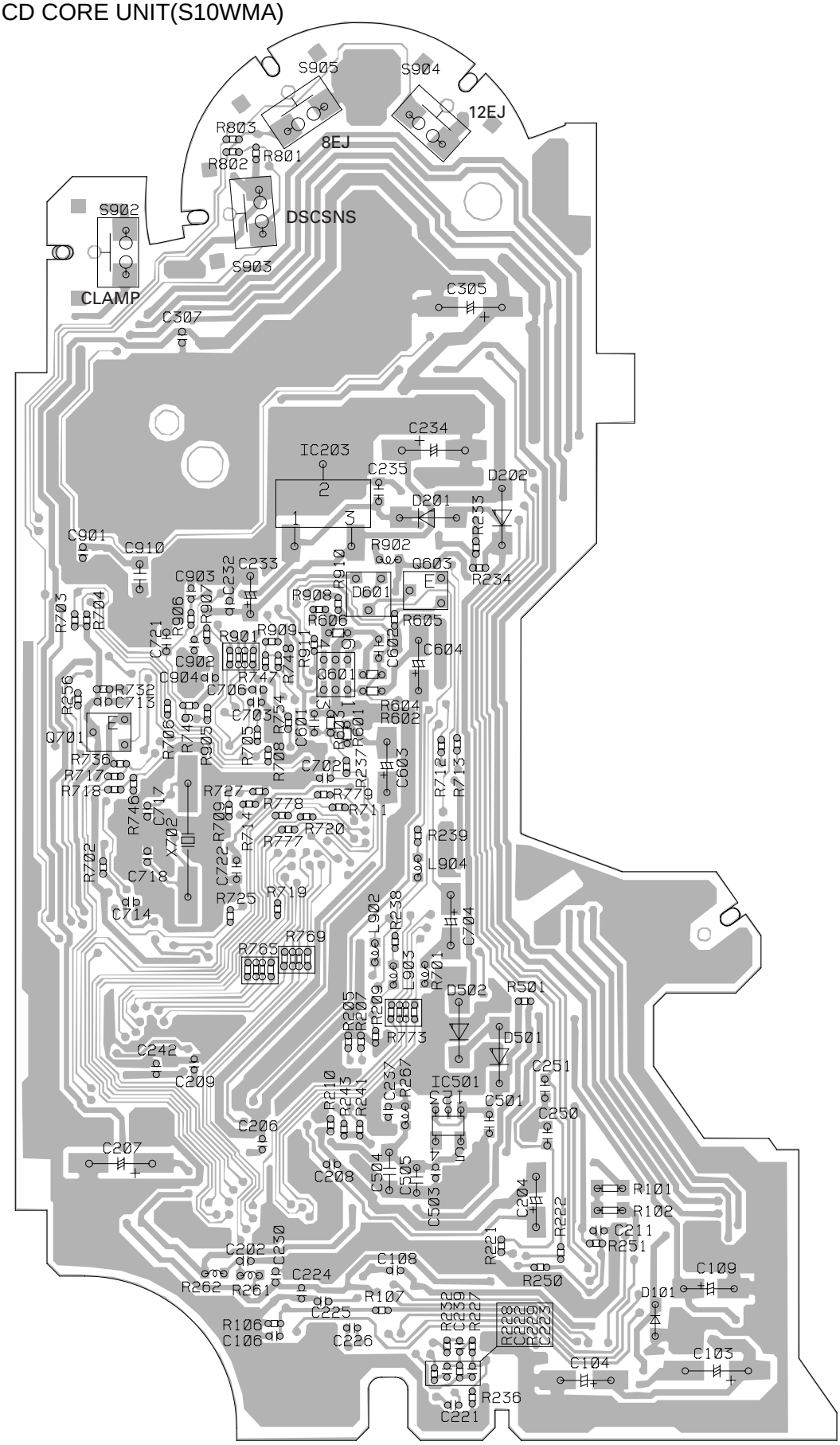
SIDE A



D

D CD CORE UNIT(S10WMA)

SIDE B



IC, Q

IC203

Q603

Q601

Q701

IC501

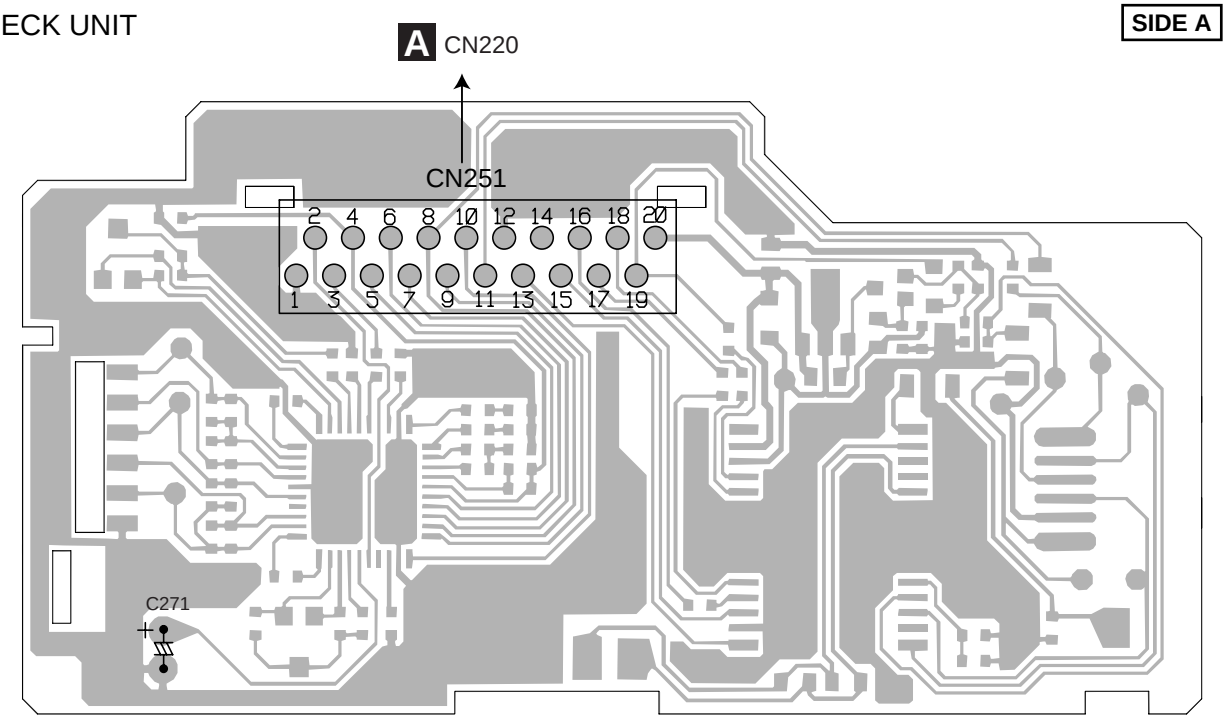
A B C D E F

D

4.5 CASSETTE MECHANISM MODULE

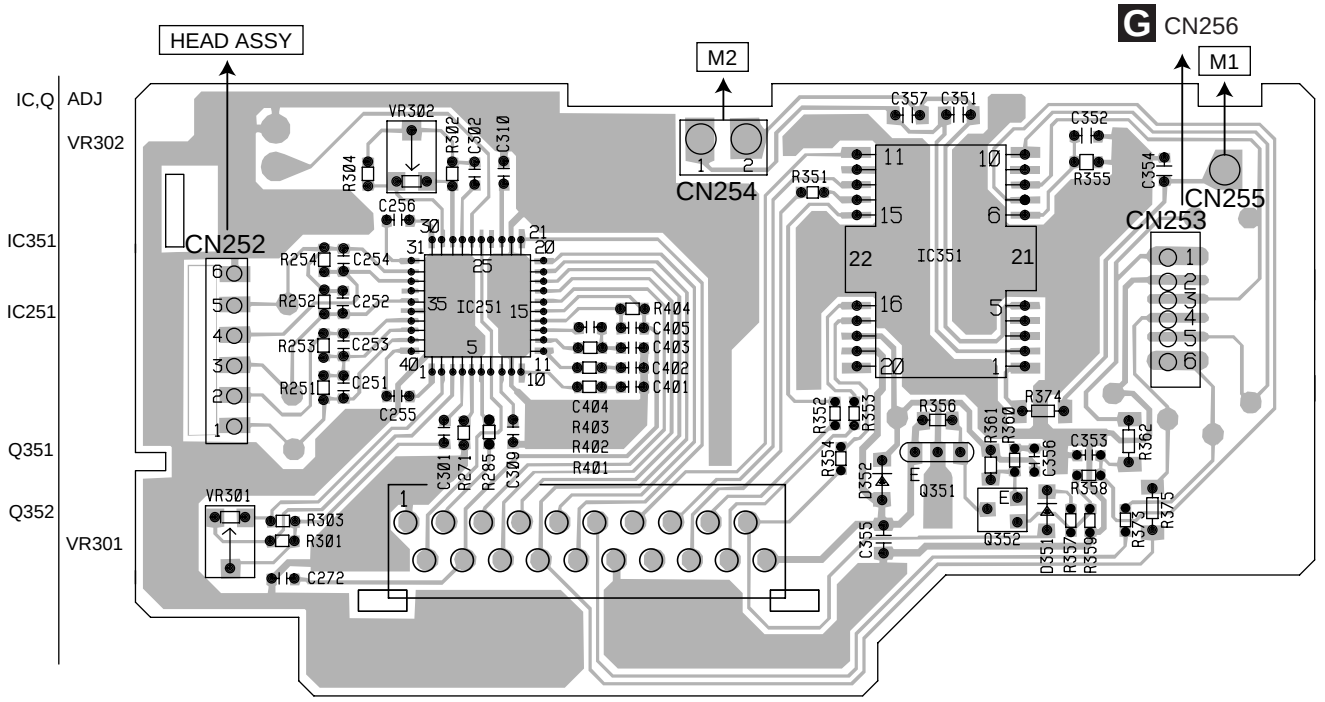
F DECK UNIT

SIDE A



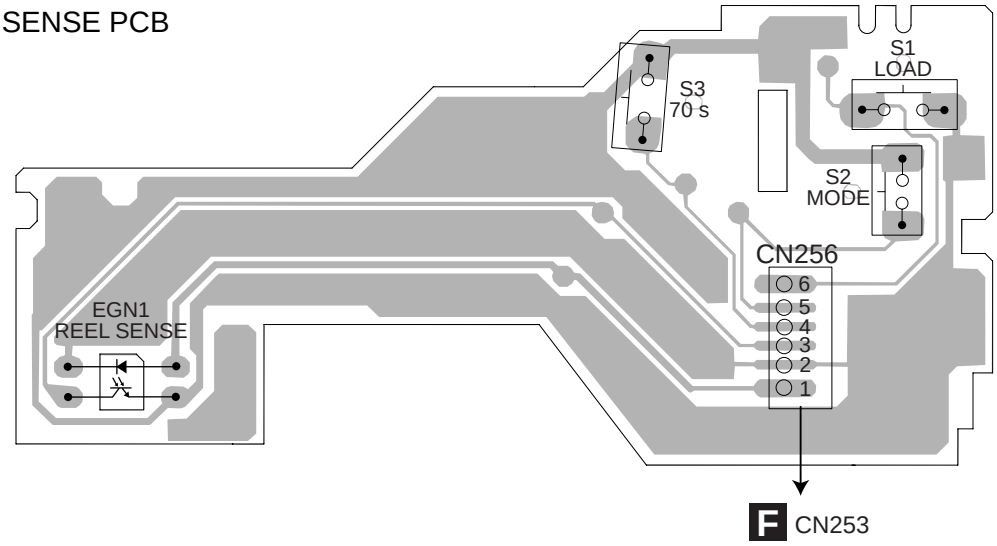
F DECK UNIT

SIDE B

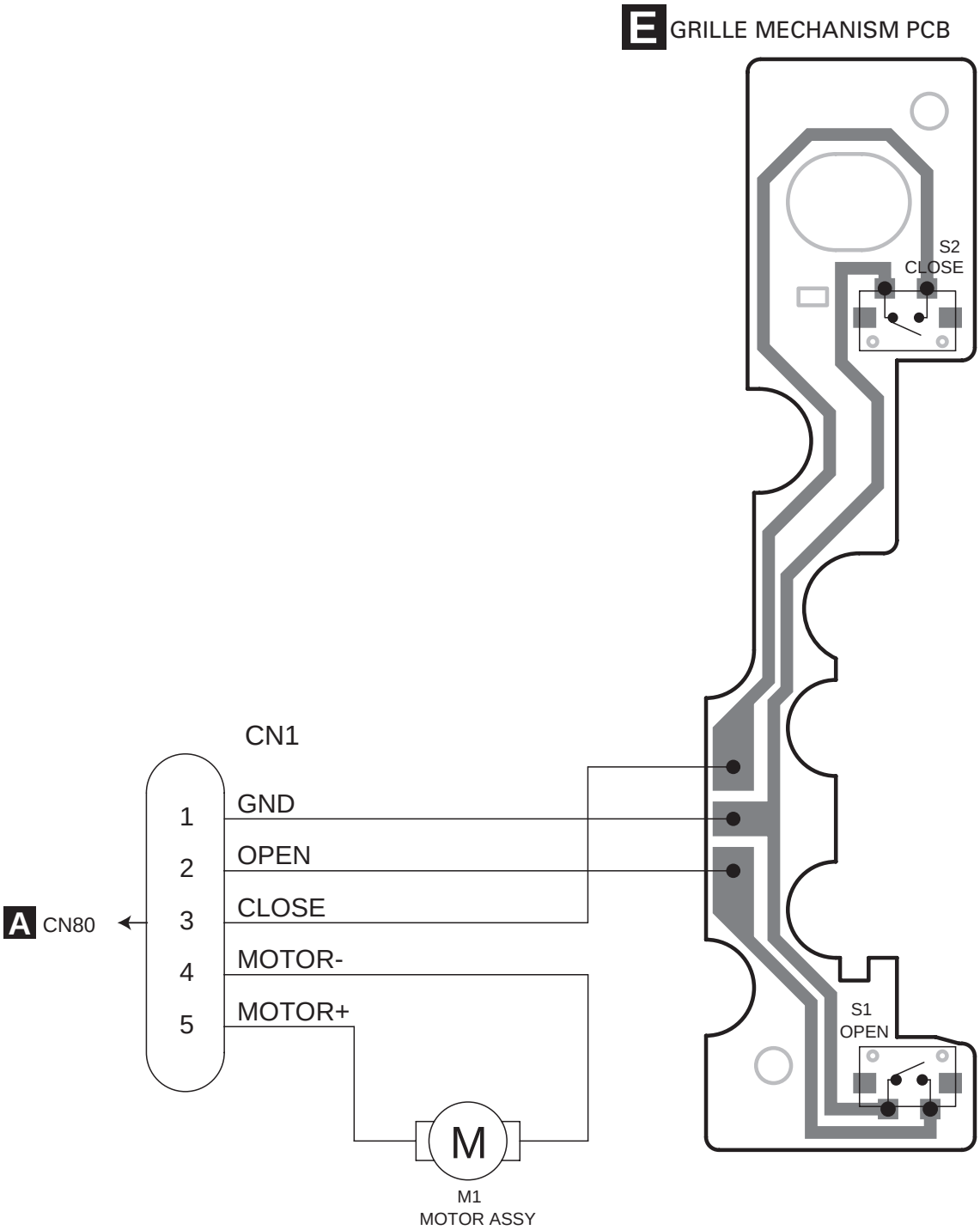


F

G REEL SENSE PCB



4.6 GRILLE MECHANISM PCB



E

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.....

A

Unit Number:CZW5546(UC)
Unit Name:MAIN PWB UNIT

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 1	IC	PD5935A
IC 2	IC	PST3435UL
IC 80	IC	BA6288FS
IC 81	IC	BA00ASFP
IC 130	IC	BA033FP
IC 150	IC	AK7730VT
IC 170	IC	TC7S08FU
IC 180	IC	TC74VHCT08AFT
IC 190	IC	TC74VHCT08AFT
IC 300	IC	PML011A
IC 330	IC	PCM1606EG
IC 350	IC	NJM2100M
IC 360	IC	NJM4558MD
IC 370	IC	NJM4558MD
IC 371	IC	NJM4558MD
IC 390	IC	NJM4558MD
IC 400	IC	HA12240FP
IC 500	IC	PAL007A
IC 670	IC	BA05SFP
IC 680	IC	BA033FP
Q 1	Transistor	2SA1576A
Q 2	Transistor	DTC114EU
Q 270	Transistor	2SD2396
Q 271	Transistor	IMD3A
Q 280	Transistor	2SA1797
Q 281	Transistor	DTC124EU
Q 282	Transistor	2SD1760F5
Q 283	Transistor	IMD2A
Q 400	Transistor	2SA1576A
Q 401	Transistor	DTC114EU
Q 450	Transistor	IMH3A
Q 451	Transistor	DTA124EU
Q 460	Transistor	IMH3A
Q 470	Transistor	IMH3A
Q 500	Transistor	DTC144EU
Q 501	Transistor	DTC124EU
Q 600	Transistor	DTC114EU
Q 601	Transistor	2SC4081
Q 602	Transistor	2SC4081
Q 603	Transistor	2SA1576A
Q 604	Transistor	2SA1576A
Q 605	Transistor	DTC124EU
Q 620	Transistor	2SD1760F5
Q 621	Transistor	IMD2A
Q 630	Transistor	2SA1797
Q 631	Transistor	DTC114EU
Q 632	Transistor	2SC4081
Q 633	Transistor	2SD2396
Q 640	Transistor	2SD1760F5
Q 641	Transistor	IMD2A
Q 650	Transistor	2SD2396
Q 651	Transistor	IMD2A
Q 660	Transistor	2SB710A
Q 661	Transistor	DTC124EU
D 1	Diode	1SS400
D 80	Diode	1SS133
D 81	Diode	1SS133
D 130	Diode	RR264M-400
D 131	Diode	RR264M-400
D 132	Diode	RR264M-400
D 133	Diode	RR264M-400
D 134	Diode	RR264M-400
D 220	Diode	1SS133
D 270	Diode	1SS400
D 271	Diode	DAN202U
D 273	Diode	HZS9L(B2)
D 280	Diode	HZS6L(C2)
D 600	Diode	1SR139-400
D 601	Diode	1SR139-400
D 602	Diode	1SR154-400
D 603	Diode	1SR154-400
D 606	Diode	1SR154-400
D 607	Diode	HZS7L(A1)
D 608	Diode	HZS7L(C3)
D 609	Diode	DAN202U
D 610	Diode	DAN202U
D 617	Diode	RR264M
D 620	Diode	HZS11L(B1)
D 630	Diode	HZS9L(A2)
D 631	Diode	HZS9L(B3)
D 640	Diode	HZS9L(B2)
D 650	Diode	1SR154-400
D 651	Diode	HZS6L(B2)
D 670	Diode	RR264M-400
D 671	Diode	RR264M-400
D 672	Diode	RR264M-400
D 673	Diode	RR264M-400
ZNR100	Surge Protector	RCCA-201Q31UA
L 1	Inductor	CTF1379

Circuit Symbol and No.		Part No.
L 2	Inductor	CTF1379
L 3	Inductor	CTF1379
L 4	Inductor	CTF1379
L 60	Chip-Inductor	LCTAW100J2520
L 100	Chip-Inductor	LCTAW4R7J2520
L 101	Chip-Inductor	CZT2931
L 102	Chip-Inductor	LCTAW2R2J2520
L 103	Chip-Inductor	CZT2931
L 150	Inductor	CTF1379
L 151	Inductor	CTF1379
L 152	Inductor	CTF1379
L 153	Inductor	CTF1379
L 154	Inductor	CTF1379
L 155	Inductor	CTF1379
L 156	Inductor	CTF1379
L 160	Inductor	CTF1379
L 170	Inductor	CTF1409
L 171	Inductor	CTF1389
L 180	Inductor	CTF1379
L 190	Inductor	CTF1379
L 250	Inductor	CTF1379
L 300	Chip-Inductor	LCTAW2R2J2520
L 330	Inductor	CTF1379
L 331	Inductor	CTF1379
L 332	Inductor	CTF1379
L 333	Inductor	CTF1379
L 334	Inductor	CTF1379
L 335	Inductor	CTF1379
L 336	Inductor	CTF1379
L 350	Chip-Inductor	LCTAW2R2J2520
L 360	Chip-Inductor	LCTAW2R2J2520
L 370	Chip-Inductor	LCTAW2R2J2520
L 400	Inductor	CTF1379
L 601	FeRri-Inductor	LAU2R2J
L 690	Inductor	CTF1379
L 691	Inductor	CTF1379
L 692	Inductor	ATH7005
L 693	Inductor	CTF1461
X 1	Radiator 10MHz	CSS1599
X 150	Radiator 16.9344MHz	CSS1052
FU270	Fuse 1.25A	CEK1281
FU450	Fuse 2A	CEK1284
FU630	Fuse 1A	CEK1280
BZ1	Buzzer	CPV1062
TU100	FM/AM Tuner Unit	CWE1646

RESISTORS

Circuit Symbol and No.	Part No.
R 1	RS1/16S472J
R 2	RS1/16S472J
R 3	RS1/16S0R0J
R 4	RS1/16S104J
R 6	RS1/16S0R0J
R 9	RS1/16S221J
R 10	RS1/16S473J
R 11	RS1/16S221J
R 12	RS1/16S682J
R 13	RS1/16S221J
R 14	RS1/16S682J
R 15	RS1/16S472J
R 16	RS1/16S472J
R 17	RS1/16S221J
R 18	RS1/16S682J
R 19	RS1/16S221J
R 20	RS1/16S682J
R 21	RS1/16S102J
R 22	RS1/16S473J
R 23	RS1/16S102J
R 24	RS1/16S473J
R 25	RS1/16S102J
R 26	RS1/16S473J
R 27	RS1/16S473J
R 28	RS1/16S473J
R 29	RS1/16S681J
R 30	RS1/16S473J
R 31	RS1/16S473J
R 32	RS1/16S473J
R 34	RS1/16S103J
R 35	RS1/16S102J
R 37	RS1/16S473J
R 38	RS1/16S473J
R 39	RS1/16S473J
R 40	RS1/16S473J
R 42	RS1/16S473J
R 43	RS1/16S221J
R 44	RS1/16S103J
R 45	RS1/16S102J
R 46	RS1/16S103J
R 48	RS1/16S102J
R 49	RS1/16S473J
R 50	RS1/16S103J
R 51	RS1/16S103J
R 52	RS1/16S473J
R 53	RS1/16S472J
R 54	RS1/16S102J
R 55	RS1/16S223J
R 56	RS1/16S222J
R 60	RS1/16S102J
R 61	RS1/16S102J
R 62	RS1/16S102J
R 63	RS1/16S102J
R 64	RS1/16S102J
R 65	RS1/16S222J
R 66	RS1/16S102J
R 67	RS1/16S102J
R 68	RS1/16S102J
R 69	RS1/16S102J
R 70	RS1/16S472J
R 71	RS1/16S472J
R 80	RS1/16S102J
R 81	RS1/16S102J
R 82	RS1/16S102J
R 83	RS1/16S102J
R 84	RS1/16S752J
R 85	RS1/16S222J
R 100	RS1/16S681J
R 101	RS1/16S681J
R 103	RS1/16S681J
R 104	RS1/16S681J
R 105	RS1/16S681J

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
R 106	RS1/16S681J	R 259	RS1/16S101J
R 150	RS1/16S562J	R 260	RS1/16S101J
R 153	RS1/16S102J	R 261	RS1/16S101J
R 154	RS1/16S102J	R 270	RS1/10S680J
R 155	RS1/16S102J	R 271	RS1/10S680J
R 158	RS1/16S102J	R 272	RS1/10S680J
R 159	RS1/16S102J	R 280	RS1/16S103J
R 160	RS1/16S681J	R 281	RS1/10S121J
R 161	RS1/16S681J	R 282	RS1/10S121J
R 162	RS1/16S152J	R 283	RS1/10S121J
R 163	RS1/16S681J	R 284	RS1/16S433J
R 170	RS1/16S0R0J	R 300	RS1/16S153J
R 171	RS1/16S472J	R 301	RS1/16S103J
R 172	RS1/16S103J	R 302	RS1/16S103J
R 173	RS1/16S0R0J	R 303	RS1/16S682J
R 174	RS1/16S153J	R 305	RS1/16S0R0J
R 175	RS1/16S223J	R 306	RS1/16S0R0J
R 176	RS1/16S153J	R 307	RS1/16S0R0J
R 177	RS1/16S223J	R 308	RS1/16S0R0J
R 178	RS1/16S153J	R 309	RS1/16S0R0J
R 179	RS1/16S223J	R 310	RS1/16S0R0J
R 180	RS1/16S681J	R 330	RS1/16S103J
R 181	RS1/16S681J	R 331	RS1/16S103J
R 182	RS1/16S681J	R 333	RS1/16S102J
R 183	RS1/16S681J	R 350	RS1/16S223J
R 184	RS1/16S681J	R 351	RS1/16S223J
R 185	RS1/16S681J	R 352	RS1/16S223J
R 186	RS1/16S681J	R 353	RS1/16S223J
R 187	RS1/16S681J	R 354	RS1/16S223J
R 190	RS1/16S681J	R 355	RS1/16S223J
R 191	RS1/16S681J	R 356	RS1/16S331J
R 192	RS1/16S681J	R 357	RS1/16S331J
R 220	RS1/16S681J	R 358	RS1/16S331J
R 221	RS1/16S102J	R 359	RS1/16S331J
R 222	RS1/16S102J	R 360	RS1/16S473J
R 223	RS1/16S102J	R 361	RS1/16S433J
R 224	RS1/16S102J	R 362	RS1/16S473J
R 225	RS1/16S102J	R 363	RS1/16S473J
R 226	RS1/16S102J	R 370	RS1/16S101J
R 227	RS1/16S102J	R 371	RS1/16S101J
R 228	RS1/16S102J	R 372	RS1/16S101J
R 229	RS1/16S102J	R 373	RS1/16S101J
R 230	RS1/16S102J	R 374	RS1/16S682J
R 231	RS1/16S102J	R 375	RS1/16S682J
R 232	RS1/16S473J	R 376	RS1/16S682J
R 233	RS1/16S473J	R 377	RS1/16S682J
R 234	RS1/16S104J	R 378	RS1/16S682J
R 235	RS1/16S103J	R 379	RS1/16S682J
R 236	RS1/16S473J	R 380	RS1/16S682J
R 240	RS1/16S0R0J	R 381	RS1/16S682J
R 241	RS1/16S0R0J	R 382	RS1/16S223J
R 250	RS1/16S681J	R 383	RS1/16S223J
R 251	RS1/16S221J	R 384	RS1/16S223J
R 252	RS1/16S221J	R 385	RS1/16S223J
R 253	RS1/16S221J	R 386	RS1/16S122J
R 254	RS1/16S681J	R 387	RS1/16S122J
R 255	RS1/16S0R0J	R 388	RS1/16S122J
R 256	RS1/16S221J	R 389	RS1/16S122J
R 257	RS1/16S221J	R 390	RS1/16S101J
R 258	RS1/16S473J	R 391	RS1/16S101J

Circuit Symbol and No.	Part No.
R 392	RS1/16S682J
R 393	RS1/16S682J
R 394	RS1/16S682J
R 395	RS1/16S682J
R 396	RS1/16S223J
R 397	RS1/16S223J
R 398	RS1/16S122J
R 399	RS1/16S122J
R 400	RS1/16S681J
R 401	RS1/16S681J
R 402	RS1/16S103J
R 403	RS1/16S101J
R 404	RS1/16S101J
R 405	RS1/16S620J
R 410	RS1/16S181J
R 411	RS1/16S181J
R 412	RS1/16S223J
R 413	RS1/16S223J
R 414	RS1/16S102J
R 415	RS1/16S102J
R 420	RS1/16S682J
R 421	RS1/16S332J
R 422	RS1/16S222J
R 450	RS1/16S821J
R 451	RS1/16S821J
R 452	RS1/16S223J
R 453	RS1/16S223J
R 454	RS1/10S0R0J
R 455	RS1/10S0R0J
R 460	RS1/16S821J
R 461	RS1/16S821J
R 462	RS1/16S223J
R 463	RS1/16S223J
R 464	RS1/10S0R0J
R 465	RS1/10S0R0J
R 470	RS1/16S821J
R 471	RS1/16S821J
R 472	RS1/16S223J
R 473	RS1/16S223J
R 474	RS1/10S0R0J
R 475	RS1/10S0R0J
R 500	RS1/16S103J
R 501	RS1/16S101J
R 502	RS1/16S331J
R 503	RS1/16S103J
R 504	RS1/16S103J
R 601	RD1/4PU102J
R 602	RS1/16S103J
R 603	RS1/16S104J
R 604	RD1/4PU102J
R 605	RS1/16S472J
R 606	RS1/16S473J
R 607	RS1/16S473J
R 608	RS1/16S473J
R 609	RS1/16S104J
R 610	RS1/16S473J
R 611	RS1/16S473J
R 612	RS1/16S183J
R 613	RS1/16S472J
R 614	RS1/16S472J

Circuit Symbol and No.	Part No.
R 615	RS1/16S102J
R 616	RS1/16S102J
R 617	RS1/16S473J
R 618	RS1/16S223J
R 619	RS1/16S473J
R 620	RS1/16S821J
R 621	RS1/16S821J
R 630	RS1/16S103J
R 631	RD1/4PU182J
R 632	RD1/4PU182J
R 633	RS1/16S103J
R 634	RS1/16S473J
R 635	RS1/16S473J
R 636	RS1/16S102J
R 640	RS1/16S122J
R 649	RS1/16S102J
R 650	RS1/10S220J
R 651	RS1/10S220J
R 652	RS1/16S222J
R 653	RS1/16S223J
R 660	RS1/16S103J
R 661	RS1/16S122J
R 662	RS1/16S122J
R 763	RS1/16S473J

CAPACITORS

C 1	CKSRYB104K50
C 2	CKSRYB104K50
C 3	CEAL100M16
C 4	CCSRCH180D50
C 5	CCSRCH180D50
C 6	CKSRYB105K10
C 7	CKSRYB105K10
C 8	CKSRYB105K10
C 9	CKSRYB102K50
C 10	CKSQYB225K10
C 11	CKSRYB105K10
C 12	CKSRYB104K50
C 60	CKSRYB104K50
C 61	CKSRYB102K50
C 62	CCSRCH101J50
C 63	CCSRCH221J50
C 80	CEAL470M16
C 81	CKSRYB103K50
C 82	CKSRYB104K50
C 83	CKSRYB103K50
C 84	CKSRYB103K50
C 100	CKSRYB103K50
C 101	CEAL101M10
C 102	CKSRYB103K50
C 103	CKSRYB103K50
C 104	CKSRYB103K50
C 106	CEAL470M6R3
C 107	CKSRYB102K50
C 130	CEAL470M16
C 131	CKSRYB102K50
C 132	CKSRYB104K50
C 150	CKSRYB104K50
C 151	CEAL100M16

Circuit Symbol and No.		Part No.
C 152		CKSRYB104K50
C 153		CEAL100M16
C 154		CKSRYB104K50
C 155		CEAL220M16
C 156		CKSRYB682K50
C 157		CKSRYB104K50
C 158		CKSRYB104K50
C 159		CCSRCH180D50
C 161		CCSRCH100D50
C 162		CCSRCH100D50
C 163		CKSRYB104K50
C 166		CKSRYB103K50
C 167		CKSRYB102K50
C 170		CKSRYB103K50
C 175		CKSRYB104K50
C 176		CKSRYB104K50
C 177		CKSRYB332K50
C 178		CKSRYB332K50
C 180		CKSRYB104K50
C 190		CKSRYB104K50
C 220		CEAL220M16
C 221		CEAL220M16
C 250		CKSRYB103K50
C 251	470µF/16V	CCH1331
C 270		CKSRYB103K50
C 271		CEAL101M10
C 272		CKSRYB104K50
C 280		CEAL101M10
C 281		CKSRYB104K50
C 282		CKSRYB103K50
C 283		CEAL101M10
C 284		CKSRYB104K50
C 300		CKSRYB104K50
C 301		CEAL1R0M50
C 302		CEAL1R0M50
C 303		CEAL1R0M50
C 304		CEAL1R0M50
C 305		CEAL1R0M50
C 306		CEAL1R0M50
C 307		CKSRYB104K50
C 308		CKSRYB104K50
C 309		CKSQYB225K10
C 310		CKSRYB105K10
C 311		CKSRYB472K50
C 312		CKSRYB472K50
C 313		CEAL100M16
C 314		CEAL100M16
C 315		CKSRYB104K50
C 316		CKSQYB225K10
C 317		CKSQYB225K10
C 330		CKSRYB104K50
C 331		CEAL470M10
C 332		CEAL100M16
C 333		CKSRYB104K50
C 335		CEAL100M16
C 336		CEAL100M16
C 337		CEAL100M16
C 338		CEAL100M16
C 339		CEAL100M16
C 340		CEAL100M16

Circuit Symbol and No.		Part No.
C 350		CCSRCH220J50
C 351		CCSRCH220J50
C 354		CEAL100M16
C 355		CEAL100M16
C 356		CKSRYB104K50
C 360		CEAL100M16
C 361		CKSRYB104K50
C 362		CEAL100M16
C 363		CKSRYB102K50
C 364		CKSRYB104K50
C 370		CEALNP4R7M16
C 371		CEALNP4R7M16
C 372		CEALNP4R7M16
C 373		CEALNP4R7M16
C 374		CCSRCH681J50
C 375		CCSRCH681J50
C 376		CCSRCH681J50
C 377		CCSRCH681J50
C 378		CCSRCH331J50
C 379		CCSRCH331J50
C 380		CCSRCH331J50
C 381		CCSRCH331J50
C 382		CKSRYB104K50
C 383		CKSRYB104K50
C 390		CEALNP4R7M16
C 391		CEALNP4R7M16
C 392		CCSRCH681J50
C 393		CCSRCH681J50
C 394		CCSRCH331J50
C 395		CCSRCH331J50
C 396		CKSRYB104K50
C 400		CKSRYB104K50
C 401		CKSRYB102K50
C 402		CKSRYB102K50
C 403		CKSRYB104K50
C 450		CEAL100M16
C 451		CEAL100M16
C 452		CKSRYB102K50
C 453		CKSRYB102K50
C 460		CEAL100M16
C 461		CEAL100M16
C 462		CKSRYB102K50
C 463		CKSRYB102K50
C 470		CEAL100M16
C 471		CEAL100M16
C 472		CKSRYB102K50
C 473		CKSRYB102K50
C 500		CKSQYB474K25
C 501		CKSQYB474K25
C 502		CKSQYB474K25
C 503		CKSQYB474K25
C 504		CKSQYB474K25
C 505		CKSQYB474K25
C 506		CKSQYB474K25
C 507		CKSQYB474K25
C 508		CKSQYB225K10
C 509		CKSQYB225K10
C 511		CEHAS330M10
C 512		CEHAS100M16
C 600		CEHAT332M16

Circuit Symbol and No.	Part No.
C 601	CKSRYB104K50
C 602	CKSQYB104K50
C 605	CKSQYB105K16
C 606	CKSRYB104K50
C 607	CKSRYB104K50
C 617	CEAL220M16
C 620	CKSRYB103K50
C 621	CKSRYB104K50
C 622	CEAL100M16
C 630	CKSRYB103K50
C 631	CEAL101M10
C 632	CKSRYB103K50
C 633	CEHAT221M10
C 640	CKSRYB103K50
C 641	CKSRYB104K50
C 642	CEAL100M16
C 650	CEHAT102M16
C 651	CKSRYB103K50
C 652	CKSRYB104K50
C 653	CEAL470M16
C 670	CKSRYB104K50
C 671	CKSRYB103K50
C 672	CEAL101M10
C 680	CKSRYB104K50
C 681	CEAL220M6R3
C 682	CKSRYB103K50
C 690	CKSRYB104K50
C 691	CKSRYB104K50
C 692	CKSRYB104K50
C 694	CEAL101M10
C 695	CEAL101M10
C 762	CCSRCH101J50
C 763	CCSRCH101J50

A

Unit Number:CZW5547(ES)
Unit Name:MAIN PWB UNIT

MISCELLANEOUS

IC 1	IC	PD5935A
IC 2	IC	PST3435UL
IC 80	IC	BA6288FS
IC 81	IC	BA00ASFP
IC 130	IC	BA033FP
IC 150	IC	AK7730VT
IC 170	IC	TC7S08FU
IC 180	IC	TC74VHCT08AFT
IC 190	IC	TC74VHCT08AFT
IC 300	IC	PML011A
IC 330	IC	PCM1606EG
IC 350	IC	NJM2100M
IC 360	IC	NJM4558MD
IC 370	IC	NJM4558MD
IC 371	IC	NJM4558MD
IC 390	IC	NJM4558MD
IC 400	IC	HA12240FP
IC 500	IC	PAL007A
IC 600	IC	TPD1018F
IC 670	IC	BA05SFP

Circuit Symbol and No.		Part No.
IC 680	IC	BA033FP
Q 1	Transistor	2SA1576A
Q 2	Transistor	DTC114EU
Q 270	Transistor	2SD2396
Q 271	Transistor	IMD3A
Q 280	Transistor	2SA1797
Q 281	Transistor	DTC124EU
Q 282	Transistor	2SD1760F5
Q 283	Transistor	IMD2A
Q 400	Transistor	2SA1576A
Q 401	Transistor	DTC114EU
Q 450	Transistor	IMH3A
Q 451	Transistor	DTA124EU
Q 460	Transistor	IMH3A
Q 500	Transistor	DTC144EU
Q 501	Transistor	DTC124EU
Q 600	Transistor	DTC114EU
Q 601	Transistor	2SC4081
Q 602	Transistor	2SC4081
Q 603	Transistor	2SA1576A
Q 604	Transistor	2SA1576A
Q 605	Transistor	DTC124EU
Q 620	Transistor	2SD1760F5
Q 621	Transistor	IMD2A
Q 630	Transistor	2SA1797
Q 631	Transistor	DTC114EU
Q 632	Transistor	2SC4081
Q 633	Transistor	2SD2396
Q 640	Transistor	2SD1760F5
Q 641	Transistor	IMD2A
Q 650	Transistor	2SD2396
Q 651	Transistor	IMD2A
Q 660	Transistor	2SB710A
Q 661	Transistor	DTC124EU
D 1	Diode	1SS400
D 80	Diode	1SS133
D 81	Diode	1SS133
D 130	Diode	RR264M-400
D 131	Diode	RR264M-400
D 132	Diode	RR264M-400
D 133	Diode	RR264M-400
D 134	Diode	RR264M-400
D 220	Diode	1SS133
D 270	Diode	1SS400
D 271	Diode	DAN202U
D 273	Diode	HZS9L(B2)
D 280	Diode	HZS6L(C2)
D 600	Diode	1SR139-400
D 601	Diode	1SR139-400
D 602	Diode	1SR154-400
D 603	Diode	1SR154-400
D 604	Diode	1SR154-400
D 605	Diode	1SR154-400
D 606	Diode	1SR154-400
D 607	Diode	HZS7L(A1)
D 608	Diode	HZS7L(C3)
D 609	Diode	DAN202U
D 610	Diode	DAN202U
D 617	Diode	RR264M-400
D 620	Diode	HZS11L(B1)

Circuit Symbol and No.		Part No.
D 630	Diode	HZS9L(A2)
D 631	Diode	HZS9L(B3)
D 640	Diode	HZS9L(B2)
D 650	Diode	1SR154-400
D 651	Diode	HZS6L(B2)
D 670	Diode	RR264M-400
D 671	Diode	RR264M-400
D 672	Diode	RR264M-400
D 673	Diode	RR264M-400
ZNR100	Surge Protector	RCCA-201Q31UA
L 1	Inductor	CTF1379
L 2	Inductor	CTF1379
L 3	Inductor	CTF1379
L 4	Inductor	CTF1379
L 60	Chip-Inductor	LCTAW100J2520
L 100	Chip-Inductor	LCTAW4R7J2520
L 101	Chip-Inductor	CZT2931
L 102	Chip-Inductor	LCTAW2R2J2520
L 103	Chip-Inductor	CZT2931
L 150	Inductor	CTF1379
L 151	Inductor	CTF1379
L 152	Inductor	CTF1379
L 153	Inductor	CTF1379
L 154	Inductor	CTF1379
L 155	Inductor	CTF1379
L 156	Inductor	CTF1379
L 160	Inductor	CTF1379
L 170	Inductor	CTF1409
L 171	Inductor	CTF1389
L 180	Inductor	CTF1379
L 190	Inductor	CTF1379
L 250	Inductor	CTF1379
L 300	Chip-Inductor	LCTAW2R2J2520
L 330	Inductor	CTF1379
L 331	Inductor	CTF1379
L 332	Inductor	CTF1379
L 333	Inductor	CTF1379
L 334	Inductor	CTF1379
L 335	Inductor	CTF1379
L 336	Inductor	CTF1379
L 350	Chip-Inductor	LCTAW2R2J2520
L 360	Chip-Inductor	LCTAW2R2J2520
L 370	Chip-Inductor	LCTAW2R2J2520
L 400	Inductor	CTF1379
L 601	FeRri-Inductor	LAU2R2J
L 690	Inductor	CTF1379
L 691	Inductor	CTF1379
L 692	Inductor	ATH7005
L 693	Inductor	CTF1461
X 1	Radiator 10MHz	CSS1599
X 150	Radiator 16.9344MHz	CSS1052
FU270	Fuse 1.25A	CEK1281
FU450	Fuse 2A	CEK1284
FU630	Fuse 1A	CEK1280
BZ1	Buzzer	CPV1062
TU100	FM/AM Tuner Unit	CWE1646

RESISTORS

Circuit Symbol and No.	Part No.
R 1	RS1/16S472J
R 2	RS1/16S472J
R 3	RS1/16S0R0J
R 4	RS1/16S104J
R 6	RS1/16S0R0J
R 9	RS1/16S221J
R 10	RS1/16S473J
R 11	RS1/16S221J
R 12	RS1/16S682J
R 13	RS1/16S221J
R 14	RS1/16S682J
R 15	RS1/16S472J
R 16	RS1/16S472J
R 17	RS1/16S221J
R 18	RS1/16S682J
R 19	RS1/16S221J
R 20	RS1/16S682J
R 21	RS1/16S102J
R 22	RS1/16S473J
R 23	RS1/16S102J
R 24	RS1/16S473J
R 25	RS1/16S102J
R 26	RS1/16S473J
R 27	RS1/16S473J
R 28	RS1/16S473J
R 29	RS1/16S681J
R 30	RS1/16S473J
R 31	RS1/16S473J
R 32	RS1/16S473J
R 36	RS1/16S473J
R 37	RS1/16S473J
R 38	RS1/16S473J
R 39	RS1/16S473J
R 41	RS1/16S473J
R 42	RS1/16S473J
R 43	RS1/16S221J
R 44	RS1/16S103J
R 48	RS1/16S102J
R 49	RS1/16S473J
R 50	RS1/16S103J
R 51	RS1/16S103J
R 52	RS1/16S473J
R 53	RS1/16S472J
R 54	RS1/16S102J
R 55	RS1/16S223J
R 56	RS1/16S222J
R 60	RS1/16S102J
R 61	RS1/16S102J
R 62	RS1/16S102J
R 63	RS1/16S102J
R 64	RS1/16S102J
R 65	RS1/16S222J
R 66	RS1/16S102J
R 67	RS1/16S102J
R 68	RS1/16S102J
R 69	RS1/16S102J
R 70	RS1/16S472J
R 71	RS1/16S472J
R 80	RS1/16S102J
R 81	RS1/16S102J

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
R 82	RS1/16S102J	R 250	RS1/16S681J
R 83	RS1/16S102J	R 251	RS1/16S221J
R 84	RS1/16S752J	R 252	RS1/16S221J
R 85	RS1/16S222J	R 253	RS1/16S221J
R 100	RS1/16S681J	R 254	RS1/16S681J
R 101	RS1/16S681J	R 255	RS1/16S0R0J
R 103	RS1/16S681J	R 256	RS1/16S221J
R 104	RS1/16S681J	R 257	RS1/16S221J
R 105	RS1/16S681J	R 258	RS1/16S473J
R 106	RS1/16S681J	R 259	RS1/16S101J
R 150	RS1/16S562J	R 260	RS1/16S101J
R 153	RS1/16S102J	R 261	RS1/16S101J
R 154	RS1/16S102J	R 270	RS1/10S680J
R 155	RS1/16S102J	R 271	RS1/10S680J
R 158	RS1/16S102J	R 272	RS1/10S680J
R 159	RS1/16S102J	R 280	RS1/16S103J
R 160	RS1/16S681J	R 281	RS1/10S121J
R 161	RS1/16S681J	R 282	RS1/10S121J
R 162	RS1/16S152J	R 283	RS1/10S121J
R 163	RS1/16S681J	R 284	RS1/16S433J
R 170	RS1/16S0R0J	R 300	RS1/16S153J
R 171	RS1/16S472J	R 301	RS1/16S103J
R 172	RS1/16S103J	R 302	RS1/16S103J
R 173	RS1/16S0R0J	R 303	RS1/16S682J
R 174	RS1/16S153J	R 305	RS1/16S0R0J
R 175	RS1/16S223J	R 306	RS1/16S0R0J
R 176	RS1/16S153J	R 307	RS1/16S0R0J
R 177	RS1/16S223J	R 308	RS1/16S0R0J
R 178	RS1/16S153J	R 309	RS1/16S0R0J
R 179	RS1/16S223J	R 310	RS1/16S0R0J
R 180	RS1/16S681J	R 330	RS1/16S103J
R 181	RS1/16S681J	R 331	RS1/16S103J
R 182	RS1/16S681J	R 333	RS1/16S102J
R 183	RS1/16S681J	R 350	RS1/16S223J
R 184	RS1/16S681J	R 351	RS1/16S223J
R 185	RS1/16S681J	R 352	RS1/16S223J
R 186	RS1/16S681J	R 353	RS1/16S223J
R 187	RS1/16S681J	R 354	RS1/16S223J
R 190	RS1/16S681J	R 355	RS1/16S223J
R 191	RS1/16S681J	R 356	RS1/16S331J
R 192	RS1/16S681J	R 357	RS1/16S331J
R 220	RS1/16S681J	R 358	RS1/16S331J
R 221	RS1/16S102J	R 359	RS1/16S331J
R 222	RS1/16S102J	R 360	RS1/16S473J
R 223	RS1/16S102J	R 361	RS1/16S433J
R 224	RS1/16S102J	R 362	RS1/16S473J
R 225	RS1/16S102J	R 363	RS1/16S473J
R 226	RS1/16S102J	R 370	RS1/16S101J
R 227	RS1/16S102J	R 371	RS1/16S101J
R 228	RS1/16S102J	R 372	RS1/16S101J
R 229	RS1/16S102J	R 373	RS1/16S101J
R 230	RS1/16S102J	R 374	RS1/16S682J
R 231	RS1/16S102J	R 375	RS1/16S682J
R 232	RS1/16S473J	R 376	RS1/16S682J
R 233	RS1/16S473J	R 377	RS1/16S682J
R 234	RS1/16S104J	R 378	RS1/16S682J
R 235	RS1/16S103J	R 379	RS1/16S682J
R 236	RS1/16S473J	R 380	RS1/16S682J
R 240	RS1/16S0R0J	R 381	RS1/16S682J
R 241	RS1/16S0R0J	R 382	RS1/16S223J

Circuit Symbol and No.	Part No.
R 383	RS1/16S223J
R 384	RS1/16S223J
R 385	RS1/16S223J
R 386	RS1/16S122J
R 387	RS1/16S122J
R 388	RS1/16S122J
R 389	RS1/16S122J
R 390	RS1/16S101J
R 391	RS1/16S101J
R 392	RS1/16S682J
R 393	RS1/16S682J
R 394	RS1/16S682J
R 395	RS1/16S682J
R 396	RS1/16S223J
R 397	RS1/16S223J
R 398	RS1/16S122J
R 399	RS1/16S122J
R 400	RS1/16S681J
R 401	RS1/16S681J
R 402	RS1/16S103J
R 403	RS1/16S101J
R 404	RS1/16S101J
R 405	RS1/16S620J
R 410	RS1/16S181J
R 411	RS1/16S181J
R 412	RS1/16S223J
R 413	RS1/16S223J
R 414	RS1/16S102J
R 415	RS1/16S102J
R 420	RS1/16S682J
R 421	RS1/16S332J
R 422	RS1/16S222J
R 450	RS1/16S821J
R 451	RS1/16S821J
R 452	RS1/16S223J
R 453	RS1/16S223J
R 454	RS1/10S0R0J
R 455	RS1/10S0R0J
R 460	RS1/16S821J
R 461	RS1/16S821J
R 462	RS1/16S223J
R 463	RS1/16S223J
R 464	RS1/10S0R0J
R 465	RS1/10S0R0J
R 500	RS1/16S103J
R 501	RS1/16S101J
R 502	RS1/16S331J
R 503	RS1/16S103J
R 504	RS1/16S103J
R 600	RS1/16S103J
R 601	RD1/4PU102J
R 602	RS1/16S103J
R 603	RS1/16S104J
R 604	RD1/4PU102J
R 605	RS1/16S472J
R 606	RS1/16S473J
R 607	RS1/16S473J
R 608	RS1/16S473J
R 609	RS1/16S104J
R 610	RS1/16S473J

Circuit Symbol and No.	Part No.
R 611	RS1/16S473J
R 612	RS1/16S183J
R 613	RS1/16S472J
R 614	RS1/16S472J
R 615	RS1/16S102J
R 616	RS1/16S102J
R 617	RS1/16S473J
R 618	RS1/16S223J
R 619	RS1/16S473J
R 620	RS1/16S821J
R 621	RS1/16S821J
R 630	RS1/16S103J
R 631	RD1/4PU182J
R 632	RD1/4PU182J
R 633	RS1/16S103J
R 634	RS1/16S473J
R 635	RS1/16S473J
R 636	RS1/16S102J
R 640	RS1/16S122J
R 649	RS1/16S102J
R 650	RS1/10S220J
R 651	RS1/10S220J
R 652	RS1/16S222J
R 653	RS1/16S223J
R 660	RS1/16S103J
R 661	RS1/16S122J
R 662	RS1/16S122J
R 763	RS1/16S473J

CAPACITORS

C 1	CKSRYB104K50
C 2	CKSRYB104K50
C 3	CEAL100M16
C 4	CCSRCH180D50
C 5	CCSRCH180D50
C 6	CKSRYB105K10
C 7	CKSRYB105K10
C 8	CKSRYB105K10
C 9	CKSRYB102K50
C 10	CKSQYB225K10
C 11	CKSRYB105K10
C 12	CKSRYB104K50
C 60	CKSRYB104K50
C 61	CKSRYB102K50
C 62	CCSRCH101J50
C 63	CCSRCH221J50
C 80	CEAL470M16
C 81	CKSRYB103K50
C 82	CKSRYB104K50
C 83	CKSRYB103K50
C 84	CKSRYB103K50
C 100	CKSRYB103K50
C 101	CEAL101M10
C 102	CKSRYB103K50
C 103	CKSRYB103K50
C 104	CKSRYB103K50
C 106	CEAL470M6R3
C 107	CKSRYB102K50
C 130	CEAL470M16
C 131	CKSRYB102K50

Circuit Symbol and No.		Part No.
C 132		CKSRYB104K50
C 150		CKSRYB104K50
C 151		CEAL100M16
C 152		CKSRYB104K50
C 153		CEAL100M16
C 154		CKSRYB104K50
C 155		CEAL220M16
C 156		CKSRYB682K50
C 157		CKSRYB104K50
C 158		CKSRYB104K50
C 159		CCSRCH180D50
C 161		CCSRCH100D50
C 162		CCSRCH100D50
C 163		CKSRYB104K50
C 166		CKSRYB103K50
C 167		CKSRYB102K50
C 170		CKSRYB103K50
C 175		CKSRYB104K50
C 176		CKSRYB104K50
C 177		CKSRYB332K50
C 178		CKSRYB332K50
C 180		CKSRYB104K50
C 190		CKSRYB104K50
C 220		CEAL220M16
C 221		CEAL220M16
C 250		CKSRYB103K50
C 251	470µF/16V	CCH1331
C 270		CKSRYB103K50
C 271		CEAL101M10
C 272		CKSRYB104K50
C 280		CEAL101M10
C 281		CKSRYB104K50
C 282		CKSRYB103K50
C 283		CEAL101M10
C 284		CKSRYB104K50
C 300		CKSRYB104K50
C 301		CEAL1R0M50
C 302		CEAL1R0M50
C 303		CEAL1R0M50
C 304		CEAL1R0M50
C 305		CEAL1R0M50
C 306		CEAL1R0M50
C 307		CKSRYB104K50
C 308		CKSRYB104K50
C 309		CKSQYB225K10
C 310		CKSRYB105K10
C 311		CKSRYB472K50
C 312		CKSRYB472K50
C 313		CEAL100M16
C 314		CEAL100M16
C 315		CKSRYB104K50
C 316		CKSQYB225K10
C 317		CKSQYB225K10
C 330		CKSRYB104K50
C 331		CEAL470M10
C 332		CEAL100M16
C 333		CKSRYB104K50
C 335		CEAL100M16
C 336		CEAL100M16
C 337		CEAL100M16

Circuit Symbol and No.	Part No.
C 338	CEAL100M16
C 339	CEAL100M16
C 340	CEAL100M16
C 350	CCSRCH220J50
C 351	CCSRCH220J50
C 354	CEAL100M16
C 355	CEAL100M16
C 356	CKSRYB104K50
C 360	CEAL100M16
C 361	CKSRYB104K50
C 362	CEAL100M16
C 363	CKSRYB102K50
C 364	CKSRYB104K50
C 370	CEALNP4R7M16
C 371	CEALNP4R7M16
C 372	CEALNP4R7M16
C 373	CEALNP4R7M16
C 374	CCSRCH681J50
C 375	CCSRCH681J50
C 376	CCSRCH681J50
C 377	CCSRCH681J50
C 378	CCSRCH331J50
C 379	CCSRCH331J50
C 380	CCSRCH331J50
C 381	CCSRCH331J50
C 382	CKSRYB104K50
C 383	CKSRYB104K50
C 390	CEALNP4R7M16
C 391	CEALNP4R7M16
C 392	CCSRCH681J50
C 393	CCSRCH681J50
C 394	CCSRCH331J50
C 395	CCSRCH331J50
C 396	CKSRYB104K50
C 400	CKSRYB104K50
C 401	CKSRYB102K50
C 402	CKSRYB102K50
C 403	CKSRYB104K50
C 450	CEAL100M16
C 451	CEAL100M16
C 452	CKSRYB102K50
C 453	CKSRYB102K50
C 460	CEAL100M16
C 461	CEAL100M16
C 462	CKSRYB102K50
C 463	CKSRYB102K50
C 500	CKSQYB474K25
C 501	CKSQYB474K25
C 502	CKSQYB474K25
C 503	CKSQYB474K25
C 504	CKSQYB474K25
C 505	CKSQYB474K25
C 506	CKSQYB474K25
C 507	CKSQYB474K25
C 508	CKSQYB225K10
C 509	CKSQYB225K10
C 511	CEHAS330M10
C 512	CEHAS100M16
C 600	CEHAT332M16
C 601	CKSRYB104K50

Circuit Symbol and No.	Part No.
C 602	CKSQYB104K50
C 603	CKSQYB104K50
C 604	CKSRYB473K50
C 605	CKSQYB105K16
C 606	CKSRYB104K50
C 607	CKSRYB104K50
C 617	CEAL220M16
C 620	CKSRYB103K50
C 621	CKSRYB104K50
C 622	CEAL100M16
C 630	CKSRYB103K50
C 631	CEAL101M10
C 632	CKSRYB103K50
C 633	CEHAT221M10
C 640	CKSRYB103K50
C 641	CKSRYB104K50
C 642	CEAL100M16
C 650	CEHAT102M16
C 651	CKSRYB103K50
C 652	CKSRYB104K50
C 653	CEAL470M16
C 670	CKSRYB104K50
C 671	CKSRYB103K50
C 672	CEAL101M10
C 680	CKSRYB104K50
C 681	CEAL220M6R3
C 682	CKSRYB103K50
C 690	CKSRYB104K50
C 691	CKSRYB104K50
C 692	CKSRYB104K50
C 694	CEAL101M10
C 695	CEAL101M10
C 762	CCSRCH101J50
C 763	CCSRCH101J50

B

Unit Number:CZW5549
Unit Name:DISP PWB UNIT

MISCELLANEOUS

IC 800	IC	PD2068B
IC 830	IC	TSOP4840SB1
IC 831	IC	PST3434UL
Q 815	Transistor	DTC143EU
Q 860	Transistor	2SC4081
Q 870	Transistor	2SC4081
D 800	Diode	1SS400
D 850	Diode	CL-195SR-CD
D 851	Diode	CL-195SR-CD
D 860	Diode	SML310BAT
D 870	Diode	NSCW505C-3388
D 871	Diode	NSCW505C-3388
D 872	Diode	NSCW505C-3388
D 873	Diode	NSCW505C-3388
L 800	Inductor	CTF1379
LCD1	LCD	CZA5598
X 800	Radiator 8.18MHz	CSS1631
S 890	Push Switch(SHELL)	CZS2923

Circuit Symbol and No.	Part No.

RESISTORS

R 800	RS1/16S222J
R 801	RS1/16S222J
R 802	RS1/16S224J
R 803	RS1/16S472J
R 804	RS1/16S102J
R 805	RS1/16S474J
R 806	RS1/16S0R0J
R 807	RS1/16S0R0J
R 808	RS1/16S0R0J
R 809	RS1/16S0R0J
R 810	RS1/16S0R0J
R 811	RAB4C104J
R 815	RS1/16S3300D
R 816	RS1/16S1201D
R 817	RS1/16S1801D
R 830	RS1/16S101J
R 840	RS1/16S102J
R 850	RS1/16S271J
R 851	RS1/16S271J
R 852	RS1/16S271J
R 860	RS1/16S151J
R 861	RS1/16S151J
R 870	RS1/16S101J
R 871	RS1/16S101J
R 872	RS1/16S101J
R 873	RS1/16S101J
R 874	RS1/16S101J
R 875	RS1/16S101J
R 876	RS1/16S101J
R 877	RS1/16S101J
R 878	RS1/16S220J
R 879	RS1/16S220J
R 880	RS1/16S0R0J

CAPACITORS

C 800	CKSRYB104K50
C 801	CKSRYB104K50
C 815	CKSRYB104K50
C 816	CKSRYB104K50
C 817	CKSRYB104K50
C 818	CKSRYB104K50
C 819	CKSRYB104K50
C 830	CKSRYB103K50
C 831	CKSQYB225K10
C 860	CKSRYB104K50
C 874	CKSRYB103K50

C

Unit Number:CZW5551
Unit Name:KEY PWB UNIT

MISCELLANEOUS

IC 920	IC	M62343FP
Q 930	Transistor	IMX1
Q 931	Transistor	IMX1
Q 932	Transistor	IMX1
Q 940	Transistor	2SC4081

Circuit Symbol and No.		Part No.
Q 941	Transistor	2SC4081
Q 942	Transistor	2SC4081
D 900	Diode	SML310BAT
D 901	Diode	SML310BAT
D 902	Diode	SML310BAT
D 903	Diode	SML310BAT
D 904	Diode	SML310BAT
D 905	Diode	SML310BAT
D 906	Diode	SML310BAT
D 907	Diode	SML310BAT
D 908	Diode	SML310BAT
D 909	Diode	SML310BAT
D 910	Diode	SML310BAT
D 911	Diode	SML310BAT
D 912	Diode	SML310BAT
D 913	Diode	SML310BAT
D 940	Diode	NSCM315CT
S 900	Tact Switch(Tape Eject)	CZS2924
S 901	Tact Switch(DISP)	CZS2924
S 902	Tact Switch(CD Eject)	CZS2924
S 903	Tact Switch(ENT)	CZS2924
S 904	Tact Switch(AUDIO)	CZS2924
S 905	Tact Switch(FUNC)	CZS2924
S 906	Tact Switch(COLOR)	CZS2924
S 907	Tact Switch(DSP)	CZS2924
S 908	Tact Switch(CLOCK)	CZS2924
S 909	Tact Switch(SOURCE)	CZS2924
S 950	Tact Switch(RESET)	CZS2924
S 970	Tact Switch(BAND/MULTI)	CSX1065

RESISTORS

R 900	RS1/16S271J
R 901	RS1/16S271J
R 902	RS1/16S271J
R 903	RS1/16S271J
R 904	RS1/16S271J
R 905	RS1/16S271J
R 906	RS1/16S271J
R 907	RS1/16S271J
R 908	RS1/16S271J
R 909	RS1/16S271J
R 910	RS1/16S271J
R 911	RS1/16S271J
R 912	RS1/16S271J
R 913	RS1/16S271J
R 920	RS1/16S102J
R 921	RS1/16S102J
R 923	RS1/16S102J
R 924	RS1/16S104J
R 925	RS1/16S104J
R 926	RS1/16S104J
R 927	RS1/16S102J
R 928	RS1/16S102J
R 929	RS1/16S102J
R 930	RS1/16S222J
R 931	RS1/16S104J
R 932	RS1/16S101J
R 933	RS1/16S222J
R 934	RS1/16S104J
R 935	RS1/16S101J
R 936	RS1/16S222J
R 937	RS1/16S104J
R 938	RS1/16S101J
R 940	RS1/16S680J
R 941	RS1/16S680J
R 942	RS1/16S121J
R 943	RS1/16S121J
R 944	RS1/16S101J
R 945	RS1/16S101J
R 950	RS1/16S102J
R 970	RS1/16S222J
R 971	RS1/16S332J
R 972	RS1/16S822J
R 973	RS1/16S473J
R 980	RS1/16S102J
R 981	RS1/16S102J

CAPACITORS

C 900	CKSRYB104K50
C 901	CKSRYB104K50
C 902	CKSRYB104K50
C 903	CKSRYB104K50
C 904	CKSRYB104K50
C 905	CKSRYB104K50
C 906	CKSRYB104K50
C 907	CKSRYB104K50
C 908	CKSRYB104K50
C 909	CKSRYB104K50
C 910	CKSRYB104K50
C 911	CKSRYB104K50
C 912	CKSRYB104K50
C 913	CKSRYB104K50
C 923	CKSRYB104K50
C 924	CEV100M16
C 925	CKSRYB103K50
C 926	CKSRYB103K50
C 927	CKSRYB103K50
C 930	CKSQYB475Z16
C 931	CKSQYB475Z16
C 932	CKSQYB475Z16
C 940	CKSRYB104K50
C 941	CKSRYB104K50
C 950	CKSRYB102K50
C 980	CKSRYB104K50
C 981	CKSRYB104K50

D

Unit Number:CWX2931
Unit Name:CD CORE UNIT(S10WMA)

MISCELLANEOUS

IC 201	IC	UPD63761GJ
IC 203	IC	NJM2391DL1-33
IC 301	IC	BA5835FM
IC 501	IC	S-L2980A15MC-C6A
IC 701	IC	PE5440A
IC 703	IC	S-812C33AUA-C2N
Q 101	Transistor	2SB1132

Circuit Symbol and No.		Part No.
Q 701	Transistor	UN2111
D 101	Diode	1SS355
L 203	Inductor	CTF1389
L 207	Inductor	CTF1389
L 209	Inductor	CTF1389
L 703	Inductor	CTF1389
L 902	Inductor	CTF1306
L 903	Inductor	CTF1306
L 904	Inductor	CTF1306
X 701	Ceramic Resonator 4.00MHz	CSS1652
S 901	Switch(HOME)	CSN1051
S 902	Switch(CLAMP)	CSN1051
S 903	Spring Switch(DSCSNS)	CSN1052
S 904	Switch(12EJ)	CSN1051
S 905	Switch(8EJ)	CSN1051

RESISTORS

R 101	RS1/10S1R5J
R 102	RS1/10S1R5J
R 103	RS1/10S1R5J
R 104	RS1/10S1R5J
R 105	RS1/10S1R5J
R 107	RS1/16SS0R0J
R 201	RS1/16SS102J
R 202	RS1/16SS333J
R 205	RS1/16SS473J
R 207	RS1/16SS473J
R 209	RS1/16SS473J
R 210	RS1/16SS0R0J
R 214	RS1/16SS472J
R 216	RS1/16SS472J
R 218	RS1/16SS472J
R 220	RS1/16SS472J
R 221	RS1/16SS103J
R 222	RS1/16SS103J
R 223	RS1/16SS0R0J
R 224	RS1/16SS0R0J
R 225	RS1/16SS103J
R 226	RS1/16SS393J
R 227	RS1/16SS562J
R 228	RS1/16SS122J
R 229	RS1/16SS472J
R 231	RS1/16SS0R0J
R 232	RS1/16SS122J
R 233	RS1/16SS0R0J
R 237	RS1/16SS221J
R 238	RS1/16SS221J
R 239	RS1/16SS221J
R 240	RS1/16SS0R0J
R 241	RS1/16SS333J
R 243	RS1/16SS333J
R 245	RS1/16SS333J
R 250	RS1/16SS0R0J
R 256	RS1/16SS0R0J
R 261	RS1/16S0R0J
R 262	RS1/16S0R0J
R 263	RS1/16S0R0J
R 264	RS1/16S0R0J
R 267	RS1/16S0R0J

Circuit Symbol and No.	Part No.
R 301	RS1/16SS183J
R 302	RS1/16SS822J
R 304	RS1/16SS183J
R 305	RS1/16SS822J
R 307	RS1/16SS183J
R 308	RS1/16SS183J
R 309	RS1/16SS183J
R 310	RS1/16SS183J
R 501	RS1/16SS0R0J
R 701	RS1/16S0R0J
R 702	RS1/16SS0R0J
R 703	RS1/16SS104J
R 704	RS1/16SS104J
R 705	RS1/16SS221J
R 706	RS1/16SS221J
R 707	RS1/16SS0R0J
R 708	RS1/16SS221J
R 709	RS1/16SS473J
R 710	RS1/16SS102J
R 711	RS1/16SS102J
R 712	RS1/16SS102J
R 713	RS1/16SS102J
R 714	RS1/16SS473J
R 715	RS1/16SS0R0J
R 716	RS1/16SS472J
R 719	RS1/16SS221J
R 720	RS1/16SS471J
R 721	RS1/16S0R0J
R 724	RS1/16S473J
R 725	RS1/16SS222J
R 726	RS1/16SS103J
R 727	RS1/16SS473J
R 729	RS1/16SS223J
R 730	RS1/16SS473J
R 731	RS1/16SS104J
R 732	RS1/16SS104J
R 733	RS1/16SS104J
R 735	RS1/16SS473J
R 737	RS1/16SS104J
R 740	RS1/16SS473J
R 743	RS1/16SS104J
R 745	RS1/16SS473J
R 746	RS1/16SS104J
R 747	RS1/16SS102J
R 750	RS1/16SS473J
R 751	RS1/16SS102J
R 754	RS1/16SS102J
R 755	RS1/16SS102J
R 756	RS1/16SS104J
R 765	RAB4CQ221J
R 769	RAB4CQ221J
R 773	RAB4CQ221J
R 777	RS1/16SS221J
R 778	RS1/16SS221J
R 779	RS1/16SS221J
R 901	RAB4CQ221J
R 902	RS1/16S0R0J
R 905	RS1/16SS221J
R 906	RS1/16SS221J
R 909	RS1/16SS0R0J

Circuit Symbol and No.		Part No.
R 911		RS1/16SS0R0J

CAPACITORS

C 101		CKSSYB104K10
C 102		CKSSYB104K10
C 103	100µF/16V	CCH1504
C 104	47µF/6.3V	CCH1506
C 105		CKSSYB104K10
C 106		CCSSCH101J50
C 107		CKSRYB224K16
C 108		CKSSYB104K10
C 110		CKSSYB104K10
C 201		CKSSYB471K50
C 202		CKSSYB104K10
C 203		CKSSYB104K10
C 205		CKSSYB104K10
C 207	220µF/4V	CCH1590
C 208		CKSSYB104K10
C 209		CKSSYB104K10
C 216		CKSSYB332K50
C 217		CKSSYB104K10
C 218		CKSSYB223K16
C 219		CKSSYB104K10
C 220		CKSSYB103K16
C 221		CKSSYB104K10
C 222		CCSSCH560J50
C 223		CCSSCH5R0C50
C 224		CKSSYB104K10
C 225		CKSSYB103K16
C 226		CCSSCH680J50
C 227		CCSSCH470J50
C 228		CKSSYB682K25
C 230		CKSSYB104K10
C 232		CKSSYB104K10
C 233	10µF/6.3V	CCH1470
C 234	220µF/4V	CCH1590
C 235		CKSRYB224K16
C 237		CKSSYB104K10
C 239		CCSSCH330J50
C 242		CKSSYB104K10
C 246		CKSSYB104K10
C 249		CKSSYB221K50
C 250		CKSRYB102K50
C 251		CKSRYB102K50
C 260		CKSSYB104K10
C 301		CKSSYB221K50
C 302		CKSSYB221K50
C 303		CKSSYB472K25
C 304		CKSSYB103K16
C 305	100µF/16V	CCH1504
C 306		CKSSYB104K10
C 307		CKSSYB104K10
C 501		CKSRYB224K16
C 505		CKSQYB475K6R3
C 701		CKSSYB104K10
C 702		CKSSYB471K50
C 703		CKSSYB103K16
C 704	4.7µF/25V	CCH1592
C 706		CKSSYB104K10
C 707		CKSSYB104K10
C 712		CKSRYB224K16
C 713		CKSSYB104K10
C 714		CKSSYB104K10
C 716		CKSSYB103K16
C 720		CKSQYB225K10
C 722		CKSRYB105K10
C 903		CKSSYB471K50
C 906		CKSRYB224K16
C 910		CKSQYB225K10

E

Unit Number:
Unit Name:GRILLE MECHANISM PCB

MISCELLANEOUS

S 1	Switch(OPEN)	CZS2921
S 2	Switch(CLOSE)	CZS2922

F

Unit Number:EWM1033
Unit Name:Deck Unit

MISCELLANEOUS

IC 251	IC	HA12228F
IC 351	IC	PA2020A
D 352	Diode	1SS355
VR301	Semi-fixed 33kΩ(B)	CCP1280
VR302	Semi-fixed 33kΩ(B)	CCP1280

RESISTORS

R 271		RS1/16S183J
R 285		RS1/16S0R0J
R 351		RS1/16S102J
R 352		RS1/16S102J
R 353		RS1/16S102J
R 354		RS1/16S102J
R 355		RS1/16S274J
R 362		RS1/8S301J
R 373		RS1/16S0R0J
R 374		RS1/8S0R0J
R 375		RS1/8S0R0J
R 401		RS1/16S153J
R 402		RS1/16S332J
R 403		RS1/16S911J
R 404		RS1/16S274J

CAPACITORS

C 251		CKSRYB391K50
C 252		CKSRYB391K50
C 253		CKSRYB391K50
C 254		CKSRYB391K50
C 255		CKSRYB103K50
C 256		CKSRYB103K50
C 271	1µF/50V	ECH0002
C 272		CKSRYB104K16
C 301		CKSRYB104K16
C 302		CKSRYB104K16

Circuit Symbol and No.	Part No.
C 309	CKSRYB104K16
C 310	CKSRYB104K16
C 351	CKSQYB224K25
C 352	CKSRYB392K50
C 353	CKSRYB103K50
C 354	CKSRYB103K50
C 355	CKSQYB104K50
C 356	CKSRYB103K50
C 401	CKSRYB392K50
C 402	CKSRYB334K10
C 403	CKSRYB223K25
C 404	CKSRYB103K50
C 405	CKSRYB333K16

G

Unit Number:
Unit Name:Reel Sense PCB

MISCELLANEOUS

S 1	Switch(LOAD)	ESG1007
S 2	Switch(MODE)	ESG1007
S 3	Switch(70µs)	ESG1007
EGN1	Photo-reflector	ESG1004

Miscellaneous Parts List

	Pickup Unit(P10)(Service)	CXX1641
M 1	Motor Unit(SPINDLE)	CXB6007
M 2	Motor Unit(LOADING/CARRIAGE)	CXB8933
M 1	Motor Unit(MAIN)	EXA1490
M 2	Motor Unit(SUB)	EXA1580
HD1	Head Assy	EXA1589
M 1	Motor Assy	CZX5579

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.

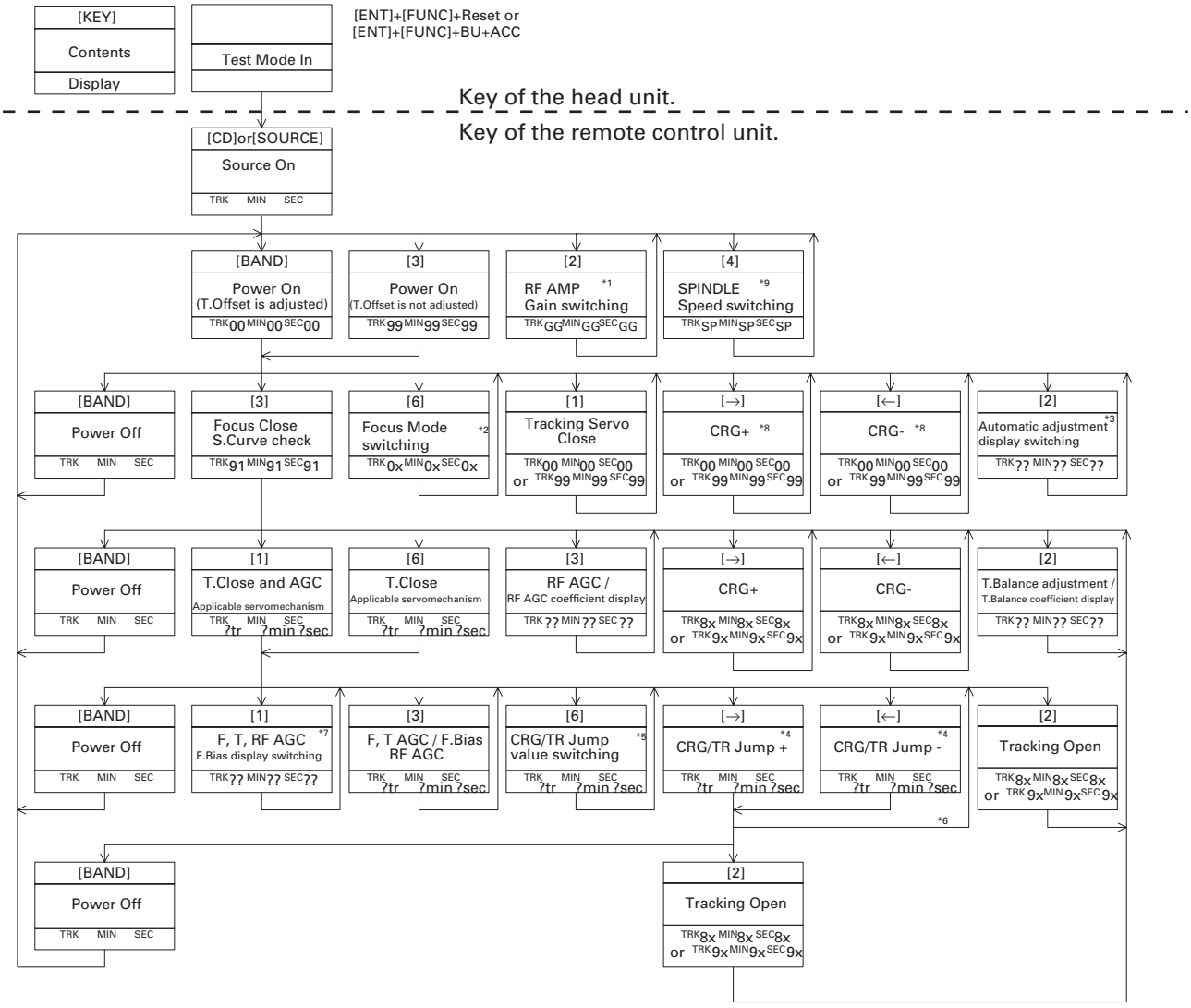
• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.
• To enter the test mode.
While pressing the ENT and FUNC 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 ckeck 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) 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.

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

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.

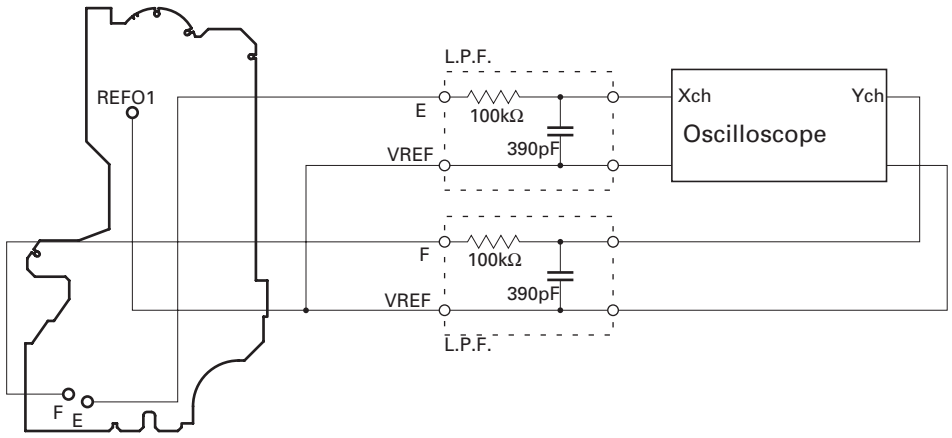
• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **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(S10WMA)



• **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.

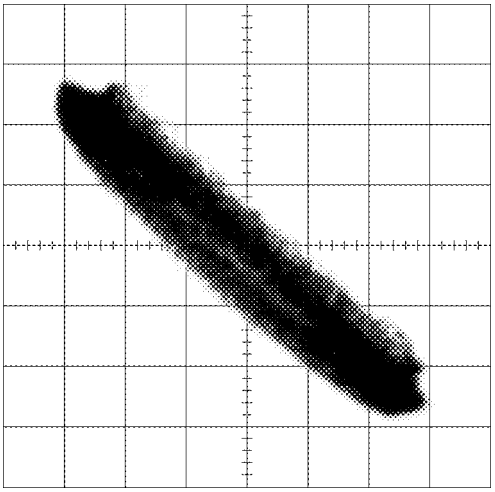
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

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

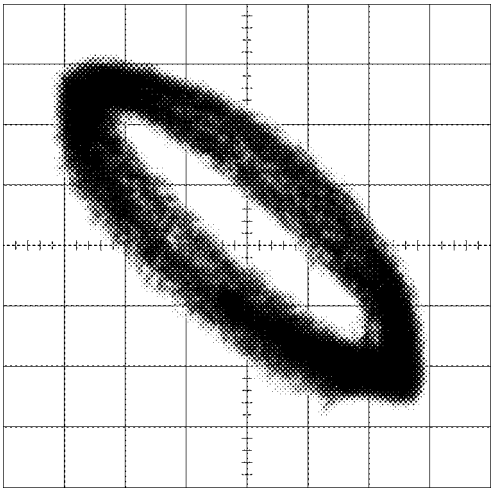
Grating waveform

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

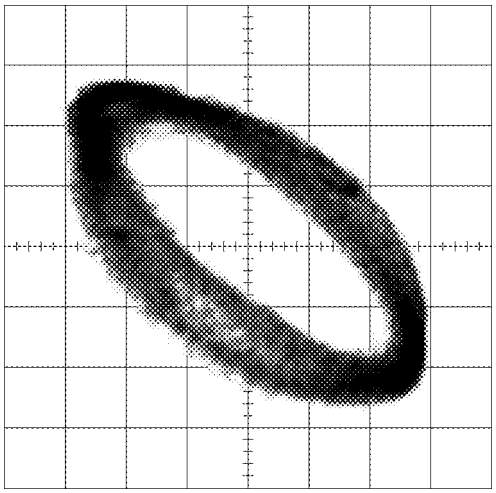
0°



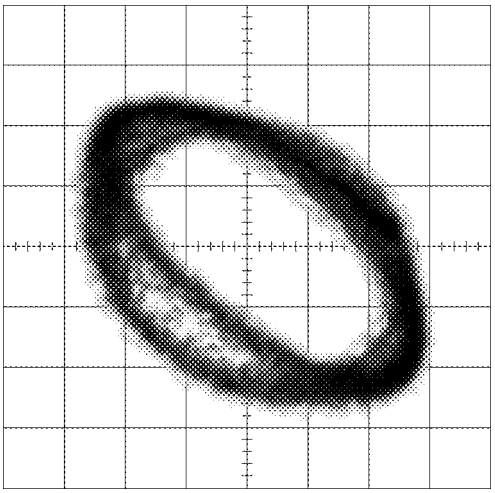
30°



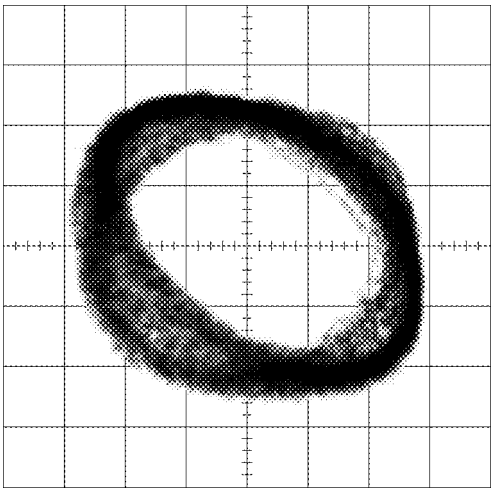
45°



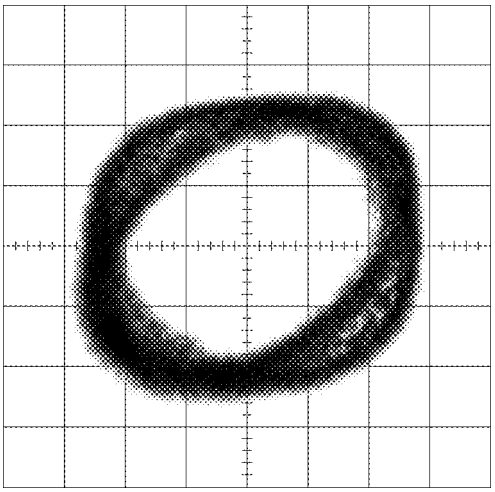
60°



75°



90°



6.3 ERROR MODE

● Error Messages

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

(1) Basic Indication Method

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

2) Head unit display examples

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

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

(2) Error Code List

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

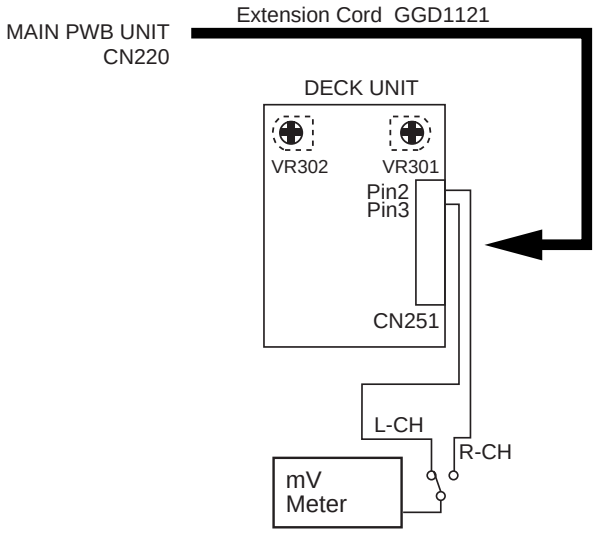
Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).

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

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

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

6.4 DOLBY ADJUSTMENT



DOLBY B NR ADJUSTMENT

No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz, 200nwb/m)	VR301(Lch), VR302(Rch) (DOLBY NR Switch : OFF)	mV Meter : - 8.24dBm ±1dB

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.

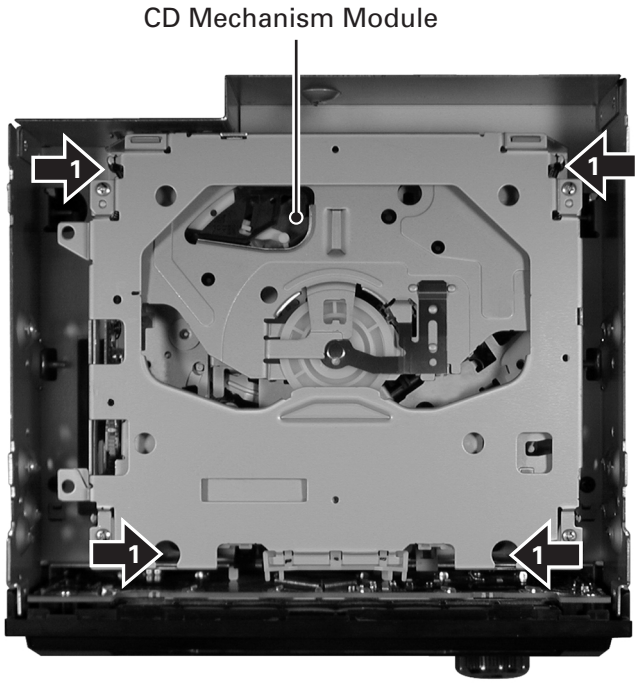


Fig.1

● **Removing the KEY PWB Unit (Fig.2)**

1 Remove the screw.

2 Remove the three screws.

Disconnect the connector and then remove the KEY PWB Unit.

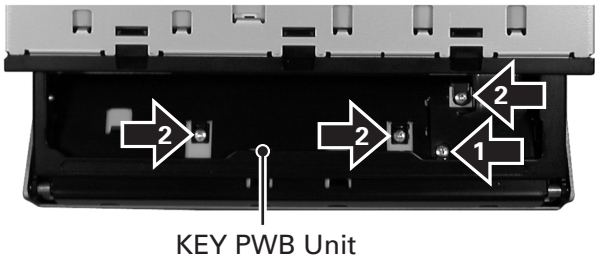


Fig.2

● Removing the Panel (Fig.3)

1. Remove the two washers.
2. Remove the two screws and then remove the Grille.
3. Remove the two screws and then remove the Panel.

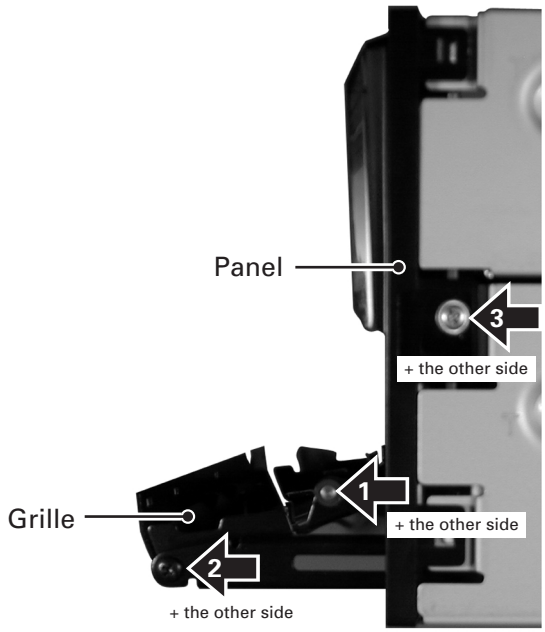


Fig.3

● Removing the Heat Sink (not shown)

1. Remove the six screws and then remove the Heat Sink.

● Removing the Chassis(TOP) (Fig.4)

1. Remove the two screws.
2. Remove the four screws and then remove the Chassis(TOP).

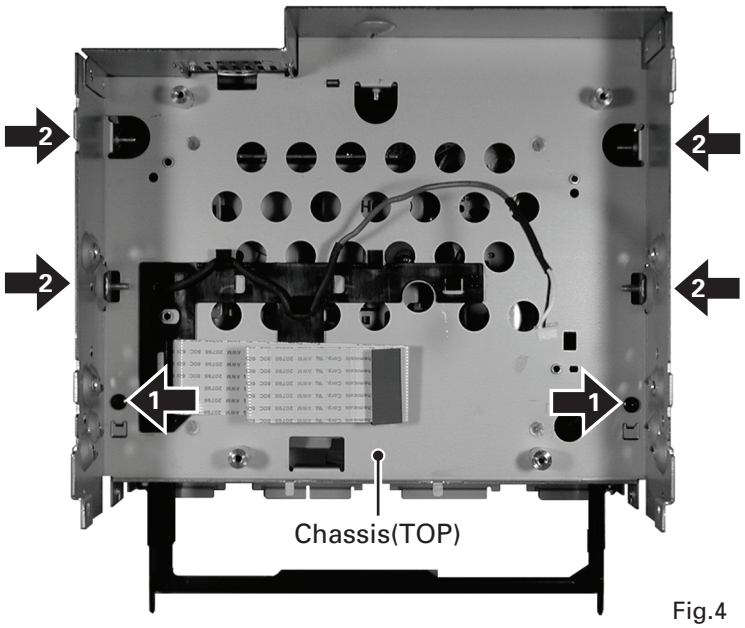


Fig.4

● Removing the Cassette Mechanism Module (Fig.5)

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

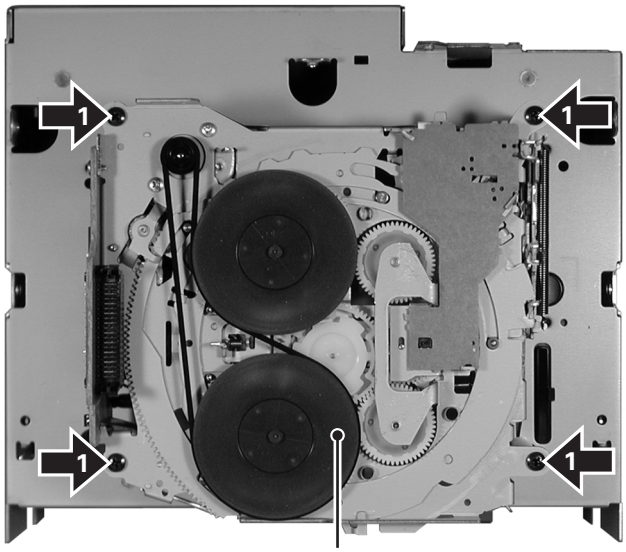


Fig.5

● Removing the Grille Mechanism Unit (Fig.6)

1 Remove the four screws.

Disconnect the connector and then remove the Grille Mechanism Unit.

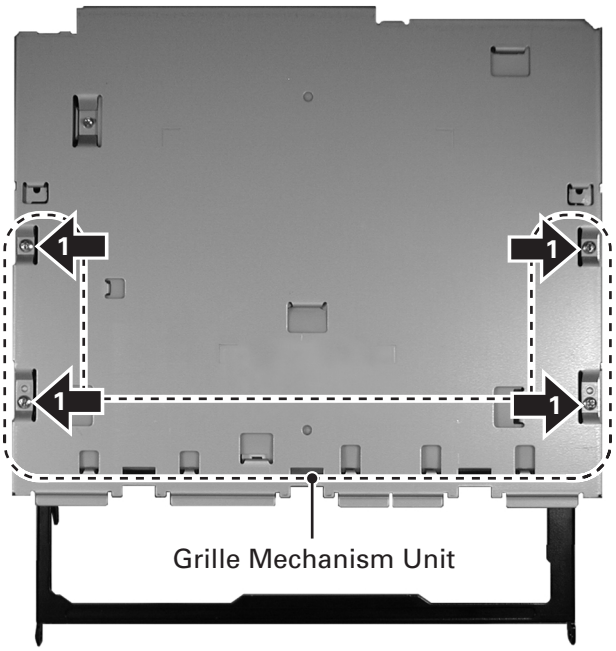


Fig.6

● Removing the Main PWB Unit (Fig.7)

1. Remove the screw.
2. Remove the three screws.
3. Straighten the tabs at four locations indicated.
4. Remove the screw and then remove the Main PWB Unit.

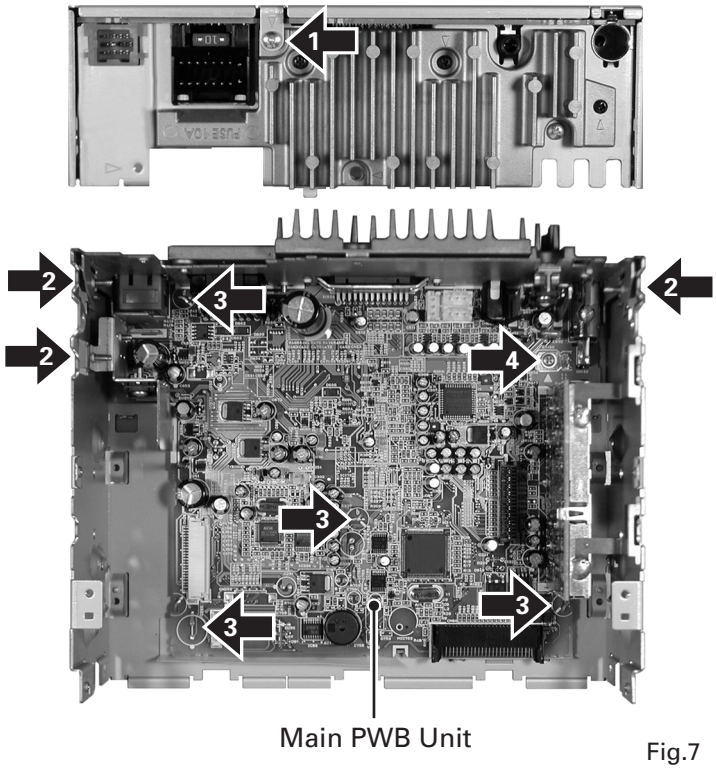
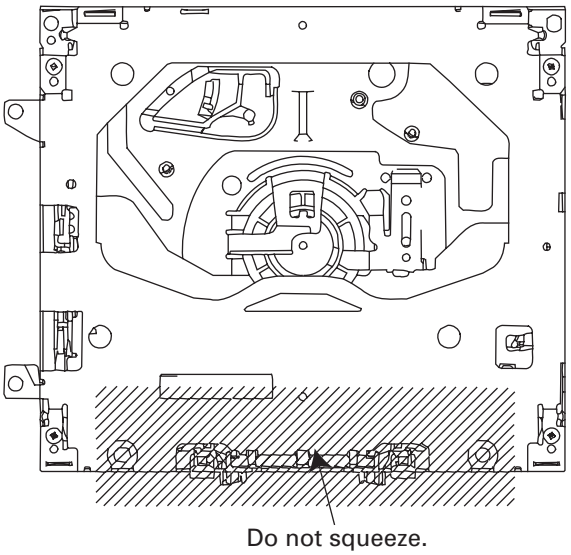


Fig.7

● How to hold the Mechanism Unit

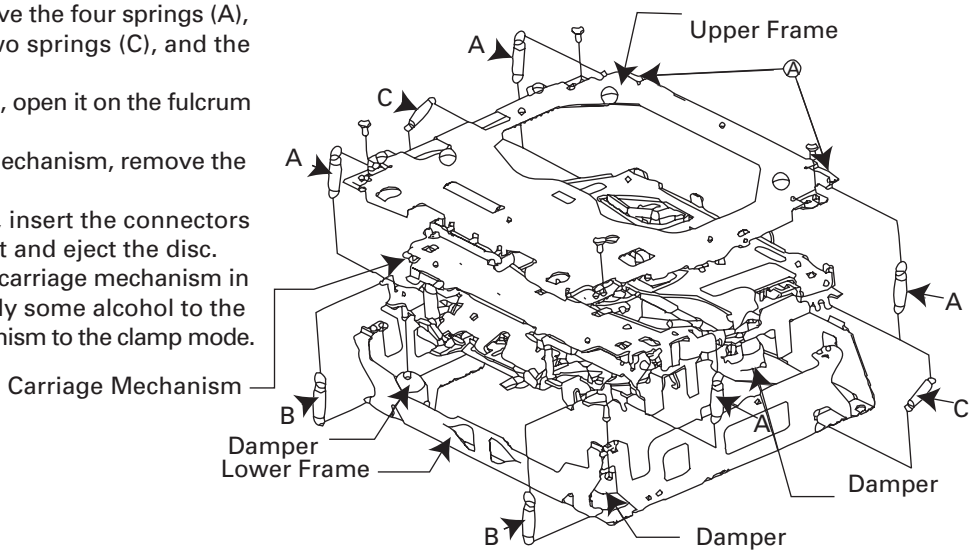
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● 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.

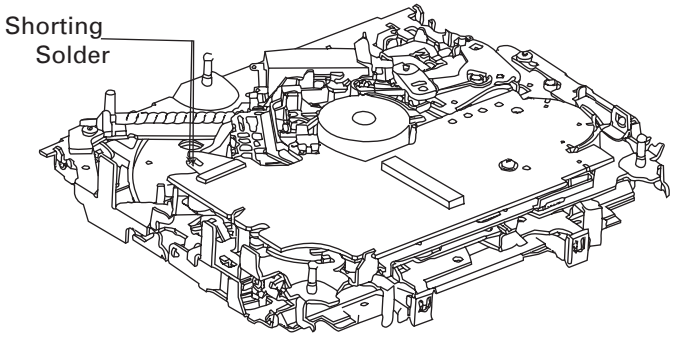
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.

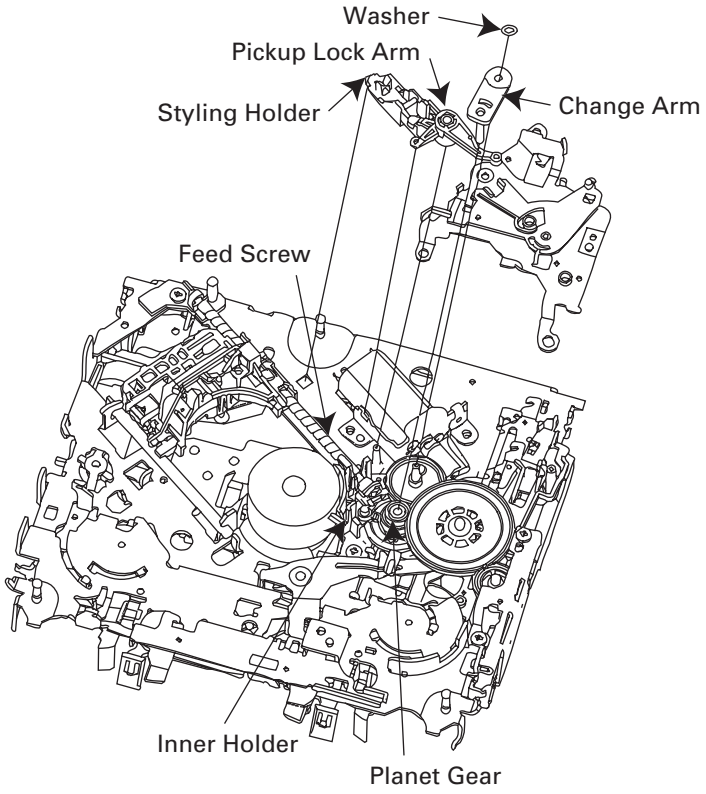


● Removing the Pickup Unit

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.

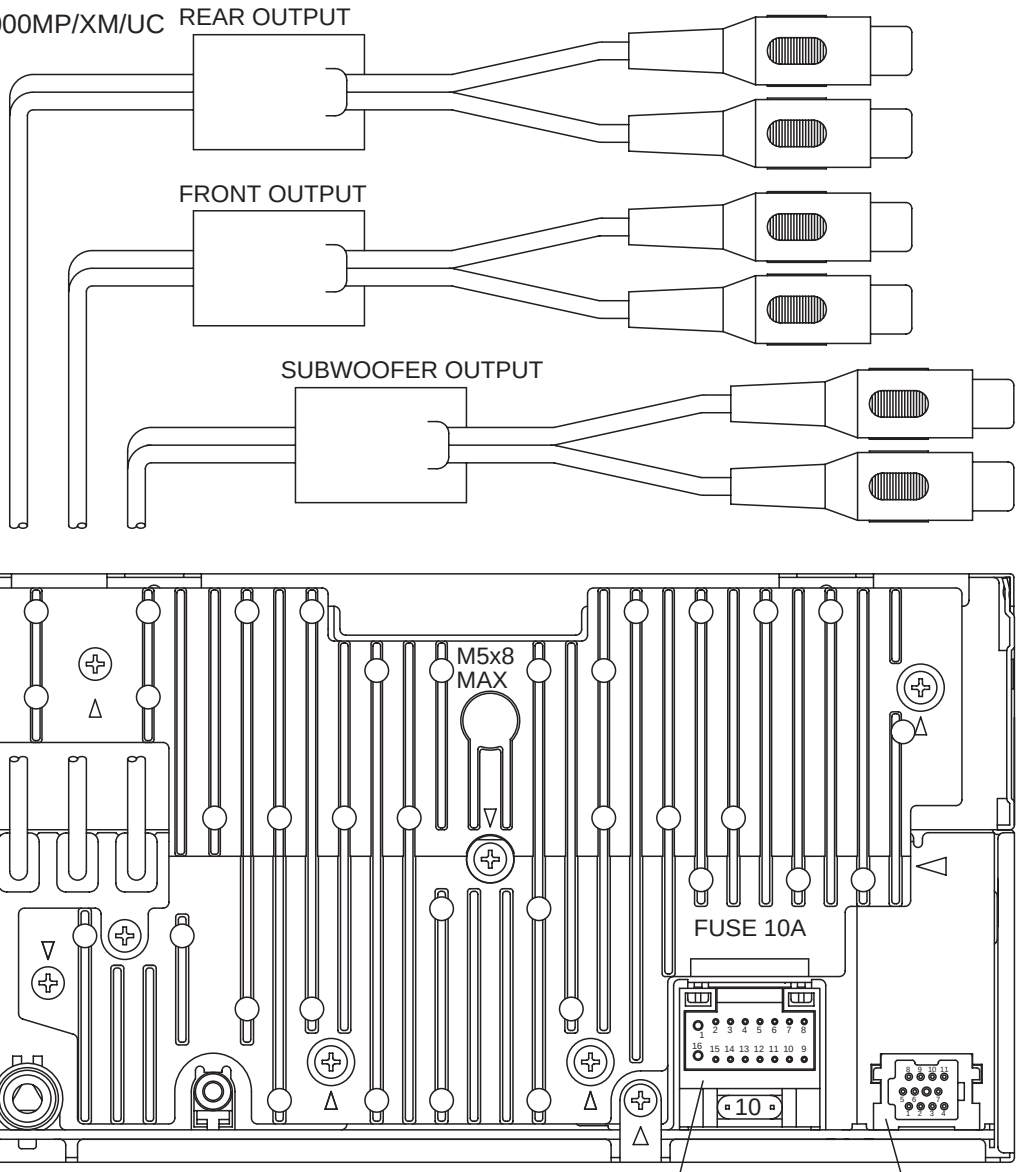
Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.





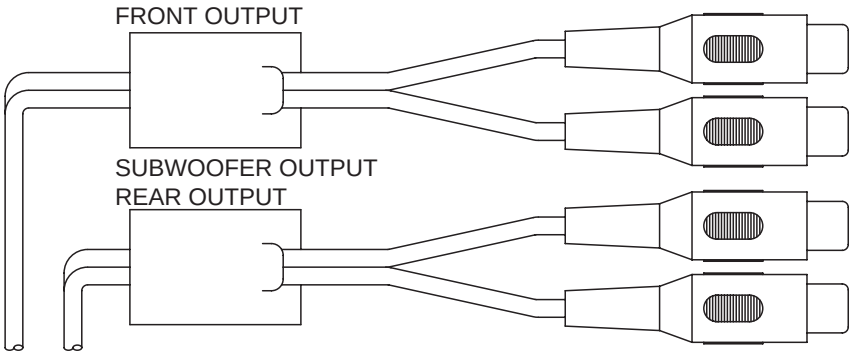
7.1.2 CONNECTOR FUNCTION DESCRIPTION

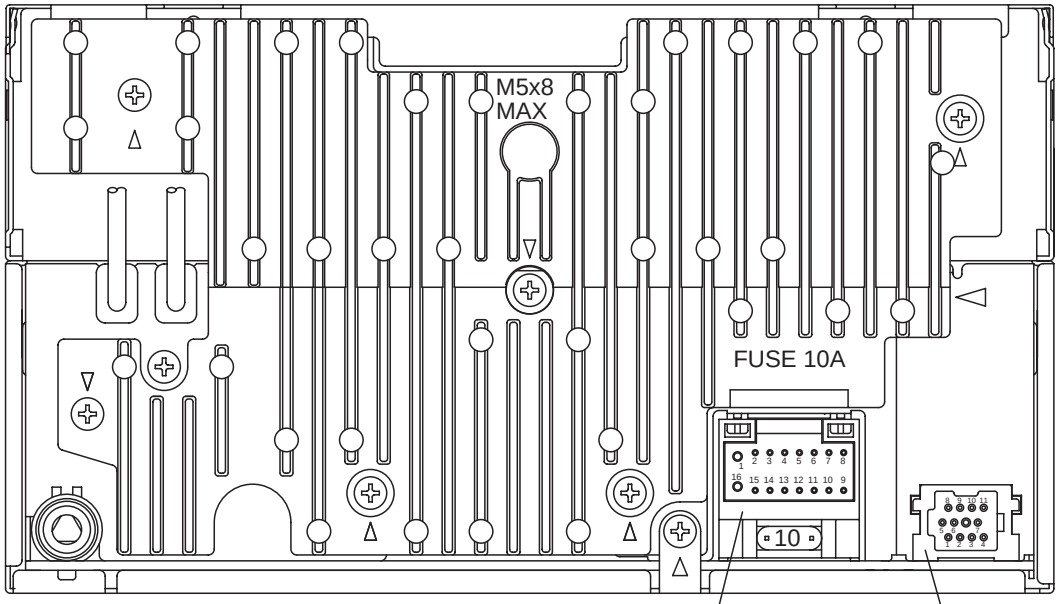
● FH-P5000MP/XM/UC



1.GND	1.BU+
2.FR-	2.GND
3.FR+	3.GND
4.FL-	4.NC
5.FL+	5.BUS-
6.RL+	6.GND
7.RL-	7.BUSL+
8.RR+	8.SWDB
9.RR-	9.BUSR+
10.ACC	10.BUSR-
11.B.REM	11.BUSL-
12.A.ANT	
13.TEL_MUTE	
14.ILUMI	
15.NC	
16.BU	

● FH-P5000MP/XM/ES





ANTENNA JACK

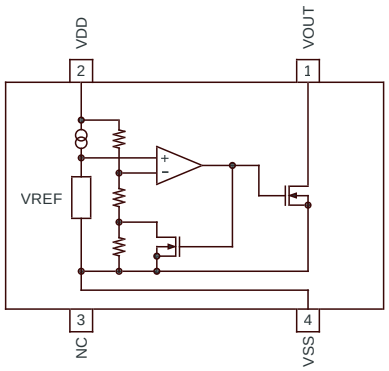
1.GND	1.BU+
2.FR-	2.GND
3.FR+	3.GND
4.FL-	4.NC
5.FL+	5.BUS-
6.RL+	6.GND
7.RL-	7.BUSL+
8.RR+	8.SWDB
9.RR-	9.BUSR+
10.ACC	10.BUSR-
11.B.REM	11.BUSL-
12.A.ANT	
13.TEL_MUTE	
14.ILUMI	
15.NC	
16.BU	

7.2 PARTS

7.2.1 IC

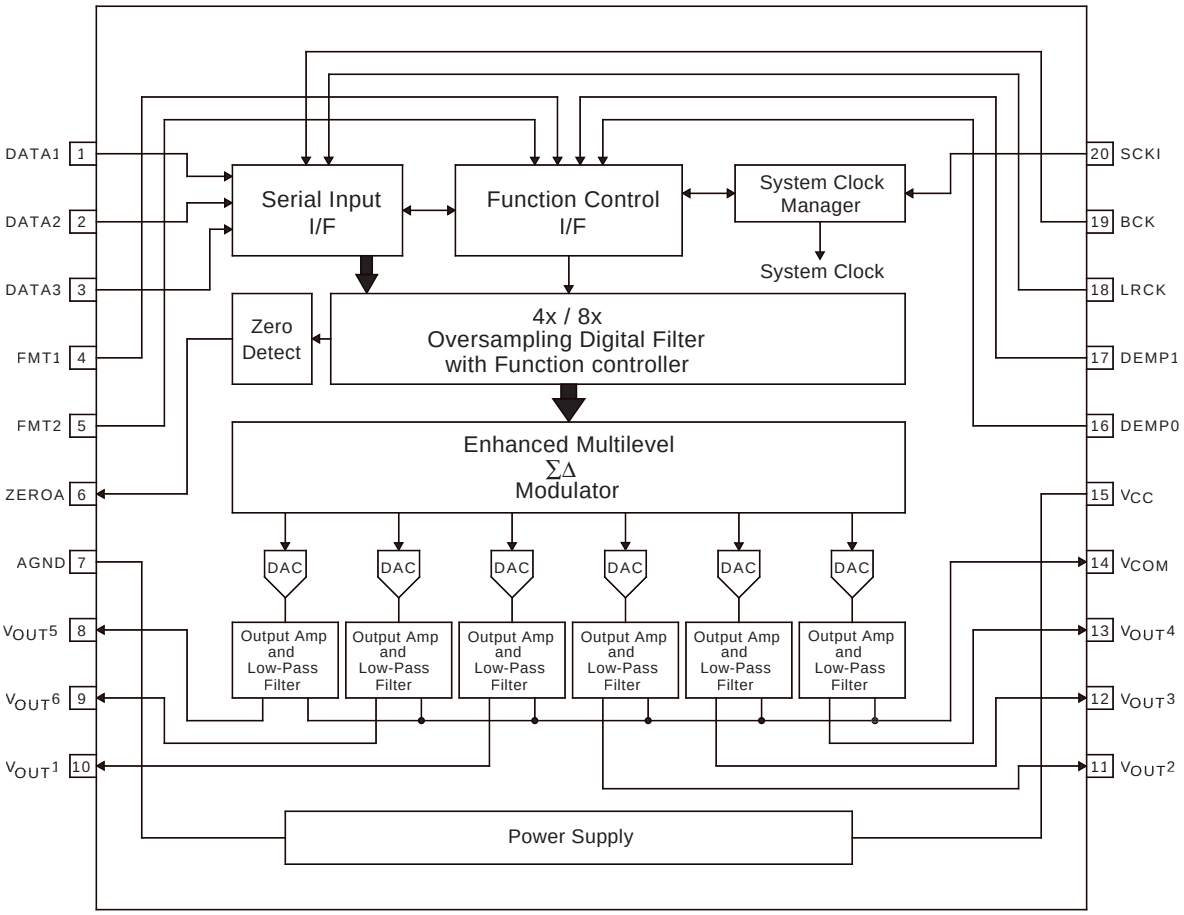
PST3435UL	HA12240FP	S-L2980A15MC-C6A
PST3434UL	PD2068B	PE5440A
PCM1606EG	M62343FP	S-812C33AUA-C2N
PD5935A	UPD63761GJ	
AK7730VT	BA5835FM	

* PST3435UL
* PST3434UL



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

* PCM1606EG

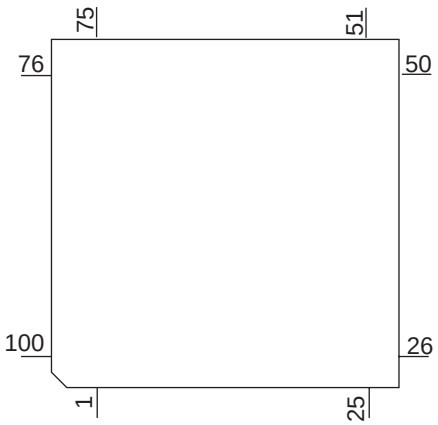


● Pin Functions (PD5935A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	SYSPW	O	C	System power output
2	DSPPW	O	C	DSP,DAC power control output
3	DSPOUT	O	C	DSP data output
4	DSPIN	I		DSP data input
5	DSPCK	O	C	DSP clock output
6	BYTE			External data bus width select input
7	CNVSS			Processor mode select input
8	TELIN	I		Tel mute input
9	DACCS	O	C	RGB:DAC chip select output
10	$\overline{\text{RESET}}$			Reset
11	XOUT			Clock output
12	Vss			Vss
13	XIN			Clock input
14	VCC			Vcc
15	(NMI)	I		Not Used
16	$\overline{\text{MSIN}}$	I		MS input
17	PLAY	O	C	MS gain select output
18	DIRO	O	C	Normal/Reverse select output
19	RX2	I		IPBUS data input 2
20	LCDPW	O	C	LCD back light output
21	$\overline{\text{MTLSW}}$	I		Metal SW input
22	PEE	O	C	PEE output
23	$\overline{\text{LOADSW}}$	I		Load SW input
24	$\overline{\text{BRST}}$	O	C	PBUS reset output
25	$\overline{\text{BRXEN}}$	I/O	C	PBUS data input/output
26	$\overline{\text{BSRQ}}$	I		PBUS data request input
27	RX	I		IPBUS data input
28	TX	O	N	IPBUS data output
29	NC	O		Not Used
30	NC	I		Not Used
31	NC	I	C	Not Used
32	$\overline{\text{STBY}}$	O	C	Driver IC stand by control output
33	DPDT	O	C	Grille:Data output
34	KYDT	I		Key data input
35	ROT1	I		Rotary encoder pulse input 1
36	ROT0	I		Rotary encoder pulse input 0
37	PCL	O	C	Clock adjustment output
38	SWVDD	O	C	Grille:Power supply control output
39	$\overline{\text{SHELL}}$	I		Cassette half sense input
40	FLPILM	O	C	Flap illumination outoput
41	ILMPW	O	C	Illumination power output
42	NC	I		Not Used
43	CONTRAST	O	C	Contrast select output
44	SMODE	O	C	Slave master select output
45	LRCKOK	I		DSP clock stability interface input
46	MCKRQ	I		Master clock request input
47	FLPPW	O	C	Flap power supply output
48	NC	O	C	Not Used
49	ENTILM	O	C	ENT illumination output
50	EMPIN	I		CD enfanchise data input
51	EMPOUT	O	C	CD enfanchise control output
52	NC	O	C	Not Used
53	$\overline{\text{FLPSENS0}}$	I		Flap open/close select input(open)
54	$\overline{\text{FLPSENS1}}$	I		Flap open/close select input(close)
55	FLPMOT0	O	C	Flap open output
56	FLPMOT1	O	C	Flap close output
57	NR	O	C	Dplby B select output
58	$\overline{\text{POS}}$	I		Position sense input
59	ES	I		Reel pulse sense input

Pin No.	Pin Name	I/O	Format	Function and Operation
60	Vcc			Vcc
61	NC	O	C	Open
62	Vss			Vss
63	EVOLCS	O	C	EVOL chip select output
64	KEYD	I		Wired remote control key input (/ES) Not Used
65	$\overline{\text{DSPRDY}}$	I		DSP data write ready input
66	$\overline{\text{DSPDRDY}}$	I		DSP data read ready input
67	DALMON	O	C	For consumption low-current output
68	$\overline{\text{INIT\_RESET}}$	O	C	DSP system reset output
69	$\overline{\text{TUNPCE2}}$	O	C	PLL chip enable output 2
70	TUNPCE1	O	C	PLL chip enable output
71	ROMCS	O	C	ROM collection chip select output
72	$\overline{\text{ASENS}}$	I		Acc sense input
73	$\overline{\text{BSENS}}$	I		Back up sense input
74	ROMCK	O	C	ROM collection clock output
75	ROMDATA	I/O	C	ROM collection data input/output
76	$\overline{\text{DSPCS}}$	O	C	DSP CS output
77	$\overline{\text{DSPRST}}$	O	C	DSP reset output
78	$\overline{\text{DSPRQ}}$	O	C	DSP interface request output
79	IPPW	O	C	IPBUS driver power supply output
80	ASENBO	O	C	Asense output for slave output
81	$\overline{\text{ISENS}}$	I		Illumination sense input
82	DACDT	O	C	RGB: DAC data output
83	DACCK	O	C	RGB: DAC clock outpuy
84	ANTPW	O	C	Antenna power output (/UC) Not Used
85	MUTE	O	C	Mute
86	TESTIN	I		Test program input
87	SC2	O	C	Sub motor output 2
88	SC1	O	C	Sub motor output 1
89	CM	O	C	Capstan motor output
90	CLOSSKEY	I		Closs key data input (include Band key)
91	MODEL1	I		Model input 1
92	KEYAD	I		Wired remote control key input (/ES) Not Used
93	NC	I		Not Used
94	Vss			Vss
95	SL	I		Signal level input
96	Vref			Vref
97	Vcc			Vcc
98	TUNPDI	I		PLL data input
99	TUNPDO	O	C	PLL data output
100	TUNPCK	O	C	PLL clock output

* PD5935A

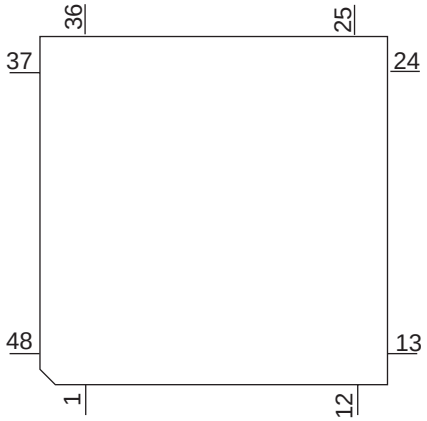


Format	Meaning
C	CMOS
N	N channel open drain

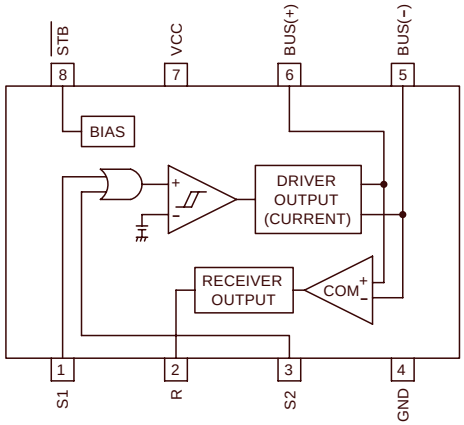
● Pin Functions(AK7730VT)

Pin No.	Pin Name	I/O	Function and Operation
1	EESEL	I	Control Mode select pin (Pull down)
2	JX0/SDIN4A	I	External conditional jump pin / DSP serial data input pin (Pull down)
3, 4	SDIN3, 2/JX1, 2	I	DSP serial data input pin / External condition jump pin (Pull down)
5	SDIN1	I	DSP serial data input pin (Pull down)
6	CKS1	I	Master clock (XTI) select pin (Pull down)
7	BVSS		Silicon substrate potential 0V
8	DVSS		Ground pin for digital section 0.0V
9	DVDD		Power supply pin for digital section 3.3V (typ)
10-13	SDOUT4-1	O	DSP Serial data output pin
14	BITCLK_I	I	Serial bit clock input pin
15	LRCLK_I	I	LR channel select clock input pin
16	BITCLK_O	O	Serial bit clock output pin
17	LRCLK_O	O	LR channel select clock output pin
18	RDY	O	Data write ready output pin for microcomputer interface
19	DRDY	O	Output data ready pin for Microcomputer interface
20	$\overline{CS}$	I	Chip select pin for Microcomputer interface (pull down)
21	DVDD		Power supply pin for digital section 3.3V (typ)
22	DVSS		Ground pin for digital section 0V
23, 24	CLKO1, 2	O	Clock output pin
25	XTO	O	Crystal oscillator output pin
26	XTI	I	Master clock input pin
27	DVSS		Ground pin for digital section 0V
28	DVDD		Power supply pin for digital section 3.3V (typ)
29	SMODE	I	Slave / Master mode selector pin
30	SO	O	Serial data output pin for Microcomputer interfaces
31	SI	I	Microcomputer interface serial data input and serial data output control pin
32	SCLK	I	Microcomputer interface serial data clock pin
33	$\overline{RQ}$	I	Microcomputer interface write request pin
34	$\overline{S\_RESET}$	I	System Reset pin
35	$\overline{INIT\_RESET}$	I	Reset pin (for initialization)
36	CKS0	I	Master clock (XTI) select pin (pull down)
37	LFLT		Filter connection pin for PLL
38	AVSS		Analog ground 0V
39, 40	AVDD		Power supply pin for analog section 3.3V (typ)
41	VREFH	I	Analog reference voltage input pin
42	VCOM	O	Common voltage
43	VREFL	I	Analog reference voltage input pin for low-level
44	AVSS		Analog ground 0V
45	AINR-	I	ADC Rch analog inverted input pin
46	AINR+	I	ADC Rch analog non-inverted input pin
47	AINL-	I	ADC Lch analog inverted input pin
48	AINL+	I	ADC Lch analog non-inverted input pin

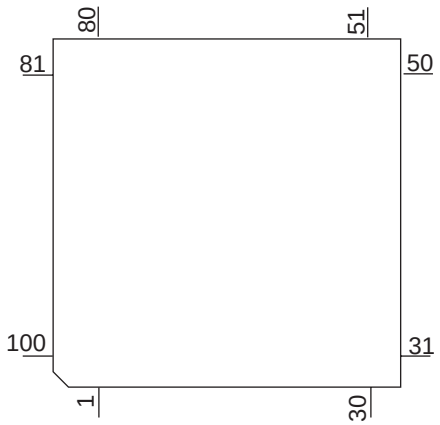
* AK7730VT



HA12240FP



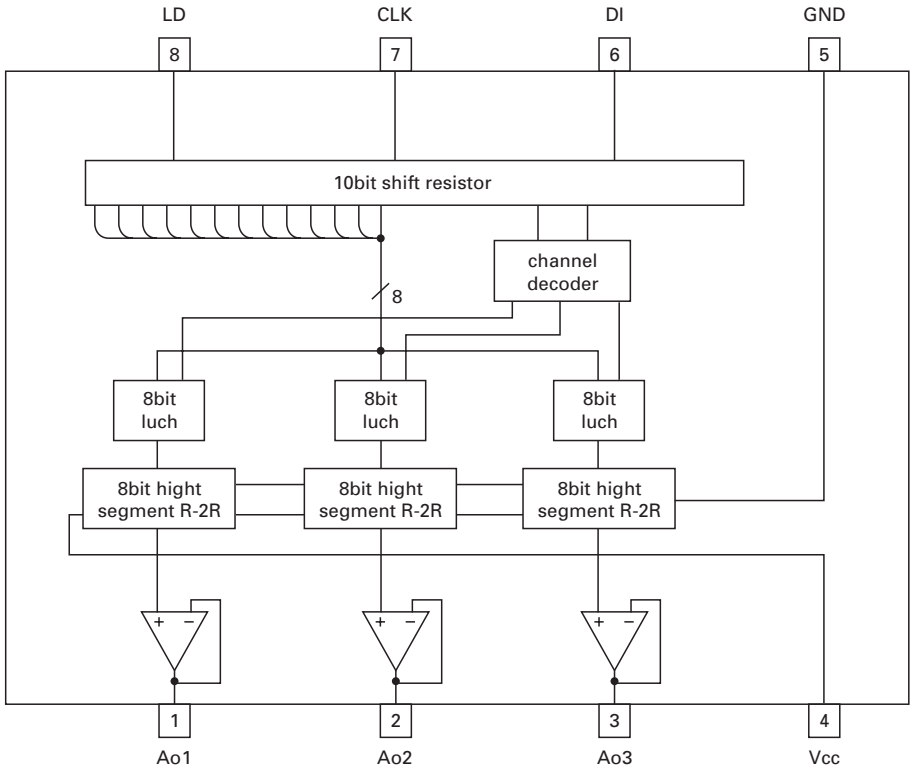
* PD2068B



● Pin Functions (PD2068B)

Pin No.	Pin Name	I/O	Function and Operation
1	VSS		GND
2	XIN	I	Clock input
3	XOUT	O	Clock output
4	TEST	I	Test input
5	VDD		Power supply
6	NC		Not used
7	DIM	O	Dimmer control output
8	$\overline{\text{RESET}}$	I	Reset input
9-10	NC		Not used
11	REM	I	Remote control input
12-13	NC		Not used
14-17	KDT0-3	I	Key data input
18	VAREF		VAREF
19	NC		Not used
20	KYDT	O	Key data output
21	DPDT	I	Display data input
21-78	SEG56-0	O	Output for driving segment of LCD
79-86	COM0-7	O	Output for LCD common driving
87-92	KST0-5	O	Key strobe output
93-94	NC		Not used
95-98	V4-V1		Multilevel power supply for driving LCD
99-100	C1-0		Ascending voltage capacitor connection of LCD

* M62343FP

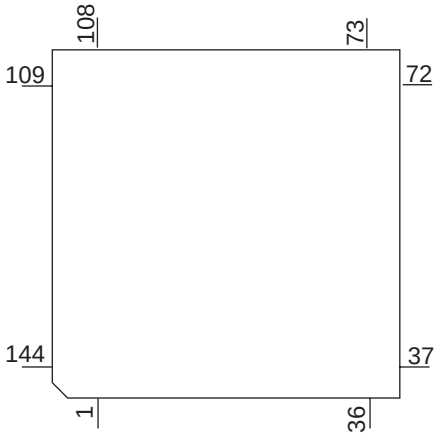

LD
CLK
DI
GND
8
7
6
5
10bit shift resistor
channel
decoder
8
8bit
luch
8bit
luch
8bit
luch
8bit hight
segment R-2R
8bit hight
segment R-2R
8bit hight
segment R-2R
+ −
+ −
+ −
1
2
3
4
Ao1
Ao2
Ao3
Vcc

● Pin Functions(UPD63761GJ)

Pin No.	Pin Name	I/O	Function and Operation
1	D.VDD		Power supply for digital circuits
2	D1.GND		GND for 1.6V digital circuits
3	$\overline{\text{RESET}}$	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	O	Output of PLCK
56	LOCK/RFOK	O	Output of LRCK/Output of RFOK
57	C1D1/C8M	O	Information on error correction/C8M : 8MHz
58	C1D2/C16M	O	Information on error correction/C16M : 16MHz
59	C2D1/RMUTE	O	Information on error correction/Mute for Rch
60	C2D2/LMUTE	O	Information on error correction/Mute for Lch
61	C2D3/SHOCK	O	Information on error correction/Detection of vibration
62	D1.GND		GND for 1.6V digital circuits
63	C33M	O	Output of 33.8688MHz(CLK for SDRAM)
64	($\overline{\text{RCS}}$)	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

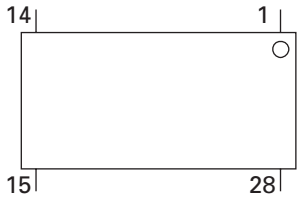
* UPD63761GJ



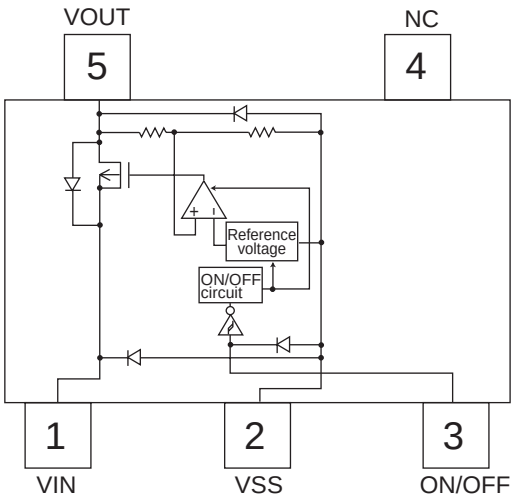
● Pin Functions(BA5835FM)

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

BA5835FM



* S-L2980A15MC-C6A

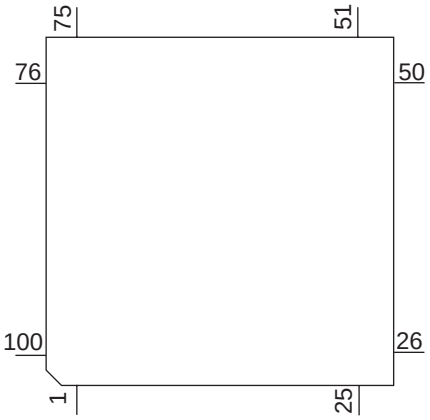


● Pin Functions(PE5440A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	AVREF			A power supply Positive power supply(5V)
2	AVSS			A power supply GND
3	RFOK	O	C	Output of state of RFOK
4	CLAMP	I	C	CLAMP SW sense input
5	EVDD			E power supply Positive power supply
6	PWM			For changer(PWM)
7	NC			Not used
8	IC/FLMD0			IC : VSS direct connection/FLMOD0 : Pull-down
9	VDD			Positive power supply(5V)
10	REGC			Connected to the capacity stabilizing output of the regulator
11	VSS			GND
12	X1	I		Oscillator connection for mainclock
13	X2			Oscillator connection for mainclock
14	$\overline{\text{RESET}}$	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	PULLDOWN	I		Connected to EVDD or EVSS via the resistor
18	$\overline{\text{EJSW}}$	I	C	Eject key input
19	$\overline{\text{XINT}}$		C	CD LSI interruption signal input
20	NC			Not used
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(transmitted signal)
26	FRXD	I		For flash rewriting(received signal)
27	BRXEN	I/O	/C	It is possible to receive P-Bus
28	$\overline{\text{BSRQ}}$	I/O	/C	P-Bus service request demand
29	$\overline{\text{DSPOK}}$	I		DSP microcomputer initialization OK input
30	DSCSNS(S903)	I		Disc state sense input
31	8EJ(S905)	I		Input of detection of 8 cm disc ejection
32	12EJ(S904)	I		Input of detection of 12 cm disc ejection
33	EVSS			E power supply GND
34	EVDD			E power supply Positive power supply
35, 36	SRAMLEVEL0, 1	O	C	SRAM level meter output
37	EMPH	O	C	Emphasis information output
38	$\overline{\text{EMPH}}$	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	INT			For changer(Interruption at the edge)
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 output
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

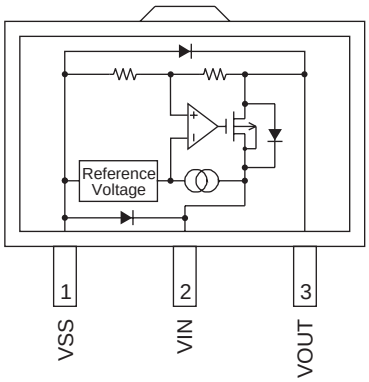
Pin No.	Pin Name	I/O	Format	Function and Operation
66	NC			Not used
67	$\overline{\text{XREAD}}$	O		CD LSI read control signal output
68	XASTB	O		CD LSI address strobe output
69	BVSS			B power supply GND
70	BVDD			B power supply Positive power supply
71-86	AD0-15	I/O	/C	Address/data Bus 0-15
87-90	NC			Not used
91-93	A/D			For changer(A/D)
94	$\overline{\text{CSENS}}$	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			Temperature information sense input
99	VDSENS			VD power supply short sense input
100	NC			Not used

* PE5440A

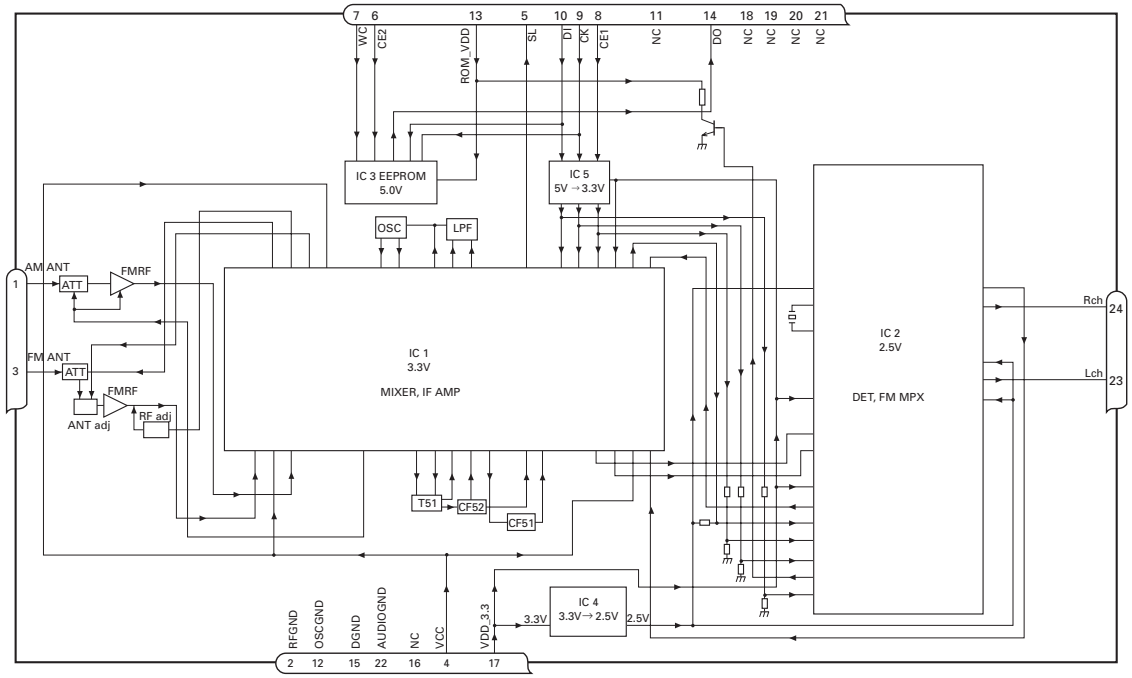


Format	Meaning
C	CMOS

* S-812C33AUA-C2N



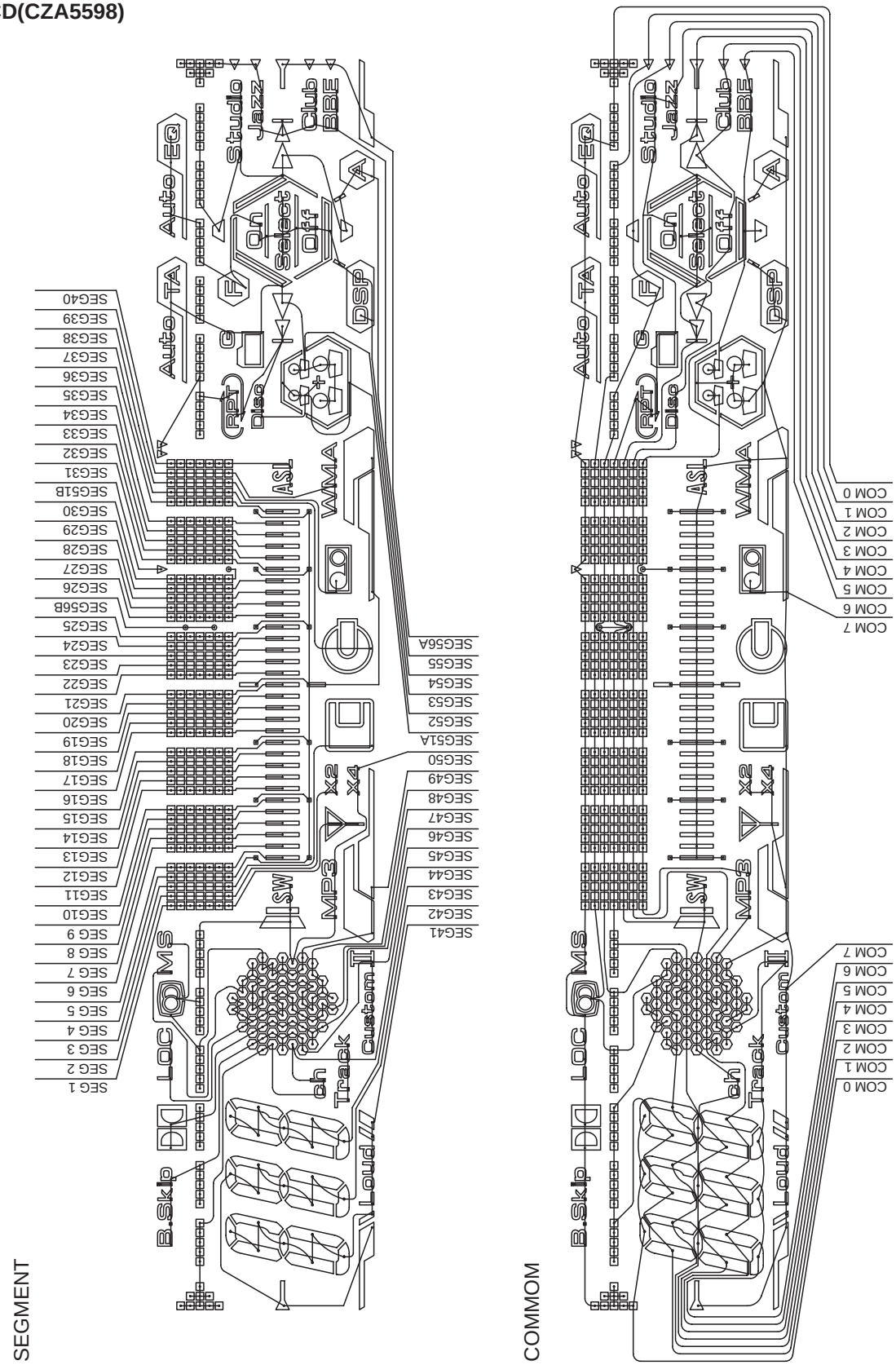
● FM/AM Tuner Unit



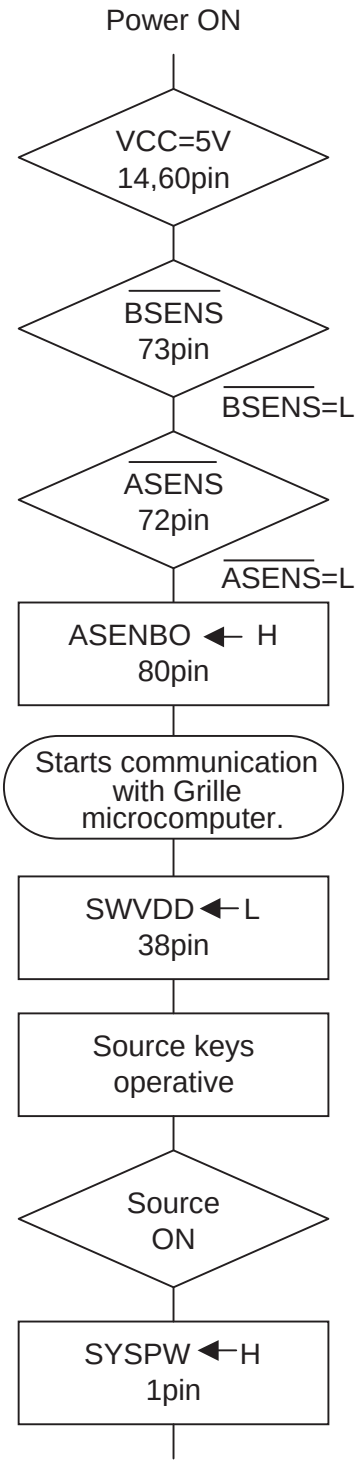
No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission 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

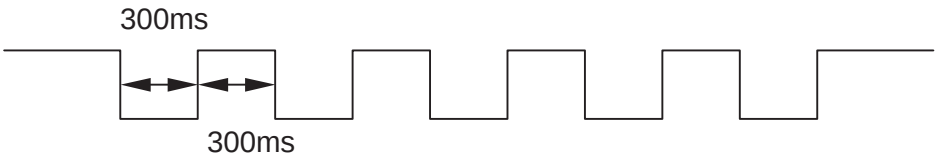
7.2.2 DISPLAY

● **LCD(CZA5598)**



7.3 OPERATIONAL FLOW CHART





In case of the above signal, the communication with Grille microcomputer may fail.
If the time interval is not 300msec, the oscillator may be defective.

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

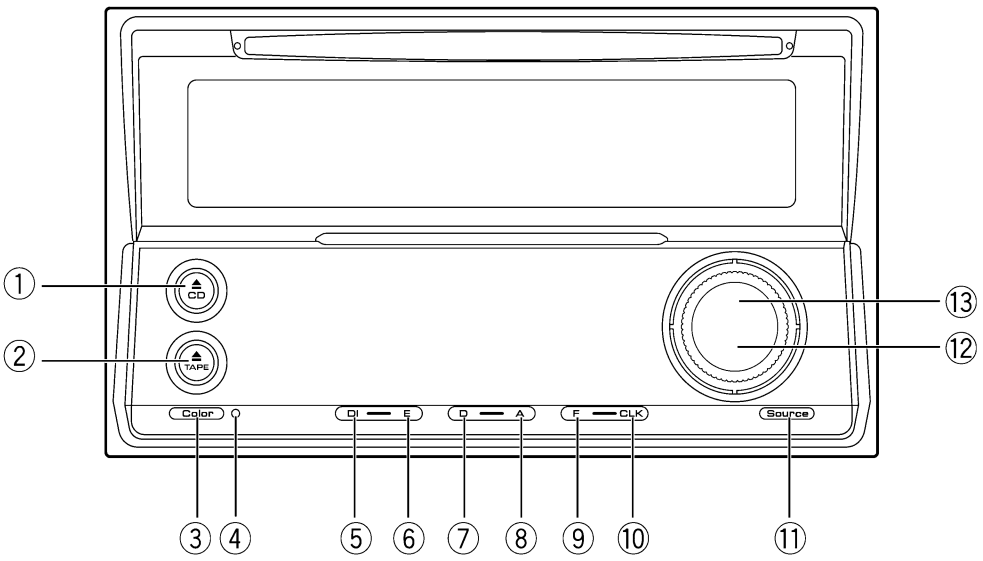
7.4 CLEANING

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

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

8. OPERATIONS



Head unit

① **CD EJECT button**
Press to eject a CD from your built-in CD player.

② **TAPE EJECT button**
Press to eject a tape from your cassette player.
Press and hold to open or close the front panel.

③ **COLOR button**
Press to change the illuminated bar color.

④ **RESET button**
Press to reset the microprocessor.

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

⑥ **ENTERTAINMENT button**
Press to change to the entertainment display.

⑦ **DSP button**
Press to select sound field functions.

⑧ **AUDIO button**
Press to select various sound quality controls.

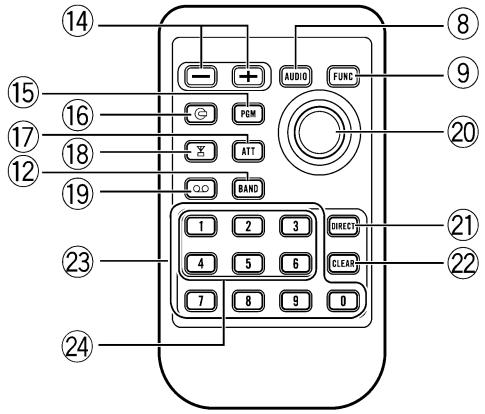
⑨ **FUNCTION button**
Press to select functions.

⑩ **CLOCK button**
Press to change to the clock display.

⑪ **SOURCE button**
This unit is turned on by selecting a source.
Press to cycle through all the available sources.

⑫ **BAND button**
Press to select among three FM bands and one AM band and to cancel the control mode of functions.
Press to change the direction of the tape transport and return to playback after fast forward or rewind.

⑬ **Multi Control**
Push up, down, left or right to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.



Turn it to increase or decrease the volume.

Remote control

Operation is the same as when using the buttons on the head unit.

⑭ **VOLUME buttons**
Press to increase or decrease the volume.

⑮ **PGM button**
Press to operate the preprogrammed functions for each source.

⑯ **CD button**
Press to select the built-in or multi-CD player as the source.

⑰ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑱ **TUNER button**
Press to select the tuner as the source.

⑲ **CASSETTE button**
Press to select the cassette player as the source.

⑳ **Joystick**
Move to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions. Functions are the same as **Multi Control** except for volume control.

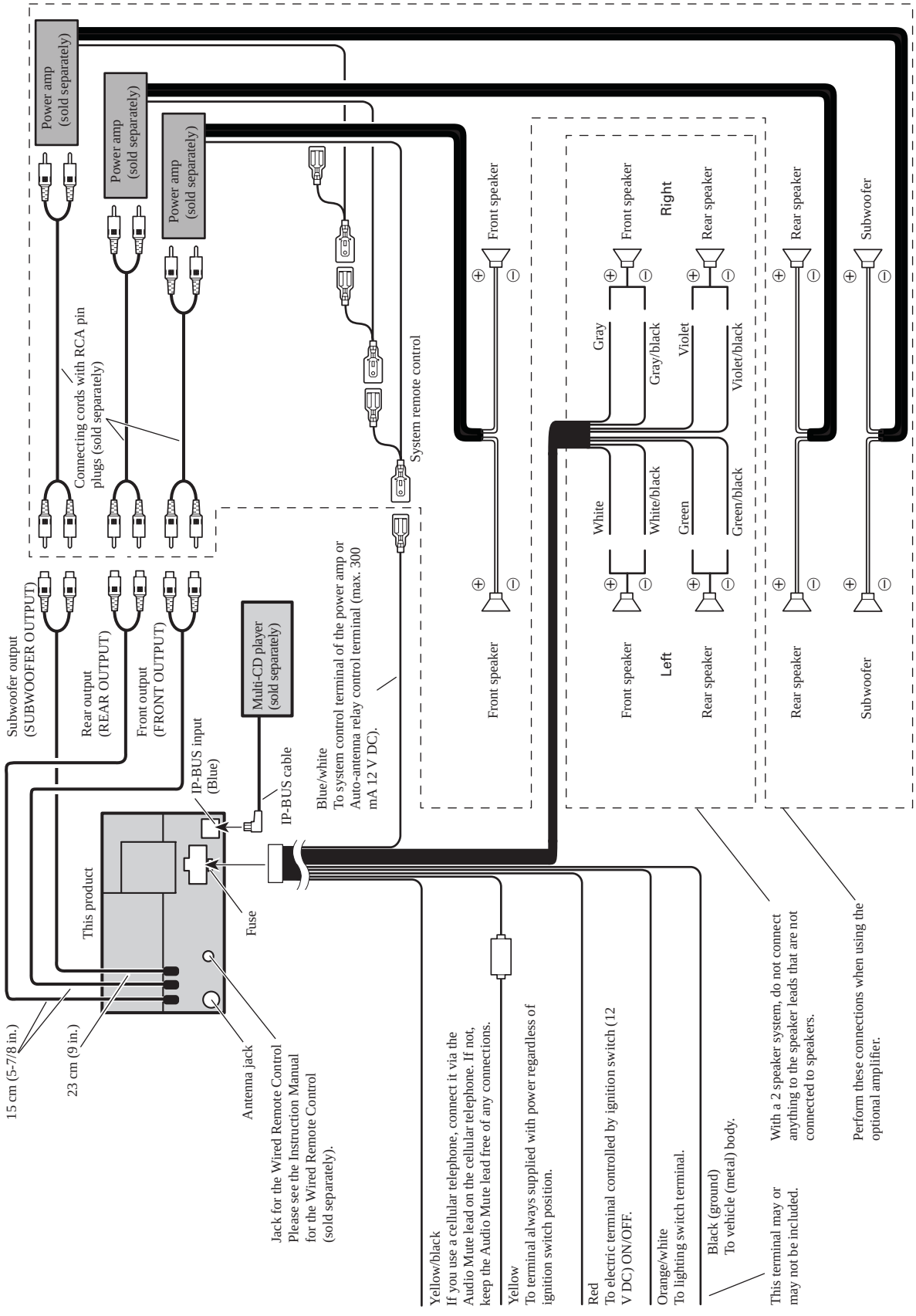
㉑ **DIRECT button**
Press to directly select the desired track. Press to do direct channel select when using an XM tuner.

㉒ **CLEAR button**
Press to cancel the input number when **NUMBER** are used.

㉓ **NUMBER buttons**
Press to enter the number for selecting a desired track in direct track select mode. Press to enter the number for selecting an XM channel directly, in direct channel select mode when using an XM tuner.

㉔ **1–6 buttons**
Press for preset tuning and disc number search when using a multi-CD player.

● CONNECTION DIAGRAM(UC)



● Jigs List

Name	Jig No.	Remarks
Silicon grease	GEM1057	Power IC or heat sink
Grease	GEM1024	CD mechanism module
Grease	GEM1045	CD mechanism module
Grease	GEM1035	CD mechanism module
Test disc	TCD-782	Checking the grating
L.P.F.		Checking the grating (Two pieces)
Extension cord	GGD1121	Cassette mechanism module adjustment
Test tape	NCT-150	Cassette mechanism module adjustment
Cleaning liquid	GEM1004	Cleaning CD pickup lenses
Cleaning paper	GED-008	Cleaning CD pickup lenses, cassette heads, pinch rollers and capstans