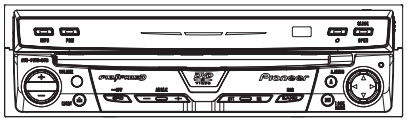
Pioneer sound.vision.soul

Service Manual



AVH-P5750DVD/RC

ORDER NO.
CRT3426

AV RECEIVER/DVD PLAYER 6.5 INCH WIDE DISPLAY

AVH-P5750DVD/RC
AVH-P5750DVD/RD
AVH-P5750DVD/RI

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

Model No.	Order No.	Mech.Module	Remarks
CX-3078	CRT3257	MS-3V1	DVD Mech. Module:Circuit Description, Mech. Description, Disassembly

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

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-ZZD.MAR. 2005 Printed in Japan

SAFETY INFORMATION

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

RC, RI

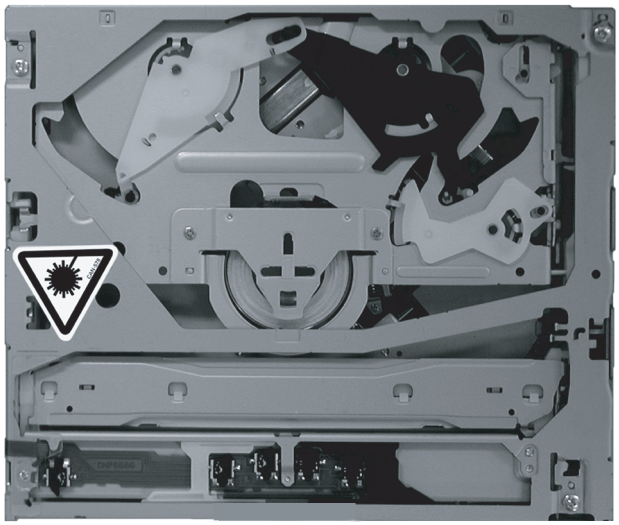
1. Safety Precautions for those who Service this Unit.

• Follow the adjustment steps in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

2. The triangular label is attached to the mechanism unit frame.



CAUTION
This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.
Refer all servicing to qualified personnel.

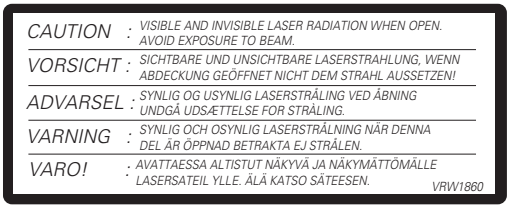
The following caution label appears on your unit.

Location: on the bottom of the unit

En

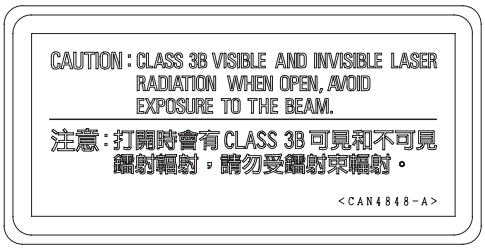
RI

On the top of the player.



RC

在机器的机壳上。



WARNING!

The AEL (accessible emission level)of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.
A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics

Wave length:
DVD:640~660nm
CD:770~810nm
DVD : 2.48mw(Emitting period :9sec.)
CD : 705μw(Emitting period : unlimited)

Additionla Laser Caution

Transistors Q1101 and Q1102 in PCB drive the laser diodes for DVD and CD respectively. When Q1101 or Q1102 is shorted between their terminals, the laser diodes for DVD or CD will radiate beam. If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

RI

CAUTION

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

● Service Precaution

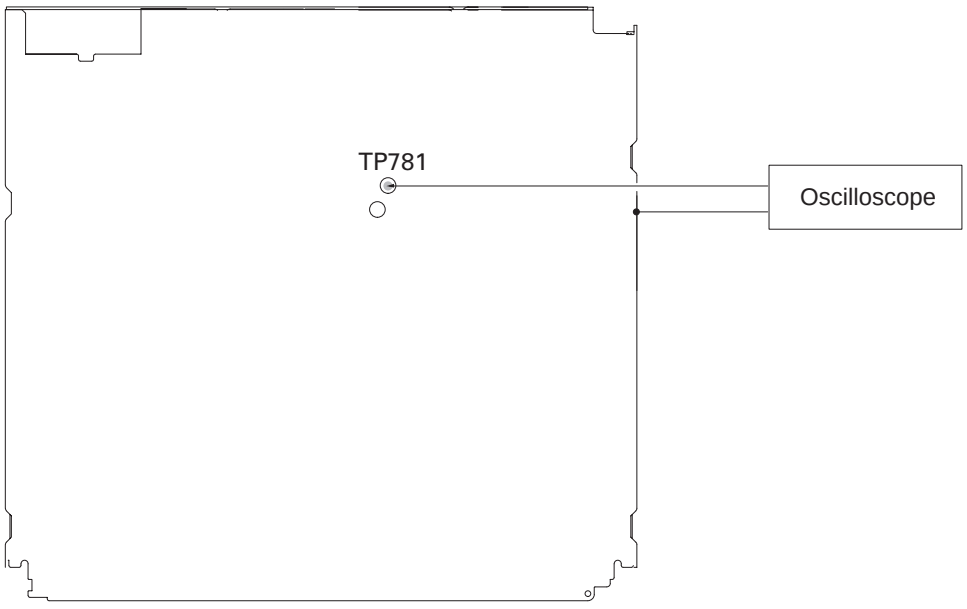
1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) .
4. After replacing the pickup unit, be sure to skew adjustment.
5. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.

● Inverter for LCD back light becomes a high voltage.

● Operation Check of Fan Motor (Center)

After completing repair of this product, please confirm that the fan motor (center) is rotating.
Check Method

1. DVD video is played with this product.
2. The operation is normal if the operation noise (pulse) can be observed after connecting oscilloscope to TP781 located at the bottom of this product. Under this circumstance, be careful not to contact TP781 with chassis as the power fuse of fan motor (center) will blow out, disabling the fan motor (center) to rotate.



Bottom of this product

[Important Check Points for Good Servicing]

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

1. Product safety

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

① Use specified parts for repair.

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

② Do not perform modifications without proper instructions.

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

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

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

④ Make sure the screws are tightly fastened.

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

⑤ Make sure each connectors are correctly inserted.

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

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

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

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

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

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

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

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

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

⑩ Safe environment should be secured during servicing.

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

2. Adjustments

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

3. Lubricants, Glues, and Replacement parts

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

4. Cleaning

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

5. Shipping mode and Shipping screws

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

CONTENTS

1. SPECIFICATIONS

General

Rated power source ..... 14.4 V DC
(allowable voltage range: 12.0 – 14.4 V DC)
Grounding system ..... Negative type
Max. current consumption
..... 10.0 A
Backup current ..... 5 mA
Dimensions (W × H × D):
DIN
Chassis ..... 178 × 50 × 160 mm
Nose ..... 188 × 58 × 30 mm
D
Chassis ..... 178 × 50 × 165 mm
Nose ..... 170 × 46 × 25 mm
Weight ..... 2.3 kg

Display

Screen size/aspect ratio ..... 6.5 inch wide/16:9
(effective display area: 144 × 77 mm)
Pixels ..... 336,960 (1,440 × 234)
Type ..... TFT active matrix, transmissive type
Color system ..... NTSC/PAL/SECAM/PAL-M compatible
Storage temperature range
..... –20 – +80 °C
Angle adjustment ..... 50 – 110°
(initial settings: 110°)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance ..... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance
..... 2.2 V/1kΩ
Equalizer (3-Band Parametric Equalizer):
Low
Frequency ..... 40/80/100/160 Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
Mid
Frequency ..... 200/500/1k/2k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
High
Frequency ..... 3.15k/8k/10k/12.5k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
Loudness contour:
Low ..... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
High ..... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)
Tone controls:
Bass
Frequency ..... 40/63/100/160 Hz
Gain ..... ±12dB
Treble
Frequency ..... 2.5k/4k/6.3k/10k Hz
Gain ..... ±12dB
HPF:
Frequency ..... 50/80/125 Hz
Slope ..... –12 dB/oct
Subwoofer:
Frequency ..... 50/80/125 Hz
Slope ..... –18 dB/oct
Gain ..... ±12dB
Phase ..... Normal/Reverse

DVD Player

System ..... DVD video, Video CD, Compact disc audio system
Usable discs ..... DVD video, Video CD, Compact disc
Region number:
for Southeast Asian models
..... 3
for South American and Oceanian models
..... 4
for Middle East Asian and South African models
..... 2
Signal format:
Sampling frequency ..... 44.1/48/96 kHz
Number of quantization bits
..... 16/20/24; linear
Frequency response ..... 5 – 44,000 Hz (with DVD, at sampling frequency 96 kHz)

Signal-to-noise ratio	97 dB (1 kHz) (IEC-A network) (CD: 96 dB (1 kHz) (IEC-A network))
Dynamic range	95 dB (1 kHz) (CD: 94 dB (1 kHz))
Distortion	0.008 % (1 kHz)
Output level:	
Video	1.0 Vp-p/75 Ω (±0.2 V)
Audio	1.0 V (1 kHz, 0 dB)
Number of channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7 & 8

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	945 nm
Output	typ; 10 mw/sr per Infrared LED

Note

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

A

B

C

D

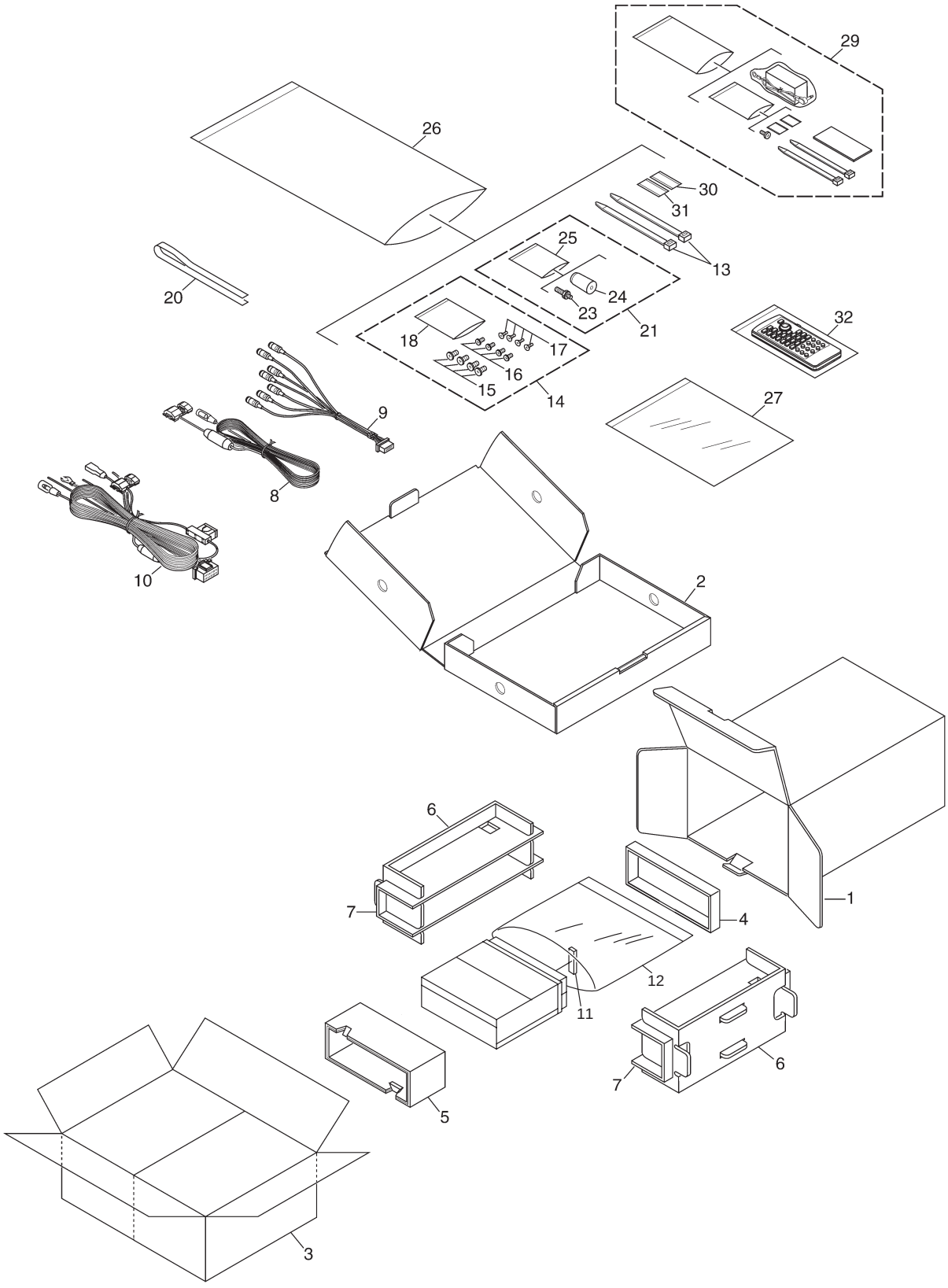
E

F

2. EXPLODED VIEWS AND PARTS LIST

NOTES : • *Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• *The ⚠ mark found on some component parts indicatesthe importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
• *Screw adjacent to▽mark on the product are used for disassembly.*
• *For the applying amount of lobricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)*

2.1 PACKING



(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Carton	CHG5495
	2	Sub Carton	CHG5270
	3	Contain Box	See Contrast table(2)
	4	Protector	CHP2387
	5	Protector	CHP2708
	6	Protector	CHP2706
	7	Protector	CHP2707
	8	Cord Assy	CDE7321
	9	Cord Assy	CDE7801
	10	Cord Assy	CDE7790
	11	Spacer	CNM9773
	12	Polyethylene Bag	CEG1088
*	13	Lock Tie	CNV-754
	14	Screw Assy	CEA5144
	15	Screw	BMZ50P060FTC
	16	Screw(M4x3)	CBA1870
	17	Screw	CMZ50P060FTC
*	18	Polyethylene Sheet	CNM4338
	20	Sheet	CNM8603
	21	Accessory Assy	CEA3743
	23	Screw	CBA1650
	24	Bush	CNV1917
*	25	Polyethylene Bag	E36-615
*	26	Polyethylene Bag	CEG-158
	27-1	Polyethylene Bag	CEG1116
	27-2	Owner's Manual	CRB2055
	27-3	Owner's Manual	See Contrast table(2)
	27-4	Owner's Manual	See Contrast table(2)
	27-5	Installation Manual	See Contrast table(2)
	27-6	Caution Card	CRP1310
	28	•••••	
	29	Optical Cable Connection Box	See Contrast table(2)
	30	Fastener	CNM6544
	31	Fastener	CNM6545
	32	Remote Control Unit	CXC3075

(2) CONTRAST TABLE

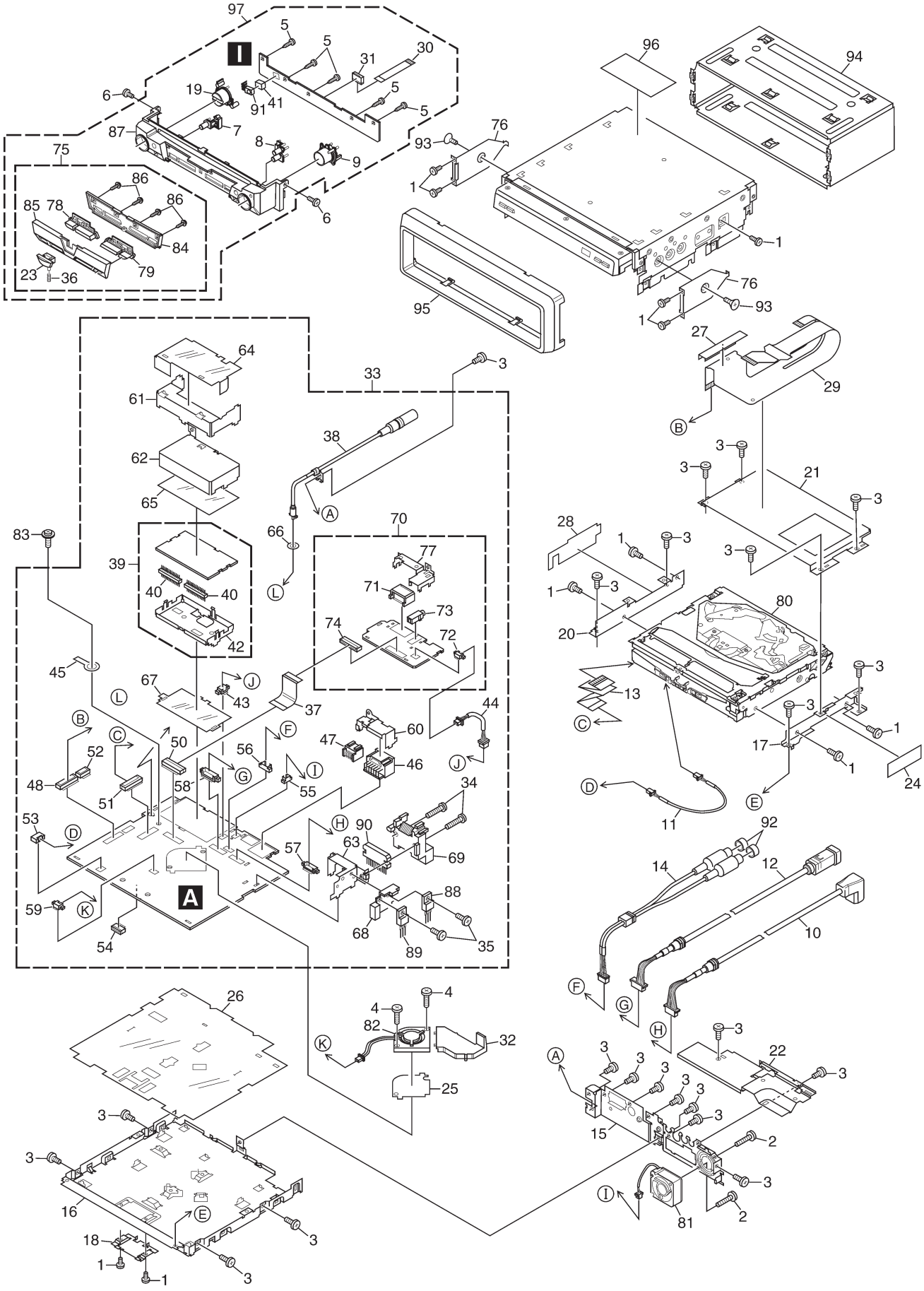
AVH-P5750DVD/RC, AVH-P5750DVD/RD and AVH-P5750DVD/RI are constructed the same except for the following:

Mark	No.	Description	AVH-P5750DVD/RC	AVH-P5750DVD/RD	AVH-P5750DVD/RI
	3	Contain Box	CHL5495	CHL5496	CHL5497
	27-3	Owner's Manual	CRB2056	CRB2058	CRB2061
	27-4	Owner's Manual	Not used	CRB2059	Not used
	27-5	Installation Manual	CRD3967	CRD3968	CRD3969
	29	Optical Cable Connection Box	CXC3584	CXC3584	Not used

Owner's Manual,Installation Manual

Part No.	Language
CRB2055	English
CRB2056	Traditional Chinese
CRB2058	Spanish
CRB2059	Portuguese(B)
CRB2061	Arabic
CRD3967	English, Traditional Chinese
CRD3968	English, Spanish, Portuguese(B)
CRD3969	English, Arabic

2.2 EXTERIOR(1)



EXTERIOR(1) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ20P030FTB
	2	Screw	BMZ20P160FTC
	3	Screw	BMZ26P030FTC
	4	Screw(M2x8)	CBA1752
	5	Screw	BPZ20P060FTB
	6	Screw(M2x2)	CBA1872
	7	Button(EJECT)	CAC9062
	8	Button(A-BM)	CAC9088
	9	Button(CROSS)	CAC9089
	10	Cord Assy	CDE7176
	11	Cord	CDE7715
	12	Cord Assy	CDE7797
	13	Flat Cable	CDE7805
	14	Cord Assy	CDE7796
	15	Panel	CNB3101
	16	Case	CNB3104
	17	Bracket	CND1438
	18	Holder	CND1441
	19	Button(VOL)	CAC9061
	20	Bracket	CND2626
	21	Bracket	CND2627
	22	Holder	CND2628
	23	Lever Unit	CXC4588
	24	Insulator	CNM8495
	25	Insulator	CNM8864
	26	Insulator	CNM9398
	27	Sheet	CNM9517
	28	Insulator	CNM9750
	29	Flexible PCB	CNP8806
	30	FFC	CDE7807
	31	Connector(CN5501)	CKS4511
	32	Guide	CNV8415
	33	Mother Unit	See Contrast table(2)
	34	Screw	BMZ26P160FTC
	35	Screw	BSZ26P080FTC
	36	Spring	CBH2863
	37	Flat Cable	CDE7806
	38	Antenna Cable	CDH1348
	39	FM/AM Tuner Unit	CWE1651
	40	Connector(CN101,102)	CKS4653
	41	Cushion	CNM8671
	42	Holder	CND1432
	43	Connector(CN154)	CKS4823
	44	Cord	CDE7809
	45	Terminal(CN731)	CKF1064
	46	Connector(CN701)	CKM1332
	47	Socket(CN261)	CKM1457
	48	Connector(CN171)	CKS3751
	49	•••••	

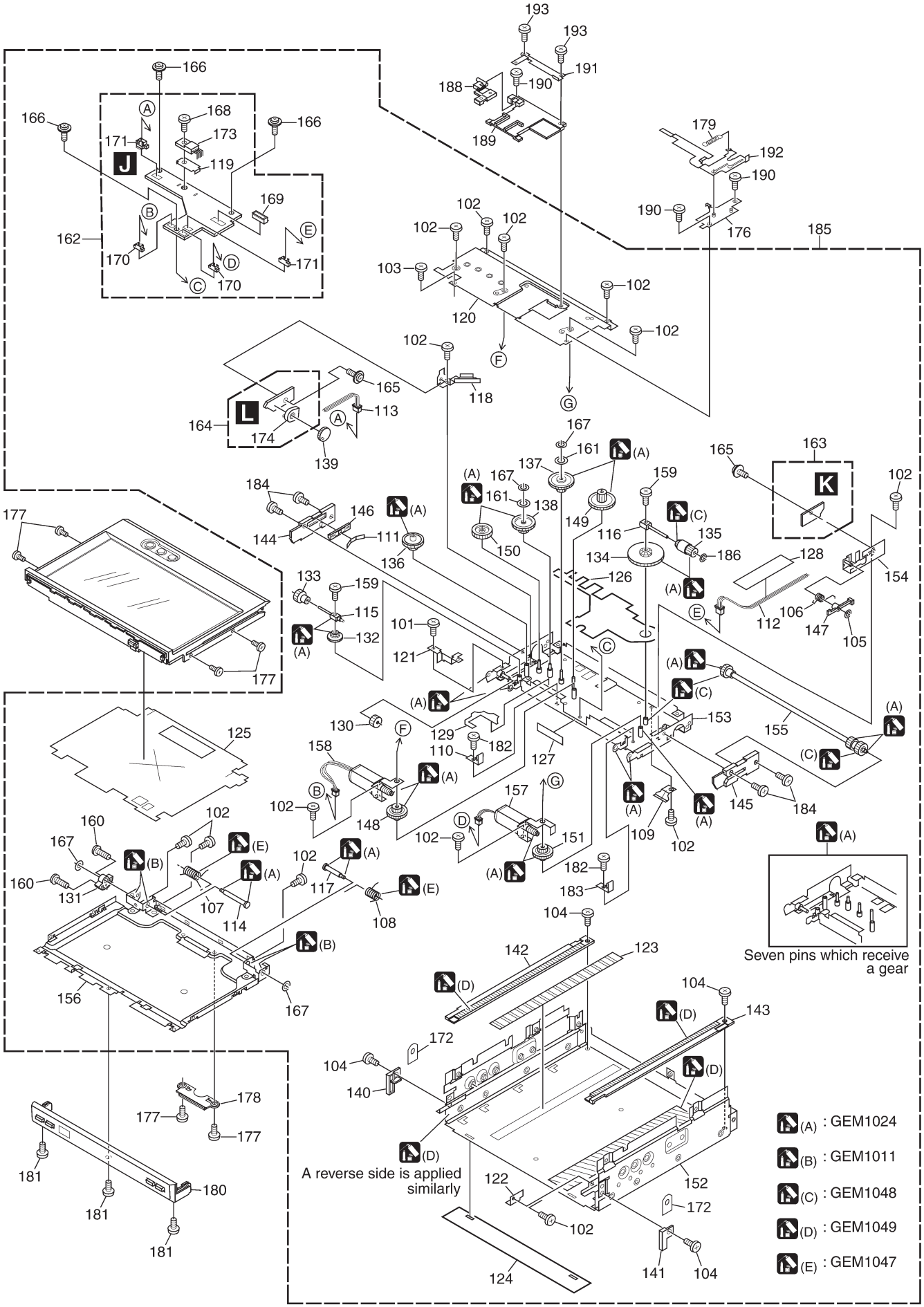
Mark	No.	Description	Part No.
	50	Connector(CN151)	CKS4052
	51	Connector(CN181)	CKS4052
	52	Connector(CN175)	CKS4068
	53	Connector(CN152)	CKS4282
	54	Connector(CN101)	CKS4511
	55	Connector(CN771)	CKS4822
	56	Connector(CN561)	CKS4824
	57	Connector(CN121)	CKS4830
	58	Connector(CN131)	CKS4832
	59	Connector(CN781)	CKS4977
	60	Holder	CND2629
	61	Holder	CND2630
	62	Shield	CND2631
	63	Holder	CND2633
	64	Insulator	CNM9400
	65	Insulator	CNM9521
	66	Spacer	CNM9522
	67	Spacer	CNM9523
	68	Heat Sink	CNR1703
	69	Heat Sink	CNR1784
	70	RGB Unit	CWM9817
	71	Connector(CN951)	CKS4497
	72	Connector(CN952)	CKS4978
	73	Jack(CN981)	CKN1022
	74	Connector(CN954)	CKS4052
	75	Detach Grille Assy	CXC4194
	76	Bracket	CND1482
	77	Holder	CND2634
	78	Button(SRC/-,+)	CAC9054
	79	Button(ATT,EQ/BAND)	CAC9056
	80	DVD Mechanism Module(MS-3V1)	CXK6418
	81	Fan Motor	CXM1262
	82	Fan Motor	CXM1276
	83	Screw	IMS26P040FTC
	84	Cover	CNS8178
	85	Grille	CNS8175
	86	Screw	IPS20P060FTB
	87	Grille Unit	CXC4208
	88	Transistor(Q892)	2SD2396
	89	IC(IC871)	NJM2388F84
	90	IC(IC241)	PAL007A
	91	IC(IC5501)	TSOP4840SB1
	92	Cap	CNV6727
	93	Screw	CMZ50P060FTC
	94	Holder	CNC9510
	95	Panel	CNS7481
	96	Label	See Contrast table(2)
	97	Grille Assy	CXC4189

(2) CONTRAST TABLE

AVH-P5750DVD/RC, AVH-P5750DVD/RD and AVH-P5750DVD/RI are constructed the same except for the following:

Mark	No.	Description	AVH-P5750DVD/RC	AVH-P5750DVD/RD	AVH-P5750DVD/RI
	33	Mother Unit	CWM9811	CWM9812	CWM9810
	96	Label	Not used	Not used	VRW1860

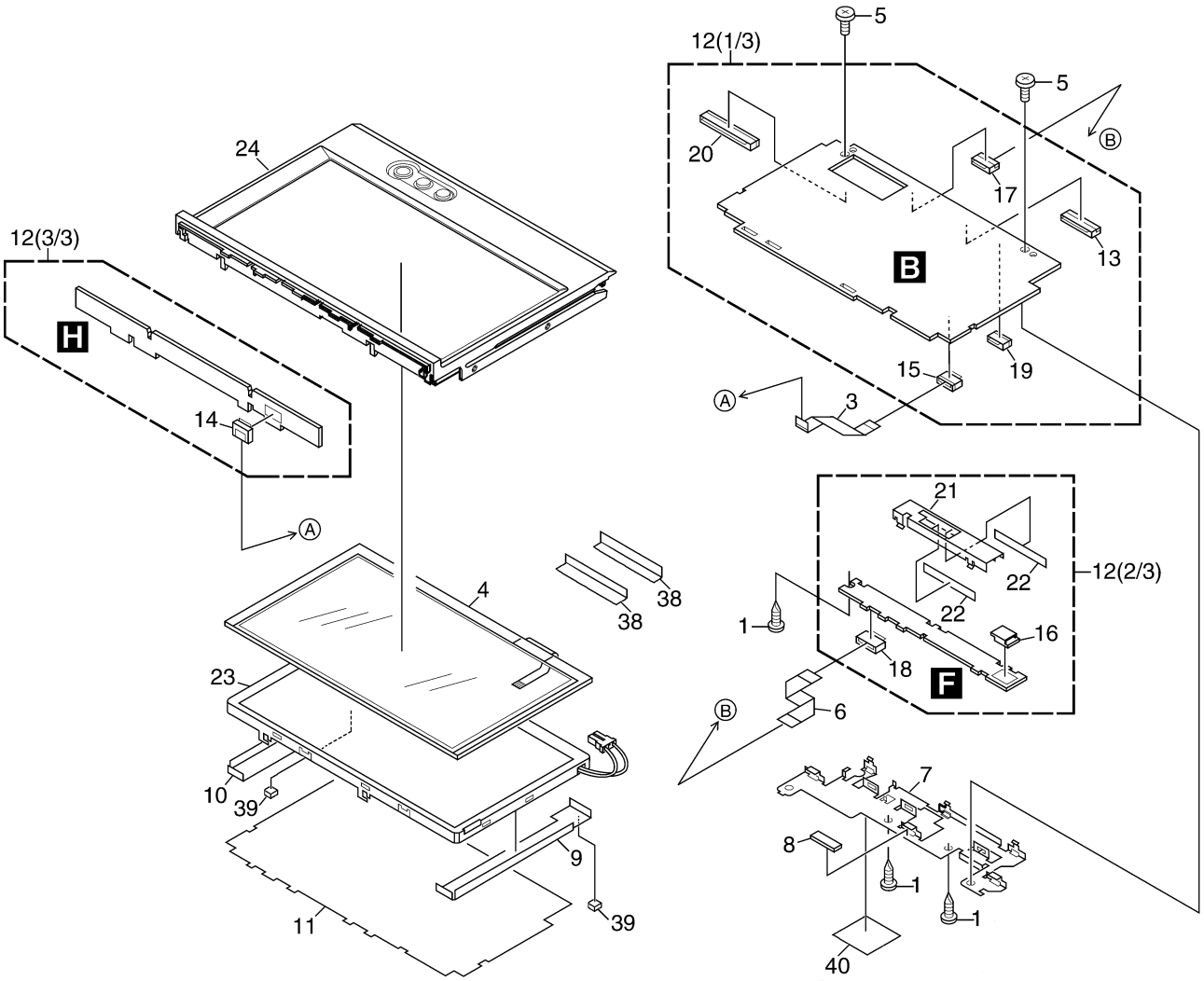
2.3 EXTERIOR(2)

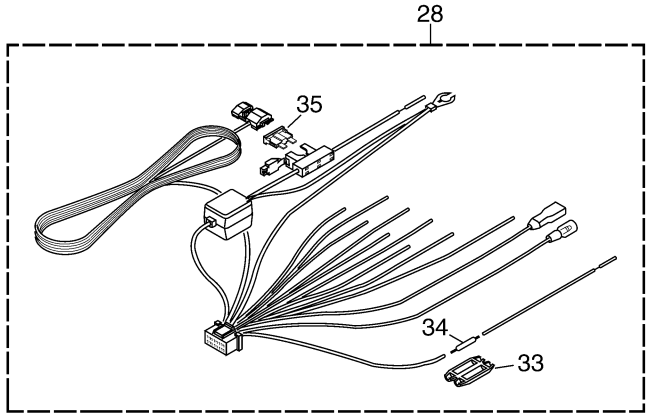


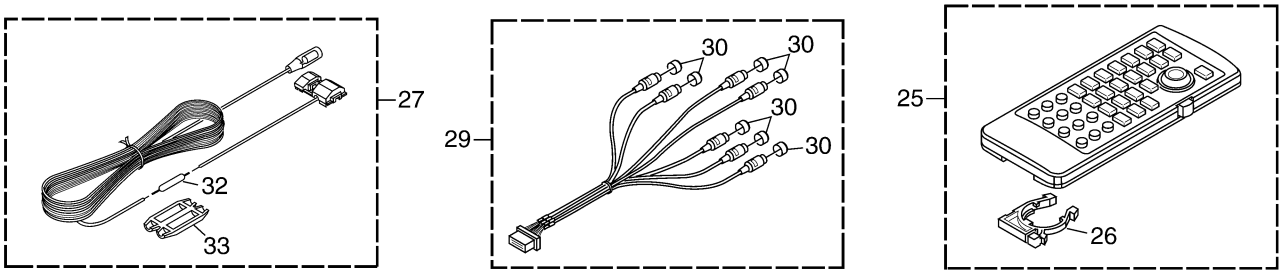
EXTERIOR(2) SECTION PARTS LIST

Mark	No.	Description	Part No.
	101	Screw(M2x3)	CBA1082
	102	Screw(M2x2.5)	CBA1250
	103	Screw(M2x4)	CBA1277
	104	Screw(M2x1.5)	CBA1615
	105	Washer	CBF1038
	106	Spring	CBH2645
	107	Spring	CBH2646
	108	Spring	CBH2647
	109	Spring	CBL1585
	110	Spring	CBL1586
	111	Spring	CBL1587
	112	Cord Assy	CDE7047
	113	Cord Assy	CDE7213
	114	Shaft	CLA4270
	115	Shaft	CLA4305
	116	Shaft	CLA4306
	117	Shaft	CLA4309
	118	Bracket	CND1221
	119	Heat Sink	CND1228
	120	Case	CND1229
	121	Holder	CND1318
	122	Holder	CND1449
	123	Sheet	CNM8522
	124	Sheet	CNM8037
	125	Insulator	CNM8048
	126	Insulator	CNM8158
	127	Sheet	CNM8159
	128	Tape	CNM8160
	129	Insulator	CNM8294
	130	Gear	CNR1664
	131	Gear	CNR1665
	132	Gear	CNR1677
	133	Gear	CNR1678
	134	Gear	CNR1679
	135	Gear	CNR1680
	136	Gear	CNR1688
	137	Gear	CNR1802
	138	Gear	CNR1708
	139	Gear	CNV7383
	140	Holder	CNV7384
	141	Holder	CNV7385
	142	Rack	CNV7386
	143	Rack	CNV7387
	144	Slider	CNV7388
	145	Slider	CNV7389
	146	Holder	CNV7390
	147	Arm	CNV7391
	148	Gear	CNV7522
	149	Gear	CNV7523
	150	Gear	CNR1709
	151	Gear	CNV7529
	152	Chassis Unit	CXB9509
	153	Frame Unit	CXB9511
	154	Holder Unit	CXB9512
	155	Shaft Unit	CXB9513
	156	Holder Unit	CXB9514
	157	Motor Unit(M3001)(Position)	CXB9515
	158	Motor Unit(M3002)(Angle)	CXB9516
	159	Screw	CZB3082
	160	Screw	CZB3083
	161	Washer	CZB3084
	162	Main Unit	CZW3087
	163	SW Unit	CZW3088
	164	Volume Unit	CZW3089
	165	Screw	IMS20P020FTC
	166	Screw	IMS20P030FZK
	167	Washer	YE15S
	168	Screw	BMZ26P050FTC
	169	Connector(CN3801)	CKS4068
	170	Connector(CN3802,CN3803)	CKS4732
	171	Connector(CN3807,3809)	CKS4733
	172	Spacer	CNM9837
	173	IC(IC3801)	BA00AST
	174	Volume(VR3841)	CCW1025
	175	•••••	
	176	Bracket Unit	CXC3048
	177	Screw(M2x2)	CBA1872
	178	Holder	CND2890
	179	Spring	CBH2750
	180	Cover Unit	CXC5118
	181	Screw(M2x2)	CBA1872
	182	Screw(M2x1.8)	CZB3085
	183	Spring	CBL1642
	184	Screw(M2x4)	CZB3088
	185	Drive Unit	CXC5111
	186	Washer	CZB3089
	187	Sheet	•••••
	188	Arm	CNV8065
	189	Holder	CNV8066
	190	Screw(M2x3)	CBA1876
	191	Spring	CBL1679
	192	Lever	CND2202
	193	Screw	CBA1797
	101	Screw(M2x3)	CBA1082

2.4 EXTERIOR(3)



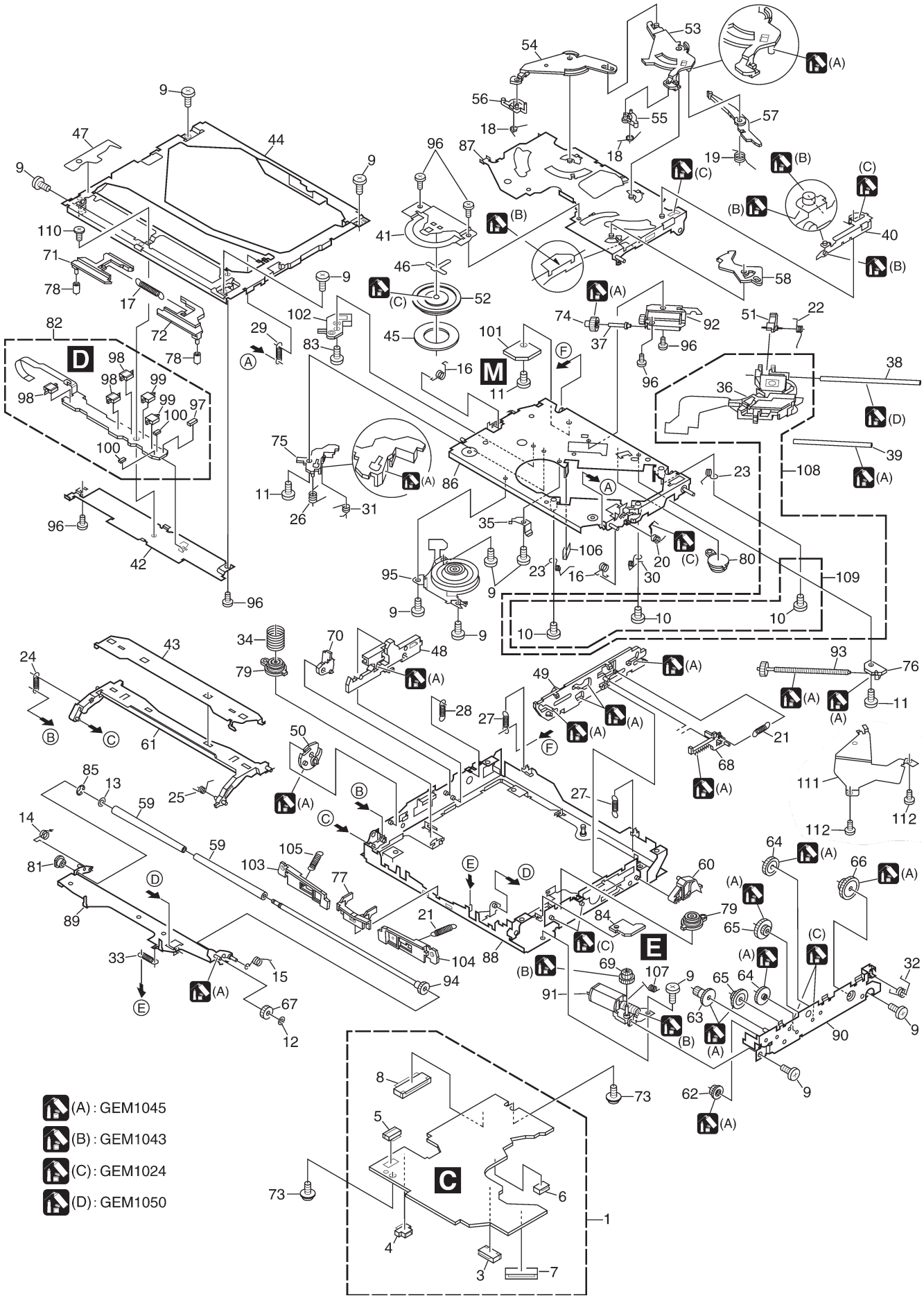




EXTERIOR(3) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BPZ20P060FTC
	2	•••••	
	3	FFC	CDE7195
	4	Touch Panel	CSX1087
	5	Screw(M2x2)	CBA1872
	6	FFC	CDE7814
	7	Holder	CND2610
	8	Gasket	CNM8600
	9	Sheet	CNM8265
	10	Sheet	CNM7784
	11	Insulator	CNM9390
	12	Monitor Unit	CWM9822
	13	Connector(CN4541)	CKS3968
	14	Connector(CN4301)	CKS4054
	15	Connector(CN4591)	CKS4054
	16	Connector(CN5342)	CKS4428
	17	Connector(CN4521)	CKS4595
	18	Connector(CN5001)	CKS4595
	19	Connector(CN4501)	CKS4675
	20	Connector(CN4007)	CKS4872
	21	Shield	CND2737
	22	Insulator	CNM9251
	23	LCD Module	CWX3151
	24	Grille Unit	CXC4199
	25	Remote Control Unit	CXC3075
	26	Cover	CZN5357
	27	Cord Assy	CDE7321
	28	Cord Assy	CDE7790
	29	Cord Assy	CDE7801
	30	Cap	CNV6727
	31	•••••	
	32	Resistor	RSV2PMF102J
	33	Cap	CNS1472
	34	Resistor	RS1/2PMF102J
⚠	35	Fuse(10A)	CEK1136
	36	•••••	
	37	•••••	
	38	Sheet	CNM9742
	39	Spacer	CNM9840
	40	Sheet	CNM9744

2.5 DVD MECHANISM MODULE(MS3-V1)



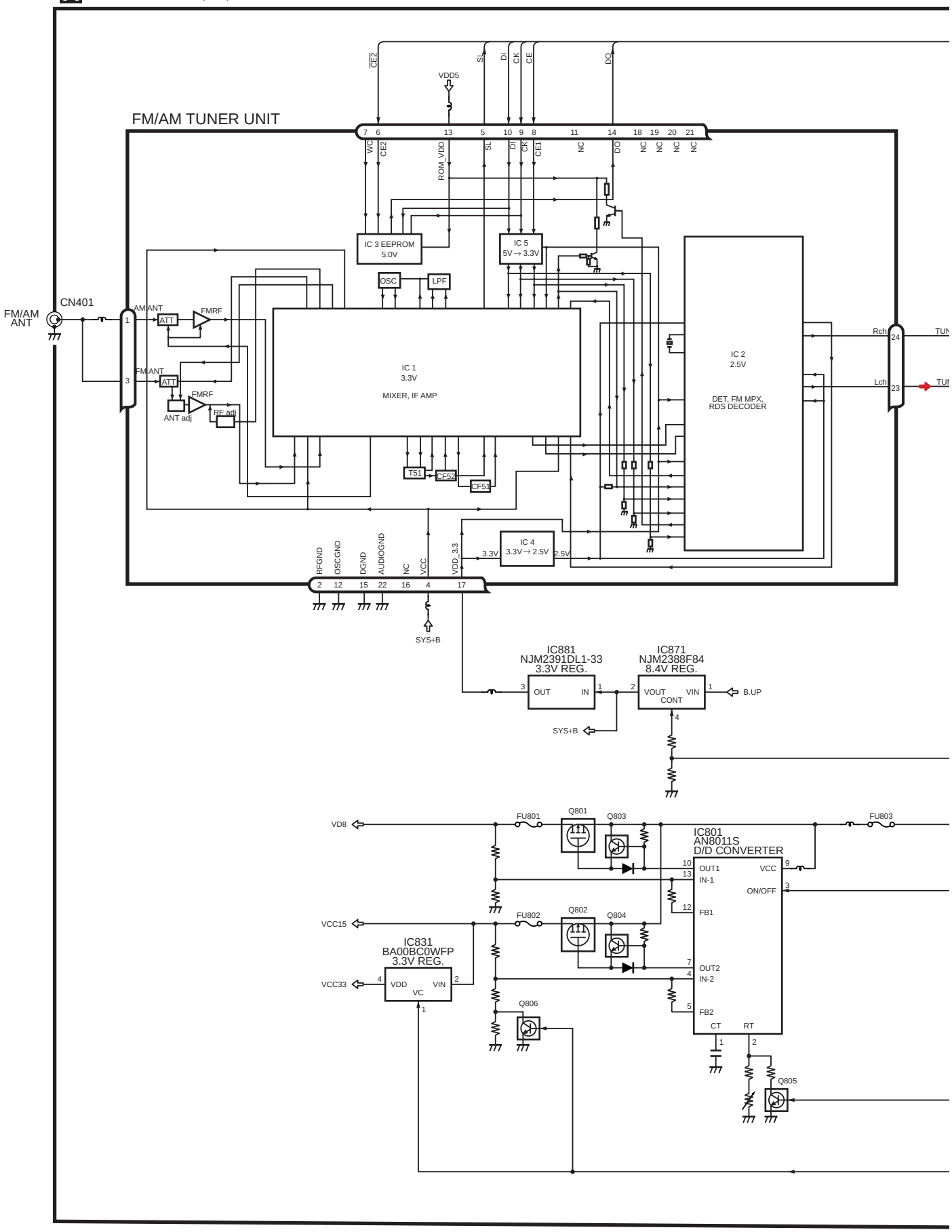
DVD MECHANISM MODULE (MS3-V1)SECTION PARTS LIST

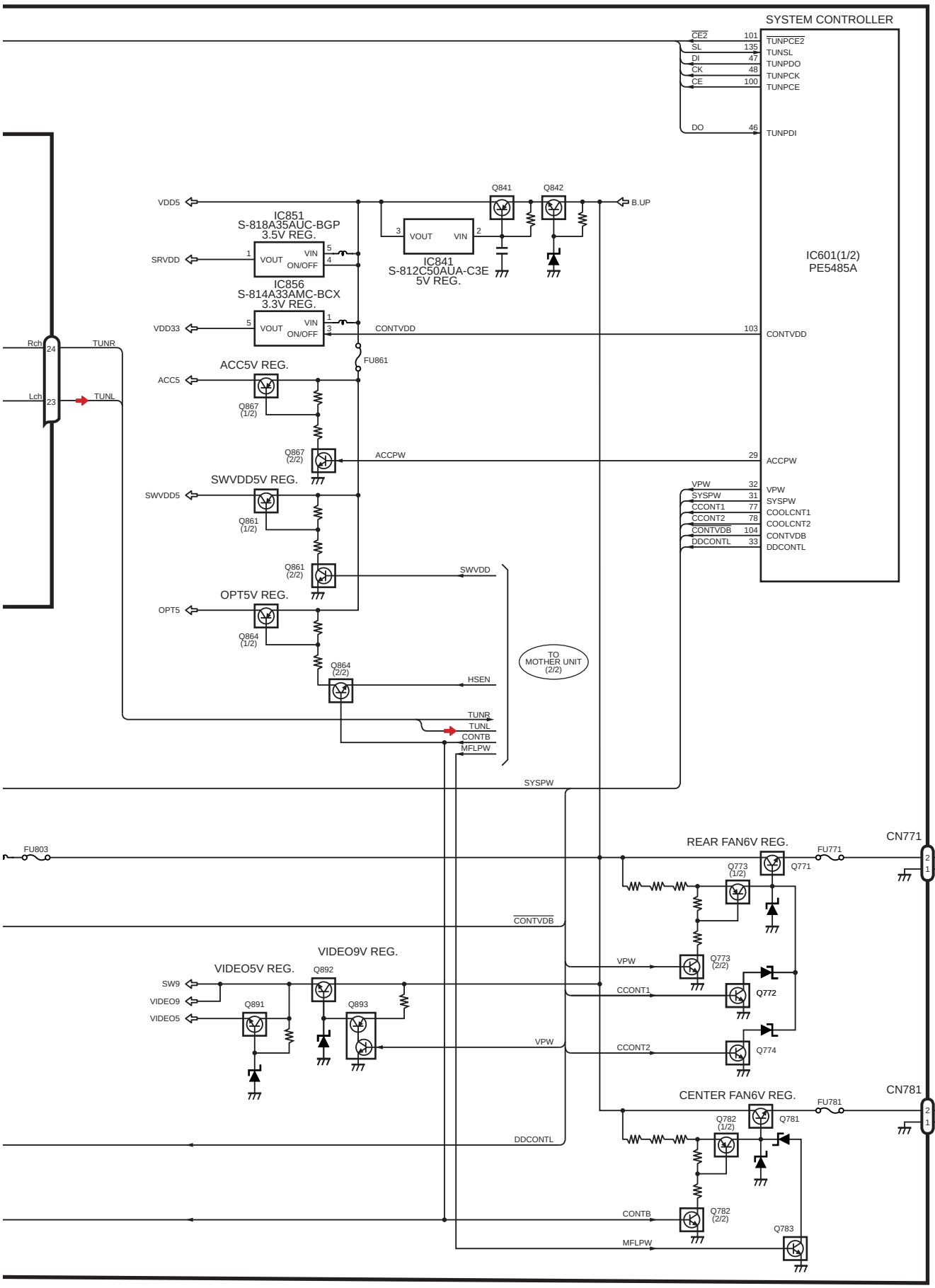
Mark	No.	Description	Part No.
	1	DVD Core Unit	CWX3170
	2	•••••	
	3	Connector(CN1201)	CKS4067
	4	Connector(CN1551)	CKS4817
	5	Connector(CN1231)	CKS4624
	6	Connector(CN1903)	CKS4374
	7	Connector(CN1101)	CKS4625
	8	Connector(CN1901)	CKS3971
	9	Screw	BMZ20P020FTC
	10	Screw(M2 x 3.5)	CBA1571
	11	Screw(M2 x 2.5)	CBA1623
	12	Washer	CBF1038
	13	Washer	CBF1064
	14	Spring	CBH2586
	15	Spring	CBH2587
	16	Spring	CBH2588
	17	Spring	CBH2589
	18	Spring	CBH2590
	19	Spring	CBH2591
	20	Spring	CBH2592
	21	Spring	CBH2593
	22	Spring	CBH2594
	23	Spring	CBH2595
	24	Spring	CBH2596
	25	Spring	CBH2597
	26	Spring	CBH2598
	27	Spring	CBH2599
	28	Spring	CBH2600
	29	Spring	CBH2601
	30	Spring	CBH2602
	31	Spring	CBH2603
	32	Spring	CBH2604
	33	Spring	CBH2605
	34	Spring	CBH2711
	35	Spring	CBL1564
	36	Pickup Unit(Service)	CXX1770
	37	Shaft	CLA3881
	38	Shaft	CLA4206
	39	Shaft	CLA4207
	40	Lever	CNC9933
	41	Holder	CNC9939
	42	Holder	CND2251
	43	Holder	CNC9941
	44	Frame	CND2250
	45	Sheet	CNM6883
	46	Sheet	CNM8283
	47	Sheet	CNM8643
	48	Lever	CNV8076
	49	Lever	CNV7155
	50	Cam	CNV7156
	51	Rack	CNV7157
	52	Clamper	CNV7158
	53	Arm	CNV7159
	54	Arm	CNV7160
	55	Arm	CNV7161
	56	Arm	CNV7162
*	57	Arm	CNV7163
	58	Arm	CNV7164
	59	Roller	CNV7165
	60	Arm	CNV7166
	61	Guide	CNV8093
	62	Gear	CNV7169
	63	Gear	CNV7170
	64	Gear	CNV7171
	65	Gear(Black)	CNV7172
	66	Gear	CNV7173
	67	Gear	CNV7174
	68	Rack	CNV7175
	69	Gear	CNV7176
	70	Arm	CNV8077
	71	Lever	CNV7178
	72	Lever	CNV7179
	73	Screw	IMS20P030FTC
	74	Gear	CNV7181
	75	Holder	CNV7183
	76	Holder	CNV7184
	77	Guide	CNV7745
	78	Roller	CNV7344
	79	Damper	CNV7470
	80	Damper	CNV7471
	81	Collar	CNV7645
	82	Compound Unit(A)	CWX3154
	83	Screw(M2x2)	CBA1817
	84	Compound Unit(B)	CWX3156
	85	Washer	YE20FTC
	86	Chassis Unit	CXC3629
	87	Arm Unit	CXB8681
	88	Frame Unit	CXB8683
	89	Arm Unit	CXC4701
	90	Bracket Unit	CXB8685
	91	Motor Unit(LOADING)(M1)	CXC4659
	92	Motor Unit(CARRIAGE)(M2)	CXC4314
	93	Screw Unit	CXB8689
	94	Roller Unit	CXB8690
	95	Motor(SPINDLE)(M3)	CXM1272
	96	Screw	JFZ20P018FTC
	97	Photo-transistor(Q1299)	CPT231SCTD
	98	Switch(S1201,S1202,S1203)	CSN1069
	99	Spring Switch(S1204,S1205)	CSN1070
	100	Resistor(R1298,R1299)	RS1/16S0R0J
	101	Gathering PCB	CNX4320
	102	Holder	CNV8186
	103	Arm	CNV7742
	104	Arm	CNV7743
	105	Spring	CBH2710
	106	Spring	CBL1643
	107	Spring	CBH2712
	108	Pickup Unit(Service)(Screw)	GXX1242
	109	Screw Assy	CXX1750
	110	Screw(M1.4xM1.4)	CBA1787
	111	Cover	CNC9943
	112	Screw	JFZ20P018FTC

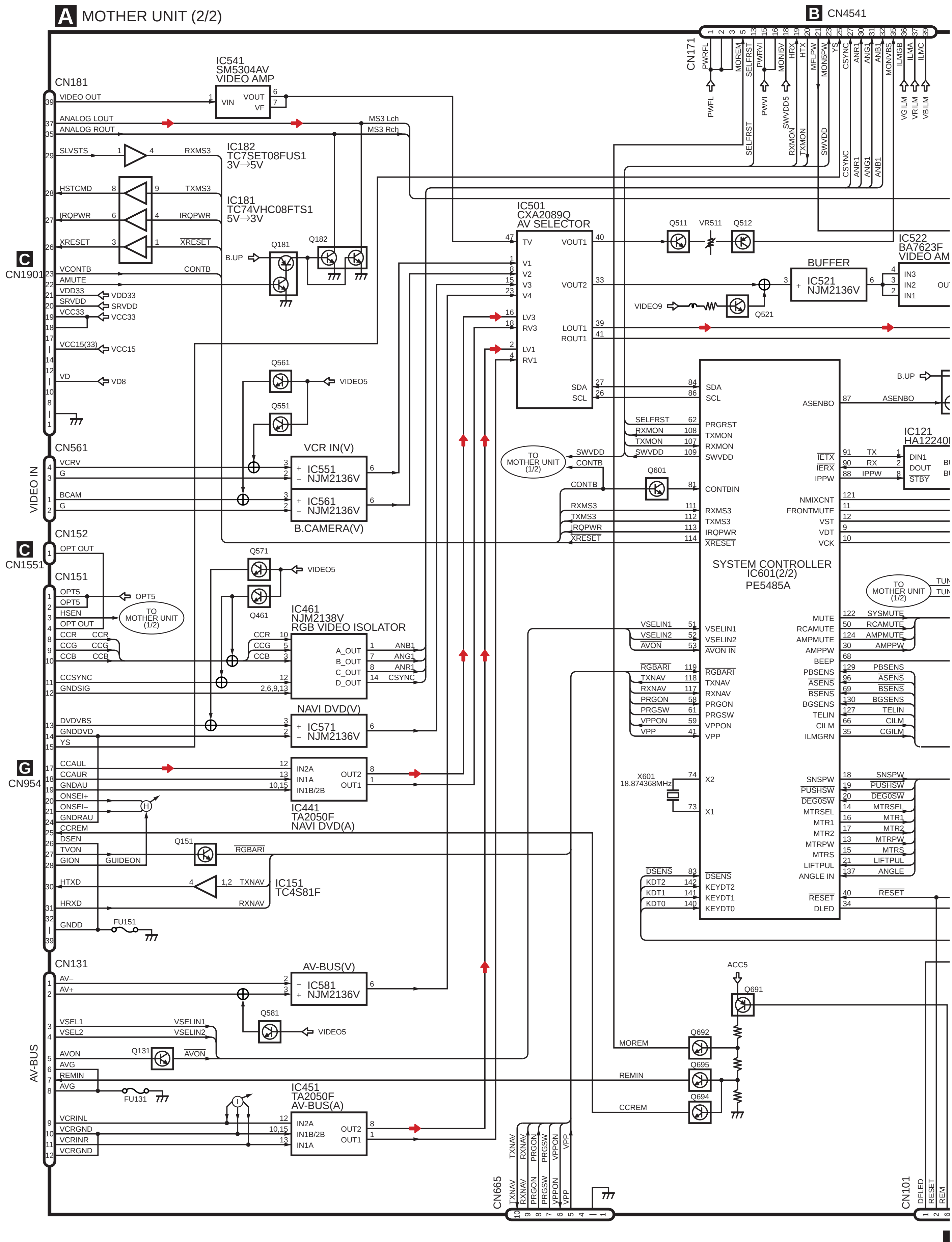
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

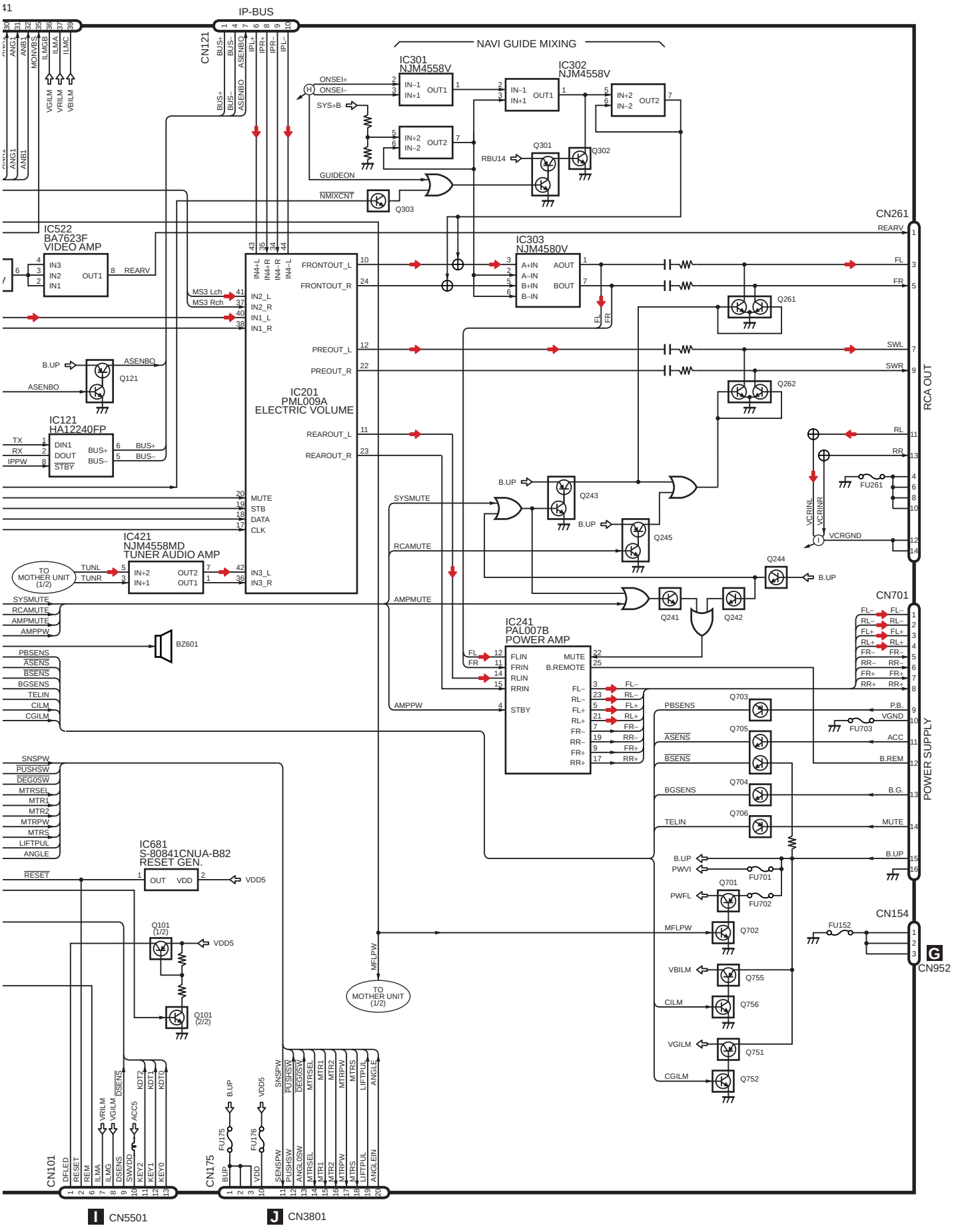
3.1 BLOCK DIAGRAM

A MOTHER UNIT (1/2)

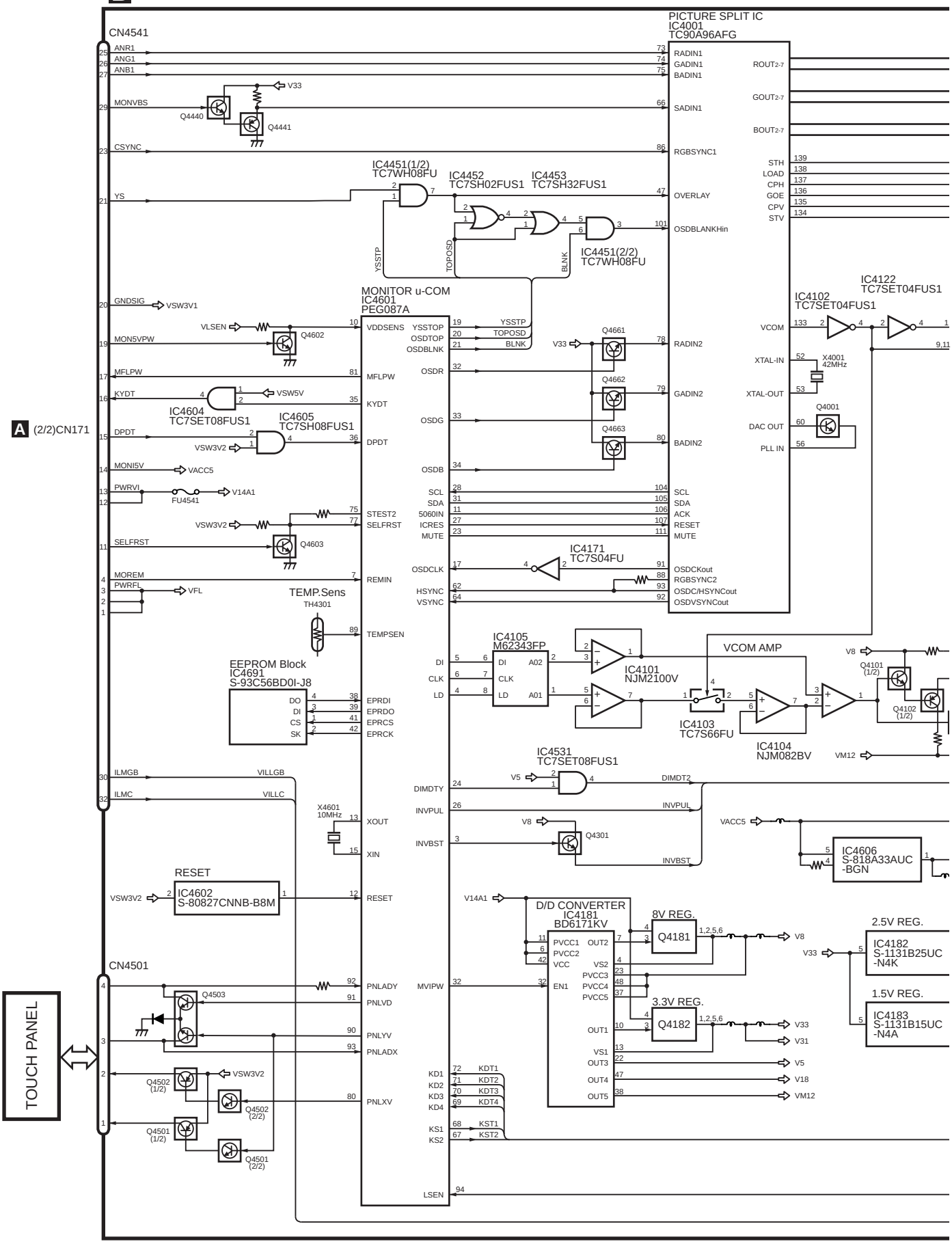


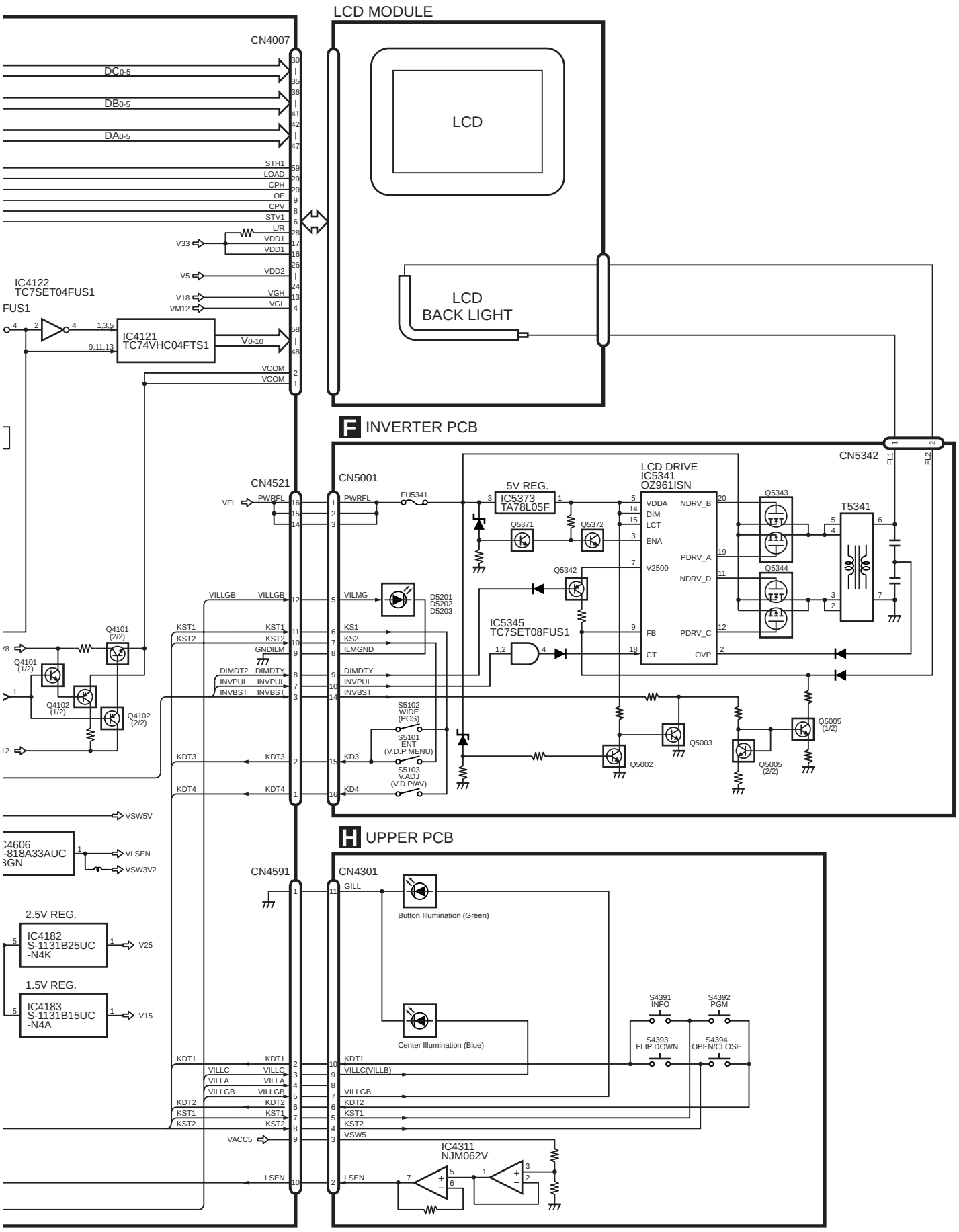

SYSTEM CONTROLLER
IC601(1/2)
PE5485A
CE2 101
SL 135
DI 47
CK 48
CE 100
DO 46
TUNPCE2
TUNSL
TUNPDO
TUNPCK
TUNPCE
TUNPDI
VDD5
IC851
S-818A35AUC-BGP
3.5V REG.
SRVDD
IC856
S-814A33AMC-BCX
3.3V REG.
VDD33
IC841
S-812C50AUA-C3E
5V REG.
Q841
Q842
B.UP
CONTVDD
103
FU861
Rch
Lch
TUNR
TUNL
ACC5V REG.
ACC5
Q867 (1/2)
Q867 (2/2)
ACCPW
29
SWVDD5V REG.
SWVDD5
Q861 (1/2)
Q861 (2/2)
SWVDD
OPT5V REG.
OPT5
Q864 (1/2)
Q864 (2/2)
HSEN
TO MOTHER UNIT (2/2)
CONTB
MFLPW
VPW 32
SYSPW 31
CCONT1 77
CCONT2 78
CONTVDB 104
DDCONTL 33
COOLCNT1
COOLCNT2
SYSPW
FU803
REAR FAN6V REG.
FU771
CN771
FAN MOTOR (REAR)
Q773 (1/2)
Q771
CONTVDB
VIDEO9V REG.
VIDEO5V REG.
Q892
SW9
VIDEO9
VIDEO5
Q891
Q893
Q773 (2/2)
Q772
Q774
CCONT1
CCONT2
CENTER FAN6V REG.
FU781
CN781
FAN MOTOR (CENTER)
Q782 (1/2)
Q781
DDCONTL
Q782 (2/2)
Q783

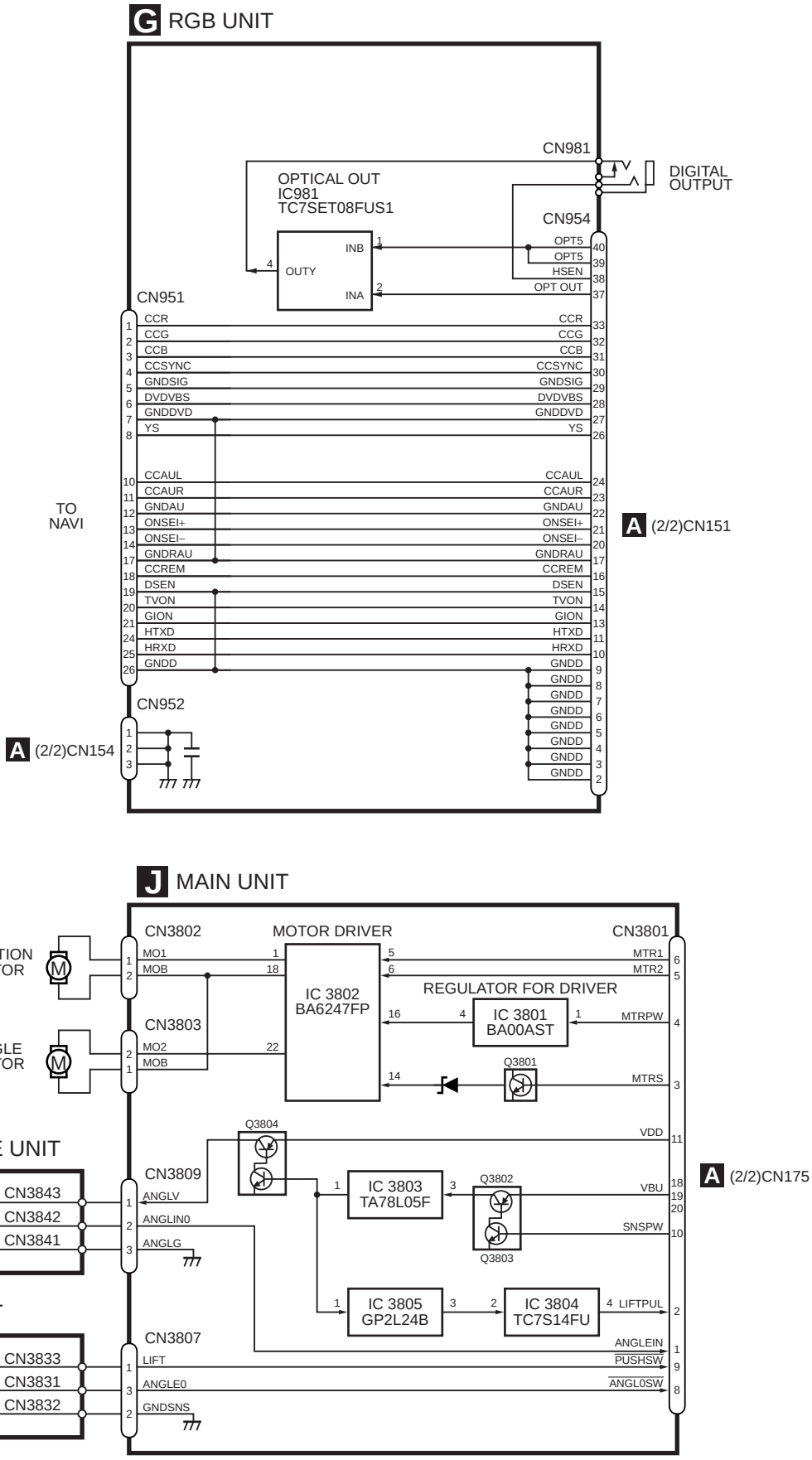

A MOTHER UNIT (2/2)
B CN4541
CN171
C CN1901
C CN1551
G CN954
CN181
CN561
CN152
CN151
CN131
CN665
CN101
VIDEO IN
AV-BUS
IC541 SM5304AV VIDEO AMP
IC182 TC7SET08FUS1 3V→5V
IC181 TC74VHC08FTS1 5V→3V
IC501 CXA2089Q AV SELECTOR
IC522 BA7623F VIDEO AM
BUFFER
IC521 NJM2136V
IC121 HA12240
VCR IN(V)
IC551 NJM2136V
IC561 NJM2136V
B.CAMERA(V)
SYSTEM CONTROLLER IC601(2/2) PE5485A
IC461 NJM2138V RGB VIDEO ISOLATOR
NAVI DVD(V)
IC571 NJM2136V
IC441 TA2050F NAVI DVD(A)
IC151 TC4S81F
AV-BUS(V)
IC581 NJM2136V
IC451 TA2050F AV-BUS(A)
TO MOTHER UNIT (1/2)
X601 18.874368MHz
Q181 Q182 Q511 VR511 Q512 Q521 Q561 Q551 Q601 Q571 Q461 Q151 Q581 Q131 Q691 Q692 Q695 Q694
FU151 FU131
ACC5
B.UP
VIDEO9
VIDEO5
MS3 Lch
MS3 Rch
VIDEO OUT
ANALOG LOUT
ANALOG ROUT
SLVSTS
HSTCMD
IRQPWR
XRESET
VCONTB
AMUTE
VDD33
SRVDD
VCC33
VCC15(33)
VD
VCRV
BCAM
OPT OUT
OPT5
HSEN
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI–
GNDRAU
CCREM
DSEN
TVON
GION
GUIDEON
HTXD
HRXD
GNDD
AV–
AV+
VSEL1
VSEL2
AVON
AVG
REMIN
VCRINL
VCRGND
VCRINR
PWRFL
MOREM
SELFRST
PWRVI
MONI5V
HRX
HTX
MFLPW
MON5PW
YS
CSYNC
ANR1
ANG1
ANB1
MONVBS
ILMGB
ILMA
ILMC
PWFL
PWVI
SWVDD5
RXMON
TXMON
SWVDD
VGILM
VRILM
VBILM
RXMS3
TXMS3
IRQPWR
XRESET
TV V1 V2 V3 V4 LV3 RV3 LV1 RV1
VOUT1 VOUT2 LOUT1 ROUT1 SDA SCL
SDA SCL PRGRST TXMON RXMON SWVDD CONTBIN RXMS3 TXMS3 IRQPWR XRESET
ASENBO IETX IERX IPPW NMIXCNT FRONTMUTE VST VDT VCK
DIN1 DOUT STBY
VSELIN1 VSELIN2 AVON IN
RGBARI TXNAV RXNAV PRGON PRGSW VPPON VPP
X2 X1
MUTE RCAMUTE AMPMUTE AMPPW BEEP PBSENS ASENS BSENS BGSENS TELIN CILM ILMGRN
SNSPW PUSHSW DEG0SW MTRSEL MTR1 MTR2 MTRPW MTRS LIFTPUL ANGLE IN
DSENS KEYDT2 KEYDT1 KEYDT0
RESET DLED
SYSMUTE CGILM
A_OUT B_OUT C_OUT D_OUT
ANB1 ANG1 ANR1 CSYNC
IN2A IN1A IN1B/2B OUT2 OUT1
DFLED RESET REM


IP-BUS
CN121
NAVI GUIDE MIXING
IC301
NJM4558V
IC302
NJM4558V
ONSEI+
ONSEI–
SYS+B
GUIDEON
NMIXCNT
RBU14
Q301
Q302
Q303
IC522
BA7623F
VIDEO AMP
REARV
IC303
NJM4580V
CN261
FL
FR
SWL
SWR
RL
RR
RCA OUT
Q261
Q262
FU261
VCRINL
VCRINR
VCRGND
MS3 Lch
MS3 Rch
IC201
PML009A
ELECTRIC VOLUME
FRONTOUT_L
FRONTOUT_R
PREOUT_L
PREOUT_R
REAROUT_L
REAROUT_R
MUTE
STB
DATA
CLK
B.UP
ASENBO
Q121
IC121
HA12240FP
TX
RX
IPPW
BUS+
BUS–
IC421
NJM4558MD
TUNER AUDIO AMP
TO MOTHER UNIT (1/2)
TUNL
TUNR
SYSMUTE
RCAMUTE
AMPMUTE
AMPPW
Q243
Q245
Q244
Q241
Q242
BZ601
IC241
PAL007B
POWER AMP
FLIN
FRIN
RLIN
RRIN
STBY
MUTE
B.REMOTE
CN701
POWER SUPPLY
PBSENS
ASENS
BSENS
BGSENS
TELIN
CILM
CGILM
Q703
Q705
Q704
Q706
FU703
P.B.
VGND
ACC
B.REM
B.G.
MUTE
B.UP
PWVI
PWFL
FU701
FU702
Q701
MFLPW
Q702
VBILM
Q755
CILM
Q756
VGILM
Q751
CGILM
Q752
CN154
FU152
CN952
SNSPW
PUSHSW
DEG0SW
MTRSEL
MTR1
MTR2
MTRPW
MTRS
LIFTPUL
ANGLE
IC681
S-80841CNUA-B82
RESET GEN.
RESET
VDD5
Q101 (1/2)
Q101 (2/2)
CN101
DFLED
RESET
REM
ILMA
ILMG
DSENS
SWVDD
KEY2
KEY1
KEY0
ACC5
KDT2
KDT1
KDT0
CN175
BUP
VDD
FU175
FU176
CN5501
CN3801

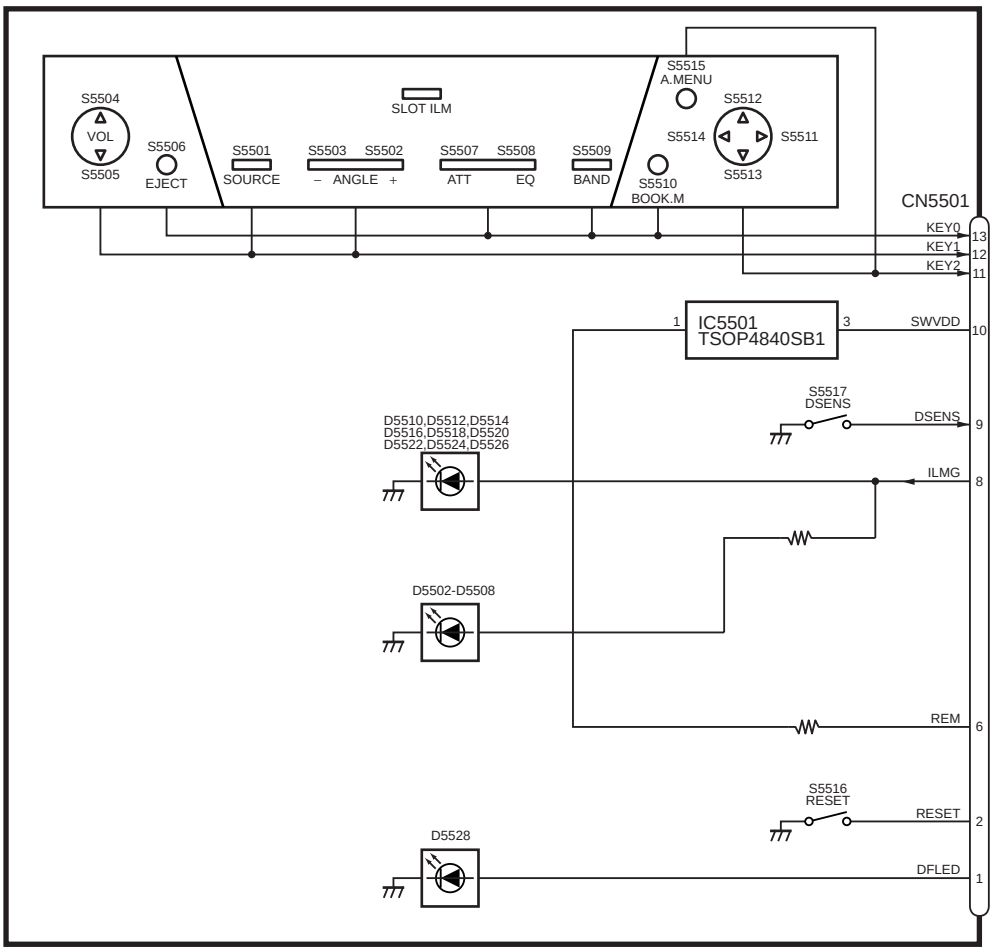
B MONITOR PCB

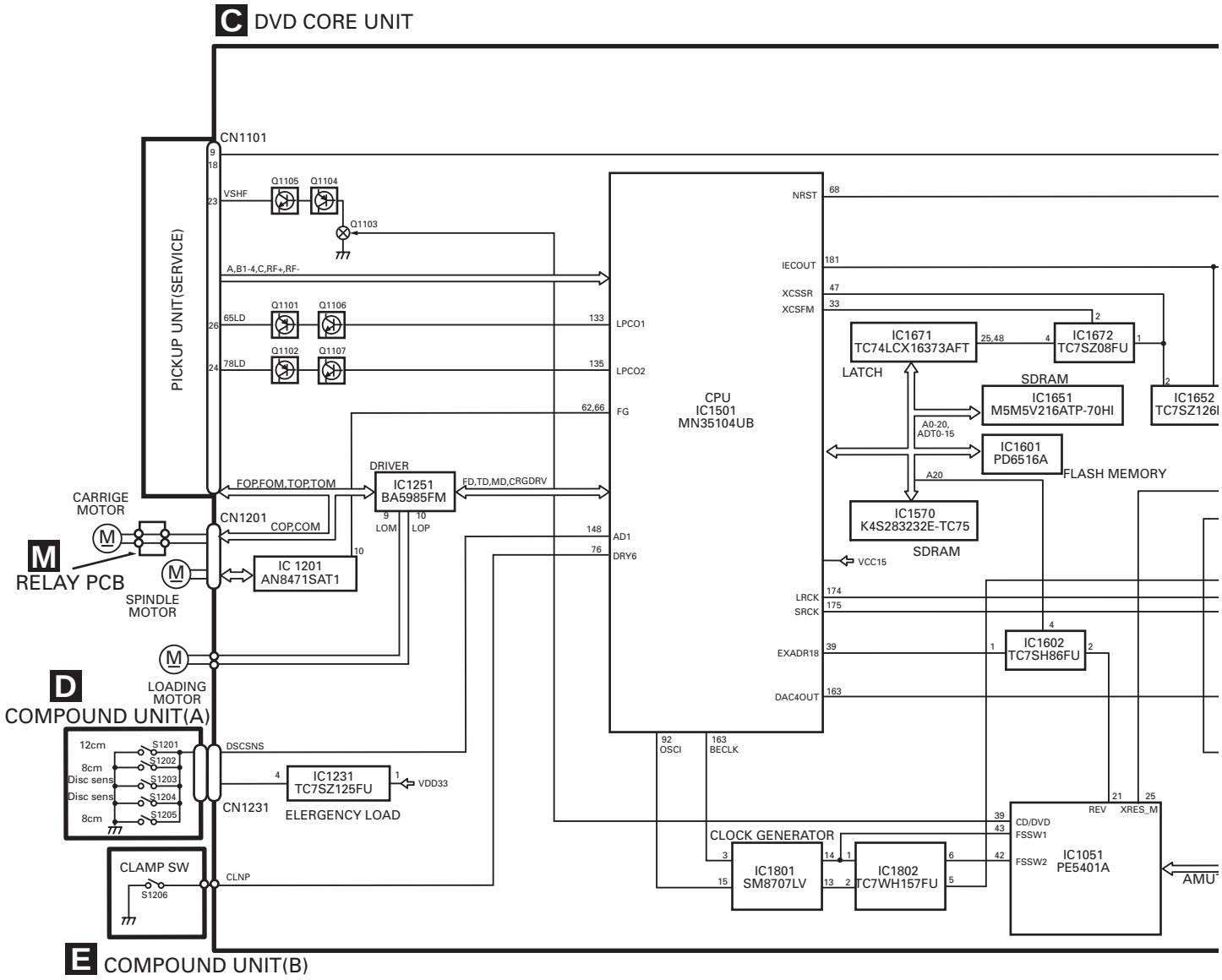


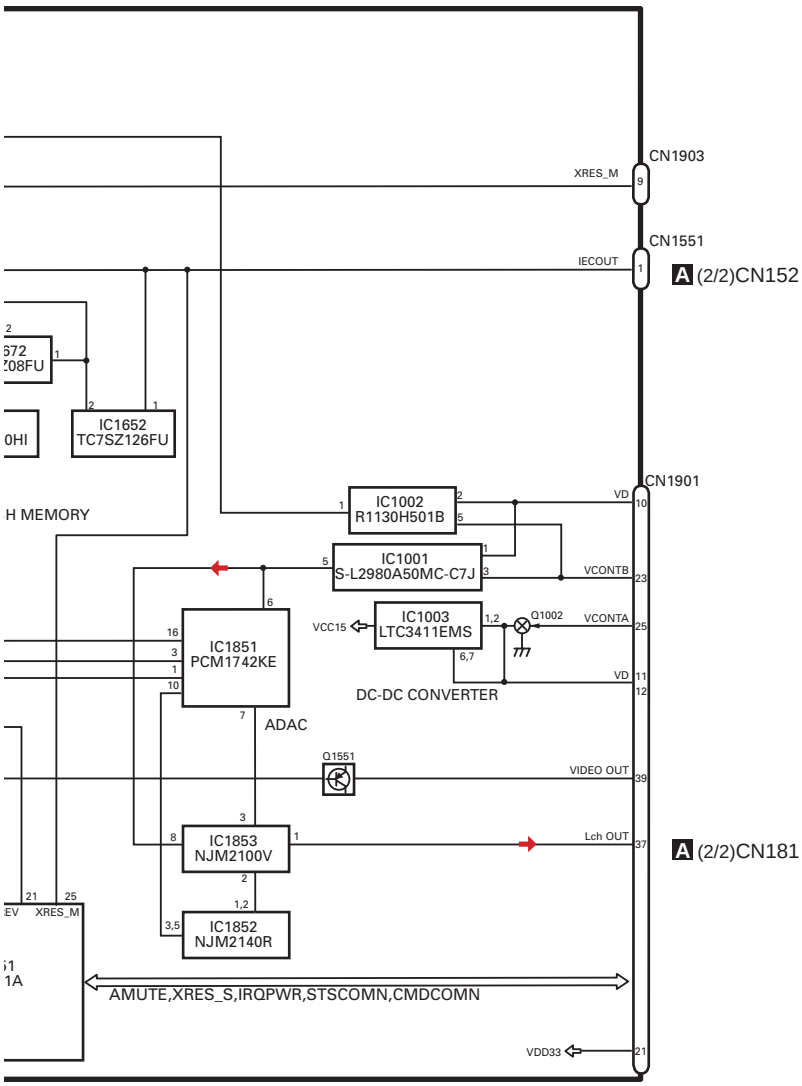

LCD MODULE
LCD
LCD BACK LIGHT
CN4007
DC0-5
DB0-5
DA0-5
STH1
LOAD
CPH
OE
CPV
STV1
L/R
V33
VDD1
V5
VDD2
V18
VGH
VM12
VGL
IC4122
TC7SET04FUS1
FUS1
IC4121
TC74VHC04FTS1
V0-10
VCOM
F INVERTER PCB
CN5342
CN4521
CN5001
5V REG.
IC5373
TA78L05F
LCD DRIVE
IC5341
OZ961ISN
VDDA
DIM
LCT
ENA
V2500
FB
CT
NDRV_B
PDRV_A
NDRV_D
PDRV_C
OVP
Q5343
Q5344
T5341
Q5371
Q5372
Q5342
FU5341
PWRFL
VFL
VILLGB
KST1
KST2
GNDILM
DIMDT2
DIMDTY
INVPUL
INVBST
VILMG
D5201
D5202
D5203
KS1
KS2
ILMGND
IC5345
TC7SET08FUS1
Q4101 (2/2)
Q4101 (1/2)
Q4102 (1/2)
Q4102 (2/2)
S5102 WIDE (POS)
S5101 ENT (V.D.P MENU)
S5103 V.ADJ (V.D.P/AV)
KD3
KD4
KDT3
KDT4
Q5002
Q5003
Q5005 (1/2)
Q5005 (2/2)
VSW5V
VLSEN
VSW3V2
2.5V REG.
IC4182
S-1131B25UC
-N4K
V25
1.5V REG.
IC4183
S-1131B15UC
-N4A
V15
H UPPER PCB
CN4591
CN4301
GILL
Button Illumination (Green)
Center Illumination (Blue)
S4391 INFO
S4392 PGM
S4393 FLIP DOWN
S4394 OPEN/CLOSE
KDT1
KDT2
VILLC
VILLA
VILLC(VILLB)
VACC5
VSW5
IC4311
NJM062V
LSEN


G RGB UNIT
CN981
DIGITAL OUTPUT
OPTICAL OUT
IC981
TC7SET08FUS1
INB
OUTY
INA
CN954
OPT5
OPT5
HSEN
OPT OUT
CN951
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI–
GNDRAU
CCREM
DSEN
TVON
GION
HTXD
HRXD
GNDD
TO NAVI
A (2/2)CN151
CN952
A (2/2)CN154
J MAIN UNIT
CN3802
MOTOR DRIVER
CN3801
POSITION MOTOR
MO1
MOB
IC 3802
BA6247FP
MTR1
MTR2
REGULATOR FOR DRIVER
IC 3801
BA00AST
MTRPW
CN3803
ANGLE MOTOR
MO2
MOB
Q3801
MTRS
K VOLUME UNIT
Q3804
VDD
CN3809
CN3843
CN3842
CN3841
VR3841
ANGLV
ANGLIN0
ANGLG
IC 3803
TA78L05F
Q3802
Q3803
VBU
SNSPW
A (2/2)CN175
L SW UNIT
IC 3805
GP2L24B
IC 3804
TC7S14FU
LIFTPUL
CN3807
S3832
LIFTSW
S3831
ANGLE0SW
CN3833
CN3831
CN3832
LIFT
ANGLE0
GNDSNS
ANGLEIN
PUSHSW
ANGL0SW

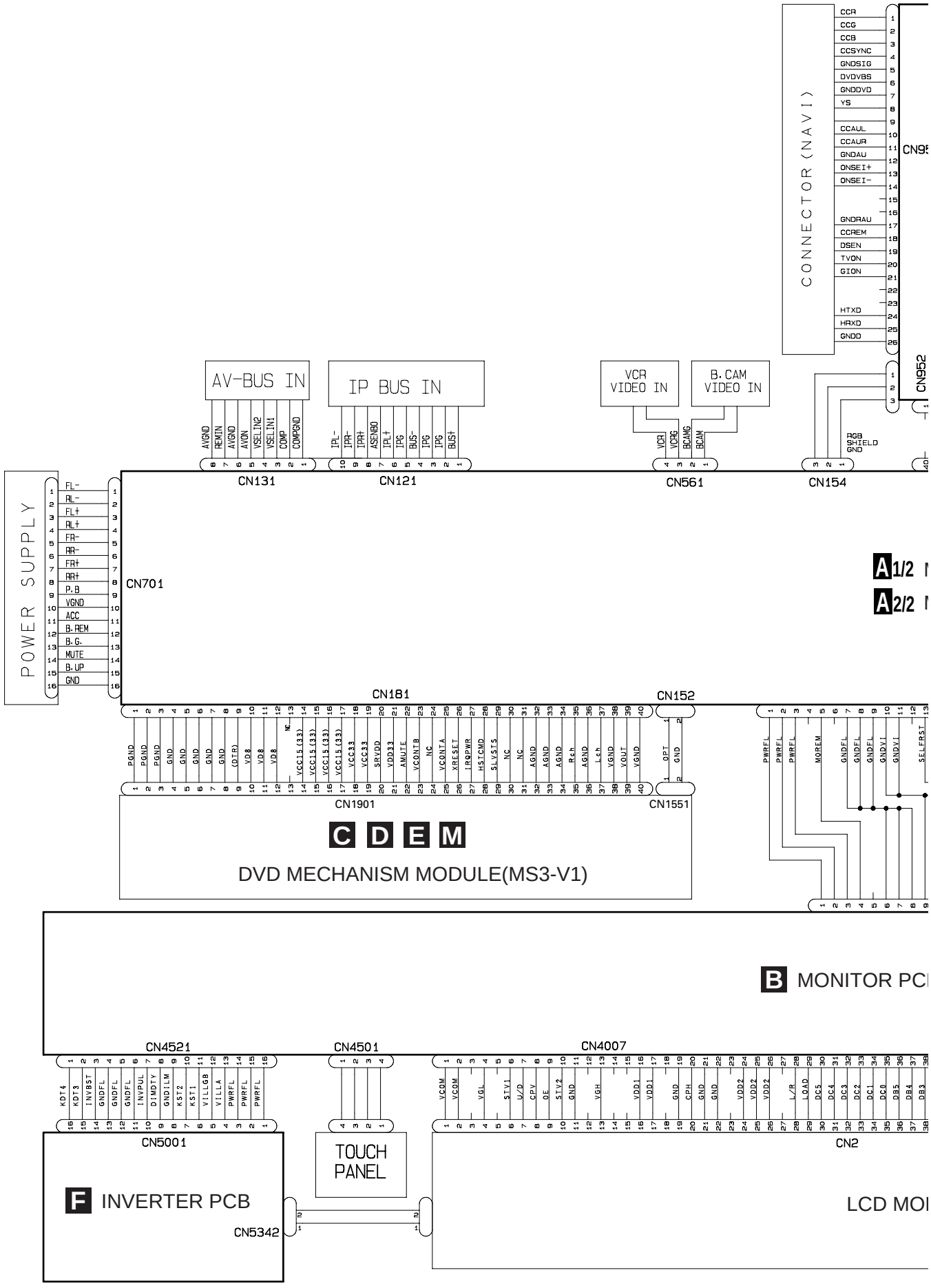
KEYBOARD UNIT

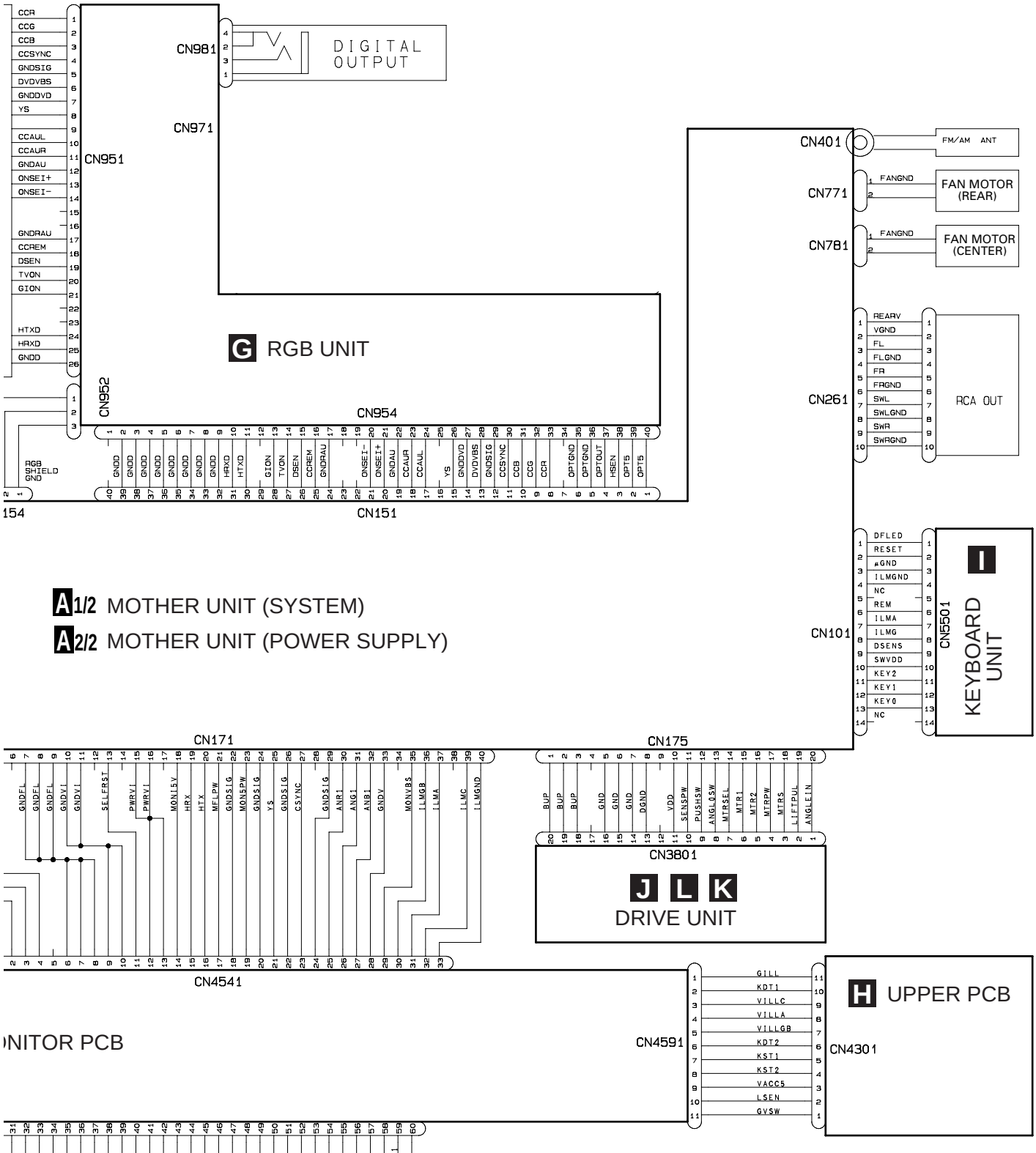



C DVD CORE UNIT
CN1101
PICKUP UNIT(SERVICE)
VSHF
Q1105
Q1104
Q1103
A,B1-4,C,RF+,RF-
65LD
Q1101
Q1106
78LD
Q1102
Q1107
FOP,FOM,TOP,TOM
DRIVER
IC1251
BA5985FM
FD,TD,MD,CRGDRV
CARRIGE MOTOR
CN1201
COP,COM
LOM
LOP
M
RELAY PCB
SPINDLE MOTOR
IC 1201
AN8471SAT1
LOADING MOTOR
D
COMPOUND UNIT(A)
12cm
8cm
Disc sens
Disc sens
8cm
S1201
S1202
S1203
S1204
S1205
DSCSNS
CN1231
IC1231
TC7SZ125FU
VDD33
ELERGENCY LOAD
CLAMP SW
S1206
CLNP
E COMPOUND UNIT(B)
CPU
IC1501
MN35104UB
LPCO1
LPCO2
FG
AD1
DRY6
NRST
IECOUT
XCSSR
XCSFM
VCC15
LRCK
SRCK
EXADR18
DAC4OUT
OSCI
BECLK
IC1671
TC74LCX16373AFT
LATCH
IC1672
TC7SZ08FU
SDRAM
IC1651
M5M5V216ATP-70HI
IC1652
TC7SZ126
A0-20,
ADT0-15
IC1601
PD6516A
FLASH MEMORY
A20
IC1570
K4S283232E-TC75
SDRAM
IC1602
TC7SH86FU
CLOCK GENERATOR
IC1801
SM8707LV
IC1802
TC7WH157FU
IC1051
PE5401A
REV
XRES_M
CD/DVD
FSSW1
FSSW2
AMU


CN1903
XRES_M
9
CN1551
IECOUT
1
A (2/2)CN152
IC1652
TC7SZ126FU
H MEMORY
CN1901
IC1002
R1130H501B
VD
10
IC1001
S-L2980A50MC-C7J
VCONTB
23
IC1003
LTC3411EMS
VCC15
Q1002
VCONTA
25
IC1851
PCM1742KE
DC-DC CONVERTER
VD
11
12
ADAC
Q1551
VIDEO OUT
39
IC1853
NJM2100V
Lch OUT
37
A (2/2)CN181
IC1852
NJM2140R
XRES_M
AMUTE,XRES_S,IRQPWR,STSCOMN,CMDCOMN
VDD33
21

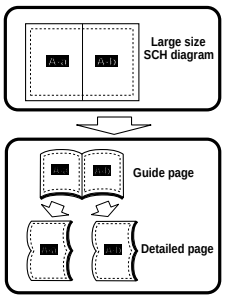
3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

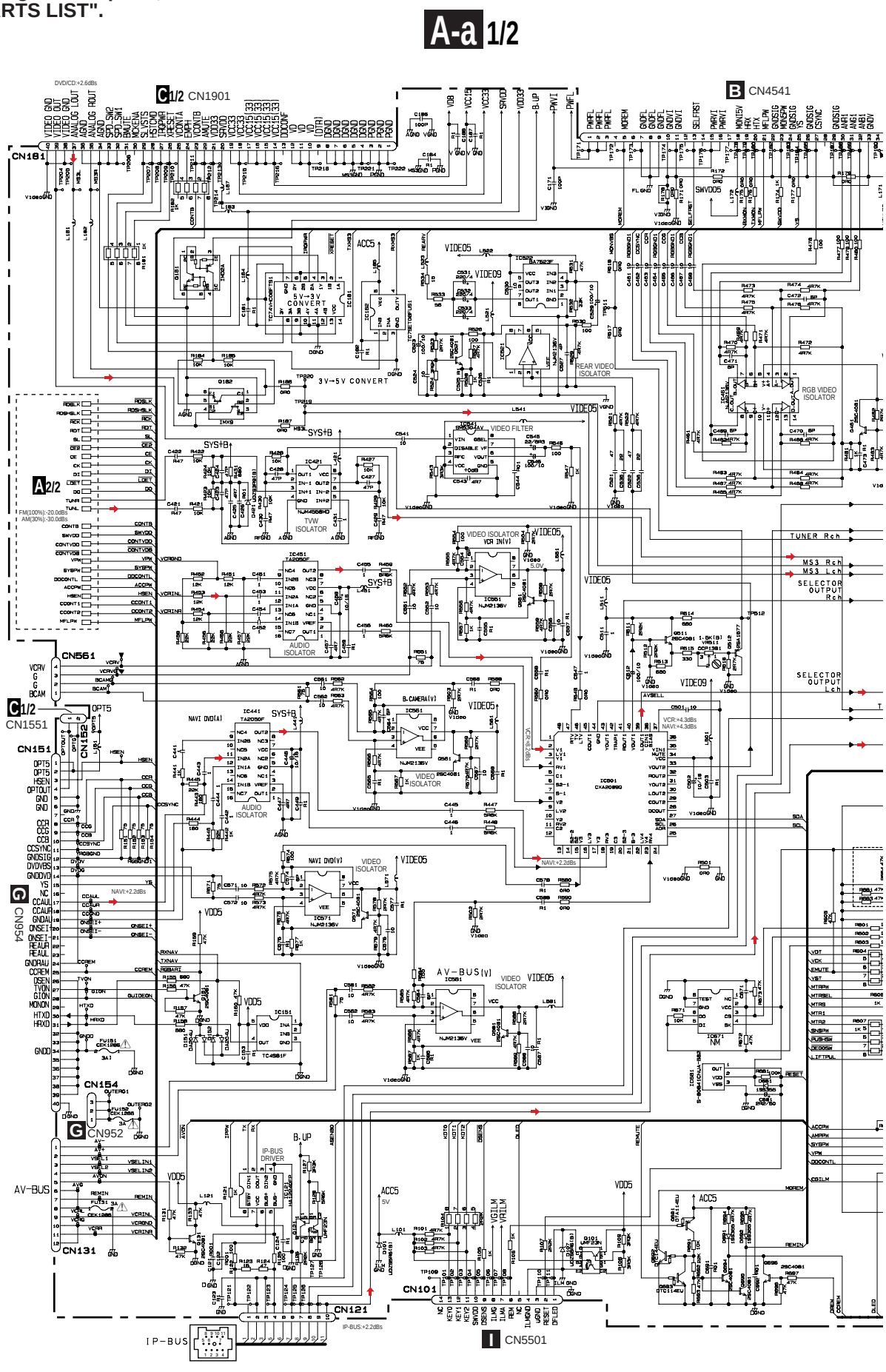



CN981
DIGITAL OUTPUT
CN971
CN951
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI−
GNDRAU
CCREM
DSEN
TVON
GION
HTXD
HRXD
GNDD
G RGB UNIT
CN952
CN954
RGB SHIELD GND
GNDD
HRXD
HTXD
GION
TVON
DSEN
CCREM
GNDRAU
ONSEI−
ONSEI+
GNDAU
CCAUR
CCAUL
YS
GNDDVD
DVDVBS
GNDSIG
CCSYNC
CCB
CCG
CCR
OPTGND
OPTGND
OPTOUT
HSEN
OPT5
OPT5
154
CN151
CN401
FM/AM ANT
CN771
FANGND
FAN MOTOR (REAR)
CN781
FANGND
FAN MOTOR (CENTER)
CN261
REARV
VGND
FL
FLGND
FR
FRGND
SWL
SWLGND
SWR
SWRGND
RCA OUT
CN101
DFLED
RESET
µGND
ILMGND
NC
REM
ILMA
ILMG
DSENS
SWVDD
KEY2
KEY1
KEY0
NC
CN5501
I
KEYBOARD UNIT
A1/2 MOTHER UNIT (SYSTEM)
A2/2 MOTHER UNIT (POWER SUPPLY)
CN171
GNDFL
GNDFL
GNDFL
GNDVI
GNDVI
SELFRST
PWRVI
PWRVI
MON15V
HRX
HTX
MFLPW
GNDSIG
MONSPW
GNDSIG
VS
GNDSIG
CSYNC
GNDSIG
ANR1
ANG1
ANB1
GNDV
MONVBS
ILMGB
ILMA
ILMC
ILMGND
CN4541
CN175
BUP
BUP
BUP
GND
GND
GND
DGND
VDD
SENSPW
PUSHSW
ANGLISW
MTRSEL
MTR1
MTR2
MTRPW
MTRS
LIFTPUL
ANGLEIN
CN3801
J L K
DRIVE UNIT
NITOR PCB
CN4591
GILL
KDT1
VILLC
VILLA
VILLGB
KDT2
KST1
KST2
VACC5
LSEN
GVSW
CN4301
H UPPER PCB
DC4
DC3
DC2
DC1
DC0
DB5
DB4
DB3
DB2
DB1
DB0
DA5
DA4
DA3
DA2
DA1
DA0
V10
V9
V8
V7
V6
V5
V4
V3
V2
V1
V0
STH1
GND
CN2
LCD MODULE

3.3 MOTHER UNIT(SYSTEM)(GUIDE PAGE)

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





A-b 1/2

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

A 1/2 MOTHER UNIT (SYSTEM)

J CN3801

CN171 CN175

NAVI GUIDE MIXING

RGB VIDEO ISOLATOR

TUNER Rch

TUNER Lch

MS.3 Rch

MS.3 Lch

SELECTOR OUTPUT Rch

SELECTOR OUTPUT Lch

POWER AMP

RCA OUT

CN261

CN701

CN731

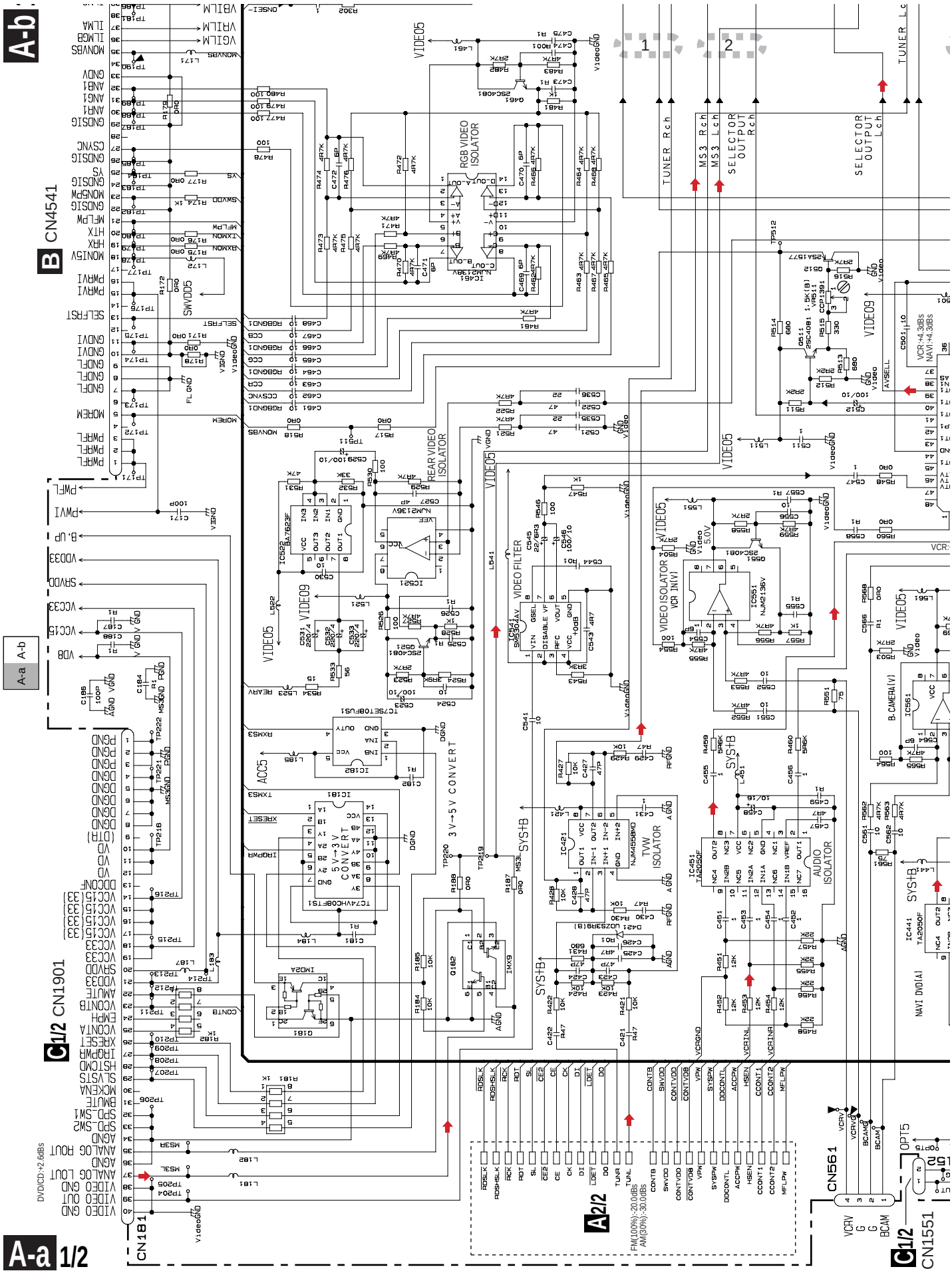
PE5485A

SYSTEM CONTROLLER

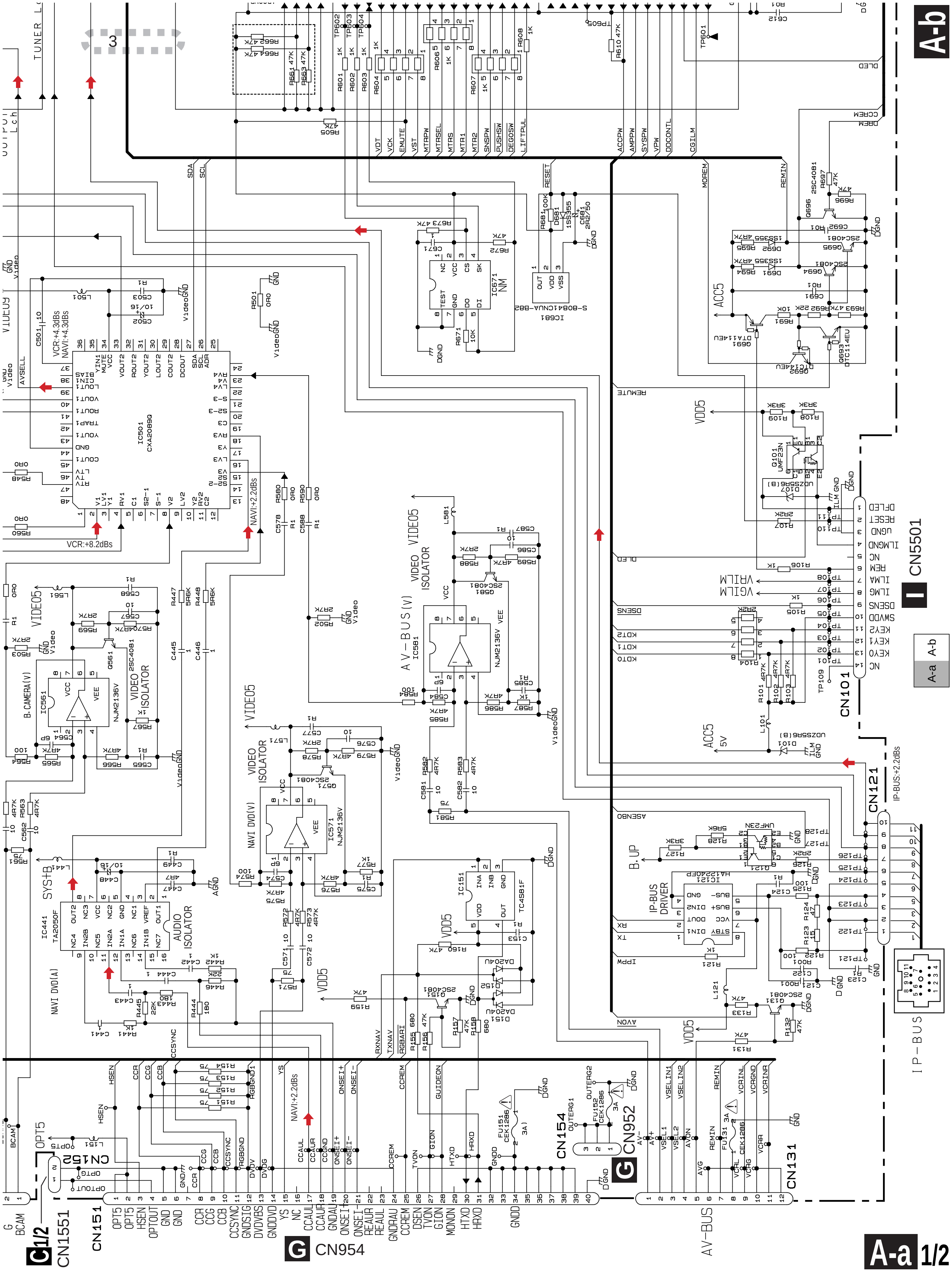
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

: The power supply is shown with the marked box.

A 1/2


A-b
B CN4541
C1/2 CN1901
A-a 1/2
A2/2
C1/2 CN1551
CN561
CN181
RGB VIDEO ISOLATOR
REAR VIDEO ISOLATOR
VIDEO FILTER
VIDEO ISOLATOR
TV ISOLATOR
AUDIO ISOLATOR
3 V→5 V CONVERT
5 V→3 V CONVERT
ACC5
SYS+B
TUNER Rch
TUNER Lch
MS3 Rch
MS3 Lch
SELECTOR OUTPUT Rch
SELECTOR OUTPUT Lch
VIDEO5
VIDEO9
NAVI DVD(A)
B.CAMERA(V)
VCR IN(V)
DVD/CD:+2.6dBs
FM(100%):-20.0dBs
AM(30%):-30.0dBs

A B C D E F


A-b
CN5501
CN121
CN101
CN131
CN151
CN1551
CN152
CN954
CN952
CN154
IC501
CXA2089Q
IC441
TA2050F
AUDIO ISOLATOR
VIDEO ISOLATOR
NJM2136V
IC671
IC681
IC151
TC4S81F
IC121
HA12240FP
IP-BUS DRIVER
IP-BUS
AV-BUS
AV-BUS(V)
C 1/2
G CN954
G CN952

A-a 1/2

A-b 1/2

A-a | A-b

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

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

J CN3801

CN171 CN175

MONVBS, ILMGB, ILMA, ILMC, ILMGND, BUP, BUP, BUP, NC, GND, GND, DGND, NC, VDD, SENSPW, PUSHSW, ANGLOSW, MTRSEL, MTR1, MTR2, MTRPW, MTRS, LIFTPUL, ANGLEIN

B.UP FU175 CEK1283 1.75A

FU176 CEK1280 1A

VDD5

A 1/2 MOTHER UNIT (SYSTEM)

FM:+4.34dBs
AM: -5.66dBs
IP-BUS:+8.54dBs
VCR:+8.54dBs
NAVI:+8.54dBs
DVD/CD:+8.94dBs

RCA OUT CN261

REARV, VGND, FL, RCAG, FR, SWL, SWR, SWRGND, RL, RR, RGND, VCRINL, VCRINR, VCRGND

VIDEO OU, FL OUTPU, FR OUTPU, SUBWOOF L OUTPUT, SUBWOOF R OUTPUT, L INPUT, FR INPUT

VCR IN:+8.2dBs

NAVI GUIDE MIXING

SYS+B

IC302 NJM4558V, IC303 NJM4580V, IC301 NJM4558V

RBU14

VIDEO5

ACC5

GUIDEON, NMIXCNT

FL, FR, RL, RR, SWL, SWR

POWER AMP

IC241 PAL007B

1.TAB, 2.PW.GND2, 3.FL-, 4.STBY, 5.FL+, 6.VCC1/2, 7.FR-, 8.PW.GND1, 9.FR+, 10.SVR, 11.FRIN, 12.FLIN, 13.S-GND, 14.RLIN, 15.RRIN, 16.ACGND, 17.RR+, 18.PW.GND3, 19.RR-, 20.VCC3/4, 21.RL+, 22.MUTE, 23.RL-, 24.PW.GND4, 25.B.REMOTE

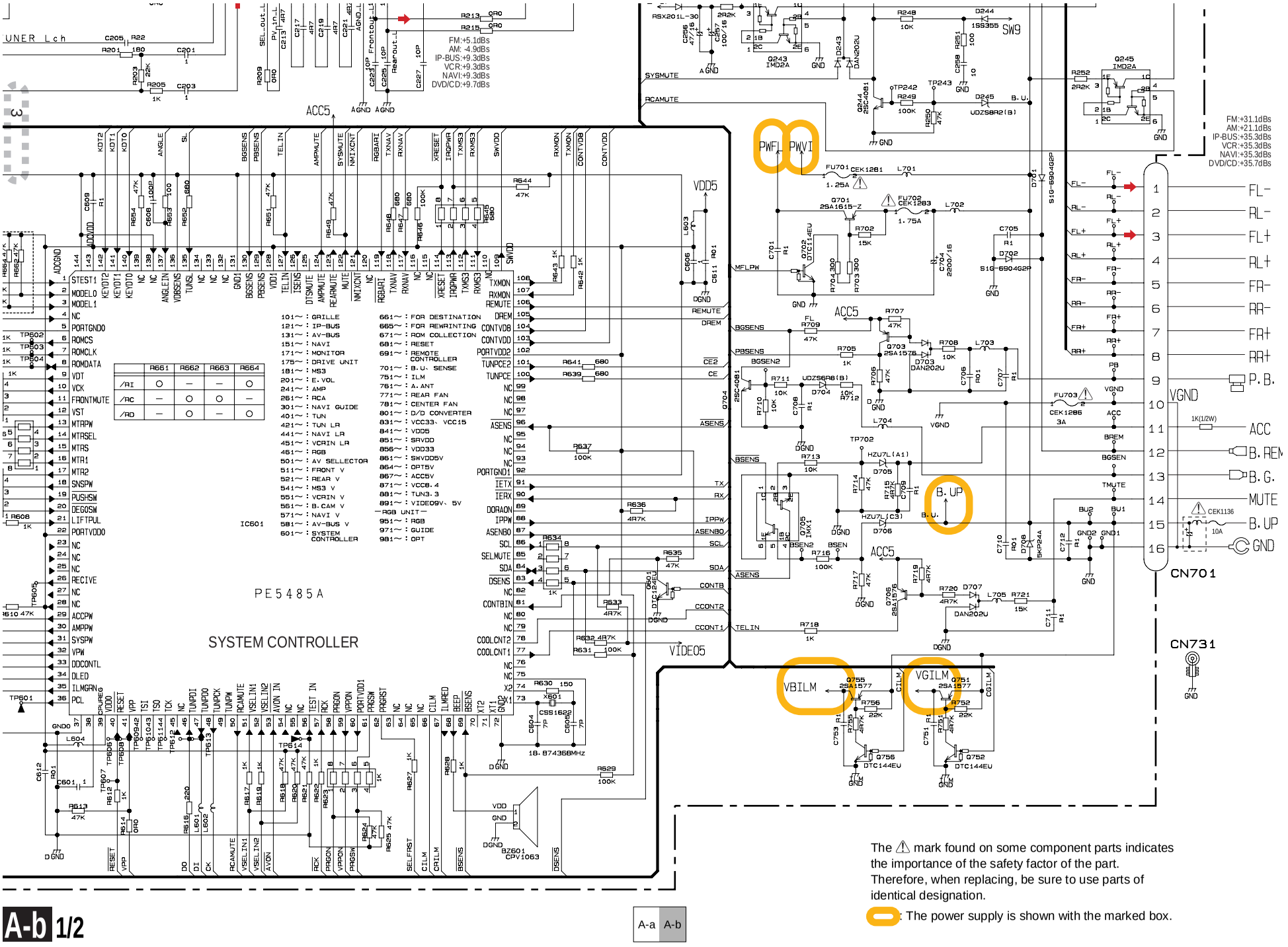
IC201 PML009A E-VOL

AMPPW, AMPMUTE, EMUTE, VST, VDT, VCK, SYSMUTE

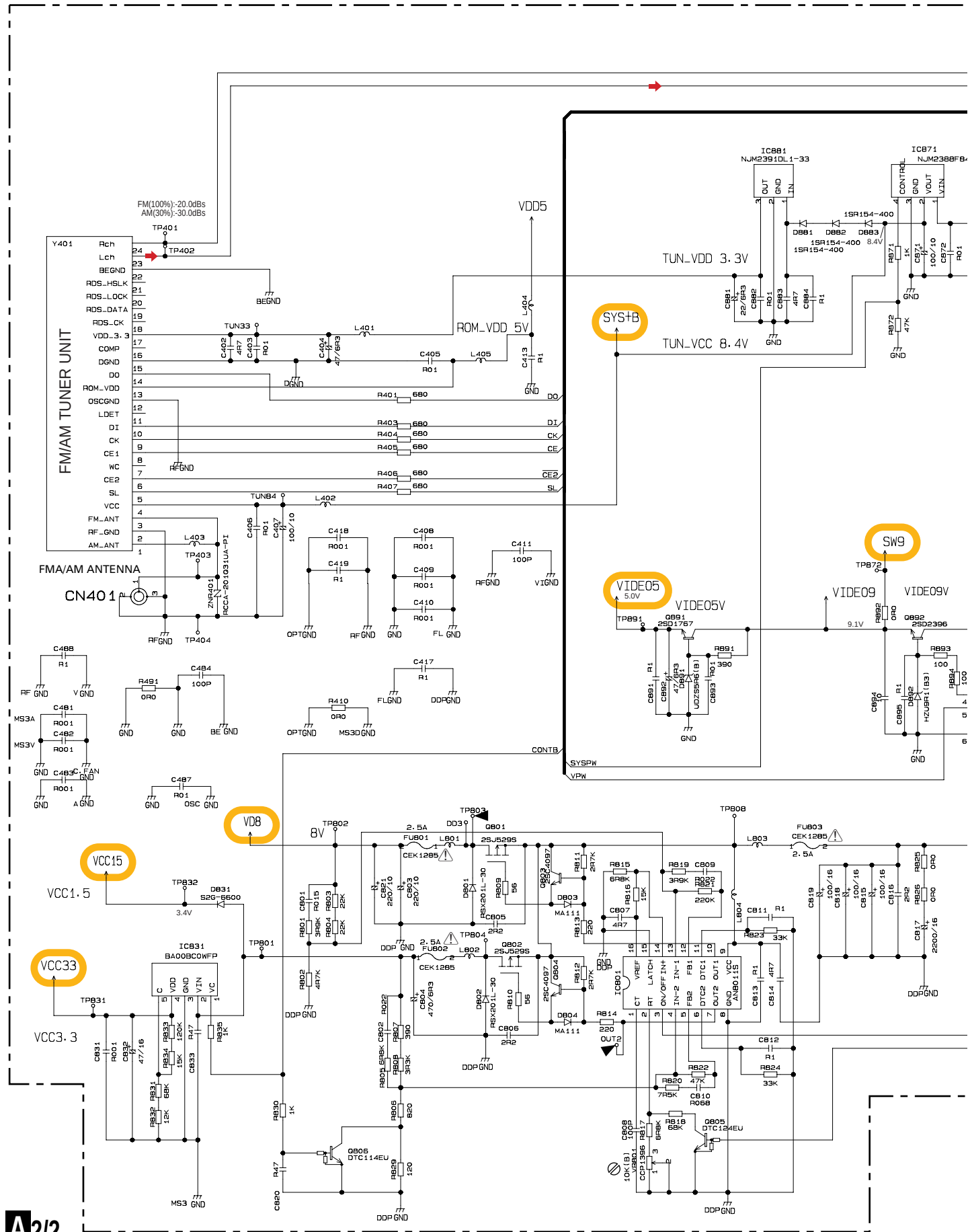
B.UP D242 RSX201L-30, SW9 D244 1SS355

TUNER Lch

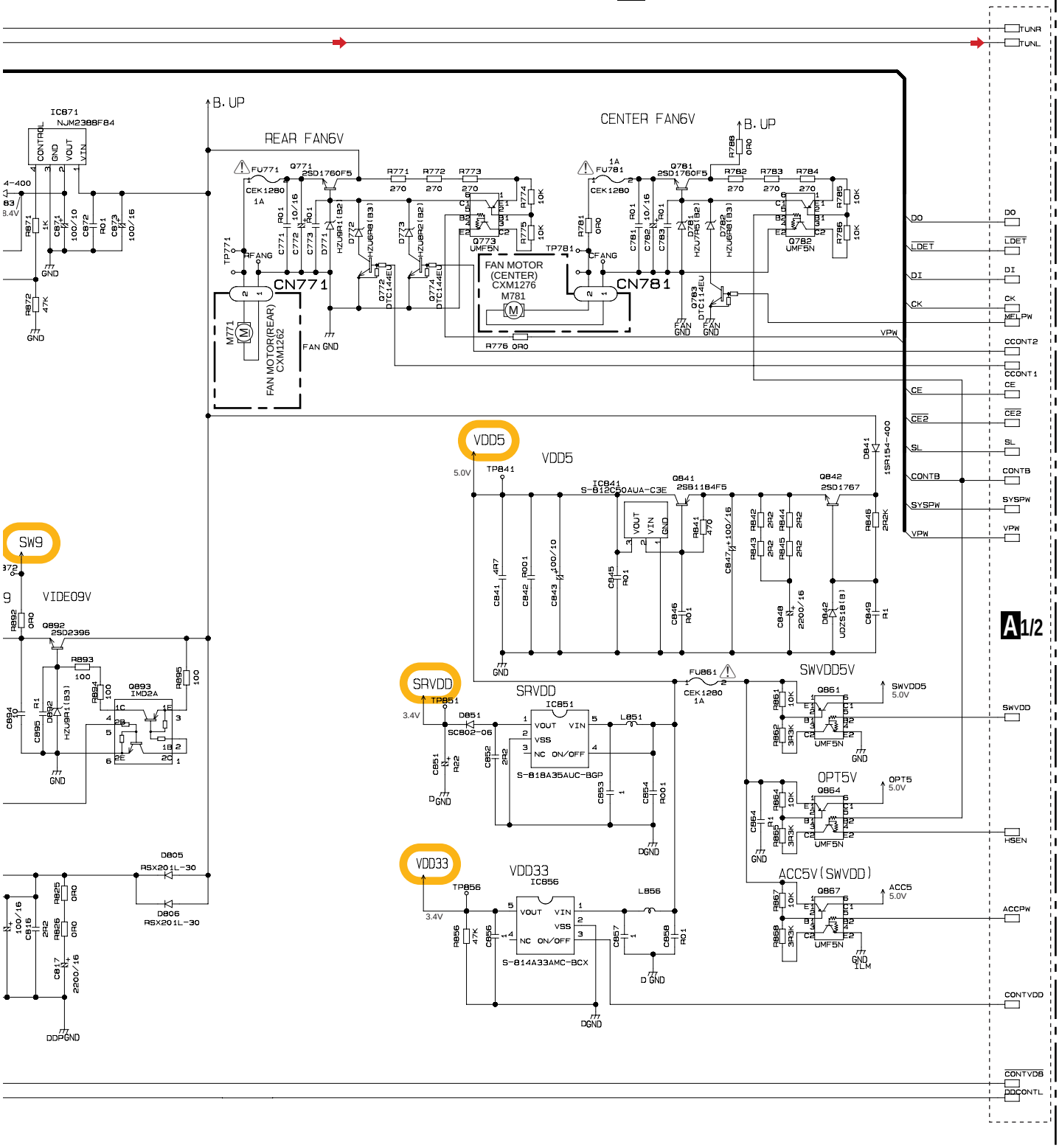
FM:+5.1dBs
AM: -4.9dBs
IP-BUS:+9.3dBs
VCR:+9.3dBs
NAVI:+9.3dBs
DVD/CD:+9.7dBs


AVH-P5750DVD/RC
SYSTEM CONTROLLER
PE5485A
IC601
CN701
CN731
ACC5
VDD5
VIDE05
PWFL
PWVI
B. UP
VBILM
VGILM
SW9
FM:+5.1dBs
AM: -4.9dBs
IP-BUS:+9.3dBs
VCR:+9.3dBs
NAVI:+9.3dBs
DVD/CD:+9.7dBs
FM:+31.1dBs
AM:+21.1dBs
IP-BUS:+35.3dBs
VCR:+35.3dBs
NAVI:+35.3dBs
DVD/CD:+35.7dBs
18.874368MHz
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.
: The power supply is shown with the marked box.
A-b 1/2
A-a
A-b

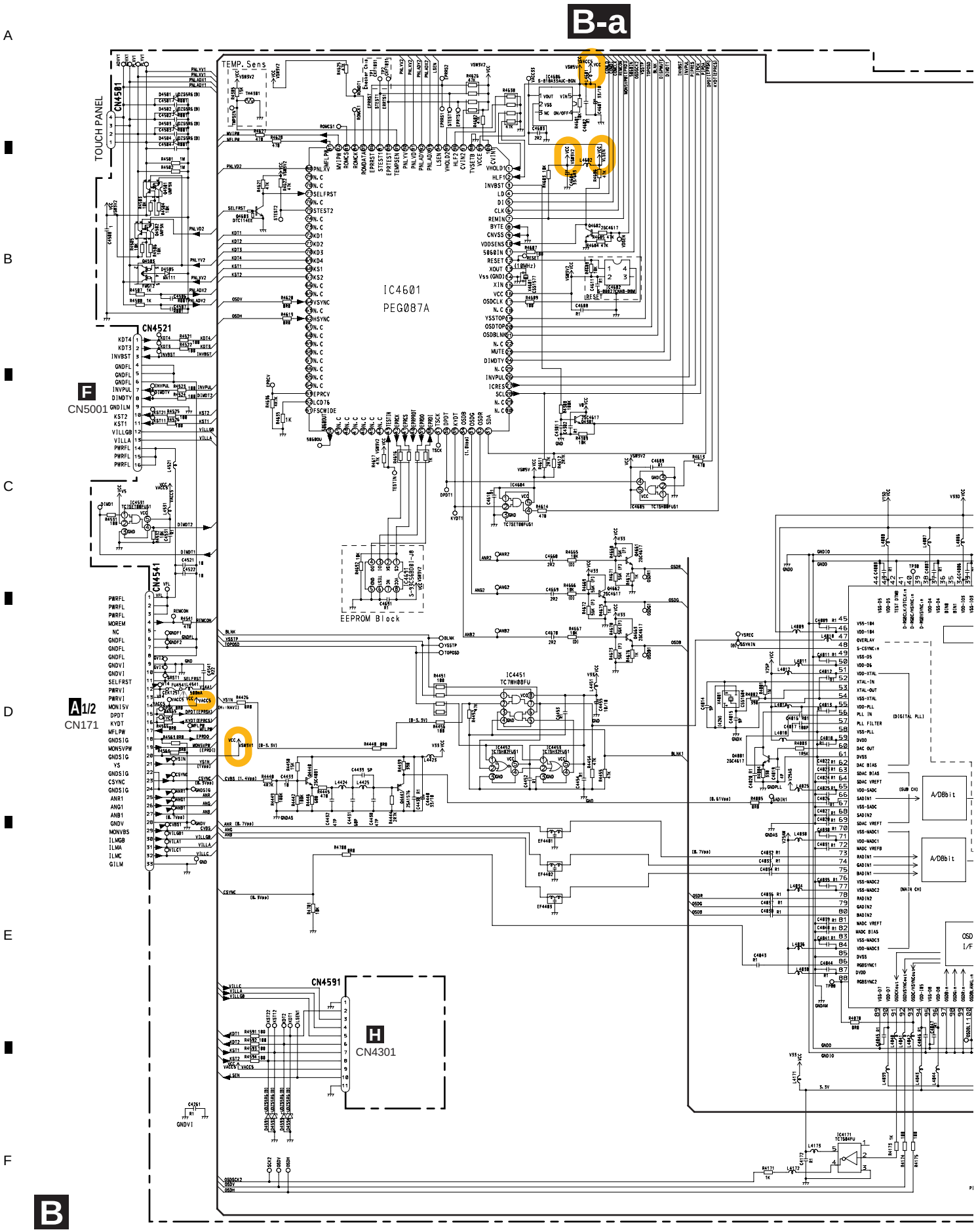
3.4 MOTHER UNIT(POWER SUPPLY)



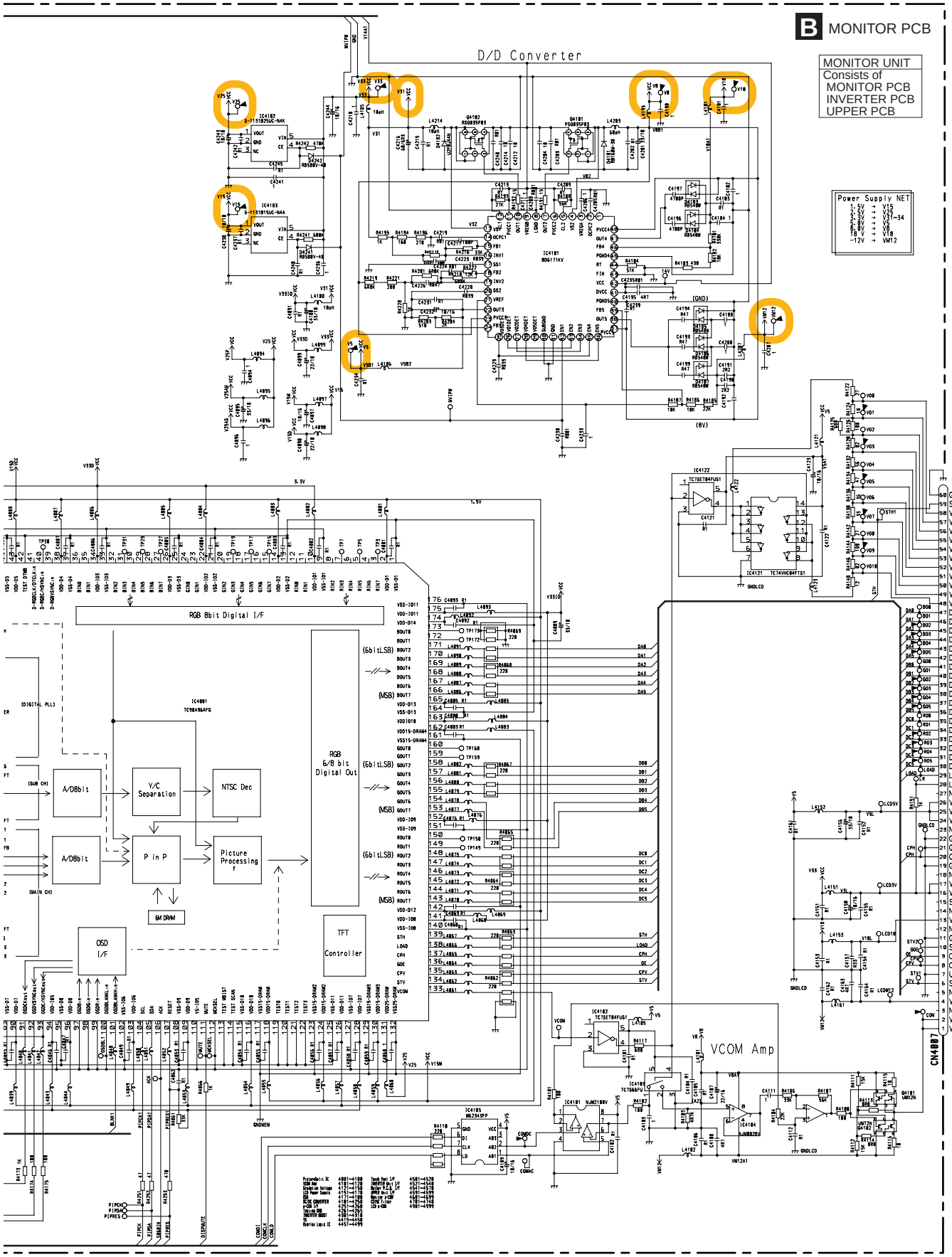
A2/2 MOTHER UNIT (POWER SUPPLY)

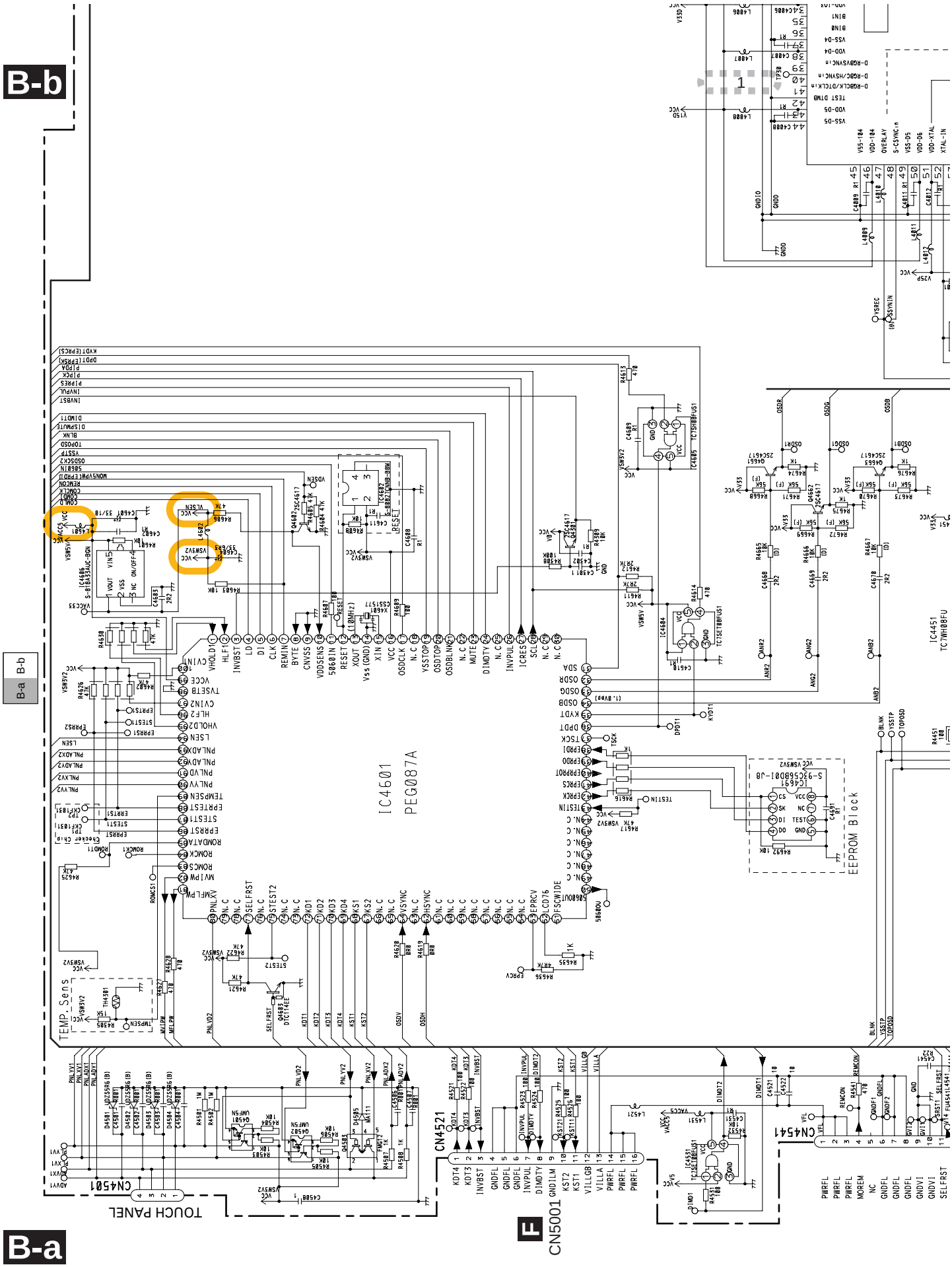


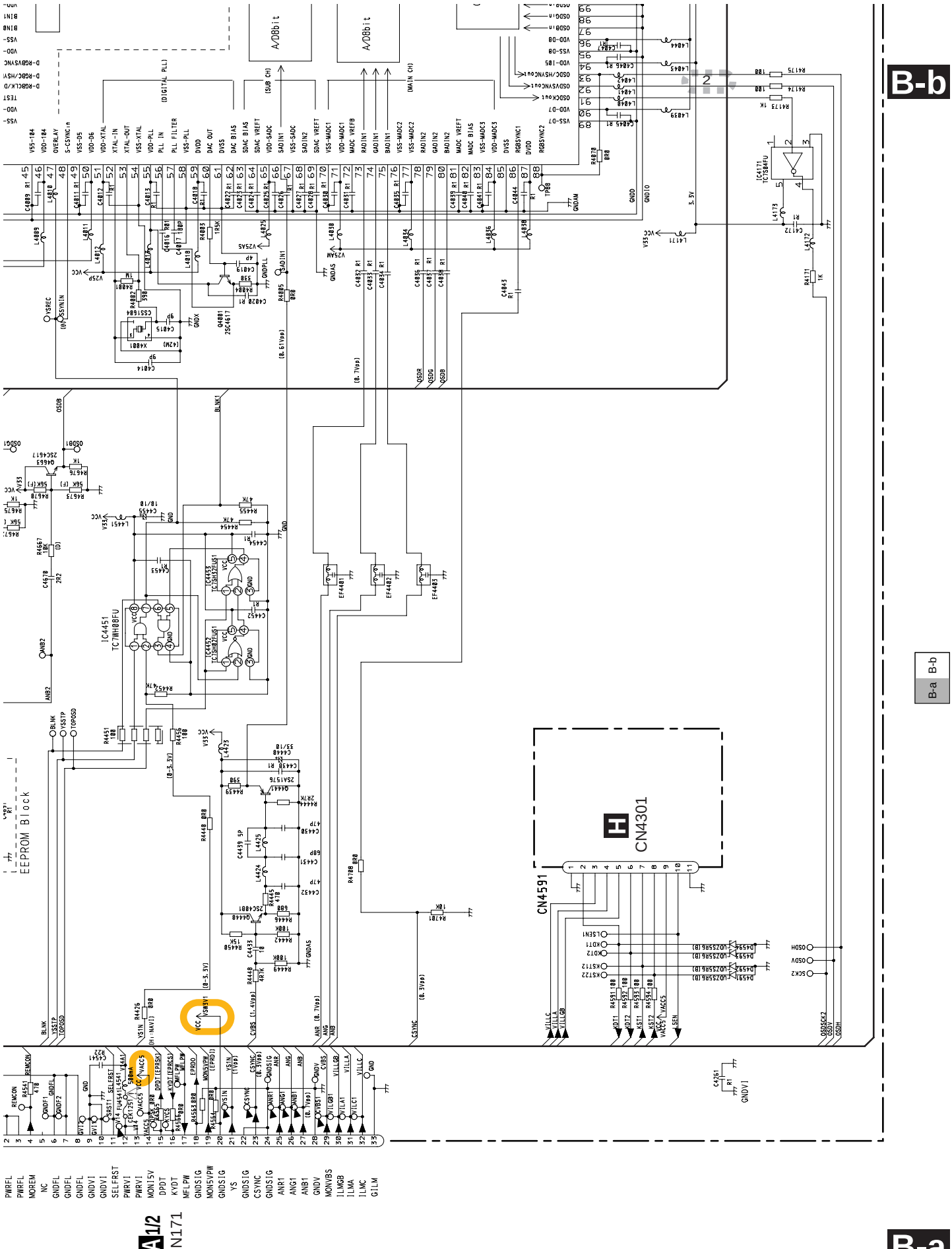
3.5 MONITOR PCB(GUIDE PAGE)

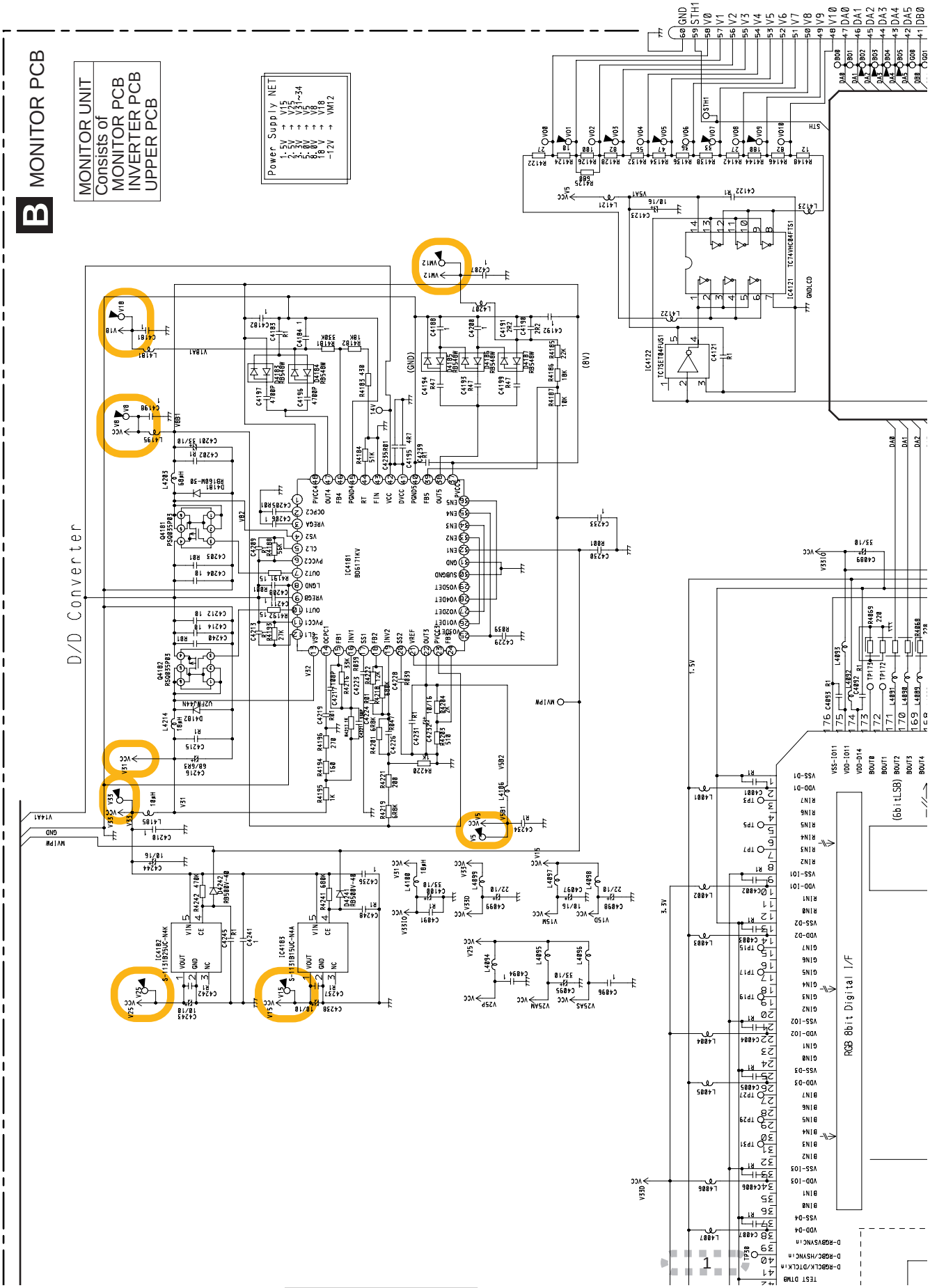


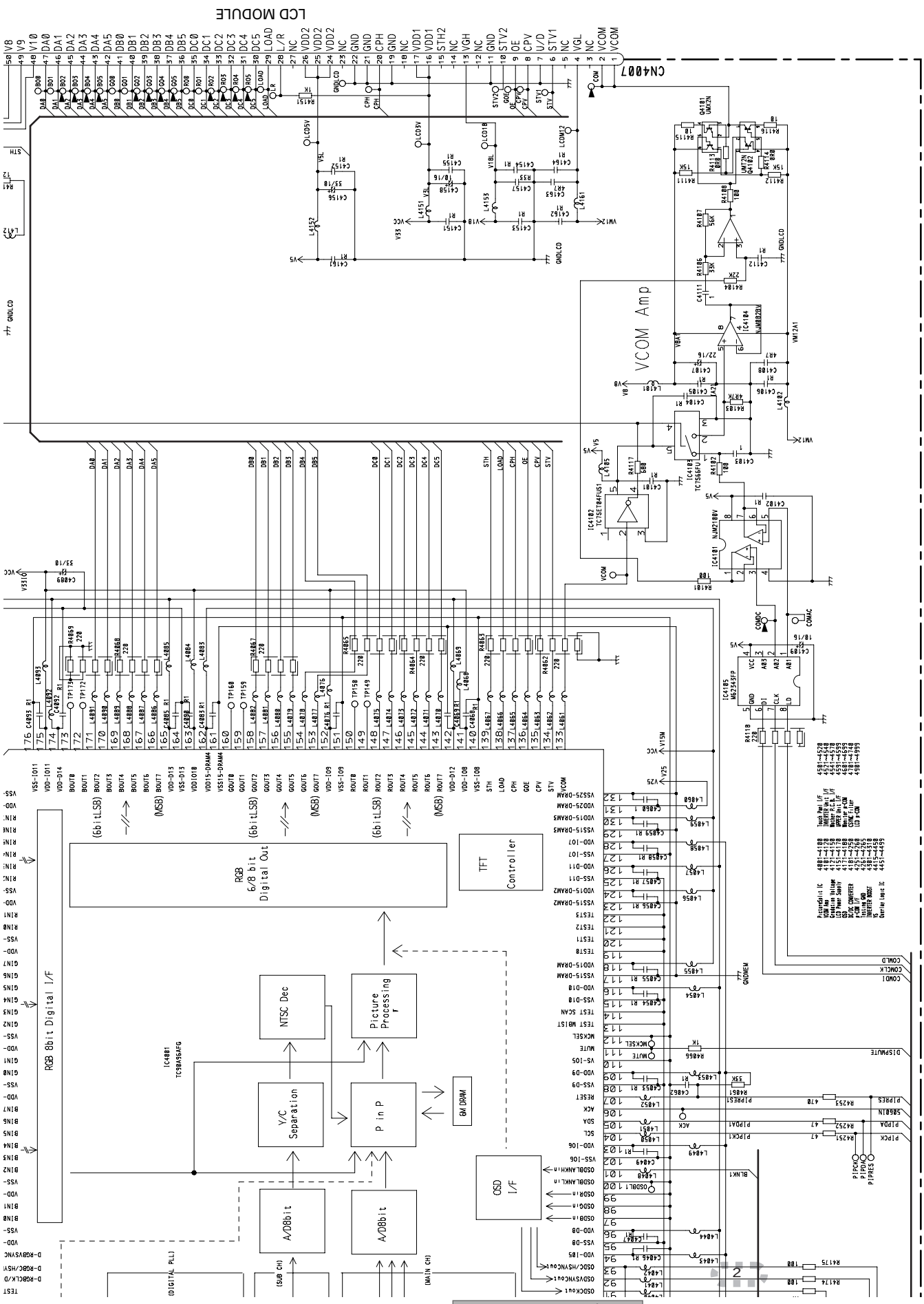
B-b


B MONITOR PCB
MONITOR UNIT
Consists of
MONITOR PCB
INVERTER PCB
UPPER PCB
Power Supply NET
D/D Converter
RGB 8bit Digital I/F
RGB 6/8 bit Digital Out
TFT Controller
OSD I/F
6M DRAM
A/D8bit
Y/C Separation
NTSC Dec
P in P
Picture Processing
VCOM Amp
LCD MODULE
CN4007


B-b
B-a
IC4601
PEG087A
EEPROM Block
TEMP-Sens
TOUCH PANEL
CN4501
CN4521
CN5001
CN4541
IC4451
TC7WH08FU
B-a


B-b
B-a
EEPROM Block
CN4301
CN4591
IC4451
TC7WH08FU
A/D8bit
A/D8bit
(DIGITAL PLL)
(SUB CH)
(MAIN CH)
CN171
A1/2
PWRFL
PWRFL
MOREM
NC
GNDFL
GNDFL
GNDFL
GNDVI
GNDVI
SELFRST
PWRVI
PWRVI
MONI5V
DPDT
KYDT
MFLPW
GNDSIG
MONSYPW
GNDSIG
YS
GNDSIG
CSYNC
GNDSIG
ANR1
ANG1
ANB1
GNDV
MONVBS
ILMGB
ILMA
ILMC
GILM

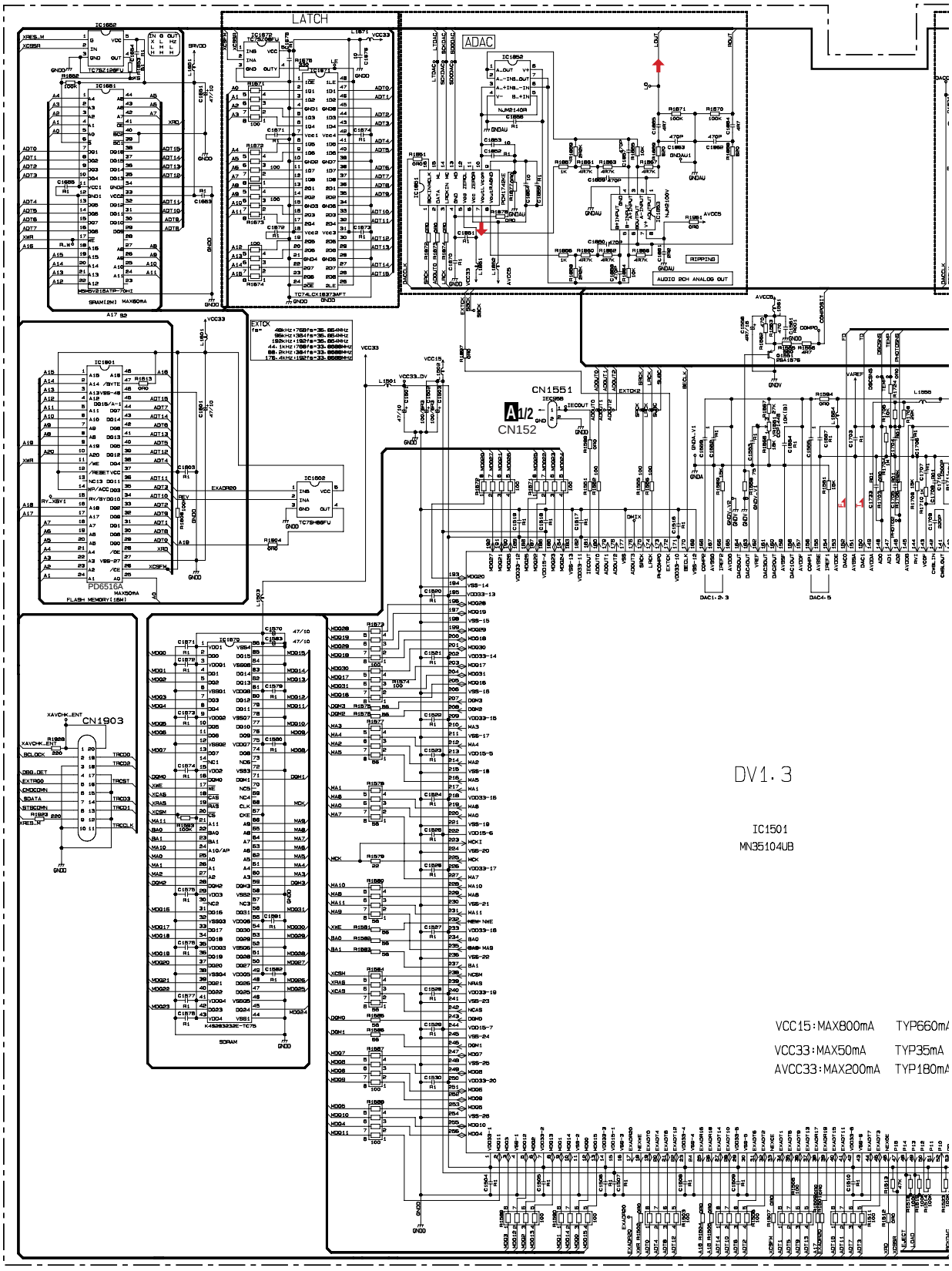

B MONITOR PCB
MONITOR UNIT
Consists of
MONITOR PCB
INVERTER PCB
UPPER PCB
Power Supply NET
1.5V
2.5V
3.3V
5.0V
8.0V
-12V
V15
V25
V31~34
V5
V8
VM12
D/D Converter
RGB 8bit Digital I/F
(GND)
(8V)
1.5V
2.5V
3.3V
5.0V
GNDLCD


LCD MODULE
CN4007
VCOM Amp
RGB 8bit Digital I/F
RGB 6/8 bit Digital Out
TFT Controller
NTSC Dec
Picture Processing
Y/C Separation
P in P
6M DRAM
A/D8bit
A/D8bit
OSD I/F
(DIGITAL PLL)
(SUB CH)
(MAIN CH)
B-a B-b
B-b

3.6 DVD CORE UNIT(SODC)

A

C-a 1/2



B

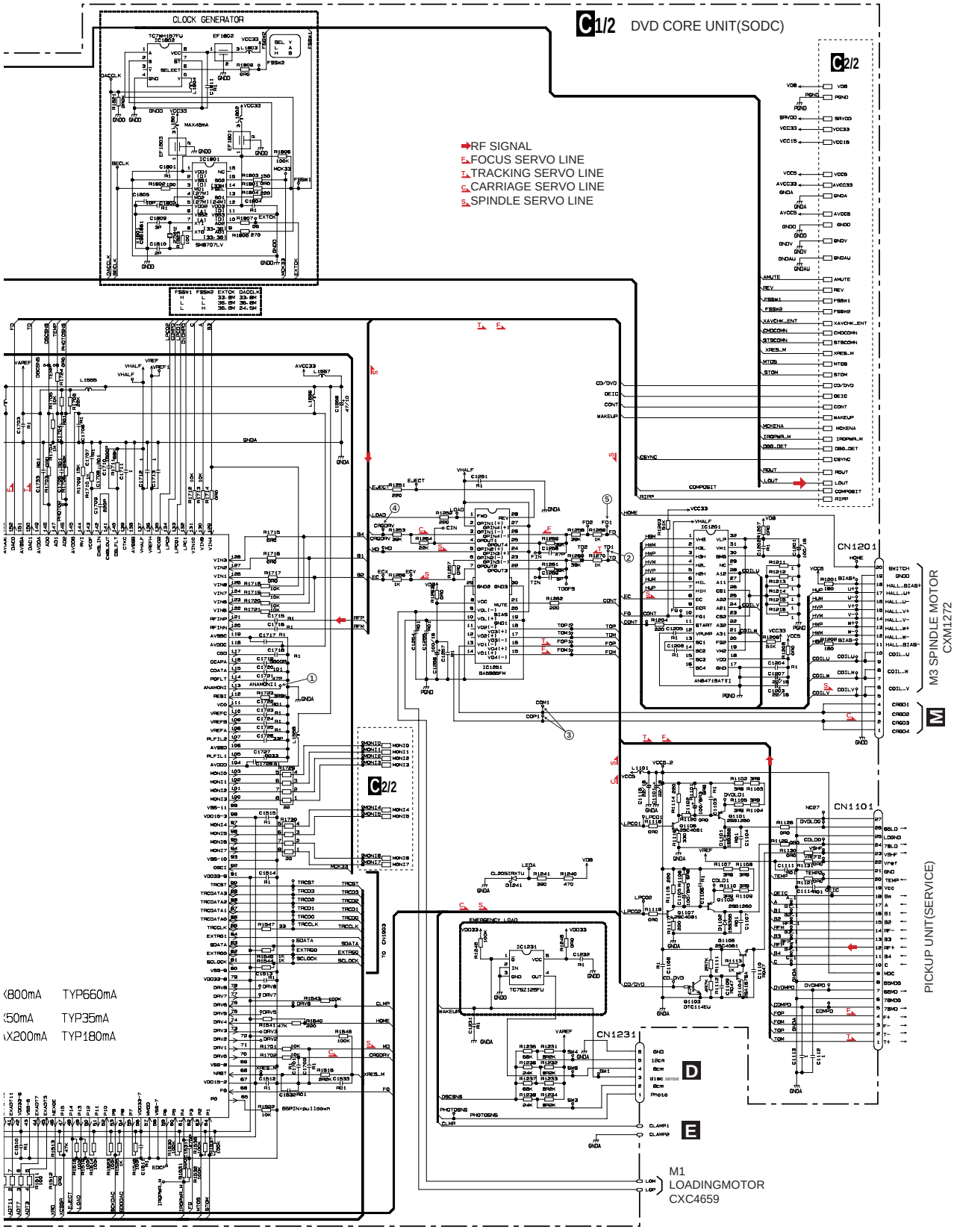
C

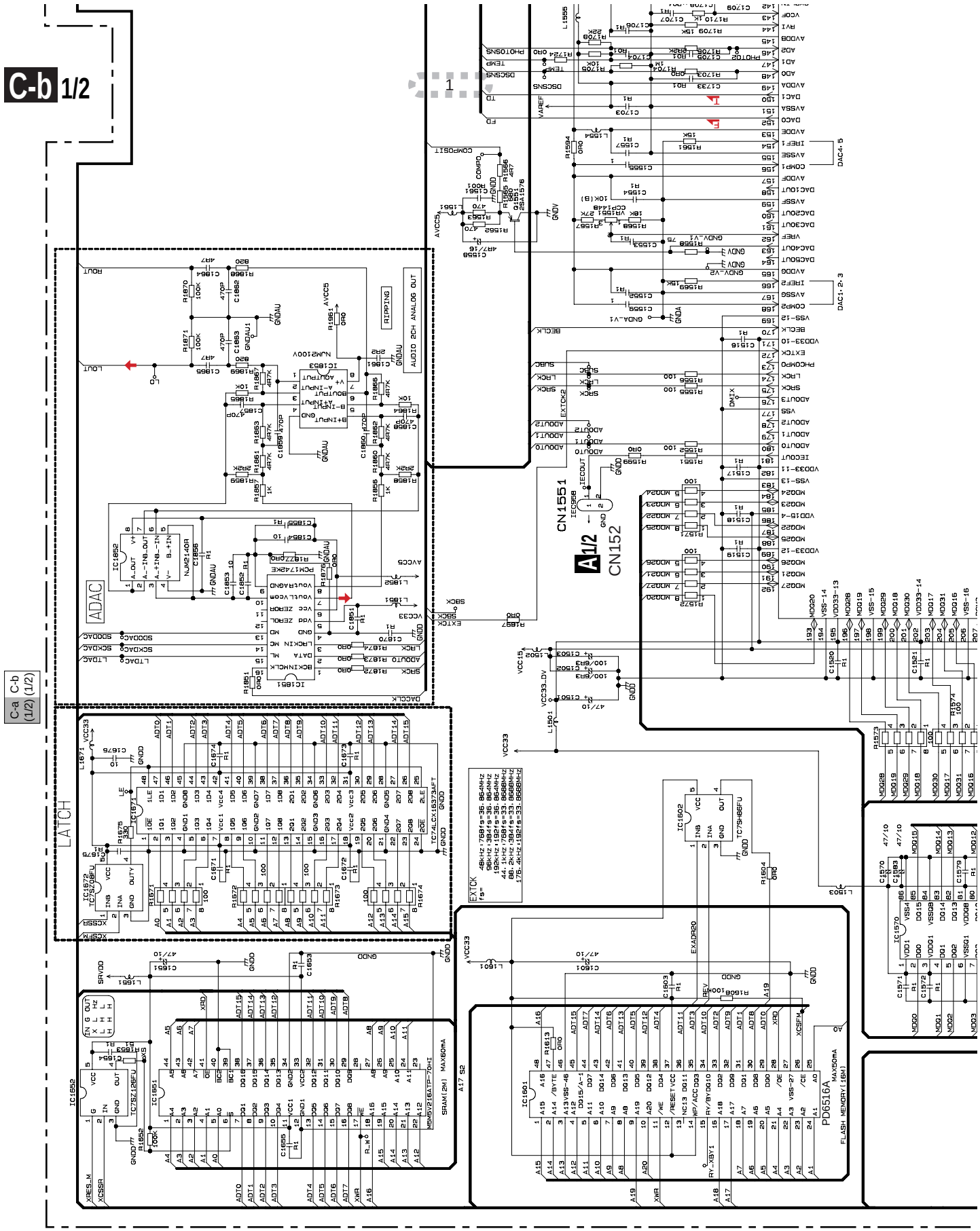
D

E

F

C 1/2


C1/2 DVD CORE UNIT(SODC)
CLOCK GENERATOR
RF SIGNAL
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE
C2/2
CN1201
M3 SPINDLE MOTOR
CXM1272
CN1101
PICKUP UNIT(SERVICE)
CN1231
M1
LOADINGMOTOR
CXC4659
TYP660mA
TYP35mA
TYP180mA

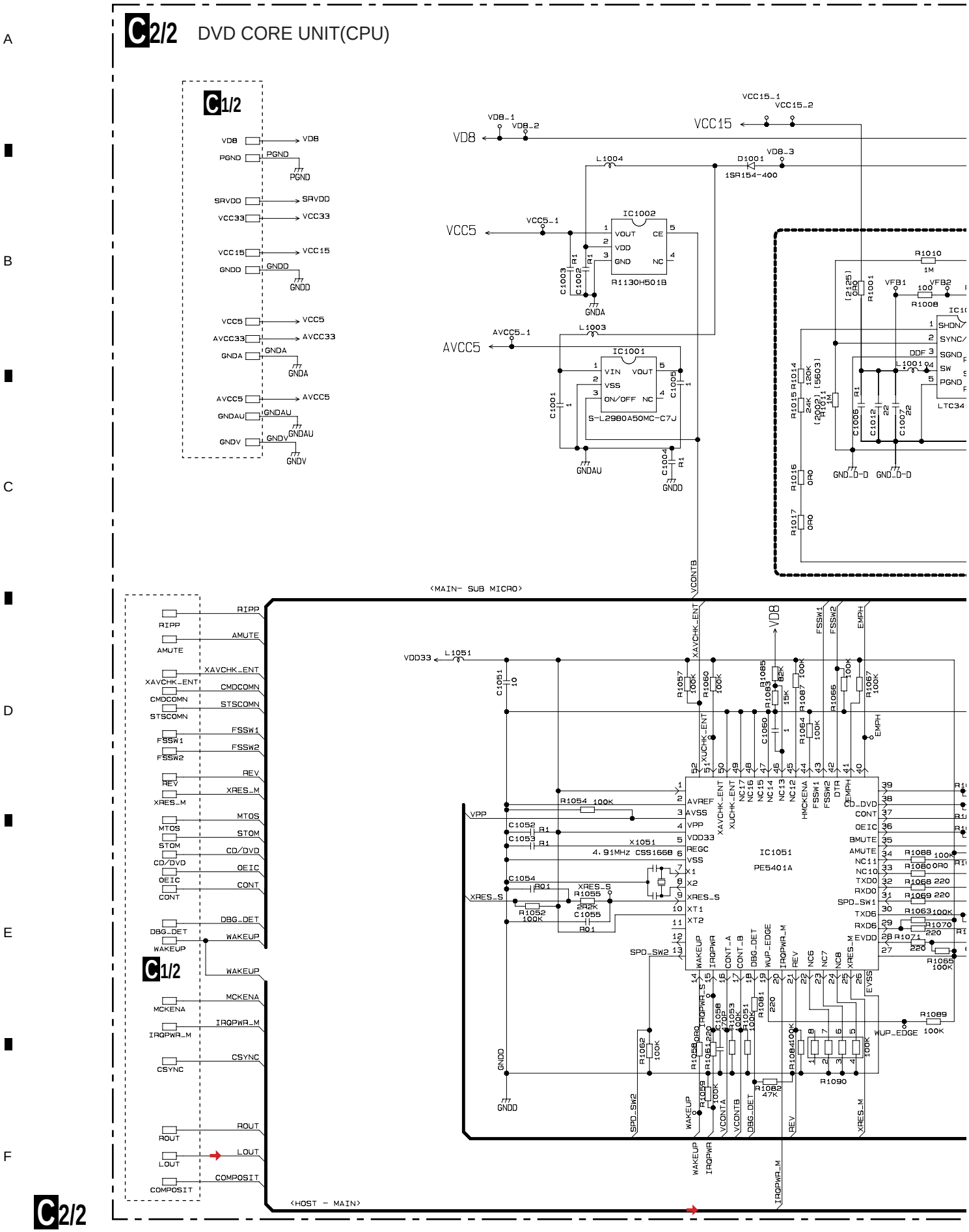

C-b 1/2
C-a C-b (1/2) (1/2)
A1/2
CN152
CN1551
ADAC
LATCH
FLASH MEMORY(16M)
C-a 1/2

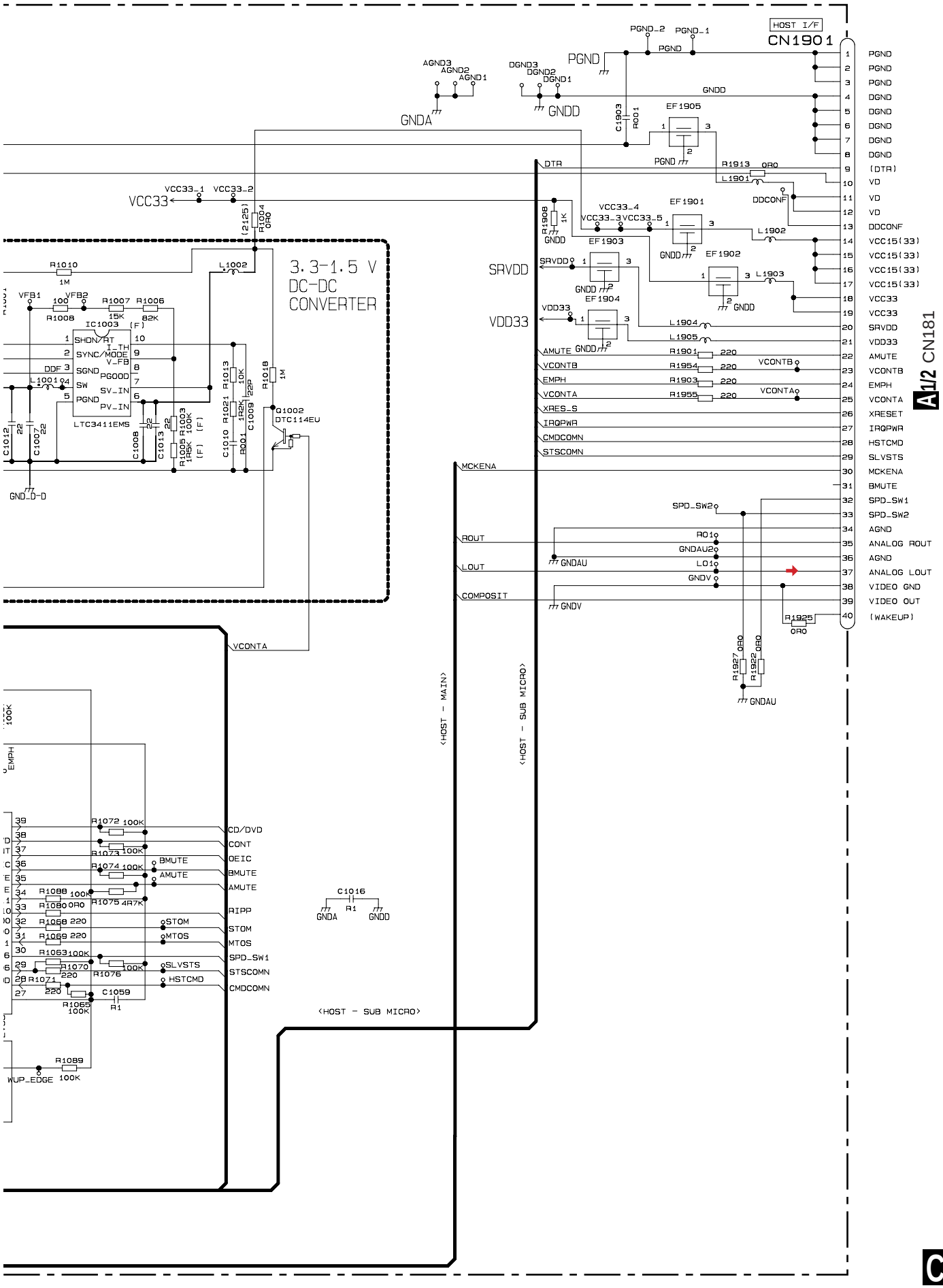
DV1.3
IC1501
MN35104UB
VCC15:MAX800mA TYP66(
VCC33:MAX50mA TYP35r
AVCC33:MAX200mA TYP18(
CN1903
SDRAM
C-b 1/2
C-a C-b (1/2) (1/2)
C-a 1/2

C1/2
DVD CORE UNIT(SODC)
C2/2
RF SIGNAL
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE
CN1201
13 SPINDLE MOTOR
CXM1272
CLOCK GENERATOR
C-a (1/2) C-b (1/2)
C-b 1/2
AVH-P5750DVD/RC
50

M3 SPINDLE MOT
CXM1272
PICKUP UNIT(SERVICE)
CN1101
M1
LOADINGMOTOR
CXC4659
CN1231
C-a C-b
(1/2) (1/2)
C-b 1/2
TYP660mA
TYP35mA
TYP180mA

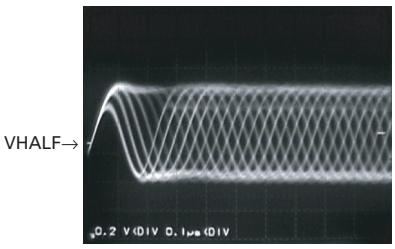
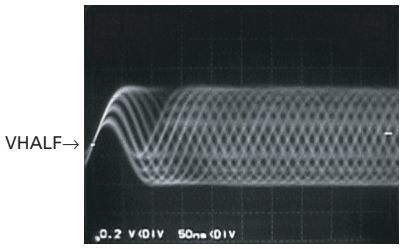
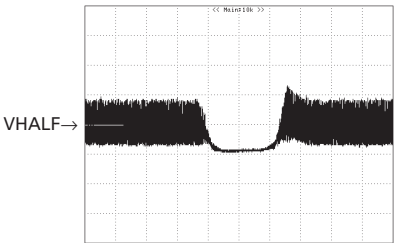
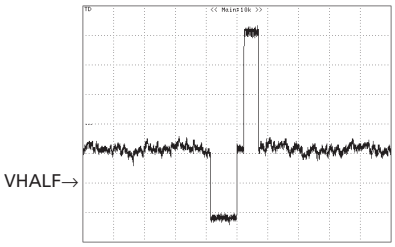
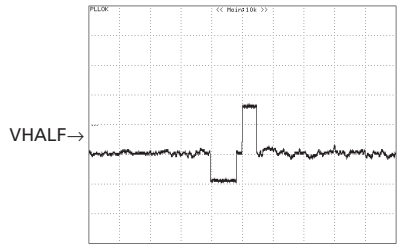
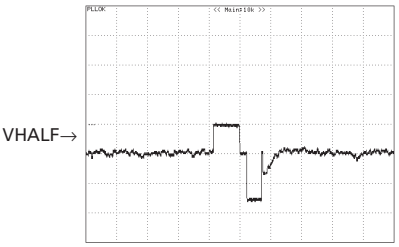
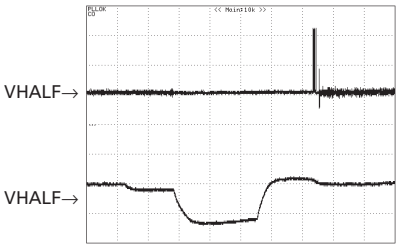
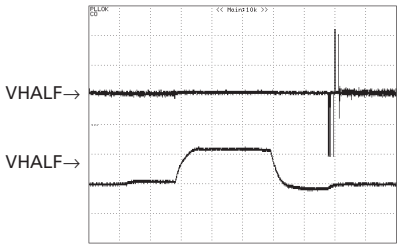
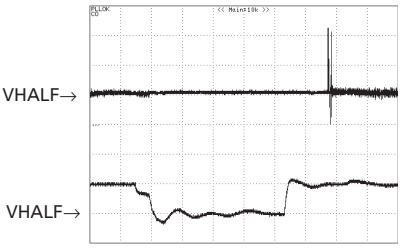
3.7 CD MECHANISM MODULE(CPU)

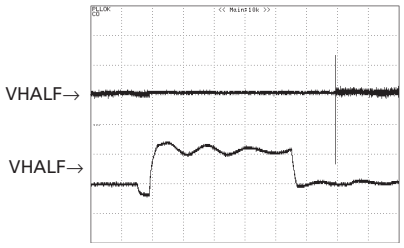
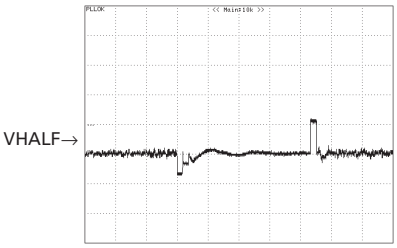
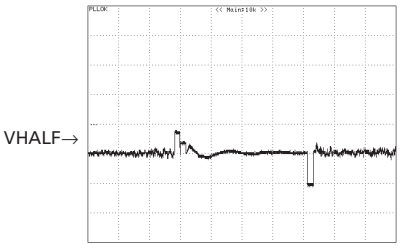
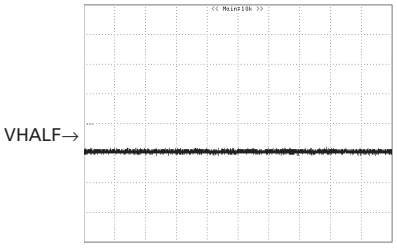
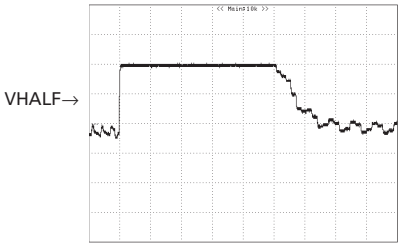
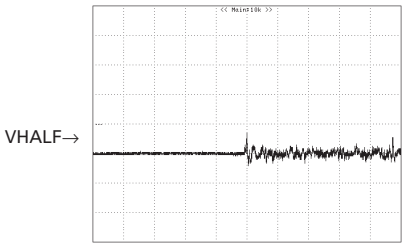
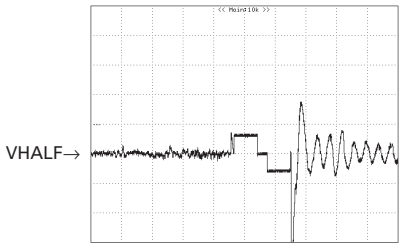
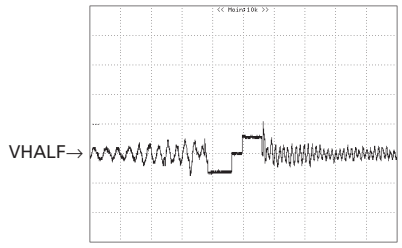
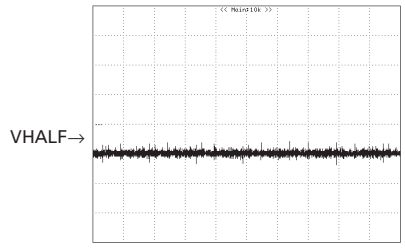



HOST I/F
CN1901
3.3-1.5 V
DC-DC
CONVERTER
IC1003
LTC3411EMS
Q1002
DTC114EU
EF1901
EF1902
EF1903
EF1904
EF1905
PGND
GNDD
GNDA
GNDAU
GNDV
VCC33
SRVDD
VDD33
DTR
DDCONF
VCONTA
VCONTB
MCKENA
ROUT
LOUT
COMPOSIT
BMUTE
AMUTE
RIPP
STOM
MTOS
SPD_SW1
STSCOMN
CMDCOMN
SLVSTS
HSTCMD
CD/DVD
CONT
OEIC
EMPH
WUP_EDGE
<HOST - MAIN>
<HOST - SUB MICRO>
A1/2 CN181
C2/2

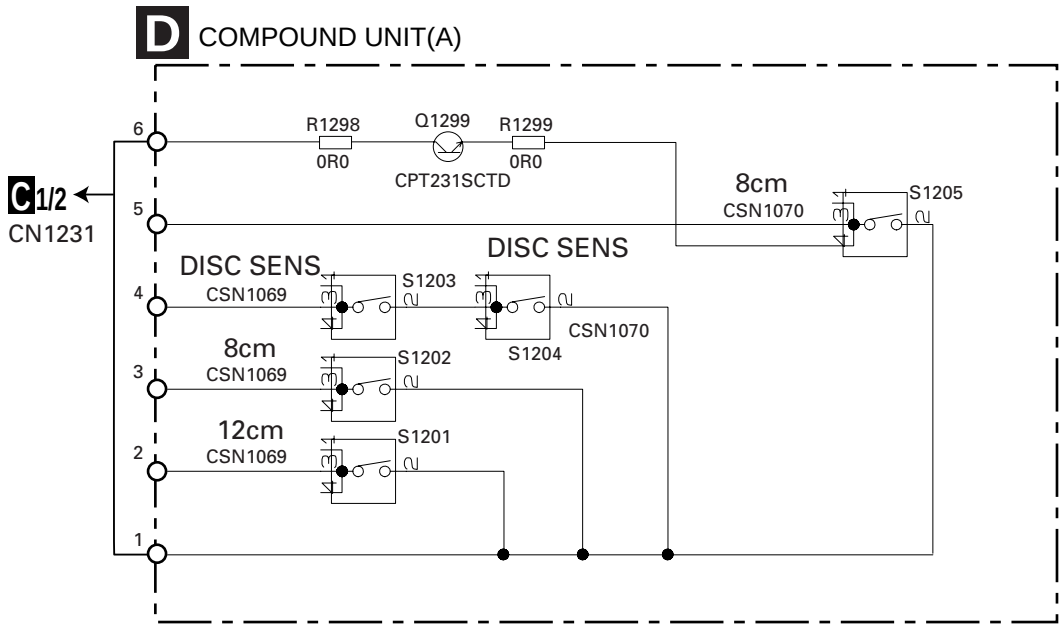
● Waveforms

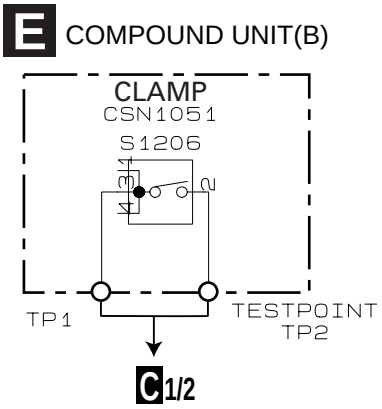
Note:1. The encircled number denote measuring pointes in the circuit diagram.
2. Reference voltage VHALF : 1.65V(TD1,FD1,CRGDRV)
: 2V Center(ANAMONI1)
In this waveform, it is seeing on the GND standard.
Offset of 1.65V or 2V is put in.

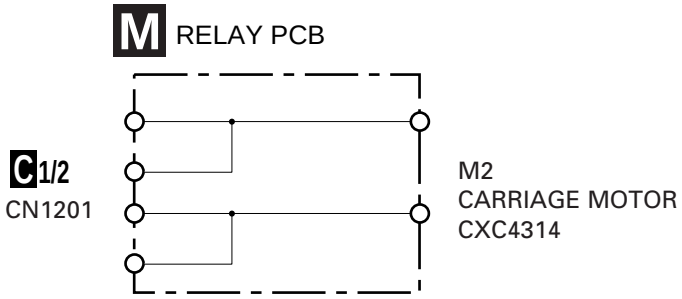
① ANAMONI1 0.2V/div. 0.1μs/div. CDRF 	① ANAMONI1 0.2V/div. 0.1μs/div. DVDRF 	① ANAMONI1 0.5V/div. 100μs/div. DVDRF(BD1mm) 
② TD1 0.2V/div. 100μs/div. Interval 	② TD1 0.5V/div. 100μs/div. Interval FWD 	② TD1 0.5V/div. 100μs/div. Interval REV 
② CH1: TD1 0.5V/div.5ms/div. ③ CH2: COP1-COM1 2.0V/div.5ms/div. Traverse501FWD 	② CH1: TD1 0.5V/div.5ms/div. ③ CH2: COP1-COM1 2.0V/div.5ms/div. Traverse501REV 	② CH1: TD1 0.5V/div.5ms/div. ③ CH2: COP1-COM1 2.0V/div.5ms/div. Traverse5000FWD 

② CH1: TD1 0.5V/div.5ms/div. ③ CH2: COP1-COM1 2.0V/div.5ms/div. Traverse5000REV 	② TD1 0.5V/div.500µs/div. Multi 32FWD 	② TD1 0.5V/div.500µs/div. Multi 32REV 
② TD1 0.5V/div.20ms/div. Play TD 	④ CRGPRV 0.5V/div. 100µs/div. ID search Insaide → Outside 	⑤ FD1 0.5V/div. 1ms/div. Focus close 
⑤ FD1 0.5V/div.500µs/div. Focus jamp L 0 → L1 	⑤ FD1 0.5V/div.500µs/div. Focus jamp L1 → L 0 	⑤ FD1 0.5V/div.20ms/div. Play TD 

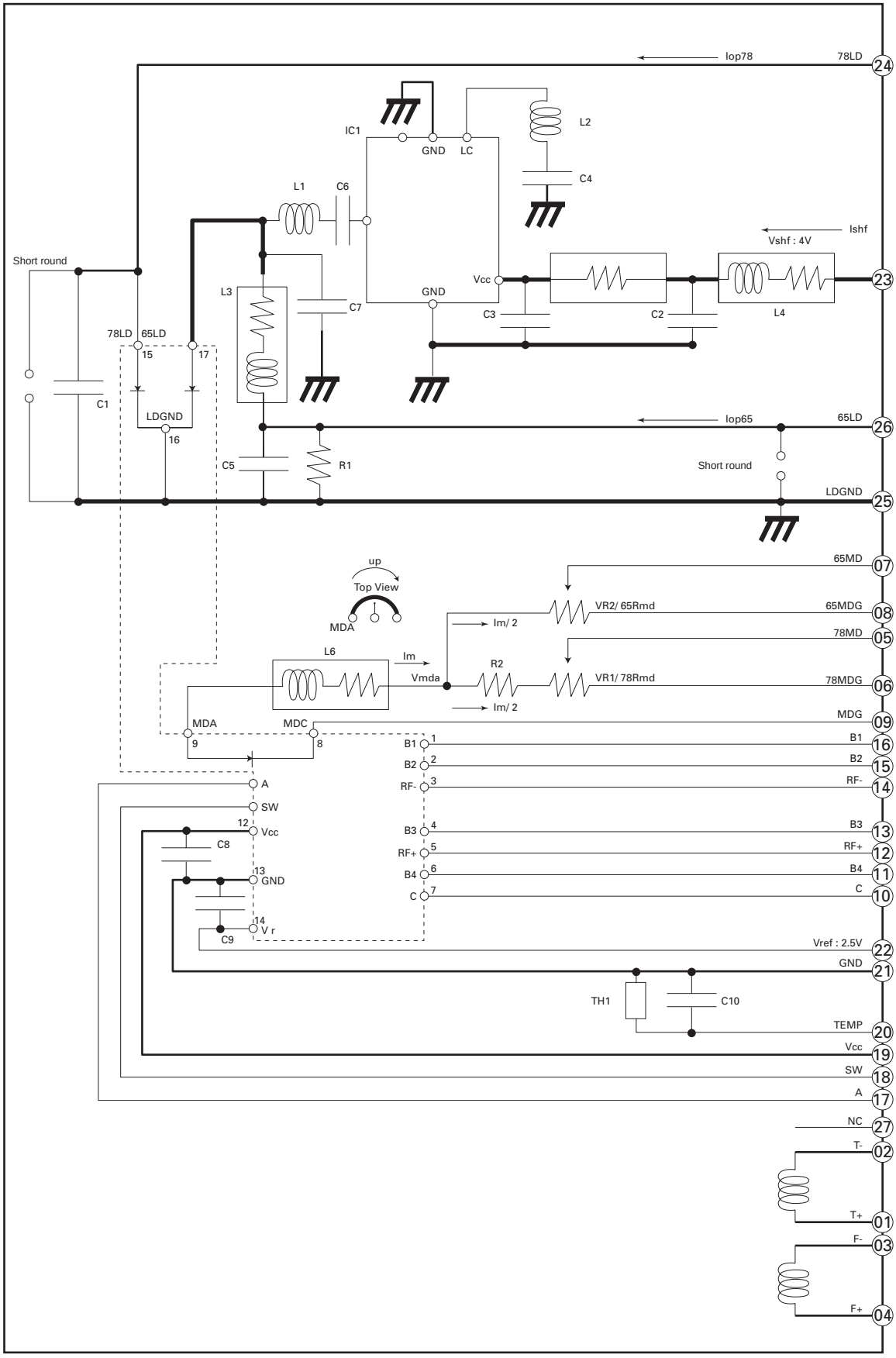
3.8 COMPOUND UNIT(A), COMPOUND UNIT(B) AND RELAY PCB



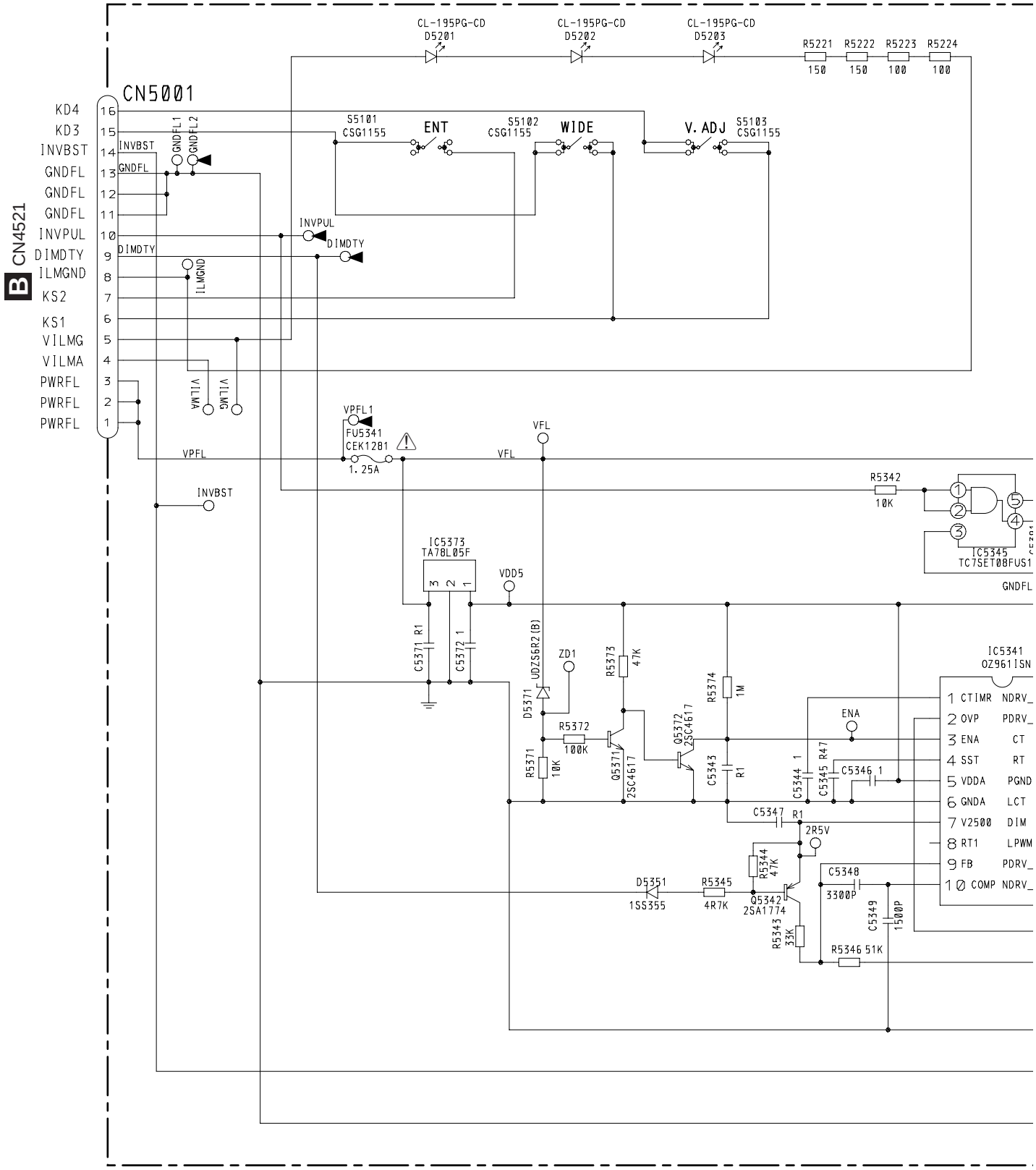




3.9 PU UNIT(REFERENCE)

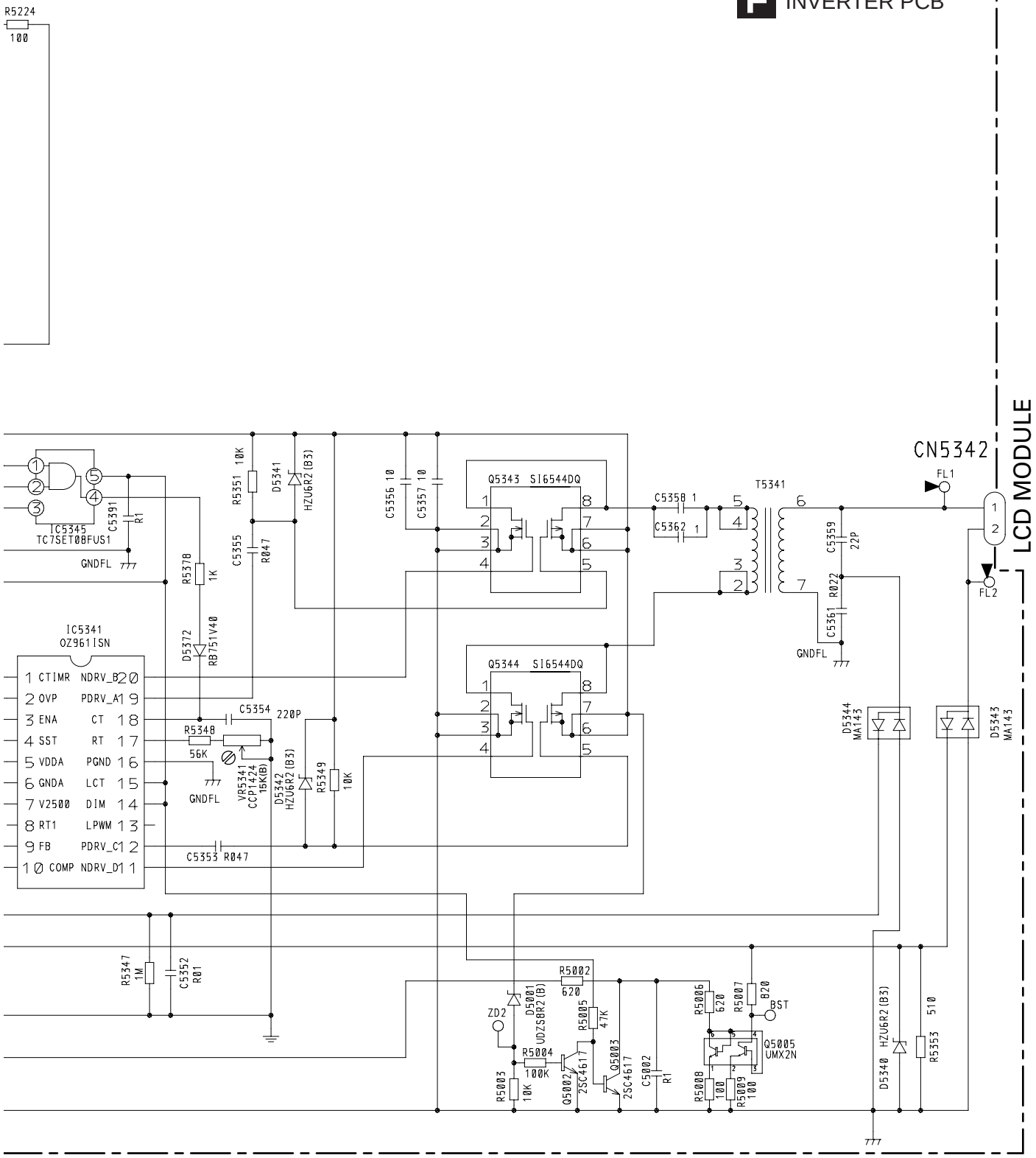


3.10 INVERTER PCB



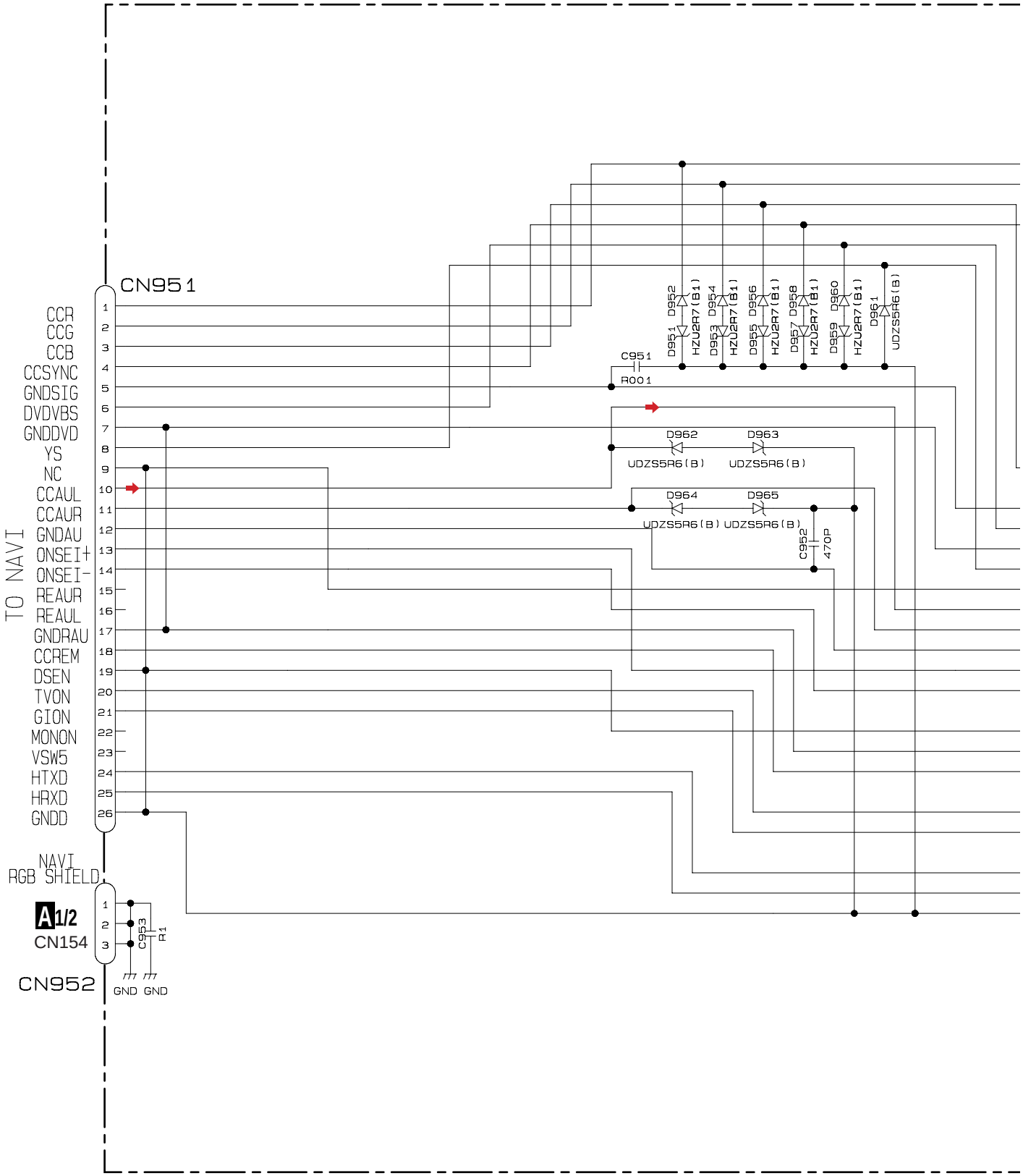
MONITOR UNIT
Consists of
MONITOR PCB
INVERTER PCB
UPPER PCB

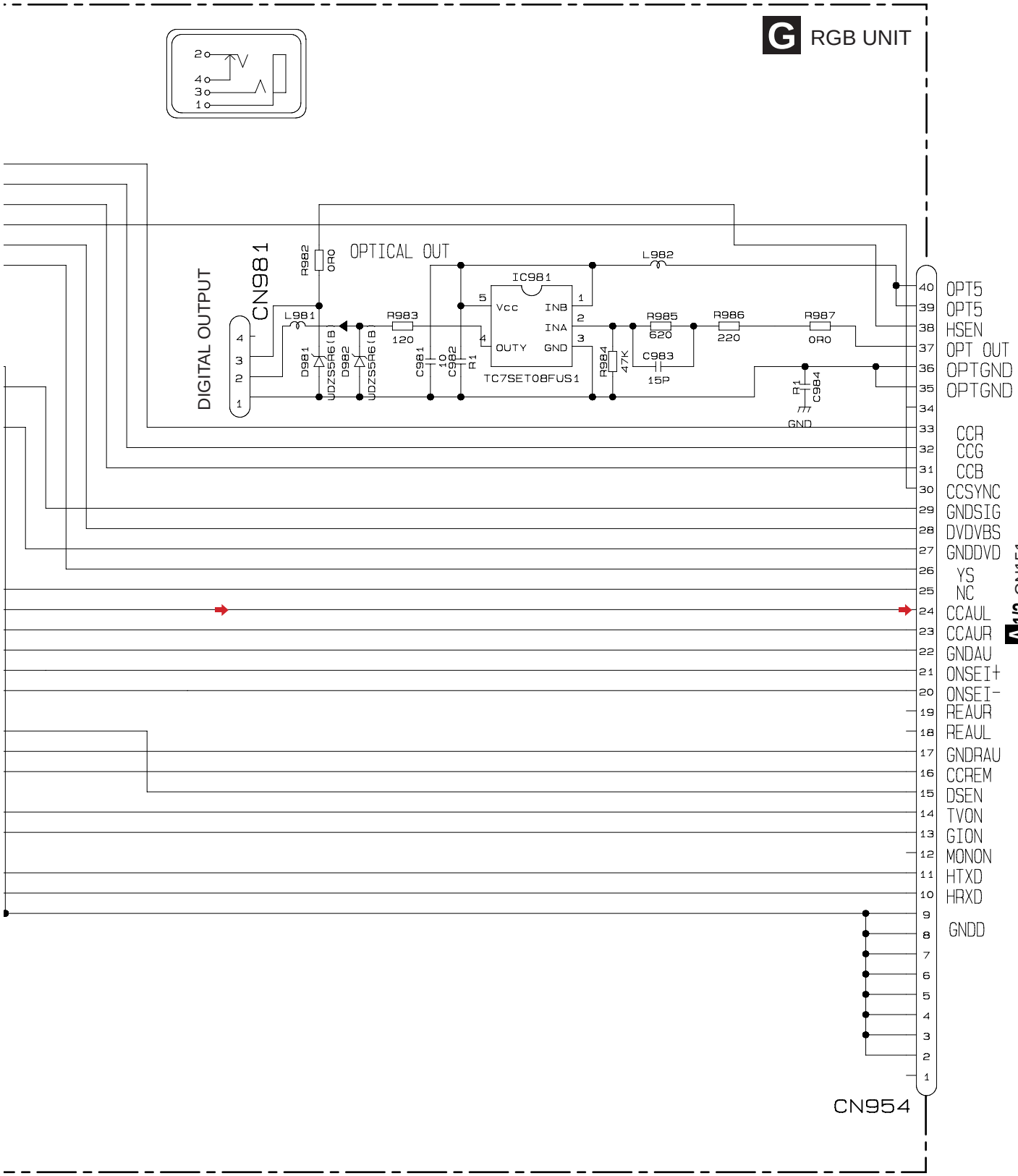
F INVERTER PCB



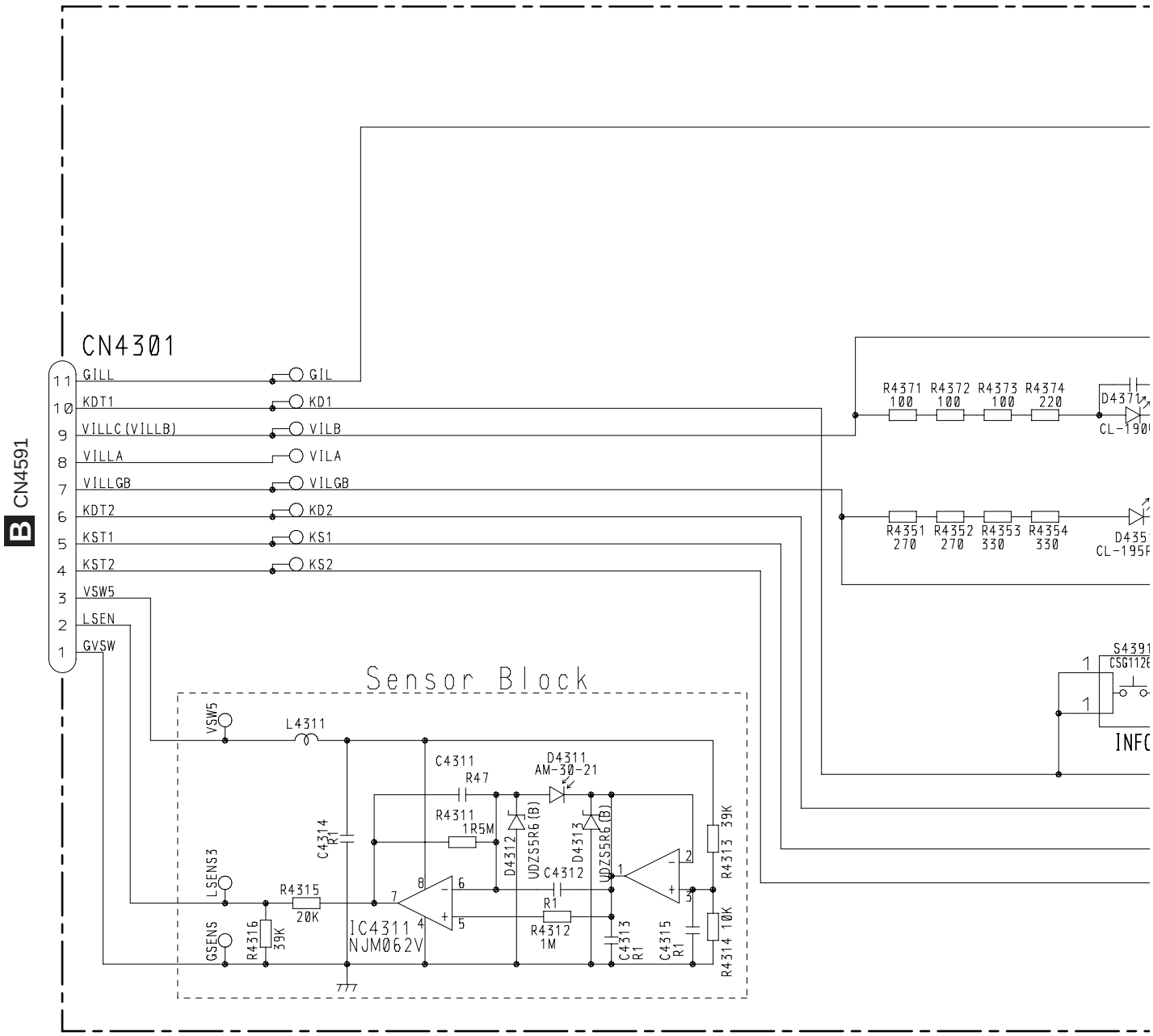
F

3.11 RGB UNIT


CN951
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
NC
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI-
REAUR
REAUL
GNDRAU
CCREM
DSEN
TVON
GION
MONON
VSW5
HTXD
HRXD
GNDD
TO NAVI
NAVI
RGB SHIELD
A1/2
CN154
CN952
C953
R1
GND GND
C951
R001
D951 D952 D953 D954 D955 D956 D957 D958 D959 D960 D961
HZU2R7(B1)
UDZS5R6(B)
D962 D963 D964 D965
C952
470P

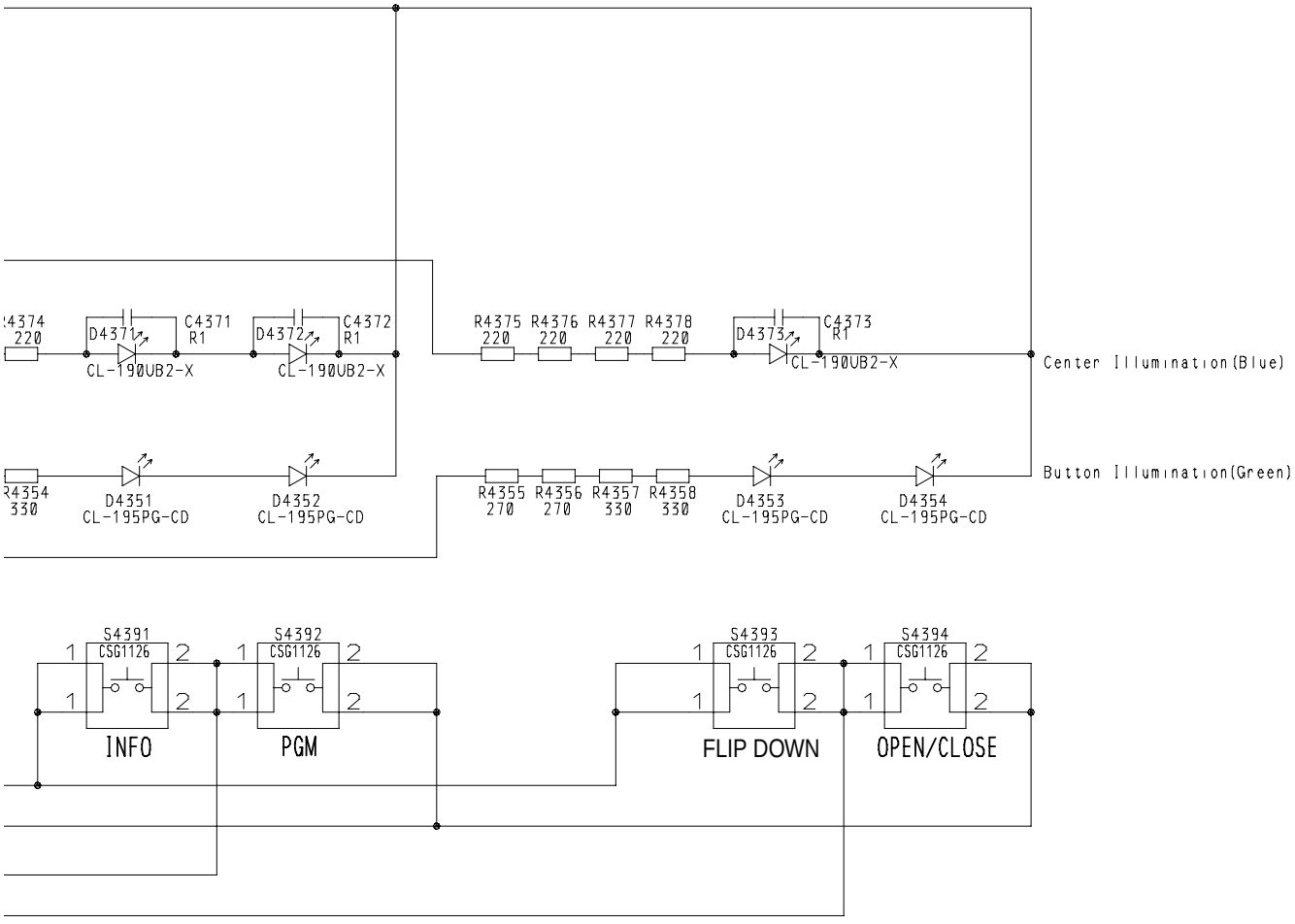

G RGB UNIT
DIGITAL OUTPUT
CN981
OPTICAL OUT
R982 0R0
L981
R983 120
D981 UDZS5R6(B)
D982 UDZS5R6(B)
C981 10
C982
R1
IC981
Vcc
INB
INA
OUTY
GND
TC7SET08FUS1
L982
R984 47K
R985 620
R986 220
R987 0R0
C983 15P
R1
C984
GND
OPT5
OPT5
HSEN
OPT OUT
OPTGND
OPTGND
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
NC
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI-
REAUR
REAUL
GNDRAU
CCREM
DSEN
TVON
GION
MONON
HTXD
HRXD
GNDD
A1/2 CN151
CN954

3.12 UPPER PCB

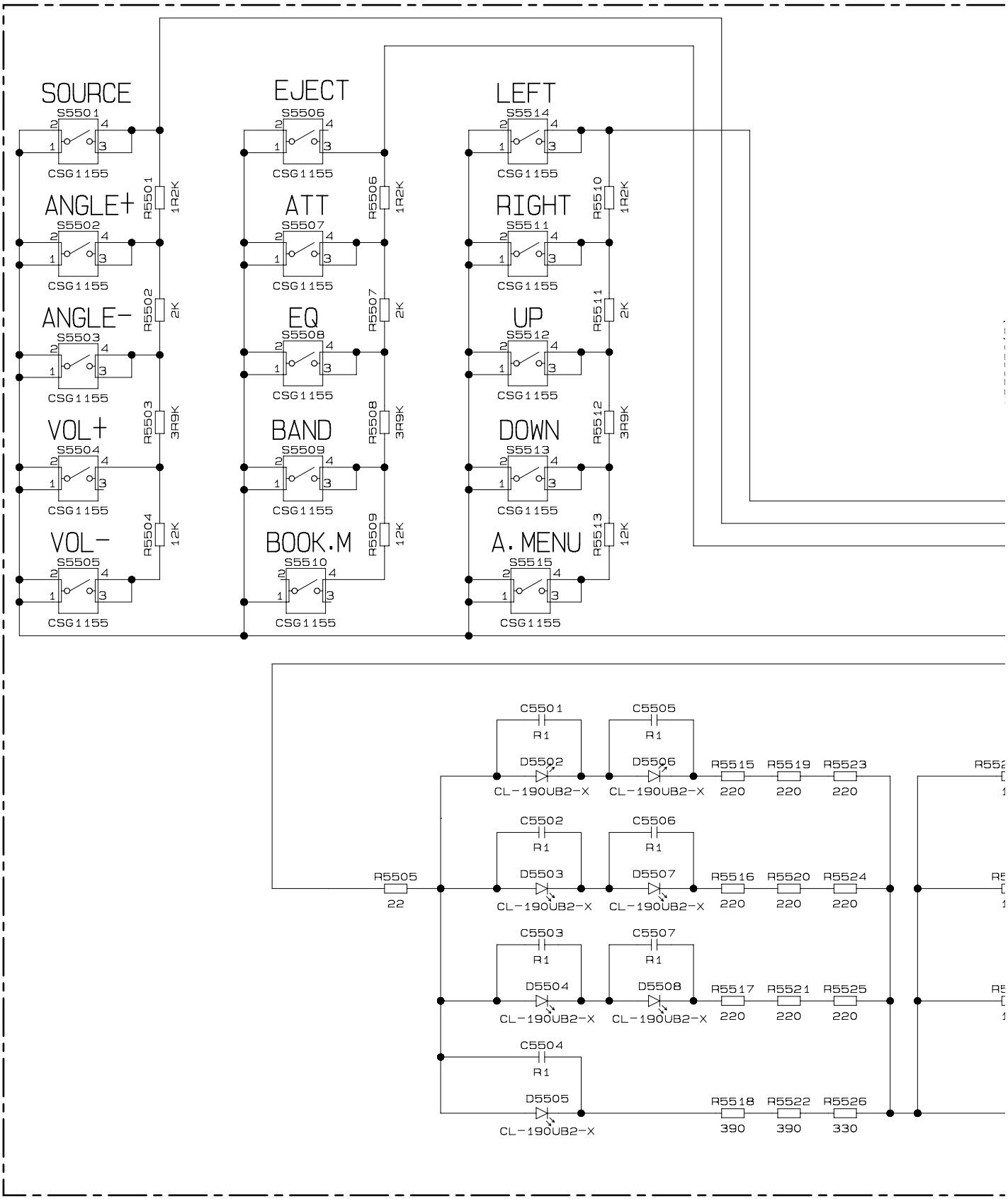


MONITOR UNIT
Consists of MONITOR PCB INVERTER PCB UPPER PCB

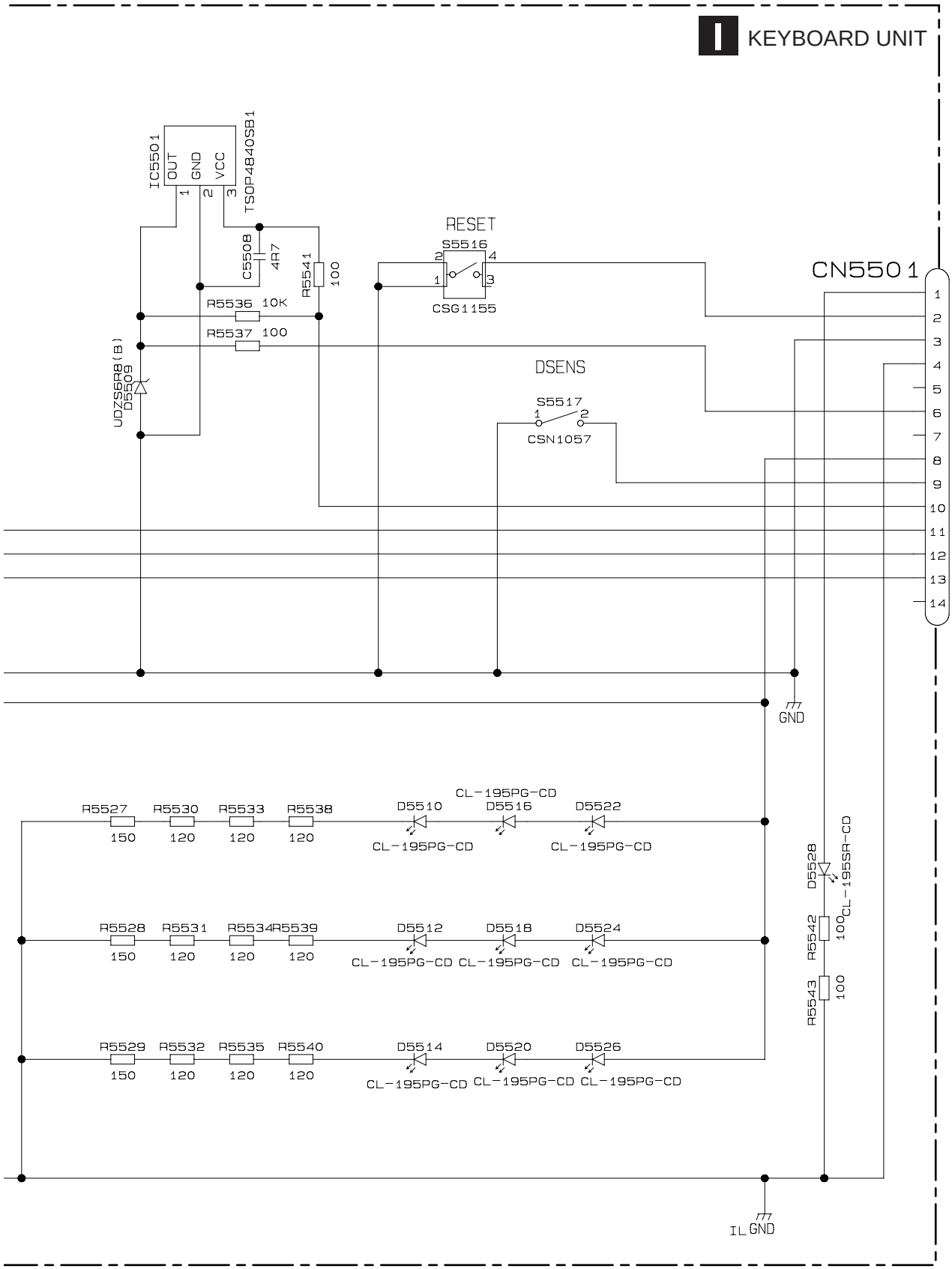
H UPPER PCB



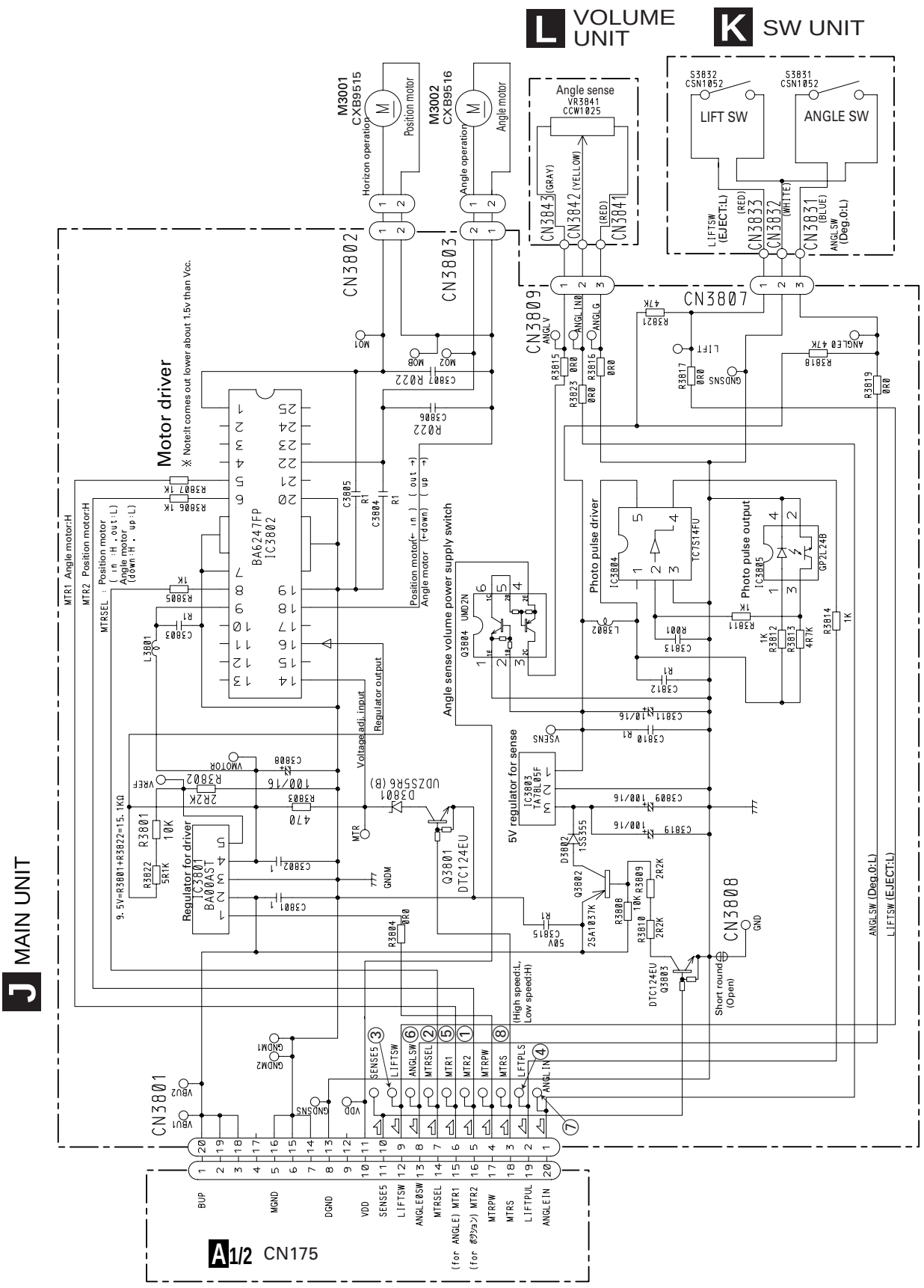
3.13 KEYBOARD UNIT



I KEYBOARD UNIT



3.14 MAIN UNIT, SW UNIT AND VOLUME UNIT

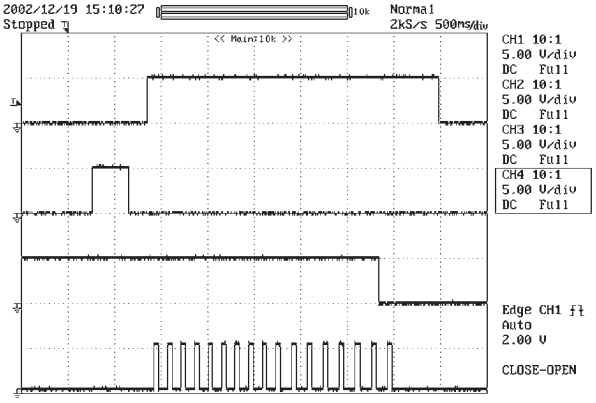


● Waveforms

The encircled number denote measuring pointes in the circuit diagram.

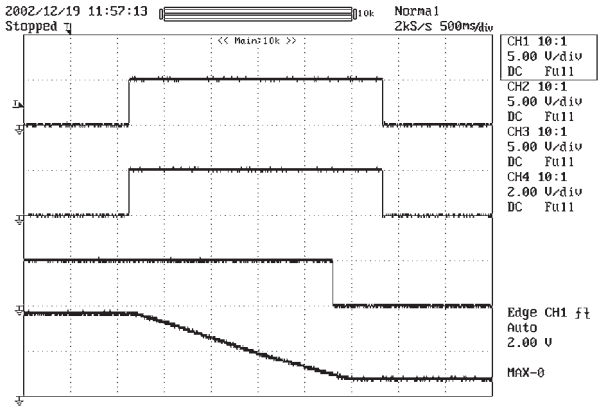
• CLOSE -> OPEN

① CH1:MTR2 ② CH2:MTRSEL
③ CH3:LIFTSW ④ CH4:LFTPLS



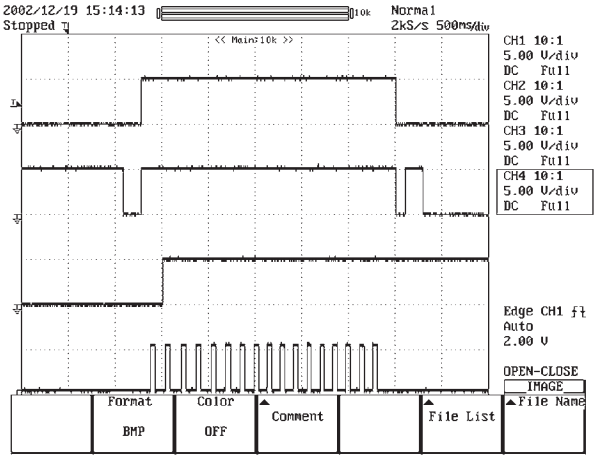
• MAX -> Deg.0 DOWN

⑤ CH1:MTR1 ② CH2:MTRSEL
⑥ CH3:ANGLSW ⑦ CH4:ANGLIN



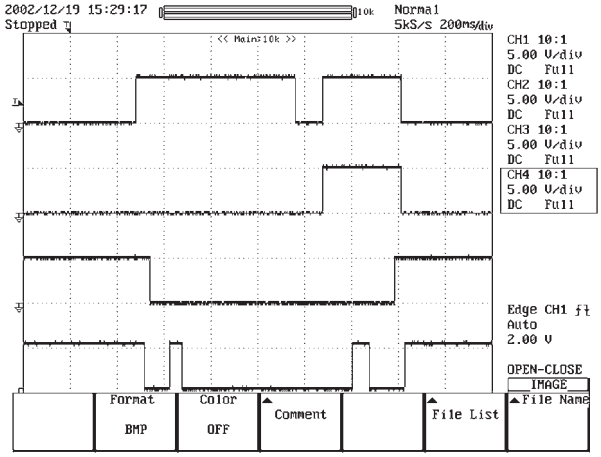
• OPEN -> CLOSE

① CH1:MTR2 ② CH2:MTRSEL
③ CH3:LIFTSW ④ CH4:LFTPLS



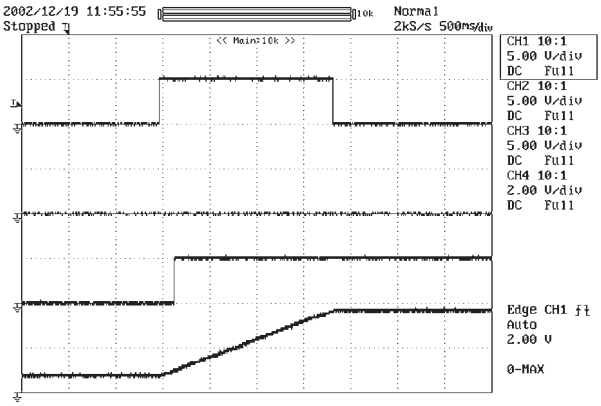
• Set back open -> Set

① CH1:MTR2 ⑧ CH2:MTRS
③ CH3:LIFTSW ④ CH4:LFTPLS



• 0->MAX

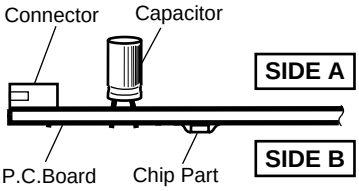
⑤ CH1:MTR1 ② CH2:MTRSEL
⑥ CH3:ANGLSW ⑦ CH4:ANGLIN

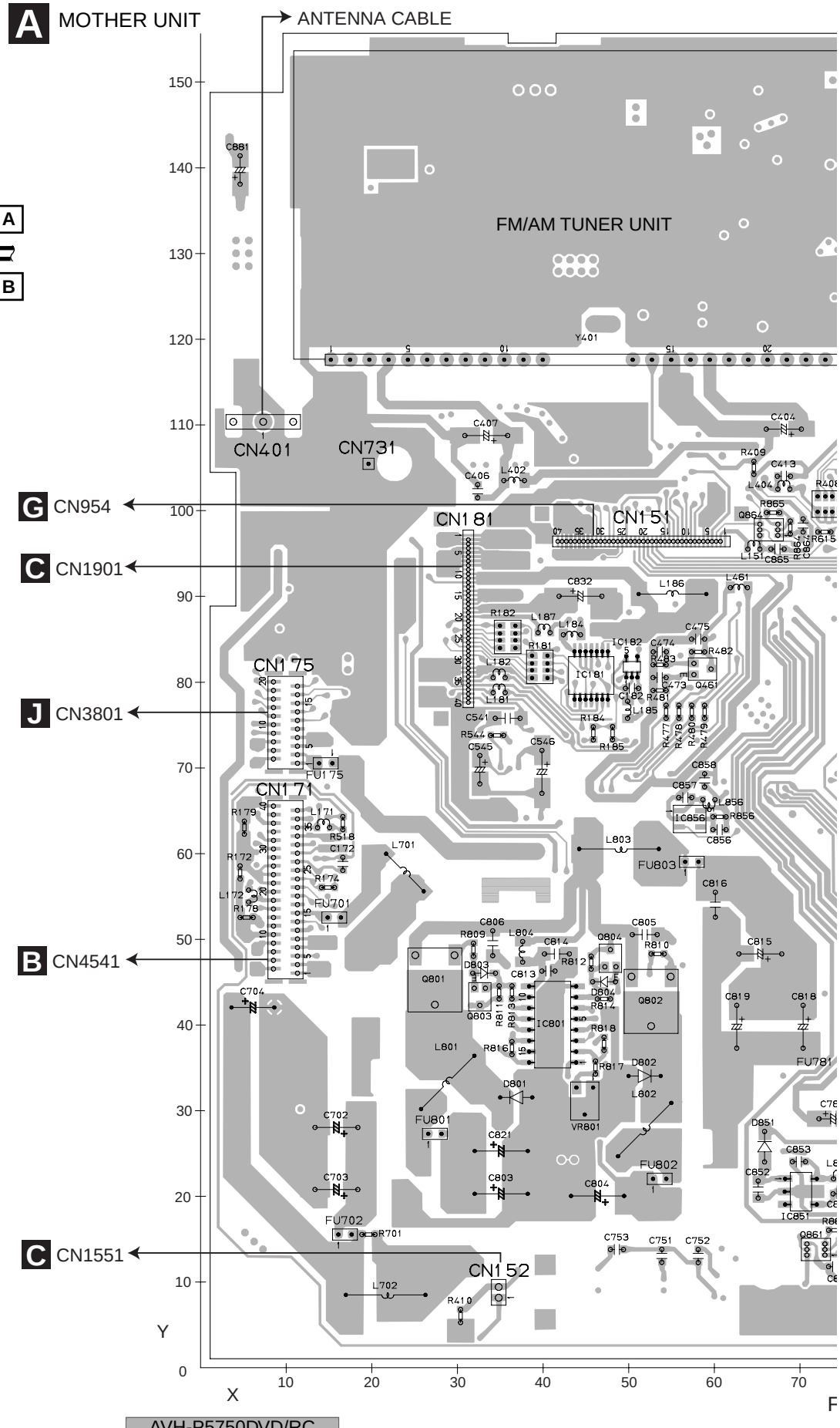


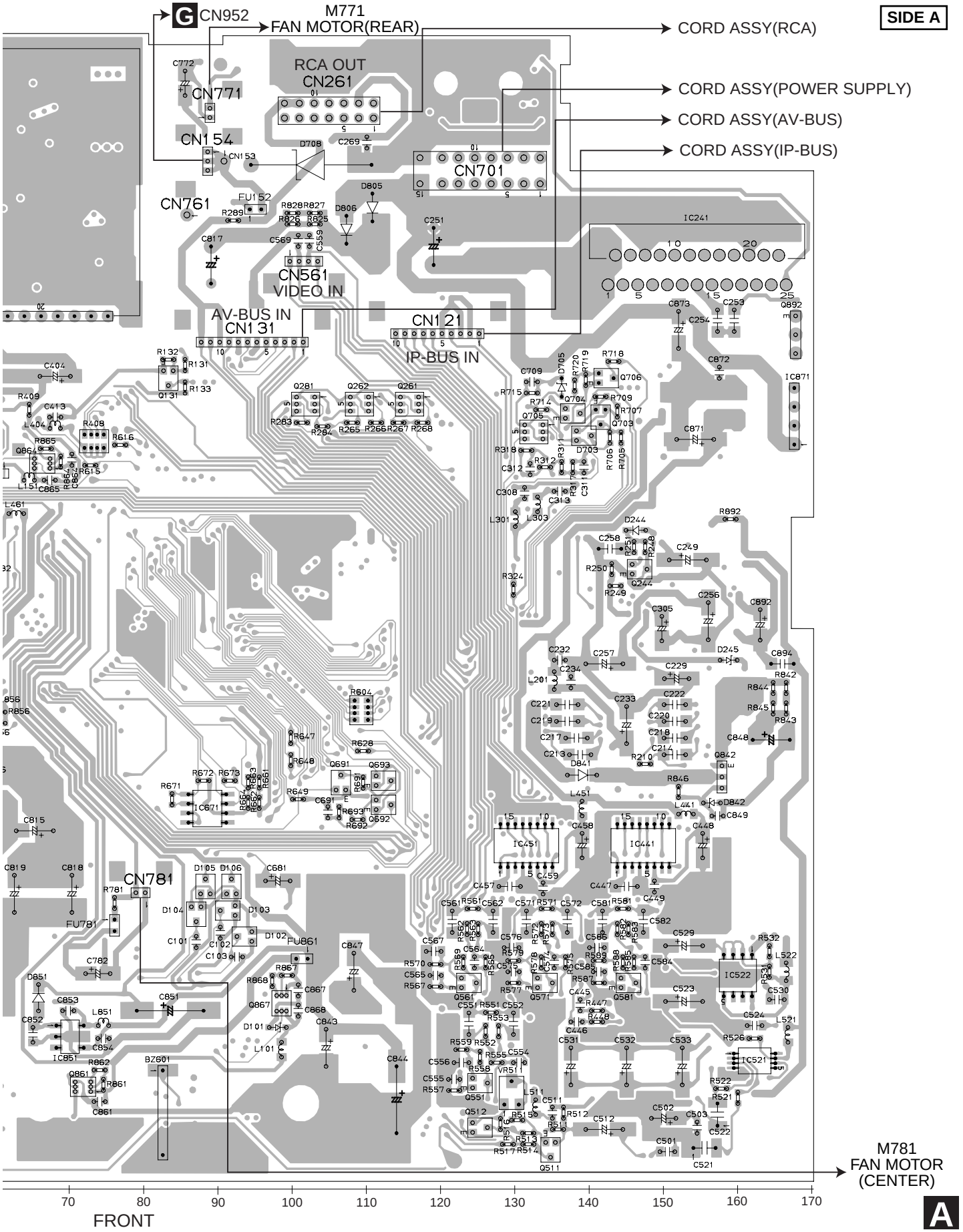
4. PCB CONNECTION DIAGRAM
4.1 MOTHER UNIT

NOTE FOR PCB DIAGRAMS

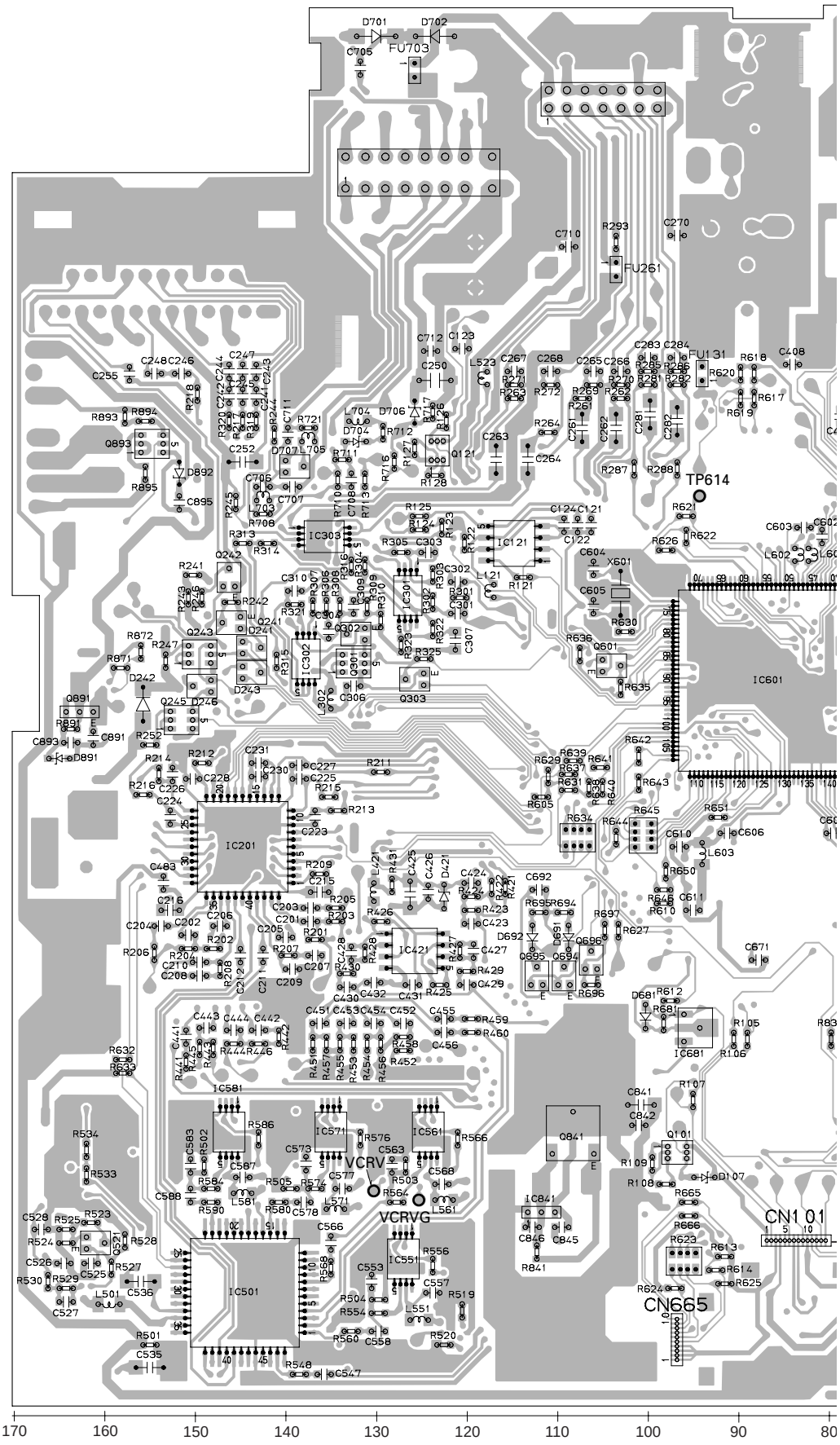
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



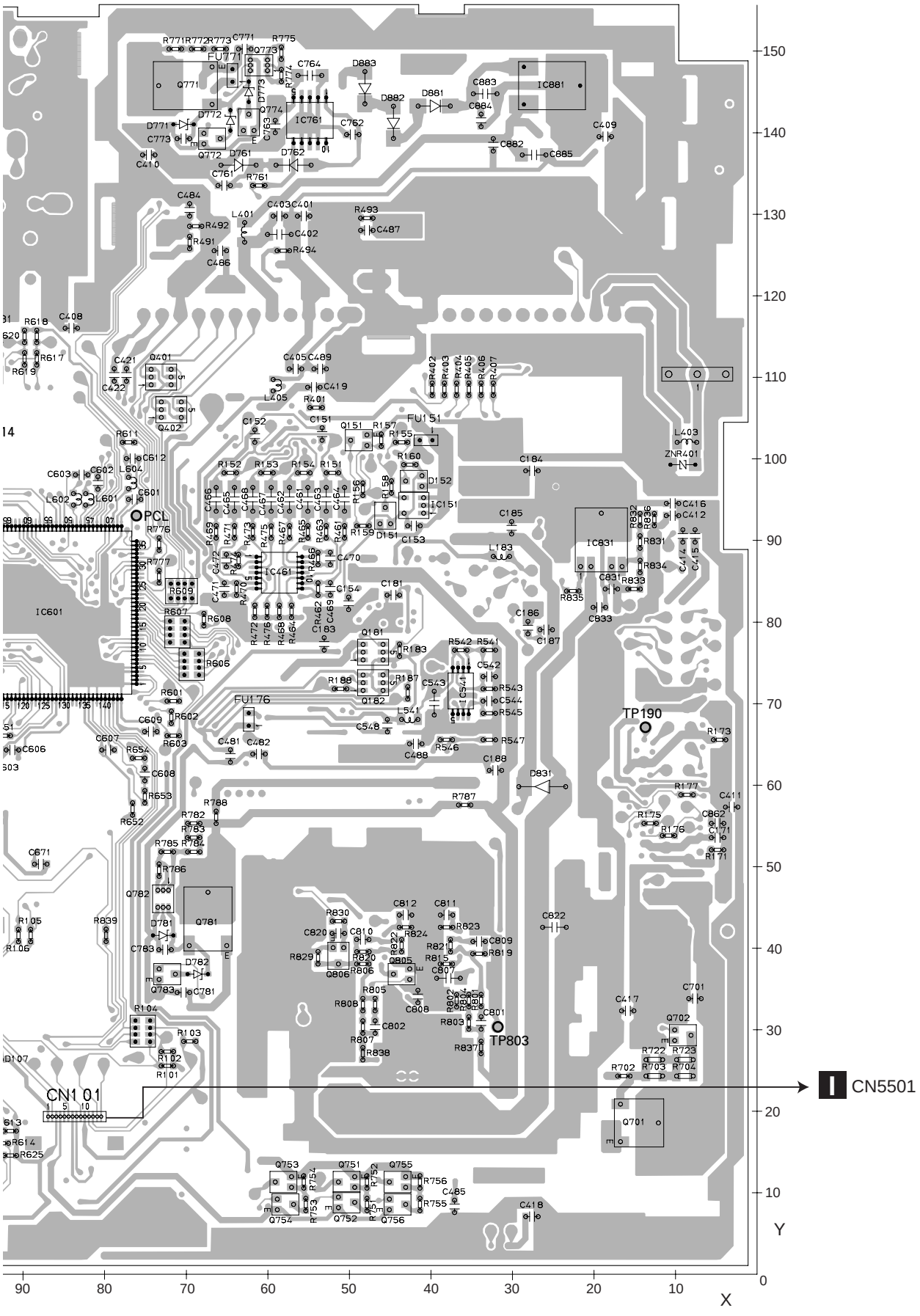



G CN952
M771
FAN MOTOR(REAR)
CORD ASSY(RCA)
CORD ASSY(POWER SUPPLY)
CORD ASSY(AV-BUS)
CORD ASSY(IP-BUS)
SIDE A
RCA OUT
CN261
CN771
CN154
CN153
CN701
CN761
FU152
CN561
VIDEO IN
AV-BUS IN
CN131
CN121
IP-BUS IN
IC241
IC871
IC671
IC451
IC441
IC522
IC521
IC851
CN781
FU781
FU861
BZ601
M781
FAN MOTOR
(CENTER)
FRONT
A
B
C
D
E
F

A MOTHER UNIT



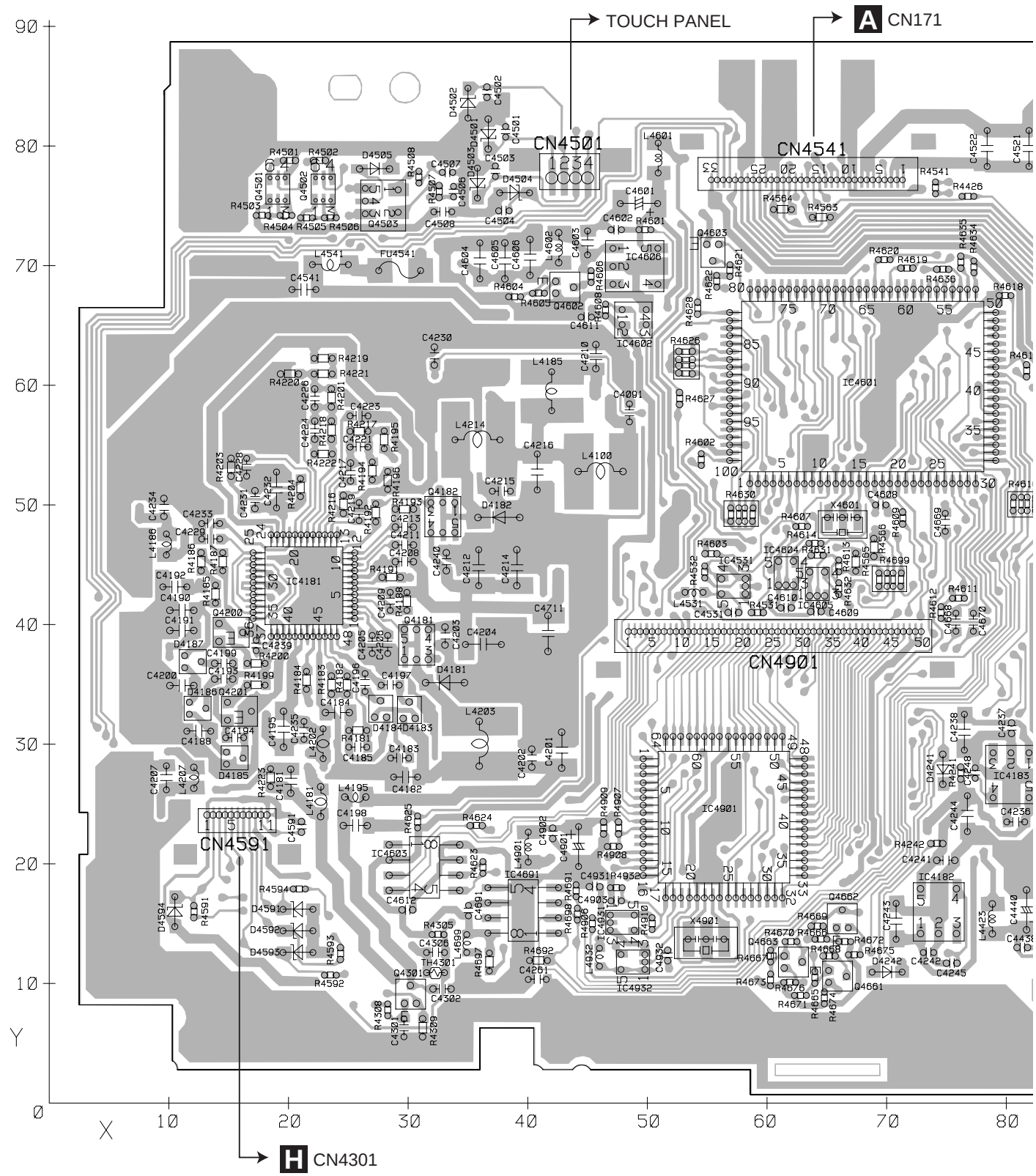
SIDE B



AVH-P5750DVD/RC

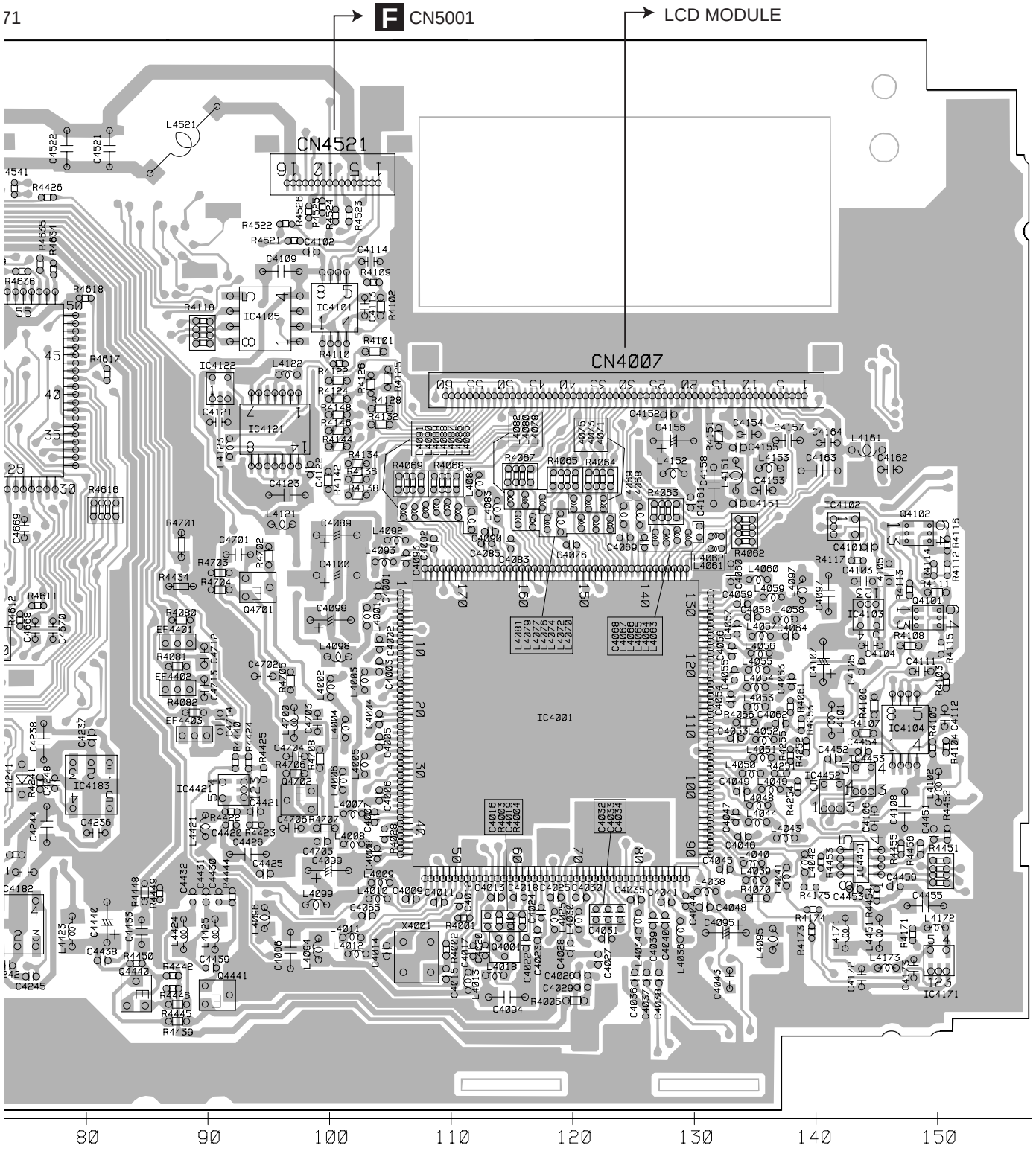
4.2 MONITOR PCB

B MONITOR PCB



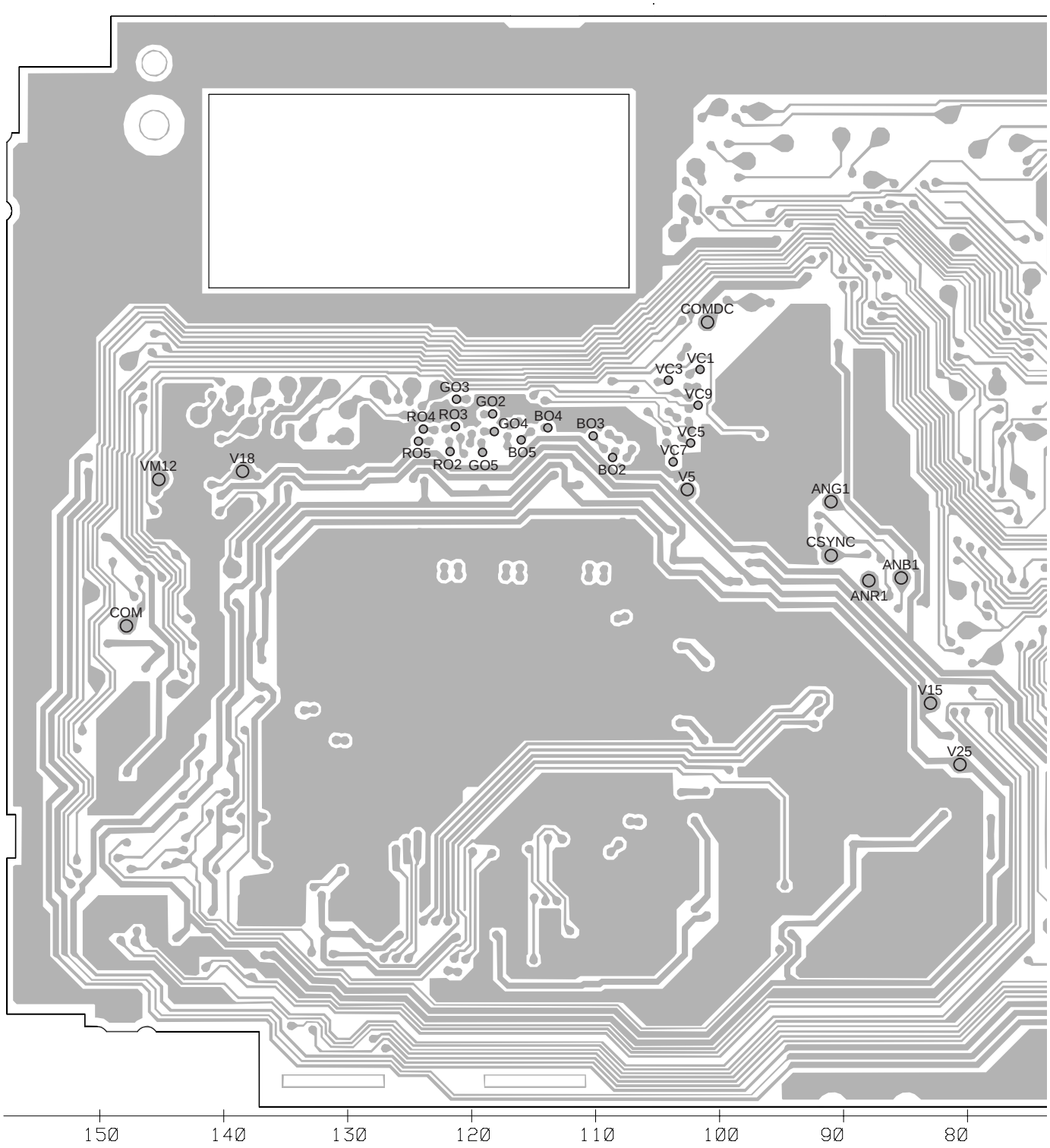
B

SIDE A


71
F CN5001
LCD MODULE
CN4521
CN4007
IC4001
80 90 100 110 120 130 140 150

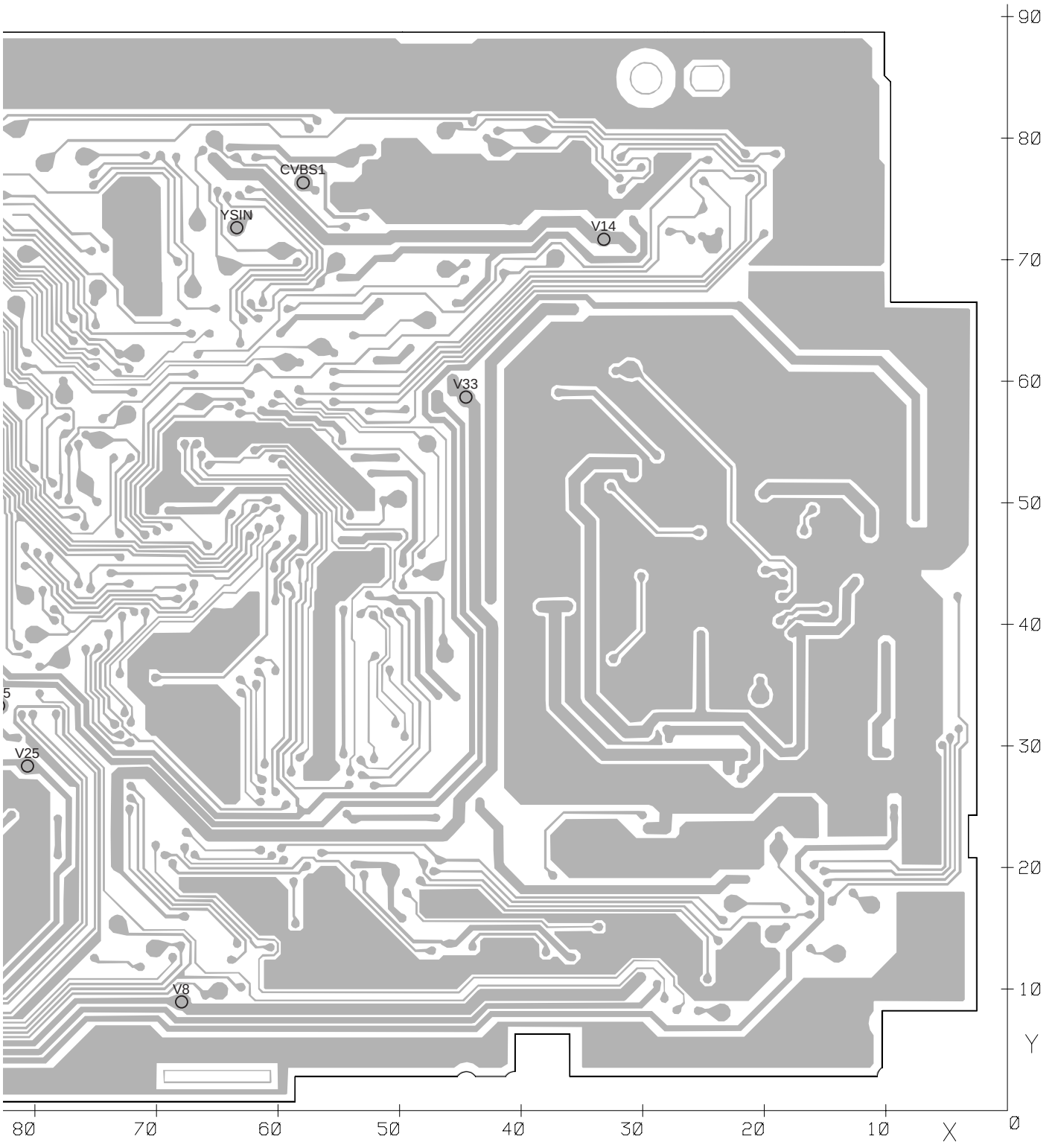
A

B MONITOR PCB



B

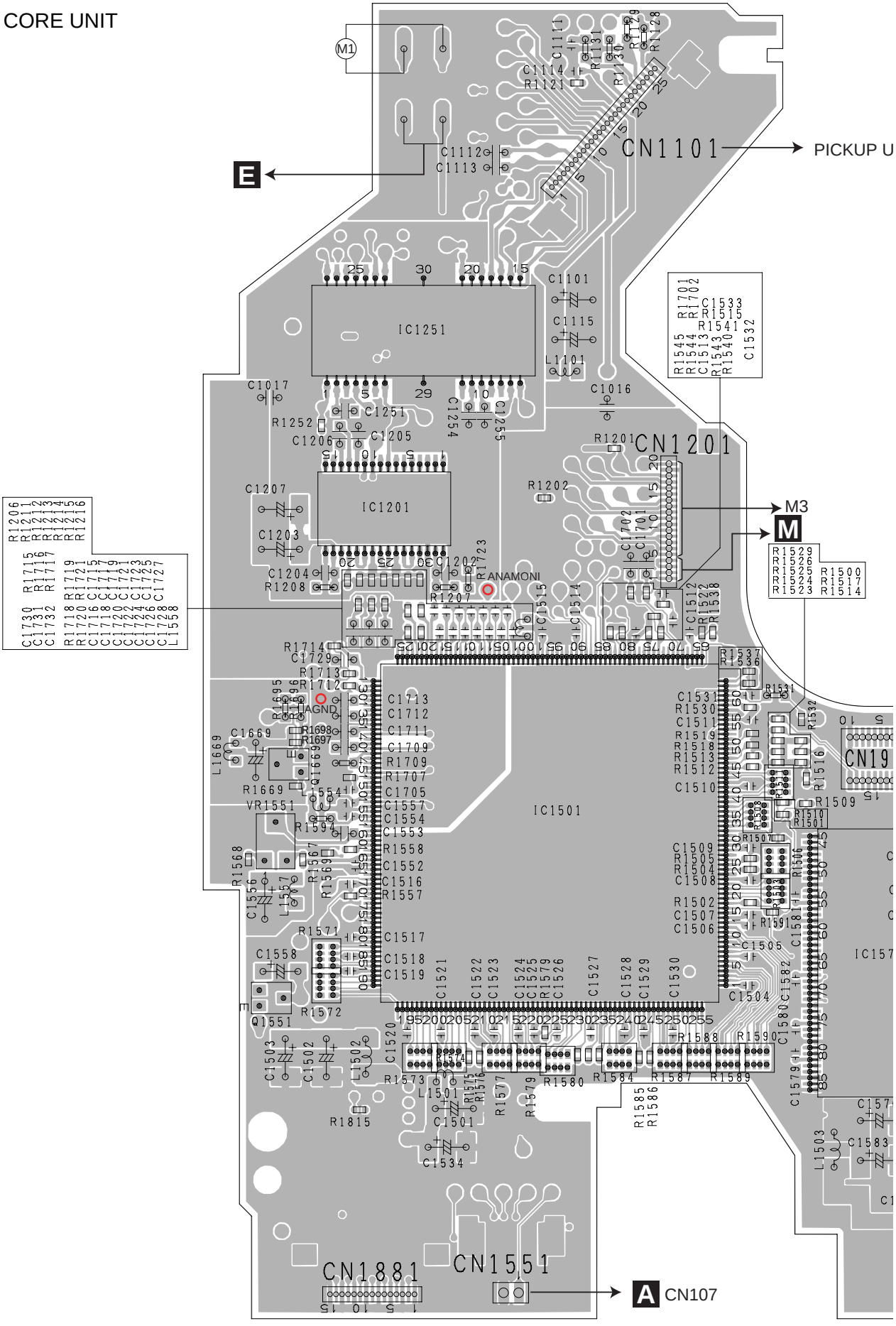
SIDE B


CVBS1
YSIN
V14
V33
V25
V8
90
80
70
60
50
40
30
20
10
0
Y
80
70
60
50
40
30
20
10
X

B

4.3 DVD CORE UNIT

C DVD CORE UNIT



SIDE A

A

B

C

D

E

F

IC,Q

IC1251

IC1201

Q1669

VR1551
IC1501

IC1051
IC1003

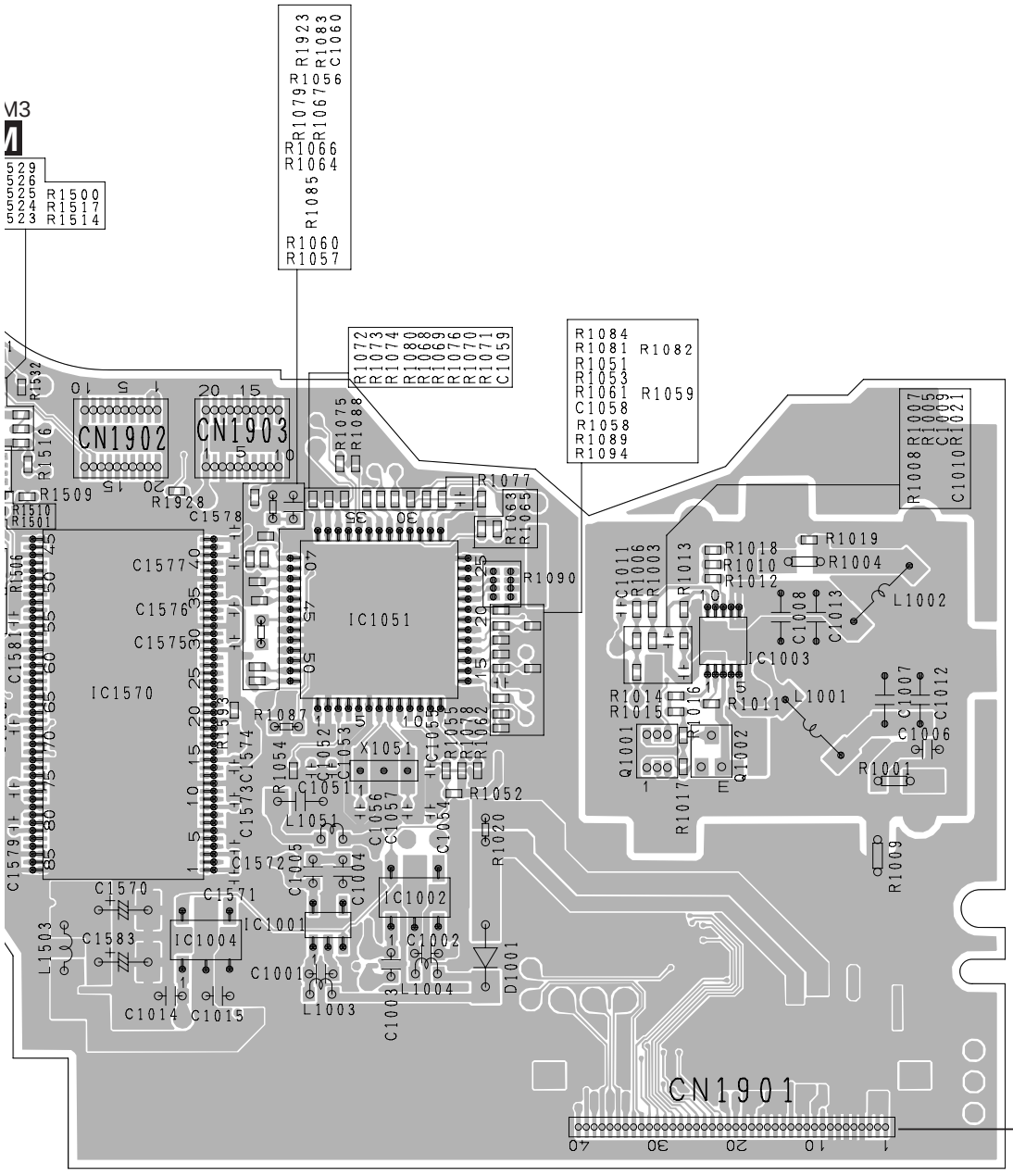
IC1570

Q1001
Q1551
Q1002

IC1002

IC1001
IC1004

➔ PICKUP UNIT(SERVICE)

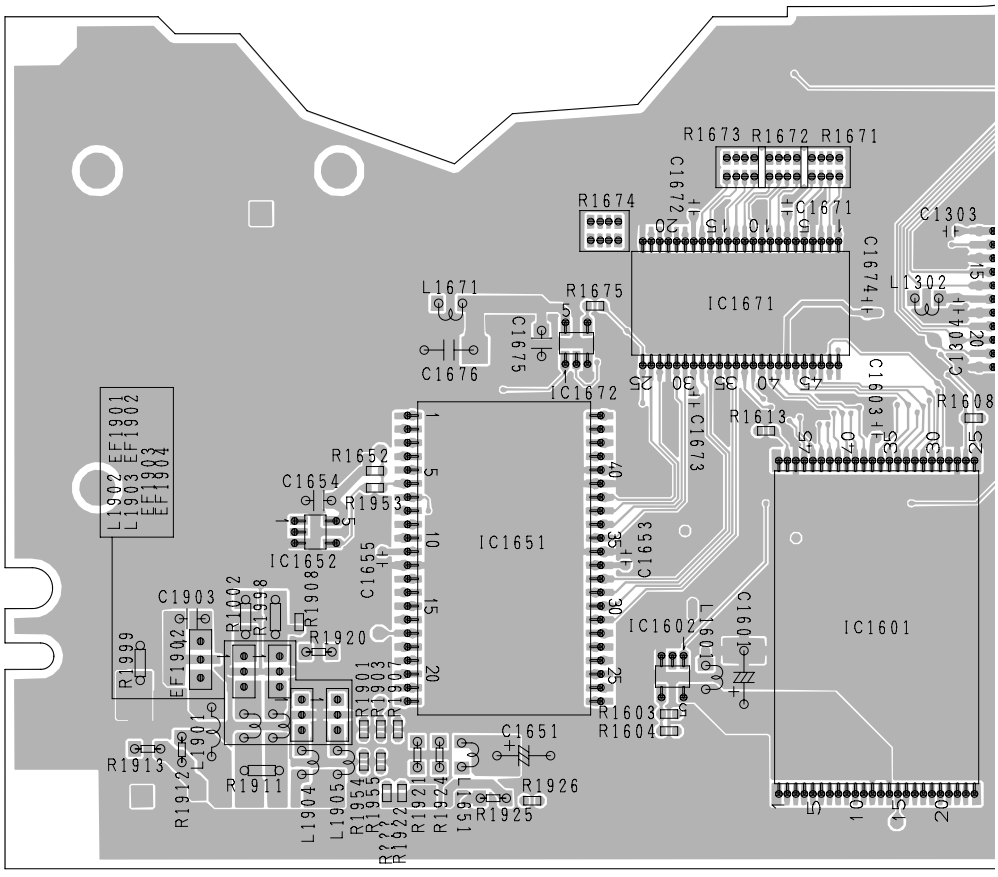


C

C DVD CORE UNIT

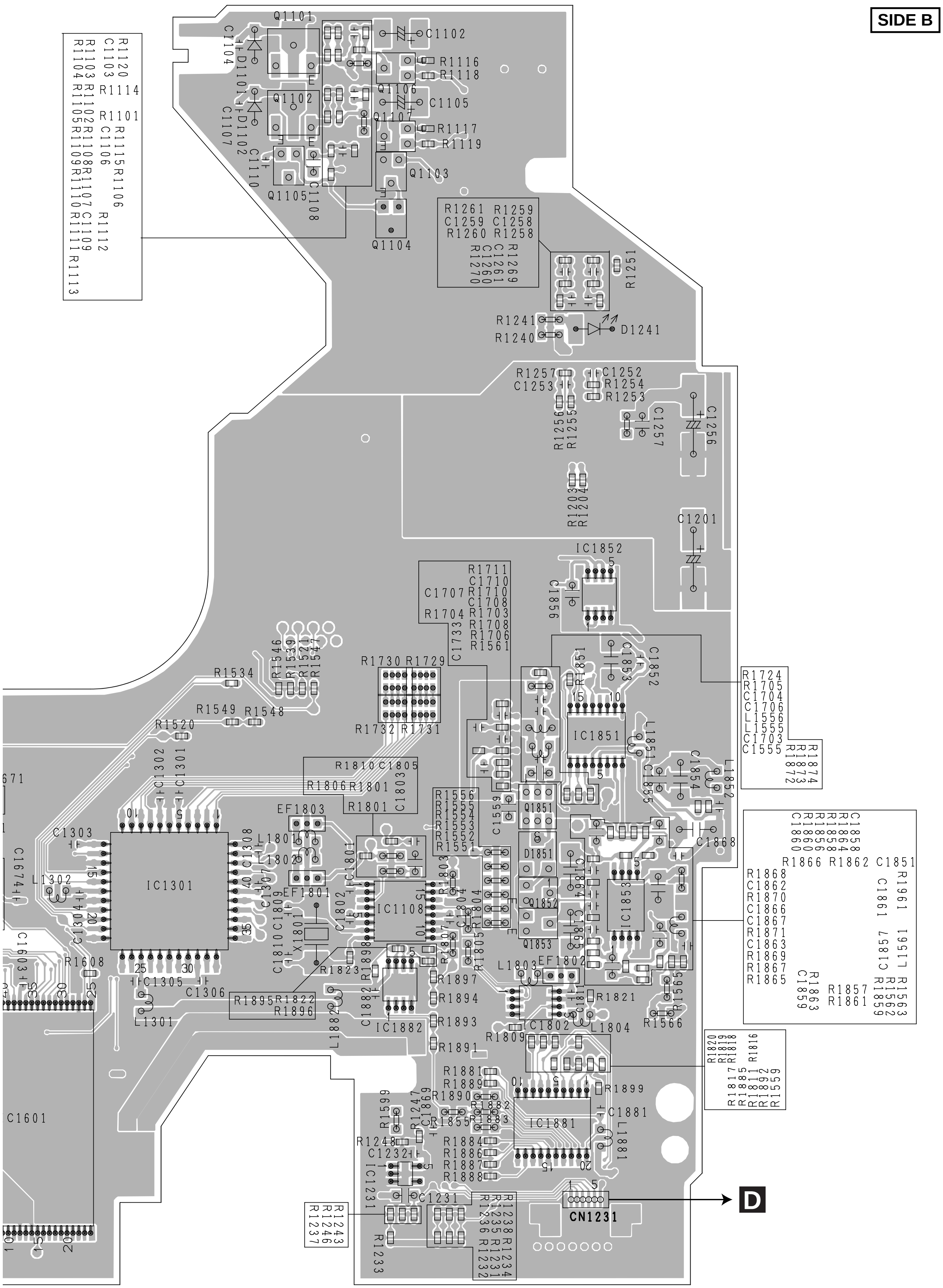
IC,Q
Q1101
Q1106
Q1102
Q1107
Q1103
Q1105
Q1104
IC1852
IC1851
Q1851
IC1301 Q1852
IC1671
IC1672
IC1108 IC1853
Q1853 IC1882
IC1802
IC1651
IC1652
IC1881
IC1601
IC1602
IC1231

R1103 R1102 R1108 R1107 C1109
R1104 R1105 R1109 R1110 R1111 R1113



C

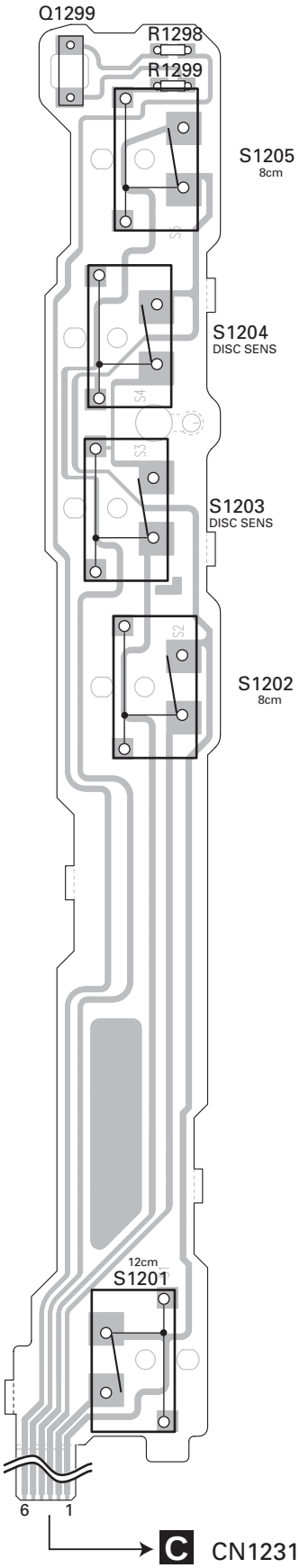
A
B
C
D
E
F


SIDE B
Q1101
Q1102
Q1103
Q1104
Q1105
Q1106
Q1107
D1241
IC1852
IC1851
IC1301
IC1108
IC1882
IC1802
IC1881
IC1853
IC1231
Q1851
Q1852
Q1853
D1851
EF1801
EF1802
EF1803
C1601
CN1231
D

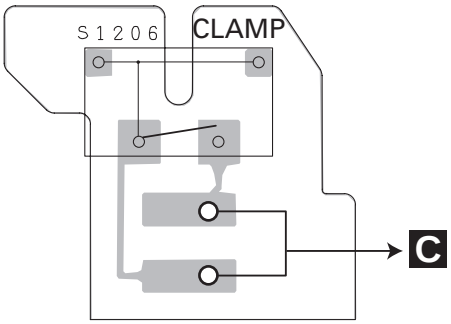
C

4.4 COMPOUND UNIT(A) , COMPOUND UNIT(B) ANP RELAY PCB

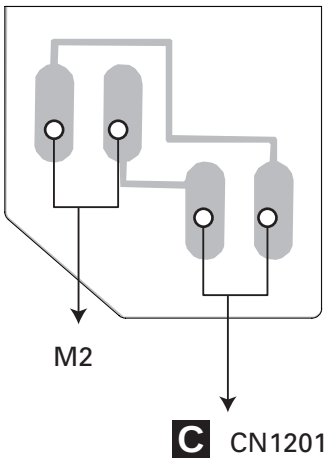
D COMPOUND UNIT(A)



E COMPOUND UNIT(B)



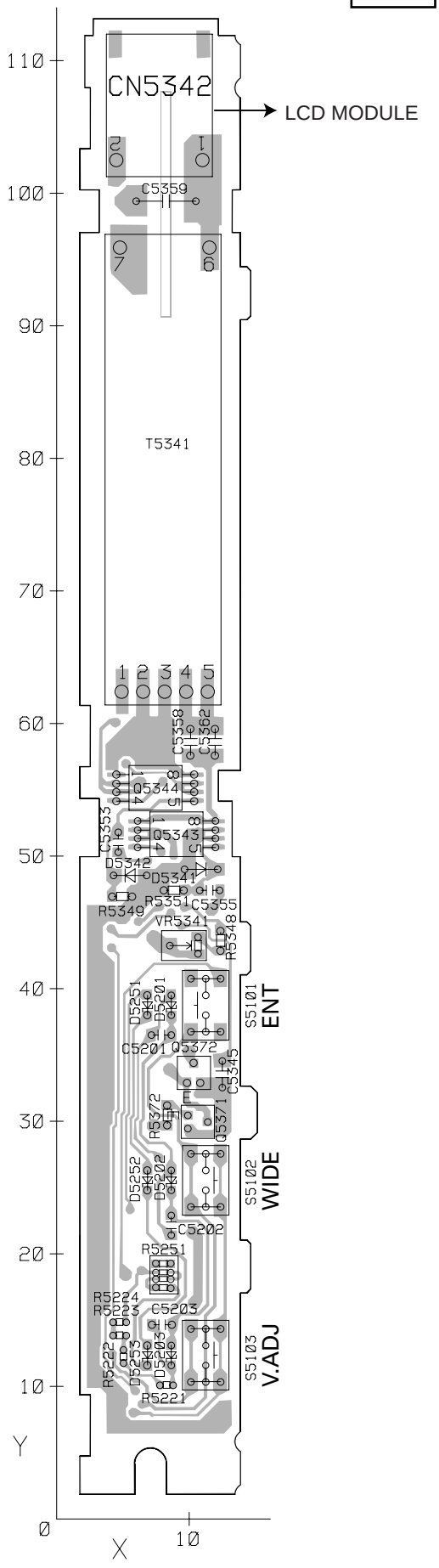
M RELAY PCB



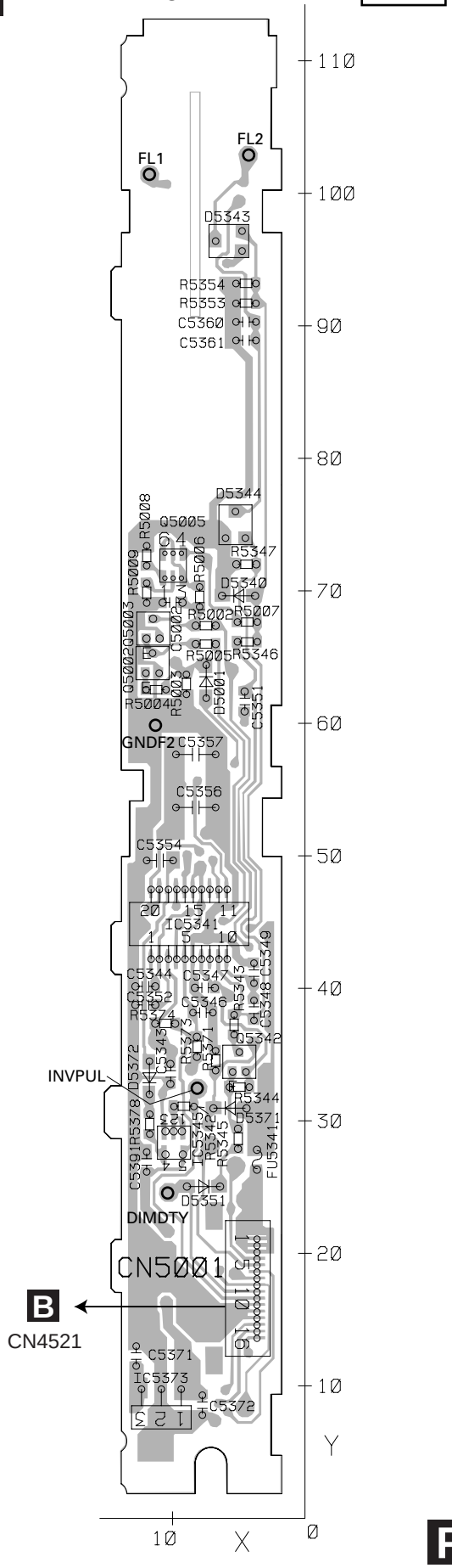
D E M

4.5 INVERTER PCB

F INVERTER PCB **SIDE A**



F INVERTER PCB **SIDE B**

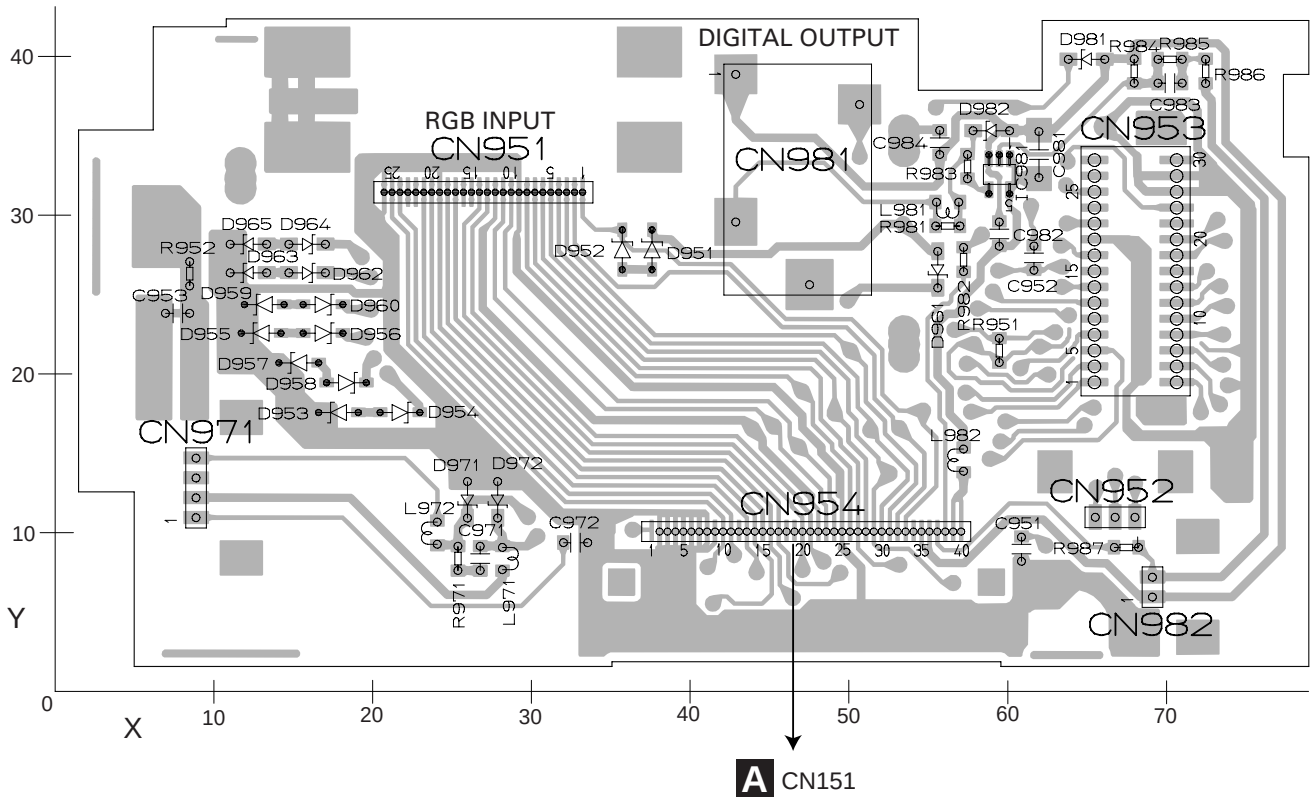


F

4.6 RGB UNIT

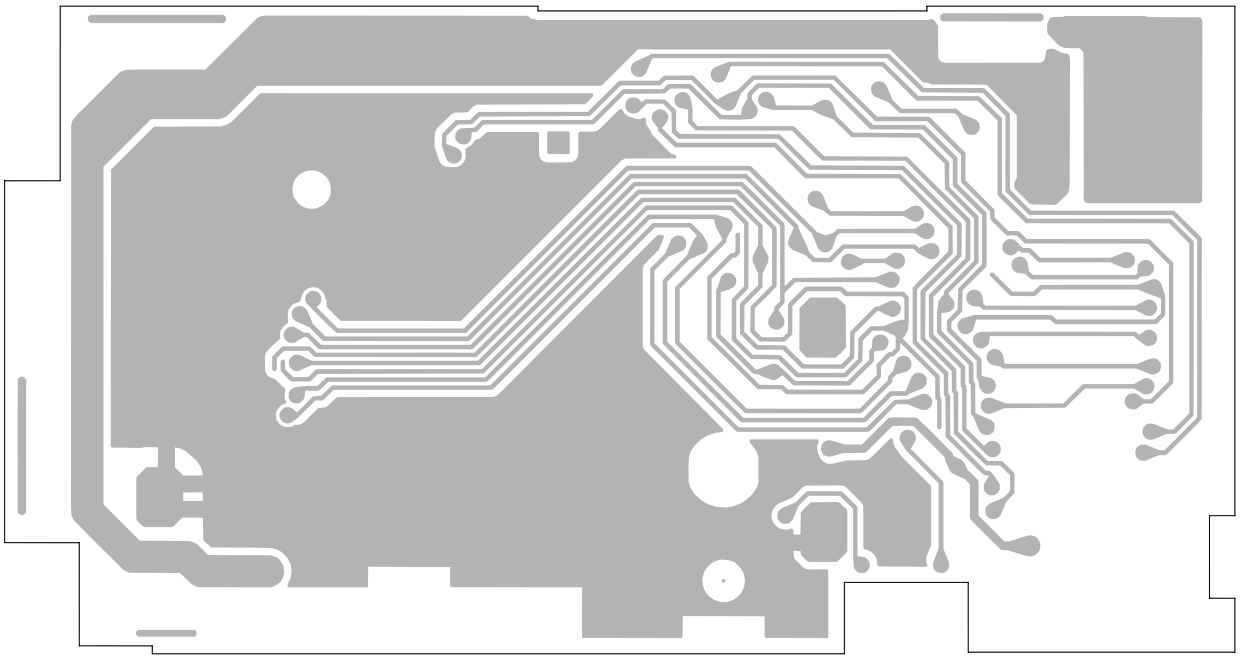
G RGB UNIT

SIDE A



G RGB UNIT

SIDE B

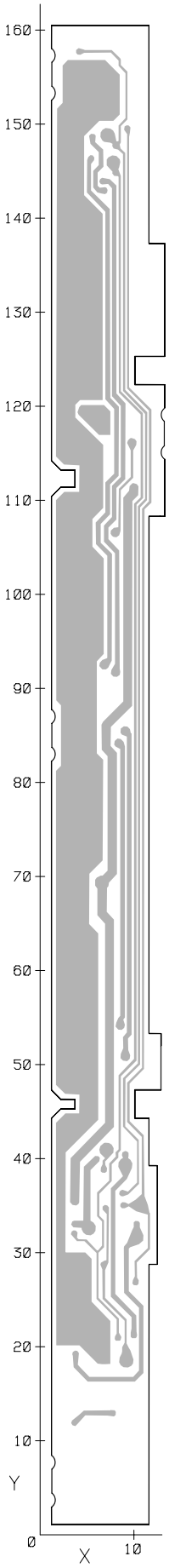


G

4.7 UPPER PCB

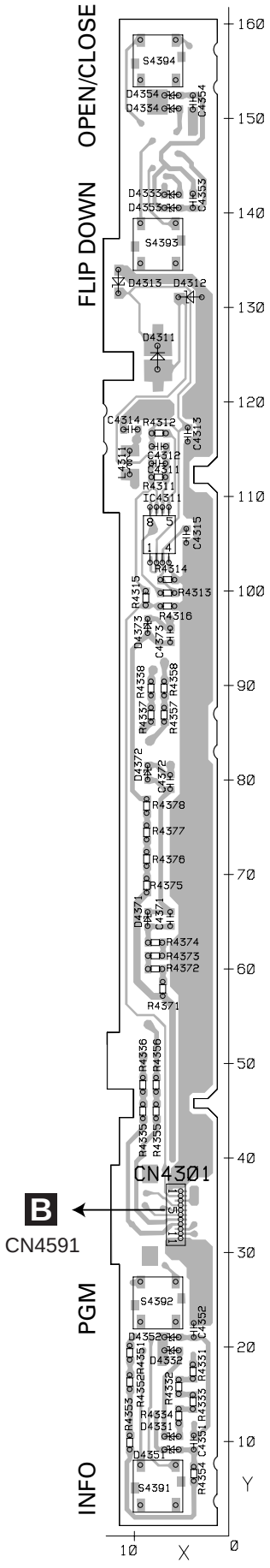
H UPPER PCB

SIDE A

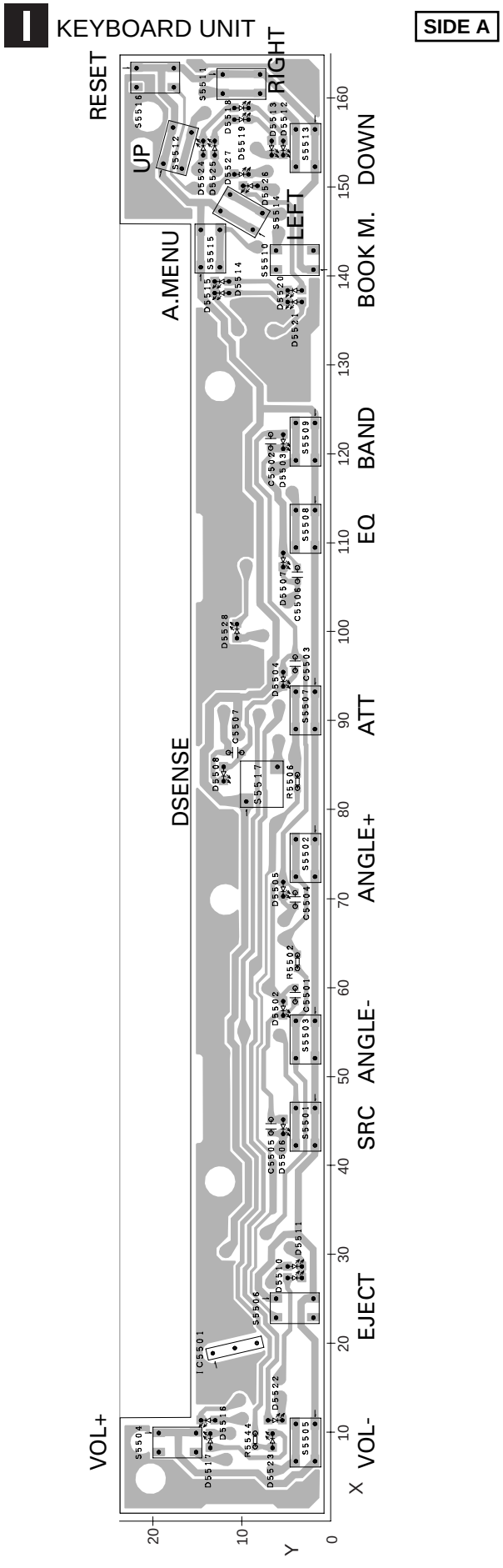


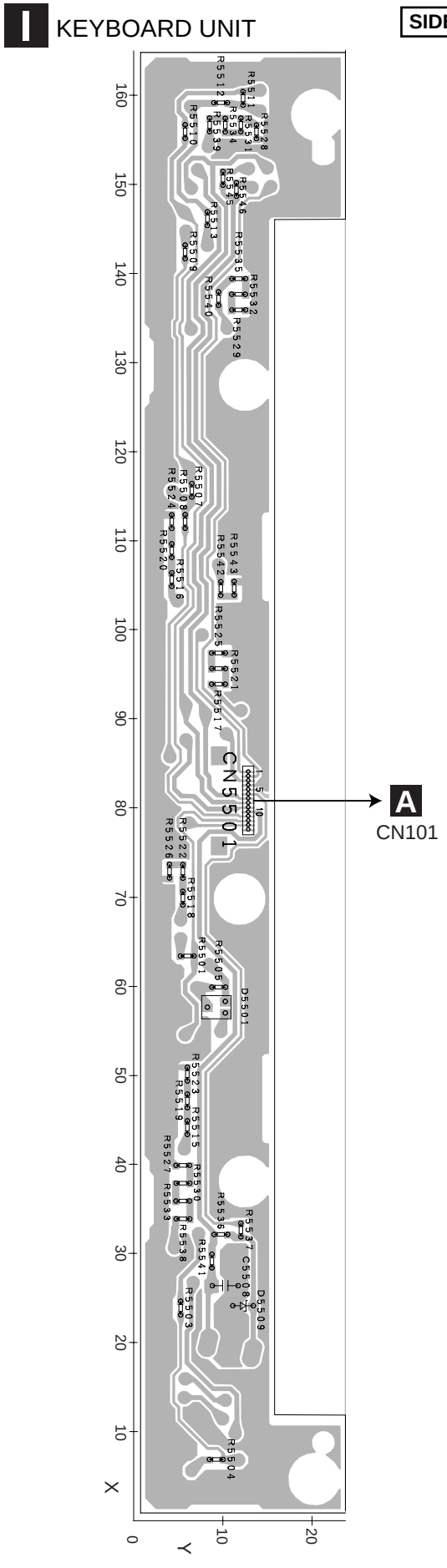
H UPPER PCB

SIDE B



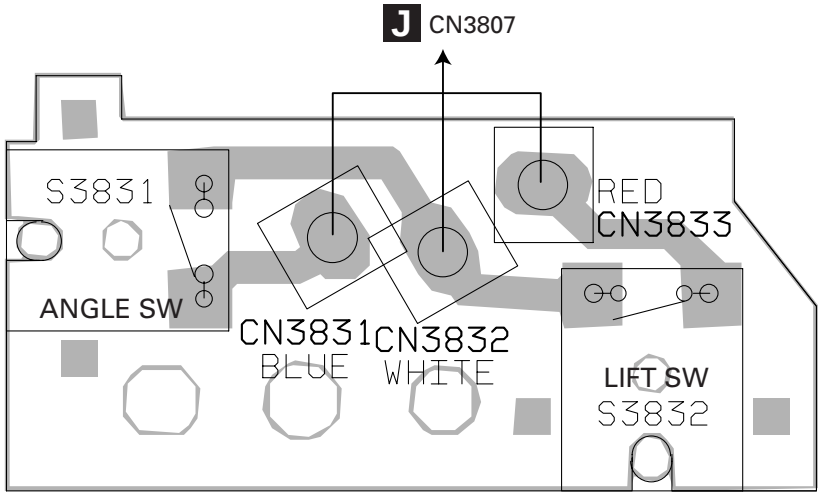
4.8 KEYBOARD UNIT



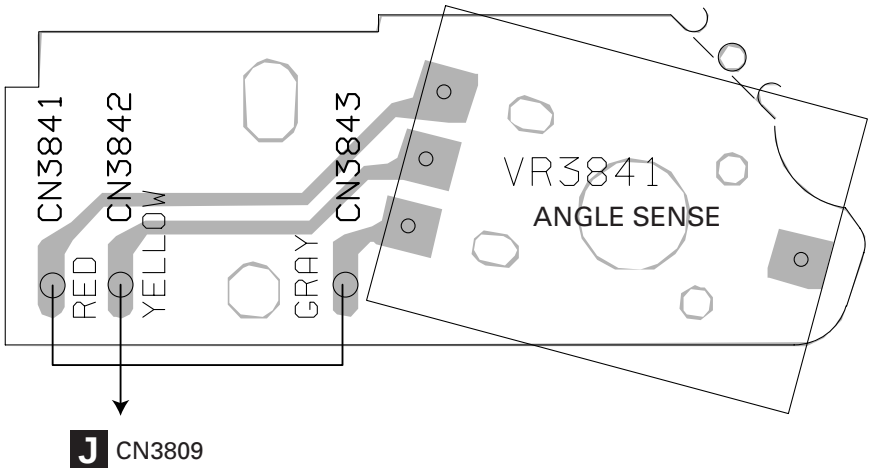


4.9 SW UNIT AND VOLUME UNIT

K SW UNIT



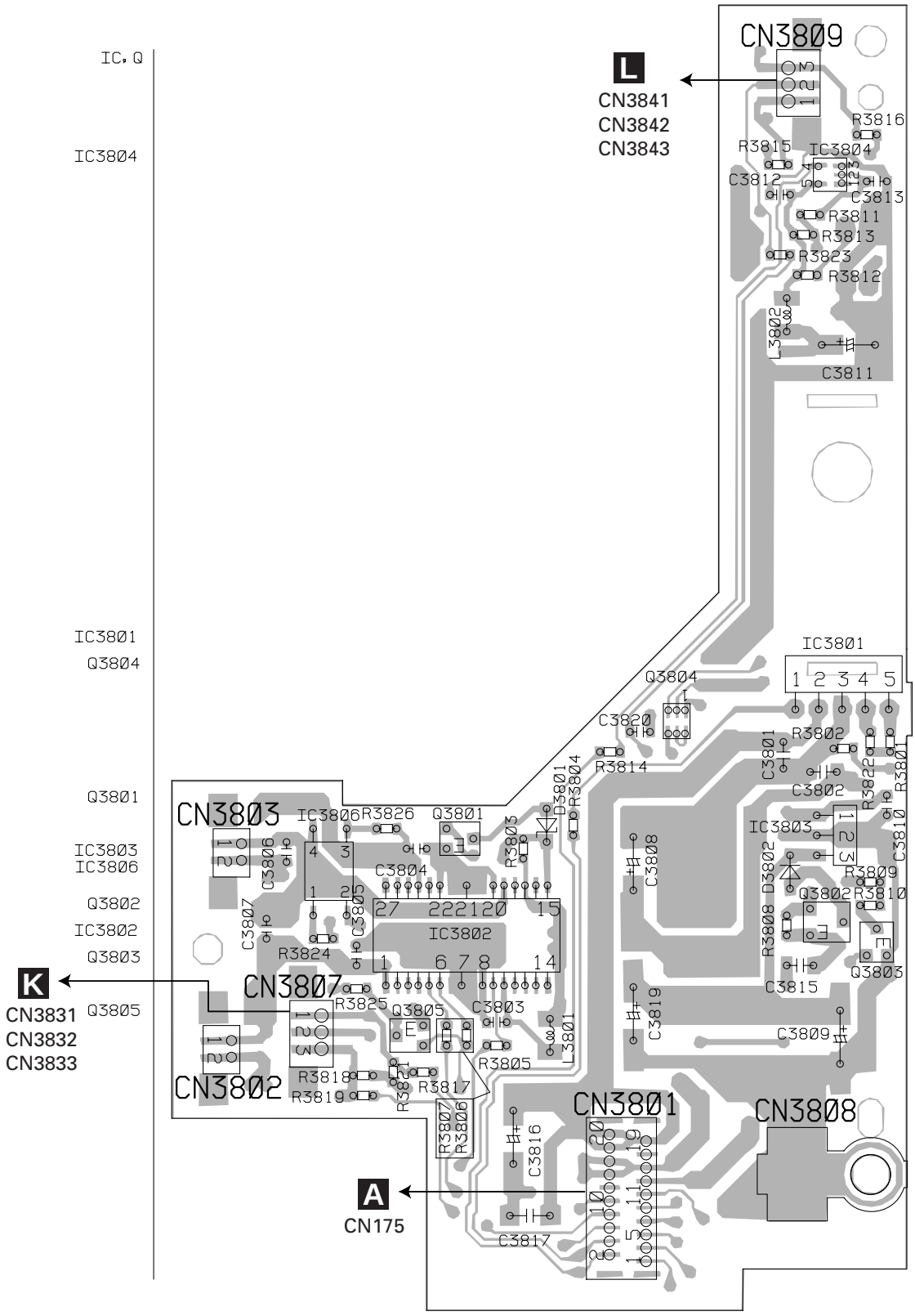
L VOLUME UNIT



4.10 MAIN UNIT

J MAIN UNIT

SIDE A



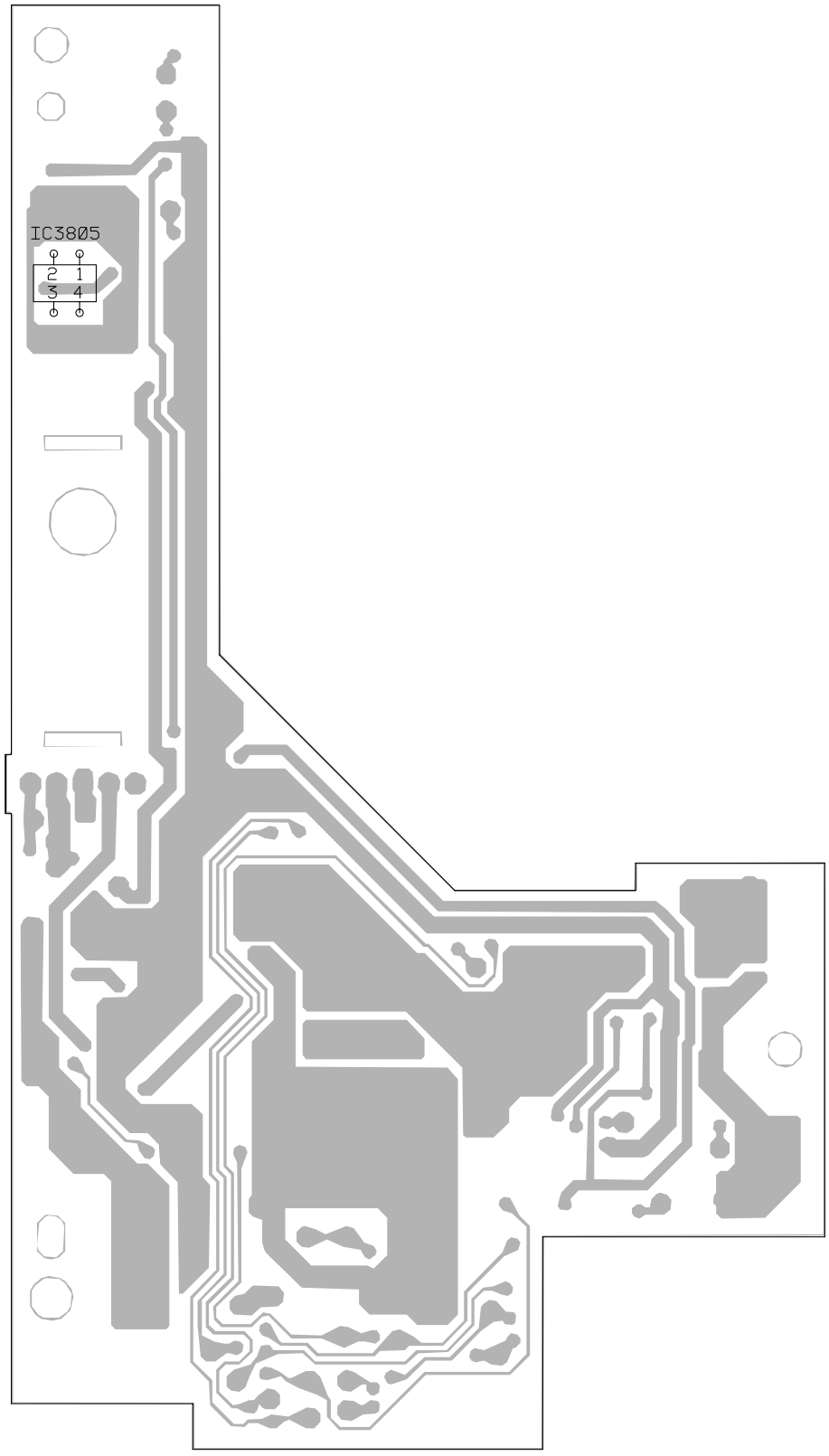
J

J MAIN UNIT

SIDE B

IC, Q

IC3805



5. ELECTRICAL PARTS LIST

NOTE:

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

  Chip Resistor

  RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J

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

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

  Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

  IC 301 (A, 91, 111) IC NJM2068V

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

AVH-P5750DVD/RC

Mother Unit	**: CWM9811**
Monitor Unit	**: CWM9822**
Monitor PCB	**: NSP**
Inverter PCB	**: NSP**
Upper PCB	**: NSP**
Keyboard Unit	**: NSP**
RGB Unit	**: CWM9817**
DVD Core Unit	**: CWX3170**
Compound Unit(A)	**: CWX3156**
Compound Unit(B)	**: CWX3154**
Main Unit	**: CZW3087**
SW Unit	**: CZW3088**
Volume Unit	**: CZW3089**

AVH-P5750DVD/RD

Mother Unit	**: CWM9812**
Monitor Unit	**: CWM9822**
Monitor PCB	**: NSP**
Inverter PCB	**: NSP**
Upper PCB	**: NSP**
Keyboard Unit	**: NSP**
RGB Unit	**: CWM9817**
DVD Core Unit	**: CWX3170**
Compound Unit(A)	**: CWX3156**
Compound Unit(B)	**: CWX3154**
Main Unit	**: CZW3087**
SW Unit	**: CZW3088**
Volume Unit	**: CZW3089**

AVH-P5750DVD/RI

Mother Unit	**: CWM9810**
Monitor Unit	**: CWM9822**
Monitor PCB	**: NSP**
Inverter PCB	**: NSP**
Upper PCB	**: NSP**
Keyboard Unit	**: NSP**
RGB Unit	**: CWM9817**
DVD Core Unit	**: CWX3170**
Compound Unit(A)	**: CWX3156**
Compound Unit(B)	**: CWX3154**
Main Unit	**: CZW3087**
SW Unit	**: CZW3088**
Volume Unit	**: CZW3089**

A

Unit Number:CWM9811(RC)
Unit Number:CWM9812(RD)
Unit Number:CWM9810(RI)
Unit Name:Mother Unit

MISCELLANEOUS

IC 121	(B,115,96) IC	HA12240FP
IC 151	(B,42,94) IC	TC4S81F
IC 181	(A,46,81) IC	TC74VHC08FTS1
IC 182	(A,50,82) IC	TC7SET08FUS1
IC 201	(B,145,63) IC	PML009A
IC 241	(A,155,128) IC	PAL007B
IC 301	(B,127,91) IC	NJM4558V
IC 302	(B,138,84) IC	NJM4558V
IC 303	(B,136,97) IC	NJM4580V
IC 421	(B,126,51) IC	NJM4558MD
IC 441	(A,147,46) IC	TA2050F
IC 451	(A,132,46) IC	TA2050F
IC 461	(B,59,86) IC	NJM2138V
IC 501	(B,145,14) IC	CXA2089Q
IC 521	(A,162,17) IC	NJM2136V
IC 522	(A,160,29) IC	BA7623F
IC 541	(B,36,72) IC	SM5304AV
IC 551	(B,127,17) IC	NJM2136V
IC 561	(B,124,31) IC	NJM2136V
IC 571	(B,135,31) IC	NJM2136V

Circuit Symbol and No.		Part No.
IC 581	(B,146,31) IC	NJM2136V
IC 601	(B,87,81) IC	PE5485A
IC 681	(B,94,43) IC	S-80841CNUA-B82
IC 801	(A,41,40) IC	AN8011S
IC 831	(B,19,92) IC	BA00BC0WFP
IC 841	(B,112,24) IC	S-812C50AUA-C3E
IC 851	(A,70,21) IC	S-818A35AUC-BGP
IC 856	(A,57,64) IC	S-814A33AMC-BCX
IC 871	(A,168,100) IC	NJM2388F84
IC 881	(B,25,146) IC	NJM2391DL1-33
Q 101	(B,97,29) Transistor	UMF23N
Q 121	(B,123,107) Transistor	UMF23N
Q 131	(A,83,109) Transistor	2SC4081
Q 151	(B,49,102) Transistor	2SC4081
Q 181	(B,47,76) Transistor	IMD2A
Q 182	(B,47,73) Transistor	IMX9
Q 241	(B,146,88) Transistor	DTC124EU
Q 242	(B,146,93) Transistor	DTC144EU
Q 243	(B,150,84) Transistor	IMD2A
Q 244	(A,147,84) Transistor	2SC4081
Q 245	(B,152,77) Transistor	IMD2A
Q 261	(A,116,106) Transistor	IMX9
Q 262	(A,109,106) Transistor	IMX9
Q 301	(B,133,83) Transistor	IMD2A
Q 302	(B,132,86) Transistor	DTC323TU
Q 303	(B,126,81) Transistor	DTC124EU
Q 461	(A,59,82) Transistor	2SC4081
Q 511	(A,135,5) Transistor	2SC4081
Q 512	(A,125,8) Transistor	2SA1577
Q 521	(B,161,19) Transistor	2SC4081
Q 551	(A,125,14) Transistor	2SC4081
Q 561	(A,124,28) Transistor	2SC4081
Q 571	(A,134,28) Transistor	2SC4081
Q 581	(A,145,28) Transistor	2SC4081
Q 601	(B,104,83) Transistor	DTC124EU
Q 691	(A,107,55) Transistor	DTA114EU
Q 692	(A,112,52) Transistor	DTC144EU
Q 694	(B,109,49) Transistor	2SC4081
Q 695	(B,112,49) Transistor	2SC4081
Q 701	(B,12,19) Transistor	2SA1615-Z
Q 702	(B,9,29) Transistor	DTC114EU
Q 703	(A,142,104) Transistor	2SA1576
Q 704	(A,138,105) Transistor	2SC4081
Q 705	(A,133,102) Transistor	IMX1
Q 706	(A,142,109) Transistor	2SA1576
Q 751	(B,50,11) Transistor	2SA1577
Q 752	(B,50,9) Transistor	DTC144EU
Q 755	(B,44,11) Transistor	2SA1577
Q 756	(B,44,9) Transistor	DTC144EU
Q 771	(B,72,146) Transistor	2SD1760F5
Q 772	(B,67,139) Transistor	DTC144EU
Q 773	(B,61,148) Transistor	UMF5N
Q 774	(B,62,141) Transistor	DTC144EU
Q 781	(B,67,45) Transistor	2SD1760F5
Q 782	(B,73,46) Transistor	UMF5N
Q 783	(B,72,37) Transistor	DTC114EU
Q 801	(A,27,44) Transistor	2SJ529S
Q 802	(A,53,41) Transistor	2SJ529S
Q 803	(A,33,43) Transistor	2SC4097
Q 804	(A,48,48) Transistor	2SC4097

Circuit Symbol and No.		Part No.
Q 805	(B,44,37) Transistor	DTC124EU
Q 806	(B,51,39) Transistor	DTC114EU
Q 841	(B,108,34) Transistor	2SB1184F5
Q 842	(A,156,56) Transistor	2SD1767
Q 861	(A,72,14) Transistor	UMF5N
Q 864	(A,66,98) Transistor	UMF5N
Q 867	(A,99,25) Transistor	UMF5N
Q 891	(B,163,80) Transistor	2SD1767
Q 892	(A,167,115) Transistor	2SD2396
Q 893	(B,155,107) Transistor	IMD2A
D 101	(A,98,22) Diode	UDZS5R6(B)
D 107	(B,94,26) Diode	UDZS5R6(B)
D 151	(B,46,93) Diode Network	DA204U
D 152	(B,42,97) Diode Network	DA204U
D 241	(B,144,85) Diode	DAN202U
D 242	(B,156,79) Diode	RSX201L-30
D 243	(B,144,82) Diode	DAN202U
D 244	(A,146,89) Diode	1SS355
D 245	(A,159,71) Diode	UDZS8R2(B)
D 246	(B,149,81) Diode	DAN202U
D 421	(B,123,57) Diode	UDZS3R9(B)
D 681	(B,100,44) Diode	1SS355
D 691	(B,109,53) Diode	1SS355
D 692	(B,113,53) Diode	1SS355
D 701	(B,130,152) Diode	S1G-6904G2P
D 702	(B,124,152) Diode	S1G-6904G2P
D 703	(A,139,102) Diode	DAN202U
D 704	(B,132,108) Diode	UDZS6R8(B)
D 705	(A,136,108) Diode	HZU7L(A1)
D 706	(B,126,111) Diode	HZU7L(C3)
D 707	(B,139,105) Diode	DAN202U
D 708	(A,103,138) Diode	5KP24A
D 771	(B,70,141) Diode	HZU9R1(B2)
D 772	(B,65,142) Diode	HZU6R8(B3)
D 773	(B,62,145) Diode	HZU8R2(B2)
D 781	(B,73,42) Diode	HZU7R5(B2)
D 782	(B,69,37) Diode	HZU6R8(B3)
D 801	(A,37,32) Diode	RSX201L-30
D 802	(A,52,34) Diode	RSX201L-30
D 803	(A,33,46) Diode	MA111
D 804	(A,47,45) Diode	MA111
D 805	(A,111,132) Diode	RSX201L-30
D 806	(A,107,129) Diode	RSX201L-30
D 831	(B,26,60) Diode	S2G-6600
D 841	(A,139,56) Diode	1SR154-400
D 842	(A,157,52) Diode	UDZS18(B)
D 851	(A,66,26) Diode	SC802-06
D 881	(B,40,143) Diode	1SR154-400
D 882	(B,45,141) Diode	1SR154-400
D 883	(B,48,146) Diode	1SR154-400
D 891	(B,165,73) Diode	UDZS5R6(B)
D 892	(B,152,104) Diode	HZU9R1(B3)
ZNR401	(B,9,99) Surge Protector	RCCA-201Q31UA-PI
L 101	(A,99,19) Inductor	CTF1399
L 121	(B,117,91) Inductor	LCTC2R2K1608
L 151	(A,65,96) Inductor	CTF1473
L 171	(A,14,63) Inductor	CTF1383
L 172	(A,6,55) Inductor	CTF1473
L 181	(A,35,79) Inductor	CTF1473
L 182	(A,35,81) Inductor	CTF1473

Circuit Symbol and No.		Part No.
L 183	(B,31,88) Inductor	CTF1399
L 184	(A,43,86) Inductor	CTF1305
L 185	(A,50,77) Inductor	CTF1305
L 187	(A,40,86) Inductor	CTF1473
L 201	(A,135,69) Inductor	LCTAW2R2J2520
L 301	(A,130,90) Inductor	CTF1399
L 302	(B,135,79) Inductor	CTF1399
L 303	(A,133,92) Inductor	CTF1399
L 401	(B,63,128) Chip Coil	LCTAW1R0J2520
L 402	(A,37,104) Chip Coil	LCTAW1R0J2520
L 403	(B,9,102) Chip Coil	LCTAW4R7J2520
L 404	(A,68,103) Inductor	CTF1473
L 405	(B,59,109) Inductor	CTF1473
L 421	(B,130,58) Inductor	CTF1399
L 441	(A,153,51) Inductor	CTF1399
L 451	(A,139,51) Inductor	CTF1399
L 461	(A,63,91) Inductor	CTF1399
L 501	(B,160,12) Chip Coil	LCTAW100J2520
L 511	(A,133,11) Inductor	CTF1399
L 521	(A,167,21) Inductor	CTF1399
L 522	(A,167,29) Inductor	LCTAW150J2520
L 523	(B,118,115) Inductor	CTF1383
L 541	(B,43,68) Inductor	CTF1399
L 551	(B,125,11) Inductor	CTF1399
L 561	(B,123,24) Inductor	CTF1399
L 571	(B,135,23) Inductor	CTF1399
L 581	(B,145,25) Inductor	CTF1399
L 601	(B,82,95) Inductor	CTF1306
L 602	(B,84,95) Inductor	CTF1306
L 603	(B,94,62) Inductor	LCTAW2R2J2520
L 604	(B,77,97) Inductor	CTF1473
L 701	(A,24,58) Coil	CTH1267
L 702	(A,22,8) Inductor	CTH1262
L 703	(B,143,101) Inductor	LCTC2R2K1608
L 704	(B,132,110) Inductor	CTF1295
L 705	(B,138,108) Inductor	LCTC2R2K1608
L 801	(A,29,33) Coil	CTH1303
L 802	(A,52,28) Coil	CTH1303
L 803	(A,49,61) Inductor	CTH1253
L 804	(A,38,49) Chip Coil	LCTAW100J2520
L 851	(A,75,22) Inductor	CTF1383
L 856	(A,59,66) Inductor	CTF1383
X 601	(B,103,91)Radiator 18.874368MHz	CSS1622
VR511	(A,130,13)Semi-fixed 1.5kΩ(B)	CCP1391
VR801	(A,45,31) Semi-fixed 10kΩ(B)	CCP1396
⚠ FU131	(B,94,115) Fuse 3A	CEK1286
⚠ FU151	(B,41,102) Fuse 3A	CEK1286
⚠ FU152	(A,95,132) Fuse 3A	CEK1286
⚠ FU175	(A,15,71) Fuse 1.75A	CEK1283
⚠ FU176	(B,62,68) Fuse 1A	CEK1280
⚠ FU261	(B,104,127) Fuse 3A	CEK1286
⚠ FU701	(A,16,53) Fuse 1.25A	CEK1281
⚠ FU702	(A,17,16) Fuse 1.75A	CEK1283
⚠ FU703	(B,126,149) Fuse 3A	CEK1286
⚠ FU771	(B,64,147) Fuse 1A	CEK1280
⚠ FU781	(A,76,36) Fuse 1A	CEK1280
⚠ FU801	(A,27,27) Fuse 2.5A	CEK1285
⚠ FU802	(A,54,22) Fuse 2.5A	CEK1285
⚠ FU803	(A,57,59) Fuse 2.5A	CEK1285
⚠ FU861	(A,101,31) Fuse 1A	CEK1280

Circuit Symbol and No.		Part No.
BZ601	(A,83,10) Buzzer	CPV1063

RESISTORS

R 101	(B,72,26)	RS1/16S472J
R 102	(B,72,27)	RS1/16S472J
R 103	(B,70,29)	RS1/16S472J
R 104	(B,75,30)	RAB4C222J
R 105	(B,89,42)	RS1/16S102J
R 106	(B,91,42)	RS1/16S102J
R 107	(B,95,35)	RS1/16S222J
R 108	(B,98,26)	RS1/16S332J
R 109	(B,100,28)	RS1/16S332J
R 121	(B,114,93)	RS1/16S102J
R 122	(B,120,96)	RS1/16S101J
R 123	(B,123,98)	RS1/16S150J
R 124	(B,125,98)	RS1/16S470J
R 125	(B,125,99)	RS1/16S101J
R 126	(B,122,110)	RS1/16S222J
R 127	(B,126,107)	RS1/16S332J
R 128	(B,124,104)	RS1/16S562J
R 131	(A,86,111)	RS1/16S473J
R 132	(A,83,112)	RS1/16S473J
R 133	(A,86,108)	RS1/16S473J
R 151	(B,52,98)	RS1/16S750J
R 152	(B,65,98)	RS1/16S750J
R 153	(B,60,98)	RS1/16S750J
R 154	(B,56,98)	RS1/16S750J
R 155	(B,44,102)	RS1/16S681J
R 156	(B,48,96)	RS1/16S473J
R 157	(B,46,102)	RS1/16S473J
R 158	(B,45,97)	RS1/16S681J
R 159	(B,48,92)	RS1/16S473J
R 160	(B,43,99)	RS1/16S473J
R 171	(B,5,52)	RS1/16S0R0J
R 172	(A,5,58)	RS1/16S0R0J
R 174	(A,15,56)	RS1/16S102J
R 175	(B,13,55)	RS1/16S0R0J
R 176	(B,11,54)	RS1/16S0R0J
R 177	(B,9,59)	RS1/16S0R0J
R 178	(A,5,53)	RS1/16S0R0J
R 179	(A,5,63)	RS1/16S0R0J
R 181	(A,40,82)	RAB4C102J
R 182	(A,36,85)	RAB4C102J
R 184	(A,46,74)	RS1/16S103J
R 185	(A,48,74)	RS1/16S103J
R 187	(B,43,71)	RS1/16S0R0J
R 188	(B,51,72)	RS1/16S0R0J
R 201	(B,137,53)	RS1/16S181J
R 202	(B,148,52)	RS1/16S181J
R 203	(B,135,55)	RS1/16S223J
R 204	(B,151,52)	RS1/16S223J
R 205	(B,135,56)	RS1/16S102J
R 206	(B,155,51)	RS1/16S102J
R 207	(B,140,51)	RS1/16S0R0J
R 208	(B,147,49)	RS1/16S0R0J
R 209	(B,136,60)	RS1/16S0R0J
R 210	(A,148,57)	RS1/16S0R0J
R 211	(B,130,71)	RS1/16S0R0J
R 212	(B,149,72)	RS1/16S0R0J

Circuit Symbol and No.		Part No.
R 213	(B,134,67)	RS1/16S0R0J
R 214	(B,154,71)	RS1/16S0R0J
R 215	(B,135,68)	RS1/16S0R0J
R 216	(B,156,69)	RS1/16S0R0J
R 217	(B,145,110)	RS1/16S471J
R 218	(B,150,113)	RS1/16S471J
R 241	(B,150,93)	RS1/16S103J
R 242	(B,146,90)	RS1/16S103J
R 243	(B,151,90)	RS1/16S221J
R 244	(B,141,108)	RS1/16S103J
R 245	(B,146,101)	RS1/16S473J
R 246	(B,149,90)	RS1/16S101J
R 247	(B,153,83)	RS1/16S222J
R 248	(A,148,87)	RS1/16S103J
R 249	(A,144,81)	RS1/16S104J
R 250	(A,143,84)	RS1/16S473J
R 251	(A,146,87)	RS1/16S101J
R 252	(B,155,74)	RS1/16S222J
R 261	(B,107,112)	RS1/16S821J
R 262	(B,103,112)	RS1/16S821J
R 263	(B,115,112)	RS1/16S821J
R 264	(B,111,109)	RS1/16S821J
R 265	(A,108,103)	RS1/16S103J
R 266	(A,111,103)	RS1/16S103J
R 267	(A,114,103)	RS1/16S103J
R 268	(A,118,103)	RS1/16S103J
R 269	(B,106,114)	RS1/16S223J
R 270	(B,103,114)	RS1/16S223J
R 271	(B,115,114)	RS1/16S223J
R 272	(B,111,114)	RS1/16S223J
R 287	(B,102,105)	RS1/16S0R0J
R 288	(B,97,105)	RS1/16S0R0J
R 289	(A,92,131)	RS1/16S0R0J
R 301	(B,121,90)	RS1/16S101J
R 302	(B,124,90)	RS1/16S473J
R 303	(B,124,93)	RS1/16S473J
R 304	(B,131,94)	RS1/16S472J
R 305	(B,127,95)	RS1/16S472J
R 306	(B,136,89)	RS1/16S473J
R 307	(B,137,89)	RS1/16S103J
R 308	(B,134,89)	RS1/16S103J
R 309	(B,131,89)	RS1/16S821J
R 310	(B,130,88)	RS1/16S473J
R 311	(A,136,97)	RS1/16S103J
R 312	(A,134,97)	RS1/16S103J
R 313	(B,145,96)	RS1/16S103J
R 314	(B,142,96)	RS1/16S103J
R 315	(B,141,83)	RS1/16S103J
R 316	(B,133,94)	RS1/16S103J
R 317	(A,138,97)	RS1/16S103J
R 318	(A,132,100)	RS1/16S103J
R 319	(B,143,110)	RS1/16S471J
R 320	(B,146,110)	RS1/16S471J
R 321	(B,139,90)	RS1/16S104J
R 322	(B,124,87)	RS1/16S473J
R 323	(B,127,85)	RS1/16S473J
R 324	(A,130,81)	RS1/16S473J
R 325	(B,125,84)	RS1/16S102J
R 401	(B,54,106)	RS1/16S681J
R 403	(B,38,109)	RS1/16S681J

Circuit Symbol and No.		Part No.
R 404	(B,37,109)	RS1/16S681J
R 405	(B,35,109)	RS1/16S681J
R 406	(B,34,109)	RS1/16S681J
R 407	(B,32,109)	RS1/16S681J
R 410	(A,30,6)	RS1/16S0R0J
R 421	(B,116,58)	RS1/16S103J
R 422	(B,117,58)	RS1/16S103J
R 423	(B,120,56)	RS1/16S103J
R 424	(B,120,57)	RS1/16S103J
R 427	(B,121,51)	RS1/16S103J
R 428	(B,131,51)	RS1/16S103J
R 429	(B,120,49)	RS1/16S103J
R 430	(B,133,49)	RS1/16S103J
R 431	(B,128,59)	RS1/16S681J
R 441	(B,151,39)	RS1/16S102J
R 442	(B,141,42)	RS1/16S102J
R 443	(B,148,41)	RS1/16S181J
R 444	(B,146,41)	RS1/16S181J
R 445	(B,150,41)	RS1/16S223J
R 446	(B,143,41)	RS1/16S223J
R 447	(A,141,24)	RS1/16S562J
R 448	(A,141,23)	RS1/16S562J
R 451	(B,137,41)	RS1/16S123J
R 452	(B,127,40)	RS1/16S123J
R 453	(B,133,41)	RS1/16S123J
R 454	(B,131,41)	RS1/16S123J
R 455	(B,134,41)	RS1/16S223J
R 456	(B,130,41)	RS1/16S223J
R 457	(B,136,41)	RS1/16S223J
R 458	(B,127,42)	RS1/16S223J
R 459	(B,120,44)	RS1/16S562J
R 460	(B,120,42)	RS1/16S562J
R 461	(B,51,91)	RS1/16S472J
R 462	(B,54,84)	RS1/16S472J
R 463	(B,53,91)	RS1/16S472J
R 464	(B,57,81)	RS1/16S472J
R 465	(B,55,91)	RS1/16S472J
R 466	(B,54,88)	RS1/16S472J
R 467	(B,57,91)	RS1/16S472J
R 468	(B,59,81)	RS1/16S472J
R 469	(B,66,91)	RS1/16S472J
R 470	(B,64,84)	RS1/16S472J
R 471	(B,64,91)	RS1/16S472J
R 472	(B,62,81)	RS1/16S472J
R 473	(B,62,91)	RS1/16S472J
R 474	(B,64,88)	RS1/16S472J
R 475	(B,60,91)	RS1/16S472J
R 476	(B,60,81)	RS1/16S472J
R 477	(A,54,77)	RS1/16S101J
R 478	(A,56,77)	RS1/16S101J
R 479	(A,59,77)	RS1/16S101J
R 480	(A,57,77)	RS1/16S101J
R 481	(A,54,79)	RS1/16S102J
R 482	(A,58,84)	RS1/16S272J
R 483	(A,54,82)	RS1/16S472J
R 491	(B,70,127)	RS1/16S0R0J
R 501	(B,155,8)	RS1/16S0R0J
R 502	(B,149,28)	RS1/16S272J
R 503	(B,127,28)	RS1/16S272J
R 504	(B,130,13)	RS1/16S272J

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
R 511	(A,136,8)	RS1/16S222J	R 586	(B,143,31)	RS1/16S472J
R 512	(A,137,10)	RS1/16S222J	R 587	(A,141,28)	RS1/16S102J
R 513	(A,132,8)	RS1/16S681J	R 588	(A,145,31)	RS1/16S272J
R 514	(A,132,6)	RS1/16S681J	R 589	(A,141,31)	RS1/16S472J
R 515	(A,130,9)	RS1/16S331J	R 590	(B,148,24)	RS1/16S0R0J
R 516	(A,128,9)	RS1/16S272J	R 601	(B,72,70)	RS1/16S102J
R 517	(A,129,6)	RS1/16S0R0J	R 602	(B,72,68)	RS1/16S102J
R 518	(A,17,64)	RS1/16S0R0J	R 603	(B,72,66)	RS1/16S102J
R 521	(A,160,12)	RS1/16S472J	R 604	(A,109,65)	RAB4C102J
R 522	(A,158,14)	RS1/16S472J	R 605	(B,112,68)	RS1/16S473J
R 523	(B,162,21)	RS1/16S272J	R 606	(B,69,75)	RAB4C102J
R 524	(B,164,19)	RS1/16S392J	R 607	(B,71,79)	RAB4C102J
R 526	(A,162,20)	RS1/16S101J	R 608	(B,68,80)	RS1/16S102J
R 527	(B,159,16)	RS1/16S472J	R 610	(B,98,57)	RS1/16S473J
R 528	(B,158,19)	RS1/16S102J	R 612	(B,98,46)	RS1/16S102J
R 529	(B,164,14)	RS1/16S472J	R 613	(B,92,18)	RS1/16S473J
R 530	(B,166,15)	RS1/16S101J	R 614	(B,93,16)	RS1/16S0R0J
R 531	(A,164,29)	RS1/16S473J	R 616	(A,77,100)	RS1/16S221J
R 532	(A,164,32)	RS1/16S333J	R 617	(B,88,112)	RS1/16S102J
R 533	(B,162,27)	RS1/16S560J	R 618	(B,88,115)	RS1/16S473J
R 534	(B,162,29)	RS1/16S150J	R 619	(B,90,112)	RS1/16S102J
R 543	(B,33,72)	RS1/16S332J	R 620	(B,90,115)	RS1/16S473J
R 546	(B,38,66)	RS1/16S101J	R 621	(B,96,99)	RS1/16S473J
R 547	(B,33,66)	RS1/16S102J	R 622	(B,96,97)	RS1/16S102J
R 548	(B,139,5)	RS1/16S0R0J	R 623	(B,96,17)	RAB4C102J
R 551	(A,127,24)	RS1/16S750J	R 624	(B,97,14)	RS1/16S473J
R 552	(A,126,21)	RS1/16S472J	R 625	(B,92,15)	RS1/16S473J
R 553	(A,128,21)	RS1/16S472J	R 627	(B,103,54)	RS1/16S102J
R 554	(B,130,11)	RS1/16S101J	R 628	(A,110,59)	RS1/16S102J
R 555	(A,128,17)	RS1/16S472J	R 629	(B,111,71)	RS1/16S104J
R 556	(B,124,17)	RS1/16S472J	R 630	(B,103,87)	RS1/16S151J
R 557	(A,122,13)	RS1/16S102J	R 631	(B,109,69)	RS1/16S104J
R 558	(A,125,18)	RS1/16S272J	R 632	(B,158,39)	RS1/16S472J
R 559	(A,123,19)	RS1/16S472J	R 633	(B,158,38)	RS1/16S472J
R 560	(B,133,9)	RS1/16S0R0J	R 634	(B,108,64)	RAB4C102J
R 561	(A,124,38)	RS1/16S750J	R 635	(B,103,80)	RS1/16S473J
R 562	(A,124,35)	RS1/16S472J	R 636	(B,108,84)	RS1/16S472J
R 563	(A,125,35)	RS1/16S472J	R 637	(B,109,71)	RS1/16S104J
R 564	(B,128,24)	RS1/16S101J	R 639	(B,108,72)	RS1/16S681J
R 565	(A,126,31)	RS1/16S472J	R 641	(B,105,72)	RS1/16S681J
R 566	(B,121,31)	RS1/16S472J	R 642	(B,101,73)	RS1/16S102J
R 567	(A,119,27)	RS1/16S102J	R 643	(B,101,70)	RS1/16S102J
R 568	(B,135,16)	RS1/16S0R0J	R 644	(B,104,64)	RS1/16S473J
R 569	(A,123,31)	RS1/16S272J	R 645	(B,101,64)	RAB4C681J
R 570	(A,119,30)	RS1/16S472J	R 646	(B,98,58)	RS1/16S104J
R 571	(A,134,38)	RS1/16S750J	R 647	(A,100,61)	RS1/16S681J
R 572	(A,134,35)	RS1/16S472J	R 648	(A,100,58)	RS1/16S681J
R 573	(A,135,35)	RS1/16S472J	R 649	(A,101,53)	RS1/16S473J
R 574	(B,137,25)	RS1/16S101J	R 651	(B,92,66)	RS1/16S473J
R 575	(A,137,31)	RS1/16S472J	R 652	(B,77,57)	RS1/16S681J
R 576	(B,132,31)	RS1/16S472J	R 653	(B,75,59)	RS1/16S101J
R 577	(A,130,28)	RS1/16S102J	R 654	(B,76,63)	RS1/16S473J
R 578	(A,134,31)	RS1/16S272J	R 661	(A,96,55) (RI)	RS1/16S473J
R 579	(A,130,31)	RS1/16S472J	R 662	(A,96,52) (RC,RD)	RS1/16S473J
R 580	(B,141,24)	RS1/16S0R0J	R 663	(A,94,55) (RC)	RS1/16S473J
R 581	(A,145,38)	RS1/16S750J	R 664	(A,94,52) (RD,RI)	RS1/16S473J
R 582	(A,144,35)	RS1/16S472J	R 671	(A,84,53)	RS1/16S103J
R 583	(A,145,35)	RS1/16S472J	R 672	(A,88,55)	RS1/16S473J
R 584	(B,148,25)	RS1/16S101J	R 673	(A,92,55)	RS1/16S473J
R 585	(A,146,31)	RS1/16S472J	R 681	(B,98,43)	RS1/16S104J

Circuit Symbol and No.		Part No.
R 691	(A,110,55)	RS1/16S103J
R 692	(A,109,50)	RS1/16S223J
R 693	(A,106,51)	RS1/16S473J
R 694	(B,109,56)	RS1/16S472J
R 695	(B,112,56)	RS1/16S472J
R 702	(B,16,24)	RS1/16S153J
R 703	(B,13,24)	RS1/10S301J
R 704	(B,9,24)	RS1/10S301J
R 705	(A,144,101)	RS1/16S102J
R 706	(A,143,101)	RS1/16S473J
R 707	(A,144,105)	RS1/16S473J
R 708	(B,143,100)	RS1/16S103J
R 709	(A,142,107)	RS1/16S473J
R 710	(B,134,103)	RS1/16S103J
R 711	(B,134,106)	RS1/16S103J
R 712	(B,129,109)	RS1/16S103J
R 713	(B,131,103)	RS1/16S103J
R 714	(A,134,105)	RS1/16S473J
R 715	(A,132,107)	RS1/16S472J
R 716	(B,128,105)	RS1/16S104J
R 717	(B,124,111)	RS1/16S473J
R 718	(A,143,112)	RS1/16S102J
R 719	(A,140,109)	RS1/16S472J
R 720	(A,138,108)	RS1/16S472J
R 721	(B,138,109)	RS1/16S153J
R 751	(B,48,9)	RS1/16S472J
R 752	(B,48,11)	RS1/16S223J
R 755	(B,41,9)	RS1/16S472J
R 756	(B,41,11)	RS1/16S223J
R 771	(B,71,150)	RS1/16S271J
R 772	(B,69,150)	RS1/16S271J
R 773	(B,66,150)	RS1/16S271J
R 774	(B,58,147)	RS1/16S103J
R 775	(B,58,150)	RS1/16S103J
R 776	(B,73,90)	RS1/16S0R0J
R 781	(A,76,39)	RS1/16S0R0J
R 782	(B,69,55)	RS1/16S271J
R 783	(B,69,54)	RS1/16S271J
R 784	(B,69,52)	RS1/16S271J
R 785	(B,72,52)	RS1/16S103J
R 786	(B,73,50)	RS1/16S103J
R 788	(B,66,56)	RS1/16S0R0J
R 801	(B,34,34)	RS1/16S3901D
R 802	(B,37,34)	RS1/16S4701D
R 803	(B,35,31)	RS1/16S2202D
R 804	(B,35,34)	RS1/16S2202D
R 805	(B,47,33)	RS1/16S6801D
R 806	(B,48,38)	RS1/16S8200D
R 807	(B,48,30)	RS1/16S3900D
R 808	(B,48,33)	RS1/16S3301D
R 809	(A,32,49)	RS1/16S560J
R 810	(A,53,48)	RS1/16S560J
R 811	(A,35,44)	RS1/16S272J
R 812	(A,46,47)	RS1/16S272J
R 813	(A,36,44)	RS1/16S221J
R 814	(A,47,43)	RS1/16S221J
R 815	(B,38,38)	RS1/16S6801D
R 816	(A,36,37)	RS1/16S1502D
R 817	(A,46,35)	RS1/16S6801D
R 818	(A,47,38)	RS1/16S6802D
R 819	(B,34,39)	RS1/16S3901D
R 820	(B,48,40)	RS1/16S7501D
R 821	(B,38,40)	RS1/16S2203D
R 822	(B,44,40)	RS1/16S4702D
R 823	(B,38,43)	RS1/16S3302D
R 824	(B,43,43)	RS1/16S3302D
R 825	(A,103,130)	RS1/16S0R0J
R 826	(A,100,130)	RS1/16S0R0J
R 829	(B,54,39)	RS1/16S1200D
R 830	(B,51,43)	RS1/16S102J
R 831	(B,14,90)	RS1/16S6802D
R 832	(B,14,93)	RS1/16S1202D
R 833	(B,15,84)	RS1/16S1203D
R 834	(B,14,87)	RS1/16S1502D
R 835	(B,23,84)	RS1/16S102J
R 841	(B,112,18)	RS1/16S471J
R 842	(A,167,68)	RS1/16S2R2J
R 843	(A,167,65)	RS1/16S2R2J
R 844	(A,165,68)	RS1/16S2R2J
R 845	(A,165,65)	RS1/16S2R2J
R 846	(A,152,54)	RS1/16S222J
R 856	(A,61,64)	RS1/16S473J
R 861	(A,75,14)	RS1/16S103J
R 862	(A,74,16)	RS1/16S332J
R 864	(A,69,98)	RS1/16S103J
R 865	(A,67,100)	RS1/16S332J
R 867	(A,99,29)	RS1/16S103J
R 868	(A,97,28)	RS1/16S332J
R 871	(B,158,83)	RS1/16S102J
R 872	(B,156,84)	RS1/16S473J
R 891	(B,164,76)	RS1/16S391J
R 892	(A,159,90)	RS1/16S0R0J
R 893	(B,158,110)	RS1/16S101J
R 894	(B,156,110)	RS1/16S101J
R 895	(B,156,104)	RS1/16S101J

CAPACITORS

C 121	(B,106,98)	CKSRYB102K50
C 122	(B,108,98)	CKSRYB102K50
C 123	(B,121,118)	CKSRYB104K50
C 124	(B,109,98)	CKSRYB104K50
C 153	(B,42,92)	CKSRYB104K50
C 171	(B,5,54)	CCSRCH101J50
C 181	(B,45,83)	CKSRYB104K50
C 182	(A,50,79)	CKSRYB104K50
C 184	(B,28,99)	CKSRYB104K50
C 186	(B,28,79)	CCSRCH101J50
C 187	(B,26,79)	CKSRYB104K50
C 188	(B,32,62)	CKSRYB104K50
C 201	(B,137,55)	CKSRYB105K6R3
C 202	(B,151,53)	CKSRYB105K6R3
C 203	(B,137,56)	CKSRYB105K6R3
C 204	(B,154,54)	CKSRYB105K6R3
C 205	(B,140,53)	CKSRYB224K16
C 206	(B,147,54)	CKSRYB224K16
C 207	(B,137,51)	CKSRYB105K6R3
C 208	(B,150,49)	CKSRYB105K6R3
C 211	(B,143,51)	CKSRYB105K6R3
C 212	(B,145,51)	CKSRYB105K6R3

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
C 213	(A,139,59)	CKSYB475K16	C 406	(A,32,102)	CKSRYB103K50
C 214	(A,152,59)	CKSYB475K16	C 407	(A,33,109)	CEVLW101M10
C 217	(A,138,61)	CKSYB475K16	C 408	(B,84,116)	CKSRYB102K50
C 218	(A,152,61)	CKSYB475K16	C 409	(B,19,140)	CKSRYB102K50
C 219	(A,137,63)	CKSYB475K16	C 410	(B,75,137)	CKSRYB102K50
C 220	(A,152,63)	CKSYB475K16	C 411	(B,3,57)	CCSRCH101J50
C 221	(A,137,65)	CKSYB475K16	C 413	(A,68,104)	CKSRYB104K50
C 222	(A,152,65)	CKSYB475K16	C 417	(B,16,32)	CKSRYB104K50
C 223	(B,137,66)	CCSRCH100D50	C 418	(B,28,7)	CKSRYB102K50
C 224	(B,153,66)	CCSRCH100D50	C 419	(B,54,109)	CKSRYB104K50
C 225	(B,139,70)	CCSRCH100D50	C 421	(B,77,110)	CKSRYB474K10
C 226	(B,153,71)	CCSRCH100D50	C 422	(B,79,110)	CKSRYB474K10
C 227	(B,139,72)	CCSRCH100D50	C 423	(B,120,54)	CCSRCH470J50
C 228	(B,150,70)	CCSRCH100D50	C 424	(B,120,59)	CCSRCH470J50
C 229	(A,152,69)	CEVLW100M16	C 425	(B,126,58)	CKSYB475K16
C 230	(B,143,71)	CKSRYB104K50	C 426	(B,124,58)	CKSRYB103K50
C 231	(B,143,72)	CKSRYB104K50	C 427	(B,119,51)	CCSRCH470J50
C 232	(A,136,71)	CKSRYB102K50	C 428	(B,133,51)	CCSRCH470J50
C 233	(A,145,63)	CEVLW470M16	C 429	(B,120,48)	CKSRYB474K10
C 234	(A,138,68)	CKSRYB104K50	C 430	(B,133,47)	CKSRYB474K10
C 241	(B,143,113)	CKSRYB105K10	C 431	(B,126,48)	CKSRYB105K10
C 242	(B,146,113)	CKSRYB105K10	C 441	(B,151,42)	CKSRYB105K6R3
C 243	(B,143,115)	CKSRYB105K10	C 442	(B,143,43)	CKSRYB105K6R3
C 244	(B,146,115)	CKSRYB105K10	C 443	(B,149,43)	CKSRYB105K6R3
C 245	(B,145,113)	CKSRYB105K10	C 444	(B,146,43)	CKSRYB105K6R3
C 246	(B,152,115)	CKSRYB105K10	C 445	(A,139,25)	CKSRYB105K6R3
C 247	(B,145,115)	CKSRYB105K10	C 446	(A,138,23)	CKSRYB105K6R3
C 248	(B,155,115)	CKSRYB105K10	C 447	(A,145,41)	CKSYB475K16
C 249	(A,153,85)	CEVLW330M25	C 448	(A,155,46)	CEVLW100M16
C 250	(B,124,114) 10µF	CCG1138	C 449	(A,149,41)	CKSRYB104K50
C 251	(A,119,127) 1000µF/16V	CCH1428	C 451	(B,136,43)	CKSRYB105K6R3
C 252	(B,145,105) 10µF	CCG1182	C 452	(B,127,43)	CKSRYB105K6R3
C 253	(A,160,117)	CKSYB475K16	C 453	(B,133,43)	CKSRYB105K6R3
C 254	(A,157,117)	CKSYB475K16	C 454	(B,130,43)	CKSRYB105K6R3
C 255	(B,157,115)	CKSRYB473K50	C 455	(B,123,44)	CKSRYB105K6R3
C 256	(A,156,77)	CEVLW470M16	C 456	(B,123,42)	CKSRYB105K6R3
C 257	(A,142,71)	CEVW101M16	C 457	(A,129,41)	CKSYB475K16
C 258	(A,143,86) 10µF	CCG1182	C 458	(A,139,46)	CEVLW100M16
C 261	(B,107,109) 10µF	CCG1182	C 459	(A,134,41)	CKSRYB104K50
C 262	(B,104,109) 10µF	CCG1182	C 461	(B,55,95)	CKSYB106K6R3
C 263	(B,117,106) 10µF	CCG1182	C 462	(B,57,95)	CKSYB106K6R3
C 264	(B,113,106) 10µF	CCG1182	C 463	(B,53,95)	CKSYB106K6R3
C 265	(B,106,115)	CCSRCH101J50	C 464	(B,51,95)	CKSYB106K6R3
C 266	(B,103,115)	CCSRCH101J50	C 465	(B,64,95)	CKSYB106K6R3
C 267	(B,115,115)	CCSRCH101J50	C 466	(B,66,95)	CKSYB106K6R3
C 268	(B,111,115)	CCSRCH101J50	C 467	(B,60,95)	CKSYB106K6R3
C 269	(A,110,141)	CKSRYB102K50	C 468	(B,62,95)	CKSYB106K6R3
C 301	(B,121,89)	CKSRYB105K6R3	C 469	(B,52,84)	CCSRCH6R0D50
C 302	(B,121,92)	CKSRYB105K6R3	C 470	(B,52,88)	CCSRCH6R0D50
C 305	(A,150,76)	CEVLW100M16	C 471	(B,65,84)	CCSRCH6R0D50
C 306	(B,133,81)	CKSRYB104K50	C 472	(B,65,88)	CCSRCH6R0D50
C 307	(B,121,86) 10µF	CCG1171	C 473	(A,54,81)	CKSRYB104K50
C 308	(A,131,94)	CKSRYB104K50	C 474	(A,54,84)	CKSRYB102K50
C 309	(B,133,89)	CKSRYB104K50	C 475	(A,58,85)	CKSRYB104K50
C 310	(B,139,91)	CKSRYB104K50	C 481	(B,65,64)	CKSRYB102K50
C 313	(A,136,94)	CKSRYB104K50	C 482	(B,61,64)	CKSRYB102K50
C 402	(B,59,128)	CKSYB475K16	C 483	(B,154,59)	CKSRYB102K50
C 403	(B,59,130)	CKSRYB103K50	C 484	(B,70,131)	CCSRCH101J50
C 404	(A,68,110)	CEVLW470M6R3	C 487	(B,48,128)	CKSRYB103K50
C 405	(B,57,111)	CKSRYB103K50	C 488	(B,42,65)	CKSRYB104K50

Circuit Symbol and No.		Part No.
C 501	(A,151,5) 10µF	CCG1171
C 502	(A,150,10)	CEVLW100M16
C 503	(A,155,8)	CKSRYB104K50
C 511	(A,135,10)	CKSRYB105K6R3
C 512	(A,142,8)	CEVLW101M10
C 521	(A,156,6) 47µF/6.3V	CCG1181
C 522	(A,157,10) 47µF/6.3V	CCG1181
C 523	(A,153,25)	CEVLW101M10
C 524	(A,162,22) 10µF	CCG1171
C 525	(B,162,17)	CKSRYB104K50
C 526	(B,165,17)	CKSRYB104K50
C 527	(B,164,13)	CCSRCH4R0D50
C 529	(A,153,33)	CEVLW101M10
C 530	(A,165,26) 10µF	CCG1171
C 531	(A,138,17)	CEVLW221M4
C 532	(A,145,17)	CEVLW221M4
C 533	(A,153,17)	CEVLW221M4
C 535	(B,155,5) 22µF/6.3V	CCG1178
C 536	(B,156,15) 22µF/6.3V	CCG1178
C 541	(A,36,76)	CKSYB106K6R3
C 543	(B,40,70)	CKSYB475K16
C 544	(B,33,70)	CKSRYB103K50
C 545	(A,33,70)	CEVLW220M6R3
C 546	(A,40,70)	CEVLW101M10
C 547	(B,136,5)	CKSRYB105K6R3
C 551	(A,124,22)	CKSYB106K6R3
C 552	(A,130,22)	CKSYB106K6R3
C 554	(A,131,17)	CCSRCH6R0D50
C 555	(A,122,15)	CKSRYB104K50
C 556	(A,123,17) 10µF	CCG1171
C 557	(B,124,14)	CKSRYB104K50
C 558	(B,130,9)	CKSRYB104K50
C 561	(A,122,36)	CKSYB106K6R3
C 562	(A,127,36)	CKSYB106K6R3
C 564	(A,125,31)	CCSRCH6R0D50
C 565	(A,119,29)	CKSRYB104K50
C 566	(B,135,19)	CKSRYB104K50
C 567	(A,119,32) 10µF	CCG1171
C 568	(B,123,26)	CKSRYB104K50
C 571	(A,132,36)	CKSYB106K6R3
C 572	(A,137,36)	CKSYB106K6R3
C 574	(A,135,31)	CCSRCH6R0D50
C 575	(A,130,29)	CKSRYB104K50
C 576	(A,130,33) 10µF	CCG1171
C 577	(B,134,25)	CKSRYB104K50
C 578	(B,138,24)	CKSRYB104K50
C 581	(A,142,36)	CKSYB106K6R3
C 582	(A,147,36)	CKSYB106K6R3
C 584	(A,148,31)	CCSRCH6R0D50
C 585	(A,141,29)	CKSRYB104K50
C 586	(A,141,33) 10µF	CCG1171
C 587	(B,145,26)	CKSRYB104K50
C 588	(B,151,24)	CKSRYB104K50
C 601	(B,76,95)	CKSRYB105K6R3
C 604	(B,106,94)	CCSRCH7R0D50
C 605	(B,106,89)	CCSRCH7R0D50
C 606	(B,91,64)	CKSRYB105K6R3
C 608	(B,75,61)	CCSRCH101J50
C 609	(B,74,67)	CKSRYB104K50
C 611	(B,95,56)	CKSRYB103K50

Circuit Symbol and No.		Part No.
C 612	(B,77,100)	CKSRYB103K50
C 671	(B,88,50)	CKSRYB105K6R3
C 681	(A,98,42)	CEVLW2R2M50
C 691	(A,105,51)	CKSRYB103K50
C 692	(B,112,58)	CKSRYB103K50
C 701	(B,8,34)	CKSRYB104K50
C 704	(A,6,42) 2200µF/16V	CCH1405
C 705	(B,132,149)	CKSRYB104K50
C 706	(B,143,103)	CKSRYB103K50
C 707	(B,139,103)	CKSRYB104K50
C 708	(B,133,103)	CKSRYB104K50
C 709	(A,132,109)	CKSRYB104K50
C 710	(B,109,129)	CKSRYB103K50
C 711	(B,140,108)	CKSRYB104K50
C 712	(B,124,118)	CKSRYB104K50
C 751	(A,54,13)	CKSRYB104K50
C 753	(A,49,14)	CKSRYB104K50
C 771	(B,63,150)	CKSRYB103K50
C 772	(A,86,149)	CEVLW100M16
C 773	(B,70,139)	CKSRYB103K50
C 781	(B,70,35)	CKSRYB103K50
C 782	(A,74,29)	CEVLW100M16
C 783	(B,73,40)	CKSRYB103K50
C 801	(B,34,31)	CKSRYB153K50
C 802	(B,47,30)	CKSRYB223K50
C 803	(A,35,20) 220µF/10V	CCH1409
C 804	(A,46,20) 470µF/6.3V	CCH1437
C 805	(A,52,51)	CKSYB225K16
C 806	(A,34,50)	CKSYB225K16
C 807	(B,38,36)	CKSYB475K16
C 808	(B,42,34)	CCSRCH101J50
C 809	(B,34,41)	CKSRYB223K50
C 810	(B,48,41)	CKSRYB683K50
C 811	(B,38,44)	CKSRYB104K50
C 812	(B,43,44)	CKSRYB104K50
C 813	(A,41,46)	CKSRYB104K50
C 814	(A,42,48)	CKSYB475K16
C 815	(A,65,48) 100µF/16V	CCH1565
C 816	(A,60,54)	CKSYB225K16
C 817	(A,89,125) 2200µF/16V	CCH1405
C 818	(A,70,40) 100µF/16V	CCH1565
C 819	(A,63,40) 100µF/16V	CCH1565
C 820	(B,51,42)	CKSRYB474K10
C 821	(A,35,25) 220µF/10V	CCH1409
C 831	(B,18,84)	CCSRCH102J50
C 832	(A,44,90)	CEVLW470M16
C 833	(B,19,82)	CKSRYB474K10
C 841	(B,101,34)	CKSYB475K16
C 842	(B,101,32)	CKSRYB102K50
C 843	(A,105,19)	CEVLW101M10
C 845	(B,110,21)	CKSRYB103K50
C 846	(B,113,21)	CKSRYB103K50
C 847	(A,108,29)	CEVW101M16
C 848	(A,165,61) 2200µF/16V	CCH1405
C 849	(A,157,50)	CKSRYB104K50
C 851	(A,84,24) 0.22µF	CCL1058
C 852	(A,65,21)	CKSQYB225K10
C 853	(A,70,24)	CKSRYB105K10
C 854	(A,75,20)	CKSRYB102K50
C 856	(A,61,63)	CKSRYB105K6R3

Circuit Symbol and No.		Part No.
C 857	(A,57,67)	CKSRYB105K10
C 858	(A,59,69)	CKSRYB103K50
C 864	(A,70,98)	CKSRYB104K50
C 871	(A,154,101)	CEVLW101M10
C 872	(A,158,110)	CKSRYB103K50
C 873	(A,152,116)	CEVW101M16
C 881	(A,5,140)	CEVLW220M6R3
C 882	(B,32,139)	CKSRYB103K50
C 883	(B,33,145)	CKSYB475K16
C 884	(B,34,142)	CKSRYB104K50
C 891	(B,161,75)	CKSRYB104K50
C 892	(A,163,76)	CEVLW470M6R3
C 893	(B,164,74)	CKSRYB103K50
C 894	(A,166,71) 10µF	CCG1182
C 895	(B,152,101)	CKSRYB104K50

G

Unit Number:CWM9817
Unit Name:RGB Unit

MISCELLANEOUS

IC 981	(A,59,33) IC	TC7SET08FUS1
D 951	(A,38,28) Diode	HZU2R7(B1)
D 952	(A,36,28) Diode	HZU2R7(B1)
D 953	(A,18,18) Diode	HZU2R7(B1)
D 954	(A,22,18) Diode	HZU2R7(B1)
D 955	(A,13,23) Diode	HZU2R7(B1)
D 956	(A,17,23) Diode	HZU2R7(B1)
D 957	(A,15,21) Diode	HZU2R7(B1)
D 958	(A,18,19) Diode	HZU2R7(B1)
D 959	(A,13,24) Diode	HZU2R7(B1)
D 960	(A,17,24) Diode	HZU2R7(B1)
D 961	(A,56,27) Diode	UDZS5R6(B)
D 962	(A,16,26) Diode	UDZS5R6(B)
D 963	(A,12,26) Diode	UDZS5R6(B)
D 964	(A,16,28) Diode	UDZS5R6(B)
D 965	(A,12,28) Diode	UDZS5R6(B)
D 981	(A,65,40) Diode	UDZS5R6(B)
D 982	(A,59,35) Diode	UDZS5R6(B)
L 981	(A,56,31) Inductor	CTF1389
L 982	(A,57,15) Inductor	CTF1379

RESISTORS

R 982	(A,57,27)	RS1/16S0R0J
R 983	(A,57,33)	RS1/16S121J
R 984	(A,68,39)	RS1/16S473J
R 985	(A,70,40)	RS1/16S621J
R 986	(A,72,39)	RS1/16S221J
R 987	(A,67,9)	RS1/16S0R0J

CAPACITORS

C 951	(A,61,9)	CKSRYB102K50
C 952	(A,62,27)	CCSRCH471J50
C 953	(A,8,24)	CKSRYB104K50
C 981	(A,62,34)	CKSYB106K6R3
C 982	(A,59,29)	CKSRYB104K50
C 983	(A,70,38)	CCSRCH150J50
C 984	(A,56,35)	CKSRYB104K50

Circuit Symbol and No.		Part No.

Monitor Unit
Consists of
Monitor PCB
Inverter PCB
Upper PCB

B F H

Unit Number:CWM9822
Unit Name:Monitor Unit

MISCELLANEOUS

IC 4001	(A,119,33) IC	TC90A96AFG
IC 4101	(A,100,67) IC	NJM2100V
IC 4102	(A,142,49) IC	TC7SET04FUS1
IC 4103	(A,144,41) IC	TC7S66FU
IC 4104	(A,147,32) IC	NJM082BV
IC 4105	(A,95,66) IC	M62343FP
IC 4121	(A,96,57) IC	TC74VHC04FTS1
IC 4122	(A,91,60) IC	TC7SET04FUS1
IC 4171	(A,150,13) IC	TC7S04FU
IC 4181	(A,21,43) IC	BD6171KV
IC 4182	(A,74,16) IC	S-1131B25UC-N4K
IC 4183	(A,80,27) IC	S-1131B15UC-N4A
IC 4311	(B,7,106) IC	NJM062V
IC 4451	(A,144,21) IC	TC7WH08FU
IC 4452	(A,141,27) IC	TC7SH02FUS1
IC 4453	(A,144,28)	TC7SH32FUS1
IC 4531	(A,57,43) IC	TC7SET08FUS1
IC 4601	(A,68,60) IC	PEG087A
IC 4602	(A,49,66) IC	S-80827CNNB-B8M
IC 4604	(A,62,44) IC	TC7SET08FUS1
IC 4605	(A,64,43) IC	TC7SH08FUS1
IC 4606	(A,49,70) IC	S-818A33AUC-BGN
IC 4691	(A,40,16) IC	S-93C56BD0I-J8
IC 5341	(B,9,45) IC	OZ961ISN
IC 5345	(B,10,28) IC	TC7SET08FUS1
IC 5373	(B,11,8) IC	TA78L05F
Q 4001	(A,114,14) Transistor	2SC4617
Q 4101	(A,149,41) Transistor	UMX2N
Q 4102	(A,148,48) Transistor	UMT2N
Q 4181	(A,31,38) FET	RSQ035P03
Q 4182	(A,33,49) FET	RSQ035P03
Q 4301	(A,30,9) Transistor	2SC4617
Q 4440	(A,84,10) Transistor	2SC4081
Q 4441	(A,91,10) Transistor	2SA1576
Q 4501	(A,19,76) Transistor	UMF5N
Q 4502	(A,23,76) Transistor	UMF5N
Q 4503	(A,28,75) Transistor	FMG12
Q 4602	(A,43,68) Transistor	2SC4617
Q 4603	(A,55,71) Transistor	DTC114EE
Q 4661	(A,66,11) Transistor	2SC4617
Q 4662	(A,66,15) Transistor	2SC4617
Q 4663	(A,62,12) Transistor	2SC4617
Q 5002	(B,12,65) Transistor	2SC4617
Q 5003	(B,11,67) Transistor	2SC4617
Q 5005	(B,10,72) Transistor	UMX2N
Q 5342	(B,5,34) Transistor	2SA1774
Q 5343	(A,9,52) FET	SI6544DQ

Circuit Symbol and No.		Part No.
Q 5344	(A,7,55) FET	SI6544DQ
Q 5371	(A,11,30) Transistor	2SC4617
Q 5372	(A,10,34) Transistor	2SC4617
D 4181	(A,33,35) Diode	RB160M-30
D 4182	(A,38,49) Diode	U2FWJ44N
D 4183	(A,30,33) Diode	RB548W
D 4184	(A,28,33) Diode	RB548W
D 4185	(A,16,29) Diode	RB548W
D 4186	(A,12,33) Diode	RB548W
D 4187	(A,12,37) Diode	RB548W
D 4241	(A,75,28) Diode	RB500V-40
D 4242	(A,70,11) Diode	RB500V-40
D 4311	(B,8,125) Photo Diode	AM-30-21
D 4312	(B,4,131) Diode	UDZS5R6(B)
D 4313	(B,12,133) Diode	UDZS5R6(B)
D 4351	(B,6,9) LED	CL-195PG-CD
D 4352	(B,6,21) LED	CL-195PG-CD
D 4353	(B,6,141) LED	CL-195PG-CD
D 4354	(B,6,152) LED	CL-195PG-CD
D 4371	(B,9,65) LED	CL-190UB2-X
D 4372	(B,9,81) LED	CL-190UB2-X
D 4373	(B,9,96) LED	CL-190UB2-X
D 4501	(A,37,81) Diode	UDZS5R6(B)
D 4502	(A,35,84) Diode	UDZS5R6(B)
D 4503	(A,36,77) Diode	UDZS5R6(B)
D 4504	(A,39,76) Diode	UDZS5R6(B)
D 4505	(A,27,78) Diode	MA111
D 4591	(A,21,16) Diode	UDZS5R6(B)
D 4592	(A,21,14) Diode	UDZS5R6(B)
D 4593	(A,21,13) Diode	UDZS5R6(B)
D 4594	(A,11,16) Diode	UDZS5R6(B)
D 5001	(B,7,63) Diode	UDZS8R2(B)
D 5201	(A,9,39) LED	CL-195PG-CD
D 5202	(A,9,26) LED	CL-195PG-CD
D 5203	(A,9,12) LED	CL-195PG-CD
D 5340	(B,5,70) Diode	HZU6R2(B3)
D 5341	(A,11,49) Diode	HZU6R2(B3)
D 5342	(A,6,49) Diode	HZU6R2(B3)
D 5343	(B,6,96) Diode	MA143
D 5344	(B,5,75) Diode	MA143
D 5351	(B,8,25) Diode	1SS355
D 5371	(B,6,31) Diode	UDZS6R2(B)
D 5372	(B,12,33) Diode	RB751V40
L 4001	(A,103,41) Inductor	CTF1306
L 4002	(A,100,35) Inductor	CTF1306
L 4003	(A,103,36) Inductor	CTF1306
L 4004	(A,101,32) Inductor	CTF1306
L 4005	(A,103,29) Inductor	CTF1306
L 4006	(A,101,28) Inductor	CTF1306
L 4007	(A,102,25) Inductor	CTF1306
L 4008	(A,102,23) Inductor	CTF1306
L 4009	(A,104,19) Inductor	CTF1306
L 4010	(A,104,18) Inductor	CTF1306
L 4011	(A,102,15) Inductor	CTF1306
L 4012	(A,102,14) Inductor	CTF1306
L 4013	(A,111,11) Inductor	CTF1306
L 4018	(A,114,12) Inductor	CTF1306
L 4025	(A,119,16) Inductor	CTF1306
L 4030	(A,121,16) Inductor	CTF1306
L 4034	(A,125,16) Inductor	CTF1306

Circuit Symbol and No.		Part No.
L 4036	(A,129,16) Inductor	CTF1306
L 4038	(A,131,19) Inductor	CTF1306
L 4039	(A,135,20) Inductor	CTF1306
L 4040	(A,135,21) Inductor	CTF1306
L 4041	(A,138,20) Inductor	CTF1306
L 4042	(A,139,21) Inductor	CTF1306
L 4043	(A,138,23) Inductor	CTF1306
L 4044	(A,135,24) Inductor	CTF1306
L 4048	(A,135,26) Inductor	CTF1306
L 4049	(A,136,27) Inductor	CTF1306
L 4050	(A,135,28) Inductor	CTF1306
L 4051	(A,136,30) Inductor	CTF1306
L 4052	(A,136,31) Inductor	CTF1306
L 4053	(A,135,34) Inductor	CTF1306
L 4054	(A,135,36) Inductor	CTF1306
L 4055	(A,135,37) Inductor	CTF1306
L 4056	(A,135,38) Inductor	CTF1306
L 4057	(A,136,40) Inductor	CTF1306
L 4058	(A,138,41) Inductor	CTF1306
L 4059	(A,136,43) Inductor	CTF1306
L 4060	(A,135,44) Inductor	CTF1306
L 4061	(A,132,47) Ferrite Bead	CTF1528
L 4062	(A,132,48) Ferrite Bead	CTF1528
L 4063	(A,130,48) Ferrite Bead	CTF1528
L 4064	(A,130,48) Ferrite Bead	CTF1528
L 4065	(A,129,48) Ferrite Bead	CTF1528
L 4066	(A,128,48) Ferrite Bead	CTF1528
L 4067	(A,127,48) Ferrite Bead	CTF1528
L 4068	(A,126,50) Inductor	CTF1306
L 4069	(A,124,50) Inductor	CTF1306
L 4070	(A,123,49) Ferrite Bead	CTF1528
L 4071	(A,123,51) Ferrite Bead	CTF1528
L 4072	(A,122,49) Ferrite Bead	CTF1528
L 4073	(A,121,51) Ferrite Bead	CTF1528
L 4074	(A,121,49) Ferrite Bead	CTF1528
L 4075	(A,120,51) Ferrite Bead	CTF1528
L 4076	(A,119,49) Inductor	CTF1306
L 4077	(A,118,49) Ferrite Bead	CTF1528
L 4078	(A,118,51) Ferrite Bead	CTF1528
L 4079	(A,117,49) Ferrite Bead	CTF1528
L 4080	(A,116,51) Ferrite Bead	CTF1528
L 4081	(A,116,49) Ferrite Bead	CTF1528
L 4082	(A,115,51) Ferrite Bead	CTF1528
L 4083	(A,114,50) Inductor	CTF1306
L 4084	(A,112,52) Inductor	CTF1306
L 4085	(A,112,49) Inductor	CTF1306
L 4086	(A,111,50) Ferrite Bead	CTF1528
L 4087	(A,110,50) Ferrite Bead	CTF1528
L 4088	(A,109,50) Ferrite Bead	CTF1528
L 4089	(A,108,50) Ferrite Bead	CTF1528
L 4090	(A,107,50) Ferrite Bead	CTF1528
L 4091	(A,106,50) Ferrite Bead	CTF1528
L 4092	(A,106,48) Inductor	CTF1306
L 4093	(A,105,46) Inductor	CTF1306
L 4094	(A,99,14) Inductor	CTF1635
L 4095	(A,136,15) Inductor	CTF1635
L 4096	(A,95,17) Inductor	CTF1635
L 4097	(A,139,44) Inductor	CTF1635
L 4098	(A,101,38) Inductor	CTF1635
L 4099	(A,99,18) Inductor	CTF1635

Circuit Symbol and No.		Part No.
L 4100	(A,46,53) Choke Coil 18µH	CTH1250
L 4101	(A,141,33) Inductor	LCKAW101J2520
L 4102	(A,150,27) Inductor	LCKAW101J2520
L 4105	(A,146,45) Inductor	CTF1306
L 4121	(A,96,49) Inductor	CTF1635
L 4122	(A,97,61) Inductor	CTF1306
L 4123	(A,92,55) Inductor	CTF1306
L 4151	(A,133,53) Chip Inductor	DTL1096
L 4152	(A,128,53) Inductor	CTF1635
L 4153	(A,136,54) Inductor	CTF1635
L 4161	(A,144,55) Chip Inductor	DTL1096
L 4171	(A,142,15) Inductor	LCKAW101J2520
L 4172	(A,150,16) Inductor	CTF1306
L 4173	(A,146,12) Inductor	CTF1379
L 4181	(A,23,25) Chip Inductor	DTL1096
L 4185	(A,42,60) Choke Coil 10µH	CTH1249
L 4186	(A,10,47) Inductor	CTF1635
L 4195	(A,26,26) Inductor	CTF1635
L 4203	(A,36,30) Choke Coil 68µH	CTH1318
L 4207	(A,12,27) Inductor	CTF1635
L 4214	(A,36,55) Choke Coil 18µH	CTH1250
L 4311	(B,11,114) Inductor	LCKBW100K2520
L 4423	(A,79,15) Inductor	LCKAW101J2520
L 4424	(A,88,15) Inductor	LCTAW220J2520
L 4425	(A,91,15) Chip Coil	LCTAW270J2520
L 4451	(A,145,15) Inductor	LCKAW101J2520
L 4521	(A,88,81) Coil	CTH1338
L 4531	(A,54,43) Inductor	CTF1306
L 4541	(A,24,70) Inductor	CTF1488
L 4601	(A,51,79) Inductor	LCKBW100K2520
L 4602	(A,43,72) Inductor	LCKBW100K2520
T 5341	(A,8,79) Transformer	CTT1126
TH4301	(A,32,11) Thermistor	CCX1051
X 4001	(A,107,13)Crystal Resonator 42MHz	CSS1604
X 4601	(A,66,49) Radiator 10.0MHz	CSS1577
S 4391	(B,8,5) Push Switch	CSG1126
S 4392	(B,8,25) Push Switch	CSG1126
S 4393	(B,8,137) Push Switch	CSG1126
S 4394	(B,8,156) Push Switch	CSG1126
S 5101	(A,11,39) Push Switch	CSG1155
S 5102	(A,11,26) Push Switch	CSG1155
S 5103	(A,11,12) Push Switch	CSG1155
VR5341	(A,10,43) Semi-fixed 15kΩ(B)	CCP1424
⚠ FU4541	(A,29,70) Fuse 500mA	CEK1251
⚠ FU5341	(B,4,27) Fuse 1.25A	CEK1281
EF4401	(A,88,39) EMI Filter	CCG1082
EF4402	(A,88,35) EMI Filter	CCG1082
EF4403	(A,89,32) EMI Filter	CCG1082

RESISTORS

R 4001	(A,111,17)	RS1/16SS105J
R 4002	(A,110,14)	RS1/16SS391J
R 4003	(A,114,16)	RS1/16SS152J
R 4004	(A,116,16)	RS1/16SS331J
R 4005	(A,120,10)	RS1/16S0R0J
R 4061	(A,138,34)	RS1/16SS333J
R 4062	(A,134,48)	RAB4CQ221J
R 4063	(A,128,50)	RAB4CQ221J
R 4064	(A,122,53)	RAB4CQ221J
R 4065	(A,119,53)	RAB4CQ221J
R 4066	(A,134,33)	RS1/16S102J
R 4067	(A,116,53)	RAB4CQ221J
R 4068	(A,110,52)	RAB4CQ221J
R 4069	(A,107,52)	RAB4CQ221J
R 4070	(A,135,18)	RS1/16S0R0J
R 4101	(A,104,63)	RS1/16S101J
R 4102	(A,104,67)	RS1/16S101J
R 4103	(A,151,36)	RS1/16SS472J
R 4104	(A,151,31)	RS1/16SS223J
R 4106	(A,145,34)	RS1/16S3302F
R 4107	(A,144,32)	RS1/16S5602F
R 4108	(A,148,39)	RS1/16S101J
R 4111	(A,150,43)	RS1/16S153J
R 4112	(A,151,45)	RS1/16SS153J
R 4113	(A,148,44)	RS1/16SS0R0J
R 4114	(A,150,45)	RS1/16SS0R0J
R 4115	(A,150,39)	RS1/16SS100J
R 4116	(A,151,47)	RS1/16SS100J
R 4117	(A,143,46)	RS1/16SS681J
R 4118	(A,90,65)	RAB4CQ221J
R 4122	(A,101,61)	RS1/16S27R0D
R 4124	(A,101,59)	RS1/16S10R0D
R 4125	(A,105,61)	RS1/16S6800D
R 4126	(A,103,60)	RS1/16S1000D
R 4128	(A,104,58)	RS1/16S82R0F
R 4132	(A,104,57)	RS1/16S56R0D
R 4134	(A,102,54)	RS1/16S47R0D
R 4136	(A,102,53)	RS1/16S36R0D
R 4138	(A,102,51)	RS1/16S33R0F
R 4142	(A,100,53)	RS1/16S27R0D
R 4144	(A,101,55)	RS1/16S1800D
R 4146	(A,101,57)	RS1/16S82R0F
R 4148	(A,101,58)	RS1/16S12R0F
R 4151	(A,132,56)	RS1/16S102J
R 4171	(A,148,15)	RS1/16SS102J
R 4173	(A,140,15)	RS1/16SS102J
R 4174	(A,140,17)	RS1/16SS101J
R 4175	(A,140,19)	RS1/16SS101J
R 4181	(A,26,31)	RS1/16S3303D
R 4182	(A,25,35)	RS1/16S1802D
R 4183	(A,24,35)	RS1/16S4300D
R 4184	(A,22,35)	RS1/16S5102D
R 4185	(A,14,43)	RS1/16S2202F
R 4186	(A,13,45)	RS1/16S1802F
R 4187	(A,15,45)	RS1/16S1002F
R 4188	(A,30,42)	RS1/16S563J
R 4191	(A,29,44)	RS1/16S150J
R 4192	(A,27,49)	RS1/16S150J
R 4193	(A,30,50)	RS1/16S273J
R 4194	(A,27,53)	RS1/16S1600D
R 4195	(A,28,55)	RS1/16S1001D
R 4196	(A,28,52)	RS1/16S2700D
R 4201	(A,24,59)	RS1/16S682J
R 4203	(A,15,53)	RS1/16S5100F
R 4204	(A,21,51)	RS1/16S2001F
R 4216	(A,25,50)	RS1/16S333J
R 4217	(A,26,56)	RS1/16S102J
R 4218	(A,24,56)	RS1/16S684J
R 4219	(A,23,62)	RS1/16S6801F

Circuit Symbol and No.		Part No.
R 4220	(A,20,61)	RS1/16S1001D
R 4221	(A,23,61)	RS1/16S201J
R 4222	(A,23,54)	RS1/16S123J
R 4241	(A,76,28)	RS1/16SS684J
R 4242	(A,74,22)	RS1/16SS474J
R 4251	(A,137,28)	RS1/16SS470J
R 4252	(A,139,31)	RS1/16SS470J
R 4253	(A,139,32)	RS1/16SS471J
R 4305	(A,33,14)	RS1/16SS153J
R 4308	(A,28,8)	RS1/16SS104J
R 4309	(A,31,6)	RS1/16S103J
R 4311	(B,7,112)	RS1/16S155J
R 4312	(B,7,117)	RS1/16S105J
R 4313	(B,7,100)	RS1/16S393J
R 4314	(B,7,101)	RS1/16S103J
R 4315	(B,9,99)	RS1/16S203J
R 4316	(B,7,98)	RS1/16S393J
R 4351	(B,11,19)	RS1/16S271J
R 4352	(B,11,16)	RS1/16S271J
R 4353	(B,11,10)	RS1/16S331J
R 4354	(B,4,7)	RS1/16S331J
R 4355	(B,8,45)	RS1/16S271J
R 4356	(B,8,48)	RS1/16S271J
R 4357	(B,7,87)	RS1/16S331J
R 4358	(B,7,90)	RS1/16S331J
R 4371	(B,7,58)	RS1/16S101J
R 4372	(B,8,60)	RS1/16S101J
R 4373	(B,8,61)	RS1/16S101J
R 4374	(B,8,63)	RS1/16S221J
R 4375	(B,9,69)	RS1/16S221J
R 4376	(B,9,72)	RS1/16S221J
R 4377	(B,9,74)	RS1/16S221J
R 4378	(B,9,77)	RS1/16S221J
R 4426	(A,77,76)	RS1/16SS0R0J
R 4439	(A,88,8)	RS1/16S391J
R 4440	(A,92,29)	RS1/16SS0R0J
R 4442	(A,87,12)	RS1/16SS104J
R 4444	(A,92,18)	RS1/16SS272J
R 4445	(A,88,9)	RS1/16S471J
R 4446	(A,87,11)	RS1/16SS681J
R 4448	(A,85,19)	RS1/16S472J
R 4449	(A,86,19)	RS1/16SS104J
R 4450	(A,84,13)	RS1/16SS153J
R 4451	(A,150,20)	RAB4CQ101J
R 4452	(A,151,23)	RS1/16SS473J
R 4454	(A,145,18)	RS1/16SS473J
R 4455	(A,147,22)	RS1/16SS473J
R 4456	(A,149,22)	RS1/16SS101J
R 4501	(A,20,79)	RS1/16SS105J
R 4502	(A,23,79)	RS1/16SS105J
R 4503	(A,18,74)	RS1/16SS103J
R 4504	(A,20,74)	RS1/16SS103J
R 4505	(A,22,74)	RS1/16SS103J
R 4506	(A,24,74)	RS1/16SS103J
R 4507	(A,33,76)	RS1/16SS102J
R 4508	(A,31,77)	RS1/16SS102J
R 4521	(A,97,72)	RS1/16SS101J
R 4522	(A,96,74)	RS1/16SS101J
R 4523	(A,102,74)	RS1/16SS101J
R 4524	(A,101,74)	RS1/16SS101J

Circuit Symbol and No.		Part No.
R 4525	(A,99,75)	RS1/16SS101J
R 4526	(A,98,75)	RS1/16SS101J
R 4531	(A,59,41)	RS1/16SS101J
R 4532	(A,55,44)	RS1/16SS103J
R 4541	(A,74,77)	RS1/16SS471J
R 4563	(A,65,74)	RS1/16S0R0J
R 4564	(A,61,75)	RS1/16S0R0J
R 4565	(A,67,45)	RS1/16S0R0J
R 4566	(A,69,46)	RS1/16S0R0J
R 4591	(A,12,16)	RS1/16SS101J
R 4592	(A,24,11)	RS1/16SS101J
R 4593	(A,24,13)	RS1/16SS101J
R 4594	(A,21,18)	RS1/16SS101J
R 4601	(A,50,73)	RS1/16SS103J
R 4602	(A,55,54)	RS1/16SS473J
R 4603	(A,55,46)	RS1/16SS103J
R 4604	(A,39,67)	RS1/16SS473J
R 4605	(A,41,68)	RS1/16SS473J
R 4606	(A,45,69)	RS1/16SS473J
R 4607	(A,63,48)	RS1/16SS101J
R 4608	(A,47,66)	RS1/16SS103J
R 4609	(A,71,49)	RS1/16SS101J
R 4611	(A,76,42)	RS1/16SS272J
R 4612	(A,75,41)	RS1/16SS272J
R 4613	(A,66,45)	RS1/16SS471J
R 4614	(A,64,47)	RS1/16SS471J
R 4616	(A,82,50)	RAB4CQ102J
R 4617	(A,82,61)	RS1/16SS473J
R 4619	(A,72,70)	RS1/16SS0R0J
R 4620	(A,70,71)	RS1/16SS0R0J
R 4621	(A,57,70)	RS1/16SS473J
R 4622	(A,56,69)	RS1/16SS473J
R 4625	(A,31,24)	RS1/16SS473J
R 4626	(A,53,62)	RAB4CQ473J
R 4627	(A,53,59)	RS1/16SS471J
R 4628	(A,54,66)	RS1/16SS471J
R 4630	(A,58,49)	RAB4CQ473J
R 4635	(A,76,70)	RS1/16SS102J
R 4636	(A,75,70)	RS1/16SS472J
R 4665	(A,64,11)	RS1/16SS1002D
R 4666	(A,65,14)	RS1/16SS1002D
R 4667	(A,60,12)	RS1/16SS1002D
R 4668	(A,65,12)	RS1/16SS5602F
R 4669	(A,64,15)	RS1/16SS5602F
R 4670	(A,62,14)	RS1/16SS5602F
R 4671	(A,63,9)	RS1/16SS5602F
R 4672	(A,67,14)	RS1/16SS5602F
R 4673	(A,60,10)	RS1/16SS5602F
R 4674	(A,65,9)	RS1/16SS102J
R 4675	(A,67,12)	RS1/16SS102J
R 4676	(A,62,10)	RS1/16SS102J
R 4692	(A,41,12)	RS1/16S103J
R 4701	(A,88,47)	RS1/10S103J
R 4708	(A,99,30)	RS1/16S0R0J
R 5002	(B,7,67)	RS1/16S621J
R 5003	(B,9,63)	RS1/16S103J
R 5004	(B,11,63)	RS1/16S104J
R 5005	(B,7,66)	RS1/16S473J
R 5006	(B,8,70)	RS1/16S621J
R 5007	(B,4,68)	RS1/16S821J

Circuit Symbol and No.		Part No.
R 5008	(B,12,73)	RS1/16S101J
R 5009	(B,12,70)	RS1/16S101J
R 5221	(A,8,10)	RS1/16SS151J
R 5222	(A,5,12)	RS1/16SS151J
R 5223	(A,5,14)	RS1/16SS101J
R 5224	(A,5,15)	RS1/16SS101J
R 5342	(B,9,31)	RS1/16S103J
R 5343	(B,5,37)	RS1/16S333J
R 5344	(B,5,33)	RS1/16S473J
R 5345	(B,5,29)	RS1/16S472J
R 5346	(B,4,66)	RS1/16S513J
R 5347	(B,4,72)	RS1/16S105J
R 5348	(A,12,44)	RS1/16S563J
R 5349	(A,5,47)	RS1/16S103J
R 5351	(A,9,47)	RS1/16S103J
R 5353	(B,4,92)	RS1/16S511J
R 5371	(B,7,35)	RS1/16S103J
R 5372	(A,8,30)	RS1/16S104J
R 5373	(B,8,36)	RS1/16S473J
R 5374	(B,11,37)	RS1/16S105J
R 5378	(B,12,30)	RS1/16S102J

CAPACITORS

C 4001	(A,104,43)	CKSSYF104Z16
C 4002	(A,104,39)	CKSSYF104Z16
C 4003	(A,104,37)	CKSSYF104Z16
C 4004	(A,104,33)	CKSSYF104Z16
C 4005	(A,104,31)	CKSSYF104Z16
C 4006	(A,104,27)	CKSSYF104Z16
C 4007	(A,104,25)	CKSSYF104Z16
C 4008	(A,104,22)	CKSSYF104Z16
C 4009	(A,107,18)	CKSSYF104Z16
C 4011	(A,109,18)	CKSSYF104Z16
C 4012	(A,111,18)	CKSSYF104Z16
C 4013	(A,114,18)	CKSSYF104Z16
C 4014	(A,105,14)	CCSSCH9R0D50
C 4015	(A,110,12)	CCSSCH9R0D50
C 4016	(A,113,16)	CKSSYB103K16
C 4017	(A,112,14)	CCSSCH181J25
C 4018	(A,116,18)	CKSSYF104Z16
C 4019	(A,115,16)	CCSSCH4R0C50
C 4020	(A,113,14)	CKSSYF104Z16
C 4022	(A,116,14)	CKSSYB104K10
C 4023	(A,117,15)	CKSSYB104K10
C 4024	(A,117,17)	CKSSYB104K10
C 4025	(A,119,18)	CKSSYF104Z16
C 4026	(A,121,12)	CKSSYB104K10
C 4027	(A,122,13)	CKSSYB104K10
C 4028	(A,120,14)	CKSSYB104K10
C 4030	(A,121,18)	CKSSYF104Z16
C 4031	(A,123,15)	CKSSYB104K10
C 4032	(A,122,17)	CKSSYB104K10
C 4033	(A,123,17)	CKSSYB104K10
C 4034	(A,124,17)	CKSSYB104K10
C 4035	(A,125,18)	CKSSYF104Z16
C 4036	(A,125,12)	CKSSYB104K10
C 4037	(A,126,12)	CKSSYB104K10
C 4038	(A,127,12)	CKSSYB104K10
C 4039	(A,127,16)	CKSSYB104K10

Circuit Symbol and No.		Part No.
C 4040	(A,128,16)	CKSSYB104K10
C 4041	(A,128,18)	CKSSYF104Z16
C 4043	(A,133,11)	CKSRYB104K50
C 4044	(A,129,18)	CKSSYF104Z16
C 4045	(A,133,21)	CKSSYF104Z16
C 4046	(A,134,23)	CKSSYF104Z16
C 4047	(A,133,25)	CKSSYF104Z16
C 4049	(A,134,27)	CKSSYF104Z16
C 4053	(A,133,31)	CKSSYF104Z16
C 4054	(A,133,35)	CKSSYF104Z16
C 4055	(A,133,37)	CKSSYF104Z16
C 4056	(A,133,38)	CKSSYF104Z16
C 4057	(A,134,40)	CKSSYF104Z16
C 4058	(A,135,41)	CKSSYF104Z16
C 4059	(A,134,42)	CKSSYF104Z16
C 4060	(A,133,45)	CKSRYF105Z10
C 4062	(A,137,33)	CKSSYF104Z16
C 4068	(A,126,47)	CKSSYF104Z16
C 4069	(A,124,48)	CKSSYF104Z16
C 4076	(A,120,47)	CKSSYF104Z16
C 4083	(A,115,47)	CKSSYF104Z16
C 4085	(A,113,47)	CKSSYF104Z16
C 4089	(A,101,48)	CSZSR330M10
C 4090	(A,113,48)	CKSSYF104Z16
C 4091	(A,49,58)	CKSRYB104K50
C 4092	(A,109,47)	CKSSYF104Z16
C 4093	(A,106,46)	CKSSYF104Z16
C 4094	(A,115,10)	CKSYF105Z16
C 4095	(A,133,15)	CSZSR330M10
C 4096	(A,97,14)	CKSYF105Z16
C 4097	(A,141,43)	CSZS100M16
C 4098	(A,100,41)	CSZSR220M10
C 4099	(A,100,20)	CSZSR220M10
C 4100	(A,101,45)	CSZSR330M10
C 4101	(A,144,47)	CKSSYF104Z16
C 4102	(A,99,71)	CKSSYF104Z16
C 4103	(A,144,44)	CKSRYB105K6R3
C 4104	(A,145,39)	CKSRYB104K50
C 4105	(A,144,37)	CKSSYF104Z16
C 4106	(A,145,25)	CKSRYB104K50
C 4107	(A,141,38)	CSZSR220M16
C 4108	(A,147,25) 4.7µF	CCG1111
C 4109	(A,96,70)	CSZS100M16
C 4111	(A,149,37)	CKSRYB105K6R3
C 4112	(A,151,33)	CKSRYB104K50
C 4121	(A,91,57)	CKSRYF104Z16
C 4122	(A,98,53)	CKSSYF104Z16
C 4123	(A,97,51)	CSZS100M16
C 4151	(A,134,51)	CKSSYF104Z16
C 4152	(A,128,58)	CKSSYF104Z16
C 4153	(A,136,52)	CKSRYB104K50
C 4154	(A,135,56)	CKSRYB104K50
C 4155	(A,134,55)	CKSSYF104Z16
C 4156	(A,128,56)	CSZSR330M10
C 4157	(A,138,56)	CKSQYF334Z25
C 4158	(A,132,52)	CSZS100M16
C 4161	(A,130,51)	CKSSYF104Z16
C 4162	(A,146,53)	CKSRYB104K50
C 4163	(A,140,53) 4.7µF	CCG1111
C 4164	(A,141,56)	CKSRYB104K50

Circuit Symbol and No.		Part No.
C 4172	(A,144,12)	CKSRYB104K50
C 4181	(A,20,27)	CKSQYF105Z25
C 4182	(A,30,27)	CKSQYF105Z25
C 4183	(A,29,29)	CKSRYB104K50
C 4184	(A,24,33)	CKSQYF105Z25
C 4188	(A,13,31)	CKSQYF105Z25
C 4190	(A,11,41)	CKSQYF225Z16
C 4191	(A,11,40)	CKSQYF225Z16
C 4192	(A,11,43)	CKSQYF105Z25
C 4193	(A,15,35)	CKSRYF474Z16
C 4194	(A,16,31)	CKSRYF474Z16
C 4195	(A,20,31)	CKSYF475Z16
C 4196	(A,26,35)	CKSRYB472K50
C 4197	(A,29,35)	CKSRYB472K50
C 4198	(A,26,23)	CKSQYF105Z25
C 4199	(A,15,37)	CKSRYF474Z16
C 4200	(A,11,35)	CKSQYF105Z25
C 4201	(A,43,30) 33µF/10V	CCH1586
C 4202	(A,40,29)	CKSRYB104K50
C 4203	(A,33,39)	CKSRYB103K50
C 4204	(A,36,38) 10µF	CCG1138
C 4205	(A,27,38)	CKSRYB103K50
C 4206	(A,28,38)	CKSRYB105K6R3
C 4207	(A,10,27)	CKSQYF105Z25
C 4208	(A,30,45)	CKSRYB102K50
C 4209	(A,29,42)	CKSRYB104K50
C 4210	(A,46,62)	CKSQYF105Z25
C 4211	(A,30,47)	CKSRYB105K6R3
C 4212	(A,36,45) 10µF	CCG1138
C 4213	(A,30,48)	CKSRYB104K50
C 4214	(A,39,45) 10µF	CCG1138
C 4215	(A,38,51)	CKSRYB104K50
C 4216	(A,41,53) 68µF/6.3V	CCH1440
C 4217	(A,25,53)	CCSRCH101J50
C 4219	(A,26,49)	CKSRYB103K50
C 4221	(A,26,55)	CCSRCH331J50
C 4223	(A,26,57)	CKSRYB393K16
C 4224	(A,22,56)	CKSRYB103K50
C 4226	(A,22,59)	CKSRYB473K50
C 4228	(A,17,53)	CKSRYB393K16
C 4229	(A,14,47)	CKSRYB393K16
C 4230	(A,32,62)	CKSRYB102K50
C 4231	(A,17,50)	CKSRYB104K50
C 4232	(A,19,51)	CSZS100M16
C 4233	(A,14,48)	CKSRYB105K6R3
C 4234	(A,10,50)	CKSRYB104K50
C 4235	(A,21,31)	CKSRYB103K50
C 4236	(A,81,24)	CKSRYF105Z10
C 4237	(A,80,31)	CKSSYB104K10
C 4238	(A,77,31)	CSZS100M10
C 4239	(A,17,38)	CKSSYF104Z16
C 4240	(A,33,45)	CKSRYB103K50
C 4241	(A,75,20)	CKSRYF105Z10
C 4242	(A,74,13)	CKSSYB104K10
C 4243	(A,71,15)	CSZS100M10
C 4244	(A,77,24)	CSZS100M16
C 4245	(A,75,12)	CKSSYF104Z16
C 4248	(A,77,28)	CKSSYB104K10
C 4261	(A,41,10)	CKSRYB104K50
C 4301	(A,30,6)	CKSRYB105K6R3

Circuit Symbol and No.		Part No.
C 4302	(A,33,10)	CKSRYB104K50
C 4311	(B,7,114)	CKSRYB474K10
C 4312	(B,7,115)	CKSRYB104K50
C 4313	(B,4,117)	CKSRYB104K50
C 4314	(B,10,117)	CKSRYB104K50
C 4315	(B,5,106)	CKSRYB104K50
C 4371	(B,6,65)	CKSRYB104K50
C 4372	(B,6,80)	CKSRYB104K50
C 4373	(B,6,95)	CKSRYB104K50
C 4430	(A,91,18)	CCSSCH470J50
C 4431	(A,90,18)	CCSSCH680J50
C 4432	(A,89,18)	CCSSCH470J50
C 4433	(A,85,15) 10µF	CCG1171
C 4438	(A,81,13)	CKSSYF104Z16
C 4439	(A,90,12)	CCSSCH5R0C50
C 4440	(A,82,16)	CSZSR330M10
C 4452	(A,141,30)	CKSSYB104K10
C 4453	(A,143,19)	CKSSYB104K10
C 4454	(A,144,30)	CKSSYB104K10
C 4455	(A,149,18)	CSZS100M10
C 4501	(A,38,81)	CKSSYB102K10
C 4502	(A,37,85)	CKSSYB102K10
C 4503	(A,37,78)	CKSSYB102K10
C 4504	(A,38,75)	CKSSYB102K10
C 4506	(A,34,76)	CKSSYB102K10
C 4507	(A,33,78)	CKSSYB102K10
C 4508	(A,33,75)	CKSRYB105K6R3
C 4521	(A,82,80) 10µF	CCG1138
C 4522	(A,78,80) 10µF	CCG1138
C 4531	(A,57,41)	CKSSYB104K10
C 4541	(A,21,68)	CKSQYF224Z25
C 4601	(A,49,75)	CSZSR330M10
C 4602	(A,47,73)	CKSSYB104K10
C 4603	(A,45,72)	CKSQYB225K10
C 4604	(A,36,70)	CSZS330M6R3
C 4608	(A,70,50)	CKSSYB104K10
C 4609	(A,64,41)	CKSSYB104K10
C 4610	(A,62,41)	CKSSYB104K10
C 4611	(A,45,66)	CKSSYB104K10
C 4668	(A,76,40)	CCG1179
C 4669	(A,75,49)	CCG1179
C 4670	(A,77,40)	CCG1179
C 4691	(A,35,16)	CKSSYB104K10
C 5002	(B,10,69)	CKSRYB104K50
C 5343	(B,10,34)	CKSRYB104K50
C 5344	(B,12,40)	CKSRYB105K10
C 5345	(A,13,34)	CKSQYB474K16
C 5346	(B,8,38)	CKSRYF105Z10
C 5347	(B,8,40)	CKSRYF104Z50
C 5348	(B,4,38)	CKSRYB332K50
C 5349	(B,4,41)	CKSRYB152K50
C 5352	(B,12,39)	CKSRYB103K50
C 5353	(A,5,51)	CKSRYB473K50
C 5354	(B,11,50)	CFHXSQ221J50
C 5355	(A,12,47)	CKSRYB473K50
C 5356	(B,8,54) 10µF	CCG1138
C 5357	(B,8,58) 10µF	CCG1138
C 5358	(A,10,59)	CKSQYB105K10
C 5359	(A,8,99) 22pF	CCG1140
C 5361	(B,4,89)	CKSRYB223K50

Circuit Symbol and No.		Part No.
C 5362	(A,12,59)	CKSQYB105K10
C 5371	(B,13,12)	CKSRYF104Z50
C 5372	(B,8,9)	CKSRYF105Z10
C 5391	(B,12,27)	CKSRYF104Z50

I

Unit Number:CWM9827
Unit Name:Keyboard Unit

MISCELLANEOUS

IC 5501	(A,19,11) IC	TSOP4840SB1
D 5502	(A,58,5) LED	CL-190UB2-X
D 5503	(A,121,5) LED	CL-190UB2-X
D 5504	(A,95,5) LED	CL-190UB2-X
D 5505	(A,71,5) LED	CL-190UB2-X
D 5506	(A,44,5) LED	CL-190UB2-X
D 5507	(A,108,5) LED	CL-190UB2-X
D 5508	(A,84,12) LED	CL-190UB2-X
D 5509	(B,24,12) Diode	UDZS6R8(B)
D 5510	(A,27,4) LED	CL-195PG-CD
D 5512	(A,154,5) LED	CL-195PG-CD
D 5514	(A,139,12) LED	CL-195PG-CD
D 5516	(A,11,14) LED	CL-195PG-CD
D 5518	(A,159,10) LED	CL-195PG-CD
D 5520	(A,138,4) LED	CL-195PG-CD
D 5522	(A,11,6) LED	CL-195PG-CD
D 5524	(A,154,14) LED	CL-195PG-CD
D 5526	(A,150,9) LED	CL-195PG-CD
D 5528	(A,100,11) LED	CL-195SR-CD
S 5501	(A,44,3) Push Switch	CSG1155
S 5502	(A,75,3) Push Switch	CSG1155
S 5503	(A,54,3) Push Switch	CSG1155
S 5504	(A,9,17) Push Switch	CSG1155
S 5505	(A,9,3) Push Switch	CSG1155
S 5506	(A,24,4) Push Switch	CSG1155
S 5507	(A,91,3) Push Switch	CSG1155
S 5508	(A,112,3) Push Switch	CSG1155
S 5509	(A,121,3) Push Switch	CSG1155
S 5510	(A,142,4) Push Switch	CSG1155
S 5511	(A,162,10) Push Switch	CSG1155
S 5512	(A,154,17) Push Switch	CSG1155
S 5513	(A,154,3) Push Switch	CSG1155
S 5514	(A,147,10) Push Switch	CSG1155
S 5515	(A,143,14) Push Switch	CSG1155
S 5516	(A,162,20) Push Switch	CSG1155
S 5517	(A,83,8) Switch	CSN1057

RESISTORS

R 5501	(B,63,6)	RS1/16S122J
R 5502	(A,63,4)	RS1/16S202J
R 5503	(B,24,5)	RS1/16S392J
R 5504	(B,7,9)	RS1/16S123J
R 5505	(B,60,9)	RS1/16S220J
R 5506	(A,83,4)	RS1/16S122J
R 5507	(B,112,6)	RS1/16S202J
R 5508	(B,116,6)	RS1/16S392J
R 5509	(B,142,6)	RS1/16S123J
R 5510	(B,156,6)	RS1/16S122J
R 5511	(B,160,12)	RS1/16S202J
R 5512	(B,159,10)	RS1/16S392J
R 5513	(B,146,8)	RS1/16S123J
R 5515	(B,44,6)	RS1/16S221J
R 5516	(B,106,4)	RS1/16S221J
R 5517	(B,94,9)	RS1/16S221J
R 5518	(B,70,5)	RS1/16S391J
R 5519	(B,47,6)	RS1/16S221J
R 5520	(B,109,4)	RS1/16S221J
R 5521	(B,96,9)	RS1/16S221J
R 5522	(B,73,5)	RS1/16S391J
R 5523	(B,50,6)	RS1/16S221J
R 5524	(B,112,4)	RS1/16S221J
R 5525	(B,97,9)	RS1/16S221J
R 5526	(B,73,4)	RS1/16S331J
R 5527	(B,40,5)	RS1/16S151J
R 5528	(B,156,14)	RS1/16S151J
R 5529	(B,136,12)	RS1/16S151J
R 5530	(B,38,5)	RS1/16S121J
R 5531	(B,157,12)	RS1/16S121J
R 5532	(B,138,12)	RS1/16S121J
R 5533	(B,36,5)	RS1/16S121J
R 5534	(B,157,10)	RS1/16S121J
R 5535	(B,139,12)	RS1/16S121J
R 5536	(B,32,10)	RS1/16S103J
R 5537	(B,33,12)	RS1/16S101J
R 5538	(B,34,5)	RS1/16S121J
R 5539	(B,157,8)	RS1/16S121J
R 5540	(B,137,9)	RS1/16S121J
R 5541	(B,29,9)	RS1/16S101J
R 5542	(B,105,10)	RS1/16S101J
R 5543	(B,105,11)	RS1/16S101J

CAPACITORS

C 5501	(A,59,4)	CKSRYB104K50
C 5502	(A,121,7)	CKSRYB104K50
C 5503	(A,96,4)	CKSRYB104K50
C 5504	(A,70,4)	CKSRYB104K50
C 5505	(A,44,7)	CKSRYB104K50
C 5506	(A,106,4)	CKSRYB104K50
C 5507	(A,86,11)	CKSRYB104K50
C 5508	(B,26,10)	CKSYB475K1

C

Unit Number:CWX3170
Unit Name:DVD Core Unit

MISCELLANEOUS

IC 1001	IC	S-L2980A50MC-C7J
IC 1002	IC	R1130H501B
IC 1003	IC	LTC3411EMS
IC 1051	IC	PE5401A
IC 1201	IC	AN8471SAT1
IC 1231	IC	TC7SZ125FU
IC 1251	IC	BA5985FM
IC 1501	IC	MN35104UB
IC 1570	IC	K4S283232E-TC75
IC 1601	IC	PD6516A
IC 1602	IC	TC7SH86FU

Circuit Symbol and No.		Part No.
IC 1651	IC	M5M5V216ATP-70HI
IC 1652	IC	TC7SZ126FU
IC 1671	IC	TC74LCX16373AFT
IC 1672	IC	TC7SZ08FU
IC 1801	IC	SM8707LV
IC 1802	IC	TC7WH157FU
IC 1851	IC	PCM1742KE
IC 1852	IC	NJM2140R
IC 1853	IC	NJM2100V
Q 1002	Transistor	DTC114EU
Q 1101	Transistor	2SB1260
Q 1102	Transistor	2SB1260
Q 1103	Transistor	DTC114EU
Q 1104	Transistor	2SA1576A
Q 1105	Transistor	2SC4081
Q 1106	Transistor	2SC4081
Q 1107	Transistor	2SC4081
Q 1551	Transistor	2SA1576
D 1001	Diode	1SR154-400
D 1101	Diode	1SS355
D 1102	Diode	1SS355
D 1241	Chip LED	CL205IRXTU
L 1001	Inductor	CTF1623
L 1002	Inductor	CTF1624
L 1003	Inductor	CTF1558
L 1004	Inductor	CTF1558
L 1051	Inductor	CTF1473
L 1101	Inductor	CTF1305
L 1501	Inductor	CTF1378
L 1502	Inductor	CTF1487
L 1503	Inductor	CTF1488
L 1554	Inductor	CTF1473
L 1555	Inductor	CTF1473
L 1556	Inductor	CTF1400
L 1557	Inductor	CTF1395
L 1558	Inductor	CTF1473
L 1561	Inductor	CTF1473
L 1601	Inductor	CTF1464
L 1651	Inductor	CTF1464
L 1671	Inductor	CTF1473
L 1801	Inductor	CTF1558
L 1802	Inductor	CTF1558
L 1803	Inductor	CTF1464
L 1804	Inductor	CTF1468
L 1851	Inductor	CTF1471
L 1852	Inductor	CTF1473
L 1901	Inductor	CTF1487
L 1902	Inductor	CTF1558
L 1903	Inductor	CTF1558
L 1904	Inductor	CTF1468
L 1905	Inductor	CTF1468
X 1051	Resonator 4.91MHz	CSS1668
X 1801	Resonator 27.0000MHz	CSS1661
VR1551	Semi-fixed 10kΩ(B)	CCP1448
EF1801	Chp EMI Filter	DTL1106
EF1802	Chp EMI Filter	DTL1106
EF1803	Chp EMI Filter	DTL1106
EF1901	Chp EMI Filter	DTL1106
EF1902	Chp EMI Filter	DTL1106
EF1903	Chp EMI Filter	DTL1106
EF1904	Chp EMI Filter	DTL1106
EF1905	Chp EMI Filter	DTF1106

RESISTORS

R 1001	RS1/10S0R0J
R 1003	RS1/16SS1003D
R 1004	RS1/10S0R0J
R 1005	RS1/16SS1501D
R 1006	RS1/16SS8202D
R 1007	RS1/16SS1502D
R 1008	RS1/16SS101J
R 1010	RS1/16SS105J
R 1011	RS1/16SS105J
R 1013	RS1/16SS103J
R 1014	RS1/16SS1203D
R 1015	RS1/16SS2402D
R 1016	RS1/16SS0R0J
R 1017	RS1/16SS0R0J
R 1018	RS1/16SS105J
R 1021	RS1/16SS122J
R 1051	RS1/16SS104J
R 1052	RS1/16SS104J
R 1053	RS1/16SS104J
R 1054	RS1/16SS104J
R 1055	RS1/16SS222J
R 1057	RS1/16SS104J
R 1058	RS1/16SS0R0J
R 1059	RS1/16SS104J
R 1060	RS1/16SS104J
R 1061	RS1/16SS221J
R 1062	RS1/16SS104J
R 1063	RS1/16SS104J
R 1064	RS1/16SS104J
R 1065	RS1/16SS104J
R 1066	RS1/16SS104J
R 1067	RS1/16SS104J
R 1068	RS1/16SS221J
R 1069	RS1/16SS221J
R 1070	RS1/16SS221J
R 1071	RS1/16SS221J
R 1072	RS1/16SS104J
R 1073	RS1/16SS104J
R 1074	RS1/16SS104J
R 1075	RS1/16SS472J
R 1076	RS1/16SS104J
R 1080	RS1/16SS0R0J
R 1081	RS1/16SS221J
R 1082	RS1/16SS473J
R 1083	RS1/16S153J
R 1084	RS1/16SS104J
R 1085	RS1/16S823J
R 1087	RS1/16S104J
R 1088	RS1/16SS104J
R 1089	RS1/16SS104J
R 1090	RAB4CQ104J
R 1101	RS1/16S6R8J
R 1102	RS1/16SS3R9J
R 1103	RS1/16SS3R9J
R 1104	RS1/16SS3R9J

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
R 1105	RS1/16SS3R9J	R 1501	RS1/16SS0R0J
R 1106	RS1/16S6R8J	R 1502	RS1/16SS0R0J
R 1107	RS1/16SS3R9J	R 1503	RAB4CQ101J
R 1108	RS1/16SS3R9J	R 1504	RS1/16SS0R0J
R 1109	RS1/16SS3R9J	R 1505	RS1/16SS0R0J
R 1110	RS1/16SS3R9J	R 1506	RAB4CQ101J
R 1111	RS1/16SS272J	R 1507	RS1/16SS0R0J
R 1112	RS1/16SS472J	R 1508	RAB4CQ101J
R 1113	RS1/16SS102J	R 1509	RS1/16SS0R0J
R 1114	RS1/16SS221J	R 1511	RAB4CQ101J
R 1115	RS1/16SS221J	R 1512	RS1/16SS0R0J
R 1116	RS1/16SS331J	R 1513	RS1/16SS473J
R 1117	RS1/16SS221J	R 1514	RS1/16SS104J
R 1118	RS1/16SS0R0J	R 1515	RS1/16SS222J
R 1119	RS1/16SS0R0J	R 1518	RS1/16SS104J
R 1120	RS1/16SS0R0J	R 1519	RS1/16SS104J
R 1121	RS1/16SS0R0J	R 1522	RS1/16SS103J
R 1128	RS1/16S0R0J	R 1523	RS1/16SS104J
R 1129	RS1/16S0R0J	R 1525	RS1/16SS102J
R 1130	RS1/16S0R0J	R 1530	RS1/16SS104J
R 1131	RS1/16S0R0J	R 1531	RS1/16S221J
R 1201	RS1/16SS181J	R 1532	RS1/16SS104J
R 1202	RS1/16SS181J	R 1536	RS1/16SS104J
R 1203	RS1/16SS513J	R 1537	RS1/16SS104J
R 1204	RS1/16SS221J	R 1540	RS1/16SS221J
R 1206	RS1/16SS513J	R 1541	RS1/16SS473J
R 1207	RS1/16S0R0J	R 1543	RS1/16SS104J
R 1208	RS1/16S0R0J	R 1544	RS1/16SS102J
R 1211	RS1/16SS1R0J	R 1545	RS1/16SS102J
R 1212	RS1/16SS1R0J	R 1546	RS1/16SS104J
R 1213	RS1/16SS1R0J	R 1547	RS1/16SS330J
R 1214	RS1/16SS1R0J	R 1548	RS1/16SS104J
R 1215	RS1/16SS1R0J	R 1551 Inductor	CTF1387
R 1216	RS1/16SS1R0J	R 1552	RS1/16S101J
R 1231	RS1/16SS822J	R 1555	RS1/16S101J
R 1232	RS1/16SS822J	R 1556	RS1/16S101J
R 1233	RS1/16SS822J	R 1558	RS1/16SS750J
R 1234	RS1/16SS822J	R 1561	RS1/16SS153J
R 1235	RS1/16SS563J	R 1562	RS1/16SS471J
R 1236	RS1/16SS243J	R 1563	RS1/16SS471J
R 1237	RS1/16SS683J	R 1565	RS1/16S68R0D
R 1238	RS1/16SS243J	R 1566	RS1/16S4R7J
R 1240	RS1/16S471J	R 1567	RS1/16SS273J
R 1241	RS1/16S391J	R 1568	RS1/16SS183J
R 1246	RS1/16SS104J	R 1569	RS1/16SS153J
R 1248	RS1/16SS0R0J	R 1571	RAB4CQ101J
R 1251	RS1/16SS221J	R 1572	RAB4CQ101J
R 1252	RS1/16SS221J	R 1573	RAB4CQ101J
R 1253	RS1/16SS393J	R 1574	RAB4CQ101J
R 1254	RS1/16SS223J	R 1575	RS1/16SS560J
R 1256	RS1/16SS102J	R 1576	RS1/16SS560J
R 1257	RS1/16SS0R0J	R 1577	RAB4CQ560J
R 1258	RS1/16SS393J	R 1578	RAB4CQ560J
R 1259	RS1/16SS393J	R 1579	RS1/16SS220J
R 1260	RS1/16SS393J	R 1580	RAB4CQ560J
R 1261	RS1/16SS393J	R 1581	RS1/16SS560J
R 1262	RS1/16SS221J	R 1582	RS1/16SS560J
R 1263	RS1/16S0R0J	R 1583	RS1/16SS560J
R 1269	RS1/16SS102J	R 1584	RAB4CQ560J
R 1270	RS1/16SS102J	R 1585	RS1/16SS560J

Circuit Symbol and No.	Part No.
R 1586	RS1/16SS560J
R 1587	RAB4CQ101J
R 1588	RAB4CQ101J
R 1589	RAB4CQ101J
R 1590	RAB4CQ101J
R 1593	RS1/16SS104J
R 1594	RS1/16S0R0J
R 1599	RS1/16S221J
R 1604	RS1/16SS0R0J
R 1608	RS1/16SS104J
R 1613	RS1/16SS0R0J
R 1652	RS1/16SS104J
R 1653	RS1/16SS510J
R 1671	RAB4CQ101J
R 1672	RAB4CQ101J
R 1673	RAB4CQ101J
R 1674	RAB4CQ101J
R 1675	RS1/16SS331J
R 1701	RS1/16SS103J
R 1702	RS1/16SS103J
R 1703	RS1/16SS0R0J
R 1704	RS1/16SS105J
R 1705	RN1/16SE1002D
R 1706	RS1/16SS222J
R 1708	RS1/16SS223J
R 1709	RS1/16S1502D
R 1710	RS1/16SS102J
R 1711	RS1/16SS683J
R 1712	RS1/16SS103J
R 1713	RS1/16SS103J
R 1714	RS1/16SS0R0J
R 1715	RS1/16SS0R0J
R 1716	RS1/16SS0R0J
R 1717	RS1/16SS0R0J
R 1718	RS1/16SS103J
R 1719	RS1/16SS103J
R 1720	RS1/16SS103J
R 1721	RS1/16SS103J
R 1723	RN1/16SE3901D
R 1724	RS1/16SS0R0J
R 1729	RAB4CQ220J
R 1730	RAB4CQ220J
R 1801	RS1/16S0R0J
R 1802	RS1/16S151J
R 1803	RS1/16S151J
R 1804	RS1/16S221J
R 1805	RS1/16S271J
R 1806	RS1/16SS104J
R 1807	RS1/16S560J
R 1809	RS1/16SS0R0J
R 1821	RS1/16SS222J
R 1823	RS1/16SS101J
R 1851	RS1/16SS0R0J
R 1856	RS1/16SS102J
R 1857	RS1/16SS102J
R 1858	RS1/16SS222J
R 1859	RS1/16SS222J
R 1860	RS1/16SS472J
R 1861	RS1/16SS472J
R 1862	RS1/16SS472J

Circuit Symbol and No.	Part No.
R 1863	RS1/16SS472J
R 1864	RS1/16SS103J
R 1865	RS1/16SS103J
R 1866	RS1/16SS472J
R 1867	RS1/16SS472J
R 1868	RS1/16SS821J
R 1869	RS1/16SS821J
R 1870	RS1/16SS104J
R 1871	RS1/16SS104J
R 1872	RS1/16SS0R0J
R 1873	RS1/16SS0R0J
R 1874	RS1/16SS0R0J
R 1876	RS1/16SS0R0J
R 1877	RS1/16SS0R0J
R 1885	RS1/16SS0R0J
R 1897	RS1/16SS0R0J
R 1899	RS1/16SS0R0J
R 1901	RS1/16SS221J
R 1903	RS1/16SS221J
R 1908	RS1/16SS102J
R 1913	RS1/16S0R0J
R 1922	RS1/16SS0R0J
R 1923	RS1/16SS221J
R 1925	RS1/16S0R0J
R 1927	RS1/16SS0R0J
R 1928	RS1/16SS221J
R 1954	RS1/16SS221J
R 1955	RS1/16SS221J
R 1961	RS1/16S0R0J

CAPACITORS

C 1001		CKSRYB105K10
C 1002		CKSRYB104K25
C 1003		CKSRYB104K25
C 1004		CKSRYB104K25
C 1005		CKSRYB105K10
C 1006		CKSRYB104K25
C 1007	22µF	CCG1178
C 1008	22µF	CCG1178
C 1009		CCSSCH220J50
C 1010		CKSSYB102K16
C 1012	22µF	CCG1178
C 1013	22µF	CCG1178
C 1016		CKSRYB104K25
C 1051		CKSYB106K6R3
C 1052		CKSSYB104K10
C 1053		CKSSYB104K10
C 1054		CKSSYB103K16
C 1055		CKSSYB103K16
C 1058		CKSSYB471K50
C 1059		CKSSYB104K10
C 1060		CKSRYB105K10
C 1101		CSZSR220M16
C 1102		CSZSR101M6R3
C 1103		CKSSYB104K10
C 1104		CKSSYB103K16
C 1105		CSZSR101M6R3
C 1106		CKSSYB104K10
C 1107		CKSSYB103K16
C 1108		CKSRYB104K25

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
C 1109	CKSSYB473K10	C 1556	CSZSR470M10
C 1110	CKSSYB473K10	C 1557	CKSSYB104K10
C 1111	CKSSYB103K16	C 1558	CSZS4R7M16
C 1112	CKSRYB105K10	C 1559	CKSRYB105K10
C 1113	CKSRYB105K10	C 1561	CKSSYB102K50
C 1114	CKSSYB103K16	C 1570	CSZSR470M10
C 1115	CSZSR220M16	C 1571	CKSSYB104K10
C 1201	CEVW101M16	C 1572	CKSSYB104K10
C 1202	CKSRYB104K25	C 1573	CKSSYB104K10
C 1203	CSZSR220M16	C 1574	CKSSYB104K10
C 1204	CKSRYB104K25	C 1575	CKSSYB104K10
C 1205	CKSRYB104K25	C 1576	CKSSYB104K10
C 1206	CKSRYB104K25	C 1577	CKSSYB104K10
C 1207	CSZSR220M16	C 1578	CKSSYB104K10
C 1231	CKSRYB104K25	C 1579	CKSSYB104K10
C 1232	CKSSYB104K10	C 1580	CKSSYB104K10
C 1251	CKSRYB104K25	C 1581	CKSSYB104K10
C 1254	CKSRYB103K50	C 1582	CKSSYB104K10
C 1255	CKSRYB103K50	C 1583	CSZSR470M10
C 1256	CEVW101M16	C 1601	CSZSR470M10
C 1257	CKSRYB104K25	C 1603	CKSSYB104K10
C 1258	CCSSCH470J50	C 1651	CSZSR470M10
C 1259	CCSSCH5R0C50	C 1653	CKSSYB104K10
C 1501	CSZSR470M10	C 1654	CKSRYB104K25
C 1502	CSZSR101M6R3	C 1655	CKSSYB104K10
C 1503	CSZSR101M6R3	C 1671	CKSSYB104K10
C 1504	CKSSYB104K10	C 1672	CKSSYB104K10
C 1505	CKSSYB104K10	C 1673	CKSSYB104K10
C 1506	CKSSYB104K10	C 1674	CKSSYB104K10
C 1507	CKSSYB104K10	C 1675	CKSRYB104K25
C 1508	CKSSYB104K10	C 1676	CKSYB106K6R3
C 1509	CKSSYB104K10	C 1701	CKSRYB104K25
C 1510	CKSSYB104K10	C 1702	CKSRYB104K25
C 1511	CKSSYB104K10	C 1703	CKSSYB104K10
C 1512	CKSSYB104K10	C 1704	CKSSYB103K16
C 1513	CKSSYB104K10	C 1705	CKSSYB103K16
C 1514	CKSSYB104K10	C 1706	CKSSYB104K10
C 1515	CKSSYB104K10	C 1707	CKSSYB104K10
C 1516	CKSSYB104K10	C 1708	CKSSYB103K16
C 1517	CKSSYB104K10	C 1709	CCSRCH221J50
C 1518	CKSSYB104K10	C 1710	CKSSYB152K50
C 1519	CKSSYB104K10	C 1711	CKSRYB105K10
C 1520	CKSSYB104K10	C 1712	CKSRYB105K10
C 1521	CKSSYB104K10	C 1713	CKSRYB105K10
C 1522	CKSSYB104K10	C 1715	CKSSYB104K10
C 1523	CKSSYB104K10	C 1716	CKSSYB104K10
C 1524	CKSSYB104K10	C 1717	CKSSYB104K10
C 1525	CKSSYB104K10	C 1718	CKSSYB104K10
C 1526	CKSSYB104K10	C 1719	CKSSYB562K25
C 1527	CKSSYB104K10	C 1720	CCSSCH101J50
C 1528	CKSSYB104K10	C 1721	CCSSCH470J50
C 1529	CKSSYB104K10	C 1722	CKSSYB103K16
C 1530	CKSSYB104K10	C 1723	CKSSYB104K10
C 1531	CKSSYB471K50	C 1724	CKSSYB104K10
C 1532	CKSSYB103K16	C 1725	CKSSYB104K10
C 1533	CKSSYB103K16	C 1726	CCSSCH330J50
C 1552	CKSSYB104K10	C 1727	CKSSYB333K16
C 1553	CKSRYB104K25	C 1728	CKSSYB104K10
C 1554	CKSSYB104K10	C 1733	CKSSYB103K16
C 1555	CKSRYB105K10	C 1801	CKSSYB104K10

Circuit Symbol and No.		Part No.
C 1802		CKSSYB104K10
C 1804		CKSSYB104K10
C 1805		CCSSCH100D50
C 1809		CCSSCJ3R0C50
C 1810		CCSSCK2R0C50
C 1811		CKSSYB104K10
C 1851		CKSSYB104K10
C 1852		CKSSYB104K10
C 1853		CKSYB106K6R3
C 1854		CKSYB106K6R3
C 1855		CKSRYB104K25
C 1856		CKSRYB104K25
C 1857		CCSRCH471J50
C 1858		CCSRCH471J50
C 1859		CCSRCH471J50
C 1860		CCSRCH471J50
C 1861		CKSQYB225K10
C 1862		CKSSYB471K50
C 1863		CKSSYB471K50
C 1864		CKSYB475K10
C 1865		CKSYB475K10
C 1870		CKSSYB104K10
C 1903		CKSRYB102K50

D

Unit Number:CWX3154
Unit Name:Compound Unit(A)

Q 1299	Photo-taransistor	CPT231SCTD
S 1201	Spring Switch(12cm)	CSN1069
S 1202	Spring Switch(8cm)	CSN1069
S 1203	Spring Switch(DISC SENS)	CSN1069
S 1204	Spring Switch(DISC SENS)	CSN1070
S 1205	Spring Switch(8cm)	CSN1070
R 1298		RS1/16S0R0J
R 1299		RS1/16S0R0J

E

Unit Number:CWX3156
Unit Name:Compound Unit(B)

S 1206	Switch(CLAMP)	CSN1051

J

Unit Number:CZW3087
Unit Name:Main Unit

MISCELLANEOUS

IC 3801	IC	BA00AST
IC 3802	IC	BA6247FP
IC 3803	IC	TA78L05F
IC 3804	IC	TC7S14FU
IC 3805	Photo-interrupter	GP2L24B
Q 3801	Transistor	DTC124EU
Q 3802	Transistor	2SA1037K
Q 3803	Transistor	DTC124EU
Q 3804	Transistor	UMD2N
D 3801	Diode	UDZS5R6(B)

Circuit Symbol and No.		Part No.
D 3802	Diode	1SS355
L 3801	Inductor	LCTA150J2520
L 3802	Inductor	LCTA150J2520

RESISTORS

R 3801	RS1/16S103J
R 3802	RS1/16S222J
R 3803	RS1/16S471J
R 3804	RS1/16S102J
R 3805	RS1/16S102J
R 3806	RS1/16S102J
R 3807	RS1/16S102J
R 3808	RS1/16S103J
R 3809	RS1/16S222J
R 3810	RS1/16S222J
R 3811	RS1/16S102J
R 3812	RS1/16S102J
R 3813	RS1/16S472J
R 3814	RS1/16S102J
R 3815	RS1/16S0R0J
R 3816	RS1/16S0R0J
R 3817	RS1/16S0R0J
R 3818	RS1/16S473J
R 3819	RS1/16S0R0J
R 3821	RS1/16S473J
R 3822	RS1/16S512J
R 3823	RS1/16S0R0J

CAPACITORS

C 3801	CKSQYB105K16
C 3802	CKSQYB105K16
C 3803	CKSRYB104K16
C 3804	CKSRYB104K16
C 3805	CKSRYB104K16
C 3806	CKSRYB223K50
C 3807	CKSRYB223K50
C 3808	CEVW101M16
C 3809	CEVW101M16
C 3810	CKSRYB104K16
C 3811	CEVW100M16
C 3812	CKSRYB104K16
C 3813	CKSRYB102K50
C 3815	CKSQYB104K50
C 3819	CEVW101M16

K

Unit Number:CZW3088
Unit Name:SW Unit

S 3831	Spring Switch(ANGLE)	CSN1052
S 3832	Spring Switch(LIFT)	CSN1052

L

Unit Number:CZW3089
Unit Name:Volume Unit

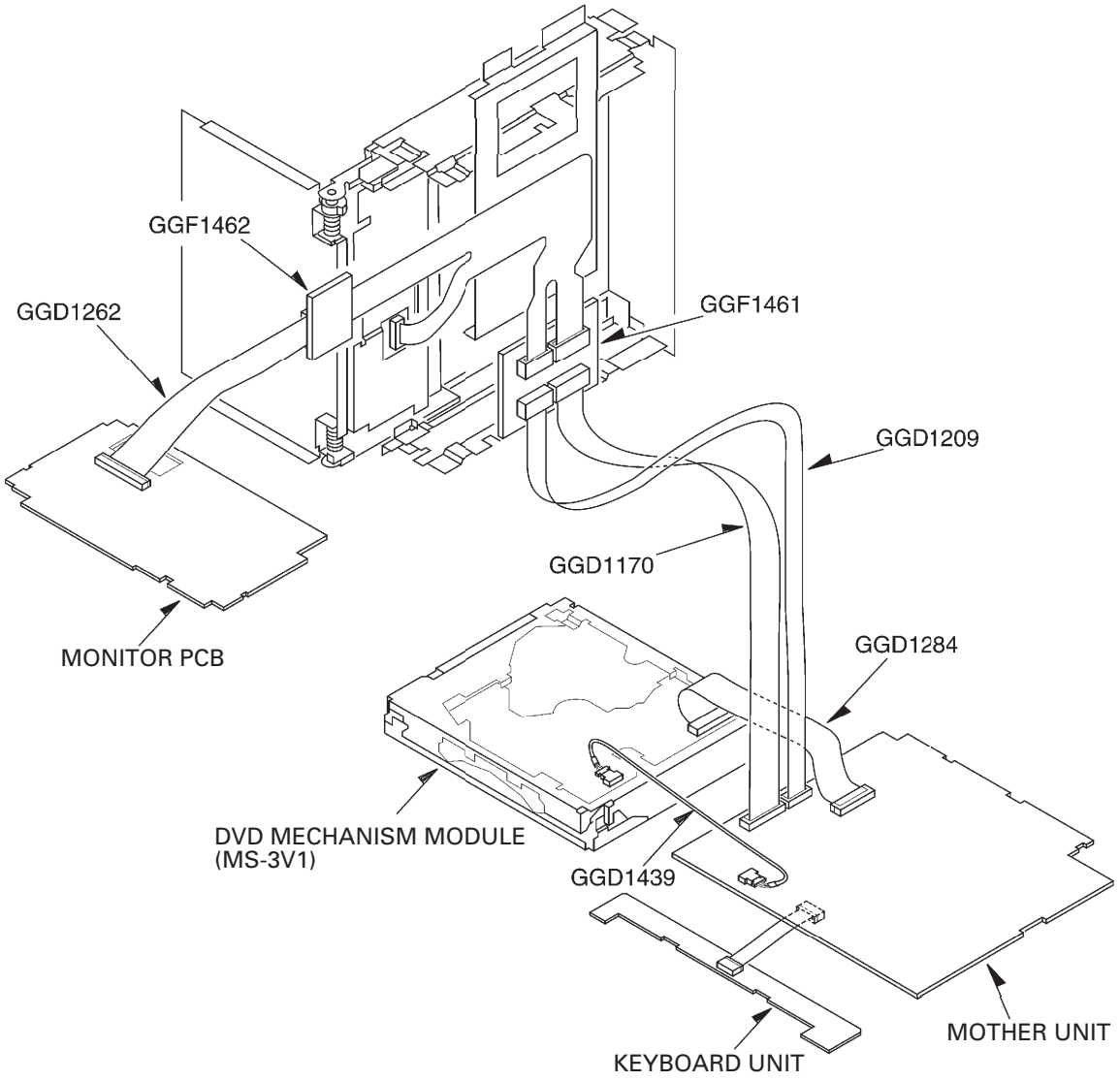
VR3841(ANGLE SENSE)	CCW1025

Miscellaneous Parts List

Circuit Symbol and No.		Part No.
	Pickup Unit(Service)	CXX1770
M 1	Motor Unit(LOADING)	CXC4659
M 2	Motor Unit(CARRIAGE)	CXC4134
M 3	Motor(SPINDLE)	CXM1272
M 771	Fan Motor(REAR)	CXM1262
M 781	Fan Motor(CENTER)	CXM1276
M 3001	Motor Unit(POSITION)	CXB9515
M 3002	Motor Unit(ANGLE)	CXB9516

6. ADJUSTMENT

6.1 JIG CONNECTION DIAGRAM



● **Jigs List**

Name	Jig No.	Remarks
33 pin extension cable	GGD1262	Connecting the monitor PCB to relay PCB(GGF1462)
Relay PCB	GGF1462	Connecting the monitor PCB extension cable to flexible PCB
Relay PCB	GGF1461	Connecting the monitor PCB extension cable to flexible PCB
20 pin extension cable	GGD1209	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1170	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1284	Connecting the mother unit to DVD mechanism module
2 pin extension cable	GGD1439	Connecting the mother unit to DVD mechanism module

6.2 DVD ADJUSTMENT

1) Precautions

This product uses 5V and 3.3V as standard voltages. The electrical potential that is the reference for signals, is not GND, but VREF (approximately 2.2V) and VHALF (approximately 1.65V).

During product adjustments, if the reference voltage is mistakenly taken as GND, and a grounding contact is made, not only would it be impossible to measure the accurate electrical potential, but also the servo motor would malfunction, resulting in the application of a strong impact on the pick up. The following precautionary measures should be strictly adhered to, in order to avoid such problems.

The reference voltage and GND should not be confused when using the minus probe of a measurement device. When an oscilloscope is being used special care should be taken to make sure that the reference voltage is not connected to the probe of ch1 (on the minus side), while the probe of ch2 (on the minus side), is connected to GND. Further, since the body frame of most measurement devices have the same electrical potential as the minus side of the probe, the body frame of the measurement device should be set to floating ground.

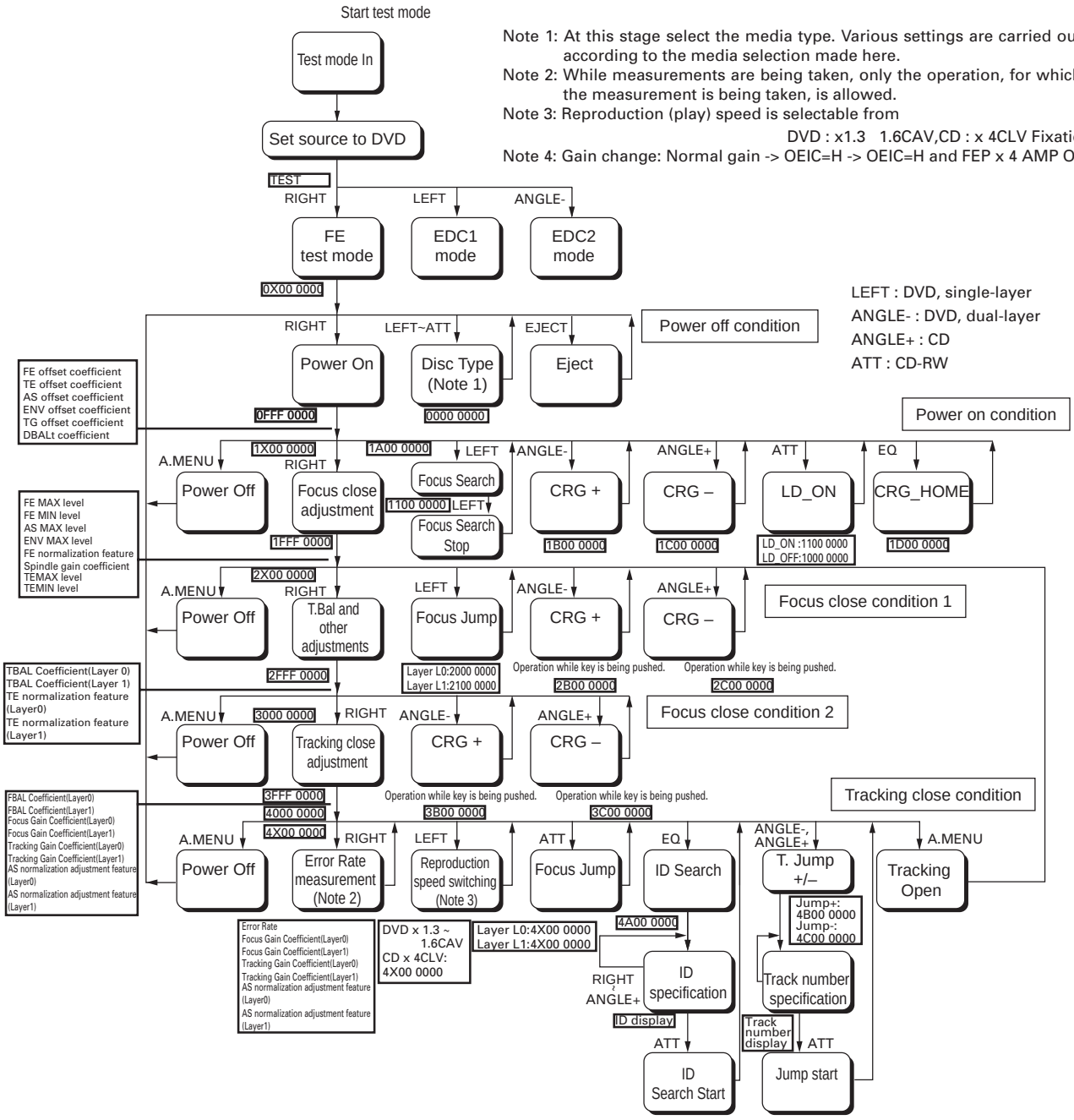
If the reference voltage is connected to GND by mistake, turn the regulator OFF immediately, or turn the power OFF.

- Remove the filters and wires used for measurements only after the regulator has been turned OFF.
- After the power supply is turned on, regulator ON the following adjustment and measurement are promptly done.
- Whenever the product is in the test mode, the software will not take any protective action. For this reason, special care should be taken to make sure that no mechanical or electrical shock could be applied to the product when taking measurements in the test mode.
- Whenever the EJECT key is pressed to eject the disk, no other keys, other than the EJECT key, should be pressed until the disk eject action has been completed.
- Press the EJECT key only after the disk has stopped completely.
- If the product hangs up turn the power OFF immediately.
- Laser didoes may be damaged, if the volume switch for the laser power adjustment of the pick up unit, is turned.

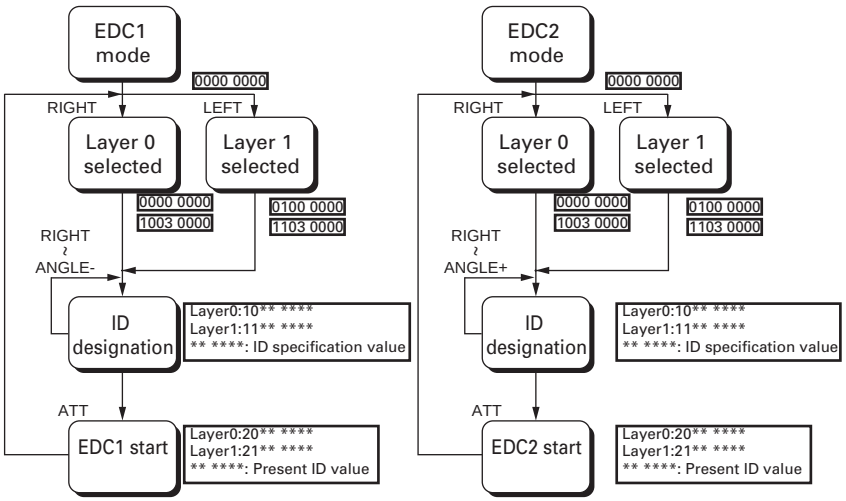
Attention)

- Test mode starting procedure
  Reset start while pressing the BAND and ANGLE- keys together.
- Test mode stopping procedure
  ACC and Backup OFF.

● Front-End test mode flow chart



Note 1: At this stage select the media type. Various settings are carried out according to the media selection made here.
Note 2: While measurements are being taken, only the operation, for which the measurement is being taken, is allowed.
Note 3: Reproduction (play) speed is selectable from
DVD : x1.3 1.6CAV,CD : x 4CLV Fixation
Note 4: Gain change: Normal gain -> OEIC=H -> OEIC=H and FEP x 4 AMP ON



F-close and F-search cannot be executed, unless LD-ON is set.
[If F-close isn't executed within 9 seconds after LD-ON, it switches to LD-OFF automatically.
And even if F-search is executed within 9 seconds after LD-ON, it also switches to LD-OFF.]
Please carry out F-close after carrying out power-off at once and carrying out power-on again, when carrying out F-close after performing F-search.

The track number designation is selected from the track numbers already prepared for selection.
Switching to cyclic operation is made at step ANGLE-, and the decision is finalized (entered) in step ATT.

For CD: Tracks 1, 4, 10, 11 and 32.

For DVD: Tracks 1, 4, 10, 11, 32, 64 and 100.

Method for designating an ID address:

- A number of digits are determined through commands RIGHT and LEFT. Numerical UP/DOWN operations are performed through commands ANGLE- and ANGLE+. The decision is finalized (entered) with command ATT.

Display

Error Code List

Error status from DVD microcomputer	Contents	Display
0X50	Mecha. error	No display
0X40	No disc	No display
0X30	The temperature is abnormal	Thermal Protection in Motion
0X20	Read error	Error-02-XX
0XE2	Non-playable disc	NON-PLAYABLE DISC
0X90	Different region disc	DIFFERENT REGION DISC
0XFF	Undefined error	Error-FF

Error code of read error(Part of XX)

Error Code	Contents	Display
0X99	Data cannot read	Please confirm the disc
0X80	The address cannot be found	Please confirm the disc
0X90	Focus error	Please confirm the disc
0X91	Spindle lock NG	DVD is stopping because mechanism detected abnormality
0X92	Carriage home NG	DVD is stopping because mechanism detected abnormality
0X93	FOK error	Please confirm the disc
0X94	ID/Subcode cannot be read	Please confirm the disc
0X95	High spindle rotation	DVD is stopping because mechanism detected abnormality
0X96	Row spindle rotation	DVD is stopping because mechanism detected abnormality
0X98	TOC cannot be found	Please confirm the disc
0X9A	AV chip error	DVD is stopping because mechanism detected abnormality
0X9B	RecaveryNG(BE)	DVD is stopping because mechanism detected abnormality
0X9C	Play state error	
0X9D	Disc data error	
0X9E	Serface error (Disc distinction is improper)	

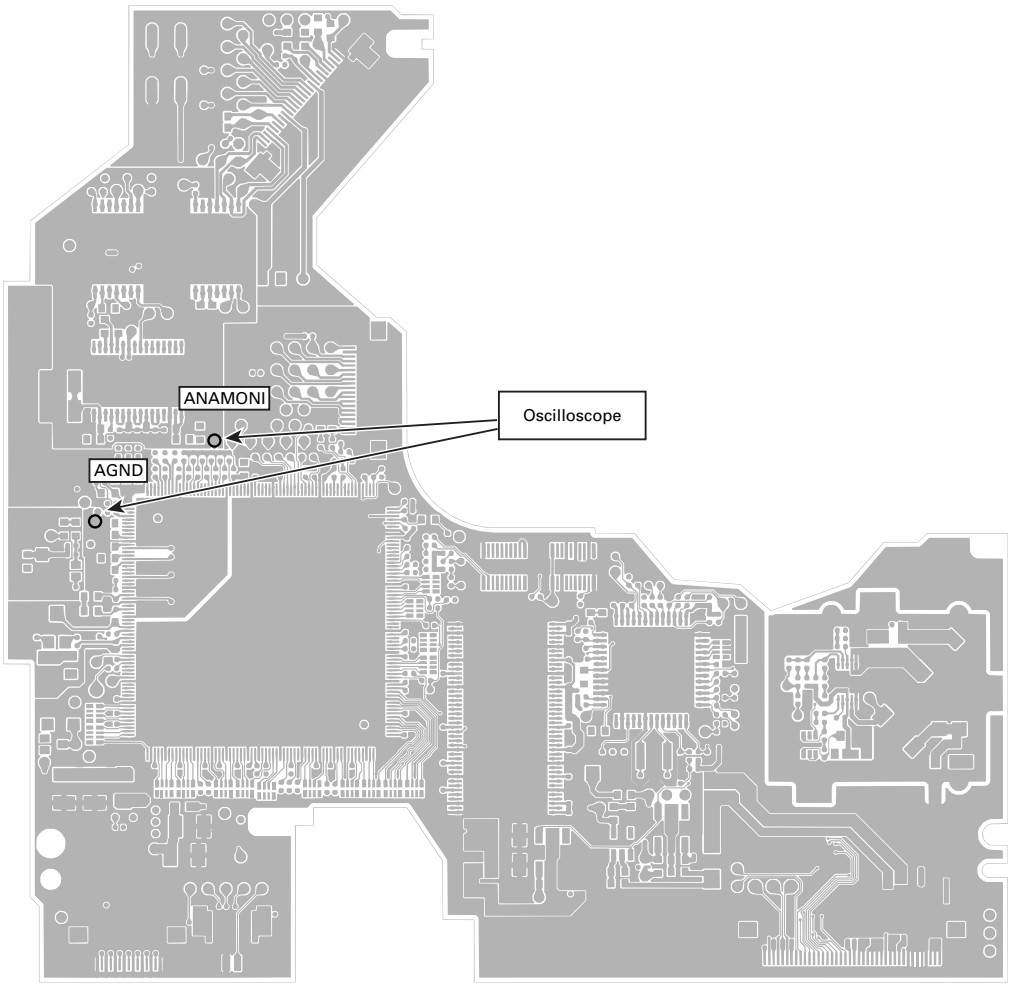
● Skew Adjustment

The skew adjustment is to adjust the pickup and the flatness of the disc so that the beam from the pickup continues to go to the disc vertically. In MS3 mecha, the pickup shaft on the inner track near the carriage motor is fixed, so the fixed position is regarded as the standard and the flatness is adjusted. Observing the RF waveform on the oscilloscope, repeat the adjustment on the inner track position and the outer track position, and narrow the adjusted value.

If any of the following replacements have been performed on the system, adjustments for pick up, must be conducted:

1. Pick up unit replacement
2. Spindle motor replacement
3. Carriage chassis replacement
4. Pick up unit main shaft replacement
5. Pick up unit sub-shaft replacement

Measurement device and tools : Oscilloscope
Allen key wrench
40-pin flexible extension (GGD1284)
2-pin extension cable(GGD1439)
Disk used Screw lock (GYL1001)
Measurement reference : GGV1018
Measurement point : AGND3
Connection diagram : ANAMONI
DVD core unit



Symptoms in case of poor adjustment: Error efficiency deteriorated: 10^{-3} (Optimum value: 10^{-4} or lower)
High jitter of the RF signal RF waveform deformed
Unstable operation in tracking closing and servo control

Caution: Avoid exposing your eyes to laser beams for a long time.

Preparation for adjustment: Clean both ends of the shafts.
Use brand new skew screws supplied with the service kit GXX1242.

Procedures:

1. Place the DVD mechanism module upside down.
   To avoid the disc from being robbed when it is turned upside down, first put a coin of about 1.5 mm on the table, then turn the disc upside down and set it so that the ① in the figure comes to the point immediately above the coin.
2. After replacing the pickup (by referring to the procedures of "Removing the Pickup."), roughly adjust the three skew screws through visual check so that the pickup is mounted in parallel to the CRG chassis around the inner and outer tacks.
3. Connect an oscilloscope as shown in the connecting diagram.
4. Turn on the power of the product. Load the test disc (GGV1018).
5. In the front-end test mode, set the disc type to DVD layer 1. Then, turn on the power. Move the pickup toward the inner tracks.
6. Turn on the laser diodes.
7. With the focus servo closed, complete all automatic adjustments. Close the tracking servo, and then complete all automatic adjustments.

8 Follow the next procedures, from 8-1 to 8-5, and adjust the (three) skew screws.

8-1 Move the pickup toward the inner track and turn the skew adjustment screw C so that the RF level of oscilloscope becomes the maximum.
(Tangential adjustment at the inner track position: Adjust the flatness of the disc at the inner track position with the adjustment screw C)

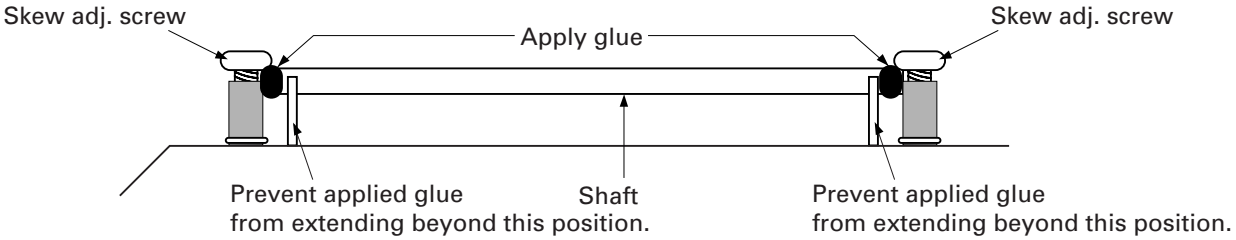
8-2 Move the pickup toward the outer track and turn the skew adjustment screw B so that the RF level becomes the maximum.
(Tangential adjustment at the outer track position: Adjust the flatness of the disc at the outer track position with the adjustment screw B)

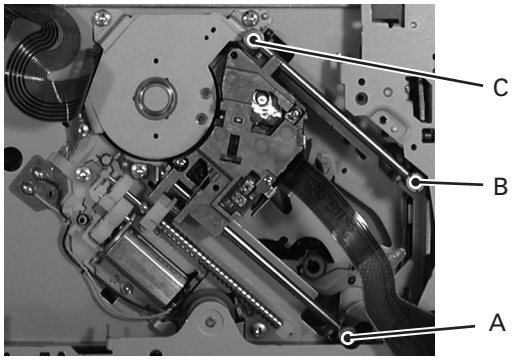
8-3 Leave the pickup at the outer track position and turn the skew adjustment screws A and B in the same direction alternately one quarter at a time (A•B•A•B •••) so that the RF level becomes the maximum.
(Radial adjustment at the outer track position: Keeping the flatness at the outer track position, adjust the flatness of the whole disk with the adjustment screws A and B)

8-4 Move the pickup toward the inner track and turn the skew adjustment screw C so that the RF level becomes the maximum.
(Tangential adjustment at the inner track position: Adjust the flatness of the disc at the inner track position with the djustment screw C)

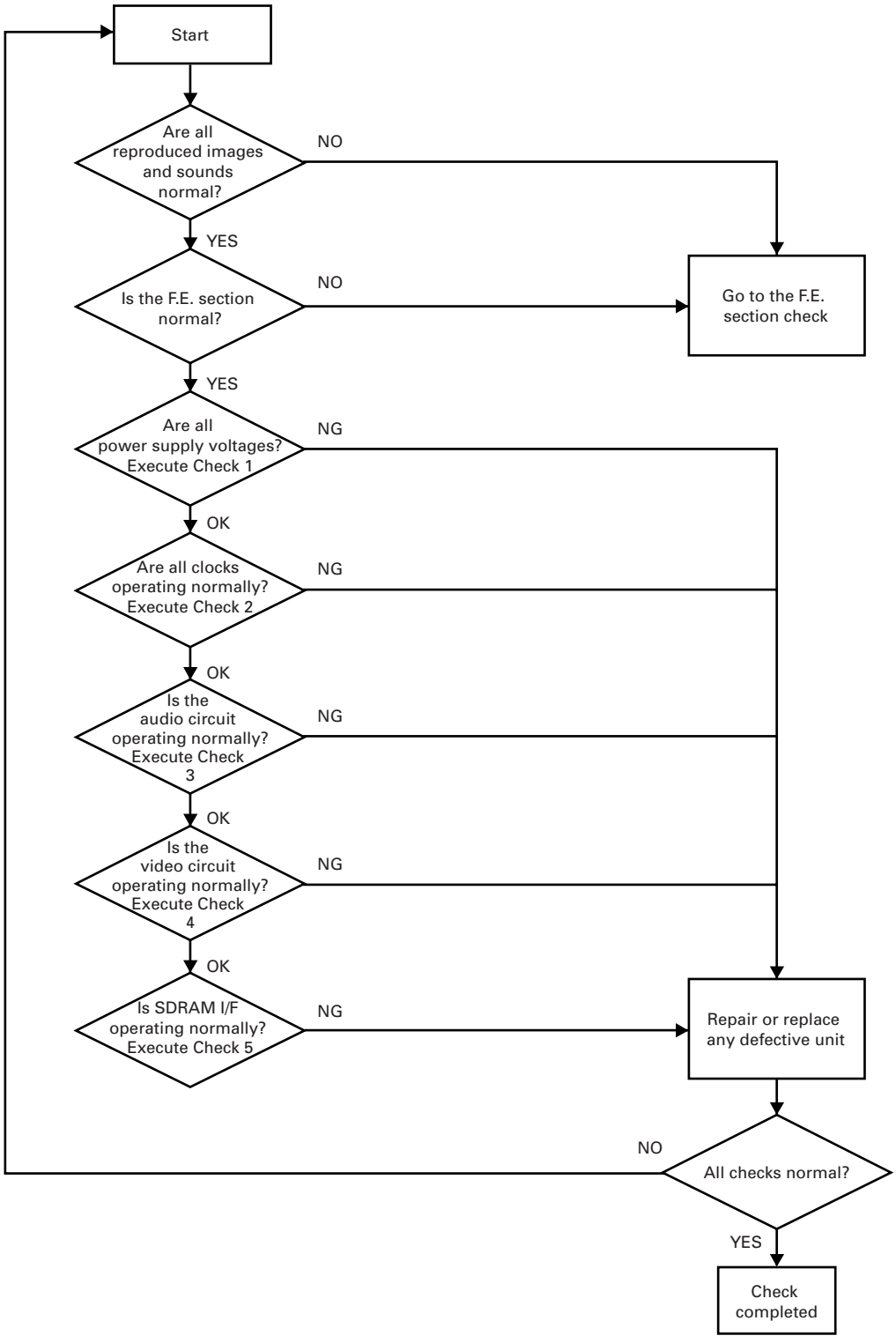
8-5 Repeat the steps from 8-2 to 8-4 three times, and adjust at the position where the RF level becomes the maximum.

9. Turn off the power in the test mode. After confirming that the disc has stopped, eject the disc.
10. Adjust with a screw rock the shaft and skew adjustment screw to the same state as initial one.





Back end section check flow chart



Check 1 : Are all power supply voltages?

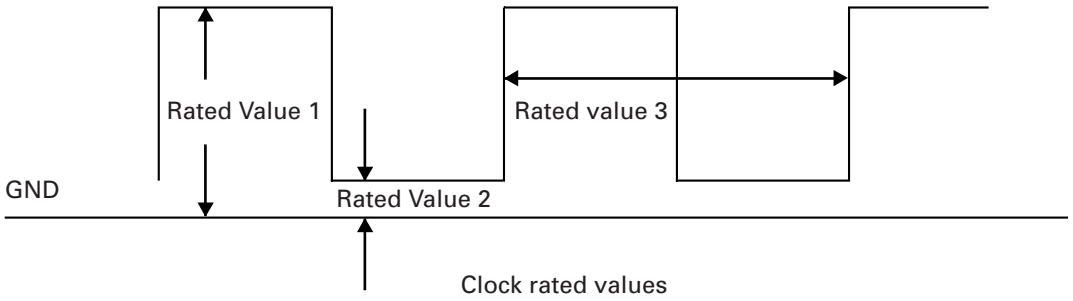
Reproduce DVD-REF-A1 Title 1.
Verify the voltage of the sensing pin.

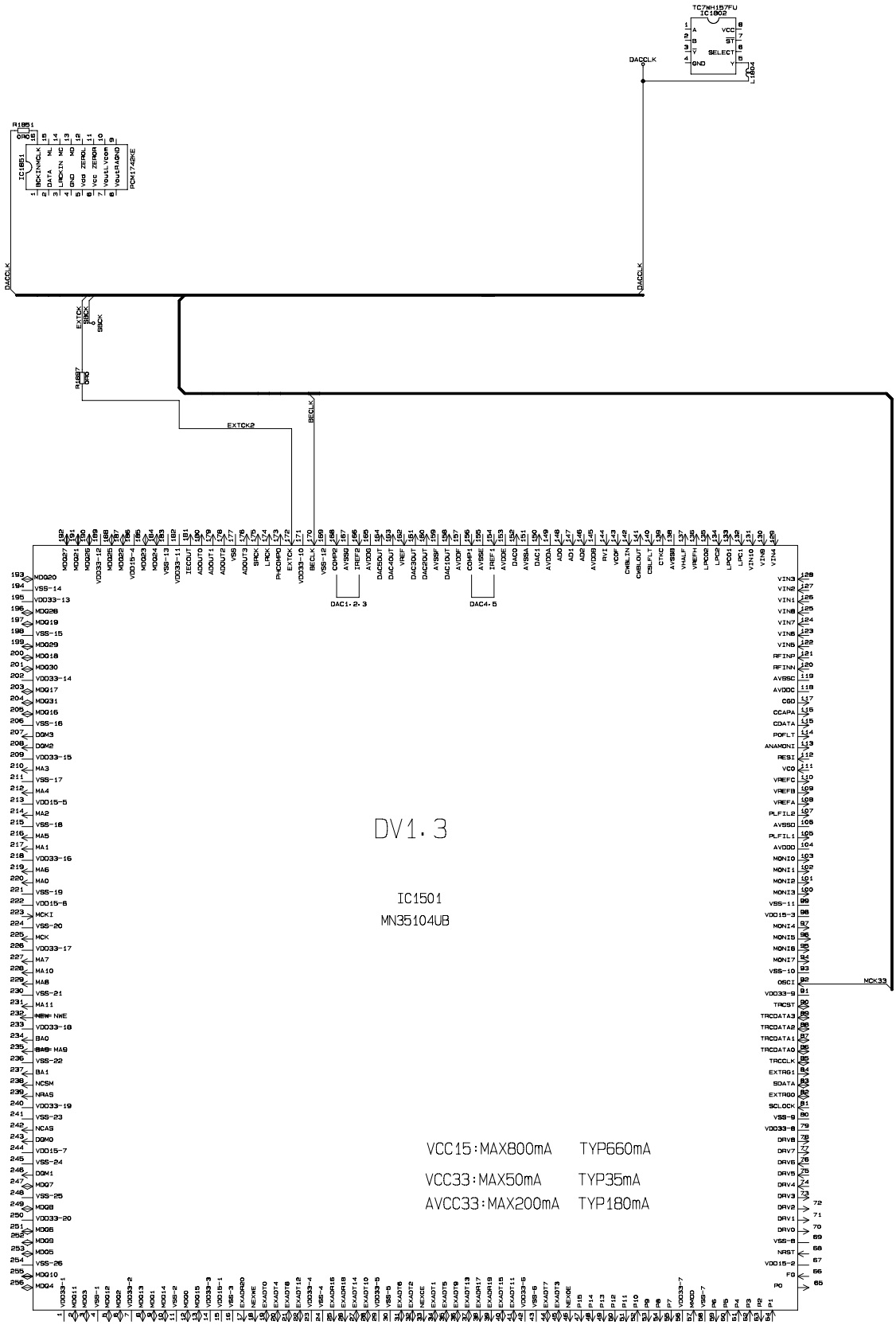
No.	Verification location	Rated value	Unit
1	VD8_1/2 – PGND_1/2	8.0±0.4	V
2	VDD33 – DGND1/2/3	3.3±0.15	V
3	SRVDD – DGND1/2/3	3.3±0.15	V
4	VCC5_1 – AGND1	5.0±0.1	V
5	AVCC5_1 – AGND1	5.0±0.1	V
6	VCC33_1/2 – DGND1/2/3	3.3±0.15	V
7	VCC33_3/4/5 – DGND1/2/3	3.3±0.3	V
8	VCC15_1/2 – DGND1/2/3	1.5±0.1	V

Check 2 : Are all clock operating normally?

Reproduce DVD-REF-A1 Title 1
Check Circuit Diagram ①.
Checks are to conducted with a GND reference.
If locations listed under "verification location 2", can be verified, there will be no need to perform verifications for the locations listed under "verification location 1."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder and other defects in the applicable line, vicinity of IC 1802 (Circuit Diagram ①) and peripheral components.

No.	Verification location 1 (Sensing pin)	Verification location 2	Media	Rated value 1	Rated value 2	Rated value 3
1	BECLK	IC1501 170pin	ALL	2.3V ～ VCC33	GND ～ 0.8V	27MHz±50ppm
2	EXTCK	IC1501 172pin	DVD	2.3V ～ VCC33	GND ～ 0.8V	36.8640MHz±300ppm
3	EXTCK	IC1501 172pin	CD	2.3V ～ VCC33	GND ～ 0.8V	33.8688MHz±300ppm
4	MCK33	IC1501 92pin	ALL	2.2V ～ VCC33	GND ～ 0.8V	33.898MHz±300ppm
5	DACCLK	IC1851 16pin	DVD	2.0V ～ VCC33	GND ～ 0.8V	33.8688MHz±300ppm
6	DACCLK	IC1881 3pin	DVD	2.3V ～ VCC33	GND ～ 0.99V	33.8689MHz±300ppm



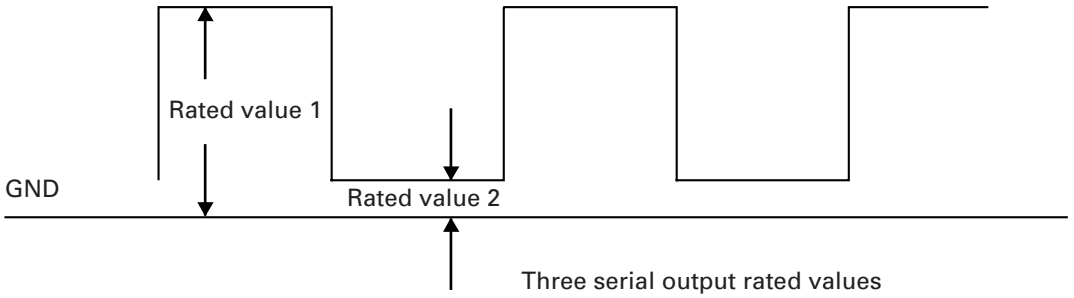


Circuit Diagram ①

Check 3 : Is the audio circuit operating normally?

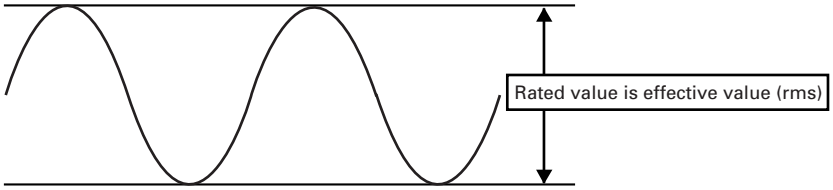
Reproduce DVD-REF-A1 Title 2 Chapter (48k/16-bit 1 kHz/0dB).
Checks are to be conducted using GNDAU1 (sensing pins) as a reference.
If the locations, listed under "verification location 2", can be verified, there is no need to conduct verifications for the locations listed under "verification location 1."
If the result is not satisfactory, check to see if there are any problems with resin flux cored solder and other defects in the applicable line, vicinity of major parts stated in the above diagram (Circuit Diagram ②) and peripheral components.

No.	Verification location 1 (Sensing pin)	Verification location 2	Rated value 1	Rated value 2	Reference waveform
1	AOUT0	IC1851 2pin	2.0V and over	0.8V and lower	Waveform 1
2	SRCK	IC1851 1pin	2.0V and over	0.8V and lower	Waveform 1
3	LRCK	IC1851 3pin	2.0V and over	0.8V and lower	Waveform 1

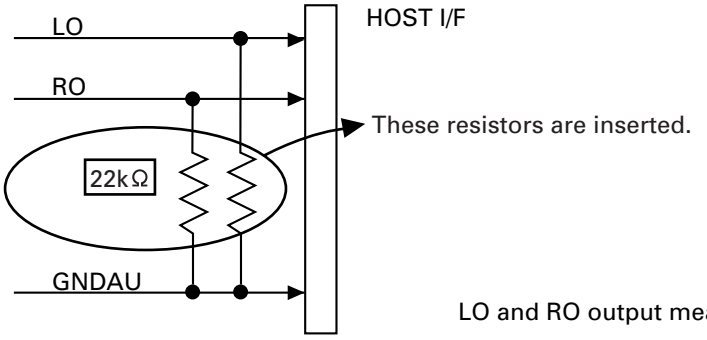


Checks are conducted with the measurement circuit below.

No.	Verification location 1 (Sensing pin)	Verification location 2	Rated value (rms)	Reference waveform
4	LO	CN1901 37pin	1100±150mV	Waveform 2
5	RO	CN1901 35pin	1100±150mV	Waveform 2

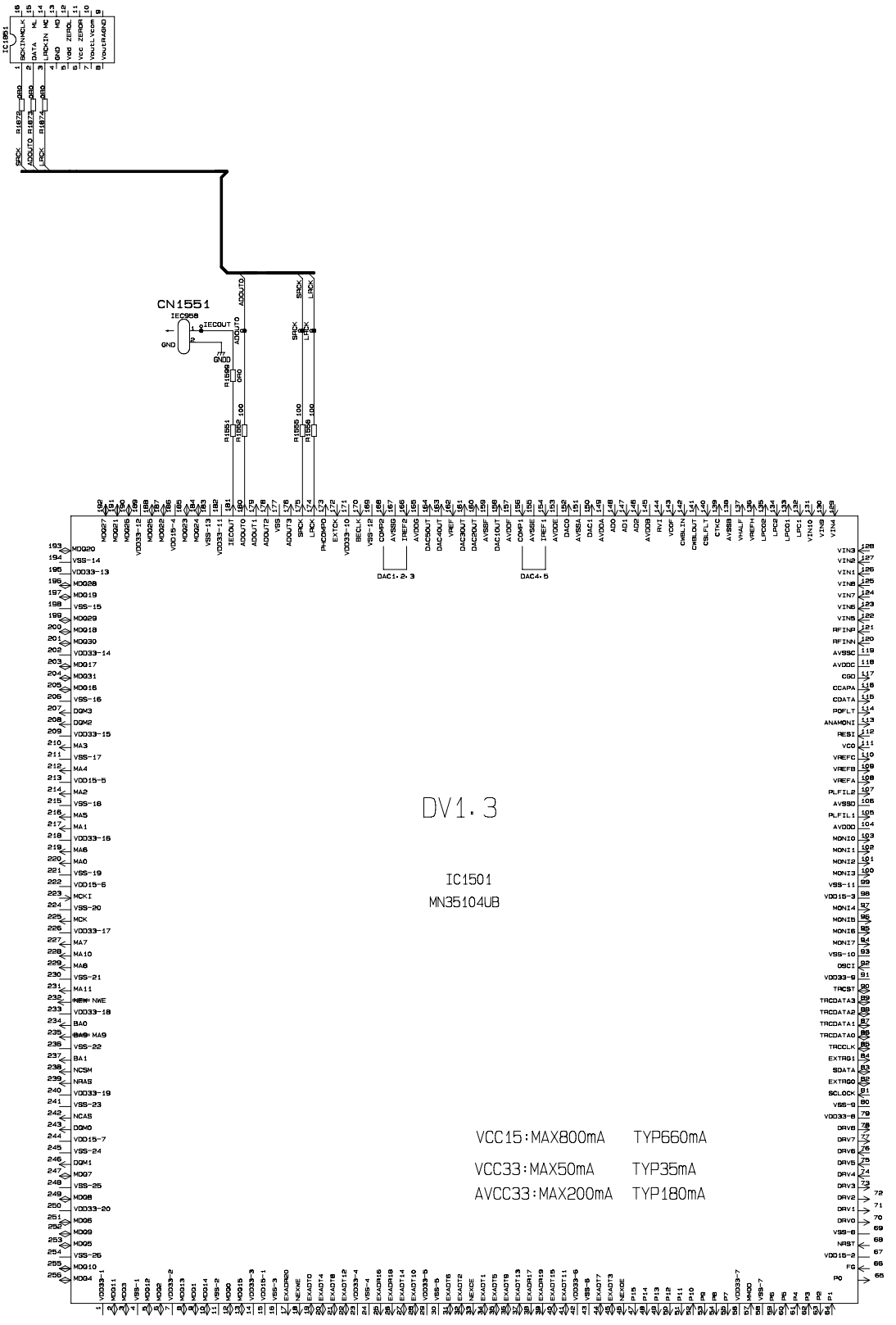


Analog audio outputs (LO and RO) rated values



LO and RO output measurement circuit

No.	Verification location 1 (Sensing pin)	Verification location 2	Rated value 1	Rated value 2	Reference waveform
6	IEC958	CN1551 1pin	VCC33V−0.6V and over	0.4Vand lower	Waveform 3



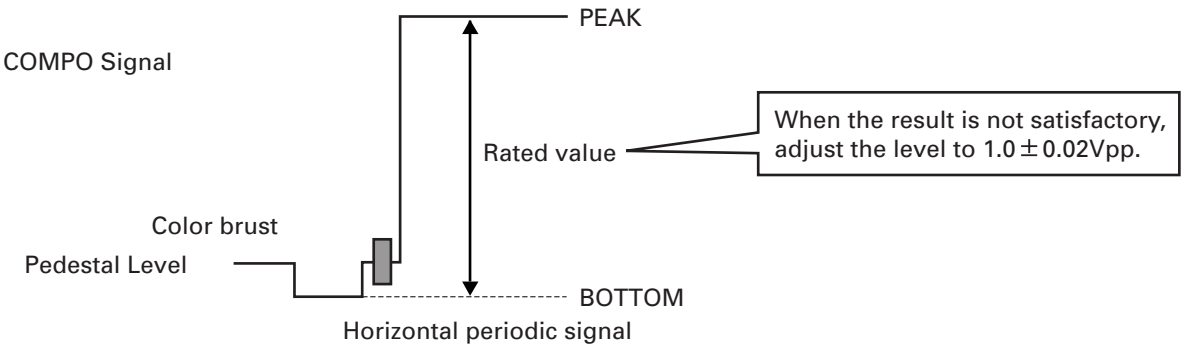
Circuit Diagram ②

Check 4 : Is the video circuit operated normally?

Reproduce DVD-REF-A1 Title 2 Chapters (White 1000IRE)
Monitor the output with the oscilloscope, by setting the COMPO signal to a GND reference.
Set the Trigger mode to the TV trigger, and the Trigger line to line-150.

No.	Verification location 1 (Sensing pin)	Rated value	Reference waveform
1	COMPO	1.0±0.02Vpp	Waveform 4

If the result is not satisfactory, check to see if there are any problems with resin flux cored solder and other defects in the applicable line, vicinity of major parts stated in the above diagram (Circuit Diagram ③) and peripheral components.



Composite signal white 100% output waveform

< Method of Readjusting Video Levels >

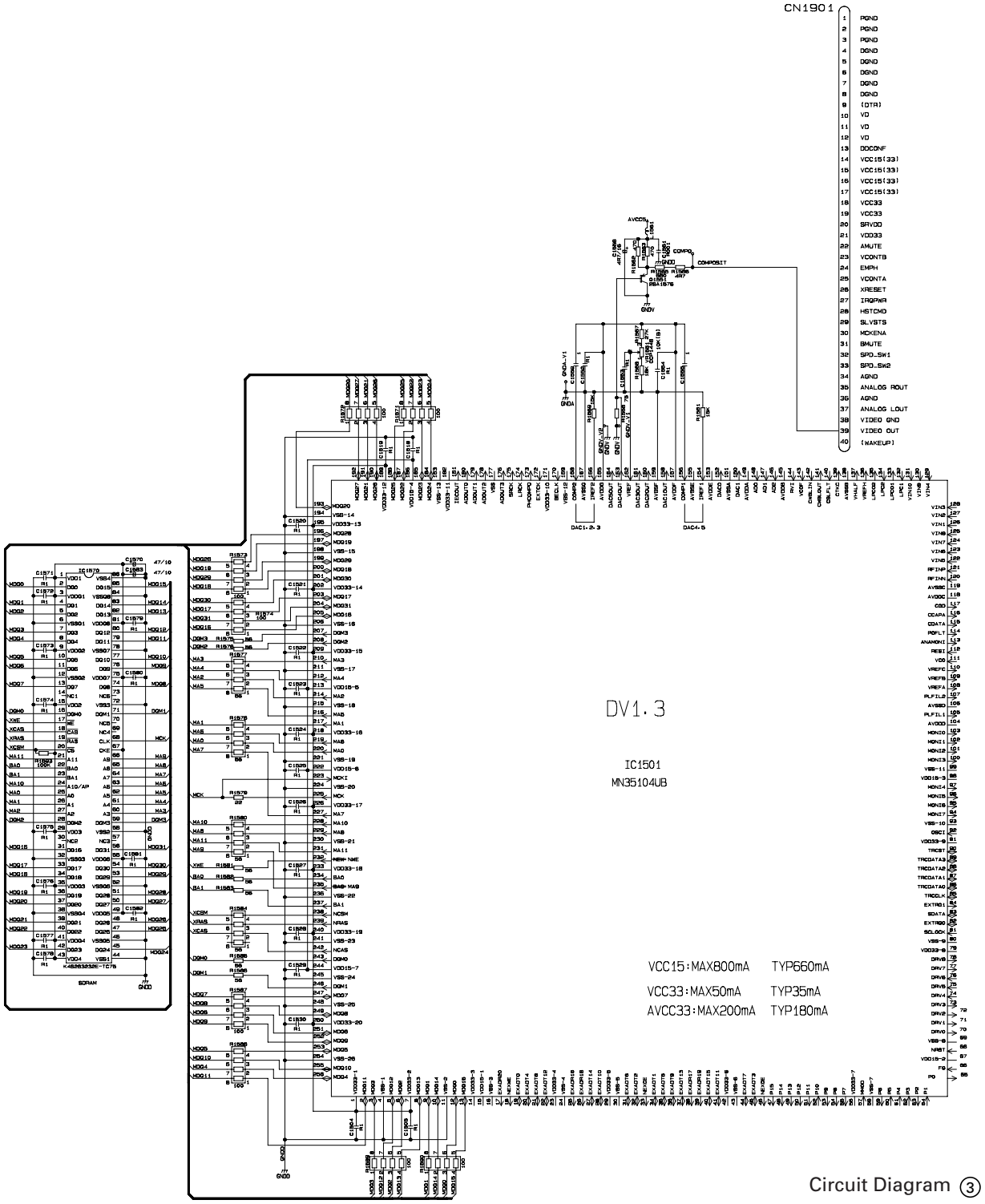
If the video composite output is not within the range of rated value, the video level is readjusted in the following method.
Turn the video level adjustment volume (VR1551) to adjust its level to 1.0 ± 0.02Vpp.

Check 5 : Is SDRAM I/F operated normally?

Reproduce DVD-REF-A1 Title 1.
Check Circuit Diagram ③
Common to all DVD-V adapted modules
Check the conductivity of both the "Verification location 1"and the "Verification location 2."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where as problem occurs, for the overall sequence of "output" "input" of the checked location.

No.	Signal name	Verification location 1	Verification location 2	Rated value
1	MA0	IC1570 25pin	IC1501 220pin	56Ω±5%
2	MA1	IC1570 26pin	IC1501 217pin	56Ω±5%
3	MA2	IC1570 27pin	IC1501 214pin	56Ω±5%
4	MA3	IC1570 60pin	IC1501 210pin	56Ω±5%
5	MA4	IC1570 61pin	IC1501 212pin	56Ω±5%
6	MA5	IC1570 62pin	IC1501 216pin	56Ω±5%
7	MA6	IC1570 63pin	IC1501 219pin	56Ω±5%
8	MA7	IC1570 64pin	IC1501 227pin	56Ω±5%
9	MA8	IC1570 65pin	IC1501 229pin	56Ω±5%
10	MA9	IC1570 66pin	IC1501 235pin	56Ω±5%
11	MA10	IC1570 24pin	IC1501 228pin	56Ω±5%
12	MA11	IC1570 21pin	IC1501 231pin	56Ω±5%

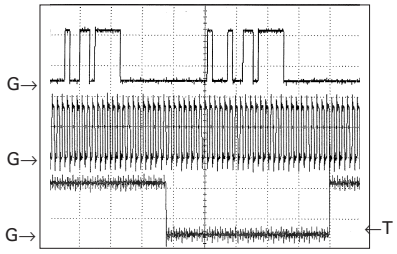
No.	Signal name	Verification location 1	Verification location 2	Rated value
13	MDQ0	IC1570 2pin	IC1501 12pin	100Ω± 5%
14	MDQ1	IC1570 4pin	IC1501 9pin	100Ω± 5%
15	MDQ2	IC1570 5pin	IC1501 6pin	100Ω± 5%
16	MDQ3	IC1570 7pin	IC1501 3pin	100Ω± 5%
17	MDQ4	IC1570 8pin	IC1501 256pin	100Ω± 5%
18	MDQ5	IC1570 10pin	IC1501 253pin	100Ω± 5%
19	MDQ6	IC1570 11pin	IC1501 251pin	100Ω± 5%
20	MDQ7	IC1570 13pin	IC1501 247pin	100Ω± 5%
21	MDQ8	IC1570 74pin	IC1501 249pin	100Ω± 5%
22	MDQ9	IC1570 76pin	IC1501 252pin	100Ω± 5%
23	MDQ10	IC1570 77pin	IC1501 255pin	100Ω± 5%
24	MDQ11	IC1570 79pin	IC1501 2pin	100Ω± 5%
25	MDQ12	IC1570 80pin	IC1501 5pin	100Ω± 5%
26	MDQ13	IC1570 82pin	IC1501 8pin	100Ω± 5%
27	MDQ14	IC1570 83pin	IC1501 10pin	100Ω± 5%
28	MDQ15	IC1570 85pin	IC1501 13pin	100Ω± 5%
29	MDQ16	IC1570 31pin	IC1501 205pin	100Ω± 5%
30	MDQ17	IC1570 33pin	IC1501 203pin	100Ω± 5%
31	MDQ18	IC1570 34pin	IC1501 200pin	100Ω± 5%
32	MDQ19	IC1570 36pin	IC1501 197pin	100Ω± 5%
33	MDQ20	IC1570 37pin	IC1501 193pin	100Ω± 5%
34	MDQ21	IC1570 39pin	IC1501 191pin	100Ω± 5%
35	MDQ22	IC1570 40pin	IC1501 187pin	100Ω± 5%
36	MDQ23	IC1570 42pin	IC1501 185pin	100Ω± 5%
37	MDQ24	IC1570 45pin	IC1501 184pin	100Ω± 5%
38	MDQ25	IC1570 47pin	IC1501 188pin	100Ω± 5%
39	MDQ26	IC1570 48pin	IC1501 190pin	100Ω± 5%
40	MDQ27	IC1570 50pin	IC1501 192pin	100Ω± 5%
41	MDQ28	IC1570 51pin	IC1501 196pin	100Ω± 5%
42	MDQ29	IC1570 53pin	IC1501 199pin	100Ω± 5%
43	MDQ30	IC1570 54pin	IC1501 201pin	100Ω± 5%
44	MDQ31	IC1570 56pin	IC1501 204pin	56 Ω±5%
45	MCK	IC1570 68pin	IC1501 225pin	22 Ω±5%
46	XWE	IC1570 17pin	IC1501 232pin	56 Ω±5%
47	XCAS	IC1570 18pin	IC1501 242pin	56 Ω±5%
48	XRAS	IC1570 19pin	IC1501 239pin	56 Ω±5%
49	XCSM	IC1570 20pin	IC1501 238pin	56 Ω±5%
50	DQM0	IC1570 16pin	IC1501 243pin	56 Ω±5%
51	DQM1	IC1570 71pin	IC1501 246pin	56 Ω±5%
52	DQM2	IC1570 28pin	IC1501 208pin	56 Ω±5%
53	DQM3	IC1570 59pin	IC1501 207pin	56 Ω±5%
54	BA0	IC1570 22pin	IC1501 234pin	56 Ω±5%
55	BA1	IC1570 23pin	IC1501 237pin	56 Ω±5%



Circuit Diagram ③

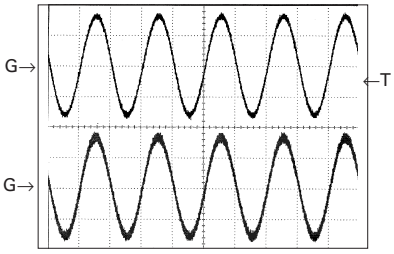
Note: Reference voltage VHALF : 1.65V

CH1: AOUT0
CH2: SRCKAV
CH3: LRCKAV
2V/div. 2µs/div.



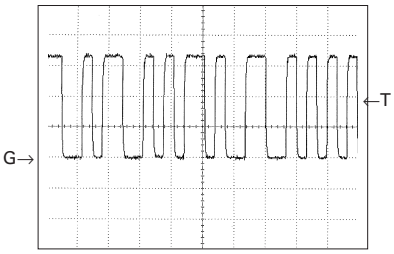
Waveform1

CH1: LO
CH2: RO
1V/div. 500µs/div.



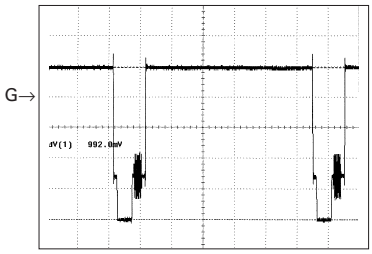
Waveform2

CH1: IEC958 1V/div. 500ns/div.



Waveform3

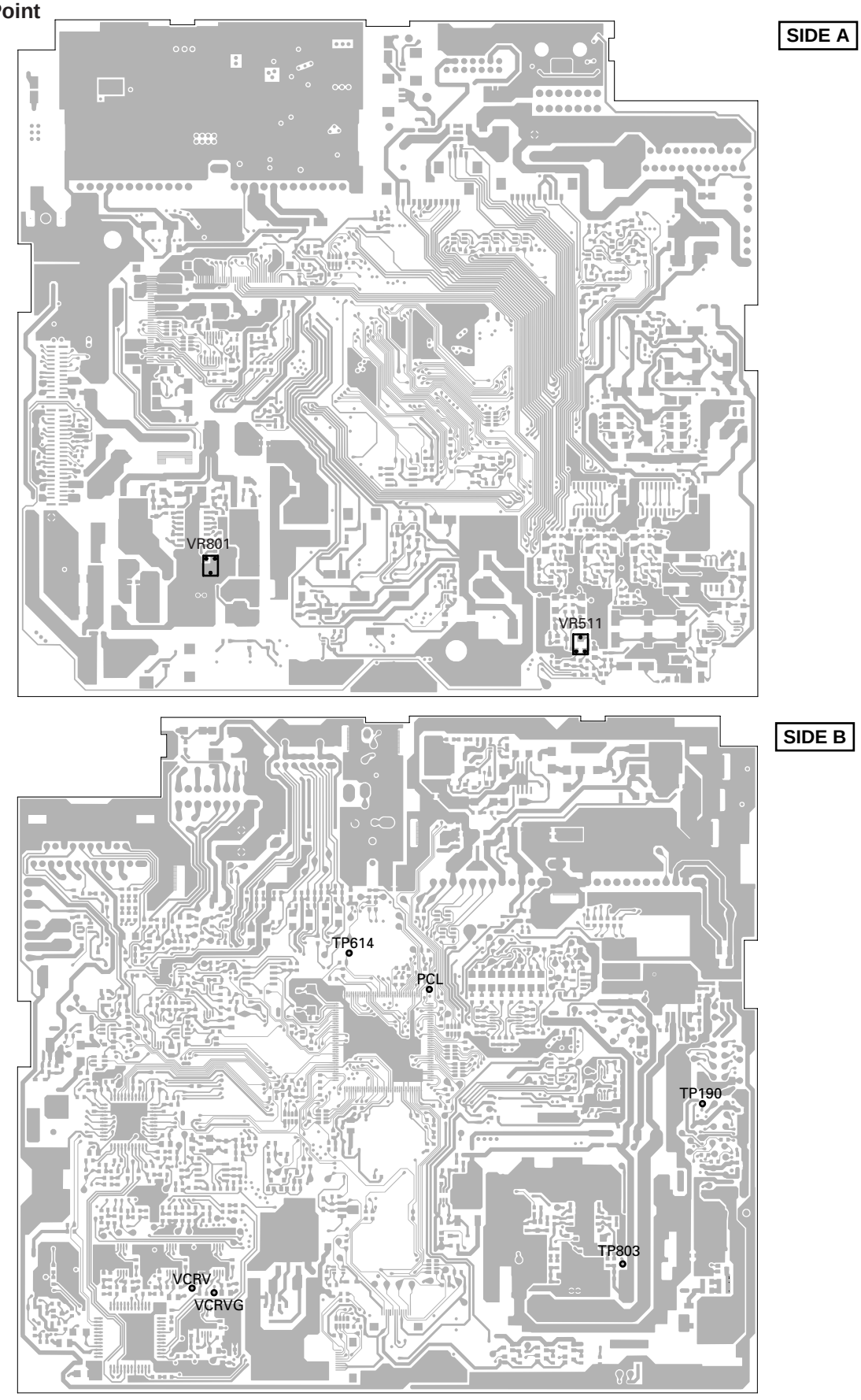
CH1: COMPO 200mV/div. 10µs/div.
[White 100% output]



Waveform4

6.3 MOTHER UNIT ADJUSTMENT

● Adjustment Point

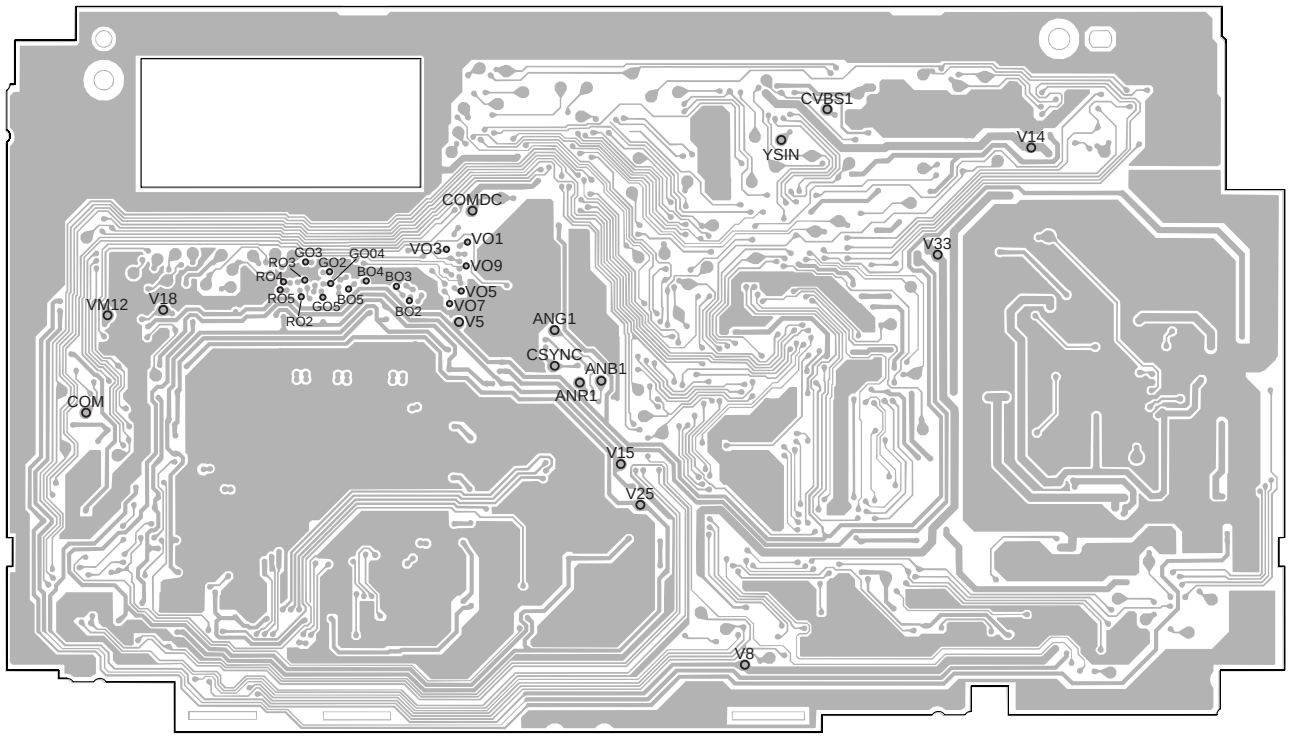


Step	Mother PCB adjustment	Mode	Input signsl (input test pin,specs, other conditions)	Output signsl (measuring point, waveform)	Measuring instruments	Specs	Adjusting point
1	Main video level	AV	Input test pin: VCRV····100 IRE (white 100%), 1.0Vp-p, (input via 75ohms) VCRVG···· (GND VIDEO GND)	Measuring point: TP190 	Oscilloscope	1.4V ± 0.05Vp-p Measure between the sync tip and 100 IRE (top wave). Symptoms with poor adjustment. Over level : Luminance is too high. Under level : Luminance is too low.	VR511
2	Clock frequency Check		IC601 pin56(TP614) to 5V	IC601 pin36(PCL)	Frequency Counter	18.874368MHz±754Hz	
3	DC-DC converter frequency Adjustment		Playback the DVD	Test point TP803	Frequency Counter	370kHz±5Hz	VR801

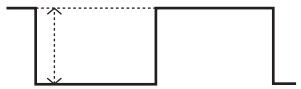
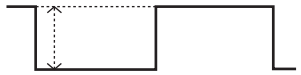
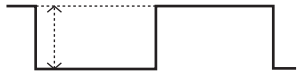
6.4 MONITOR PCB ADJUSTMENT

● **Adjustment Point**

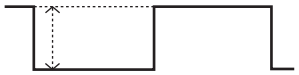
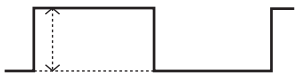
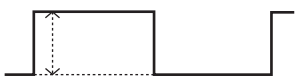
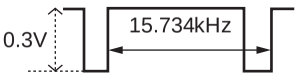
SIDE B



NOTE : When shutting off the power supply of TC90A96AFG, be careful not to energize each IC terminal. However, IIC lines (SDA and SCL) is not included in this case and it is possible to energize them with up to 5V.

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
1	Check 3.3V power supply voltage	TP:14.4V to14V	C210 hot side (TP:V33)	—	V33 = 3.3 ± 0.25V	
2	Check 2.5V power supply voltage	TP:14.4V to14V	IC4182 1-pin (TP:V25)	—	V25 = 2.5 ± 0.15V	
3	Check 1.5V power supply voltage	TP:14.4V to14V	IC4183 1-pin (TP:V15)	—	V15 = 1.5 ± 0.08V	
4	Check 5V power supply voltage	TP:14.4V to14V	C4234 hot side (TP:V5)	—	V5 = 4.9 ± 0.3 V	
5	Check 8V power supply voltage	TP:14.4V to14V	C4198 hot side (TP:V8)	—	V8 = 8.0 ± 0.5 V	
6	Check 18.5V power supply voltage	TP:14.4V to14V	C4181 hot side (TP:V18)	—	V18 = 18.5 ± 0.5 V	
7	Check -12V power supply voltage	TP:14.4V to14V	C4207 hot side (TP:VM12)	—	VM12 = -12.0 ± 0.6 V	
8	Vcom amplifier output amplitude check	No definition	CN4007 1-pin (TP:COM)	—	4.70 ± 0.10 V 	Connect LCD panel for measurement
9	Tone voltage amplitude check V1	No definition	CN4007 57-pin (TP:VO1)	—	4.20 ± 0.30 V 	Connect LCD panel for measurement
10	Tone voltage amplitude check V3	No definition	CN4007 55-pin (TP:VO3)	—	1.80 ± 0.10 V 	Connect LCD panel for measurement

NOTE : When shutting off the power supply of TC90A64AFG, be careful not to energize each IC terminal. However, IIC lines (SDA and SCL) is not included in this case and it is possible to energize them with up to 5V.

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
11	Tone voltage amplitude adjustment V5	No definition	CN4007 53-pin (TP:VO5)	—	0.35 ± 0.10 V 	Connect LCD panel for measurement
12	Tone voltage amplitude adjustment V7	No definition	CN4007 51-pin (TP:VO7)	—	0.60 ± 0.10 V 	Connect LCD panel for measurement
13	Tone voltage amplitude adjustment V9	No definition	CN4007 49-pin (TP:VO9)	—	3.30 ± 0.20 V 	Connect LCD panel for measurement
14	Preparation for image check	Input synchroniz-ed signal to TP CSYNC	—	—		Input 0.3V (75Ω)
15	Check RGB digital output	Input white 100% signal to TP ANR1, ANG1, ANB1 (0.70Vpp±1%)	TP BO2 ~ BO5 TP GO2 ~ GO5 TP RO2 ~ RO5	—	Make sure that each output is “Hi” continuously during displaying image. 	When OSD is displayed in EEPROM adjustment mode, LOW output is mixed to the parts where there is a character.
16	Composite level adjustment	Input composite image 10STEP signal to TP CVBS1 (1.4Vpp±1%)	TP GO1	Resistor setting of SA13h D5-0	Using EEPROM adjustment mode, set CMP CONTRAST on 30 and decrease value one by one. Decrease value by one when "L" starts to appear on output while displaying GO1 image.	Using EEPROM adjustment mode, check that CONTRAST is being 168 to make adjustment. When OSD is displayed on EEPROM adjustment mode, ignore "L" output shown among lettered part.
			TP GO2 ~ GO5		Check that "H" always appears on each output while displaying image.	
17	YS performance check	Input signal to TP YSIN For abroad: 0-3.3V For J spec: 0.4-1.4V(75Ω)			Verify YS performs.	

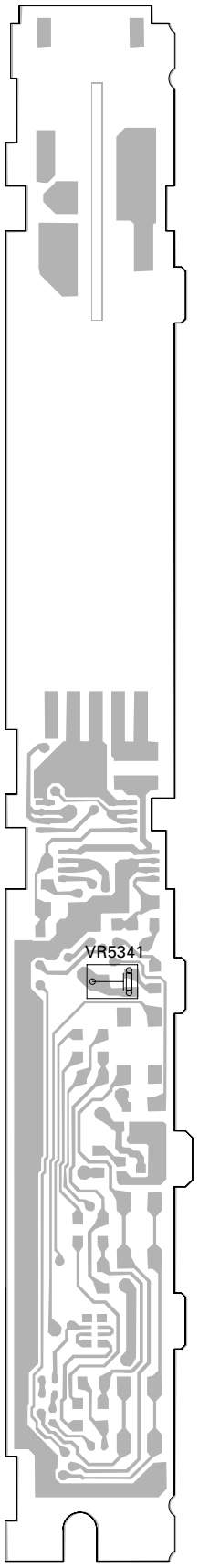
NOTE : When shutting off the power supply of TC90A96AFG, be careful not to energize each IC terminal. However, IIC line (SDA and SCL) is not included in this case and it is possible to energize it with up to 5V.

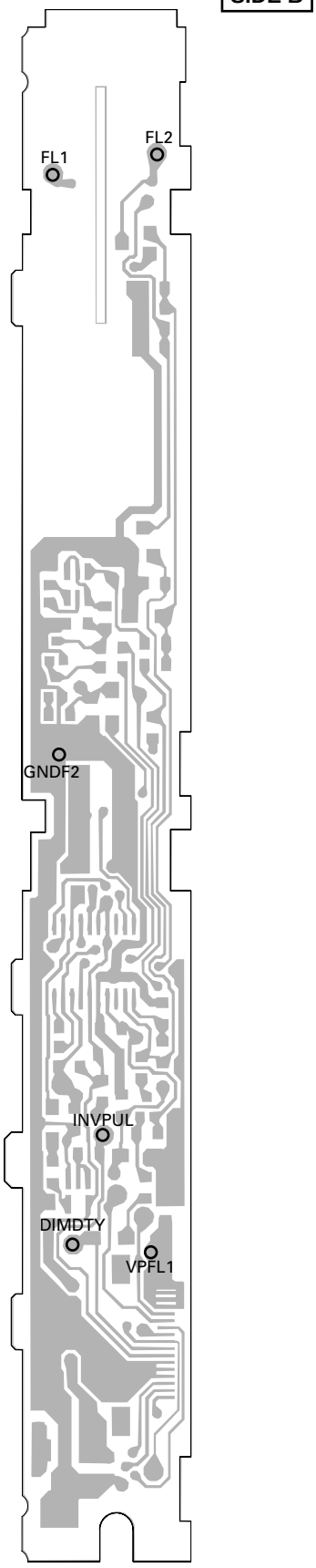
No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
18	YS, RGB sampling phase setting, check	No definition	—	Register setting for SA2Dh D15 ~ 12 : YS D11 ~ 8 : B D7 ~ 4 : G D3 ~ 0 : R	(Line writing): 0100 (Service): [YS (R, G, B) SAMPL] should be 12 in EEPROM test mode	Check EEP-ROM setting value after writing.
19	YS-OFFSET setting, check	No definition	—	Register setting of SA2Fh D3-0	(Line writing): 1111 (Service): [YS DELAY] should be 7 in EEPROM test mode	Check EEP-ROM setting value after writing.
20	Image check	Input composite image lamp signal (monochrome) to TP CVBS1	Screen	—	Make sure that tone changes smoothly, and there is no colored area in the entire display.	Execute to verify that 2-display IC digital-out is not bridged or “OPEN”ed.
21	Aging	No definition	—	—	Leave for more than 30 minutes in operation mode.	
22	Flicker adjustment	Input black-white reverse signal per 1 line to TP ANR1, ANG1, ANB1	Screen	IC4101-3pin (TP COMDC) DC output	Adjust the flicker level to minimum from all directions.	Black-white reverse signal can be the input to TP CVBS1 (however, adjustment in RGB comes first). Brightness level of reverse signal should be 50%. Adjustment point can be COM DC of flicker adjustment mode.

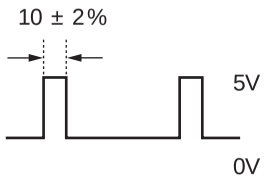
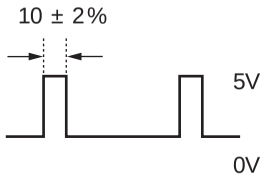
SA**h in this chart means the sub-address of TC90A96AFG.

6.5 INVERTER PCB ADJUSTMENT

● Adjustment Point





No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
1	Basic drive Frequency adjustment	14.4 ± 0.2V to TP VPFL1 TP DIMDTY : GND TP GNDFL : GND TP INVPUL : GND	TP FL1 TP FL2	VR5341	48.0 ± 0.1kHz	Connect 100kΩ between TP FL1 and FL2. Monitor the waveform after voltage division or TPFL2. Do not monitor TP FL1 directly (measurement meter may be damaged because of high voltage).
2	Check frequency switching	Input 98.0 ± 1kHz waveform below to INVPUL. 	TP FL1 TP FL2	—	49.0 ± 0.5kHz	Verify that the frequency of waveform measured in No.1 is 49kHz.
3	Check frequency switching	Input 104.0 ± 1kHz waveform below to INVPUL. 	TP FL1 TP FL2	—	52.0 ± 0.5kHz	Verify that the frequency of waveform measured in No.1 is 52kHz.

6.6 MONITOR TEST MODE

● EEPROM Setting Mode

1. Start-up

- Reset and start-up the monitor microcomputer while EPRTEST terminal is in the Low.
- Press EQ key + SOURCE key together to Reset Start.

2. Operation

Switching setting mode

Press [MENU] key of remote control unit to go to the next mode.

Selecting an adjustment item to be changed

Press [↑↓] key of remote control unit.

Changing value of the selected item

Press [← →] key of remote control unit.

3. Setting mode

(1) Flicker adjustment mode (start-up mode)
(2) Line adjustment 1 mode
(3) Line adjustment 2 mode
(4) Line adjustment 3 mode
(5) Line adjustment 4 mode
(6) Line adjustment 5 mode
(7) Line adjustment 6 mode
(8) Line adjustment 7 mode
(9) Line adjustment 8 mode
(10) Line adjustment 9 mode
(11) Line adjustment 10 mode
(12) Parameter setting mode for dimmer

4. Operation key

[Remote control code] head unit code

Key	Code
MENU	AD19AF63
↑	AD40
↓	AD41
←	AD42
→	AD43

Main unit key

(If pressing a monitor key in this adjustment mode, there is no affection in operation of the main unit.)

∗ Please note that there is a model by which the remote control signal is not connected to the monitor microcomputer (in that case, operation should be done only by key).

∗ After writing a setting value to EEPROM, read and display it.
Writing and reading should be done in 16-bit unit. The bit number of settings varies in each item.

∗ After changing the value of CS (CHECKSUM), take exclusive OR (XOR) with 8-bit and execute writing.
After writing this CS value to EEPROM, read and display it, too.
If the written value and the read value are different, change the color of the read value.

5. Memory item list and EEPROM

EEPROM memory alignment chart (S-93C56BD0I-JS)

	ADDRESS	Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
RELATED DIMMER	00h	Outside light of dimmer adjustment coordinates (high)								Backlight of dimmer adjustment coordinates (high)							
	01h	Outside light of dimmer adjustment coordinates (middle)								Backlight of dimmer adjustment coordinates (middle)							
	02h	Outside light of dimmer adjustment coordinates (low)								Backlight of dimmer adjustment coordinates (low)							
	03h	Outside light threshold for dimmer (high)								Outside light threshold for dimmer (low)							
	04h	Maximum value of backlight output								Minimum value of backlight output							
	05h	Checksum EEPROM address:03h-04h															
RELATED PIP (including operation settings)	06h	RGB &YS horizontal positioning								Don't care							
	07h	YS sampling phase				Bch sampling phase				Gch sampling phase				Rch sampling phase			
	08h	Don't care												YS internal delay adjustment value			
	09h	Checksum EEPROM address:06h-08h															
RELATED PIP (excluding operation settings)	0Ah	Common reference output DC center value								Common reverse output amplitude adjustment value							
	0Bh	Don't care		Brightness R						Don't care							
	0Ch	Don't care		Brightness G						Don't care							
	0Dh	Don't care		Brightness B						Don't care							
	0Eh	Don't care								Main Y contrast							
	0Fh	Don't care		Main horizontal enhancer						Sub vertical enhancer							Don't care
				Gain		Limiter			fo	Gain			Replicate		Coring		
	10h	Don't care								Sub Y contrast							
	11h	Don't care		Main horizontal enhancer						Sub vertical enhancer							Don't care
				Gain		Limiter			fo	Gain			Replicate		Coring		
	12h	Don't care	RGB simultaneous γslope A			R output DC offset				Don't care			RGB simultaneous γ1 inflection point				
	13h	RGB simultaneous γslope B			RGB simultaneous γ2 inflection point					RGB simultaneous γslope C				RGB simultaneous γ3 inflection point			
	14h	Don't care				G output DC offset				Don't care							
	15h	Don't care				B output DC offset				Don't care							
	16h	SA24h UPPER								SA24h LOWER							
	17h	SA25h UPPER								SA25h LOWER							
	18h	SA26h UPPER TV								SA26h LOWER TV							
	19h	SA26h UPPER								SA26h LOWER							
	1Ah	SA27h UPPER TV								SA27h LOWER TV							
	1Bh	SA27h UPPER								SA27h LOWER							
	1Ch	SA46h UPPER								SA46h LOWER							
	1Dh	SA47h UPPER								SA47h LOWER							
	1Eh	SA48h UPPER								SA48h LOWER							
	1Fh	SA49h UPPER								SA49h LOWER							
	20h	SA4Ah UPPER								SA4Ah LOWER							
	21h	SA4Bh UPPER								SA4Bh LOWER							
	22h	SA4Ch UPPER								SA4Ch LOWER							
	23h	SA4Dh UPPER								SA4Dh LOWER							
	24h	SA4Eh UPPER								SA4Eh LOWER							
	25h	SA4Fh UPPER								SA4Fh LOWER							
	26h	Dot search threshold								YS search threshold							
	27h	Phase search threshold								Xdisp (display difference permissible level)							
	28h	Don't care								YS disp (display difference permissible level)							
	29h	Checksum EEPROM address:0AH-28H															
	2AH	Don't care								Common reverse output DC center value reference							
RELATED TOUCH PANEL	2Bh	Touch panel X coordinate 1								Touch panel Y coordinate 1							
	2Ch	Touch panel X coordinate 2								Touch panel Y coordinate 2							
	2Dh	Touch panel X coordinate 3								Touch panel Y coordinate 3							
	2Eh	Touch panel X coordinate 4								Touch panel Y coordinate 4							
	2Fh	Touch panel X coordinate 5								Touch panel Y coordinate 5							
	30h	Touch panel X coordinate 6								Touch panel Y coordinate 6							
	31h	Touch panel X coordinate 7								Touch panel Y coordinate 7							
	32h	Touch panel X coordinate 8								Touch panel Y coordinate 8							
	33h	Touch panel X coordinate 9								Touch panel Y coordinate 9							

	ADDRESS	Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
RELATED TOUCH PANEL	34h	Touch panel X coordinate 10								Touch panel Y coordinate 10							
	35h	Touch panel X coordinate 11								Touch panel Y coordinate 11							
	36h	Touch panel X coordinate 12								Touch panel Y coordinate 12							
	37h	Touch panel X coordinate 13								Touch panel Y coordinate 13							
	38h	Touch panel X coordinate 14								Touch panel Y coordinate 14							
	39h	Touch panel X coordinate 15								Touch panel Y coordinate 15							
	3Ah	Touch panel X coordinate 16								Touch panel Y coordinate 16							
	3Bh	Outermost circumference X min								Outermost circumference Y min							
	3Ch	Outermost circumference X max								Outermost circumference Y max							
	3Dh	Touch panel calibration adjustment result								Touch panel outermost circumference adjustment result							
	3Eh	Checksum EEPROM address:2BH-3DH															
Others	3FH	Flicker adjustment completion (writing of microcomputer) ∗A				EEPROM adjustment completion (writing of production engineering jig) ∗B				EJECT lock value							
Addition	40H	Don't care				Ch sampling phase reference				Ch sampling phase reference				Ch sampling phase reference			
To be determined	41H	Don't care															
	～	Don't care															
	7FH	Don't care															

∗ The order of RELATED DIMMER, RELATED PIP, RELATED TOUCH PANEL and others is determined according to frequency of changing.
∗ When a writing & reading error or data check (checksum, magnitude relation) error occurs, initialization is done with data belonging to the software at the error time, and initialization is performed per divided section described above.
However, RELATED DIMMER should be further divided into sections such as address 00H～02H and 03H～04H, then initialized.
∗ The user changeable parts (address 00H～02H) in the segment RELATED DIMMER is not a target of checksum.
∗ Concerning the segment RELATED DIMMER, considering PIP register configuration, data obtained from PIP can be stored without software processing.
And the alignment is designed to send data obtained from EEPROM to PIP without processing it. (same as NN629)
Each area is divided according as whether it is changed during operation or not. (Checksum division is carried out to each.)
∗ Address 2H, remote control reverse output DC center value reference is not a target of checksum because it maintains default settings, and basically it is READ ONLY and is not shipped.
∗ Address 40H, sampling phase reference is not a target of checksum because it maintains default settings, and basically it is READ ONLY and is not shipped.
∗ At the time of EEPROM reset, the address above (excluding 2AH, 40H) is initialized with data belonging to the software.
∗A : Microcomputer writes the result whether flicker adjustment is performed or not (direct mode, EEPROM adjustment screen).
∗B : Production engineering jig: After completing EEPROM adjustment, the value is written (this value is displayed on the confirmation screen).

6. Screen specification of each mode

Actual OSD screen samples are showed inside of the thick frame in the chart below.
The numbers in the chart are the changed parts during adjustment in each screen (maximum value is showed in the sample).
The items are for design review and line adjustment.

■ Flicker adjustment mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Common reverse output center value	[0-255]	COM_DC	255		

∗ ■ Note1 : The contents of [COM DC, clock phase] should be reflected to the reverse output center reference value.

■ Line adjustment 1 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
					LINE1
Bright	[0-255]	BRIGHT	150	NOT	EEPROM
RGB simultaneous contrast (SA0C [D0-7])	[0-255]	CONTRAST	168	NOT	EEPROM
Common reverse output amplitude adjustment value	[0-255]	COM AMP AJ	150		
R output DC offset (SA1A [D11-8])	[0-15]	ROUT BIAS	8		
G output DC offset (SA1C[D11-8])	[0-15]	GOUT BIAS	8		
B output DC offset (SA1E[D11-8])	[0-15]	BOUT BIAS	8		
Main Y contrast (SA0F[D5-0])	[0-63]	RGB CNTRST	34		
Sub Y contrast (SA13[D5-0])	[0-63]	CMP CNTRST	26		
				CS	FFFF

- Adjust common reverse output amplitude by line in order to cancel the variation of hardware quality.
- [COM AMPAJ] is a default value set by line and stored in EEPROM.
- In the normal operation, [BRIGHT] is determined based on COM AMPAJ (common reverse output amplitude adjustment) and the attached “Image quality table” according to user setting steps, and this value controls monitor microcomputer [COM_AC] output.
- User’s adjustment of “Black density (=bright)” on this product is done by controlling common reverse output amplitude only, not done by brightness of 2-display IC.
- User’s adjustment of “Black density” is not reflected to [BRIGHT] in the test mode of single monitor. When adjusting [COM AMPAJ], [BRIGHT] changes accordingly. (Memorized [COM AMPAJ] is the same as the [BRIGHT] value of step0.)
- When entering test mode in product condition, “Black density” by user’s adjustment is reflected to [BRIGHT] value. If changing [BRIGHT] value in the test mode, it is not reflected to the user setting value.

∗ ■ Note1 : The contents of [BRIGHT] and [CONTRAST] are the reference value for adjusting the other items, and not stored in EEPROM.

∗ ■ Note2 : Be careful about the contents of [R, G, B OUT BIAS] and [RGB, CMP CONTRST] since their indicated value / EEPROM written value and their registered value of 2-display IC (TC90A96AFG) are different. (Software conversion is running because correlation between registered value of 2-display IC and display output is not linear.)

[R, G, BOUT BIAS]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
15	15	0111	(MAX)
14	14	0110	
:	:	:	
9	9	0001	
8	8	0000	(TYP)
7	7	1111	
:	:	:	
1	1	1001	
0	0	1000	(MIN)

[RGB, CMP, CNTRST]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
63	63	011111	(MAX)
62	62	011110	
:	:	:	
33	33	000001	
32	32	000000	(TYP)
31	31	111111	
:	:	:	
1	1	100001	
0	0	100000	(MIN)

■Line adjustment 2 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
RGB & YS horizontal alignment (SA2B [D15-8])	[0-255]	DOT H POSIT	63		LINE2
YS sampling phase 1 (SA2D [D15-12])	[0-15]	YS SAMPL	8		
AD sampling phase B (SA2D [D11-8])	[0-15]	B SAMPL	8		
AD sampling phase G (SA2D [D7-4])	[0-15]	G SAMPL	8		
AD sampling phase R (SA2D [D3-0])	[0-15]	R SAMPL	8		
YS internal delay adjustment phase (SA2F [D3-0])	[0-15]	YS DELAY	8		
				CS	FFFF

* ■Note : Be careful about the contents of [YS,R,G,B SAMPL] and [YS DELAY] since their indicated value / EEPROM written value and their registered value of 2-display IC (TC90A96AFG) are different.
(Software conversion is running because correlation between registered value of 2-display IC and display output is not linear.)

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
15	15	0111	(MAX)
14	14	0110	
:	:	:	
9	9	0001	
8	8	0000	(TYP)
7	7	1111	
:	:	:	
1	1	1001	
0	0	1000	(MIN)

■Line adjustment 3 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Dot search threshold	[0-255]	TH DOT	112		LINE3
YS search threshold	[0-4]	TH YS	3		
Phase search threshold	[0-255]	TH PHASE	112		
Xdisp	[0-63]	X DISP	32		
Ydisp	[0-4]	YS DISP	2		
				CS	FFFF

■Line adjustment 4 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Main horizontal enhancer gain (SA10 [D13-12])	[0-3]	MH GAIN	0		LINE4
Main horizontal enhancer limiter (SA10 [D11-10])	[0-3]	MH LIMIT	0		
Main horizontal enhancer f0 (SA10 [D8])	[0-1]	MH F0	0		
Main vertical enhancer gain (SA10 [D7-6])	[0-3]	MV GAIN	0		
Main vertical enhancer replicable (SA10 [D5-4])	[0-3]	MV ORI	0		
Main vertical enhancer coring (SA10 [D3-2])	[0-3]	MV CORE	0		
				CS	FFFF

■Line adjustment 5 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Sub horizontal enhancer gain (SA14 [D13-12])	[0-3]	SH GAIN	1		LINE5
Sub horizontal enhancer limiter (SA14 [D11-10])	[0-3]	SH LIMIT	1		
Sub horizontal enhancer f0 (SA14 [D8])	[0-1]	SH F0	1		
Sub vertical enhancer gain (SA14 [D7-6])	[0-3]	SV GAIN	2		
Sub vertical enhancer replicable (SA14 [D5-4])	[0-3]	SV ORI	1		
Sub vertical enhancer coring (SA14 [D3-2])	[0-3]	SV CORE	2		
				CS	FFFF

■Line adjustment 6 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Brightness R (SA0C [D13-8])	[0-63]	BRIGHT R	16	LINE6	
Brightness G (SA0D [D13-8])	[0-63]	BRIGHT G	16		
Brightness B (SA0E [D13-8])	[0-63]	BRIGHT B	16		
γ control ON/OFF (SA1A [D15])		GAMMA	OFF		
RGB simultaneous γ1 inflection point (SA1A [D5-D0])	[0-63]	GAMMA 1	0		
RGB simultaneous γ2 inflection point (SA1B [D12-8])	[0-31]	GAMMA 2	4		
RGB simultaneous γ3 inflection point (SA1B[D4-D0])	[0-31]	GAMMA 3	1		
RGB simultaneous γ slope A (SA1A [D14-12])	[0-7]	GAMMASLP A	4		
RGB simultaneous γ slope B (SA1B [D15-13])	[0-7]	GAMMASLP B	1		
RGB simultaneous γ slope C (SA1B [D7-5])	[0-7]	GAMMASLP C	1	CS	FFFF

* ■Note : Be careful about the contents of [BRIGHTNESS R, G, B] since their indicated value / EEPROM written value and their registered value of 2-display IC (TC90A96AFG) are different.
(Software conversion is running because correlation between registered value of 2-display IC and display output is not linear.)

[BRIGHTNESS R, G, B]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
63	63	011111	(MAX)
62	62	011110	
:	:	:	
33	33	000001	
32	32	000000	(TYP)
31	31	111111	
:	:	:	
1	1	100001	
0	0	100000	(MIN)

■Line adjustment 7 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
					LINE7
Main PLL0 (SA24 [D15-D8])	[0-255]	MAIN PLL0	158		
Main PLL1 (SA24 [D7-D0])	[0-255]	MAIN PLL1	13		
Main PLL2 (SA25 [D15-D8])	[0-255]	MAIN PLL2	204		
Main PLL3 (SA25 [D7-D0])	[0-255]	MAIN PLL3	4		
				CS	FFFF

■Line adjustment 8 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
					LINE8
TV sub PLL0 (SA26 [D15-8])	[0-255]	SUB PLL0 TV	140		
TV sub PLL1 (SA26 [D7-D0])	[0-255]	SUB PLL1 TV	136		
Other sub PLL0 (SA27 [D15-D8])	[0-255]	SUB PLL0	140		
Other sub PLL1 (SA27 [D7-D0])	[0-255]	SUB PLL1	141		
TV sub PLL2 (SA28 [D15-8])	[0-255]	SUB PLL2 TV	100		
TV sub PLL3 (SA28 [D7-D0])	[0-255]	SUB PLL3 TV	68		
Other sub PLL0 (SA29 [D15-D8])	[0-255]	SUB PLL2	152		
Other sub PLL1 (SA29 [D7-D0])	[0-255]	SUB PLL3	135		
				CS	FFFF

■Line adjustment 9 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
SA46[D15-8]	[0-255]	SA46H UPPER	0		LINE9
SA46[D7-D0]	[0-255]	SA46H LOWER	0		
SA47[D15-8]	[0-255]	SA47H UPPER	0		
SA47[D7-D0]	[0-255]	SA47H LOWER	0		
SA48[D15-8]	[0-255]	SA48H UPPER	0		
SA48[D7-D0]	[0-255]	SA48H LOWER	0		
SA49[D15-D8]	[0-255]	SA49H UPPER	0		
SA49[D7-D0]	[0-255]	SA49H LOWER	0		
SA4A[D15-8]	[0-255]	SA4AH UPPER	0		
SA4A[D7-D0]	[0-255]	SA4AH LOWER	0	CS	FFFF

■ Line adjustment 10 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
SA4B[D15-D8]	[0-255]	SA4BH UPPER	0		LINE10
SA4B[D7-D0]	[0-255]	SA4BH LOWER	0		
SA4C[D15-D8]	[0-255]	SA4CH UPPER	0		
SA4C[D7-D0]	[0-255]	SA4CH LOWER	0		
SA4D[D15-D8]	[0-255]	SA4DH UPPER	0		
SA4D[D7-D0]	[0-255]	SA4DH LOWER	0		
SA4E[D15-D8]	[0-255]	SA4EH UPPER	0		
SA4E[D7-D0]	[0-255]	SA4EH LOWER	0		
SA4F[D15-D8]	[0-255]	SA4FH UPPER	0		
SA4F[D7-D0]	[0-255]	SA4FH LOWER	0	CS	FFFF

■ Parameter setting mode for dimmer

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Maximum Backlight power	[0-255]	BL MAX	C4		DIMMER
Minimum Backlight power	[0-255]	BL MIN	59		
Dimmer threshold (high)	[0-255]	REF H	C0		
Dimmer threshold (low)	[0-255]	REF L	60		
Outside light point (high)	[0-255]	LUM H	E2		
Outside light point (middle)	[0-255]	LUM M	87		
Outside light point (low)	[0-255]	LUM L	52		
Backlight point (high)	[0-255]	BL H	C4		
Backlight point (middle)	[0-255]	BL M	C4		
Backlight point (low)	[0-255]	BL L	68	CS	FFFF

* Data of point for dimmer (coordinates) is stored in EEPROM but is not a target of CS since that is changeable by user's operation.

■ List of EEPROM write values

DIMMER relation

Item	E2PROM initial value (HEX)
Upper limit of backlight output	C4
Lower limit of backlight output	59
Threshold value (high) of outer light for DIMMER	C0
Threshold value (low) of outer light for DIMMER	60
Outer light value on DIMMER-adjusted coordinate (high)	E2
Outer light value on DIMMER-adjusted coordinate (middle)	87
Outer light value on DIMMER-adjusted coordinate (low)	52
Backlight value on DIMMER-adjusted coordinate (high)	C4
Backlight value on DIMMER-adjusted coordinate (middle)	C4
Backlight value on DIMMER-adjusted coordinate (low)	68

Touch panel relation

Item	E2PROM initial value (HEX)	E2PROM initial value (DEC)
X coordinate (1-16) of touch panel	00	00
Y coordinate (1-16) of touch panel	00	00
Ultimate perimeter (Xmin) of touch panel	3A	58
Ultimate perimeter (Xmax) of touch panel	F8	248
Ultimate perimeter (Ymin) of touch panel	40	64
Ultimate perimeter (Ymax) of touch panel	F1	241
Result of adjusting calibration of touch panel	00	00
Result of adjusting ultimate perimeter of touch panel	00	00

IC relation on Screen 2

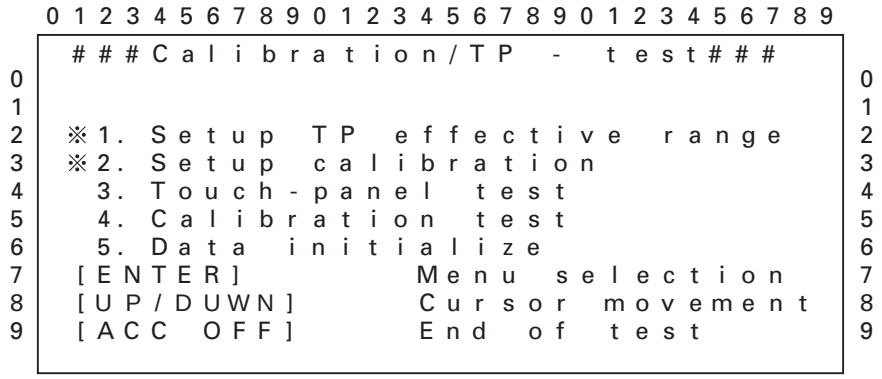
Item	E2PROM initial value (HEX)	E2PROM initial value (DEC)	
COM_DC	(5C)	(92)	*The value shown on the left is initial value which is adjusted based on No. 22 Flicker Adjustment in 6.4 Monitor PCB Adjustment.
COM_AMP_AJ	96	150	
ROUT_BIAS	08	8	
GOUT_BIAS	08	8	
BOUT_BIAS	08	8	
RGB_CNTRST	22	34	
CMP_CNTRST	1A	26	*The value shown on the left is initial value which is adjusted based on No. 16 Composite Level Adjustment in 6.4 Monitor PCB Adjustme -nt.
DOT_H_POSIT	3F	63	
YS_SAMPL	0C	12	
B_SAMPL	0C	12	
G_SAMPL	0C	12	
R_SAMPL	0C	12	
YS_DELAY	07	7	
TH_DOT	70	112	
TH_YS	03	3	
TH_PHASE	70	112	
X_DISP	20	32	
YS_DISP	02	2	
M_H_GAIN	00	0	
M_H_LIMIT	00	0	
M_H_F0	00	0	
M_V_GAIN	00	0	
M_V_ORI	00	0	
M_V_CORE	00	0	
S_H_GAIN	00	0	
S_H_LIMIT	01	1	
S_H_F0	01	1	
S_V_GAIN	00	0	
S_V_ORI	01	1	
S_V_CORE	02	2	
BRIGHT_R	10	16	
BRIGHT_G	10	16	
BRIGHT_B	10	16	
GAMMA_1	00	0	
GAMMA_2	04	4	
GAMMA_3	01	1	
GAMMASLP_A	04	4	
GAMMASLP_B	01	1	
GAMMASLP_C	01	1	
SA24H_UPPER	9E	158	
SA24H_LOWER	0D	13	
SA25H_UPPER	CC	204	
SA25H_LOWER	04	4	
SA26H_UPPER_TV	8C	140	
SA26H_LOWER_TV	88	136	
SA26H_UPPER	8C	140	
SA26H_LOWER	8D	141	
SA27H_UPPER_TV	64	100	
SA27H_LOWER_TV	44	68	
SA27H_UPPER	98	152	
SA27H_LOWER	6B	107	
SA46H_UPPER	02	2	
SA46H_LOWER	00	0	
SA47H_UPPER	00	0	
SA47H_LOWER	00	0	
SA48H_UPPER	00	0	
SA48H_LOWER	00	0	
SA49H_UPPER	00	0	
SA49H_LOWER	00	0	
SA4AH_UPPER	00	0	
SA4AH_LOWER	00	0	
SA4BH_UPPER	00	0	
SA4BH_LOWER	00	0	
SA4CH_UPPER	00	0	
SA4CH_LOWER	00	0	
SA4DH_UPPER	00	0	
SA4DH_LOWER	00	0	
SA4EH_UPPER	00	0	
SA4EH_LOWER	00	0	
SA4FH_UPPER	00	0	
SA4FH_LOWER	00	0	

6.7 TOUCH PANEL TEST MODE

1 TOP MENU

1.1 Screen configuration

Select each item of touch panel test mode.



Currently selected item is displayed in blue (default : 1).

* Background : black
  Characters : white
  Selected characters : blue
  Confirmation indication of conditioned item : red
  Non-selectable items : gray

1.2 Operation specification

Reset Start by pressing ATT and ANGLE+ to go to touch panel calibration mode.
Select each item with up and down keys and go to each setting screen with A.MENU key.

[Remote control code]

Key	Code
ENTER	AD19AF63
↑	AD40
↓	AD41

[Main unit key]

Key
ENTER
↑
↓

1.3 Processing detail

There is no condition in MENU selection.

1.4 Screen detail

The ※ mark meaning “conditioned item” is indicated under following condition:

※ 1
When outermost circumference is adjusted, it is indicated.

※ 2
When 16-point adjustment is done, it is indicated.

The ※ mark meaning “conditioned item” is not indicated under following condition:
No calibration is done after product completion.
Adjusted value initialization is done.
EEPROM initialization is done.

Confirmation indication of conditioned EEPROM Newly available with this product
See “Production engineering test : result feedback specification document” for more detail.

2 OUTERMOST CIRCUMFERENCE

2.1 Screen configuration

Go over the outermost circumference of touch panel to store the set value to EEPROM.

```
  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
0 ##Setup TP effective range##                                  0
1   The present of touch-panel                                  1
2   effect range(before,after)                                  2
3       X min   : (  56,120)                                    3
4       Y min   : (  63,120)                                    4
5       X max   : ( 243,180)                                    5
6       Y max   : ( 234,180)                                    6
7 <CAUTION>                                                     7
8 Please touch around panel                                     8
9 [ENTER]   Check the Value                                     9
  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
```

* [before] is the data stored already in EEPROM.
  [after] is the data going to be stored now.

Audit result confirmation screen : normal case

```
  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
0                                                               0
1                                                               1
2                                                               2
3                                                               3
4                       O.K                                     4
5                                                               5
6                                                               6
7                                                               7
8 [ENTER]   Return to Menu                                      8
9                                                               9
  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
```

Audit result confirmation screen: abnormal case

```
  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
0                                                               0
1                                                               1
2                                                               2
3                                                               3
4                       N.G                                     4
5                                                               5
6                                                               6
7                                                               7
8 [ENTER]   Return to Menu                                      8
9                                                               9
  0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
```

NG condition information

2.2 Operation specification

Touch the outermost circumference of screen, and take outermost circumference value of X, Y.

Press [ENT] key of main unit or remote control unit to finish adjustment.
After finishing adjustment, if a taken value is within permissible zone, enter [O.K] at the center, and if it is outside permissible zone, enter [NG] at the center.
Then, press [ENT] key of main unit or remote control unit to return to TOP MENU.

2.3 Processing detail

Press [ENT] key of main unit or remote control unit to finish adjustment and store setting value (maximum and minimum value) to EEPROM only when the taken value is within permissible zone.

Receive confirmation screen TP and display OK or NG after fulfilling the following conditions:
[O.K] is displayed after storing a taken value to EEPROM.
[NG] is displayed when a taken value is determined to be outside permissible zone.

Default is showed below.

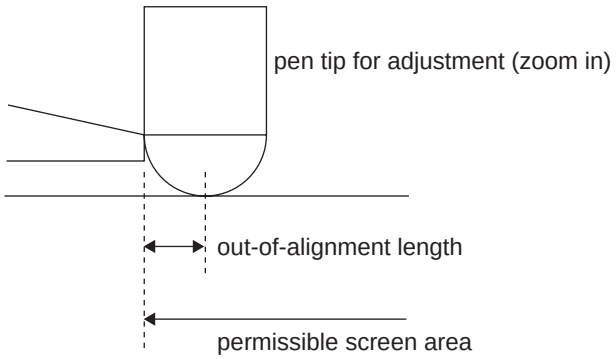
Coordinates	Minimum	Maximum
X	58	248
Y	64	241

2.4 Additional information

Consider diameter of the top of jig (pen tip) before adjusting outermost circumference.

Out-of-alignment length 0.8 mm

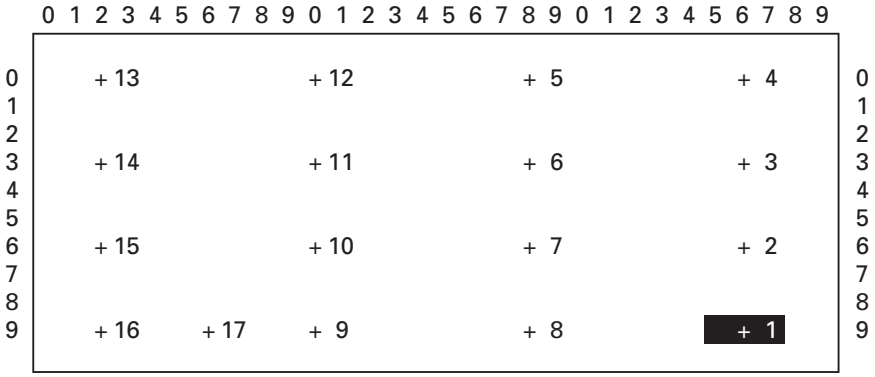
Perform calibration data operation with the size calculated by subtracting out-of-alignment length from permissible screen area.



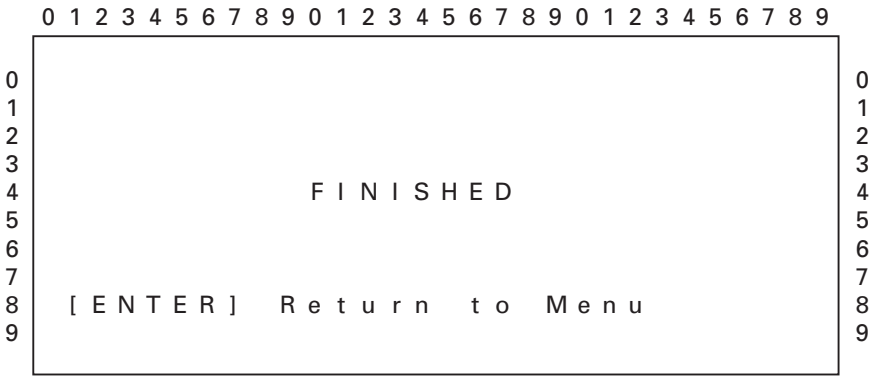
3 CALIBRATION

3.1 Overview

Press cursor [+] on the screen in turn to calibrate and store the set value to EEPROM.



* It is invalid if the distant point from displayed block is pressed.



* The number above shows the order of displaying cursor.
* [FINISHED] above is displayed when the number 17 is pressed.

3.2 Operation specification

Execute calibration by pressing cursor displayed at 16 points on the screen in turn and press one point to finish at the end (total 17 points).
After the 17th point is displayed, [FINISHED] is indicated at the center of the screen.
Cursor is always showing one point only and the next cursor is displayed after pressing one correctly.
Press [ENT] key of main unit or remote control unit to return to TOP MENU.

When pressing [ESC] during adjustment, the adjusted value is not stored and TOP MENU screen is displayed.

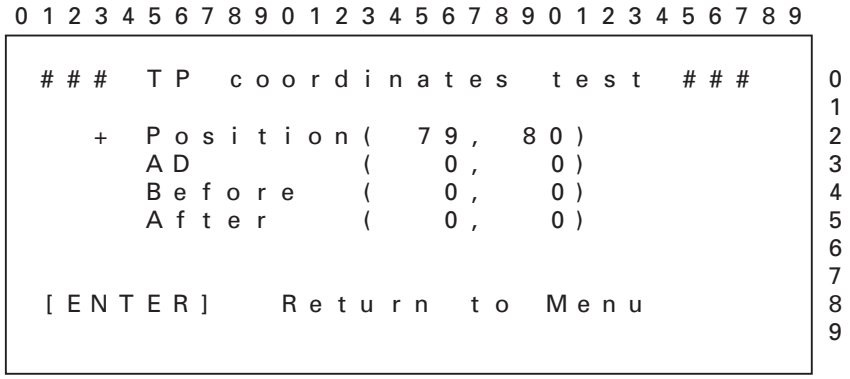
3.3 Processing detail

The taken setting value is stored in EEPROM only when pressing the 17th point, and [FINISHED] is displayed after storing.
See "Engineering Specification (monitor) EEPROM Memory Alignment" about the area for storing EEPROM settings.
See "Attachment 1 Calibration Settings" about cursor indicating position.
See "Attachment 2 Calibration Settings" about setting value of cursor point.

4 TOUCH PANEL COORDINATES AUDIT

4.1 Screen configuration

Check displayed coordinates before and after correction when pressing touch panel and perform operation check.



M152 : The + mark is not displayed at 16 points on the screen.

4.2 Operation specification

Move [+] mark by up and down, right and left keys and display its OSD coordinates.
Press [ENT] key of main unit or remote control unit to return to TOP MENU.

[Remote control unit code]

Key	Code
ENTER	AD19AF63
↑	AD40
↓	AD41
←	AD42
→	AD43

Operatable with main unit key

Operatable only with remote control unit

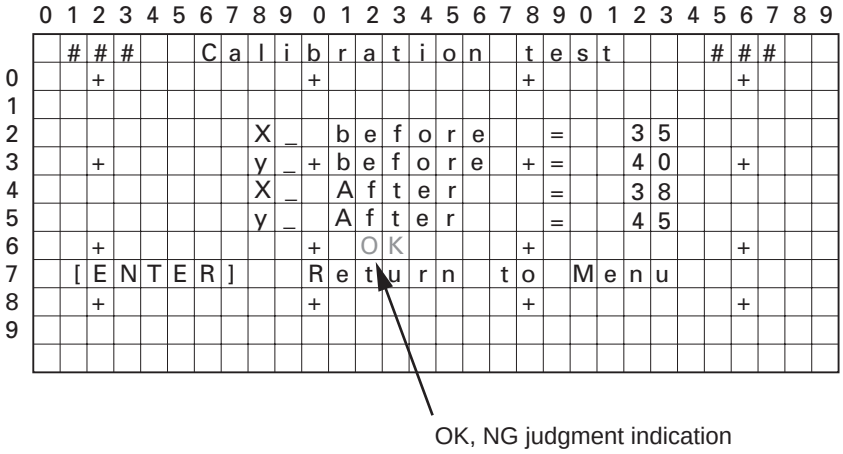
4.3 Processing detail

∗Explanation about displayed coordinates (from up to down)
(79, 80) : Drawing system coordinates of the cross point of horizontal and vertical lines (X direction, Y direction [0-500, 0-240]).
(0,0) : AD data value of the coordinates of pressed point (X direction, Y direction).
(0,0) : The coordinates of normalized AD data of pressed point within permissible zone (X direction, Y direction).
(0,0) : The coordinates corrected by calibration of the normalized coordinates (X direction, Y direction).

Specification correction
Rounding was done within the setting range with outermost circumference adjustment in the conventional product (AVH-P9DVA).
When value more than outermost circumference value was entered, the outermost circumference value was used.
From this time, considering that audit may be performed without outermost circumference adjustment, no limit is set.

4.4 Screen processing (additional)

The + mark at the point touched on screen is displayed.
When a finger etc. is detached, the + mark at the point pressed at the last moment is displayed continuously.
The + mark displayed when being pressed is showed at the under layer of the fixed red + mark.
The value displayed at that time is still being displayed.



4.5 Judgment processing

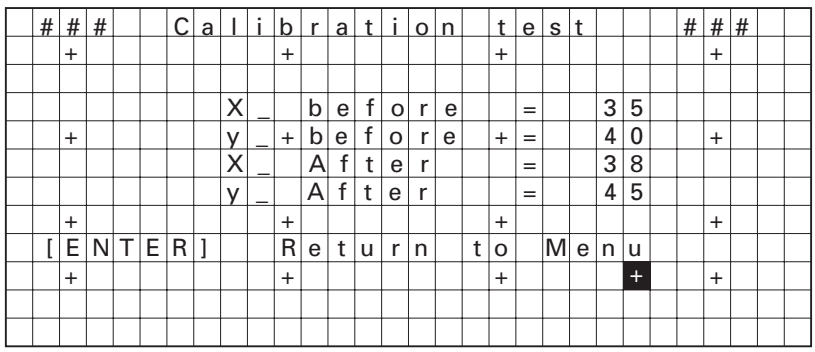
According to the length between + indication and touched coordinates (the point where the cursor is pointed), OK or NG is indicated.

OK condition	the length between + position and cursor indication is within ± 6 mm at the center
NG condition	except OK condition

5 TOUCH PANEL CONFIRMATION

5.1 Screen configuration

Check displayed coordinates before and after correction when pressing touch panel and perform operation check.



5.2 Operation specification

Check the coordinates before and after correction by touching the touch panel.
Press [ENT] key of main unit or remote control unit to return to TOP MENU.

5.3 Processing detail

Displayed items

panel x_before = ✻ normalized data before calibration (0-255)
panel y_before = ✻ normalized data before calibration (0-255)
panel x_after = ✻ normalized data after calibration (0-255)
panel y_after = ✻ normalized data after calibration (0-255)

Follow the steps below to convert AD value entered from touch panel to the corrected coordinates.
(Follow ① → ② in turn. Execute them during regular operation.)

① Data expansion of raw coordinates
Coordinates after data expansion = (raw coordinates − minimum value) × 255 ÷ (maximum value − minimum value)
✻ If raw coordinates are 0, the coordinates after data expansion should be 0.

② Coordinates correction after data expansion
(1) If the coordinates are under 224 after data expansion;
Coordinates after correction = coordinates after data expansion + correction value × (1 − (coordinates after data expansion − 224) ÷ 31)
✻ 31: Because there are 31 points of coordinates position from the value 225 to 255.
✻ The effect of correction value declines as the value is going to 255.

(2) If the coordinates are less than or equal to 32 after data expansion;
Coordinates after correction = coordinates after data expansion + (correction value × coordinates after data expansion ÷ 32)
✻ 32 : Because there are 32 points of coordinates position from the value 0 to 32 (coordinates 0 is not included).
✻ The effect of correction value declines as the value is going to 0.

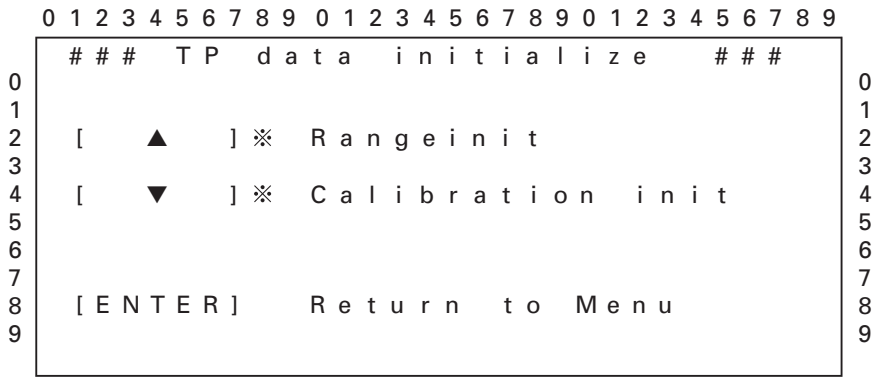
(3) If the coordinates are 33 ~ 224 after data expansion;
Coordinates after correction = coordinates after data expansion + B + (A − B) × (coordinates after data expansion − C) ÷ 64)
✻ 64 : Because there are 64 points of coordinates position in each area.
✻ Add the correction value at the left corner first. Then, the effect of correction value is increasing as going to right.

Coordinates after data	A	B	C
33 ~ 95	Right corner correction data of correction area	Left corner correction data of correction area	Left corner coordinates of correction area
96 ~ 160			
161 ~ 224			

6 INITIALIZATION OF TOUCH PANEL CALIBRATION DATA

6.1 Screen configuration

Return the outermost circumference, 16-point calibration data to default.



The ※ mark indicates that adjustment is finished.
Deleted after initialization.
(initialization = default inside microcomputer)

6.2 Operation specification

up key [▲] Clearing outermost circumference adjustment value and return it to default
down key [▼] Clearing 16-point calibration value and return it to default.

Press [ENT] key of main unit or remote control unit to return to TOP MENU.

6.3 Processing detail

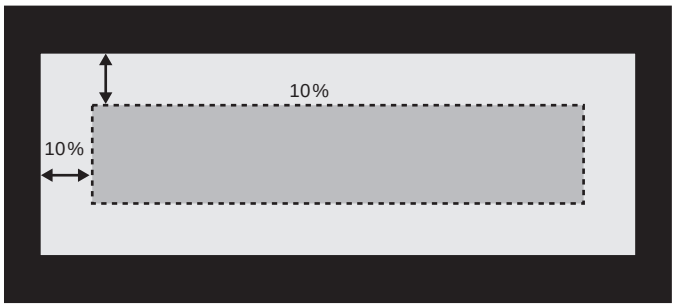
[Initialization processing]
It initializes outermost circumference value and 16-point value.
It writes default of initialized items to EEPROM and clears conditioned flag.

● Information About Permissible Error Settings For TPS Touch Panel Audit

Outermost circumference settings

Permissible error of outermost circumference should be 10% of valid zone.

*10% is calculated by the value determined by the outermost circumference zone as 100.



Settings valid zone (OK)

Settings invalid zone (NG)

Outermost circumference default

		min	max
X	Voltage (V)	0.75	3.21
	digital (AD)	58	248
	dot (OSD)	0	240
	NAVI	0	255
Y	Voltage (V)	0.83	3.12
	digital (AD)	64	241
	dot (OSD)	0	232
	NAVI	0	255
	ref	3.3	(V)

*Default above is measured with to the very limit of frame during measuring outermost circumference value.

Outermost circumference permissible error value

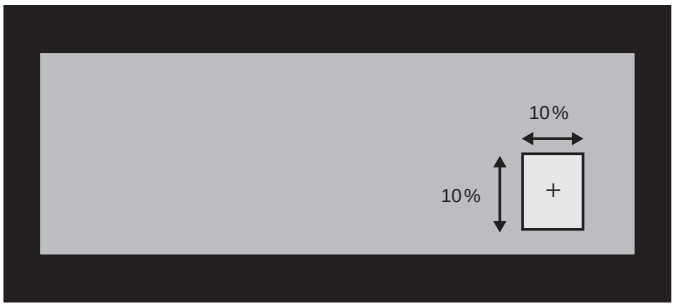
		△	10%
X	Voltage (V)	0.25	
	digital (AD)	19	
	dot (OSD)	24	
	NAVI	26	
Y	Voltage (V)	0.23	
	digital (AD)	18	
	dot (OSD)	23	
	NAVI	26	

Outermost circumference adjustment OK zone

		min	max
X	Minimum permissible value	0	229
	Maximum permissible value	77	255
Y	Minimum permissible value	0	223
	Maximum permissible value	82	255

Calibration

Permissible error of point calibration should be 10%



Settings valid zone (OK)

Settings invalid zone (NG)

Outermost circumference permissible error value

		△	10%
X	Voltage (V)	0.25	
	digital (AD)	19	
	dot (OSD)	24	
	NAVI	26	
Y	Voltage (V)	0.23	
	digital (AD)	18	
	dot (OSD)	23	
	NAVI	26	
ref	3.3 (V)		

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

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

Monitor section is drawn out forward.

1 Remove the two screws and then remove the Holder.
Disconnect the connector.

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

● **Removing the Case**

3 Remove the five screws.(Fig.1)

4 Remove the screw.(Fig.1)

5 Remove the two screws and then remove the Case.(Fig.1)

Note) Inside the product there is a flexible substrate that connects the Case and the Bracket.
Be very careful and do not give it a strong pull when removing the Case, otherwise it may be torn.

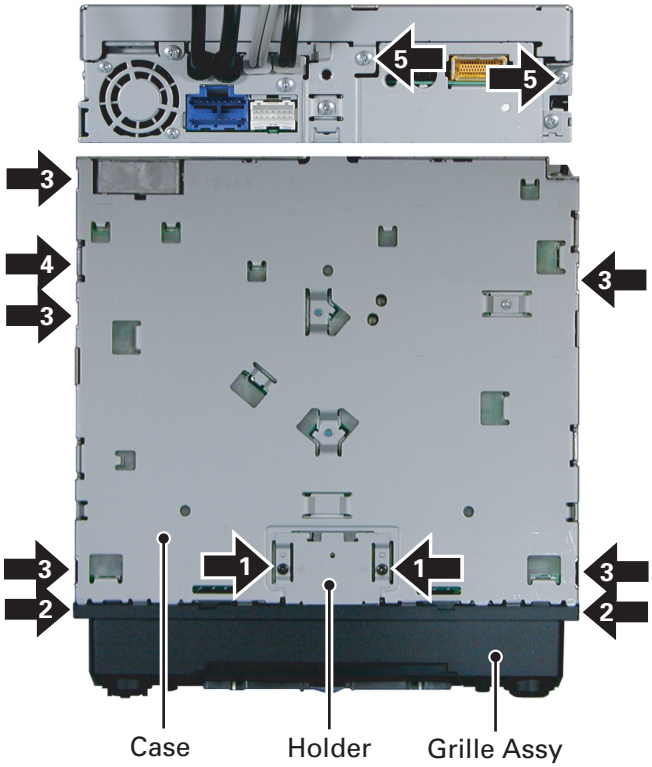


Fig.1

● **Removing the DVD Mechanism Module (Fig.2)**

1 Remove the four screws.

Disconnect the connector and then remove the DVD Mechanism Module.

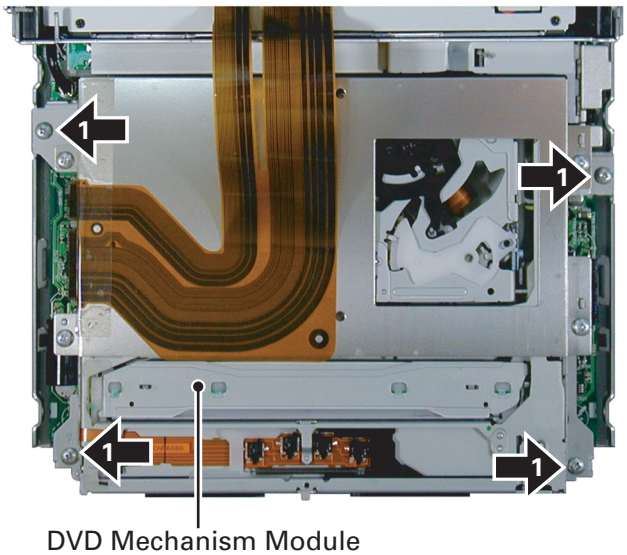


Fig.2

● Removing the Mother Unit (Fig.3)

1 Straighten the tabs at two locations indicated.

2 Remove the two screws and then remove the Holder.

3 Remove the two screws.

Disconnect the connector and then remove the Fan Motor.

4 Remove the two screws.

5 Remove the five screws and then remove the Panel.

6 Straighten the tabs at five locations indicated.

7 Remove the screw and then remove the Mother Unit.

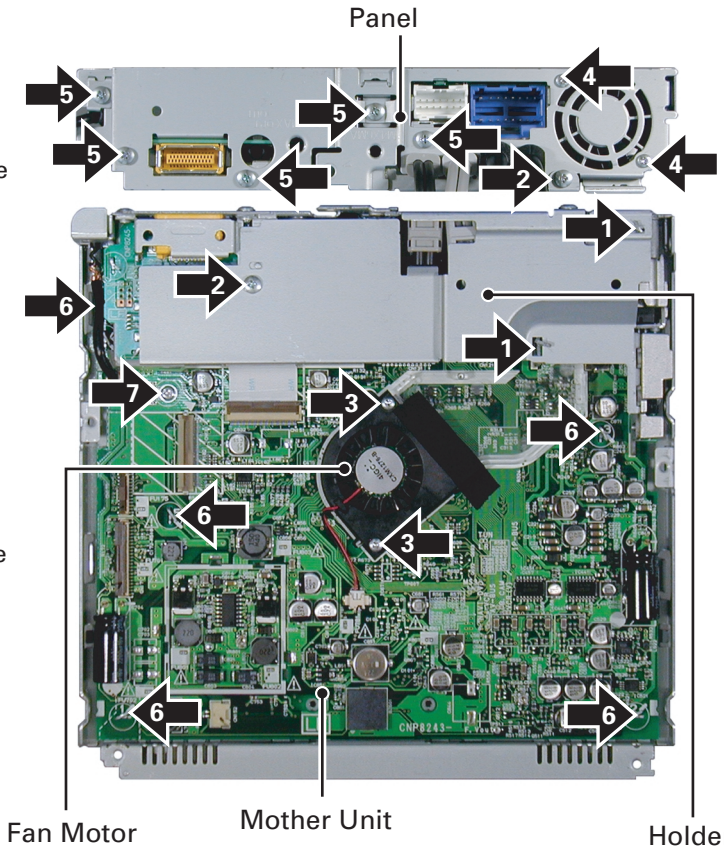


Fig.3

● Removing the Case (Fig.4)

1 Remove the two screws and then remove the Lever.

2 Remove the three screws and then remove the Holder.

3 Disconnect the connector.

4 Remove the screw.

5 Remove the five screws and then remove the Case.

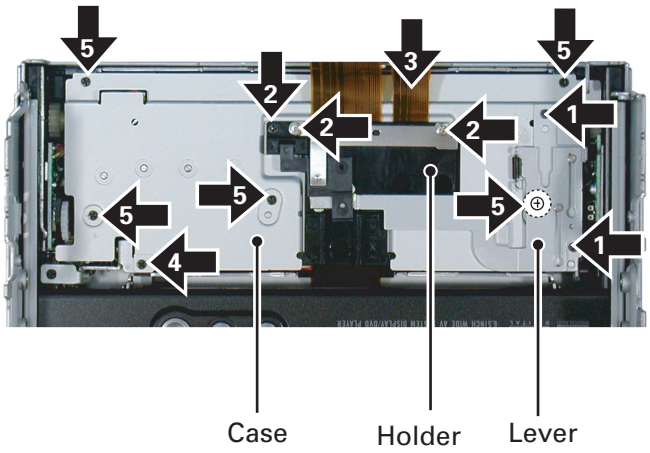


Fig.4

● Removing the Display Assy (Fig.5)

1 Remove the screw.

Disconnect the connector and then remove the Motor Unit.

2 Remove the two screws and then remove the two Holders.

3 Pull out the Display Assy in the arrow indicated direction.

Note) When reassembling, hold the switch down with tweezers or the like and put the Display Assy back to the Chassis. Otherwise, the switch may be damaged and not function properly.

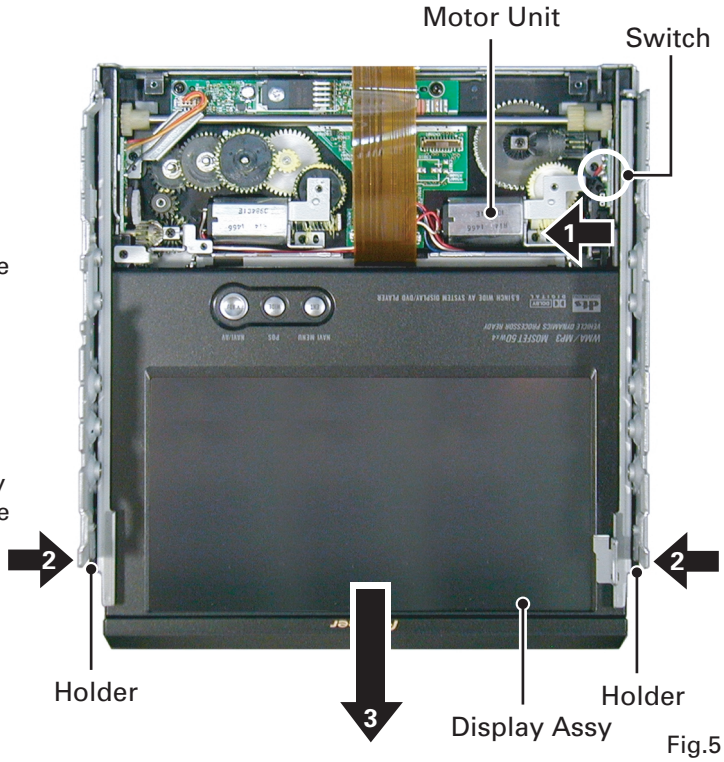


Fig.5

● Removing the Main Unit (Fig.6)

1 Remove the screw and then remove the Bracket.

2 Remove the four screws and then remove the Shaft Unit.

3 Remove the three screws.

Disconnect the connector and then remove the Main Unit.

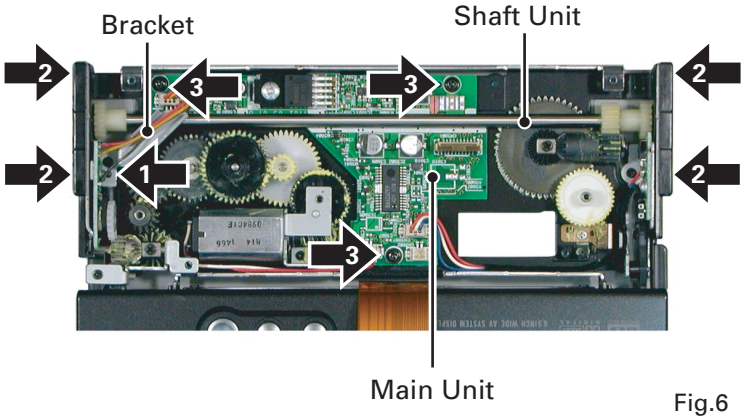


Fig.6

● Removing the Display Assy (Fig.7)

1 Remove the two screws and then remove the Holder.

2 Remove the three screws and then remove the Cover Unit.

3 Remove the four screws.

Disconnect the connector and then remove the Display Assy.

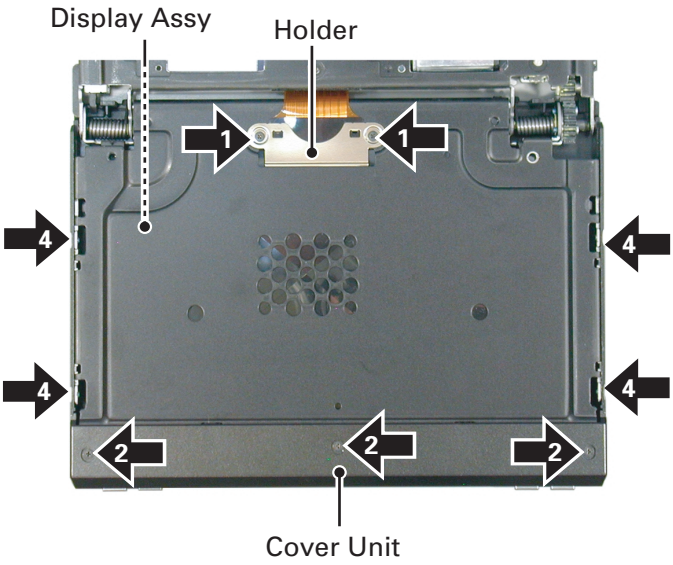


Fig.7

● Removing the Monitor PCB (Fig.8)

1 Straighten the tabs at two locations indicated.

2 Remove the three screws.

Disconnect the connector and then remove the Monitor PCB.

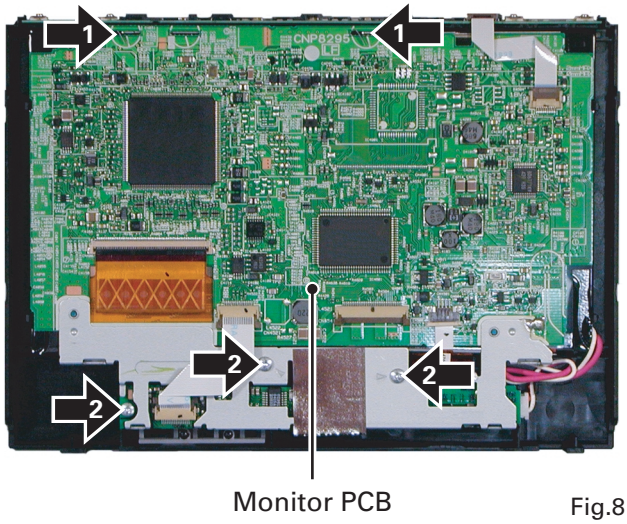
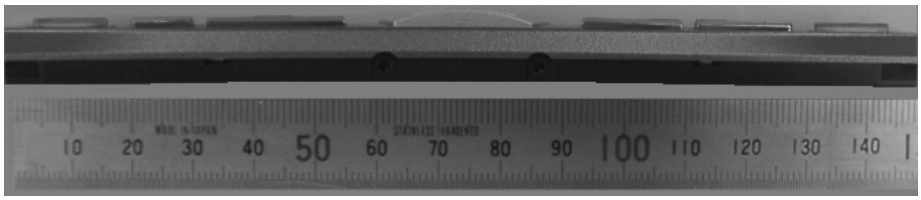
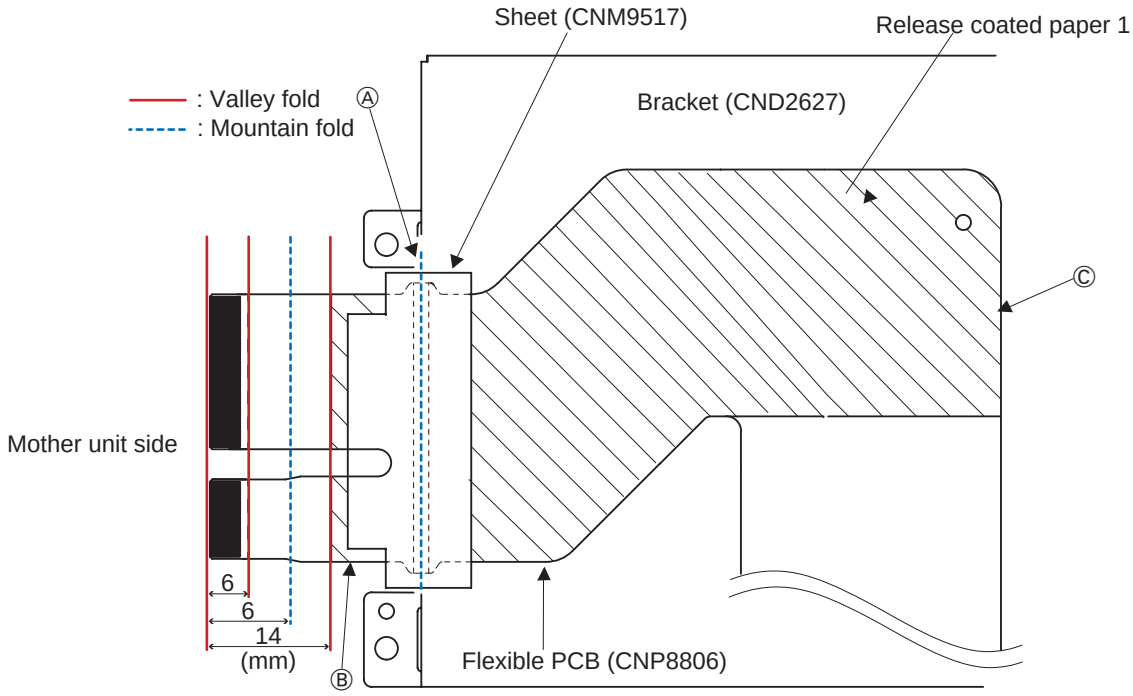


Fig.8

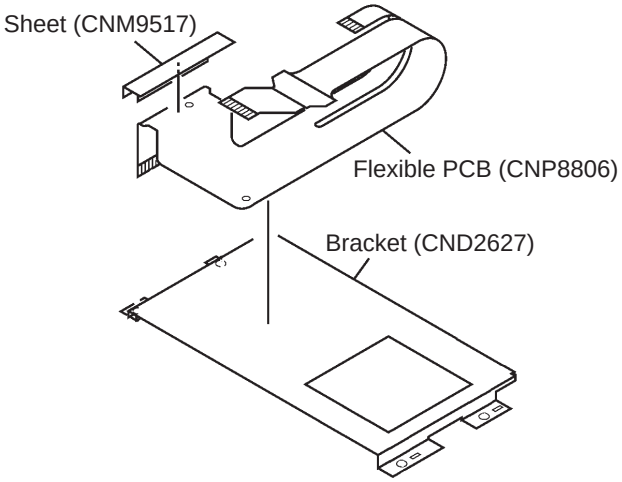
Note:
Tighten the screws with the panel in warped state as shown in the photograph below. Otherwise, it will be difficult to install Detach Grille Assy to Panel Assy.



● Exchanging Flexible PCB (CNP8806)

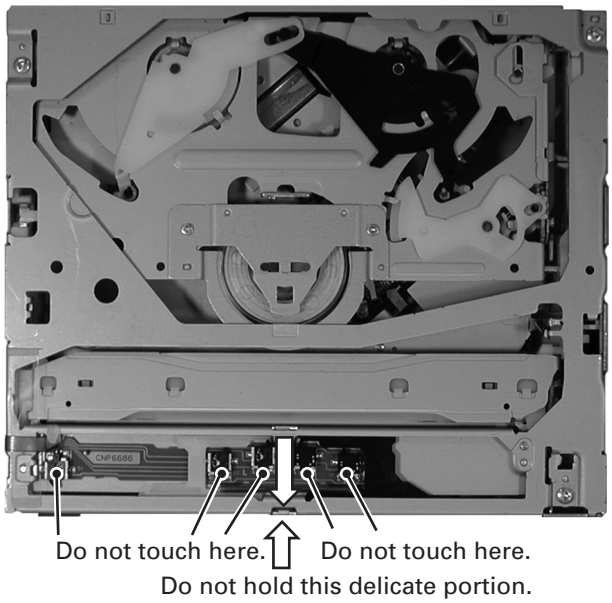


1. When exchanging a flexible PCB (CNP8806), fold the PCB as indicated in the upper figure.
2. Connect the mother unit side of the flexible PCB to the connecter of the mother unit.
3. Remove release Ⓑ part of coated paper of the flexible PCB.
4. Paste Ⓐ part of the flexible PCB along the corner of the bracket (CND2627).
3. Paste Ⓒ part of the flexible PCB on the bracket.
5. Paste the sheet (CNM9517) according to Ⓐ part of the flexible PCB.
   If the flexible PCB and the sheet are not contacted at this time, a monitor part will get damaged or a shutter mechanism will get hung up. Make sure that the flexible PCB and the sheet contact a bracket.
   In addition, since adhesive strength becomes weak, do not use again the sheet removed once.



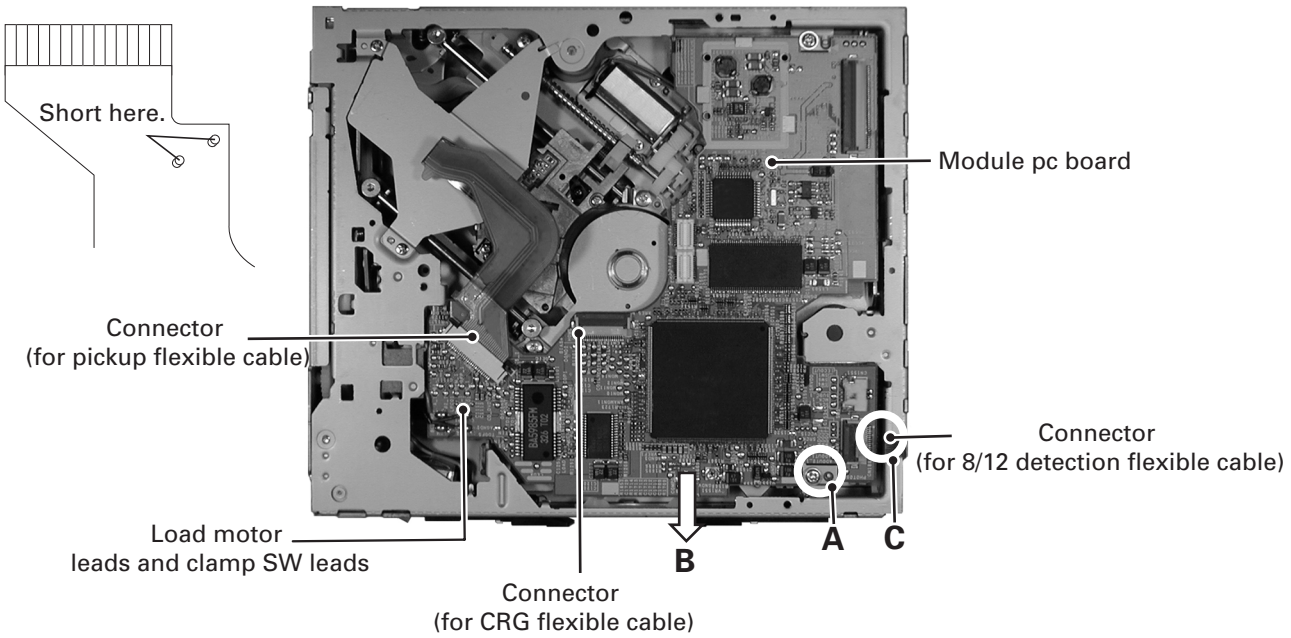
● Precautions on handling the mechanism module

1. Hold the upper and main frames.
2. Do not hold the front portion of the upper frame. It is a delicate part.
3. Do not touch the switches on the top panel.
4. Be careful not to catch the flexible cables.



● Removing the module pc board

1. Set the mechanism to the lock position (disc load standby position).
2. Place the mechanism module upside down.
3. Short the two lands on the pickup flexible cable as shown below.
4. Be sure to disconnect the pickup flexible cable and the CRG flexible cable from the connectors to protect them from damages.
5. Remove solder from the load motor leads and clamp SW leads.
6. Loosen the two fixing screws. Lift the position A of the module pc board lightly and move it in the direction B to remove it. Be careful not to damage the flexible cable C.
7. Disconnect the 8/12 detection flexible-cable from the connector.



● Removing the pickup unit

1. Remove the module pc board in accordance with the procedure of "Removing the module pc board."
2. While holding the pickup case, remove the skew screw (main).
3. Lifting the end of the pickup rack, slide the main shaft, and remove the pickup unit.

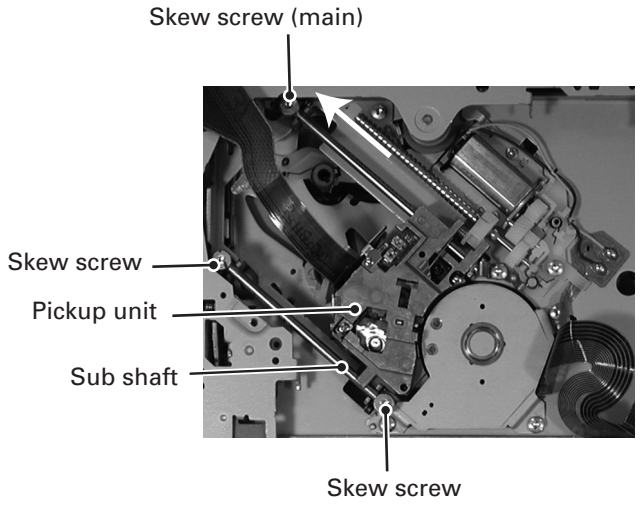
Notes:

Replacing the pickup unit requires the skew adjustment.

Remove glue from both ends of the main and sub shafts, and skew stud.

Do not reuse the old skew screw. Be sure to use a brand-new skew screw supplied with a new pickup unit.

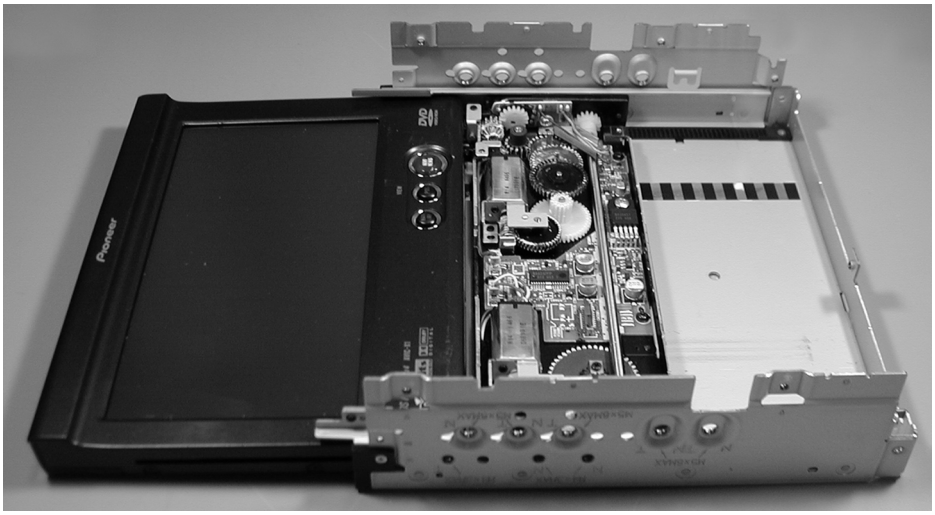
Fix the skew screw with glue (GYL1001) after adjustment.



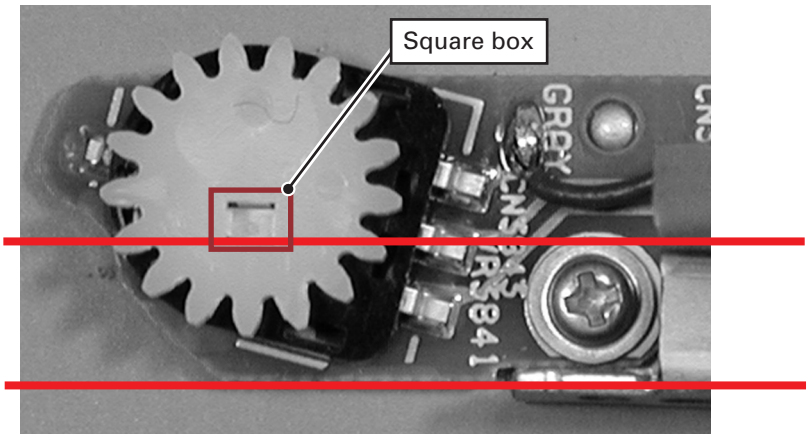
● How to install the Volume Unit fo the Drive Unit

When install the Volume Unit, adjust the positioning of the rotating angle of the gear.

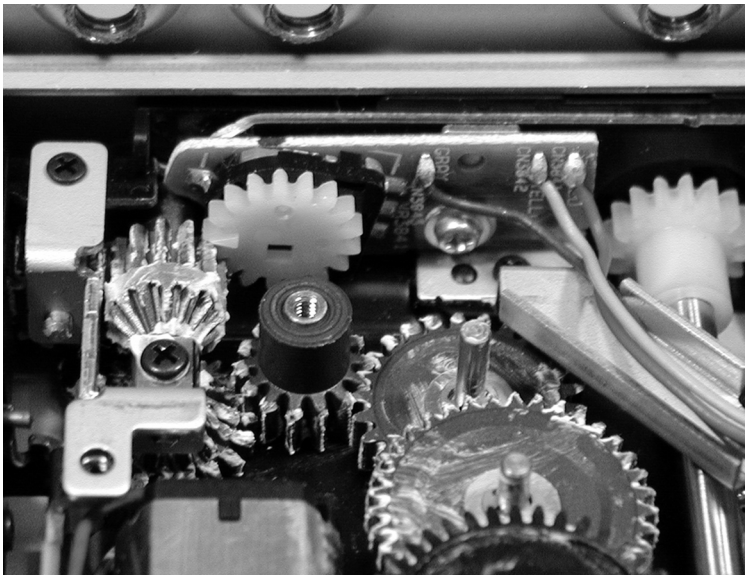
1. Set the Monitor Unit horizontally with the Main Unit of the Drive Unit.



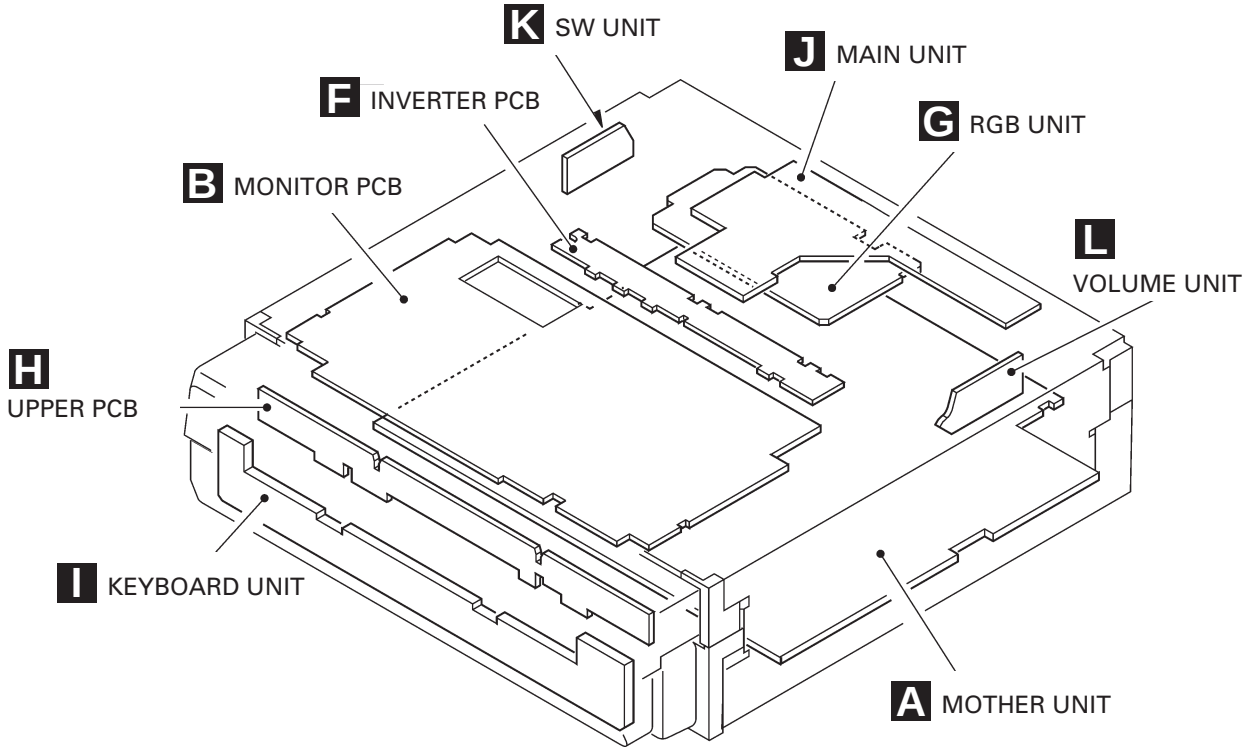
2. When install the gear unit, rotate the gear by hand until the square box of the gear keeps in a horizontal position like the figure below.

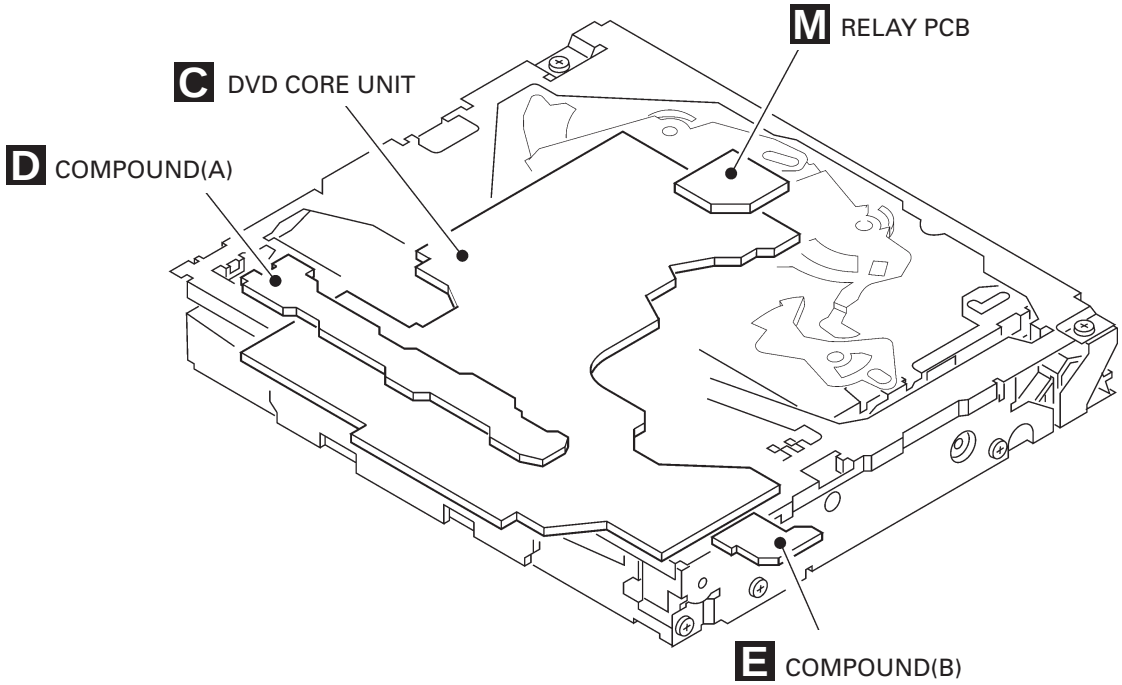


*Gap of one teeth is acceptable.

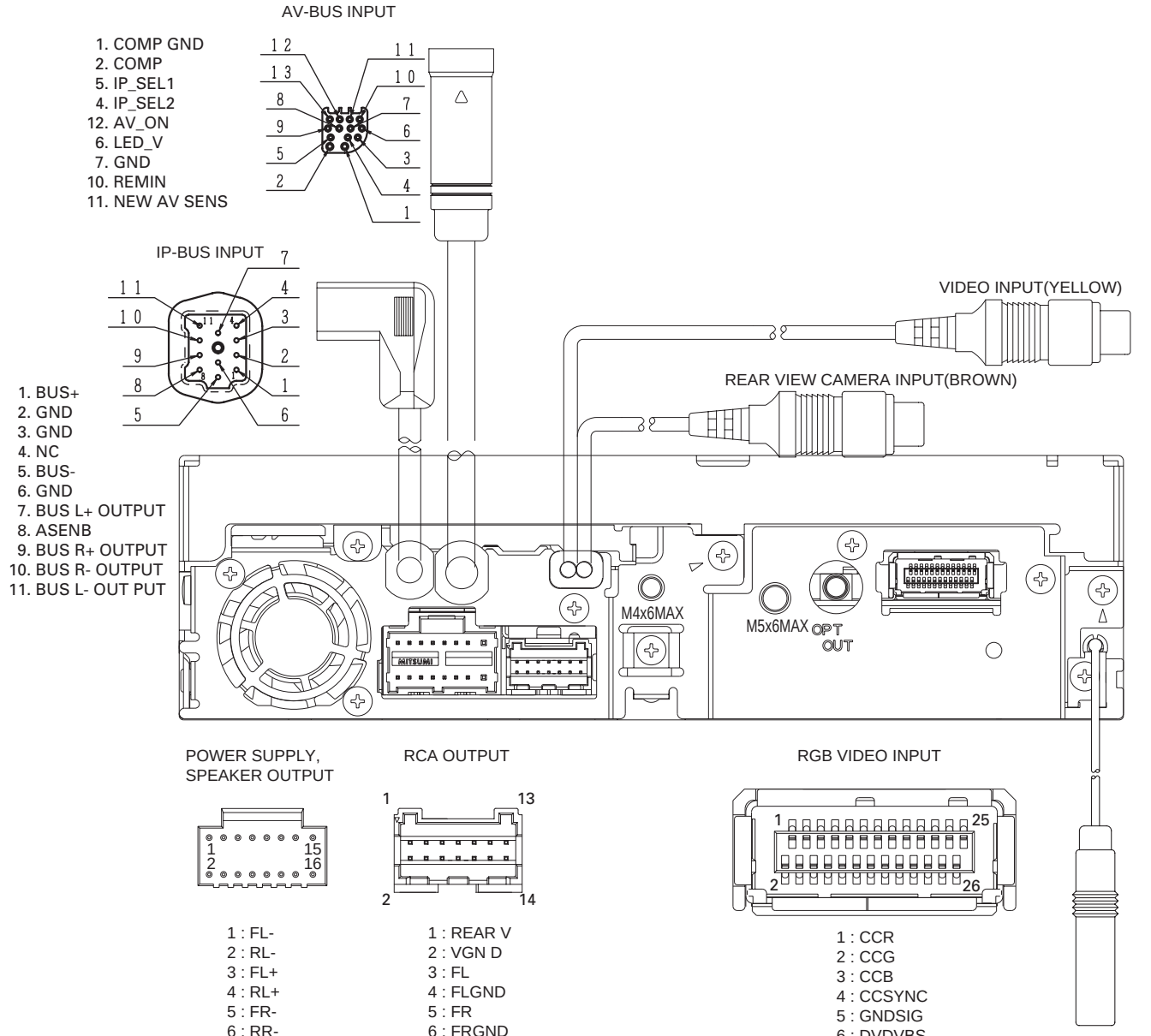


7.1.2 PCB LOCATIONS





7.1.3 CONNECTOR FUNCTION DESCRIPTION



POWER SUPPLY, SPEAKER OUTPUT

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

RCA OUTPUT

1 : REAR V
2 : VGN D
3 : FL
4 : FLGND
5 : FR
6 : FRGND
7 : SWL
8 : SWLGND
9 : SWR
10 : SWRGND
11 : VCRINL
12 : VCRGND
13 : VCRINR
14 : VCRGND

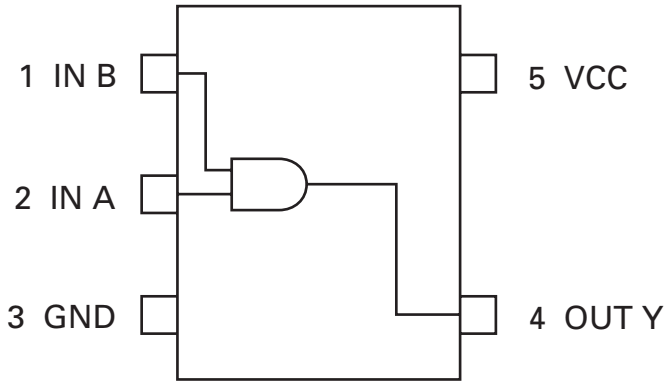
RGB VIDEO INPUT

1 : CCR
2 : CCG
3 : CCB
4 : CCSYNC
5 : GNDSIG
6 : DVDVBS
7 : GNDDVD
8 : YS
9 : NC
10 : CCAUL
11 : CCAUR
12 : GNDAU
13 : ONSEI+
14 : ONSEI-
15 : REAUR
16 : REAUL
17 : GNDRAU
18 : CCREM
19 : DSEN
20 : TVON
21 : GION
22 : MONON
23 : VSW5
24 : HTXD
25 : HRXD
26 : GNDD

7.2 IC

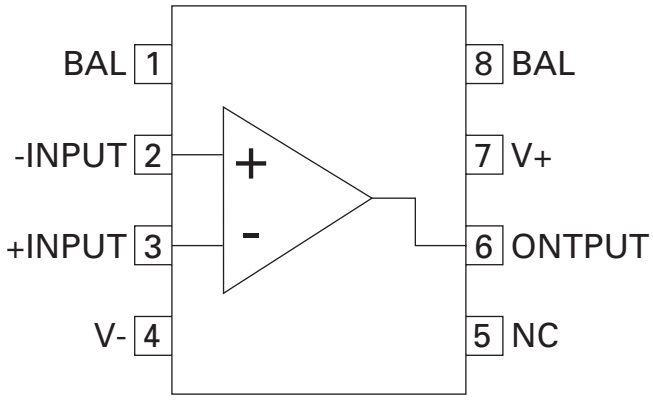
TC7SET08FUS1	TC7SET04FUS1	OZ961ISN	SM8707LV
TC7SH08FUS1	TC74VHC04FTS1	PDG087A	TC74LCK16373AFT
NJM2136V	BD6171KV	K4S283232E-TC75	PE5401A
S-818A35AUC-BGP	S-1131B25UC-N4K	NJM2140R	PD6516A
NJM2388F84	S-1131B15UC-N4A	TC7WH157FU	S-L2980A50MC-C7J
TC74VHC08FTS1	TC7SH02FUS1	R1130H501B	LTC3411EMS
PE5485A	TC7SH32FUS1	SM8707LV	TC7SZ125FU
TC90A96AFG	S-93C56BD0I-J8	TC74LCK16373AFT	MN35104UB

*TC7SET08FUS1,*TC7SH08FUS1

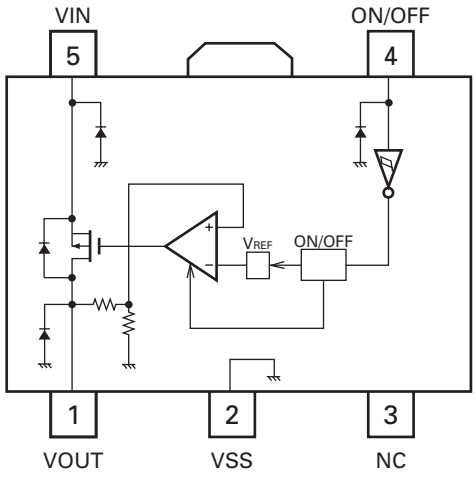


IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

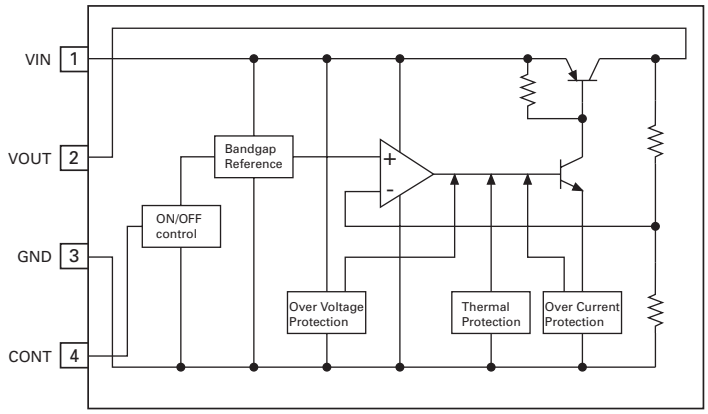
*NJM2136V



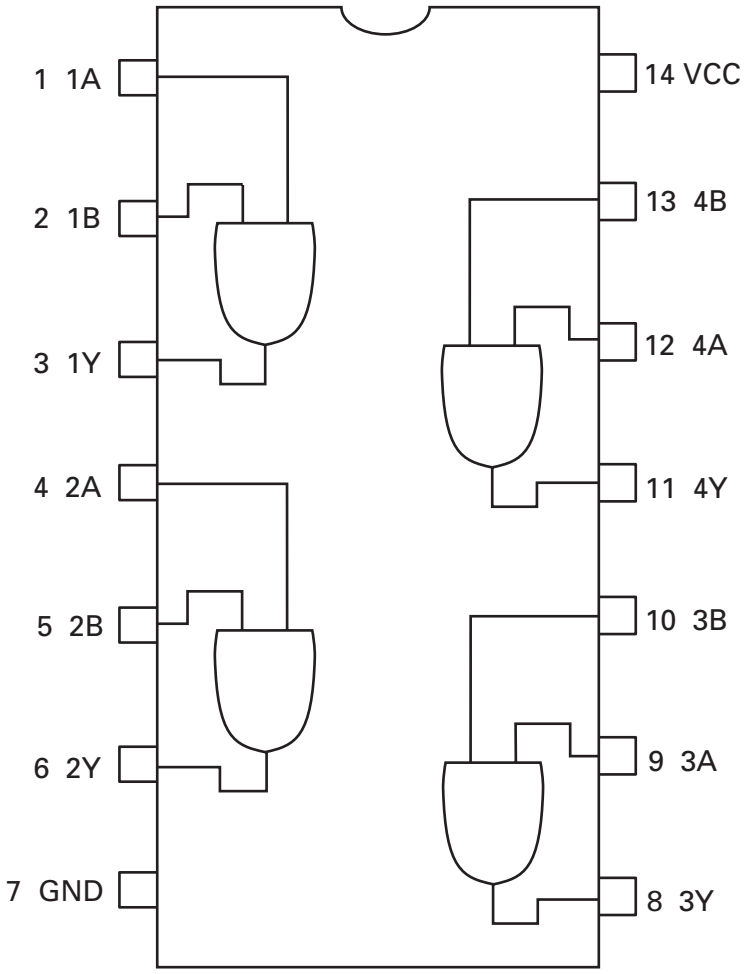
*S-818A35AUC-BGP



NJM2388F84



*TC74VHC08FTS1



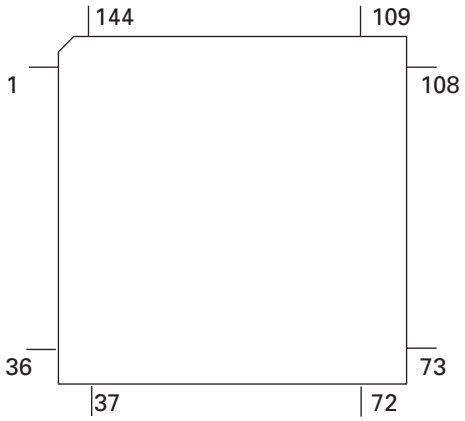
●Pin Function(PE5485A)

Pin No.	Pin Name	I/O	Function and operation
1	NC		Not used
2,3	MODEL0,1	I	Model select input
4	NC		Not used
5	PORTGND0		Port GND
6	ROMCS	O	ROM Chip select output
7	ROMCLK	O	ROM Clock output
8	ROMDATA	I/O	ROM Data Input/output
9	VDT	O	Electronic volume:Data output
10	VCK	O	Electronic volume:Clock output
11	FRONTMUTE	O	Front Mute output
12	VST	O	Electronic volume:Strobe output
13	MTRPW	O	FLAP Motor power supply control output
14	MTRSEL	O	FLAP motor control output
15	MTRS	O	FLAP Motor speed contorl output
16	MTR1	O	FLAP angle motor control signal output
17	MTR2	O	FLAP position motor control signal
18	SNSPW	O	FLAP sense power supply output
19	PUSHSW	I	FLAP LIFE sense switch input
20	DEGOSW	I	FLAP monitor angle 0 sense input
21	LIFTPUL	I	FLAP lift pulse input
22	PORTVDD0		Port power supply
23-25	NC		Not used
26	RECIVE	O	Not used
27,28	NC		Not used
29	ACCPW		ACC power control output
30	AMPPW	O	Amp power control output
31	SYSPW	O	
32	VPW	O	Video power control output
33	DDCCNTL	O	DC/DC converter control output
34	DLED	O	Anti-theft LED output
35	ILMGRN	O	Green illumination output
36	PCL	O	System clock ouptut
37	GND0		GND
38	CPUREG		Filter capacitor connected
39	VDD0		Power supply
40	$\overline{\text{RESET}}$	I	System reset input
41	VPP		Power supply for frash ROM
42	TSI	I	Test data input
43	NC		Not used
44	TCK	I	Test data clock input
45	NC		Not used
46	TUNPDI	I	TUNER PLL data input
47	TUNPDO	I/O	TUNER PLL data input/output
48	TUNPCK	I/O	TUNER PLL clock input/output
49	NC		Not used
50	RCAMUTE	O	RCA REAR mute output
51,52	VSELIN1,2	I	VSEL input
53	AVONIN	I	AV-BUS AV video sense input
54,55	NC		Not used
56	TESTIN	I	Test mode input
57	NC		Not used
58	PRGON	I	System microcomputer program mode input
59	VPPON	O	VPP ON/OFF output
60	PORTVDD1		Port power supply

Pin No.	Pin Name	I/O	Function and operation
61	PRGSW	I	System microcomputer programing mode input
62	PRGRST	O	Display microcomputer programing mode reset output
63-65	NC		Not used
66	CILM	O	Flap illumination output
67	NC		Not used
68	BEEP	O	BEEP output
69	$\overline{\text{BSENS}}$	I	Backup sense input
70,71	XT2,1		Sub clock oscillator connect
72	GND2		GND
73,74	X1,2		Main clock oscillator connect
75,76	NC		Not used
77,78	COOLCNT1,2	O	Fan control output1,2
79,80	NC		Not used
81	CONTBIN	I	Backup off intput
82	NC		Notused
83	$\overline{\text{DSENS}}$	I	Detach sense intput
84	SDA	I/O	AVselector data input/output
85	NC		Not used
86	SCL	O	AV selector clock output
87	ASENBO	O	Slave ACC sense output
88	IPPW	O	IPBUS driver power supply contorl output
89	NC		Not used
90	$\overline{\text{IERX}}$	I	IPBUS data input
91	$\overline{\text{IETX}}$	O	IPBUS data output
92	PORTGND1		Port GND
93-95	NC		Not used
96	$\overline{\text{ASENS}}$	I	ACC sense input
97-99	NC		Not used
100	TUNPCE	O	TUNER PLL chip enable output
101	$\overline{\text{TUNPCE2}}$	O	TUNER PLL chip enable output 2
102	PORTVDD2		Port power supply
103	CONTVDD	O	DVD Mechanism modul digital power control output
104	CONTVD8	O	DVD Mechanism modul motor power control output
105	DREM	O	NAVI Reboot remote control output
106	REMUTE	O	NAVI remote control mute output
107	RXMOM	I	Display microcomputer data input
108	TXMON	O	Display microcomputer data output
109	SWVDD	O	Display microcomputer power supply output
110	NC		Not used
111	RXMS3	I	DVD Mechanism modul data input
112	TXMS3	O	DVD Mechanism modul data output
113	IRQPWR	O	DVD Mechanism modul backup power output
114	$\overline{\text{XRESET}}$	O	DVD Mechanism modul mechanism CPU reset output
115,116	NC		Not used
117	RXNAV	I	NAVI data input
118	TXNAV	O	NAVI command output
119	$\overline{\text{RGBARI}}$	I	RGB navigation ON sense input
120	NC		Not used
121	NMIXCNT	O	Voice guide mute output
122	MUTE	O	Mute output
123	NC		Not used
124	AMPMUTE	O	AMP mute output
125,126	NC		Not used
127	TELIN	I	TEL mute input
128	VDD1		Power supply
129	PBSENS	I	Packing brake sense input
130	BGSENS	I	Back gear sense input

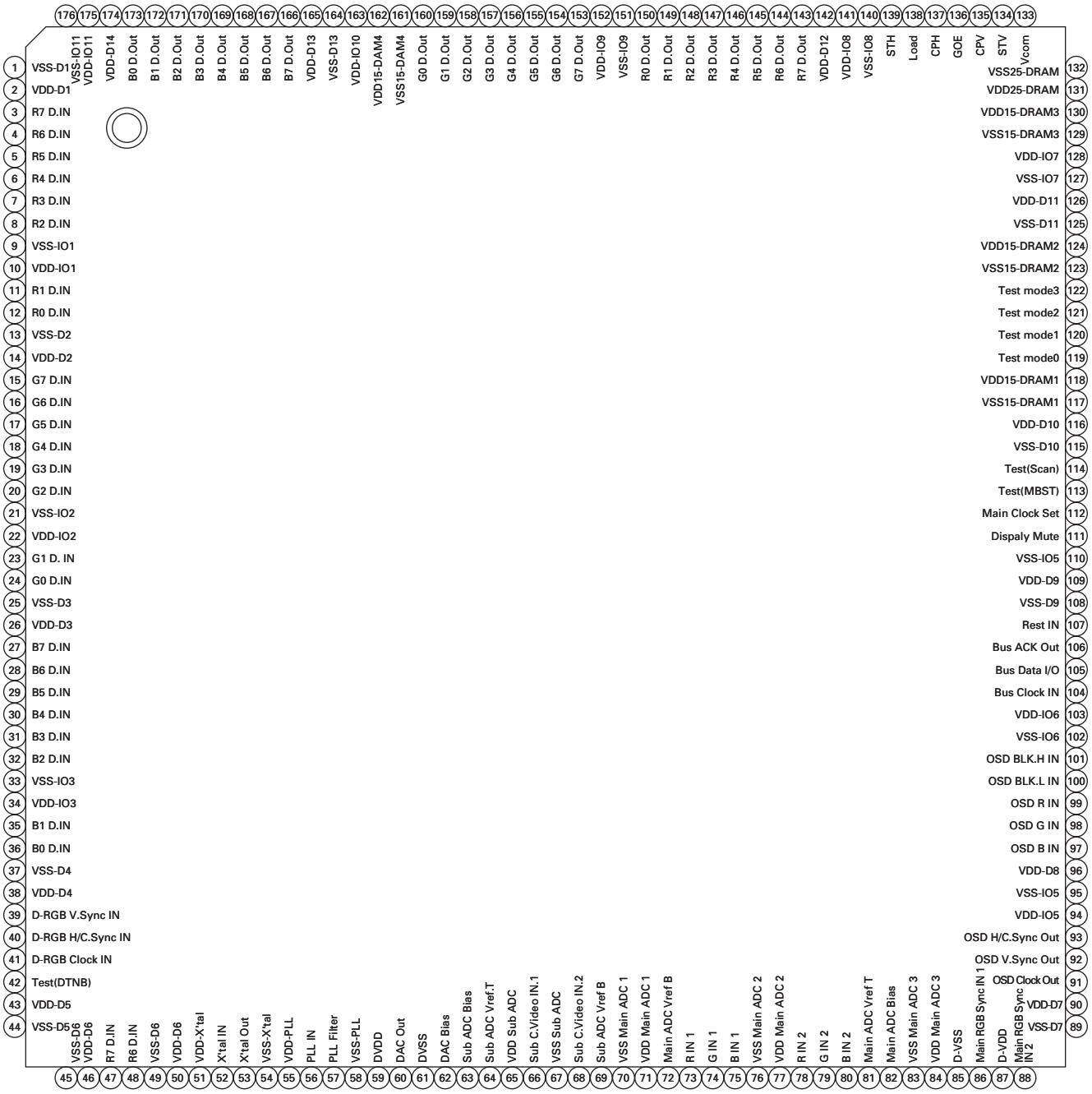
Pin No.	Pin Name	I/O	Function and operation
131	GND1		GND
132-134	NC		Not used
135	TUNSL	I	TUNER signal level input
136	NC		Not used
137	ANGLEIN	I	Mechanism volume for angle sense input
138,139	NC		Not used
140-142	KEYDTA0-2	I	Key data input0-2
143	ADCVDD		A/D Power supply
144	ADCGND		A/D GND

*PE5485A

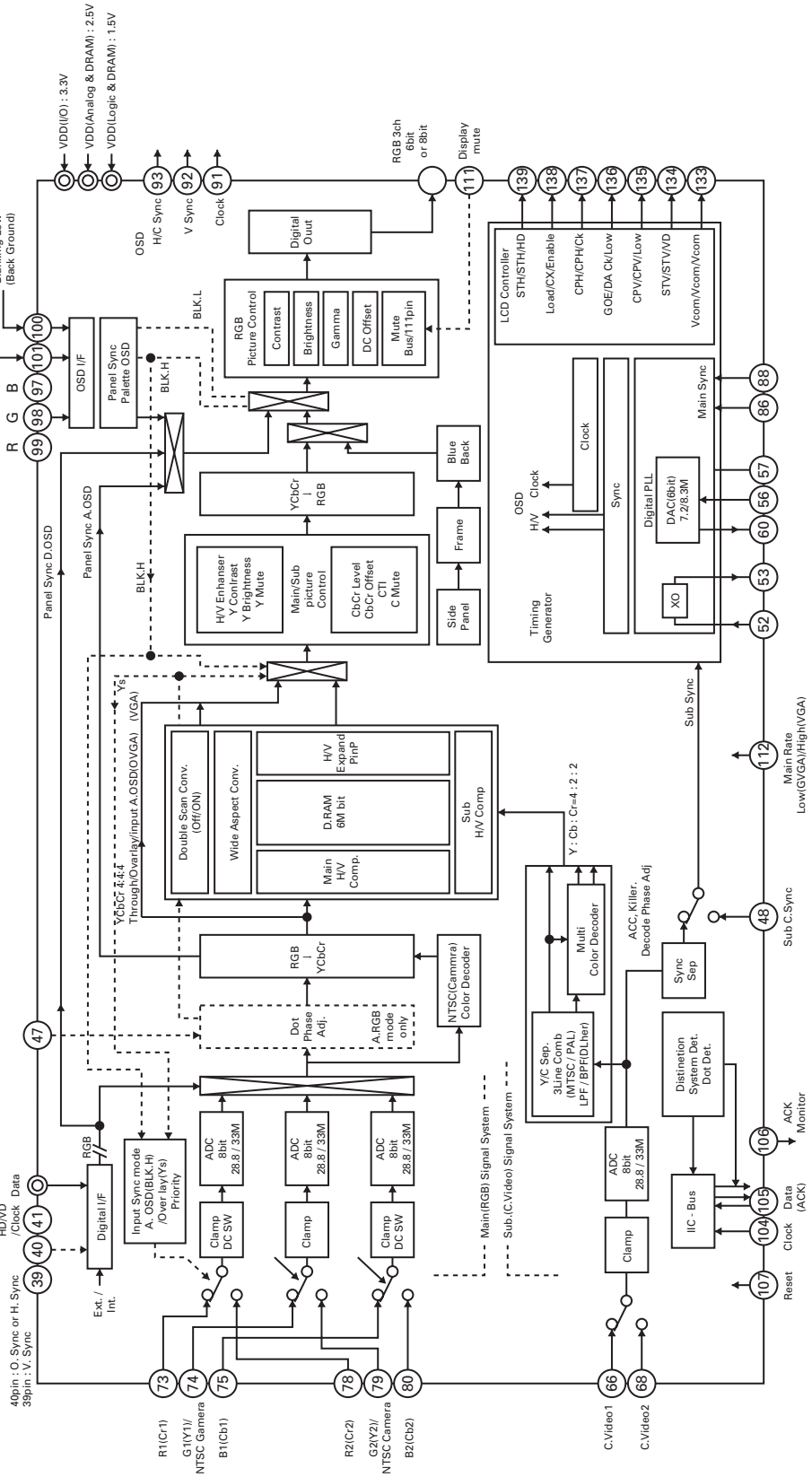


TC90A96AFG

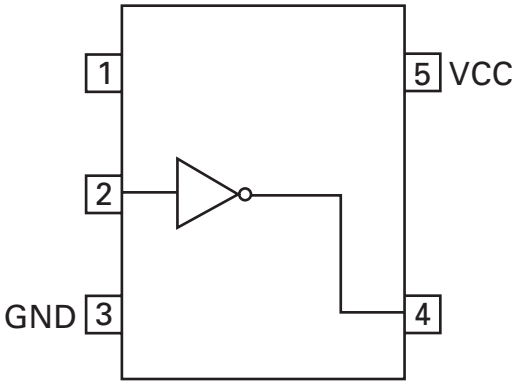
● Pin Layout



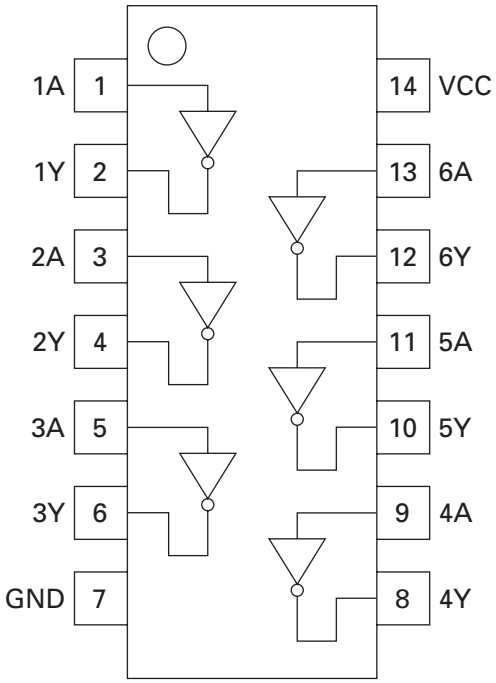
● Block Diagram



TC7SET04FUS1

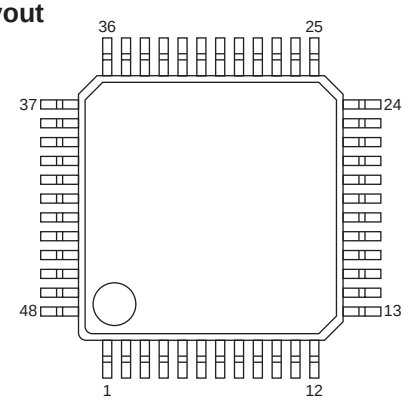


*TC74VHC04FTS1



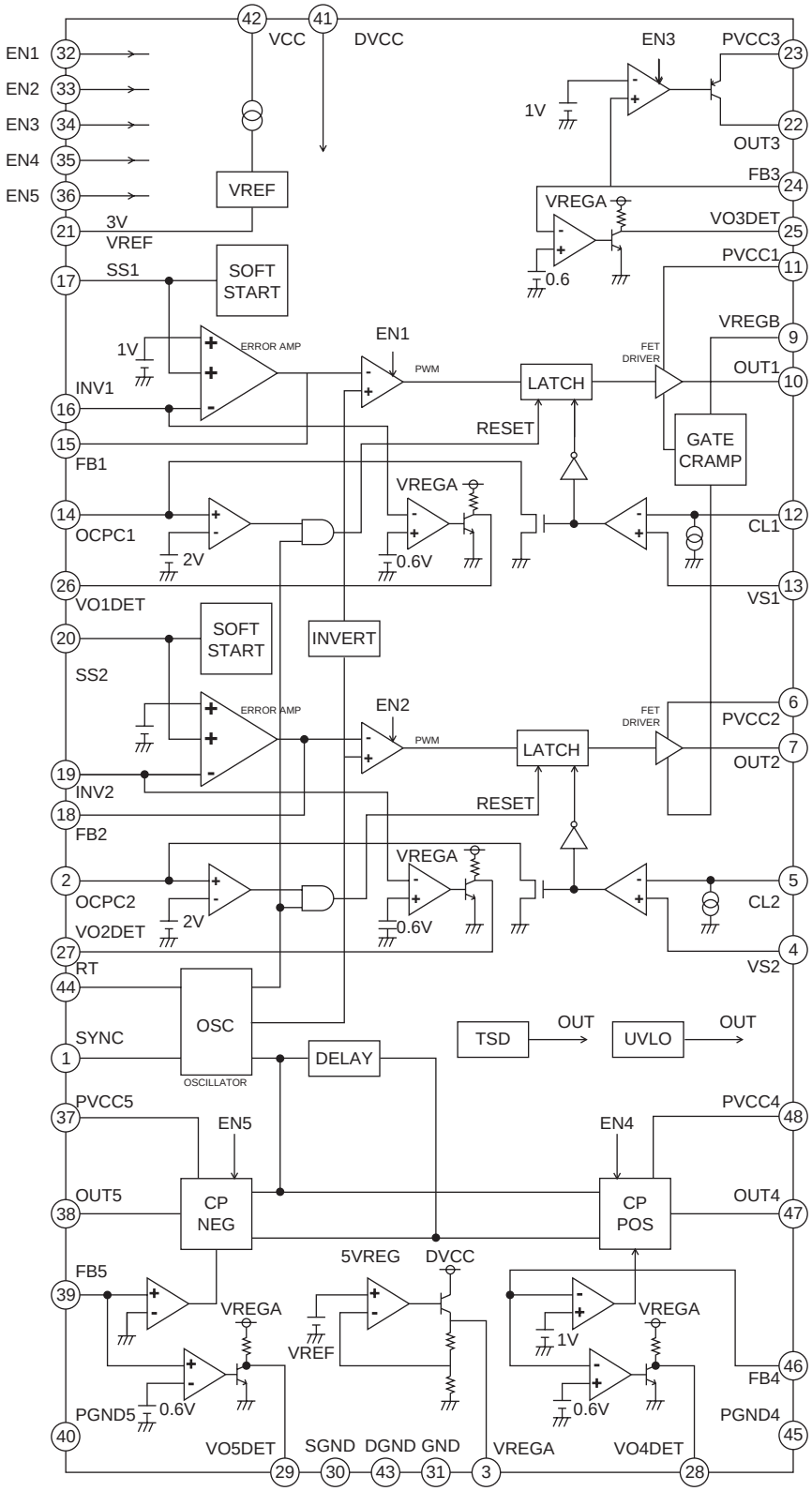
BD6171KV

● **Pin Layout**

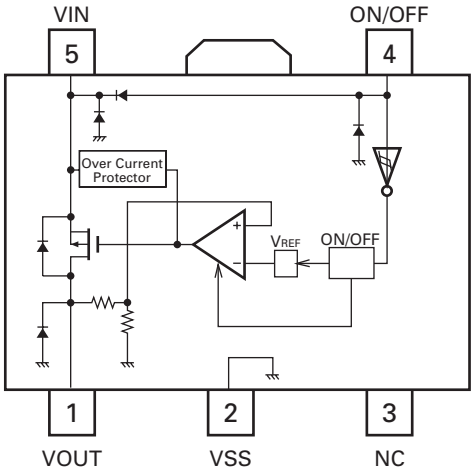


BD6171KV

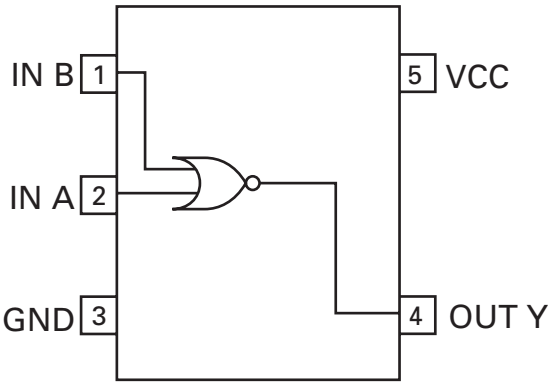
● Block Diagram



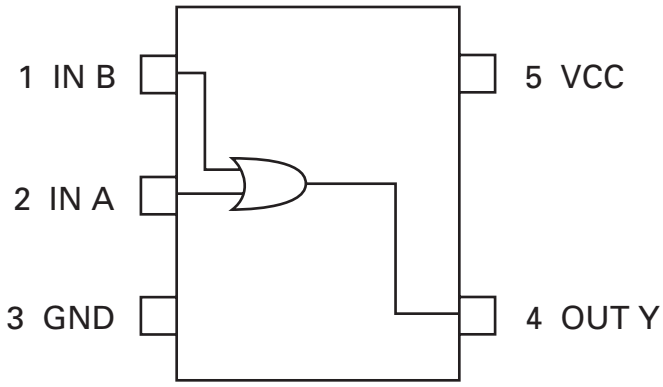
S-1131B25UC-N4K
S-1131B15UC-N4A



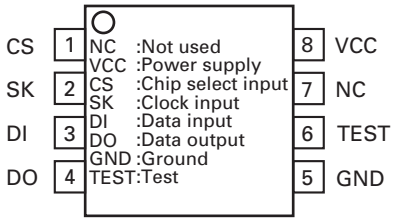
*TC7SH02FUS1



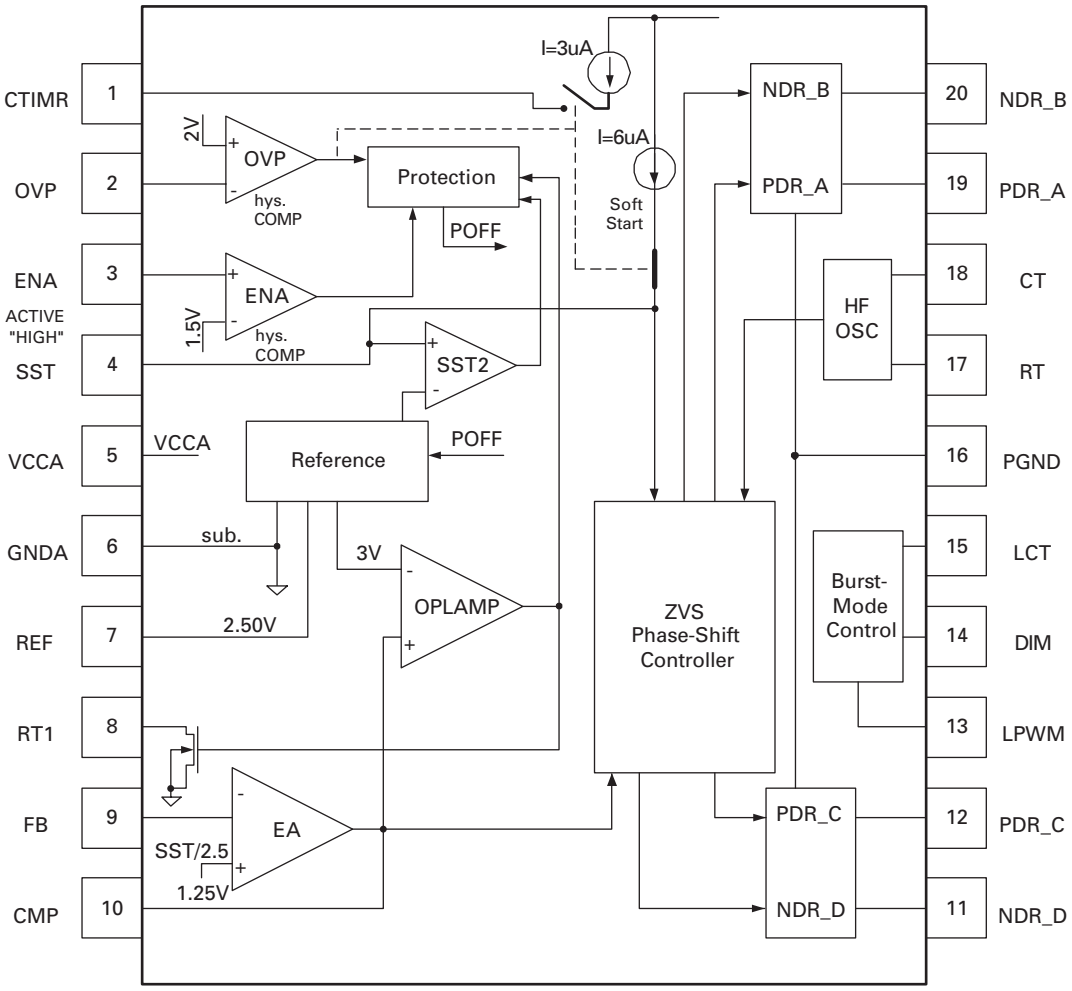
*TC7SH32FUS1



*S-93C56BD0I-J8



OZ961ISN

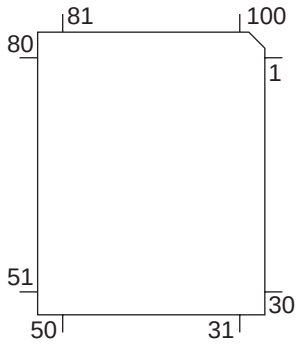

CTIMR
1
OVP
2
ENA
3
ACTIVE "HIGH"
SST
4
VCCA
5
GNDA
6
REF
7
RT1
8
FB
9
CMP
10
2V
OVP
hys. COMP
Protection
POFF
1.5V
ENA
hys. COMP
SST2
VCCA
Reference
POFF
sub.
2.50V
3V
OPLAMP
SST/2.5
1.25V
EA
I=3uA
I=6uA
Soft Start
ZVS Phase-Shift Controller
NDR_B
PDR_A
HF OSC
Burst-Mode Control
PDR_C
NDR_D
20
NDR_B
19
PDR_A
18
CT
17
RT
16
PGND
15
LCT
14
DIM
13
LPWM
12
PDR_C
11
NDR_D

● Pin Functions (PEG087A)

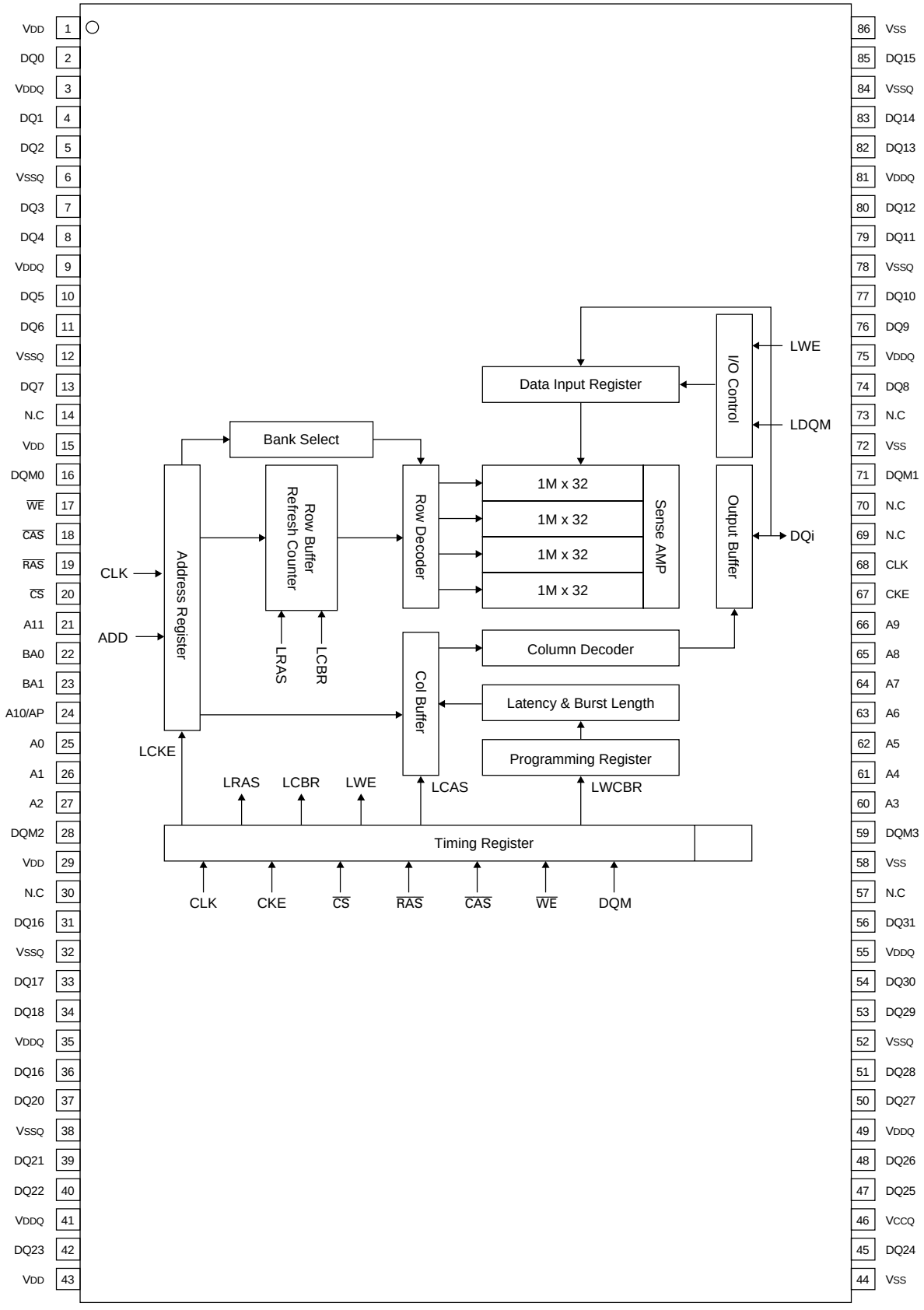
Pin No.	Pin Name	I/O	Format	Function and Operation
1	VHOLD1	I		Not used
2	HLF1	I		Not used
3	INVBST	O	C	Inverter boost output
4	LD	O	C	COMAC,COMDC latch signal output
5	DI	O	C	COMAC,COMDC data output
6	REMIN	O	C	COMAC,COMDC clock output
7	REMIN	I	C	Remote control signal input
8	BYTE	I		GND connection
9	CNVSS	I		GND connection
10	VDDSENS	I		VDD power supply sense input
11	5060IN	I		50/60Hz input
12	RESET	I		Reset input
13	XOUT	O		Clock output
14	VSS			GND
15	XIN	I		Clock input
16	VCC			Power supply
17	OSDCLK	I		Clock input for OSD
18	NC			Not used
19	YSSTOP	O	C	NAVI over write enable output
20	OSDTOP	O	C	OSD/NAVI over write enable output
21	OSDBLNK	O	C	OSD blanking output
22	NC			Not used
23	MUTE	O	C	2 screens IC mute output
24	DIMMER	O	C	Dimmer pulse output
25	NC			Not used
26	INVPUL	O	C	Inverter pulse output
27	ICRES	O	C	IC reset output
28	SCL	O	C	2 screens IC clock output
29,30	NC			Not used
31	SDA	I/O	C	2 screens IC data input/output
32	OSDR	O	C	OSD analog R signal output
33	OSDG	O	C	OSD analog G signal output
34	OSDB	O	C	OSD analog B signal output
35	KYDT	O	C	Key data output
36	DPDT	I		Display data input
37	TSCK	I		Test mode clock input
38	EPRDI	I		EEPROM data input for adjustment memory
39	EPRDO	O	C	EEPROM data output for adjustment memory
40	NC			Not used
41	EPRCS	O	C	EEPROM chip select output for adjustment memory
42	EPRCK	O	C	EEPROM clock output for adjustment memory
43	TESTIN	I		Chip test input
44-50	NC			Not used
51	FSCWIDE	I		Not used
52	LCD76	I		LCD size select (H:7inch, L:6.5inch) input
53	EPRCV	I		EEPROM adjustment input
54-61	NC			Not used
62	HSYNC	I		HSYNC signal input for OSD
63	NC			Not used
64	VSYNC	I		VSYNC signal input for OSD
65,66	NC			Not used
67,68	KS2,1	I/O	C	Key strobe input/output
69-72	KD4-1	I	C	Key data input
73,74	NC			Not used
75	STEST2	I		Touch panel test mode input

Pin No.	Pin Name	I/O	Format	Function and Operation
76	NC			Not used
77	SELFRST	I		Self write reset input
78,79	NC			Not used
80	PNLXV	O	C	Touch panel:X direction sense output
81	MFLPW	O	C	Back light power supply control output
82	MVIPW	O	C	Video power supply control output
83	ROMCS	O	C	EEPROM chip select output
84	ROMCK	O	C	EEPROM clock output
85	ROMDATA	I		EEPROM data input
86	EPRPST	I		EEPROM initalize input for memory adjustment
87	STEST1	I		Monitor mode input
88	EPRTEST	I		EEPROM set mode input for memory adjustment
89	TEMPSEN	I		Temperature sense input for inverter boost
90	PNLYV	O	C	Touch panel:Y direction sense output
91	PNLVD	O	C	Touch panel:sense output
92	PNLADY	I		Touch panel:X data input
93	PNLADX	I		Touch panel:Y data input
94	LSEN	I		Brightness on the outside sense input
95	VHOLD2	I		Not used
96	HLF2	I		Not used
97	CVIN2	I		Not used
98	TVSETB	I		Test mode input
99	VCCE			Power supply
100	CVIN1	I		Not used

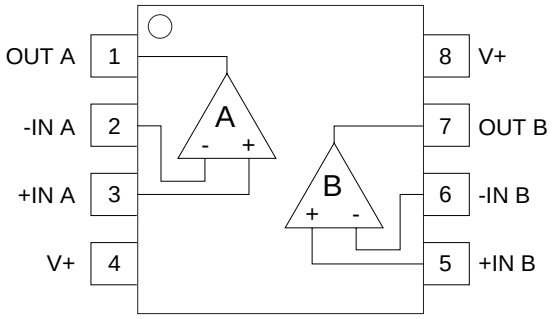
*PEG087A



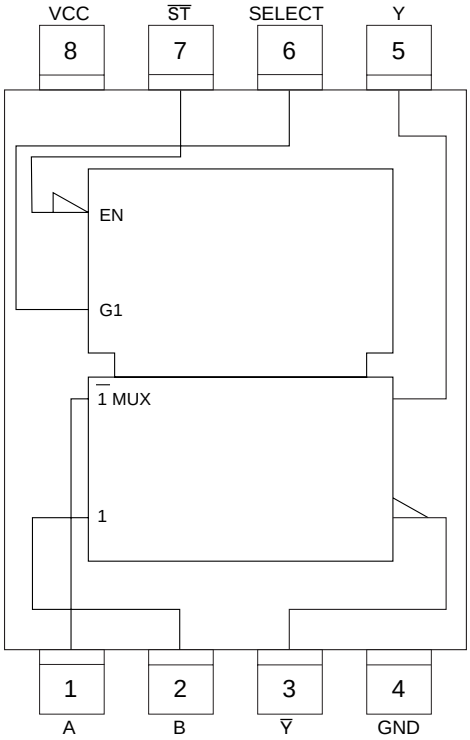
*K4S283232E-TC75



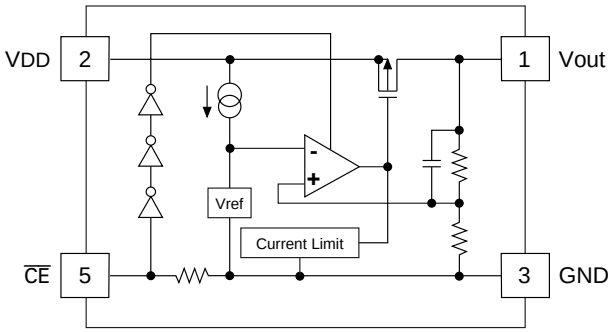
NJM2140R



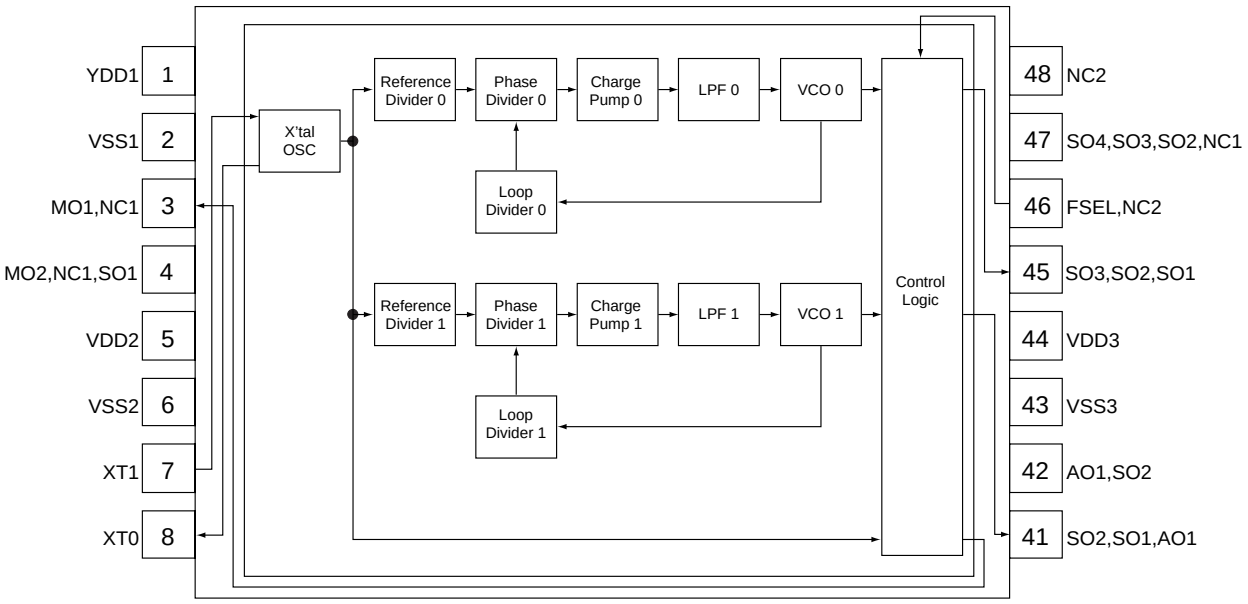
*TC7WH157FU



*R1130H501B



*SM8707LV



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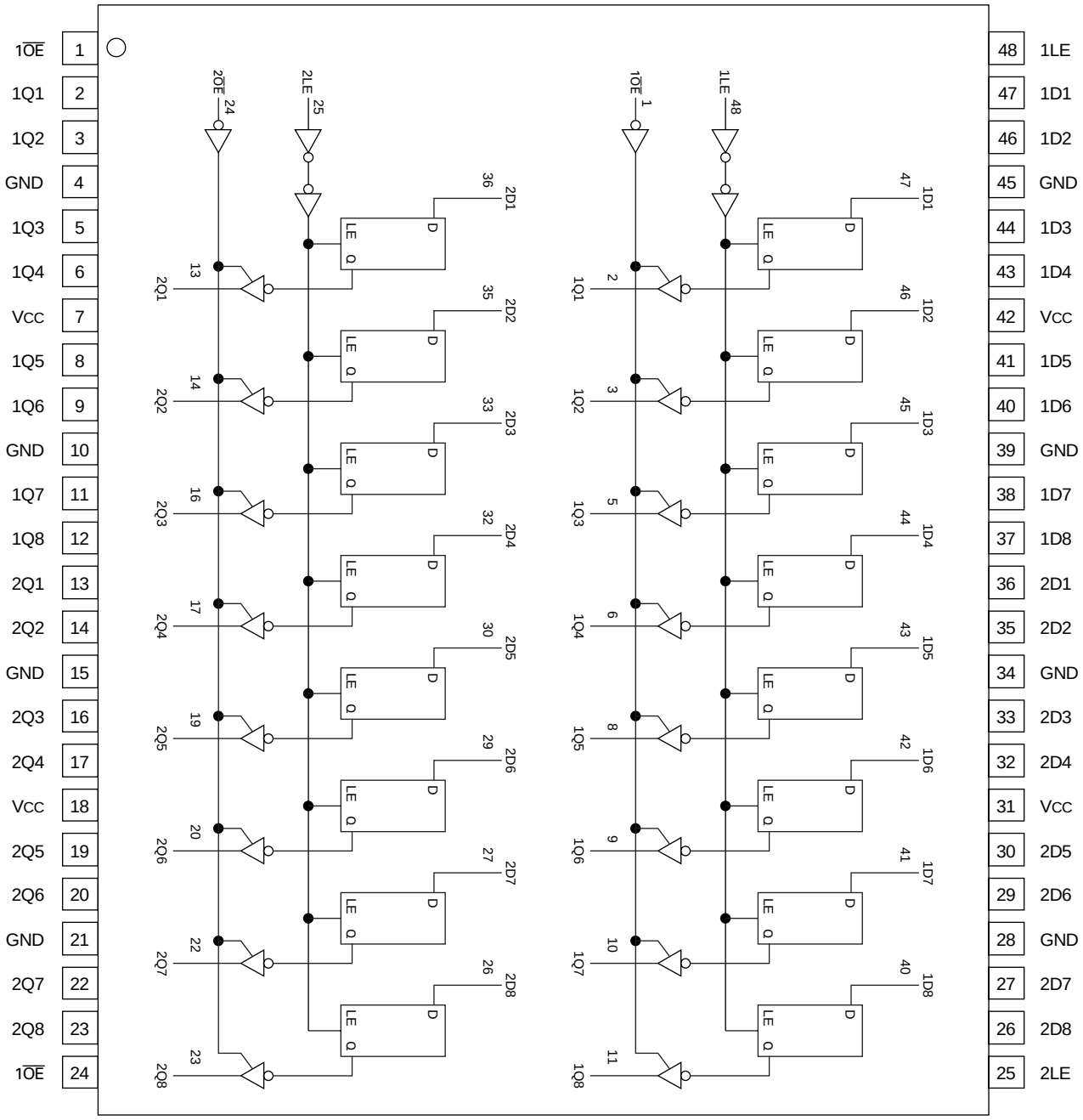

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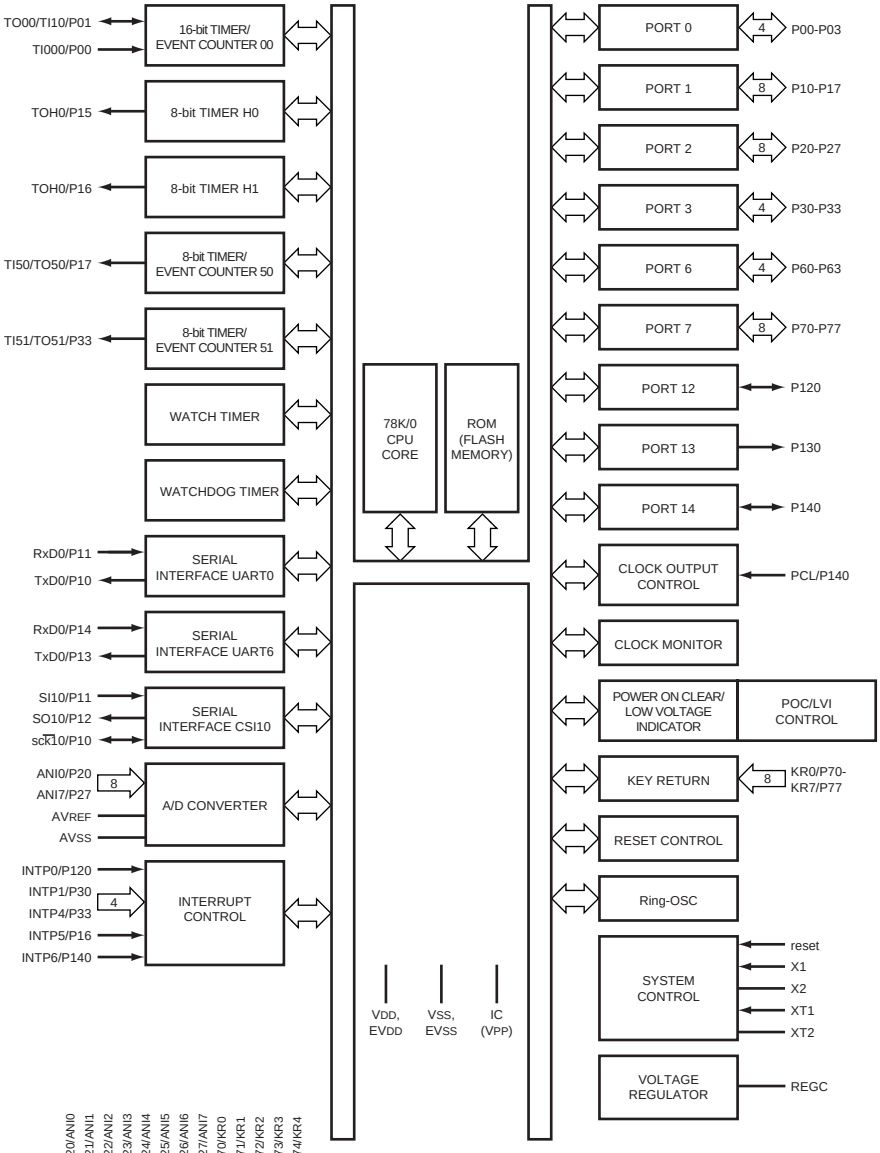
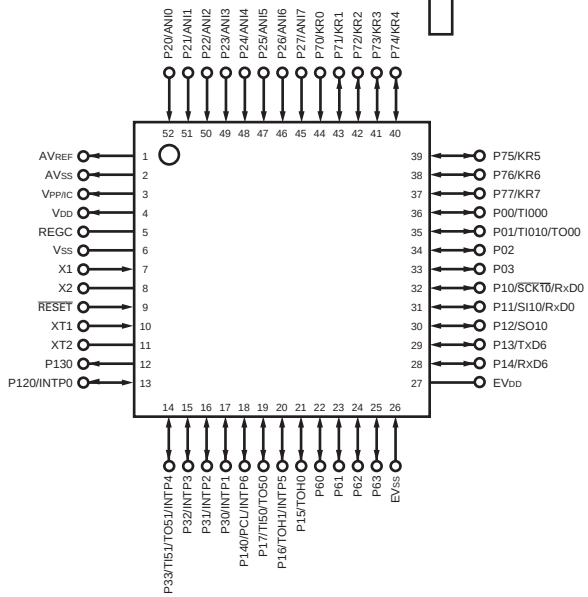
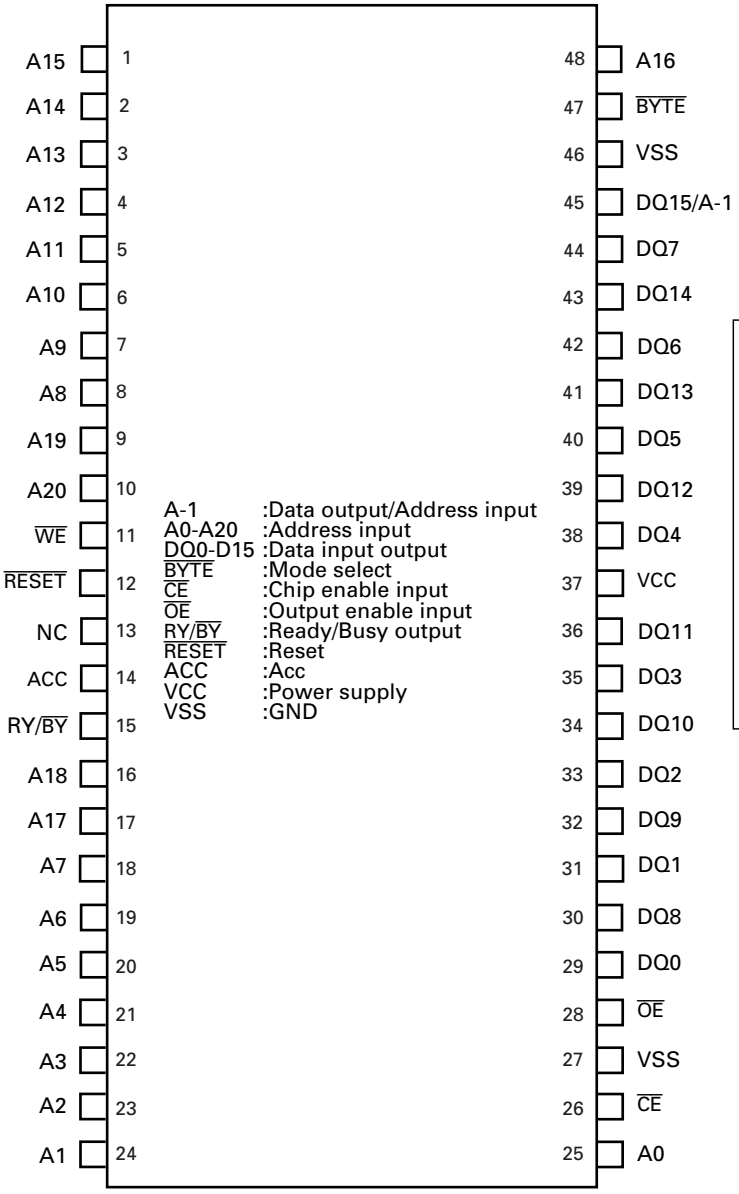
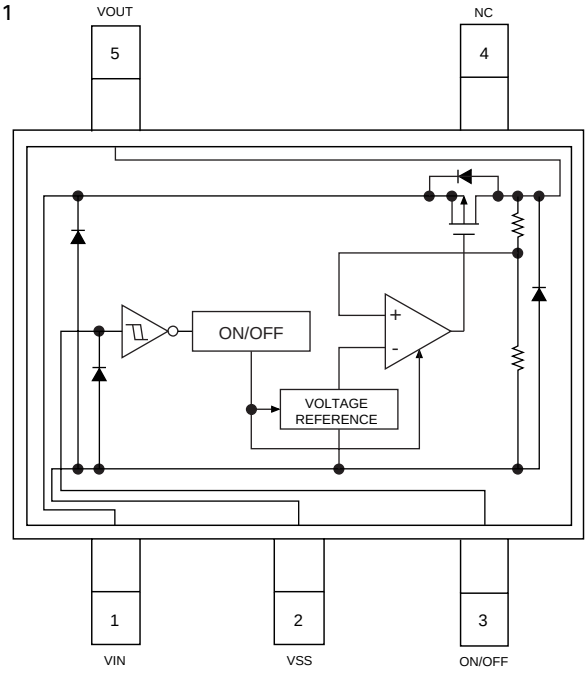

TO00/TI10/P01
TI000/P00
16-bit TIMER/ EVENT COUNTER 00
TOH0/P15
8-bit TIMER H0
TOH0/P16
8-bit TIMER H1
TI50/TO50/P17
8-bit TIMER/ EVENT COUNTER 50
TI51/TO51/P33
8-bit TIMER/ EVENT COUNTER 51
WATCH TIMER
WATCHDOG TIMER
RxD0/P11
TxD0/P10
SERIAL INTERFACE UART0
RxD0/P14
TxD0/P13
SERIAL INTERFACE UART6
SI10/P11
SO10/P12
SCK10/P10
SERIAL INTERFACE CSI10
ANI0/P20
ANI7/P27
AVREF
AVSS
8
A/D CONVERTER
INTP0/P120
INTP1/P30
INTP4/P33
INTP5/P16
INTP6/P140
4
INTERRUPT CONTROL
78K/0 CPU CORE
ROM (FLASH MEMORY)
VDD, EVDD
VSS, EVSS
IC (VPP)
PORT 0
PORT 1
PORT 2
PORT 3
PORT 6
PORT 7
PORT 12
PORT 13
PORT 14
CLOCK OUTPUT CONTROL
CLOCK MONITOR
POWER ON CLEAR/ LOW VOLTAGE INDICATOR
POC/LVI CONTROL
KEY RETURN
RESET CONTROL
Ring-OSC
SYSTEM CONTROL
VOLTAGE REGULATOR
4
8
8
8
4
4
8
4
P00-P03
P10-P17
P20-P27
P30-P33
P60-P63
P70-P77
P120
P130
P140
PCL/P140
KR0/P70-KR7/P77
reset
X1
X2
XT1
XT2
REGC


P20/ANI0
P21/ANI1
P22/ANI2
P23/ANI3
P24/ANI4
P25/ANI5
P26/ANI6
P27/ANI7
P70/KR0
P71/KR1
P72/KR2
P73/KR3
P74/KR4
52 51 50 49 48 47 46 45 44 43 42 41 40
AVREF 1
AVSS 2
VPP/IC 3
VDD 4
REGC 5
VSS 6
X1 7
X2 8
RESET 9
XT1 10
XT2 11
P130 12
P120/INTP0 13
39 P75/KR5
38 P76/KR6
37 P77/KR7
36 P00/TI000
35 P01/TI010/TO00
34 P02
33 P03
32 P10/SCK10/RxD0
31 P11/SI10/RxD0
30 P12/SO10
29 P13/TxD6
28 P14/RxD6
27 EVDD
14 15 16 17 18 19 20 21 22 23 24 25 26
P33/TI51/TO51/INTP4
P32/INTP3
P31/INTP2
P30/INTP1
P140/PCL/INTP6
P17/TI50/TO50
P16/TOH1/INTP5
P15/TOH0
P60
P61
P62
P63
EVSS

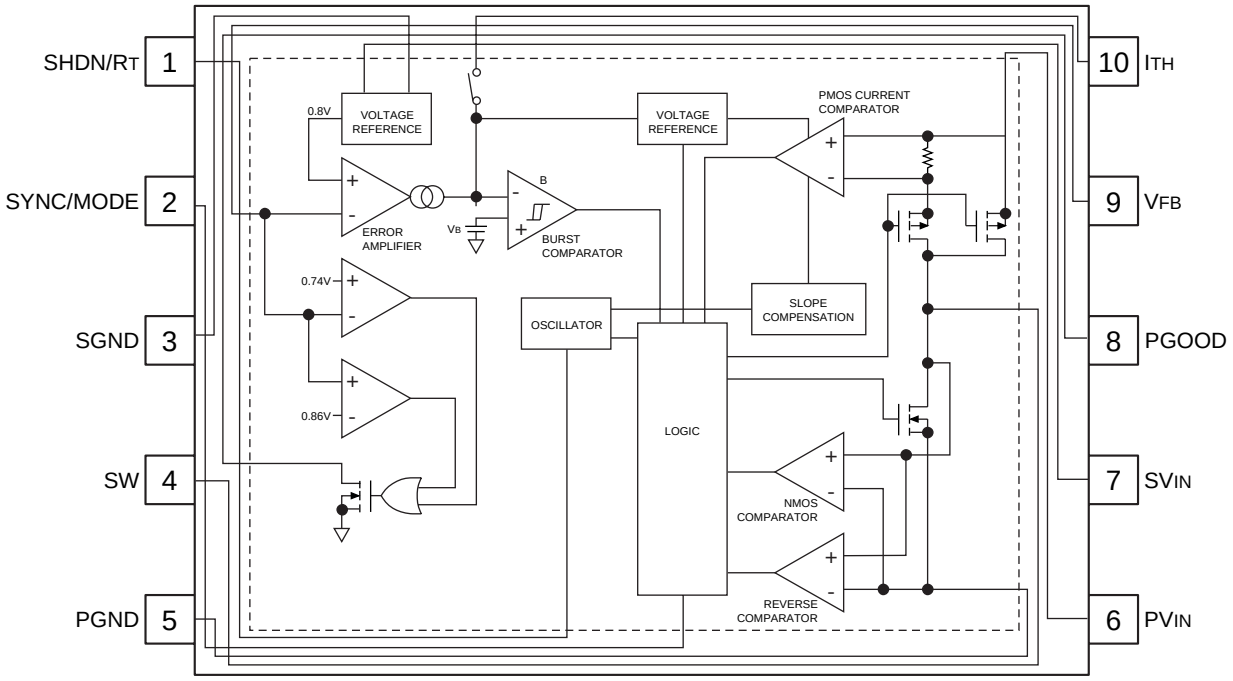
*PD6516A



*S-L2980A50MC-C7J



*LTC3411EMS



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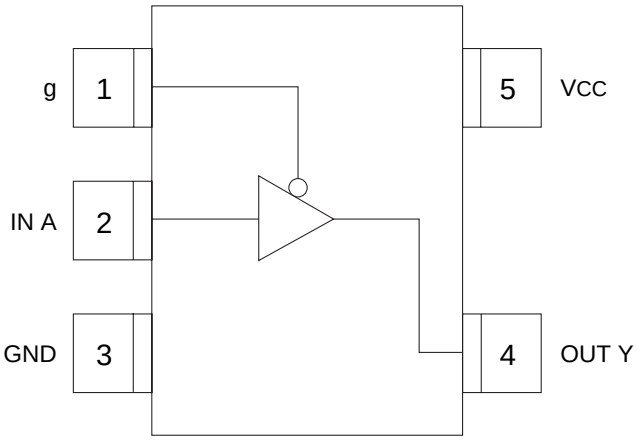

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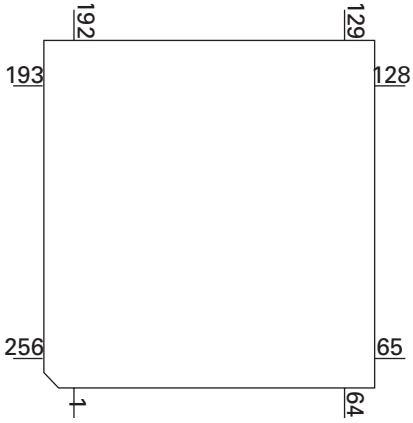


● Pin Functions(MN35104UB)

Pin No.	Pin Name	I/O	Function and Operation
1	VDD33		IO power supply
2,3	MDQ	I / O	SDRAM data
4	VSS		GND
5,6	MDQ	I / O	SDRAM data
7	VDD33		IO power supply
8-10	MDQ	I / O	SDRAM data
11	VSS		GND
12,13	MDQ	I / O	SDRAM data
14	VDD33		IO power supply
15	VDD15		Power supply
16	VSS		GND
17	EXADR	I / O	Memory address
18	NEXWE	O	Memory write enable
19-22	EXADT	I / O	Memory address data
23	VDD33		IO power supply
24	VSS		GND
25,26	EXADR	I / O	Memory address
27,28	EXADT	I / O	Memory address data
29	VDD33		IO power supply
30	VSS		GND
31,32	EXADT	I / O	Memory address data
33	NEXCE	O	Memory chip select
34-37	EXADT	I / O	Memory address data
38,39	EXADR	I / O	Memory address
40,41	EXADT	I / O	Memory address data
42	VD33		IO power supply
43	VSS		GND
44,45	EXADT	I / O	Memory address data
46	NEXOE	O	Memory output(Read) enable
47	P15	I / O	Memory address bus
48	P14	I / O	The flag of transmitting end
49	P13	I / O	The flag of transmitting start
50	P12	I / O	Serial clock
51	P11	I / O	Serial output data
52	P10	I / O	Serial input data
53	P9	I / O	Serial clock
54	P8	I / O	Serial output data
55	P7	I / O	Serial input data
56	VDD3		IO power supply
57	MMOD	I	Test mode setting
58	VSS		GND
59	P6	I / O	Serial clock

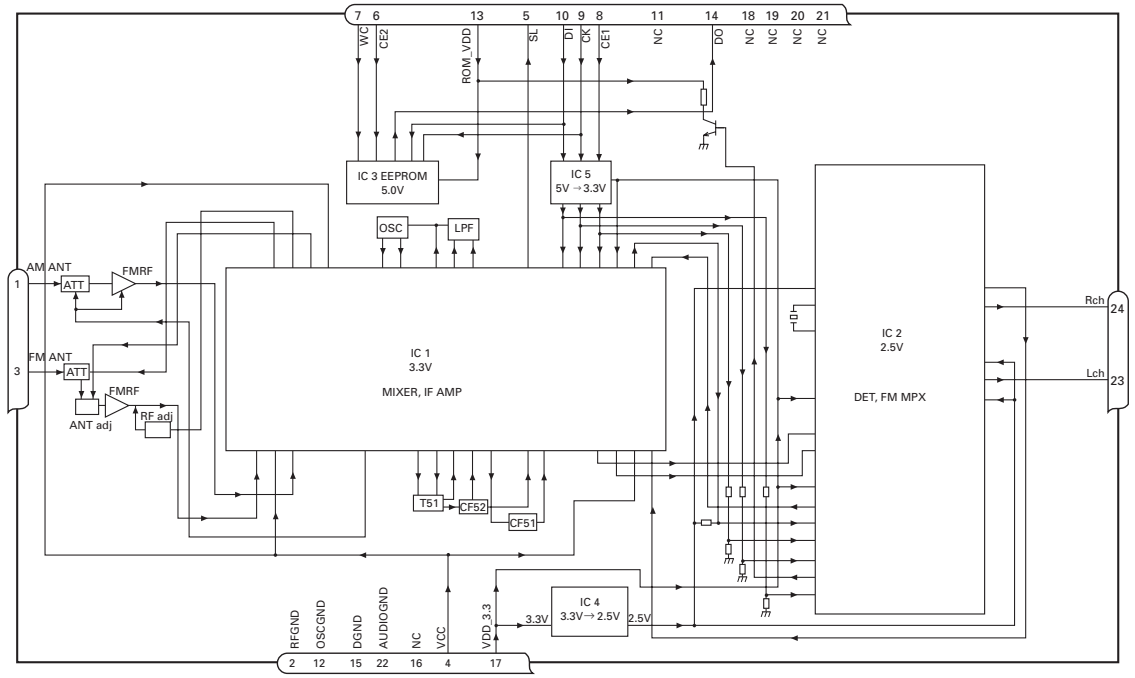
Pin No.	Pin Name	I/O	Function and Operation
60	P5	I / O	Serial output data
61	P4	I / O	Serial input data
62	P3	I / O	Serial clock
63	P2	I / O	Serial output data
64	P1	I / O	Serial input data
65	P0	I / O	Serial clock
66	FG	I	Motor FG
67	VDD15		Power supply
68	NRST	I	Master reset
69	VSS		GND
70-77	DRV	I / O	Servo port
78	DRV8		Servo port
79	VDD33		IO power supply
80	VSS	I / O	GND
81	SCLOCK	I / O	Input clock for debug
82	EXTRG	I / O	I/O trigger for debug
83	SDATA	I / O	I/O data for debug
84	EXTRG	I / O	I/O trigger for debug
85	TRCCLK	I / O	Output trace clock for debug
86-89	TRCDATA	I / O	I/O trace data for debug
90	TRCST	I / O	Output trace status for debug
91	VDD33		Power supply
92	OSCI	I	Front end clock input
93	VSS		GND
94-97	MONI	I / O	Inside monitor
98	VDD15		Power supply
99	VSS		GND
100-103	MONI	I / O	Inside monitor
104	AVDDD	O	Power supply
105	PLFIL1		DRC VCO
106	AVSSD	O	GND
107	PLFIL2	O	DRC VCO
108-110	VREF	I	Reference voltage
111	VC0	I	gm-cEQ
112	RESI	O	gm-cEQ
113	ANAMONI	O	Inside analog monitor
114	POFLT	O	DPDOFTR
115	CDATA		Inline data
116	CCAPA	O	Inline capacitor
117	CGD	O	Reference voltage
118	AVDDC		Analog current
119	AVSSC	I	Analog GND

Pin No.	Pin Name	I/O	Function and Operation
120	RFINN	I	RF input
121	RFINP	I	RF input
122-131	VIN	I	Head input
132	LPC1	O	DVDLPC input
133	LPCO1	I	DVDLPC output
134	LPC2	O	CDLPC input
135	LPCO2	O	CDLPC output
136	VREFH	O	Reference voltage
137	VHALF		Reference voltage
138	AVSSB	O	Analog GND
139	CTKC	I	TC
140	CSLFLT	O	Capasitor
141	CWBLOUT	I	DC cut for wobble
142	CWBLIN		DC cut for wobble
143	VCOF	I	JFVCO control voltage
144	RVI		VREFH reference current
145	AVDDB	I	Analog current
146-148	AD	I	AD input
149	AVDDA		Analog current
150	DAC1	O	Tracking drive output
151	AVSSA		Analog GND
152	DAC0	O	Focus drive output
153	AVDDE		Analog current
154	IREF1	I	Inside DAC bias current
155	AVSSE		Analog GND
156	COMP1	I	Inside DAC
157	AVDDF		Analog current
158	DAC1OUT	O	Analog signal
159	AVSSF		Analog GND
160	DAC2OUT	O	Analog signal
161	DAC3OUT	O	Analog signal
162	VREF	I	Reference voltage
163	DAC4OUT	O	Analog signal
164	DAC5OUT	O	Analog signal
165	AVDDG	I	Analog power suplly
166	IREF2		Inside DAC bias current
167	VSSG	I	Analog GND
168	COMP2		Inside DAC
169	VSS	I	GND
170	BECLK		Backend clock input
171	VDD33	I	IO power supply
172	EXTCK		Exterior audio clock

Pin No.	Pin Name	I/O	Function and Operation
173	PHCOMPO		Composite audio clock
174	LRCK	O	LR chanel clock output
175	SRCK	O	Bit clock output
176	ADOUT3	O	Audio down mixing
177	VSS	O	GND
178-180	ADOUT	O	Audio data
181	IECOUT	O	IEC958 digital audio output
182	VDD33		IO power supply
183	VSS		GND
184,185	MDQ	I / O	SDRAM data
186	VDD15		Power supply
187,188	MDQ	I / O	SDRAM data
189	VDD33		IO power supply
190-193	MDQ	I / O	SDRAM data
194	VSS		GND
195	VDD33		IO power supply
196,197	MDQ	I / O	SDRAM data
198	VSS		GND
199-201	MDQ	I / O	SDRAM data
202	VDD33		GND
203-205	MDQ	I / O	SDRAM data
206	VSS		GND
207,208	DQM	O	SDRAM data mask
209	VDD33		Power supply
210	MA	O	SDRAM address
211	VSS		GND
212	MA4	O	SDRAM address
213	VDD15		Power supply
214	MA2	O	SDRAM address
215	VSS		GND
216,217	MA	O	SDRAM address
218	VDD33		Power supply
219,220	MA	O	SDRAM address
221	VSS		GND
222	VDD15		Power supply
223	MCKI	I	SDRAM output clock
224	VSS		GND
225	MCK	O	SDRAM input clock
226	VDD33		IO power supply
227-229	MA	O	SDRAM address
230	VSS		GND
231	MA	O	SDRAM address

Pin No.	Pin Name	I/O	Function and Operation
232	NWE	O	SDRAM writte enable
233	VDD33		IO power supply
234	BA0	O	SDRAM bank address
235	MA	O	SDRAM address
236	VSS		GND
237	BA1	O	SDRAM bank address
238	NCSM	O	SDRAM chip select
239	NRAS	O	SDRAM low address strobe
240	VDD33		IO power supply
241	VSS		GND
242	NCAS	O	SDRAM column address strobe
243	DQM0	O	SDRAM data mask
244	VDD15		Power supply
245	VSS		GND
246	DQM	O	SDRAM data mask
247	MDQ	I / O	SDRAM data
248	VSS		GND
249	MDQ	I / O	SDRAM data
250	VDD33		IO power supply
251-253	MDQ	I / O	SDRAM data
254	VSS		GND
255,256	MDQ	I / O	SDRAM data

● 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

7.3 EXPLANATION

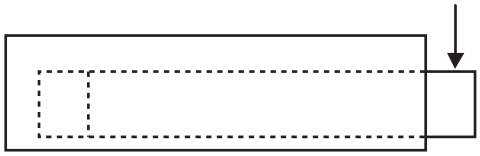
7.3.1 MECHANISM DESCRIPTIONS

● Outline of the FLAP motion

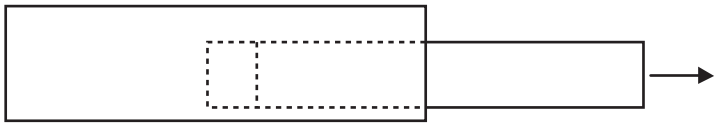
1. The motion is actuated made by two motors, the forward/backward driving motor (CXB9515) and the angle driving motor (CXB9516).
2. Analog electric potential generated by the angle encoder is detected to detect angle motion status and motion position.
3. Memory function for the angle last position is accomplished by the micro processor using the 256 resolution steps of the VDD.
4. A pulse is detected by the photo interrupter to detect the horizontal motion status.
5. In the case of reset start, the monitor will be in a stored position first, and ejection motion will take place, which puts the system in the booted up state.
6. Angle adjustment is made by the angle key (+/-).
7. OPEN/CLOSE key makes the monitor stored or ejected, and temporary folding key folds the monitor temporarily.
8. Setting of the monitor auto storage/ejection ON/OFF and set back ON/OFF at the time of ACC ON/OFF is made on the navigation menu screen.
9. A backlight is switched-off during forward/backward and storage.

● Explanation on the FLAP ejection motion

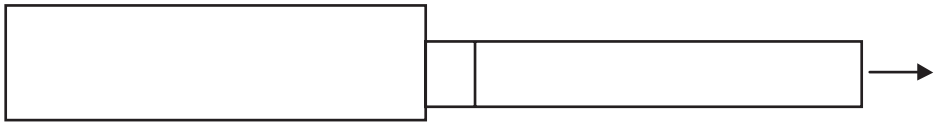
1. When the OPEN key is pressed or ACC is set to ON while the auto OPEN/CLOSE is being set to ON, angle driving motor rotates in the 0° direction for 500ms. (Pressed down.)



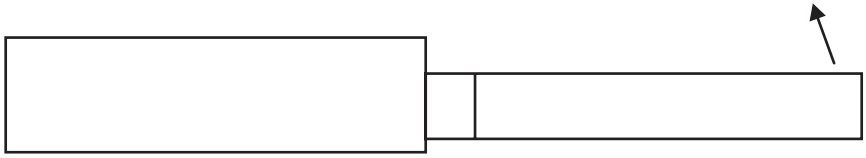
2. After 500ms, the angle driving motor is stopped, and the forward/backward driving motor rotates in the ejection direction.



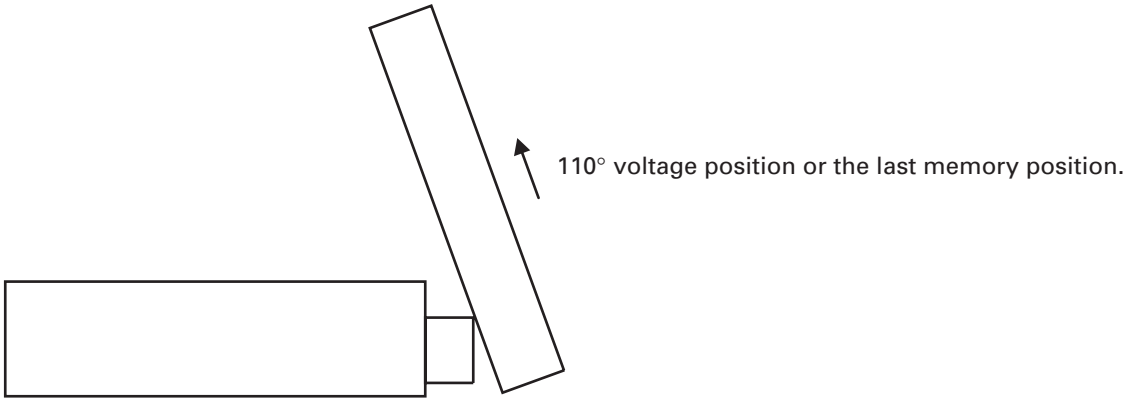
3. For a period of 600ms from the time when LIFTSW is switched from H to L, the forward/backward driving motor keeps rotating in the ejection direction.



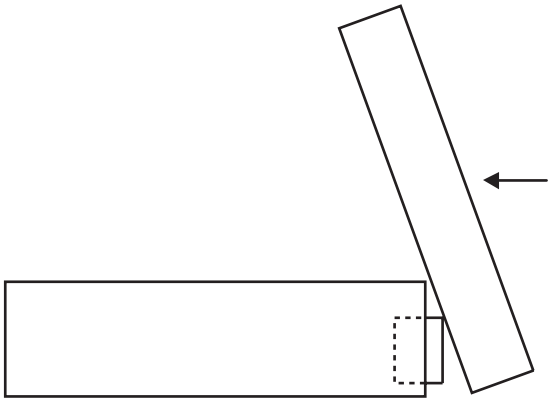
4. After 600ms, the forward/backward driving motor is stopped, and the angle driving motor rotates in the UP direction.



5. When the angle voltage reaches the voltage for 110°, brake is applied to the angle driving motor, and the ejection is completed. (In case the previous angle is stored in the memory, the motion continues to that angle.)

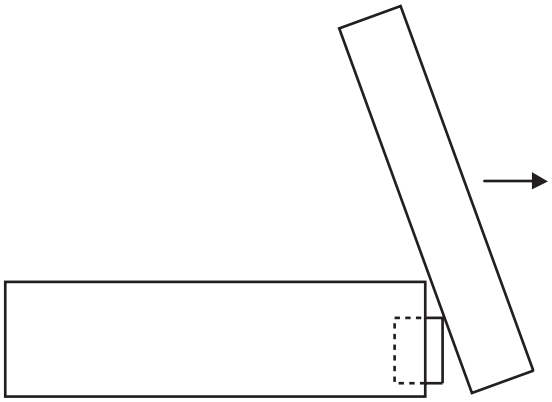


6. When the setback is set to ON, after the monitor angle voltage has reached the previously memorized voltage, brake is applied to the angle driving motor, then the forward/backward driving motor is rotated in slow speed in the storage direction. After that, when LIFTSW has switched from L to H, the forward/backward driving motor is stopped.

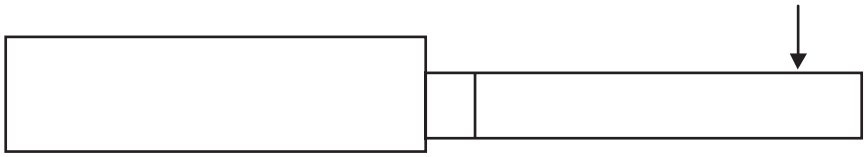


● Explanation of the FLAP storage motion

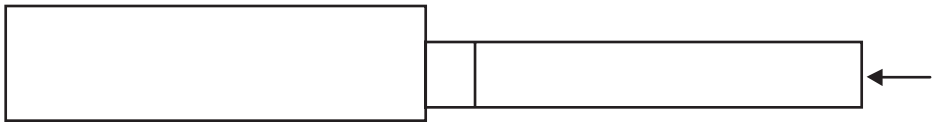
1. When CLOSE key is pressed, or after 6 seconds from ACC OFF when auto OPEN/CLOSE is being set to ON, the angle driving motor is rotated in the 0° direction. In case the setback setting is ON, the forward/backward driving motor is rotated in high speed in the ejection direction and the motor continues to rotate for 600ms from the time when LIFTSW is switched from H to L, then the angle driving motor is rotated in the 0° direction.



2. For a period of 500ms from the time when DIGOSW is switched from H to L, the angle driving motor is rotated in the 0° direction for the "pressed down" motion.



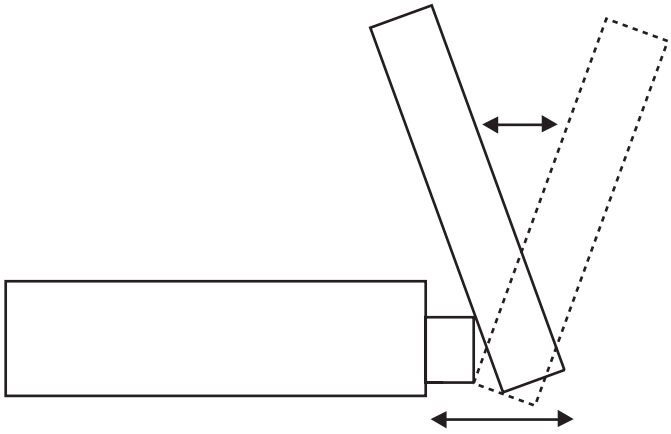
3. After 500ms, brake is applied to the angle driving motor, and then the forward/backward driving motor is rotated in the storage direction.



4. When the horizontal motion detection pulse is no longer detected for 200ms, brake is applied and the monitor storage motion is completed.

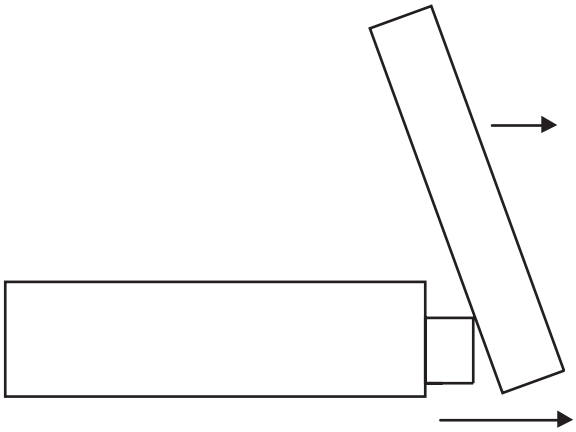
● Explanation on the FLAP angle adjustment

1. The angle driving motor is rotated in UP direction by the "+" key and in DOWN direction by the "–" key from the monitor stop position. If the key is kept pressed, the monitor will keep changing the angle without steps within the range of 50 to 110 degrees. When the setback is being set to ON, the forward/backward driving motor is rotated in the horizontal ejection direction while the key is being pressed, and angle adjustment is made by changing the angle voltage to the extent the angle adjustment key is effective after 600ms has elapsed from the time when LIFTSW has switched from H to L. When 3 seconds have elapsed from the time of angle adjustment completion, the forward/backward driving motor is rotated in slow speed in the horizontal storage direction, and brake is applied when LIFTSW has switched from L to H.

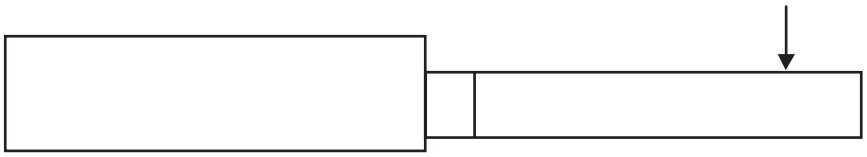


● Explanation on the FLAP temporary folding operation

1. By pressing the temporary folding key, the angle driving motor is rotated from the monitor stop position toward 0° direction. When the setback is being set to ON, the forward/backward driving motor is rotated when the key is pressed, brake is applied after 600ms has elapsed from the time when LIFTSW has switched from H to L, and the angle driving motor is rotated in 0° direction.



2. For a period of 500ms after DEGOSW has switched from H to L, the angle driving motor is rotated, and the monitor stops at its horizontal position by the brake. After 7 seconds, navigator operation sound is heard three times in 1 second interval. After 10 seconds, the angle driving motor is rotated in UP direction, and then the brake is applied to stop the motor at the last memory position. When the setback is being set to ON, after the angle driving motor stops at the last memory position, the forward/backward driving motor is rotated in slow speed in the horizontal storage direction, and the motor stops after LIFTSW has switched from L to H.



● Notes related to the FLAP motion

1. Regarding the angle position, angle voltage is always checked, and the last memory is stored by addition or subtraction of the voltage. It should be noted, however, that the last memory will not be stored when the monitor is manually moved by force.
2. If the expected pulse is not detected during horizontal motion, the monitor will stop at that position.

● Table of driving unit operations by different preset modes

		OPEN state	In OPEN motion	In CLOSE motion	CLOSE state
Auto OPEN/CLOSE setting ON	Bup ON (Reset start)	CLOSE state ↓ CLOSE ↓ OPEN state ↓ Last angle	——	——	Continue OPEN motion ↓ Last angle
	Bup OFF	To stand-by	To stand-by	To stand-by	To stand-by
	Bup OFF→ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC ON	No state change	——	——	OPEN motion ↓ Last angle ↓ Return
	ACC OFF→ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC OFF	6 sec from ACC OFF ↓ Advance ↓ CLOSE motion ↓ CLOSE	Continue OPEN motion ↓ Last angle ↓ Return ↓ 6 sec from ACC OFF ↓ Advance ↓ CLOSE motion ↓ CLOSE	Continue CLOSE motion ↓ CLOSE	No state change
	Last memory	OPEN	OPEN	CLOSE	CLOSE
Auto OPEN/CLOSE setting OFF	Bup ON (Reset start)	——	——	——	——
	Bup OFF	To stand-by	To stand-by	To stand-by	To stand-by
	Bup OFF→ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC ON	No state change	——	——	No state change
	ACC OFF→ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC OFF	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	Last memory	OPEN	OPEN	CLOSE	CLOSE

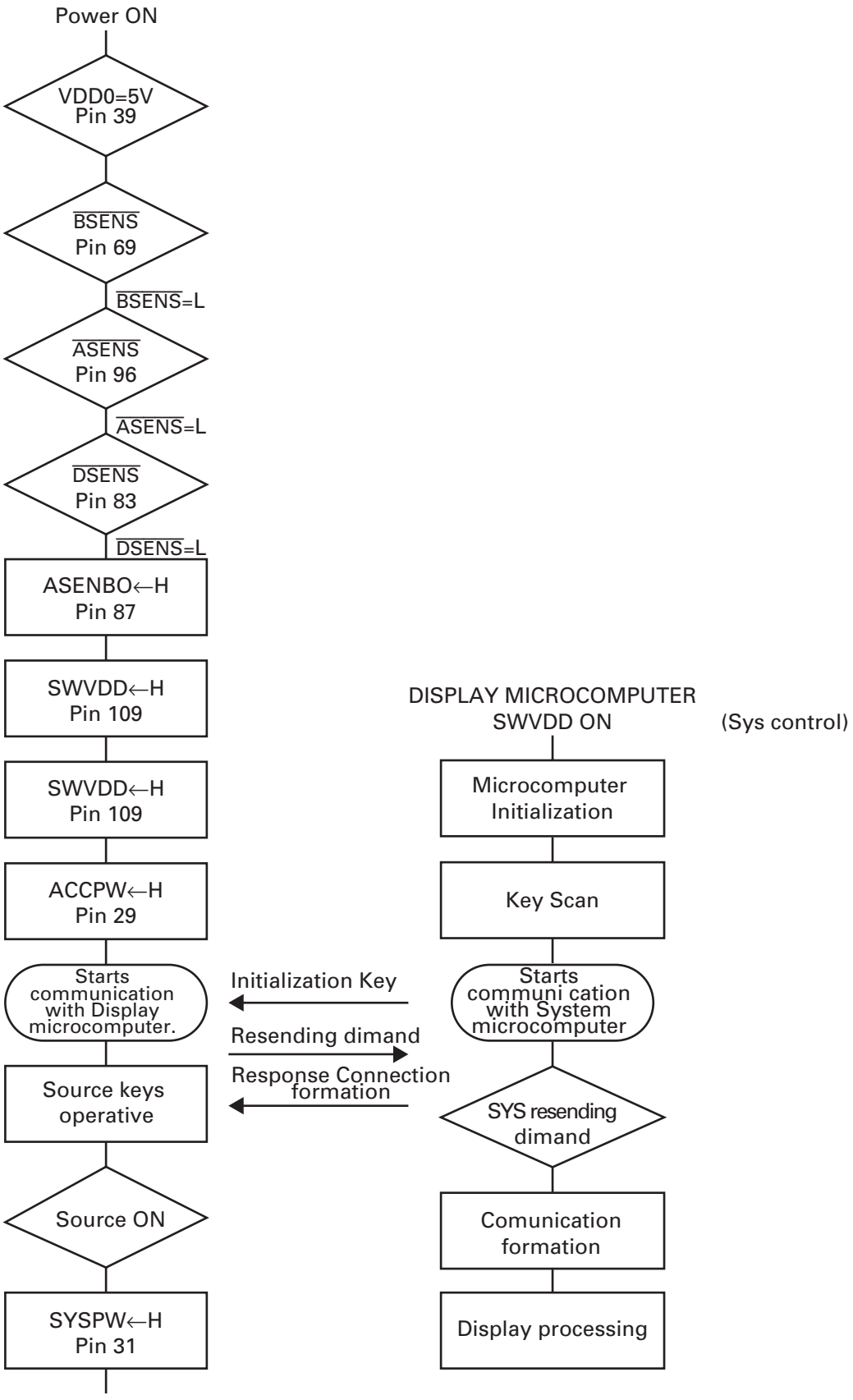
* When the setback is being set to OFF, there will be no advance/return motion.
After ACC OFF, if ACC is switched ON again during the 6 seconds counting, standby will be passed and the FLAP status will not change.

● Table of temporary folding control

		Temporary folding state (horizontal position)	Temporary folding reset (horizontal position→last angle)	Temporary folding in motion (last angle→horizontal position)
Auto OPEN/CLOSE setting ON	Bup ON	———	———	———
	Bup OFF	To stand-by	To stand-by	To stand-by
	Bup OFF→ ON	Continue temporary folding motion	Continue OPEN motion ↓ Last angle ↓ Return	Continue temporary folding motion ↓ Temporary folding
	ACC ON	———	———	———
	ACC OFF→ ON	OPEN motion ↓ Last angle ↓ Return	Continue OPEN motion ↓ Last angle ↓ Return	Continue temporary folding motion ↓ Temporary folding
	ACC OFF	6 sec from ACC OFF ↓ CLOSE motion ↓ CLOSE	Continue OPEN motion ↓ Last angle ↓ Return ↓ 6 sec from ACC OFF ↓ Advance ↓ CLOSE motion ↓ CLOSE	Continue temporary folding motion ↓ Temporary folding ↓ 6 sec from ACC OFF ↓ CLOSE motion ↓ CLOSE
	Last memory	OPEN	OPEN	OPEN
Auto OPEN/CLOSE setting OFF	Bup ON	———	———	———
	Bup OFF	To stand-by	To stand-by	To stand-by
	Bup OFF→ ON	Continue temporary folding motion	Temporary folding reset	Temporary folding in motion
	ACC ON	———	———	———
	ACC OFF→ ON	OPEN motion ↓ Last angle ↓ Return	Continue OPEN motion ↓ Last angle ↓ Return	OPEN motion ↓ Last angle ↓ Return
	ACC OFF	OPEN motion ↓ Last angle ↓ Return	Continue OPEN motion ↓ Last angle ↓ Return	OPEN motion ↓ Last angle ↓ Return
	Last memory	OPEN	OPEN	OPEN

* When the setback is being set to OFF, there will be no advance/return motion.

7.3.2 OPERATIONAL FLOW CHART



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

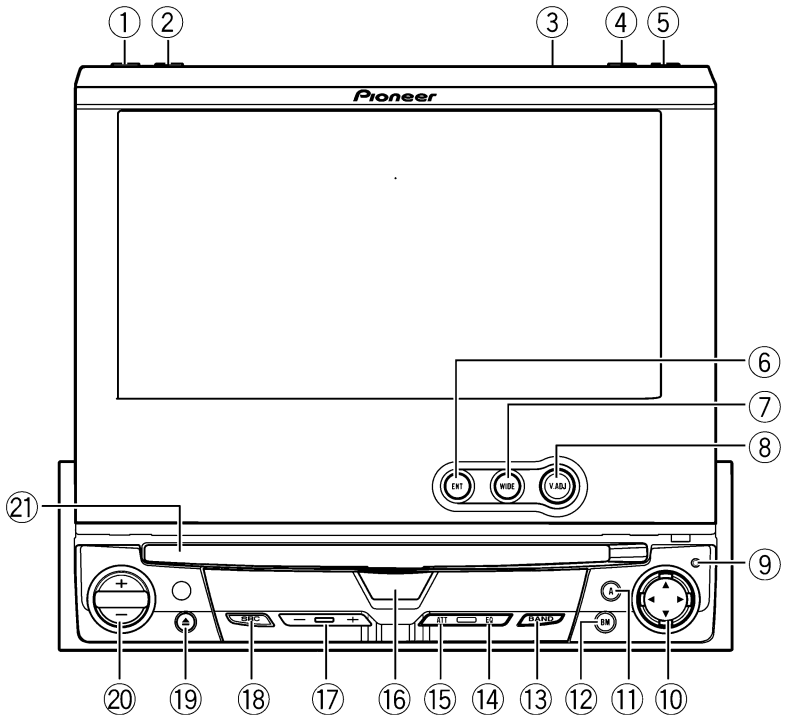
7.4 CLEANIG

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

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

Portions to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. OPERATIONS



Head unit

① **INFO button**
Press to turn the information bar on/off.

② **PGM button**
Press to operate the preprogrammed functions for each source.

③ **Ambient light sensor**
Senses ambient light. This system automatically adjusts the brightness of the display to compensate for ambient light.

④ **FLIP DOWN button**
Press to turn the LCD panel horizontal temporarily from upright position.

⑤ **OPEN/CLOSE button**
Press to open or close the LCD panel.

⑥ **ENTERTAINMENT (ENT) button**
Press to switch between the background displays.

⑦ **WIDE button**
Press to select a desired mode for enlarging a 4:3 picture to a 16:9 one.

⑧ **V.ADJ button**
Press and hold to display the picture adjustment menu.

⑨ **RESET button**
Press to return to the factory settings (initial settings).

⑩ **▲/▼/◄/► buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls.

⑪ **A.MENU button**
Press to display **MENU**.

A

⑫ **BOOKMARK (BM) button**
Press to bookmark a scene that you want to resume playback.

⑬ **BAND/ESC button**
Press to select among three FM bands and one AM band and to cancel the control mode of functions.

B

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

⑮ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑯ **Release button**
Press downward to detach the front panel.

C

⑰ **ANGLE (+/–) button**
Press to change the LCD panel angle.

⑱ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all the available sources.

D

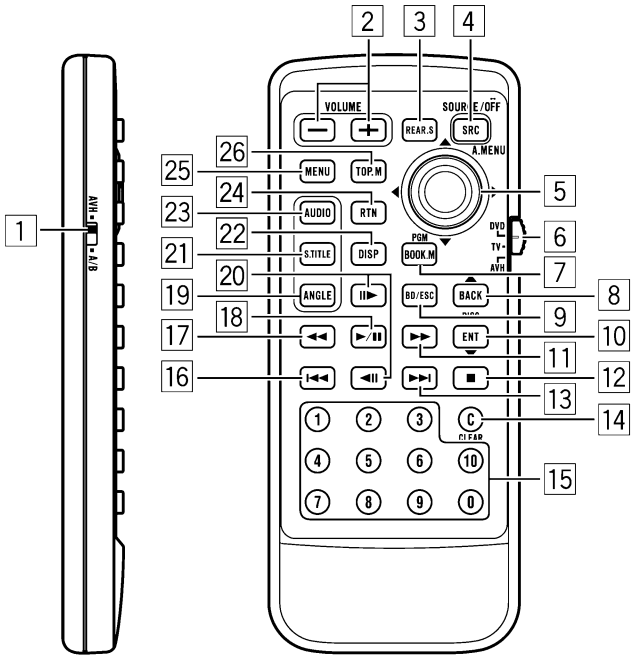
⑲ **EJECT button**
Press to eject a disc from this unit.

⑳ **VOLUME**
Press to increase or decrease the volume.

㉑ **Disc loading slot**
Insert a disc to play.

E

F



Remote control

1 **Remote control selection switch**
Switch to change the setting of the remote control.

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

3 **REAR.S button**
Not used.

4 **SOURCE button**
Press to cycle through all the available sources. Press and hold to turn the source off.

5 **Joystick**
Move to do fast forward, reverse and track search controls. Click to recall **MENU**.

6 **Remote control operation mode switch**
Switch the operation mode between **AVH**, **DVD** and **TV** modes. Normally, set to **AVH**.

7 **BOOKMARK (BOOK.M) button**
AVH mode: Press to operate the preprogrammed functions for each source.

DVD mode: Press to turn the bookmark function on or off.
TV mode: Not used.

8 **BACK button**
AVH mode: Press to return to the previous display.
DVD mode with remote control code A: Press to select the next disc when the multi-DVD player is connected.
DVD mode with remote control code B or AVH: Not used.
TV mode: Not used.

9 **BAND/ESC button**
AVH mode: Press to select among three FM bands and one AM band and to cancel the control mode of functions.
DVD mode: Press to switch mode between MP3/WMA and audio data (CD-DA) when playing discs with MP3/WMA and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs.
TV mode: Not used.

10 **ENTERTAINMENT (ENT) button**
AVH mode: Press to switch between the background displays.
DVD mode with remote control code A: Press to select the previous disc when the multi-DVD player is connected.
DVD mode with remote control code B or AVH: Not used.
TV mode: Not used.

11 **FORWARD (►►) button**
AVH mode or **DVD** mode: Press to perform fast forward.
TV mode: Not used.

12 **STOP (■) button**
AVH mode or **DVD** mode: Press to stop playback.
TV mode: Not used.

13 **NEXT (►►I) button**
AVH mode or **DVD** mode: Press to go to the next track (chapter).
TV mode: Not used.

14 **CLEAR button**
AVH mode or **DVD** mode: Press to cancel the input number when **0-9** are used.
TV mode: Not used.

15 **0–10 buttons**
AVH mode: Press **0-9** to directly select the desired track, preset tuning or disc. Buttons **1–6** can operate the preset tuning for the tuner or disc number search for the multi-CD player.
DVD mode: Press to directly select the desired track, chapter or disc.
TV mode: Not used.

16 **PREVIOUS (I◄◄) button**
AVH mode or **DVD** mode: Press to return to the previous track (chapter).
TV mode: Not used.

17 **REVERSE (◄◄) button**
AVH mode or **DVD** mode: Press to perform fast reverse.
TV mode: Not used.

18 **PLAY/PAUSE (►/II) button**
AVH mode or **DVD** mode: Press to switch sequentially between playback and pause.
TV mode: Not used.

19 **ANGLE button**
AVH mode or **DVD** mode: Press to change the viewing angle during DVD playback.
TV mode: Not used.

20 **STEP (II►/◄II) button**
AVH mode or **DVD** mode: Press to move ahead one frame at a time during DVD/VideoCD playback. Press and hold for one second to activate slow playback.
TV mode: Not used.

21 **SUBTITLE (S.TITLE) button**
AVH mode or **DVD** mode: Press to change the subtitle language during DVD playback.
TV mode: Not used.

22 **DISPLAY button**
AVH mode or **DVD** mode: Press to select different displays.
TV mode: Not used.

23 **AUDIO button**
AVH mode or **DVD** mode: Press to change the audio language during DVD playback.
TV mode: Not used.

24 **RETURN button**
AVH mode or **DVD** mode: Press to display the PBC (playback control) menu during PBC playback.
TV mode: Not used.

25 **MENU button**
AVH mode or **DVD** mode: Press to display the DVD menu during DVD playback.
TV mode: Not used.

26 **TOP MENU (TOP.M) button**
AVH mode or **DVD** mode: Press to return to the top menu during DVD playback.
TV mode: Not used.

Using the remote control operation mode switch

There are three remote control operation modes on the remote control.

AVH mode operation

When operating this unit by remote control, the mode is normally switched to **AVH**.

- The joystick on the remote control can perform the same operations as the one on the head unit. Furthermore, the joystick can perform the same operations as the touch panel keys ▲, ▼, ◄ and ►.
- **1–6** can perform the same operations as the preset tuning keys **P1—P6** and the disc selection keys **01—06**.
  — If you want to select a disc located at 7 to 12 by using buttons **1–6**, press and hold the corresponding numbers, such as **1** for disc 7, until the disc number appears in the display.

DVD mode operation

If you switch the mode to **DVD**, the joystick and **0–10** operations are changed for DVD player.

● When you want to operate the following functions, switch the mode to DVD:

- When operating the DVD menu by using the joystick.
- When operating the PBC menu by using **0–10**.
- When specifying title by using **0–10**.

Note

With the mode switched to **DVD**, you cannot use these buttons; **BACK** and **ENTERTAINMENT (ENT)**.

TV mode operation

TV operations available with a Pioneer TV tuner (e.g. GEX-P5750TV(P)) can be controled with **AVH** mode. **TV** mode is not used with this unit.

- For details concerning operation, refer to the TV tuner's operation manuals.▣

Turning the unit on and selecting a source

① **Source icon**
Shows which source has been selected.

You can select a source you want to listen to. To switch to the DVD player, load a disc in the unit to switch to **DVD**.

● **When using the touch panel keys, touch the source icon and then touch the desired source name.**
The source names are displayed and selectable ones are highlighted.

- **DVD** – Built-in DVD player
- **S-DVD** – DVD player/multi-DVD player
- **M-CD** – Multi-CD player
- **TUNER** – Tuner
- **TV** – Television
- **iPod** – iPod
- **EXT-1** – External unit 1
- **EXT-2** – External unit 2
- **AUX** – AUX
- **AV** – AV input
- **OFF** – Turn the unit off

■ When the source icon is not displayed, you can display it by touching the screen.
■ To return to the playback display, touch **ESC**.

● **When using the buttons, press SOURCE to select a source.**
Press **SOURCE** repeatedly to switch between the following sources:

TUNER (tuner)—**TV** (television)—**AV** (AV)—**DVD** (built-in DVD player)—**S-DVD** (DVD player/multi-DVD player)—**M-CD** (multi-CD player)—**iPod** (iPod)—**EXT-1** (external unit 1)—**EXT-2** (external unit 2)—**AUX** (AUX)

Notes

- In the following cases, the sound source will not change:
  — When there is no unit corresponding to the selected source connected to this unit.
  — When there is no disc in the unit.
  — When there is no disc in the DVD player.
  — When there is no magazine in the multi-CD player.
  — When there is no magazine in the multi-DVD player.
  — When the AUX (auxiliary input) is set to off.
  — When the AV (AV input) is not set to **VIDEO**.
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.
- When this unit's blue/white lead is connected to the vehicle's auto-antenna relay control terminal, the vehicle's antenna extends when this unit's source is turned on. To retract the antenna, turn the source off. ▣

Loading a disc

● **Insert a disc into the disc loading slot.**
Playback will automatically start.

- When the automatic playback function is on, this unit will cancel the DVD menu and automatically start playback from the first chapter of the first title.

■ To eject a disc, press **EJECT**.

Notes

- The DVD player plays one, standard, 12-cm or 8-cm (single) disc at a time. Do not use an adapter when playing 8-cm discs.
- Do not insert anything other than a disc into the disc loading slot.

- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting it again.
- If an error message such as **ERROR-02** is displayed.
- If bookmark function is on, DVD playback resumes from the selected point. ▣

Adjusting the volume

● **Use VOLUME to adjust the sound level.**

With the head unit, press **VOLUME** up/+ or down/– to increase or decrease the source volume.

With the remote control, press **VOLUME** to increase or decrease the volume. ▣

Turning the unit off

● **When using the touch panel keys, touch the source icon and then touch OFF.**

■ When the source icon is not displayed, you can display it by touching the screen.

● **When using the buttons, press SOURCE and hold until the unit turns off.** ▣

Using the rear display

You can watch a DVD/Video CD/TV/AV on the rear display.

1 Press A.MENU button and touch SETUP to display the setup function names.

2 Touch R.DISP on the setup menu to display video of the selected source on rear display.

Touch **R.DISP** until **SOURCE** appears in the display.

- **SOURCE** – Display the video of the selected source on rear display
- **V.D.P.** – Display the AVG-VDP1 on rear display

Note

When a Pioneer Vehicle Dynamics Processor (AVG-VDP1) is connected to this unit, the AVG-VDP1 can be displayed on the rear display. ▣

Displaying the AVG-VDP1 (Pioneer Vehicle Dynamics Processor)

This unit can be used as the display unit for the AVG-VDP1 (sold separately) product.

- You can operate this function only when a Pioneer Vehicle Dynamics Processor (AVG-VDP1) is connected to this unit.

Dsiplaying AVG-VDP1

● Press V.ADJ to switch the display to the AVG-VDP1.

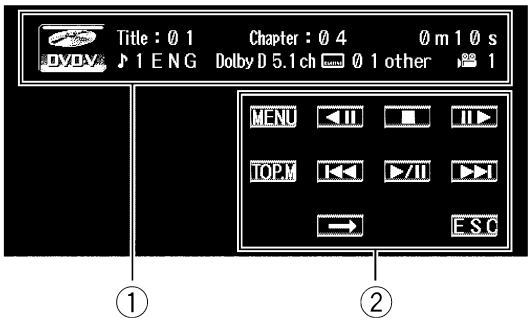
■ To return to the video of sources, press **V.ADJ** again.

Note

You can also use **WIDE** and **ENTERTAINMENT (ENT)** buttons when you display the AVG-VDP1. For details concerning operation, refer to the AVG-VDP1 operation manual.

Touch panel key basic operation

Activating the touch panel keys



① Information bar

② Touch panel keys

Touch to do various operations.

1 Touch the screen to activate the touch panel keys corresponding to each source.

The touch panel keys appear on the display.

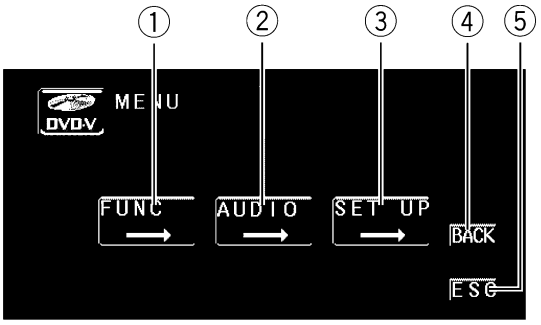
■ To go to the next group of touch panel keys, touch →.

2 Touch ESC to hide the touch panel keys.

Note

If you do not use the touch panel keys within 30 seconds, they will be hidden automatically.

Operating the menu



① **FUNCTION key**
Touch to select functions for each source.

② **AUDIO key**
Touch to select various sound quality controls.

③ **SETUP key**
Touch to select various setup functions.

④ **BACK key**
Touch to return to the previous display.

⑤ **ESC key**
Touch to cancel the control mode of functions.

1 Press A.MENU button to display MENU.
MENU appears on the display.

2 Touch the desired key to display the function names you want to operate.
- To go to the next group of function names, touch **NEXT**.
- To return to the previous group of function names, touch **PREV**.

3 Touch ESC to return to the display of each source.

Note

If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display.

Opening and closing the LCD panel

The LCD panel will be opened or closed automatically with the turning of the ignition switch on or off. You can turn off the automatic close/open function.

- Do not close the LCD panel with hands by force. That cause malfunction.
- The automatic close/open function will operate the display as follows.
  - — When the ignition switch is turned OFF while the LCD panel is opened, the LCD panel will close after six seconds.
  - — When the ignition switch is turned ON again (or turned to ACC), the LCD panel will be opened automatically.
  - — Removing or attaching the front panel will automatically close or open the LCD panel.
- When the ignition switch is turned OFF after the LCD panel has been closed, turning the ignition switch ON again (or turning it to ACC) will not open the LCD panel. In this case, press **OPEN/CLOSE** to open the LCD panel.
- When closing the LCD panel, check to make sure that it has closed completely. If the LCD panel has stopped halfway, leaving it like this could result in damage.

● **Press OPEN/CLOSE to open the LCD panel.**
- To close the LCD panel, press **OPEN/CLOSE** again.

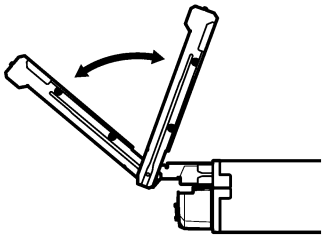
Adjusting the LCD panel angle

Important

- If you can hear the LCD panel knocking against your vehicle's console or dashboard, press **ANGLE (–)** to move the LCD panel a little forward.
- When adjusting the LCD panel angle, be sure to press **ANGLE (+/–)**. Forcibly adjusting the LCD panel by hand may damage it.

● **Press ANGLE (+/–) to adjust the LCD panel to an easily viewable angle.**

The LCD panel angle continues changing as long as you press **ANGLE (+/–)** and hold.



▪ The adjusted LCD panel angle will be memorized and automatically returned to the next time the LCD panel is opened.

Turning the LCD panel horizontal

When the LCD panel is upright and it hinders the operation of the air conditioner, the panel can be turned horizontal temporarily.

● **Press FLIP DOWN to turn the LCD panel horizontal.**

▪ To return to original position, press **FLIP DOWN** again.

▪ The LCD panel returns to the original position automatically with beeping sound 10 seconds after operation.

Changing the wide screen mode

You can select a desired mode for enlarging a 4:3 picture to a 16:9 one.

● **Press WIDE to select the desired setting.**

Press **WIDE** repeatedly to switch between the following settings:
FULL (full)—**JUST** (just)—**CINEMA** (cinema)—**ZOOM** (zoom)—**NORMAL** (normal)

FULL (full)

A 4:3 picture is enlarged in the horizontal direction only, giving you a 4:3 TV picture (normal picture) without any omissions.

JUST (just)

The picture is enlarged slightly at the center and the amount of enlargement increases horizontally to the ends, enabling you to enjoy a 4:3 picture without sensing any disparity even on a wide screen.

CINEMA (cinema)

The picture is enlarged by the same proportion as **FULL** or **ZOOM** in the horizontal direction and by an intermediate proportion between **FULL** and **ZOOM** in the vertical direction; ideal for a cinema-sized picture (wide screen picture) where captions lie outside.

ZOOM (zoom)

A 4:3 picture is enlarged in the same proportion both vertically and horizontally; ideal for a cinema-sized picture (wide screen picture).

NORMAL (normal)

A 4:3 picture is displayed as it is, giving you no sense of disparity since its proportions are the same as that of the normal picture.

Notes

- Different settings can be memorized for each video source.
- When video is viewed in a wide screen mode that does not match its original aspect ratio, it may appear different.
- Remember that using the wide mode feature of this system for commercial or public viewing purposes may constitute an infringement on the author's rights protected by the Copyright Law.
- Video will appear grainy when viewed in **CINEMA** or **ZOOM** mode.

Adjusting the picture adjustment

You can adjust **BRIGHT** (brightness), **CONTRAST** (contrast), **COLOR** (color) and **HUE** (hue) for each source and rear view camera.

- The adjustments of **BRIGHT** and **CONTRAST** are stored separately for light ambient (daytime) and dark ambient (nighttime). A sun ☀ or moon ☽ is displayed to the left of **BRIGHT** and **CONTRAST**, respectively, as the ambient light sensor determines brightness or darkness.
- You cannot adjust **HUE** for PAL video.
- You cannot adjust **COLOR** or **HUE** for the audio source.

1 Press V.ADJ and hold to display PICTURE ADJUST.

Press **V.ADJ** until **PICTURE ADJUST** appears in the display.

2 Touch any of the following touch panel keys to select the function to be adjusted.

The adjustment function names are displayed and adjustable ones are highlighted.

- **BRIGHT** – Adjust the black intensity
- **CONTRAST** – Adjust the contrast
- **COLOR** – Adjust the color saturation
- **HUE** – Adjust the tone of color (red is emphasized or green is emphasized)
- **DIMMER** – Adjust the brightness of display
- **BACK-CAMERA** – Switch to the picture adjustment display for the rear view camera

■ You can adjust the picture adjustment for rear view camera only when **B-CAM** is turned on.

■ With some rear view cameras, picture adjustment may not be possible.

3 Touch ◄ or ► to adjust the selected item.

Each time you touch ◄ or ► it increases or decreases the level of selected item. **+24** – **–24** is displayed as the level is increased or decreased.

4 Touch ESC to hide the touch panel keys.

Adjusting the dimmer

The adjustment of **DIMMER** is stored separately for each ambient light; daytime, evening and nighttime. The brightness of LCD screen will be adjusted to optimum level automatically in accordance with the ambient light based on the setting values.

1 Press V.ADJ and hold to display PICTURE ADJUST.

Press **V.ADJ** until **PICTURE ADJUST** appears in the display.

2 Touch DIMMER.

The ambient light level used as the standard for adjusting **DIMMER** appears above the level bar.

- Red sun ☀ – Adjust the brightness for bright ambient light (daytime)
- White sun ☼ – Adjust the brightness for intermediate brightness (evening)

- Blue moon ☽ – Adjust the brightness for dark ambient light (nighttime)

3 Touch ◄ or ► to adjust the brightness.

Each time you touch ◄ or ► moves the key towards the left or the right.
The level indicates the brightness of the screen being adjusted. The farther the key moves to the right, the brighter the screen.

4 Touch ESC to hide the touch panel keys.

Note

The icons indicating the current ambient brightness used for adjusting **BRIGHT** and **CONTRAST** may differ from **DIMMER** slightly.

Protecting your unit from theft

The front panel can be detached from the head unit to discourage theft.

- If the front panel is not detached from the head unit within five seconds of turning off the ignition, a warning tone will sound.
- You can turn off the warning tone.

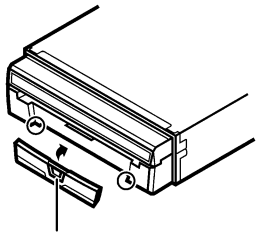
Important

- Never use force or grip the display and the buttons too tightly when removing or attaching.
- Avoid subjecting the front panel to excessive shocks.
- Keep the front panel out of direct sunlight and high temperatures.
- If removed, replace the front panel on the unit before starting up your vehicle.

Removing the front panel

● **Push the release button downward and release the front panel.**

Take care not to grip it too tightly or to drop the front panel and protect it from contact with water or other fluids to prevent permanent damage.

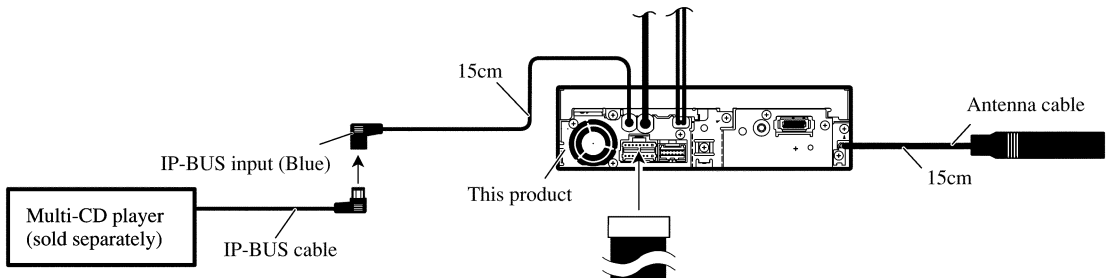


Release button

Attaching the front panel

● **Replace the front panel by holding it upright to the unit and clipping it securely into the mounting hook.**

Connecting the power cord



Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.

Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.

Fuse resistor

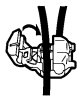
Violet/white
Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position. For details, see Fig. 4

Fuse holder

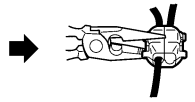
Yellow
To terminal always supplied with power regardless of ignition switch position.

Black (ground)
To vehicle (metal) body

Connection method



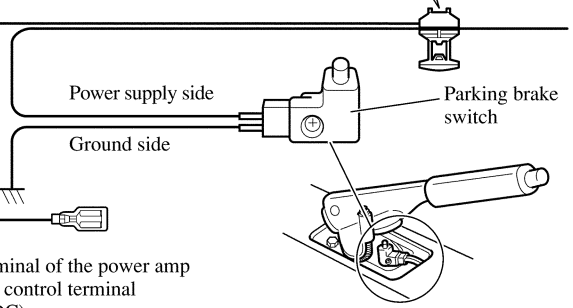
1. Clamp the lead.



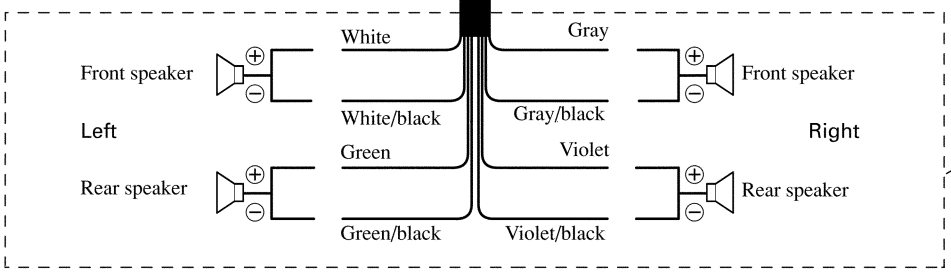
2. Clamp firmly with needle-nosed pliers.

Note:
- The position of the parking brake switch depends on the vehicle model. For details, consult the vehicle Owner's Manual or dealer.

Light green
Used to detect the ON/OFF status of the parking brake. This lead must be connected to the power supply side of the parking brake switch.



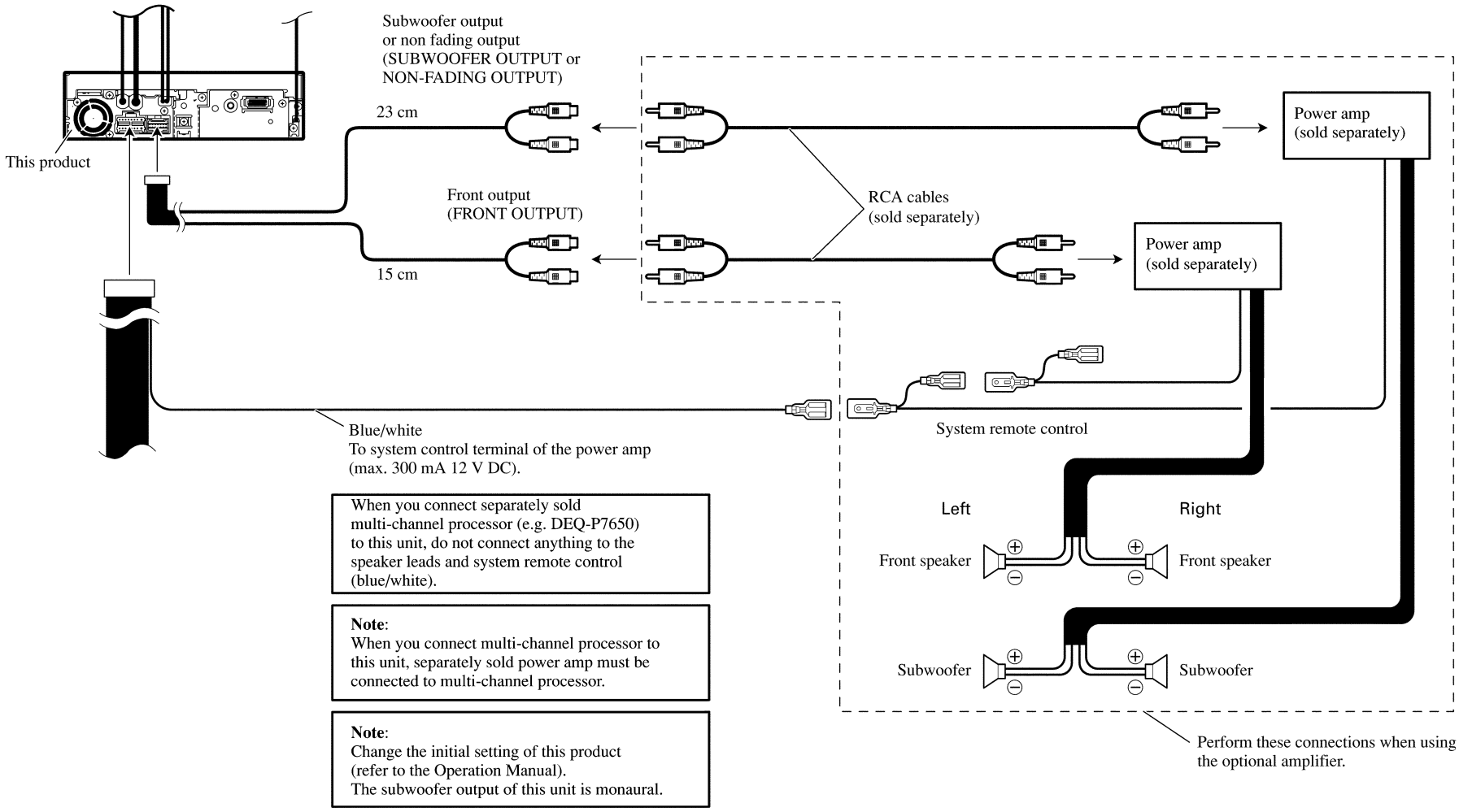
Blue/white
To system control terminal of the power amp or Auto-antenna relay control terminal (max. 300 mA 12 V DC).



With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.

When you connect separately sold multi-channel processor (DEQ-P7650) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

When connecting to separately sold power amp



When you connect separately sold multi-channel processor (e.g. DEQ-P7650) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

Note:
When you connect multi-channel processor to this unit, separately sold power amp must be connected to multi-channel processor.

Note:
Change the initial setting of this product (refer to the Operation Manual).
The subwoofer output of this unit is monaural.

When connecting with a rear view camera

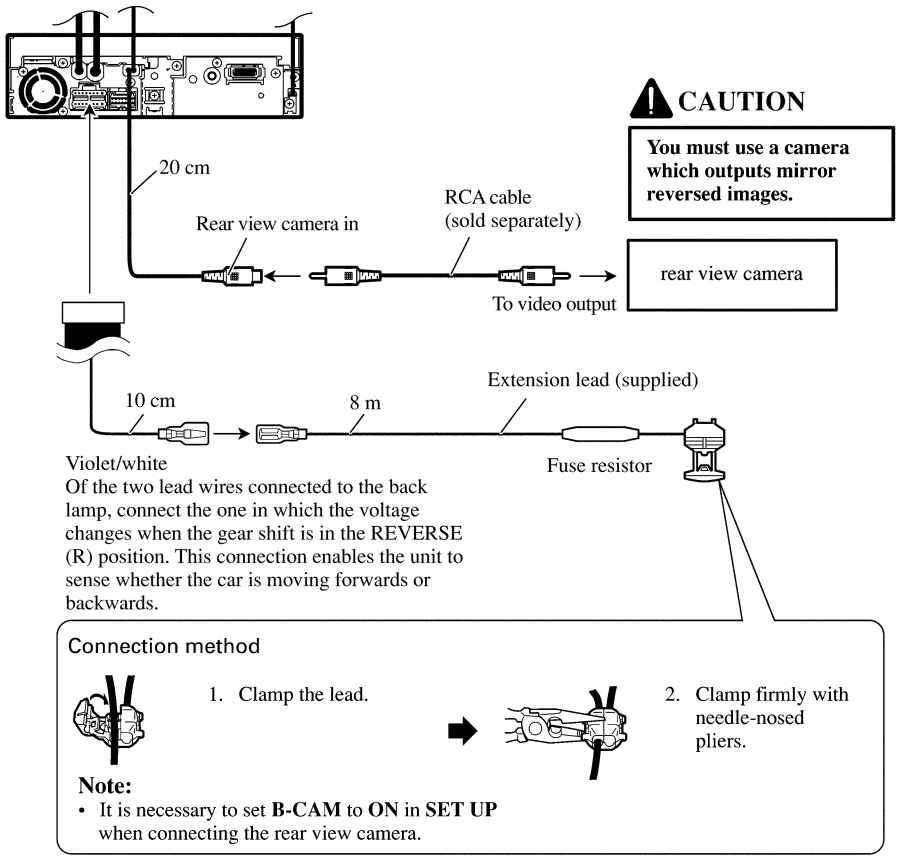
When using this product with a rear view camera, automatic switching to video from a rear view camera when the gear shift is moved to **REVERSE (R)** position is possible.

⚠ WARNING

USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.

⚠ CAUTION

- The screen image may appear reversed.
- The rear view camera function is to use this product as an aid to keep an eye on trailers, or backing into a tight parking spot. Do not use this function for entertainment purposes.
- The object in rear view may appear closer or more distant than in reality.



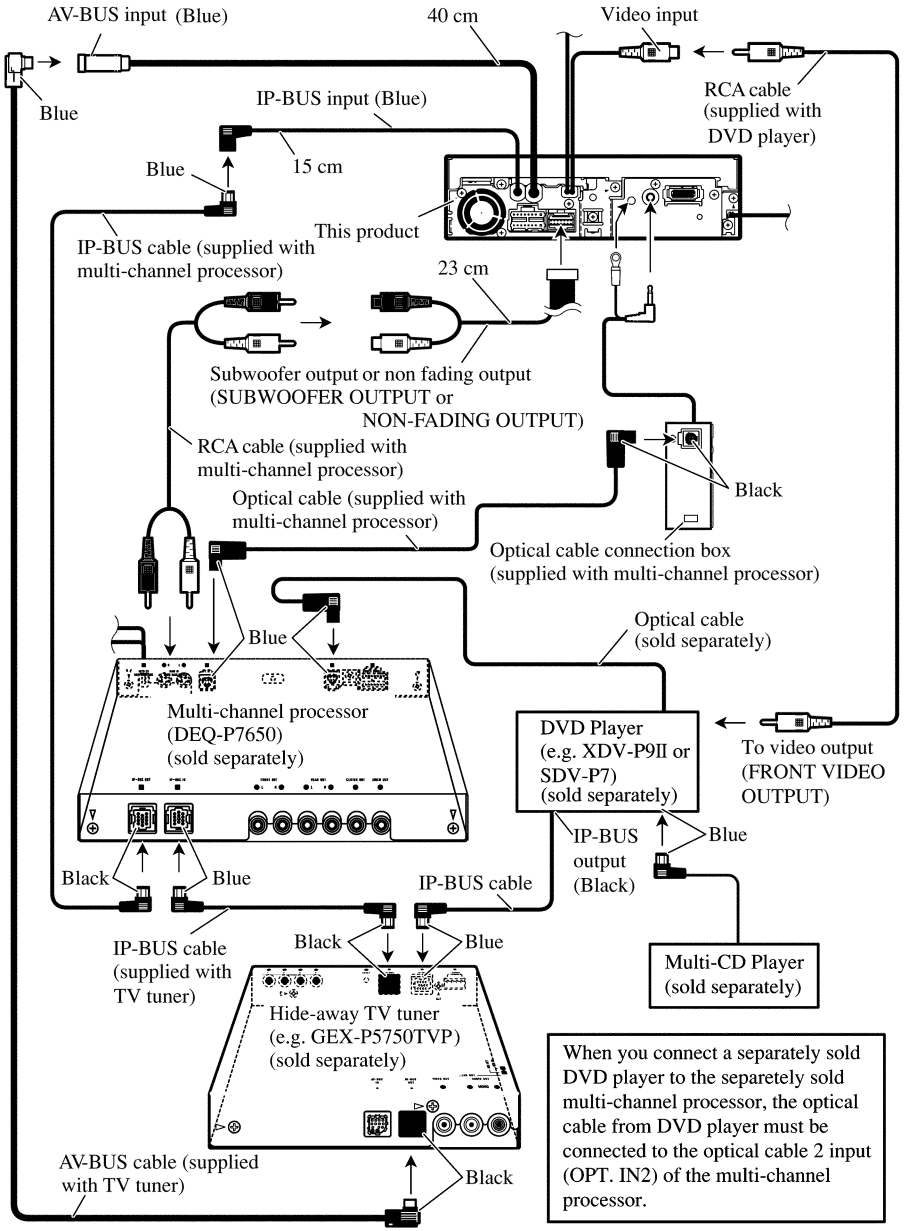
⚠ CAUTION

You must use a camera which outputs mirror reversed images.

Note:

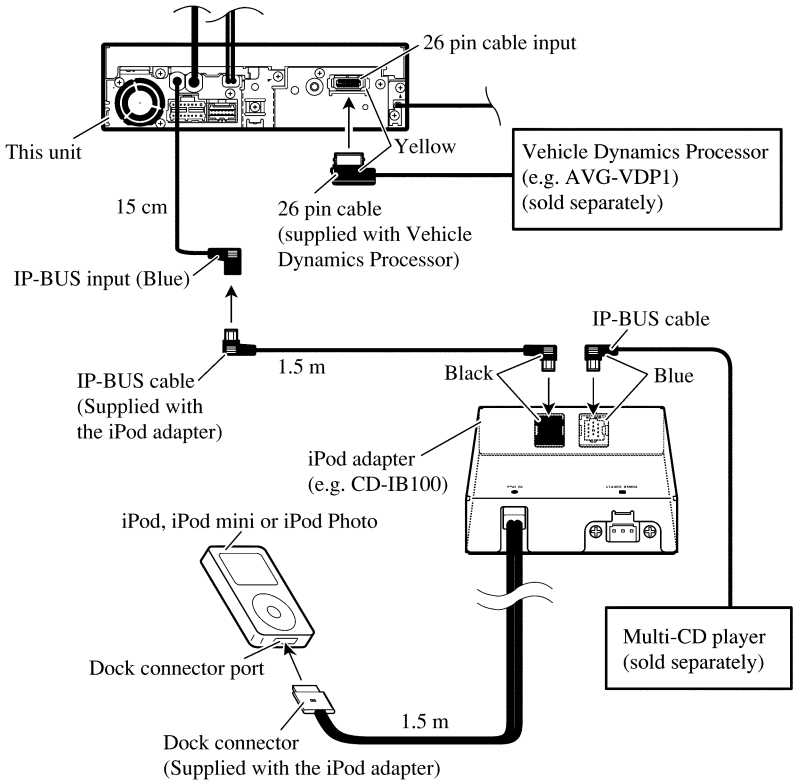
- It is necessary to set **B-CAM** to **ON** in **SET UP** when connecting the rear view camera.

When connecting with a multi-channel processor



When you connect a separately sold DVD player to the separetely sold multi-channel processor, the optical cable from DVD player must be connected to the optical cable 2 input (OPT. IN2) of the multi-channel processor.

When connecting with Vehicle Dynamics Processor and an iPod adapter



A

B

C

D

E

F

● Jigs List

Name	Jig No.	Remarks
Test Disc	GGV1018	Adjusting the skew
Screw lock	GYL1001	Adjusting the skew
33 pin extension cable	GGD1262	Connecting the monitor PCB to relay PCB(GGF1462)
Relay PCB	GGF1462	Connecting the monitor PCB extension cable to flexible PCB
Relay PCB	GGF1461	Connecting the monitor PCB extension cable to flexible PCB
20 pin extension cable	GGD1209	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1170	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1284	Connecting the mother unit to DVD mechanism module
2 pin extension cable	GGD1439	Connecting the mother unit to DVD mechanism module