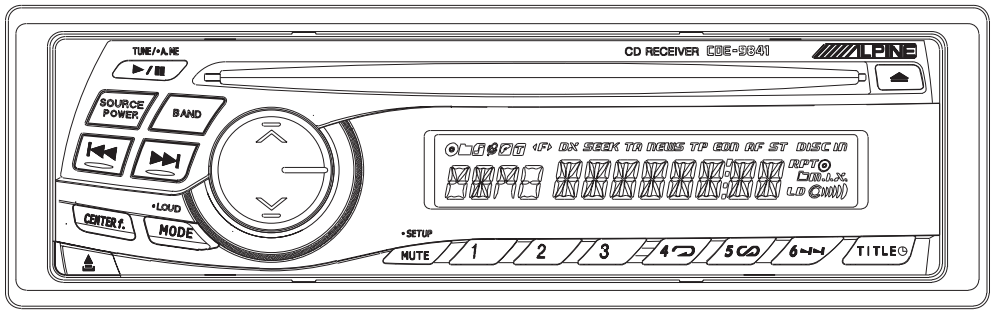
ALPINE

SERVICE MANUAL

FM/AM CD Receiver

COMPACT disc DIGITAL AUDIO



(CDE-9841)

2 / 05-A
68E38344S01

CDE-9841/CDE-9841E

<Cautions for Safe Repair Work>

The following cautions will prevent accidents in the workplace and will ensure safe products.
*The symbols indicate caution is needed to prevent injuries and damage to property.
The symbols and their meanings follow.

Warning	If you ignore this symbol and handle the product incorrectly or unsafely, serious injury or death may result.
Caution	If you ignore this symbol and handle the product incorrectly or unsafely, injury or only material damage may result.

*The following symbols indicate two levels of cautions.

	When you see this symbol, you have to be very careful.
	When you see this symbol, you have to follow the instructions there.

Warning

Do not look squarely into the laser light coming from the pickup. You may loose you sight.	**Fuse Caution** Always use a designated fuse. Use of an incorrect fuse may result in a fire.

Caution

Do not allow wiring to be caught in the screw/chassis. If wiring is caught in the screw/chassis, it may cause a short circuit, resulting in a fire.	**Battery Caution** Use the designated battery. Confirm the correct polarity and seat of the battery. An incorrect battery or an improperly connected or seated battery may result in a fire.
High Temperature Caution Touching the heat sink may cause severe burns.	**Designated Parts Caution** Look up the part list and ensure that only designated parts are used to prevent problems or accidents.
Reverse Power Supply Connections or Misconnections Caution Reverse power supply connections or misconnections may cause ignition problems and smoke may result.	**Wiring Caution** Ensure that the wiring is correct when rewiring to prevent problems with ignition/breakdown.
Soldering Caution Hot solder from solder splash may cause severe burns.	**Wear Gloves** Wear gloves to prevent electrical shocks or injury from the end face of the metal.

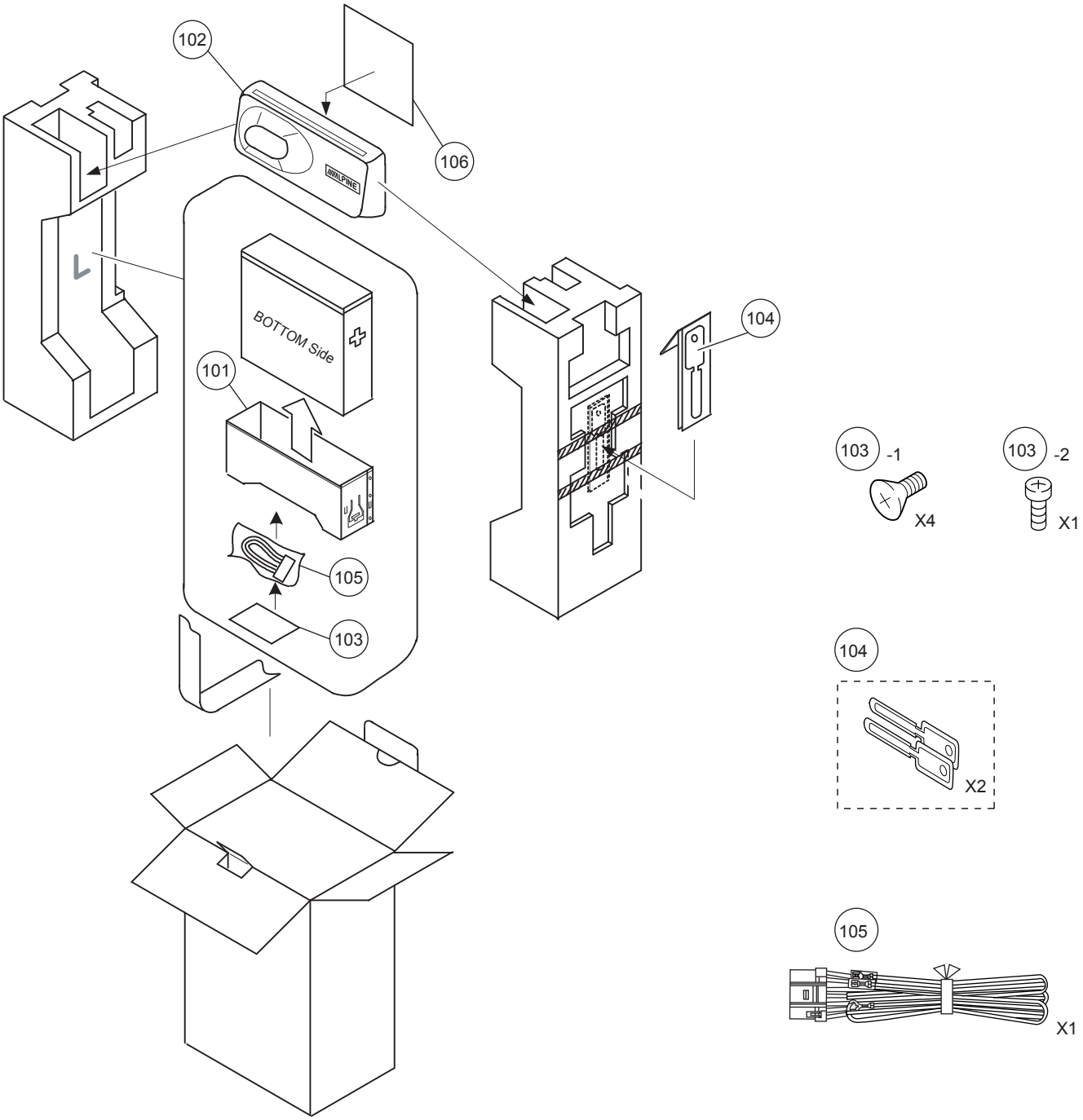
Packing Assembly Parts List

Symbol No.	Part No.	Description
101	15-01970Z01	CASE,INNER
102	15D01798K03	CARRYING,CASE
103-1	03S60820Y16	SCR,MCH 5X8 ZN A
103-2	03S60824Y01	SCR,WEV 1.7X4 ZN A
104	07-01964Z01	BKT,RELEASE

Symbol No.	Part No.	Description
#2 105	09-02256Z01	ASSY,ANIC-0008-01A
$2 105	09-01538Z05	ASSY,POWER WIRE9841E
%2 105	09-01538Z05	ASSY,POWER WIRE9841E
#2 106	68-00493Z95	O/M AOAM AOTA
$2 106	68-02278Z05	O/M AAO AODN
%2 106	68-02770Z01	O/M,AOCH 9841

NOTE: #2:For CDE-9841 Model Only, $2:For CDE-9841E(General Foreign) Model Only, %2:For CDE-9841E(Chinese) Model Only, Others:Common.

Packing Method View



Specifications

< FM RADIO >

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.7 to 107.9MHz (#1)
	87.5 to 108.0MHz ($1)
Usable Sensitivity (3% Dist., Mono, at 98.1MHz)	20.2dBf
Quieting Sensitivity (50dB S/N, Mono, at 98.1MHz)	20.2dBf
-3dB Limiting Sensitivity (at 98.1MHz)	20.2dBf
Residual Noise (Ref. 400Hz, at 98.1MHz)	30±10dB
S/N Ratio (at 98.1MHz)	Stereo : 55dB
	Mono : 60dB
Image Rejection (at 106.1MHz)	40dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 60dBu, at 98.1MHz)	1.5%
Frequency Response (Ref. 400Hz, at 98.1MHz)	100Hz : 0±3dB
	10kHz : -13±3dB
Stereo Separation (1kHz, at 98.1MHz)	20dB

< AM RADIO >

Intermediate Frequency	1st : 10.8MHz
	2nd : 450kHz
Frequency Range	530 to 1,710kHz (#1)
	531 to 1,602kHz ($1)
Usable Sensitivity (20dB S/N, at 1,000kHz(#1), 999kHz($1))	35dB
S/N Ratio (at 1,000kHz(#1), 999kHz($1))	44dB
Image Rejection (at 1,400kHz(#1), 1,404kHz($1))	2nd IF : 40dB
IF Rejection (at 600kHz(#1), 603kHz($1))	2nd IF : 60dB
Distortion (at 1,000kHz(#1), 999kHz($1))	1.5%
Frequency Response (Ref. 400Hz, at 1,000kHz(#1), 999kHz($1))	100Hz : -3±4dB
	4kHz : -14±6dB

< CD SECTION >

System	Optical (Compact Disc System)
Channel Balance (1kHz)	TCD-782 : 0±3dB
Distortion (1kHz)	TCD-782 : 0.3%
Frequency Response (Ref. 1kHz, 0dB)	TCD-782 : 17Hz : 0±3dB
	127Hz : 0±2dB
	10.007kHz : 0±2dB
	19.997kHz : -1±4dB
S/N Ratio	TCD-782 : 85dB
Separation (1kHz)	TCD-782 : 55dB
De-Emphasis (Ref. 1kHz, 0dB)	TCD-782 : 4kHz : -20±3dB
	16kHz : -20±3dB

NOTE : #1 : For CDE-9841 Model Only, $1 : For CDE-9841E Model Only, Others : Common.

< CD Deck Mechanism >

Test Disc TCD-782
RF Waveform Amplitude ..... 1.0±0.5Vp-p
Quantity of Jitter ..... Less than 30nsec
Measurement Angle Range ..... Front and Rear : -15°~75°
Right and Left : ±45°
Laser Current ..... Initial value ±5mA
(The initial value of laser current is indicated on the Flexible Cable.)

< Pickup >

Wave Length 795nm
Laser Power ..... CLASS I

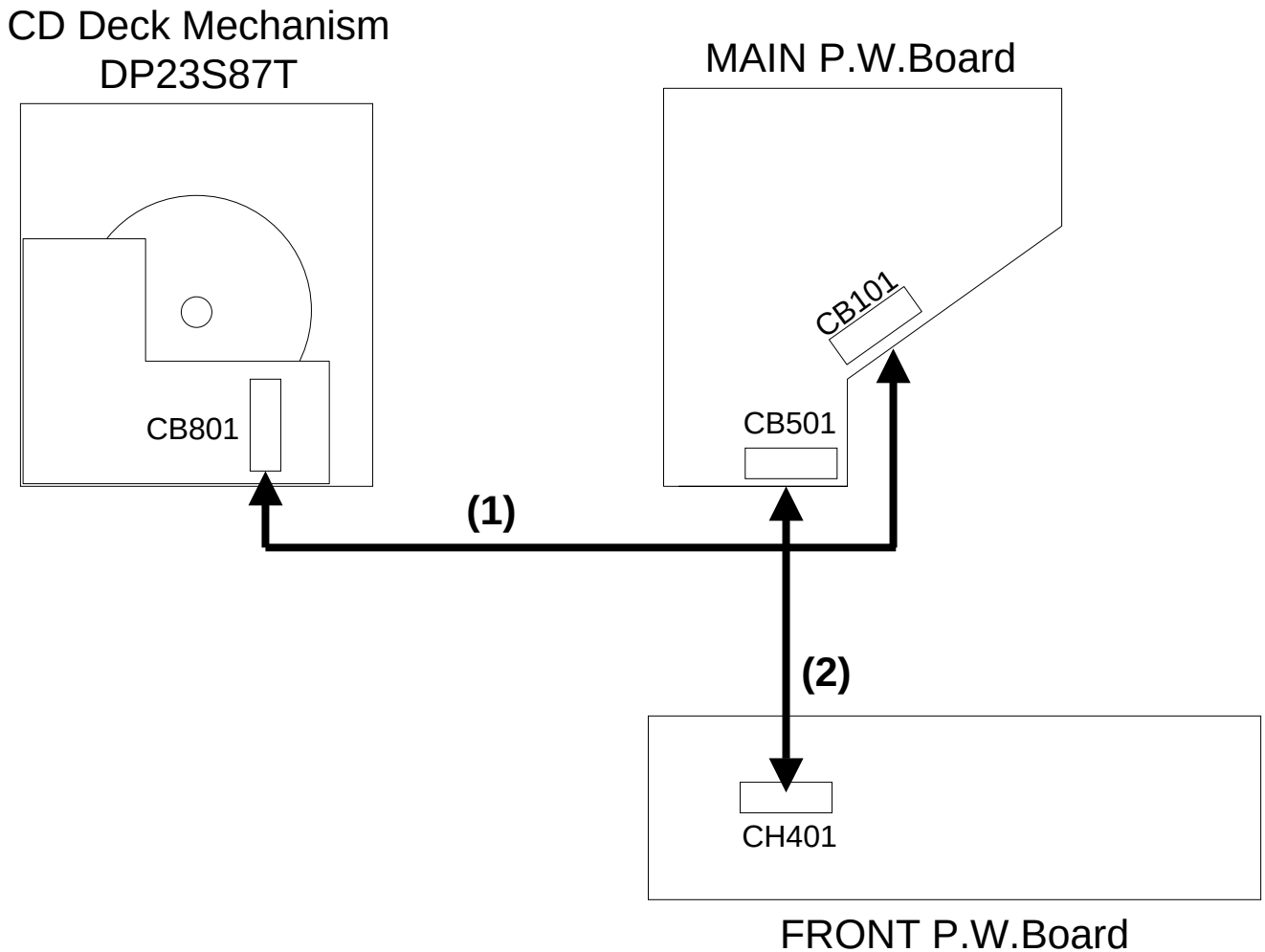
< GENERAL >

Power Supply DC14.4V
Power Output (FM 98.1MHz, Mod.1kHz, T.H.D.1%) / Impedance ..... 16W / ch / 4 ohm (#1)
(TCD-782 (1kHz, 0dB), T.H.D. 10%) / Impedance ..... 16W / ch / 4 ohm ($1)
Pre Output (TCD-782 (1kHz, 0dB), T.H.D. 1%) / Impedance ..... 6 +3/-2dBV / ch / 10k ohm
Back Up Current 5mA
Dimensions (W x H x D) ..... Chassis : 178 x 50 x 162mm
Nose : 188 x 58 x 18mm
Weight 1.6kg

NOTE : #1 : For CDE-9841 Model Only, $1 : For CDE-9841E Model Only, Others : Common.
: Due to Continuing product improvement, specifications and designs are subject to change without notice.

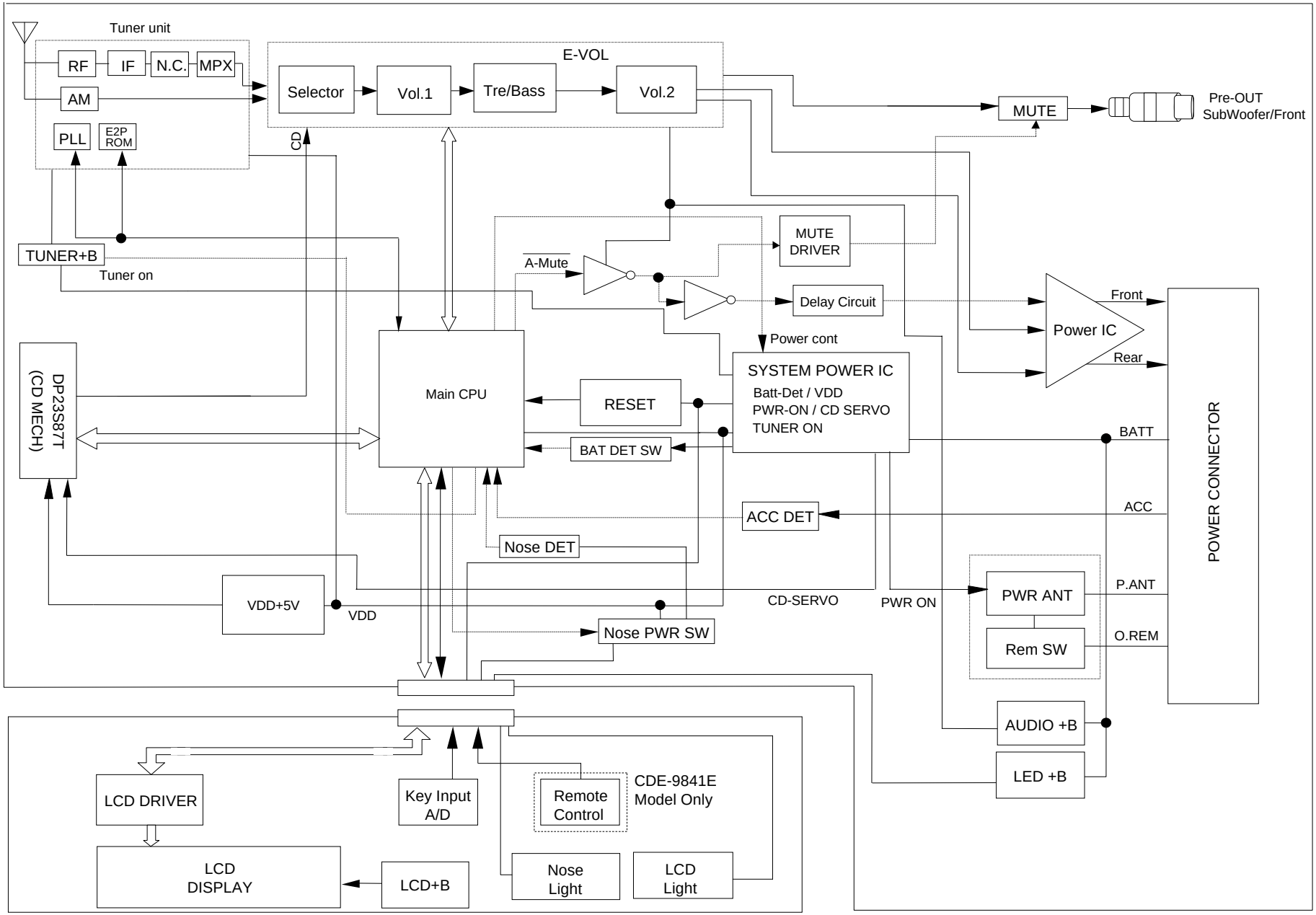
Extension Cable

*Always connect the Extension Cable when making checks of voltage and repair.

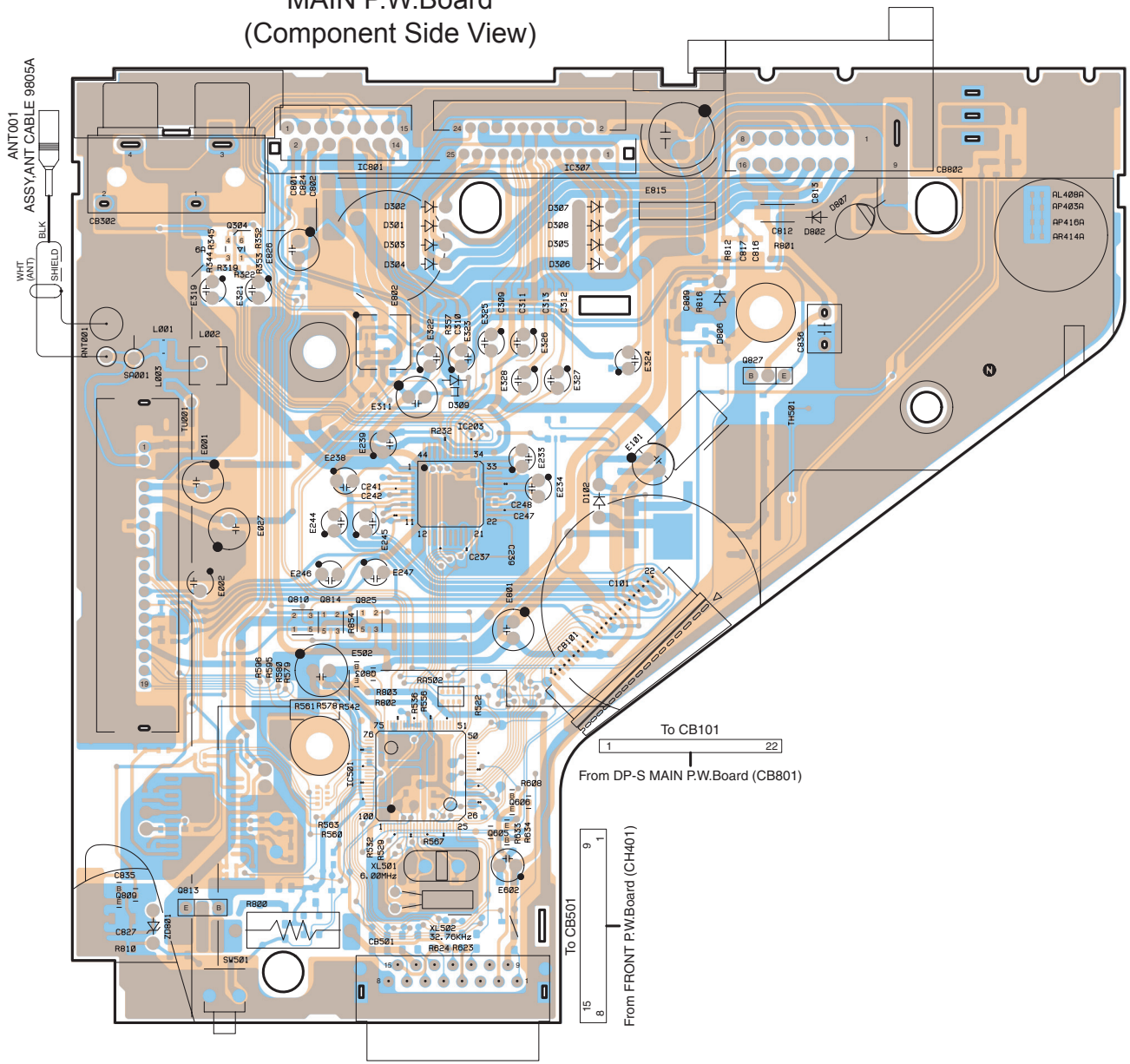


(1) 01E29616S01
(2) 01V37775S01

Block Diagram

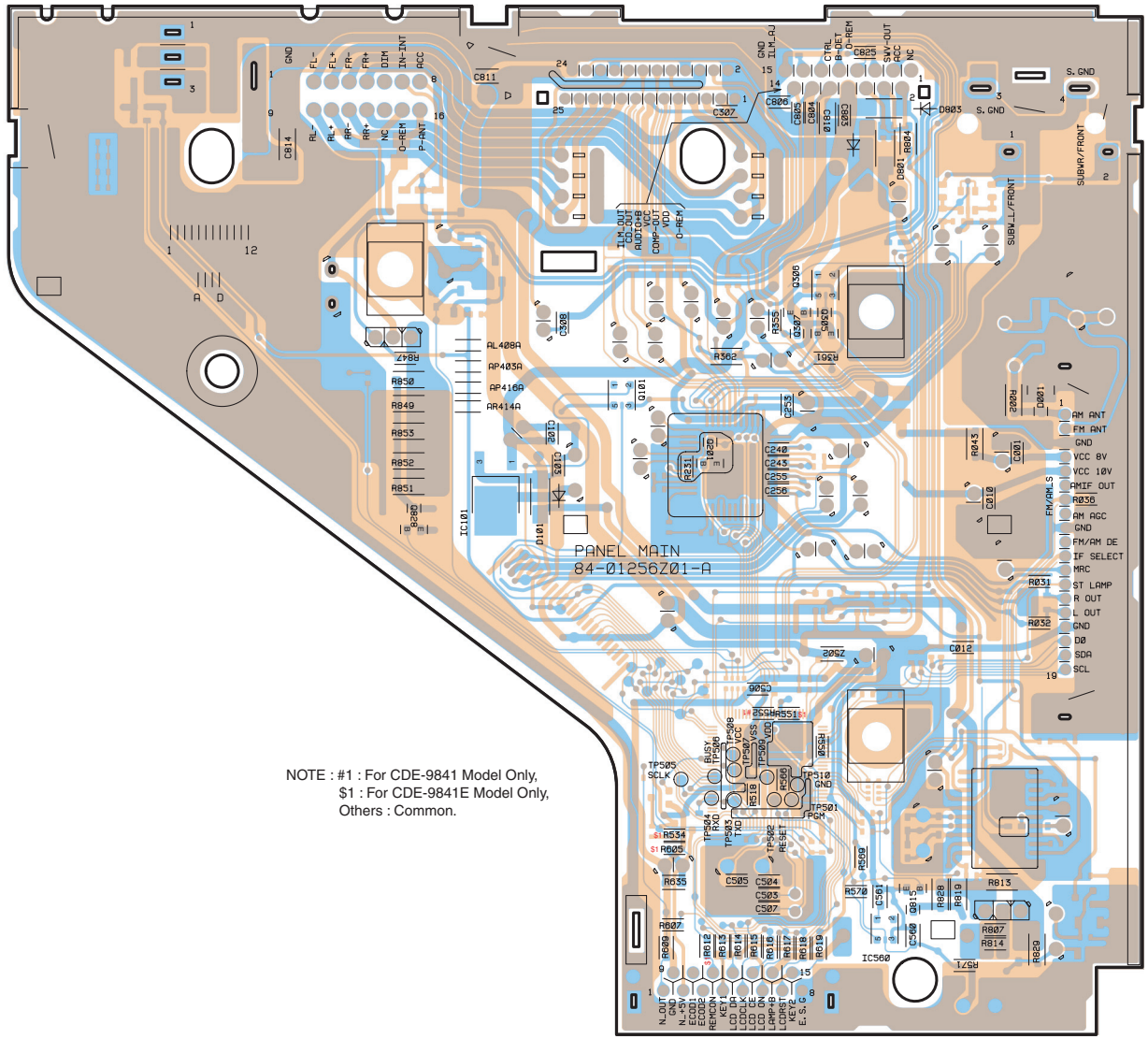


MAIN P.W.Board
(Component Side View)



Orange Color Pattern:Component Side Pattern
Blue Color Pattern:Foil Side Pattern

MAIN P.W.Board (Foil Side View)



NOTE : #1 : For CDE-9841 Model Only,
$1 : For CDE-9841E Model Only,
Others : Common.

Orange Color Pattern:Component Side Pattern
Blue Color Pattern:Foil Side Pattern

1

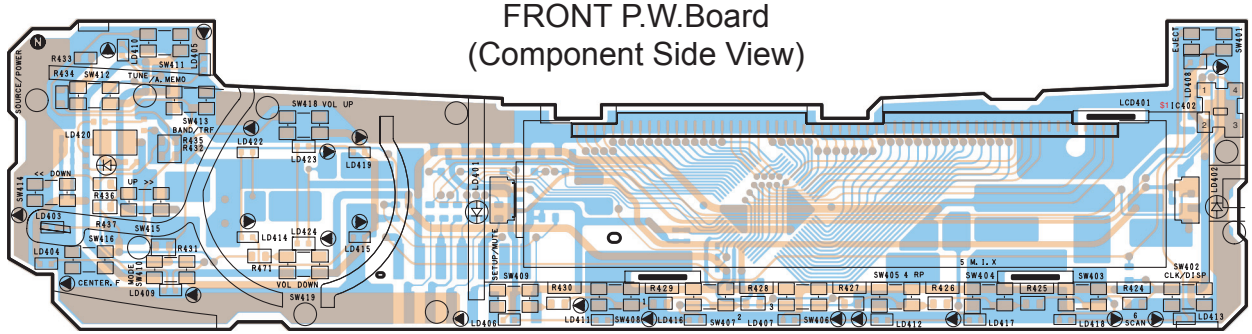
2

3

4

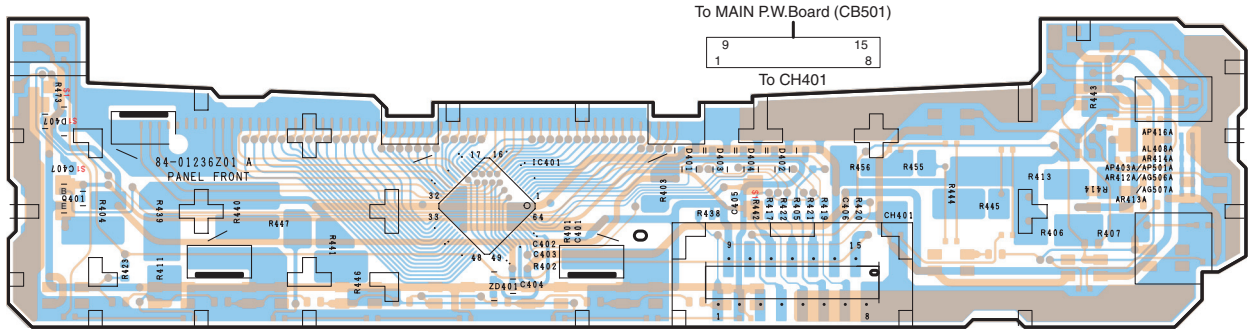
5

FRONT P.W.Board
(Component Side View)



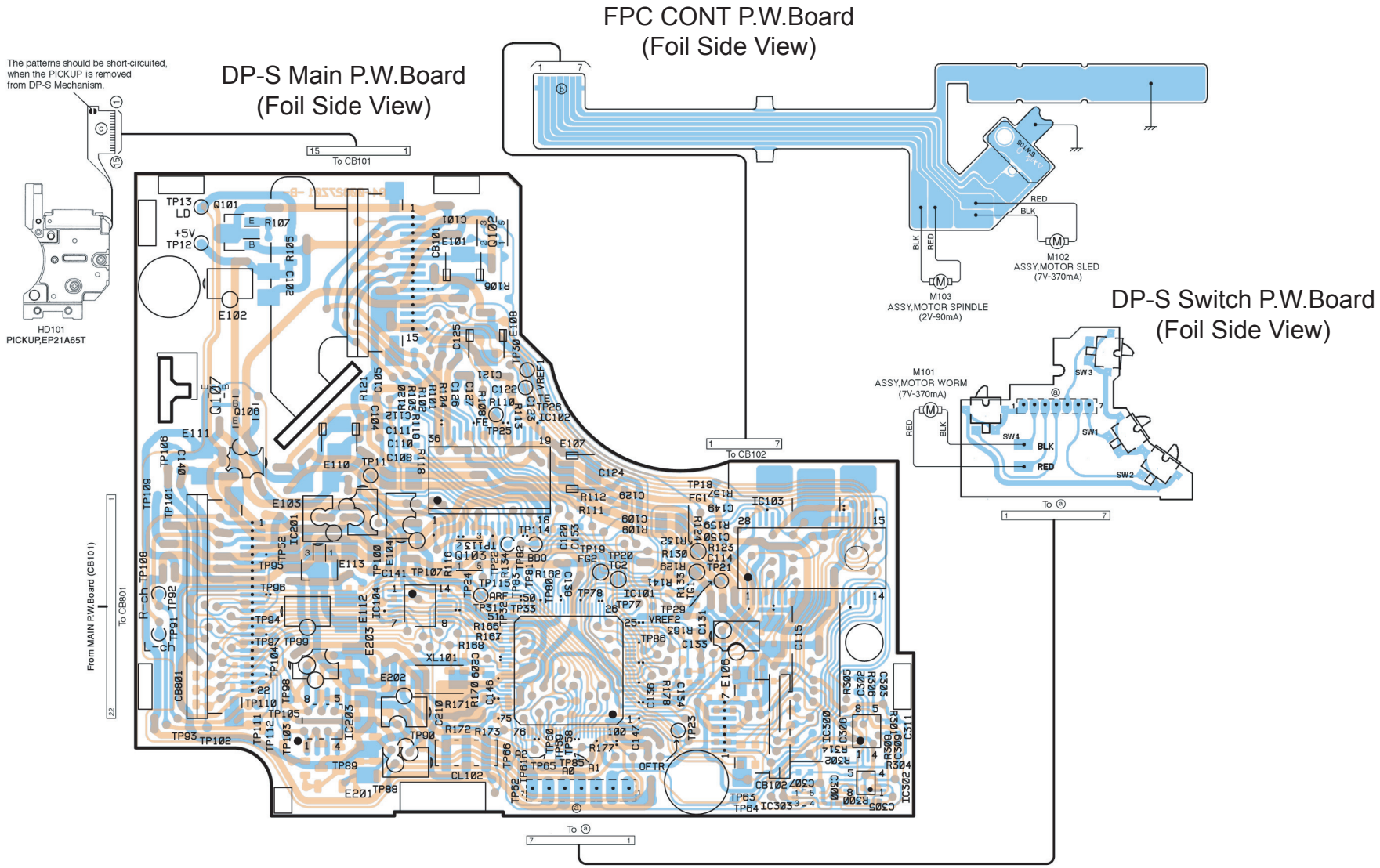
NOTE : $1 : For CDE-9841E Model Only,
Others : Common.

FRONT P.W.Board (Foil Side View)



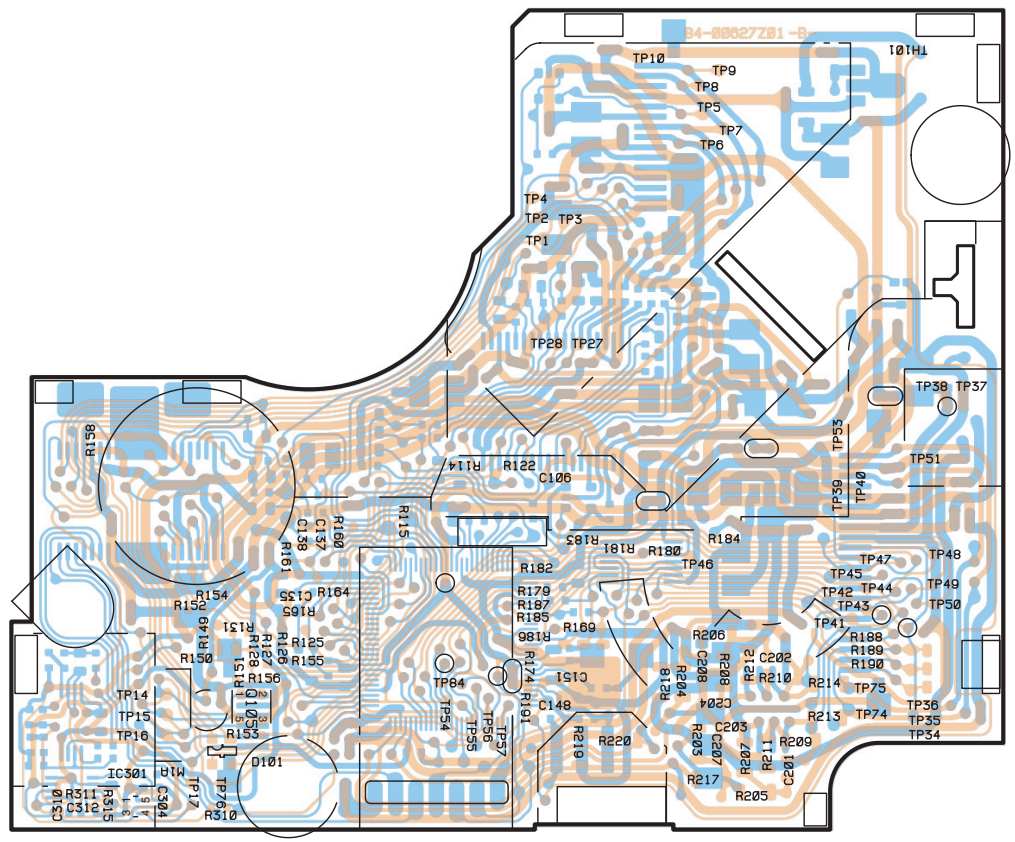
Orange Color Pattern:Component Side Pattern
Blue Color Pattern:Foil Side Pattern

A | B | C | D | E | F | G

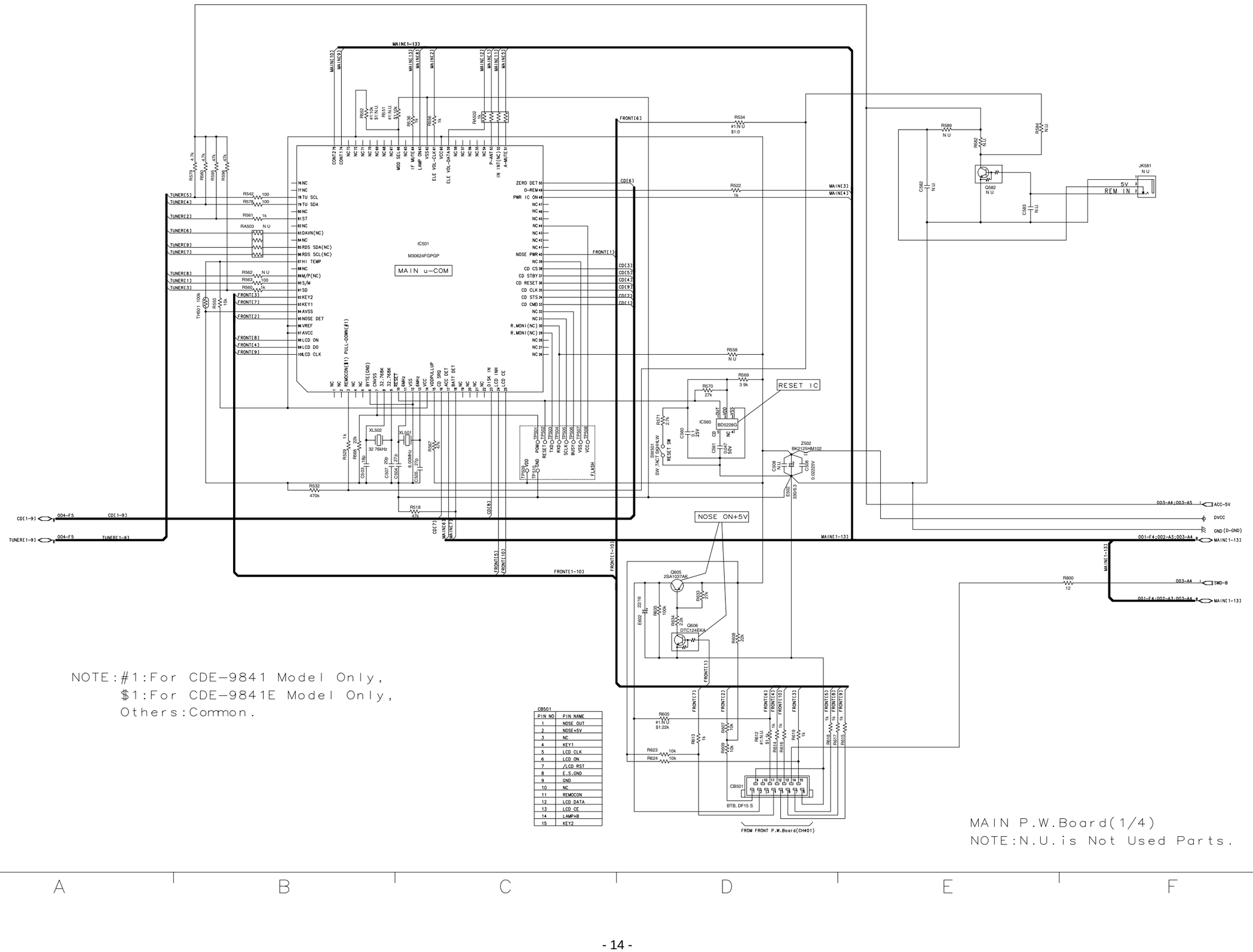


Orange Color Pattern:Component Side Pattern
Blue Color Pattern:Foil Side Pattern

DP-S Main P.W.Board
(Component Side View)



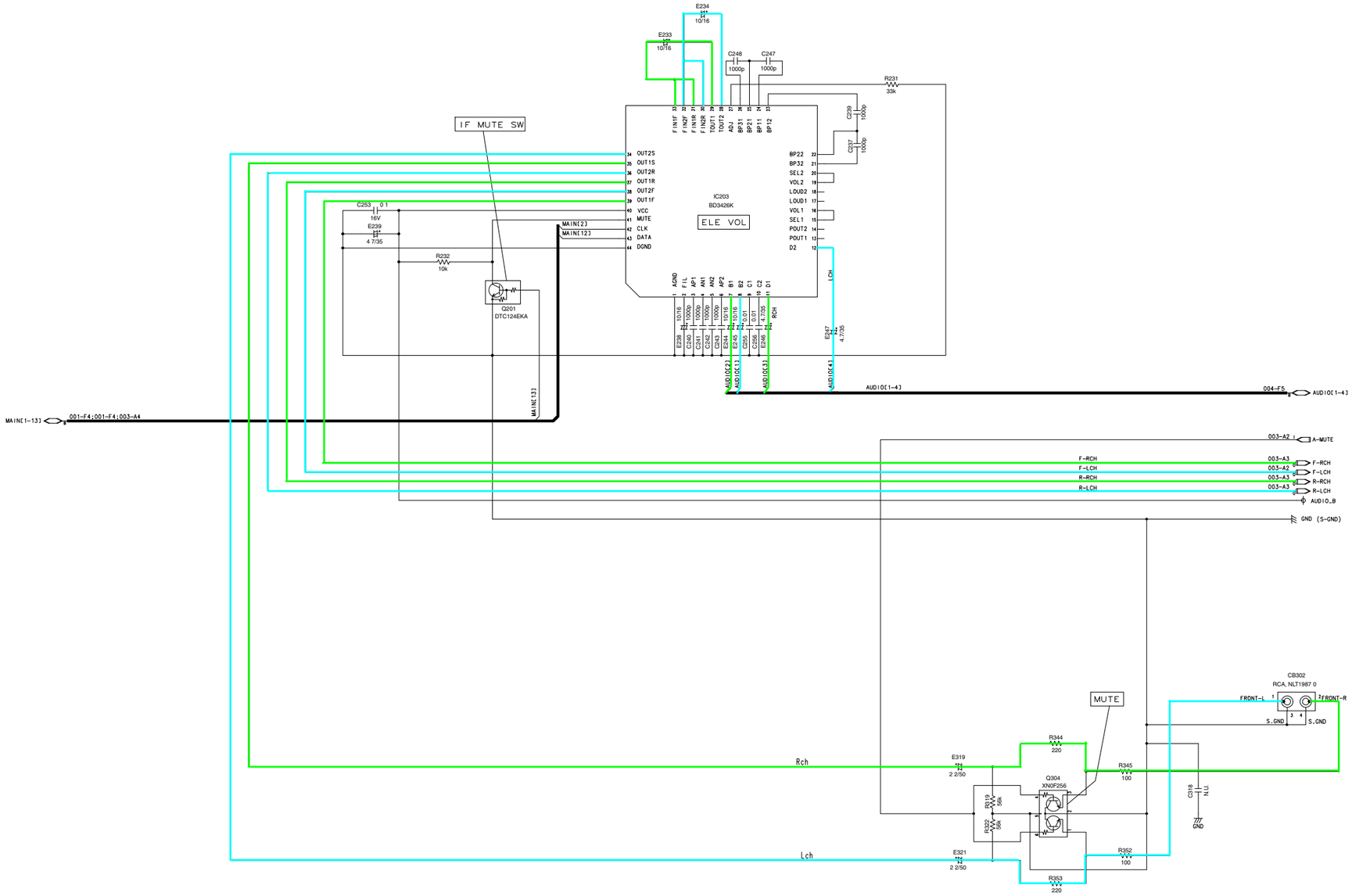
Orange Color Pattern:Component Side Pattern
Blue Color Pattern:Foil Side Pattern



CB501

PIN NO	PIN NAME
1	NOSE_OUT
2	NOSE+5V
3	NC
4	KEY1
5	LCD CLK
6	LCD ON
7	/LCD RST
8	E.S.GND
9	GND
10	NC
11	REMOCON
12	LCD DATA
13	LCD CE
14	LAMP+B
15	KEY2

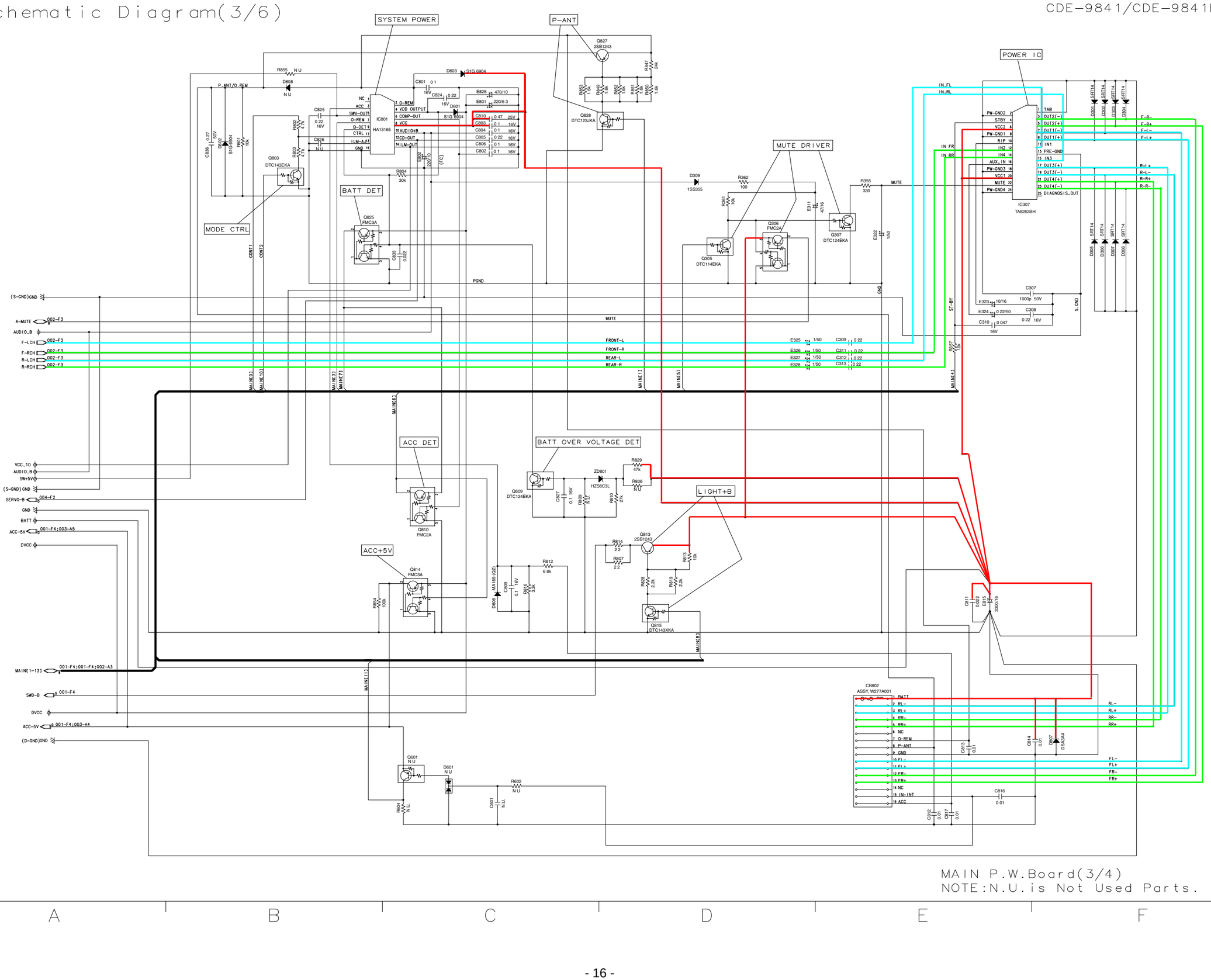
Schematic Diagram(2/6)



MAIN P.W.Board(2/4)
NOTE:N.U.is Not Used Parts.

Schematic Diagram(3/6)

CDE-9841/CDE-9841E

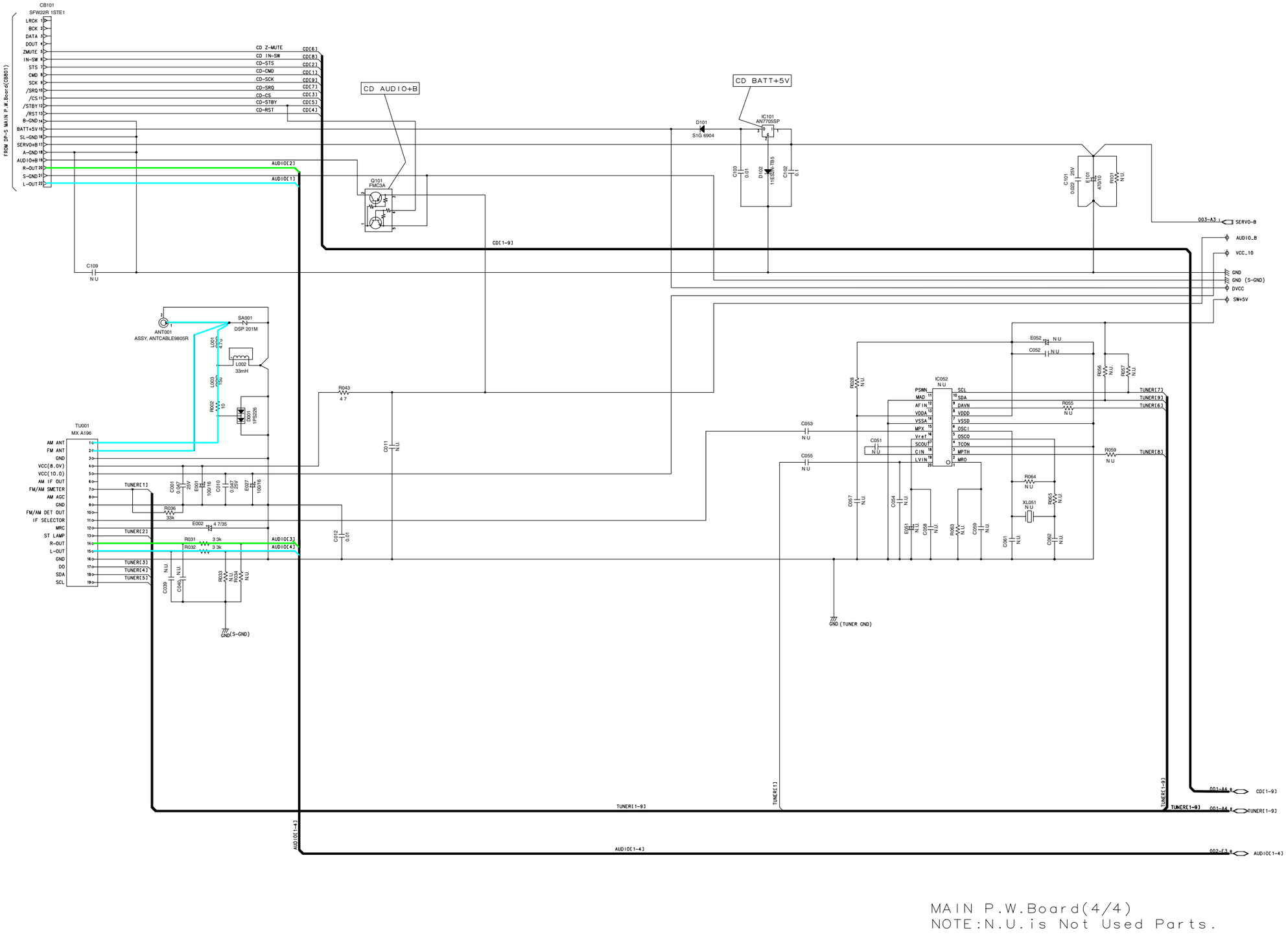


MAIN P.W.Board(3/4)

NOTE:N.U.is Not Used Parts.

Schematic Diagram(4/6)

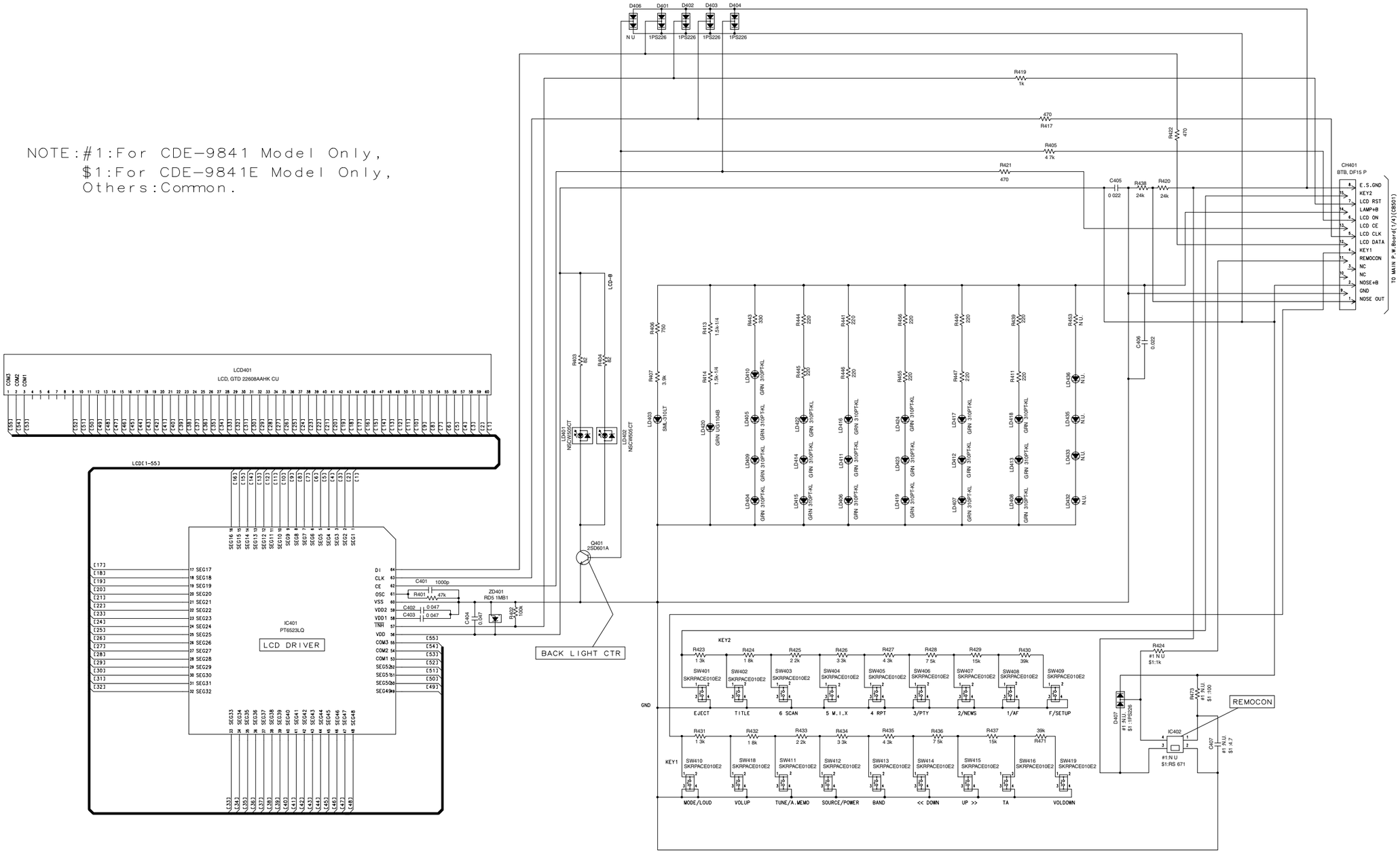
CDE-9841/CDE-9841E



MAIN P.W.Board(4/4)
NOTE:N.U.is Not Used Parts.

Schematic Diagram(5/6)

NOTE:#1:For CDE-9841 Model Only,
$1:For CDE-9841E Model Only,
Others:Common.



Schematic Diagram (6/6)

CDE-9841/CDE-9841E

DP-S MAIN P.W.Board

LASER DIODE SWITCHING

RF AMP STAND-BY SWITCHING

RF AMP & T/F ERROR AMP

AUTOMATIC LASER POWER CONTROL

SERVO PROCESSOR/DAC + CD MECHA u-COM

DIGITAL OUT SWITCHING

LOW PASS FILTER

5V REGULATOR (AUDIO)

SERVO DRIVER

ANALOG SWITCH

AND GATE

LOW PASS ACTIVE FILTER

MONOSTABLE MULTIVIBRATOR

BATT+B SW

DISC SCRATCH DETECT

DP-S MAIN P.W.Board

NOTE:N.U.is Not Used Parts.

Terminal Voltage of IC/TR

REF	NO.	HIGH(V)	LOW(V)
IC101	1	7.0(CD)	0(TUNER)
	2	0.6(CD)	0.2(TUNER)
	3	5.6(CD)	0.2(TUNER)

REF	NO.	HIGH(V)	LOW(V)
IC203	1	0(POW ON)	0(POW OFF)
	2	4.3(POW ON)	0(POW OFF)
	3	4.3(POW ON)	0(POW OFF)
	4	4.3(POW ON)	0(POW OFF)
	5	4.3(POW ON)	0(POW OFF)
	6	4.3(POW ON)	0(POW OFF)
	7	4.3(POW ON)	0(POW OFF)
	8	4.3(POW ON)	0(POW OFF)
	9	4.3(POW ON)	0(POW OFF)
	10	4.3(POW ON)	0(POW OFF)
	11	4.3(POW ON)	0(POW OFF)
	12	4.3(POW ON)	0(POW OFF)
	13	4.3(POW ON)	0(POW OFF)
	14	4.3(POW ON)	0(POW OFF)
	15	4.3(POW ON)	0(POW OFF)
	16	4.3(POW ON)	0(POW OFF)
	17	4.3(POW ON)	0(POW OFF)
	18	4.3(POW ON)	0(POW OFF)
	19	4.3(POW ON)	0(POW OFF)
	20	4.3(POW ON)	0(POW OFF)
	21	4.3(POW ON)	0(POW OFF)
	22	4.3(POW ON)	0(POW OFF)
	23	4.3(POW ON)	0(POW OFF)
	24	4.3(POW ON)	0(POW OFF)
	25	4.3(POW ON)	0(POW OFF)
	26	4.3(POW ON)	0(POW OFF)
	27	0.7(POW ON)	0(POW OFF)
	28	4.3(POW ON)	0(POW OFF)
	29	4.3(POW ON)	0(POW OFF)
	30	4.3(POW ON)	0(POW OFF)
	31	4.3(POW ON)	0(POW OFF)
	32	4.3(POW ON)	0(POW OFF)
	33	4.3(POW ON)	0(POW OFF)
	34	4.3(POW ON)	0(POW OFF)
	35	4.3(POW ON)	0(POW OFF)
	36	4.3(POW ON)	0(POW OFF)
	37	4.3(POW ON)	0(POW OFF)
	38	4.3(POW ON)	0(POW OFF)
	39	4.3(POW ON)	0(POW OFF)
	40	8.6(POW ON)	0(POW OFF)
	41	8.6(POW ON)	0(POW OFF)
	42	PULSE	PULSE
	43	PULSE	PULSE
	44	0(POW ON)	0(POW OFF)

REF	NO.	HIGH(V)	LOW(V)
IC307	1	0(POW ON)	0(POW OFF)
	2	0(POW ON)	0(POW OFF)
	3	7.6(POW ON)	0(POW OFF)
	4	4.8(POW IC ON)	0(POW IC OFF)
	5	7.6(POW ON)	0(POW OFF)
	6	14.4(POW ON)	14.4(POW OFF)
	7	7.6(POW ON)	0(POW OFF)
	8	0(POW ON)	0(POW OFF)
	9	7.6(POW ON)	0(POW OFF)
	10	9.0(POW ON)	0(POW OFF)
	11	1.4(POW ON)	0(POW OFF)
	12	1.4(POW ON)	0(POW OFF)
	13	0(POW ON)	0(POW OFF)
	14	1.4(POW ON)	0(POW OFF)
	15	1.4(POW ON)	0(POW OFF)
	16	1.4(POW ON)	0(POW OFF)
	17	7.6(POW ON)	0(POW OFF)
	18	0(POW ON)	0(POW OFF)
	19	7.6(POW ON)	0(POW OFF)
	20	14.4(POW ON)	14.4(POW OFF)
	21	7.6(POW ON)	0(POW OFF)
	22	4.1(NORMAL)	0(MUTE)
	23	7.6(POW ON)	0(POW OFF)
	24	0(POW ON)	0(POW OFF)
	25		

REF	NO.	HIGH(V)	LOW(V)
IC401-1	1	PULSE	PULSE
	2	PULSE	PULSE
	3	PULSE	PULSE
	4	PULSE	PULSE
	5	PULSE	PULSE
	6	PULSE	PULSE
	7	PULSE	PULSE
	8	PULSE	PULSE
	9	PULSE	PULSE
	10	PULSE	PULSE
	11	PULSE	PULSE
	12	PULSE	PULSE
	13	PULSE	PULSE
	14	PULSE	PULSE
	15	PULSE	PULSE
	16	PULSE	PULSE
	17	PULSE	PULSE
	18	PULSE	PULSE
	19	PULSE	PULSE
	20	PULSE	PULSE
	21	PULSE	PULSE
	22	PULSE	PULSE

REF	NO.	HIGH(V)	LOW(V)
IC401-2	23	PULSE	PULSE
	24	PULSE	PULSE
	25	PULSE	PULSE
	26	PULSE	PULSE
	27	PULSE	PULSE
	28	PULSE	PULSE
	29	PULSE	PULSE
	30	PULSE	PULSE
	31	PULSE	PULSE
	32	PULSE	PULSE
	33	PULSE	PULSE
	34	PULSE	PULSE
	35	PULSE	PULSE
	36	PULSE	PULSE
	37	PULSE	PULSE
	38	PULSE	PULSE
	39	PULSE	PULSE
	40	PULSE	PULSE
	41	PULSE	PULSE
	42	PULSE	PULSE
	43	PULSE	PULSE
	44	PULSE	PULSE
	45	PULSE	PULSE
	46	PULSE	PULSE
	47	PULSE	PULSE
	48	PULSE	PULSE
	49	PULSE	PULSE
	50	PULSE	PULSE
	51	PULSE	PULSE
	52	PULSE	PULSE
	53	PULSE	PULSE
	54	PULSE	PULSE
	55	PULSE	PULSE
	56	4.8(POW ON)	4.8(POW OFF)
	57	4.9(POW ON)	4.9(POW OFF)
	58	3.1(POW ON)	3.1(POW OFF)
	59	1.5(POW ON)	1.5(POW OFF)
	60	0(POW ON)	0(POW OFF)
	61	3.7(POW ON)	3.7(POW OFF)
	62	PULSE	PULSE
	63	PULSE	PULSE
	64	PULSE	PULSE

REF	NO.	HIGH(V)	LOW(V)
IC402 *	1	4.6(CD)	4.6(TUNER)
	2	0(CD)	0(TUNER)
	3	4.6(CD)	4.6(TUNER)
	4	0(CD)	0(TUNER)

* IC402 : For CDE-9841E Model Only

REF	NO.	HIGH(V)	LOW(V)
IC501-1	1		
	2		
	3	4.8(POW ON) *	4.8(POW OFF) *
	4		
	5		
	6	0(POW ON)	0(POW OFF)
	7	0(POW ON)	0(POW OFF)
	8	0.7(POW ON)	0.7(POW OFF)
	9	0.7(POW ON)	0.7(POW OFF)
	10	4.9(NORMAL)	0(RESET)
	11	2.5(POW ON)	2.5(POW OFF)
	12	0(POW ON)	0(POW OFF)
	13	2.3(POW ON)	2.3(POW OFF)
	14	4.9(POW ON)	4.9(POW OFF)
	15	4.9(POW ON)	4.9(POW OFF)
	16	4.8(CD)	0(TUNER)
	17	4.9(NORMAL)	0(ACC OFF)
	18	4.9(POW ON)	4.9(POW OFF)
	19		
	20		
	21		
	22		
	23	4.9(CD IN)	0(CD OUT)
	24	4.9(NOSE ON)	0(NOSE OFF)
	25	PULSE	PULSE
	26		
	27		
	28		
	29		
	30		
	31		
	32		
	33	PULSE	PULSE
	34	PULSE	PULSE
	35	PULSE	PULSE
	36	4.9(CD)	4.9(TUNER)
	37	4.8(CD)	0(TUNER)
	38	PULSE	PULSE
	39		
	40	4.9(NOSE ON)	0(NOSE OFF)
	41		
	42		
	43		
	44		
	45		
	46		
	47		
	48	4.9(POW IC ON)	0(POW IC OFF)
	49	4.8(POW ON)	0(POW OFF)
	50	4.8(0 MUTE)	0(ELSE)
	51	4.8(NORMAL)	0(MUTE)
	52		
	53	4.9(TUNER)	0(CD)

* PIN NO.3 : For CDE-9841E Model Only

REF	NO.	HIGH(V)	LOW(V)
IC501-2	54		
	55		
	56		
	57		
	58		
	59	PULSE	PULSE
	60	4.9(POW ON)	4.9(POW OFF)
	61	PULSE	PULSE
	62	0(POW ON)	0(POW OFF)
	63	4.8(NORMAL)	0(LAMP OFF)
	64	4.9(POW ON)	0(NORMAL)
	65		
	66	4.9(FM)	4.9(AM)
	67		
	68		
	69		
	70		
	71		
	72		
	73		
	74	4.9(POW ON)	0(POW OFF)
	75	4.8(TUNER)	0(CD)
	76		
	77		
	78	PULSE	PULSE
	79	PULSE	PULSE
	80		
	81	4.8(MONO)	0(ST)
	82		
	83		
	84		
	85		
	86		
	87	4.0(NORMAL)	0(HI-TEMP)
	88		
	89		
	90	4.0(FM)	2.9(AM)
	91	4.8(POW ON)	2.8(POW OFF)
	92	PULSE	PULSE
	93	PULSE	PULSE
	94	0(POW ON)	0(POW OFF)
	95	4.9(NOSE OFF)	2.4(NOSE ON)
	96	4.9(POW ON)	4.9(POW OFF)
	97	4.9(POW ON)	4.9(POW OFF)
	98	4.8(LCD ON)	0(LCD OFF)
	99	PULSE	PULSE
	100	PULSE	PULSE

REF	NO.	HIGH(V)	LOW(V)
IC560	1	5.0(NORMAL)	0(RESET)
	2	4.9(NORMAL)	1.9(RESET)
	3	0(NORMAL)	0(RESET)
	4		
	5	2.6(NORMAL)	0(RESET)

REF	NO.	HIGH(V)	LOW(V)
IC801	1		
	2	13.8(POW ON)	0(POW OFF)
	3	4.5(ACC ON)	0(ACC OFF)
	4	5.6(POW ON)	5.6(POW OFF)
	5	5.0(POW ON)	1.3(POW OFF)
	6	5.1(POW ON)	5.1(POW OFF)
	7	4.8(POW ON)	0(POW OFF)
	8	14.4(POW ON)	14.4(POW OFF)
	9	1.9(POW ON)	1.9(POW OFF)
	10	8.6(POW ON)	0(POW OFF)
	11	4.6(CD)	2.4(TUNER)
	12	7.0(CD)	0(TUNER)
	13	1.3(POW ON)	0(POW OFF)
	14	10.0(POW ON)	0(POW OFF)
	15	0(POW ON)	0(POW OFF)

REF	NO.	HIGH(V)	LOW(V)
Q101	1		
	2	8.5(CD)	0(TUNER)
	3	8.6(CD)	8.6(TUNER)
	4	4.9(CD)	0(TUNER)
	5	0(CD)	0(TUNER)

REF	NO.	HIGH(V)	LOW(V)
Q201	B	4.8(POW ON)	0(NORMAL)
	C	8.5(POW ON)	0(POW OFF)
	E	0(POW ON)	0(POW OFF)

REF	NO.	HIGH(V)	LOW(V)
Q304	1	0(NORMAL)	0(MUTE)
	2	0(NORMAL)	0(MUTE)
	3	0(NORMAL)	0(MUTE)
	4	14.4(MUTE)	0(NORMAL)
	5	0(NORMAL)	0(MUTE)
	6	14.4(MUTE)	0(NORMAL)

REF	NO.	HIGH(V)	LOW(V)
Q305	B	4.4(NORMAL)	0(MUTE)
	C	4.3(MUTE)	0(NORMAL)
	E	0(NORMAL)	0(MUTE)

REF	NO.	HIGH(V)	LOW(V)
Q306	1		
	2	14.4(MUTE)	0(NORMAL)
	3	14.4(NORMAL)	14.4(MUTE)
	4	4.3(MUTE)	0(NORMAL)
	5	0(NORMAL)	0(NORMAL)

REF	NO.	HIGH(V)	LOW(V)
Q307	B	4.0(MUTEL)	0(NORMA)
	C	4.3(NORMAL)	0(MUTE)
	E	0(NORMAL)	0(MUTE)

REF	NO.	HIGH(V)	LOW(V)
Q401	E	0.8(POW ON)	0(POW OFF)
	B	2.7(POW OFF)	0.1(POW ON)
	C	0(POW ON)	0(POW OFF)

REF	NO.	HIGH(V)	LOW(V)
Q605	B	4.9(NOSE OFF)	4.1(NOSE ON)
	C	4.9(NOSE ON)	0(NOSE OFF)
	E	4.9(NOSE OFF)	4.9(NOSE ON)

REF	NO.	HIGH(V)	LOW(V)
Q606	B	4.9(NOSE ON)	0(NOSE OFF)
	C	4.9(NOSE OFF)	0(NOSE ON)
	E	0(NOSE ON)	0(NOSE OFF)

REF	NO.	HIGH(V)	LOW(V)
Q803	B	4.8(TUNER)	0(CD)
	C	4.6(CD)	0(TUNER)
	E	0(TUNER)	0(CD)

REF	NO.	HIGH(V)	LOW(V)
Q809	B	1.2(OverVoltage)	0(NORMAL)
	C	1.9(NORMAL)	0(OverVoltage)
	E	0(OverVoltage)	0(OverVoltage)

REF	NO.	HIGH(V)	LOW(V)
Q810	1		
	2	4.9(ACC ON)	0(ACC OFF)
	3	4.9(ACC ON)	4.9(ACC OFF)
	4	5.1(ACC ON)	0(ACC OFF)
	5	0(ACC ON)	0(ACC OFF)

REF	NO.	HIGH(V)	LOW(V)
Q813	E	14.4(NOSE OFF)	13.7(NOSE ON)
	C	14.4(NOSE ON)	0(NOSE OFF)
	B	14.4(NOSE ON)	14.4(NOSEOFF)

REF	NO.	HIGH(V)	LOW(V)
Q814	1		
	2	4.9(ACC ON)	0(ACC OFF)
	3	5.0(ACC ON)	5.0(ACC OFF)
	4	4.9(ACC ON)	0(ACC OFF)
	5	0(ACC ON)	0(ACC OFF)

REF	NO.	HIGH(V)	LOW(V)
Q815	B	4.8(NORMAL)	0(NOSE OFF)
	C	14.4(NOSE OFF)	0(NORMAL)
	E	0(NORMAL)	0(NOSE OFF)

REF	NO.	HIGH(V)	LOW(V)
Q825	1		
	2	4.9(POW ON)	4.9(POW OFF)
	3	4.9(POW ON)	4.9(POW OFF)
	4	1.9(POW ON)	1.9(POW OFF)
	5	0(POW ON)	0(POW OFF)

REF	NO.	HIGH(V)	LOW(V)
Q827	E	13.8(CD)	13.6(TUNER)
	C	13.6(TUNER)	0(CD)
	B	13.8(CD)	12.9(TUNER)

REF	NO.	HIGH(V)	LOW(V)
Q828	E	0(TUNER)	0(CD)
	B	3.5(TUNER)	0(CD)
	C	13.8(CD)	0(TUNER)

[Measuring Conditions]

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Multimeter
3. Measuring Point Reference : Between GND
4. Measuring Condition : See each data

(CD Deck Mechanism)

IC101									
1	0.04	21	0.02	41	NC	61	NC	81	0.05
2	0.2	22	NC	42	2.83	62	NC	82	0.05
3	0.05	23	2.6	43	NC	63	0.05	83	0.05
4	0.04	24	1.25	44	NC	64	0.04	84	4.93
5	4.98	25	1.77	45	NC	65	0.04	85	NC
6	NC	26	NC	46	NC	66	5.05	86	NC
7	NC	27	0.04	47	0.04	67	5.05	87	NC
8	0.04	28	2.06	48	NC	68	OSC	88	5.05
9	5.03	29	2.5	49	NC	69	OSC	89	5.03
10	-	30	2.5	50	NC	70	0.04	90	5
11	-	31	NC	51	0.04	71	OSC	91	0.02
12	2.5	32	2.5	52	0.04	72	OSC	92	5.03
13	NC	33	2.5	53	0.04	73	5.05	93	5.03
14	NC	34	2.5	54	0.04	74	5.01	94	4.96
15	2.5	35	2.5	55	5.05	75	0.03	95	*
16	NC	36	2.5	56	2.5	76	0.03	96	4.96
17	NC	37	2.2	57	2.5	77	0.03	97	2.51
18	NC	38	5.03	58	2.5	78	5.02	98	5.02
19	0.02	39	0.04	59	NC	79	0.05	99	2.51
20	2.5	40	0.04	60	0.04	80	NC	100	0.03

NOTE : * : Changing Voltage by Temperature

IC102							
1	2.51	10	1.73	19	NC	28	2.38
2	4.7	11	3.01	20	2.51	29	-
3	4.95	12	2.5	21	4.96	30	-
4	0.04	13	3.1	22	2.48	31	2.53
5	2.47	14	0.05	23	2.48	32	2.53
6	2.84	15	3.04	24	2.49	33	2.53
7	2.02	16	0.2	25	NC	34	2.53
8	2.83	17	0.05	26	2.49	35	2.53
9	1.41	18	0.04	27	2.49	36	2.69

IC104	
1	5.04
2	5
3	5.03
4	0.05
5	0.05
6	0.04
7	0.04
8	0.04
9	2.53
10	0.05
11	0.04
12	0.05
13	2.5
14	5.04

IC103							
1	0.07	8	6.93	15	3.14	22	2.51
2	2.5	9	0.06	16	3.37	23	2.51
3	2.5	10	0.06	17	3.21	24	2.49
4	2.5	11	2.93	18	3.24	25	2.46
5	2.5	12	3.62	19	0.04	26	2.5
6	2.5	13	6.27	20	2.52	27	2.5
7	2.5	14	3.29	21	4.96	28	0.07

IC201	
1	5.03
2	0.02
3	8.01

IC203	
1	2.53
2	2.5
3	2.5
4	0.02
5	2.5
6	2.5
7	2.5
8	5.02

IC300	
1	2.56
2	2.56
3	2.46
4	0.02
5	2.5
6	2.52
7	2.52
8	4.9

IC301		
1	2.45	
2	2.5	
3	0.02	
4	0.02	*1
5	4.9	

IC302		
1	0.02	
2	0.07	*2
3	5	
4	0.02	
5	0.02	*1
6	0.02	
7	4.9	
8	5	

IC303		
1	0.02	*1
2	0.04	*2
3	0.02	
4	0.02	*1
5	5	

*1 When a defect is detected :4.9V
*2 When a defect is detected :4.1V

	E	C	B
Q101	4.36	2.55	3.69
Q106	0.08	0.12	5.05
Q107	0.12	5.06	4.99

	1	2	3	4	5
Q102	0.09	2.54	6.09	0.08	5.01
Q103	0.08	2.51	0.08	0.08	4.96
Q105	5.03	2.51	5.03	0.08	0.07

[Measuring Conditions]
1.Power Supply Voltage : DC14.4V
2.Measuring Meter : Digital Multi Voltmeter
3.Measuring Point Reference : Between GND
4.Measuring Condition : at playing Disc

Description of IC Terminal

M30624FGPGP : IC501

No.	Symbol	I/O	Terminal Description
1	NC	-	No connect terminal.
2			
3	REMOCON ($1)	I	Remote control signal input terminal.
	PULL-DOWN (#1)	-	Pull-down connect terminal.
4	NC	-	No connect terminal.
5			
6	BYTE(GND)	-	GND connect terminal.
7	CNVSS		
8	32.768K	I	Crystal connect terminal for sub system clock OSC.
9		O	
10	$\overline{\text{RESET}}$	I	System Reset input terminal.
11	6MHz	O	Crystal connect terminal for main system clock OSC.
12	VSS	-	GND connect terminal.
13	6MHz	I	Crystal connect terminal for main system clock OSC.
14	VCC	-	Power supply connect terminal.
15	VDDPULLUP	-	Pull-up connect terminal.
16	CD SRQ	I	CD SRQ input terminal.
17	ACC DET	I	ACC ON detection signal input terminal.
18	BATT DET	I	BATT ON detection signal input terminal.
19	NC	-	No connect terminal.
I			
22			
23	DISC IN	I	CD DISC-IN detection signal input terminal.
24	LCD INH	O	LCD INH signal output terminal.
25	LCD CE	O	LCD CE signal output terminal.
26	NC	-	No connect terminal.
27			
28			
29	R.MONI(NC)		
30			
31	NC		
32			
33	CD CMD	O	CMD signal output terminal to CD MECH.
34	CD STS	I	STS signal input terminal from CD MECH.
35	CD CLK	O	CLK signal output terminal to CD MECH.
36	CD RESET	O	RESET signal output terminal to CD MECH.
37	CD STBY	O	STBY signal output terminal to CD MECH.
38	CD CS	O	CS signal output terminal to CD MECH.
39	NC	-	No connect terminal.
40	NOSE PWR	O	Power supply control signal output terminal for NOSE.
41	NC	-	No connect terminal.
I			
47			
48	PWR IC ON	O	Power-IC Stand-by control signal output terminal.
49	O-REM	O	OUT-REM signal output terminal.
50	ZERO DET	I	0 bit MUTE signal input terminal from CD-uCOM.
51	A-MUTE	O	A-MUTE signal output terminal.

NOTE : #1 : For CDE-9841 Model Only, $1 : For CDE-9841E Model Only, Others : Common.

No.	Symbol	I/O	Terminal Description
52	IN INT(NC)	-	No connect terminal.
53	P-ANT	O	External Power ANT control signal output terminal.
54	NC	-	No connect terminal.
I			
58			
59	ELE VOL-DATA	I/O	E-VOL DATA input / output terminal.
60	VCC	-	Power supply connect terminal.
61	ELE VOL-CLK	O	E-VOL CLOCK output terminal.
62	VSS	-	GND connect terminal.
63	LAMP ON	O	Lighting power supply control output terminal.
64	IF MUTE	O	IF MUTE signal output terminal.
65	NC	-	No connect terminal.
66	MOD SEL	I	Destination switching input terminal.
67	NC	-	No connect terminal.
I			
73			
74	CONT1	O	System Power IC (HA13165) control signal output terminal.
75	CONT2		
76	NC	-	No connect terminal.
77			
78	TU SCL	O	Serial clock output terminal to TUNER.
79	TU SDA	I/O	Serial data input / output terminal to TUNER.
80	NC	-	No connect terminal.
81	ST	I	ST signal input terminal.
82	NC	-	No connect terminal.
83	DAVN(NC)		
84	NC		
85	RDS SDA(NC)		
86	RDS SCL(NC)		
87	HI TEMP	I	CD HI-TEMP input terminal.
88	NC	-	No connect terminal.
89	M/P(NC)		
90	S/M	I	TUNER S/M level input terminal.
91	SD	I	SD signal input terminal.
92	KEY2	I	KEY signal input terminal.
93	KEY1		
94	AVSS	-	GND connect terminal for A/D Converter.
95	NOSE DET	I	NOSE installation detect terminal.
96	VREF	-	Reference voltage input terminal for A/D Converter.
97	AVCC	-	Power supply connect terminal for A/D Converter.
98	LCD ON	O	LCD back-lighting control terminal.
99	LCD DO	O	Data output terminal to LCD Driver.
100	LCD CLK	O	Clock output terminal to LCD Driver.

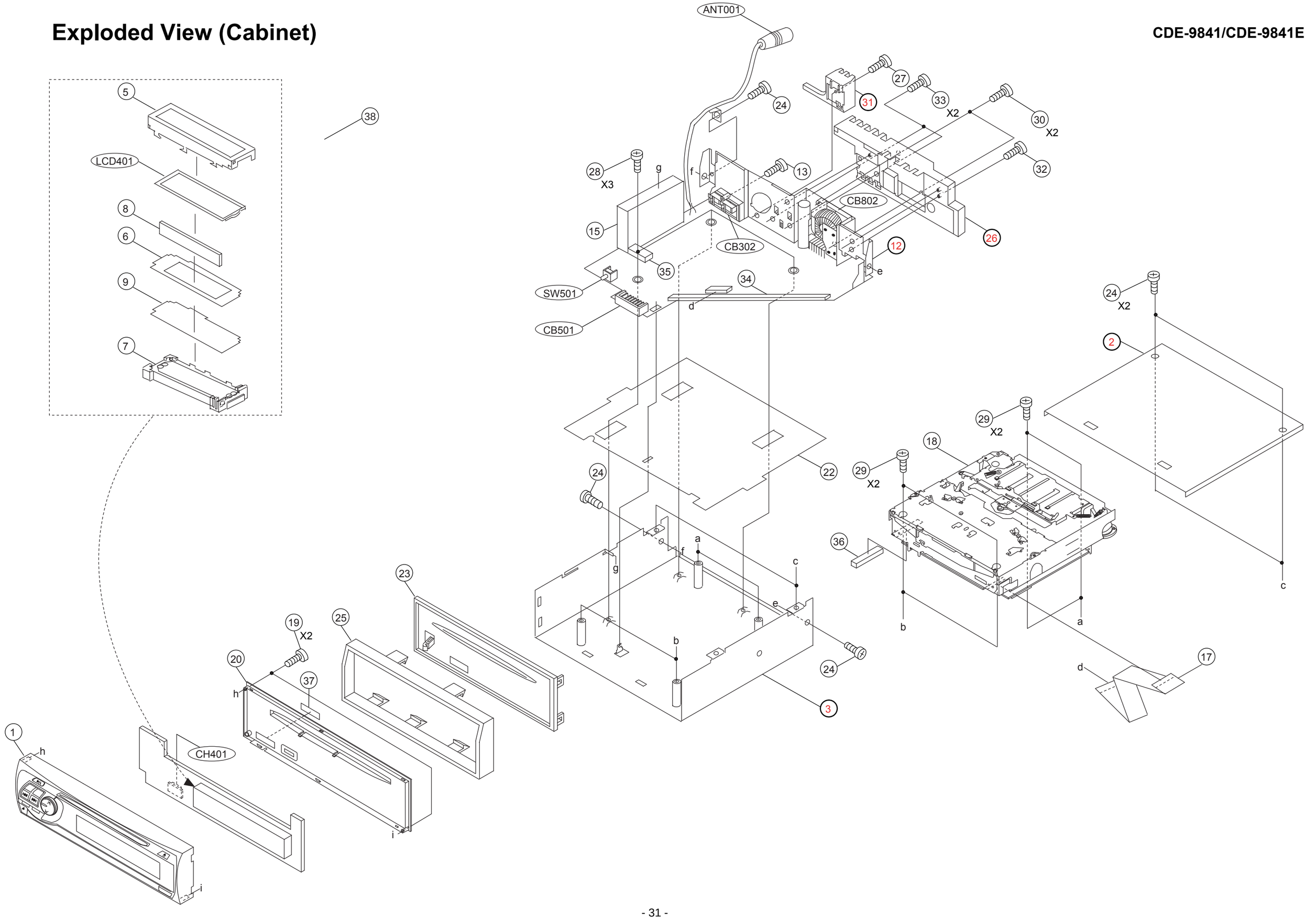
MN662771AW : IC101 (DP23S87T)

No.	Symbol	I/O	Terminal Description
1	BDO	I	Drop-Out signal input terminal. (H:Drop-Out)
2	OFT	I	Off Track signal input terminal. (H:Off Track)
3	/RFDET	I	RF detect signal input terminal. (L:detection)
4	VDET	I	Vibration detect signal input terminal. (H:detection)
5	LDON	O	Laser ON signal output terminal. (H:ON)
6 7	NC	-	No connect terminal.
8	AVSS3	-	GND connect terminal for analog circuit.
9	AVDD3	-	Power supply terminal for analog circuit.
10	FBAL	O	Focus Balance adjustment output terminal.
11	TBAL	O	Tracking Balance adjustment output terminal.
12	FE	I	Focus Error signal input terminal. (analog input)
13 14	NC	-	No connect terminal.
15	TE	I	Tracking Error signal input terminal. (analog input)
16 I 18	NC	-	No connect terminal.
19	RFENV	I	RF Envelop signal input terminal. (analog input)
20	VREF	I	VREF input terminal.
21	ARF	I	RF signal input terminal. (for DSL)
22	DRF(NC)	I	Bias terminal for DSL. (No connect)
23	DSLF	I/O	Roop Filter terminal for DSL.
24	IREF	I	Standard current input terminal.
25	PLLF	I/O	Roop Filter terminal for PLL.
26	PLLF2	I/O	Characteristic Roop Filter switching terminal for PLL.
27	VCOF	I/O	Roop Filter terminal for VCO.
28	VCOF2	I/O	Terminal of Digital Servo (33.8688MHz)/Roop Filter for VCO.
29	TRV	O	Traverse compulsion sending output terminal.
30	TVD	O	Traverse drive output terminal.
31	PC	O	Spindle Motor ON output terminal.
32	ECM	O	Spindle Motor driving signal terminal. (compulsion mode output) 3-State
33	ECS	O	Spindle Motor driving signal terminal. (Servo Error signal output)
34	KICK	O	Kick Pulse output terminal. 3-State
35	TRD	O	Tracking Drive output terminal.
36	FOD	O	Focus Drive output terminal.
37	TOFS	O	Tracking Offset adjustment output terminal.
38	AVDD2	-	Power supply terminal for analog circuit. (for DSL,PLL,AD and DA block)
39	AVSS2	-	GND connect terminal for analog circuit. (for DSL,PLL,AD and DA block)
40	DVSS2	-	GND connect terminal for digital circuit.
41	EFM/CK384(NC)	O	EFM signal output terminal at IOSEL=L. (No connect)
42	PCK/DSLB	O	PLL Sampling Clock output terminal. (fPCK=4.3218MHz) *at default:PLL Sampling Clock output *at fulfillment command:DSL Balance output
43	/CLDCK(NC)	O	Sub Code Frame Clock signal output terminal. (fCLDCK=7.35KHz) (No connect)
44	FCLK(NC)	O	Crystal Frame Clock signal output terminal. (fFCLK=7.35KHz) (No connect)
45	IPFLAG(NC)	O	Interpolation Flag signal output terminal. (H:Interpolation) (No connect)

No.	Symbol	I/O	Terminal Description
46	FLAG(NC)	O	Flag signal output terminal. (No connect)
47	TRCRS	I	Track Cross signal input terminal.
48	STOUT(NC)	O	Serial Data output terminal for monitor signal. (SENSE,NFLOCK,NTLOCK…etc.) (No connect)
49	STLD(NC)	O	Load signal output terminal for monitor signal. (No connect)
50	SMCK(NC)	O	Bit Clock signal output terminal for monitor signal. (fSMCK=4.2336MHz) (No connect)
51	CSEL(GND)	I	OSC frequency appointment terminal. (L:OSC frequency=16.9344MHz, usually:L) (GND connect)
52	TEST1(GND)	I	Test1 terminal. (usually:L) (GND connect)
53	TEST2(GND)	I	Test2 terminal. (usually:L) (GND connect)
54	IOSEL(GND)	I	Input mode set up terminal of DAC outside data for audio. (GND connect)
55	/RST	I	Reset input terminal from CD Signal Processor LSI block. (L:Reset)
56	BCLK	O	Bit Clock output terminal for SRDATA.
57	LRCK	O	L/R discrimination signal output terminal.
58	SRDATA	O	Serial Data output terminal.
59	SUBC(NC)	O	Sub code serial output terminal. (No connect)
60	SBCK(GND)	I	Clock input terminal for sub code serial output. (GND connect)
61	DQSY(NC)	O	Sub code block clock signal terminal. (No connect)
62	DEMPH(NC)	O	De-Emphasis detect signal output terminal. (No connect)
63	TX	O	Digital audio interface signal output terminal.
64	PSEL(GND)	I	Test terminal at IOSEL=L. (usually:L) (GND connect)
65	MSEL(GND)	I	SMCK output/frequency switching terminal at IOSEL=L. (GND connect)
66	SSEL(BATT+5V)	I	Test terminal at IOSEL=L. (usually:H) (BATT+5V connect)
67	DVDD1	-	Power supply terminal for digital circuit.
68	X1	I	Main Clock input terminal. (f=16.9344MHz)
69	X2	O	Main Clock output terminal. (f=16.9344MHz)
70	DVSS1	-	GND connect terminal for digital circuit.
71	OSC1	I	Sub clock input terminal for u-COM. (f=6.7 to 1.0MHz)
72	OSC2	O	Sub clock output terminal for u-COM. (f=6.7 to 1.0MHz)
73	DVDD2	-	Power supply terminal for digital circuit.
74	SW-A	I	Mechanism control SW signal input terminal. (L:SW ON)
75	SW-B		
76	SW-C		
77	SW-D		
78	LMTSW	I	Pick-Up detect SW input terminal. (L:detection)
79	D/OCNT	O	Digital audio data control output terminal. (H:D/O ON)
80	RF-GAIN(NC)	O	Spindle Motor ON output terminal. (No connect)
81	LODM+	O	Loading Motor driving signal terminal.
82	LODM-		
83	ZMUTE	O	Zero Mute signal output terminal.
84	DR-MUTE	O	Servo Driver MUTE signal output terminal. (L:Servo Driver MUTE ON)
85	DATA(NC)	O	DATA output terminal for Error monitor. (No connect)
86	LATCH(NC)	O	LATCH output terminal for Error monitor. (No connect)
87	CLOCK(NC)	O	CLOCK output terminal for Error monitor. (No connect)
88	/SRQ	O	Communication Request output terminal.
89	RST	I	µ-COM block reset input terminal.
90	STBY	I	Stand-by signal input terminal.
91	/CS	I	Chip select signal input terminal.
92	CMD	I	Command input terminal.

No.	Symbol	I/O	Terminal Description
93	STS	O	Status output terminal.
94	SCK	I	Serial clock input terminal.
95	TEMP	I	Temperature detect terminal.
96	VREF+	-	Power supply terminal for A/D converter.
97	OUTR	O	Rch audio output terminal.
98	AVDD1	-	Power supply terminal for analog circuit. (for audio output block (for using both as Lch and Rch))
99	OUTL	O	Lch audio output terminal.
100	AVSS1	-	GND connect terminal for analog circuit. (for audio output block (for using both as Lch and Rch))

Exploded View (Cabinet)



Exploded View (CD Deck Mechanism)

(DP23S87T)