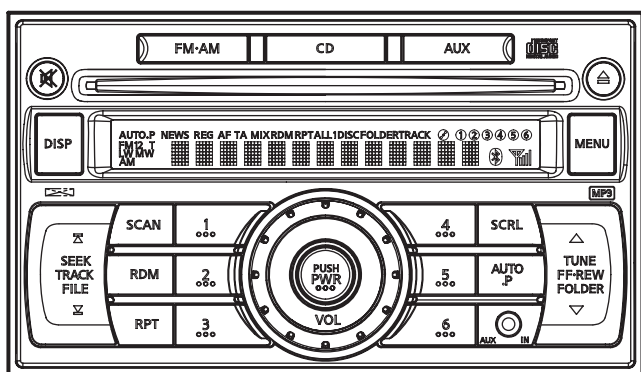


Service Manual



NISSAN Automobile Genuine
 MW/FM Radio 1CD Combination

Model PN-3090L-A
 (Genuine No.28185 1JY1A)(ID No. CY24E)

Model PN-3090L-B
 (Genuine No.28185 8W90A)(ID No. CY02F)

Model PP-3090H-A
 (Genuine No.28185 JT30A)(ID No. CY13E)

Model PP-3090N-A
 (Genuine No.28185 AZ61A)(ID No. CY21E)

DIFFERENCE

Model	Distination	Illumination color	ANT AMP	Remote control
PN-3090L-A	Middle East	Reddish orange	○	○
PN-3090L-B	Mexico,Brazil	Yellow orange	○	○
PP-3090H-A	Brazil	Yellow orange	×	×
PP-3090N-A	Brazil	Yellow orange	×	×

NOTES

- * Tuner(BL101) of this unit is DSP type. When you exchange the tuner pack, it is necessary to adjust for S-meter etc. The special equipment is used for an accurate adjustment. Individual data of each unit is recorded in EEPROM IC(IC401). When EEPROM IC is replaced, it is necessary to record the data.
- * DSP IC(IC301) and Switching regulator IC(IC505) cannot be removed with an ordinary soldering iron because of the pad type.
- * This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from MSLGP.
- * We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.
- * Specifications and design are subject to change without notice for further improvement.

SPECIFICATIONS

Radio section

Tuning system: PLL Frequency synthesizer system

Receive range:

PN-3090L-A / PP-3090H-A / PP-3090N-A

MW 531kHz to 1,602kHz
(9kHz step)

FM 87.5MHz to 107.9MHz

PN-3090L-B

MW 530kHz to 1,620kHz
(10kHz step)

FM 87.5MHz to 107.9MHz

Intermediate frequency:

MW 10.7MHz

FM 10.7MHz

Quieting sensitivity:

PN-3090L-A / PN-3090L-B

MW Less than 37dBu
(at 20dB S/N)

FM Less than 15dBu
(at 30dB S/N)

PP-3090H-A / PP-3090N-A

MW Less than 32dBu
(at 20dB S/N)

FM Less than 10dBu
(at 30dB S/N)

Separation:

FM 22+5/-7dB(1kHz)

S/N ratio:

MW More than 40dB

FM More than 50dB

Auto tuning stop sensitivity:

PN-3090L-A / PN-3090L-B

MW 39+6/-6dBu

FM 32+6/-6dBu

PP-3090H-A / PP-3090N-A

MW 32+6/-6dBu

FM 25+6/-6dBu

CD section

Disc: 12cm disc

Format: CD-DA,CD-R,CD-RW,MP3,WMA

Separation: More than 50dB
(1kHz,20kHz L.P.F)

S/N ratio: More than 74dB(JIS-A)

Distortion: Less than 0.2%(20kHz L.P.F.)

General

Load impedance: 4ohm/CH

Power output: 40W x4

Power supply voltage: DC13.2V(10.8 to 15.6V)
Negative ground

Back-up consumption: Less than 1.0mA

Dimensions(mm): 178(W) x 100(H) x 163(D)

Weight: 1.65kg

COMPONENT

PN-3090L-A / PN-3090L-B / PP-3090H-A /
PP-3090N-A

1. Main unit ----- 1

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.

The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

2. Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.

If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

3. Check for safety after repair.

Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.

If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

4. Caution in removal and making wiring connection to the parts for the automobile.

Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

5. Cautions in soldering

Please do not spread liquid flux in soldering.

Please do not wash the soldering point after soldering.

6. Cautions in soldering for chip capacitors

Please solder the chip capacitors after pre-heating for replacement because they are very weak to heat.

Please do not heat the chip capacitors with a soldering iron directly.

7. Cautions in handling for chip parts.

Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc).

Please make an operation test after replacement.

8. Cautions in handling flexible PWB

Before working with a soldering iron, make sure that the iron tip temperature is around 270°C. Take care not to apply the iron tip repeatedly(more than three times)to the same patterns. Also take care not to apply the tip with force.

9. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

10. Cautions in checking that the optical pickup lights up.

The laser is focused on the disc reflection surface through the lens of the optical pickup. When checking that the laser optical diode lights up, keep your eyes more than 30cms away from the lens. Prolonged viewing of the laser within 30cms may damage your eyesight.

11. Cautions in handling the optical pickup

The laser diode of the optical pickup can be damaged by electrostatic charge caused by your clothes and body. Make sure to avoid electrostatic charges on your clothes or body, or discharge static electricity before handling the optical pickup.

11-1. Laser diode

The laser diode terminals are shorted for transportation in order to prevent electrostatic damage. After replacement, open the shorted circuit. When removing the pickup from the mechanism, short the terminals by soldering them to prevent this damage.

11-2. Actuator

The actuator has a powerful magnetic circuit. If a magnetic material is put close to it. Its characteristics will change. Ensure that no foreign substances enter through the ventilation slots in the cover.

11-3. Cleaning the lens

Dust on the optical lens affects performance.

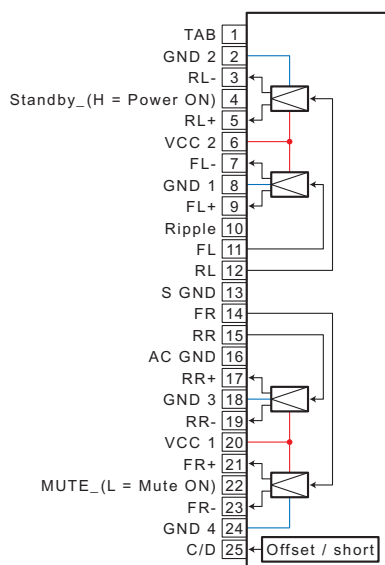
To clean the lens, apply a small amount of isopropyl alcohol to lens paper and wipe the lens gently.

ADJUSTMENT

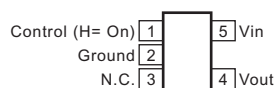
Clock accuracy adjustment

1. Set a universal counter to TP429, adjust TC401 so that a reading of the counter is $0+0.1/-0.1$ sec./day.

051-2064-00 Renesas TB2926HQ Audio Power Amplifier



051-3551-90 JRC NJM2878F3-33-TE1 3.3V Voltage Regulator
051-3552-90 JRC NJU7741F15-TE1 1.5V Voltage Regulator

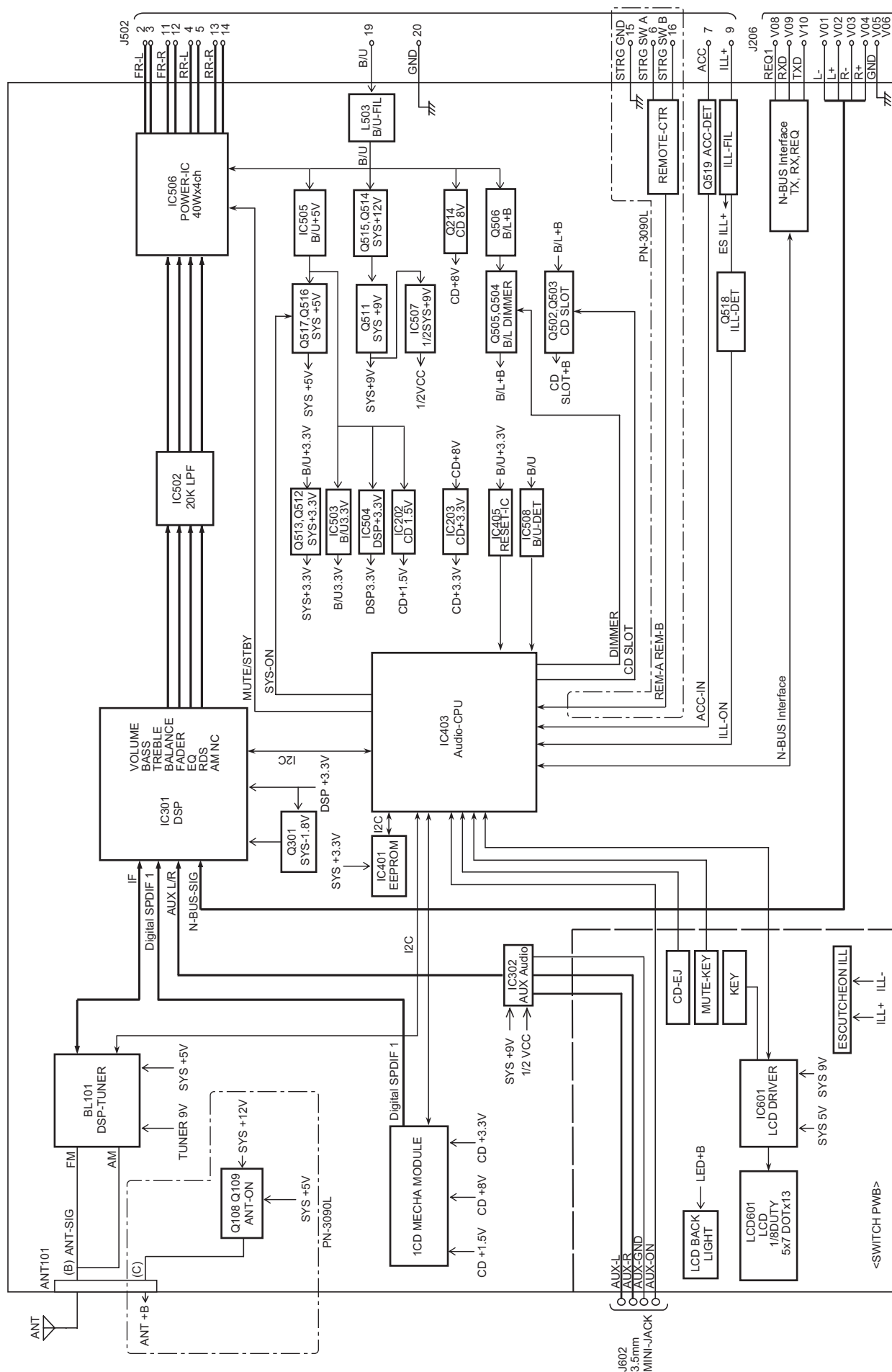


052-3222-01 Renesas M30876MJB-A29GP Audio CPU

Terminal Description for 1CD type

pin 1: CONTRAST	: O : Contrast control signal output.	pin 67: NU	: - : Not in use.
pin 2: NU	: - : Not in use.	pin 68: NU	: - : Not in use.
pin 3: NU	: - : Not in use.	pin 70: NU	: - : Not in use.
pin 4: ILL PULSE	: IN: Illumination control signal input.	pin 71: SBSY	: IN: Sub code block synchronous signal detection input.
pin 5: BU DET	: IN: Backup detection signal input.	pin 72: P IC STNDB	: O : Power IC standby signal output.
pin 6: 16bit/8bit	: IN: Data length selection (8bit/16bit).	pin 73: RDS CK	: IN: RDS clock pulse input.
pin 7: CN VSS	: IN: CPU motion selection signal input.	pin 74: NU	: - : Not in use.
pin 8: ILL ON	: IN: Illumination ON signal input.	pin 75: RDS DI	: IN: RDS data input.
pin 9: SYS ON	: O : System ON signal output.	pin 76: DSP RESET	: O : Reset signal output to the DSP IC.
pin 10: RESET	: IN: Reset signal input.	pin 77: NU	: - : Not in use.
pin 11: X out	: O : The crystal connection.	pin 78: NU	: - : Not in use.
pin 12: VSS	: - : Negative voltage supply.	pin 79: NU	: - : Not in use.
pin 13: X in	: IN: The crystal connection.	pin 80: NU	: - : Not in use.
pin 14: VDD	: - : Positive voltage supply.	pin 81: NU	: - : Not in use.
pin 15: NMI	: IN: Nonmaskable interrupt.	pin 82: NU	: - : Not in use.
pin 16: ACC IN	: IN: ACC ON flag input.	pin 83: NU	: - : Not in use.
pin 17: NU	: - : Not in use.	pin 84: NU	: - : Not in use.
pin 18: NU	: - : Not in use.	pin 85: NU	: - : Not in use.
pin 19: NU	: - : Not in use.	pin 86: TEL ON	: IN: Telephone ON signal input.
pin 20: NU	: - : Not in use.	pin 87: AUX ON	: IN: AUX ON signal input.
pin 21: NU	: - : Not in use.	pin 88: DISP KEY	: IN: DISP key signal input.
pin 22: NU	: - : Not in use.	pin 89: CD EJECT	: IN: CD eject switch signal input.
pin 23: Main T SCK	: O : Main tuner serial clock.	pin 90: MENU KEY	: IN: MENU KEY input.
pin 24: Main T SDA	: O : Main tuner serial data.	pin 91: MUTE IN	: IN: Mute command input.
pin 25: SOURCE CHG	: O : The signal source change signal output.	pin 92: NU	: - : Not in use.
pin 26: DIMMER	: O : PWM output.	pin 93: REM A	: IN: Remote control signal input.
pin 27: EEP SCK	: O : Clock pulse output to EEP-ROM.	pin 94: A GND	: - : Analog ground.
pin 28: EEP SD	: I/O: Serial data input/output for EEP-ROM.	pin 95: REM B	: IN: Remote control signal input.
pin 29: NDS/BT TX	: O : Serial data output for NDS and Blue-tooth.	pin 96: VREFI	: IN: Reference voltage input.
pin 30: NDS/BT RX	: IN: Serial data input for NDS and Blue-tooth.	pin 97: A VCC	: - : Positive voltage supply for the internal analog section.
pin 31: NDS REQ 1	: IN: NDS request signal input.	pin 98: DSP SCL	: O : Clock pulse output to the DSP IC.
pin 32: CD SLOT	: O : CD slot LED ON signal output.	pin 99: DSP SDA	: I/O: Serial data input/output for the digital signal processor.
pin 33: CD 3.3V ON	: O : Power supply control signal output.	pin100: NU	: - : Not in use.
pin 34: CD 1.5V ON	: O : Power supply control signal output.		
pin 35: CD SRAM 1.5V	: O : Power supply control signal output.		
pin 36: REQ	: IN: Request signal input.		

BLOCK DIAGRAM



TROUBLESHOOTING

Power does not turn on

	CHECK ITEM	CHECK POINT
1	B/U,ACC Power Supply	B/U 5V line(IC505) ACC DET line(Q519)
2	System Reset	B/U DET line(IC508) RESET IC(IC405)
3	Microcomputer Clock	X401
4	System Power Supply	SYS-ON signal of IC403 (pin 9) SYS 3.3V line(Q513), SYS 5V line(Q517)
5	Display line	Output wave form of pins 52 - 56 of IC403

Radio does not work

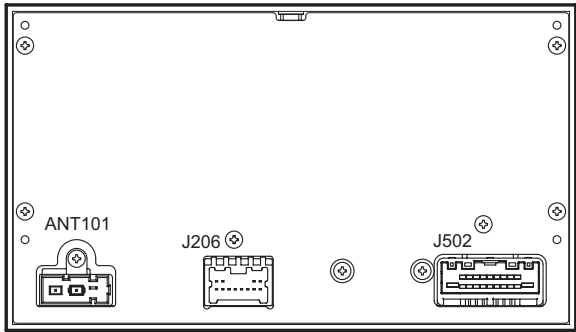
	CHECK ITEM	CHECK POINT
1	Tuner Power Supply	TUN 9V(Q107) SYS 5V(Q517)
2	DSP Line	Pins 5-11 of BL101
3	Output of Tuner	Pins 16, 17 of BL101
4	Parameter of DSP	Parameter adjustment (with special equipment)
5	Output Wave Form	Pins 38,39,43 and 44 of IC301
6	Input of Pre-AMP	C501,C502,C503 and C504
7	Output of Pre-AMP	C532 - C535, C571 - C574
8	Around Pre-AMP(IC506)	

CD player does not work

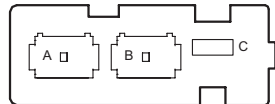
	CHECK ITEM	CHECK POINT
1	CD mechanism Power Supply	CD 9V line(Q214) CD 3.3V line(IC203), CD 1.5V line(IC202)
2	CD mechanism line	Pins 10 - 26 of J202
3	CD-SPDIF Output	Pin 34 of J202
4	Output wave form of DSP	Pins 38,39,43 and 44 of IC301
5	Input of Pre-AMP	C501,C502,C503 and C504
6	Output of Pre-AMP	C532 - C535, C571 - C574
7	Around Pre-AMP(IC506)	

CONNECTOR LAYOUT

Rear view of the unit

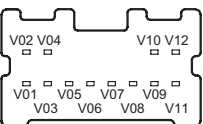


ANT101
ANT Connector(GT13)



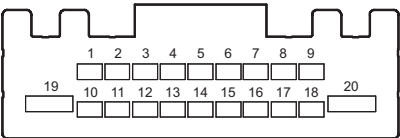
A	N.C.
B	ANT-SIG
C	PN-3090L : ANT+B PP-3090H,N : N.C.

J206
N-BUS Connector(A12)



V01	CD LCH (-)
V02	CD LCH (+)
V03	CD RCH (-)
V04	CD RCH (+)
V05	GND
V06	SHIELD GND
V07	N.C.
V08	CHG-REQ
V09	CHG-COMBI(RXD)
V10	COMBI-CHG(TXD)
V11	N.C.
V12	N.C.

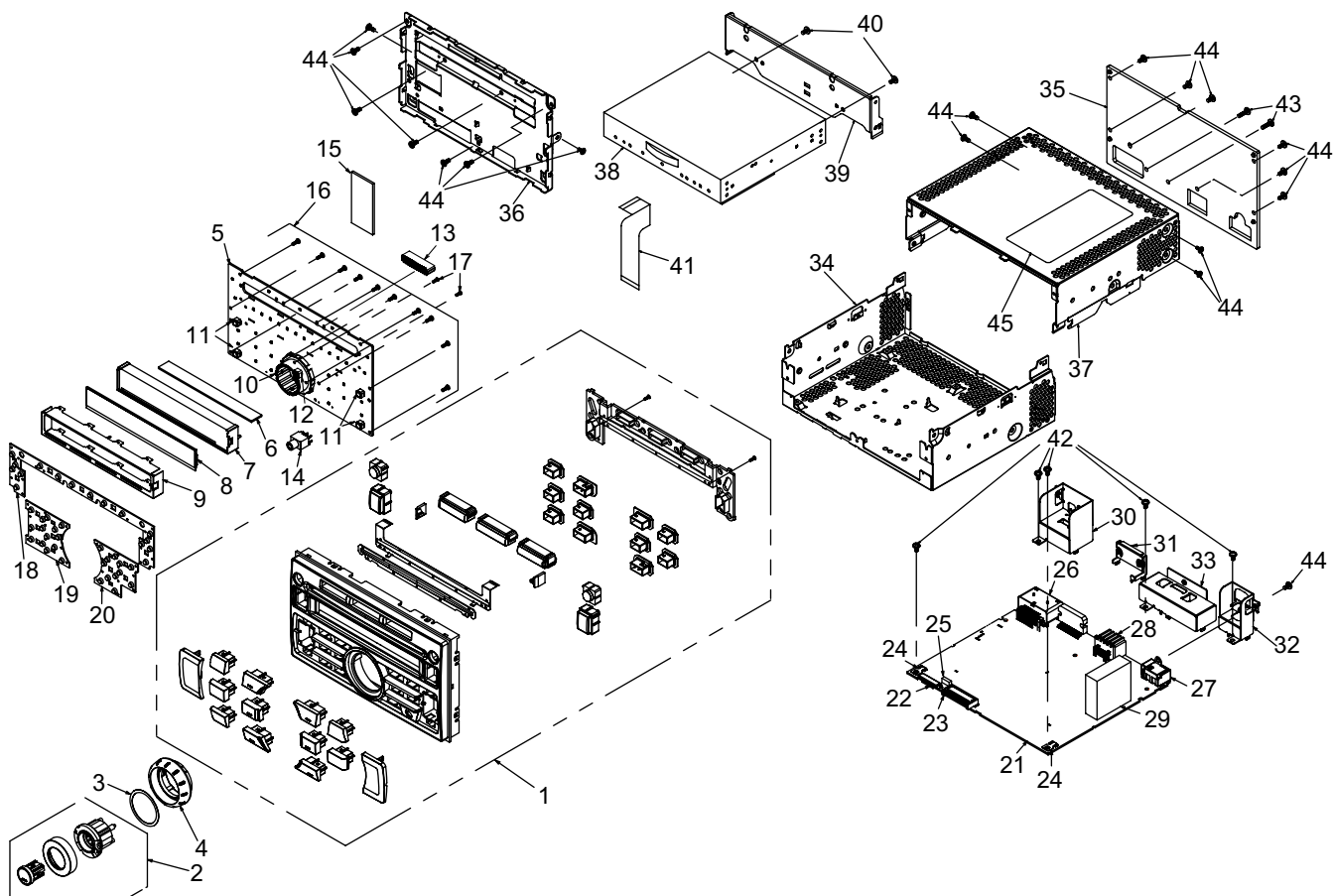
J502
Main Connector(TH18)



1	N.C.	11	FRONT-R(+)
2	FRONT-L(+)	12	FRONT-R(-)
3	FRONT-L(-)	13	REAR-R(+)
4	REAR-L(+)	14	REAR-R(-)
5	REAR-L(-)	15	STRG-GND
6	PN-3090L : STRG SW A PP-3090H,N : N.C.	16	PN-3090L : STRG SW B PP-3090H,N : N.C.
7	ACC	17	N.C.
8	N.C.	18	N.C.
9	ILLUMI(+)	19	BACK UP
10	N.C.	20	GND

EXPLODED VIEW/PARTS LIST

Main section



Note) Some parts depend on each model. The model name is specified in the description.

NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	940-8436-00 940-8436-10 940-8436-20 940-8436-30	ES-ASSY(PP-3090H-A) ES-ASSY(PN-3090L-A) ES-ASSY(PP-3090N-A) ES-ASSY(PN-3090L-B)	1	23	076-3011-76	PLUG (26P)	1
2	947-0591-10	KNOB ASSY	1	24	073-0762-90	TERMINAL	2
3	347-7959-00	SHADE	1	25	076-6000-59	PLUG (9P)	1
4	380-5655-00	KNOB	1	26	074-4009-20	OUTLET SOCKET	1
5	-----	SWITCH PWB	1	27	092-2210-01	ANT-RECEPT	1
6	345-6311-00	RUBBER CONNECT	1	28	074-1013-00	OUTLET SOCKET	1
7	335-8365-00	LCD-HOLDER	1	29	880-2091L	AM/FM TUNER	1
8	379-1419-50 379-1419-52	INDICATOR (PN-3090L, PP-3090N-A) INDICATOR(PP-3090H-A)	1	30	331-4679-00	SOCKET HOLDER	1
9	331-4675-01	LCD COVER	1	31	331-4678-00	IC-HOLDER	1
10	016-7004-00	ROTARY SWITCH	1	32	331-4676-00	ANT-HOLDER	1
11	013-6202-52	TACT SWITCH	4	33	331-4677-00	SHIELD CASE	1
12	013-6201-53	SWITCH	1	34	311-1969-00	LOWER CASE	1
13	074-3033-26	OUTLET SOCKET	1	35	313-2052-20	HEAT SINK	1
14	075-0395-00	JACK	1	36	309-1885-00	ES-PLATE(1CD)	1
15	345-8090-00	CUSHION RUBBER	1	37	310-1889-00	UPPER CASE	1
16	716-0778-52	WAVE SCREW (2 x 6)	10	38	929-5027-80	CD-MECH-MODULE	1
17	716-0872-51	SCREW (M1.7 x 5)	2	39	331-4123-00	CD BRKT	1
18	345-6307-00	RUBBER SW(UP)	1	40	714-2603-89	MACHINE SCREW (M2.6 x 3)	2
19	345-6308-00	RUBBER SW(LH)	1	41	816-3020-51	FLAT WIRE	1
20	345-6309-00	RUBBER SW(RH)	1	42	716-0878-50	SCREW (M2.6 x 5)	5
21	-----	MAIN PWB	1	43	735-2614-1B	D-SEMS SCREW	2
22	074-1189-88	OUTLET SOCKET	1	44	714-2606-8B	MACHINE SCREW (M2.6 x 6)	18
				45	276-0359-07 276-0507-00 276-0507-02 276-0507-03	SETPLATE(PN-3090L-A) SETPLATE(PP-3090H-A) SETPLATE(PP-3090N-A) SETPLATE(PN-3090L-B)	1

ELECTRICAL PARTS LIST

Main PWB(B1) section

Note) Some parts depend on each model. The model name is specified in the description.

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
ANT101	092-2210-01	ANT-RECEPT	C330	166-1011-50	100pF CH	C520	168-3342-58	0.33uF
BL101	880-2091L	AM/FM TUNER	C331	168-1042-78	16V 0.1uF	C521	166-5611-50	560pF CH
C101	168-2222-55	2200pF K (PN-3090L-A) (PN-3090L-B)	C332	166-1011-50	100pF CH	C522	166-5611-50	560pF CH
C104	119-0000-05	1/10W 0 ohm JW (PN-3090L-A) (PN-3090L-B)	C333	168-1022-55	1000pF K	C523	168-1042-78	16V 0.1uF
C104	166-6801-50	68pF CH (PP-3090H-A) (PP-3090N-A)	C334	168-1022-55	1000pF K	C524	168-2242-58	0.22uF B
C112	043-0319-51	200P	C335	163-1063-35	16V 10uF	C525	043-0552-90	6.3V 47uF M
C113	166-2201-50	22pF CH	C336	168-1052-78	16V 1uF	C526	043-0566-90	50V 2.2uF K
C118	168-1022-55	1000pF K	C337	168-3332-78	0.033uF K	C527	043-0604-90	25V 10uF B
C121	163-1073-35	16V 100uF	C338	168-1022-55	1000pF K	C529	168-4742-78	0.47uF
C124	168-2222-55	2200pF K	C340	168-1022-55	1000pF K	C530	168-1042-38	50V 0.1uF
C127	168-1022-55	1000pF K	C341	166-1011-50	100pF CH	C531	163-1073-35	16V 100uF
C129	168-1022-55	1000pF K	C342	168-1022-55	1000pF K	C532	168-1542-58	0.15uF K
C132	168-1022-55	1000pF K	C343	168-4712-55	470pF K	C533	168-1542-58	0.15uF K
C135	168-1022-55	1000pF K	C344	168-1042-78	16V 0.1uF	C534	168-1542-58	0.15uF K
C136	163-1073-35	16V 100uF	C345	168-1022-55	1000pF K	C535	168-1542-58	0.15uF K
C152	163-1063-35	16V 10uF	C347	168-3322-55	3300pF K	C536	168-1042-78	16V 0.1uF
C154	163-1063-35	16V 10uF (PN-3090L-A) (PN-3090L-B)	C348	168-3322-55	3300pF K	C537	178-1052-78	1uF
C203	168-1042-78	16V 0.1uF	C349	168-3322-55	3300pF K	C540	042-1760-90	16V 10uF M
C204	163-3363-25	10V 33uF	C350	168-3322-55	3300pF K	C541	178-2742-78	0.27uF
C209	043-0570-90	16V 2.2uF K	C351	168-3322-55	3300pF K	C542	168-1052-78	16V 1uF
C210	043-0570-90	16V 2.2uF K	C352	168-3322-55	3300pF K	C543	163-4763-35	16V 47uF
C211	043-0570-90	16V 2.2uF K	C354	043-0554-90	25V 10uF	C544	163-2273-25	10V 220uF
C212	043-0570-90	16V 2.2uF K	C355	042-1736-90	16V 470uF M	C545	168-2212-55	220pF K
C214	168-1022-55	1000pF K	C356	168-4722-55	4700pF K	C546	166-2201-50	22pF CH
C217	168-1022-55	1000pF K	C357	163-1073-15	6.3V 100uF	C548	163-4763-35	16V 47uF
C218	168-1022-55	1000pF K	C358	168-2222-55	2200pF K	C549	042-1465-00	16V 3300uF
C227	043-0552-90	6.3V 47uF M	C359	043-0570-90	16V 2.2uF K	C550	172-1041-15	0.1uF
C230	168-2242-58	0.22uF B	C360	043-0570-90	16V 2.2uF K	C551	163-4763-35	16V 47uF
C231	168-3342-58	0.33uF	C361	166-2201-50	22pF CH	C552	163-4763-35	16V 47uF
C232	043-0554-90	10V 10uF	C362	168-2222-55	2200pF K	C554	168-6822-55	6800pF K
C238	163-1063-35	16V 10uF	C363	166-2201-50	22pF CH	C555	168-6822-55	6800pF K
C245	168-2222-55	2200pF K	C364	166-2201-50	22pF CH	C556	168-6822-55	6800pF K
C257	168-5622-55	5600pF K	C365	168-2222-55	2200pF K	C557	168-6822-55	6800pF K
C258	168-5622-55	5600pF K	C366	166-2201-50	22pF CH	C558	168-6822-55	6800pF K
C259	168-2222-55	2200pF K	C367	168-2222-55	2200pF K	C559	168-6822-55	6800pF K
C301	163-4753-65	50V 4.7uF	C368	166-2201-50	22pF CH	C560	168-6822-55	6800pF K
C302	168-1042-78	16V 0.1uF	C369	166-2201-50	22pF CH	C561	168-6822-55	6800pF K
C303	166-1811-50	180pF CH	C370	043-0570-90	16V 2.2uF K	C562	168-6822-55	6800pF K
C304	168-1042-78	16V 0.1uF	C371	043-0570-90	16V 2.2uF K	C563	043-0574-90	25V 1.0uF
C305	168-1042-78	16V 0.1uF	C372	043-0570-90	16V 2.2uF K	C564	168-1042-78	16V 0.1uF
C306	166-8097-50	8pF C CH	C373	043-0570-90	16V 2.2uF K	C565	163-1063-35	16V 10uF
C307	166-8097-50	8pF C CH	C401	168-1042-78	16V 0.1uF	C566	168-2232-55	0.022uF K
C308	168-1022-55	1000pF K	C402	168-1042-78	16V 0.1uF	C567	042-4000-90	16V 470uF
C309	163-4753-65	50V 4.7uF	C408	166-1801-50	18pF CH	C568	168-1522-55	1500pF K
C310	168-1042-78	16V 0.1uF	C409	168-1042-78	16V 0.1uF	C569	166-2201-50	22pF CH
C311	163-4753-65	50V 4.7uF	C410	163-4763-15	6.3V 47uF	C570	178-2242-38	0.22uF B
C312	168-1042-78	16V 0.1uF	C411	168-1042-78	16V 0.1uF	C571	168-1542-58	0.15uF K
C313	168-1022-55	1000pF K	C412	168-1032-55	0.01uF K	C572	168-1542-58	0.15uF K
C314	168-1022-55	1000pF K	C414	168-2242-58	0.22uF B	C573	168-1542-58	0.15uF K
C315	166-1011-50	100pF CH	C415	168-2242-58	0.22uF B	C574	168-1542-58	0.15uF K
C316	168-1042-78	16V 0.1uF	C416	168-2242-58	0.22uF B	C576	168-1022-55	1000pF K
C317	168-5622-55	5600pF K	C417	168-2242-58	0.22uF B	C9001	042-1736-90	16V 470uF M (PP-3090H-A)
C318	168-5622-55	5600pF K	C418	168-2242-58	0.22uF B	CCT402	050-0140-54	1/32W 1k ohm x4J
C319	166-1011-50	100pF CH	C419	168-1022-55	1000pF K	CCT403	050-0145-52	1/16W 1k ohm x4
C320	166-1011-50	100pF CH	C501	168-1042-78	16V 0.1uF	CCT404	050-0145-52	1/16W 1k ohm x4
C322	168-1022-55	1000pF K	C502	168-1042-78	16V 0.1uF	D104	001-0580-90	1SS352
C323	168-1022-55	1000pF K	C503	168-1042-78	16V 0.1uF	D106	001-0529-48	MA8091-H
C324	163-2273-05	4V 220uF	C504	168-1042-78	16V 0.1uF	D107	001-0580-90	1SS352 (PN-3090L-A) (PN-3090L-B)
C325	168-2222-55	2200pF K	C506	166-5611-50	560pF CH	D204	001-4305-39	UDZSTE-17 36B
C326	166-4711-50	470pF CH	C507	166-5611-50	560pF CH	D206	001-0580-90	1SS352
C327	163-2263-35	16V 22uF	C509	166-5611-50	560pF CH	D207	001-0580-90	1SS352
C328	163-4763-15	6.3V 47uF	C510	166-5611-50	560pF CH	D210	001-4313-53	HZU9B1L TRF-E
			C511	166-2201-50	22pF CH	D215	001-9210-50	AVR- M1608C270MTAAD
			C512	166-2201-50	22pF CH			AVR- M1608C270MTAAD
			C513	166-2201-50	22pF CH			
			C514	166-2201-50	22pF CH			
			C515	168-1052-78	16V 1uF			
			C516	163-1073-35	16V 100uF			
			C518	166-5611-50	560pF CH			
			C519	166-5611-50	560pF CH			

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
D217	001-9210-50	AVR- M1608C270MTAAD	L402	010-3406-54	2.2uH J	R214	119-4721-15	1/10W 4.7k ohm
D218	001-9210-50	AVR- M1608C270MTAAD	L501	010-3104-54	600 ohm/100MHz	R215	119-4721-15	1/10W 4.7k ohm
D219	001-9210-50	AVR- M1608C270MTAAD	L502	010-3414-92	2.2UH	R216	119-1021-15	1/10W 1k ohm
D220	001-9210-50	AVR- M1608C270MTAAD	L503	010-8050-00	CHOKE	R219	119-5621-15	1/10W 5.6k ohm
D221	001-9210-50	AVR- M1608C270MTAAD	P402	076-3011-76	26P	R220	119-5621-15	1/10W 5.6k ohm
D401	001-2630-90	1SS420-TPL3,F	P403	076-6000-59	PLUG(9P)	R223	119-5631-15	1/10W 56k ohm
D501	001-2640-90	D1FJ4	Q105	198-3018-00	2SK3018	R224	119-5631-15	1/10W 56k ohm
D502	001-0529-48	MA8091-H	Q106	198-3018-00	2SK3018	R230	119-1031-15	1/10W 10k ohm
D504	001-0529-48	MA8091-H	Q107	192-5886-00	2SC5886	R231	119-1031-15	1/10W 10k ohm
D506	001-2015-00	RL253	Q108	125-2027-90	DTC143EU (PN-3090L-A) (PN-3090L-B)	R234	119-5631-15	1/10W 56k ohm
D507	001-0580-90	1SS352	Q109	190-2060-00	2SA2060 (PN-3090L-A) (PN-3090L-B)	R235	119-1031-15	1/10W 10k ohm
D510	001-0529-48	MA8091-H	Q201	192-4081-00	2SC4081	R236	119-2231-15	1/10W 22k ohm
D511	001-4320-50	EDZC6.8B (PN-3090L-A) (PN-3090L-B)	Q203	192-4081-00	2SC4081	R238	119-4731-15	1/10W 47k ohm
D512	001-0580-90	1SS352	Q204	192-4081-00	2SC4081	R241	119-4731-15	1/10W 47k ohm
D514	001-4320-50	EDZC6.8B (PN-3090L-A) (PN-3090L-B)	Q207	125-0021-91	DTA114EUA	R247	116-3911-15	1/4W 390 ohm
D515	001-0529-34	MA8062-L	Q208	125-2027-91	DTC114EUA	R248	116-3911-15	1/4W 390 ohm
D517	001-0529-47	MA8091-M	Q214	193-1259-50	2SD1259DS R,Q	R249	119-1041-15	1/10W 100k ohm
D536	001-2412-90	RR264M-400	Q301	125-7007-90	Si5441BDC-TI-E3	R258	119-1021-15	1/10W 1k ohm
D538	001-2412-90	RR264M-400	Q302	125-2027-91	DTC114EUA	R259	119-1021-15	1/10W 1k ohm
IC202	051-3552-90	NJU7741F15	Q407	125-2027-91	DTC114EUA	R260	119-1021-15	1/10W 1k ohm
IC203	051-3518-90	NJM2846DL3-33-TE1	Q408	198-3018-00	2SK3018	R261	119-1021-15	1/10W 1k ohm
IC301	-----	SAF7730HV/N332 (impossible to exchange) (670650-051)	Q409	125-2027-91	DTC114EUA	R301	119-1031-15	1/10W 10k ohm
IC302	051-3020-90	NJM4565V	Q410	198-3018-00	2SK3018	R302	119-1031-15	1/10W 10k ohm
IC401	051-9426-90	S-24CS16A01-T8T1G	Q411	125-2027-91	DTC114EUA	R303	119-2201-15	1/10W 22 ohm
IC403	052-3222-01	M30876MJB-A29GP	Q502	125-2027-91	DTC114EUA	R304	032-0140-80	1/10W 18k ohm F
IC405	051-5417-08	S-80927CNMC-G8X	Q503	191-1197-50	2SB1197K Q,R	R305	032-0140-80	1/10W 18k ohm F
IC502	051-3019-90	NJM2060V	Q504	125-2027-91	DTC114EUA	R306	032-0140-80	1/10W 18k ohm F
IC503	051-3551-90	NJM2878F3-33-TE1	Q505	191-1197-50	2SB1197K Q,R	R307	032-0140-80	1/10W 18k ohm F
IC504	051-3396-90	NJM2386ADL3-33-TE1	Q511	192-5810-00	2SC5810 TE12L	R308	119-1031-15	1/10W 10k ohm
IC505	-----	LT3481EMSE#TRPBF (impossible to exchange) (351790-051)	Q512	125-2027-91	DTC114EUA	R309	119-1011-15	1/10W 100 ohm
IC506	051-2064-00	TB2926HQ	Q513	191-1197-50	2SB1197K Q,R	R310	119-1021-15	1/10W 1k ohm
IC507	051-3034-90	NJM4558V	Q514	192-4116-51	2SC4116 G,L	R311	032-0140-50	1/10W 10k ohm F
IC508	051-5441-08	BD4828G-TR	Q515	191-1204-61	2SB1204 R,S,T	R312	119-3921-15	1/10W 3.9k ohm
J202	074-1189-88	SOCKET	Q516	125-2027-91	DTC114EUA	R313	032-0140-50	1/10W 10k ohm F
J206	074-1013-00	12P	Q517	191-1197-50	2SB1197K Q,R	R314	119-3921-15	1/10W 3.9k ohm
J502	074-4009-20	20P	Q518	192-4081-00	2SC4081	R315	032-0140-50	1/10W 10k ohm F
L104	010-2198-50	0.15uH (PP-3090H-A) (PP-3090N-A)	Q519	192-4116-00	2SC4116	R316	119-0000-05	1/10W 0 ohm JW
L105	010-2003-04	30uH	Q521	192-4116-51	2SC4116 G,L	R317	032-0140-50	1/10W 10k ohm F
L106	010-4011-20	2.5mH +3/-3%	R109	119-0000-05	1/10W 0 ohm JW	R318	119-1041-15	1/10W 100k ohm
L201	010-3104-54	600 ohm/100MHz	R125	119-0000-05	1/10W 0 ohm JW	R319	119-1041-15	1/10W 100k ohm
L202	010-3104-54	600 ohm/100MHz	R129	166-1511-50	150pF CH (PN-3090L-A) (PN-3090L-B)	R320	119-1001-15	1/10W 10 ohm
L301	010-3104-54	600 ohm/100MHz	R129	119-0000-05	1/10W 0 ohm JW (PP-3090H-A) (PP-3090N-A)	R321	119-3921-15	1/10W 3.9k ohm
L302	010-3104-54	600 ohm/100MHz	R135	119-1011-15	1/10W 100 ohm	R322	119-0000-05	1/10W 0 ohm JW
L303	010-3104-54	600 ohm/100MHz	R141	119-1011-15	1/10W 100 ohm	R323	119-1021-15	1/10W 1k ohm
L304	010-3104-54	600 ohm/100MHz	R143	119-1011-15	1/10W 100 ohm	R324	119-3921-15	1/10W 3.9k ohm
L305	010-3104-54	600 ohm/100MHz	R146	116-6891-15	1/4W 6.8 ohm	R325	119-0000-05	1/10W 0 ohm JW
L306	010-3104-54	600 ohm/100MHz	R150	119-3321-15	1/10W 3.3k ohm	R327	032-0140-50	1/10W 10k ohm F
L307	010-3104-54	600 ohm/100MHz	R154	119-3321-15	1/10W 3.3k ohm	R329	032-0140-50	1/10W 10k ohm F
L308	010-3104-54	600 ohm/100MHz	R155	119-3321-15	1/10W 3.3k ohm	R331	032-0140-50	1/10W 10k ohm F
L309	010-3104-54	600 ohm/100MHz	R161	119-0000-05	1/10W 0 ohm JW	R332	032-0140-50	1/10W 10k ohm F
L310	010-3104-54	600 ohm/100MHz	R162	119-3321-15	1/10W 3.3k ohm	R333	032-0140-50	1/10W 10k ohm F
L311	010-3104-54	600 ohm/100MHz	R170	116-1091-15	1/4W 1 ohm (PN-3090L-A) (PN-3090L-B)	R334	032-0140-50	1/10W 10k ohm F
L312	010-3104-54	600 ohm/100MHz	R173	116-1221-15	1/4W 1.2k ohm (PN-3090L-A) (PN-3090L-B)	R335	119-1031-15	1/10W 10k ohm
L313	010-3104-54	600 ohm/100MHz	R174	116-3911-15	1/4W 390 ohm	R336	119-1031-15	1/10W 10k ohm
			R176	119-1031-15	1/10W 10k ohm (PN-3090L-A) (PN-3090L-B)	R337	119-1031-15	1/10W 10k ohm
			R180	119-0000-05	1/10W 0 ohm JW	R338	119-1031-15	1/10W 10k ohm
			R210	119-3011-15	1/10W 300 ohm	R339	119-1011-15	1/10W 100 ohm
			R211	119-3011-15	1/10W 300 ohm	R340	119-1011-15	1/10W 100 ohm
			R212	119-4731-15	1/10W 47k ohm	R341	119-0000-05	1/10W 0 ohm JW
						R342	119-0000-05	1/10W 0 ohm JW
						R343	119-0000-05	1/10W 0 ohm JW
						R344	119-0000-05	1/10W 0 ohm JW
						R345	119-0000-05	1/10W 0 ohm JW
						R346	119-0000-05	1/10W 0 ohm JW
						R347	119-1031-15	1/10W 10k ohm
						R348	119-0000-05	1/10W 0 ohm JW
						R349	119-4731-15	1/10W 47k ohm
						R350	119-0000-05	1/10W 0 ohm JW
						R351	119-1021-15	1/10W 1k ohm
						R352	119-1021-15	1/10W 1k ohm
						R353	119-1021-15	1/10W 1k ohm
						R354	119-1021-15	1/10W 1k ohm
						R355	119-1001-15	1/10W 10 ohm
						R357	032-0140-15	1/10W 6.8k ohm F

REF No.	PART No.	DESCRIPTION
R358	032-0140-15	1/10W 6.8k ohm F
R360	032-0140-15	1/10W 6.8k ohm F
R361	032-0140-15	1/10W 6.8k ohm F
R362	032-0140-50	1/10W 10k ohm F
R363	032-0140-50	1/10W 10k ohm F
R364	032-0140-50	1/10W 10k ohm F
R365	032-0140-50	1/10W 10k ohm F
R366	032-0140-50	1/10W 10k ohm F
R367	032-0140-50	1/10W 10k ohm F
R401	119-1021-15	1/10W 1k ohm
R402	119-1021-15	1/10W 1k ohm
R403	119-1021-15	1/10W 1k ohm
R404	119-0000-05	1/10W 0 ohm JW
R405	119-1021-15	1/10W 1k ohm
R406	119-1021-15	1/10W 1k ohm
R407	119-1021-15	1/10W 1k ohm
R408	119-1021-15	1/10W 1k ohm
R411	119-4721-15	1/10W 4.7k ohm
R412	119-4721-15	1/10W 4.7k ohm
R413	119-3311-15	1/10W 330 ohm (PN-3090L-A) (PN-3090L-B)
R414	119-3311-15	1/10W 330 ohm (PN-3090L-A) (PN-3090L-B)
R415	119-4731-15	1/10W 47k ohm
R416	119-4731-15	1/10W 47k ohm
R417	119-4731-15	1/10W 47k ohm
R422	119-0000-05	1/10W 0 ohm JW
R423	119-1011-15	1/10W 100 ohm
R424	119-1011-15	1/10W 100 ohm
R432	119-1011-15	1/10W 100 ohm
R433	119-1011-15	1/10W 100 ohm
R434	119-1031-15	1/10W 10k ohm (PN-3090L-A) (PN-3090L-B)
R435	119-1031-15	1/10W 10k ohm (PN-3090L-A) (PN-3090L-B)
R437	119-4731-15	1/10W 47k ohm
R439	119-4731-15	1/10W 47k ohm
R440	119-4731-15	1/10W 47k ohm
R442	119-4721-15	1/10W 4.7k ohm
R444	119-1021-15	1/10W 1k ohm
R445	119-4731-15	1/10W 47k ohm
R446	119-4731-15	1/10W 47k ohm
R447	119-1031-15	1/10W 10k ohm
R448	119-4731-15	1/10W 47k ohm
R449	119-4731-15	1/10W 47k ohm
R450	119-0000-05	1/10W 0 ohm JW
R452	119-4731-15	1/10W 47k ohm
R453	119-1031-15	1/10W 10k ohm
R454	119-4731-15	1/10W 47k ohm
R456	119-1021-15	1/10W 1k ohm
R458	119-1021-15	1/10W 1k ohm
R459	119-4731-15	1/10W 47k ohm

REF No.	PART No.	DESCRIPTION
R460	119-4731-15	1/10W 47k ohm
R463	119-4731-15	1/10W 47k ohm
R466	119-4731-15	1/10W 47k ohm
R469	119-1011-15	1/10W 100 ohm
R472	119-1011-15	1/10W 100 ohm
R474	119-4731-15	1/10W 47k ohm
R475	119-1011-15	1/10W 100 ohm
R476	119-1011-15	1/10W 100 ohm
R477	119-4721-15	1/10W 4.7k ohm
R478	119-4721-15	1/10W 4.7k ohm
R481	119-2231-15	1/10W 22k ohm
R484	119-4731-15	1/10W 47k ohm
R485	119-4731-15	1/10W 47k ohm
R486	119-1041-15	1/10W 100k ohm
R487	119-1041-15	1/10W 100k ohm
R492	119-4731-15	1/10W 47k ohm
R493	119-4721-15	1/10W 4.7k ohm
R494	119-4721-15	1/10W 4.7k ohm
R495	119-4731-15	1/10W 47k ohm
R496	119-4721-15	1/10W 4.7k ohm
R497	119-4721-15	1/10W 4.7k ohm
R498	119-1041-15	1/10W 100k ohm (PN-3090L-A) (PN-3090L-B)
R499	119-1041-15	1/10W 100k ohm (PN-3090L-A) (PN-3090L-B)
R502	119-1031-15	1/10W 10k ohm
R503	119-1031-15	1/10W 10k ohm
R504	119-1031-15	1/10W 10k ohm
R505	119-1031-15	1/10W 10k ohm
R507	119-1031-15	1/10W 10k ohm
R508	119-1031-15	1/10W 10k ohm
R509	119-1031-15	1/10W 10k ohm
R510	119-1031-15	1/10W 10k ohm
R511	119-1031-15	1/10W 10k ohm
R512	119-1031-15	1/10W 10k ohm
R514	119-1051-15	1/10W 1M ohm
R515	119-1051-15	1/10W 1M ohm
R516	119-1051-15	1/10W 1M ohm
R517	119-1051-15	1/10W 1M ohm
R518	119-1031-15	1/10W 10k ohm
R519	119-1031-15	1/10W 10k ohm
R520	119-1031-15	1/10W 10k ohm
R521	119-1031-15	1/10W 10k ohm
R522	119-1031-15	1/10W 10k ohm
R523	119-1031-15	1/10W 10k ohm
R524	119-4731-15	1/10W 47k ohm
R525	119-0000-05	1/10W 0 ohm JW
R526	119-1031-15	1/10W 10k ohm
R527	032-0148-63	1/10W 130k ohm (D)
R528	032-0148-64	1/10W 390k (D)
R529	119-1031-15	1/10W 10k ohm
R530	119-1031-15	1/10W 10k ohm
R532	119-1031-15	1/10W 10k ohm
R533	119-1841-15	1/10W 180k ohm

REF No.	PART No.	DESCRIPTION
R534	119-1031-15	1/10W 10k ohm
R535	116-6811-15	1/4W 680 ohm
R536	119-1031-15	1/10W 10k ohm
R537	032-0140-51	1/10W 15k ohm F
R544	119-4731-15	1/10W 47k ohm
R547	119-4721-15	1/10W 4.7k ohm
R548	119-4721-15	1/10W 4.7k ohm
R549	119-3331-15	1/10W 33k ohm
R555	116-3911-15	1/4W 390 ohm
R556	119-1521-15	1/10W 1.5k ohm
R557	116-1221-15	1/4W 1.2k ohm
R558	119-1031-15	1/10W 10k ohm
R559	116-1221-15	1/4W 1.2k ohm
R560	119-1031-15	1/10W 10k ohm
R561	116-1221-15	1/4W 1.2k ohm
R562	116-1221-15	1/4W 1.2k ohm
R563	119-1031-15	1/10W 10k ohm
R564	119-4721-15	1/10W 4.7k ohm
R565	119-1521-15	1/10W 1.5k ohm
R566	119-1031-15	1/10W 10k ohm
R567	032-0148-50	1/10W 100k ohm
R568	032-0140-16	1/10W 180k ohm F
R570	119-0000-05	1/10W 0 ohm JW (PN-3090L-A) (PN-3090L-B)
R571	119-0000-05	1/10W 0 ohm JW (PN-3090L-A) (PN-3090L-B)
R572	032-0208-51	1/4W 15k ohm
R573	119-2221-15	1/10W 2.2k ohm
R575	116-1531-15	1/4W 15k ohm
R578	119-0000-05	1/10W 0 ohm JW
R579	119-1031-15	1/10W 10k ohm
R580	119-5611-15	1/10W 560 ohm
R581	116-4791-15	1/4W 4.7 ohm
R582	116-4791-15	1/4W 4.7 ohm
R588	119-3341-15	1/10W 330k ohm
R591	119-0000-05	1/10W 0 ohm JW
R592	119-1021-15	1/10W 1k ohm
R593	119-1021-15	1/10W 1k ohm
R4001	119-1021-15	1/10W 1k ohm
R4004	119-1021-15	1/10W 1k ohm
R4005	119-1021-15	1/10W 1k ohm
SUP102	060-0122-91	DSP-141N-S00B
TC401	004-1580-10	30pF GRN
TH101	002-0229-00	PTH8L05BAIR8M1B (PN-3090L-A) (PN-3090L-B)
TM101	073-0762-90	TERMINAL
TM502	073-0762-90	TERMINAL
X301	061-3537-90	41.6MHz
X401	061-3567-90	8.000MHz AT-41CD2
PWB	039-3343-00	PWB(WITHOUT COMPONENT)

Switch PWB(B2) section : PN-3090L-A

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C601	043-0554-90	25V 10uF	D627	001-7109-90	SML-311DTT86	D669	001-9210-50	AVR-
C602	043-0554-90	25V 10uF			ORG			M1608C270MTAAD
C603	168-1042-78	16V 0.1uF	D628	001-7109-90	SML-311DTT86	IC601	051-6057-00	ML9090A-01GA
C604	043-0554-90	25V 10uF			ORG	J601	074-3033-26	SOCKET(26P)
C605	168-1042-78	16V 0.1uF	D629	001-7109-90	SML-311DTT86	J602	075-0395-00	JACK
D601	001-9210-50	AVR-			ORG	Q601	190-1162-00	2SA1162
		M1608C270MTAAD	D630	001-7109-90	SML-311DTT86	Q602	192-2712-51	2SC2712 G,L
D602	001-9210-50	AVR-			ORG	R601	032-0140-00	1/10W 56k ohm F
		M1608C270MTAAD	D631	001-7109-90	SML-311DTT86	R602	119-4731-15	1/10W 47k ohm
D603	001-9210-50	AVR-			ORG	R604	032-0140-53	1/10W 2.2k ohm F
		M1608C270MTAAD	D632	001-7109-90	SML-311DTT86	R605	032-0140-53	1/10W 2.2k ohm F
D604	001-4320-50	EDZC6.8B			ORG	R606	116-1821-15	1/4W 1.8k ohm
D605	001-7109-90	SML-311DTT86	D633	001-7109-90	SML-311DTT86	R607	119-4731-15	1/10W 47k ohm
		ORG			ORG	R608	116-2221-15	1/4W 2.2k ohm
D606	001-7109-90	SML-311DTT86	D634	001-7109-90	SML-311DTT86	R609	116-2721-15	1/4W 2.7k ohm
		ORG			ORG	R610	116-6811-15	1/4W 680 ohm
D607	001-7109-90	SML-311DTT86	D635	001-7109-90	SML-311DTT86	R611	116-2221-15	1/4W 2.2k ohm
		ORG			ORG	R612	116-2221-15	1/4W 2.2k ohm
D610	001-7109-90	SML-311DTT86	D636	001-7109-90	SML-311DTT86	R613	116-2221-15	1/4W 2.2k ohm
		ORG			ORG	R614	116-2221-15	1/4W 2.2k ohm
D611	001-7109-90	SML-311DTT86	D637	001-7109-90	SML-311DTT86	R615	116-1021-15	1/4W 1k ohm
		ORG			ORG	R616	116-2221-15	1/4W 2.2k ohm
D612	001-7109-90	SML-311DTT86	D638	001-7109-90	SML-311DTT86	R617	116-1021-15	1/4W 1k ohm
		ORG			ORG	R618	116-2221-15	1/4W 2.2k ohm
D613	001-7109-90	SML-311DTT86	D639	001-7109-90	SML-311DTT86	R619	116-1021-15	1/4W 1k ohm
		ORG			ORG	R620	116-2221-15	1/4W 2.2k ohm
D614	001-7109-90	SML-311DTT86	D640	001-7109-90	SML-311DTT86	R621	116-1021-15	1/4W 1k ohm
		ORG			ORG	R622	116-1821-15	1/4W 1.8k ohm
D615	001-7109-90	SML-311DTT86	D641	001-7109-90	SML-311DTT86	R623	116-1021-15	1/4W 1k ohm
		ORG			ORG	R624	116-1821-15	1/4W 1.8k ohm
D616	001-7109-90	SML-311DTT86	D642	001-7109-90	SML-311DTT86	R625	116-1021-15	1/4W 1k ohm
		ORG			ORG	R626	116-1821-15	1/4W 1.8k ohm
D617	001-7109-90	SML-311DTT86	D643	001-7109-90	SML-311DTT86	R627	116-2221-15	1/4W 2.2k ohm
		ORG			ORG	R628	116-2721-15	1/4W 2.7k ohm
D618	001-7109-90	SML-311DTT86	D644	001-7109-90	SML-311DTT86	R629	116-2221-15	1/4W 2.2k ohm
		ORG			ORG	R630	116-2221-15	1/4W 2.2k ohm
D619	001-7109-90	SML-311DTT86	D645	001-7109-90	SML-311DTT86	R631	116-2221-15	1/4W 2.2k ohm
		ORG			ORG	R632	116-2221-15	1/4W 2.2k ohm
D620	001-7109-90	SML-311DTT86	D662	001-9210-50	AVR-	R633	116-2221-15	1/4W 2.2k ohm
		ORG			M1608C270MTAAD	R634	116-2221-15	1/4W 2.2k ohm
D621	001-7109-90	SML-311DTT86	D663	001-9210-50	AVR-	R635	119-0000-05	1/10W 0 ohm JW
		ORG			M1608C270MTAAD	S601	016-7004-00	ROTARY SWITCH
D622	001-7109-90	SML-311DTT86	D664	001-9210-50	AVR-	S602	013-6201-53	TACT-SW
		ORG			M1608C270MTAAD			SKPMAPE010
D623	001-7109-90	SML-311DTT86	D665	001-9210-50	AVR-	S603	013-6202-52	SKPMBJE010
		ORG			M1608C270MTAAD	S604	013-6202-52	SKPMBJE010
D624	001-7109-90	SML-311DTT86	D666	001-9210-50	AVR-	S605	013-6202-52	SKPMBJE010
		ORG			M1608C270MTAAD	S606	013-6202-52	SKPMBJE010
D625	001-7109-90	SML-311DTT86	D667	001-9210-50	AVR-	TM601	073-0778-90	TERMINAL
		ORG			M1608C270MTAAD	PWB	039-3349-01	PWB(WITHOUT COMPONENT)
D626	001-7109-90	SML-311DTT86	D668	001-9210-50	AVR-			
		ORG			M1608C270MTAAD			

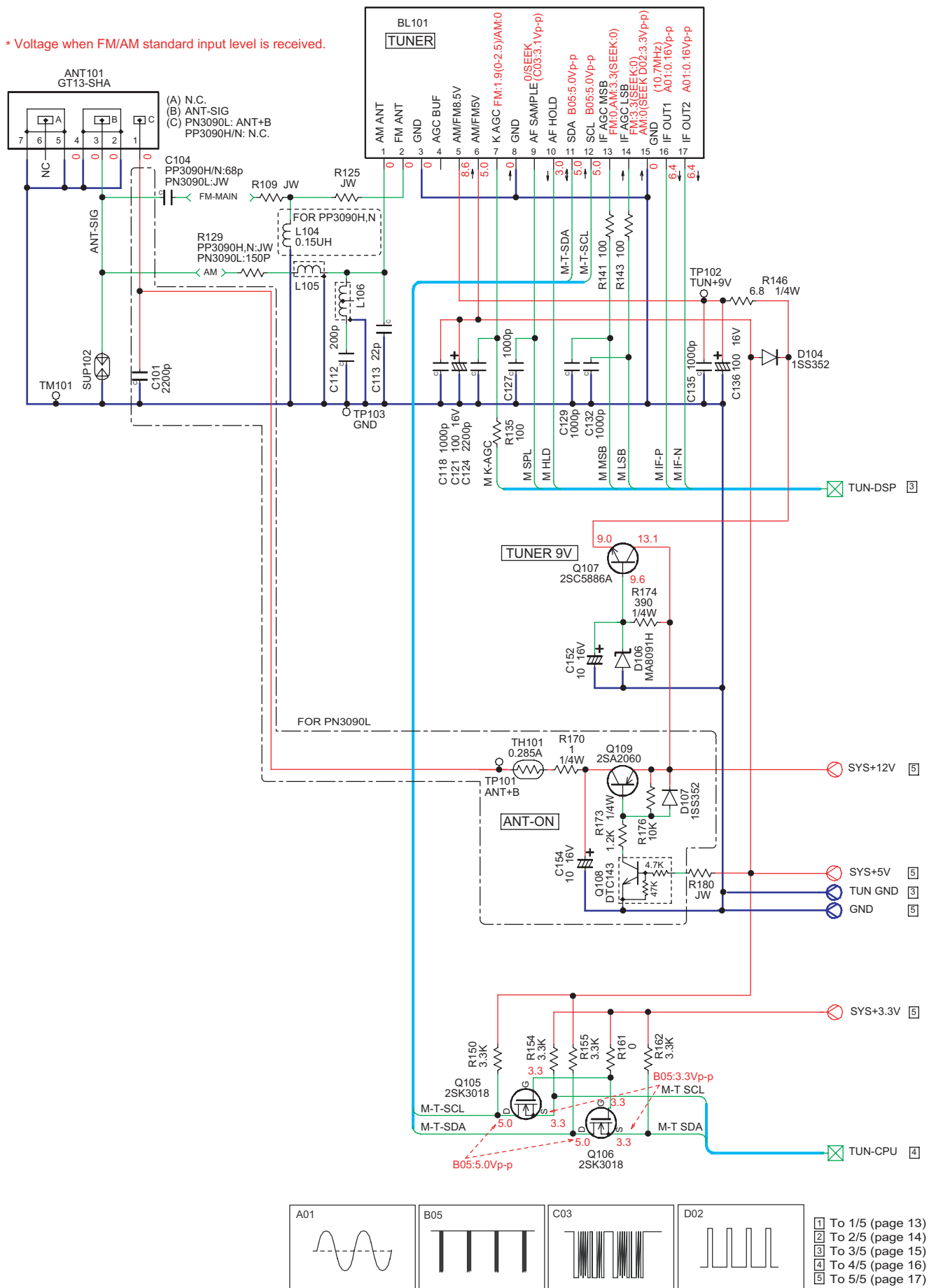
Switch PWB(B2) section : PN-3090L-B / PP-3090H-A / PP-3090N-A

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C601	043-0554-90	25V 10uF	D627	001-7093-91	RFY1112H-16-TR	D669	001-9210-50	AVR-
C602	043-0554-90	25V 10uF			YEL			M1608C270MTAAD
C603	168-1042-78	16V 0.1uF	D628	001-7093-91	RFY1112H-16-TR	IC601	051-6057-00	ML9090A-01GA
C604	043-0554-90	25V 10uF			YEL	J601	074-3033-26	SOCKET(26P)
C605	168-1042-78	16V 0.1uF	D629	001-7093-91	RFY1112H-16-TR	J602	075-0395-00	JACK
D601	001-9210-50	AVR-			YEL	Q601	190-1162-00	2SA1162
		M1608C270MTAAD	D630	001-7093-91	RFY1112H-16-TR	Q602	192-2712-51	2SC2712 G,L
D602	001-9210-50	AVR-			YEL	R601	032-0140-00	1/10W 56k ohm F
		M1608C270MTAAD	D631	001-7093-91	RFY1112H-16-TR	R602	119-4731-15	1/10W 47k ohm
D603	001-9210-50	AVR-			YEL	R604	032-0140-53	1/10W 2.2k ohm F
		M1608C270MTAAD	D632	001-7093-91	RFY1112H-16-TR	R605	032-0140-53	1/10W 2.2k ohm F
D604	001-4320-50	EDZC6.8B			YEL	R606	116-3321-15	1/4W 3.3k ohm
D605	001-7093-91	RFY1112H-16-TR	D633	001-7093-91	RFY1112H-16-TR	R607	119-4731-15	1/10W 47k ohm
		YEL			YEL	R608	116-3921-15	1/4W 3.9k ohm
D606	001-7093-91	RFY1112H-16-TR	D634	001-7093-91	RFY1112H-16-TR	R609	116-4721-15	1/4W 4.7k ohm
		YEL			YEL	R610	116-4711-15	1/4W 470 ohm
D607	001-7093-91	RFY1112H-16-TR	D635	001-7093-91	RFY1112H-16-TR	R611	116-3921-15	1/4W 3.9k ohm
		YEL			YEL	R612	116-4721-15	1/4W 4.7k ohm
D610	001-7093-91	RFY1112H-16-TR	D636	001-7093-91	RFY1112H-16-TR	R613	116-4721-15	1/4W 4.7k ohm
		YEL			YEL	R614	116-4721-15	1/4W 4.7k ohm
D611	001-7093-91	RFY1112H-16-TR	D637	001-7093-91	RFY1112H-16-TR	R615	116-1521-15	1/4W 1.5k ohm
		YEL			YEL	R616	116-4721-15	1/4W 4.7k ohm
D612	001-7093-91	RFY1112H-16-TR	D638	001-7093-91	RFY1112H-16-TR	R617	116-1521-15	1/4W 1.5k ohm
		YEL			YEL	R618	116-4721-15	1/4W 4.7k ohm
D613	001-7093-91	RFY1112H-16-TR	D639	001-7093-91	RFY1112H-16-TR	R619	116-1521-15	1/4W 1.5k ohm
		YEL			YEL	R620	116-4721-15	1/4W 4.7k ohm
D614	001-7093-91	RFY1112H-16-TR	D640	001-7093-91	RFY1112H-16-TR	R621	116-1521-15	1/4W 1.5k ohm
		YEL			YEL	R622	116-3921-15	1/4W 3.9k ohm
D615	001-7093-91	RFY1112H-16-TR	D641	001-7093-91	RFY1112H-16-TR	R623	116-1521-15	1/4W 1.5k ohm
		YEL			YEL	R624	116-3921-15	1/4W 3.9k ohm
D616	001-7093-91	RFY1112H-16-TR	D642	001-7093-91	RFY1112H-16-TR	R625	116-1521-15	1/4W 1.5k ohm
		YEL			YEL	R626	116-3321-15	1/4W 3.3k ohm
D617	001-7093-91	RFY1112H-16-TR	D643	001-7093-91	RFY1112H-16-TR	R627	116-3921-15	1/4W 3.9k ohm
		YEL			YEL	R628	116-4721-15	1/4W 4.7k ohm
D618	001-7093-91	RFY1112H-16-TR	D644	001-7093-91	RFY1112H-16-TR	R629	116-3921-15	1/4W 3.9k ohm
		YEL			YEL	R630	116-4721-15	1/4W 4.7k ohm
D619	001-7093-91	RFY1112H-16-TR	D645	001-7093-91	RFY1112H-16-TR	R631	116-4721-15	1/4W 4.7k ohm
		YEL			YEL	R632	116-4721-15	1/4W 4.7k ohm
D620	001-7093-91	RFY1112H-16-TR	D662	001-9210-50	AVR-	R633	116-4721-15	1/4W 4.7k ohm
		YEL			M1608C270MTAAD	R634	116-4721-15	1/4W 4.7k ohm
D621	001-7093-91	RFY1112H-16-TR	D663	001-9210-50	AVR-	R635	119-0000-05	1/10W 0 ohm JW
		YEL			M1608C270MTAAD	S601	016-7004-00	ROTARY SWITCH
D622	001-7093-91	RFY1112H-16-TR	D664	001-9210-50	AVR-	S602	013-6201-53	TACT-SW
		YEL			M1608C270MTAAD			SKPMAPE010
D623	001-7093-91	RFY1112H-16-TR	D665	001-9210-50	AVR-	S603	013-6202-52	SKPMBJE010
		YEL			M1608C270MTAAD	S604	013-6202-52	SKPMBJE010
D624	001-7093-91	RFY1112H-16-TR	D666	001-9210-50	AVR-	S605	013-6202-52	SKPMBJE010
		YEL			M1608C270MTAAD	S606	013-6202-52	SKPMBJE010
D625	001-7093-91	RFY1112H-16-TR	D667	001-9210-50	AVR-	TM601	073-0778-90	TERMINAL
		YEL			M1608C270MTAAD	PWB	039-3344-00	PWB(WITHOUT COMPONENT)
D626	001-7093-91	RFY1112H-16-TR	D668	001-9210-50	AVR-			
		YEL			M1608C270MTAAD			

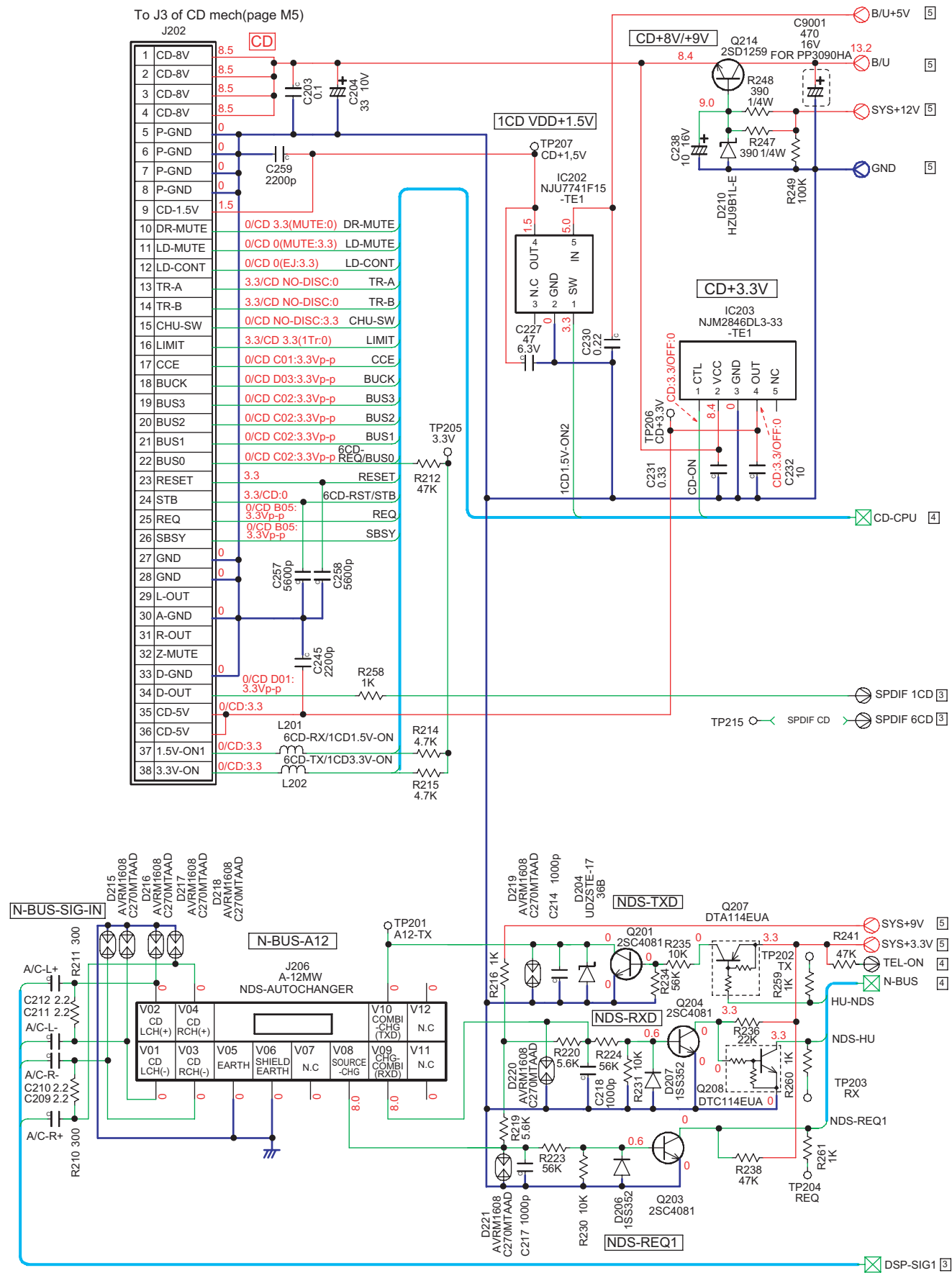
CIRCUIT DIAGRAM

Main PWB(B1) section 1/5

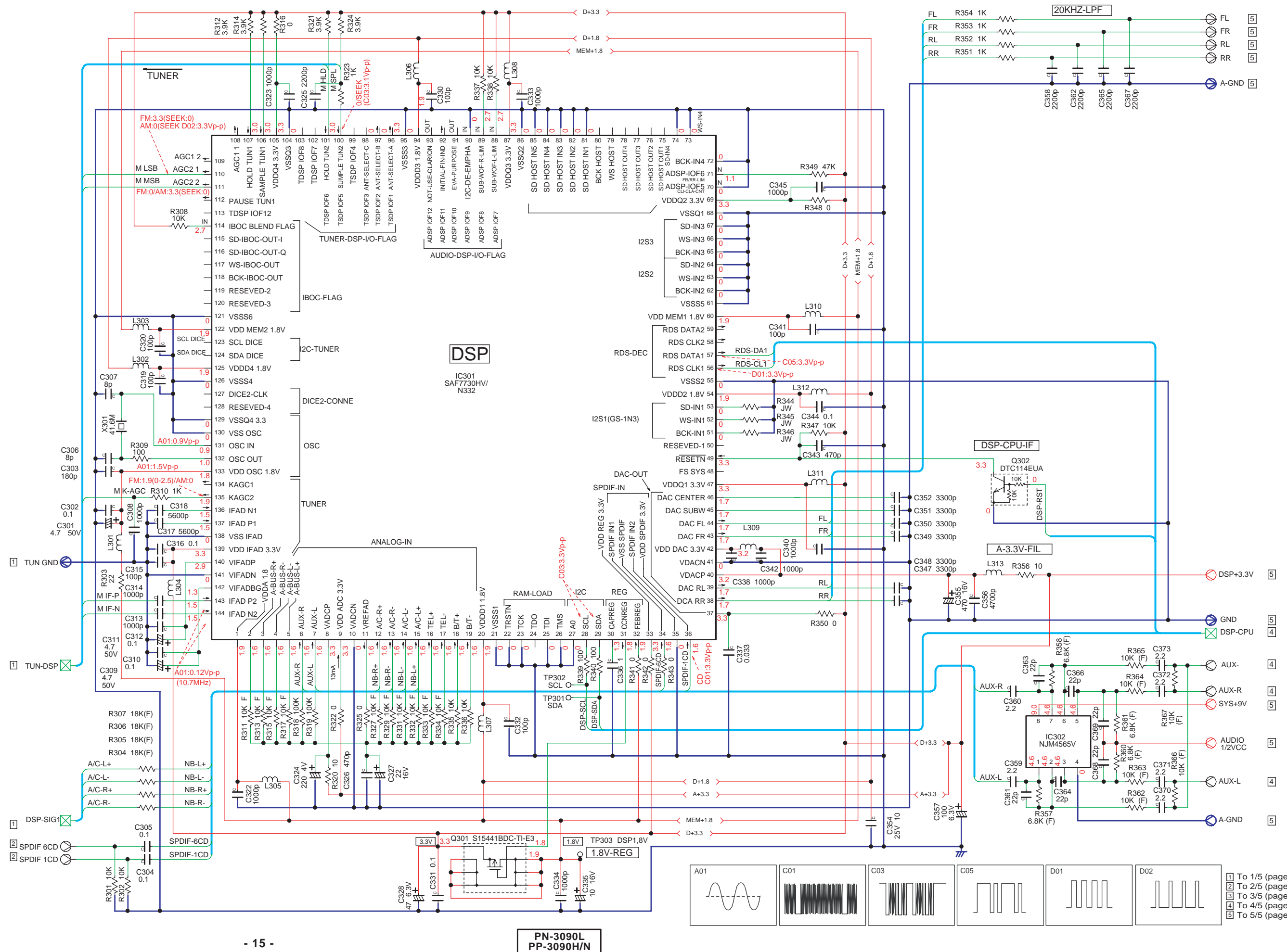
* Voltage when FM/AM standard input level is received.



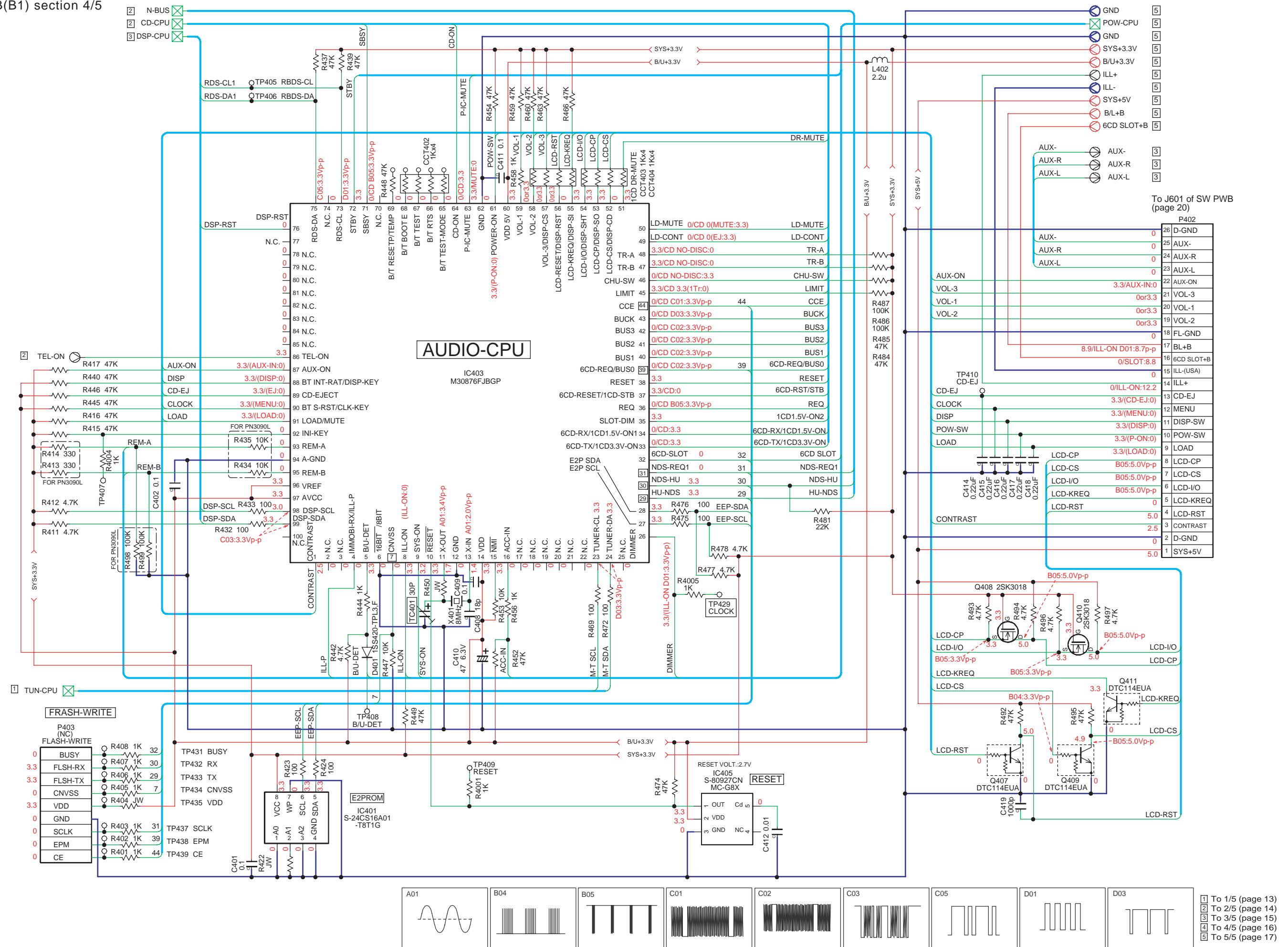
Main PWB(B1) section 2/5



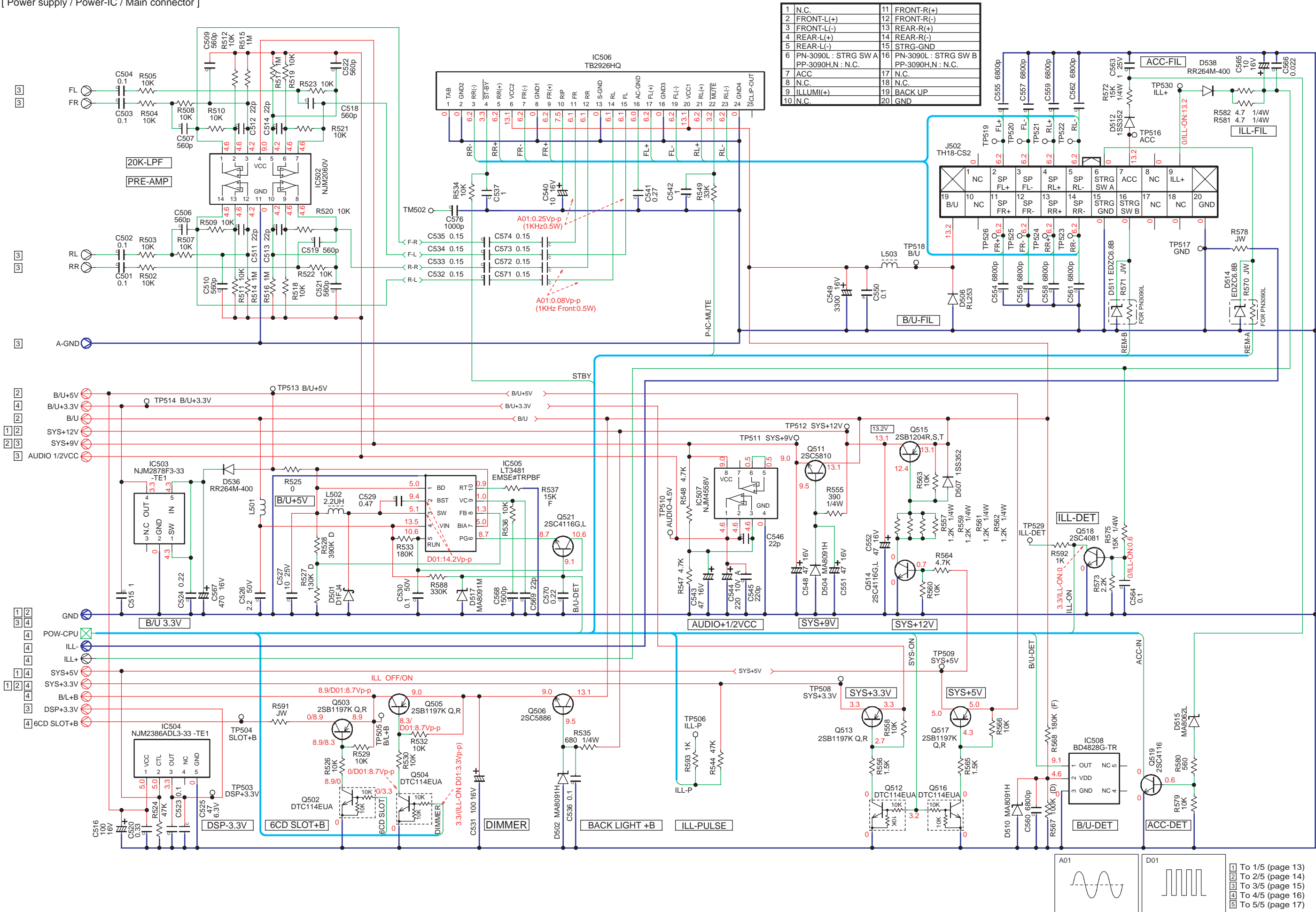
- 1 To 1/5 (page 13)
- 2 To 2/5 (page 14)
- 3 To 3/5 (page 15)
- 4 To 4/5 (page 16)
- 5 To 5/5 (page 17)






Main PWB(B1) section 4/5
[Audio CPU]



Main PWB(B1) section 5/5
[Power supply / Power-IC / Main connector]



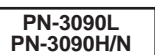
Main PWB(B1) section 1/2

 : For PN3090LA, LB
 : For PP3090HA, NA
 : For PP3090HA

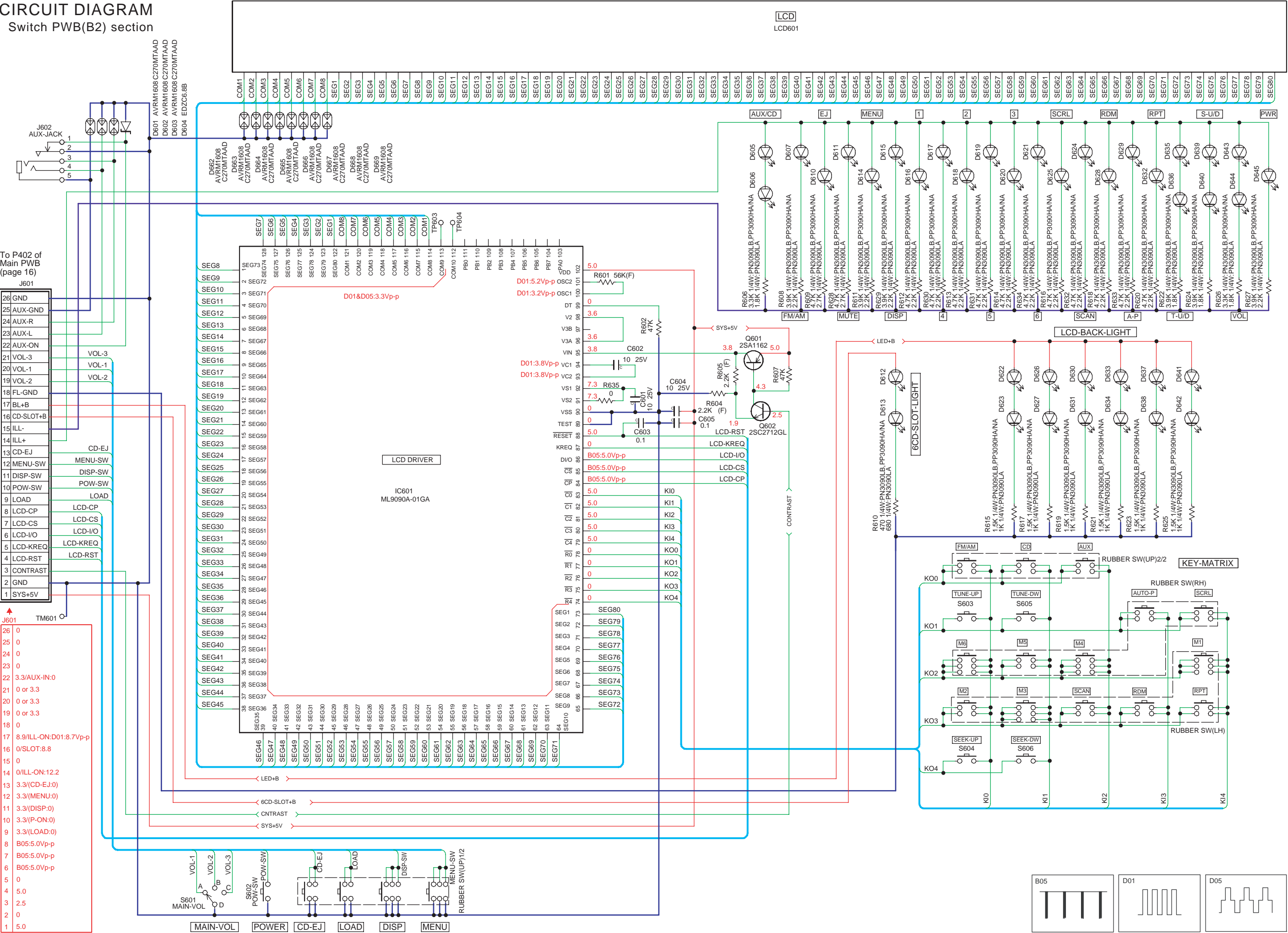
J206
N-BUS Connector(A12)

ANT101
ANT Connector(GT13)

A	N.C.
B	ANT-SIG
C	PN-3090L : ANT+ PP-3090H,N : N.C



CIRCUIT DIAGRAM
Switch PWB(B2) section

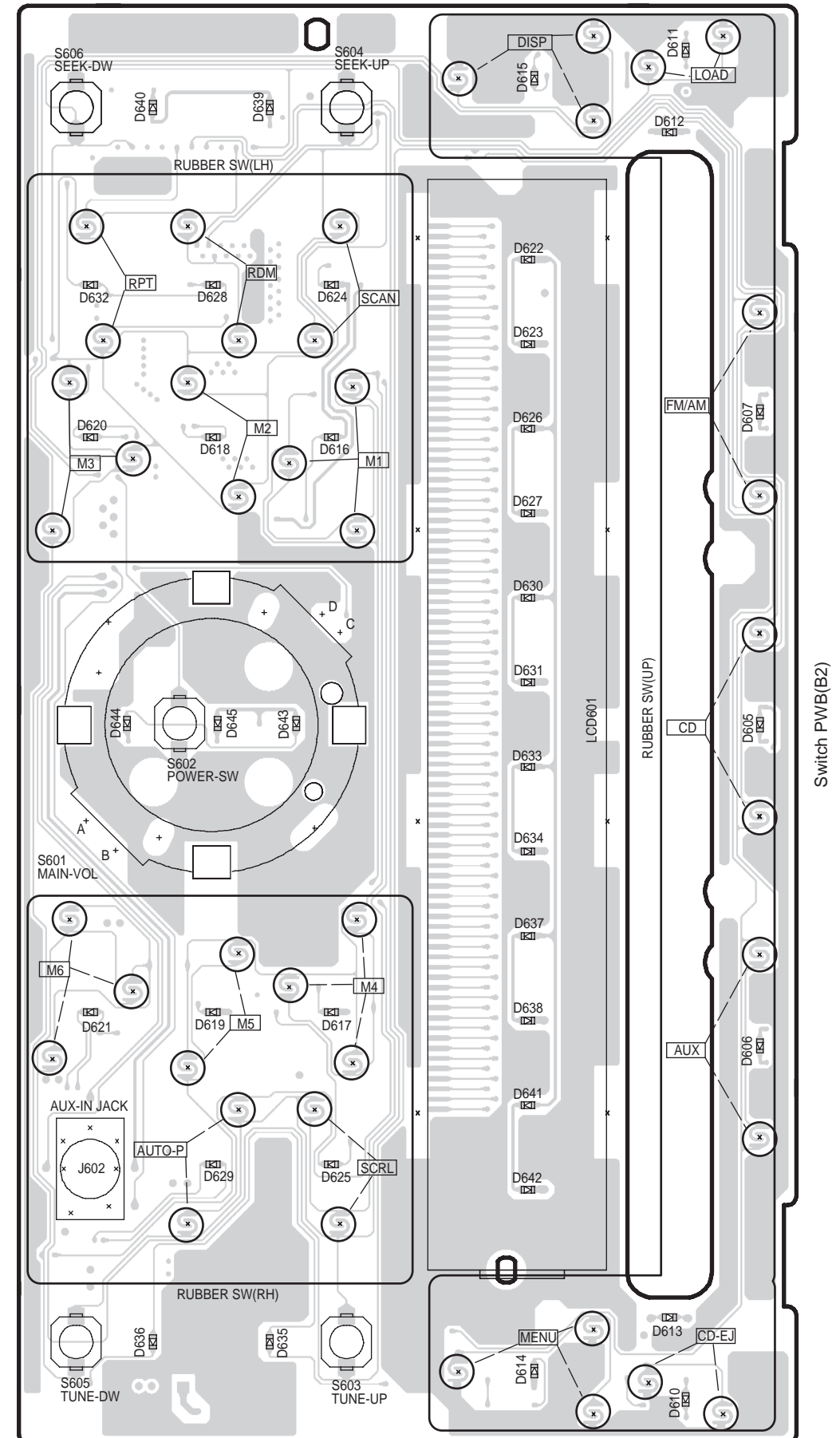
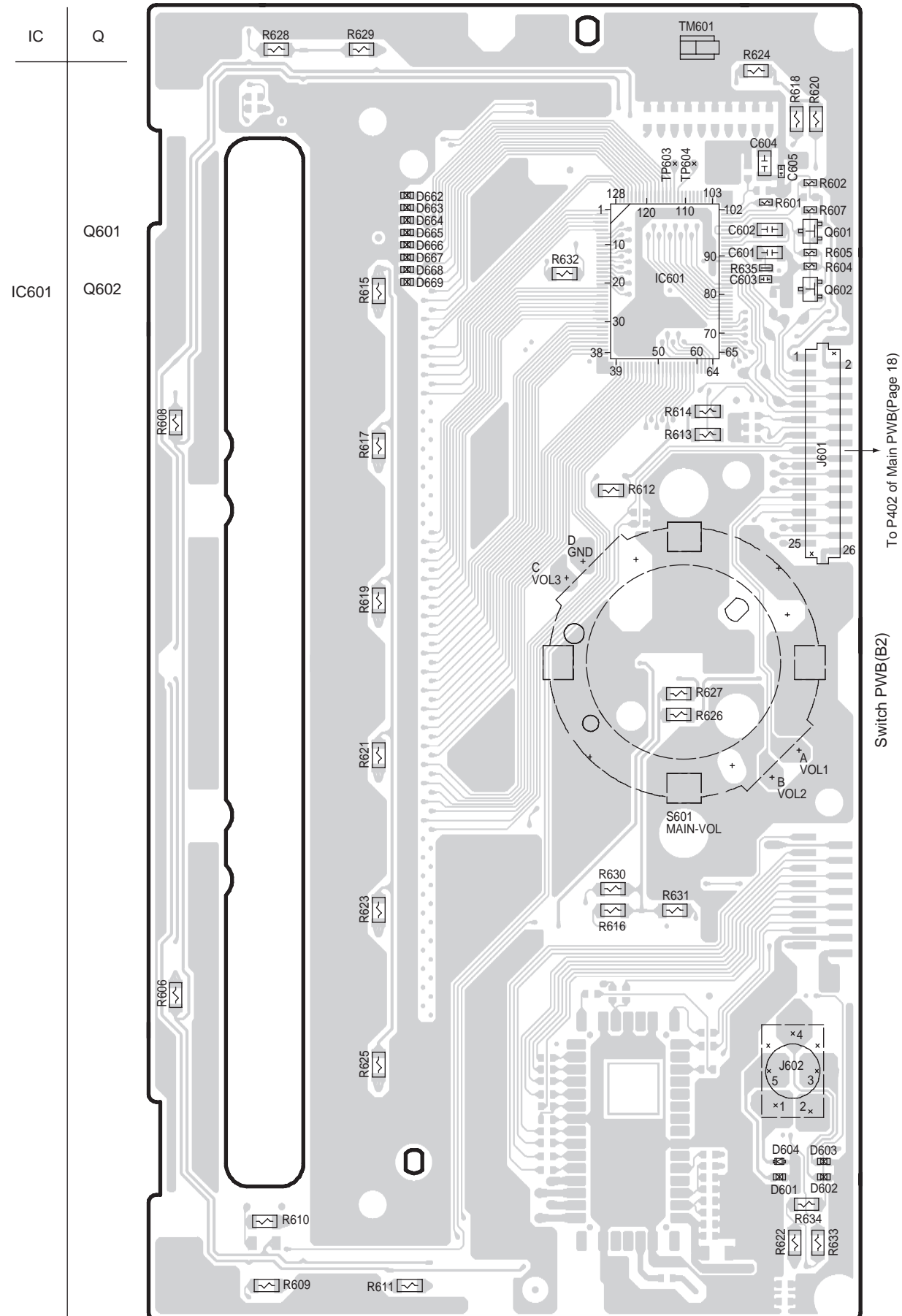


Switch PWB(B2) section
: PN-3090L-A

- * **SOLDER SIDE:**
Parts on the solder side seen from the solder side are indicated.
- * Switch PWB has four layers.
- * The dotted line are parts on a component side.

* COMPONENT SIDE:
Parts on the component side seen from
the component side are indicated.

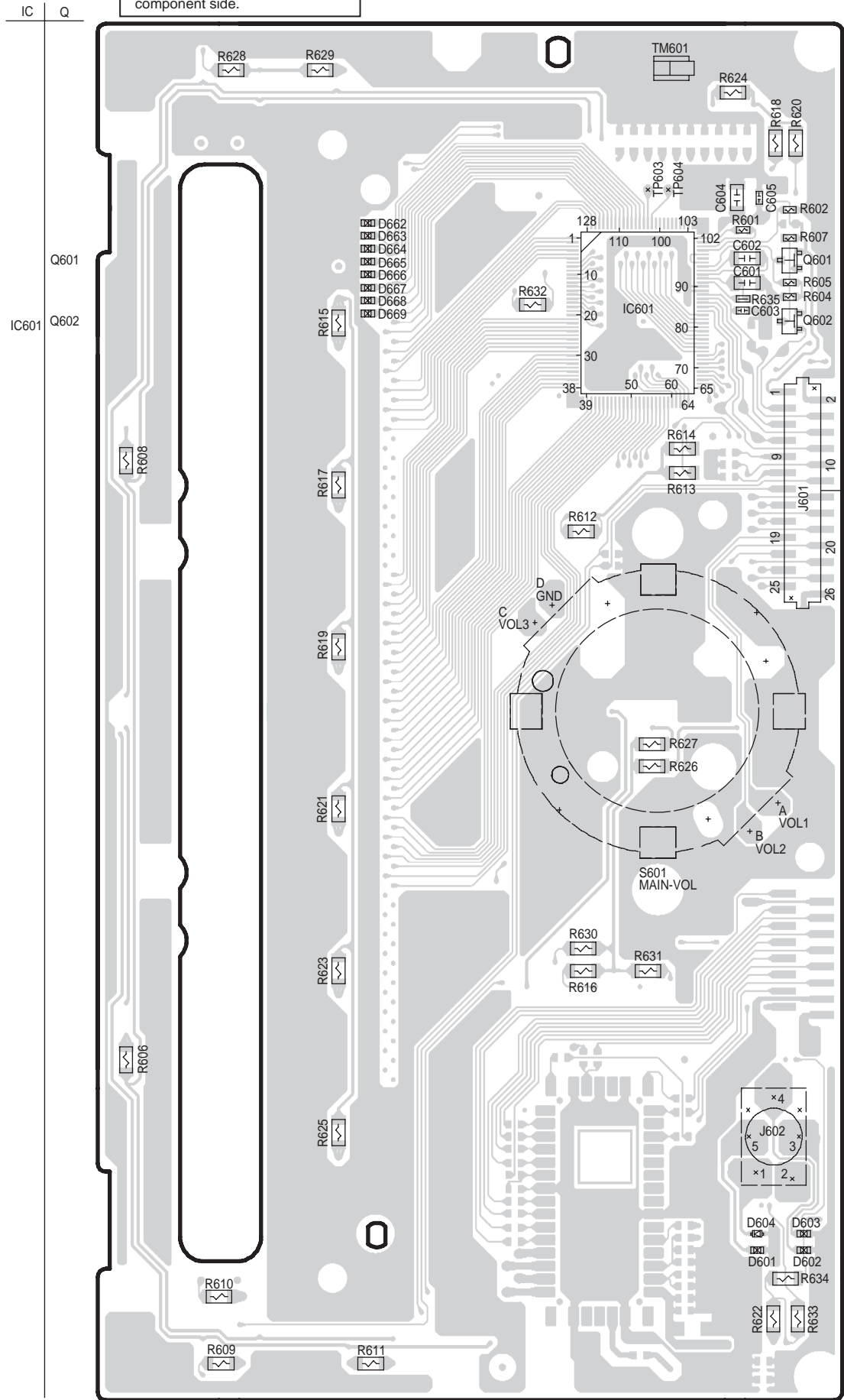
* Switch PWB has four layers.



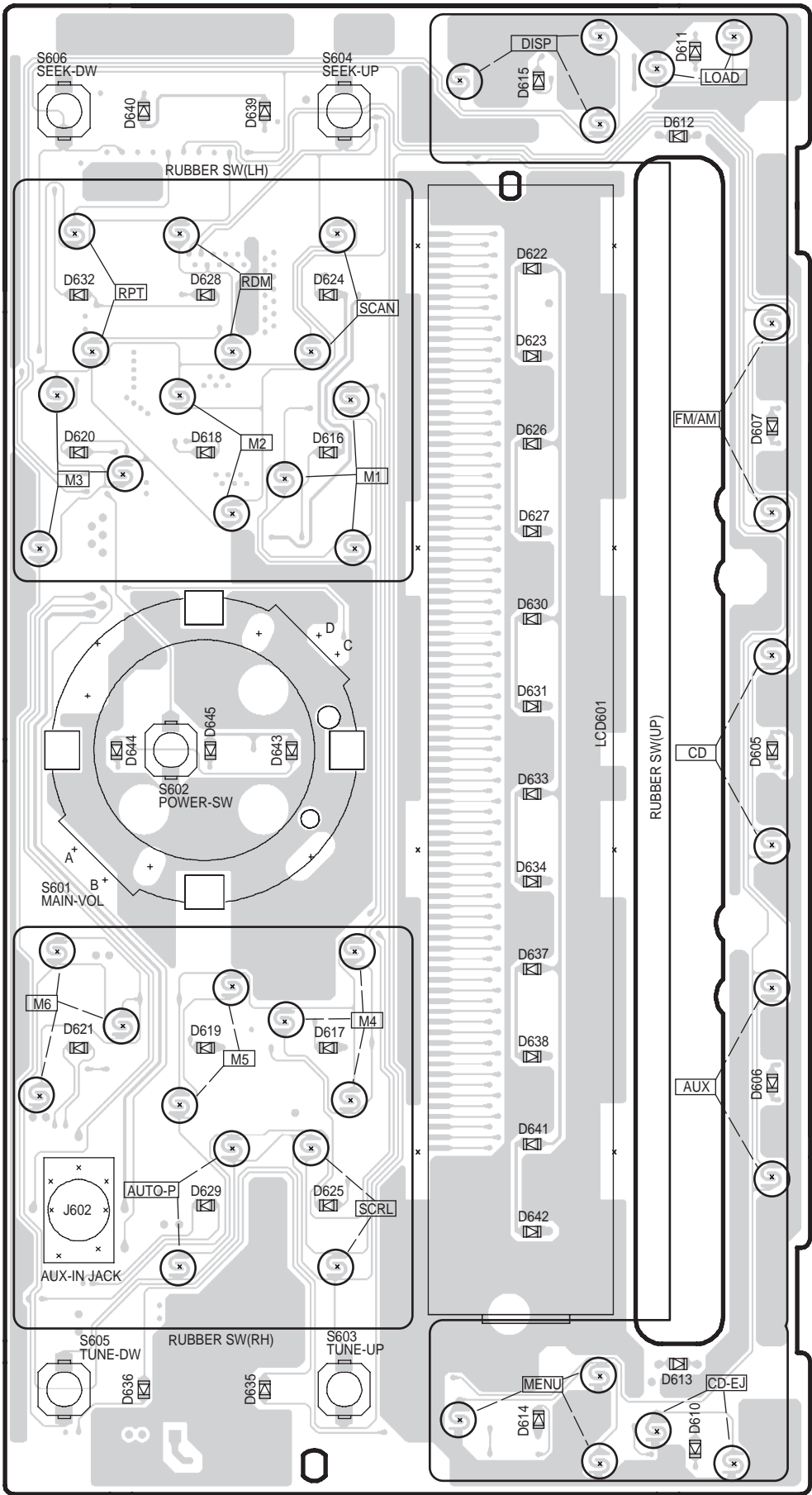
Switch PWB(B2) section

- : PN-3090L-B
- : PP-3090H-A
- : PP-3090N-A

* SOLDER SIDE:
Parts on the solder side seen
from the solder side are indicated.
* Switch PWB has four layers.
* The dotted line are parts on a
component side.



* COMPONENT SIDE:
Parts on the component side seen
from the component side are indicated.
* Switch PWB has four layers.



Service Manual

CD mechanism

Model **929-5027-80**

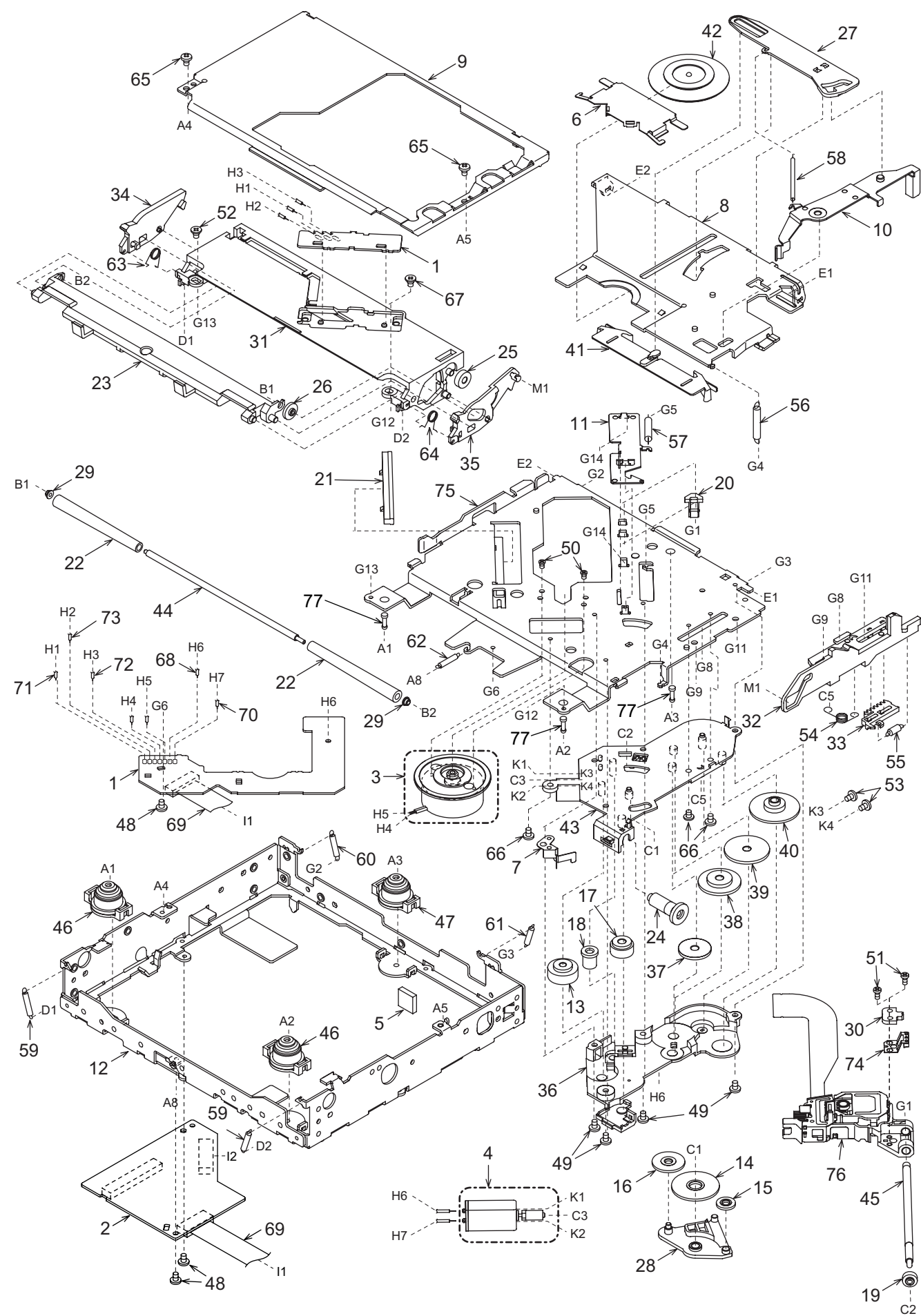
EXPLANATION OF IC

051-6733-30 Toshiba TC94A73MFG-201 CD IC (Decoder)

Terminal Description

pin 1: A VSS	: - : Analog ground.	pin 49: Pio 1	: I/O: General purpose input/output.
pin 2: RF ZI	: IN: RF ripple zero cross signal input.	pin 50: Pio 2	: I/O: General purpose input/output.
pin 3: RF RP	: O : RF ripple signal output.	pin 51: Pio 3	: I/O: General purpose input/output.
pin 4: SBAD/RFDC	: O : Sub beam Addition / RF Peak detection.	pin 52: VSS	: - : Negative voltage supply.
pin 5: F E	: IN: Focusing error signal input.	pin 53: VDD	: - : Positive voltage supply.
pin 6: T E	: IN: Tracking error signal input.	pin 54: SB SY O	: O : Sub code block synchronous signal output.
pin 7: TE Z IN	: IN: Tracking error zero cross signal input.	pin 55: SB OK O	: O : Sub code Q data CRCC OK signal output.
pin 8: A VDD	: - : Positive voltage supply for the analog section.	pin 56: IPF out	: O : IP flag output.
pin 9: FOO	: O : Focus equalizer output.	pin 57: SF SY O	: O : Frame synchronous signal output.
pin 10: TRO	: O : Tracking equalizer output.	pin 58: Z DET O	: O : DAC zero flag output.
pin 11: Vref	: - : Reference voltage.	pin 59: GPIN	: IN: General purpose input.
pin 12: FMO	: O : Field equalizer output.	pin 60: M/S	: IN: I/F MODE selection.
pin 13: DMO	: O : Disk equalizer output.	pin 61: D out	: O : Digital audio interface output.
pin 14: VSS	: - : Negative voltage supply.	pin 62: A out 1	: O : L ch, analog output.
pin 15: VCO CNTRL	: IN: VCO control signal input.	pin 63: B CK	: O : Bit clock output.
pin 16: VDD	: - : Positive voltage supply.	pin 64: LR CK	: O : LR clock output.
pin 17: VDD	: - : Positive voltage supply.	pin 65: AiN	: IN: DAC data input.
pin 18: VSS	: - : Negative voltage supply.	pin 66: B CK IN	: IN: DAC Bit clock input.
pin 19: FG IN	: IN: FG input for the spindle CAV servo.	pin 67: LR CK IN	: IN: DAC Left/Right clock input.
pin 20: IO 0 (HSo)	: I/O: Play speed mode flag.	pin 68: VDD	: - : Positive voltage supply.
pin 21: IO 1 (UHSO)	: I/O: Play speed mode flag.	pin 69: VSS	: - : Negative voltage supply.
pin 22: X VSS	: - : Clock ground.	pin 70: AWRC	: O : Control signal output for the active wide range VCO.
pin 23: X in	: IN: Crystal connection.	pin 71: P VDD	: - : PLL positive voltage supply.
pin 24: X out	: O : Crystal connection.	pin 72: PDO	: O : Phase difference signal output of EFM-PLCK.
pin 25: X VDD	: - : Clock power supply.	pin 73: TMAX S	: O : T max judgment output.
pin 26: D VSS	: - : DAC ground.	pin 74: TMAX	: O : T max judgment output.
pin 27: RO	: O : Right channel audio signal output.	pin 75: LPF N	: IN: Inverted input of LPF for PLL.
pin 28: D VDD	: - : Positive voltage supply for the DAC.	pin 76: LPF out	: O : Output for the Low Pass Filter.
pin 29: DVR	: - : Reference voltage for the DAC.	pin 77: P Vref	: - : PLL reference voltage.
pin 30: LO	: O : Left channel audio signal output.	pin 78: VCO FILTER	: O : Loop filter for VCO.
pin 31: D VSS	: - : DAC ground.	pin 79: PLL VSS	: - : PLL ground.
pin 32: VDD	: - : Positive voltage supply.	pin 80: SLCO	: O : Output of internal DAC for data slice level generation.
pin 33: VSS	: - : Negative voltage supply.	pin 81: RF IN	: IN: RF signal input.
pin 34: VDD	: - : Positive voltage supply.	pin 82: RF RP	: IN: RF ripple input.
pin 35: VDD	: - : Positive voltage supply.	pin 83: RF EQ out	: O : The output of the RF equalizer.
pin 36: SRAM STB	: IN: SRAM standby.	pin 84: Vref out	: O : Reference voltage output.
pin 37: RESET	: IN: Reset signal input.	pin 85: RESIN	: IN: Resistor connection for the reference current.
pin 38: BUS 0	: I/O: Parallel Data input/output.	pin 86: VMDiR	: O : APC reference voltage.
pin 39: BUS 1	: I/O: Parallel Data input/output.	pin 87: TESTR	: O : The compensation terminal for RFEQO offset.
pin 40: BUS 2 / SO	: I/O: Parallel Data input/output. Serial data output.	pin 88: AGCI	: IN: Input of the RF AGC amplifier.
pin 41: BUS 3 / SI	: I/O: Parallel Data input/output. Serial data input.	pin 89: RF out	: O : RF signal output.
pin 42: BUCK / CK	: IN: Parallel Data Clock input. Serial clock input.	pin 90: RF VDD	: - : RF power supply.
pin 43: CCEI	: IN: Chip enable input.	pin 91: LDO	: O : The laser diode drive output.
pin 44: TEST	: IN: For the test.	pin 92: MDI	: IN: Monitor photo diode signal input.
pin 45: IRQ	: IN: DSP interrupt.	pin 93: RF VSS	: - : RF ground.
pin 46: A out 3	: O : Audio data output.	pin 94: FNi 2	: IN: Main beam input.
pin 47: A out 2	: O : Audio data output.	pin 95: FNi 1	: IN: Main beam input.
pin 48: Pio 0	: I/O: General purpose input/output.	pin 96: FPi 2	: IN: Main beam input.
		pin 97: FPi 1	: IN: Main beam input.
		pin 98: TPI	: IN: Sub beam signal input.
		pin 99: TNPC	: O : TNI/TPI capacitor.
		pin100: TNI	: IN: Sub beam signal input.

EXPLODED VIEW/PARTS LIST



NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	-----	SENSOR PWB	1	40	621-1751-20	POWER GEAR D	1
2	-----	CD PWB	1	41	621-1752-20	DISC STOPPER	1
3	SMA-182-100	SPINDLE MOTOR-ASSY	1	42	621-1753-20	CLAMPER RING	1
4	SMA-183-100	SLED MOTOR-ASSY	1	43	621-1754-20	GEAR BASE	1
5	345-5476-20	CUSHION RUBBER	1	44	622-1571-21	ROLLER SHAFT	1
6	620-1023-23	CLAMPER PLATE	1	45	624-0018-01	LEAD SCREW	1
7	620-1026-21	SPRING PLATE	1	46	629-0086-20	DAMPER F	2
8	620-1596-23	CLAMPER LINK	1	47	629-0087-20	DAMPER R	1
9	620-1862-20	UPPER CHASSIS	1	48	716-1507-01	SCREW(M2x3)	3
10	620-1752-20	SENSOR ARM	1	49	716-1670-01	SCREW(M2x4)	4
11	620-1753-20	ID-LOCK PLATE	1	50	716-1733-01	SCREW(M1.7x2.3)	2
12	620-1868-20	LOWER CHASSIS	1	51	716-3469-01	SCREW(1.7x4)	2
13	621-0608-21	SECOND GEAR	1	52	716-3473-01	SCREW(M2x3)	1
14	621-0609-20	BASE GEAR	1	53	716-3551-00	SCREW(M1.4x2.5)	2
15	621-0610-20	IDLE GEAR A	1	54	750-7865-20	SHIFT SPRING	1
16	621-0611-20	IDLE GEAR B	1	55	750-7866-20	RACK SPRING	1
17	621-0612-21	ROLLER GEAR A	1	56	750-7867-20	CLAMPER SPRING	1
18	621-0620-20	THREAD GEAR A	1	57	750-7868-20	ID-LOCK SPRING	1
19	621-0621-20	THREAD GEAR B	1	58	750-7869-20	SENSOR SPRING	1
20	621-0623-23	LS-HOLDER	1	59	750-7870-20	DR-SPRING F	2
21	621-0624-22	GUIDE RAIL	1	60	750-7871-20	DR-SPRING RA	1
22	621-0711-21	LOADING ROLLER	2	61	750-7872-20	DR-SPRING RB	1
23	621-0718-21	ROLLER GUIDE	1	62	750-7873-20	DR-SPRING C	1
24	621-0719-20	ROLLER GEAR B	1	63	750-6797-20	ROLLER SPRING L	1
25	621-0720-20	ROLLER GEAR C	1	64	750-6798-20	ROLLER SPRING R	1
26	621-0721-20	ROLLER GEAR D	1	65	714-2003-8B	SCREW(M2x3)	2
27	621-0728-20	STOPPER LINK	1	66	780-2025-00	SCREW(M2x2.5)	3
28	621-1719-20	IDLE CASE	1	67	781-1730-00	SCREW(M1.7x3)	1
29	621-1726-20	ROLLER SLEEVE	2	68	803-4906-60	VINYL-COAT-WIRE(ORG)	1
30	621-1729-20	SH-BASE	1	69	816-2542-01	FLAT WIRE	1
31	621-1742-20	UPPER GUIDE	1	70	816-2590-00	VINYL-COAT-WIRE(GRN)	1
32	621-1743-20	SHIFT LEVER	1	71	816-2591-00	VINYL-COAT-WIRE(YEL)	1
33	621-1744-20	RACK	1	72	816-2592-00	VINYL-COAT-WIRE(BLUE)	1
34	621-1745-20	LOCK ARM L	1	73	816-2593-00	VINYL-COAT-WIRE(PUR)	1
35	621-1746-20	LOCK ARM R	1	74	966-1722-20	SH-RACK-ASSY	1
36	621-1747-20	GEAR COVER	1	75	620-1866-20	DRIVE-PLATE	1
37	621-1748-20	POWER GEAR A	1	76	969-0071-30	PICKUP-ASSY	1
38	621-1749-20	POWER GEAR B	1	77	622-1570-21	DAMPER PIN	3
39	621-1750-20	POWER GEAR C	1				

ELECTRICAL PARTS LIST

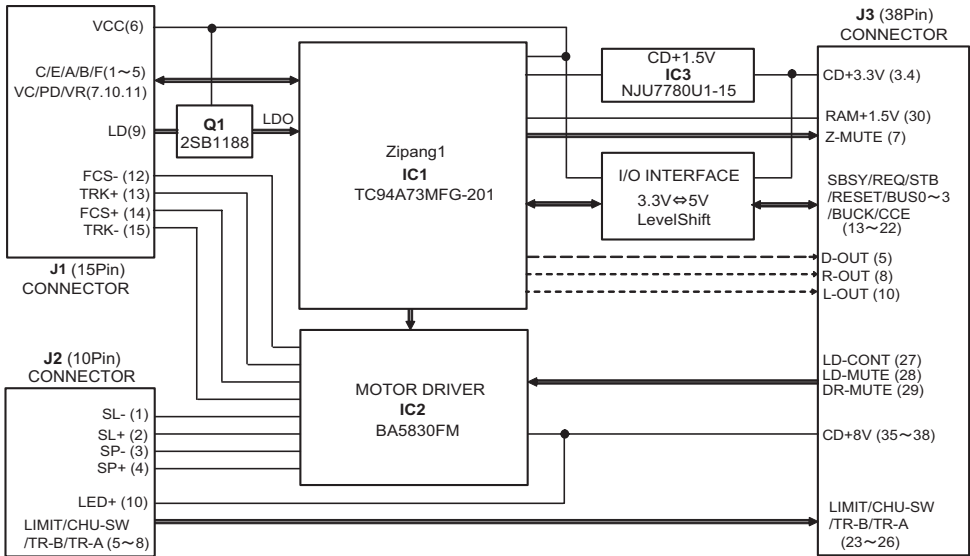
CD PWB(BM1) section

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C2	178-1052-78	1uF	C60	168-1042-78	16V 0.1uF	R19	119-0000-05	1/10W 0 ohm JW
C3	042-0627-90	16V 100uF	C63	168-1042-78	16V 0.1uF	R20	119-0000-05	1/10 0ohm JW
C4	168-1042-78	16V 0.1uF	C68	168-1042-78	16V 0.1uF	R22	119-2231-15	1/10W 22k ohm
C6	178-1052-78	1uF	C69	042-1710-90	6.3V 100uF	R23	119-0000-05	1/10 0ohm JW
C7	042-0560-85	6.3V 100uF	C74	042-1709-90	6.3V 47uF	R25	119-1041-15	1/10W 100k ohm
C8	178-1052-78	1uF	C75	168-1042-78	16V 0.1uF	R26	119-0000-05	1/10W 0 ohm JW
C9	166-4711-50	470pF CH	C77	168-1042-78	16V 0.1uF	R27	119-4731-15	1/10W 47k ohm
C10	168-4732-78	0.047uF K	C78	168-1022-55	1000pF K	R29	119-5621-15	1/10W 5.6k ohm
C11	166-4711-50	470pF CH	C79	168-1022-55	1000pF K	R30	119-2231-15	1/10W 22k ohm
C12	168-4732-78	0.047uF K	C80	042-0423-20	10V-10uF	R31	119-4731-15	1/10W 47k ohm
C14	168-1042-78	16V 0.1uF	D1	001-1305-90	DAN217UT106	R32	119-3341-15	1/10W 330k ohm
C15	166-1007-50	10pF CH	IC1	051-6733-30	TC94A73MFG-201	R33	119-1041-15	1/10W 100k ohm
C16	166-1007-50	10pF CH	IC2	051-6079-80	BA5830FM-E2	R34	119-1041-15	1/10W 100k ohm
C17	168-1042-78	16V 0.1uF	IC3	051-3395-90	NJU7780U1-15-TES	R35	119-1041-15	1/10W 100k ohm
C18	168-2222-55	2200pF K	J1	074-1138-65	SOCKET (15P)	R36	119-1011-15	1/10W 100 ohm
C19	168-1042-78	16V 0.1uF	J2	074-1138-60	SOCKET (10P)	R38	119-1041-15	1/10W 100k ohm
C20	168-1042-78	16V 0.1uF	J3	074-1022-55	SOCKET (38P)	R39	119-0000-05	1/10W 0 ohm JW
C22	168-6822-55	6800pF K	L1	119-0000-05	1/10 0ohm JW	R41	119-4721-15	1/10W 4.7k ohm
C24	168-3332-78	0.033uF K	L2	119-0000-05	1/10 0ohm JW	R42	119-4721-15	1/10W 4.7k ohm
C25	168-3332-78	0.033uF K	L3	119-0000-05	1/10 0ohm JW	R45	119-1031-15	1/10W 1k ohm
C26	043-0570-90	16V 2.2uF K	L4	010-3104-50	30ohm/100MHz	R46	119-4731-15	1/10W 47k ohm
C28	168-1042-78	16V 0.1uF	L5	010-3406-26	0.01uH	R47	119-4731-15	1/10W 47k ohm
C29	168-1042-78	16V 0.1uF	Q1	131-1188-50	2SB1188 Q,R	R48	119-1031-15	1/10W 10k ohm
C30	168-1042-78	16V 0.1uF	Q2	198-3018-00	2SK3018	R49	119-1031-15	1/10W 10k ohm
C31	168-1042-78	16V 0.1uF	Q3	198-3018-00	2SK3018	R50	119-2211-15	1/10W 220 ohm
C33	168-1042-78	16V 0.1uF	Q4	192-4155-51	2SC4155A S,T	R51	119-1031-15	1/10W 10k ohm
C34	168-1042-78	16V 0.1uF	Q5	198-3018-00	2SK3018	R52	119-1031-15	1/10W 10k ohm
C35	168-5622-55	5600pF K	Q6	192-4155-51	2SC4155A S,T	R53	119-2211-15	1/10W 220 ohm
C36	168-1042-78	16V 0.1uF	Q7	198-3018-00	2SK3018	R54	119-3331-15	1/10W 33k ohm
C37	168-5622-55	5600pF K	Q8	198-3018-00	2SK3018	R55	119-4721-15	1/10W 4.7k ohm
C38	166-6801-50	68pF	R1	119-2211-15	1/10W 220 ohm	R56	119-3331-15	1/10W 33k ohm
C39	168-1042-78	16V 0.1uF	R2	117-6811-15	1/8W 680 ohm	R57	119-4721-15	1/10W 4.7k ohm
C40	168-1532-55	0.015uF K	R3	117-0000-05	1/8W 0 ohm JW	R58	119-3331-15	1/10W 33k ohm
C41	168-1042-78	16V 0.1uF	R4	119-1001-15	1/10W 10 ohm	R59	119-4721-15	1/10W 4.7k ohm
C42	168-1032-55	0.01uF K	R5	119-2731-15	1/10W 27k ohm	R60	119-3331-15	1/10W 33k ohm
C43	168-1042-78	16V 0.1uF	R6	119-2731-15	1/10W 27k ohm	R61	119-4721-15	1/10W 4.7k ohm
C44	168-1042-78	16V 0.1uF	R7	119-2221-15	1/10W 2.2k ohm	R62	119-3331-15	1/10W 33k ohm
C46	168-1522-55	1500pF K	R8	119-2731-15	1/10W 27k ohm	R63	119-4721-15	1/10W 4.7k ohm
C47	168-3322-55	3300pF K	R9	119-2731-15	1/10W 27k ohm	R64	119-1051-15	1/10W 1M ohm
C48	168-1032-55	0.01uF K	R10	119-1051-15	1/10W 1M ohm	R65	119-4701-15	1/10W 47 ohm
C49	168-1042-78	16V 0.1uF	R11	119-2211-15	1/10W 220 ohm	R66	119-1051-15	1/10W 1M ohm
C54	168-1532-55	0.015uF K	R13	119-8231-15	1/10W 82k ohm	R67	119-0000-05	1/10W 0 ohm JW
C55	168-1042-78	16V 0.1uF	R14	119-1531-15	1/10W 15k ohm	TM1	073-0768-90	TERMINAL
C56	168-1042-78	16V 0.1uF	R15	119-8231-15	1/10W 82k ohm	X1	061-3534-90	16.92MHz
C58	166-6097-50	6pF CH	R16	119-4731-15	1/10W 47k ohm	PWB	039-3205-01	PWB(WITHOUT COMPONENTS)
C59	166-4701-50	47pF CH	R17	119-0000-05	1/10 0ohm JW			

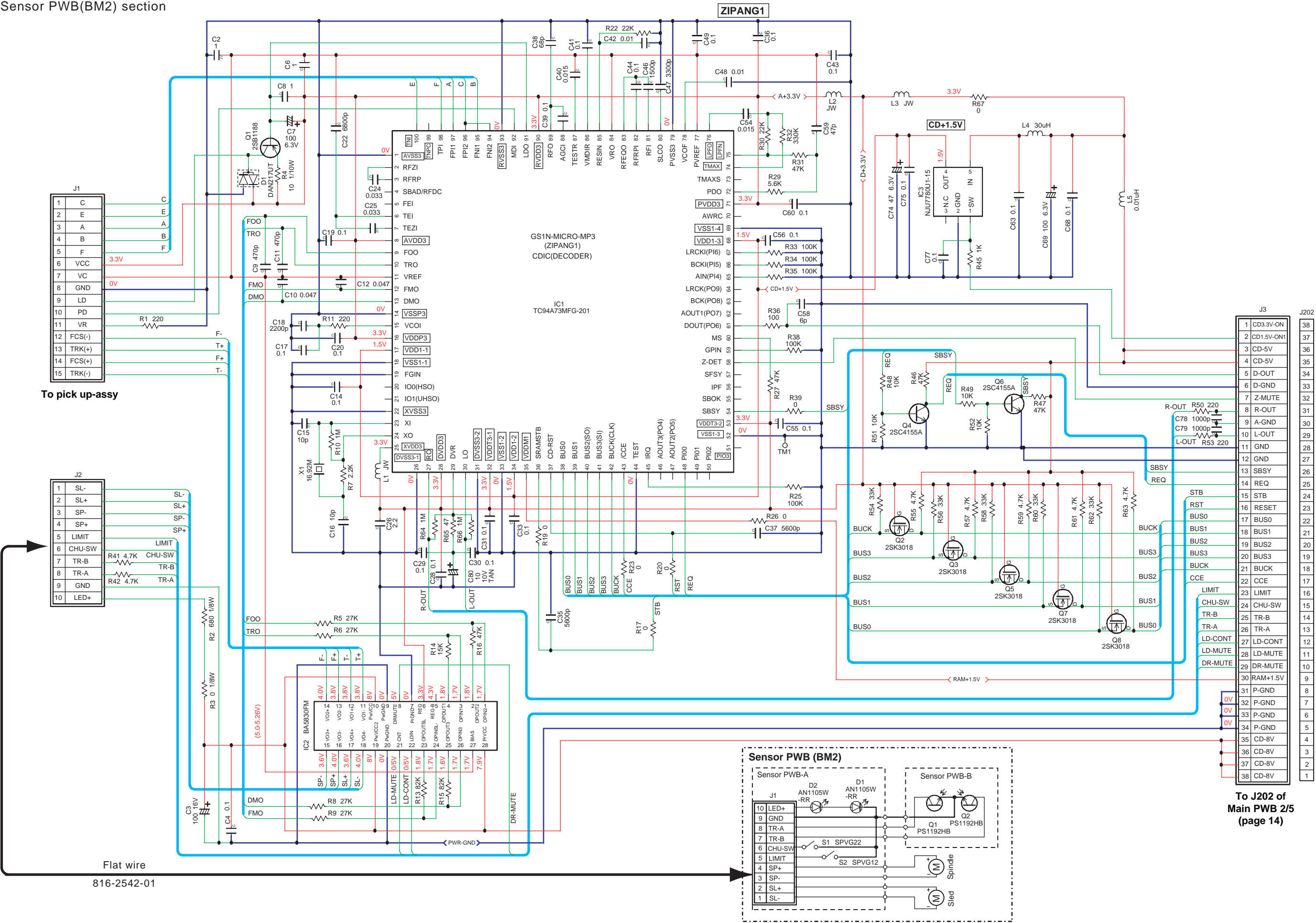
SENSOR PWB(BM2) section

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
D1	001-7058-90	AN1105W-RR	Q1	060-4015-91	PS1192HB-32-TR	S2	013-7413-50	LIMIT
D2	001-7058-90	AN1105W-RR	Q2	060-4015-91	PS1192HB-32-TR	PWB	039-1944-21	PWB(WITHOUT COMPONENTS)
J1	074-1138-60	10P	S1	013-7414-50	CHUCKING			

BLOCK DIAGRAM



CIRCUIT DIAGRAM
CD PWB(BM1) section
Sensor PWB(BM2) section



PRINTED WIRING BOARD

CD PWB(BM1) section
Sensor PWB(BM2) section

