

SERVICE MANUAL

STEREO CAR CD RECEIVER

BASIC CD MECHANISM : TN-CCD1001-113J

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" of CDC-X207<YZ>, (S/M Code No. 09-001-422-3T3) and CDC-X207<YH>, (S/M Code No. 09-002-422-3T4) and CDC-Z107<YH>, (S/M Code No. 09-002-422-4T2).

SPECIFICATIONS

RADIO SECTION

(FM)	
Frequency Range	87.5 MHz – 108 MHz (50-kHz steps) 87.5 MHz – 108 MHz (100-kHz steps)
Usable Sensitivity	12.7 dBf
50 dB Quieting Sensitivity	17.2 dBf
IF Rejection	80 dB
Frequency Response	30 Hz – 15,000 Hz
S/N Ratio	63 dB
Stereo Separation	35 dB at 1 kHz
Alternate Channel Selectivity	70 dB
Capture Ratio	3 dB

(AM)

Frequency Range	531 kHz – 1,602 kHz (9-kHz steps) 530 kHz – 1,710 kHz (10-kHz steps)
Usable Sensitivity	30 µV (30 dB)

Set the frequency increment for your area using the switch on the bottom of the unit.
(The switch is set at the factory to the 10k position)

CD SECTION

Frequency Response	17 Hz – 20 kHz +0/-3 dB
Dynamic Range	More than 80 dB
Channel Separation	More than 65 dB
S/N Ratio	More than 85 dB
Wow/Flutter	Unmeasurable

AUDIO SECTION

Max. Power Output	45 W x 4 channels<X207> 40 W x 4 channels<Z107>
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AUX IN input<X207YH, Z107YH>

Input Sensitivity (load impedance)	
AUX IN	300 mV (10 kΩ)

TAPE/ MD IN input<X207YZ>

Input Sensitivity (load impedance)	
TAPE/MD IN	300 mV (10 kΩ)

GENERAL

Power Supply Voltage	14.4 V (11 to 16 V allowable), DC, negative ground
Load Impedance	4 Ω
Tone Control	Bass ±10 dB at 100 Hz Treble ±10 dB at 10 kHz
Preamp Output Voltage (load impedance)	2.2 V (10 kΩ)
Installation Size	182 (W) x 53 (H) x 155 (D) mm (7 ¹ / ₄ (W) x 2 ¹ / ₈ (H) x 6 ¹ / ₈ (D) inches)

- Design and specifications are subject to change without notice.

ACCESSORIES / PACKAGE LIST

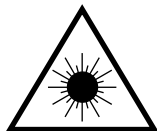
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-KCG-904-010		IB, YZ (9L) 207<X207YZ>
1	8A-KCG-905-010		IB, INST, YZ (9L) -I<X207YZ>
1	8A-KCG-907-010		IB, YH (E CK CH) 207<X207YH>
1	8A-KCG-908-010		IB, INST, YH (E CK CH) -I<X207YH, Z107YH>
1	8A-KCH-903-010		IB, YH (E CK CH) 107<Z107YH>
2	87-B10-141-010		NUT, 5 TYPE-2
3	87-B10-143-010		UT1+5-15 W/O SLOT
4	87-B10-144-010		W, 5.2-10-0.5
5	87-B10-145-010		W-SPR, 5.3-8.5-1.5
6	8Z-KC1-231-110		HLDR, HALF -C
7	8Z-KC1-232-010		KEY, REMOVE -C
8	8Z-KC1-235-010		HLDR, REAR MTG
9	8Z-KC1-244-010		S-SCREW, 5*6 TH+ TAPPING ST
10	8Z-KC1-250-010		S-SCREW, HEXAGON
11	8Z-KT1-616-010		CONN ASSY, 16P B52

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

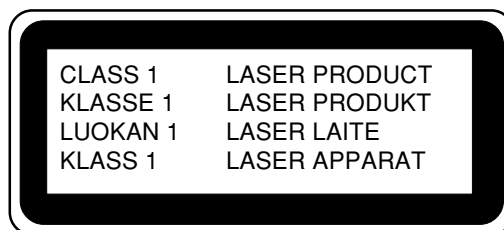
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

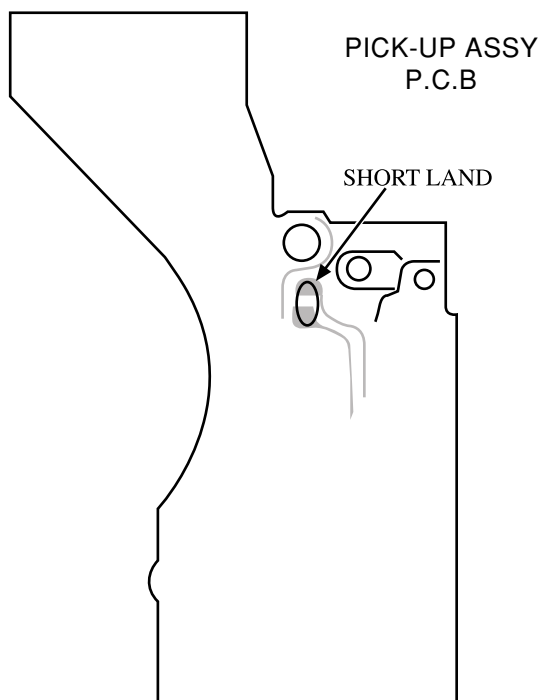
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (OPTIMA-720AIE)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in right figure.



ELETRICAL MAIN PARTS LIST

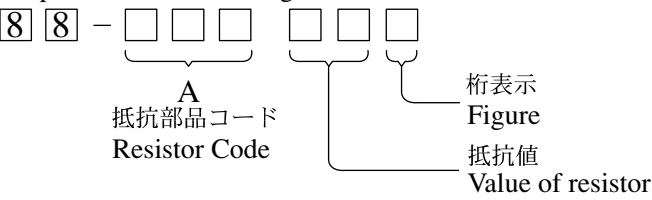
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C210	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A20-446-010		C-IC,LA9241ML	C211	87-010-498-040		CAP,E 10-16 M 5L SRE
	87-A21-319-010		C-IC,LC78622NE	C212	87-010-180-080		C-CER 1500P
	87-A21-488-040		C-IC,LA6556	C213	87-010-992-080		CAP, CHIP 0.047
	8Z-KT1-622-010		C-IC,LC75374E	C214	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A21-562-010		IC,LA4743B	C215	87-010-182-080		C-CAP,S 2200P-50 K B C2012
	88-KT1-606-080		IC,PST994D	C216	87-016-460-080		C-CAP,S 0.22-16 K B
	87-A21-535-030		C-IC,LC72358N-9910	C217	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A21-489-030		C-IC,LC75853NW	C218	87-010-198-080		CAP, CHIP 0.022
				C219	87-012-157-080		C-CAP,S 330P-50 CH
TRANSISTOR				C220	87-010-184-080		CHIP CAPACITOR 3300P(K)
	89-324-122-080		TR,2SC2412K	C221	87-010-322-080		C-CAP,S 100P-50 CH
	87-A30-289-040		C-TR,2SA1037AK(R)	C222	87-010-492-040		CAP,E 0.33-50 GAS
	87-A30-288-040		C-TR,DTC114YKA	C223	87-010-067-040		CAP,E 0.1-50 5L
	87-A30-287-040		C-TR,DTC114TKA	C224	87-010-553-040		CAP,E 47-16 GAS
	87-026-235-080		CHIP-TR,DTC114EK	C225	87-010-184-080		C-CAP,S 3300P-50 K B C2012
	87-026-210-080		CHIP-TR,DTC144EK	C226	87-010-497-040		CAP,E 4.7-35 GAS
	87-A30-299-080		TR,2SB1326	C227	87-010-555-040		CAP,E 100-10 GAS
	87-A30-282-040		C-TR,DTA114TKA	C228	87-016-669-080		CHIP CAPACITOR,0.1-25
	87-A30-168-010		TR,2SB1566F	C229	87-010-498-040		CAP,E 10-16 GAS
	89-211-821-080		CHIP-TR 2SB1182Q	C230	87-016-669-080		CHIP CAPACITOR,0.1-25
	89-423-953-010		TR,2SD2395F	C231	87-010-555-040		CAP,E 100-10 GAS
	87-A30-301-080		TR,2SD1862	C232	87-016-669-080		CHIP CAPACITOR,0.1-25
	87-A30-449-040		C-TR,DTA123YKA	C233	87-010-555-040		CAP,E 100-10 GAS
				C234	87-010-193-080		CHIP CAPACITOR,0.033
DIODE				C235	87-010-992-080		CAP, CHIP 0.047
	87-A40-250-080		CHIP-DIODE,DAN202K	C236	87-010-067-040		CAP,E 0.1-50 5L
	87-001-783-080		DIODE,1N4002	C237	87-010-553-040		CAP,E 47-16 GAS
	87-020-331-080		CHIP-DIODE,DAN202K	C238	87-010-197-080		CAP, CHIP 0.01 DM
	87-A40-624-080		ZENER,MTZJ10A	C240	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A40-523-080		ZENER,MTZJ9.1B	C250	87-010-805-080		C-CAP,S 1-16 Z F
	87-070-136-080		ZENER,MTZJ5.1B	C251	87-010-555-040		CAP,E 100-10 GAS
	87-017-932-080		ZENER,MTJ6.2B	C252	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A40-798-010		DIODE,1N5402 (3A/200V)	C253	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A40-817-040		C-ZENER,STZ6.8N	C254	87-016-669-080		C-CAP,S 0.1-25 K B
MAIN C.B				C256	87-010-186-080		CAP,CHIP 4700P
	C101	87-010-178-080	CHIP CAP 1000P	C258	87-010-150-080		C-CAP,S 6P-50 D CH
	C102	87-010-197-080	CAP, CHIP 0.01 DM	C259	87-010-316-080		C-CAP,S 33P-50 CH
	C103	87-010-495-040	CAP,E 2.2-50 GAS	C261	87-012-156-080		C-CAP,S 220P-50 J CH GRM
	C106	87-010-322-080	C-CAP,S 100P-50 CH	C262	87-016-669-080		C-CAP,S 0.1-25 K B
	C107	87-010-552-040	CAP,E 22-16 GAS	C263	87-010-555-040		CAP,E 100-10 GAS
	C108	87-010-322-080	C-CAP,S 100P-50 CH	C264	87-010-555-040		CAP,E 100-10 GAS
	C109	87-010-553-040	CAP,E 47-16 GAS	C265	87-016-669-080		C-CAP,S 0.1-25 K B
	C110	87-010-198-080	CAP, CHIP 0.022	C266	87-016-669-080		C-CAP,S 0.1-25 KB
	C111	87-010-553-040	CAP,E 47-16 GAS	C267	87-010-498-040		CAP,E 10-16 GAS
	C112	87-010-185-080	C-CAP,S 3900P-50 B	C268	87-010-498-040		CAP,E 10-16 GAS
	C113	87-010-197-080	CAP, CHIP 0.01 DM	C269	87-010-180-080		C-CER 1500P
	C114	87-010-197-080	CAP, CHIP 0.01 DM	C270	87-010-180-080		C-CER 1500P
	C115	87-010-196-080	CHIP CAPACITOR,0.1-25	C271	87-010-154-080		CAP CHIP 10P
	C116	87-010-196-080	CHIP CAPACITOR,0.1-25	C272	87-010-154-080		CAP CHIP 10P
	C131	87-010-220-080	C-CAP,S 0.018-25 K B	C273	87-010-494-040		CAP,E 1-50 M 5L SRE
	C132	87-010-220-080	C-CAP,S 0.018-25 K B	C280	87-010-494-040		CAP,E 1-50 M 5L SRE
	C133	87-012-358-080	C-CAP,S 0.47-10 F Z	C281	87-010-555-040		CAP,E 100-10 GAS
	C134	87-012-358-080	C-CAP,S 0.47-10 F Z	C282	87-016-669-080		C-CAP,S 0.1-25 K B
	C161	87-010-196-080	CHIP CAPACITOR,0.1-25	C301	87-010-498-040		CAP,E 10-16 GAS
	C173	87-010-322-080	C-CAP,S 100P-50 J CH GRM	C302	87-010-498-040		CAP,E 10-16 GAS
	C176	87-010-197-080	CAP, CHIP 0.01 DM	C303	87-010-494-040		CAP,E 1-50 GAS
	C201	87-010-553-040	CAP,E 47-16 GAS	C304	87-010-494-040		CAP,E 1-50 GAS
	C202	87-010-553-040	CAP,E 47-16 GAS	C305	87-010-184-080		CHIP CAPACITOR 3300P(K)
	C203	87-010-178-080	CHIP CAP 1000P	C306	87-010-184-080		CHIP CAPACITOR 3300P(K)
	C204	87-016-669-080	C-CAP,S 0.1-25 K B	C307	87-010-198-080		CAP, CHIP 0.022
	C205	87-016-460-080	C-CAP,S 0.22-16 K B	C308	87-010-198-080		CAP, CHIP 0.022
	C206	87-010-492-040	CAP,E 0.33-50 GAS	C309	87-010-498-040		CAP,E 10-16 GAS
	C207	87-010-195-080	C-CAP,S 0.068-25 Z F C2012	C310	87-010-498-040		CAP,E 10-16 GAS
	C208	87-010-176-080	C-CAP,S 680P-50 J SL	C311	87-A11-177-080		C-CAP,S 0.15-16 K B
	C209	87-010-992-080	CAP, CHIP 0.047	C312	87-A11-177-080		C-CAP,S 0.15-16 K B
				C313	87-A11-177-080		C-CAP,S 0.15-16 K B
				C314	87-A11-177-080		C-CAP,S 0.15-16 K B
				C315	87-010-498-040		CAP,E 10-16 GAS

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C316	87-010-498-040		CAP,E 10-16 GAS	CON851	88-KTA-603-010		CONN,15P CAM-B68
C321	87-010-196-080		CHIP CAPACITOR,0.1-25	CON881	8Z-KT1-611-010		CONN,16P CAM-B51
C322	87-010-555-040		CAP,E 100-10 GAS	F881	8Z-KC1-621-010		FUSE,15A 32V
C323	87-010-196-080		CHIP CAPACITOR,0.1-25	J101	8Z-KT1-614-010		ANT,AW-002
C324	87-010-498-040		CAP,E 10-16 GAS	J451	87-A61-225-010		JACK,PIN 2P
C331	87-012-358-080		C-CAP,S 0.47-10 F Z<X207YH,X207YZ>	L101	87-003-143-080		COIL 4.7 UH
C332	87-012-358-080		C-CAP,S 0.47-10 F Z<X207YH,X207YZ>	L102	8Z-KT1-619-010		COIL,68MH K7-D
C333	87-010-196-080		C-CAP,S 0.1-25 C2012<X207YH,X207YZ>	L465	87-003-143-080		COIL,4.7UH K LAL02
C334	87-010-196-080		C-CAP,S 0.1-25 C2012<X207YH,X207YZ>	L671	87-003-149-080		COIL,47UH
C351	87-010-494-040		CAP,E 1-50 GAS	L831	87-003-143-080		COIL,4.7UH K LAL02
C352	87-010-494-040		CAP,E 1-50 GAS	L881	8Z-KT1-615-010		FLTR,AMORPHOUS -CHOKE
C353	87-010-494-040		CAP,E 1-50 GAS	LED702	87-027-262-010		LEDE,TLR124 (RED)<X207YH,X207YZ>
C354	87-010-494-040		CAP,E 1-50 GAS	R241	87-022-371-080		C-RES,S 330K-1/10W F
C361	87-012-358-080		C-CAP,S 0.47-10 F Z	R242	87-022-371-080		C-RES,S 330K-1/10W F
C362	87-012-358-080		C-CAP,S 0.47-10 F Z	SW701	87-A91-070-010		SW,TACT SKHHLVZ<X207YH,X207YZ>
C363	87-012-358-080		C-CAP,S 0.47-10 F Z	SW702	87-A91-152-010		SW,SL 1-1-2 SSSS212-11-A
C364	87-012-358-080		C-CAP,S 0.47-10 F Z	TU101	8A-KC8-621-010		TU UNIT, FAE347-A12
C365	87-010-175-080		CAP 560P	X201	81-592-641-010		VIB,CER 16.93MHZ
C366	87-010-175-080		CAP 560P	X701	87-A70-175-010		VIB,XTAL 4.5MHZ AT-49
C367	87-010-175-080		CAP 560P				
C368	87-010-175-080		CAP 560P	FRONT C.B			
C453	87-010-498-040		CAP,E 10-16 GAS	C901	87-010-805-080		CAP, S 1-16
C454	87-010-498-040		CAP,E 10-16 GAS	C902	87-010-194-080		CAP, CHIP 0.047
C457	87-012-140-080		CAP 470P	C903	87-010-194-080		CAP, CHIP 0.047
C458	87-012-140-080		CAP 470P	C904	87-010-177-080		C-CAP,S 820P-50 SL
C461	87-005-902-080		C-COIL,S 4.7UH K L K2125<Z107YH>	C905	87-010-196-080		CHIP CAPACITOR,0.1-25
C511	8A-KC7-623-000		CAP,E 2200U-16 BT(125C)	CON901	88-KTA-602-010		CONN,15P CAM-B67
C512	87-010-196-080		CHIP CAPACITOR,0.1-25	LCD901	8A-KCG-610-010		LCD,AKC-16-17<X207YZ>
C513	87-010-196-080		CHIP CAPACITOR,0.1-25	LCD901	8A-KCG-612-010		LCD,AKC-16-17AUX<X207YH,Z107YH>
C514	87-010-553-040		CAP,E 10-16 M 5L SRE	LED951	87-017-827-070		C-LED,SEC1201 RED<X207YH,X207YZ>
C515	87-010-494-040		CAP,E 1-50 GAS	LED951	87-A91-052-080		LED,SEL 6227S RED<Z107YH>
C516	87-010-178-080		CHIP CAP 1000P	LED952	87-017-827-070		C-LED,SEC1201 RED<X207YH,X207YZ>
C517	87-010-178-080		CHIP CAP 1000P<X207YZ>	LED952	87-A91-052-080		LED,SEL 6227S RED<Z107YH>
C519	87-010-494-040		CAP,E 1-50 M 5L SRE	LED953	87-017-827-070		C-LED,SEC1201 RED<X207YH,X207YZ>
C535	87-018-209-080		CAP,TC U 0.1-50 Z F	LED953	87-A91-052-080		LED,SEL 6227S RED<Z107YH>
C551	87-010-553-040		CAP,E 47-16 M 5L SRE	LED961	87-A40-813-040		C-LED,SEC1E01C BLUE
C590	87-010-178-080		CHIP CAP 1000P	LED962	87-A40-813-040		C-LED,SEC1E01C BLUE
C611	87-010-553-040		CAP,E 47-16 GAS	LED963	87-A40-813-040		C-LED,SEC1E01C BLUE
C612	87-010-198-080		CAP, CHIP 0.022	PL901	8Z-KT1-641-010		LAMP,T-3
C613	87-016-044-040		CAP,E 100-16 GAS	PL902	8Z-KT1-641-010		LAMP,T-3
C621	87-010-553-040		CAP,E 47-16 GAS	SW901	87-036-251-080		SW,T CT 6X3.5 160
C622	87-010-553-040		CAP,E 47-16 GAS	SW902	87-036-251-080		SW,T CT 6X3.5 160
C641	87-010-196-080		CHIP CAPACITOR,0.1-25	SW903	87-036-251-080		SW,T CT 6X3.5 160
C642	87-010-196-080		CHIP CAPACITOR,0.1-25	SW904	87-A90-001-080		C-SW,TACT SKQMAL<X207YH,X207YZ>
C671	87-010-198-080		CAP, CHIP 0.022	SW904	87-036-251-080		SW,T CT 6X3.5 160<Z107YH>
C672	87-010-555-040		CAP,E 100-10 GAS	SW905	87-A90-001-080		C-SW,TACT SKQMAL<X207YH,X207YZ>
C673	87-010-553-040		CAP,E 47-16 GAS	SW905	87-036-251-080		SW,T CT 6X3.5 160<Z107YH>
C674	87-010-198-080		CAP, CHIP 0.022	SW906	87-A90-001-080		C-SW,TACT SKQMAL<X207YH,X207YZ>
C681	87-010-553-040		CAP,E 47-16 GAS	SW906	87-036-251-080		SW,T CT 6X3.5 160<Z107YH>
C682	87-010-198-080		CAP, CHIP 0.022	SW907	87-036-251-080		SW,T CT 6X3.5 160
C701	87-010-315-080		C-CAP,S 22P-50 CH	SW908	87-036-251-080		SW,T CT 6X3.5 160
C702	87-010-314-080		C-CAP,S 22P-50V	SW910	87-A90-001-080		C-SW,TACT SKQMAL<X207YH,X207YZ>
C706	87-010-497-040		CAP,E 4.7-35 GAS	SW910	87-036-251-080		SW,T CT 6X3.5 160<Z107YH>
C711	87-010-322-080		C-CAP,S 100P-50 CH	SW911	87-036-251-080		SW,T CT 6X3.5 160
C712	87-010-322-080		C-CAP,S 100P-50 CH	SW913	87-036-251-080		SW,T CT 6X3.5 160
C761	87-010-555-040		CAP,E 100-10 GAS	SW914	87-036-251-080		SW,T CT 6X3.5 160
C763	87-010-196-080		CHIP CAPACITOR,0.1-25	SW915	87-036-251-080		SW,T CT 6X3.5 160
C771	87-012-156-080		C-CAP,S 220P-50 J CH GRM	SW916	87-036-251-080		SW,T CT 6X3.5 160
C831	87-010-494-040		CAP,E 1-50 M 5L SRE	SW917	87-036-251-080		SW,T CT 6X3.5 160
C832	87-010-494-040		CAP,E 1-50 M 5L SRE	SW918	87-036-251-080		SW,T CT 6X3.5 160
C835	87-010-182-080		C-CAP,S 2200P-50 K B C2012	SW921	87-A91-597-010		SW,RTRY SIM-026MT<X207YH,X207YZ>
C836	87-010-182-080		C-CAP,S 2200P-50 K B C2012	SW921	87-036-251-080		SW,T CT 6X3.5 160<Z107YH>
C881	87-010-182-080		C-CAP,S 2200P-50 B				
C882	87-010-182-080		C-CAP,S 2200P-50 B				
C883	87-010-182-080		C-CAP,S 2200P-50 B	AUX C.B			
C884	87-010-182-080		C-CAP,S 2200P-50 B	CON831	87-A60-912-010		CONN,3P V IMSA-9202B-1<Z107YH>
CNA001	8A-KT1-631-010		CONN ASSY,8P ISO-BLACK-A	FC901	8A-KC7-611-010		F-CABLE,3P (AUX)<X207YH,X207YZ>
CNA002	8A-KT1-632-010		CONN ASSY,8P ISO-WHITE-A	J831	85-HRL-623-010		JACK,3.5 ST BLK<Z107YH>
CON201	87-A60-859-010		CONN,12P TKC-F12X-K1	J901	85-HRL-623-010		JACK,3.5 ST BLK<X207YH,X207YZ>
CON202	87-A60-860-010		CONN,14P TKC-F14X-K1				

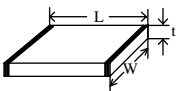
○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

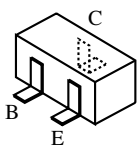
Chip Resistor Part Coding



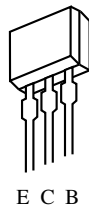
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

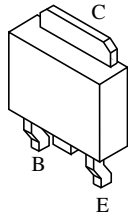
TRANSISTOR ILLUSTRATION



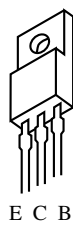
2SA1037
2SC2412
DTA114TKA
DTA123YKA
DTC114EK
DTC114YKA
DTC114TKA
DTC144EK



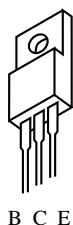
2SB1326
2SD1862



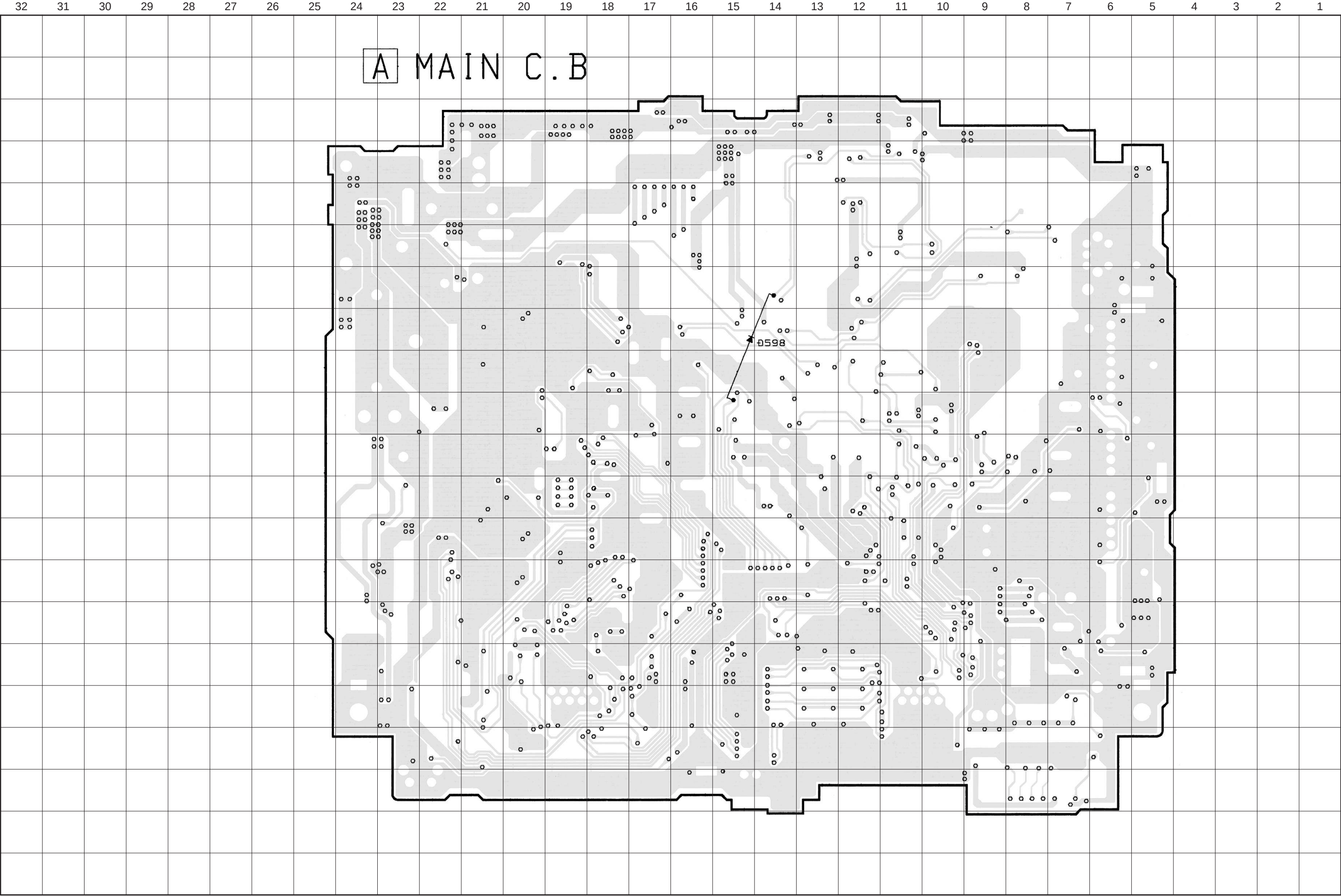
2SB1182



2SB1566

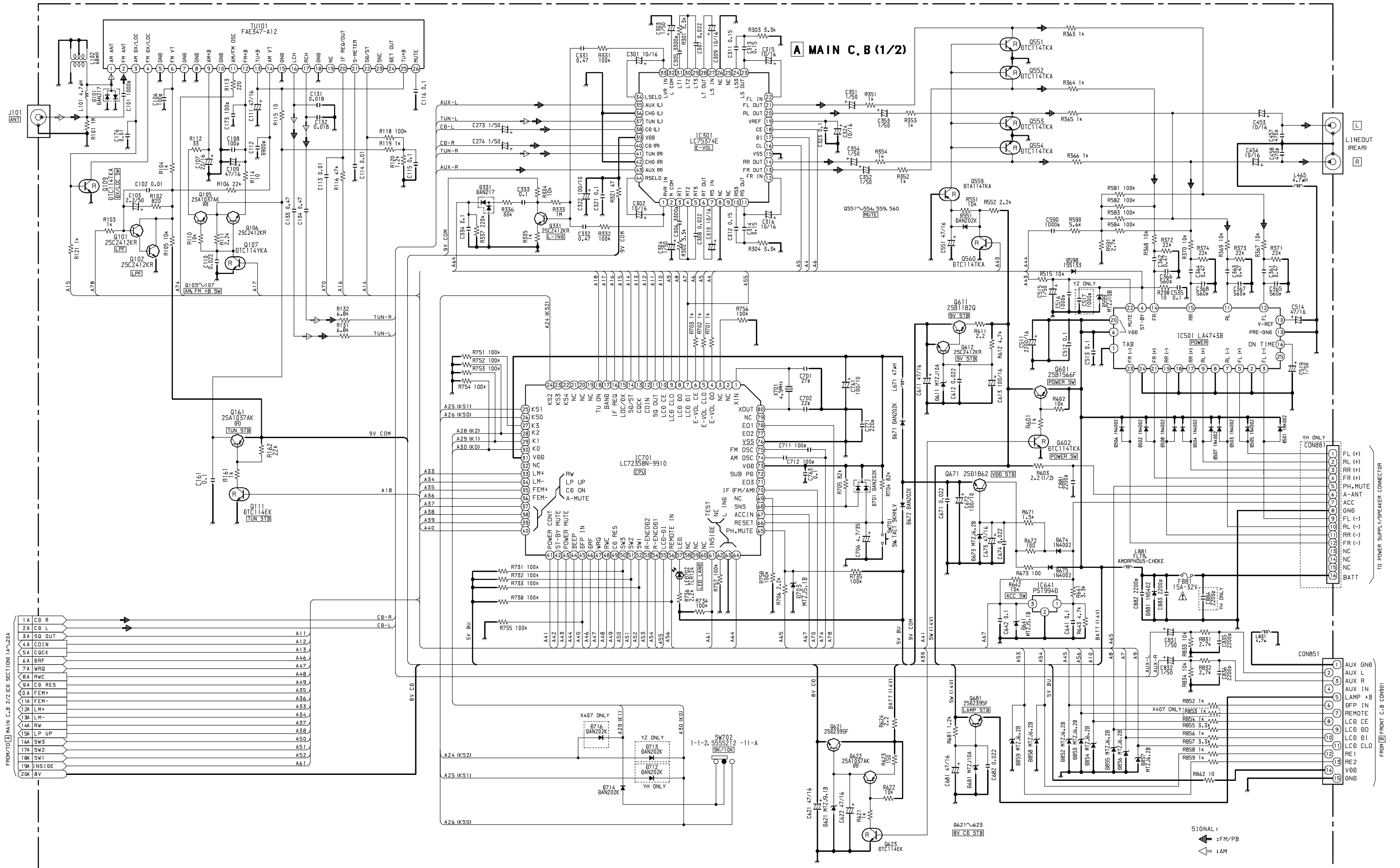


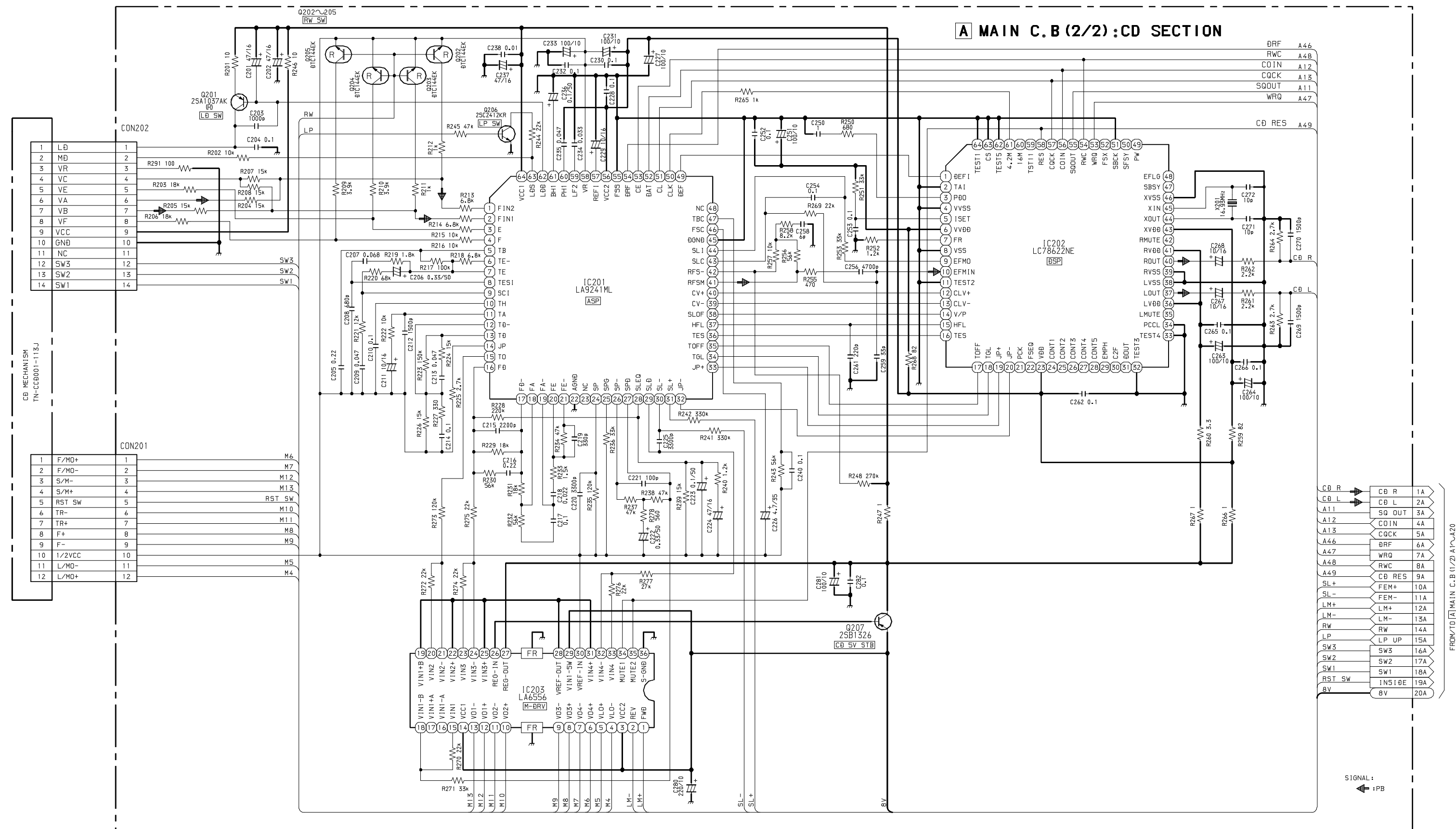
2SD2395

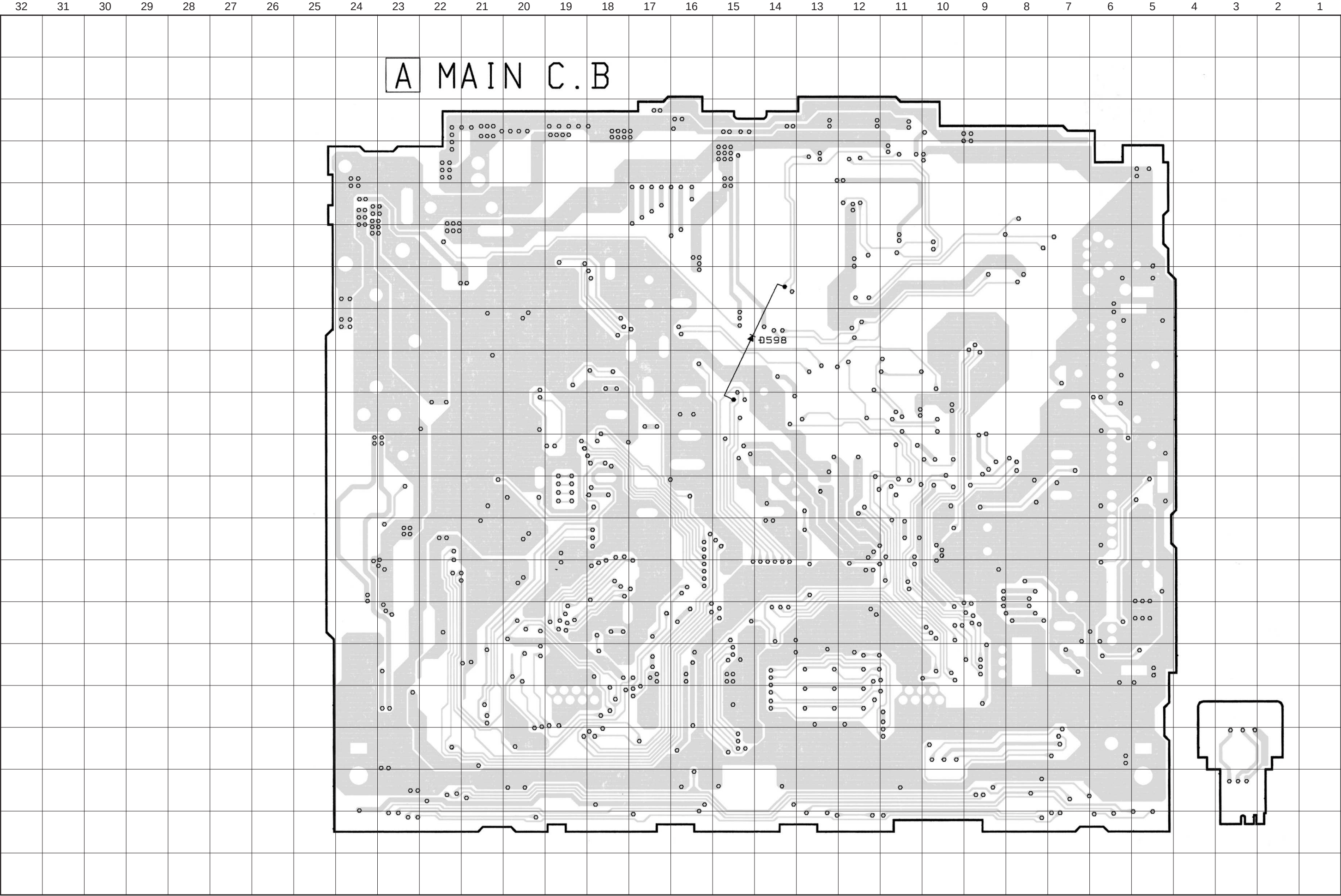


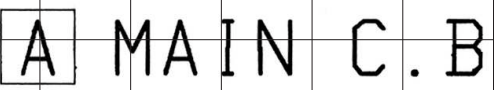


SCHEMATIC DIAGRAM - 1 (X207: MAIN 1 / 2)

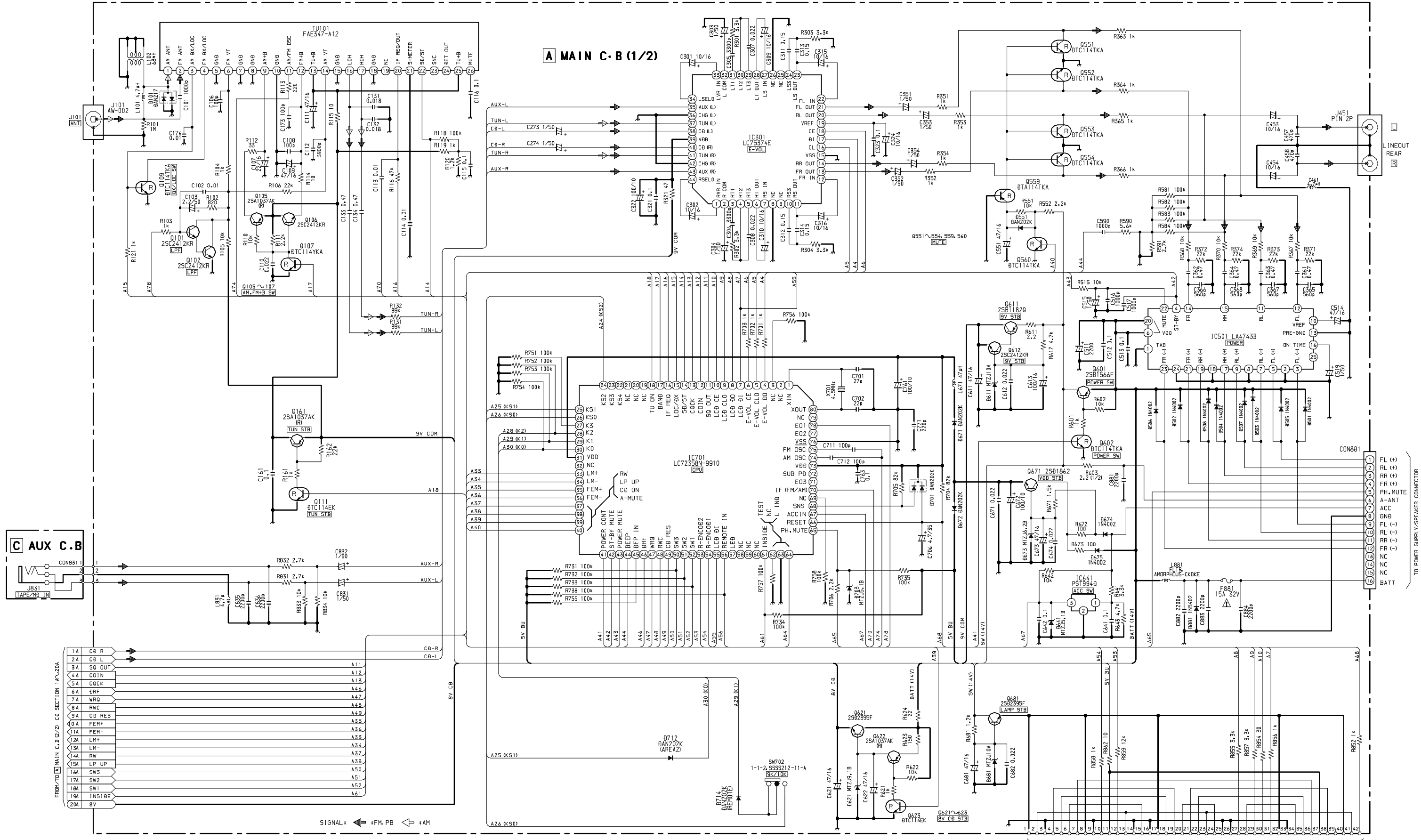




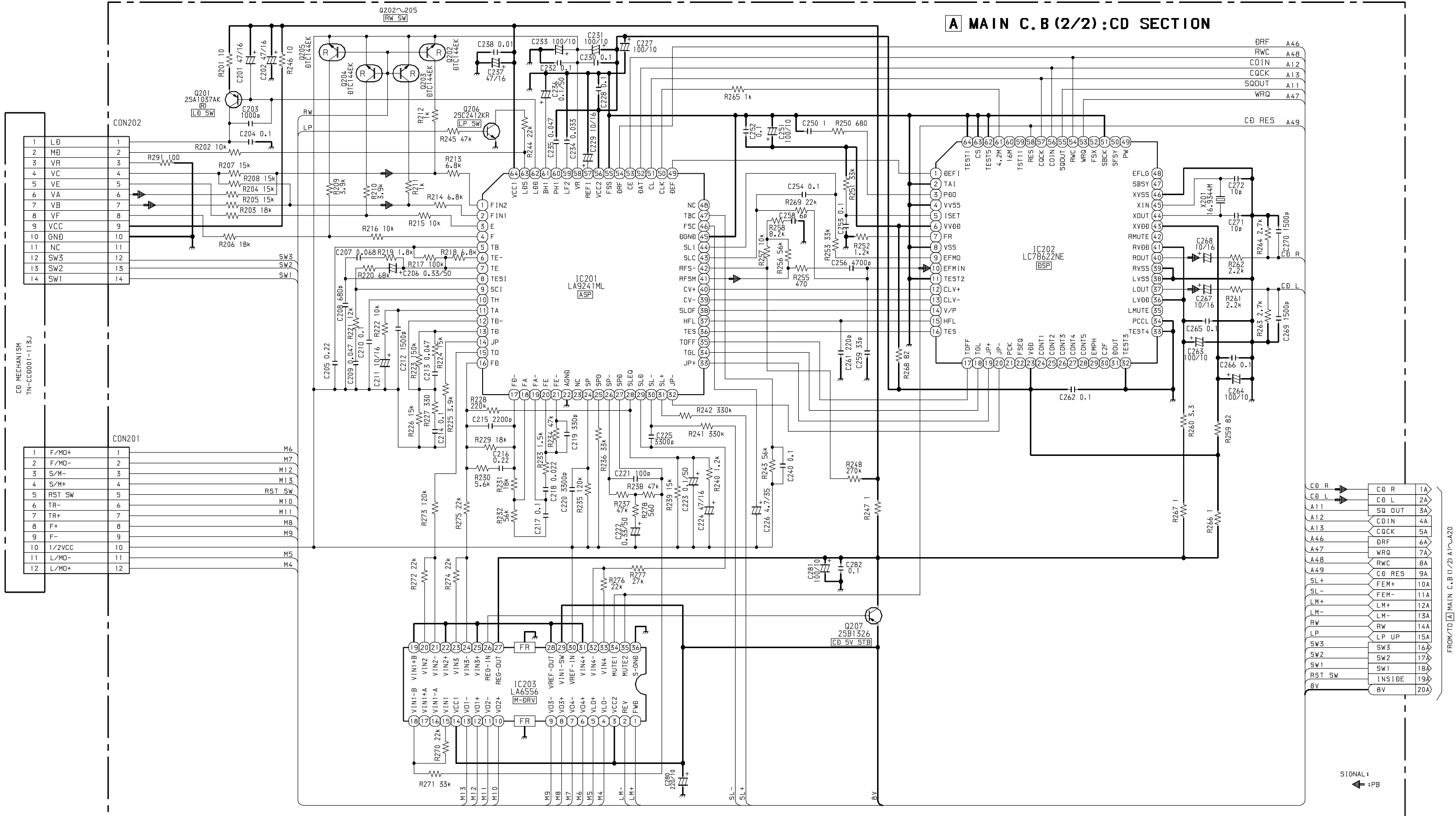


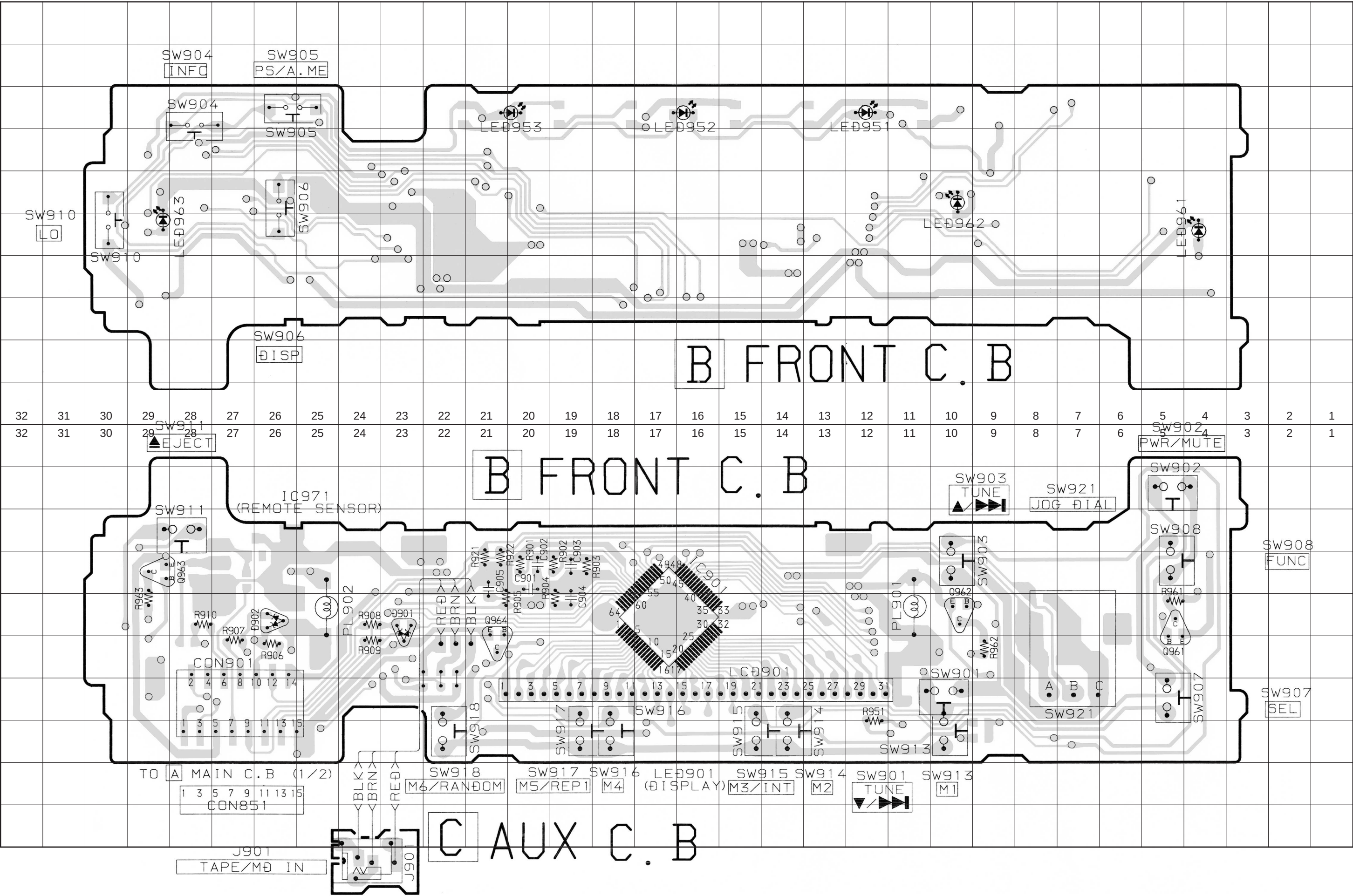


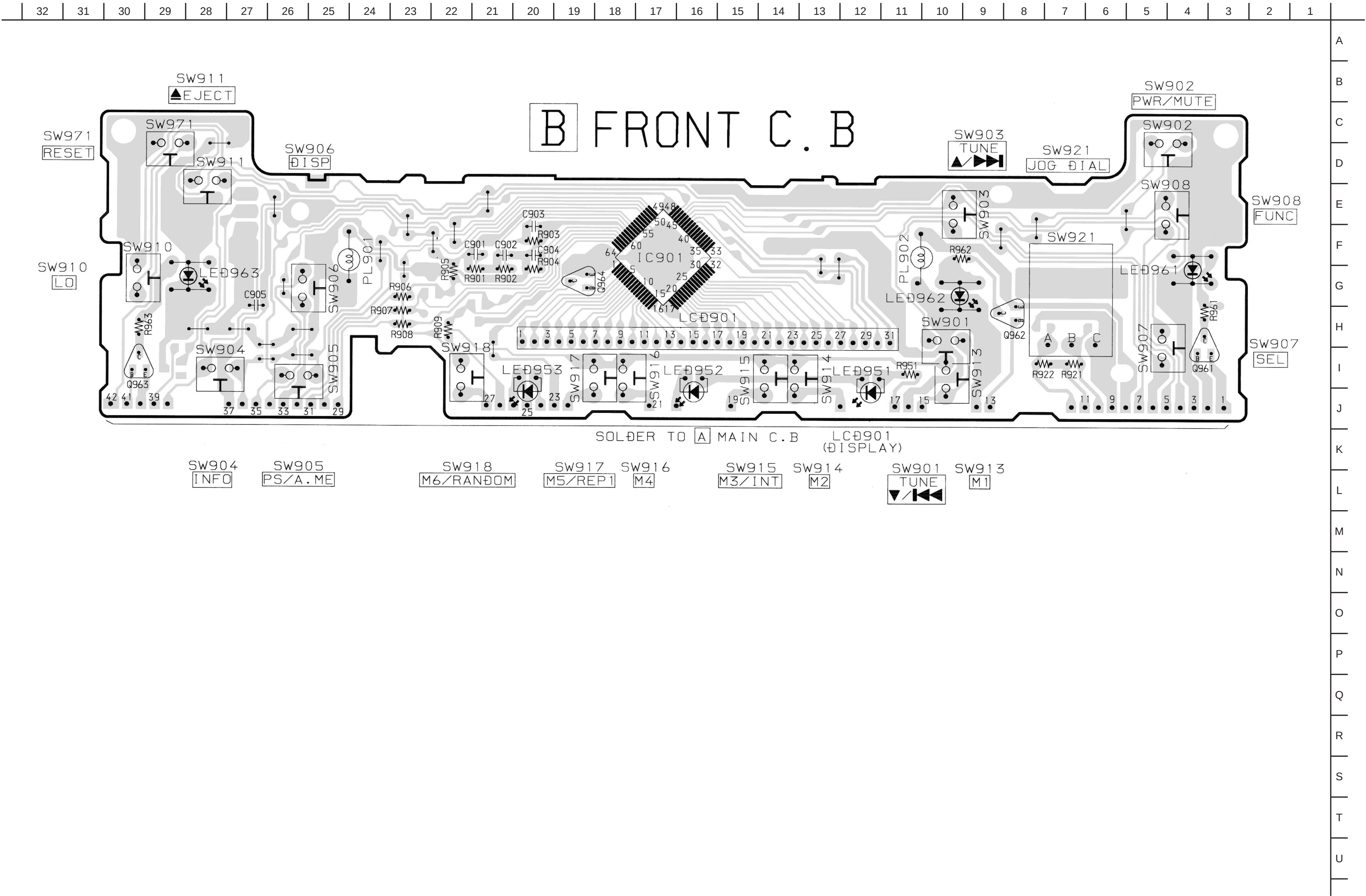
SCHEMATIC DIAGRAM - 3 (Z107: MAIN 1 / 2)



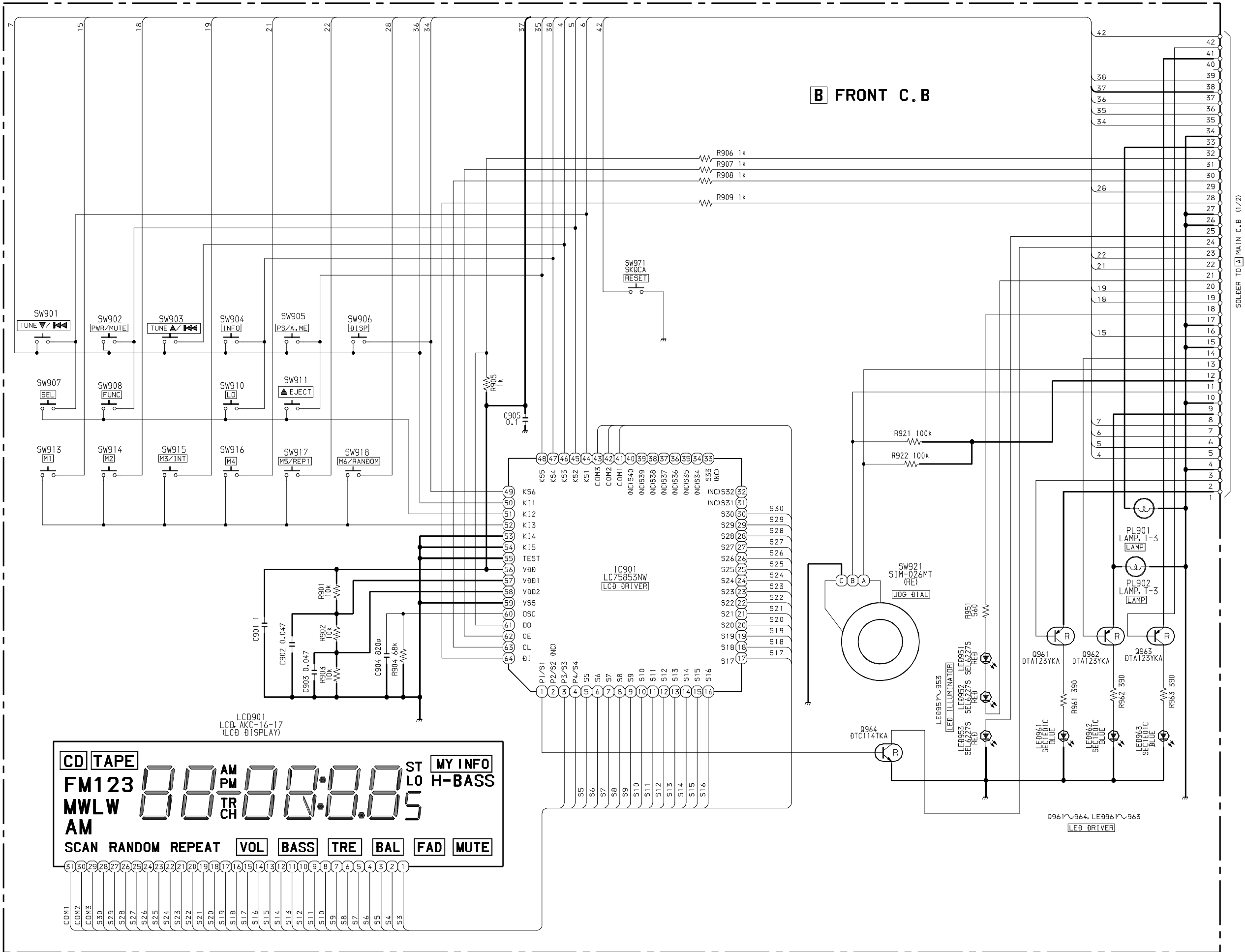
SCHEMATIC DIAGRAM - 4 (Z107: MAIN 2 / 2)



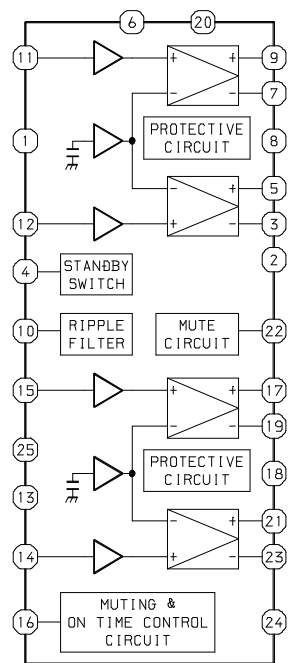




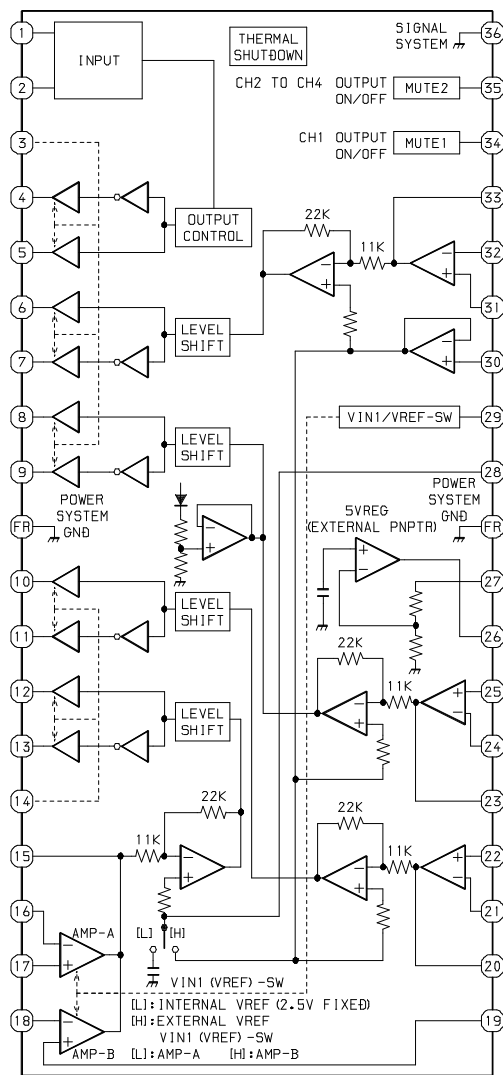
SCHEMATIC DIAGRAM - 6 (Z107: FRONT)

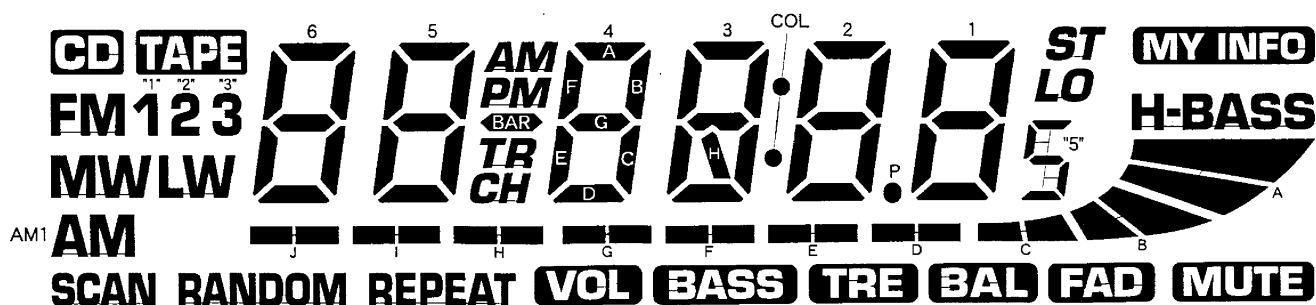


IC BLOCK DIAGRAM
IC,LA4743B

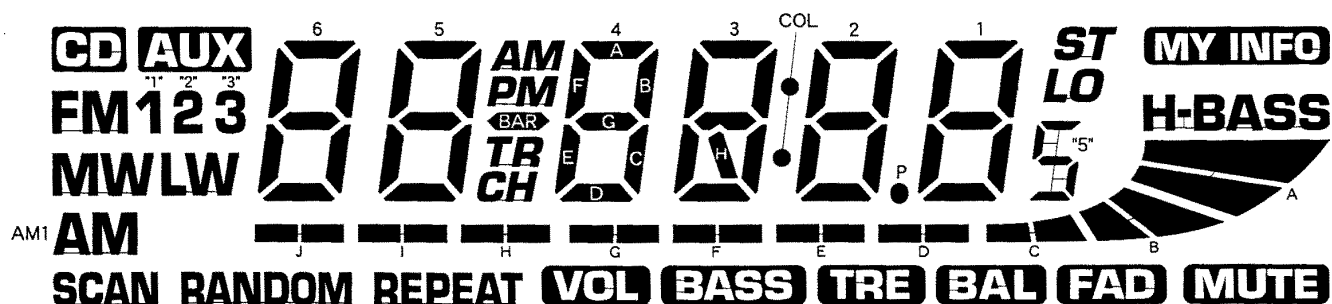


IC,LA6556





NO	COM1	COM2	COM3
1	MUTE	A	H-BASS
2	B	LO	MY INFO
3	FAD	"5"	ST
4	C	1B	1A
5	1C	1G	1F
6	BAL	1D	1E
7	D	2B	2A
8	2C	2G	2F
9	TRE	2D	2E
10	E	3B	3A
11	3C	3G	3F
12	BASS	3H	COL
13	F	3D	3E
14	VOL	4B	4A
15	4C	4G	4F
16	G	4D	4E
17	H	PM	P
18	REPEAT	TR	BAR
19	I	5D	5E
20	5C	5G	5F
21	CH	5B	5A
22	RANDOM	J	AM
23	6B	6A	"3"
24	6C	6G	6F
25	6D	6E	"2"
26	SCAN	"1"	TAPE
27	---	LW	FM
28	AM1	MW	CD
29	---	---	COM3
30	---	COM2	---
31	COM1	---	---



NO	COM1	COM2	COM3
1	MUTE	A	H-BASS
2	B	LO	MY INFO
3	FAD	"5"	ST
4	C	1B	1A
5	1C	1G	1F
6	BAL	1D	1E
7	D	2B	2A
8	2C	2G	2F
9	TRE	2D	2E
10	E	3B	3A
11	3C	3G	3F
12	BASS	3H	COL
13	F	3D	3E
14	VOL	4B	4A
15	4C	4G	4F
16	G	4D	4E
17	H	PM	P
18	REPEAT	TR	BAR
19	I	5D	5E
20	5C	5G	5F
21	CH	5B	5A
22	RANDOM	J	AM
23	6B	6A	"3"
24	6C	6G	6F
25	6D	6E	"2"
26	SCAN	"1"	AUX
27	---	LW	FM
28	AM1	MW	CD
29	---	---	COM3
30	---	COM2	---
31	COM1	---	---

VOLTAGE CHART

IC, LC72358N-9910

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1	2.45	2.47	2.35	2.35	2.42	2.28
2 ~ 6	0	0	0	0	0	0
7	4.87	4.91	4.85	4.84	4.90	4.87
8	0	0	0.05	0.05	0.15	0.03
9	0.10	0.10	0.20	0.21	0.70	0.21
10	0.10	0.10	0.22	0.21	0.75	0.24
11	0	0	0	0	0.03	0
12	0	0	0	0	0	0
13	0	0	0	0	4.83	0
14	0	0	4.57	4.54	0	0
15 ~ 16	0	0	0	0	0	0
17	0	0	0	0	4.78	0
18	0	0	4.72	4.72	0	0
19 ~ 30	0	0	0	0	0	0
31	4.98	5.00	4.79	4.85	4.91	4.85
32 ~ 38	0	0	0	0	0	0
39	0	0	0	0	4.84	0
40	0	0	4.72	4.72	4.84	4.79
41	0	0	4.72	4.73	4.83	4.79
42	0	0	4.74	4.74	4.85	4.80
43	0	0	4.78	4.77	4.89	4.84
44	0	0	0	0	0	0
45	4.46	4.49	4.44	4.45	4.52	4.46
46	0	0	0	0	4.84	0
47	0	0	0	0	2.00	0
48	0	0	0	0	0	0
49	0	0	0	0	4.89	0
50	0	0	0	0	0	0
51	4.86	4.90	4.89	4.89	0	4.87
52	0	0	0	0	4.94	0
53	4.78 / 0	4.78 / 0	4.75 / 0	4.75 / 0	4.75 / 0	4.75 / 0
54	4.80 / 0	4.80 / 0	4.77 / 0	4.77 / 0	4.77 / 0	4.75 / 0
55	4.87	4.90	4.86	4.86	4.90	4.84
56	4.82 / 4.78	4.82 / 4.78	4.70 / 4.75	4.70 / 4.75	4.70 / 4.75	4.72 / 4.75
57	3.40	3.44	3.44	3.44	3.50	3.41
58 ~ 60	0	0	0	0	0	0
61	4.86	4.89	4.88	4.87	4.93	4.87
62 ~ 64	0	0	0	0	0	0
65	3.31	3.32	3.31	3.32	3.32	3.31
66	4.94	4.96	4.78	4.78	4.87	4.79
67	0	0	4.63	4.62	4.61	4.62

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
68	4.94	4.95	4.76	4.76	4.87	4.79
69	0	0	0.58	0.57	0	0.59
70	0	0	2.51	2.51	0	2.52
71 ~ 72	0	0	0	0	0	0
73	4.98	4.97	4.80	4.80	4.91	4.84
74	0	0	0	2.34	0	2.31
75	0	0	2.45	0.01	0	0.03
76	0	0	0	0	0	0
77	0	0	0.08	0.08	0	0
78	0	0	1.04	1.04	1.05	0
79	0	0	0	0	0	0
80	2.53	2.52	2.45	2.46	2.50	2.47

IC, LA4743B

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1 ~ 2	0	0	0	0	0	0
3	0	0	2.75	2.74	2.74	2.74
4	0	0	4.76	4.82	4.83	4.84
5	0	0	2.74	2.74	2.75	2.75
6	14.40	14.40	14.38	14.38	14.38	14.38
7	0	0	2.75	2.74	2.74	2.74
8	0	0	0	0	0	0
9	0	0	2.68	2.73	2.73	2.74
10	0	0	13.17	13.15	13.16	13.16
11	0	0	3.04	3.07	3.07	3.08
12	0	0	3.09	3.11	3.11	3.11
13	0	0	0	0	0	0
14	0	0	3.09	3.11	3.11	3.11
15	0	0	3.04	3.07	3.07	3.08
16	0	0	2.29	2.40	2.41	2.40
17	0	0	2.71	2.74	2.74	2.74
18	0	0	0	0	0	0
19	0	0	2.73	2.74	2.74	2.74
20	14.40	14.40	14.38	14.38	14.38	14.35
21	0	0	2.76	2.73	2.73	2.73
22	0	0	4.54	4.55	4.58	4.56
23	0	0	2.72	2.76	2.76	2.77
24 ~ 25	0	0	0	0	0	0

IC, LA9241ML

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1 ~ 2	0	0	0	0	2.50	0
3	0	0	0	0	2.53	0
4	0	0	0	0	2.49	0
5 ~ 7	0	0	0	0	2.51	0
8	0	0	0	0	2.52	0
9 ~ 12	0	0	0	0	2.51	0
13	0	0	0	0	2.50	0
14	0	0	0	0	2.51	0
15	0	0	0	0	2.50	0
16	0	0	0	0	2.61	0
17	0	0	0	0	2.52	0
18	0	0	0	0	2.42	0
19	0	0	0	0	2.52	0
20	0	0	0	0	2.53	0
21	0	0	0	0	2.51	0
22 ~ 23	0	0	0	0	0	0
24 ~ 25	0	0	0	0	2.47	0
26 ~ 28	0	0	0	0	0	0
29	0	0	0	0	2.63	0
30	0	0	0	0	2.37	0
31 ~ 33	0	0	0	0	0	0
34	0	0	0	0	4.93	0
35	0	0	0	0	0	0
36	0	0	0	0	1.0	0
37 ~ 39	0	0	0	0	0	0
40	0	0	0	0	0.50	0
41	0	0	0	0	2.29	0
42	0	0	0	0	2.40	0
43	0	0	0	0	2.41	0
44	0	0	0	0	2.50	0
45 ~ 46	0	0	0	0	2.51	0
47	0	0	0	0	2.41	0
48 ~ 49	0	0	0	0	0	0
50	0	0	0	0	2.41	0
51	0	0	0	0	4.80	0
52 ~ 53	0	0	0	0	0	0
54	0	0	0	0	4.84	0
55	0	0	0	0	0	0
56	0	0	0	0	4.93	0
57 ~ 58	0	0	0	0	2.51	0
59	0	0	0	0	2.39	0

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
60	0	0	0	0	0	0
61	0	0	0	0	2.22	0
62	0	0	0	0	3.71	0
63	0	0	0	0	0.19	0
64	0	0	0	0	4.91	0

IC, LA6556

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1 ~ 2	0	0	0	0	0	0
3	0	0	0	0	8.44	0
4 ~ 5	0	0	0	0	0	0
6	0	0	0	0	3.70	0
7	0	0	0	0	4.06	0
8	0	0	0	0	3.76	0
9	0	0	0	0	4.05	0
10	0	0	0	0	3.86	0
11	0	0	0	0	3.88	0
12	0	0	0	0	3.60	0
13	0	0	0	0	4.20	0
14	0	0	0	0	8.45	0
15	0	0	0	0	2.38	0
16 ~ 17	0	0	0	0	0	0
18 ~ 22	0	0	0	0	2.51	0
23	0	0	0	0	2.45	0
24 ~ 25	0	0	0	0	2.51	0
26	0	0	0	0	7.85	0
27	0	0	0	0	4.98	0
28	0	0	0	0	2.51	0
29	0	0	0	0	8.44	0
30 ~ 32	0	0	0	0	2.51	0
33	0	0	0	0	2.43	0
34 ~ 35	0	0	0	0	4.91	0
36	0	0	0	0	0	0

IC, LC78622NE

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1	0	0	0	0	0.05	0
2	0	0	0	0	0	0
3	0	0	0	0	1.55	0
4	0	0	0	0	0	0
5	0	0	0	0	1.77	0
6	0	0	0	0	4.69	0
7	0	0	0	0	0.33	0
8	0	0	0	0	0	0
9	0	0	0	0	2.49	0
10	0	0	0	0	2.39	0
11	0	0	0	0	0	0
12	0	0	0	0	0.50	0
13 ~ 17	0	0	0	0	0	0
18	0	0	0	0	4.92	0
19 ~ 20	0	0	0	0	0	0
21	0	0	0	0	2.35	0
22 ~ 23	0	0	0	0	4.93	0
24 ~ 30	0	0	0	0	0	0
31	0	0	0	0	2.47	0
32 ~ 36	0	0	0	0	0	0
37	0	0	0	0	2.03	0
38 ~ 39	0	0	0	0	0	0
40	0	0	0	0	2.03	0
41	0	0	0	0	4.96	0
42	0	0	0	0	4.92	0
43	0	0	0	0	4.79	0
44	0	0	0	0	1.75	0
45	0	0	0	0	1.85	0
46	0	0	0	0	0	0
47	0	0	0	0	0.10	0
48	0	0	0	0	0.02	0
49	0	0	0	0	0.11	0
50	0	0	0	0	2.47	0
51	0	0	0	0	0	0
52	0	0	0	0	2.46	0
53	0	0	0	0	2.0	0
54	0	0	0	0	0	0
55	0	0	0	0	0.04	0
56	0	0	0	0	0	0
57	0	0	0	0	4.80	0
58	0	0	0	0	4.88	0

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
59	0	0	0	0	0	0
60	0	0	0	0	1.93	0
61	0	0	0	0	2.34	0
62 ~ 64	0	0	0	0	0	0

TU UNIT, FAE347-A12

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1 ~ 2	0	0	0	0	0	0
3	0	0	0	0.02	0	0
4	0	0	6.89	0	6.93	0
5	0	0	0	0	0	0
6	0	0	3.42	3.42	3.42	3.42
7 ~ 8	0	0	0	0	0	0
9	0	0	0	7.95	0	7.85
10 ~ 11	0	0	0	0	0	0
12	0	0	7.27	0	7.31	0
13	0	0	7.58	7.49	7.61	7.46
14	0	0	3.41	3.42	3.42	3.42
15	0	0	0	0	0	0
16	0	0	3.41	3.44	3.39	3.42
17	0	0	3.36	3.41	3.39	3.42
18 ~ 19	0	0	0	0	0	0
20	0	0	0.01	0.01	0	0
21	0	0	5.74	3.66	0.43	0
22	0	0	4.55	4.56	4.56	4.54
23	0	0	1.07	0.63	0.05	0.04
24	0	0	4.07	1.21	4.01	1.21
25	0	0	7.58	7.50	7.61	7.46
26	0	0	0	0.03	2.05	0.03

IC, LC75374E

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1	0	0	3.94	3.93	3.96	3.96
2	0	0	3.98	3.98	4.00	4.01
3	0	0	4.00	4.00	4.02	4.01
4 ~ 6	0	0	4.00	4.00	4.02	4.02
7	0	0	3.99	3.99	4.01	3.99
8 ~ 9	0	0	0	0	0	0
10	0	0	3.98	3.98	4.00	3.99
11	0	0	4.01	4.01	4.03	4.01
12	0	0	3.99	3.99	4.01	3.99
13	0	0	4.02	4.01	4.04	4.01
14	0	0	4.01	4.01	4.03	4.01
15 ~ 18	0	0	0	0	0	0
19	0	0	4.01	4.01	4.03	4.01
20 ~ 21	0	0	4.02	4.01	4.04	4.01
22	0	0	4.01	4.01	4.03	3.98
23	0	0	4.01	4.01	4.03	4.01
24	0	0	3.98	3.98	4.00	3.98
25 ~ 26	0	0	0	0	0	0
27	0	0	4.02	3.99	4.04	3.99
28	0	0	4.02	4.01	4.04	4.01
29	0	0	4.02	4.01	4.04	4.01
30 ~ 31	0	0	4.01	4.01	4.03	4.00
32	0	0	4.00	3.99	4.02	3.98
33	0	0	3.91	3.91	3.93	3.93
34	0	0	4.02	4.01	4.04	4.02
35	0	0	4.00	3.99	4.02	4.00
36	0	0	0	0	0	0
37 ~ 38	0	0	4.00	3.99	4.02	4.00
39	0	0	7.64	7.63	7.68	7.64
40	0	0	4.00	3.99	4.02	4.00
41	0	0	3.99	3.99	4.01	3.99
42	0	0	0	0	0	0
43	0	0	4.00	3.99	4.02	3.99
44	0	0	4.03	4.02	4.05	4.01

IC, LC75853NW

PIN NO.	BU (V)	BU+ACC (V)	FM (V)	AM(V)	CD (V)	AUX (V)
1	0	0	4.84	4.83	4.86	4.85
2	0	0	0	0	0	0
3	2.50	2.50	2.47	2.47	2.48	2.48
4	2.50	2.50	2.47	2.47	2.48	2.47
5	2.50	2.50	2.47	2.47	2.48	2.48
6	2.50	2.50	2.47	2.47	2.48	2.47
7 ~ 10	2.50	2.50	2.47	2.46	2.47	2.47
11 ~ 12	2.50	2.50	2.47	2.47	2.47	2.47
13	2.50	2.50	2.47	2.46	2.47	2.47
14	2.50	2.50	2.47	2.47	2.48	2.47
15 ~ 16	2.50	2.50	2.47	2.47	2.47	2.47
17	2.50	2.50	2.47	2.47	2.48	2.47
18 ~ 19	2.50	2.50	2.47	2.47	2.47	2.47
20 ~ 23	2.50	2.50	2.47	2.47	2.48	2.47
24 ~ 25	2.50	2.50	2.47	2.47	2.47	2.47
26 ~ 29	2.50	2.50	2.47	2.47	2.48	2.47
30	2.50	2.50	2.47	2.46	2.47	2.47
31 ~ 32	2.50	2.50	2.49	2.47	2.48	2.47
33 ~ 40	2.50	2.50	2.48	2.47	2.48	2.47
41	2.50	2.50	2.48	2.46	2.47	2.47
42	2.50	2.50	2.48	2.47	2.47	2.47
43	2.50	2.50	2.48	2.46	2.48	2.46
44	4.96	4.96	4.95	4.92	4.93	4.91
45	4.96	4.96	4.95	4.93	4.93	4.91
46	4.96	4.96	4.95	4.92	4.93	4.91
47 ~ 49	4.96	4.96	4.95	4.92	4.93	4.91
50 ~ 55	0	0	0	0	0	0
56	4.99	4.99	4.95	4.92	4.93	4.91
57	3.33	3.33	3.32	3.29	3.30	3.28
58	1.67	1.67	1.67	1.65	1.66	1.65
59	0	0	0	0	0	0
60	3.91	3.91	3.88	3.88	3.88	3.87
61	4.96	4.96	4.92	4.86	4.88	4.86
62	0	0	0.25	0.24	0.77	0.24
63	0	0	0.25	0.20	0.67	0.24
64	0	0	0.04	0.03	0.18	0.03

IC DESCRIPTION

IC, LC72358N-9910

Pin No.	Pin Name	I/O	Description
1	XIN	I	System clock oscillator input.
2 ~ 3	NC	-	Not connected.
4	E-VOL DO	O	Data output for electric volume.
5	E-VOL CLO	O	Clock output for electric volume.
6	E-VOL CE	O	CE output for electric volume.
7	LCD DI	I	LCD driver data signal input.
8	LCD DO	O	LCD driver data signal output.
9	LCD CLO	O	LCD driver clock signal output.
10	LCD CE	O	LCD driver CE signal output.
11	SQ OUT	I	Sub-code Q input terminal.
12	COIN	O	Command output terminal for DSP.
13	CQCK	O	Transfer-out clock for command output or output terminal for Sub-code transfer-in clock from SQ OUT.
14	SD/ST	I	Stereo signal input when receiving. Hi=MONO, Low=ST FM reception. Channel detection signal input when FM/AM seeking. Hi=detect channel
15	LOC/DX	O	LOC/DX switching output when in the radio seek mode. Hi=LOC, Low=DX
16	IF REQ	O	IF count signal request output.
17	BAND	O	FM/AM power switch output. Hi=AM, Low=FM
18	TU ON	O	Radio power switch output. Hi=Radio mode
19 ~ 21	NC	-	Not connected.
22 ~ 23	KS4 ~ KS3	O	Initial setting diode matrix output(Not used).
24 ~ 26	KS2 ~ KS0	O	Initial setting diode matrix output.
27 ~ 30	K3 ~ K0	I	Initial setting diode matrix input.
31	VDD	-	Power supply.
32	NC	-	Not connected.
33	LM+	O	Loading motor control terminal.
34	LM-	O	Loading motor control terminal.
35	FEM+	O	Thread motor control terminal.
36	FEM-	O	Thread motor control terminal.
37	RW	O	RW disc control. Normal set to "Hi". Hi=NORMAL DISC, Low=RW DISC
38	LP UP	O	RW disc control. Normal set to "Lo". Hi=Disable playback even though
39	CD ON	O	CD power switch output. Hi=CD mode RW port is low
40	A-MUTE	O	Audio mute signal output.
41	POWER CONT	O	Power control signal output.
42	ST-BY MUTE	O	ST-BY mute signal output.
43	POWER MUTE	O	Power mute signal output.
44	BEEP	O	BEEP output(3 kHz, 50 ms).
45	DFP IN	I	Front panel detection.
46	DRF	I	"Detect RF" RF level detection input. Pulled up when not used.
47	WRQ	I	Sub-code Q output standby input terminal.

Pin No.	Pin Name	I/O	Description
48	RWC	O	Read / write control output terminal.
49	CD RES	O	DSP reset output terminal.
50	SW3	I	Disc detection / chuck or release disc detection.
51	SW2	I	12 cm disc detection / 12 cm disc ejection end detection.
52	SW1	I	Leading motor start detection.
53	R-ENCOD2	I	Rotary encoder input 2.
54	R-ENCOD1	I	Rotary encoder input 1.
55	LCD-DI	I	LCD driver data signal input.
56	REMOTE IN	I	Remote controller input. Pulled up when not used.
57	LED	O	Security LED flashing output. H: No light on, L: Light on.
58 ~ 60	NC	-	Not connected.
61	INSIDE	I	Pick up inner track position detection.
62	TEST	I	CD test mode. Pulled down when not used.
63	NC	-	Not connected.
64	L IND	I	Voltage input for level indicator. Pulled down when not used.
65	PH.MUTE	I	External mute control. Low=-20dB mute. Pulled up when not used.
66	RESET	I	System reset. Low= system reset.
67	HOLD	I	ACC (accessory power) ON/ OFF input. OFF=fault mode.
68	SNS	I	Backup detection.
69	NC	-	Not connected.
70	IF	I	IF count signal input (FM / AM).
71	EO3	-	Not used.
72	SUBPD	-	Not used.
73	VDD	-	Power supply.
74	AM OSC	I	AM channel transmission input.
75	FM OSC	I	FM channel transmission input.
76	VSS	-	Connected to GND.
77	EO2	O	Not used.
78	EO1	O	Error out from charge pump (for FM / AM).
79	NC	-	Not connected.
80	XOUT	O	System clock oscillator output.

Pin No.	Pin Name	I/O	Description
1	FIN2	O	For the connection of the pickup photodiode. Addition to the FIN1 pin creates an RF signal and subtraction from it create an EF signal.
2	FIN1	O	For the connection of the pickup photodiode.
3	E	O	For the connection of the pickup photodiode. Subtraction from the F pin creates a TE signal.
4	F	O	For the connection of the pickup photodiode.
5	TB	I	Inputs the DC components in the TE signal.
6	TE-	O	For the connection of a resistor which sets the gain of the TE signal between this pin and the TE pin.
7	TE	O	TE signal output.
8	TESI	I	TES (track error sense) comparator input. The signal is passed through a BPF.
9	SCI	I	Shock detection input.
10	TH	I	Sets the time constant for the tracking gain.
11	TA	O	TA amp output.
12	TD-	I	Composes the tracking phase compensation constant between the TD and VR pins.
13	TD	I	Sets the tracking phase compensation.
14	JP	I	Sets the amplitude of the tracking jump signal (kick pulses).
15	TO	O	Tracking control signal output.
16	FD	O	Focusing control signal output.
17	FD-	I	Composes the focusing phase compensation constant between the FD and FA pins.
18	FA	O	Composes the focusing phase compensation constant between the FD and FA pins.
19	FA-	I	Composes the focusing phase compensation constant between the FD and FA pins.
20	FE	O	FE signal output.
21	FE-	I	For the connection of a resistor whichs sets the gain of the FE signal between this pin and the TE pin.
22	A-GND	O	Ground of analog signals.
23	SP	O	Single-ended output of the signals input to the CV+ and CV- pins.
24	SPI	I	Spindle amp input.
25	SPG	I	For the connection of a resistor which sets the gain in the spindle 12cm mode.
26	SP-	I	For the connection of the spindle phase compensation constant with the SPD pin.
27	SPD	O	Spindle control signal output.
28	SLEQ	I	For the connection of sled phase compensation constant.
29	SLD	O	Sled control signal output.
30	SL-	I	Sled feed signal input from the microprocessor.
31	SL+		
32	JP-	I	Tracking signal input from the DSP.
33	JP+		
34	TGL	I	Tracking gain control signal input from the DSP. Low gain when TGL is "H".
35	TOFF	I	Tracking off control signal input from the DSP. Off when TOFF is "H".
36	TES	O	Outputs the TES signal to the DSP.

Pin No.	Pin Name	I/O	Description
37	HFL	O	The HFL (high frequency level) signal is used to judge whether the main beam is positioned on the pit or on the mirror.
38	SLOF	I	Sled servo off control input.
39	CV-	I	CLV error signal input from the DSP.
40	CV+		
41	RFSM	O	RF output.
42	RFS-	O	Sets the RF gain and the EFM signal's 3T compensation constant together with the RFSM pin.
43	SLC	O	The SLC (slice level control) signal is output to control the DSP's data slice level of the RF waveform.
44	SL1	I	Input to control the DSP's data slice level.
45	D-GND	-	Ground of digital signals.
46	FSC	O	Output for the focus search smoothing capacitor.
47	TBC	I	The TBC (tracking balance control) signal sets the EF balance variation range.
48	NC	-	Not connected.
49	DEF	O	Disc defect detection output.
50	CLK	I	Reference clock input. 4.23 MHz is input from the DSP.
51	CL	I	Microprocessor command clock input.
52	DAT	I	Microprocessor command data input.
53	CE	I	Microprocessor chip enable input.
54	DRF	O	DRF (detect RF) is an output to detect the RF level.
55	FSS	I	The FSS (focus search select) signal switches the focus search modes (+/-search / +search with respect to the reference voltage). (Not connected)
56	VCC2	-	VCC of servo and digital circuits.
57	REF1	-	For the connection of bypass capacitor for the reference voltage.
58	VR	O	Reference voltage output.
59	LF2	-	Sets the time constant for disc defect detection.
60	PH1	-	For the connection of a capacitor to hold the RF signal peak.
61	BH1	-	For the connection of a capacitor to hold the RF signal bottom.
62	LDD	O	APC circuit output.
63	LDS	I	APC circuit input.
64	VCC1	-	VCC of RF signal circuits.

IC, LC78622NE

Pin No.	Pin Name	I/O	Description
1	DEFI	I	Defect detection signal (DEF) input. (Must be connected to 0V when unused.)
2	TAI	I	For PLL/Test input. A pull-down resistor is built-in. (Must be connected to 0V.)
3	PDO	O	External VCO control phase comparator output.
4	VVSS	-	Internal VCO ground. (Must be connected to 0V.)
5	ISSET	I	PDO output current adjustment resistor connection.
6	VVDD	-	Internal VCO power supply.
7	FR	I	VCO frequency range adjustment.
8	VSS	-	Digital system ground. (Must be connected to 0V.)
9	EFMO	O	Slice level control EFM signal output.
10	EFMIN	I	Slice level control EFM signal input.
11	TEST2	I	Test input. A pull-down resistor is built-in. (Must be connected to 0V.)
12	CLV+	O	Disc motor control output. Can be set to three-value output by microprocessor command.
13	CLV-		
14	V/P	O	Rough servo/phase control automatic switching monitor output. Outputs a high level during rough servo a low level.
15	HFL	I	Track detection signal input. This is a Schmitt input.
16	TES	I	Tracking error signal input. This is a Schmitt input.
17	TOFF	O	Tracking off output.
18	TGL	O	Tracking gain switching output. Increase the gain when low.
19	JP+	O	Track jump output. Three value output is also possible when specified by0 microprocessor command.
20	JP-		
21	PCK	O	EFM data playback clock monitor. Output 4.3218 MHz when the phase is locked.
22	FSEQ	O	Synchronization signal detection output. Output a high level when the synchronization signal detected from the EFM signal and the internally generated synchronization signal range.
23	VDD	-	Digital system power supply.
24 ~ 28	CONT1 ~ 5	I/O	General purpose input/ output pin1 ~ 5.
29	EMPH/CONT6	O	De-emphasis monitor. A high level indicates playback of a De-emphasis disk./ General General purpose input/ output pin6.
30	C2F	O	C2 flag output.
31	DOUT	O	Digital output.
32	TEST3	I	Test input. A pull-down resistor is built-in. (Must be connected to 0V.)
33	TEST4	I	Test input. A pull-down resistor is built-in. (Must be connected to 0V.)
34	PCCL	I	General purpose input/ output command identifying. A pull-down resistor is built-in. "H": Control possible only for the general purpose input/ output port command. "L": Control possible for all commands.
35	MUTEL/CONT7	O	Left channel mute output./ General purpose input/ output pin.
36	LVDD	-	Left channel power supply.
37	LCHO	O	Left channel output.
38	LVSS	-	Left channel ground. (Must be connected to 0V.)

Pin No.	Pin Name	I/O	Description
39	RVSS	-	Right channel ground. (Must be connected to 0V.)
40	RCHO	O	Right channel output.
41	RVDD	-	Right channel power supply.
42	MUTER/CONT8	O	Right channel mute output./ General purpose input/ output.
43	XVDD	-	Crystal oscillator power supply.
44	XOUT	O	Connections for a 16.9344 MHz crystal oscillator element.
45	XIN	I	
46	XVSS	-	Crystal oscillator ground. (Must be connected to 0V.)
47	SBSY	O	Subcode clock synchronization signal output.
48	EFLG	O	C1, C2, single and double error correction monitor.
49	PW	O	Subcode P, Q, R, S, T, U and W output.
50	SFSY	O	Subcode frame synchronization signal output. This signal falls when the subcode are in standby state.
51	SBCK	I	Subcode readout clock input. This is a Schmitt input.
52	FSX	O	Output pin for the 7.35 kHz synchronization signal divided from the crystal oscillator.
53	WRQ	O	Subcode Q output standby output.
54	RWC	I	Read/write control input. This is a Schmitt input.
55	SQOUT	O	Subcode Q output.
56	COIN	I	Command input pin from control microprocessor.
57	CQCK	I	Input for both the command input acquisition clock and the SQOUT pin subcode readout clock input pin. This is Schmitt input.
58	RES	I	Reset input. This pin must be set low briefly after power is first applied.
59	TST11	O	Test output. Leave open. (Normally output a low level.)
60	16M	O	16.9344 MHz output.
61	4.2M	O	4.2336 MHz output.
62	TEST5	I	Test input. A pull-down resistor is built-in. (Must be connected to 0V.)
63	CS	I	Chip select input. A pull-down resistor is built-in. (Must be connected to 0V if not controlled.)
64	TEST1	I	Test input. No pull-down resistor. (Must be connected to 0V.)

Pin No.	Pin Name	I/O	Description
1	RVRIN	I	4dB volume control input. Must be driven at a low impedance.
2	RCOM	–	1dB volume control common pin.
3 ~ 5	RT1 ~ RT3	–	For the connection of capacitors that compensate for bass and treble in the tone control circuits. A high-frequency compensation capacitors must be connected between T1 and T2. A low-frequency compensation capacitors must be connected between T2 and T3.
6	RTOUT	O	Tone control output.
7	RSIN	I	Super bass input. Must be driven at a low impedance.
8	NC	–	Connected to VSS.
9	NC	–	Not used.
10 ~ 11	RSB1 ~ RSB2	–	For the connection of RCH super bass compensation capacitors.
12	RFIN	I	Fader input. Must be driven at a low impedance.
13	RFOUT	O	Fader outputs. The front and rear sides can be attenuated independently.
14	RROUT		
15	VSS	–	Ground.
16	CL	I	Serial data and clock inputs for control.
17	DI		
18	CE	–	Chip enable. Data is written in the internal latch when the chip enable signal goes "L" from "H", and each analog switch is activated. Data transfer is enabled at "H".
19	VREF	–	Generates a 1/2VDD power source. A capacitor must be connected between VREF and VSS as a troubleshooting against power ripples.
20	LROUT	O	Fader outputs. The front and rear sides can be attenuated independently.
21	LFOUT		
22	LFIN	I	Fader input. Must be driven at a low impedance.
23 ~ 24	LSB2 ~ LSB1	–	For the connection of LCH super bass compensation capacitors.
25	NC	–	Not used.
26	NC	–	Connected to VSS.
27	LSIN	I	Super bass input. Must be driven at a low impedance.
28	LTOUT	O	Tone control output.
29 ~ 31	LT3 ~ LT1	–	For the connection of capacitors that compensate for bass and treble in the tone control circuit. A high-frequency compensation capacitors must be connected between T1 and T2. A low-frequency compensation capacitors must be connected between T2 and T3.
32	LCOM	–	1dB volume control common pin.
33	LVRIN	I	4dB volume control input. Must be driven at a low impedance.
34	LSELO	O	Input selector output pin.
35	AUX(L)	I	Signal input pins.
36	CD(L)		
37	TUN(L)		
38	TP(L)		
39	VDD	–	Power supply.

Pin No.	Pin Name	I/O	Description
40	TP(R)	I	Signal input pins.
41	TUN(R)		
42	CD(R)		
43	AUX(R)		
44	RSELO	O	Input selector output pin.

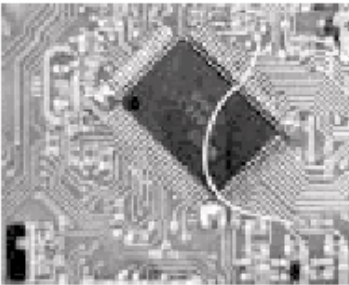
IC, LC75853NW

Pin No.	Pin Name	I/O	Description
1 ~ 40	S1 ~ S40	O	LCD segment output.
41 ~ 43	COM1~ COM3	O	LCD command driver outputs.
44 ~ 49	KS1 ~ KS6	O	Key scan outputs.
50 ~ 54	KI1 ~ KI5	I	Key scan inputs. These pins have build-in pull-down resistor.
55	TEST	-	Test pin. (Connected to GND.)
56	VDD	-	Power supply.
57	VDD1	I	Used for applying the LCD drive 2/3 bias voltage externally. (Must be connected to VDD2 when a 1/2 bias drive scheme is used.)
58	VDD2	I	Used for applying the LCD drive 1/3 bias voltage externally. (Must be connected to VDD1 when a 1/2 bias drive scheme is used.)
59	VSS	-	Power supply. (Connected to GND.)
60	OSC	I/O	Resistor and capacitor are attached externally form an oscillator circuit.
61	DO	O	Serial data interface pin; output data.
62	CE	O	Serial data interface pin; chip enable.
63	CL	O	Serial data interface pin; synchronization.
64	DI	O	Serial data interface pin; data transferred.

CD TEST MODE

1-1 How to Activate CD Test Mode

- 1) Connect 62 pin (test) of IC701 (LC72358N-9910) on MAIN C.B to the 31 pin (VDD) by cable.



- 2) Connect wire of ACC (red) and BACKUP (yellow) of power supply/speaker connector to DC+12V, then connect Ground (black) to -. When CD test mode is started, all displays will be lighted as shown in the following figure.



1-2 How to cancel CD Test Mode

- 1) Disconnect the cable of 62 pin (test) and 31 pin (VDD) of the MAIN C.B IC701 (LC72358N-9910) and switch on the power.

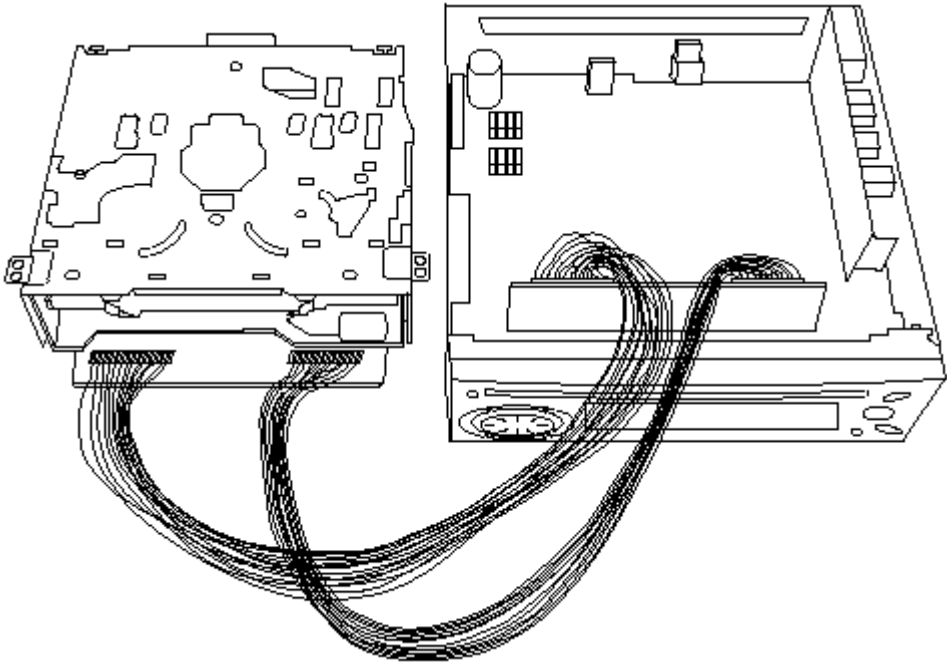
1-3 CD Test Mode Functions

MODE	Keys to operate	Display	Operations	Contents
Start Mode		All lightented		• Start TEST MODE
Search Mode	RANDOM	TOC READING	• Continual Focus Search (The pickup lens respeats the full-swing up-down motion) *NOTE 1	• Confirm APC circuit • Laser current measurement • Confirm focus error waveform
Play Mode	REP 1	TRACK No. Playing Time Indica- tion Revel/Ing Indication	• Normal Play Back • Focus search is contiuned if TOC cannot be read	• Focus servo • Traking servo • CLV servo • Sled servo
Traverse Mode	INT	Track no. & Playing Time Indication	• Pause Status	• Traking servo OFF
Thread Mode		All lightened	 • Pick up Move to outer most track  • Pick up Move to inner most track	• Thread servo • Confirm mechanism operation
Gain Switch	1 (Preset Button)	All lightened	• Step 1 : For CD/CD-R • Step 2 : For CD-R RF Gain is up against Step 1 • Step 3 : For CD-R Laser Power Up against Step 2	• Step 1 to 3 are cyclic • “Error 03” is indicated if the Disc does not Step 1 match.

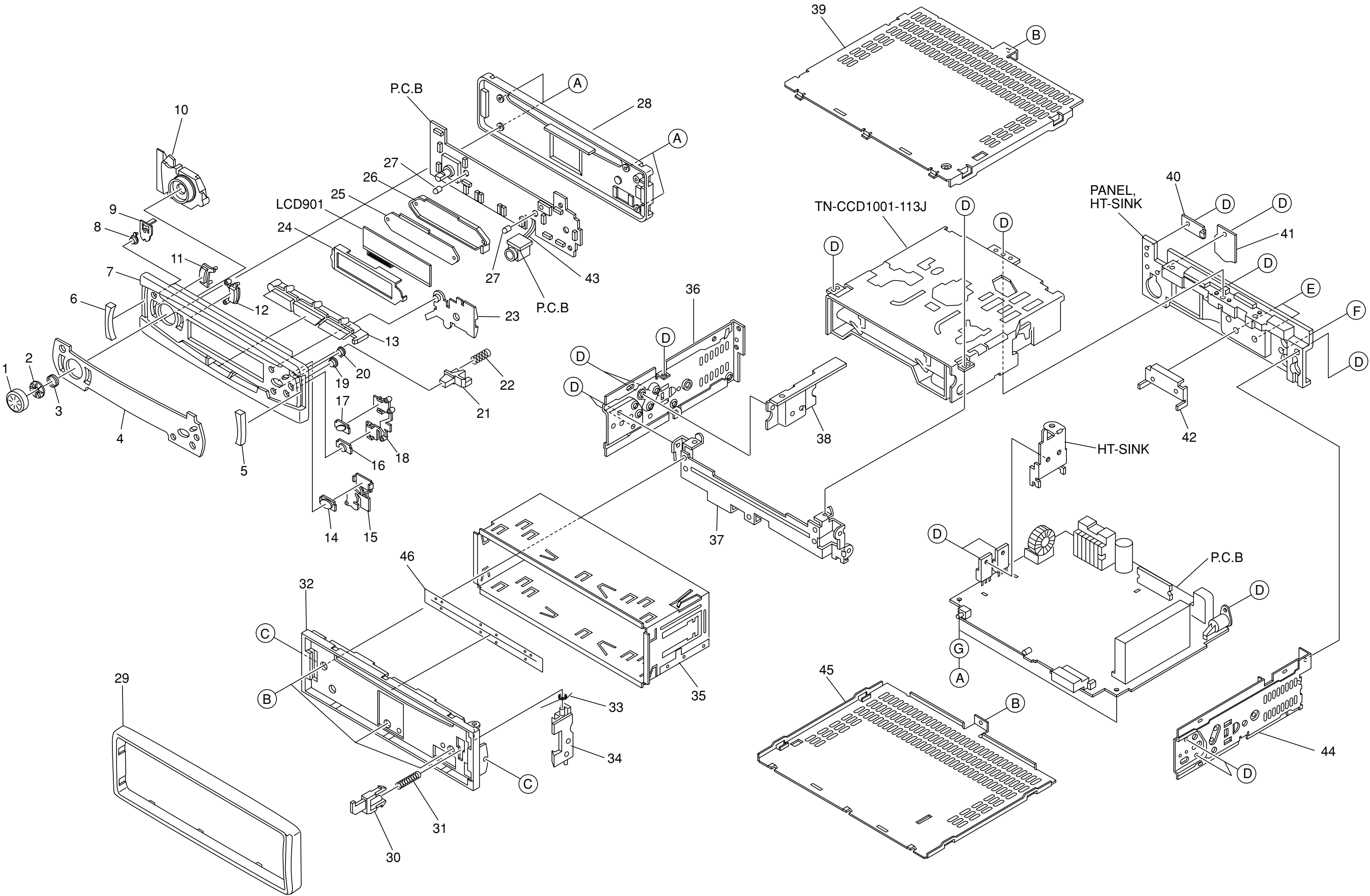
- Do not insert a Disc when confirming Search Mode
- Press PWR button when cancelling Search Mode. Test Mode will be restored when PWR button is pressed once again.
- Insert the “Test Disc” when operating all modes except search mode.
- * NOTE 1 : There are CD operations are disable owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In cases, the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.

Caution when servicing

- (1) How to use extension jig.
Correct between MAIN C.B. and CD mechanisms by extension jigs when checking CD mechanism (TN-CCD1001-113J) operation.
(Refer to the following figure.)



Parts Description	AKC-JIG	Parts Number	SV-J00-075-010
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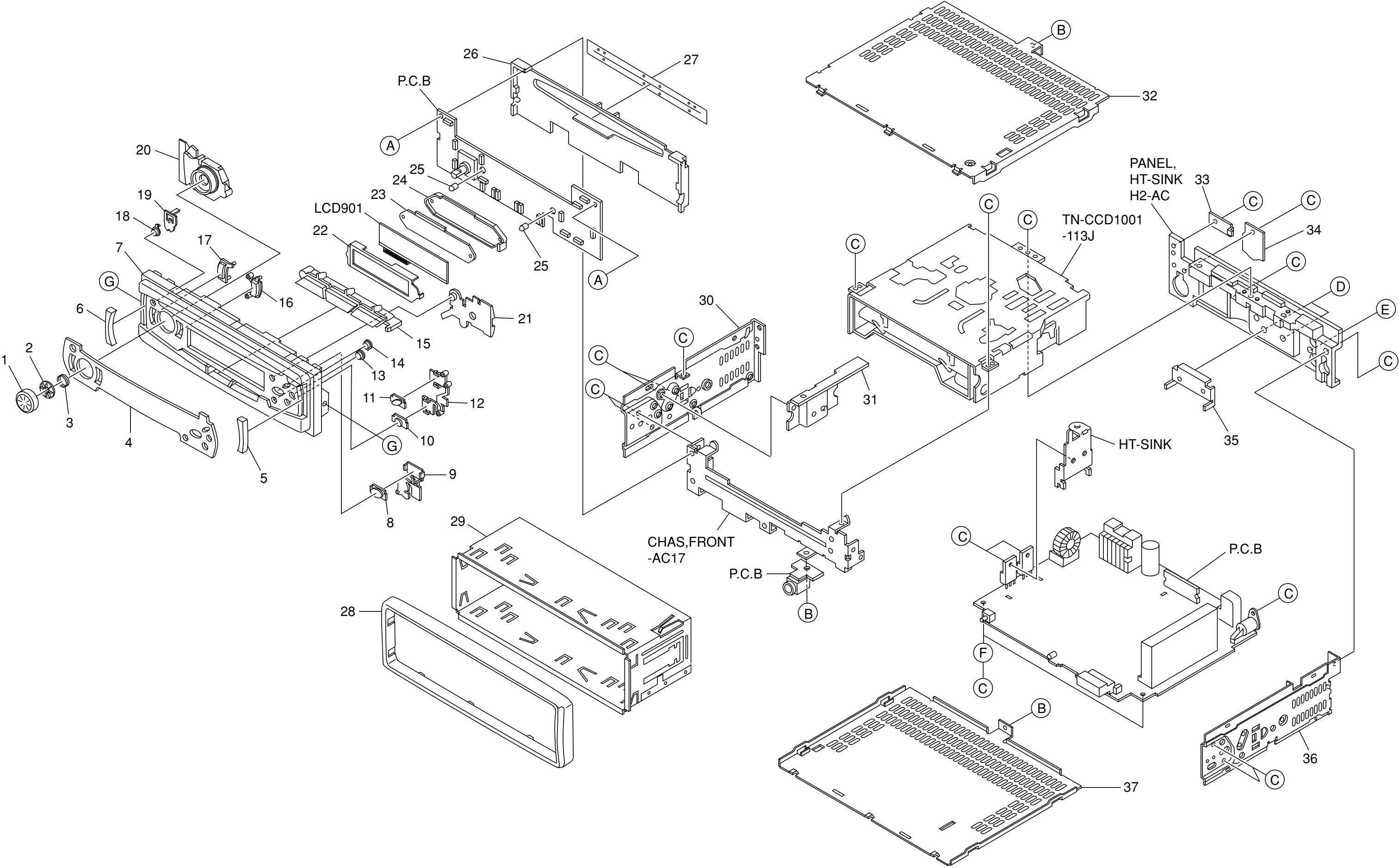


MECHANICAL PARTS LIST 1 / 1 <X207>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-KC7-005-010		KNOB,RTRY -AC	30	8Z-KC2-203-210		LEVER,DFP HOOK -C2
2	8A-KC7-020-010		RING,RTRY -AC	31	8Z-KC2-221-110		SPR-C,DETACH HOOK-C2
3	8A-KC7-220-010		SPR-C,ROTARY -AC	32	8Z-KC2-011-210		CABI,BASE -C2
4	8A-KCG-004-010		WINDOW,LCD X207<X207YH>	33	8Z-KC2-222-010		SPR-T,DETACH LOCK-C2
4	8A-KCG-031-010		WINDOW,LCD X207 T/M<X207YZ>	34	8Z-KC2-204-210		LEVER,DFP LOCK -C2
5	8A-KCF-022-010		WINDOW,SIDE R -AC15	35	8Z-KC1-231-110		HLDR,HALF-C
6	8A-KCF-021-010		WINDOW,SIDE L -AC15	36	8Z-KC1-213-010		CHAS,SIDE L -C
7	8A-KCF-001-010		CABI,FRONT -AC15	37	8Z-KCG-201-210		CHAS,FRONT -C16
8	8A-KC7-014-010		BTN,CLEAR S -AC	38	8A-KC7-230-010		HLDR,TR2 -AC
9	8A-KC7-208-010		HLDR,BTN L-AC	39	8Z-KC1-211-010		COVER, TOP -C
10	8A-KCF-211-010		LENS,ENCO -AC15	40	8Z-KC7-201-010		COVER, ISO BLIND -C
11	8A-KC7-007-010		BTN,SEESAW R -AC	41	8Z-KC3-201-010		COVER, CD BLIND -C
12	8A-KCF-007-010		BTN,SEESAW L -AC15	42	8A-KC7-224-010		HLDR,P-IC -AC
13	8A-KC7-006-010		BTN,PRE.-AC	43	8A-KC7-611-010		F-CABLE,3P (AUX)
14	8A-KC7-011-010		BTN,CLEAR L -AC	44	8Z-KC1-214-010		CHAS,SIDE R -C
15	8A-KCF-208-010		HLDR,BTN R1 -AC15	45	8Z-KC1-212-010		COVER, BOTTOM -C
16	8A-KC7-013-010		BTN,CLEAR ML -AC	46	8A-KCF-230-010		COVER, DUST DFP LOWR
17	8A-KCF-012-010		BTN,CLEAR EJ -AC15	A	8Z-KC1-253-010		S-SCREW,PT 2*8 BH+ BLK
18	8A-KCF-210-010		HLDR,BTN R3 -AC15	B	87-B10-216-010		U+2.6-4.0 ZINC BLK (BH M2.6)
19	8A-KCF-008-010		BTN,MONO -AC15	C	8Z-KC1-251-010		S-SCREW,TH2.6-4.0-0.8
20	8A-KCF-010-010		BTN,CLEAR S2 -AC15	D	87-251-073-410		SCREW,U+2.6-6
21	8A-KCF-011-010		BTN,DETACH -AC15	E	87-251-100-410		U+3-16
22	8Z-KC2-223-010		SPR-C,DETACH -C2	F	87-B10-259-010		UT2+3.0-10.0 W/O SLOT (BH TAP)
23	8A-KCF-212-010		LENS,R -AC15	G	87-432-903-010		WASHER,WTE 2.6
24	8A-KCF-215-210		HLDR,LCD -AC15				
25	8A-KCF-213-010		LENS,LCD -AC15				
26	8A-KCF-214-010		CASE,LCD LENS -AC15				
27	8Z-KT1-239-010		CAP,LAMP BLU B				
28	8A-KCF-002-010		CABI,REAR -AC15				
29	8A-KCF-020-010		CABI,TRIM -AC15				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		



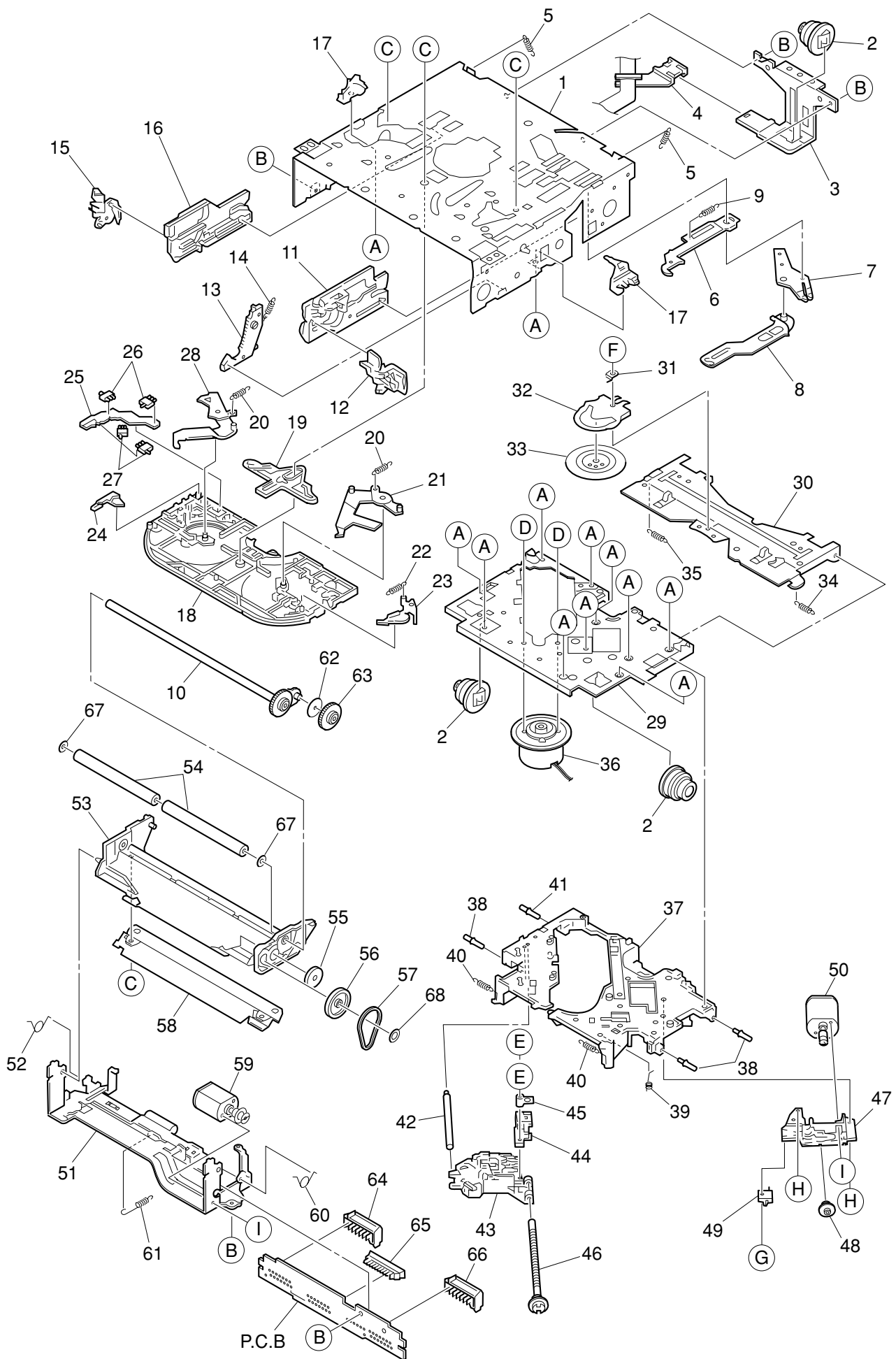
MECHANICAL PARTS LIST 1 / 1 <Z107>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-KC7-005-010		KNOB,RTRY -AC	26	8A-KCH-202-010		HLDL,PWB -AC17
2	8A-KC7-020-010		RING,RTRY -AC	27	8A-KCH-219-010		COVER, DUST 2
3	8A-KC7-220-010		SPR-C,ROTARY -AC	28	8A-KCH-020-010		CABI,TRIM -AC17
4	8A-KCH-004-110		WINDOW,LCD Z107 40W	29	8Z-KC1-231-110		HLDL,HALF-C
5	8A-KCF-022-010		WINDOW,SIDE R -AC15	30	8Z-KC1-213-010		CHAS,SIDE L -C
6	8A-KCF-021-010		WINDOW,SIDE L -AC15	31	8A-KC7-230-010		HLDL,TR2-AC
7	8A-KCH-001-110		CABI,FRONT -AC17	32	8Z-KC1-211-010		COVER, TOP -C
8	8A-KC7-011-010		BTN,CLEAR L -AC	33	8Z-KC7-201-010		COVER, ISO BLIND -C
9	8A-KCF-208-010		HLDL,BTN R1 -AC15	34	8Z-KC3-201-010		COVER, CD BLIND -C5
10	8A-KC7-013-010		BTN,CLEAR ML -AC	35	8A-KC7-224-010		HLDL,P-IC -AC
11	8A-KCF-012-010		BTN,CLEAR EJ -AC15	36	8Z-KC1-214-010		CHAS,SIDE R -C
12	8A-KCF-209-010		HLDL,BTN R2 -AC15	37	8Z-KC1-212-010		COVER, BOTTOM -C
13	8A-KCF-008-010		BTN,MONO -AC15	A	87-251-075-410		U+2.6-10
14	8A-KCF-010-010		BTN,CLEAR S2 -AC15	B	87-B10-216-010		U+2.6-4.0 Z1NC BLKC
15	8A-KC7-006-010		BTN,PRL -AC	C	87-251-073-410		SCREW,U+2.6-6
16	8A-KC7-007-010		BTN,SEESAW R -AC	D	87-251-100-410		U+3-16
17	8A-KCF-007-010		BTN,SEESAW L -AC15	E	87-B10-259-010		UT2+3.0-10.0 W/O SLOT (BH TAP)
18	8A-KC7-014-010		BTN,CLEAR S -AC	F	87-432-903-010		WASHER,WTE 2.6
19	8A-KC7-208-010		HLDL,BTN L-AC	G	8Z-KC1-251-010		S-SCREW,TH2.6-4.0-0.8
20	8A-KCF-211-010		LENS,ENCO -AC15				
21	8A-KCF-212-010		LENS,R -AC15				
22	8A-KCF-215-210		HLDL,LCD -AC15				
23	8A-KCF-213-010		LENS,LCD -AC15				
24	8A-KCF-214-010		CASE,LCD LENS -AC15				
25	8Z-KT1-239-010		CAP,LAMP BLU B				

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LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

CD MECHANISM EXPLODED VIEW 1 / 1



CD MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S3-031-010-010		FRAME	41	S3-031-050-220		LOCK PIN BL
2	S3-031-050-240		DAMPER (J)	42	S3-031-050-080		PU SHAFT
3	S3-031-010-260		REAR OAMPER BKT (J)	43	S6-901-160-110		PICK-UP OPTIMA-720AIE
4	S3-031-010-270		FPC GUIDE	44	S3-031-050-110		PU M NUT
5	S3-031-010-290		HUNG UP SP (R)	45	S3-031-050-120		NUT PUSH SPR PL
6	S3-031-010-140		TRIG PL	46	S3-031-053-030		FEED SCREW ASSY
7	S3-031-010-160		TRIG ARM	47	S3-031-050-040		FD GR BLK
8	S3-031-010-120		TRIG LVR	48	S3-030-050-100		PU GEAR (B)
9	S3-031-010-150		TRIG PL SPRING	49	S6-418-040-040		DET SW ESE11HS2
10	S3-031-113-020		LDG RLR SFT ASSY	50	S3-031-053-010		FEED MOTOR ASSY
11	S3-031-010-200		FIX PL (R)	51	S3-031-110-300		FRONT BRKT (J)
12	S3-031-010-180		FIX ARM (R)	52	S3-031-110-180		L.P SPRING (L)
13	S3-031-010-210		LDG GR (6)	53	S3-031-110-080		GR MT BLK
14	S3-031-010-220		LDG GR (6) SPRING	54	S3-031-110-310		LDG ROLLER (S)
15	S3-031-010-170		FIX ARM (L)	55	S3-031-110-100		LDG GR (3)
16	S3-031-010-190		FIX PL (L)	56	S3-031-110-090		LDG GR (2)
17	S3-031-010-030		DAMPER PIN	57	S3-031-110-290		LDG BELT
18	S3-031-010-070		UPPER PL	58	S3-031-110-050		SUPPORT PL
19	S3-031-010-080		SEL STOP PL	59	S3-031-113-010		LDG MOTOR ASSY
20	S3-031-010-330		S ARM SPRING (B)	60	S3-031-110-190		L.P SPRING (R)
21	S3-031-010-100		SEL ARM (R)	61	S3-031-010-300		LEVER SP
22	S3-031-010-250		S.L ARM SPRING	62	S9-W07-350-800		LUMILAR W 2.3-9.8-0.35
23	S3-031-010-240		S.L ARM	63	S3-031-110-120		LDG GR (5)
24	S3-031-110-240		SW ACTR	64	S6-815-020-350		CONNECTOR TKC-F14P-J3
25	S3-031-110-230		SW PCB	65	S6-817-020-240		CONNECTOR 6208010115
26	S6-418-040-020		DET SW ESE22MH1	66	S6-815-020-370		CONNECTOR TKC-F12P-J3
27	S6-418-040-030		DET SW ESE22MH3	67	S9-W03-302-760		NW BLUE 2.9-5-0.3
28	S3-031-010-090		SEL ARM (L)	68	S9-W06-400-300		HLW CUT 1.4-3.2-0.4
29	S3-031-050-010		TTB	A	87-841-034-410		CAMERA B TAOPPING SCREW M2-5
30	S3-031-050-130		CLP ARM	B	87-741-033-410		CAMERA SCREW TS.G M2-4
31	S3-031-050-360		STOPPER SPR	C	87-351-549-310		CAMERA B TAPPING SCREW M2-4
32	S3-031-050-230		CLAMPER PLATE	D	87-267-525-310		CAMERA SCREW M1.7-2.2
33	S3-031-050-150		CLAMPER	E	87-B10-026-010		CAMERA TAPPING SCREW S M1.7-8
34	S3-031-050-140		CLP ARM SPRING	F	87-078-159-110		CAMERA TAPPING SCREW S 3 M2-2
35	S3-031-050-250		CLP ARM SPR (L)	G	87-067-643-010		CAMERA TAPPING SCREW B 3 M2-10
36	S3-031-053-020		SPINDLE MOTOR ASSY	H	87-841-034-410		CAMERA TAPPING SCREW B 3 M2-5
37	S3-031-050-030		FMB	I	87-261-032-410		TAMS SCREW M2-3
38	S3-031-050-210		LOCK PIN				
39	S3-031-050-100		THRUST SPR				
40	S3-031-010-280		HUNG UP SP (F)				

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
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