

CDC-X207 YU

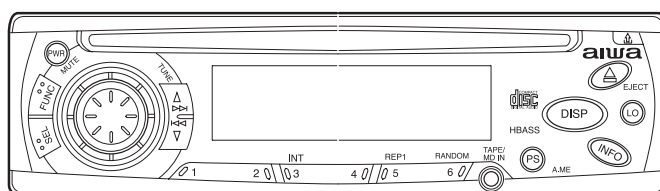
CDC-X307 YU

CDC-X407 YU

CDC-X2070 YL

CDC-X3070 YL

CDC-X4010 YL



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/ X307/ X407<YU>, (S/M Code No. 09-99B-422-3T1) and CDC-X2070/ X3070/ X4010<YL>, (S/M Code No. 09-99C-422-3T2).

aiwa

S/M Code No. 09-002-422-3R1

REVISION

DATA

SPECIFICATIONS

RADIO SECTION

(FM)

Frequency Range	87.5 MHz – 108 MHz (100-kHz steps) 87.5 MHz – 108 MHz (50-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	530 kHz – 1,710 kHz (10-kHz steps) 531 kHz – 1,602 kHz (9-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 [for the U.S.A.])

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 <except CDC-X2070> 35 W x 4 channels <CDC-X2070 only>
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TAPE/MD IN input

Input Sensitivity (load impedance)	
TAPE/MD IN	500 mV (10 kΩ)<YU> 300 mV (10 kΩ)<YL>

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)

STEERING-WHEEL-MOUNTED REMOTE CONTROL UNIT <CDC-X407/4010 only>

Dimensions	approx. 67 (W) x 26 (H) x 27 (D) mm (2 ³ / ₄ (W) x 1 ¹ / ₁₆ (H) x 1 ¹ / ₈ (D) inches) (excluding holder)
Weight	approx. 38g (1.33 oz.) (including holder, battery)

- Design and specifications are subject to change without notice.

ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI	DESCRIPTION
1	8A-KC7-902-010	IB, INST, YU, YL (3L, P)	
1	8A-KCG-902-010	IB, YU (3L) 207<X207>	
1	8A-KCG-901-010	IB, YU (3L) 307, 407<X307, X407>	
1	8A-KCG-903-010	IB, YL (3L) 4010, 3070, 2070<YL>	
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	87-B10-216-010	U+2.6-4.0 ZINC BLK (BH M2.6)	
7	8Z-KC1-030-010	CASE, DFP -C	
8	8Z-KC1-231-110	HLDR, HALF -C	
9	8Z-KC1-232-010	KEY, REMOVE -C	
10	8Z-KC1-235-010	HLDR, REAR MTG	
11	8Z-KC1-244-010	S-SCREW, 5*6 TH+ TAPPING ST	
12	8Z-KC1-250-010	S-SCREW, HEXAGON	
13	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

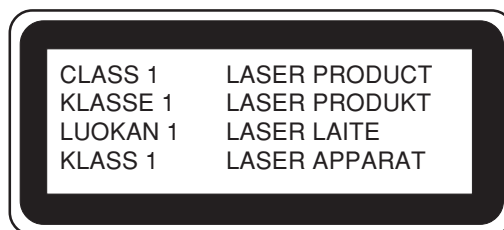
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

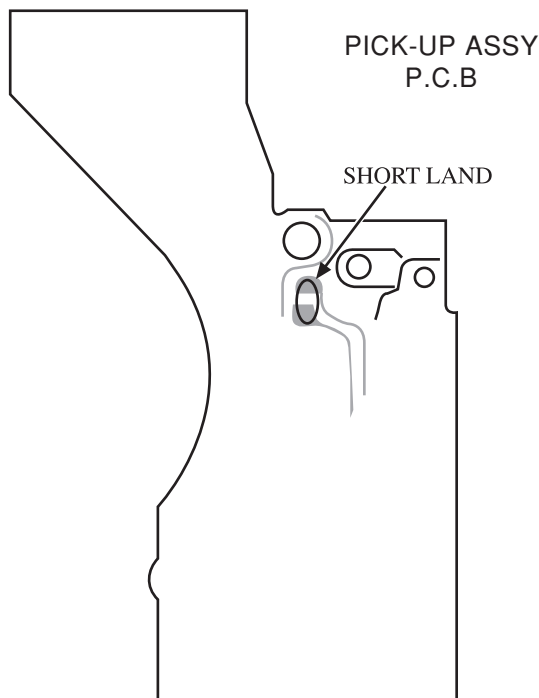
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



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

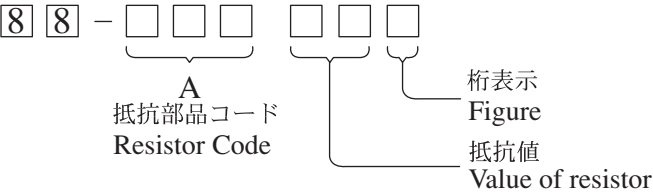
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C205	87-A11-606-080		C-CAP,S 0.22-25 K B
	87-A20-446-010		C-IC,LA9241ML	C206	87-010-492-040		CAP,E 0.33-50 GAS
	87-A21-319-010		C-IC,LC78622NE	C207	87-010-195-080		C-CAP,S 0.068-25 Z F C2012
	87-A21-488-040		C-IC,LA6556	C208	87-010-176-080		C-CAP,S 680P-50 J SL
	8Z-KT1-622-010		C-IC,LC75374E	C209	87-010-992-080		CAP, CHIP 0.047
	87-A21-562-010		IC,LA4743B	C210	87-016-669-080		C-CAP,S 0.1-25 K B
	88-KT1-606-080		IC,PST994D	C211	87-010-498-040		CAP,E 10-16 M 5L SRE
	87-A21-535-030		C-IC,LC72358N-9910	C212	87-010-180-080		C-CER 1500P
	87-A21-489-030		C-IC,LC75853NW	C213	87-010-992-080		CAP, CHIP 0.047
	87-A90-951-010		RCR UNIT,SBX1971-52<X407>	C214	87-016-669-080		C-CAP,S 0.1-25 K B
TRANSISTOR				C215	87-010-178-080		C-CAP,S 1000P-50 K B C2012<YU>
	89-324-122-080		TR,2SC2412K	C215	87-010-182-080		C-CAP,S 2200P-50 K B C2012<YL>
	87-A30-289-040		C-TR,2SA1037AK(R)	C216	87-A11-606-080		C-CAP,S 0.22-25 K B
	87-A30-288-040		C-TR,DTC114YKA	C217	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A30-287-040		C-TR,DTC114TKA	C218	87-010-198-080		CAP, CHIP 0.022
	87-026-235-080		CHIP-TR,DTC114EK	C219	87-012-157-080		C-CAP,S 330P-50 CH
	87-026-210-080		CHIP-TR,DTC144EK	C220	87-010-184-080		CHIP CAPACITOR 3300P(K)
	87-A30-299-080		TR,2SB1326	C221	87-010-322-080		C-CAP,S 100P-50 CH
	87-A30-282-040		C-TR,DTA114TKA	C222	87-010-492-040		CAP,E 0.33-50 GAS
	87-A30-168-010		TR,2SB1566F	C223	87-010-067-040		CAP,E 0.1-50 5L
	89-211-821-080		CHIP-TR 2SB1182Q	C224	87-010-553-040		CAP,E 47-16 GAS
	89-423-953-010		TR,2SD2395F	C225	87-010-805-080		C-CAP,S 1-16 Z F<YU>
	87-A30-301-080		TR,2SD1862	C225	87-010-184-080		C-CAP,S 3300P-50 K B C2012<YL>
	87-A30-449-040		C-TR,DTA123YKA	C226	87-010-497-040		CAP,E 4.7-35 GAS
DIODE				C227	87-010-555-040		CAP,E 100-10 GAS
	87-A40-250-080		CHIP-DIODE,DAN202K	C228	87-016-669-080		CHIP CAPACITOR,0.1-25
	87-001-783-080		DIODE,1N4002	C229	87-010-498-040		CAP,E 10-16 GAS
	87-020-331-080		CHIP-DIODE,DAN202K	C230	87-016-669-080		CHIP CAPACITOR,0.1-25
	87-A40-624-080		ZENER,MTZJ10A	C231	87-010-555-040		CAP,E 100-10 GAS
	87-A40-523-080		ZENER,MTZJ9.1B	C232	87-016-669-080		CHIP CAPACITOR,0.1-25
	87-070-136-080		ZENER,MTZJ5.1B	C233	87-010-555-040		CAP,E 100-10 GAS
	87-017-932-080		ZENER,MTJ6.2B	C234	87-010-193-080		CHIP CAPACITOR,0.033
	87-A40-798-010		DIODE,1N5402 (3A/200V)	C235	87-010-992-080		CAP, CHIP 0.047
	87-A40-817-040		C-ZENER,STZ6.8N	C236	87-010-067-040		CAP,E 0.1-50 5L
MAIN C.B				C237	87-010-553-040		CAP,E 47-16 GAS
C101	87-010-178-080		CHIP CAP 1000P	C238	87-010-197-080		CAP, CHIP 0.01 DM
C102	87-010-197-080		CAP, CHIP 0.01 DM	C240	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-010-495-040		CAP,E 2.2-50 GAS	C250	87-016-669-080		CHIP CAPACITOR,0.1-25<YU>
C106	87-010-322-080		C-CAP,S 100P-50 CH	C250	87-010-805-080		C-CAP,S 1-16 Z F<YL>
C107	87-010-552-040		CAP,E 22-16 GAS	C251	87-010-555-040		CAP,E 100-10 GAS
C108	87-010-322-080		C-CAP,S 100P-50 CH	C256	87-010-186-080		CAP,CHIP 4700P
C109	87-010-553-040		CAP,E 47-16 GAS	C258	87-010-150-080		C-CAP,S 6P-50 D CH
C110	87-010-198-080		CAP, CHIP 0.022	C259	87-010-316-080		C-CAP,S 33P-50 CH
C111	87-010-553-040		CAP,E 47-16 GAS	C261	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C112	87-010-185-080		C-CAP,S 3900P-50 B	C262	87-016-669-080		C-CAP,S 0.1-25 K B
C113	87-010-197-080		CAP, CHIP 0.01 DM	C263	87-010-555-040		CAP,E 100-10 GAS
C114	87-010-197-080		CAP, CHIP 0.01 DM	C264	87-010-555-040		CAP,E 100-10 GAS
C115	87-010-196-080		CHIP CAPACITOR,0.1-25	C265	87-016-669-080		C-CAP,S 0.1-25 K B
C116	87-010-196-080		CHIP CAPACITOR,0.1-25	C266	87-016-669-080		C-CAP,S 0.1-25 K B
C131	87-012-365-080		C-CAP,S 0.027-25VBK<YU>	C267	87-010-498-040		CAP,E 10-16 GAS
C131	87-010-220-080		C-CAP,S 0.018-25 K B<YL>	C268	87-010-498-040		CAP,E 10-16 GAS
C132	87-012-365-080		C-CAP,S 0.027-25VBK<YU>	C269	87-010-180-080		C-CER 1500P
C132	87-010-220-080		C-CAP,S 0.018-25 K B<YL>	C270	87-010-180-080		C-CER 1500P
C133	87-012-358-080		C-CAP,S 0.47-10 F Z	C271	87-010-154-080		CAP CHIP 10P
C134	87-012-358-080		C-CAP,S 0.47-10 F Z	C272	87-010-154-080		CAP CHIP 10P
C161	87-010-196-080		CHIP CAPACITOR,0.1-25	C273	87-010-494-040		CAP,E 1-50 M 5L SRE
C171	87-010-197-080		CAP, CHIP 0.01 DM<YU>	C274	87-010-494-040		CAP,E 1-50 M 5L SRE
C173	87-010-322-080		C-CAP,S 100P-50 J CH GRM	C280	87-A10-189-040		CAP,E 220-10
C176	87-010-197-080		C-CAP,S 0.01-25 K B<YL>	C281	87-010-555-040		CAP,E 100-10 GAS
C201	87-010-553-040		CAP,E 47-16 GAS	C282	87-016-669-080		C-CAP,S 0.1-25 K B
C202	87-010-553-040		CAP,E 47-16 GAS	C301	87-010-498-040		CAP,E 10-16 GAS
C203	87-010-178-080		CHIP CAP 1000P	C302	87-010-498-040		CAP,E 10-16 GAS
C204	87-016-669-080		C-CAP,S 0.1-25 K B	C303	87-010-494-040		CAP,E 1-50 GAS
				C304	87-010-494-040		CAP,E 1-50 GAS
				C305	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C306	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C307	87-010-198-080		CAP, CHIP 0.022
				C308	87-010-198-080		CAP, CHIP 0.022
				C309	87-010-498-040		CAP,E 10-16 GAS
				C310	87-010-498-040		CAP,E 10-16 GAS

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C311	87-A11-177-080		C-CAP,S 0.15-16 K B	C832	87-010-494-040		CAP,E 1-50 M 5L SRE
C312	87-A11-177-080		C-CAP,S 0.15-16 K B	C835	87-010-182-080		C-CAP,S 2200P-50 K B C2012
C313	87-A11-177-080		C-CAP,S 0.15-16 K B	C836	87-010-182-080		C-CAP,S 2200P-50 K B C2012
C314	87-A11-177-080		C-CAP,S 0.15-16 K B	C881	87-010-182-080		C-CAP,S 2200P-50 B
C315	87-010-498-040		CAP,E 10-16 GAS	C882	87-010-182-080		C-CAP,S 2200P-50 B
C316	87-010-498-040		CAP,E 10-16 GAS	C883	87-010-182-080		C-CAP,S 2200P-50 B
C321	87-010-196-080		CHIP CAPACITOR,0.1-25	C884	87-010-182-080		C-CAP,S 2200P-50 B
C322	87-010-555-040		CAP,E 100-10 GAS	CON201	87-A60-859-010		CONN,12P TKC-F12X-K1
C323	87-010-196-080		CHIP CAPACITOR,0.1-25	CON202	87-A60-860-010		CONN,14P TKC-F14X-K1
C324	87-010-498-040		CAP,E 10-16 GAS	CON851	88-KTA-603-010		CONN,15P CAM-B68
C331	87-012-358-080		C-CAP,S 0.47-10 F Z	CON881	8Z-KT1-611-010		CONN,16P CAM-B51
C332	87-012-358-080		C-CAP,S 0.47-10 F Z	F881	8Z-KC1-621-010		FUSE,15A 32V
C333	87-010-196-080		C-CAP,S 0.1-25 Z F C2012	J101	8Z-KT1-614-010		ANT,AW-002
C334	87-010-196-080		CHIP CAPACITOR,0.1-25	J451	87-A61-225-010		JACK,PIN 2P<EXCEPT X307,X407>
C351	87-010-494-040		CAP,E 1-50 GAS	J451	87-A61-224-010		JACK,PIN 4P XR-401<X307,X407>
C352	87-010-494-040		CAP,E 1-50 GAS	L101	87-003-143-080		COIL 4.7 UH
C353	87-010-494-040		CAP,E 1-50 GAS	L102	8Z-KT1-619-010		COIL,68MH K7-D
C354	87-010-494-040		CAP,E 1-50 GAS	L465	87-003-143-080		COIL,4.7UH K LAL02
C361	87-012-358-080		C-CAP,S 0.47-10 F Z	L671	87-003-149-080		COIL,47UH
C362	87-012-358-080		C-CAP,S 0.47-10 F Z	L831	87-003-143-080		COIL,4.7UH K LAL02
C363	87-012-358-080		C-CAP,S 0.47-10 F Z	L881	8Z-KT1-615-010		FLTR,AMORPHOUS -CHOKE
C364	87-012-358-080		C-CAP,S 0.47-10 F Z	LED702	87-027-262-010		LEDE,TLR124 (RED)
C365	87-010-175-080		CAP 560P	R241	87-022-371-080		C-RES,S 330K-1/10W F
C366	87-010-175-080		CAP 560P	R242	87-022-371-080		C-RES,S 330K-1/10W F
C367	87-010-175-080		CAP 560P	SW701	87-A91-070-010		SW,TACT SKHHLV
C368	87-010-175-080		CAP 560P	SW702	87-A91-152-010		SW,SL 1-1-2 SSSS212-11-A
C451	87-010-498-040		CAP,E 10-16 GAS<X307,X407>	TU101	8A-KC8-621-010		TU UNIT, FAE347-A12
C452	87-010-498-040		CAP,E 10-16 GAS<X307,X407>	X201	81-592-641-010		VIB,CER 16.93MHZ
C453	87-010-498-040		CAP,E 10-16 GAS	X701	87-A70-175-010		VIB,XTAL 4.5MHZ AT-49
C454	87-010-498-040		CAP,E 10-16 GAS				
C455	87-012-140-080		CAP 470P<X307,X407>	FRONT C.B			
C456	87-012-140-080		CAP 470P<X307,X407>	C901	87-010-805-080		CAP, S 1-16
C457	87-012-140-080		CAP 470P	C902	87-010-194-080		CAP, CHIP 0.047
C458	87-012-140-080		CAP 470P	C903	87-010-194-080		CAP, CHIP 0.047
C511	8A-KC7-623-000		CAP,E 2200U-16 BT(125C)	C904	87-010-177-080		C-CAP,S 820P-50 SL
C512	87-010-196-080		CHIP CAPACITOR,0.1-25	C905	87-010-196-080		CHIP CAPACITOR,0.1-25
C513	87-010-196-080		CHIP CAPACITOR,0.1-25	C971	87-010-196-080		CHIP CAPACITOR,0.1-25<X407>
C514	87-010-498-040		CAP,E 10-16 GAS	CON901	88-KTA-602-010		CONN,15P CAM-B67
C515	87-010-494-040		CAP,E 1-50 GAS	LCD901	8A-KCG-610-010		LCD,AKC-16-17
C516	87-010-178-080		CHIP CAP 1000P	LED951	87-017-827-070		C-LED,SEC1201 RED
C517	87-010-178-080		CHIP CAP 1000P	LED952	87-017-827-070		C-LED,SEC1201 RED
C519	87-010-494-040		CAP,E 1-50 M 5L SRE	LED953	87-017-827-070		C-LED,SEC1201 RED
C519	87-010-494-040		CAP,E 1-50 M 5L SRE	LED961	87-A40-813-040		C-LED,SEC1E01C BLUE
C531	87-012-368-080		C-CAP,S 0.1-50 Z F<YL>	LED962	87-A40-813-040		C-LED,SEC1E01C BLUE
C532	87-012-368-080		C-CAP,S 0.1-50 Z F<YL>	LED963	87-A40-813-040		C-LED,SEC1E01C BLUE
C533	87-012-368-080		C-CAP,S 0.1-50 Z F<YL>	PL901	8Z-KT1-641-010		LAMP,T-3
C534	87-012-368-080		C-CAP,S 0.1-50 Z F<YL>	PL902	8Z-KT1-641-010		LAMP,T-3
C590	87-010-178-080		CHIP CAP 1000P	SW901	87-036-251-080		SW,T CT 6X3.5 160
C611	87-010-553-040		CAP,E 47-16 GAS	SW902	87-036-251-080		SW,T CT 6X3.5 160
C612	87-010-198-080		CAP, CHIP 0.022	SW903	87-036-251-080		SW,T CT 6X3.5 160
C613	87-016-044-040		CAP,E 100-16 GAS	SW904	87-A90-001-080		C-SW,TACT SKQMAL
C621	87-010-553-040		CAP,E 47-16 GAS	SW905	87-A90-001-080		C-SW,TACT SKQMAL
C622	87-010-553-040		CAP,E 47-16 GAS	SW906	87-A90-001-080		C-SW,TACT SKQMAL
C641	87-010-196-080		CHIP CAPACITOR,0.1-25	SW907	87-036-251-080		SW,T CT 6X3.5 160
C642	87-010-196-080		CHIP CAPACITOR,0.1-25	SW908	87-036-251-080		SW,T CT 6X3.5 160
C671	87-010-198-080		CAP, CHIP 0.022	SW910	87-A90-001-080		C-SW,TACT SKQMAL
C672	87-010-555-040		CAP,E 100-10 GAS	SW911	87-036-251-080		SW,T CT 6X3.5 160
C673	87-010-553-040		CAP,E 47-16 GAS	SW913	87-036-251-080		SW,T CT 6X3.5 160
C674	87-010-198-080		CAP, CHIP 0.022	SW914	87-036-251-080		SW,T CT 6X3.5 160
C681	87-010-553-040		CAP,E 47-16 GAS	SW915	87-036-251-080		SW,T CT 6X3.5 160
C682	87-010-198-080		CAP, CHIP 0.022	SW916	87-036-251-080		SW,T CT 6X3.5 160
C701	87-010-315-080		C-CAP,S 27P-50 CH	SW917	87-036-251-080		SW,T CT 6X3.5 160
C702	87-010-314-080		C-CAP,S 22P-50V	SW918	87-036-251-080		SW,T CT 6X3.5 160
C706	87-010-497-040		CAP,E 4.7-35 GAS	SW921	87-A91-597-010		SW,RTRY SIM-026MT
C711	87-010-322-080		C-CAP,S 100P-50 CH				
C712	87-010-322-080		C-CAP,S 100P-50 CH	AUX C.B			
C761	87-010-555-040		CAP,E 100-10 GAS	FC901	8A-KC7-611-010		F-CABLE,3P (AUX)
C763	87-010-196-080		CHIP CAPACITOR,0.1-25	J901	85-HRL-623-010		JACK,3.5 ST BLK
C771	87-012-156-080		C-CAP,S 220P-50 J CH GRM				
C831	87-010-494-040		CAP,E 1-50 M 5L SRE				

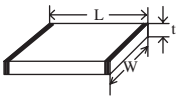
チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

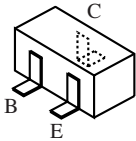
Chip Resistor Part Coding



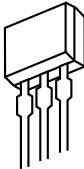
チップ抵抗
Chip resistor

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

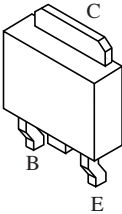
TRANSISTOR ILLUSTRATION



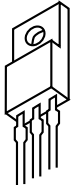
2SA1037
2SC2412
DTA114TKA
DTA123YKA
DTC114EK
DTC114YKA
DTC114TKA
DTC144EK



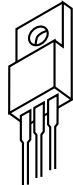
2SB1326
2SD1862



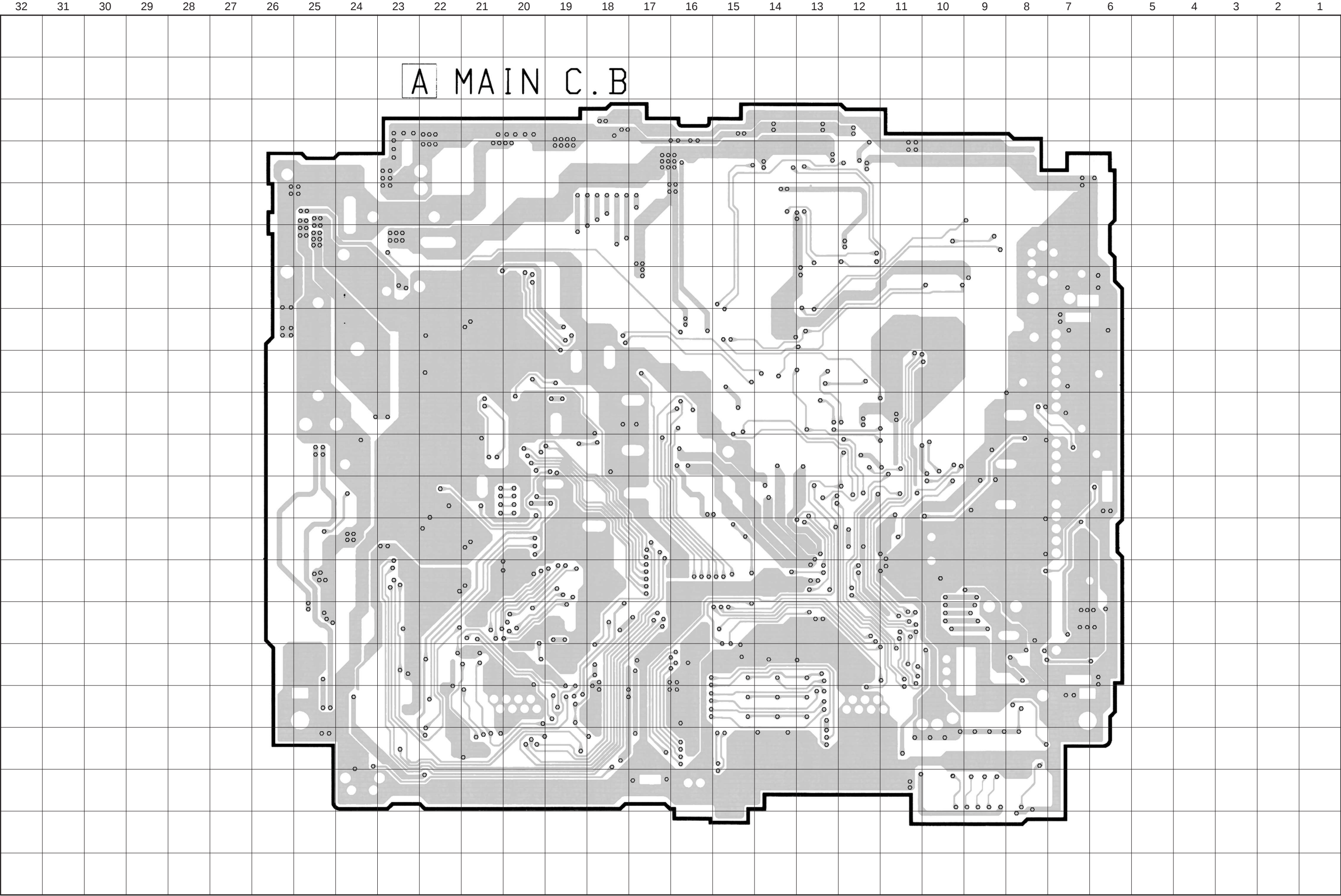
2SB1182

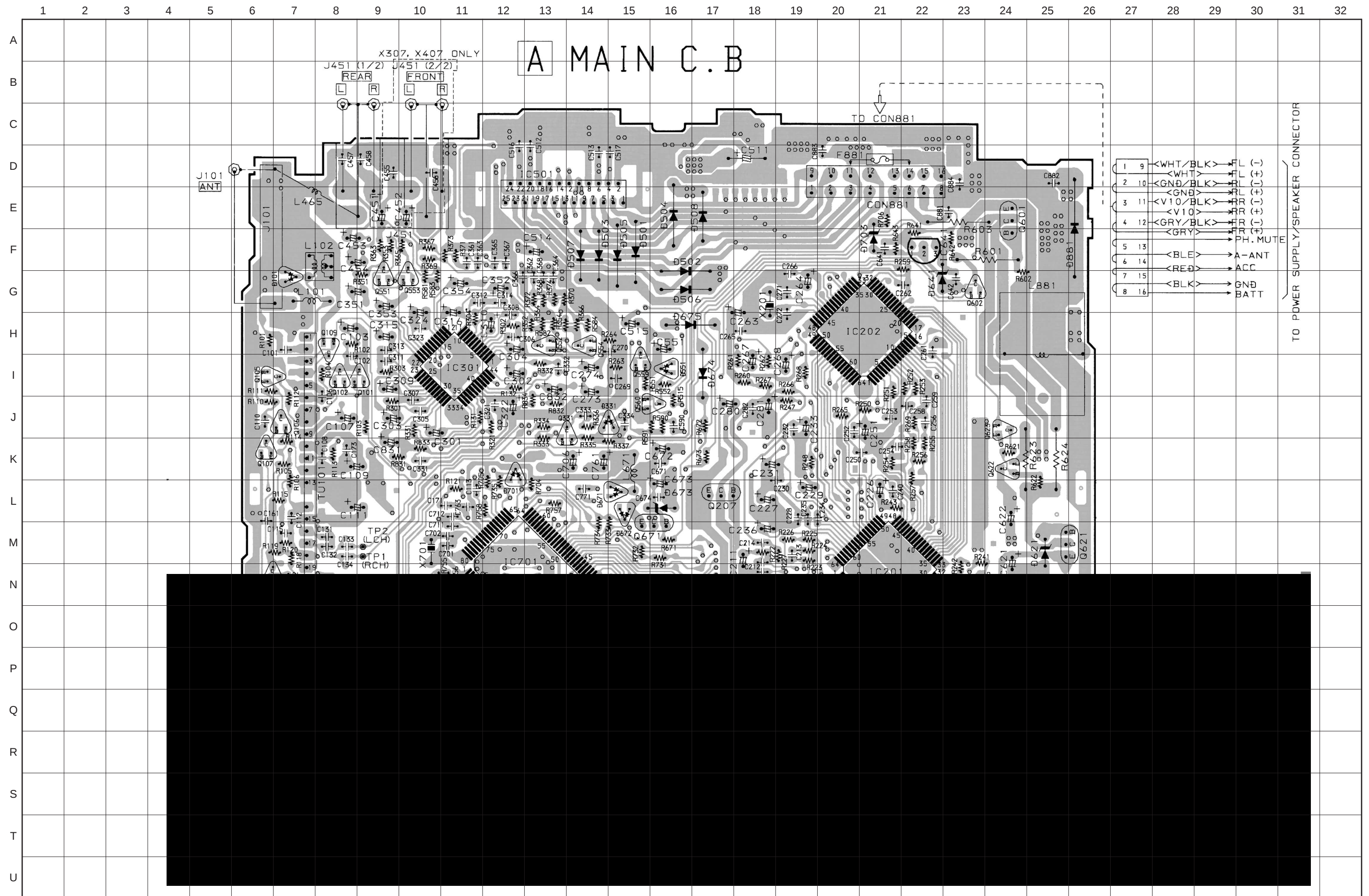


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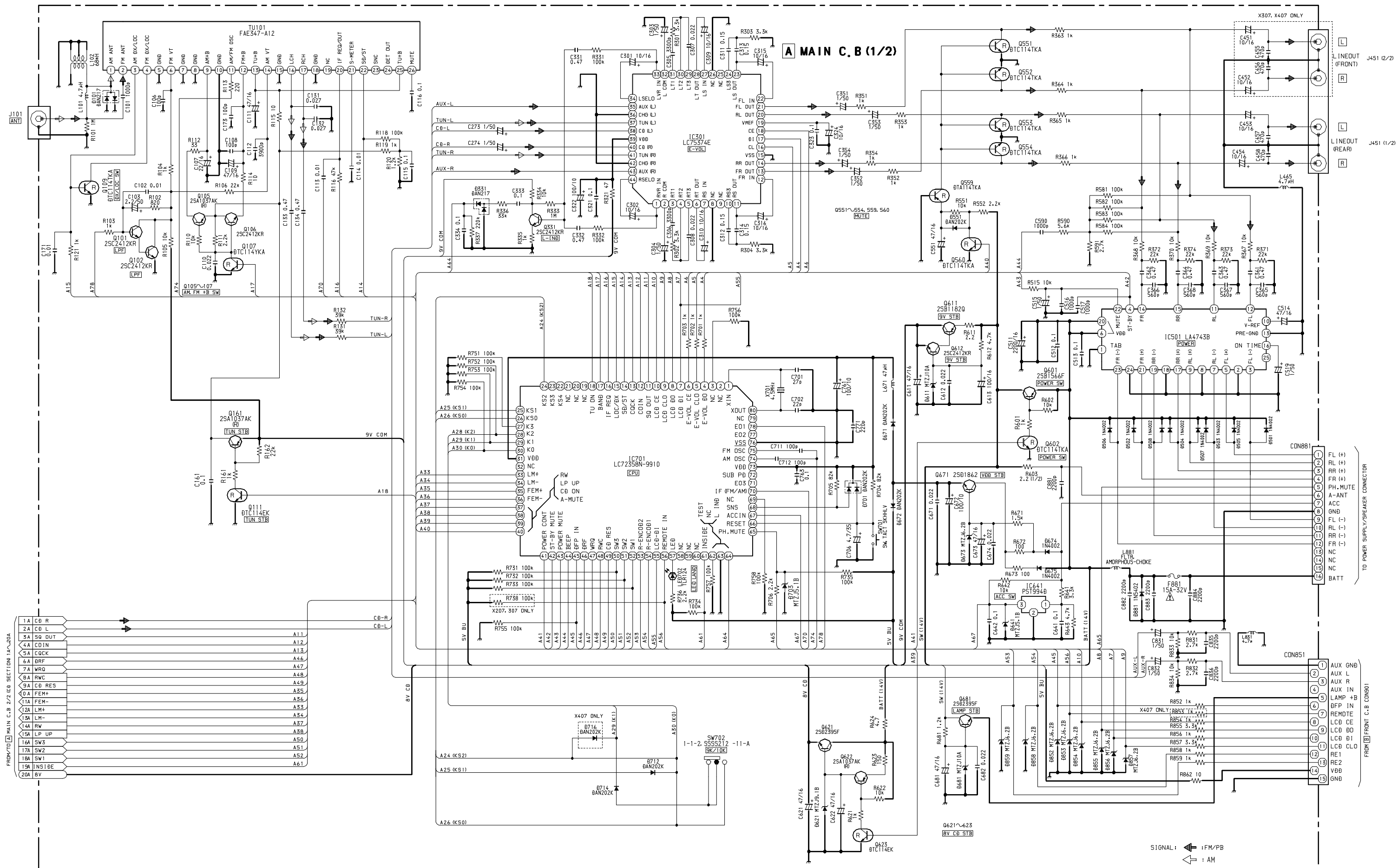


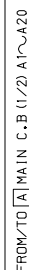
2SD2395

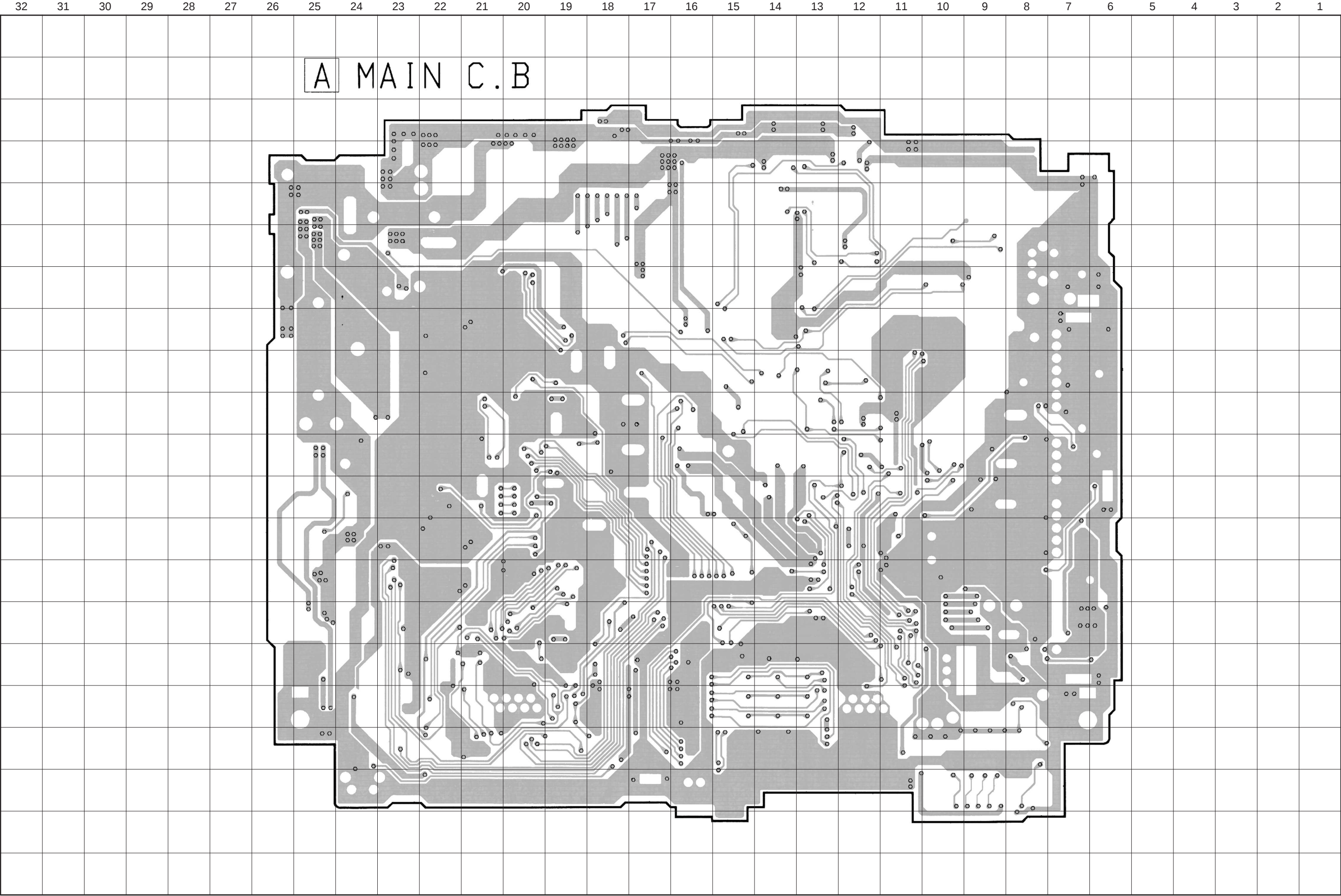




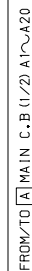
SCHEMATIC DIAGRAM - 1 (YU: MAIN 1 / 2)

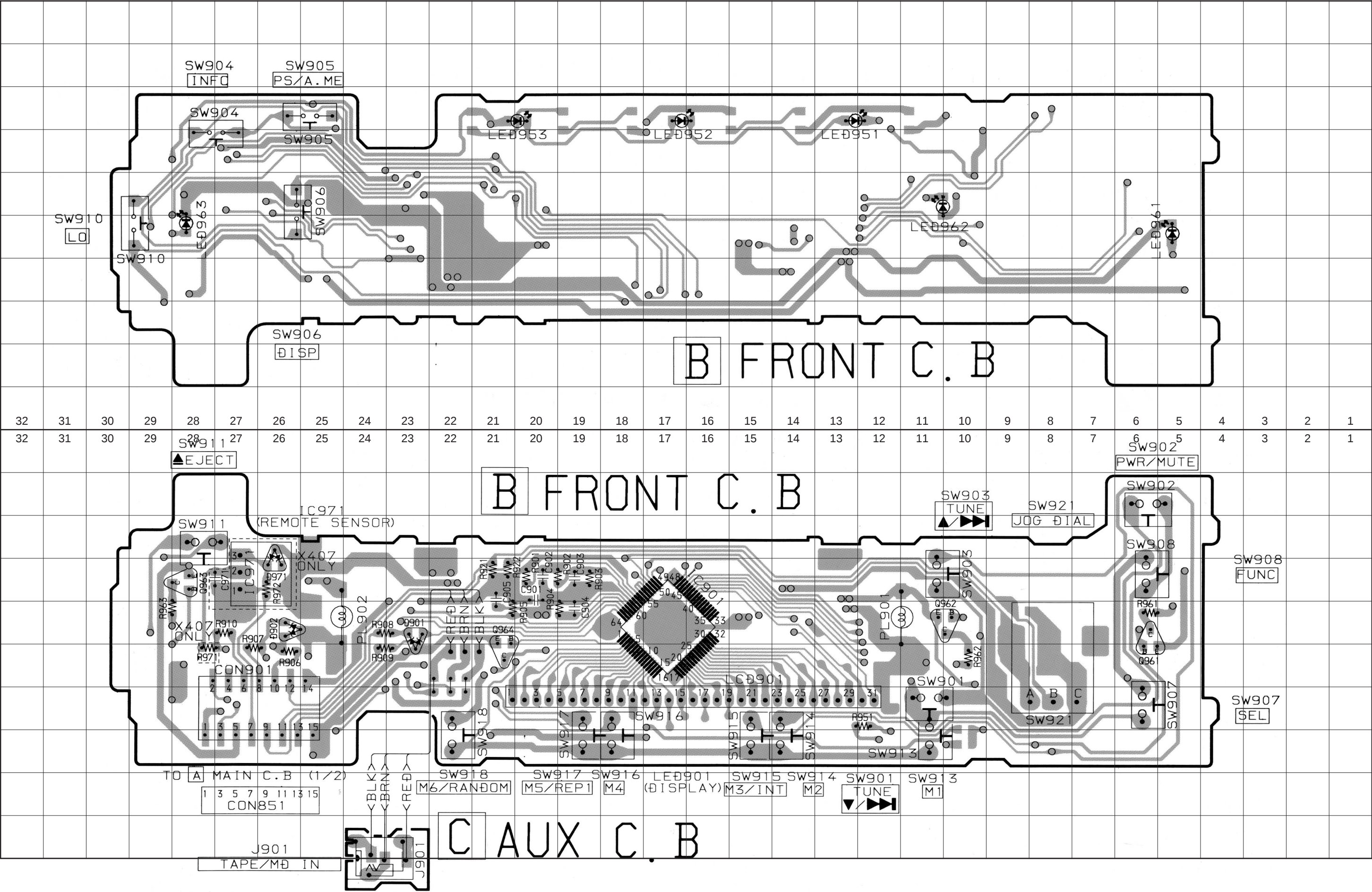




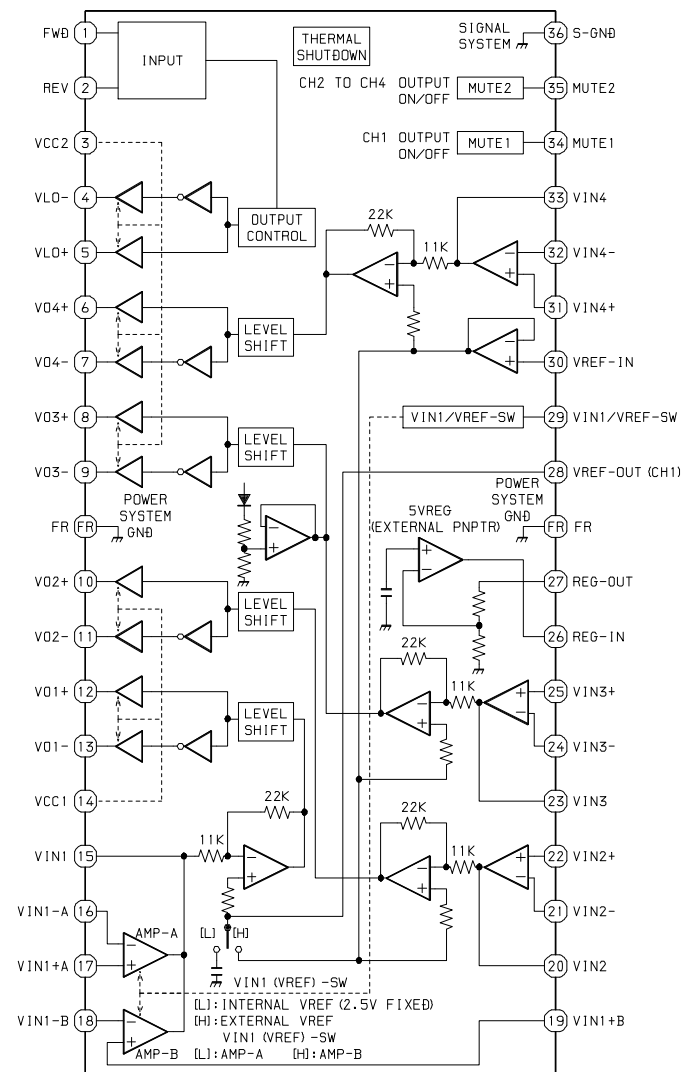








IC,LA6556



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 indecator. 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 singal'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.

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	-	Intetnal VCO ground. (Must be connected to 0V.)
5	IS ET	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 internaly 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 groud. (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 channe 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, sigle an 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 stase.
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 seledt 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.)

IC, LC75374E

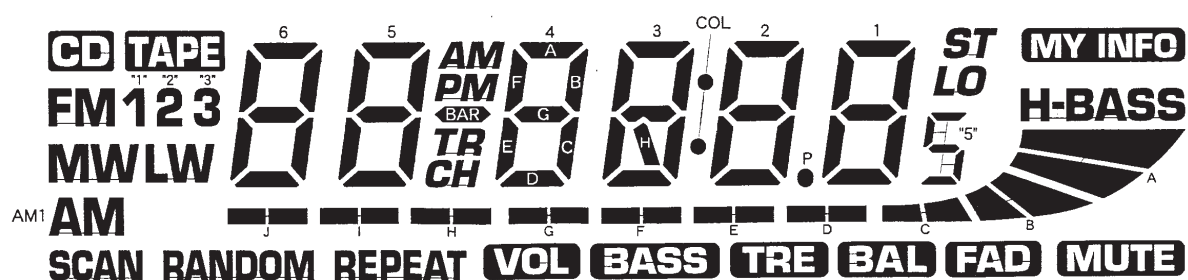
Pin No.	Pin Name	I/O	Description
1	RVRIN	I	4dB volume control input. Must be driven at a low impedance.
2	RCOM	–	1dB volume control common pin.
3 ~ 5	RT1 ~ RT3	–	For the connection of capacitors that compensate for bass and treble in the tone control circuits. A high-frequency compensation capacitors 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 frount 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.

LCD DIAGRAM

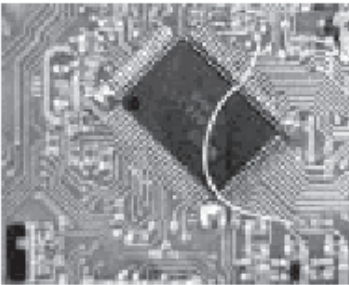


NO	COM1	COM2	COM3
1	MUTE	A	H-BASS
2	B	LO	MY INFO
3	FAD	"5"	ST
4	C	1B	1A
5	1C	1G	1F
6	BAL	1D	1E
7	D	2B	2A
8	2C	2G	2F
9	TRE	2D	2E
10	E	3B	3A
11	3C	3G	3F
12	BASS	3H	COL
13	F	3D	3E
14	VOL	4B	4A
15	4C	4G	4F
16	G	4D	4E
17	H	PM	P
18	REPEAT	TR	BAR
19	I	5D	5E
20	5C	5G	5F
21	CH	5B	5A
22	RANDOM	J	AM
23	6B	6A	"3"
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	---	---

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.

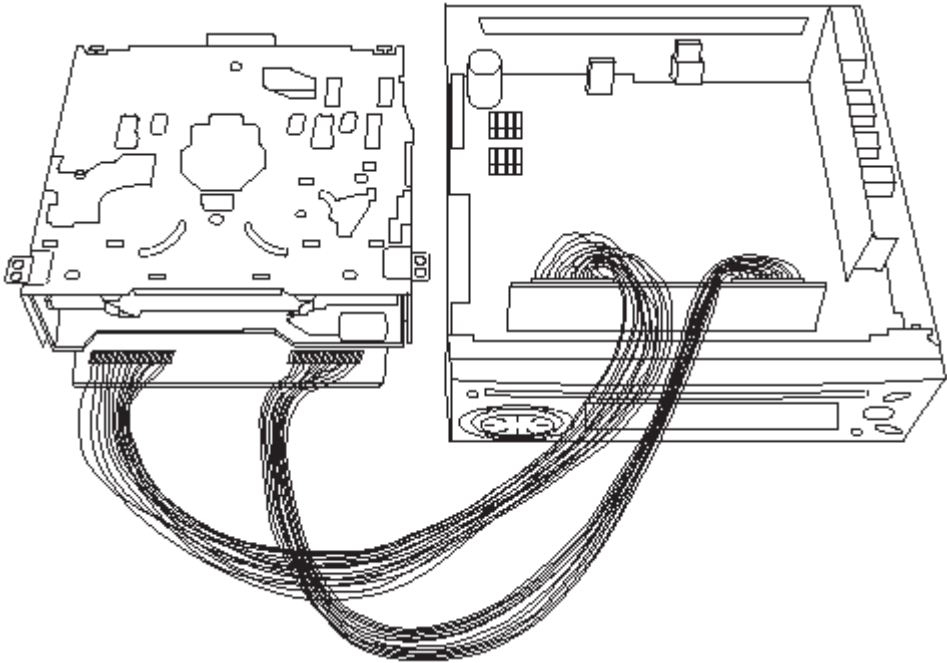
1-3 CD Test Mode Functions

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.

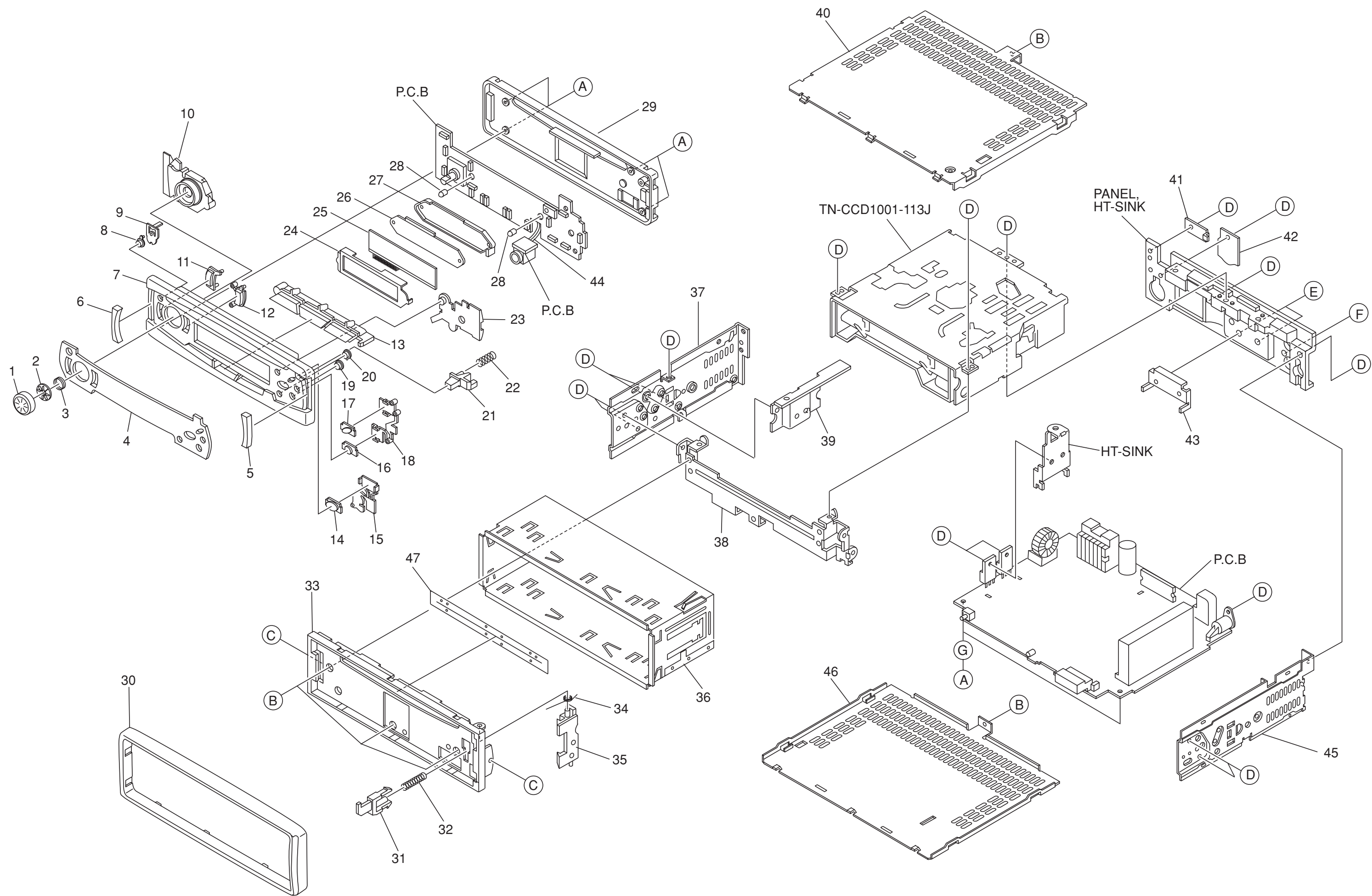
- Do not insert a Disc when confirming Search Mode
- Press PWR button when cancelling Search Mode. Test Mode will be restored when PWR button is pressed once again.
- Insert the “Test Disc” when operating all modes except search mode.
- * NOTE 1 : There are CD operations are disable owing to the protection 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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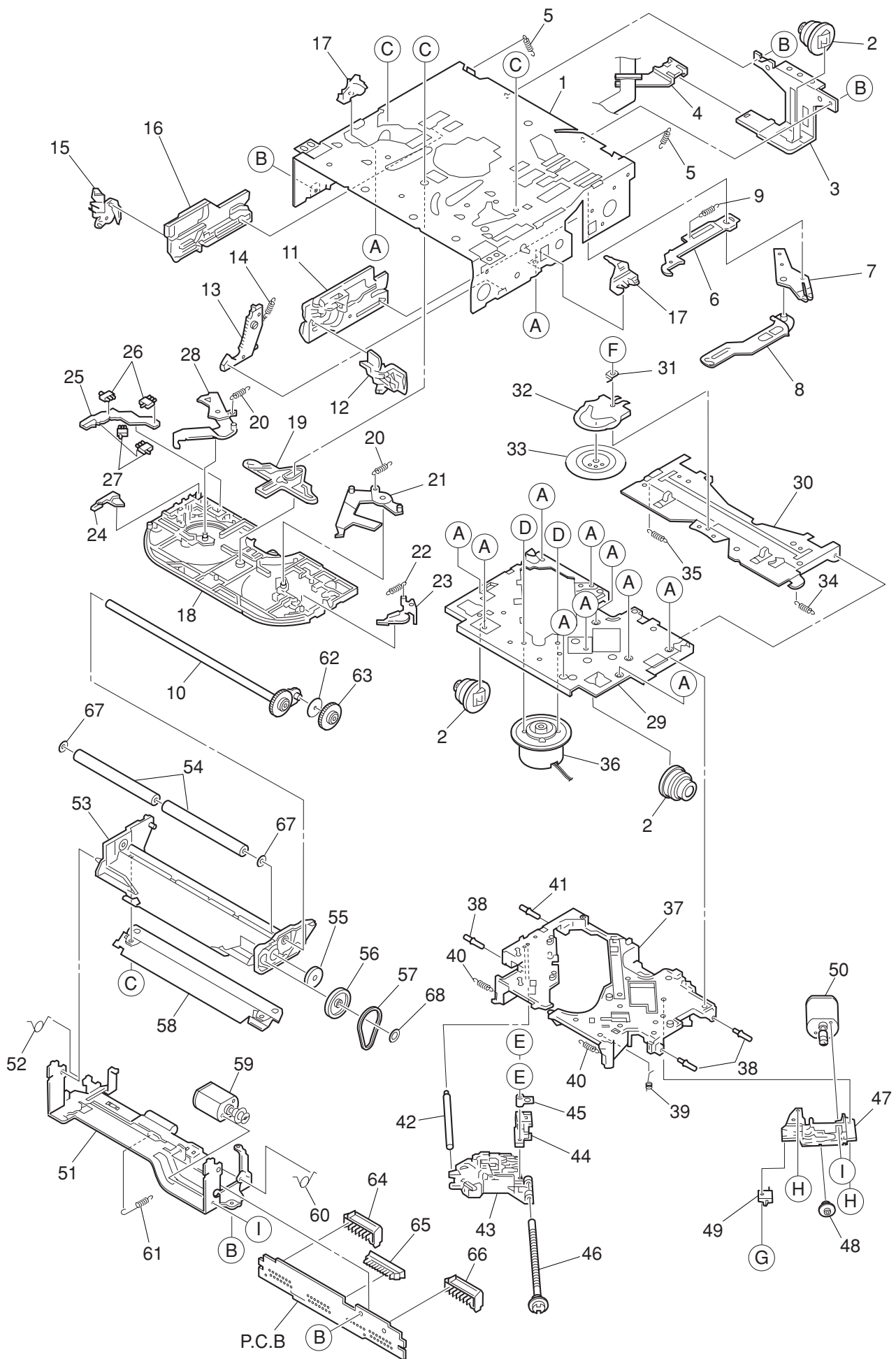
MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-KC7-005-010		KNOB,RTRY -AC	30	8A-KCF-020-010		CABI,TRIM -AC15
2	8A-KC7-020-010		RING,RTRY -AC	31	8Z-KC2-203-210		LEVER,DFP HOOK -C2
3	8A-KC7-220-010		SPR-C,ROTARY -AC	32	8Z-KC2-221-110		SPR-C,DETACH HOOK-C2
4	8A-KCG-004-010		WINDOW,LCD X207<207>	33	8Z-KC2-011-110		CABI,BASE -C2<YU>
4	8A-KCG-003-010		WINDOW,LCD X307<307>	33	8Z-KC2-011-210		CABI,BASE -C2<YL>
4	8A-KCG-005-010		WINDOW,LCD X3070<3070>	34	8Z-KC2-222-010		SPR-T,DETACH LOCK-C2
4	8A-KCG-006-010		WINDOW,LCD X4010<4010>	35	8Z-KC2-204-210		LEVER,DFP LOCK -C2
4	8A-KCG-007-010		WINDOW,LCD X2070<2070>	36	8Z-KC1-231-110		HLDR,HALF-C
4	8A-KCG-008-010		WINDOW,LCD X407<407>	37	8Z-KC1-213-010		CHAS,SIDE L -C
5	8A-KCF-022-010		WINDOW,SIDE R -AC15	38	8Z-KCG-201-210		CHAS,FRONT -C16
6	8A-KCF-021-010		WINDOW,SIDE L -AC15	39	8A-KC7-230-010		HLDR,TR2 -AC
7	8A-KCF-001-010		CABI,FRONT -AC15	40	8Z-KC1-211-010		COVER, TOP -C
8	8A-KC7-014-010		BTN,CLEAR S -AC	41	8Z-KC7-201-010		COVER, ISO BLIND -C
9	8A-KC7-208-010		HLDR,BTN L-AC	42	8Z-KC3-201-010		COVER, CD BLIND -C
10	8A-KCF-211-010		LENS,ENCO -AC15	43	8A-KC7-224-010		HLDR,P-IC -AC
11	8A-KC7-007-010		BTN,SEESAW R -AC	44	8A-KC7-611-010		F-CABLE,3P (AUX)
12	8A-KCF-007-010		BTN,SEESAW L -AC15	45	8Z-KC1-214-010		CHAS,SIDE R -C
13	8A-KC7-006-010		BTN,PRE.-AC	46	8Z-KC1-212-010		COVER, BOTTOM -C
14	8A-KC7-011-010		BTN,CLEAR L -AC	47	8A-KCF-220-010		COVER, DUST DFP-AC
15	8A-KCF-208-010		HLDR,BTN R1 -AC15	A	8Z-KC1-253-010		S-SCREW,PT 2*8 BH+ BLK
16	8A-KC7-013-010		BTN,CLEAR ML -AC	B	87-B10-216-010		U+2.6-4.0 ZINC BLK (BH M2.6)
17	8A-KCF-012-010		BTN,CLEAR EJ -AC15	C	8Z-KC1-251-010		S-SCREW,TH2.6-4.0-0.8
18	8A-KCF-210-010		HLDR,BTN R3 -AC15	D	87-251-073-410		SCREW,U+2.6-6
19	8A-KCF-008-010		BTN,MONO -AC15	E	87-251-100-410		U+3-16
20	8A-KCF-010-010		BTN,CLEAR S2 -AC15	F	87-B10-259-010		UT2+3.0-10.0 W/O SLOT (BH TAP)
21	8A-KCF-011-010		BTN,DETACH -AC15	G	87-432-903-010		WASHER,WTE 2.6
22	8Z-KC2-223-010		SPR-C,DETACH -C2				
23	8A-KCF-212-010		LENS,R -AC15				
24	8A-KCF-215-010		HLDR,LCD -AC15				
25	8A-KCG-610-010		LCD,AKC-16-17				
26	8A-KCF-213-010		LENS,LCD -AC15				
27	8A-KCF-214-010		CASE,LCD LENS -AC15				
28	8Z-KT1-236-010		CAP,LAMP BLU<YU>				
28	8Z-KT1-239-010		CAP,LAMP BLU B<YL>				
29	8A-KCF-002-010		CABI,REAR -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		

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)				

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