

SERVICE MANUAL

COMPACT DISC CARRY
COMPONENT SYSTEM

BASIC TAPE MECHANISM : TN-21ZFW-1791
BASIC CD MECHANISM : ZZG-4 YG

This Service Manual is the "Revision Publishing" and replaces "Simple Manual"
(S/M Code No. 09-997-413-5T1).

SPECIFICATIONS

<Tuner section>

(FM)

Tuning range	87.5 MHz to 108.0 MHz
Antenna	Rod antenna

(AM)

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Antenna	Ferrite bar antenna

<Cassette deck section>

Track format	4 track, 2 channels stereo
Frequency response	Normal tape: 50 Hz - 12500 Hz
Recording system	AC bias
Heads	Deck 1: Recording/Playback head x 1 Erasure head x 1 Deck 2: Playback head x 1

<Compact disc player section>

Laser	Semiconductor ($\lambda = 780 \text{ nm}$)
D-A converter	1 bit dual

<General>

Power output	5 W + 5 W (4 ohms, EIAJ) FTC rule 4 watts per channel, Min. RMS at 4 ohms from 65 Hz to 5000 Hz, with no more than 1% total harmonic distortion
Input	VIDEO/AUX: 1000 mV
Output	Headphones (stereo minijack)
Power requirements	12 V DC using eight size D (R20) batteries 120 V AC, 60 Hz
Power consumption	30 W
Dimensions of main unit	(W x H x D) 266 x 303 x 307 mm (10 $\frac{1}{2}$ x 12 x 12 $\frac{1}{8}$ in.)
Weight of main unit	4.85 kg (10 lb 11 oz.)

<Speaker>

Type	120 mm cone type 27 mm ceramic type
Dimensions (W x H x D)	197 x 303 x 231 mm (7 $\frac{1}{8}$ x 12 x 9 $\frac{1}{8}$ in.)
Weight	1.7 kg (3 lbs 12 oz) x 2
Impedance	4 ohms
Allowable max, input	10 W

- Design and specifications are subject to change without notice.

ACCESSORIES LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

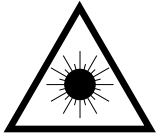
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CT1-905-010	IB,U(ESF)S	
2	8Z-CK4-962-010	RC UNIT, RC-ZAT04 (VS)	
3	87-A80-109-010	AC CORD, HK7281 BLK U	

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 käyttäjän turvallisuusluokan 1 ylitävälle 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

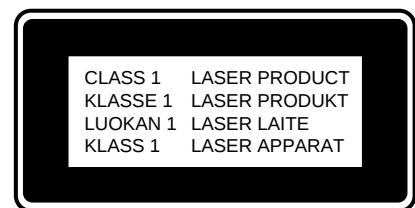
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

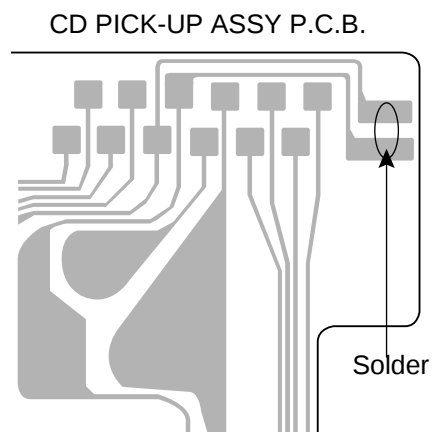


Precaution to replace Optical block

(KSS – 213F)

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 the right figure.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C15	87-012-349-080		C-CAP, S 1000P-50 CH
	87-A21-184-010	IC, TA2104AN		C16	87-010-380-080		CAP, ELECT 47-16V
	87-A21-185-040	C-IC, LC72121M		C17	87-010-198-080		CAP, CHIP 0.022
	8Z-CT1-610-010	C-IC, LC867232A-5L78		C18	87-015-819-080		CAPACITOR, 0.01
	87-A20-914-010	IC, SPS-442-1-F		C19	87-010-112-080		CAP, ELECT 100-16V
	87-A21-116-040	C-IC, BH3862FS		C20	87-010-404-080		CAP, ELECT 4.7-50V
	87-017-889-010	IC, NJM4558LD		C21	87-010-197-080		CAP, CHIP 0.01 DM
	87-070-417-010	IC, NJM4558 DD		C22	87-010-197-080		CAP, CHIP 0.01 DM
	87-A21-103-040	C-IC, MM1454XFBE		C23	87-010-197-080		CAP, CHIP 0.01 DM
	87-A21-020-010	IC, TA8223K		C24	87-010-303-080		C-CAP, S 330P-50CH
	87-070-416-010	IC, NJU7201 L55		C25	87-016-460-080		C-CAP, S 0.22-16 B
	87-A20-446-010	C-IC, LA9241ML		C27	87-A11-067-080		C-CAP, S 1-10 K B
	87-A20-459-010	C-IC, LC78622ED		C28	87-016-669-080		C-CAP, S 0.1-25 K B
	87-A20-445-010	IC, BA5936		C29	87-016-669-080		C-CAP, S 0.1-25 K B
				C30	87-010-198-080		CAP, CHIP 0.022
TRANSISTOR				C31	87-010-198-080		CAP, CHIP 0.022
	87-026-291-080	TR, DTC124XS		C33	87-010-401-080		CAP, ELECT 1-50V
	87-A30-091-080	FET, 2S3460		C34	87-010-401-080		CAP, ELECT 1-50V
	89-213-702-010	TR, 2SB1370E(1.8W)		C35	87-015-819-080		CAPACITOR, 0.01
	87-026-346-080	C-TR, DTC114YU		C36	87-010-112-080		CAP, ELECT 100-16V
	89-319-233-080	TR, 2SC1923 (0.1W)		C37	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-215-080	TR, DTC114YS		C38	87-010-380-080		CAP, ELECT 47-16V
	87-026-462-080	TR, 2SC1740 S(RS 0.3W)		C39	87-010-404-080		CAP, ELECT 4.7-50V
	87-026-463-080	TR, 2SA933SRS(0.3W)		C40	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-486-080	TR, DTA144TS		C41	87-012-349-080		C-CAP, S 1000P-50 CH
	87-026-287-080	TR, DTC143ES		C42	87-012-349-080		C-CAP, S 1000P-50 CH
	89-414-683-080	TR, 2SD1468S 150MHZ 0.4		C43	87-012-349-080		C-CAP, S 1000P-50 CH
	87-A30-090-080	FET, 2SK2541		C44	87-010-311-080		CAP 12P
	87-A30-197-080	TR, KTA1267GR		C45	87-010-312-080		C-CAP, S 15P-50 CH
	89-320-011-080	TR, 2SC2001K(15W)		C47	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-610-080	TR, KTC3198GR		C48	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-214-080	TR, DTA114YS (0.3W)		C49	87-010-303-080		C-CAP, S 330P-50CH
	87-026-218-080	TR, DTC144ES (0.2W)		C50	87-010-197-080		CAP, CHIP 0.01 DM
	89-406-555-080	TR, 2SD655E(0.5W)		C52	87-016-669-080		C-CAP, S 0.1-25 K B
	87-A30-219-080	TR, 2SB1443(Q)		C53	87-016-669-080		C-CAP, S 0.1-25 K B
	87-026-219-080	TR, DTA144ES (0.3W)		C55	87-018-115-080		CAP, CER 47P-50V
	89-109-521-080	TR, 2SA952K(0.6W)		C56	87-018-131-080		CAP, CER 1000P-50V
	89-318-154-080	TR, 2SC1815Y(0.4W)		C201	87-010-405-080		CAP, ELECT 10-50V
	87-026-239-080	TR, DTC114TK (0.2W)		C202	87-010-405-080		CAP, ELECT 10-50V
	89-113-187-080	TR, 2SA1318TU		C207	87-010-546-080		CAP, ELECT 0.33-50V
	87-026-237-080	CHIP-TR, DTC124XK		C208	87-010-546-080		CAP, ELECT 0.33-50V
	89-327-125-080	CHIP-TR, 2SC2712GR		C213	87-010-401-080		CAP, ELECT 1-50V
DIODE				C214	87-010-401-080		CAP, ELECT 1-50V
	87-020-465-080	DIODE, 1SS133 (110MA)		C215	87-010-401-080		CAP, ELECT 1-50V
	87-017-072-080	ZENER, HZS3B1		C216	87-010-401-080		CAP, ELECT 1-50V
	87-027-399-080	ZENER, HZ7A3L		C217	87-010-221-080		CAP, ELECT 470-10V
	87-017-091-080	ZENER, HZSSC1		C225	87-018-205-080		CAP, CERA-SOL 0.022
	87-A40-156-080	DIODE, 1N5392		C226	87-010-263-080		CAP, ELECT 100-10V
	87-017-164-080	ZENER, HZS9A2L		C227	87-010-404-080		CAP, ELECT 4.7-50V
	87-017-139-080	ZENER, HZS15-2		C228	87-010-404-080		CAP, ELECT 4.7-50V
	87-A40-291-080	DIODE, 1N4148 (CPT)		C229	87-018-209-080		CAP, CER 0.1-50V
MAIN C.B				C230	87-010-401-080		CAP, ELECT 1-50V
C1	87-010-314-080	C-CAP, S 22P-50V		C231	87-010-401-080		CAP, ELECT 1-50V
C2	87-010-316-080	C-CAP, S 33P-50 CH		C232	87-010-404-080		CAP, ELECT 4.7-50V
C3	87-010-314-080	C-CAP, S 22P-50V		C260	87-010-405-080		CAP, ELECT 10-50V
C5	87-010-196-080	CHIP CAPACITOR, 0.1-25		C301	87-018-131-080		CAP, CER 1000P-50V
C6	87-010-313-080	CAP, CHIP 18P		C302	87-018-131-080		CAP, CER 1000P-50V
C7	87-014-049-080	CAP, PP 470P-100 J		C303	87-018-130-080		CAP, TC-U 820P-50 B
C8	87-012-349-080	C-CAP, S 1000P-50 CH		C304	87-018-130-080		CAP, TC-U 820P-50 B
C10	87-010-197-080	CAP, CHIP 0.01 DM		C305	87-010-263-080		CAP, ELECT 100-10V
C11	87-010-197-080	CAP, CHIP 0.01 DM		C306	87-010-263-080		CAP, ELECT 100-10V
C12	87-010-197-080	CAP, CHIP 0.01 DM		C309	87-018-130-080		CAP, TC-U 820P-50 B
C13	87-010-150-080	C-CAP, S 6P-50 CH		C310	87-018-130-080		CAP, TC-U 820P-50 B
C14	87-010-303-080	C-CAP, S 330P-50CH		C311	87-010-546-080		CAP, ELECT 0.33-50V
				C312	87-010-546-080		CAP, ELECT 0.33-50V
				C321	87-018-131-080		CAP, CER 1000P-50V
				C331	87-018-126-080		CAP, TC-U 390P-50 B
				C332	87-018-126-080		CAP, TC-U 390P-50 B
				C333	87-018-124-080		CAP, CER 270P-50V
				C334	87-018-123-080		CAP, CER 220P-50V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C340	87-010-374-080	CAP,	ELECT 47-10V	J202	87-009-610-010		JACK PIN 2P H EARTH
C341	87-018-205-080	CAP,	CERA-SOL 0.022	J601	87-A60-420-010		JACK, 3.5 ST (MSC)
C343	87-018-123-080	CAP,	CER 220P-50V	J602	87-099-443-010		TERMINAL, SPKR 4P
C344	87-018-123-080	CAP,	CER 220P-50V	L2	87-A50-347-010		COIL, FM BPF EX
C355	87-018-132-080	CAP,	CER 2200P-16V	L3	8Z-CT4-616-010		BAR-ANT, MW2B
C356	87-018-132-080	CAP,	CER 2200P-16V	L4	87-A50-420-010		COIL, MW OSC(SYN)
C369	87-018-118-080	CAP, TC-U	82P-50 B	L5	87-A50-424-010		COIL, FM RF EX(SYN)
C370	87-018-118-080	CAP, TC-U	82P-50 B	L6	87-A50-454-010		COIL, FM OSC U(SYN)
C373	87-010-401-080	CAP,	ELECT 1-50V	L7	87-A91-308-010		FLTR, PCFAZH- 450T (TOK)
C374	87-010-401-080	CAP,	ELECT 1-50V	L8	87-005-849-080		COIL, 10UH(CECS)
C382	87-010-401-080	CAP,	ELECT 1-50V	L9	87-005-849-080		COIL, 10UH(CECS)
C383	87-010-374-080	CAP,	ELECT 47-10V	L331	87-007-342-010		COIL, OSC 85K BIAS
C385	87-010-405-080	CAP,	ELECT 10-50V	L601	87-A50-087-080		COIL, 100UH (CECS)
C386	87-018-198-080	CAP, TC-U	2700P-16 X	L602	87-A50-087-080		COIL, 100UH (CECS)
C387	87-018-198-080	CAP, TC-U	2700P-16 X	SCR3	87-A40-616-080		VARI-CAP, SVC384(S/T)
C388	87-018-198-080	CAP, TC-U	2700P-16 X	SCR4	87-A40-615-040		VARI-CAP, KV1311NT
C541	87-010-263-080	CAP,	ELECT 100-10V	SCR5	87-A40-615-040		VARI-CAP, KV1311NT
C542	87-010-374-080	CAP,	ELECT 47-10V	SFR751	87-024-350-080		SFR 2.2K DIA 6H
C543	87-010-405-080	CAP,	ELECT 10-50V	TC1	87-011-220-080		TRIMMER CAP 20P VTC
C544	87-010-401-080	CAP,	ELECT 1-50V	X1	87-A70-061-010		VIB, XTAL 4.500MHZ CSA-309
C547	87-010-401-080	CAP,	ELECT 1-50V	FRONT C.B			
C548	87-010-401-080	CAP,	ELECT 1-50V	C101	87-010-263-080		CAP, ELECT 100-10V
C549	87-010-401-080	CAP,	ELECT 1-50V	C102	87-010-196-080		CHIP CAPACITOR, 0.1-25
C550	87-010-401-080	CAP,	ELECT 1-50V	C103	87-010-248-080		CAP, ELECT 220-10V
C601	87-010-401-080	CAP,	ELECT 1-50V	C104	87-010-248-080		CAP, ELECT 220-10V
C602	87-010-401-080	CAP,	ELECT 1-50V	C105	87-010-196-080		CHIP CAPACITOR, 0.1-25
C603	87-018-208-080	CAP	0.047-50F	C106	87-010-196-080		CHIP CAPACITOR, 0.1-25
C604	87-018-208-080	CAP	0.047-50F	C107	87-010-452-080		C-CAP, 1-16 Z F GRM42-6
C605	87-018-132-080	CAP,	CER 2200P-16V	C108	87-010-321-080		CHIP CAPACITOR, 82P(J)
C606	87-018-132-080	CAP,	CER 2200P-16V	C109	87-018-115-080		CAP, CER 47P-50V
C607	87-010-406-080	CAP,	ELECT 22-50	C110	87-010-321-080		CHIP CAPACITOR, 82P(J)
C608	87-010-406-080	CAP,	ELECT 22-50	C111	87-010-312-080		C-CAP, S 15P-50 CH
C609	87-010-260-080	CAP,	ELECT 47-25V	C112	87-010-314-080		C-CAP, S 22P-50V
C610	87-018-209-080	CAP,	CER 0.1-50V	C113	87-010-178-080		CHIP CAP 1000P
C613	87-010-263-080	CAP,	ELECT 100-10V	C115	87-010-401-080		CAP, ELECT 1-50V
C614	87-010-263-080	CAP,	ELECT 100-10V	C116	87-010-400-080		CAP, ELECT 0.47-50V
C615	87-010-376-090	CAP	10-2200	C117	87-010-196-080		CHIP CAPACITOR, 0.1-25
C616	87-010-376-090	CAP	10-2200	C121	87-010-196-080		CHIP CAPACITOR, 0.1-25
C623	87-010-546-080	CAP,	ELECT 0.33-50V	C122	87-010-196-080		CHIP CAPACITOR, 0.1-25
C624	87-010-546-080	CAP,	ELECT 0.33-50V	C123	87-010-196-080		CHIP CAPACITOR, 0.1-25
C625	87-010-404-080	CAP,	ELECT 4.7-50V	C124	87-010-197-080		CAP, CHIP 0.01 DM
C641	87-010-248-080	CAP,	ELECT 220-10V	C125	87-018-209-080		CAP, CER 0.1-50V
C643	87-010-387-080	CAP, E	470-25 SME	C126	87-018-209-080		CAP, CER 0.1-50V
C644	87-010-260-080	CAP,	ELECT 47-25V	C127	87-018-209-080		CAP, CER 0.1-50V
C720	87-010-405-080	CAP,	ELECT 10-50V	C128	87-010-196-080		CHIP CAPACITOR, 0.1-25
C722	87-010-385-080	CAP,	ELECT 220-25V	C129	87-010-178-080		CHIP CAP 1000P
C723	87-010-248-080	CAP,	ELECT 220-10V	C130	87-010-260-080		CAP, ELECT 47-25V
C724	87-018-205-080	CAP,	CERA-SOL 0.022	C131	87-010-400-080		CAP, ELECT 0.47-50V
C726	87-010-404-080	CAP,	ELECT 4.7-50V	C133	87-010-405-080		CAP, ELECT 10-50V
C727	87-010-401-080	CAP,	ELECT 1-50V	C134	87-010-196-080		CHIP CAPACITOR, 0.1-25
C728	87-010-221-080	CAP,	ELECT 470-10V	C135	87-010-196-080		CHIP CAPACITOR, 0.1-25
C729	87-010-237-080	CAP, E	1000-16 M 11L SME	C136	87-010-196-080		CHIP CAPACITOR, 0.1-25
C741	87-010-384-080	CAP,	ELECT 100-25V	C137	87-010-248-080		CAP, ELECT 220-10V
C750	87-010-404-080	CAP,	ELECT 4.7-50V	C140	87-012-358-080		C-CAP, S 0.47-10 Z F
C751	87-010-404-080	CAP,	ELECT 4.7-50V	C141	87-010-196-080		CHIP CAPACITOR, 0.1-25
C753	87-010-385-080	CAP,	ELECT 220-25V	C142	87-010-196-080		CHIP CAPACITOR, 0.1-25
C754	87-010-404-080	CAP,	ELECT 4.7-50V	C143	87-010-196-080		CHIP CAPACITOR, 0.1-25
C761	87-010-928-090	CAP, E	4700-25 SMG	C144	87-010-196-080		CHIP CAPACITOR, 0.1-25
C800	87-010-378-080	CAP,	ELECT 10-16V	C145	87-010-196-080		CHIP CAPACITOR, 0.1-25
CF1	87-A91-094-010	FLTR,	CDA10.7 MG80A	C150	87-010-405-080		CAP, ELECT 10-50V
CF2	82-785-747-080	CF, MS2	GHY, R	C401	87-010-182-080		C-CAP, S 2200P-50 B
CF3	82-785-747-080	CF, MS2	GHY, R	C402	87-010-186-080		CAP, CHIP 4700P
CN201	87-099-719-010	CONN,	30P TYK-B(X)	C403	87-012-154-080		C-CAP, S 150P-50 CH
CN203	87-A60-060-010	CONN,	07P V 9604S-07C	C404	87-010-401-080		CAP, ELECT 1-50V
CN301	87-A60-622-010	CONN,	5P V 2MM JMT	C405	87-010-545-080		CAP, ELECT 0.22-50V
CN302	87-A60-621-010	CONN,	4P V 2MM JMT	C406	87-010-178-080		CHIP CAP 1000P
CN701	87-A60-621-010	CONN,	4P V 2MM JMT	C407	87-010-405-080		CAP, ELECT 10-50V
CN751	87-A60-626-010	CONN,	9P V 2MM JMT	C408	87-010-260-080		CAP, ELECT 47-25V
△IC651	87-001-132-010	FUSE,	ICP-N38				
△ICP705	87-002-330-080	PROTECTOR,	ICP-N5				

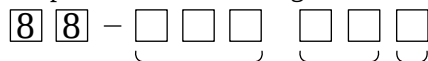
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C409	87-010-248-080		CAP, ELECT 220-10V	S1156	87-A91-024-080		SW, TACT KSH0611BT
C410	87-010-405-080		CAP, ELECT 10-50V	S1157	87-A91-024-080		SW, TACT KSH0611BT
C411	87-018-209-080		CAP, CER 0.1-50V	S1158	87-A91-024-080		SW, TACT KSH0611BT
C414	87-012-153-080		C-CAP,S 120P-50 CH	S1159	87-A91-024-080		SW, TACT KSH0611BT
CN101	87-A60-058-010		CONN,10P V 9604S-10C	S1160	87-A91-024-080		SW, TACT KSH0611BT
CN102	87-099-720-010		CONN,30P TYK-B(P)	S1161	87-A91-024-080		SW, TACT KSH0611BT
CN103	87-099-759-010		CONN,21P H 9604	S1162	87-A91-024-080		SW, TACT KSH0611BT
D124	87-001-519-010		LIGHT EMITTING DIODE,SLR-37				
D132	87-A40-161-010		LED, L-1154SGD				
D133	87-A40-161-010		LED, L-1154SGD	CD C.B			
D134	87-A40-161-010		LED, L-1154SGD	C1	87-010-403-080		CAP, ELECT 3.3-50V
D135	87-A40-161-010		LED, L-1154SGD	C2	87-010-197-080		CAP, CHIP 0.01 DM
D136	87-A40-161-010		LED, L-1154SGD	C3	87-010-263-080		CAP, ELECT 100-10V
D137	87-A40-161-010		LED, L-1154SGD	C4	87-010-248-080		CAP, ELECT 220-10V
D138	87-A40-161-010		LED, L-1154SGD	C5	87-010-197-080		CAP, CHIP 0.01 DM
D141	87-001-519-010		LED,SLR-37VR3F RED	C6	87-010-374-080		CAP, ELECT 47-10V
D142	87-001-519-010		LED,SLR-37VR3F RED	C7	87-012-349-080		C-CAP,S 1000P-50 CH
D143	87-001-519-010		LED,SLR-37VR3F RED	C8	87-010-198-080		CAP, CHIP 0.022
D144	87-A40-410-010		LED,SEL2515C PGRN	C9	87-010-248-080		CAP, ELECT 220-10V
D145	87-A40-410-010		LED,SEL2515C PGRN	C10	87-010-263-080		CAP, ELECT 100-10V
D146	87-A40-410-010		LED,SEL2515C PGRN	C12	87-010-401-080		CAP, ELECT 1-50V
D147	87-A40-410-010		LED,SEL2515C PGRN	C13	87-010-193-080		CHIP CAPACITOR,0.033
J401	87-A60-651-010		JACK, 3.5MONO	C14	87-010-405-080		CAP, ELECT 10-50V
L101	87-003-171-010		COIL,15UH TROIDAL	C16	87-010-491-040		CAP, E 0.22-50 GAS
L103	87-003-171-010		COIL,15UH TROIDAL	C17	87-012-157-080		C-CAP,S 330P-50 CH
L401	87-A50-067-080		COIL,1.00UH (CECS)	C18	87-010-213-080		C-CAP,S 0.015-50 B
LCD101	82-CT4-607-010		LCD,AIW4176	C20	87-010-193-080		CHIP CAPACITOR,0.033
S1100	87-A91-024-080		SW,TACT KSH0611BT	C22	87-010-183-080		C-CAP,S 2700P-50 B
S1101	87-A91-024-080		SW,TACT KSH0611BT	C23	87-010-956-080		CHIP-CAP,S 0.068-25B
S1102	87-A91-024-080		SW,TACT KSH0611BT	C25	87-010-994-080		C-CAP,S 680P-50 CH
S1103	87-A91-024-080		SW,TACT KSH0611BT	C29	87-010-186-080		CAP,CHIP 4700P
S1104	87-A91-024-080		SW,TACT KSH0611BT	C30	87-012-156-080		C-CAP,S 220P-50 CH
S1105	87-A91-024-080		SW,TACT KSH0611BT	C31	87-010-400-080		CAP, ELECT 0.47-50V
S1106	87-A91-024-080		SW,TACT KSH0611BT	C32	87-010-374-080		CAP, ELECT 47-10V
S1107	87-A91-024-080		SW,TACT KSH0611BT	C33	87-010-401-080		CAP, ELECT 1-50V
S1108	87-A91-024-080		SW,TACT KSH0611BT	C34	87-010-184-080		CHIP CAPACITOR 3300P(K)
S1109	87-A91-024-080		SW,TACT KSH0611BT	C35	87-010-197-080		CAP, CHIP 0.01 DM
S1110	87-A91-024-080		SW,TACT KSH0611BT	C36	87-010-374-080		CAP, ELECT 47-10V
S1111	87-A91-024-080		SW,TACT KSH0611BT	C37	87-010-404-080		CAP, ELECT 4.7-50V
S1112	87-A91-024-080		SW,TACT KSH0611BT	C38	87-010-196-080		CHIP CAPACITOR,0.1-25
S1120	87-A91-024-080		SW,TACT KSH0611BT	C40	87-010-145-080		C-CAP,S 1P-50 CH
VR401	82-NK7-615-010		VR,10KA RK11K1130	C42	87-010-312-080		C-CAP,S 15P-50 CH
X101	87-030-376-080		VIB,CER CSA5.76MG200	C45	87-010-196-080		CHIP CAPACITOR,0.1-25
X102	87-030-273-010		VIB,XTAL 32.768K5PPM	C46	87-010-196-080		CHIP CAPACITOR,0.1-25
				C47	87-010-196-080		CHIP CAPACITOR,0.1-25
LED C.B				C48	87-010-315-080		C-CAP,S 27P-50 CH
C138	87-010-248-080		CAP, ELECT 220-10V	C50	87-012-140-080		CAP 470P
C139	87-010-196-080		CHIP CAPACITOR,0.1-25	C51	87-012-156-080		C-CAP,S 220P-50 CH
CN1151	87-A60-077-010		CONN,10P H 9604S-10F	C52	87-012-140-080		CAP 470P
D1151	87-A40-639-010		LED,SML72420C Y-G/R	C53	87-010-322-080		C-CAP,S 100P-50 CH
D1152	87-A40-639-010		LED,SML72420C Y-G/R	C54	87-012-153-080		C-CAP,S 120P-50 CH
D1153	87-A40-639-010		LED,SML72420C Y-G/R	C55	87-010-263-080		CAP, ELECT 100-10V
D1154	87-A40-639-010		LED,SML72420C Y-G/R	C57	87-010-316-080		C-CAP,S 33P-50 CH
D1155	87-A40-639-010		LED,SML72420C Y-G/R	C58	87-010-316-080		C-CAP,S 33P-50 CH
D1156	87-A40-639-010		LED,SML72420C Y-G/R	C59	87-010-263-080		CAP, ELECT 100-10V
D1157	87-A40-639-010		LED,SML72420C Y-G/R	C60	87-010-196-080		CHIP CAPACITOR,0.1-25
D1158	87-A40-639-010		LED,SML72420C Y-G/R	C61	87-010-196-080		CHIP CAPACITOR,0.1-25
D1159	87-A40-639-010		LED,SML72420C Y-G/R	C62	87-010-221-080		CAP, ELECT 470-10V
D1160	87-A40-639-010		LED,SML72420C Y-G/R	C65	87-010-404-080		CAP, ELECT 4.7-50V
D1161	87-A40-639-010		LED,SML72420C Y-G/R	C66	87-010-196-080		CHIP CAPACITOR,0.1-25
D1162	87-A40-639-010		LED,SML72420C Y-G/R	C67	87-010-263-080		CAP, ELECT 100-10V
D1163	87-A40-639-010		LED,SML72420C Y-G/R	C68	87-010-322-080		C-CAP,S 100P-50 CH
D1164	87-A40-639-010		LED,SML72420C Y-G/R	C69	87-012-154-080		C-CAP,S 150P-50 CH
D1165	87-A40-639-010		LED,SML72420C Y-G/R	C75	87-010-197-080		CAP, CHIP 0.01 DM
S1151	87-A91-024-080		SW,TACT KSH0611BT	C76	87-A10-102-080		CAP,E 1000-10 REA
S1152	87-A91-024-080		SW,TACT KSH0611BT	C77	87-010-197-080		CAP, CHIP 0.01 DM
S1153	87-A91-024-080		SW,TACT KSH0611BT	C78	87-010-221-080		CAP, ELECT 470-10V
S1154	87-A91-024-080		SW,TACT KSH0611BT	C79	87-010-263-080		CAP, ELECT 100-10V
S1155	87-A91-024-080		SW,TACT KSH0611BT	C80	87-010-197-080		CAP, CHIP 0.01 DM
				C81	87-010-405-080		CAP, ELECT 10-50V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C82	87-010-405-080		CAP, ELECT 10-50V	SENSOR C.B			
C83	87-010-181-080		CAP, CHIP S 1800P	CN202	87-A60-946-010		CONN,4P H 6232
C84	87-010-181-080		CAP, CHIP S 1800P	Q202	87-026-674-010		P-TR,PT4850F
C90	87-010-196-080		CHIP CAPACITOR,0.1-25	Q212	87-026-674-010		P-TR,PT4850F
C91	87-010-553-040		CAP,E 47-16 GAS	SWITCH C.B			
C92	87-010-552-040		CAP,E 22-16 GAS	CN201	87-A60-946-010		CONN,4P H 6232
C93	87-010-197-080		CAP, CHIP 0.01 DM	CN207	87-A60-081-010		CONN,06P H 9604S-06F
C94	87-015-819-080		CAPACITOR,0.01	SW202	87-A90-967-010		SW,PUSH 3-2-1 MPU20160MLB0
C95	87-010-197-080		CAP, CHIP 0.01 DM	TRAY C.B			
C98	87-010-197-080		CAP, CHIP 0.01 DM	CN208	87-A60-083-010		CONN,04P H 9604S-04F
C101	87-010-322-080		C-CAP,S 100P-50 CH	SW211	87-A91-333-010		SW,PUSH 1-1-1 MPU11570
C102	87-010-322-080		C-CAP,S 100P-50 CH	SW212	87-A91-333-010		SW,PUSH 1-1-1 MPU11570
C103	87-010-322-080		C-CAP,S 100P-50 CH	SW213	87-A91-333-010		SW,PUSH 1-1-1 MPU11570
C104	87-010-322-080		C-CAP,S 100P-50 CH	LED C.B			
C105	87-010-322-080		C-CAP,S 100P-50 CH	D321	87-070-319-010		LED,GL4800 RED
C110	87-010-196-080		CHIP CAPACITOR,0.1-25	DRIVE C.B			
C201	87-010-552-040		CAP,E 22-16 GAS	M20	87-045-358-019		MOT,RF-310TA 43
C211	87-010-552-040		CAP,E 22-16 GAS	M21	87-045-356-019		MOT,RF-310TA 30
C221	87-010-196-080		CHIP CAPACITOR,0.1-25	SW1	87-A90-042-019		SW,LEAF MSW 17310 MVPO
C222	87-010-405-080		CAP, ELECT 10-50V	AC C.B			
C223	87-010-405-080		CAP, ELECT 10-50V	C701	87-018-205-080		CAP, CERA-SOL 0.022
C224	87-010-196-080		CHIP CAPACITOR,0.1-25	C702	87-018-205-080		CAP, CERA-SOL 0.022
C225	87-010-405-080		CAP, ELECT 10-50V	C703	87-018-205-080		CAP, CERA-SOL 0.022
C226	87-010-405-080		CAP, ELECT 10-50V	C704	87-018-205-080		CAP, CERA-SOL 0.022
C251	87-010-552-040		CAP,E 22-16 GAS	△F380	87-035-488-010		FUSE,3.15A 125V D UL
CN1	87-A60-424-010		CONN,16P V TOC-B	△FC1	87-A90-505-080		FUSE CLAMP,TP00351-51
CN2	87-A60-081-010		CONN,06P H 9604S-06F	△FC2	87-A90-505-080		FUSE CLAMP,TP00351-51
CN3	87-A60-945-010		CONN,21P H 6216-11				
CN4	87-A60-080-010		CONN,07P H 9604S-07F				
CN7	87-A60-081-010		CONN,06P H 9604S-06F				
CN8	87-A60-083-010		CONN,04P H 9604S-04F				
D221	87-070-288-010		LED,GL380				
L1	87-003-102-080		COIL,10UH				
L4	87-003-152-080		COIL,100UH				
L5	87-003-152-080		COIL,100UH				
PS231	85-ZG1-607-080		SNSR,GP1S24				
SFR130	87-024-437-080		SFR100K,RH063EC				
SW201	88-ZG5-606-010		SW,MODE MMS00420				
SW204	87-A91-040-010		SW,LVR SSCF31P-1				
X1	87-A70-046-010		VIB,XTAL 16.934MHZ				

○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



A
抵抗部品コード
Resistor Code

桁表示
Figure
抵抗値
Value of resistor

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



E C B

2SA952
2SA1318
2SC1815
2SC1923
2SC2001
2SD655
2SD1468
KTC3198



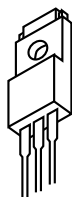
E C B

2SA933S
2SC1740S
DTA114YS
DTA144ES
DTA144TS
DTC114YS
DTC124XS
DTC143ES
DTC144ES
KTA1267



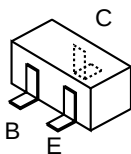
S D G

2SJ460
2SK2541

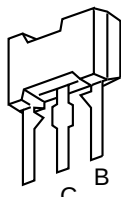


B C E

2SB1370

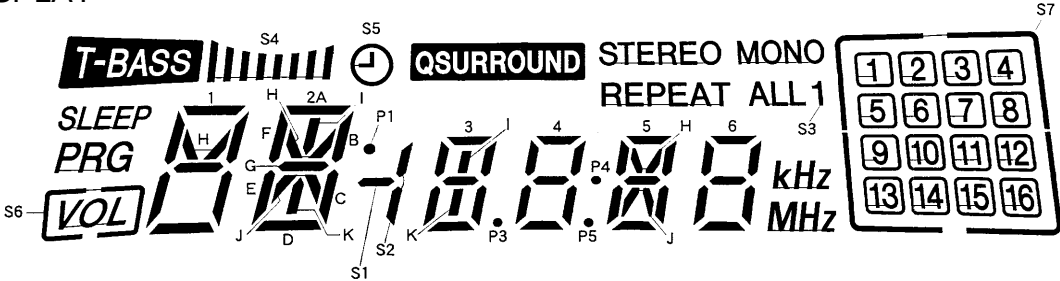


2SC2712
DTC114TK
DTC114YU
DTC124XK



2SB1443

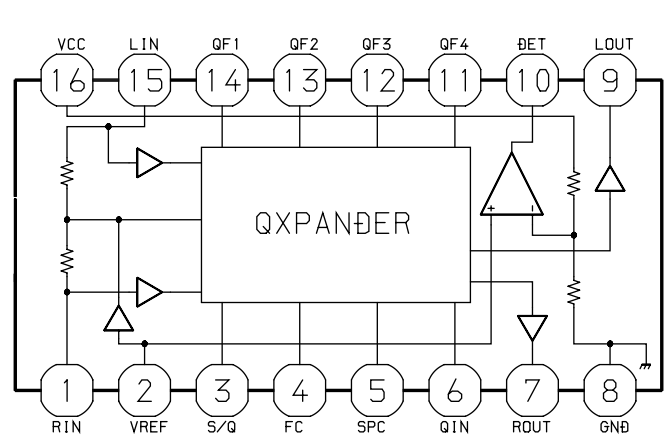
LCD DIASPLAY



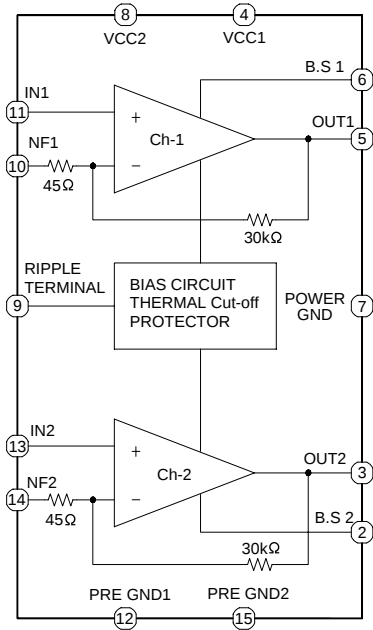
No	COM1	COM2	COM3
1	COM1		
2		COM2	
3			COM3
4	S4	PRG	S6
5	1A	1F	1E
6	1H	1G	1D
7	T-BASS VOL	1B	1C
8	2I	2A	STEREO
9	2G	2H	2F
10	2K	2J	2E
11	2B	2C	2D
12	MONO	P1	S1
13	REPEAT	S5	S2
14	3F	3G	3E
15	3A	3I, K	3D
16	3B	3C	P3
17	4F	4G	4E
18	4B	4C	4D
19	4A	P4	P5
20		5F	5E
21	5A	5H, J	5G
22	5B	5C	5D
23	6F	6G	6E
24	6B	6C	6D
25	6A	kHz	MHz
26	5	9	13
27	6	10	14
28	7	11	15
29	8	12	16
30	4	3	2
31	S7	QSURROUND	1
32	ALL	SLEEP	S3

IC BLOCK DIAGRAMS

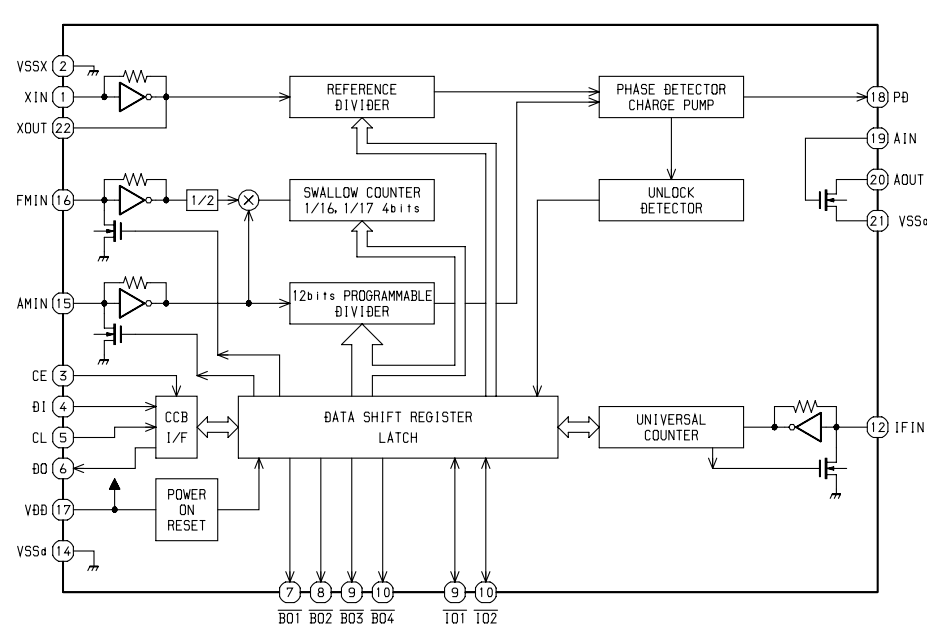
IC, MM1454XFBE



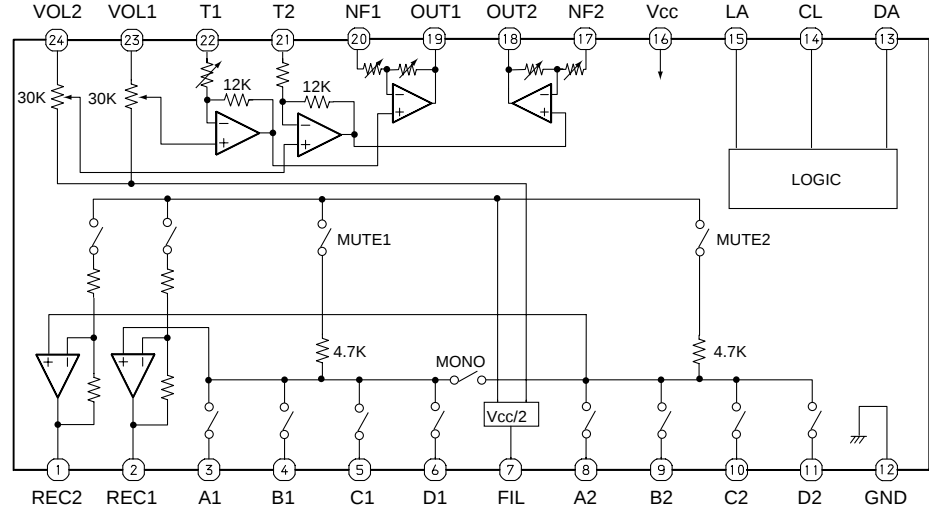
IC, TA8223K



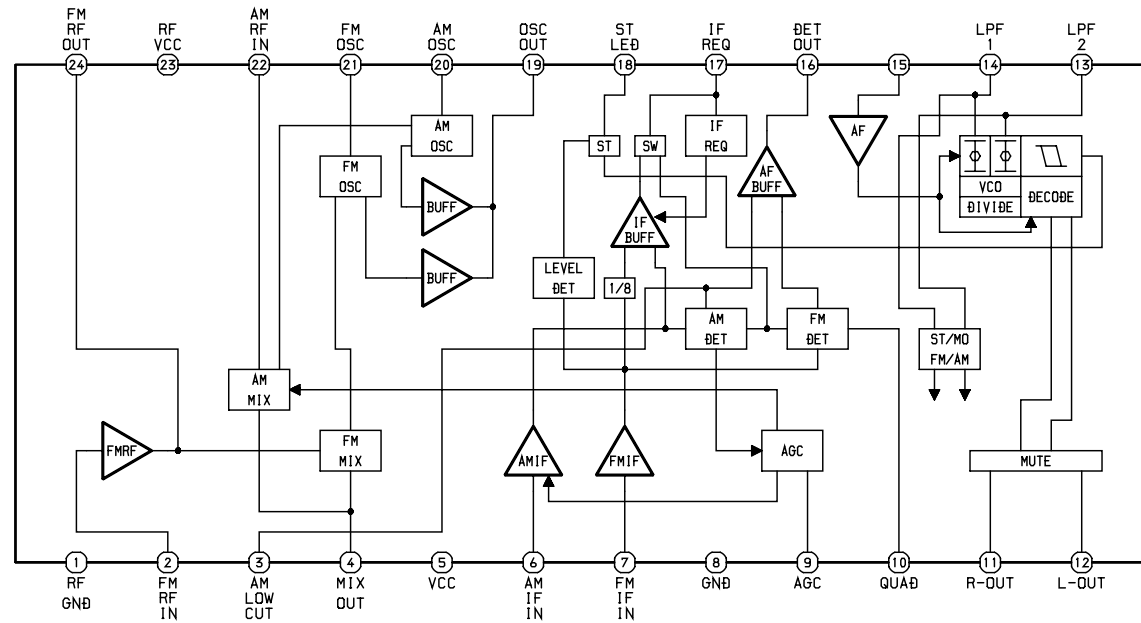
IC, LC72121M



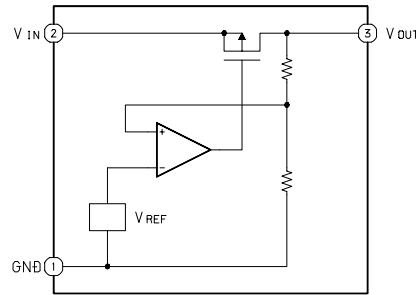
IC, BH3862FS



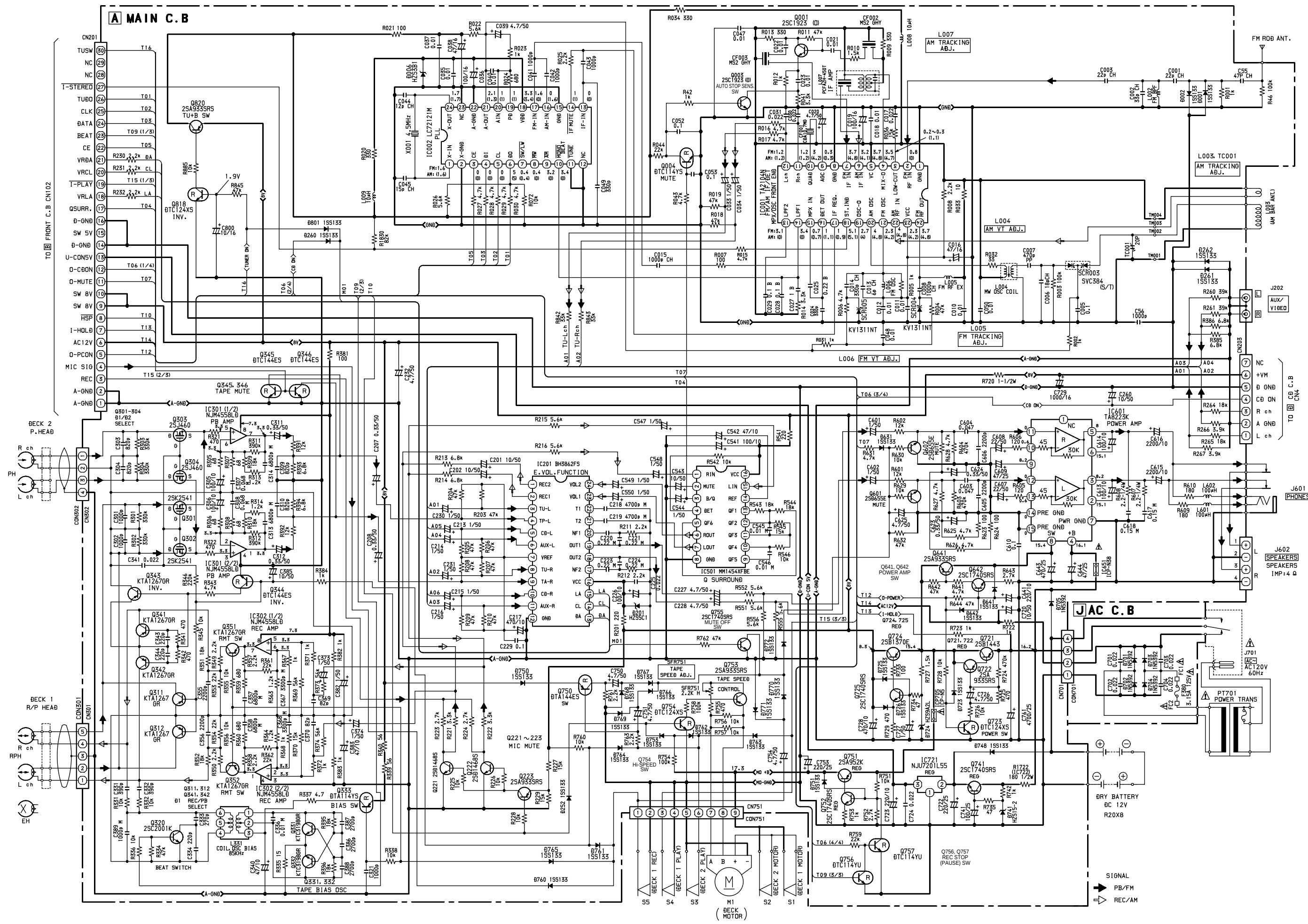
IC, TA2104AN



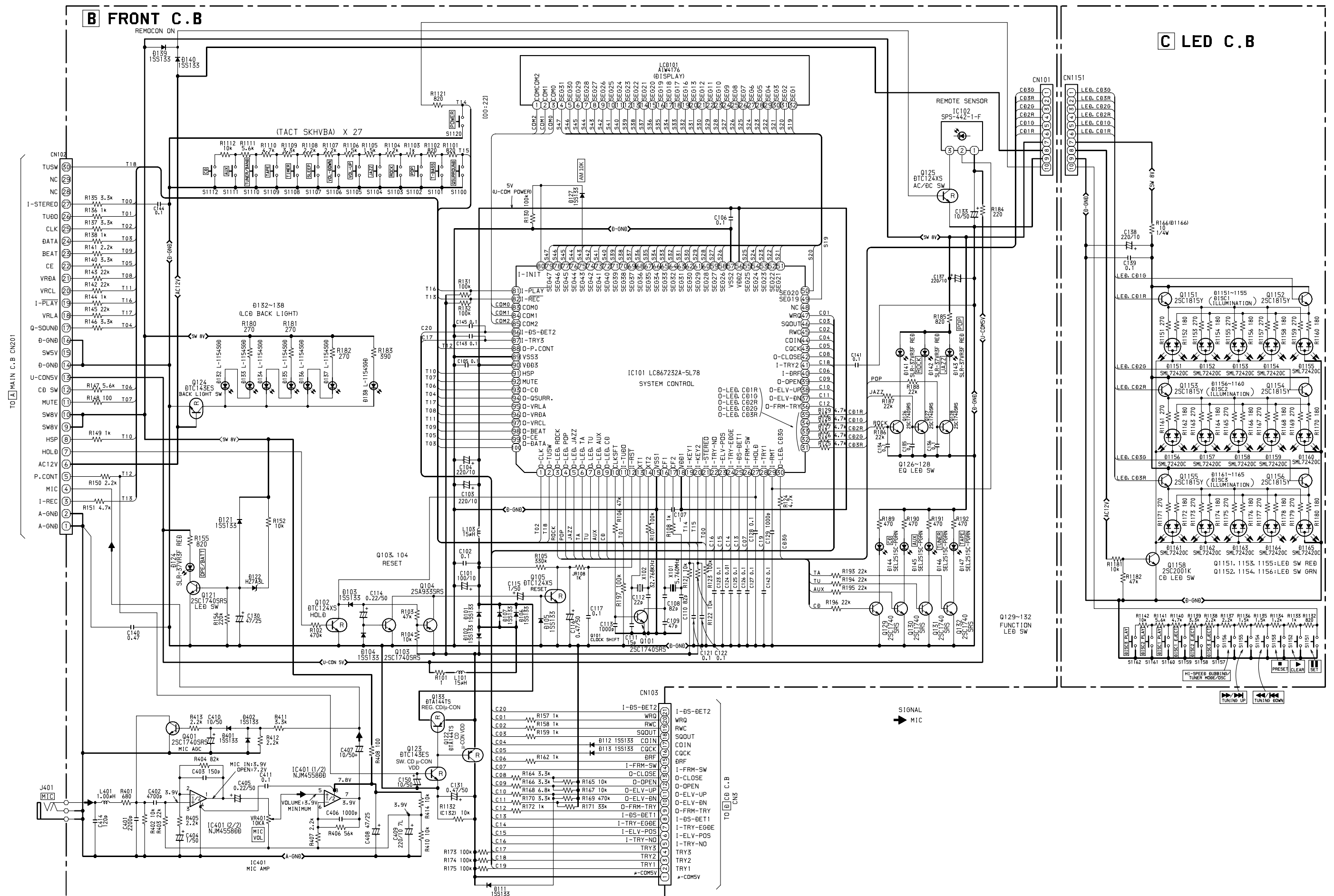
IC, NJU7201L55

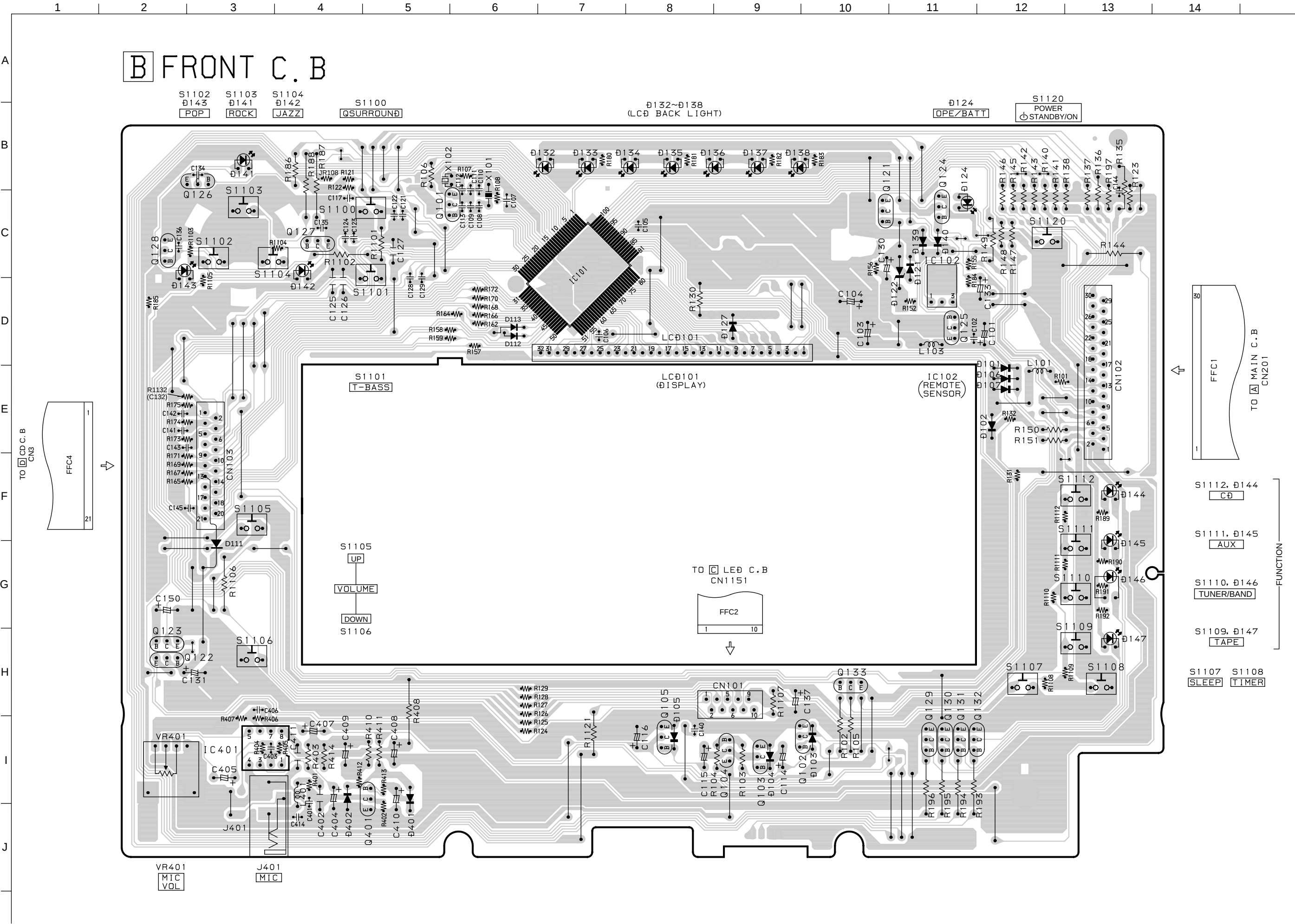


SCHEMATIC DIAGRAM-1 (MAIN SECTION)



SCHEMATIC DIAGRAM-2 (FRONT/LED SECTION)





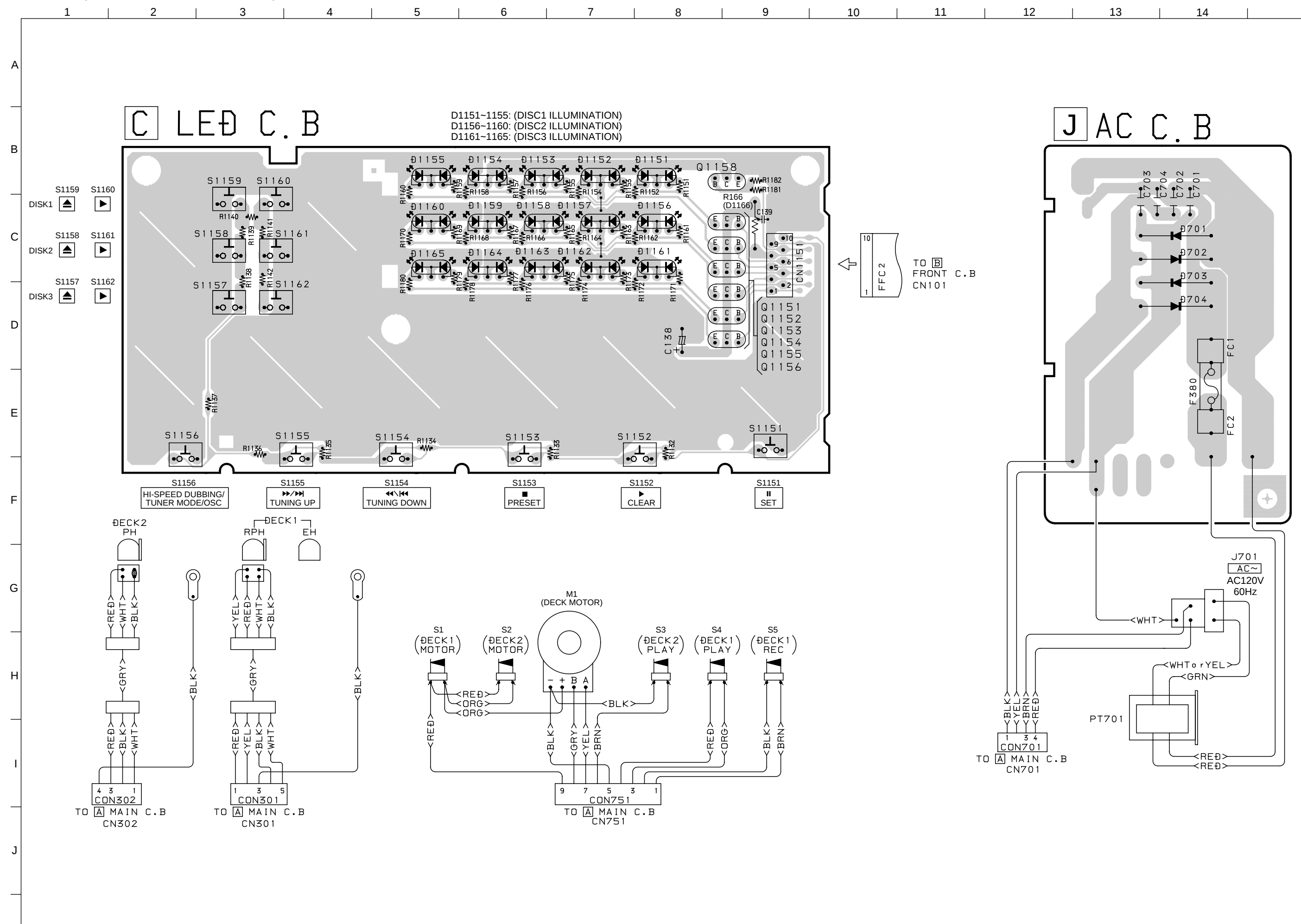
IC DESCRIPTION

IC, LC867232A-5L78

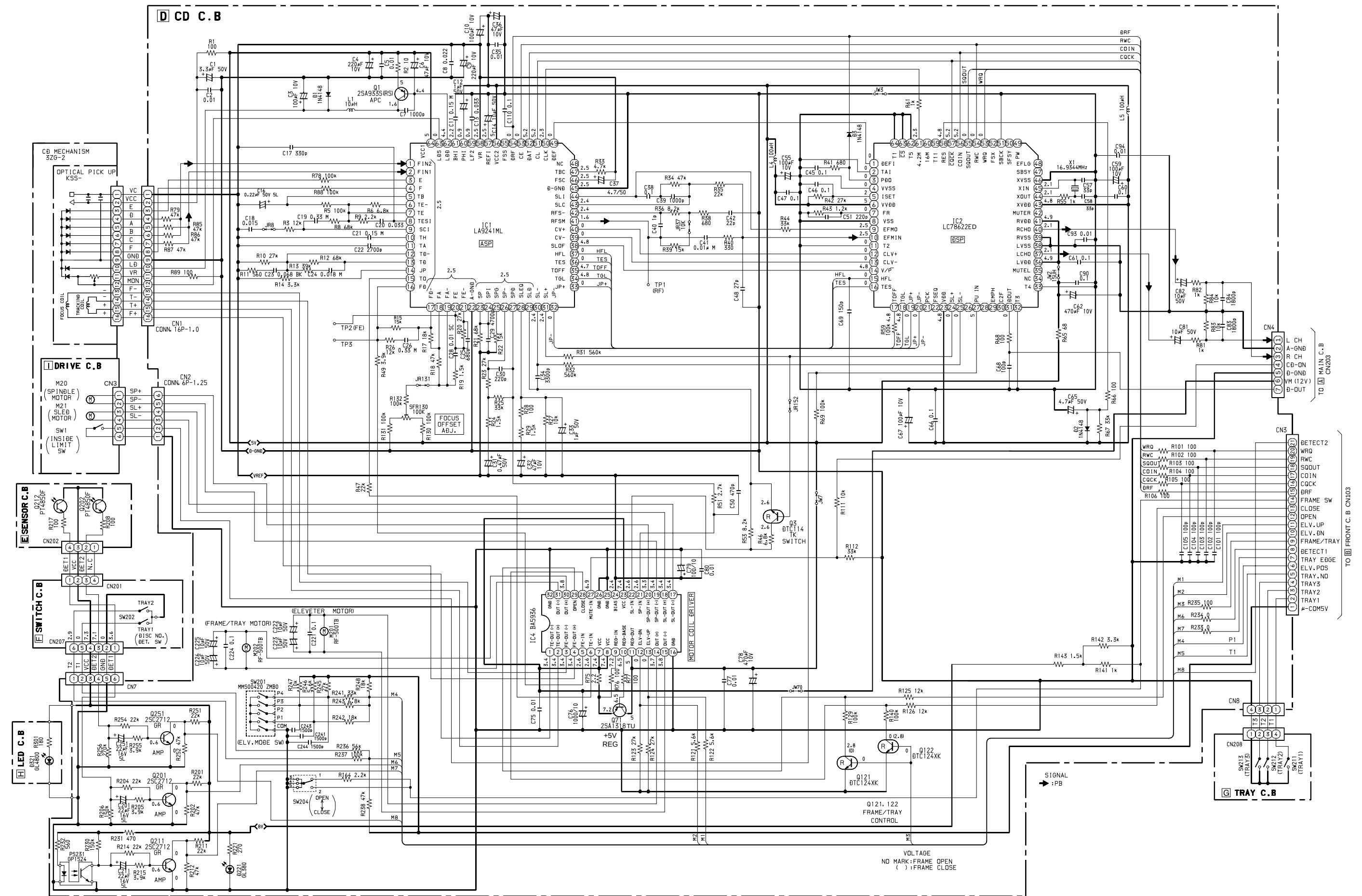
Pin No.	Pin Name	I/O	Description
1	CLK	O	Clock output to TUNER PLL IC
2	TUSW	O	TUNER power switch
3	LED ROCK	O	LED lighting SW
4	LED POP		
5	LED JAZZ		
6	LED TA		
7	LED TU		
8	LED AUX		
9	LED CD		
10	CLKSFT	O	Microprocessor clock shift SW
11	TUDO	I	Data input from TUNER PLL IC
12	RST	I	Reset input
13	XT1	I	Crystal oscillator input for clock
14	XT2	O	Crystal oscillator output for clock
15	VSS1	–	Negative terminal of power supply
16	CF1	I	Ceramic oscillator input for microprocessor main clock
17	CF2	O	Ceramic oscillator output for microprocessor main clock
18	VDD1	–	Positive terminal of power supply
19, 20	KEY1, KEY2	I	Tact key AD input detection
21	STEREO	I	TUNER stereo reception detection input
22	TRY NO	I	CD mechanism tray number detection
23	ELV POS	I	CD mechanism elevator position detection
24	TRY EDGE	I	CD mechanism tray position detection
25	DS DET1	I	CD mechanism disc size detection
26	FRM SW	I	CD mechanism frame position detection
27	HOLD	I	Main power supply input detection
28	TRY1	I	CD mechanism tray 1 detection
29	RMT	I	Remote control signal reception pin
30	LED CD3G	O	LED lighting SW
31	LED CD3R		
32	LED CD2G		
33	LED CD2R		
34	LED CD1G		
35	LED CD1R		
36	FRM/TRY	O	CD frame/tray drive motor speed control
37	ELV-DN	O	CD mechanism elevator motor control: Down side
38	ELV-UP	O	CD mechanism elevator motor control: Up side
39	OPEN	O	CD mechanism frame/tray motor control: Open side
40	DRF	I	Detects level of RF signal from CD ASP.
41	TRY2	I	CD mechanism tray 2 detection
42	CLOSE	O	CD mechanism frame/tray motor control: Close side
43	CQCK	O	Serial communication clock output to CD DSP

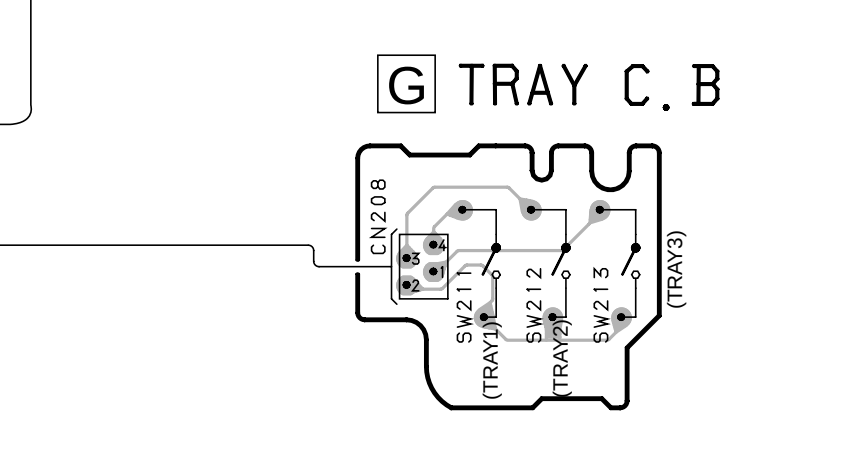
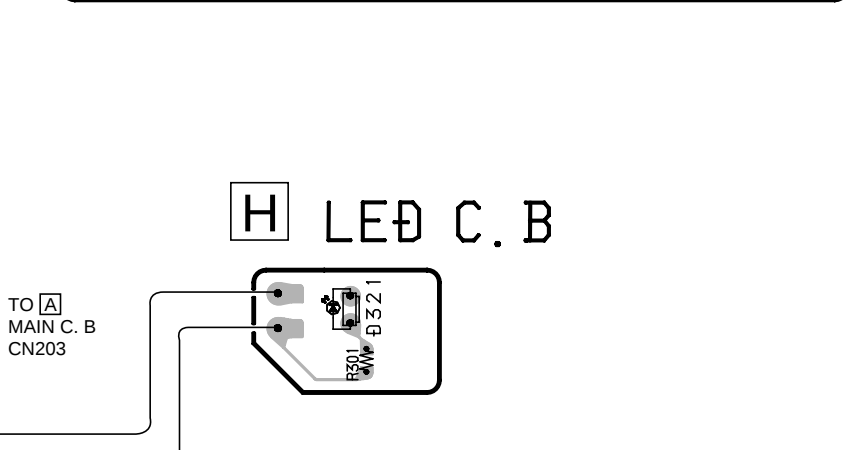
Pin No.	Pin Name	I/O	Description
44	COIN	O	Serial data output to CD DSP
45	RWC	O	Read/write control to CD DSP
46	SQOUT	O	Subcode Q data input from CD DSP
47	WRQ	O	CD DSP subcode Q output standby check input
48	NC	–	Not connected.
49 ~ 55	SEG19 ~ SEG25	O	LCD segment output
56	VDD2	–	Positive terminal of power supply
57	VSS2	–	Negative terminal of power supply
58 ~ 79	SEG26 ~ SEG47	O	LCD segment output
80	INIT	I	Microprocessor initial setting read
81	PLAY	I	TAPE playback detection
82	REC	I	TAPE recording detection
83 ~ 85	COM0 ~ COM2	O	LCD common output
86	DS DET2	I	CD mechanism disc size detection
87	TRY3	I	CD mechanism tray 3 detection
88	P, CONT	O	Main power supply input detection
89	VSS3	–	Negative terminal of power supply
90	VDD3	–	Positive terminal of power supply
91	HSP	O	TAPE dubbing high speed mode SW
92	MUTE	O	Audio signal muting SW
93	CD	O	CD power SW
94	QSURR	O	Q SURROUND SW
95	VRLA	O	Audio control IC data latch
96	VRDA	O	Data output to audio control IC
97	VRCL	O	Clock output to audio control IC
98	BEAT	O	TAPE BEAT switching
99	CE	O	TUNER PLL IC chip enable
100	DATA	O	Data output to TUNER PLL IC

WIRING-3 (LED C.B, AC C.B SECTION)



SCHEMATIC DIAGRAM-3 (CD SECTION)





IC DESCRIPTION-2

IC, LC78622ED

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISSET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	T2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK–	O	Disc motor control output. Three level output is possible using command.	
14	V/P	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP–	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24	SL+	O	Moves the sled to outer circumference.	
25	SL–	O	Moves the sled to inner circumference.	
26	—	—	Not connected.	
27	PUIN	I	CD pickup inner switch detection.	
28	—	—	Not connected.	
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	T3, T4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	CQCK	I	Command input read clock or subcode read input clock from SQOUT pin
58	RES	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	T11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	T5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	CS	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	T1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE–	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD–	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD–	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA–	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE–	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	A-GND	—	Analog signal GND.
23	SP	O	Single ended output of the CV+ and CV– pin input signal.
24	SPI	I	Spindle amp input
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP–	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL–, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP–, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV-, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS-	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	D-GND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode ($\pm$ search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

TEST MODE

The CA-DW935M has two types of test mode: conventional CD test mode and new mechanism test mode.

1) Starting CD test mode

- Hold down the CD function key, and then plug the power cord into AC outlet: The CD test mode will start and "CD TES7" will appear.
- Each time the CD function key is pressed thereafter, the CD test mode and mechanism test mode will alternate.
 "CD TES7" appears in CD test mode.
 "MC TES7" appears in mechanism test mode.

2) Functions in CD test mode

Mode	Operation	Display	Action	Content
Start	to start test mode	CD TES7	—	—
Search		CD ----	Continuous focus search. PU lens repeats full swing. (Note 1)	APC circuit check Laser current measurement Focus error waveform check
Play		Track no. and play time	Normal play. Same operation as in search mode when TOC read is impossible.	Focus servo Tracking servo CLV servo Sled servo
Traverse		Track no. and play time	Playback pause status	Tracking servo OFF
Sled		CD TES7	Pickup moves to inner edge. Pickup moves to outer circumference.	Sled servo Mechanism operation check

Note 1: If focus search continues for 10 minutes or more, the driver IC could generate heat and the protection circuit could operate, resulting in no operation of CD player. In this case, turn power off, radiate heat for approx. 10 minutes, and then restart the CD player.

3) Mechanism test mode

- The following items can be checked in the mechanism test mode:

1. Checking mechanism operation

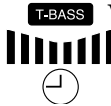
The elevator up/down and frame/tray open/close operations can be checked.

Operation to be checked	Operation button	Display
Elevator going up		E UP
Elevator going down		E DO
Frame opening	CD1 OPEN/CLOSE button	F OP
Frame closing	CD2 OPEN/CLOSE button	F CL
Tray opening	CD1 OPEN/CLOSE button	T OP
Tray closing	CD2 OPEN/CLOSE button	T CL

Note: When the elevator is at the top position, the frame will open or close, and when it is at positions other than top, the tray will open or close.

2. Checking status of switches and sensors

The switch/sensor ON/OFF status of mechanism can be checked using the display.

SW/Sensor	Ref. no.	SW/Sensor status	Display
Frame OPEN/CLOSE SW	SW204	Frame is at OPEN position. Frame is at intermediate position. Frame is at CLOSE position.	
Tray no. detection SW	SW202	Tray 1 is at PLAY position. Tray 2 is at PLAY position. Tray 3 is at PLAY position.	 VOL lights. lights. lights.
Elevator position detection SW	SW201	Elevator is at TOP position. Elevator is at CD3 position. Elevator is at CD2 position. Elevator is at CD1 position. Elevator is at PLAY position. Elevator is at UNLOCK position. Elevator is at TOP UNLOCK position. Elevator is at positions other than the above.	 lights.  lights.  lights.  lights.  lights.  lights.  lights.  lights.
Tray detection SW	SW213 SW212 SW211	Tray 1 is in STOCK BOX. Tray 2 is in STOCK BOX. Tray 3 is in STOCK BOX.	REPEAT lights. ALL lights. 1 lights.
Tray edge detection sensor	PS231	Frame/tray are at OPEN/CLOSE position. Frame/tray are at an intermediate position.	STEREO lights. STEREO goes out.
Erroneous CD insertion prevention sensor	Q202 Q212	Tray/frame shade Q202. Tray/frame shade Q212.	MONO goes out. SLEEP goes out.

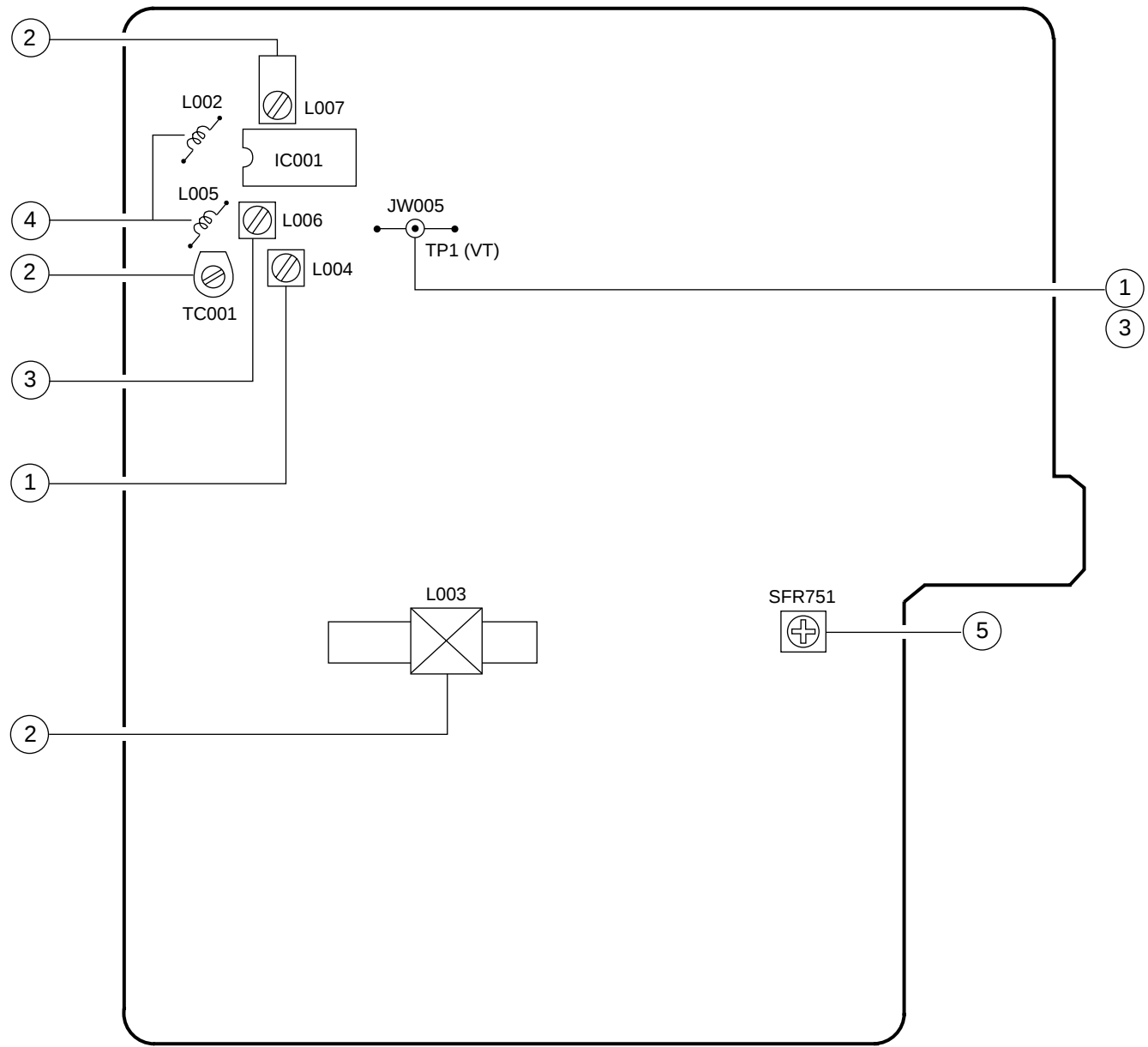
Note: This set does not have the frame OPEN/CLOSE SW display.

4) Releasing test mode

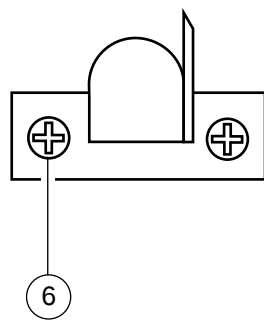
- Press the POWER button or unplug the power cord from the AC outlet to release the test mode.

Note: After operation is performed in the mechanism test mode, return the set to the first mechanism status to exit the test mode.

MAIN C.B



RPH (DECK1) / PH (DECK2)

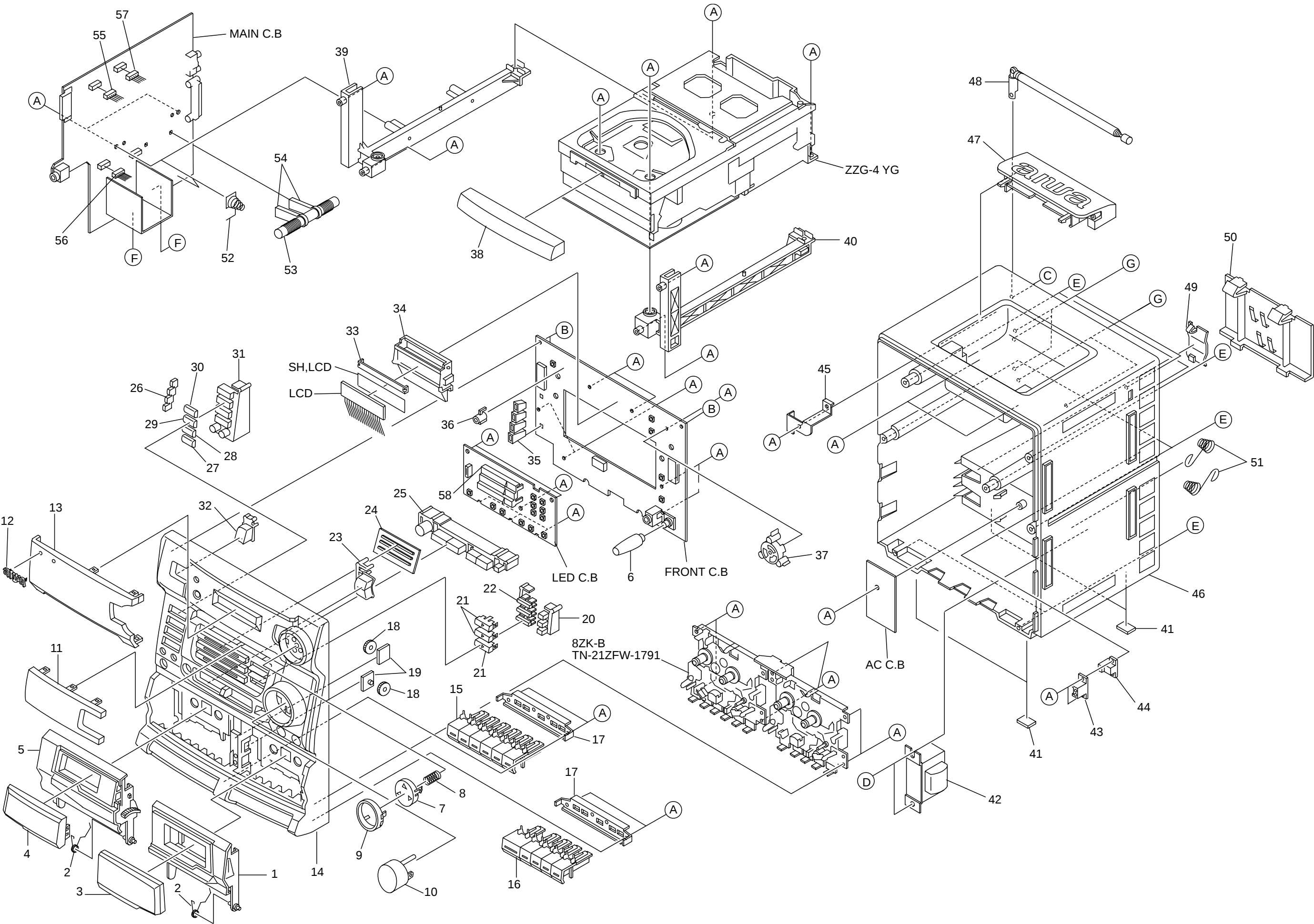


<TUNER SECTION>

1. AM VT Adjustment
 Settings: • Test point: TP1 (VT)
 • Adjustment location: L004
 Method: Set to AM 1710 kHz and adjust L004 so that the test point becomes 6.0 ± 0.05 V.
2. AM Tracking Adjustment
 L003, L007 600 kHz
 TC1 1400 kHz
3. FM VT Adjustment
 Settings: • Test point: TP1 (VT)
 • Adjustment location: L006
 Method: Set to FM 108.0 MHz and adjust L006 so that test point becomes 6.0 ± 0.3 V.
4. FM Tracking Adjustment
 L005 87.5 MHz

<DECK SECTION>

5. Tape Speed Adjustment
 Settings: • Test Tape: TTA-100 (TTA-111S)
 • Test point: J602 (PHONES Jack)
 • Adjustment location: SFR751
 Method: Playback the test tape with DECK 1 and adjust SFR 751 so that the output frequency is 3000 Hz.
 After the adjustment, check that the frequency of DECK 2 is 3000 45 Hz.
6. Head Azimuth Adjustment
 Settings: • Test Tape: TTA-320 (TTA-113B, TTC-152)
 • Test point: J201 (PHONES Jack)
 • Adjustment location: Head Azimuth Adjustment Screw
 Method: Playback the 10 kHz signal of test tape and adjust screw so that the output becomes maximum.



MECHANICAL MAIN PARTS LIST 1/1

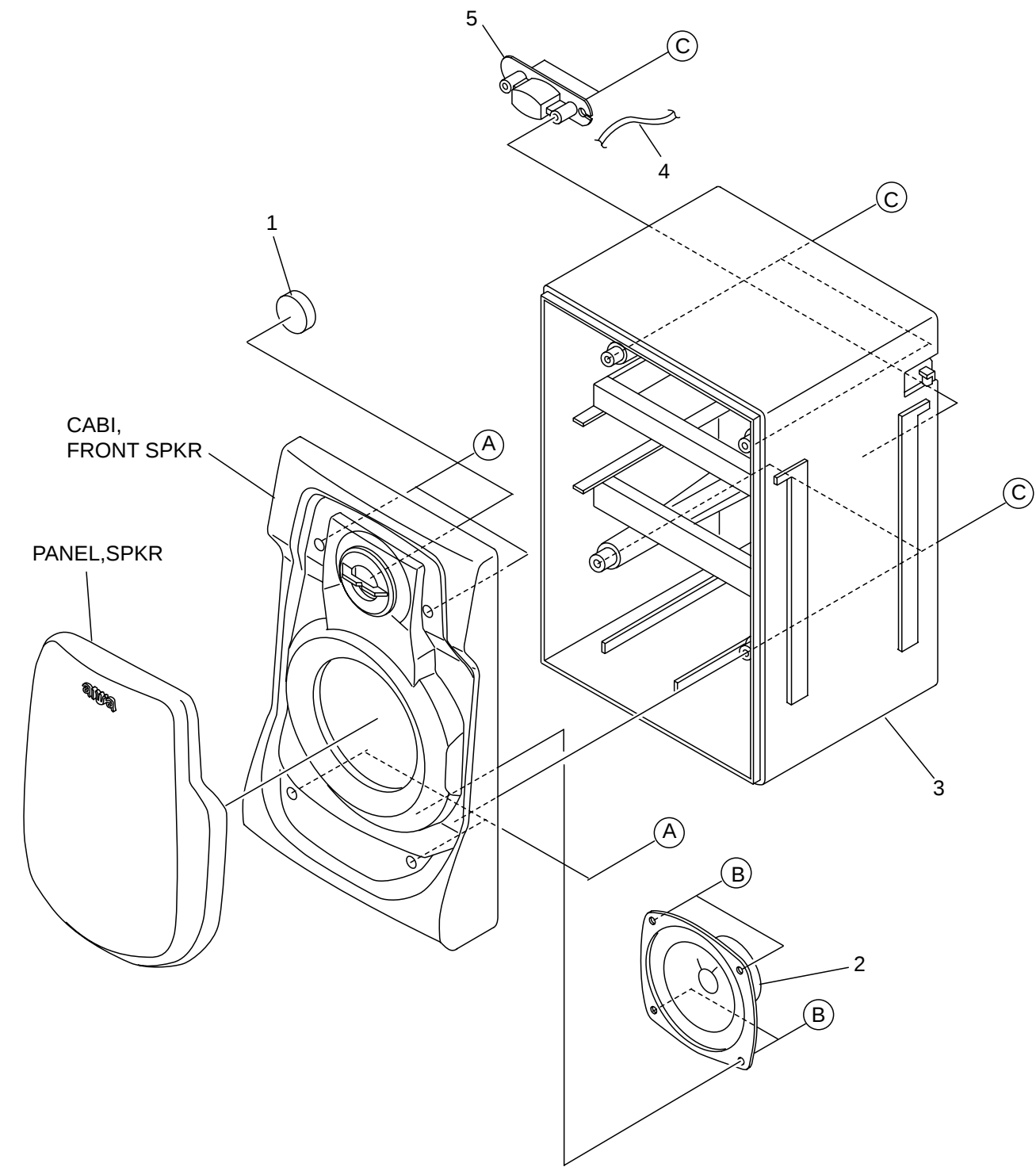
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CT1-004-010		BOX, CASS B	36	8Z-CT1-204-010		HLDR, LED OPE
2	8Z-CT4-211-010		SPR-T, CASS	37	8Z-CT1-209-010		HLDR, EQ
3	8Z-CT1-019-010		WINDOW, CASS B	38	8Z-CT1-023-010		PANEL, CD
4	8Z-CT1-018-010		WINDOW, CASS A	39	8Z-CT1-201-010		CHAS, CD A
5	8Z-CT1-003-010		BOX, CASS A	40	8Z-CT1-202-010		CHAS, CD B
6	8Z-CT1-015-010		KNOB, RTRY MIC	41	88-CT4-026-010		CUSH, FOOT
7	8Z-CT1-012-010		KEY, EQ	42	8Z-CT1-612-010		PT, U
8	8Z-CT1-210-010		SPR-C, EQ	43	87-A90-086-010		COVER, AC-SOCKET
9	8Z-CT1-020-010		LENS, EQ	44	87-A60-177-010		JACK, AC U W/SW
10	8Z-CT1-013-010		KEY, VOL	45	88-CT4-224-010		HLDR, ANT
11	8Z-CT1-017-010		WINDOW, CD	46	8Z-CT1-002-010		CABI, REAR
12	81-CD1-032-010		BADGE, AIWA 30J	47	8Z-CT4-041-010		PANEL, TOP ST
13	8Z-CT1-016-010		WINDOW, DISP	48	86-CT4-616-010		ANT, ROD
14	8Z-CT1-001-010		CABI, FRONT	49	87-CT4-037-110		COVER, BATT
15	8Z-CT1-005-010		KEY, CASS A	50	8Z-CT4-040-010		LID, BATT
16	8Z-CT1-006-010		KEY, CASS B	51	88-CT4-207-010		SPR-C, BATT A
17	8Z-CT4-212-010		HLDR, KEY CASS	52	88-CT4-208-010		SPR-C, BATT B
18	88-CT4-225-010		GEAR, OIL DUMP	53	8Z-CT4-616-010		BAR-ANT, MW2B
19	88-CT4-226-010		HLDR, OIL DUMP	54	8Z-CT4-624-010		HLDR, BAR-ANT
20	8Z-CT1-007-010		KEY, CD OPEN	55	88-CT4-607-010		CONN ASSY, 5P
21	8Z-CT1-034-010		KEY, CD CAP	56	88-CT4-608-110		CONN ASSY, 9P
22	8Z-CT1-008-010		KEY, CD PLAY	57	88-CT4-606-010		CONN ASSY, 4P
23	8Z-CT1-011-010		KEY, Q SURROUND	58	8Z-CT1-206-010		HLDR, LED CD
24	8Z-CT1-021-010		LENS, CD MAIN	A	87-751-096-410		VT2+3-10 GLD
25	8Z-CT1-014-010		KEY, MAIN	B	87-753-095-410		VT2+3-8W/O SLOT BLK
26	8Z-CT1-022-010		LENS, FUNC	C	87-493-100-410		VWWS+3-16 BLK
27	8Z-CT1-029-010		LENS, TAPE	D	87-661-100-410		VFT1+3-16
28	8Z-CT1-028-010		LENS, TUNER	E	87-753-104-410		VT2+3-30 W/O BLK
29	8Z-CT1-027-010		LENS, AUX	F	87-067-579-010		TAPPING SCREW, BVT2+3-8
30	8Z-CT1-026-010		LENS, CD	G	87-753-097-410		VT2+3-12 W/O BLK
31	8Z-CT1-009-010		KEY, FUNC				
32	8Z-CT1-010-010		KEY, POWER				
33	8Z-CT1-208-010		COVER, LED				
34	8Z-CT1-203-010		HLDR, LCD				
35	8Z-CT1-207-010		HLDR, LED FUNC				

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		

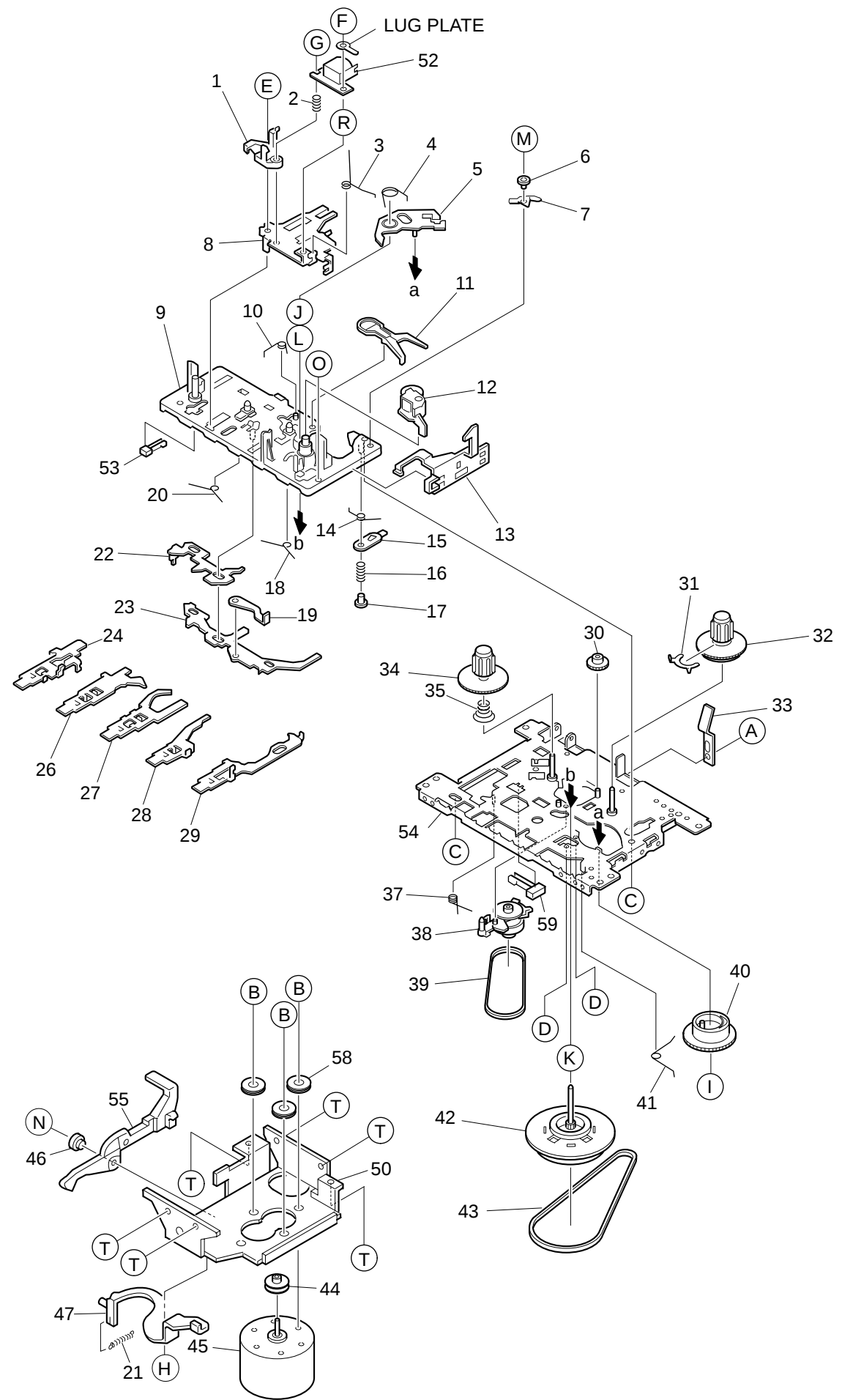
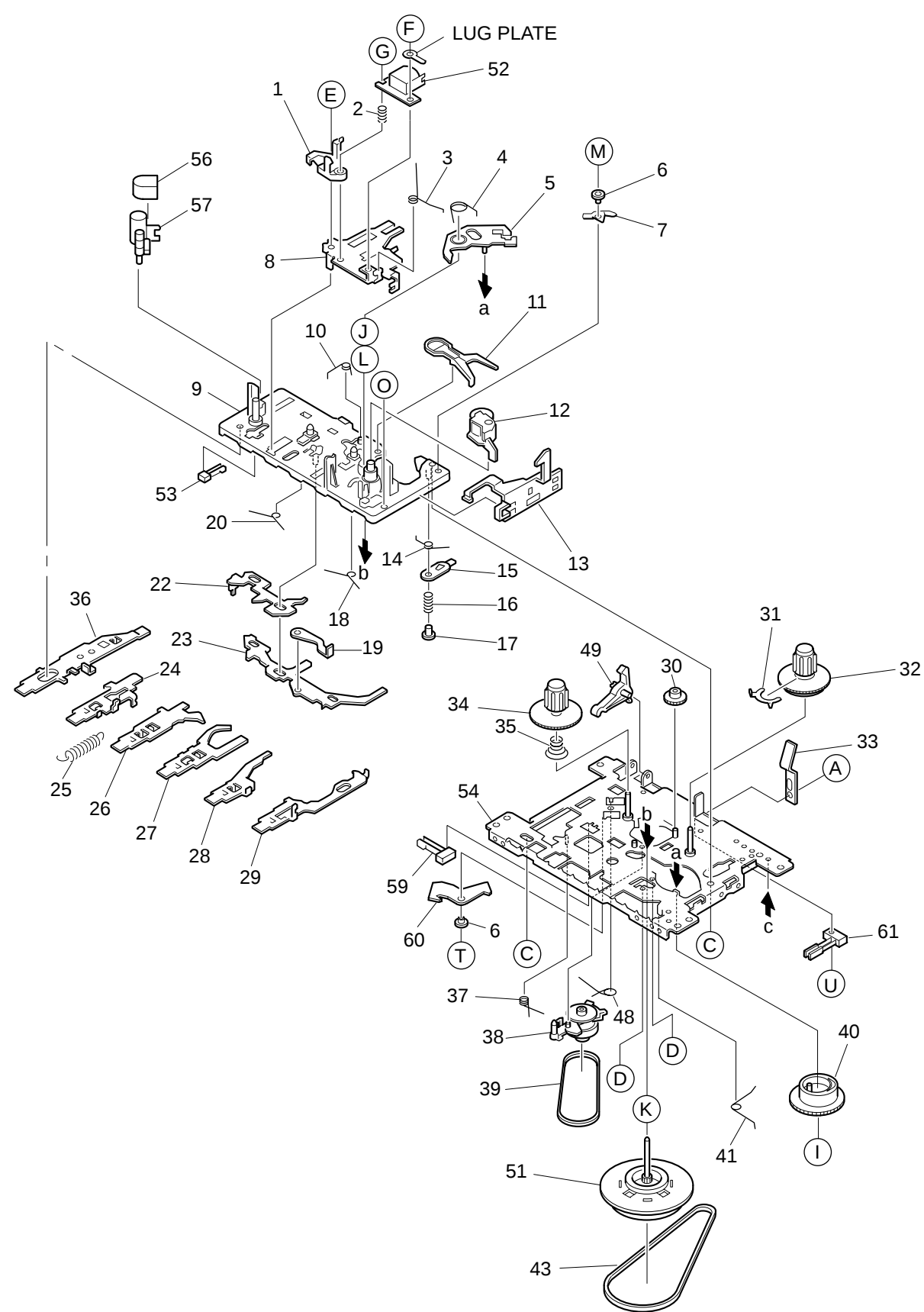
SPEAKER EXPLODED VIEW 1/1



SPEAKER PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-CT4-626-010		SPKR, T
2	86-CT4-625-010		SPKR, W 120 40HM 10W 6CT-4
3	87-CT4-027-110		CABI, REAR SPKR L
3	87-CT4-028-110		CABI, REAR SPKR R
4	86-CT4-627-010		CORD, 2PSPKR
5	84-CT4-106-110		HLDR, CORD
A	87-751-096-410		VT2+3-10 GLD
B	87-661-097-410		TAPPING SCREW, VFT1+3-12
C	87-751-098-410		SCREW 3X14



TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE	41	S1-921-140-160		E ACTUATOR SPRING
2	S1-821-030-070		AZIMUTH SPRING	42	S1-921-093-040		FLYWHEEL ASSY
3	S1-921-030-090		PANEL P SPRING	43	S1-921-090-240		MAIN BELT
4	S1-921-260-050		GEAR PLATE SPRING	44	S1-921-120-130		MOTOR PULLEY
5	S1-921-265-020		GEAR PLATE ASSY	45	S6-002-030-290		MOTOR EG530YD-2BH
6	S1-921-140-370		P ARM COLLER	46	S1-821-120-650		COLLER B
7	S1-921-140-340		P ARM	47	S1-821-120-680		P KICK LEVER (A)
8	S1-921-030-110		HEAD PANEL	48	S1-921-140-210		REC BUTTON LEVER SPRING
9	S1-921-143-160		BASE ASSY	49	S1-821-100-690		RECORD SAFETY LEVER
10	S1-921-141-8A0		M CONTROL SPRING	50	S1-921-120-110		MOTOR BRACKET
11	S1-921-260-4A0		SENSING LEVER	51	S1-921-093-030		FLYWHEEL ASSY
12	S1-921-043-100		PINCH ROLLER ARM ASSY	52	S6-202-010-920		R.P HEAD MS15R-AK0N1
13	S1-921-130-020		EJECT SLIDE LEVER	53	S6-401-011-520		LEAF SW MSW-1541F
14	S1-921-141-3A0		P CONTROL SPRING	54	S1-921-015-010		CHASSIS ASSY
15	S1-921-140-820		PAUSE LEVER(F)	55	S1-921-120-090		P KICK LEVER B
16	S1-921-140-120		PAUSE LEVER SPRING	56	S6-209-100-100		E HEAD PH-K380-MS1
17	S1-921-140-110		PAUSE STOPPER	57	S1-921-030-050		MG ARM
18	S1-921-140-150		BUTTON LEVER SPRING(B)	58	S1-820-130-060		MOTOR RUBBER
19	S1-821-011-590		E KICK LEVER	59	S6-401-011-610		LEAF SW MSW-17820MVEI
20	S1-921-140-140		BUTTON LEVER SPRING(A)	60	S1-921-020-010		REC ARM
21	S1-821-120-250		P KICK LEVER SPRING	61	S6-401-010-380		LEAF SWITCH MSW-1275
22	S1-921-140-090		SWITCH ACTUATOR	A	S9-P33-200-320		DEL TITE SCREWM2-3
23	S1-921-140-080		PUSH BUTTON ACTUATOR	B	S1-821-120-020		MOTOR COLLER SCREW
24	S1-921-140-230		PLAY BUTTON LEVER	C	S9-B10-200-510		P TAPPING BIND SCREW M2-5
25	S1-821-010-500		PLAY BUTTON LEVER SPRING	D	S9-C07-204-510		SCREW,TAPPING(CAMERA)M2-4.5
26	S1-921-140-240		REW BUTTON LEVER	E	87-261-553-310		SCREW,M2-6
27	S1-921-140-250		FF BUTTON LEVER	F	87-261-032-410		SCREW,M2-3
28	S1-921-140-260		STOP BUTTON LEVER	G	S9-F08-200-710		AZIMUTH SCREW M2-7
29	S1-921-140-610		PAUSE BUTTON LEVER	H	S1-821-120-230		PK COLLER SCREW A
30	S1-821-100-700		FF GEAR	I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
31	S1-921-050-060		SENSOR	J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
32	S1-921-053-100		TAKE UP REEL ASSY	K	S9-W01-400-100		P WASHER 2-3.5-0.4
33	S1-829-100-010		PACK SPRING	L	S9-W01-130-200		P WASHER 2.1-4-0.13
34	S1-921-050-150		S REEL HUB	M	S9-P08-203-010		PS TAPPING SCREW M2-3
35	S1-921-050-220		BACK TENSION SPRING	N	S9-P04-200-610		C TAPPING SCREW M2-6
36	S1-921-140-220		REC BUTTON LEVER	O	S9-P05-200-810		SCREW,S TAP 2-8
37	S1-921-140-170		P.S.LEVER SPRING	R	S9-W13-000-100		Y WASHER PB 0.1T
38	S1-921-073-080		RF CLUTCH ASSY	T	S9-P04-200-410		C TAPPING SCREW M2-4
39	S1-921-070-030		RF BELT	U	S9-P04-200-510		C TAPPING SCREW M2-5
40	S1-921-260-020		CAM GEAR				

This exploded view diagram illustrates the assembly of a mechanical device, likely a lock or a secure enclosure. The components are numbered 1 through 65, with some parts labeled with letters A through G. Key components include:

- Top Cover (29):** The main upper housing.
- Base Plate (56):** The bottom-most structural layer.
- Internal Frame (25):** A central structural component.
- Lock Mechanism (30):** The core locking assembly, including the **3ZG-2YE3NM** component.
- Electrical Components:** Multiple **P.C.B.** (Printed Circuit Boards) are shown, along with various connectors and wiring.
- Fasteners:** Numerous screws (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65) and washers (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65) are shown for assembly.
- Locking Elements:** **SPR-E LOCK C2** and **LEVER LOCK C2** are indicated at the bottom.

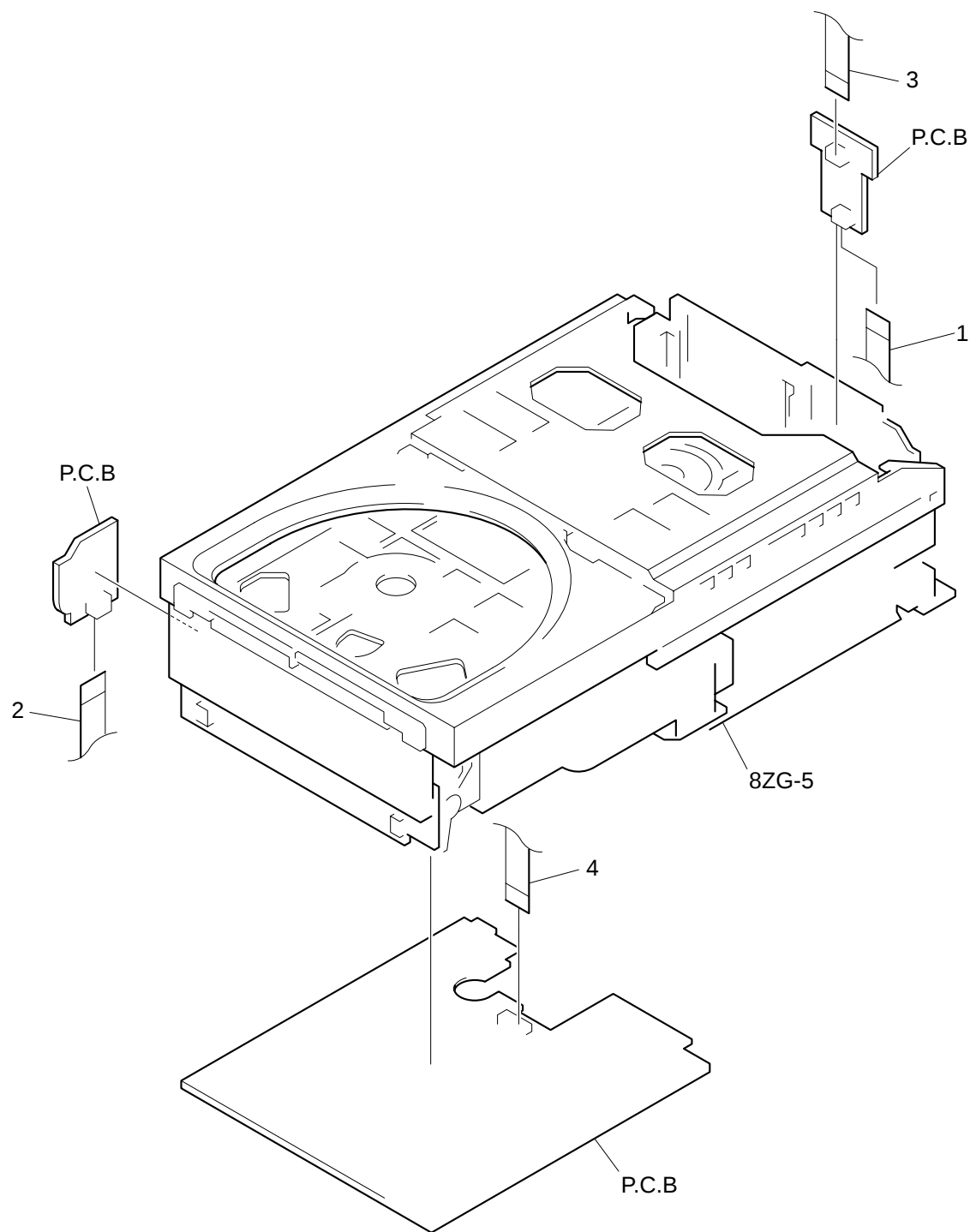
The diagram uses dashed lines to show the alignment and assembly sequence of the parts.

CD MECHANISM PARTS LIST 1/3

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-ZG5-241-010		LEVER, LOCK C	41	88-ZG5-279-010		LEVER ASSY, ROLLER L
2	88-ZG5-242-010		SPR-T, LOCK C	42	88-ZG5-287-010		ROLLER ASSY,
3	88-ZG5-206-010		GEAR, BASE A	43	87-B10-220-010		W-P, 0.94-5-0.25 SLIT
4	88-ZG5-207-010		GEAR, BASE B	44	88-ZG5-280-010		LEVER ASSY, ROLLER R
5	88-ZG5-211-010		GEAR, SLIDER B	45	88-ZG5-270-010		SPR-T, LVR ROLLER
6	88-ZG5-224-010		LEVER, LOCK F	46	87-B10-221-010		W-P, 0.85-3-0.25 SLIT
7	88-ZG5-250-010		LEVER, SW F	47	88-ZG5-262-010		SHAFT, ROLLER 2
8	88-ZG5-247-010		SHAFT, ELEVATOR	48	88-ZG5-238-010		PLATE, ELEVATOR
9	88-ZG5-254-010		GEAR, TRAY A	49	88-ZG5-231-010		LEVER ASSY, LINK R
10	88-ZG5-255-010		GEAR, TRAY B	50	88-ZG5-229-010		LEVER ASSY, LINK L
11	88-ZG5-210-010		GEAR, SLIDER A	51	87-B10-219-010		W-P, 2.15-3.5-0.25 SLIT
12	88-ZG5-212-010		GEAR, SLIDER C	52	88-ZG5-266-010		SPR-T, LVR TRAY
13	88-ZG5-213-010		PULLEY, SLIDER	53	88-ZG5-225-010		SPR-E, LOCK F
14	88-ZG5-281-010		BELT, SLIDER	54	88-ZG5-239-010		PLATE, LIFT
15	88-ZG5-209-010		PULLEY, BASE	55	88-ZG5-240-010		SPR-T, LIFT
16	88-ZG5-282-010		BELT, BASE	56	88-ZG5-222-010		FRAME, TOP
17	88-ZG5-202-010		BASE,	57	81-ZG1-254-010		S-SCREW, MECH HLDR
18	88-ZG5-237-010		LEVER, SLIDE R	58	88-ZG5-217-010		GEAR, ELEVATOR
19	88-ZG5-236-010		LEVER, SLIDE L	59	88-ZG5-259-010		SPR-P, CATCHER R
20	88-ZG5-246-010		HLDR, SHAFT	60	84-ZG1-243-110		HLDR, MAGNET N(J)
21	82-ZM1-247-210		PULLEY, MOTOR	61	88-ZG5-264-010		LEVER, LIFT
22	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)	62	88-ZG5-203-010		MAGAZINE, TOP
23	88-ZG5-258-010		SPR-P, CATCHER L	63	83-ZG3-211-010		PLATE, DISC
24	88-ZG5-263-010		LEVER, TRAY	64	83-ZG3-602-010		RING, MAG
25	88-ZG5-243-010		TRAY, 1	65	86-ZG1-239-110		PLATE, DISC PC
26	88-ZG5-244-010		TRAY, 2	A	88-ZG5-300-010		VFT2+2-12 W/O
27	88-ZG5-245-010		TRAY, 3	B	88-ZG5-302-010		S-SCREW, 8ZG5+2-4 W/O
28	88-ZG5-204-010		MAGAZINE,	C	87-251-071-110		SCREW, U+2.6-4
29	88-ZG5-221-010		FRAME, MAIN	D	88-ZG5-301-010		VFT2+2-20 W/O
30	88-ZG5-265-010		SPR-T, LVR LIFT	E	88-ZG5-300-010		VFT2+2-16
31	88-ZG5-218-010		GEAR, FRAME A	F	87-B10-271-010		VIT+1.7-3
32	88-ZG5-219-010		GEAR, FRAME B	G	88-ZG5-317-010		S-SCREW, 8ZG5S +2-4 W/O
33	88-ZG5-223-010		FRAME, SIDE				
34	88-ZG5-257-010		SPR-T, CATCHER R				
35	88-ZG5-226-010		HLDR, CLAMP				
36	88-ZG5-251-010		SPR-T, CATCHER L				
37	88-ZG5-228-010		LEVER, CATCHER R				
38	88-ZG5-227-010		LEVER, CATCHER L				
39	88-ZG5-253-010		HLDR, ELEVATOR R				
40	88-ZG5-252-010		HLDR, ELEVATOR L				

CD MECHANISM EXPLODED VIEW 2/3

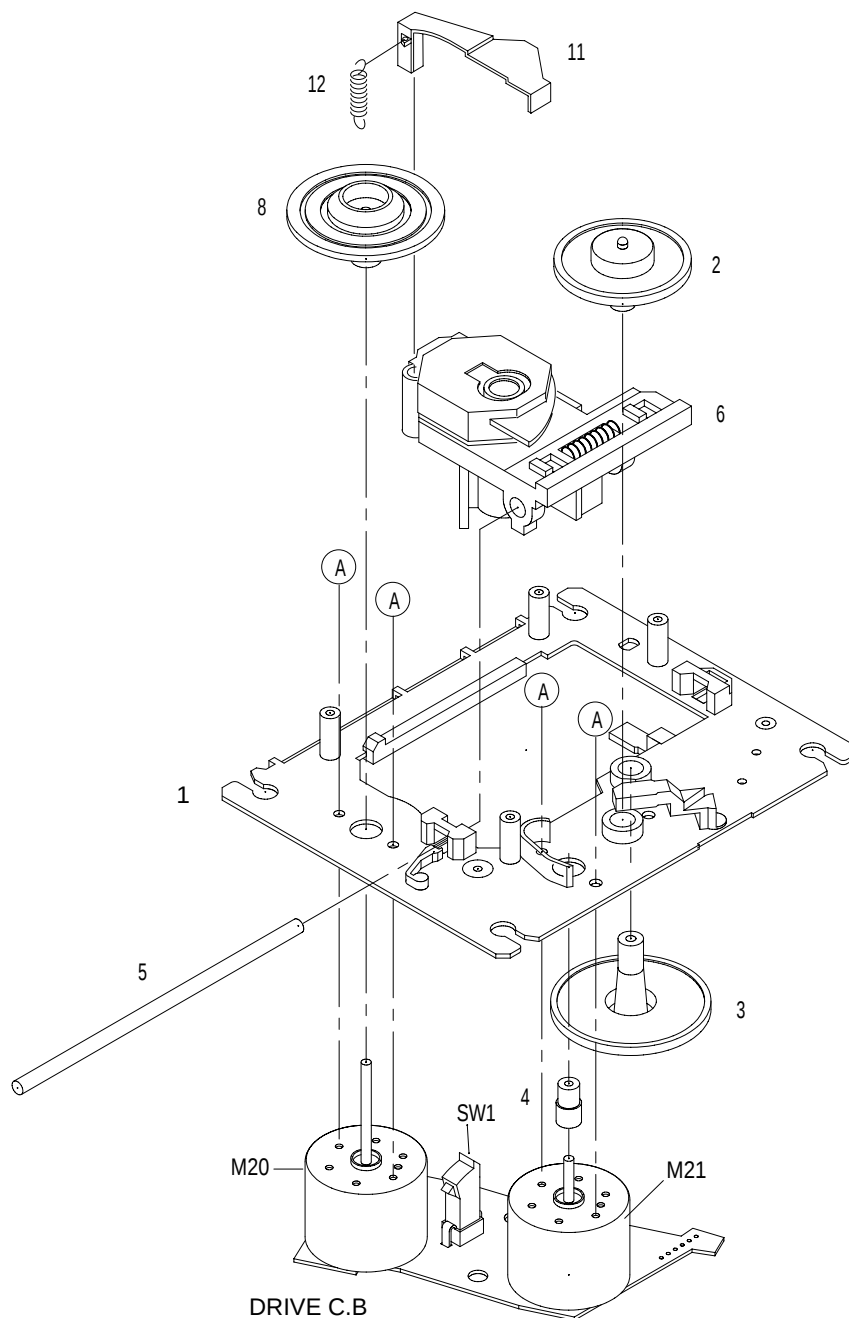


CD MECHANISM PARTS LIST 2/3

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-906-191-110		FF-CABLE, 6P 1.25
2	84-ZG2-612-110		CABLE, FFC 4P L=130
3	8Z-ZG4-613-010		FF-CABLE, 4P 1.0 210MM
4	8Z-ZG4-610-010		FF-CABLE, 16P 1.0 70MM PIC

CD MECHANISM EXPLODED VIEW 3/3



CD MECHANISM PARTS LIST 3/3

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY, SHT
2	83-ZG2-235-010		GEAR, A3
3	83-ZG2-205-210		GEAR, B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT, SLIDE 3
6	87-A90-836-010		PICKUP, KSS-213F
8	83-ZG2-233-010		TURN TABLE, A5
11	83-ZG2-245-110		LEVER, SHUTTER
12	83-ZG2-250-010		SPR-E, SHT 2
A	87-261-032-210		SCREW V+2-3



サービス技術ニュース	
番号	連絡内容
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