

SERVICE MANUAL

COMPACT DISC RADIO
CASSETTE RECORDER

BASIC TAPE MECHANISM : TN-21ZVC-2000
BASIC CD MECHANISM : DA11T3C

This Service Manual is the "Revision Publishing" and replaces "Simple Manual"
CSD-A510 LH(S)(S/M Code No. 09-003-343-2T1)
CSD-A510 EZ(S),K(S)/A519 LH1J(S)(S/M Code No. 09-003-343-2T2).

SPECIFICATIONS

LH, HA MODELS

Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, AM: 530 - 1,710 kHz Ferrite bar antenna

Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General

Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10%), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 110 - 120 V/220 - 240 V switchable, 50/60 Hz / Power consumption — 14 W / Dimensions — 302 (W) × 162 (H) × 253 (D) mm / Weight (excluding batteries) — 2.7 kg

- Design and specifications are subject to change without notice.

K MODEL

Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, MW: 530 - 1,605 kHz Ferrite bar antenna, LW: 150 - 285 kHz Ferrite bar antenna

Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General

Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10% DC), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 14 W / Dimensions — 302 (W) × 162 (H) × 253 (D) mm / Weight — 2.7 kg (excluding batteries)

- Design and specifications are subject to change without notice.

EZ MODEL

Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, MW: 530 - 1,605 kHz Ferrite bar antenna, LW: 150 - 285 kHz Ferrite bar antenna

Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General

Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.9 W + 2.9 W (DIN MUSIC POWER), 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10% DC), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 14 W / Dimensions — 302 (W) × 162 (H) × 253 (D) mm / Weight — 2.7 kg (excluding batteries)

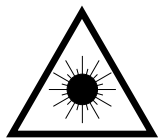
- Design and specifications are subject to change without notice.

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!

Laitteen 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 laserstråling, 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

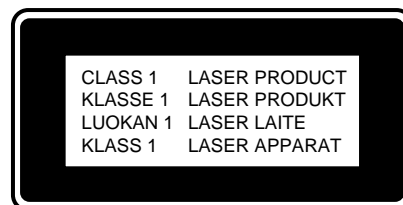
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

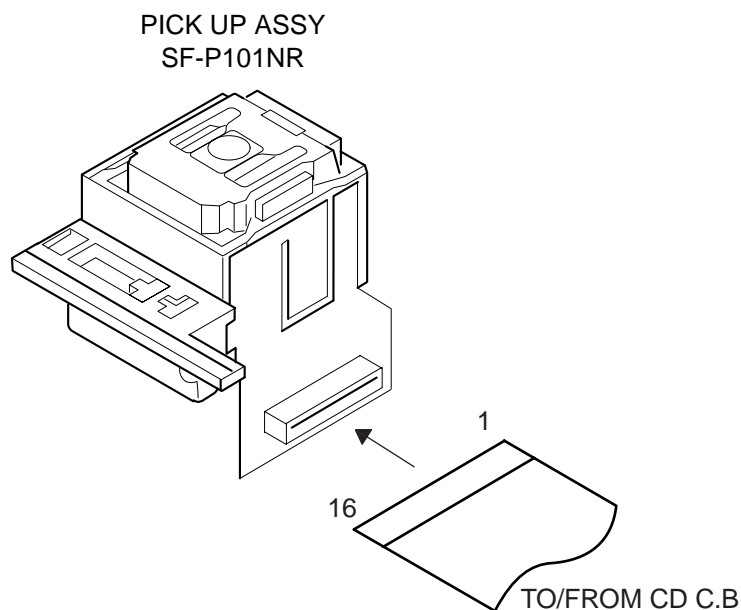
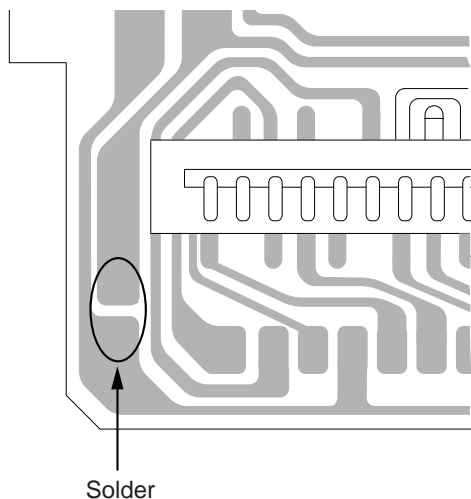
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (SF-P101NR)

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				C821	87-010-401-080		CAP, ELECT 1-50V
				C822	87-010-401-080		CAP, ELECT 1-50V
	87-A20-955-010	IC,LA1828		C823	87-010-178-080		CHIP CAP 1000P
	87-A21-064-010	IC,LA4227		C824	87-010-178-080		CHIP CAP 1000P
	87-A21-520-040	C-IC,M61509FP		C829	87-010-178-080		CHIP CAP 1000P
	87-A20-446-010	C-IC,LA9241ML					
	87-A20-459-010	C-IC,LC78622ED		C830	87-010-178-080		CHIP CAP 1000P
				C833	87-018-195-080		CAP, CER 1200P-16V
	87-A21-093-010	IC,LA6541D		C834	87-010-248-080		CAP, ELECT 220-10V
	8A-CD9-610-010	C-IC,LC865516A-5K51		C835	87-010-322-080		C-CAP,S 100P-50 CH
	87-A21-431-010	IC,BA4560N		C836	87-010-322-080		C-CAP,S 100P-50 CH
TRANSISTOR				C843	87-010-197-080		CAP, CHIP 0.01 DM
				C844	87-018-124-080		CAP, CER 270P-50V
	89-327-143-080	TR,2SC2714 (0.1W)		C845	87-010-178-080		CHIP CAP 1000P
	87-026-447-080	TR,2SC1740S R		C846	87-010-263-080		CAP, ELECT 100-10V
	87-026-463-080	TR,2SA933S (0.3W)		C851	87-010-186-080		CAP,CHIP 4700P
	87-026-213-080	CHIP-TR,DTC114YK					
	89-112-965-080	TR,2SA1296 (0.75W)		C852	87-010-178-080		CHIP CAP 1000P
				C853	87-018-211-080		CAP, CER 0.01-50<LH<S>>
	87-026-291-080	TR,DTC124XS		C853	87-A11-145-080		CAP,TC U 0.01-50 Z F<EXCEPT LH<S>>
	89-213-702-080	TR,2SB1370E		CN201	87-099-018-010		CONN,16P
	87-026-462-080	TR,2SC1740 S(RS 0.3W)		CN801	87-A60-110-010		CONN,4P V S2M-4W
	89-318-154-080	TR,2SC1815 (0.4W)					
	89-109-332-380	TR,2SA933RS		CNA302	8A-CD9-629-010		CONN ASSY,6P MA-TU
				CNA801	8A-CD9-630-010		CONN ASSY, 4P RPH
	89-113-187-080	TR,2SA1318TU		L801	87-007-342-010		COIL,OSC 85K BIAS
	87-026-295-080	TR,DTC144TK		SW801	8Z-CD9-609-010		SW,SL 1-6-2 PS62D01
	89-317-403-080	TR,2SC1740S					
	87-026-239-080	TR,DTC114TK (0.2W)		CD C.B			
	87-026-464-080	TR,DTC114TS (0.3W)					
DIODE				C30	87-010-260-080		CAP, ELECT 47-25V
				C261	87-010-402-080		CAP, ELECT 2.2-50V
				C262	87-010-402-080		CAP, ELECT 2.2-50V
	87-020-465-080	DIODE,1SS133 (110MA)		C263	87-010-178-080		CHIP CAP 1000P
	87-A40-128-080	C-VARI-CAP,HVU202A		C264	87-010-178-080		CHIP CAP 1000P
	87-027-607-080	ZENER,HZ7B3L					
	87-070-345-080	DIODE,1N4148		C265	87-010-263-080		CAP, ELECT 100-10V
	87-A40-648-080	ZENER,MTZJ8.2A		C266	87-010-263-080		CAP, ELECT 100-10V
				C267	87-010-112-080		CAP, ELECT 100-16V
	87-017-978-080	DIODE,1N4003		C268	87-010-112-080		CAP, ELECT 100-16V
	87-027-702-080	DIODE,ZENER HZ6C2L (200MA)		C271	87-010-237-080		CAP, ELECT 1000-16V
	87-A40-465-010	DIODE,FR202					
MAIN C.B				C272	87-010-237-080		CAP, ELECT 1000-16V
				C278	87-010-405-080		CAP, ELECT 10-50V
				C279	87-010-385-080		CAP, ELECT 220-25V
				C301	87-016-495-000		CAP,E 3300-25 M SMG
				C306	87-010-404-080		CAP, ELECT 4.7-50V
	C211	87-A11-603-080	CAP, S 0.15-16				
	C212	87-A11-603-080	CAP, S 0.15-16				
	C215	87-016-460-080	C-CAP,S 0.22-16 B	C307	87-010-401-080		CAP, ELECT 1-50V
	C216	87-016-460-080	C-CAP,S 0.22-16 B	C308	87-010-221-080		CAP, ELECT 470-10V
	C231	87-010-213-080	C-CAP,S 0.015-50 B	C311	87-010-263-080		CAP, ELECT 100-10V
				C312	87-010-385-080		CAP, ELECT 220-25V
				C321	87-010-197-080		CAP, CHIP 0.01 DM
	C232	87-010-213-080	C-CAP,S 0.015-50 B				
	C233	87-A10-201-080	C-CAP,S0.33-16 KB	C322	87-010-263-080		CAP, ELECT 100-10V
	C234	87-A10-201-080	C-CAP,S0.33-16 KB	C325	87-010-405-080		CAP, ELECT 10-50V
	C235	87-016-669-080	C-CAP,S 0.1-25 K B	C401	87-010-403-080		CAP, ELECT 3.3-50V
	C236	87-016-669-080	C-CAP,S 0.1-25 K B	C402	87-010-197-080		CAP, CHIP 0.01 DM
				C403	87-010-263-080		CAP, ELECT 100-10V
	C237	87-010-371-080	CAP, ELECT 470-50V				
	C239	87-010-197-080	CAP, CHIP 0.01 DM	C404	87-010-248-080		CAP, ELECT 220-10V
	C240	87-010-197-080	CAP, CHIP 0.01 DM	C405	87-010-197-080		CAP, CHIP 0.01 DM
	C247	87-010-401-080	CAP, ELECT 1-50V	C406	87-010-374-080		CAP, ELECT 47-10V
	C248	87-010-401-080	CAP, ELECT 1-50V	C407	87-010-178-080		CHIP CAP 1000P
				C408	87-010-198-080		CAP, CHIP 0.022
	C310	87-010-248-080	CAP, ELECT 220-10V				
	C316	87-010-263-080	CAP,E 100-10	C409	87-010-248-080		CAP, ELECT 220-10V
	C317	87-010-197-080	CAP, CHIP 0.01 DM	C410	87-010-263-080		CAP, ELECT 100-10V
	C801	87-010-248-080	CAP, ELECT 220-10V	C411	87-A11-177-080		C-CAP,S 0.15-16 K B
	C805	87-012-365-080	C-CAP,S 0.027-25VBK	C412	87-010-401-080		CAP, ELECT 1-50V
				C413	87-016-369-080		C-CAP,S 0.033-25 B K
	C806	87-012-365-080	C-CAP,S 0.027-25VBK				
	C807	87-010-405-080	CAP, ELECT 10-50V	C414	87-010-405-080		CAP, ELECT 10-50V
	C808	87-010-405-080	CAP, ELECT 10-50V	C416	87-010-545-080		CAP, ELECT 0.22-50V
	C809	87-010-401-080	CAP, ELECT 1-50V	C417	87-012-157-080		C-CAP,S 330P-50 CH
	C810	87-010-401-080	CAP, ELECT 1-50V	C418	87-010-213-080		C-CAP,S 0.015-50 B
				C419	87-A11-608-080		C-CAP,S 0.33-25 K B
	C811	87-010-178-080	CHIP CAP 1000P				
	C812	87-010-178-080	CHIP CAP 1000P	C420	87-016-369-080		C-CAP,S 0.033-25 B K
	C816	87-010-180-080	C-CER 1500P	C421	87-A11-177-080		C-CAP,S 0.15-16 K B
	C817	87-010-180-080	C-CER 1500P	C422	87-010-183-080		C-CAP,S 2700P-50 B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C2	87-010-316-080		C-CAP,S 33P-50 CH	L8	87-A50-335-010		COIL,FM IFT (TOKO)
C3	87-010-314-080		C-CAP,S 22P-50V	L9	87-A50-577-010		COIL,FM DET(ACD)
C4	87-010-322-080		C-CAP,S 100P-50 CH	L10	87-005-849-080		COIL,10UH(CECS)
C5	87-010-378-080		CAP, ELECT 10-16V	L16	87-A50-569-010		COIL,LW OSC-ACD(COI)<K<S>,EZ<S>>
C7	87-012-156-080		C-CAP,S 220P-50 CH	L17	87-A50-337-010		COIL,AM OSC (TOKO)<K<S>,EZ<S>>
C8	87-010-197-080		CAP, CHIP 0.01 DM	PVC1	87-A91-635-010		TUN-CAP,20P-140P E-ACD
C9	87-010-311-080		CAP 12P				(MITSUMI<K<S>,EZ<S>>
C10	87-010-197-080		CAP, CHIP 0.01 DM	PVC1	87-A91-167-010		TUN-CAP,20P-160P FA-22125 N000
C11	87-010-152-080		C-CAP,S 8P-50 D CH				<LH<S>,519LH1J<S>>
C12	87-010-314-080		C-CAP,S 22P-50V	SW1	87-A91-548-010		SW,SL-2-3 SK23E01G06
							<LH<S>,519LH1J<S>>
C13	87-010-322-080		C-CAP,S 100P-50 CH	SW1	87-A91-549-010		SW,SL-6-4 SK64D01G06<K<S>,EZ<S>>
C14	87-010-148-080		C-CAP,S 4P-50 C CH	TC5	87-011-253-080		TRIMER,30P LAR<K<S>,EZ<S>>
C15	87-016-669-080		C-CAP,S 0.1-25 K B				
C16	87-010-178-080		CHIP CAP 1000P	TC6	87-011-253-080		TRIMMER,CER 30P 4.0X4.5 ECR
C17	87-016-669-080		C-CAP,S 0.1-25 K B				<K<S>,EZ<S>>
C18	87-010-197-080		CAP, CHIP 0.01 DM				
			<LH<S>,519LH1J<S>>	H.P. C.B			
C18	87-010-188-080		CAP,CHIP 6800P<K<S>,EZ<S>>				
C19	87-016-669-080		C-CAP,S 0.1-25 K B	CN101	8A-CD9-628-010		CONN ASSY,3P MA-HP
C20	87-010-400-080		CAP, ELECT 0.47-50V	CN102	87-A60-685-010		CONN,4P H WHT EH
C21	87-010-403-080		CAP, ELECT 3.3-50V	HP1	87-A60-569-010		JACK,HTJ-035-18
C22	87-010-197-080		CAP, CHIP 0.01 DM				
C24	87-A11-569-080		C-CAP,S 0.012-50 K B				BATT1 C.B
			<LH<S>,519LH1J<S>>				
C24	87-010-189-080		C-CAP,S 8200P-50 K B<K<S>,EZ<S>>	C901	87-010-192-080		C-CAP,S 0.022-50 F
C25	87-010-189-080		C-CAP,S 8200P-50 K B<K<S>,EZ<S>>	C902	87-010-192-080		C-CAP,S 0.022-50 F
C25	87-A11-569-080		C-CAP,S 0.012-50 K B	C903	87-010-192-080		C-CAP,S 0.022-50 F
			<LH<S>,519LH1J<S>>	C904	87-010-192-080		C-CAP,S 0.022-50 F
				CNA901	8A-CD9-627-010		CONN ASSY,3P PWR
C26	87-012-358-080		C-CAP,S 0.47-10 Z F				
C27	87-012-358-080		C-CAP,S 0.47-10 Z F	APR901	87-A90-092-080		PROTECTOR,2.5A 491
C28	87-010-992-080		C-CAP,S 0.047-25 B	SP901	87-CD6-213-010		SPR-C,BATT (-)
C29	87-010-992-080		C-CAP,S 0.047-25 B	SP902	87-CD6-213-010		SPR-C,BATT (-)
C30	87-010-248-080		CAP, ELECT 220-10V				
C31	87-010-379-080		CAP, ELECT 22-16V				BATT2 C.B
C32	87-010-197-080		CAP, CHIP 0.01 DM				
C33	87-010-197-080		CAP, CHIP 0.01 DM	SP903	87-CD6-213-010		SPR-C,BATT (-)
C34	87-010-197-080		CAP, CHIP 0.01 DM	SP904	87-CD6-213-010		SPR-C,BATT (-)
C35	87-010-197-080		CAP, CHIP 0.01 DM				
C36	87-010-263-080		CAP, ELECT 100-10V				MOTOR C.B
C37	87-010-197-080		CAP, CHIP 0.01 DM				
C40	87-010-329-080		C-CAP,S 6P-50 D UJ<K<S>,EZ<S>>	M2	9X-262-576-910		MOTOR GEAR ASSY
C41	87-010-321-080		CHIP CAPACITOR,82P(J)<K<S>,EZ<S>>	PIN3	91-564-722-110		CONNECTOR 6P
C42	87-010-150-080		C-CAP,S 6P-50 CH<K<S>,EZ<S>>	SW1	91-572-085-120		LEAF SW
C44	87-012-140-080		CAP 470P<K<S>,EZ<S>>				
C51	87-010-197-080		CAP, CHIP 0.01 DM				KEY C.B
C56	87-010-327-080		C-CAP,S 4P-50 C UJ				
			<LH<S>,519LH1J<S>>	S606	87-A90-696-080		SW,TACT TS2103-03-430
C92	87-010-178-080		CHIP CAP 1000P	S607	87-A90-696-080		SW,TACT TS2103-03-430
CF1	87-A90-128-010		FLTR,AM IF CFAL-455	S608	87-A90-696-080		SW,TACT TS2103-03-430
CF2	87-008-261-010		FILTER, SFE10.7MA5-A				
CF3	87-008-261-010		FILTER, SFE10.7MA5-A				VOL SEL C.B<LH<S>,519LH1J<S>>
CN2	87-A60-116-010		CONN,6P H S2M-6WR				
L2	87-A50-560-010		COIL,FM BPF(ACD)	SW901	87-A91-369-010		SW,AC SL 2 2 2 SDKGA41700
L3	8A-CD9-660-010		BAR-ANT,MW 2B-ACD(COI)				<LH<S>,519LH1J<S>>
			<LH<S>,519LH1J<S>>				
L3	8A-CD9-661-010		BAR-ANT,MW/LW 3B-ACD(COI)				
			<K<S>,EZ<S>>				
L4	87-A50-562-010		COIL,FM RF EX(ACD)				
L5	87-A50-564-010		COIL,FM OSC EX(ACD)				
L6	87-A50-337-010		COIL,AM OSC (TOKO)				
			<LH<S>,519LH1J<S>>				
L7	87-A50-579-010		COIL,AM IFT(ACD)				

- Regarding connectors, they are not stocked as they are not the initial order items. The connectors are available after they are supplied from connector manufacturers upon the order is received.

○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

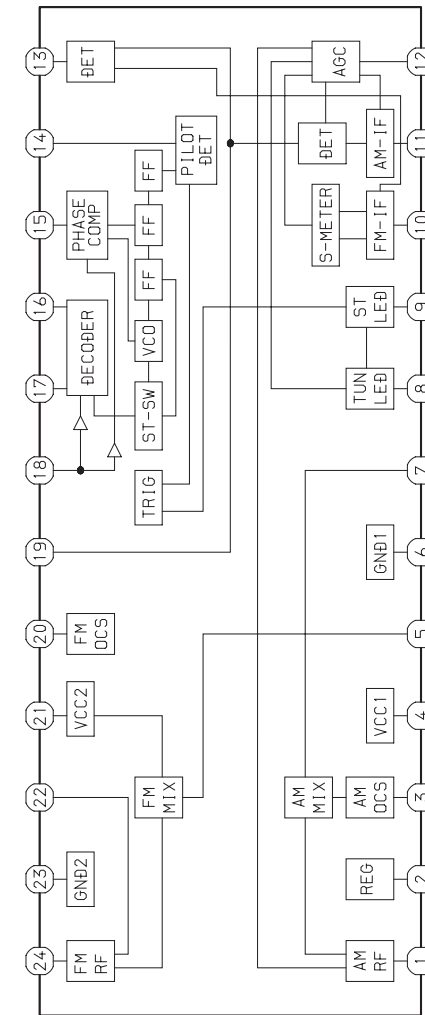
桁表示
Figure
抵抗値
Value of resistor

チップ抵抗
Chip resistor

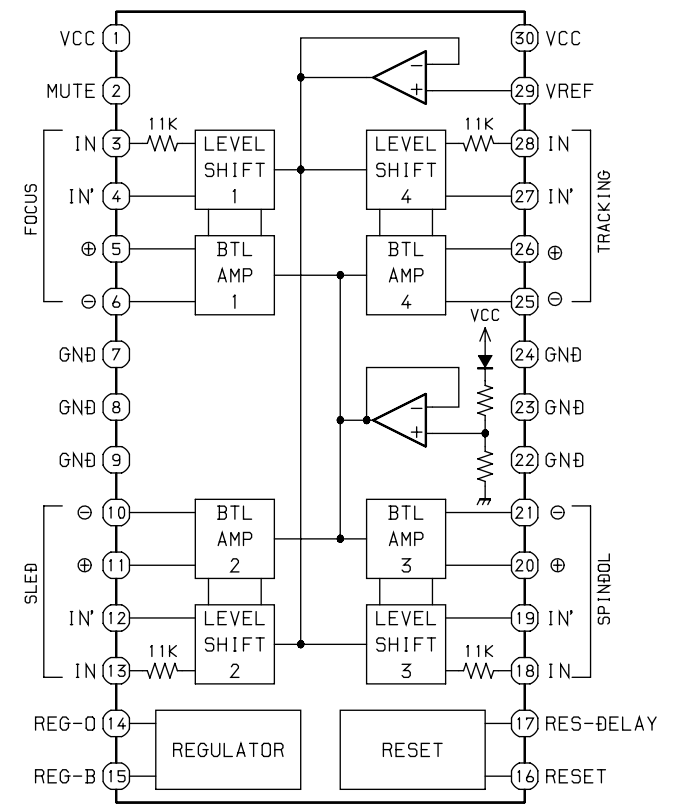
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

IC BLOCK DIAGRAM

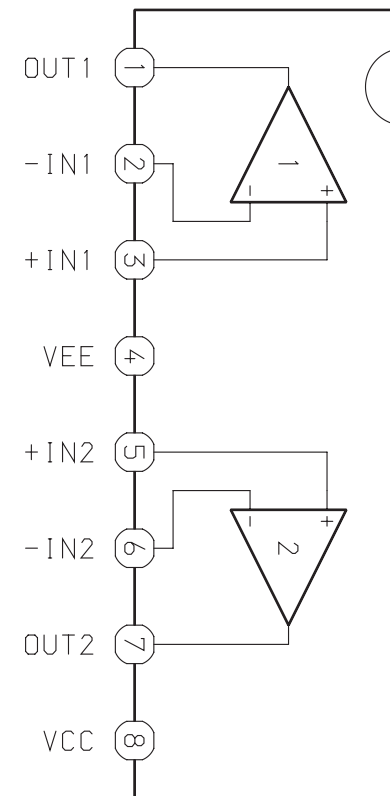
IC, LA1828



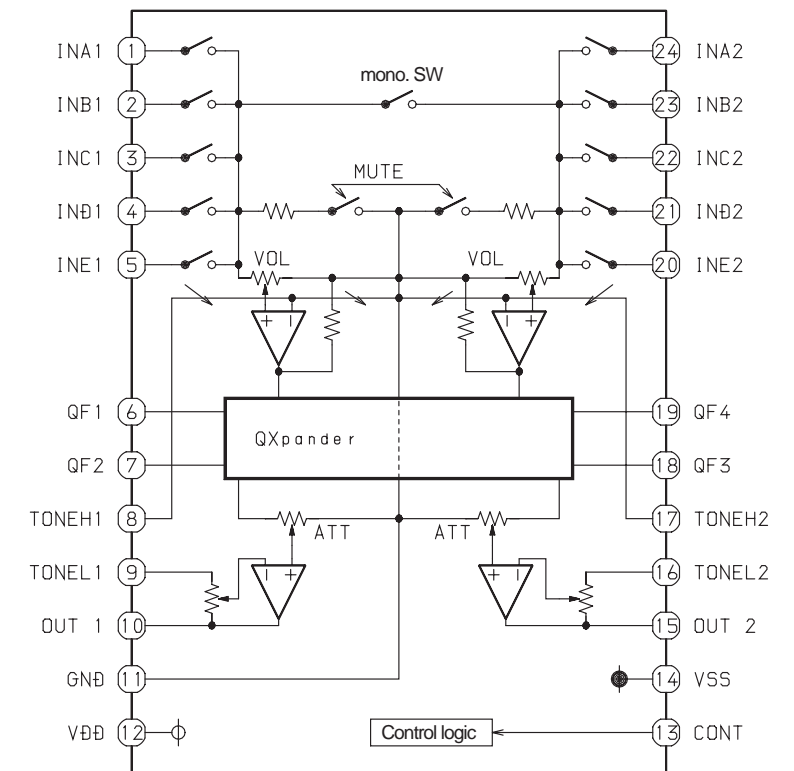
IC, LA6541D



IC, BA4560N



IC, M61509FP



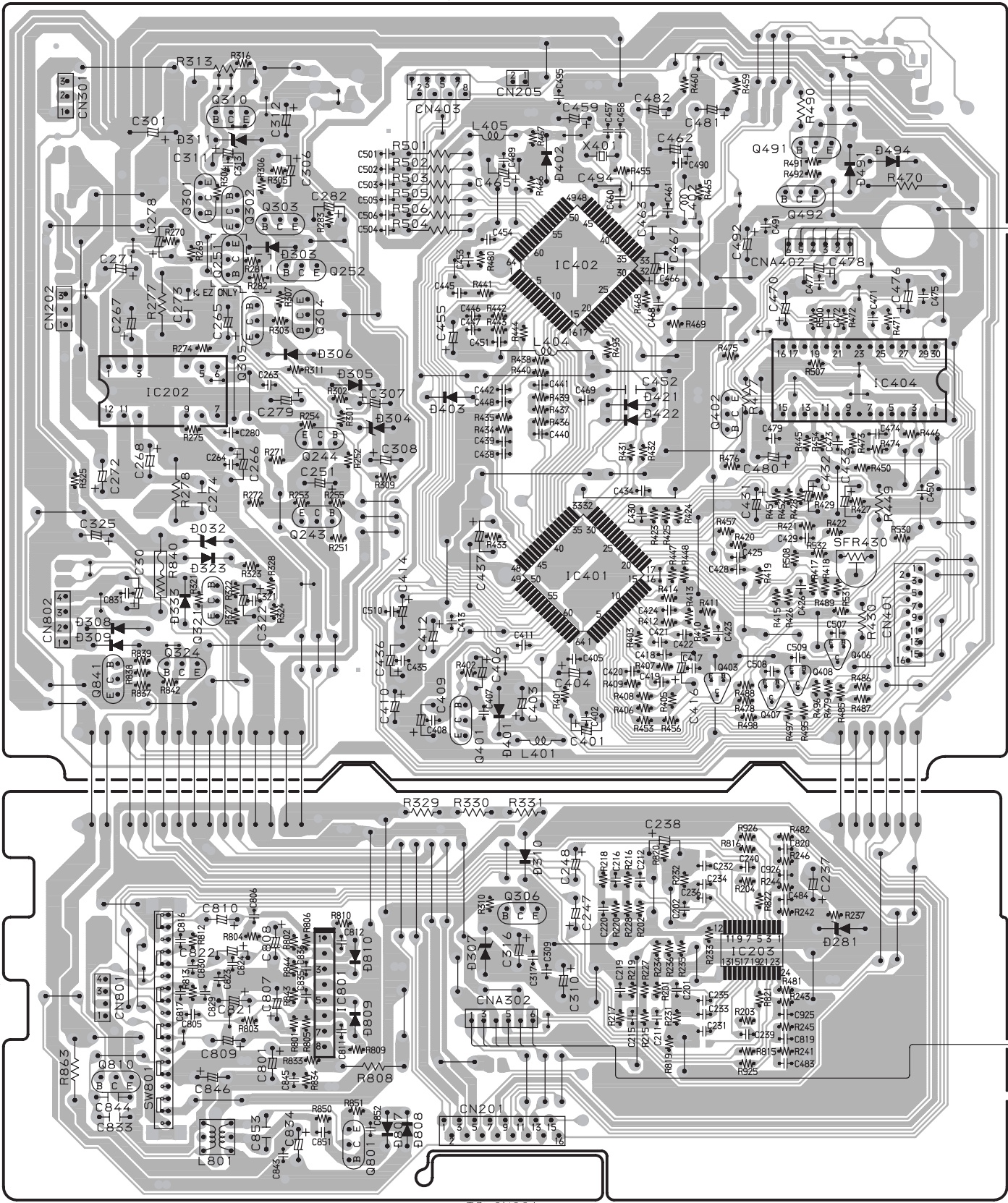
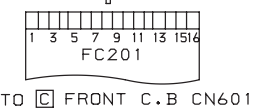
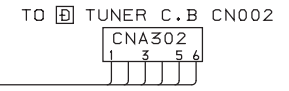
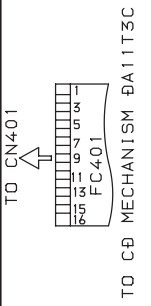
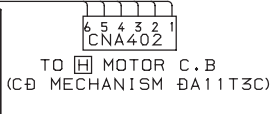
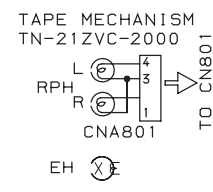
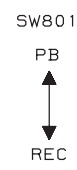
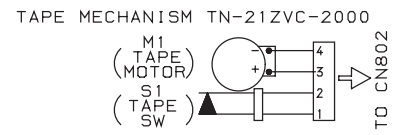
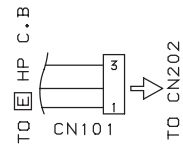
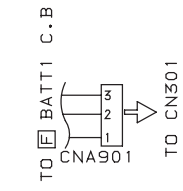
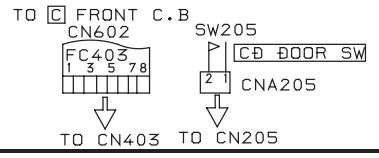
WIRING-1 (MAIN/CD)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

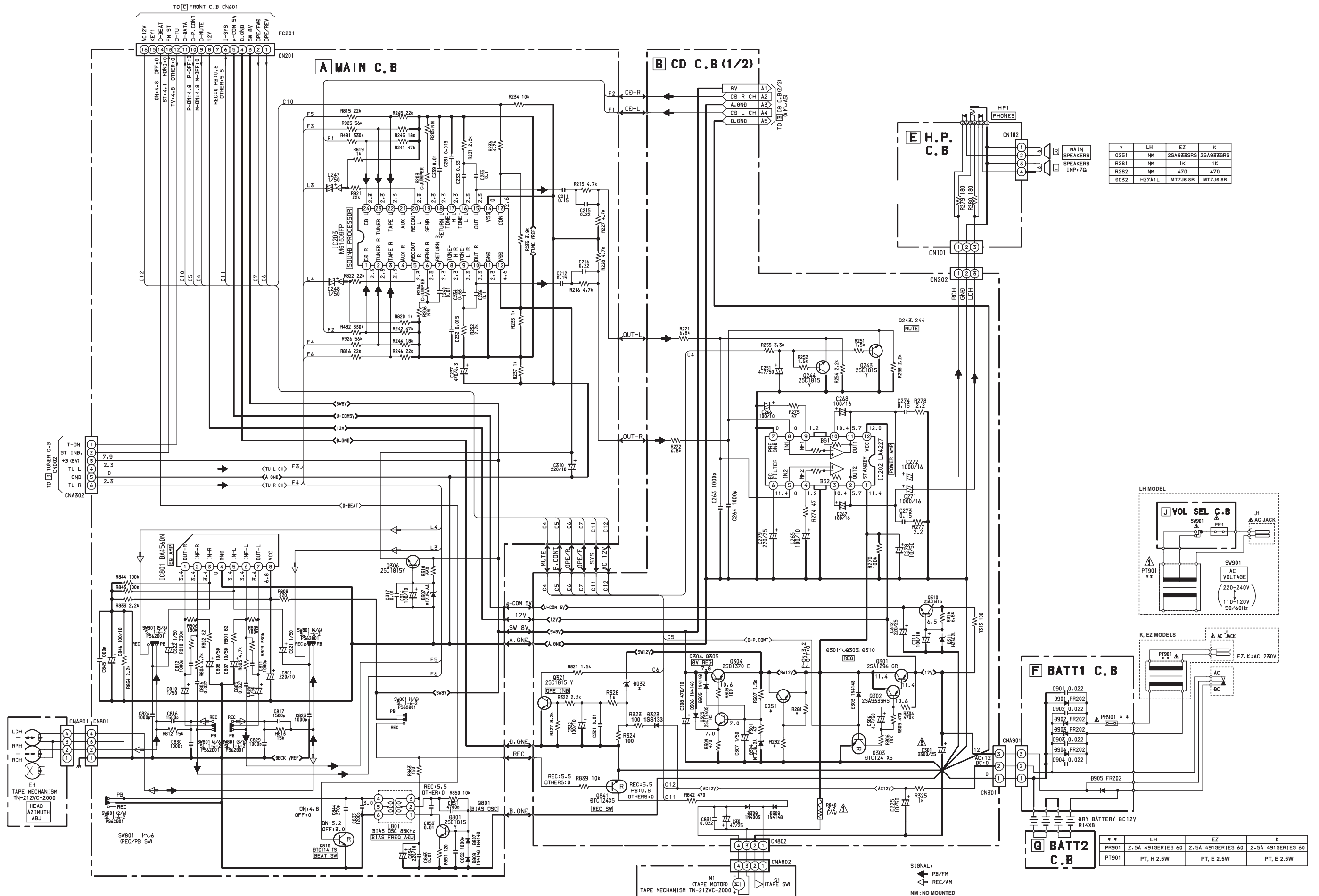
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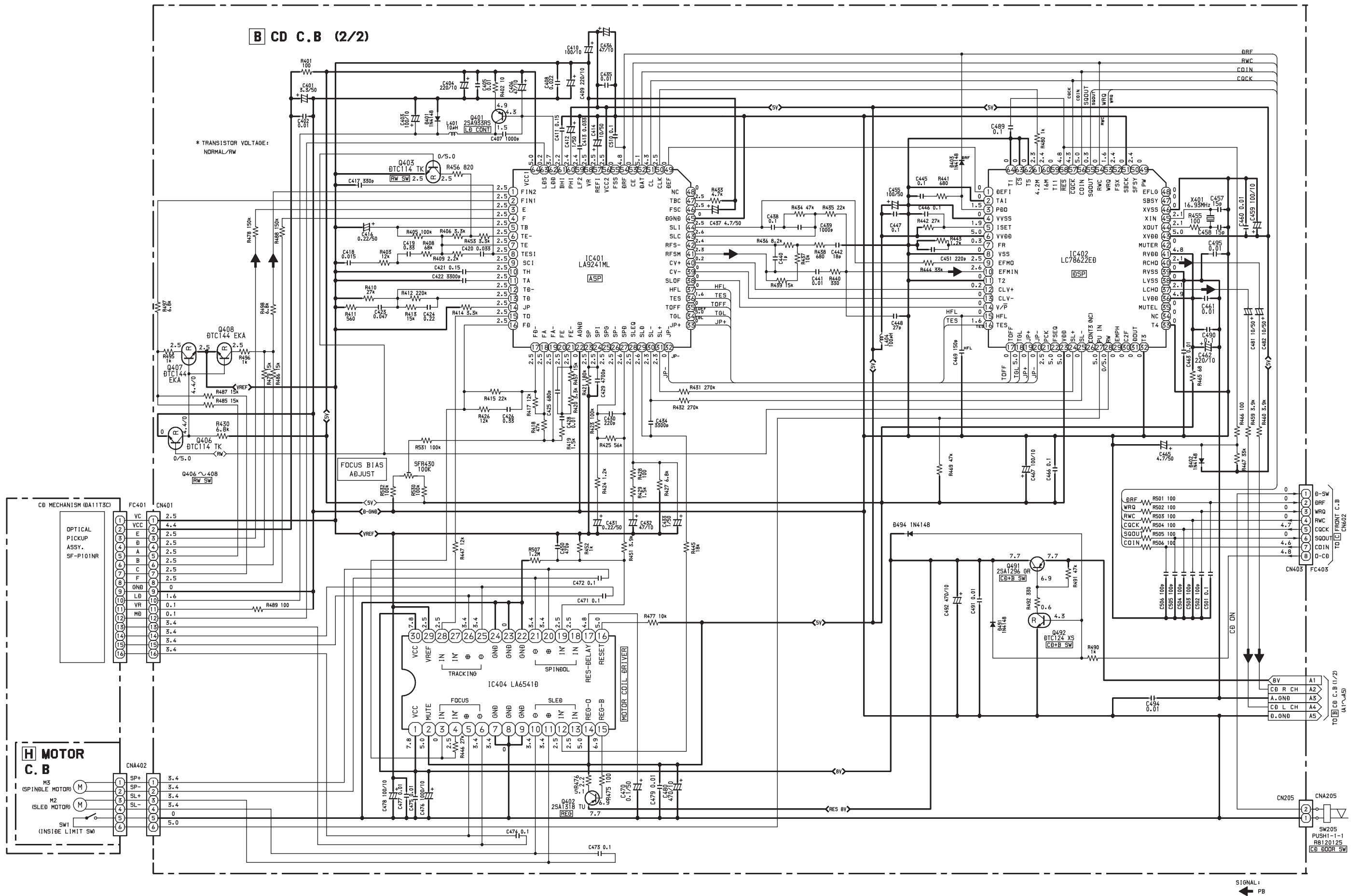
A MAIN C.B

B CD C.B



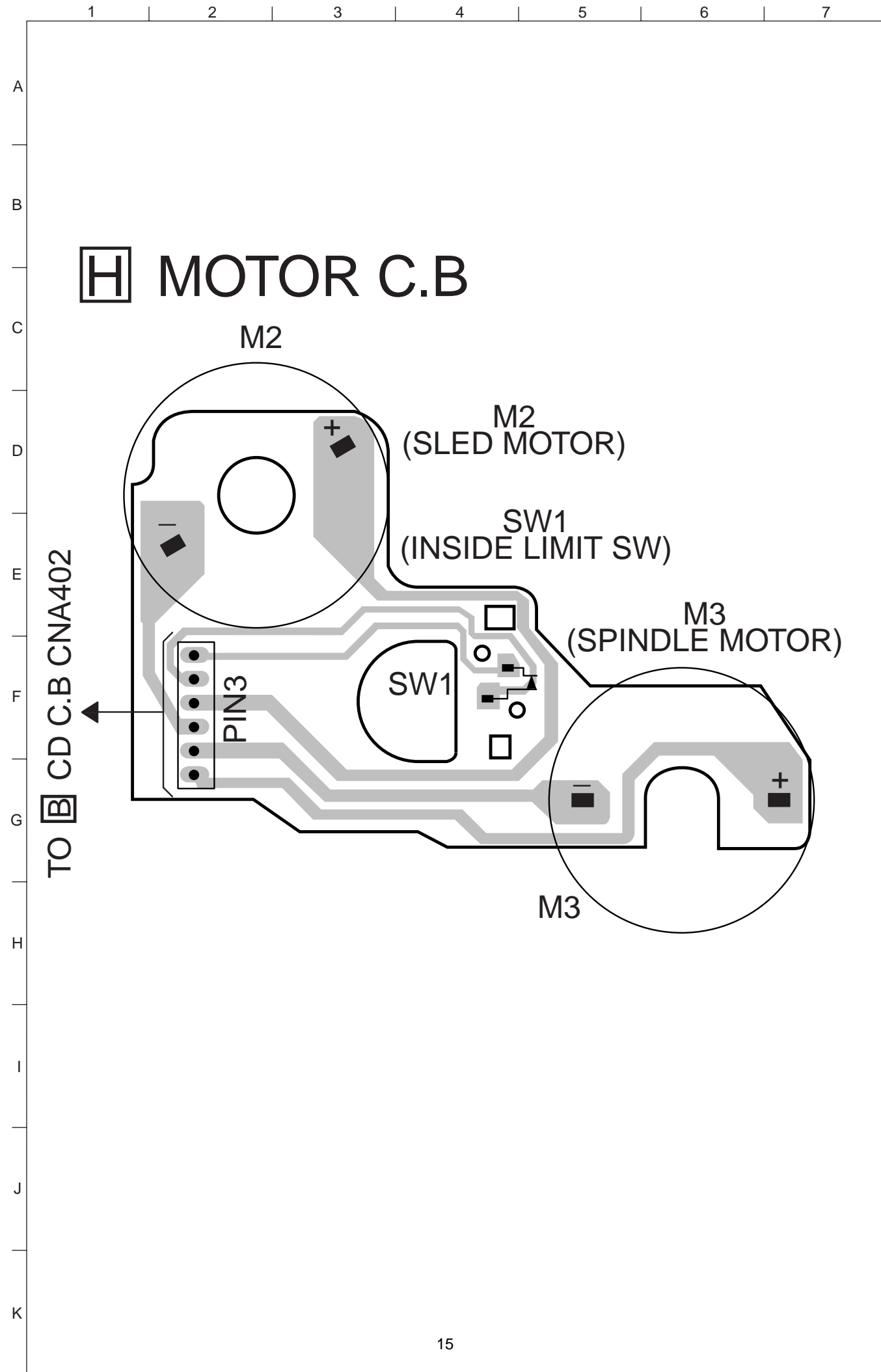
SCHEMATIC DIAGRAM-1 (MAIN)



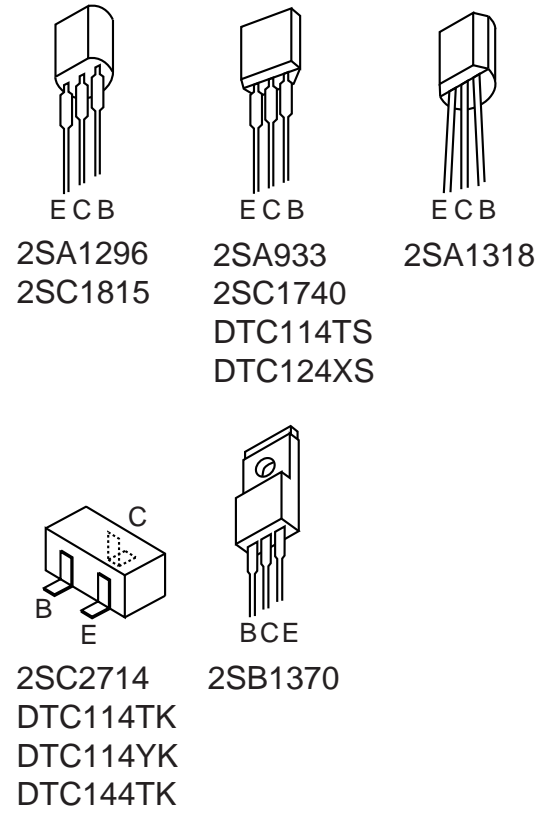


SIGNAL: ← PB

WIRING-2 (MOTOR)



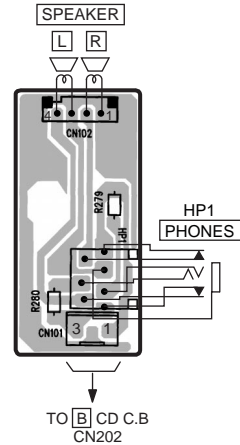
TRANSISTOR ILLUSTRATION



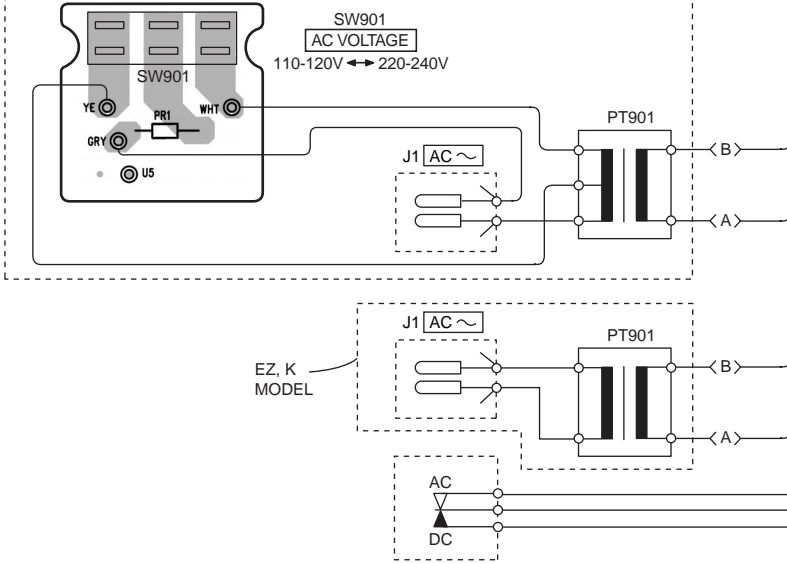
1 2 3 4 5 6 7 8 9 10 11 12 13 14

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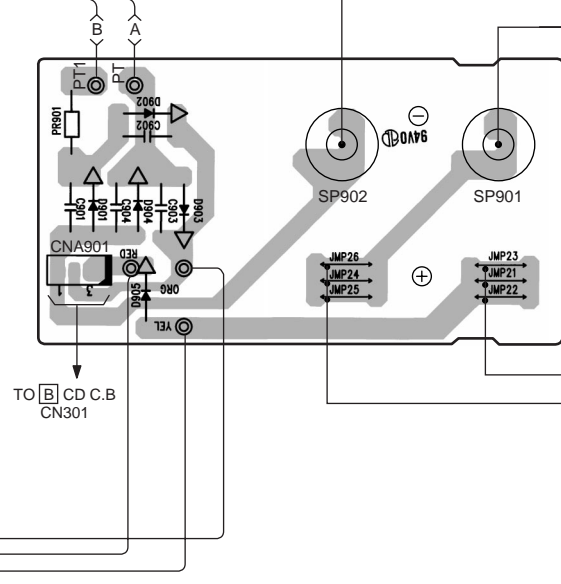
E H.P. C.B (INSERTED PARTS)



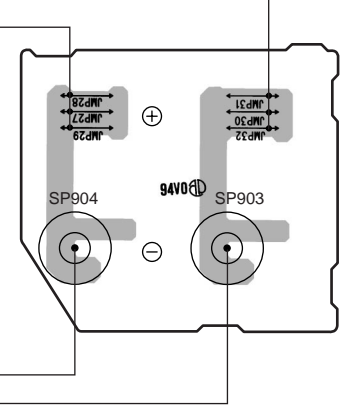
J VOL SEL C.B (INSERTED PARTS)



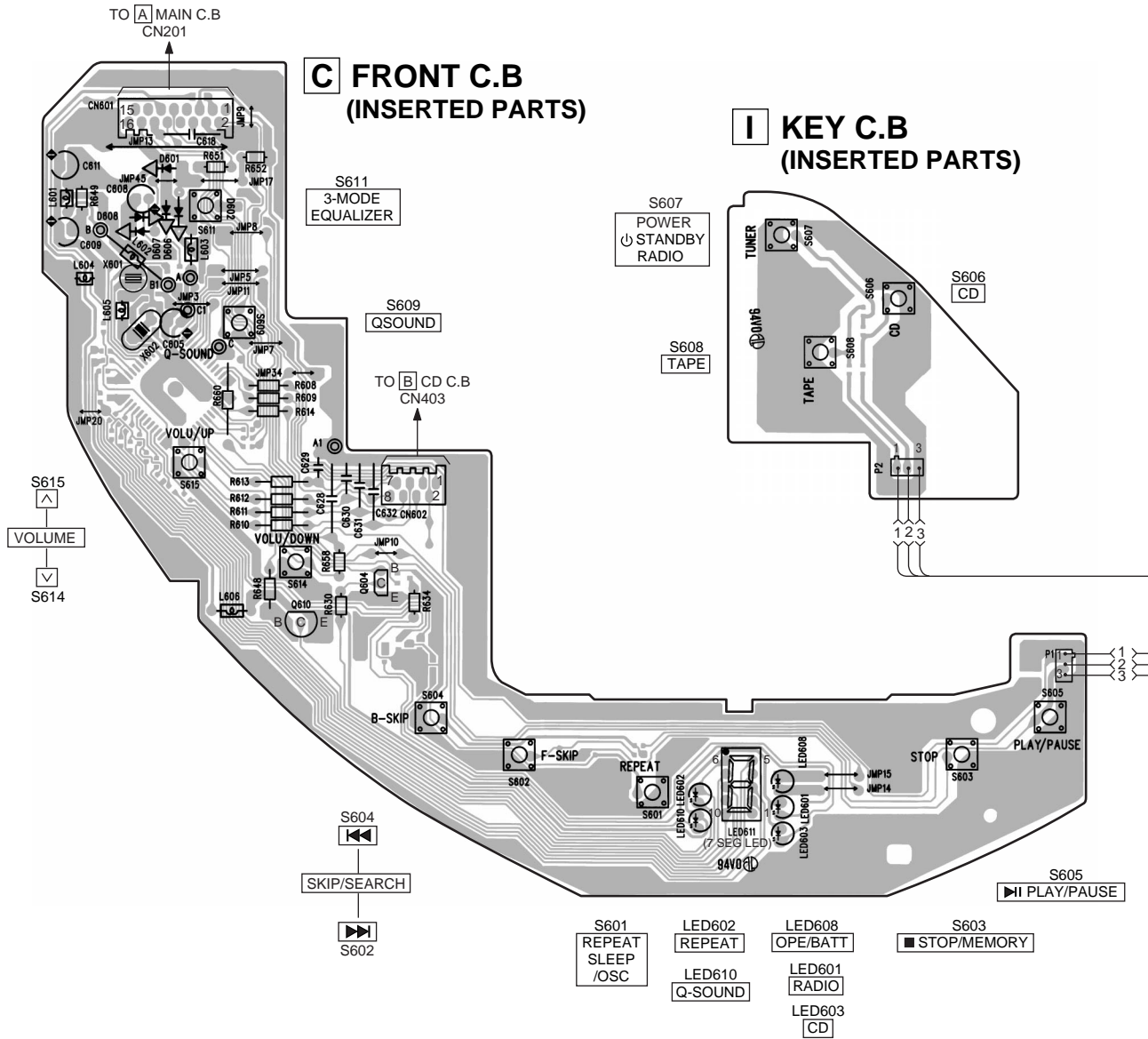
F BATT1 C.B (INSERTED PARTS)



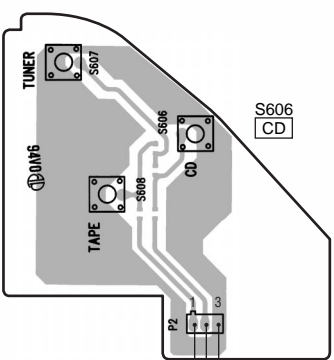
G BATT2 C.B (INSERTED PARTS)



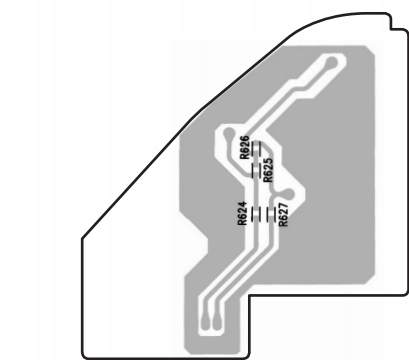
C FRONT C.B (INSERTED PARTS)



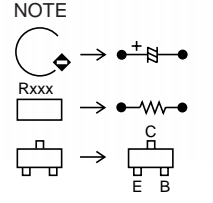
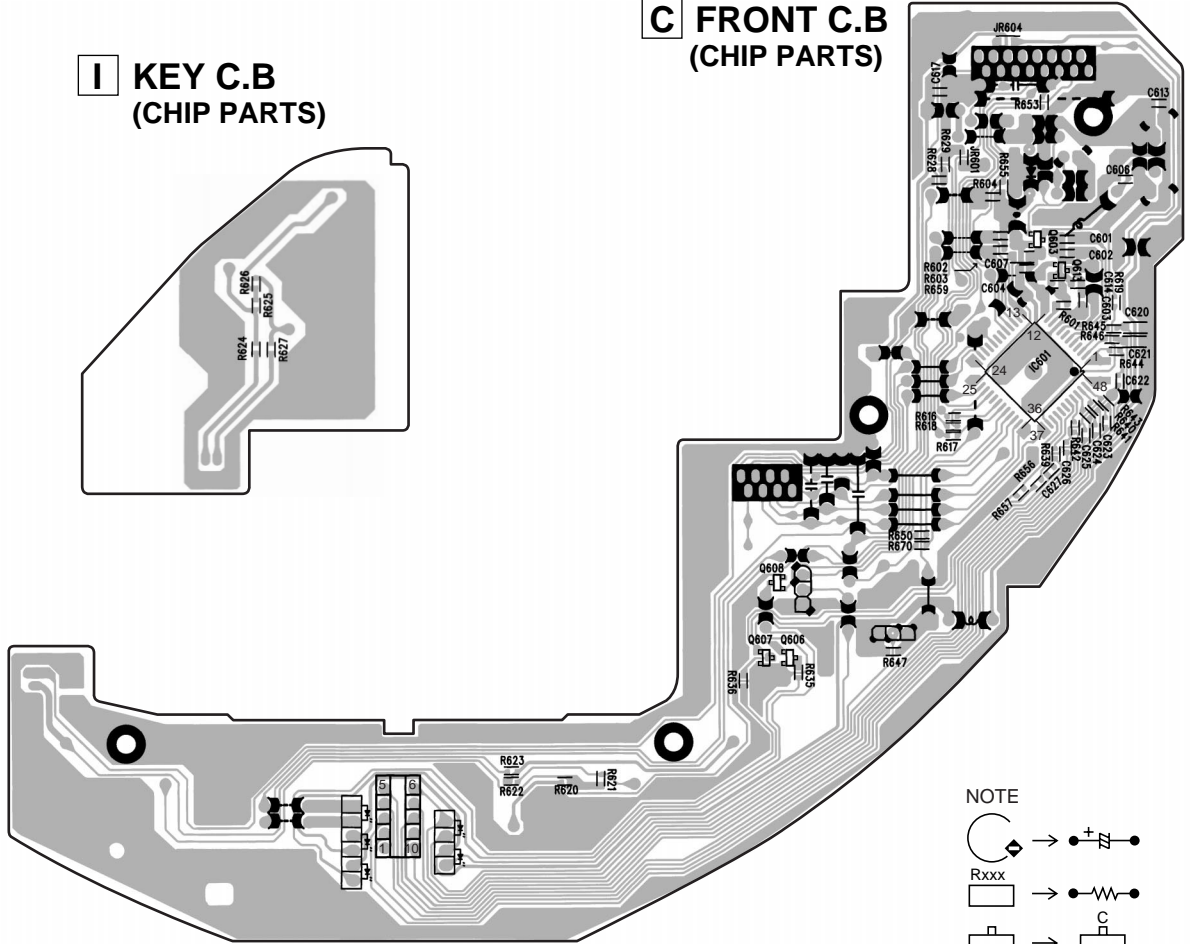
I KEY C.B (INSERTED PARTS)



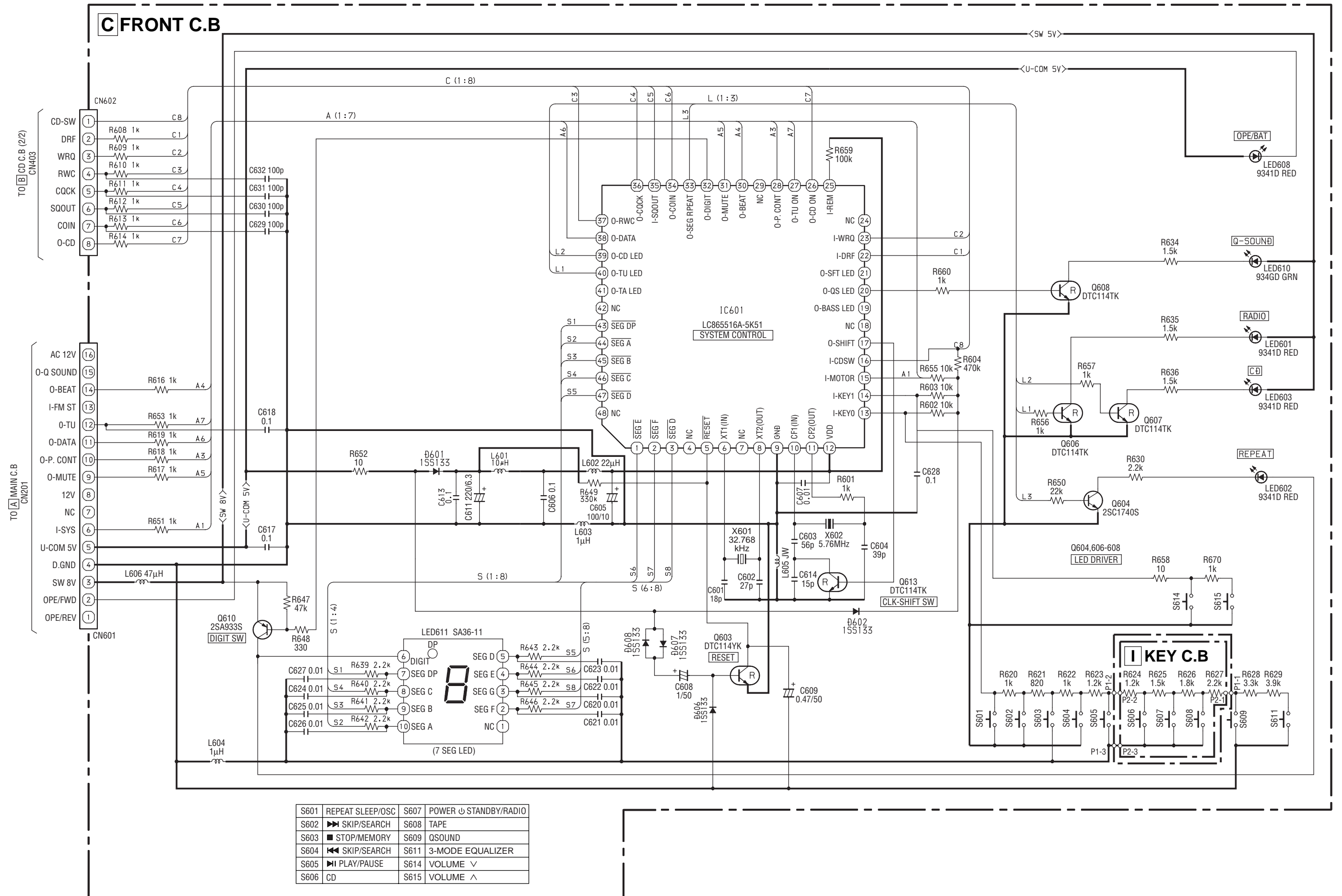
I KEY C.B (CHIP PARTS)



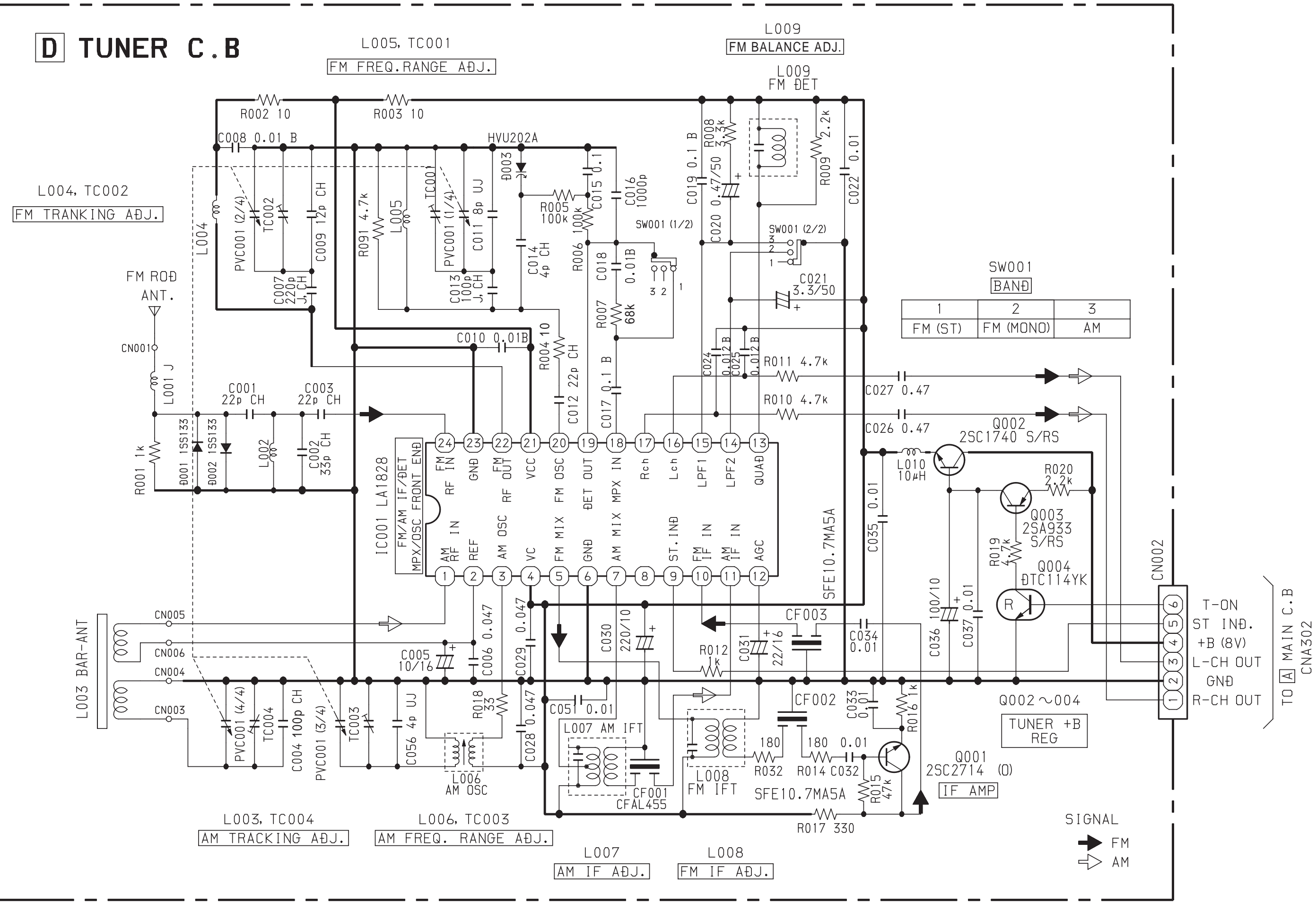
C FRONT C.B (CHIP PARTS)



SCHEMATIC DIAGRAM-3 (FRONT/KEY)



D TUNER C.B



SW001 BAND		
1	2	3
FM (ST)	FM (MONO)	AM

TO MAIN C.B
CNA302

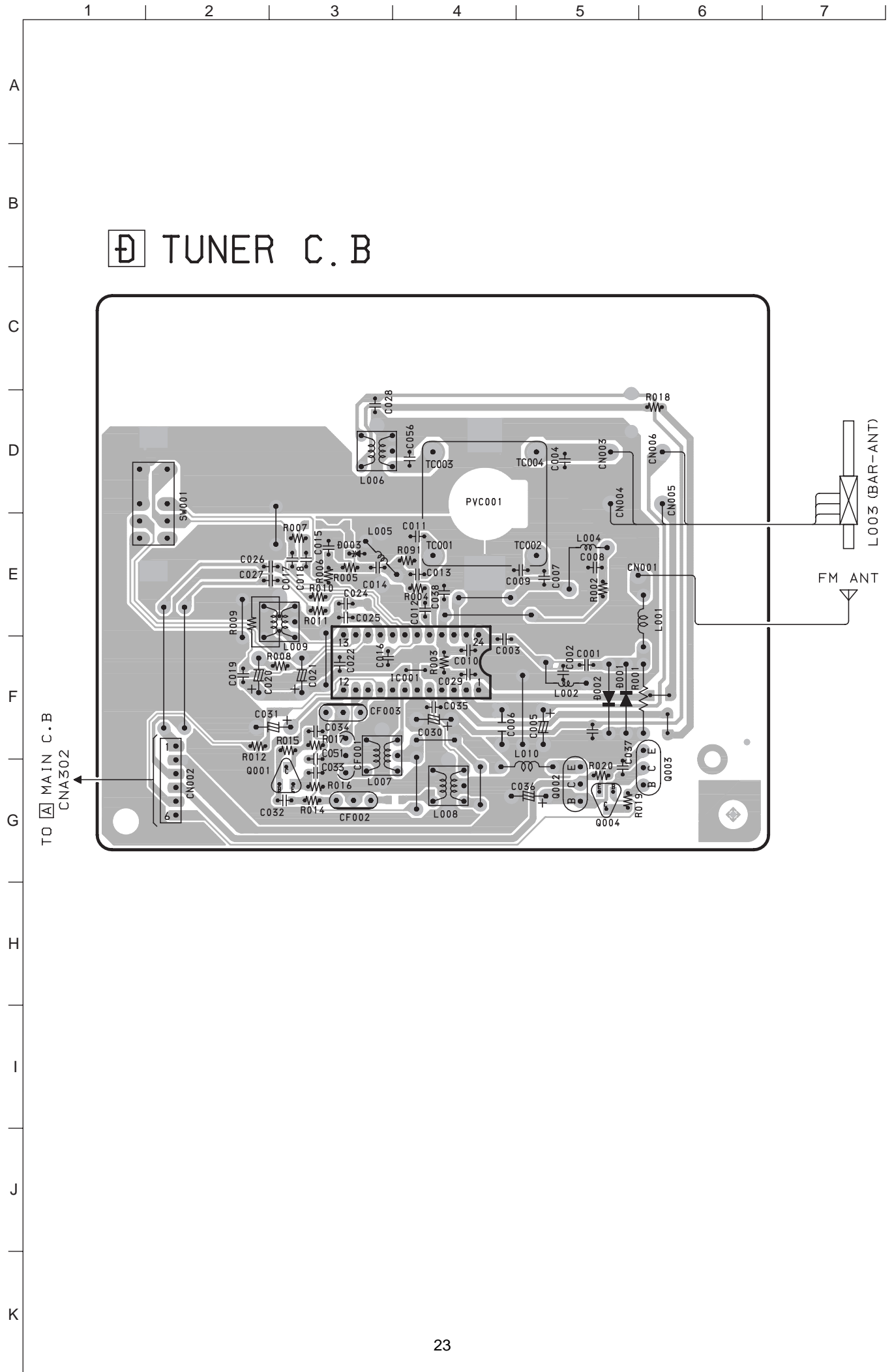
1 2 3 4 5 6

T-ON
ST INB.
+B (8V)
L-CH OUT
GND
R-CH OUT

SIGNAL

FM
AM

WIRING-4 (TUNER: LH)

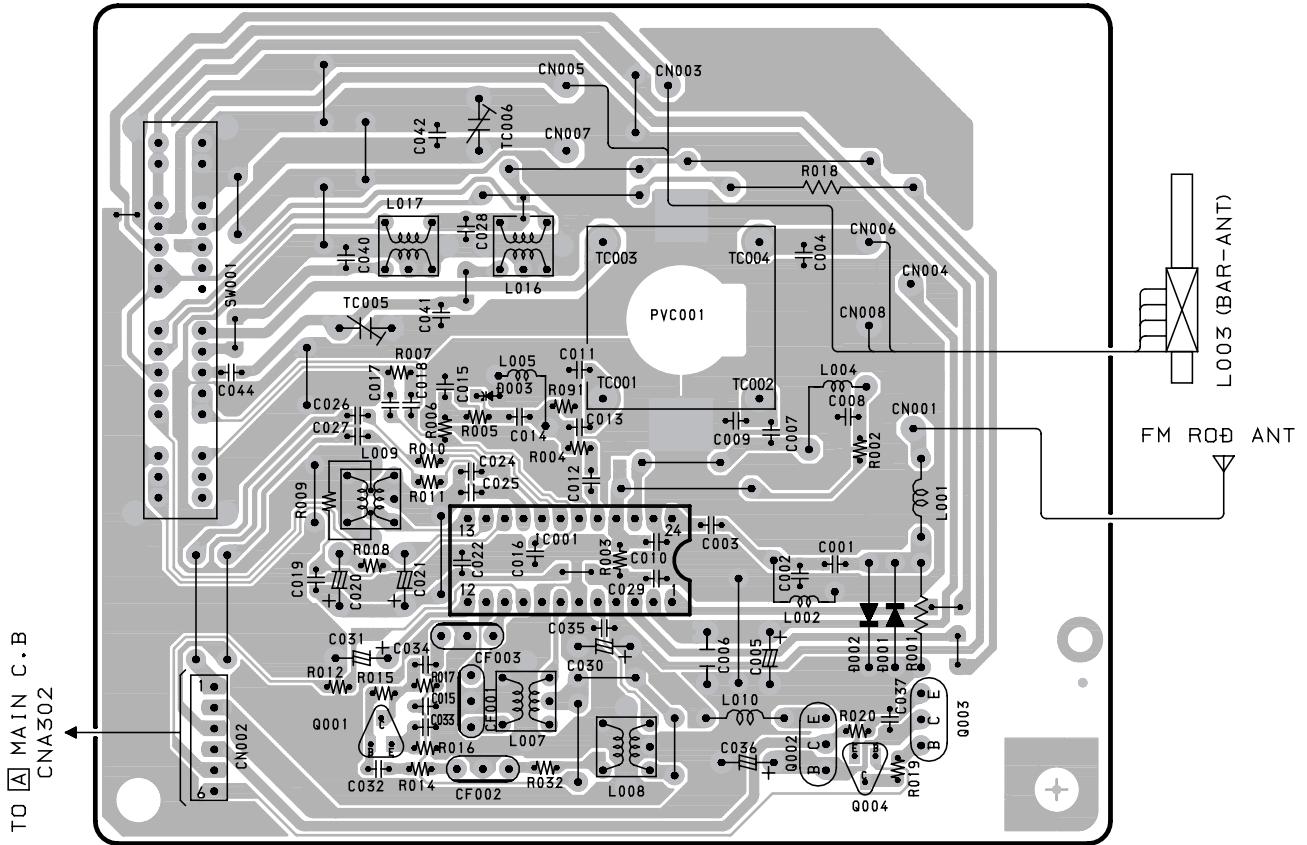


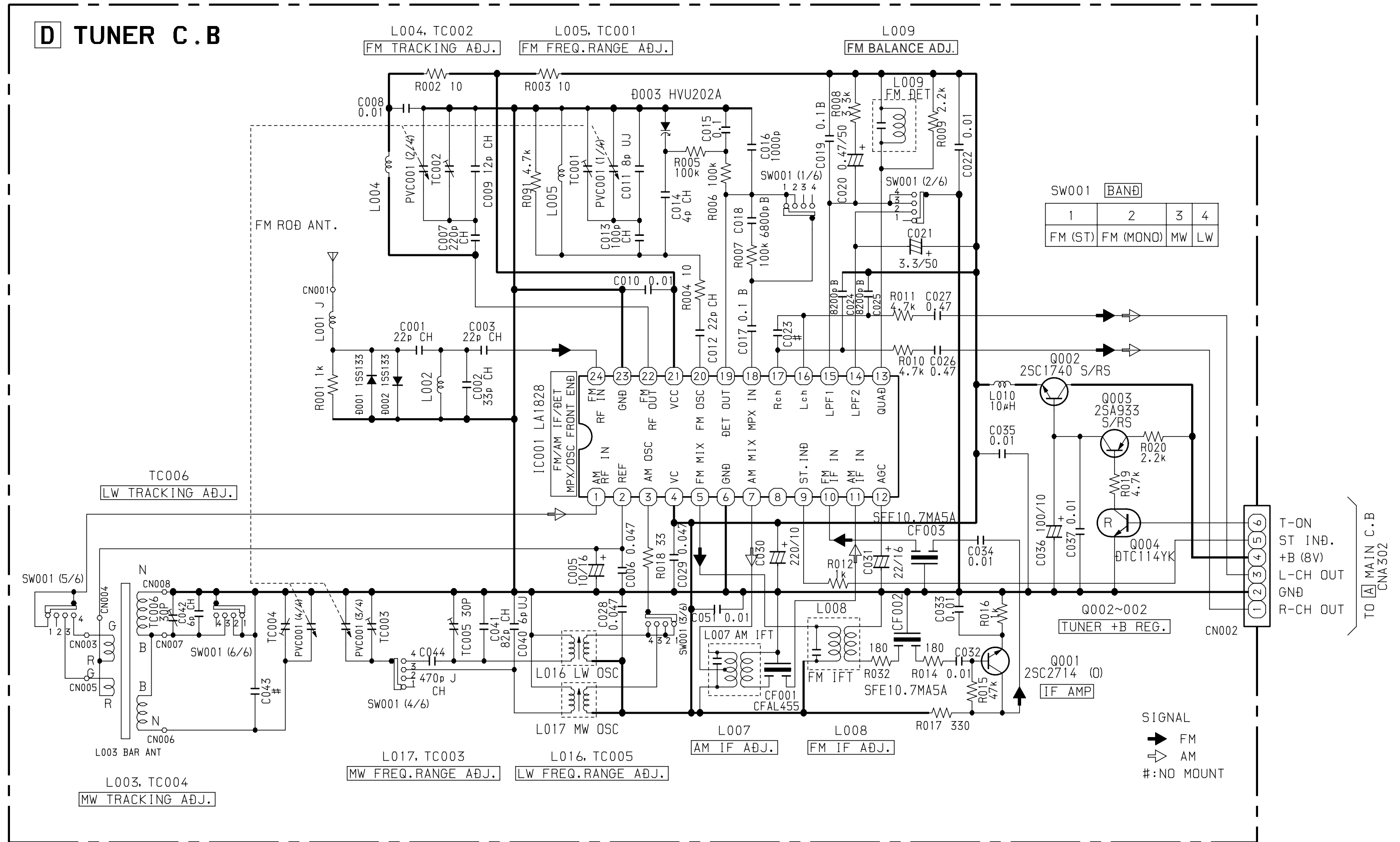
WIRING-5 (TUNER: K, EZ)

1 2 3 4 5 6 7

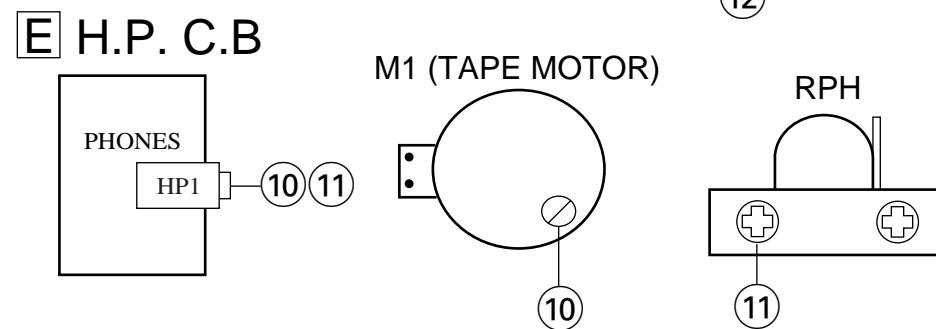
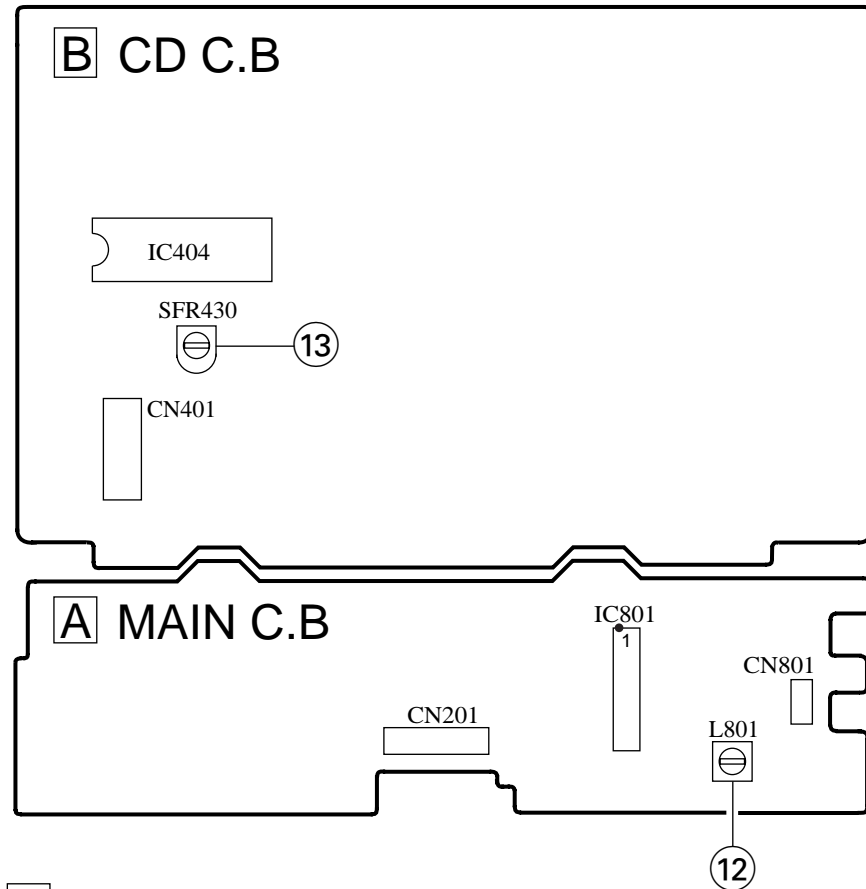
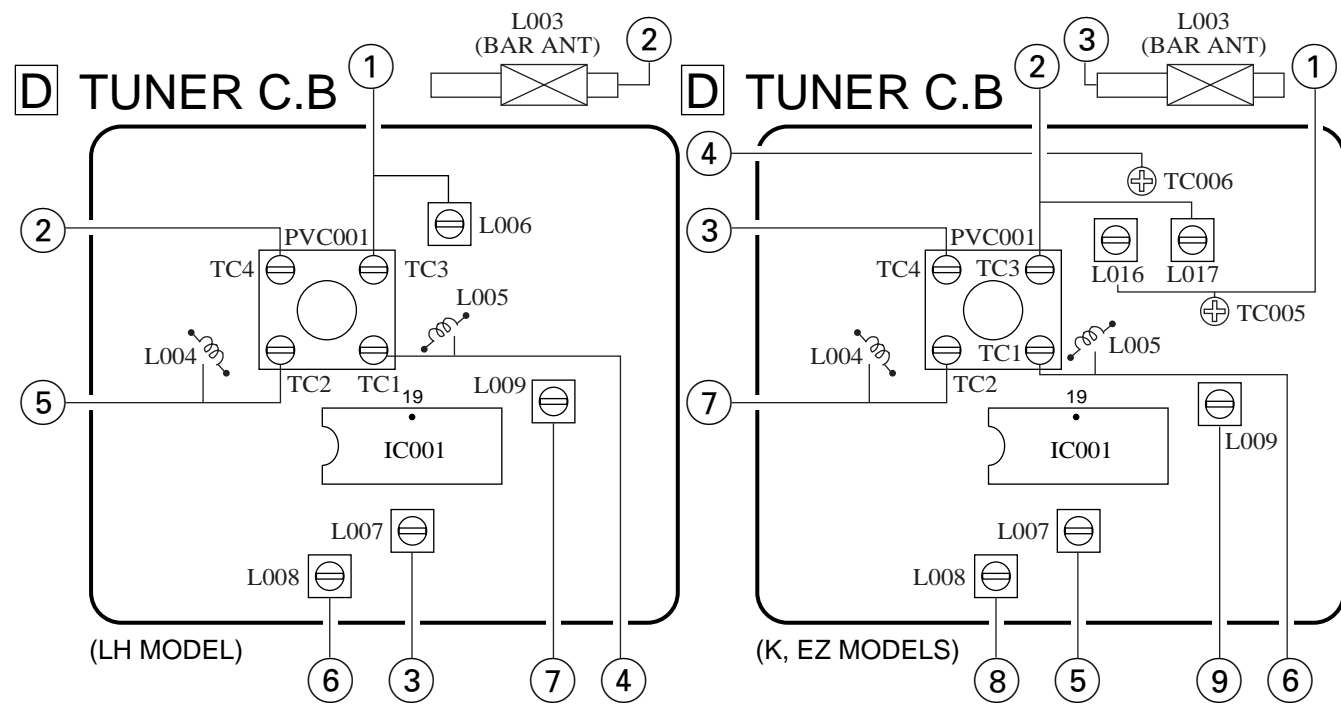
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TUNER C.B





ELECTRICAL ADJUSTMENT



< TUNER SECTION >

(LH MODEL)

1. AM Freq. Range Adjustment
L006 517kHz
TC003 1750kHz
2. AM Tracking Adjustment
L003 600kHz
TC004 1400kHz
3. AM IF Adjustment
Settings: • Test point: IC001 (LA1828) 19PIN
• Adjustment location: L007
Method: Adjust L007 so that the output level at 1400kHz becomes maximum.
4. FM Freq. Range Adjustment
L005 87.0MHz
TC001 109.0MHz
5. FM Tracking Adjustment
L004 88.0MHz
TC002 108.0MHz
6. FM IF Adjustment
Settings: • Test point: IC001 (LA1828) 19PIN
• Adjustment location: L008
Method: Adjust L008 so that the output level at 98.0MHz becomes balanced.
7. FM Balance Adjustment
Settings: • Test point: IC001 (LA1828) 19PIN
• Adjustment location: L009
Method: Adjust L009 so that the output level at 98.0MHz becomes balanced.

(K, EZ MODELS)

1. LW Freq. Range Adjustment
L016 145kHz
TC005 295kHz
2. MW Freq. Range Adjustment
L017 515kHz
TC003 1635kHz
3. MW Tracking Adjustment
L003 600kHz
TC004 1400kHz
4. LW Tracking Adjustment
TC006 288kHz
5. AM IF Adjustment
Settings: • Test point: IC001 (LA1828) 19PIN
• Adjustment location: L007
Method: Adjust L007 so that the output level at 1400kHz becomes maximum.

6. FM Freq. Range Adjustment
L005 87.4MHz
TC001 108.3MHz
7. FM Tracking Adjustment
L004 88.0MHz
TC002 108.0MHz
8. FM IF Adjustment
Settings: • Test point: IC001 (LA1828) 19PIN
• Adjustment location: L008
Method: Adjust L008 so that the output level at 98.0MHz becomes balanced.
9. FM Balance Adjustment
Settings: • Test point: IC001 (LA1828) 19PIN
• Adjustment location: L009
Method: Adjust L009 so that the output level at 98.0MHz becomes balanced.

< DECK SECTION >

10. Tape Speed Adjustment
Settings : • Test tape : TTA-100
• Test point : J251 (PHONES jack)
• Adjustment location : SFR of deck motor
Method : Play back the test tape and adjust SFR so that the frequency counter reads 3000Hz±30Hz.
11. Head Azimuth Adjustment
Settings : • Test tape : TTA-320
• Test point : J251 (PHONES jack)
• Adjustment location : Azimuth adjustment screw
Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.
12. Bias frequency Adjustment
L801 85kHz±0.5kHz

< CD SECTION >

13. FE Balance Adjustment
Settings : • Test point : IC401 PIN58 (VR), IC401 PIN 20 (FE)
• Adjustment location : SFR430
Method : Playback the disc and adjust SFR430 so that the test point voltage becomes 0V.

PRACTICAL SERVICE FIGURE

< TUNER SECTION >

< FM SECTION >

Sensitivity: (THD 3%)	Less than 19dB (88.0MHz) Less than 18dB (98.0MHz) Less than 18dB (108.0MHz)
Signal to Noise Ratio: (Input 60dB)	LH MODEL: More than 57dB (at 98.0MHz) K, EZ MODELS: More than 50dB (at 98.0MHz)
Distortion: (Input 60dB)	Less than 1.5% (at 98.0MHz)
Intermediate frequency:	10.7MHz \pm 0.1MHz
Stereo separation:	More than 22dB (at 98MHz)

< AM/MW SECTION >

Sensitivity: (S/N 10dB)	Less than 45dB (at 600kHz) Less than 45dB (at 1000kHz) Less than 45dB (at 1400kHz)
Distortion: (Input 74dB)	Less than 3.0%
Intermediate frequency:	455kHz \pm 3.5kHz

< LW SECTION > (K, EZ MODELS)

Sensitivity: (S/N 10dB)	Less than 57dB (at 153/198/288kHz)
Signal to Noise Ratio: (Input 74dB)	More than 24dB (at 198kHz)
Distortion: (Input: 74/120dB)	Less than 3% (at 198kHz)

< CASSETTE SECTION >

Tape speed:	3000Hz+3%-2%
Wow & flutter:	Less than 0.35% (JIS RMS)
S/N ratio:	More than 35dB
Distortion:	Less than 3.0% (PB)
Noise (PB):	Less than 1mV (DC, MIN)
	Less than 1.2mV (AC, MIN)
Erasing Ratio (W/O FILTER):	More than 45dB

IC DESCRIPTION

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	AGND	—	Analog signal GND.
23	SP	O	Signal 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	DGND	—	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.

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	ISET	I		Pin to which external resistor adjusting the PDO 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	$\overline{V/P}$	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 the sync 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	CONT3 (NC)	—	Not connected.	
27	PUIN	I	CD pickup inner switch detection.	
28	\overline{RW}	O	Read, write signal.	
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	$\overline{\text{CQCK}}$	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	$\overline{\text{CS}}$	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, LC865516A-5K51

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{SEG E}}$	O	SEG E control.
2	$\overline{\text{SEG F}}$	O	SEG F control.
3	$\overline{\text{SEG G}}$	O	SEG G control.
4	NC	—	Not connected.
5	$\overline{\text{RESET}}$	I	Micro processor reset input
6	XT1 (IN)	I	Connected to an external 32.768 kHz crystal oscillator.
7	NC	—	Not connected.
8	XT2 (OUT)	O	Connected to an external 32.768 kHz crystal oscillator.
9	GND	—	GND.
10	CF1 (IN)	I	Connected to an external 5.76 MHz ceramic filter.
11	CF2 (OUT)	O	Connected to an external 5.76 MHz ceramic filter.
12	VDD	—	Microprocessor power supply (+5V).
13	I-KEY0	I	Key AD input. (AD)
14	I-KEY1	I	Key AD input. (AD)
15	I-MOTOR	I	Deck status input. (AD)
16	I-CD SW	I	CD door switch status input.
17	O-SHIFT	O	Main clock shift output.
18	NC	—	Not connected.
19	O-BASS LED	O	BASS LED ON/OFF control output. (Not connected)
20	O-QS LED	O	Q sound LED ON/OFF control output. (Not connected)
21	O-SFT LED	—	Not connected.
22	I-DRF	I	CD RF level detection input.
23	I-WRQ	I	CD subcode Q standby input.
24	NC	—	Not connected.
25	I-REM	—	Remote control input.
26	O-CD ON	O	CD power control output.
27	O-TU ON	O	TU power control output.
28	O-P.CONT	O	The main power supply control output.
29	NC	—	Not connected.
30	O-BEAT	O	Beat control.
31	O-MUTE	O	Main mute output.
32	O-DIGIT	O	7-segment LED power supply control output.
33	O-SEG RPEAT	O	REPEAT LED ON/OFF control output.
34	O-COIN	O	CD command output.
35	I-SQOUT	I	CD subcode Q input.
36	O-CQCK	O	CD command/CLK for subcode.
37	O-RWC	O	CD read/write control output.
38	O-DATA	O	Data output to M62349FP.
39	O-CD LED	O	LED ON/OFF control output for the CD function.
40	O-TU LED	O	LED ON/OFF control output for the TU function.
41	O-TA LED	O	LED ON/OFF control output for the TA function. (Not connected)

Pin No.	Pin Name	I/O	Description
42	NC	—	Not connected.
43	$\overline{\text{SEG DP}}$	O	SEG DP control.
44	$\overline{\text{SEG A}}$	O	SEG A control.
45	$\overline{\text{SEG B}}$	O	SEG B control.
46	$\overline{\text{SEG C}}$	O	SEG C control.
47	$\overline{\text{SEG D}}$	O	SEG D control.
48	NC	—	Not connected.

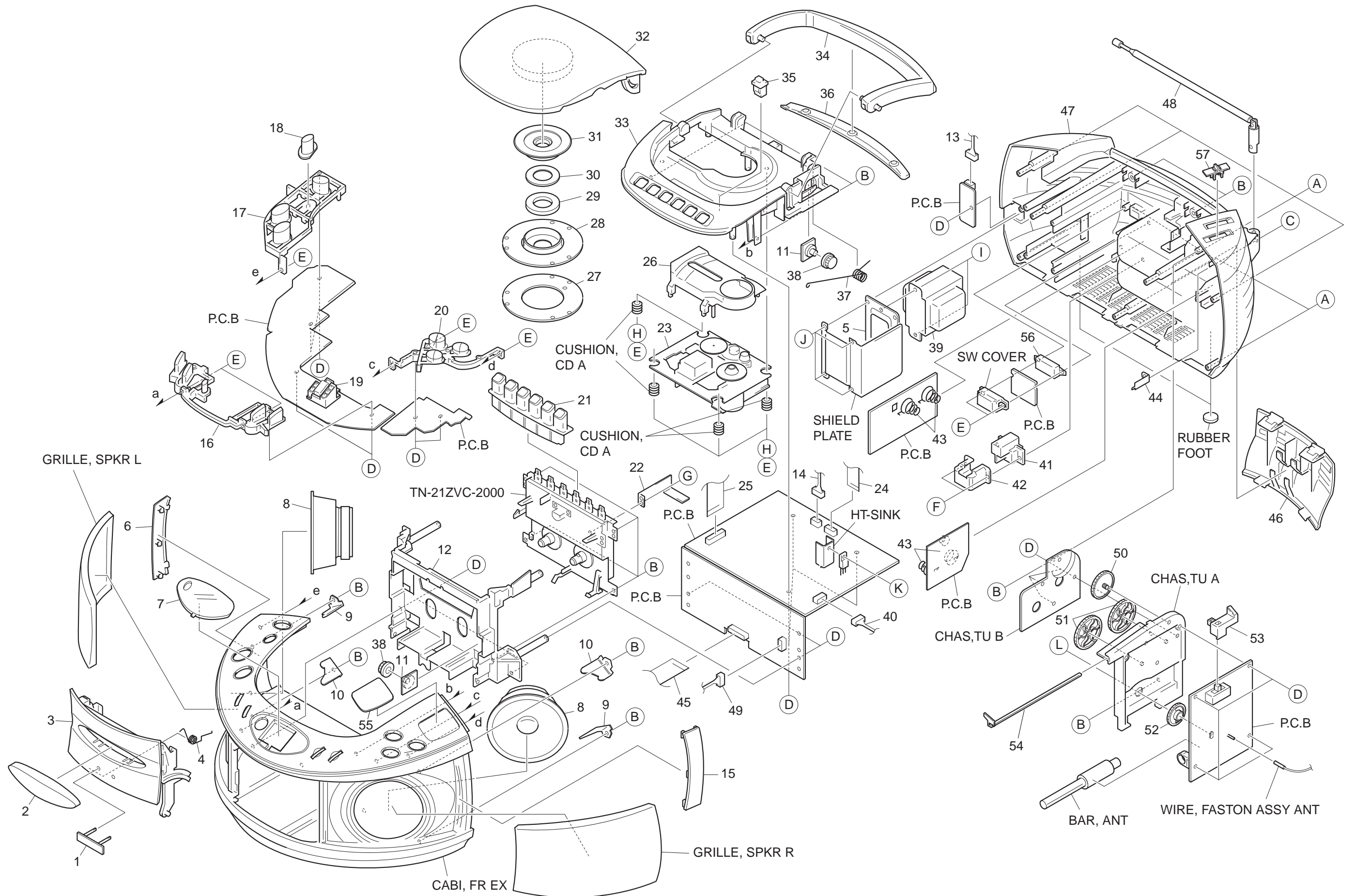
MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
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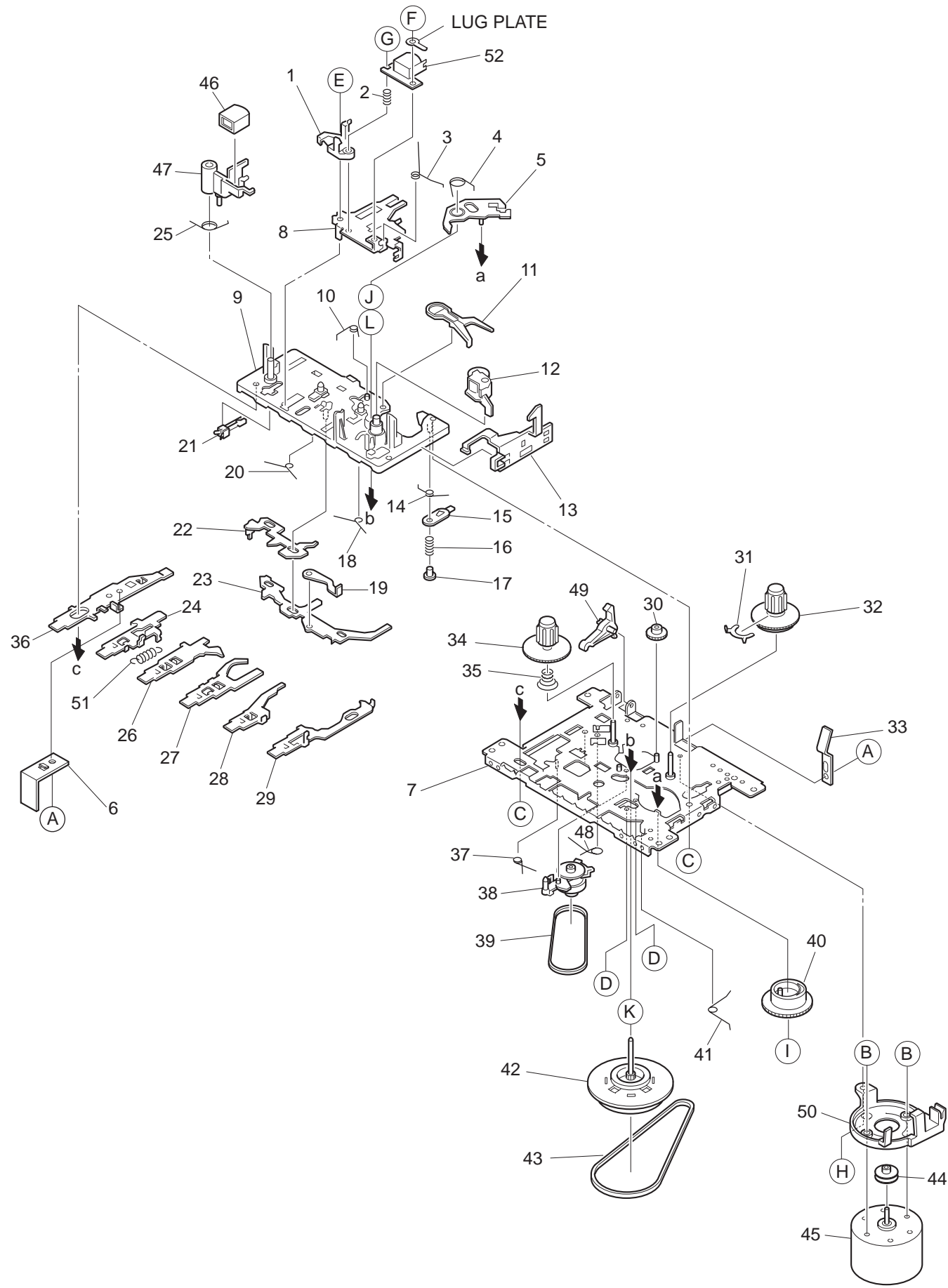
REF.NO	PART NO.	KANRI NO.	DESCRIPTION	REF.NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CL7-107-010		BADGE,AIWA SILVER				
2	8A-CD8-007-010		WINDOW,CASS	△	40	8A-CD9-630-010	CONN ASSY,4P RPH
3	8A-CD8-006-010		BOX,CASS		41	87-A60-178-010	JACK,AC E W/SW
4	8A-CD8-207-010		SPR-T,CASS		42	87-A90-086-010	COVER,AC-SOCKET
5	8A-CD8-209-010		HLDR,TRANS		43	88-CD8-209-010	SPR-C,BATT
					44	8A-CD8-212-010	HLDR,ANT
6	8A-CD8-018-010		PANEL,FR L		45	8A-CD9-620-010	FF-CABLE, 16P FR-MAIN
7	8A-CD8-043-010		WINDOW,DISPLAY EX		46	8A-CD8-003-010	LID,BATT
8	88-CD8-622-010		SPKR,F 77 70HM 3W		47	8A-CD8-026-010	CABI,REAR EZ<K<S>,EZ<S>>
9	8A-CD8-210-010		HLDR,SPKR A		47	8A-CD8-024-010	CABI,REAR U<LH<S>,519LH1J<S>>
10	8A-CD8-211-010		HLDR,SPKR B		48	8Z-CH4-640-010	ANT,ROD
11	84-CD5-215-010		GEAR		49	8A-CD9-631-010	CONN ASSY,4P TP-ME
12	8A-CD8-021-010		CHAS,CASS		50	8A-CD8-012-010	KNOB,RTRY TU
13	8A-CD9-633-010		CONN ASSY,4P SP		51	8A-CD8-201-010	GEAR,IDLER
14	8A-CD9-626-010		CONN ASSY,2P DOOR		52	8A-CD8-203-010	DRUM,DIAL
15	8A-CD8-022-010		PANEL,FR R		53	8A-CD8-202-010	LEVER,BAND
16	8A-CD8-016-010		KEY,CONTROL CD		54	8A-CD8-010-010	POINTER,TU
17	8A-CD8-014-010		KEY,VOL		55	8A-CD8-030-010	WINDOW,DIAL EZ<K<S>,EZ<S>>
18	8A-CD8-017-010		KEY,QSOUND		55	8A-CD8-029-010	WINDOW,DIAL U<LH<S>,519LH1J<S>>
19	8A-CD8-206-010		HLDR,LED	△	56	87-A91-369-010	SW,AC SL 2 2 2 SDKGA41700
20	8A-CD8-015-010		KEY,FUNC				<LH<S>,519LH1J<S>>
21	8A-CD8-011-010		KEY,CASS SET		57	8A-CD8-013-010	KNOB,SL BAND
22	8A-CD8-213-010		SPR-P,REC		A	87-B10-242-010	UT2+3-30 W/O CR
23	M8-ZZK-E90-070		DA11T3C		B	87-741-095-410	UT2+3-8 W/O SLOT
24	8A-CD9-622-010		FF-CABLE, 8P CD-FR		C	87-254-097-410	U+3-12 CR
25	8A-CD9-621-010		FF-CABLE, 16P CD-RF		D	87-741-095-410	UT2+3-8 GLD
					E	87-342-074-010	UT2+2.6-8
26	8Z-CDB-169-010		PANEL,CD SANYO		F	87-353-076-210	VT2+2.6-12
27	88-CD9-211-210		RING,CHUCK		G	87-571-032-410	VIT+2-3
28	8Z-CDB-170-010		BASE,CHUCK		H	87-WA5-253-010	W,3.3-10-0.8
29	87-036-368-010		MAGNET		I	87-751-094-410	VT2+3-6 W10SLOT
30	84-CT5-209-010		PLATE,MAGNET		J	87-661-097-410	TAPPING SCREW, VFT1+3-12
31	8Z-CH4-225-010		HLDR, CHUCK A(S)		K	87-067-566-010	TAPPING SCREW, VFTT+3-6
32	8A-CD8-027-010		BOX,CD EX		L	87-501-073-410	VF+2.6-6
33	8A-CD8-028-010		CHAS,CD EX				
34	8A-CD8-008-010		HANDL,FR				
35	87-036-389-010		SW,PUSH LOCK				
36	8A-CD8-009-010		HANDL,REAR				
37	8A-CD8-208-010		SPR-T,CD				
38	84-CD5-216-010		BRACKET				
39	8A-CD8-603-010		PT,E 2.5W<K<S>,EZ<S>>				
△	39	8A-CD8-604-010	PT,H 2.5W<LH<S>,519LH1J<S>>				

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		



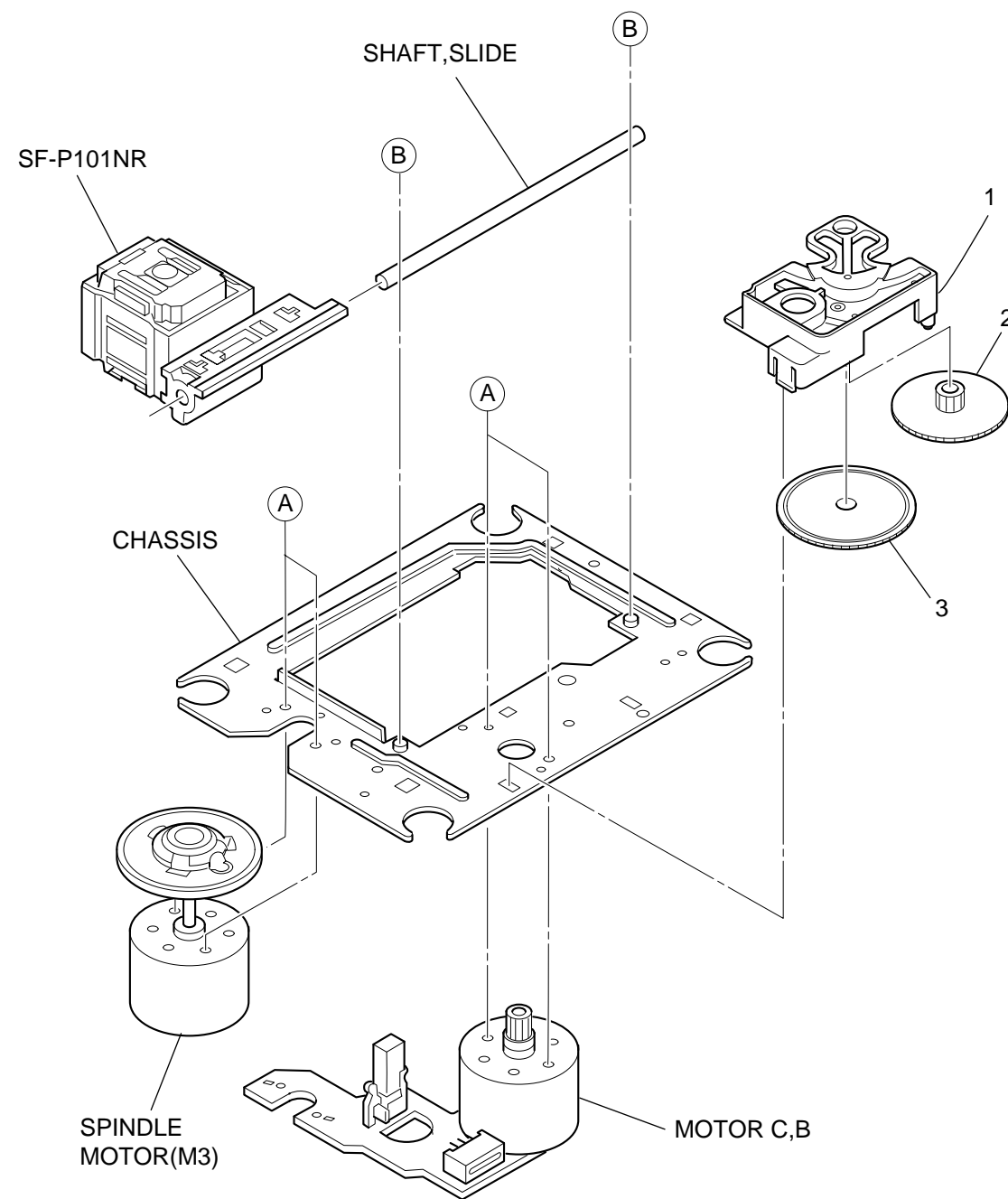
TAPE MECHANISM EXPLODED VIEW 1/1



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。
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE	36	S1-921-140-030		REC BUTTON LEVER
2	S1-821-030-070		AZIMUTH SPRING	37	S1-921-140-170		P.S.LEVER SPRING
3	S1-921-030-090		PANEL P SPRING	38	S1-921-073-040		RF CLUTCH ASSY
4	S1-921-260-050		GEAR PLATE SPRING	39	S1-921-070-030		RF BELT
5	S1-921-265-020		GEAR PLATE ASSY	40	S1-921-260-020		CAM GEAR
6	S1-510-020-020		REC SPRING PLATE	41	S1-921-140-160		E ACTUATOR SPRING
7	S1-921-015-010		CHASSIS ASSY	42	S1-921-093-210		FLYWHEEL ASSY
8	S1-921-030-110		HEAD PANEL	43	S1-921-090-380		MAIN BELT
9	S1-921-143-160		BASE ASSY	44	S1-921-120-590		MOTOR PULLEY
10	S1-921-141-8A0		M CONTROL SPRING	45	S6-002-030-220		MOTOR EG530AD-2B
11	S1-921-260-4A0		SENSING LEVER	46	S6-209-100-100		E HEAD PH-K380-MS1
12	S1-921-043-100		PINCH ROLLER ARM ASSY	47	S1-921-030-050		MG ARM
13	S1-921-130-010		EJECT SLIDE LEVER	48	S1-921-140-210		REC BUTTON LEVER SPRING
14	S1-921-141-3A0		P CONTROL SPRING	49	S1-821-100-690		RECORD SAFETY LEVER
15	S1-921-140-550		PAUSE LEVER(E)	50	S1-821-128-9A0		MOTOR BRACKET
16	S1-921-140-120		PAUSE LEVER SPRING	51	S1-821-010-500		PLAY BUTTON LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER	52	S6-201-011-110		HEAD,RP7442ES-0951
18	S1-921-140-150		BUTTON LEVER SPRING(B)	A	S9-P04-200-310		C TAPPING SCREW 2-3
19	S1-821-011-590		E KICK LEVER	B	S1-921-120-020		MOTOR COLLER SCREW
20	S1-921-141-070		BUTTON LEVER SPRING(A)	C	S9-B10-200-510		P TAPPING BIND SCREW M2-5
21	S6-401-011-490		LEAF SW MSW-1541T	D	S9-C07-204-510		SCREW,TAPPING(CAMERA)M2-4.5
22	S1-921-140-090		SWITCH ACTUATOR	E	S9-P01-200-610		SCREW,M2-6
23	S1-921-140-080		PUSH BUTTON ACTUATOR	F	S9-B01-200-310		(+)BIND SCREW M2-3
24	S1-921-140-190		PLAY BUTTON LEVER	G	S9-F08-200-710		AZIMUTH SCREW M2-7
25	S1-921-030-100		MG ARM SPRING	H	S1-921-120-030		MB SCREW
26	S1-921-140-040		REW BUTTON LEVER	I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
27	S1-921-140-050		FF,BUTTON REVER	J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
28	S1-921-140-060		STOP BUTTON LEVER	K	S9-W01-400-100		P WASHER 2-3.5-0.4
29	S1-921-140-600		PAUSE BUTTON LEVER	L	S9-W01-130-200		P WASHER 2.1-4-0.13
30	S1-821-100-700		FF GEAR				
31	S1-921-050-060		SENSOR				
32	S1-921-053-100		TAKE UP REEL ASSY				
33	S1-829-100-010		PACK SPRING				
34	S1-921-050-150		S REEL HUB				
35	S1-921-050-220		BACK TENSION SPRING				



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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S2-121-A28-400		COVER GEAR
2	S2-511-A21-000		GEAR MIDDLE
3	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-05E		SCR PAN PCS 2-3
B	87-261-073-410		SCR S-TPG FLT 2.6-6
ALL	M8-ZZK-E90-070		DA11T3C

ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CD8-906-010		IB,EZ(9L)B<EZ<S>>
1	8A-CD8-905-010		IB,K(E)B<K<S>>
1	8A-CD9-902-010		IB,LH(ESP)B<LH<S>>
1	8A-CD8-940-010		IB,LH1(P)KIT<519LH1J<S>>
⚠	2	87-A80-036-010	AC CORD SET ASSY,E W/FLTR VOL<EXCEPT K<S>>
⚠	2	87-A80-034-010	AC CORD SET ASSY,K W/F MAY-BG<K<S>>
⚠	3	87-A90-312-010	PLUG,CONVERSION WTN-1157R1<LH<S>,519LH1J<S>>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL