

SERVICE MANUAL

COMPACT DISC STEREO
SYSTEM

BASIC TAPE MECHANISM : TN-21ZSC-2003
BASIC CD MECHANISM : DA11T3C

SPECIFICATIONS

MAIN UNIT

FM tuner section

Tuning range 87.5 MHz to 108 MHz
Antenna terminals 75 ohms (unbalanced)

MW tuner section

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

LW tuner section

Tuning range 144 kHz to 290 kHz
Usable sensitivity 1400 μ V/m
Antenna Loop antenna

Amplifier section

Power output Rated: 5.5 W + 5.5 W (4 ohms, T.H.D. 1%, 1 kHz/DIN 45500)
Reference: 7.0W + 7.0W (4 ohms, T.H.D. 10%, 1 kHz/DIN 45324)

Input

Outputs AUX: 500 mV
SPEAKERS: accept speakers of 4 ohms or more
PHONES (stereo minijack): accepts headphones of 32 ohms or more

Cassette deck section

Track format 4 tracks, 2 channels stereo
Frequency response Normal tape: 50 Hz – 10000 Hz
Recording system AC bias
Erasure system Magnet erase
Heads Recording/playback \times 1
Erase head \times 1

Compact disc player section

Laser Semiconductor laser ($\lambda = 780$ nm)
D-A converter 1 bit linear
Wow and flutter Unmeasurable

SPEAKER SYSTEM

Speakers 100 mm cone type, 4 ohms
Impedance 4 ohms
Dimensions (W \times H \times D) 140 \times 236.5 \times 198 mm
Weight 1.1 kg

GENERAL

Power requirements 220V AC, 60 Hz
Power consumption 31 W
Dimensions of main unit (W \times H \times D) 160 \times 236.5 \times 202.5 mm
Weight of main unit 2.5 kg

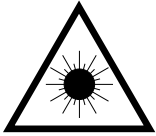
- Design and specifications are subject to change without notice.

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!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainituilla 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

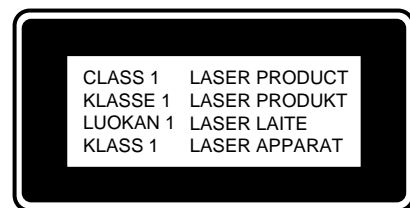
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

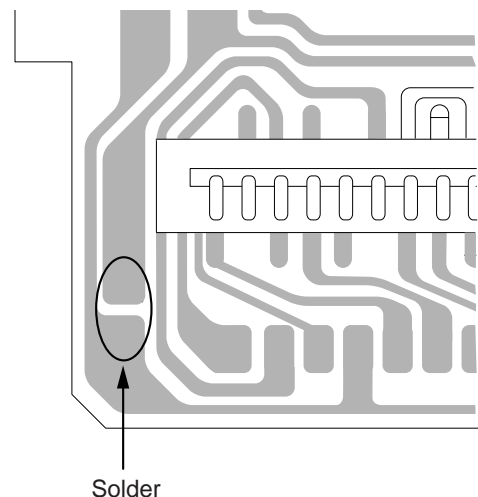


Precaution to replace Optical block (SF-P101NR)

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.

PICK-UP Assy P.C.B



ELECTRICAL MAIN PARTS LIST

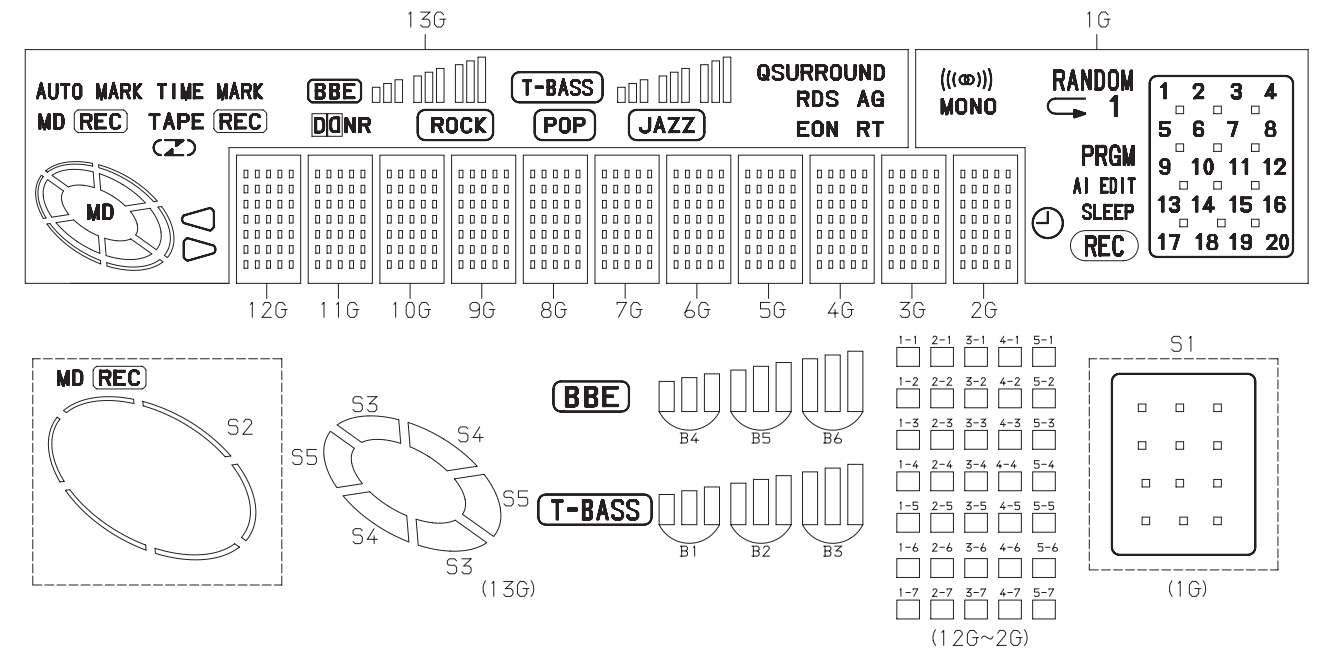
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
 If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C112	87-012-140-080		CAP 470P
	87-A20-734-010	IC,TDA2007A		C113	87-010-190-080		S CHIP F 0.01
	87-A21-443-040	C-IC,M62495AFP		C114	87-010-190-080		S CHIP F 0.01
	8A-CLB-602-010	IC,LC867240A-5P15		C115	87-010-112-080		CAP, ELECT 100-16V
	87-A21-245-010	IC,RPM6938-V4		C116	87-010-101-080		CAP, ELECT 220-16
	87-A21-145-040	C-IC,BA4560F-E2		C118	87-010-263-080		CAP, ELECT 100-10V
	87-A20-446-010	C-IC,LA9241ML		C119	87-010-190-080		S CHIP F 0.01
	87-A20-459-010	C-IC,LC78622ED		C120	87-010-401-080		CAP, ELECT 1-50V
	87-A21-093-010	IC,LA6541D		C121	87-010-396-080		CAP,E 470-35 SME
	87-070-127-110	IC,LC72131 D		C122	87-010-213-080		C-CAP,S 0.015-50 B
	87-A20-913-010	IC,LA1837NL		C123	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A20-440-040	C-IC,BU1920FS		C124	87-010-402-080		CAP, ELECT 2.2-50V
TRANSISTOR				C126	87-010-408-080		CAP, ELECT 47-50V
	87-026-610-080	TR,KTC3198GR		C127	87-010-248-080		CAP, ELECT 220-10V
	89-213-702-010	TR,2SB1370 (1.8W)		C128	87-010-393-080		CAP, ELECT 100-35V
	87-A30-185-010	TR,2SD1381FQR		C129	87-010-248-080		CAP, ELECT 220-10V
	87-026-313-080	TR,DTC343TS		C130	87-010-393-080		CAP, ELECT 100-35V
	87-026-609-080	TR,KTA1266GR		C131	87-010-393-080		CAP, ELECT 100-35V
	87-026-218-080	TR,DTC144ES (0.2W)		C132	87-010-237-080		CAP, ELECT 1000-16V
	87-026-237-080	CHIP-TR,DTC124XK		C136	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-223-080	TR,DTC143TK		C137	87-010-197-080		CAP, CHIP 0.01 DM
	89-320-011-080	TR,2SC2001 (15W)		C138	87-010-197-080		CAP, CHIP 0.01 DM
	87-CD7-603-080	TR,SS8050		C139	87-010-197-080		CAP, CHIP 0.01 DM
	89-318-154-080	TR,2SC1815 (0.4W)		C143	87-010-401-080		CAP, ELECT 1-50V
	87-026-291-080	TR,DTC124XS		C144	87-010-401-080		CAP, ELECT 1-50V
	89-112-965-080	TR,2SA1296 (0.75W)		C147	87-010-190-080		S CHIP F 0.01
	87-026-463-080	TR,2SA933S (0.3W)		C150	87-010-263-080		CAP, ELECT 100-10V
	87-026-239-080	TR,DTC114TK (0.2W)		C151	87-010-263-080		CAP, ELECT 100-10V
	87-A30-227-080	TR,2SB1010Q		C152	87-010-182-080		C-CAP,S 2200P-50 B
	87-026-210-080	CHIP-TR,DTC144EK		C153	87-010-166-080		C-CAP,S 100P-50 SL
	87-A30-196-080	TR,2SC4115SRS		C154	87-010-545-080		CAP, ELECT 0.22-50V
	89-327-143-080	TR,2SC2714 (0.1W)		C155	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-072-080	C-TR,RT1P 144C		C157	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-076-080	C-TR,2SC3052F		C158	87-010-545-080		CAP, ELECT 0.22-50V
	89-505-434-540	C-FET,2SK543 (4/5)		C159	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-257-080	C-TR,2SD1306E		C161	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-074-080	C-TR,RT1P 141C		C162	87-010-405-080		CAP, ELECT 10-50V
DIODE				C163	87-010-405-080		CAP, ELECT 10-50V
	87-020-465-080	DIODE,1SS133 (110MA)		C164	87-010-405-080		CAP, ELECT 10-50V
	87-A40-393-090	DIODE,1N5402GW(F20)		C165	87-010-405-080		CAP, ELECT 10-50V
	87-070-334-080	ZENER,MTZJ10B		C166	87-010-404-080		CAP, ELECT 4.7-50V
	87-017-932-080	ZENER,MTJ6.2B		C167	87-010-404-080		CAP, ELECT 4.7-50V
	87-A40-347-080	ZENER,MTZJ2.2B		C169	87-010-197-080		CAP, CHIP 0.01 DM
	87-070-136-080	ZENER,MTZJ5.1B		C170	87-010-197-080		CAP, CHIP 0.01 DM
	87-020-027-080	CHIP-DIODE 1SS184		C171	87-010-404-080		CAP, ELECT 4.7-50V
	87-027-825-080	ZENER,HZ9A3L		C175	87-010-237-080		CAP, ELECT 1000-16V
	87-A40-291-080	DIODE,1N4148 (CPT)		C181	87-010-197-080		CAP, CHIP 0.01 DM
	87-017-978-080	DIODE,1N4003		C182	87-010-197-080		CAP, CHIP 0.01 DM
	87-A40-234-080	ZENER,MTZJ5.6A		C301	87-010-322-080		C-CAP,S 100P-50 CH
	87-A40-270-080	C-DIODE,MC2838		C302	87-015-951-080		CAP,E 1-50 LL
MAIN C.B				C304	87-010-406-080		CAP, ELECT 22-50
C30	87-010-544-080	CAP, ELECT 0.1-50V		C306	87-010-405-080		CAP, ELECT 10-50V
C101	87-010-190-080	S CHIP F 0.01		C307	87-010-248-080		CAP, ELECT 220-10V
C102	87-010-190-080	S CHIP F 0.01		C308	87-010-405-080		CAP, ELECT 10-50V
C103	87-010-190-080	S CHIP F 0.01		C309	87-010-322-080		C-CAP,S 100P-50 CH
C104	87-010-404-080	CAP, ELECT 4.7-50V		C311	87-010-406-080		CAP, ELECT 22-50
C105	87-010-403-080	CAP, ELECT 3.3-50V		C312	87-015-951-080		CAP,E 1-50 LL
C106	87-010-192-080	C-CAP,S 0.022-50 F		C314	87-010-426-080		C-CAP,S 0.012-25 B
C107	87-010-192-080	C-CAP,S 0.022-50 F		C315	87-010-404-080		CAP, ELECT 4.7-50V
C108	87-010-192-080	C-CAP,S 0.022-50 F		C316	87-010-404-080		CAP, ELECT 4.7-50V
C109	87-010-192-080	C-CAP,S 0.022-50 F		C319	87-010-426-080		C-CAP,S 0.012-25 B
C110	87-010-190-080	S CHIP F 0.01		C320	87-010-197-080		CAP, CHIP 0.01 DM
C111	87-016-658-090	CAP,E 4700-35 SMG		C322	87-010-112-080		CAP, ELECT 100-16V
				C325	87-010-178-080		CHIP CAP 1000P
				C326	87-010-178-080		CHIP CAP 1000P
				C327	87-010-178-080		CHIP CAP 1000P
				C329	87-015-695-080		CAP,E 1-50 7L
				C330	87-012-140-080		CAP 470P
				C701	87-010-381-080		CAP, ELECT 330-16V
				C702	87-010-404-080		CAP, ELECT 4.7-50V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C703	87-012-286-080		CAP, U 0.01-25	C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C704	87-012-286-080		CAP, U 0.01-25	C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C709	87-012-195-080		C-CAP,U 100P-50CH	C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C711	87-010-263-080		CAP, ELECT 100-10V	C859	87-012-286-080		CAP, U 0.01-25
C712	87-010-196-080		CHIP CAPACITOR,0.1-25	C861	87-012-199-080		CAP 220P
C713	87-012-286-080		CAP, U 0.01-25	C862	87-012-199-080		CAP 220P
C714	87-012-286-080		CAP, U 0.01-25	C864	87-010-405-080		CAP, ELECT 10-50V
C715	87-012-195-080		C-CAP,U 100P-50CH	C865	87-010-196-080		CHIP CAPACITOR,0.1-25
C717	87-012-286-080		CAP, U 0.01-25	C866	87-010-405-080		CAP, ELECT 10-50V
C719	87-012-286-080		CAP, U 0.01-25	C867	87-012-286-080		CAP, U 0.01-25
C720	87-012-195-080		C-CAP,U 100P-50CH	C868	87-012-184-080		C-CAP,U 33P-50 CH
C721	87-012-176-080		CAP 15P	C869	87-012-180-080		C-CAP,U 22P-50 CH
C722	87-012-176-080		CAP 15P	C909	87-012-286-080		CAP, U 0.01-25
C723	87-012-274-080		CHIP CAP,U 1000P-50B	C910	87-012-286-080		CAP, U 0.01-25
C725	87-018-131-080		CAP, CER 1000P-50V	C940	87-012-286-080		CAP, U 0.01-25
C727	87-010-196-080		CHIP CAPACITOR,0.1-25	C942	87-012-172-080		CAPACITOR CHIP U 10P CH
C728	87-010-248-080		CAP, ELECT 220-10V	C947	87-012-286-080		CAP, U 0.01-25
C729	87-012-274-080		CHIP CAP,U 1000P-50B	C949	87-A10-039-080		C-CAP,U 470P-50 J CH
C731	87-012-286-080		CAP, U 0.01-25	C952	87-012-286-080		CAP, U 0.01-25
C752	87-012-284-080		CAP, U 6800P-50	C958	87-010-197-080		CAP, CHIP 0.01 DM
C753	87-012-195-080		C-CAP,U 100P-50CH	C959	87-010-831-080		C-CAP,U,0.1-16F
C755	87-012-286-080		CAP, U 0.01-25	C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C756	87-012-286-080		CAP, U 0.01-25	C962	87-010-401-080		CAP, ELECT 1-50V
C757	87-012-188-080		C-CAP,U 47P-50 CH	CF801	87-008-423-010		CERAMIC FILTER, SFE10.7
C758	87-012-167-080		C-CAP,U 5P-50 CH	CF802	82-785-747-010		CF MS2 GHY R
C761	87-010-196-080		CHIP CAPACITOR,0.1-25	CN301	87-009-036-010		CONNECTOR, 8P PH V WHT
C762	87-012-286-080		CAP, U 0.01-25	△F101	87-035-457-010		FUSE,3.15A 250V TW/C
C763	87-010-829-080		CAP, U 0.047-16	FC101	87-033-213-080		CLAMP, FUSE
C765	87-012-286-080		CAP, U 0.01-25	FC102	87-033-213-080		CLAMP, FUSE
C766	87-010-197-080		CAP, CHIP 0.01 DM	FFE801	A8-6ZA-19C-170		6ZA-1 YFEENC
C768	87-012-286-080		CAP, U 0.01-25	J101	87-A60-354-010		JACK,PIN 2P MSP -242V-05
C769	87-010-260-080		CAP, ELECT 47-25V	J102	87-A60-754-010		TERMINAL,SPK 4P MSP-154V-05
C769	87-010-260-080		CAP, ELECT 47-25V	J103	87-A60-420-010		JACK,3.5 ST (MSC)
C770	87-010-829-080		CAP, U 0.047-16	J104	87-099-608-010		JACK, DC HEC3800
C771	87-010-383-080		CAP, ELECT 33-25V	J801	87-A60-880-010		TERMINAL,ANT-PAL 2P MSP-313V-0
C772	87-010-829-080		CAP, U 0.047-16	L101	87-005-366-010		COIL, 1UH
C773	87-010-196-080		CHIP CAPACITOR,0.1-25	L102	87-005-366-010		COIL, 1UH
C774	87-010-263-080		CAP, ELECT 100-10V	L104	87-005-676-080		COIL,2.2UH K LF5.0S
C775	87-010-404-080		CAP, ELECT 4.7-50V	L301	88-CL6-609-010		COIL,BIAS 8CL6
C776	87-012-286-080		CAP, U 0.01-25	L771	87-A50-266-010		COIL,FM DET-2N(TOK)
C777	87-010-400-080		CAP, ELECT 0.47-50V	L772	87-A90-733-010		FLTR,PCFAZH-450 (TOK)
C778	87-010-401-080		CAP, ELECT 1-50V	L781	87-005-847-080		COIL,2.2UH(CECS)
C779	87-010-401-080		CAP, ELECT 1-50V	L832	87-005-847-080		COIL,2.2UH(CECS)
C780	87-010-196-080		CHIP CAPACITOR,0.1-25	L851	87-005-847-080		COIL,2.2UH(CECS)
C781	87-010-405-080		CAP, ELECT 10-50V	L941	87-A50-020-010		COIL,ANT LW(COI)
C782	87-010-405-080		CAP, ELECT 10-50V	L942	87-A50-019-010		COIL,OSC LW(COI)
C783	87-012-286-080		CAP, U 0.01-25	L981	87-NF4-651-110		COIL,AM PACK2N(TOM)
C784	87-012-286-080		CAP, U 0.01-25	△PR100	87-A90-091-080		PROTECTOR,2A 491
C785	87-010-405-080		CAP, ELECT 10-50V	R118	87-029-118-090		RES,FUSE 220-1/2W J
C786	87-010-405-080		CAP, ELECT 10-50V	SW301	8Z-CL8-668-010		SW,RP ZCL8
C787	87-012-287-080		C-CAP,U 0.015-25 F	TC942	87-011-164-010		CAPACITOR,TRIMMER 30P
C788	87-012-287-080		C-CAP,U 0.015-25 F	WH101	87-099-043-010		CONN 2P EH
C789	87-012-275-080		C-CAP,U 1200P-50 B	X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
C790	87-012-275-080		C-CAP,U 1200P-50 B	X851	87-A70-184-010		VIB,XTAL 4.332MHZ HC-49/U
C791	87-010-405-080		CAP, ELECT 10-50V				
C793	87-012-275-080		C-CAP,U 1200P-50 B	FRONT C.B			
C794	87-010-406-080		CAP, ELECT 22-50				
C795	87-010-596-080		CAP, S 0.047-16	C201	87-010-375-080		CAP,E 330-10 SME
C796	87-010-403-080		CAP, ELECT 3.3-50V	C202	87-012-350-080		C-CAP,1-25 F
C797	87-012-276-080		CAP, CHIP SS 1500 PBK	C203	87-010-197-080		CAP, CHIP 0.01 DM
C798	87-012-276-080		CAP, CHIP SS 1500 PBK	C205	87-010-178-080		CHIP CAP 1000P
C799	87-010-829-080		CAP, U 0.047-16	C208	87-010-197-080		CAP, CHIP 0.01 DM
C803	87-018-047-080		CAP, CER 0.01-16V	C209	87-010-196-080		CHIP CAPACITOR,0.1-25
C812	87-012-286-080		CAP, U 0.01-25	C210	87-010-196-080		CHIP CAPACITOR,0.1-25
C814	87-012-286-080		CAP, U 0.01-25	C211	87-010-314-080		C-CAP,S 22P-50V
C820	87-010-260-080		CAP, ELECT 47-25V	C212	87-010-318-080		C-CAP,S 47P-50 CH
C821	87-012-286-080		CAP, U 0.01-25	C213	87-010-154-080		CAP CHIP 10P
C822	87-012-286-080		CAP, U 0.01-25	C214	87-012-149-080		C-CAP,S 30P-50 CH
C823	87-012-286-080		CAP, U 0.01-25	C215	87-010-312-080		C-CAP,S 15P-50 CH
C824	87-012-172-080		CAPACITOR CHIP U 10P CH	C216	87-010-400-080		CAP, ELECT 0.47-50V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C217	87-010-196-080		CHIP CAPACITOR,0.1-25	C566	87-010-196-080		CHIP CAPACITOR,0.1-25
CN201	87-099-720-010		CONN,30P TYK-B(P)	C568	87-010-197-080		CAP, CHIP 0.01 DM
CN202	87-A60-404-010		CONN,3P TKX-P03P-F1	C571	87-010-248-080		CAP, ELECT 220-10V
L206	87-003-098-080		COIL,2.2UH	C572	87-010-196-080		CHIP CAPACITOR,0.1-25
LCD201	8Z-CL8-665-110		LCD,ZCL-8	C573	87-010-197-080		CAP, CHIP 0.01 DM
S200	87-A90-095-080		SW,TACT EVQ11G04M	C578	87-010-197-080		CAP, CHIP 0.01 DM
S201	87-A90-095-080		SW,TACT EVQ11G04M	C579	87-010-263-080		CAP, ELECT 100-10V
S202	87-A90-095-080		SW,TACT EVQ11G04M	C582	87-010-197-080		CAP, CHIP 0.01 DM
S203	87-A90-095-080		SW,TACT EVQ11G04M	C583	87-010-405-080		CAP, ELECT 10-50V
S205	87-A90-095-080		SW,TACT EVQ11G04M	C587	87-010-166-080		C-CAP,S 100P-50 SL
S207	87-A90-095-080		SW,TACT EVQ11G04M	C589	87-010-166-080		C-CAP,S 100P-50 SL
S208	87-A90-095-080		SW,TACT EVQ11G04M	C590	87-010-166-080		C-CAP,S 100P-50 SL
S213	87-A90-095-080		SW,TACT EVQ11G04M	C591	87-010-166-080		C-CAP,S 100P-50 SL
S214	87-A90-095-080		SW,TACT EVQ11G04M	C592	87-010-166-080		C-CAP,S 100P-50 SL
S216	87-A90-095-080		SW,TACT EVQ11G04M	C593	87-010-197-080		CAP, CHIP 0.01 DM
S217	87-A90-095-080		SW,TACT EVQ11G04M	C594	87-010-263-080		CAP, ELECT 100-10V
S218	87-A90-095-080		SW,TACT EVQ11G04M	C596	87-010-404-080		CAP, ELECT 4.7-50V
S220	87-A90-095-080		SW,TACT EVQ11G04M	C598	87-010-197-080		CAP, CHIP 0.01 DM
SW221	87-A90-095-080		SW,TACT EVQ11G04M	CN501	87-009-345-010		CONN,2P PH H
X201	87-030-364-010		VIB,XTAL 32.768K CT	CN510	87-009-034-010		CONN,6P PH V
X202	87-A70-185-080		VIB,CER 5.76MHZ TF21	CN520	87-A60-248-010		CONN,16P H CFF1416
CD C.B				L501	87-005-647-080		COIL,10UH K LF5S
C500	87-016-459-040		CAP,E 470-10 SMG	L502	87-005-659-080		COIL,100UH K LF5.0S
C502	87-016-459-040		CAP,E 470-10 SMG	R503	87-029-019-010		RES, FUSEIBLE 1/2W-2.2
C503	87-016-459-040		CAP,E 470-10 SMG	SFR501	87-A90-787-080		SFR,100K H HOKU
C505	87-010-196-080		CHIP CAPACITOR,0.1-25	X501	87-A70-046-010		VIB,XTAL 16.934MHZ
C507	87-010-196-080		CHIP CAPACITOR,0.1-25	LED C.B			
C513	87-010-196-080		CHIP CAPACITOR,0.1-25	D941	87-A40-365-080		LED,L-1154 SGD
C514	87-010-196-080		CHIP CAPACITOR,0.1-25	D942	87-A40-365-080		LED,L-1154 SGD
C515	87-012-157-080		C-CAP,S 330P-50 CH	D943	87-A40-365-080		LED,L-1154 SGD
C516	87-010-545-080		CAP, ELECT 0.22-50V	D944	87-A40-365-080		LED,L-1154 SGD
C521	87-010-186-080		CAP,CHIP 4700P	D945	87-A40-365-080		LED,L-1154 SGD
C525	87-010-176-080		C-CAP,S 680P-50 SL	D946	87-A40-365-080		LED,L-1154 SGD
C528	87-012-156-080		C-CAP,S 220P-50 CH	D947	87-A40-365-080		LED,L-1154 SGD
C529	87-010-545-080		CAP, ELECT 0.22-50V	D948	87-A40-365-080		LED,L-1154 SGD
C530	87-012-140-080		CAP 470P	D949	87-A40-365-080		LED,L-1154 SGD
C531	87-010-374-080		CAP, ELECT 47-10V	AC C.B			
C532	87-010-401-080		CAP, ELECT 1-50V	C181	87-010-197-080		CAP, CHIP 0.01 DM
C533	87-010-184-080		CHIP CAPACITOR 3300P(K)	C182	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-197-080		CAP, CHIP 0.01 DM	CNA101	8A-CLA-630-010		CONN ASSY,2P PT
C535	87-010-145-080		C-CAP,S 1P-50 CH	△T1	87-A60-317-010		TERMINAL, 1P MSC
C536	87-010-312-080		C-CAP,S 15P-50 CH	△T2	87-A60-317-010		TERMINAL, 1P MSC
C537	87-010-309-080		C-CAP,1000P-50 CH	MOTOR C.B			
C538	87-010-196-080		CHIP CAPACITOR,0.1-25	M2	9X-262-576-910		MOTOR GEAR ASSY
C539	87-010-404-080		CAP, ELECT 4.7-50V	PIN3	91-564-722-110		CONNECTOR 6P
C540	87-010-196-080		CHIP CAPACITOR,0.1-25	SW1	91-572-085-120		LEAF SW
C541	87-010-405-080		CAP, ELECT 10-50V				
C542	87-010-369-080		C-CAP,S 0.033-25 K B				
C543	87-010-401-080		CAP, ELECT 1-50V				
C545	87-010-197-080		CAP, CHIP 0.01 DM				
C546	87-010-374-080		CAP, ELECT 47-10V				
C547	87-010-263-080		CAP, ELECT 100-10V				
C548	87-010-248-080		CAP, ELECT 220-10V				
C549	87-010-198-080		CAP, CHIP 0.022				
C550	87-010-248-080		CAP, ELECT 220-10V				
C551	87-010-178-080		CHIP CAP 1000P				
C552	87-010-197-080		CAP, CHIP 0.01 DM				
C553	87-010-374-080		CAP, ELECT 47-10V				
C555	87-010-403-080		CAP, ELECT 3.3-50V				
C556	87-010-197-080		CAP, CHIP 0.01 DM				
C559	87-010-315-080		C-CAP,S 27P-50 CH				
C560	87-010-263-080		CAP, ELECT 100-10V				
C561	87-010-196-080		CHIP CAPACITOR,0.1-25				
C562	87-010-196-080		CHIP CAPACITOR,0.1-25				
C563	87-012-156-080		C-CAP,S 220P-50 CH				
C564	87-010-197-080		CAP, CHIP 0.01 DM				
C565	87-010-263-080		CAP, ELECT 100-10V				

GRID ASSIGNMENT



ANODE CONNECTION

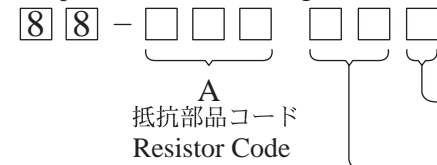
	13G	12G~2G	1G		13G	12G~2G	1G
P1	JAZZ	1-1	1	P19)	4-4	8
P2	POP	2-1	↶	P20	⚡	5-4	9
P3	ROCK	3-1	MONO	P21	(1-5	10
P4	DQNR	4-1	RANDOM	P22	TAPE REC	2-5	11
P5	RT	5-1	((∞))	P23	S2	3-5	12
P6	EON	1-2	PRGM	P24	S3	4-5	13
P7	AG	2-2	AI	P25	S4	5-5	14
P8	RDS	3-2	EDIT	P26	S5	1-6	15
P9	B1	4-2	SLEEP	P27	MD	2-6	16
P10	B2	5-2	⌚	P28	TIME MARK	3-6	17
P11	B3	1-3	REC	P29	AUTO MARK	4-6	18
P12	T-BASS	2-3	(CALENDAR) 1	P30	QSURROUND	5-6	19
P13	B4	3-3	2	P31	-	1-7	20
P14	B5	4-3	3	P32	-	2-7	S1
P15	B6	5-3	4	P33	-	3-7	-
P16	BBE	1-4	5	P34	-	4-7	-
P17	△	2-4	6	P35	-	5-7	-
P18	▽	3-4	7				

- 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

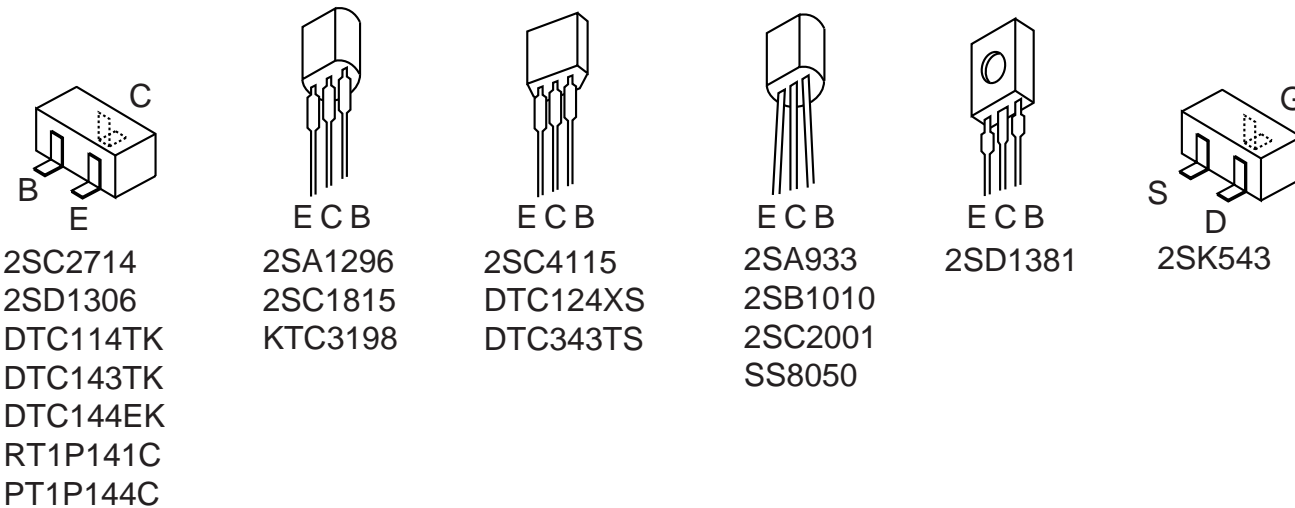
桁表示
Figure

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

TRANSISTOR ILLUSTRATION

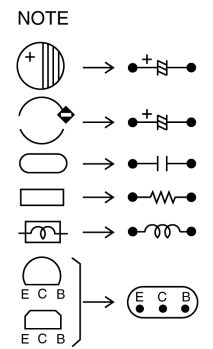
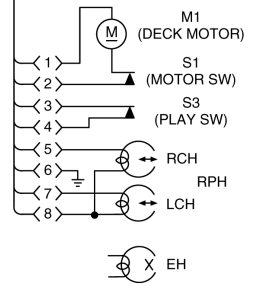
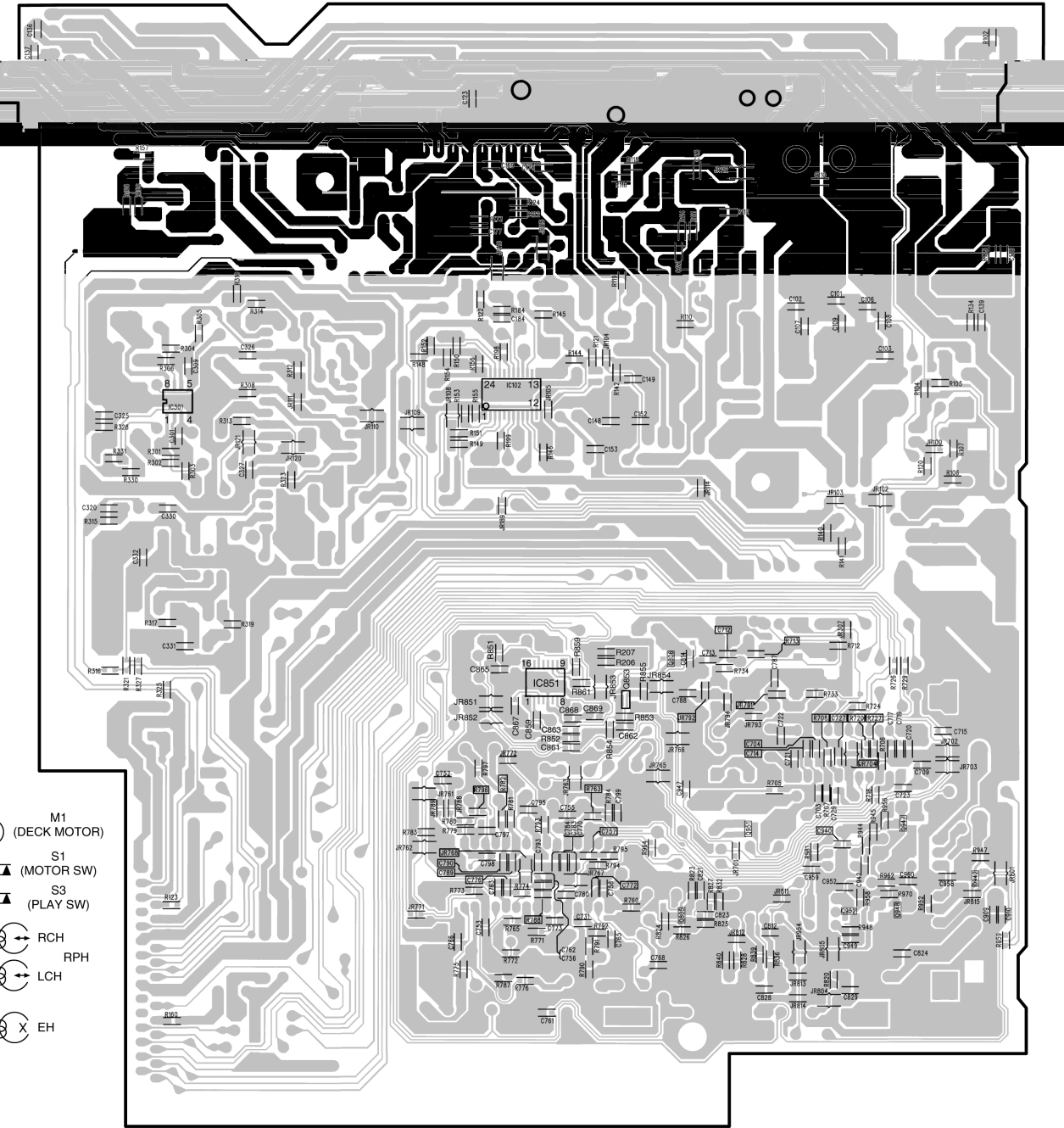
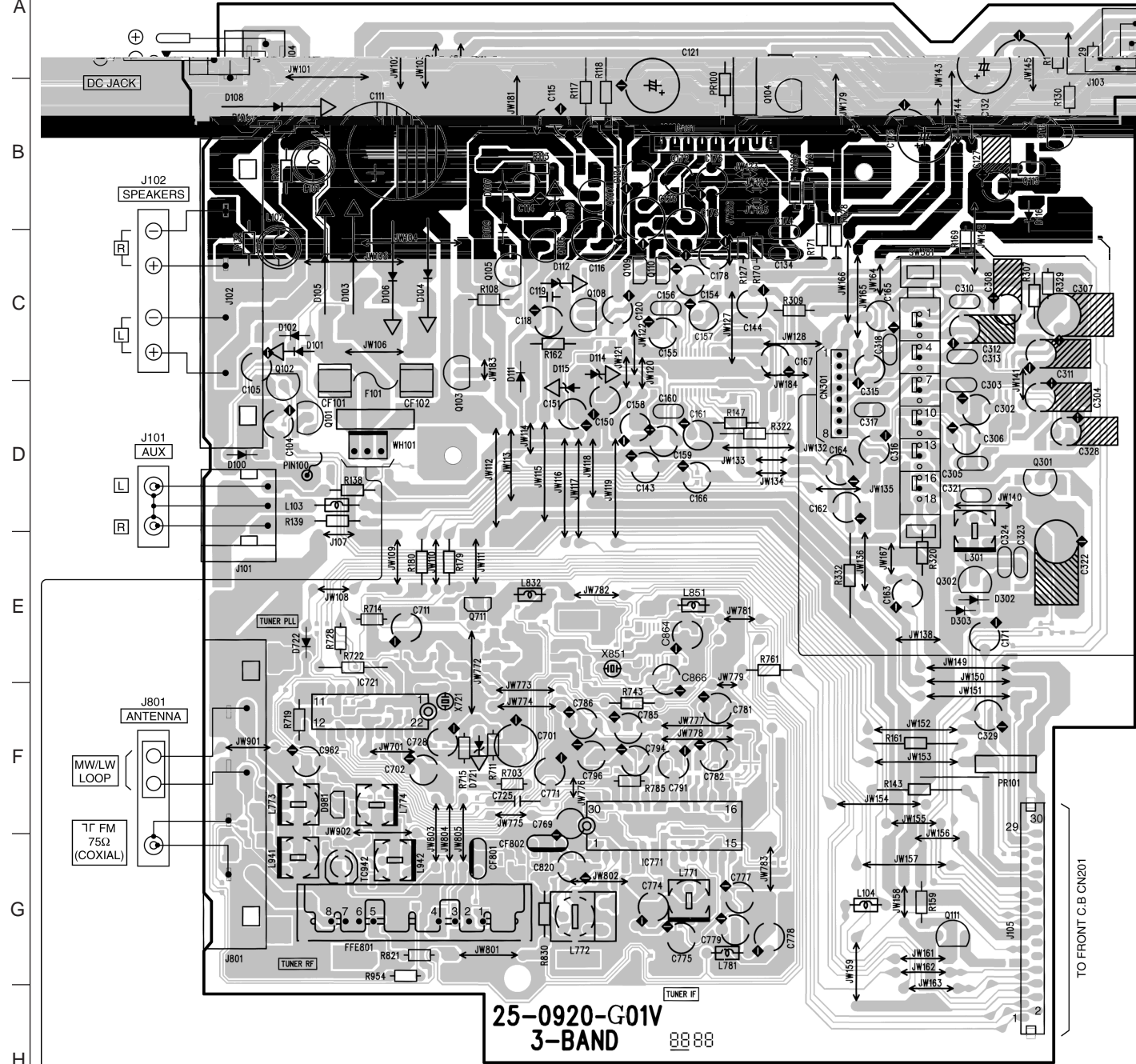


WIRING-1 (MAIN)

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

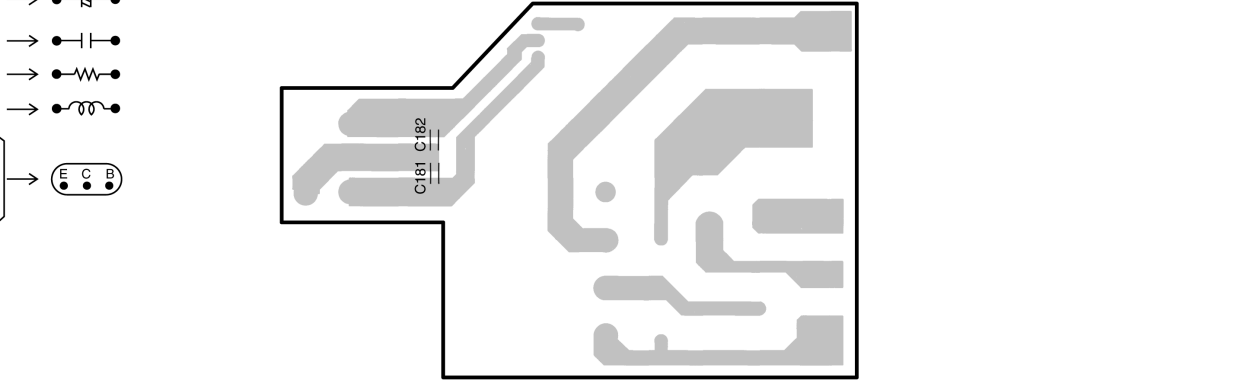
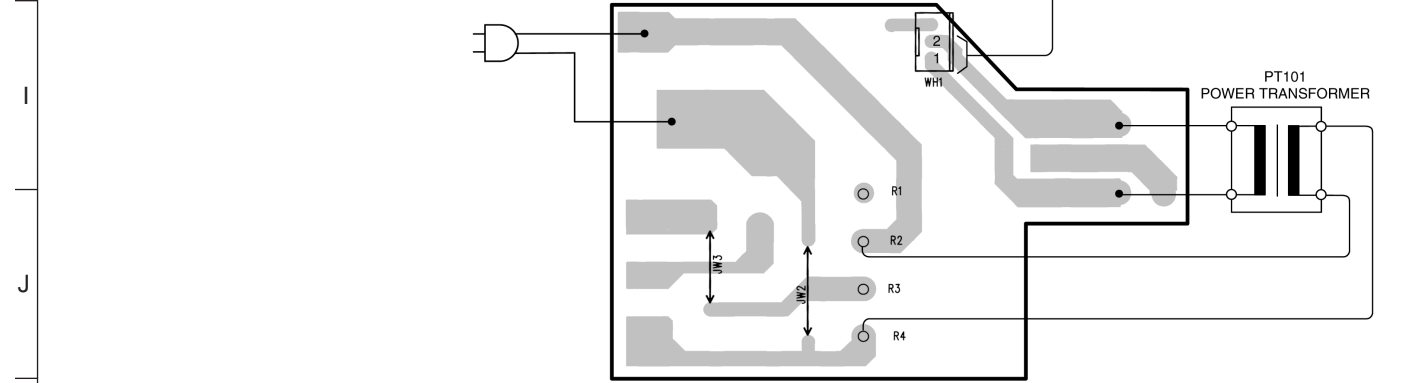
MAIN C.B (INSERTED PARTS)

MAIN C.B (CHIP PARTS)

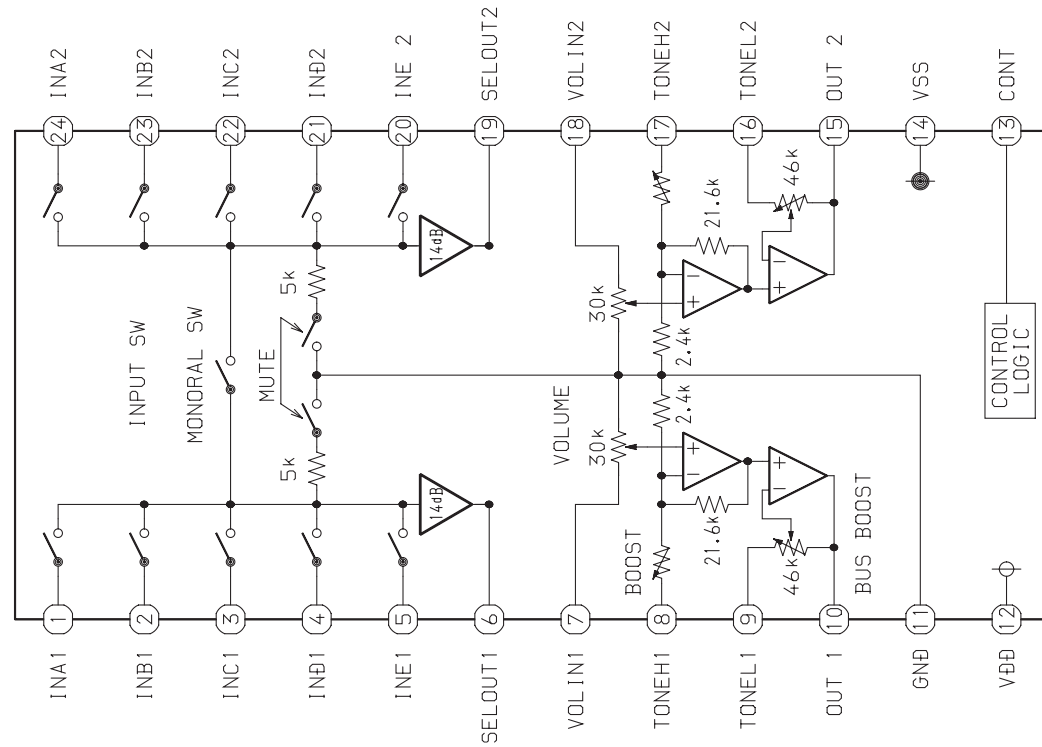


AC C.B (INSERTED PARTS)

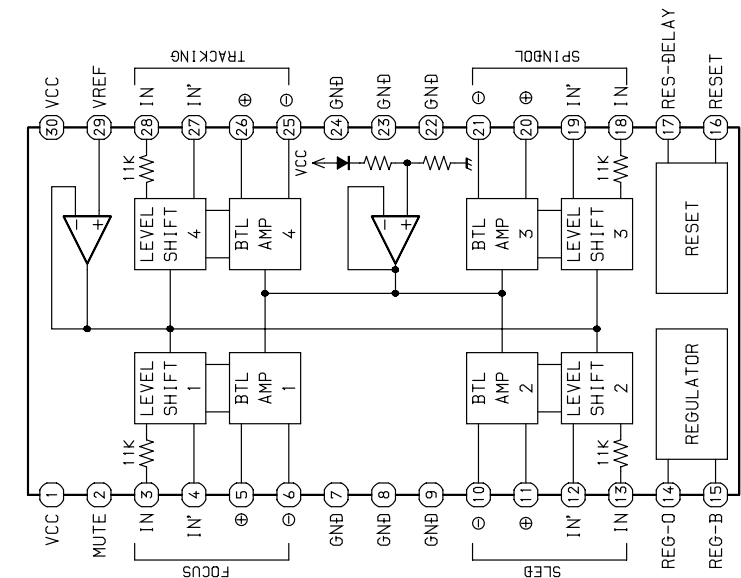
AC C.B (CHIP PARTS)



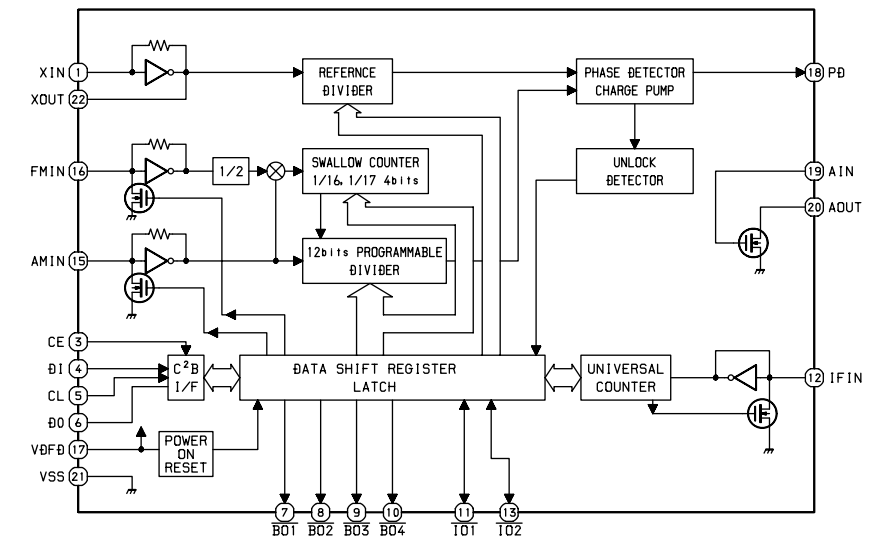
IC BLOCK DIAGRAM
IC, M62495AFP



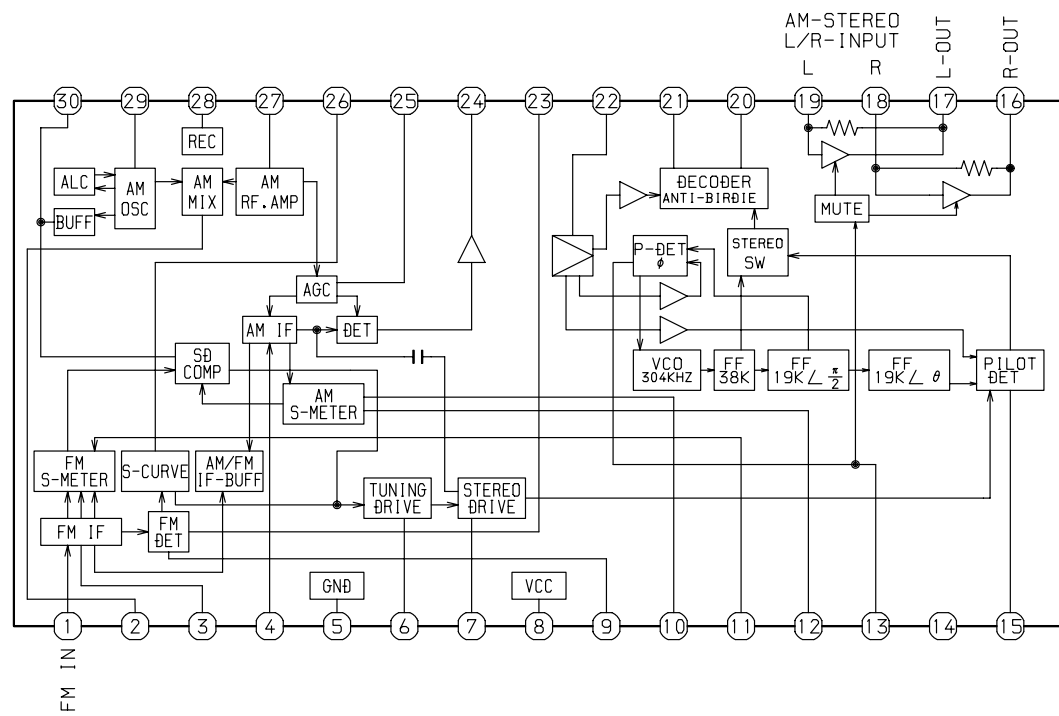
IC, LA6541D



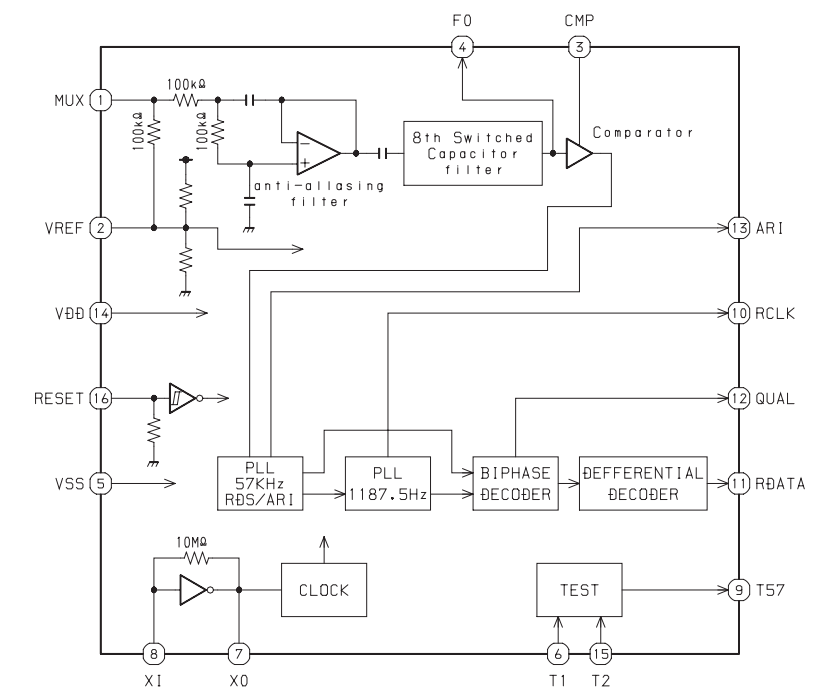
IC, LC72131D

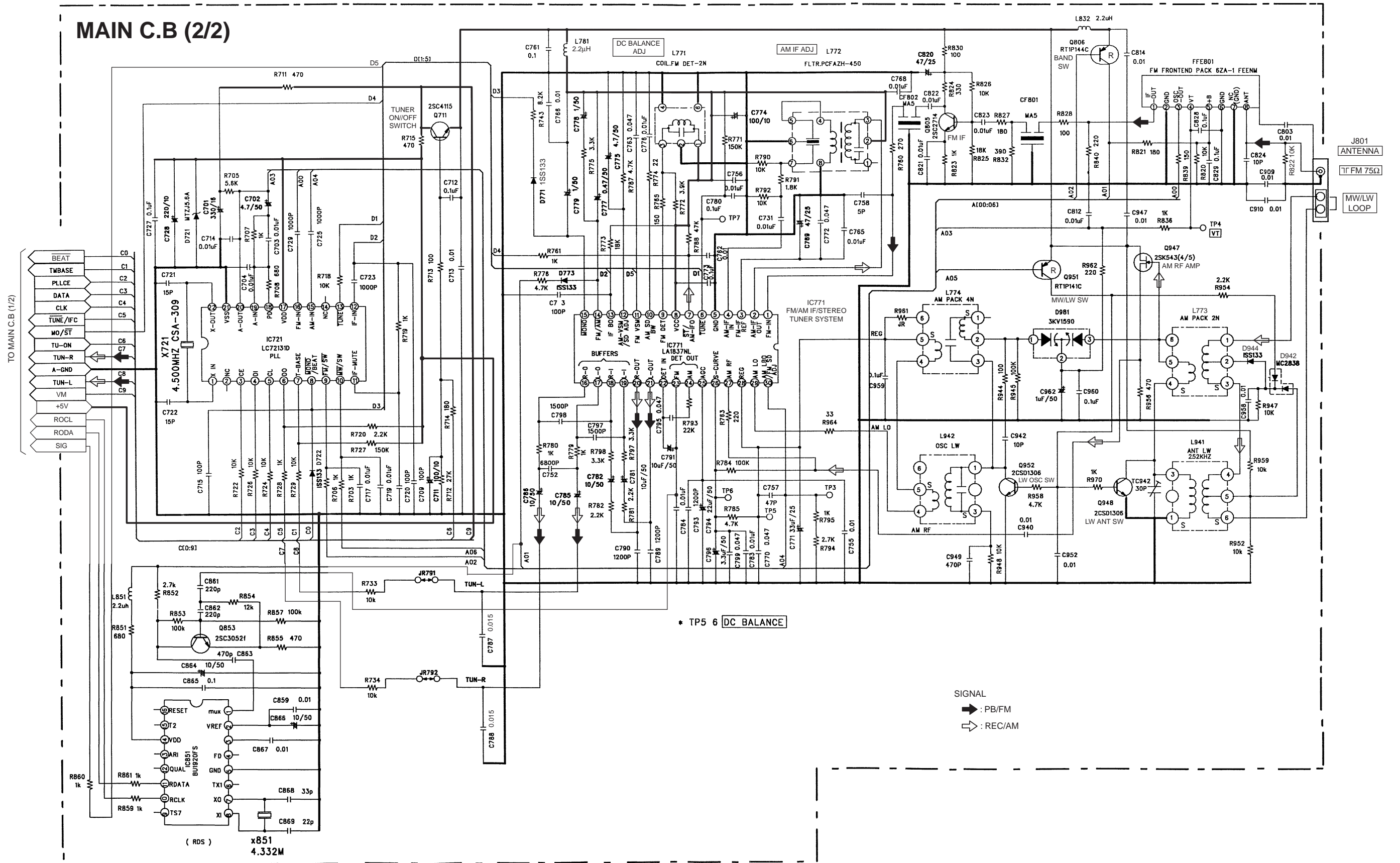


IC, LA1837NL



IC, BU1920FS





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

FRONT C.B (INSERTED PARTS)

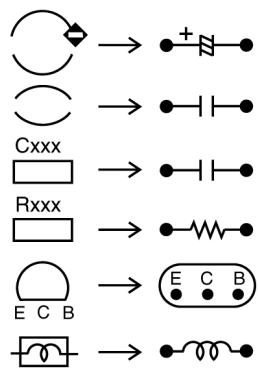
CD C.B (INSERTED PARTS)

LED C.B (INSERTED PARTS)

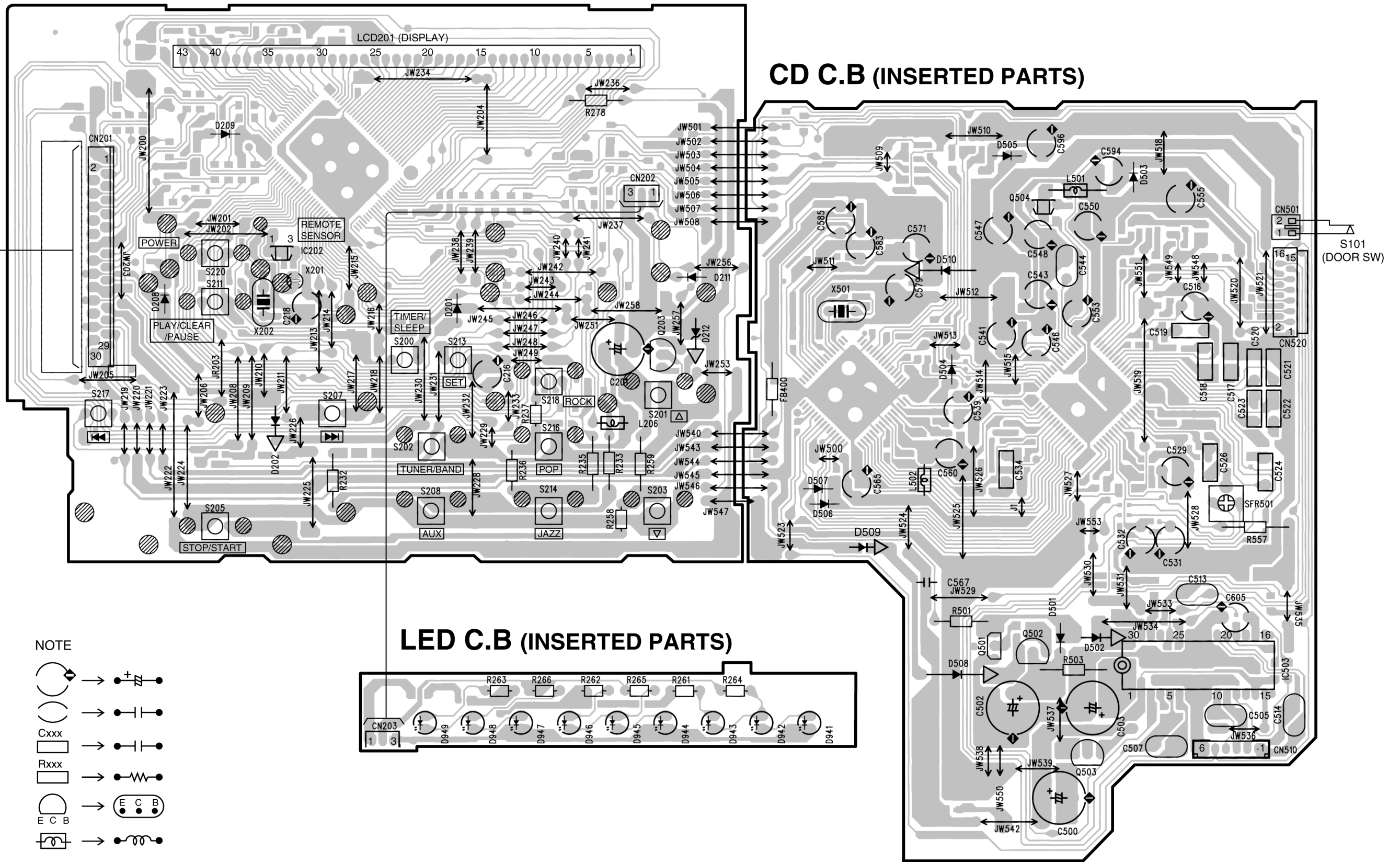
TO MAIN C.B J105

S101 (DOOR SW)

NOTE



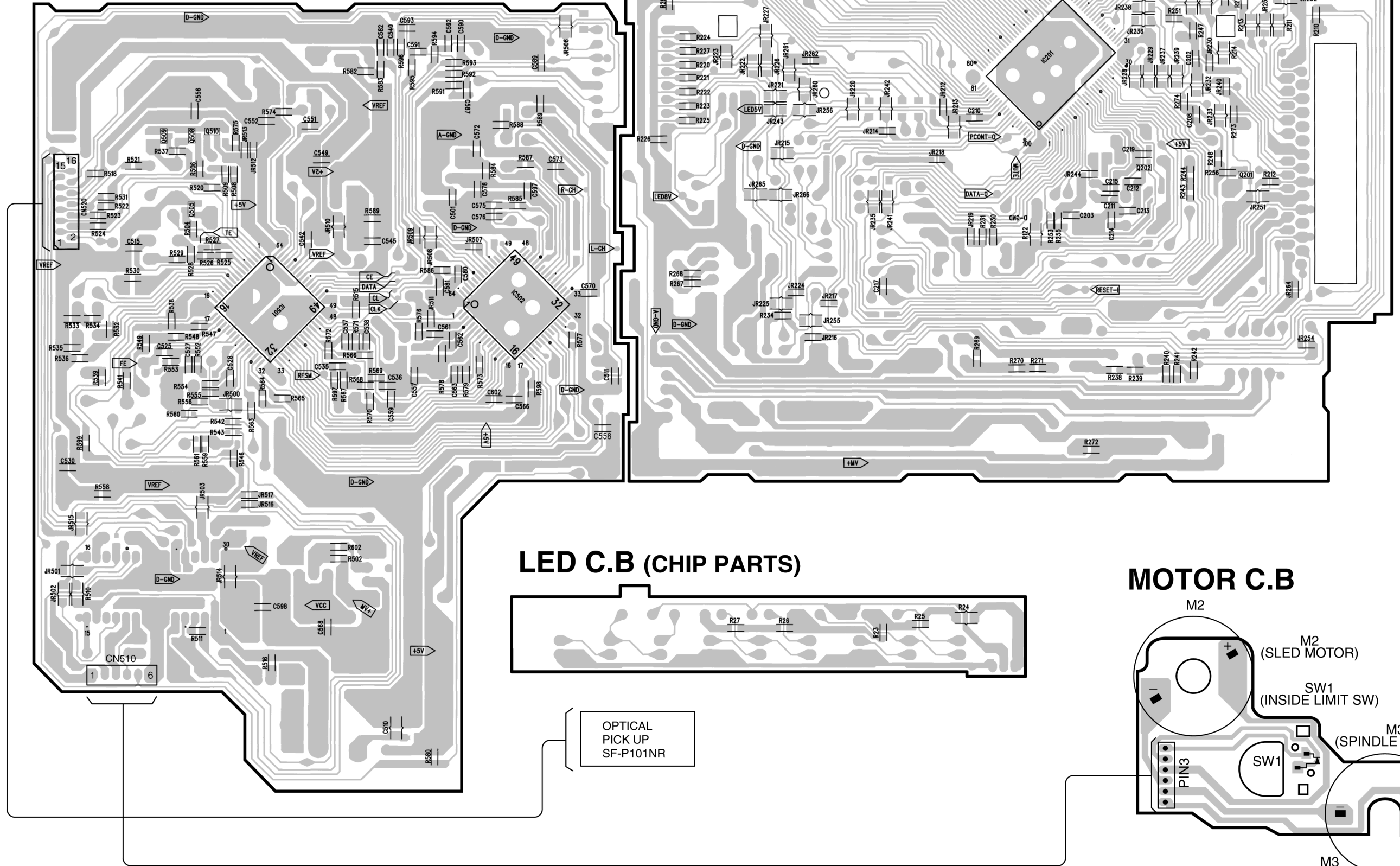
A
B
C
D
E
F
G
H
I
J
K



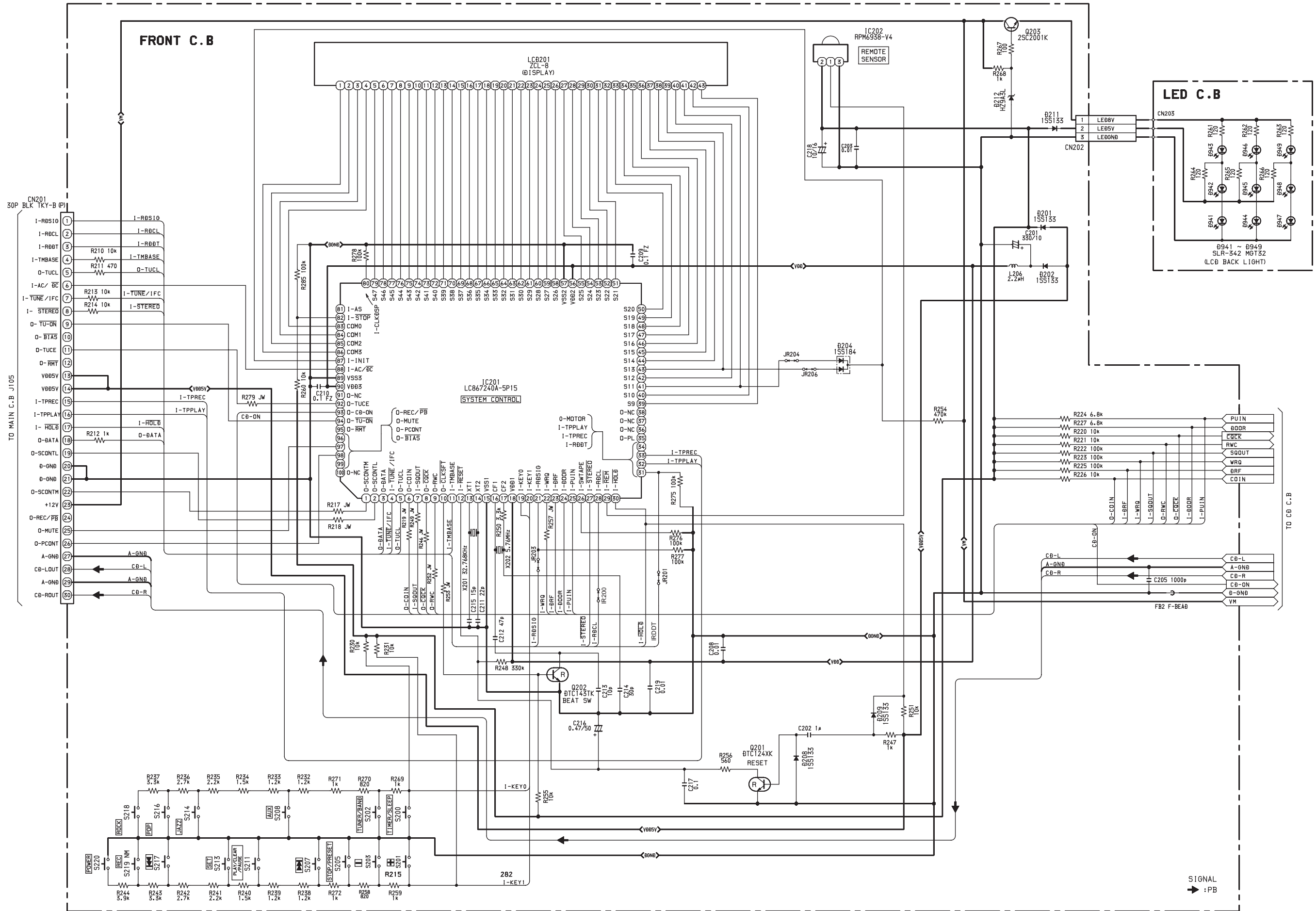
A
B
C
D
E
F
G
H
I
J
K

FRONT C.B (CHIP PARTS)

CD C.B (CHIP PARTS)



SCHEMATIC DIAGRAM-3 (FRONT)



VOLTAGE CHART

IC101 TDA2007A (V)

PIN	1	2	3	4	5	6	7	8	9
TU	1.4	0.7	11	0.74	1.4	GND	9.9	20.4	9.9
CD	1.4	0.7	11	0.72	1.4	GND	9.9	20.4	9.9

IC102 M62495AFP (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12
TU	2.4	2.4	2.4	2.39	NC	2.4	2.4	2.39	2.4	2.4	2.4	5.34
TAPE	2.4	2.4	2.4	2.38	NC	2.4	2.4	2.38	2.4	2.4	2.4	5.33
CD	2.4	2.4	2.4	2.35	NC	2.4	2.4	2.35	2.4	2.4	2.4	5.29
PIN	13	14	15	16	17	18	19	20	21	22	23	24
TU	2.5	GND	2.4	2.42	2.4	2.4	2.4	NC	2.4	2.4	2.4	2.4
TAPE	2.5	GND	2.4	2.4	2.4	2.4	2.4	NC	2.4	2.4	2.4	2.4
CD	2.5	GND	2.4	2.4	2.4	2.4	2.4	NC	2.4	2.4	2.4	2.4

IC301 BA4560 (V)

PIN	1	2	3	4	5	6	7	8
TAPE	4.2	4.5	4.2	GND	4.2	4.2	4.2	8.69
REC	4.2	4.2	4.1	GND	4.1	4.2	4.2	8.68

IC721 LC72131D PLL (V)

PIN	1	2	3	4	5	6	7	8	9	10	11
FM	2.7	NC	2.5	0.96	1	5.5	2	0	0.8	0	0
MW	2.7	NC	0	0	0	5.5	2	0	9.1	0	0
LW	2.7	NC	0	0	0	5.5	2	0	9.3	9.4	0
PIN	12	13	14	15	16	17	18	19	20	21	22
FM	0	9.1	NC	7.7	2.1	0	0	0	0	GN	2.7
MW	0	9.2	NC	2.7	0	5.5	0.9	0.91	4.3	GN	2.7
LW	0	9.3	NC	2.71	0	5.5	0.9	0.99	1.3	GN	2.7

IC851 BU1920FS RDS (V)

PIN	1	2	3	4	5	6	7	8
FM(RDS)	0.4	0.6	0.4	0	0.9	6.7	0.9	0.62
PIN	9	10	11	12	13	14	15	16
FM(RDS)	0.7	0.9	0.9	0.83	0	0.4	0.9	0.89

IC771 LA1837NL (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FM	3.6	9.1	3.6	3.56	GN	0	0	9.09	9.1	1.3	2.5	0	0.5	8	8
MW	3.6	9.3	3.5	3.54	GN	9.2	5.5	9.31	9.3	1.3	0	0	0.5	5	5.6
LW	3.6	9.4	3.6	3.54	GN	9.3	5.5	9.43	9.4	1.3	0	0.79	0.5	5.1	5.7
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
FM	4.3	4.3	4.3	4.29	3.4	3.4	2.8	3.54	0	0	3.6	3.6	3.6	3.6	2.2
MW	4.3	4.3	4.3	4.27	3.4	3.4	2.8	2.7	0.7	0.7	3.6	3.54	3.6	3.6	2
LW	4.3	4.3	4.3	4.28	3.4	3.4	2.8	2.58	0.9	0.8	3.6	3.54	3.6	3.6	2

FM FFE801 (V)

PIN	1	2	3	4	5	6	7	8
FM	0	GND	0	VT	7.1	GN	GN	0
MW	0	GND	0	VT	0	GN	GN	0

IC501 LA9241M CD (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dynamics	2.5	2.5	2.6	2.55	2.5	2.5	2.5	2.54	2.5	2.5	2.5	2.52	2.6	2.5	2.6
stafics	2.5	2.5	2.5	2.52	2.5	2.5	2.5	2.51	2.5	2.5	2.5	2.51	2.5	2.5	2.5
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
dynamics	2.6	2.5	2.5	2.54	2.6	2.5	GN	2.51	2.5	2.5	2.5	2.6	2.5	2.6	2.4
stafics	2.5	2.5	0	2.49	2.5	2.5	GN	0	0	2.5	2.5	2.51	2.5	2.5	2.3
PIN	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
dynamics	2.4	0	0	4.99	0	1.2	0	0	0	0	2.3	2.43	2.6	2.5	GN
stafics	2.3	0	0	4.94	4.8	0	0	4.92	0	0	1.6	2.4	2.6	2.5	GN
PIN	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
dynamics	2.5	2.6	NC	0	2.4	4.7	4.8	0	4.9	NC	5	2.53	2.5	2.3	2.4
stafics	2.5	2.5	NC	0	0	0	4.8	0	0	NC	0	2.51	2.5	1	1
PIN	61	62	63	64											
dynamics	2.2	3.6	0	0											
stafics	2.2	4.3	0	0											

IC502 LC78622E CD (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dynamics	0	0	1.5	0	2	4.9	0.3	0	2.7	2.6	0	0	0	0	0
stafics	0	0	0	0	2	4.9	0	0	2.5	2.6	0	0	0	4.9	0
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
dynamics	1.8	0	5	0	0	2.5	NC	4.19	0	0	NC	4.98	0	NC	NC
stafics	0	4.9	4.9	0	0	2.5	NC	4.95	0	0	NC	4.93	0	NC	NC
PIN	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
dynamics	2.5	0	0	NC	NC	4.9	2.1	0	0	2.1	4.9	NC	5	2	2.5
stafics	0	0	0	NC	NC	4.8	2.1	0	0	2.1	4.8	NC	5	2	2.2
PIN	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
dynamics	0	NC	NC	NC	NC	0	2.5	0.75	0	0	4.8	4.6	5	NC	2
stafics	0	NC	NC	NC	NC	0	2.5	0	0	0	4.8	4.77	5	NC	2
PIN	61	62	63	64											
dynamics	2.4	0	0	0											
stafics	235	0	0	0											

IC503 LA6541 CD

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dynamics	9.9	5	2.5	2.52	4.6	4.5	GN	GN	GN	4.5	4.6	2.52	NC	5	9.3
stafics	10	5	2.5	2.51	4.7	4.7	GN	GN	GN	4.7	4.7	2.51	NC	5	9.5
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
dynamics	5	4.9	NC	2.53	4.9	4	GN	GN	GN	4.5	4.5	NC	2.5	2.5	9.8
stafics	4.9	4.8	NC	2.51	4.7	4.6	GN	GN	GN	4.7	4.7	NC	2.5	2.5	10

IC201 LC867240A-5P15

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
TU	0	0	0	0	0	0	0.8	0	0	0	1.9	4.67	1.8	2.6	0
TAPE	0	0	0	0	0	0	0	0	0	2	1.9	4.6	1.6	2.7	0
CD	0	0	0	0	0	4.8	0	4.65	0	2	1.9	4.63	1.6	2.6	0
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
TU	2.2	2.3	4.8	4.91	4.9	2.4	0.8	0.96	4.9	0	4.9	0	0.6	4.9	5.3
TAPE	2.3	2.3	4.8	4.91	4.9	0	0.8	0.96	4.9	0.5	1.8	0	0	4.9	5.3
CD	2.2	2.3	4.8	4.88	4.9	0	0.8	0.91	4.9	1.9	2.4	0	0	4.9	5.3
PIN	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
TU	0.5	0	0	NC	NC	NC	NC	NC	2.4	2.4	2.4	2.49	2.4	2.5	2.5
TAPE	0	0	0	NC	NC	NC	NC	NC	2.5	2.4	2.4	2.46	2.4	2.4	2.4
CD	0	0	0	NC	NC	NC	NC	NC	2.3	2.3	2.3	2.33	2.3	2.3	2.3
PIN	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
TU	2.4	2.5	2.5	2.49	2.5	2.5	2.5	2.5	2.5	2.4	4.8	0	2.4	2.4	2.4
TAPE	2.4	2.4	2.4	2.43	2.4	2.4	1.7	1.9	2.5	2.4	4.8	0	2.4	2.4	2.4
CD	2.3	2.3	2.3	2.32	2.4	2.5	2.3	2.33	2.3	2.3	4.8	0	2.3	2.3	2.3
PIN	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
TU	2.5	2.5	2.5	2.47	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.47	2.4	2.5	2.5
TAPE	2.5	2.4	2.4	2.43	2.4	2.4	2.5	2.42	2.4	2.4	2.4	2.43	2.4	2.5	2.5
CD	2.3	2.4	2.3	2.34	2.4	2.4	2.3	2.34	2.4	2.4	2.3	2.35	2.4	2.3	2.3
PIN	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
TU	2.5	2.5	2.5	2.48	0	NC	4.9	2.48	2.5	2.5	2.5	2.94	5.3	0	4.8
TAPE	2.5	2.5	2.5	2.46	0	NC	0	2.45	2.5	2.5	2.5	3.54	5.3	0	4.8
CD	2.4	2.4	2.4	2.36	0	NC	4.8	2.4	2.4	2.4	2.4	2.05	5.3	0	4.8
PIN	91	92	93	94	95	96	97	98	99	100					
TU	NC	0	0	0	NC	NC	0	0.98	NC	NC					
TAPE	NC	0	0	4.75	NC	NC	0	0.99	NC	NC					
CD	NC	0	4.7	4.72	NC	NC	0	1.12	NC	NC					

Q101	KTC3198GR	Q102	KTC3198GR	Q103	2SB1370	Q105	KTC3198GR
PIN	B E C	PIN	B E C	PIN	B E C	PIN	B E C
dynamics	0.7 0 0	dynamics	0 0 5.3	dynamics	12 22 21	dynamics	0.7 0 20
stafics(v)	0.7 0 0	stafics(v)	0 0 5.3	stafics(v)	12 22 21	stafics(v)	0.6 0 20

Q106	KTC3198GR	Q107	KTC3198GR	Q108	2SD1381F	Q104	2SB1370E
PIN	B E C	PIN	B E C	PIN	B E C	PIN	B E C
dynamics	0.7 GN 1	TAPE	12 11 12	TU (V)	6.2 5.6 16	dynamics	21 22 21
stafics(v)	0.7 GN 91	CD (V)	12 12 11	CD (V)	6.2 5.6 16	stafics(v)	21 22 21

Q112	KTA1266GR	Q113	DTC144ES	Q109	DTC343TS	Q110	DTC343TS
PIN	B E C	PIN	B E C	PIN	B E C	PIN	B E C
dynamics	20 21 21	dynamics	7.1 GN 0	dynamics	0 0 0	dynamics	0 0 0
stafics(v)	20 21 22	stafics(v)	7.1 GN 0	stafics(v)	1.4 0 0	stafics(v)	1.4 0 0

Q111	2SC1815Y	Q301	2S8050C	Q302	2SC1815Y	Q201	DTC124XK
PIN	B E C	PIN	B E C	PIN	B E C	PIN	B E C
TU (V)	0 GN 10	PB(V)	0 GN OS	PB(V)	0.4 GN 0.4	CD(V)	0 0 4.7
CD (V)	0.7 GN 0	REC(V)	1.6 GN OS	REC(V)	1.9 GN 6.7	TU(V)	0 0 4.7

Q202	DTC143TK	Q203	2SC2001K	Q711	C4115	Q853	2SC3052
PIN	B E C	PIN	E B C	PIN	B E C	PIN	B E C
CD(V)	2 0 0	CD(V)	8.4 7.7 12	CD(V)	0 0 12	RDS(V)	1.5 0.9 3.8
TU(V)	2 0 0	TU(V)	8.4 7.7 12	TU(V)	9.8 9.1 12		

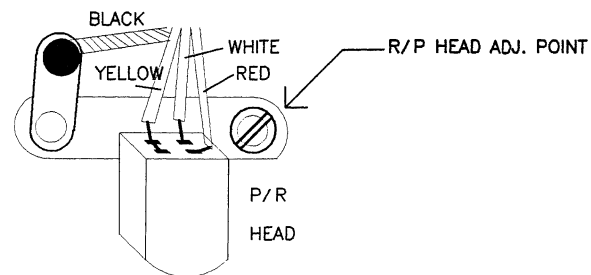
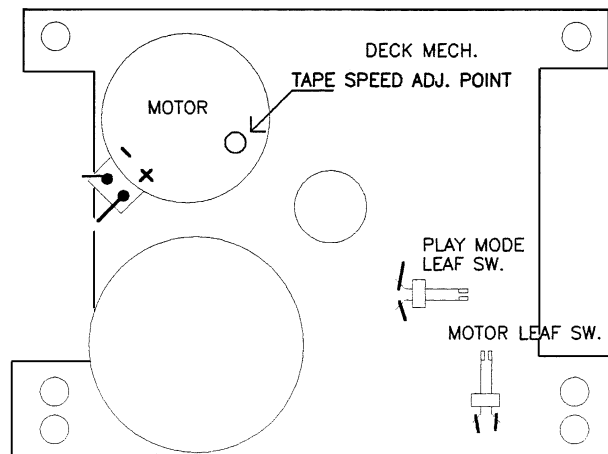
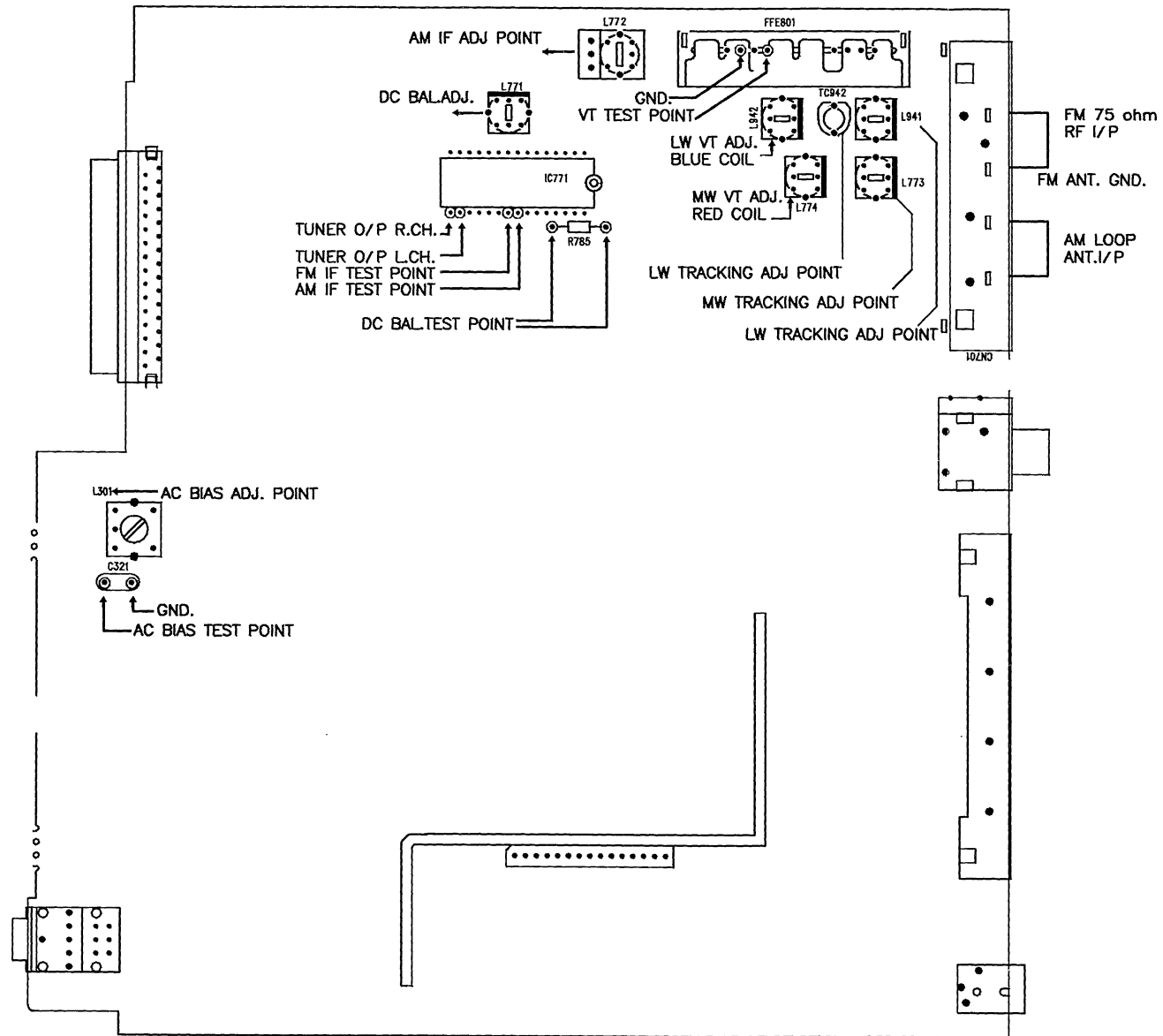
Q805	2SC2714	Q806	RTIP144C	Q951	RTIP141C	Q947	2SK543
PIN	B E C	PIN	B E C	PIN	B E C	PIN	B E C
FM(V)	5.2 4.5 7.2	FM(V)	0.8 9.1 9	FM(V)	9.1 9.1 0	FM(V)	0 9.1 0.4
AM(V)	5.4 4.2 7.3	AM(V)	0 9.3 0	AM(V)	0.8 9.3 9.3	AM(V)	0 9.3 0.4

Q952	2SD1306	Q948	2SD1306	Q501	DTC124XS	Q502	2SA1296GR
PIN	B E C	PIN	B E C	PIN	B E C	PIN	B E C
MW(V)	1.9 1.2 1.2	MW(V)	1.9 1.1 1.1	dynamics	4.5 0 0.2	dynamics	9.6 10 10
LW(V)	0 1.1 1.1	LW(V)	0 1.1 1.1	stafics(v)	4.5 0 0.2	stafics(v)	9.5 10 10

Q503	2SA1296GR	Q504	2SA933RS	Q505	DTC114TK	Q508	DTC144EK
PIN	B E C	PIN	B E C	PIN	B E C	PIN	B E C
dynamics	9.8 10 5	dynamics	4.2 4.8 1.6	dynamics	0.1 2.5 2.5	dynamics	4.3 2.5 2.5
stafics(v)	9.7 10 5.2	stafics(v)	3.7 4.4 2.1	stafics(v)	0.1 2.5 2.5	stafics(v)	4.4 2.5 2.5

Q509	DTC144EK	Q510	DTC114TK
PIN	B E C	PIN	B E C
dynamics	4.3 2.5 2.5	dynamics	0.1 0 4.3
stafics(v)	4.4 2.5 2.5	stafics(v)	0.1 0 4.3

ELECTRICAL ADJUSTMENT



ADJUSTMENT ITEM	ADJ. POINT	TEST POINT	SET FREQ.	SETTING
MW VT ADJ.	L774	FFE801 4PIN TO GND.	1602KHz	6.8V+/-0.1V
MW VT CHECK	-	FFE801 4PIN TO GND.	531KHz	<= 2.0V
MW TRACKING ADJ.	L773	TUNER O/P L/R	603KHz	MAX. Output Sine Wave(Min. Dist.)
LW VT ADJ.	L942	FFE801 4PIN TO GND.	290KHz	6.1V+/-0.1V
LW VT CHECK	TEST ONLY	FFE801 4PIN TO GND.	144KHz	<= 2.5V
LW TRACKING ADJ.	TC942	TUNER O/P L/R	290KHz	MAX. Output Sine Wave(Min. Dist.)
	L941	TUNER O/P L/R	144KHz	
FM VT ADJ.	-	FFE801 4PIN TO GND.	108 MHz	<= 8V
FM VT CHECK	-	FFE801 4PIN TO GND.	87.5MHz	<= 2.5V
DC BAL. ADJ.	L771	Both Terminal OF R785	98 MHz	0 mv (+/- 20 mv)
FM IF CHECK	-	IC 771 PIN 22	10.7 MHz	-
AM IF ADJ.	L772	IC 771 PIN 24	450 KHz	-
REC. BIAS FREQ. ADJ.	-	C321,330 Common/GND	-	80KHz +/-3KHz (With R/P HEAD)
REC. BIAS LEVEL ONLY CHECK	L301	C321,330 Common/GND	-	10 V~18 V (With R/P HEAD)
BEAT CUT ST / ON MONO/OFF	TEST ONLY	C330,321 Common/GND	FM 98MHz Deck REC.	4 KHz +/- 1 KHz
TAPE SPEED	MOTOR	SPEAKER OUTPUT	-	3000Hz +3/-2%
DECK R/P HEAD ADJ.	R/P HEAD	SPEAKER OUTPUT	8 KHz TEST TAPE	-

IC DESCRIPTION

IC, LC867240A-5P15

Pin No.	Pin Name	I/O	Description
1	O-SCONTM	O	M62439SP control. open drain output.
2	O-SCONTL	O	
3	O-DATA	O	Tuner control. CMOS output.
4	I-TUNE/IFC	I	Tuner control.
5	O-TUCL	O	Tuner control. CMOS output.
6	O-COIN	O	CD control. open drain output.
7	I-SQOUT	I	CD control.
8	O- \overline{CQCK}	O	CD control. open drain output.
9	O-RWC	O	
10	O- \overline{CLKSFT}	O	Clock shift output. "L" during shift. open drain output.
11	I-TMBASE	I	8 Hz time base input.
12	I- \overline{RESET}	I	Reset input.
13	XT1	I	Input pin.
14	XT2	O	Output pin for 32.768kHz crystal oscillation.
15	VSS1	—	GND.
16, 17	CF1, CF2	I/O	Main clock input/output 5.76 MHz.
18	VDD1	—	+5V.
19	I-KEY0	I	KEY0 A/D input.
20	I-KEY1	I	KEY1 A/D input.
21	I-RDSIG	I	RDS signal level input. (A/D input)
22	I-WRQ	I	CD control.
23	I-DRF	I	
24	I-DOOR	I	CD door SW detection SW input. "L" at CLOSE.
25	I-PUIN	I	CD pick-up detection SW input. "L" at ON.
26	I-SWTAPE	I	Tape detection SW input. (A/D input)
27	I- \overline{STEREO}	I	Monaural/stereo indication selector input. "L" at stereo.
28	I-RDCL	I	RDS clock input.
29	I- \overline{REM}	I	Remote control input. (fall-down edge interrupt input)
30	I- \overline{HOLD}	I	Hold mode detection. "L" at hold mode.
31	I-RDDT	I	RDS data input.
32	I-TPREC	I	Tape REC detection input. "H" at REC.
33	I-TPPLAY	I	Tape PLAY detection input. "H" at PLAY.
34	O-MOTOR	O	Mechanism deck motor ON/OFF output. "H" at ON. CMOS output.
35	O-PL	O	Mechanism deck plunger solenoid ON/OFF output. "H" at ON. CMOS output .
36-38	O-NC	O	Not used.
39-55	S9-S25	O	LCD SEG terminal Initial setting output. (S10 to S16)
56	VDD2	—	+5V.
57	VSS2	—	GND.
58-79	S26-S47	O	LCD SEG terminal .
80	I-CLKDSP	I	Watch indication select input "L": 12H. "H": 24H.
81	I-AS	I	Auto stop. counter input .

Pin No.	Pin Name	I/O	Description
82	I-STOP	I	Tape stop input.
83-86	COM0-COM3	O	LCD common output.
87	I-INIT	I	Initial setting input.
88	I-AC/DC	O	Beat selector output. "H" during selection. CMOS output .
89	VSS3	—	GND.
90	VDD3	—	5V.
91	O-NC	O	Not used.
92	O-TUCE	O	Tuner chip enable output. CMOS output .
93	O-CD-ON	O	"H" output during CD function. CMOS output.
94	O-TU-ON	O	"H" output during TU function. Open drain output.
95	O-RMT	O	REC mute output. "H" during mute. Open drain output.
96	O-REC/PB	O	REC/PB select output. "H" during PB. Open drain output.
97	O-MUTE	O	Mute output. "H" during mute. Open drain output.
98	O-PCONT	O	Power control output. "H" at ON. CMOS output.
99	O-BIAS	O	REC bias ON/OFF output. "H" at ON. Open drain output.
100	O-NC	O	Not used.

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	—	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.

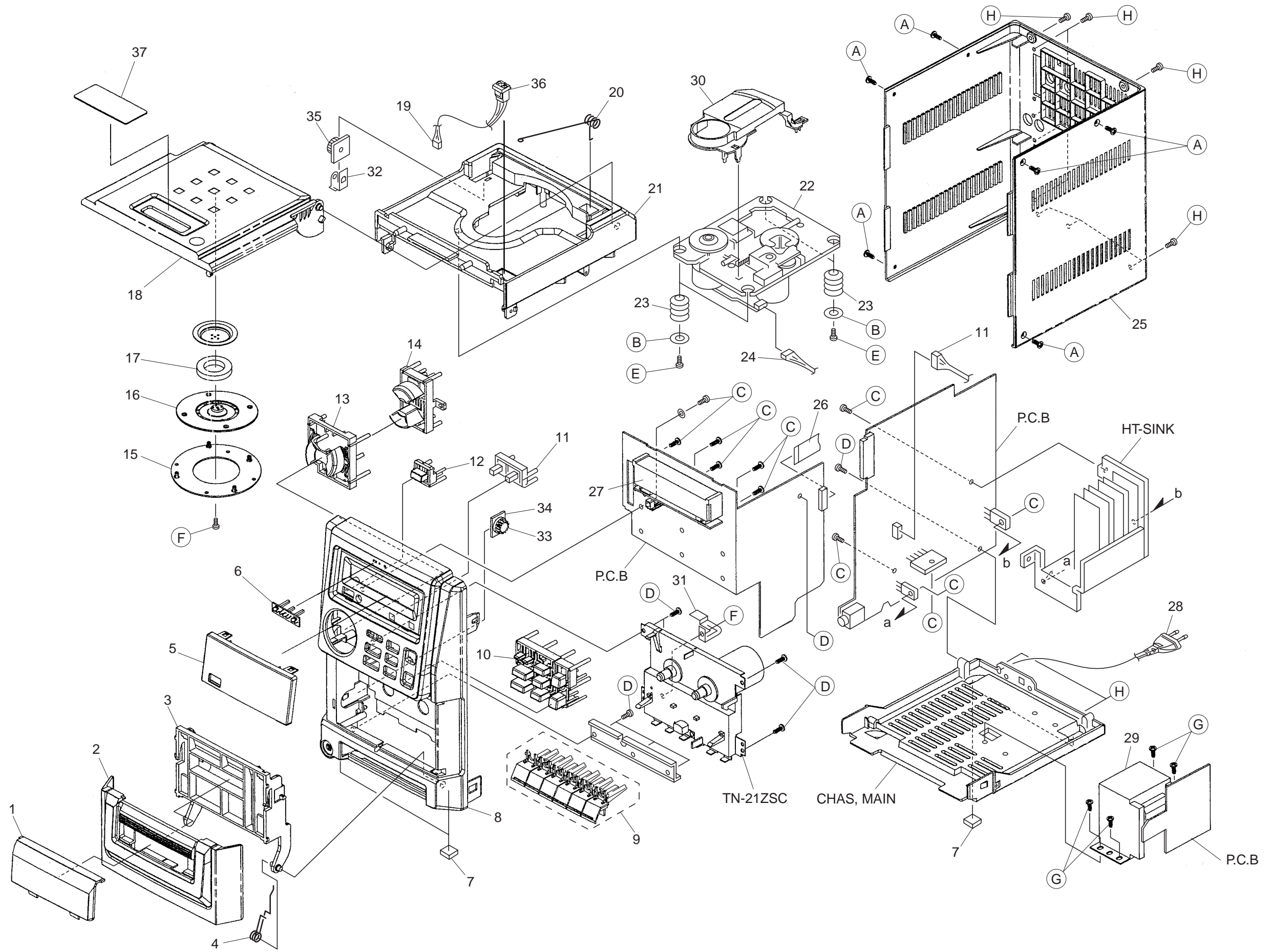
Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV-, CV+	I	CLV error signal input pin from DSP.
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	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	TEST2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLV-	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 the sync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24-28	SL+, SL-, CONT3-5	I/O	General purpose input/output pin 1 to 5.	The pin is controlled by the serial data command from microprocessor. When the pin is not used, set the pin to the input terminal and connect to 0V, or alternately set the pin to output terminal and leave the pin open.
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	TEST3, TEST4	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	TST11	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	TEST5	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	TEST1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

Note: The same potential must be applied to the respective power supply terminals. (VDD, VVDD, LVDD, RVDD, XVDD)



MECHANICAL PARTS LIST 1/1

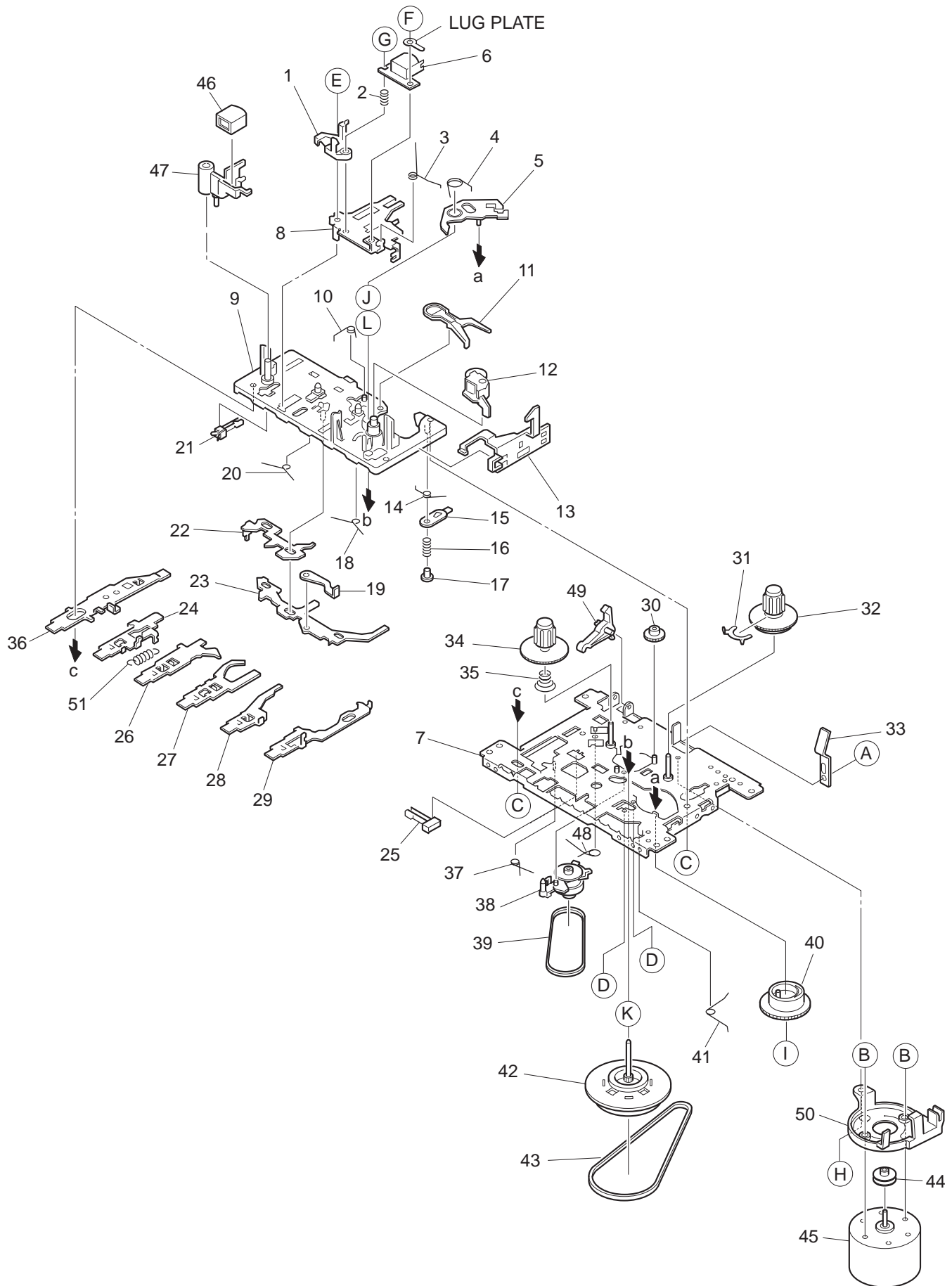
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 If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CLB-007-010		WINDOW,CASS	26	8Z-CL8-682-010		FF-CABLE, 16P 1.0 180MM
2	8A-CLB-005-010		LID,CASS	27	8Z-CL8-201-010		GUIDE,LCD
3	8A-CLB-006-010		BOX,CASS	28	87-A80-006-010		AC CORD ASSY HS
4	8Z-CL8-209-010		SPR-T,CASS	29	8A-CLA-626-010		PT,EZ ACL-A
5	8A-CLB-004-010		WINDOW,DISP	30	8Z-CDB-169-010		PANEL,CD SANYO
6	87-B00-002-010		BADGE,AIWA 30 ABS SIL	31	8Z-CL8-206-010		SPR-P,REC
7	8Z-CL8-204-010		CUSH,FOOT	32	8Z-CL8-214-010		DMPR,HLDR BE
8	8A-CLB-001-010		CABI,FR	33	84-CD5-215-010		GEAR
9	8A-CLB-008-010		KEY,CASS SET	34	84-CD5-216-010		BRACKET
10	8A-CLB-009-010		KEY,CONT	35	86-NFZ-231-010		DMPR,70
11	8Z-CL8-686-110		CONN ASSY,8P RPH	36	87-064-108-110		HLDR,NC LUTCH
12	8A-CLB-012-010		KEY,POWER	37	8A-CLB-027-010		WINDOW,CD
13	8A-CLB-010-010		KEY,SKIP	A	87-B10-239-010		QT2+3-8 W/O CR
14	8A-CLB-011-010		KEY,P/S	B	8Z-CL8-220-010		W,30-0856-01-01-01
15	8Z-CDB-170-010		BASE,CHUCK	C	87-067-579-010		TAPPING SCREW, BVT2+3-8
16	88-CD9-211-210		RING,CHUCK	D	87-067-703-010		TAPPING SCREW, BVT2+3-10
17	87-036-368-010		MAGNET	E	87-342-074-010		UT2+2.6-8
18	8A-CLB-002-010		LID,CD	F	87-571-033-410		TAPPING SCREW, VIT+2-4
19	8Z-CL8-683-010		CONN ASSY,2P CD DOOR	G	87-761-097-410		VFT2+3-12 SLOT
20	8Z-CL8-205-010		SPR-T,CD	H	87-B10-230-010		BVT2+3-10 W/O SLOT SILVER CR
21	8A-CLB-003-010		CHAS,CD				
22	M8-ZZK-E90-070		DA11T3C				
23	88-CT6-206-010		CUSHION,CD				
24	8Z-CL8-681-010		CONN ASSY,6P CD MOTOR				
25	8A-CLB-020-010		CABI,REAR				

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

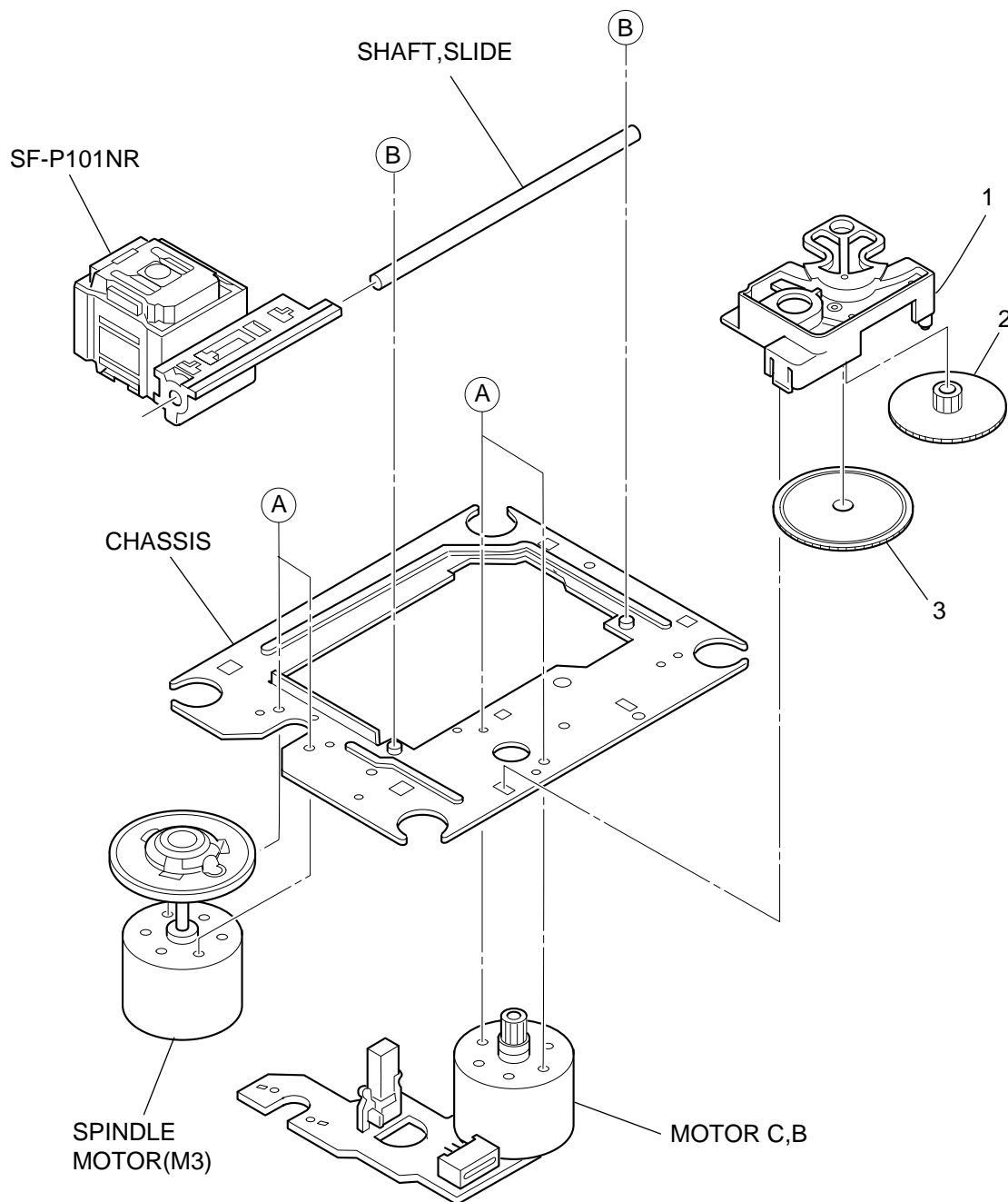


TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
 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	36	S1-921-140-220		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	S6-201-011-110		HEAD,RP7442ES-0951	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	S1-921-130-020		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	A	S9-P04-200-310		C TAPPING SCREW 2-3
18	S1-921-140-150		BUTTON LEVER SPRING(B)	B	S1-921-120-020		MOTOR COLLER SCREW
19	S1-821-011-590		E KICK LEVER	C	S9-B10-200-510		P TAPPING BIND SCREW M2-5
20	S1-921-141-070		BUTTON LEVER SPRING(A)	D	S9-C07-204-510		SCREW,TAPPING(CAMERA)M2-4.5
21	S6-401-011-490		LEAF SW MSW-1541T	E	S9-P01-200-610		SCREW,M2-6
22	S1-921-140-090		SWITCH ACTUATOR	F	S9-B01-200-310		(+)BIND SCREW M2-3
23	S1-921-140-080		PUSH BUTTON ACTUATOR	G	S9-F08-200-710		AZIMUTH SCREW M2-7
24	S1-921-140-230		PLAY BUTTON LEVER	H	S1-921-120-030		MB SCREW
25	S6-401-011-610		LEAF SW MSW-17820MVEI	I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
26	S1-921-140-240		REW BUTTON LEVER	J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
27	S1-921-140-250		FF BUTTON LEVER	K	S9-W01-400-100		P WASHER 2-3.5-0.4
28	S1-921-140-260		STOP BUTTON LEVER	L	S9-W01-130-200		P WASHER 2.1-4-0.13
29	S1-921-140-610		PAUSE BUTTON LEVER				
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				

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

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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

SPEAKER PARTS LIST 1/1

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CLA-602-010		SPKR, 40HM 8W ACL-A
2	8A-CLB-014-010		CABI, FR SPKR
3	8A-CLB-016-010		FRAME, SPKR
4	86-CL9-214-010		HLDL, CORD(SPKR)
5	8Z-CL7-107-010		BADGE, AIWA SILVER
6	8Z-CL8-694-110		CORD, SPKR GRY

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-CLB-961-010		RC UNIT, RC-AAT11
2	87-A90-030-010		ANT, LOOP AM-NC C
3	87-A90-118-010		ANT, WIRE FM (Z)

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