

SERVICE MANUAL

COMPACT DISC STEREO
SYSTEM

BASIC TAPE MECHANISM : TN-21ZSC-2003
BASIC CD MECHANISM : DA-11T3C

SPECIFICATIONS

MAIN UNIT

FM tuner section

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

AM tuner section

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

Amplifier section

Power output 5.5 W + 5.5 W (4 ohms, T.H.D. 1%, 1 kHz)
 7.0 W + 7.0 W (4 ohms, T.H.D. 10%, 1 kHz)
 AUX: 800 mV

Input

Outputs SPEAKERS: accept speakers of 4 ohms or more
 PHONES (stereo minijack): accepts headphones of 32 ohms or more
 VIDEO OUT: 1 Vp-p (75 ohms)

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 × 1
 Erase head × 1

Compact disc player section

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

SPEAKER SYSTEM

Speakers 100 mm cone type, 4 ohms
 Impedance 4 ohms
 Dimensions (W × H × D) 130 × 262.5 × 215 mm
 Weight 1.3 kg

GENERAL

Power requirements 120 V/220-240 V AC switchable, 50/60 Hz

Power consumption 26 W

Dimensions of main unit (W × H × D)

160 × 265 × 248.5 mm

Weight of main unit

3.5 kg

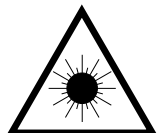
- Design and specifications are subject to change without notice.

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 mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle 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

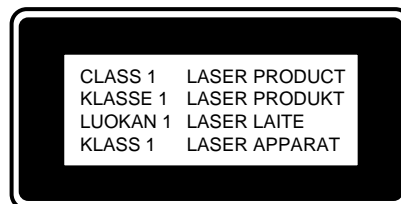
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

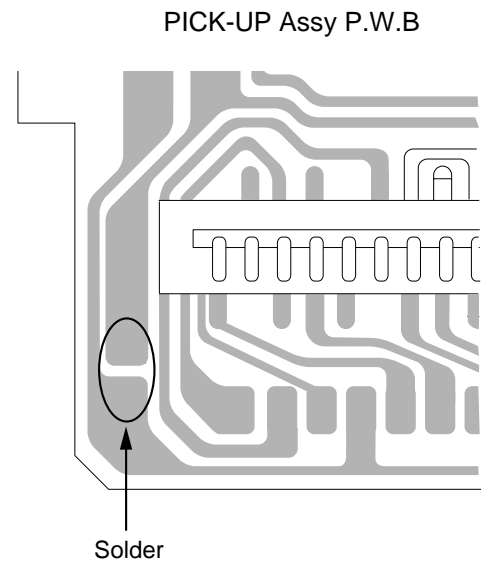
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



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-1/4

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC							
	87-A20-547-010	C-IC,CXA1992AR		C117	87-010-403-080		CAP, ELECT 3.3-50V
	87-A21-368-010	IC,NJM7812FA(A)		C118	87-010-101-080		CAP, ELECT 220-16
	87-A20-919-040	C-IC,BA5915FP		C119	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-002-849-080	IC,NJM78L06A		C120	87-010-263-080		CAP, ELECT 100-10V
	87-A20-917-010	C-IC,CXD2540Q-1/2		C201	87-010-248-080		CAP, ELECT 220-10V
	87-A21-443-040	C-IC,M62495AFP		C203	87-010-248-080		CAP, ELECT 220-10V
	8A-CGC-606-010	C-IC,UPD78016FGC		C204	87-010-197-080		CAP, CHIP 0.01 DM
	87-A21-020-010	IC,TA8223K		C213	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A20-993-040	C-IC,PST9121NL		C214	87-016-669-080		C-CAP,S 0.1-25 K B
	87-A20-602-040	C-IC,M5291FP		C223	87-A11-123-080		CAP,TC U 1800P
	87-A21-431-010	IC,BA4560N		C224	87-A11-123-080		CAP,TC U 1800P
	87-A20-925-040	C-IC,BA05FP		C225	87-010-401-080		CAP, ELECT 1-50V
	87-A20-905-040	C-IC,BA033FP		C226	87-010-401-080		CAP, ELECT 1-50V
	87-A20-920-010	C-IC,CL680-D1		C227	87-018-208-080		CAP 0.047-50F
	87-A20-921-040	C-IC,SN74LVU04APW		C228	87-018-208-080		CAP 0.047-50F
	87-A20-962-040	C-IC,MSM54V16258B/BSL		C229	87-018-132-080		CAP, CER 2200P-16V
	84-ZG1-695-040	C-IC,LH5V2RN1		C230	87-018-132-080		CAP, CER 2200P-16V
	87-A20-975-040	C-IC,SN74LV74APW		C231	87-010-406-080		CAP, ELECT 22-50
	87-A20-974-040	C-IC,LC74781M-9017		C232	87-010-406-080		CAP, ELECT 22-50
	8A-CGC-605-010	C-IC,LC877248A		C233	87-010-260-080		CAP, ELECT 47-25V
	87-A20-918-040	C-IC,SM5878AM		C234	87-010-404-080		CAP, ELECT 4.7-50V
	87-070-127-110	IC,LC72131 D		C235	87-010-112-080		CAP, ELECT 100-16V
	87-A20-913-010	IC,LA1837NL		C236	87-010-112-080		CAP, ELECT 100-16V
	87-A21-482-010	IC,RPM6938-H4		C237	87-010-237-080		CAP, ELECT 1000-16V
				C238	87-010-237-080		CAP, ELECT 1000-16V
TRANSISTOR							
	87-026-463-080	TR,2SA933S (0.3W)		C241	87-018-209-080		CAP, CER 0.1-50V
	89-213-703-010	TR,2SB1370F		C243	87-010-387-080		CAP,E 470-25 SME
	87-026-237-080	CHIP-TR,DTC124XK		C244	87-010-248-080		CAP, ELECT 220-10V
	87-026-610-080	TR,KTC3198GR		C250	87-010-401-080		CAP, ELECT 1-50V
	89-327-125-080	CHIP TR,2SC2712GR		C251	87-010-401-080		CAP, ELECT 1-50V
	87-026-580-080	C-TR,DTA123JK		C255	87-010-401-080		CAP, ELECT 1-50V
	87-026-235-080	CHIP-TR,DTC114EK		C256	87-010-401-080		CAP, ELECT 1-50V
	87-026-231-080	CHIP-TRANSISTOR,DTA124XK		C257	87-010-401-080		CAP, ELECT 1-50V
	89-406-555-080	TR,2SD655 (0.5W)		C258	87-010-401-080		CAP, ELECT 1-50V
	89-109-521-080	TR,2SA952 (0.6W)		C259	87-010-401-080		CAP, ELECT 1-50V
	87-A30-117-010	TR,2SA1357		C260	87-010-401-080		CAP, ELECT 1-50V
	89-111-625-080	TR,2SA1162 (0.15W)		C270	87-010-322-080		C-CAP,S 100P-50 CH
	87-026-263-080	C-TR,RN1410		C271	87-010-322-080		C-CAP,S 100P-50 CH
	87-026-470-080	TR,HN1C03F (0.3W)		C301	87-010-322-080		C-CAP,S 100P-50 CH
	89-320-011-080	TR,2SC2001 (15W)		C302	87-010-401-080		CAP, ELECT 1-50V
	87-A30-072-080	C-TR,RT1P 144C		C305	87-010-374-080		CAP, ELECT 47-10V
	87-026-215-080	TR,DTC114YS		C307	87-010-405-080		CAP, ELECT 10-50V
	89-327-143-080	TR,2SC2714 (0.1W)		C308	87-010-248-080		CAP, ELECT 220-10V
				C309	87-010-405-080		CAP, ELECT 10-50V
				C310	87-010-322-080		C-CAP,S 100P-50 CH
				C312	87-010-374-080		CAP, ELECT 47-10V
				C313	87-010-401-080		CAP, ELECT 1-50V
				C315	87-010-426-080		C-CAP,S 0.012-25 B
				C318	87-010-426-080		C-CAP,S 0.012-25 B
				C319	87-A11-098-080		CAP,270PF-50 CH
DIODE							
	87-020-027-080	CHIP-DIODE 1SS184		C320	87-010-197-080		CAP, CHIP 0.01 DM
	87-070-178-090	DIODE,1N5402-BD54		C321	87-A11-114-080		CAP,TC U 1200P-50 J CH
	87-020-465-080	DIODE,1SS133 (110MA)		C322	87-010-248-080		CAP, ELECT 220-10V
	87-017-024-040	C-DIODE,DA204K		C324	87-010-186-080		CAP,CHIP 4700P
	87-017-092-080	ZENER,HZS5C2		C327	87-010-405-080		CAP, ELECT 10-50V
	87-A40-180-040	C-DIODE,SB07-015C		C328	87-010-405-080		CAP, ELECT 10-50V
	87-A40-189-080	DIODE,1SR139-400		C329	87-010-178-080		CHIP CAP 1000P
	87-020-330-080	DIODE,DAP202K		C330	87-010-178-080		CHIP CAP 1000P
	87-A40-246-080	DIODE,1N4148T-77		C331	87-010-178-080		CHIP CAP 1000P
	87-017-781-080	DIODE,1N4004G		C332	87-010-263-080		CAP, ELECT 100-10V
	87-017-149-080	ZENER,HZS6A2L		C334	87-010-401-080		CAP, ELECT 1-50V
				C335	87-010-260-080		CAP, ELECT 47-25V
				C341	87-010-197-080		CAP, CHIP 0.01 DM
				C700	87-018-209-080		CAP, CER 0.1-50V
				C701	87-010-381-080		CAP, ELECT 330-16V
				C702	87-010-404-080		CAP, ELECT 4.7-50V
				C703	87-012-286-080		CAP, U 0.01-25
				C704	87-012-286-080		CAP, U 0.01-25
				C705	87-A10-592-080		C-CAP,S 0.015-50 J B
				C706	87-A10-592-080		C-CAP,S 0.015-50 J B
MAIN C.B							
C109	87-016-658-090	CAP,E 4700-35 SMG					
C111	87-010-196-080	CHIP CAPACITOR,0.1-25					
C112	87-010-401-080	CAP, ELECT 1-50V					
C113	87-010-401-080	CAP, ELECT 1-50V					
C114	87-010-101-080	CAP, ELECT 220-16					
C115	87-010-101-080	CAP, ELECT 220-16					

ELECTRICAL MAIN PARTS LIST-3/4

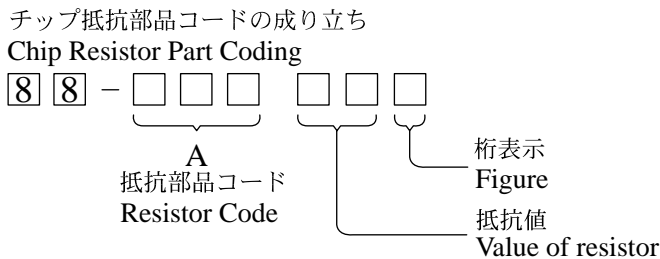
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C119	87-010-313-080		CAP, CHIP 18P	C520	87-012-157-080		C-CAP,S 330P-50 CH
C120	87-010-992-080		C-CAP,S 0.047-25 B	C521	87-012-154-080		C-CAP,S 150P-50 CH
C121	87-010-992-080		C-CAP,S 0.047-25 B	C522	87-010-371-080		CAP, ELECT 470-6.3V
C123	87-016-669-080		C-CAP,S 0.1-25 K B	C523	87-010-197-080		CAP, CHIP 0.01 DM
C125	87-010-198-080		CAP, CHIP 0.022	C524	87-010-197-080		CAP, CHIP 0.01 DM
C126	87-016-669-080		C-CAP,S 0.1-25 K B	C525	87-010-197-080		CAP, CHIP 0.01 DM
C127	87-010-112-040		CAP,E 100-16	C526	87-010-197-080		CAP, CHIP 0.01 DM
C130	87-010-112-040		CAP,E 100-16	C527	87-010-197-080		CAP, CHIP 0.01 DM
C131	87-010-112-040		CAP,E 100-16	C528	87-010-197-080		CAP, CHIP 0.01 DM
C132	87-010-178-080		CHIP CAP 1000P	C529	87-010-197-080		CAP, CHIP 0.01 DM
C133	87-010-112-040		CAP,E 100-16	C530	87-010-197-080		CAP, CHIP 0.01 DM
C134	87-010-196-080		CHIP CAPACITOR,0.1-25	C531	87-010-197-080		CAP, CHIP 0.01 DM
C135	87-010-196-080		CHIP CAPACITOR,0.1-25	C532	87-010-374-040		CAP,E 47-10
C136	87-010-196-080		CHIP CAPACITOR,0.1-25	C533	87-010-197-080		CAP, CHIP 0.01 DM
C137	87-010-196-080		CHIP CAPACITOR,0.1-25	C534	87-010-112-040		CAP,E 100-16
C138	87-010-184-080		CHIP CAPACITOR 3300P(K)	C535	87-010-197-080		CAP, CHIP 0.01 DM
C139	87-010-197-080		CAP, CHIP 0.01 DM	C536	87-010-078-040		CAP,E 47-6.3 5L
C140	87-010-112-040		CAP,E 100-16	C537	87-010-190-080		S CHIP F 0.01
C141	87-010-196-080		CHIP CAPACITOR,0.1-25	C538	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-992-080		C-CAP,S 0.047-25 B	C539	87-010-196-080		CHIP CAPACITOR,0.1-25
C151	87-010-263-040		CAP,E 100-10	C540	87-010-078-040		CAP,E 47-6.3 5L
C152	87-010-197-080		CAP, CHIP 0.01 DM	C541	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-893-040		CAP,E 220-10 M PW	C542	87-010-318-080		C-CAP,S 47P-50 CH
C154	87-010-190-080		S CHIP F 0.01	C543	87-010-322-080		C-CAP,S 100P-50 CH
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)	C544	87-010-197-080		CAP, CHIP 0.01 DM
C156	87-010-992-080		C-CAP,S 0.047-25 B	C546	87-010-197-080		CAP, CHIP 0.01 DM
C157	87-010-992-080		C-CAP,S 0.047-25 B	C547	87-010-322-080		C-CAP,S 100P-50 CH
C158	87-012-156-080		C-CAP,S 220P-50 CH	C548	87-018-134-080		CAP,TC U 0.01-16 NY UP050
C159	87-016-526-080		C-CAP,S 0.47-16 BK	C549	87-010-494-040		CAP,E 1-50 GAS
C160	87-010-314-080		C-CAP,S 22P-50V	C551	87-012-153-080		C-CAP,S 120P-50 CH
C161	87-010-182-080		C-CAP,S 2200P-50 B	C552	87-016-526-080		C-CAP,S 0.47-16 BK
C162	87-010-178-080		CHIP CAP 1000P	C554	87-010-197-080		CAP, CHIP 0.01 DM
C201	87-016-669-080		C-CAP,S 0.1-25 K B	C556	87-010-197-080		CAP, CHIP 0.01 DM
C206	87-010-322-080		C-CAP,S 100P-50 CH	C557	87-A11-167-080		C-CAP,S 27P-50 F CH
C207	87-010-322-080		C-CAP,S 100P-50 CH	C558	87-A11-167-080		C-CAP,S 27P-50 F CH
C208	87-010-322-080		C-CAP,S 100P-50 CH	C559	87-010-197-080		CAP, CHIP 0.01 DM
C209	87-010-322-080		C-CAP,S 100P-50 CH	C560	87-010-197-080		CAP, CHIP 0.01 DM
C210	87-016-669-080		C-CAP,S 0.1-25 K B	C601	87-010-197-080		CAP, CHIP 0.01 DM
C211	87-010-263-040		CAP,E 100-10	C602	87-010-197-080		CAP, CHIP 0.01 DM
C213	87-010-190-080		S CHIP F 0.01	C603	87-010-112-040		CAP,E 100-16
C214	87-010-196-080		CHIP CAPACITOR,0.1-25	C604	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-016-251-040		CAP,E 220-16 SMG	C605	87-010-197-080		CAP, CHIP 0.01 DM
C302	87-012-140-080		CAP 470P	C606	87-010-197-080		CAP, CHIP 0.01 DM
C303	87-010-178-080		CHIP CAP 1000P	C607	87-010-313-080		CAP, CHIP 18P
C304	87-010-384-040		CAP,E 100-25 SME	C608	87-010-313-080		CAP, CHIP 18P
C305	87-010-982-040		CAP,E 33-25 GAS	C609	87-010-178-080		CHIP CAP 1000P
C306	87-010-112-040		CAP,E 100-16	C610	87-010-178-080		CHIP CAP 1000P
C307	87-010-196-080		CHIP CAPACITOR,0.1-25	C611	87-010-178-080		CHIP CAP 1000P
C308	87-010-263-040		CAP,E 100-10	C612	87-010-178-080		CHIP CAP 1000P
C309	87-010-196-080		CHIP CAPACITOR,0.1-25	C613	87-010-403-040		CAP,E 3.3-50 SME
C310	87-010-263-040		CAP,E 100-10	C614	87-010-403-040		CAP,E 3.3-50 SME
C311	87-010-196-080		CHIP CAPACITOR,0.1-25	C615	87-010-318-080		C-CAP,S 47P-50 CH
C312	87-010-178-080		CHIP CAP 1000P	C616	87-010-318-080		C-CAP,S 47P-50 CH
C321	87-010-992-080		C-CAP,S 0.047-25 B	CN101	87-A60-424-010		CONN,16P V TOC-B
C322	87-010-197-080		CAP, CHIP 0.01 DM	CN403	87-A60-079-010		CONN,08P H 9604S-08F
C501	87-010-197-080		CAP, CHIP 0.01 DM	CN405	87-A60-060-010		CONN,07P V 9604S-07C
C502	87-010-197-080		CAP, CHIP 0.01 DM	CN406	87-A60-619-010		CONN,2P V 2MM JMT
C503	87-010-197-080		CAP, CHIP 0.01 DM	CNA102	8A-CJB-623-010		CONN ASSY, 6P CD MOTOR
C504	87-010-154-080		CAP CHIP 10P	J501	87-009-502-010		JACK,PIN 1P Y EARTH
C505	87-010-154-080		CAP CHIP 10P	L101	87-005-196-080		COIL,10UH
C506	87-010-197-080		CAP, CHIP 0.01 DM	L301	87-A50-095-010		COIL,68UH RCR875D
C508	87-010-263-040		CAP,E 100-10	L302	87-005-426-080		COIL,3.3UH K FLR50
C509	87-016-669-080		C-CAP,S 0.1-25 K B	L502	87-005-204-080		COIL,47UH
C510	87-010-263-040		CAP,E 100-10	L503	87-005-189-080		COIL 2.7UH
C511	87-010-196-080		CHIP CAPACITOR,0.1-25	L504	87-005-187-080		COIL,1.8UH
C512	87-010-197-080		CAP, CHIP 0.01 DM	L505	87-005-204-080		COIL,47UH
C513	87-010-197-080		CAP, CHIP 0.01 DM	L506	87-005-204-080		COIL,47UH
C514	87-010-197-080		CAP, CHIP 0.01 DM	L507	87-005-204-080		COIL,47UH
C518	87-010-322-080		C-CAP,S 100P-50 CH	L508	87-005-817-080		C-COIL, 33UH J FLC32
C519	87-012-145-080		CAP, CHIP S 270P CH	L509	87-005-270-080		COIL,4.7UH K LAL03

ELECTRICAL MAIN PARTS LIST-4/4

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
L510	87-005-270-080		COIL, 4.7UH K LAL03	PT C.B			
R109	87-022-364-080		C-RES, S 82K-1/10W F				
R507	87-A00-408-080		C-RES, S 2K-1/10W D				
S201	88-CDV-607-010		SW, SL 2-2-3 SK23D02G9	C100	87-010-398-010		CAP ELECT 2200
X201	87-A70-124-080		VIB, CER 8.0MHZ	C101	87-010-198-080		CAP, CHIP 0.022
				C102	87-010-198-080		CAP, CHIP 0.022
				C103	87-010-198-080		CAP, CHIP 0.022
X501	87-A70-125-080		VIB, XTAL 27MHZ 50PPM	C104	87-010-198-080		CAP, CHIP 0.022
X601	87-030-270-080		VIB, XTAL 16.9344MHZ				
KEY C.B							
C901	87-010-196-080		CHIP CAPACITOR, 0.1-25	CNA101	8A-CLC-610-010		CONN ASSY, 3P POWER
C902	87-010-196-080		CHIP CAPACITOR, 0.1-25	△F101	87-035-367-010		FUSE, 3.15A 250V
C903	87-010-197-080		CAP, CHIP 0.01 DM	FC101	87-A90-160-080		FUSE CLAMP
C904	87-010-197-080		CAP, CHIP 0.01 DM	FC102	87-A90-160-080		FUSE CLAMP
C905	87-010-405-080		CAP, ELECT 10-50V	△PT101	8A-CLC-609-010		PT, ACL-12 H
C906	87-010-178-080		CHIP CAP 1000P	△S101	87-A90-234-010		SW, SL 1-2-2 SW2201
CN901	87-A60-080-010		CONN, 07P H 9604S-07F	△T1	87-A60-317-010		TERMINAL, 1P MSC
S901	87-A91-024-180		SW, TACT KSH0611BT	△T2	87-A60-317-010		TERMINAL, 1P MSC
S902	87-A91-024-180		SW, TACT KSH0611BT				
S904	87-A91-024-180		SW, TACT KSH0611BT				
S905	87-A91-024-180		SW, TACT KSH0611BT				
S906	87-A91-024-180		SW, TACT KSH0611BT				
S907	87-A91-024-180		SW, TACT KSH0611BT				
S908	87-A91-024-180		SW, TACT KSH0611BT				
S909	87-A91-024-180		SW, TACT KSH0611BT				
S910	87-A91-024-180		SW, TACT KSH0611BT				
S911	87-A91-024-180		SW, TACT KSH0611BT				
S913	87-A91-024-180		SW, TACT KSH0611BT				
S915	87-A91-024-180		SW, TACT KSH0611BT				
S916	87-A91-024-180		SW, TACT KSH0611BT				
S917	87-A91-024-180		SW, TACT KSH0611BT				
S920	87-A91-385-010		SW, RTRY EC12E12504-15MM				
LED C.B							
CN606	87-A61-297-010		CONN, 5P TKX-P05P-A1				
D621	87-A40-821-080		LED, SMLS1BE16C BLU/UMB				
D622	87-A40-821-080		LED, SMLS1BE16C BLU/UMB				

- 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.

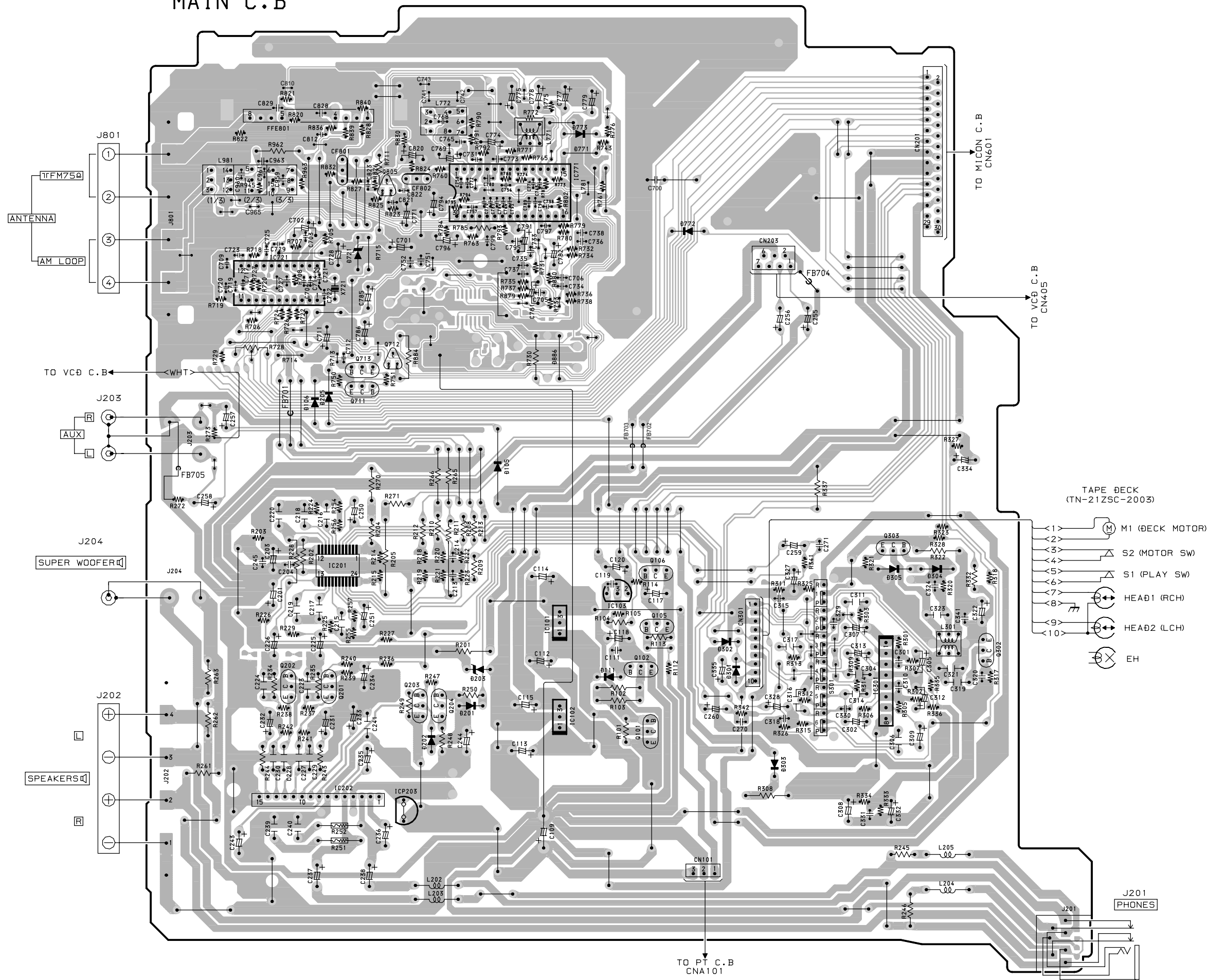
チップ抵抗部品コード/CHIP RESISTOR PART CODE



チップ抵抗 Chip resistor

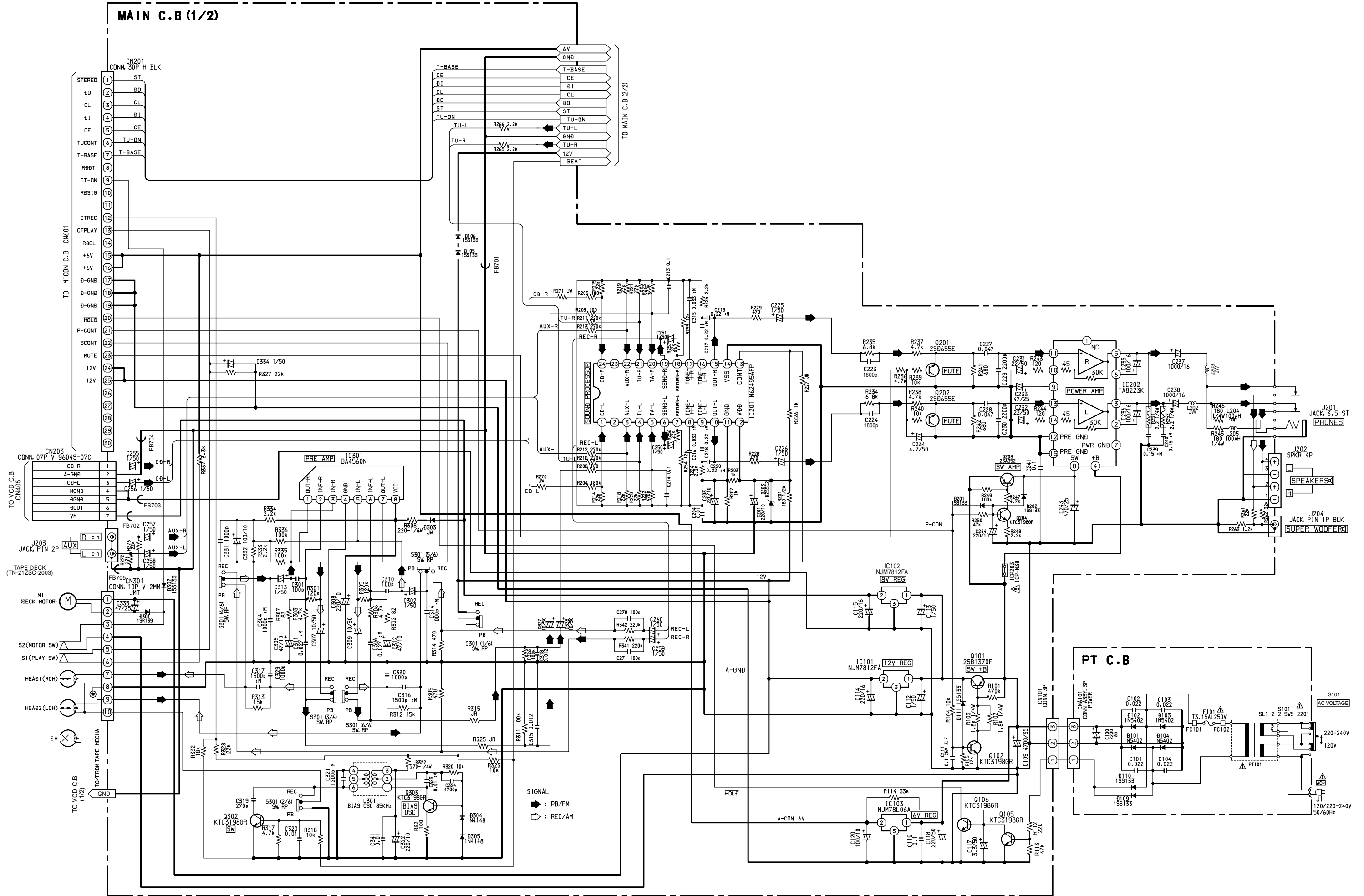
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

MAIN C.B

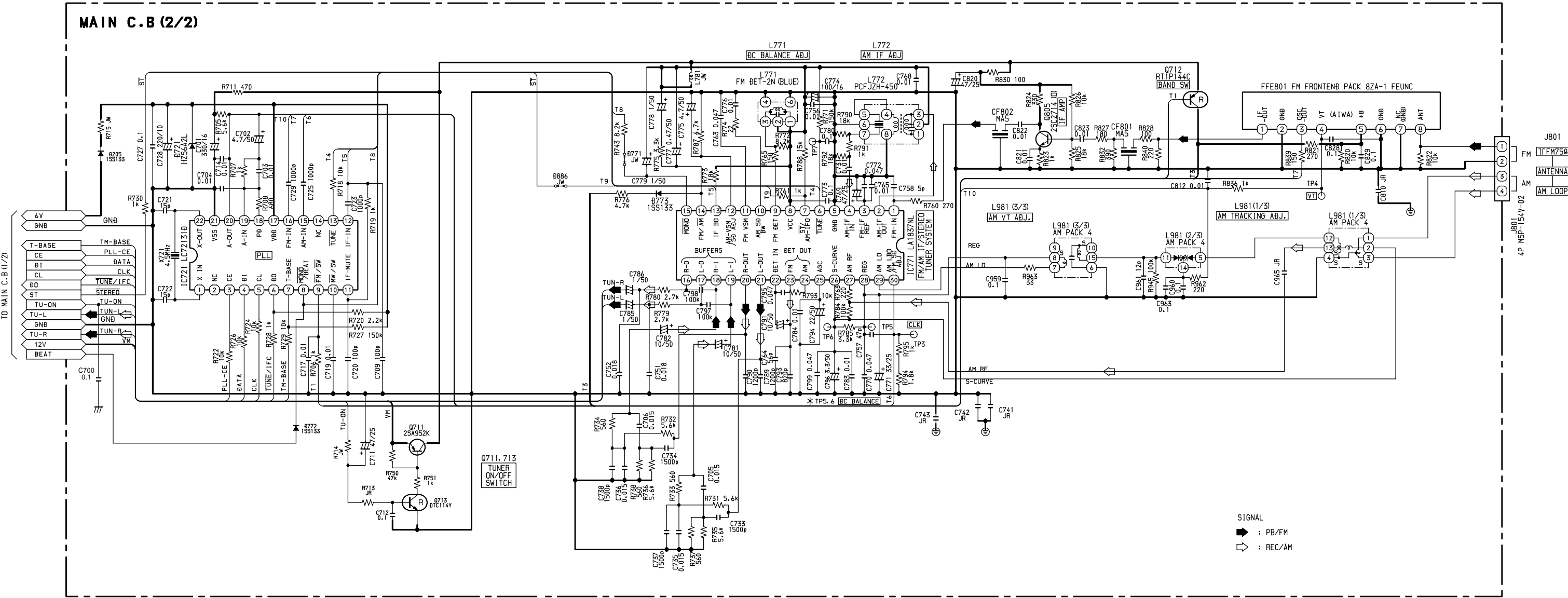


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SCHEMATIC DIAGRAM-1/5 (MAIN1/2)

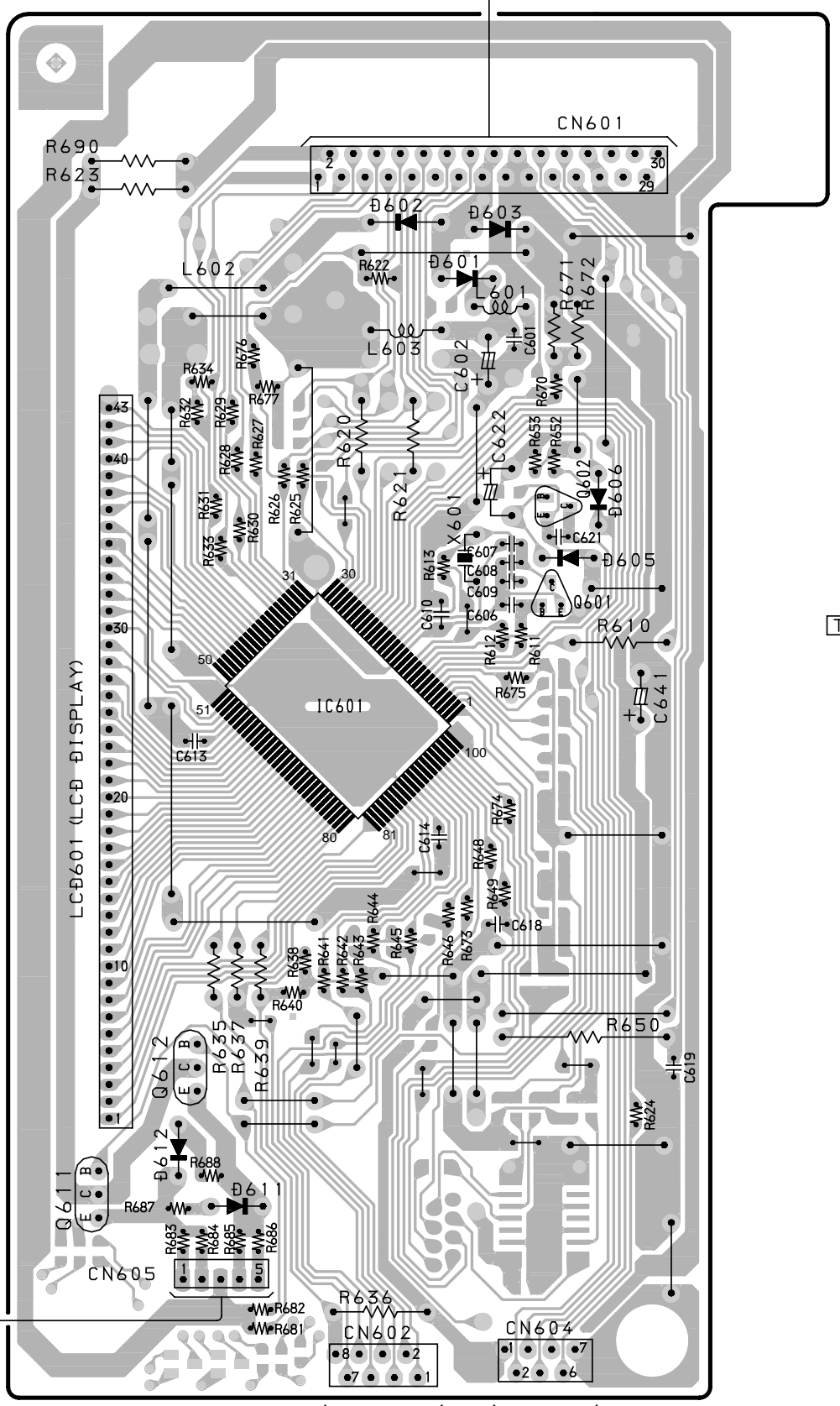


SCHEMATIC DIAGRAM-2/5 (MAIN2/2: TUNER)

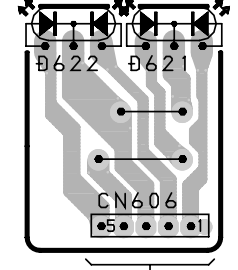


MICON C.B

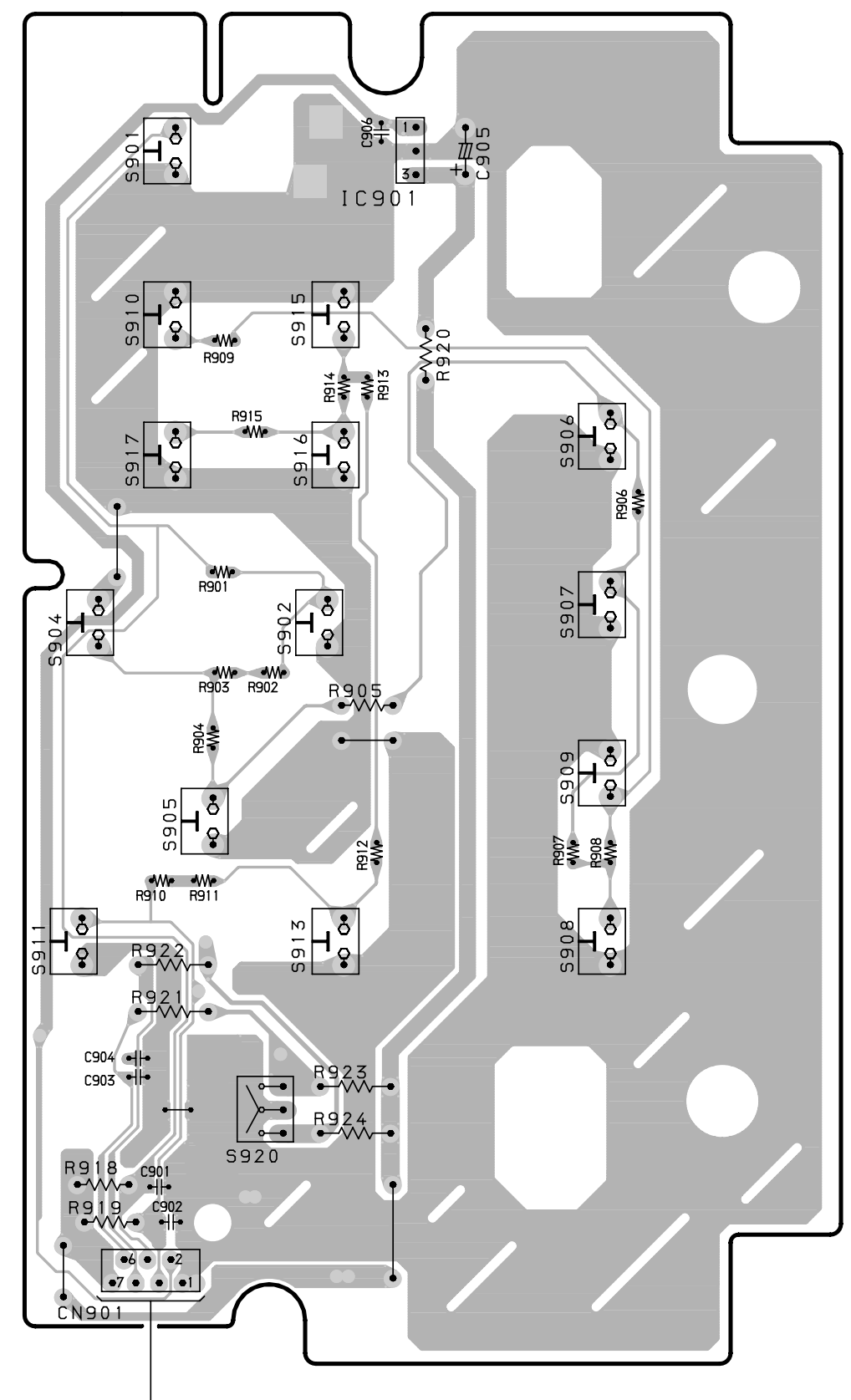
TO MAIN C.B
CN201



LED C.B



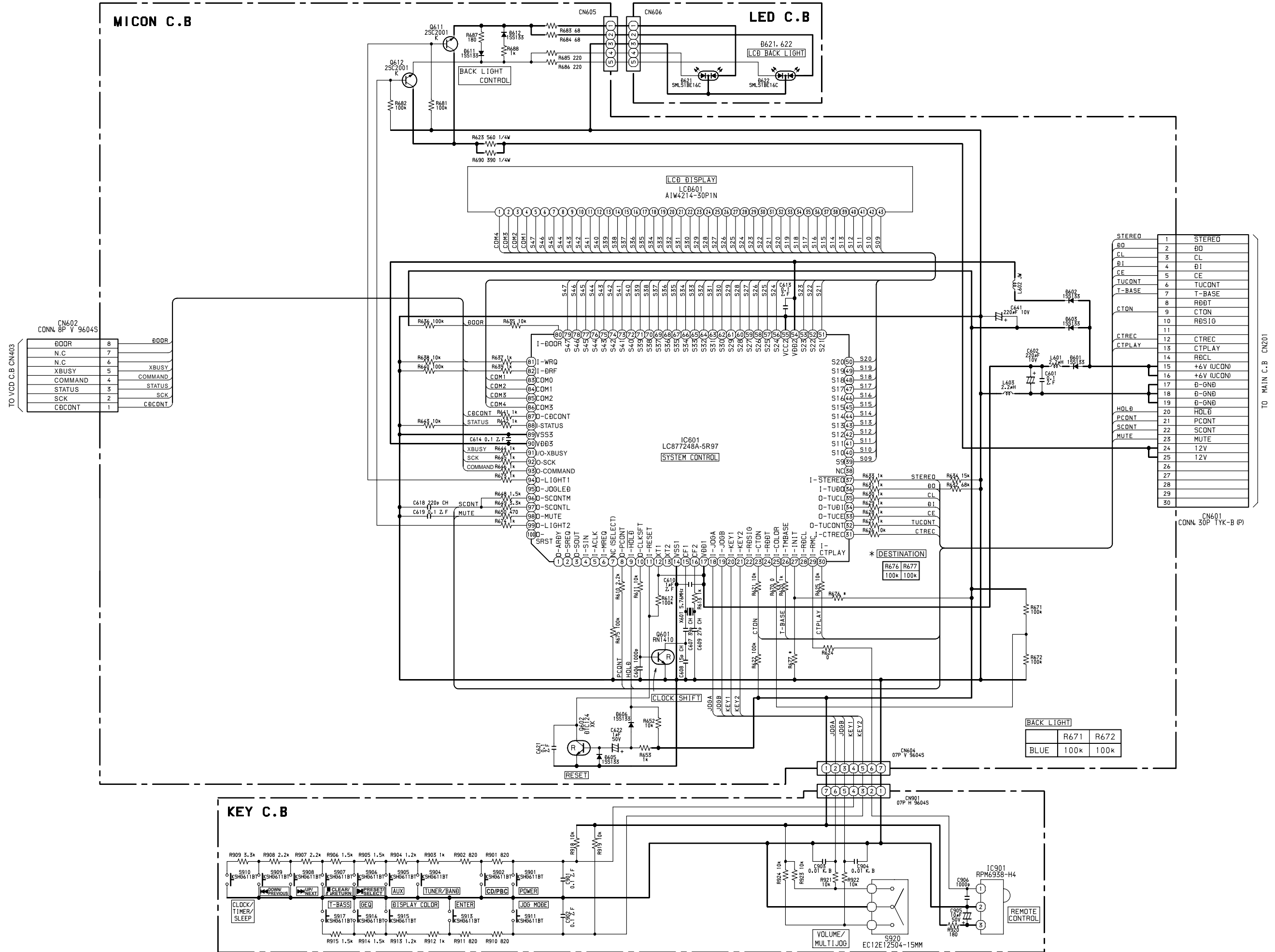
KEY C.B



- S901 POWER
⏻ STANDBY/
⏻ ON
- S910 CLOCK/
TIMER/
SLEEP
- S915 DISPLAY/
COLOR
- S917 T-BASS
- S916 GEQ
- S904 TUNER/BAND
- S902 CD/PBC
- S905 AUX
- S911 JOG
MODE
- S913 ENTER
- S920 VOLUME/
MULTI JOG

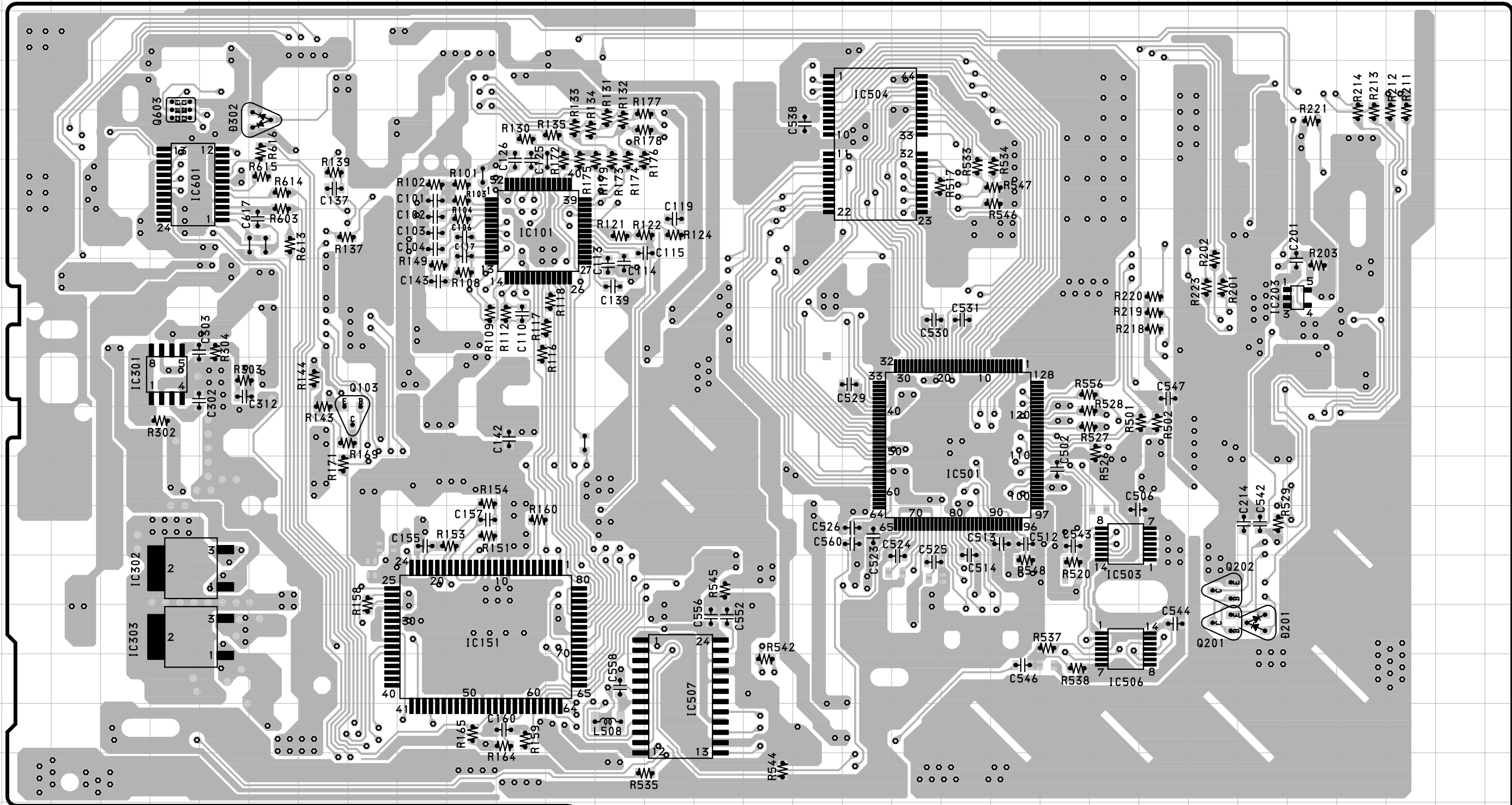
- IC901 REMOTO
CONTROL
- S906 PRE SET
SELECT
- S907 CLEAR/
RETURN
- S909 TUNING
DOWN/
PREVIOUS
- S908 TUNING
UP/
NEXT

SCHEMATIC DIAGRAM-3/5 (MICON)

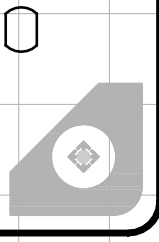


32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

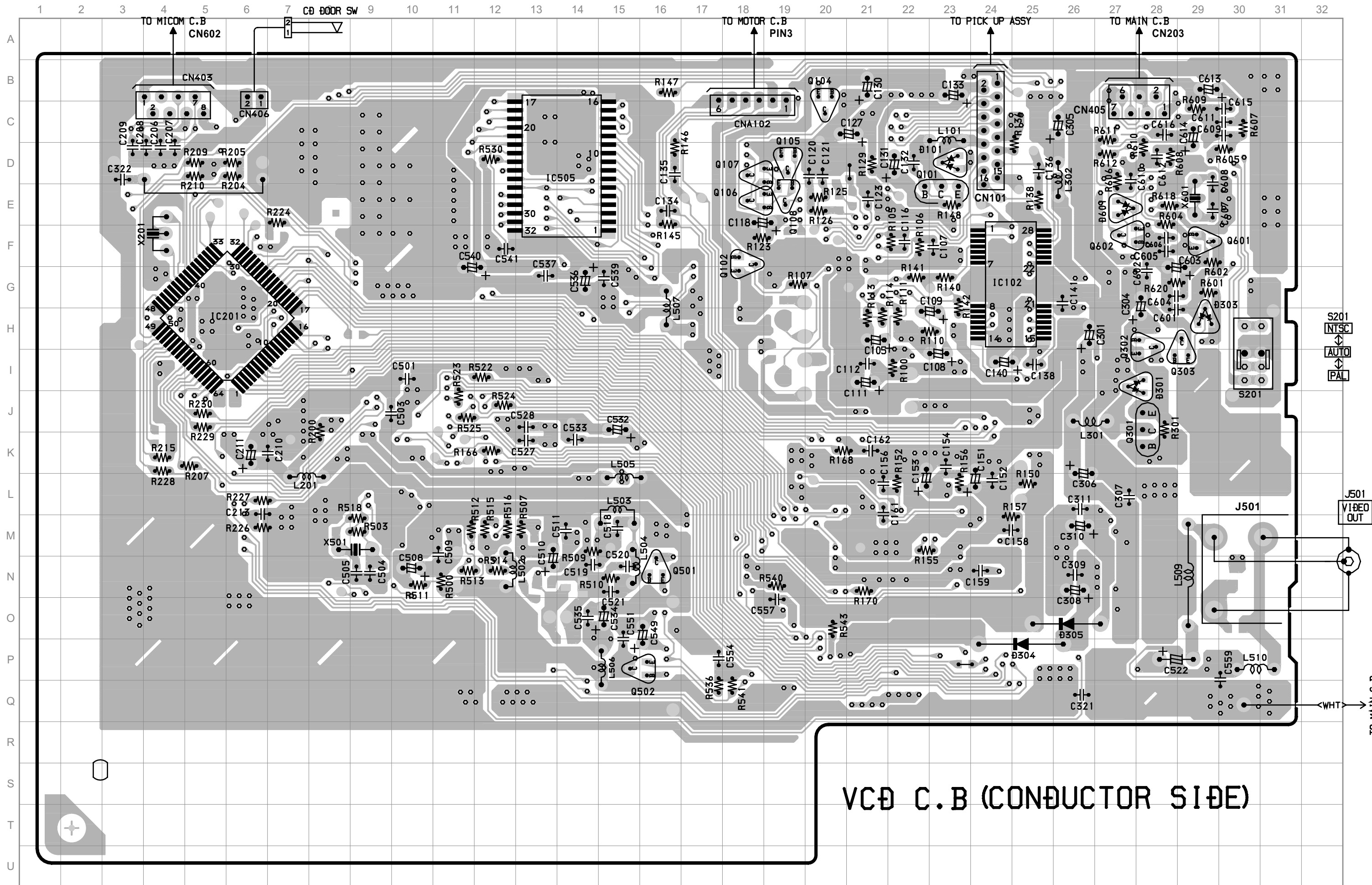
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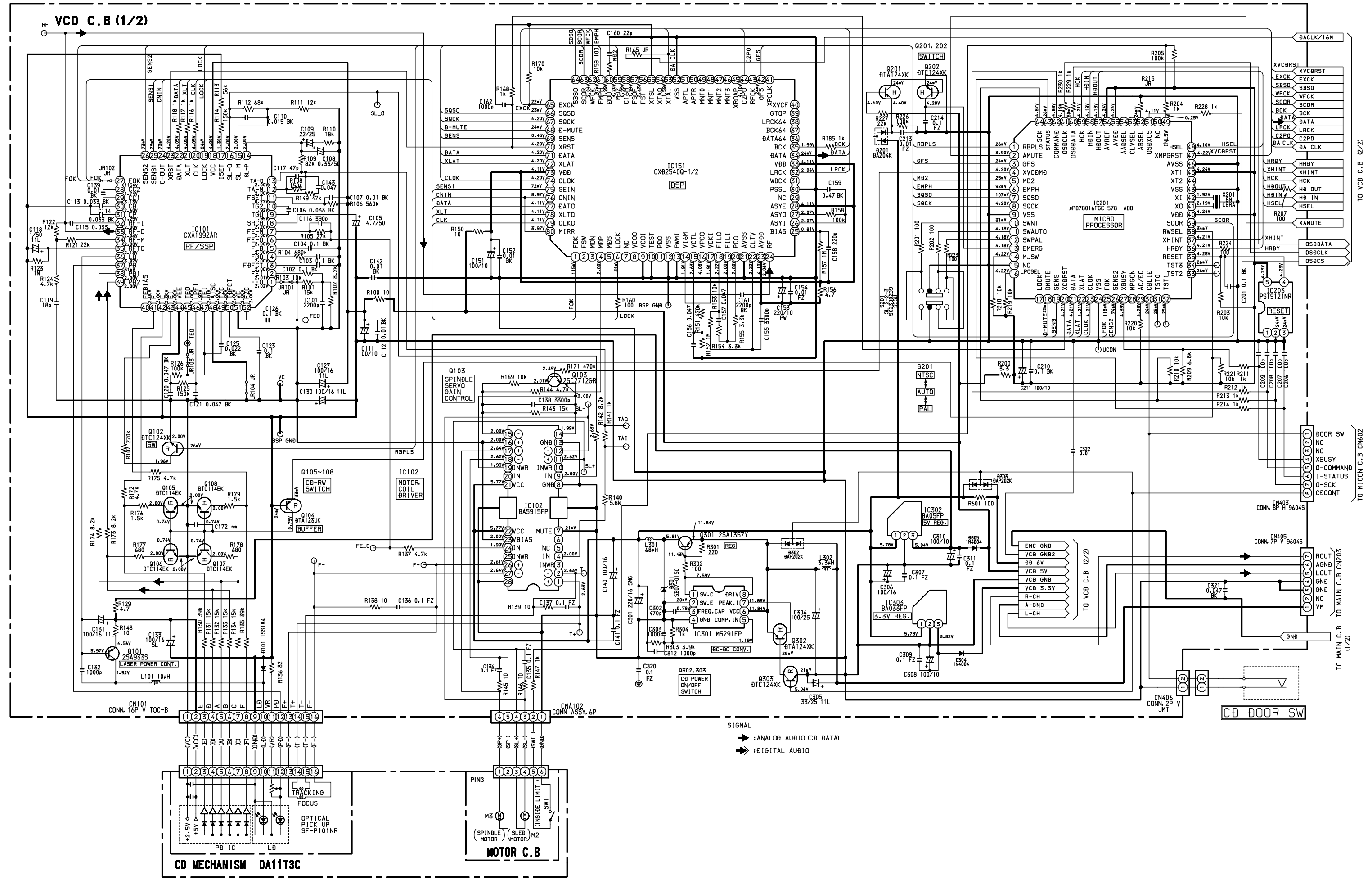
VCD C.B (COMPONENT SIDE)

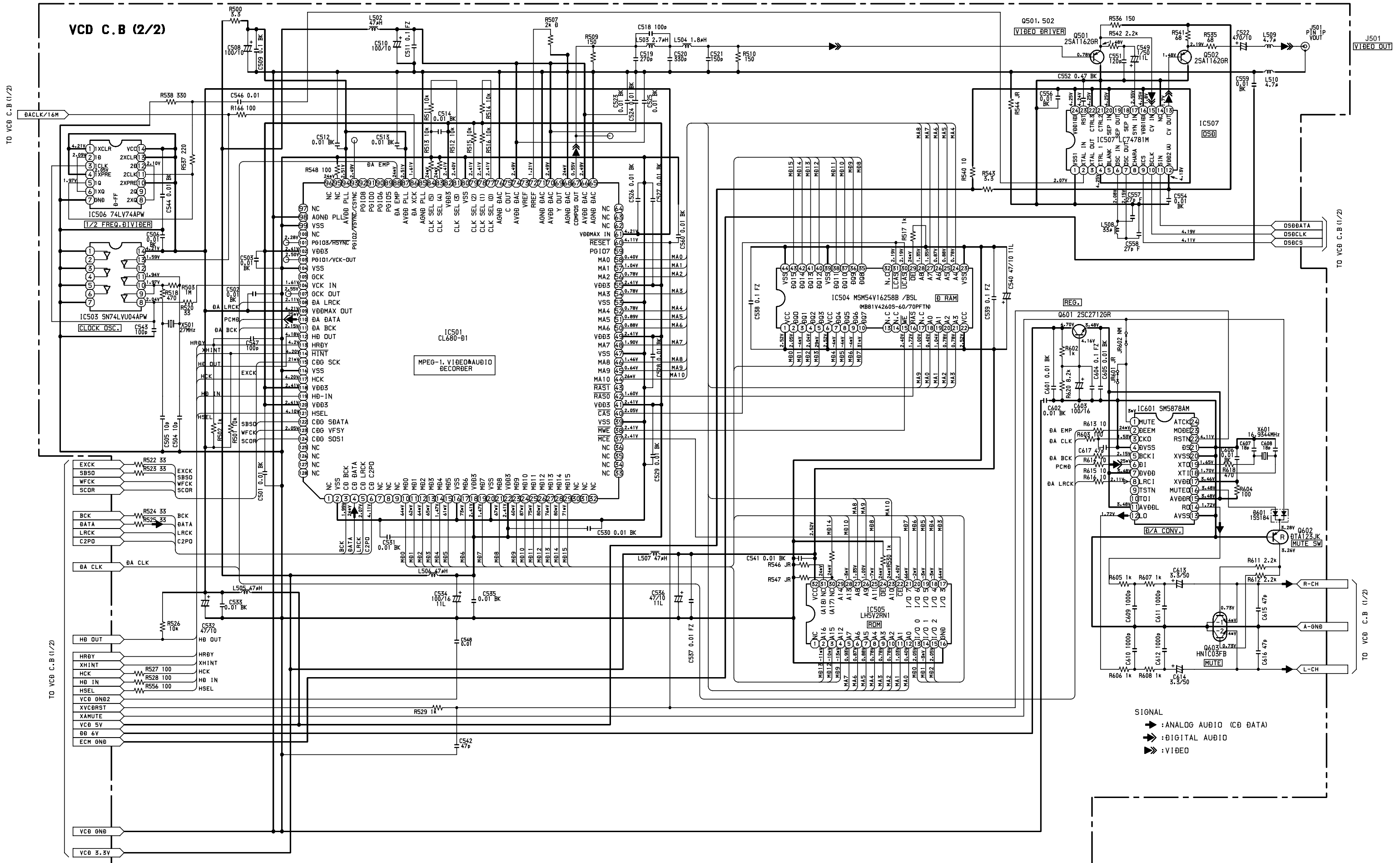


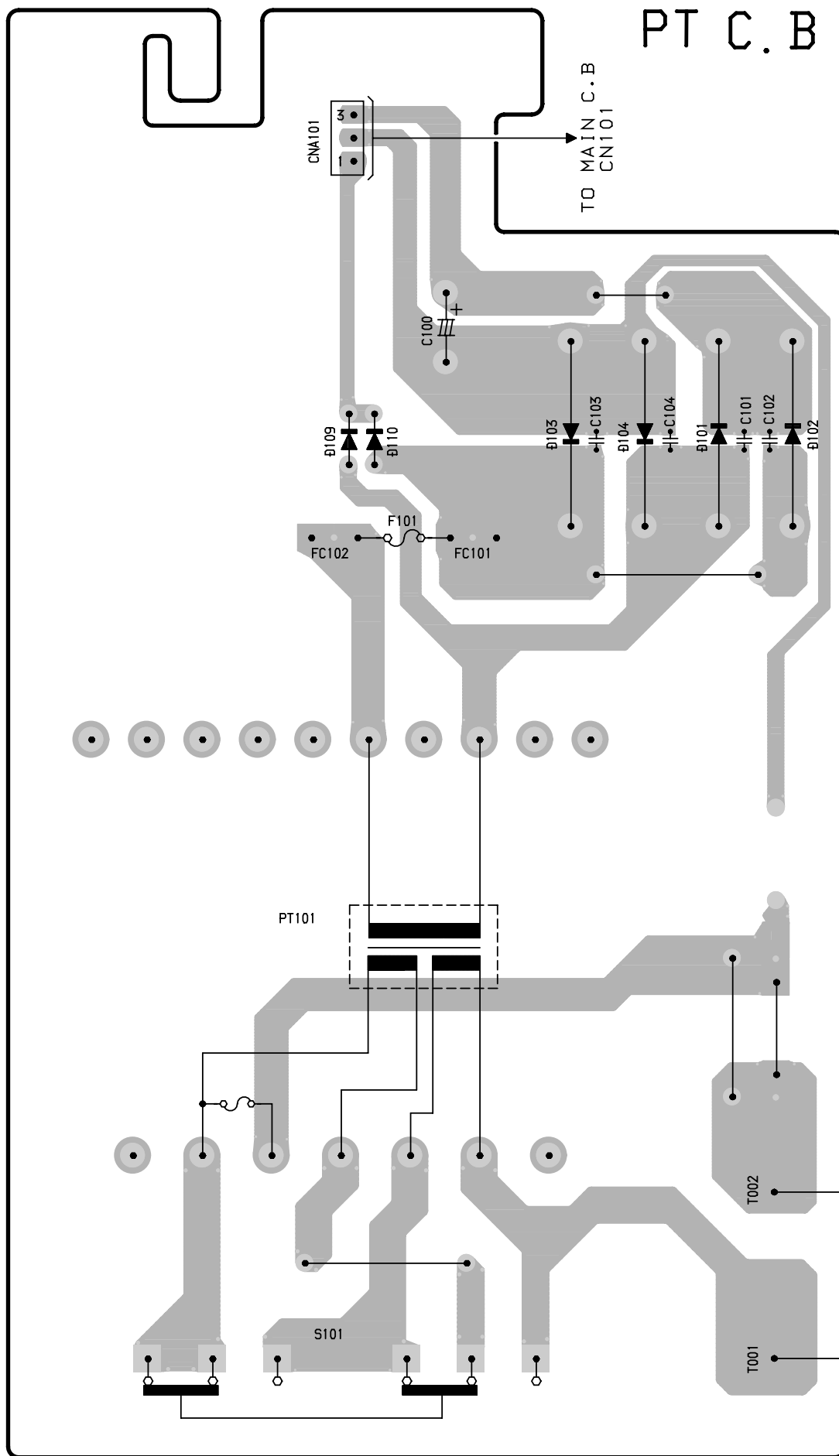
WIRING-4/5 (VCD: CONDUCTOR SIDE)



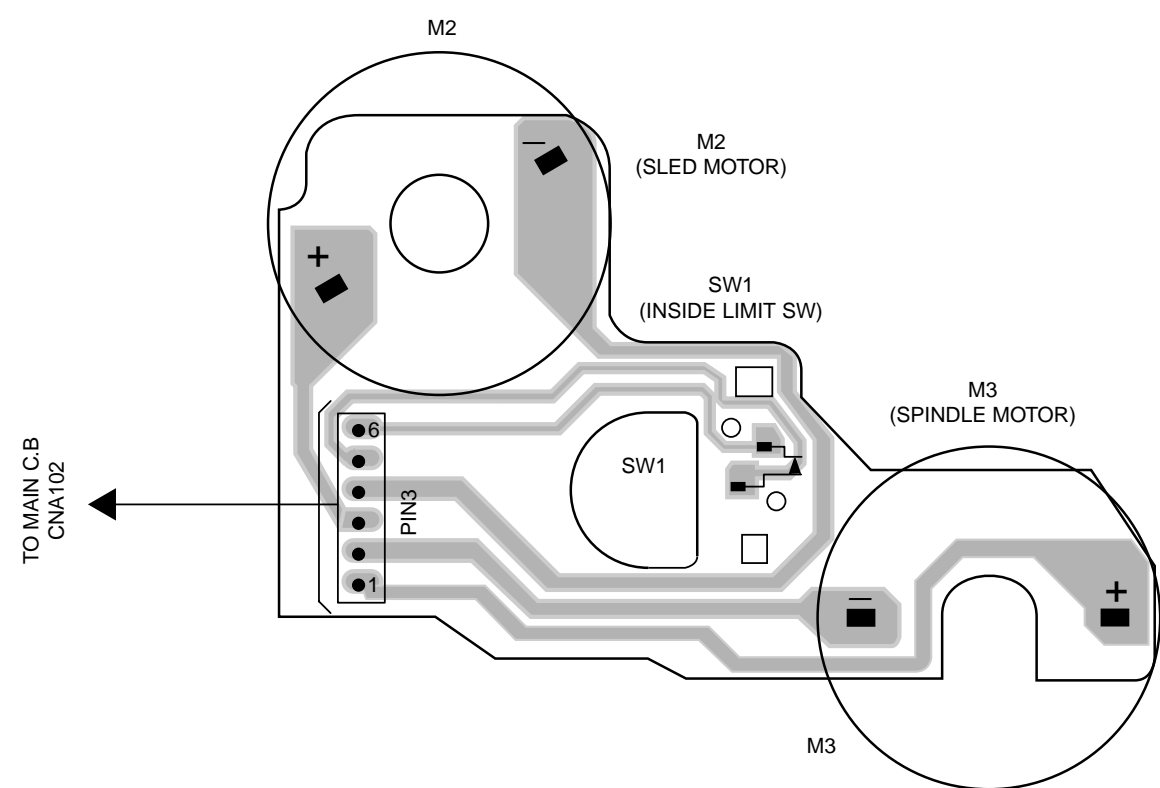
SCHEMATIC DIAGRAM-4/5 (VCD1/2)





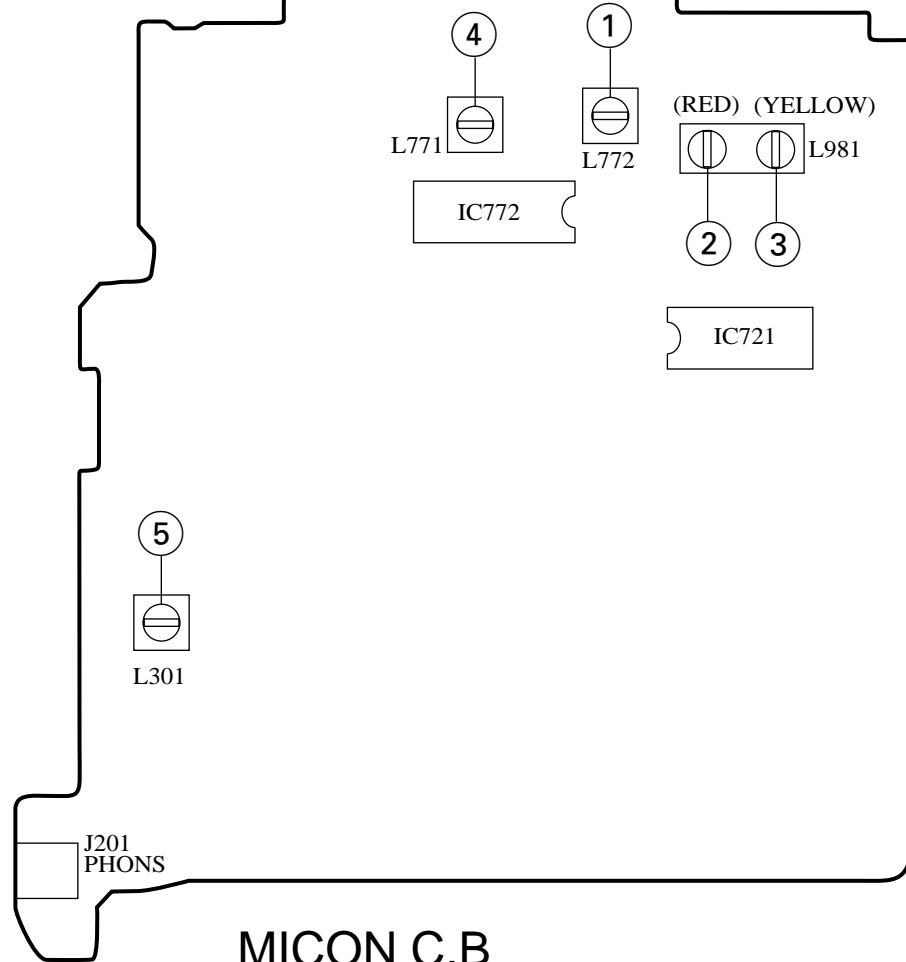


MOTOR C.B

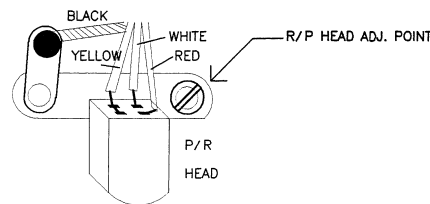
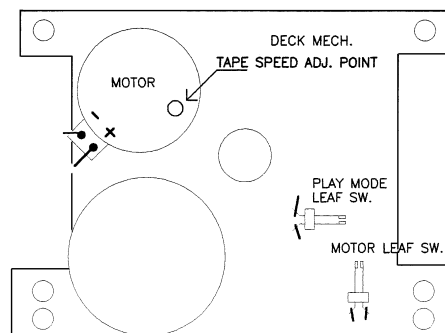
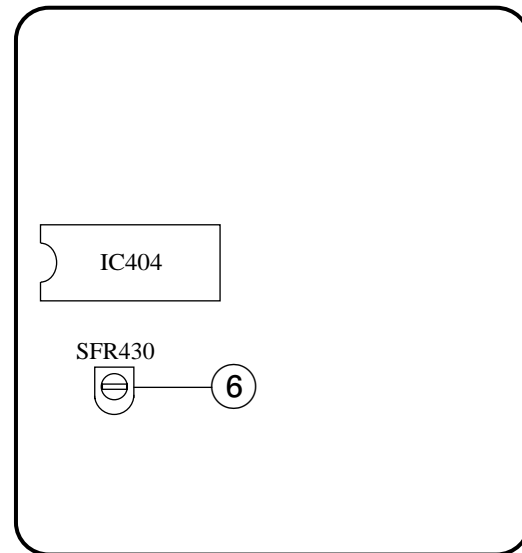


S101
AC VOLTAGE
220-240V ← → 120V

MAIN C.B



MICON C.B



	VERSION	APPROVED	CHECKED	PREPARED	DATE
ADJUSTMENT ITEM	ADJ. POINT	TEST POINT	SET F.	SETTING	
① AM IF.	L772	Output	603KHz	Max output(mini. Distortion)	
② AM VT ADJ.	L981 RED	FFE801 4Pin to GND	1602KHz	6.9V (6.4V--7.4V) DC	
AM VT CHECK	-	FFE801 4Pin to GND	531KHz	1.46V(1.16V--1.76V) DC	
③ AM TRACKING	L981 YELLOW	Output	603KHz	Max output(mini. Distortion)	
FM VT CHECK	-	FFE801 4Pin to GND	108MHz	<8.0V DC	
FM VT CHECK	-	FFE801 4Pin to GND	87.5MHz	<1.5V DC	
④ DC BAL. ADJ.	L771	TP5 , TP6	98MHZ	0mV +/-20mV	
⑤ REC. BIAS F.	L301	Both terminal of C321		85KHz +/- 3KHz	
⑥ FOCUS BIAS ADJUSTMENT	SFR 430	FE & Vref		0mV +/- 20mV	
TEST SPEED	MOTOR	SPEAKER OUTPUT	-	3000Hz +3/-2%	
DECK R/P HEAD ADJ	R/P HEAD	SPEAKER OUTPUT	8KHz TEST TAPE	-	

VOLTAGE CHART-1/1

FUNCTION : TAPE
 TEST CONDITION : TAPE STOP
 UPPER : Pin's Number / LOWER : Voltage

IC301 : BA4560N

1	2	3	4	5	6	7	8
3.5	3.5	3.5	0	3.5	3.5	3.5	7

IC201 : M62495AFP

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2.7	0	2.7	2.7	2.7	2.7	2.7	2.5	2.7	2.7	2.7	5.3	2.7	0	2.7
16	17	18	19	20	21	22	23	24						
2.7	2.5	2.7	2.7	2.7	2.7	2.7	0	2.7						

IC101 : NJM7812FA

1	2	3
19.2	12.3	0

IC102 : NJM7812FA

1	2	3
19.2	8.1	0

IC103 : NJM78L06

1	2	3
19.1	5.9	0

Q101 : 2SB1370F

E	C	B
19.1	19.1	18.4

IC202 : TA8223K

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	18.5	10	18.9	9.9	18.6	0	18.9	9.9	0.6	0	0	0	0.6	0

FUNCTION : TUNER
 TEST CONDITION : FM(87.5MHz),MW(531kHz)
 UPPER : Pin's Number / LOWER : Voltage

IC721 : LC7231D

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2.6	0	0	0	0	5	-	9.5	0	0	0	0	10.4	0	0
2.6	0	0	0	0	5.1	-	0	10.6	0	0	0	10.5	0	2.6
16	17	18	19	20	21	22								
2.6	5.2	1	1	1	0	2.6								
0	5.3	1	1	1.6	0	2.6								

IC771 : LA1837NL

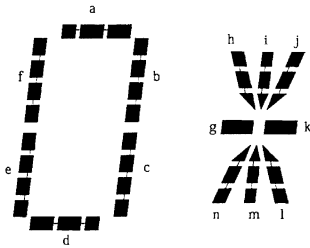
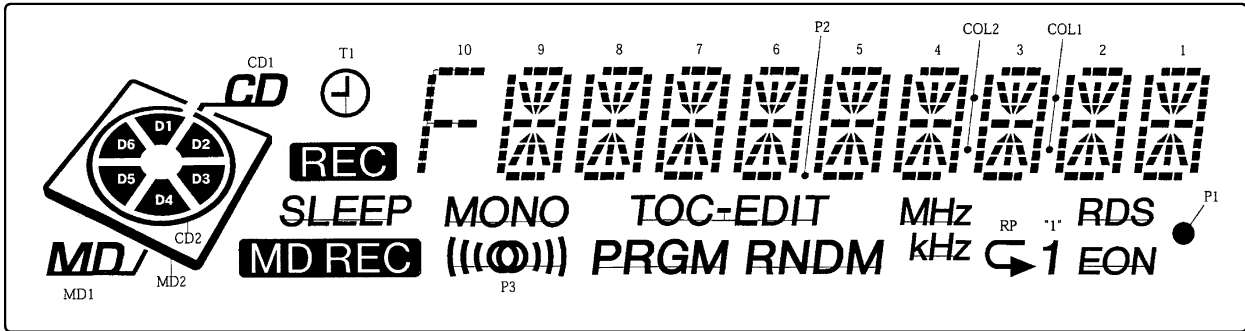
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3.6	10.6	3.6	3.6	0	10.4	5.5	10.6	10.6	1.5	0.2	0	0.6	9.5	9.5
3.6	10.6	3.6	3.6	0	10.5	5.5	10.6	10.6	1.5	0	0	0.6	5.8	6.3
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
4.3	4.3	4.3	4.3	3.4	3.4	2.9	3.5	0.1	0	3.7	3.6	3.6	3.6	1.9
4.3	4.3	4.3	4.3	3.3	3.3	2.8	-	0.6	0.6	3.6	3.6	3.6	3.6	1.8

FUNCTION : CD
 TEST CONDITION : CD STOP
 UPPER : Pin's Number / LOWER : Voltage

IC601 : LC877248A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	0	0	0	0	0	5.2	5.2	5.2	5.1	5.1	0.1	0	2.5
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
2.6	5.1	5.2	0	1.8	5.2	0	5.2	0	0	-	2.7	0	5	0
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
0	0	0	0	0	0.1	0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	5.3	0	2.5	2.5	2.6	2.5	2.5
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
2.5	2.5	2.5	2.5	0	0	0	2.6	2.6	2.6	2.6	0	0	0	5.3
91	92	93	94	95	96	97	98	99	100					
0	0	0	0	0	0.1	0	5.2	5.2	0					

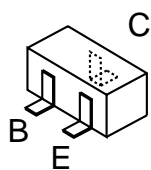
FL (AIW4214-30PIN ACJ-11) GRID ASSIGNMENT/ANODE CONNECTION-1/1
 GRID ASSIGNMENT



ANODE CONNECTION

No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
COM1	---	---	---	COM1	1a	1i	1h	1f	2a	2i	2h	COL1	3a	3i	3h
COM2	---	---	COM2	---	1b	1j	1g	1e	2b	2j	2g	2f	3b	3j	3g
COM3	---	COM3	---	---	1c	1k	1n	1d	2c	2k	2n	2e	3c	3k	3n
COM4	COM4	---	---	---	P1	1l	1m	EON	RDS	2l	2m	2d	"1"	3l	3m
No	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
COM1	3f	---	4a	4i	4h	4f	5a	5i	5h	5f	6a	6i	6h	6f	7a
COM2	3e	COL2	4b	4j	4g	4e	5b	5j	5g	5e	6b	6j	6g	6e	7b
COM3	3d	MHz	4c	4k	4n	4d	5c	5k	5n	5d	6c	6k	6n	6d	7c
COM4	RP	kHz	---	4l	4m	---	P3	5l	5m	RNDM	P2	6l	6m	PRGM	TOC-EDIT
No	31	32	33	34	35	36	37	38	39	40	41	42	43		
COM1	7i	7h	7f	8a	8i	8h	8f	9a	9i	9h	9f	MD1	D3,D6		
COM2	7j	7g	7e	8b	8j	8g	8e	9b	9j	9g	9e	T1	D2,D5		
COM3	7k	7n	7d	8c	8k	8n	8d	9c	9k	9n	9d	CD1	CD2		
COM4	7l	7m	MD REC	MONO	8l	8m	SLEEP	REC	9l	9m	10	MD2	D1,D4		

TRANSISTOR ILLUSTRATION-1/1



2SA1162
 2SC2712
 2SC2714
 DTA123JK
 DTA124XK
 DTC114EK
 RT1P144C
 DTC124XK
 RN1410



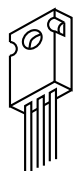
ECB
 KTC3198
 DTC114YS



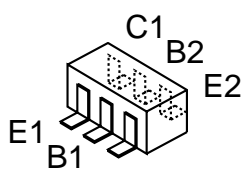
ECB
 2SC2001
 2SD655
 2SA952



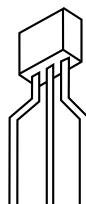
ECB
 2SB1370F



ECB
 2SA1357



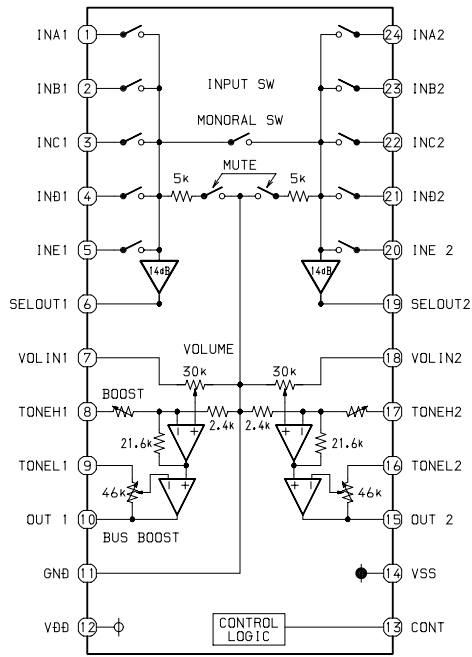
ECB
 HN1C03F



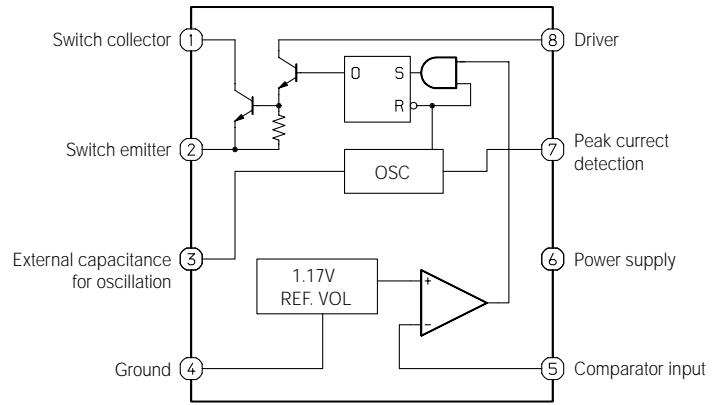
ECB
 2SA933S

IC BLOCK DIAGRAM-1/1

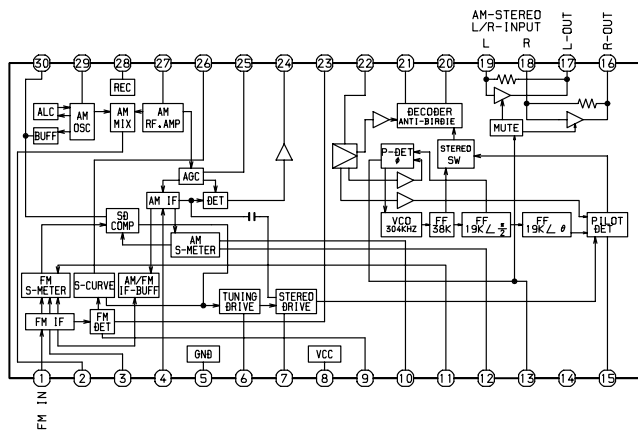
IC, M62495AFP



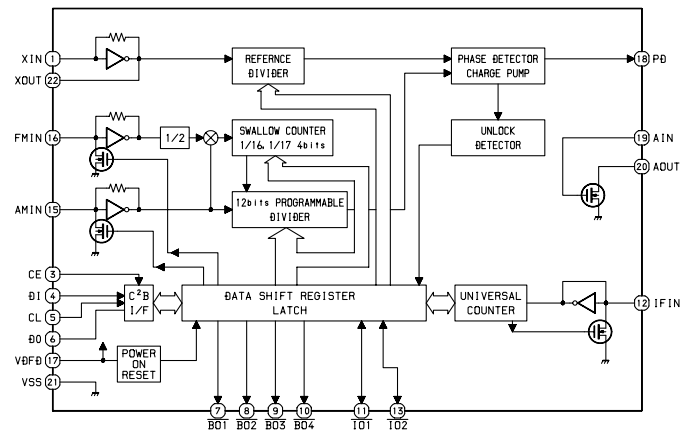
IC, M5291FP



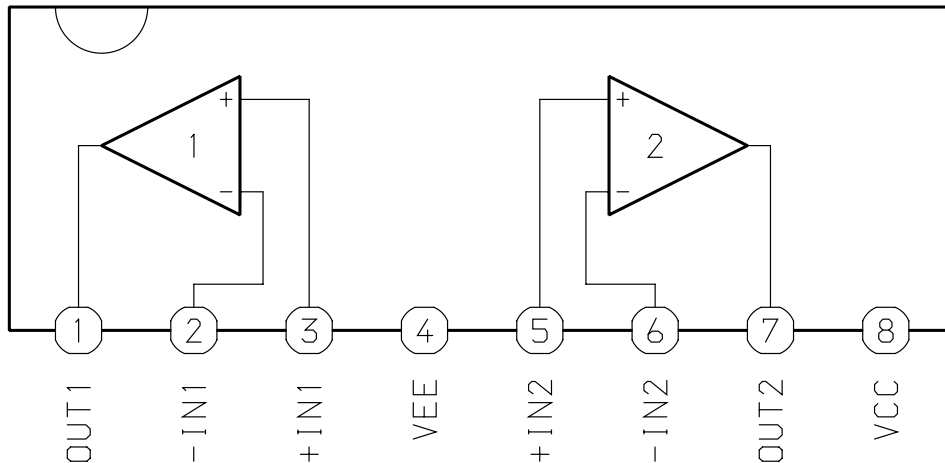
IC, LA1837NL



IC, LC72131D



IC, BA4560N



IC DESCRIPTION-1/7 (LC877248A-5R97)-1/2

Pin No.	Pin Name	I/O	Description
1	O-ARDY	O	Not connected.
2	O-SREQ	O	
3	O-SOUT	O	
4	I-SIN	I	
5	I-ACLK	I	
6	I-MREQ	I	
7	NC (SELECT)	O	Pull down.
8	O-PCONT	O	Main power control.
9	I-HOLD	I	Hold status detection.
10	O-CLKSFT	O	Clock shift control.
11	I-RESET	I	Reset terminal.
12	XT1	I	Connected to VDD.
13	XT2	O	Not connected.
14	VSS1	—	GND.
15	CF1	I	External ceramics oscillator (5.76 MHz) is connected to this pin. (input)
16	CF2	O	External ceramics oscillator (5.76 MHz) is connected to this pin. (output)
17	VDD1	—	Power supply positive polarity (+) terminal.
18	I-JOGA	I	Jog dial detection A.
19	I-JOGB	I	Jog dial detection B.
20	I-KEY1	I	Tact key, AD input detection.
21	I-KEY	I	
22	I-RDSIG	I	RDS signal level input, AD input. (Not connected)
23	I-CTON	I	CT DECK power supply detection.
24	I-RDDT	I	RDS data input. (Not connected)
25	I-COLOR	I	LCD back light initial setting input.
26	I-TMBASE	I	8Hz clock reference frequency input.
27	I-INIT	I	Tuner destination, initial setting input.
28	I-RDCL	I	RDS clock input. (Not connected)
29	I-RMC	I	Remote controller receptor signal input.
30	I-CTPLAY	I	CT DECK PLAY detection.
31	I-CTREC	I	CT DECK REC detection.
32	O-TUCONT	O	Tuner power supply control.
33	O-TUCE	O	Tuner, Chip enable output for PLL communication.
34	O-TUDI	O	Tuner, Serial data output for PLL communication.
35	O-TUCL	O	Tuner, Clock output for PLL communication.
36	I-TUDO	I	Tuner, Serial data input for PLL communication.
37	I-STEREO	I	Tuner stereo reception detection.
38	NC	—	Not connected.
39-53	S9-S23	O	LCD SEG terminal initial setting output. (No.43-29)
54	VDD2	—	Power supply positive polarity (+) terminal.
55	VCC2	—	GND.

IC DESCRIPTION-1/7 (LC877248A-5R97)-2/2

Pin No.	Pin Name	I/O	Description
56-79	S24-S47	O	LCD SEG terminal initial setting output. (No.28-5)
80	I-DOOR	I	CD door detection.
81	I-WRQ	I	Sub-code Q reading stand-by for CD LSI communication.
82	I-DRF	I	RF level detection input.
83-86	COM0-COM3	O	LCD common output. (No.4-1)
87	O-CDCONT	O	CD/VCD power supply control.
88	I-STATUS	I	STATUS from VCD MICON.
89	VSS3	—	GND.
90	VDD3	—	Power supply terminal.
91	I/O-XBUSY	I/O	READY/BUSY I/O from VCD MICON.
92	O-SCK	O	SCK to VCD MICON.
93	O-COMMAND	O	COMMAND to VCD MICON.
94	O-LIGHT1	O	Control output 1 of LCD back light.
95	O-JOGLLED	O	Not connected.
96	O-SCONTM	O	Sound processor control.
97	O-SCONTL	O	
98	O-MUTE	O	Audio signal mute output.
99	O-LIGHT2	O	Control output 2 of LCD back light.
100	O-SRST	O	Not connected.

IC DESCRIPTION-2/7 (CXA1992AR)-1/2

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFACT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.

IC DESCRIPTION-2/7 (CXA1992AR)-2/2

Pin No.	Pin Name	I/O	Description
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier. (Not connected)
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC DESCRIPTION-3/7 (CXD2540Q)-1/3

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output. (Not connected)
3	MON	O	Spindle motor on/off control output. (Not connected)
4	MDP	O	Spindle motor servo control. (Pin 5 is not connected)
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC	—	Not used.
8	VCOO	O	Analog EFM PLL oscillation circuit output. (Not connected)
9	VCOI	I	Analog EFM PLL oscillation circuit input. f _{LOCK} =8.6436MHz. (Connected to GND)
10	TEST	I	TEST pin. (Connected to GND)
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS	—	GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS	—	Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD	—	Analog power supply. (5V)
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC	—	Not connected.
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output. (Connected to GND)
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs. (Not connected)
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD	—	Power supply. (5V)
34	DATA	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two's complement, MSB first) when PSSL=0.
35	BCK	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DATA64	O	DA14 output when PSSL=1. 64-bit slot serial data (two's complement, LSB first) when PSSL=0. (Not connected)
37	BCK64	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0. (Not connected)

IC DESCRIPTION-3/7 (CXD2540Q)-2/3

Pin No.	Pin Name	I/O	Description
38	LRCK64	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0. (Not connected)
39	GTOP	O	DA11 output when PSSL=1. GTOP output when PSSL=0. (Not connected)
40	XVCF	O	DA10 output when PSSL=1. XUGF output when PSSL=0. (Not connected)
41	XPCLK	O	DA09 output when PSSL=1. XPLCK output when PSSL=0. (Not connected)
42	GFS	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	RFCK	O	DA07 output when PSSL=1. RFCK output when PSSL=0. (Not connected)
44	C2PO	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	XRAOF	O	DA05 output when PSSL=1. XRAOF output when PSSL=0. (Not connected)
46	MNT3	O	DA04 output when PSSL=1. MNT3 output when PSSL=0. (Not connected)
47	MNT2	O	DA03 output when PSSL=1. MNT2 output when PSSL=0. (Not connected)
48	MNT1	O	DA02 output when PSSL=1. MNT1 output when PSSL=0. (Not connected)
49	MNT0	O	DA01 output when PSSL=1. MNT0 output when PSSL=0. (Not connected)
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used. (Not connected)
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used. (Not connected)
52	VSS	—	GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output. (Not connected)
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54. (Not connected)
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54. (Not connected)
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes) (Not connected)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level meter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD		Power supply. (5V)
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.

IC DESCRIPTION-3/7 (CXD2540Q)-3/3

Pin No.	Pin Name	I/O	Description
76	CNIN	I	Track jump count signal input.
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136 μ .
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the $\pm 28F$ jitter margin.

IC DESCRIPTION-4/7 (CL680)-1/3

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	GND.
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No connection.
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground.
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground.
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No connection.
37	MCE	—	ROM chip enable.
38	MWE	O	DRAM write enable.
39	VSS	—	Ground.
40	CAS	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	RASO	O	DRAM/ROM interface. (Pin 43 is no connection)
43	RASI	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground.
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground.
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O. (No connection)
60	RESET	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No connection.
65	AGND DAC	—	Analog ground.
66	A DAC	—	Analog power supply (DAC) : 3.3V.
67	COMP OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

IC DESCRIPTION-4/7 (CL680)-2/3

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT. (No connection)
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input.
73	V REF	I	Voltage reference input.
74	AVDD DAC	—	Analog power supply (DAC) : 3.3V.
75	C OUT	O	Video signal “C” out. (No connection)
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input.
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input.
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O. (No connection)
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC/CSYNC}}$	O	$\overline{\text{VSYNC/CSYNC}}$ output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock.
96	PROC_CK	O	Processor clock. (No connection)
97	AUD_XCK	O	Audio XCK. (No connection)
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz) (No connection)
106	VCK IN	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

IC DESCRIPTION-4/7 (CL680)-3/3

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG SDATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125	DSP-XCK	O	DSP-XCK output. (No connection)
126-128	NC	—	No connection.

IC DESCRIPTION-5/7 (LC74781M)-1/2

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal)
2	Xtal IN	I	External X'tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc)
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X'tal generator mode is selected by this selector terminal. L: X'tal generator mode, H: External clock input.
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H) When reset ($\overline{\text{RST}}$ terminal = L), the X'tal clock signal is output. (It is not output when reset by the reset command)
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output) When reset ($\overline{\text{RST}}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command)
9	$\overline{\text{CS}}$	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input)
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input)
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input)
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply)
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply. (+5V digital power supply)
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal)
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal.
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal)
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.
22	CTRL3	I	Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal.
23	$\overline{\text{RST}}$	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input)

IC DESCRIPTION-5/7 (LC74781M)-2/2

Pin No.	Pin Name	I/O	Description
24	VDD1	—	Power supply. (+5V digital power supply)

IC DESCRIPTION-6/7 (μ PD78016FGC-578-AB8)-1/2

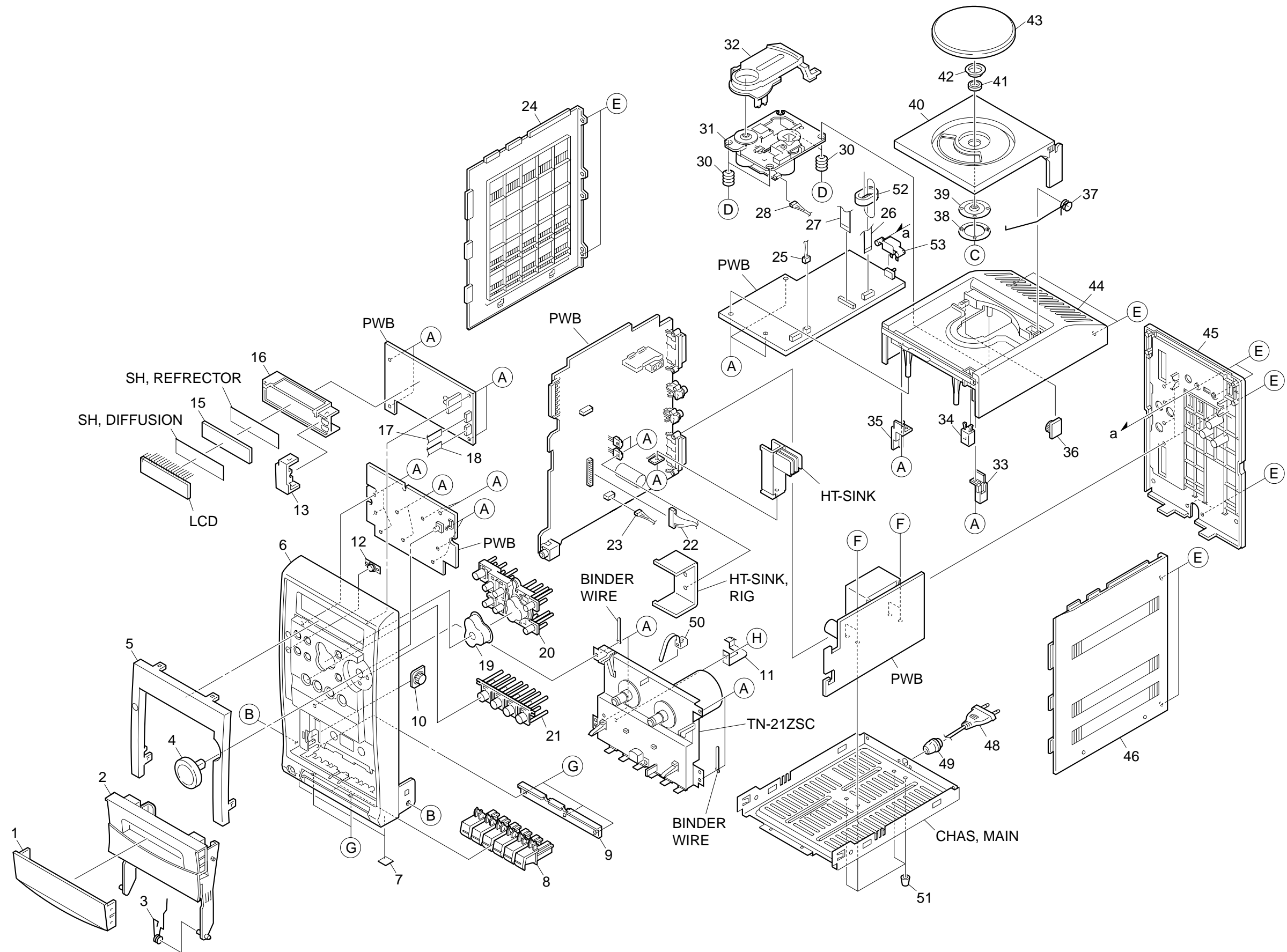
Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE. (H=MUTE ON)
3	GFS	I	GFS.
4	XVCDMD	O	AUDIO/VIDEO CD MODE. (L=VCD=SPINDLE GAIN UP)
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	GND.
10	SWNT	I	SW TV OUT MODE. (L=NTSC)
11	SWAUTO	I	SW TV OUT MODE. (L=NTSC/PAL AUTO)
12	SWPAL	I	SW TV OUT MODE. (L=PAL)
13	EMERG	I	POWER EMERGENCY STOP. (L \neq 3sec=STOP)
14	MJSW	I	MIC DETECTION INPUT. (L=MIC IN)
15	NC	I	Not used. (Connected to GND)
16	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”.
17	LOCK	O	GFS (FRAME SYNC) LOCK. (NO USE=H) (Not connected)
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	GND.
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	MPGON	O	MPEG POWER CONTROL OUTPUT. H=VCD. (Not connected)
29	AC/DC	I	AC/DC DETECTION INPUT. H=AC.
30	CDLID	I	CD LID SWITCH STATUS INPUT. H=OPEN.
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	XHINT FROM CL680.
38	RWSEL	O	CD-RW SELECT1. L=CD-RW.
39	SCOR	I/O	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK.

IC DESCRIPTION-6/7 (μ PD78016FGC-578-AB8)-2/2

Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK.
43	VSS	—	GND.
44	XT2	—	Not connected.
45	XT1	I	5.0VDD.
46	AVSS	—	GND.
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW .
50	NC	—	Not connected.
51	OSDXCS	O	OSD CHIP SELECT.
52	ABSEL	I	CXA1992A/B SELECT. (L=CXA1992A)
53	CLVSEL	I	CLV MODE SELECT. (H=CLV-N) (Not connected)
54	AADSEL	I	AUTO ADJUST SELECT. (H=AUTO ON) (Not connected)
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN FROM CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST.
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

IC DESCRIPTION-7/7 (SM5878AM)-1/1

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H) MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H)
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H)
3	CKO	O	Oscillator clock output. (16.9344 MHz)
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch)
9	TSTN	I	Test input. ("H" or open during normal operation) (Not connected)
10	TO1	O	Test output 1. (Normally low level output) (Not connected)
11	AVDDL	—	Analog VDD terminal. (For L ch)
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch)
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X'tal system VDD terminal.
18	XTI	I	X'tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz)
19	XTO	O	X'tal oscillator terminal.
20	XVSS	—	X'tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H)
22	RSTN	I	Reset terminal. (Reset at L)
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H) (Not connected)
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H) (Not connected)



MECHANICAL PARTS LIST-1/1

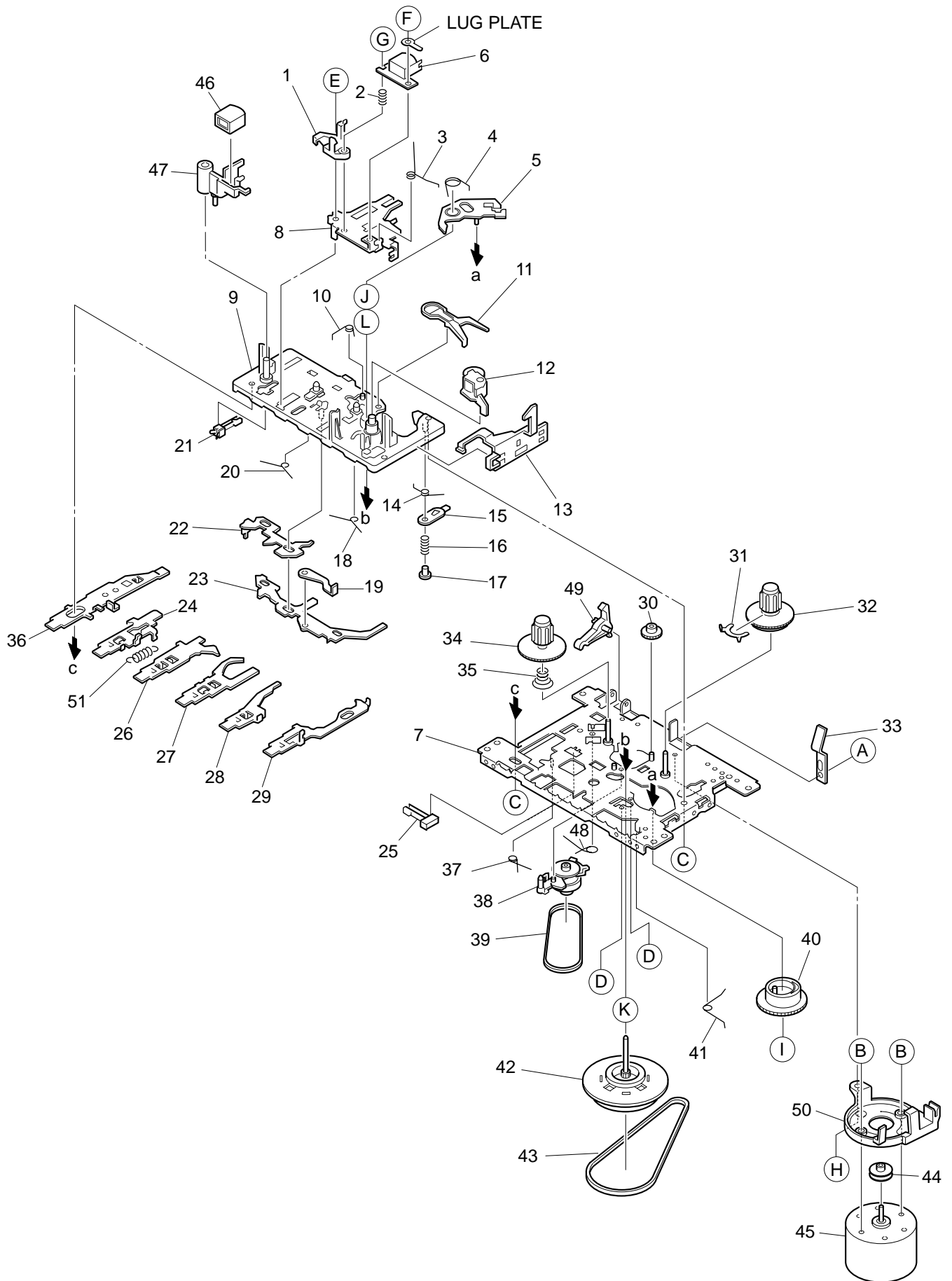
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1	8A-CJB-044-010		WINDOW,CASS (S)	33	8A-CJB-206-010		HLDR,CHAS CD R
2	8A-CGC-005-010		LID,CASS	34	87-036-389-010		SW,PUSH LOCK
3	8A-CJB-221-010		SPR-T,CASS	35	8A-CJB-205-010		HLDR,CHAS CD L
4	8A-CJB-020-010		KNOB,RTRY JOG	36	8Z-NF6-210-010		DMPR,150 N
5	8A-CLC-028-010		WINDOW,DISP (DS)	37	8A-CLC-206-010		SPR-T,CD
6	8A-CGC-004-010		CABI,FRONT	38	88-CD9-211-210		RING,CHUCK
7	8A-CJB-061-010		CUSH,FOOT MAIN	39	8Z-CDB-170-010		BASE,CHUCK
8	8A-CJB-019-010		KEY,CASS	40	8A-CLC-026-010		LID,CD (DS)
9	8A-CJB-207-010		HLDR,KEY CASS	41	87-036-368-010		MAGNET
10	86-NFZ-231-010		DMPR,70	42	84-CT5-209-010		PLATE,MAGNET
11	8A-CLC-207-010		SPR-P,REC	43	8A-CJB-042-010		WINDOW,CD (S)
12	8A-CJB-012-010		WINDOW,RC	44	8A-CJB-005-010		CHAS,CD
13	8A-CJB-210-010		COVER,LED	45	8A-CGC-003-010		PANEL,REAR H
15	8A-CJB-218-010		PLATE,REFLECTOR	46	8A-CJB-004-010		PANEL,R
16	8A-CJB-208-010		GUIDE,LCD	48	87-A80-083-010		AC CORD,HC BLK
17	88-908-101-110		FF-CABLE, 8P 1.25 10MM	49	87-085-185-010		BUSHING, AC CORD (E)
18	88-907-121-110		FF-CABLE, 7P 1.25 120MM	50	87-A90-193-010		HLDR,CV100 (B)
19	8A-CGC-009-010		COVER, KEY FUNC	51	8Z-NB8-240-010		COVER, PL
20	8A-CLC-002-010		KEY,CONT A	52	87-A91-894-010		F-BEAD, E2010JET
21	8A-CGC-014-010		KEY,CONT B MASK	53	8A-CGC-201-010		HLDR,SW SL
22	8A-CJB-625-010		CONN ASSY,10P DECK	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
23	8A-CLC-610-010		CONN ASSY,3P POWER	B	87-723-095-410		QT2+3-8 BLK
24	8A-CJB-003-010		PANEL,L	C	87-253-033-110		SCREW,U+2-4
25	8A-CJB-626-010		CONN ASSY,2P CD DOOR	D	8A-CK4-223-010		S-SCREW,CD
26	8A-CGC-609-010		FF-CABLE,7P 1.25 250MM	E	87-B10-230-010		BVT2+3-10 W/O SLOT SILVER CR
27	8A-CGC-608-010		FF-CABLE,16P 1.0 150MM	F	87-067-586-010		TAPPING SCREW, BVT2+4-8
28	8A-CJB-623-010		CONN ASSY,6P CD MOTOR	G	87-078-150-010		BVT2+3-6 SIL
30	88-CH6-220-010		CUSHION,CD A	H	87-571-032-410		VIT+2-3
31	M8-ZZK-E90-070		DA11T3C				
32	8Z-CDB-169-010		PANEL,CD SANYO				

NOTE: No.14, 29 and 47 are not used.

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	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

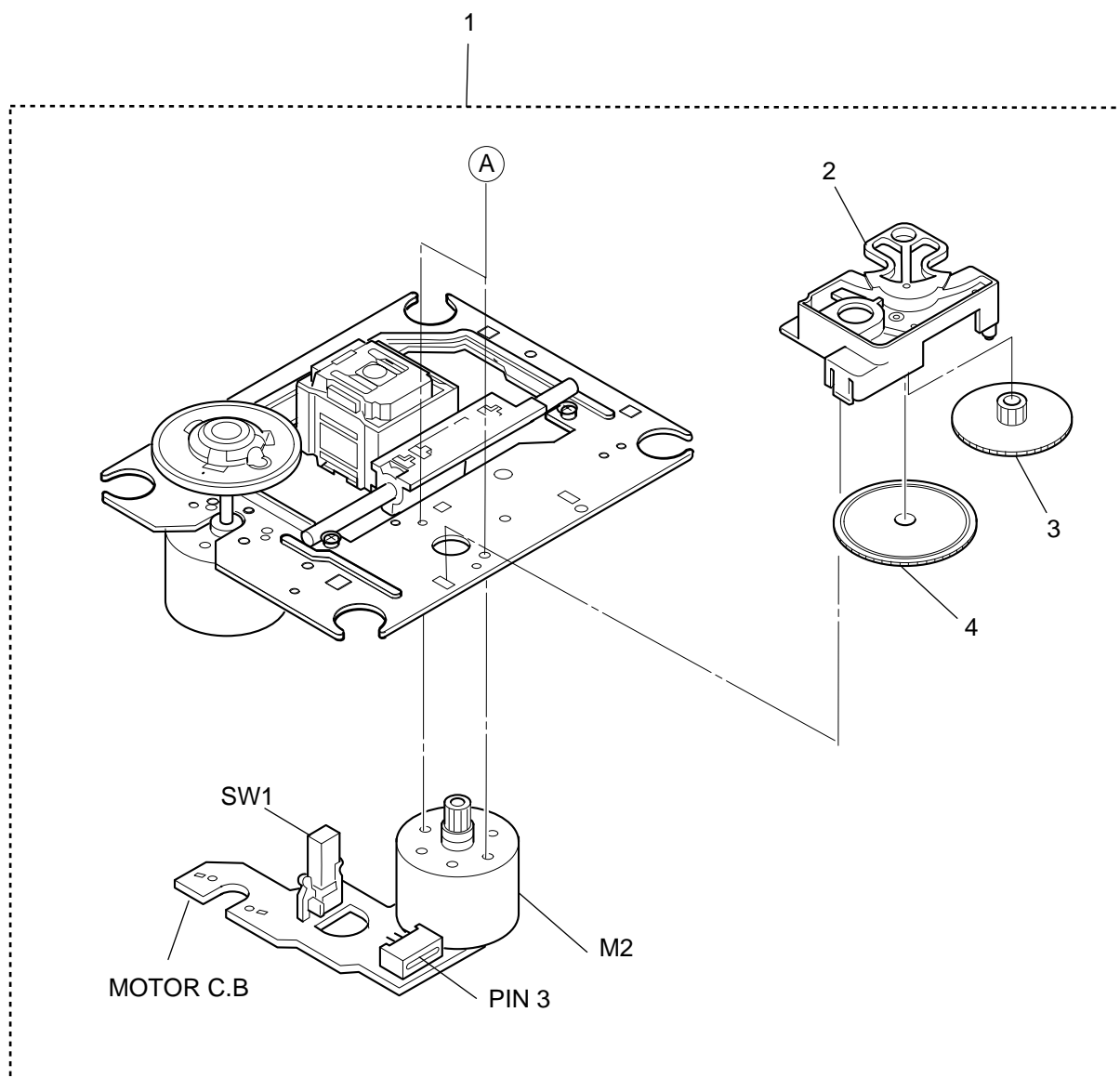
TAPE MECHANISM EXPLODED VIEW-1/1 (TN21ZSC)



TAPE MECHANISM PARTS LIST-1/1 (TN21ZSC)

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		SENER				
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 (DTA11T3C)



CD MECHANISM PARTS LIST-1/1 (DTA11T3C)

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	M8-ZZK-E90-070		DA11T3C
2	S2-121-A28-400		COVER GEAR
3	S2-511-A21-000		GEAR MIDDLE
4	S2-511-A21-100		GEAR, DRIVE
A	S1-PN2-03R-OSE		SCR PAN PCS 2-3

SPEAKER PARTS LIST-1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJB-632-010		SPKR,100MM 4OHM
2	8A-CJB-021-010		CABI,SPKR FR
3	8A-CJB-023-110		PANEL,SPKR
4	8A-CJB-220-010		HLDL,SPKR REAR
5	8A-CJB-204-010		HLDL,SPKR WIRE
6	8A-CJB-627-010		CORD,SPKR
7	8A-CJB-027-010		CUSH,FOOT
A	87-067-698-010		BVT2+3-18 (W/O,SLOT)
B	87-067-703-010		TAPPING SCREW, BVT2+3-10

ACCESSORIES/PACKAGE LIST-1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CGC-911-010		IB,H(EC-K)B
2	87-A90-030-010		ANT,LOOP AM-NC C
3	87-043-115-010		ANT,FEEDER FM
4	8Z-CG8-952-010		RC UNIT,RC-ZAT05

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110-8710, JAPAN TEL:03 (3827) 3111