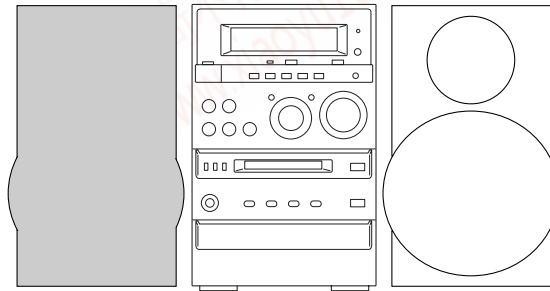




XR-MD100 K(S)

XR-MD101 EZ(S)



SERVICE MANUAL

MD/CD STEREO SYSTEM

BASIC MD MECHANISM : 7ZG-9 YB
BASIC CD MECHANISM : 3ZG-3 E3N
BASIC TAPE MECHANISM : 2ZM-1 YR9

This Service Manual is the "Revision Publishing" and replaces "Simple Manual"
(S/M Code No. 09-993-315-0T1).

aiwa

S/M Code No. 09-993-315-0R3

REVISION
DATA

TABLE OF CONTENTS

SPECIFICATIONS	3
ACCESSORIES/PACKAGE LIST	3
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING/ Precaution to replace Optical block.....	4
DISASSEMBLY INSTRUCTIONS	5-8
ELECTRICAL MAIN PARTS LIST	9-14
TRANSISTOR ILLUSTRATION	14
BLOCK DIAGRAM-1 (MAIN).....	15, 16
BLOCK DIAGRAM-2 (MD)	17, 18
WIRING-1 (MAIN)	19, 20
SCHEMATIC DIAGRAM-1 (MAIN).....	21, 22
WIRING-2 (FRONT)	23, 24
SCHEMATIC DIAGRAM-2 (FRONT)	25, 26
WIRING-3 (CD)	27, 28
SCHEMATIC DIAGRAM-3 (CD)	29, 30
WIRING-4 (MD).....	31, 32
SCHEMATIC DIAGRAM-4 (MD)	33, 34
WIRING-5 (TUNER)	35, 36
SCHEMATIC DIAGRAM-5 (TUNER)	37, 38
WIRING-6 (AC/PT).....	39
WIRING-7 (MECHA/LOAD)	40
FL GRID ASSIGNMENT/ANODE CONNECTION	41
ELECTRICAL ADJUSTMENT/PRACTICAL SERVICE FIGURE	42-45
IC DESCRIPTION	46-57
IC BLOCK DIAGRAM.....	58-60
MECHANICAL EXPLODED VIEW 1/1	61, 62
MECHANICAL PARTS LIST 1/1	63
TAPE MECHANISM PARTS LIST 1/1	64
TAPE MECHANISM EXPLODED VIEW 1/1	65, 66
CD MECHANISM EXPLODED VIEW 1/2	67
CD MECHANISM PARTS LIST 1/2	68
CD MECHANISM EXPLODED VIEW 2/2	69
CD MECHANISM PARTS LIST 2/2	69
MD MECHANISM EXPLODED VIEW 1/3	70
MD MECHANISM PARTS LIST 1/3	70
MD MECHANISM EXPLODED VIEW 2/3	71
MD MECHANISM PARTS LIST 2/3	72
MD MECHANISM EXPLODED VIEW 3/3	73
MD MECHANISM PARTS LIST 3/3	74
SPEAKER DISASSEMBLY INSTRUCTIONS	75
SPEAKER PARTS LIST 1/1	76
SPRING APPLICATION POSITION	77

SPECIFICATIONS

MAIN UNIT XR-MD100

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
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)
Usable sensitivity	350 μ V/m
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: 25 W+25 W (6 ohms, T.H.D. 1%, 1 kHz/DIN 45500) Reference: 30+30 W (6 ohms, T.H.D. 10%, 1 kHz/DIN 45324) DIN MUSIC POWER (EZ MODEL) 66.9 W+66.9 W
Inputs	VIDEO/AUX: 400 mV DIGITAL IN sampling frequency: 48 kHz/32 kHz Optical input level: more than -21 dBm

Outputs

SUPER WOOFER: 1.4 V
SPEAKERS: accept speakers of 6 ohms or more
PHONES (stereo minijack): accepts headphones of 16 ohms or more

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	CrO ₂ tape: 50 Hz-16000 Hz Normal tape: 50 Hz-15000 Hz
Signal-to-noise ratio	60 dB (Dolby B NR ON, CrO ₂ tape peak level)
Recording system	AC bias
Heads	Deck: Recording/playback/erase head X 1

Compact disc player section


Laser	Semiconductor laser ($\lambda=780$ nm)
D-A converter	1 bit dual
Signal-to-noise ratio	90 dB (1 kHz, 0 dB)
Harmonic distortion	0.05% (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

MD recorder section

Scanning method	Non-contact optical scanner (Semiconductor laser application)
Recording system	Magnetic polarity modulation overwrite system
Rotation speed	Approx. 400-900 rpm (CLV)
Sampling frequency	44.1 kHz
No. of channels	Stereo: 2 channels Monaural: 1 channel
A-D, D-A converter	1-bit
Frequency	20-20000 Hz+0.2- -1.5 dB
Wow and flutter	Unmeasurable

SPEAKER SYSTEM SX-M100

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer: 130 mm cone type Tweeter: 60 mm cone type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W X H X D)	175 X 275 X 227 mm
Weight	3.0 kg
General	
Power requirements	230 V AC, 50 Hz
Power consumption	80 W
Standby power consumption	1.4 W (power-economizing mode set to ON)
Dimensions (W X H X D)	175 X 275 X 333 mm
Weight	6.0 kg

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc. Under license from BBE Sound, Inc.

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

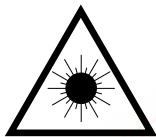
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-A90-118-010		ANT, WIRE FM (Z)
2	87-A90-030-010		ANT, LOOP AM-NC C
3	8Z-CL4-906-010		IB, EZ (9L)S<EZ>
3	8Z-CL4-905-010		IB, K(E)S<K>
4	8Z-CK4-952-010		RC UNIT, RC-ZAT04

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 mainituulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

VARNING!

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.

Precaution to replace Optical block (KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.

Precaution to replace Optical block (KMS-260A)

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.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

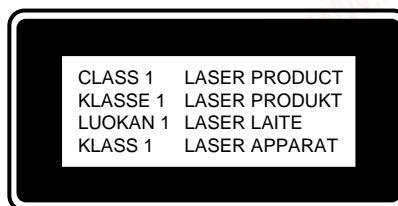
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

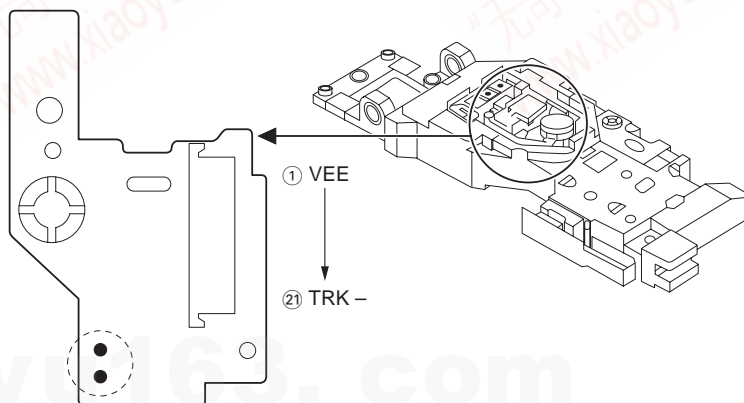
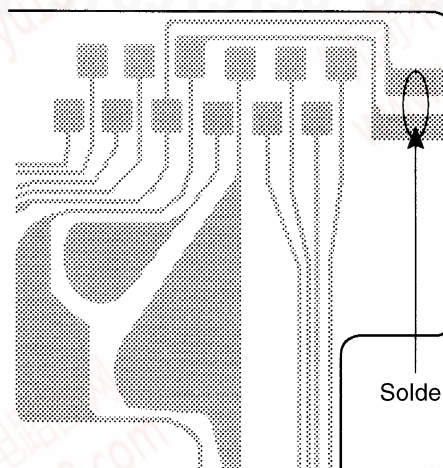
Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

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



PICK-UP Assy P.C.B

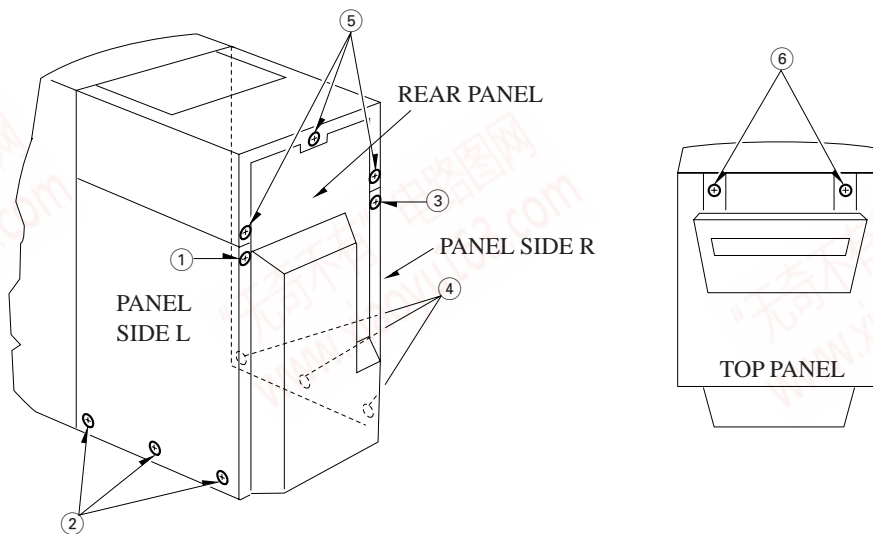


DISASSEMBLY INSTRUCTIONS

Disassembly Procedure

1. Open the cabinet

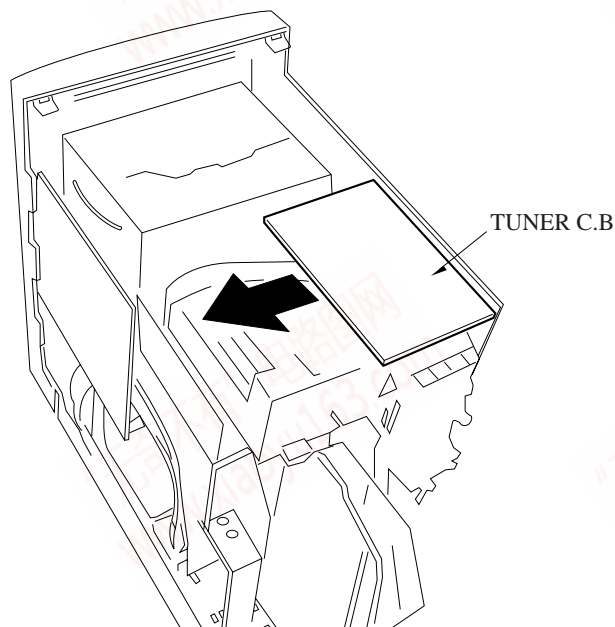
- 1) Remove the screws (①BVT2+3-10X1, ②UTT2+3-6X3 w/o SLOT B), and remove the PANEL SIDE L.
- 2) Remove the screws (③BVT2+3-10X1, ④UTT2+3-6X3 w/o SLOT B), and remove the PANEL SIDE R.
- 3) Remove the screw (⑤BVT2+3-10X3) from the rear side, open the deck lid, remove the screw (⑥BVT2+3-16X2), and remove the TOP PANEL.



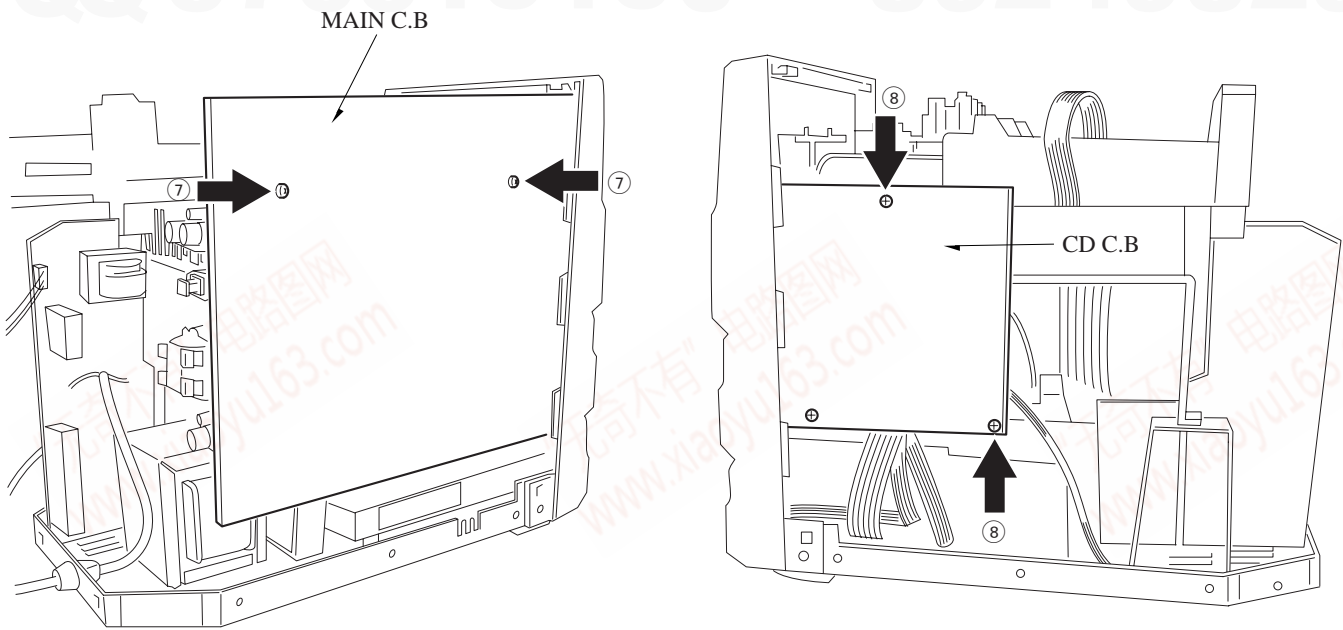
- 4) Remove the screw (BVT2+3-10X11) from the rear side, and remove the REAR PANEL.

2. Removing the deck mechanism.

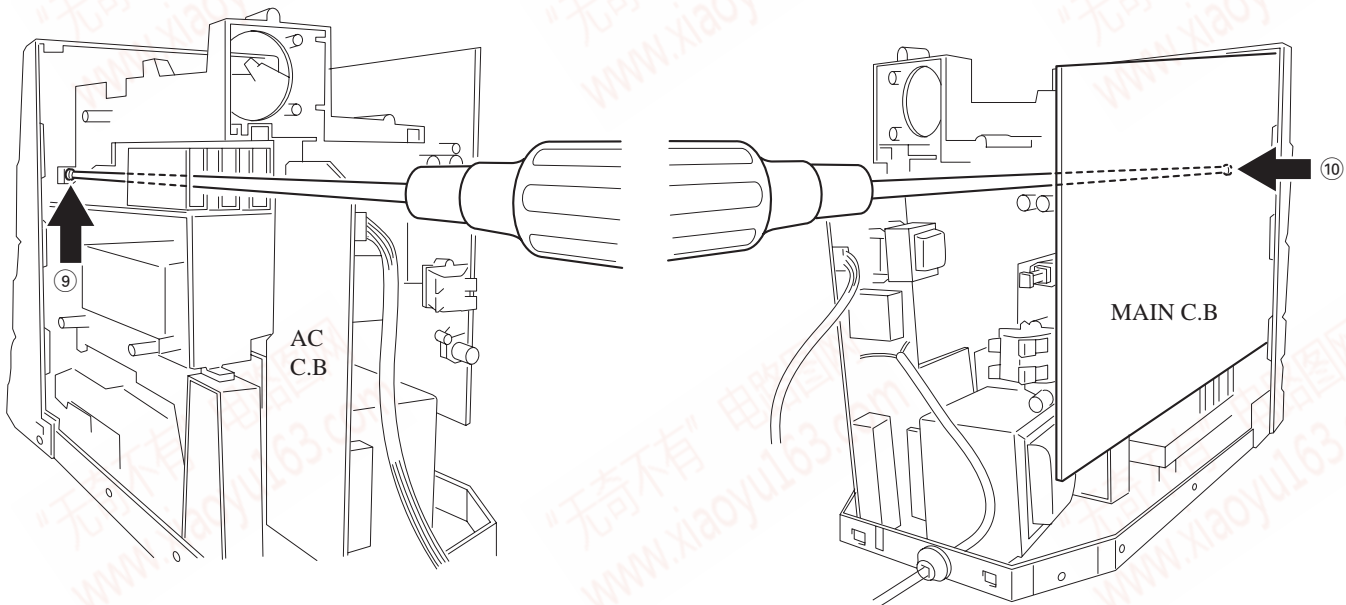
- 1) Remove the TUNER C.B in the direction of the arrow.



- 2) Remove the screw (⑦BVT2+3-10X2) on the top of the MAIN C.B, and remove the screw (⑧BVT2+3-10X3) from the CD C.B.



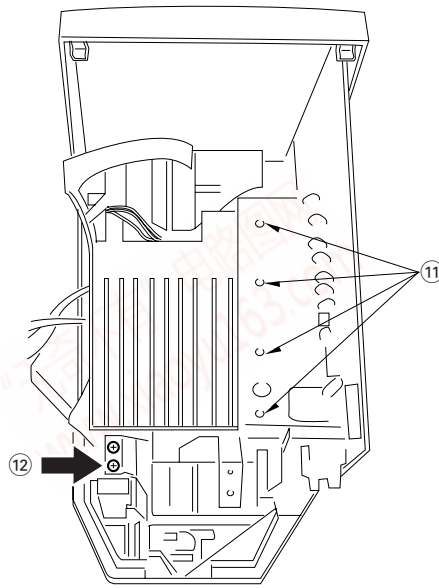
- 3) Remove the CD C.B, remove the screw (⑨UTT2+3-6X1), insert a screwdriver tip through the clearance between the parts and the chassis, and remove the screw (⑩UTT2+3-6X1).



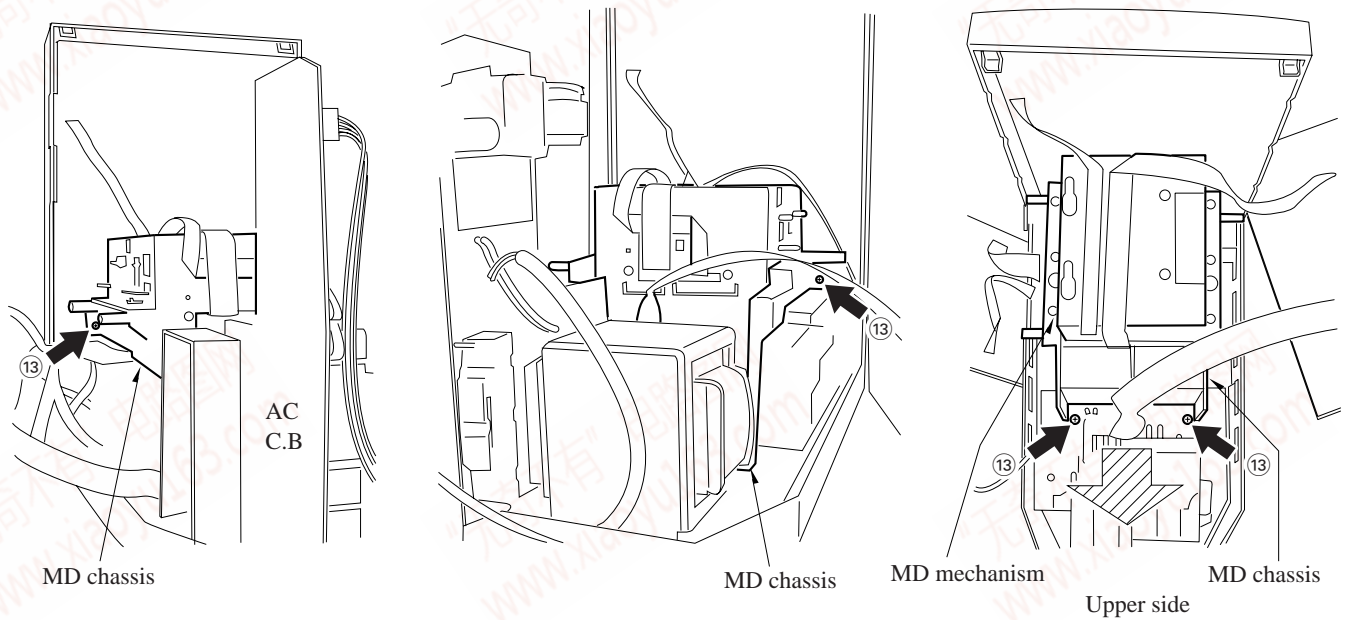
- 4) Remove the cord, and remove the deck mechanism together with the chassis.

3. Removing the MD mechanism.

- 1) Remove the screw (⑪BVTT+4-6X4) securing the transformer, and move the transformer to the rear.
- 2) Remove the screw (⑫BVT2+3-10X1) that fixes the heat side to the holder, and remove the MAIN C.B.

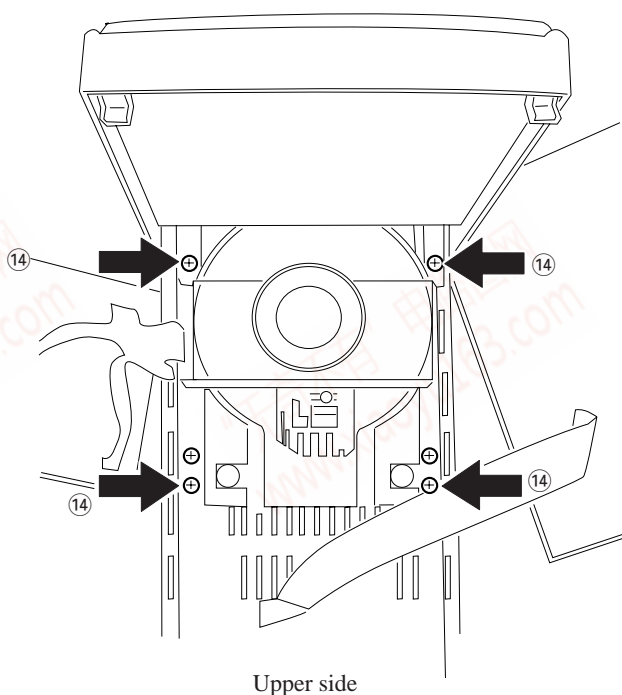


- 3) Remove the screw (⑬BVT2+3-10X4), and remove the MD mechanism together with the chassis.



4. Removing the CD mechanism.

1) Remove the screw (14)BVT2+3-6X4, open the tray, remove the CD panel, and remove the CD mechanism.

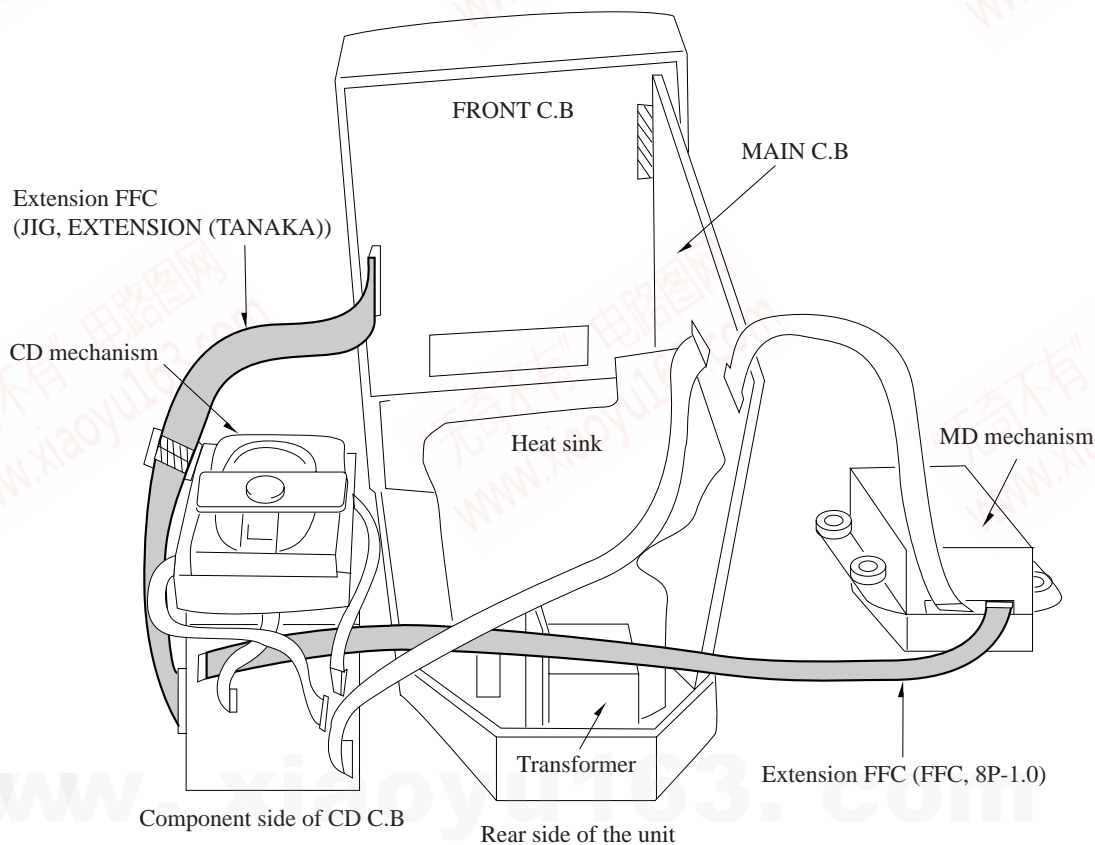


SERVICE JIG AND TOOLS

After opening the board, use the following jig and tools as shown in the figure.

JIG. EX TENSION (TANAKA)SV-J00-019-010

FFC, 8P-1.0SV-J00-043-010



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					87-026-423-080		C-TR RN2305
	87-A20-446-010	C-IC, LA9241ML			89-115-884-080		CHIP -TRANSISTOR 2SA1588Y
	87-A20-459-010	C-IC, LC78622ED			89-341-164-080		CHIP -TRANSISTOR, 2SC4116 Y
	87-A20-445-010	IC, BA5936			87-026-412-080		C-TR RN1305
	87-070-289-040	IC, BU 2092F					
	8Z-CL4-620-010	IC, LC87F65C8A		DIODE			
	87-A20-914-010	IC, SPS-442-1-F			87-A40-291-080		DIODE, 1N4148 (CPT)
	87-A20-455-010	IC, HA12211			87-A40-270-080		C-DIODE, MC2838
	87-A20-355-010	IC, CXA1553P			87-A40-269-080		C-DIODE, MC2836
	87-A21-111-040	C-IC, M62495FP			87-A40-004-080		ZENER, MTZJ16A
	87-A21-103-040	C-IC, MM1454XFBE			87-070-178-090		DIODE, 1N5402-BD54
	87-017-915-080	IC, BU4094BCF			87-070-274-080		DIODE, 1N4003 SEM
	87-A21-022-040	C-IC, BA3880FS			87-A40-345-080		ZENER, MTZJ10C
	87-A20-870-010	IC, GP1F37R			87-017-083-080		ZENER, HZS4C2
	87-A21-175-040	C-IC, TC74VHC14FT			87-A40-312-080		ZENER, DZ33M
	87-070-127-110	IC, LC72131 D			87-A40-488-080		DIODE, 1SS244
	87-A20-913-010	IC, LA1837NL			87-A40-509-080		ZENER, MTZJ6.8C
	87-A20-440-040	C-IC, BU1920FS			87-A40-293-080		ZENER, DZ2.7M
	87-A20-707-010	C-IC, CXA2523AR			87-001-731-080		ZENER, HZS6C2L
	87-A20-708-010	C-IC, CXD2652AR			87-A40-299-080		ZENER, DZ5.1M
	87-A20-709-040	C-IC, BD7910FV			87-017-149-080		ZENER, HZS6A2L
	87-ZG9-607-010	C-IC, CXP81952M-523R			87-020-465-080		DIODE, 1SS133 (110MA)
	87-ZG9-606-040	C-IC, MN41V4400SJ-08			87-A40-270-080		C-DIODE, MC2838
	87-A20-755-080	C-IC, AK93C45AF			87-001-166-080		DIODE, 1SS301
	87-A20-710-040	C-IC, S-8110AMP			87-A40-412-040		C-DIODE, SB05-05CP
	87-A20-711-040	C-IC, BA5970FP					
	87-A20-712-040	C-IC, BA6417F		MAIN C.B			
	87-A21-110-040	C-IC, AK4519VF					
	87-017-853-040	IC, NJM2100V		C61	87-010-260-080		CAP, ELECT 47-25V
	87-A20-797-040	C-IC, NJU7221U30		C62	87-010-403-080		CAP, ELECT 3.3-50V
	87-A20-798-040	C-IC, NJU7221U35		C63	87-010-197-080		CAP, CHIP 0.01 DM
	87-A20-714-040	C-IC, NJM2370U33		C102	87-016-051-090		CAP, E 2200-35 SMG
				C103	87-A10-479-080		CAP, CER 2200P-250 M E KH
TRANSISTOR							
	87-026-463-080	TR, 2SA933S (0.3W)		C106	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-026-239-080	TR, DTC114TK (0.2W)		C107	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A30-076-080	C-TR, 2SC3052F		C108	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A30-075-080	C-TR, 2SA1235F		C109	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A30-268-040	C-TR, 2SA1514K (S)		C110	87-010-928-090		CAP, E 4700-25 SMG
	87-A30-074-080	C-TR, RT1P 141C		C111	87-012-140-080		CAP 470P
	89-113-187-880	TRNSISTOR, 2SA1318 (0.5W)		C112	87-010-112-080		CAP, ELECT 100-16V
	87-A30-047-080	TR, CSD655E		C113	87-010-247-080		CAP, ELECT 100-50V
	89-213-702-010	TR, 2SB1370 (1.8W)		C114	87-010-112-080		CAP, ELECT 100-16V
	87-026-245-080	TR, DTC114ES		C115	87-010-235-080		CAP, E 470-16 SME
	87-A30-198-080	TR, KTC3199GR		C151	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-026-610-080	TR, KTC3198GR		C152	87-A11-233-090		CAP, E 4700-16 105 KMG
	87-A30-196-080	TR, 2SC4115SRS		C153	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A30-072-080	C-TR, RT1P 144C		C154	87-A10-105-080		CAP, E 1000-6.3 REA
	87-A30-073-080	C-TR, RT1N 141C		C171	87-010-260-080		CAP, ELECT 47-25V
	87-A30-087-080	C-FET, 2SK2158		C172	87-010-260-080		CAP, ELECT 47-25V
	87-026-609-080	TR, KTA1266GR		C173	87-010-260-080		CAP, ELECT 47-25V
	87-A30-190-080	TR, CC5551		C174	87-010-260-080		CAP, ELECT 47-25V
	87-A30-215-010	TR, 2SD2025		C175	87-010-247-080		CAP, ELECT 100-50V
	87-A30-214-010	TR, 2SB1344		C176	87-010-247-080		CAP, ELECT 100-50V
	87-A30-106-070	C-TR, CMBT5551		C201	87-010-260-080		CAP, ELECT 47-25V
	87-A30-105-080	C-TR, RT1P 441C		C202	87-010-260-080		CAP, ELECT 47-25V
	87-A30-159-080	C-TR, KTA1298Y		C203	87-A10-946-080		C-CAP, S 220P-100 J CH
	87-A30-084-080	TR, CSB1058B		C204	87-A10-946-080		C-CAP, S 220P-100 J CH
	89-327-143-080	TR, 2SC2714 (0.1W)		C209	87-010-186-080		CAP, CHIP 4700P
	87-026-297-080	TR, DTA144TK		C210	87-010-186-080		CAP, CHIP 4700P
	87-A30-071-080	C-TR, RT1N 144C		C211	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-234-080	TR, CSC4115BC		C212	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-072-080	C-TR, RT1P 144		C213	87-010-195-080		C-CAP, S 0.068-25 F
	89-327-143-080	TR, 2SC2714 (0.1W)		C214	87-015-837-080		C-CAP, 0.068 F
	87-A30-076-080	C-TR, 2SC3052F<K>		C215	87-010-544-080		CAP, ELECT 0.1-50V
	87-A30-074-080	C-TR, RT1P 141C		C216	87-010-544-080		CAP, ELECT 0.1-50V
	87-A30-086-070	C-TR, CSD1306E		C217	87-010-182-080		C-CAP, S 2200P-50 B
	89-505-434-540	C-FET, 2SK543 (4/5)		C218	87-010-182-080		C-CAP, S 2200P-50 B
				C221	87-010-186-080		CAP, CHIP 4700P
				C222	87-010-186-080		CAP, CHIP 4700P

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C223	87-010-403-080		CAP, ELECT 3.3-50V	C582	87-010-404-080		CAP, ELECT 4.7-50V
C224	87-010-403-080		CAP, ELECT 3.3-50V	C603	87-010-402-080		CAP, ELECT 2.2-50V
C265	87-010-546-080		CAP, ELECT 0.33-50V	C604	87-010-402-080		CAP, ELECT 2.2-50V
C266	87-010-546-080		CAP, ELECT 0.33-50V	C605	87-010-408-080		CAP, ELECT 47-50V
C267	87-010-380-080		CAP, ELECT 47-16V	C607	87-010-405-080		CAP, ELECT 10-50V
C267	87-010-380-080		CAP, ELECT 47-16V	C608	87-010-405-080		CAP, ELECT 10-50V
C277	87-010-197-080		CAP, CHIP 0.01 DM	C609	87-010-196-080		CHIP CAPACITOR,0.1-25
C303	87-012-157-080		C-CAP,S 330P-50 CH	C610	87-010-384-080		CAP, ELECT 100-25V
C304	87-012-157-080		C-CAP,S 330P-50 CH	C611	87-010-197-080		CAP, CHIP 0.01 DM
C307	87-010-196-080		CHIP CAPACITOR,0.1-25	C612	87-010-197-080		CAP, CHIP 0.01 DM
C311	87-010-198-080		CAP, CHIP 0.022	C620	87-010-380-080		CAP, ELECT 47-16V
C312	87-010-198-080		CAP, CHIP 0.022	C621	87-010-196-080		CHIP CAPACITOR,0.1-25
C315	87-010-181-080		CAP,CHIP S 1800P	C622	87-010-322-080		C-CAP,S 100P-50 CH
C316	87-010-181-080		CAP,CHIP S 1800P	C631	87-010-400-080		CAP, ELECT 0.47-50V
C317	87-012-142-080		CAP, S 0.33-16	C653	87-010-404-080		CAP, ELECT 4.7-50V
C318	87-012-142-080		CAP, S 0.33-16	C654	87-010-404-080		CAP, ELECT 4.7-50V
C319	87-012-141-080		CHIP-CAPACITOR,0.22-16F	C655	87-010-404-080		CAP, ELECT 4.7-50V
C320	87-012-141-080		CHIP-CAPACITOR,0.22-16F	C656	87-010-404-080		CAP, ELECT 4.7-50V
C321	87-012-141-080		CHIP-CAPACITOR,0.22-16F	C657	87-010-188-080		CAP,CHIP 6800P
C322	87-012-141-080		CHIP-CAPACITOR,0.22-16F	C658	87-010-188-080		CAP,CHIP 6800P
C324	87-010-260-080		CAP, ELECT 47-25V	C659	87-012-140-080		CAP 470P
C325	87-010-370-080		CAP,E 330-6.3 SME	C660	87-012-140-080		CAP 470P
C327	87-010-404-080		CAP, ELECT 4.7-50V	C662	87-010-408-080		CAP, ELECT 47-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V	C663	87-010-178-080		CHIP CAP 1000P
C332	87-010-196-080		CHIP CAPACITOR,0.1-25	C664	87-010-178-080		CHIP CAP 1000P
C335	87-010-401-080		CAP, ELECT 1-50V	C665	87-010-197-080		CAP, CHIP 0.01 DM
C336	87-010-401-080		CAP, ELECT 1-50V	C666	87-010-197-080		CAP, CHIP 0.01 DM
C337	87-010-196-080		CHIP CAPACITOR,0.1-25	C667	87-010-195-080		C-CAP,S 0.068-25 F
C339	87-010-196-080		CHIP CAPACITOR,0.1-25	C668	87-010-195-080		C-CAP,S 0.068-25 F
C340	87-010-196-080		CHIP CAPACITOR,0.1-25	C669	87-010-408-080		CAP, ELECT 47-50V
C351	87-012-140-080		CAP 470P	C670	87-010-196-080		CHIP CAPACITOR,0.1-25
C352	87-012-140-080		CAP 470P	C671	87-010-404-080		CAP, ELECT 4.7-50V
C354	87-010-175-080		CAP 560P	C672	87-010-404-080		CAP, ELECT 4.7-50V
C355	87-010-178-080		CHIP CAP 1000P	C675	87-010-401-080		CAP, ELECT 1-50V
C356	87-010-260-080		CAP, ELECT 47-25V	C676	87-010-401-080		CAP, ELECT 1-50V
C357	87-010-197-080		CAP, CHIP 0.01 DM	C901	87-010-196-080		CHIP CAPACITOR,0.1-25
C358	87-010-183-080		C-CAP,S 2700P-50 B	C902	87-010-178-080		CHIP CAP 1000P
C359	87-010-183-080		C-CAP,S 2700P-50 B	C903	87-010-178-080		CHIP CAP 1000P
C360	87-010-183-080		C-CAP,S 2700P-50 B	C904	87-010-196-080		CHIP CAPACITOR,0.1-25
C370	87-010-196-080		CHIP CAPACITOR,0.1-25	C905	87-012-140-080		CAP 470P
C371	87-010-179-080		CAP,CHIP S B1200P	C906	87-010-196-080		CHIP CAPACITOR,0.1-25
C372	87-010-179-080		CAP,CHIP S B1200P	C951	87-010-401-080		CAP, ELECT 1-50V
C373	87-010-179-080		CAP,CHIP S B1200P	C952	87-010-263-080		CAP, ELECT 100-10V
C374	87-010-179-080		CAP,CHIP S B1200P	C953	87-010-380-080		CAP, ELECT 47-16V
C375	87-010-545-080		CAP, ELECT 0.22-50V	C960	87-010-405-080		CAP, ELECT 10-50V
C376	87-010-545-080		CAP, ELECT 0.22-50V	CN101	87-A60-111-010		CONN,5P V S2M 5W
C378	87-018-209-080		CAP, CHR 0.1-50V	CN501	87-099-719-010		CONN,30P TYK-B(X)
C381	87-010-197-080		CAP, CHIP 0.01 DM	CN502	87-A60-423-010		CONN,14P V TOC-B
C382	87-010-318-080		C-CAP,S 47P-50 CH	CN503	87-A60-133-010		CONN,8P V FE
C383	87-010-197-080		CAP, CHIP 0.01 DM	CN702	87-A60-189-010		CONN,16P V TUC-P16P-B1
C384	87-010-402-080		CAP, ELECT 2.2-50V	CN901	8Z-CL4-656-010		CONN ASSY,2P V DTL SHLD
C385	87-010-184-080		CHIP CAPACITOR 3300P(K)	J201	87-A60-420-010		JACK,3.5 ST (MSC)
C386	87-010-196-080		CHIP CAPACITOR,0.1-25	J202	87-099-801-010		JACK,PIN 1P BLK
C388	87-010-154-080		CAP CHIP 10P	J203	87-A60-659-010		TERMINAL,SPKR 4P HSP-134V-05Z
C399	87-010-265-080		CAP, ELECT 33-16V	L201	87-003-383-010		COIL,1UH-S
C501	87-010-154-080		CAP CHIP 10P	L202	87-003-383-010		COIL,1UH-S
C502	87-010-374-080		CAP, ELECT 47-10V	L301	87-A50-049-010		COIL,TRAP 85K(COI)
C503	87-010-374-080		CAP, ELECT 47-10V	L302	87-A50-049-010		COIL,TRAP 85K(COI)
C505	87-010-187-080		CAP CHIP S5600P	L351	87-007-342-010		COIL,OSC 85K BIAS
C506	87-010-187-080		CAP CHIP S5600P	PN301	87-A60-112-010		CONN,7P V S2M-7W
C509	87-010-182-080		C-CAP,S 2200P-50 B	PR103	87-026-681-080		PROTECTOR,5A 60V 491
C510	87-010-182-080		C-CAP,S 2200P-50 B	PR104	87-026-681-080		PROTECTOR,5A 60V 491
C511	87-010-213-080		C-CAP,S 0.015-50 B	PR151	87-A90-094-080		PROTECTOR,4A 491SERIES 60V
C512	87-010-213-080		C-CAP,S 0.015-50 B	PR152	87-A90-094-080		PROTECTOR,4A 491SERIES 60V
C513	87-010-400-080		CAP, ELECT 0.47-50V	R215	87-A00-258-080		RES,M/F 0.22-1W J
C514	87-010-400-080		CAP, ELECT 0.47-50V	R216	87-A00-258-080		RES,M/F 0.22-1W J
C515	87-010-400-080		CAP, ELECT 0.47-50V	R217	87-A00-258-080		RES,M/F 0.22-1W J
C516	87-010-400-080		CAP, ELECT 0.47-50V	R218	87-A00-258-080		RES,M/F 0.22-1W J
C517	87-010-401-080		CAP, ELECT 1-50V	R219	87-A00-258-080		RES,M/F 0.22-1W J
C518	87-010-401-080		CAP, ELECT 1-50V	R220	87-A00-258-080		RES,M/F 0.22-1W J
C551	87-010-402-080		CAP, ELECT 2.2-50V	R908	87-008-372-080		FILTER, EMI BL OIRNI
C552	87-010-402-080		CAP, ELECT 2.2-50V	SFR303	87-A90-557-080		SFR,33K H HOKU
C561	87-010-407-080		CAP, ELECT 33-50V	SFR304	87-A90-557-080		SFR,33K H HOKU
C562	87-010-407-080		CAP, ELECT 33-50V	SFR305	87-024-436-080		SFR,47K RH063EC
C581	87-010-404-080		CAP, ELECT 4.7-50V	SFR306	87-024-436-080		SFR,47K RH063EC

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
SFR351	87-024-436-080		SFR,47K RH063EC	C101	87-010-322-080		C-CAP,S 100P-50 CH
SFR352	87-024-436-080		SFR,47K RH063EC	C102	87-010-322-080		C-CAP,S 100P-50 CH
TH51	87-A91-042-080		C-THMS,100K 55001	C103	87-010-322-080		C-CAP,S 100P-50 CH
TH52	87-A91-042-080		C-THMS,100K 55001	C104	87-010-322-080		C-CAP,S 100P-50 CH
W101	8Z-CL4-658-010		F-CABLE,10P 2.5 300MM	C105	87-010-322-080		C-CAP,S 100P-50 CH
CD C.B				C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C1	87-010-403-080		CAP, ELECT 3.3-50V	CN1	87-A60-424-010		CONN,16P V TOC-B
C2	87-010-197-080		CAP, CHIP 0.01 DM	CN2	87-A60-131-010		CONN,6P V FE
C3	87-010-263-080		CAP, ELECT 100-10V	CN3	87-A60-130-010		CONN,5P V FE
C4	87-010-248-080		CAP, ELECT 220-10V	CN4	87-099-719-010		CONN,30P TYK-B(X)
C5	87-010-197-080		CAP, CHIP 0.01 DM	CN5	87-A60-133-010		CONN,8P V FE
C6	87-010-374-080		CAP, ELECT 47-10V	CN6	87-A60-422-010		CONN,8P V TOC-B
C7	87-012-349-080		C-CAP,S 1000P-50 CH	CNA1	87-A60-109-010		CONN,2P V S2M-2W
C8	87-010-198-080		CAP, CHIP 0.022	L1	87-003-102-080		COIL, 10UH
C9	87-010-248-080		CAP, ELECT 220-10V	L4	87-003-152-080		COIL, 100UH
C10	87-010-263-080		CAP, ELECT 100-10V	L5	87-003-152-080		COIL, 100UH
C12	87-010-401-080		CAP, ELECT 1-50V	SFR130	87-024-437-080		SFR100K,RH063EC
C13	87-010-193-080		CHIP CAPACITOR,0.033	X1	87-A70-046-010		VIB,XTAL 16.934MHZ
C14	87-010-405-080		CAP, ELECT 10-50V	FRONT C.B			
C17	87-012-157-080		C-CAP,S 330P-50 CH	C131	87-010-402-040		CAP,E 2.2-50 SME
C18	87-010-213-080		C-CAP,S 0.015-50 B	C132	87-010-400-040		CAP,E 0.47-50
C20	87-010-193-080		CHIP CAPACITOR,0.033	C151	87-010-196-080		CHIP CAPACITOR,0.1-25
C22	87-010-183-080		C-CAP,S 2700P-50 B	C152	87-010-322-080		C-CAP,S 100P-50 CH
C23	87-010-956-080		CHIP-CAP,S 0.068-25B	C201	87-012-145-080		CAP, CHIP S 270P CH
C25	87-010-994-080		C-CAP,S 680P-50 CH	C203	87-018-149-080		CAP,TC-U 15P-50 CH
C29	87-010-186-080		CAP,CHIP 4700P	C204	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C30	87-012-156-080		C-CAP,S 220P-50 CH	C205	87-010-196-080		CHIP CAPACITOR,0.1-25
C31	87-010-400-080		CAP, ELECT 0.47-50V	C206	87-018-209-080		CAP, CER 0.1-50V
C32	87-010-374-080		CAP, ELECT 47-10V	C207	87-018-209-080		CAP, CER 0.1-50V
C33	87-010-401-080		CAP, ELECT 1-50V	C231	87-010-405-040		CAP,E 10-50
C34	87-010-184-080		CHIP CAPACITOR 3300P(K)	C232	87-010-178-080		CHIP CAP 1000P
C35	87-010-197-080		CAP, CHIP 0.01 DM	C241	87-010-400-040		CAP,E 0.47-50
C36	87-010-374-080		CAP, ELECT 47-10V	C242	87-A10-189-040		E 220-10
C37	87-010-404-080		CAP, ELECT 4.7-50V	C243	87-010-196-080		CHIP CAPACITOR,0.1-25
C38	87-010-196-080		CHIP CAPACITOR,0.1-25	C245	87-010-378-040		CAP,E 10-16
C40	87-010-145-080		C-CAP,S 1P-50 CH	C246	87-010-196-080		CHIP CAPACITOR,0.1-25
C42	87-010-312-080		C-CAP,S 15P-50 CH	C247	87-010-194-080		CAP, CHIP 0.047
C45	87-010-196-080		CHIP CAPACITOR,0.1-25	C249	87-018-208-080		CAP 0.047-50F
C46	87-010-196-080		CHIP CAPACITOR,0.1-25	C250	87-010-198-080		CAP, CHIP 0.022
C47	87-010-196-080		CHIP CAPACITOR,0.1-25	C251	87-010-263-040		CAP,E 100-10
C48	87-010-315-080		C-CAP,S 27P-50 CH	C351	87-010-197-080		CAP, CHIP 0.01 DM
C50	87-012-140-080		CAP 470P	C352	87-010-197-080		CAP, CHIP 0.01 DM
C51	87-012-156-080		C-CAP,S 220P-50 CH	C353	87-010-197-080		CAP, CHIP 0.01 DM
C52	87-012-140-080		CAP 470P	C354	87-010-197-080		CAP, CHIP 0.01 DM
C53	87-010-322-080		C-CAP,S 100P-50 CH	C371	87-010-421-040		CAP,E 4.7-50 5L
C54	87-012-153-080		C-CAP,S 120P-50 CH	C372	87-010-421-040		CAP,E 4.7-50 5L
C55	87-010-263-080		CAP, ELECT 100-10V	C373	87-010-408-040		CAP,E 47-50 SME
C57	87-010-316-080		C-CAP,S 33P-50 CH	C501	87-010-196-080		CHIP CAPACITOR,0.1-25
C58	87-010-316-080		C-CAP,S 33P-50 CH	CN101	87-099-720-010		CONN,30P TYK-B(P)
C59	87-010-263-080		CAP, ELECT 100-10V	CN102	87-099-720-010		CONN,30P TYK-B(P)
C60	87-010-196-080		CHIP CAPACITOR,0.1-25	CNA401	88-802-092-420		CONN ASSY,9P
C61	87-010-196-080		CHIP CAPACITOR,0.1-25	D153	87-A40-568-010		LED,L-13HD RED
C62	87-A10-373-080		CAP,E 220-6.3 M SSL	D154	87-001-161-080		LED SEL2410E
C65	87-010-404-080		CAP, ELECT 4.7-50V	D155	87-001-161-080		LED SEL2410E
C66	87-010-196-080		CHIP CAPACITOR,0.1-25	D156	87-001-161-080		LED SEL2410E
C67	87-010-263-080		CAP, ELECT 100-10V	D157	87-001-161-080		LED SEL2410E
C69	87-012-154-080		C-CAP,S 150P-50 CH	D158	87-001-161-080		LED SEL2410E
C75	87-010-197-080		CAP, CHIP 0.01 DM	D161	87-A40-276-080		LED,SML1816W UMB/GRN
C76	87-A10-102-080		CAP,E 1000-10 REA	D163	87-A40-276-080		LED,SML1816W UMB/GRN
C77	87-010-197-080		CAP, CHIP 0.01 DM	D165	87-A40-276-080		LED,SML1816W UMB/GRN
C78	87-010-221-080		CAP, ELECT 470-10V	D167	87-A40-276-080		LED,SML1816W UMB/GRN
C79	87-010-263-080		CAP, ELECT 100-10V	D169	87-A40-276-080		LED,SML1816W UMB/GRN
C80	87-010-197-080		CAP, CHIP 0.01 DM	FL301	8Z-CL4-621-010		FL,13-ST-36GNK
C81	87-010-405-080		CAP, ELECT 10-50V	L201	87-A50-052-010		COIL,CLOCK 5.76MHZ T1
C82	87-010-405-080		CAP, ELECT 10-50V	S301	87-A90-696-080		SW,TACT TS2103-03-430
C83	87-010-181-080		CAP,CHIP S 1800P	S302	87-A90-696-080		SW,TACT TS2103-03-430
C84	87-010-181-080		CAP,CHIP S 1800P	S303	87-A90-696-080		SW,TACT TS2103-03-430
C90	87-010-196-080		CHIP CAPACITOR,0.1-25	S304	87-A90-696-080		SW,TACT TS2103-03-430
C91	87-010-408-080		CAP, ELECT 47-50V	S305	87-A90-696-080		SW,TACT TS2103-03-430
C92	87-010-382-080		CAP, ELECT 22-25V	S306	87-A90-696-080		SW,TACT TS2103-03-430
C93	87-010-197-080		CAP, CHIP 0.01 DM	S307	87-A90-696-080		SW,TACT TS2103-03-430
C94	87-010-197-080		CAP, CHIP 0.01 DM	S308	87-A90-696-080		SW,TACT TS2103-03-430
C95	87-010-197-080		CAP, CHIP 0.01 DM	S309	87-A90-696-080		SW,TACT TS2103-03-430

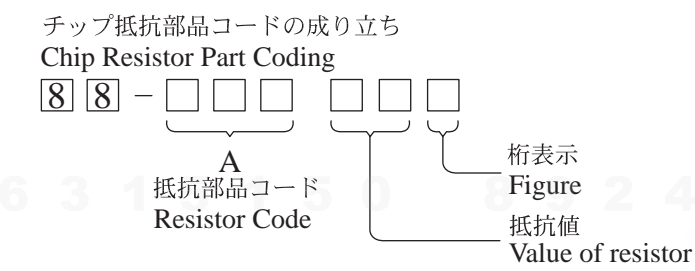
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
S310	87-A90-696-080	SW,TACT	TS2103-03-430	C785	87-010-405-080		CAP, ELECT 10-50V
S311	87-A90-696-080	SW,TACT	TS2103-03-430	C786	87-010-405-080		CAP, ELECT 10-50V
S312	87-A90-696-080	SW,TACT	TS2103-03-430	C787	87-012-275-080		C-CAP,U 1200P-50 B
S321	87-A90-696-080	SW,TACT	TS2103-03-430	C788	87-012-275-080		C-CAP,U 1200P-50 B
S322	87-A90-696-080	SW,TACT	TS2103-03-430	C789	87-012-275-080		C-CAP,U 1200P-50 B
S323	87-A90-696-080	SW,TACT	TS2103-03-430	C790	87-012-275-080		C-CAP,U 1200P-50 B
S324	87-A90-696-080	SW,TACT	TS2103-03-430	C791	87-010-405-080		CAP, ELECT 10-50V
S325	87-A90-696-080	SW,TACT	TS2103-03-430	C793	87-012-273-080		C-CAP,U 820P-50 B
S326	87-A90-696-080	SW,TACT	TS2103-03-430	C794	87-010-406-080		CAP, ELECT 22-50
S327	87-A90-696-080	SW,TACT	TS2103-03-430	C795	87-010-596-080		CAP, S 0.047-16
S328	87-A90-696-080	SW,TACT	TS2103-03-430	C796	87-010-403-080		CAP, ELECT 3.3-50V
S329	87-A90-696-080	SW,TACT	TS2103-03-430	C797	87-012-276-080		CAP, CHIP SS 1500 PBK
S330	87-A90-696-080	SW,TACT	TS2103-03-430	C798	87-012-276-080		CAP, CHIP SS 1500 PBK
S331	87-A90-696-080	SW,TACT	TS2103-03-430	C799	87-010-829-080		CAP, U 0.047-16
S351	87-A90-085-010	SW,RTRY	EC16B 24204	C814	87-012-286-080		CAP, U 0.01-25
S352	87-A90-535-010	SW,RTRY	EC16B24304	C820	87-010-260-080		CAP, ELECT 47-25V
				C821	87-012-286-080		CAP, U 0.01-25
				C822	87-012-286-080		CAP, U 0.01-25
				C823	87-012-286-080		CAP, U 0.01-25
				C859	87-012-286-080		CAP, U 0.01-25<K>
LED C.B							
D181	87-001-161-080	LED	SEL2410E				
D182	87-002-738-080	LED	SEL2210R TP6	C861	87-012-199-080		CAP 220P<K>
D183	87-001-161-080	LED	SEL2410E	C862	87-012-199-080		CAP 220P<K>
				C863	87-012-270-080		CAP, U 470P-50<K>
				C864	87-010-405-080		CAP, ELECT 10-50V<K>
				C865	87-010-196-080		CHIP CAPACITOR,0.1-25<K>
TUNER C.B							
C701	87-010-381-080	CAP, ELECT	330-16V	C866	87-010-405-080		CAP, ELECT 10-50V<K>
C702	87-010-404-080	CAP, ELECT	4.7-50V	C867	87-012-286-080		CAP, U 0.01-25<K>
C703	87-012-286-080	CAP, U	0.01-25	C868	87-012-184-080		C-CAP,U 33P-50 CH<K>
C704	87-012-286-080	CAP, U	0.01-25	C869	87-012-180-080		C-CAP,U 22P-50 CH<K>
C709	87-012-195-080	C-CAP,U	100P-50CH	C940	87-012-286-080		CAP, U 0.01-25
C711	87-010-260-080	CAP, ELECT	47-25V	C942	87-012-168-080		C-CAP,U 6P-50 CH
C712	87-010-831-080	C-CAP,U	0.1-16F	C947	87-012-286-080		CAP, U 0.01-25
C713	87-012-286-080	CAP, U	0.01-25	C949	87-A10-039-080		C-CAP,U 470P-50 J CH
C714	87-012-286-080	CAP, U	0.01-25	C952	87-012-286-080		CAP, U 0.01-25
C715	87-012-195-080	C-CAP,U	100P-50CH	C958	87-010-197-080		CAP, CHIP 0.01 DM
C717	87-012-286-080	CAP, U	0.01-25	C959	87-010-831-080		C-CAP,U,0.1-16F
C719	87-012-286-080	CAP, U	0.01-25	C962	87-010-401-080		CAP, ELECT 1-50V
C720	87-012-195-080	C-CAP,U	100P-50CH	CF801	87-008-423-010		CERAMIC FILTER, SFE10.7
C721	87-012-176-080	CAP	15P	CF802	82-785-747-010		CF MS2 GHY R
C722	87-012-176-080	CAP	15P	CN701	87-A60-700-010		CONN,13P H GRY TUC-P13X-C1<E>
C723	87-012-274-080	CHIP CAP,U	1000P-50B	CN701	87-A60-650-010		CONN,16P H GRY TUC-P16X-C1<K>
C725	87-018-131-080	CAP, CER	1000P-50V	FFE801	A8-6ZA-191-130		6ZA-1 FEENM
C727	87-010-196-080	CHIP CAPACITOR	0.1-25	J801	87-033-241-010		TERMINAL,ANT AJ-2039
C728	87-010-248-080	CAP, ELECT	220-10V	L771	87-A50-266-010		COIL,FM DET-2N(TOK)
C729	87-012-274-080	CHIP CAP,U	1000P-50B	L772	87-A91-110-010		FLTR,PCFJZH-450 (TOK)
C731	87-012-286-080	CAP, U	0.01-25	L781	87-005-847-080		COIL,2.2UH(CECS)
C733	87-012-280-080	CAP, U	3300P-50	L791	87-A50-027-010		COIL,1 POLE MPX(TOK)
C734	87-012-280-080	CAP, U	3300P-50	L792	87-A50-027-010		COIL,1 POLE MPX(TOK)
C752	87-012-282-080	CAP, U	4700P-50	L832	87-005-847-080		COIL,2.2UH(CECS)
C753	87-012-195-080	C-CAP,U	100P-50CH	L851	87-005-847-080		COIL,2.2UH(CECS)<K>
C755	87-012-286-080	CAP, U	0.01-25	L941	87-A50-020-010		COIL,ANT LW(COI)
C756	87-012-286-080	CAP, U	0.01-25	L942	87-A50-019-010		COIL,OSC LW(COI)
C757	87-012-188-080	C-CAP,U	47P-50 CH	L981	8Z-ZA1-665-010		COIL,AM PACK 2(TOK)
C758	87-012-167-080	C-CAP,U	5P-50 CH	TC942	87-011-164-010		CAPACITOR,TRIMMER 30P
C761	87-010-196-080	CHIP CAPACITOR	0.1-25	X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
C762	87-012-286-080	CAP, U	0.01-25	X851	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309<K>
C763	87-010-829-080	CAP, U	0.047-16				
C765	87-012-286-080	CAP, U	0.01-25				
C766	87-010-197-080	CAP, CHIP	0.01 DM				
C769	87-010-260-080	CAP, ELECT	47-25V				
C770	87-010-829-080	CAP, U	0.047-16				
C771	87-010-383-080	CAP, ELECT	33-25V				
C772	87-010-829-080	CAP, U	0.047-16				
C773	87-010-196-080	CHIP CAPACITOR	0.1-25				
C774	87-010-263-080	CAP, ELECT	100-10V				
C775	87-010-404-080	CAP, ELECT	4.7-50V				
C776	87-012-286-080	CAP, U	0.01-25				
C777	87-010-493-080	CAP,E	0.47-50 GAS				
C778	87-010-401-080	CAP, ELECT	1-50V				
C779	87-010-401-080	CAP, ELECT	1-50V				
C780	87-010-196-080	CHIP CAPACITOR	0.1-25				
C781	87-010-405-080	CAP, ELECT	10-50V				
C782	87-010-405-080	CAP, ELECT	10-50V				
C783	87-012-286-080	CAP, U	0.01-25				
C784	87-012-286-080	CAP, U	0.01-25				

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C116	87-012-282-080	CAP, U 4700P-50		C501	87-010-831-080	C-CAP, U, 0.1-16F	
C117	87-016-462-080	C-CAP, S 1-16 F		C502	87-010-831-080	C-CAP, U, 0.1-16F	
C118	87-012-282-080	CAP, U 4700P-50		C503	87-010-662-080	C-CAP, E 22-6.3	
C119	87-016-491-080	C-CAP, S 0.22-16 FZ		C504	87-010-831-080	C-CAP, U, 0.1-16F	
C120	87-010-787-080	CAP, U 0.022-25		C505	87-010-662-080	C-CAP, E 22-6.3	
C121	87-012-286-080	CAP, U 0.01-25		C506	87-010-831-080	C-CAP, U, 0.1-16F	
C122	87-010-829-080	CAP, U 0.047-16		C506	87-010-831-080	C-CAP, U, 0.1-16F	
C123	87-012-286-080	CAP, U 0.01-25		C507	87-010-661-080	C-CAP, E 10-16	
C124	87-010-662-080	C-CAP, E 22-6.3		C508	87-010-831-080	C-CAP, U, 0.1-16F	
C125	87-010-662-080	C-CAP, E 22-6.3		C509	87-010-662-080	C-CAP, E 22-6.3	
C126	87-010-831-080	C-CAP, U, 0.1-16F		C510	87-010-831-080	C-CAP, U, 0.1-16F	
C201	87-010-831-080	C-CAP, U, 0.1-16F		C510	87-010-831-080	C-CAP, U, 0.1-16F	
C202	87-010-831-080	C-CAP, U, 0.1-16F		C511	87-010-661-080	C-CAP, E 10-16	
C203	87-010-785-080	C-CAP, U, 0.015-25BK		C513	87-010-661-080	C-CAP, E 10-16	
C204	87-016-461-080	C-CAP, S 0.47-16F		C514	87-010-661-080	C-CAP, E 10-16	
C205	87-010-831-080	C-CAP, U, 0.1-16F		C515	87-012-337-080	C-CAP, U 56P-50 CH	
C206	87-012-270-080	CAP, U 470P-50		C516	87-012-337-080	C-CAP, U 56P-50 CH	
C207	87-016-461-080	C-CAP, S 0.47-16F		C517	87-012-278-080	C-CAP, U 2200P-50 B	
C208	87-012-286-080	CAP, U 0.01-25		C518	87-012-278-080	C-CAP, U 2200P-50 B	
C209	87-010-831-080	C-CAP, U, 0.1-16F		C519	87-010-831-080	C-CAP, U, 0.1-16F	
C210	87-012-172-080	CAPACITOR CHIP U 10P CH		C520	87-010-661-080	C-CAP, E 10-16	
C211	87-012-172-080	CAPACITOR CHIP U 10P CH		C521	87-010-831-080	C-CAP, U, 0.1-16F	
C212	87-012-195-080	C-CAP, U 100P-50CH		C522	87-010-661-080	C-CAP, E 10-16	
C213	87-010-662-080	C-CAP, E 22-6.3		C523	87-010-662-080	C-CAP, E 22-6.3	
C214	87-012-274-080	CHIP CAP, U 1000P-50B		C524	87-010-662-080	C-CAP, E 22-6.3	
C217	87-012-188-080	C-CAP, U 47P-50 CH		C525	87-012-274-080	CHIP CAP, U 1000P-50B	
C218	87-012-172-080	CAPACITOR CHIP U 10P CH		C526	87-012-274-080	CHIP CAP, U 1000P-50B	
C219	87-016-296-080	C-CAP, TN 22-4SV(A)		C527	87-010-661-080	C-CAP, E 10-16	
C220	87-010-662-080	C-CAP, E 22-6.3		C528	87-010-661-080	C-CAP, E 10-16	
C221	87-010-831-080	C-CAP, U, 0.1-16F		C530	87-010-831-080	C-CAP, U, 0.1-16F	
C222	87-016-444-080	C-CAP, TN 47-10 F95E		C531	87-010-831-080	C-CAP, U, 0.1-16F	
C223	87-010-831-080	C-CAP, U, 0.1-16F		C600	87-010-662-080	C-CAP, E 22-6.3	
C224	87-A10-685-080	C-CAP, S 470P-100 J CH		C601	87-010-779-080	C-CAP, E 100-6.3	
C225	87-010-831-080	C-CAP, U, 0.1-16F		C602	87-010-779-080	C-CAP, E 100-6.3	
C226	87-010-831-080	C-CAP, U, 0.1-16F		C603	87-010-662-080	C-CAP, E 22-6.3	
C227	87-012-274-080	CHIP CAP, U 1000P-50B		C604	87-010-779-080	C-CAP, E 100-6.3	
C228	87-012-274-080	CHIP CAP, U 1000P-50B		C605	87-012-286-080	CAP, U 0.01-25	
C229	87-012-274-080	CHIP CAP, U 1000P-50B		C607	87-010-831-080	C-CAP, U, 0.1-16F	
C232	87-012-274-080	CHIP CAP, U 1000P-50B		C607	87-010-831-080	C-CAP, U, 0.1-16F	
C233	87-012-274-080	CHIP CAP, U 1000P-50B		C608	87-010-831-080	C-CAP, U, 0.1-16F	
C236	87-010-831-080	C-CAP, U, 0.1-16F		CN400	87-A60-027-080	C-CONN, 8P H WHT	
C300	87-010-831-080	C-CAP, U, 0.1-16F		CN401	87-A60-062-010	CONN, 05P V 9604S-05C	
C301	87-010-831-080	C-CAP, U, 0.1-16F		FB501	87-A90-828-080	C-F-BEAD, BK1608LM182	
C302	87-010-831-080	C-CAP, U, 0.1-16F		L100	87-A50-117-080	C-COIL, 10UHLQH3C	
C305	87-016-462-080	C-CAP, S 1-16 F		L101	87-A50-012-080	C-COIL, 100UH LQH3C	
C307	87-010-831-080	C-CAP, U, 0.1-16F		L102	87-A50-117-080	C-COIL, 10UHLQH3C	
C308	87-010-831-080	C-CAP, U, 0.1-16F		L103	87-A50-117-080	C-COIL, 10UHLQH3C	
C311	87-010-662-080	C-CAP, E 22-6.3		L201	87-A50-117-080	C-COIL, 10UHLQH3C	
C312	87-012-195-080	C-CAP, U 100P-50CH		L202	87-A50-117-080	C-COIL, 10UHLQH3C	
C321	87-012-274-080	CHIP CAP, U 1000P-50B		L203	87-A50-116-080	C-COIL, 4.7UHLQH3C	
C322	87-012-274-080	CHIP CAP, U 1000P-50B		L301	87-A50-117-080	C-COIL, 10UHLQH3C	
C323	87-012-274-080	CHIP CAP, U 1000P-50B		L501	87-A50-116-080	C-COIL, 4.7UHLQH3C	
C324	87-012-274-080	CHIP CAP, U 1000P-50B		L502	87-A50-116-080	C-COIL, 4.7UHLQH3C	
C325	87-012-274-080	CHIP CAP, U 1000P-50B		L503	87-A50-116-080	C-COIL, 4.7UHLQH3C	
C400	87-010-831-080	C-CAP, U, 0.1-16F		L504	87-005-774-080	C-COIL, 4BLH	
C401	87-010-831-080	C-CAP, U, 0.1-16F		L505	87-005-774-080	C-COIL, 4BLH	
C402	87-010-831-080	C-CAP, U, 0.1-16F		L611	87-A50-163-080	C-COIL, ZBFS5101-PT	
C403	87-010-831-080	C-CAP, U, 0.1-16F		L612	87-005-512-080	C-COIL, BLM21A05	
C404	87-010-831-080	C-CAP, U, 0.1-16F		L613	87-005-512-080	C-COIL, BLM21A05	
C405	87-010-661-080	C-CAP, E 10-16		L614	87-A50-163-080	C-COIL, ZBFS5101-PT	
C406	87-010-779-080	C-CAP, E 100-6.3		L615	87-A90-034-080	C-FLTR, EMI BLM41P750	
C407	87-012-197-080	C-CAP, U 150P-50 CH		L616	87-A50-163-080	C-COIL, ZBFS5101-PT	
C408	87-012-197-080	C-CAP, U 150P-50 CH		R423	87-025-564-080	C-RES, U M/F 47K D	
C411	87-012-271-080	CAP, U 560P-50		R424	87-025-564-080	C-RES, U M/F 47K D	
C412	87-012-271-080	CAP, U 560P-50		R425	87-022-583-080	C-RES, U M/F 12K D	
C413	87-012-197-080	C-CAP, U 150P-50 CH		R426	87-022-583-080	C-RES, U M/F 12K D	
C414	87-012-197-080	C-CAP, U 150P-50 CH		X200	87-A70-105-080	C-VIB, XTAL 22.5792MHZ SMD-49	
C417	87-012-268-080	C-CAP, U 330P-50 B		X301	87-A70-100-080	C-VIB, CER 12.0MHZ PBRC-BR-A	
C418	87-012-268-080	C-CAP, U 330P-50 B					
C423	87-012-286-080	CAP, U 0.01-25					
C424	87-012-286-080	CAP, U 0.01-25					
C429	87-012-286-080	CAP, U 0.01-25					
C430	87-012-286-080	CAP, U 0.01-25					
C431	87-010-779-080	C-CAP, E 100-6.3					
C434	87-010-831-080	C-CAP, U, 0.1-16F					

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
MECHA C.B				CD MOTOR C.B			
SW400	87-A90-611-010	SW, PUSH 3-2-2 MPU20300MLB0		M1	87-045-305-019	MOTOR, RF-500TB	
SW401	87-A90-612-010	SW, PUSH 2-1-1 MPU10371MLB1		SW1	87-036-110-019	SW, PUSH SPPB 62	
				SW2	87-036-110-019	SW, PUSH SPPB 62	
DECK C.B				AC C.B			
SFR1	87-024-581-010	SFR, 3.3K DIA 6H KOA		C101	87-010-387-080	CAP, E 470-25 SME	
SOL2	82-ZM1-618-310	SOL ASSY, 27		C103	87-016-051-090	CAP, E 2200-35 SMG	
SW2	87-036-110-010	SW, PUSH SPPB 62		C105	87-010-403-080	CAP, ELECT 3.3-50V	
SW3	87-036-110-010	SW, PUSH SPPB 62		CN102	87-A60-109-010	CONN, 2P V S2M-2W	
SW4	87-036-110-010	SW, PUSH SPPB 62		RY101	87-A90-976-010	RELAY, AC12V SDT-S-112LMR	
SW5	87-036-110-010	SW, PUSH SPPB 62		T101	87-A60-317-010	TERMINAL, 1P MSC	
SW6	87-A90-248-010	SW, MICRO ESEL1SH		T102	87-A60-317-010	TERMINAL, 1P MSC	
RELAY C.B				PT C.B			
CON301	88-CE2-655-010	CONN ASSY, 7P V RPH		PT102	8Z-NF8-662-010	PT, SUB ZNF-8(E)	
DRIVE C.B							
M20	87-045-358-019	MOT, RF-310TA 43					
M21	87-045-356-019	MOT, RF-310TA 30					
SW1	87-A90-042-019	SW, LEAF MSW 17310 MVPO					

- 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.

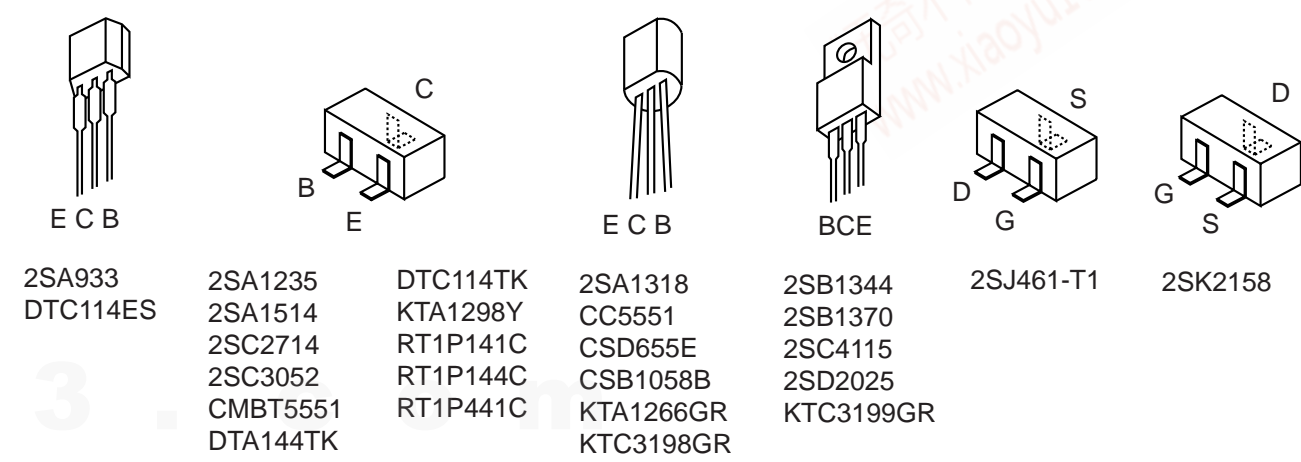
チップ抵抗部品コード/CHIP RESISTOR PART CODE



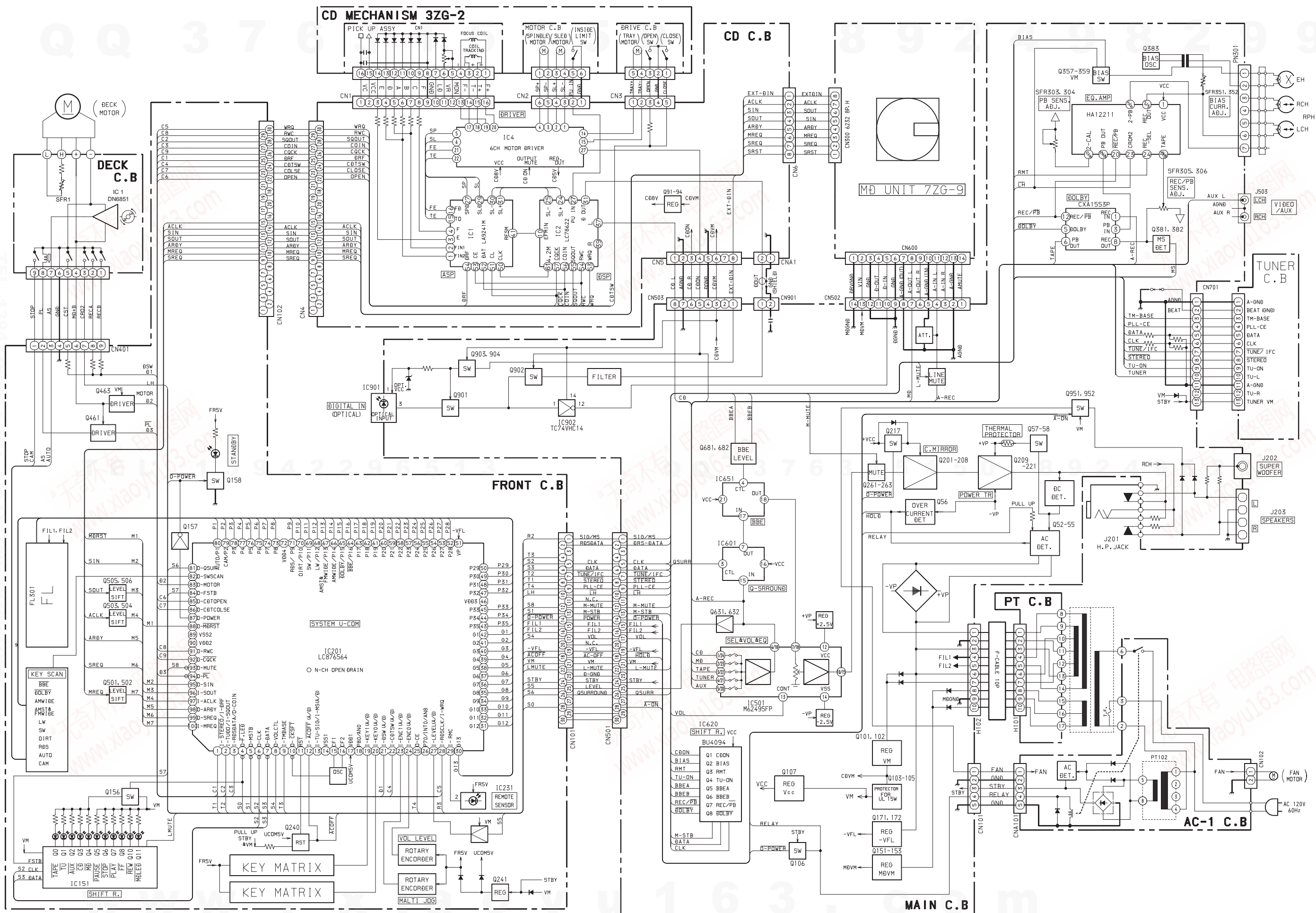
チップ抵抗 Chip resistor

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

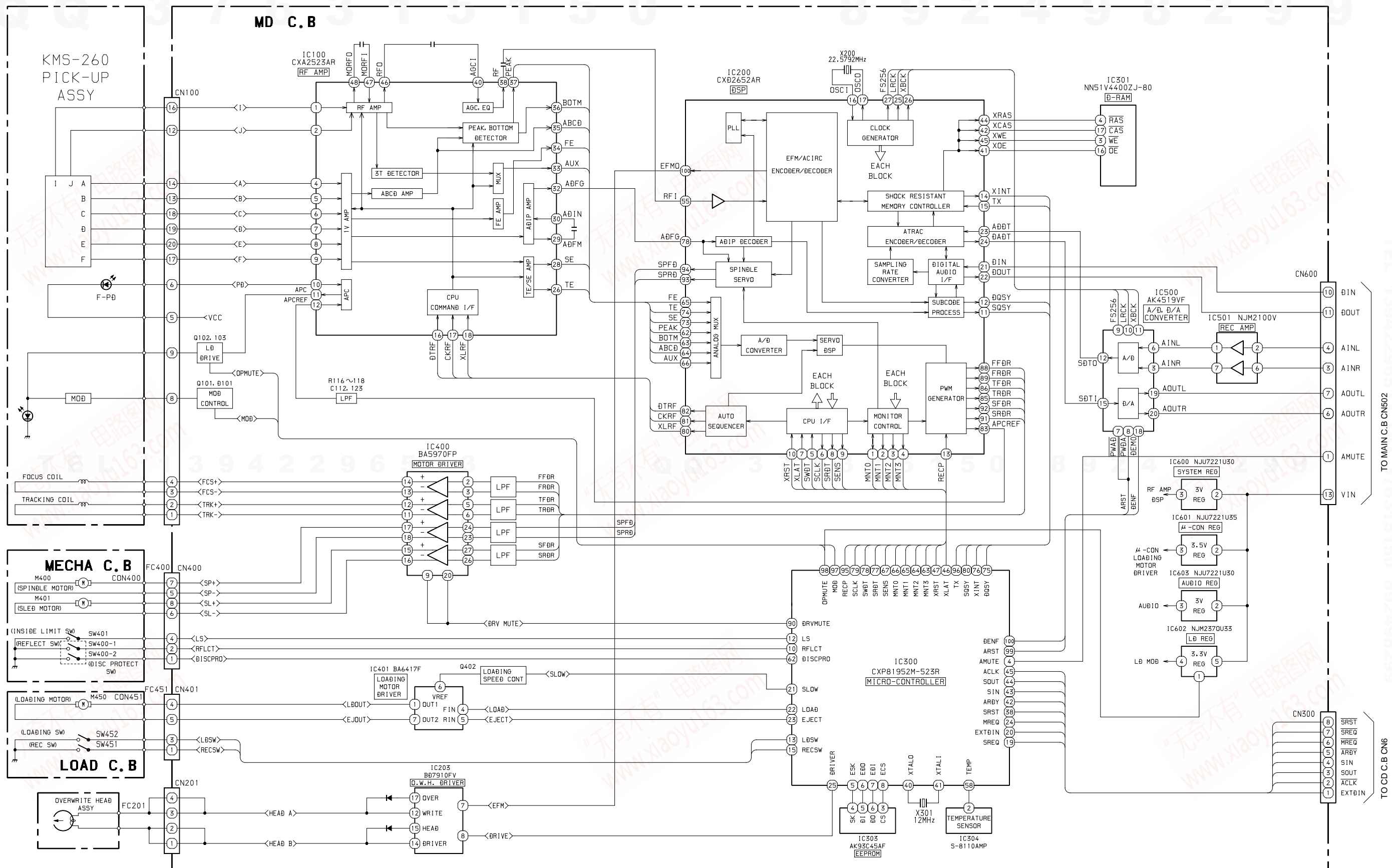
TRANSISTOR ILLUSTRATION



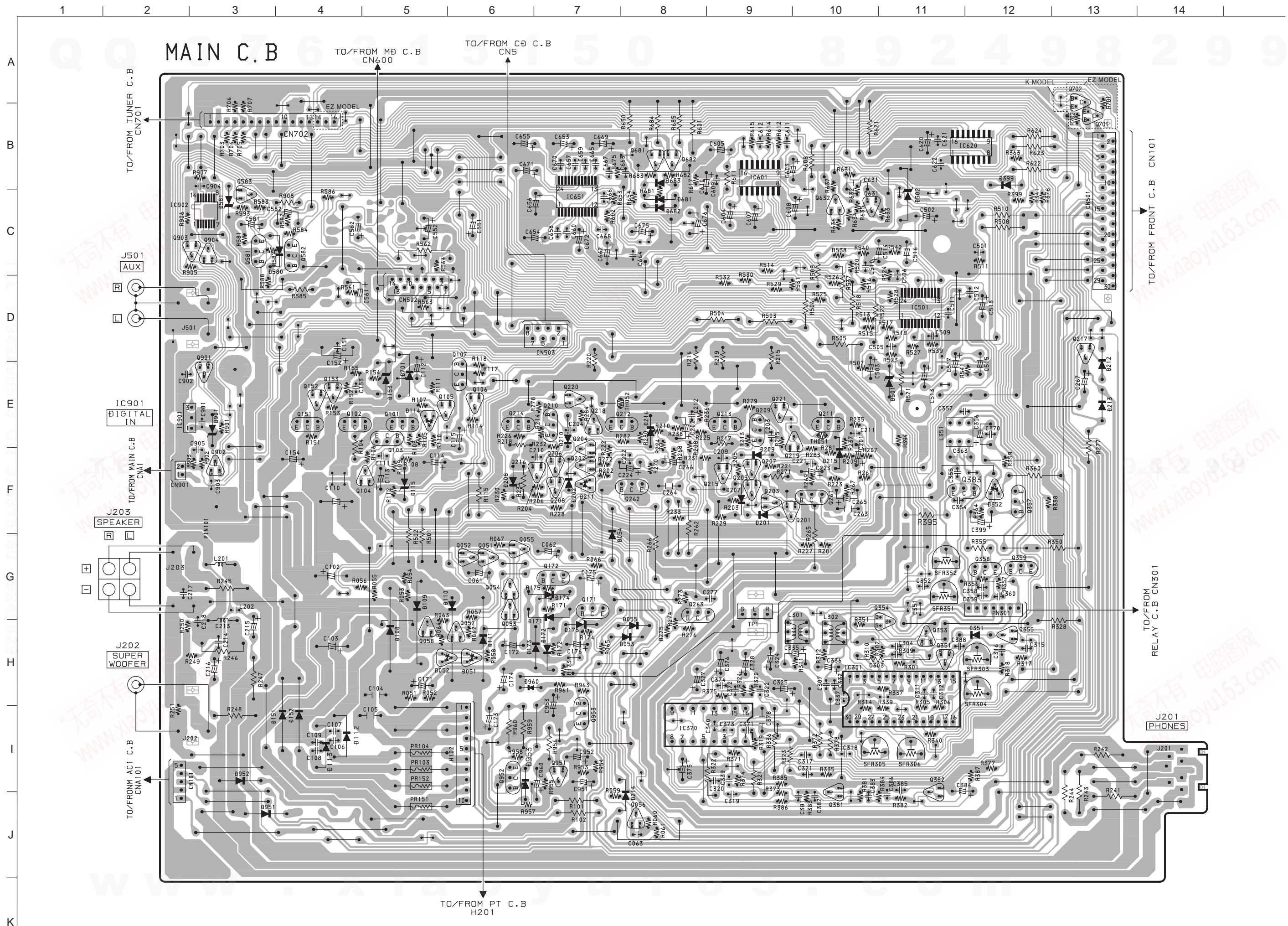
BLOCK DIAGRAM-1 (MAIN)



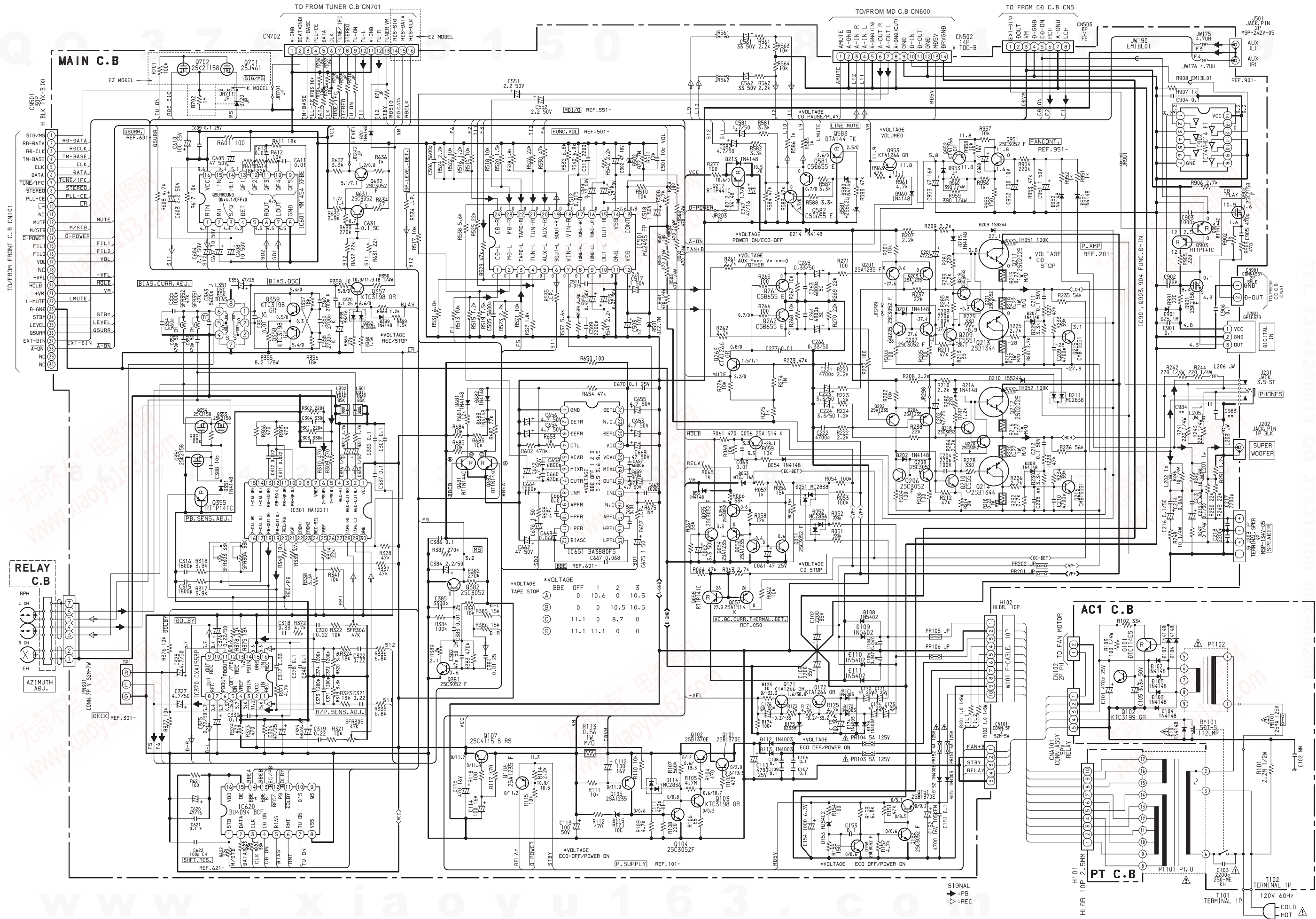
BLOCK DIAGRAM-2 (MD)



WIRING-1 (MAIN)



SCHEMATIC DIAGRAM-1 (MAIN)

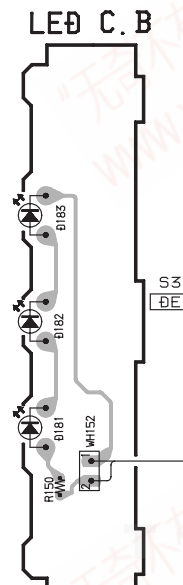
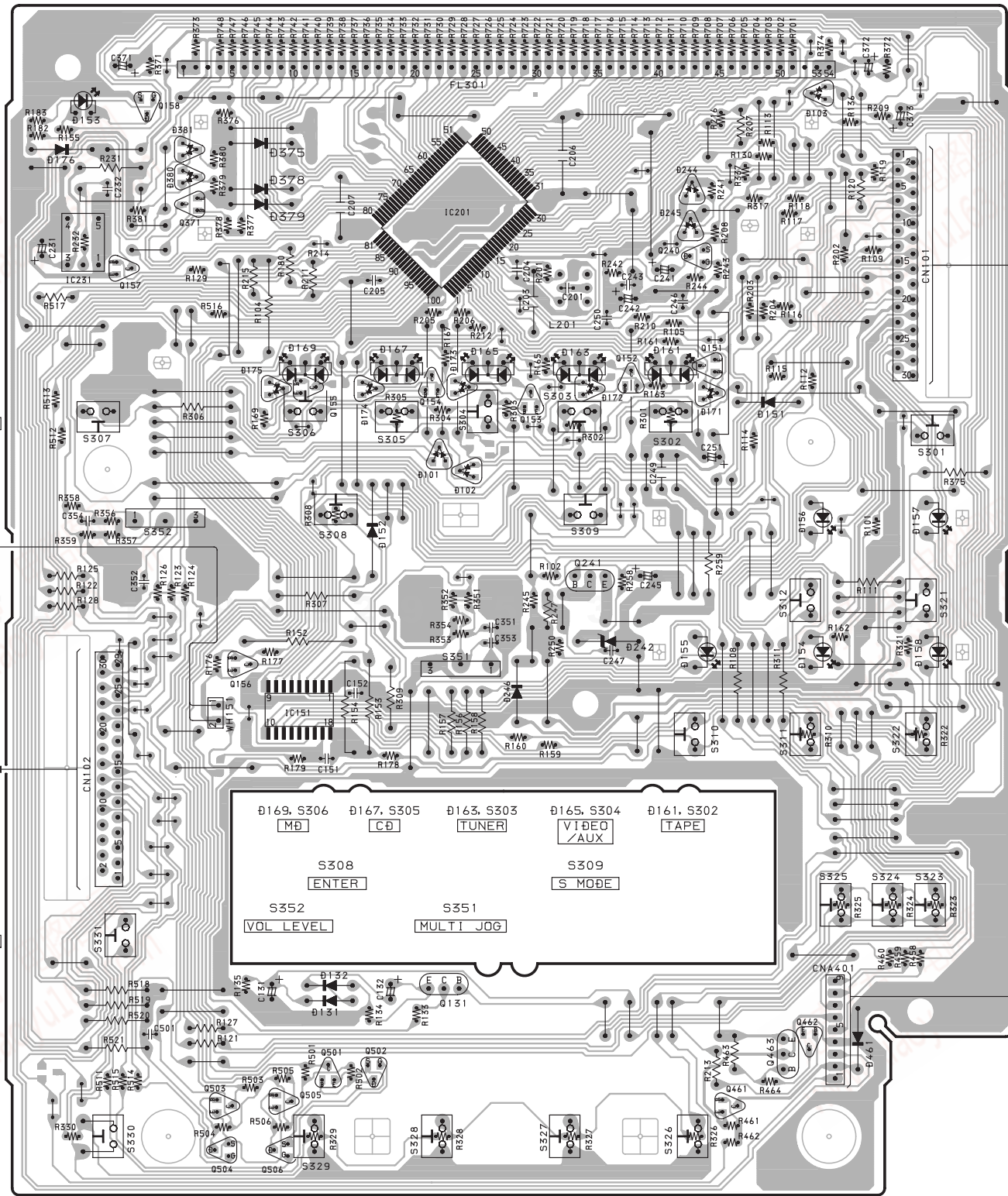


WIRING-2 (FRONT)

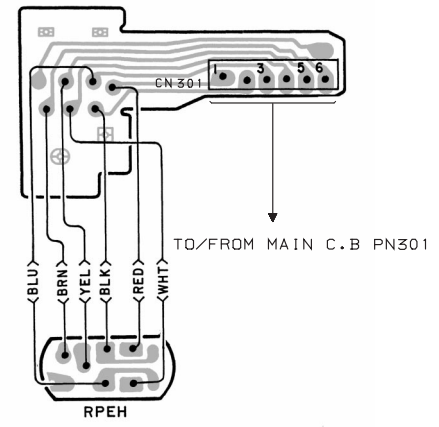
1 2 3 4 5 6 7 8 9 10 11 12 13 14

A B C D E F G H I J K

FRONT C.B



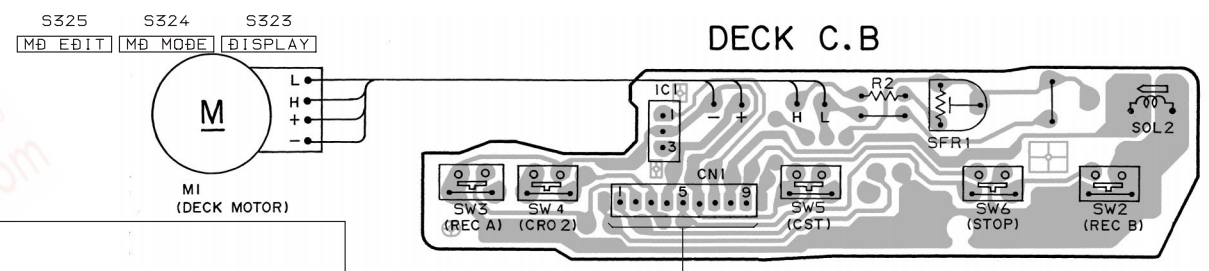
RELAY C.B



TO/FROM MAIN C.B CN501

- S301 POWER
- Ø156, S312 PLAY
- Ø157, S321 STOP
- Ø155, S310
- Ø154, S311 REW
- Ø158, S322 PAUSE

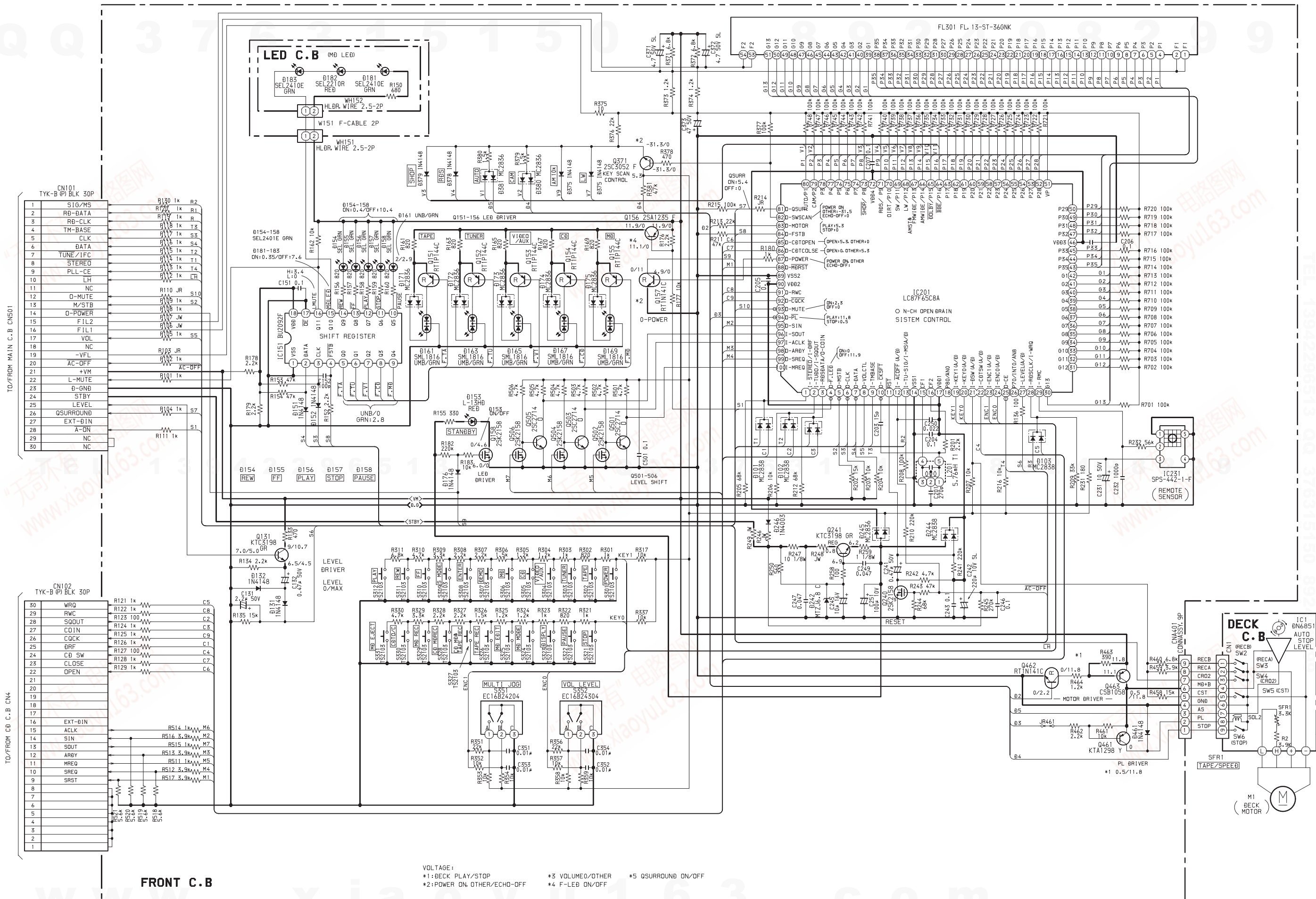
DECK C.B



TO/FROM CB C.B CN4

- S330 CD TO C
- S329 MD REC
- S328 CD MD REC
- S327 CD MD & TAPE REC
- S326 TAPE REC

SCHEMATIC DIAGRAM-2 (FRONT)



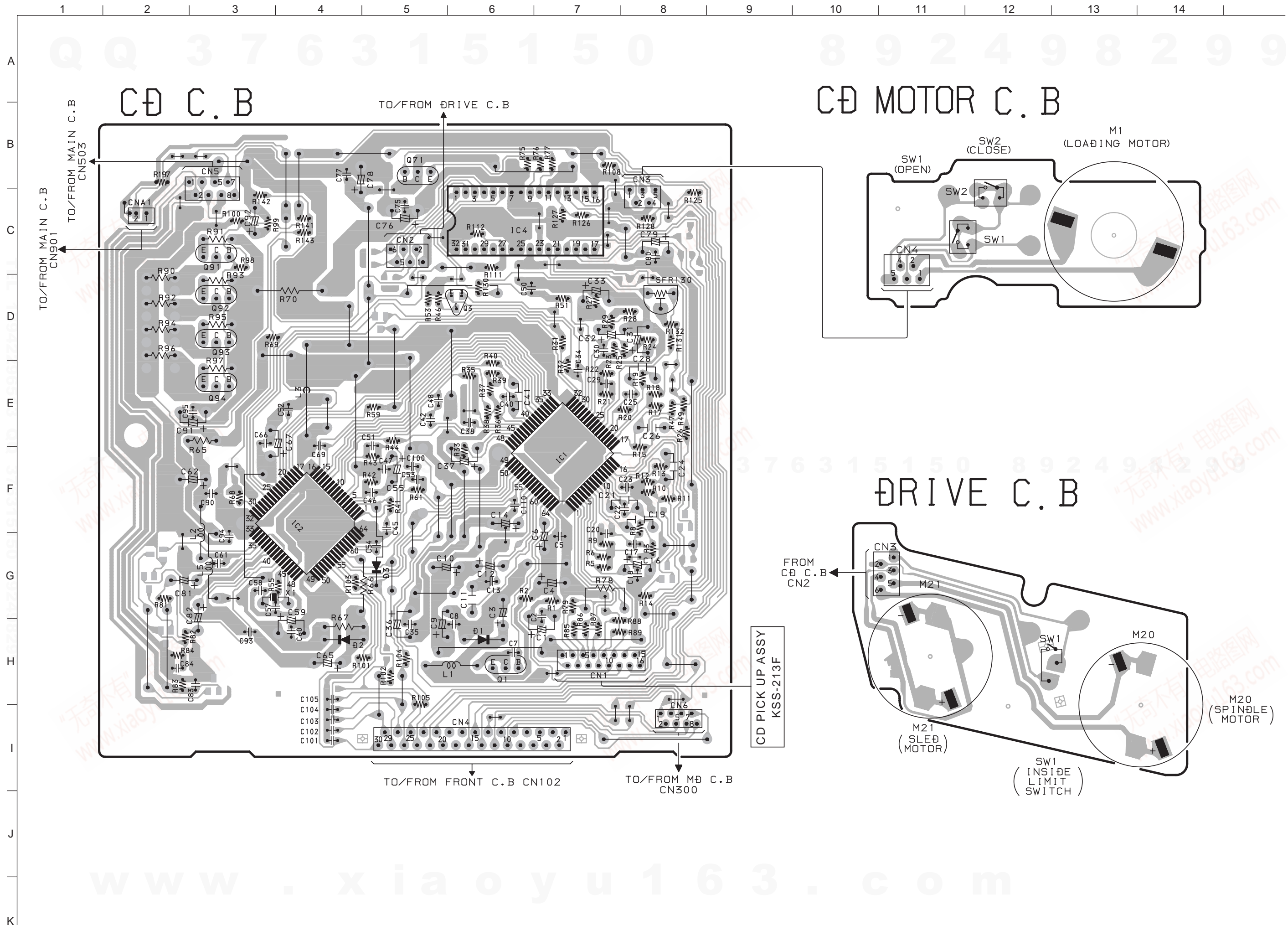
TO/FROM MAIN C.B. CNS01

1	SIG/MS	R130 1k	R2
2	RD-DATA	R131 1k	R1
3	RD-CLK	R132 1k	R
4	TM-BASE	R133 1k	TX
5	CLK	R134 1k	S4
6	DATA	R135 1k	T2
7	TUNE/IFC	R136 1k	T1
8	STEREO	R137 1k	T4
9	PLL-CE	R138 1k	CH
10	LH	R139 1k	CH
11	NC	R140 JR	S10
12	O-MUTE	R141 1k	S2
13	M/STB	R142 1k	S2
14	O-POWER	R143 1k	S2
15	FIL2	R144 JW	S
16	FIL1	R145 JW	S
17	VOL	R146 1k	S5
18	NC	R147 JR	S10
19	-VFL	R148 JR	S2
20	AC-OFF	R149 1k	AC-OFF
21	+VM	R150 1k	AC-OFF
22	L-MUTE	R151 1k	S7
23	B-GND	R152 1k	S1
24	STBY	R153 1k	S1
25	LEVEL	R154 1k	S7
26	QSURROUND	R155 1k	S7
27	EXT-DIN	R156 1k	S1
28	A-ON	R157 1k	S1
29	NC	R158 1k	S1
30	NC	R159 1k	S1

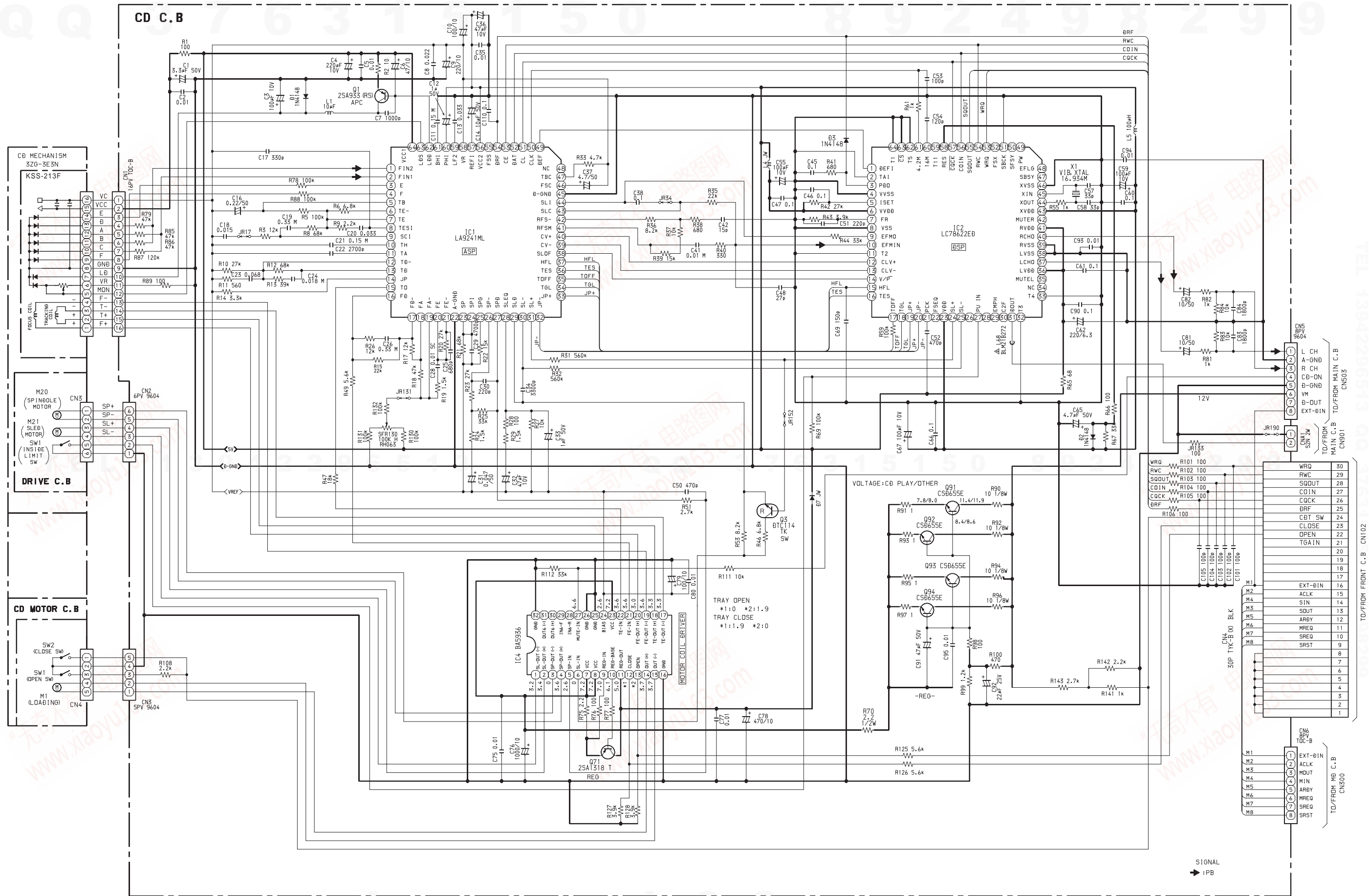
TO/FROM CD C.B. CN4

30	WRQ	R121 1k	C5
29	RWC	R122 1k	C8
28	SQOUT	R123 100	C2
27	COIN	R124 1k	C3
26	COCK	R125 1k	C9
25	DRF	R126 1k	C1
24	CD SW	R127 100	C4
23	CLOSE	R128 1k	C7
22	OPEN	R129 1k	C6
21			
20			
19			
18			
17			
16	EXT-DIN	R514 1k	M6
15	ACK	R516 3.9k	M2
14	SIN	R515 1k	M7
13	SOUT	R513 3.9k	M3
12	ARBY	R511 1k	M5
11	MREQ	R512 3.9k	M4
10	SREQ	R517 3.9k	M1
9	SRST		
8			
7			
6			
5			
4			
3			
2			
1			

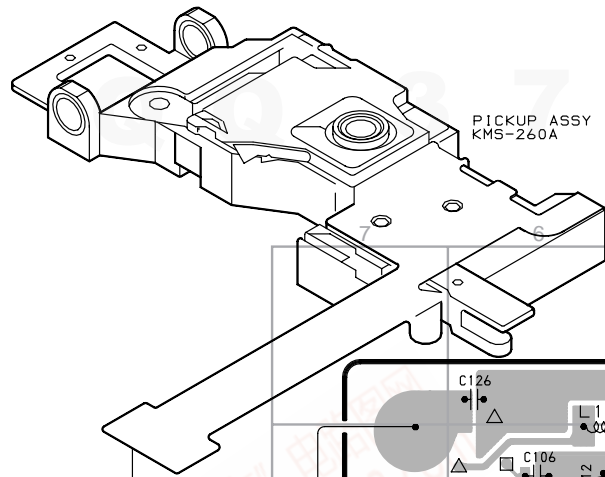
WIRING-3 (CD)



SCHEMATIC DIAGRAM-3 (CD)

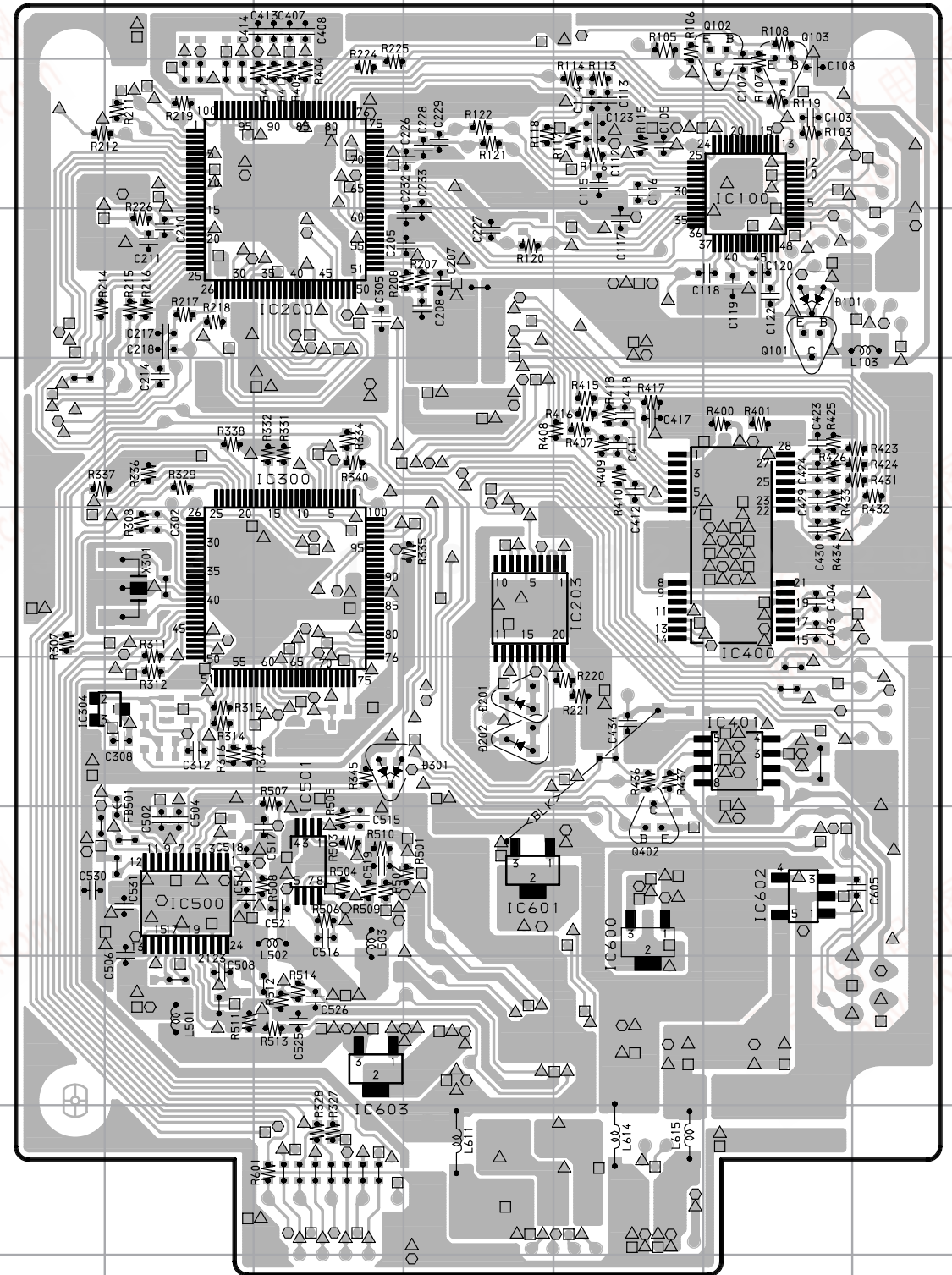
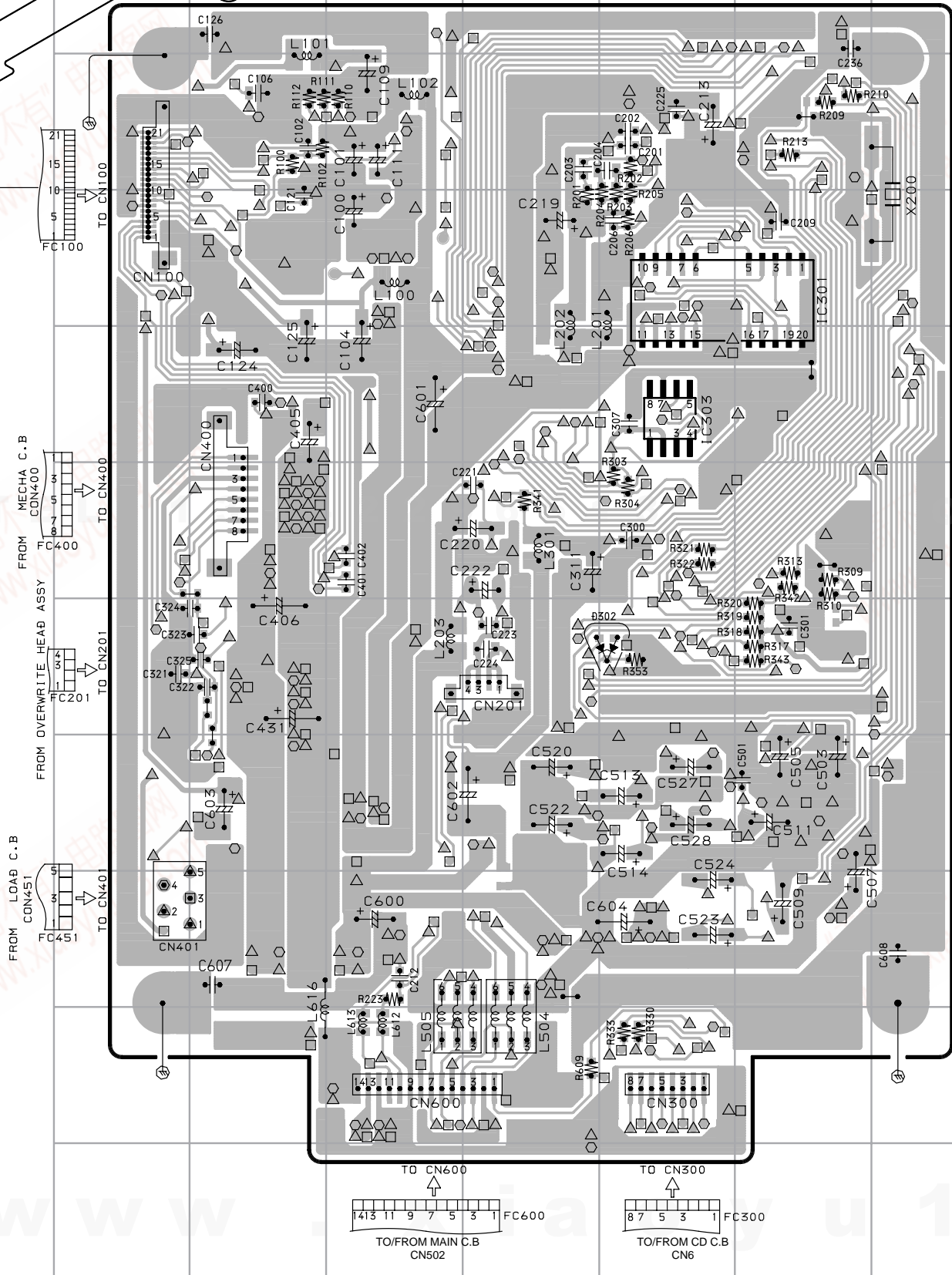


WIRING-4 (MD)

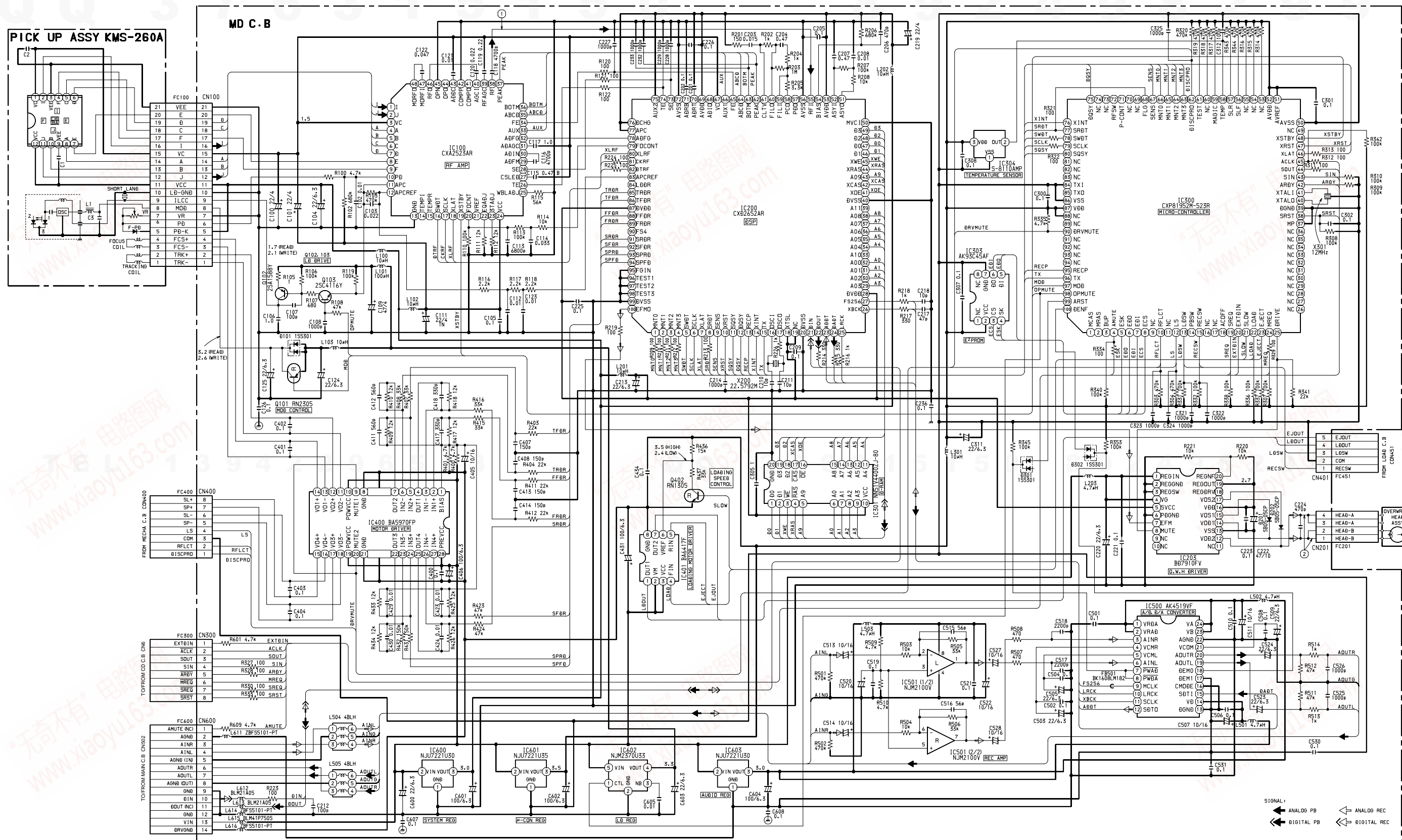


M0 C. B (COMPONENT SIDE)

M0 C. B (CONDUCTOR SIDE)



SCHEMATIC DIAGRAM-4 (MD)



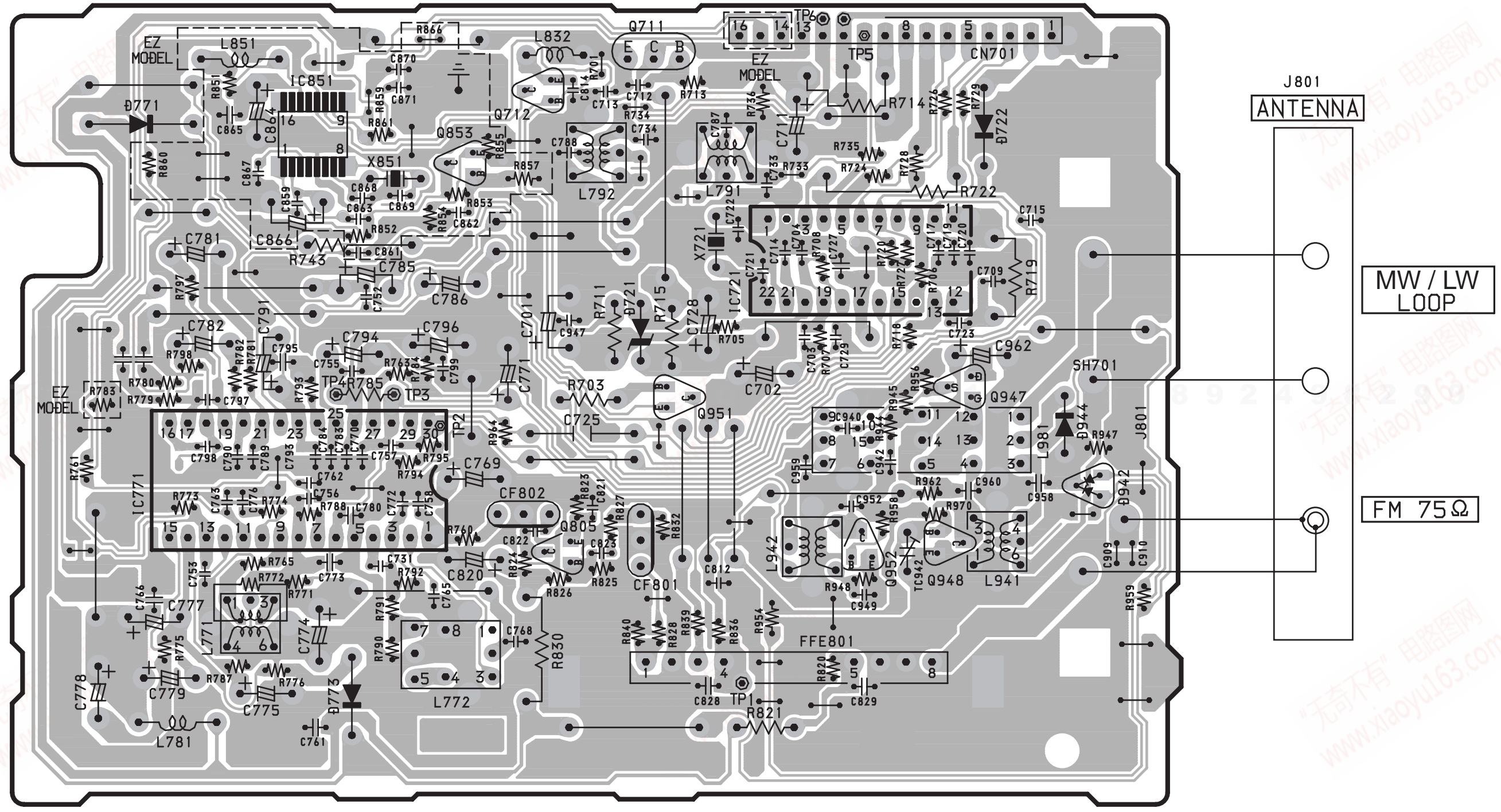
WIRING-5 (TUNER)

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

Q Q 3 7 6 3 1 5 1 5 0 8 9 2 4 9 8 2 9 9

TUNER C.B

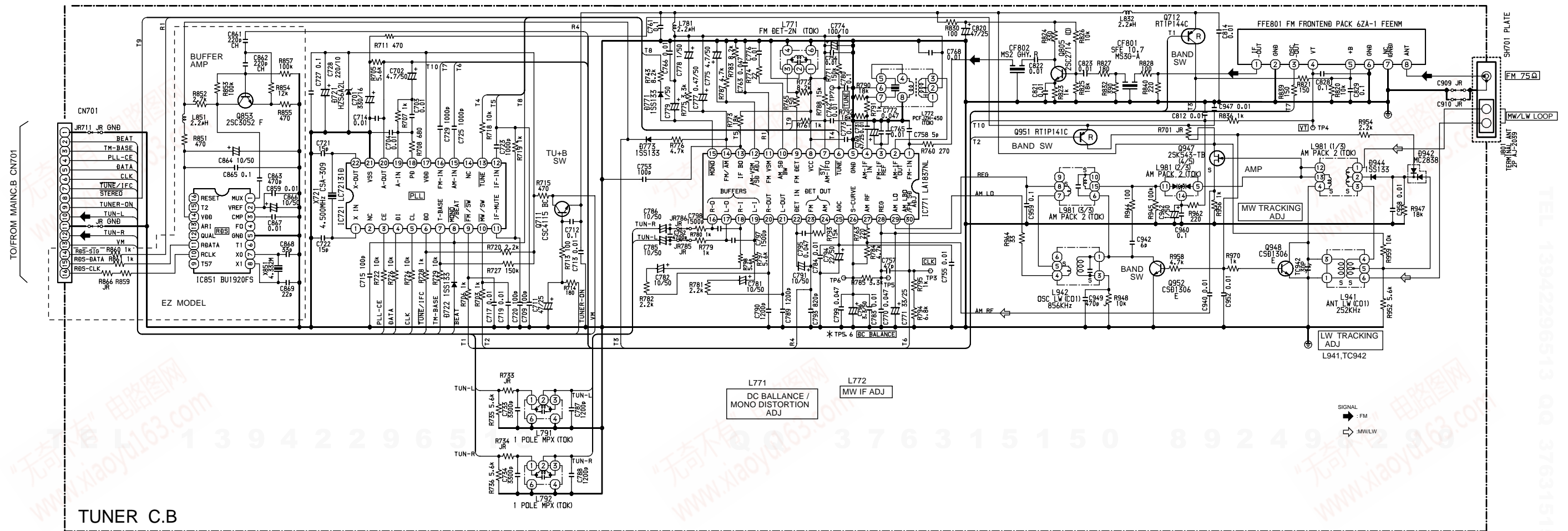
TO MAIN C.B
CN701



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SCHEMATIC DIAGRAM-5 (TUNER)

Q Q 3 7 6 3 1 5 1 5 0 8 9 2 4 9 8 2 9 9



TO/FROM MAIN:C.B. CN701

TUNER C.B.

TEL: 13942296513 QQ: 376315150 892498299

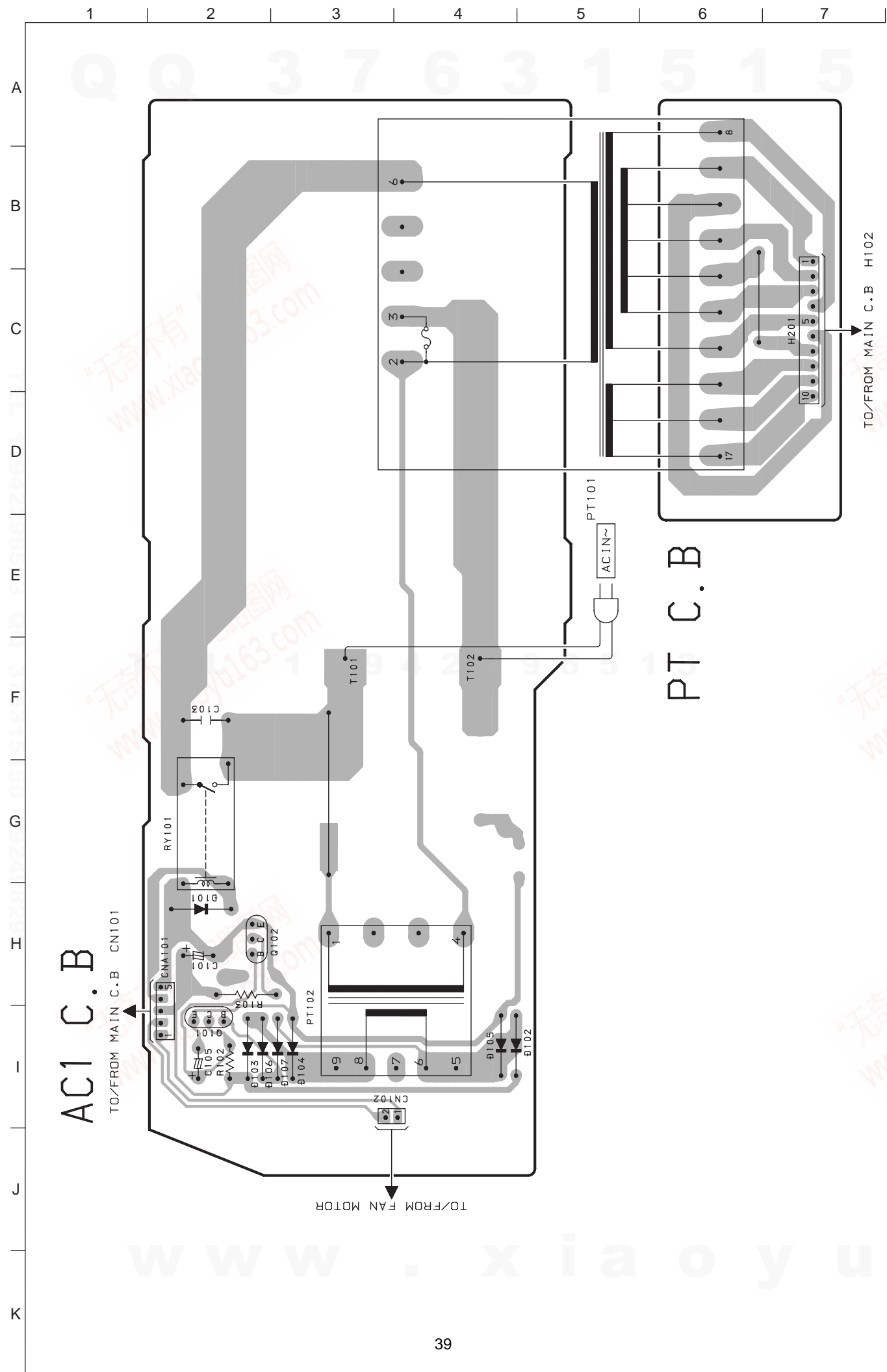
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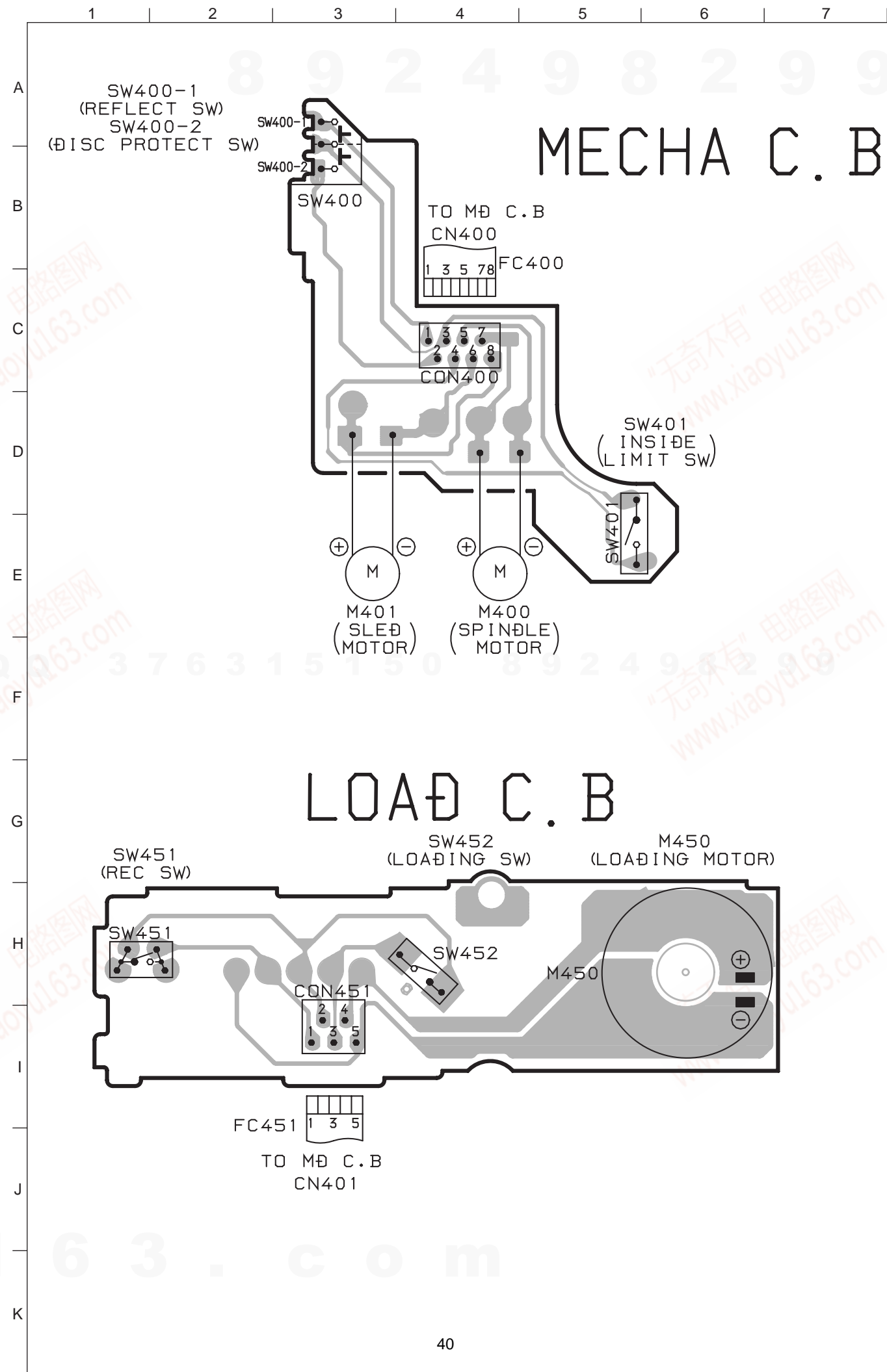
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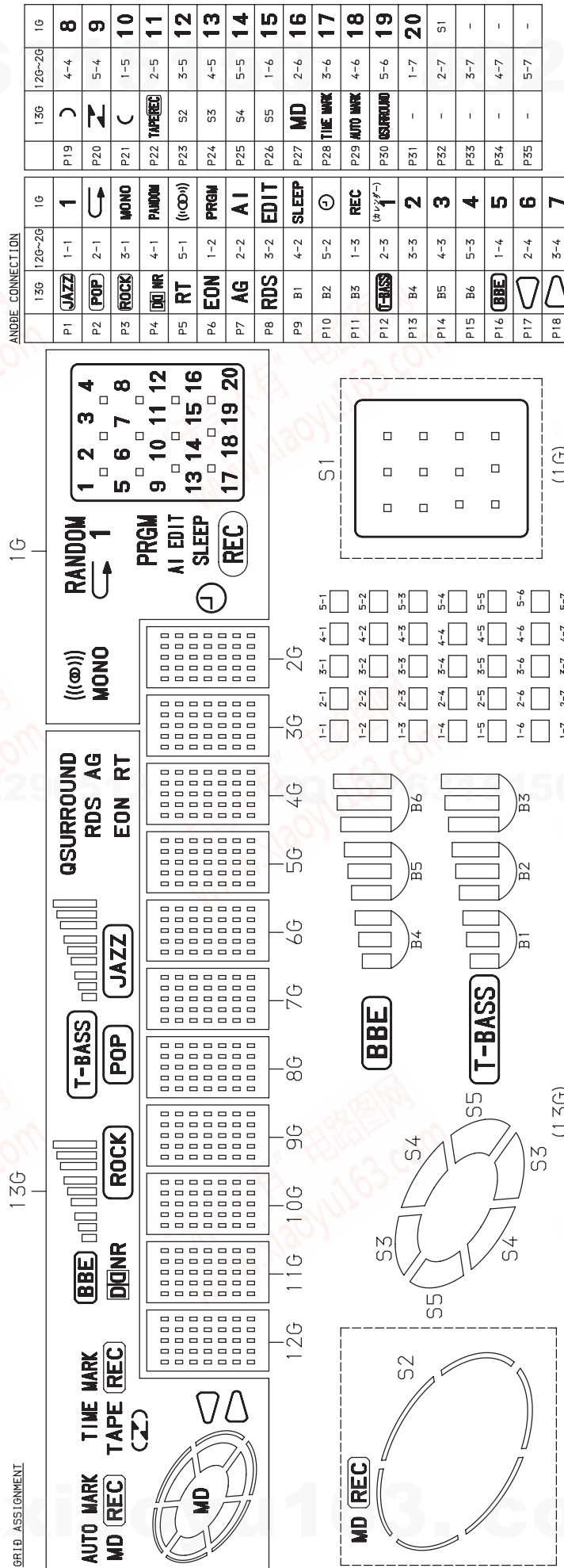
WIRING-6 (AC/PT)



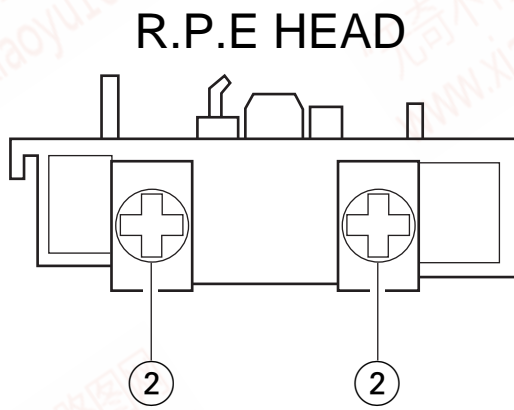
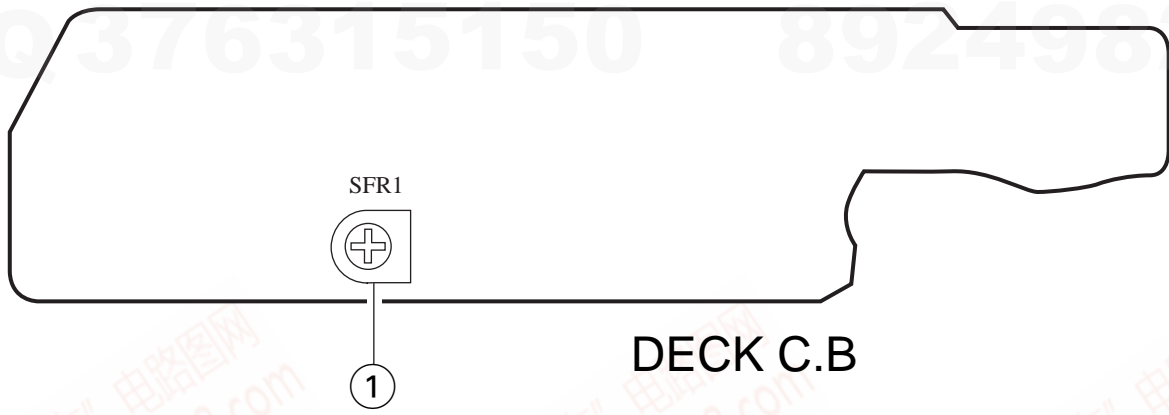
WIRING-7 (MECHA/LOAD)



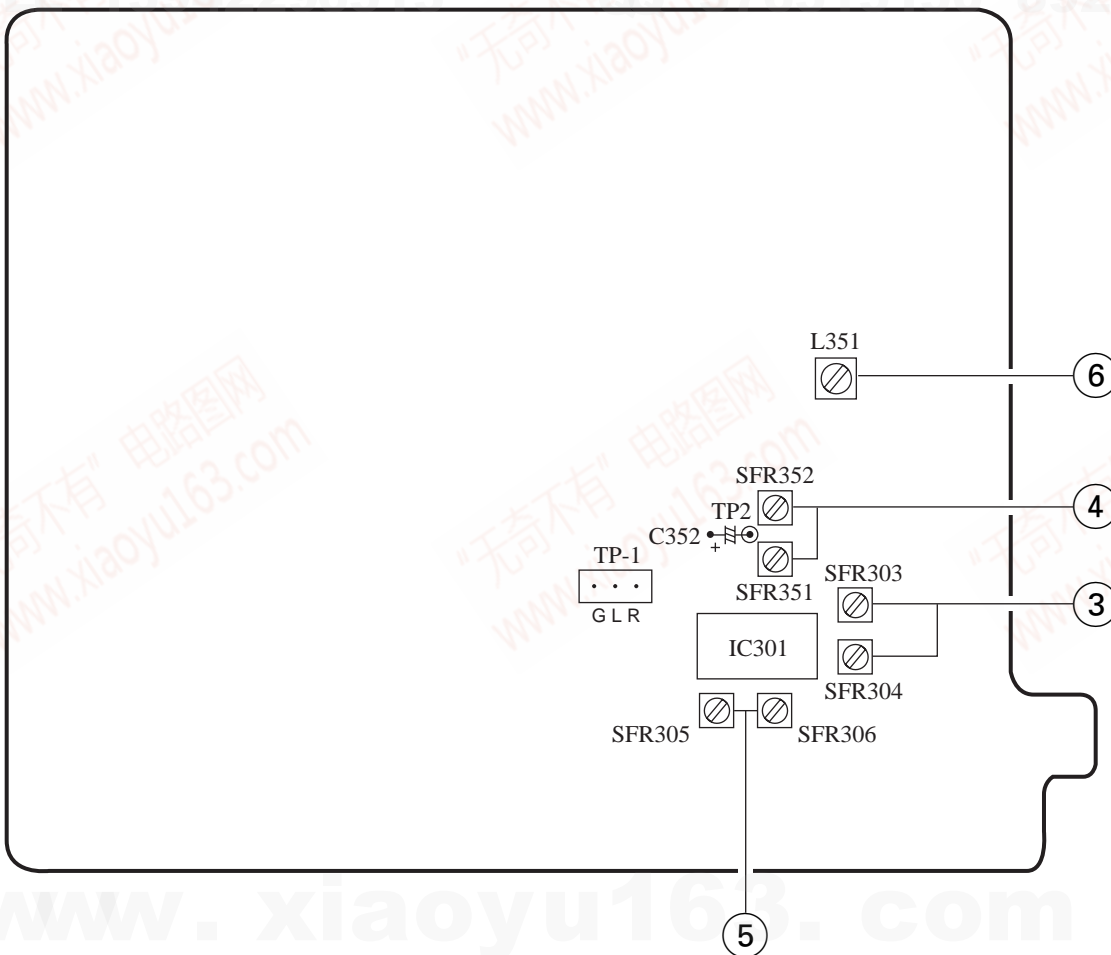
FL (13-ST-36GNK) GRID ASSIGNMENT/ANODE CONNECTION



ELECTRICAL ADJUSTMENT 1/2



MAIN C.B



< DECK SECTION >

1. Tape Speed Adjustment

Settings: • Test tape: TTA-100
 • Test point: TP1
 • Adjustment location: SFR1

Method: Playback the test tape by DECK2 and adjust SFR1 so that the frequency counter reads 3000Hz±5Hz. Check that the counter reading in the REV mode is within the range of ±45Hz of that in the FWD mode.

2. Azimuth Adjustment

Settings: • Test tape: TTA-300
 • Test point: TP1
 • Adjustment location: Head azimuth adjustment screw

Method: Playback the 10kHz signal of the test tape and adjust the adjustment screw so that the output becomes the -5dB point below the maximum reading. The adjustment must ends with the clockwise rotation of the adjustment screw. Perform this adjustment in both FWD and REV directions. Fix the adjustment screw with adhesive agent upon completion of adjustment.

3. PB Sensitivity Adjustment

Settings: • Test tape: TTA-200
 • Test point: TP1
 • Adjustment location: SFR303 (Lch)
 SFR304 (Rch)

Method: Play back the test tape and adjust SFRs so that the output level of the TP1 becomes 245mV±5mV.

4. REC/PB Frequency Response Adjustment

Settings: • Test tape: TTA-602
 • Test point: TP1
 • Input signal: 315Hz/10kHz (LINE IN)
 • Adjustment location: SFR351 (Lch)
 SFR352 (Rch)

Method: Establish the record mode. Input the 315Hz and the 10kHz signals from LINE IN with the input level so that TP1 has the signal level of 12mV. Record the 1kHz and the 10kHz signals, then play them back. Adjust SFR so that the output difference between the 315Hz and the 10kHz signals becomes 0dB±0.5dB.

5. REC/PB Sensitivity Adjustment

Settings: • Test tape: TTA-602
 • Test point: TP1
 • Input signal: 1kHz /10kHz (LINE IN)
 • Adjustment location: SFR305 (Lch)
 SFR306 (Rch)

Method: Establish the record mode. Input the 1kHz signal from LINE IN with the input level so that TP1 has the signal level of 12mV. Record the 1kHz signal, then play it back. Adjust SFR so that the output level becomes 12mV±0.5dB.

6. Bias OSC Frequency Adjustment

Settings: • Test tape: TTA-601
 • Test point: TP2
 • Adjustment location: L351

Method: Set to the REC mode. Adjust L351 so that the frequency at TP2 is 85.0kHz±1kHz.

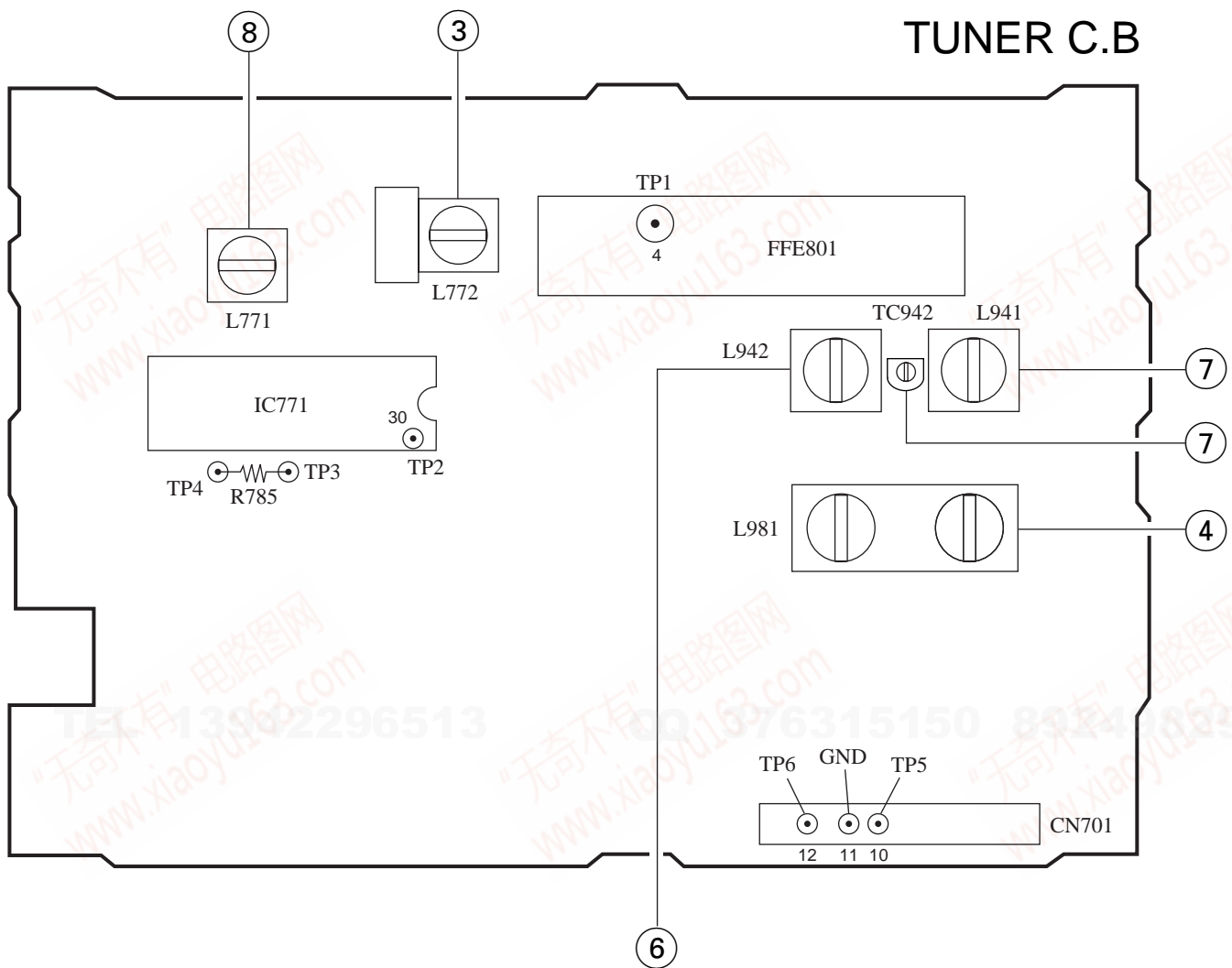
PRACTICAL SERVICE FIGURE

< DECK SECTION >

Tape speed:	3000Hz±5.0%
Wow & flutter: (W.R.M.S)	Less than 0.21%
Distortion (REC/PB):	Less than 2% (NORM, CrO ₂)
Noise level (PB):	Less than 50mV (DOLBY NR OFF, NORM) Less than 35mV (DOLBY NR ON, CrO ₂)
Test tape:	NORMAL TTA-100 TTA-300 TTA-601 TTA-602 CrO ₂ TTA-200

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PRACTICAL SERVICE FIGURE

< TUNER SECTION >

1. Clock Frequency Check
 - Settings: • Test point: TP2 (CLK IC770 pin30)
 - Method: Set to MW 1602kHz and check that the test point becomes 2052kHz±45Hz (EZ).

2. MW VT Check
 - Settings: • Test point: TP1 (VT)
 - Method: Set to MW 1602kHz and check that the test point is less than 8.0V.
Then set to MW 531kHz and check that the test point is more than 0.6V.

3. MW IF Adjustment
 - Settings: • Test point: TP5, TP6
 - L772 450kHz

4. MW Tracking Adjustment
 - Settings: • Test point: TP5, TP6
 - Adjustment location: L981
 - Method: Set to MW 999kHz and adjust L981 so that the test point becomes maximum.

5. FM VT Check
 - Settings: • Test point: TP1 (VT)
 - Method: Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 0.5V (87.5MHz) and less than 8.0V (108.0MHz).

6. LW VT Adjustment
 - Settings: • Test point: TP2 (VT)
 - Adjustment location: L942
 - Method: Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V±0.05V.
Then set to LW 290kHz and check that the test point is less than 8.0V.

7. LW Tracking Adjustment
 - Settings: • Test point: TP5, TP6
 - Adjustment location:
 - L941 144kHz
 - TC942 290kHz
 - Method: Set up TC942 to center before adjustment.
The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

8. DC Balance/Mono Distortion Adjustment
 - Settings: • Test point: TP3, TP4
 - Adjustment location: L771
 - Input level: 54dB
 - Method: Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V±0.04V.
Next, check that the distortion is less than 1.3%.

< TUNER SECTION >

< FM SECTION >

IHF Sensitivity: (THD 3%)	Less than 13dB (at 108.0/98.0MHz) Less than 14dB (at 98.0MHz)
Distortion:	Less than 1.2% (98.0MHz)
Stereo separation:	More than 12dB (98.0MHz)
Intermediate frequency:	10.7MHz

< MW SECTION >

Sensitivity: (S/N 20dB)	Less than 60dB (at 600kHz) Less than 58dB (at 1000/1400kHz)
Distortion:	Less than 1.5% (at 1000kHz)

< LW SECTION >

Sensitivity:	Less than 70dB (at 144kHz) Less than 68dB (at 198kHz) Less than 66dB (at 290kHz)
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IC DESCRIPTION

IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE-	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES "Track Error Sense" comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD-	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD-	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD- and FA- pins.
19	FA-	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE-	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	NC	—	No connection.
24	SP	O	Single ended output of the CV+ and CV- pin input signal.
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+ - PUIN	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)

IC, LC87F65C8A

Pin No.	Pin Name	I/O	Description
1	I-STEREO/DRF	I	Connected to stereo detection and tuner CD ASP LA9240ML pin-54 DRF.
2	I-TUDO/I-SQOUT	I	Connected to tuner PLL IC LC72131 pin-⑥ DO and connected to CD DSP LC78622ED pin-55 DAT.
3	I-RSDATA/O-COIN	I	Connected to RDS data input CD DSP LC78622ED pin-56 COIN and CD ASP LA9240ML pin-52 DAT.
4	O-F.LED	O	Function LED control output.
5	O-M.STB	O	Connected to main shift resistor 4094 pin-① STB.
6	O-CLK	O	Connected to front shift resistor BU2092 pin-③ CLK, main shift resistor 4094 pin-③ CLK, and tuner PLL IC LC72131 pin-⑤ CL.
7	O-DATA	O	Connected to front shift resistor BU2092 pin-② DATA, main shift resistor 4094 pin-② DATA, and tuner PLL IC LC72131 pin-④ DI.
8	O-VOLCTL	O	Connected to VOL/P.EQ IC M62439SP pin-⑪ CONT.
9	I-TMBASE	I	Reference clock input for clock PLL IC LC72131 pin-⑦.
10	O-CKSFT	O	Clock shift output is shifted: "L"
11	RESET	I/O	Microprocessor reset.
12	I-ACOFF	I	Hold status detection.
13	I-TU-SIG/I-MS	I	RDS signal level AD value input, and CD ASP LA9240ML pin-52 DAT.
14	VSS	—	GND.
15	CF1	—	Connected to 5.76 MHz oscillator
16	CF2	—	Connected to 5.76 MHz oscillator.
17	VDD1	—	Microprocessor power supply. (μ-com 5 V)
18	N.C	—	Not connected.
19	I-KEY1	I	Key AD value input.
20	I-KEY0	I	Key AD value input.
21	I-DSW	I	Deck MECA status detection input. (AD)
22	I-CDTSW	I	CD tray OPEN/CLOSE status detection input. (AD)
23	I-ENC1	I	AD value input from multiple jog rotary encoder outputs A and B.
24	I-ENC0	I	Electronic VOL's AD value input from rotary encoder outputs A and B.
25	O-CE	O	Connected to tuner PLL IC LC72131 pin-③ CE.
26	N.C.	—	Not connected.
27	I-LEVEL	I	Level meter input.
28	I-RD-CLK/I-WQR	I	Connected to RDS CLK input and CD DSP LC78622ED pin-53 WRQ.
29	I-RMT	I	Remote control input.
30-42	T0-T12	O	FL tube grid output. (13G-1G)
43-45	S13-S15	O	FL tube anode output. (P35-P33)
46	VDD3	—	Microprocessor power supply. (μ-com 5 V)
47-50	S16-S19	O	FL tube anode output. (P32-P29)
51	VP	—	Connected to minus power supply for FL, -VFL.
52-63	S20-S31	O	FL tube anode output. (P28-P17)
64	S32/BBE	O	FL tube anode output (P16), and INT.DIODE MATRIX input.
65	S33/DOLBY	O	FL tube anode output (P15), and INT.DIODE MATRIX input.

Pin No.	Pin Name	I/O	Description
66	S34/AM10k	O	FL tube anode output (P14), and INT.DIODE MATRIX input.
67	S35/FMWIDE&AMST	O	FL tube anode output (P13), and INT.DIODE MATRIX input.
68	S36/LW	O	FL tube anode output (P12), and INT.DIODE MATRIX input.
69	S37/SW	O	FL tube anode output (P11), and INT.DIODE MATRIX input.
70	S38/OIRT	O	FL tube anode output (P10), and INT.DIODE MATRIX input.
71	S39/RDS	O	FL tube anode output (P9), and INT.DIODE MATRIX input.
72	VDD4	—	Microprocessor power supply. (μ -com 5 V)
73-78	S40-S45	O	FL tube anode output. (P8-P3)/SHOP
79	S46/CAM	O	(P2)/deck mechanism status detection input. (CAM)
80	S47/AUTO	O	(P1)/deck mechanism status detection input. (AUTO)
81	O-QSURR	O	Q-surround IC control output.
82	O-SWSCAN	O	Key scan detection timing switch.
83	O-MOTOR	O	Deck mechanism motor control output.
84	O-FSTB	O	Connected to front shift resistor IC BU2092 pin-⑤.
85	O-CDOPEN	O	CD tray open control output.
86	O-CDCLOSE	O	CD tray close control output.
87	O-P.ON	O	Power supply ON/OFF control.
88	O-MDRST	O	MD unit 7ZG-9A reset signal output.
89	VSS2	—	GND.
90	VDD2	—	Microprocessor power supply. (μ -com 5 V)
91	O-RWC	O	Connected to CD DSP LC78622ED pin-54 RWC and CD ASP LA9240ML pin-53 CE.
92	O-CQCK	O	Connected to CD DSP LC78622ED pin-57 CQCK and CD ASP LA9240ML pin-51 CL.
93	O-MUTE	O	Main mute output.
94	O-PL	O	Deck mechanism plunger solenoid control output.
95	O-SIN	O	MD unit control serial data output.
96	I-SOUL	I	MD unit control serial data input.
97	I-ACLK	I	MD unit control serial data input.
98	O-ARDY	O	MD unit control serial data send/receive ready output.
99	O-SREQ	O	MD unit control serial data transfer request .
100	O-MREQ	O	MD unit control serial data transfer request.

IC, CXD2652AR

Pin No.	Pin Name	I/O	Description
1	MNT0	O	Monitor output terminal.
2	MNT1	O	Monitor output terminal.
3	MNT2	O	Monitor output terminal.
4	MNT3	O	Monitor output terminal.
5	SWDT	I	Microprocessor serial interface data input.
6	SCLK	I	Microprocessor serial interface shift clock input.
7	XLAT	I	Microprocessor serial interface latch input. Latched at falling down edge.
8	SRDT	O	Microprocessor serial interface data output.
9	SENS	O	The terminal which outputs internal status in accordance with the address of the microprocessor serial interface.
10	XRST	I	Reset input. L: reset.
11	SQSY	O	Disc sub code Q sync/ADIP sync output.
12	DQSY	O	Subcode Q sync output of U-bit CD or MD format when the DIGITAL IN source is CD or MD.
13	RECP	I	Laser power selection input. H: Recording power, L: Playback power.
14	XINT	O	Interrupt request output terminal. L is output when interrupt status is generated.
15	TX	I	Record data output enable signal input terminal. H: enable.
16	OSCI	I	Crystal oscillator circuit input terminal.
17	OSCO	O	Crystal oscillator circuit output terminal. (Inverted output of OSCI).
18	XTSL	I	OSCI terminal input frequency selection. H: 512 Fs (22.5792 MHz), L: 1024 Fs (45.1584 MHz).
19	NC	—	Not connected.
20	DVSS	—	Digital GND.
21	DIN	I	Digital audio interface signal input.
22	DOUT	O	Digital audio interface signal output.
23	ADDT	I	Analog recording signal input terminal. (External A/D converter output is connected to this terminal).
24	DADT	O	RECORD monitor output/decode audio data output.
25	LRCK	O	LRCK (44.1 kHz) output terminal to external audio block.
26	XBCK	O	Bit clock output (2.8224 kHz) output terminal to external audio block.
27	FS256	O	256 Fs output. (11.2896 MHz).
28	DVDD	—	Digital power supply.
29	A03	O	Address output to external DRAM.
30	A02	O	Address output to external DRAM.
31	A01	O	Address output to external DRAM.
32	A00	O	Address output to external DRAM.
33	A10	O	Address output to external DRAM. (Not used).
34	A04	O	Address output to external DRAM.
35	A05	O	Address output to external DRAM.
36	A06	O	Address output to external DRAM.
37	A07	O	Address output to external DRAM.

Pin No.	Pin Name	I/O	Description
38	A08	O	Address output to external DRAM.
39	A11	O	Address output to external DRAM. (Not used).
40	DVSS	—	Digital GND.
41	XOE	O	External DRAM output enable.
42	XCAS	O	$\overline{\text{CAS}}$ output to external DRAM.
43	A09	O	Address output to external DRAM.
44	XRAS	O	$\overline{\text{RAS}}$ output to external DRAM.
45	XWE	O	Write enable for external DRAM.
46	D1	I/O	Data bus for external DRAM.
47	D0	I/O	Data bus for external DRAM.
48	D2	I/O	Data bus for external DRAM.
49	D3	I/O	Data bus for external DRAM.
50	MVCI	I	External VCO (784 fs) clock input.
51	ASYO	O	Playback EFM full swing output. (L: VSS, H: VDD).
52	ASYI	I	Playback EFM comparator slice voltage input.
53	AVDD	—	Analog GND.
54	BIAS	I	Playback EFM comparator bias current input.
55	RFI	I	Playback EFM RF signal input.
56	AVss	—	Analog power supply.
57	PDO	O	Phase comparison output to EFM decoder analog PLL.
58	PCO	O	Phase comparison output to the master PLL of playback digital PLL and to the recording EFM PLL.
59	FILI	I	Filter input to the master PLL of playback digital PLL and to the recording EFM PLL.
60	FILO	O	Filter output to the master PLL of playback digital PLL and to the recording EFM PLL.
61	CLTV	I	Internal VCO control voltage of the master PLL of playback digital PLL and of the recording EFM PLL.
62	PEAK	I	Optical light volume's peak hold signal input.
63	BOTM	I	Optical light volume's bottom hold signal input.
64	ABCD	I	Optical light volume signal input.
65	FE	I	Focus error signal input.
66	AUX1	I	Auxiliary input 1.
67	VC	I	Center terminal voltage input.
68	ADIO	O	Monitor output of A/D converter input signal.
69	AVDD	—	Analog power supply.
70	ADRT	I	Voltage input of the upper limit of the A/D converter operation range.
71	ADRB	I	Voltage input of the lower limit of the A/D converter operation range.
72	AVSS	—	Analog GND.
73	SE	I	Sled error signal input.
74	TE	I	Tracking error signal input.
75	AUX2	I	Auxiliary input 2.

Pin No.	Pin Name	I/O	Description
76	DCHG	I	Connected to the low impedance power supply.
77	APC	I	Error signal input to the laser digital APC.
78	ADFG	I	ADIP2 binary-converted FM signal (22.05±1 kHz) input.
79	F0CNT	O	Current source setting output terminal to CXA2523.
80	XLRF	O	Latch output for CXA2523 control. Latched at rise-up.
81	CKRF	O	Shift clock output for CXA2523 control.
82	DTRF	O	Data output for CXA2523 control.
83	APCREF	O	Reference PWM output to laser APC.
84	LDDR	O	PWM output to laser digital APC. (Not used).
85	TRDR	O	Tracking servo drive PWM output. (-).
86	TFDR	O	Tracking servo drive PWM output. (+).
87	DVDD	—	Digital power supply.
88	FFDR	O	Focus servo drive PWM output. (+).
89	FRDR	O	Focus servo drive PWM output. (-).
90	FS4	O	4 fs output. (176.4 kHz).
91	SRDR	O	Sled servo drive PWM output. (-).
92	SFDR	O	Sled servo drive PWM output. (+).
93	SPRD	O	Spindle servo drive PWM output. (PWM (-) or negative polarity).
94	SPFD	O	Spindle servo drive PWM output. (PWM (+) or PWM absolute value).
95	FGIN	I	FG input to spindle CAV servo.
96	TEST1	I	Test pin. Connected to GND.
97	TEST2	I	Test pin. Connected to GND.
98	TEST3	I	Test pin. Connected to GND.
99	DVSS	—	Digital GND.
100	EFMO	O	Low signal during playback. EFM (encode data) output: during recording.

IC, CXP81952

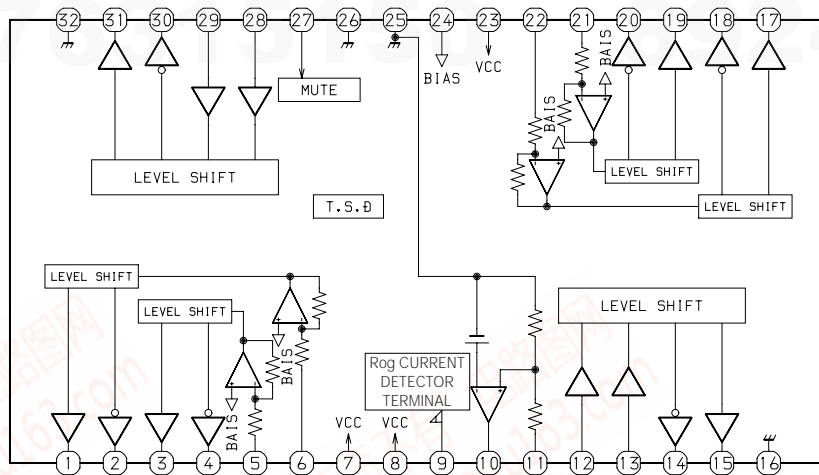
Pin No.	Pin Name	I/O	Description
1	MCAS	—	Not used.
2	MRAS	—	
3	BUP	—	
4	AMUTE	O	Audio mute signal output.
5	ESK	O	Serial clock output for EEPROM interface.
6	EDO	O	Serial data output for EEPROM interface.
7	EDI	I	Serial data input for EEPROM interface.
8	ECS	O	EEPROM interface chip select signal output.
9	—	—	Not used.
10	RFLCT	I	DISC reflectance factor detection switch input.
11	—	—	Not used.
12	LS	I	Optical pickup inner circumference detection switch input.
13	LDSW	I	Loading mechanism, EJECT position detection switch input.
14	PBSW	I	Loading mechanism, PB position detection switch input.
15	RECSW	I	Loading mechanism, RECORD position detection switch input.
16	—	—	Not used.
17	—	—	
18	ACOFF	—	
19	SREQ	I	System control send request signal input for system control interface.
20	EXTDIN	O	External DIGITAL-IN enable signal output.
21	SLOW	O	Loading mechanism speed control signal input.
22	LOAD	O	Loading mechanism operational direction control signal input 1.
23	EJECT	O	Loading mechanism operational direction control signal input 2.
24	MREQ	O	MD microprocessor send request signal output for system control interface.
25	DRIVE	O	EFM driver ON/OFF signal output.
26	—	—	Not used.
27	—	—	
28	—	—	
29	—	—	
30	—	—	
31	—	—	
32	—	—	
33	—	—	
34	—	—	
35	—	—	
36	—	—	
37	MP	—	Connected to VSS.
38	SRST	I	MD microprocessor reset signal input.
39	DGND	—	Connected to VSS.
40	XTALO	O	External system clock oscillation crystal connection terminal 1.
41	XTALI	I	External system clock oscillation crystal connection terminal 2.

Pin No.	Pin Name	I/O	Description
42	ARDY	I	Ready signal input for system control interface.
43	SIN	I	Serial data input for system control interface.
44	SOUT	O	Serial data output for system control interface.
45	ACLK	O	Serial clock output for system control interface.
46	XLAT	O	CXD2652 interface latch signal output.
47	XRST	O	CXD2652 reset signal output.
48	XSTBY	O	CXA2523 standby signal output.
49	—	—	Not used.
50	AVSS	—	Connected to VSS.
51	AVREF	—	Connected to VDD.
52	AVDD	—	
53	—	—	Not used. (PLL UP)
54	—	—	
55	—	—	
56	SLF	—	
57	SRF	—	
58	TEMP	—	
59	MAGIC	—	
60	—	—	
61	TEST	—	
62	DISCPRO	I	
63	MNT3	I	CXD2652 monitor signal input 3.
64	MNT2	I	CXD2652 monitor signal input 2.
65	MNT1	I	CXD2652 monitor signal input 1.
66	MNT0	I	CXD2652 monitor signal input 0.
67	SENS	I	CXD2652 SENS signal input.
68	FLG	I	The terminal monitoring the flag included in the SRDT of the CXD2652 interface.
69	—	—	Not used.
70	—	—	
71	P-CONT	—	
72	RFSW	—	
73	—	—	
74	—	—	
75	DQSY	I	DIGITAL-IN SUB-Q sync input.
76	XINT	I	CXD2652 status sync input.
77	SRDT	I	CXD2652 interface serial data input.
78	SWDT	O	CXD2652 interface serial data output.
79	SCLK	O	CXD2652 interface serial clock output.
80	SQSY	I	SUB-Q, ADIP sync input.
81	—	—	Not used.
82	—	—	

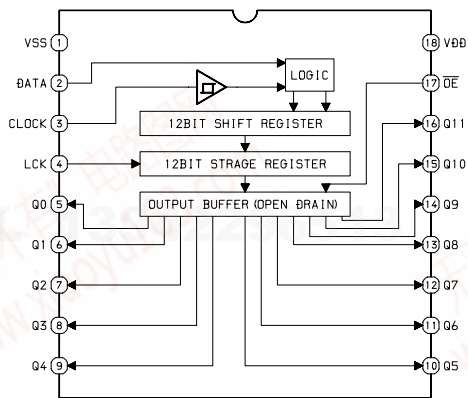
Pin No.	Pin Name	I/O	Description
83	—	—	Not used.
84	TXI	—	Connected to VSS.
85	TXO	—	Open. (Not used)
86	VSS	—	Connected to VSS.
87	VDD	—	Connected to VDD.
88	NC	—	
89	—	—	Not used.
90	DRVMUTE	O	BA5970FP mute signal output.
91	—	—	Not used.
92	—	—	
93	—	—	
94	—	—	
95	RECP	O	Laser power selection signal output.
96	TX	O	Record data output enable signal output.
97	MOD	O	RF modulation circuit ON/OFF signal output.
98	OPMUTE	O	Laser mute signal output.
99	ARST	O	AK4512 reset signal output.
100	DENF	O	De-emphasis ON/OFF signal output.

IC BLOCK DIAGRAM

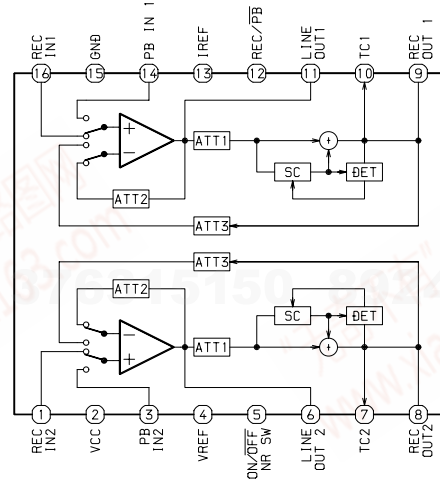
IC, BA5936



IC, BU2092F

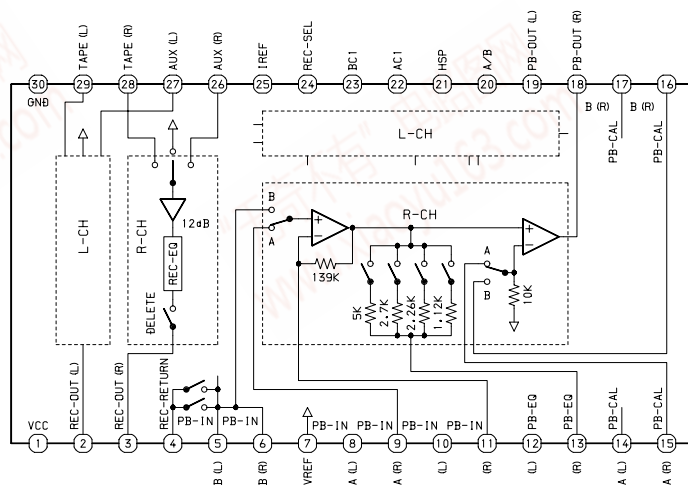


IC, CXA1553P

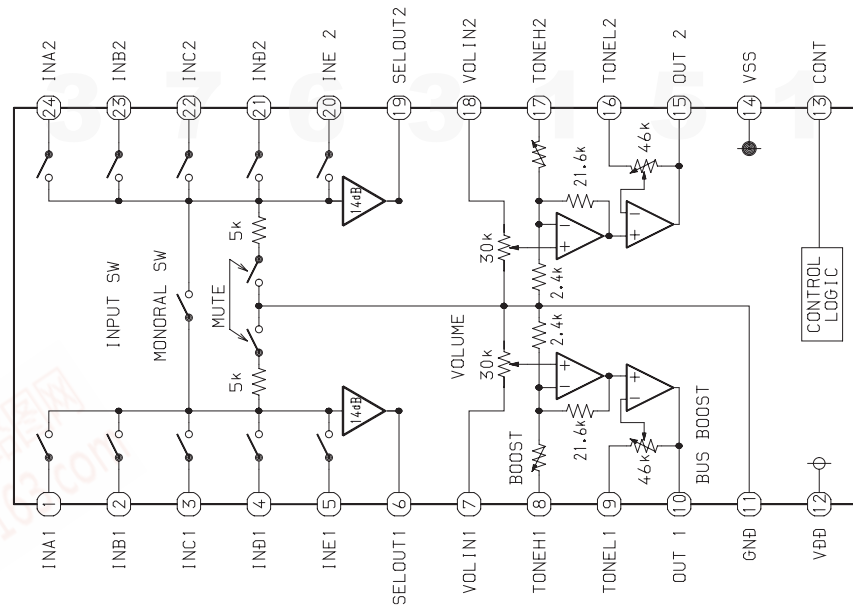


ATT:Attenuator
SC:Side Chain
DET:Detector

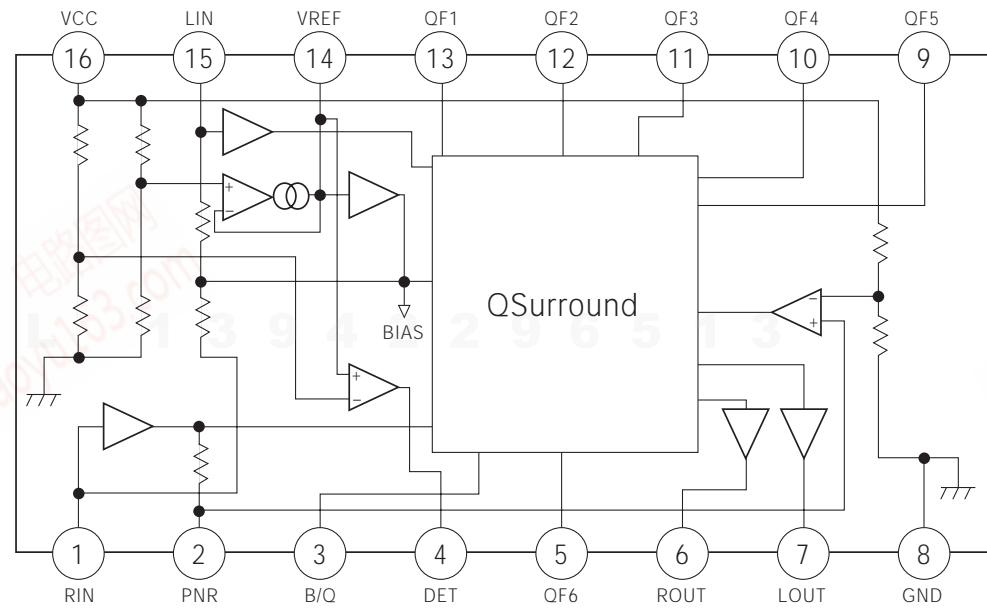
IC, HA12211



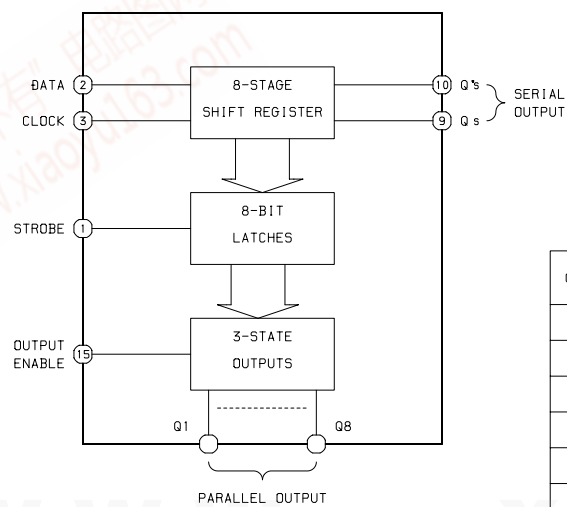
IC, M62495FP



IC, MM1454XFBE



IC, BU4094BCF

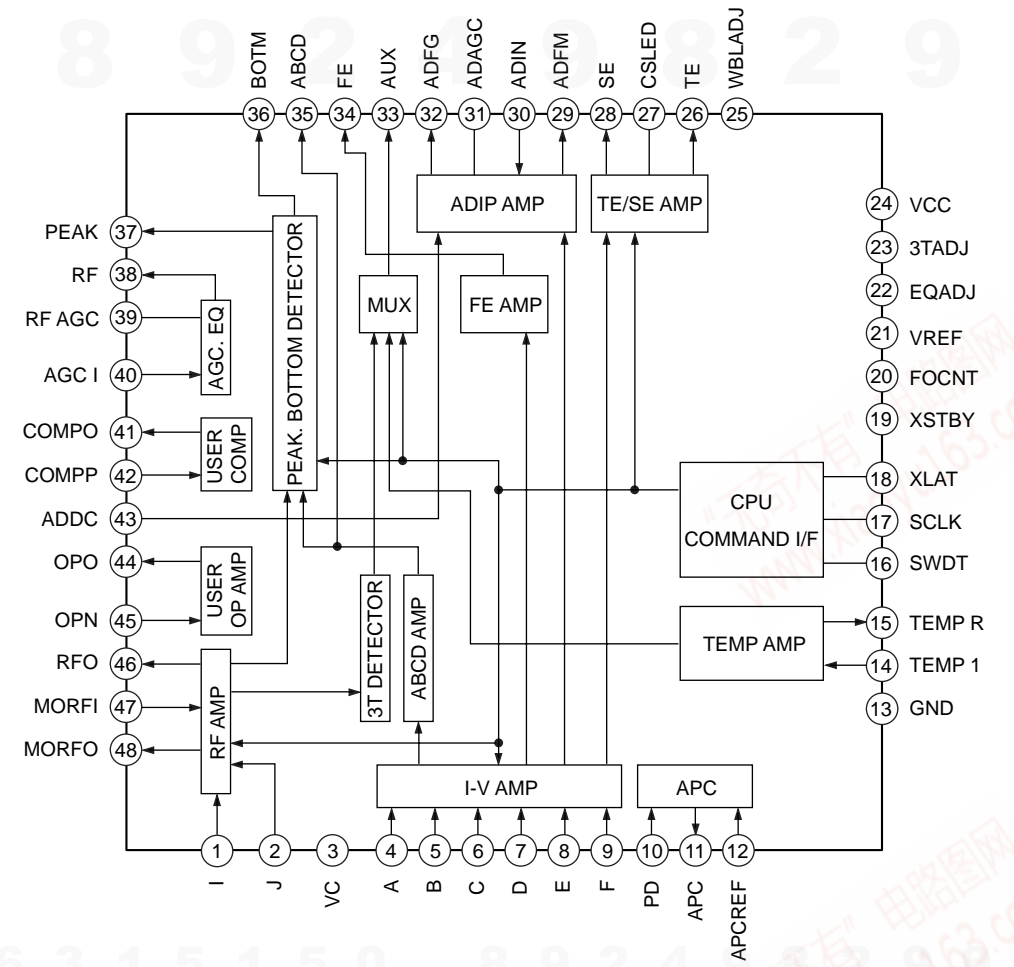


TRUTH TABLE

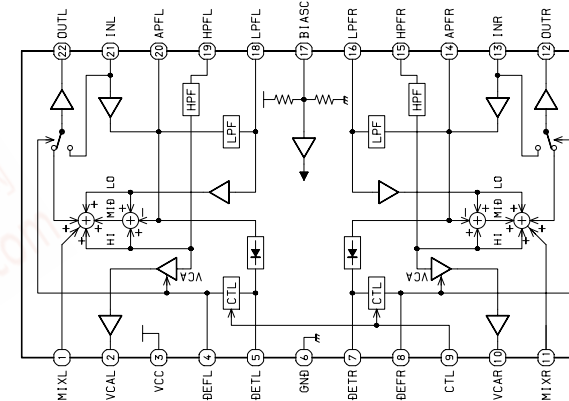
CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Qs	Q's
↑	L	X	X	Z	Z	Qs	NO Chg.
↓	L	X	X	Z	Z	No Chg.	Qs
↑	H	L	X	No Chg.	No Chg.	Q7	No Chg.
↑	H	H	L	L	Qn-1	Q7	No Chg.
↑	H	H	H	H	Qn-1	Q7	No Chg.
↓	H	X	X	No Chg.	No Chg.	No Chg.	Qs

Z=High Impedance
X=Don't Care

IC, CXA2523AR

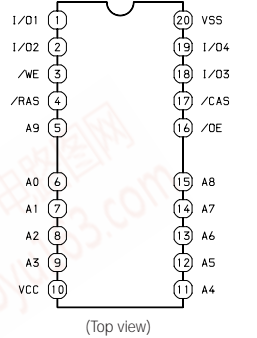


IC, BA3880FS

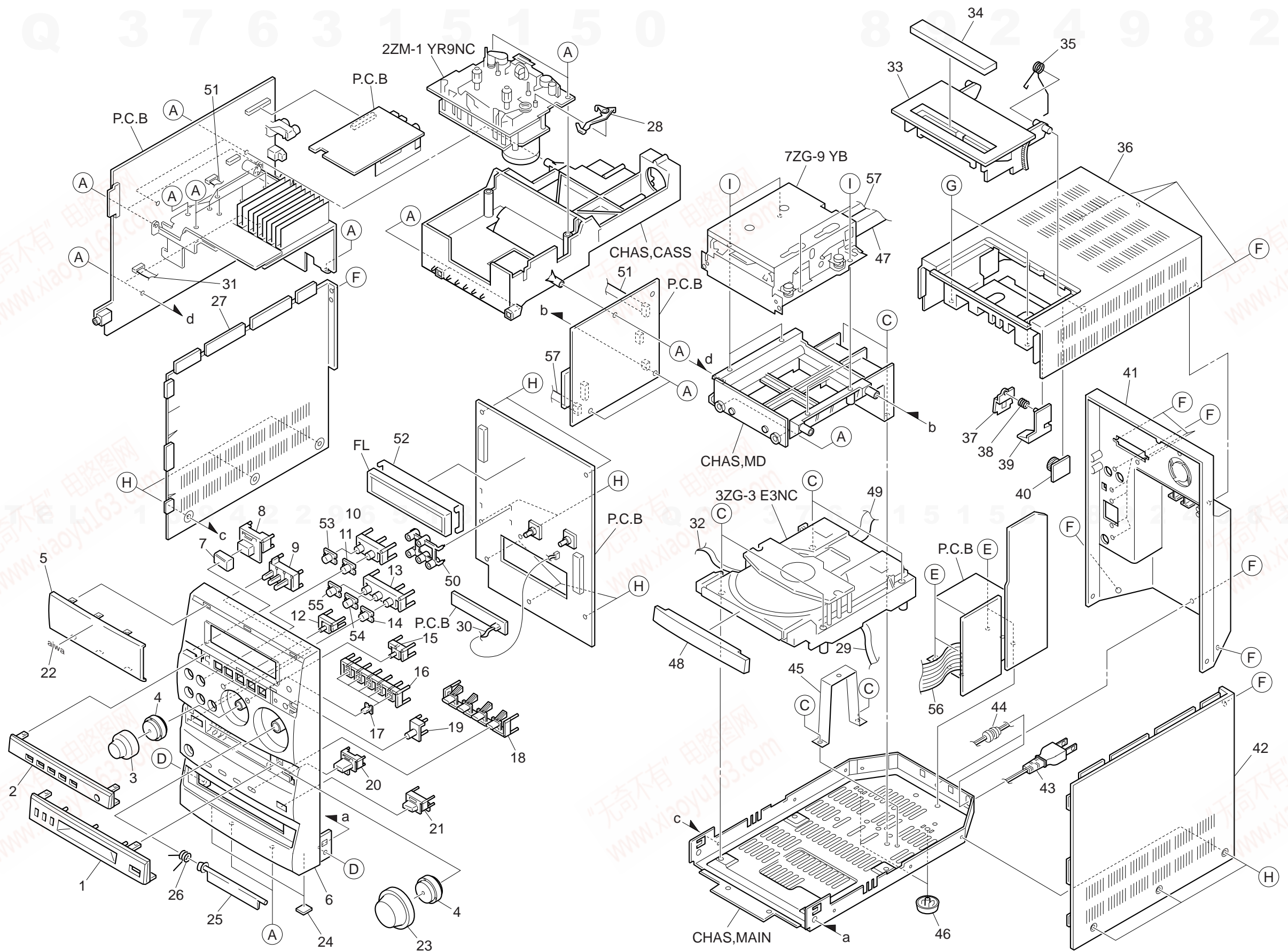


IC, MN41V4400SJ-08

Pin No.	Signal name	Power supply/Clock	Input	Output
1				I/O1
2				I/O2
3	/WE			
4	/RAS			
5		A9		
6		A0		
7		A1		
8		A2		
9		A3		
10	VCC			
11		A4		
12		A5		
13		A6		
14		A7		
15		A8		
16	/OE			
17	/CAS			
18				I/O3
19				I/O4
20	VSS			



MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

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

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CL4-007-010		PANEL,MD	33	8Z-CL4-011-110		BOX,CASS
2	8Z-CL4-087-110		PANEL,FUNC EX<K>	34	8Z-CL4-010-010		WINDOW,CASS
2	8Z-CL4-088-110		PANEL,FUNC EZ<EZ>	35	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
3	8Z-CL4-025-010		CAP, JOG	36	8Z-CL4-041-010		CABI, TOP T
4	8Z-CL4-208-010		KNOB,RTRY	37	88-CD5-203-010		HLDR, LOCK 2N
5	8Z-CL4-009-010		WINDOW,FL<K>	38	88-CD5-213-010		SPR-C, LOCK
5	8Z-CL4-086-010		WINDOW,FL EZ<EZ>	39	82-NF5-229-010		PLATE, LOCK
6	8Z-CL4-084-010		CABI, FR EX<K>	40	87-063-165-010		OIL-DMPR 150
6	8Z-CL4-085-010		CABI, FR EZ<EZ>	41	8Z-CL4-053-010		PANEL, REAR EZ
7	8Z-CL4-023-010		CAP, PWR	42	8Z-CL4-005-010		PANEL, SIDE R
8	8Z-CL4-209-010		BTN, PWR	43	87-A80-092-010		AC CORD ASSY, E BLK SUN FAI<EZ>
9	8Z-CL4-020-010		BTN, MD	43	87-A80-108-010		AC CORD ASSY, K BLK 3P<K>
10	8Z-CL4-015-010		BTN, CONT 1	44	87-085-185-010		BUSHING, AC CORD (E)
11	8Z-CL4-026-010		CAP, PLAY	45	8Z-CL4-207-010		HLDR, HT-SINK
12	8Z-CL4-018-010		BTN, MODE	46	81-669-025-010		FOOT, H11
13	8Z-CL4-016-010		BTN, CONT 2	47	8Z-CL4-641-010		FF-CABLE, 14P 1.0 550MM
14	8Z-CL4-028-010		CAP, FF	48	8Z-CL4-008-010		PANEL, CD
15	8Z-CL4-017-010		BTN, ENTER	49	8Z-CL4-642-010		FF-CABLE, 16P 1.0 320MM
16	8Z-CL4-206-010		BTN, FUNC	50	8Z-CL4-205-010		GUIDE, CONT LED
17	8Z-CL4-013-010		LENS, FUNC	51	88-908-271-110		FF-CABLE, 8P 1.25 270MM
18	8Z-CL4-022-010		BTN, REC	52	8Z-CL4-204-010		HLDR, FL
19	8Z-CL4-014-010		BTN, DEMO	53	8Z-CL4-027-010		CAP, STOP
20	8Z-CL4-019-110		BTN, EJECT	54	8Z-CL4-029-010		CAP, REW
21	8Z-CL4-021-110		BTN, OPEN	55	8Z-CL4-030-010		CAP, PAUSE
22	87-B00-010-010		BADGE, AIWA 30.5-5.2 S 2.5L	56	8Z-CL4-658-010		F-CABLE, 10P 2.5 300MM
23	8Z-CL4-024-010		CAP, VOL	57	88-CE2-640-010		FF-CABLE, 8P 1.0 300MM N
24	80-VT1-202-010		FELT, 12.5-15.5-2	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
25	8Z-CL4-012-010		PANEL, FLAP	B	87-751-075-210		VT2+2.6-10
26	88-CE2-209-010		SPR-T, MD	C	87-067-584-010		TAPPING SCREW, BVT2+3-6
27	8Z-CL4-004-010		PANEL, SIDE L	D	87-591-094-010		QIT+3-6 GOLD
28	82-ZM1-263-110		LVR, EJECT L	E	87-067-585-010		TAPPING SCREW, BVTT+4-6
29	88-906-251-110		FF-CABLE, 6P 1.25	F	87-067-761-010		TAPPING SCREW, BVT2+3-10
30	88-CE2-659-010		F-CABLE, 2P 2.5 100MM (4MM)	G	87-B10-071-010		BVT2+3-16 W/O SLOT B
31	8Z-CL4-655-010		CONN ASSY, 7P V RPH SHLD	H	87-B10-068-010		UTT2+3-6 W/O SLOT CR
32	88-905-351-110		FF-CABLE, 5P 1.25 350MM	I	87-067-703-010		BVT2+3-10 W/O SLOT

COLOR NAME TABLE

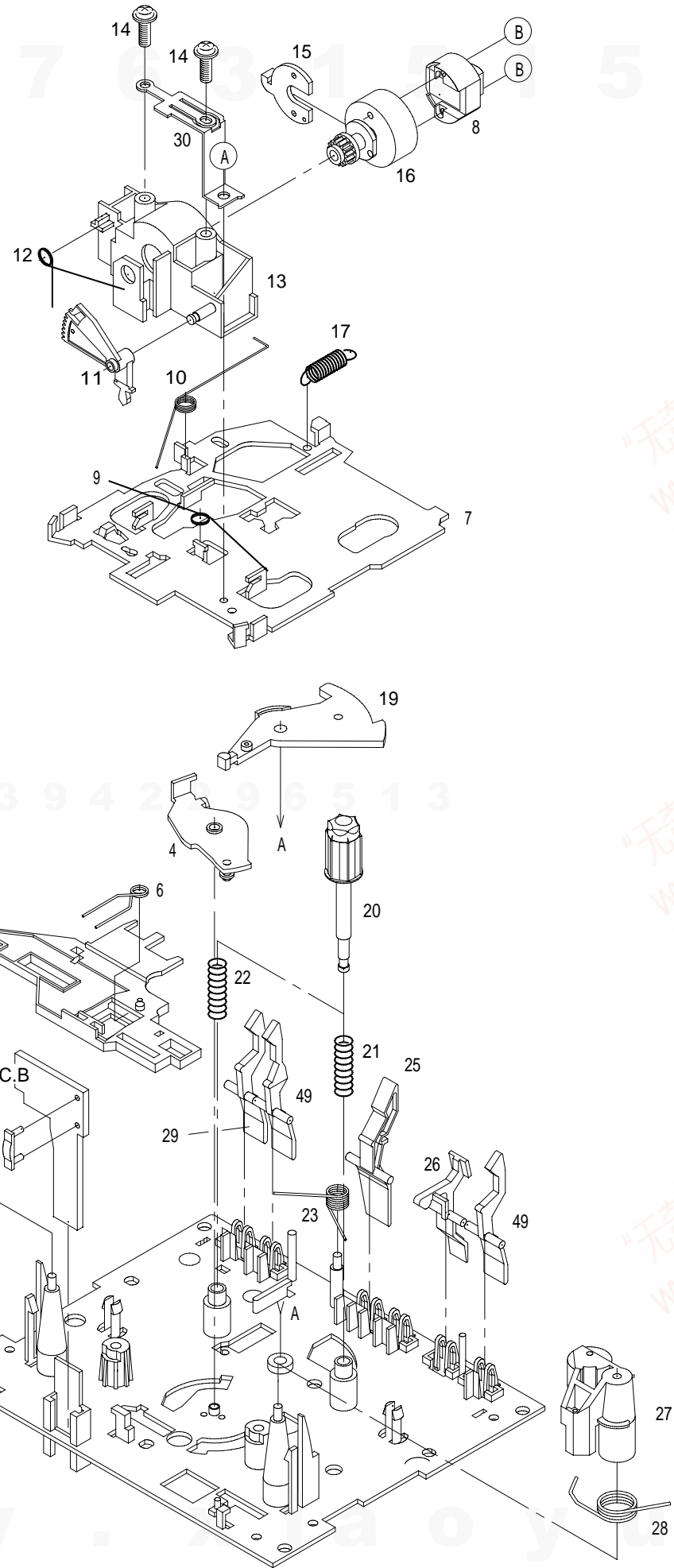
Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

TAPE MECHANISM PARTS LIST 1/1

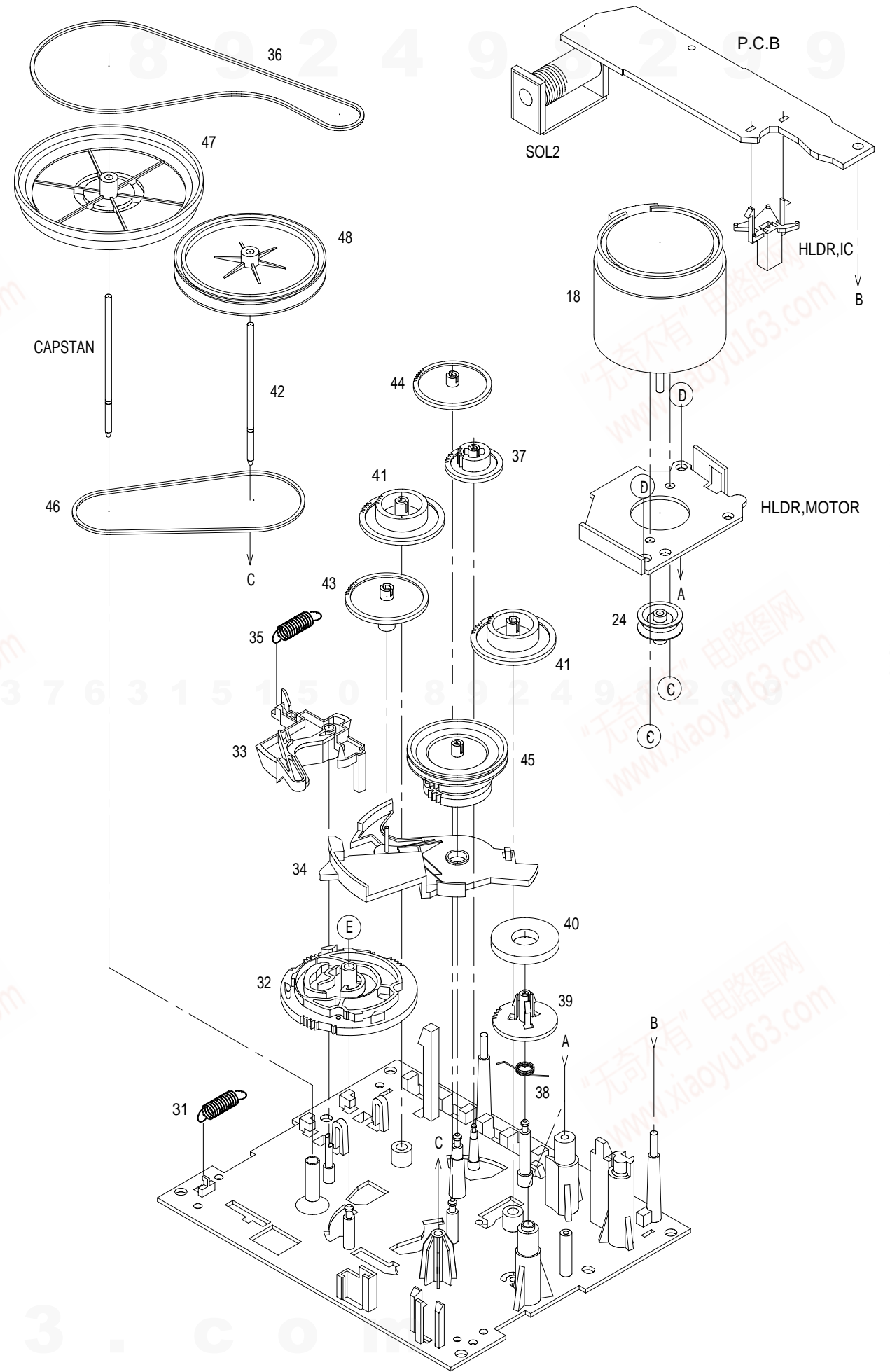
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM1-327-310		CHAS ASSY, RM	31	82-ZM1-255-310		SPR-E, LVR DIR
2	82-ZM1-258-210		SPR-T, PINCH L	32	82-ZM1-221-310		GEAR, CAM(*)
3	82-ZM1-341-210		LVR ASSY, PINCH L2	33	82-ZM1-227-310		LVR, TRIG
4	82-ZM1-333-210		PLATE, LINK2	34	82-ZM1-224-410		LVR, FR
5	82-ZM1-266-310		LVR, DIR	35	82-ZM1-305-210		SPR-E, TRIG 2
6	82-ZM1-214-010		SPR-T, DIR	36	82-ZM1-340-010		BELT, SBU MAIN2
7	82-ZM1-206-910		CHAS, HEAD	37	82-ZM1-223-010		GEAR, PLAY
8	87-A91-176-010		HEAD, RPH HADKH56	38	82-ZM1-322-010		SPR-T, FR 60
9	82-ZM1-269-210		SPR-T, BRG	39	82-ZM1-220-210		GEAR, IDLER
10	82-ZM1-219-110		SPR-T, LINK	40	82-ZM3-616-010		RING MAGNET 4
11	82-ZM1-210-110		GEAR, H T	41	82-ZM1-216-510		GEAR, REEL
12	82-ZM1-213-010		SPR-T, HEAD	42	82-ZM1-236-010		CAPSTAN, 2-41.5
13	82-ZM1-207-910		GUIDE, TAPE	43	82-ZM1-225-210		GEAR, FR
14	82-ZM1-283-310		S-SCREW, AZIMUTH	44	82-ZM1-226-010		GEAR, REW
15	82-ZM1-314-110		PLATE, HEAD	45	82-ZM3-333-310		SLIP DISK ASSY 2
16	82-ZM1-208-310		HLDR, HEAD	46	82-ZM1-338-110		BELT, FR 4
17	82-ZM1-218-010		SPR-E, HB	47	82-ZM1-349-110		FLY-WHL, R W
18	87-045-347-010		MOT, SHU2L 70	48	82-ZM1-348-110		FLY-WHL, L W
19	82-ZM1-222-210		LVR, PLAY	49	82-ZM1-241-310		LVR, MC
20	82-ZM1-217-410		REEL TABLE	A	82-ZM1-315-010		S-SCREW GUIDE TAPE
21	82-ZM1-244-510		SPR-C, BT	B	80-ZM6-207-010		V+1.6-7
22	82-ZM1-285-410		SPR-C, BT L	C	87-251-070-410		U+2.6-3
23	82-ZM1-257-010		SPR-T, CAS	D	87-741-073-410		UT2+2.6-6 GLD
24	82-ZM1-247-210		PULLEY, MOTOR	E	87-B10-008-010		W-P, 2.08-8-0.4-SLIP
25	82-ZM1-242-010		LVR, CAS				
26	82-ZM1-243-010		LVR, STOP				
27	82-ZM1-344-210		LVR ASSY, PINCH R2				
28	82-ZM1-259-210		SPR-T, PINCH R				
29	82-ZM1-240-110		LVR, REC(*)				
30	82-ZM1-298-010		SPR-P EARTH				

TAPE MECHANISM EXPLODED VIEW 1/1

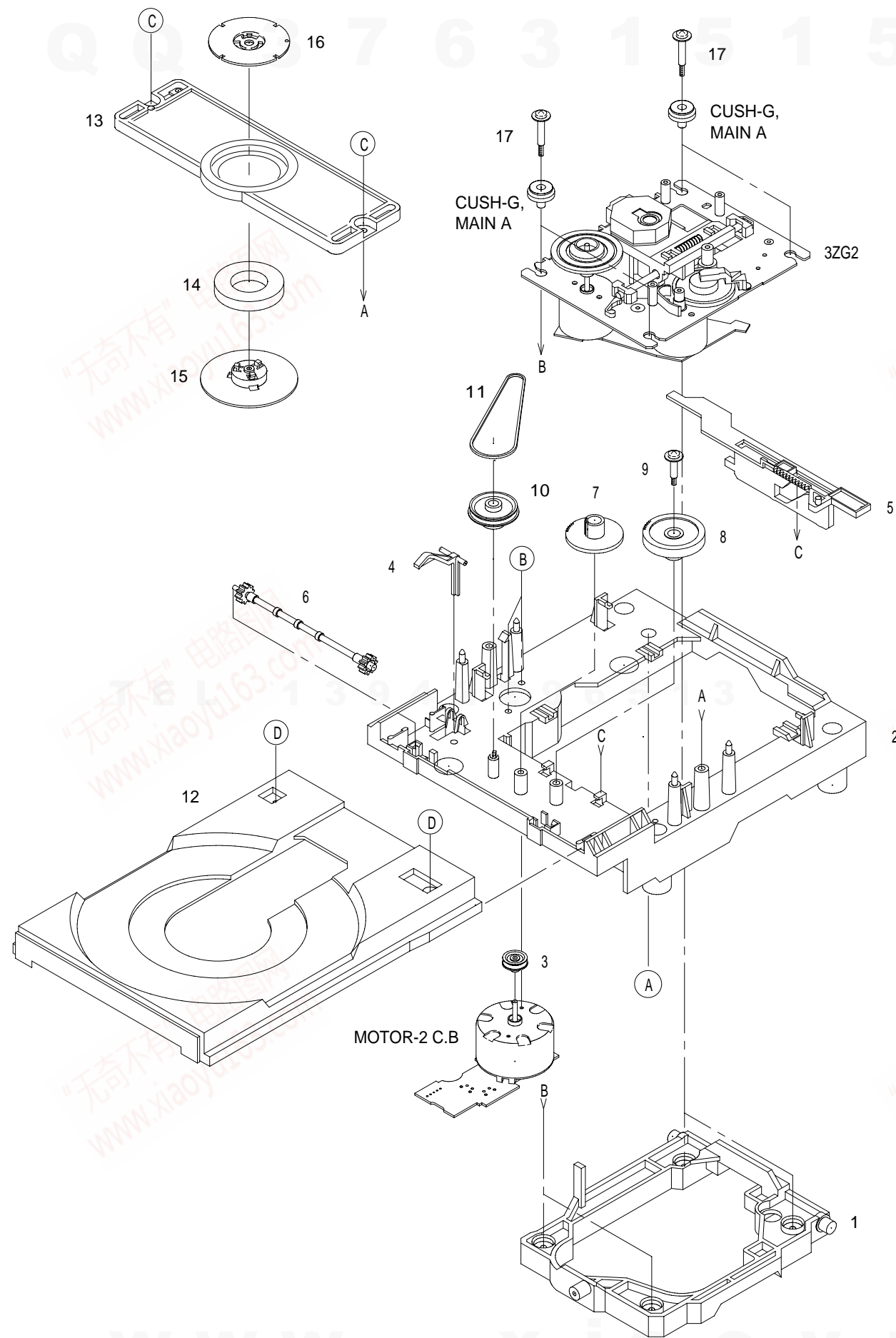


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66

CD MECHANISM EXPLODED VIEW 1/2



CD MECHANISM PARTS LIST 1/2

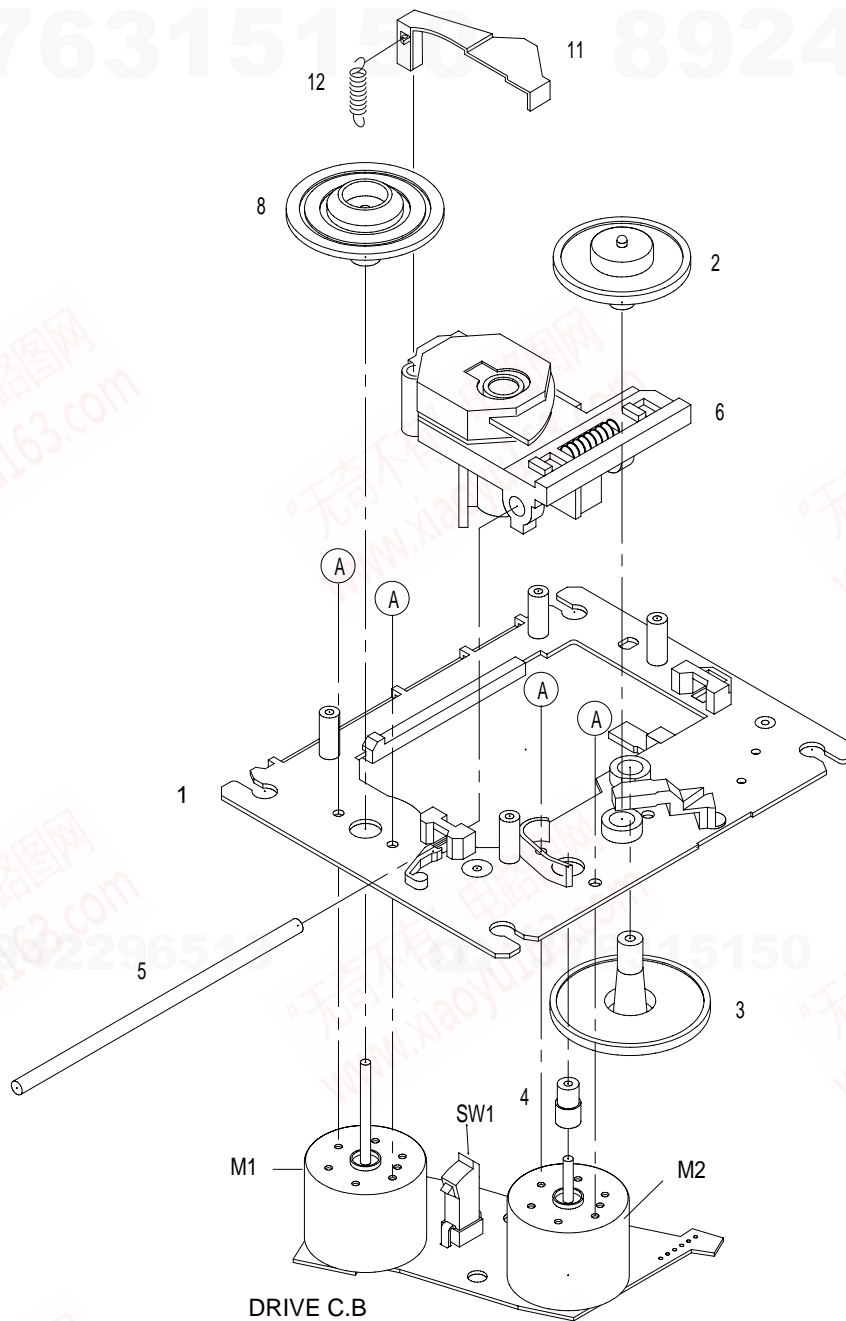
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG3-224-310		HLDR, M2	16	83-ZG3-219-010		PLATE, CLAMP
2	83-ZG3-228-610		CHAS, L6	17	81-ZG1-254-010		S-SCEW, MECH HLDR
3	83-ZG3-208-010		PULLEY, MOTOR	A	87-067-945-110		VFT2+3-12(F10)
4	83-ZG3-213-010		LVR, SW	B	87-251-071-110		U+2.6-4
5	83-ZG3-209-610		CAM, SLIDE	C	87-512-074-210		VFT2+2.6-8
6	83-ZG3-207-010		GEAR, TRAY	D	87-352-075-210		VT2+2.6-10
7	83-ZG3-204-210		GEAR, C				
8	83-ZG3-205-010		GEAR, D				
9	83-ZG3-217-010		S-SCREW, GEAR D				
10	83-ZG3-220-210		GEAR, PULLEY 2				
11	83-ZG3-214-010		BELT, L				
12	83-ZG3-229-410		TRAY, CD 2				
13	83-ZG3-230-010		HLDR, CHUCK 2				
14	83-ZG3-602-010		RING, MAG				
15	83-ZG3-212-010		CAP, DISC				

TEL 13942296513 QQ 376315150 892498299

TEL 13942296513 QQ 376315150 892498299

CD MECHANISM EXPLODED VIEW 2/2

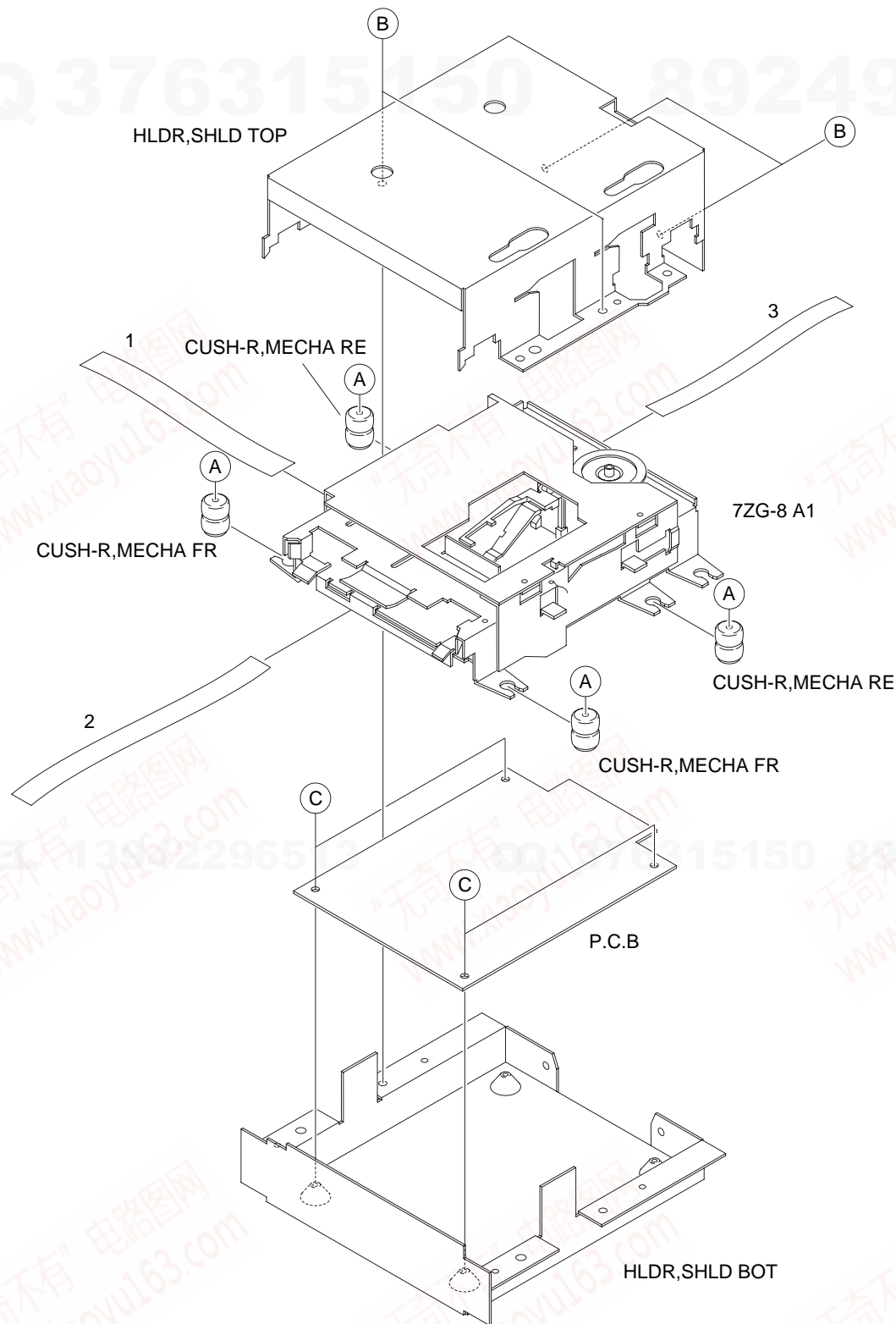


CD MECHANISM PARTS LIST 2/2

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

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

MD MECHANISM EXPLODED VIEW 1/3

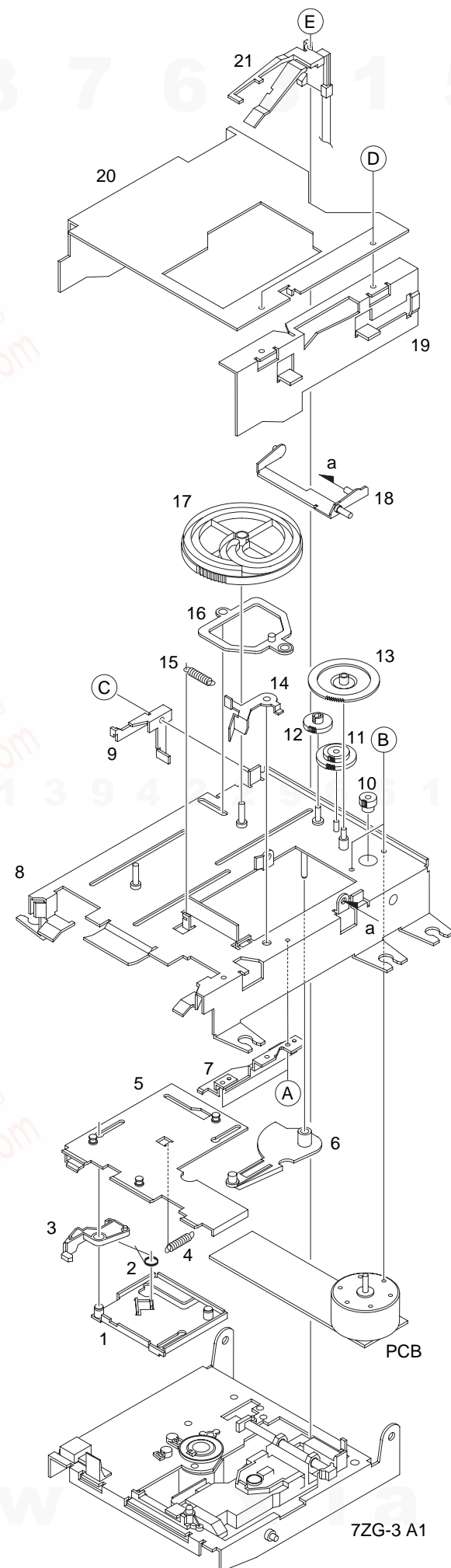


MD MECHANISM PARTS LIST 1/3

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

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZG9-602-010		FF-CABLE, 21P 0.5 90MM
2	87-ZG9-603-010		FF-CABLE, 8P 1.0 120MM
3	87-ZG9-604-010		FF-CABLE, 5P 1.25 100MM
A	87-ZG9-206-010		S-SCREW, MD
B	87-067-688-010		BVTT+3-6
C	87-067-421-010		VTT+2-4

MD MECHANISM EXPLODED VIEW 2/3



MD MECHANISM PARTS LIST 2/3

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

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZG8-220-110		PLATE ASSY, LATCH	16	87-ZG8-225-110		LEVER ASSY, CAM
2	87-ZG8-259-010		SPR-T, LATCH	17	87-ZG8-239-010		CAM, LOAD
3	87-ZG8-230-110		LEVER, LATCH	18	87-ZG8-257-110		LEVER ASSY, REC
4	87-ZG8-224-110		SPR-E, LATCH	19	87-ZG8-213-010		PLATE, SLIDE R
5	87-ZG8-214-110		HLDR ASSY, CARTRIGE	20	87-ZG8-209-010		PLATE ASSY, SLIDE L
6	87-ZG8-233-010		LEVER, SW H	21	87-A90-605-010		HEAD, OWH RF325-74A
7	87-ZG8-255-110		PLATE, CARTRIGE	A	87-B10-129-010		VTT+1.7-3.5 W/O MFZN2-C
8	87-ZG8-201-210		CHAS ASSY, MAIN	B	87-B10-128-010		V+1.7-2 W/O MFZN2-C
9	87-ZG8-256-010		LEVER, SW S2	C	87-B10-130-010		W-P, 1.23-3.1-0.25 SLIT
10	87-ZG8-242-010		GEAR, MOT	D	87-067-421-010		VTT+2-4
11	87-ZG8-253-010		GEAR, REDUCTION S3	E	87-B10-131-010		VW+1.7-5 W/O MFZN2C
12	87-ZG8-246-010		GEAR, IDLER 2				
13	87-ZG8-252-010		GEAR, REDUCTION L3				
14	87-ZG8-231-010		LEVER, SHUTTER				
15	87-ZG8-232-010		SPR-E, SHUTTER				

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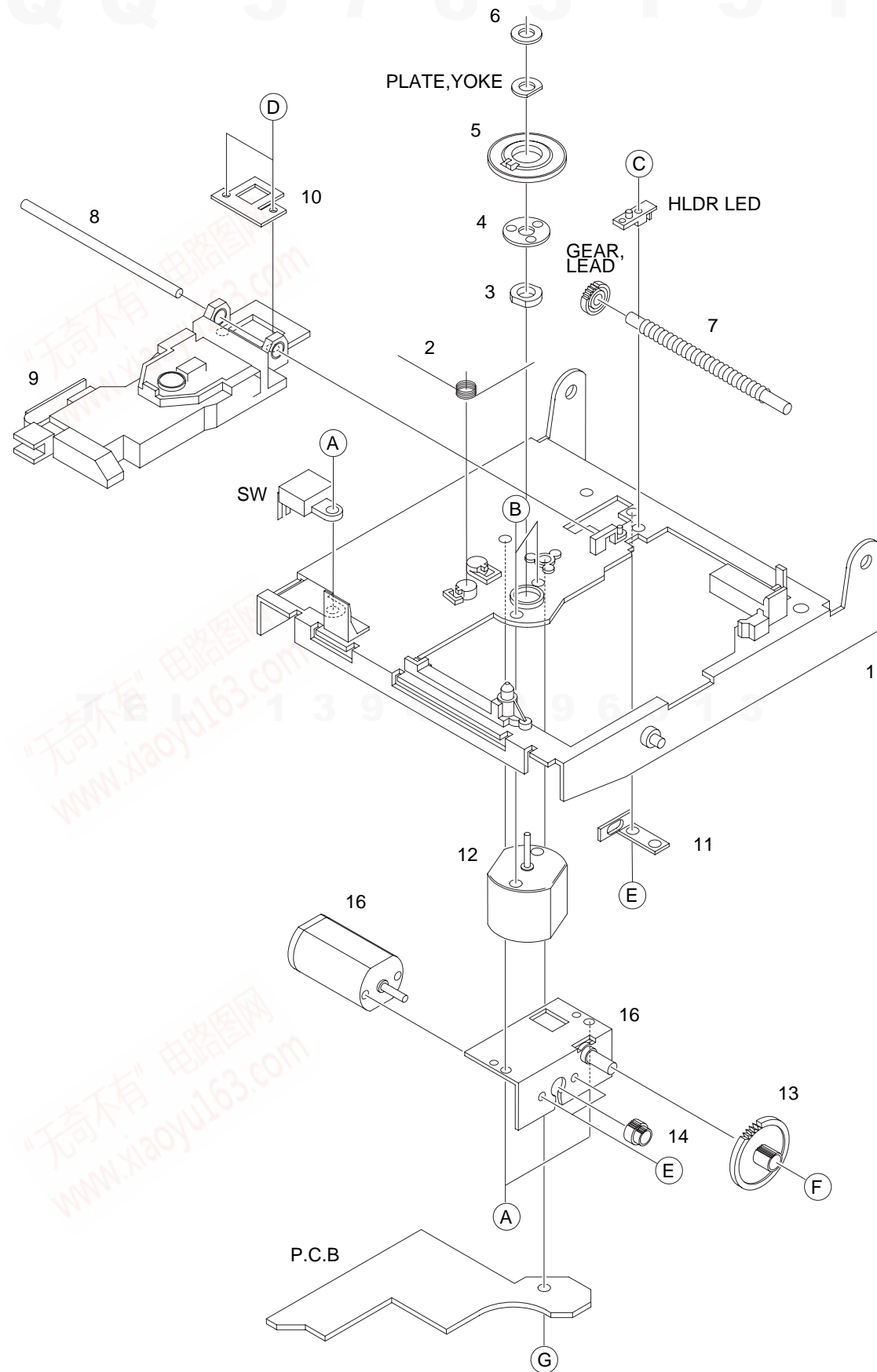
TEL 13942296513 QQ 376315150 892498299

MD MECHANISM EXPLODED VIEW 3/3

MD MECHANISM PARTS LIST 3/3

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

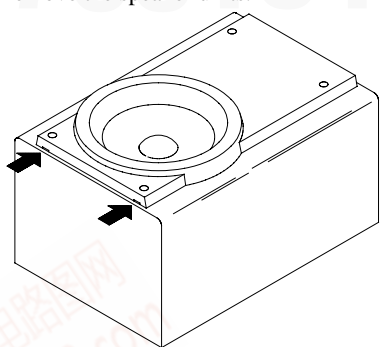
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZG3-202-010		CHAS ASSY,OUT-SERT	16	87-A90-616-010		MOT,FF-N30VA
2	87-ZG3-214-010		SPR-T,SPINDLE-A	A	87-261-547-310		V+2-3 BLK (1)
3	83-ZG5-308-010		BRG,1.5-2	B	87-263-523-310		SCREW, V+1.7-2
4	83-ZG5-305-010		SPR-P,DISC	C	87-261-509-310		SCREW, V+1.4-4
5	83-ZG5-302-010		TURN TABLE,MD1	D	87-067-393-010		SCREW +1.4-1.4
6	83-ZG5-605-010		MAGNET,CHUCK	E	87-261-503-310		PRECISION SCREW, V+1.4-2
7	87-ZG3-212-010		SHAFT,LEAD	F	87-078-033-010		PW 1.2-2.5-0.25 SLT
8	87-ZG3-211-010		SHAFT,GUIDE	G	87-341-035-210		SCREW,UT1+2-6
9	87-A90-613-010		PICKUP,KMS-260A				
10	87-ZG3-216-010		SPR-P,RACK				
11	87-ZG3-213-010		SPR-P,LEAD				
12	87-A90-413-010		MOT,FF-110PH 9				
13	87-ZG3-206-010		GEAR, A				
14	87-ZG3-205-010		GEAR, MOT SL				
15	87-ZG3-208-010		HLDR ASSY,MOTOR				



SPEAKER DISASSEMBLY INSTRUCTIONS

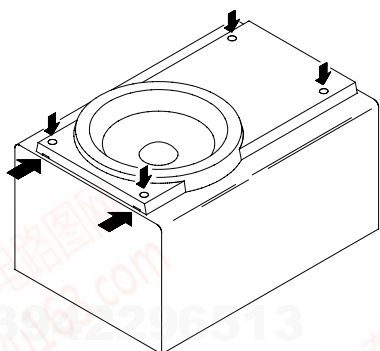
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



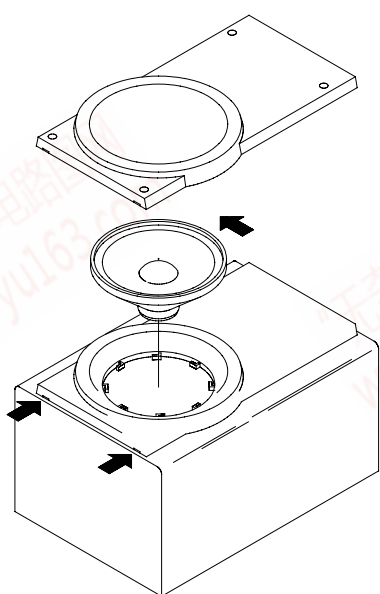
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hold where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

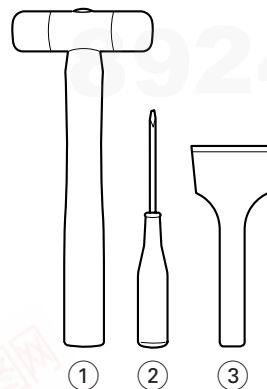


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

- ① Plastic head hammer
- ② (⊖) flat head screwdriver
- ③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.
2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.
3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

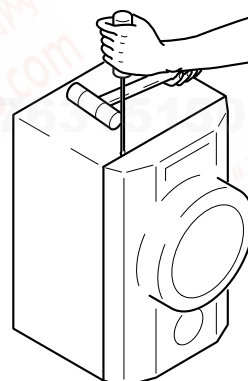


Fig-1

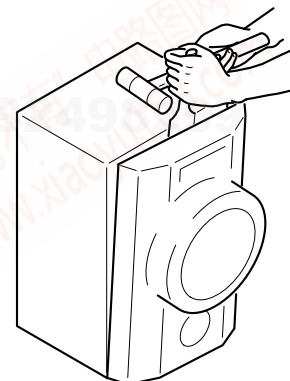


Fig-2

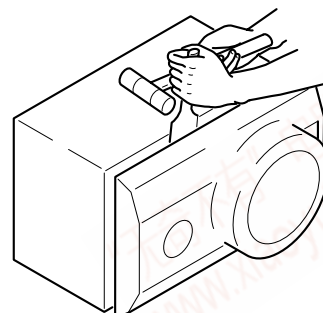


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST 1/1

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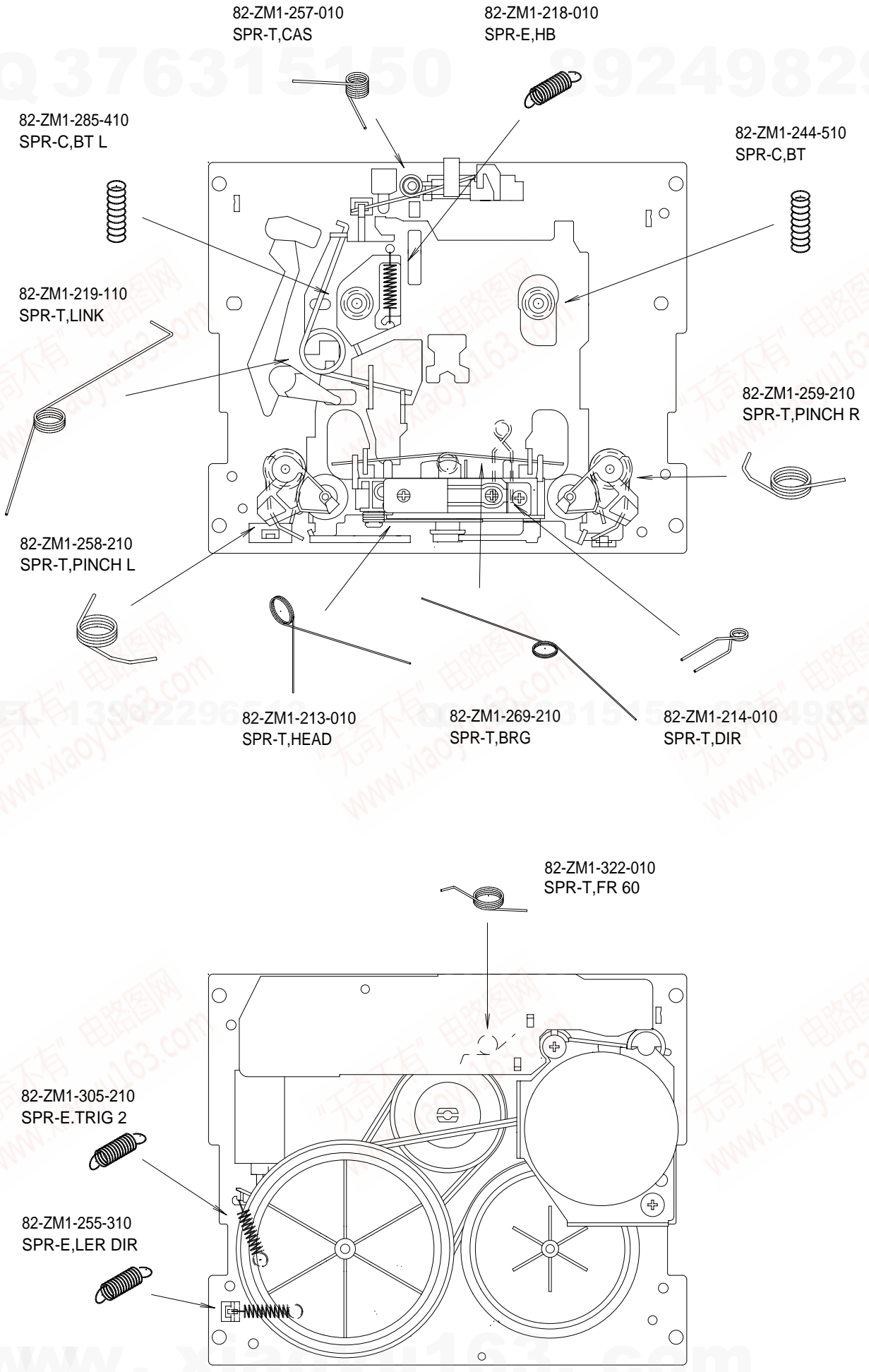
REF.NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CL4-970-010		GRILLE ASSY,FRAME
2	87-A90-193-010		HHDR,CV100 (B)
3	8Z-CL4-962-010		PANEL,FR
4	8Z-CL4-963-010		PANEL,TW
5	87-NSG-606-010		SPKR TW60
6	88-CL3-948-010		SPKR,W 130
A	87-067-579-010		TAPPING SCREW, BVT2+3-8
B	87-067-421-010		VTT+2-4

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SPRING APPLICATION POSITION



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