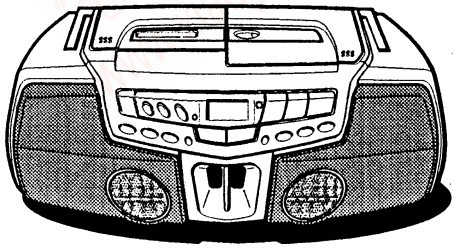
aiwa SERVICE

CSD-FD92 U(S)
CSD-FD94 HRJ(S),EZ(S)



SERVICE MANUAL

COMPACT DISC STEREO
RADIO CASSETTE RECORDER

BASIC TAPE MECHANISM : 2ZM-1 R15NF
BASIC CD MECHANISM : BZG-6 BNF

This Service Manual is the "Revision Publishing" and replaces "Simple Manual" (S/M Code No. 09-014-355-8T1).

REVISION DATA

aiwa

S/M Code No. 09-014-355-8R1

SPECIFICATIONS

CSD-FD94 HRJ MODEL

Tuner section
Frequency range antenna — FM: 87.5 - 108.0 MHz Rod antenna, AM: 531/530 - 1 602/1,710 kHz (9/10 kHz step) Ferrite bar antenna

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

CD player section
Disc — Compact disc / Scanning method — Non contact optical scanner (semiconductor laser)

General
Speaker — 100 mm cone type (2) 36 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 4.5 W + 4.5 W (EIAJ 3.2 ohms, T H D 10%), 3.3 W + 3.3 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries AC 110-120 V/ 220-240 V switchable, 50/60 Hz / Power consumption — 23 W / Dimensions (W × H × D) — 465 × 181 × 284 mm / Weight (excluding batteries) — 4.1 kg

- Design and specifications are subject to change without notice.

CSD-FD94 EZ MODEL

Tuner section
Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, MW: 531/530 - 1,602/1,710 kHz (9/10 kHz step) Ferrite bar antenna, LW: 144 - 290 kHz Ferrite bar antenna

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

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

General
Speaker — 100 mm cone type (2), 36 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 5 W + 5 W (DIN MUSIC POWER), 4.5 W + 4.5 W (EIAJ 3.2 ohms, T.H.D. 10%), 3.3 W + 3.3 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 22 W / Dimensions (W × H × D) — 460 × 192 × 262 mm / Weight (excluding batteries) — 4.0 kg

- Design and specifications are subject to change without notice.

CSD-FD92 U MODEL

Tuner section
Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, AM: 530/531 - 1,710/1,602 kHz (10/9 kHz step) Ferrite bar antenna

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

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

General
Speaker — 100 mm cone type (2), 36 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ, 7 ohms DC) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 120 V, 60 Hz / Power consumption — 15 W / Dimensions (W × H × D) — 460 × 192 × 262 mm (18 1/8 × 7 5/8 × 10 3/8 in.) / Weight (excluding batteries) — 4.0 kg (8 lbs. 13 oz.)

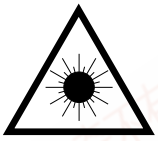
- Design and specifications are subject to change without notice.

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: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

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

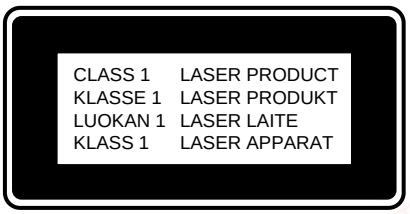
ATTENTION

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

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

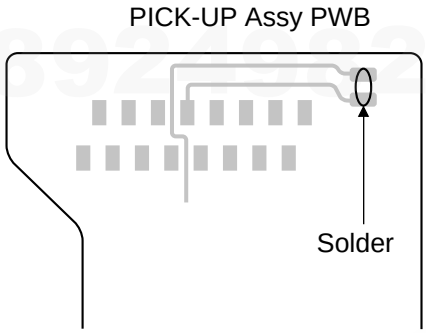
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (PXR-104X-AP-0101)

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
IC			
	87-A21-550-010		IC,TA2149N
	87-A21-185-040		IC,LC72121D-N
	87-020-454-010		IC,DN6851
	87-070-289-040		IC,BU 2092F<FD92USTF>
	8B-CH4-602-010		C-IC,LC867132V-BCH-4
	87-A21-090-010		IC,LA4600
	87-A21-520-040		C-IC,M61509FP
	87-A20-911-010		IC,RPM6938
	87-A21-419-040		C-IC,NJM14558MD-TE2
	87-A20-446-010		C-IC,LA9241ML
	87-A21-319-010		C-IC,LC78622NE
	87-A21-891-010		C-IC,MM1469XH
TRANSISTOR			
	89-327-143-080		TR,2SC2714 (0.1W)
	87-026-462-080		TR,2SC1740 S(RS 0.3W)
	89-111-624-080		TR,2SA1162Y
	87-A30-288-040		C-TR,DTC114YKA
	89-503-025-080		CHIP FET,2SK302 GR<FD94EZSF>
	89-320-011-080		TR,2SC2001 (15W)
	87-A30-283-040		C-TR,DTA114YKA<FD94EZSF>
	89-327-125-080		CHIP TR,2SC2712GR
	87-026-245-080		TR,DTC114ES<FD92USTF>
	87-A30-432-040		C-TR,DTC124XKA
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-610-080		TR,KTC3198GR
	87-A30-090-080		FET,2SK2541
	89-110-155-080		TR,2SA1015(0.4W)
	87-A30-190-080		TR,CC5551<FD94EZSF>
	87-A30-436-040		C-TR,DTC144TKA
	87-A30-435-040		C-TR,DTC144EK T146
	87-A30-287-040		C-TR,DTC114TKA
	87-A30-433-040		C-TR,DTC143XKA
	87-A30-427-040		C-TR,DTC114EKA
	89-112-965-080		TR,2SA1296 (0.75W)
	87-A30-515-080		TR,2SA1979O/Y
	87-A30-273-040		C-TR,DTC124EKA
	89-109-521-080		TR,2SA952 (0.6W)
	87-026-291-080		TR,DTC124XS
	87-A30-492-080		TR,2SC5343G<FD94HRJSF>
	87-A30-630-080		TR,2SC5343GL
	89-213-702-010		TR,2SB1370 (1.8W)
DIODE			
	87-070-345-080		DIODE,IN4148
	87-A40-616-070		VARI-CAP,SVC384(S/T)
	87-A40-916-040		C-VARI-CAP,HVC202A
	87-017-090-080		ZENER,HZS5B3
	87-A40-530-080		DIODE,RB721Q-40
	87-017-148-080		ZENER,HZS6A1L
	87-A40-270-080		C-DIODE,MC2838
	87-020-339-080		CHIP DIODE,1SS226
	87-001-936-080		ZENER,HZS7A3L
	87-001-731-080		ZENER,HZS6C2L
	87-017-161-080		ZENER,HZS7C2L
	87-020-465-080		DIODE,1SS133 (110MA)
	87-A40-465-090		DIODE,FR202
MAIN C.B			
C211	87-010-546-080		CAP, ELECT 0.33-50V
C212	87-010-546-080		CAP, ELECT 0.33-50V
C230	87-010-401-080		CAP, ELECT 1-50V
C233	87-010-546-080		CAP, ELECT 0.33-50V
C234	87-010-546-080		CAP, ELECT 0.33-50V
C235	87-A11-148-080		CAP,TC U 0.1-50 Z F
C236	87-A11-148-080		CAP,TC U 0.1-50 Z F
C237	87-010-370-080		CAP,E 330-6.3 SME
C238	87-010-263-080		CAP, ELECT 100-10V
C239	87-012-286-080		CAP, U 0.01-25
C240	87-012-286-080		CAP, U 0.01-25
C241	87-010-400-080		CAP, ELECT 0.47-50V
C242	87-010-400-080		CAP, ELECT 0.47-50V
C243	87-010-401-080		CAP, ELECT 1-50V
C244	87-010-401-080		CAP, ELECT 1-50V
C245	87-010-401-080		CAP, ELECT 1-50V
C246	87-010-401-080		CAP, ELECT 1-50V
C247	87-010-402-080		CAP, ELECT 2.2-50V
C248	87-010-402-080		CAP, ELECT 2.2-50V
C255	87-A12-090-080		CAP,E 4.7-50 SMG
C263	87-012-274-080		CHIP CAP,U 1000P-50B
C264	87-012-274-080		CHIP CAP,U 1000P-50B
C265	87-010-544-080		CAP, ELECT 0.1-50V
C266	87-010-544-080		CAP, ELECT 0.1-50V
C271	87-A10-730-080		CAP,E 1000-16 SMG<EXCEPT FD92USTF>
C271	87-A12-068-080		CAP,E 470-16 SMG<FD92USTF>
C272	87-A10-730-080		CAP,E 1000-16 SMG<EXCEPT FD92USTF>
C272	87-A12-068-080		CAP,E 470-16 SMG<FD92USTF>
C273	87-012-274-080		CHIP CAP,U 1000P-50B
C274	87-018-131-080		CAP, CER 1000P-50V
C275	87-012-274-080		CHIP CAP,U 1000P-50B
C277	87-010-404-080		CAP, ELECT 4.7-50V
C278	87-A12-062-080		CAP,E 100-10 SMG
C279	87-A12-062-080		CAP,E 100-10 SMG
C287	87-012-273-080		C-CAP,U 820P-50 B
C288	87-012-273-080		C-CAP,U 820P-50 B
C289	87-012-156-080		C-CAP,S 220P-50 CH
C290	87-012-156-080		C-CAP,S 220P-50 CH
C301	87-012-274-080		CHIP CAP,U 1000P-50B
C302	87-012-274-080		CHIP CAP,U 1000P-50B
C305	87-A12-062-080		CAP,E 100-10 SMG
C306	87-A12-062-080		CAP,E 100-10 SMG
C307	87-012-285-080		C-CAP,U 8200P-50 B
C308	87-012-285-080		C-CAP,U 8200P-50 B
C311	87-010-546-080		CAP, ELECT 0.33-50V
C312	87-010-546-080		CAP, ELECT 0.33-50V
C313	87-012-283-080		C-CAP,U 5600P-50 B
C314	87-012-283-080		C-CAP,U 5600P-50 B
C321	87-018-205-080		CAP, CERA-SOL 0.022
C323	87-012-271-080		CAP, U 560P-50
C324	87-012-271-080		CAP, U 560P-50
C331	87-018-126-080		CAP,TC-U 390P-50 B
C332	87-018-126-080		CAP,TC-U 390P-50 B
C333	87-012-275-080		C-CAP,U 1200P-50 B
C334	87-012-278-080		C-CAP,U 2200P-50 B
C336	87-018-134-080		CAPACITOR,TC-U 0.01-16
C337	87-012-279-080		C-CAP,U 2700P-50 B
C338	87-012-279-080		C-CAP,U 2700P-50 B
C339	87-012-279-080		C-CAP,U 2700P-50 B
C340	87-A12-691-040		CAP,E 22-16 M 5L R85S5
C341	87-010-787-080		CAP, U 0.022-25
C342	87-012-266-080		C-CAP,U 220P-50 B<EXCEPT FD92USTF>
C343	87-012-284-080		CAP, U 6800P-50<FD94EZSF>
C345	87-012-274-080		CHIP CAP,U 1000P-50B
C346	87-012-274-080		CHIP CAP,U 1000P-50B
C347	87-010-374-080		CAP, ELECT 47-10V
C348	87-012-274-080		CHIP CAP,U 1000P-50B
C350	87-012-275-080		C-CAP,U 1200P-50 B
C351	87-012-278-080		C-CAP,U 2200P-50 B
C352	87-012-284-080		CAP, U 6800P-50<FD94EZSF>
C354	87-010-555-040		CAP,E 100-10 GAS
C355	87-012-285-080		C-CAP,U 8200P-50 B
C356	87-012-285-080		C-CAP,U 8200P-50 B
C357	87-010-784-080		C-CAP,U 0.012-25 B
C358	87-010-784-080		C-CAP,U 0.012-25 B
C363	87-010-405-080		CAP, ELECT 10-50V

ELECTRICAL MAIN PARTS LIST-2/4

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C364	87-010-405-080		CAP, ELECT 10-50V
C367	87-012-273-080		C-CAP,U 820P-50 B
C368	87-012-273-080		C-CAP,U 820P-50 B
C369	87-012-193-080		C-CAP,U 82P-50 CH
C370	87-012-193-080		C-CAP,U 82P-50 CH
C373	87-010-401-080		CAP, ELECT 1-50V
C374	87-010-401-080		CAP, ELECT 1-50V
C382	87-010-401-080		CAP, ELECT 1-50V
C383	87-A12-063-080		CAP,E 220-10 SMG
C384	87-010-374-080		CAP, ELECT 47-10V
C387	87-012-266-080		C-CAP,U 220P-50 B<EXCEPT FD92USTF>
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-012-286-080		CAP, U 0.01-25
C403	87-A12-062-080		CAP,E 100-10 SMG
C404	87-A12-063-080		CAP,E 220-10 SMG
C405	87-012-286-080		CAP, U 0.01-25
C406	87-010-374-080		CAP, ELECT 47-10V
C407	87-012-274-080		CHIP CAP,U 1000P-50B
C408	87-010-787-080		CAP, U 0.022-25
C409	87-A12-063-080		CAP,E 220-10 SMG
C410	87-A12-062-080		CAP,E 100-10 SMG
C412	87-010-401-080		CAP, ELECT 1-50V
C413	87-A11-070-080		C-CAP,U 0.033-16 K B
C414	87-010-405-080		CAP, ELECT 10-50V
C416	87-010-545-080		CAP, ELECT 0.22-50V
C417	87-012-268-080		C-CAP,U 330P-50 B
C418	87-010-785-080		C-CAP,U0.015-25BK
C420	87-A11-070-080		C-CAP,U 0.033-16 K B
C422	87-012-279-080		C-CAP,U 2700P-50 B
C425	87-012-272-080		C-CAP,U 680P-50 B
C428	87-012-286-080		CAP, U 0.01-25
C429	87-012-282-080		CAP, U 4700P-50
C430	87-012-199-080		CAP 220P
C431	87-010-545-080		CAP, ELECT 0.22-50V
C432	87-010-374-080		CAP, ELECT 47-10V
C433	87-010-401-080		CAP, ELECT 1-50V
C434	87-012-280-080		CAP, U 3300P-50
C435	87-012-286-080		CAP, U 0.01-25
C436	87-010-374-080		CAP, ELECT 47-10V
C437	87-010-404-080		CAP, ELECT 4.7-50V
C439	87-012-274-080		CHIP CAP,U 1000P-50B
C440	87-012-162-080		C-CAP,U 1P-50 CK
C442	87-012-176-080		CAP 15P
C445	87-010-831-080		C-CAP,U,0.1-16F
C446	87-010-831-080		C-CAP,U,0.1-16F
C447	87-010-831-080		C-CAP,U,0.1-16F
C448	87-012-182-080		C-CAP,U 27P-50 CH
C451	87-012-199-080		CAP 220P
C455	87-A12-095-080		CAP,E 100-50 SMG
C457	87-012-176-080		CAP 15P
C458	87-012-176-080		CAP 15P
C459	87-A12-062-080		CAP,E 100-10 SMG
C460	87-010-197-080		CAP, CHIP 0.01 DM
C461	87-A11-132-080		CAP,TC U 0.01-50 K B
C462	87-A12-063-080		CAP,E 220-10 SMG
C463	87-A11-132-080		CAP,TC U 0.01-50 K B
C465	87-010-404-080		CAP, ELECT 4.7-50V
C466	87-010-831-080		C-CAP,U,0.1-16F
C467	87-A12-062-080		CAP,E 100-10 SMG
C469	87-A11-092-080		CAP,TC U 150P-50 J CH
C471	87-018-209-080		CAP, CER 0.1-50V
C472	87-018-209-080		CAP, CER 0.1-50V
C473	87-018-209-080		CAP, CER 0.1-50V
C474	87-018-209-080		CAP, CER 0.1-50V
C475	87-012-286-080		CAP, U 0.01-25
C476	87-A12-064-080		CAP,E 1000-10 SMG
C477	87-012-286-080		CAP, U 0.01-25
C478	87-A12-062-080		CAP,E 100-10 SMG
C479	87-012-286-080		CAP, U 0.01-25
C480	87-016-459-080		CAP,E 470-10 SMG
C481	87-010-405-080		CAP, ELECT 10-50V
C482	87-010-405-080		CAP, ELECT 10-50V
C489	87-018-209-080		CAP, CER 0.1-50V
C490	87-018-209-080		CAP, CER 0.1-50V
C491	87-A11-132-080		CAP,TC U 0.01-50 K B
C492	87-A12-064-080		CAP,E 1000-10 SMG
C493	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C494	87-A11-132-080		CAP,TC U 0.01-50 K B
C495	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C496	87-A11-057-080		C-CAP,U 0.1-16 K B
C501	87-010-831-080		C-CAP,U,0.1-16F
C502	87-012-195-080		C-CAP,U 100P-50CH
C503	87-012-195-080		C-CAP,U 100P-50CH
C504	87-012-195-080		C-CAP,U 100P-50CH
C505	87-012-195-080		C-CAP,U 100P-50CH
C506	87-012-195-080		C-CAP,U 100P-50CH
C520	87-010-405-080		CAP, ELECT 10-50V
⚠C521	87-A12-777-090		CAP,E 3300-25 M 85 SKR
C526	87-010-404-080		CAP, ELECT 4.7-50V
C527	87-010-401-080		CAP, ELECT 1-50V
C528	87-016-459-080		CAP,E 470-10 SMG
C529	87-A12-062-080		CAP,E 100-10 SMG
C530	87-A12-063-080		CAP,E 220-10 SMG
C531	87-010-265-080		CAP, ELECT 33-16V
C536	87-A12-062-080		CAP,E 100-10 SMG
CN203	87-049-469-010		CONN,4P V
CN205	87-A60-619-010		CONN,2P V 2MM JMT
CN301	87-A60-624-010		CONN,7P V 2MM JMT
CN401	87-A60-424-010		CONN,16P V TOC-B
CN501	87-049-919-010		CONN,3P EH V WHT
CN801	87-A60-054-010		CONN,14P V 9604S-14C
CN802	87-A60-054-010		CONN,14P V 9604S-14C
CNA220	88-805-063-010		CONN ASSY,6P 300MM
CNA402	88-805-061-630		CONN ASSY,6P 160MM
J201	87-A60-420-010		JACK,3.5 ST (MSC)
⚠J701	87-A61-455-010		JACK AC E PSE27<EXCEPT FD92USTF>
⚠J701	87-A61-177-010		JACK AC U W/SW<FD92USTF>
JW216	87-003-098-080		COIL,2.2UH<FD92USTF>
JW437	87-003-098-080		COIL,2.2UH
JW447	87-003-098-080		COIL,2.2UH
L201	87-003-097-080		COIL,1UH
L202	87-003-097-080		COIL,1UH
L331	87-007-342-010		COIL,OSC 85K BIAS
L401	87-005-152-080		COIL,10UH
L402	87-003-146-080		COIL,15UH LAL02
L404	87-005-239-080		COIL,100UH
L405	87-003-098-080		COIL,2.2UH
R561	87-029-125-010		FUSE RESISTOR,1/4-1<FD92USTF>
SFR430	87-024-437-080		SFR100K,RH063EC
X401	81-592-641-010		VIB,CER 16.93MHZ
FRONT C.B			
C101	87-010-553-040		CAP,E 47-16 GAS<FD92USTF>
C102	87-010-553-040		CAP,E 47-16 GAS<FD92USTF>
C103	87-010-831-080		C-CAP,U,0.1-16F<FD92USTF>
C104	87-010-831-080		C-CAP,U,0.1-16F<FD92USTF>
C105	87-010-831-080		C-CAP,U,0.1-16F<FD92USTF>
C106	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C107	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C108	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C109	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C110	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C111	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C112	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C113	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C114	87-012-195-080		C-CAP,U 100P-50CH<FD92USTF>
C115	87-012-195-080		C-CAP,U 100P-50CH<FD92USTF>
C116	87-012-195-080		C-CAP,U 100P-50CH<FD92USTF>
C120	87-010-178-080		CHIP CAP 1000P

ELECTRICAL MAIN PARTS LIST-3/4

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C201	87-012-286-080		CAP, U 0.01-25
C202	87-A12-686-040		CAP,E 2.2-50 M 5L R85S5
C203	87-A12-686-040		CAP,E 2.2-50 M 5L R85S5
C204	87-A12-683-040		CAP,E 0.47-50 M 5L R85S5
C205	87-010-831-080		C-CAP,U,0.1-16F
C206	87-010-178-080		CHIP CAP 1000P
C221	87-010-562-040		CAP,E 220-10 GAS
C222	87-010-196-080		CHIP CAPACITOR,0.1-25
C223	87-010-550-040		CAP,E 100-6.3 GAS
C225	87-010-805-080		CAP, S 1-16
C226	87-010-178-080		CHIP CAP 1000P
C227	87-012-286-080		CAP, U 0.01-25
C228	87-012-178-080		C-CAP,U 18P-50 CH
C229	87-012-180-080		C-CAP,U 22P-50 CH
C230	87-012-186-080		C-CAP,U 39P-50 CH
C231	87-012-186-080		C-CAP,U 39P-50 CH
C232	87-012-176-080		CAP 15P
C233	87-A10-047-080		C-CAP,U 1-10 Z F
C241	87-A12-689-040		CAP,E 10-16 M 5L R85S5
C242	87-012-274-080		CHIP CAP,U 1000P-50B
C261	87-012-286-080		CAP, U 0.01-25
C331	87-012-286-080		CAP, U 0.01-25
C332	87-012-286-080		CAP, U 0.01-25
C333	87-A12-689-040		CAP,E 10-16 M 5L R85S5
C334	87-A12-689-040		CAP,E 10-16 M 5L R85S5
C335	87-010-831-080		C-CAP,U,0.1-16F
C336	87-010-831-080		C-CAP,U,0.1-16F
C337	87-010-549-040		CAP,E 47-6.3 GAS
C338	87-010-549-040		CAP,E 47-6.3 GAS
C351	87-010-555-040		CAP,E 100-10 GAS
C352	87-012-286-080		CAP, U 0.01-25
C401	87-010-831-080		C-CAP,U,0.1-16F
C403	87-010-982-040		CAP,E 33-25 GAS
C511	87-010-263-040		CAP,E 100-10
C512	87-A12-063-040		CAP,E 220-10 SMG
C515	87-012-286-080		CAP, U 0.01-25
C801	87-010-555-040		CAP,E 100-10 GAS<FD92USTF>
C802	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C803	87-010-560-040		CAP,E 10-50 GAS<FD92USTF>
C804	87-012-286-080		CAP, U 0.01-25<FD92USTF>
C805	87-A11-144-080		CAP,TC U 0.1-50 K B<FD92USTF>
C806	87-A11-144-080		CAP,TC U 0.1-50 K B<FD92USTF>
C807	87-010-401-040		CAP,E 1-50 SME<FD92USTF>
C808	87-010-401-040		CAP,E 1-50 SME<FD92USTF>
C809	87-010-494-040		CAP,E 1-50 GAS<FD92USTF>
C810	87-010-497-040		CAP,E 4.7-35 GAS<FD92USTF>
C811	87-010-497-040		CAP,E 4.7-35 GAS<FD92USTF>
CN501	87-099-755-010		CONN,14P H 9604
CN502	87-099-755-010		CONN,14P H 9604
CNA501	88-803-043-660		CONN ASSY,4P 360MM
CNA502	8B-CH4-653-010		CONN ASSY,9P H FR-DECK
D101	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D102	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D103	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D104	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D105	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D106	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D107	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D108	87-A41-061-010		LED,333-2UYOC/S530-A2 Y ORAG<FD92USTF>
D333	87-A92-157-010		LED,SMLU1BE16C-S
D351	8A-CDA-646-010		LED,6224-10GD GRN
L222	87-003-097-080		COIL,1UH
LCD301	8B-CH4-605-010		LCD,AIW4267BCH-4
R609	87-003-097-080		COIL,1UH
S301	87-A91-704-080		SW,TACT EVQ 214 05R
S302	87-A91-704-080		SW,TACT EVQ 214 05R
S303	87-A91-704-080		SW,TACT EVQ 214 05R
S304	87-A91-704-080		SW,TACT EVQ 214 05R
S305	87-A91-704-080		SW,TACT EVQ 214 05R
S306	87-A91-704-080		SW,TACT EVQ 214 05R
S307	87-A91-704-080		SW,TACT EVQ 214 05R
S308	87-A91-704-080		SW,TACT EVQ 214 05R
S311	87-A91-704-080		SW,TACT EVQ 214 05R
S312	87-A91-704-080		SW,TACT EVQ 214 05R
S313	87-A91-704-080		SW,TACT EVQ 214 05R
S314	87-A91-704-080		SW,TACT EVQ 214 05R
S315	87-A91-704-080		SW,TACT EVQ 214 05R
S316	87-A91-704-080		SW,TACT EVQ 214 05R
S317	87-A91-704-080		SW,TACT EVQ 214 05R
S318	87-A91-704-080		SW,TACT EVQ 214 05R
S319	87-A91-704-080		SW,TACT EVQ 214 05R
X201	87-030-273-010		VIB,XTAL 32.768K5PPM
X202	87-A70-070-080		VIB,CER 5.76MHZ CRHF

POWER C.B

C701	87-018-205-080		CAP, CERA-SOL 0.022
C702	87-018-205-080		CAP, CERA-SOL 0.022
C703	87-018-205-080		CAP, CERA-SOL 0.022
C704	87-018-205-080		CAP, CERA-SOL 0.022
CNA701	8B-CH4-662-010		CONN ASSY,3P V PWR
⚠F701	87-A91-216-010		FUSE,2.5A 250V T 50T<EXCEPT FD92USTF>
FC701	87-033-213-080		CLAMP, FUSE<EXCEPT FD92USTF>
FC702	87-033-213-080		CLAMP, FUSE<EXCEPT FD92USTF>

TUNER C.B

C1	87-010-312-080		C-CAP,S 15P-50 CH
C2	87-010-316-080		C-CAP,S 33P-50 CH
C3	87-010-312-080		C-CAP,S 15P-50 CH
C5	87-016-669-080		C-CAP,S 0.1-25 K B<EXCEPT FD94EZSF>
C5	87-012-360-080		CAP, CER 1-10<FD94EZSF>
C6	87-010-313-080		CAP, CHIP 18P<EXCEPT FD94EZSF>
C7	87-012-140-080		CAP 470P
C8	87-012-349-080		C-CAP,S 1000P-50 CH
C10	87-010-197-080		CAP, CHIP 0.01 DM
C11	87-010-197-080		CAP, CHIP 0.01 DM
C12	87-010-197-080		CAP, CHIP 0.01 DM
C13	87-010-150-080		C-CAP,S 6P-50 CH
C14	87-012-157-080		C-CAP,S 330P-50 CH
C15	87-010-178-080		CHIP CAP 1000P
C16	87-010-374-080		CAP, ELECT 47-10V
C17	87-010-198-080		CAP, CHIP 0.022
C18	87-010-992-080		C-CAP,S 0.047-25 B
C19	87-A12-062-080		CAP,E 100-10 SMG
C20	87-010-404-080		CAP, ELECT 4.7-50V
C21	87-010-197-080		CAP, CHIP 0.01 DM
C22	87-010-197-080		CAP, CHIP 0.01 DM
C23	87-010-197-080		CAP, CHIP 0.01 DM
C24	87-012-157-080		C-CAP,S 330P-50 CH
C25	87-016-460-080		C-CAP,S 0.22-16 B
C27	87-A11-067-080		C-CAP,S 1-10 K B
C28	87-016-669-080		C-CAP,S 0.1-25 K B
C29	87-016-669-080		C-CAP,S 0.1-25 K B
C30	87-010-220-080		C-CAP,S 0.018-25 B<EXCEPT FD92USTF>
C30	87-012-365-080		C-CAP,S 0.027-25VBK<FD92USTF>
C31	87-010-220-080		C-CAP,S 0.018-25 B<EXCEPT FD92USTF>
C31	87-012-365-080		C-CAP,S 0.027-25VBK<FD92USTF>
C33	87-012-358-080		C-CAP,S 0.47-10 F Z
C34	87-012-358-080		C-CAP,S 0.47-10 F Z
C35	87-010-197-080		CAP, CHIP 0.01 DM
C36	87-A12-062-080		CAP,E 100-10 SMG
C37	87-010-197-080		CAP, CHIP 0.01 DM
C38	87-A12-062-080		CAP,E 100-10 SMG
C39	87-010-404-080		CAP, ELECT 4.7-50V
C40	87-010-197-080		CAP, CHIP 0.01 DM
C41	87-010-178-080		CHIP CAP 1000P
C42	87-010-178-080		CHIP CAP 1000P
C43	87-010-178-080		CHIP CAP 1000P
C44	87-010-312-080		C-CAP,S 15P-50 CH<FD92USTF>

ELECTRICAL MAIN PARTS LIST-4/4

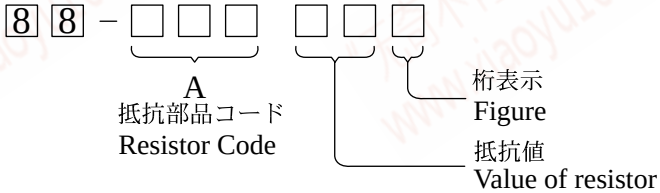
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C44	87-010-311-080		CAP 12P<EXCEPT FD92USTF>
C45	87-010-312-080		C-CAP,S 15P-50 CH
C46	87-010-197-080		CAP, CHIP 0.01 DM
C47	87-010-197-080		CAP, CHIP 0.01 DM
C48	87-010-197-080		CAP, CHIP 0.01 DM
C49	87-012-140-080		CAP 470P
C50	87-010-197-080		CAP, CHIP 0.01 DM
C51	87-010-316-080		C-CAP,S 33P-50 CH<FD94EZSF>
C52	87-010-197-080		CAP, CHIP 0.01 DM<FD94EZSF>
C53	87-010-197-080		CAP, CHIP 0.01 DM<FD94EZSF>
C54	87-010-177-080		C-CAP,S 820P-50 SL<FD94EZSF>
C55	87-010-197-080		CAP, CHIP 0.01 DM<FD94EZSF>
C56	87-010-312-080		C-CAP,S 15P-50 CH<FD94EZSF>
C71	87-010-197-080		CAP, CHIP 0.01 DM
C72	87-A12-062-080		CAP,E 100-10 SMG
C73	87-010-197-080		CAP, CHIP 0.01 DM
C75	87-010-197-080		CAP, CHIP 0.01 DM
C91	87-012-140-080		CAP 470P<FD92USTF>
C92	87-010-197-080		CAP, CHIP 0.01 DM
C93	87-010-197-080		CAP, CHIP 0.01 DM
CF2	87-008-261-010		FILTER, SFE10.7MA5-A
CF3	87-008-261-010		FILTER, SFE10.7MA5-A
CN2	87-A60-623-010		CONN,6P V 2MM JMT
CN3	87-A60-621-010		CONN,4P V 2MM JMT
L2	87-A50-560-010		COIL,FM BPF(ACD)
L4	87-A50-420-010		COIL,MW OSC(SYN)
L5	87-A50-566-010		COIL,FM RF EX(ACH)
L6	87-A50-567-010		COIL,FM OSC(ACH)
L7	87-A91-308-010		FLTR,PCFAZH- 450T (TOK)
L8	87-005-849-080		COIL,10UH(CECS)
L51	87-A50-421-010		COIL,LW OSC(SYN)<FD94EZSF>
L003	8A-CH4-670-010		BAR-ANT,MW 2B-ACH(COI)<EXCEPT FD94EZSF>
L003	8A-CH4-671-010		BAR-ANT,MW/LW 3B-ACH(COI)<FD94EZSF>
TC1	87-011-254-080		TRIMER,20P LAR
TC51	87-A91-659-010		TRIMMER,50P 4.0X4.5 ECRL<FD94EZSF>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
X1	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
SPL C.B			
C293	87-010-133-080		CAP, ELECT 2.2-50V
CN291	87-A60-619-010		CONN,2P V 2MM JMT
CNA203	8B-CH4-655-010		CONN ASSY,4P V SP
SPR C.B			
C294	87-010-133-080		CAP, ELECT 2.2-50V
CN292	87-A60-619-010		CONN,2P V 2MM JMT
DECK C.B			
CN1	87-009-352-010		CONN,9P PH H
CRD1	82-ZM1-625-010		RBN-CORD,4P-55
M1	87-045-347-010		MOT,SHU2L 70
SFR1	87-024-581-010		SFR,3.3K DIA6V K0A
SOL1	82-ZM3-628-010		SOL ASSY,23 SO
SW2	87-036-110-010		PUSH SWITCH
SW3	87-036-110-010		PUSH SWITCH
SW5	87-036-110-010		PUSH SWITCH
SW6	87-A90-248-010		SW,MICRO ESE11SH2CXQ
MOTOR C.B			
CN1	87-A60-670-010		CONN,6P H 2MM JMT
M1	87-A91-973-010		MOT,MDN4RA3FTAS1
M2	87-045-363-010		MOT,MDN4RA3ETA1
SW1	87-A90-042-010		SW,LEAF MSW-17310MVP0

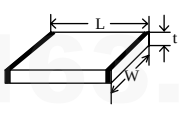
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

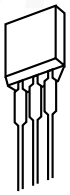
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

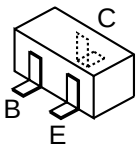
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION-1/1

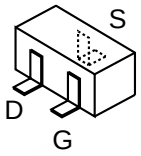


2SA933

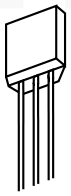
2SA952
2SA1296
2SC1740
2SC2001
CC5551
KTC3198
2SA1015
2SC5343
2SA19790



2SA1162
2SC2714
DTA114YK
DTC114YK
DTC124XK
DTC144EK



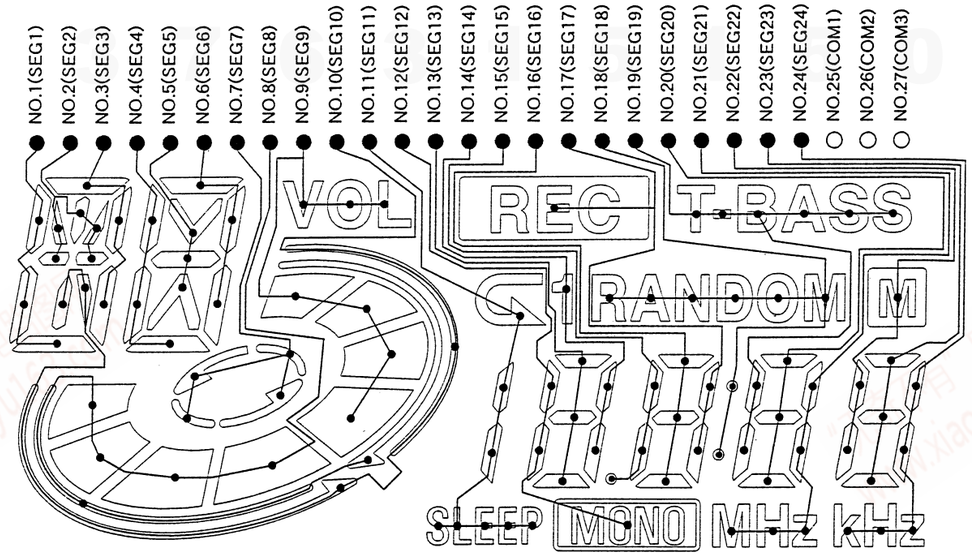
2SK302GR

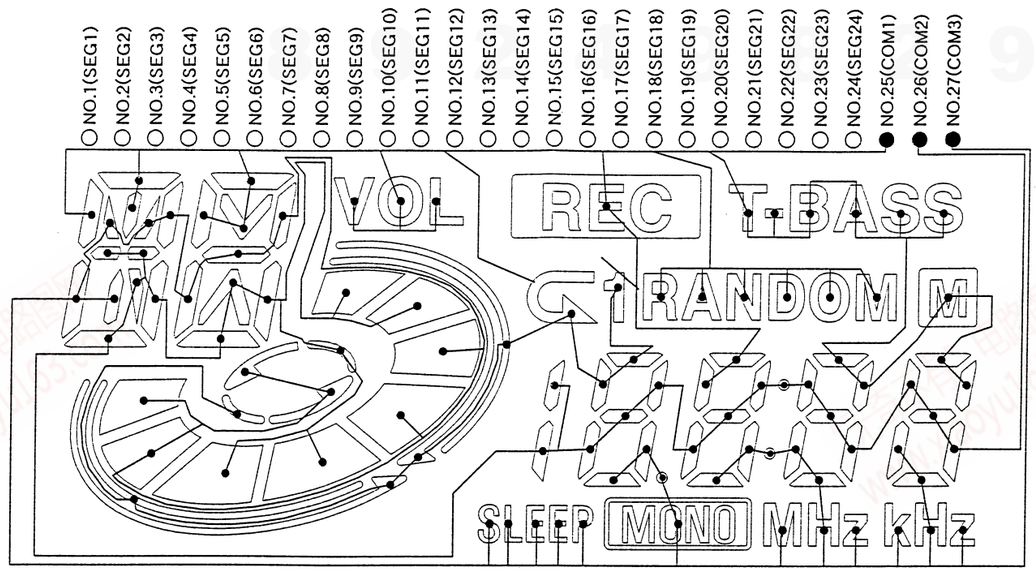


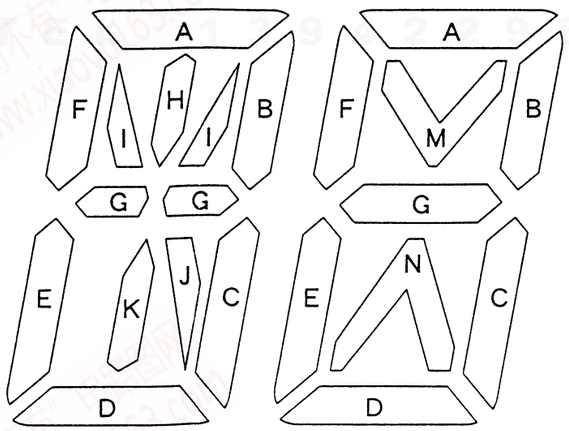
2SK2541

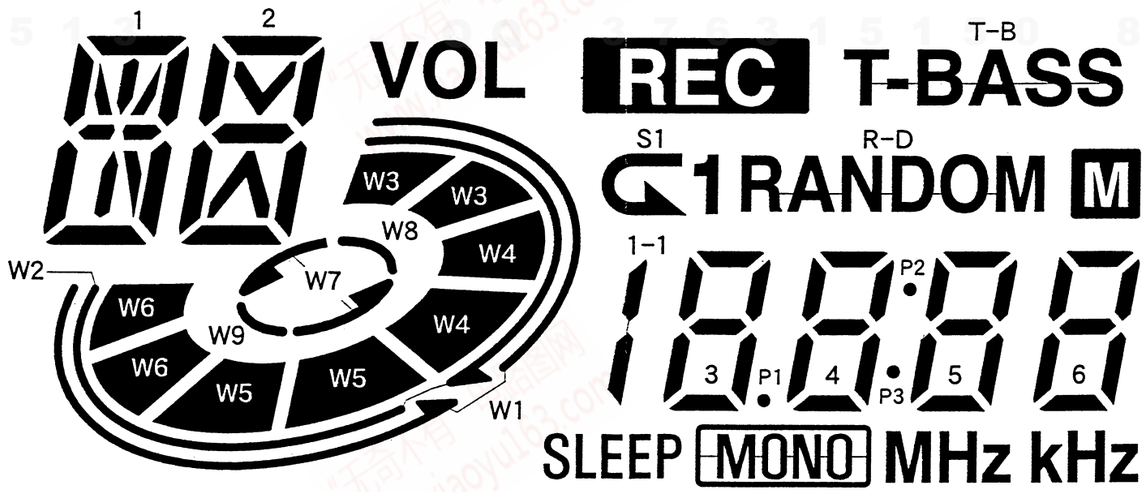
FL (LCD, AIW4267BCH-4) GRID ASSIGNMENT/ANODE CONNECTION-1/1

GRID ASSIGNMENT





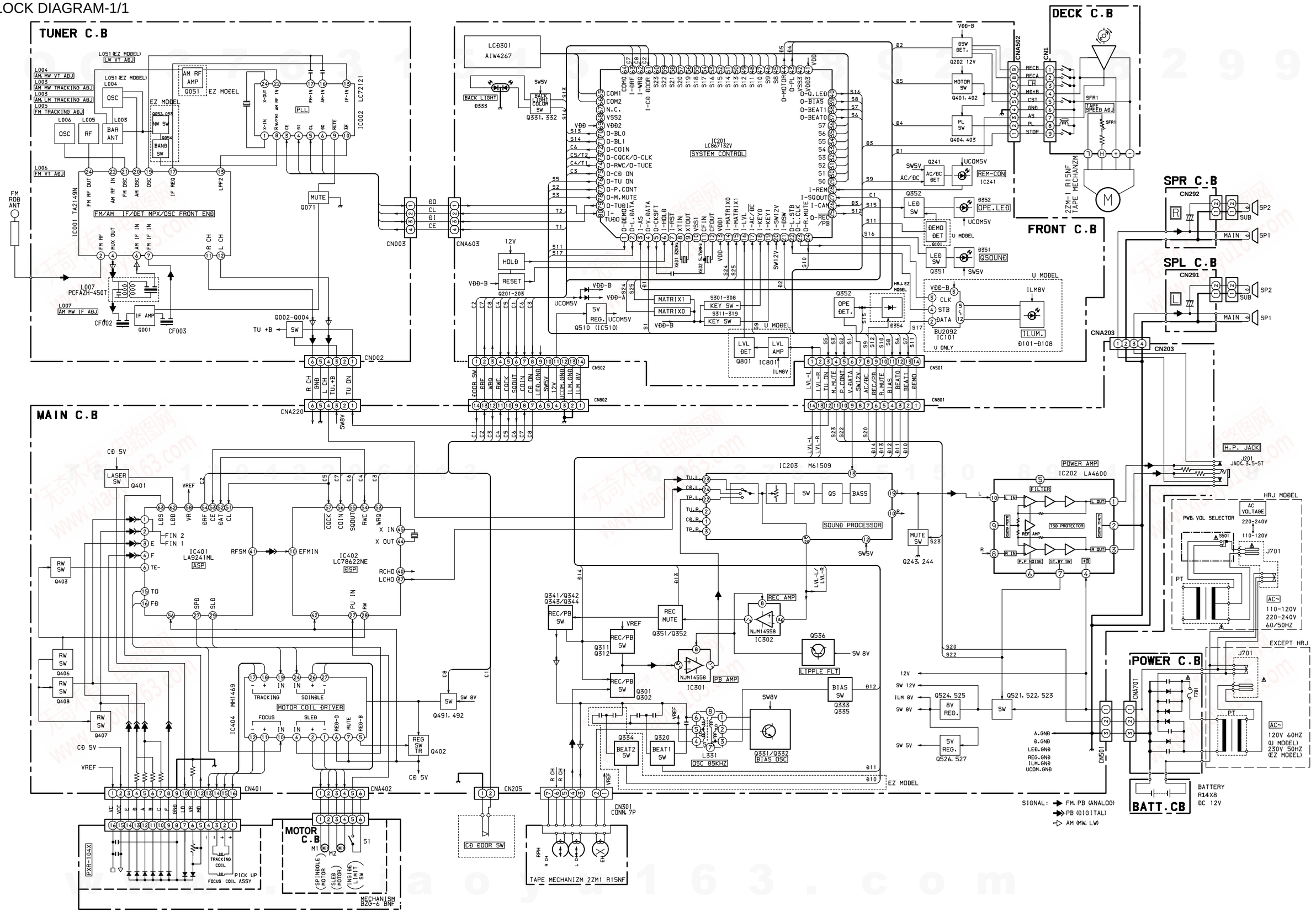




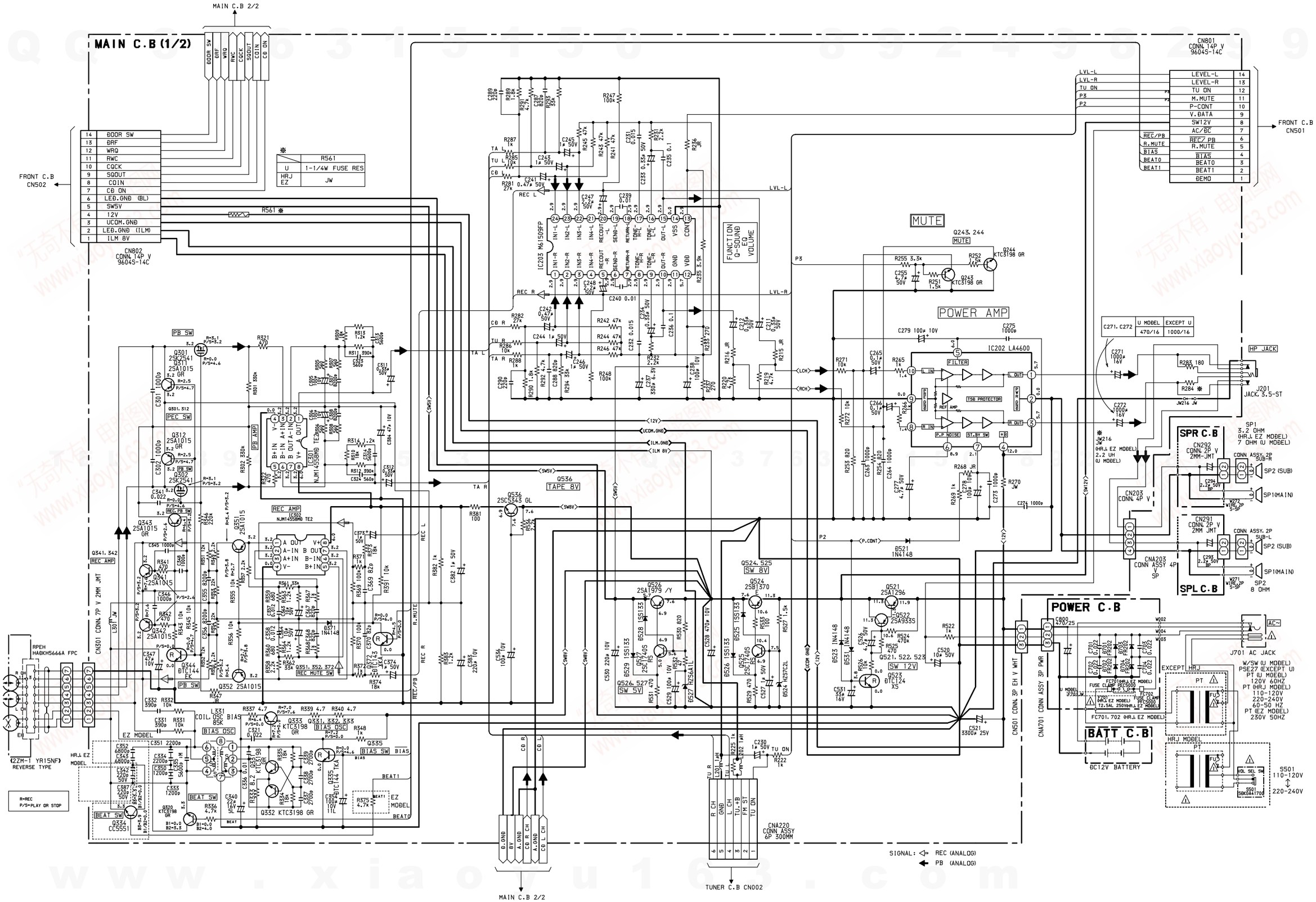
ANODE CONNECTION

NO	COM1	COM2	COM3
1	1F	1D	1E
2	1H	1G	1I
3	1A	1C	1B
4	2F	2D	2E
5	2M	2N	2G
6	2A	2C	2B
7	W9	W8	W7
8	W2	W5	W6
9	VOL	W3	W4
10	W1	1J	1K
11	S1	1-1	SLEEP
12	3F	3E	MONO
13	3A	3G	3D
14	1	3B	3C
15	4F	4E	P1
16	4A	4G	4D
17	REC	4B	4C
18	R-D	P2	P3
19	T-B	5F	5E
20	5A	5G	5D
21	5B	5C	MHz
22	M	6F	6E
23	6A	6G	6D
24	6B	6C	KHz
25	COM1	——	——
26	——	COM2	——
27	——	——	COM3

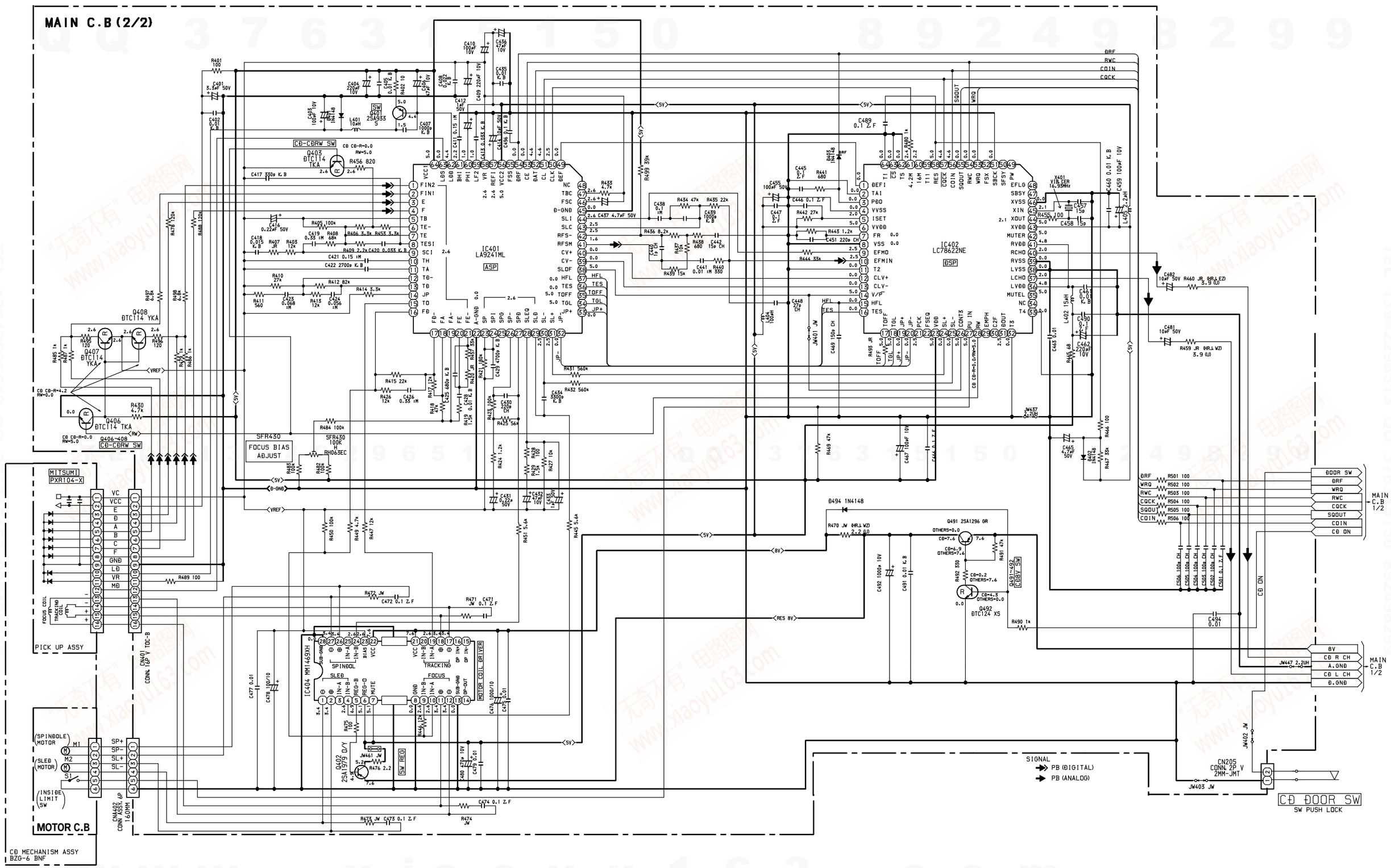
BLOCK DIAGRAM-1/1



SCHEMATIC DIAGRAM-1/5 (MAIN)

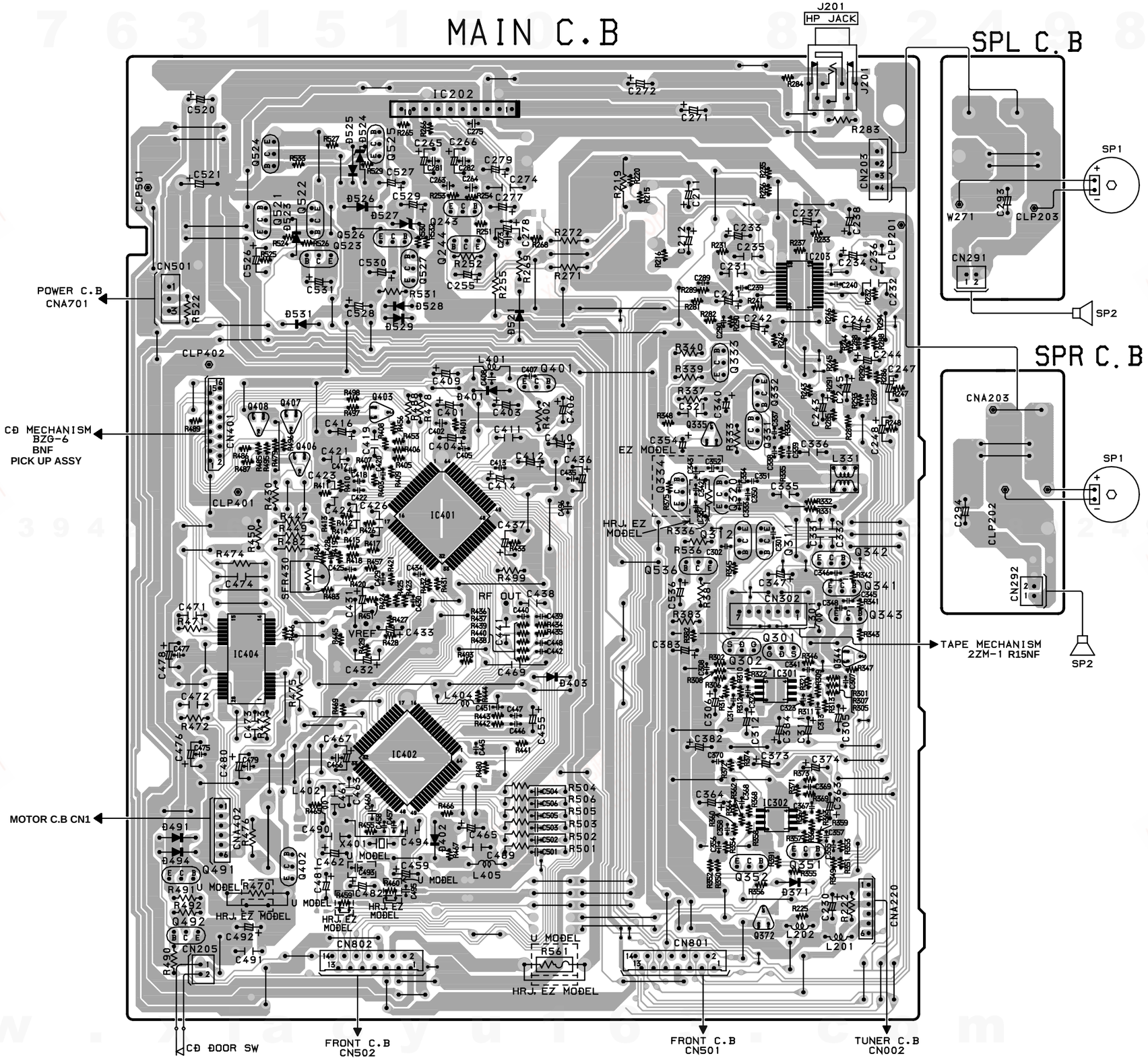


SCHEMATIC DIAGRAM-2/5 (CD)

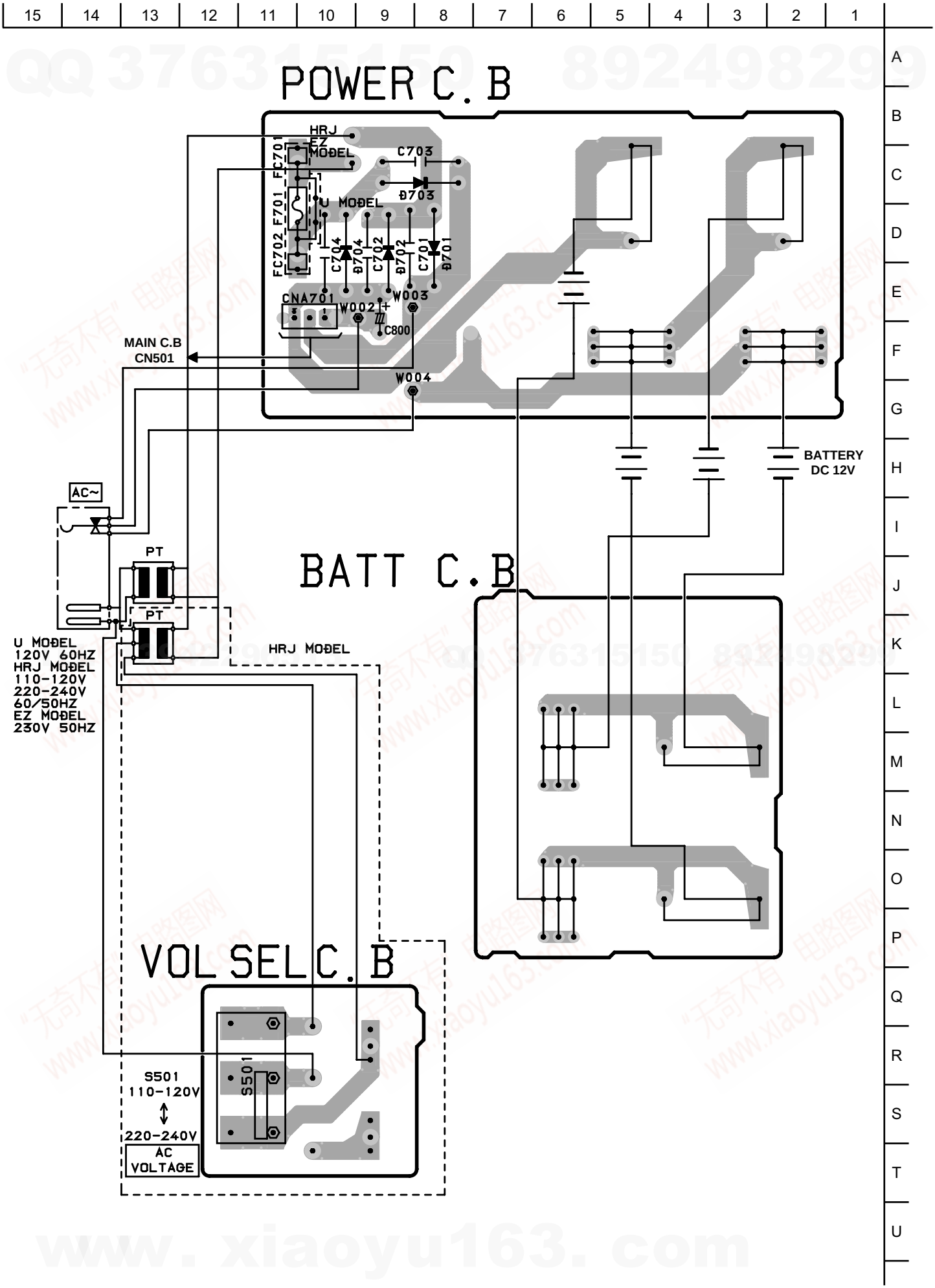


32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

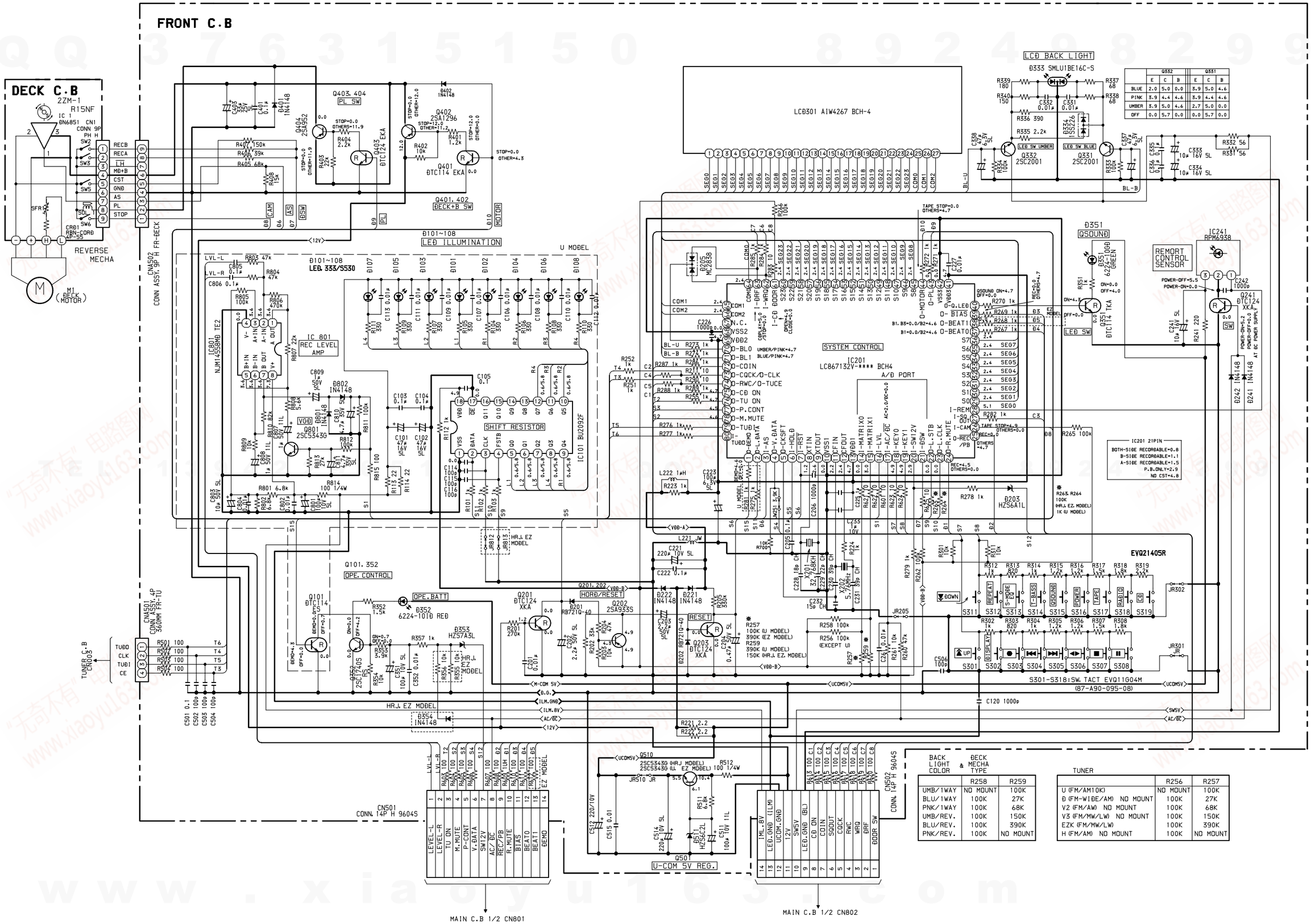
A B C D E F G H I J K L M N O P Q R S T U



WIRING-2/6 (POWER, BATT, VOL SEL)



SCHEMATIC DIAGRAM-3/5 (FRONT)



	Q332			Q331		
	E	C	B	E	C	B
BLUE	2.0	5.0	0.0	3.9	5.0	4.6
PINK	3.9	4.4	4.6	3.9	4.4	4.6
UMBER	3.9	5.0	4.6	2.7	5.0	0.0
OFF	0.0	5.7	0.0	0.0	5.7	0.0

BACK LIGHT COLOR & ĐECK MECHA TYPE

	R258	R259
UMB/1WAY	NO MOUNT	100K
BLU/1WAY	100K	27K
PNK/1WAY	100K	68K
UMB/REV.	100K	150K
BLU/REV.	100K	390K
PNK/REV.	100K	NO MOUNT

TUNER

	R256	R257
U (FM/AM10K)	NO MOUNT	100K
Đ (FM-W1ĐE/AM) NO MOUNT	100K	27K
V2 (FM/AW) NO MOUNT	100K	68K
V3 (FM/MW/LW) NO MOUNT	100K	150K
EZK (FM/MW/LW)	100K	390K
H (FM/AM) NO MOUNT	100K	NO MOUNT

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

A B C D E F G H I J K L M N O P Q R S T U

FRONT C.B

MAIN C.B CN802

MAIN C.B CN801

ĐECK C.B CN1

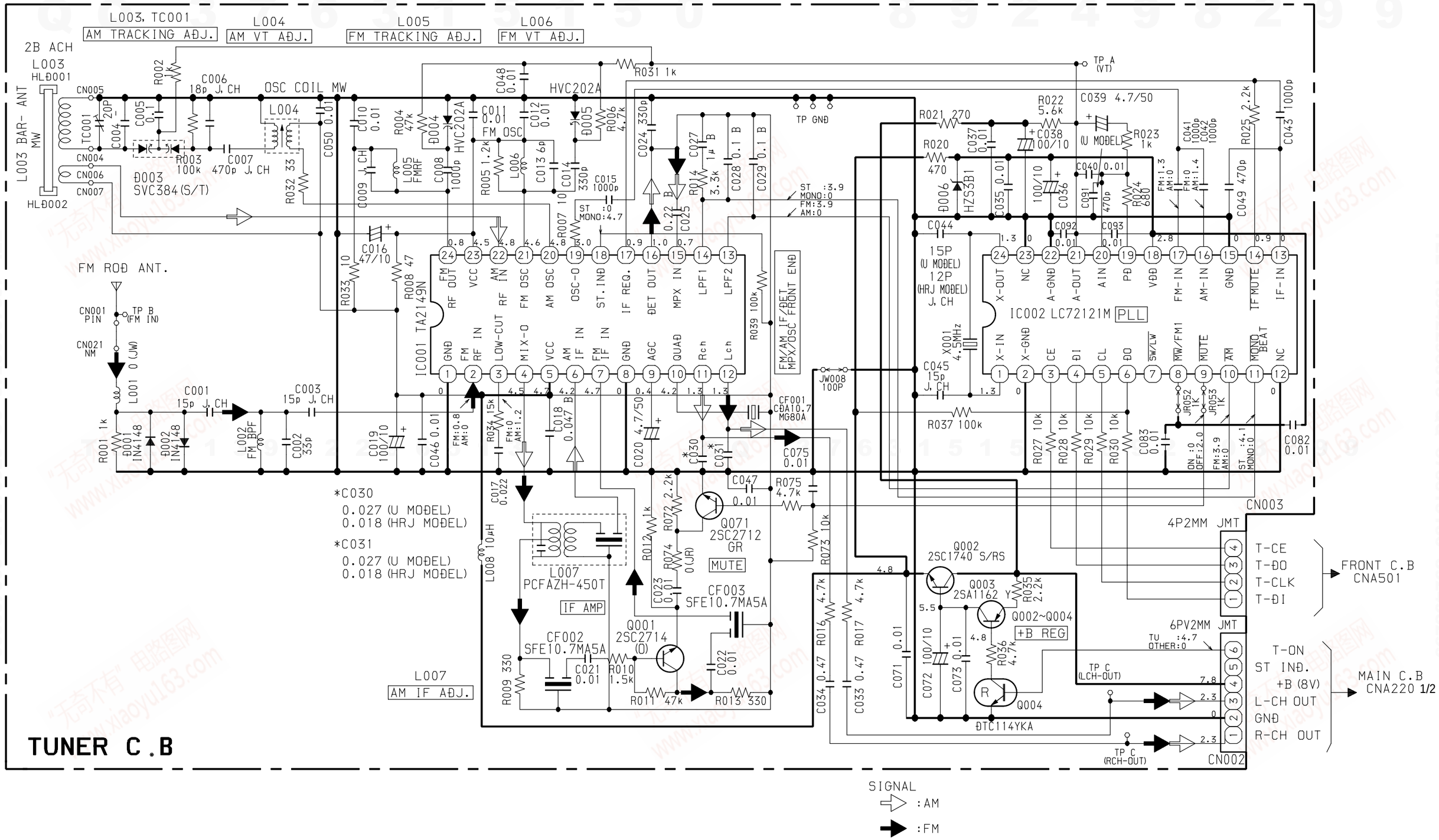
TUNER C.B CN003

IC801 C805 C806 U MODEL R814 R512 Q510 C512 C801 S306 Q801 PLAY DIR PRESET C809 S305 S304 S307 C811 C101 C102 STOP/CLEAR S308 PAUSE/SET

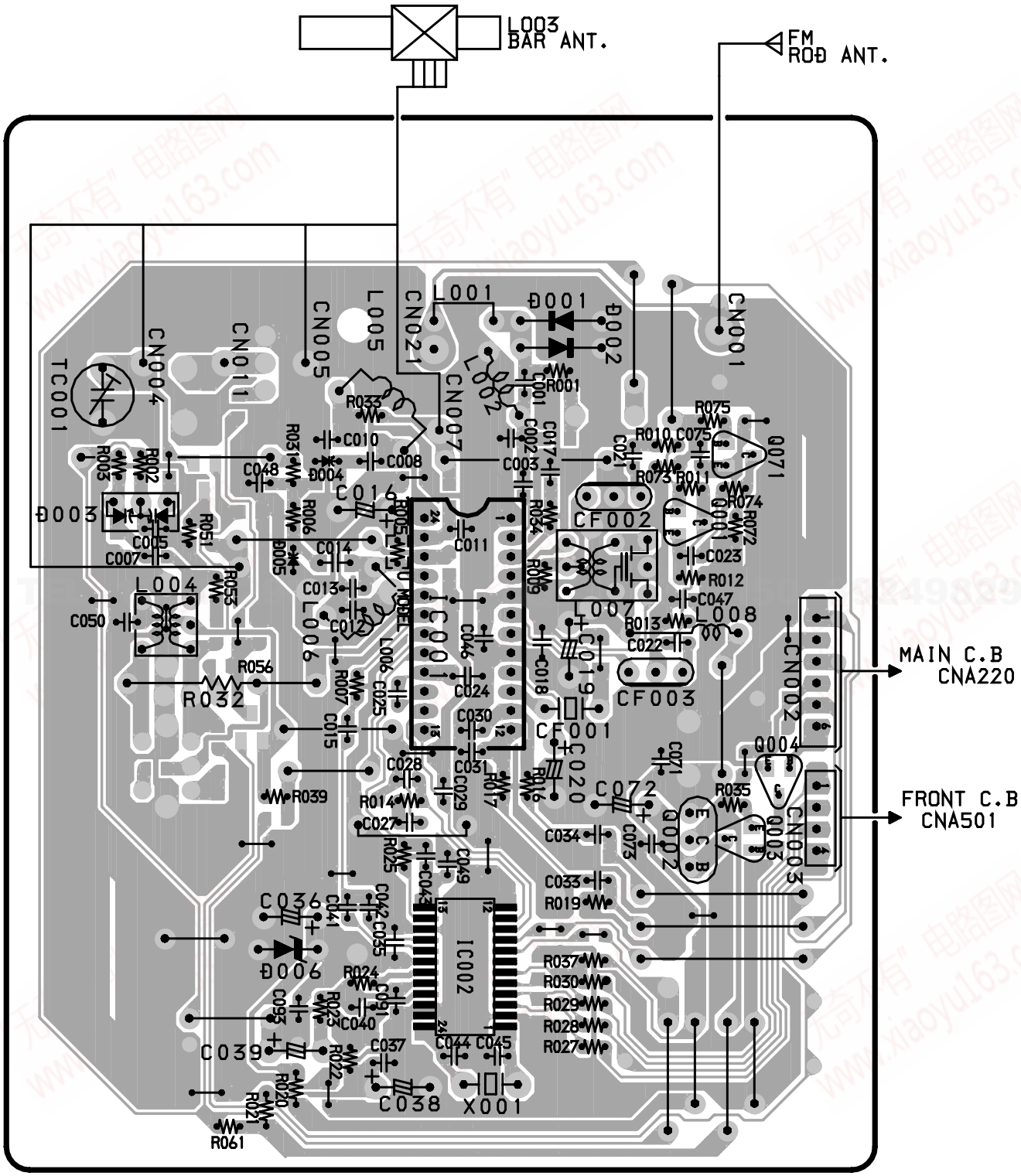
CN502 LCDĐ301 IC241 Đ242 Q241 R283 R285 R284 R266 IC201 R241 R251 Đ241 S301 UP DISPLAY S302 S303 Đ101~108 ILLUMINATION U MODEL ONLY Đ108 IC101 Đ104 Đ106 Đ102 Đ103 Đ107 S311 DOWN

Đ353 CN501 HRJ EZ MODEL C351 EZ MODEL Đ203 C337 C338 Đ352 OPE BATT LCĐ BACK LIGHT Q SOUND Đ351 C333 C334 S319 Đ354 HRJ EZMODEL Đ204 Q332 Q331 TUNER S318 Đ201 Q201 C202 Đ222 C221 L222 Đ221 C222 C223 L221 Đ202 3-MODE EQ Q203 S313 REPEAT S312 Đ105 CNA502 Đ401 Q101 TAPE S317 Q404 Đ402 Q402 C403 POWER S316 Q401 Q403 C401 Q200 S314 T-BASS Q SOUND S315 CNA501

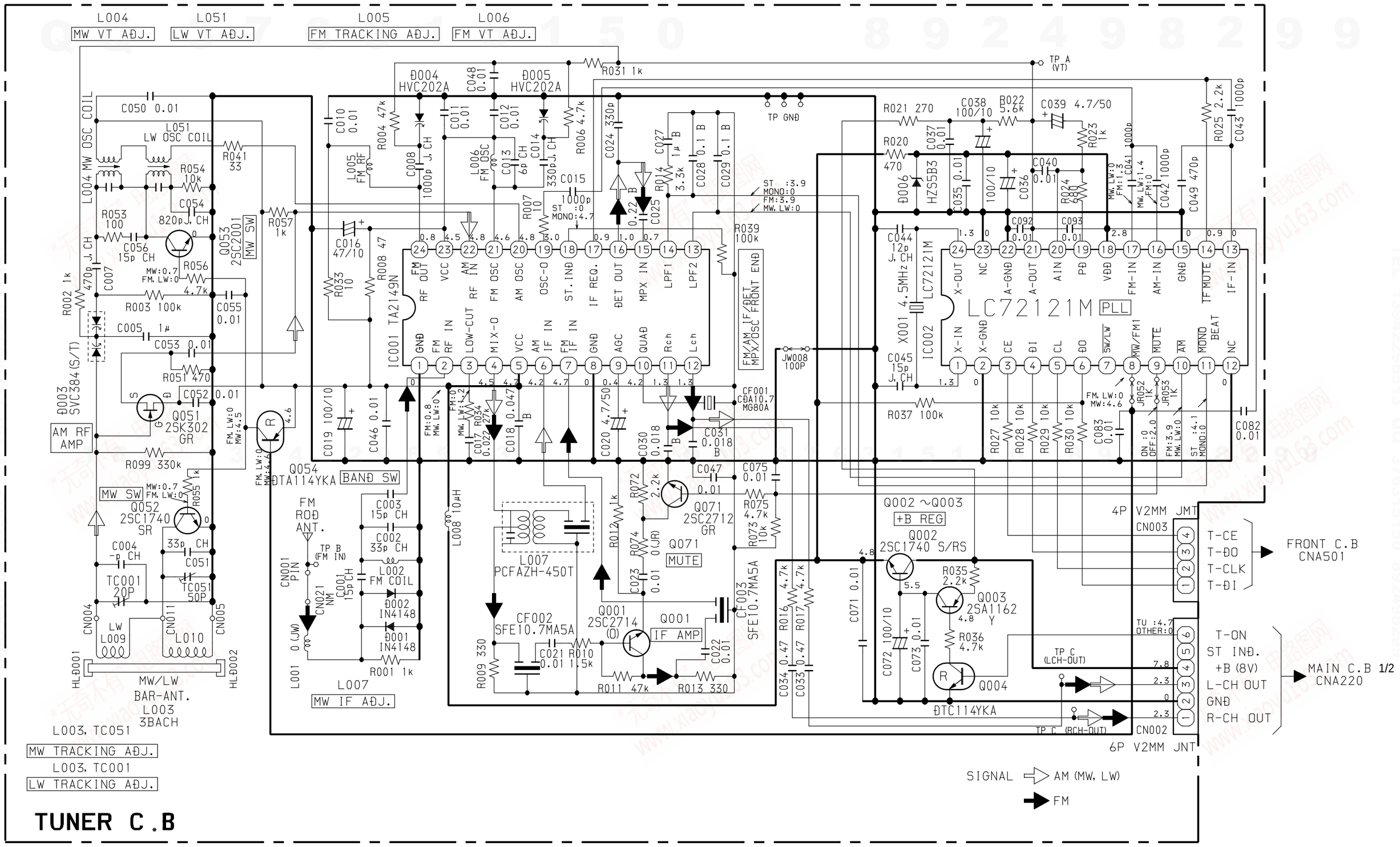
SCHEMATIC DIAGRAM-4/5 (TUNER HRJ, U)



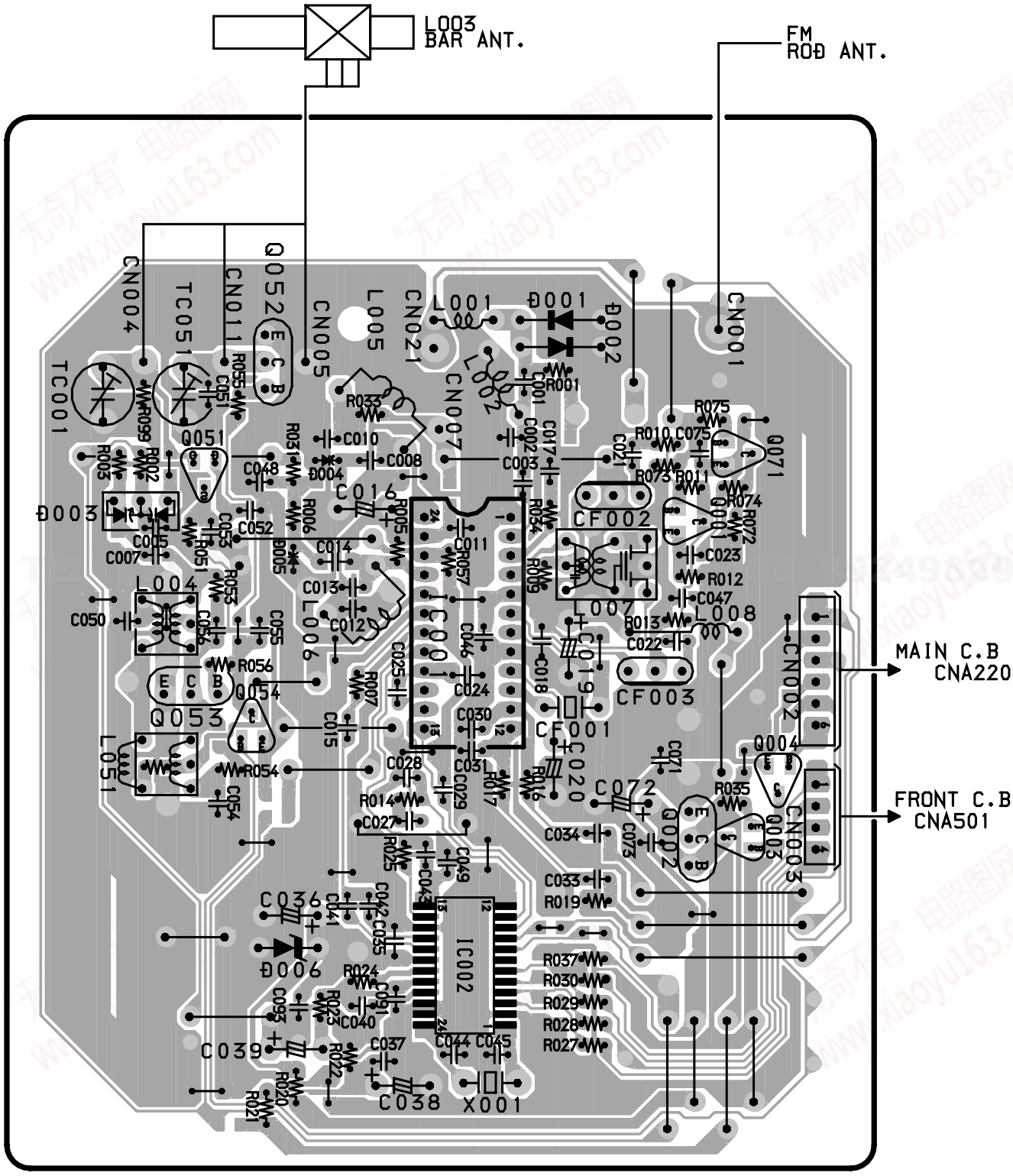
TUNER C.B

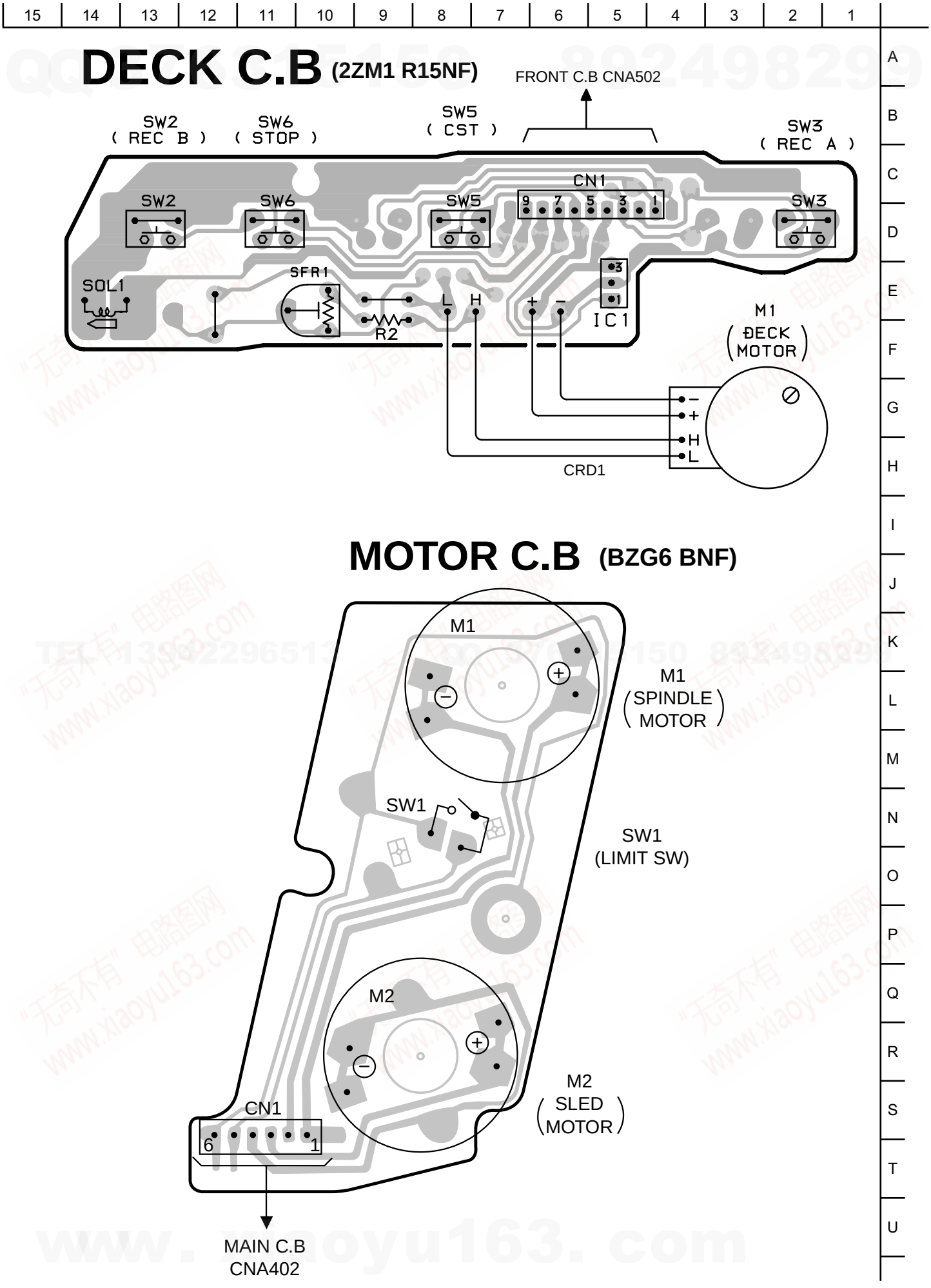


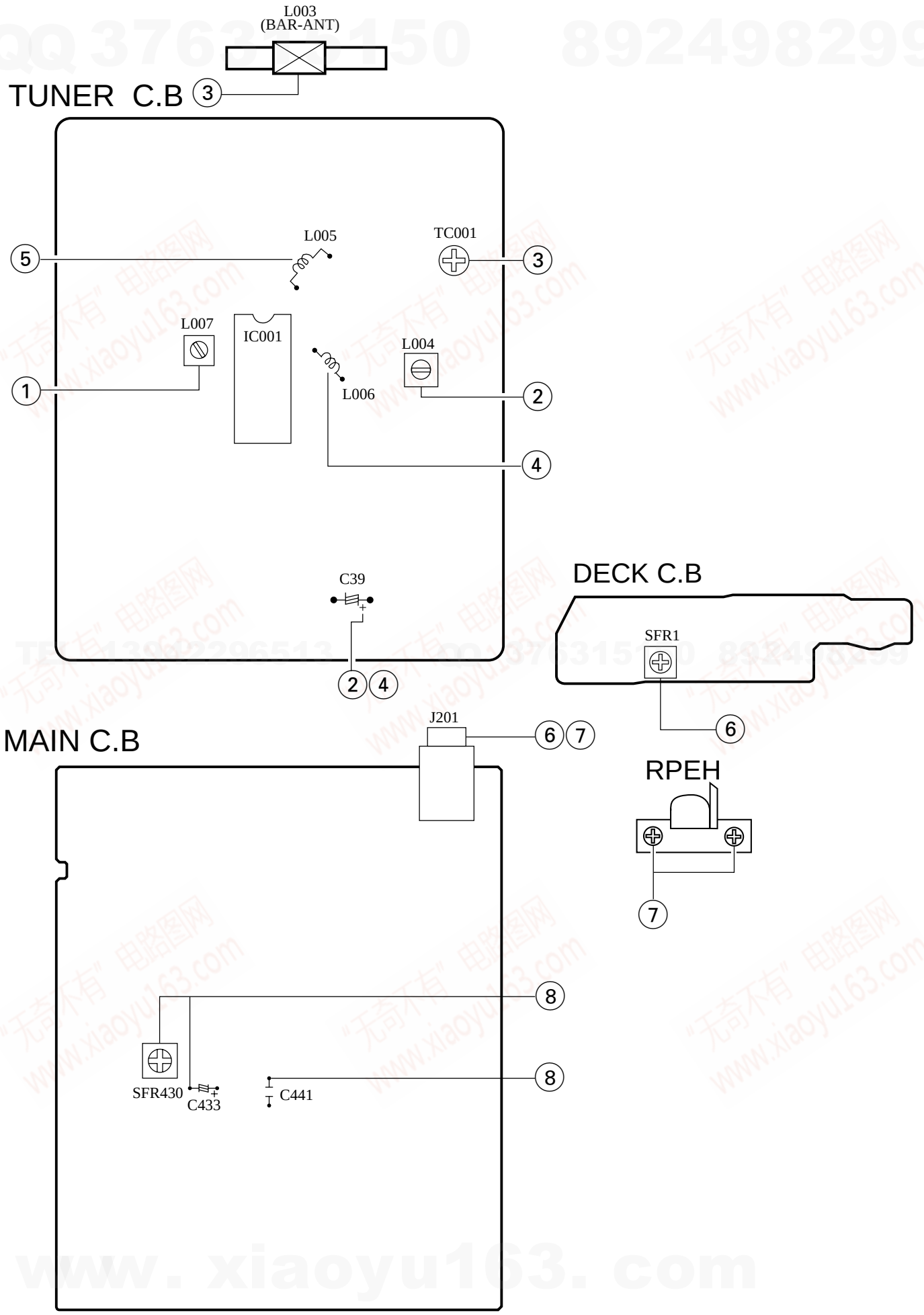
SCHEMATIC DIAGRAM-5/5 (TUNER EZ)



TUNER C.B







ELECTRICAL ADJUSTMENT-2/4 (HRJ, U MODEL)

< TUNER SECTION >

1. AM IF Adjustment
   L007 ..... 1400/1404kHz

2. AM VT Adjustment
   Settings:
   - Test point: C39⊕
   - Adjustment location: L004

   Method: Set to AM 1602/1710kHz adjust L004 so that the test point becomes 6.0V±50mV (U)
   Set to AM 1602/1710 kHz adjust L004 so that the Test point becomes 5.6V±50mV (HRJ)

3. AM Tracking Adjustment
   L003 ..... 600kHz
   TC001 ..... 1400kHz

4. FM VT Adjustment
   Settings:
   - Test point: C39⊕
   - Adjustment location: L006

   Method: Set to FM 108MHz adjust L006 so that the test point becomes 6.0V±50mV.

5. FM Tracking Adjustment
   L005 ..... 87.5MHz

< DECK SECTION >

6. Tape speed Adjustment
   Settings:
   - Test tape: TTA-100
   - Test point: PHONES JACK (J201)
   - Adjustment location: SFR of deck motor

   Method: Play back the test tape and adjust so that the output frequency is 3000Hz ±30Hz.

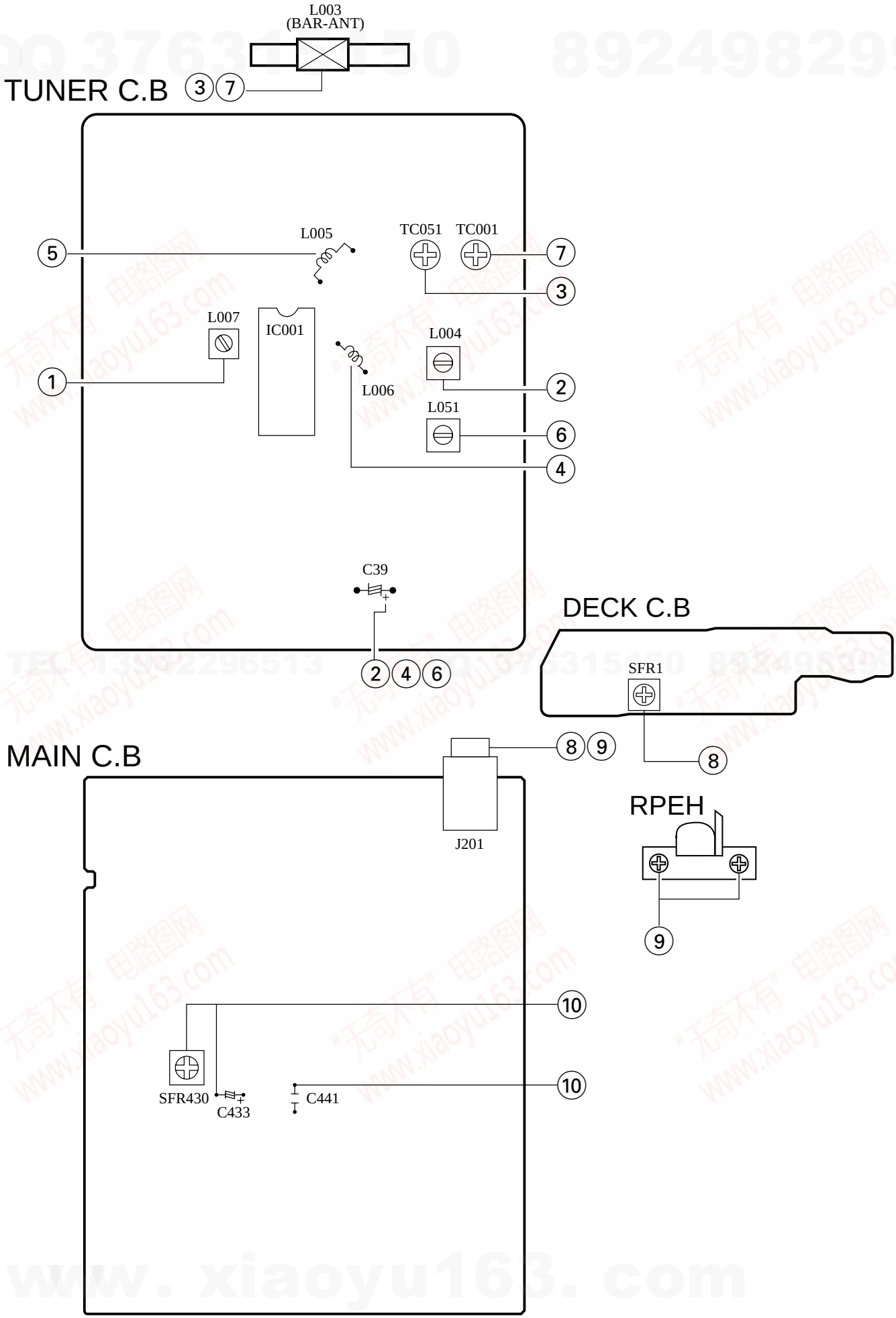
7. Azimuth Adjustment
   Settings:
   - Test tape: TTA-320
   - Test point: PHONES JACK (J201)
   - Adjustment location: Azimuth adjustment screw

   Method: Play back the test tape and adjust so that the output is maximum.

< CD SECTION >

8. Focus BIAS Adjustment
   Settings:
   - Test CD: D-782
   - Test point: C441 (RF OUT)
     C433⊖ (VREF)
   - Adjustment location: SFR430

   Method: Play back the test ⊕ track 2 and adjust so that the output level is DC 0mV±10mV.



ELECTRICAL ADJUSTMENT-4/4 (EZ MODEL)

< TUNER SECTION >

1. MW IF Adjustment
   L007 ..... 1400/1404kHz

2. MW VT Adjustment
   Settings: • Test point: C39⊕
   • Adjustment location: L004
   Method: Set to MW 1602/1710kHz adjust L004 so that the test point becomes 5.6V±50mV.

3. MW Tracking Adjustment
   L003 ..... 603kHz
   TC051 ..... 1404kHz

4. FM VT Adjustment
   Settings: • Test point: C39⊕
   • Adjustment location: L006
   Method: Set to FM 108MHz adjust L006 so that the test point becomes 6.0V±50mV.

5. FM Tracking Adjustment
   L005 ..... 87.5MHz

6. LW VT Adjustment
   Settings: • Test point: C39⊕
   • Adjustment location: L051
   Method: Set to LW 290kHz adjust L051 so that the test point becomes 4.60V±50mV.

7. LW Tracking Adjustment
   L003 ..... 153kHz
   TC001 ..... 288kHz

< DECK SECTION >

8. Tape speed Adjustment
   Settings: • Test tape: TTA-100
   • Test point: PHONES JACK (J201)
   • Adjustment location: SFR1 of deck C.B
   Method: Play back the test tape and adjust so that the output frequency is 3000Hz ±30Hz.

9. Azimuth Adjustment
   Settings: • Test tape: TTA-320
   • Test point: PHONES JACK (J201)
   • Adjustment location: Azimuth adjustment screw
   Method: Play back the test tape and adjust so that the output is maximum.

< CD SECTION >

10. Focus BIAS Adjustment
    Settings: • Test CD: TCD-782
    • Test point: C441 (RF OUT)
    C433⊖ (VREF)
    • Adjustment location: SFR430
    Method: Play back the test CD track 2 and adjust so that the output level is DC 0mV±10mV.

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

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS-	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode (± search/+ search) select pin. (Not connected)
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	PHI	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BHI	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 DESCRIPTION-2/3 (LC78622NE)-1/2

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 PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	T2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK-	O	Disc motor control output. Three level output is possible using command.	
14	V/$\overline{P}$	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. (Not connected)	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree. (Not connected)	
23	VDD	—	Digital system power supply pin.	
24	SL+	O	Moves the sled to outer circumference.	
25	SL-	O	Moves the sled to inner circumference.	
26	COM3	I/O	General purpose input/output pin.	
27	PUIN	I	CD pickup inner switch detection.	
28	RW	O	Read, wright signal.	
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H. (Not connected)	
30	C2F	O	C2 flag output pin. (Not connected)	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format) (Not connected)	
32, 33	T3, T4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not connected. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin. (Not connected)
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. (Not connected)

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. (Not connected)
48	EFLG	O	C1, C2, single and dual correction monitoring pin. (Not connected)
49	PW	O	Subcode P, Q, R, S, T, U and W output pin. (Not connected)
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby. (Not connected)
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. (Not connected)
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin.
58	RES	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	T11	O	Test signal output pin. Use this pin as open (normally L output) (Not connected)
60	16M	O	16.9344 MHz output pin. (Not connected)
61	4.2M	O	4.2336 MHz output pin.
62	T5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	T1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

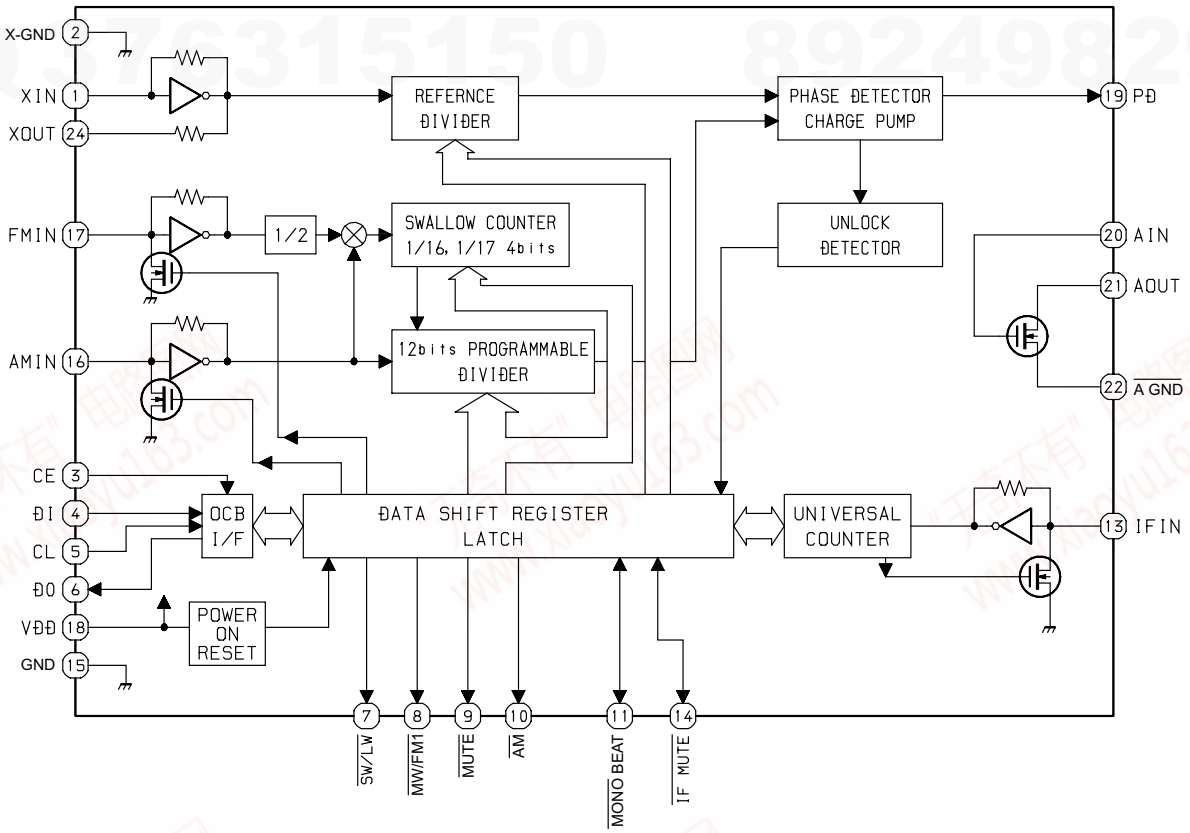
IC DESCRIPTION-3/3 (LC867132V)-1/2

Pin No.	Pin Name	I/O	Description
1	O-DEMO	O	POWER OFF: demonstration mode. OPE LED control output.
2	O-L.DATA	O	Shift register BU2092 data output for illumination LED control.
3	I-AS	I	Tape mechanism status detection. (Auto pulse)
4	O-V.DATA	O	Volume control IC M61509.
5	O-CLKSFT	O	µ COM main clock. Clock shift output.
6	I-HOLD	I	Hold status detection: Hold rush-in at “H”.
7	$\overline{\text{I-RST}}$	I	Microprocessor reset input.
8	XTIN	I	Connected to external 32.768 kHz X’tal.
9	XTOUT	O	
10	VSS1	—	Microprocessor power GND.
11	CFIN	I	Connected to external 5.76 MHz CF.
12	CFOUT	O	
13	VDD1	—	Microprocessor power. µ com 5 V.
14	I-MATRIX0	I	AD value matrix input-1 for each destination. Tuner system selection. (AD input)
15	I-MATRIX1	I	AD value matrix input-2 for each destination. Deck system selection. (AD input)
16	I-LVL	I	Audio level detector level input. (AD input)
17	I-AC/$\overline{\text{DC}}$	I	Set power. AD/DC status input. (AD input)
18, 19	I-KEY0, 1	I	Key input (AD input)-1, 2.
20	I-SW12V	I	Set SW 12 V status detection. (AD input)
21	I-DSW	I	Tape mechanism status detection. (Side-A/-B REC possible/impossible) (AD input)
22	O-L.STB	O	Shift register BU2092 STB output for illumination LED control.
23	O-L.CLK	O	Shift register BU2092 CLK output for illumination LED control.
24	O-R.MUTE	O	Tape REC MUTE control output.
25	O-$\overline{\text{REC}}$/PB	O	Tape REC/PLAY selection control output.
26	I-CAM	I	Tape mechanism status detection. (stop pulse)
27	I-SQOUT	I	CD sub-code Q data input.
28	I-REM	I	Remote control signal input.
29-36	S0-7	O	LCD segment output LCD.
37, 38	O-BEAT0, 1	O	AM beat selection output-1, 2.
39	O-$\overline{\text{BIAS}}$	O	Tape REC BIAS control output.
40	O-Q.LED	O	Q SOUND LED control output mode “H”: LED ON.
41	VDD3	—	Microprocessor power. µ com 5 V.
42	VSS3	—	Microprocessor power GND.
43	O-PL	O	Tape mechanism control output. (Plunger)
44	O-MOTOR	O	Tape mechanism control output. (Motor)
45-60	S8-23	O	LCD segment output LCD.
61	I-CDDOOR	I	CD DOOR SW open/close detection.
62	I-WRQ	I	CD sub-code Q standby input.
63	I-DRF	I	CD DRF input.
64-66	COM0-2	O	LCD common output LCD.
67	N.C.	—	Not connected.

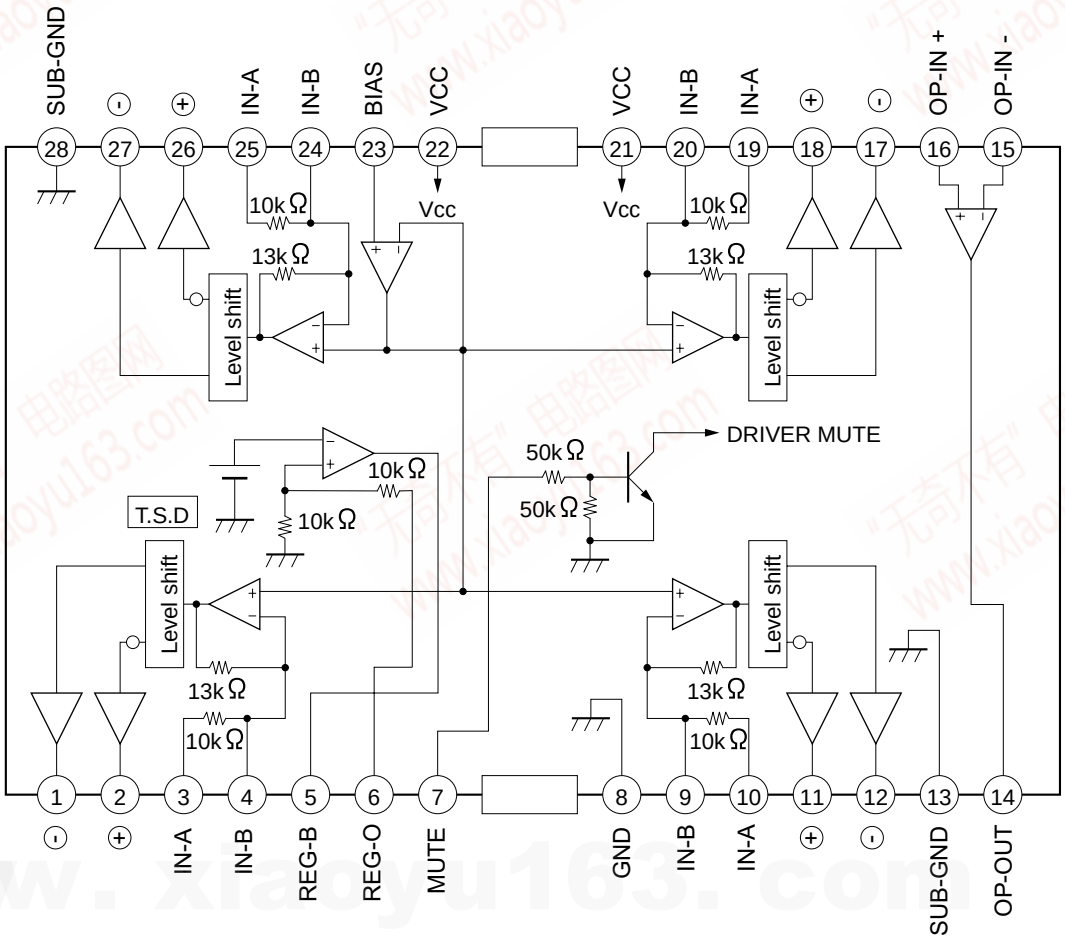
IC DESCRIPTION-3/3 (LC867132V)-2/2

Pin No.	Pin Name	I/O	Description
68	VSS2	—	Microprocessor power GND.
69	VDD2	—	Microprocessor power. µ com 5 V.
70, 71	O-BL0, 1	O	LCD color backlight control output-1, 2.
72	O-COIN	O	CD command output.
73	O-CQCK/O-CLK	O	CD command/sub-code CLK and TUNER IC LC72121 clock output.
74	O-RWC/O-TUCE	O	CD read/write control output and CE output to TUNER IC72121.
75	O-CD ON	O	CD Function Power control output.
76	O-TU ON	O	TUNER Function Power control output.
77	O-P.CONT	—	Set power control output.
78	O-M.MUTE	O	Main mute output.
79	O-TUDI	O	Data output to TUNER IC LC72121.
80	I-TUDO	I	Data input from TUNER IC LC72121.

IC BLOCK DIAGRAM-1/3
IC, LC72121

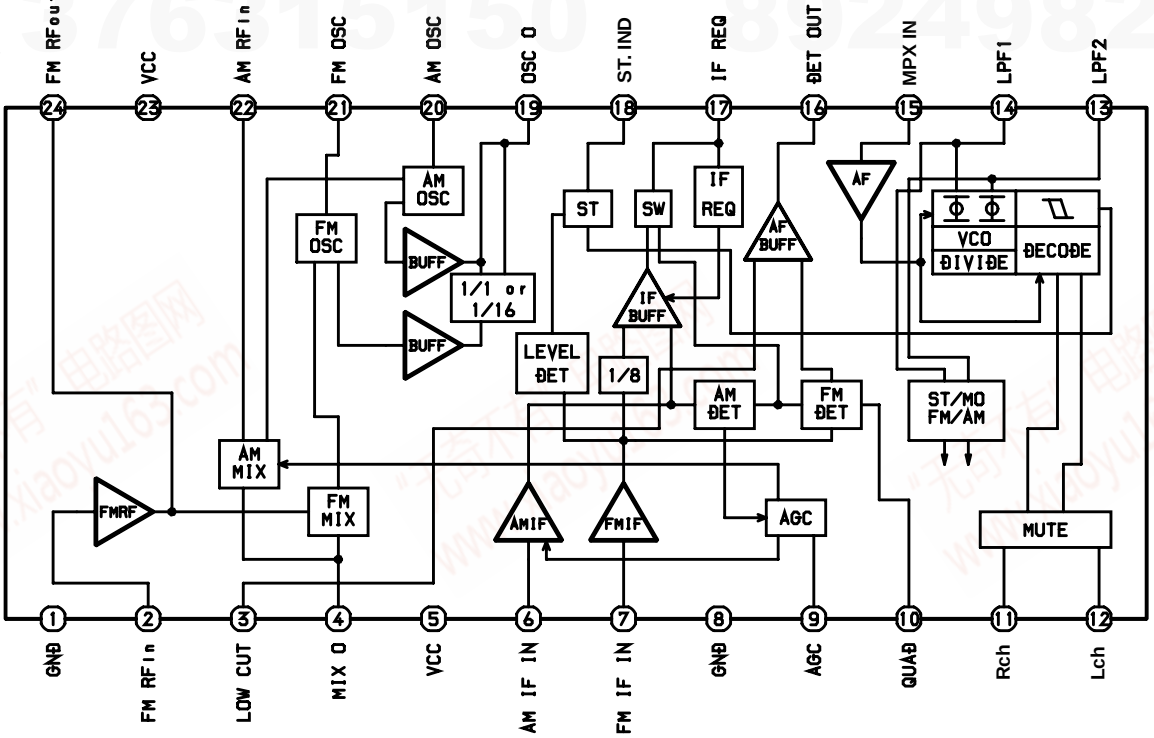


IC, MM1469

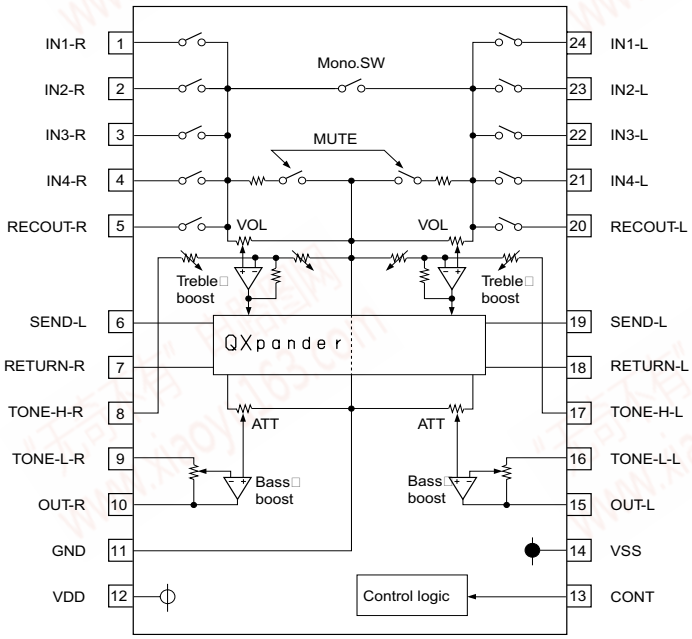


IC BLOCK DIAGRAM-2/3

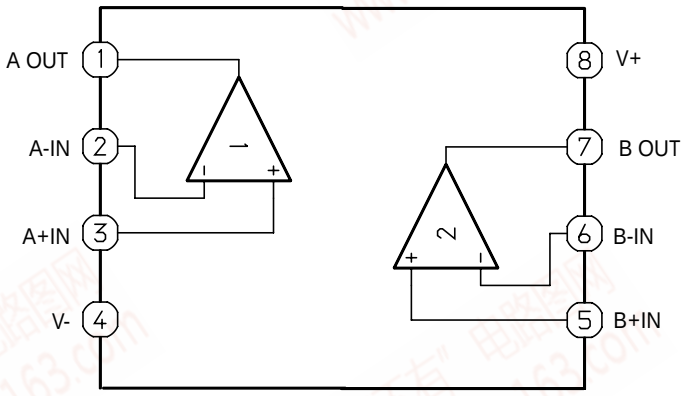
IC, TA2149



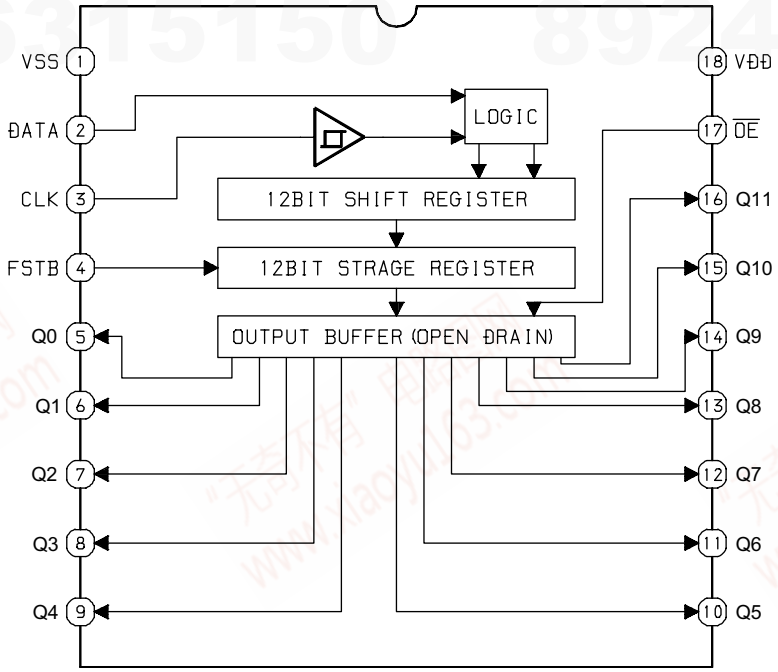
IC, M61509



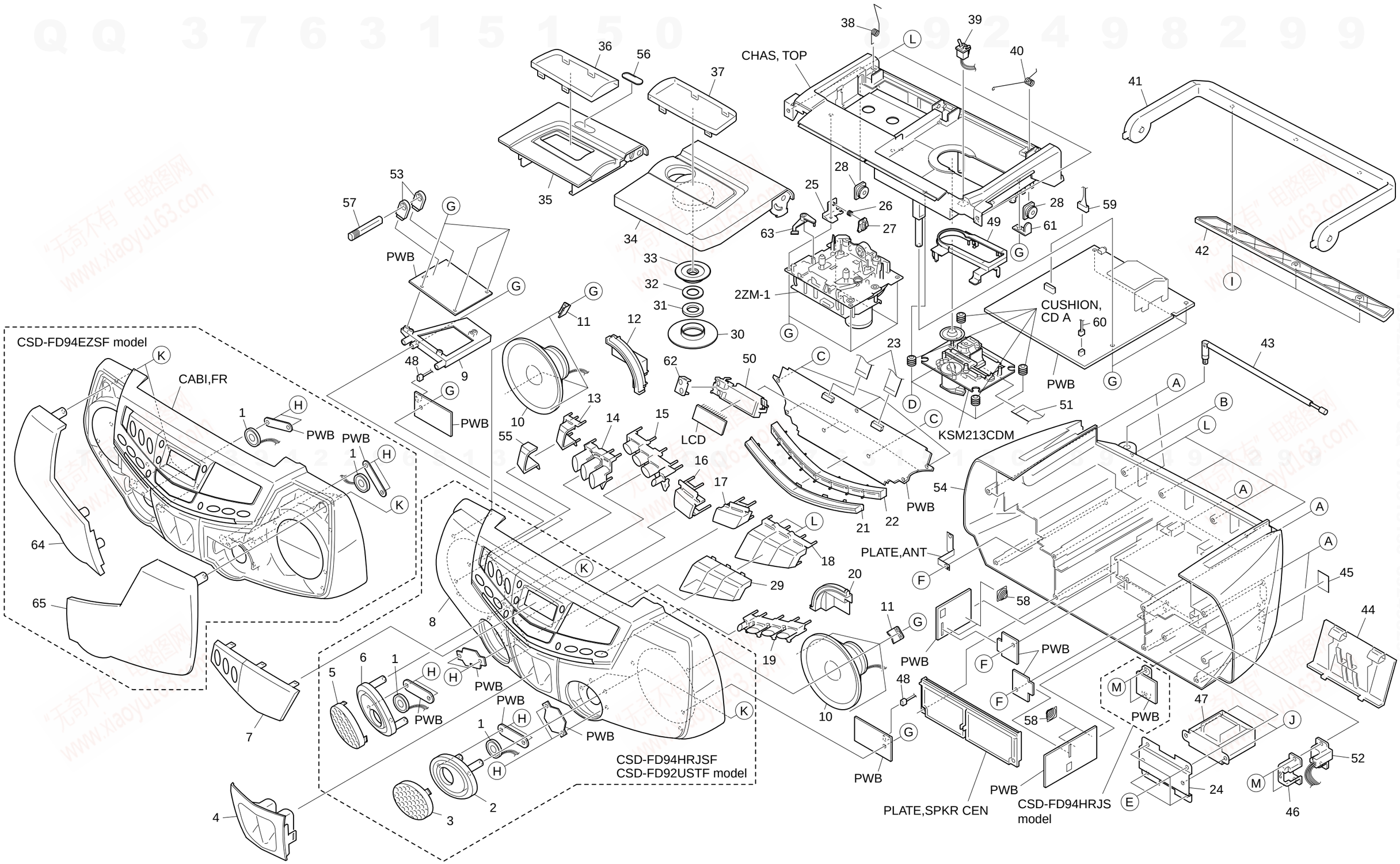
IC, NJM14558



IC BLOCK DIAGRAM-3/3
IC, BU2092



MECHANICAL EXPLODED VIEW-1/1



MECHANICAL PARTS LIST-1/1

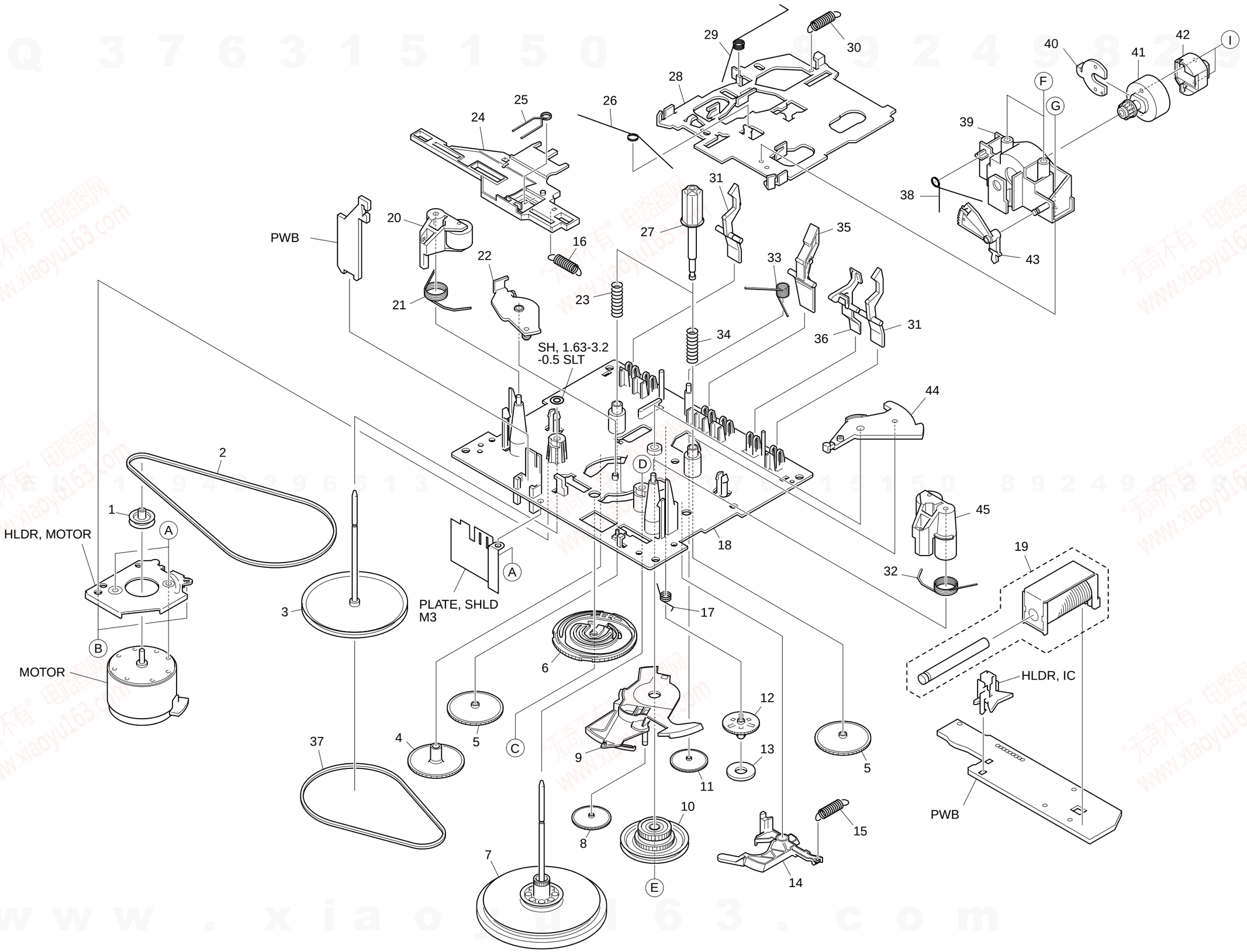
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8B-CHA-640-010		SPKR,36MM FY36-1C-W/GASKET
2	8B-CH4-036-010		PANEL,TW R<FD94HRJSF>
2	8B-CHR-016-010		PANEL,TW R U 24<FD92USTF>
3	8B-CH4-015-010		CAP, TW R<EXCEPT FD94EZSF>
4	8B-CH4-022-010		COVER, DUCT<EXCEPT FD92USTF>
4	8B-CHR-019-010		COVER, DUCT U 24<FD92USTF>
5	8B-CH4-014-010		CAP, TW L<EXCEPT FD94EZSF>
6	8B-CH4-035-010		PANEL,TW L<FD94HRJSF>
6	8B-CHR-015-010		PANEL,TW L U 24<FD92USTF>
7	8B-CHE-002-110		WINDOW,FR K 14
8	8B-CH4-030-110		CABI,FR ASSY<FD94HRJSF>
8	8B-CHR-009-010		CABI,FR ASSY U 24<FD92USTF>
9	8B-CH4-203-010		HLDR,TU
10	8B-CHR-666-010		SPKR,10- 7OHM SILVER RED<FD92USTF>
10	8B-CHE-631-010		SPKR,10- 3.2OHM SILVER<EXCEPT FD92USTF>
11	8B-CH4-222-010		HLDR,SPEAKER
12	8B-CH4-213-010		PLATE,SPKR L
13	8B-CH4-040-010		BTN,POWER BASE K 4<EXCEPT FD92USTF>
13	8B-CHR-029-010		BTN,POWER BASE U 24<FD92USTF>
14	8B-CH4-017-010		BTN,FUNC<EXCEPT FD92USTF>
14	8B-CHR-020-010		BTN,FUNC U 24<FD92USTF>
15	8B-CH4-018-110		BTN,EQ<EXCEPT FD92USTF>
15	8B-CHR-021-110		BTN,EQ U 24<FD92USTF>
16	8B-CHR-027-010		BTN,VOL DOWN K 24<FD92USTF>
16	8B-CH4-034-010		BTN,VOL DOWN<EXCEPT FD92USTF>
17	8B-CH4-033-010		BTN,VOL UP<EXCEPT FD92USTF>
17	8B-CHR-026-010		BTN,VOL UP K24<FD92USTF>
18	8B-CH4-039-010		BTN,CONT BASE K 4<EXCEPT FD92USTF>
18	8B-CHR-028-010		BTN,CONT BASE U 24<FD92USTF>
19	8B-CH4-019-110		BTN,REC<EXCEPT FD92USTF>
19	8B-CHR-022-010		BTN,REC U 24<FD92USTF>
20	8B-CH4-214-010		PLATE,SPKR R
21	8B-CH4-023-010		LENS,FR<FD92USTF>
22	8B-CH4-207-010		HLDR,LED<FD92USTF>
23	88-914-141-110		FF-CABLE,14P 1.25
24	8B-CH4-205-010		HLDR,PT
25	87-NF4-217-110		HLDR,LOCK 2
26	86-NF9-224-010		SPR-C,LOCK
27	82-NF5-229-010		PLATE,LOCK
28	87-063-165-010		OIL-DMPR 150
29	8B-CHR-024-010		CAP, CONT K 24<EXCEPT FD92USTF>
29	8B-CHR-025-010		CAP, CONT U 24<FD92USTF>
30	8B-CH4-223-010		BASE,CHUCK N
31	87-036-368-010		MAGNET
32	8B-CH4-225-010		PLATE,MAGNET
33	85-CD7-217-110		HLDR,CHUCK A
34	8B-CH4-004-110		BOX,CD<EXCEPT FD92USTF>
34	8B-CHR-004-110		BOX,CD U 24<FD92USTF>
35	8B-CH4-003-010		BOX,CASS<EXCEPT FD92USTF>
35	8B-CHR-003-010		BOX,CASS U 24<FD92USTF>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
36	8B-CHR-007-010		WINDOW,CASS U 24
37	8B-CH4-007-010		WINDOW,CD
38	8B-CH4-210-110		SPR-T,CASS
39	87-036-389-010		SW,PUSH LOCK
40	8B-CH4-211-010		SPR-T,CD
41	8B-CH4-011-010		HANDL,ARM<EXCEPT FD92USTF>
41	8B-CHR-012-010		HANDL,ARM U 24<FD92USTF>
42	8B-CH4-012-010		HANDL,GRIP<EXCEPT FD92USTF>
42	8B-CHR-013-010		HANDL,GRIP U 24<FD92USTF>
43	87-A92-151-010		ANT,ROD 5SEC709
44	8B-CH4-013-010		LID,BATT<EXCEPT FD92USTF>
44	8B-CHR-014-010		LID,BATT U 24<FD92USTF>
45	8B-CH4-042-010		PLATE,AC<EXCEPT FD94HRJSF>
46	87-A92-235-010		COVER,AC JACK MORNIN
⚠ 47	8A-CH4-667-010		PT,E<FD94EZSF>
⚠ 47	8A-CH4-668-010		PT,H<FD94HRJSF>
⚠ 47	8A-CD9-606-010		PT,U 2.5W<FD92USTF>
48	8B-CH4-657-010		CONN ASSY,2P V S-SP
49	8B-CH4-010-010		PANEL,CD M
50	8B-CH4-201-010		HLDR,LCD
51	8B-CH4-641-010		FF-CABLE,16P 1.0 120MM
⚠ 52	87-A61-455-010		JACK,AC E PSE27<EXCEPT FD92USTF>
⚠ 52	87-A60-177-010		JACK,AC U W/SW<FD92USTF>
53	8B-CH4-683-110		HLDR,BER ANT
54	8B-CH4-002-010		CABI,REAR<EXCEPT FD92USTF>
54	8B-CHR-002-010		CABI,REAR U 24<FD92USTF>
55	8B-CH4-031-010		CAP, POWER<EXCEPT FD92USTF>
55	8B-CHR-034-010		CAP, POWER U 24<FD92USTF>
56	8B-CH4-043-010		PLATE,BOX CASS<EXCEPT FD92USTF>
56	8B-CHR-037-010		PLATE,BOX CASS U 24<FD92USTF>
57	8A-CH4-670-010		BAR-ANT,MW 2B-ACH(COI)<EXCEPT FD94EZSF>
57	8A-CH4-671-010		BAR-ANT,MW/LW 3B-ACH(COI)<FD94EZSF>
58	8B-CH4-221-010		SPR-C,BATT(-)
59	8B-CH4-654-110		CONN ASSY,7P V DECK SHLD
60	8B-CH4-661-110		CONN ASSY,2P V DOOR
61	8B-CH4-206-010		HLDR,OIL-DMPR
62	8B-CH4-218-010		CAP,LCD
63	82-ZM1-264-010		LVR,EJECT R
64	8B-CH4-027-010		NET,ASSY L<FD94EZSF>
65	8B-CH4-028-010		NET,ASSY R<FD94EZSF>
A	87-B10-242-010		UT2+3-30 W/O CR
B	87-254-097-410		U+3-12 CR
C	87-721-096-410		QT2+3-10 GLD
D	8Z-CK5-222-010		S-SCREW,CD+2.6-6 F9
E	87-661-100-410		VFT1+3-16
F	87-741-095-410		UT2+3-8 GLD
G	87-741-096-410		UT2+3-10
H	87-342-074-010		UT2+2.6-8
I	87-B10-239-010		QT2+3-8 W/O CR
J	87-067-566-010		TAPPING SCREW, VFTT+3-6
K	87-661-097-410		VFT1+3-12
L	87-B10-269-010		UT2+3-12 W/O CR
M	87-352-075-210		VT2+2.6-10

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		

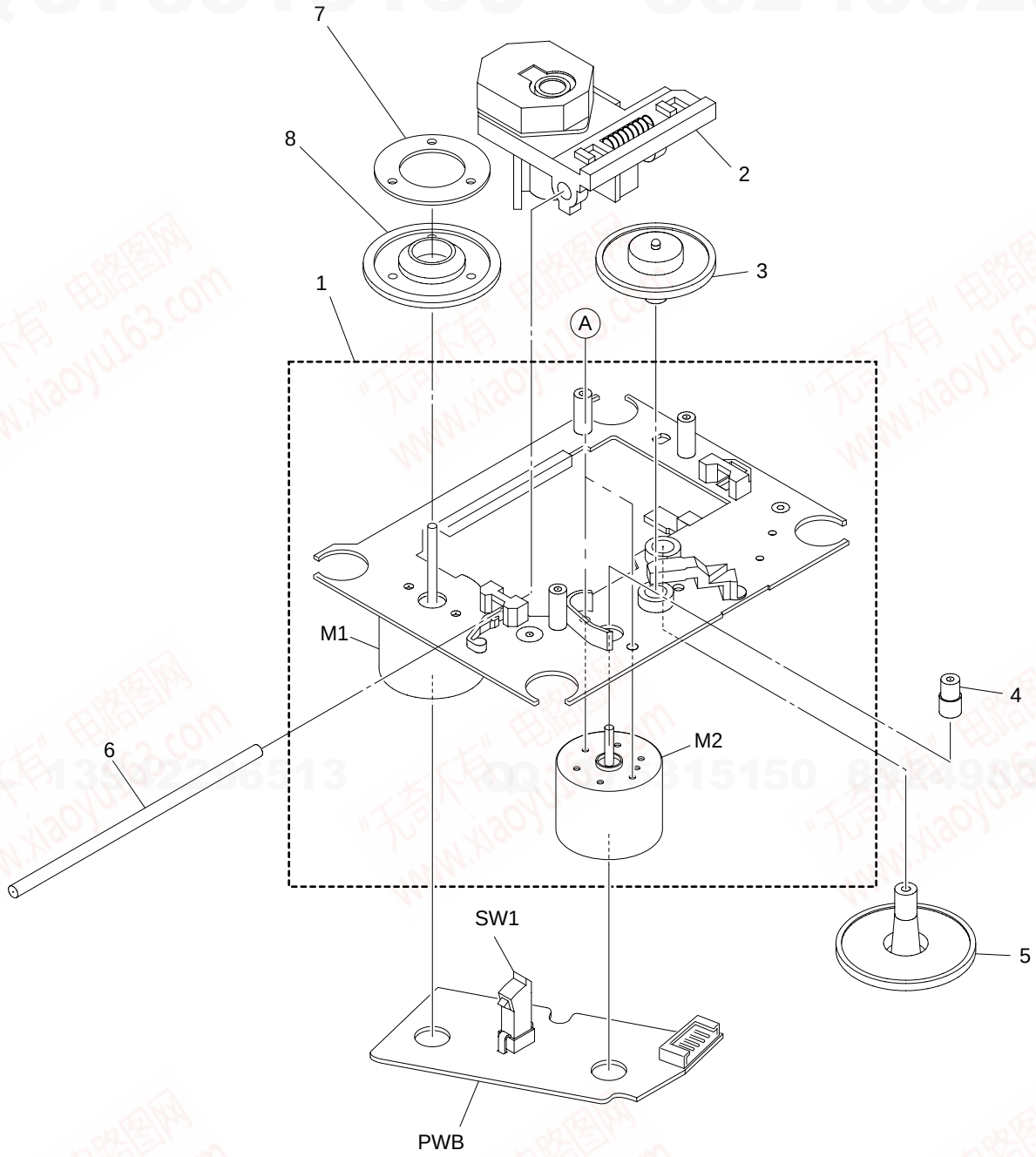
TAPE MECHANISM EXPLODED VIEW-1/1 (2ZM-1 R15NF)



TAPE MECHANISM PARTS LIST-1/1 (2ZM-1 R15NF)

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM1-247-210		PULLEY,MOTOR
2	82-ZM1-354-010		BELT,SBU MAIN2 EPDM
3	82-ZM1-234-310		FLY-WHL ASSY,L
4	82-ZM1-226-010		GEAR,REW
5	82-ZM1-216-510		GEAR,REEL
6	82-ZM1-221-310		GEAR,CAM(*)
7	82-ZM1-237-610		FLY-WHL ASSY,R
8	82-ZM1-225-210		GEAR,FR
9	82-ZM1-224-410		LVR,FR
10	82-ZM3-333-310		SLIP DISK ASSY 2
11	82-ZM1-223-010		GEAR,PLAY
12	82-ZM1-220-210		GEAR,IDLER
13	82-ZM3-616-010		RING MAGNET 4
14	82-ZM1-227-310		LVR,TRIG
15	82-ZM1-305-210		SPR-E,TRIG 2
16	82-ZM1-255-310		SPR-E,LVR DIR
17	82-ZM1-322-010		SPR-T,FR 60
18	82-ZM1-358-010		CHAS ASSY,FPC
19	82-ZM3-628-010		SOL ASSY,23 SO
20	82-ZM1-341-210		LVR ASSY,PINCH L2
21	82-ZM1-258-210		SPR-T,PINCH L
22	82-ZM1-333-210		PLATE,LINK2
23	82-ZM1-244-510		SPR-C,BT
24	82-ZM1-266-310		LVR,DIR
25	82-ZM1-214-010		SPR-T,DIR
26	82-ZM1-269-210		SPR-T,BRG
27	82-ZM1-217-410		REEL TABLE
28	82-ZM1-206-910		CHAS,HEAD
29	82-ZM1-219-110		SPR-T,LINK
30	82-ZM1-218-010		SPR-E,HB
31	82-ZM1-240-110		LVR,REC(*)
32	82-ZM1-259-210		SPR-T,PINCH R
33	82-ZM1-257-010		SPR-T,CAS
34	82-ZM1-285-410		SPR-C,BT L
35	82-ZM1-242-010		LVR,CAS
36	82-ZM1-243-010		LVR,STOP
37	82-ZM1-338-110		BELT,FR 4
38	82-ZM3-353-010		SPR-T,HEAD 2
39	82-ZM1-207-910		GUIDE,TAPE
40	82-ZM1-314-110		PLATE,HEAD
41	82-ZM1-208-310		HLDR,HEAD
42	87-A90-821-010		HEAD,RPH HADKH56 FPC
43	82-ZM1-210-110		GEAR,H T
44	82-ZM1-222-310		LVR,PLAY(*)
45	82-ZM1-344-210		LVR ASSY,PINCH R2
A	87-251-070-410		U+2.6-3
B	87-741-073-410		UT2+2.6-6 GLD
C	87-B10-008-010		W-P,2.08-8-0.4-SLIP
D	80-ZM6-243-010		SH 1.75-3.6-0.5 SLT
E	82-ZM3-334-010		PW 2.16-6-0.4
F	86-ZM4-206-110		S-SCREW,AZIMUTH L
G	85-ZM3-202-010		S-SCREW,TG
H	82-ZM3-222-010		S-SCREW,SHILD PLATE
I	80-ZM6-207-010		V+1.6-7

CD MECHANISM EXPLODED VIEW-1/1 (BZG-6 BNF)



CD MECHANISM PARTS LIST-1/1 (BZG-6 BNF)

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8B-ZG6-201-010		CHAS ASSY,SHT R
2	87-A91-995-010		PICKUP,PXR-104X-AP-0101
3	83-ZG2-235-010		GEAR,A3
4	83-ZG2-236-010		GEAR,MOTOR 3
5	83-ZG2-205-310		GEAR,B
6	83-ZG2-253-010		SHAFT,SLIDE 5
7	83-ZG2-226-410		TURN,TABLE B3
8	83-ZG2-241-110		PLATE,C2
A	87-261-032-210		V+2-3

ACCESSORIES/PACKAGE LIST-1/1

REF. NO		PART NO.	KANRI NO.	DESCRIPTION
	1	8B-CHE-906-010		IB,EZ(9L)M<FD94EZSF>
	1	8B-CHE-901-010		IB,H(ECA)M<FD94HRJSF>
	1	8B-CHE-903-010		IB,U(ESF)M<FD92USTF>
	2	8A-CLB-961-210		RC UNIT,RC-AAT11
⚠	3	87-A80-109-010		AC CORD,HK7281 BLK U<FD92USTF>
⚠	3	8Z-RT5-601-010		CORD,AC POWER-KE21/KE22 KENIC <EXCEPT FD92USTF>
⚠	4	87-A91-017-010		PLUG,CONVERSION JT-0476<FD94HRJSF>

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H251701

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