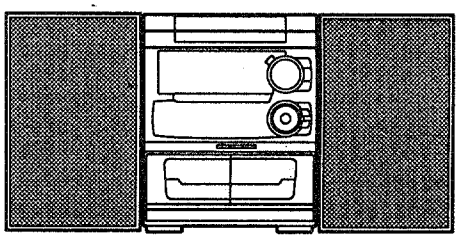
aiwa

aiwa SERVICE

NSX-K370

SERVICE MANUAL



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 6ZM-3 PR2NM
- BASIC CD MECHANISM : 4ZG-1 VOS1DSHNM
- TYPE : HR

SYSTEM	SPEAKER	CD – CASSEIVER	REMOTE CONTROLLER
NSX-K370 (TYPE: HR)	SX-NS302	CX-NK370	RC-8AS08
NSX-K370 (TYPE: HRJ8)	SX-NS503		

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1, S/M Code No. 09-985-249-8OT.

S/M Code No. 09–986–273–6FE

SPECIFICATIONS

<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 μV/m
Antenna	Loop antenna

<SW Tuner section>

Tuning range	5.900 MHz to 17.900 MHz
Antenna	Wire antenna

<Amplifier section>

Power output	Rated: 40 W + 40 W (6 ohms, T.H.D 1%,1kHz) Reference: 50 W + 50 W (6 ohms,T.H.D 10%,1kHz)
Total harmonic distortion	0.1% (25W,1kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 400 mV MIC: 1.0 mV (10 kohms) VIDEO OUT: 1.0Vp-p (75 ohms)
Outputs	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 15000 Hz
Recording system	AC bias
Heads	Deck 1 : Playback head x 1 Deck 2 : Recording/playback/ erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05% (1 kHz, 0 dB)
Wow and flutter	Crystal accuracy
Video signal	NTSC/PAL color format(selectable)
Video data	MPEG 1
Audio data	MPEG 1,LAYER 2

<Speaker system SX–NS302> (HR)

Cabinet type	3 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 140 mm cone type Tweeter : 60 mm cone type Super tweeter : 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	235 x 324 x 250 mm
Weight	3.3 kg

<Speaker system SX–NS503> (HRJ8)

Cabinet type	3 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 160 mm cone type Tweeter : 60 mm cone type Super tweeter : 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	240 x 324 x 225 mm
Weight	3.7 kg

<General>

Power requirements	120 V/220 – 230 V/240 V AC, switchable 50/60Hz
Power consumption	100 W
Dimensions of main unit (W x H x D)	260 x 330 x 346 mm
Weight of main unit	6.6 kg

• Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

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

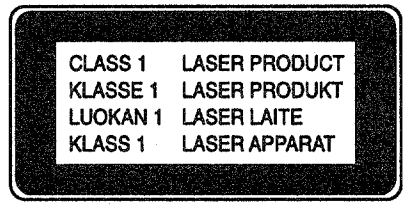
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

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 laserstråling 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.



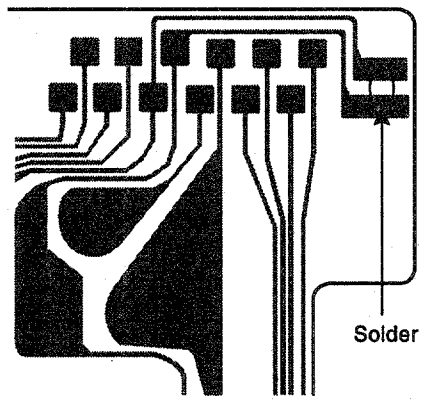
Precaution to replace Optical block

(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 right figure.

PICK-UP Assy P.C.B



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, the secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased 1 V or less using a multimeter or an oscilloscope.

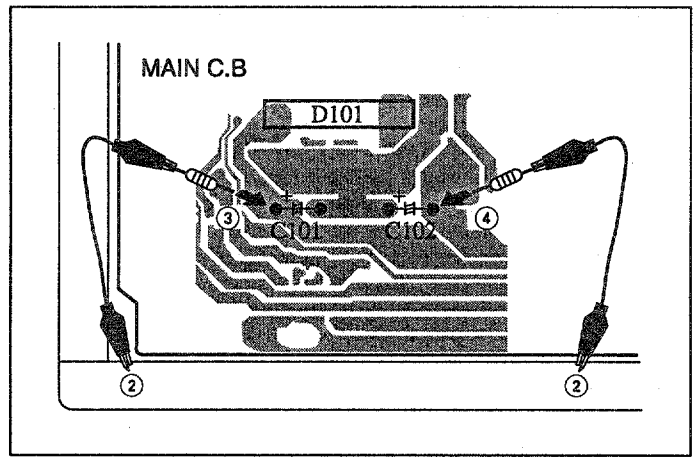


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

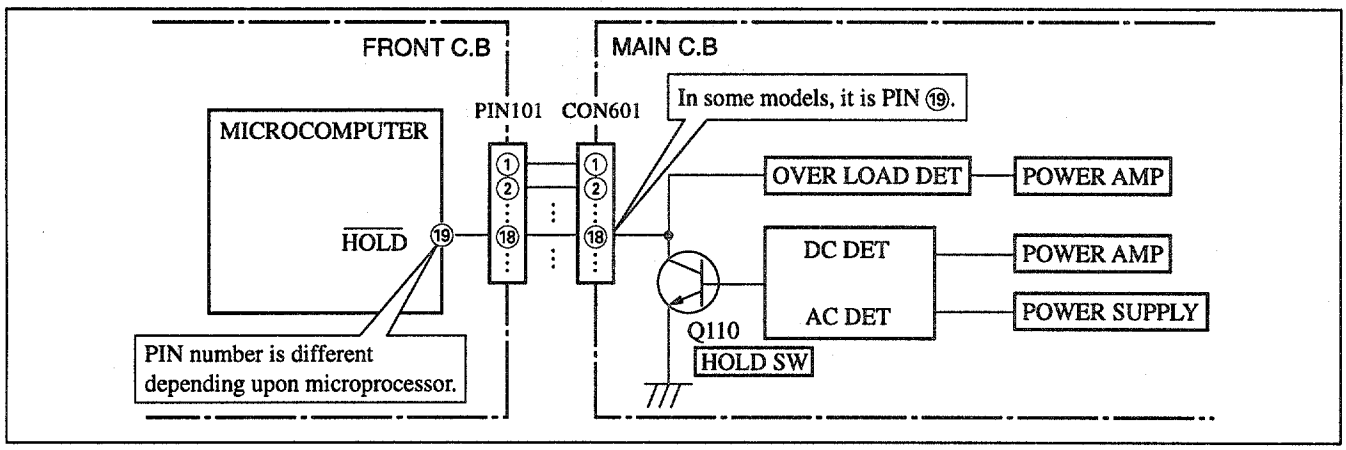


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can leads to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

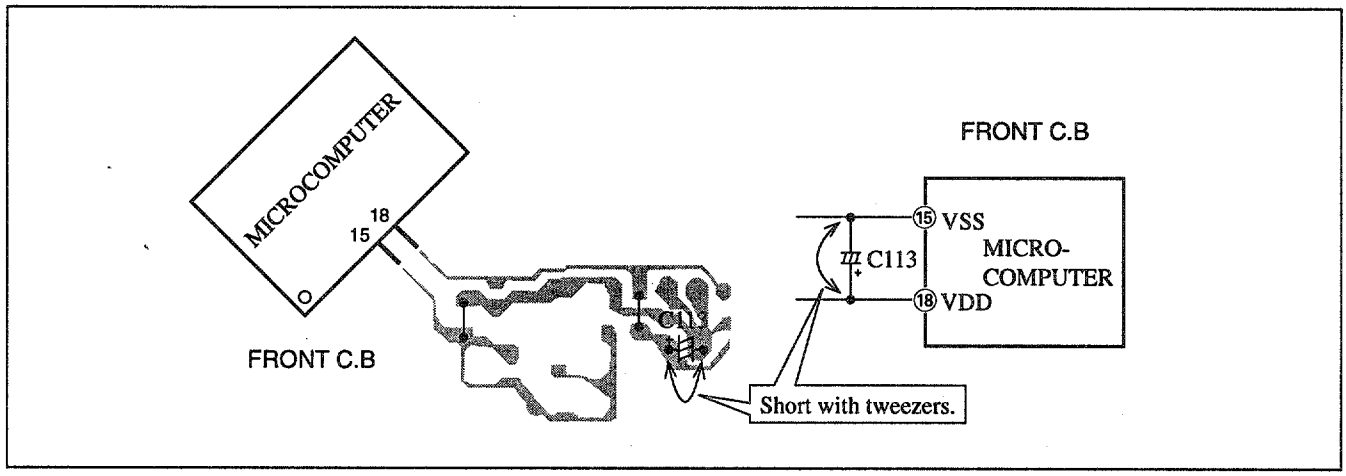


Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-083-010		IC,BA3835S
	88-NH8-601-010		C-IC,UPD780228-021-3BA
	87-NF8-614-010		IC,SPS-442-1-W
	87-A20-783-040		C-IC,BA7762AFS
	87-A20-561-040		C-IC,M65847AFP
	87-017-888-080		IC,NJM4558MD
	87-A20-954-040		C-IC,M62445FP-601
	87-A20-560-040		C-IC,M65849BFP
	86-NFZ-655-010		IC,LC72131D(Z)
	87-A20-438-010		IC,LA1837
	87-020-454-010		IC,DN6851
TRANSISTOR			
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-610-080		TR,KTC3198GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-196-080		TR,2SC4115SRS
	87-A30-075-080		C-TR,2SA1235F
	87-026-609-080		TR,KTA1266GR
	87-A30-198-080		TR,KTC3199GR
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-071-080		C-TR,RT1N 144C
	87-A30-087-080		C-FET,2SK2158
	87-A30-107-070		C-TR,CMBT5401
	87-026-263-080		C-TR,RN1410
	87-A30-190-080		TR,CC5551
	87-A30-137-010		TR,2SD2494
	87-A30-138-010		TR,2SB1625
	87-A30-106-070		C-TR,CMBT5551
	87-A30-221-080		C-TR,DTA114WK
	87-A30-159-080		C-TR,KTA1298Y
	89-112-964-580		TR,2SA1296Y 0.75W 120M
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-105-080		C-TR,RT1P 441C
	89-327-143-080		C-TR,2SC2714 (0.1W)
	87-A30-072-080		C-TR,RT1P 144C
	87-A30-086-070		C-TR,CSD1306E
	89-505-434-540		C-FET,2SK543(4/5)
DIODE			
	87-A40-115-060		DIODE,RS603M
	87-002-225-010		DIODE,DBF40C-K10
	87-A40-470-080		DIODE,1SS254
	87-A40-505-040		C-DIODE,KDS181
	87-A40-504-040		C-DIODE,KDS184
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-435-080		ZENER,MTZJ30D
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-004-080		ZENER,MTZJ16A
	87-A40-509-080		ZENER,MTZJ6.8C
	87-A40-488-080		DIODE,1SS244
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-002-080		ZENER,MTZJ5.1C
	87-017-931-080		ZENER,MTZJ5.6B
	87-A40-438-080		ZENER,MTZJ4.7A
	87-A40-234-080		ZENER,MTZJ5.6A
MAIN C.B			
C101	87-010-918-090		CAP,E 4700-50
C102	87-010-918-090		CAP,E 4700-50
C105	87-012-368-080		C-CAP,S 0.1-50 F
C106	87-012-368-080		C-CAP,S 0.1-50 F
C107	87-012-368-080		C-CAP,S 0.1-50 F
C108	87-012-368-080		C-CAP,S 0.1-50 F
C109	87-010-196-080		CHIP CAPACITOR,0.1-25
C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C111	87-010-196-080		CHIP CAPACITOR,0.1-25
C112	87-010-196-080		CHIP CAPACITOR,0.1-25
C113	87-010-407-080		CAP, ELECT 33-50V
C114	87-010-407-080		CAP, ELECT 33-50V
C115	87-010-407-080		CAP, ELECT 33-50V
C116	87-010-407-080		CAP, ELECT 33-50V
C117	87-010-430-080		CAP, ELECT 100-63
C118	87-010-263-080		CAP, ELECT 100-10V
C119	87-010-260-080		CAP, ELECT 47-25V
C120	87-010-403-080		CAP, ELECT 3.3-50V
C121	87-012-140-080		CAP 470P
C122	87-010-263-080		CAP, ELECT 100-10V
C123	87-010-247-080		CAP, ELECT 100-50V
C124	87-010-112-080		CAP, ELECT 100-16V
C125	87-010-235-080		CAP,E 470-16 SME
C128	87-010-385-080		CAP, ELECT 220-25V
C153	87-010-928-090		CAP,E 4700-25 SMG
C205	87-010-805-080		CAP, S 1-16
C206	87-010-805-080		CAP, S 1-16
C209	87-010-400-080		CAP, ELECT 0.47-50V
C210	87-010-400-080		CAP, ELECT 0.47-50V
C211	87-010-185-080		C-CAP,S 3900P-50 B
C212	87-010-185-080		C-CAP,S 3900P-50 B
C213	87-010-186-080		CAP,CHIP 4700P
C214	87-010-186-080		CAP,CHIP 4700P
C215	87-010-403-080		CAP, ELECT 3.3-50V
C216	87-010-403-080		CAP, ELECT 3.3-50V
C217	87-A10-899-080		CAP,E 47-25 M BP SME
C218	87-A10-899-080		CAP,E 47-25 M BP SME
C219	87-010-805-080		CAP, S 1-16
C220	87-010-805-080		CAP, S 1-16
C229	87-A10-812-080		C-CAP,S 220P-200 J CH
C230	87-A10-812-080		C-CAP,S 220P-200 J CH
C233	87-010-544-080		CAP, ELECT 0.1-50V
C234	87-010-544-080		CAP, ELECT 0.1-50V
C237	87-012-368-080		C-CAP,S 0.1-50 F
C238	87-012-368-080		C-CAP,S 0.1-50 F
C239	87-012-368-080		C-CAP,S 0.1-50 F
C240	87-012-368-080		C-CAP,S 0.1-50 F
C280	87-010-188-080		CAP,CHIP 6800P
C301	87-010-318-080		C-CAP,S 47P-50 CH
C302	87-010-318-080		C-CAP,S 47P-50 CH
C303	87-012-157-080		C-CAP,S 330P-50 CH
C304	87-012-157-080		C-CAP,S 330P-50 CH
C305	87-012-145-080		CAP, CHIP S 270P CH
C306	87-012-145-080		CAP, CHIP S 270P CH
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-196-080		CHIP CAPACITOR,0.1-25
C311	87-010-198-080		CAP, CHIP 0.022
C312	87-010-198-080		CAP, CHIP 0.022
C313	87-010-180-080		C-CER 1500P
C314	87-010-180-080		C-CER 1500P
C315	87-010-178-080		CHIP CAP 1000P
C316	87-010-178-080		CHIP CAP 1000P
C321	87-016-492-080		C-CAP,S 0.33-16 FZ
C322	87-016-492-080		C-CAP,S 0.33-16 FZ
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-370-080		CAP,E 330-6.3 SME
C327	87-010-404-080		CAP, ELECT 4.7-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V
C332	87-010-196-080		CHIP CAPACITOR,0.1-25
C335	87-010-401-080		CAP, ELECT 1-50V
C336	87-010-401-080		CAP, ELECT 1-50V
C337	87-010-196-080		CHIP CAPACITOR,0.1-25
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C354	87-010-175-080		CAP 560P
C355	87-012-349-080		C-CAP,S 1000P-50 CH
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		CAP, CHIP 0.01 DM
C358	87-010-183-080		C-CAP,S 2700P-50 B
C359	87-010-183-080		C-CAP,S 2700P-50 B
C360	87-010-183-080		C-CAP,S 2700P-50 B
C370	87-010-196-080		CHIP CAPACITOR,0.1-25
C373	87-016-083-080		C-CAP,S 0.15-16 RK
C374	87-016-083-080		C-CAP,S 0.15-16 RK
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C379	87-010-382-080		CAP, ELECT 22-25V
C380	87-010-382-080		CAP, ELECT 22-25V
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-010-405-080		CAP, ELECT 10-50V
C402	87-010-405-080		CAP, ELECT 10-50V
C457	87-010-404-080		CAP, ELECT 4.7-50V
C458	87-010-404-080		CAP, ELECT 4.7-50V
C501	87-A10-060-080		C-CAP,S 0.18-16 K B
C502	87-A10-060-080		C-CAP,S 0.18-16 K B
C503	87-012-154-080		C-CAP,S 150P-50 CH
C504	87-012-154-080		C-CAP,S 150P-50 CH
C505	87-012-145-080		CAP, CHIP S 270P CH
C506	87-012-145-080		CAP, CHIP S 270P CH
C507	87-010-183-080		C-CAP,S 2700P-50 B
C509	87-010-196-080		CHIP CAPACITOR,0.1-25
C510	87-010-177-080		C-CAP,S 820P-50 SL
C511	87-010-177-080		C-CAP,S 820P-50 SL
C512	87-010-196-080		CHIP CAPACITOR,0.1-25
C513	87-010-374-080		CAP, ELECT 47-10V
C514	87-010-196-080		CHIP CAPACITOR,0.1-25
C515	87-010-263-080		CAP, ELECT 100-10V
C517	87-010-183-080		C-CAP,S 2700P-50 B
C521	87-016-460-080		C-CAP,S 0.22-16 B
C522	87-016-460-080		C-CAP,S 0.22-16 B
C523	87-016-460-080		C-CAP,S 0.22-16 B
C527	87-010-196-080		CHIP CAPACITOR,0.1-25
C601	87-010-180-080		C-CER 1500P
C602	87-010-180-080		C-CER 1500P
C613	87-016-081-080		C-CAP,S 0.1-16 RK
C614	87-016-081-080		C-CAP,S 0.1-16 RK
C619	87-010-185-080		C-CAP,S 3900P-50 B
C620	87-010-185-080		C-CAP,S 3900P-50 B
C621	87-010-401-080		CAP, ELECT 1-50V
C622	87-010-401-080		CAP, ELECT 1-50V
C629	87-010-405-080		CAP, ELECT 10-50V
C630	87-010-213-080		C-CAP,S 0.015-50 B
C631	87-010-194-080		CAP, CHIP 0.047
C632	87-010-263-080		CAP, ELECT 100-10V
C633	87-010-263-080		CAP, ELECT 100-10V
C634	87-010-196-080		CHIP CAPACITOR,0.1-25
C635	87-010-196-080		CHIP CAPACITOR,0.1-25
C636	87-010-194-080		CAP, CHIP 0.047
C637	87-010-183-080		C-CAP,S 2700P-50 B
C641	87-010-196-080		CHIP CAPACITOR,0.1-25
C701	87-010-381-080		CAP, ELECT 330-16V
C702	87-010-404-080		CAP, ELECT 4.7-50V
C703	87-010-197-080		CAP, CHIP 0.01 DM
C704	87-010-197-080		CAP, CHIP 0.01 DM
C709	87-010-322-080		C-CAP,S 100P-50 CH
C711	87-010-263-080		CAP, ELECT 100-10V
C712	87-010-196-080		CHIP CAPACITOR,0.1-25
C713	87-010-197-080		CAP, CHIP 0.01 DM
C714	87-010-197-080		CAP, CHIP 0.01 DM
C721	87-010-312-080		C-CAP,S 15P-50 CH
C722	87-010-312-080		C-CAP,S 15P-50 CH
C723	87-010-178-080		CHIP CAP 1000P
C725	87-010-178-080		CHIP CAP 1000P
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-248-080		CAP, ELECT 220-10V
C755	87-010-197-080		CAP, CHIP 0.01 DM
C756	87-010-197-080		CAP, CHIP 0.01 DM
C757	87-010-318-080		C-CAP,S 47P-50 CH
C758	87-010-149-080		C-CAP,S 5P-50 CH
C759	87-012-154-080		C-CAP,S 150P-50 CH
C760	87-012-154-080		C-CAP,S 150P-50 CH
C761	87-010-196-080		CHIP CAPACITOR,0.1-25
C762	87-010-197-080		CAP, CHIP 0.01 DM
C763	87-010-194-080		CAP, CHIP 0.047
C764	87-010-319-080		C-CAP,S 56P-50 CH
C765	87-010-197-080		CAP, CHIP 0.01 DM
C766	87-010-197-080		CAP, CHIP 0.01 DM
C767	87-010-405-080		CAP, ELECT 10-50V
C768	87-010-197-080		CAP, CHIP 0.01 DM
C769	87-010-408-080		CAP, ELECT 47-50V
C770	87-015-821-080		C-CAP 0.047
C771	87-010-407-080		CAP, ELECT 33-50V
C772	87-010-194-080		CAP, CHIP 0.047
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
C777	87-010-400-080		CAP, ELECT 0.47-50V
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	87-015-819-080		CAPACITOR,0.01
C784	87-010-197-080		CAP, CHIP 0.01 DM
C785	87-010-403-080		CAP, ELECT 3.3-50V
C786	87-010-403-080		CAP, ELECT 3.3-50V
C789	87-010-179-080		CAP,CHIP S B1200P
C790	87-010-179-080		CAP,CHIP S B1200P
C791	87-010-405-080		CAP, ELECT 10-50V
C793	87-010-177-080		C-CAP,S 820P-50 SL
C794	87-010-406-080		CAP, ELECT 22-50
C795	87-010-596-080		CAP, S 0.047-16
C796	87-010-403-080		CAP, ELECT 3.3-50V
C797	87-010-179-080		CAP,CHIP S B1200P
C798	87-010-179-080		CAP,CHIP S B1200P
C799	87-010-194-080		CAP, CHIP 0.047
C812	87-010-197-080		CAP, CHIP 0.01 DM
C814	87-010-197-080		CAP, CHIP 0.01 DM
C820	87-010-408-080		CAP, ELECT 47-50V
C821	87-010-197-080		CAP, CHIP 0.01 DM
C822	87-010-197-080		CAP, CHIP 0.01 DM
C823	87-010-197-080		CAP, CHIP 0.01 DM
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C940	87-010-197-080		CAP, CHIP 0.01 DM
C941	87-010-314-080		C-CAP,S 22P-50V
C943	87-010-197-080		CAP, CHIP 0.01 DM
C944	87-014-051-080		CAPACITOR (PP), 560P
C945	87-010-197-080		CAP, CHIP 0.01 DM
C947	87-010-197-080		CAP, CHIP 0.01 DM
C950	87-014-073-080		CAP,PP 4700P-100 J
C952	87-010-197-080		CAP, CHIP 0.01 DM
C953	87-010-197-080		CAP, CHIP 0.01 DM
C954	87-010-400-080		CAP, ELECT 0.47-50V
C956	87-010-263-080		CAP, ELECT 100-10V
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C962	87-010-401-080		CAP, ELECT 1-50V
CF801	87-008-261-010		FILTER, SFE10.7MA5-A
CF802	87-008-261-010		FILTER, SFE10.7MA5-A
CN301	87-099-827-010		CONN,3P S2M-3W
CN351	87-099-832-010		CONN,8P S2M-8W
FFE801	A8-8ZA-190-030		8ZA-1 FEUNM
J201	87-A60-483-010		JACK,DIA6.3 BLK ST W/S KM
J203	87-033-240-010		TERMINAL,SP 4P32SV1-05

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
J601	87-A60-425-010		JACK,PIN 2P YKC21-3838
J801	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02
J940	81-754-629-010		CONNECTOR, 2P
L201	87-003-383-010		COIL,1UH-S
L202	87-003-383-010		COIL,1UH-S
L301	87-A50-049-010		COIL,TRAP 85K(COI)
L302	87-A50-049-010		COIL,TRAP 85K(COI)
L351	87-007-342-010		COIL,OSC 85K BIAS
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-052-010		FLTR,CFMT-450A(TOK)
L781	87-005-847-080		COIL,2.2UH(CECS)
L832	86-NFZ-694-080		COIL,2.2UH K CECS
L941	87-A50-022-010		COIL,ANT SW(COI)
L942	87-A50-173-010		COIL,OSC SW-N(COI)
L943	87-005-372-080		COIL S 1MHM
L944	87-A50-159-010		COIL,10MH K C2B
L981	88-NF8-625-010		COIL,AM PACK3N(TOK)
R237	87-A00-258-080		RES,M/F 0.22-1W J
R238	87-A00-258-080		RES,M/F 0.22-1W J
R239	87-A00-258-080		RES,M/F 0.22-1W J
R240	87-A00-258-080		RES,M/F 0.22-1W J
RY101	87-A90-464-010		RELAY, DG12D2-O(M)
SFR351	87-A90-433-080		SFR,50K H NVZ6TLTA
SFR352	87-A90-433-080		SFR,50K H NVZ6TLTA
TC941	87-011-220-080		TRIMMER CAP 20P VTC
TC943	87-011-221-080		CAP, TRIMMER 30P
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
X771	87-030-354-010		VIB,CF BFU 450C

FRONT C.B

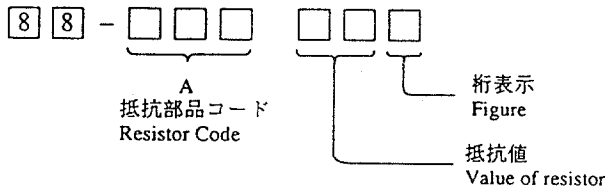
C30	87-018-209-080		CAP,TC-U 0.1-50
C36	87-010-322-080		C-CAP,S 100P-50 CH
C37	87-010-322-080		C-CAP,S 100P-50 CH
C38	87-010-322-080		C-CAP,S 100P-50 CH
C39	87-010-322-080		C-CAP,S 100P-50 CH
C40	87-010-322-080		C-CAP,S 100P-50 CH
C41	87-010-322-080		C-CAP,S 100P-50 CH
C42	87-010-322-080		C-CAP,S 100P-50 CH
C43	87-010-322-080		C-CAP,S 100P-50 CH
C44	87-010-322-080		C-CAP,S 100P-50 CH
C45	87-010-322-080		C-CAP,S 100P-50 CH
C46	87-012-156-080		C-CAP,S 220P-50 CH
C150	87-010-196-080		CHIP CAPACITOR,0.1-25
C153	87-010-196-080		CHIP CAPACITOR,0.1-25
C154	87-010-196-080		CHIP CAPACITOR,0.1-25
C170	87-010-194-080		CAP, CHIP 0.047
C171	87-010-196-080		CHIP CAPACITOR,0.1-25
C172	87-010-406-040		CAP,E 22-50 SME
C173	87-010-194-080		CAP, CHIP 0.047
C201	87-018-205-080		CAP, CERA-SOL 0.022
C202	87-010-198-080		CAP, CHIP 0.022
C203	87-010-198-080		CAP, CHIP 0.022
C204	87-012-140-080		CAP 470P
C205	87-010-316-080		C-CAP,S 33P-50 CH
C206	87-010-318-080		C-CAP,S 47P-50 CH
C207	87-010-312-080		C-CAP,S 15P-50 CH
C208	87-010-196-080		CHIP CAPACITOR,0.1-25
C209	87-010-494-040		CAP,E 1-50 GAS
C210	87-A10-189-040		CAP,E 220-10
C211	87-010-194-080		CAP, CHIP 0.047
C212	87-010-555-040		CAP,E 100-10 GAS
C214	87-010-405-040		CAP,E 10-50
C215	87-012-156-080		C-CAP,S 220P-50 CH
C216	87-012-156-080		C-CAP,S 220P-50 CH
C217	87-010-197-080		CAP, CHIP 0.01 DM
C250	87-010-196-080		CHIP CAPACITOR,0.1-25
C307	87-015-686-040		CAP,E 22-25 M 7L SRA
C354	87-010-196-080		CHIP CAPACITOR,0.1-25
C355	87-010-196-080		CHIP CAPACITOR,0.1-25
C373	87-010-196-080		CHIP CAPACITOR,0.1-25
C376	87-012-158-080		C-CAP,S 390P-50 CH
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-010-405-040		CAP,E 10-50
C402	87-010-405-040		CAP,E 10-50
C404	87-010-194-080		CAP, CHIP 0.047
C405	87-010-246-040		CAP,E 47-35 SME
C406	87-010-197-080		CAP, CHIP 0.01 DM
C410	87-010-560-040		CAP,E 10-50 GAS
C411	87-010-560-040		CAP,E 10-50 GAS
C501	87-010-494-040		CAP,E 1-50 GAS
C502	87-010-177-080		C-CAP,S 820P-50 SL
C505	87-010-321-080		CHIP CAPACITOR,82P(J)
C506	87-010-405-040		CAP,E 10-50
C508	87-A10-189-040		CAP,E 220-10
C509	87-010-545-040		CAP,E 0.22-50 SME
C510	87-018-209-080		CAP, CER 0.1-50V
C511	87-010-406-040		CAP,E 22-50 SME
C513	87-010-405-040		CAP,E 10-50
C514	87-010-186-080		CAP,CHIP 4700P
C601	87-016-081-080		C-CAP,S 0.1-16 RK
C602	87-010-184-080		CHIP CAPACITOR 3300P(K)
C603	87-010-986-080		C-CAP,S 820P-50 J CH
C604	87-016-081-080		C-CAP,S 0.1-16 RK
C605	87-016-081-080		C-CAP,S 0.1-16 RK
C606	87-010-260-040		CAP,E 47-25 SME
C607	87-016-081-080		C-CAP,S 0.1-16 RK
C608	87-016-081-080		C-CAP,S 0.1-16 RK
C609	87-010-986-080		C-CAP,S 820P-50 J CH
C610	87-010-184-080		CHIP CAPACITOR 3300P(K)
C611	87-010-196-080		CHIP CAPACITOR,0.1-25
C612	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C613	87-012-393-080		C-CAP,S 0.22-16 R K
C614	87-012-393-080		C-CAP,S 0.22-16 R K
C616	87-010-263-040		CAP,E 100-10
C617	87-010-544-040		CAP,E 0.1-50 SME
CON101	87-099-720-010		CONN,30P TYK-B(P)
CON102	87-099-015-010		CONN,13P 6216V
CON301	87-099-013-010		CONN,11P 6216 V
EMI501	87-008-372-080		FILTER, EMI BL OIRNI
FL401	88-NH8-603-010		FL,SVA-11MM17
J501	87-A60-651-010		JACK,3.5MONO
LED207	87-070-281-080		LED,SLZ736A-25-S-T1
LED208	87-070-281-080		LED,SLZ736A-25-S-T1
LED209	87-070-281-080		LED,SLZ736A-25-S-T1
LED210	87-070-281-080		LED,SLZ736A-25-S-T1
LED211	87-070-281-080		LED,SLZ736A-25-S-T1
LED212	87-070-281-080		LED,SLZ736A-25-S-T1
S401	87-A90-680-080		SW,TACT KSM0612BTS
S402	87-A90-680-080		SW,TACT KSM0612BTS
S403	87-A90-680-080		SW,TACT KSM0612BTS
S404	87-A90-680-080		SW,TACT KSM0612BTS
S405	87-A90-680-080		SW,TACT KSM0612BTS
S406	87-A90-680-080		SW,TACT KSM0612BTS
S407	87-A90-680-080		SW,TACT KSM0612BTS
S408	87-A90-680-080		SW,TACT KSM0612BTS
S409	87-A90-680-080		SW,TACT KSM0612BTS
S410	87-A90-680-080		SW,TACT KSM0612BTS
S411	87-A90-680-080		SW,TACT KSM0612BTS
S412	87-A90-680-080		SW,TACT KSM0612BTS
S413	87-A90-680-080		SW,TACT KSM0612BTS
S414	87-A90-680-080		SW,TACT KSM0612BTS
S415	87-A90-680-080		SW,TACT KSM0612BTS
S416	87-A90-680-080		SW,TACT KSM0612BTS
S417	87-A90-680-080		SW,TACT KSM0612BTS
S418	87-A90-680-080		SW,TACT KSM0612BTS
S419	87-A90-680-080		SW,TACT KSM0612BTS
S420	87-A90-680-080		SW,TACT KSM0612BTS
S421	87-A90-680-080		SW,TACT KSM0612BTS
S422	87-A90-680-080		SW,TACT KSM0612BTS

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
S423	87-A90-680-080		SW,TACT KSM0612BTS
S424	87-A90-680-080		SW,TACT KSM0612BTS
S425	87-A90-680-080		SW,TACT KSM0612BTS
S426	87-A90-680-080		SW,TACT KSM0612BTS
S428	87-A90-680-080		SW,TACT KSM0612BTS
SW201	87-A90-535-010		SW,RTRY EC16B24304
SW202	88-NF8-615-010		SW,RTRY EC16B24204L=25
X201	87-A70-075-080		VIB,CER 4.19MHZ CRHF
AC1 C.B			
⚠ F101	87-035-369-010		FUSE,5A 250V TE
⚠ FC101	87-033-147-010		FUSE CLAMP
⚠ FC102	87-033-147-010		FUSE CLAMP
⚠ PT101	88-NF8-606-010		PT,8NF-8HR
⚠ SW101	87-A90-165-010		SW,SL 1-2-3 SWS2301
⚠ T101	87-A60-317-010		TERMINAL, 1P MSC
⚠ T102	87-A60-317-010		TERMINAL, 1P MSC
AC2 C.B			
⚠ PR101	87-A90-195-080		PROTECTOR,7A 491 SERIES 60V
⚠ PR102	87-A90-195-080		PROTECTOR,7A 491 SERIES 60V
⚠ PR103	87-026-682-080		PROTECTOR,10A 60V491
⚠ PR104	87-026-682-080		PROTECTOR,10A 60V491
W104	85-NF5-628-010		F-CABLE 7P-2.5

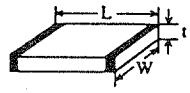
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
DECK C.B			
CON105	87-099-753-019		CONN,11P H 9604
SFR1	87-024-581-089		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-410		SOL ASSY,27
SOL2	82-ZM1-618-410		SOL ASSY,27
SW1	87-A90-248-010		SW,MICRO ESE11SH2CX0
SW2	87-A90-248-010		SW,MICRO ESE11SH2CX0
SW3	87-A90-248-010		SW,MICRO ESE11SH2CX0
SW4	87-A90-248-010		SW,MICRO ESE11SH2CX0
SW5	87-A90-248-010		SW,MICRO ESE11SH2CX0
W1	82-ZM3-601-019		RBN-CORD,4P-75
HEAD-1 C.B			
CON351	85-MA2-615-010		CON ASSY,3P-PB

○ 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



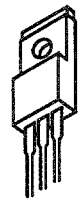
チップ抵抗
Chip resistor

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：A Resistor Code: A
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

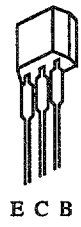
TRANSISTOR ILLUSTRATION

KTC3198
KTA1266

CC5551



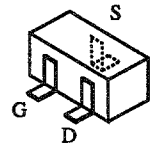
2SB1370
2SD1625
2SD2494



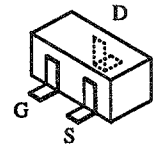
KTC3199

2SA1296

2SC4115S



2SK543



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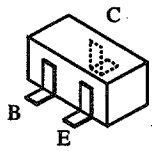
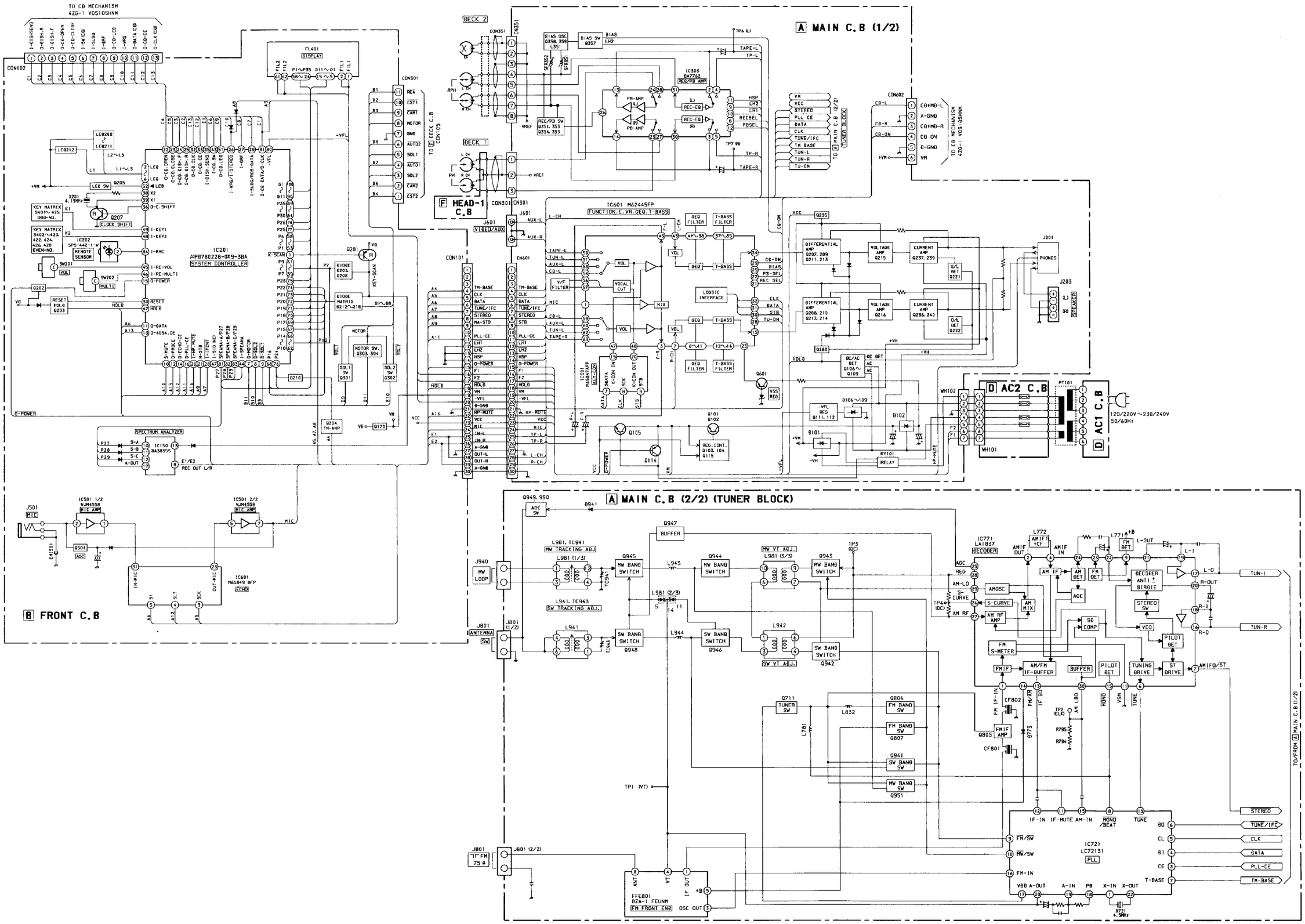
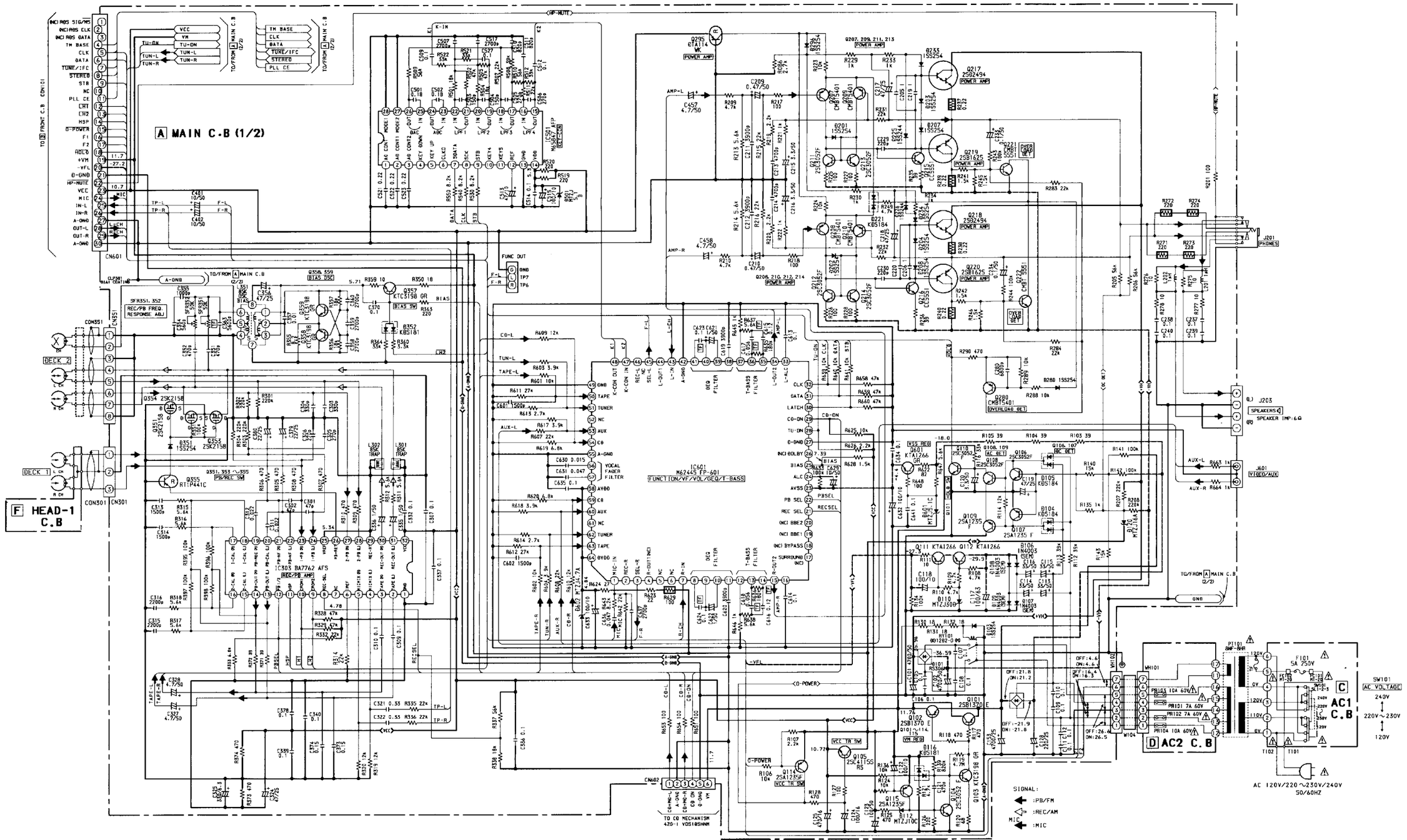


DTA114WK	RN1410
CSD1306E	RT1N141C
CMBT5551	RT1N144C
CMBT5401	RT1P141C
2SA1235F	RT1P441C
2SC3052F	RT1P144C
2SC2714(O)	KTA1298Y


A MAIN C.B (1/2)
B FRONT C.B
A MAIN C.B (2/2) (TUNER BLOCK)
D AC2 C.B
D AC1 C.B
F HEAD-1 C.B
TO CD MECHANISM 4ZG-1 VOS105HNM
IC201 μPB780228-029-3BA SYSTEM CONTROLLER
IC601 M62445FP FUNCTION:E.VR.GEQ.T-BASS
IC721 LC72131 PLL
IC771 LA1837 DECODER
IC501 1/2 NJM4558 MIC AMP
IC501 2/2 NJM4558 MIC AMP
IC601 M65849 BFP ECHO
IC150 BA5855S SPECTRUM ANALYZER
IC202 SPS-442-1-W REMOTE SENSOR
FFE801 8ZA-1 FEUNM FM FRONT END
IC501 M62445FP EQ/ECHO
IC301 M62445FP EQ/ECHO
IC302 BA7762 EQ/PB AMP
BIAS OSC Q358 & 359 L351
BIAS SW Q357
REC/PB SW Q351, 353 Q354, 355
DECK 1
DECK 2
VREF
TAPE-L
TAPE-R
TP-L
TP-R
TP6 EJ
TP7 EG
HSP
CH1
RECSEL
PBSEL
REC-EQ
PB-AMP
VM
VCC
STEREO
PLL CE
DATA
CLK
TUNE/IFC
TM BASE
TUN-L
TUN-R
TU-ON
TO A MAIN C.B (2/2) TUNER BLOCK
CD+MD-L
A-GND
CD+MD-R
CD ON
B-GND
VM
CD-L
CD-R
CD-ON
+VM
TO CD MECHANISM 4ZG-1 VOS105HNM
FL401 DISPLAY
P10~P35 911~01
CON102
CON301
CON351
CON101
CN601
J601 VIDEO/AUX
J6D1
AUX-L
AUX-R
TAPE-L
TUN-L
AUX-L
CD-L
TM-BASE
CLK
DATA
TUNE/IFC
STEREO
MA-STB
STB
PLL-CE
LHT
LH2
HSP
D-POWER
F1
F2
RDLB
VM
-VFL
D-GNB
HP-MUTE
VCC
MIC
IN-L
IN-R
A-GND
OUT-L
OUT-R
A-GND
L-CH
R-CH
TP-L
TP-R
E1
E2
VF FILTER
VOCAL CUT
MIX
VOL
DEQ FILTER
T-BASS FILTER
LOGSIC INTERFACE
CD-ON
BIAS
PB-SEL
REC SEL
CLK
DATA
STB
TU-ON
DIFFERENTIAL AMP Q207, 209 Q211, 213
VOLTAGE AMP Q215
CURRENT AMP Q237, 239
Q/L DET Q221
DIFFERENTIAL AMP Q208, 210 Q212, 214
VOLTAGE AMP Q216
CURRENT AMP Q238, 240
Q/L DET Q222
PHONES
SPEAKER
J201
J205
Q295
Q280
Q601
VSS REG
AC/AC DET Q104~Q109
AC DET
-VFL REG Q111, 112
Q106~109
B102
B101
RY101 RELAY
WH102
WH101
PT101
120/220V~230/240V 50/60Hz
RESET Q203
HOLD
Q202
SW202 MULTI
SW201 VOL
SW203 CLOCK SHIFT
X201 4.19MHz
LED SW Q205
LED
KEY MATRIX 5401~425 OBD-NO.
KEY MATRIX 5402~420, 422, 424, 426, 428 EVEN-NO.
K-SCAN
KEY-SCAN
DIODE Q201
DIODE Q203, Q208
DIODE MATRIX D212~218
Q210
Q204 TM-AMP
Q170
MOTOR
MOTOR SW. Q303, 304
SOL1 SW Q301
SOL2 SW Q302
SPECTRUM ANALYZER
REC OUT L/R
J501 MIC
EX1501
Q501 AGC
Q949, 950 AGC SW
Q941
Q947 BUFFER
J940 MW LOOP
J801 ANTENNA
J801 (1/2) SW
J801 (2/2) IF FM 75Ω
L981, TC941 MW TRACKING ADJ.
L941, TC943 SW TRACKING ADJ.
L981 (1/3)
L981 (2/3)
L941
MW VT ADJ.
SW VT ADJ.
MW BAND SWITCH Q945
MW BAND SWITCH Q944
MW BAND SWITCH Q943
SW BAND SWITCH Q948
SW BAND SWITCH Q946
SW BAND SWITCH Q942
L943
L944
TP3 (BC)
TP1 (VT)
Q711 TUNER SW
L832
L781
Q806 FM BAND SW
FM BAND SW Q807
Q941 SW BAND SW
MW BAND SW Q951
CF802
CF801
Q805 FMIF AMP
Q773
R795
R794
TP2 (LO)
AM LBO
AGC
REG
AM-LO
S-CURVE
AM RF
AMOSC
AM MIX
AM IF
AM DET
FM DET
AMIF OUT
AMIF IN
AMIFT ACT
L772
L771
FM S-METER
FMIF
AM/FM IF-BUFFER
BUFFER
PILOT DET
TUNING DRIVE
ST DRIVE
AMIFO/ST
SD COMP
VCO
PILOT DET
STEREO SW
DECODER ANTI ALIASING
L-OUT
R-OUT
L-O
R-O
L-I
R-I
TUN-L
TUN-R
STEREO
IF-IN
IF-MUTE
AM-IN
MONO /BEAT
TUNE
FM/SW
MW/SW
FM-IN
V08 A-OUT
A-IN
PB
X-IN
X-OUT
X721 4.5MHz
TO/FROM A MAIN C.B (1/2)


A MAIN C.B (1/2)
F HEAD-1 C.B
D AC2 C.B
C AC1 C.B
IC601
M62445 FP-601
FUNCTION/VF/VOL/EQ/T-BASS
IC303 BA7742 AFS
Q295 GTA114
POWER AMP
Q207, 209, 211, 213
Q217 2SD2494
Q219 2SB1625
Q218 2SD2494
Q220 2SB1625
Q206 210 212 214
Q221 KDS184
Q201 1SS254
Q203 1SS254
Q205 1SS254
Q233 1SS254
Q235 1SS254
Q237 1SS254
Q239 1SS254
Q241 1SS254
Q243 1SS254
Q245 1SS254
Q247 1SS254
Q249 1SS254
Q251 1SS254
Q253 1SS254
Q255 1SS254
Q257 1SS254
Q259 1SS254
Q261 1SS254
Q263 1SS254
Q265 1SS254
Q267 1SS254
Q269 1SS254
Q271 1SS254

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

A B C D E F G H I J

A MAIN C.B

EH PH
DECK2
BLK WHT WHT PINK WHT PINK
GRY GRY GRY
BLK WHT BLK WHT RED RED WHT BLK
CON351 1 3 5 7 8
TO CN351

FROM F HEAD-1 C.B
CON301 1 3
TO CN301

J940 MW LOOP
J801 ANTENNA
SW ANT
TFM 75Ω
J601 VIDEO/ AUX
J203 SPEAKERS
SPEAKER IMP: 6Ω
J201 PHONES

TO CD MECHANISM 4Z6-1 VDS1858NM
TO CN602

FROM E AC2 C.B WH101
W104 WHT

CN301 CN601 CN101 TO B FRONT C.B

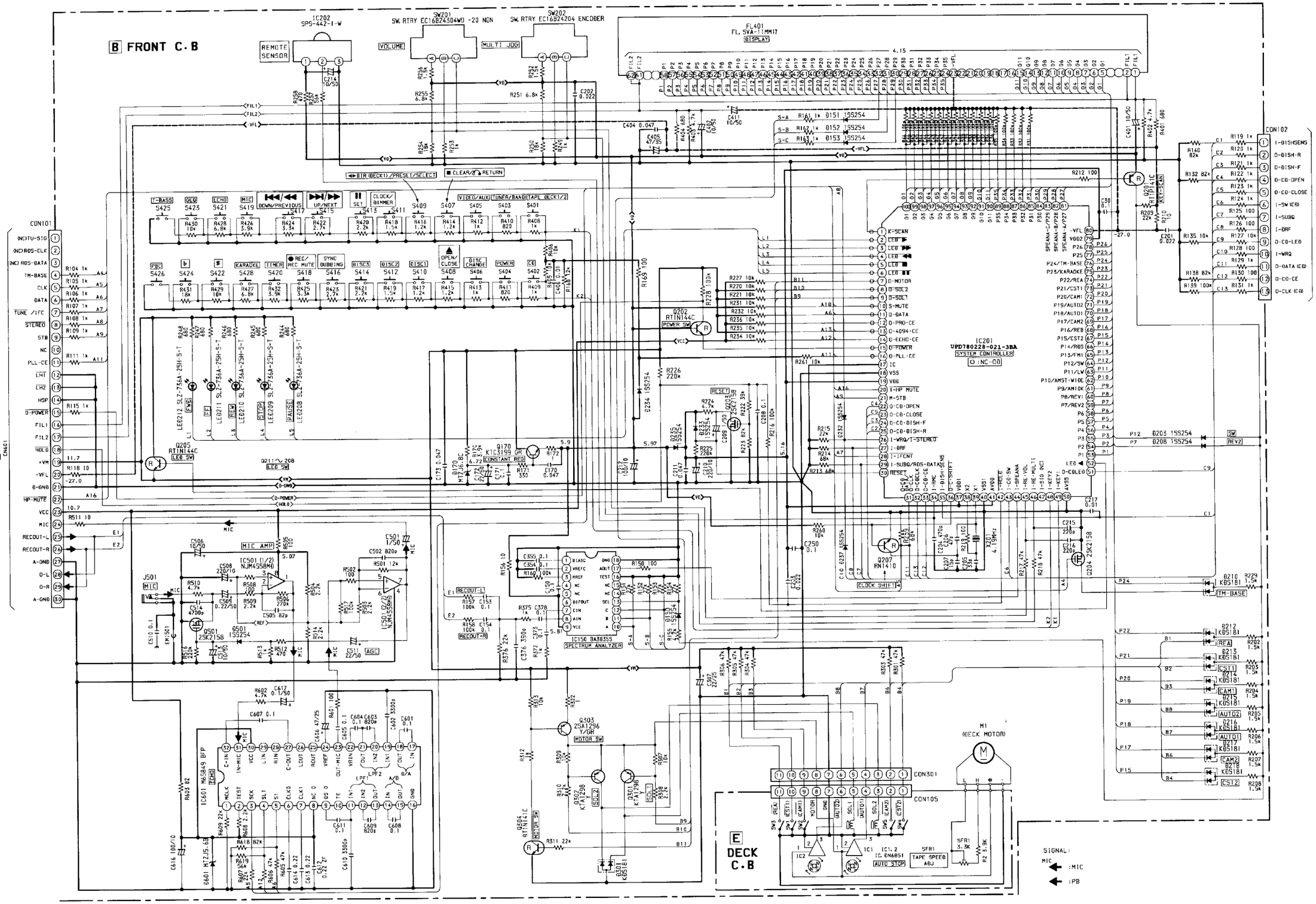
IC303 IC601 IC501 IC502 IC503 IC504 IC505 IC506

FUNC OUT
TP6 TP7
LCD BACK GND

SFR351 SFR352

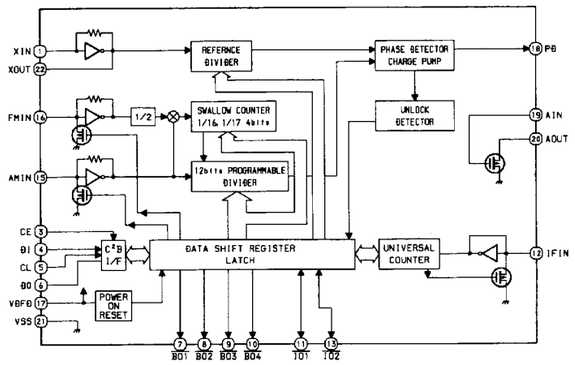
B FRONT C.B

SW201 VOLUME
S425 T-BASS
S402 CÐ
S405 VIÐEO/AUX
FL401 (ÐISPLAY)
S403 TUNER/BANÐ
S401 TAPE ÐECK 1/2
IC202 (REMOTE SENSOR)
S423 GEQ
S421 ECHO
S419 MIC
TO CÐ MECHANISM 4ZG-1 VOS15SHNM
CON102
LEÐ211 S417 ⏮/◀◀ ÐOWN/PREVIOUS
TUNING
LEÐ210, S415 ⏭/▶▶ UP/NEXT
S404 POWER
FROM A MAIN C.B CN601
SW202 MULTI JOG
J501 MIC
FROM F ÐECK C.B CON105
LEÐ208, S413 ❚❚ SET
S411 CLOCK/ ÐIMMER
S420 TIMER
LEÐ213, S409 ◀▶ÐIR (ÐECK1) /PRESET/ SELECT
S418 ● REC/REC MUTE
LEÐ209, S407 ■ CLEAR/↩ RETURN
S416 SYNC ÐUBBING
S428 KARAOKE
S422 ♯
S424 ♭
S426 PBC
S408 ▲OPEN/CLOSE
S406 ÐISC CHANGE
S414 ÐISC 3
S412 ÐISC 2
S410 ÐISC 1
ÐISC ÐIRECT PLAY


B FRONT C.B
REMOTE SENSOR
IC202 SPS-442-1-W
SW201 SW, RTRY EC16B24304W0 -20 NON
VOLUME
SW202 SW, RTRY EC16B24204 ENCODER
MULTI JOG
FL401 FL, SVA-11MM17
DISPLAY
CON101
CON102
IC201 UPD780228-021-3BA SYSTEM CONTROLLER
O : NC-OO
IC150 BA3835S SPECTRUM ANALYZER
IC601 M65849 BFP
IC501 (1/2) NJM4558MD
IC501 (2/2) NJM4558MD
Q202 RT1N144C POWER SW
Q203 RT1N144C LED SW
Q204 2SK2158
Q205 2SA1298 Y/GR MOTOR SW
Q206 KTA1298 SOL2
Q207 RN1410 CLOCK SHIFT
Q208 KTC3199 GR CONSTANT REG
Q209 2SK2158
Q211 LED SW
Q301 KTA1298 SOL1
Q303 2SA1298 Y/GR MOTOR SW
Q501 2SK2158
Q502 IS5254
Q503 2SA1298 Y/GR MOTOR SW
Q504 RT1N144C MOTOR SW
M1 (DECK MOTOR)
CON301
CON105
IC1 IC1, 2 IC BA6851 AUTO STOP
SFR1 TAPE SPEED ADJ
X201 4.19MHz
X202 32.768kHz
D170 MTZJ5.6B
D601 MTZJ5.6B
D501 KDS181
D502 KDS181
D503 KDS181
D504 KDS181
D505 KDS181
D506 KDS181
D507 KDS181
D508 KDS181
D509 KDS181
D510 KDS181
D511 KDS181
D512 KDS181
D513 KDS181
D514 KDS181
D515 KDS181
D516 KDS181
D517 KDS181
D518 KDS181
D519 KDS181
D520 KDS181

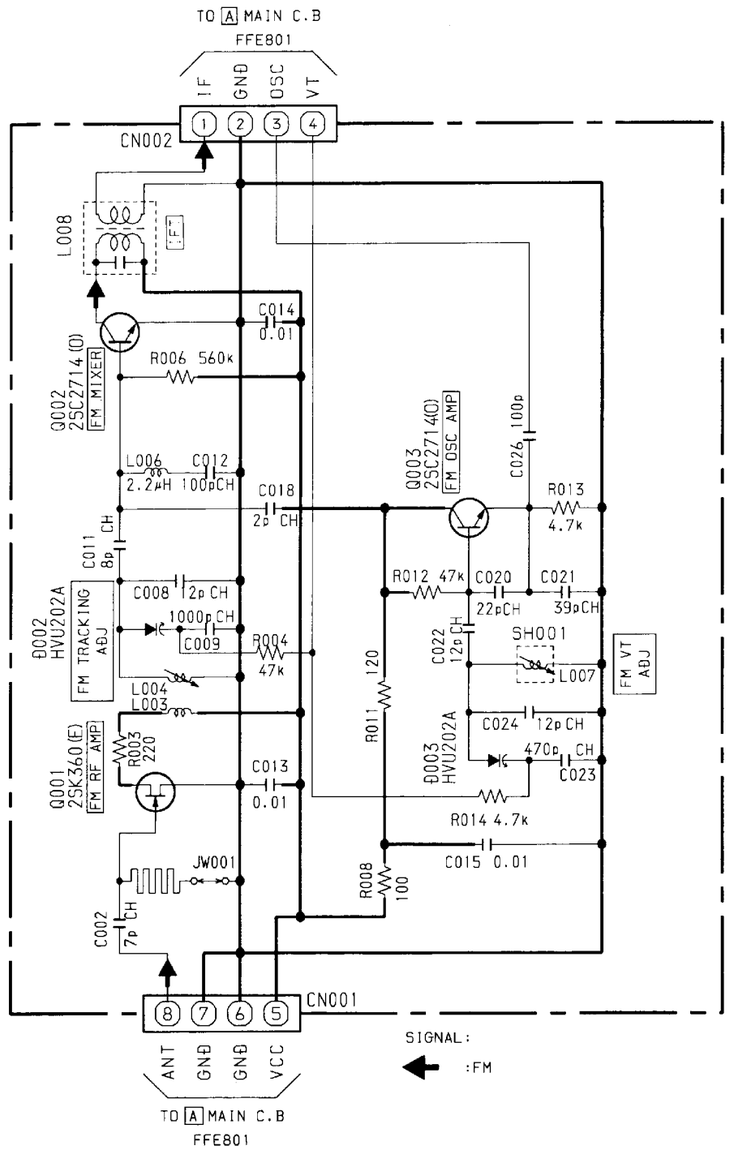
IC BLOCK DIAGRAM – 1

IC, LC72131D(Z)

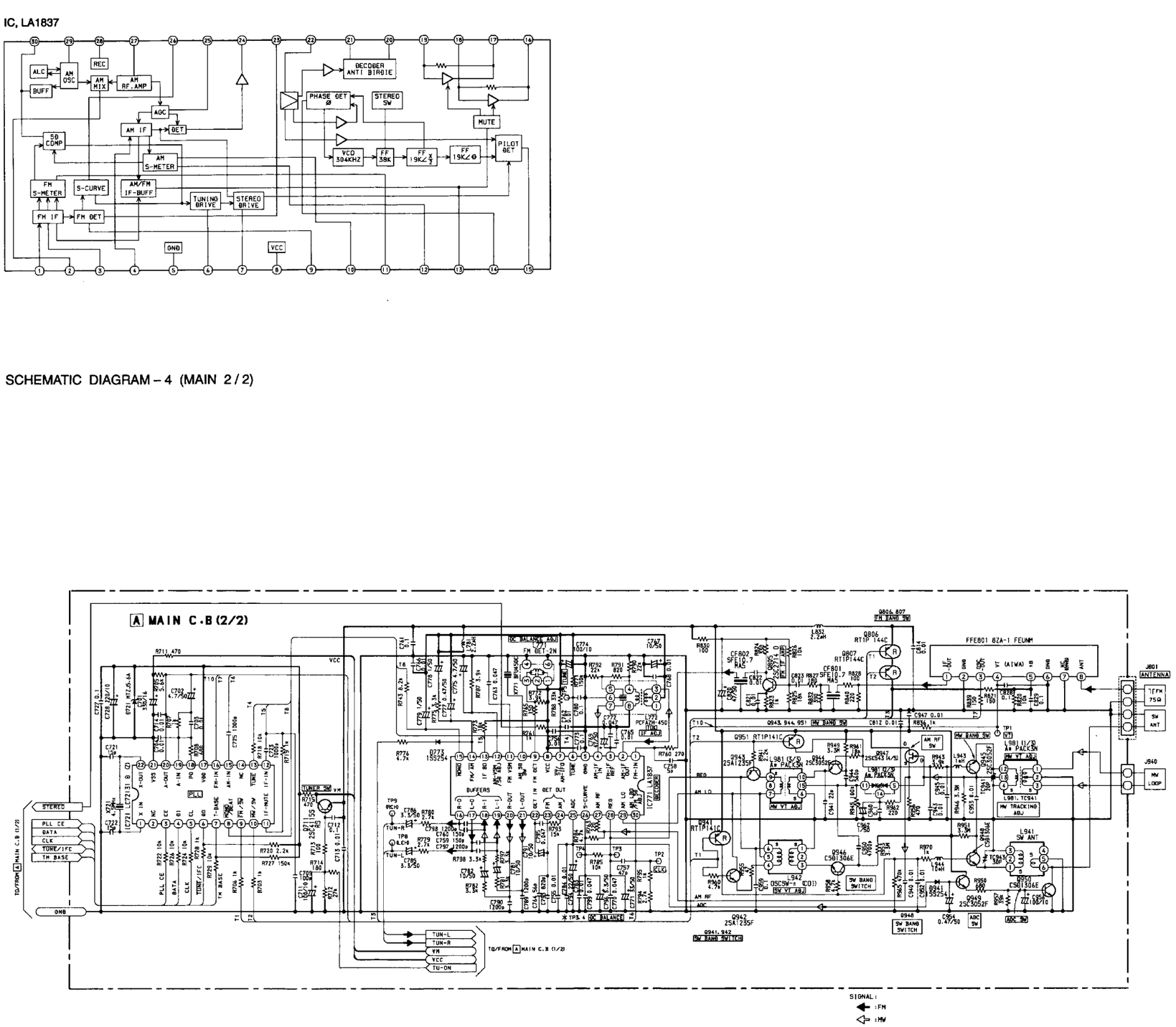


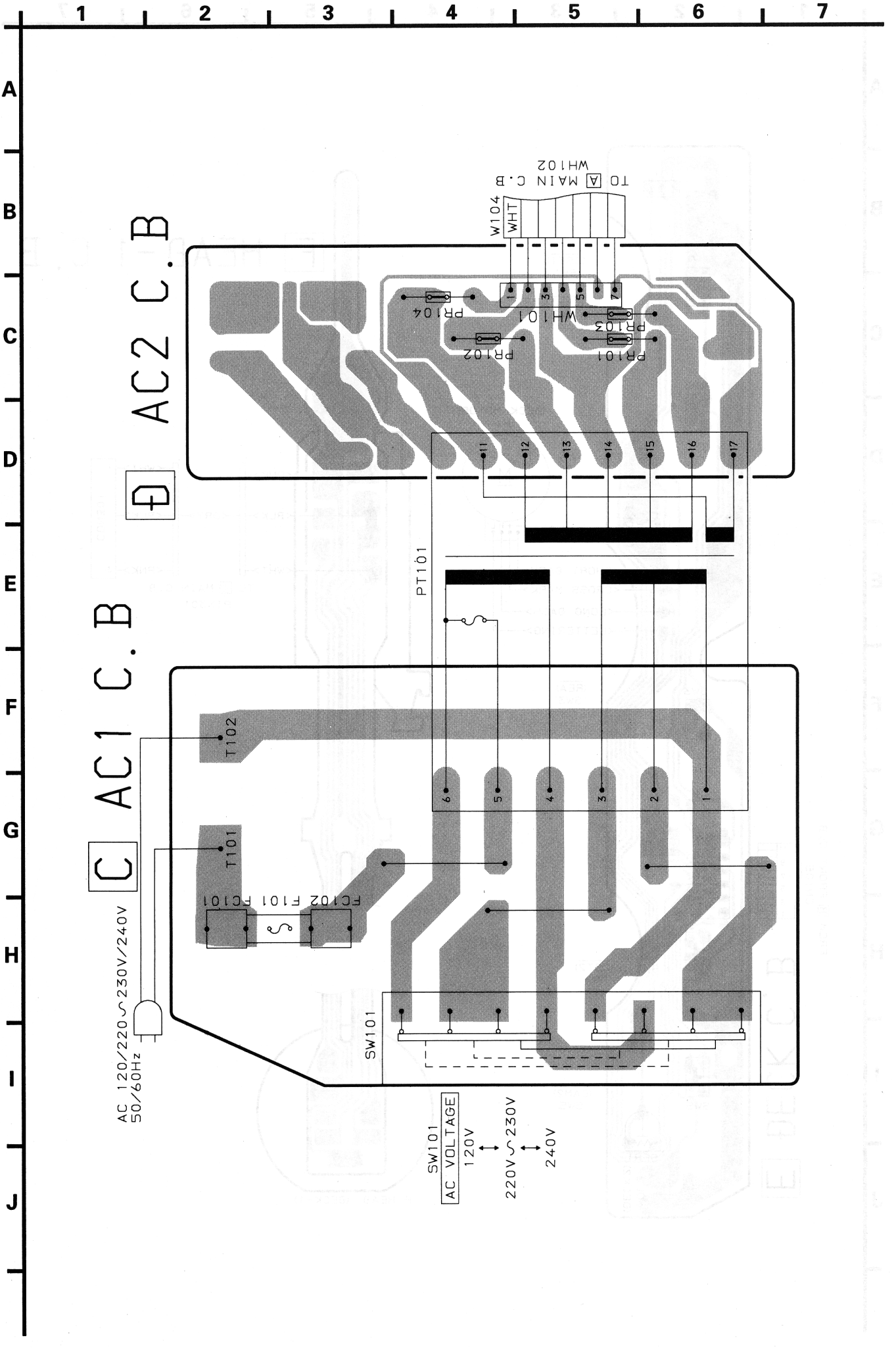
IC, LA1837

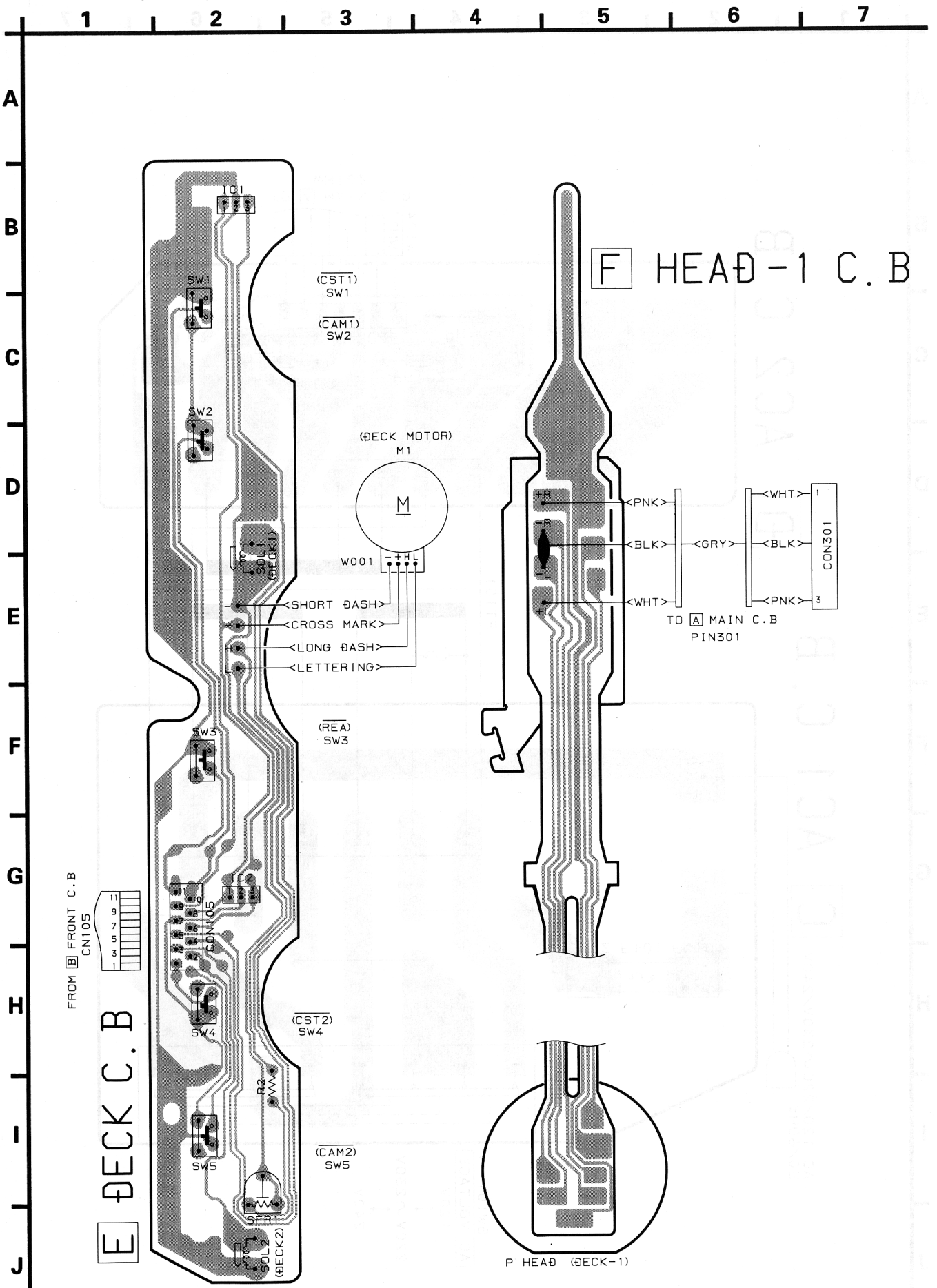
SCHEMATIC DIAGRAM – 3 (TUNER FRONT END)



SCHEMATIC DIAGRAM – 4 (MAIN 2 / 2)

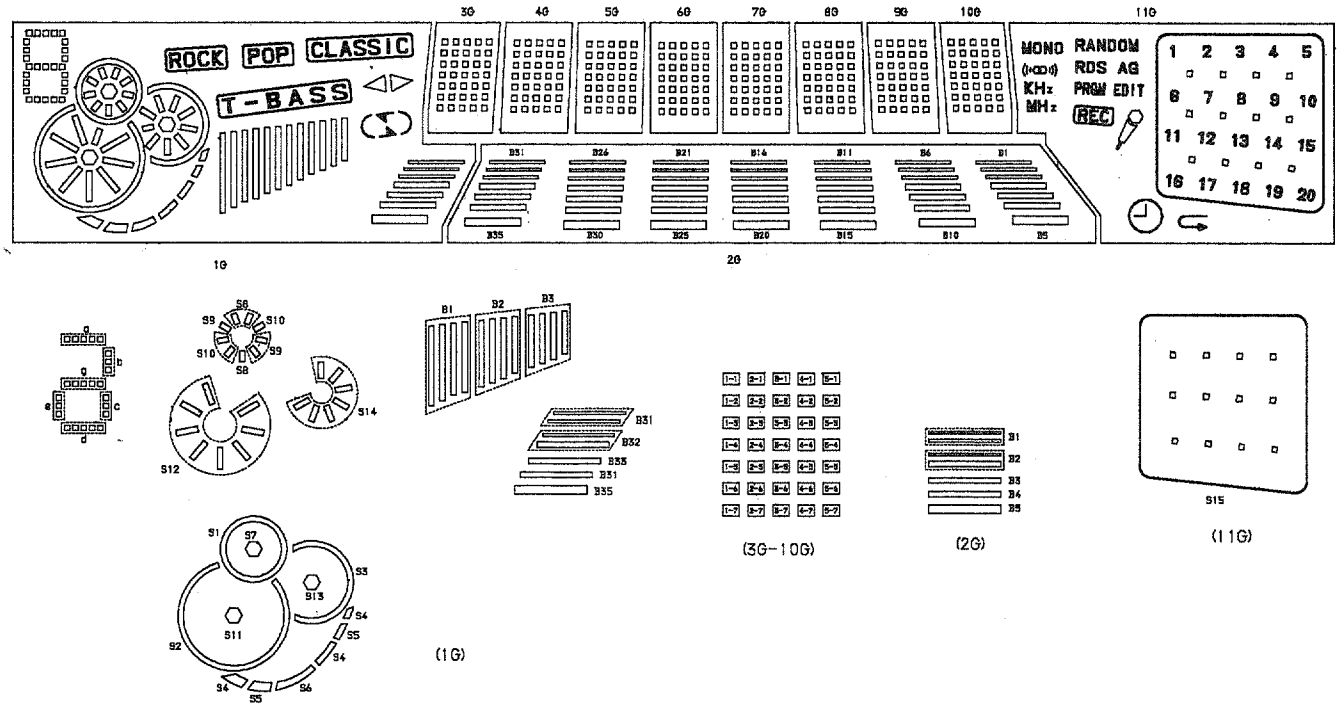



1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
D AC2 C.B
C AC1 C.B
TO A MAIN C.B
WH102
W104
WHT
PR104
PR102
WH101
PR103
PR101
PT101
T102
T101
FC102 F101 FC101
AC 120/220~230V/240V
50/60Hz
SW101
SW101
AC VOLTAGE
120V
220V~230V
240V


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
E DECK C.B
IC1
SW1
(CST1)
SW1
(CAM1)
SW2
SW2
(DECK MOTOR)
M1
M
W001
SOL1
(DECK1)
<SHORT DASH>
<CROSS MARK>
<LONG DASH>
<LETTERING>
SW3
(REA)
SW3
FROM B FRONT C.B
CN105
CON105
IC2
SW4
(CST2)
SW4
R2
SW5
(CAM2)
SW5
SFR1
SOL2
(DECK2)
F HEAD-1 C.B
+R
-R
-L
+L
<PNK>
<BLK>
<WHT>
<GRY>
<WHT>
<BLK>
<PNK>
CON301
TO A MAIN C.B
PIN301
P HEAD (DECK-1)

FL GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



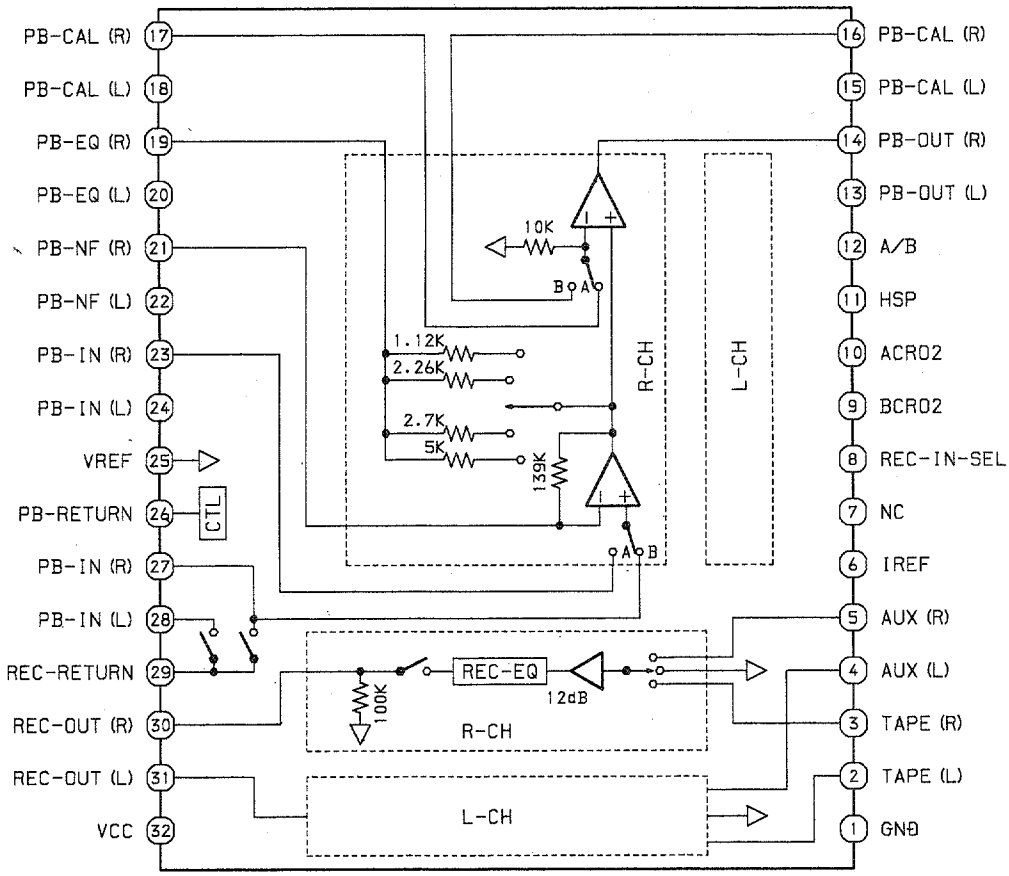
ANODE CONNECTION

	1G	2G	3G-10G	11G
P1	a, g, d	B35	1-1	MONO
P2	b	B30	2-1	((∞))
P3	c	B25	3-1	KHz
P4	e	B20	4-1	MHz
P5	S1	B15	5-1	
P6	S7	B10	1-2	RANDOM
P7	S8	B5	2-2	
P8	S9	B34	3-2	
P9	S10	B29	4-2	
P10	S2	B24	5-2	EDIT
P11	S11	B19	1-3	REC
P12	S12	B14	2-3	
P13	S3	B9	3-3	
P14	S13	B4	4-3	
P15	S14	B33	5-3	S15
P16	S4	B28	1-4	20
P17	S5	B23	2-4	19
P18	S6	B18	3-4	18

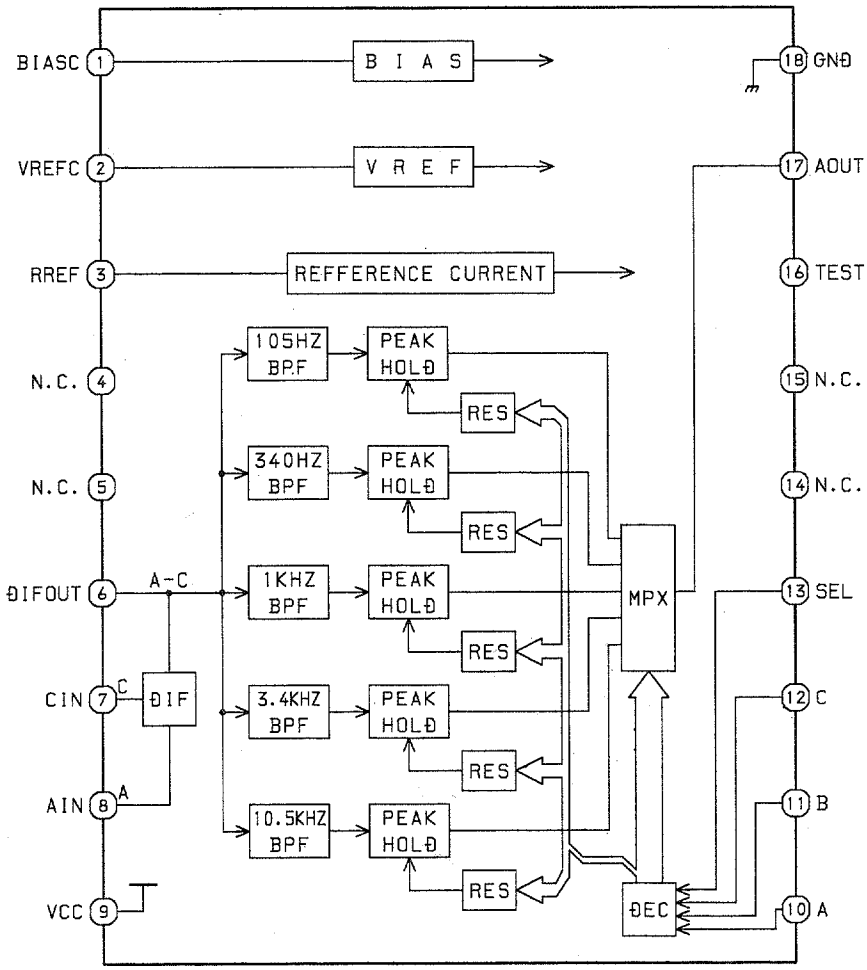
	1G	2G	3G-10G	11G
P19	ROCK	B13	4-4	17
P20	POP	B8	5-4	16
P21	CLASSIC	B3	1-5	15
P22	▷	B32	2-5	14
P23	◁	B27	3-5	13
P24	↻	B22	4-5	12
P25	↺	B17	5-5	11
P26	↺	B12	1-6	10
P27	T-BASS	B7	2-6	9
P28	B1	B2	3-6	8
P29	B2	B31	4-6	7
P30	B3	B26	5-6	6
P31	B31	B21	1-7	5
P32	B32	B16	2-7	4
P33	B33	B11	3-7	3
P34	B34	B6	4-7	2
P35	B35	B1	5-7	1

IC BLOCK DIAGRAM – 2

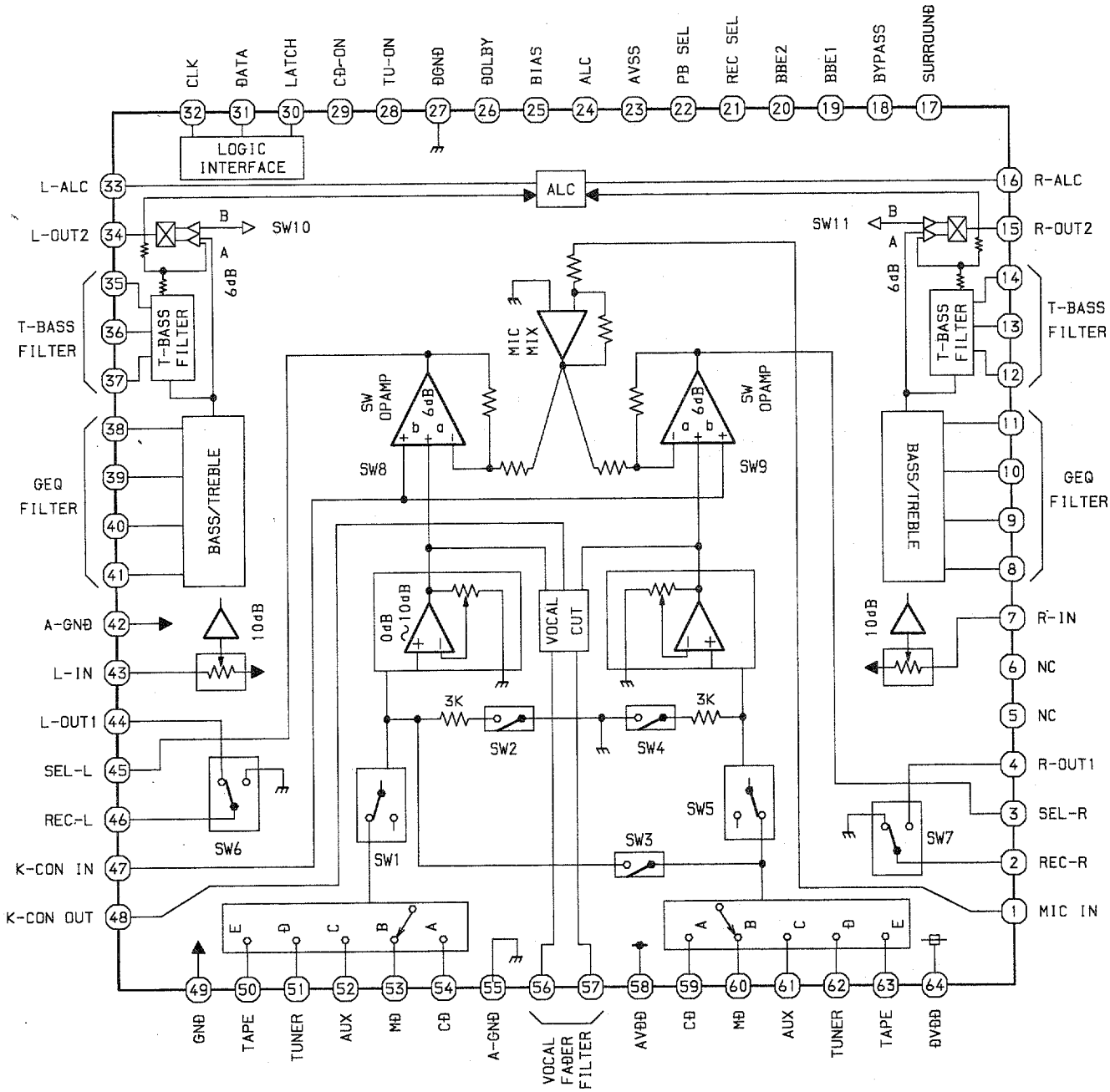
IC, BA7762AFS



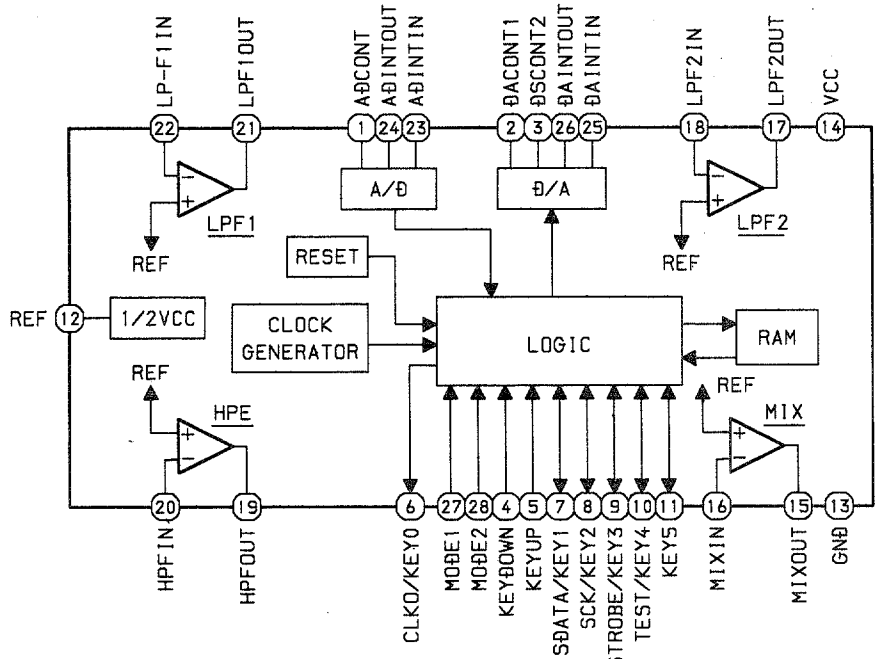
IC, BA3835S



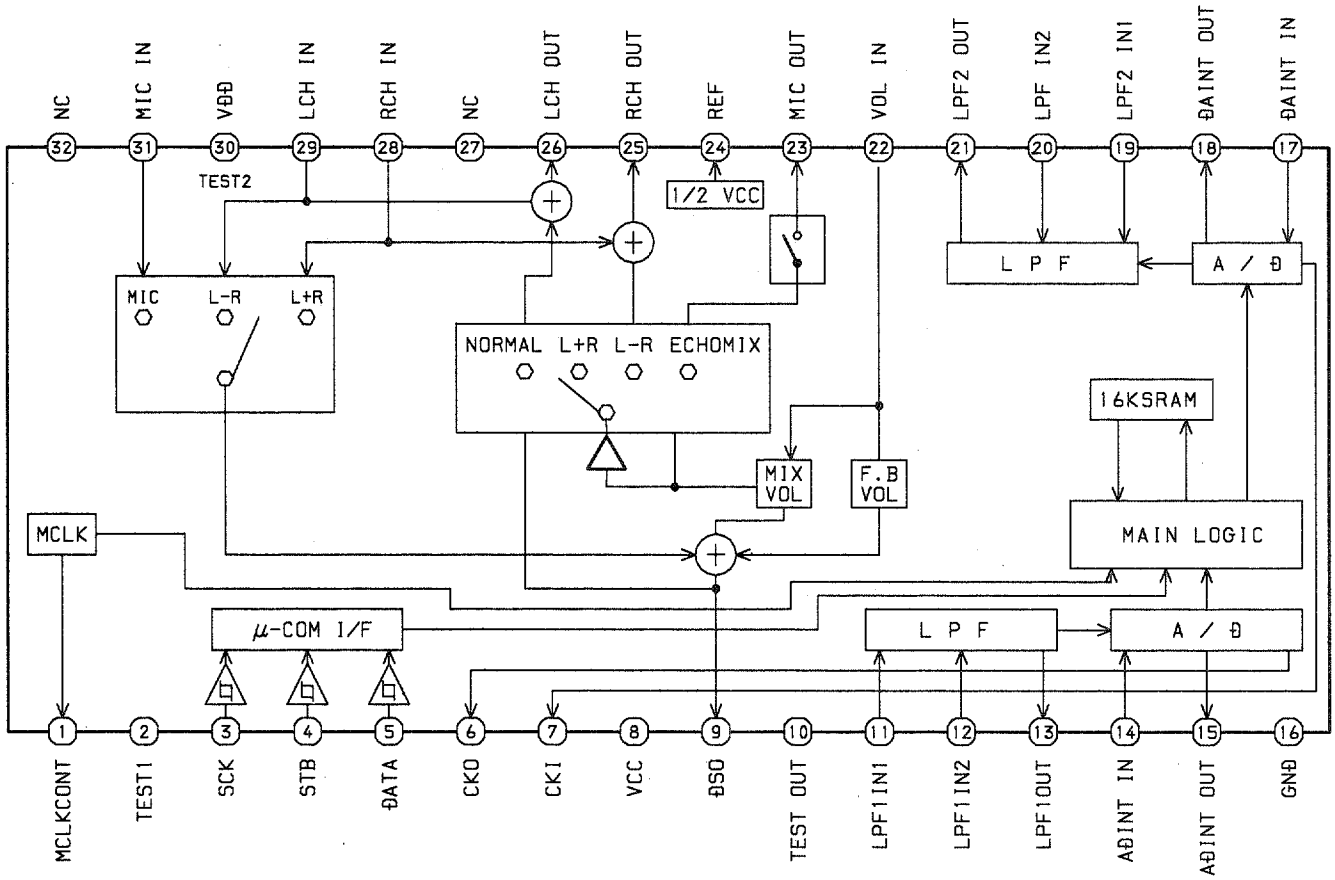
IC, M62445FP-601



IC, M65847AFP



IC, M65849BFP



IC DESCRIPTION

IC, μPD780228-021-3BA

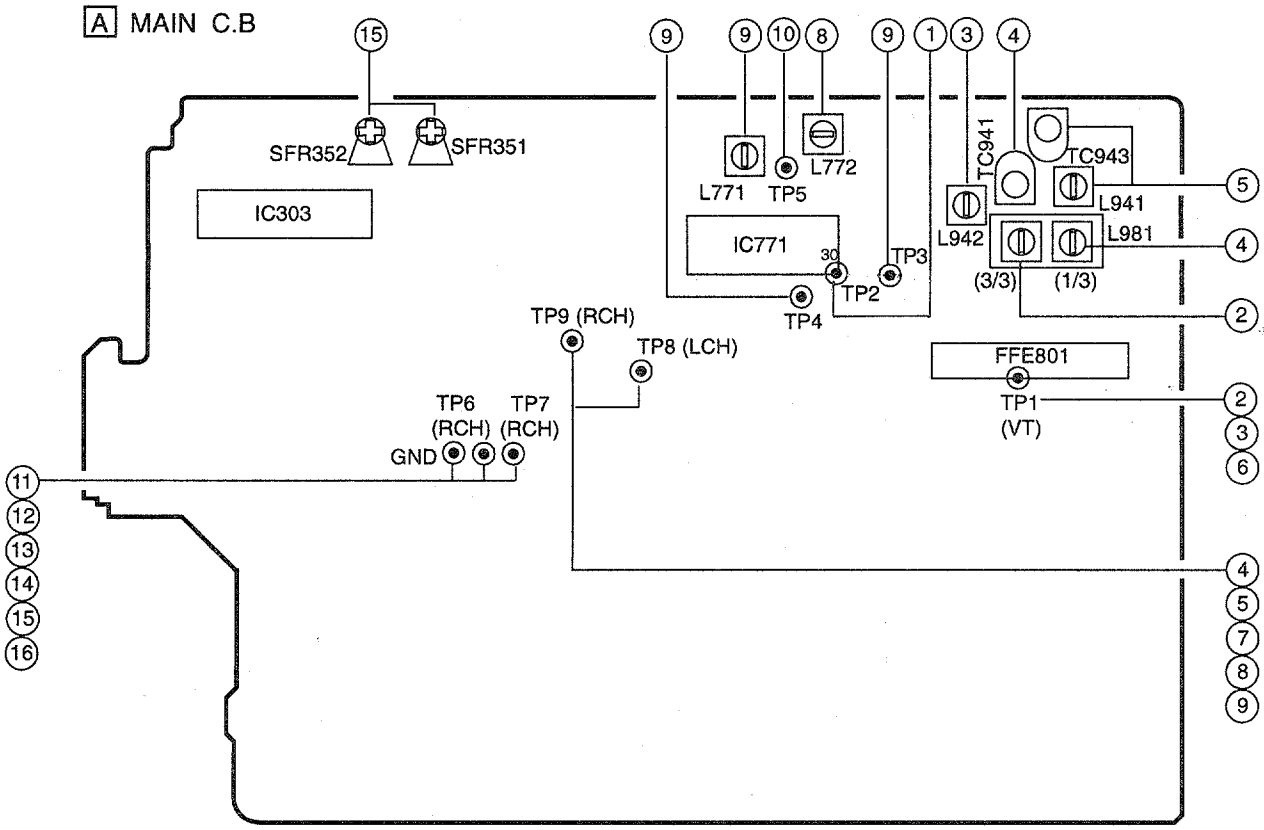
Pin No.	Pin Name	I/O	Description
1	$\overline{\text{K-SCAN}}$	O	Key scan output.
2	$\overline{\text{LED ▶}}$	O	▶ LED $\overline{\text{ON}}$/OFF output.
3	$\overline{\text{LED ▶▶}}$	O	▶▶ LED $\overline{\text{ON}}$/OFF output.
4	$\overline{\text{LED ◀◀}}$	O	◀◀ LED $\overline{\text{ON}}$/OFF output.
5	$\overline{\text{LED ■}}$	O	■ LED $\overline{\text{ON}}$/OFF output.
6	$\overline{\text{LED ▮▮}}$	O	▮▮ LED $\overline{\text{ON}}$/OFF output.
7	O-MOTOR	O	DECK MOTOR ON/$\overline{\text{OFF}}$ output.
8	$\overline{\text{O-SOL2}}$	O	DECK 2 solenoid output.
9	$\overline{\text{O-SOL1}}$	O	DECK 1 solenoid output.
10	S-MUTE	O	Surround mute output.
11	O-DATA	O	Data output for MAIN and FRONT C.B.
12	O-PRO-CE	O	Prologic IC chip enable output.
13	O-4094.CE	O	Latch strobe output to shift register IC.
14	O-ECHO.CE	O	ECHO IC chip enable output.
15	$\overline{\text{O-POWER}}$	O	System power supply $\overline{\text{ON}}$/OFF output.
16	O-PLL.CE	O	PLL IC chip enable output.
17	IC	–	Internal connection.(Connected to GND.)
18	VSS	–	GND.
19	VDD	–	Power supply input.
20	$\overline{\text{I-HP MUTE}}$	I	"L" input prologic DSP off.
21	M-STB	O	Latch strobe output for MAIN C.B.
22	O-CD.OPEN	O	CD tray open data output.
23	O-CD.CLOSE	O	CD tray close data output.
24	O-CD.DISH.F	O	CD turntable forward rotation output.
25	O-CD.DISH.R	O	CD turntable reverse rotation output.
26	I-WRQ/$\overline{\text{I-STEREO}}$	I	CD WRQ input/Tuner stereo input.
27	I-DRF	I	CD DRF input.
28	$\overline{\text{I-IFCNT}}$	I	Tune IF count serial data input.
29	I-SUBQ/RDS-DATA	I	CD SUBQ data input/RDS data input.
30	$\overline{\text{RESET}}$	I	System reset.
31	O-CD DATA/O-CLK	O	CD data output/Main PLL shift register clock output.
32	O-CDCLK	O	CD clock output.
33	O-CD.CE	O	CD enable output.
34	I-RMC	I	System remote control input.
35	I.DISH.SENSE	I	CD turntable photo sensor input.
36	$\overline{\text{O-C.SHIFT}}$	O	Micon clock shift output.
37	VDD1	–	Power supply input.
38,39	X2,X1	–	4.19MHz oscillator circuit.
40	VSS1	–	GND.
41	AVDD	–	Power supply input.
42	$\overline{\text{I-HOLD}}$	I	Power failure detected input "L" to stop clock and main memory. "H" for normal operation.
43	I-CD.SW	I	CD mecha switch input.

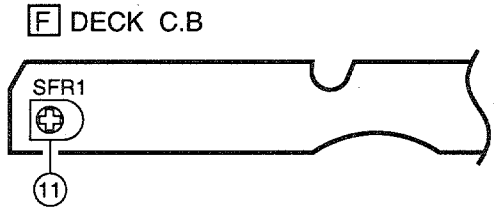
Pin No.	Pin Name	I/O	Description
44	I-SPEANA	I	A/D input for spectrum analyser display.
45	I-RE.VOL	I	Volume jog AD input.
46	I-RE.MULTI	I	Multi jog AD input.
47	I-SIG (N.C)	I	RDS Tuner signal input. (Not connected.)
48,49	I-KEY2,1	I	Key2,1 input.
50	AVSS	–	GND.
51	O-CDLED	O	CD flash window LED ON/OFF output.
52	LED ◀	O	◀ LED switch ON/OFF output.
53~58	P1~P6	O	FL segment P1~6 output.
59	P7/REV2	I/O	FL segment P7 output / REV2 data input.
60	P8/REV1	I/O	FL segment P8 output / REV1 data input.
61	P9/AM10K	I/O	FL segment P9 output / AM10K data input.
62	P10/AMST.WIDE	I/O	FL segment P10 output / AMSTWIDE data input.
63	P11/LW	I/O	FL segment P11 output / LW mode data input.
64	P12/SW	I/O	FL segment P12 output / SW mode data input.
65	P13/FM1	I/O	FL segment P13 output / FM1 data input.
66	P14/RDS	I/O	FL segment P14 output / RDS data input.
67	P15/CST2	I/O	FL segment P15 output / DECK2 cassette detect switch data input.
68	P16/REB	I/O	FL segment P16 output / DECK2 side B record OK switch data input.
69	P17/CAM2	I/O	FL segment P17 output / DECK2 CAM switch data input.
70	P18/AUTO1	I/O	FL segment P18 output / DECK1 AUTO stop switch data input.
71	P19/AUTO2	I/O	FL segment P19 output / DECK2 AUTO stop switch data input.
72	P20/CAM1	I/O	FL segment P20 output / DECK1 CAM switch data input.
73	P21/CST1	I/O	FL segment P21 output / DECK1 cassette detect switch data input.
74	P22/REA	I/O	FL segment P22 output / DECK2 side A record OK switch data input.
75	P23/KARAOKE	I/O	FL segment P23 output / KARAOKE data input.
76	P24/TM-BASE	I/O	FL segment P24 output / TM-BASE data input.
77,78	P25,P26	O	FL segment P25,P26 output.
79	VDD2	–	Power supply input.
80	-VFL	–	Power supply for FL display.
81	SPEANA-A/P27	O	FL segment P27 output / Spectrum analyser band switching data output.
82	SPEANA-B/P28	O	FL segment P28 output / Spectrum analyser band switching data output.
83	SPEANA-C/P29	O	FL segment P29 output / Spectrum analyser band switching data output.
84~89	P30~P35	O	FL segment P30~35 output.
90~100	G11~G1	O	FL grid G11~1 output.

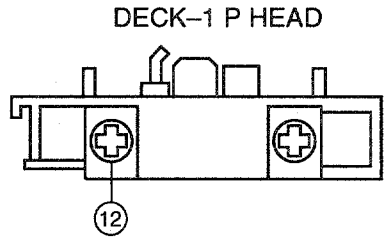
IC, LC72131

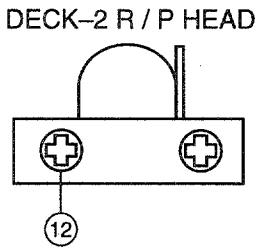
<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>XIN</td><td rowspan="2">I/O</td><td rowspan="2">A crystal oscillator (4.5MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>XOUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Digital data input from CPU (μPD780228-021-3BA) when relevant key is operated. Active "H".</td></tr>
<tr><td>5</td><td>CL</td><td>I</td><td>To clock in the data DI.</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Digital data output to CPU (μPD780228-021-3BA).</td></tr>
<tr><td>7</td><td>T-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when MONO / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / $\overline{\text{SW}}$</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$/SW</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IF-IN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>15</td><td>AM-IN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>FM-IN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>A-IN</td><td>I</td><td rowspan="2">The MOS transistor for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>A-OUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>

ADJUSTMENT <TUNER / DECK>









< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2
   Method : Set to MW 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Adjustment
   Settings : • Test point : TP1
   • Adjustment Location : L981 (3/3)
   Method : Set to MW 1710kHz and adjust L981(3/3) so that the test point becomes 7.5V ± 0.05V. Then set to MW 530kHz and check that the test point is more than 0.3V.

3. SW VT Adjustment
   Settings : • Test point : TP1
   • Adjustment Location : L942
   Method : Set to SW 17.9MHz and adjust L942 so that the test point becomes 6.0V ± 0.05V. Then set to SW 5.9MHz and check that the test point is more than 0.3V.

4. MW Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L981(1/3) 603kHz
   TC941(1/3) 1404kHz

Method : Set up TC941 to center before adjustment. The level at 603kHz is adjusted to max by L981(1/3). Then the level at 1404kHz is adjusted to max by TC941.

5. SW Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L941 ..... 5.9MHz
   TC943 ..... 17.9MHz
   Method : Set up TC943 to center before adjustment. The level at 5.9MHz is adjusted to max by L941. Then the level at 17.9MHz is adjusted to max by TC943.

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

7. FM Tracking Check
   Settings : • Test point : TP8(Lch), TP9(Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 9.0dB.

8. MW IF Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L772 ..... 450kHz

9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC Balance)
   TP8, TP9 (Distortion)
   • 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%

10. Auto Stop Level Check
    MW
    Settings : • Test point : TP5
    • Input level : 52dB
    Method : Set to MW 999kHz and check that the auto stop is at 37 ~ 62dB.

    FM
    Settings : • Test point : TP5
    • Input level : 25dB
    Method : Set to FM 98.0MHz and check that the auto stop is at 25dB ± 10dB.

< DECK SECTION >

11. Tape Speed Adjustment
    Settings : • Test tape : TTA-100
    • Test point : TP6(Lch), TP7(Rch)
    • Adjustment location : SFR1
    Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz.

12. Head Azimuth Adjustment
    Settings : • Test tape : TTA-330
    • Test point : TP6(Lch), TP7(Rch)
    • Adjustment location : Head azimuth adjustment screw
    Method : Play back (FWD) the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV PLAY mode.

13. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA-330
    • Test point :TP6(Lch), TP7(Rch)
    Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5dB.

14. PB Sensitivity Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA-200
    • Test point : TP6(Lch), TP7(Rch)
    Method : Play back the test tape and check that the output level at TP6,TP7 becomes 300mV± 3.0dB.

15. REC/PB Frequency Response Adjustment
    Settings : • Test tape : TTA-602
    • Test point : TP6(Lch), TP7(Rch)
    • Input signal : 1kHz / 10kHz (LINE IN)
    • Adjustment location : SFR351 (Lch)
    SFR352 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes -28 dBV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

16. REC/PB Sensitivity Check
    Settings : • Test tape : TTA-602
    • Test point : TP6(Lch), TP7(Rch)
    • Input signal : 1kHz (LINE IN)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes -8 dBV. Record and play back the 1kHz signals and check that the output is -2 ± 3.5dB.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	Less than 10 / 9 / 9dB
(THD 3%)	[at 87.5 / 98.0 / 108.0MHz]
S/N 50dB Quieting sensitivity :	
	Less than 35dB
	[at 98.0MHz]
Signal to noise ratio :	Mono : More than 68dB
	Stereo : More than 66dB
	[at 98.0MHz]
Distortion :	Mono : Less than 1.2%
	Stereo : Less than 2.0%
	[at 98.0MHz]
Auto stop level :	25dB ± 10dB [at 98.0MHz]
Stereo separation :	More than 22dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

<MW SECTION>

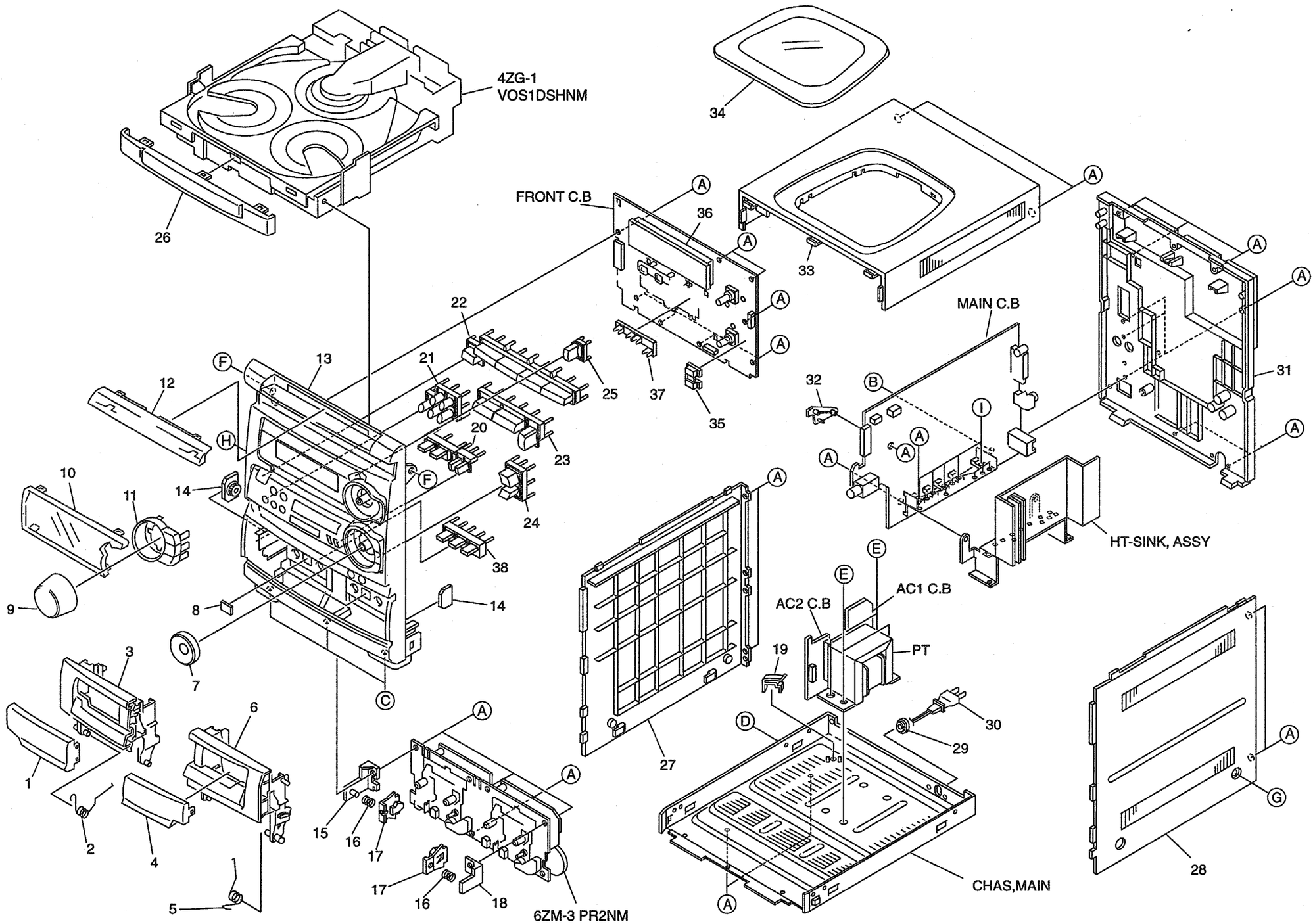
Sensitivity :	Less than 60dB
(S/N 20 dB)	[at 603kHz]
	Less than 58dB
	[at 999kHz]
	Less than 58dB
	[at 1404kHz]
Signal to noise ratio :	Mono : More than 36dB
	Stereo : More than 34dB
	[at 999kHz]
Distortion :	Mono : Less than 1.5%
	Stereo : More than 4.0%
	[at 999kHz]
Auto stop level :	52dB +10/-15dB
	[at 999kHz]
Stereo separation :	More than 15dB
	[at 999kHz]
Intermediate frequency :	450kHz

<SW SECTION>

Sensitivity :	Less than 42dB
(S/N 20 dB)	[at 5.9MHz]
	Less than 38dB
	[at 12.0MHz]
	Less than 38dB
	[at 17.9MHz]
Distortion :	Less than 10%
	[at 12.0MHz]
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.25% (W.R.M.S)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F torque :	75 ~ 180g-cm
REW torque :	75 ~ 180g-cm
Back tension :	2 ~ 7g-cm (FWD, REV)
PB output level :	2.8V± 3dB (SP OUT 2V,TTA-200)
REC/PB output level :	-2.0 ± 3.0dB (NORM)
Distortion (REC/PB) :	Less than 2.0% (NORM)
Noise level (PB) :	Less than 25mV(NORM)
Noise level (REC/PB) :	Less than 30mV(NORM)
Erasing ratio :	More than 60dB
	(at 125Hz, +10VU, NORM)
Test tape :	TTA-602 (NORM)
	TTA-200

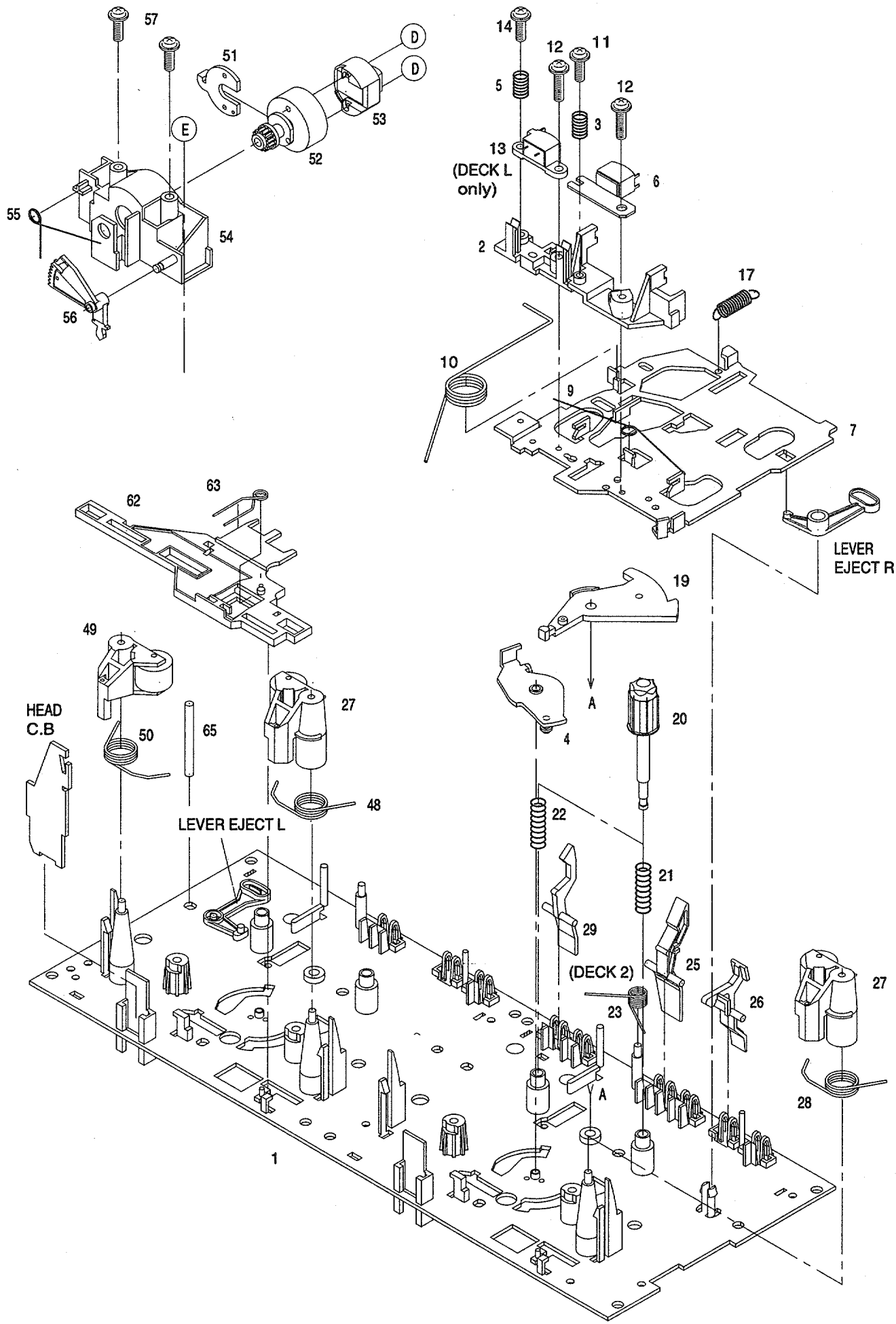

4ZG-1
VOS1DSHNM
34
26
FRONT C.B
36
33
MAIN C.B
22
21
25
37
35
31
12
13
32
20
23
10
11
14
24
38
HT-SINK, ASSY
9
8
14
AC2 C.B
AC1 C.B
PT
19
30
29
3
6
7
27
1
2
4
5
15
16
17
18
6ZM-3 PR2NM
CHAS,MAIN
28

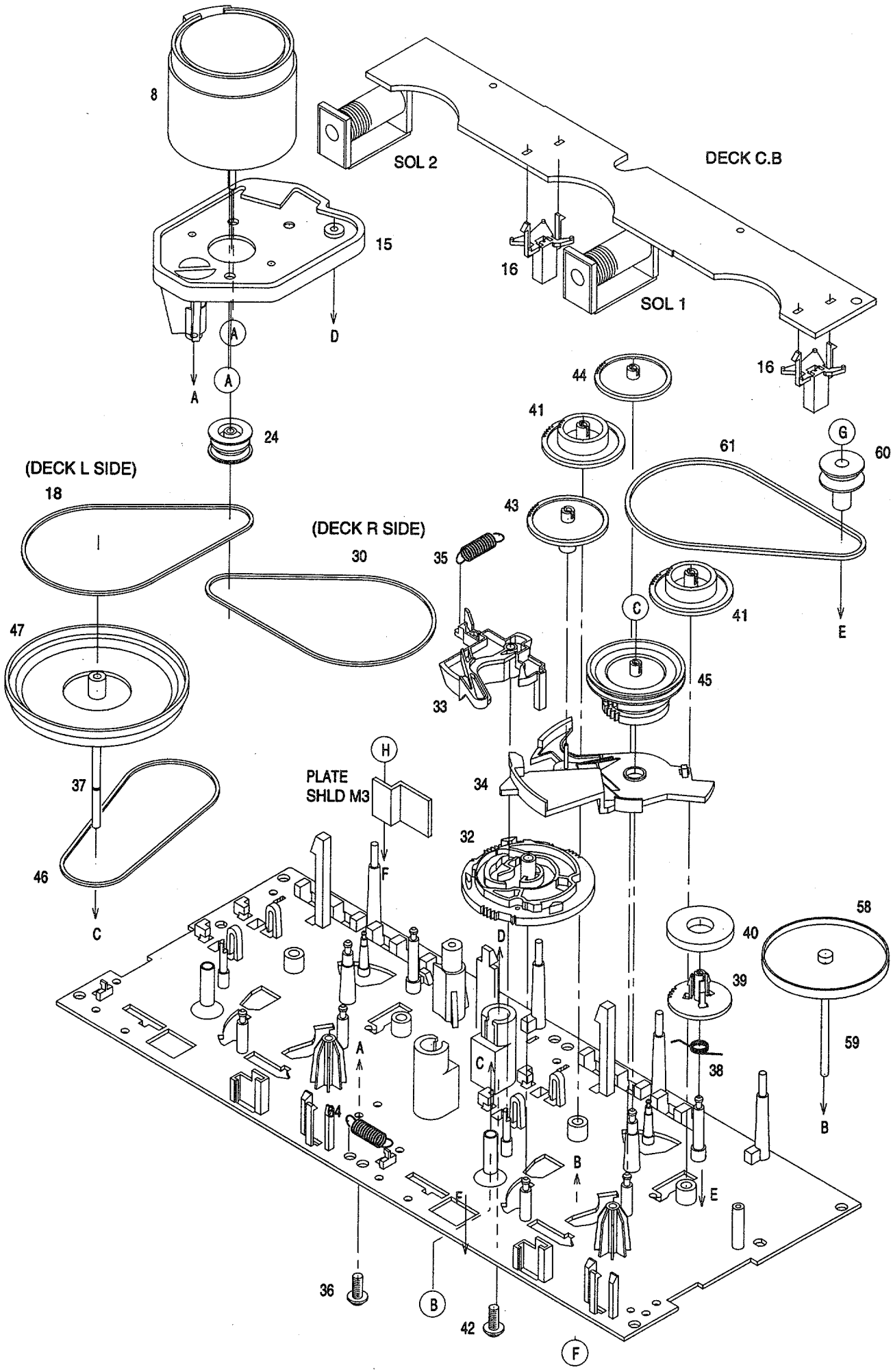
MECHANICAL PARTS LIST 1 / 1

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

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-NB8-012-010		WINDOW,CASS 1
2	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
3	88-NF8-041-010		BOX,CASS 1 REV
4	87-NB8-013-010		WINDOW,CASS 2
5	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
6	88-NF8-043-010		BOX,CASS 2 1WAY
7	88-NF8-016-010		KNOB,RTRY JOG
8	81-532-080-010		LABEL, CASS. COMPT
9	87-NB8-015-010		KNOB,RTRY VOL
10	88-NH8-002-010		WINDOW,DISPLAY H
11	88-NH8-005-010		KEY,GEQ VCD
12	87-NB8-009-010		WINDOW,CD
13	88-NH8-001-010		CABI,FR H
14	87-NF8-220-010		DMPR,150
15	87-NF4-216-010		HLDR,LOCK 1
16	86-NF9-224-010		SPR-C,LOCK
17	82-NF5-229-010		PLATE,LOCK
18	87-NF4-217-010		HLDR,LOCK 2
19	87-NF4-221-010		HLDR,CABLE
20	88-NF8-006-210		KEY,REC
21	88-NF8-014-110		KEY,CD
22	88-NF8-007-010		KEY,FUNCTION
23	88-NH8-007-010		KEY,ASSY PLAY REV PBC
24	88-NH8-009-010		KEY,ASSY FF PBC
25	87-NB8-022-010		KEY,T-BASS
26	88-NH8-004-010		PANEL,TRAY
27	87-NB8-005-010		PANEL,LEFT
28	88-NF8-047-010		PANEL,RIGHT 2
29	87-085-185-010		BUSHING, AC CORD (E)
⚠ 30	87-050-079-010		AC-CORD ASSY,E
31	88-NH8-012-010		CABI,REAR HRJSTNM
32	88-NF5-208-010		HLDR,PWB-M N
33	87-NF9-055-010		PANEL,TOP
34	86-NFZ-001-010		WINDOW,TOP
35	88-NF8-207-010		GUIDE,FF
36	88-NF8-205-010		GUIDE,FL
37	88-NF8-206-010		GUIDE,PLAY REV
38	88-NH8-003-010		KEY,VCD
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
C	87-067-688-010		BVTT+3-6
D	87-721-096-410		QT2+3-10 GLD
E	87-078-019-010		S-SCREW,IT+4-6
F	87-721-097-410		QT2+3-12 GLD
G	87-067-641-010		UTT2+3-8(W/O SLOT)BL
H	87-723-096-410		QT2+3-10W/O SLOT BL

TAPE MECHANISM EXPLODED VIEW 1 / 1



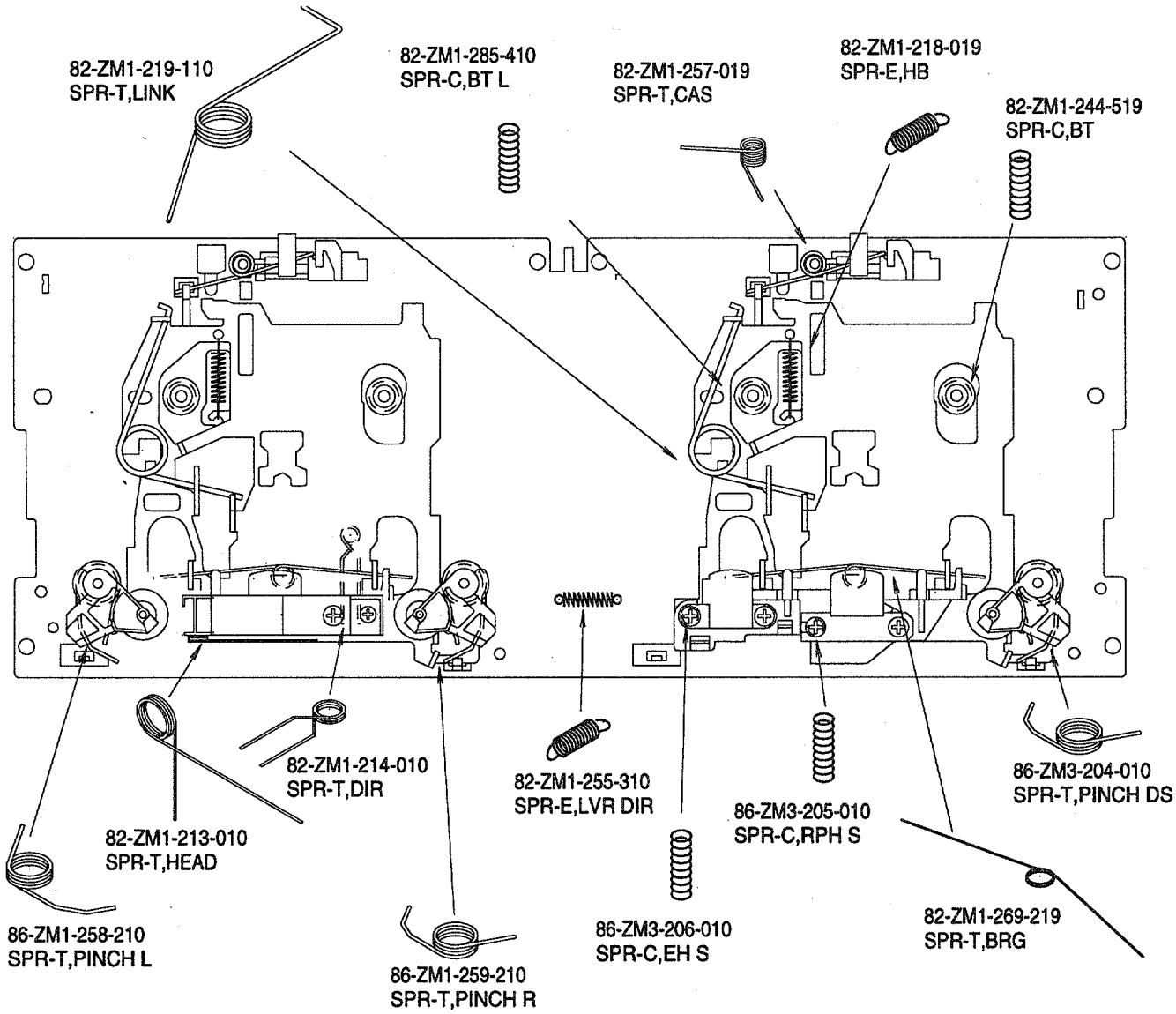

8
SOL 2
DECK C.B
15
16
SOL 1
D
A
A
16
44
41
24
G
61
60
(DECK L SIDE)
18
43
(DECK R SIDE)
30
35
C
41
47
E
45
33
H
PLATE
SHLD M3
34
37
32
F
46
C
58
40
D
39
59
A
C
38
64
B
E
B
36
B
42
F

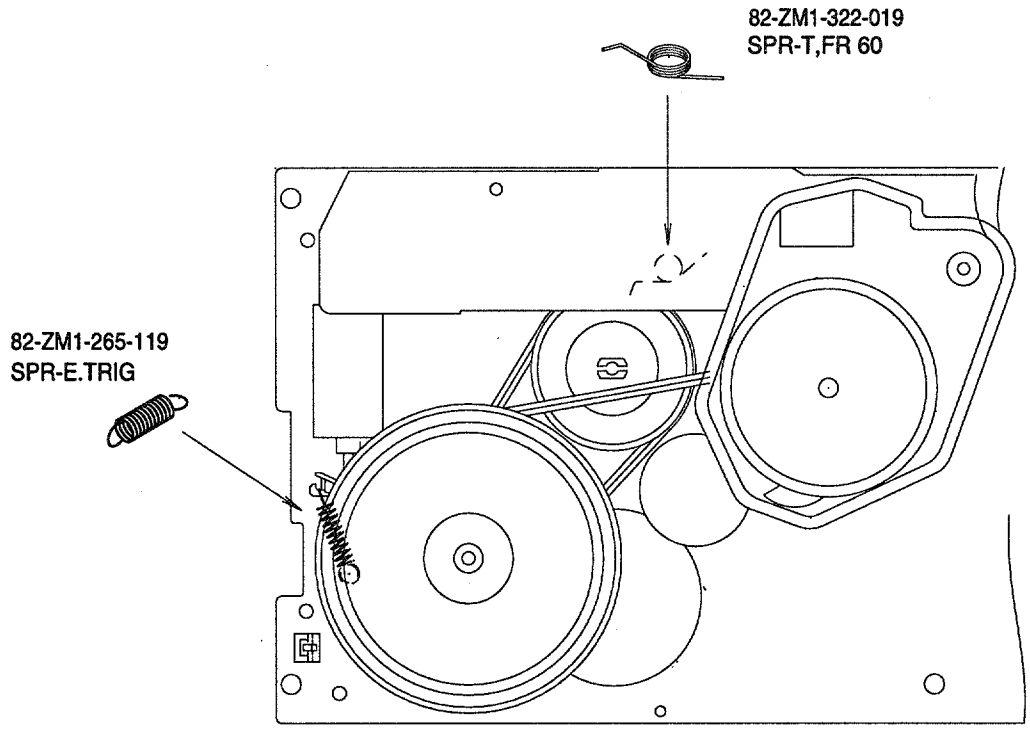
TAPE MECHANISM PARTS LIST 1 / 1

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

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM3-215-010		CHAS ASSY,RS
2	86-ZM3-202-010		BASE,HEAD S
3	86-ZM3-205-010		SPR-C,RPH S
4	82-ZM1-333-210		PLATE,LINK 2
5	86-ZM3-206-010		SPR-C,EH S
6	87-A90-403-019		HEAD,RPH MS15R
7	86-ZM3-201-010		CHAS,HEAD S(DECK L)
7	82-ZM3-206-910		CHAS,HEAD(DECK R)
8	87-045-347-019		MOT,SHU2L 70(M1)
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-110		SPR-T,LINK
11	86-ZM3-209-010		S-SCREW,ASIMUTHS
12	86-ZM3-207-010		S-SCREW,RPH
13	87-A90-404-019		HEAD,EH LE15B
14	86-ZM3-208-010		S-SCREW,EH
15	86-ZM3-203-010		HLDR,MOTS
16	82-ZM1-245-210		HLDR,IC
17	82-ZM1-218-019		SPR-E,HB
18	86-ZM3-214-010		BELT,SUB RR
19	82-ZM1-222-219		LVR,PLAY
20	82-ZM1-217-419		REEL TABLE
21	82-ZM1-244-519		SPR-C,BT
22	82-ZM1-285-410		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM3-221-010		PULLEY,MOT 2M
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-344-119		LVR ASSY,PINCH
28	86-ZM3-204-010		SPR-T,PINCHDS
29	82-ZM1-240-119		LVR,REC (DECK 2)
30	86-ZM3-210-010		BELT,RS
32	82-ZM3-305-119		GEAR,CAM M2
33	82-ZM1-227-319		LVR,TRIG
34	82-ZM3-306-110		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	87-761-073-419		VFT2+2.6-6 W/O SLOT
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-319		GEAR,REEL
42	86-ZM3-213-010		S-SCREW,HLDR,MOT 3
43	82-ZM1-225-219		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM3-333-310		SLIP DISK ASSY 2
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-349-019		FLY-WHL RW (DECK L)
47	82-ZM3-338-010		FLY-WHL R3W (DECK R)
48	82-ZM1-259-210		SPR-T,PINCH R
49	82-ZM1-341-110		LVR ASSY,PINCH L2
50	82-ZM1-258-210		SPR-T,PINCH L
51	82-ZM1-314-110		PLATE,HEAD
52	82-ZM1-208-310		HLDR,HEAD
53	87-A90-366-010		HEAD,PH YK50P-BF414
54	82-ZM1-207-810		GUIDE TAPE
55	82-ZM1-213-010		SPR-T,HEAD
56	82-ZM1-210-110		GEAR,HT
57	86-ZM4-206-010		S-SCREW AZIMUTH L
58	82-ZM1-348-010		FLY-WHL,LW
59	82-ZM1-236-019		CAPSTAN N 2-41.5
60	82-ZM3-335-210		PULLEY,COUPLER M3
61	86-ZM1-206-010		BELT,MAIN L
62	82-ZM1-266-110		LVR,DIR
63	82-ZM1-214-010		SPR-T,DIR
64	82-ZM1-255-310		SPR-E,LVR DIR
65	82-ZM3-339-010		SHAFT,COUPLER N3
A	87-251-071-417		U+2.6-4
B	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
C	82-ZM3-334-010		PW,2.16-6-0.4
D	80-ZM6-207-010		V+1.6-7
E	85-ZM3-202-010		S-SCREW TG
F	82-ZM1-288-010		SH,1.63-3.2-0.5 SLT
G	87-B10-043-010		W-P,0.99-4-0.25 SLT
H	87-571-032-410		VIT+2-3

SPRING APPLICATION POSITION



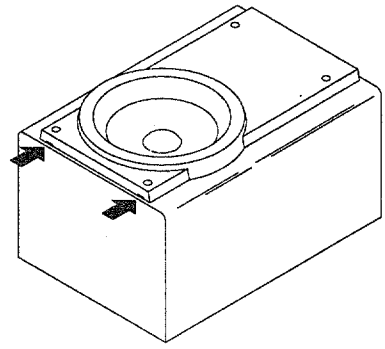


SPEAKER DISASSEMBLY INSTRUCTIONS

Type.1

矢印の位置にマイナスドライバーを差し込んで、パネルを外します。各々のスピーカーユニットのビスを取り、スピーカーユニットを外してください。

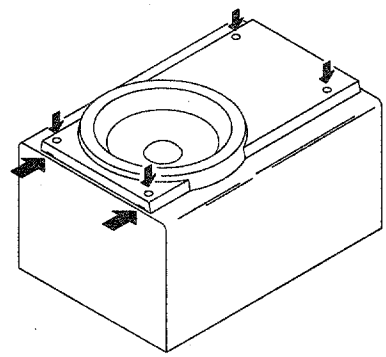
Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



Type.2

グリルフレームを外し、4個のゴムキャプをマイナスドライバーで端の方から持ち上げて外すと中にビスが有りますので、ビスを取り外します。矢印の位置にマイナスドライバーを差し込んで、パネルを外します。各々のスピーカーユニットのビスを取り、スピーカーユニットを外してください。

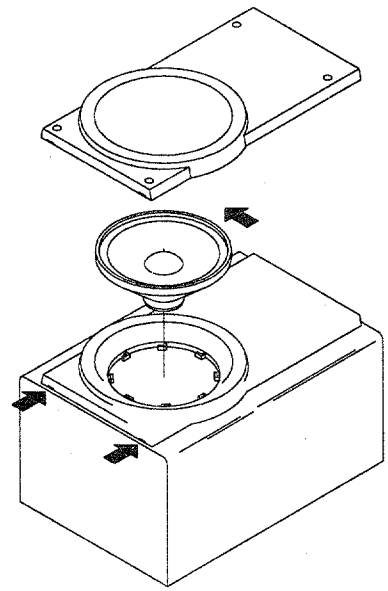
Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then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



Type.3

矢印の位置にマイナスドライバーを差し込んで、パネルを外します。各々のスピーカーユニットの凹にマイナスドライバーを差し込んで、反時計方向に回転させスピーカーユニットを外してください。スピーカーユニット交換後は時計方向にクリック音がするまで、回転させて取り付けます。

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.



SPEAKER PARTS LIST (SX-NS302) <HR>

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NS5-012-010		BADGE,AIWA 35
2	87-NS7-611-010		CORD,SPKR
3	87-NSH-612-010		SPKR,CERAMIC ASSY
4	88-NSJ-604-010		SPKR,T 60
5	88-NSJ-602-010		SPKR,W 140
6	88-NSJ-001-010		PANEL,FR
7	88-NSJ-003-010		NET,

SPEAKER PARTS LIST (SX-NS503) <HRJ8>

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NSE-602-010		SPKR,W 160
2	87-NSE-604-010		SPKR,T 80
3	87-NSF-610-010		SPKR,CORD
4	88-NSG-001-010		PANEL,FR R
5	88-NSG-002-010		PANEL,FR L
6	88-NSG-004-010		GRILLE,FRAME ASSY
7	88-NSG-610-010		SPKR, CERAMIC ASSY

ACCESSORIES / PACKAGE LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-NH8-901-010		IB,H(ECA)M
2	87-006-269-010		AM LOOP ANT (UN)
3	87-043-095-010		WIRE ANTENNA
4	87-043-115-010		ANT,FEEDER FM
5	87-050-103-010		CORD,PIN 1PY1.5M
⚠ 6	87-A90-312-010		PLUG,CONVERSION WTN-1157R1
7	88-NH8-602-010		RC UNIT,8AS08

REFERENCE NAME LIST

ELECTRICAL SECTION

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

MECHANICAL SECTION

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

サービス技術ニュース	
番号	連絡内容
G— —	
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Tokyo Japan

Printed in Singapore