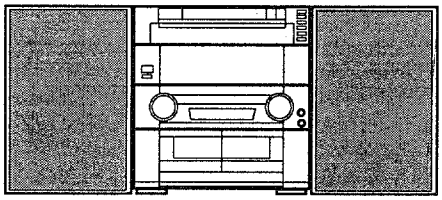
aiwa

aiwa SERVICE

Z-R990

SERVICE MANUAL



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 2ZM-3MK2 PR5NM
- BASIC CD MECHANISM : 6ZG–1 S2DSHNM
- TYPE : LH

SYSTEM	SPEAKER	CD – CASSEIVER	REMOTE CONTROLLER
Z–R990	SX – WZR99	CX – ZR990	RC – 7AS01

•If requiring information about the CD mechanism, see Service Manual of 6ZG-1, S/M Code No. 09-984-249-90T.

S/M Code No. 09–983–248–1FE

SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output	170 W + 170 W (6 ohms, T.H.D. 10 %, 1 kHz)
Total harmonic distortion	0.15 % (85W, 1 kHz, 6 ohms)
Inputs	VIDEO/AUX : 210 mV (adjustable) PHONO: 340 mV (4 7kohms) MIC 1, MIC 2:1.4 mV (20 kohms)
Outputs	CD DIGITAL OUT (OPTICAL) SUPER WOOFER:3.2 V SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS : accept speakers of 8 ohms to 16 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	CrO2 tape: 50 Hz - 16000Hz Normal tape: 50 Hz - 15000 Hz
Signal-to-noise ratio	60 dB (Dolby B NR ON,CrO2 tape peak level,above 400 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	Unmeasurable

<Speaker system SX-WZR99>

Cabinet type	4 way, bass reflex
Speakers	Super woofer: 240 mm cone type Woofer: 140 mm cone type Tweeter: 60 mm cone type Super tweeter : 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	89 dB/W/m
Dimensions (W x H x D)	300 x 500 x 385 mm
Weight	7.0 kg

<General>

Power requirements	120 V/ 220 – 230 V/ 240 V AC, switchable ,50 / 60 Hz
Power consumption	190 W
Dimensions of main unit (W x H x D)	360 x 394.5 x 382.5 mm
Weight of main unit	11.5 kg

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

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.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

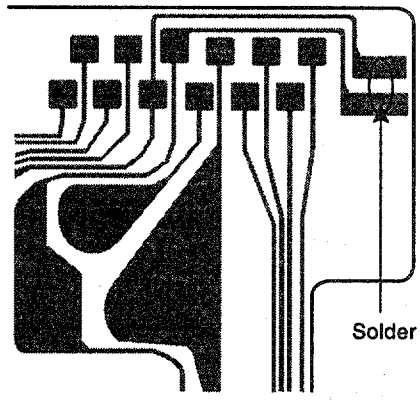
Precaution to replace Optical block

(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. Connector 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.

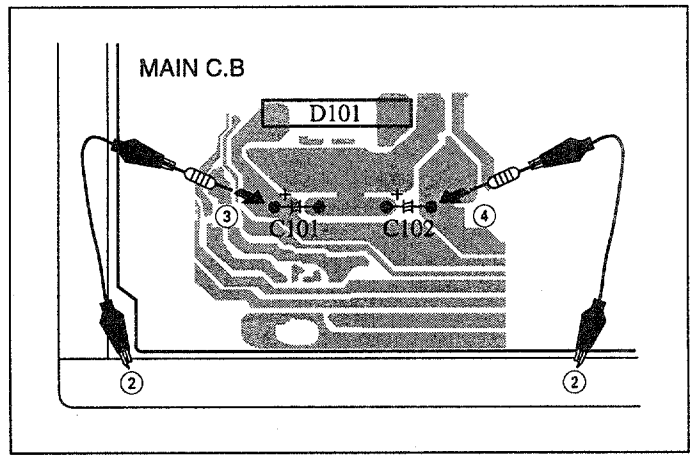


Fig-1

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 capacitor 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 judgment 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.

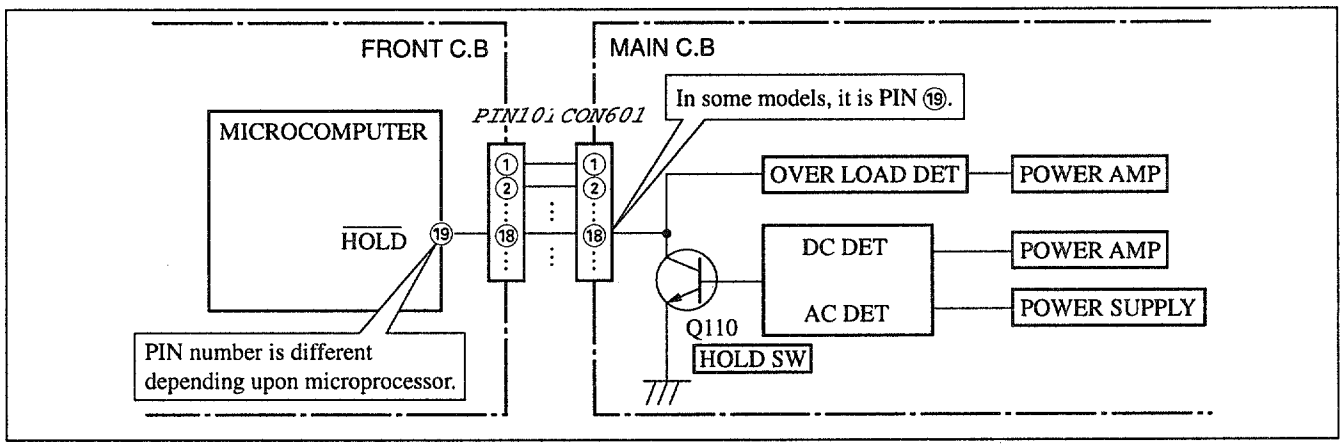


Fig-2-1

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 judgment 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.

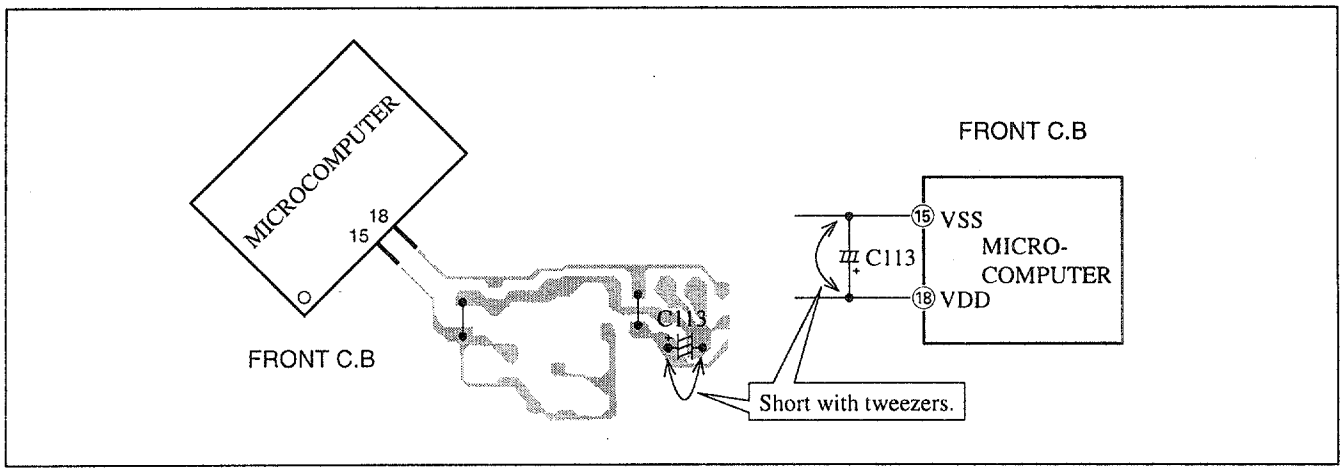


Fig-2-2

② Short the 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			
	87-020-454-010		IC,DN6851
	88-MA1-602-010		C-IC,LC866560W-5H04
	87-NF8-614-010		IC,SPS-442-1-W
	87-017-915-080		IC,BU4094BCF
	87-070-289-040		IC,BU 2092F
	87-A20-455-010		IC,HA12211
	87-A20-355-010		IC,CXA1553P
	87-A20-083-010		IC,BA3835S
	87-A20-804-040		C-IC,NJM2152M
	87-A20-613-040		C-IC,BU9262AFS
	87-A20-954-040		C-IC,M62445FP-601
	87-017-888-080		IC,NJM4558MD
	86-NFZ-655-010		IC,LC72131D(Z)
	87-A20-438-010		IC,LA1837
	88-NF5-615-040		C-IC,MSM6654A-521GS-KR1
TRANSISTOR			
	87-026-463-080		TR,2SA933S(RS)
	87-A30-076-080		C-TR,2SC3052F
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-610-080		TR,KTC3198GR
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-085-070		C-TR,CSA1362GR
	87-A30-196-080		TR,2SC4115SRS
	87-A30-075-080		C-TR,2SA1235F
	89-112-965-080		TR,2SA1296 (0.75W)
	87-A30-071-080		C-TR,RT1N 144C
	87-026-609-080		TR,KTA1266GR
	87-A30-105-080		C-TR,RT1P 441C
	87-026-580-080		C-TR,DTA123JK
	87-A30-107-070		C-TR,CMBT5401
	87-A30-190-080		TR,CC5551
	87-A30-097-010		TR,FN 1016
	87-A30-098-010		TR,FP 1016
	87-A30-106-070		C-TR,CMBT5551
	87-A30-162-010		FET,2SK2937
	87-A30-072-080		C-TR,RT1P 144C
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-221-080		C-TR,DTA114WK
	87-A30-087-080		C-FET,2SK2158
	87-026-211-080		TR,DTA144EK
	89-327-143-080		TR,2SC2714 (0.1W)
DIODE			
	87-A40-470-080		DIODE,1SS254
	87-A40-224-010		DIODE,GBU8D
	87-A40-269-080		C-DIODE,MC2836
	87-A40-270-080		C-DIODE,MC2838
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-344-080		ZENER,MTZJ6.2C
	87-A40-341-080		ZENER,MTZJ 36 A
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-004-080		ZENER,MTZJ16A
	87-A40-438-080		ZENER,MTZJ4.7A
	87-A40-274-010		DIODE,FMB-G16L
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-488-080		DIODE,1SS244
	87-017-931-080		ZENER,MTZJ5.6B
	87-A40-002-080		ZENER,MTZJ5.1C
	87-A40-234-080		ZENER,MTZJ5.6A
MAIN C.B			
	88-906-251-110		FF-CABLE,6P 1.25
C101	87-A10-231-090		CAP,E 3300-80
C102	87-A10-231-090		CAP,E 3300-80
C103	87-016-658-090		CAP,E 4700-35 SMG
C104	87-016-658-090		CAP,E 4700-35 SMG
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	87-010-247-080		CAP, ELECT 100-50V
C116	87-010-247-080		CAP, ELECT 100-50V
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
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
C209	87-010-546-080		CAP, ELECT 0.33-50V
C210	87-010-546-080		CAP, ELECT 0.33-50V
C211	87-010-183-080		C-CAP,S 2700P-50 B
C212	87-010-183-080		C-CAP,S 2700P-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	87-010-913-080		CAP, ELECT 47-25BP
C218	87-010-913-080		CAP, ELECT 47-25BP
C223	87-010-197-080		CAP, CHIP 0.01 DM
C224	87-010-197-080		CAP, CHIP 0.01 DM
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
C235	87-010-196-080		CHIP CAPACITOR,0.1-25
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
C247	87-010-186-080		C-CAP,S 4700P
C248	87-010-186-080		C-CAP,S 4700P
C280	87-010-191-080		C-CAP,S 0.015-50 Z F GRM
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
C311	87-010-198-080		CAP, CHIP 0.022
C312	87-010-198-080		CAP, CHIP 0.022
C313	87-010-182-080		C-CAP,S 2200P-50 B
C314	87-010-182-080		C-CAP,S 2200P-50 B
C315	87-010-181-080		CAP,CHIP S 1800P
C316	87-010-181-080		CAP,CHIP S 1800P
C317	87-012-142-080		CAP, S 0.33-16
C318	87-012-142-080		CAP, S 0.33-16
C319	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C320	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C321	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C322	87-012-141-080		CHIP-CAPACITOR,0.22-16F
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

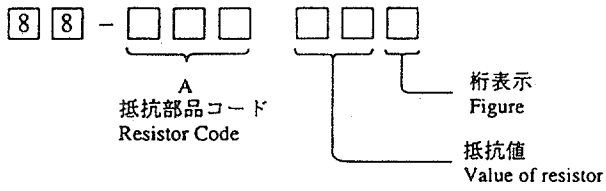
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P
C354	87-010-175-080		CAP 560P
C355	87-010-178-080		CHIP CAP 1000P
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		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
C371	87-010-179-080		CAP,CHIP S B1200P
C372	87-010-179-080		CAP,CHIP S B1200P
C373	87-010-179-080		CAP,CHIP S B1200P
C374	87-010-179-080		CAP,CHIP S B1200P
C375	87-010-545-080		CAP, ELECT 0.22-50V
C376	87-010-545-080		CAP, ELECT 0.22-50V
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C381	87-010-197-080		CAP, CHIP 0.01 DM
C382	87-010-318-080		C-CAP,S 47P-50 CH
C383	87-010-197-080		CAP, CHIP 0.01 DM
C384	87-010-402-080		CAP, ELECT 2.2-50V
C385	87-010-184-080		CHIP CAPACITOR 3300P(K)
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
C403	87-010-183-080		C-CAP,S 2700P-50 B
C404	87-010-183-080		C-CAP,S 2700P-50 B
C405	87-010-193-080		CHIP CAPACITOR,0.033
C406	87-010-193-080		CHIP CAPACITOR,0.033
C407	87-010-405-080		CAP, ELECT 10-50V
C408	87-010-405-080		CAP, ELECT 10-50V
C409	87-010-380-080		CAP, ELECT 47-16V
C410	87-010-380-080		CAP, ELECT 47-16V
C411	87-010-405-080		CAP, ELECT 10-50V
C412	87-010-112-080		CAP, ELECT 100-16V
C415	87-010-184-080		CHIP CAPACITOR 3300P(K)
C416	87-010-184-080		CHIP CAPACITOR 3300P(K)
C457	87-010-404-080		CAP, ELECT 4.7-50 SME
C458	87-010-404-080		CAP, ELECT 4.7-50 SME
C516	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
C625	87-010-405-080		CAP, ELECT 10-50V
C626	87-010-405-080		CAP, ELECT 10-50V
C629	87-010-405-080		CAP, ELECT 10-50V
C630	87-010-213-080		C-CAP,S 0.015-50 B
C631	87-010-992-080		C-CAP,S 0.047-25 B
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	87-010-196-080		CHIP CAPACITOR,0.1-25
C637	87-010-183-080		C-CAP,S 2700P-50 B
C641	87-010-196-080		CHIP CAPACITOR,0.1-25
C667	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
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
C776	87-010-197-080		CAP, CHIP 0.01 DM
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
C787	87-010-184-080		CHIP CAPACITOR 3300P(K)
C788	87-010-184-080		CHIP CAPACITOR 3300P(K)
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	87-010-182-080		C-CAP,S 2200P-50 B
C798	87-010-182-080		C-CAP,S 2200P-50 B
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
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C961	87-010-152-080		C-CAP,S 8P-50 CH
CF801	87-008-261-010		FILTER, SFE10.7MA5-A
CF802	87-008-261-010		FILTER, SFE10.7MA5-A
FB601	87-A50-190-080		C-COIL,S BLM21A102S
FFE801	A8-8ZA-190-030		8ZA-1 FEUNM
J201	87-A60-488-010		JACK,DIA6.3 BLK ST W/SW KM16AT
J202	87-A60-547-010		JACK,PIN 4P R/W/B
J203	87-033-240-010		TERMINAL,SP 4P32SV1-05
J602	87-099-625-010		JACK PIN 4P,RVS (KM)
J801	87-033-239-010		TERMINAL,HSP-154V-2

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
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-A90-733-010		FLTR,PCFAZH-450 (TOK)
L781	87-005-847-080		COIL,2.2UH(CECS)
L791	87-A50-209-010		COIL,1POLE MPX(MIT)
L792	87-A50-209-010		COIL,1POLE MPX(MIT)
L832	86-NFZ-694-080		COIL,2.2UH K CECS
L981	87-NF4-650-010		COIL,AM PACK 4N(TOK)
R237	87-A00-262-080		RES,M/F 0.15-2W J
R238	87-A00-262-080		RES,M/F 0.15-2W J
R239	87-A00-262-080		RES,M/F 0.15-2W J
R240	87-A00-262-080		RES,M/F 0.15-2W J
RY101	87-045-389-010		RELAY,OSA-SS-212DM5
RY201	87-045-382-010		RELAY,OUAZ-SH-112L
SFR301	87-A90-557-080		SFR,33K H HOKU
SFR302	87-A90-557-080		SFR,33K H HOKU
SFR303	87-A90-557-080		SFR,33K H HOKU
SFR304	87-A90-557-080		SFR,33K H HOKU
SFR305	87-A90-433-080		SFR,50K H NVZ6TLTA
SFR306	87-A90-433-080		SFR,50K H NVZ6TLTA
SFR351	87-A90-433-080		SFR,50K H NVZ6TLTA
SFR352	87-A90-433-080		SFR,50K H NVZ6TLTA
TH201	87-A90-221-080		C-THMS,100K
TH202	87-A90-221-080		C-THMS,100K
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
FRONT C.B			
	85-MA2-602-010		CABLE,FFC 15P-1.25
	88-912-281-110		FF-CABLE,12P 1.25
	88-909-231-110		FF-CABLE,9P 1.25
C101	87-010-198-080		CAP, CHIP 0.022
C102	87-010-198-080		CAP, CHIP 0.022
C103	87-010-197-080		CAP, CHIP 0.01 DM
C104	87-010-312-080		C-CAP,S 15P-50 CH
C105	87-010-316-080		C-CAP,S 33P-50 CH
C106	87-010-320-080		CHIP CAP 68P
C107	87-012-157-080		C-CAP,S 330P-50 CH
C108	87-010-405-040		CAP,E 10-50
C109	87-010-071-040		CAP,E 1-50 5L
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-A10-189-040		CAP,E 220-10
C114	87-010-196-080		CHIP CAPACITOR,0.1-25
C115	87-010-178-080		CHIP CAP 1000P
C116	87-010-071-040		CAP,E 1-50 5L
C117	87-010-079-040		CAP,E 100-6.3 5L
C118	87-012-369-080		C-CAP,S 0.047-50F
C119	87-010-408-040		CAP,E 47-50 SME
C120	87-010-421-040		CAP,E 4.7-50 5L
C121	87-010-421-040		CAP,E 4.7-50 5L
C122	87-010-194-080		CAP, CHIP 0.047
C123	87-010-196-080		CHIP CAPACITOR,0.1-25
C124	87-010-196-080		CHIP CAPACITOR,0.1-25
C125	87-010-196-080		CHIP CAPACITOR,0.1-25
C127	87-010-196-080		CHIP CAPACITOR,0.1-25
C201	87-010-196-080		CHIP CAPACITOR,0.1-25
C202	87-010-196-080		CHIP CAPACITOR,0.1-25
C203	87-010-196-080		CHIP CAPACITOR,0.1-25
C204	87-010-196-080		CHIP CAPACITOR,0.1-25
C281	87-010-198-080		CAP, CHIP 0.022
C282	87-010-198-080		CAP, CHIP 0.022
C381	87-010-196-080		CHIP CAPACITOR,0.1-25
C382	87-012-158-080		C-CAP,S 390P-50 CH
C383	87-010-196-080		CHIP CAPACITOR,0.1-25
C384	87-010-196-080		CHIP CAPACITOR,0.1-25
C385	87-010-196-080		CHIP CAPACITOR,0.1-25
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C387	87-010-196-080		CHIP CAPACITOR,0.1-25
C501	87-010-319-080		C-CAP,S 56P-50 CH
C502	87-010-319-080		C-CAP,S 56P-50 CH
C503	87-012-393-080		C-CAP,S 0.22-16 R K
C504	87-010-197-080		CAP, CHIP 0.01 DM
C505	87-010-180-080		C-CER 1500P
C506	87-010-213-080		C-CAP,S 0.015-50 B
C507	87-010-213-080		C-CAP,S 0.015-50 B
C508	87-010-197-080		CAP, CHIP 0.01 DM
C509	87-010-181-080		CAP,CHIP S 1800P
C510	87-010-196-080		CHIP CAPACITOR,0.1-25
C511	87-010-067-040		CAP,E 0.1-50 5L
C512	87-010-503-040		CAP,E 220-4 GAS
C513	87-010-071-040		CAP,E 1-50 5L
C514	87-010-071-040		CAP,E 1-50 5L
C515	87-010-183-080		C-CAP,S 2700P-50 B
C516	87-010-183-080		C-CAP,S 2700P-50 B
C518	87-010-196-080		CHIP CAPACITOR,0.1-25
C519	87-010-263-040		CAP,E 100-10
C525	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C601	87-010-405-040		CAP,E 10-50
C602	87-010-186-080		CAP,CHIP 4700P
C603	87-010-405-040		CAP,E 10-50
C604	87-010-382-040		CAP,E 22-25 SME
C607	87-010-321-080		CHIP CAPACITOR,82P(J)
C608	87-010-196-080		CHIP CAPACITOR,0.1-25
C609	87-010-068-040		CAP E 0.22-50 5L
C611	87-010-177-080		C-CAP,S 820P-50 SL
C612	87-010-176-080		C-CAP,S 680P-50 SL
C614	87-010-248-040		CAP,E 220-10 SME
C801	87-010-263-040		CAP,E 100-10
C802	87-010-196-080		CHIP CAPACITOR,0.1-25
C803	87-010-400-040		CAP,E 0.47-50
C804	87-010-315-080		C-CAP,S 27P-50 CH
C805	87-010-315-080		C-CAP,S 27P-50 CH
C852	87-012-156-080		C-CAP,S 220P-50 CH
C853	87-010-404-040		CAP,E 4.7-50 SME
C854	87-010-196-080		CHIP CAPACITOR,0.1-25
C938	87-012-145-080		CAP, CHIP S 270P CH
C941	87-012-145-080		CAP, CHIP S 270P CH
C942	87-012-145-080		CAP, CHIP S 270P CH
C943	87-012-145-080		CAP, CHIP S 270P CH
C944	87-012-145-080		CAP, CHIP S 270P CH
C945	87-012-145-080		CAP, CHIP S 270P CH
C946	87-012-145-080		CAP, CHIP S 270P CH
C947	87-012-145-080		CAP, CHIP S 270P CH
C948	87-012-145-080		CAP, CHIP S 270P CH
C949	87-012-145-080		CAP, CHIP S 270P CH
C950	87-012-145-080		CAP, CHIP S 270P CH
C951	87-012-145-080		CAP, CHIP S 270P CH
C952	87-012-145-080		CAP, CHIP S 270P CH
FB601	87-A50-190-080		C-COIL,S BLM21A102S
FL101	88-MA1-604-010		FL,BJ612GK
L501	87-005-448-080		COIL 220UH,K
LED201	87-070-201-080		LED,SLP9118C-51-S RED
LED202	87-070-201-080		LED,SLP9118C-51-S RED
LED203	87-070-201-080		LED,SLP9118C-51-S RED
LED204	87-070-201-080		LED,SLP9118C-51-S RED
LED205	87-070-201-080		LED,SLP9118C-51-S RED
LED206	87-070-197-080		LED,SLP7118C-51-S RED
LED207	87-070-197-080		LED,SLP7118C-51-S RED
LED208	87-070-197-080		LED,SLP7118C-51-S RED
LED209	87-070-197-080		LED,SLP7118C-51-S RED
LED210	87-070-197-080		LED,SLP7118C-51-S RED
LED211	87-070-197-080		LED,SLP7118C-51-S RED
LED212	87-070-197-080		LED,SLP7118C-51-S RED
LED213	87-070-197-080		LED,SLP7118C-51-S RED

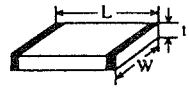
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
LED214	87-070-197-080		LED,SLP7118C-51-S RED
LED215	87-070-197-080		LED,SLP7118C-51-S RED
LED216	87-A40-446-080		LED,SLP-7131F-81H-S-T1 P-GRN
LED217	87-A40-446-080		LED,SLP-7131F-81H-S-T1 P-GRN
LED218	87-A40-446-080		LED,SLP-7131F-81H-S-T1 P-GRN
LED219	87-A40-446-080		LED,SLP-7131F-81H-S-T1 P-GRN
LED220	87-A40-446-080		LED,SLP-7131F-81H-S-T1 P-GRN
LED221	87-A40-446-080		LED,SLP-7131F-81H-S-T1 P-GRN
LED233	87-070-278-010		LED,SLZ-738A-24-S P-GRN
LED234	87-070-278-010		LED,SLZ-738A-24-S P-GRN
LED235	87-070-278-010		LED,SLZ-738A-24-S P-GRN
LED236	87-070-278-010		LED,SLZ-738A-24-S P-GRN
LED237	87-070-290-010		LED,SLZ 936-30-S RED
LED238	87-070-290-010		LED,SLZ 936-30-S RED
LED239	87-070-201-080		LED,SLP9118C-51-S RED
LED240	87-070-201-080		LED,SLP9118C-51-S RED
LED241	87-070-201-080		LED,SLP9118C-51-S RED
LED242	87-070-201-080		LED,SLP9118C-51-S RED
LED243	87-070-201-080		LED,SLP9118C-51-S RED
LED244	87-070-201-080		LED,SLP9118C-51-S RED
LED245	87-070-201-080		LED,SLP9118C-51-S RED
LED246	87-070-201-080		LED,SLP9118C-51-S RED
LED247	87-070-201-080		LED,SLP9118C-51-S RED
LED248	87-070-201-080		LED,SLP9118C-51-S RED
LED249	87-070-201-080		LED,SLP9118C-51-S RED
LED250	87-070-201-080		LED,SLP9118C-51-S RED
⚠ PR201	87-A90-393-080		PROTECTOR,0.5A 491 SERISE 60V
R301	87-022-355-080		C-RES,S10K-1/10W F
R321	87-022-355-080		C-RES,S10K-1/10W F
R341	87-022-355-080		C-RES,S10K-1/10W F
S101	87-A90-535-010		SW,RTRY EC16B24304
S103	87-A90-792-010		SW,RTRY EC12E12244 ENCORDER
S301	87-A90-095-080		SW,TACT EVQ11G04M
S302	87-A90-095-080		SW,TACT EVQ11G04M
S303	87-A90-095-080		SW,TACT EVQ11G04M
S304	87-A90-095-080		SW,TACT EVQ11G04M
S305	87-A90-095-080		SW,TACT EVQ11G04M
S306	87-A90-095-080		SW,TACT EVQ11G04M
S307	87-A90-095-080		SW,TACT EVQ11G04M
S308	87-A90-095-080		SW,TACT EVQ11G04M
S309	87-A90-095-080		SW,TACT EVQ11G04M
S310	87-A90-095-080		SW,TACT EVQ11G04M
S311	87-A90-095-080		SW,TACT EVQ11G04M
S321	87-A90-095-080		SW,TACT EVQ11G04M
S322	87-A90-095-080		SW,TACT EVQ11G04M
S323	87-A90-095-080		SW,TACT EVQ11G04M
S324	87-A90-095-080		SW,TACT EVQ11G04M
S325	87-A90-095-080		SW,TACT EVQ11G04M
S326	87-A90-095-080		SW,TACT EVQ11G04M
S327	87-A90-095-080		SW,TACT EVQ11G04M
S328	87-A90-095-080		SW,TACT EVQ11G04M
S329	87-A90-095-080		SW,TACT EVQ11G04M
S330	87-A90-095-080		SW,TACT EVQ11G04M
S331	87-A90-095-080		SW,TACT EVQ11G04M
S332	87-A90-095-080		SW,TACT EVQ11G04M
S333	87-A90-095-080		SW,TACT EVQ11G04M
S334	87-A90-095-080		SW,TACT EVQ11G04M
S341	87-A90-095-080		SW,TACT EVQ11G04M
S342	87-A90-095-080		SW,TACT EVQ11G04M
S343	87-A90-095-080		SW,TACT EVQ11G04M
S345	87-A90-095-080		SW,TACT EVQ11G04M
S346	87-A90-095-080		SW,TACT EVQ11G04M
S347	87-A90-095-080		SW,TACT EVQ11G04M
S348	87-A90-095-080		SW,TACT EVQ11G04M
S349	87-A90-095-080		SW,TACT EVQ11G04M
S350	87-A90-095-080		SW,TACT EVQ11G04M
S351	87-A90-095-080		SW,TACT EVQ11G04M
S352	87-A90-095-080		SW,TACT EVQ11G04M
S353	87-A90-095-080		SW,TACT EVQ11G04M
S354	87-A90-095-080		SW,TACT EVQ11G04M
S355	87-A90-095-080		SW,TACT EVQ11G04M
S356	87-A90-095-080		SW,TACT EVQ11G04M
X101	87-A70-070-080		VIB,CER 5.76MHZ CRHF
X801	87-A70-075-080		VIB,CER 4.19MHZ CRHF
MIC C.B			
C605	87-010-196-080		CHIP CAPACITOR,0.1-25
J601	87-099-659-010		JACK,6.3 JY-6314-01130
J602	87-099-659-010		JACK,6.3 JY-6314-01130
CD KEY C.B			
C287	87-010-196-080		CHIP CAPACITOR,0.1-25
CN302	87-099-202-010		CONN,9P 6216 H
LED258	88-MA1-630-080		LED,SML76755WN
LED259	88-MA1-630-080		LED,SML76755WN
LED260	88-MA1-630-080		LED,SML76755WN
LED261	88-MA1-630-080		LED,SML76755WN
LED262	88-MA1-630-080		LED,SML76755WN
S312	87-A90-095-080		SW,TACT EVQ11G04M
S313	87-A90-095-080		SW,TACT EVQ11G04M
S314	87-A90-095-080		SW,TACT EVQ11G04M
S315	87-A90-095-080		SW,TACT EVQ11G04M
S316	87-A90-095-080		SW,TACT EVQ11G04M
S317	87-A90-095-080		SW,TACT EVQ11G04M
S318	87-A90-095-080		SW,TACT EVQ11G04M
AC1 C.B			
⚠ F101	87-035-459-010		FUSE,5A 250V
⚠ FC101	87-033-147-010		FUSE CLAMP
⚠ FC102	87-033-147-010		FUSE CLAMP
⚠ PT101	88-MA1-609-010		PT,8MA-1 LH
⚠ S101	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	87-026-682-080		PROTECTOR,10A 60V491
⚠ PR102	87-026-682-080		PROTECTOR,10A 60V491
⚠ 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
DECK C.B			
W001	82-ZM3-601-019		RBN CORD,4P-75
SFR1	87-024-581-019		SFR,3.2K DIA 6H
SOL1	82-ZM1-626-010		SOL ASSY,27K
SOL2	82-ZM1-626-010		SOL ASSY,27K
SW1	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW2	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW3	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW4	87-036-110-010		SW,MICRO SPPB62
SW5	87-036-110-010		SW,MICRO SPPB62
SW6	87-036-110-010		SW,MICRO SPPB62
SW8	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW9	87-036-110-010		SW,MICRO SPPB62
HEAD-1 C.B			
	85-ZM3-601-010		PWB,FLEX I
HEAD-2 C.B			
	85-ZM3-601-010		PWB,FLEX I
CN351	83-NEG-608-010		CONN ASSY 8P-RPB

○ 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

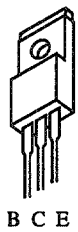
TRANSISTOR ILLUSTRATION

E C B

KTA1266GR
KTC3198GR

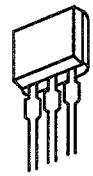
E C B

CC5551



B C E

2SB1370
FN1016
FP1016



B C E

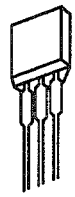
2SC4115S

B C E

2SA1296

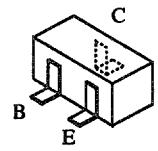
G D S

2SK2937

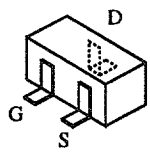


E C B

2SA933S

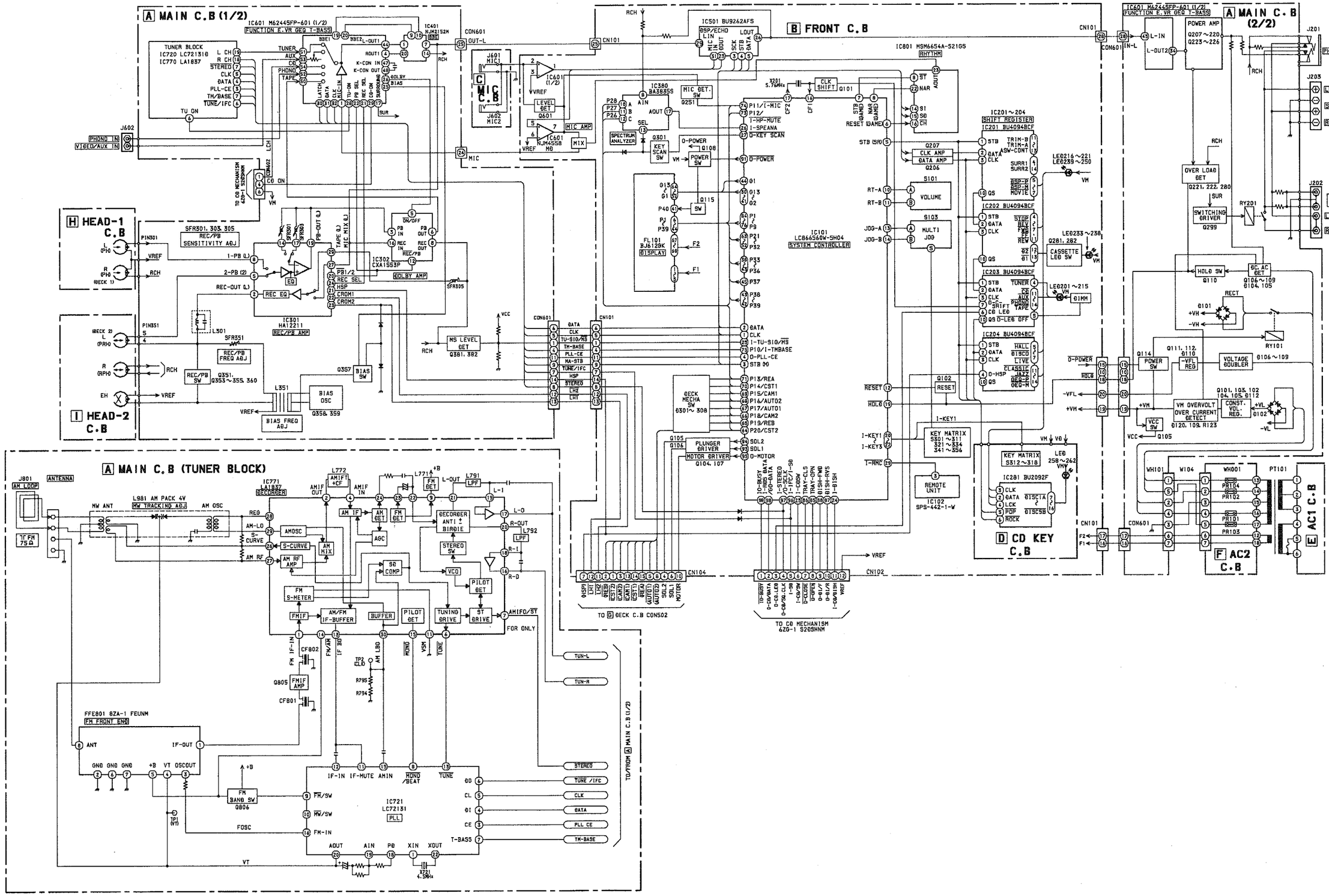


RT1N141C　CSA1362GR
2SA1235　RT1P441C
2SC3052　DTA144EK
RT1P144C　DTA114WK
CMBT5551　CMBT5401
2SC2714　RT1N144C
DTA123JK　RT1P141C



2SK2158

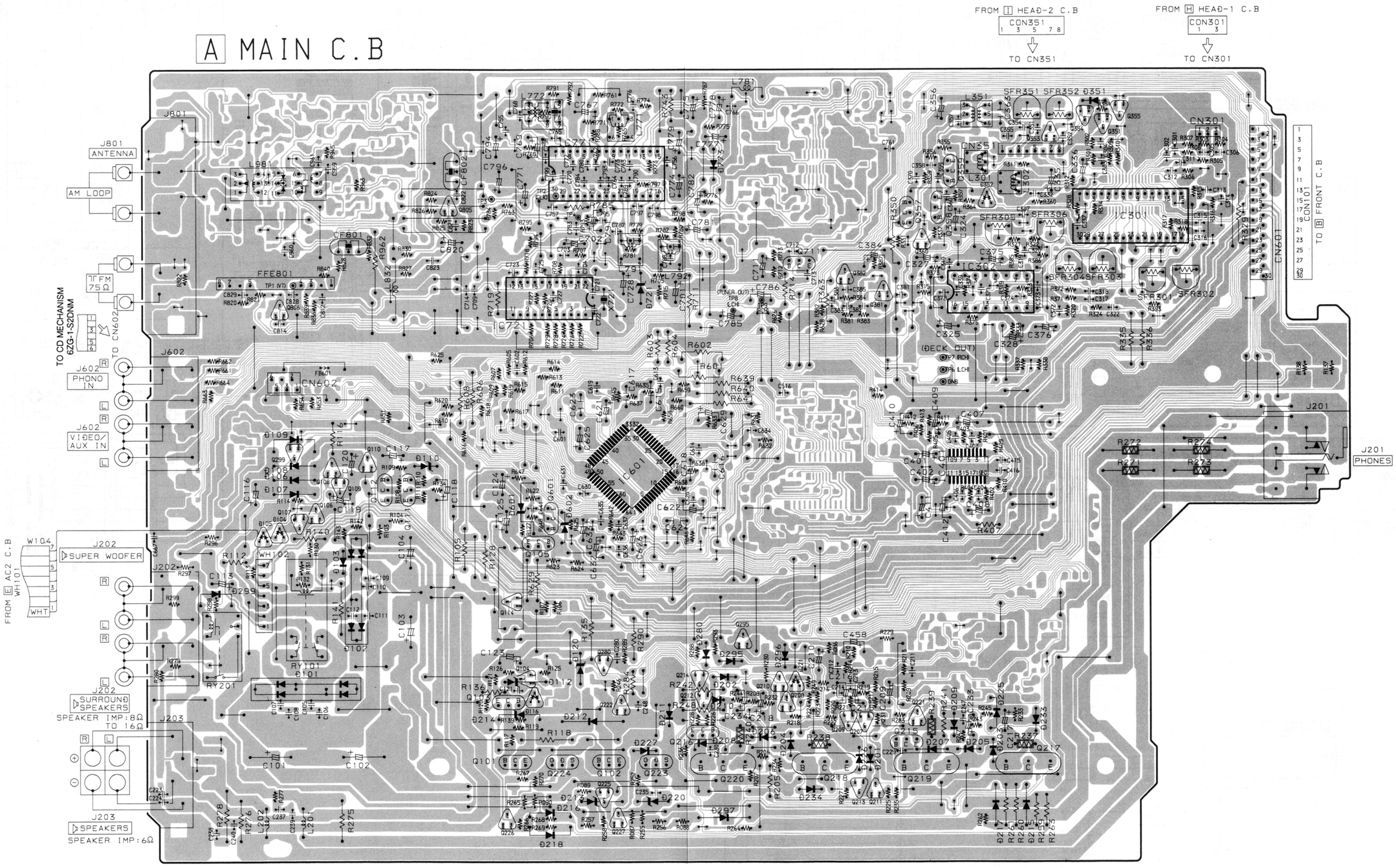
BLOCK DIAGRAM (MAIN / FRONT)



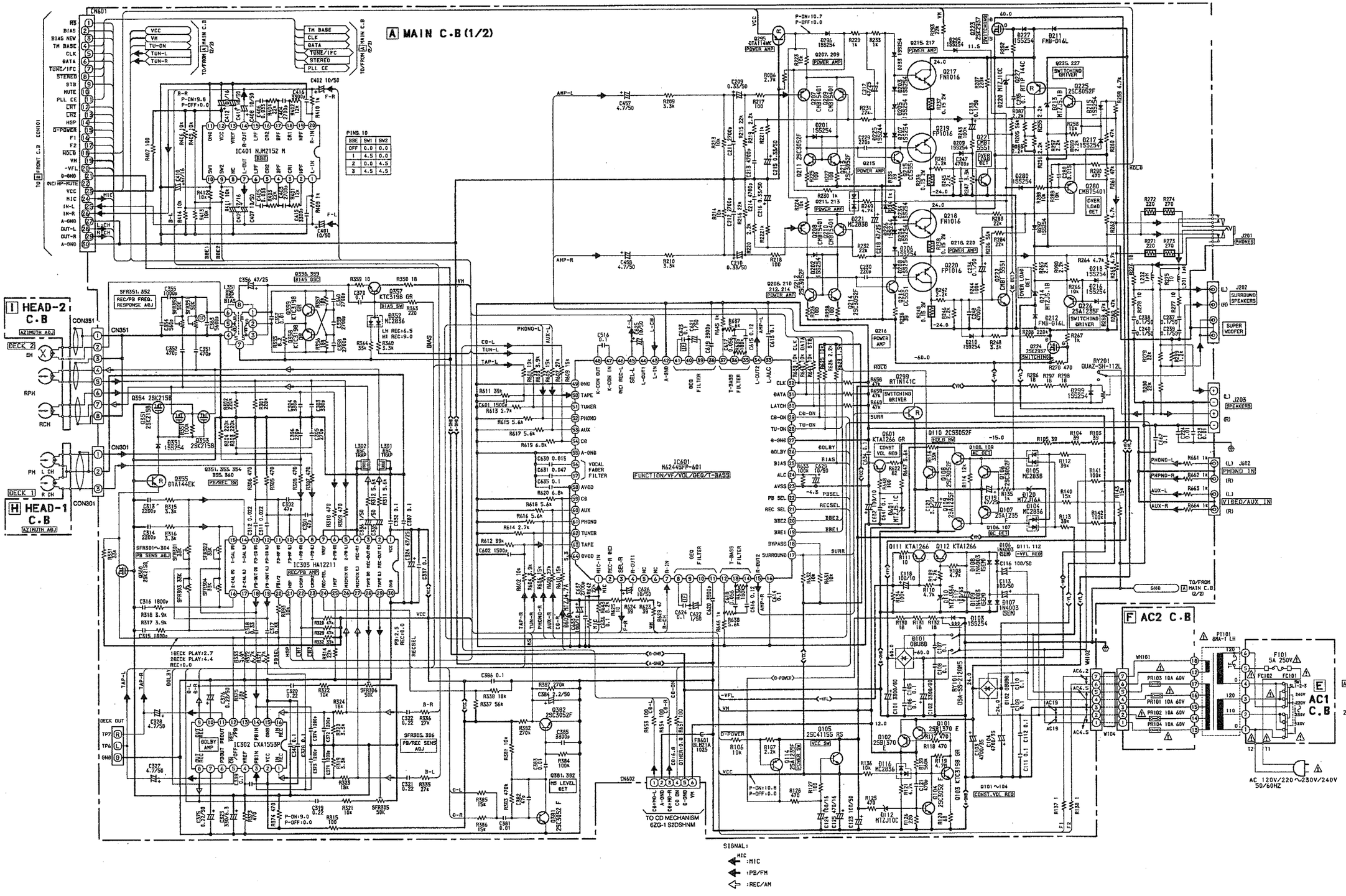
1 2 3 4 5 6 7 8 9 10 11 12 13 14

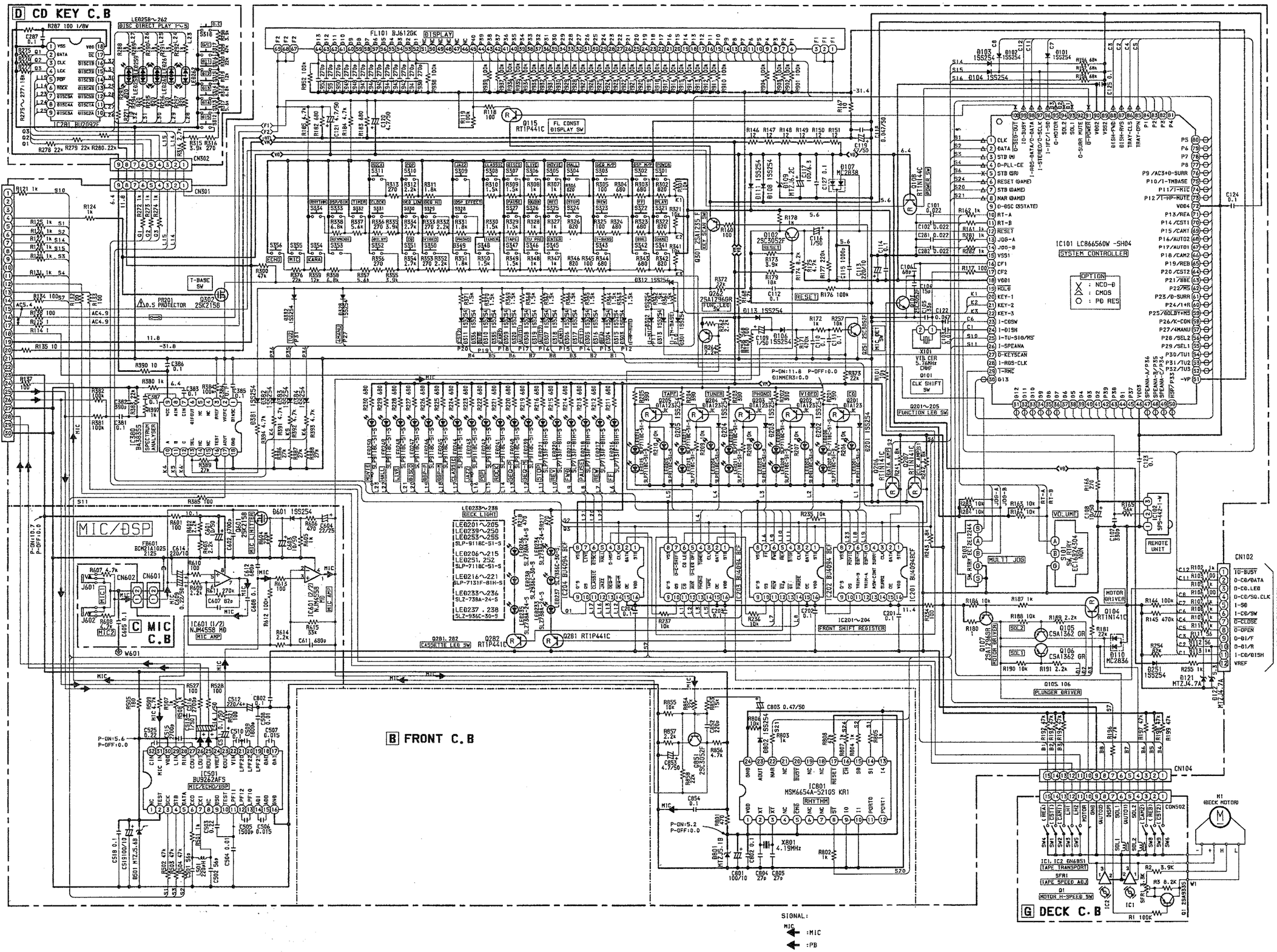
A B C D E F G H I J

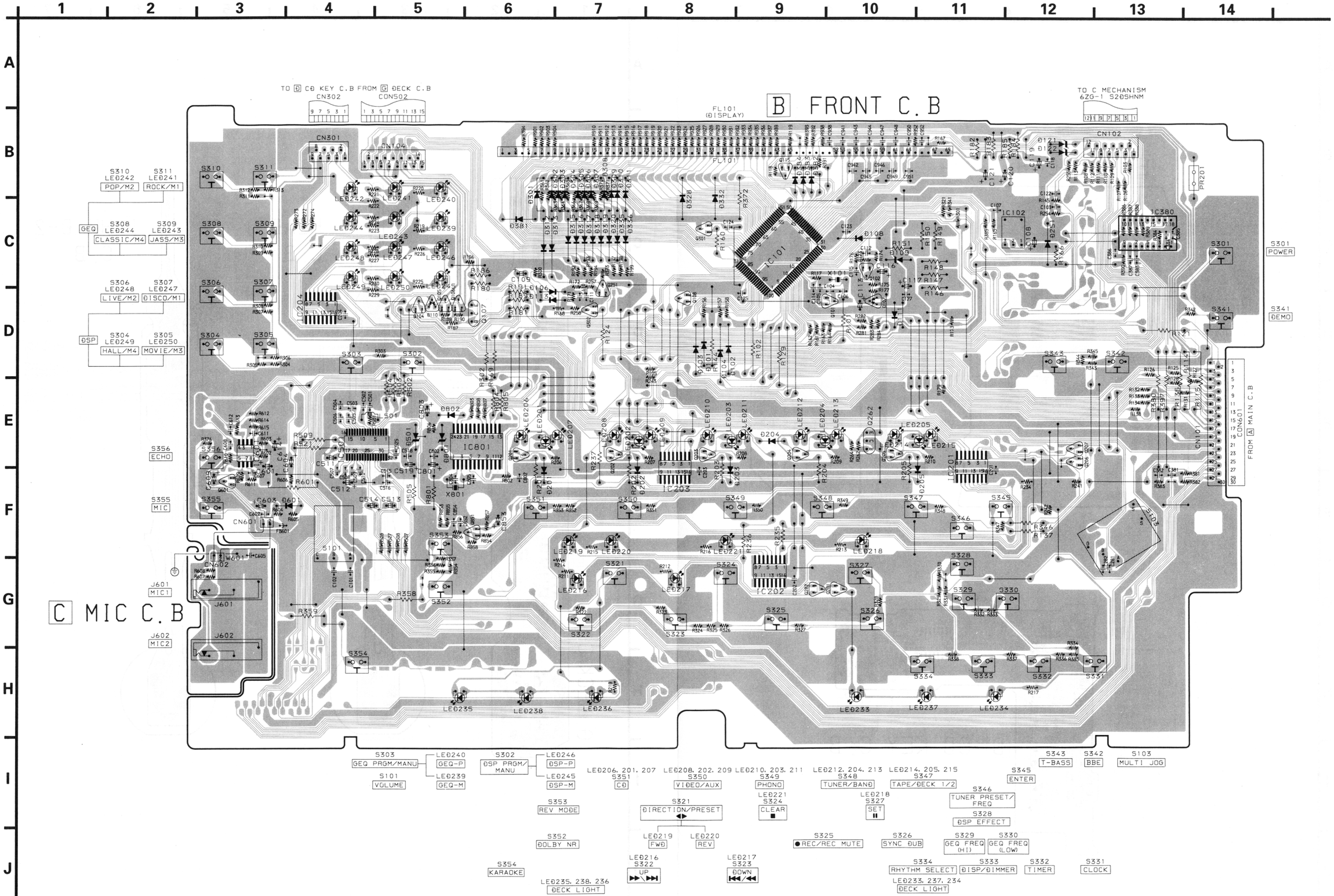
A MAIN C.B

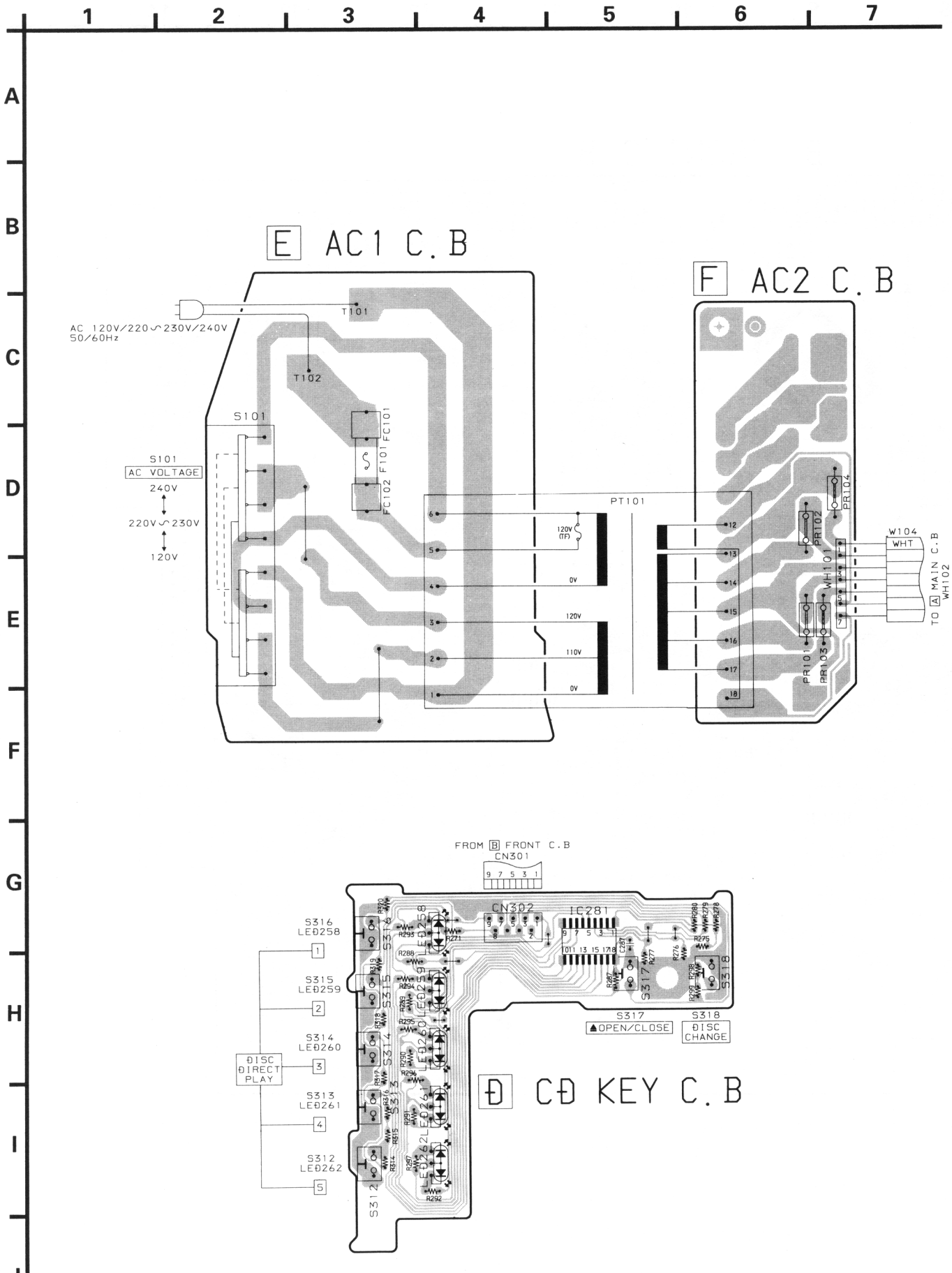


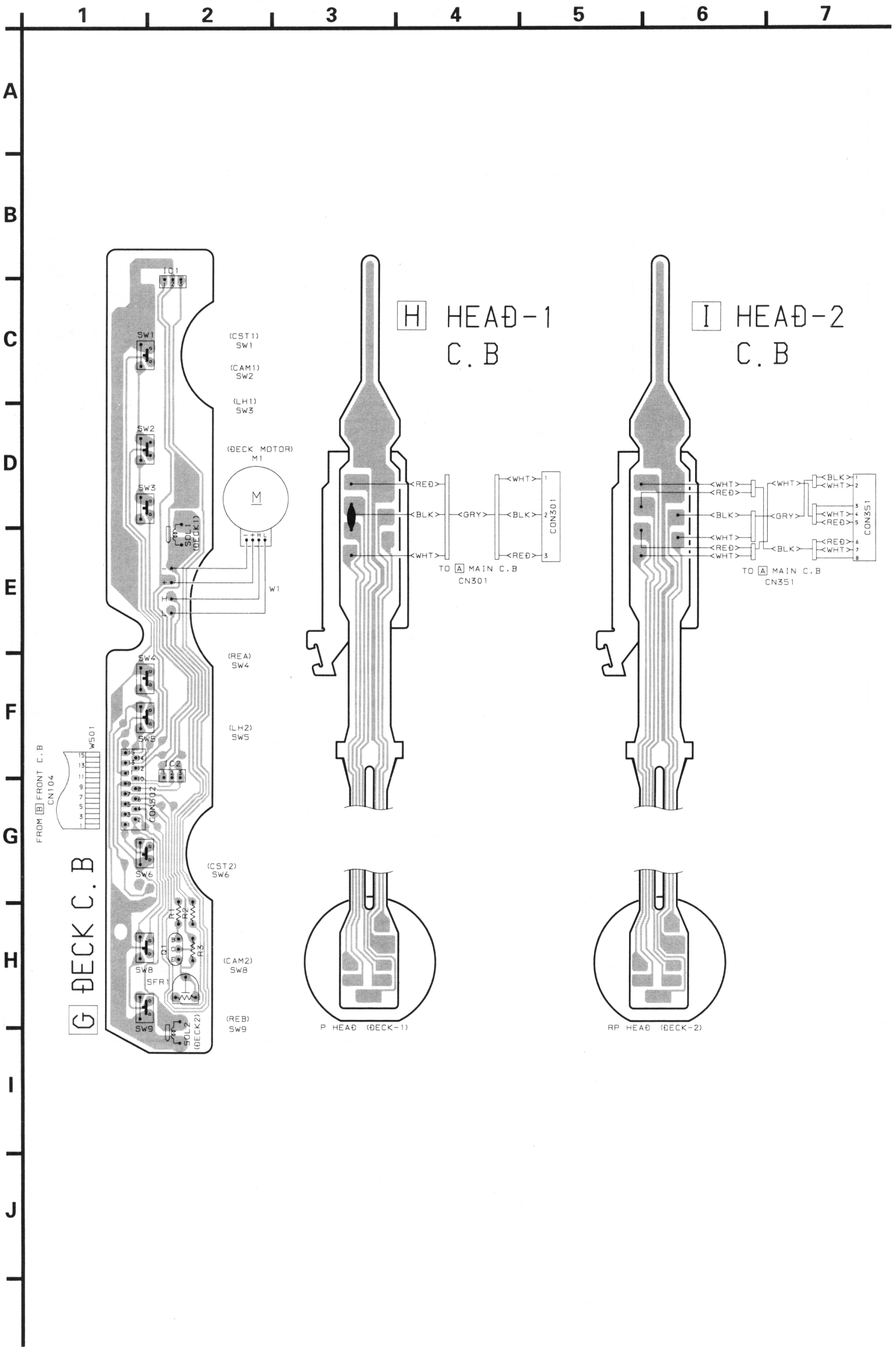
SCHEMATIC DIAGRAM – 1 (MAIN 1 / 2)



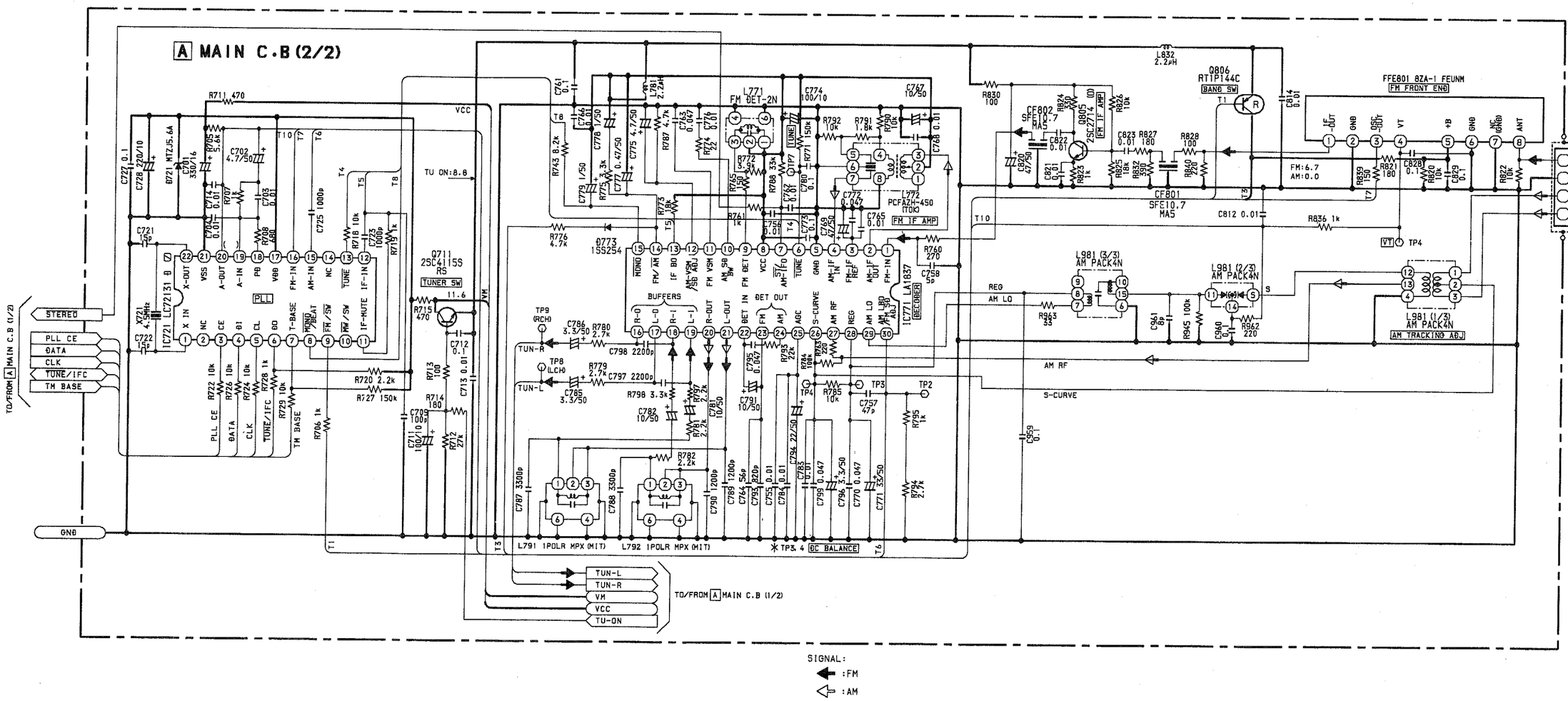

D CD KEY C.B
IC201 BU2092F
CN302
CN301
CN101
FROM A MAIN C.B CN601
T-BASE SW
PR201 0.5 PROTECTOR
Q302 2SK2158
FL101 BJ612GK DISPLAY
Q115 RT1P441C
FL CONST DISPLAY SW
Q102 2SC3052F RESET
Q103 2SA1796QR FUNC. LED SW
Q104 RT1N141C POWER SW
IC101 LC866560W -5H04
SYSTEM CONTROLLER
OPTION
X : NCO-B
O : CMOS
□ : PD RES
X101 VIB CER 5.76MHz CMX
Q101 CLK SHIFT SW
Q201~205 FUNCTION LED SW
Q108 RT1N144C
Q107 2SA1362 GR MOTOR DRIVER
Q105 C5A1362 GR
Q106 C5A1362 GR
PLUNGER DRIVER
REMOTE UNIT
CN102
TO CD MECHANISM 6ZG-1 52905HAM
MIC/DSP
C MIC C.B
IC601 (1/2) NJM4558 MD MIC AMP
IC601 (2/2) NJM4558 MD MIC AMP
B FRONT C.B
IC501 BU9262AFS MIC/ECHO/DSP
IC801 MSM6654A-52105 KR1 RHYTHM
X801 4.19MHz
LED233~238 BEAT LIGHT
LED201~205 LED239~250 LED253~255 SLP-911BC-51-S
LED206~215 LED251, 252 SLP-711BC-51-S
LED216~221 SLP-7131F-81H-S
LED233~236 SLZ-738A-24-S
LED237 . 238 SLZ-936C-30-S
Q281, 282 CASSETTE LED SW
Q281 RT1P441C
IC201~204 FRONT SHIFT REGISTER
CN104
CN502
M1 DECK MOTOR
IC1, IC2 BN6851 TAPE TRANSPORT
SFR1 TAPE SPEED ADJ
Q1 MOTOR H-SPEED SW
G DECK C.B
SIGNAL:
MIC :MIC
:PB


B FRONT C.B
C MIC C.B
TO D CD KEY C.B FROM G DECK C.B
CN302
CON502
TO C MECHANISM 6ZG-1 S20SHNM
FL101 (DISPLAY)
FROM A MAIN C.B
CON601
S301 POWER
S341 DEMO
S310 LED242 POP/M2
S311 LED241 ROCK/M1
GEQ
S308 LED244 CLASSIC/M4
S309 LED243 JASS/M3
S306 LED248 LIVE/M2
S307 LED247 DISCO/M1
DSP
S304 LED249 HALL/M4
S305 LED250 MOVIE/M3
S356 ECHO
S355 MIC
J601 MIC1
J602 MIC2
S303 GEQ PRGM/MANU
LED240 GEQ-P
LED239 GEQ-M
S302 DSP PRGM/MANU
LED246 DSP-P
LED245 DSP-M
S101 VOLUME
LED206. 201. 207
LED208. 202. 209
LED210. 203. 211
LED212. 204. 213
LED214. 205. 215
S351 CD
S350 VIDEO/AUX
S349 PHONO
S348 TUNER/BAND
S347 TAPE/DECK 1/2
S345 ENTER
S343 T-BASS
S342 BBE
S103 MULTI JOG
S353 REV MODE
S321 DIRECTION/PRESET
LED221 S324 CLEAR
LED218 S327 SET
S346 TUNER PRESET/ FREQ
S328 DSP EFFECT
S352 DOLBY NR
LED219 FWD
LED220 REV
S325 REC/REC MUTE
S326 SYNC DUB
S329 GEQ FREQ (HI)
S330 GEQ FREQ (LOW)
S354 KARAOKE
LED216 S322 UP
LED217 S323 DOWN
S334 RHYTHM SELECT
S333 DISP/DIMMER
S332 TIMER
S331 CLOCK
LED235, 238, 236 DECK LIGHT
LED233, 237, 234 DECK LIGHT

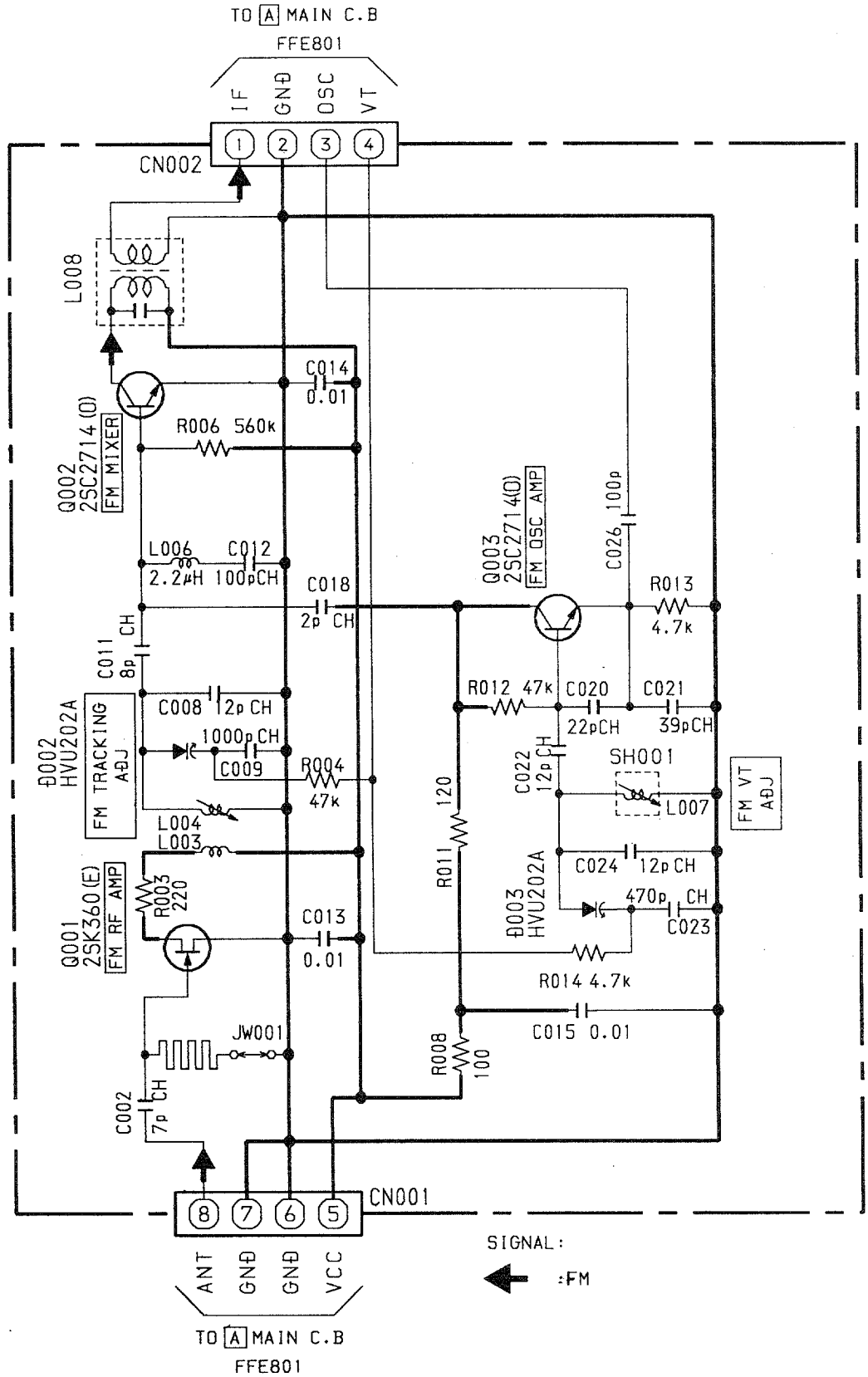

E AC1 C.B
F AC2 C.B
AC 120V/220∽230V/240V
50/60Hz
T101
T102
S101
S101
AC VOLTAGE
240V
220V∽230V
120V
FC101
F101
FC102
PT101
120V
(TF)
0V
120V
110V
0V
W104
WHT
TO A MAIN C.B
WH102
WH101
PR101
PR102
PR103
PR104
FROM B FRONT C.B
CN301
9 7 5 3 1
CN302
IC281
S316
LED258
S315
LED259
S314
LED260
DISC
DIRECT
PLAY
S313
LED261
S312
LED262
S317
OPEN/CLOSE
S318
DISC
CHANGE
D CD KEY C.B


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
G DECK C.B
FROM B FRONT C.B
CN104
W501
CON502
IC1
IC2
SW1
SW2
SW3
SW4
SW5
SW6
SW8
SW9
(CST1)
SW1
(CAM1)
SW2
(LH1)
SW3
(DECK MOTOR)
M1
M
SOL1
(DECK1)
W1
(REA)
SW4
(LH2)
SW5
(CST2)
SW6
R1
R2
R3
Q1
SFR1
(CAM2)
SW8
(REB)
SW9
SOL2
(DECK2)
H HEAD-1
C.B
RED
BLK
GRY
WHT
CON301
TO A MAIN C.B
CN301
P HEAD (DECK-1)
I HEAD-2
C.B
CON351
TO A MAIN C.B
CN351
RP HEAD (DECK-2)

SCHEMATIC DIAGRAM – 3 (MAIN 2 / 2)

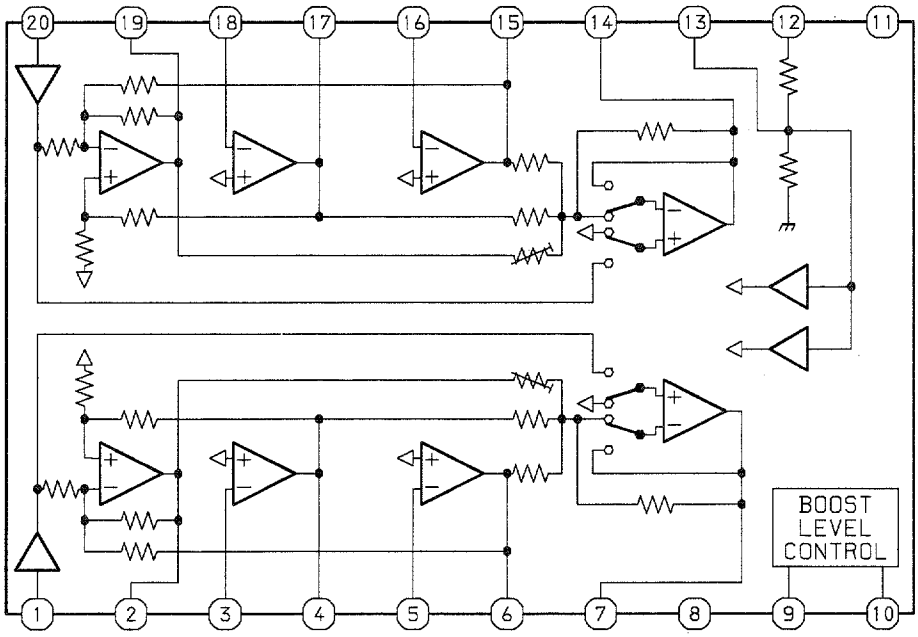


SCHEMATIC DIAGRAM – 4 (TUNER FRONT END)

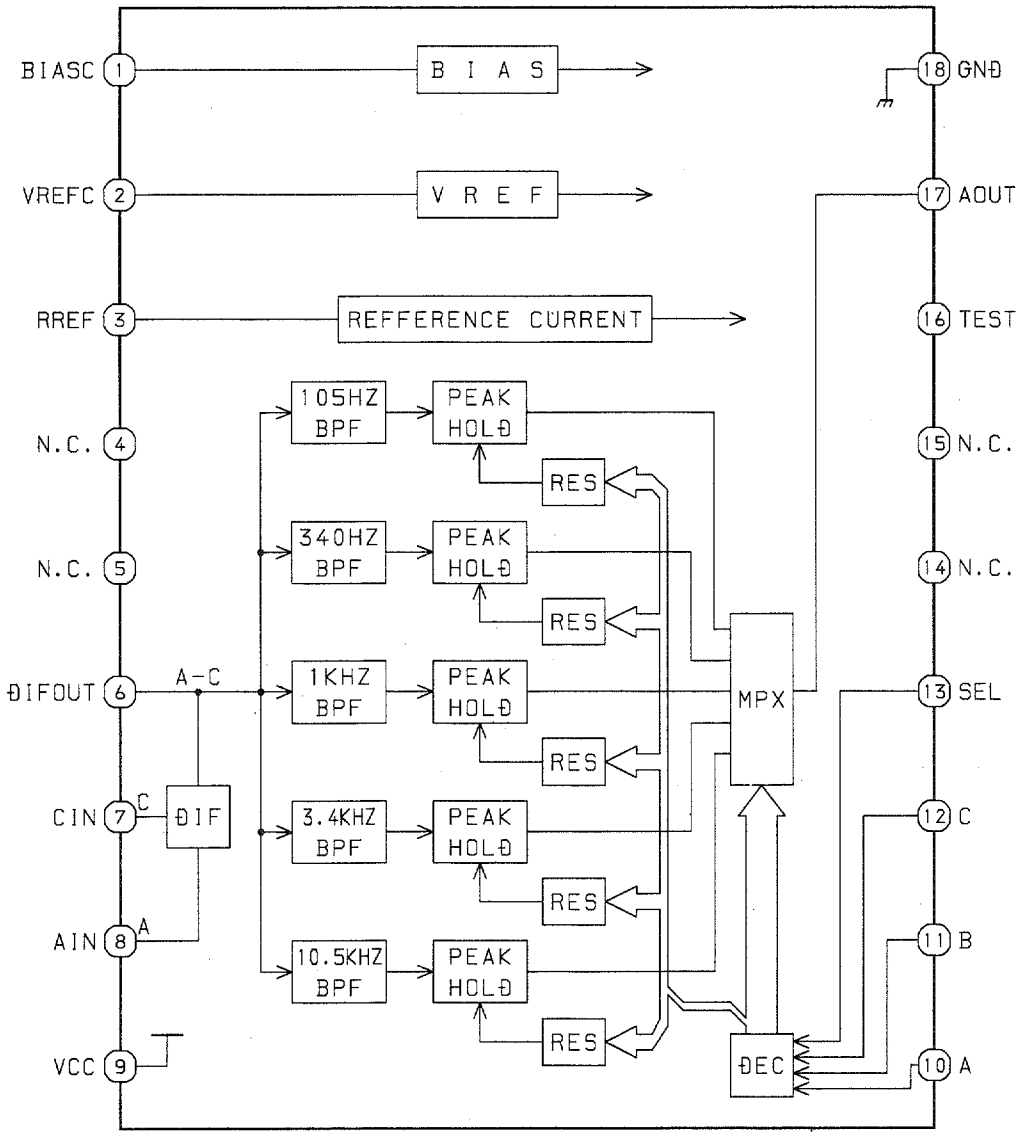


IC BLOCK DIAGRAM

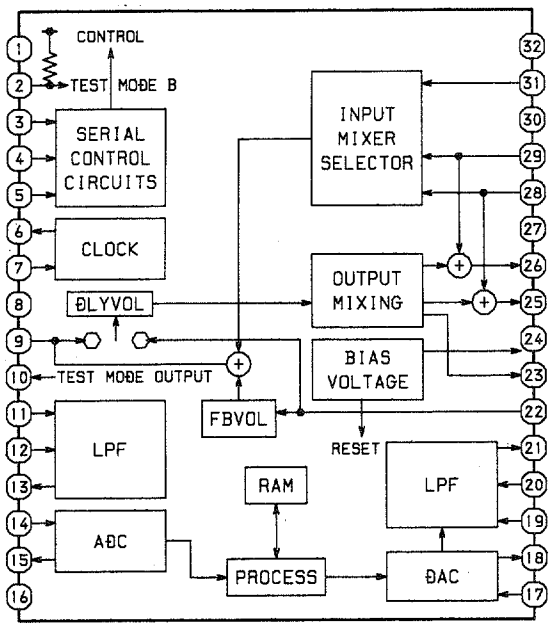
IC, NJM2152M



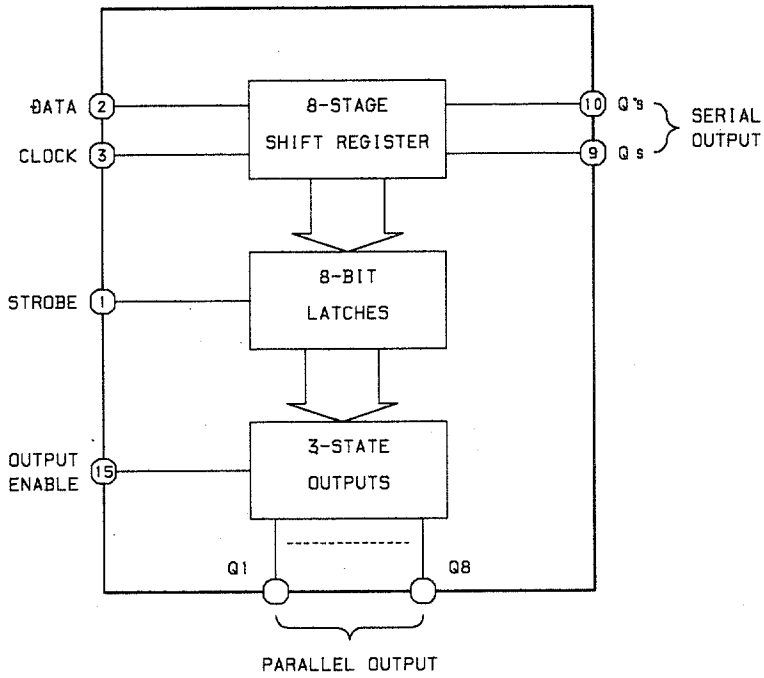
IC, BA3835S



IC, BU9262AFS



IC, BU4094BCF



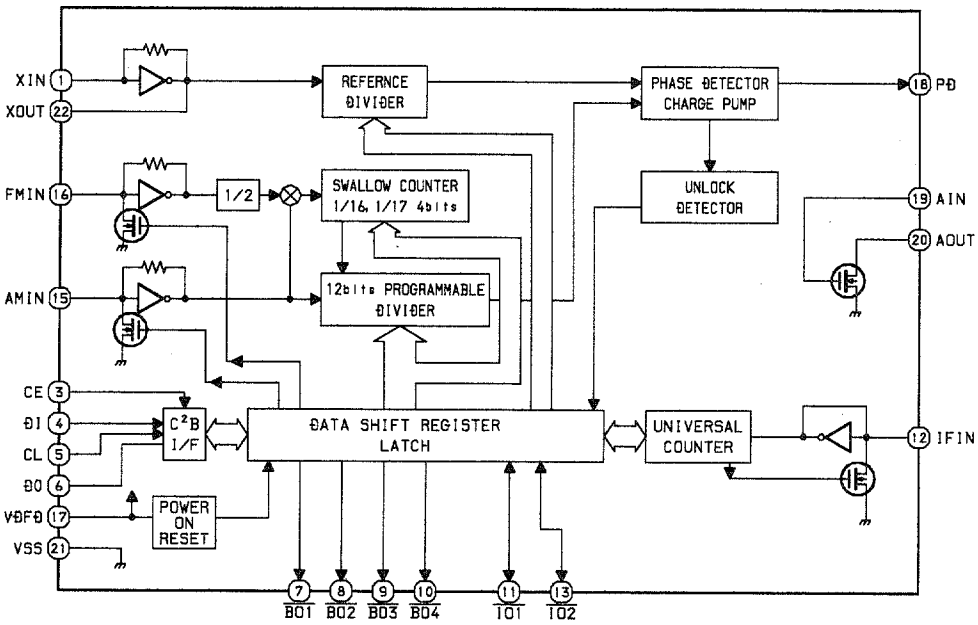
TRUTH TABLE

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

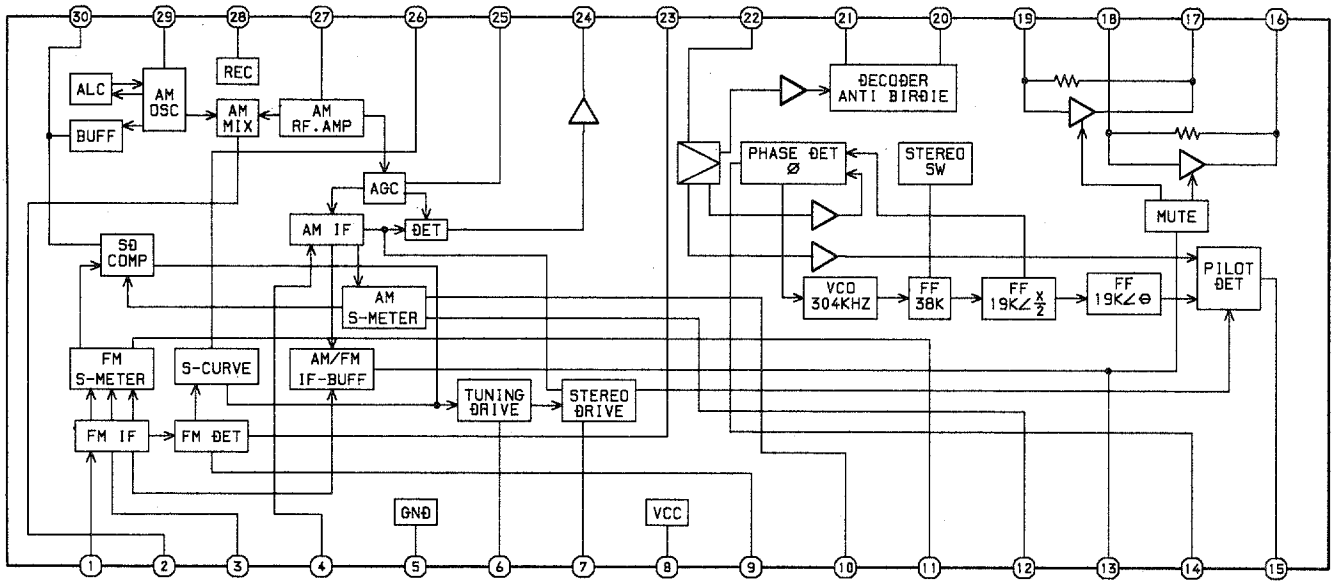
Z=High Impedance

X=Đon't Care

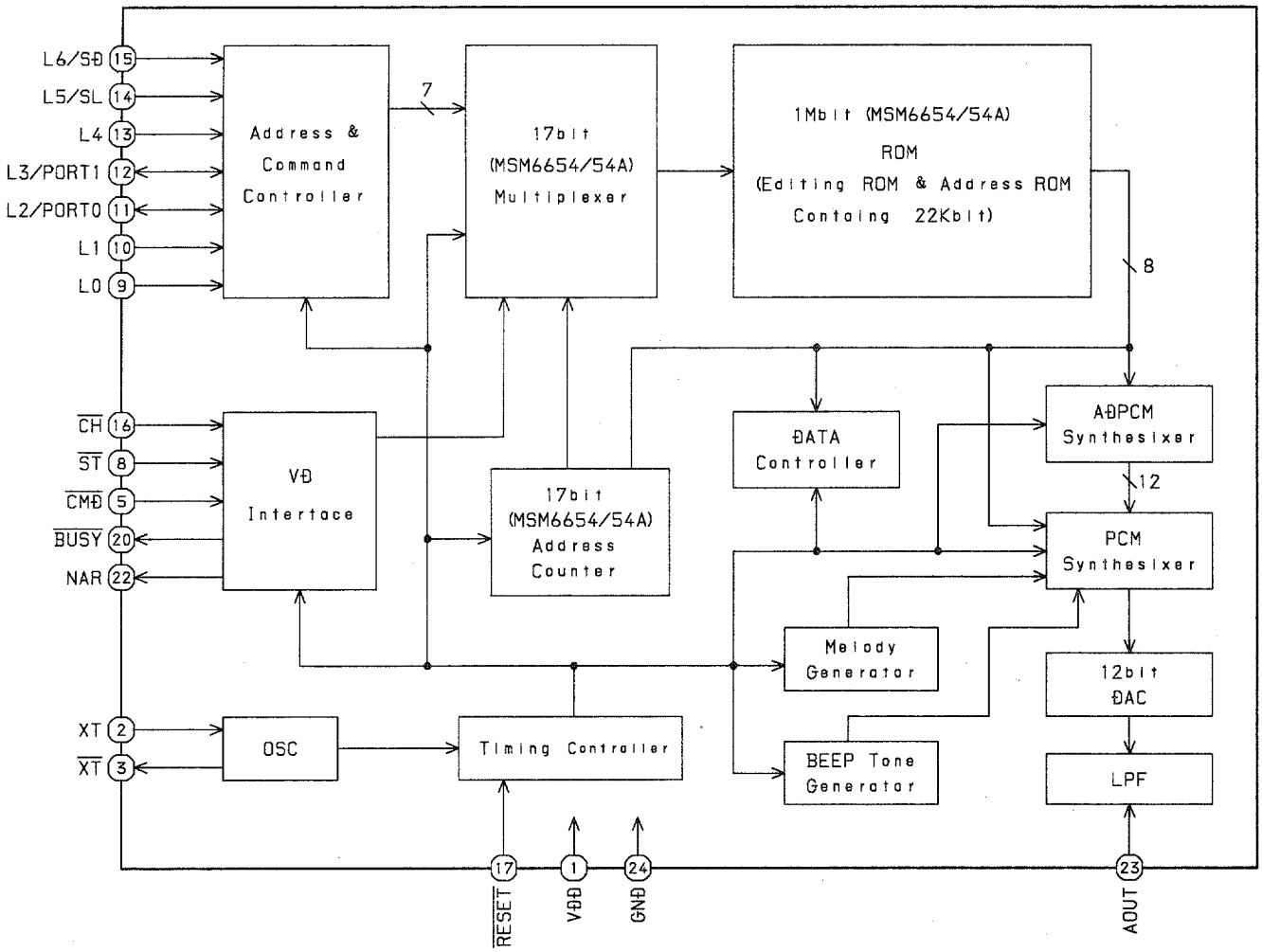
IC, LC72131D



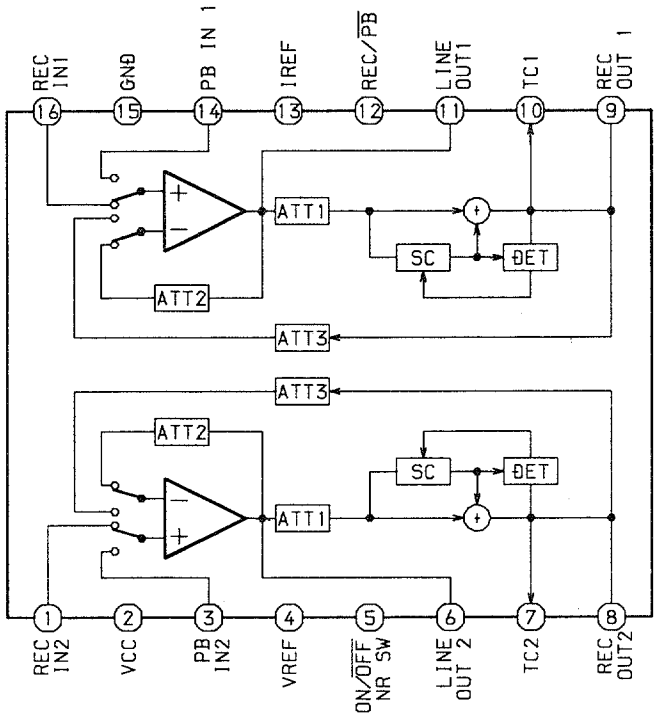
IC, LA1837



IC, MSM6654A

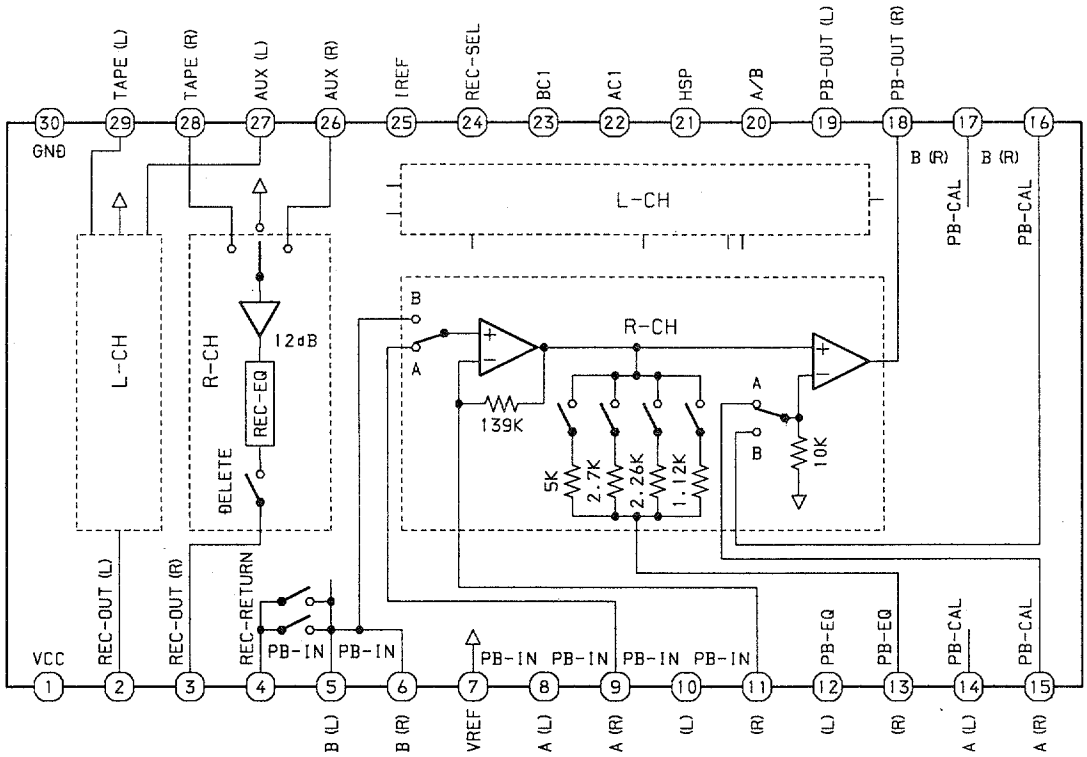


IC, CXA1553P

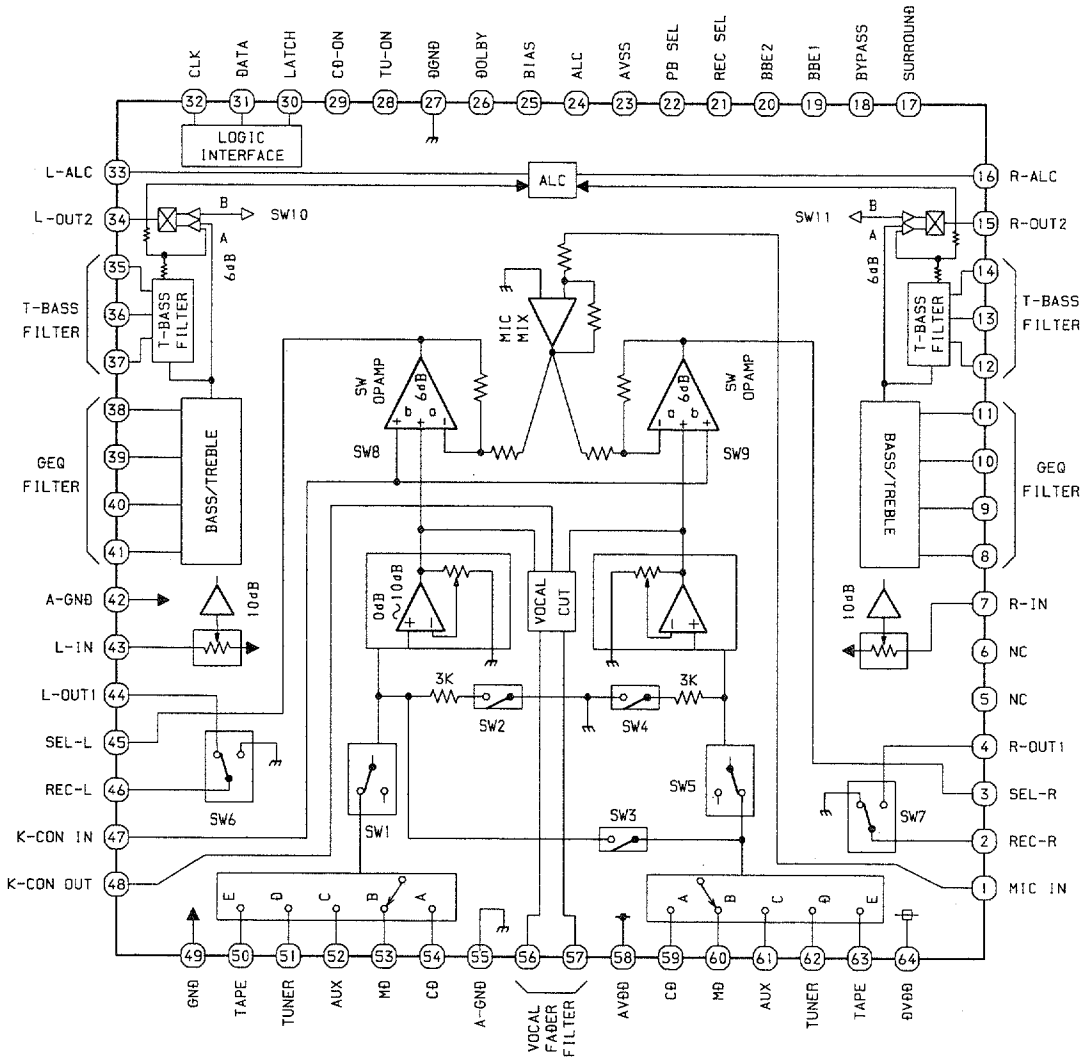


ATT:Attenuator
SC:Side Chain
ÐET:Ðetector

IC, HA12211

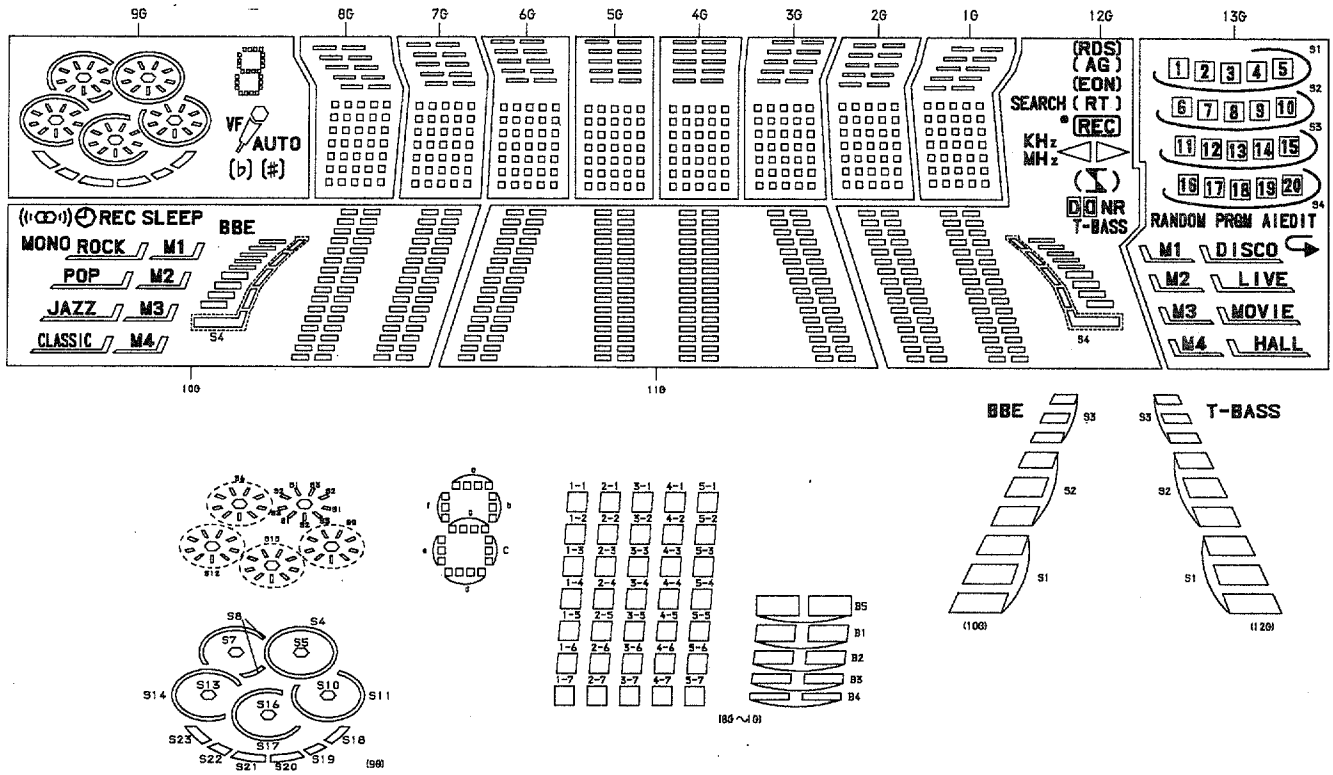


IC, M62445FP-601



FL (BJ612GK) GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



ANODE CONNECTION

	13G	12G	11G	10G	9G	1G ~ 8G
P1	S1	SEARCH	-	-	-	B4
P2	S2	RDS AG EON	-	-	-	B3
P3	S3	RT	-	-	-	B2
P4	S4	-	-	((( )))	S23	B1
P5	DISCO LIVE HALL MOVIE	(RDS)	-	MONO	S22	1-1
P6	(MOVIE)	(AG)	-	ROCK POP CLASSIC JAZZ	S21	2-1
P7	(HALL)	(EON)	-	(JAZZ)	S20	3-1
P8	(LIVE)	(RT)	B1	(CALSSIC)	S19	4-1
P9	(DISCO)		B9	(POP)	S18	5-1
P10	M1 M2 M3 M4	B1	B17	B1	S16	1-2
P11	(M4)	B9	B25	B9	S15	2-2
P12	(M3)		B2	(ROCK)	S17	3-2
P13	(M2)		B10	M1 M2 M3 M4	S13	4-2
P14	(M1)	B2	B18	B2	S12	5-2
P15		B10	B26	B10	S14	1-3
P16	EDIT		B3	(M4)	S10	2-3
P17	AI		B11	(M3)	S9	3-3
P18	PRGM	B3	B19	B3	S11	4-3
P19	RANDOM	B11	B27	B11	S7	5-3
P20	1	DD NR	B4	(M2)	S6	1-4

	13G	12G		10G	9G	1G ~ 8G
P21	2	REC	B12	(M1)	S8	2-4
P22	3	B4	B20	B4	S5	3-4
P23	4	B12	B28	B12	S2	4-4
P24	5		B5	REC	S3	5-4
P25	6	KHz	B13		S1	1-5
P26	7	B5	B21	B5	S4	2-5
P27	8	B13	B29	B13	d	3-5
P28	9	MHz	B6	SLEEP	e	4-5
P29	10	S4	B14	S4	c	5-5
P30	11	B6	B22	B6	g	1-6
P31	12	B14	B30	B14	f	2-6
P32	13	T-BASS	B7	BBE	b	3-6
P33	14	S1	B15	S1	a	4-6
P34	15	B7	B23	B7	VF	5-6
P35	16	B15	B31	B15		1-7
P36	17	S2	B8	S2	AUTO	2-7
P37	18	S3	B16	S3	(b)	3-7
P38	19	B8	B24	B8	(#)	4-7
P39	20	B16	B32	B16	b #	5-7
P40	-	S5	B5	S5	-	B5

IC DESCRIPTION

IC, LC866560W-5H04

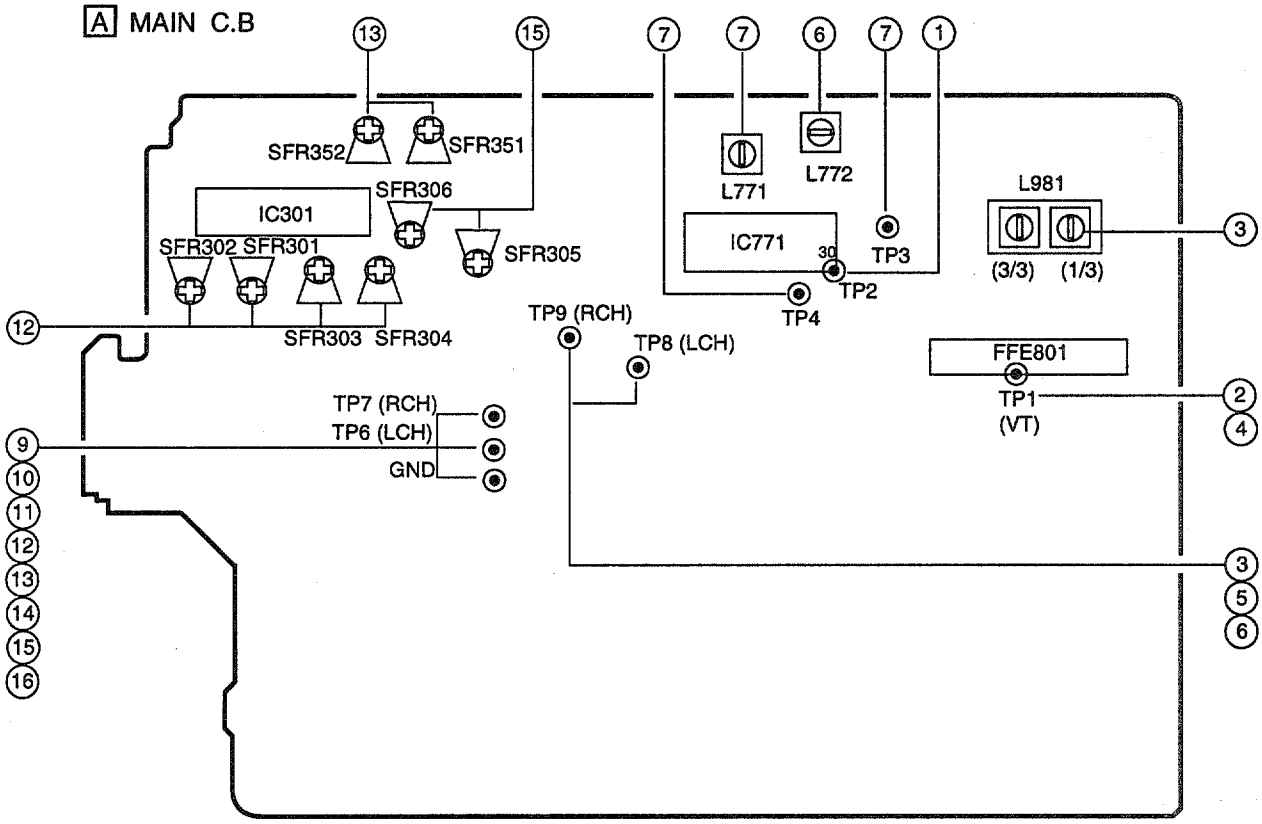
Pin No.	Pin Name	I/O	Description
1	CLK	O	All serial ICs clock output.
2	DATA	O	All serial ICs data output.
3	STB (M)	O	Main C.B IC data latch strobe output.
4	O-PLL-CE	O	PLL IC (LC7213D) chip enable output.
5	STB (SR)	O	Shift register data latch strobe output.
6	RESET (GAME)	I	Reset input.
7	STB (GAME)	O	Rhythm IC data latch strobe output.
8	NAR (GAME)	I	Rhythm IC NAR input.
9	O-DSC (3STATE)	O	Serial data output for Prologic C.B.(Not connected.)
10	RT-A	I	Rotary encorder volume A input.
11	RT-B	I	Rotary encorder volume B input.
12	$\overline{\text{RESET}}$	I	Reset input.
13	JOG-A	I	Rotary encorder multi jog A input.
14	JOG-B	I	Rotary encorder multi jog B input.
15	VSS 1	–	GND.
16	CF 1	–	5.76MHz oscillator circuit.
17	CF 2	–	
18	VDD 1	–	Power supply input.
19	$\overline{\text{HOLD}}$	I	Power failure detected input "1" to stop clock and main memory.
20	KEY-1	I	KEY input 1~3.(A/D)
21	KEY-2		
22	KEY-3		
23	I-CD SW	I	CD mechanical switch A/D converter input.
24	I-DISH	I	CD turntable photo sensor A/D converter input.
25	I-TU-SIG/$\overline{\text{MS}}$	I	Tuner signal and deck music sensor signal input.
26	I-SPEANA	I	A/D input for spectrum analyzer display.
27	O-$\overline{\text{KEYSCAN}}$	O	Key scan timing output.
28	I-RDS-CLK	I	Tuner RDS clock input.(Not connected.)
29	I-$\overline{\text{RMC}}$	I	System remote control signal input.
30~41	G13~G2	O	FL grid G13~G2 output .
42,43	P39~P38	O	FL Segment P39,P38 output .
44	G1	O	FL grid G1 output.
45	P31	–	FL Segment P26 output.
46	VDD3	–	Power supply input.
47	SPEANA-A/P36	I/O	Spectrum analyzer band pass filter control A / FL segment P36 output.
48	SPEANA-B/P35	I/O	Spectrum analyzer band pass filter control B / FL segment P35 output.
49	SPEANA-C/P34	I/O	Spectrum analyzer band pass filter control C / FL segment P34 output.
50	$\overline{\text{HSP}}$/P33	I/O	$\overline{\text{HSP}}$ diode detect input / FL segment P33 output.
51	-VP	–	Power supply input for FL display.
52	P32/TU3	I/O	FL segment P32 output / Tuner band select 3 input.
53	P31/TU2	I/O	FL segment P31 output / Tuner band select 2 input.
54	P30/TU1	I/O	FL segment P30 output / Tuner band select 1 input.

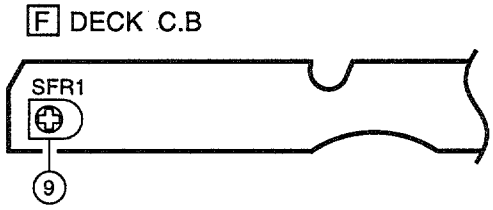
Pin No.	Pin Name	I/O	Description
55	P29/SEL1	I/O	FL segment P29 output / SEL1 diode detect input.
56	P28/SEL2	I/O	FL segment P28 output / SEL2 diode detect input.
57	P27/$\overline{4MANU}$	I/O	FL segment P27 output / $\overline{4MANU}$ diode detect input.
58	P26/K-CON	I/O	FL segment P26 output / K-CON diode detect input.
59	P25/$\overline{DOLBY+MS}$	I/O	FL segment P25 output / $\overline{DOLBY+MS}$ diode detect input.
60	P24/1+R	I/O	FL segment P24 output / 1+R diode detect input.
61	P23/D-SURR	I/O	FL segment P23 output / D-SURR diode detect input.
62	P22/$\overline{MS}$	I/O	FL segment P22 output / $\overline{MS}$ diode detect input.
63	P21/$\overline{BBE}$	I/O	FL segment P21 output / $\overline{BBE}$ diode detect input.
64	P20/CST 2	I/O	FL segment P20 output / DECK2 cassette detect switch input.
65	P19/REB	I/O	FL segment P19 output / DECK2 side-B record OK switch input.
66	P18/CAM 2	I/O	FL segment P18 output / DECK2 cam switch input.
67	P17/AUTO 1	I/O	FL segment P17 output / DECK1 auto stop signal input.
68	P16/AUTO 2	I/O	FL segment P16 output / DECK2 auto stop signal input.
69	P15/CAM 1	I/O	FL segment P15 output / DECK1 cam switch input.
70	P14/CST 1	I/O	FL segment P14 output / DECK1 cassette detect switch input.
71	P13/REA	I/O	FL segment P13 output / DECK2 side A record OK switch input.
72	VDD 4	–	Power supply input.
73	P12/$\overline{I\text{-}HP\text{-}MUTE}$	I/O	FL segment P12 output / "L" input prologic DSP off.
74	P11/$\overline{I\text{-}MIC}$	I/O	FL segment P11 output / Microphone infor. for auto vocal fader ON/OFF.
75	P10/I-TMBASE	I/O	FL segment P10 output / Reference clock input for timer watch.
76	P9/AC3+D-SURR	I/O	FL segment P9 output / AC3 +D-SURR diode detect input.
77~84	P8~P1	O	FL segment P8~P1 output.
85	TRAY-OPN	O	CD tray open data output.
86	TRAY-CLS	O	CD tray close data output.
87	DISH-RVS	O	CD turntable reverse rotation output.
88	DISH-FWD	O	CD turntable forward rotation output.
89	VSS2	–	GND.
90	VDD2	–	Power supply input.
91	$\overline{O\text{-}POWER}$	O	System power supply $\overline{ON}$ /OFF output.
92	O-SURR MUTE	O	Surround mute output.(Not connected.)
93	SOL1	O	Deck1 solenoid output.
94	SOL2	O	Deck2 solenoid output.
95	O-MOTOR	O	Deck motor output.
96	I-IFC/I-SD	I	Tuner $\overline{SD}$ detect input / Tuner IF count serial data input.
97	I-STEREO/O-SCLK	I/O	Clock output for CD SUB-Q data / Tuner stereo data input.
98	I-RDS-DA/O-DA	I/O	Clock control data output / Tuner RDS data input.
99	$\overline{IO\text{-}BUSY}$	I/O	CD IC data input/output.
100	$\overline{O\text{-}SEQ\text{-}OUT}$	O	FL segment control data output.

IC, LC72131

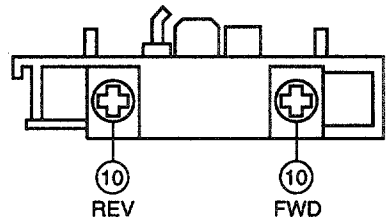
<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>X IN</td><td rowspan="2">I/O</td><td rowspan="2">A crystal oscillator (4.5MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>X-OUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not 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 (LC866560W-5H04) 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 (LC866560W-5H04).</td></tr>
<tr><td>7</td><td>TM-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 $\overline{\text{MONO}}$ / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / AM</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>$\overline{\text{MW}}$</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>





DECK–1 P,DECK-2R/P/E HEAD HEAD



< TUNER SECTION >

1. Clock Check
   Settings : • Test point : TP2
   Method : Set to AM 1710kHz and check that the test point is 2160kHz ± 45Hz.

2. AM VT Check
   Settings : • Test point : TP1
   Method : Set to AM 1710kHz and AM 530kHz and check that the test point is less than 8.5V(1710kHz) and more than 0.6V(530kHz).

3. AM Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L981(1/3) 1000kHz
   Method : The level at 1000kHz is adjusted to MAX by L981(1/3).

4. 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.

5. 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.

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

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

8. Auto Stop Level Check
   AM
   Settings : • Input level : 52dB
   Method : Set to AM 1000kHz and check that the auto stop is at 37 ~ 62dB.

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

< DECK SECTION >

9. 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.

10. Head Azimuth Adjustment
    Settings : • Test tape : TTA-300
    • 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.

11. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA-300
    • Test point :TP6(Lch), TP7(Rch)
    Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is within 2dB.

12. PB Sensitivity Adjustment (DECK 1, DECK 2)
    Settings : • Test tape : TTA-200
    • Test point : TP6(Lch), TP7(Rch)
    • Adjustment Location : SFR301 (DECK1,Lch)
    SFR302 (DECK1,Rch)
    SFR303 (DECK2,Lch)
    SFR304 (DECK2,Rch)
    Method : Play back the test tape and adjust SFRs so that the output level at TP6,TP7 becomes 245mV± 10mV.

13. 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 17mV. 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.

14. REC/PB Frequency Response Check
    Settings : • Test tape : TTA-615
    • Test point : TP6(Lch), TP7(Rch)
    • Input signal : 1kHz / 10kHz (LINE IN)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes 17mV. Record and play back the 1kHz and 10kHz signals and check that the output is 0dB ± 2dB.

15. REC/PB Sensitivity Adjustment
    Settings : • Test tape : TTA-602
    • Test point : TP6(Lch), TP7(Rch)
    • Input signal : 1kHz (LINE IN)
    • Adjustment location : SFR305 (Lch)
    SFR306 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes 170mV. Record and play back the 1kHz signals and adjust SFRs so that the output of the 1kHz signals becomes 0 ± 0.5dB.

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 170mV. Record and play back the 1kHz signals and check that the output is 0 ± 1.5dB.

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 30dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

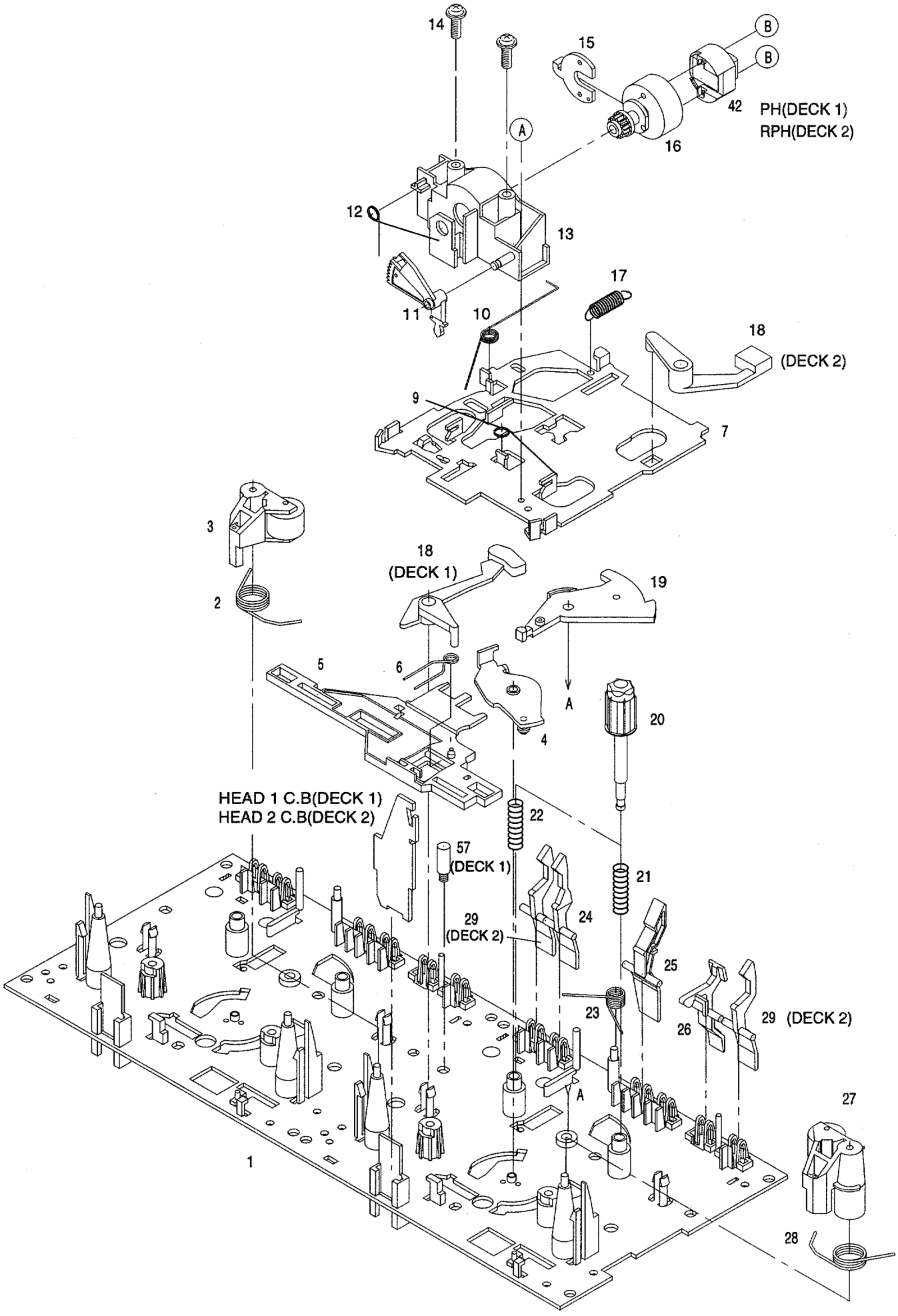
<AM SECTION>

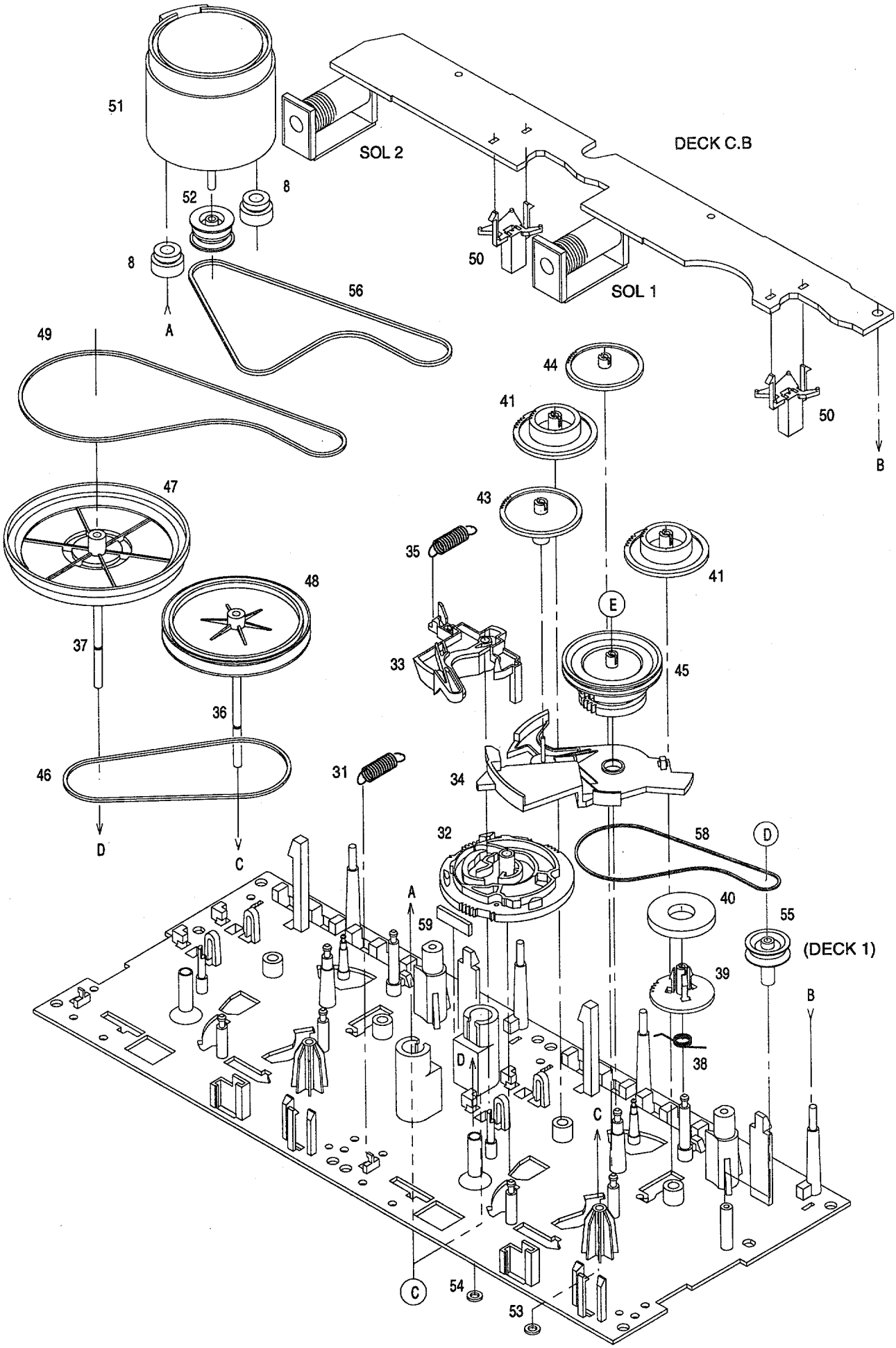
Sensitivity :	Less than 60dB
(S/N 20 dB)	[at 600kHz]
	Less than 58dB
	[at 1000kHz]
	Less than 58dB
	[at 1400kHz]
Signal to noise ratio :	Mono : More than 36dB
	Stereo : More than 34dB
	[at 1000kHz]
Distortion :	Mono : Less than 1.5%
	Stereo : Less than 4.0%
	[at 1000kHz]
Stereo separation :	More than 15dB [at 1000kHz]
Auto stop level :	52dB +10/-15dB
	[at 1000kHz]
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.21%
	(W.R.M.S)
Take-up torque :	30 ~ 55g-cm
	(FWD, REV)
F.F torque :	75 ~ 160g-cm
REW torque :	75 ~ 160g-cm
Back tension :	2 ~ 7g-cm
	(FWD, REV)
PB output level :	2.8V± 2dB
	(SP OUT 6Ω)
REC/PB output level :	0 ± 1dB
	(SP OUT 6Ω,NORM)
Distortion (REC/PB) :	Less than 2.0%
	(NORM,CrO2)
Noise level (PB) :	Less than 20mV
	(NORM, SP OUT 6Ω)
Noise level (REC/PB) :	Less than 20mV
	(NORM, SP OUT 6Ω)
Erasing ratio :	More than 60dB
	(at 125Hz, +10VU, NORM, CrO2)
Test tape :	TTA–602 (NORM)
	TTA-615 (CrO2)

TAPE MECHANISM EXPLODED VIEW 1 / 1



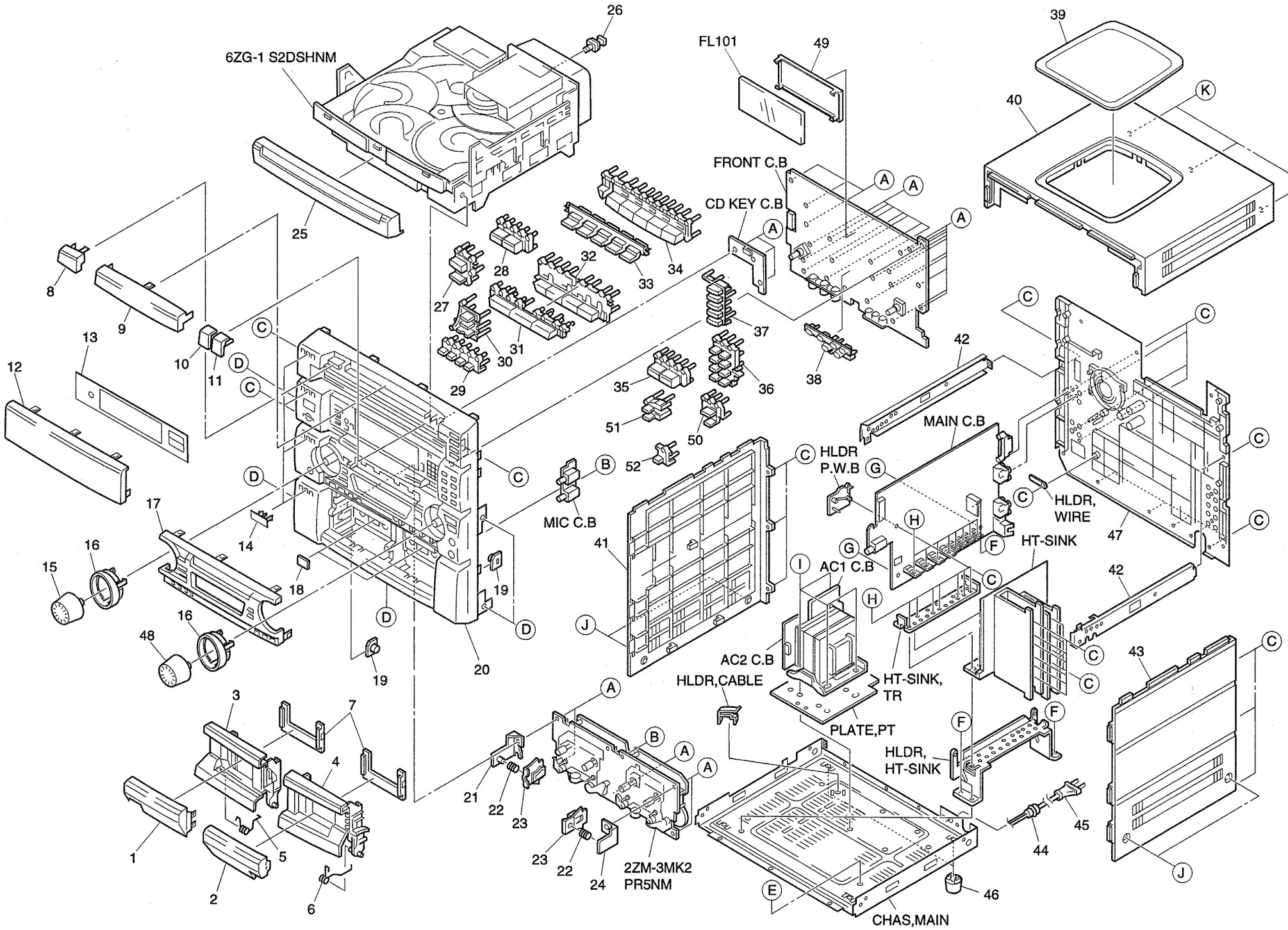

51
SOL 2
DECK C.B
52
8
8
A
56
50
SOL 1
49
44
41
50
B
47
43
35
41
48
E
37
33
45
36
46
31
34
D
C
32
58
D
A
40
55
59
(DECK 1)
39
B
38
D
C
C
54
53

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	82-ZM3-301-519		CHAS ASSY,M2
2	82-ZM1-258-110		SPR-T,PINCH L
3	82-ZM1-341-110		LVR ASSY,PINCH L2
4	82-ZM1-333-010		PLATE,LINK 2
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-81K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-119		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-619		GUIDE,TAPE
14	86-ZM4-206-010		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-119		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-21K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-344-110		LVR ASSY,PINCH R2
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-11K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-236-019		CAPSTAN N 2-41.5
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-ZM1-216-31K		GEAR,REEL
42	87-A90-366-010		HEAD,PH YK50P-BF414 FPC
42	87-A90-367-010		HEAD,RPH YK56R-BF414 FPC
43	82-ZM1-225-21K		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-ZM1-349-110		FLY-WHL,R W(DECK 2)
47	82-ZM3-338-110		FLY-WHL,R3 W(DECK 1)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 2)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 1)
49	82-ZM3-329-210		BELT,SBU R2
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-221-010		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-335-210		PULLEY,COUPLER M3(DECK 1)
56	82-ZM3-337-010		BELT,SBU MOT 2
57	82-ZM3-339-010		SHAFT,COUPLER N3(DECK 1)
58	86-ZM1-206-010		BELT,MAIN L
59	82-ZM3-340-010		SH,BELT D2
A	85-ZM3-202-010		S-SCREW,TG
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-B10-043-010		W-P,0.99-4-0.25 SLT
E	82-ZM3-334-010		PW,2.16-6-0.4

MECHANICAL EXPLODED VIEW 1 / 1

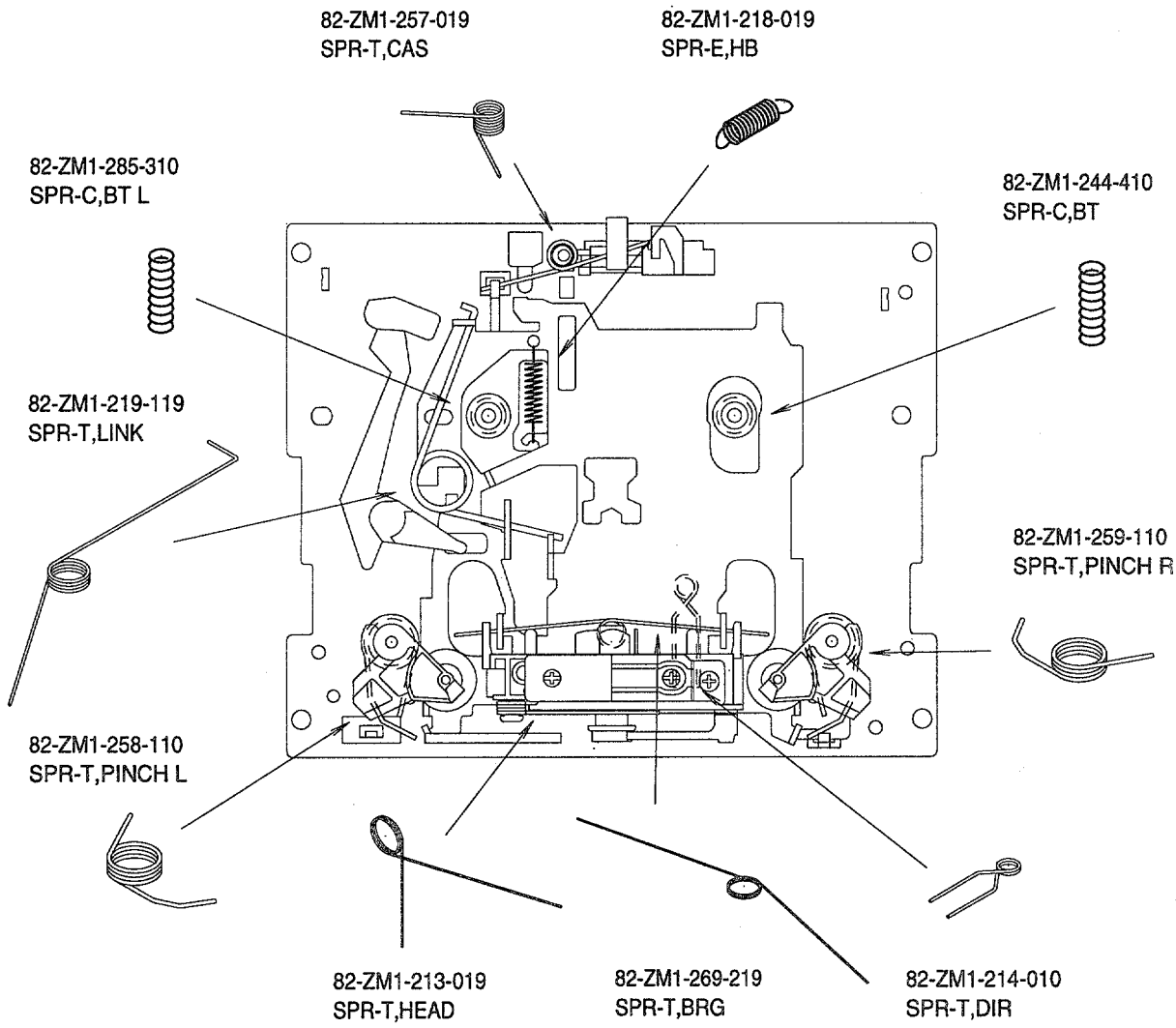


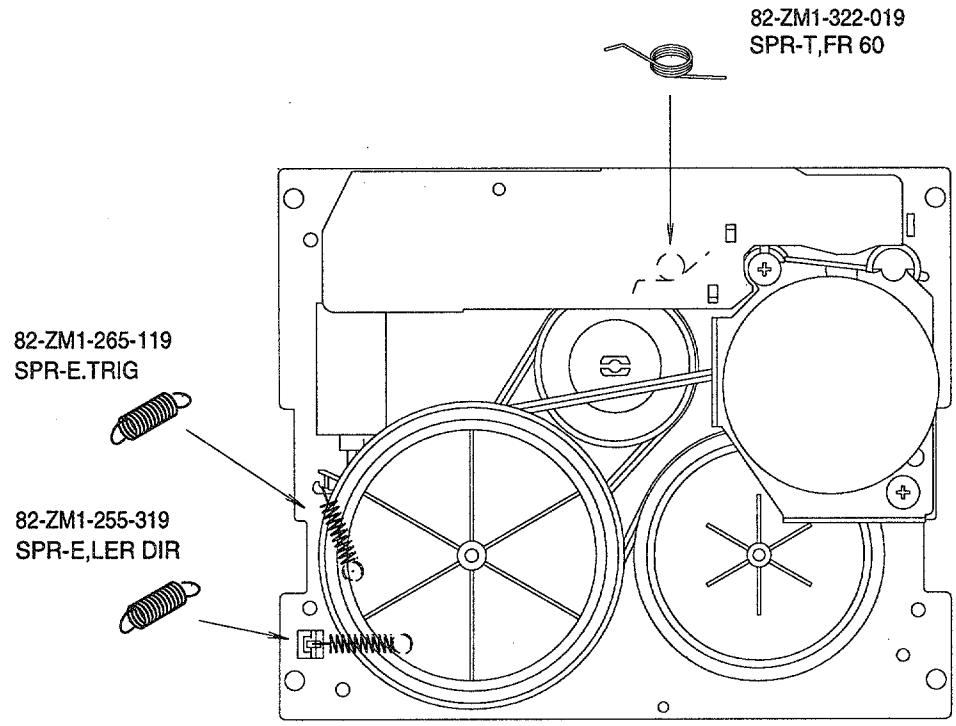
MECHANICAL PARTS LIST 1 / 1

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-MA1-027-010		WINDOW,CASS L
2	88-MA1-028-010		WINDOW,CASS R
3	88-MA1-004-010		BOX,CASS L
4	88-MA1-005-010		BOX,CASS R
5	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
6	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
7	86-NF6-061-010		REFLECTOR,CASS
8	88-MA1-012-010		PANEL,CD
9	88-MA1-025-010		WINDOW,CD
10	88-MA1-011-010		KEY,CHANGE
11	88-MA1-010-010		KEY,OPEN
12	88-MA1-026-010		WINDOW,AMP
13	88-MA1-033-010		PLATE,GEQ
14	82-NE8-032-010		BADGE,AIWA 27.5
15	88-MA1-060-010		KNOB,RTRY RHYTHM
16	88-MA1-029-010		RING,VOL
17	88-MA1-032-010		PANEL,FR
18	81-532-080-010		LABEL, CASS. COMPT
19	87-NF8-220-010		DMPR,150
20	88-MA1-001-010		CABI,FR H
21	87-NF4-216-010		HLDR,LOCK 1
22	86-NF9-224-010		SPR-C,LOCK
23	82-NF5-229-010		PLATE,LOCK
24	87-NF4-217-010		HLDR,LOCK 2
25	88-MA1-013-010		PANEL,TRAY
26	84-ZG1-245-210		CAP,OPTICAL
27	88-MA1-015-010		KEY,POWER
28	88-MA1-016-010		KEY,BBE
29	88-MA1-059-010		KEY,DEMO
30	88-MA1-019-010		KEY,JOG
31	88-MA1-039-010		KEY,ASSY PLAY
32	88-MA1-040-010		KEY,ASSY FF
33	88-MA1-045-010		REFLECTOR,FUN
34	88-MA1-018-010		KEY,FUN
35	88-MA1-017-010		KEY,PRGM
36	88-MA1-014-010		KEY,GEQ
37	88-MA1-009-010		KEY,DIRECT
38	88-MA1-201-010		GUIDE,PLAY
39	86-MA3-042-010		WINDOW,TOP
40	88-MA1-006-010		PANEL,TOP
41	88-MA1-007-010		PANEL,SIDE L
42	88-MA1-208-010		JOINT,CABI
43	88-MA1-008-010		PANEL,SIDE R
44	87-085-185-010		BUSHING, AC CORD (E)
⚠ 45	87-050-079-010		AC-CORD ASSY,E
46	87-MA3-062-010		FOOT, H17
47	88-MA1-044-010		CABI,REAR LH
48	88-MA1-030-010		KNOB,RTRY MAIN
49	88-MA1-205-010		GUIDE,FL
50	88-MA1-022-010		KEY,MIC

SPRING APPLICATION POSITION



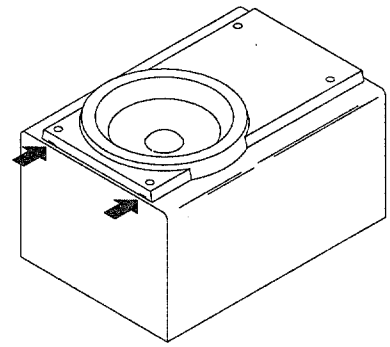


SPEAKER DISASSEMBLY INSTRUSTIONS

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。

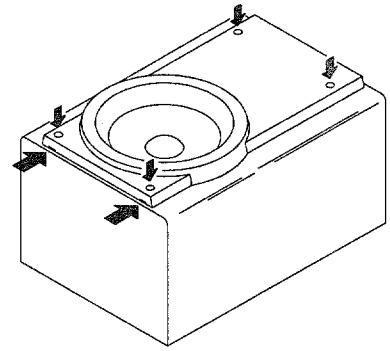
Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



Type.2

グリルフレームを外し、4個のゴムキャッ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。

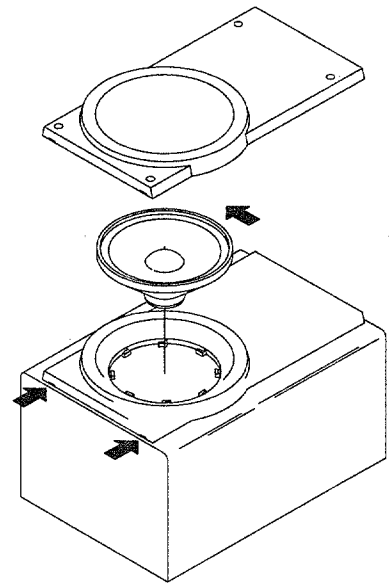
Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then 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 arround 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-WZR99)

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-MS1-001-010		PANEL,FR
2	88-MS1-002-010		PANEL,TW R
3	88-MS1-003-010		PANEL,TW L
4	88-MS1-004-010		PANEL,BA
5	88-MS1-006-010		PANEL,COVER
6	88-MS1-010-010		GRILLE,FRAME ASSY
7	88-MS1-602-010		SPKR, W 240
8	88-MS1-603-010		SPKR, M 140
9	88-MS1-605-010		SPKR, T 60
10	88-MS1-610-010		CORD,SPKR
11	88-MS1-608-010		SPKR, CERAMIC

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-MA1-902-010		IB,LH(ESP)M
2	87-043-115-010		FEEDER-ANT,FM
3	87-A90-030-010		ANT,LOOP AM-NC C
⚠4	87-099-789-010		PLUG,CONVERSION IR44
5	87-MA6-702-010		RC UNIT,RC-7AS01

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－　－	
G－　－	
G－　－	

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