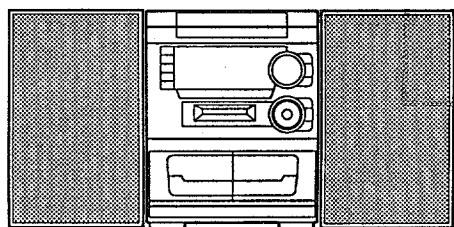


aiwa



XR-H33MD



MD/CD STEREO SYSTEM

- BASIC TAPE MECHANISM: 2ZM-3MK2 PR4NM
- BASIC CD MECHANISM: 4ZG-1 Z3MD<K,HD>, Z3SHMD<EZ> • TYPE: EZ,K,HD
- BASIC MD MECHANISM: 7ZG-A D

REVISION PUBLISHING

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
XR-H33MD	CX-NH33MD	SX-NH33	RC-7AS06

- This Service Manual is the "Revision Publishing" and replaces Simple Manual XR-H33MD<HD>(S/M Code No. 09-986-285-30A) and XR-H33MD<EZ, K>(S/M Code No. 09-985-265-8FE).
- If requiring information about the CD mechanism, see Servive Manual of 4ZG-1. 4ZG-1 Z3MD (S/M Code No. 09-978-221-20T). 4ZG-1 Z3SHMD (S/M Code No. 09-989-293-101).

TABLE OF CONTENTS

SPECIFICATIONS	3
MD DISASSEMBLY INSTRUCTION	4
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING	5
PRECAUTION TO REPLACE OPTICAL BLOCK	5
NOTE IN BEFORE STARTING REPAIR	6,7
ELECTRICAL MAIN PARTS LIST	8~12
BLOCK DIAGRAM - 1 (MAIN / FRONT)	13,14
BLOCK DIAGRAM - 2 (MD MAIN)	15,16
WIRING - 1 (MAIN: EZ, K)	17,18
SCHEMATIC DIAGRAM - 1 (MAIN: EZ, K)	19~21
SCHEMATIC DIAGRAM - 2 (MAIN: HD)	22~24
WIRING - 2 (MAIN: HD)	25,26
WIRING - 3 (FRONT: EZ)	27,28
SCHEMATIC DIAGRAM - 3 (FRONT: EZ)	29~31
SCHEMATIC DIAGRAM - 4 (FRONT: K, HD)	32~34
WIRING - 4 (FRONT: K, HD)	35,36
WIRING - 5 (MD MAIN)	37,38
SCHEMATIC DIAGRAM - 5 (MD MAIN)	39~41
CHIP RESISTOR PART CODE	42
SCHEMATIC DIAGRAM - 6 (INTERFACE)	42,43
TRANSISTOR ILLUSTRATION	43,44
SCHEMATIC DIAGRAM - 7 (MECHA/LOAD)	44
WIRING - 6 (INTERFACE/MECHA/LOAD)	45,46
WIRING - 7 (AC: EZ, K)	47
WIRING - 8 (AC: HD)	48
WIRING - 9 (DECK)	49
SCHEMATIC DIAGRAM - 8 (FAN)	50
FL GRID ASSIGNMENT & ANODE CONNECTION	51,52
WAVEFORM	53
IC BLOCK DIAGRAM - 1	53~59
IC DESCRIPTION	60~68
ADJUSTMENT - 1 <TUNER / DECK: EZ, K>	69,70
ADJUSTMENT - 2 <TUNER / DECK: HD>	71,72
PRACTICAL SERVICE FIGURE	72
ADJUSTMENT - 3 <MD>	73,74
MD TEST MODE	75,76
CD TEST MODE	77
IC BLOCK DIAGRAM - 2	78
MECHANICAL EXPLODED VIEW 1 / 1	79,80
MECHANICAL PARTS LIST 1 / 1	81
MD MECHANISM EXPLODED VIEW 1 / 4	82
MD MECHANISM PARTS LIST 1 / 4	82
MD MECHANISM EXPLODED VIEW 2 / 4	83
MD MECHANISM PARTS LIST 2 / 4	83
MD MECHANISM EXPLODED VIEW 3 / 4	84
MD MECHANISM PARTS LIST 3 / 4	85
MD MECHANISM EXPLODED VIEW 4 / 4	86
MD MECHANISM PARTS LIST 4 / 4	87
TAPE MECHANISM EXPLODED VIEW 1 / 1	88,89
TAPE MECHANISM PARTS LIST 1 / 1	90
SPRING APPLICATION POSITION	91
SPEAKER DISASSEMBLY INSTRUCTION	92
SPEAKER PARTS LIST	92
ACCESSORIES / PACKAGE LIST	93
REFERENCE NAME LIST	94

SPECIFICATIONS

<FM Tuner section>

Tuning range	EZ, K: 87.5 MHz to 108 MHz HD: 76 MHz to 108 MHz
Usable sensitivity(IHF)	EZ, K: 16.8 dBf HD: 12.8 dBf
Antenna terminals	75 ohms (unbalanced)

<MW Tuner section>

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

<LW Tuner section> (EZ, K ONLY)

Tuning range	144kHz to 290 kHz
Usable sensitivity	1400 μ V/m
Antenna	Loop antenna

<Amplifier section>

Power output	EZ, K: Rated: 30 W + 30 W (6 ohms, T.H.D. 1 %, 1kHz/DIN45500) Reference: 37 W + 37 W (6 ohms, T.H.D 10 %, 1kHz/DIN45324) EZ: DIN MUSIC POWER: 80 W + 80 W HD: 30 W + 30 W (1kHz, T.H.D 1%, 6ohms)
Total harmonic distortion	EZ, K: 0.1 % (15 W, 1kHz, 6ohms, DIN AUDIO) HD: 0.05% (15 W, 1kHz, 6ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 500 mV DIGITAL IN (OPTICAL) jack HD:
Outputs	MIC: 1.7 mV SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more CD DIGITAL OUT (OPTICAL) jack

<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 head x 1, Erase head x 1

<Compact disc player section>

Laser	Semiconductor laser ($\lambda = 780$ 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

<MD recorder section>

Scanning method:	Non-contact optical scanner (Semiconductor laser application)
Recording system	Magnetic polarity modulation overwrite system
Rotation speed	Approx. 400 - 900 rpm (CLV)
Sampling frequency	44.1 kHz
No. of channels	Stereo: 2 channels Monaural: 1 channel
A-D, D-A convert	1-bit
Frequency	20 - 20000 Hz +0.5/-1.5dB
Wow and flutter	Unmeasurable

<Speaker system SX-NH33>

Cabinet type	3 way, bass reflex (magnetic shielded type)
Speakers	Woofer: 130mm cone type Tweeter: 60 mm cone type Super tweeter: 20mm ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	235 x 324 x 240 mm
Weight	3.4 Kg
<General>	
Power requirements	EZ, K: 230 - 240 V AC, 50 Hz HD: AC 100 - 120 or 200 - 240 V, switchable 50/60 Hz
Power consumption	EZ, K: 120 W HD: 110 W
Dimensions (W x H x D)	260 x 329 x 345.5 mm
Weight	7.0 Kg

• Design and specifications are subject to change without notice.

• Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

• The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
under license from BBE Sound, Inc

MD DISASSEMBLY INSTRUCTIONS

- Remove the cabinet.
- Turn the power off while DISC is inserted.

1. MD part removal

- 1) Remove the four BVT2+3-10 screws indicated with ▲ marks.

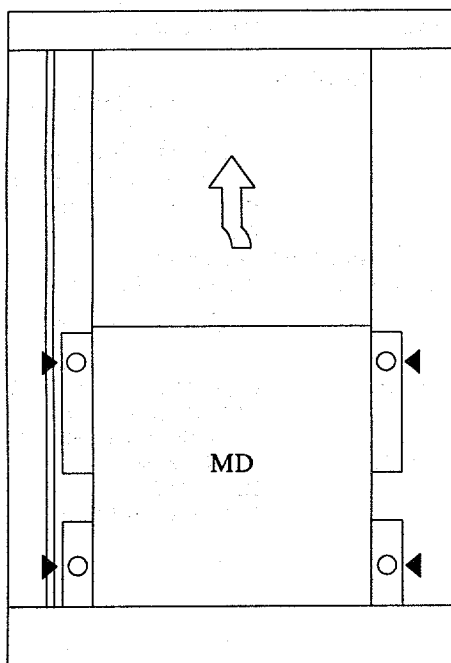


Fig. 1

- 2) Remove the part in the direction of arrow as shown above.

- 3) Remove the 2 screws indicated with ▲ marks from the shield case on the upper surface of the MD part.

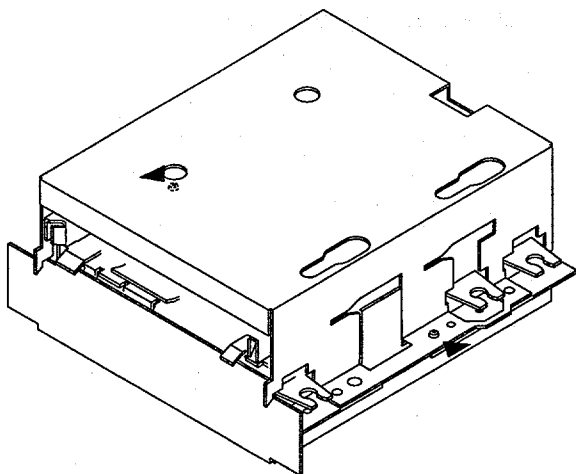


Fig. 2

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

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

WARNING!!

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



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

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitäivälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, som överskrider gränsen för laserklass 1.

CAUTION

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

ATTENTION

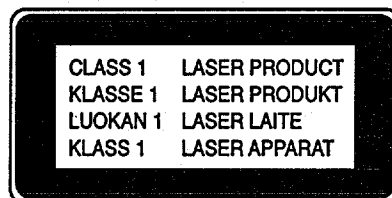
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

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

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

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

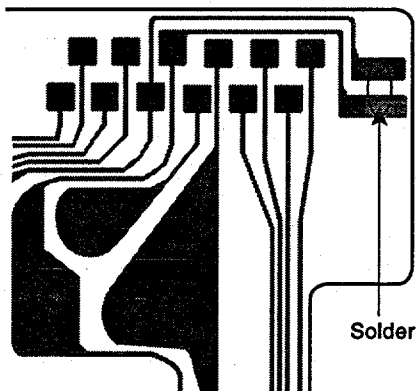


Precaution to replace Optical block

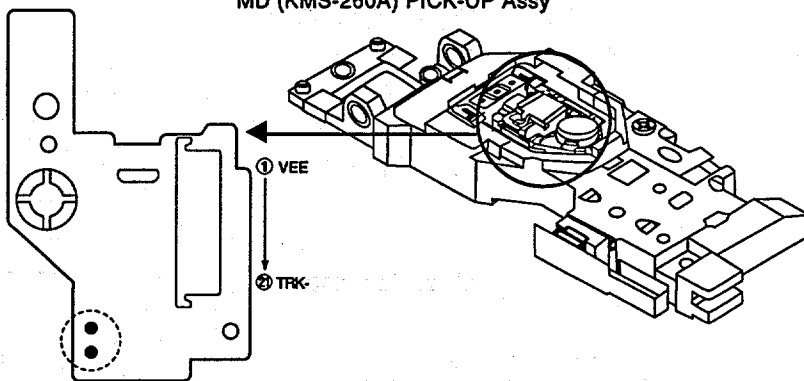
Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

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

CD (KSS-213F) PICK-UP Assy P.C.B



MD (KMS-260A) PICK-UP Assy



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.

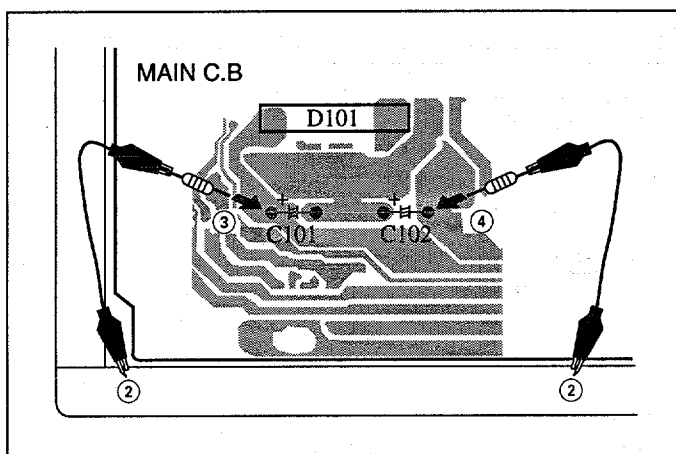


Fig-1

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.

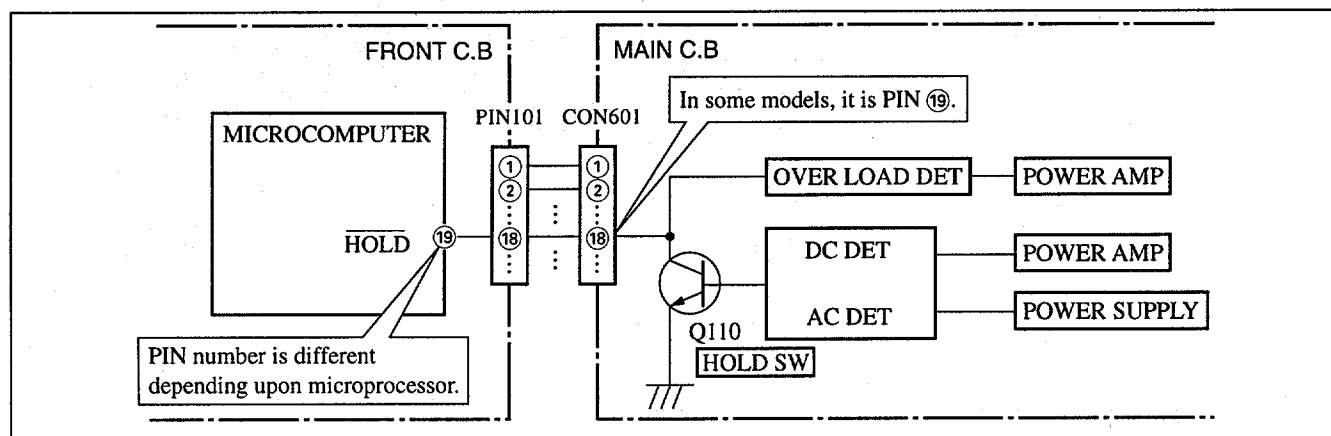


Fig-2-1

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 lead 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.

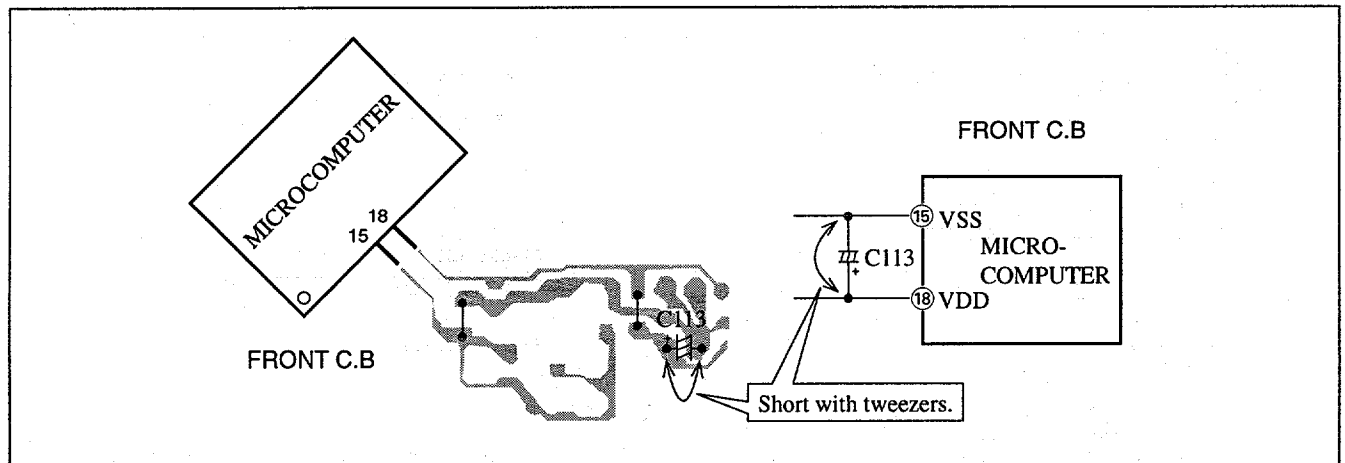


Fig-2-2

- 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	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	
IC				87-026-463-080			TR, 2SA933S	
87-NB8-618-210			C-IC, LC866556W-5H69<HD, K>	DIODE	87-070-178-090		DIODE, 1N5402-BD54	
87-NB8-619-110			C-IC, LC876572A-5H76<EZ>		87-070-274-080		DIODE, 1N4003 SEM	
87-NF8-614-010			IC, SPS-442-1-W		87-A40-291-080		DIODE, 1N4148M(CPT)	
87-017-889-010			IC, NJM4558LD		87-A40-312-080		ZENER, DZ33M	
87-A20-715-010			IC, M62439SP		87-070-150-080		ZENER, MTZJ33D<EZ, K>	
87-017-888-080			IC, NJM4558MD		87-A40-308-080		ZENER, DZ10M	
87-070-127-110			IC, LC72131D		87-A40-469-080		C-DIODE, HSM2838CTR	
87-A20-716-010			IC, TA2040AP<HD>		87-A40-468-080		C-DIODE, HSM2836CTR	
87-A20-913-010			IC, LA1837NL		87-A40-304-080		ZENER, DZ6.2M	
87-A20-698-080			C-IC, AK4512VF		87-A40-466-080		ZENER, MTZJ2.7A	
87-070-289-040			C-IC, BU2092F	87-A40-302-080		ZENER, DZ5.6M		
87-A20-502-010			IC, BU1920<EZ>	87-A40-234-080		ZENER, MTZJ5.6A<EZ, K>		
87-020-454-010			IC, DN6851	87-001-166-080		DIODE, 1SS301		
87-020-784-040			IC, TC74UHC14F5	87-A40-412-040		C-DIODE, SB05-05CP		
87-002-870-010			IC, GP1F37R	87-A40-313-080		C-DIODE, MC2840		
87-A20-714-040			C-IC, NJM2370U33	87-A40-299-080		ZENER, DZ5.1M		
87-A20-798-040			C-IC, NJU7221U35					
87-A20-797-040			C-IC, NJU7221U30					
87-017-853-040			IC, NJM2100V					
87-A20-712-040			C-IC, BA6417F					
87-A20-711-040			C-IC, BA5970FP	MAIN C.B				
87-A20-710-040			C-IC, S-8110AMP		C101	87-A10-520-090		CAP, E 3300-35 M SMG<HD>
87-A20-755-080			C-IC, AK93C45AF		C101	87-010-917-090		CAP, E 3300-50 M SMG<EZ, K>
87-017-920-040			IC, HM51W4400BS/BLS78		C104	87-016-051-090		CAP, E 2200-35 M SMG<HD>
87-ZG9-605-010			C-IC, CXP81952-540R		C104	87-A10-627-090		CAP, E 2200-50 M SMG<EZ, K>
87-A20-709-040			C-IC, BD7910FV		C105	87-018-127-080		CAP, CER 470P-50V
87-A20-708-010			C-IC, CXD2652AR		C106	87-010-408-080		CAP, E 47-50 SME
⚠ 87-001-486-010			PROTECTOR, IC ICP-N15		C107	87-010-384-080		CAP, ELECT 100-25V
87-A20-707-010			C-IC, CXA2523AR		C108	87-010-381-080		CAP, ELECT 330-16V
					C109	87-010-408-080		CAP, ELECT 47-50V<EZ, K>
TRANSISTOR				C109	87-010-260-080		CAP, E 47-25 SME<HD>	
89-213-750-010			TR, 2SB1375	C110	87-010-260-080		CAP, ELECT 47-25V	
89-333-317-880			TR, 2SC3331	C111	87-010-430-080		CAP, ELECT 100-63	
87-A30-196-080			TR, 2SC4115SRS	C112	87-010-263-080		CAP, ELECT 100-10V	
87-A30-199-080			TR, 2SB1238	C113	87-010-403-080		CAP, ELECT 3.3-50V	
87-A30-152-080			TR, 2SC5395F	C114	87-010-374-080		CAP, ELECT 47-10V	
87-A30-151-080			TR, 2SA1993F	C122	87-010-408-080		CAP, ELECT 47-50V<EZ, K>	
87-A30-153-080			TR, RT1P441S	C122	87-010-260-080		CAP, E 47-25 SME<HD>	
87-026-609-080			TR, KTA1266GR	C123	87-010-260-080		CAP, ELECT 47-25V	
87-A30-076-080			C-TR, 2SC3052F	C124	87-018-134-080		CAP, TC-U 0.01-16<EZ, K>	
87-A30-087-080			C-FET, 2SK2158	C130	87-018-131-080		CAP, CER 1000P-50V<EZ, K>	
87-A30-071-080			C-TR, RT1N 144C	C207	87-010-546-080		CAP, ELECT 0.33-50V	
87-A30-112-080			TR, C2N5551<HD>	C208	87-010-546-080		CAP, ELECT 0.33-50V	
87-A30-190-080			TR, CC5551<EZ, K>	C209	87-018-133-080		CAPACITOR, CER 4700P-16V	
87-A30-137-010			TR, 2SD2494	C210	87-018-133-080		CAPACITOR, CER 4700P-16V	
87-A30-138-010			TR, 2SB1625	C211	87-010-403-080		CAP, ELECT 3.3-50V	
87-A30-047-080			TR, CSD655E	C212	87-010-403-080		CAP, ELECT 3.3-50V	
87-A30-073-080			C-TR, RT1N 141C	C213	87-010-260-080		CAP, ELECT 47-25V	
89-112-964-580			TR, 2SA1296Y 0.75W 120M	C214	87-010-260-080		CAP, ELECT 47-25V	
87-A30-159-080			C-TR, KTA1298Y	C219	87-010-544-080		CAP, ELECT 0.1-50V	
87-A30-091-080			FET, 2SJ460	C220	87-010-544-080		CAP, ELECT 0.1-50V	
87-A30-090-080			FET, 2SK2541	C221	87-A10-207-080		CAP, 0.01-50KBUP050<EZ, K>	
87-A30-154-080			TR, RT1N441S	C222	87-A10-207-080		CAP, 0.01-50KBUP050<EZ, K>	
89-327-143-080			TR, 2SC2714	C223	87-018-134-080		CAP, TC-U 0.01-16<EZ, K>	
87-A30-155-080			TR, RT1P141S	C224	87-018-134-080		CAPACITOR, TC-U 0.01-16<EZ, K>	
87-A30-156-080			TR, RT1P144S	C225	87-010-400-080		CAP, ELECT 0.47-50V	
87-A30-092-080			FET, 2SK439E/F<EZ, K>	C226	87-010-400-080		CAP, ELECT 0.47-50V	
87-A30-164-080			TR, CSC2001K<EZ, K>	C227	87-010-260-080		CAP, E 47-25 SME<HD>	
87-A30-072-080			C-TR, RT1P144C	C229	87-018-123-080		CAP, CER 220P-50V<EZ, K>	
87-026-225-080			C-TR, 2SJ106GR	C229	87-018-119-080		CAP, TC-U 100P-50<HD>	
87-A30-074-080			C-TR, RT1P141C	C230	87-018-123-080		CAP, CER 220P-50V<EZ, K>	
87-A30-075-080			C-TR, 2SA1235F	C230	87-018-119-080		CAP, TC-U 100P-50<HD>	
87-026-412-080			C-TR, RN1305	C235	87-018-209-080		CAP, CER 0.1-50V	
89-341-164-080			C-TR, 2SC4116Y	C236	87-018-209-080		CAP, CER 0.1-50V	
89-115-884-080			C-TR, 2SA1588Y	C237	87-018-134-080		CAPACITOR, TC-U 0.01-16<HD>	
87-026-423-080			C-TR, RN2305	C239	87-010-402-080		CAP, E 2.2-50 SME<EZ, K>	
89-305-352-380			TR, 2SC535 (B/C)	C240	87-010-402-080		CAP, E 2.2-50 SME<EZ, K>	
87-A30-084-080			TR, CSB1058B	C253	87-018-131-080		CAP, TC-U 1000P-50<EZ, K>	

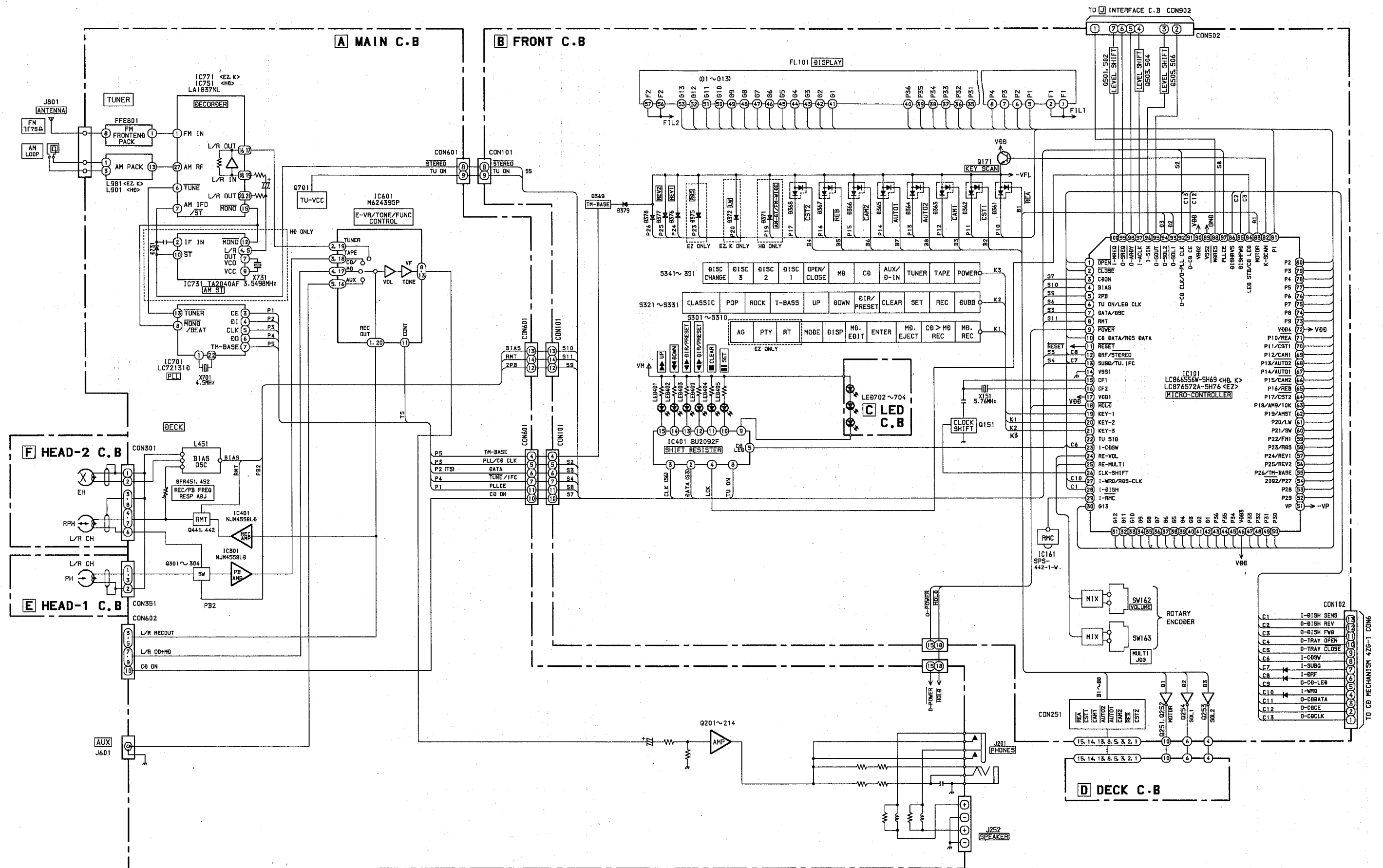
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C254	87-018-131-080		CAP, TC-U 1000P-50<EZ, K>	C758	87-010-112-080		CAP, ELECT 100-16V
C255	87-018-115-080		CAP, CER 47P-50V<EZ, K>	C759	87-018-134-080		CAP, TC-U 0.01-16 NY
C256	87-018-115-080		CAP, TC-U 47P-50<EZ, K>	C761	87-010-404-080		CAP, ELECT 4.7-50V
C257	87-018-119-080		CAP, CER 100P-50V<EZ, K>	C762	87-010-400-080		CAP, ELECT 0.47-50V
C301	87-018-130-080		CAP, TC-U 820P-50 B	C763	87-010-401-080		CAP, ELECT 1-50V
C302	87-018-130-080		CAP, TC-U 820P-50 B	C764	87-010-401-080		CAP, ELECT 1-50V
C303	87-018-130-080		CAP, TC-U 820P-50 B	C765	87-018-115-080		CAP, CER 47P-50V
C304	87-018-130-080		CAP, TC-U 820P-50 B	C766	87-010-407-080		CAP, ELECT 33-50V
C307	87-010-263-080		CAP, ELECT 100-10V	C768	87-018-208-080		CAP 0.047-50F
C308	87-010-263-080		CAP, ELECT 100-10V	C769	87-010-403-080		CAP, ELECT 3.3-50V
C309	87-018-115-080		CAP, CER 47P-50V<EZ, K>	C770	87-018-134-080		CAP, TC-U 0.01-16 NY
C310	87-018-115-080		CAP, CER 47P-50V<EZ, K>	C771	87-010-406-080		CAP, ELECT 22-50
C315	87-010-374-080		CAP, ELECT 47-10V	C773	87-018-131-080		CAP, CER 1000P-50V<HD>
C317	87-010-546-080		CAP, ELECT 0.33-50V	C773	87-018-195-080		CAP, CER 1200P-16V<EZ>
C318	87-010-546-080		CAP, ELECT 0.33-50V	C773	87-018-196-080		CAP, CER 1500P-16V<K>
C360	87-010-401-080		CAP, ELECT 1-50V	C774	87-010-405-080		CAP, ELECT 10-50V
C361	87-010-374-080		CAP, ELECT 47-10V	C783	87-018-202-080		CAP, CERAM.6800PF<EZ>
C401	87-010-401-080		CAP, ELECT 1-50V	C784	87-018-202-080		CAP, CERAM.6800PF<EZ>
C402	87-010-401-080		CAP, ELECT 1-50V	C785	87-010-405-080		CAP, ELECT 10-50V
C403	87-018-118-080		CAP, TC-U 82P-50 B	C786	87-010-405-080		CAP, ELECT 10-50V
C404	87-018-118-080		CAP, TC-U 82P-50 B	C787	87-018-196-080		CAP, TC-U 1500P-16 MX
C411	87-010-405-080		CAP, ELECT 10-50V	C788	87-018-196-080		CAP, TC-U 1500P-16 MX
C411	87-010-405-080		CAP, ELECT 10-50V	C789	87-010-546-080		CAP, ELECT 0.33-50V
C412	87-010-405-080		CAP, ELECT 10-50V	C790	87-010-546-080		CAP, ELECT 0.33-50V
C452	87-010-382-080		CAP, ELECT 22-25V	C801	87-018-134-080		CAP, TC-U 0.01-16 NY<EZ, K>
C458	87-018-131-080		CAP, CER 1000P-50V	C802	87-018-134-080		CAP, TC-U 0.01-16 NY<EZ, K>
C459	87-018-128-080		CAP, CERA-SOL SS 560P	C803	87-018-134-080		CAP, TC-U 0.01-16 NY
C461	87-018-126-080		CAP, TC-U 390P-50 B	C804	87-018-134-080		CAP, TC-U 0.01-16 NY
C462	87-018-126-080		CAP, TC-U 390P-50 B	C808	87-018-134-080		CAP, TC-U 0.01-16 NY
C601	87-018-130-080		CAP, TC-U 820P-50 B	C809	87-018-134-080		CAP, TC-U 0.01-16 NY
C602	87-018-130-080		CAP, TC-U 820P-50 B	C810	87-018-134-080		CAP, TC-U 0.01-16 NY
C611	87-010-545-080		CAP, ELECT 0.22-50V	C811	87-018-134-080		CAP, TC-U 0.01-16 NY
C612	87-010-545-080		CAP, ELECT 0.22-50V	C812	87-010-408-080		CAP, ELECT 47-50V
C613	87-010-545-080		CAP, ELECT 0.22-50V	C813	87-018-131-080		CAP, CER 1000P-50V<EZ, K>
C614	87-010-545-080		CAP, ELECT 0.22-50V	C851	87-018-123-080		CAP, CER 220P-50V<EZ>
C615	87-018-104-080		CAP, TC-U 10P-50 SL	C852	87-018-123-080		CAP, CER 220P-50V<EZ>
C616	87-010-408-080		CAP, ELECT 47-50V	C853	87-018-127-080		CAP, CER 470P-50V<EZ>
C617	87-010-408-080		CAP, ELECT 47-50V	C855	87-010-405-080		CAP, ELECT 10-50V<EZ>
C619	87-010-401-080		CAP, ELECT 1-50V	C856	87-010-405-080		CAP, ELECT 10-50V<EZ>
C620	87-010-401-080		CAP, ELECT 1-50V	C857	87-018-134-080		CAPACITOR, TC-U 0.01-16<EZ>
C701	87-010-404-080		CAP, ELECT 4.7-50V	C858	87-018-109-080		CAP, CER 22P-50V<EZ>
C702	87-018-134-080		CAPACITOR, TC-U 0.01-16	C859	87-018-109-080		CAP, CER 22P-50V<EZ>
C703	87-018-134-080		CAPACITOR, TC-U 0.01-16	C860	87-018-134-080		CAPACITOR, TC-U 0.01-16<EZ>
C704	87-018-131-080		CAP, CER 1000P-50V	C921	87-018-134-080		CAP, TC-U 0.01-16 NY<EZ, K>
C705	87-018-131-080		CAP, CER 1000P-50V	C922	87-018-142-080		CAP, TC-U 3.9P-50 CH<EZ, K>
C706	87-018-131-080		CAP, CER 1000P-50V	C923	87-018-102-080		CAP, TC-U 6.8P-50 SL<EZ, K>
C707	87-010-112-080		CAP, ELECT 100-16V	C924	87-014-049-080		CAP, PP 470P-100 J<EZ, K>
C709	87-010-248-080		CAP, ELECT 220-10V	C937	87-018-134-080		CAP, TC-U 0.01-16 NY<EZ, K>
C710	87-010-112-080		CAP, ELECT 100-16V	C938	87-018-134-080		CAP, TC-U 0.01-16 NY<EZ, K>
C712	87-018-149-080		CAP, TC-U 15P-50 CH	C944	87-018-148-080		CAP, TC-U 12P-50 CH<HD>
C713	87-018-149-080		CAP, TC-U 15P-50 CH	CF801	87-008-423-010		CERAMIC FILTER, SFE10.7<EZ, K>
C714	87-101-112-080		CAP, E 100-16 SME<EZ>	CF801	87-008-261-010		FILTER, SFE10.7MA5-A<HD>
C715	87-018-119-080		CAP, CER 100P-50V<EZ, K>	CF802	82-785-747-010		CF MS2 GHY R<EXCEPT HD>
C731	87-010-545-080		CAP, ELECT 0.22-50V<HD>	CF802	87-008-261-010		FILTER, SFE10.7MA5-A<HD>
C732	87-010-404-080		CAP, ELECT 4.7-50V<HD>	CN301	87-099-827-010		CONN, 3P S2M-3W
C733	87-010-545-080		CAP, ELECT 0.22-50V<HD>	CN351	87-099-832-010		CONN, 8P S2M-8W
C734	87-010-545-080		CAP, ELECT 0.22-50V<HD>	CON102	87-NB7-615-010		CONN ASSY, 2P SHIELDPH/PH
C735	87-018-132-080		CAP, CER 2200P-16V<HD>	CON301	87-099-827-010		CONN, 3P S2M-3W
C736	87-018-132-080		CAP, CER 2200P-16V<HD>	CON351	87-099-832-010		CONN, 8P S2M-8W
C737	87-018-134-080		CAP, TC-U 0.01-16<HD>	CON601	87-A60-349-010		CONN, 30P DF8A-30S<HD>
C738	87-010-260-080		CAP, ELECT 47-25V<HD>	CON601	87-099-719-010		CONN, 30P TYK-B(X)<EZ, K>
C740	87-018-127-080		CAP, CER 470P-50V<HD>	CON602	87-099-014-010		CONN, 12P 6216 V
C741	87-010-404-080		CAP, ELECT 4.7-50V<HD>	FB301	87-008-372-080		FILTER, EMI BL OIRNI<EZ, K>
C742	87-010-400-080		CAP, ELECT 0.47-50V<HD>	FB601	87-008-372-080		FILTER, EMI BL OIRNI<EZ, K>
C743	87-010-101-080		CAP, ELECT 220-16<HD>	FC602	88-912-151-110		FF-CABLE, 12P
C746	87-018-134-080		CAPACITOR, TC-U 0.01-16	FFE801	A8-62A-191-130		62A-1 FEENM<K, EZ>
C752	87-018-143-080		CAP, TC-U 4.7P-50 CH	FFE801	A8-62A-19D-070		62A-1 YFEJNC<HD>
C753	87-010-408-080		CAP, ELECT 47-50V	J201	87-A60-024-010		JACK 6.3BLK W/S WKM
C756	87-018-134-080		CAP, TC-U 0.01-16<EZ, K>	J202	87-A60-238-010		TERMINAL, SP 4P
C757	87-018-134-080		CAP, TC-U 0.01-16 NY	J601	87-A60-398-010		JACK, PIN 2P R/W HSP-242V24

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
J801	87-A60-403-010		TERMINAL, HSP-312V05<EZ, K>	C614	87-010-248-040		CAP, E 220-10 SME<HD>
J801	87-033-239-010		TERMINAL, HSP-154V-2<HD>	C630	87-010-196-080		C-CAP, S 0.1-25<HD>
L201	87-003-383-010		COIL, 1UH-S	CON101	87-A60-350-010		CONN, 30P DF8A-30P
L202	87-003-383-010		COIL, 1UH-S	CON251	87-099-017-010		CONN, 15P 6216 V
L451	87-007-342-010		COIL, OSC 85K BIAS	CON502	87-099-195-010		CONN, 7P 6216 V
L701	87-005-847-080		COIL, 2.2UH<CECS>	FB401	87-008-372-080		FILTER, EMI BL OIRNI
L751	87-A50-165-010		COIL, FM DET-N(TOK)<HD>	FB601	87-008-372-080		FILTER, EMI BL OIRNI<HD>
L752	87-A90-053-010		FLTR, PCFMT-060(TOK)<HD>	FC102	88-913-271-110		FF-CABLE, 13P
L771	87-A50-266-010		COIL, FM DET-2N(TOK)<EZ, K>	FC251	88-915-091-110		FF-CABLE, 15P
L772	87-A90-733-010		FLTR, PCFAZH-450 (TOK)<EZ, K>	FL101	87-NB8-617-010		FL, 13-BT-159GK
L801	87-005-847-080		COIL, 2.2UH<CECS>	J601	87-A60-651-010		JACK, 3.5MMONO<HD>
L851	87-005-847-080		COIL, 2.2UH<CECS><EZ>	LED400	87-070-281-080		LED, SLZ736A-25-S-T1
L901	87-NF4-650-010		COIL, AM PACK 4N(TOK)<HD>	LED401	87-070-281-080		LED, SLZ736A-25-S-T1
L941	87-A50-020-010		COIL, ANT LW(COI)<EZ, K>	LED402	87-070-281-080		LED, SLZ736A-25-S-T1
L942	87-A50-019-010		COIL, OSC LW(COI)<EZ, K>	LED403	87-070-281-080		LED, SLZ736A-25-S-T1
L981	87-NF4-651-010		COIL, AM PACK2N(TOM)<EZ, K>	LED404	87-070-281-080		LED, SLZ736A-25-S-T1
M111	87-A90-296-210		MOT ASSY, F614R-12MC-15	LED405	87-070-281-080		LED, SLZ736A-25-S-T1
PR202	87-A90-093-080		PROTECTOR, 3A 491 SERIES 60V<HD>	R116	87-029-390-010		FUSE RES 120 1/4W
R223	87-A00-258-080		RES, M/F 0.22-1W J	S301	87-A90-095-080		SW, TACT EVQ11G04M
R224	87-A00-258-080		RES, M/F 0.22-1W J	S302	87-A90-095-080		SW, TACT EVQ11G04M
R249	87-A00-258-080		RES, M/F 0.22-1W J	S303	87-A90-095-080		SW, TACT EVQ11G04M
R250	87-A00-258-080		RES, M/F 0.22-1W J	S304	87-A90-095-080		SW, TACT EVQ11G04M
SFR451	87-A90-636-080		SFR, 33K H RH0638C LG	S305	87-A90-095-080		SW, TACT EVQ11G04M
SFR452	87-A90-636-080		SFR, 33K H RH0638C LG	S306	87-A90-095-080		SW, TACT EVQ11G04M
TC942	87-011-221-080		CAP, TRIMMER 30P<EZ, K>	S307	87-A90-095-080		SW, TACT EVQ11G04M
W101	83-NE2-618-110		F-CABEL, 5P-2.5	S308	87-A90-095-080		SW, TACT EVQ11G04M<EZ>
WH102	87-064-168-010		HOLDER, WIRE(U) 2.5-7P	S309	87-A90-095-080		SW, TACT EVQ11G04M<EZ>
X701	87-A70-061-010		VIB, XTAL 4.500MHZ CSA-309	S310	87-A90-095-080		SW, TACT EVQ11G04M<EZ>
X731	87-030-394-010		VIB, CER CSA3.6MGF228<HD>	S321	87-A90-095-080		SW, TACT EVQ11G04M
X851	89-KT1-608-010		X, TAL, 4.332MHZ<EZ>	S322	87-A90-095-080		SW, TACT EVQ11G04M
FRONT C.B				S323	87-A90-095-080		SW, TACT EVQ11G04M
C151	87-010-555-040		CAP, E 100-10 GAS	S324	87-A90-095-080		SW, TACT EVQ11G04M
C152	87-010-196-080		C-CAP, S 0.1-25	S325	87-A90-095-080		SW, TACT EVQ11G04M
C153	87-010-494-040		CAP, E 1-50 GAS	S326	87-A90-095-080		SW, TACT EVQ11G04M
C154	87-A10-189-040		CAP, E 220-10	S327	87-A90-095-080		SW, TACT EVQ11G04M
C155	87-010-320-080		C-CAP, S 68P-50 CH	S328	87-A90-095-080		SW, TACT EVQ11G04M
C156	87-010-314-080		C-CAP, S 22P-50V	S329	87-A90-095-080		SW, TACT EVQ11G04M
C157	87-010-316-080		C-CAP, S 33P-50 CH	S330	87-A90-095-080		SW, TACT EVQ11G04M
C159	87-010-196-080		C-CAP, S 0.1-25	S331	87-A90-095-080		SW, TACT EVQ11G04M
C160	87-010-196-080		C-CAP, S 0.1-25	S341	87-A90-095-080		SW, TACT EVQ11G04M
C161	87-010-196-080		C-CAP, S 0.1-25	S342	87-A90-095-080		SW, TACT EVQ11G04M
C165	87-012-157-080		C-CAP, S 330P-50 CH	S343	87-A90-095-080		SW, TACT EVQ11G04M
C166	87-010-405-040		CAP, E 10-50	S344	87-A90-095-080		SW, TACT EVQ11G04M
C171	87-010-194-080		C-CAP, S 0.047	S345	87-A90-095-080		SW, TACT EVQ11G04M
C172	87-010-408-040		CAP, E 47-50 SME	S346	87-A90-095-080		SW, TACT EVQ11G04M
C173	87-010-406-040		CAP, E 22-50 SME	S347	87-A90-095-080		SW, TACT EVQ11G04M
C174	87-010-406-040		CAP, E 22-50 SME	S348	87-A90-095-080		SW, TACT EVQ11G04M
C180	87-010-194-080		C-CAP, S 0.047	S349	87-A90-095-080		SW, TACT EVQ11G04M
C181	87-012-156-080		C-CAP, S 220P-50 CH	S350	87-A90-095-080		SW, TACT EVQ11G04M
C182	87-012-156-080		C-CAP, S 220P-50 CH	S351	87-A90-095-080		SW, TACT EVQ11G04M
C183	87-010-197-080		C-CAP, S 0.01 DM	SW162	87-A90-535-010		SW, RTRY EC16B24304
C191	87-012-368-080		C-CAP, S 0.1-50 F	SW163	87-A90-085-010		SW, RTRY EC16B 24204
C192	87-015-785-080		C-CAP, 0.1PZ-25Z	VR601	87-NB7-602-010		VR, RTRY 10KAX1 1 V<HD>
C401	87-010-196-080		C-CAP, S 0.1-25	X151	87-A70-070-080		VIB, CER 5.76MHZ CRHF
C403	87-010-318-080		C-CAP, S 47P-50 CH	LED C.B			
C501	87-010-196-080		C-CAP, S 0.1-25	LED702	87-017-730-080		LED, SEL6214S<HD, EZS, EZSM>
C600	87-010-380-040		CAP, E 47-16 SME<HD>	LED703	87-A40-380-080		LED, SEL6510C-TP5 GRN
C601	87-010-405-040		CAP, E 10-50SME<HD>	LED704	87-017-730-080		LED, SEL6214S<HD, EZS, EZSM>
C602	87-010-186-080		C-CAP, S 4700P-50<HD>	DECK C.B			
C603	87-010-405-040		CAP, E 10-50 SME<HD>	CON105	87-099-756-019		CONN, 15P 9604 S F
C604	87-010-406-040		CAP, E 22-50 SME<HD>	SFR1	87-024-581-019		SFR, 3.3K DIA 6H
C605	87-010-196-080		C-CAP, S 0.1-25<HD>	SOL1	82-ZM1-618-010		SOL ASSY, 27
C606	87-010-322-080		C-CAP, S 100P-50 CH<HD>	SOL2	82-ZM1-618-010		SOL ASSY, 27
C607	87-010-321-080		C-CAP, S 82P-50<HD>	SW1	87-A90-248-019		SW, MICRO ESE11SH2CXQ
C608	87-010-196-080		C-CAP, S 0.1-25<HD>	SW2	87-A90-248-019		SW, MICRO ESE11SH2CXQ
C609	87-010-545-040		CAP, E 0.22-50 SME<HD>	SW3	87-A90-248-019		SW, MICRO ESE11SH2CXQ
C610	87-010-322-080		C-CAP, S 100P-50 CH<HD>	SW4	87-036-110-010		SW, MICRO SPPB62
C611	87-010-177-080		C-CAP, S 820P-50 SL<HD>				
C612	87-010-176-080		C-CAP, S 680P-50 SL<HD>				

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SW5	87-036-110-010		SW,MICRO SPPB62	C208	87-012-286-080		CAP, U 0.01-25
SW6	87-036-110-010		SW,MICRO SPPB62	C209	87-010-831-080		C-CAP,U,0.1-16F
SW8	87-A90-248-019		SW,MICRO ESE11SH2CKXQ	C210	87-012-172-080		CAPACITOR CHIP U 10P CH
SW9	87-036-110-010		SW,MICRO SPPB62	C211	87-012-172-080		CAPACITOR CHIP U 10P CH
W001	82-ZM3-601-019		RBN,CORD,4P-75	C212	87-012-195-080		C-CAP,U 100P-50CH
HEAD-1 C.B				C213	87-010-662-080		C-CAP,E 22-6.3
HEAD-2 C.B				C214	87-012-274-080		CHIP CAP,U 1000P-50B
CON351	87-NF6-616-010		CONN ASSY, 8P-RPB	C217	87-012-188-080		C-CAP,U 47P-50 CH
AC1 C.B				C218	87-012-188-080		C-CAP,U 47P-50 CH
△ F101	87-035-223-010		FUSE,1.25A 250VT<EZ,K>	C219	87-A10-418-080		C-CAP,TN 22-4 A TCF
△ F101	87-035-224-010		FUSE,1.6A 250VT<HD>	C220	87-010-662-080		C-CAP,E 22-6.3
△ FC1	87-A90-505-080		FUSE CLAMP,TP00351-51<EZ,K>	C221	87-010-831-080		C-CAP,U,0.1-16F
△ FC2	87-A90-505-080		FUSE CLAMP,TP00351-51<EZ,K>	C222	87-016-444-080		C-CAP,TN 47-10 F95E
△ FC101	87-033-147-010		FUSE CLAMP<HD>	C223	87-010-831-080		C-CAP,U,0.1-16F
△ FC102	87-033-147-010		FUSE CLAMP<HD>	C224	87-A10-685-080		C-CAP,S 470P-100 J CH
△ PT101	87-NB8-627-010		PT,7NB-8 EZ<EZ>	C225	87-010-831-080		C-CAP,U,0.1-16F
△ PT101	87-NB8-610-010		PT,7NB-8 HD<HD>	C226	87-010-831-080		C-CAP,U,0.1-16F
△ PT101	87-NB8-628-010		PT,7NB-8 K<K>	C227	87-012-274-080		CHIP CAP,U 1000P-50B
△ SW101	87-A90-234-010		SW,SL 1-2-2 SW2201<HD>	C228	87-012-274-080		CHIP CAP,U 1000P-50B
△ T1	87-A60-317-010		TERMINAL, 1P MSC<EZ,K>	C229	87-012-274-080		CHIP CAP,U 1000P-50B
△ T2	87-A60-317-010		TERMINAL, 1P MSC<EZ,K>	C232	87-012-274-080		CHIP CAP,U 1000P-50B
△ T101	87-A60-317-010		TERMINAL, 1P MSC<HD>	C233	87-012-274-080		CHIP CAP,U 1000P-50B
△ T102	87-A60-317-010		TERMINAL, 1P MSC<HD>	C236	87-010-831-080		C-CAP,U,0.1-16F
AC2 C.B				C300	87-010-831-080		C-CAP,U,0.1-16F
△ PR1	87-026-681-080		PROTECTOR,5A 60V 491<EZ,K>	C301	87-010-831-080		C-CAP,U,0.1-16F
△ PR2	87-026-681-080		PROTECTOR,5A 60V 491<EZ,K>	C302	87-010-831-080		C-CAP,U,0.1-16F
WH101	87-064-168-010		HOLDER,WIRE(U)2.5-7P	C305	87-016-462-080		C-CAP,S 1-16 F
MD MAIN C.B				C307	87-010-831-080		C-CAP,U,0.1-16F
C100	87-A10-418-080		C-CAP,TN 22-4 A TCF	C308	87-010-831-080		C-CAP,U,0.1-16F
C101	87-A10-418-080		C-CAP,TN 22-4 A TCF	C311	87-010-662-080		C-CAP,E 22-6.3
C102	87-012-286-080		CAP, U 0.01-25	C312	87-012-195-080		C-CAP,U 100P-50 CH
C103	87-010-787-080		CAP, U 0.022-25	C321	87-012-274-080		CHIP CAP,U 1000P-50B
C104	87-010-662-080		C-CAP,E 22-6.3	C322	87-012-274-080		CHIP CAP,U 1000P-50B
C105	87-010-831-080		C-CAP,U,0.1-16F	C323	87-012-274-080		CHIP CAP,U 1000P-50B
C106	87-016-462-080		C-CAP,S 1-16 F	C324	87-012-274-080		CHIP CAP,U 1000P-50B
C107	87-012-195-080		C-CAP,U 100P-50CH	C325	87-012-274-080		CHIP CAP,U 1000P-50B
C108	87-012-274-080		CHIP CAP,U 1000P-50B	C400	87-010-831-080		C-CAP,U,0.1-16F
C109	87-016-436-080		C-CAP,TN 47-4(B2)	C401	87-010-831-080		C-CAP,U,0.1-16F
C111	87-A10-418-080		C-CAP,TN 22-4 A TCF	C402	87-010-831-080		C-CAP,U,0.1-16F
C112	87-012-286-080		CAP, U 0.01-25	C403	87-010-831-080		C-CAP,U,0.1-16F
C113	87-012-284-080		CAP, U 6800P-50	C404	87-010-831-080		C-CAP,U,0.1-16F
C114	87-010-828-080		CHIP CAPACITOR,U 0.033-25F	C405	87-010-661-080		C-CAP,E 10-16
C115	87-A10-369-080		C-CAP,S 0.47-16 K B	C406	87-010-779-080		C-CAP,E 100-6.3
C116	87-012-282-080		CAP, U 4700P-50	C407	87-012-197-080		C-CAP,U 150P-50 CH
C117	87-016-462-080		C-CAP,S 1-16 F	C408	87-012-197-080		C-CAP,U 150P-50 CH
C118	87-012-282-080		CAP, U 4700P-50	C411	87-012-271-080		CAP, U 560P-50
C119	87-016-491-080		C-CAP,S 0.22-16 FZ	C412	87-012-271-080		CAP, U 560P-50
C120	87-010-787-080		CAP, U 0.022-25	C413	87-012-197-080		C-CAP,U 150P-50 CH
C121	87-012-286-080		CAP, U 0.01-25	C414	87-012-197-080		C-CAP,U 150P-50 CH
C122	87-010-829-080		CAP, U 0.047-16	C417	87-012-268-080		C-CAP,U 330P-50 B
C123	87-012-286-080		CAP, U 0.01-25	C418	87-012-268-080		C-CAP,U 330P-50 B
C124	87-010-662-080		C-CAP,E 22-6.3	C423	87-012-286-080		CAP, U 0.01-25
C125	87-010-662-080		C-CAP,E 22-6.3	C424	87-012-286-080		CAP, U 0.01-25
C201	87-010-831-080		C-CAP,U,0.1-16F	C429	87-012-286-080		CAP, U 0.01-25
C202	87-010-831-080		C-CAP,U,0.1-16F	C430	87-012-286-080		CAP, U 0.01-25
C203	87-010-785-080		C-CAP,U0.015-25BK	C431	87-010-779-080		C-CAP,E 100-6.3
C204	87-016-461-080		C-CAP,S 0.47-16F	C434	87-010-831-080		C-CAP,U,0.1-16F
C205	87-010-831-080		C-CAP,U,0.1-16F	C501	87-010-831-080		C-CAP,U,0.1-16F
C206	87-012-270-080		CAP, U 470P-50	C502	87-010-831-080		C-CAP,U,0.1-16F
C207	87-016-461-080		C-CAP,S 0.47-16F	C503	87-010-662-080		C-CAP,E 22-6.3
				C504	87-010-831-080		C-CAP,U,0.1-16F
				C505	87-010-662-080		C-CAP,E 22-6.3
				C506	87-010-831-080		C-CAP,U,0.1-16F
				C507	87-010-661-080		C-CAP,E 10-16
				C508	87-010-831-080		C-CAP,U,0.1-16F
				C509	87-010-662-080		C-CAP,E 22-6.3
				C510	87-010-831-080		C-CAP,U,0.1-16F
				C511	87-010-661-080		C-CAP,E 10-16
				C513	87-010-661-080		C-CAP,E 10-16

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C513	87-010-661-080		C-CAP, E 10-16	C208	87-010-404-080		CAP, ELECT 4.7-50V
C514	87-010-661-080		C-CAP, E 10-16	C251	87-010-408-080		CAP, ELECT 47-50V
C515	87-012-337-080		C-CAP, U 56P-50 CH	C252	87-010-196-080		CHIP CAPACITOR, 0.1-25
C516	87-012-337-080		C-CAP, U 56P-50 CH	C401	87-010-178-080		CHIP CAP 1000P
C517	87-012-278-080		C-CAP, U 2200P-50 B	C402	87-010-309-080		C-CAP, 1000P-50 CH
C518	87-012-278-080		C-CAP, U 2200P-50 B	C403	87-010-196-080		CHIP CAPACITOR, 0.1-25
C519	87-010-831-080		C-CAP, U, 0.1-16F	C404	87-010-196-080		CHIP CAPACITOR, 0.1-25
C520	87-010-661-080		C-CAP, E 10-16	C411	87-012-140-080		CAP 470P
C521	87-010-831-080		C-CAP, U, 0.1-16F	FC905	87-ZGA-612-010		FF-CABLE, 14P 1.0 100MM
C522	87-010-661-080		C-CAP, E 10-16	FC906	87-ZGA-611-010		FF-CABLE, 8P 1.0 100MM
C523	87-010-662-080		C-CAP, E 22-6.3				
C524	87-010-662-080		C-CAP, E 22-6.3	LOAD C.B			
C525	87-012-274-080		CHIP CAP, U 1000P-50B	M450	87-A90-672-010		MOT, M25E-4
C526	87-012-274-080		CHIP CAP, U 1000P-50B	SW451	87-A90-673-010		SW, MICRO ESE11SH1C
C527	87-010-661-080		C-CAP, E 10-16	SW452	87-A90-117-010		SW, PUSH 1-1-1 MPU103
C528	87-010-661-080		C-CAP, E 10-16				
C530	87-010-831-080		C-CAP, U, 0.1-16F	MECHA C.B			
C531	87-010-831-080		C-CAP, U, 0.1-16F	SW400	87-A90-611-010		SW, PUSH 3-2-2 MPU20300MLB0
C600	87-010-662-080		C-CAP, E 22-6.3	SW401	87-A90-612-010		SW, PUSH 2-1-1 MPU10371MLB1
C601	87-010-779-080		C-CAP, E 100-6.3				
C602	87-010-779-080		C-CAP, E 100-6.3	FAN C.B			
C603	87-010-662-080		C-CAP, E 22-6.3	C131	87-010-263-080		CAP, E 100-10V SME
C604	87-010-779-080		C-CAP, E 100-6.3	C132	87-010-380-080		CAP, E 47-16V SME
C605	87-012-286-080		CAP, U 0.01-25	C133	87-010-401-080		CAP, E 1-50V SME
C607	87-010-831-080		C-CAP, U, 0.1-16F	M130	87-A90-296-210		MOT ASSY, F614R-12MC-15
C608	87-010-831-080		C-CAP, U, 0.1-16F				
FC100	87-ZG9-602-010		FF-CABLE, 21P 0.5 90MM				
FC201	87-ZG9-604-010		FF-CABLE, 5P 1.25 100MM				
FC400	87-ZG9-603-010		FF-CABLE, 8P 1.0 120MM				
L100	87-A50-117-080		C-COIL, 10UHLQH3C				
L101	87-A50-012-080		C-COIL, 100UH LQH3C				
L102	87-A50-117-080		C-COIL, 10UHLQH3C				
L103	87-A50-117-080		C-COIL, 10UHLQH3C				
L201	87-A50-117-080		C-COIL, 10UHLQH3C				
L202	87-A50-117-080		C-COIL, 10UHLQH3C				
L203	87-A50-116-080		C-COIL, 4.7UHLQH3C				
L301	87-A50-117-080		C-COIL, 10UHLQH3C				
L501	87-A50-116-080		C-COIL, 4.7UHLQH3C				
L502	87-A50-116-080		C-COIL, 4.7UHLQH3C				
L503	87-A50-116-080		C-COIL, 4.7UHLQH3C				
L504	87-005-774-080		C-COIL, 4BLH				
L505	87-005-774-080		C-COIL, 4BLH				
L611	87-A50-163-080		C-COIL, ZBFS5101-PT				
L612	87-005-512-080		C-COIL, BLM21A05				
L613	87-005-512-080		C-COIL, BLM21A05				
L614	87-A50-163-080		C-COIL, ZBFS5101-PT				
L615	87-A90-034-080		C-FLTR, EMI BLM41P750				
L616	87-A50-163-080		C-COIL, ZBFS5101-PT				
R423	87-025-564-080		C-RES, U M/F 47K D				
R424	87-025-564-080		C-RES, U M/F 47K D				
R425	87-022-583-080		C-RES, U M/F 12K D				
R426	87-022-583-080		C-RES, U M/F 12K D				
X200	87-A70-105-080		C-VIB, XTAL 22.5792MHZ SMD-49				
X301	87-A70-100-080		C-VIB, CER 12.0MHZ PBRC-BR-A				
INTERFACE C.B							
C101	87-010-196-080		CHIP CAPACITOR, 0.1-25				
C102	87-010-101-080		CAP, ELECT 220-16				
C104	87-010-544-080		CAP, ELECT 0.1-50V				
C105	87-010-380-080		CAP, ELECT 47-16V				
C106	87-010-101-080		CAP, ELECT 220-16				
C201	87-010-402-080		CAP, ELECT 2.2-50V				
C202	87-010-402-080		CAP, ELECT 2.2-50V				
C203	87-012-156-080		C-CAP, S 220P-50 CH				
C204	87-012-156-080		C-CAP, S 220P-50 CH				
C205	87-010-180-080		C-CER 1500P				
C206	87-010-180-080		C-CER 1500P				
C207	87-010-404-080		CAP, ELECT 4.7-50V				

BLOCK DIAGRAM - 1 (MAIN / FRONT)



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

A

B

C

D

E

F

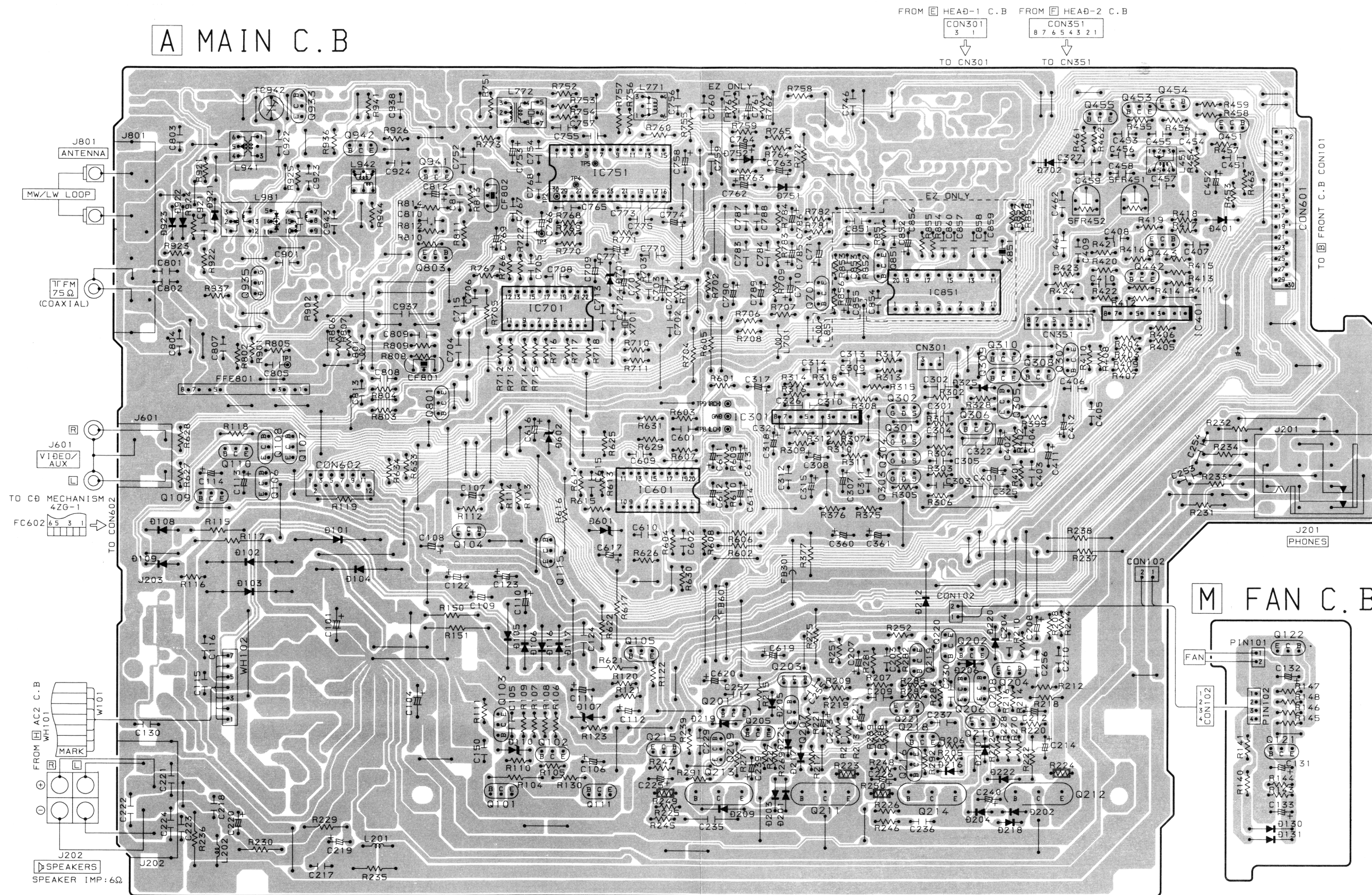
G

H

I

J

A MAIN C.B.

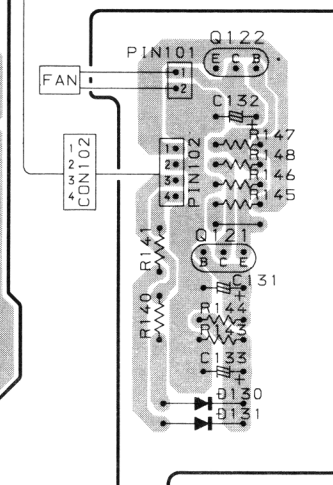


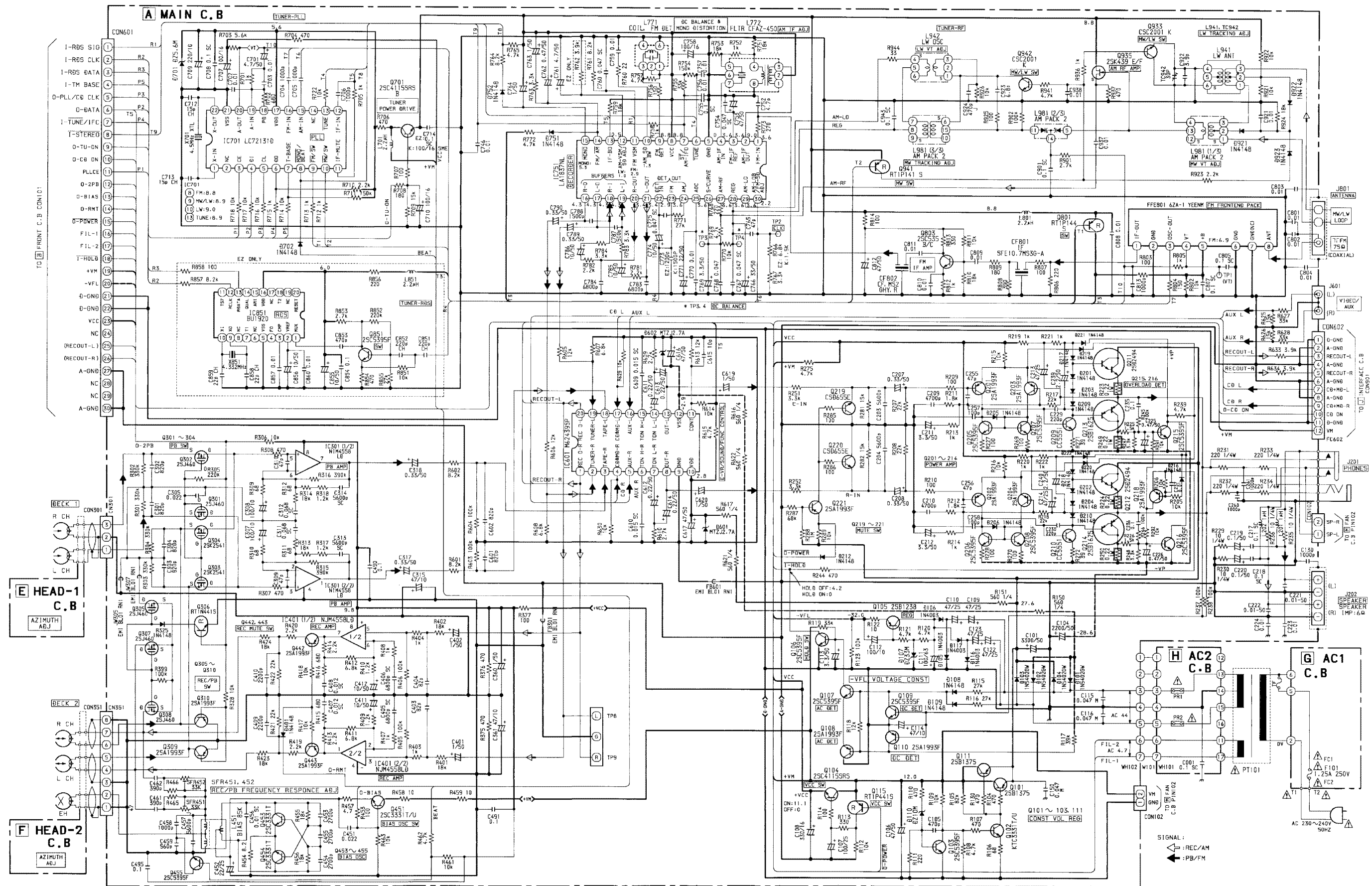
FROM HEAD-1 C.B. FROM HEAD-2 C.B.
 CON301 3 1
 TO CN301
 CON351 8 7 6 5 4 3 2 1
 TO CN351

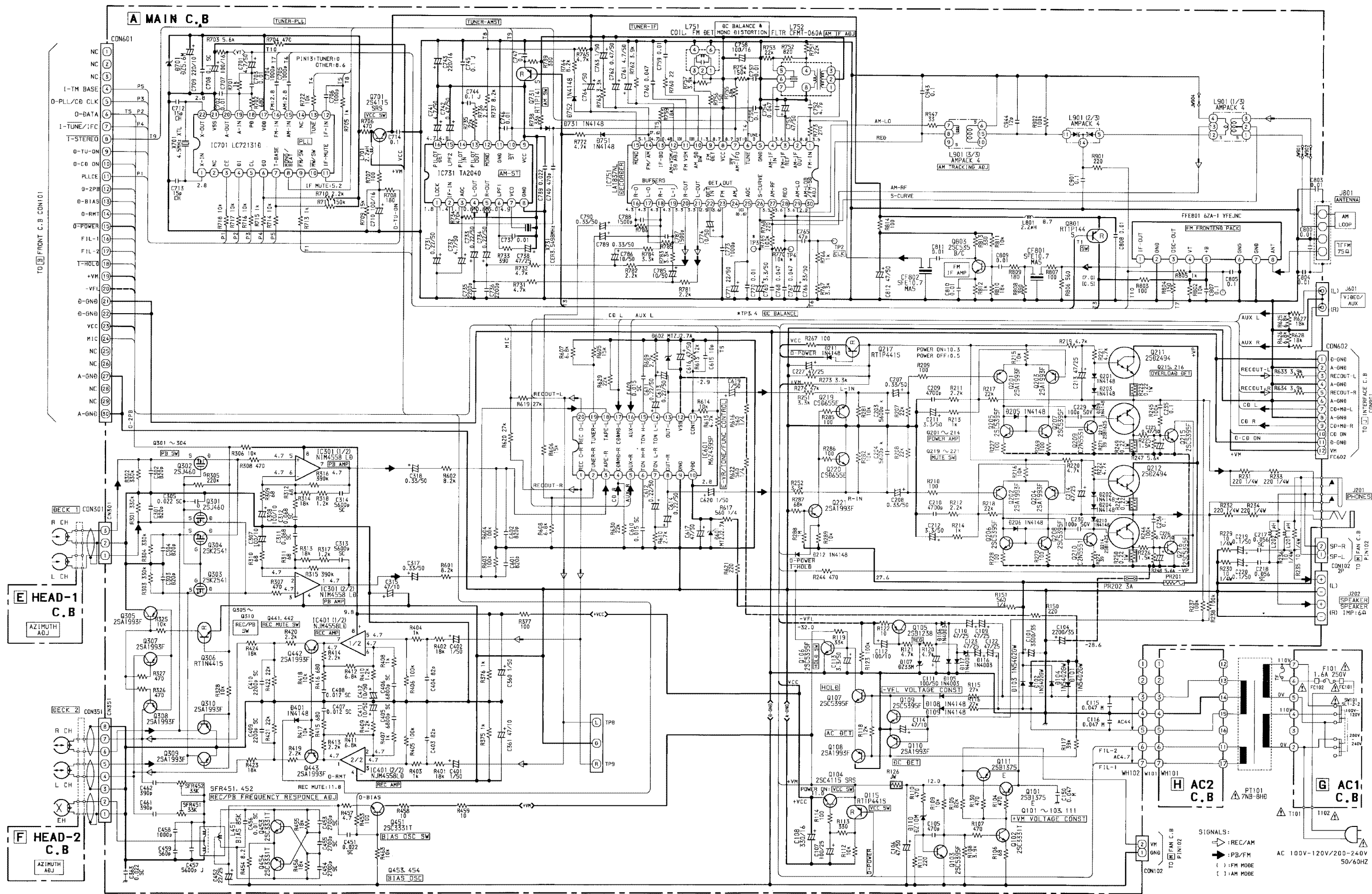
TO FRONT C.B. CON101

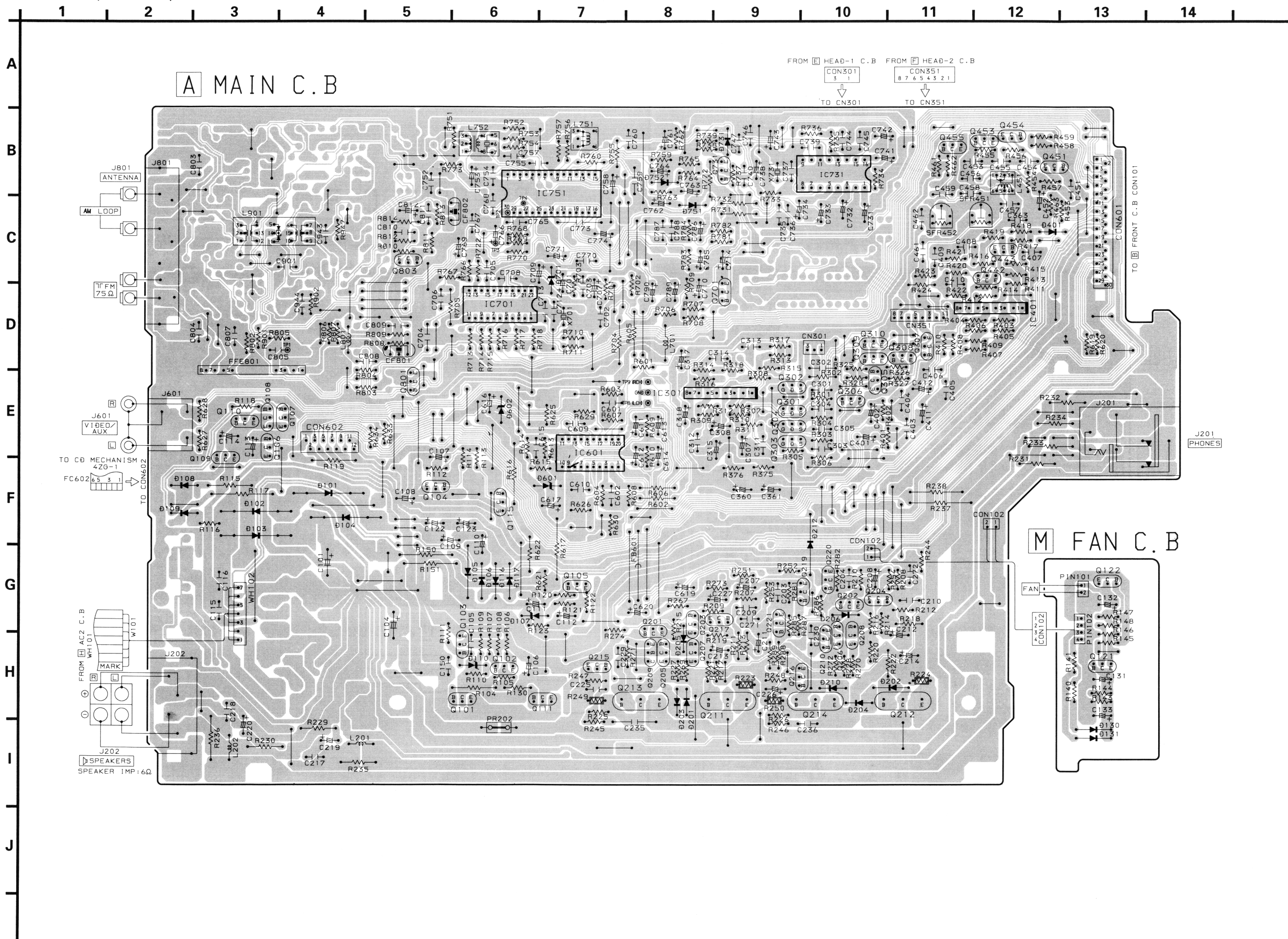
J201 PHONES

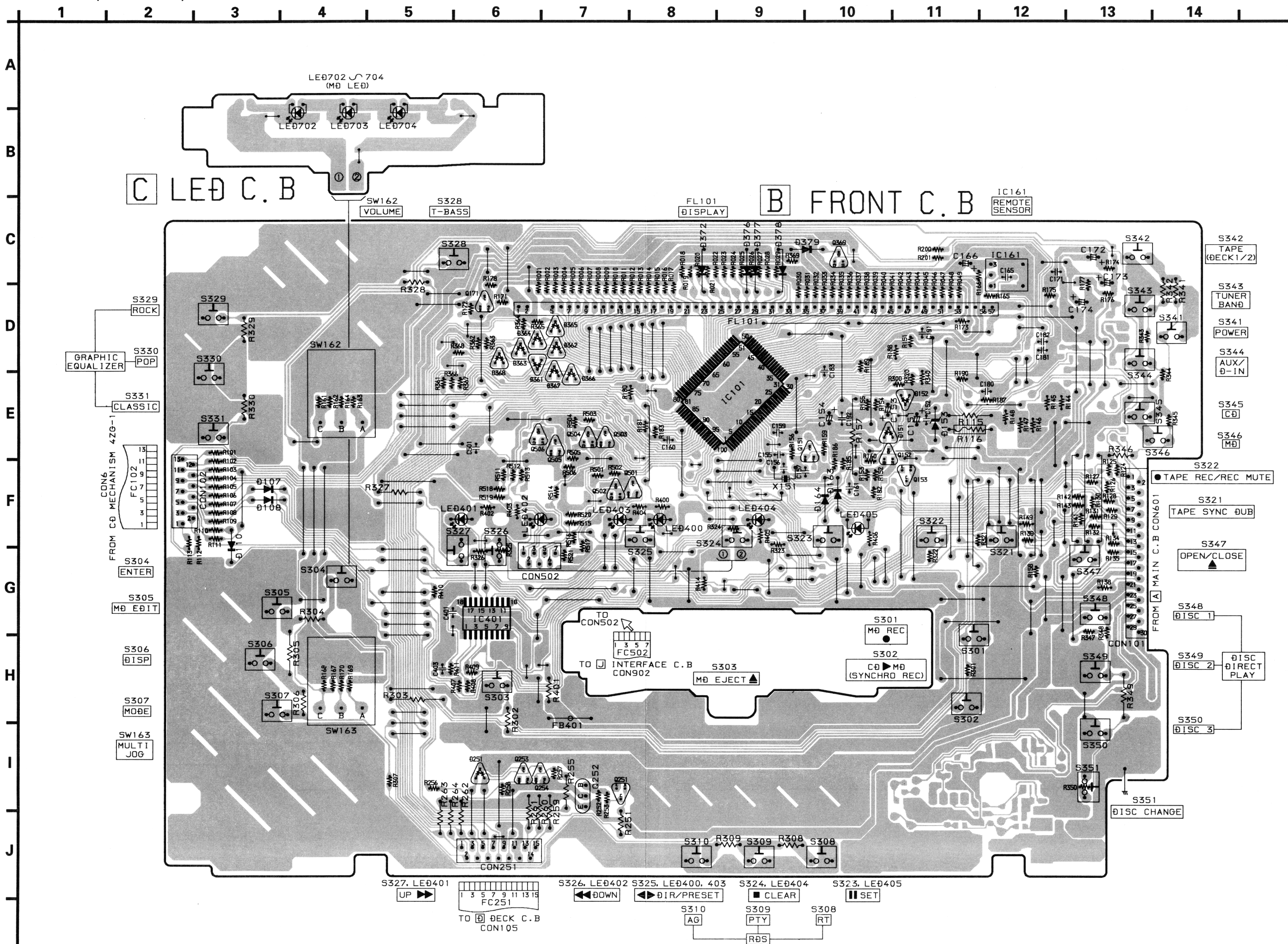
M FAN C.B.

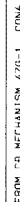


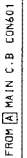


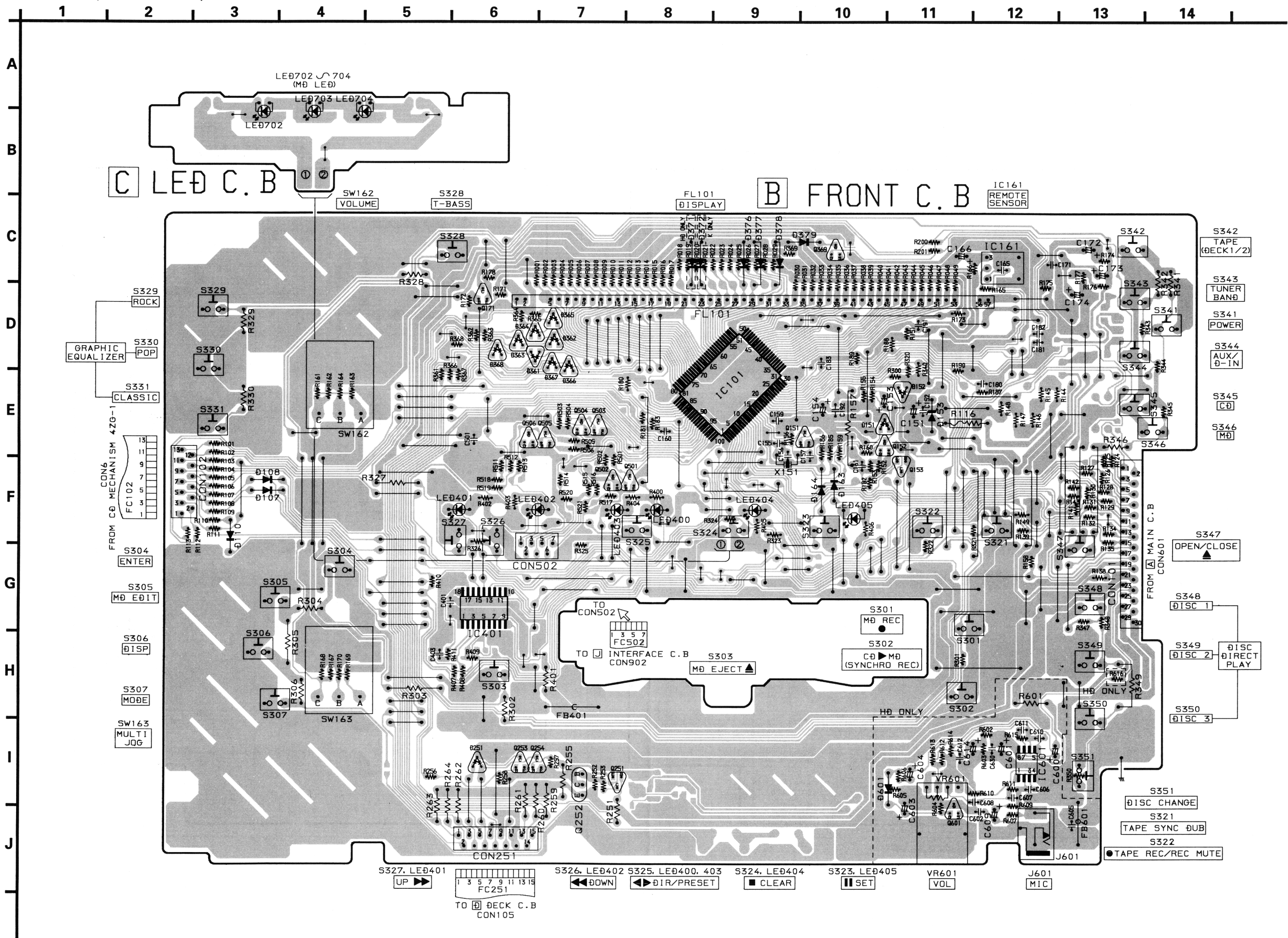












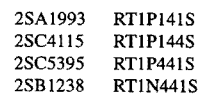
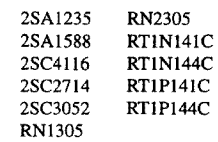


Chip Resistor Part Coding

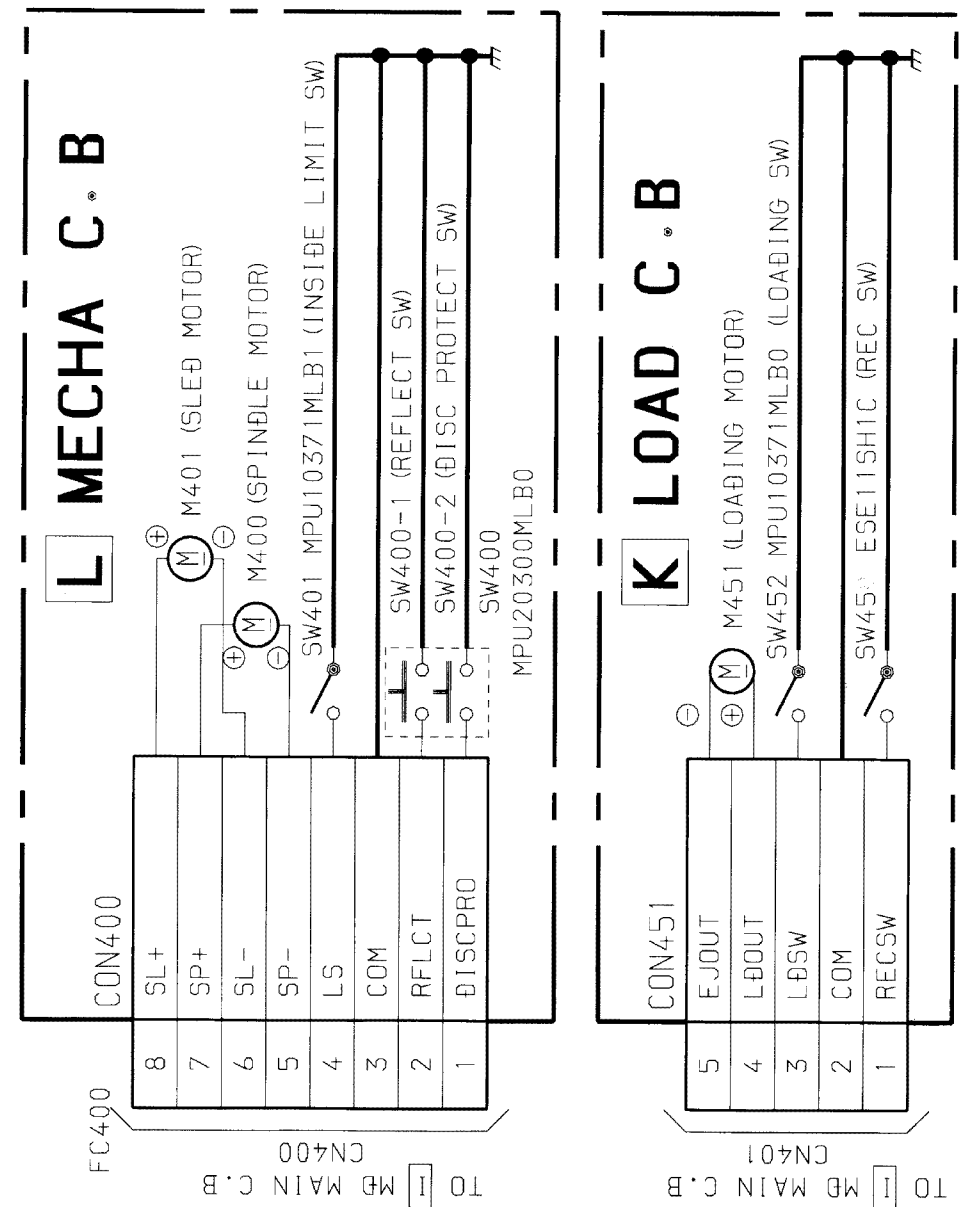


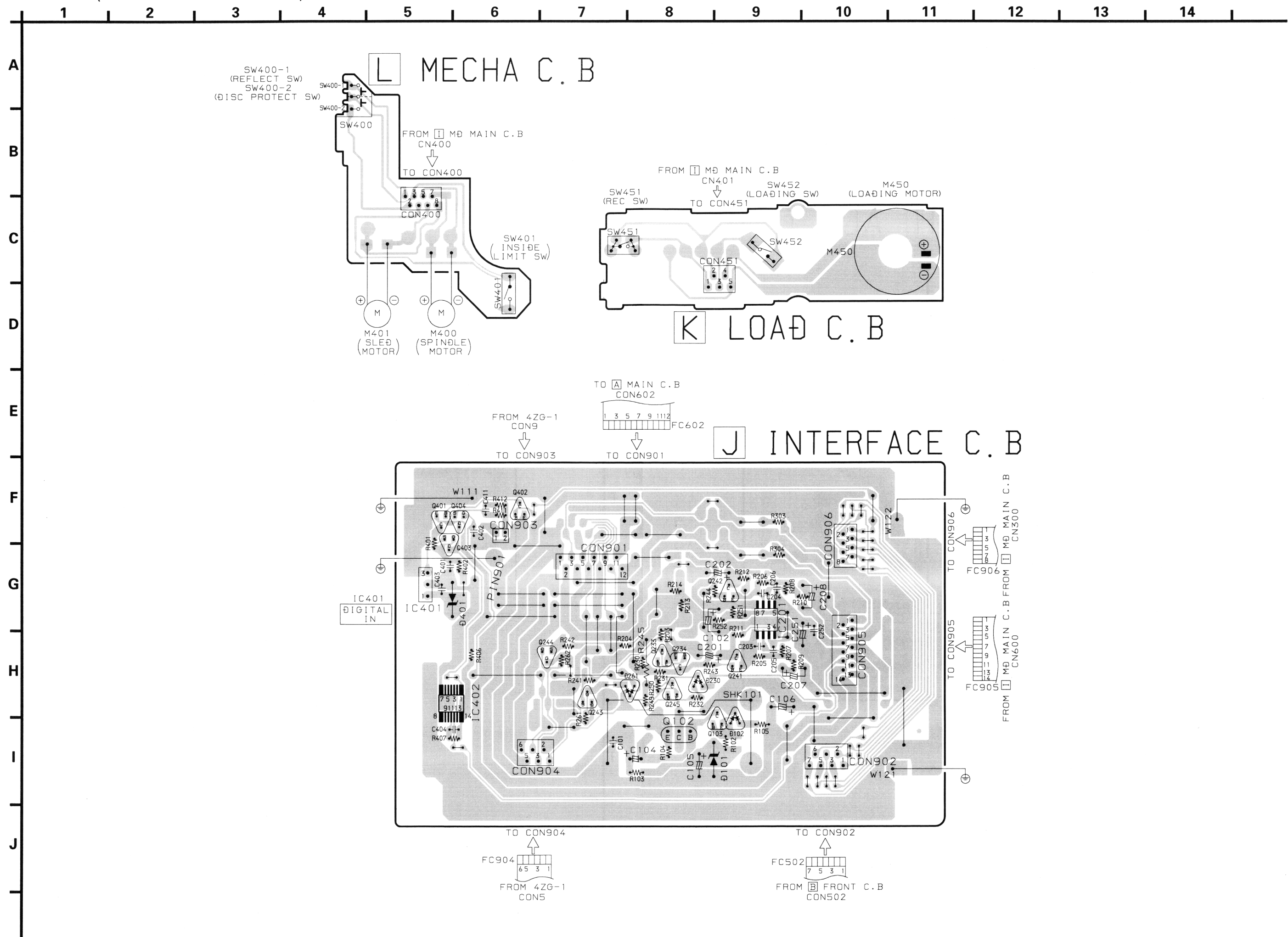
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code: A
				外形／Form	L	W	t	
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

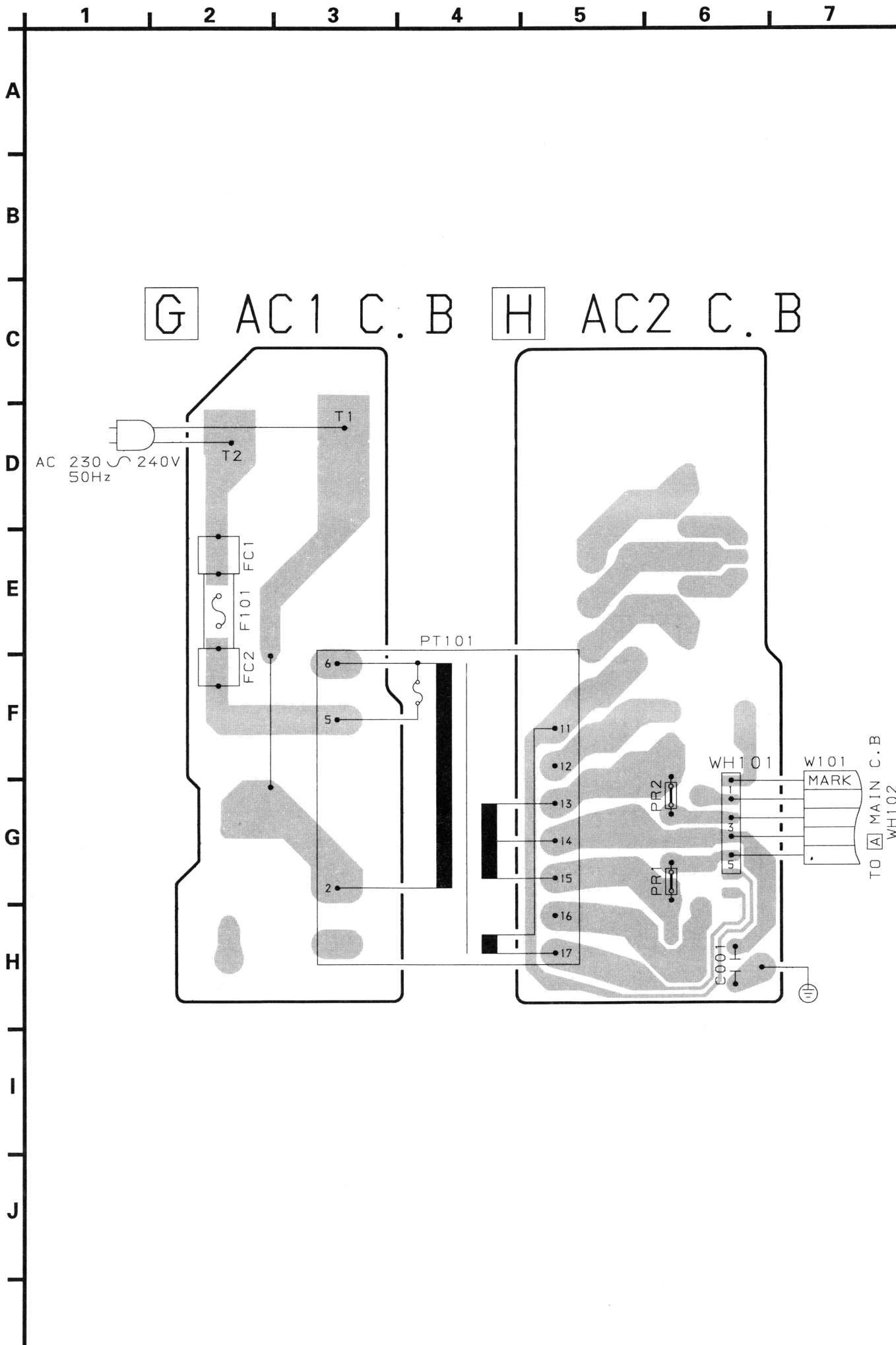
TRANSISTOR ILLUSTRATION

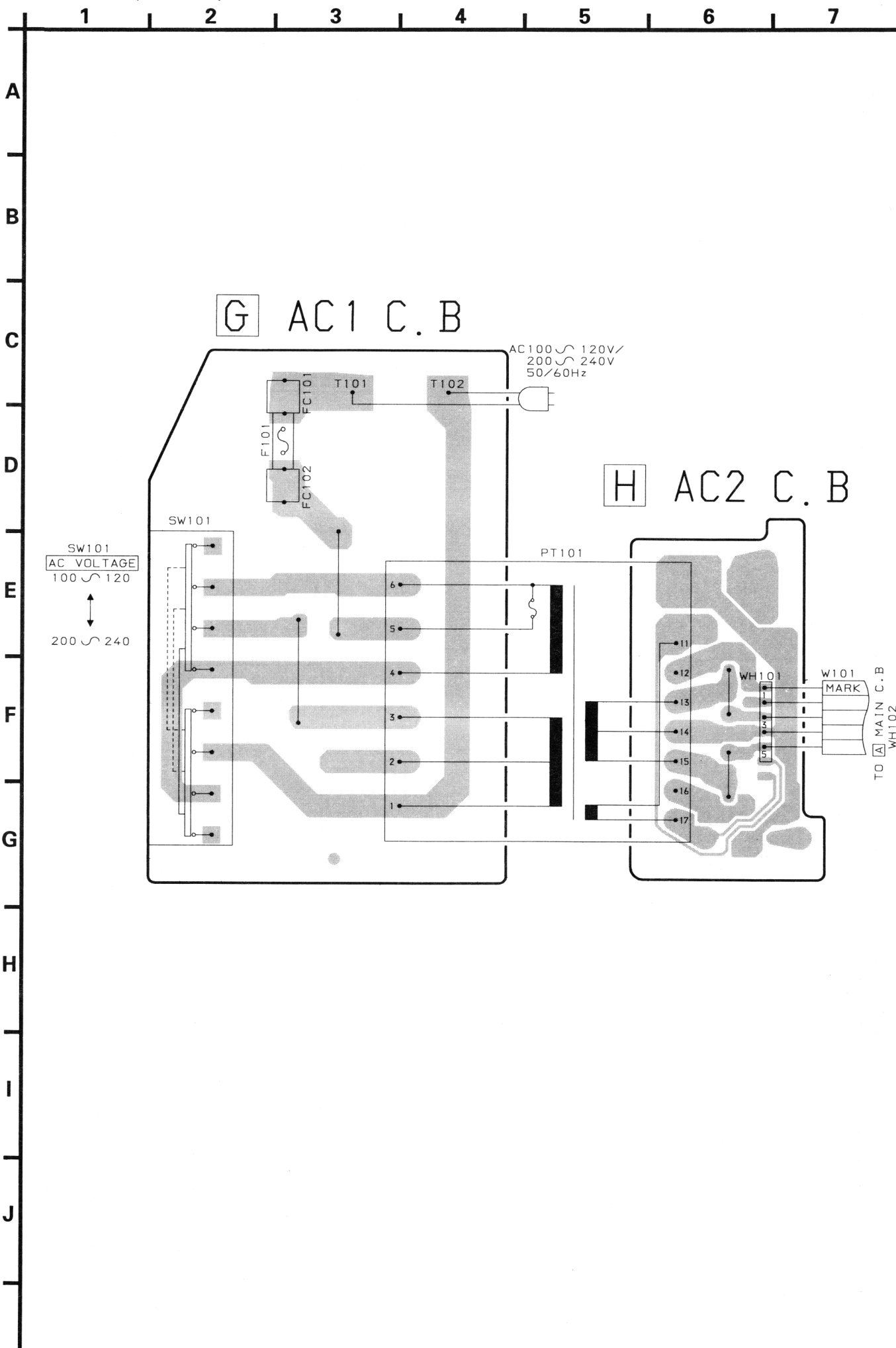


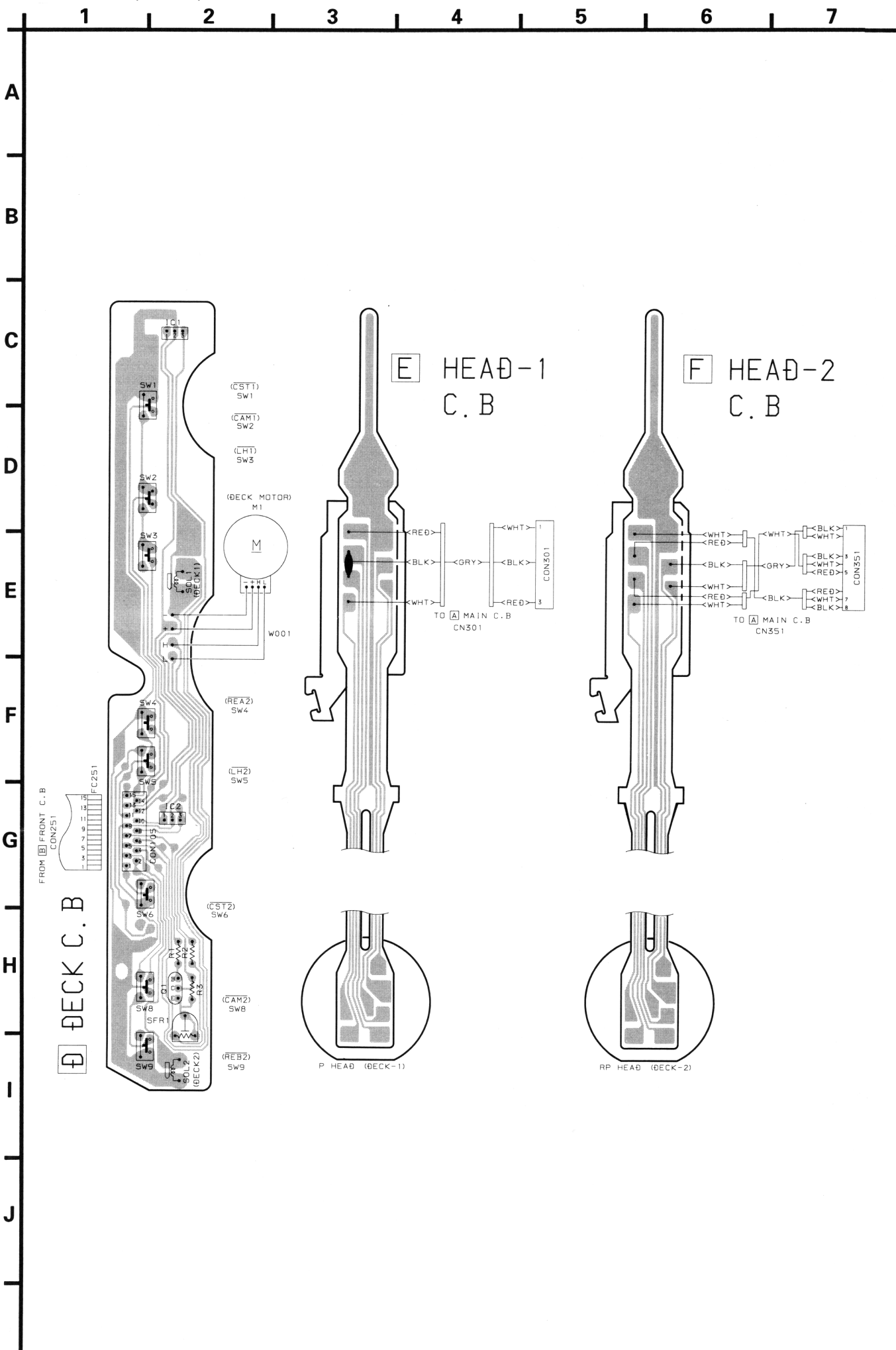
SCHEMATIC DIAGRAM - 7 (MECHA / LOAD)



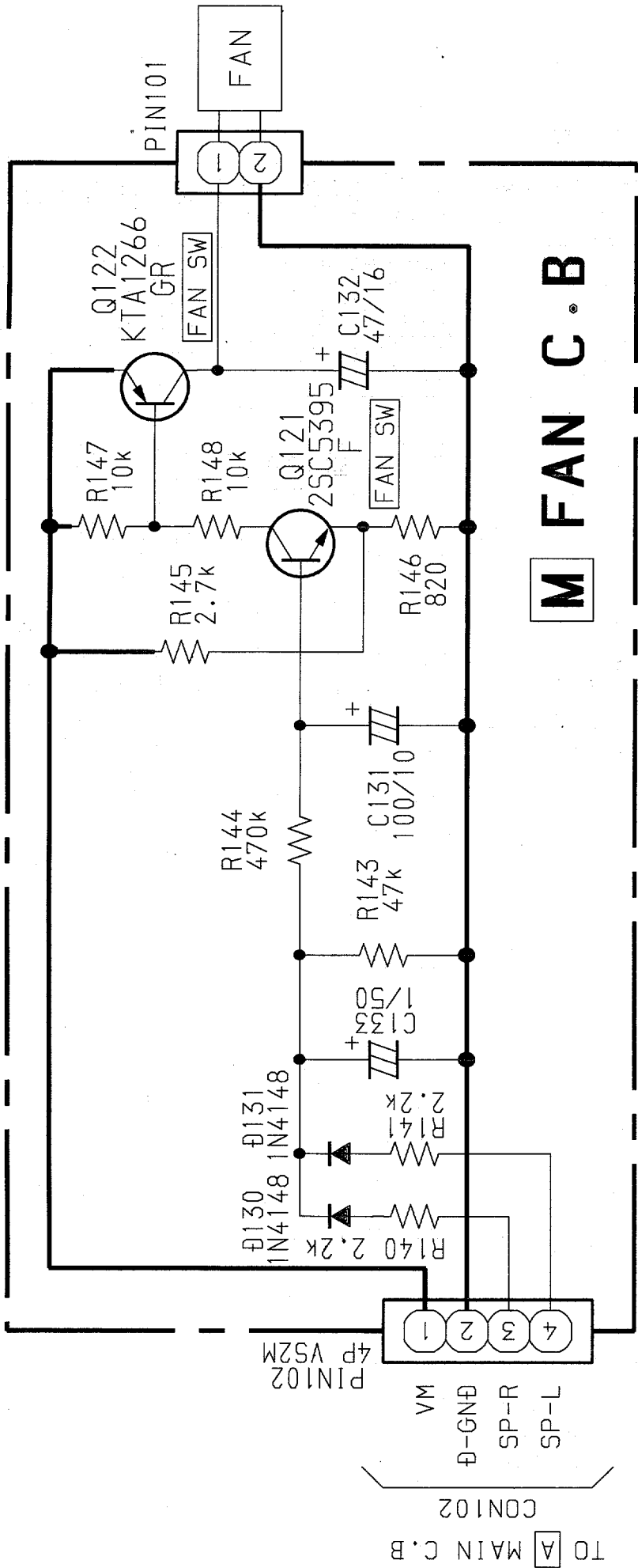






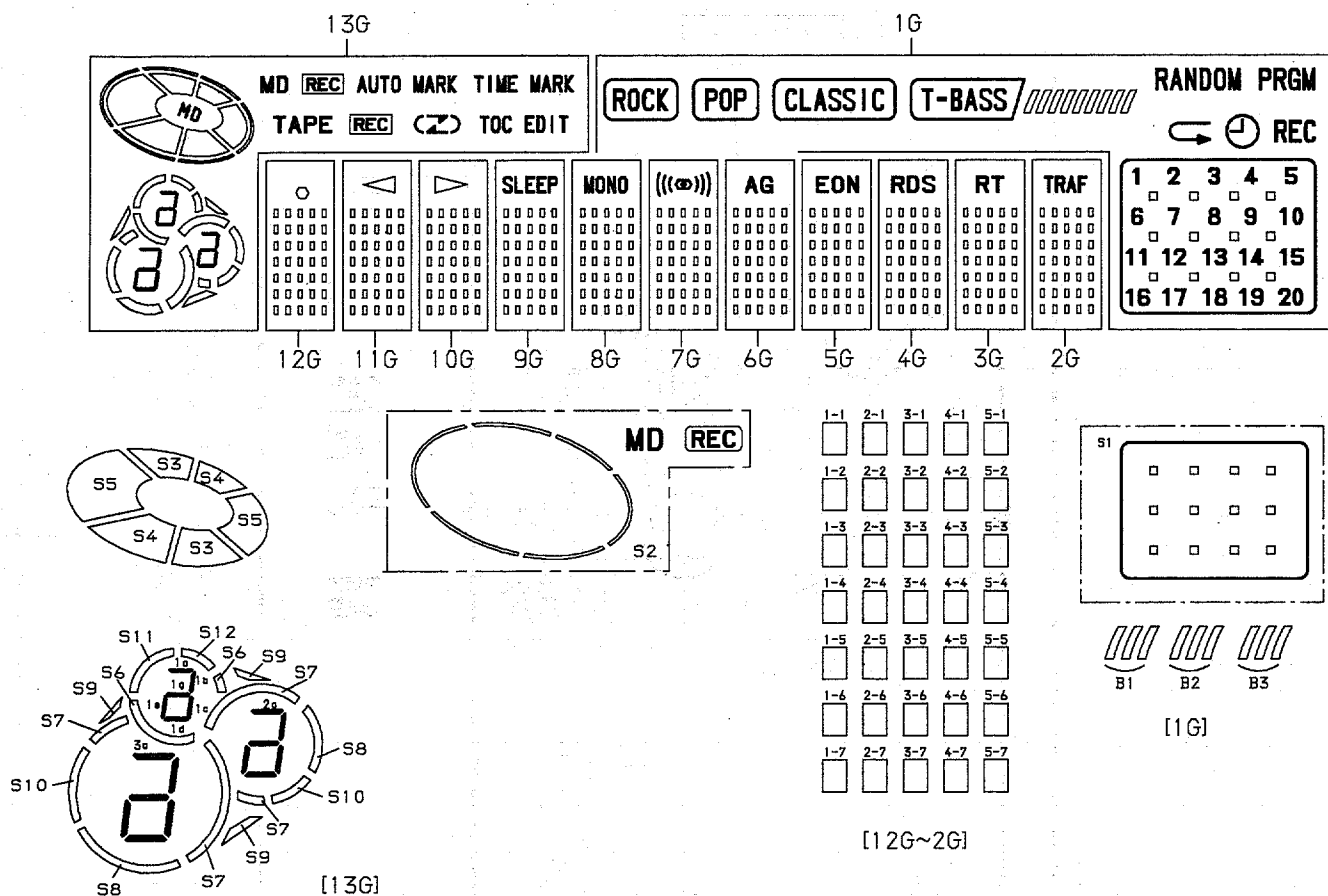


SCHEMATIC DIAGRAM - 8 (FAN)



FL (13-BT-156GK) GRID ASSIGNMENT & ANODE CONNECTION

GRID ASSIGNMENT



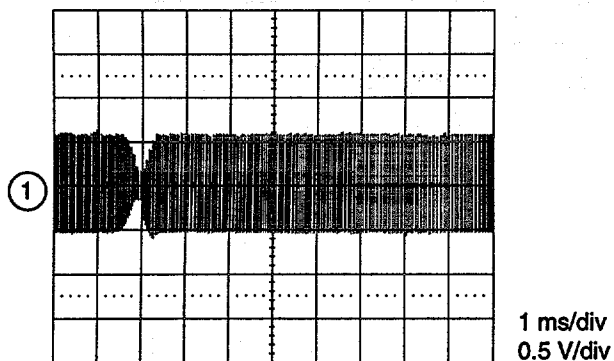
ANODE CONNECTION

	6G	5G	4G	3G	2G	1G
P1	AG	EON	RDS	RT	TRAF	ROCK POP CLASSIC
P2	1-1	1-1	1-1	1-1	1-1	(ROCK)
P3	2-1	2-1	2-1	2-1	2-1	(POP)
P4	3-1	3-1	3-1	3-1	3-1	(CLASSIC)
P5	4-1	4-1	4-1	4-1	4-1	(T-BASS)
P6	5-1	5-1	5-1	5-1	5-1	B1
P7	1-2	1-2	1-2	1-2	1-2	B2
P8	2-2	2-2	2-2	2-2	2-2	B3
P9	3-2	3-2	3-2	3-2	3-2	RANDOM
P10	4-2	4-2	4-2	4-2	4-2	PRGM
P11	5-2	5-2	5-2	5-2	5-2	
P12	1-3	1-3	1-3	1-3	1-3	
P13	2-3	2-3	2-3	2-3	2-3	REC
P14	3-3	3-3	3-3	3-3	3-3	S1
P15	4-3	4-3	4-3	4-3	4-3	1
P16	5-3	5-3	5-3	5-3	5-3	2
P17	1-4	1-4	1-4	1-4	1-4	3
P18	2-4	2-4	2-4	2-4	2-4	4
P19	3-4	3-4	3-4	3-4	3-4	5
P20	4-4	4-4	4-4	4-4	4-4	6
P21	5-4	5-4	5-4	5-4	5-4	7
P22	1-5	1-5	1-5	1-5	1-5	8
P23	2-5	2-5	2-5	2-5	2-5	9
P24	3-5	3-5	3-5	3-5	3-5	10
P25	4-5	4-5	4-5	4-5	4-5	11
P26	5-5	5-5	5-5	5-5	5-5	12
P27	1-6	1-6	1-6	1-6	1-6	13
P28	2-6	2-6	2-6	2-6	2-6	14
P29	3-6	3-6	3-6	3-6	3-6	15
P30	4-6	4-6	4-6	4-6	4-6	16
P31	5-6	5-6	5-6	5-6	5-6	17
P32	1-7	1-7	1-7	1-7	1-7	18
P33	2-7	2-7	2-7	2-7	2-7	19
P34	3-7	3-7	3-7	3-7	3-7	20
P35	4-7	4-7	4-7	4-7	4-7	—
P36	5-7	5-7	5-7	5-7	5-7	—

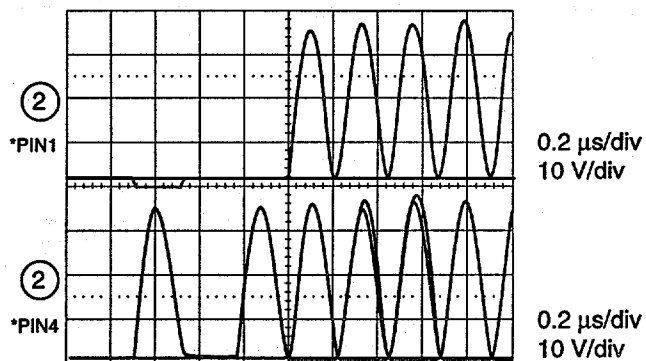
	13G	12G	11G	10G	9G	8G	7G
P1	TIME MARK	○	◁	▷	SLEEP	MONO	(((((O))))
P2	TOC EDIT	1-1	1-1	1-1	1-1	1-1	1-1
P3	)	2-1	2-1	2-1	2-1	2-1	2-1
P4	≡	3-1	3-1	3-1	3-1	3-1	3-1
P5	(	4-1	4-1	4-1	4-1	4-1	4-1
P6	AUTO MARK	5-1	5-1	5-1	5-1	5-1	5-1
P7	TAPE REC	1-2	1-2	1-2	1-2	1-2	1-2
P8	S2	2-2	2-2	2-2	2-2	2-2	2-2
P9	S5	3-2	3-2	3-2	3-2	3-2	3-2
P10	S4	4-2	4-2	4-2	4-2	4-2	4-2
P11	S3	5-2	5-2	5-2	5-2	5-2	5-2
P12	MD	1-3	1-3	1-3	1-3	1-3	1-3
P13	S12	2-3	2-3	2-3	2-3	2-3	2-3
P14	S11	3-3	3-3	3-3	3-3	3-3	3-3
P15	1a, 1d, 1g	4-3	4-3	4-3	4-3	4-3	4-3
P16	1b	5-3	5-3	5-3	5-3	5-3	5-3
P17	1c	1-4	1-4	1-4	1-4	1-4	1-4
P18	1e	2-4	2-4	2-4	2-4	2-4	2-4
P19	S6	3-4	3-4	3-4	3-4	3-4	3-4
P20	S9	4-4	4-4	4-4	4-4	4-4	4-4
P21	S7	5-4	5-4	5-4	5-4	5-4	5-4
P22	2a, 2d, 2g	1-5	1-5	1-5	1-5	1-5	1-5
P23	2b	2-5	2-5	2-5	2-5	2-5	2-5
P24	2c	3-5	3-5	3-5	3-5	3-5	3-5
P25	2e	4-5	4-5	4-5	4-5	4-5	4-5
P26	3a, 3d, 3g	5-5	5-5	5-5	5-5	5-5	5-5
P27	3b	1-6	1-6	1-6	1-6	1-6	1-6
P28	3c	2-6	2-6	2-6	2-6	2-6	2-6
P29	3e	3-6	3-6	3-6	3-6	3-6	3-6
P30	S8	4-6	4-6	4-6	4-6	4-6	4-6
P31	S10	5-6	5-6	5-6	5-6	5-6	5-6
P32	—	1-7	1-7	1-7	1-7	1-7	1-7
P33	—	2-7	2-7	2-7	2-7	2-7	2-7
P34	—	3-7	3-7	3-7	3-7	3-7	3-7
P35	—	4-7	4-7	4-7	4-7	4-7	4-7
P36	—	5-7	5-7	5-7	5-7	5-7	5-7

WAVEFORM (MD MAIN)

① IC100 PIN 38

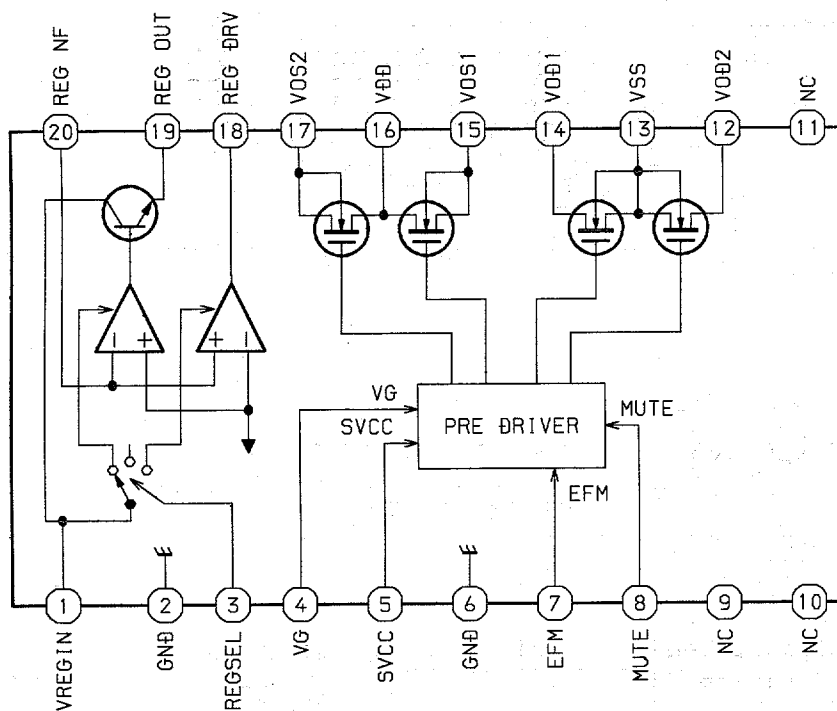


② CN201 PIN 1
CN201 PIN 4

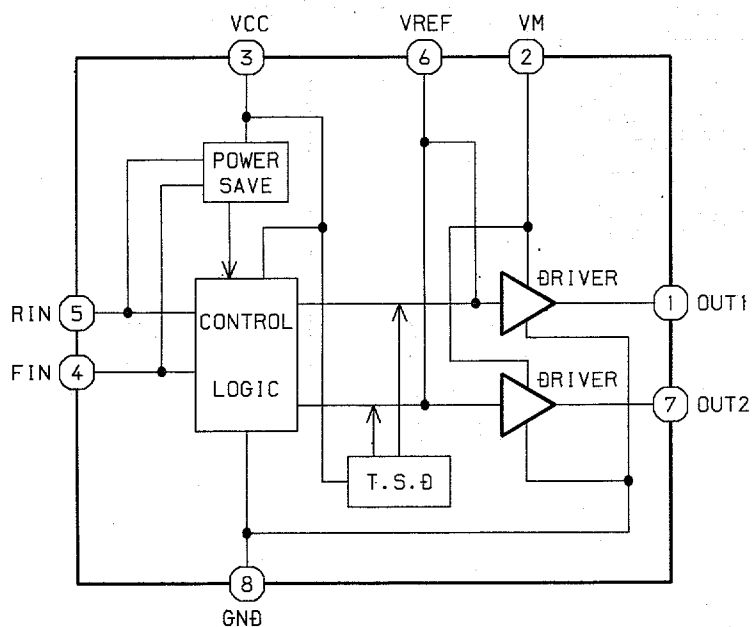


IC BLOCK DIAGRAM - 1

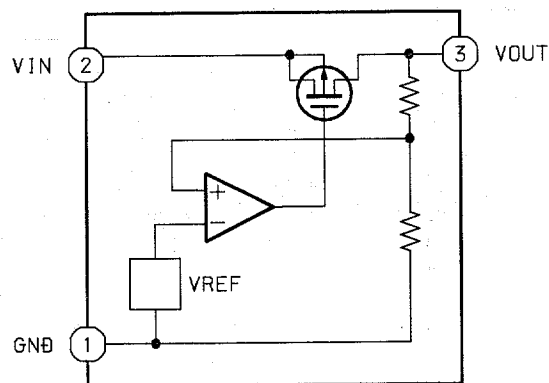
IC, BD7910FV



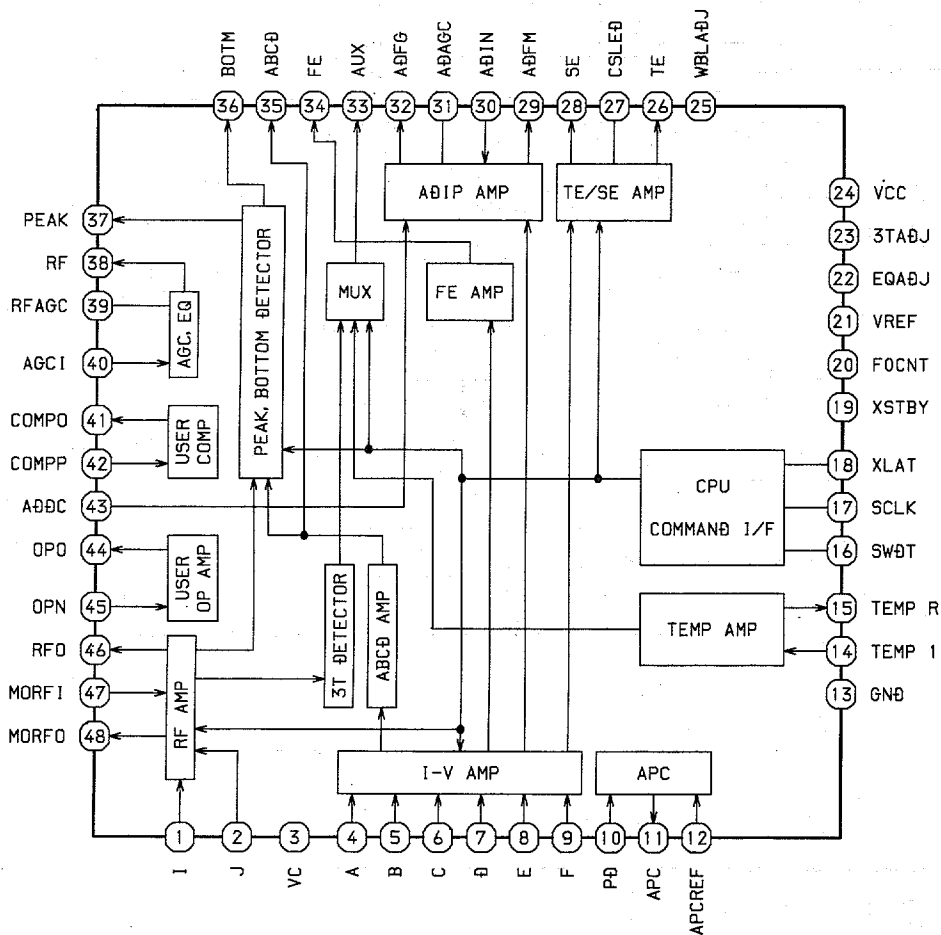
IC, BA6417F



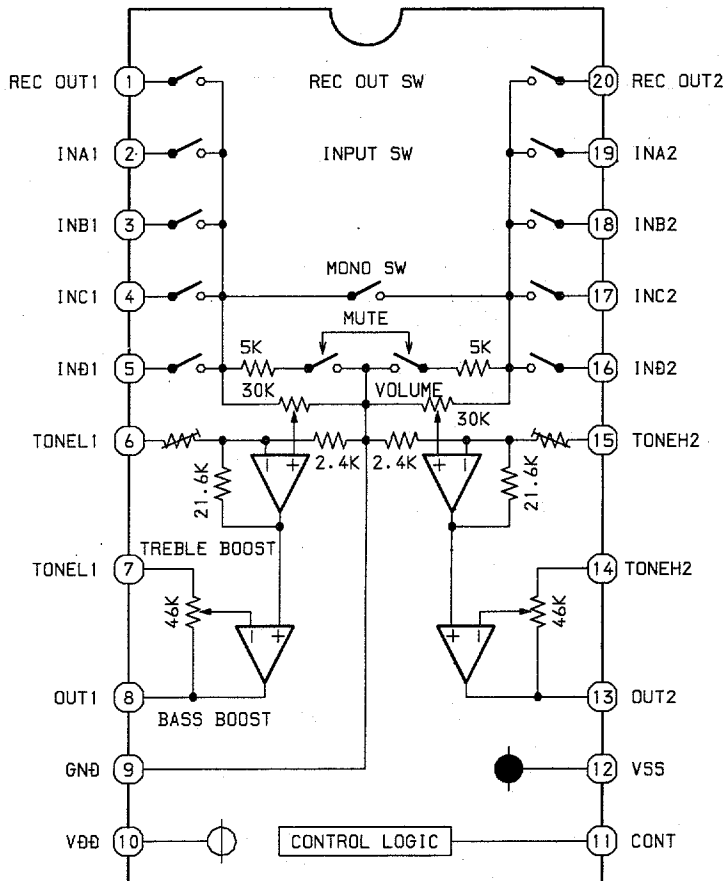
IC, NJU7221U35
IC, NJU7221U30



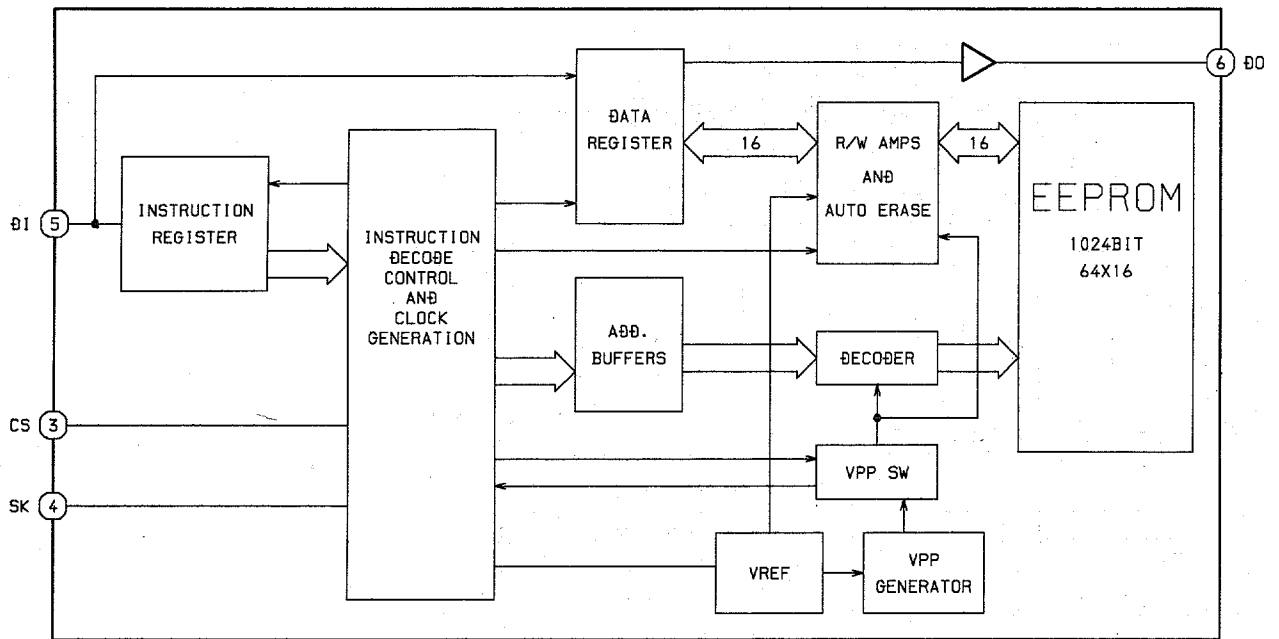
IC, CXA2523AR



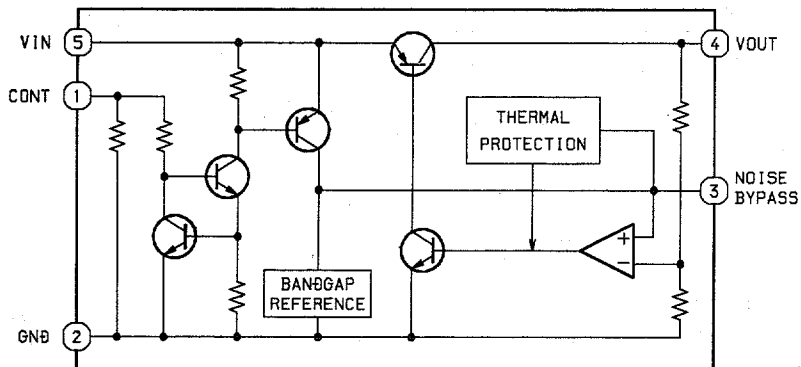
IC, M62439SP



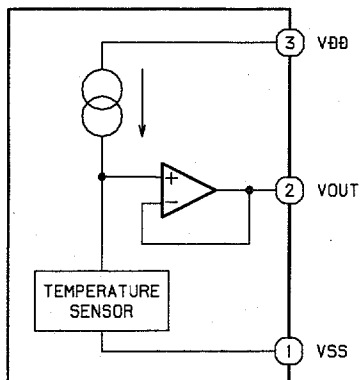
IC, AK93C45AF



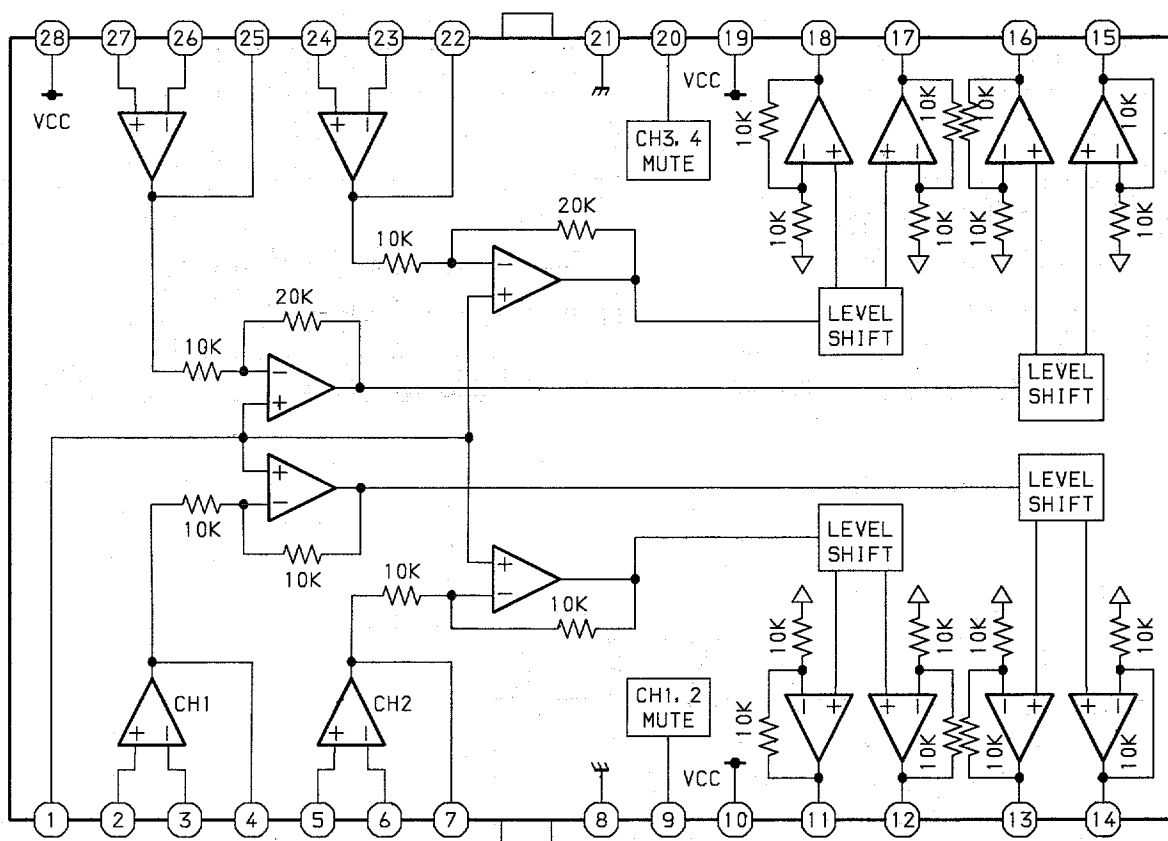
IC, NJM2370U33



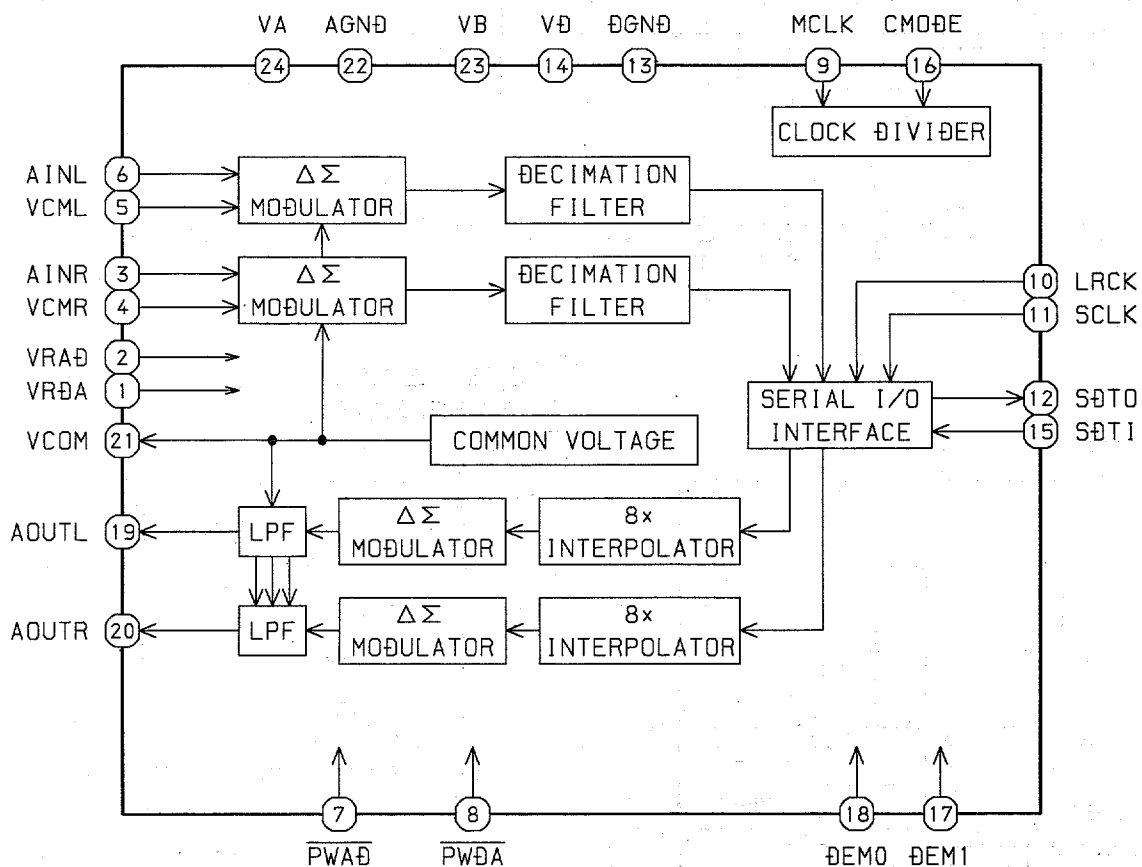
IC, S-8110AMP



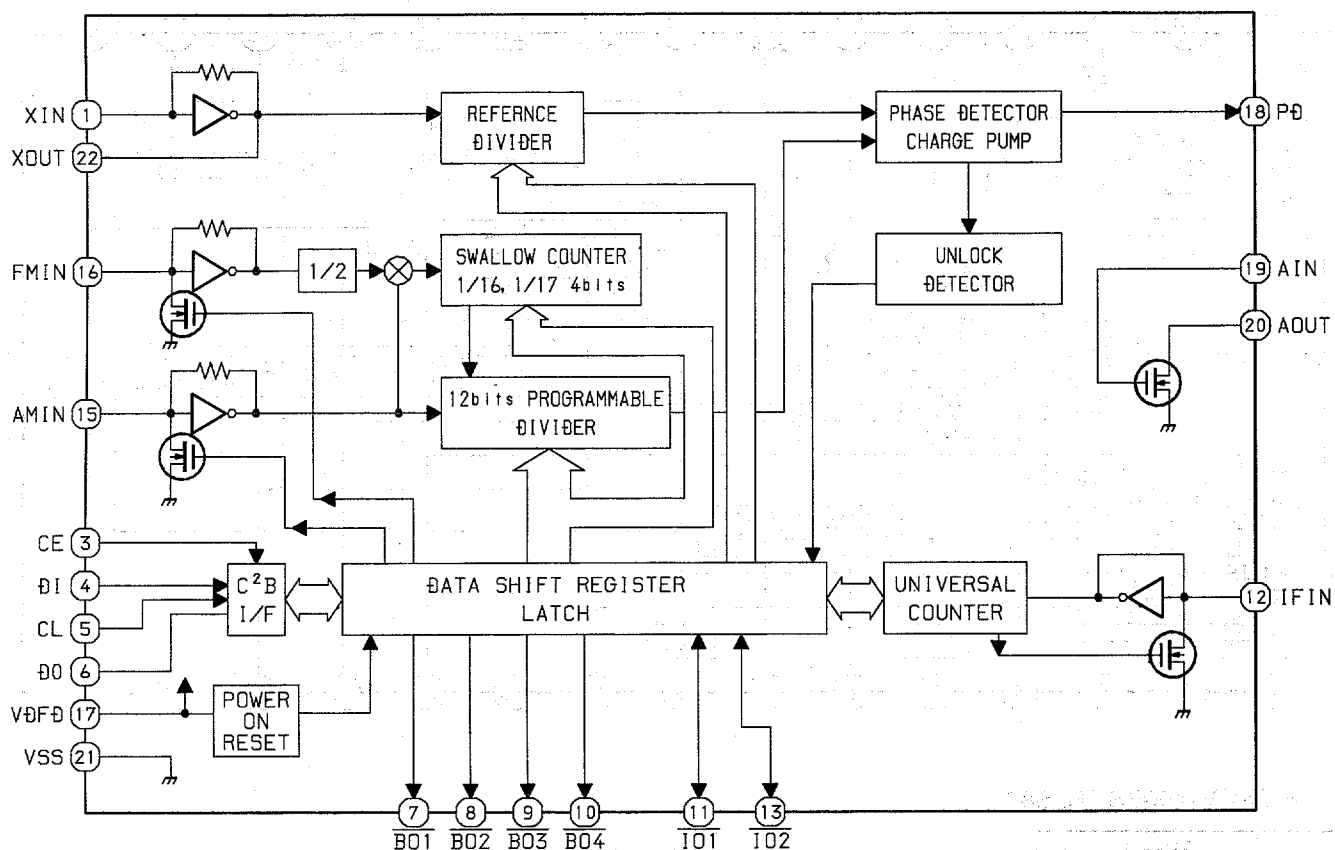
IC, BA5970FP



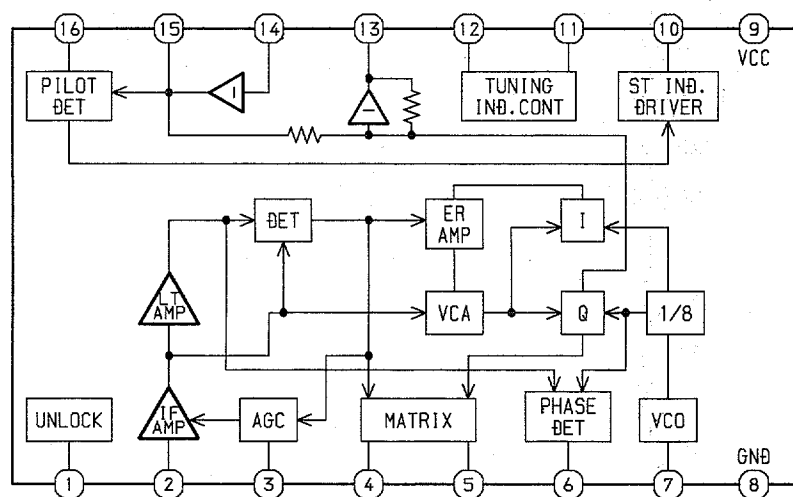
IC, AK4512VF



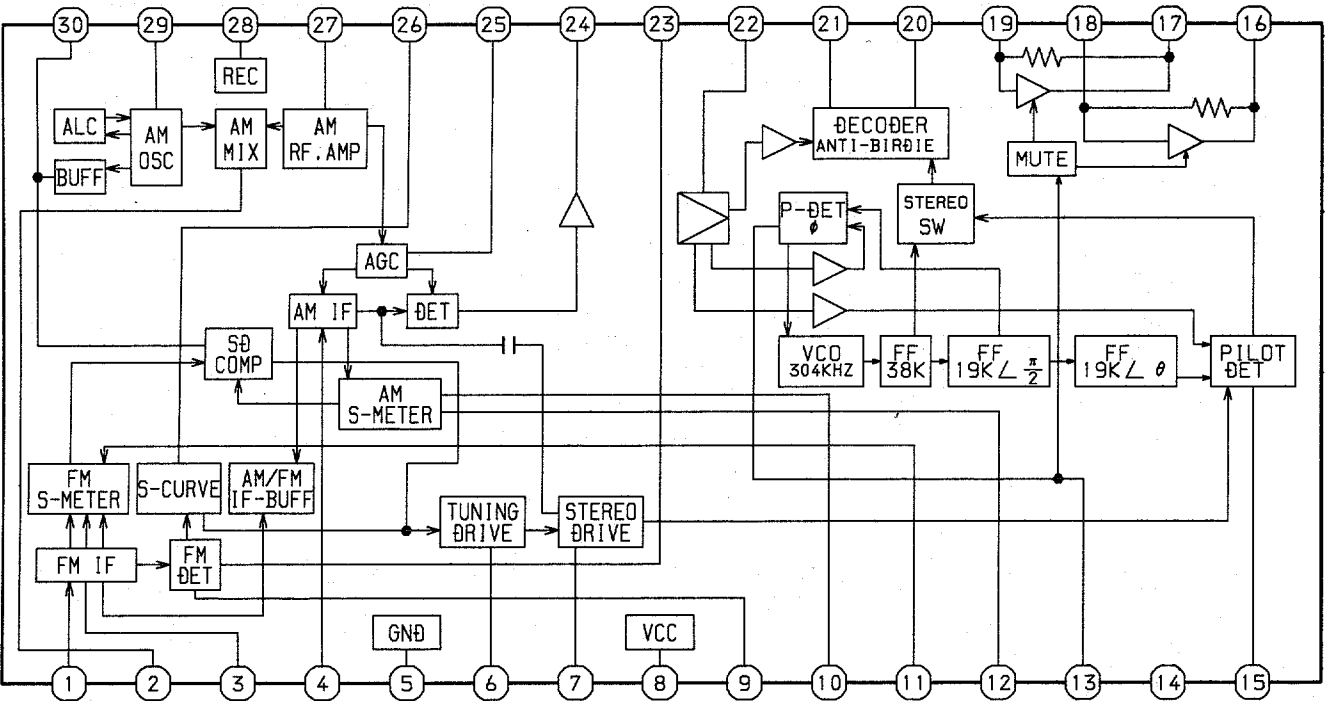
IC, LC72131D



IC, TA2040AP

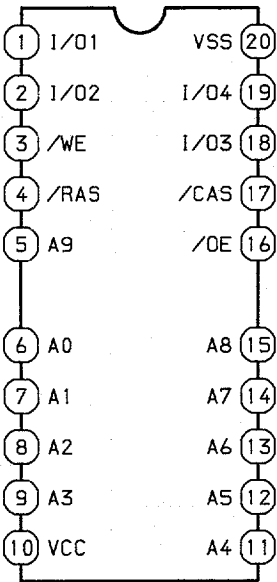


IC, LA1837NL

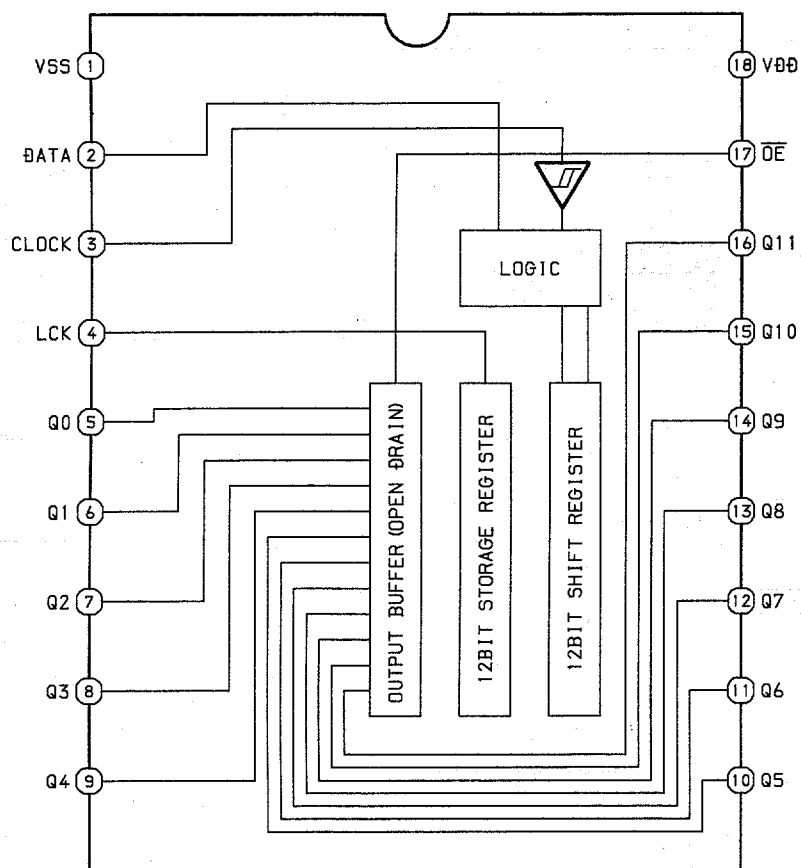


IC, HM51W4400BS / BLS87

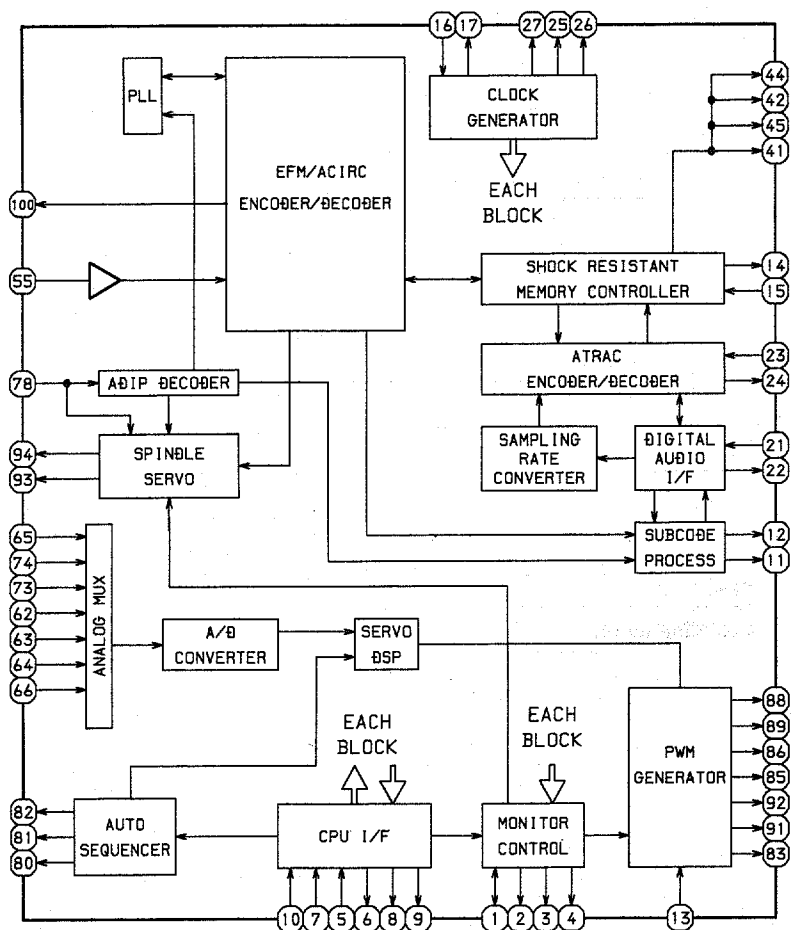
PIN NO.	SIGNAL		
	POW/CLK	I	O
1		I/O1	
2		I/O2	
3	/WE		
4	/RAS		
5		A9	
6		A0	
7		A1	
8		A2	
9		A3	
10	VCC		
11		A4	
12		A5	
13		A6	
14		A7	
15		A8	
16	/OE		
17	/CAS		
18		I/O3	
19		I/O4	
20	VSS		



IC, BU2092F



IC, CXD2652AR



IC DESCRIPTION

IC, LC866556W-5H69 (HD, K)

IC, LC876572A-5H76 (EZ)

Pin No	Pin Name	I/O	Description
1	O-OPEN	O	CD tray OPEN output.
2	O-CLOSE	O	CD tray CLOSE output.
3	O-CD-ON	O	CD power supply ON/OFF output, "H" at CD function.
4	O-BIAS	O	Deck 2 BIAS ON/OFF output.
5	O-2PB	O	Playback deck selection output (DECK1/DECK2).
6	O-LEDCLK / O-TU-ON	O	LED driver clock output / Tuner power supply ON/OFF output.
7	O-DSC / PLL-DATA	O	E-VR&SOUND&FUNCTION IC data output / Tuner PLL data output.
8	O-RMT	O	Deck 2 REC MUTE output.
9	O-POWER	O	System power ON/OFF output.
10	O-CDDATA / I-RDSDATA	I/O	CD control data output / RDS data input.
11	O-CLKSHIFT	O	Microcomputer clock shift output. (Shift at "L")
12	RESET	-	Reset pin.
13	I-DRF / I-STEREO	I	CD control DRF input / Tuner stereo detection input.
14	I-SUBQ / I-TU.IFC	I	CD control SUBQ input / Tuner TUNE, IF count input.
15	VSS1	-	Connected to GND.
16	CF1	-	5.76MHz oscillator circuit.
17	CF2	-	5.76MHz oscillator circuit.
18	VDD1	-	Connected to VDD (Backup).
19	I-HOLD	I	System power-supply voltage check AD input.
20	I-KEY1	I	KEY1 AD input.
21	I-KEY2	I	KEY2 AD input.
22	I-KEY3	I	KEY3 AD input.
23	I-TU-SIG	I	RDS tuning signal AD input.
24	I-CDSW	I	CD switch detection AD input.
25	I-RE-VOL	I	Volume JOG AD input.
26	I-RE-MULTI	I	Multi-JOG AD input.
27	I-WRQ / I-RDSCCLK	I	CD control WRQ input / RDS clock input.
28	I-DISH	I	CD turntable rotation input.
29	I-RMC	I	System remote-control input.
30	G13	O	Grid (G13) output.
31	G12	O	Grid (G12) output.
32	G11	O	Grid (G11) output.
33	G10	O	Grid (G10) output.
34	G9	O	Grid (G9) output.
35	G8	O	Grid (G8) output.

Pin No	Pin Name	I/O	Description
36	G7	O	Grid (G7) output.
37	G6	O	Grid (G6) output.
38	G5	O	Grid (G5) output.
39	G4	O	Grid (G4) output.
40	G3	O	Grid (G3) output.
41	G2	O	Grid (G2) output.
42	P36	O	Segment (P36) output.
43	P35	O	Segment (P35) output.
44	G1	O	Grid (G1) output.
45	P34	O	Segment (P34) output.
46	VDD3	–	Connected to VDD (for FL).
47	P33	O	Segment (P33) output.
48	P32	O	Segment (P32) output.
49	P31	O	Segment (P31) output.
50	P30	O	Segment (P30) output.
51	VP	–	VFL.
52	P29	O	Segment (P29) output.
53	P28	O	Segment (P28) output.
54	P27 / 2092	I/O	Segment (P27) output / No LED driver response, diode input.
55	P26 / I-TMBASE	I/O	Segment (P26) output / Time base (8Hz) input.
56	P25 / REV2	I/O	Segment (P25) output / Respond to Deck 2 reverse, diode input.
57	P24 / REV1	I/O	Segment (P24) output / Respond to Deck 1 reverse, diode input.
58	P23 / RDS	I/O	Segment (P23) output / Respond to RDS, diode input.
59	P22 / FM1	I/O	Segment (P22) output / Respond to FM1, diode input.
60	P21 / SW	I/O	Segment (P21) output / Respond to SW, diode input.
61	P20 / LW	I/O	Segment (P20) output / Respond to LW, diode input.
62	P19 / AMST	I/O	Segment (P19) output / Respond to AM STEREO, diode input.
63	P18 / AM10K	I/O	Segment (P18) output / Respond to AM10K step initial, diode input.
64	P17 / $\overline{\text{CS}}\text{T}2$	I/O	Segment (P17) output / Deck 2 $\overline{\text{with}}$ /without cassette SW input.
65	P16 / $\overline{\text{RE}}\text{B}$	I/O	Segment (P16) output / Deck 2 Side-B recording $\overline{\text{possible}}$ /protected SW input.
66	P15 / $\overline{\text{CAM}}\text{2}$	I/O	Segment (P15) output / Deck 2 CAM SW $\overline{\text{ON}}$ /OFF input.
67	P14 / $\overline{\text{AUTO}}\text{1}$	I/O	Segment (P14) output / Deck 1 Auto-stop detection input.
68	P13 / $\overline{\text{AUTO}}\text{2}$	I/O	Segment (P13) output / Deck 2 Auto-stop detection input.
69	P12 / $\overline{\text{CAM}}\text{1}$	I/O	Segment (P12) output / Deck 1 CAM SW $\overline{\text{ON}}$ /OFF input.
70	P11 / $\overline{\text{CS}}\text{T}1$	I/O	Segment (P11) output / Deck 1 $\overline{\text{with}}$ /without cassette SW input.
71	P10 / $\overline{\text{RE}}\text{A}$	I/O	Segment (P10) output / Deck 2 Side-A recording $\overline{\text{possible}}$ /protected SW input.
72	VDD4	–	Connected to VDD (for FL).
73	P9	O	Segment (P9) output.
74	P8	O	Segment (P8) output.
75	P7	O	Segment (P7) output.
76	P6	O	Segment (P6) output.

Pin No	Pin Name	I/O	Description
77	P5	O	Segment (P5) output.
78	P4	O	Segment (P4) output.
79	P3	O	Segment (P3) output.
80	P2	O	Segment (P2) output.
81	P1	O	Segment (P1) output.
82	O-KSCAN	O	Key-scan timing output.
83	O-MOTOR	O	Deck-motor ON/OFF output.
84	O-LEDSTB / CDLED	O	LED driver strobe output / CD flash window ON/OFF output.
85	O-DISHFWD	O	CD turntable forward output.
86	O-DISHRVS	O	CD turntable reverse output.
87	O-PLLCE	O	Tuner PLL chip enable output.
88	O-MDRES	O	MD microcomputer reset output. (RESET = "L")
89	VSS2	–	Connected to GND.
90	VDD2	–	Connected to VDD (Backup).
91	O-CDCE	O	CD control chip enable output.
92	O-CDCLK / O-PLLCLK	O	CD control clock output / Tuner PLL clock output.
93	O-SOL1	O	Deck 1 plunger ON/OFF output.
94	O-SOL2	O	Deck 2 plunger ON/OFF output.
95	O-SOUT	O	MD control data output.
96	I-SIN	I	MD control data input.
97	I-ACLK	I	MD control clock input.
98	O-ARDY	O	MD control ready input.
99	O-SREQ	O	MD control system-component request output.
100	I-MREQ	I	MD control MD microcomputer request input.

IC, CXP81952 – 540R

Pin No	Pin Name	I/O	Description
1	MCAS	–	Not used.
2	MRAS	–	Not used.
3	BUP	–	Not used.
4	AMUTE	O	AUDIO MUTE signal output.
5	ESK	O	Serial clock output for EEPROM interface.
6	EDO	O	Serial data output for EEPROM interface.
7	EDI	I	Serial data input for EEPROM interface.
8	ECS	O	EEPROM chip select signal output.
9	---	–	Not used.
10	RFLCT	I	DISC reflection rate detection switch input.
11	---	–	Not used.
12	LS	I	Pickup inner track detection switch input.
13	LDSW	I	Loading mechanism, EJECT position detection switch input.
14	PBSW	I	Loading mechanism, PB position detection switch input.
15	RECSW	I	Loading mechanism, REC position detection switch input.
16	---	–	Not used.
17	---	–	Not used.
18	ACOFF	–	Not used.
19	SREQ	I	System-component send request signal input for system component interface.
20	EXTDIN	O	External digital in permission signal output.
21	SLOW	O	Speed control signal output for loading mechanism.
22	LOAD	O	Motion direction control signal output 1 for loading mechanism.
23	EJECT	O	Motion direction control signal output 2 for loading mechanism.
24	MREQ	O	MD microcomputer send request signal output for system-component interface.
25	DRIVE	O	EFM driver ON/OFF signal output.
26	---	–	Not used.
27	---	–	Not used.
28	---	–	Not used.
29	---	–	Not used.
30	---	–	Not used.
31	---	–	Not used.
32	---	–	Not used.
33	---	–	Not used.
34	---	–	Not used.
35	---	–	Not used.
36	---	–	Not used.
37	MP	–	Connected to VSS.
38	SRST	I	MD microcomputer reset signal input.
39	DGND	–	Connected to VSS.
40	XTALO	O	Crystal connection terminal 1 for system clock oscillator.
41	XTALI	I	Crystal connection terminal 2 for system clock oscillator.

Pin No	Pin Name	I/O	Description
42	ARDY	I	READY signal input for system-component interface.
43	SIN	I	Serial data input for system-component interface.
44	SOUT	O	Serial data output for system-component interface.
45	ACLK	O	Serial clock output for system-component interface.
46	XLAT	O	Latch signal output for CXD2652 interface.
47	XRST	O	CXD2652AR reset signal output.
48	XSTBY	O	CXA2523AR standby signal output.
49	---	–	Not used.
50	AVSS	–	Connected to VSS.
51	AVREF	–	Connected to VDD.
52	AVDD	–	Connected to VDD.
53	---	–	Not used (PLL UP).
54	---	–	Not used (PLL UP).
55	---	–	Not used (PLL UP).
56	SLF	–	Not used (PLL UP).
57	SRF	–	Not used (PLL UP).
58	TEMP	–	Not used (PLL UP).
59	MAGIC	–	Not used (PLL UP).
60	---	–	Not used (PLL UP).
61	TEST	–	Not used (PLL UP).
62	DISCPRO	I	DISC wrong protection switch input.
63	MNT3	I	Monitor signal input 3 for CXD2652AR.
64	MNT2	I	Monitor signal input 2 for CXD2652AR.
65	MNT1	I	Monitor signal input 1 for CXD2652AR.
66	MNT0	I	Monitor signal input 0 for CXD2652AR.
67	SENS	I	SENS signal input for CXD2652AR.
68	FLG	I	FLAG monitor pin set in SRDT for CXD2652AR interface.
69	---	–	Not used.
70	---	–	Not used.
71	P-CONT	–	Not used.
72	RFSW	–	Not used.
73	---	–	Not used.
74	---	–	Not used.
75	DQSY	I	Digital in SUB-Q synchronous input.
76	XINT	I	CXD2652AR status synchronous input.
77	SRDT	I	Serial data input for CXD2652AR interface.
78	SWDT	O	Serial data output for CXD2652AR interface.
79	SCLK	O	Serial clock output for CXD2652AR interface.
80	SQSY	I	SUB-Q, ADIP synchronous input.
81	---	–	Not used.
82	---	–	Not used.

Pin No	Pin Name	I/O	Description
83	---	–	Not used.
84	TXI	–	Connected to VSS.
85	TXO	–	Open (Not used).
86	VSS	–	Connected to VSS.
87	VDD	–	Connected to VDD.
88	NC	–	Connected to VDD.
89	---	–	Not used.
90	DRVMUTE	O	MUTE signal output for BA5970FP.
91	---	–	Not used.
92	---	–	Not used.
93	---	–	Not used.
94	---	–	Not used.
95	RECP	O	Laser power switch signal output.
96	TX	O	Record data output permission signal output.
97	MOD	O	High frequency modulation circuit ON/OFF signal output.
98	OPMUTE	O	Laser MUTE signal output.
99	ARST	O	AK4512VF reset signal output.
100	DENF	O	De-emphasis ON/OFF signal output.

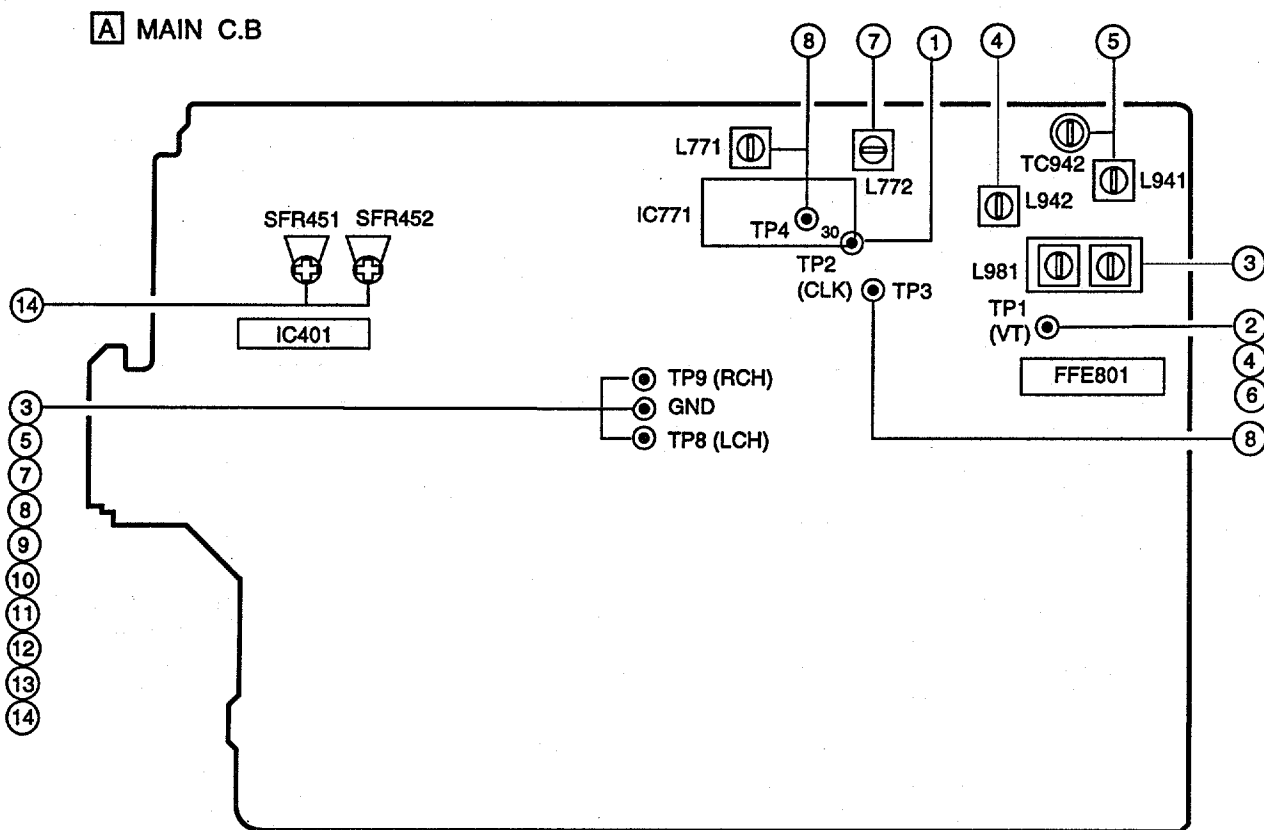
IC, CXD2652AR

Pin No	Pin Name	I/O	Description
1	MNTO	O	Monitor output pin.
2	MNTI	O	Monitor output pin.
3	MNT2	O	Monitor output pin.
4	MNT3	O	Monitor output pin.
5	SWDT	I	Data input pin for micro-processor serial interface.
6	SCLK	I	Shift clock input pin for micro-processor serial interface.
7	XLAT	I	Latch input pin for micro-processor serial interface. Shut down: latch.
8	SRDT	O	Data output pin for micro-processor serial interface.
9	SENS	O	Output internal status according to micro-processor serial interface address.
10	XRST	I	Reset input pin. "L": Reset.
11	SQSY	O	Disc sub-code Q synchronize / ADIP synchronize output.
12	DQSY	O	When source of the digital in is set to CD or MD, output sub-code Q synchronize of UbitCD or MD format.
13	RECP	I	Laser power switching input pin. "H": Record power, "L": Playback power.
14	XINT	O	Intrusion demand output pin. "L" setting when intrusion status is generated.
15	TX	I	Record data output enable signal input pin. "H": Enable.
16	OSCI	I	Crystal oscillator circuit input pin.
17	OSCO	O	Crystal oscillator circuit output pin. (OSCI inverted output)
18	XTSL	I	Switch input frequency of OSCI pin. (Connected to DVDD) "H": 512Fs (22.5792MHz), "L": 1024Fs (45.158MHz).
19	NC	–	Not connected.
20	DVSS	–	Digital GND.
21	DIN	I	Input digital audio interface signal.
22	DOUT	O	Output digital audio interface signal.
23	ADDT	I	Analog record input pin. (Connect external A/D converter output)
24	DADT	O	REC monitor output pin / output decode audio data.
25	LRCK	O	Output LRCK (44.1kHz) to external audio block.
26	XBCK	O	Output bit clock (2.8224MHz) to external audio block.
27	FS256	O	Output 256Fs (11.2896MHz).
28	DVDD	–	Digital power supply.
29	A03	O	Output address for external DRAM.
30	A02	O	Output address for external DRAM.
31	A01	O	Output address for external DRAM.
32	A00	O	Output address for external DRAM.
33	A10	O	Output address for external DRAM. (Not used.)
34	A04	O	Output address for external DRAM.
35	A05	O	Output address for external DRAM.
36	A06	O	Output address for external DRAM.
37	A07	O	Output address for external DRAM.
38	A08	O	Output address for external DRAM.
39	A11	O	Output address for external DRAM. (Not used.)

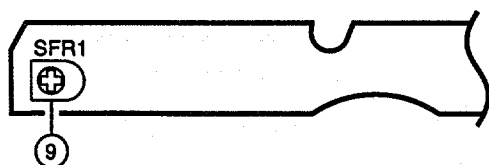
Pin No	Pin Name	I/O	Description
40	DVSS	–	Digital GND.
41	XOE	O	Output enable pin for external DRAM.
42	XCAS	O	Output $\overline{\text{CAS}}$ for external DRAM.
43	A09	O	Output address for external DRAM.
44	XRAS	O	Output $\overline{\text{RAS}}$ for external DRAM.
45	XWE	O	Write enable for external DRAM.
46	D1	I/O	Data pass for external DRAM.
47	D0	I/O	Data pass for external DRAM.
48	D2	I/O	Data pass for external DRAM.
49	D3	I/O	Data pass for external DRAM.
50	MVCI	I	Clock input pin for external VCO (784fs).
51	ASYO	O	Full swing output pin for playback EFM (“L”=V _{SS} , “H”=V _{DD}).
52	ASYI	I	Input comparator slice voltage for playback EFM.
53	AVDD	–	Analog GND.
54	BIAS	I	Input comparator bias current for playback EFM.
55	RFI	I	Input RF signal for playback EFM.
56	AVSS	–	Analog GND.
57	PDO	O	Output phase comparison for analog PLL of EFM decoder.
58	PCO	O	Output phase comparison for master PLL of playback digital PLL and for record EFM PLL.
59	FILI	I	Input filter for master PLL of playback digital PLL and for record EFM PLL.
60	FILO	O	Output filter for master PLL of playback digital PLL and for record EFM PLL.
61	CLTV	I	Input internal VCO control voltage for master PLL of playback digital PLL and for record EFM PLL.
62	PEAK	I	Input peak hold signal for beam spectrum.
63	BOTM	I	Input bottom hold signal for beam spectrum.
64	ABCD	I	Input beam spectrum signal.
65	FE	I	Input focus error signal.
66	AUX1	I	Backup input 1.
67	VC	I	Input midpoint voltage.
68	ADIO	O	Monitor output pin for A/D converter input signal.
69	AVDD	–	Analog power supply.
70	ADRT	I	Input maximum voltage of A/D converter operation range.
71	ADRB	I	Input minimum voltage of A/D converter operation range.
72	AVSS	–	Analog GND.
73	SE	I	Input sled error signal.
74	TE	I	Input tracking error signal.
75	AUX2	I	Backup input 2.
76	DCHG	I	Connected to the power supply of low impedance.
77	APC	I	Input error signal for laser digital APC.
78	ADFG	I	Input ADIP2 binary data FM signal (22.051kHz $\pm$ 1kHz).
79	FOCNT	O	Current setting output pin for CXA2523AR.

Pin No	Pin Name	I/O	Description
80	XLRF	O	Latch output pin for CXA2523AR control. Shut down: latch.
81	CKRF	O	Shift clock output pin for CXA2523AR control.
82	DTRF	O	Data output pin for CXA2523AR control.
83	APCREF	O	Reference PWM output pin for laser APC.
84	LDDR	O	PWM output for laser digital APC. (Not used.)
85	TRDR	O	Tracking servo drive PWM output (-).
86	TFDR	O	Tracking servo drive PWM output (+).
87	DVDD	-	Digital power supply.
88	FFDR	O	Focus servo drive PWM output (+).
89	FRDR	O	Focus servo drive PWM output (-).
90	FS4	O	Output 4Fs (176.4kHz).
91	SRDR	O	SLED servo drive PWM output (-).
92	SFDR	O	SLED servo drive PWM output (+).
93	SPRD	O	Spindle servo drive PWM output. (PWM (-) or polar)
94	SPFD	O	Spindle servo drive PWM output. (PWM (+) or PWM absolute value)
95	FGIN	I	FG input for spindle CAV servo.
96	TEST1	I	Test pin. Connected to GND.
97	TEST2	I	Test pin. Connected to GND.
98	TEST3	I	Test pin. Connected to GND.
99	DVSS	-	Digital GND.
100	EFMO	O	Output "L" at playback, EFM (encode data) at recording.

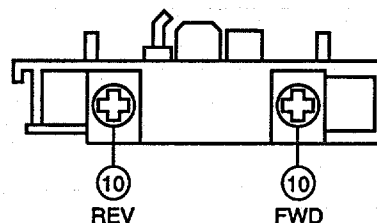
ADJUSTMENT - 1 < TUNER / DECK : EZ, K >



D DECK C.B



DECK-1 P, DECK-2R/P/E HEAD



< TUNER SECTION >

1. Clock Frequency Check
 Settings : • Test point : TP2 (CLK)
 Method : Set to MW 1602kHz and check that the test point is 2052kHz $\pm$ 45Hz.
2. MW VT Check
 Settings : • Test point : TP1 (VT)
 Method : Set to MW 531kHz (1602kHz) and check that the test point is more than 0.6V (less than 8.0V).
3. MW Tracking Adjustment
 Settings : • Test point : TP8 (Lch), TP9 (Rch)
 • Adjustment location : L981
 Method : Set to MW 999kHz and adjust L981 so that the test point become maximum.
4. LW VT Adjustment
 Settings : • Test point : TP1 (VT)
 • Adjustment location : L942
 Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V $\pm$ 0.05V.
5. LW Tracking Adjustment
 Settings : • Test point : TP8 (Lch), TP9 (Rch)
 • Adjustment location : L941, TC942
 Method : Set to LW 144kHz (290kHz) and adjust L941 (TC942) so that the test point become maximum.
6. FM VT Check
 Settings : • Test point : TP1 (VT)
 Method : Set to 87.5MHz and check that the test point is more than 1.5V. Then set to FM 108MHz and check that the test point is less than 8.5V.
7. AM IF Adjustment
 Settings : • Test point : TP8 (Lch), TP9 (Rch)
 • Adjustment location : L772 450kHz

8. 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 $0V \pm 0.04V$.
Next, check that the distortion is less than 1.2%.

<DECK SECTION>

9. Tape Speed Adjustment (DECK1, DECK2)

- Settings: • Test tape : TTA-100
- Test point : TP8 (Lch), TP9 (Rch)
- Adjustment location : SFR1
- Method : Play back the test tape and adjust SFR1 so that the frequency counter becomes $3000Hz \pm 5Hz$ (FWD).
Then check RVS speed is $\pm 45Hz$ with respect to FWD speed.

10. Head Azimuth Adjustment (DECK1, DECK2)

- Settings: • Test tape : TTA-300
- Test point : TP8 (Lch), TP9 (Rch)
- Adjustment location : Head azimuth adjustment screw
- Method : Play back the 10kHz (FWD) signal of the test tape and adjust screw so that the output becomes MAX.
Next, perform on REV PLAY mode.

11. PB Sensitivity Check (DECK1, DECK2)

- Settings: • Test tape : TTA-200
- Test point : TP8 (Lch), TP9 (Rch)
- Method : Play back the test tape and check that the test point is $130mV \pm 3dB$.

12. PB Frequency Response Check (DECK1, DECK2)

- Settings: • Test tape : TTA-320
- Test point : TP8 (Lch), TP9 (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.

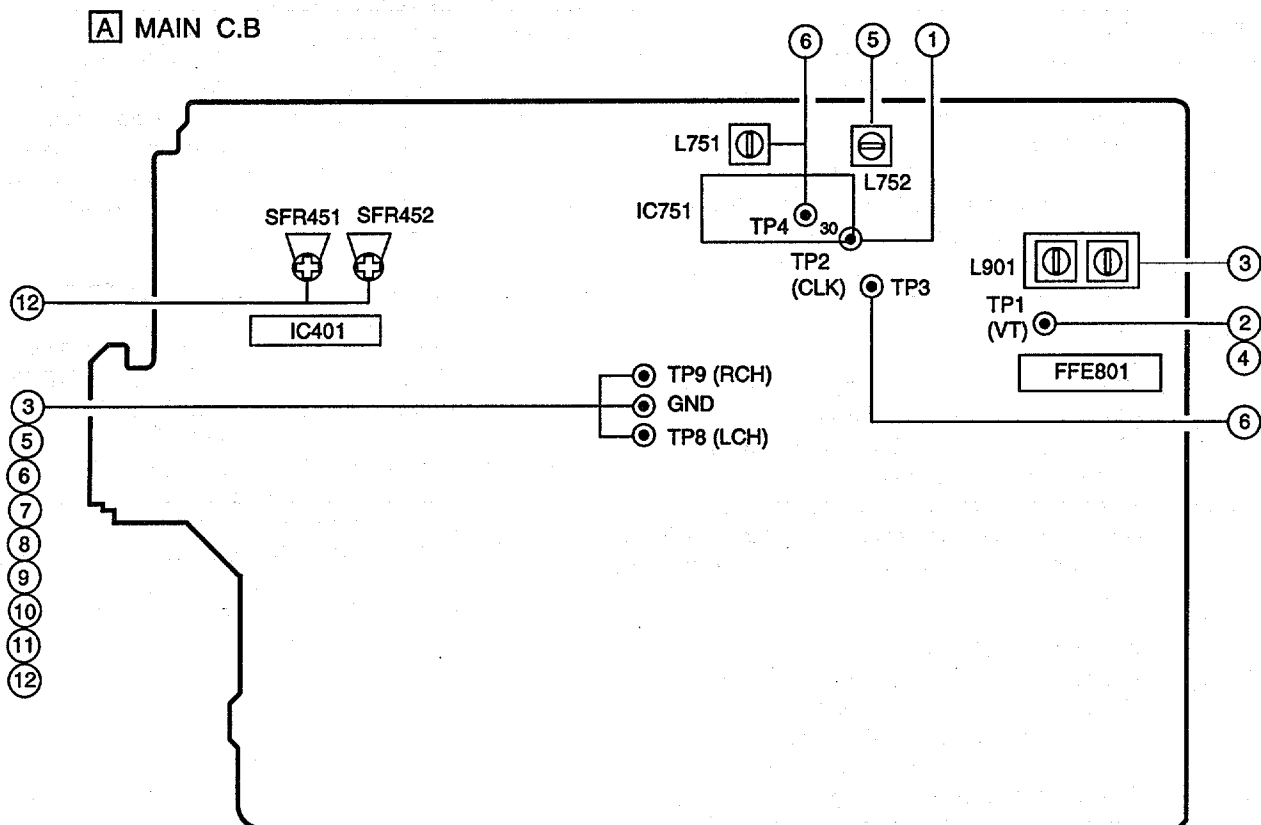
13. REC/PB Sensitivity Check

- Settings: • Test tape : TTA-602
- Test point : TP8 (Lch), TP9 (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 TP8, TP9 becomes 8mV. Record and play back the 1kHz signals and check that the output is $8mV \pm 3dB$.

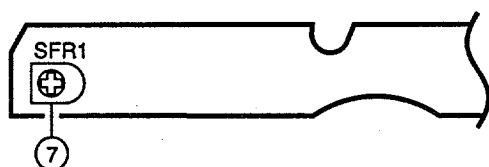
14. REC/PB Frequency Response Adjustment (DECK2)

- Settings: • Test tape : TTA-602
- Test point : TP8 (Lch), TP9 (Rch)
- Input signal : 1kHz / 8kHz (LINE IN)
- Adjustment location : SFR451 (Lch)
SFR452 (Rch)
- Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 80mV. Record and Play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes $0dB \pm 0.5dB$ with respect to that 1kHz signal.

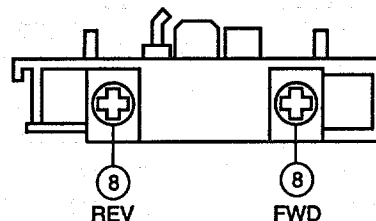
ADJUSTMENT - 1 < TUNER / DECK : HD >



D DECK C.B



DECK-1 P, DECK-2R/P/E HEAD



< TUNER SECTION >

1. Clock Frequency Check
 Settings : • Test point : TP2 (CLK)
 Method : Set to MW1602kHz and check that the test point is $2052\text{kHz} \pm 45\text{Hz}$.
2. AM VT Check
 Settings : • Test point : TP1 (VT)
 Method : Set to MW 1710kHz and check that the test point is $6.0 \pm 1.0\text{V}$.
3. AM Tracking Adjustment
 Settings : • Test point : TP8 (Lch), TP9 (Rch)
 • Adjustment location : L901
 Method : Set to MW 999kHz and adjust L901 so that the test point become maximum.
4. FM VT Check
 Settings : • Test point : TP1 (VT)
 Method : Set to FM 76.0MHz and check that the test point is more than 0.5V. Then set to FM 108MHz and check that the test point is less than 9.0V.
5. AM IF Adjustment
 Settings : • Test point : TP8(Lch), TP9(Rch)
 • Adjustment location : L752450kHz
6. DC Balance / Mono Distortion Adjustment
 Settings : • Test point : TP3, TP4 (DC Balance)
 TP8, TP9 (Distortion)
 • Adjustment location : L751
 • Input level : 54dB
 Method : Set to FM 83.0MHz and adjust L751 so that the voltage between TP3 and TP4 becomes $0\text{V} \pm 0.04\text{V}$.
 Next, check that the distortion is less than 1.2%.

< DECK SECTION >

7. Tape Speed Adjustment (DECK1, DECK2)
 Settings : • Test tape : TTA-100
 • Test point : TP8 (Lch), TP9(Rch)
 • Adjustment location : SFR1
 Method : Play back the test tape and adjust SFR1 so that the frequency counter becomes $3000\text{Hz} \pm 5\text{Hz}$ (FWD). Then check RVS speed is $\pm 45\text{Hz}$ with respect to FWD speed.
8. Head Azimuth Adjustment (DECK1, DECK2)
 Settings : • Test tape : TTA-300
 • Test point : TP8 (Lch), TP9 (Rch)
 • Adjustment location : Head azimuth adjustment screw
 Method : Play back the 10kHz (FWD) signal of the test tape and adjust screw so that the output becomes MAX. Next, perform on REV PLAY mode.
9. PB Sensitivity Check (DECK1, DECK2)
 Settings : • Test tape : TTA-200
 • Test point : TP8 (Lch), TP9 (Rch)
 Method : Play back the test tape and check that the test point is $130\text{mV} \pm 3\text{dB}$.
10. PB Frequency Response Check (DECK1, DECK2)
 Settings : • Test tape : TTA-320
 • Test point : TP8 (Lch), TP9 (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.
11. REC/PB Sensitivity Check (DECK2)
 Settings : • Test tape : TTA-602
 • Test point : TP8 (Lch), TP9 (Rch)
 • Input signal : 1kHz (LINE IN)
 Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 8mV. Record and play back the 1kHz signals and check that the output is $8\text{mV} \pm 3\text{dB}$.
12. REC/PB Frequency Response Adjustment (DECK2)
 Settings : • Test tape : TTA-602
 • Test point : TP8 (Lch), TP9 (Rch)
 • Input signal : 1kHz / 8kHz (LINE IN)
 • Adjustment location : SFR451 (Lch)
 SFR452 (Rch)
 Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 80mV. Record and Play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes $0\text{dB} \pm 0.5\text{dB}$ with respect to that 1kHz signal.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	Less than 10dB
(THD 3%)	[at 76.0/83.0/108.0MHz(HD)]
	Less than 11dB
	[at 87.5MHz(EZ,K)]
	Less than 10dB
	[at 98.0/108.0MHz(EZ,K)]
S/N 50dB Quieting sensitivity (L-R) :	
	Less than 36dB [at 83.0MHz(HD)]
	Less than 38dB [at 98.0MHz(EZ,K)]
Signal to noise ratio :	(MONO) More than 65dB
	[at 83.0MHz(HD)]
	More than 68dB
	[at 98.0MHz(EZ,K)]
	(STEREO) More than 64dB
	[at 83.0MHz(HD)]
	[at 98.0MHz(EZ,K)]
Distortion :	(MONO) Less than 1.2%
	[at 83.0MHz(HD)]
	[at 98.0MHz(EZ,K)]
	(STEREO) Less than 2.0%
	[at 83.0MHz(HD)]
	[at 98.0MHz(EZ,K)]
Auto stop level :	25dB $\pm$ 10dB
	[at 83.0MHz(HD)]
	[at 98.0MHz(EZ,K)]
Stereo separation :	More than 25dB [at 83.0MHz(HD)]
	More than 12dB [at 98.0MHz(EZ,K)]
Intermediate frequency :	10.7MHz

<AM (MW) SECTION>

Sensitivity :	Less than 62dB [at 603kHz]
(S/N 20 dB)	Less than 60dB [at 999/1404kHz]
Signal to noise ratio :	More than 34dB [at 999kHz]
Distortion :	Less than 1.5% [at 999kHz]
Auto stop level :	55dB + 10/-15dB [at 999kHz]
Intermediate frequency :	450kHz

<LW SECTION>(EZ, K ONLY)

Sensitivity :	Less than 70dB [at 144kHz]
(S/N 20 dB)	Less than 68dB [at 198kHz]
	Less than 66dB [at 290kHz]

<DECK SECTION>

Tape speed :	$3000\text{Hz} \pm 45\text{Hz}$
Wow & flutter :	Less than 0.21% (W.R.M.S)
Pinch roller pressure :	270 ~ 330g (FWD, REV)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F & REW torque :	75 ~ 180g-cm (F.FWD)
	75 ~ 130g-cm (REW)
Back tension :	$3 \pm 4\text{g-cm}$ (FWD, REV)
PB Output level :	$3.5\text{V} \pm 3\text{dB}$
REC/PB Output level :	$1.7\text{V} \pm 3\text{dB}$ (NORMAL)
Distortion (REC/PB) :	Less than 2.0% (NORMAL)
Noise level (PB) :	Less than 30mV (Dolby OFF, NORMAL)
Noise level (REC/PB) :	Less than 20mV (Dolby OFF, NORMAL)
Erasing ratio :	More than 60dB (at 125Hz, 10VU)
AC bias frequency :	85 kHz
Test tape :	NORMAL : TTA-602

ADJUSTMENT <MD>

1. Temperature compensation adjustment

- Test point: Check on the display message.
 - Jig: Thermometer
 - Method
 - 1) After MD TEST MODE is activated, press  button to show the "ALL SV OFF" message on the display.
 - 2) Press  button to switch the display to "TEMP = \$**".
 - 3) Press  button to switch the display to "TEMP+**C:+00".
 - 4) Place a thermometer close to MD mechanism and measure the temperature.
 - 5) Check the temperature. Adjust the value displayed on ** with  and  buttons so that the value becomes the same as the temperature. Press  button to confirm.
 - 6) After adjustment, press  button to return to "ALL SV OFF".
- Note: Do not perform this adjustment, if temperature cannot be measured.

2. Laser power adjustment

- Test point: PICK UP laser output
 - Jig: Laser power meter
 - Method
 - 1) Press  button three times at "ALL SV OFF" to switch the display to "LASER WRITE".
 - 2) Press  button once to switch the display to "LASER=***".
 - 3) Measure laser output of PICK UP with laser power meter, and adjust the value to $6.8 \pm 0.03\text{mW}$ with  and  buttons. Press  button to confirm.
 - 4) After adjustment, press  button to return to "ALL SV OFF".
- Note: PICK UP may be damaged, if laser output exceeds 7.0mW.

3. AUTO SEQUENCE ADJ (EFB/IVR/FOCUS AGC/TRACKING AGC adjustment)

- Test Disc: MDW-60, TGYS-1
 - Method
 - 1) Place MDW-60 on tray.
 - 2) Press  button to display the message, "SELECT GRV".
 - 3) Press  (MD Function) button to display the message, "AUTO ADJ". After the adjustment, the display shows "DONE".
(The "FAILED" message shows that no adjustment could be done.)
 - 4) After adjustment, press  button to return to "ALL SV OFF".
- ◇ Checking IVR, EFB, focus/tracking/sled gain
- ① Move PICK UP to the middle track with  and  buttons.
 - ② Press  button to display the "FOCUS ON!" message.
 - ③ Press  button to switch to "ALL SV ON" status.
 - ④ Press  button once and  button twice.
- At this time, check that the display message, "IV\$*:EF◇◇" shows the following values.
- 「*」 03~07
- 「◇」 09~12
- ⑤ Press  button once more.
- At this time, check that the display message, "Gf*t#s△△" show the following values.
- 「*」 20~40
- 「##」 15~35
- 「△」 15~35
- 5) Place TGYS-1 on tray.
 - 6) Press  button to display the message, "SELECT PIT".

7) Press **MD** (MD function) button to display the message, "AUTO ADJ". After adjustment, the display shows "DONE".
(The "FAILED" message shows that no adjustment could be done.)

8) After the adjustment, press **■** button to return to "ALL SV OFF".

◇ Checking IVR, EFB, focus/tracking/sled gain

① In the same steps as MO disc, confirm with the following values.

「IVR」 13 ~ 17

「EFB」 09 ~ 12

「focus gain」 2A ~ 45

「tracking gain」 20 ~ 40

「sled gain」 20 ~ 40

4. Checking focus servo / error rate. (PIT DISC)

1) Place TGYS-1 on tray.

2) Move PICK UP to the middle track with **◀◀◀◀** and **▶▶▶▶** buttons.

3) Press **MODE** button to display the message, "SELECT PIT".

4) Press **◀▶** button to display the message, "FOCUS ON!".

5) Press **ENTER** button to display the message, "ALL SV ON", and press **DISPLAY** button once to check that address display is successfully sent.

6) Press **DISPLAY** button again to display the playback error rate.

Check that the number shown in the underlined part of 「Er****:****」 is less than 0030.

7) After adjustment, press **■** button to return to "ALL SV OFF".

5. Checking the playback/record error rate

1) Place MDW-60 on tray.

2) Move PICK UP to the middle track with **◀◀◀◀** and **▶▶▶▶** buttons.

3) Press **CD** button to start recording from 600 cluster.

4) Record around 15 seconds, and press **■** button.

5) Press **AUX** button to switch to "ALL SV ON", and press **DISPLAY** button around 600 cluster.

Check that the number shown in the underlined part of 「Er****:****」 is less than 0020.

6) After adjustment, press **■** button to return to "ALL SV OFF".

MD TEST MODE

1. Starting MD TEST MODE

Insert the AC plug while pressing the **MD** (MD function) button.

* MD test mode is activated with display shows "MD TEST".

Note:

- 1) During TEST MODE, a motion ignoring mechanical failures may be performed.
If any wrong operation is seen, unplug immediately.
- 2) During TEST MODE, normal record and playback cannot be performed.
- 3) DISC may not be inserted occasionally. In this case, push the DISC edge slightly, and press **CD ► MD** button so that the DISC is inserted securely.

2. Exiting MD TEST MODE

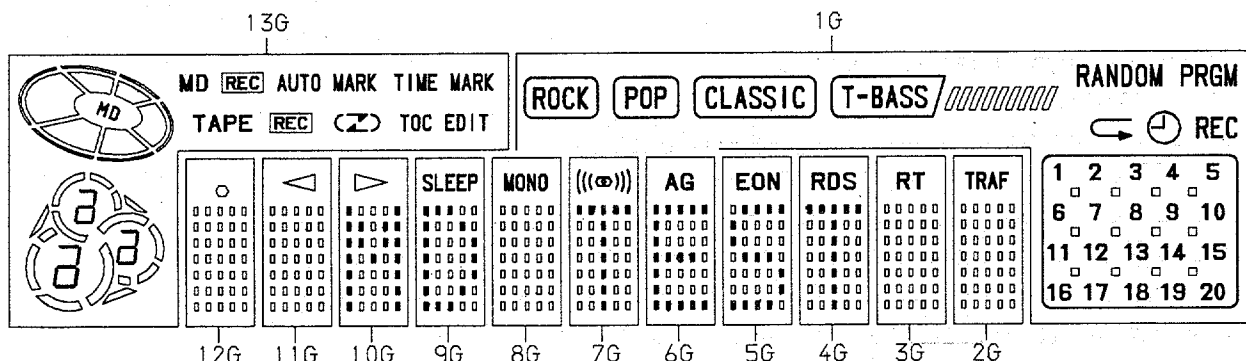
- 1) Press **▲** (MD EJECT) button to remove DISC.
- 2) Disconnect the AC plug.

* Be sure to follow the above steps when exiting MD TEST MODE, otherwise, POWER ON function may not be operated properly when restarted. In this case, disconnect the AC plug.

3. Checking MD TEST MODE

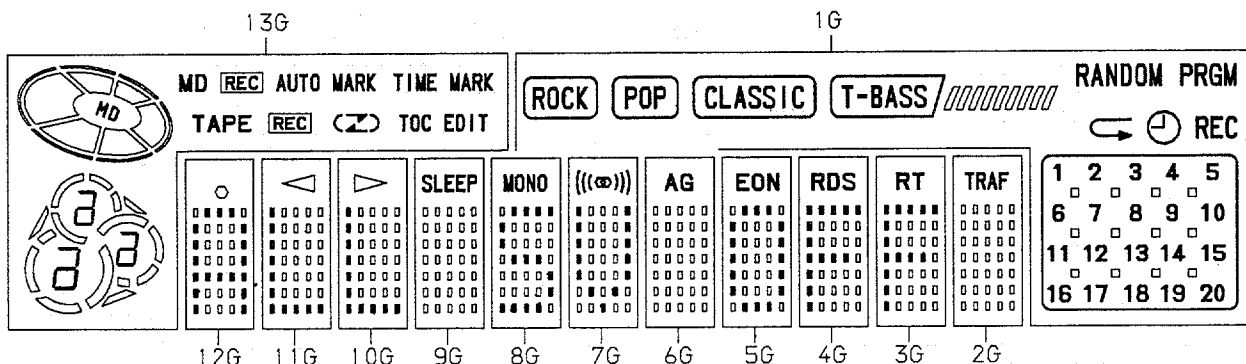
- 1) Display

Approximate 5 seconds after the test mode is activated, the following diagram appears on the display and the test mode can be started.



4. Switching to servo standby mode

- 1) After the test mode is activated, press the **■** (CLEAR) button to switch to the servo standby mode (ALL SV OFF appears on display). Switch to other mode from this mode.



Press the **■** (CLEAR) button to return to "ALL SV OFF" from each mode.

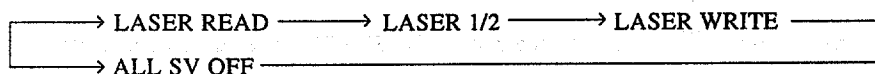
5. Checking SLED sending function

- 1) Press **►►►►** (F. SKIP) button at "ALL SV OFF" to move PICK UP to the outer track.
The display shows the message, "T. SLED FWD".
- 2) Press **◄◄◄◄** (B. SKIP) button at "ALL SV OFF" to move PICK UP to the inner track.
The display shows the message, "T. SLED RVS".

6. Checking laser power

- 1) Press  (MD EDIT) button at "ALL SV OFF". Switch laser power by pressing the button once.

The display shows the messages as follows:



- 2) After checking, return to "ALL SV OFF".

7. Checking loading mechanism/OWH (Over Write Head) functions

7-1. Checking loading mechanism function

Press  or  button at "ALL SV OFF" to check loading mechanism function.

-  . . . Loading
-  . . . Unloading

7-2. Checking OWH function

At loading status, press  or  button to operate OWH UP/DOWN.

-  . . . OWH DOWN
-  . . . OWH UP

* Loading mechanism/OWH status can be monitored by the lights of EON and AG.

Lights	Loading mechanism/OWH status
Only EON is light ON	Loading/OWH DOWN
AG and EON are light OFF	Loading/OWH UP
AG and EON are light ON	Unloading/OWH UP

8. Checking servo function

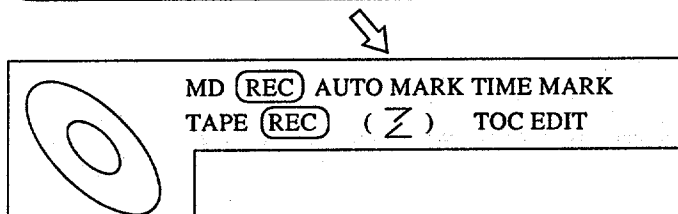
8-1. Checking focus search / spindle kick

- 1) Be sure that no DISC is placed. Press the  (PLAY) button at "ALL SV OFF" to perform search and spindle kick at the same time continually. At this time, the display shows the message, "FOCUS SCH".
- 2) After checking, press  button to return to "ALL SV OFF".

8-2. Checking focus servo

- 1) Place a DISC on tray.
- 2) Press  (MODE) button, and adjust servo mode to the loaded DISC as follows.
 - MO DISC (MO) SELECT GRV
 - PIT DISK (PIT) SELECT PIT

When SELECT PIT is adjusted, AUTO MARK is displayed.
When SELECT GRV is adjusted, TIME MARK is displayed.



- 3) Press  button.

When focus servo functions properly, the display shows "FOCUS SCH" followed by "FOCUS ON!".

- 4) After checking, press  button to return to "ALL SV OFF".

8-3. Checking all servos ON

- 1) At focus servo ON, press  (ENTER) button so that tracking and sled servos turn to ON and all servos starts operating.

When all servos are functioning properly, the display shows the message, "ALL SV ON".

- 2) After checking, press  button to return to "ALL SV OFF".

CD TEST MODE

1. How to Activate CD Test Mode

Insert the AC plug while pressing the CD button. "CD TEST" message appears on FL display and the test mode will be activated.

2. How to Cancel CD Test Mode

Either one of the following operations will cancel the CD test mode.

- Press any function button (Except CD function button).
- Press the power switch button.
- Disconnect the AC plug.

3. CD Test Mode functions

When test mode is activated, the following mode functions can be used by pressing the operation keys.

MODE	Function Button	FL display	Operation	Contents
Start mode (Sled mode)	Activate	CD TEST	· TEST MODE is activated	· CD Test Mode
	◀◀ button ▶▶ button		· Pickup moves to outer track · Pickup moves to inner track * Note 1 (Normal operation during CDPLAY)	· SLED SERVO · Check SLED mechanism operation
Search mode	■ button	CD	· LASER DIODE illuminated all the time (CD block power ON) · Continual focus search *Note 2 (The pickup lenses repeat full-swinging) · Spindle motor continual kick rotation	· Check APC circuit · Laser current measurement FOCUS SERVO · Check focus search waveform · Check focus error waveform (FOK/FZC are not monitored in the search mode.)
Play mode	▶ button	CD1Tr	· Normal playback · Focus search is continued if TOC cannot be read *Note 2 · Spindle motor continual kick rotation	· FOCUS SERVO/TRACKING SERVO · CLV SERVO/SLED SERVO · Check FOC(DRF)
Traverse mode	button	CD1Tr	· Tracking servo OFF/ON · OFF/ON is repeated by pressing button each time *Note 3	· TRACKING SERVO OFF · Check tracking balance (radial balance)

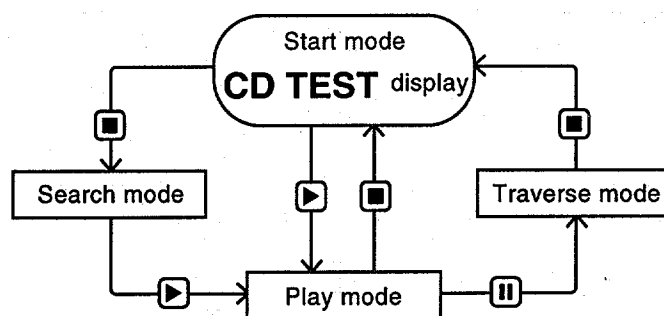
* Note 1 When pressing the ◀◀ or ▶▶ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ◀◀ or ▶▶ keys are pressed, even when the pick-up is at outermost or innermost track. The sled operation is not as normal and moves outermost track with ◀◀ button and innermost track with ▶▶ button.

* Note 2 There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC (IC400) if the focus search is operated continually for more than 10 minutes. In these case, the power supply should be switched off for 10 minutes until heat has been reduced and then re-start.

* Note 3 Do not press ◀◀ or ▶▶ button when "||" button is pressed. Playback mode may not be started after "||" button is released. Press ■ button to return to start mode then pressing ◀◀ or ▶▶ button while "||" button is pressed.

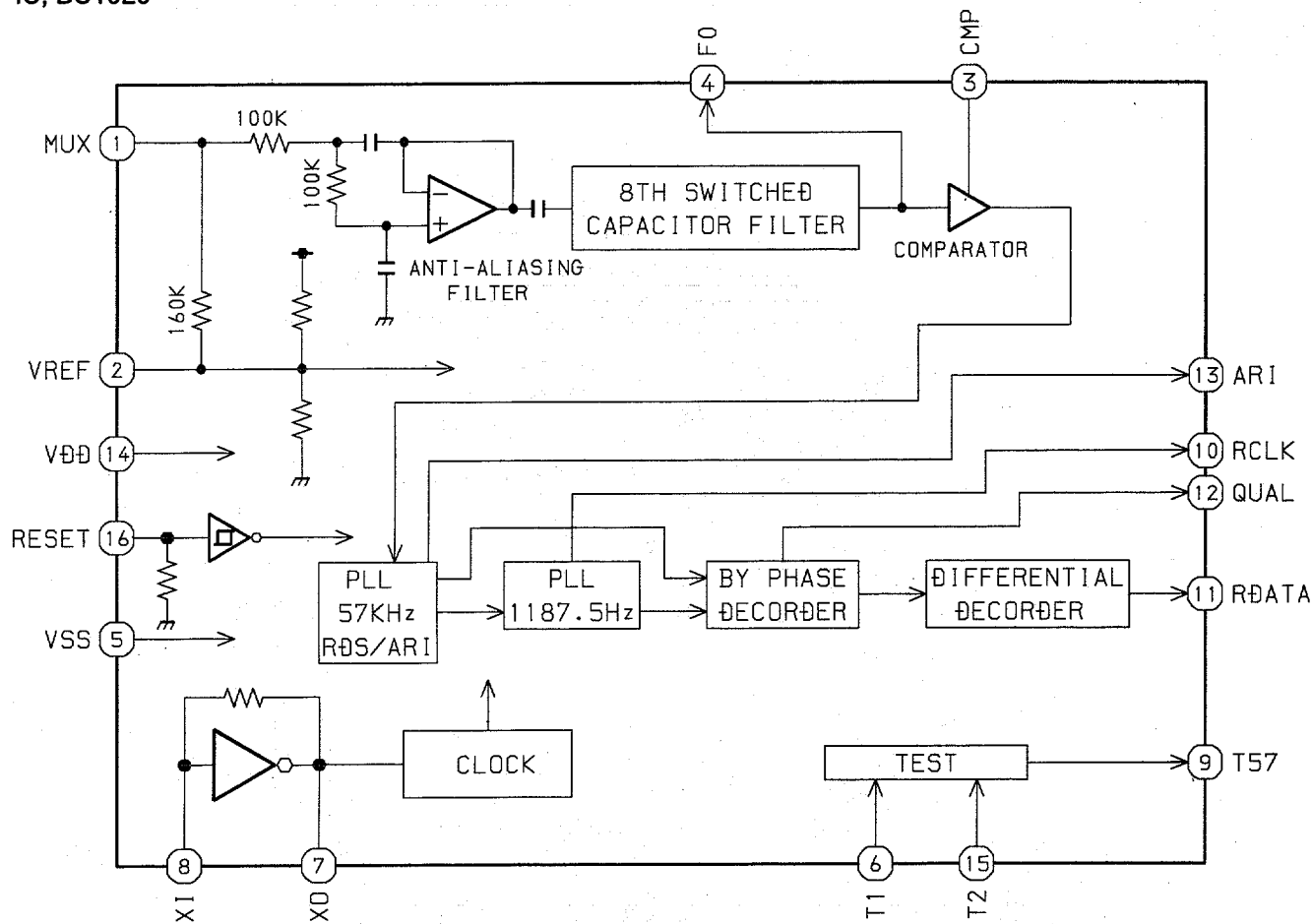
4. Operation Outline

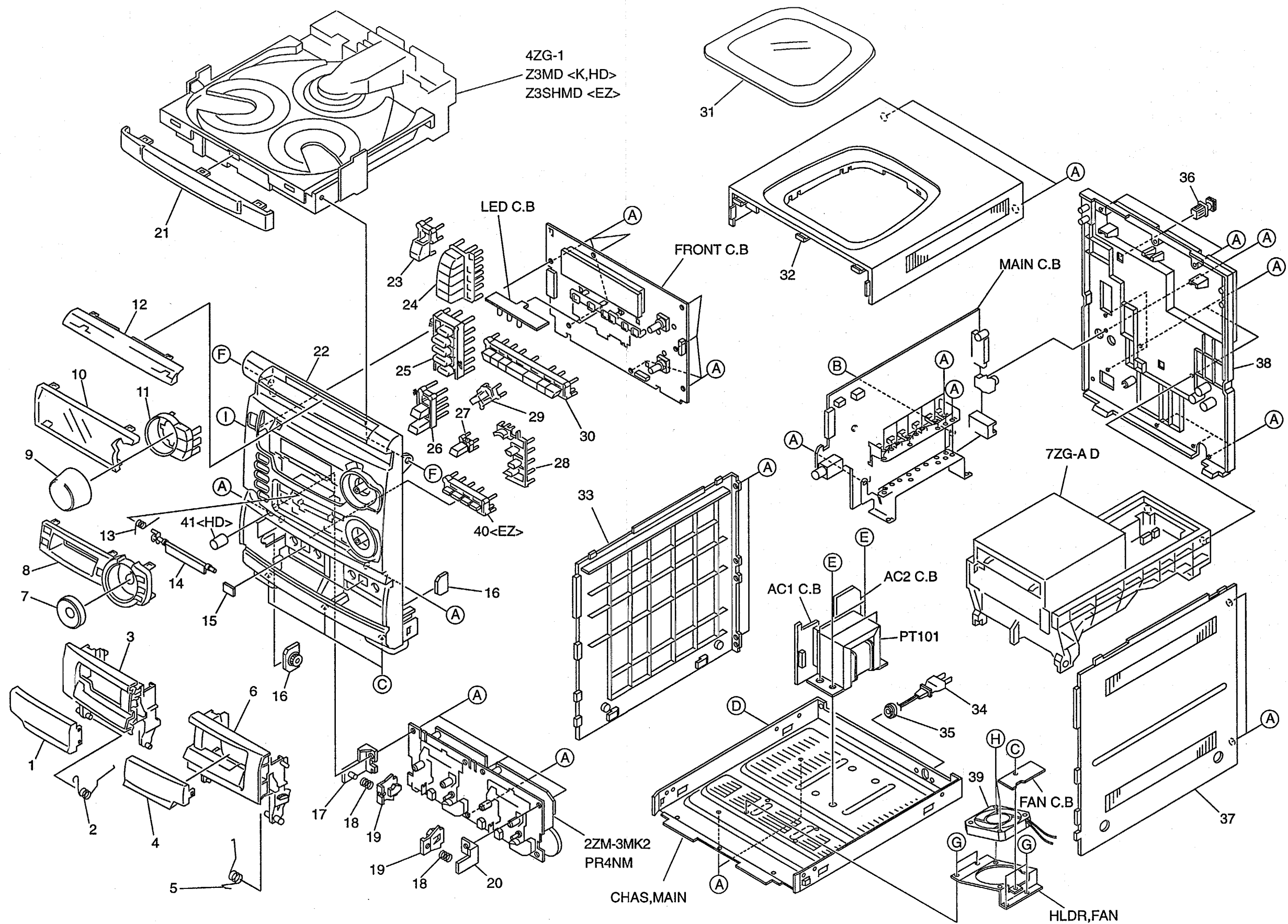
The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



IC BLOCK DIAGRAM - 2

IC, BU1920



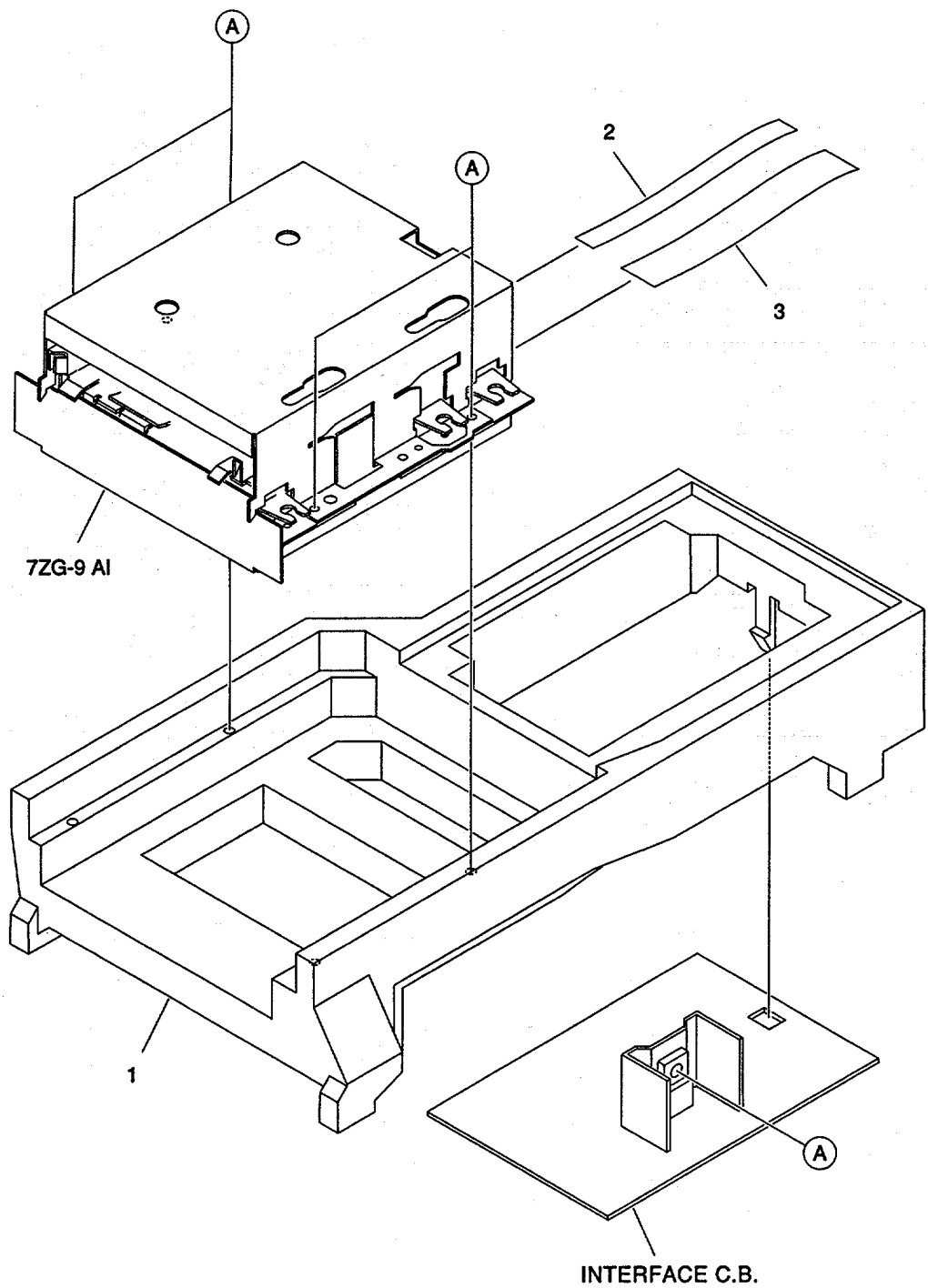


MECHANICAL PARTS LIST 1/1

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NB8-012-010		WINDOW, CASS 1	28	87-NB8-027-110		KEY, MD ENTER
2	82-NF5-218-010		SPR-T, EJECT 1 (SIN)	29	87-NB8-022-010		KEY, T-BASS
3	87-NB8-003-010		BOX, CASS 1	30	87-NB8-030-110		KEY, ASSY PLAY
4	87-NB8-013-010		WINDOW, CASS 2	31	86-NF6-007-010		WINDOW, TOP
5	82-NF5-219-010		SPR-T, EJECT 2 (SIN)	32	87-NF6-021-010		PANEL, TOP
6	87-NB8-004-010		BOX, CASS 2	33	87-NB8-005-010		PANEL, LEFT
7	88-NF8-016-010		KNOB, RTRY JOG	34	87-050-097-010		AC CORD ASSY, H<HD>
8	87-NB8-008-110		PANEL, FR	34	87-A80-007-110		AC CORD ASSY, K BLK<K>
9	87-NB8-015-010		KNOB, RTRY VOL	34	87-050-079-010		AC-CORD ASSY, E<EZ>
10	87-NB8-010-010		WINDOW, DISPLAY<HD, K>	35	87-085-184-010		BUSHING, AC CORD (D)<HD>
10	87-NB8-065-010		WINDOW, DISPLAY E<EZ>	35	87-085-185-010		BUSHING, AC CORD (E)<K, EZ>
11	87-NB8-021-110		KEY, GEQ	36	84-ZG1-245-210		CAP, OPTICAL
12	87-NB8-009-010		WINDOW, CD	37	87-NB8-006-010		PANEL, RIGHT
13	87-NB8-210-010		SPR-T, FLAP	38	87-NB8-046-010		CABI, REAR EZS<EZ>
14	87-NB8-014-010		WINDOW, FLAP N	38	87-NB8-050-010		CABI, REAR HDS<HD>
15	81-532-080-010		LABEL, CASS. COMPT	38	87-NB8-047-210		CABI, REAR KS<K>
16	87-NF8-220-010		DMPR, 150	39	87-A90-296-210		MOT ASSY, F614R-12MC-15
17	87-NF4-216-010		HLDR, LOCK 1	40	87-NB8-028-010		KEY, RDS<EZ>
18	86-NF9-224-010		SPR-C, LOCK	41	87-NB8-017-010		KNOB, RTRY MIC<HD>
19	82-NF5-229-010		PLATE, LOCK	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
20	87-NF4-217-010		HLDR, LOCK 2	B	87-NF4-224-010		S-SCREW, IT3B+3-8 CU
21	87-NB8-007-010		PANEL, TRAY	C	87-067-688-010		BVT+3-6
22	87-NB8-001-410		CABI, FR D<K>	D	87-721-096-410		QT2+3-10 GLD
22	87-NB8-036-210		CABI, FR E<EZ>	E	87-078-019-010		S-SCREW, IT+4-6
22	87-NB8-035-210		CABI, FR H<HD>	F	87-721-097-410		QT2+3-12 GLD
23	87-NB8-019-010		KEY, POWER	G	87-067-584-010		TAPPING SCREW, BVT2+3-6
24	87-NB8-020-010		KEY, FUNCTION	H	87-B10-184-010		BVT+3-20 W/O SLOT
25	87-NB8-024-010		KEY, CD	I	87-723-096-410		QT2+3-10W/O SLOT BL
26	87-NB8-025-110		KEY, MD REC				
27	87-NB8-026-010		KEY, MD EJECT				

MD MECHANISM EXPLODED VIEW 1 / 4

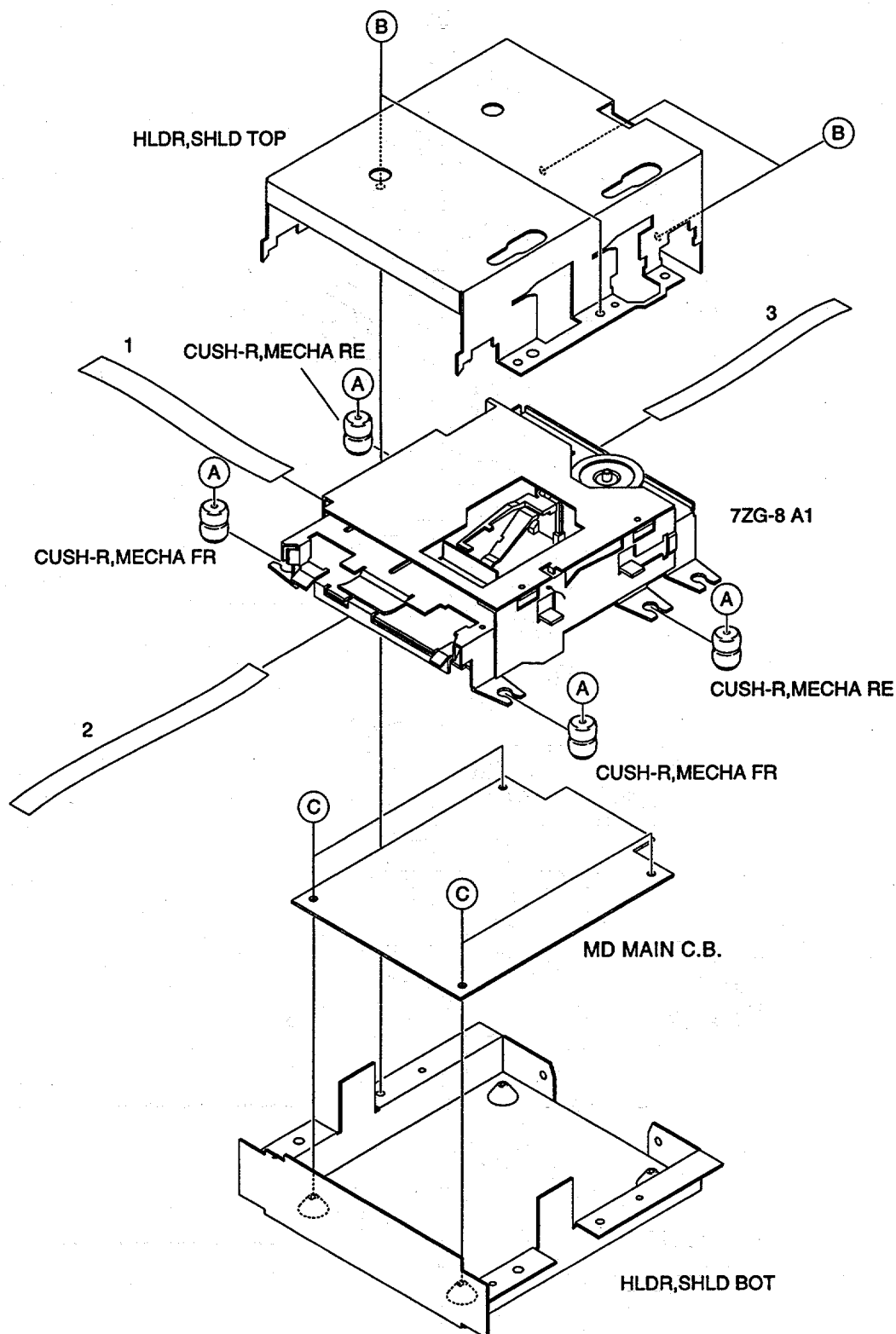


MD MECHANISM PARTS LIST 1 / 4

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NB8-202-010		HLDR, MD
2	87-ZGA-611-010		FF-CABLE, 8P 1.0 100MM
3	87-ZGA-612-010		FF-CABLE, 14P 1.0 100MM
A	87-067-703-010		TAPPING SCREW, BVT2+3-10

MD MECHANISM EXPLODED VIEW 2 / 4

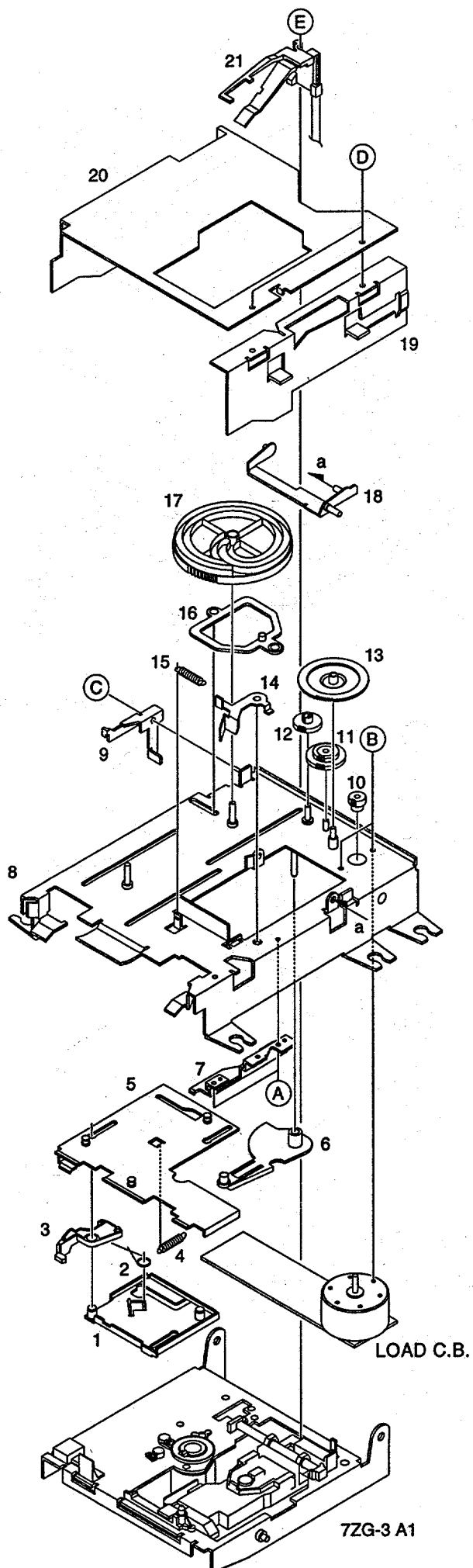


MD MECHANISM PARTS LIST 2 / 4

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

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

MD MECHANISM EXPLODED VIEW 3 / 4

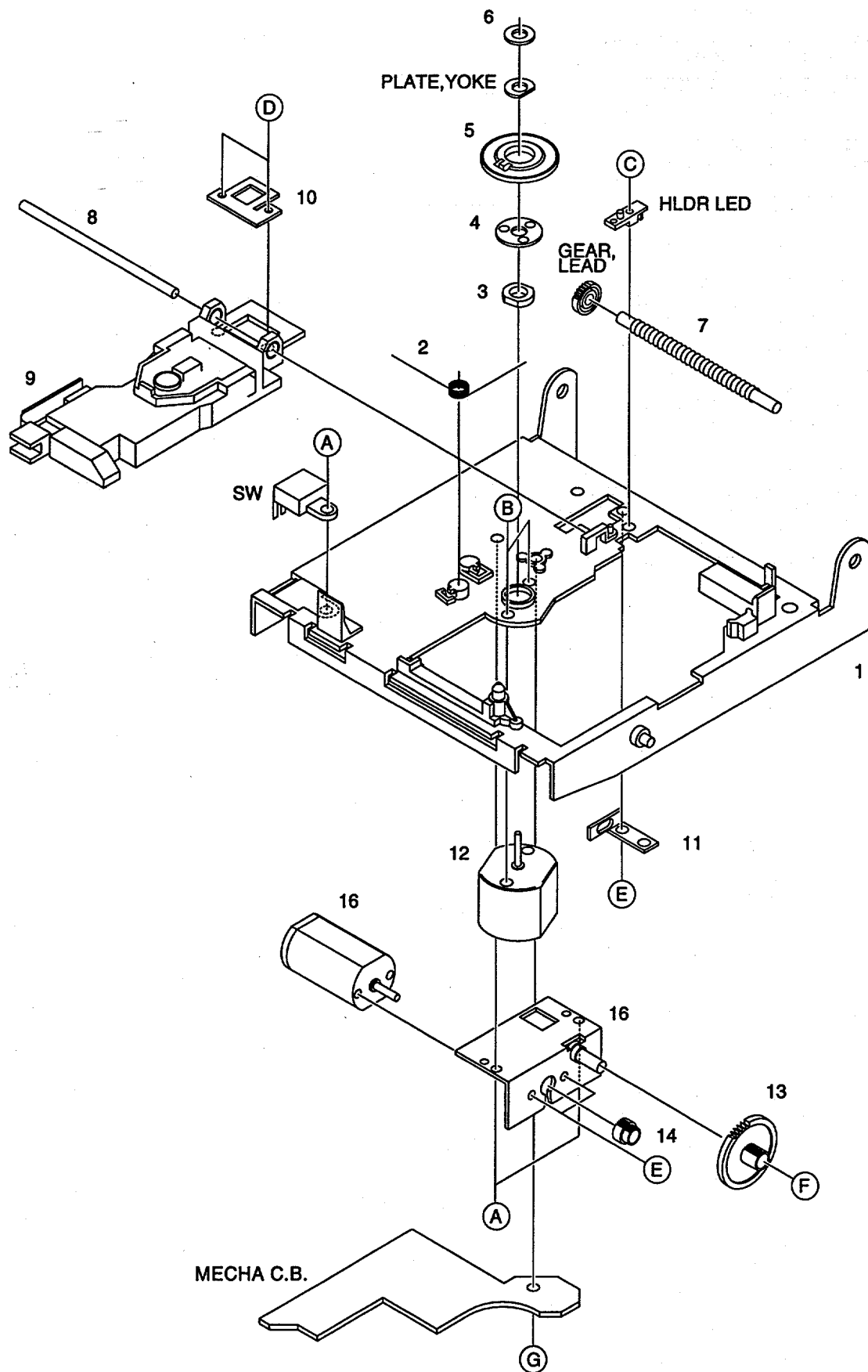


MD MECHANISM PARTS LIST 3/4

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

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

MD MECHANISM EXPLODED VIEW 4 / 4

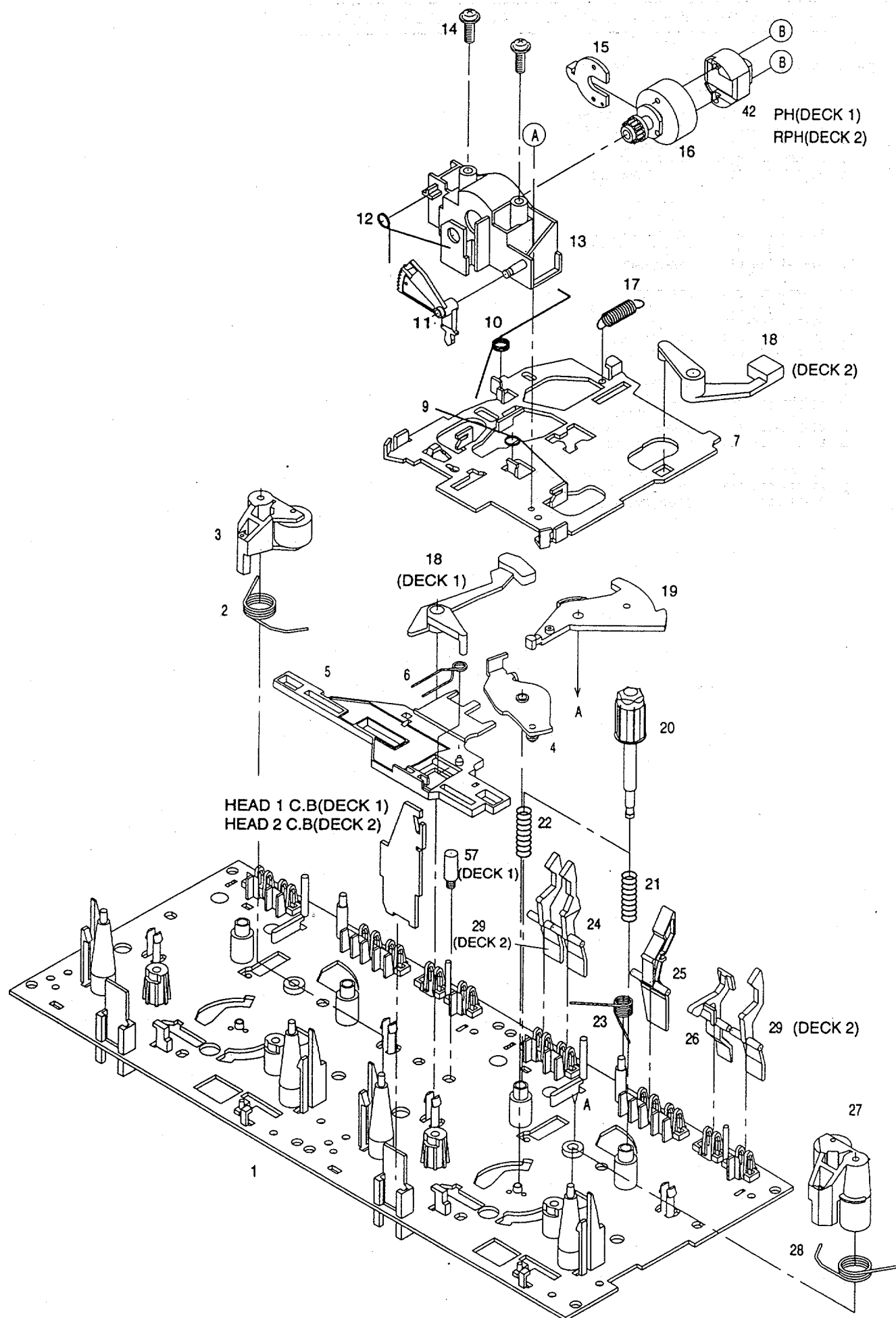


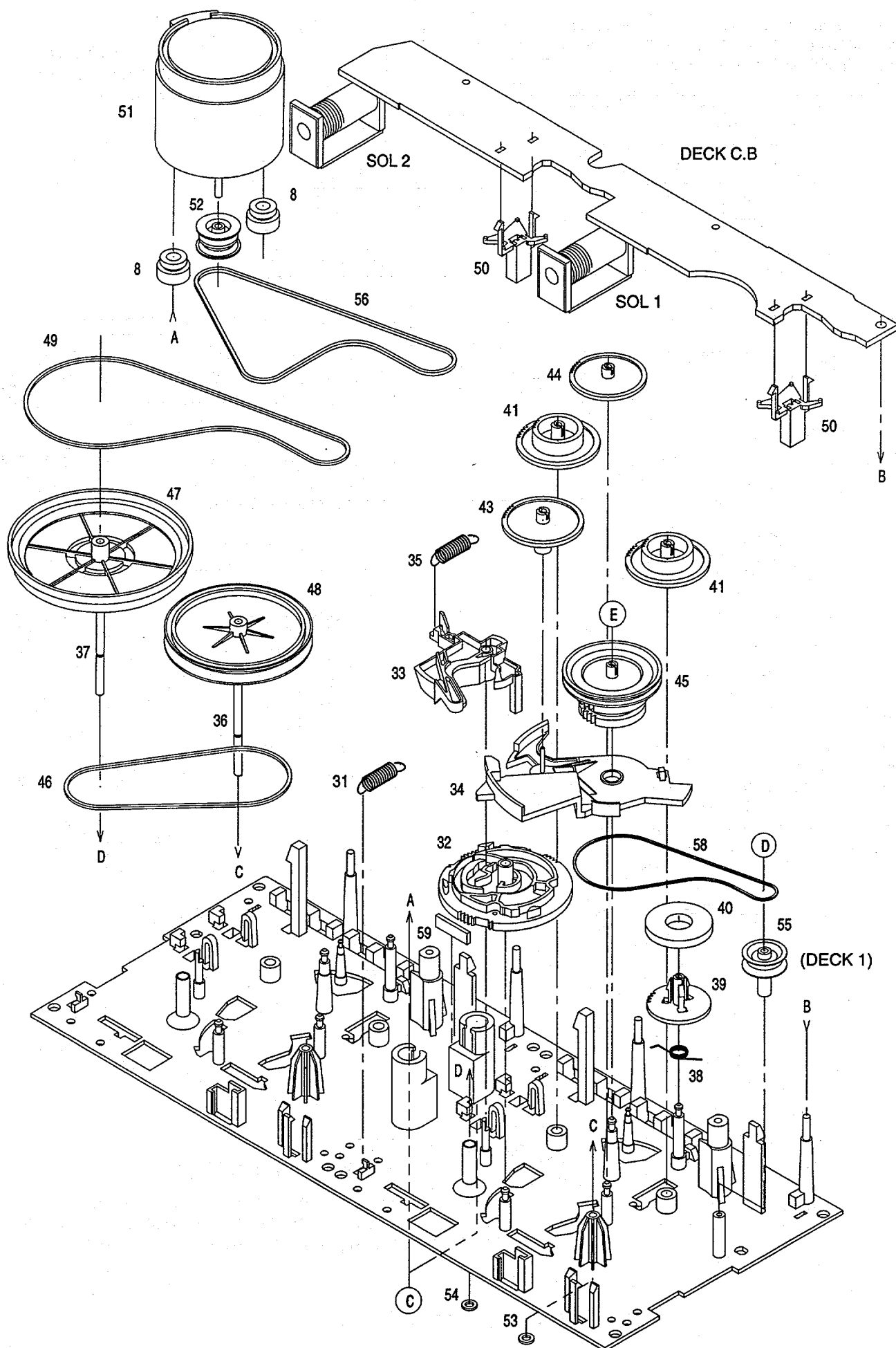
MD MECHANISM PARTS LIST 4 / 4

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

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

TAPE MECHANISM EXPLODED VIEW 1 / 1



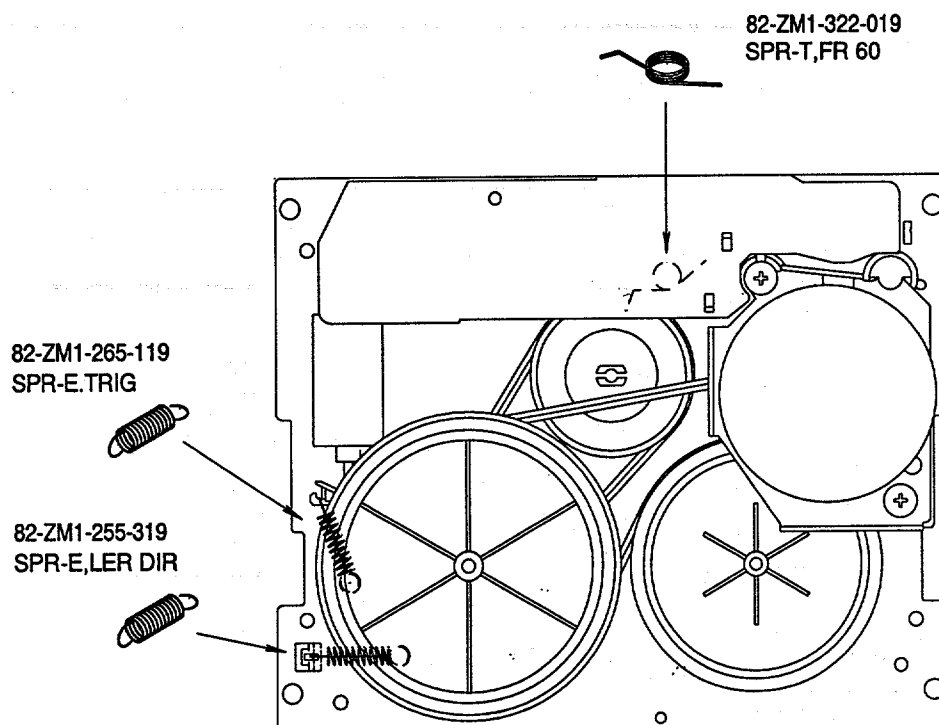
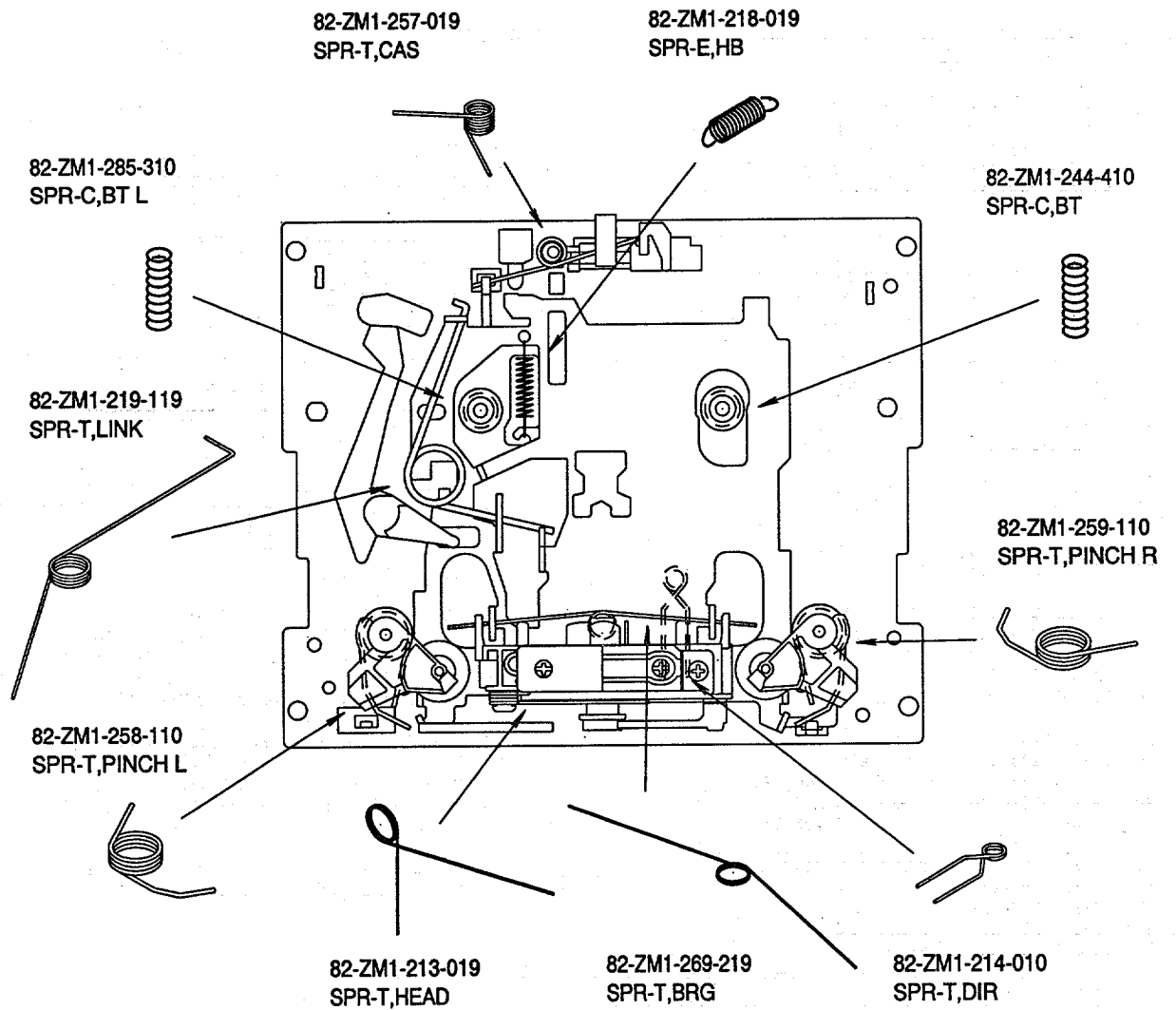


TAPE MECHANISM PARTS LIST 1/1

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY, M2	36	82-ZM1-236-019		CAPSTAN N 2-41.5
2	82-ZM1-258-110		SPR-T, PINCH L	37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
3	82-ZM1-341-110		LVR ASSY, PINCH L2	38	82-ZM1-322-019		SPR-T, FR60
4	82-ZM1-333-010		PLATE, LINK 2	39	82-ZM1-220-219		GEAR, IDLER
5	82-ZM1-266-11K		LVR, DIR	40	82-ZM3-616-019		RING MAGNET 4
6	82-ZM1-214-010		SPR-T, DIR	41	82-ZM1-216-31K		GEAR, REEL
7	82-ZM1-206-81K		CHAS, HEAD	42	87-A90-319-010		HEAD, PH HADKH2 FPC
8	82-ZM3-307-019		CUSH-G, DIA3.7-8-3.2	42	87-A90-320-010		HEAD, RPH HADKH5 FPC
9	82-ZM1-269-219		SPR-T, BRG	43	82-ZM1-225-21K		GEAR, FR
10	82-ZM1-219-119		SPR-T, LINK	44	82-ZM1-226-019		GEAR, REW
11	82-ZM1-210-119		GEAR, H T	45	82-ZM3-333-310		SLIP DISK ASSY 2
12	82-ZM1-213-019		SPR-T, HEAD	46	82-ZM1-338-010		BELT FR4
13	82-ZM1-207-619		GUIDE, TAPE	47	82-ZM1-349-110		FLY-WHL, R W(DECK 2)
14	86-ZM4-206-010		S-SCREW, AZIMUTH	47	82-ZM3-338-110		FLY-WHL, R3 W(DECK 1)
15	82-ZM1-314-119		PLATE, HEAD	48	82-ZM1-348-010		FLY-WHL, L W(DECK 2)
16	82-ZM1-208-119		HLD, HEAD	48	82-ZM1-348-010		FLY-WHL, L W(DECK 1)
17	82-ZM1-218-019		SPR-E, HB	49	82-ZM3-329-210		BELT, SBU R2
18	82-ZM1-263-110		LVR, EJECT L (DECK 1)	50	82-ZM1-245-210		HLD, IC
18	82-ZM1-264-010		LVR, EJECT R (DECK 2)	51	87-045-347-019		MOT, SHU2L 70(M1)
19	82-ZM1-222-21K		LVR, PLAY	52	82-ZM3-221-010		PULLEY, MOT 2M
20	82-ZM1-217-319		REEL, TABLE	53	82-ZM1-288-019		SH, 1.63-3.2-0.5 SLT
21	82-ZM1-244-510		SPR-C, BT	54	80-ZM6-243-019		SH, 1.75-3.6-0.5 SLT
22	82-ZM1-285-310		SPR-C, BT L	55	82-ZM3-335-210		PULLEY, COUPLER M3 (DECK 1)
23	82-ZM1-257-019		SPR-T, CAS	56	82-ZM3-337-010		BELT, SBU MOT 2
24	82-ZM1-241-319		LVR, MC	57	82-ZM3-339-010		SHAFT, COUPLER N3 (DECK 1)
25	82-ZM1-242-019		LVR, CAS	58	86-ZM1-206-010		BELT, MAIN L
26	82-ZM1-243-019		LVR, STOP	59	82-ZM3-340-010		SH, BELT D2
27	82-ZM1-344-110		LVR ASSY, PINCH R2	A	85-ZM3-202-010		S-SCREW, TG
28	82-ZM1-259-110		SPR-T, PINCH R	B	80-ZM6-207-019		V+1.6-7
29	82-ZM1-240-11K		LVR, REC (DECK 2)	C	82-ZM3-318-019		S-SCRW MOTOR M2
31	82-ZM1-255-319		SPR-E, LVR DIR	D	87-B10-043-010		W-P, 0.99-4-0.25 SLT
32	82-ZM3-305-01K		GEAR, CAM M2	E	82-ZM3-334-010		PW, 2.16-6-0.4
33	82-ZM1-227-21K		LVR, TRIG				
34	82-ZM3-306-11K		LVR, FR M2				
35	82-ZM1-265-119		SPR-E, TRIG				

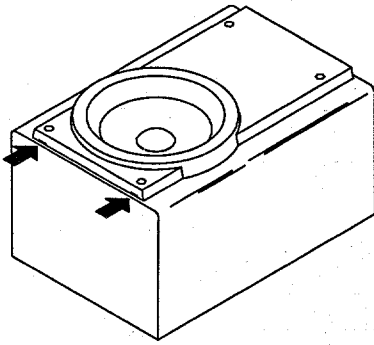
SPRING APPLICATION POSITION



SPEAKER DISASSEMBLY INSTRUCTIONS

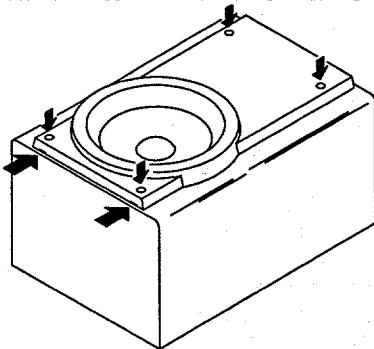
Type.1

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



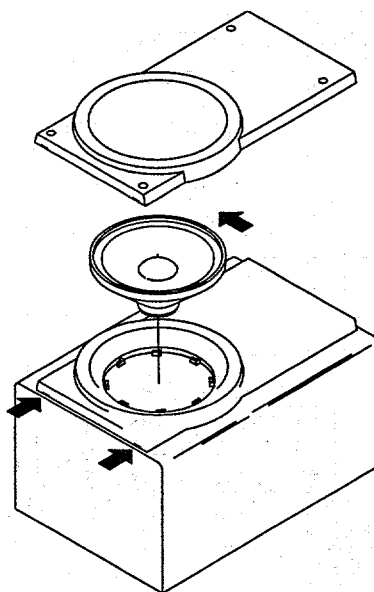
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from 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.

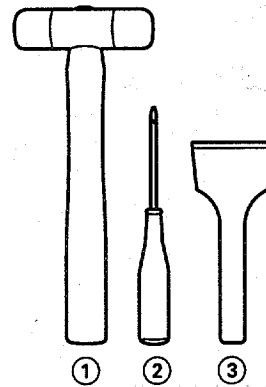


Type.3

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



Type.4



TOOLS

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

How to Remove the PANEL, FR

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

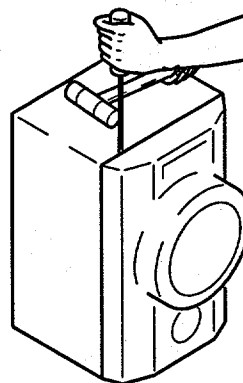


Fig-1

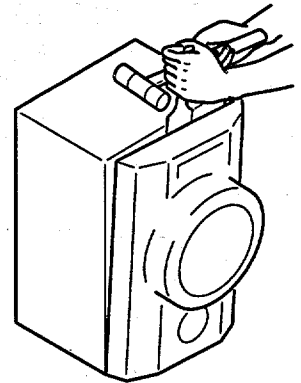


Fig-2

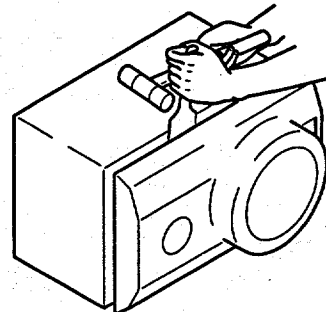


Fig-3

How to Attach the PANEL, FR

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

SPEAKER (SX-NH33) 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-NST-604-010		SPKR, T 60
2	87-NS0-001-010		PANEL, FR
3	87-NS0-002-010		PANEL, SPKR
4	87-NS0-004-010		GRILLE, FRAME ASSY
5	87-NS0-602-010		SPKR, W 160
6	87-NSG-605-010		SPKR, CORD

ACCESSORIES / PACKAGE LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NB8-926-010		IB, E (9L) M<EZ>
1	87-NB8-925-010		IB, K (E) M<K>
1	87-NB8-914-010		IB, HD (EC) M<HD>
2	87-006-225-010		AM LOOP ANT NC2
3	87-043-115-010		FEEDER-ANT, FM<HD>
3	87-043-106-010		ANT, FM 1007AWG<EZ, K>
4	87-NF6-635-010		RC UNIT, RC-7AS06
△ 5	87-009-724-010		PLUG, CONVERSION IR39<HD>

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- --	

アイワ株式会社
AIWA CO.,LTD.

9630466, 750038

Tokyo Japan