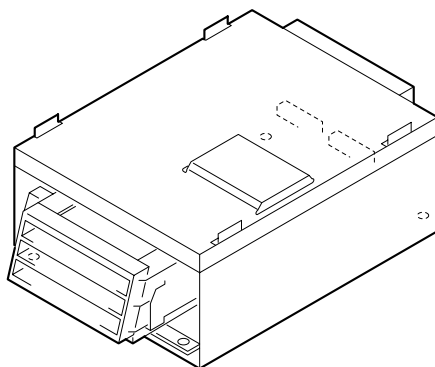




# SERVICE MANUAL

MD MECHANISM

BASIC MD MECHANISM : ZZG-1 A  
7ZG-3 A1

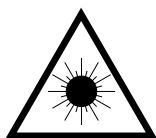
| TYPE |
|------|
| A    |
| YA   |

## 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 ylitävälle näkymättömälle lasersäteilylle.

### WARNING!

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

### CAUTION

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

### ATTENTION

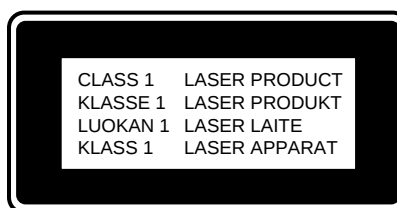
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### ADVARSEL!

Usynlig laserstråling ved åbning, når 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.

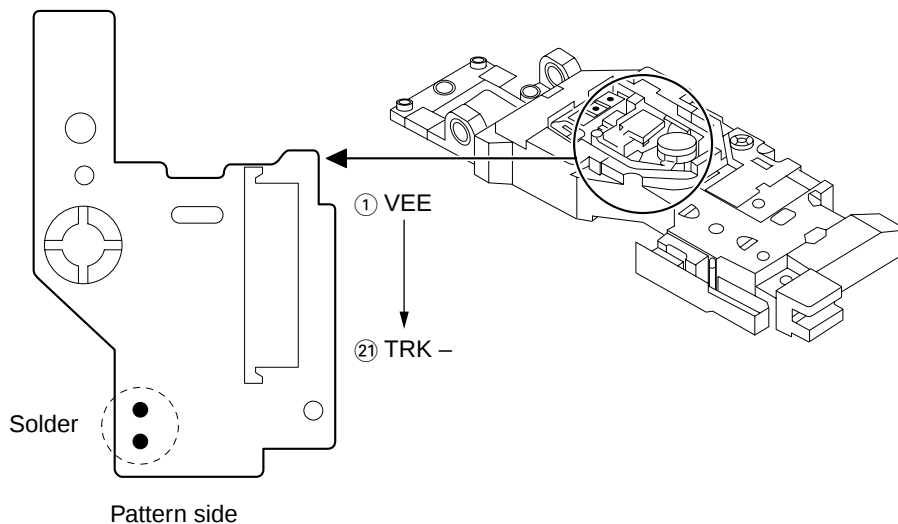


## Precaution to replace Optical block (KMS-260B)

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

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

MD PICKUP Assy P.C.B.



# ELECTRICAL MAIN PARTS LIST

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

| REF. NO    | PART NO.       | KANRI NO.                   | DESCRIPTION | REF. NO | PART NO.       | KANRI NO. | DESCRIPTION              |
|------------|----------------|-----------------------------|-------------|---------|----------------|-----------|--------------------------|
| IC         |                |                             |             | C213    | 87-010-662-080 |           | C-CAP, E 22-6.3          |
|            | 87-A20-707-010 | C-IC, CXA2523AR             |             | C214    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
|            | 87-A21-610-030 | C-IC, CXD2654R              |             | C217    | 87-012-188-080 |           | C-CAP, U 47P-50 CH       |
|            | 87-A20-709-040 | C-IC, BD7910FV              |             | C218    | 87-012-172-080 |           | CAPACITOR CHIP U 10P CH  |
|            | 8A-ZGM-601-030 | C-IC, CXP81960M-561R        |             | C219    | 87-A11-241-080 |           | C-CAP, TN 22-6.3 M F93 A |
|            | 87-A21-526-010 | C-IC, GM71VLS17403CTL-1     |             | C220    | 87-010-662-080 |           | C-CAP, E 22-6.3          |
|            | 87-A20-755-080 | C-IC, AK93C45AF             |             | C221    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            | 87-A20-710-040 | C-IC, S-8110AMP             |             | C222    | 87-016-444-080 |           | C-CAP, TN 47-10 F95E     |
|            | 87-A20-711-040 | C-IC, BA5970FP              |             | C223    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            | 87-A20-712-040 | C-IC, BA6417F               |             | C224    | 87-A10-685-080 |           | C-CAP, S 470P-100 J CH   |
|            | 87-A21-078-080 | C-IC, PCM3003E              |             | C225    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            | 87-017-853-040 | IC, NJM2100V                |             | C226    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            | 87-A20-797-040 | C-IC, NJU7221U30            |             | C227    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
|            | 87-A20-798-040 | C-IC, NJU7221U35            |             | C228    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
|            | 87-A20-714-040 | C-IC, NJM2370U33            |             | C229    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
| TRANSISTOR |                |                             |             | C232    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
|            | 87-026-423-080 | C-TR RN2305                 |             | C233    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
|            | 89-115-884-080 | CHIP -TRANSISTER 2SA1588Y   |             | C237    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
|            | 89-341-164-080 | CHIP-TRANSISTOR, 2SC4116 Y  |             | C300    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            | 87-026-412-080 | C-TR RN1305                 |             | C301    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| DIODE      |                |                             |             | C302    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            | 87-001-166-080 | DIODE, 1SS301               |             | C305    | 87-A11-067-080 |           | C-CAP, S 1-10 K B        |
|            | 87-A40-412-040 | C-DIODE, SB05-05CP          |             | C307    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            | 87-020-764-080 | CHIP-ZENER, 02CZ4.7X        |             | C308    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            |                |                             |             | C311    | 87-010-662-080 |           | C-CAP, E 22-6.3          |
| MD C.B     |                |                             |             | C312    | 87-012-195-080 |           | C-CAP, U 100P-50CH       |
|            | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C321    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
| C9         | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C322    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
| C10        | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C323    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
| C100       | 87-A11-241-080 | C-CAP, TN 22-6.3 M F93 A    |             | C324    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
| C101       | 87-A11-241-080 | C-CAP, TN 22-6.3 M F93 A    |             | C325    | 87-012-274-080 |           | CHIP CAP, U 1000P-50B    |
| C102       | 87-012-286-080 | CAP, U 0.01-25              |             | C400    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
|            |                |                             |             | C401    | 87-012-286-080 |           | CAP, U 0.01-25           |
| C103       | 87-010-787-080 | CAP, U 0.022-25             |             | C402    | 87-012-286-080 |           | CAP, U 0.01-25           |
| C104       | 87-010-662-080 | C-CAP, E 22-6.3             |             | C403    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C105       | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C404    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C106       | 87-A11-067-080 | C-CAP, S 1-10 K B           |             | C405    | 87-010-661-080 |           | C-CAP, E 10-16           |
| C107       | 87-012-195-080 | C-CAP, U 100P-50CH          |             | C406    | 87-010-779-080 |           | C-CAP, E 100-6.3         |
|            |                |                             |             | C407    | 87-012-197-080 |           | C-CAP, U 150P-50 CH      |
| C108       | 87-012-274-080 | CHIP CAP, U 1000P-50B       |             | C408    | 87-012-197-080 |           | C-CAP, U 150P-50 CH      |
| C109       | 87-016-558-080 | C-CAP, TN47-6.3F93B         |             | C411    | 87-012-271-080 |           | CAP, U 560P-50           |
| C111       | 87-A11-241-080 | C-CAP, TN 22-6.3 M F93 A    |             | C412    | 87-012-271-080 |           | CAP, U 560P-50           |
| C112       | 87-012-286-080 | CAP, U 0.01-25              |             | C413    | 87-012-197-080 |           | C-CAP, U 150P-50 CH      |
| C113       | 87-012-284-080 | CAP, U 6800P-50             |             | C414    | 87-012-197-080 |           | C-CAP, U 150P-50 CH      |
|            |                |                             |             | C417    | 87-012-268-080 |           | C-CAP, U 330P-50 B       |
| C114       | 87-010-828-080 | CHIP CAPACITOR, U 0.033-25F |             | C418    | 87-012-268-080 |           | C-CAP, U 330P-50 B       |
| C115       | 87-A10-369-080 | C-CAP, S 0.47-16 K B        |             | C423    | 87-012-286-080 |           | CAP, U 0.01-25           |
| C116       | 87-012-282-080 | CAP, U 4700P-50             |             | C424    | 87-012-286-080 |           | CAP, U 0.01-25           |
| C117       | 87-A11-067-080 | C-CAP, S 1-10 K B           |             | C429    | 87-012-286-080 |           | CAP, U 0.01-25           |
| C118       | 87-012-282-080 | CAP, U 4700P-50             |             | C430    | 87-012-286-080 |           | CAP, U 0.01-25           |
|            |                |                             |             | C431    | 87-010-779-080 |           | C-CAP, E 100-6.3         |
| C119       | 87-016-491-080 | C-CAP, S 0.22-16 FZ         |             | C434    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C120       | 87-010-787-080 | CAP, U 0.022-25             |             | C500    | 87-010-661-080 |           | C-CAP, E 10-16           |
| C121       | 87-012-286-080 | CAP, U 0.01-25              |             | C501    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C122       | 87-010-829-080 | CAP, U 0.047-16             |             | C502    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C123       | 87-012-286-080 | CAP, U 0.01-25              |             | C503    | 87-010-846-080 |           | C-CAP, E 4.7-35V         |
|            |                |                             |             | C504    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C124       | 87-010-662-080 | C-CAP, E 22-6.3             |             | C505    | 87-010-846-080 |           | C-CAP, E 4.7-35V         |
| C125       | 87-010-662-080 | C-CAP, E 22-6.3             |             | C506    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C201       | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C507    | 87-010-661-080 |           | C-CAP, E 10-16           |
| C202       | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C508    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C203       | 87-010-785-080 | C-CAP, U0.015-25BK          |             | C509    | 87-010-846-080 |           | C-CAP, E 4.7-35V         |
|            |                |                             |             | C510    | 87-010-831-080 |           | C-CAP, U, 0.1-16F        |
| C204       | 87-016-461-080 | C-CAP, S 0.47-16F           |             | C511    | 87-010-661-080 |           | C-CAP, E 10-16           |
| C205       | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C513    | 87-010-661-080 |           | C-CAP, E 10-16           |
| C206       | 87-012-270-080 | CAP, U 470P-50              |             | C514    | 87-010-661-080 |           | C-CAP, E 10-16           |
| C207       | 87-016-461-080 | C-CAP, S 0.47-16F           |             | C515    | 87-012-337-080 |           | C-CAP, U 56P-50 CH       |
| C208       | 87-012-286-080 | CAP, U 0.01-25              |             | C516    | 87-012-337-080 |           | C-CAP, U 56P-50 CH       |
|            |                |                             |             | C517    | 87-012-278-080 |           | C-CAP, U 2200P-50 B      |
| C209       | 87-010-831-080 | C-CAP, U, 0.1-16F           |             | C518    | 87-012-278-080 |           | C-CAP, U 2200P-50 B      |
| C210       | 87-012-176-080 | CAP 15P                     |             |         |                |           |                          |
| C211       | 87-012-176-080 | CAP 15P                     |             |         |                |           |                          |
| C212       | 87-012-195-080 | C-CAP, U 100P-50CH          |             |         |                |           |                          |

| REF. NO | PART NO.       | KANRI NO.                | DESCRIPTION | REF. NO | PART NO.       | KANRI NO.                    | DESCRIPTION |
|---------|----------------|--------------------------|-------------|---------|----------------|------------------------------|-------------|
| C519    | 87-010-831-080 | C-CAP,U,0.1-16F          |             | L504    | 87-005-774-080 | C-COIL,4BLH                  |             |
| C520    | 87-010-661-080 | C-CAP,E 10-16            |             | L505    | 87-005-774-080 | C-COIL,4BLH                  |             |
| C521    | 87-010-831-080 | C-CAP,U,0.1-16F          |             | L611    | 87-A50-163-080 | C-COIL,ZBFS5101-PT           |             |
| C522    | 87-010-661-080 | C-CAP,E 10-16            |             | L612    | 87-005-512-080 | C-COIL,BLM21A05              |             |
| C523    | 87-010-662-080 | C-CAP,E 22-6.3           |             | L614    | 87-A50-163-080 | C-COIL,ZBFS5101-PT           |             |
| C524    | 87-010-662-080 | C-CAP,E 22-6.3           |             | L615    | 87-A90-034-080 | C-FLTR,EMI BLM41P750         |             |
| C525    | 87-012-274-080 | CHIP CAP,U 1000P-50B     |             | L616    | 87-A50-163-080 | C-COIL,ZBFS5101-PT           |             |
| C526    | 87-012-274-080 | CHIP CAP,U 1000P-50B     |             | R315    | 87-022-239-080 | C-RES U 10K-1/16WF           |             |
| C527    | 87-010-661-080 | C-CAP,E 10-16            |             | R423    | 87-025-564-080 | C-RES,U M/F 47K D            |             |
| C528    | 87-010-661-080 | C-CAP,E 10-16            |             | R424    | 87-025-564-080 | C-RES,U M/F 47K D            |             |
| C530    | 87-010-831-080 | C-CAP,U,0.1-16F          |             | R425    | 87-022-583-080 | C-RES,U M/F 12K D            |             |
| C531    | 87-010-831-080 | C-CAP,U,0.1-16F          |             | R426    | 87-022-583-080 | C-RES,U M/F 12K D            |             |
| C532    | 87-010-831-080 | C-CAP,U,0.1-16F          |             | S701    | 87-A90-947-080 | C-SW,MICRO SPPB63            |             |
| C600    | 87-010-662-080 | C-CAP,E 22-6.3           |             | S702    | 87-A90-947-080 | C-SW,MICRO SPPB63            |             |
| C601    | 87-010-779-080 | C-CAP,E 100-6.3          |             | X200    | 87-A70-270-080 | C-VIB,XTAL 45.1584MHZ SMD-49 |             |
| C602    | 87-010-779-080 | C-CAP,E 100-6.3          |             | X301    | 87-A70-100-080 | C-VIB,CER 12.0MHZ PBRC-BR-A  |             |
| C603    | 87-010-662-080 | C-CAP,E 22-6.3           |             |         |                |                              |             |
| C604    | 87-010-779-080 | C-CAP,E 100-6.3          |             |         |                |                              |             |
| C605    | 87-012-286-080 | CAP, U 0.01-25           |             |         |                |                              |             |
| C607    | 87-A10-711-080 | C-CAP,E 100-6.3 M MF     |             |         |                |                              |             |
| C701    | 87-010-779-080 | C-CAP,E 100-6.3          |             |         |                |                              |             |
| C702    | 87-012-286-080 | CAP, U 0.01-25           |             |         |                |                              |             |
| C703    | 87-012-286-080 | CAP, U 0.01-25           |             |         |                |                              |             |
| C706    | 87-010-831-080 | C-CAP,U,0.1-16F          |             |         |                |                              |             |
| CN100   | 87-A61-347-080 | C-CONN,21P H XF2H-2115-1 |             |         |                |                              |             |
| CN200   | 87-A60-816-080 | C-CONN,9P V 6232         |             |         |                |                              |             |
| CN300   | 87-A60-518-080 | C-CONN,8P H 6232         |             |         |                |                              |             |
| CN400   | 87-A60-714-080 | C-CONN,8P V FMN-BMTR     |             |         |                |                              |             |
| CN600   | 87-A60-519-080 | C-CONN,14P H 6232        |             |         |                |                              |             |
| CN700   | 87-A60-814-080 | C-CONN,4P H 6232         |             |         |                |                              |             |
| FB204   | 83-XM1-617-080 | C-COIL,BK2125HM601       |             |         |                |                              |             |
| FB205   | 83-XM1-617-080 | C-COIL,BK2125HM601       |             |         |                |                              |             |
| FB501   | 87-A90-828-080 | C-F-BEAD, BK1608LM182    |             |         |                |                              |             |
| 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        |             |         |                |                              |             |
| L204    | 87-003-367-080 | C-COIL,U 2.2UHK          |             |         |                |                              |             |
| 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        |             |         |                |                              |             |

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

#### チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

Chip Resistor Part Coding



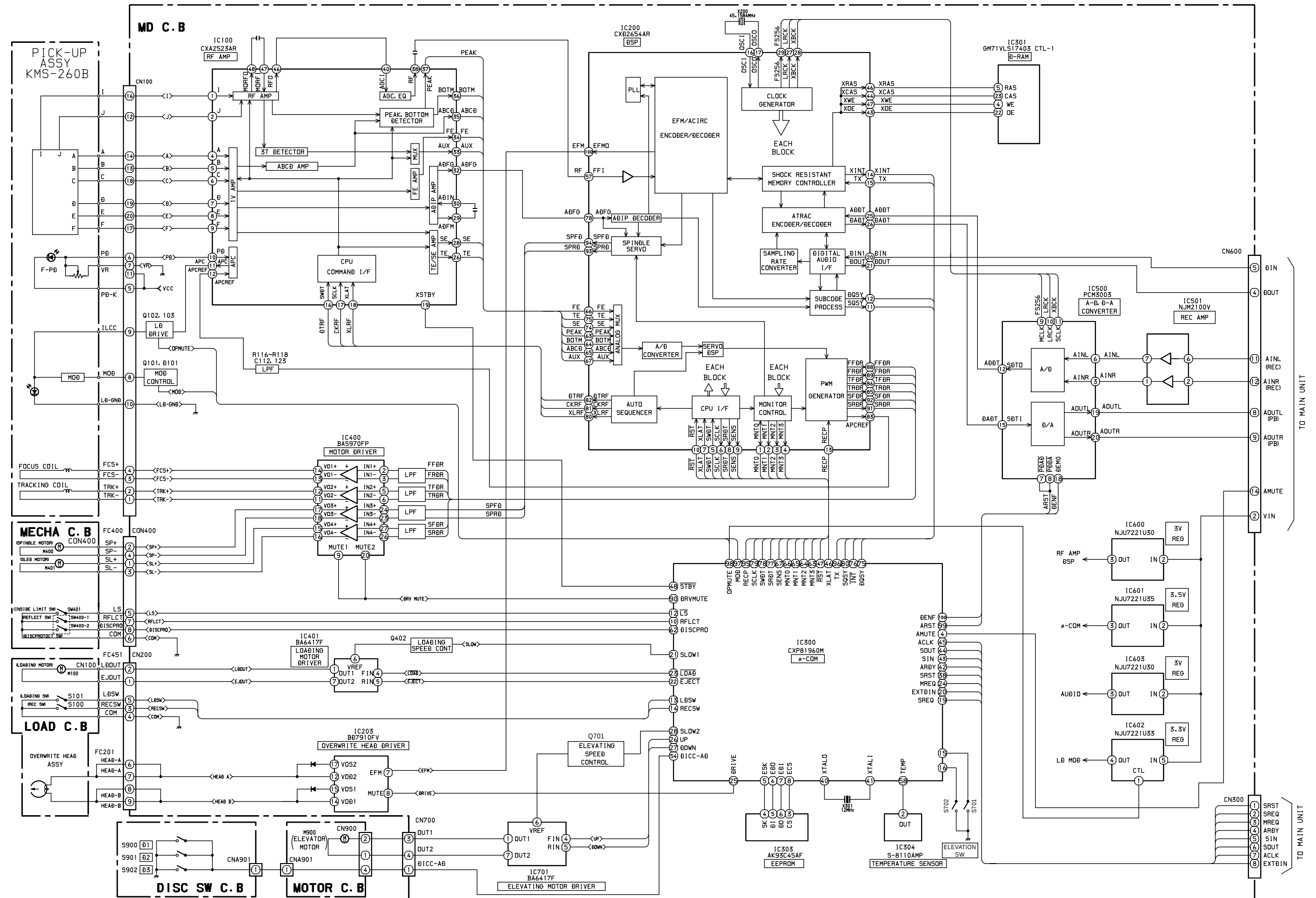
A  
抵抗部品コード  
Resistor Code

桁表示  
Figure  
抵抗値  
Value of resistor

チップ抵抗  
Chip resistor

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

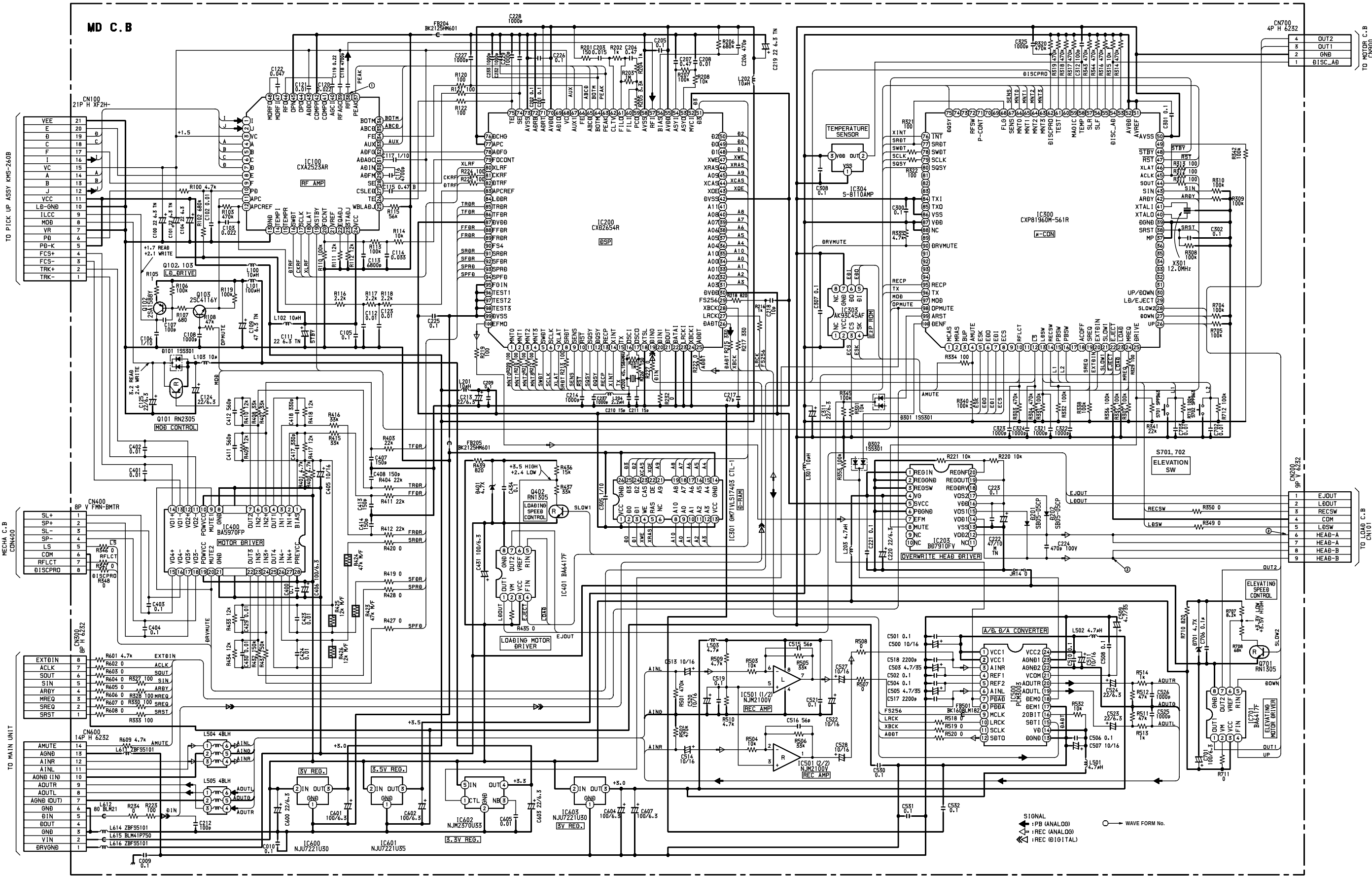
### BLOCK DIAGRAM



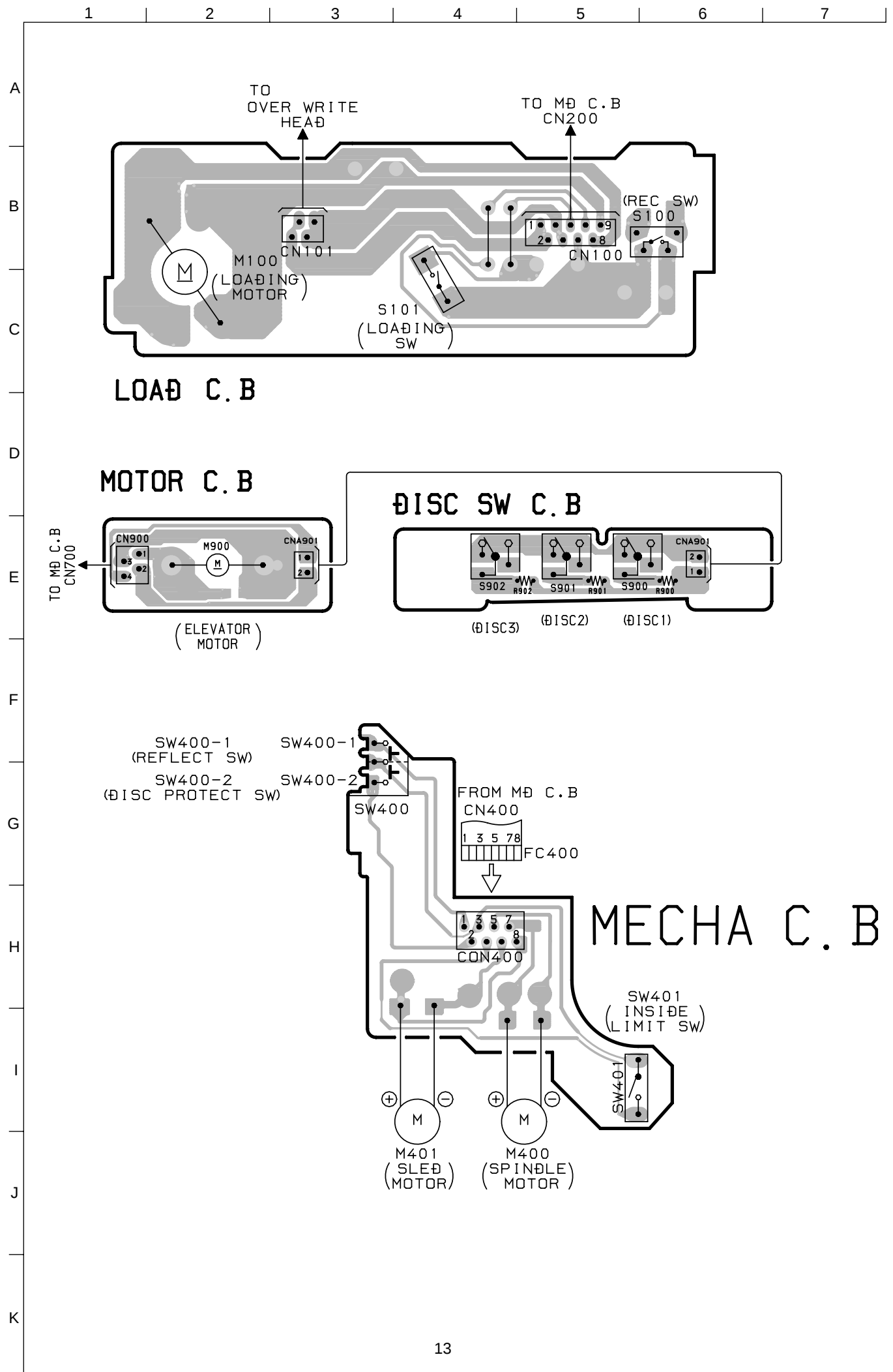




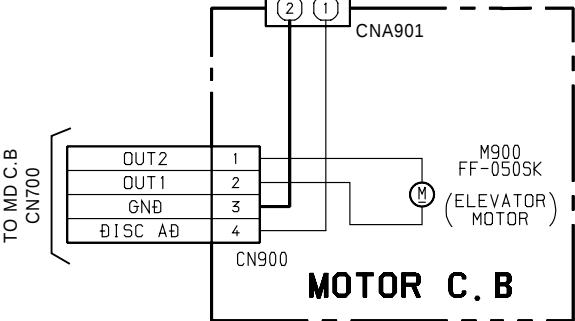
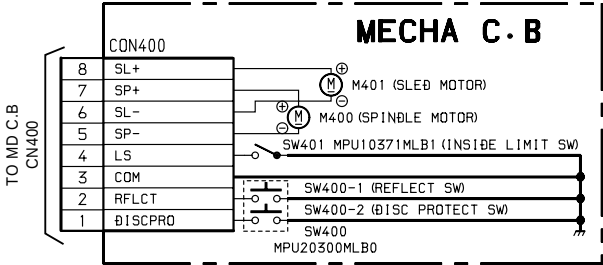
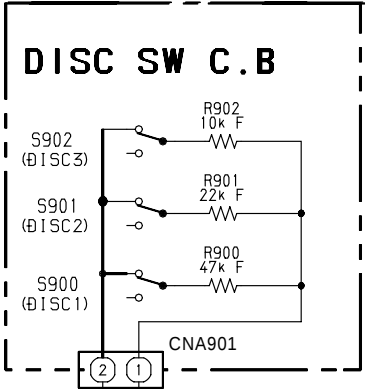
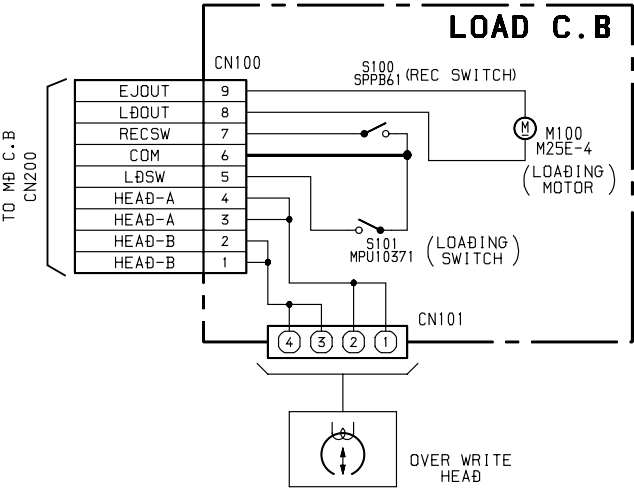
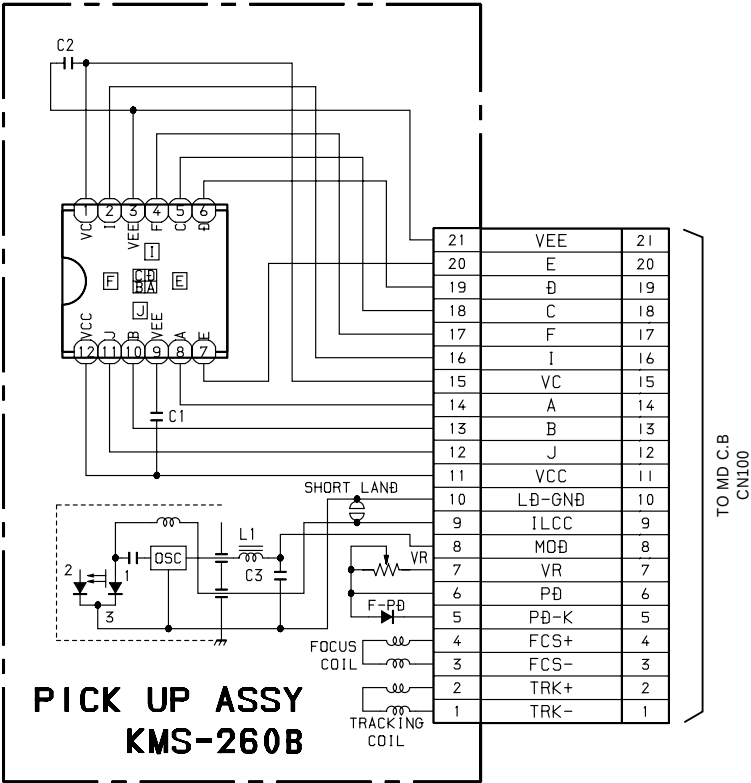
SCHEMATIC DIAGRAM-1 (MD)



# WIRING-2 (LOAD/MOTOR/DISC SW/MECHA)

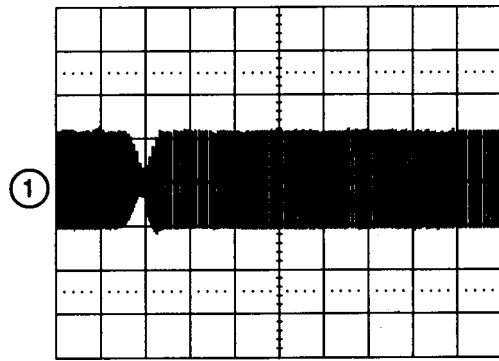


SCHEMATIC DIAGRAM-2 (PICK UP/LOAD/DISC SW/MOTOR/MECHA)

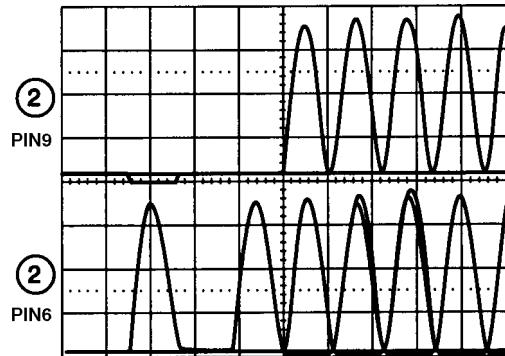


## WAVE FORM

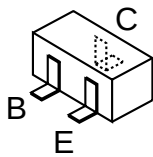
- ① IC100 Pin ③⑧ (RF) VOLT/DIV: 0.5V  
TIME/DIV: 1mS



- ② CN200 Pin ⑨ (HEAD-B) VOLT/DIV: 10V  
CN200 Pin ⑥ (HEAD-A) TIME/DIV: 0.2μS



## TRANSISTOR ILLUSTRATION



2SA1588  
2SC4116  
RN1305  
RN2305

## IC DESCRIPTION

### IC, CXA2523AR

| Pin No. | Pin Name | I/O | Description                                               |
|---------|----------|-----|-----------------------------------------------------------|
| 1       | I        | I   | Input “I” RF signal converted to I-V.                     |
| 2       | J        | I   | Input “J” RF signal converted to I-V.                     |
| 3       | VC       | O   | Output voltage for VCC/2.                                 |
| 4       | A        | I   | Input current for main beam servo signal A.               |
| 5       | B        | I   | Input current for main beam servo signal B.               |
| 6       | C        | I   | Input current for main beam servo signal C.               |
| 7       | D        | I   | Input current for main beam servo signal D.               |
| 8       | E        | I   | Input current for side beam servo signal E.               |
| 9       | F        | I   | Input current for side beam servo signal F.               |
| 10      | PD       | I   | Input beam spectrum monitor signal.                       |
| 11      | APC      | O   | Output laser APC.                                         |
| 12      | APCREF   | I   | Input reference voltage for laser power setting.          |
| 13      | GND      | —   | GND.                                                      |
| 14      | TEMPI    | I   | Not used.                                                 |
| 15      | TEMPR    | I   |                                                           |
| 16      | SWDT     | I   | Input micro-processor serial interface data.              |
| 17      | SCLK     | I   | Input micro-processor serial interface shift clock.       |
| 18      | XLAT     | I   | Input micro-processor serial interface latch. “L”: Latch. |
| 19      | XSTBY    | I   | Standby setting pin. “H”: Normal mode, “L”: Standby.      |
| 20      | FOCNT    | I   | Internal current setting pin.                             |
| 21      | VREF     | O   | Not used.                                                 |
| 22      | EQADJ    | I/O | EQ central frequency setting pin.                         |
| 23      | 3TADJ    | I/O | BPF3T central frequency setting pin.                      |
| 24      | VCC      | —   | Power supply pin.                                         |
| 25      | WBLADJ   | I/O | BPF22 central frequency setting pin.                      |
| 26      | TE       | O   | Output tracking error signal.                             |
| 27      | CSLED    | —   | LPF capacitor connection pin for SLED error signal.       |
| 28      | SE       | O   | Output SLED error signal.                                 |
| 29      | ADFM     | O   | Output ADIP FM signal.                                    |
| 30      | ADIN     | I   | Input ADIP signal comparator.                             |
| 31      | ADAGC    | —   | ADIPAGC capacitor connection pin.                         |
| 32      | ADFG     | O   | Output ADIP2 binary data signal.                          |
| 33      | AUX      | O   | I3 output temperature signal. Switched by serial command. |
| 34      | FE       | O   | Output focus error signal.                                |
| 35      | ABCD     | O   | Output beam spectrum signal for main beam servo detector. |
| 36      | BOTM     | O   | Output bottom hold signal for RF/ABCD.                    |
| 37      | PEAK     | O   | Output peak hold signal for RF/ABCD.                      |
| 38      | RF       | O   | RF equalizer output pin.                                  |
| 39      | RFAGC    | —   | RFAGC capacitor connection pin.                           |
| 40      | AGCI     | I   | RFAGC input pin.                                          |
| 41      | COMPO    | O   | Not used.                                                 |

| Pin No. | Pin Name | I/O | Description                                                    |
|---------|----------|-----|----------------------------------------------------------------|
| 42      | COMPP    | I   | User comparator non-inverted input pin.                        |
| 43      | ADDC     | I/O | Capacitor connection pin for ADIP amplifier on return circuit. |
| 44      | OPO      | O   | Not used.                                                      |
| 45      | OPN      | I   | Non-inverted input pin for user operational amplifier.         |
| 46      | RFO      | O   | RF amplifier output pin. Check point for eye pattern.          |
| 47      | MORFI    | I   | Input pin where Groove RF signal is AC coupled.                |
| 48      | MORFO    | O   | Output pin for Groove RF signal.                               |

# IC, CXD2654R

| Pin No. | Pin Name | I/O | Description                                                                                                       |
|---------|----------|-----|-------------------------------------------------------------------------------------------------------------------|
| 1       | MNT0     | O   | Monitor output terminal.                                                                                          |
| 2       | MNT1     | O   |                                                                                                                   |
| 3       | MNT2     | O   |                                                                                                                   |
| 4       | MNT3     | O   |                                                                                                                   |
| 5       | SWDT     | I   | Microprocessor serial interface data input.                                                                       |
| 6       | SCLK     | I   | Microprocessor serial interface shift clock input.                                                                |
| 7       | XLAT     | I   | Microprocessor serial interface latch input. Latched at falling down edge.                                        |
| 8       | SRDT     | O   | Microprocessor serial interface data output.                                                                      |
| 9       | SENS     | O   | The terminal which outputs internal status in accordance with the address of the microprocessor serial interface. |
| 10      | RST      | I   | Reset input. L: reset.                                                                                            |
| 11      | SQSY     | O   | Disc sub code Q sync/ADIP sync output.                                                                            |
| 12      | DQSY     | O   | Subcode Q sync output of U-bit CD or MD format when the DIGITAL IN source is CD or MD.                            |
| 13      | RECP     | I   | Laser power selection input. H: Recording power, L: Playback power.                                               |
| 14      | XINT     | O   | Interrupt request output terminal. L is output when interrupt status is generated.                                |
| 15      | TX       | I   | Record data output enable signal input terminal. H: enable.                                                       |
| 16      | OSCI     | I   | Crystal oscillator circuit input terminal.                                                                        |
| 17      | OSCO     | O   | Crystal oscillator circuit output terminal. (Inverted output of OSCI).                                            |
| 18      | XTSL     | I   | OSCI terminal input frequency selection. H: 512 Fs (22.5792 MHz), L: 1024 Fs (45.1584 MHz).                       |
| 19      | DIN0     | I   | Digital audio interface signal input 1.                                                                           |
| 20      | DIN1     | I   | Digital audio interface signal input 2.                                                                           |
| 21      | DOUT     | O   | Digital audio interface signal output.                                                                            |
| 22      | DATAI    | I   | Test pin. Connect to GND.                                                                                         |
| 23      | LRCKI    | I   | Test pin. Connect to GND.                                                                                         |
| 24      | XBCKI    | I   | Test pin. Connect to GND.                                                                                         |
| 25      | ADDT     | I   | Data input from A/D converter.                                                                                    |
| 26      | DADT     | O   | REC monitor output/decoded audio data output.                                                                     |
| 27      | LRCK     | O   | LR clock (44.1kHz) output to the external audio block.                                                            |
| 28      | XBCK     | O   | Bit clock (2.8224MHz) output to the external audio block.                                                         |
| 29      | FS256    | O   | 256Fs output.                                                                                                     |
| 30      | DVDD     | —   | Digital power supply.                                                                                             |
| 31      | A03      | O   | Eternal DRAM address output.                                                                                      |
| 32      | A02      | O   |                                                                                                                   |
| 33      | A01      | O   |                                                                                                                   |
| 34      | A00      | O   |                                                                                                                   |
| 35      | A10      | O   |                                                                                                                   |
| 36      | A04      | O   |                                                                                                                   |
| 37      | A05      | O   |                                                                                                                   |
| 38      | A06      | O   |                                                                                                                   |

| Pin No. | Pin Name | I/O | Description                                                                                      |
|---------|----------|-----|--------------------------------------------------------------------------------------------------|
| 39      | A07      | O   | Eternal DRAM address output.                                                                     |
| 40      | A08      | O   |                                                                                                  |
| 41      | A11      | O   | Eternal DRAM address output. (Not connected)                                                     |
| 42      | DVSS     | —   | Digital ground.                                                                                  |
| 43      | XOE      | O   | External DRAM output enable.                                                                     |
| 44      | XCAS     | O   | External DRAM $\overline{\text{CAS}}$ output.                                                    |
| 45      | A09      | O   | External DRAM address output.                                                                    |
| 46      | XRAS     | O   | External DRAM $\overline{\text{RAS}}$ output.                                                    |
| 47      | XWE      | O   | External DRAM write enable.                                                                      |
| 48      | D1       | I/O | External DRAM data bus.                                                                          |
| 49      | D0       | I/O |                                                                                                  |
| 50      | D2       | I/O |                                                                                                  |
| 51      | D3       | I/O |                                                                                                  |
| 52      | MVCI     | I   | External VCO (784Fs) clock input.                                                                |
| 53      | ASYO     | O   | Playback EFM full- swing output. (Low: VSS; high: VDD)                                           |
| 54      | ASYI     | I   | Playback EFM comparator slice voltage input.                                                     |
| 55      | AVDD     | —   | Analog power supply.                                                                             |
| 56      | BIAS     | I   | Playback EFM comparator bias current input.                                                      |
| 57      | RFI      | I   | Playback EFM RF signal input.                                                                    |
| 58      | AVSS     | —   | Analog ground.                                                                                   |
| 59      | PCO      | O   | Phase comparison output for master PLL of playback digital PLL and recording EFM PLL.            |
| 60      | FILI     | I   | Filter input for master PLL of playback digital PLL and recording EFM PLL.                       |
| 61      | FILO     | O   | Filter output for master PLL of playback digital PLL and recording EFM PLL.                      |
| 62      | CLTV     | I   | Internal VCO control voltage input for master PLL of playback digital PLL and recording EFM PLL. |
| 63      | PEAK     | I   | Peak hold signal input for quantity of light.                                                    |
| 64      | BOTM     | I   | Bottom hold signal input for quantity of light.                                                  |
| 65      | ABCD     | I   | Signal input for quantity of light.                                                              |
| 66      | FE       | I   | Focus error signal input.                                                                        |
| 67      | AUX1     | I   | Auxiliary input 1.                                                                               |
| 68      | VC       | I   | Center voltage input.                                                                            |
| 69      | ADIO     | O   | Monitor output for A/D converter input signal. (Not connected)                                   |
| 70      | AVDD     | —   | Analog power supply.                                                                             |
| 71      | ADRT     | I   | Voltage input for the upper limit of the A/D converter operating range.                          |
| 72      | ADRB     | I   | Voltage input for the lower limit of the A/D converter operating range.                          |
| 73      | AVSS     | —   | Analog ground.                                                                                   |
| 74      | SE       | I   | Sled error signal input.                                                                         |
| 75      | TE       | I   | Tracking error signal input.                                                                     |
| 76      | DCHG     | I   | Connected to the low impedance power supply.                                                     |
| 77      | APC      | I   | Error signal input to the laser digital APC.                                                     |

| Pin No. | Pin Name | I/O | Description                                                             |
|---------|----------|-----|-------------------------------------------------------------------------|
| 78      | ADFG     | I   | ADIP2 binary-converted FM signal (22.05±1 kHz) input.                   |
| 79      | F0CNT    | O   | Current source setting output terminal to CXA2523.                      |
| 80      | XLRF     | O   | Latch output for CXA2523 control. Latched at rise-up.                   |
| 81      | CKRF     | O   | Shift clock output for CXA2523 control.                                 |
| 82      | DTRF     | O   | Data output for CXA2523 control.                                        |
| 83      | APCREF   | O   | Reference PWM output to laser APC.                                      |
| 84      | LDDR     | O   | 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   | Not used.                                                               |
| 91      | SRDR     | O   | Sled servo drive PWM output. (-).                                       |
| 92      | SFDR     | O   | Sled servo drive PWM output. (+).                                       |
| 93      | SPRD     | O   | Spindle servo drive PWM output. (PWM (-) or negative polarity).         |
| 94      | SPFD     | O   | Spindle servo drive PWM output. (PWM (+) or PWM absolute value).        |
| 95      | FGIN     | I   | FG input to spindle CAV servo.                                          |
| 96      | TEST1    | I   | Test pin. Connected to GND.                                             |
| 97      | TEST2    | I   |                                                                         |
| 98      | TEST3    | I   |                                                                         |
| 99      | DVSS     | —   | Digital GND.                                                            |
| 100     | EFMO     | O   | Low signal during playback. EFM (encode data) output: during recording. |

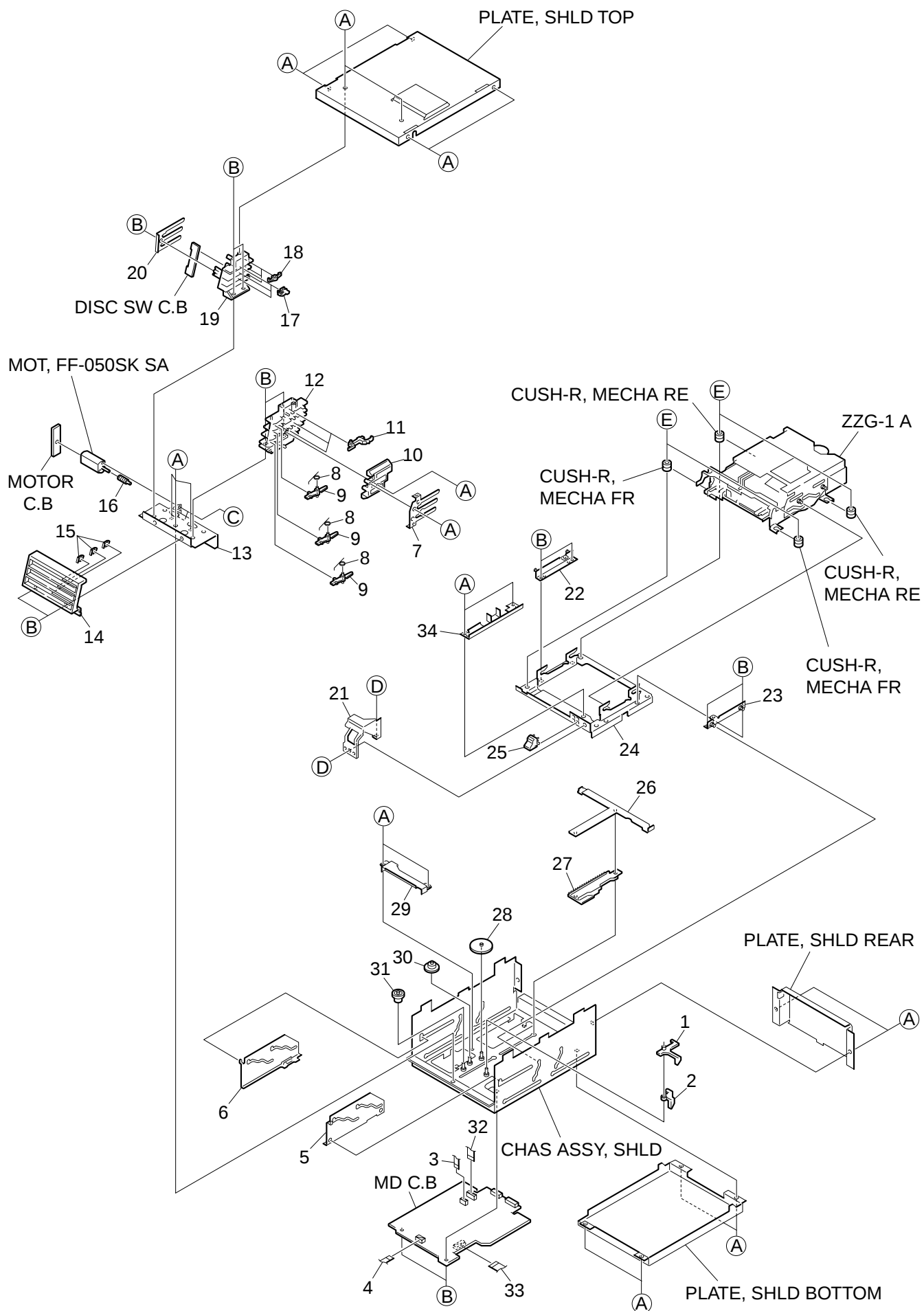
## IC, CXP81960M-561R

| Pin No. | Pin Name                  | I/O | Description                                                              |
|---------|---------------------------|-----|--------------------------------------------------------------------------|
| 1       | MCAS                      | —   | Not used.                                                                |
| 2       | MRAS                      | —   |                                                                          |
| 3       | BUP                       | —   |                                                                          |
| 4       | AMUTE                     | O   | Audio mute signal output.                                                |
| 5       | ESK                       | O   | Serial clock output for EEPROM interface.                                |
| 6       | EDO                       | O   | Serial data output for EEPROM interface.                                 |
| 7       | EDI                       | I   | Serial data input for EEPROM interface.                                  |
| 8       | ECS                       | O   | EEPROM chip select signal output.                                        |
| 9       | NC                        | —   | Not used.                                                                |
| 10      | RFLCT                     | I   | Input from disc reflectance detection switch.                            |
| 11      | NC                        | —   | Not used.                                                                |
| 12      | $\overline{\text{LS}}$    | I   | Input signal from pickup inner circumference detect switch.              |
| 13      | LDSW                      | I   | Input signal from loading mechanism EJECT position detect switch.        |
| 14      | RECSW                     | I   | Input signal from loading mechanism REC position detect switch.          |
| 15      | PBSW                      | I   | Elevator's mechanical position detection switch input.                   |
| 16      | PBSW                      | I   |                                                                          |
| 17      | NC                        | —   | Not used.                                                                |
| 18      | ACOFF                     | —   |                                                                          |
| 19      | SREQ                      | I   | System control send request input signal for system control interface.   |
| 20      | EXTDIN                    | O   | External DIGITAL-IN permission output signal.                            |
| 21      | SLOW1                     | O   | Speed control signal output to loading mechanism.                        |
| 22      | $\overline{\text{EJECT}}$ | O   | Movement direction control signal output-1 to loading mechanism.         |
| 23      | $\overline{\text{LOAD}}$  | O   | Movement direction control signal output-2 to loading mechanism.         |
| 24      | MREQ                      | O   | MD controller send request output signal for system control interface.   |
| 25      | DRIVE                     | O   | EFM driver ON/OFF output signal.                                         |
| 26      | UP                        | O   | Operation direction control signal output 1 from the elevator mechanism. |
| 27      | DOWN                      | O   | Operation direction control signal output 2 from the elevator mechanism. |
| 28      | SLOW2                     | O   | Speed control signal output of the elevator mechanism.                   |
| 29      | LE/EJECT                  | —   | Not used.                                                                |
| 30      | UP/DOWN                   | —   |                                                                          |
| 31      | NC                        | —   |                                                                          |
| 32      | NC                        | —   |                                                                          |
| 33      | NC                        | —   |                                                                          |
| 34      | NC                        | —   |                                                                          |
| 35      | NC                        | —   |                                                                          |
| 36      | NC                        | —   |                                                                          |
| 37      | MP                        | —   | Connected to VSS.                                                        |
| 38      | SRST                      | I   | MD controller reset signal input.                                        |
| 39      | DGND                      | —   | Connected to VSS.                                                        |
| 40      | XTALO                     | O   | External crystal connection terminal-1 for system clock oscillation.     |
| 41      | XTALI                     | I   | External crystal connection terminal-2 for system clock oscillation.     |

| Pin No. | Pin Name | I/O | Description                                                       |
|---------|----------|-----|-------------------------------------------------------------------|
| 42      | ARDY     | I   | READY input signal for system control interface.                  |
| 43      | SIN      | I   | Serial data input for system control interface.                   |
| 44      | SOUT     | O   | Serial data output for system control interface.                  |
| 45      | ACLK     | O   | Serial clock output for system control interface.                 |
| 46      | XLAT     | O   | Latch signal output for CXD2654 interface.                        |
| 47      | RST      | O   | CXD2654 reset signal output.                                      |
| 48      | STBY     | O   | CXA2523 standby signal output.                                    |
| 49      | NC       | O   | Not used.                                                         |
| 50      | AVSS     | —   | Connected to VSS.                                                 |
| 51      | AVREF    | I   | Connected to VDD.                                                 |
| 52      | AVDD     | I   |                                                                   |
| 53      | NC       | I   | Not used.                                                         |
| 54      | DISC_AD  | I   | Selection disc detection.                                         |
| 55      | NC       | I   | Not used.                                                         |
| 56      | SLF      | I   |                                                                   |
| 57      | SLR      | I   |                                                                   |
| 58      | TEMP     | I   | Temperature sensor A/D input.                                     |
| 59      | MAGIC    | I   | Not used.                                                         |
| 60      | NC       | I   |                                                                   |
| 61      | TEST     | I   |                                                                   |
| 62      | DISCPRO  | I   | Disc write protection switch input.                               |
| 63      | MNT3     | I   | CXD2654 monitor signal input-1.                                   |
| 64      | MNT2     | I   | CXD2654 monitor signal input-2.                                   |
| 65      | MNT1     | I   | CXD2654 monitor signal input-3.                                   |
| 66      | MNT0     | I   | CXD2654 monitor signal input-4.                                   |
| 67      | SENS     | I   | CXD2654 SENS signal input.                                        |
| 68      | FLG      | O   | Monitoring signal of flag contained in SRDT of CXD2652 interface. |
| 69      | NC       | O   | Not used.                                                         |
| 70      | NC       | O   |                                                                   |
| 71      | P-CONT   | O   |                                                                   |
| 72      | RFSW     | O   |                                                                   |
| 73      | NC       | O   |                                                                   |
| 74      | NC       | O   |                                                                   |
| 75      | DQSY     | I   | DIGITAL-IN SUB-Q sync input.                                      |
| 76      | INT      | I   | CXD2654 status sync input.                                        |
| 77      | SRDT     | I   | Serial data input for CXD2654 interface.                          |
| 78      | SWDT     | O   | Serial data output for CXD2654 interface.                         |
| 79      | SCLK     | O   | Serial clock output for CXD2654 interface.                        |
| 80      | SQSY     | I   | SUB-Q, ADIP sync input.                                           |
| 81      | NC       | —   | Not used.                                                         |
| 82      | NC       | —   |                                                                   |

| Pin No. | Pin Name | I/O | Description                                              |
|---------|----------|-----|----------------------------------------------------------|
| 83      | NC       | —   | Not used.                                                |
| 84      | TXI      | I   | Connected to VSS.                                        |
| 85      | TXO      | O   | Open.                                                    |
| 86      | VSS      | —   | Connected to VSS.                                        |
| 87      | VDD      | —   | Connected to VDD.                                        |
| 88      | NC       | —   |                                                          |
| 89      | NC       | —   | Not used.                                                |
| 90      | DRVMUTE  | O   | BA5970FP mute signal output.                             |
| 91      | NC       | —   | Not used.                                                |
| 92      | NC       | —   |                                                          |
| 93      | NC       | —   |                                                          |
| 94      | NC       | —   |                                                          |
| 95      | RECP     | O   | Laser power select signal output.                        |
| 96      | TX       | O   | Record data output enable signal output.                 |
| 97      | MOD      | O   | High frequency superimpose circuit ON/OFF signal output. |
| 98      | OPMUTE   | O   | Laser mute signal output.                                |
| 99      | ARST     | O   | PCM3003 reset signal output.                             |
| 100     | DENF     | O   | De-emphasis ON/OFF signal output.                        |

# MECHANICAL EXPLODED VIEW 1/1



## MECHANICAL PARTS LIST 1/1

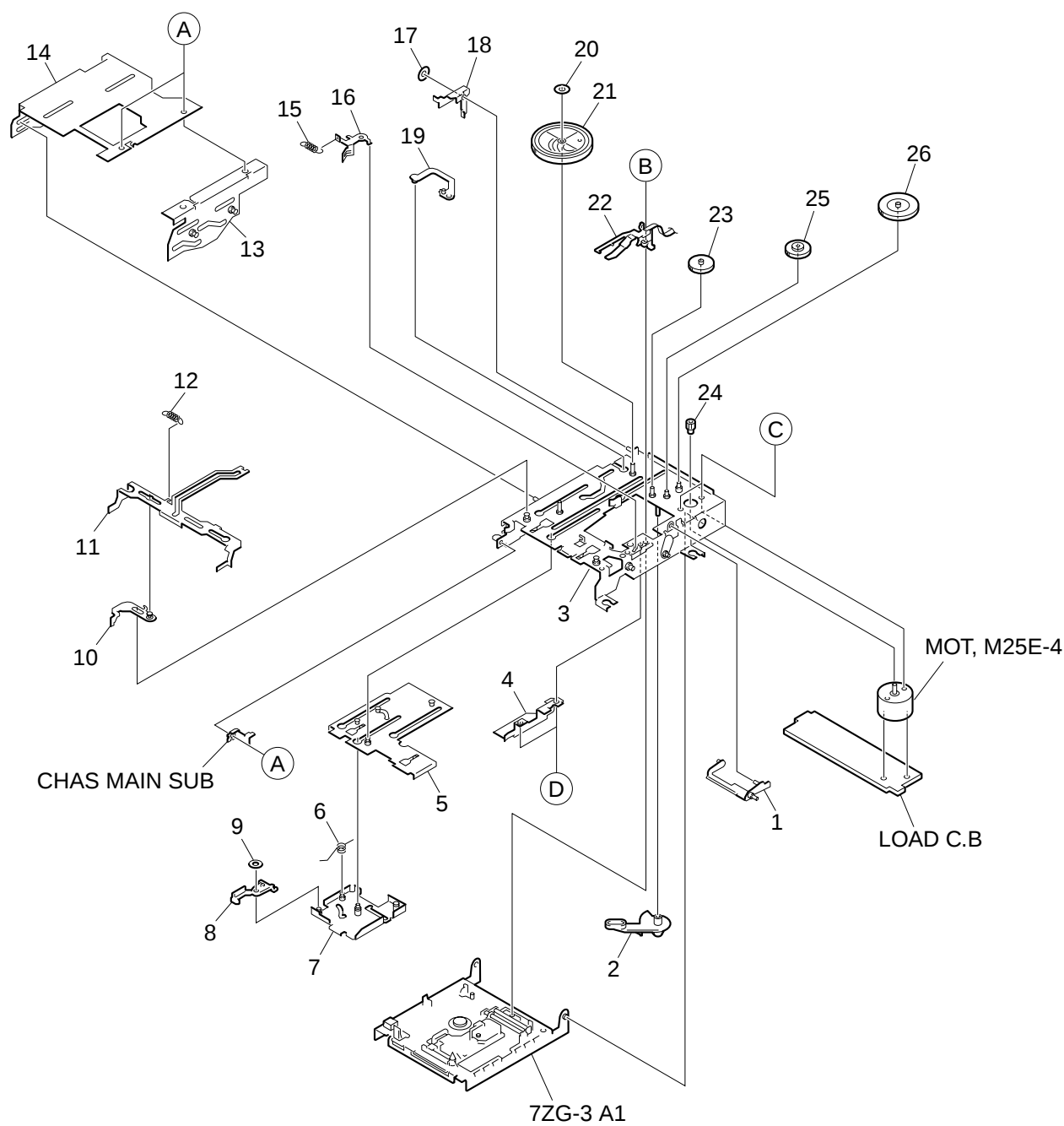
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

| REF. NO | PART NO.       | KANRI NO. | DESCRIPTION            | REF. NO | PART NO.       | KANRI NO. | DESCRIPTION             |
|---------|----------------|-----------|------------------------|---------|----------------|-----------|-------------------------|
| 1       | 8Z-ZG2-220-010 |           | LEVER, SW RACK A       | 21      | 8Z-ZG2-238-010 |           | HLDR, MECHA STOP        |
| 2       | 8Z-ZG2-221-010 |           | LEVER, SW RACK B       | 22      | 8Z-ZG2-241-010 |           | HLDR, ASSY M SUB L      |
| 3       | 8Z-ZG1-606-010 |           | FF-CABLE, 8P 1.0 115MM | 23      | 8Z-ZG2-243-010 |           | HLDR, ASSY M SUB R      |
| 4       | 8Z-ZG2-613-010 |           | FF-CABLE, 4P 1.0 70MM  | 24      | 8Z-ZG2-235-010 |           | HLDR, MECHA             |
| 5       | 8Z-ZG2-213-010 |           | SLIDER ASSY, CAM R     | 25      | 8Z-ZG2-239-010 |           | STOPPER, HLDR M         |
| 6       | 8Z-ZG2-210-010 |           | SLIDER ASSY, CAM L     | 26      | 8Z-ZG2-207-010 |           | JOINT ASSY, SLIDER      |
| 7       | 8Z-ZG2-233-010 |           | SPR-P, STOPPER R       | 27      | 8Z-ZG2-219-010 |           | GEAR, RACK JT           |
| 8       | 8Z-ZG2-245-010 |           | SPR-T, LVR PUSH        | 28      | 8Z-ZG2-218-010 |           | GEAR, JT B              |
| 9       | 8Z-ZG2-230-010 |           | LEVER, PUSH R          | 29      | 8Z-ZG2-244-010 |           | PLATE, PROTECTOR        |
| 10      | 8Z-ZG2-231-010 |           | HLDR, LEVER R          | 30      | 8Z-ZG2-217-010 |           | GEAR, JT A              |
| 11      | 8Z-ZG2-229-010 |           | LEVER, STOPPER R       | 31      | 8Z-ZG2-216-010 |           | WORM-WHL, JT            |
| 12      | 8Z-ZG2-225-010 |           | MAGAZINE, R            | 32      | 8Z-ZG2-612-010 |           | FF-CABLE, 9P 1.0 90MM   |
| 13      | 8Z-ZG2-223-010 |           | HLDR, MAGAZINE         | 33      | 8Z-ZG1-605-010 |           | FF-CABLE, 21P 0.5 100MM |
| 14      | 8Z-ZG2-001-010 |           | MAGAZINE, F            | 34      | 8Z-ZG2-248-010 |           | PLATE, PROTECT PIC      |
| 15      | 8Z-ZG2-247-010 |           | PLATE, MAGAZINE F      | A       | 87-067-684-010 |           | BVT2+2.6-6 W/O SLOT     |
| 16      | 8Z-ZG2-215-010 |           | GEAR, WORM JT          | B       | 87-743-073-410 |           | UT2+2.6-6               |
| 17      | 8Z-ZG2-227-010 |           | STOPPER, L             | C       | 87-262-545-310 |           | V+2-2.5                 |
| 18      | 8Z-ZG2-228-010 |           | LEVER, STOPPER L       | D       | 87-067-421-010 |           | VTT+2-4                 |
| 19      | 8Z-ZG2-224-010 |           | MAGAZINE, L            | E       | 87-ZG9-208-010 |           | S-SCREW, MD T           |
| 20      | 8Z-ZG2-232-010 |           | SPR-P, STOPPER L       |         |                |           |                         |

COLOR NAME TABLE

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

MECHANISM EXPLODED VIEW 1/1 (ZZG-1 A)

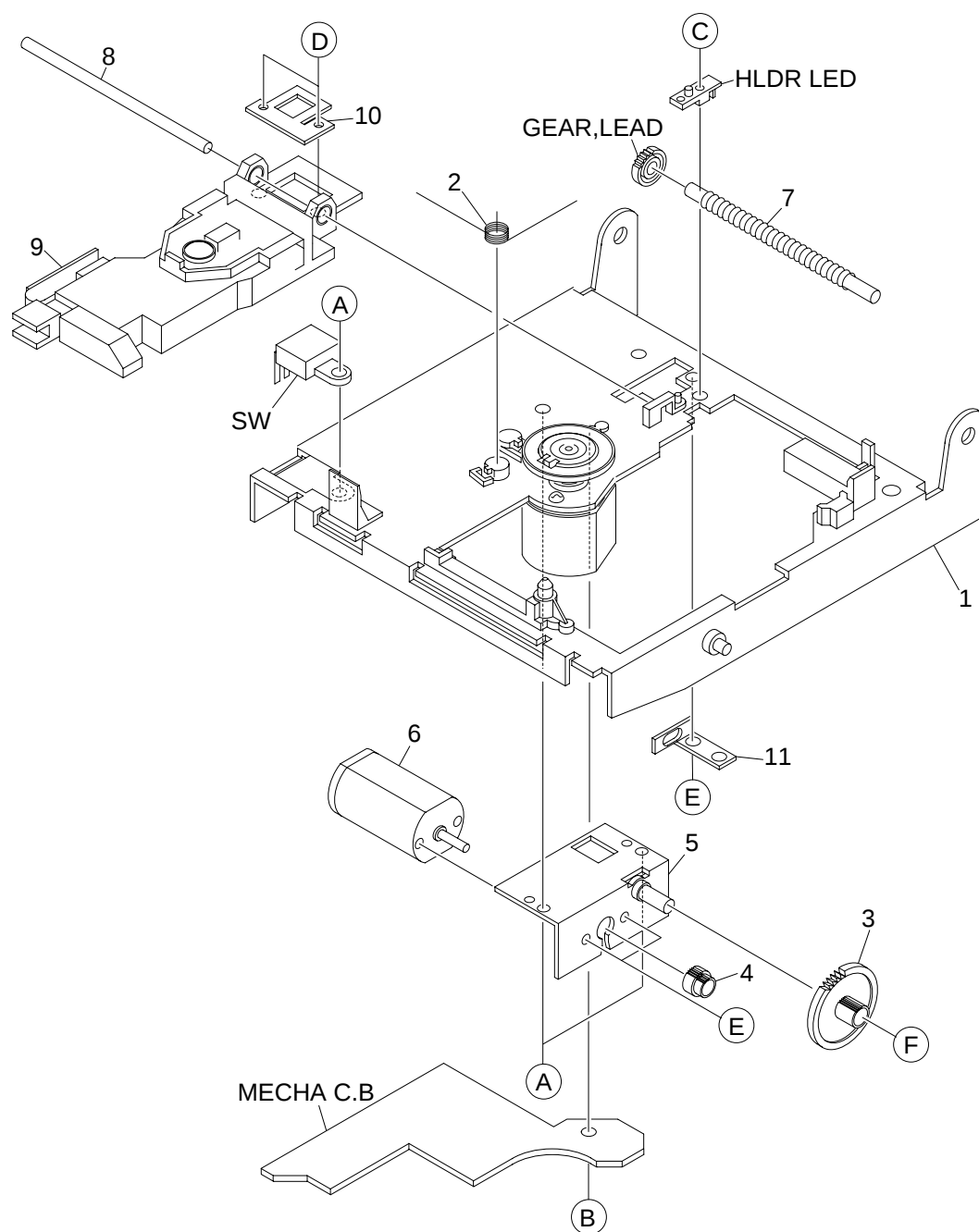


## MD MECHANISM PARTS LIST 1/1 (ZZG-1 A)

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

| REF. NO | PART NO.       | KANRI NO. | DESCRIPTION                    | REF. NO | PART NO.       | KANRI NO. | DESCRIPTION                 |
|---------|----------------|-----------|--------------------------------|---------|----------------|-----------|-----------------------------|
| 1       | 87-ZG8-257-210 |           | LEVER ASSY, REC                | 16      | 87-ZG8-231-010 |           | LEVER, SHUTTER              |
| 2       | 8Z-ZG1-220-010 |           | LEVER, SW EJECT                | 17      | 87-B10-130-010 |           | W-P, 1.23-3.1-0.25 SLIT     |
| 3       | 8Z-ZG1-201-010 |           | CHAS ASSY, MAIN                | 18      | 8Z-ZG1-221-010 |           | LEVER, SW PLAY              |
| 4       | 8Z-ZG1-248-010 |           | PLATE, CTRG                    | 19      | 8Z-ZG1-218-010 |           | LEVER ASSY, CAM             |
| 5       | 8Z-ZG1-210-010 |           | HLDR ASSY, CTRG                | 20      | 87-B10-267-010 |           | W-P, 1.74-4-0.2 BLKSLIT W/O |
| 6       | 8Z-ZG1-209-010 |           | SPR-T, LOAD                    | 21      | 87-ZG8-239-010 |           | CAM, LOAD                   |
| 7       | 8Z-ZG1-206-010 |           | PLATE ASSY, EJECT              | 22      | 87-A90-605-010 |           | HEAD, OWH RF325-74A         |
| 8       | 8Z-ZG1-208-010 |           | LEVER, LOAD                    | 23      | 8Z-ZG1-243-010 |           | GEAR, IDLER                 |
| 9       | 87-B10-193-010 |           | W-P, 1.76-4.5-0.3 SLIT W/O ADH | 24      | 87-ZG8-242-010 |           | GEAR, MOT                   |
| 10      | 8Z-ZG1-223-010 |           | LEVER ASSY, LOAD M             | 25      | 8Z-ZG1-226-010 |           | GEAR, REDUCTION S           |
| 11      | 8Z-ZG1-222-010 |           | SLIDER, OPEN                   | 26      | 8Z-ZG1-225-010 |           | GEAR, REDUCTION L           |
| 12      | 8Z-ZG1-245-010 |           | SPR-E, SL OPEN                 | A       | 87-067-421-010 |           | VTT+2-4                     |
| 13      | 8Z-ZG1-216-010 |           | PLATE ASSY, SLIDE R            | B       | 87-B10-131-010 |           | VW+1.7-5 W/O MFZN2C         |
| 14      | 8Z-ZG1-214-010 |           | PLATE ASSY, SLIDE L            | C       | 87-B10-128-010 |           | V+1.7-2 W/O MFZN2-C         |
| 15      | 87-ZG8-232-110 |           | SPR-E, SHUTTER                 | D       | 87-B10-129-010 |           | VTT+1.7-3.5 W/O MFZN2-C     |

## MD MECHANISM EXPLODED VIEW 1/1 (7ZG-3 A1)



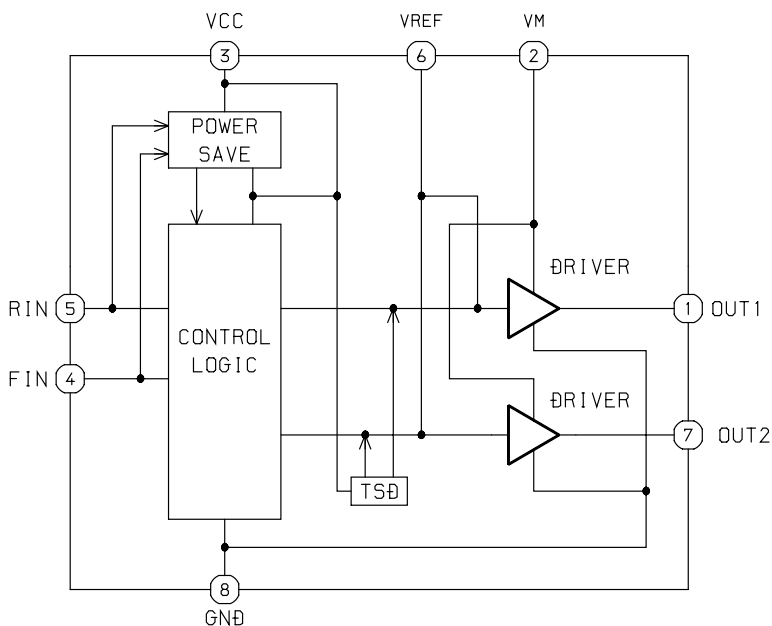
## MD MECHANISM PARTS LIST 1/1 (7ZG-3 A1)

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

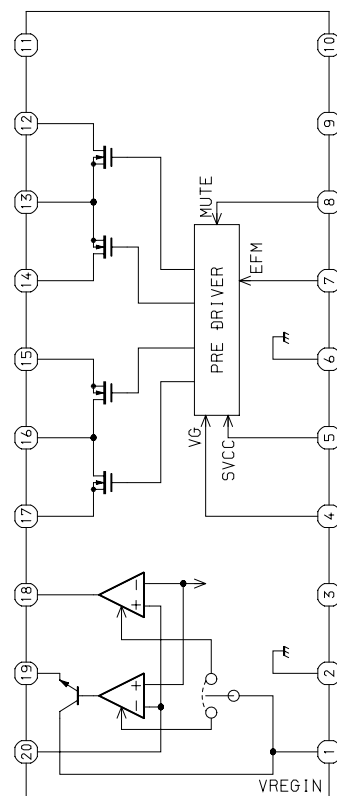
| REF. NO | PART NO.       | KANRI NO. | DESCRIPTION       | REF. NO | PART NO.       | KANRI NO. | DESCRIPTION              |
|---------|----------------|-----------|-------------------|---------|----------------|-----------|--------------------------|
| 1       | 87-ZG3-219-010 |           | CHAS ASSY (7ZG-3) | 11      | 87-ZG3-213-010 |           | SPR-P, LEAD              |
| 2       | 87-ZG3-214-010 |           | SPR-T, SPINDLE-A  | A       | 87-261-547-310 |           | V+2-3 BLK (1)            |
| 3       | 87-ZG3-206-010 |           | GEAR, A           | B       | 87-341-035-210 |           | SCREW, UT1+2-6           |
| 4       | 87-ZG3-205-010 |           | GEAR, MOT SL      | C       | 87-261-509-310 |           | SCREW, V+1.4-4           |
| 5       | 87-ZG3-208-010 |           | HLDR ASSY, MOTOR  | D       | 87-067-393-010 |           | SCREW +1.4-1.4           |
| 6       | 87-A90-616-010 |           | MOT, FF-N30VA     | E       | 87-261-503-310 |           | PRECISION SCREW, V+1.4-2 |
| 7       | 87-ZG3-212-010 |           | SHAFT, LEAD       | F       | 87-078-033-010 |           | PW 1.2-2.5-0.25 SLT      |
| 8       | 87-ZG3-211-010 |           | SHAFT, GUIDE      |         |                |           |                          |
| 9       | 87-A91-444-010 |           | PICKUP, KMS-260B  |         |                |           |                          |
| 10      | 87-ZG3-216-010 |           | SPR-P, RACK       |         |                |           |                          |

## IC BLOCK DIAGRAM

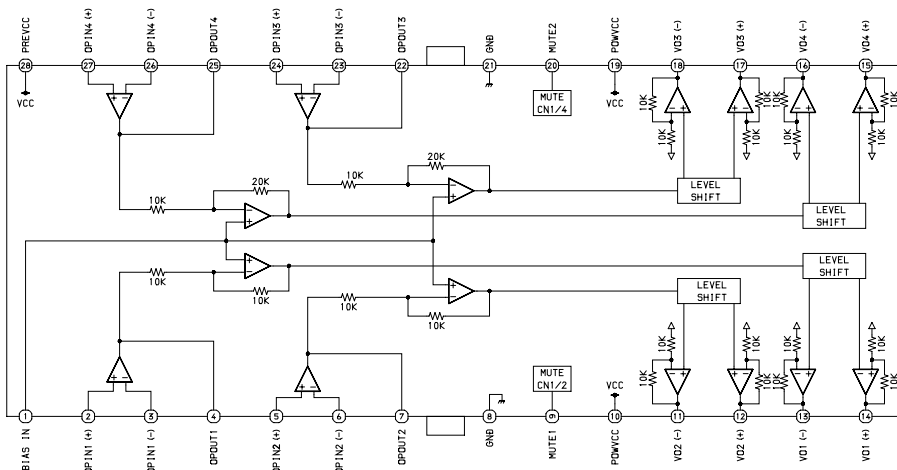
### IC, BA6417F



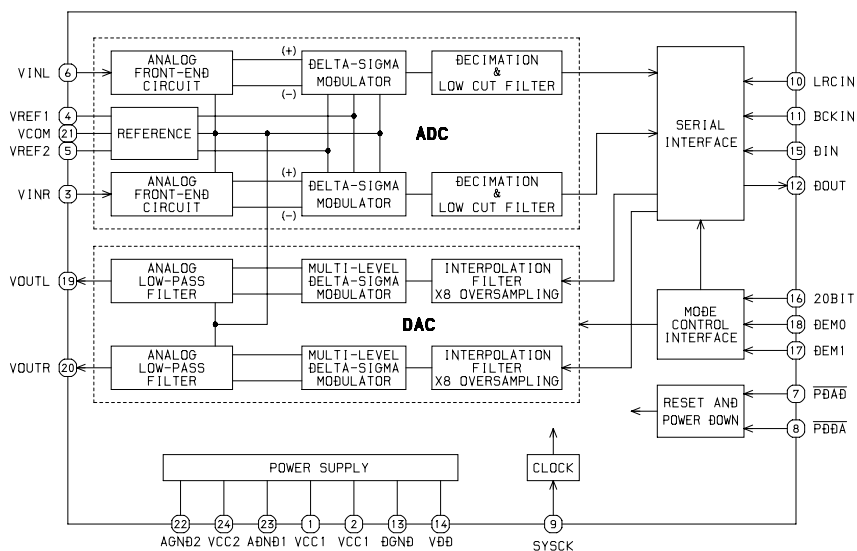
### IC, BD7910FV



### IC, BA5970FP



### IC, PCM3003E



## 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         |
| TRIMMER     | 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          |

