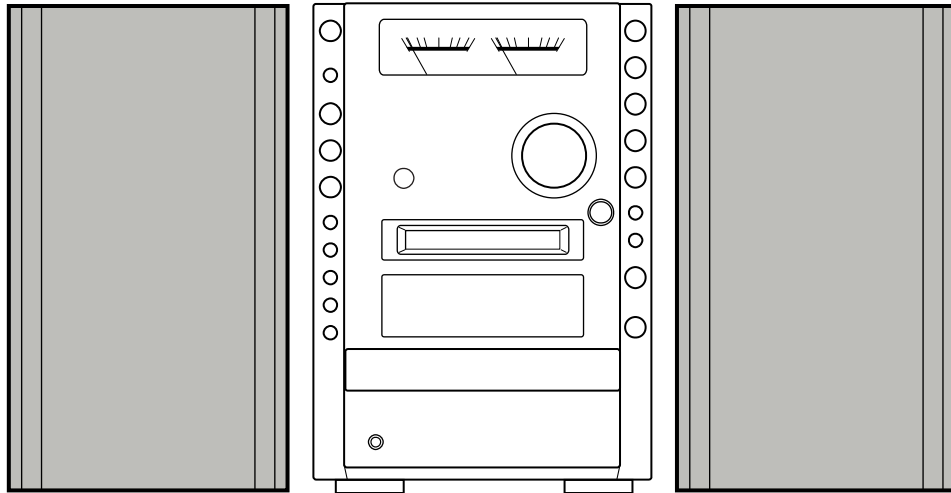


# XR-FD55

CEK



# SERVICE MANUAL

MICRO Hi-Fi COMPONENT SYSTEM

BASIC TAPE MECHANISM : BZM-1 AR2NC  
BASIC CD MECHANISM : 3ZG-3 E14NC  
BASIC MD MECHANISM : MDM-16QA

This Service Manual is "Revision Publishing" and replaces "Simple Manual"  
(S/M Code No. 09-032-365-9T2).

| SYSTEM  | CENTER UNIT | SPEAKER  | REMOTE CONTROLLER |
|---------|-------------|----------|-------------------|
| XR-FD55 | CX-LFD55    | SX-LFD55 | RC-CAS20          |



S/M Code No. 09-032-365-9R2

REVISION

DATA

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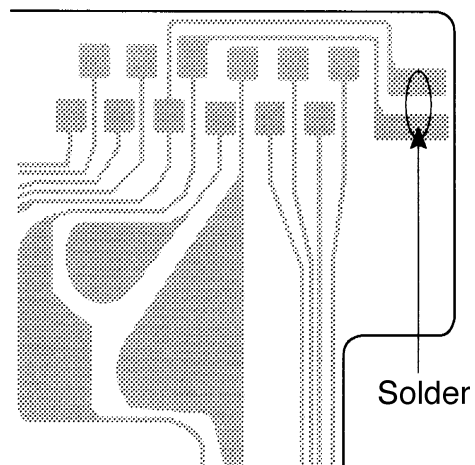
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## PRECAUTION TO REPLACE OPTICAL BLOCK (PXR-104X-BP-0101)

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

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

PICK-UP Assy PWB



# SPECIFICATIONS -1/1

## MAIN UNIT CX-LFD55

### TUNER

|                             |                          |
|-----------------------------|--------------------------|
| FM tuning range             | 87.5 MHz to 108 MHz      |
| FM usable sensitivity (IHF) | 16.8 dBf                 |
| FM antenna terminal         | 75 $\Omega$ (unbalanced) |
| AM tuning range             | 531 kHz to 1602 kHz      |
| AM usable sensitivity       | 350 $\mu$ V/m            |
| AM antenna                  | Loop antenna             |

### AMPLIFIER

|              |   |
|--------------|---|
| Power output | Rated: 24 W + 24 W (6 $\Omega$ , T.H.D.1%, 1 kHz/DIN 45500)<br>Reference: 30 W + 30 W (6 $\Omega$ , T.H.D.10%, 1 kHz/DIN 45324) |
| Input        | AUX IN: 800 mV<br>DIGITAL IN (supported sampling frequencies: 32 kHz, 44.1 kHz and 48 kHz)                                      |
| Outputs      | SPEAKERS: 6 $\Omega$ or more<br>PHONES: 32 $\Omega$ or more<br>SUB WOOFER: 1.2 V  |

### CD PLAYER

|                    |   |
|--------------------|---|
| Laser              | Semiconductor laser ( $\lambda= 780$ nm)<br>Emission duration: continuous |
| Sampling frequency | 44.1 kHz  |
| D/A converter      | 24 bit multi  |
| Frequency          | 20 to 20000 Hz  |
| Wow and flutter    | Unmeasurable  |

### MD RECORDER

|                    |  |
|--------------------|--|
| Scanning method    | Non-contact optical scanner<br>(Semiconductor laser application) |
| Recording system   | Magnetic polarity modulation overwrite system                    |
| Sampling frequency | 44.1 kHz   |
| No. of channels    | Stereo: 2 channels<br>Monaural: 1 channel                        |
| A/D, D/A converter | 1-bit  |
| Frequency          | 20 to 20000 Hz   |
| Wow and flutter    | Unmeasurable   |

### CASSETTE DECK

|                    |                                   |
|--------------------|-----------------------------------|
| Track format       | 4 tracks, 2 channels stereo       |
| Frequency response | Normal tape: 50 Hz to 12500 Hz    |
| Heads              | Recording/playback x 1, erase x 1 |

### GENERAL

|                                   |  |
|-----------------------------------|--|
| Power requirements                | 230 V AC, 50 Hz                                    |
| Power consumption                 | 60 W   |
| Power consumption in standby mode | With ECO mode on: 0.5 W<br>With ECO mode off: 17 W |
| Dimensions (w/h/d)                | Approx. 155 x 220 x 313.2 mm                       |
| Mass                              | Approx. 5.5 kg                                     |

### SPEAKER SYSTEM SX-LFD55

|                    |  |
|--------------------|--|
| Speakers system    | 2 way, bass-reflex type (magnetic shielded)            |
| Speaker units      | Woofers: 120 mm cone type<br>Tweeters: 25 mm dome type |
| Nominal impedance  | 6 $\Omega$   |
| Dimensions (w/h/d) | Approx. 136 x 220 x 210 mm                             |
| Mass               | Approx. 2.0 kg net per speaker                         |

- Specifications and external appearance are subject to change without notice.
- US AND FOREIGN PATENTS LICENSED FROM DOLBY LABORATORIES.

# ACCESSORIES PARTS LIST -1/1

! =  $\Delta$  SAFETY PARTS

C = Components marked

All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME            | SUFFIX&MODEL |
|-----------|-----|--------|----------------|-----------------------|--------------|
|           |     |        |                |                       | XR-FD55      |
|           |     |        |                |                       | CEK          |
|           | O   | AS1001 | 8C-CJE-909-010 | IB, K(E) BF XR-FD55   | a            |
|           | O   | AS1002 | 87-A92-150-110 | ANT, LOOP AM NO-CONT  | a            |
|           | O   | AS1003 | 87-A92-346-110 | ANT, WIRE FM (FASTEN) | a            |
|           | O   | AS1004 | 8C-CJE-701-010 | RC UNIT, RC-CAS20     | a            |
|           | ! O | AS1005 | 87-099-811-110 | PLUG, ADPTR CONV (K)  | a            |
|           | O   | AS1006 | 8B-CPY-610-110 | CORD, SPKR 2M         | a            |

# ELECTRICAL PARTS LIST - 1/16

! =  $\Delta$  SAFETY PARTS  
 C = Components marked

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Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C  | REF-NO  | PARTS-NO       | PARTS-NAME                 | SUFFIX&MODEL   |
|-----------|------|---------|----------------|----------------------------|----------------|
|           |      |         |                |                            | XR-FD55<br>CEK |
| AMP       | O C  | 0597    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| AMP       | O C  | 0598    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| AMP       | O C  | 0601    | 87-012-277-080 | C-CAP,U 1800P-50 K B GRM   | a              |
| AMP       | O C  | 0602    | 87-012-277-080 | C-CAP,U 1800P-50 K B GRM   | a              |
| AMP       | O C  | 0603    | 87-A13-163-080 | CAP,E 0.33-50 M FG         | a              |
| AMP       | O C  | 0604    | 87-A13-163-080 | CAP,E 0.33-50 M FG         | a              |
| AMP       | O C  | 0607    | 87-010-405-040 | CAP,E 10-50 M 11L SME      | a              |
| AMP       | O C  | 0608    | 87-010-405-040 | CAP,E 10-50 M 11L SME      | a              |
| AMP       | O C  | 0609    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| AMP       | O C  | 0610    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| AMP       | O C  | 0611    | 87-010-258-040 | CAP,E 22-35 M 11L SME      | a              |
| AMP       | O C  | 0612    | 87-010-258-040 | CAP,E 22-35 M 11L SME      | a              |
| AMP       | O C  | 0613    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| AMP       | O C  | 0614    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| AMP       | O C  | 0615    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| AMP       | O C  | 0616    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| AMP       | O C  | 0617    | 87-A12-317-080 | C-CAP,U 0.1-50 Z F         | a              |
| AMP       | O C  | 0618    | 87-A12-317-080 | C-CAP,U 0.1-50 Z F         | a              |
| AMP       | O C  | 0619    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| AMP       | O C  | 0620    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
|           |      |         |                |                            | XR-FD55<br>CEK |
| AMP       | O C  | 0621    | 87-A13-165-080 | CAP,E 1-50 M FG            | a              |
| AMP       | O C  | 0622    | 87-A13-165-080 | CAP,E 1-50 M FG            | a              |
| AMP       | O C  | 0623    | 87-010-177-080 | C-CAP,S 820P-50 J SL C2012 | a              |
| AMP       | O C  | 0624    | 87-010-177-080 | C-CAP,S 820P-50 J SL C2012 | a              |
| AMP       | O C  | 0633    | 87-012-282-080 | C-CAP,U 4700P-50 K B GRM   | a              |
| AMP       | O C  | 0640    | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM   | a              |
| AMP       | O C  | 0686    | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB   | a              |
| AMP       | O C  | 0687    | 87-010-392-040 | CAP,E 33-35 M 11L SME      | a              |
| AMP       | O C  | 0688    | 87-010-392-040 | CAP,E 33-35 M 11L SME      | a              |
| AMP       | X    | CLP0601 | 87-A60-884-010 | PIN,DIAL COATING-SHS       | a              |
| AMP       | O CN | 0601    | 87-A61-013-010 | CONN,15P H BLK TAC-L15P-A3 | a              |
| AMP       | O D  | 0562    | 87-A40-270-040 | C-DIODE,MC2838             | a              |
| AMP       | O D  | 0565    | 87-A40-269-040 | C-DIODE,MC2836             | a              |
| AMP       | O D  | 0601    | 87-A40-269-040 | C-DIODE,MC2836             | a              |
| AMP       | O D  | 0603    | 87-020-465-080 | DIODE,1SS133               | a              |
| AMP       | O D  | 0604    | 87-020-465-080 | DIODE,1SS133               | a              |
| AMP       | O D  | 0605    | 87-A40-269-040 | C-DIODE,MC2836             | a              |
| AMP       | O D  | 0606    | 87-A40-269-040 | C-DIODE,MC2836             | a              |
| AMP       | O D  | 0607    | 87-A40-270-040 | C-DIODE,MC2838             | a              |
| AMP       | O D  | 0608    | 87-A40-270-040 | C-DIODE,MC2838             | a              |
|           |      |         |                |                            | XR-FD55<br>CEK |
| AMP       | O D  | 0617    | 87-A40-488-080 | DIODE,1SS244               | a              |
| AMP       | O D  | 0618    | 87-A40-488-080 | DIODE,1SS244               | a              |
| AMP       | O D  | 0650    | 87-A40-270-040 | C-DIODE,MC2838             | a              |
| AMP       | O D  | 0660    | 87-A40-270-040 | C-DIODE,MC2838             | a              |
| AMP       | O D  | 0661    | 87-A40-459-090 | DIODE,RL203GW (15MM)       | a              |
| AMP       | O D  | 0662    | 87-A40-459-090 | DIODE,RL203GW (15MM)       | a              |
| AMP       | O D  | 0687    | 87-A40-747-080 | ZENER,UZ5.1BSB             | a              |
| AMP       | O D  | 0688    | 87-A40-749-080 | ZENER,UZ5.6BSB             | a              |
| AMP       | O D  | 0689    | 87-A40-270-040 | C-DIODE,MC2838             | a              |
| AMP       | O D  | 0690    | 87-A40-269-040 | C-DIODE,MC2836             | a              |
| AMP       | O D  | 0691    | 87-A40-764-080 | ZENER,UZ10BSC              | a              |
| AMP       | O D  | 0692    | 87-020-465-080 | DIODE,1SS133               | a              |
| AMP       | O D  | 0693    | 87-020-465-080 | DIODE,1SS133               | a              |
| AMP       | O Q  | 0539    | 87-A30-669-040 | C-TR,SBT5401               | a              |
| AMP       | O Q  | 0565    | 87-A30-538-040 | C-TR,SRA2202S              | a              |
| AMP       | O Q  | 0601    | 87-A30-675-040 | C-TR,2SD1306NE07TL         | a              |
| AMP       | O Q  | 0602    | 87-A30-675-040 | C-TR,2SD1306NE07TL         | a              |
| AMP       | O Q  | 0603    | 87-A30-075-040 | C-TR,2SA1235F              | a              |
| AMP       | O Q  | 0604    | 87-A30-075-040 | C-TR,2SA1235F              | a              |
| AMP       | O Q  | 0605    | 87-A30-075-040 | C-TR,2SA1235F              | a              |
|           |      |         |                |                            | XR-FD55<br>CEK |
| AMP       | O Q  | 0606    | 87-A30-075-040 | C-TR,2SA1235F              | a              |
| AMP       | O Q  | 0607    | 87-A30-076-040 | C-TR,2SC3052F              | a              |
| AMP       | O Q  | 0608    | 87-A30-076-040 | C-TR,2SC3052F              | a              |
| AMP       | O Q  | 0609    | 87-A30-076-040 | C-TR,2SC3052F              | a              |
| AMP       | O Q  | 0610    | 87-A30-076-040 | C-TR,2SC3052F              | a              |
| AMP       | O Q  | 0611    | 87-A30-672-080 | TR,2N5551C                 | a              |
| AMP       | O Q  | 0612    | 87-A30-672-080 | TR,2N5551C                 | a              |
| AMP       | O Q  | 0613    | 87-A30-076-040 | C-TR,2SC3052F              | a              |
| AMP       | O Q  | 0614    | 87-A30-076-040 | C-TR,2SC3052F              | a              |
| AMP       | O Q  | 0615    | 87-A30-670-040 | C-TR,SBT5551               | a              |
| AMP       | O Q  | 0616    | 87-A30-670-040 | C-TR,SBT5551               | a              |
| AMP       | O Q  | 0617    | 87-A30-255-010 | TR,2SB1342                 | a              |
| AMP       | O Q  | 0618    | 87-A30-255-010 | TR,2SB1342                 | a              |
| AMP       | O Q  | 0619    | 87-A30-256-010 | TR,2SD1933                 | a              |
| AMP       | O Q  | 0620    | 87-A30-256-010 | TR,2SD1933                 | a              |
| AMP       | O Q  | 0623    | 87-A30-669-040 | C-TR,SBT5401               | a              |
| AMP       | O Q  | 0624    | 87-A30-669-040 | C-TR,SBT5401               | a              |
| AMP       | O Q  | 0626    | 87-A30-669-040 | C-TR,SBT5401               | a              |
| AMP       | O Q  | 0627    | 87-A30-076-040 | C-TR,2SC3052F              | a              |
| AMP       | O Q  | 0628    | 87-A30-076-040 | C-TR,2SC3052F              | a              |

# ELECTRICAL PARTS LIST - 2/16

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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME            | SUFFIX&MODEL   |
|-----------|-----|--------|----------------|-----------------------|----------------|
|           |     |        |                |                       | XR-FD55<br>CEK |
| AMP       | O Q | 0630   | 87-A30-670-040 | C-TR, SBT5551         | a              |
| AMP       | O Q | 0683   | 87-A30-162-010 | FET, 2SK2937          | a              |
| AMP       | O Q | 0684   | 87-A30-162-010 | FET, 2SK2937          | a              |
| AMP       | O Q | 0685   | 87-A30-076-040 | C-TR, 2SC3052F        | a              |
| AMP       | O Q | 0686   | 87-A30-075-040 | C-TR, 2SA1235F        | a              |
| AMP       | O Q | 0687   | 87-A30-075-040 | C-TR, 2SA1235F        | a              |
| AMP       | O Q | 0735   | 87-A30-075-040 | C-TR, 2SA1235F        | a              |
| AMP       | O R | 0552   | 88-108-223-080 | C-RES, U 22K-1/16W J  | a              |
| AMP       | X R | 0557   | 88-108-222-080 | C-RES, U 2.2K-1/16W J | a              |
| AMP       | O R | 0559   | 88-118-103-080 | C-RES, S 10K-1/10W J  | a              |
| AMP       | O R | 0560   | 88-118-473-080 | C-RES, S 47K-1/10W J  | a              |
| AMP       | O R | 0568   | 88-108-224-080 | C-RES, U 220K-1/16W J | a              |
| AMP       | O R | 0569   | 88-108-224-080 | C-RES, U 220K-1/16W J | a              |
| AMP       | O R | 0571   | 88-108-473-080 | C-RES, U 47K-1/16W J  | a              |
| AMP       | O R | 0572   | 88-108-473-080 | C-RES, U 47K-1/16W J  | a              |
| AMP       | O R | 0582   | 88-130-272-080 | RES, 2.7K-1/4W J      | a              |
| AMP       | O R | 0583   | 88-130-272-080 | RES, 2.7K-1/4W J      | a              |
| AMP       | X R | 0601   | 88-108-392-080 | C-RES, U 3.9K-1/16W J | a              |
| AMP       | X R | 0602   | 88-108-392-080 | C-RES, U 3.9K-1/16W J | a              |
| AMP       | O R | 0603   | 88-108-153-080 | C-RES, U 15K-1/16W J  | a              |
|           |     |        |                |                       | XR-FD55<br>CEK |
| AMP       | O R | 0604   | 88-108-153-080 | C-RES, U 15K-1/16W J  | a              |
| AMP       | O R | 0605   | 88-108-223-080 | C-RES, U 22K-1/16W J  | a              |
| AMP       | O R | 0606   | 88-108-223-080 | C-RES, U 22K-1/16W J  | a              |
| AMP       | O R | 0607   | 88-108-101-080 | C-RES, U 100-1/16W J  | a              |
| AMP       | O R | 0608   | 88-108-101-080 | C-RES, U 100-1/16W J  | a              |
| AMP       | O R | 0611   | 88-118-102-080 | C-RES, S 1K-1/10W J   | a              |
| AMP       | O R | 0612   | 88-118-102-080 | C-RES, S 1K-1/10W J   | a              |
| AMP       | O R | 0613   | 88-118-223-080 | C-RES, S 22K-1/10W J  | a              |
| AMP       | O R | 0614   | 88-118-223-080 | C-RES, S 22K-1/10W J  | a              |
| AMP       | O R | 0617   | 88-108-103-080 | C-RES, U 10K-1/16W J  | a              |
| AMP       | O R | 0618   | 88-108-103-080 | C-RES, U 10K-1/16W J  | a              |
| AMP       | X R | 0619   | 88-118-101-080 | C-RES, S 100-1/10W J  | a              |
| AMP       | X R | 0620   | 88-118-101-080 | C-RES, S 100-1/10W J  | a              |
| AMP       | X R | 0621   | 88-118-101-080 | C-RES, S 100-1/10W J  | a              |
| AMP       | X R | 0622   | 88-118-101-080 | C-RES, S 100-1/10W J  | a              |
| AMP       | O R | 0623   | 88-121-222-080 | RES, 2.2K-1/8W J      | a              |
| AMP       | O R | 0624   | 88-121-222-080 | RES, 2.2K-1/8W J      | a              |
| AMP       | O R | 0625   | 88-121-222-080 | RES, 2.2K-1/8W J      | a              |
| AMP       | O R | 0626   | 88-121-222-080 | RES, 2.2K-1/8W J      | a              |
| AMP       | X R | 0627   | 88-118-390-080 | C-RES, S 39-1/10W J   | a              |
|           |     |        |                |                       | XR-FD55<br>CEK |
| AMP       | X R | 0628   | 88-118-390-080 | C-RES, S 39-1/10W J   | a              |
| AMP       | O R | 0629   | 87-A00-258-080 | RES, M/F 0.22-1W J    | a              |
| AMP       | O R | 0630   | 87-A00-258-080 | RES, M/F 0.22-1W J    | a              |
| AMP       | O R | 0631   | 87-A00-258-080 | RES, M/F 0.22-1W J    | a              |
| AMP       | O R | 0632   | 87-A00-258-080 | RES, M/F 0.22-1W J    | a              |
| AMP       | O R | 0633   | 88-108-332-080 | C-RES, U 3.3K-1/16W J | a              |
| AMP       | O R | 0634   | 88-108-332-080 | C-RES, U 3.3K-1/16W J | a              |
| AMP       | X R | 0635   | 88-108-152-080 | C-RES, U 1.5K-1/16W J | a              |
| AMP       | X R | 0636   | 88-108-152-080 | C-RES, U 1.5K-1/16W J | a              |
| AMP       | O R | 0637   | 88-108-101-080 | C-RES, U 100-1/16W J  | a              |
| AMP       | O R | 0638   | 88-108-101-080 | C-RES, U 100-1/16W J  | a              |
| AMP       | O R | 0641   | 88-118-102-080 | C-RES, S 1K-1/10W J   | a              |
| AMP       | O R | 0642   | 88-118-102-080 | C-RES, S 1K-1/10W J   | a              |
| AMP       | O R | 0651   | 88-108-473-080 | C-RES, U 47K-1/16W J  | a              |
| AMP       | O R | 0652   | 88-108-473-080 | C-RES, U 47K-1/16W J  | a              |
| AMP       | X R | 0655   | 88-108-682-080 | C-RES, U 6.8K-1/16W J | a              |
| AMP       | X R | 0656   | 88-108-682-080 | C-RES, U 6.8K-1/16W J | a              |
| AMP       | X R | 0657   | 88-108-472-080 | C-RES, U 4.7K-1/16W J | a              |
| AMP       | X R | 0658   | 88-108-472-080 | C-RES, U 4.7K-1/16W J | a              |
| AMP       | O R | 0659   | 88-108-103-080 | C-RES, U 10K-1/16W J  | a              |
|           |     |        |                |                       | XR-FD55<br>CEK |
| AMP       | O R | 0660   | 88-118-103-080 | C-RES, S 10K-1/10W J  | a              |
| AMP       | X R | 0661   | 88-108-472-080 | C-RES, U 4.7K-1/16W J | a              |
| AMP       | X R | 0662   | 88-108-472-080 | C-RES, U 4.7K-1/16W J | a              |
| AMP       | X R | 0663   | 88-108-472-080 | C-RES, U 4.7K-1/16W J | a              |
| AMP       | X R | 0664   | 88-108-472-080 | C-RES, U 4.7K-1/16W J | a              |
| AMP       | X R | 0665   | 88-108-152-080 | C-RES, U 1.5K-1/16W J | a              |
| AMP       | X R | 0666   | 88-108-152-080 | C-RES, U 1.5K-1/16W J | a              |
| AMP       | O R | 0667   | 88-108-103-080 | C-RES, U 10K-1/16W J  | a              |
| AMP       | O R | 0668   | 88-118-473-080 | C-RES, S 47K-1/10W J  | a              |
| AMP       | O R | 0671   | 88-118-182-080 | C-RES, S 1.8K-1/10W J | a              |
| AMP       | O R | 0672   | 88-118-182-080 | C-RES, S 1.8K-1/10W J | a              |
| AMP       | X R | 0673   | 88-118-222-080 | C-RES, S 2.2K-1/10W J | a              |
| AMP       | X R | 0674   | 88-118-222-080 | C-RES, S 2.2K-1/10W J | a              |
| AMP       | O R | 0675   | 88-118-331-080 | C-RES, S 330-1/10W J  | a              |
| AMP       | O R | 0676   | 88-118-331-080 | C-RES, S 330-1/10W J  | a              |
| AMP       | X R | 0677   | 88-128-222-080 | C-RES, 2.2K-1/8W J    | a              |
| AMP       | O R | 0678   | 88-118-103-080 | C-RES, S 10K-1/10W J  | a              |
| AMP       | O R | 0679   | 88-108-102-080 | C-RES, U 1K-1/16W J   | a              |
| AMP       | O R | 0680   | 88-108-102-080 | C-RES, U 1K-1/16W J   | a              |
| AMP       | X R | 0681   | 88-118-222-080 | C-RES, S 2.2K-1/10W J | a              |

# ELECTRICAL PARTS LIST - 3/16

! =  $\Delta$  SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

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| UNIT-NAME | ! C  | REF-NO | PARTS-NO       | PARTS-NAME               | SUFFIX&MODEL   |
|-----------|------|--------|----------------|--------------------------|----------------|
|           |      |        |                |                          | XR-FD55<br>CEK |
| AMP       | X R  | 0682   | 88-118-222-080 | C-RES,S 2.2K-1/10W J     | a              |
| AMP       | O R  | 0684   | 88-118-102-080 | C-RES,S 1K-1/10W J       | a              |
| AMP       | O R  | 0685   | 88-108-332-080 | C-RES,U 3.3K-1/16W J     | a              |
| AMP       | X R  | 0686   | 88-118-222-080 | C-RES,S 2.2K-1/10W J     | a              |
| AMP       | O R  | 0687   | 88-118-103-080 | C-RES,S 10K-1/10W J      | a              |
| AMP       | O R  | 0688   | 88-118-102-080 | C-RES,S 1K-1/10W J       | a              |
| AMP       | X R  | 0689   | 88-128-272-080 | C-RES, 2.7K-1/8W J       | a              |
| AMP       | X R  | 0690   | 88-128-272-080 | C-RES, 2.7K-1/8W J       | a              |
| AMP       | X R  | 0692   | 88-128-222-080 | C-RES, 2.2K-1/8W J       | a              |
| AMP       | O R  | 0693   | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| AMP       | O R  | 0694   | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| AMP       | O R  | 0695   | 88-108-473-080 | C-RES,U 47K-1/16W J      | a              |
| AMP       | O R  | 0696   | 88-108-473-080 | C-RES,U 47K-1/16W J      | a              |
| AMP       | O R  | 0697   | 88-108-473-080 | C-RES,U 47K-1/16W J      | a              |
| AMP       | O R  | 0698   | 88-108-473-080 | C-RES,U 47K-1/16W J      | a              |
| AMP       | X R  | 0699   | 88-108-225-080 | C-RES,U 2.2M-1/16W J     | a              |
| AMP       | X R  | 0700   | 88-128-272-080 | C-RES, 2.7K-1/8W J       | a              |
| AMP       | X R  | 0713   | 88-118-563-080 | C-RES,S 56K-1/10W J      | a              |
| AMP       | O R  | 0717   | 88-118-683-080 | C-RES,S 68K-1/10W J      | a              |
| AMP       | X R  | 0718   | 88-118-105-080 | C-RES,S 1M-1/10W J       | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| AMP       | O R  | 0719   | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| AMP       | O TH | 0601   | 87-A91-042-080 | C-THMS,100K 55001        | a              |
| AMP       | O TH | 0602   | 87-A91-042-080 | C-THMS,100K 55001        | a              |
| CD        | O C  | 0501   | 87-A13-118-080 | CAP,E 47-16 M RA 6.3X5L  | a              |
| CD        | O C  | 0502   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0503   | 87-A13-118-080 | CAP,E 47-16 M RA 6.3X5L  | a              |
| CD        | O C  | 0504   | 87-A13-118-080 | CAP,E 47-16 M RA 6.3X5L  | a              |
| CD        | O C  | 0505   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0506   | 87-A13-118-080 | CAP,E 47-16 M RA 6.3X5L  | a              |
| CD        | O C  | 0507   | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM | a              |
| CD        | O C  | 0510   | 87-012-176-080 | C-CAP,U 15P-50 J CH GRM  | a              |
| CD        | O C  | 0511   | 87-012-180-080 | C-CAP,U 22P-50 J CH GRM  | a              |
| CD        | O C  | 0513   | 87-A10-827-080 | C-CAP,U 0.47-6.3 K B     | a              |
| CD        | O C  | 0514   | 87-A10-260-080 | C-CAP,U 0.1-16 K B       | a              |
| CD        | O C  | 0515   | 87-A11-228-080 | C-CAP,U 0.027-25 K B     | a              |
| CD        | O C  | 0516   | 87-A11-228-080 | C-CAP,U 0.027-25 K B     | a              |
| CD        | O C  | 0517   | 87-012-283-080 | C-CAP,U 5600P-50 K B GRM | a              |
| CD        | O C  | 0518   | 87-012-277-080 | C-CAP,U 1800P-50 K B GRM | a              |
| CD        | O C  | 0519   | 87-012-279-080 | C-CAP,U 2700P-50 K B GRM | a              |
| CD        | O C  | 0520   | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| CD        | O C  | 0521   | 87-012-270-080 | C-CAP,U 470P-50 K B GRM  | a              |
| CD        | O C  | 0522   | 87-012-199-080 | C-CAP,U 220P-50 J CH GRM | a              |
| CD        | O C  | 0523   | 87-012-275-080 | C-CAP,U 1200P-50 K B GRM | a              |
| CD        | O C  | 0524   | 87-012-193-080 | C-CAP,U 82P-50 J CH GRM  | a              |
| CD        | O C  | 0525   | 87-012-193-080 | C-CAP,U 82P-50 J CH GRM  | a              |
| CD        | O C  | 0551   | 87-A13-120-080 | CAP,E 220-10 M RA 8X5L   | a              |
| CD        | O C  | 0553   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0554   | 87-A13-118-080 | CAP,E 47-16 M RA 6.3X5L  | a              |
| CD        | O C  | 0555   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0601   | 87-A13-120-080 | CAP,E 220-10 M RA 8X5L   | a              |
| CD        | O C  | 0602   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0603   | 87-A13-120-080 | CAP,E 220-10 M RA 8X5L   | a              |
| CD        | O C  | 0604   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0605   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0606   | 87-A13-118-080 | CAP,E 47-16 M RA 6.3X5L  | a              |
| CD        | O C  | 0607   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0609   | 87-A10-047-080 | C-CAP,U 1-10 Z F         | a              |
| CD        | O C  | 0614   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0615   | 87-012-270-080 | C-CAP,U 470P-50 K B GRM  | a              |
| CD        | O C  | 0616   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| CD        | O C  | 0617   | 87-010-784-080 | C-CAP,U 0.012-25 K B GRM | a              |
| CD        | O C  | 0618   | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM | a              |
| CD        | O C  | 0619   | 87-A11-058-080 | C-CAP,U 0.22-10 K B      | a              |
| CD        | X C  | 0620   | 88-108-000-080 | C-JUMPER,U               | a              |
| CD        | O C  | 0622   | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM | a              |
| CD        | O C  | 0623   | 87-A10-260-080 | C-CAP,U 0.1-16 K B       | a              |
| CD        | O C  | 0624   | 87-012-165-080 | C-CAP,U 3P-50 C CH GRM   | a              |
| CD        | O C  | 0625   | 87-012-165-080 | C-CAP,U 3P-50 C CH GRM   | a              |
| CD        | O C  | 0626   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0627   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0628   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0629   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| CD        | O C  | 0630   | 87-012-280-080 | C-CAP,U 3300P-50 K B GRM | a              |
| CD        | O C  | 0631   | 87-A10-827-080 | C-CAP,U 0.47-6.3 K B     | a              |
| CD        | O C  | 0651   | 87-012-270-080 | C-CAP,U 470P-50 K B GRM  | a              |
| CD        | O C  | 0652   | 87-012-270-080 | C-CAP,U 470P-50 K B GRM  | a              |
| CD        | O C  | 0653   | 87-A13-114-080 | CAP,E 2.2-50 M RA 4X5L   | a              |
| CD        | O C  | 0654   | 87-A13-114-080 | CAP,E 2.2-50 M RA 4X5L   | a              |
| CD        | O C  | 0655   | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM | a              |
| CD        | O C  | 0656   | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM | a              |



# ELECTRICAL PARTS LIST - 4/16

! = SAFETY PARTS  
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| UNIT-NAME | ! C  | REF-NO | PARTS-NO       | PARTS-NAME                  | SUFFIX&MODEL   |
|-----------|------|--------|----------------|-----------------------------|----------------|
|           |      |        |                |                             | XR-FD55<br>CEK |
| CD        | O C  | 0671   | 87-A13-118-080 | CAP,E 47-16 M RA 6.3X5L     | a              |
| CD        | O C  | 0672   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| CD        | O C  | 0673   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| CD        | O C  | 0674   | 87-A13-116-080 | CAP,E 10-35 M RA 5X5L       | a              |
| CD        | O C  | 0681   | 87-012-172-080 | C-CAP,U 10P-50 D CH GRM     | a              |
| CD        | O C  | 0682   | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM    | a              |
| CD        | O C  | 0683   | 87-012-188-080 | C-CAP,U 47P-50 J CH GRM     | a              |
| CD        | O C  | 0684   | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM    | a              |
| CD        | O C  | 0685   | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM    | a              |
| CD        | O C  | 0686   | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM    | a              |
| CD        | O C  | 0687   | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM    | a              |
| CD        | O C  | 0691   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| CD        | O C  | 0692   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| CD        | O C  | 0694   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| CD        | O C  | 0695   | 87-018-098-080 | CAP,TC U 3.3P-50 K SL UP050 | a              |
| CD        | O C  | 0696   | 87-018-098-080 | CAP,TC U 3.3P-50 K SL UP050 | a              |
| CD        | O C  | 0697   | 87-018-098-080 | CAP,TC U 3.3P-50 K SL UP050 | a              |
| CD        | O C  | 0698   | 87-A11-148-080 | CAP,TC U 0.1-50 Z F         | a              |
| CD        | O C  | 0699   | 87-A11-148-080 | CAP,TC U 0.1-50 Z F         | a              |
| CD        | O CN | 0501   | 87-A60-429-010 | CONN,16P H TOC-A            | a              |
|           |      |        |                |                             | XR-FD55<br>CEK |
| CD        | O CN | 0502   | 87-A60-154-010 | CONN,6P H FE                | a              |
| CD        | O CN | 0503   | 87-099-210-010 | CONN,5P H BLK 6216          | a              |
| CD        | O CN | 0601   | 87-099-030-010 | CONN,13P H BLK 6216         | a              |
| CD        | O CN | 0602   | 87-099-200-010 | CONN,7P H BLK 6216          | a              |
| CD        | O CN | 0603   | 87-009-348-010 | CONN,5P H WHT PH            | a              |
| CD        | O D  | 0551   | 87-A40-553-080 | DIODE,1N4003 LES            | a              |
| CD        | O D  | 0671   | 87-027-416-080 | ZENER,HZ3C2                 | a              |
| CD        | X FB | 0601   | 87-003-223-080 | F-BEAD,BL02RN2              | a              |
| CD        | X FB | 0602   | 87-003-223-080 | F-BEAD,BL02RN2              | a              |
| CD        | O IC | 0501   | 87-A22-373-080 | C-IC,AN22002A               | a              |
| CD        | O IC | 0551   | 87-A22-280-040 | C-IC,BA5813FM               | a              |
| CD        | O IC | 0601   | 87-A22-372-030 | C-IC,MN6627482WA            | a              |
| CD        | O IC | 0602   | 87-017-853-040 | C-IC,NJM2100V               | a              |
| CD        | O IC | 0671   | 87-A21-993-040 | C-IC,PCM1742 KE             | a              |
| CD        | O Q  | 0501   | 87-A30-075-040 | C-TR,2SA1235F               | a              |
| CD        | O Q  | 0502   | 87-A30-287-040 | C-TR,DTC114TKA              | a              |
| CD        | O Q  | 0551   | 87-A30-495-080 | TR,2SA1981Y                 | a              |
| CD        | O Q  | 0601   | 87-A30-283-040 | C-TR,DTA114YKA              | a              |
| CD        | O Q  | 0602   | 87-A30-273-040 | C-TR,DTC124EKA              | a              |
| CD        | X R  | 0501   | 88-108-479-080 | C-RES,U 4.7-1/16W J         | a              |
|           |      |        |                |                             | XR-FD55<br>CEK |
| CD        | X R  | 0502   | 88-108-479-080 | C-RES,U 4.7-1/16W J         | a              |
| CD        | O R  | 0503   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | X R  | 0504   | 88-108-479-080 | C-RES,U 4.7-1/16W J         | a              |
| CD        | O R  | 0505   | 88-108-822-080 | C-RES,U 8.2K-1/16W J        | a              |
| CD        | X R  | 0506   | 88-108-182-080 | C-RES,U 1.8K-1/16W J        | a              |
| CD        | O R  | 0507   | 88-108-332-080 | C-RES,U 3.3K-1/16W J        | a              |
| CD        | X R  | 0510   | 88-108-154-080 | C-RES,U 150K-1/16W J        | a              |
| CD        | X R  | 0511   | 88-108-394-080 | C-RES,U 390K-1/16W J        | a              |
| CD        | O R  | 0512   | 88-108-223-080 | C-RES,U 22K-1/16W J         | a              |
| CD        | X R  | 0513   | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| CD        | O R  | 0514   | 88-108-333-080 | C-RES,U 33K-1/16W J         | a              |
| CD        | O R  | 0515   | 87-022-235-080 | C-RES,U 6.8K-1/16W F        | a              |
| CD        | O R  | 0516   | 87-022-280-080 | C-RES,U 560-1/16W F         | a              |
| CD        | O R  | 0517   | 87-022-241-080 | C-RES,U 12K-1/16W F         | a              |
| CD        | X R  | 0518   | 88-108-274-080 | C-RES,U 270K-1/16W J        | a              |
| CD        | X R  | 0519   | 88-108-824-080 | C-RES,U 820K-1/16W J        | a              |
| CD        | O R  | 0520   | 87-022-237-080 | C-RES,U 8.2K-1/16W F        | a              |
| CD        | O R  | 0521   | 87-022-237-080 | C-RES,U 8.2K-1/16W F        | a              |
| CD        | X R  | 0522   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0523   | 88-108-000-080 | C-JUMPER,U                  | a              |
|           |      |        |                |                             | XR-FD55<br>CEK |
| CD        | X R  | 0524   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0525   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0526   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | O R  | 0551   | 88-140-229-080 | RES,2.2-1/2W J              | a              |
| CD        | O R  | 0552   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | X R  | 0553   | 88-108-222-080 | C-RES,U 2.2K-1/16W J        | a              |
| CD        | X R  | 0554   | 88-108-681-080 | C-RES,U 680-1/16W J         | a              |
| CD        | O R  | 0555   | 88-108-333-080 | C-RES,U 33K-1/16W J         | a              |
| CD        | O R  | 0556   | 88-108-562-080 | C-RES,U 5.6K-1/16W J        | a              |
| CD        | X R  | 0557   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0558   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0559   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0560   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0565   | 88-108-181-080 | C-RES,U 180-1/16W J         | a              |
| CD        | O R  | 0566   | 88-108-821-080 | C-RES,U 820-1/16W J         | a              |
| CD        | X R  | 0601   | 88-108-229-080 | C-RES,U 2.2-1/16W J         | a              |
| CD        | X R  | 0602   | 88-108-339-080 | C-RES,U 3.3-1/16W J         | a              |
| CD        | X R  | 0603   | 88-108-100-080 | C-RES,U 10-1/16W J          | a              |
| CD        | X R  | 0604   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R  | 0605   | 88-108-000-080 | C-JUMPER,U                  | a              |

# ELECTRICAL PARTS LIST - 5/16

! = SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C   | REF-NO | PARTS-NO       | PARTS-NAME                  | SUFFIX&MODEL   |
|-----------|-------|--------|----------------|-----------------------------|----------------|
|           |       |        |                |                             | XR-FD55<br>CEK |
| CD        | O R   | 0608   | 88-108-473-080 | C-RES,U 47K-1/16W J         | a              |
| CD        | O R   | 0610   | 88-108-123-080 | C-RES,U 12K-1/16W J         | a              |
| CD        | O R   | 0611   | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| CD        | X R   | 0612   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | O R   | 0613   | 88-108-473-080 | C-RES,U 47K-1/16W J         | a              |
| CD        | X R   | 0614   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | O R   | 0616   | 88-108-153-080 | C-RES,U 15K-1/16W J         | a              |
| CD        | O R   | 0617   | 88-108-272-080 | C-RES,U 2.7K-1/16W J        | a              |
| CD        | X R   | 0618   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | O R   | 0619   | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| CD        | O R   | 0620   | 88-108-103-080 | C-RES,U 10K-1/16W J         | a              |
| CD        | X R   | 0621   | 88-108-105-080 | C-RES,U 1M-1/16W J          | a              |
| CD        | X R   | 0622   | 88-108-475-080 | C-RES,U 4.7M-1/16W J        | a              |
| CD        | X R   | 0623   | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| CD        | X R   | 0624   | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| CD        | O R   | 0625   | 88-108-333-080 | C-RES,U 33K-1/16W J         | a              |
| CD        | X R   | 0626   | 88-108-331-080 | C-RES,U 330-1/16W J         | a              |
| CD        | O R   | 0628   | 88-108-474-080 | C-RES,U 470K-1/16W J        | a              |
| CD        | X R   | 0629   | 88-108-221-080 | C-RES,U 220-1/16W J         | a              |
| CD        | X R   | 0631   | 88-108-220-080 | C-RES,U 22-1/16W J          | a              |
|           |       |        |                |                             | XR-FD55<br>CEK |
| CD        | X R   | 0632   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0633   | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| CD        | X R   | 0634   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | O R   | 0635   | 88-108-103-080 | C-RES,U 10K-1/16W J         | a              |
| CD        | X R   | 0636   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0637   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0638   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0639   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0640   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0641   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | O R   | 0642   | 88-108-473-080 | C-RES,U 47K-1/16W J         | a              |
| CD        | X R   | 0643   | 88-108-393-080 | C-RES,U 39K-1/16W J         | a              |
| CD        | X R   | 0644   | 88-108-393-080 | C-RES,U 39K-1/16W J         | a              |
| CD        | X R   | 0645   | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| CD        | O R   | 0646   | 88-108-272-080 | C-RES,U 2.7K-1/16W J        | a              |
| CD        | O R   | 0647   | 88-108-683-080 | C-RES,U 68K-1/16W J         | a              |
| CD        | O R   | 0648   | 88-108-103-080 | C-RES,U 10K-1/16W J         | a              |
| CD        | O R   | 0649   | 88-108-103-080 | C-RES,U 10K-1/16W J         | a              |
| CD        | X R   | 0653   | 88-108-152-080 | C-RES,U 1.5K-1/16W J        | a              |
| CD        | X R   | 0654   | 88-108-152-080 | C-RES,U 1.5K-1/16W J        | a              |
|           |       |        |                |                             | XR-FD55<br>CEK |
| CD        | O R   | 0655   | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| CD        | O R   | 0656   | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| CD        | O R   | 0657   | 88-108-103-080 | C-RES,U 10K-1/16W J         | a              |
| CD        | O R   | 0658   | 88-108-103-080 | C-RES,U 10K-1/16W J         | a              |
| CD        | X R   | 0659   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0660   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | O R   | 0671   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | O R   | 0681   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | O R   | 0682   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | O R   | 0683   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | O R   | 0684   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | O R   | 0685   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | O R   | 0686   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | O R   | 0687   | 88-108-101-080 | C-RES,U 100-1/16W J         | a              |
| CD        | X R   | 0688   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0689   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0690   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0692   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0693   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X R   | 0695   | 88-108-222-080 | C-RES,U 2.2K-1/16W J        | a              |
|           |       |        |                |                             | XR-FD55<br>CEK |
| CD        | X R   | 0697   | 88-108-000-080 | C-JUMPER,U                  | a              |
| CD        | X W   | 0602   | 8C-CJE-661-010 | WIRE ASSY,120 BLACK FASTON  | a              |
| CD        | O X   | 0602   | 87-A70-363-010 | VIB,XTAL 16.9344MHZ CSA-309 | a              |
| HP        | O C   | 0223   | 87-012-272-080 | C-CAP,U 680P-50 K B GRM     | a              |
| HP        | O C   | 0224   | 87-012-272-080 | C-CAP,U 680P-50 K B GRM     | a              |
| HP        | X C   | 0230   | 87-A11-120-080 | CAP,TC U 2200P-50 J CH      | a              |
| HP        | X C   | 0231   | 87-A11-120-080 | CAP,TC U 2200P-50 J CH      | a              |
| HP        | O CNA | 0201   | 8C-CJE-603-010 | CONN ASSY,5P TID-A300       | a              |
| HP        | O J   | 0201   | 87-A61-821-010 | JACK,3.5 BLK ST W/SW GLD    | a              |
| HP        | X R   | 0243   | 88-130-151-080 | RES,150-1/4W J              | a              |
| HP        | X R   | 0244   | 88-130-151-080 | RES,150-1/4W J              | a              |
| HP        | X R   | 0245   | 88-130-151-080 | RES,150-1/4W J              | a              |
| HP        | X R   | 0246   | 88-130-151-080 | RES,150-1/4W J              | a              |
| HP        | O R   | 0265   | 88-121-222-080 | RES,2.2K-1/8W J             | a              |
| HP        | O R   | 0266   | 88-121-222-080 | RES,2.2K-1/8W J             | a              |
| HP        | O WH  | 0101   | 87-A90-459-010 | HLDR,WIRE 2.5-5P            | a              |
| KEY       | O C   | 0101   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| KEY       | O C   | 0102   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| KEY       | O C   | 0103   | 87-015-698-040 | CAP,E 4.7-50 M 7L SRA       | a              |
| KEY       | O C   | 0104   | 87-015-698-040 | CAP,E 4.7-50 M 7L SRA       | a              |

# ELECTRICAL PARTS LIST - 6/16

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| UNIT-NAME | ! C       | REF-NO         | PARTS-NO             | PARTS-NAME                | SUFFIX&MODEL |
|-----------|-----------|----------------|----------------------|---------------------------|--------------|
|           |           |                |                      |                           | XR-FD55      |
|           |           |                |                      |                           | CEK          |
| KEY       | O C       | 0105           | 87-010-408-040       | CAP,E 47-50 M 11L SME     | a            |
| KEY       | O C       | 0106           | 87-A12-317-080       | C-CAP,U 0.1-50 Z F        | a            |
| KEY       | O C       | 0114           | 87-015-699-040       | CAP,E 10-50 M 7L SRA      | a            |
| KEY       | O C       | 0115           | 87-012-274-080       | C-CAP,U 1000P-50 K B GRM  | a            |
| KEY       | O C       | 0117           | 87-012-286-080       | C-CAP,U 0.01-25 K B GRM   | a            |
| KEY       | O C       | 0118           | 87-012-286-080       | C-CAP,U 0.01-25 K B GRM   | a            |
| KEY       | O C       | 0120           | 87-012-286-080       | C-CAP,U 0.01-25 K B GRM   | a            |
| KEY       | O C       | 0121           | 87-012-286-080       | C-CAP,U 0.01-25 K B GRM   | a            |
| KEY       | O C       | 0122           | 87-A11-088-080       | CAP,TC U 100P-50 J CH     | a            |
| KEY       | O C       | 0145           | 87-012-172-080       | C-CAP,U 10P-50 D CH GRM   | a            |
| KEY       | O C       | 0146           | 87-012-172-080       | C-CAP,U 10P-50 D CH GRM   | a            |
| KEY       | O C       | 0147           | 87-012-172-080       | C-CAP,U 10P-50 D CH GRM   | a            |
| KEY       | O C       | 0148           | 87-012-172-080       | C-CAP,U 10P-50 D CH GRM   | a            |
| KEY       | O CN      | 0108           | 87-099-034-010       | CONN,17P H BLK 6216       | a            |
| KEY       | O D       | 0110           | 87-A40-269-040       | C-DIODE,MC2836            | a            |
| KEY       | O FL      | 0101           | 8C-CJE-609-010       | FL,15-BT-89GINK           | a            |
| KEY       | O IC      | 0103           | 87-A22-043-010       | IC,SPS-440-1-E1           | a            |
| KEY       | O LED0101 | 87-A40-317-080 | LED,SLR-342VCT31 RED | a                         |              |
| KEY       | O LED0102 | 87-A41-112-010 | LED,SEL2710K YEL     | a                         |              |
| KEY       | O Q       | 0111           | 87-A30-435-040       | C-TR,DTC144EKA            | a            |
|           |           |                |                      |                           | XR-FD55      |
|           |           |                |                      |                           | CEK          |
| KEY       | O Q       | 0113           | 87-A30-435-040       | C-TR,DTC144EKA            | a            |
| KEY       | O R       | 0101           | 88-118-153-080       | C-RES,S 15K-1/10W J       | a            |
| KEY       | O R       | 0102           | 88-118-153-080       | C-RES,S 15K-1/10W J       | a            |
| KEY       | X R       | 0105           | 88-121-220-080       | RES,22-1/8W J             | a            |
| KEY       | O R       | 0106           | 88-108-821-080       | C-RES,U 820-1/16W J       | a            |
| KEY       | O R       | 0108           | 88-108-821-080       | C-RES,U 820-1/16W J       | a            |
| KEY       | X R       | 0110           | 88-100-000-010       | PLATING-JW, 0.58 SN95     | a            |
| KEY       | O R       | 0136           | 88-108-102-080       | C-RES,U 1K-1/16W J        | a            |
| KEY       | O R       | 0138           | 88-108-563-080       | C-RES,U 56K-1/16W J       | a            |
| KEY       | O R       | 0145           | 88-108-223-080       | C-RES,U 22K-1/16W J       | a            |
| KEY       | O R       | 0146           | 88-108-223-080       | C-RES,U 22K-1/16W J       | a            |
| KEY       | X R       | 0147           | 88-108-221-080       | C-RES,U 220-1/16W J       | a            |
| KEY       | O R       | 0148           | 88-108-272-080       | C-RES,U 2.7K-1/16W J      | a            |
| KEY       | O R       | 0150           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
| KEY       | O R       | 0151           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
| KEY       | O R       | 0157           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
| KEY       | O R       | 0158           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
| KEY       | O R       | 0159           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
| KEY       | O R       | 0160           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
| KEY       | O R       | 0170           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
|           |           |                |                      |                           | XR-FD55      |
|           |           |                |                      |                           | CEK          |
| KEY       | O R       | 0171           | 88-108-122-080       | C-RES,U 1.2K-1/16W J      | a            |
| KEY       | O R       | 0172           | 88-108-122-080       | C-RES,U 1.2K-1/16W J      | a            |
| KEY       | X R       | 0173           | 88-108-222-080       | C-RES,U 2.2K-1/16W J      | a            |
| KEY       | X R       | 0174           | 88-108-222-080       | C-RES,U 2.2K-1/16W J      | a            |
| KEY       | O R       | 0175           | 88-108-332-080       | C-RES,U 3.3K-1/16W J      | a            |
| KEY       | X R       | 0176           | 88-108-472-080       | C-RES,U 4.7K-1/16W J      | a            |
| KEY       | O R       | 0177           | 88-108-822-080       | C-RES,U 8.2K-1/16W J      | a            |
| KEY       | O R       | 0178           | 88-108-183-080       | C-RES,U 18K-1/16W J       | a            |
| KEY       | X R       | 0179           | 88-108-393-080       | C-RES,U 39K-1/16W J       | a            |
| KEY       | O R       | 0212           | 88-108-103-080       | C-RES,U 10K-1/16W J       | a            |
| KEY       | O R       | 0213           | 88-108-122-080       | C-RES,U 1.2K-1/16W J      | a            |
| KEY       | O R       | 0214           | 88-108-122-080       | C-RES,U 1.2K-1/16W J      | a            |
| KEY       | X R       | 0215           | 88-108-222-080       | C-RES,U 2.2K-1/16W J      | a            |
| KEY       | X R       | 0216           | 88-108-222-080       | C-RES,U 2.2K-1/16W J      | a            |
| KEY       | O R       | 0217           | 88-108-332-080       | C-RES,U 3.3K-1/16W J      | a            |
| KEY       | X R       | 0218           | 88-108-472-080       | C-RES,U 4.7K-1/16W J      | a            |
| KEY       | O R       | 0219           | 88-108-822-080       | C-RES,U 8.2K-1/16W J      | a            |
| KEY       | O R       | 0220           | 88-108-183-080       | C-RES,U 18K-1/16W J       | a            |
| KEY       | X R       | 0221           | 88-108-393-080       | C-RES,U 39K-1/16W J       | a            |
| KEY       | O S       | 0101           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
|           |           |                |                      |                           | XR-FD55      |
|           |           |                |                      |                           | CEK          |
| KEY       | O S       | 0102           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0103           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0104           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0105           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0106           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0107           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0108           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0109           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0110           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0111           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0112           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0113           | 87-A92-419-010       | SW,RTRY EC12E24304WITH VC | a            |
| KEY       | O S       | 0114           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0115           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0116           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0117           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0118           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0119           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0120           | 87-A91-024-180       | SW,TACT KSHG611BT         | a            |
| KEY       | O S       | 0123           | 87-A90-894-010       | SW,RTRY EC12E12444        | a            |

# ELECTRICAL PARTS LIST - 7/16

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| UNIT-NAME | ! C  | REF-NO | PARTS-NO       | PARTS-NAME               | SUFFIX&MODEL   |
|-----------|------|--------|----------------|--------------------------|----------------|
|           |      |        |                |                          | XR-FD55<br>CEK |
| LED       | O C  | 0130   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| LED       | O C  | 0131   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| LED       | O C  | 0136   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| LED       | O C  | 0138   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| LED       | O CM | 0106   | 87-A60-538-010 | CONN,5P H TUC-P05X-B1    | a              |
| LED       | O D  | 0105   | 87-A40-821-080 | LED,SMLS1BE16C BLU/UMB   | a              |
| LED       | O D  | 0106   | 87-A40-821-080 | LED,SMLS1BE16C BLU/UMB   | a              |
| LED       | X R  | 0222   | 88-108-560-080 | C-RES,U 56-1/16W J       | a              |
| LED       | O R  | 0223   | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| LED       | O R  | 0224   | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| LED       | X R  | 0226   | 88-108-151-080 | C-RES,U 150-1/16W J      | a              |
| LED       | X R  | 0227   | 88-108-560-080 | C-RES,U 56-1/16W J       | a              |
| LED       | O R  | 0228   | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| LED       | O R  | 0229   | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| LED       | X R  | 0233   | 88-108-151-080 | C-RES,U 150-1/16W J      | a              |
| MAIN      | O C  | 0001   | 87-A10-520-000 | CAP,E 3300-35 M SMG      | a              |
| MAIN      | O C  | 0002   | 87-A10-520-000 | CAP,E 3300-35 M SMG      | a              |
| MAIN      | O C  | 0003   | 87-A12-317-080 | C-CAP,U 0.1-50 Z F       | a              |
| MAIN      | O C  | 0004   | 87-A12-317-080 | C-CAP,U 0.1-50 Z F       | a              |
| MAIN      | O C  | 0005   | 87-A12-317-080 | C-CAP,U 0.1-50 Z F       | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| MAIN      | O C  | 0006   | 87-A12-317-080 | C-CAP,U 0.1-50 Z F       | a              |
| MAIN      | O C  | 0009   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0010   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0011   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0012   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0013   | 87-012-282-080 | C-CAP,U 4700P-50 K B GRM | a              |
| MAIN      | O C  | 0014   | 87-010-384-040 | CAP,E 100-25 M 11L SME   | a              |
| MAIN      | O C  | 0016   | 87-012-282-080 | C-CAP,U 4700P-50 K B GRM | a              |
| MAIN      | O C  | 0017   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0021   | 87-010-928-000 | CAP,E 4700-25 M SMG      | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| MAIN      | O C  | 0022   | 87-010-928-000 | CAP,E 4700-25 M SMG      | a              |
| MAIN      | O C  | 0025   | 87-010-247-080 | CAP,E 100-50 M SME       | a              |
| MAIN      | O C  | 0026   | 87-010-247-080 | CAP,E 100-50 M SME       | a              |
| MAIN      | O C  | 0029   | 87-010-393-080 | CAP,E 100-35 M SME       | a              |
| MAIN      | O C  | 0030   | 87-010-393-080 | CAP,E 100-35 M SME       | a              |
| MAIN      | O C  | 0031   | 87-010-263-040 | CAP,E 100-10 M 11L SME   | a              |
| MAIN      | O C  | 0034   | 87-010-260-040 | CAP,E 47-25 M 11L SME    | a              |
| MAIN      | O C  | 0035   | 87-010-391-040 | CAP,E 10-35 M 11L SME    | a              |
| MAIN      | O C  | 0036   | 87-010-386-080 | CAP,E 330-25 M SME       | a              |
| MAIN      | O C  | 0041   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| MAIN      | O C  | 0042   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0043   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0044   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0045   | 87-A12-829-000 | CAP,E 4700-25 M 85 GS    | a              |
| MAIN      | O C  | 0051   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0053   | 87-010-252-080 | CAP,E 1000-6.3 M SME     | a              |
| MAIN      | O C  | 0060   | 87-010-403-040 | CAP,E 3.3-50 M 11L SME   | a              |
| MAIN      | O C  | 0061   | 87-010-260-040 | CAP,E 47-25 M 11L SME    | a              |
| MAIN      | O C  | 0101   | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM | a              |
| MAIN      | O C  | 0102   | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| MAIN      | O C  | 0103   | 87-015-698-040 | CAP,E 4.7-50 M 7L SRA    | a              |
| MAIN      | O C  | 0104   | 87-015-698-040 | CAP,E 4.7-50 M 7L SRA    | a              |
| MAIN      | O C  | 0109   | 87-015-681-040 | CAP,E 10-16 7L SRA       | a              |
| MAIN      | O C  | 0110   | 87-015-681-040 | CAP,E 10-16 7L SRA       | a              |
| MAIN      | O C  | 0111   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| MAIN      | O C  | 0112   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| MAIN      | O C  | 0225   | 87-A10-307-080 | CAP,M 0.1-50 J           | a              |
| MAIN      | O C  | 0226   | 87-A10-307-080 | CAP,M 0.1-50 J           | a              |
| MAIN      | O C  | 0227   | 87-A10-307-080 | CAP,M 0.1-50 J           | a              |
| MAIN      | O C  | 0228   | 87-A10-307-080 | CAP,M 0.1-50 J           | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| MAIN      | O C  | 0229   | 87-010-191-080 | C-CAP,S 0.015-50 Z F GRM | a              |
| MAIN      | O C  | 0230   | 87-010-191-080 | C-CAP,S 0.015-50 Z F GRM | a              |
| MAIN      | O C  | 0231   | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM  | a              |
| MAIN      | O C  | 0232   | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM  | a              |
| MAIN      | O C  | 0233   | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM  | a              |
| MAIN      | O C  | 0303   | 87-012-275-080 | C-CAP,U 1200P-50 K B GRM | a              |
| MAIN      | O C  | 0304   | 87-012-275-080 | C-CAP,U 1200P-50 K B GRM | a              |
| MAIN      | O C  | 0305   | 87-012-270-080 | C-CAP,U 470P-50 K B GRM  | a              |
| MAIN      | O C  | 0363   | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| MAIN      | O C  | 0451   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
|           |      |        |                |                          | XR-FD55<br>CEK |
| MAIN      | O C  | 0452   | 87-015-690-040 | CAP,E 22-35 M 7L SRA     | a              |
| MAIN      | O C  | 0453   | 87-012-279-080 | C-CAP,U 2700P-50 K B GRM | a              |
| MAIN      | O C  | 0454   | 87-012-279-080 | C-CAP,U 2700P-50 K B GRM | a              |
| MAIN      | O C  | 0455   | 87-012-279-080 | C-CAP,U 2700P-50 K B GRM | a              |
| MAIN      | O C  | 0456   | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM  | a              |
| MAIN      | O C  | 0457   | 87-A12-361-080 | CAP,M 5600P-100 J CP     | a              |
| MAIN      | O C  | 0458   | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM | a              |
| MAIN      | O C  | 0459   | 87-012-271-080 | C-CAP,U 560P-50 K B GRM  | a              |
| MAIN      | O C  | 0460   | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB | a              |
| MAIN      | O C  | 0461   | 87-012-158-080 | C-CAP,S 390P-50 J CH GRM | a              |

# ELECTRICAL PARTS LIST - 8/16

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 C = Components marked

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| UNIT-NAME | ! C   | REF-NO  | PARTS-NO       | PARTS-NAME                 | SUFFIX&MODEL   |
|-----------|-------|---------|----------------|----------------------------|----------------|
|           |       |         |                |                            | XR-FD55<br>CEK |
| MAIN      | O C   | 0462    | 87-012-158-080 | C-CAP,S 390P-50 J CH GRM   | a              |
| MAIN      | O C   | 0463    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0464    | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM   | a              |
| MAIN      | O C   | 0601    | 87-012-188-080 | C-CAP,U 47P-50 J CH GRM    | a              |
| MAIN      | O C   | 0602    | 87-012-188-080 | C-CAP,U 47P-50 J CH GRM    | a              |
| MAIN      | O C   | 0603    | 87-010-555-040 | CAP,E 100-10 M 5L SRE      | a              |
| MAIN      | O C   | 0604    | 87-010-555-040 | CAP,E 100-10 M 5L SRE      | a              |
| MAIN      | O C   | 0605    | 87-012-284-080 | C-CAP,U 6800P-50 K B GRM   | a              |
| MAIN      | O C   | 0606    | 87-012-284-080 | C-CAP,U 6800P-50 K B GRM   | a              |
| MAIN      | O C   | 0607    | 87-012-273-080 | C-CAP,U 820P-50 K B GRM    | a              |
| MAIN      | O C   | 0608    | 87-012-273-080 | C-CAP,U 820P-50 K B GRM    | a              |
| MAIN      | O C   | 0609    | 87-A13-165-080 | CAP,E 1-50 M FG            | a              |
| MAIN      | O C   | 0610    | 87-A13-165-080 | CAP,E 1-50 M FG            | a              |
| MAIN      | O C   | 0613    | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM   | a              |
| MAIN      | O C   | 0614    | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM   | a              |
| MAIN      | O C   | 0615    | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM   | a              |
| MAIN      | O C   | 0616    | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM   | a              |
| MAIN      | O C   | 0617    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| MAIN      | O C   | 0618    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| MAIN      | O C   | 0619    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
|           |       |         |                |                            | XR-FD55<br>CEK |
| MAIN      | O C   | 0620    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| MAIN      | O C   | 0621    | 87-010-545-040 | CAP,E 0.22-50 M 11L SME    | a              |
| MAIN      | O C   | 0622    | 87-010-545-040 | CAP,E 0.22-50 M 11L SME    | a              |
| MAIN      | O C   | 0623    | 87-010-545-040 | CAP,E 0.22-50 M 11L SME    | a              |
| MAIN      | O C   | 0624    | 87-010-545-040 | CAP,E 0.22-50 M 11L SME    | a              |
| MAIN      | O C   | 0625    | 87-012-281-080 | C-CAP,U 3900P-50 K B GRM   | a              |
| MAIN      | O C   | 0626    | 87-012-281-080 | C-CAP,U 3900P-50 K B GRM   | a              |
| MAIN      | O C   | 0631    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| MAIN      | O C   | 0632    | 87-012-195-080 | C-CAP,U 100P-50 J CH GRM   | a              |
| MAIN      | O C   | 0633    | 87-012-284-080 | C-CAP,U 6800P-50 K B GRM   | a              |
| MAIN      | O C   | 0634    | 87-012-284-080 | C-CAP,U 6800P-50 K B GRM   | a              |
| MAIN      | O C   | 0635    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| MAIN      | O C   | 0636    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| MAIN      | O C   | 0637    | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM   | a              |
| MAIN      | O C   | 0638    | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM   | a              |
| MAIN      | O C   | 0651    | 87-A13-045-040 | CAP,E 220-16 M VR-GSO      | a              |
| MAIN      | O C   | 0652    | 87-A13-030-040 | CAP,E 47-35 M VR-GSO       | a              |
| MAIN      | O C   | 0655    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| MAIN      | O C   | 0656    | 87-012-186-080 | C-CAP,U 39P-50 J CH GRM    | a              |
| MAIN      | O C   | 0657    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
|           |       |         |                |                            | XR-FD55<br>CEK |
| MAIN      | O C   | 0658    | 87-012-281-080 | C-CAP,U 3900P-50 K B GRM   | a              |
| MAIN      | O C   | 0659    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0660    | 87-010-402-040 | CAP,E 2.2-50 M 11L SME     | a              |
| MAIN      | O C   | 0663    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0664    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0667    | 87-015-684-040 | CAP,E 47-16 M 7L SRA       | a              |
| MAIN      | O C   | 0669    | 87-012-271-080 | C-CAP,U 560P-50 K B GRM    | a              |
| MAIN      | O C   | 0670    | 87-012-271-080 | C-CAP,U 560P-50 K B GRM    | a              |
| MAIN      | O C   | 0672    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0676    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0677    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM    | a              |
| MAIN      | O C   | 0681    | 87-015-695-040 | CAP,E 1-50 7L SRA          | a              |
| MAIN      | O C   | 0682    | 87-015-695-040 | CAP,E 1-50 7L SRA          | a              |
| MAIN      | O C   | 0683    | 87-010-497-040 | CAP,E 4.7-35 M 5L SRE      | a              |
| MAIN      | O C   | 0684    | 87-015-698-040 | CAP,E 4.7-50 M 7L SRA      | a              |
| MAIN      | O C   | 0693    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0694    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | O C   | 0751    | 87-010-497-040 | CAP,E 4.7-35 M 5L SRE      | a              |
| MAIN      | O C   | 0752    | 87-010-497-040 | CAP,E 4.7-35 M 5L SRE      | a              |
| MAIN      | O C   | 0753    | 87-010-494-040 | CAP,E 1-50 M 5L SRE        | a              |
|           |       |         |                |                            | XR-FD55<br>CEK |
| MAIN      | O C   | 0754    | 87-010-494-040 | CAP,E 1-50 M 5L SRE        | a              |
| MAIN      | O C   | 0755    | 87-010-754-080 | CAP,E 220-10 M 7L SRA      | a              |
| MAIN      | O C   | 0756    | 87-A10-189-040 | CAP,E 220-10 M 5L          | a              |
| MAIN      | O C   | 0803    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM     | a              |
| MAIN      | X     | CLP0301 | 87-A60-884-010 | PIN,DIAL COATING-SHS       | a              |
| MAIN      | O CN  | 0101    | 87-A61-108-010 | CONN,5P V TID-A            | a              |
| MAIN      | O CN  | 0302    | 87-A60-625-010 | CONN,8P V 2MM JMT          | a              |
| MAIN      | O CN  | 0601    | 87-099-394-010 | CONN,28P V BLK 6216        | a              |
| MAIN      | O CN  | 0602    | 87-099-195-010 | CONN,7P V BLK 6216         | a              |
| MAIN      | O CN  | 0604    | 87-099-013-010 | CONN,11P V BLK 6216        | a              |
| MAIN      | O CN  | 0605    | 87-A60-998-010 | CONN,15P V BLK TAC-L15X-A3 | a              |
| MAIN      | O CN  | 0607    | 87-099-195-010 | CONN,7P V BLK 6216         | a              |
| MAIN      | O CN  | 0608    | 87-099-014-010 | CONN,12P V BLK 6216        | a              |
| MAIN      | O CNA | 0001    | 8C-CJE-602-010 | CONN ASSY,11P TID-A200     | a              |
| MAIN      | O D   | 0001    | 87-A40-455-080 | DIODE,RL203 GW             | a              |
| MAIN      | O D   | 0002    | 87-A40-455-080 | DIODE,RL203 GW             | a              |
| MAIN      | O D   | 0003    | 87-A40-455-080 | DIODE,RL203 GW             | a              |
| MAIN      | O D   | 0004    | 87-A40-455-080 | DIODE,RL203 GW             | a              |
| MAIN      | O D   | 0005    | 87-A40-455-080 | DIODE,RL203 GW             | a              |
| MAIN      | O D   | 0006    | 87-A40-455-080 | DIODE,RL203 GW             | a              |

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| UNIT-NAME | ! C  | REF-NO | PARTS-NO       | PARTS-NAME                  | SUFFIX&MODEL   |
|-----------|------|--------|----------------|-----------------------------|----------------|
|           |      |        |                |                             | XR-FD55<br>CEK |
| MAIN      | O D  | 0007   | 87-A40-455-080 | DIODE,RL203 GW              | a              |
| MAIN      | O D  | 0008   | 87-A40-455-080 | DIODE,RL203 GW              | a              |
| MAIN      | O D  | 0011   | 87-A40-270-040 | C-DIODE,MC2838              | a              |
| MAIN      | O D  | 0012   | 87-020-465-080 | DIODE,1SS133                | a              |
| MAIN      | O D  | 0013   | 87-A40-764-080 | ZENER,UZ10BSC               | a              |
| MAIN      | O D  | 0014   | 87-A40-455-080 | DIODE,RL203 GW              | a              |
| MAIN      | O D  | 0015   | 87-A40-455-080 | DIODE,RL203 GW              | a              |
| MAIN      | O D  | 0027   | 87-A40-553-080 | DIODE,1N4003 LES            | a              |
| MAIN      | O D  | 0029   | 87-A40-686-080 | ZENER,MTZJ39D               | a              |
| MAIN      | O D  | 0030   | 87-A40-553-080 | DIODE,1N4003 LES            | a              |
| MAIN      | O D  | 0033   | 87-020-465-080 | DIODE,1SS133                | a              |
| MAIN      | O D  | 0041   | 87-A40-270-040 | C-DIODE,MC2838              | a              |
| MAIN      | O D  | 0042   | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MAIN      | O D  | 0061   | 87-A40-752-080 | ZENER,UZ6.2BSC              | a              |
| MAIN      | O D  | 0063   | 87-A40-270-040 | C-DIODE,MC2838              | a              |
| MAIN      | O D  | 0064   | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MAIN      | O D  | 0065   | 87-A40-270-040 | C-DIODE,MC2838              | a              |
| MAIN      | O D  | 0066   | 87-A40-750-080 | ZENER,UZ6.2BSA              | a              |
| MAIN      | O D  | 0076   | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MAIN      | O D  | 0077   | 87-A40-270-040 | C-DIODE,MC2838              | a              |
|           |      |        |                |                             | XR-FD55<br>CEK |
| MAIN      | O D  | 0093   | 87-A40-270-040 | C-DIODE,MC2838              | a              |
| MAIN      | O D  | 0094   | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MAIN      | O D  | 0095   | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MAIN      | O D  | 0301   | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MAIN      | O D  | 0621   | 87-020-465-080 | DIODE,1SS133                | a              |
| MAIN      | O D  | 0632   | 87-A40-761-080 | ZENER,UZ9.1BSB              | a              |
| MAIN      | O D  | 0661   | 87-A40-745-080 | ZENER,UZ4.7BSA              | a              |
| MAIN      | O D  | 0662   | 87-A40-745-080 | ZENER,UZ4.7BSA              | a              |
| MAIN      | O D  | 0751   | 87-020-465-080 | DIODE,1SS133                | a              |
| MAIN      | O D  | 0752   | 87-020-465-080 | DIODE,1SS133                | a              |
| MAIN      | O D  | 0753   | 87-020-465-080 | DIODE,1SS133                | a              |
| MAIN      | O D  | 0754   | 87-020-465-080 | DIODE,1SS133                | a              |
| MAIN      | X FB | 0601   | 88-108-000-080 | C-JUMPER,U                  | a              |
| MAIN      | X FB | 0602   | 88-108-000-080 | C-JUMPER,U                  | a              |
| MAIN      | X FB | 0603   | 88-100-000-010 | PLATING-JW, 0.58 SN95       | a              |
| MAIN      | X FB | 0604   | 88-108-000-080 | C-JUMPER,U                  | a              |
| MAIN      | O IC | 0001   | 87-A21-365-010 | IC,NJM7808FA(A)             | a              |
| MAIN      | O IC | 0051   | 87-A21-363-010 | IC,NJM7805FA(A)             | a              |
| MAIN      | O IC | 0101   | 87-A21-419-040 | C-IC,NJM14558MD-TE2         | a              |
| MAIN      | O IC | 0452   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
|           |      |        |                |                             | XR-FD55<br>CEK |
| MAIN      | O IC | 0601   | 87-A22-235-040 | C-IC,M61518FP               | a              |
| MAIN      | O IC | 0602   | 87-017-726-040 | C-IC,BU4052BCF              | a              |
| MAIN      | O IC | 0615   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O IC | 0616   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O IC | 0751   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O IC | 0751   | 87-A21-419-040 | C-IC,NJM14558MD-TE2         | a              |
| MAIN      | O IC | 0752   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O IC | 0753   | 87-A30-075-040 | C-TR,2SA1235F               | a              |
| MAIN      | O IC | 0803   | 87-A22-371-010 | IC,GP1FA501RZ               | a              |
| MAIN      | O J  | 0203   | 87-A60-238-010 | TERMINAL,SP 4P (MSC)        | a              |
| MAIN      | O J  | 0205   | 87-099-801-010 | JACK,PIN 1P BLK W/O SW      | a              |
| MAIN      | O J  | 0602   | 87-A60-881-010 | JACK,PIN 2P MSP 242V05 PBSN | a              |
| MAIN      | O L  | 0201   | 87-A50-611-010 | COIL,1UH K(CS)              | a              |
| MAIN      | O L  | 0202   | 87-A50-611-010 | COIL,1UH K(CS)              | a              |
| MAIN      | O L  | 0451   | 87-007-342-010 | COIL,OSC 85KHZ BIAS         | a              |
| MAIN      | O Q  | 0001   | 87-A30-630-080 | TR,2SC5343GL                | a              |
| MAIN      | O Q  | 0002   | 87-A30-630-080 | TR,2SC5343GL                | a              |
| MAIN      | O Q  | 0003   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O Q  | 0009   | 87-A30-494-080 | TR,2SA1980G                 | a              |
| MAIN      | O Q  | 0010   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
|           |      |        |                |                             | XR-FD55<br>CEK |
| MAIN      | O Q  | 0011   | 87-A30-614-010 | TR,2SB1548                  | a              |
| MAIN      | O Q  | 0012   | 87-A30-630-080 | TR,2SC5343GL                | a              |
| MAIN      | O Q  | 0013   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O Q  | 0014   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O Q  | 0060   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O Q  | 0061   | 87-A30-075-040 | C-TR,2SA1235F               | a              |
| MAIN      | O Q  | 0062   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O Q  | 0063   | 87-A30-075-040 | C-TR,2SA1235F               | a              |
| MAIN      | O Q  | 0064   | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MAIN      | O Q  | 0065   | 87-A30-075-040 | C-TR,2SA1235F               | a              |
| MAIN      | O Q  | 0066   | 87-026-245-080 | TR,DTC114ES                 | a              |
| MAIN      | O Q  | 0305   | 87-A30-091-080 | FET,2SJ460                  | a              |
| MAIN      | O Q  | 0306   | 87-A30-091-080 | FET,2SJ460                  | a              |
| MAIN      | O Q  | 0307   | 87-A30-090-080 | FET,2SK2541                 | a              |
| MAIN      | O Q  | 0308   | 87-A30-090-080 | FET,2SK2541                 | a              |
| MAIN      | O Q  | 0309   | 87-A30-090-080 | FET,2SK2541                 | a              |
| MAIN      | O Q  | 0451   | 87-A30-630-080 | TR,2SC5343GL                | a              |
| MAIN      | O Q  | 0453   | 89-333-317-880 | TR,2SC3331(T/U)             | a              |
| MAIN      | O Q  | 0454   | 89-333-317-880 | TR,2SC3331(T/U)             | a              |
| MAIN      | O Q  | 0601   | 87-A30-538-040 | C-TR,SRA2202S               | a              |

# ELECTRICAL PARTS LIST - 10/16

! =  $\Delta$  SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C | REF-NO | PARTS-NO            | PARTS-NAME            | SUFFIX&MODEL |
|-----------|-----|--------|---------------------|-----------------------|--------------|
|           |     |        |                     |                       | XR-FD55      |
|           |     |        |                     |                       | CEK          |
| MAIN      |     | O Q    | 0621 87-A30-494-080 | TR,2SA1980G           | a            |
| MAIN      |     | O Q    | 0622 87-A30-288-040 | C-TR,DTC114YKA        | a            |
| MAIN      |     | X R    | 0001 88-130-159-080 | RES,1.5-1/4W J        | a            |
| MAIN      |     | X R    | 0002 88-130-159-080 | RES,1.5-1/4W J        | a            |
| MAIN      |     | X R    | 0005 88-130-159-080 | RES,1.5-1/4W J        | a            |
| MAIN      |     | X R    | 0006 88-130-159-080 | RES,1.5-1/4W J        | a            |
| MAIN      |     | O R    | 0009 88-108-183-080 | C-RES,U 18K-1/16W J   | a            |
| MAIN      |     | O R    | 0010 88-108-183-080 | C-RES,U 18K-1/16W J   | a            |
| MAIN      |     | O R    | 0011 88-118-472-080 | C-RES,S 4.7K-1/10W J  | a            |
| MAIN      |     | O R    | 0012 88-118-472-080 | C-RES,S 4.7K-1/10W J  | a            |
| MAIN      |     | X R    | 0013 88-108-472-080 | C-RES,U 4.7K-1/16W J  | a            |
| MAIN      |     | X R    | 0014 88-118-100-080 | C-RES,S 10-1/10W J    | a            |
| MAIN      |     | X R    | 0015 88-108-104-080 | C-RES,U 100K-1/16W J  | a            |
| MAIN      |     | X R    | 0018 88-108-104-080 | C-RES,U 100K-1/16W J  | a            |
| MAIN      |     | X R    | 0019 88-108-104-080 | C-RES,U 100K-1/16W J  | a            |
| MAIN      |     | O R    | 0024 88-108-103-080 | C-RES,U 10K-1/16W J   | a            |
| MAIN      |     | O R    | 0026 88-118-472-080 | C-RES,S 4.7K-1/10W J  | a            |
| MAIN      |     | X R    | 0027 88-100-000-010 | PLATING-JW, 0.58 SN95 | a            |
| MAIN      |     | X R    | 0028 88-108-221-080 | C-RES,U 220-1/16W J   | a            |
| MAIN      |     | O R    | 0029 88-108-473-080 | C-RES,U 47K-1/16W J   | a            |
|           |     |        |                     |                       | XR-FD55      |
|           |     |        |                     |                       | CEK          |
| MAIN      |     | X R    | 0031 88-108-154-080 | C-RES,U 150K-1/16W J  | a            |
| MAIN      |     | O R    | 0032 88-118-472-080 | C-RES,S 4.7K-1/10W J  | a            |
| MAIN      |     | O R    | 0033 88-108-103-080 | C-RES,U 10K-1/16W J   | a            |
| MAIN      |     | O R    | 0035 88-108-123-080 | C-RES,U 12K-1/16W J   | a            |
| MAIN      |     | X R    | 0041 88-121-181-080 | RES,180-1/8W J        | a            |
| MAIN      |     | O R    | 0042 88-121-121-080 | RES,120-1/8W J        | a            |
| MAIN      |     | X R    | 0043 88-118-121-080 | C-RES,S 120-1/10W J   | a            |
| MAIN      |     | X R    | 0044 88-118-121-080 | C-RES,S 120-1/10W J   | a            |
| MAIN      |     | X R    | 0045 88-118-121-080 | C-RES,S 120-1/10W J   | a            |
| MAIN      |     | X R    | 0046 88-121-181-080 | RES,180-1/8W J        | a            |
| MAIN      |     | X R    | 0048 88-121-151-080 | RES,150-1/8W J        | a            |
| MAIN      |     | O R    | 0051 88-108-102-080 | C-RES,U 1K-1/16W J    | a            |
| MAIN      |     | O R    | 0052 88-121-102-080 | RES,1K-1/8W J         | a            |
| MAIN      |     | X R    | 0056 88-118-680-080 | C-RES,S 68-1/10W J    | a            |
| MAIN      |     | X R    | 0057 88-108-472-080 | C-RES,U 4.7K-1/16W J  | a            |
| MAIN      |     | O R    | 0058 88-108-103-080 | C-RES,U 10K-1/16W J   | a            |
| MAIN      |     | X R    | 0059 88-108-221-080 | C-RES,U 220-1/16W J   | a            |
| MAIN      |     | O R    | 0060 88-108-471-080 | C-RES,U 470-1/16W J   | a            |
| MAIN      |     | O R    | 0061 88-108-103-080 | C-RES,U 10K-1/16W J   | a            |
| MAIN      |     | O R    | 0062 88-108-223-080 | C-RES,U 22K-1/16W J   | a            |
|           |     |        |                     |                       | XR-FD55      |
|           |     |        |                     |                       | CEK          |
| MAIN      |     | O R    | 0063 88-108-223-080 | C-RES,U 22K-1/16W J   | a            |
| MAIN      |     | O R    | 0064 88-108-103-080 | C-RES,U 10K-1/16W J   | a            |
| MAIN      |     | O R    | 0065 88-108-123-080 | C-RES,U 12K-1/16W J   | a            |
| MAIN      |     | X R    | 0066 88-108-104-080 | C-RES,U 100K-1/16W J  | a            |
| MAIN      |     | O R    | 0067 88-108-103-080 | C-RES,U 10K-1/16W J   | a            |
| MAIN      |     | O R    | 0068 88-108-103-080 | C-RES,U 10K-1/16W J   | a            |
| MAIN      |     | O R    | 0069 88-108-101-080 | C-RES,U 100-1/16W J   | a            |
| MAIN      |     | X R    | 0070 88-108-472-080 | C-RES,U 4.7K-1/16W J  | a            |
| MAIN      |     | X R    | 0071 88-108-152-080 | C-RES,U 1.5K-1/16W J  | a            |
| MAIN      |     | O R    | 0072 88-121-103-080 | RES,10K-1/8W J        | a            |
| MAIN      |     | O R    | 0076 88-121-473-080 | RES,47K-1/8W J        | a            |
| MAIN      |     | X R    | 0077 88-108-682-080 | C-RES,U 6.8K-1/16W J  | a            |
| MAIN      |     | O R    | 0078 88-108-823-080 | C-RES,U 82K-1/16W J   | a            |
| MAIN      |     | O R    | 0084 88-108-223-080 | C-RES,U 22K-1/16W J   | a            |
| MAIN      |     | O R    | 0085 88-108-223-080 | C-RES,U 22K-1/16W J   | a            |
| MAIN      |     | O R    | 0086 88-108-563-080 | C-RES,U 56K-1/16W J   | a            |
| MAIN      |     | O R    | 0087 88-108-563-080 | C-RES,U 56K-1/16W J   | a            |
| MAIN      |     | O R    | 0088 88-108-153-080 | C-RES,U 15K-1/16W J   | a            |
| MAIN      |     | O R    | 0089 88-108-153-080 | C-RES,U 15K-1/16W J   | a            |
| MAIN      |     | O R    | 0091 88-108-563-080 | C-RES,U 56K-1/16W J   | a            |
|           |     |        |                     |                       | XR-FD55      |
|           |     |        |                     |                       | CEK          |
| MAIN      |     | X R    | 0092 88-108-393-080 | C-RES,U 39K-1/16W J   | a            |
| MAIN      |     | O R    | 0093 88-108-183-080 | C-RES,U 18K-1/16W J   | a            |
| MAIN      |     | O R    | 0094 88-108-563-080 | C-RES,U 56K-1/16W J   | a            |
| MAIN      |     | X R    | 0095 88-108-393-080 | C-RES,U 39K-1/16W J   | a            |
| MAIN      |     | O R    | 0096 88-108-183-080 | C-RES,U 18K-1/16W J   | a            |
| MAIN      |     | O R    | 0101 88-121-102-080 | RES,1K-1/8W J         | a            |
| MAIN      |     | O R    | 0102 88-108-102-080 | C-RES,U 1K-1/16W J    | a            |
| MAIN      |     | O R    | 0103 88-108-123-080 | C-RES,U 12K-1/16W J   | a            |
| MAIN      |     | O R    | 0104 88-108-123-080 | C-RES,U 12K-1/16W J   | a            |
| MAIN      |     | O R    | 0105 88-108-101-080 | C-RES,U 100-1/16W J   | a            |
| MAIN      |     | O R    | 0106 88-108-101-080 | C-RES,U 100-1/16W J   | a            |
| MAIN      |     | O R    | 0107 88-108-563-080 | C-RES,U 56K-1/16W J   | a            |
| MAIN      |     | O R    | 0108 88-108-563-080 | C-RES,U 56K-1/16W J   | a            |
| MAIN      |     | O R    | 0109 88-108-153-080 | C-RES,U 15K-1/16W J   | a            |
| MAIN      |     | O R    | 0110 88-108-153-080 | C-RES,U 15K-1/16W J   | a            |
| MAIN      |     | O R    | 0111 88-121-101-080 | RES,100-1/8W J        | a            |
| MAIN      |     | O R    | 0112 88-108-101-080 | C-RES,U 100-1/16W J   | a            |
| MAIN      |     | X R    | 0113 88-100-000-010 | PLATING-JW, 0.58 SN95 | a            |
| MAIN      |     | X R    | 0114 88-100-000-010 | PLATING-JW, 0.58 SN95 | a            |
| MAIN      |     | O R    | 0247 88-130-100-080 | RES,10-1/4W J         | a            |

# ELECTRICAL PARTS LIST - 11/16

! = SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.  
 However, please note that not all components will be available as spare parts for after-sales service.  
 Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.  
 Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME            | SUFFIX&MODEL   |
|-----------|-----|--------|----------------|-----------------------|----------------|
|           |     |        |                |                       | XR-FD55<br>CEK |
| MAIN      | O R | 0248   | 88-130-100-080 | RES,10-1/4W J         | a              |
| MAIN      | O R | 0249   | 88-121-100-080 | RES,10-1/8W J         | a              |
| MAIN      | O R | 0250   | 88-121-100-080 | RES,10-1/8W J         | a              |
| MAIN      | O R | 0251   | 88-108-223-080 | C-RES,U 22K-1/16W J   | a              |
| MAIN      | O R | 0252   | 88-108-223-080 | C-RES,U 22K-1/16W J   | a              |
| MAIN      | O R | 0253   | 88-108-122-080 | C-RES,U 1.2K-1/16W J  | a              |
| MAIN      | O R | 0303   | 88-108-823-080 | C-RES,U 82K-1/16W J   | a              |
| MAIN      | O R | 0304   | 88-108-823-080 | C-RES,U 82K-1/16W J   | a              |
| MAIN      | O R | 0305   | 88-108-224-080 | C-RES,U 220K-1/16W J  | a              |
| MAIN      | X R | 0451   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | O R | 0453   | 88-118-472-080 | C-RES,S 4.7K-1/10W J  | a              |
| MAIN      | X R | 0454   | 88-121-829-080 | RES,8.2-1/8W J        | a              |
| MAIN      | O R | 0455   | 88-108-183-080 | C-RES,U 18K-1/16W J   | a              |
| MAIN      | O R | 0456   | 88-108-183-080 | C-RES,U 18K-1/16W J   | a              |
| MAIN      | X R | 0457   | 88-108-104-080 | C-RES,U 100K-1/16W J  | a              |
| MAIN      | O R | 0458   | 88-108-563-080 | C-RES,U 56K-1/16W J   | a              |
| MAIN      | O R | 0459   | 88-118-472-080 | C-RES,S 4.7K-1/10W J  | a              |
| MAIN      | O R | 0463   | 88-108-102-080 | C-RES,U 1K-1/16W J    | a              |
| MAIN      | O R | 0464   | 88-108-102-080 | C-RES,U 1K-1/16W J    | a              |
| MAIN      | O R | 0601   | 88-108-101-080 | C-RES,U 100-1/16W J   | a              |
|           |     |        |                |                       | XR-FD55<br>CEK |
| MAIN      | O R | 0602   | 88-108-101-080 | C-RES,U 100-1/16W J   | a              |
| MAIN      | X R | 0603   | 88-108-394-080 | C-RES,U 390K-1/16W J  | a              |
| MAIN      | X R | 0604   | 88-108-394-080 | C-RES,U 390K-1/16W J  | a              |
| MAIN      | O R | 0605   | 88-108-122-080 | C-RES,U 1.2K-1/16W J  | a              |
| MAIN      | O R | 0606   | 88-108-122-080 | C-RES,U 1.2K-1/16W J  | a              |
| MAIN      | O R | 0607   | 88-108-183-080 | C-RES,U 18K-1/16W J   | a              |
| MAIN      | O R | 0608   | 88-108-183-080 | C-RES,U 18K-1/16W J   | a              |
| MAIN      | X R | 0611   | 88-108-682-080 | C-RES,U 6.8K-1/16W J  | a              |
| MAIN      | X R | 0612   | 88-108-682-080 | C-RES,U 6.8K-1/16W J  | a              |
| MAIN      | X R | 0613   | 88-108-682-080 | C-RES,U 6.8K-1/16W J  | a              |
| MAIN      | X R | 0614   | 88-108-682-080 | C-RES,U 6.8K-1/16W J  | a              |
| MAIN      | O R | 0615   | 88-108-223-080 | C-RES,U 22K-1/16W J   | a              |
| MAIN      | O R | 0616   | 88-108-223-080 | C-RES,U 22K-1/16W J   | a              |
| MAIN      | O R | 0617   | 88-121-333-080 | RES,33K-1/8W J        | a              |
| MAIN      | O R | 0618   | 88-108-333-080 | C-RES,U 33K-1/16W J   | a              |
| MAIN      | O R | 0619   | 88-108-223-080 | C-RES,U 22K-1/16W J   | a              |
| MAIN      | O R | 0620   | 88-108-223-080 | C-RES,U 22K-1/16W J   | a              |
| MAIN      | O R | 0621   | 88-108-102-080 | C-RES,U 1K-1/16W J    | a              |
| MAIN      | O R | 0622   | 88-108-102-080 | C-RES,U 1K-1/16W J    | a              |
| MAIN      | X R | 0623   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
|           |     |        |                |                       | XR-FD55<br>CEK |
| MAIN      | X R | 0624   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | X R | 0625   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | X R | 0626   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | X R | 0627   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | X R | 0628   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | O R | 0629   | 88-108-103-080 | C-RES,U 10K-1/16W J   | a              |
| MAIN      | O R | 0630   | 88-108-103-080 | C-RES,U 10K-1/16W J   | a              |
| MAIN      | X R | 0631   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | X R | 0632   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | O R | 0633   | 88-108-272-080 | C-RES,U 2.7K-1/16W J  | a              |
| MAIN      | O R | 0634   | 88-108-272-080 | C-RES,U 2.7K-1/16W J  | a              |
| MAIN      | O R | 0635   | 88-108-102-080 | C-RES,U 1K-1/16W J    | a              |
| MAIN      | O R | 0636   | 88-108-102-080 | C-RES,U 1K-1/16W J    | a              |
| MAIN      | X R | 0637   | 88-108-331-080 | C-RES,U 330-1/16W J   | a              |
| MAIN      | X R | 0638   | 88-108-331-080 | C-RES,U 330-1/16W J   | a              |
| MAIN      | X R | 0639   | 88-121-183-080 | RES,18K-1/8W J        | a              |
| MAIN      | X R | 0640   | 88-121-183-080 | RES,18K-1/8W J        | a              |
| MAIN      | O R | 0641   | 88-108-223-080 | C-RES,U 22K-1/16W J   | a              |
| MAIN      | X R | 0642   | 88-108-222-080 | C-RES,U 2.2K-1/16W J  | a              |
| MAIN      | X R | 0643   | 88-108-104-080 | C-RES,U 100K-1/16W J  | a              |
|           |     |        |                |                       | XR-FD55<br>CEK |
| MAIN      | X R | 0644   | 88-108-104-080 | C-RES,U 100K-1/16W J  | a              |
| MAIN      | O R | 0645   | 88-108-473-080 | C-RES,U 47K-1/16W J   | a              |
| MAIN      | X R | 0646   | 88-108-472-080 | C-RES,U 4.7K-1/16W J  | a              |
| MAIN      | X R | 0649   | 88-108-152-080 | C-RES,U 1.5K-1/16W J  | a              |
| MAIN      | X R | 0650   | 88-108-152-080 | C-RES,U 1.5K-1/16W J  | a              |
| MAIN      | O R | 0651   | 88-108-101-080 | C-RES,U 100-1/16W J   | a              |
| MAIN      | O R | 0652   | 88-108-101-080 | C-RES,U 100-1/16W J   | a              |
| MAIN      | X R | 0653   | 88-100-000-010 | PLATING-JW, 0.58 SN95 | a              |
| MAIN      | O R | 0654   | 88-108-224-080 | C-RES,U 220K-1/16W J  | a              |
| MAIN      | X R | 0655   | 88-108-274-080 | C-RES,U 270K-1/16W J  | a              |
| MAIN      | X R | 0656   | 88-108-104-080 | C-RES,U 100K-1/16W J  | a              |
| MAIN      | X R | 0657   | 88-108-564-080 | C-RES,U 560K-1/16W J  | a              |
| MAIN      | X R | 0658   | 88-108-000-080 | C-JUMPER,U            | a              |
| MAIN      | O R | 0659   | 88-108-153-080 | C-RES,U 15K-1/16W J   | a              |
| MAIN      | O R | 0660   | 88-108-153-080 | C-RES,U 15K-1/16W J   | a              |
| MAIN      | X R | 0661   | 88-108-182-080 | C-RES,U 1.8K-1/16W J  | a              |
| MAIN      | X R | 0662   | 88-108-182-080 | C-RES,U 1.8K-1/16W J  | a              |
| MAIN      | O R | 0663   | 88-108-103-080 | C-RES,U 10K-1/16W J   | a              |
| MAIN      | O R | 0666   | 88-121-120-080 | RES,12-1/8W J         | a              |
| MAIN      | O R | 0667   | 88-121-120-080 | RES,12-1/8W J         | a              |



# ELECTRICAL PARTS LIST - 12/16

! = SAFETY PARTS

C = Components marked

All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C  | REF-NO  | PARTS-NO       | PARTS-NAME               | SUFFIX&MODEL   |
|-----------|------|---------|----------------|--------------------------|----------------|
|           |      |         |                |                          | XR-FD55<br>CEK |
| MAIN      | O R  | 0668    | 88-121-120-080 | RES,12-1/8W J            | a              |
| MAIN      | O R  | 0672    | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| MAIN      | X R  | 0673    | 88-108-000-080 | C-JUMPER,U               | a              |
| MAIN      | O R  | 0673    | 88-121-182-080 | RES,1.8K-1/8W J          | a              |
| MAIN      | O R  | 0674    | 88-108-123-080 | C-RES,U 12K-1/16W J      | a              |
| MAIN      | X R  | 0681    | 88-108-000-080 | C-JUMPER,U               | a              |
| MAIN      | X R  | 0682    | 88-100-000-010 | PLATING-JW, 0.58 SN95    | a              |
| MAIN      | X R  | 0685    | 88-108-000-080 | C-JUMPER,U               | a              |
| MAIN      | X R  | 0686    | 88-108-000-080 | C-JUMPER,U               | a              |
| MAIN      | O R  | 0687    | 88-108-273-080 | C-RES,U 27K-1/16W J      | a              |
| MAIN      | O R  | 0688    | 88-108-273-080 | C-RES,U 27K-1/16W J      | a              |
| MAIN      | X R  | 0689    | 88-108-222-080 | C-RES,U 2.2K-1/16W J     | a              |
| MAIN      | X R  | 0690    | 88-108-222-080 | C-RES,U 2.2K-1/16W J     | a              |
| MAIN      | X R  | 0691    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| MAIN      | X R  | 0692    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| MAIN      | O R  | 0695    | 88-108-223-080 | C-RES,U 22K-1/16W J      | a              |
| MAIN      | O R  | 0696    | 88-108-223-080 | C-RES,U 22K-1/16W J      | a              |
| MAIN      | X R  | 0697    | 88-108-182-080 | C-RES,U 1.8K-1/16W J     | a              |
| MAIN      | X R  | 0698    | 88-108-182-080 | C-RES,U 1.8K-1/16W J     | a              |
| MAIN      | O R  | 0751    | 88-108-333-080 | C-RES,U 33K-1/16W J      | a              |
|           |      |         |                |                          | XR-FD55<br>CEK |
| MAIN      | O R  | 0752    | 88-108-333-080 | C-RES,U 33K-1/16W J      | a              |
| MAIN      | O R  | 0753    | 88-108-273-080 | C-RES,U 27K-1/16W J      | a              |
| MAIN      | O R  | 0754    | 88-108-273-080 | C-RES,U 27K-1/16W J      | a              |
| MAIN      | O R  | 0755    | 88-108-102-080 | C-RES,U 1K-1/16W J       | a              |
| MAIN      | O R  | 0756    | 88-108-102-080 | C-RES,U 1K-1/16W J       | a              |
| MAIN      | X R  | 0757    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| MAIN      | X R  | 0758    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| MAIN      | X R  | 0759    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| MAIN      | X R  | 0760    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| MAIN      | X R  | 0761    | 88-108-000-080 | C-JUMPER,U               | a              |
| MAIN      | X R  | 0762    | 88-108-000-080 | C-JUMPER,U               | a              |
| MAIN      | X R  | 0763    | 88-121-183-080 | RES,18K-1/8W J           | a              |
| MAIN      | O R  | 0764    | 88-108-103-080 | C-RES,U 10K-1/16W J      | a              |
| MAIN      | X R  | 0765    | 88-108-105-080 | C-RES,U 1M-1/16W J       | a              |
| MAIN      | O R  | 0766    | 88-108-683-080 | C-RES,U 68K-1/16W J      | a              |
| MAIN      | X R  | 0767    | 88-108-222-080 | C-RES,U 2.2K-1/16W J     | a              |
| MAIN      | X R  | 0768    | 88-108-222-080 | C-RES,U 2.2K-1/16W J     | a              |
| MAIN      | X R  | 0805    | 88-108-000-080 | C-JUMPER,U               | a              |
| MAIN      | X R  | 0806    | 88-108-470-080 | C-RES,U 47-1/16W J       | a              |
| MAIN      | O    | SFR0451 | 87-024-435-080 | SFR,33K H RH063MC        | a              |
|           |      |         |                |                          | XR-FD55<br>CEK |
| MAIN      | O    | SFR0452 | 87-024-435-080 | SFR,33K H RH063MC        | a              |
| MAIN      | X W  | 0010    | 8C-CJE-671-010 | WIRE ASSY,130 BLACK LUG  | a              |
| MAIN      | X W  | 0011    | 89-950-051-110 | WIRE,U24H0-5-3           | a              |
| MAIN      | X W  | 0012    | 89-950-091-110 | WIRE,U24H0-9-3           | a              |
| MAIN      | O WH | 0001    | 87-A91-179-010 | HLDR,WIRE 2.5-11P        | a              |
| METER     | O CN | 0105    | 87-A60-539-010 | CONN,5P V TUC-P05P-B1    | a              |
| METER     | O CN | 0109    | 87-099-201-010 | CONN,8P H BLK 6216       | a              |
| METER     | O LM | 0101    | 8C-CJE-625-010 | METER,WS23-01            | a              |
| METER     | O Q  | 0104    | 87-A30-435-040 | C-TR,DTC144EKA           | a              |
| METER     | O Q  | 0106    | 87-A30-435-040 | C-TR,DTC144EKA           | a              |
| METER     | O Q  | 0114    | 87-026-609-080 | TR,KTA1266GR             | a              |
| METER     | O Q  | 0115    | 87-026-609-080 | TR,KTA1266GR             | a              |
| METER     | O Q  | 0116    | 87-A30-427-040 | C-TR,DTC114EKA           | a              |
| METER     | X R  | 0186    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| METER     | O R  | 0187    | 88-108-563-080 | C-RES,U 56K-1/16W J      | a              |
| METER     | X R  | 0188    | 88-108-104-080 | C-RES,U 100K-1/16W J     | a              |
| METER     | O R  | 0198    | 88-108-563-080 | C-RES,U 56K-1/16W J      | a              |
| METER     | X R  | 0269    | 88-130-101-080 | RES,100-1/4W J           | a              |
| METER     | X R  | 0271    | 88-118-220-080 | C-RES,S 22-1/10W J       | a              |
| METER     | X R  | 0272    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
|           |      |         |                |                          | XR-FD55<br>CEK |
| METER     | X R  | 0273    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
| METER     | X R  | 0274    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
| METER     | X R  | 0275    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
| METER     | X R  | 0276    | 88-118-220-080 | C-RES,S 22-1/10W J       | a              |
| METER     | X R  | 0277    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
| METER     | X R  | 0278    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
| METER     | X R  | 0279    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
| METER     | X R  | 0280    | 88-118-390-080 | C-RES,S 39-1/10W J       | a              |
| METER     | X R  | 0281    | 88-108-000-080 | C-JUMPER,U               | a              |
| METER     | X R  | 0282    | 88-108-681-080 | C-RES,U 680-1/16W J      | a              |
| METER     | X R  | 0283    | 88-108-000-080 | C-JUMPER,U               | a              |
| METER     | X R  | 0284    | 88-108-681-080 | C-RES,U 680-1/16W J      | a              |
| MICON     | O C  | 0108    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| MICON     | O C  | 0112    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| MICON     | O C  | 0113    | 87-010-060-040 | CAP,E 100-16 M 7L SRA    | a              |
| MICON     | O C  | 0116    | 87-012-278-080 | C-CAP,U 2200P-50 K B GRM | a              |
| MICON     | O C  | 0119    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| MICON     | O C  | 0127    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM   | a              |
| MICON     | O C  | 0128    | 87-012-176-080 | C-CAP,U 15P-50 J CH GRM  | a              |
| MICON     | O C  | 0129    | 87-012-176-080 | C-CAP,U 15P-50 J CH GRM  | a              |

# ELECTRICAL PARTS LIST - 13/16

! = SAFETY PARTS

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All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

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| UNIT-NAME | ! C   | REF-NO  | PARTS-NO       | PARTS-NAME                  | SUFFIX&MODEL   |
|-----------|-------|---------|----------------|-----------------------------|----------------|
|           |       |         |                |                             | XR-FD55<br>CEK |
| MICON     | O C   | 0135    | 87-012-174-080 | C-CAP,U 12P-50 J CH GRM     | a              |
| MICON     | O C   | 0137    | 87-012-274-080 | C-CAP,U 1000P-50 K B GRM    | a              |
| MICON     | O C   | 0139    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| MICON     | O C   | 0140    | 87-A10-189-040 | CAP,E 220-10 M 5L           | a              |
| MICON     | O C   | 0141    | 87-012-184-080 | C-CAP,U 33P-50 J CH GRM     | a              |
| MICON     | O C   | 0142    | 87-A10-353-080 | C-CAP,U 0.22-10 K B         | a              |
| MICON     | O C   | 0143    | 87-012-287-080 | C-CAP,U 0.015-25 Z F C1608  | a              |
| MICON     | O C   | 0152    | 87-012-184-080 | C-CAP,U 33P-50 J CH GRM     | a              |
| MICON     | O C   | 0153    | 87-012-184-080 | C-CAP,U 33P-50 J CH GRM     | a              |
| MICON     | O C   | 0201    | 87-010-408-040 | CAP,E 47-50 M 11L SME       | a              |
| MICON     | O C   | 0801    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| MICON     | O C   | 0802    | 87-010-831-080 | C-CAP,U 0.1-16 Z F GRM      | a              |
| MICON     | O C   | 0803    | 87-018-103-080 | CAP,TC U 8.2P-50 K SL UP050 | a              |
| MICON     | O C   | 0804    | 87-018-103-080 | CAP,TC U 8.2P-50 K SL UP050 | a              |
| MICON     | O C   | 0805    | 87-018-103-080 | CAP,TC U 8.2P-50 K SL UP050 | a              |
| MICON     | O C   | 0806    | 87-018-103-080 | CAP,TC U 8.2P-50 K SL UP050 | a              |
| MICON     | O C   | 0808    | 87-010-248-040 | CAP,E 220-10 M 11L SME      | a              |
| MICON     | O C   | 0809    | 87-010-759-080 | C-CAP,U 0.1-25 Z F CM/CB    | a              |
| MICON     | O C   | 0811    | 87-012-286-080 | C-CAP,U 0.01-25 K B GRM     | a              |
| MICON     | O C   | 0812    | 87-010-263-040 | CAP,E 100-10 M 11L SME      | a              |
|           |       |         |                |                             | XR-FD55<br>CEK |
| MICON     | X     | CLP0101 | 87-A60-884-010 | PIN,DIA1 COATING-SHS        | a              |
| MICON     | O CN  | 0110    | 87-099-015-010 | CONN,13P V BLK 6216         | a              |
| MICON     | O CN  | 0111    | 87-099-394-010 | CONN,28P V BLK 6216         | a              |
| MICON     | O CN  | 0112    | 87-099-196-010 | CONN,8P V BLK 6216          | a              |
| MICON     | O CN  | 0114    | 87-099-019-010 | CONN,17P V BLK 6216         | a              |
| MICON     | O CN  | 0115    | 87-099-014-010 | CONN,12P V BLK 6216         | a              |
| MICON     | O CN  | 0116    | 87-099-196-010 | CONN,8P V BLK 6216          | a              |
| MICON     | O CN  | 0117    | 87-A61-695-010 | CONN,28P V WHT FMN-BTK-A    | a              |
| MICON     | O CNA | 0101    | 8C-CJE-606-010 | CONN ASSY,5P D-OUT          | a              |
| MICON     | O D   | 0101    | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MICON     | O D   | 0102    | 87-A40-269-040 | C-DIODE,MC2836              | a              |
| MICON     | O D   | 0103    | 87-A40-748-080 | ZENER,UZ5.6BSA              | a              |
| MICON     | O D   | 0107    | 87-020-465-080 | DIODE,1SS133                | a              |
| MICON     | O D   | 0109    | 87-020-465-080 | DIODE,1SS133                | a              |
| MICON     | X FB  | 0801    | 88-100-000-010 | PLATING-JW, 0.58 SN95       | a              |
| MICON     | O IC  | 0102    | 8C-CJE-610-030 | C-IC,LC8752B2A-50Y2         | a              |
| MICON     | O IC  | 0801    | 87-A21-359-040 | C-IC,SN74LV00APW            | a              |
| MICON     | O IC  | 0802    | 87-A21-916-040 | C-IC,SN74LV125APW           | a              |
| MICON     | O IC  | 0804    | 87-A22-360-040 | C-IC,S-814A31AMC            | a              |
| MICON     | X JW  | 0131    | 88-108-472-080 | C-RES,U 4.7K-1/16W J        | a              |
|           |       |         |                |                             | XR-FD55<br>CEK |
| MICON     | O L   | 0102    | 8C-NFT-603-010 | COIL,CLK9.43MHZ POT         | a              |
| MICON     | O Q   | 0101    | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MICON     | O Q   | 0102    | 87-A30-494-080 | TR,2SA1980G                 | a              |
| MICON     | O Q   | 0103    | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MICON     | O Q   | 0105    | 87-A30-076-040 | C-TR,2SC3052F               | a              |
| MICON     | O Q   | 0107    | 87-A30-484-080 | C-TR,KRA102S                | a              |
| MICON     | O Q   | 0108    | 87-A30-073-080 | C-TR,RT1N 141C              | a              |
| MICON     | O Q   | 0109    | 89-112-965-080 | TR,2SA1296GR                | a              |
| MICON     | O Q   | 0110    | 87-A30-495-080 | TR,2SA1981Y                 | a              |
| MICON     | O Q   | 0112    | 87-A30-073-080 | C-TR,RT1N 141C              | a              |
| MICON     | O R   | 0111    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0112    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0113    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0114    | 88-108-000-080 | C-JUMPER,U                  | a              |
| MICON     | O R   | 0115    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0116    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0117    | 88-108-000-080 | C-JUMPER,U                  | a              |
| MICON     | X R   | 0118    | 88-108-000-080 | C-JUMPER,U                  | a              |
| MICON     | O R   | 0119    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0120    | 88-108-000-080 | C-JUMPER,U                  | a              |
|           |       |         |                |                             | XR-FD55<br>CEK |
| MICON     | O R   | 0121    | 88-121-102-080 | RES,1K-1/8W J               | a              |
| MICON     | O R   | 0122    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0123    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0124    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0125    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0126    | 88-108-152-080 | C-RES,U 1.5K-1/16W J        | a              |
| MICON     | O R   | 0127    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0128    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0129    | 88-108-152-080 | C-RES,U 1.5K-1/16W J        | a              |
| MICON     | O R   | 0130    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0131    | 88-108-152-080 | C-RES,U 1.5K-1/16W J        | a              |
| MICON     | O R   | 0132    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | O R   | 0133    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0135    | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| MICON     | X R   | 0137    | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| MICON     | O R   | 0140    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0141    | 88-108-104-080 | C-RES,U 100K-1/16W J        | a              |
| MICON     | O R   | 0143    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |
| MICON     | X R   | 0144    | 88-108-472-080 | C-RES,U 4.7K-1/16W J        | a              |
| MICON     | O R   | 0149    | 88-108-102-080 | C-RES,U 1K-1/16W J          | a              |

# ELECTRICAL PARTS LIST - 14/16

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| UNIT-NAME | ! C    | REF-NO | PARTS-NO       | PARTS-NAME                    | SUFFIX&MODEL   |
|-----------|--------|--------|----------------|-------------------------------|----------------|
|           |        |        |                |                               | XR-FD55<br>CEK |
| MICON     | X R    | 0152   | 88-108-392-080 | C-RES,U 3.9K-1/16W J          | a              |
| MICON     | O R    | 0153   | 88-108-562-080 | C-RES,U 5.6K-1/16W J          | a              |
| MICON     | O R    | 0154   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | X R    | 0155   | 88-108-392-080 | C-RES,U 3.9K-1/16W J          | a              |
| MICON     | O R    | 0156   | 88-108-562-080 | C-RES,U 5.6K-1/16W J          | a              |
| MICON     | O R    | 0161   | 88-108-153-080 | C-RES,U 15K-1/16W J           | a              |
| MICON     | O R    | 0162   | 88-108-471-080 | C-RES,U 470-1/16W J           | a              |
| MICON     | O R    | 0163   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | X R    | 0164   | 88-108-392-080 | C-RES,U 3.9K-1/16W J          | a              |
| MICON     | O R    | 0165   | 88-108-562-080 | C-RES,U 5.6K-1/16W J          | a              |
| MICON     | O R    | 0166   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0168   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | X R    | 0169   | 88-108-000-080 | C-JUMPER,U                    | a              |
| MICON     | O R    | 0180   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0181   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0182   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0183   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0185   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | X R    | 0189   | 88-108-392-080 | C-RES,U 3.9K-1/16W J          | a              |
| MICON     | O R    | 0190   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
|           |        |        |                |                               | XR-FD55<br>CEK |
| MICON     | X R    | 0191   | 88-108-392-080 | C-RES,U 3.9K-1/16W J          | a              |
| MICON     | O R    | 0192   | 88-121-102-080 | RES,1K-1/8W J                 | a              |
| MICON     | O R    | 0193   | 88-121-102-080 | RES,1K-1/8W J                 | a              |
| MICON     | O R    | 0194   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0195   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0196   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0197   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0199   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0200   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0201   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0202   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0203   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0204   | 88-121-102-080 | RES,1K-1/8W J                 | a              |
| MICON     | O R    | 0205   | 88-121-102-080 | RES,1K-1/8W J                 | a              |
| MICON     | O R    | 0206   | 88-121-102-080 | RES,1K-1/8W J                 | a              |
| MICON     | O R    | 0207   | 88-121-102-080 | RES,1K-1/8W J                 | a              |
| MICON     | O R    | 0208   | 88-121-102-080 | RES,1K-1/8W J                 | a              |
| MICON     | O R    | 0209   | 88-108-102-080 | C-RES,U 1K-1/16W J            | a              |
| MICON     | O R    | 0210   | 88-108-562-080 | C-RES,U 5.6K-1/16W J          | a              |
| MICON     | O R    | 0211   | 88-108-562-080 | C-RES,U 5.6K-1/16W J          | a              |
|           |        |        |                |                               | XR-FD55<br>CEK |
| MICON     | O R    | 0225   | 88-108-101-080 | C-RES,U 100-1/16W J           | a              |
| MICON     | X R    | 0231   | 88-108-000-080 | C-JUMPER,U                    | a              |
| MICON     | O R    | 0232   | 88-108-224-080 | C-RES,U 220K-1/16W J          | a              |
| MICON     | O R    | 0234   | 88-108-123-080 | C-RES,U 12K-1/16W J           | a              |
| MICON     | O R    | 0235   | 88-108-473-080 | C-RES,U 47K-1/16W J           | a              |
| MICON     | O R    | 0236   | 88-108-224-080 | C-RES,U 220K-1/16W J          | a              |
| MICON     | O R    | 0237   | 88-108-122-080 | C-RES,U 1.2K-1/16W J          | a              |
| MICON     | X R    | 0238   | 88-108-391-080 | C-RES,U 390-1/16W J           | a              |
| MICON     | O R    | 0239   | 88-108-153-080 | C-RES,U 15K-1/16W J           | a              |
| MICON     | O R    | 0241   | 88-108-103-080 | C-RES,U 10K-1/16W J           | a              |
| MICON     | X R    | 0243   | 88-108-124-080 | C-RES,U 120K-1/16W J          | a              |
| MICON     | O R    | 0244   | 88-108-333-080 | C-RES,U 33K-1/16W J           | a              |
| MICON     | O R    | 0245   | 88-108-563-080 | C-RES,U 56K-1/16W J           | a              |
| MICON     | O R    | 0246   | 88-108-153-080 | C-RES,U 15K-1/16W J           | a              |
| MICON     | O R    | 0247   | 88-108-273-080 | C-RES,U 27K-1/16W J           | a              |
| MICON     | X R    | 0250   | 88-108-222-080 | C-RES,U 2.2K-1/16W J          | a              |
| MICON     | O R    | 0251   | 88-108-103-080 | C-RES,U 10K-1/16W J           | a              |
| MICON     | X R    | 0252   | 88-100-000-010 | PLATING-JW, 0.58 SN95         | a              |
| MICON     | X R    | 0267   | 88-108-104-080 | C-RES,U 100K-1/16W J          | a              |
| MICON     | X R    | 0268   | 88-108-104-080 | C-RES,U 100K-1/16W J          | a              |
|           |        |        |                |                               | XR-FD55<br>CEK |
| MICON     | X R    | 0801   | 88-108-680-080 | C-RES,U 68-1/16W J            | a              |
| MICON     | X R    | 0802   | 88-108-100-080 | C-RES,U 10-1/16W J            | a              |
| MICON     | X R    | 0803   | 88-108-330-080 | C-RES,U 33-1/16W J            | a              |
| MICON     | X R    | 0808   | 88-108-000-080 | C-JUMPER,U                    | a              |
| MICON     | X R    | 0809   | 88-108-180-080 | C-RES,U 18-1/16W J            | a              |
| MICON     | O X    | 0101   | 87-030-364-010 | VIB,XTAL 32.768KHZ CFS-308 CT | a              |
| PT        | O C    | 0081   | 87-010-387-080 | CAP,E 470-25 M SME            | a              |
| PT        | O C    | 0085   | 87-A11-148-080 | CAP,TC U 0.1-50 Z F           | a              |
| PT        | O C    | 0086   | 87-A11-148-080 | CAP,TC U 0.1-50 Z F           | a              |
| PT        | ! O C  | 0087   | 87-A10-479-080 | CAP,CER 2200P-250 M E KH      | a              |
| PT        | O CN   | 0081   | 87-A61-122-010 | CONN,11P V TID-A              | a              |
| PT        | ! O CN | 0082   | 87-099-674-010 | CONN,2P V VA                  | a              |
| PT        | O D    | 0081   | 87-020-465-080 | DIODE,1SS133                  | a              |
| PT        | O D    | 0082   | 87-020-465-080 | DIODE,1SS133                  | a              |
| PT        | O D    | 0083   | 87-020-465-080 | DIODE,1SS133                  | a              |
| PT        | O D    | 0084   | 87-020-465-080 | DIODE,1SS133                  | a              |
| PT        | O D    | 0085   | 87-020-465-080 | DIODE,1SS133                  | a              |
| PT        | X PR   | 0081   | 88-100-000-010 | PLATING-JW, 0.58 SN95         | a              |
| PT        | X PR   | 0082   | 88-100-000-010 | PLATING-JW, 0.58 SN95         | a              |
| PT        | ! O PT | 0001   | 8C-CJE-666-010 | PT,K CCJ-E                    | a              |

# ELECTRICAL PARTS LIST - 15/16

! =  $\Delta$  SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.

However, please note that not all components will be available as spare parts for after-sales service.

Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C | REF-NO    | PARTS-NO       | PARTS-NAME                  | SUFFIX&MODEL   |
|-----------|-----|-----------|----------------|-----------------------------|----------------|
|           |     |           |                |                             | XR-FD55<br>CEK |
| PT        | !   | O PT 0081 | 8B-MA6-675-010 | PT, SUB BMA E (VRK)         | a              |
| PT        | !   | O RY 0081 | 87-A91-418-010 | RELAY, AC 12V G5PA-1-M      | a              |
| PT        |     | X W 0081  | 8C-CJE-608-010 | WIRE ASSY, 140 BLACK FASTON | a              |
| USB       |     | O C 0703  | 87-015-689-040 | CAP, E 10-35 M 7L SRA       | a              |
| USB       |     | O C 0705  | 87-012-178-080 | C-CAP, U 18P-50 J CH GRM    | a              |
| USB       |     | O C 0706  | 87-012-178-080 | C-CAP, U 18P-50 J CH GRM    | a              |
| USB       |     | O C 0710  | 87-015-689-040 | CAP, E 10-35 M 7L SRA       | a              |
| USB       |     | O C 0711  | 87-012-286-080 | C-CAP, U 0.01-25 K B GRM    | a              |
| USB       |     | O C 0712  | 87-012-286-080 | C-CAP, U 0.01-25 K B GRM    | a              |
| USB       |     | O C 0713  | 87-012-286-080 | C-CAP, U 0.01-25 K B GRM    | a              |
| USB       |     | O C 0714  | 87-012-286-080 | C-CAP, U 0.01-25 K B GRM    | a              |
| USB       |     | O C 0715  | 87-012-276-080 | C-CAP, U 1500P-50 K B GRM   | a              |
| USB       |     | O C 0716  | 87-012-276-080 | C-CAP, U 1500P-50 K B GRM   | a              |
| USB       |     | O C 0717  | 87-015-695-040 | CAP, E 1-50 7L SRA          | a              |
| USB       |     | O C 0718  | 87-015-695-040 | CAP, E 1-50 7L SRA          | a              |
| USB       |     | O C 0719  | 87-012-286-080 | C-CAP, U 0.01-25 K B GRM    | a              |
| USB       |     | O C 0720  | 87-012-286-080 | C-CAP, U 0.01-25 K B GRM    | a              |
| USB       |     | O C 0725  | 87-015-684-040 | CAP, E 47-16 M 7L SRA       | a              |
| USB       |     | O C 0727  | 87-015-699-040 | CAP, E 10-50 M 7L SRA       | a              |
| USB       |     | O C 0737  | 87-012-276-080 | C-CAP, U 1500P-50 K B GRM   | a              |
|           |     |           |                |                             | XR-FD55<br>CEK |
| USB       |     | O C 0738  | 87-012-276-080 | C-CAP, U 1500P-50 K B GRM   | a              |
| USB       |     | O CN 0701 | 87-099-200-010 | CONN, 7P H BLK 6216         | a              |
| USB       |     | O D 0702  | 87-020-465-080 | DIODE, 1SS133               | a              |
| USB       |     | O D 0703  | 87-020-465-080 | DIODE, 1SS133               | a              |
| USB       |     | X FB 0701 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | X FB 0702 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | X FB 0704 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | X FB 0705 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | X FB 0706 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | X FB 0707 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | X FB 0708 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | X FB 0709 | 88-108-000-080 | C-JUMPER, U                 | a              |
| USB       |     | O IC 0701 | 87-A22-110-040 | C-IC, PCM2702E/2K-USB DAC   | a              |
| USB       |     | O J 0701  | 8C-CJE-660-010 | JACK, USB-22V02-B           | a              |
| USB       |     | O Q 0702  | 87-A30-432-040 | C-TR, DTC124XKA             | a              |
| USB       |     | O Q 0703  | 87-A30-450-040 | C-TR, DTA124XKA             | a              |
| USB       |     | X R 0704  | 88-100-000-010 | PLATING-JW, 0.58 SN95       | a              |
| USB       |     | X R 0705  | 88-108-152-080 | C-RES, U 1.5K-1/16W J       | a              |
| USB       |     | X R 0706  | 88-108-105-080 | C-RES, U 1M-1/16W J         | a              |
| USB       |     | X R 0707  | 88-108-222-080 | C-RES, U 2.2K-1/16W J       | a              |
|           |     |           |                |                             | XR-FD55<br>CEK |
| USB       |     | X R 0708  | 88-108-222-080 | C-RES, U 2.2K-1/16W J       | a              |
| USB       |     | X R 0709  | 88-108-220-080 | C-RES, U 22-1/16W J         | a              |
| USB       |     | X R 0710  | 88-108-220-080 | C-RES, U 22-1/16W J         | a              |
| USB       |     | X R 0711  | 88-108-220-080 | C-RES, U 22-1/16W J         | a              |
| USB       |     | O R 0715  | 88-108-102-080 | C-RES, U 1K-1/16W J         | a              |
| USB       |     | O R 0716  | 88-108-102-080 | C-RES, U 1K-1/16W J         | a              |
| USB       |     | X R 0730  | 88-100-000-010 | PLATING-JW, 0.58 SN95       | a              |
| USB       |     | O R 0737  | 88-108-102-080 | C-RES, U 1K-1/16W J         | a              |
| USB       |     | O R 0738  | 88-108-102-080 | C-RES, U 1K-1/16W J         | a              |
| USB       |     | X R 0740  | 88-108-220-080 | C-RES, U 22-1/16W J         | a              |
| USB       |     | X R 0741  | 88-108-100-080 | C-RES, U 10-1/16W J         | a              |
| USB       |     | O R 0743  | 88-108-101-080 | C-RES, U 100-1/16W J        | a              |
| USB       |     | O R 0744  | 88-108-101-080 | C-RES, U 100-1/16W J        | a              |
| USB       |     | O X 0701  | 87-A70-350-010 | VIB, XTAL 12MHZ CSA-309     | a              |

# ELECTRICAL PARTS LIST - 16/16

- 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



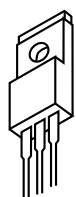
A  
抵抗部品コード  
Resistor Code

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 |

## TRANSISTOR ILLUSTRATION -1/1



B C E  
2SB1342  
2SD1933



E C B  
2SA1296GR



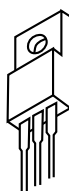
E C B  
2SA1980G  
2SA1981Y  
2SC3331(T/U)  
KTA1266GR



E C B  
2SC5343GL



E C B  
2N5551C



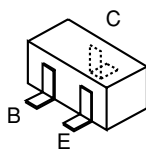
B C E  
2SB1548



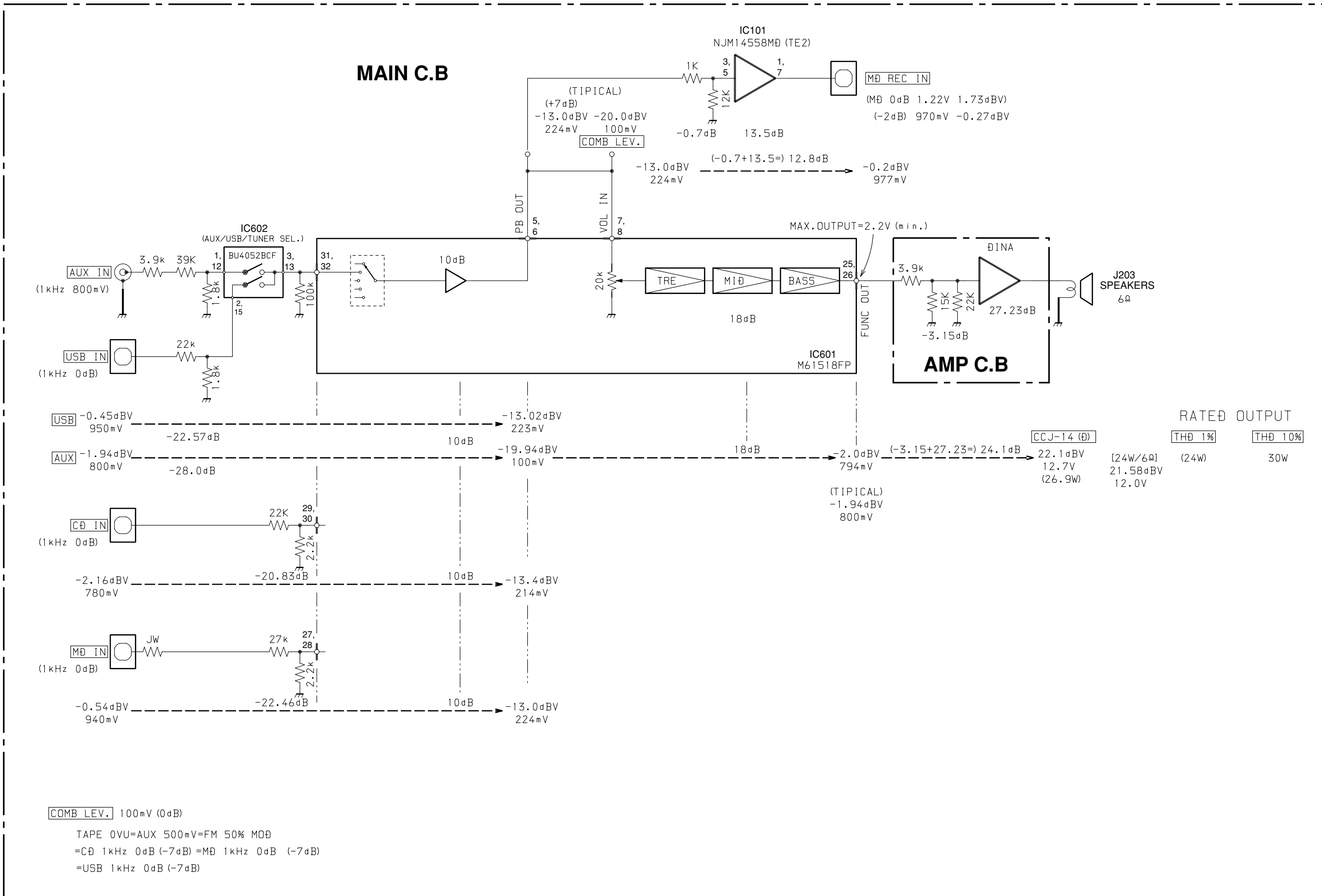
G D S  
2SK2937



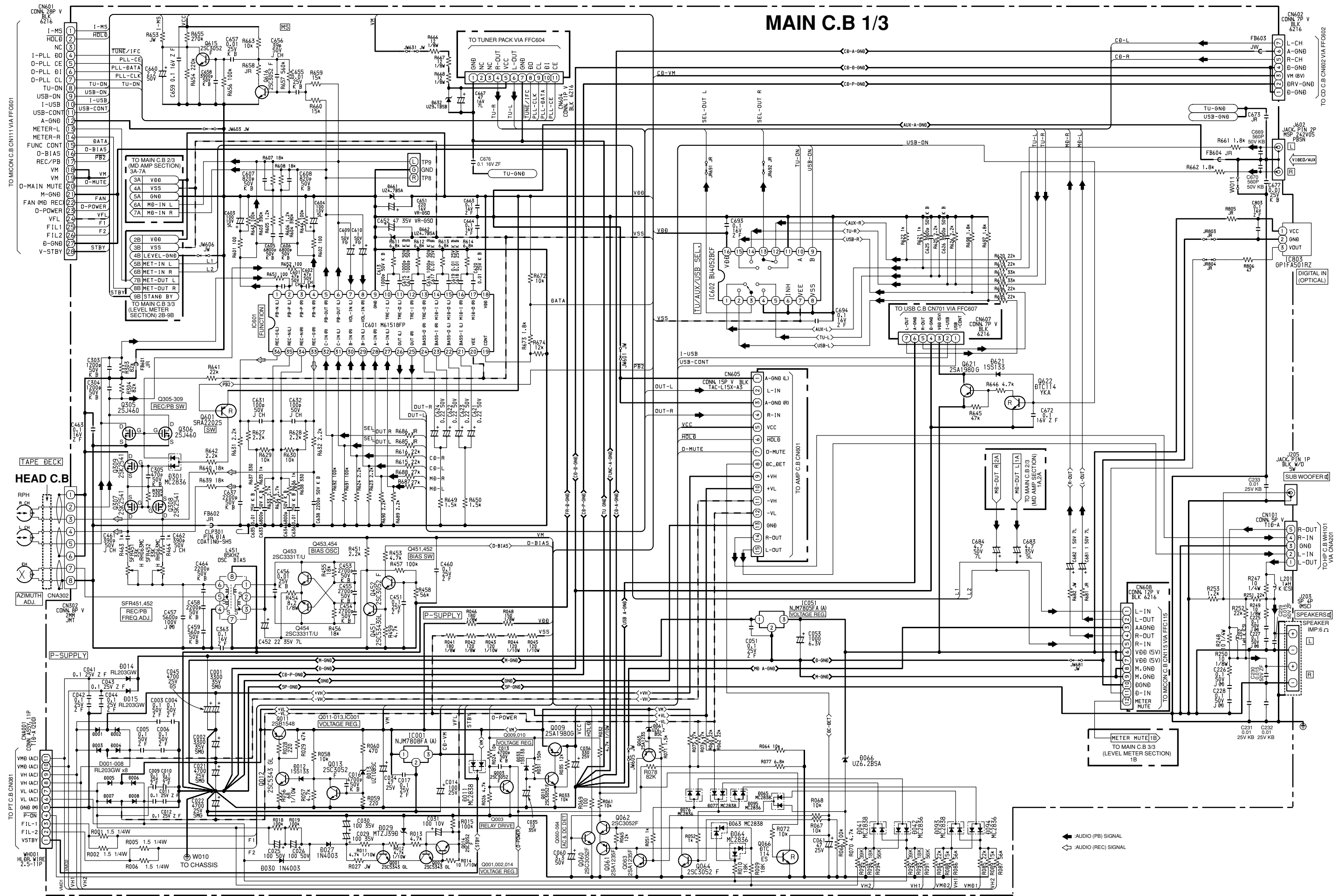
S D G  
2SJ460  
2SK2541



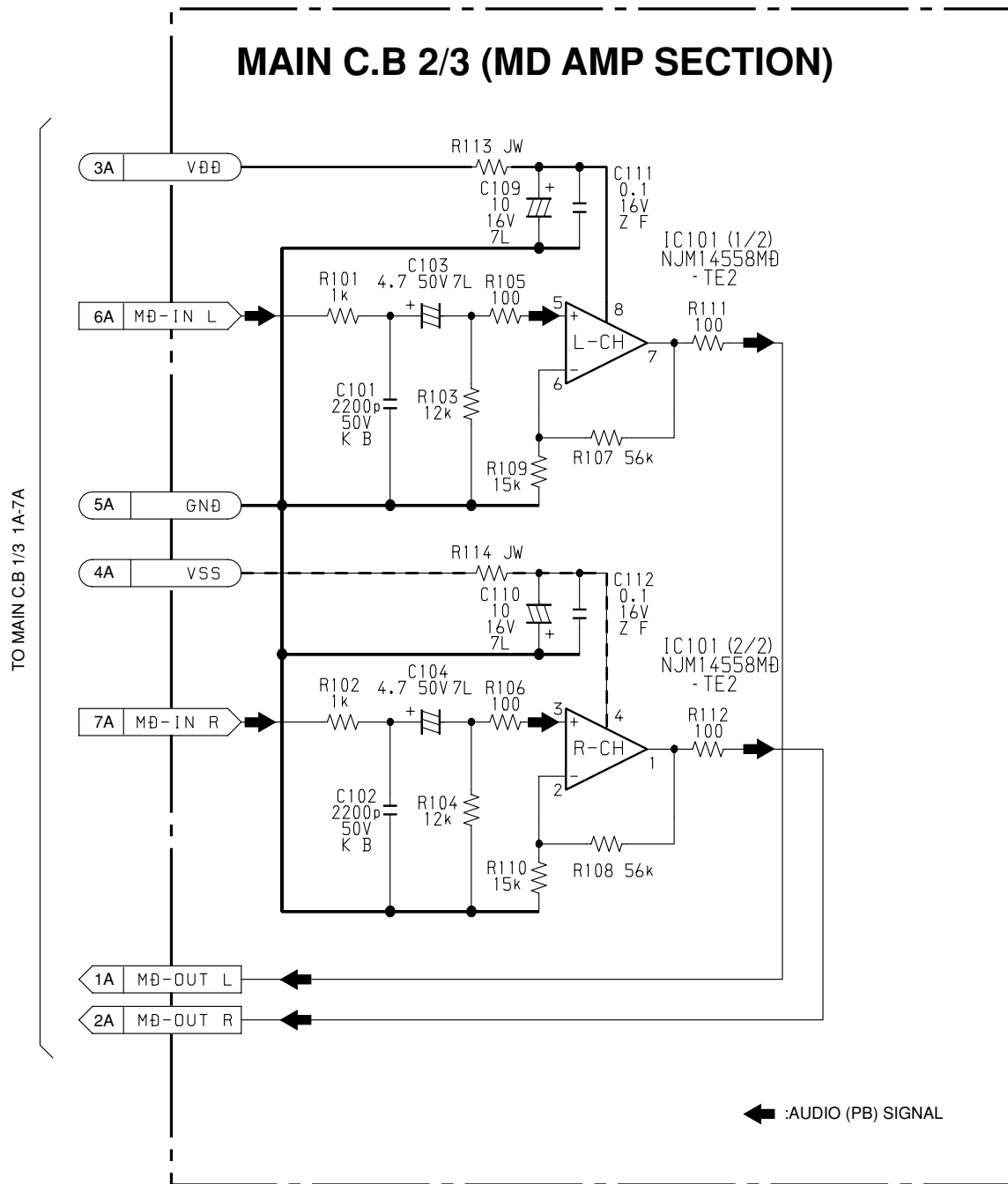
- |               |           |
|---------------|-----------|
| 2SA1235F      | DTC124EKA |
| 2SC3052F      | DTC124XKA |
| 2SD1306NE07TL | DTC144EKA |
| DTA114YKA     | KRA102S   |
| DTA124XKA     | RT1N141C  |
| DTC114EKA     | SBT5401   |
| DTC114TKA     | SBT5551   |
| DTC114YKA     | SRA2202S  |



SCHEMATIC DIAGRAM - 1/10 (MAIN -1/3 SECTION)

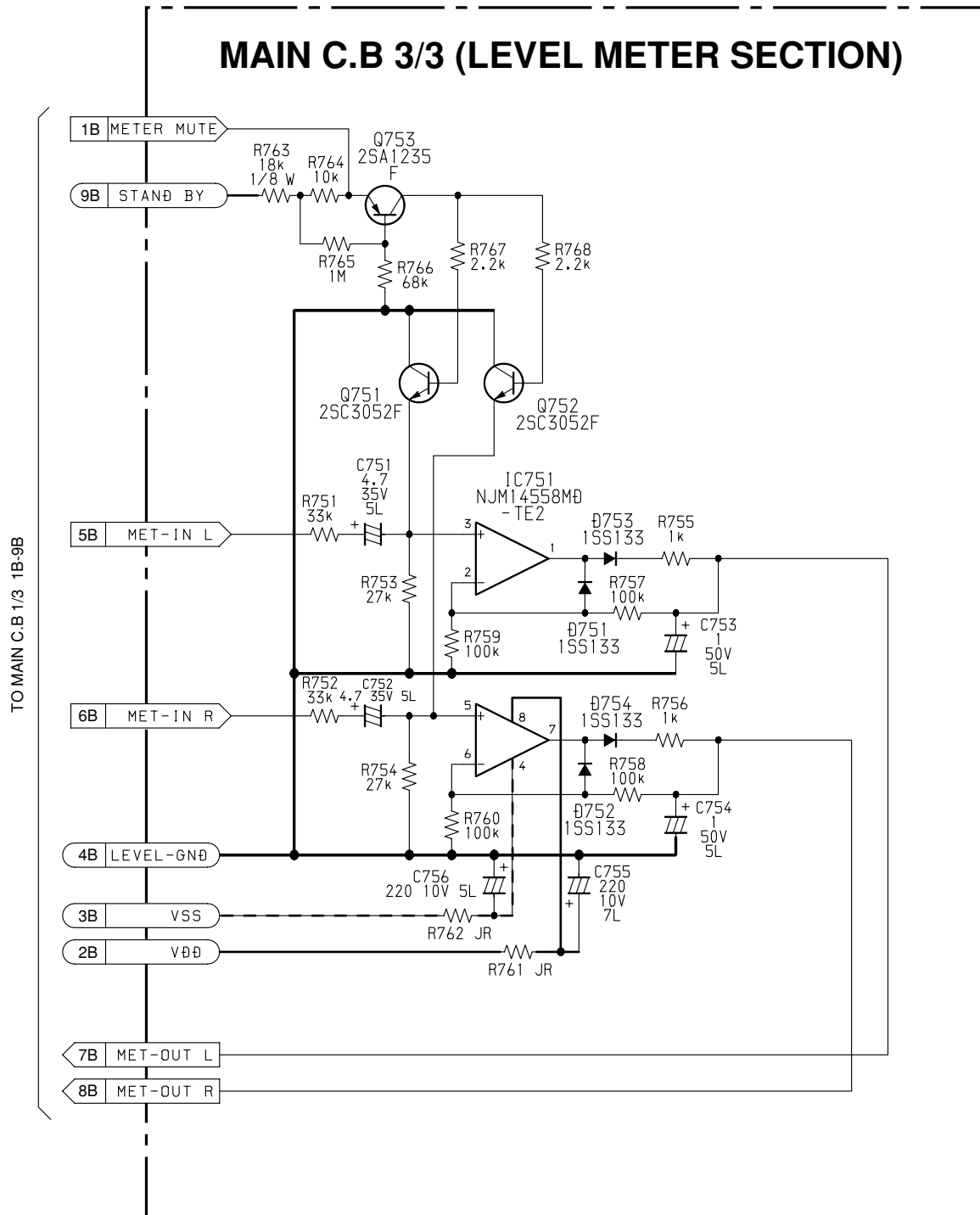


SCHEMATIC DIAGRAM -2/10 (MAIN-2/3 MD AMP SECTION)

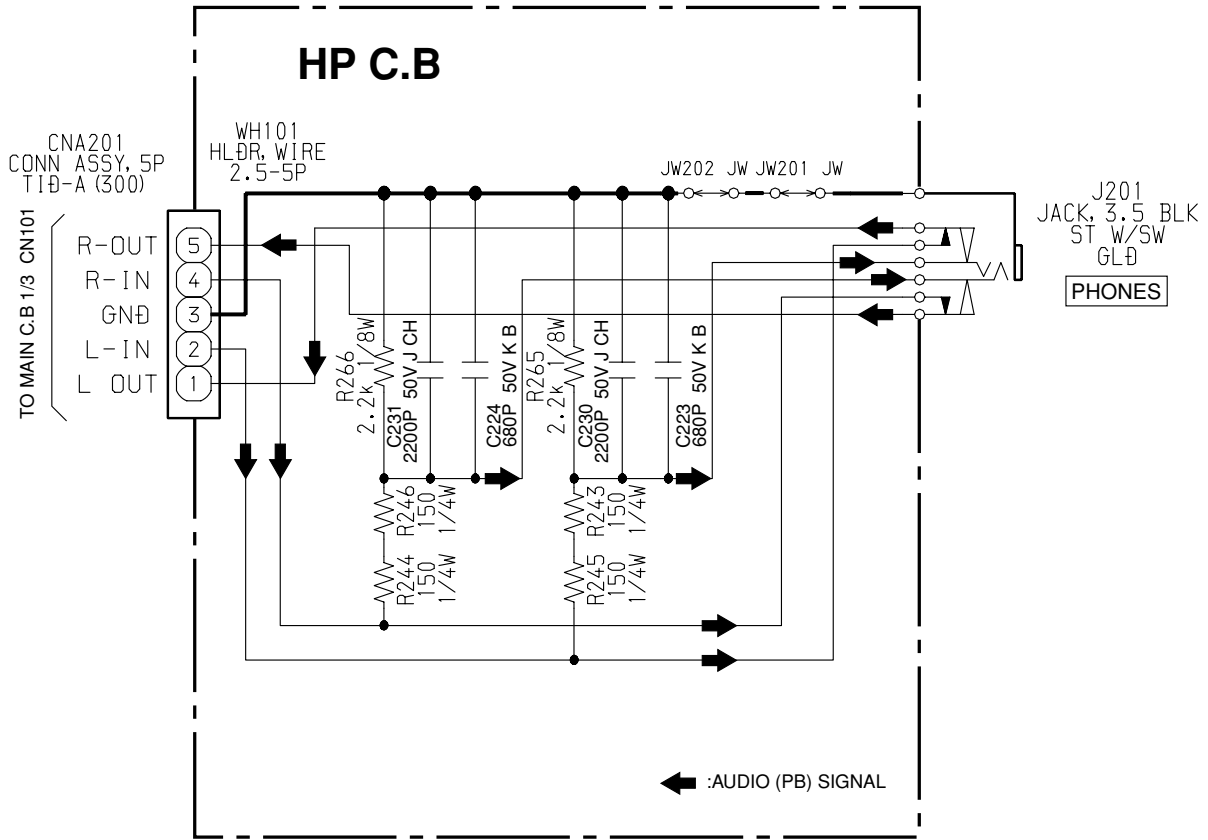




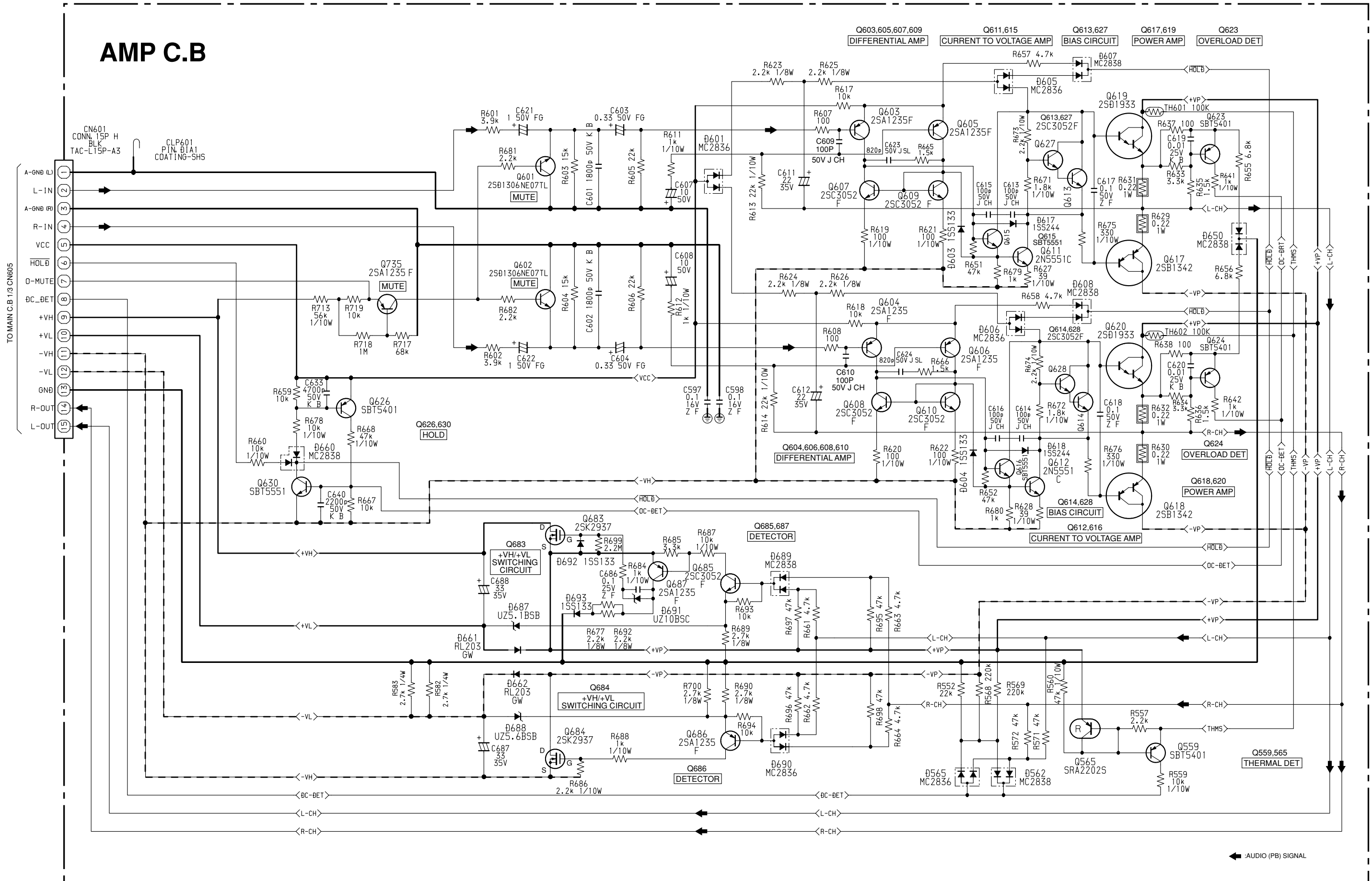
SCHEMATIC DIAGRAM -3/10 (MAIN-3/3 LEVEL METER SECTION)



SCHEMATIC DIAGRAM -4/10 (HP SECTION)

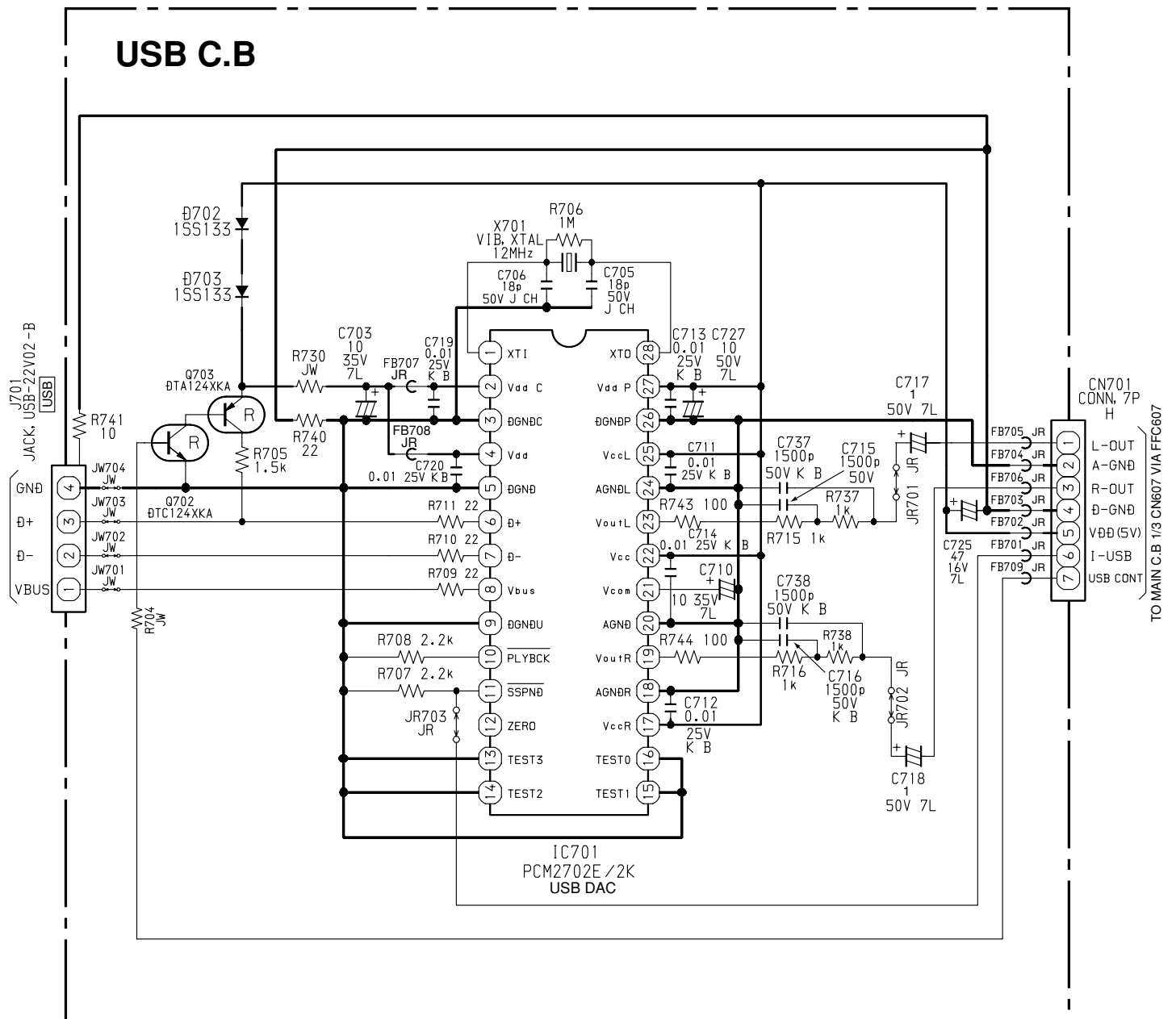








SCHEMATIC DIAGRAM -6/10 (USB SECTION)

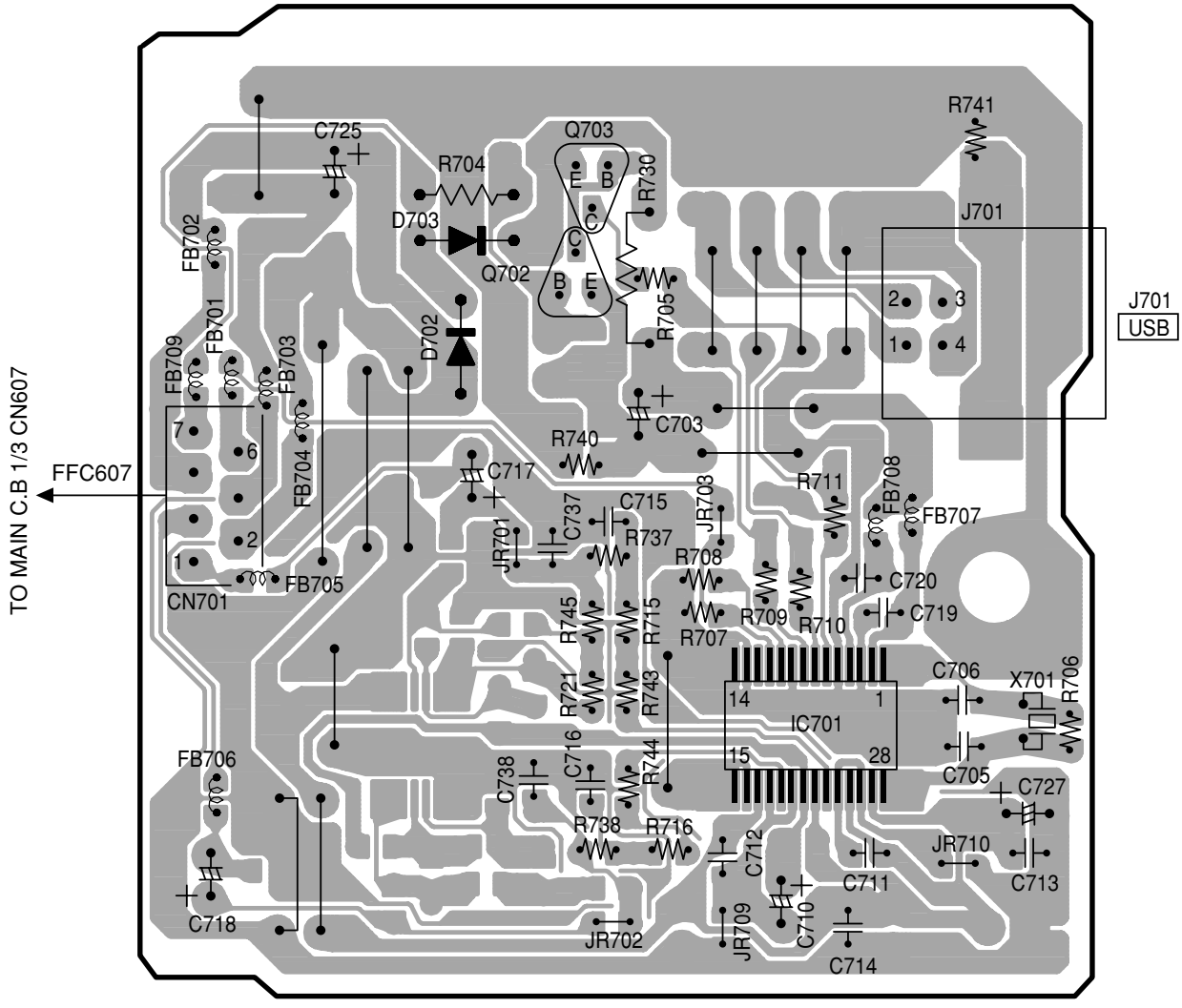


WIRING - 3/8 (USB C.B)

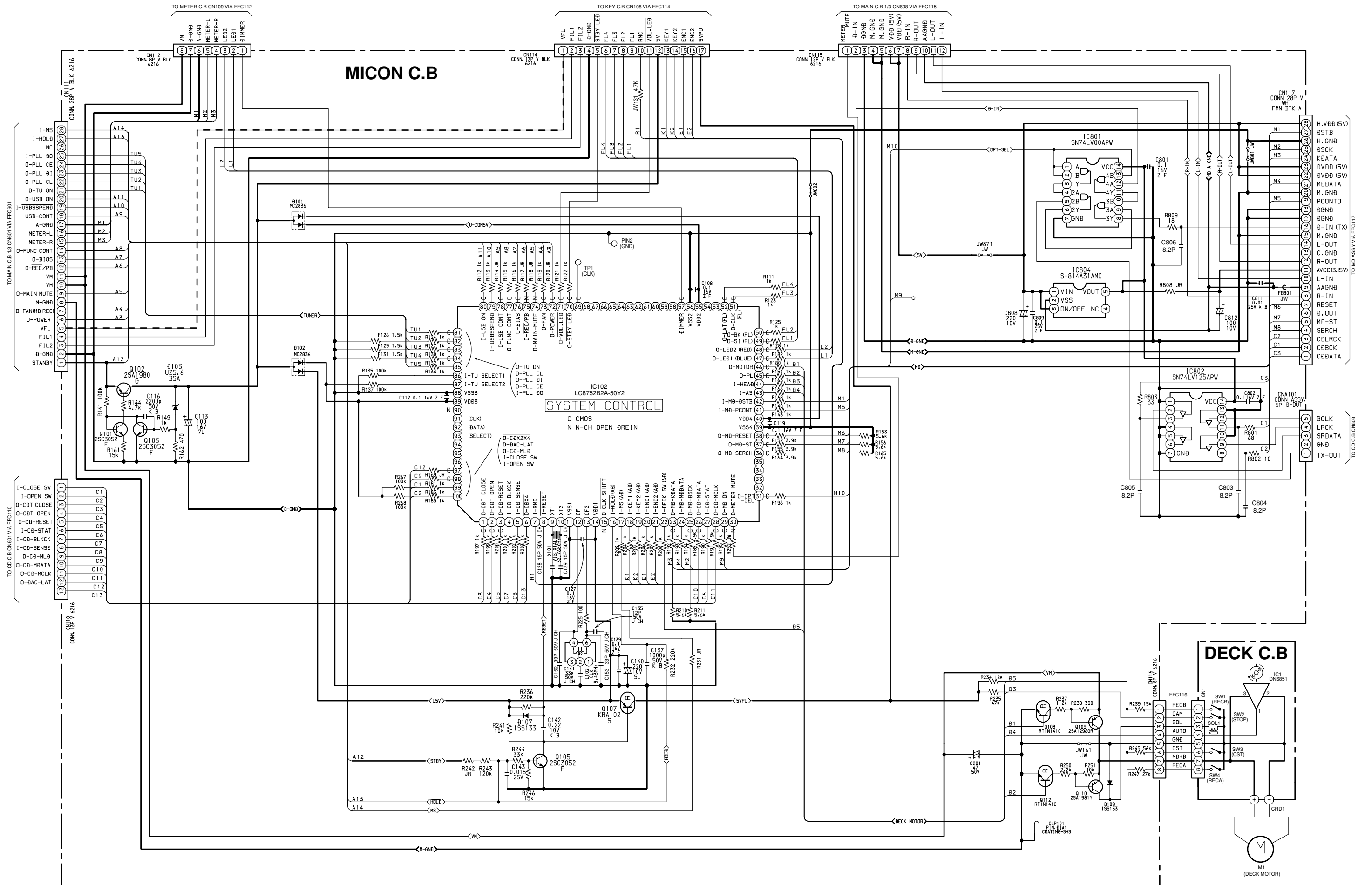
|    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

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

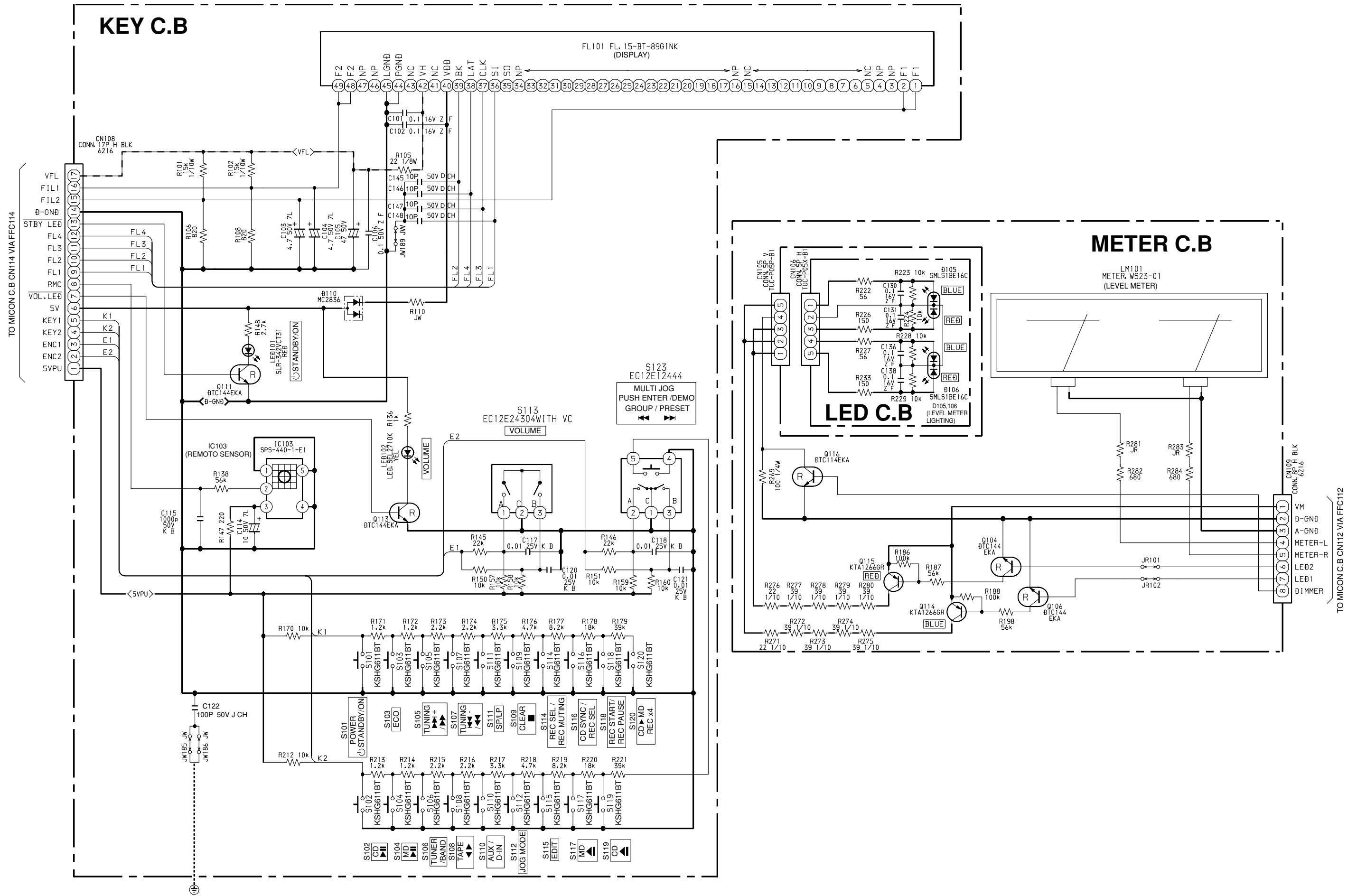
# USB C.B



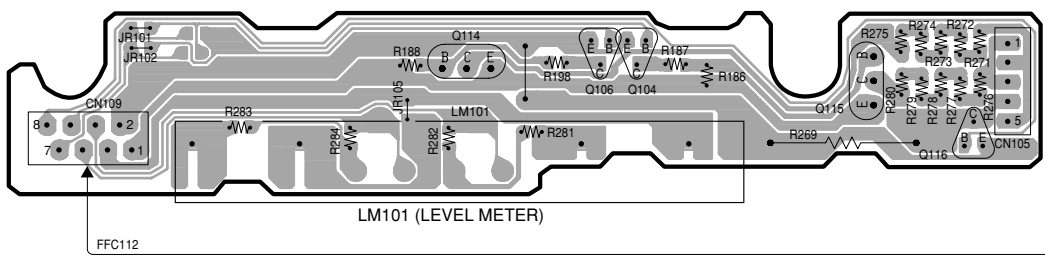
SCHEMATIC DIAGRAM - 7/10 (MICON/DECK SECTION)



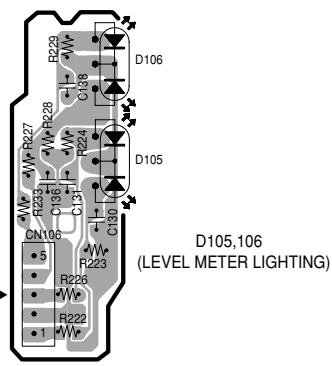




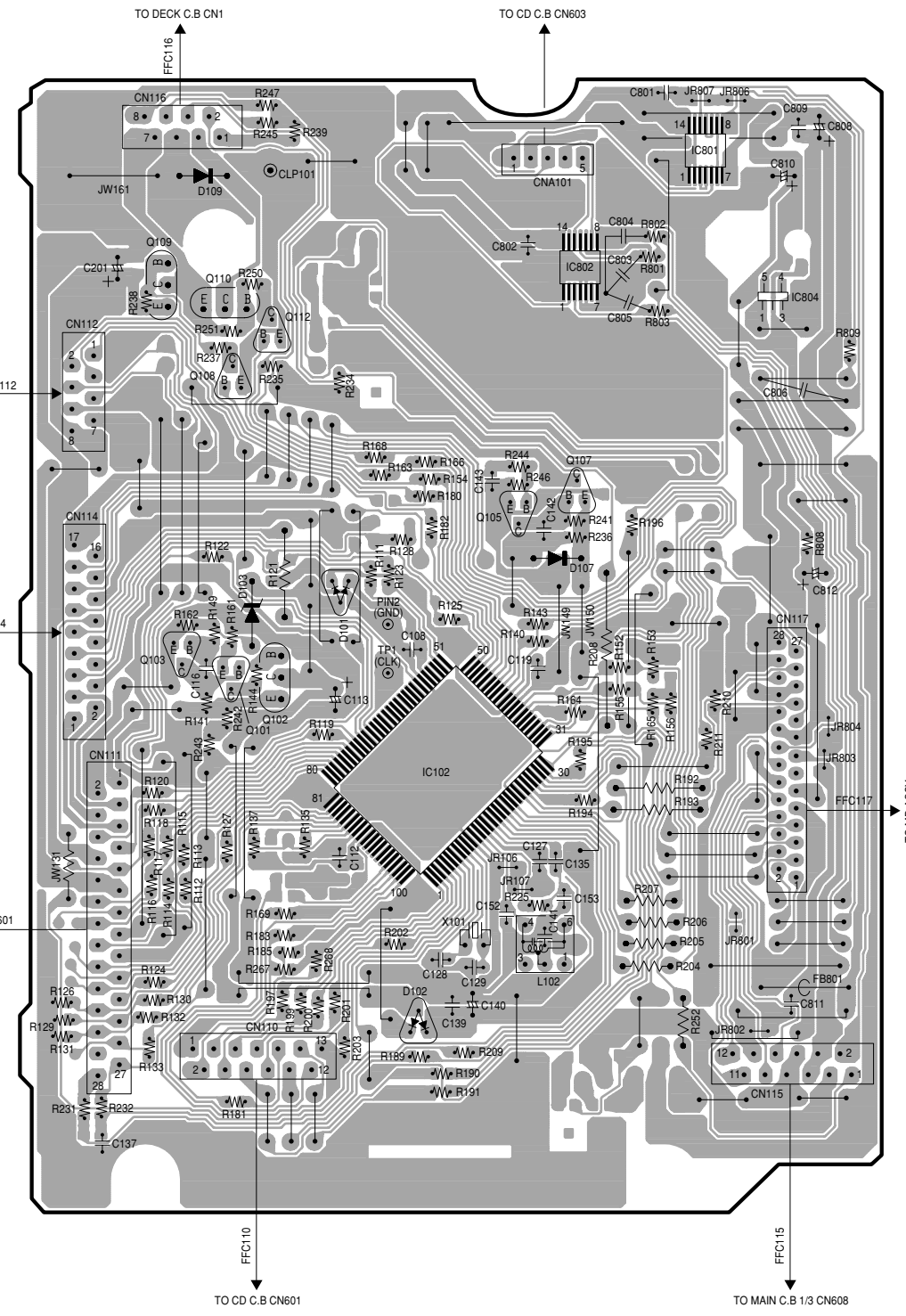
# METER C.B



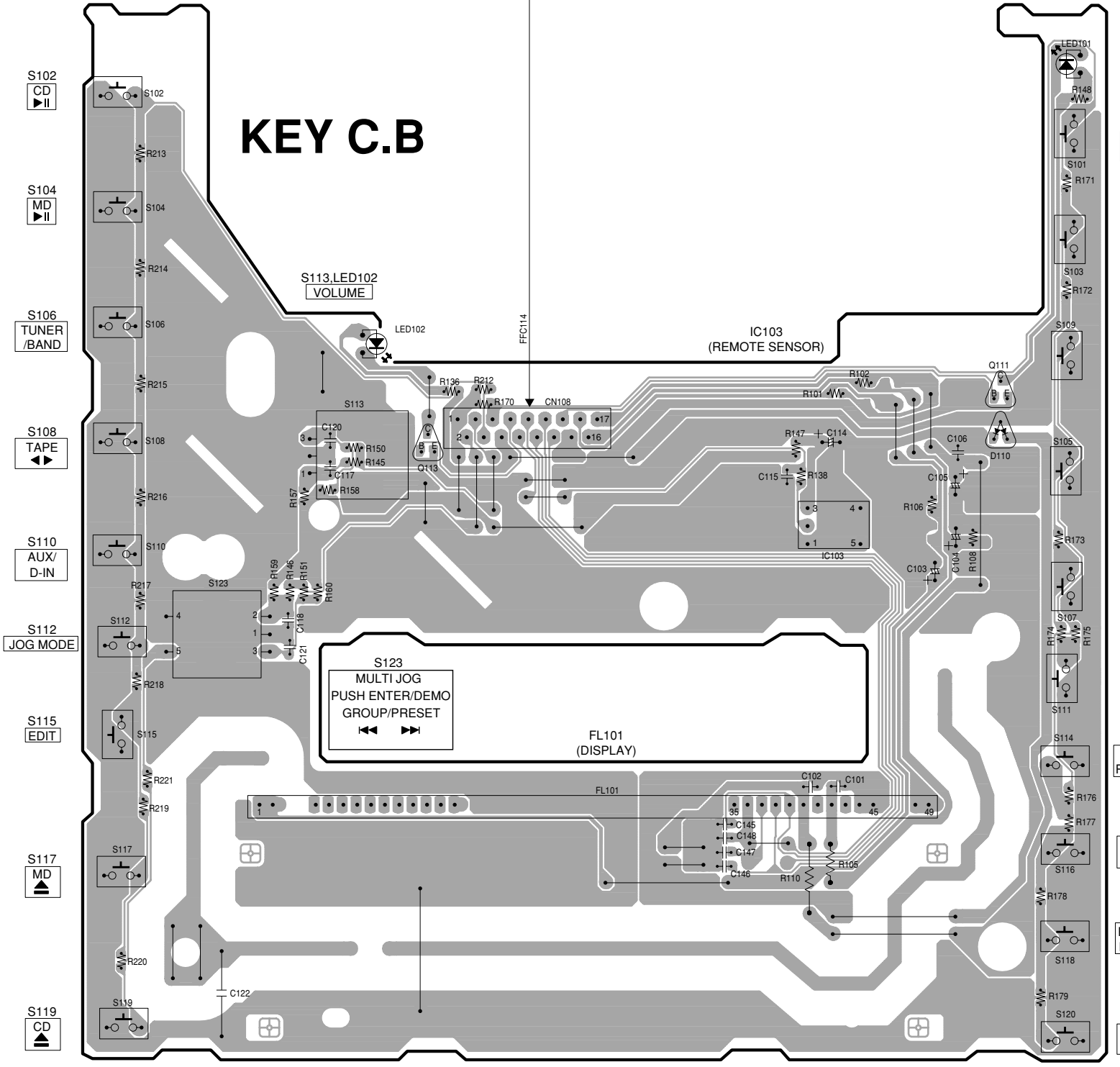
# LED C.B



# MICON C.B



# KEY C.B



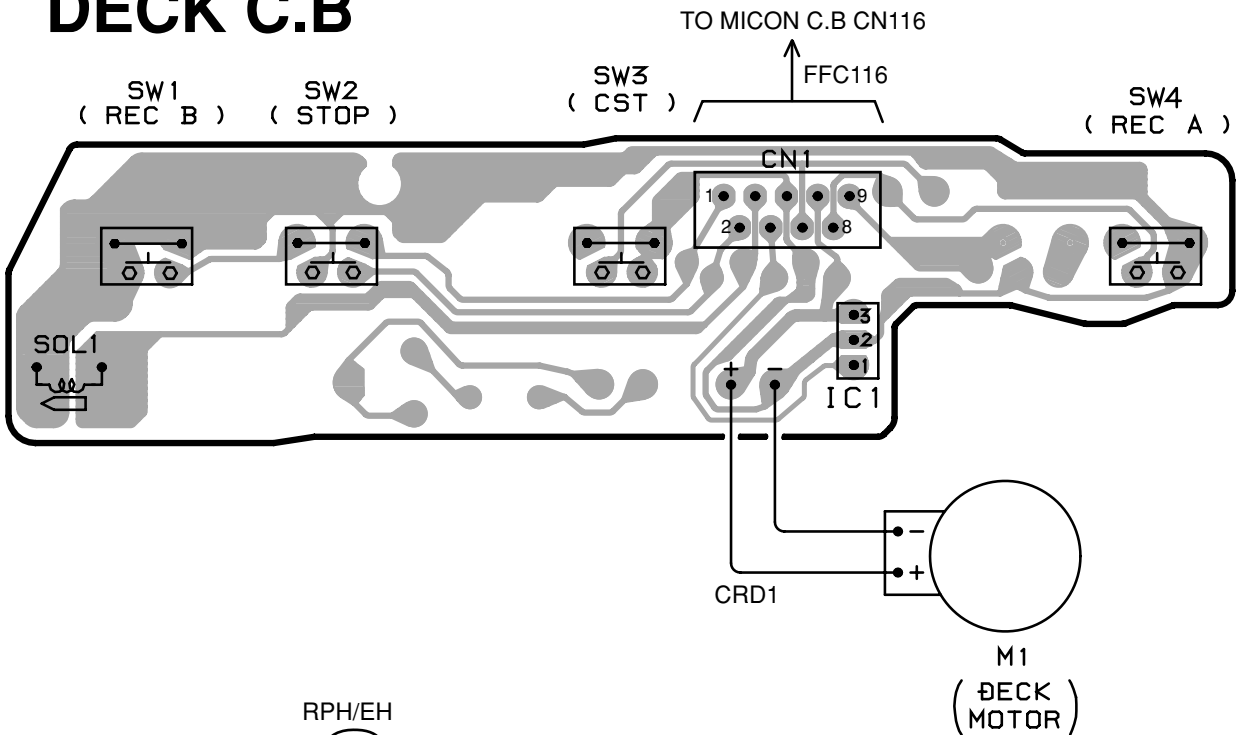
- S101.LED101  
POWER  
STANDBY/ON
- S103  
ECO
- S109  
CLEAR
- S105  
TUNING
- S107  
TUNING
- S111  
SP/LP
- S114  
REC SEL/  
REC MUTING
- S116  
CD SYNC/  
REC SEL
- S118  
REC START/  
REC PAUSE
- S120  
CD  
REC x4

WIRING -5/8 (DECK C.B/HEAD C.B)

|    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

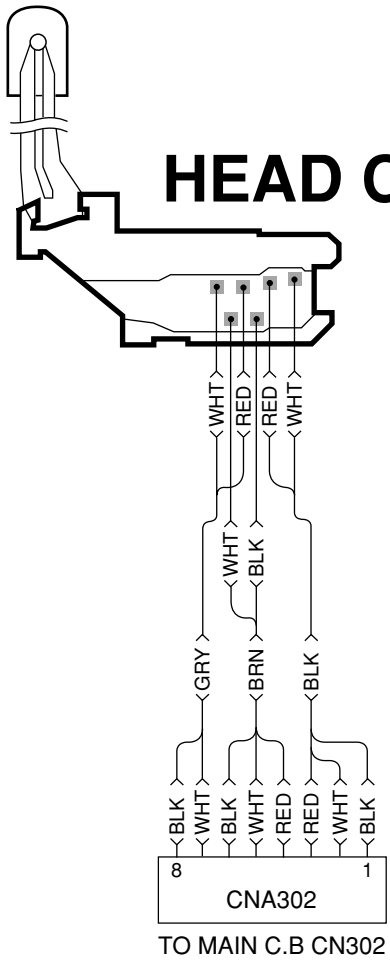
|   |
|---|
| A |
| B |
| C |
| D |
| E |
| F |
| G |
| H |
| I |
| J |
| K |
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| M |
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| O |
| P |
| Q |
| R |
| S |
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| U |

# DECK C.B

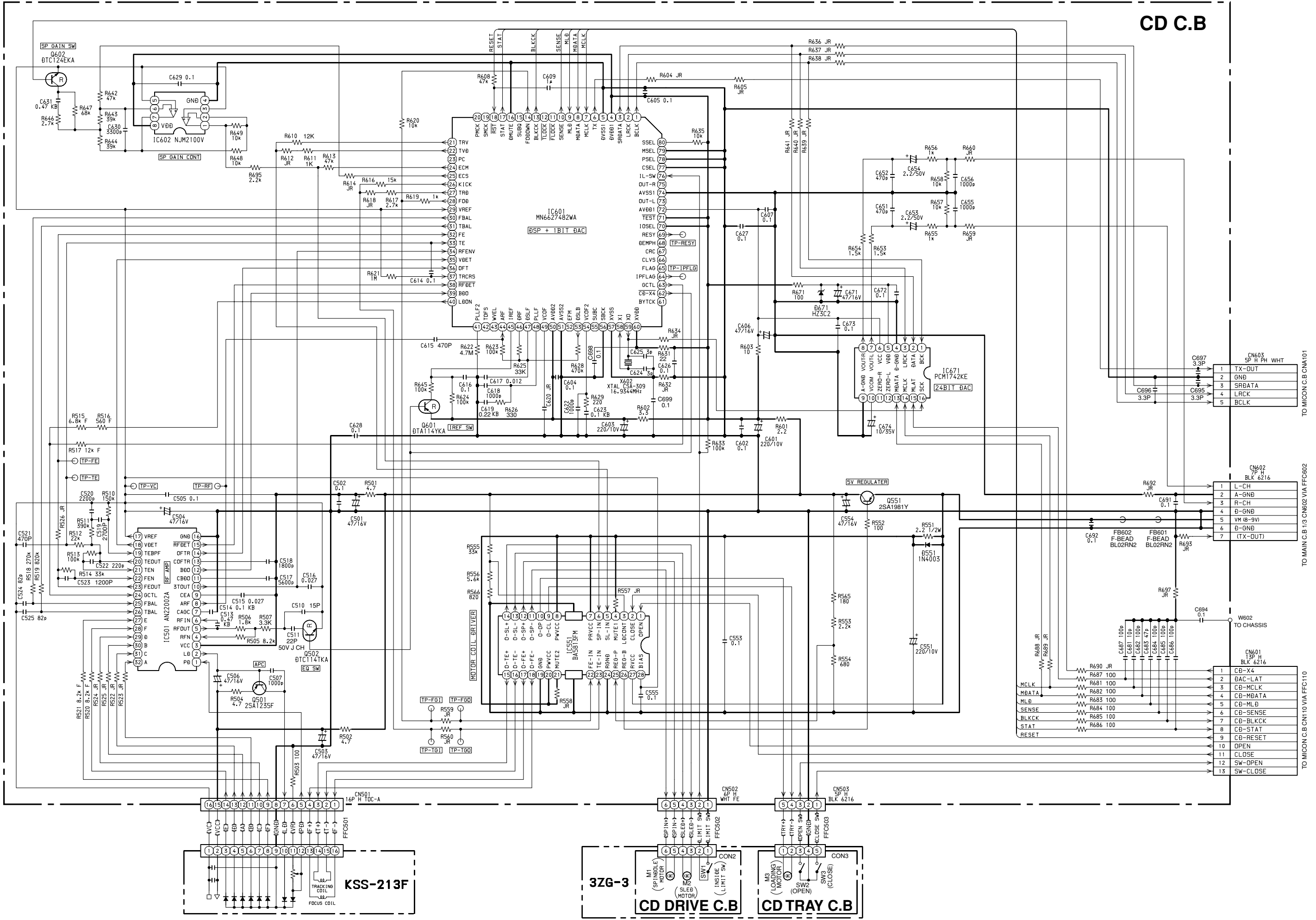


RPH/EH

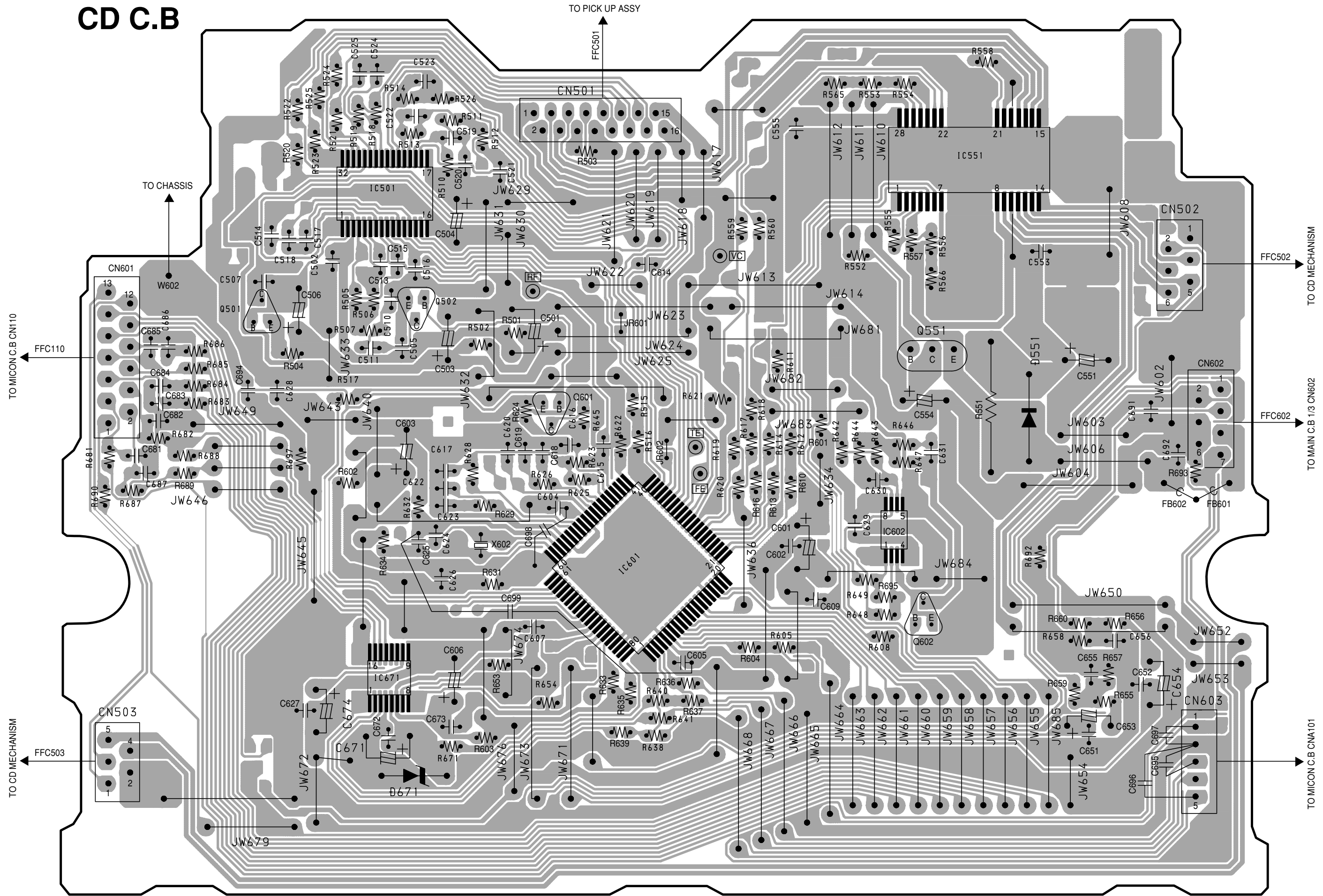
# HEAD C.B



SCHEMATIC DIAGRAM - 9/10 (CD SECTION)



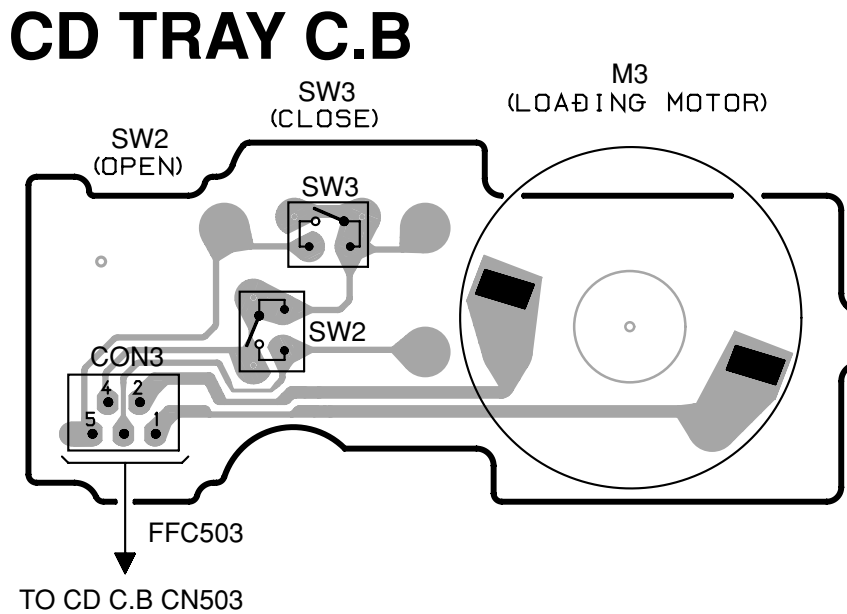
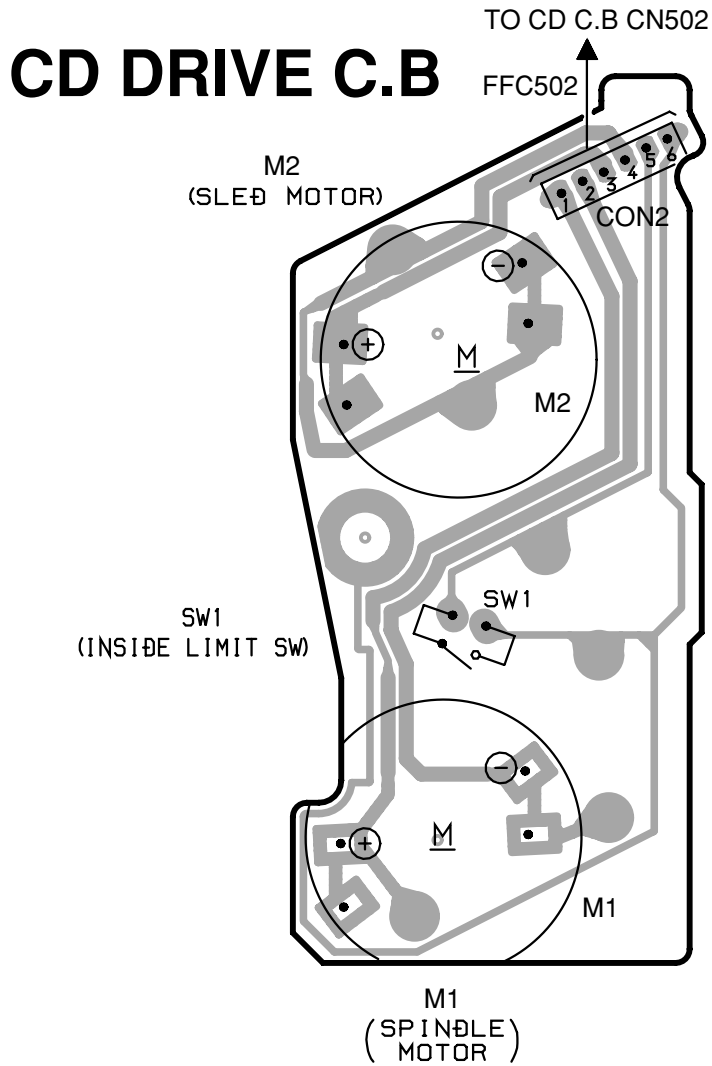
# CD C.B



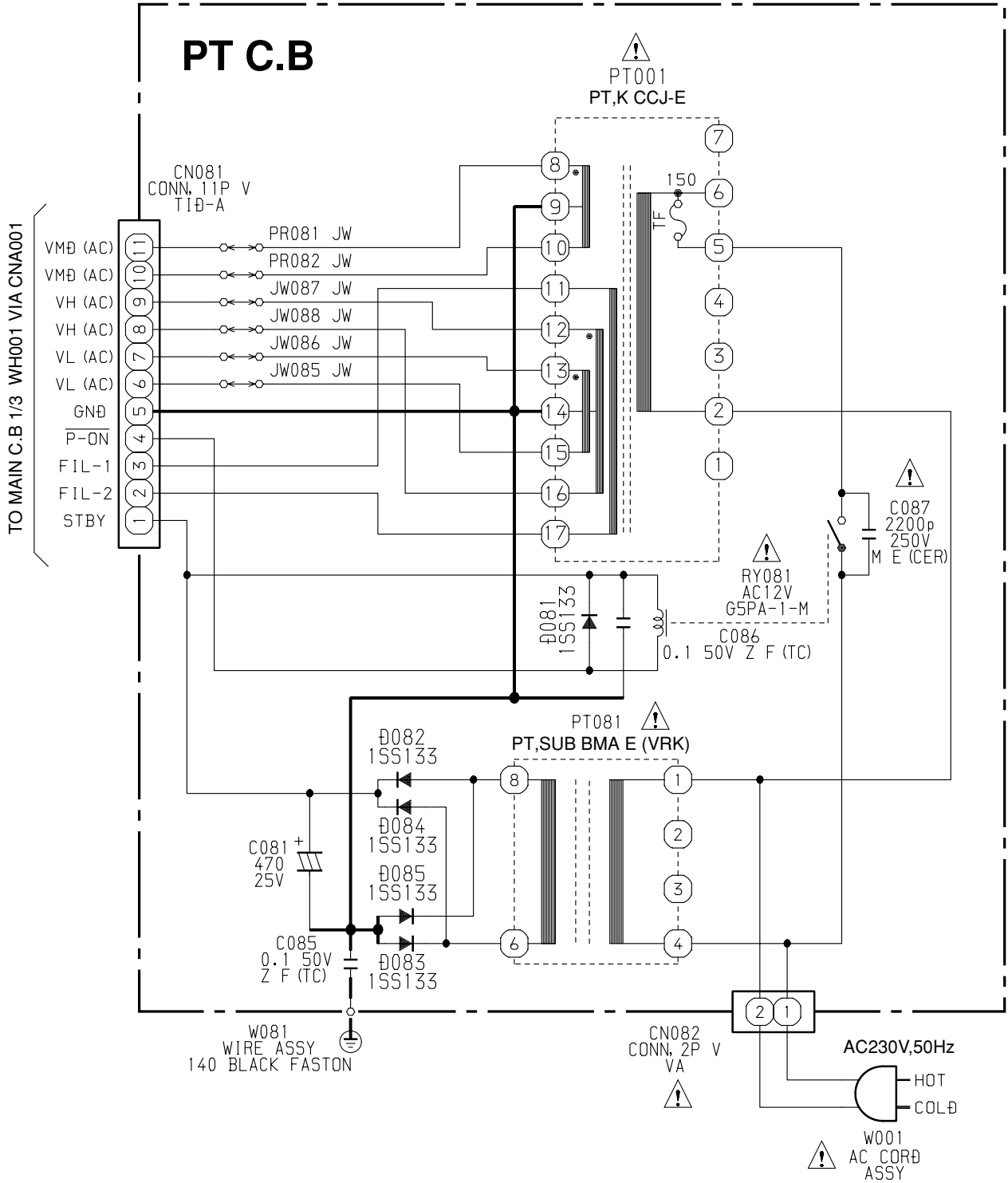
A  
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|    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

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SCHEMATIC DIAGRAM -10/10 (PT SECTION)

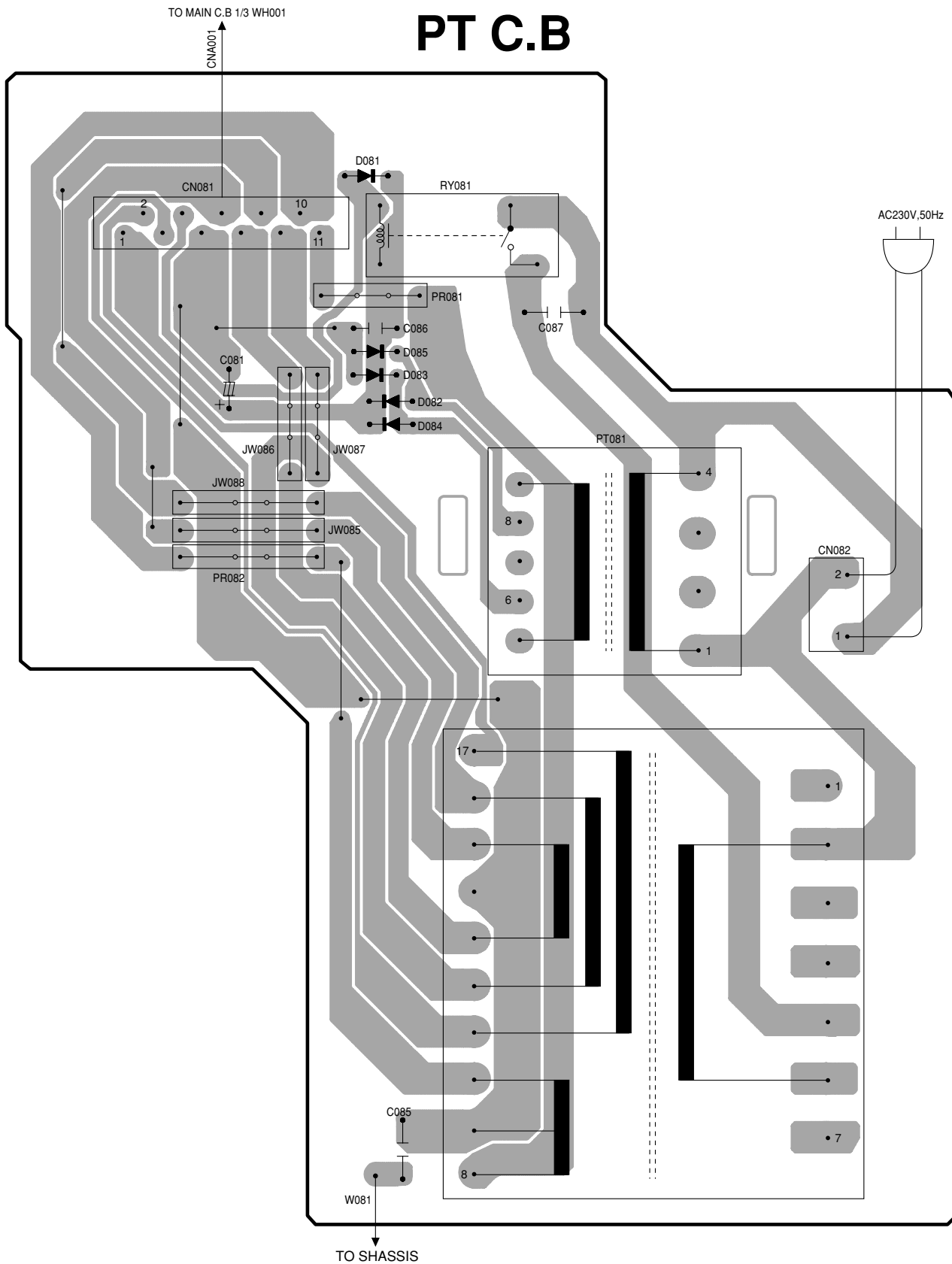


WIRING - 8/8 (PT C.B)

|    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

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# PT C.B

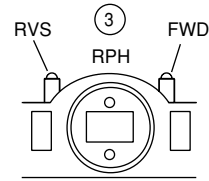
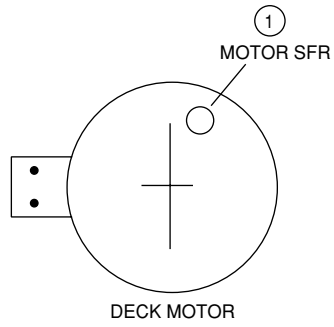
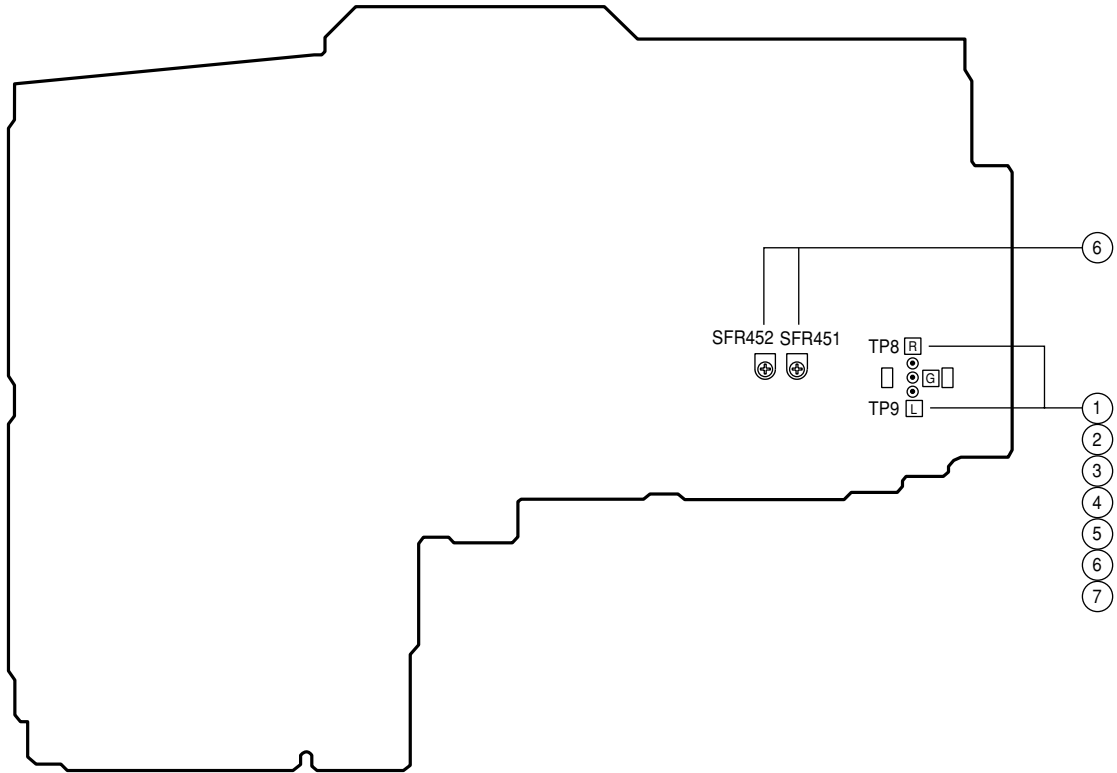




# ELECTRICAL ADJUSTMENT -1/5

<DECK Section>

MAIN C.B (PATTERN SIDE)



# ELECTRICAL ADJUSTMENT -2/5

## <DECK SECTION>

Make the following preparations for DECK adjustment.

### Preparations

- Measuring instruments: Audio signal oscillator/Attenuator/Wow-Flutter meter (frequency counter)/Oscilloscope/Millivoltmeter/Dummy resistance (6Ω)
- Test Tape: TTA-100 / TTA-330/ TTA-200 / TTA-602 (or equivalent test tape for play/record)

### 1. Tape Speed Adjustment and Check

#### Requirements

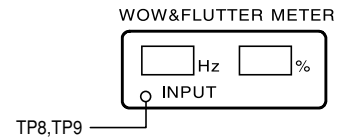
- \* Measuring instruments: Wow-flutter meter (frequency counter)

Test tape: TTA-100 (3 kHz)

Test point: TP8 (Rch), TP9 (Lch)

Adjustment point: MOTOR SFR

- (1) Connect the TP8 and TP9 of the unit to the wow-flutter meter.
- (2) Insert the test tape (TTA-100) to DECK. Playback the middle part of the tape in the FWD direction, and adjust MOTOR SFR so that the level, 3,000 Hz  $\pm$  5 Hz can be obtained.
- (3) Playback RVS, and check that the speed is less than  $\pm$  45 Hz to the speed of FWD.



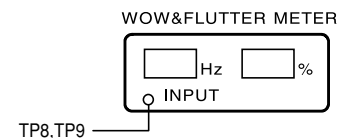
### 2. Wow-Flutter Check

- \* Measuring instruments: Wow-flutter meter (frequency counter)

Test tape: TTA-100 (3 kHz)

Test point: TP8 (Rch), TP9 (Lch)

- (1) Connect the TP8 and TP9 of the unit to the wow-flutter meter.
- (2) Switch the wow-flutter setting from INDICATOR to JIS, and from a mode to W RMS (WTD).
- (3) Playback the middle part of the test tape (TTA-100), and check that the level is 0.25 % or below.



### 3. Head Azimuth Adjustment

#### Requirements

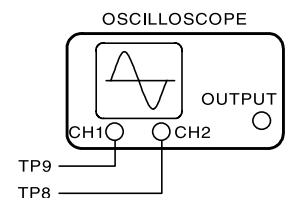
- \* Measuring instrument: Oscilloscope

Test tape: TTA-330

Test point: TP8 (Rch), TP9 (Lch)

Adjustment point: Head azimuth adjustment screw

- (1) Connect the CH1 of the oscilloscope probe to TP9 (Lch) and the CH2 to TP8 (Rch).
- (2) Set the V mode of the oscilloscope to ADD.
- (3) Insert the test tape (TTA-330) to DECK 1. Playback the middle part of the tape in the FWD direction, and adjust the head azimuth adjustment screw so that the waveform reaches maximum when 8 kHz is played.
- (4) Apply the above steps to the side of RVS.
- (5) After adjustment, lock the screw by bonding (1620B).



### 4. Playback Frequency Check

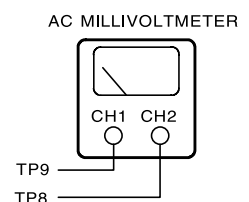
#### Requirements

- \* Measuring instrument: Millivoltmeter

Test tape: TTA-330 (315 Hz / 8 kHz)

Test point: TP8 (Rch), TP9 (Lch)

- (1) Connect the CH1 of millivoltmeter to TP9 (Lch) and the CH2 to TP8 (Rch).
- (2) Insert the test tape (TTA-330) to DECK, and playback 315 Hz and 8 kHz.
- (3) Check that the 8 kHz level is ranged within  $0 \pm 5$  dB compared to the output reference level of 315 Hz.



## ELECTRICAL ADJUSTMENT -3/5

### 5. Playback Sensitivity Check

#### Requirements

\* Measuring instrument: Millivoltmeter

Test tape: TTA-200 (400 Hz)

Test point: TP8 (Rch), TP9 (Lch)

(1) Connect the CH1 of millivoltmeter to TP9 (Lch) and the CH2 to TP8 (Rch).

(2) Insert the test tape (TTA-200) to DECK to playback.

(3) Check that the output level is ranged within  $145 \text{ mV} \pm 3 \text{ dB}$ .

### 6. Playback/Record Frequency Response Adjustment

#### Requirements

\* Measuring instruments: Millivoltmeter

Audio signal oscillator (low-frequency oscillator)

Attenuator

Test tape: TTA-602 (LH)

Test point: TP8 (Rch), TP9 (Lch)

Input point: AUX (1 kHz / 8 kHz)

Adjustment point: SFR451 (Lch), SFR452 (Rch)

(1) Connect the CH1 of millivoltmeter to TP9 (Lch) and the CH2 to TP8 (Rch).

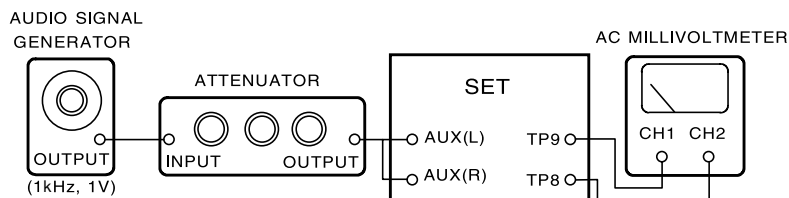
(2) Connect the output terminal of oscillator to attenuator, and then attenuator to AUX of the unit.

(3) Insert the test tape (TTA-602) to DECK, and record the 1 kHz signal from AUX.

(4) Adjust the attenuator so that the output levels of TP8 and TP9 become 17 mV.

(5) Record 1 kHz and 8 kHz alternately.

(6) Adjust SFR451 (Lch) and SFR452 (Rch) so that the playback output level of 8 kHz is ranged within  $0 \pm 1 \text{ dB}$  compared to the playback output reference level of 1 kHz.



### 7. Playback/Record Sensitivity Check

#### Requirements

\* Measuring instruments: Millivoltmeter

Audio signal oscillator (low-frequency oscillator)

Attenuator

Test tape: TTA-602 (LH)

Test point: TP8 (Rch), TP9 (Lch)

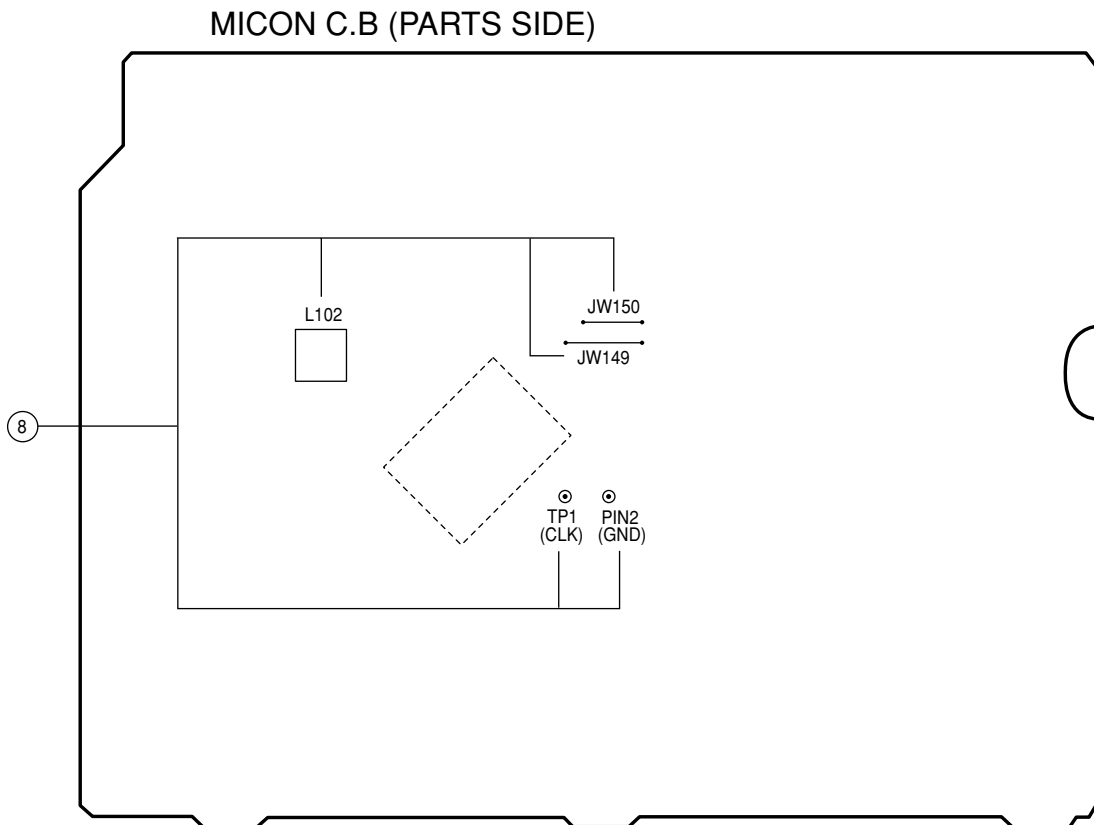
Input point: AUX (8 kHz)

(1) Insert the test tape (TTA-602) to DECK, and record the 8 kHz signal from AUX.

(2) Adjust the attenuator so that the output levels of TP8 and TP9 become 170 mV.

(3) Playback 8 kHz, and check that the output level is ranged within  $-1 \text{ dB} \pm 3.5 \text{ dB}$  compared to the output level during recording.

<FRONT Section>



<FRONT SECTION>

8. Clock Adjustment

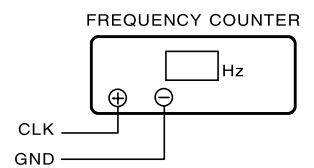
Requirement

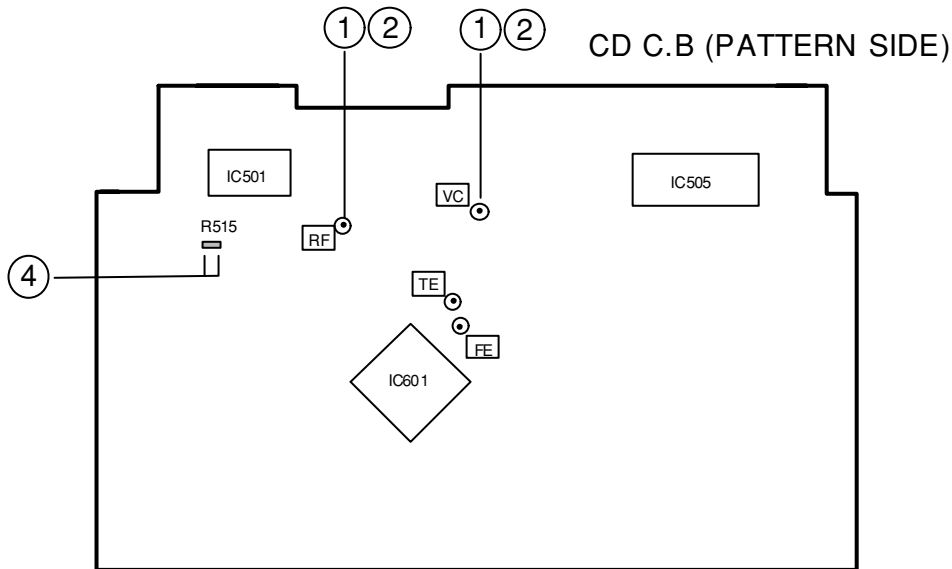
\* Measuring instrument: Frequency counter

Test point: TP1 (CLK), PIN2 (GND)

Adjustment point: L102

- (1) While pressing and holding down the POWER button and the TUNER button, insert the AC plug.
- (2) Adjust L102 so that the frequency counter indicates  $176.83 \pm 1.59$  Hz.
- (3) Draw out the code, and short-circuit JW149 and JW150 for about 2 seconds.





<CD AAdjustment>

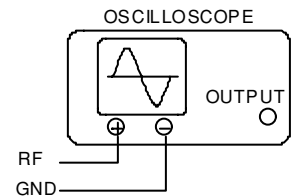
- Adjust and check at test mode.
- Keep at a level CD Mechanism.

• Equipment

Measure: Oscilloscope (using probe 10:1)  
 Digital Multimeter (using at DCV range)  
 Jitter Meter (KIKUSUI 6235)  
 Test Disc: TCD-782/ATD-001

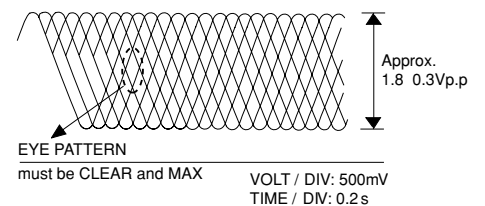
1. RF Waveform Check

- 1) Connect the Oscilloscope to Test Point (RF+) and (GND).
- 2) Play second track of TCD-782.
- 3) Check that the amplitude of RF waveform is maximum, and that the lozenge of center appear clearly.



2. Jitter Check

- 1) Keeping on connecting Oscilloscope to 2, connect the output pin of Oscilloscope to the input pin of Jitter Meter.
- 2) Tune the knob of Oscilloscope voltage range at less than 500 mV.
- 3) Play second track of TCD-782.
- 4) Check that the display of Jitter Meter is as less than 28.0 nS.



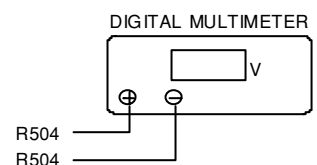
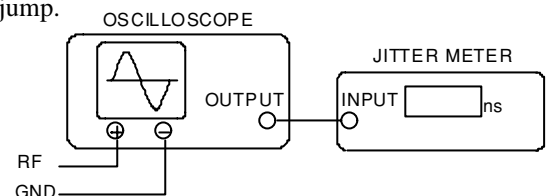
3. Play Ability Check

- 1) Play track 3, 8, 13 of ATD-001, and check playing makes any noise or sound jump.

4. Lasor Current Check

\* Don't do this check except if the Lasor is fault.

- 1) Connect the Multimeter to both side of R504 (4.7Ω)
- 2) Play TCD-782, and check the DC voltage value of the Multimeter.
- 3) Check that the Lasor current ( $I_{op} = \text{DC voltage value divided by } R504 (4.7\Omega)$ ) is less than 80 mA.



## CD TEST MODE -1/1

### 1. Starting CD Test Mode

While pressing and holding down the CD FUNCTION button, insert the AC plug to outlet.

When test mode starts, the message, CD TEST appears on the display, and all indicators light.

### 2. Exiting CD Test Mode

Press the POWER button or remove the AC plug from outlet.

### 3. Function of CD Test Mode

| No | Mode          | Function Key      | Display              | Movement   | Check   |
|----|---------------|-------------------|----------------------|--|---|
| 1  | Start Mode    |                   | All indicators light | <ul style="list-style-type: none"> <li>All FL indicators light</li> </ul>  | <ul style="list-style-type: none"> <li>FL check</li> <li>Microcomputer check</li> </ul>   |
| 2  | Search Mode   | STOP button       | READING              | <ul style="list-style-type: none"> <li>LD constantly light</li> <li>Focus search continuous movement *1</li> <li>Spindle motor continuous kick</li> </ul>        | <ul style="list-style-type: none"> <li>APC circuit check</li> <li>Laser current electricity measurement</li> <li>Focus search waveform check</li> <li>Focus error waveform check</li> </ul> |
| 3  | Play Mode     | PLAY/PAUSE button | Normal               | <ul style="list-style-type: none"> <li>Normal playback</li> <li>If TOC READ is unavailable, focus search is continued.</li> <li>CLV error is ignored.</li> </ul> | <ul style="list-style-type: none"> <li>Each servo circuit check</li> <li>RF waveform check</li> </ul>   |
| 4  | Traverse Mode | PLAY/PAUSE button | Normal               | <ul style="list-style-type: none"> <li>Tracking servo OFF/ON</li> <li>Each time PAUSE button is pressed, the tracking servo repeats turning OFF/ON.</li> </ul>   | <ul style="list-style-type: none"> <li>Tracking balance check</li> </ul>  |
| 5  | Sled mode     | FF button         | CD TEST              | <ul style="list-style-type: none"> <li>PU moves to the innermost position. At the same time, lens is kicked toward outer position.</li> </ul>                    | <ul style="list-style-type: none"> <li>Sled circuit check</li> <li>Tracking circuit check</li> <li>Mechanism movement check</li> <li>PU check</li> </ul>                                    |
|    |               | RWD button        | CD TEST              | <ul style="list-style-type: none"> <li>PU moves to the outermost position. At the same time, lens is kicked toward outer position.</li> </ul>                    |   |

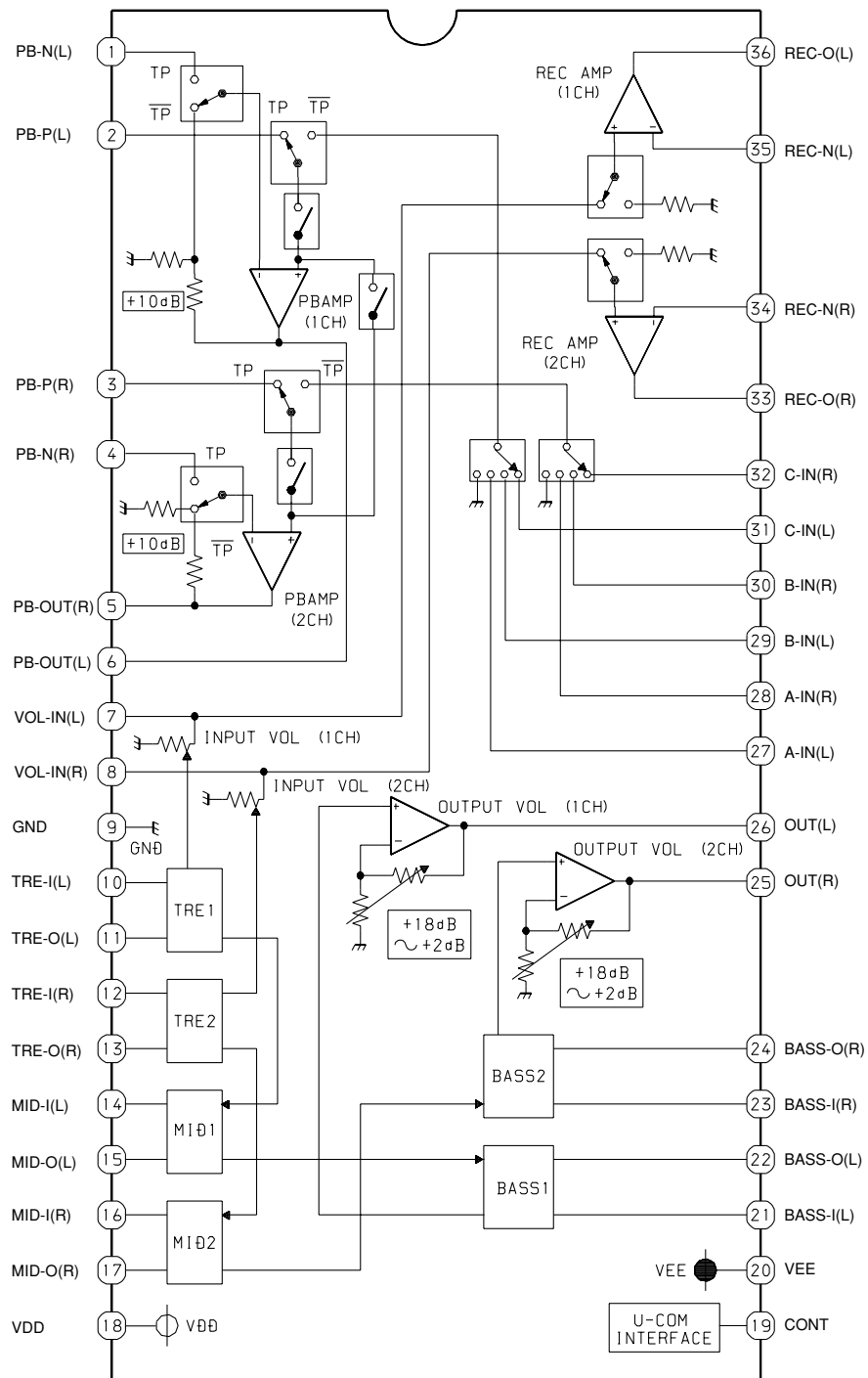
\* 1 ... When Focus Search operates continuously more than 10 minutes, the protection circuit is activated due to heat generation of the driver IC. In this case, turn off the power. After cooling down, restart the machine.

\* 2 ... Be careful not to damage the gear because the sled motor rotates while the FF or RWD button is being pressed even if the pickup is located in the innermost track or the outermost track.



# IC BLOCK DIAGRAM -1/3

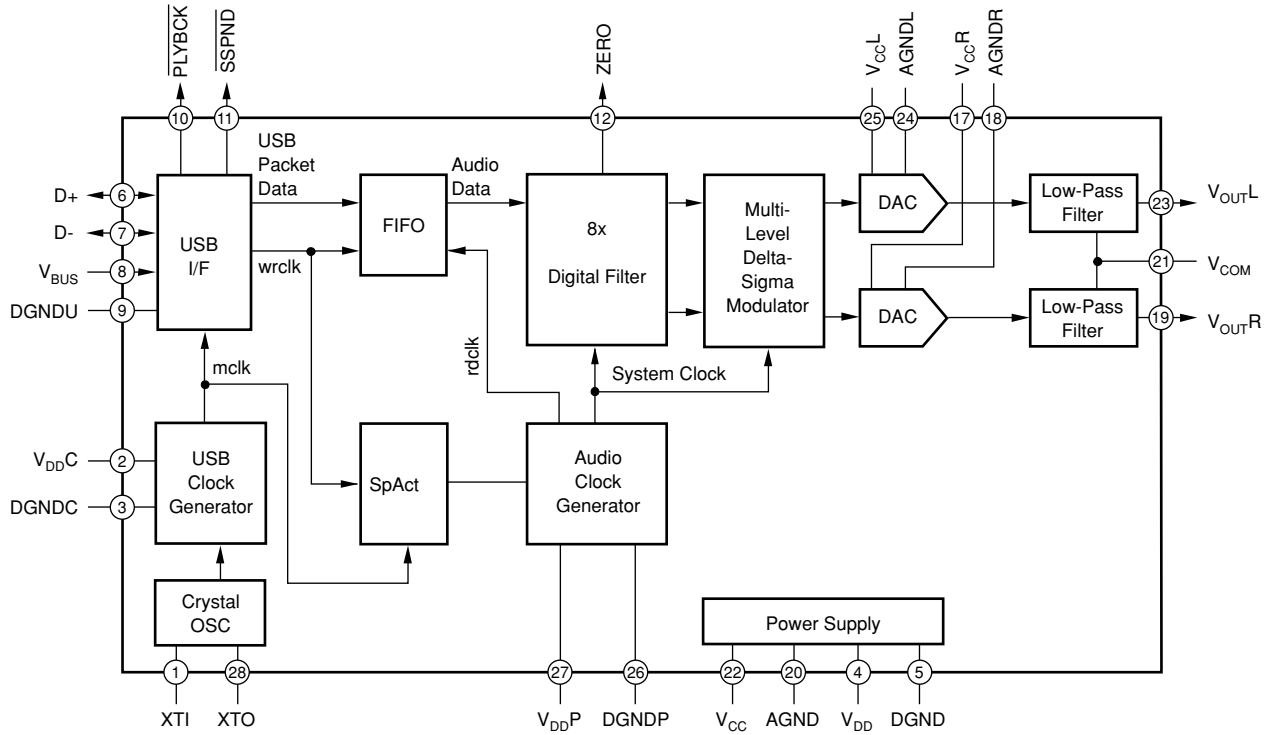
IC, M61518FP



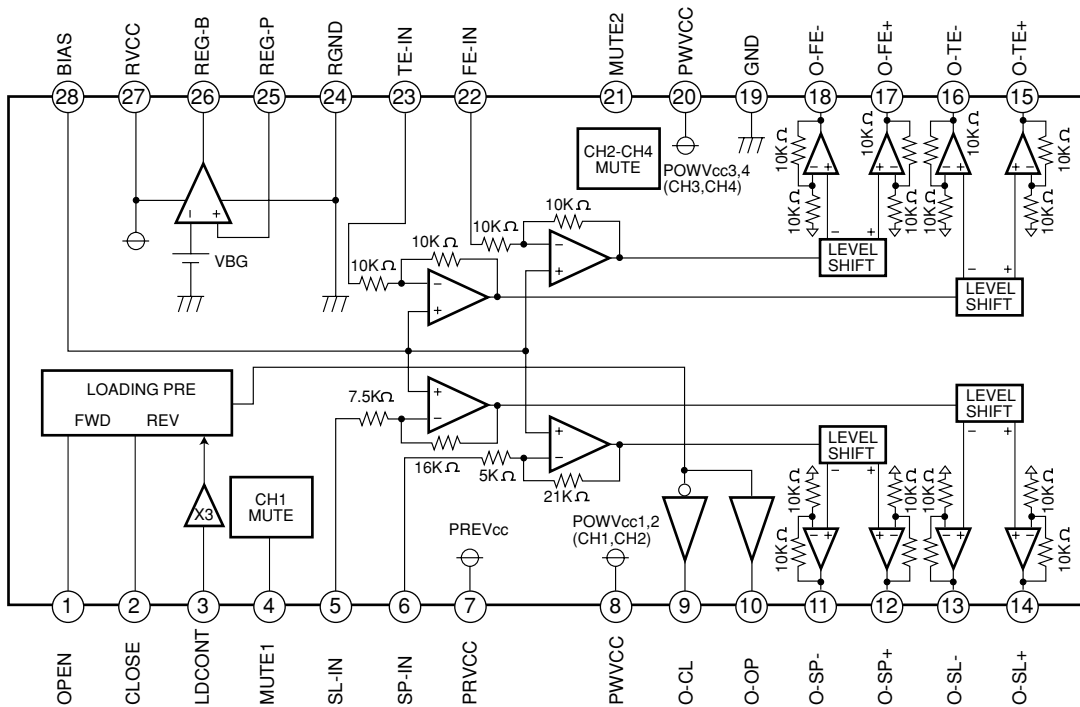


# IC BLOCK DIAGRAM -2/3

## IC, PCM2702E/2K

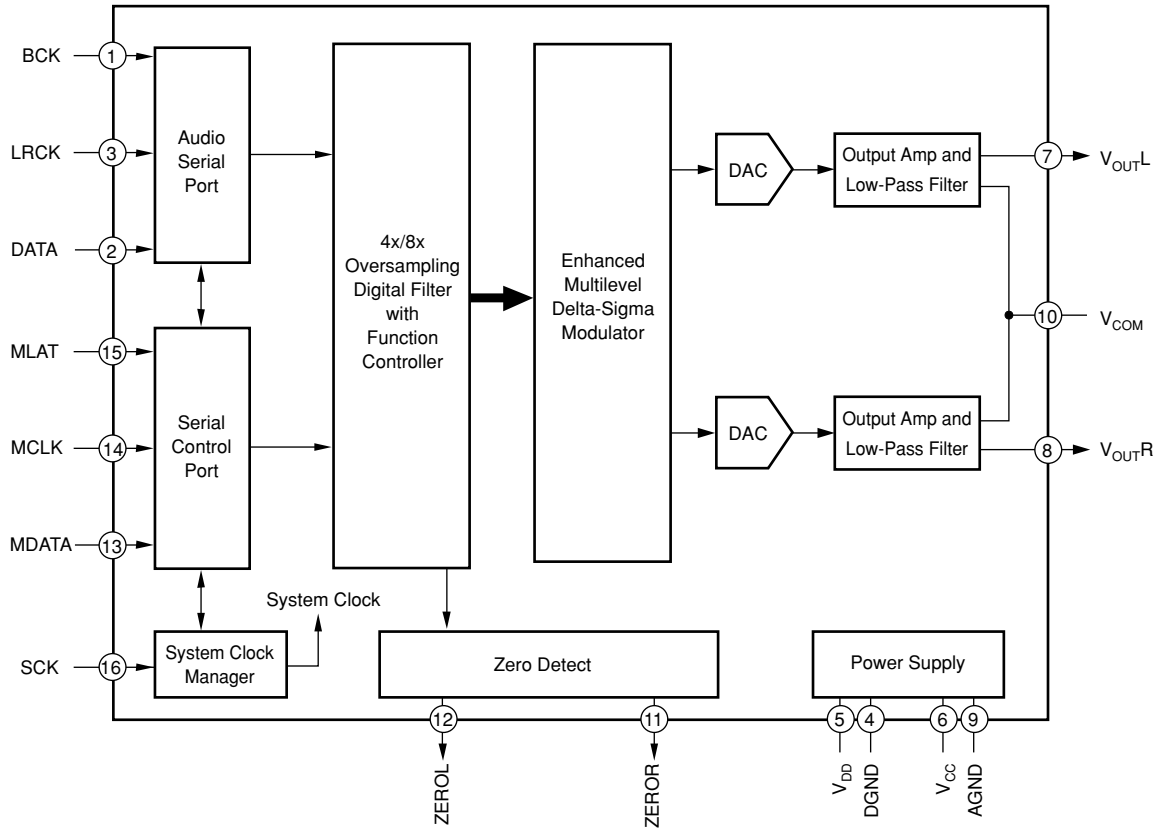


## IC, BA5813FM



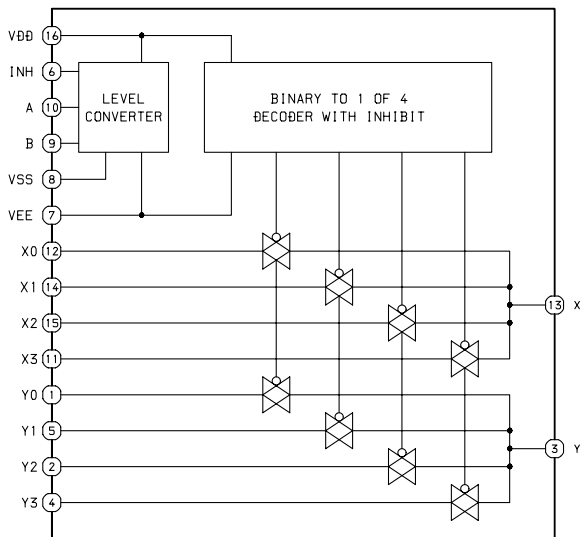
# IC BLOCK DIAGRAM -3/3

## IC, PCM1742KE



## IC, BU4052BCF

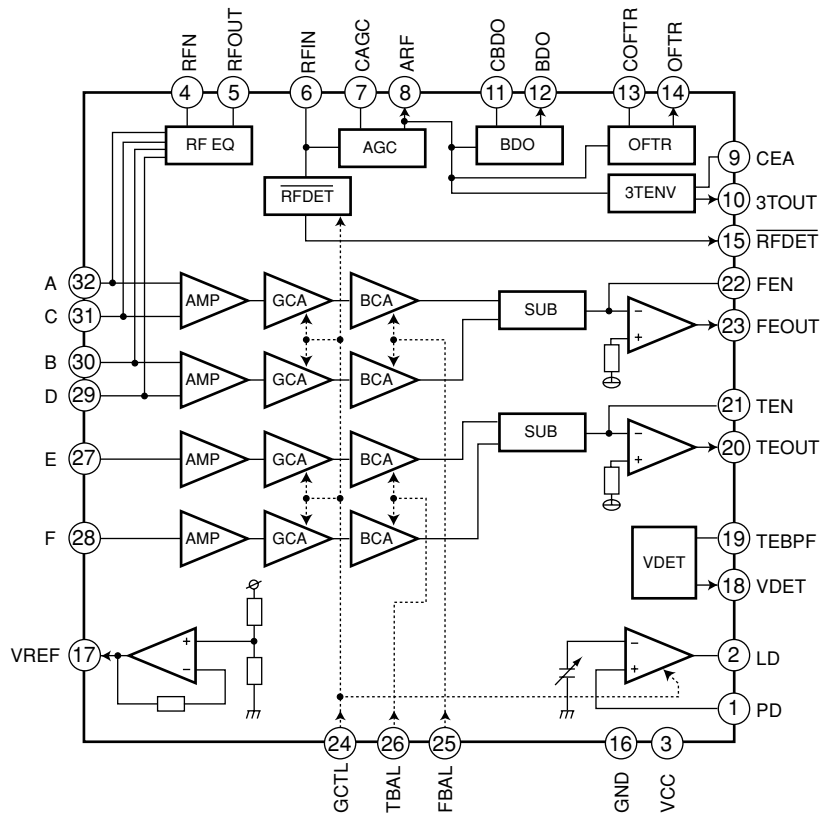
## IC, AN22002A



TRUTH TABLE

| INHIBIT | A | B | NO SWITCH |
|---------|---|---|-----------|
| L       | L | L | X0 Y0     |
| L       | H | L | X1 Y1     |
| L       | L | H | X2 Y2     |
| L       | H | H | X3 Y3     |
| H       | X | X | NONE      |

X: DON'T CARE.



## IC DESCRIPTION -1/2 (LC8752B2A-50Y2) -1/3

| Pin No. | Pin Name                        | I/O | Description                                  |
|---------|---------------------------------|-----|--|
| 1       | O-CDT CLOSE                     | O   | CD tray close output                         |
| 2       | O-CDT OPEN                      | O   | CD tray open output                          |
| 3       | O-CD-RESET                      | O   | CD reset output                              |
| 4       | I-CD-BLKCK                      | I   | CD sub-code clock input                      |
| 5       | I-CD-SENSE                      | I   | CD sense input                               |
| 6       | $\overline{\text{O-CDX4}}$      | –   | Not used                                     |
| 7       | I-RMC                           | I   | Remote control sensor data input             |
| 8       | $\overline{\text{I-RESET}}$     | I   | Reset input signal                           |
| 9       | XT1                             | I   | Crystal connect signal                       |
| 10      | XT2                             | O   | Crystal connect signal                       |
| 11      | VSS1                            | –   | Ground                                       |
| 12      | CF1                             | I   | Input signal of LC oscillator                |
| 13      | CF2                             | O   | Output signal of LC oscillator               |
| 14      | VDD1                            | –   | Power supply                                 |
| 15      | $\overline{\text{O-CLK SHIFT}}$ | O   | Microcomputer clock shift switching          |
| 16      | $\overline{\text{I-HOLD(AD)}}$  | I   | HOLD voltage input                           |
| 17      | I-MS(AD)                        | I   | Signal level input for TAPE music sensor     |
| 18      | I-KEY1(AD)                      | I   | Input tact key 1                             |
| 19      | I-KEY2(AD)                      | I   | Input tact key 2                             |
| 20      | I-ENC1(AD)                      | I   | Volume control input                         |
| 21      | I-ENC2(AD)                      | I   | JOG control input                            |
| 22      | I-DECK SW(AD)                   | I   | Detection in TAPE recording tub              |
| 23      | O-MD-KDATA                      | O   | MD command data output                       |
| 24      | I-MD-MDDATA                     | I   | MD data input                                |
| 25      | O-MD-DSCK                       | O   | MD command clock output                      |
| 26      | O-CD-MDATA                      | O   | CD command data output/data output for DAC   |
| 27      | I-CD-STAT                       | I   | CD status input                              |
| 28      | O-CD-MCLK                       | O   | CD command clock output/Clock output for DAC |
| 29      | O-MD ON                         | O   | MD power supply ON/OFF control output        |
| 30      | O-METER MUTE                    | O   | METER mute ON/OFF control output             |
| 31      | O-OPT-SEL                       | O   | Switching output for MD digital input        |
| 32      | NC                              | –   | Not connected                                |
| 33      | NC                              | –   | Not connected                                |
| 34      | NC                              | –   | Not connected                                |
| 35      | NC                              | –   | Not connected                                |
| 36      | O-MD-SERCH                      | O   | MD search signal output                      |
| 37      | O-MD-ST                         | O   | MD start output for ID                       |
| 38      | O-MD-RESET                      | O   | MD reset output                              |
| 39      | VSS4                            | –   | Ground                                       |
| 40      | VDD4                            | –   | Power supply                                 |
| 41      | I-MD-PCONT                      | I   | Detection in abnormal MD power supply        |
| 42      | I-MD-DSTB                       | I   | MD data strobe input                         |

## IC DESCRIPTION -1/2 (LC8752B2A-50Y2) -2/3

| Pin No. | Pin Name                       | I/O | Description  |
|---------|--------------------------------|-----|--|
| 43      | I-AS                           | I   | Pulse input for TAPE counter                       |
| 44      | I-HEAD                         | I   | Input of detection in TAPE head position           |
| 45      | O-PL                           | O   | TAPE plunger control output                        |
| 46      | O-MOTOR                        | O   | TAPE motor power supply ON/OFF control output      |
| 47      | O-LED1(BLUE)                   | O   | FL back-light control output                       |
| 48      | O-LED2(RED)                    | O   | FL back-light control output                       |
| 49      | O-SI(FL)                       | O   | FL serial data output                              |
| 50      | O-BK(FL)                       | O   | FL driver ranking output                           |
| 51      | O-CLK(FL)                      | O   | FL shift register clock output                     |
| 52      | O-LAT(FL)                      | O   | FL latch control output                            |
| 53      | NC                             | -   | Not connected                                      |
| 54      | NC                             | -   | Not connected                                      |
| 55      | VDD2                           | -   | Power supply                                       |
| 56      | VSS2                           | -   | Ground   |
| 57      | DIMMER                         | O   | FL back-light dimmer switching output              |
| 58      | NC                             | -   | Not connected                                      |
| 59      | NC                             | -   | Not connected                                      |
| 60      | NC                             | -   | Not connected                                      |
| 61      | NC                             | -   | Not connected                                      |
| 62      | NC                             | -   | Not connected                                      |
| 63      | NC                             | -   | Not connected                                      |
| 64      | NC                             | -   | Not connected                                      |
| 65      | NC                             | -   | Not connected                                      |
| 66      | NC                             | -   | Not connected                                      |
| 67      | NC                             | -   | Not connected                                      |
| 68      | NC                             | -   | Not connected                                      |
| 69      | NC                             | -   | Not connected                                      |
| 70      | $\overline{\text{O-STBY LED}}$ | O   | Stand-by LED ON/OFF control output                 |
| 71      | $\overline{\text{O-VOL. LED}}$ | O   | Volume LED ON/OFF control output                   |
| 72      | O-POWER                        | O   | System power supply ON/OFF control output          |
| 73      | O-FAN                          | O   | Not used   |
| 74      | O-MAIN-MUTE                    | O   | Main mute ON/OFF control output                    |
| 75      | $\overline{\text{O-/REC/PB}}$  | O   | TAPE record/play switching control output          |
| 76      | O-BIAS                         | O   | TAPE recording bias ON/OFF control output          |
| 77      | O-FUNC-CONT                    | O   | Data outputf or function IC                        |
| 78      | O-USB CONT                     | O   | Pull-up ON/OFF control output for USB D + terminal |
| 79      | $\overline{\text{I-USBSPEND}}$ | I   | Detection in USB suspension input                  |
| 80      | O-USB ON                       | O   | USB power supply ON/OFF control output             |
| 81      | O-TU ON                        | O   | TUNER power supply ON/OFF control output           |
| 82      | O-PLL CL                       | O   | TUNER clock output                                 |
| 83      | O-PLL DI                       | O   | TUNER data input                                   |
| 84      | O-PLL CE                       | O   | TUNER chip enable output                           |

IC DESCRIPTION -1/2 (LC8752B2A-50Y2) -3/3

| Pin No. | Pin Name                     | I/O | Description                   |
|---------|------------------------------|-----|-------------------------------|
| 85      | O-PLL DO                     | O   | TUNER data output             |
| 86      | I-TU SELECT1                 | I   | Detection in TUNER force      |
| 87      | I-TU SELECT2                 | I   | Detection in TUNER force      |
| 88      | VSS3                         | -   | Ground                        |
| 89      | VDD3                         | -   | Power supply                  |
| 90      | NC                           | -   | Not connected                 |
| 91      | (CLK)                        | -   | Not connected                 |
| 92      | (DATA)                       | -   | Not connected                 |
| 93      | (SELECT)                     | -   | Not connected                 |
| 94      | NC                           | -   | Not connected                 |
| 95      | NC                           | -   | Not connected                 |
| 96      | $\overline{\text{O-CDX2X4}}$ | -   | Not used                      |
| 97      | O-DAC-LAT                    | O   | CD DAC latch output           |
| 98      | O-CD-MLD                     | O   | CD command latch output       |
| 99      | I-CLOSE SW                   | I   | Detection in CD tray close SW |
| 100     | I-OPEN SW                    | I   | Detection in CD tray open SW  |

IC DESCRIPTION -2/2 (MN6627482WA) -1/2

| Pin No. | Pin Name                  | I/O | Description   |
|---------|---------------------------|-----|---|
| 1       | BCLK                      | O   | Bit clock output for SRDATA   |
| 2       | LRCK                      | O   | Distinction L and R signal output   |
| 3       | SRDATA                    | O   | Serial data output  |
| 4       | DVDD1                     | I   | Power supply for digital circuit  |
| 5       | DVSS1                     | I   | GND for digital circuit   |
| 6       | TX                        | O   | Digital audio interface output signal   |
| 7       | MCLK                      | I   | Microcomputer command clock input (Data is latched at starting edge)  |
| 8       | MDATA                     | I   | Microcomputer command data input  |
| 9       | MLD                       | I   | Microcomputer command load signal input. Load at "L".   |
| 10      | SENSE                     | O   | Sense signal output (OFT,FESL,NACEND,NAJEND,SFG)  |
| 11      | $\overline{\text{FLOCK}}$ | -   | Not connected   |
| 12      | $\overline{\text{TLOCK}}$ | -   | Not connected   |
| 13      | BLKCK                     | O   | Sub-code block clock signal (fBLKCK=75Hz)   |
| 14      | FODOWN                    | O   | Focus down output   |
| 15      | SUBQ                      | -   | Not connected   |
| 16      | DMUTE                     | I   | Muting input. Muted at "H".   |
| 17      | STAT                      | O   | Status signal (CRC, STCNT, CLVS, TTSTOP, JCLVS, SQOK, FLAG6, SENSE/FLOCK/<br>TLOCK, Rotation speed data, FCLV, SUBQ, SYFLG) |
| 18      | $\overline{\text{RST}}$   | I   | Reset input signal. (Reset at "L")  |
| 19      | SMCK                      | -   | Not connected   |
| 20      | PMCK                      | -   | Not connected   |
| 21      | TRV                       | O   | Traverse compulsion sending output. 3-State.  |
| 22      | TVD                       | O   | Traverse drive output   |
| 23      | PC                        | -   | Not connected   |
| 24      | ECM                       | O   | Spindle motor drive signal (Compulsion mode output)3-State.   |
| 25      | ECS                       | O   | Spindle motor drive signal (Servo signal error output)  |
| 26      | KICK                      | O   | Kick pulse output. 3-State.   |
| 27      | TRD                       | O   | Tracking drive output   |
| 28      | FOD                       | O   | Focus drive output  |
| 29      | VREF                      | I   | DA output part (TVD,ECS,TRD,FOD,FBAL,TBAL,TOFS) Reference voltage   |
| 30      | FBAL                      | O   | Focus balance adjustment output   |
| 31      | TBAL                      | O   | Tracking balance adjustment output  |
| 32      | FE                        | I   | Focus error signal input (Analog input)   |
| 33      | TE                        | I   | Tracking error signal input (Analog input)  |
| 34      | RFENV                     | I   | RF envelope signal input (Analog input)   |
| 35      | VDET                      | I   | Vibration detection signal input. Detection at "L".   |
| 36      | OFT                       | I   | Off track signal input. Off track at "H".   |
| 37      | TRCRS                     | I   | Track cross signal input (Analog input)   |
| 38      | $\overline{\text{RFDET}}$ | I   | RF detection signal input. Detection at "L".  |
| 39      | BDO                       | I   | Drop out signal input. Drop out at "H".   |
| 40      | LDON                      | O   | Laser ON signal output. ON at "H".  |
| 41      | PLL2                      | I/O | Terminal for switching for PLL roop filter character  |

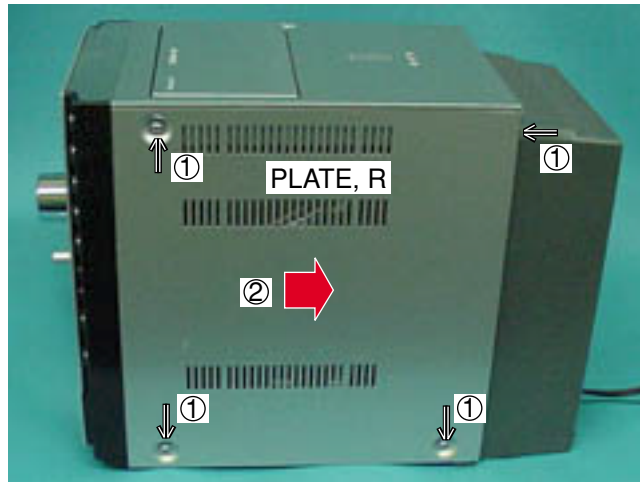
IC DESCRIPTION -2/2 (MN6627482WA) -2/2

| Pin No. | Pin Name                  | I/O | Description  |
|---------|---------------------------|-----|--|
| 42      | TOFS                      | –   | Not connected  |
| 43      | WVEL                      | –   | Not connected  |
| 44      | ARF                       | I   | RF signal input  |
| 45      | IREF                      | I   | Standard current input terminal  |
| 46      | DRF                       | I   | Bias signal for DSL  |
| 47      | DSLRF                     | I/O | Roop filter signal for DSL   |
| 48      | PLLF                      | I/O | Roop filter signal for PLL   |
| 49      | VCOF                      | I/O | Roop filter signal for VCO   |
| 50      | AVDD2                     | I   | Power supply for analog circuit (for output parts of DSL,PLL,DA and for AD)                          |
| 51      | AVSS2                     | I   | GND for analog circuit (for output parts of DSL,PLL,DA and for AD)                                   |
| 52      | EFM                       | –   | Not connected  |
| 53      | DSL B                     | O   | DSL balance output   |
| 54      | VCOF2                     | I/O | Loop filter terminal for VCO which creates digital servo 33.8688MHz                                  |
| 55      | SUBC                      | –   | Not connected  |
| 56      | SBCK                      | I   | Clock output for sub-code serial output. Clock input for reading TEXT data at CD-TEXT 1 mode.        |
| 57      | XVSS                      | I   | GND for oscillation circuit  |
| 58      | XI                        | I   | Oscillation circuit input terminal   |
| 59      | XO                        | O   | Oscillation circuit output terminal  |
| 60      | XVDD                      | I   | Power supply for oscillation circuit   |
| 61      | BYTCK                     | –   | Not connected  |
| 62      | $\overline{\text{CD-X4}}$ | O   | Output L at CD 4 x speed   |
| 63      | GCTL                      | O   | Gain control output. RW mode at "H".   |
| 64      | IPFLAG                    | –   | Not connected  |
| 65      | FLAG                      | –   | Not connected  |
| 66      | CLVS                      | –   | Not connected  |
| 67      | CRC                       | –   | Not connected  |
| 68      | DEMPH                     | –   | Not connected  |
| 69      | RESY                      | –   | Not connected  |
| 70      | IOSEL                     | I   | Switching mode signal  |
| 71      | $\overline{\text{TEST}}$  | I   | Test terminal. Normal at "H".  |
| 72      | AVDD1                     | I   | Power supply for analog circuit. (For audio output part (for combining Lch and Rch))                 |
| 73      | OUT-L                     | O   | Lch audio output   |
| 74      | AVSS1                     | I   | GND for analog circuit (for audio output part (for combining Lch and Rch))                           |
| 75      | OUT-R                     | O   | Rch audio output   |
| 76      | IL-SW                     | I   | Switch for detecting inside limit  |
| 77      | CSEL                      | I   | Ocillation frequency specified terminal. Ocillation frequency is 16.9344MHz at "L".                  |
| 78      | PSEL                      | I   | Test terminal when "H" is IOSEL. (Normally at "L")   |
| 79      | MSEL                      | I   | SMCK terminal output when "H" is IOSEL. Switching frequency terminal. SMCK=4.2336MHz at "L".         |
| 80      | SSEL                      | I   | SUBQ terminal output when "H" is IOSEL. Switching mode terminal. Using mode of Q-code buffer at "H". |

## DISASSEMBLY -1/5

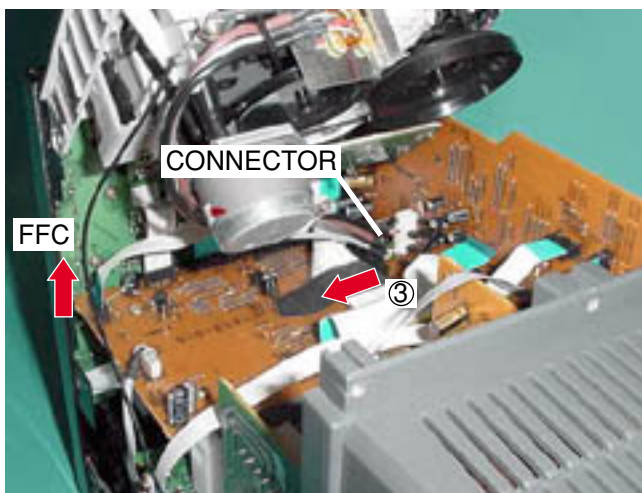
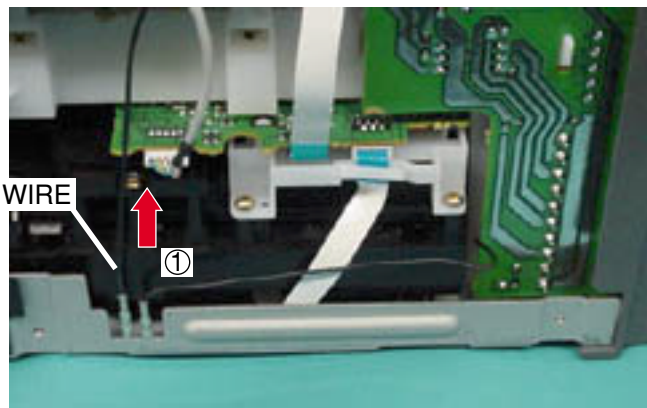
### 1. PLATE, L/R

- 1) Release 4 screws (BVT2+3-8 SILVER) of PLATE, R.
- 2) Remove PLATE, R with sliding to rear side.
- 3) Remove PLATE,L with same way.



### 2. PANEL, TOP ASSY (DECK MECHANISM)

- 1) Remove the wirer of DECK.
- 2) Release one screw (BVT2+3-8 SILVER) of PANEL, TOP ASSY.
- 3) Lift the rear side of PANEL, TOP ASSY, and remove the connector and FFC.

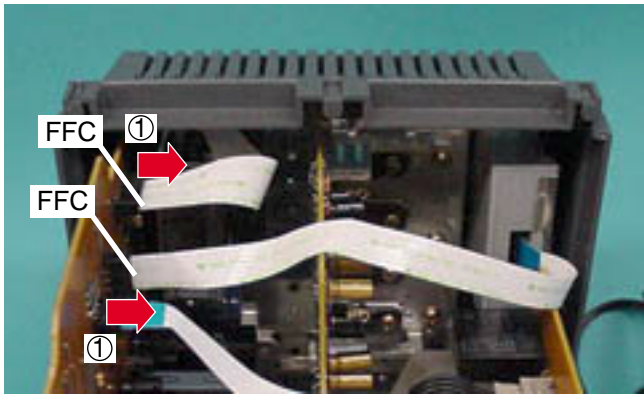




## DISASSEMBLY -2/5

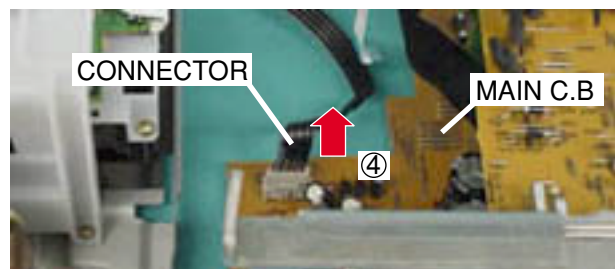
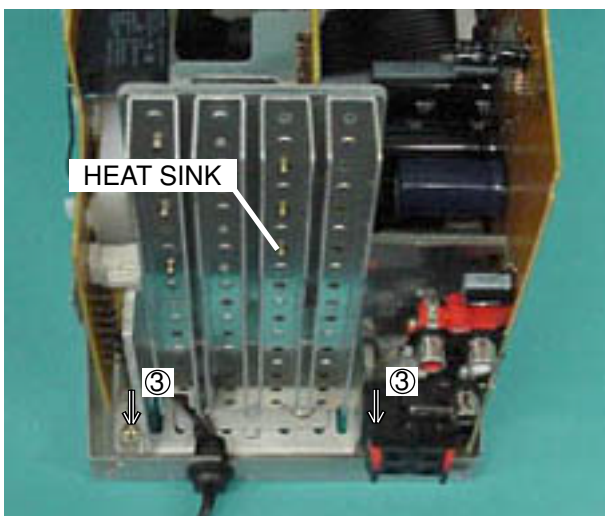
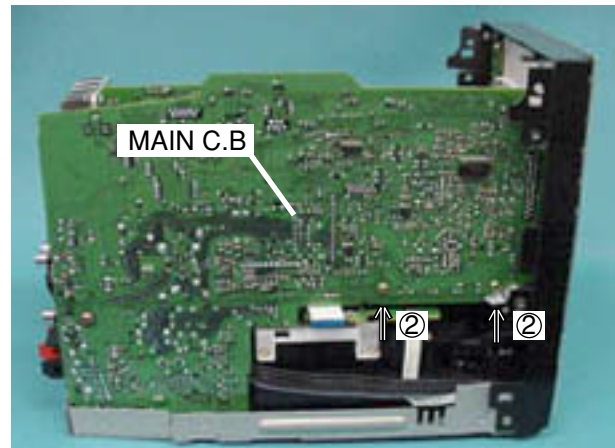
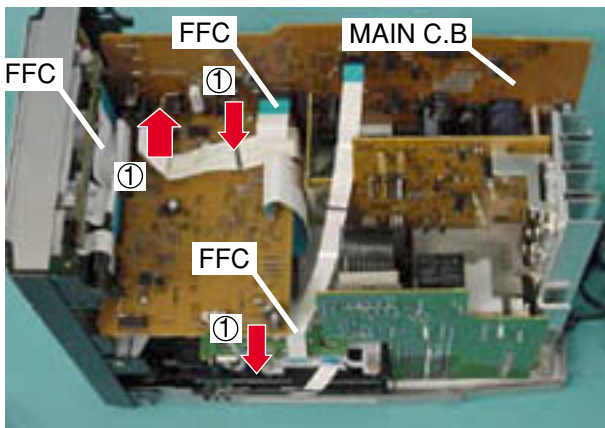
### 3. CABI, REAR ASSY

- 1) Remove TUNER PACK and FFC of USB UNIT.
- 2) Release 8 screws (BVT2+3-8 BLACK) of CABI, REAR ASSY.



### 4. MAIN C.B

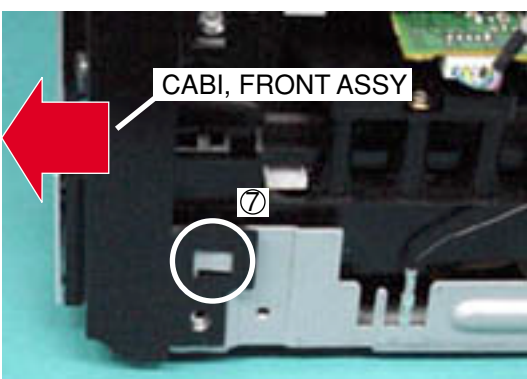
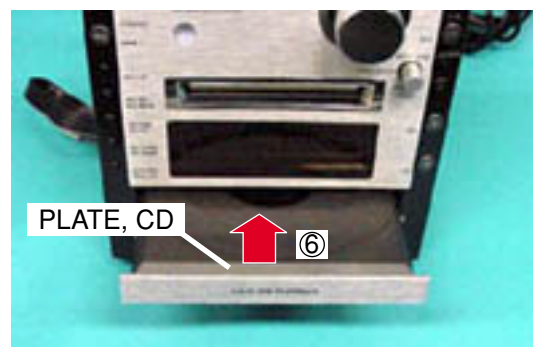
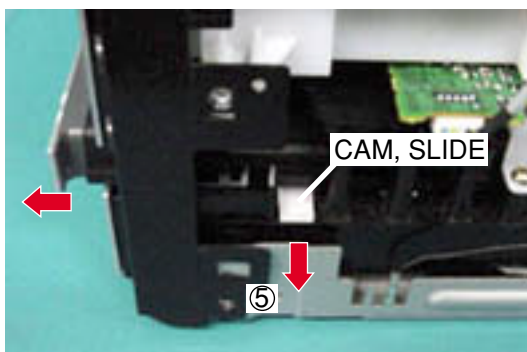
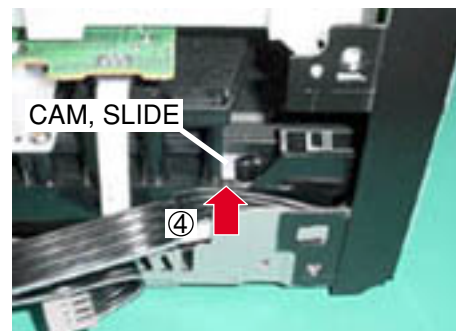
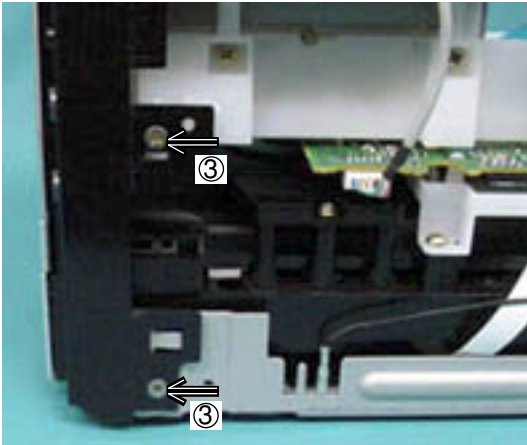
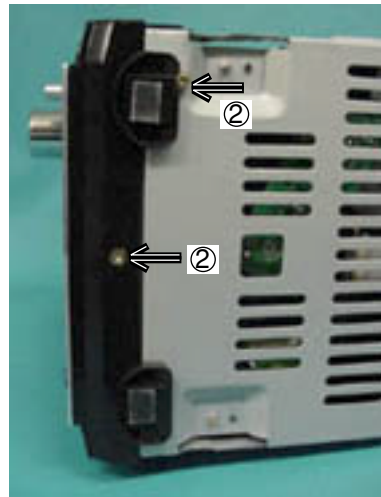
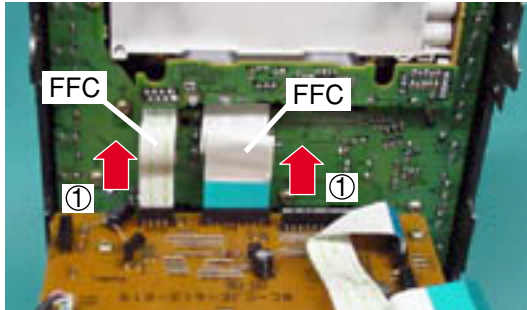
- 1) Remove 3 FFCs and one connector of MAIN C.B.
- 2) Release 2 screws (BVT2+3-10) of MAIN C.B.
- 3) Release 2 screws (BVT3B+3-8) of heat sink.
- 4) Remove MAIN C.B, and remove the connector of HP C.B.



## DISASSEMBLY -3/5

### 5. CABI, FRONT ASSY

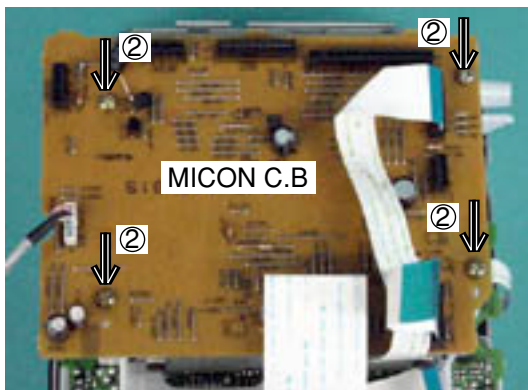
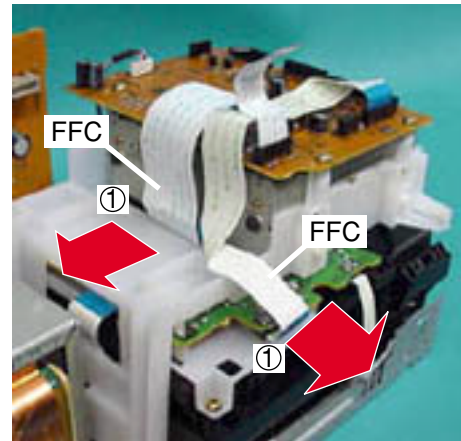
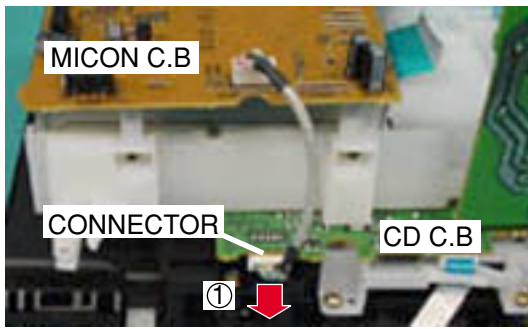
- 1) Remove 2 FFCs of CABI, FRONT ASSY.
- 2) Release 2 screws (QT2+3-10, BVT2+3-6) from the bottom of CABI, FRONT ASSY.
- 3) Release 4 screws (QT2+3-6) from the side of CABI, FRONT ASSY.
- 4) Push CAM,SLIDE to the left side of CD Mechanism.
- 5) Pull CAM,SLIDE from the right side of CD Mechanism, and then CD tray appears.
- 6) Remove PLATE,CD of CD tray, and return CD tray.
- 7) Remove CABI, FRONT ASSY with opening tubs of the both side.



## DISASSEMBLY -4/5

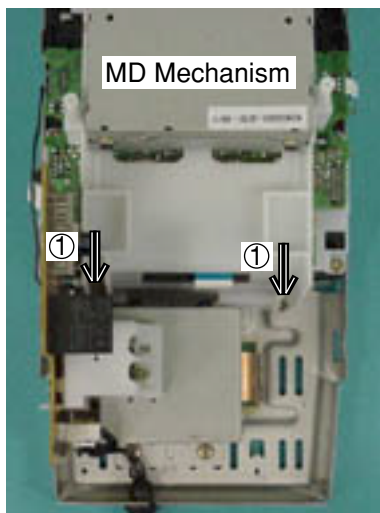
### 6. MICON C.B

- 1) Remove FFC of MD Mechanism and FFC of CD C.B, and remove connector.
- 2) Release 4 screws (BVT2+3-10) of MICON C.B.



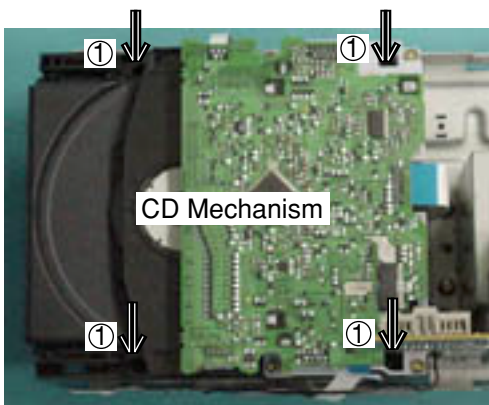
### 7. MD MECHANISM

- 1) Release 2 screws (BVTT+3-8) of CHAS, MD.



### 8. CD MECHANISM

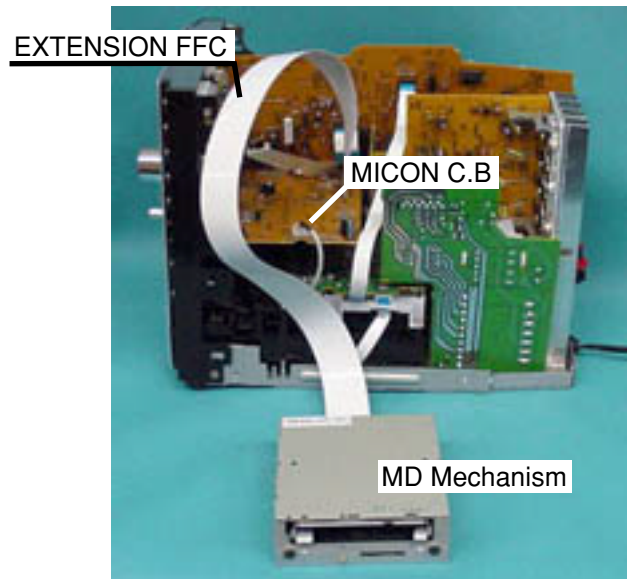
- 1) Release 4 screws (BVIT3B+3-8) of CD Mechanism.



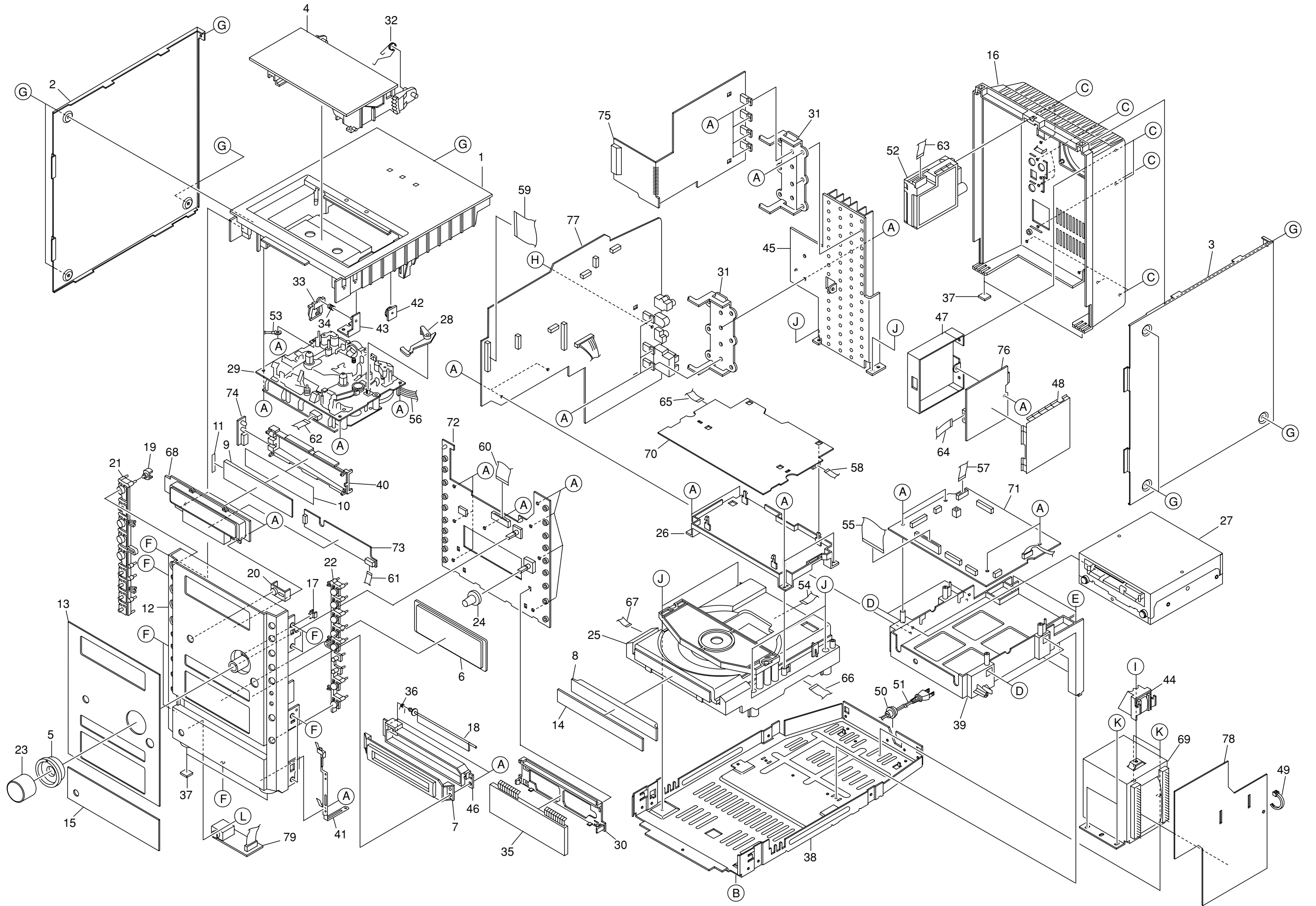
## DISASSEMBLY -5/5

### 9. SERVICE POSITION OF MDMECHANSIM

- 1) Remove MD MEHCANISM with referring to the disassembly procedure form 1 to 4 and from 6 to 7.
- 2) Set up with keeping MD MECHANISM is removed.
- 3) Connect MICON C.B to MD MECHANISM with extension FFC.  
Parts No. : SV-J00-130-010 FF-CABLE, 28P 1.00 500



MECHANICAL EXPLODED VIEW -1/1



# MECHANICAL PARTS LIST -1/2

! = SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.  
 However, please note that not all components will be available as spare parts for after-sales service.  
 Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.  
 Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C | REF-NO  | PARTS-NO       | PARTS-NAME                     | SUFFIX&MODEL   |
|-----------|-----|---------|----------------|--------------------------------|----------------|
|           |     |         |                |                                | XR-FD55<br>CEK |
|           | O   | MC1001  | 8C-CJE-003-010 | PANEL, TOP                     | a              |
|           | O   | MC1002  | 8C-CJE-004-010 | PANEL, L                       | a              |
|           | O   | MC1003  | 8C-CJE-005-010 | PANEL, R                       | a              |
|           | O   | MC1004  | 8C-CJE-006-010 | BOX, CASS                      | a              |
|           | O   | MC1005  | 8C-CJE-013-010 | RING, VOL                      | a              |
|           | O   | MC1006  | 8C-CJE-017-010 | WINDOW, LOWER                  | a              |
|           | O   | MC1007  | 8C-CJE-018-010 | PANEL, MD                      | a              |
|           | O   | MC1008  | 8C-CJE-020-010 | PANEL, CD                      | a              |
|           | O   | MC1009  | 8C-CJE-023-010 | LENS, METER                    | a              |
|           | X   | MC1010  | 8C-CJE-024-010 | SH, METER TOP                  | a              |
|           | X   | MC1011  | 8C-CJE-025-010 | SH, METER BOTTOM               | a              |
|           | O   | MC1012  | 8C-CJE-001-010 | CABI, FR                       | a              |
|           | O   | MC1013  | 8C-CJE-009-010 | PLATE, FR                      | a              |
|           | O   | MC1014  | 8C-CJE-010-010 | PLATE, CD                      | a              |
|           | O   | MC1015  | 8C-CJE-011-010 | PLATE, LOWER                   | a              |
|           | O   | MC1016  | 8C-CJE-043-010 | CABI, REAR K                   | a              |
|           | O   | MC1017  | 8C-CJE-014-010 | REFLECTOR, VOL                 | a              |
|           | O   | MC1018  | 8C-CJE-019-010 | PLATE, MD                      | a              |
|           | O   | MC1019  | 8C-CJE-021-010 | REFLECTOR, POWER               | a              |
|           | O   | MC1020  | 8C-CJE-022-010 | REFLECTOR, SENSOR              | a              |
|           |     |         |                |                                | XR-FD55<br>CEK |
|           | O   | MC1021  | 8C-CJE-007-010 | KEY, PLAY                      | a              |
|           | O   | MC1022  | 8C-CJE-008-010 | KEY, FUNC                      | a              |
|           | O   | MC1023  | 8C-CJE-012-010 | KNOB, RTRY VOL                 | a              |
|           | O   | MC1024  | 8C-CJE-015-010 | KNOB, RTRY JOG                 | a              |
|           | X   | MC1025  | M8-3ZG-38P-070 | 3ZG-3 E14NC                    | a              |
|           | X   | MC1026  | 8C-CJE-217-010 | HLDR, PWB CD                   | a              |
|           | X   | MC1027  | M8-CZK-890-070 | MDM-16Q                        | a              |
|           | O   | MC1028  | 82-ZM1-263-110 | LVR, EJECT L                   | a              |
|           | X   | MC1029  | M8-BZM-192-170 | BZM-1 AR2NC                    | a              |
|           | X   | MC1030  | 8C-CJE-203-010 | GUIDE, FL                      | a              |
|           | X   | MC1031  | 8C-CJE-208-010 | HLDR, TR                       | a              |
|           | O   | MC1032  | 82-NF5-218-010 | SPR-T, EJECT 1 (SIN)           | a              |
|           | O   | MC1033  | 82-NF5-229-010 | PLATE, LOCK (*)                | a              |
|           | O   | MC1034  | 86-NF9-224-010 | SPR-C, LOCK                    | a              |
|           | O   | MC1035  | 8C-CJE-609-010 | FL, 15-BT-89GINK               | a              |
|           | O   | MC1036  | 87-NB8-210-010 | SPR-T, FLAP                    | a              |
|           | X   | MC1037  | 8B-NF9-204-010 | CUSH, 11-8.5-2                 | a              |
|           | X   | MC1038  | 8C-CJE-201-010 | CHAS, MAIN                     | a              |
|           | O   | MC1039  | 8C-CJE-202-010 | CHAS, MD                       | a              |
|           | X   | MC1040  | 8C-CJE-209-010 | HLDR, LENS METER               | a              |
|           |     |         |                |                                | XR-FD55<br>CEK |
|           | O   | MC1041  | 8C-CJE-218-010 | SPR-P, GND FR                  | a              |
|           | O   | MC1042  | 8Z-NF6-210-010 | DMPR, 150 N                    | a              |
|           | O   | MC1043  | 87-NF4-216-010 | HLDR, LOCK 1                   | a              |
|           | X   | MC1044  | 8C-CJE-204-010 | HLDR, PWB PT                   | a              |
|           | X   | MC1045  | 8C-CJE-205-010 | HT-SINK, MAIN ASSY             | a              |
|           | X   | MC1045a | 8C-CJE-206-010 | HT-SINK, MAIN                  | a              |
|           | X   | MC1045b | 8C-CJE-207-010 | HT-SINK, FIN                   | a              |
|           | X   | MC1046  | 8C-CJE-210-010 | HLDR, FLAP MD                  | a              |
|           | X   | MC1047  | 8C-CJE-212-010 | SHLD-CASE, USB A               | a              |
|           | X   | MC1048  | 8C-CJE-213-010 | SHLD-CASE, USB B               | a              |
|           | X   | MC1049  | 87-069-033-010 | CABLE, TIE                     | a              |
|           | O   | MC1050  | 87-085-185-010 | BUSHING, AC CORD (E) CM-22B    | a              |
|           | !   | MC1051  | 87-A80-202-110 | AC CORD ASSY, EKH BLK VH       | a              |
|           | O   | MC1052  | 8C-CJE-665-010 | TU UNIT, E TFCF1E112A          | a              |
|           | X   | MC1053  | 8A-MTM-651-010 | WIRE ASSY, 160 BLK F-LUG       | a              |
|           | O   | MC1054  | 8C-CJE-604-010 | FF-CABLE, 16P 1.0 125MM CD     | a              |
|           | O   | MC1055  | 8C-CJE-605-010 | FF-CABLE, 28P 1MM 100MM        | a              |
|           | O   | MC1056  | 8C-CJE-607-010 | CONN ASSY, 8P PH CASS          | a              |
|           | O   | MC1057  | 8C-CJE-641-010 | FF-CABLE, 12P 1.25 50MM MICON  | a              |
|           | O   | MC1058  | 8C-CJE-642-010 | FF-CABLE, 7P 1.25 200MM CD-MAI | a              |
|           |     |         |                |                                | XR-FD55<br>CEK |
|           | O   | MC1059  | 8C-CJE-643-010 | FF-CABLE, 28P 1.25 90MM MAIN   | a              |
|           | O   | MC1060  | 8C-CJE-644-010 | FF-CABLE, 17P 1.25 65MM KEY    | a              |
|           | O   | MC1061  | 8C-CJE-645-010 | FF-CABLE, 8P 1.25 60MM METER   | a              |
|           | O   | MC1062  | 8C-CJE-646-010 | FF-CABLE, 8P 1.25 90MM DECK    | a              |
|           | O   | MC1063  | 8C-CJE-647-010 | FF-CABLE, 11P 1.25 90MM TUNER  | a              |
|           | O   | MC1064  | 8C-CJE-648-010 | FF-CABLE, 7P 1.25 170MM USB    | a              |
|           | O   | MC1065  | 8C-CJE-649-010 | FF-CABLE, 13P 1.25 220MM CD    | a              |
|           | O   | MC1066  | 8C-CJE-650-010 | FF-CABLE, 6P 1.25 105MM SPINDL | a              |
|           | O   | MC1067  | 8C-CJE-651-010 | FF-CABLE, 5P 1.25 120MM TRAY   | a              |
|           | O   | MC1068  | 8C-CJE-625-010 | METER, WS23-01                 | a              |
|           | !   | MC1069  | 8C-CJE-666-010 | PT, K CCJ-E                    | a              |
|           | X   | MC1070  | 8C-CJE-621-010 | PWB, CD 1 4M                   | a              |
|           | X   | MC1071  | 8C-CJE-612-110 | PWB, MICON                     | a              |
|           | X   | MC1072  | 8C-CJE-613-110 | PWB, KEY                       | a              |
|           | X   | MC1073  | 8C-CJE-614-110 | PWB, METER                     | a              |
|           | X   | MC1074  | 8C-CJE-615-110 | PWB, LED                       | a              |
|           | X   | MC1075  | 8C-CJE-616-110 | PWB, AMP                       | a              |
|           | X   | MC1076  | 8C-CJE-617-110 | PWB, USB                       | a              |
|           | X   | MC1077  | 8C-CJE-632-010 | PWB, MAIN                      | a              |
|           | X   | MC1078  | 8C-CJE-633-010 | PWB, PT                        | a              |

# MECHANICAL PARTS LIST -2/2

- ! =  $\triangle$  SAFETY PARTS
- C = Components marked

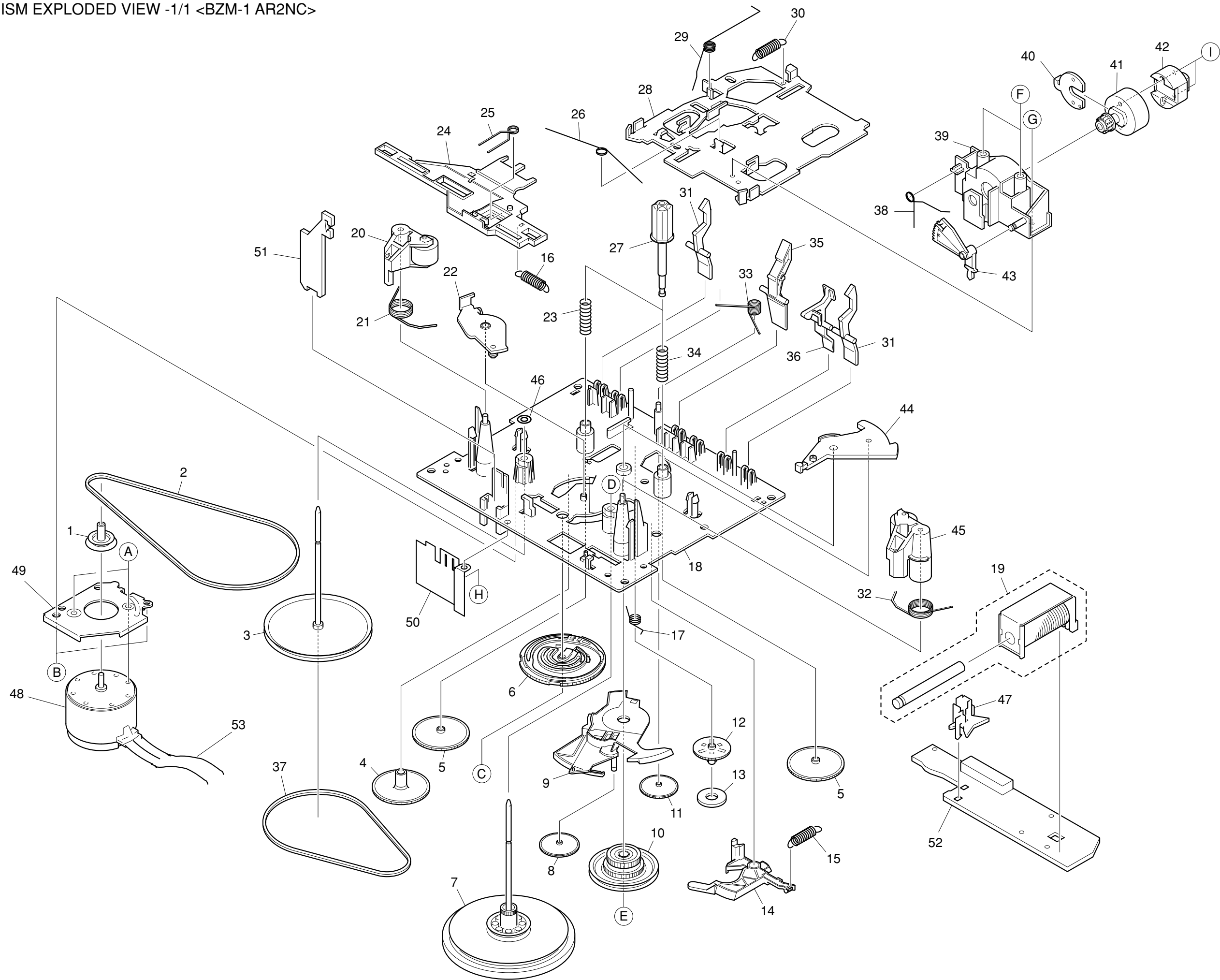
All components used on this model at the production line are shown in this service manual.  
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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME                   | SUFFIX&MODEL   |
|-----------|-----|--------|----------------|------------------------------|----------------|
|           |     |        |                |                              | XR-FD55<br>CEK |
|           | X   | MC1079 | 8C-CJE-634-010 | PWB,HP                       | a              |
|           | O   | MC1A   | 87-067-703-010 | BVT2+3-10 W/O SLOT           | a              |
|           | O   | MC1B   | 87-067-584-010 | BVT2+3-6 W/O SLOT            | a              |
|           | O   | MC1C   | 87-067-660-010 | BVT2+3-8 W/O SLOT BLK        | a              |
|           | O   | MC1D   | 87-067-689-010 | BVTT+3-8                     | a              |
|           | O   | MC1E   | 87-B10-316-010 | BVIT3B+3-10 R W/O            | a              |
|           | O   | MC1F   | 87-721-096-410 | QT2+3-10 W/O SLOT            | a              |
|           | O   | MC1G   | 87-B10-230-010 | BVT2+3-10 W/O SLOT SILVER CR | a              |
|           | O   | MC1H   | 87-NF4-224-010 | S-SCREW,IT3B+3-8 CU          | a              |
|           | O   | MC1I   | 87-067-579-010 | BVT2+3-8 W/O SLOT            | a              |
|           | O   | MC1J   | 87-B10-315-010 | BVIT3B+3-8 R W/O             | a              |
|           | O   | MC1K   | 87-B10-318-010 | BVIT3C+4-8 R W/O             | a              |
|           | O   | MC1L   | 88-AR1-217-010 | S-SCREW,BFT2+3-8             | a              |

## COLOR NAME TABLE -1/1

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

TAPE MECHANISM EXPLODED VIEW -1/1 <BZM-1 AR2NC>





# TAPE MECHANISM PARTS LIST -1/2 <BZM-1 AR2NC>

! =  $\Delta$  SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.

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| UNIT-NAME | ! C | REF-NO  | PARTS-NO       | PARTS-NAME              | SUFFIX&MODEL   |
|-----------|-----|---------|----------------|-------------------------|----------------|
|           |     |         |                |                         | BZM-1<br>AR2NC |
|           | O   | ST1001  | 8Z-ZM1-271-010 | PULLEY,MOT ZZM-1        | a              |
|           | O   | ST1002  | 82-ZM1-354-010 | BELT,SBU MAIN2 EPDM     | a              |
|           | O   | ST1003  | 82-ZM1-354-010 | FLY-WHL ASSY,L          | a              |
|           | X   | ST1003a | 82-ZM1-348-110 | FLY-WHL,L W             | a              |
|           | X   | ST1003b | 82-ZM1-236-010 | CAPSTAN,2-41.5          | a              |
|           | O   | ST1004  | 82-ZM1-226-010 | GEAR,REW                | a              |
|           | O   | ST1005  | 82-ZM1-216-510 | GEAR,REEL               | a              |
|           | O   | ST1006  | 82-ZM1-221-310 | GEAR,CAM                | a              |
|           | O   | ST1007  | 82-ZM1-237-610 | FLY-WHL ASSY,R          | a              |
|           | X   | ST1007a | 82-ZM1-349-110 | FLY-WHL,R W             | a              |
|           | X   | ST1007b | 82-ZM1-239-010 | CAPSTAN,2.2-41.7        | a              |
|           | O   | ST1008  | 82-ZM1-225-210 | GEAR,FR                 | a              |
|           | O   | ST1009  | 82-ZM1-224-410 | LVR,FR                  | a              |
|           | O   | ST1010  | 82-ZM3-333-310 | SLIP DISK ASSY 2        | a              |
|           | X   | ST1010a | 82-ZM3-332-310 | PULLEY,FR 2             | a              |
|           | X   | ST1010b | 82-ZM1-230-110 | GEAR,TAKE UP            | a              |
|           | X   | ST1010c | 82-ZM1-231-010 | CLR,SLIP                | a              |
|           | X   | ST1010d | 82-ZM1-232-010 | FELT,DIA 8.4-13-1       | a              |
|           | X   | ST1010e | 82-ZM1-233-110 | SPR-C,SLIP              | a              |
|           | O   | ST1011  | 82-ZM1-223-010 | GEAR,PLAY               | a              |
|           |     |         |                |                         | BZM-1<br>AR2NC |
|           | O   | ST1012  | 82-ZM1-220-210 | GEAR,IDLER              | a              |
|           | O   | ST1013  | 82-ZM3-616-010 | RING MAGNET 4           | a              |
|           | O   | ST1014  | 82-ZM1-227-310 | LVR,TRIG                | a              |
|           | O   | ST1015  | 82-ZM1-305-210 | SPR-E,TRIG 2            | a              |
|           | O   | ST1016  | 82-ZM1-255-310 | SPR-E,LVR DIR           | a              |
|           | O   | ST1017  | 82-ZM1-322-010 | SPR-T,FR 60             | a              |
|           | O   | ST1018  | 82-ZM1-358-110 | CHAS ASSY,FPC           | a              |
|           | X   | ST1018a | 82-ZM1-359-110 | CHAS ASSY,O/S FPC       | a              |
|           | X   | ST1018b | 82-ZM1-360-110 | CHAS,FPC                | a              |
|           | X   | ST1018c | 82-ZM1-317-210 | OILLESS-BRG 2.2RN       | a              |
|           | X   | ST1018d | 82-ZM1-318-210 | OILLESS-BRG 2LN         | a              |
|           | O   | ST1019  | 82-ZM3-628-010 | SOL ASSY,23 SO          | a              |
|           | X   | ST1019a | 82-ZM3-629-010 | HLDR,BOBBIN SOL SO      | a              |
|           | X   | ST1019b | 82-ZM3-630-010 | YOKE,SOL SO             | a              |
|           | X   | ST1019c | 82-ZM3-631-010 | SHAFT,CORE SOL SO       | a              |
|           | X   | ST1019d | 82-ZM3-632-010 | SHAFT,PLUNGER SOL SO    | a              |
|           | X   | ST1019e | 82-ZM3-633-010 | TERMINAL,SOL SO         | a              |
|           | O   | ST1020  | 82-ZM1-363-010 | LEVER,ASSY PINCH LD     | a              |
|           | X   | ST1020a | 82-ZM1-357-010 | LEVER,PINCH L D         | a              |
|           | X   | ST1020b | 82-ZM1-361-010 | ROLLER,ASSY YD          | a              |
|           |     |         |                |                         | BZM-1<br>AR2NC |
|           | X   | ST1020c | 82-ZM1-355-010 | CLR,ROLLER 3            | a              |
|           | X   | ST1020d | 82-ZM3-347-010 | ROLLER,RUBBER Y         | a              |
|           | O   | ST1021  | 82-ZM1-258-210 | SPR-T,PINCH L           | a              |
|           | O   | ST1022  | 82-ZM1-333-210 | PLATE,LINK2             | a              |
|           | O   | ST1023  | 82-ZM1-244-510 | SPR-C,BT                | a              |
|           | O   | ST1024  | 82-ZM1-266-310 | LVR,DIR                 | a              |
|           | O   | ST1025  | 82-ZM1-214-010 | SPR-T,DIR               | a              |
|           | O   | ST1026  | 82-ZM1-269-210 | SPR-T,BRG               | a              |
|           | O   | ST1027  | 82-ZM1-217-410 | REEL,TABLE              | a              |
|           | O   | ST1028  | 82-ZM1-206-910 | CHAS,HEAD               | a              |
|           | O   | ST1029  | 82-ZM1-219-110 | SPR-T,LINK              | a              |
|           | O   | ST1030  | 82-ZM1-218-010 | SPR-E,HB                | a              |
|           | O   | ST1031  | 82-ZM1-240-110 | LVR,REC                 | a              |
|           | O   | ST1032  | 82-ZM1-259-310 | SPR-T,PINCH R           | a              |
|           | O   | ST1033  | 82-ZM1-257-010 | SPR-T,CAS               | a              |
|           | O   | ST1034  | 82-ZM1-285-410 | SPR-C,BT L              | a              |
|           | O   | ST1035  | 82-ZM1-242-010 | LVR,CAS                 | a              |
|           | O   | ST1036  | 82-ZM1-243-010 | LVR,STOP                | a              |
|           | O   | ST1037  | 82-ZM1-338-110 | BELT,FR 4               | a              |
|           | O   | ST1038  | 82-ZM3-353-010 | SPR-T,HEAD 2            | a              |
|           |     |         |                |                         | BZM-1<br>AR2NC |
|           | O   | ST1039  | 82-ZM1-207-910 | GUIDE,TAPE              | a              |
|           | O   | ST1040  | 82-ZM1-314-110 | PLATE,HEAD              | a              |
|           | O   | ST1041  | 82-ZM1-208-310 | HLDR,HEAD               | a              |
|           | O   | ST1042  | 87-A92-197-010 | HEAD,RPH HADKH5666A FPC | a              |
|           | X   | ST1042a | 85-ZM3-602-010 | PWB,FLEX A              | a              |
|           | O   | ST1043  | 82-ZM1-210-110 | GEAR,H T                | a              |
|           | O   | ST1044  | 82-ZM1-222-310 | LVR,PLAY                | a              |
|           | O   | ST1045  | 82-ZM1-362-010 | LEVER,ASSY PINCH RD     | a              |
|           | X   | ST1045a | 82-ZM1-356-010 | LEVER,PINCH R D         | a              |
|           | O   | ST1046  | 82-ZM1-288-010 | SH,1.63-3.2-0.5 SLT     | a              |
|           | X   | ST1047  | 82-ZM1-245-210 | HLDR,IC                 | a              |
|           | O   | ST1048  | 87-A91-825-010 | MOT,M09Y/Z              | a              |
|           | O   | ST1049  | 8B-ZM1-202-110 | HLDR,MOTOR 2            | a              |
|           | X   | ST1050  | 85-ZM3-201-210 | PLATE,SHLD M3           | a              |
|           | X   | ST1051  | 8B-ZM1-603-010 | PWB,HEAD FPC            | a              |
|           | X   | ST1052  | 8B-ZM1-602-010 | PWB,MAIN FPC            | a              |
|           | O   | ST1053  | 8B-ZM1-604-010 | RBN-CORD,2P -55MM       | a              |
|           | O   | ST1A    | 87-251-070-410 | U+2.6-3                 | a              |
|           | O   | ST1B    | 87-741-073-410 | UT2+2.6-6 W/O SLOT      | a              |
|           | O   | ST1C    | 87-B10-008-010 | W-P,2.08-8-0.4 SLIT     | a              |

# TAPE MECHANISM PARTS LIST -2/2 <BZM-1 AR2NC>

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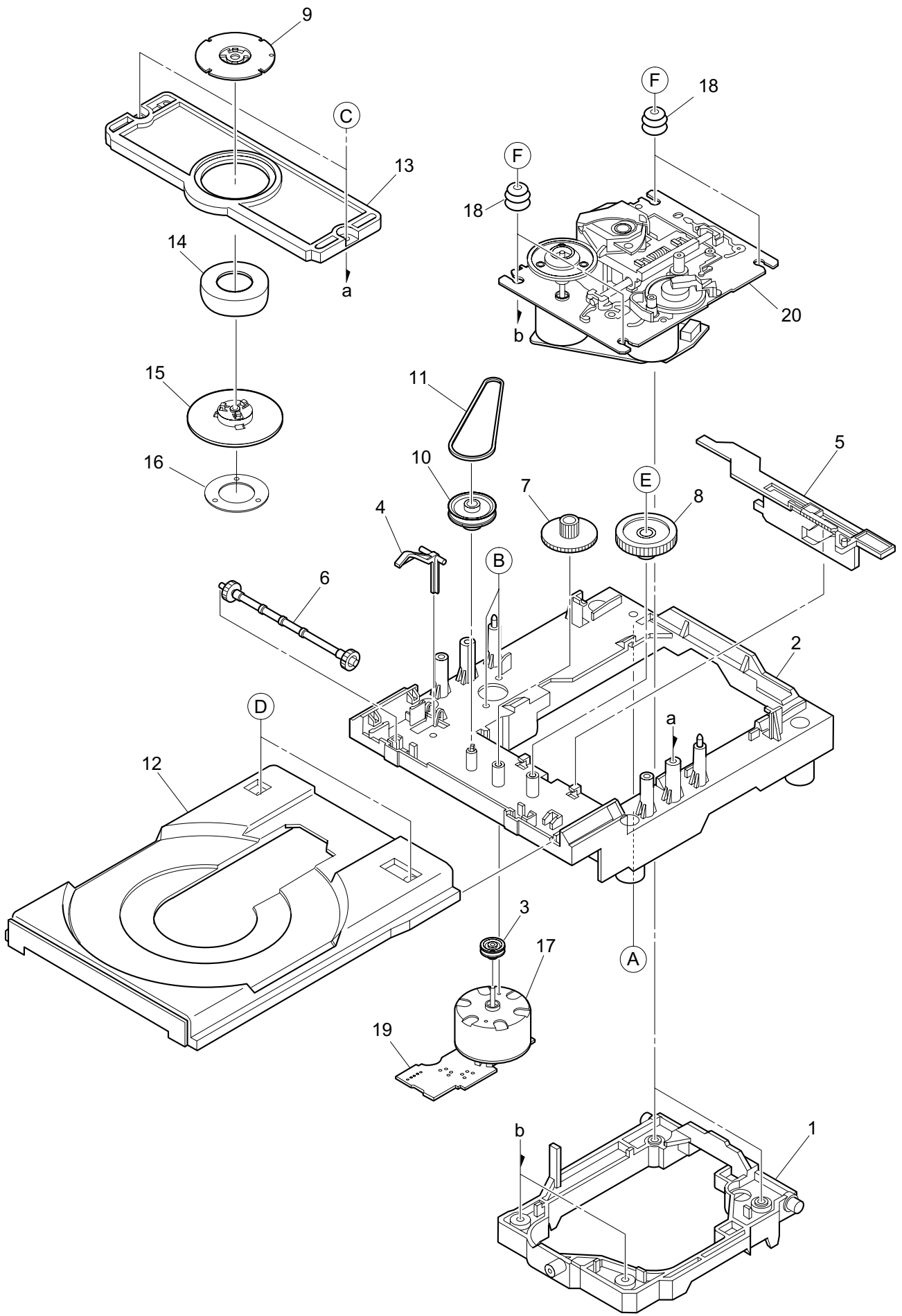
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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME           | SUFFIX&MODEL |
|-----------|-----|--------|----------------|----------------------|--------------|
|           |     |        |                |                      | BZM-1        |
|           |     |        |                |                      | AR2NC        |
|           | O   | ST1D   | 80-ZM6-243-010 | SH 1.75-3.6-0.5 SLT  | a            |
|           | O   | ST1E   | 82-ZM3-334-010 | PW, 2.16-6-0.4       | a            |
|           | O   | ST1F   | 86-ZM4-206-110 | S-SCREW, AZIMUTH L   | a            |
|           | O   | ST1G   | 85-ZM3-202-010 | S-SCREW, TG          | a            |
|           | O   | ST1H   | 82-ZM3-222-010 | S-SCREW, SHILD PLATE | a            |
|           | O   | ST1I   | 80-ZM6-207-010 | V+1.6-7              | a            |

CD MECHANISM EXPLODED VIEW -1/2 <3ZG-3 E14NC>



# CD MECHANISM PARTS LIST -1/2 <3ZG-3 E14NC>

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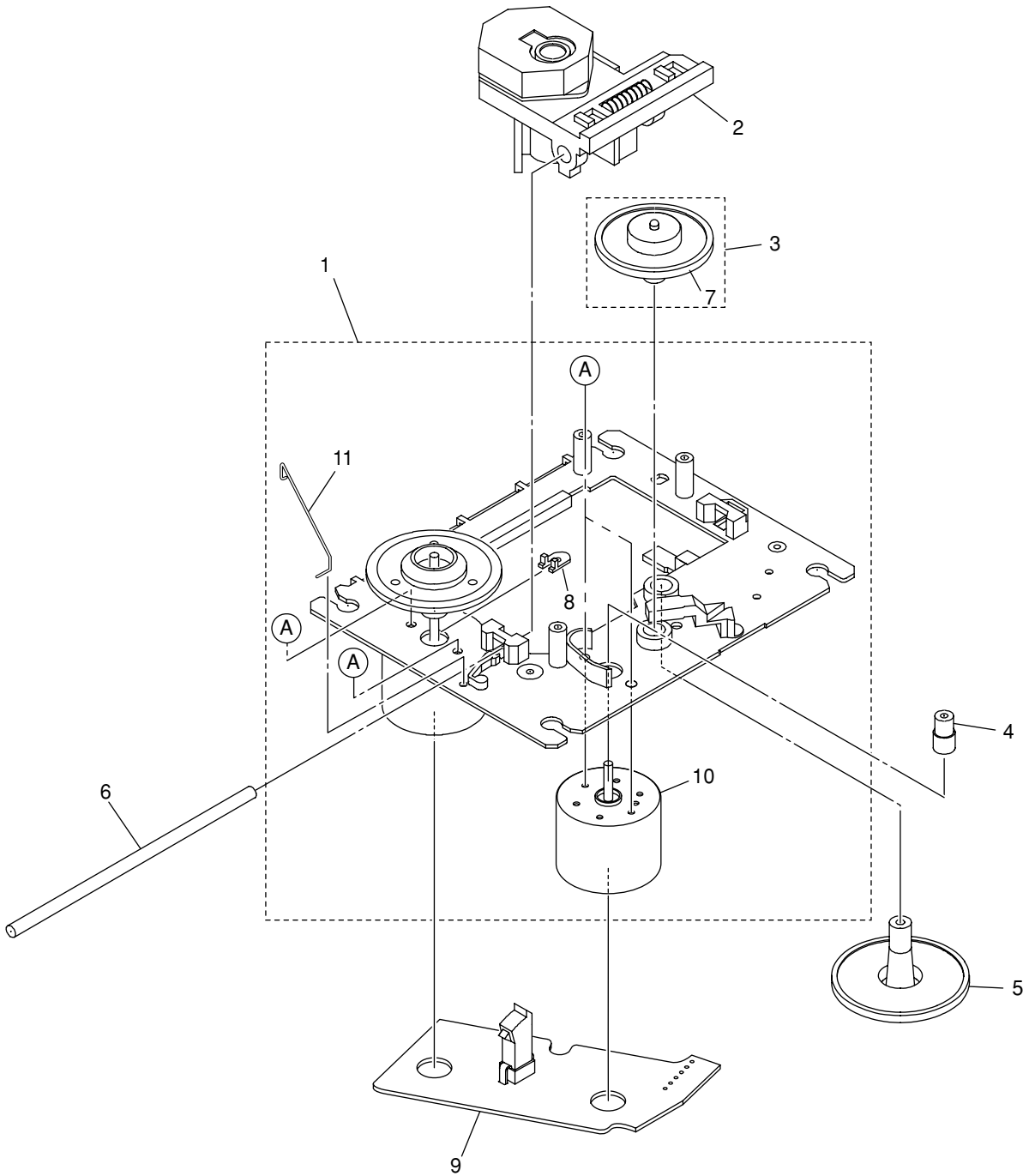
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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME        | SUFFIX&MODEL   |
|-----------|-----|--------|----------------|-------------------|----------------|
|           |     |        |                |                   | 3ZG-3<br>E14NC |
|           | O   | SC1001 | 83-ZG3-224-510 | HLDR M2           | a              |
|           | O   | SC1002 | 83-ZG3-237-110 | CHAS,L6 R         | a              |
|           | O   | SC1003 | 83-ZG3-208-010 | PULLEY,MOTOR      | a              |
|           | O   | SC1004 | 83-ZG3-213-010 | LVR,SW            | a              |
|           | O   | SC1005 | 83-ZG3-209-810 | CAM,SLIDE         | a              |
|           | O   | SC1006 | 83-ZG3-207-010 | GEAR,TRAY         | a              |
|           | O   | SC1007 | 83-ZG3-204-210 | GEAR,C            | a              |
|           | O   | SC1008 | 83-ZG3-205-010 | GEAR,D            | a              |
|           | O   | SC1009 | 83-ZG3-211-010 | PLATE,DISC        | a              |
|           | O   | SC1010 | 83-ZG3-220-210 | GEAR,PULLEY 2     | a              |
|           | O   | SC1011 | 83-ZG3-214-010 | BELT,L            | a              |
|           | O   | SC1012 | 83-ZG3-231-310 | TRAY,CD 3         | a              |
|           | O   | SC1013 | 83-ZG3-236-010 | HLDR,CHUCK 3      | a              |
|           | O   | SC1014 | 83-ZG3-604-010 | RING,MAG 2        | a              |
|           | O   | SC1015 | 86-ZG1-238-010 | HLDR,MAGNET 6ZG N | a              |
|           | O   | SC1016 | 86-ZG1-239-110 | PLATE,DISC PC     | a              |
|           | O   | SC1017 | 87-045-305-010 | MOT,RF-500TB      | a              |
|           | O   | SC1018 | 83-ZG3-225-010 | CUSH-G,MAIN A     | a              |
|           | X   | SC1019 | 83-ZG3-603-010 | PWB,LOAD-A 27M    | a              |
|           | X   | SC1020 | M8-CZG-891-070 | CZG-8 YA1NC       | a              |
|           |     |        |                |                   | 3ZG-3<br>E14NC |
|           | O   | SC1A   | 87-067-945-110 | VFT2+3-12 (F10)   | a              |
|           | O   | SC1B   | 87-251-071-410 | U+2.6-4           | a              |
|           | O   | SC1C   | 83-ZG3-235-010 | VFT2+2.6-8        | a              |
|           | O   | SC1D   | 87-352-075-210 | VT2+2.6-10        | a              |
|           | O   | SC1E   | 83-ZG3-217-010 | S-SCREW,GEAR D    | a              |
|           | O   | SC1F   | 81-ZG1-254-010 | S-SCREW,MECH HLDR | a              |

CD MECHANISM EXPLODED VIEW -2/2 <CZG-8 YA1NC>



# CD MECHANISM PARTS LIST -1/1 <CZG-8 YA1NC>

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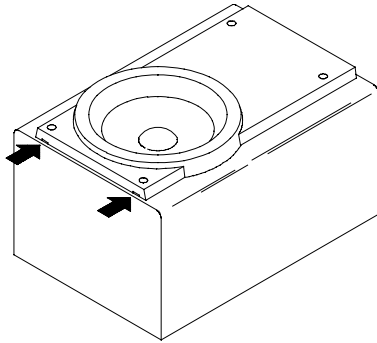
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| UNIT-NAME | ! C | REF-NO  | PARTS-NO       | PARTS-NAME               | SUFFIX&MODEL   |
|-----------|-----|---------|----------------|--------------------------|----------------|
|           |     |         |                |                          | CZG-8<br>YA1NC |
|           | O   | SC1001  | 83-ZG2-243-31C | CHAS ASSY, SHT           | a              |
|           | X   | SC1001a | 83-ZG2-244-210 | CHAS, SHT                | a              |
|           | O   | SC1001b | 8C-ZG8-201-01C | TURN TABLE, D1           | a              |
|           | O   | SC1001c | 83-ZG2-241-21K | PLATE, C2                | a              |
|           | O   | SC1002  | 87-A92-037-01C | PICKUP, PXR-104X-BP-0101 | a              |
|           | O   | SC1003  | 83-ZG2-235-01M | GEAR, A3                 | a              |
|           | O   | SC1004  | 83-ZG2-236-01M | GEAR, MOTOR 3            | a              |
|           | O   | SC1005  | 83-ZG2-205-21M | GEAR, B                  | a              |
|           | O   | SC1006  | 83-ZG2-253-11J | SHAFT, SLIDE 5           | a              |
|           | X   | SC1007  | 8C-ZG8-202-01J | SH, RUBBER               | a              |
|           | O   | SC1008  | 8C-ZG8-210-01C | CLR, SPINDLE             | a              |
|           | X   | SC1009  | 83-ZG2-609-01M | PWB, DRIVE-G 21M         | a              |
|           | O   | SC1010  | 87-A92-491-01C | MOT, RF-320EH43          | a              |
|           | O   | SC1011  | 8C-ZG8-203-01C | SPR-T, SPINDLE           | a              |
|           | O   | SC1A    | 87-261-032-21G | V+2-3                    | a              |

# GENERAL SPEAKER DISASSEMBLY INSTRUCTIONS (FOR REFERENCE) -1/1

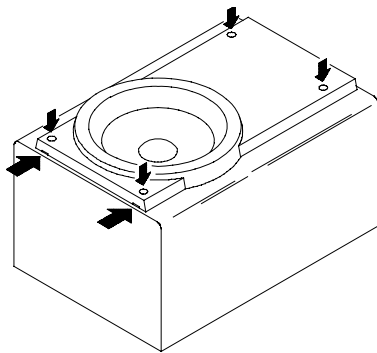
## Type.1

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.



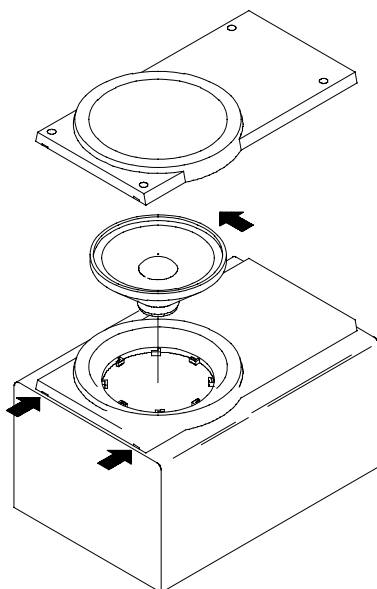
## Type.2

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.

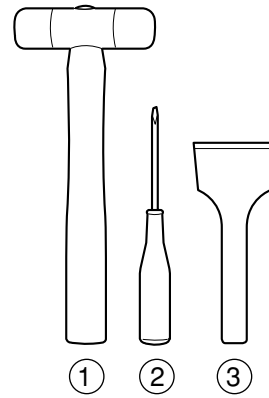


## Type.3

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.

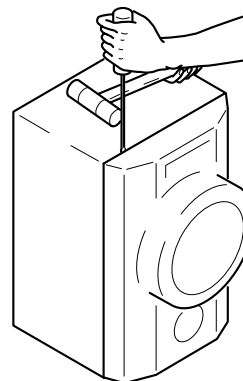


Fig-1

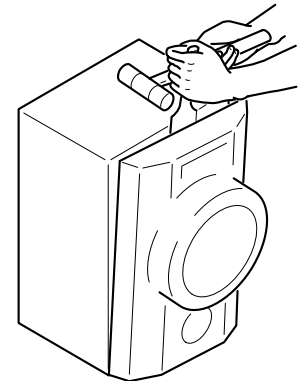


Fig-2

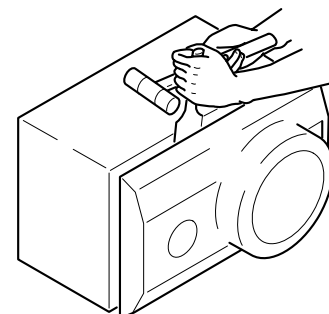


Fig-3

## 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 PARTS LIST -1/1 <SX-LFD55>

! =  $\Delta$  SAFETY PARTS

C = Components marked

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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME              | SUFFIX&MODEL |
|-----------|-----|--------|----------------|-------------------------|--------------|
|           |     |        |                |                         | SX-SLFD55    |
|           |     |        |                |                         | YMC          |
|           | X   | SP1001 | 8C-CPE-851-010 | CTN, ASSY TTC           | a            |
|           | X   | SP1002 | 8C-CPE-029-010 | BADGE, AIWA 25 NEW      | a            |
|           | X   | SP1003 | 8C-CP2-013-010 | BOSS, CATCHER           | a            |
|           | X   | SP1004 | 8C-CPE-002-010 | CABI, M                 | a            |
|           | O   | SP1005 | 8C-CPE-033-010 | CORD, SPKR 2.5M         | a            |
|           | X   | SP1006 | 8C-CPE-013-010 | FASTENER, CL            | a            |
|           | O   | SP1007 | 8C-CPE-027-010 | GRILLE, FRAME ASSY K    | a            |
|           | X   | SP1008 | 8C-CPE-028-010 | GRILLE, FRAME K         | a            |
|           | X   | SP1009 | 8C-CPE-031-010 | LBL, SPEC K L           | a            |
|           | X   | SP1010 | 8C-CPE-032-010 | LBL, SPEC K R           | a            |
|           | X   | SP1011 | 8C-CPE-030-010 | NET, K                  | a            |
|           | O   | SP1012 | 8C-CPE-023-010 | PANEL, FR ASSY L K      | a            |
|           | O   | SP1013 | 8C-CPE-025-010 | PANEL, FR ASSY R K      | a            |
|           | X   | SP1014 | 8C-CPE-024-010 | PANEL, FR L K           | a            |
|           | X   | SP1015 | 8C-CPE-026-010 | PANEL, FR R K           | a            |
|           | X   | SP1016 | 8C-CPE-005-010 | PANEL, TW               | a            |
|           | X   | SP1017 | 8C-CPE-007-010 | RING, W                 | a            |
|           | X   | SP1018 | 8C-CPE-006-010 | SH, TW                  | a            |
|           | O   | SP1019 | 8C-DS1-604-010 | SPKR, TW 25 (SX-SLTC80) | a            |
|           | O   | SP1020 | 8C-CPE-602-010 | SPKR, W 120 25/4        | a            |
|           |     |        |                |                         | SX-SLFD55    |
|           |     |        |                |                         | YMC          |
|           | O   | SP1021 | 8C-CPE-611-010 | TERMINAL, ASSY K        | a            |
|           | X   | SP1022 | 8B-CPX-001-110 | TUBE, 40                | a            |



## OTHER PARTS LIST -1/3

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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME                   | SUFFIX&MODEL   |
|-----------|-----|--------|----------------|------------------------------|----------------|
|           |     |        |                |                              | XR-FD55<br>CEK |
|           | X   |        | 87-B40-057-010 | BAG, PP 0.03-150-200         | a              |
|           | X   |        | 87-B40-095-010 | BAG, PV 0.04-500-550 PL      | a              |
|           | X   |        | 8C-CJE-851-010 | CUSHION, FRONT C             | a              |
|           | X   |        | 8C-CJE-852-010 | CUSHION, REAR C              | a              |
|           | X   |        | 93-324-066-010 | SH, FOAMED-MAT 0.31-500-300  | a              |
|           | X   |        | 87-063-173-010 | CLOTH, N9295B BLK 30-10-0.35 | a              |
|           | X   |        | 87-B40-281-010 | LBL, BAR-CODE A 35X8         | a              |
|           | X   |        | 8C-CJE-027-010 | LBL, SPEC KC                 | a              |
|           | X   |        | 8C-CJE-215-010 | SH, ADH CD                   | a              |
|           | X   |        | 8C-CJE-214-010 | SH, ADH FR                   | a              |
|           | X   |        | 8C-CJE-216-010 | SH, ADH LOWER                | a              |
|           | X   |        | 8C-CJE-221-010 | SH, GND FR W/ADH             | a              |

## OTHER PARTS LIST -2/3 <BZM-1 AR2NC>

! =  $\Delta$  SAFTY PARTS

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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME           | SUFFIX&MODEL   |
|-----------|-----|--------|----------------|----------------------|----------------|
|           |     |        |                |                      | BZM-1<br>AR2NC |
|           | X   |        | M8-BZM-192-170 | BZM-1 AR2NC          | a              |
|           | X   |        | 82-ZM1-596-010 | BAG, PV 0.04-190-240 | a              |
|           | X   |        | 82-ZM1-855-010 | CUSHION, BOTTOM 6NC  | a              |

## OTHER PARTS LIST -3/3 <3ZG-3 E14NC>

! =  $\Delta$  SAFTY PARTS

C = Components marked

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However, please note that not all components will be available as spare parts for after-sales service.

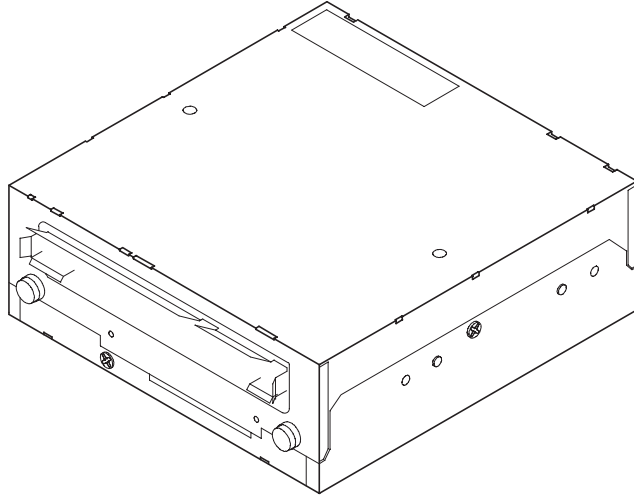
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.

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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME           | SUFFIX&MODEL   |
|-----------|-----|--------|----------------|----------------------|----------------|
|           |     |        |                |                      | 3ZG-3<br>E14NC |
|           | X   |        | 83-ZG3-599-010 | BAG, PV ANTI 390X265 | a              |
|           | X   |        | 83-ZG3-857-010 | CTN, PRINTED E1NC    | a              |
|           | X   |        | 83-ZG3-858-010 | CUSHION, BOTTOM NC   | a              |
|           | X   |        | 83-ZG3-859-010 | CUSHION, TOP NC      | a              |
|           | X   |        | 81-MX4-700-010 | SHIELD CORE, MOT S   | a              |

# MD-MECHANISM

(MDM-16QA)



# SERVICE MANUAL

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MD MECHANISM

BASIC MD MECHANISM : MDM-16QA

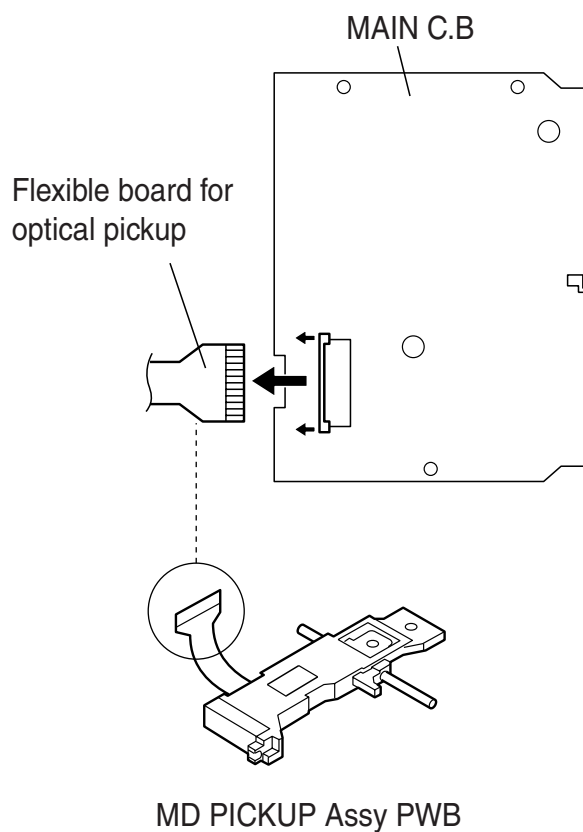
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Precaution to replace Optical block

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 pulling out the flexible board for optical pickup from the connector, cover the tip of flexible board with conductive aluminum foil, etc., in order to prevent static electricity from damaging the pickup.



# DISASSEMBLY INSTRUCTIONS -1/3

## ■ Disassembly

Cautions before disassembly:

When disassembling this unit and reassembling it after repair, be careful of the following to ensure safety and reliable performance:

1. Remove the mini-disc from this unit.
2. Take great care not to use screws of greater lengths when installing MD mechanism block (screws that secure components to be installed in MD block mechanism chassis): A longer screw will contact the optical pickup, which could result in no operation.
3. During repair, take great care with static electricity, which could damage the integrated circuits, etc.

## ■ Flow of disassembly and required tools

(Number): Shows the reference number in disassembly diagram and parts list

| Step | Item | Tool | Caution |
|------|------|------|---------|
|------|------|------|---------|

### (1) Procedure up to pickup removal

#### 1) Removing COVER, BOTTOM (26) (Fig. 2-1)

|   |                            |             |  |
|---|----------------------------|-------------|--|
| ① | Remove 3 screws (37).      | Screwdriver |  |
| ② | Remove COVER, BOTTOM (26). |             |  |



#### 2) Removing main circuit board (Fig. 2-1)

|   |   |                |  |
|---|---|----------------|--|
| ① | Disconnect 13 lead wires from the main circuit board. | Soldering iron |  |
| ② | Disconnect the flexible board.                        |                | After pulling out the flexible board of pickup from the connector, cover the tip of flexible board with conductive aluminum foil, etc., in order to prevent static electricity from damaging the pickup. |
| ③ | Remove 3 screws (38).                                 | Screwdriver    |  |
| ④ | Remove the main circuit board.                        |                |  |



#### 3) Removing PLATE, EARTH (3) (Fig. 2-1)

|   |                          |             |   |
|---|--------------------------|-------------|---|
| ① | Remove 3 screws (37).    | Screwdriver |   |
| ② | Remove PLATE, EARTH (3). |             | The insulator (27) will be freed: Take care not to lose it. |



#### 4) Removing COVER, TOP (25) (Fig. 2-1)

|   |   |          |  |
|---|---|----------|--|
| ① | Remove SPRING, EARTH (15) from COVER, TOP (25). | Tweezers |  |
| ② | Remove COVER, TOP (25).                         |          |  |



#### 5) Removing HEAD (28) (Fig. 3-3)

|   |                    |             |  |
|---|--------------------|-------------|--|
| ① | Remove screw (33). | Screwdriver |  |
| ② | Remove HEAD (28).  |             |  |



#### 6) Removing MD Base (5) (Fig. 3-4)

|   |   |             |  |
|---|---|-------------|--|
| ① | Remove screw (36) that secures ANGLE, F/M (1).  | Screwdriver |  |
| ② | Remove screw (32) holding the pickup, and then remove SPRING, GRIP (13) and GRIP RACK (18). | Screwdriver |  |
| ③ | Remove 3 screws (35).   | Screwdriver |  |
| ④ | Remove the MD BASE (5) ASSY.  |             |  |



#### 7) Removing pickup (29) (Fig. 3-4)

|   |   |  |   |
|---|---|--|---|
| ① | Remove SHAFT, PICK GUIDE (23) from ANGLE, F/M (1), and then remove the pickup (29). |  | Be careful not to damage the gears of FEED MOTOR (M901) and DRIVE SCREW (22). |
|---|---|--|---|

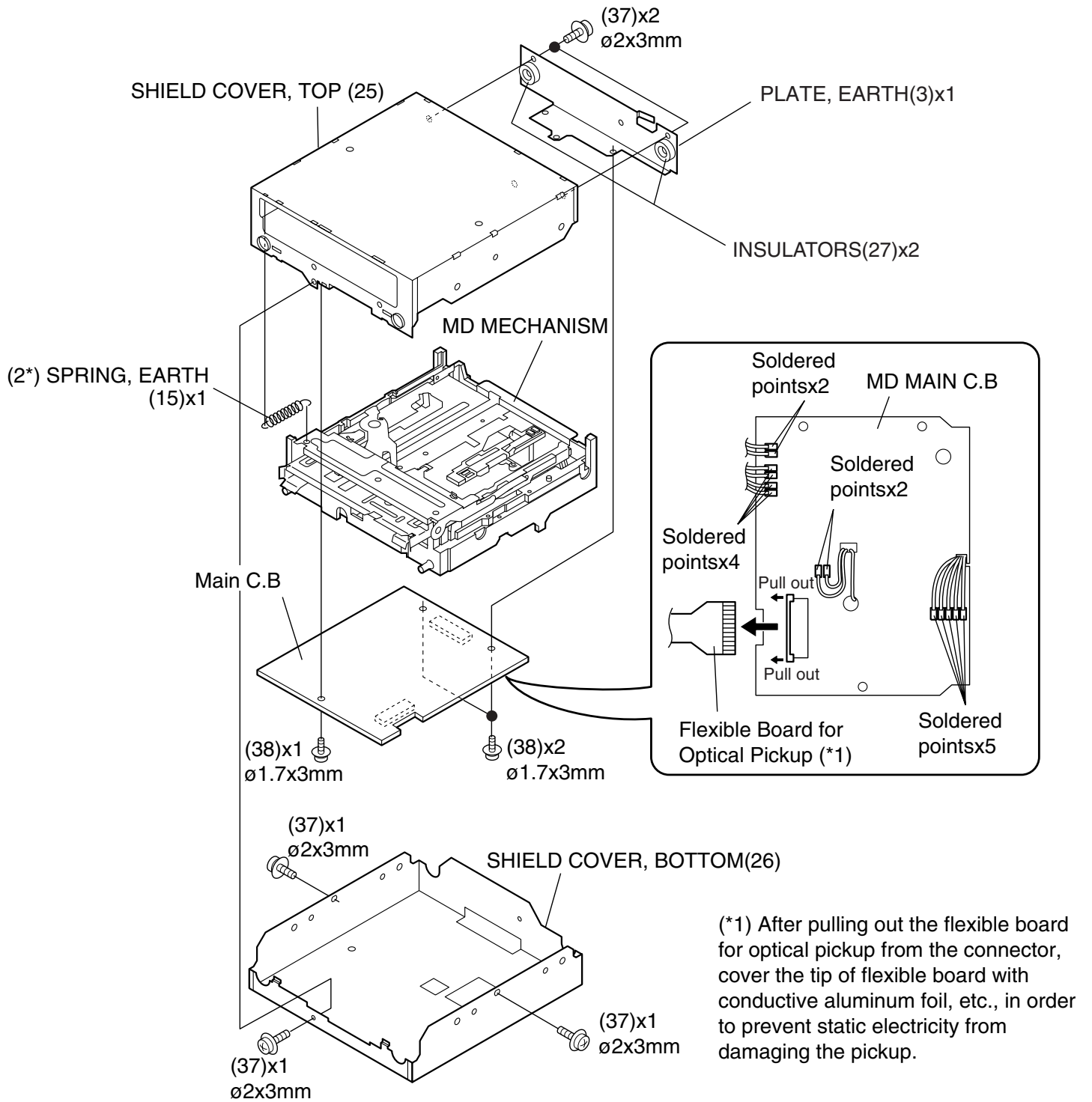


Fig.2 - 1

# DISASSEMBLY INSTRUCTIONS -3/3

| Step | Item | Tool | Caution |
|------|------|------|---------|
|------|------|------|---------|

## (2) Procedure up to spindle motor removal

### 1) Removing SPINDLE MOTOR (M903) (Fig. 3-1)

|                                |             |  |
|--------------------------------|-------------|--|
| ① Remove 3 screws (34).        | Screwdriver |  |
| ② Remove SPINDLE MOTOR (M903). |             |  |

## (3) Procedure up to loading motor removal

### 1) Removing LOADING MOTOR (M902) (Fig. 3-2)

|  |             |  |
|--|-------------|--|
| ① Remove screw (36) holding ANGLE, LD MOTOR (2).             | Screwdriver |  |
| ② Remove the ANGLE, LD MOTOR (2) ASSY.                       |             | Be careful not to damage the gear of GEAR, MIDDLE (20).                            |
| ③ Remove SHAFT, LD GEAR (24), and then GEAR, LOADING (21).   |             | Be careful not to damage the gears of LOADING MOTOR (M902) and GEAR, LOADING (21). |
| ④ Remove 2 screws (31), and then remove ANGLE, LD MOTOR (2). | Screwdriver |  |

## (4) Procedure up to feed motor removal

### 1) Removing MD BASE (5) (Fig. 3-4)

|   |             |  |
|---|-------------|--|
| ① Remove screw (36) holding ANGLE, F/M (1). | Screwdriver |  |
| ② Remove 3 screws (35).                     | Screwdriver |  |
| ③ Remove the MD BASE (5) ASSY.              |             |  |

### 2) Removing FEED MOTOR (M901) (Fig. 3-4)

|                                      |             |   |
|--------------------------------------|-------------|---|
| ① Remove the FEED MOTOR (M901) ASSY. |             | Be careful not to damage the gears of FEED MOTOR (M901) and DRIVE SCREW (22). |
| ② Remove 2 screws (30).              | Screwdriver |   |
| ③ Remove ANGLE, F/M (1).             |             |   |

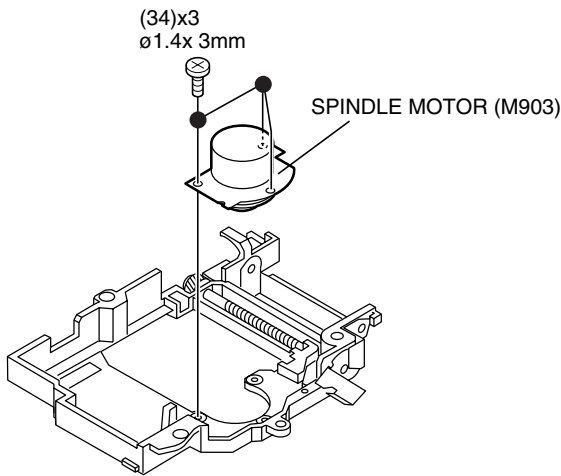


Fig.3 - 1

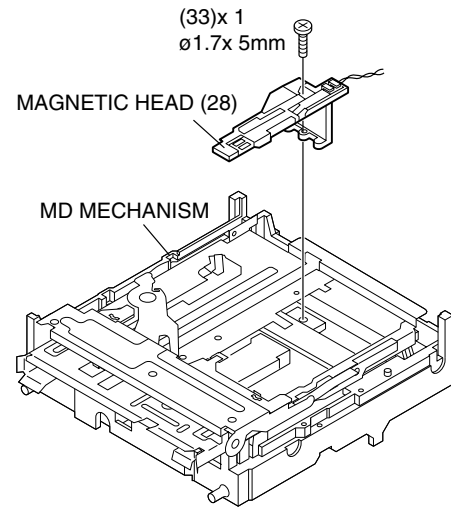


Fig.3 - 3

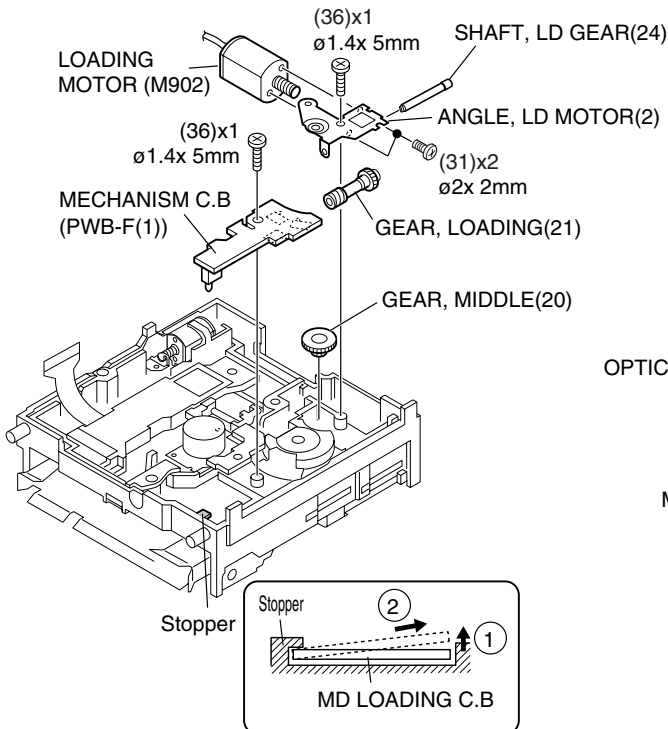


Fig.3 - 2

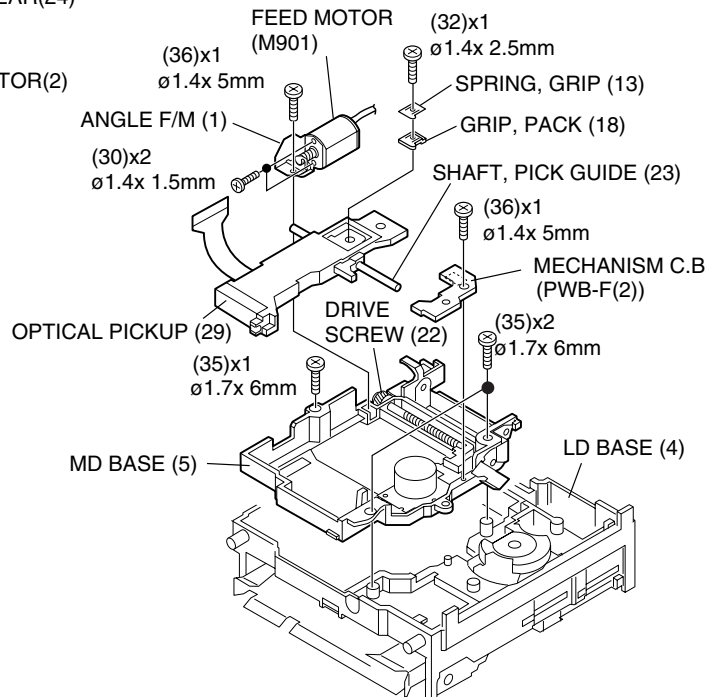


Fig.3 - 4

# ELECTRICAL PARTS LIST -1/4

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| UNIT-NAME | ! C | REF-NO  | PARTS-NO       | PARTS-NAME               | SUFFIX&MODEL |
|-----------|-----|---------|----------------|--------------------------|--------------|
| MDM-16QA  |     |         |                |                          |              |
| LEAD IN   | O   | CW 1934 | S1-245-120-671 | WIRE, LEAD QCNWN1963AWZZ | a            |
| LEAD IN   | O   | CW 1935 | S1-245-120-672 | WIRE, LEAD QCNWN1964AWZZ | a            |
| LEAD IN   | O   | SW 1936 | S1-245-300-079 | SW, PUCH QSW-P0016AWZZ   | a            |
| LOADING   | O   | CW 1931 | S1-245-120-675 | WIRE, LEAD QCNWN2126AWZZ | a            |
| LOADING   | O   | CW 1932 | S1-245-120-674 | WIRE, LEAD QCNWN2125AWZZ | a            |
| LOADING   | O   | CW 1933 | S1-245-120-673 | WIRE, LEAD QCNWN2124AWZZ | a            |
| LOADING   | O   | SW 1930 | S1-245-300-052 | SW, PUCH QSW-P0011AWZZ   | a            |
| LOADING   | O   | SW 1932 | S1-245-300-051 | SW, PUCH QSW-M0007AWZZ   | a            |
| LOADING   | O   | SW 1933 | S1-245-300-051 | SW, PUCH QSW-M0007AWZZ   | a            |
| LOADING   | O   | SW 1934 | S1-245-300-051 | SW, PUCH QSW-M0007AWZZ   | a            |
| MDM-16QA  |     |         |                |                          |              |
| MAIN      | X C | 1100    | S1-245-900-039 | CAP, 4.7-10              | a            |
| MAIN      | X C | 1101    | S1-415-950-019 | CAP, 1-6.3               | a            |
| MAIN      | X C | 1107    | S1-305-950-393 | CAP, 0.022-16            | a            |
| MAIN      | X C | 1110    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1111    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1112    | S1-305-930-566 | CAP, 5PF-50              | a            |
| MAIN      | X C | 1113    | S1-415-950-019 | CAP, 1-6.3               | a            |
| MAIN      | X C | 1114    | S1-305-950-396 | CAP, 0.033-16            | a            |
| MAIN      | X C | 1115    | S1-305-950-396 | CAP, 0.033-16            | a            |
| MAIN      | X C | 1116    | S1-245-950-043 | CAP, 1-10                | a            |
| MDM-16QA  |     |         |                |                          |              |
| MAIN      | X C | 1117    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1118    | S1-245-950-041 | CAP, 0.47-10             | a            |
| MAIN      | X C | 1119    | S1-245-950-041 | CAP, 0.47-10             | a            |
| MAIN      | X C | 1121    | S1-445-950-033 | CAP, 0.22-10             | a            |
| MAIN      | X C | 1122    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1123    | S1-245-950-023 | CAP, 0.1-16              | a            |
| MAIN      | X C | 1124    | S1-245-950-023 | CAP, 0.1-16              | a            |
| MAIN      | X C | 1125    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1200    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1201    | S1-245-900-038 | CAP, 10-10               | a            |
| MDM-16QA  |     |         |                |                          |              |
| MAIN      | X C | 1202    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1203    | S1-415-950-019 | CAP, 1-6.3               | a            |
| MAIN      | X C | 1205    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1206    | S1-305-950-316 | CAP, 0.01-16             | a            |
| MAIN      | X C | 1207    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1208    | S1-425-930-060 | CAP, 18PF-50             | a            |
| MAIN      | X C | 1209    | S1-305-930-557 | CAP, 15PF-50             | a            |
| MAIN      | X C | 1210    | S1-305-930-558 | CAP, 22PF-50             | a            |
| MAIN      | X C | 1211    | S1-425-950-096 | CAP, 0.1-25              | a            |
| MAIN      | X C | 1230    | S1-245-950-043 | CAP, 1-10                | a            |
| MDM-16QA  |     |         |                |                          |              |
| MAIN      | X C | 1241    | S1-305-950-338 | CAP, 0.001-50            | a            |
| MAIN      | X C | 1260    | S1-425-950-096 | CAP, 0.1-25              | a            |
| MAIN      | X C | 1261    | S1-185-930-010 | CAP, 220PF-50            | a            |
| MAIN      | X C | 1262    | S1-185-930-010 | CAP, 220PF-50            | a            |
| MAIN      | X C | 1263    | S1-185-930-010 | CAP, 220PF-50            | a            |
| MAIN      | X C | 1264    | S1-185-930-010 | CAP, 220PF-50            | a            |
| MAIN      | X C | 1265    | S1-185-930-010 | CAP, 220PF-50            | a            |
| MAIN      | X C | 1266    | S1-305-930-558 | CAP, 22PF-50             | a            |
| MAIN      | X C | 1270    | S1-425-930-083 | CAP, 330PF-50            | a            |
| MAIN      | X C | 1300    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MDM-16QA  |     |         |                |                          |              |
| MAIN      | X C | 1301    | S1-305-950-393 | CAP, 0.022-16            | a            |
| MAIN      | X C | 1302    | S1-245-900-038 | CAP, 10-10               | a            |
| MAIN      | X C | 1303    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1304    | S1-185-930-010 | CAP, 220PF-50            | a            |
| MAIN      | X C | 1305    | S1-305-930-593 | CAP, 82PF-50             | a            |
| MAIN      | X C | 1340    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MAIN      | X C | 1403    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1404    | S1-305-950-316 | CAP, 0.01-16             | a            |
| MAIN      | X C | 1407    | S1-425-950-096 | CAP, 0.1-25              | a            |
| MAIN      | X C | 1408    | S1-245-930-020 | CAP, 680PF-50            | a            |
| MDM-16QA  |     |         |                |                          |              |
| MAIN      | X C | 1409    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1503    | S1-425-950-096 | CAP, 0.1-25              | a            |
| MAIN      | X C | 1504    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MAIN      | X C | 1508    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MAIN      | X C | 1510    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MAIN      | X C | 1512    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MAIN      | X C | 1530    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MAIN      | X C | 1534    | S1-305-930-561 | CAP, 47PF-50             | a            |
| MAIN      | X C | 1536    | S1-305-930-561 | CAP, 47PF-50             | a            |
| MAIN      | X C | 1538    | S1-305-930-530 | CAP, 100PF-50            | a            |
| MDM-16QA  |     |         |                |                          |              |
| MAIN      | X C | 1540    | S1-305-930-553 | CAP, 150PF-50            | a            |
| MAIN      | X C | 1563    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1602    | S1-025-930-012 | CAP, 470PF-50            | a            |
| MAIN      | X C | 1603    | S1-245-930-020 | CAP, 680PF-50            | a            |
| MAIN      | X C | 1606    | S1-245-900-038 | CAP, 10-10               | a            |
| MAIN      | X C | 1607    | S1-245-950-043 | CAP, 1-10                | a            |
| MAIN      | X C | 1610    | S1-245-900-039 | CAP, 4.7-10              | a            |
| MAIN      | X C | 1611    | S1-305-950-332 | CAP, 0.0047-50           | a            |
| MAIN      | X C | 1613    | S1-305-950-316 | CAP, 0.01-16             | a            |
| MAIN      | X C | 1616    | S1-245-940-005 | CAP, E 100-10            | a            |

# ELECTRICAL PARTS LIST -2/4

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| UNIT-NAME | ! C   | REF-NO | PARTS-NO       | PARTS-NAME               | SUFFIX&MODEL |
|-----------|-------|--------|----------------|--------------------------|--------------|
| MDM-16QA  |       |        |                |                          |              |
| MAIN      | X C   | 1619   | S1-305-950-316 | CAP,0.01-16              | a            |
| MAIN      | X C   | 1633   | S1-305-950-397 | CAP,0.047-16             | a            |
| MAIN      | X C   | 1655   | S1-445-950-004 | CAP,0.01-50              | a            |
| MAIN      | X C   | 1700   | S1-425-940-037 | CAP,E 47-4               | a            |
| MAIN      | X C   | 1703   | S1-415-950-019 | CAP,1-6.3                | a            |
| MAIN      | X C   | 1704   | S1-425-940-037 | CAP,E 47-4               | a            |
| MAIN      | X C   | 1706   | S1-415-950-019 | CAP,1-6.3                | a            |
| MAIN      | X C   | 1708   | S1-415-950-019 | CAP,1-6.3                | a            |
| MAIN      | X C   | 1715   | S1-415-950-019 | CAP,1-6.3                | a            |
| MAIN      | X C   | 1716   | S1-425-940-037 | CAP,E 47-4               | a            |
| MAIN      | X C   | 1720   | S1-425-930-083 | CAP,330PF-50             | a            |
| MAIN      | X C   | 1721   | S1-425-930-083 | CAP,330PF-50             | a            |
| MAIN      | X C   | 1801   | S1-245-900-038 | CAP,10-10                | a            |
| MAIN      | X C   | 1802   | S1-245-900-038 | CAP,10-10                | a            |
| MAIN      | X C   | 1806   | S1-245-950-043 | CAP,1-10                 | a            |
| MAIN      | O CN  | 1101   | S1-245-100-262 | CONN,28P                 | a            |
| MAIN      | O CN  | 1501   | S1-245-100-253 | CONN,28P                 | a            |
| MAIN      | O CW  | 0901   | S1-245-120-676 | WIRE, LEAD QCNWN2127AWZZ | a            |
| MAIN      | O CW  | 0902   | S1-245-120-677 | WIRE, LEAD QCNWN2128AWZZ | a            |
| MAIN      | O CW  | 0903   | S1-245-120-678 | WIRE, LEAD QCNWN2129AWZZ | a            |
| MDM-16QA  |       |        |                |                          |              |
| MAIN      | O CW  | 0904   | S1-245-120-679 | WIRE, LEAD QCNWN2130AWZZ | a            |
| MAIN      | O D   | 1300   | S1-245-700-038 | DIODE, SBE803            | a            |
| MAIN      | O FFC | 1501   | - - -          | FLAT CABLE, 28P L=80mm   | a            |
| MAIN      | O FL  | 1501   | S1-246-210-011 | FL, RFILN0002AWZZ        | a            |
| MAIN      | O FL  | 1507   | S1-246-210-012 | FL, RFILN0003AWZZ        | a            |
| MAIN      | O FL  | 1509   | S1-246-210-012 | FL, RFILN0003AWZZ        | a            |
| MAIN      | O FL  | 1512   | S1-246-210-012 | FL, RFILN0003AWZZ        | a            |
| MAIN      | O FL  | 1518   | S1-246-210-012 | FL, RFILN0003AWZZ        | a            |
| MAIN      | O FL  | 1520   | S1-246-210-012 | FL, RFILN0003AWZZ        | a            |
| MAIN      | O FL  | 1523   | S1-245-730-930 | FL, RFILN0008AWZZ        | a            |
| MAIN      | O FL  | 1524   | S1-245-730-930 | FL, RFILN0008AWZZ        | a            |
| MAIN      | O FL  | 1525   | S1-245-730-930 | FL, RFILN0008AWZZ        | a            |
| MAIN      | S IC  | 1101   | S1-245-730-614 | IC, IR3R58M              | a            |
| MAIN      | S IC  | 1201   | S1-245-730-783 | IC, LR37816A             | a            |
| MAIN      | S IC  | 1202   | S1-245-730-869 | IC, IX2960AF             | a            |
| MAIN      | S IC  | 1300   | S1-245-730-472 | IC, 74ACT02T             | a            |
| MAIN      | S IC  | 1301   | S1-245-761-129 | IC, MCH6616              | a            |
| MAIN      | S IC  | 1302   | S1-245-730-582 | IC, CPH5608              | a            |
| MAIN      | S IC  | 1401   | S1-245-730-930 | IC, IX0520AW             | a            |
| MAIN      | S IC  | 1402   | S1-245-730-884 | IC, C24WC02U             | a            |
| MDM-16QA  |       |        |                |                          |              |
| MAIN      | S IC  | 1601   | S1-245-730-885 | IC, M56788AFP            | a            |
| MAIN      | S IC  | 1701   | S1-245-730-629 | IC, UDA1345TS            | a            |
| MAIN      | S IC  | 1801   | S1-245-730-367 | IC, XC62EP32             | a            |
| MAIN      | S IC  | 1802   | S1-245-730-693 | IC, XC62FP26P            | a            |
| MAIN      | O L   | 1100   | S1-245-850-026 | COIL, 0.47UH             | a            |
| MAIN      | O L   | 1101   | S1-245-850-024 | COIL, 10UH               | a            |
| MAIN      | O L   | 1200   | S1-245-850-025 | COIL, 4.7UH              | a            |
| MAIN      | O L   | 1201   | S1-245-850-026 | COIL, 0.47UH             | a            |
| MAIN      | O L   | 1202   | S1-245-850-026 | COIL, 0.47UH             | a            |
| MAIN      | O L   | 1300   | S1-246-140-033 | CHOKE COIL, 47UH         | a            |
| MAIN      | O Q   | 1631   | S1-245-761-145 | TR, 2SC3928AR            | a            |
| MAIN      | O Q   | 1804   | S1-245-760-098 | TR, 2SB1205              | a            |
| MAIN      | O Q   | 1808   | S1-245-761-171 | TR, 2SC4681              | a            |
| MAIN      | X R   | 1101   | S1-185-810-057 | RES, 1-1/16W             | a            |
| MAIN      | X R   | 1102   | S1-305-810-909 | RES, 10K-1/16W           | a            |
| MAIN      | X R   | 1105   | S1-425-810-154 | RES, 1.2K-1/16W          | a            |
| MAIN      | X R   | 1110   | S1-245-810-165 | RES, 680K-1/16W          | a            |
| MAIN      | X R   | 1111   | S1-415-810-003 | RES, 100K-1/16W          | a            |
| MAIN      | X R   | 1112   | S1-415-810-003 | RES, 100K-1/16W          | a            |
| MAIN      | X R   | 1113   | S1-245-810-165 | RES, 680K-1/16W          | a            |
| MDM-16QA  |       |        |                |                          |              |
| MAIN      | X R   | 1114   | S1-305-810-911 | RES, 12K-1/16W           | a            |
| MAIN      | X R   | 1115   | S1-245-810-005 | RES, 330K-1/16W          | a            |
| MAIN      | X R   | 1116   | S1-245-810-009 | RES, 47K-1/16W           | a            |
| MAIN      | X R   | 1117   | S1-245-810-009 | RES, 47K-1/16W           | a            |
| MAIN      | X R   | 1118   | S1-245-810-005 | RES, 330K-1/16W          | a            |
| MAIN      | X R   | 1119   | S1-305-810-920 | RES, 220K-1/16W          | a            |
| MAIN      | X R   | 1120   | S1-305-811-001 | RES, 560K-1/16W          | a            |
| MAIN      | X R   | 1121   | S1-305-810-910 | RES, 100K-1/16W          | a            |
| MAIN      | X R   | 1122   | S1-305-810-911 | RES, 12K-1/16W           | a            |
| MAIN      | X R   | 1123   | S1-305-810-911 | RES, 12K-1/16W           | a            |
| MAIN      | X R   | 1124   | S1-305-810-919 | RES, 2.2K-1/16W          | a            |
| MAIN      | X R   | 1125   | S1-305-810-919 | RES, 2.2K-1/16W          | a            |
| MAIN      | X R   | 1201   | S1-415-810-006 | RES, 56K-1/16W           | a            |
| MAIN      | X R   | 1203   | S1-415-810-003 | RES, 100K-1/16W          | a            |
| MAIN      | X R   | 1205   | S1-305-810-951 | RES, 68K-1/16W           | a            |
| MAIN      | X R   | 1207   | S1-305-810-992 | RES, 39K-1/16W           | a            |
| MAIN      | X R   | 1209   | S1-305-810-907 | RES, 100-1/16W           | a            |
| MAIN      | X R   | 1210   | S1-305-810-918 | RES, 220-1/16W           | a            |
| MAIN      | X R   | 1211   | S1-305-810-918 | RES, 220-1/16W           | a            |
| MAIN      | X R   | 1212   | S1-305-810-994 | RES, 47-1/16W            | a            |



# ELECTRICAL PARTS LIST -3/4

! = SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.  
 However, please note that not all components will be available as spare parts for after-sales service.  
 Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.  
 Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C  | REF-NO | PARTS-NO       | PARTS-NAME         | SUFFIX&MODEL |
|-----------|------|--------|----------------|--------------------|--------------|
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1215   | S1-305-810-944 | RES,1M-1/16W       | a            |
| MAIN      | X R  | 1217   | S1-305-810-949 | RES,150-1/16W      | a            |
| MAIN      | X R  | 1230   | S1-245-810-007 | RES,10K-1/16W      | a            |
| MAIN      | X R  | 1231   | S1-245-810-007 | RES,10K-1/16W      | a            |
| MAIN      | X R  | 1232   | S1-245-810-192 | RES,47-1/16W       | a            |
| MAIN      | X R  | 1238   | S1-305-810-934 | RES,0-0.8          | a            |
| MAIN      | X R  | 1261   | S1-245-810-193 | RES,27K-1/16W      | a            |
| MAIN      | X R  | 1265   | S1-305-810-989 | RES,27K-1/16W      | a            |
| MAIN      | X R  | 1266   | S1-305-810-989 | RES,27K-1/16W      | a            |
| MAIN      | X R  | 1300   | S1-245-810-013 | RES,1.8-1/16W      | a            |
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1301   | S1-305-811-011 | RES,8.2-1/16W      | a            |
| MAIN      | X R  | 1401   | S1-305-810-990 | RES,2.7K-1/16W     | a            |
| MAIN      | X R  | 1402   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1403   | S1-305-810-977 | RES,680-1/16W      | a            |
| MAIN      | X R  | 1404   | S1-305-810-948 | RES,1.5K-1/16W     | a            |
| MAIN      | X R  | 1413   | S1-305-810-934 | RES,0-0.8          | a            |
| MAIN      | X R  | 1414   | S1-305-810-920 | RES,220K-1/16W     | a            |
| MAIN      | X R  | 1415   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1420   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1429   | S1-305-810-909 | RES,10K-1/16W      | a            |
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1430   | S1-305-810-909 | RES,10K-1/16W      | a            |
| MAIN      | X R  | 1435   | S1-305-810-909 | RES,10K-1/16W      | a            |
| MAIN      | X R  | 1437   | S1-305-810-909 | RES,10K-1/16W      | a            |
| MAIN      | X R  | 1441   | S1-305-810-937 | RES,47K-1/16W      | a            |
| MAIN      | X R  | 1443   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1450   | S1-305-810-934 | RES,0-0.8          | a            |
| MAIN      | X R  | 1460   | S1-305-810-990 | RES,2.7K-1/16W     | a            |
| MAIN      | X R  | 1463   | S1-305-810-990 | RES,2.7K-1/16W     | a            |
| MAIN      | X R  | 1464   | S1-305-810-995 | RES,10-1/16W       | a            |
| MAIN      | X R  | 1515   | S1-305-810-918 | RES,220-1/16W      | a            |
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1516   | S1-305-810-918 | RES,220-1/16W      | a            |
| MAIN      | X R  | 1517   | S1-305-810-994 | RES,47-1/16W       | a            |
| MAIN      | X R  | 1518   | S1-305-810-994 | RES,47-1/16W       | a            |
| MAIN      | X R  | 1521   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1529   | S1-305-810-918 | RES,220-1/16W      | a            |
| MAIN      | X R  | 1530   | S1-305-810-934 | RES,0-0.8          | a            |
| MAIN      | X R  | 1532   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1533   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1534   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1535   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1536   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1537   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1538   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1540   | S1-305-810-908 | RES,1K-1/16W       | a            |
| MAIN      | X R  | 1601   | S1-245-810-014 | RES,12K-1/16W      | a            |
| MAIN      | X R  | 1605   | S1-245-810-014 | RES,12K-1/16W      | a            |
| MAIN      | X R  | 1612   | S1-305-810-928 | RES,56K-1/16W      | a            |
| MAIN      | X R  | 1614   | S1-305-810-923 | RES,33K-1/16W      | a            |
| MAIN      | X R  | 1616   | S1-305-810-911 | RES,12K-1/16W      | a            |
| MAIN      | X R  | 1618   | S1-305-810-950 | RES,22K-1/16W      | a            |
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1621   | S1-305-810-929 | RES,6.8K-1/16W     | a            |
| MAIN      | X R  | 1622   | S1-305-810-950 | RES,22K-1/16W      | a            |
| MAIN      | X R  | 1623   | S1-305-810-950 | RES,22K-1/16W      | a            |
| MAIN      | X R  | 1624   | S1-305-810-929 | RES,6.8K-1/16W     | a            |
| MAIN      | X R  | 1631   | S1-305-810-996 | RES,300K-1/16W     | a            |
| MAIN      | X R  | 1633   | S1-305-810-951 | RES,68K-1/16W      | a            |
| MAIN      | X R  | 1634   | S1-305-810-910 | RES,100K-1/16W     | a            |
| MAIN      | X R  | 1701   | S1-305-810-937 | RES,47K-1/16W      | a            |
| MAIN      | X R  | 1702   | S1-305-810-923 | RES,33K-1/16W      | a            |
| MAIN      | X R  | 1703   | S1-425-810-337 | RES,12-1/16W       | a            |
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1706   | S1-305-810-995 | RES,10-1/16W       | a            |
| MAIN      | X R  | 1716   | S1-305-810-910 | RES,100K-1/16W     | a            |
| MAIN      | X R  | 1800   | S1-305-810-934 | RES,0-0.8          | a            |
| MAIN      | X R  | 1802   | S1-305-810-928 | RES,56K-1/16W      | a            |
| MAIN      | X R  | 1803   | S1-305-810-923 | RES,33K-1/16W      | a            |
| MAIN      | X R  | 1804   | S1-305-810-924 | RES,390-1/16W      | a            |
| MAIN      | X R  | 1806   | S1-425-810-138 | RES,1-1/8W         | a            |
| MAIN      | X R  | 1807   | S1-305-810-989 | RES,27K-1/16W      | a            |
| MAIN      | X R  | 1808   | S1-425-810-138 | RES,1-1/8W         | a            |
| MAIN      | X R  | 1809   | S1-425-810-138 | RES,1-1/8W         | a            |
| MDM-16QA  |      |        |                |                    |              |
| MAIN      | X R  | 1811   | S1-425-810-138 | RES,1-1/8W         | a            |
| MAIN      | X R  | 1816   | S1-305-810-917 | RES,22-1/16W       | a            |
| MAIN      | O XL | 1201   | S1-246-160-018 | X' TAL, 33.8688MHz | a            |

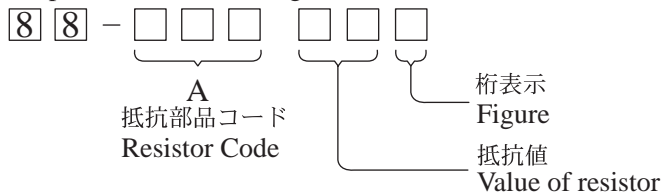
# ELECTRICAL PARTS LIST -4/4

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

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

チップ抵抗部品コードの成り立ち

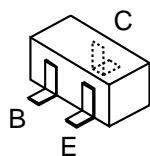
Chip Resistor Part Coding



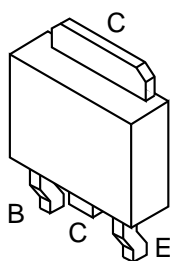
## チップ抵抗 Chip resistor

| 容量<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 |

## TRANSISTOR ILLUSTRATION -1/1



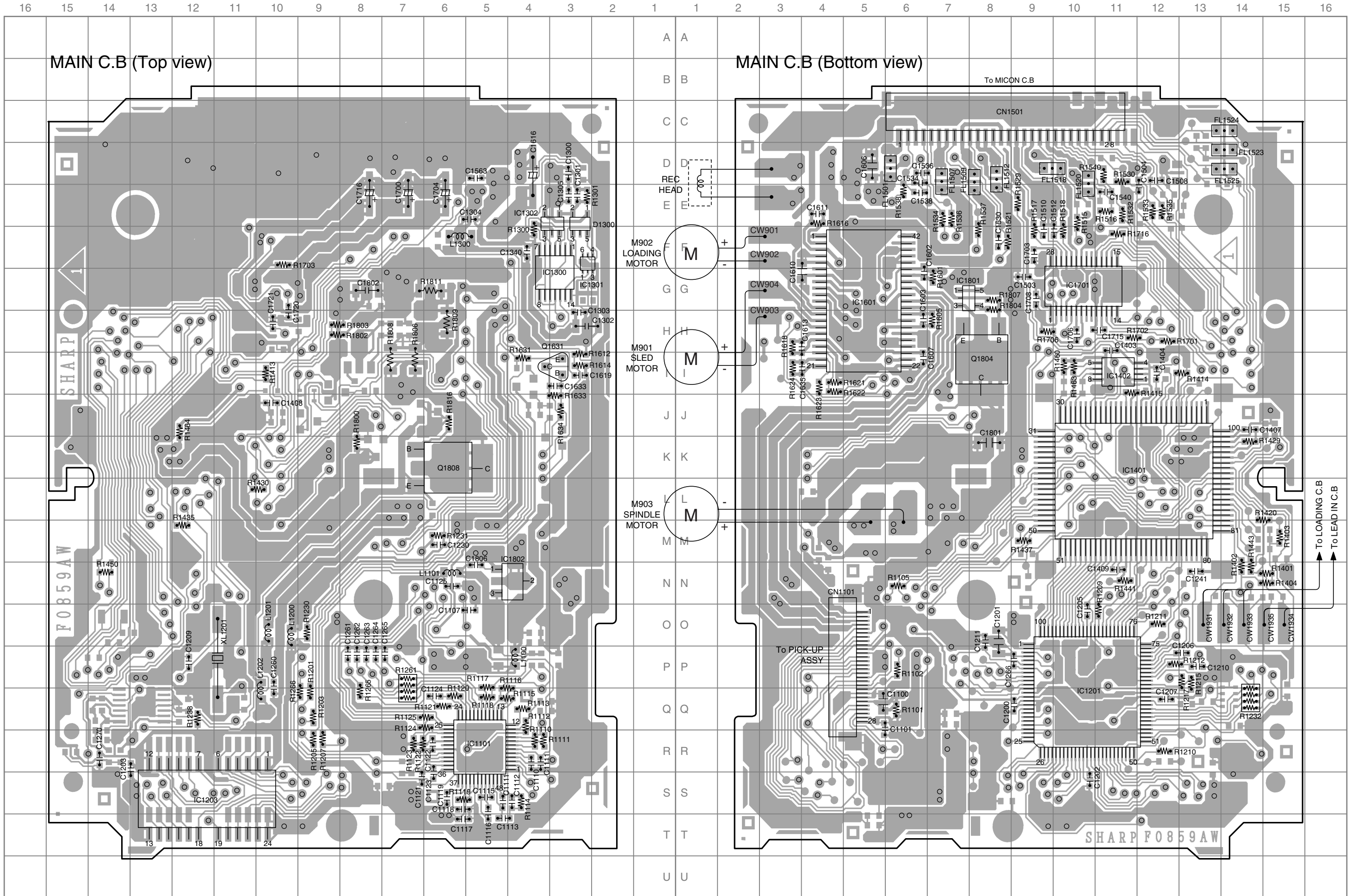
2SC3928



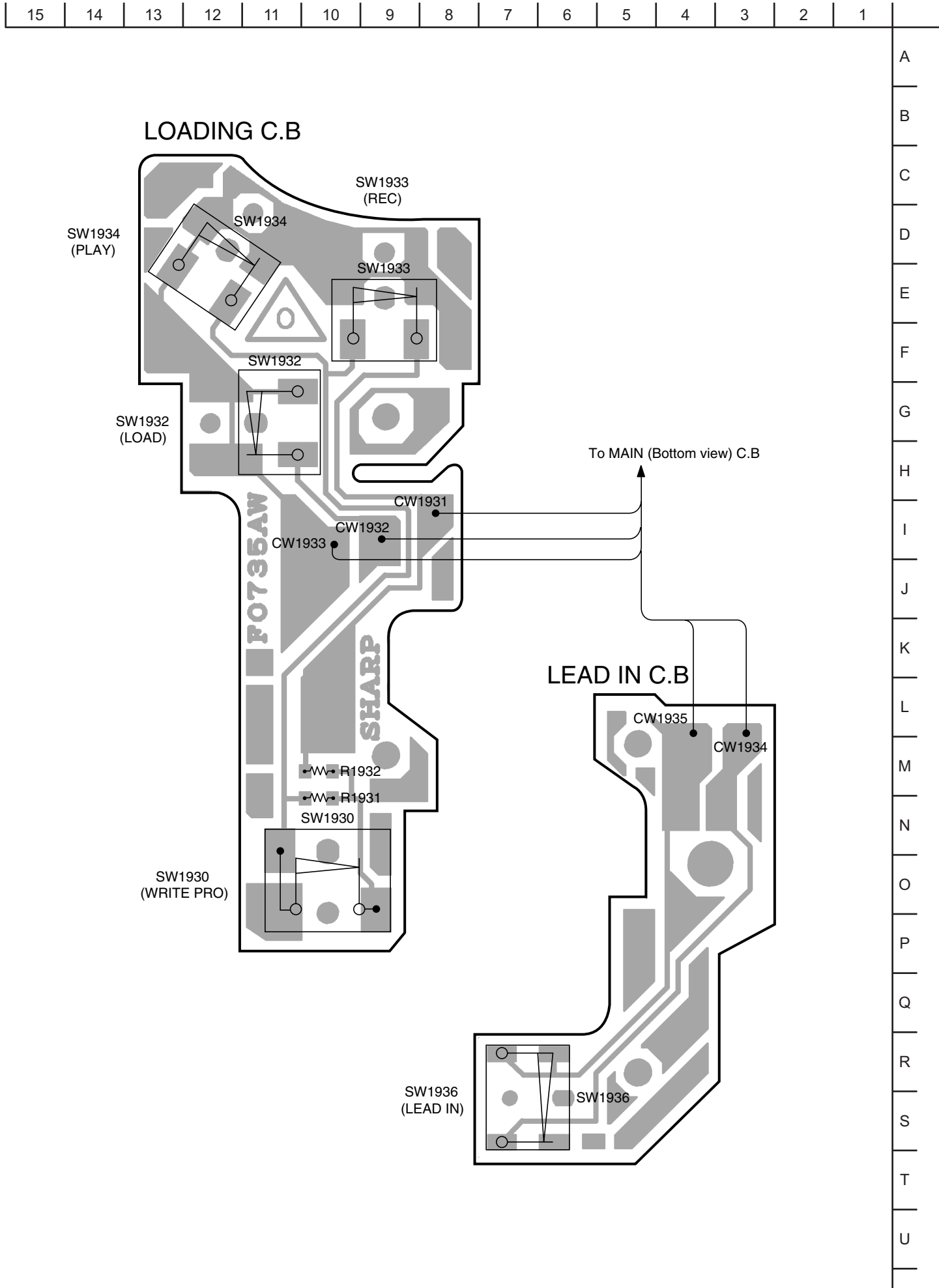
2SB1205  
2SC4681



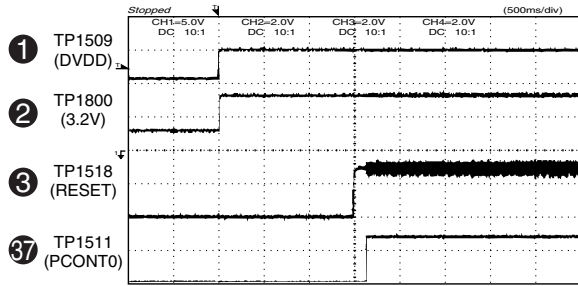




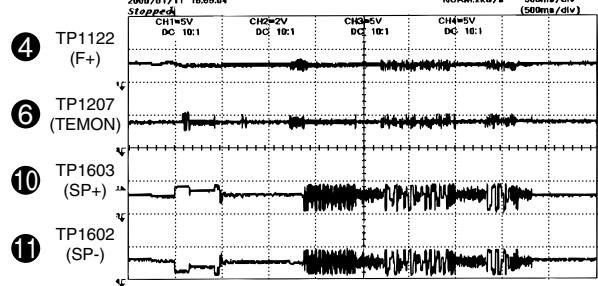
WIRING - 2/2 (LOADING C.B/LEAD IN C.B)



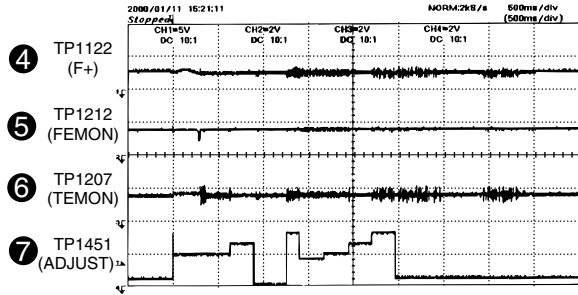
POWER ON



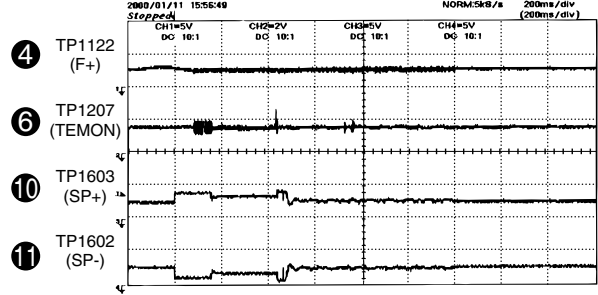
TOC READ (low-reflection disc)



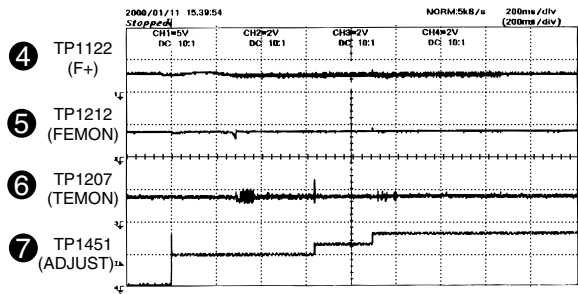
TOC READ (low-reflection disc)



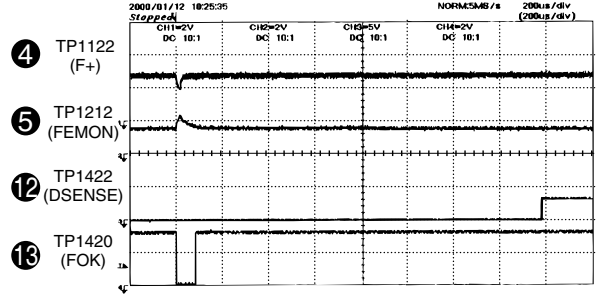
TOC READ (high-reflection disc)



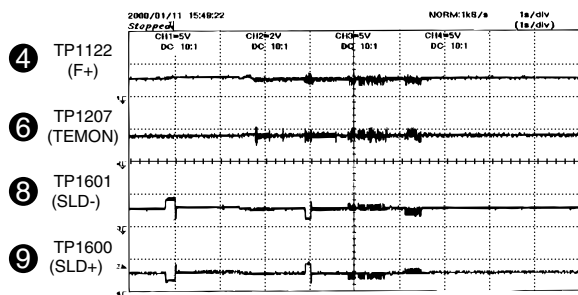
TOC READ (high-reflection disc)



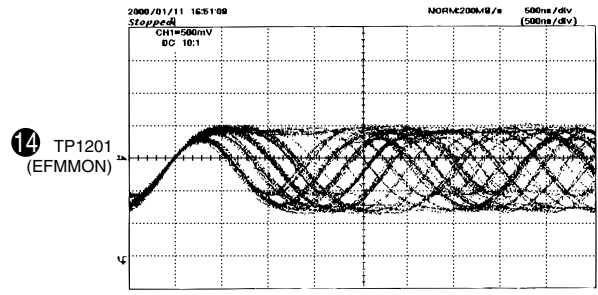
STOP→PLAY



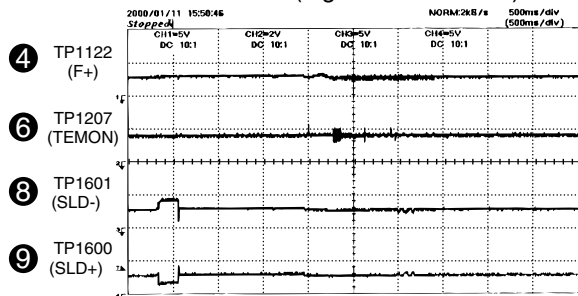
TOC READ (low-reflection disc)



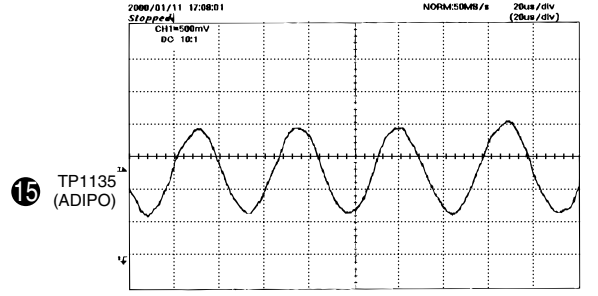
PLAY (low-reflection disc)



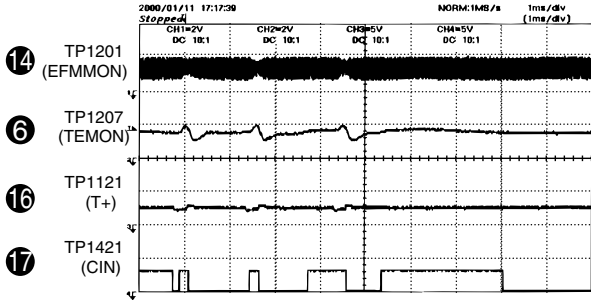
TOC READ (high-reflection disc)



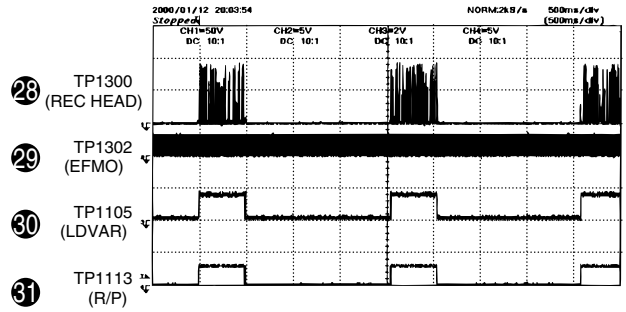
PLAY (low-reflection disc)



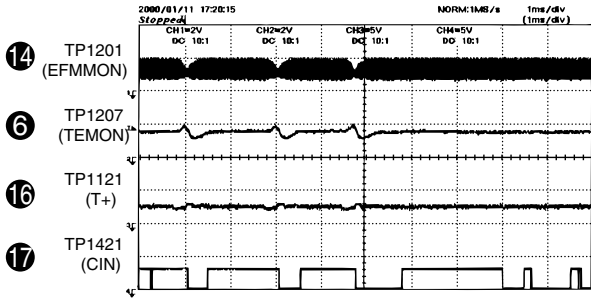
PLAY (low-reflection disc)



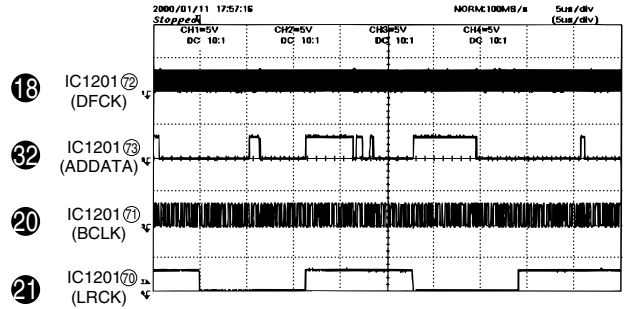
REC



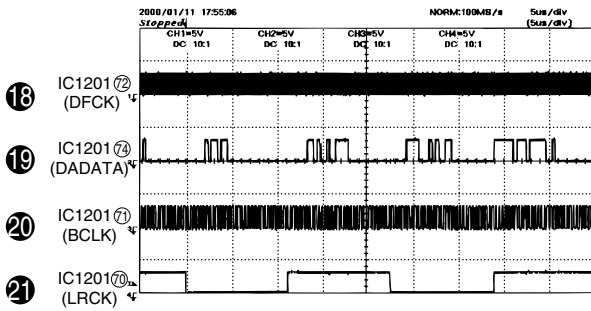
PLAY (high-reflection disc)



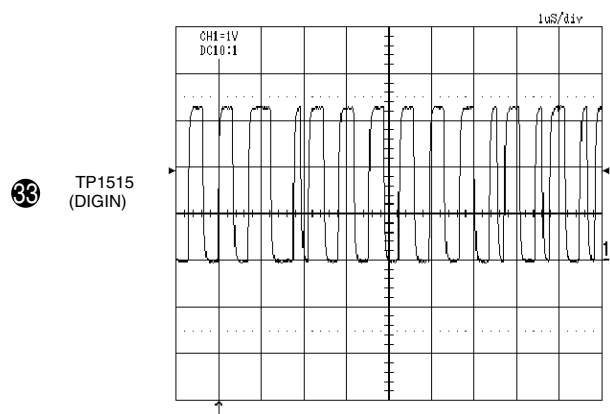
Analog REC



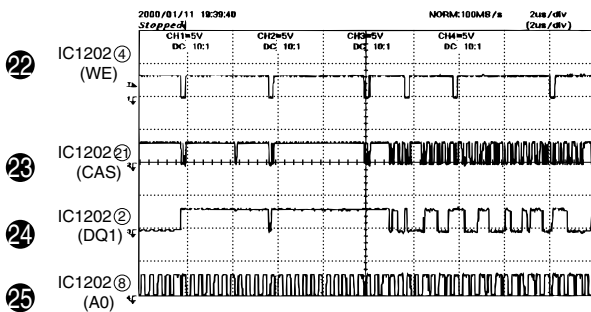
PLAY



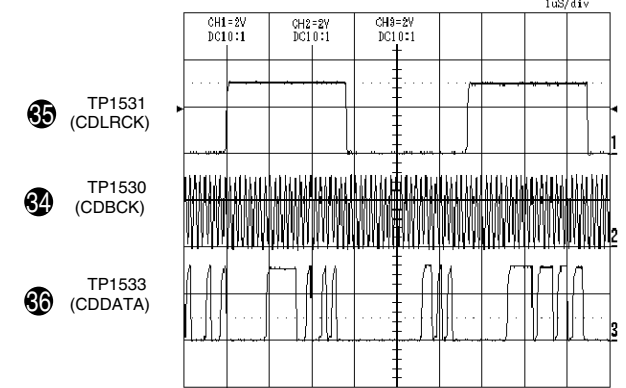
Digital REC



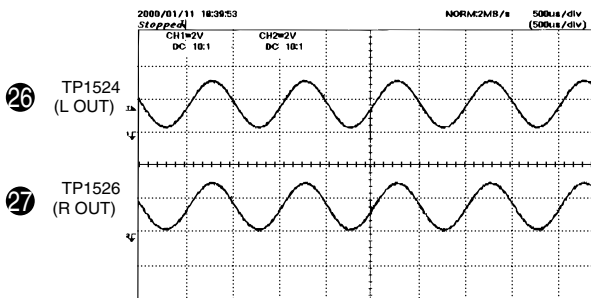
PLAY



4x Speed REC



PLAY(1kHz 0dB)





● MD Adjustment

Depending on the content of repair, such as when the new mechanism, pickup and MD C.B. are combined, the test mode must be set, and various adjustments may be required.

The adjustment procedure is as follows:

- (1) Set to the test mode and perform the adjustment and check listed below depending on the component replaced.
- (2) Press the POWER button to terminate the test mode (this will write data to EEPROM).

After performing the above, reset the mechanism to start.

| Required item<br>Component Replaced | TEMP<br>reference<br>setting | Checking<br>values set in<br>EEPROM | Writing<br>adjustment values<br>to EEPROM | All AUTO<br>adjustment (1st) | AUTO<br>adjustment | Grating a<br>djustment | All AUTO<br>adjustment (2nd) | Writing<br>adjustment values<br>to EEPROM | Operation check<br>(after executing<br>AUTO main adjustment) |          |
|-------------------------------------|------------------------------|-------------------------------------|---|------------------------------|--------------------|------------------------|------------------------------|---|--|----------|
|                                     | TEMP                         | EEPROM_SET                          | Releasing test mode                       | AUTO_YOBI                    | AUTO_ADJ           | GRATING                | AUTO_YOBI                    | Releasing test mode                       | TEST-PLAY  | TEST-REC |
| Pickup                              | —                            | ①                                   | ②   | ③                            | ④                  | ⑤                      | ⑥                            | ⑦   | ⑧  | ⑨        |
| Head                                | —                            | —                                   | —   | —                            | —                  | —                      | —                            | —   | —  | ①        |
| Mechanism                           | —                            | ①                                   | ②   | ③                            | —                  | —                      | —                            | ④   | ⑤  | ⑥        |
| Main C.B                            | ①                            | ②                                   | ③   | ④                            | —                  | —                      | —                            | ⑤   | ⑥  | ⑦        |
| MD microprocessor                   | —                            | ①                                   | ②   | —                            | —                  | —                      | —                            | —   | ③  | ④        |
| MD LSI                              | —                            | —                                   | —   | ①                            | —                  | —                      | —                            | ②   | ③  | ④        |
| RF IC                               | ①                            | ②                                   | ③   | ④                            | —                  | —                      | —                            | ⑤   | ⑥  | ⑦        |
| EEPROM IC                           | ①                            | ②                                   | ③   | ④                            | —                  | —                      | —                            | ⑤   | ⑥  | ⑦        |

①②③④⑤⑥⑦⑧⑨ Numbers in the table show the order of implementation.

" — " means that the items are unnecessary.

When the test mode is complete, the results of writing to EEPROM will appear.

OK\_EEPROM: Writing of "Setting values" and " Preliminary adjustment completed" has been normally executed.

WR\_EEPROM: Writing of "Setting values" has been normally executed, but wiring of "Preliminary adjustment completed" has not been executed.

NG\_EEPROM: Writing of "Setting values" has not been executed.

Check the connection between MD microprocessor and EEPROM.

\* When measuring TEST PLAY, TEST REC operations, or C1 error, etc., be sure to perform these after completing AUTO adjustment, so that they can be measured in the optimum servo status.

1. Preparation for adjustment/check

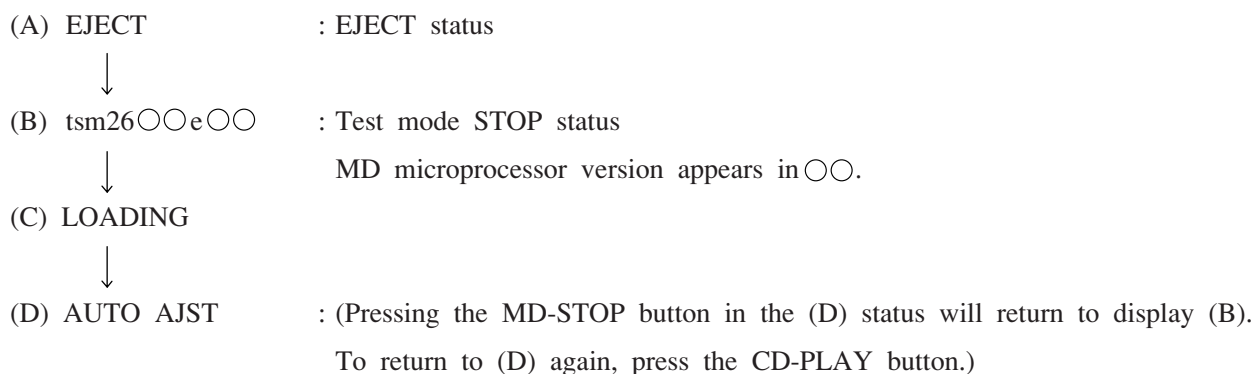
● Test discs

|   | Type                 | Test disc   | Part code    |
|---|----------------------|---|--------------|
| 1 | High-reflection disc | TDYS-1 [for playback]   | 4-963-646-01 |
| 2 | Low-reflection disc  | Disc for checking recording operation (generally available disc used) | -----        |
| 3 | Low-reflection disc  | Disc for main adjustment (MDW-74/GA-1)                                | 4-229-747-01 |

## 2. Test mode

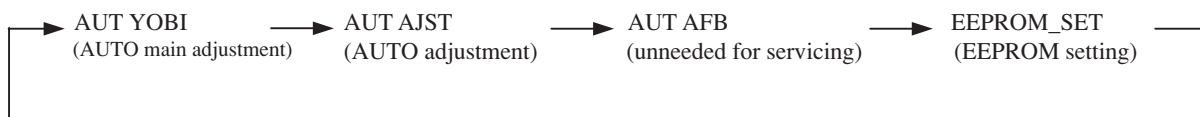
Setting to test mode:

1. While holding down the MD key, plug the power cord into AC outlet.
2. Load disc 1 for playback (high-reflection disc) or a disc for recording (low-reflection disc) (will enter the (D) status).



### ● Entering each mode

Each press of CD SYNC button will alternate between the modes:



### ● Releasing test mode

Resetting will return to normal status.

Always press the POWER button before resetting to write the data to EEPROM.

- \* In order to change the EEPROM values, write data to EEPROM once, enter the test mode again to adjust using the data, execute AUTO main adjustment, and then write the data to EEPROM again.
- \* Be sure to write the data to EEPROM whenever you change the data values in EEPROM or re-execute AUTO main adjustment.

### ● Contents of test mode

|                              |   |
|------------------------------|---|
| 1. EJECT mode                | <ul style="list-style-type: none"> <li>• To TEMP setting (in EEPROM setting)</li> <li>• To CONTROL setting (in EEPROM setting)</li> <li>• Measuring laser power (recording/playback power)</li> </ul> |
| 2. AUTO main adjustment mode | <ul style="list-style-type: none"> <li>• Executing automatic main adjustment (only with low-reflection disc)</li> </ul>   |
| 3. AUTO adjustment mode      | <ul style="list-style-type: none"> <li>• Executing automatic adjustment</li> </ul>  |
| 4. AUTO AFB adjustment       | <ul style="list-style-type: none"> <li>• Unnecessary for servicing</li> </ul>   |
| 5. EEPROM setting mode       | <ul style="list-style-type: none"> <li>• Manually changing various coefficients of digital servo</li> </ul>   |
| 6. TEST-PLAY mode            | <ul style="list-style-type: none"> <li>• Executing continuous playback from designated address</li> <li>• Measuring C1 error rate, ADIP error rate</li> </ul>   |
| 7. TEST-REC mode             | <ul style="list-style-type: none"> <li>• Executing continuous recording from designated address (1x speed/4x speed)</li> </ul>  |
| 8. INNER mode                | <ul style="list-style-type: none"> <li>• Measuring the position where the INNER switch turns "ON"</li> </ul>  |

1. EJECT mode

| Step No. | Setting method                   | Remarks   | Display           |
|----------|----------------------------------|---|-------------------|
| 1        | Test mode EJECT status           | Pressing STOP button will return to step 1 from each other step.  | [ ____EJECT____ ] |
| 2        | Press SP/LP button               | Playback power output status  | [ ppw_____ ]      |
| 3        | Press SP/LP button               | Recording power output status   | [ rpw_____ ]      |
| 4        | Press SP/LP button               | Recording power output status (4x speed)  | [ rpw4_____ ]     |
| 5        | Press SP/LP button               | Special mode unnecessary for adjustment: Move to another mode quickly (pressing CD STOP button will return to step 2) | [ xpw_____ ]      |
| 6        | Press REC START and Edit buttons | To TEMP setting in EEPROM setting (see EEPROM TEMP setting)   |                   |
| 7        | Press REC SEL button             | To CONTROL setting in EEPROM setting (see EEPROM CONTROL setting)   |                   |

\* Normally, IC401 pin 3 will be as follows:

Playback power output [ppw] : Approx. 0.2 V DC

Recording power output [rpw] : Approx. 1.8 V DC

Recording power (4x) [rpw4] : Approx. 2.0 V DC

Checking pickup laser power:

Laser power during recording and playback can be checked on laser power meter. However, since there is unevenness in measurement on laser power meter, only check the values. If the reading on laser power meter greatly drifts from the specified value, replace the pickup.

Reference values (at room temperature 25°C):

During playback (ppw) : 0.72 ±0.1 mW

During recording (rpw) : 5.5 ±0.5 mW

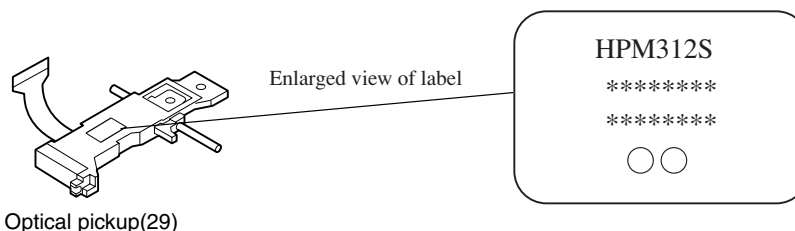
During recording (x4) (rpw4) : 6.1 ±0.6 mW

Caution: Take great care not to look directly at laser light: Doing so could damage your eye.

Checking pickup laser current:

Measure the pickup laser current and use the measured value for reference to find out the life end of pickup.

- Measure the voltage across R1101 (1 ohm: (A) and (B) in circuit diagram) in the recording (rpw) mode, and convert it to a current value.
- If the measured value is +20% - +25% of the number in label on pickup unit (29) (○○ in mA units shown in label below), the pickup may be damaged.



## ADJUSTMENT -4/13

### 2. AUTO main adjustment mode

Use disc for main adjustment (MDW-74/GA-1).

| Step No. | Setting method                                   | Remarks  | Display         |
|----------|--|--|-----------------|
| 1        | Test mode STOP status                            |  | [ tsm26 ○○e○○ ] |
| 2        | Press CD SYNC button                             | AUTO adjustment menu   | [ AUTO_AJST_ ]  |
| 3        | Press CD SYNC button                             | AUTO preliminary adjustment menu   | [ _AUT_YOBI_ ]  |
| 4        | Press ENTER (MULTI JOG) button once              | <ul style="list-style-type: none"> <li>• *** varies greatly during auto adjustment:</li> </ul> Go to step 6 if adjustment is NG. | [ ***** ]       |
| 5        | Adjustment complete:<br>Press CLEAR button twice | Go to step 1   | [ _COMPLETE_ ]  |
| 6        | Adjustment value output:<br>Press CLEAR button   | Go to step 3   | [ Can't_ADJ. ]  |

### 3. AUTO adjustment mode

| Step No. | Setting method                      | Remarks   | Display                   |
|----------|-------------------------------------|---|---------------------------|
| 1        | Test mode STOP status               |   | [ tsm26 ○○e○○ ]           |
| 2        | Press CD SYNC button once           | AUTO adjustment menu  | [ AUTO_AJST_ ]            |
| 3        | Press ENTER (MULTI JOG) button once | <ul style="list-style-type: none"> <li>• *** changes as follows with high-reflection disc:<br/>PEG---HAG</li> <li>• *** changes as follows with low-reflection disc:<br/>PEG---LAG</li> </ul> Go to step 4 when adjustment is complete OK.<br>Go to step 5 if adjustment is NG. | [ ***:_____ ]             |
| 4        | Press CLEAR button                  | Go to step 2  | [ _COMPLETE_ ]<br>*Note 1 |
| 5        | Press CLEAR button                  | Returns to step 2   | [ Can't_ADJ. ]            |

• \*\*\* : Adjustment name; ○○○○: Measured values; □□□□: Address

\*Note 1: If [≠ COMPLETE\_] appears, judging the position where the INNER switch turns on is unclear: To check the INNER switch, do it using the specified disc in the INNER mode again. There is no problem in AUTO adjustment.

### 4. AUTO AFB adjustment

Unneeded for servicing

## 5. EEPROM setting mode (when writing data to EEPROM, press the POWER button before resetting.)

## a) Focus setting

| Step No. | Setting method               | Display        |
|----------|------------------------------|----------------|
| 1        | Test mode STOP status        | [tsm26 ○○e ○○] |
| 2        | Press CD SYNC button 3 times | [EEPROM_SET]   |
| 3        | Press ENTER button           | [__Focus__]    |
| 4        | Press ENTER button           | [FG_____●●]    |
| 5        | Press CD SYNC button         | [FG2_____●●]   |
| 6        | Press CD SYNC button         | [FF0_____●●]   |
| 7        | Press CD SYNC button         | [FF02_____●●]  |
| 8        | Press CD SYNC button         | [FF1_____●●]   |
| 9        | Press CD SYNC button         | [FF12_____●●]  |
| 10       | Press CD SYNC button         | [FF2_____●●]   |
| 11       | Press CD SYNC button         | [FF22_____●●]  |
| 12       | Press CD SYNC button         | [FZHLEV__●●]   |
| 13       | Press CD SYNC button         | [FOKLEVh_●●]   |
| 14       | Press CD SYNC button         | [FOKLEVL_●●]   |
| 15       | Press CD SYNC button         | [FOSTn____●●]  |
| 16       | Press CD SYNC button         | [DSCJG____●●]  |

●● : Setting values

## b) Spin setting

| Step No. | Setting method               | Display         |
|----------|------------------------------|-----------------|
| 1        | Test mode STOP status        | [tsm26 ○○e ○○]  |
| 2        | Press CD SYNC button 3 times | [EEPROM_SET]    |
| 3        | Press ENTER button           | [__Focus__]     |
| 4        | Press CD SYNC button         | [_Spindle_]     |
| 5        | Press CD SYNC button         | [SPG_____●●]    |
| 6        | Press CD SYNC button         | [SPG_in____●●]  |
| 7        | Press CD SYNC button         | [SPG_mid____●●] |
| 8        | Press CD SYNC button         | [SPG_out____●●] |
| 9        | Press CD SYNC button         | [SP1_____●●]    |
| 10       | Press CD SYNC button         | [SP2_____●●]    |
| 11       | Press CD SYNC button         | [SP22_____●●]   |
| 12       | Press CD SYNC button         | [SP3_____●●]    |
| 13       | Press CD SYNC button         | [SP4_____●●]    |
| 14       | Press CD SYNC button         | [SP5_____●●]    |
| 15       | Press CD SYNC button         | [SP52_____●●]   |
| 16       | Press CD SYNC button         | [SPDLIM____●●]  |
| 17       | Press CD SYNC button         | [SPKLEVm_●●]    |

●● : Setting values

## c) Tracking setting

| Step No. | Setting method               | Display        |
|----------|------------------------------|----------------|
| 1        | Test mode STOP status        | [tsm26 ○○e ○○] |
| 2        | Press CD SYNC button 3 times | [EEPROM_SET]   |
| 3        | Press ENTER button           | [__Focus__]    |
| 4        | Press CD SYNC button 2 times | [_Tracking_]   |
| 5        | Press ENTER button           | [TG_____●●]    |

|    |                      |                |
|----|----------------------|----------------|
| 6  | Press CD SYNC button | [TG2_____●●]   |
| 7  | Press CD SYNC button | [TF0_____●●]   |
| 8  | Press CD SYNC button | [TF02_____●●]  |
| 9  | Press CD SYNC button | [TF1_____●●]   |
| 10 | Press CD SYNC button | [TF12_____●●]  |
| 11 | Press CD SYNC button | [TF2_____●●]   |
| 12 | Press CD SYNC button | [TF22_____●●]  |
| 13 | Press CD SYNC button | [FT3_____●●]   |
| 14 | Press CD SYNC button | [SVCNT4__●●]   |
| 15 | Press CD SYNC button | [TRBLVo__●●]   |
| 16 | Press CD SYNC button | [TRBLVt__●●]   |
| 17 | Press CD SYNC button | [TRKLVo__●●]   |
| 18 | Press CD SYNC button | [TRKLVt__●●]   |
| 19 | Press CD SYNC button | [TDPWo___●●]   |
| 20 | Press CD SYNC button | [TDPWt___●●]   |
| 21 | Press CD SYNC button | [SLCTo___●●]   |
| 22 | Press CD SYNC button | [SLCTt___●●]   |
| 23 | Press CD SYNC button | [SLCTm___●●]   |
| 24 | Press CD SYNC button | [TCRSC1P_●●]   |
| 25 | Press CD SYNC button | [TCRSC0h_●●]   |
| 26 | Press CD SYNC button | [TCRSC0L_●●]   |
| 27 | Press CD SYNC button | [TCRSCHh_●●]   |
| 28 | Press CD SYNC button | [TCRSCHL_●●]   |
| 29 | Press CD SYNC button | [COTLVp___●●]  |
| 30 | Press CD SYNC button | [COTLVr___●●]  |
| 31 | Press CD SYNC button | [JPint_____●●] |
| 32 | Press CD SYNC button | [KIK10_____●●] |

●●● : Setting values

#### d) Sled setting

| Step No. | Setting method               | Display       |
|----------|------------------------------|---------------|
| 1        | Test mode STOP status        | [tsm26○○e○○]  |
| 2        | Press CD SYNC button 3 times | [EEPROM_SET]  |
| 3        | Press ENTER button           | [__Focus__]   |
| 4        | Press CD SYNC button 3 times | [___Sled___]  |
| 5        | Press ENTER button           | [SLG_____●●]  |
| 6        | Press CD SYNC button         | [SL2_____●●]  |
| 7        | Press CD SYNC button         | [SLDLIM__●●]  |
| 8        | Press CD SYNC button         | [SLDLEV__●●]  |
| 9        | Press CD SYNC button         | [SLKLVk__●●]  |
| 10       | Press CD SYNC button         | [SLKLVt__●●]  |
| 11       | Press CD SYNC button         | [SLKLVm__●●]  |
| 12       | Press CD SYNC button         | [SLBKm___●●]  |
| 13       | Press CD SYNC button         | [SLKrio___●●] |
| 14       | Press CD SYNC button         | [SLKroi___●●] |
| 15       | Press CD SYNC button         | [SLKlio___●●] |
| 16       | Press CD SYNC button         | [SLKloi___●●] |
| 17       | Press CD SYNC button         | [INNERl___●●] |
| 18       | Press CD SYNC button         | [INNERu___●●] |
| 19       | Press CD SYNC button         | [EJOVER___●●] |

●●● : Setting values

## ADJUSTMENT -7/13

### e) TEMP setting

| Step No. | Setting method                              | Display       |
|----------|---|---------------|
| 1        | EJECT status<br>(or in no mechanism status) | [___EJECT___] |
| 2        | Press REC START button                      | [TEMP_○○_●●]  |

•●● : Setting value; ○○ : Measured value

### f) CONTROL setting

| Step No. | Setting method               | Display          |
|----------|------------------------------|------------------|
| 1        | Test mode STOP status        | [tsm26○○e○○]     |
| 2        | Press CD SYNC button 3 times | [EEPROM_SET]     |
| 3        | Press ENTER button           | [__Focus__]      |
| 4        | Press CD SYNC button 5 times | [__Control__]    |
| 5        | Press ENTER button           | [CONTRL1_●●]     |
| 6        | Press CD SYNC button         | [CONTRL2_●●]     |
| 7        | Press CD SYNC button         | [ADJTTM_●●]      |
| 8        | Press CD SYNC button         | [HDEQAD_●●]      |
| 9        | Press CD SYNC button         | [LDEQAD_●●]      |
| 10       | Press CD SYNC button         | [GDEQAD_●●]      |
| 11       | Press CD SYNC button         | [GDEQAD2_●●]     |
| 12       | Press CD SYNC button         | [HDEQBC_●●]      |
| 13       | Press CD SYNC button         | [LDEQBC_●●]      |
| 14       | Press CD SYNC button         | [GDEQBC_●●]      |
| 15       | Press CD SYNC button         | [GDEQBC2_●●]     |
| 16       | Press CD SYNC button         | [HALSG___●●]     |
| 17       | Press CD SYNC button         | [LALSG___●●]     |
| 18       | Press CD SYNC button         | [GALSG___●●]     |
| 19       | Press CD SYNC button         | [HALSOFS_●●]     |
| 20       | Press CD SYNC button         | [LALSOFS_●●]     |
| 21       | Press CD SYNC button         | [GALSOFS_●●]     |
| 22       | Press CD SYNC button         | [EFMOWD_●●]      |
| 23       | Press CD SYNC button         | [HALSCN_●●]      |
| 24       | Press CD SYNC button         | [LALSCN_●●]      |
| 25       | Press CD SYNC button         | [GALSCN_●●]      |
| 26       | Press CD SYNC button         | [ADJ:_ □□_ ____] |

•●● : Setting values; □□ : Other information

## ADJUSTMENT -8/13

### g) ADJUST setting

| Step No. | Setting method               | Display       |
|----------|------------------------------|---------------|
| 1        | Test mode STOP status        | [tsm26 ○○e○○] |
| 2        | Press CD SYNC button 3 times | [EEPROM_SET]  |
| 3        | Press ENTER button           | [__Focus__]   |
| 4        | Press CD SYNC button 6 times | [_ADJSET__]   |
| 5        | Press ENTER button           | [COK_____●●]  |
| 6        | Press CD SYNC button         | [FAT_____●●]  |
| 7        | Press CD SYNC button         | [TAT_____●●]  |
| 8        | Press CD SYNC button         | [CAT_____●●]  |
| 9        | Press CD SYNC button         | [FAB_____●●]  |
| 10       | Press CD SYNC button         | [STR_____●●]  |
| 11       | Press CD SYNC button         | [SFS_____●●]  |
| 12       | Press CD SYNC button         | [STC_____●●]  |

●●● : Setting values

### h) REC bit setting

| Step No. | Setting method               | Display       |
|----------|------------------------------|---------------|
| 1        | Test mode STOP status        | [tsm26 ○○e○○] |
| 2        | Press CD SYNC button 3 times | [EEPROM_SET]  |
| 3        | Press ENTER button           | [__Focus__]   |
| 4        | Press CD SYNC button 7 times | [RECbit_SET]  |
| 5        | Press ENTER button           | [SPWR50___●●] |
| 6        | Press CD SYNC button         | [SPWR56___●●] |
| 7        | Press CD SYNC button         | [SRWR44___●●] |
| 8        | Press CD SYNC button         | [SPWR53___●●] |
| 9        | Press CD SYNC button         | [SPWR57___●●] |
| 10       | Press CD SYNC button         | [LP2WR50__●●] |
| 11       | Press CD SYNC button         | [LP2WR56__●●] |
| 12       | Press CD SYNC button         | [LP2WR44__●●] |
| 13       | Press CD SYNC button         | [LP2WR53__●●] |
| 14       | Press CD SYNC button         | [LP4WR50__●●] |
| 15       | Press CD SYNC button         | [LP4WR56__●●] |
| 16       | Press CD SYNC button         | [LP4WR44__●●] |
| 17       | Press CD SYNC button         | [LP4WR53__●●] |

●●● : Setting values



## ADJUSTMENT -9/13

### 6. TEST-PLAY mode

(Used to check playback performance with designated address)

| Step No. | Setting method   | Remarks  | Display                            |
|----------|--|--|------------------------------------|
| 1        | Test mode STOP status  |  | [ tsm26 ○○e○○ ]                    |
| 2        | Press REC START button   | TEST-PLAY menu   | [ TEST_PLAY_ ]                     |
| 3        | Press SP/LP button<br>Press ENTER button                                 | Address setting (Target address initial value displayed)                               | [ ADRES_0032_ ]                    |
| 4        | Continuous playback (bit portion)<br>Continuous playback (group portion) | [Address + C1 error display (70 or less)]<br>[Address + C1 error display (70 or less)] | [ s□□□□ c○○○○ ]<br>[ a□□□□ c○○○○ ] |
| 5        | Press SP/LP button   | [Address +ADIP error display (200 or less)]  | [ a□□□□ a○○○○ ]                    |
| 6        | Press SP/LP button   | (Not necessary for servicing)  | [ a□□□□ j○○○○ ]                    |
| 7        | Press CLEAR button   | TEST-PLAY menu   | [ TEST_PLAY_ ]                     |

• □□□□ : Address; ○○○○ : Measured value

• Pressing the REC START button in address setting mode will change the address as follows:

0032 → 0700 → FFA0 → 0032 → • • • •

### 7. TEST-REC mode

Prepare a disc for checking record operation. (Used to check recording performance with designated address)

| Step No. | Setting method         | Remarks   | Display                          |
|----------|------------------------|---|----------------------------------|
| 1        | Test mode STOP status  |   | [ tsm26 ○○e○○ ]                  |
| 2        | Press REC START button | Pressing twice will display TEST-REC menu<br>Pressing 3 times will display TEST-REC (4x) menu | [ TEST_REC__ ]<br>[ TEST_REC4_ ] |
| 3        | Press SP/LP button     | Address setting (Address initial value displayed)   | [ a0032_pw△△ ]                   |
| 4        | Press ENTER button     | Continuous recording  | [ a□□□□ _pw△△ ]                  |
| 5        | Press CLEAR button     | START-REC menu  | [ TEST_REC__ ]<br>[ TEST_REC4_ ] |

• Pressing the REC START button in address setting mode will change the address as follows:

0032 → 0700 → FFA0 → 0032 → • • • •

### 8. INNER mode

| Step No. | Setting method        | Remarks  | Display         |
|----------|-----------------------|--|-----------------|
| 1        | Test mode STOP status |  | [ tsm26 ○○e○○ ] |
| 2        | Press REC SEL button  | INNER menu   | [ __INNER__ ]   |
| 3        | Press ENTER button    | IINNER switch position measurement<br>(SUBQ address and C1 error are also displayed) | [ s□□□□ c○○○○ ] |
| 4        | Press CLEAR button    | INNER menu   | [ __INNER__ ]   |

• □□□□ : Address

●Lead-in switch position measurement mode

Load TDYS-1 high-reflection test disc.

Note: Adjust the lead-in switch position so that the value measured in INNER mode is FF85~FFD8.

1. Loosen the screw (36) holding the mechanism switch C.B.
2. If the lead-in switch position is FF85 or lower before the screw is loosened, tighten the screw while pushing the C.B. in the direction of A; if it is FFD8 or higher, tighten the screw while pushing the C.B. in the direction of B. Then measure the lead-in switch position again.

After position adjustment, use screw (36) to secure the C.B. (See Fig. 14-1)

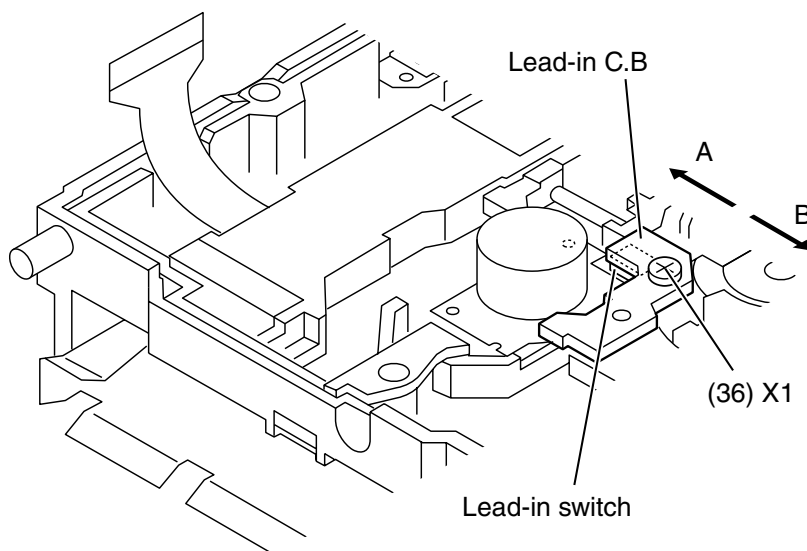


Fig.14 - 1

● Forced rotation of loading motor

When the display is in the test mode STOP or EJECT status, pressing the JOG MODE or EDIT button will enable forced rotation of loading motor.

● Checking installation position of magnetic head

- After replacing the magnetic head or optical pickup, be sure to check the head installation position.
- Move the optical pickup to the center for position adjustment in order to facilitate the installation position adjustment:
  1. Lower the magnetic head up shift arm by hand to raise the head.
  2. While viewing the unit from top, make sure that the optical pickup objective lens is aligned with the magnetic head.
  3. Make sure that the magnetic head moves smoothly up and down.

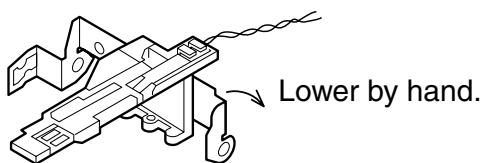
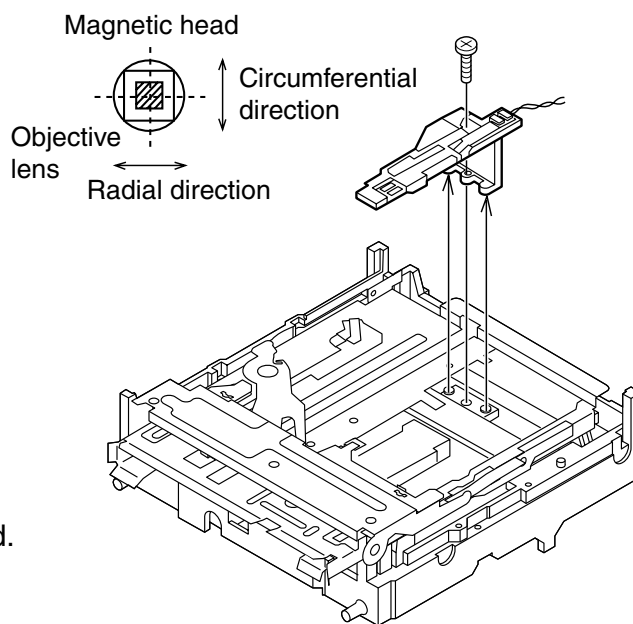


Fig.14 - 2

● Mechanism adjustment

1. Optical pickup grating adjustment

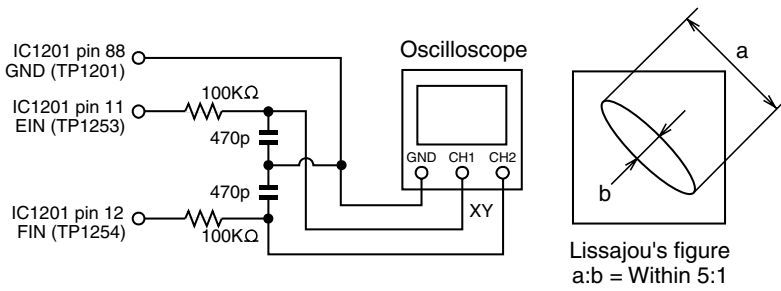
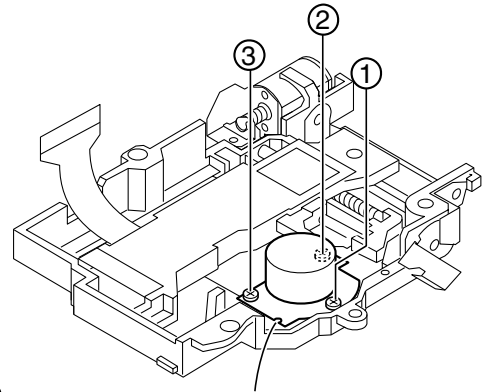
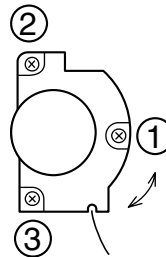


Fig. 14-1 Optical Pickup Grating Drift Measurement Method

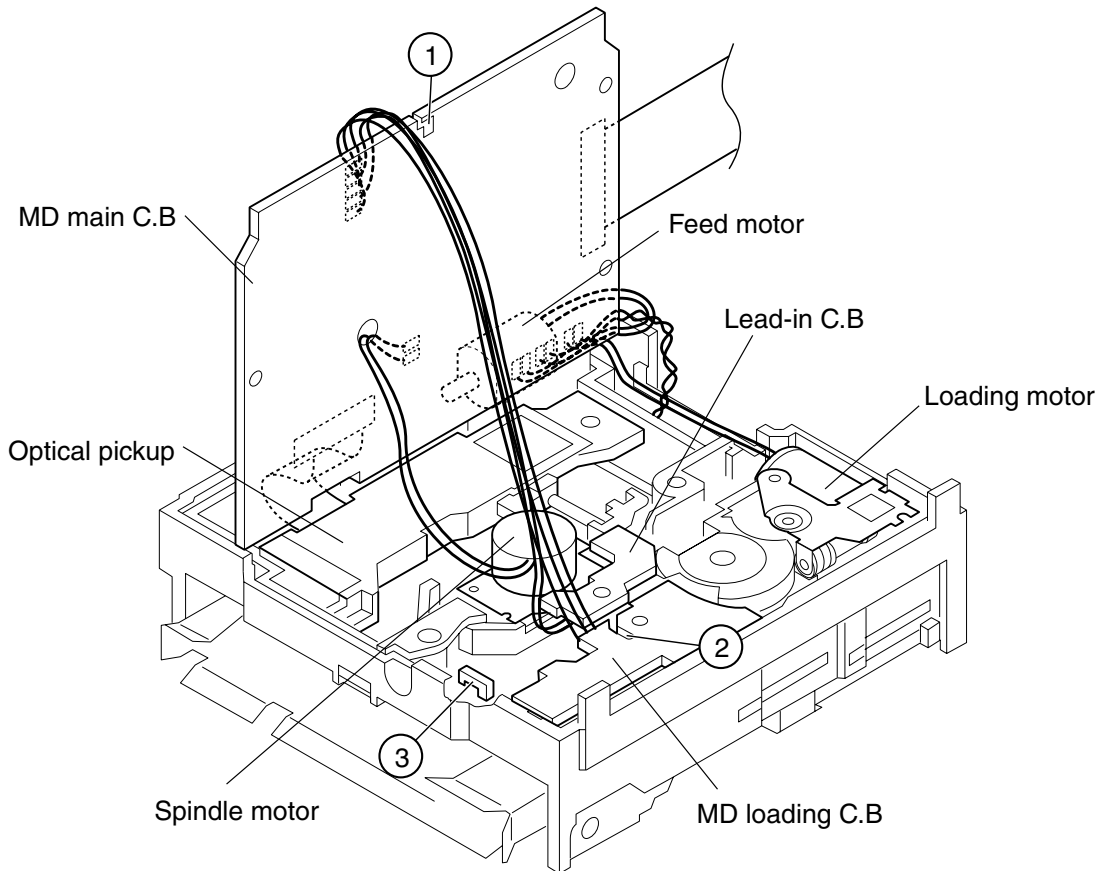


After performing auto adjustment in AUTO test mode using the TDYS-1 high-reflection disc (COMPLETE displayed), the TEST-PLAY mode will be entered: Adjust the Lissajou's figure (x-y) of EO:FOUT.

1. Slightly loosen the 3 screws holding the spindle motor, and perform adjustment while observing the Lissajou's figure.
2. After adjustment, tighten the 3 screws in numerical order.



Insert a screwdriver into the adjustment groove in spindle motor, and check the Lissajou's figure while shifting the installation position.



Lift the MD main C.B. out for servicing.

Cancel the SPIN wire layout (insert into square hole in C.B.), remove the 3 screws, and then lift the main C.B. while releasing the 5 wires that are connected to PU-IN C.B. and mechanism C.B. from guides (1), (2) and (3).

## Procedure for writing data to EEPROM

## 1. Reference temperature setting method

(Perform this setting quickly with C.B. unheated at room temperature 21-29°C.)

| Step                | Details of work  | Display             |                    |             |     |               |     |             |     |  |
|---------------------|--|---------------------|--------------------|-------------|-----|---------------|-----|-------------|-----|--|
| 1                   | After replacing EEPROM, wait until the mechanism cools down.   |                     |                    |             |     |               |     |             |     |  |
| 2                   | Connect the unassembled main C.B. to the system unit.  |                     |                    |             |     |               |     |             |     |  |
| 3                   | Set to the test mode.  | [__EJECT__]         |                    |             |     |               |     |             |     |  |
| 4                   | Press REC START button.  |                     |                    |             |     |               |     |             |     |  |
| 5                   | <p>Find the temperature compensation value from the ambient temperature according to the table below, and use the JOG MODE and EDIT buttons to set to the compensation value.</p> <table border="1"> <thead> <tr> <th>Ambient temperature</th> <th>Compensation value</th> </tr> </thead> <tbody> <tr> <td>21°C~23.2°C</td> <td>-1H</td> </tr> <tr> <td>23.3°C~26.8°C</td> <td>±0H</td> </tr> <tr> <td>26.9°C~29°C</td> <td>+1H</td> </tr> </tbody> </table> <p>Example: If the ambient temperature is 22°C and the temperature measurement value is 7AH:<br/>Temperature set value = 7AH - 01H = 79H<br/>* If the temperature measurement value drifts between two values, set the smaller value to the measurement value (select 79H if the value drifts between 79H and 7AH).</p> | Ambient temperature | Compensation value | 21°C~23.2°C | -1H | 23.3°C~26.8°C | ±0H | 26.9°C~29°C | +1H | <p>[TEMP_○○_◆◆]</p> <p>○○: Temperature measurement value<br/>◆◆: Temperature set value</p> |
| Ambient temperature | Compensation value   |                     |                    |             |     |               |     |             |     |  |
| 21°C~23.2°C         | -1H  |                     |                    |             |     |               |     |             |     |  |
| 23.3°C~26.8°C       | ±0H  |                     |                    |             |     |               |     |             |     |  |
| 26.9°C~29°C         | +1H  |                     |                    |             |     |               |     |             |     |  |
| 6                   | Press POWER button to write the temperature set value to EEPROM.   |                     |                    |             |     |               |     |             |     |  |
| 7                   | Assemble the main C.B. into mechanism, connect it to the system unit, perform AUTO main adjustment, and then press the POWER button again to write the data to EEPROM.   |                     |                    |             |     |               |     |             |     |  |

## 2. Method of setting parameters other than temperature

| Step | Details of work   | Display      |
|------|---|--------------|
| 1    | Assemble the main C.B. into mechanism and connect it to the system unit.  | [AUTO_AJST_] |
| 2    | Set to the test mode and load a disc.   | [EEPROM_SET] |
| 3    | Press CD SYNC button twice.   |              |
| 4    | Display according to the page EEPROM setting mode, and use JOG MODE and EDIT buttons to match the setting values in "List of data in EEPROM". |              |
| 5    | Press POWER button to write the setting values to EEPROM.   |              |
| 6    | Set to the test mode again, perform AUTO main adjustment, and write the data to EEPROM.   |              |

## List of data in EEPROM (version 01)

## Focus setting

| Item display  | Setting value |
|---------------|---------------|
| [FG_____●●]   | 9B            |
| [FG2_____●●]  | E4            |
| [FF0_____●●]  | 10            |
| [FF02_____●●] | 12            |
| [FF1_____●●]  | 70            |
| [FF12_____●●] | 4C            |
| [FF2_____●●]  | E0            |
| [FF22_____●●] | E4            |
| [FZHLEV__●●]  | ED            |
| [FOKLEVh_●●]  | 07            |
| [FOKLEVL_●●]  | 09            |
| [FOSTn____●●] | 2C            |
| [DSCJG____●●] | 0D            |

## Spin setting

| Item display  | Setting value |
|---------------|---------------|
| [SPG_____●●]  | 0A            |
| [SPG_in___●●] | 60            |
| [SPG_mid__●●] | 4B            |
| [SPG_out__●●] | 3B            |
| [SP1_____●●]  | 01            |
| [SP2_____●●]  | 50            |
| [SP22_____●●] | 50            |
| [SP3_____●●]  | F2            |
| [SP4_____●●]  | F3            |
| [SP5_____●●]  | 20            |
| [SP52_____●●] | 20            |
| [SPDLIM___●●] | 69            |
| [SPKLEVm_●●]  | 16            |

## Tracking setting

| Item display   | Setting value |
|----------------|---------------|
| [TG_____●●]    | 49            |
| [TG2_____●●]   | 6B            |
| [TF0_____●●]   | 10            |
| [TF02_____●●]  | 12            |
| [TF1_____●●]   | 6B            |
| [TF12_____●●]  | 48            |
| [TF2_____●●]   | E6            |
| [TF22_____●●]  | EA            |
| [FT3_____●●]   | 08            |
| [SVCNT4__●●]   | 00            |
| [TRBLVo___●●]  | 70            |
| [TRBLVt___●●]  | 60            |
| [TRKLVo___●●]  | 5B            |
| [TRKLVt___●●]  | 2B            |
| [TDPWo___●●]   | 68            |
| [TDPWt___●●]   | 17            |
| [SLCTo___●●]   | 02            |
| [SLCTt___●●]   | 0E            |
| [SLCTm___●●]   | 53            |
| [TCRSC1P_●●]   | 16            |
| [TCRSC0h_●●]   | 00            |
| [TCRSC0L_●●]   | FA            |
| [TCRSCHh_●●]   | 02            |
| [TCRSCHL_●●]   | 02            |
| [COTLVp___●●]  | 0A            |
| [COTLVr___●●]  | 28            |
| [JPint_____●●] | 00            |
| [KIK10_____●●] | 64            |

\*\* : adjustment unneeded

## Slide setting

| Item display  | Setting value |
|---------------|---------------|
| [SLG_____●●]  | 46            |
| [SL2_____●●]  | 10            |
| [SLDLIM__●●]  | 7F            |
| [SLDLEV__●●]  | 14            |
| [SLKLVk___●●] | 60            |
| [SLKLVt___●●] | 2E            |
| [SLKLVm___●●] | 60            |
| [SLBKm____●●] | 07            |
| [SLKrio___●●] | 64            |
| [SLKroi___●●] | 62            |
| [SLKlio___●●] | 64            |
| [SLKloi___●●] | 60            |
| [INNER1___●●] | 85            |
| [INNERu___●●] | D8            |
| [EJOVER___●●] | 68            |

## CONTROL setting

| Item display    | Setting value |
|-----------------|---------------|
| [CONTRL1_●●]    | 08            |
| [CONTRL2_●●]    | 01            |
| [ADJTTM__●●]    | 05            |
| [HDEQAD__●●]    | 92            |
| [LDEQAD__●●]    | 8E            |
| [GDEQAD__●●]    | 91            |
| [GDEQAD2_●●]    | 91            |
| [HDEQBC__●●]    | 8C            |
| [LDEQBC__●●]    | 8F            |
| [GDEQBC__●●]    | 8A            |
| [GDEQBC2_●●]    | 8A            |
| [HALSG____●●]   | 12            |
| [LALSG____●●]   | 12            |
| [GALSG____●●]   | 12            |
| [HALSOFS_●●]    | FF            |
| [LALSOFS_●●]    | 00            |
| [GALSOFS_●●]    | 00            |
| [EFMOWD_●●]     | **            |
| [HALSCN__●●]    | **            |
| [LALSCN__●●]    | **            |
| [GALSCN__●●]    | **            |
| [ADJ: _□□_____] | **            |

## ADJUST setting

| Item display | Setting value |
|--------------|---------------|
| [COK_____●●] | 58            |
| [FAT_____●●] | C0            |
| [TAT_____●●] | 3E            |
| [CAT_____●●] | 40            |
| [FAB_____●●] | (Note)        |
| [STR_____●●] | 0B            |
| [SFS_____●●] | 0D            |
| [STC_____●●] | 0D            |

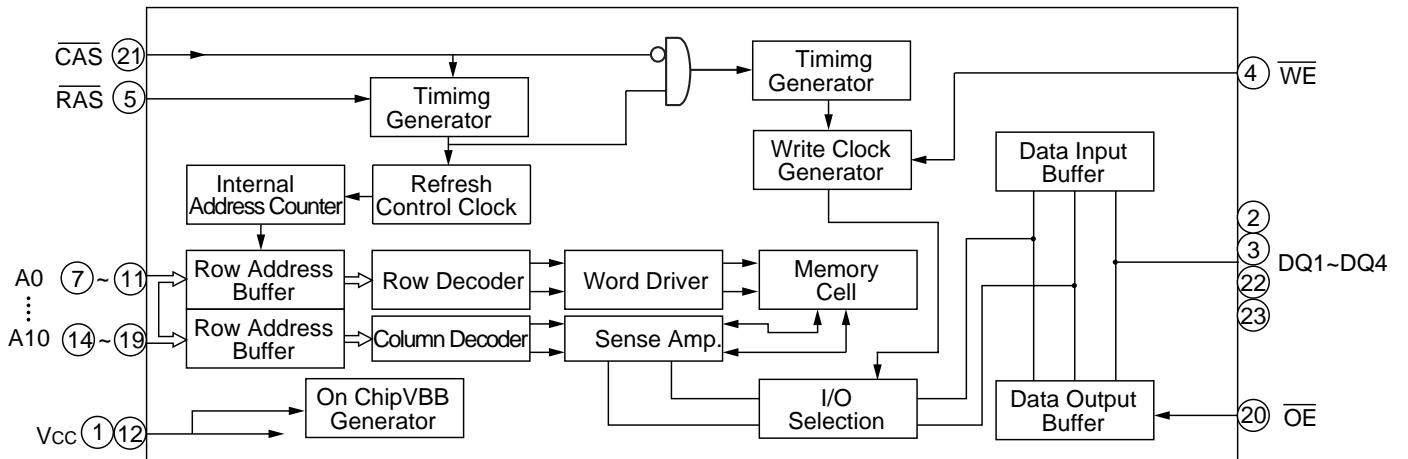
Note: AFB adjustment result value

## REC bit setting

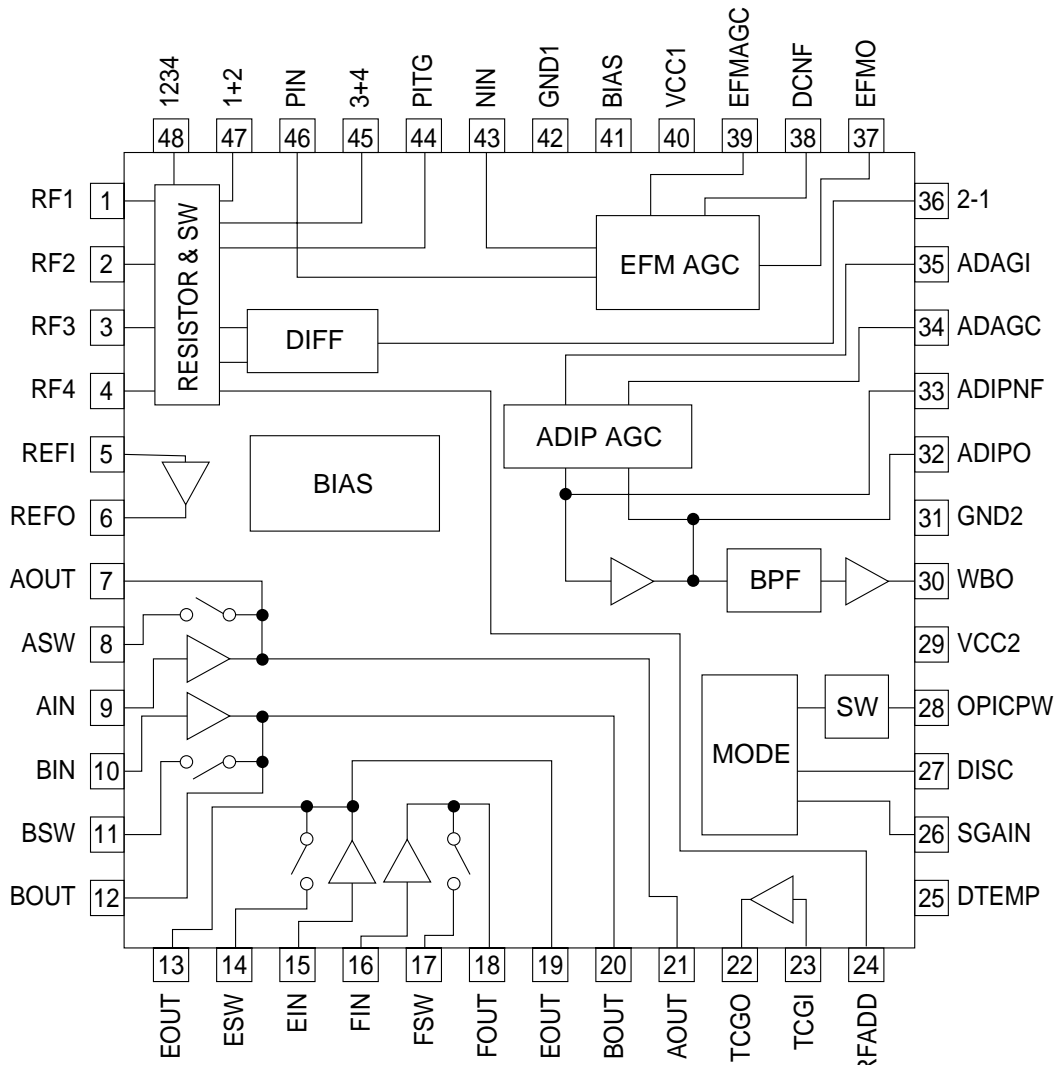
| Item display   | Setting value |
|----------------|---------------|
| [SPWR50___●●]  | C0            |
| [SPWR56___●●]  | FE            |
| [SRWR44___●●]  | 00            |
| [SPWR53___●●]  | 16            |
| [SPWR57___●●]  | **            |
| [LP2WR50___●●] | 80            |
| [LP2WR56___●●] | 20            |
| [LP2WR44___●●] | 80            |
| [LP2WR53___●●] | 00            |
| [LP4WR50___●●] | BF            |
| [LP4WR56___●●] | 02            |
| [LP4WR44___●●] | 80            |
| [LP4WR53___●●] | 00            |

IC BLOCK DIAGRAM -1/2

IC, IX2960AF

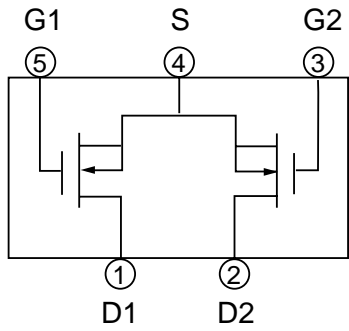


IC, IR3R58M

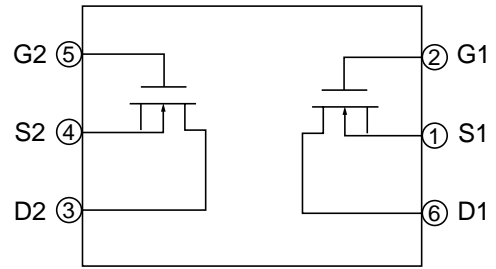


IC BLOCK DIAGRAM -2/2

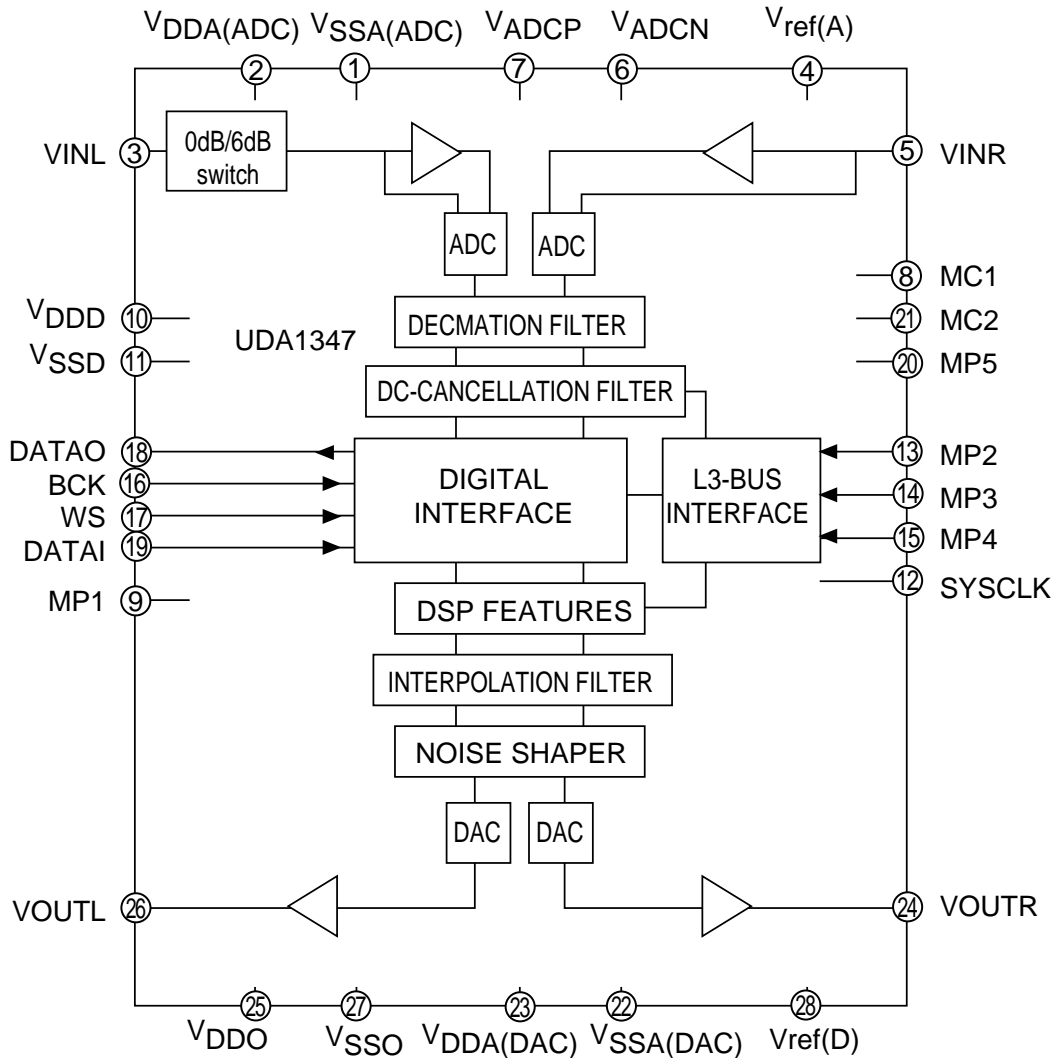
IC, CPH5608



IC, MCH6616



IC, UDA1345TS



# IC DESCRIPTION -1/3 (IX0520AW -1/3)

| Pin No. | Pin Name    | I/O | Description   |
|---------|-------------|-----|---|
| 1       | NC          | -   | Not Use   |
| 2       | NC          | -   | Not Use   |
| 3       | LDVAR       | O   | Laser power control output  |
| 4       | ADJS        | O   | Automatic adjustment step output  |
| 5       | CIN         | I   | Track count signal input  |
| 6       | NC          | -   | Not Use   |
| 7       | UNLOCK      | I   | Unlock of Monitor PLL   |
| 8       | BYTE        | -   | GND   |
| 9       | CNVss       | I   | At usually, the time (L)/At the time of serial writing (H)                  |
| 10      | DFS0        | O   | DFS0 output   |
| 11      | DFS1        | O   | DFS1 output   |
| 12      | RESET       | I   | RESET input   |
| 13      | NC          | -   | Not Use   |
| 14      | Vss         | -   | GND   |
| 15      | MCCK        | I   | System lock input (8.4672MHz)   |
| 16      | Vcc         | I   | +3.2V   |
| 17      | NC          | -   | It is a pull-up to Vcc.   |
| 18      | DINT        | I   | The interruption input from MD-LSI  |
| 19      | NC          | -   | Not Use   |
| 20      | ST? ID IN   | I   | ST-ID input   |
| 21      | SERCH       | I   | CD search input   |
| 22      | ST?ID OUT   | O   | ST-ID output  |
| 23      | MDÉTÅ[É'OUT | O   | MD search output  |
| 24      | PCNT0       | O   | Power supply circuit control output   |
| 25      | PDNON       | I   | Power failure detection / power failure return interruption input           |
| 26      | HDON        | O   | Magnetic head current ON/OFF control  |
| 27      | EEPRO       | O   | EEPROM protection output  |
| 28      | ADMUTE      | O   | ADMUTE output (for CHECK)   |
| 29      | EEPK        | O   | EEPROM serial clock output  |
| 30      | EEPD        | I/O | EEPROM data input and output  |
| 31      | MDDATA      | O   | The serial data output to a system microcomputer                            |
| 32      | KDATA       | I   | Serial data input from a system microcomputer                               |
| 33      | DSCK        | I   | The clock input for serial communication from a system microcomputer        |
| 34      | DSTB        | O   | The state output to a system microcomputer which can be communicated serial |
| 35      | NC          | -   | Not Use   |
| 36      | SBO         | I   | Sub code serial data input  |
| 37      | SBCK        | O   | Sub code serial communication clock output                                  |
| 38      | LD+         | O   | Loading motor + side control output   |
| 39      | LD?         | O   | Loading motor - side control output   |
| 40      | MDRMUT      | O   | Motor driver-on/OFF control output  |
| 41      | FLASH L     | I   | At the time of flash writing (L)  |
| 42      | LAST        | O   | LAST output   |
| 43      | RAST        | O   | RAST output   |



IC DESCRIPTION -1/3 (IX0520AW -2/3)

| Pin No. | Pin Name | I/O | Description                                     |
|---------|----------|-----|---|
| 44      | R/P      | O   | REC/PLAY change output                          |
| 45      | LDON     | O   | Laser diode-on output                           |
| 46      | FLASH H  | I   | At the time of flash writing (H)                |
| 47      | SGAIN    | O   | SGAIN output                                    |
| 48      | DISC     | O   | DISC output                                     |
| 49      | HFON     | O   | High frequency superposition output             |
| 50      | 4M/16M   | I   | DRAM selection input                            |
| 51      | A/B      | I   | Unit type discernment input                     |
| 52      | SYRS     | O   | MDLSI register selection signal output          |
| 53      | SYRD     | O   | MDLSI read signal output                        |
| 54      | SYWR     | O   | MDLSI light signal output                       |
| 55      | SYSD7    | I/O | MDLSI data bus 7                                |
| 56      | SYSD6    | I/O | MDLSI data bus 6                                |
| 57      | SYSD5    | I/O | MDLSI data bus 5                                |
| 58      | SYSD4    | I/O | MDLSI data bus 4                                |
| 59      | SYSD3    | I/O | MDLSI data bus 3                                |
| 60      | SYSD2    | I/O | MDLSI data bus 2                                |
| 61      | SYSD1    | I/O | MDLSI data bus 1                                |
| 62      | +3.2V    | -   | +3.2V   |
| 63      | SYSD0    | I/O | MDLSI data bus 0                                |
| 64      | GND      | -   | GND   |
| 65      | XRST     | O   | MDLSI reset output                              |
| 66      | NC       | -   | Not Use   |
| 67      | DSENSE   | I   | The sense input from MDLSI                      |
| 68      | FOK      | I   | Focus servo state monitor input                 |
| 69      | NC       | -   | Not Use   |
| 70      | NC       | -   | Not Use   |
| 71      | NC       | -   | Not Use   |
| 72      | NC       | -   | Not Use   |
| 73      | DAPON    | O   | DAPON output (for CHECK)                        |
| 74      | SFSY     | I   | Sub code frame synchronized signal input        |
| 75      | SBSY     | I   | Sub code block synchronized signal input        |
| 76      | NC       | -   | Not Use   |
| 77      | NC       | -   | Not Use   |
| 78      | NC       | -   | Not Use   |
| 79      | NC       | -   | Not Use   |
| 80      | 64M      | I   | DRAM selection input                            |
| 81      | LOAD IN  | I   | LOAD IN input                                   |
| 82      | L3DATA   | O   | ADC/DAC serial data output                      |
| 83      | L3MODE   | O   | ADC/DAC serial mode output                      |
| 84      | L3CLK    | O   | ADC/DAC serial lock output                      |
| 85      | INNSW    | I   | The disk inner side detection input of a pickup |
| 86      | TEST2    | I   | Special mode setting input 2                    |

IC DESCRIPTION -1/3 (IX0520AW -3/3)

| Pin No. | Pin Name | I/O | Description                                    |
|---------|----------|-----|--|
| 87      | TEST1    | I   | Special mode setting input 1                   |
| 88      | TEST0    | I   | Special mode setting input 0                   |
| 89      | AVCK3    | I   | Motor driver power supply monitor input        |
| 90      | AVCK2    | I   | ADC/DAC power supply monitor input             |
| 91      | AVCK1    | I   | Head circuit power supply monitor input        |
| 92      | DTEMP    | I   | Temperature sensor in-and-out power            |
| 93      | MINF     | I   | Mechanism switch information combination input |
| 94      | TEST?K1  | I   | The key 1 input for a test                     |
| 95      | TEST?K   | I   | The key input for a test                       |
| 96      | GND      | -   | GND  |
| 97      | NC       | -   | Not Use  |
| 98      | VREF     | I   | +3.2V  |
| 99      | AVcc     | I   | +3.2V  |
| 100     | NC       | -   | Not Use  |

## IC DESCRIPTION -2/3 (IR3R58M -1/2)

| Pin No. | Pin Name | I/O | Description   |
|---------|----------|-----|---|
| 1       | RF1      | I   | RF signal input terminal 1 RF signal output of a pickup is inputted.                  |
| 2       | RF2      | I   | RF signal input terminal 2 RF signal output of a pickup is inputted.                  |
| 3       | RF3      | I   | RF signal input terminal 3 RF signal output of a pickup is inputted.                  |
| 4       | RF4      | I   | RF signal input terminal 4 RF signal output of a pickup is inputted.                  |
| 5       | REFI     | I   | Standard voltage amplifier input terminal   |
| 6       | REFO     | O   | Standard voltage amplifier output terminal  |
| 7       | AOUT     | O   | The output terminal 1 of the signal amplifier for servo (Focus servo system)          |
| 8       | ASW      | O   | The output terminal 2 of the signal amplifier for servo (Focus servo system)          |
| 9       | AIN      | I   | The reversal input terminal of the signal amplifier for servo (Focus servo system)    |
| 10      | BIN      | I   | The reversal input terminal of the signal amplifier for servo (Focus servo system)    |
| 11      | BSW      | O   | The output terminal 2 of the signal amplifier for servo (Focus servo system)          |
| 12      | BOUT     | O   | The output terminal 1 of the signal amplifier for servo (Focus servo system)          |
| 13      | EOUT     | O   | The output terminal of the signal amplifier for servo (Tracking servo system)         |
| 14      | ESW      | O   | The output terminal of the signal amplifier for servo (Tracking servo system)         |
| 15      | EIN      | I   | The reversal input terminal of the signal amplifier for servo (Tracking servo system) |
| 16      | FIN      | I   | The reversal input terminal of the signal amplifier for servo (Tracking servo system) |
| 17      | FSW      | O   | The output terminal of the signal amplifier for servo (Tracking servo system)         |
| 18      | FOUT     | O   | The output terminal of the signal amplifier for servo (Tracking servo system)         |
| 19      | EOUT     | O   | The output terminal of the signal amplifier for servo (Tracking servo system)         |
| 20      | BOUT     | O   | The output terminal of the signal amplifier for servo (Tracking servo system)         |
| 21      | AOUT     | O   | The output terminal of the signal amplifier for servo (Tracking servo system)         |
| 22      | TCGO     | O   | The track crossing detected signal amplifier output terminal at the time of a groove  |
| 23      | TCGI     | I   | The track crossing detected signal amplifier input terminal at the time of a groove   |
| 24      | RFADD    | O   | The resistance addition output terminal of RF1-RF4                                    |
| 25      | DTEMP    | O   | Tip temperature detection terminal  |
| 26      | SGAIN    | O   | The switch part control terminal of the amplifier for servo                           |
| 27      | DISC     | O   | Pit mode, a groove mode change control terminal                                       |
| 28      | OPICPW   | O   | The power supply output terminal for OPIC   |
| 29      | VCC2     | -   | Digital part and a power part power supply terminal                                   |
| 30      | WBO      | O   | The comparator output terminal for the formation of ADIP signal 2 value               |
| 31      | GND2     | -   | Digital part and a power part GND terminal  |
| 32      | ADIPO    | O   | ADIP signal preamplifier output terminal  |
| 33      | ADIPNF   | O   | ADIP signal AGC amplifier output terminal   |
| 34      | ADAGC    | -   | The smoothing capacitor connection terminal for ADIP signal AGC                       |
| 35      | ADAGI    | I   | ADIP signal AGC amplifier input terminal  |
| 36      | ??1      | -   | Difference signal of RF1 and RF2  |
| 37      | EFMO     | O   | RF signal AGC amplifier output terminal   |
| 38      | DCNF     | -   | Smoothing capacitor connection terminal for RF signal AGC amplifier standard voltage  |
| 39      | EFMAGC   | -   | Smoothing capacitor connection terminal for RF signal AGC                             |
| 40      | VCC1     | -   | Analog part power supply terminal   |
| 41      | BIAS     | I   | Bias input terminal   |
| 42      | GND1     | -   | Analog part GND terminal  |
| 43      | NIN      | I   | RF signal AGC amplifier reversal input terminal                                       |

## IC DESCRIPTION -2/3 (IR3R58M -2/2)

| Pin No. | Pin Name | I/O | Description   |
|---------|----------|-----|---|
| 44      | PITG     | -   | It is a grounding terminal at the time of a pit.                                      |
| 45      | 3+4      | O   | It is the resistance addition output terminal of RF3 and RF4 at the time of a groove. |
| 46      | PIN      | I   | RF signal AGC amplifier reversed input terminal                                       |
| 47      | 1+2      | O   | It is the resistance addition output terminal of RF1 and RF2 at the time of a groove. |
| 48      | 1234     | O   | It is the resistance addition output terminal of RF1-RF4 at the time of a pit.        |

## IC DESCRIPTION -3/3 (LR37816A -1/3)

| Pin No. | Pin Name | I/O | Description   |
|---------|----------|-----|---|
| 1       | EFMMON   | O   | EFM monitor output  |
| 2       | AVCC1    | -   | Analog power supply (EFM system 8AD and for 8DA)                        |
| 3       | EFMI     | I   | The EFM signal input from RF amplifier                                  |
| 4       | AGND1    | -   | Analog GND  |
| 5       | AVCC2    | -   | Analog power supply (for servo system and ADIP system 1bit AD)          |
| 6       | VREF     | I   | The standard voltage input of RF amplifier                              |
| 7       | WBI      | I   | ADIP wobble signal  |
| 8       | TCG      | I   | Track crossing signal   |
| 9       | AIN      | I   | Focal error signal A  |
| 10      | BIN      | I   | Focus error signal B  |
| 11      | EIN      | I   | Tracking error signal E   |
| 12      | FIN      | I   | Tracking error signal F   |
| 13      | VBAT     | I   | The constant power supply voltage detected signal for voltage servo     |
| 14      | VDD1     | -   | Internal digital power supply   |
| 15      | DGND     | -   | Digital GND   |
| 16      | TEST2    | I   | The input for a test. Usually, it connects with GND at the time of use. |
| 17      | X176KO   | O   | Clock output. $f=176.4\text{KHz}$ (4fs)                                 |
| 18      | FODRF    | O   | Focus servo forward output. PWM.  |
| 19      | FODRR    | O   | Focus servo reverse output. PWM.  |
| 20      | TRDRF    | O   | Tracking servo forward output. PWM.                                     |
| 21      | TRDRR    | O   | Tracking servo reverse output. PWM.                                     |
| 22      | SLDRF    | O   | Slide servo forward output. PWM.  |
| 23      | SLDRR    | O   | Slide servo reverse output. PWM.  |
| 24      | SPDRF    | O   | Spindle Servo forward output. PWM.                                      |
| 25      | SPDRR    | O   | Spindle Servo reverse output  |
| 26      | RAA3     | O   | The address output to external D-RAM. ADR3                              |
| 27      | RAA2     | O   | The address output to external D-RAM. ADR2                              |
| 28      | RAA1     | O   | The address output to external D-RAM. ADR1                              |
| 29      | RAA0     | O   | The address output to external D-RAM. ADR0 (LSB )                       |
| 30      | RAA10    | O   | The address output to external D-RAM. ADR10 (MSB )                      |
| 31      | VDD2     | -   | The power supply for interfaces   |
| 32      | RAA4     | O   | The address output to external D-RAM. ADR4                              |
| 33      | RAA5     | O   | The address output to external D-RAM. ADR5                              |
| 34      | RAA6     | O   | The address output to external D-RAM. ADR6                              |
| 35      | RAA7     | O   | The address output to external D-RAM. ADR7                              |
| 36      | RAA8     | O   | The address output to external D-RAM. ADR8                              |
| 37      | RAOEX    | O   | The data output enable signal output to external D-RAM                  |
| 38      | DGND     | -   | Digital GND   |
| 39      | RACASX   | O   | The column address strobe signal output to external D-RAM               |
| 40      | RAD2     | I/O | Data input and output with Exterior D-RAM. D2                           |
| 41      | RAD3     | I/O | Data input and output with Exterior D-RAM. D3 (MSB)                     |
| 42      | RAA9     | O   | The address output to external D-RAM. ADR9                              |
| 43      | RARASX   | O   | The row address strobe signal output to external D-RAM                  |

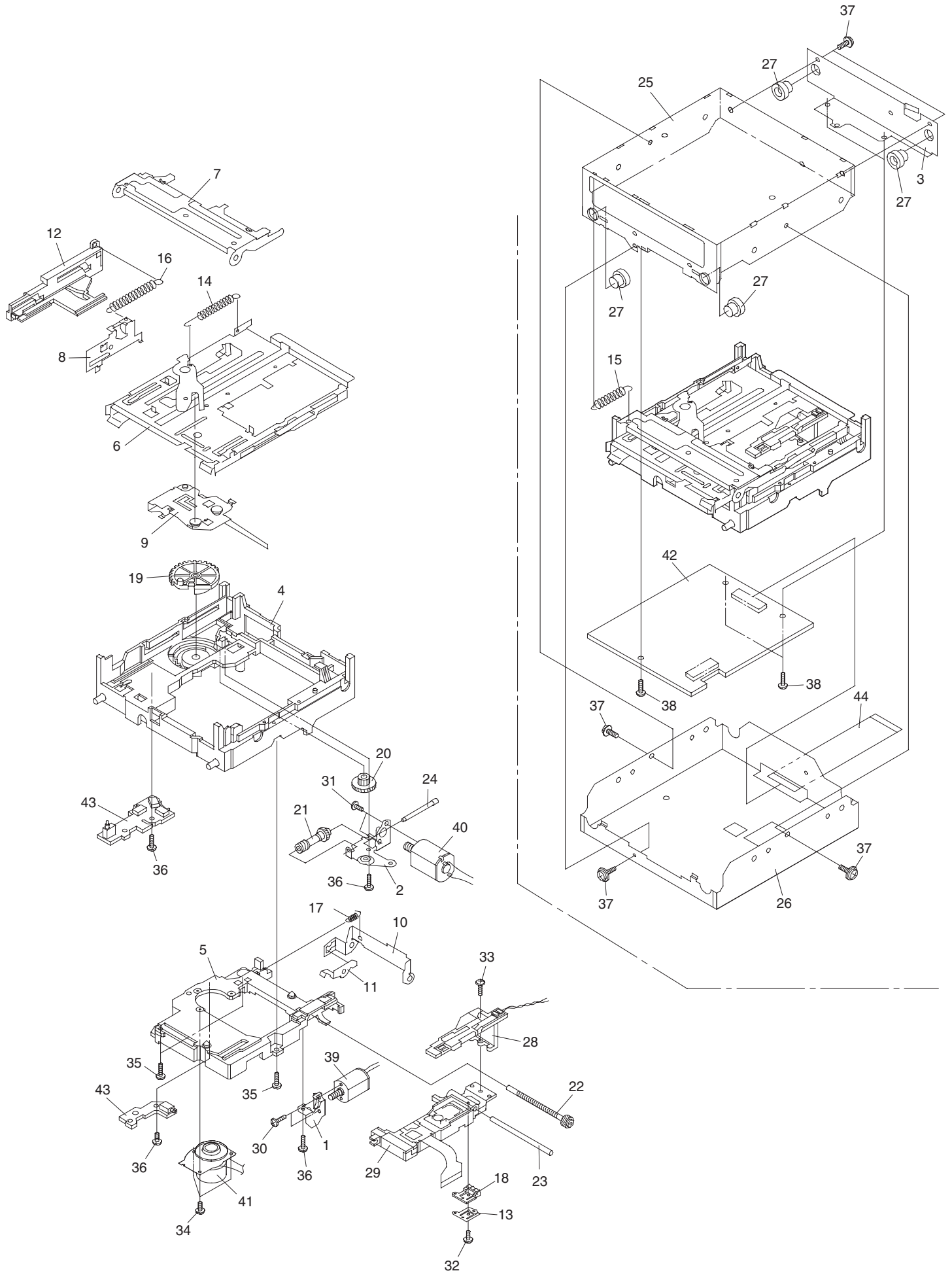
## IC DESCRIPTION -3/3 (LR37816A -2/3)

| Pin No. | Pin Name    | I/O | Description   |
|---------|-------------|-----|---|
| 44      | RAWEX       | O   | The data write enable signal output to external D-RAM   |
| 45      | RAD1        | I/O | Data input and output with Exterior D-RAM. D1   |
| 46      | RAD0        | I/O | Data input and output with Exterior D-RAM. D0 (LSB )  |
| 47      | RAA11       | O   | ADR11 (MSB 64Mbit)  |
| 48      | ACRCER      | O   | The CRC error flag monitor output of ADIP.  |
| 49      | PLCK        | O   | The EFM PLL clock output at playback.   |
| 50      | EFM0        | O   | It is an EFM signal output at record. It is a C1F (C1 error flag) monitor output at playback. |
| 51      | X700KO      | O   | Clock output. f=705.6KHz  |
| 52      | TCSR        | O   | Track crossing signal   |
| 53      | TEST0,TEST1 | I   | The input for a test. Usually, it connects with GND at the time of use.                       |
| 54      | TEST0,TEST1 | -   | The input for a test. Usually, it connects with GND at the time of use.                       |
| 55      | DILOCK      | O   | DIN lock detection  |
| 56      | DIN2        | I/O | Digital output signal.Extended port 0.  |
| 57      | CDDATA      | I/O | Data input for dubbing. Extended output port 1.   |
| 58      | CDLRCK      | I/O | The LR clock input for dubbing. Extended output port 2.                                       |
| 59      | CDBCLK      | I/O | The bit clock input for dubbing. Extended output port 3.                                      |
| 60      | VXI         | I   | The PLL clock input for variable pitches.   |
| 61      | VPO         | O   | The PLL phase error output for variable pitches.  |
| 62      | VDD1        | -   | Internal digital power supply   |
| 63      | DGND        | -   | Digital GND   |
| 64      | XI          | I   | Oscillation circuit input. 33.8688MHz   |
| 65      | XO          | O   | Oscillation circuit output. 33.8688MHz  |
| 66      | DIN         | I   | Digital input signal  |
| 67      | DOUT        | O   | Digital output signal   |
| 68      | PLLBVG      | O   | A capacitor connection terminal with the outside for Insides PLL                              |
| 69      | DGND        | -   | Digital GND   |
| 70      | LRCK        | O   | The change output of Lch and Rch of music data  |
| 71      | BCLK        | O   | The shift clock of music data   |
| 72      | DFCK        | O   | The clock for AD/DA converter digital filters 256Fs.  |
| 73      | ADDATA      | I   | Voice data input.   |
| 74      | DADATA      | O   | Voice data output.  |
| 75      | FEMON       | O   | Focus error signal monitor output. Series resistance 10 - 100k ohms built-in                  |
| 76      | TOTMON      | O   | Total signal monitor output. Series resistance 10 - 100k ohms built-in                        |
| 77      | TEMON       | O   | Tracking error signal monitor output. Series resistance 10 - 100k ohms built-in.              |
| 78      | SBCK        | I/O | The sub code read-out clock of DIN. Extended port 4.  |
| 79      | SBO         | I/O | Sub code serial data of DIN. Extended port 5.   |
| 80      | SBSY        | I/O | The sub code block synchronized signal of DIN. Extended port 6.                               |
| 81      | SFSY        | I/O | The sub code frame synchronized signal of DIN. Extended port 7.                               |
| 82      | FOK         | O   | Focus O.K. detected signal. "0": Focus O.K.   |
| 83      | SENSE       | O   | Servo state detected signal   |
| 84      | COUT        | O   | Track crossing signal output  |
| 85      | MCCK        | O   | The clock output for microcomputers   |
| 86      | DINTX       | O   | The interruption demand output terminal to a system component interface                       |

## IC DESCRIPTION -3/3 (LR37816A -3/3)


| Pin No. | Pin Name | I/O | Description  |
|---------|----------|-----|--|
| 87      | VDD2     | -   | The power supply for interfaces                                  |
| 88      | DGND     | -   | Digital GND  |
| 89      | RSTX     | I   | Chip reset input. It resets by active Lo.                        |
| 90      | SYD0     | I/O | The data bus terminal of a system control interface. (LSB)       |
| 91      | SYD1     | I/O | The data bus terminal of a system control interface.             |
| 92      | SYD2     | I/O | The data bus terminal of a system control interface.             |
| 93      | SYD3     | I/O | The data bus terminal of a system control interface.             |
| 94      | SYD4     | I/O | The data bus terminal of a system v interface.                   |
| 95      | SYD5     | I/O | The data bus terminal of a system control interface.             |
| 96      | SYD6     | I/O | The data bus terminal of a system control interface.             |
| 97      | SYD7     | I/O | The data bus terminal of a system control interface. (MSB)       |
| 98      | SYWRX    | I   | The register write-in pulse input of a system control interface. |
| 99      | SYRDX    | I   | The register read-out pulse input of a system control interface. |
| 100     | SYRS     | I   | The register selection input of a system control interface.      |

# MECHANISM EXPLODED VIEW -1/1





# MECHANISM PARTS LIST -1/1

! =  SAFETY PARTS  
 C = Components marked

All components used on this model at the production line are shown in this service manual.  
 However, please note that not all components will be available as spare parts for after-sales service.  
 Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.  
 Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME             | SUFFIX&MODEL |
|-----------|-----|--------|----------------|------------------------|--------------|
|           |     |        |                |                        | MDM-16QA     |
|           | O   | MC1001 | S1-242-000-505 | ANGLE, F/M             | a            |
|           | O   | MC1002 | S1-242-000-506 | ANGLE, LD MOTOR        | a            |
|           | O   | MC1003 | S1-242-000-507 | PLATE, EARTH           | a            |
|           | O   | MC1004 | S1-242-070-130 | LD BASE                | a            |
|           | O   | MC1005 | S1-242-070-131 | MD BASE                | a            |
|           | O   | MC1006 | S1-242-140-349 | HLDR, CARTRIGE ASSY    | a            |
|           | O   | MC1007 | S1-242-480-307 | HLDR, ARM              | a            |
|           | O   | MC1008 | S1-242-480-308 | PLATE, SW              | a            |
|           | O   | MC1009 | S1-242-480-309 | SLIDER ASSY            | a            |
|           | O   | MC1010 | S1-242-480-310 | ARM, H/A SHIFT         | a            |
|           | O   | MC1011 | S1-242-480-311 | ANGLE, H/A SHIFT       | a            |
|           | O   | MC1012 | S1-242-480-312 | CAM PLATE              | a            |
|           | O   | MC1013 | S1-242-580-289 | SPR, GRIP              | a            |
|           | O   | MC1014 | S1-242-580-291 | SPR, LD ARM            | a            |
|           | O   | MC1015 | S1-242-580-300 | SPR, EARTH             | a            |
|           | O   | MC1016 | S1-242-580-376 | SPR, LD OS             | a            |
|           | O   | MC1017 | S1-242-580-377 | SPR, H/A SHIFT         | a            |
|           | O   | MC1018 | S1-242-810-110 | GRIP RACK              | a            |
|           | O   | MC1019 | S1-242-810-141 | CAM, LOADING           | a            |
|           | O   | MC1020 | S1-242-810-143 | GEAR, MODDLE           | a            |
|           |     |        |                |                        | MDM-16QA     |
|           | O   | MC1021 | S1-242-810-142 | GEAR, LOADING          | a            |
|           | O   | MC1022 | S1-242-900-196 | DRIVE SCREW ASSY       | a            |
|           | O   | MC1023 | S1-242-900-167 | SHAFT, PICK GUIDE      | a            |
|           | O   | MC1024 | S1-242-900-197 | SHAFT, LD GEAR         | a            |
|           | O   | MC1025 | S1-243-230-066 | COVER, TOP             | a            |
|           | O   | MC1026 | S1-243-230-073 | COVER, BOTTOM          | a            |
|           | O   | MC1027 | S1-243-260-243 | INSULATOR              | a            |
|           | O   | MC1028 | S1-246-100-022 | MAGNETIC HEAD          | a            |
|           | O   | MC1029 | S1-246-170-048 | OPTICAL PICK UP UNIT   | a            |
|           | O   | MC1030 | S1-249-700-227 | SCREW, 1.4-1.5         | a            |
|           | O   | MC1031 | S1-249-700-239 | SCREW, 2-2             | a            |
|           | O   | MC1032 | S1-249-700-007 | SCREW, 1.4-2.5         | a            |
|           | O   | MC1033 | S1-249-700-108 | SCREW, 1.7-5           | a            |
|           | O   | MC1034 | S1-249-700-228 | SCREW, 1.4-3           | a            |
|           | O   | MC1035 | S1-249-700-229 | SCREW, 1.7-6           | a            |
|           | O   | MC1036 | S1-249-700-242 | SCREW, 1.4-5           | a            |
|           | O   | MC1037 | S1-249-700-241 | SCREW, 2-3             | a            |
|           | O   | MC1038 | S1-249-700-077 | SCREW, 1.7-3           | a            |
|           | O   | MC1039 | S1-246-300-098 | MOT, FEED ASSY         | a            |
|           | O   | MC1040 | S1-246-300-135 | MOT, LOADING ASSY      | a            |
|           |     |        |                |                        | MDM-16QA     |
|           | O   | MC1041 | S1-126-300-052 | MOT, SPINDLE ASSY      | a            |
|           | X   | MC1042 | S1-245-210-332 | PWB, MD MAIN           | a            |
|           | X   | MC1043 | S1-245-210-323 | PWB MD MECH            | a            |
|           | O   | MC1044 | - - -          | FLAT CABLE, 28P L=80mm | a            |

## OTHER PARTS LIST -1/1

- ! =  $\Delta$ SAFTY PARTS  
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| UNIT-NAME | ! C | REF-NO | PARTS-NO       | PARTS-NAME              | SUFFIX&MODEL |
|-----------|-----|--------|----------------|-------------------------|--------------|
|           |     |        |                |                         | MDM-16QA     |
|           | X   |        | S1-249-171-200 | LBL, TLABN0216AWZZ      | a            |
|           | X   |        | S1-249-060-067 | POLY BAG, SSAKH0077AWZZ | a            |