

SERVICE MANUAL

COMPACT DISC STEREO
CASSETTE RECORDER

BASIC TAPE MECHANISM : ZM-1 AR2NC
BASIC CD MECHANISM : CMS-B31TG6

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" CSD-FD73(HT), (S/M Code No. 09-004-425-4T2) and CSD-FD73(HC), (S/M Code No. 09-005-425-4T3).

SPECIFICATIONS

Tuner section

Frequency range

FM : 87.5 MHz-108 MHz
Antenna : Rod antenna

AM : 530/531 kHz-1,710/1,602 kHz
(10/9 kHz/step)
Antenna : Ferrite bar antenna

Deck section

Track format

4 tracks, 2 channels

Frequency range

Normal tape : 50 Hz-12,500 Hz (EIAJ)

Recording system

AC bias

Erasing system

Magnet erase

Heads

Recording/Playback head x 1 /
Erasure head x 1

CD player section

Disc

Compact disc

Scanning method

Non-contact optical scanner
(semiconductor laser)

General

Speaker

100 mm cone type (2),
36 mm cone type(2)

Output

Headphones jack (stereo mini-jack)

Power output

4.5 W + 4.5 W (EIAJ 3.2 ohms,DC)
3.3 W + 3.3 W (DIN 1% Rated Power)

Power requirement

DC 12 V using eight R14 (size C) batteries,
AC 110-120V/220-240V
switchable, 50/60 Hz

Power consumption

22 W

Dimensions (W x H x D)




460 (W) x 191.9 (H) x 261.2 (D) mm

Weight

4 kg (excluding batteries)

• Design and specifications are subject to change without notice.

ACCESSORIES / PACKAGE LIST

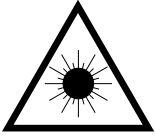
| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|----------------|--------------|-----------------------------------|
| 1 | 8A-CH4-911-010 | | IB,HT (EC-H) B<HT> |
| 1 | 8A-CH4-921-010 | | IB,H (EC-K) B<HC> |
|  2 | 87-A80-036-010 | | AC CORD SET ASSY,E W FLTR VOL<HT> |
|  2 | 87-A80-089-010 | | AC CORD SET, HC<HC> |
|  3 | 87-A91-017-010 | | PLUG,CONVERSION JT-0476<HT> |

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

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

WARNING!

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



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

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-tävälle näkymättömälle lasersäteilylle.

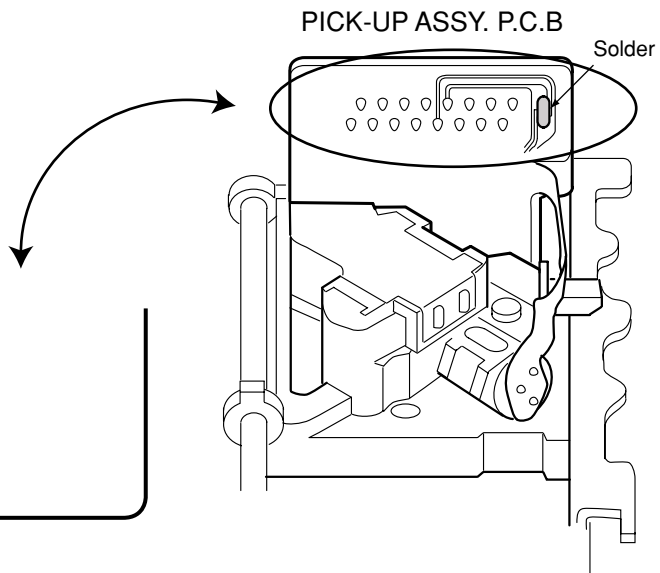
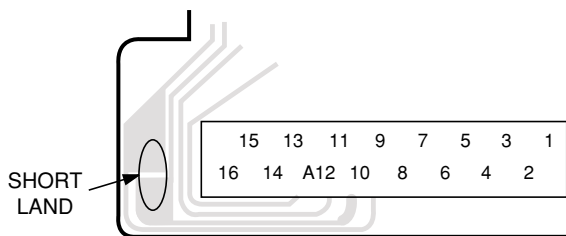
WARNING!

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

Precaution to replace Optical block

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

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



CAUTION

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

ATTENTION

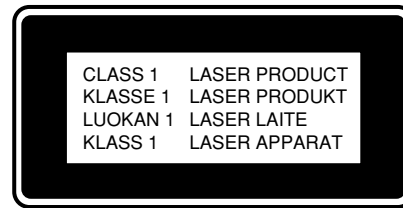
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVASEL!

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

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

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



ELECTRICAL MAIN PARTS LIST

| REF.NO. | PARTNO. | KANRI NO. | DESCRIPTION | REF.NO. | PARTNO. | KANRI NO. | DESCRIPTION |
|-------------------|----------------|-----------|------------------------------|---------|----------------|-----------|-----------------------|
| IC | | | | | | | |
| | 87-A21-550-010 | | IC,TA2149N | C811 | 87-010-178-080 | | CHIP CAP 1000P |
| | 87-A21-185-040 | | C-IC,LC72121M | C812 | 87-010-178-080 | | CHIP CAP 1000P |
| | 87-A21-090-010 | | IC,LA4600 | C816 | 87-010-180-080 | | C-CER 1500P |
| | 87-A21-520-040 | | C-IC,M61509FP | C817 | 87-010-180-080 | | C-CER 1500P |
| | 87-A20-446-010 | | C-IC,LA9241ML | C821 | 87-010-401-080 | | CAP, ELECT 1-50V |
| | 87-A20-459-010 | | C-IC,LC78622ED | C822 | 87-010-401-080 | | CAP, ELECT 1-50V |
| | 87-A21-093-010 | | IC,LA6541D | C823 | 87-010-178-080 | | CHIP CAP 1000P |
| | 8A-CH4-661-010 | | C-IC,LC867132V-5P07 | C824 | 87-010-178-080 | | CHIP CAP 1000P |
| | 87-A21-431-010 | | IC,BA4560N | C829 | 87-010-178-080 | | CHIP CAP 1000P |
| | | | | C830 | 87-010-178-080 | | CHIP CAP 1000P |
| TRANSISTOR | | | | | | | |
| | 89-327-143-080 | | TR,2SC2714 (0.1W) | C833 | 87-018-195-080 | | CAP, CER 1200P-16V |
| | 87-026-447-080 | | TR,2SC1740SR | C843 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| | 89-111-624-080 | | TR,2SA1162Y | C844 | 87-018-124-080 | | CAP, CER 270P-50V |
| | 87-026-213-080 | | CHIP-TR,DTC114YK | C845 | 87-010-178-080 | | CHIP CAP 1000P |
| | 89-327-125-080 | | CHIP TR,2SC2712GR | C846 | 87-010-263-080 | | CAP, ELECT 100-10V |
| | 89-318-154-080 | | TR,2SC1815Y(0.4W) | C851 | 87-010-186-080 | | CAP,CHIP 4700P |
| | 89-112-965-080 | | TR,2SA1296GR | C852 | 87-010-178-080 | | CHIP CAP 1000P |
| | 87-026-463-080 | | TR,2SA933SRS | C853 | 87-018-211-080 | | CAP, CER 0.01-50 |
| | 87-026-291-080 | | TR,DTC124XS | CN201 | 87-099-018-010 | | CONN,16P |
| | 89-213-702-080 | | TR,2SB1370E | CN801 | 87-A60-110-010 | | CONN,4P V S2M-4W |
| | 87-026-462-080 | | TR,2SC1740S | CNA302 | 8A-CH4-629-010 | | CONN ASSY, 6P MA-TU |
| | 89-109-332-380 | | TR,2SA933RS | CNA801 | 8A-CD9-630-010 | | CONN ASSY, 4P RPH |
| | 89-113-187-080 | | TR,2SA1318TU | FC201 | 8A-CD9-620-010 | | FF-CABLE, 16P FR-MAIN |
| | 87-026-239-080 | | C-TR,DTC114TK | L301 | 87-003-097-080 | | FIXED INDUCTOR 1UH |
| | 87-026-210-080 | | C-TR,DTC144EK | L302 | 87-003-097-080 | | FIXED INDUCTOR 1UH |
| | 87-026-464-080 | | TR,DTC114TS (0.3W) | L303 | 87-003-097-080 | | FIXED INDUCTOR 1UH |
| | | | | L801 | 87-007-342-010 | | COIL,OSC 85K BIAS |
| | | | | SW801 | 8Z-CD9-609-010 | | SW,SL 1-6-2 PS62D01 |
| DIODE | | | | | | | |
| | 87-020-465-080 | | DIODE,1SS133 (110MA) | C30 | 87-010-260-080 | | CAP, ELECT 47-25V |
| | 87-017-072-080 | | ZENER,HZS3B1 | C251 | 87-010-404-080 | | CAP, ELECT 4.7-50V |
| | 87-027-703-080 | | ZENER,HZ7A1L | C263 | 87-010-178-080 | | CHIP CAP 1000P |
| | 87-A40-648-080 | | ZENER,MTZJ8.2A | C264 | 87-010-178-080 | | CHIP CAP 1000P |
| | 87-017-978-080 | | DIODE,1N4003 | C266 | 87-010-545-080 | | CAP, ELECT 0.22-50V |
| | 87-027-702-080 | | DIODE,ZENER HZ6C2L<HT> | C267 | 87-010-545-080 | | CAP, ELECT 0.22-50V |
| | 87-A40-465-010 | | DIODE,FR202 | C271 | 87-010-237-080 | | CAP, ELECT 1000-16V |
| | 87-A40-234-080 | | ZENER,MTZJ5.6A | C272 | 87-010-237-080 | | CAP, ELECT 1000-16V |
| | 87-017-932-080 | | ZENER,MTZJ6.2V<HC> | C277 | 87-010-404-080 | | CAP, ELECT 4.7-50V |
| | | | | C278 | 87-010-263-080 | | CAP, ELECT 100-10V |
| MAIN C.B | | | | | | | |
| C211 | 87-010-805-080 | | CAP, S 1-16 | C279 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C212 | 87-010-805-080 | | CAP, S 1-16 | C301 | 87-016-495-000 | | CAP,E 3300-25 M SMG |
| C215 | 87-016-460-080 | | C-CAP,S 0.22-16 B | C306 | 87-010-404-080 | | CAP, ELECT 4.7-50V |
| C216 | 87-016-460-080 | | C-CAP,S 0.22-16 B | C307 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C231 | 87-010-213-080 | | C-CAP,S 0.015-50 B | C308 | 87-010-221-080 | | CAP, ELECT 470-10V |
| C232 | 87-010-213-080 | | C-CAP,S 0.015-50 B | C311 | 87-010-265-080 | | CAP, ELECT 33-16M |
| C233 | 87-A10-201-080 | | C-CAP,S0.33-16 KB | C312 | 87-010-385-080 | | CAP, ELECT 220-25V |
| C234 | 87-A10-201-080 | | C-CAP,S0.33-16 KB | C321 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C235 | 87-016-669-080 | | C-CAP,S 0.1-25 K B | C322 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C236 | 87-016-669-080 | | C-CAP,S 0.1-25 K B | C325 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C237 | 87-010-371-080 | | CAP, ELECT 470-6.3M | C401 | 87-010-403-080 | | CAP, ELECT 3.3-50V |
| C239 | 87-010-197-080 | | CAP, CHIP 0.01 DM | C402 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C240 | 87-010-197-080 | | CAP, CHIP 0.01 DM | C403 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C247 | 87-010-401-080 | | CAP, ELECT 1-50V | C404 | 87-010-248-080 | | CAP, ELECT 220-10V |
| C248 | 87-010-401-080 | | CAP, ELECT 1-50V | C405 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C310 | 87-010-248-080 | | CAP, ELECT 220-10V | C406 | 87-010-374-080 | | CAP, ELECT 47-10V |
| C316 | 87-010-263-080 | | CAP, ELECT 100-10V M 11L SME | C407 | 87-010-178-080 | | CHIP CAP 1000P |
| C317 | 87-010-197-080 | | CAP,S 0.01-25 KB C2012 | C408 | 87-010-198-080 | | CAP, CHIP 0.022 |
| C801 | 87-010-248-080 | | CAP, ELECT 220-10V | C409 | 87-010-248-080 | | CAP, ELECT 220-10V |
| C805 | 87-012-365-080 | | C-CAP,S 0.027-25VBK | C410 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C806 | 87-012-365-080 | | C-CAP,S 0.027-25VBK | C411 | 87-A11-177-080 | | C-CAP,S 0.15-16 K B |
| C807 | 87-010-405-080 | | CAP, ELECT 10-50V | C412 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C808 | 87-010-405-080 | | CAP, ELECT 10-50V | C413 | 87-016-369-080 | | C-CAP,S 0.033-25 B K |
| C809 | 87-010-401-080 | | CAP, ELECT 1-50V | C414 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C810 | 87-010-401-080 | | CAP, ELECT 1-50V | C416 | 87-010-545-080 | | CAP, ELECT 0.22-50V |
| | | | | C417 | 87-012-157-080 | | C-CAP,S 330P-50 CH |
| | | | | C418 | 87-010-213-080 | | C-CAP,S 0.015-50 B |
| | | | | C419 | 87-A11-608-080 | | C-CAP,S 0.33-25 K B |
| | | | | C420 | 87-016-369-080 | | C-CAP,S 0.033-25 B K |

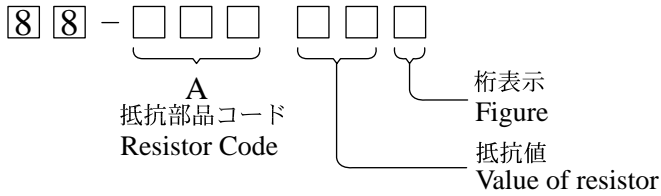
| REF.NO. | PARTNO. | KANRI NO. | DESCRIPTION | REF.NO. | PARTNO. | KANRI NO. | DESCRIPTION |
|---------|----------------|-----------|---------------------------|-----------|----------------|-----------|-----------------------------|
| C421 | 87-A11-177-080 | | C-CAP,S 0.15-16 K B | CN802 | 8A-CH4-692-010 | | CONN,4P H 2.5 |
| C422 | 87-010-183-080 | | C-CAP,S 2700P-50 B | CNA205 | 8A-CD9-626-010 | | CONN ASSY,2P DOOR |
| C423 | 87-010-956-080 | | CHIP-CAP,S 0.068-25B | CNA303 | 8A-CH4-634-010 | | CONN ASSY, 2P S-SP.L |
| C424 | 87-010-993-080 | | C-CAP,S 0.056-25 B | CNA304 | 8A-CH4-635-010 | | CONN ASSY, 2P S-SP.R |
| C425 | 87-010-176-080 | | C-CAP,S 680P-50 SL | CNA402 | 8A-CD9-625-010 | | CONN ASSY,6P CD-ME |
| C426 | 87-A11-608-080 | | C-CAP,S 0.33-25 K B | CNA802 | 8A-CD9-631-010 | | CONN ASSY,4P TP-ME |
| C428 | 87-010-197-080 | | CAP, CHIP 0.01 DM | FC401 | 8A-CD9-621-010 | | FF-CABLE, 16P CD-RF |
| C429 | 87-010-186-080 | | CAP,CHIP 4700P | FC403 | 8A-CD9-622-010 | | FF-CABLE, 8P CD-FR |
| C430 | 87-012-156-080 | | C-CAP,S 220P-50 CH | L401 | 87-003-102-080 | | COIL, 10UH |
| C431 | 87-010-545-080 | | CAP, ELECT 0.22-50V | L404 | 87-003-152-080 | | COIL, 100UH |
| C432 | 87-010-374-080 | | CAP, ELECT 47-10V | R840 | 87-029-124-010 | | RES,FUSE 2.2-1/4 |
| C433 | 87-010-401-080 | | CAP, ELECT 1-50V | SFR430 | 87-024-437-080 | | SFR,100K H RH063MC |
| C434 | 87-010-184-080 | | CHIP CAPACITOR 3300P(K) | SW205 | 87-036-389-010 | | SW, PUSH 1-1-1 R8120125 |
| C435 | 87-010-197-080 | | CAP, CHIP 0.01 DM | X401 | 8Z-CD5-633-010 | | VIB, CER16.93MHZ FCR16.93M2 |
| C436 | 87-010-374-080 | | CAP, ELECT 47-10V | | | | |
| C437 | 87-010-404-080 | | CAP, ELECT 4.7-50V | FRONT C.B | | | |
| C438 | 87-012-368-080 | | C-CAP,S 0.1-50 F | | | | |
| C439 | 87-010-178-080 | | CHIP CAP 1000P | C601 | 87-010-313-080 | | CAP, CHIP 18P |
| C440 | 87-010-145-080 | | CAP, CHIP 1P-50 C CH | C602 | 87-010-315-080 | | C-CAP,S 27P-50 CH |
| C441 | 87-010-197-080 | | CAP, CHIP 0.01 DM | C603 | 87-010-319-080 | | C-CAP,S 56P-50 CH |
| C442 | 87-010-312-080 | | C-CAP,S 15P-50 CH | C604 | 87-010-312-080 | | C-CAP,S 15P-50 CH |
| C446 | 87-012-368-080 | | C-CAP,S 0.1-50 F | C605 | 87-010-317-080 | | C-CAP,S 39P-50 CH |
| C447 | 87-012-368-080 | | C-CAP,S 0.1-50 F | | | | |
| C448 | 87-010-315-080 | | C-CAP,S 27P-50 CH | C608 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C450 | 87-012-140-080 | | CAP 470P | C610 | 87-010-555-040 | | CAP,E 100-10 GAS |
| C451 | 87-012-156-080 | | C-CAP,S 220P-50 CH | C611 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C457 | 87-010-312-080 | | C-CAP,S 15P-50 CH | C612 | 87-A10-189-040 | | CAP,E 220-10 |
| C458 | 87-010-312-080 | | C-CAP,S 15P-50 CH | C613 | 87-010-495-040 | | CAP,E 2.2-50 GAS |
| C459 | 87-010-263-080 | | CAP, ELECT 100-10V | | | | |
| C460 | 87-015-819-080 | | CAPACITOR,0.01 | C614 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C461 | 87-010-197-080 | | CAP, CHIP 0.01 DM | C615 | 87-010-493-040 | | CAP,E 0.47-50 GAS |
| C462 | 87-010-248-080 | | CAP, ELECT 220-10V | C616 | 87-010-494-040 | | CAP,E 1-50 GAS |
| C463 | 87-A11-155-080 | | CAP,TC U 0.01-16 | C620 | 87-015-785-080 | | CHIP CAPACITOR, 0.1FZ-25Z |
| C465 | 87-010-404-080 | | CAP, ELECT 4.7-50V | C625 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C466 | 87-012-368-080 | | C-CAP,S 0.1-50 F | CN601 | 87-099-033-010 | | 16P 6216 H |
| C467 | 87-010-263-080 | | CAP, ELECT 100-10V | CN602 | 87-099-201-010 | | CONN,8P 6216 H |
| C469 | 87-012-154-080 | | C-CAP,S 150P-50 CH | CNA603 | 8A-CD9-624-010 | | CONN ASSY,4P TU-FR |
| C470 | 87-010-544-080 | | CAP, ELECT 0.1-50V | L611 | 87-003-097-080 | | COIL,1.0UH K LAL02 |
| C472 | 87-015-785-080 | | CHIP CAPACITOR, 0.1FZ-25Z | L612 | 87-003-097-080 | | COIL,1.0UH K LAL02 |
| C474 | 87-010-196-080 | | CHIP CAPACITOR, 0.1FZ-25Z | L637 | 87-003-097-080 | | COIL,1.0UH K LAL02 |
| C475 | 87-010-197-080 | | CAP, CHIP 0.01 DM | LCD601 | 8Z-CH4-635-010 | | LED,C7365 ZCH-4 |
| C476 | 87-010-236-080 | | CAP,E 1000-10 SME | LED602 | 88-CD6-630-010 | | LED,934ID RED |
| C477 | 87-010-197-080 | | CAP, CHIP 0.01 DM | LED603 | 88-CD6-630-010 | | LED,934ID RED |
| C478 | 87-010-263-080 | | CAP, ELECT 100-10V | LED604 | 88-CD6-630-010 | | LED,934ID RED |
| C479 | 87-010-197-080 | | CAP, CHIP 0.01 DM | LED606 | 88-CD6-630-010 | | LED,934ID RED |
| C480 | 87-010-221-080 | | CAP, ELECT 470-10V | LED607 | 88-CD6-630-010 | | LED,934ID RED |
| C481 | 87-010-405-080 | | CAP, ELECT 10-50V | LED610 | 88-CD6-630-010 | | LED,934ID RED |
| C482 | 87-010-405-080 | | CAP, ELECT 10-50V | LED611 | 88-CD6-631-010 | | LED,934GD GRN |
| C489 | 87-012-368-080 | | C-CAP,S 0.1-50 F | LED612 | 88-CD6-630-010 | | LED,934ID RED |
| C490 | 87-012-368-080 | | C-CAP,S 0.1-50 F | S601 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C491 | 87-010-197-080 | | CAP, CHIP 0.01 DM | S603 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C492 | 87-010-221-080 | | CAP, ELECT 470-10V | S604 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C493 | 87-010-197-080 | | CAP, CHIP 0.01 DM | S605 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C494 | 87-A11-155-080 | | CAP,TC U 0.01-16 | S606 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C495 | 87-010-184-080 | | CHIP CAPACITOR 3300P(K) | S607 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C501 | 87-012-368-080 | | C-CAP,S 0.1-50 F | S608 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C502 | 87-010-322-080 | | C-CAP,S 100P-50 CH | S613 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C503 | 87-010-322-080 | | C-CAP,S 100P-50 CH | S621 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C504 | 87-010-322-080 | | C-CAP,S 100P-50 CH | S622 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C505 | 87-010-322-080 | | C-CAP,S 100P-50 CH | S623 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C506 | 87-010-322-080 | | C-CAP,S 100P-50 CH | X601 | 87-030-273-010 | | VIB,XTAL 32.768K5PPM |
| C510 | 87-012-368-080 | | C-CAP,S 0.1-50 F | X602 | 87-030-376-080 | | VIB,CER CSA5.76MG200 |
| C831 | 87-010-198-080 | | CAP, CHIP 0.022 | | | | |
| CN202 | 8A-CH4-689-010 | | CONN,3P V 2.5 | TUNER C.B | | | |
| CN301 | 8A-CH4-689-010 | | CONN,3P V 2.5 | C1 | 87-010-312-080 | | C-CAP,S 15P-50V |
| CN303 | 8A-CH4-686-010 | | CONN, 2P V 2.5 | C2 | 87-010-316-080 | | C-CAP,S 33P-50 CH |
| CN304 | 8A-CH4-686-010 | | CONN, 2P V 2.5 | C3 | 87-010-312-080 | | C-CAP,S 15P-50V |
| CN401 | 87-A60-424-010 | | CONN,16P V TOC-B | C5 | 87-016-669-080 | | C-CAP,S 0.1-25 K B |
| CN403 | 87-099-201-010 | | CONN,8P 6216 H | C6 | 87-010-313-080 | | CAP, CHIP 18P |
| CN405 | 87-A60-109-010 | | CONN,2P V S2M-2W | C7 | 87-014-049-080 | | CAP,PP 470P-100 J |
| | | | | C8 | 87-010-178-080 | | CHIP CAP 1000P |

| REF.NO. | PARTNO. | KANRI NO. | DESCRIPTION | REF.NO. | PARTNO. | KANRI NO. | DESCRIPTION |
|---------|----------------|-----------|----------------------|-----------|----------------|-----------|---------------------------|
| C10 | 87-010-197-080 | | CAP, CHIP 0.01 DM | CN3 | 87-A60-110-010 | | CONN,4P V S2M-4W |
| C11 | 87-010-197-080 | | CAP, CHIP 0.01 DM | D3 | 87-A40-616-070 | | VARI-CAP,SVC384 (S/T) |
| C12 | 87-010-197-080 | | CAP, CHIP 0.01 DM | D4 | 87-A40-128-080 | | C-VARI-CAP, HVU202A |
| C13 | 87-010-150-080 | | C-CAP,S 6P-50 CH | D5 | 87-A40-128-080 | | C-VARI-CAP, HVU202A |
| C14 | 87-010-303-080 | | C-CAP,S 330P-50CH | L2 | 87-A50-560-010 | | COIL,FM BPF (ACD) |
| C15 | 87-010-178-080 | | CHIP CAP 1000P | L3 | 8A-CH4-670-010 | | BAR-ANT,MW 2B-ACH(COI) |
| C16 | 87-010-374-080 | | CAP, ELECT 47-10V | L4 | 87-A50-420-010 | | COIL,MW OSC (SYN) |
| C17 | 87-010-198-080 | | CAP, CHIP 0.022 | L5 | 87-A50-566-010 | | COIL,FM RF EX (ACH) |
| C18 | 87-015-835-080 | | C-CAP,0.047 D | L6 | 87-A50-567-010 | | COIL,FM OSC (ACH) |
| C19 | 87-010-263-080 | | CAP, ELECT 100-10V | L7 | 87-A91-308-010 | | FLTR,PCFAZH- 450T (TOK) |
| C20 | 87-010-404-080 | | CAP, ELECT 4.7-50V | L8 | 87-005-849-080 | | COIL,10UH(CECS) |
| C21 | 87-010-197-080 | | CAP, CHIP 0.01 DM | TC1 | 87-011-254-080 | | TRIMER,20P LAR |
| C22 | 87-010-197-080 | | CAP, CHIP 0.01 DM | X1 | 87-A70-061-010 | | VIB,XTAL 4.500MHZ CSA-309 |
| C23 | 87-010-197-080 | | CAP, CHIP 0.01 DM | | | | |
| C24 | 87-010-303-080 | | C-CAP,S 330P-50CH | | | | |
| C25 | 87-016-460-080 | | C-CAP,S 0.22-16 B | | | | |
| C27 | 87-A11-067-080 | | C-CAP,S 1-10 K B | C275 | 87-016-280-080 | | CAP,E 3.3-50 M BP SME |
| C28 | 87-016-669-080 | | C-CAP,S 0.1-25 K B | C276 | 87-016-280-080 | | CAP,E 3.3-50 M BP SME |
| C29 | 87-016-669-080 | | C-CAP,S 0.1-25 K B | CN204 | 8A-CH4-687-010 | | CONN,4P V 2.5 |
| C30 | 87-010-220-080 | | C-CAP,S 0.018-25 K B | CNA203 | 8A-CD9-628-010 | | CONN ASSY,3P MA-HP |
| C31 | 87-010-220-080 | | C-CAP,S 0.018-25 K B | J251 | 87-A60-569-010 | | JACK,HTJ-035-18 |
| C33 | 87-012-358-080 | | C-CAP,S 0.47-10 F Z | | | | |
| C34 | 87-012-358-080 | | C-CAP,S 0.47-10 F Z | | | | |
| C35 | 87-015-819-080 | | CAPACITOR,0.01 | | | | |
| C36 | 87-010-263-080 | | CAP, ELECT 100-10V | KEY C.B | | | |
| C37 | 87-010-197-080 | | CAP, CHIP 0.01 DM | CN605 | 87-A60-109-010 | | CONN,2P V S2M-2W |
| C38 | 87-010-263-080 | | CAP, ELECT 100-10V | S614 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C39 | 87-010-404-080 | | CAP, ELECT 4.7-50V | S615 | 87-A91-704-080 | | SW,TACT EVQ 214 05R |
| C40 | 87-010-197-080 | | CAP, CHIP 0.01 DM | | | | |
| C41 | 87-010-178-080 | | CHIP CAP 1000P | BATT1 C.B | | | |
| C42 | 87-010-178-080 | | CHIP CAP 1000P | C901 | 87-018-205-080 | | CAP, CERA-SOL 0.022 |
| C43 | 87-010-178-080 | | CHIP CAP 1000P | C902 | 87-018-205-080 | | CAP, CERA-SOL 0.022 |
| C44 | 87-010-312-080 | | C-CAP,S 15P-50 CH | C903 | 87-018-205-080 | | CAP, CERA-SOL 0.022 |
| C45 | 87-010-197-080 | | CAP, CHIP 0.01 DM | C904 | 87-018-205-080 | | CAP, CERA-SOL 0.022 |
| C46 | 87-010-197-080 | | CAP, CHIP 0.01 DM | CNA901 | 8A-CD9-627-010 | | CONN ASSY,3P PWR |
| C47 | 87-010-197-080 | | CAP, CHIP 0.01 DM | | | | |
| C48 | 87-010-197-080 | | CAP, CHIP 0.01 DM | △ F901 | 87-035-347-010 | | FUSE,2.5A 250 VT |
| C49 | 87-012-140-080 | | CAP 470P | △ FC901 | 87-033-213-010 | | CLAMP,FUSE SMK |
| C50 | 87-010-197-080 | | CAP, CHIP 0.01 DM | △ FC902 | 87-033-213-010 | | CLAMP,FUSE SMK |
| C71 | 87-010-197-080 | | CAP, CHIP 0.01 DM | △ PT901 | 8A-CH4-668-010 | | PT, H |
| C72 | 87-010-263-080 | | CAP, ELECT 100-10V | △ SW901 | 87-A91-369-010 | | SW,AC SL 2 2 2 SDKGA41700 |
| C73 | 87-010-197-080 | | CAP, CHIP 0.01 DM | | | | |
| C75 | 87-010-197-080 | | CAP, CHIP 0.01 DM | BATT2 C.B | | | |
| C92 | 87-010-197-080 | | CAP, CHIP 0.01 DM | | | | |
| C93 | 87-010-197-080 | | CAP, CHIP 0.01 DM | SP C.B | | | |
| CF1 | 87-A91-094-010 | | FLTR,CDA10.7 MG80A | | | | |
| CF2 | 87-008-261-010 | | FILTER, SFE10.7MA5-A | CNA204 | 8A-CH4-633-010 | | CONN ASSY,4P SP |
| CF3 | 87-008-261-010 | | FILTER, SFE10.7MA5-A | | | | |
| CN2 | 87-099-854-010 | | CONN,6P S2M-6W | MOTOR C.B | | | |

チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

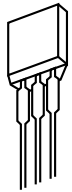
Chip Resistor Part Coding



チップ抵抗
Chip resistor

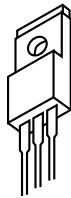
| 容量 Wattage | 種類 Type | 許容誤差 Tolerance | 記号 Symbol | 寸法/Dimensions (mm) | | | 抵抗コード : A Resistor Code : A | |
|---------------|------------|-------------------|--------------|--------------------|-----|------|--------------------------------|-----|
| | | | | 外形/Form | L | W | | t |
| 1/16W | 1005 | ± 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



E C B

2SA933SRS
2SA933RS
2SC1740S
2SC1740SR
DTC114TS
DTC124XS



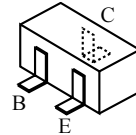
B C E

2SB1370E



E C B

2SA1296GR
2SC1815Y



2SA1162Y
2SC2712GR
2SC2714
DTC114TK
DTC114YK
DTC144EK



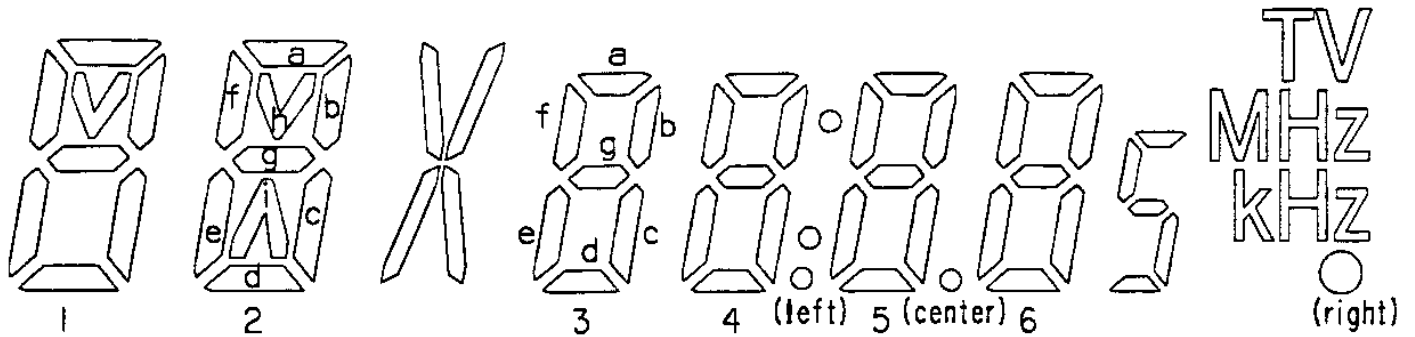
E C B

2SA1318TU

LCD DISPLAY

LCD, HLC7365 ZCH-4

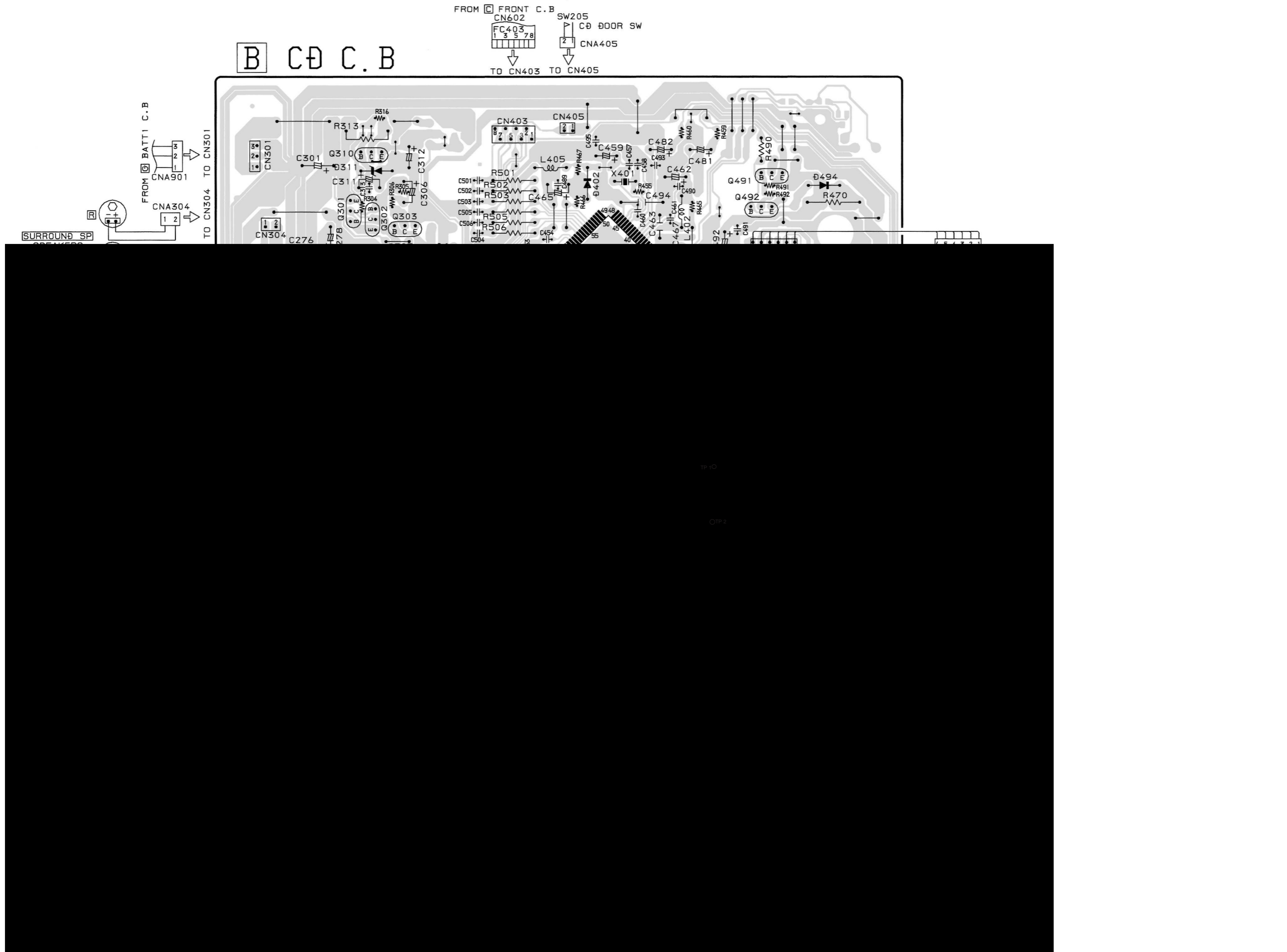
VOL G 1 M MONO STEREO



| NO. | COM.1 | COM.2 | COM.3 |
|-----|-------|----------|------------|
| 1 | 2b | 2c | 2d |
| 2 | 1b | 1c | 1d |
| 3 | 1a | 1f | 1e |
| 4 | 1h | 1g | VOL |
| 5 | 2a | 2f | 2e |
| 6 | 2h | 2g | 2i |
| 7 | 3f | 3e | C |
| 8 | 3a | 3g | 3d |
| 9 | 3b | 3c | |
| 10 | 4f | 4e | M |
| 11 | 4a | 4g | 4d |
| 12 | 4b | 4c | X |
| 13 | • | • (left) | MONO |
| 14 | 5f | 5e | • (right) |
| 15 | 5a | 5g | 5d |
| 16 | 5b | 5c | • (center) |
| 17 | 6f | 6e | STEREO |
| 18 | 6a | 6g | 6d |
| 19 | 6b | 6c | 5 |
| 20 | TV | MHz | KHz |
| 21 | COM.1 | | |
| 22 | | COM.2 | |
| 23 | | | COM.3 |

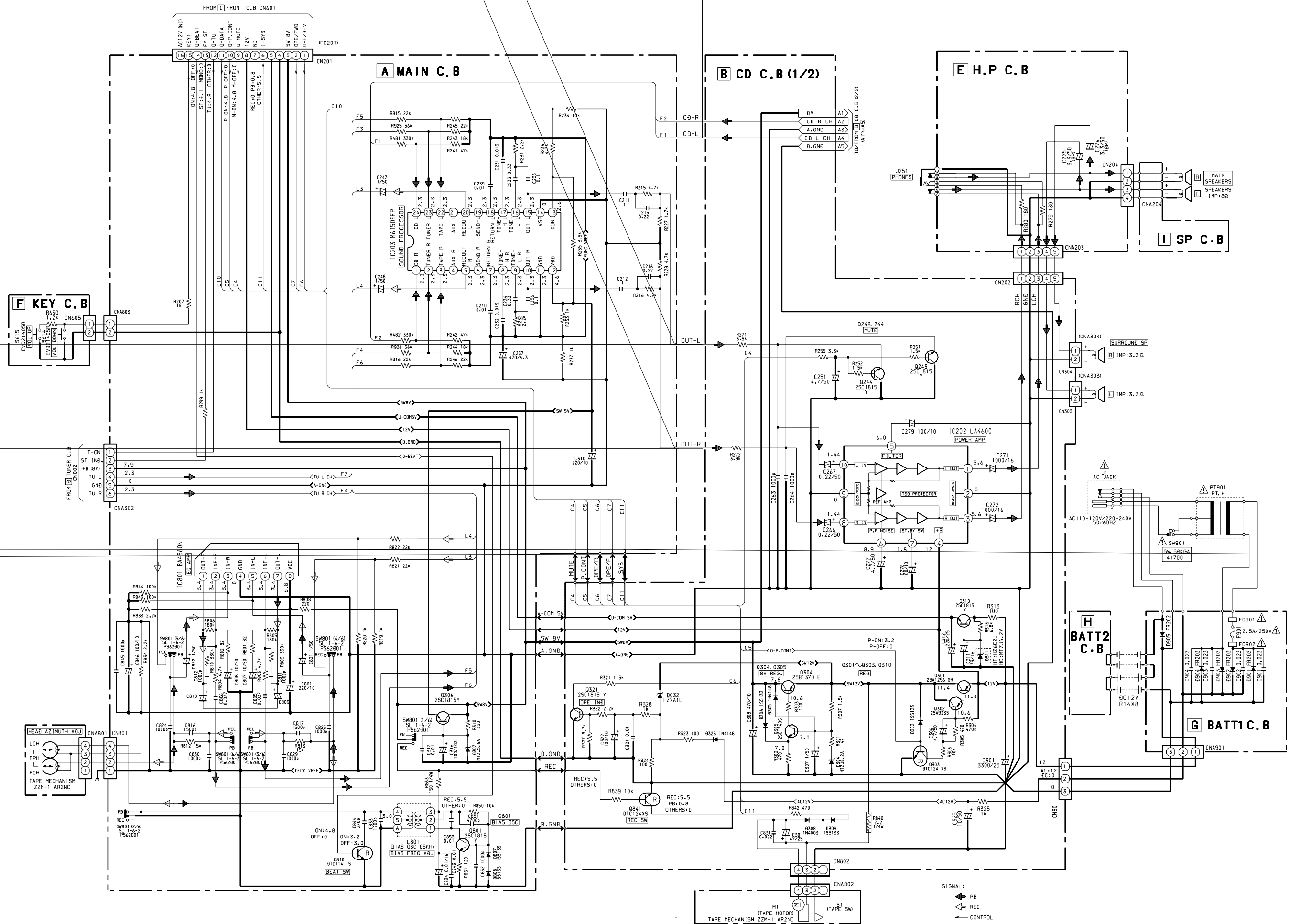
WIRING - 1 (MAIN / CD)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

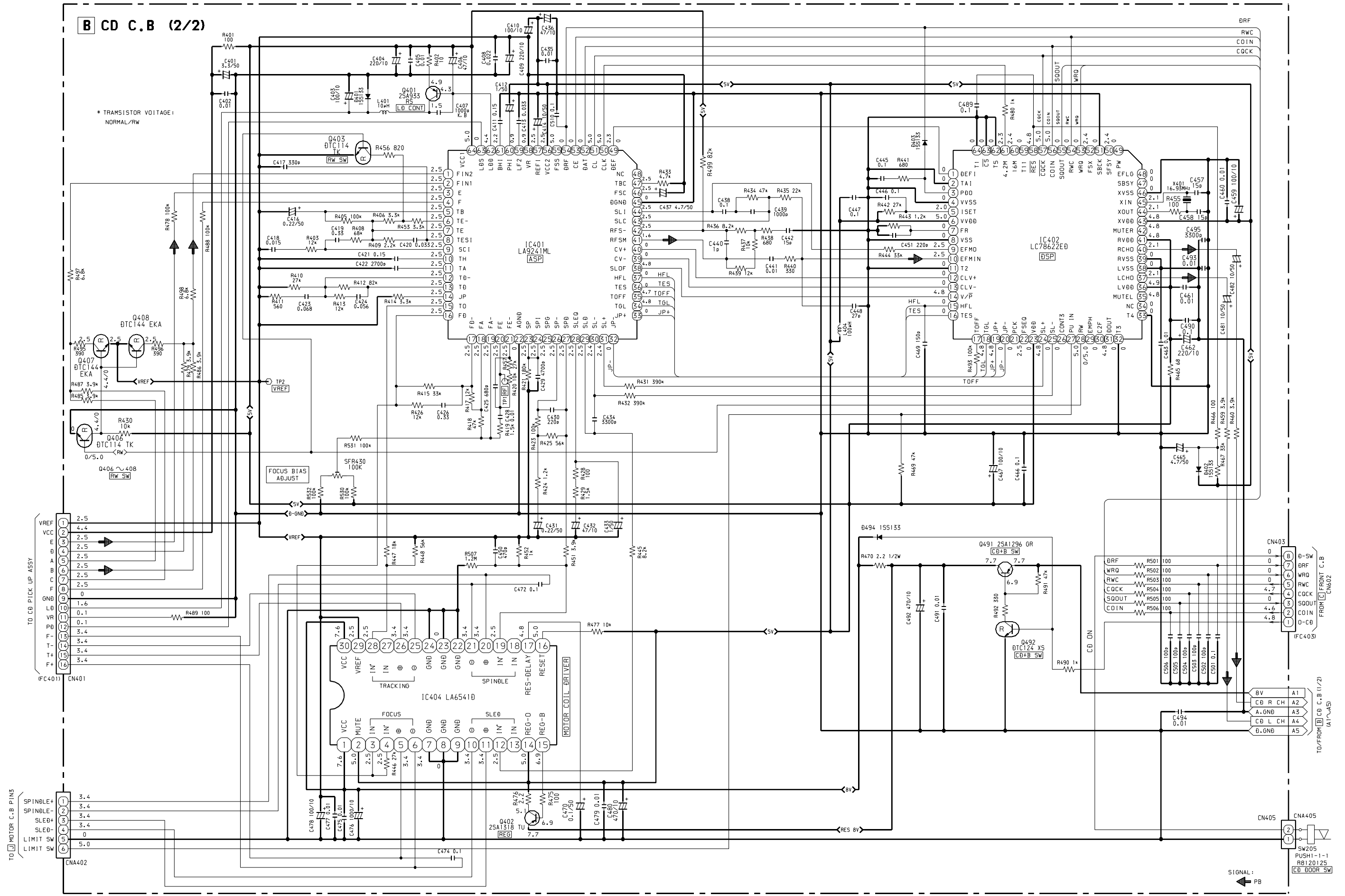


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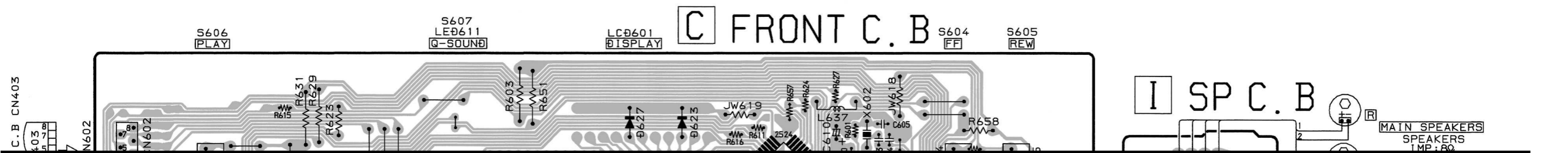
SCHEMATIC DIAGRAM - 1 (MAIN / CD (1/2) / H.P. / KEY / BATT1 / BATT2 / SP)



SCHEMATIC DIAGRAM - 2 (CD (2/2))



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

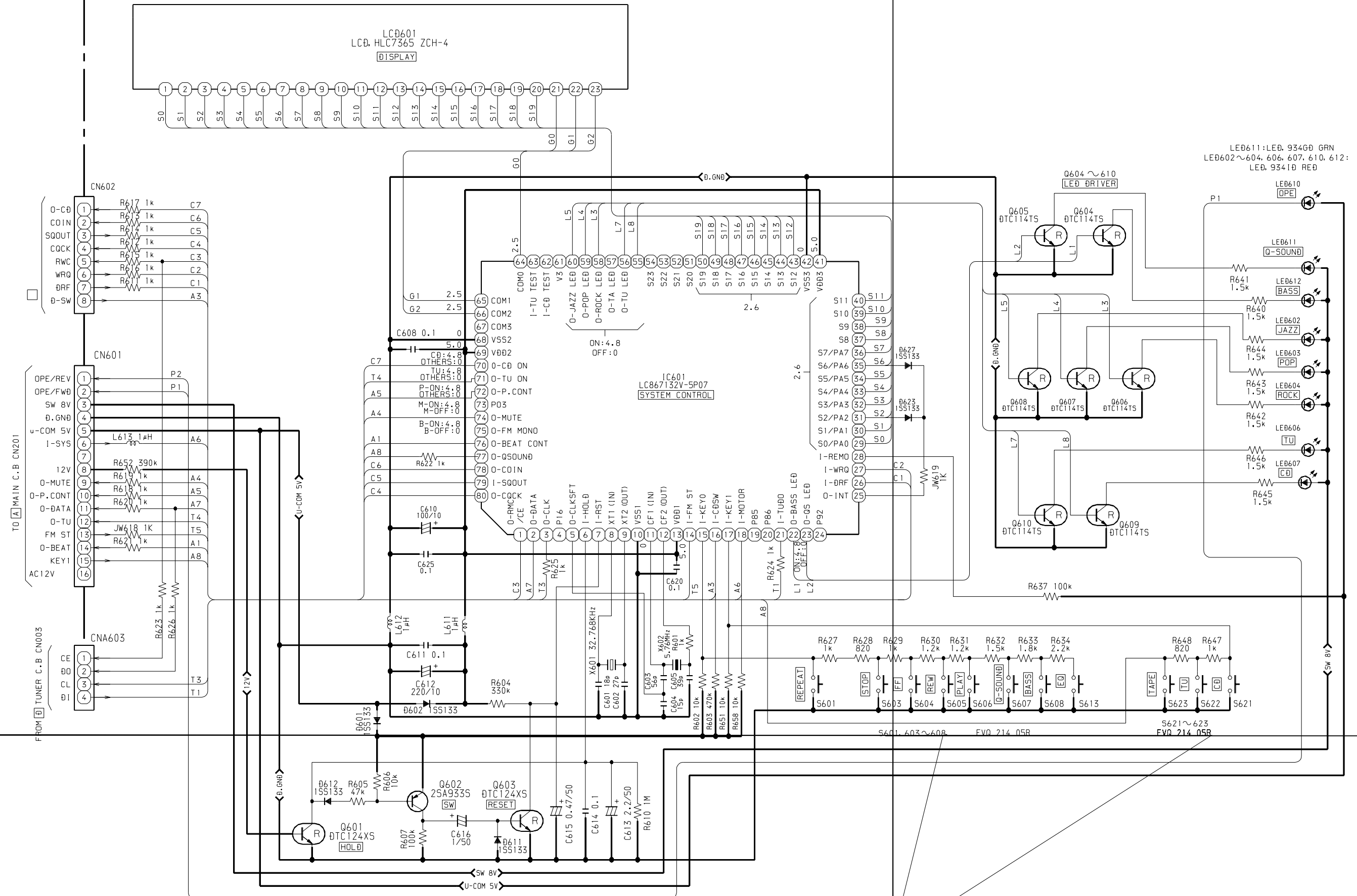


C.B. CN403
403
578
N602

SW 901
AC VOLTAGE
110 - 120 V
220 - 240 V

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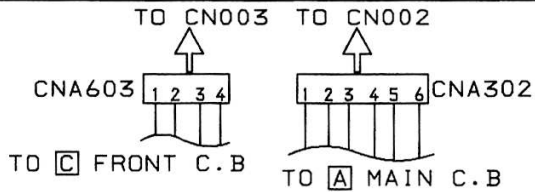
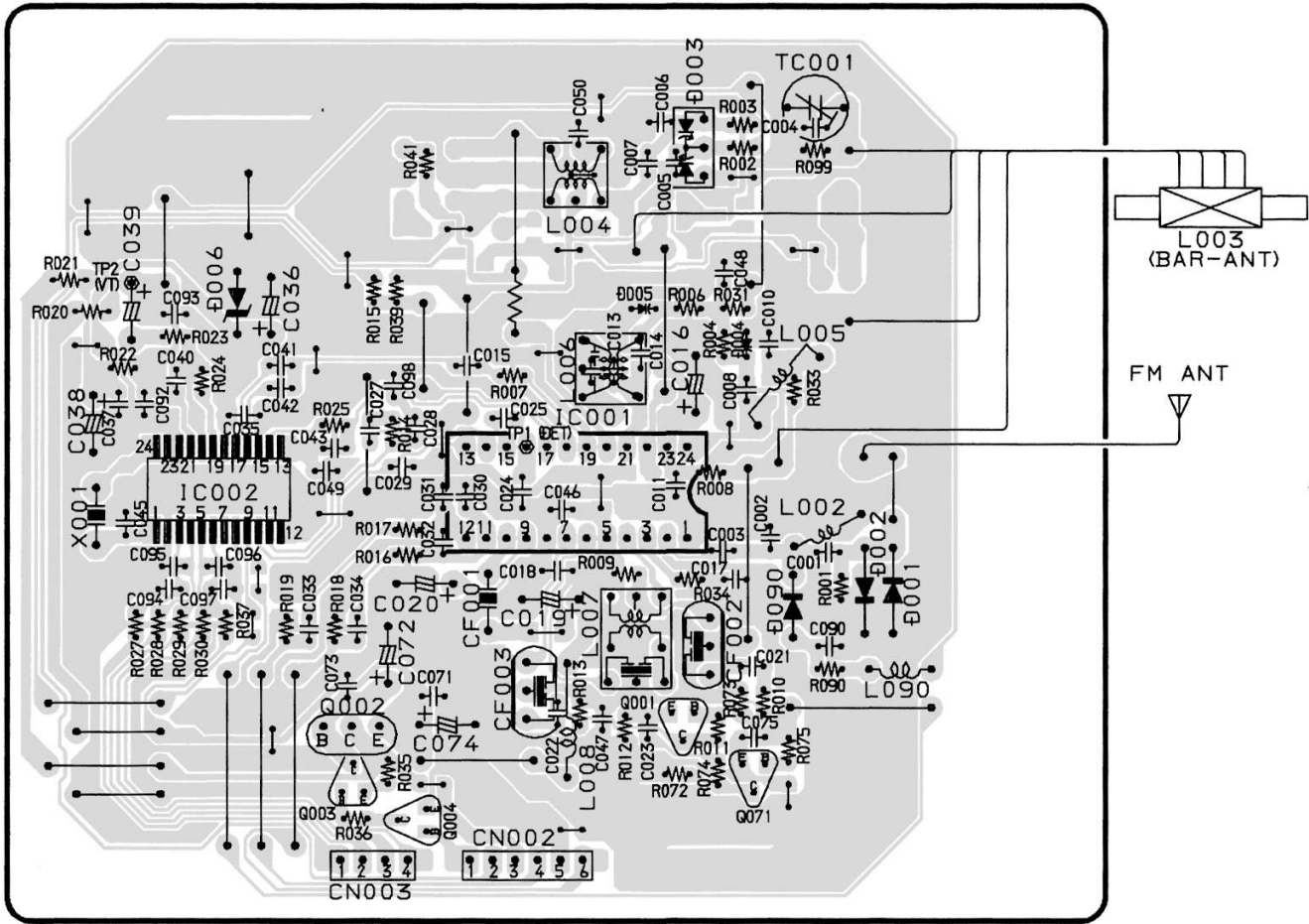
C FRONT C.B



WIRING - 3 (TUNER)

| | | | | | | | | | | | | | | |
|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
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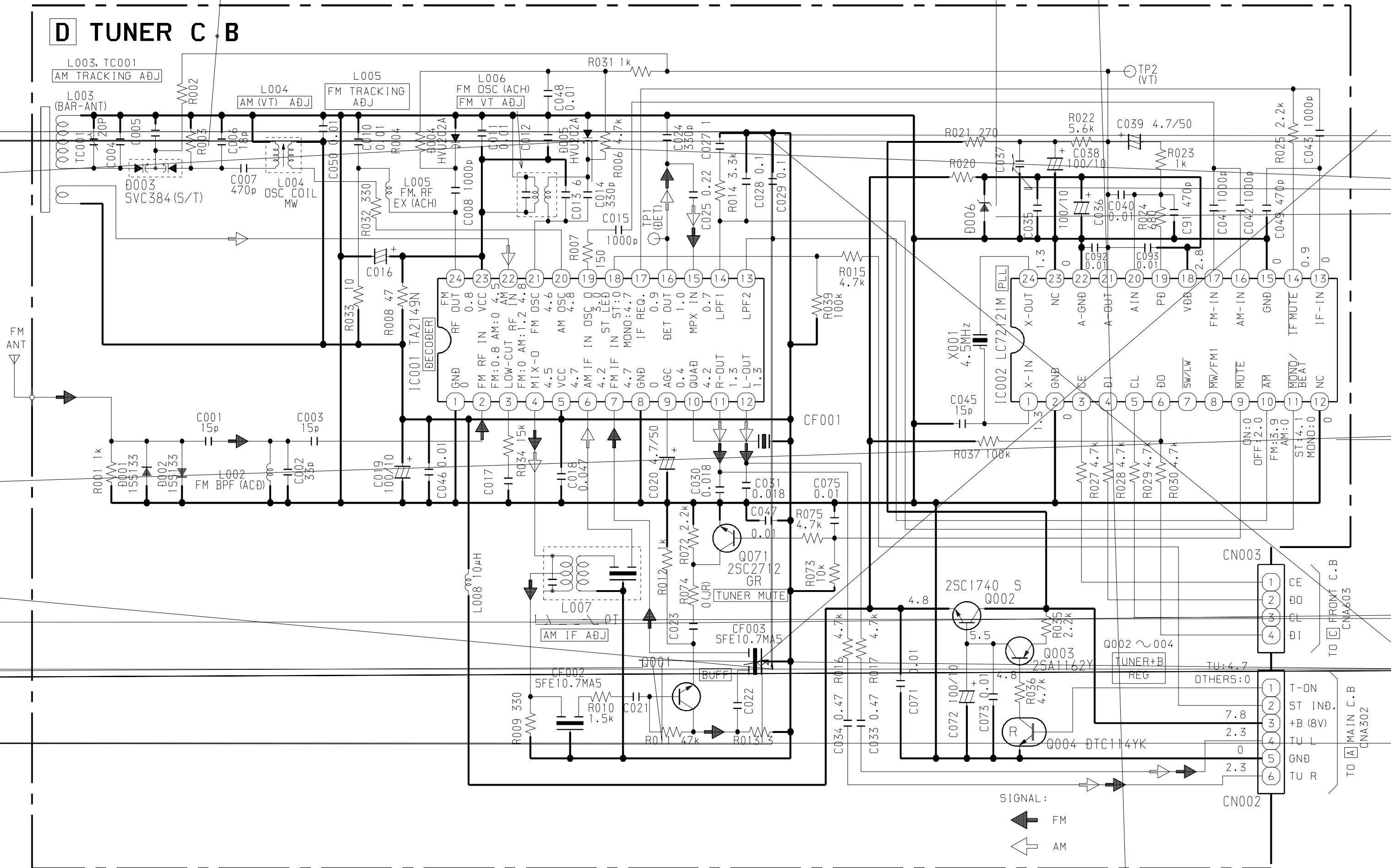
⊠ TUNER C. B



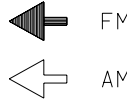
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SCHEMATIC DIAGRAM - 4 (TUNER)

D TUNER C.B



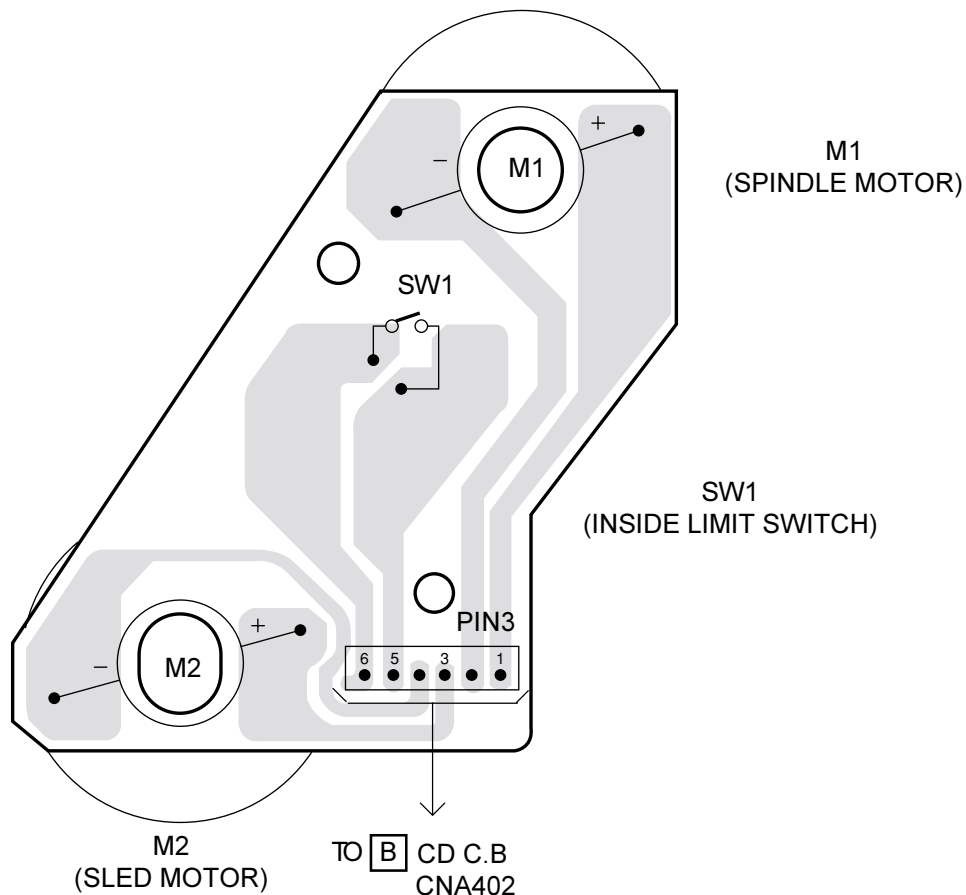
SIGNAL:



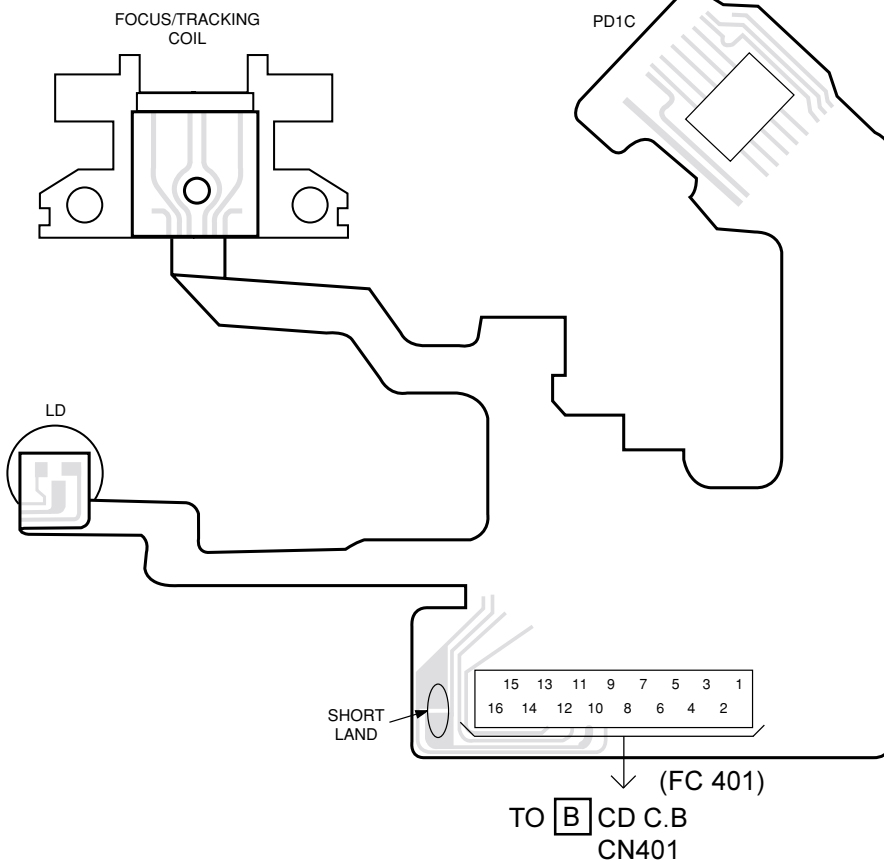
WIRING - 4 (MOTOR)

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

J MOTOR C.B

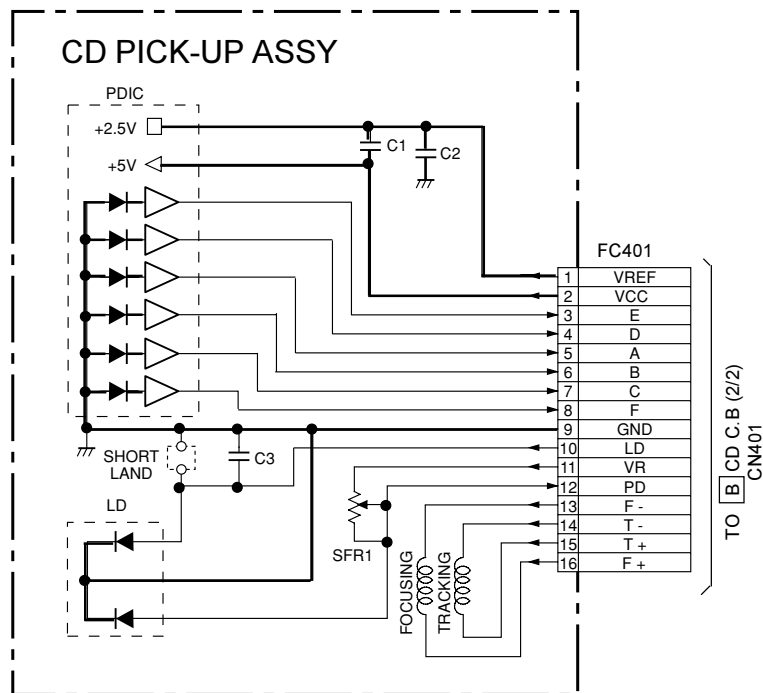
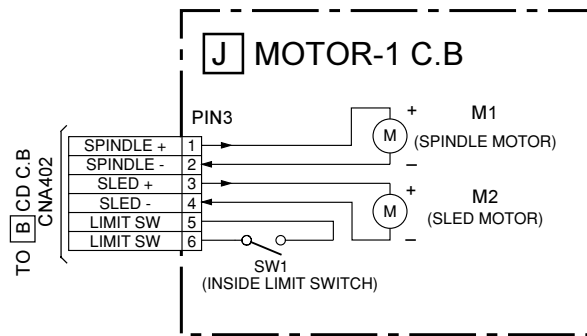


CD PICK UP ASSY



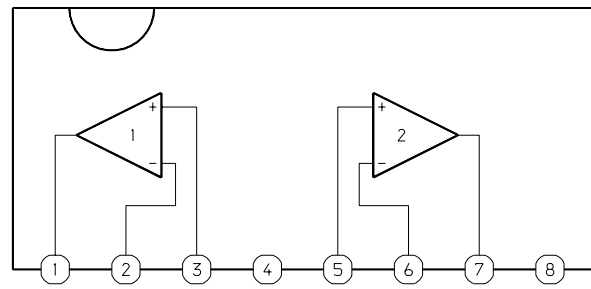
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SCHEMATIC DIAGRAM - 5 (MOTOR)

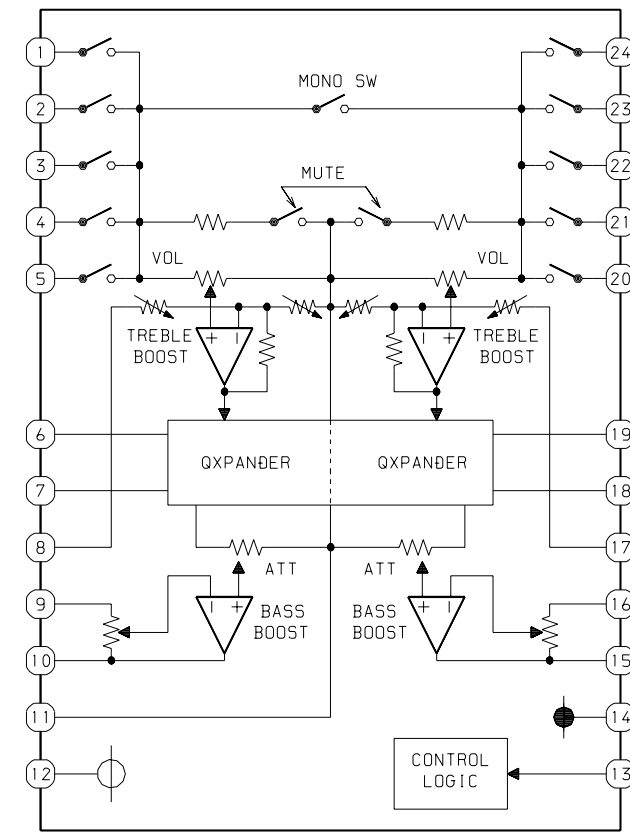


IC BLOCK DIAGRAM

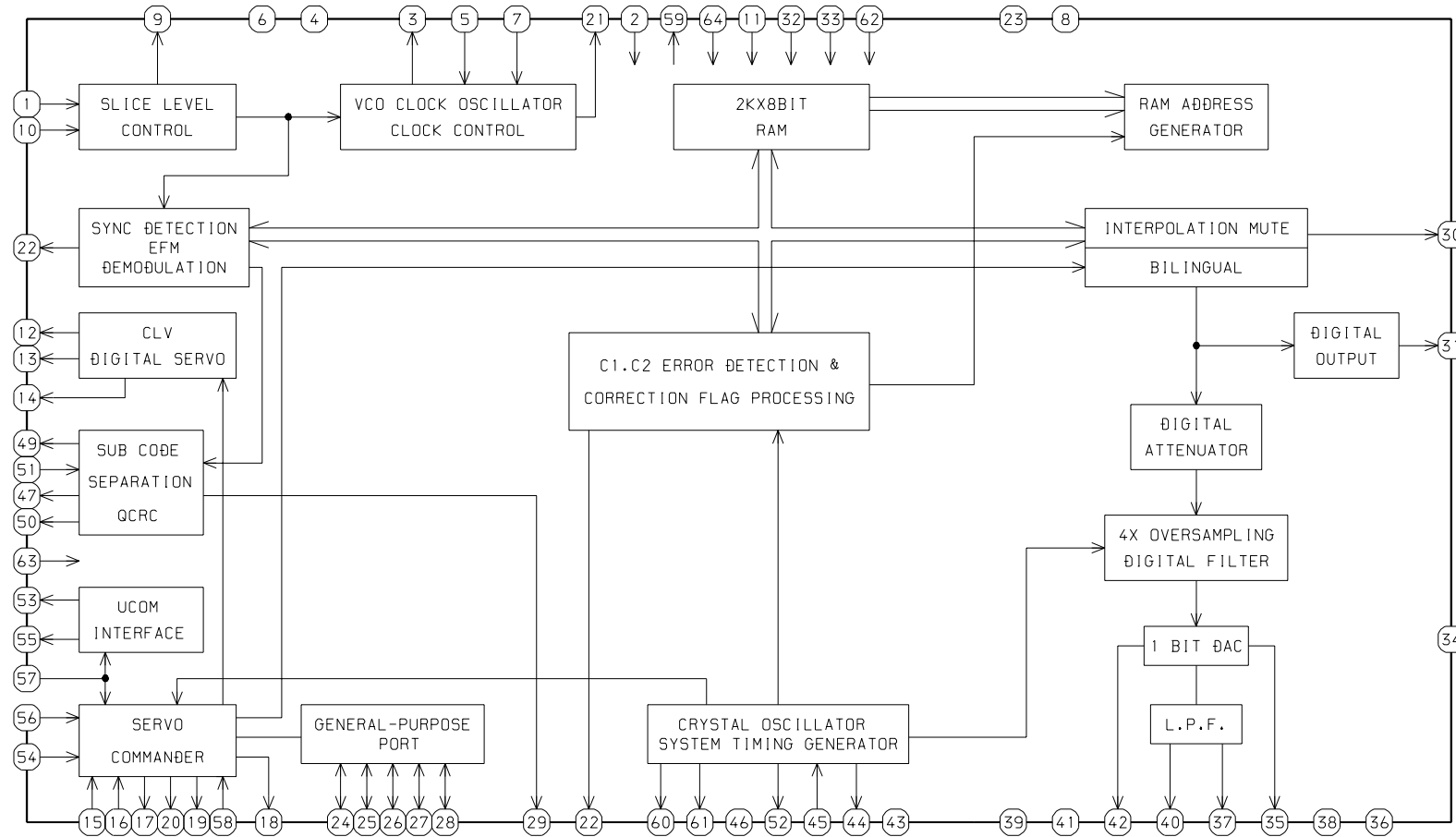
IC, BA4560N



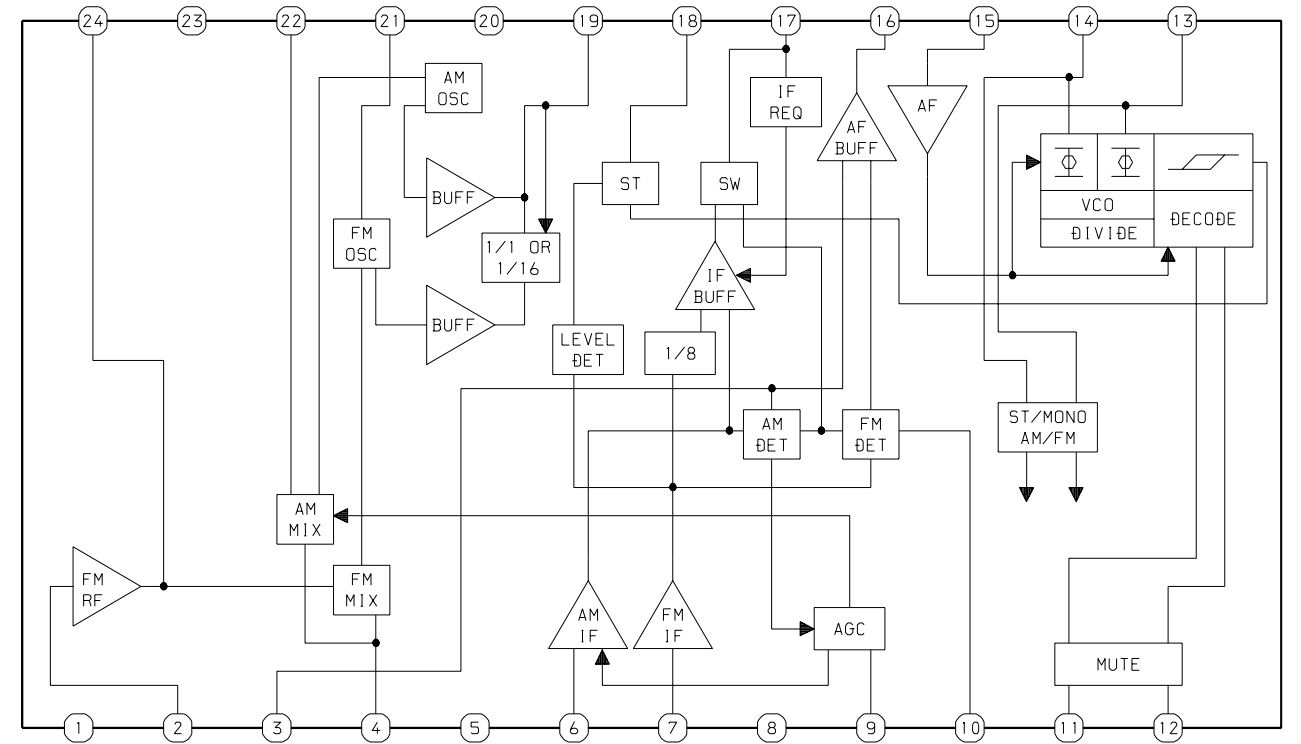
IC, M61509FP

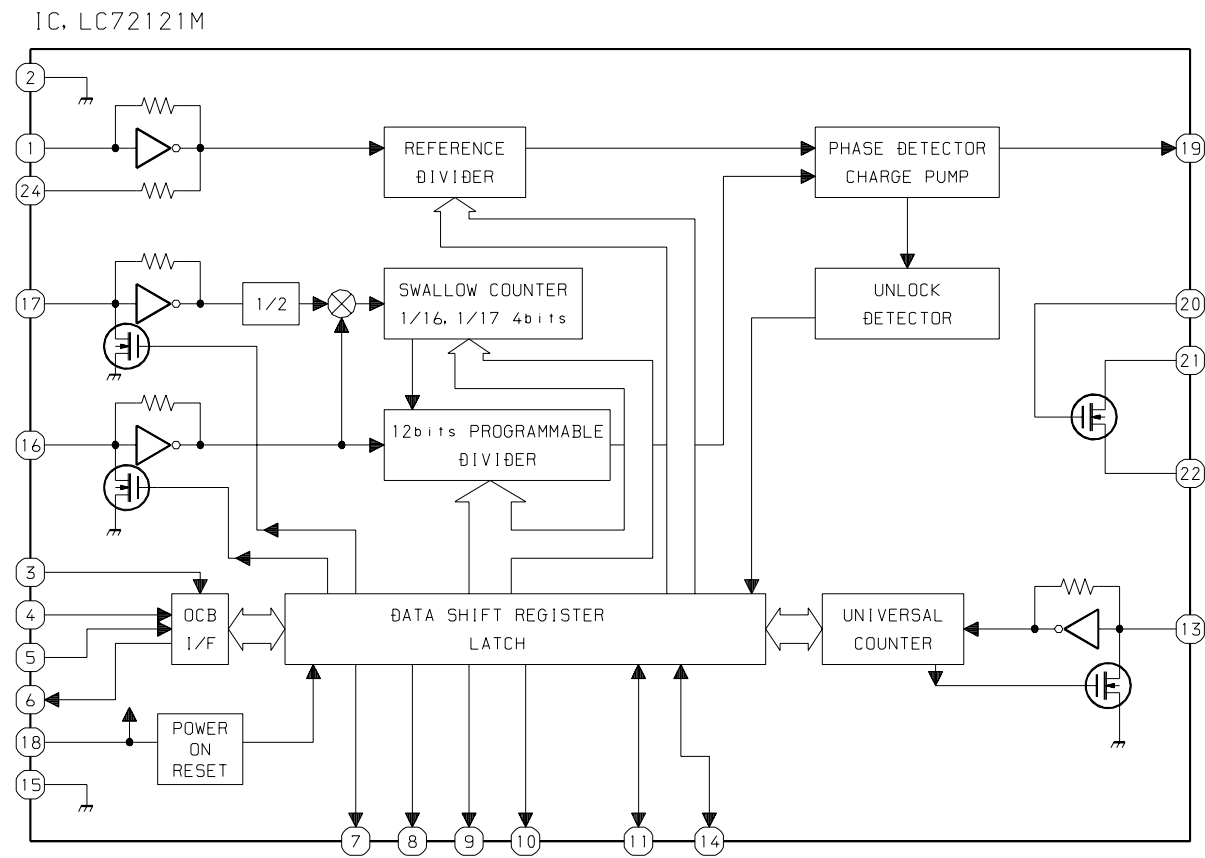
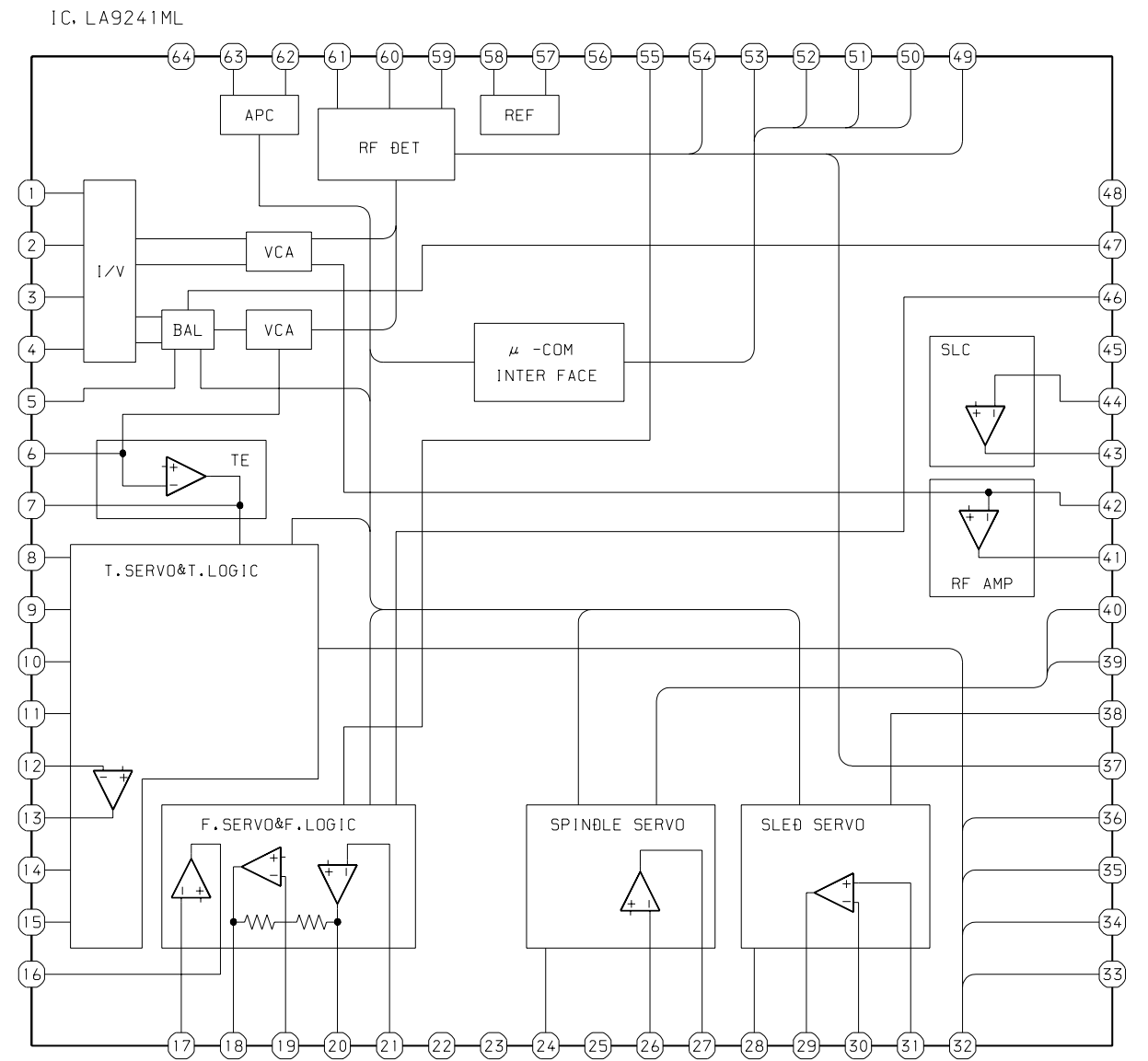
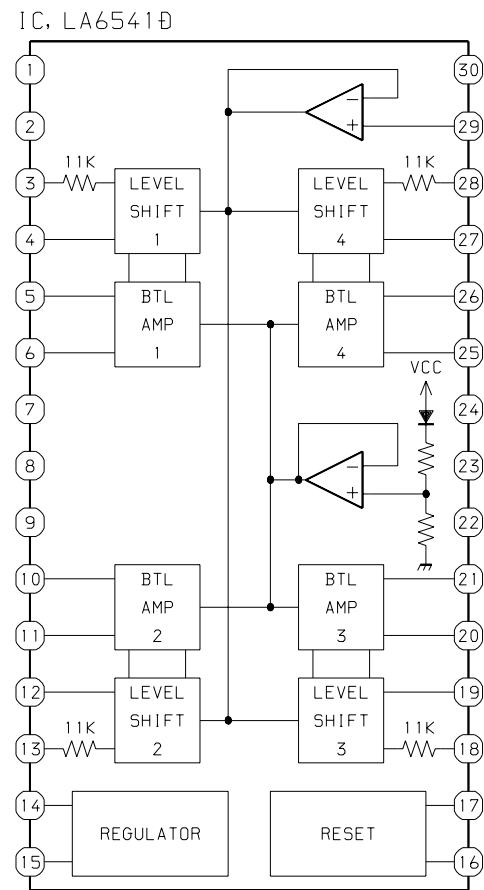


IC, LC78622E0



IC, TA2149N





IC DESCRIPTION

IC, LC867132V-5P07

| Pin No. | Pin Name | I/O | Description |
|---------|------------|-----|--|
| 1 | O-RMC / CE | O | CD read/write control output and TU CE. |
| 2 | O-DATA | O | Data output to M61509FP. |
| 3 | O-CLK | O | Output to LC72121M CLK. |
| 4 | P16 | - | Not used. |
| 5 | O-CLKSFT | O | Clock shift output of the microcomputer. |
| 6 | I-HOLD | I | Hold status detection. |
| 7 | I-RST | I | Microcomputer reset pin. |
| 8 | XT1 (IN) | I | Connected to 32.768 kHz crystal oscillator. |
| 9 | XT2 (OUT) | O | |
| 10 | VSS1 | - | Connected to GND. |
| 11 | CF1 (IN) | I | Input pin for ceramic resonator oscillation. |
| 12 | CF2 (OUT) | O | Output pin for ceramic resonator oscillation. |
| 13 | VDD1 | - | Power supply. |
| 14 | I-FM ST | I | FM STEREO status input. |
| 15 | I-KEY0 | I | KEY AD input. |
| 16 | I-CDSW | I | CD DOOR SW status detection input. |
| 17 | I-KEY1 | I | KEY AD input. |
| 18 | I-MOTOR | I | DECK MECHA MOTOR status input. |
| 19 | P85 | - | Not used. |
| 20 | P86 | - | Not used. |
| 21 | I-TUDO | I | Data input from LC72121M. |
| 22 | O-BASS LED | O | BASS LED ON/OFF control output. |
| 23 | O-QS LED | O | Q-Sound LED ON/OFF control output. |
| 24 | P92 | - | Not used. |
| 25 | O-INT | O | INITIAL DIODE MATRIX detection output. |
| 26 | I-DRF | I | CD RF level detection input. |
| 27 | I-WRQ | I | CD sub-code Q standby input. |
| 28 | I-REMO | I | Remote control input. (not used) |
| 29 | S0 / PA0 | O | LCD segment output / Initial settings output (SW) (not used). |
| 30 | S1 / PA1 | O | LCD segment output / Initial settings output (LW) (not used). |
| 31 | S2 / PA2 | O | LCD segment output / Initial settings output (MW 10K). |
| 32 | S3 / PA3 | O | LCD segment output / Initial settings output (FM WIDE) (not used). |
| 33 | S4 / PA4 | O | LCD segment output / Initial settings output (AMST) (not used). |
| 34 | S5 / PA5 | O | LCD segment output / Initial settings output (SW2) (not used). |
| 35 | S6 / PA6 | O | LCD segment output / Initial settings output. |
| 36 | S7 / PA7 | O | LCD segment output / Initial settings output (not used). |
| 37~40 | S8~S11 | O | LCD segment output. |
| 41 | VDD3 | - | Power supply. |
| 42 | VSS3 | - | Connected to GND. |
| 43~50 | S12~S19 | O | LCD segment output. |

| Pin No. | Pin Name | I/O | Description |
|---------|-------------|-----|---|
| 51~54 | S20~S23 | - | LCD segment output. (not used) |
| 55 | O-CD LED | O | LED ON/OFF control output for CD functions. |
| 56 | O-TU LED | O | LED ON/OFF control output for TUNER functions. |
| 57 | O-TA LED | O | LED ON/OFF control output for TAPE function. (not used) |
| 58 | O-ROCK LED | O | LED ON/OFF control output for ROCK. |
| 59 | O-POP LED | O | LED ON/OFF control output for POP. |
| 60 | O-JAZZ LED | O | LED ON/OFF control output for JAZZ. |
| 61 | V3 | - | Not used. |
| 62 | I-CD TEST | - | Not used. |
| 63 | I-TU TEST | - | Not used. |
| 64~66 | COM0~COM2 | O | LCD common output. |
| 67 | COM3 | - | LCD common output. (Not used) |
| 68 | VSS2 | - | Connected to GND. |
| 69 | VDD2 | - | Power supply. |
| 70 | O-CD ON | O | CD POWER control output. |
| 71 | O-TU ON | O | TUNER POWER control output. |
| 72 | O-P.CONT | O | Power supply control output. |
| 73 | P03 | - | Not used. |
| 74 | O-MUTE | O | Main mute output. |
| 75 | O-FM MONO | - | Not used. |
| 76 | O-BEAT CONT | O | BEAT switch over output. |
| 77 | O-QSOUND | - | QSOUND ON/OFF output. |
| 78 | O-COIN | O | CD command output. |
| 79 | I-SQOUT | I | CD sub-code Q input. |
| 80 | O-CQCK | O | CLK for CD commands/sub-codes. |

| Pin No. | Pin Name | I/O | Description |
|---------|-------------|-----|--|
| 1 | DEFI | I | Defect detection signal (DEF) input. |
| 2 | TAI | I | Test input. A pull-down resistor is built in. (Must be connected to 0V.) |
| 3 | PDO | O | External VCO control phase comparator output. |
| 4 | VVSS | – | Internal VCO ground. (Must be connected to 0V.) |
| 5 | ISET | O | PDO output current adjustment resistor connection. |
| 6 | VVDD | – | Internal VCO power supply. |
| 7 | FR | I | VCO frequency range adjustment. |
| 8 | VSS | – | Digital system ground. (Must be connected to 0V.) |
| 9 | EFMO | O | Slice level control; EFM signal output. |
| 10 | EFMIN | I | Slice level control; EFM signal input. |
| 11 | T2 | I | Test input. A pull-down resistor is built in. (Must be connected to 0V.) |
| 12 | CLV+ | O | Disc motor control output. Three-value output is also possible when specified by microprocessor command. |
| 13 | CLV– | | |
| 14 | V \bar{P} | O | Rough servo/phase control automatic switching monitor output. Outputs a high level during rough servo and a low level during phase control. |
| 15 | HFL | I | Track detection signal input. This is a Schmitt input. |
| 16 | TES | I | Tracking error signal input. This is a Schmitt input. |
| 17 | TOFF | O | Tracking off output. |
| 18 | TGL | O | Tracking gain switching output. Increase the gain when low. |
| 19 | JP+ | O | Track jump output. Three-value output is also possible when specified by microprocessor command. |
| 20 | JP– | | |
| 21 | PCK | O | EFM data playback clock monitor. Outputs 4.3218 MHz when the phase is locked. (Not used) |
| 22 | FSEQ | O | Synchronization signal detection output. Outputs a high level when the synchronization signal detected from the EFM signal and the internally generated synchronization signal agree. (Not used) |
| 23 | VDD | – | Digital system power supply. |
| 24 | SL+ | O | Serial data command sled signal output terminal from microprocessor. |
| 25 | SL– | | |
| 26 | CONT3 | – | Not used. |
| 27 | PU IN | I | CD pickup inside limit switch. |
| 28 | RW | O | Serial data command sled output terminal from microprocessor. |
| 29 | EMPH | O | De-emphasis monitor pin. A high level indicates playback of a de-emphasis disk. (not used) |
| 30 | C2F | O | C2 flag output. (not used) |
| 31 | DOUT | O | Digital output (EIAJ format). (not used) |
| 32 | T3 | I | Test input. A pull-down resistor is built in. (Must be connected to 0V.) |
| 33 | T4 | | |
| 34 | NC | – | Not connected. |
| 35 | MUTEL | O | Left channel one-bit D/A converter mute output. (Not used) |
| 36 | LVDD | – | Left channel one-bit D/A converter power supply. |
| 37 | LCHO | O | Left channel one-bit D/A converter output. |

| Pin No. | Pin Name | I/O | Description |
|---------|--------------------------|-----|--|
| 38 | LVSS | - | Left channel one-bit D/A converter ground. (Must be connected to 0V.) |
| 39 | RVSS | - | Right channel one-bit D/A converter ground. (Must be connected to 0V.) |
| 40 | RCHO | O | Right channel one-bit D/A converter output. |
| 41 | RVDD | - | Right channel one-bit D/A converter power supply. |
| 42 | MUTER | O | Right channel one-bit D/A converter mute output. (not used) |
| 43 | XVDD | - | Crystal oscillator power supply. |
| 44 | XOUT | O | Connections for a 16.93 MHz crystal oscillator element. |
| 45 | XIN | I | |
| 46 | XVSS | - | Crystal oscillator ground. (Must be connected to 0V.) |
| 47 | SBSY | O | Subcode clock synchronization signal output. (not used) |
| 48 | EFLG | O | C1, C2, single and double error correction monitor. (not used) |
| 49 | PW | O | Subcode P, Q, R, S, T, U and W output. (not used) |
| 50 | SFSY | O | Subcode frame synchronization signal output. This signal falls when the subcode are in standby state. (not used) |
| 51 | SBCK | I | Subcode readout clock input. This is a Schmitt input. (Must be connected to 0V.) |
| 52 | FSX | O | Output pin for the 7.35 kHz synchronization signal divided from the crystal oscillator. (Not used) |
| 53 | WRQ | O | Subcode Q output standby output. |
| 54 | RWC | I | Read/write control input. This is a Schmitt input. |
| 55 | SQOUT | O | Subcode Q output. |
| 56 | COIN | I | Command input pin from control microprocessor. |
| 57 | $\overline{\text{CQCK}}$ | I | Input for both the command input acquisition clock and the SQOUT pin subcode readout clock input pin. This is Schmitt input. |
| 58 | $\overline{\text{RES}}$ | I | Reset input. This pin must be set low briefly after power is first applied. |
| 59 | T11 | O | Test output. Leave open. (Normally output a low level). (Not used) |
| 60 | 16M | O | 16.9344 MHz output. (Not used) |
| 61 | 4.2M | O | 4.2336 MHz output. |
| 62 | T5 | I | Test input. A pull-down resistor is built-in. (Must be connected to 0V.) |
| 63 | $\overline{\text{CS}}$ | I | Chip select input. A pull-down resistor is built-in. (Must be connected to 0V if not controlled.) |
| 64 | T1 | I | Test input. No pull-down resistor. (Must be connected to 0V.) |

| Pin No. | Pin Name | I/O | Description |
|---------|----------|-----|---|
| 1 | FIN2 | O | For the connection of the pickup photodiode. Addition to the FIN1 pin creates an RF signal and subtraction from it create an EF signal. |
| 2 | FIN1 | O | For the connection of the pickup photodiode. |
| 3 | E | O | For the connection of the pickup photodiode. Subtraction from the F pin creates a TE signal. |
| 4 | F | O | For the connection of the pickup photodiode. |
| 5 | TB | I | Inputs the DC components in the TE signal. |
| 6 | TE- | O | For the connection of a resistor which sets the gain of the TE signal between this pin and the TE pin. |
| 7 | TE | O | TE signal output. |
| 8 | TESI | I | TES (track error sense) comparator input. The signal is passed through a BPF. |
| 9 | SCI | I | Shock detection input. |
| 10 | TH | I | Sets the time constant for the tracking gain. |
| 11 | TA | O | TA amp output. |
| 12 | TD- | I | Composes the tracking phase compensation constant between the TD and VR pins. |
| 13 | TD | I | Sets the tracking phase compensation. |
| 14 | JP | I | Sets the amplitude of the tracking jump signal (kick pulses). |
| 15 | TO | O | Tracking control signal output. |
| 16 | FD | O | Focusing control signal output. |
| 17 | FD- | I | Composes the focusing phase compensation constant between the FD and FA pins. |
| 18 | FA | O | Composes the focusing phase compensation constant between the FD and FA pins. |
| 19 | FA- | I | Composes the focusing phase compensation constant between the FD and FA pins. |
| 20 | FE | O | FE signal output. |
| 21 | FE- | I | For the connection of a resistor which sets the gain of the FE signal between this pin and the TE pin. |
| 22 | AGND | O | Ground of analog signals. |
| 23 | SP | O | Single-ended output of the signals input to the CV+ and CV- pins. |
| 24 | SPI | I | Spindle amp input. |
| 25 | SPG | I | For the connection of a resistor which sets the gain in the spindle 12cm mode. (not used) |
| 26 | SP- | I | For the connection of the spindle phase compensation constant with the SPD pin. |
| 27 | SPD | O | Spindle control signal output. |
| 28 | SLEQ | I | For the connection of sled phase compensation constant. |
| 29 | SLD | O | Sled control signal output. |
| 30 | SL- | I | Sled feed signal input from the microprocessor. |
| 31 | SL+ | | |
| 32 | JP- | I | Tracking signal input from the DSP. |
| 33 | JP+ | | |
| 34 | TGL | I | Tracking gain control signal input from the DSP. Low gain when TGL is "H". |
| 35 | TOFF | I | Tracking off control signal input from the DSP. Off when TOFF is "H". |
| 36 | TES | O | Outputs the TES signal to the DSP. |

| Pin No. | Pin Name | I/O | Description |
|---------|----------|-----|---|
| 37 | HFL | O | The HFL (high frequency level) signal is used to judge whether the main beam is positioned on the pit or on the mirror. |
| 38 | SLOF | I | Sled servo off control input. |
| 39 | CV- | I | CLV error signal input from the DSP. |
| 40 | CV+ | | |
| 41 | RFSM | O | RF output. |
| 42 | RFS- | O | Sets the RF gain and the EFM signal's 3T compensation constant together with the RFSM pin. |
| 43 | SLC | O | The SLC (slice level control) signal is output to control the DSP's data slice level of the RF waveform. |
| 44 | SLI | I | Input to control the DSP's data slice level. |
| 45 | DGND | - | Ground of digital signals. |
| 46 | FSC | O | Output for the focus search smoothing capacitor. |
| 47 | TBC | I | The TBC (tracking balance control) signal sets the EF balance variation range. |
| 48 | NC | - | Not connected. |
| 49 | DEF | O | Disc defect detection output. |
| 50 | CLK | I | Reference clock input. 4.23 MHz is input from the DSP. |
| 51 | CL | I | Microprocessor command clock input. |
| 52 | DAT | I | Microprocessor command data input. |
| 53 | CE | I | Microprocessor chip enable input. |
| 54 | DRF | O | DRF (detect RF) is an output to detect the RF level. |
| 55 | FSS | I | The FSS (focus search select) signal switches the focus search modes (+/-search /+search with respect to the reference voltage). (not used) |
| 56 | VCC2 | - | VCC of servo and digital circuits. |
| 57 | REFI | - | For the connection of bypass capacitor for the reference voltage. |
| 58 | VR | O | Reference voltage output. |
| 59 | LF2 | - | Sets the time constant for disc defect detection. |
| 60 | PHI | - | For the connection of a capacitor to hold the RF signal peak. |
| 61 | BHI | - | For the connection of a capacitor to hold the RF signal bottom. |
| 62 | LDD | O | APC circuit output. |
| 63 | LDS | I | APC circuit input. |
| 64 | VCC1 | - | VCC of RF signal circuits. |

ADJUSTMENT <TUNER / DECK / CD>

<TUNER SECTION>

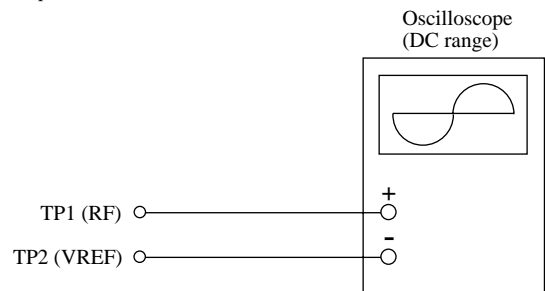
1. AM VT Adjustment
 Settings : • Test point : TP2(VT)
 • Adjustment location : L004
 Method : Set to AM 1000 kHz, and adjust L004 so that the test point voltage becomes $3.75\text{ V} \pm 0.02\text{ V}$.
 Then set to AM 530 kHz and check that the test point is between $1.0\text{ V} \sim 1.4\text{ V}$.
2. AM Tracking Adjustment
 L003.....600 kHz
 TC001.....1400 kHz
3. AM IF Adjustment
 Settings : • Test point : TP1(DET)
 • Adjustment location :
 L007.....455 kHz
4. FM VT Adjustment
 Settings : • Test point : TP2(VT)
 • Adjustment location : L006
 Method : Set to FM 108.0 MHz and adjust L006 so that the test point becomes $6.0\text{ V} \pm 0.2\text{ V}$
5. FM Tracking Adjustment
 L005.....98.0 MHz

<DECK SECTION>

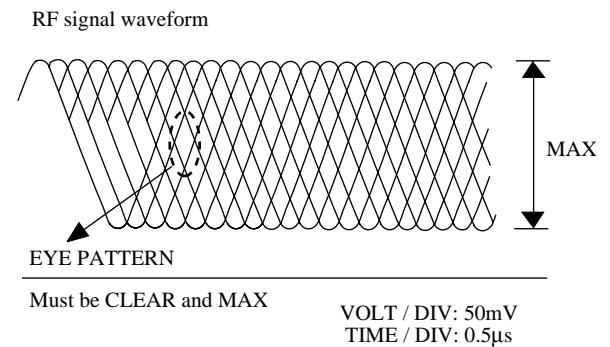
6. Tape Speed Adjustment
 Settings : • Test tape : TTA – 100
 • Test point : J251 (PHONES jack)
 • Adjustment location : SFR on Tape Motor
 Method : Play back the test tape and adjust SFR so that the frequency counter reads $3000\text{ Hz} \pm 30\text{ Hz}$.
7. Head Azimuth Adjustment
 Settings : • Test tape : TTA – 320
 • Test point : J251 (PHONES jack)
 • Adjustment location : Azimuth adjustment screw
 Method : Play back the 8 kHz signal of the test tape and adjust screw so that the output becomes maximum.
8. Bias frequency Adjustment
 L801..... $85\text{ kHz} \pm 0.5\text{ kHz}$

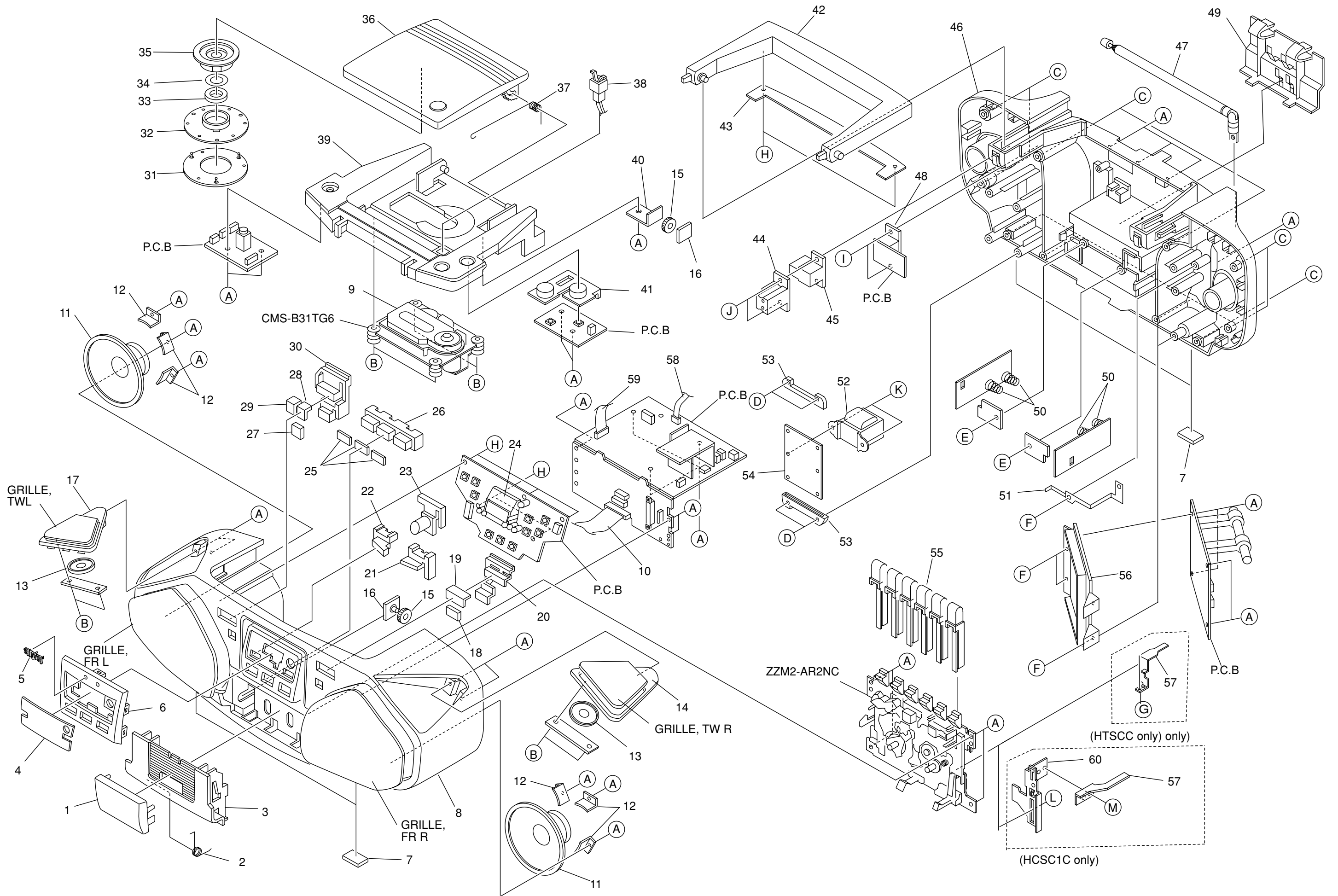
<CD SECTION>

9. Focus Bias Adjustment
 Make the focus bias adjustment when replacing and repairing the optical block.



- 1) Connect an oscilloscope to the test points TP1 (RF) and TP2 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
- 4) Adjust SFR430 so that RF signal of the test point TP1 (RF) is MAX and CLEAREST.





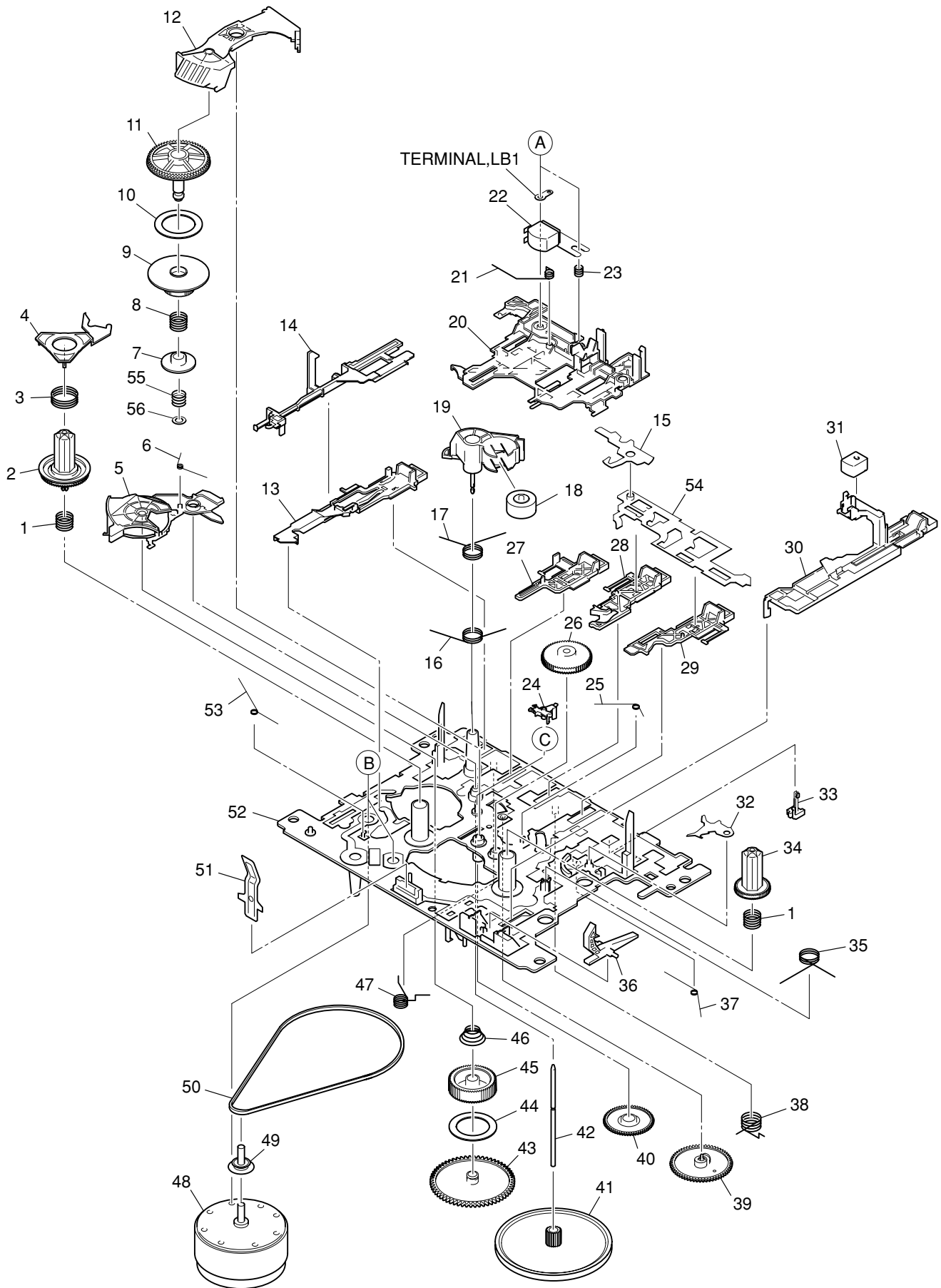
MECHANICAL PARTS LIST 1 / 1

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION | REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|----------|----------------|-----------|-----------------------------|----------|----------------|----------------|-----------------------------|
| 1 | 8A-CH4-008-010 | | WINDOW, CASS | 41 | 8A-CH4-026-010 | | BTN, VOL |
| 2 | 8A-CH4-205-010 | | SPR-T, CASS | 42 | 8A-CH4-018-010 | | HANDL, GRIP |
| 3 | 8A-CH4-007-010 | | BOX, CASS | 43 | 8A-CH4-019-010 | | COVER, HANDL |
| 4 | 8A-CH4-010-010 | | WINDOW, LCD | △ | 44 | 87-A90-086-010 | COVER, AC-SOCKET |
| 5 | 87-B00-010-010 | | BADGE, AIWA 30.5-5.2 S 2.5L | △ | 45 | 87-A60-178-010 | JACK, AC E W/SW |
| 6 | 8A-CH4-009-010 | | PANEL, LCD | 46 | 8A-CH4-002-010 | | CABI, REAR |
| 7 | 86-CT4-218-010 | | CUSHION, FOOT/PORON | 47 | 8Z-CH4-640-010 | | ANT, ROD<HTSCC> |
| 8 | 8A-CH4-101-010 | | CABI, FR ASSY | 47 | 87-A91-857-010 | | ANT, ROD 5SEC709<HCSC1C> |
| 9 | 88-CH6-019-010 | | PANEL, CD | △ | 48 | 87-A91-369-010 | SW, AC SL 2 2 2 SDKGA41700 |
| 10 | 8A-CD9-620-010 | | FF-CABLE, 16P FR-MAIN | 49 | 8A-CH4-011-010 | | LID, BATT |
| 11 | 8Z-CH4-645-010 | | SPKR, MAYLOR 8OHM SILVER | 50 | 87-CD6-213-010 | | SPR-C, BATT (-) |
| 12 | 8Z-CH4-204-010 | | HLDR, SPEAKER | 51 | 8A-CH4-210-010 | | HLDR, ANT |
| 13 | 8A-CH4-681-010 | | SPKR, 10- 3.2OHM | △ | 52 | 8A-CH4-668-010 | PT, H |
| 14 | 8A-CH4-103-010 | | PANEL, TW R ASSY | 53 | 8A-CH4-211-010 | | COVER, HLDR PT |
| 15 | 84-CD5-215-010 | | GEAR | 54 | 8A-CH4-209-010 | | HLDR, PT<HTSCC> |
| 16 | 84-CD5-216-010 | | BRACKET | 55 | 8A-CH4-020-010 | | KEY, CASS 6K<HTSCC> |
| 17 | 8A-CH4-102-010 | | PANEL, TW L ASSY | 55 | 8A-CH4-071-010 | | KEY, REC ZZM-1<HCSC1C> |
| 18 | 8A-CH4-030-010 | | CAP, STOP | 56 | 8A-CH4-203-010 | | HLDR, TU<HTSCC> |
| 19 | 8A-CH4-029-010 | | CAP, PLAY | 57 | 8A-CH4-207-010 | | SPR-P, REC 6K<HTSCC> |
| 20 | 8A-CH4-022-010 | | BTN, PLAY | 57 | 8A-CH4-212-010 | | SPR-P, REC ZZM-1<HCSC1C> |
| 21 | 8A-CH4-027-010 | | BTN, BASS | 58 | 8A-CD9-622-010 | | FF-CABLE, 8P CD-FR |
| 22 | 8A-CH4-024-010 | | BTN, EQ | 59 | 8A-CD9-621-010 | | FF-CABLE, 16P CD-RF |
| 23 | 8A-CH4-028-010 | | BTN, SOUND | 60 | 8A-CD9-224-010 | | HLDR, REC ZZM1<HCSC1C> |
| 24 | 8A-CH4-201-010 | | HLDR, LCD | A | 87-741-096-410 | | UT2+3-10 |
| 25 | 8A-CH4-034-010 | | LENS, FUNC | B | 87-342-074-010 | | UT2+2.6-8 |
| 26 | 8A-CH4-025-010 | | BTN, FUNC | C | 87-741-100-410 | | UT2+3-16(W/O) SLOT |
| 27 | 8A-CH4-033-010 | | CAP, REPEAT | D | 87-661-100-410 | | VFT1+3-16 |
| 28 | 8A-CH4-032-010 | | CAP, REW | E | 87-067-566-010 | | TAPPING SCREW, VFTT+3-6 |
| 29 | 8A-CH4-031-010 | | CAP, FF | F | 87-741-095-410 | | UT2+3-8 GLD |
| 30 | 8A-CH4-023-010 | | BTN, SKIP | G | 87-571-032-410 | | VIT+2-3<HTSCC> |
| 31 | 8Z-CH4-212-010 | | RING, CHUCK | H | 87-B10-239-010 | | QT2+3-8 W/O CR |
| 32 | 8Z-CH4-211-010 | | BASE, CHUCK | I | 87-751-075-410 | | VT2+2.6-10 |
| 33 | 87-036-368-010 | | MAGNET | J | 87-744-095-410 | | UT2+3-8CR |
| 34 | 84-CD5-217-010 | | PLATE, MAGNET | K | 87-254-097-410 | | U+3-12 CR |
| 35 | 85-CD7-217-010 | | HLDR, CHUCK A | L | 8A-CDA-222-010 | | S-SCREW, CASS+2.6-4<HCSC1C> |
| 36 | 8A-CH4-122-010 | | BOX, CD HE | M | 87-751-094-410 | | VT2+3-6 W10SLOT<HCSC1C> |
| 37 | 8A-CH4-204-010 | | SPR-T, CD | | | | |
| 38 | 87-036-389-010 | | SW, PUSH LOCK | | | | |
| 39 | 8A-CH4-003-010 | | CHAS, CD 6K | | | | |
| 40 | 8A-CH4-206-010 | | HLDR, OIL-DMPR | | | | |

COLOR NAME TABLE

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

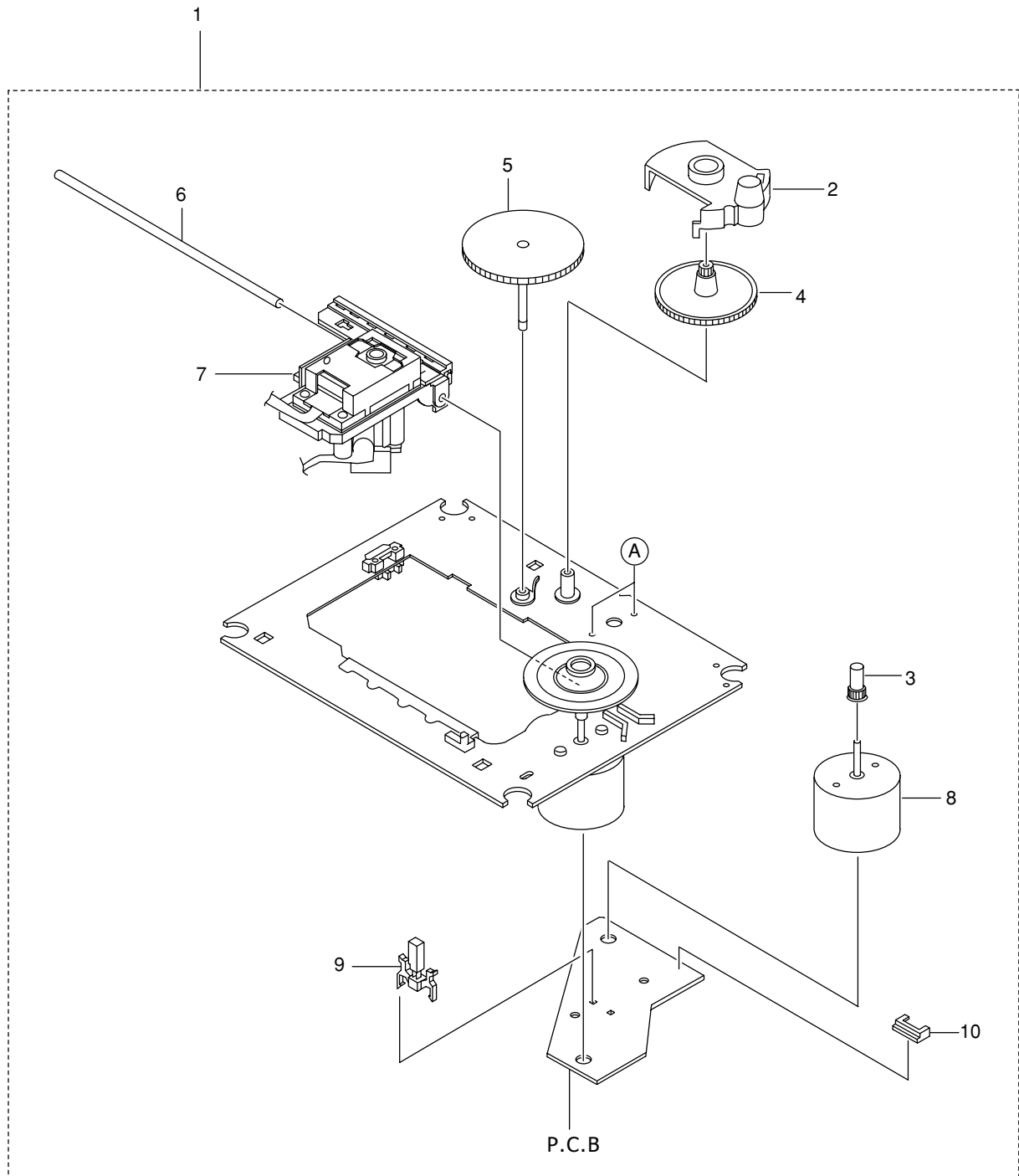
TAPE MECHANISM EXPLODED VIEW 1 / 1



TAPE MECHANISM PARTS LIST 1 / 1

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION | REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|----------|----------------|-----------|-----------------------|----------|----------------|-----------|------------------------|
| 1 | 8Z-ZM1-254-310 | | SPR-C, REEL R | 31 | 87-A91-819-010 | | HEAD, EH 2NSS-2200 |
| 2 | 8Z-ZM1-225-110 | | GEAR, REEL R | 32 | 8Z-ZM1-215-010 | | LEVER, REC LOCK |
| 3 | 8Z-ZM1-253-210 | | SPR-C, AUTO SENSOR | 33 | 87-A91-492-010 | | SW, LEAF MSW18560 |
| 4 | 8Z-ZM1-217-110 | | LEVER, AUTO SENSOR | 34 | 8Z-ZM1-226-010 | | GEAR, REEL L |
| 5 | 8Z-ZM1-212-110 | | LEVER, T-UP | 35 | 8Z-ZM1-241-210 | | SPR-T, PLAY |
| 6 | 8Z-ZM1-245-310 | | SPR-T, AUTO | 36 | 8Z-ZM1-220-110 | | LEVER, REC SENSOR |
| 7 | 8Z-ZM1-236-010 | | CLR, SLIP FF/REW | 37 | 8Z-ZM1-249-210 | | SPR-T, FR |
| 8 | 8Z-ZM1-252-110 | | SPR-C, FF/REW | 38 | 8Z-ZM1-242-310 | | SPR-T, FF/REW |
| 9 | 8Z-ZM1-230-010 | | GEAR, SLIP FF/REW A | 39 | 8Z-ZM3-244-010 | | GEAR, CAM TD20 |
| 10 | 8Z-ZM1-269-010 | | FELT, FF/REW 2 | 40 | 8Z-ZM1-232-010 | | GEAR, IDL FF/REW |
| 11 | 8Z-ZM1-238-110 | | GEAR, SLIP FF/REW B 2 | 41 | 8Z-ZM3-228-110 | | FLY-WHL, M3 |
| 12 | 8Z-ZM1-237-110 | | LEVER, FF/REW 2 | 42 | 8Z-ZM1-267-110 | | SHAFT, CAPSTAN 2 |
| 13 | 8Z-ZM1-283-010 | | LEVER, PAUSE 2 | 43 | 8Z-ZM1-228-010 | | GEAR, SLIP T-UP B |
| 14 | 8Z-ZM1-222-010 | | LEVER, E-LOCK M | 44 | 8Z-ZM1-265-010 | | FELT, T-UP |
| 15 | 8Z-ZM1-219-010 | | LEVER, E-OPEN | 45 | 8Z-ZM1-227-010 | | GEAR, SLIP T-UP A |
| 16 | 8Z-ZM1-244-110 | | SPR-T, T-UP | 46 | 8Z-ZM1-251-210 | | SPR-C, T-UP SLIP |
| 17 | 8Z-ZM1-247-310 | | SPR-T, PINCH | 47 | 8Z-ZM1-243-310 | | SPR-T, STOP/PAUSE |
| 18 | 8Z-ZM1-261-110 | | ROLLER ASSY, PINCH | 48 | 87-A91-825-010 | | MOT, M09Y/Z |
| 19 | 8Z-ZM1-221-210 | | LEVER, PINCH | 49 | 8Z-ZM1-271-010 | | PULLEY, MOT ZZM-1 |
| 20 | 8Z-ZM1-205-310 | | LEVER, PLAY | 50 | 8Z-ZM1-264-010 | | BELT, MAIN S |
| 21 | 8Z-ZM1-248-210 | | SPR-T, BRG | 51 | 8Z-ZM1-260-010 | | SPR-P, CASSETTE |
| 22 | 87-A91-830-010 | | HEAD, RP-7442 | 52 | 8Z-ZM1-201-610 | | CHAS ASSY, ZZM-1 |
| 23 | 84-ZM2-227-310 | | SPR-C, AZIMUTH | 53 | 8Z-ZM1-255-310 | | SPR-T, E-LOCK |
| 24 | 8Z-ZM1-216-110 | | LEVER, AUTO | 54 | 8Z-ZM1-214-210 | | LEVER, LOCK |
| 25 | 8Z-ZM1-246-110 | | SPR-T, AUTO 2 | 55 | 8Z-ZM1-257-110 | | SPR-C, F/R |
| 26 | 8Z-ZM1-233-110 | | GEAR, IDL REW | 56 | 8Z-ZM1-275-010 | | W-L, 1.47-4-0.25 |
| 27 | 8Z-ZM1-208-010 | | LEVER, STOP | A | 84-ZM2-242-010 | | S-SCREW, AZ1-2-6.4 |
| 28 | 8Z-ZM1-207-010 | | LEVER, FF | B | 8Z-ZM1-270-110 | | V+2.6 ZZM-1 |
| 29 | 8Z-ZM1-206-010 | | LEVER, REW | C | 87-B10-301-010 | | W-L, 1.63-3.2-0.5 SLIT |
| 30 | 8Z-ZM1-211-210 | | LEVER, REC 2 | | | | |

CD MECHANISM EXPLODED VIEW 1 / 1



CD MECHANISM PARTS LIST 1 / 1

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|----------|----------------|-----------|------------------|
| 1 | M8-ZZK-L90-07A | | CMS-B31TG6 ASSY |
| 2 | SJ-660-060-1G0 | | COVER GEAR |
| 3 | SJ-660-060-1D0 | | GEAR (A) |
| 4 | SJ-660-060-1B0 | | GEAR (B) |
| 5 | SJ-660-060-1F0 | | GEAR (C) |
| 6 | SJ-700-060-1A0 | | SHAFT UP |
| 7 | SJ-750-060-1F0 | | PICKUP ASSY |
| 8 | SJ-310-060-1A0 | | MOTOR FEED |
| 9 | S4-090-001-740 | | SW, LEAF |
| 10 | SJ-370-060-1A0 | | CONN, WAFER |
| A | SJ-600-060-100 | | SCREW-PH (+M2+3) |

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AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111