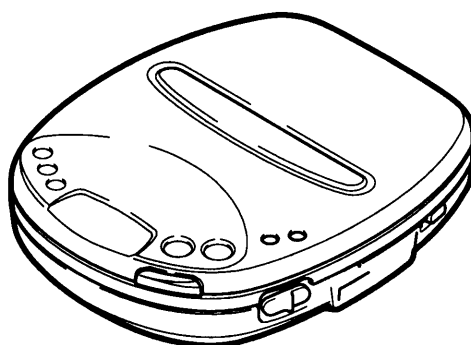


## Service Manual

## Portable Compact Disc Player



**CDP-360**<sub>(AU)</sub>  
<sub>(XE)</sub>  
**CDP-360BX**<sub>(SS)</sub>  
**CDP-360CR**<sub>(AU)</sub>  
<sub>(CA)</sub>  
<sub>(UK)</sub>

**CDP-360E**<sub>(CA)</sub>  
**CDP-370**<sub>(UK)</sub>  
**CDP-400**<sub>(XE)</sub>  
**CDP-400CR**<sub>(UK)</sub>  
**CDP-560**<sub>(UK)</sub>  
**CDP-640CR**<sub>(CA)</sub>

## Specifications

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Channels .....                | 2 channels                                    |
| Frequency Response .....      | 20 ~ 20 kHz                                   |
| S/N ratio .....               | 60 dB                                         |
| Frequency Response .....      | 20 ~ 20 kHz                                   |
| Wow / Flutter .....           | Below measurable limits                       |
| Error Correction Method ..... | CIRC                                          |
| Wow & Flutter .....           | undetectable                                  |
| Sampling frequency .....      | 44.1kHz                                       |
| D/A converter .....           | 1-bit                                         |
| Pick-up light source .....    | Semi-conductor laser                          |
| Pick-up wavelength .....      | 790nm                                         |
| Laser output .....            | Continuous wave max. 0.5mW                    |
| Terminal impedance .....      | PHONES:16 - 32 ohms                           |
|                               | Line OUT: 47 kohms                            |
| Power source .....            | AC : 230V - 240V , 50Hz(AU)                   |
|                               | AC : 230V , 50Hz(UK , XE)                     |
|                               | AC : 120V , 60Hz(CA)                          |
|                               | DC : 3V(Ni-Cd battery NBP-50A or AA x 2)(AU)  |
|                               | DC : 3V(Ni-Cd battery NBP-50A or HP7 x 2)(UK) |
|                               | DC : 12V(Cigarette lighter adaptor)(AU)       |

### Maximum Output

|                           |                                 |
|---------------------------|---------------------------------|
| (stereo headphones) ..... | 10 mW / ch                      |
| Dimensions .....          | 132.5 x 30 x 152.5mm(W x H x D) |
| Weight(approx.) .....     | 235g without batteries          |

### PRODUCT CODE No.

|               |            |
|---------------|------------|
| CDP-360(AU)   | 142 685 01 |
| CDP-360(XE)   | 142 685 03 |
| CDP-360BX(SS) | 164 003 00 |
| CDP-360CR(AU) | 142 686 02 |
| CDP-360CR(CA) | 142 686 03 |
| CDP-360CR(UK) | 142 686 04 |
| CDP-360E(CA)  | 142 686 01 |
| CDP-370(UK)   | 142 685 04 |
| CDP-400(XE)   | 142 687 01 |
| CDP-400CR(UK) | 142 688 01 |
| CDP-560(UK)   | 164 005 00 |
| CDP-640CR(CA) | 164 006 00 |

# Notice

# SANYO

|                                                |                                            |
|------------------------------------------------|--------------------------------------------|
| <input checked="" type="checkbox"/> CORRECTION | <input type="checkbox"/> PRODUCTION CHANGE |
| <input type="checkbox"/> SERVICE FLASH         | <input type="checkbox"/> ADD INFORMATION   |
| <input type="checkbox"/>                       | <input type="checkbox"/>                   |

FILE NO.

Please add this notice to the Service Manual listed below.

Category : **Personal Compact Disc Player**

Date : **Jul, 1997**

Model : **CDP-360 , 370 , 400 , 560 , 640 Series**

Destination : **Below**

Reference No. : **SM580830**

Issue Number : **1**

The reason of change.

A : Misprint

B : Quality Reliabilities

C : Standardization

D : Design

E :

F :

G :

| Page & Section | Ref. No. |     | Part No.     | Description              | Q'ty | Interchangeability | Reason |
|----------------|----------|-----|--------------|--------------------------|------|--------------------|--------|
| PARTS LIST     | -        | Old | -            | -                        | -    |                    | -      |
| P10            | 110      | New | 645 025 3089 | LASER PICK UP , KSS-542A | 1    |                    | A      |

Prod. cord : 142 685 01 : CDP-360(AU)

142 685 03 : CDP-360(XE)

164 003 00 : CDP-360BX(SS)

142 686 02 : CDP-360CR(AU)

142 686 03 : CDP-360CR(CA)

142 686 04 : CDP-360CR(UK)

142 686 01 : CDP-360E(CA)

142 685 04 : CDP-370(UK)

142 687 01 : CDP-400(XE)

142 688 01 : CDP-400CR(UK)

164 005 00 : CDP-560(UK)

164 006 00 : CDP-640CR(CA)

**SANYO Technosound Co., Ltd**

**Osaka , Japan**

# Notice

# SANYO

|                                     |               |                          |                   |
|-------------------------------------|---------------|--------------------------|-------------------|
| <input type="checkbox"/>            | CORRECTION    | <input type="checkbox"/> | PRODUCTION CHANGE |
| <input checked="" type="checkbox"/> | SERVICE FLASH | <input type="checkbox"/> | ADD INFORMATION   |
| <input type="checkbox"/>            |               | <input type="checkbox"/> |                   |

FILE NO.

Please add this notice to the Service Manual listed below.

Category : **Portable Compact Disc Player**

Date : **Nov. 1997**

Model : **CDP-360, 370, 400, 560, 640 Series**

Destination : **Below**

Reference No. : **SM580830**

Issue Number : **2**

The reason of change.

A : Misprint

B : Quality Reliabilities

C : Standardization

D : Design

E :

F :

G :

| Page & Section       | Ref. No. |     | Part No.     | Description                                                                            | Q'ty | Reason |
|----------------------|----------|-----|--------------|----------------------------------------------------------------------------------------|------|--------|
| Page 8<br>PARTS LIST | 13       | Old | 614 290 3827 | ASSY, CABINET (360/XE • AU, 360BX/SS, 360CR/UK • AU, 370/UK, 400/XE, 400CR/UK, 560/UK) | 1    | B      |
|                      | 13       | New | 614 297 8320 | ASSY, CABINET (360/XE • AU, 360BX/SS, 360CR/UK • AU, 370/UK, 400/XE, 400CR/UK, 560/UK) | 1    | B      |
|                      | 13       | Old | 614 293 0847 | ASSY, CABINET (360CR/CA, 360E/CA, 640CR/CA)                                            | 1    | B      |
|                      | 13       | New | 614 297 8337 | ASSY, CABINET (360CR/CA, 360E/CA, 640CR/CA)                                            | 1    | B      |
|                      | 18       | Old | 614 290 5425 | BUTTON, EJECT                                                                          | 1    | B      |
|                      | 18       | New | 614 297 7293 | BUTTON, EJECT                                                                          | 1    | B      |

Prod. cord : 142 685 01 : CDP-360 (AU)

142 685 03 : CDP-360 (XE)

164 003 00 : CDP-360BX (SS)

142 686 02 : CDP-360CR (AU)

142 686 03 : CDP-360CR (CA)

142 686 04 : CDP-360CR (UK)

142 686 01 : CDP-360E (CA)

142 685 04 : CDP-370 (UK)

142 687 01 : CDP-400 (XE)

142 688 01 : CDP-400CR (UK)

164 005 00 : CDP-560 (UK)

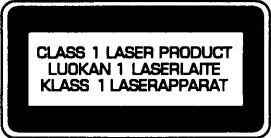
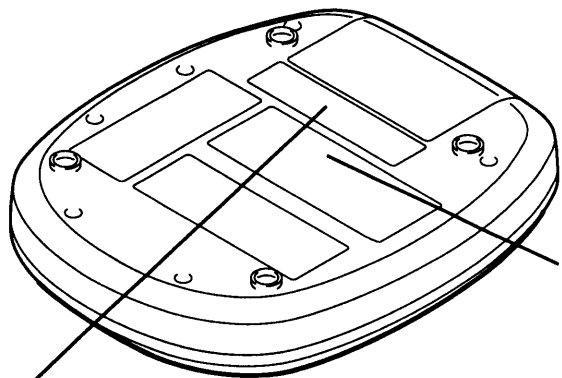
164 006 00 : CDP-640CR (CA)

**SANYO Technosound Co., Ltd**

Osaka, Japan

**LASER BEAM SAFETY PRECAUTIONS**

- Pickup that emits a laser beam is used on this CD section.



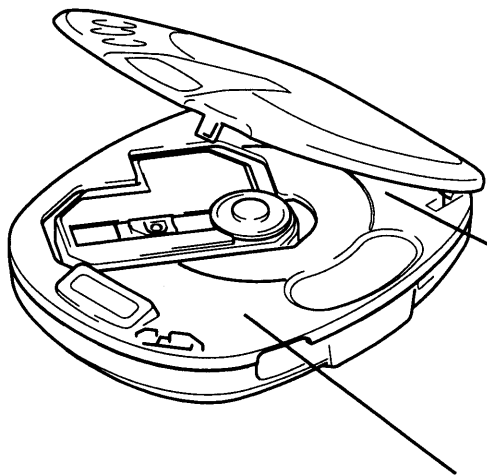
AU , XE & UK

**CAUTION :**  
THIS PRODUCT CONTAINS A LOW POWER LASER  
DEVICE, TO ENSURE CONTINUES SAFETY DO NOT  
REMOVE ANY COVERS OR ATTEMPT TO GAIN  
ACCESS TO THE INSIDE OF PRODUCT.  
REFER ALL SERVICING TO QUALIFIED PERSONNEL.

**CAUTION :**  
USE OF CONTROLS OR ADJUSTMENTS OR  
PERFORMANCE OF PROCEDURES OTHER  
THAN THOSE SPECIFIED HEREIN MAY RESULT  
IN HAZARDOUS RADIATION EXPOSURE.

AU

UK



XE & AU

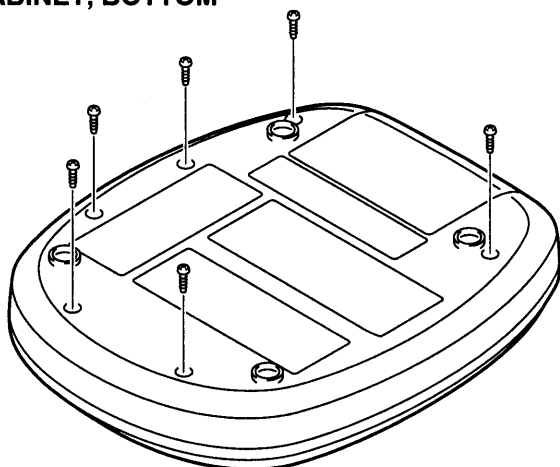
|                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.</b>                                                      |
| <b>ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.</b>                            |
| <b>VARNING – OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.</b>                                                |
| <b>VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.</b> |
| <b>VARO! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso äteeseen.</b>                                     |

XE & AU

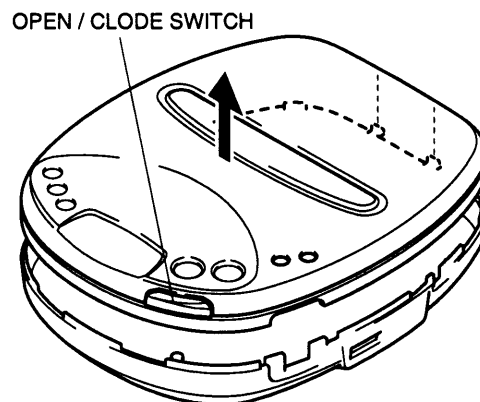
## REMOVAL AND INSTALLATION

- Disconnect the AC adaptor's plug.
- Remove the batteries.
- All wiring should be returned to the original position after work is completed.

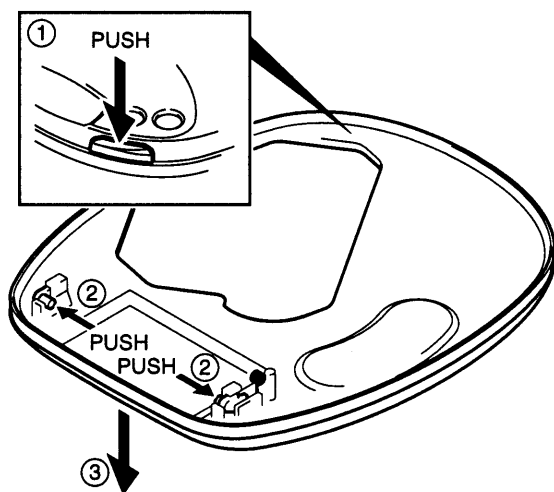
### a. CABINET, BOTTOM



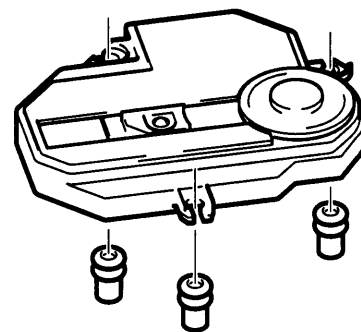
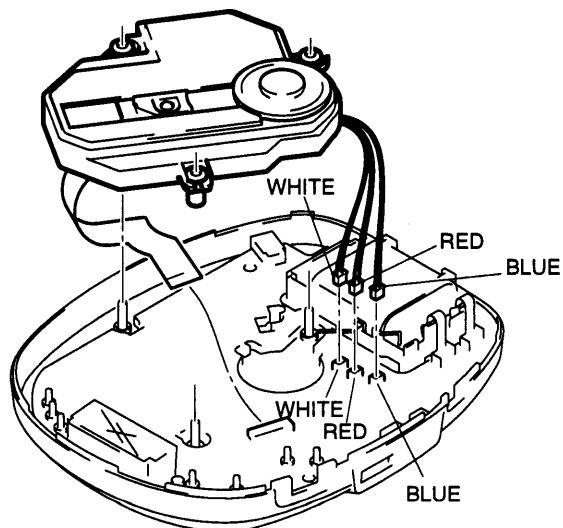
### b. CABINET



### c. CD LID

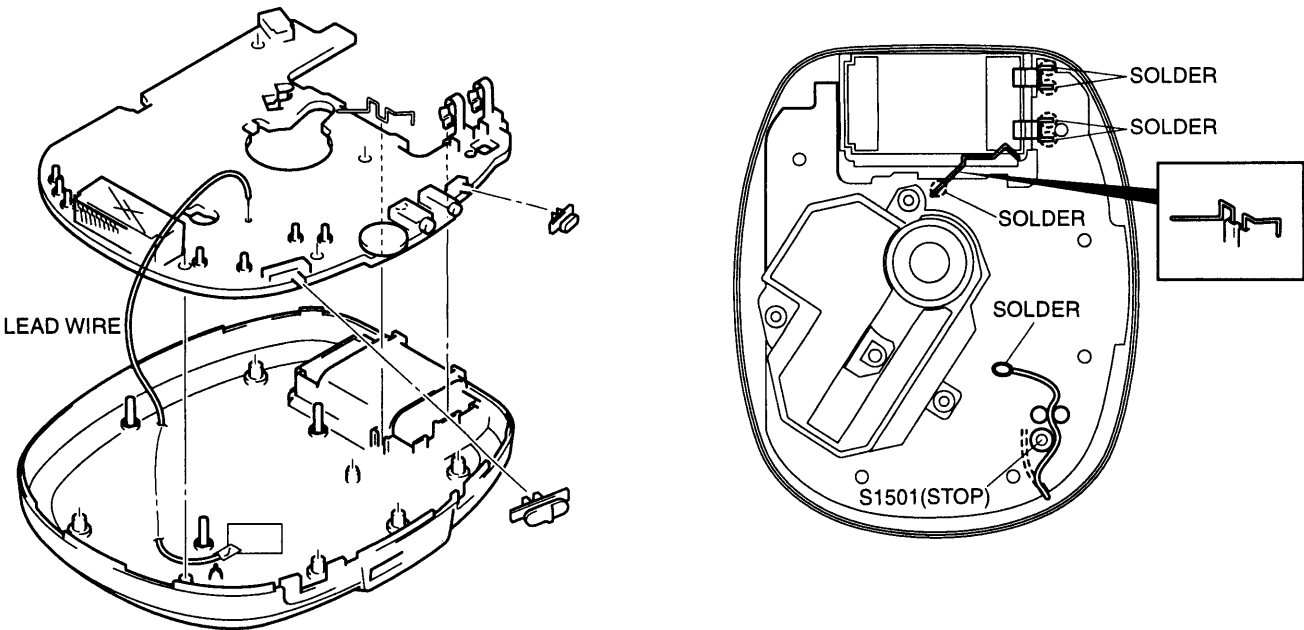


### d. CD MECHANISM

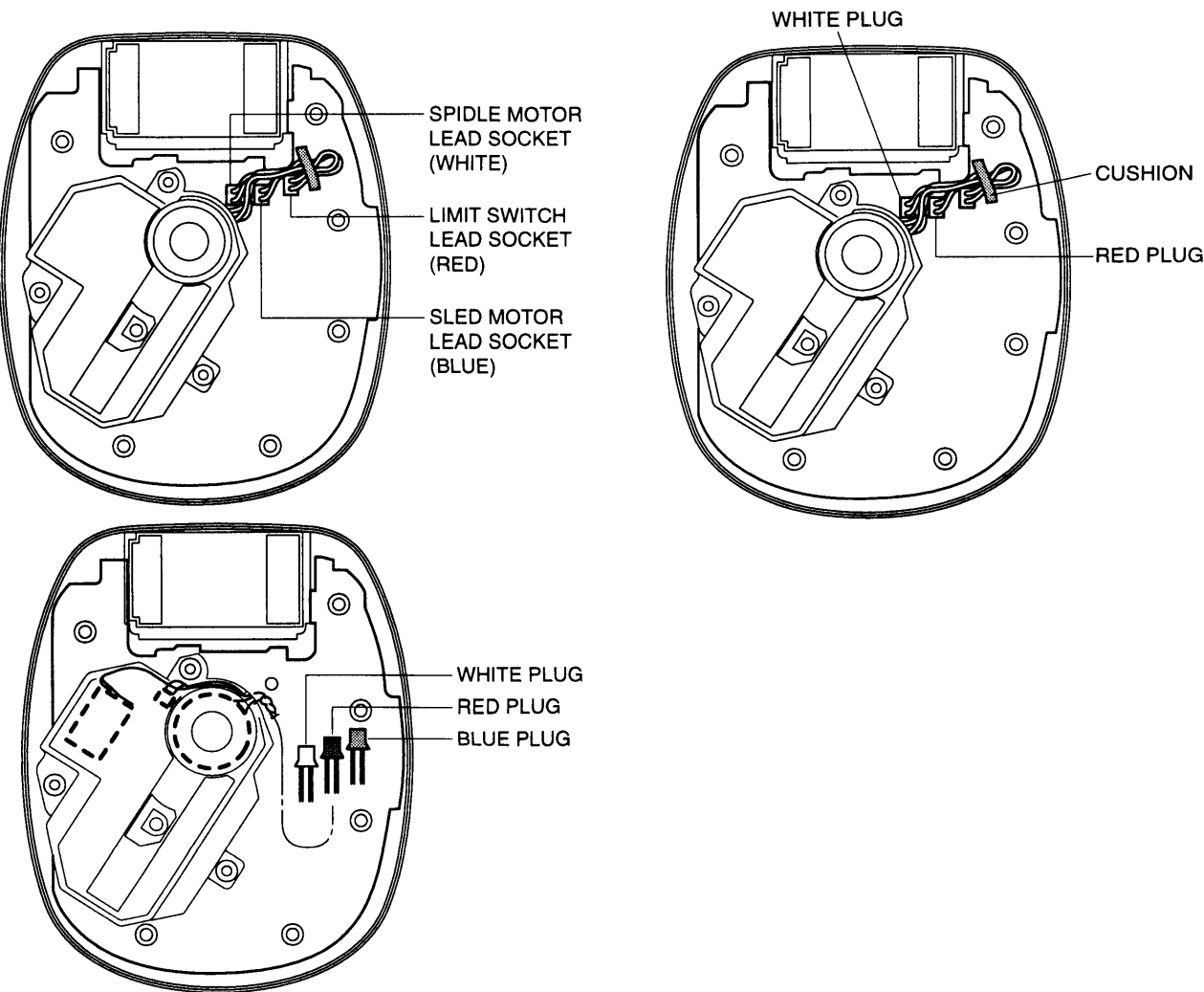


REMOVAL AND INSTALLATION

e. CD P.W.BOARD



f. WIRING LAYOUT



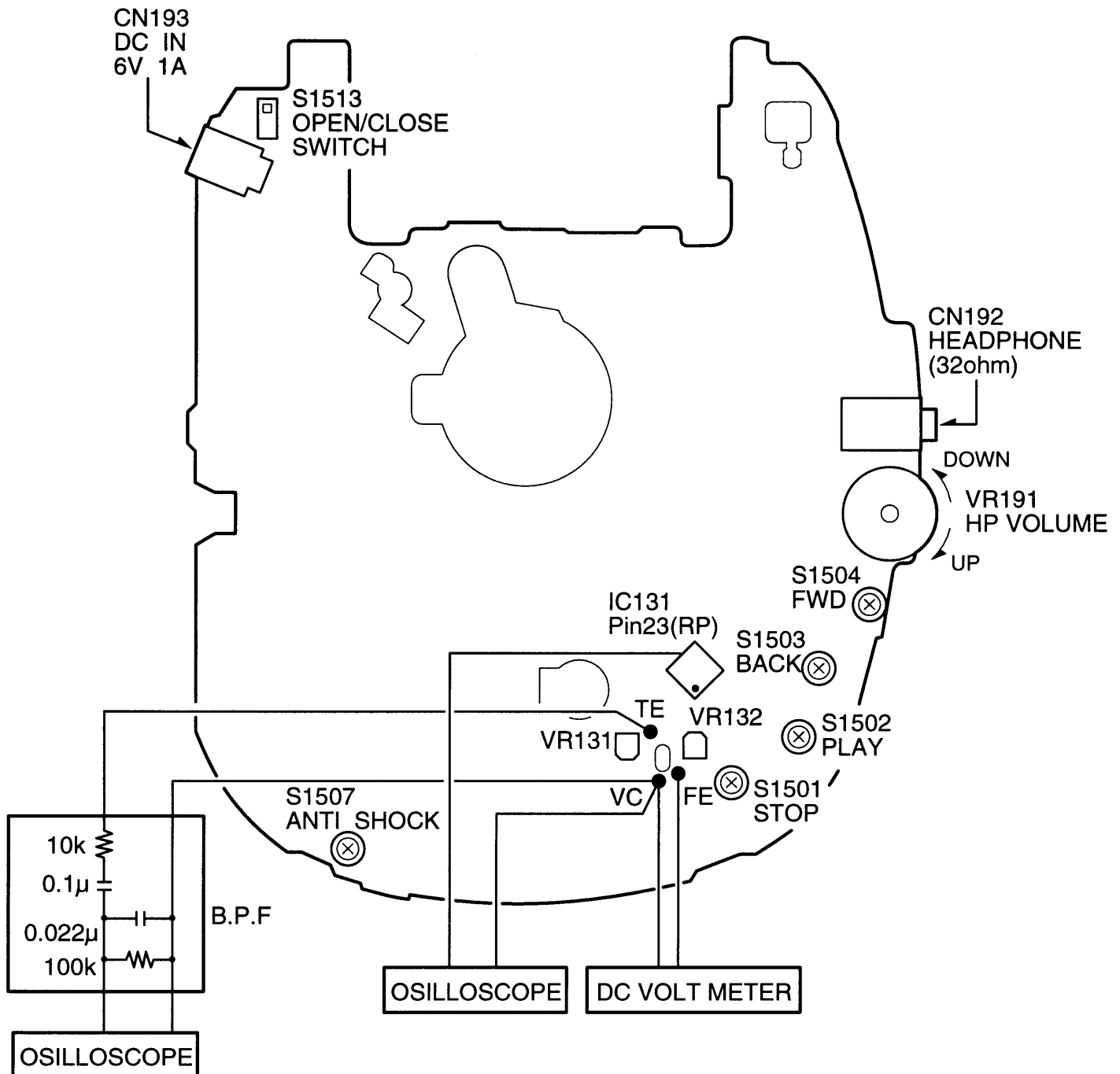
## CD ADJUSTMENTS

### a. PREPARATIONS

- Measuring instruments, tools and filter

- (1) Test disc : YEDS 18 (SONY) or etc.
- (2) Oscilloscope : SS5711 (10 MHz or dual-trace)  
or Memoryscope : DSS6521 (Storagescope)
- (3) EXT. DC POWER : DC 6V, 1A
- (4) Screwdrivers (non-metallic) for adjustments

### b. PARTS LOCATION



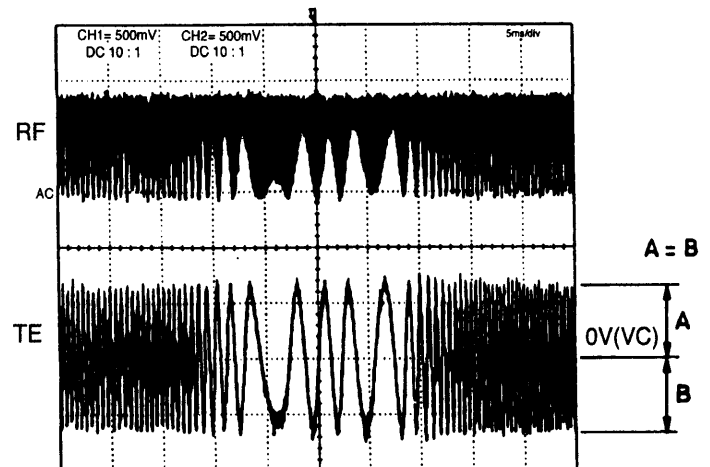
## CD ADJUSTMENTS

### c. ADJUSTMENTS

| Adjustment Item                | Measuring instrument  | Service mode | Output connection       | Adjustment location | Adjustment value                                                                                                    |
|--------------------------------|-----------------------|--------------|-------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------|
| (a) Tracking balance           | Oscilloscope<br>L.P.F | yes          | TE<br>VC                | VR131               | Waveform symmetry<br>A = B                                                                                          |
| (b) Checking the "eye" pattern | Oscilloscope          | -            | IC131(23Pin) : RF<br>VC | -                   | Check be sure that the "eye" pattern is at the center of the waveform and that the diamond shape is clearly defined |

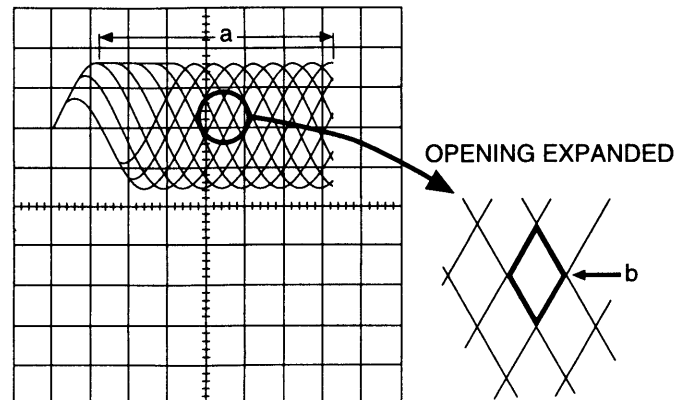
#### (a) TRACKING BALANCE ADJUSTMENT

- Connect the oscilloscope to TE and VC.
- Set the test disc.
- Turn open closing switch on PWB ASSY(S1513) into an open state, and does DC power supply in on while pushing STOP Key(S1501) and ANTI-SHOCK Key(S1507) simultaneously, and confirms that all segments of LCD become indication state. (Establishes a microcomputer in movement test mode)
- Pushes the first time and pushes PLAY state and the second time and becomes rough servo state.
- Turn on PWB ASSY VR131 with a driver for adjustment slowly from side to side, and adjusts it as wave pattern of "TE" becomes symmetric top and bottom.



#### (b) CHECKING THE "EYE" PATTERN

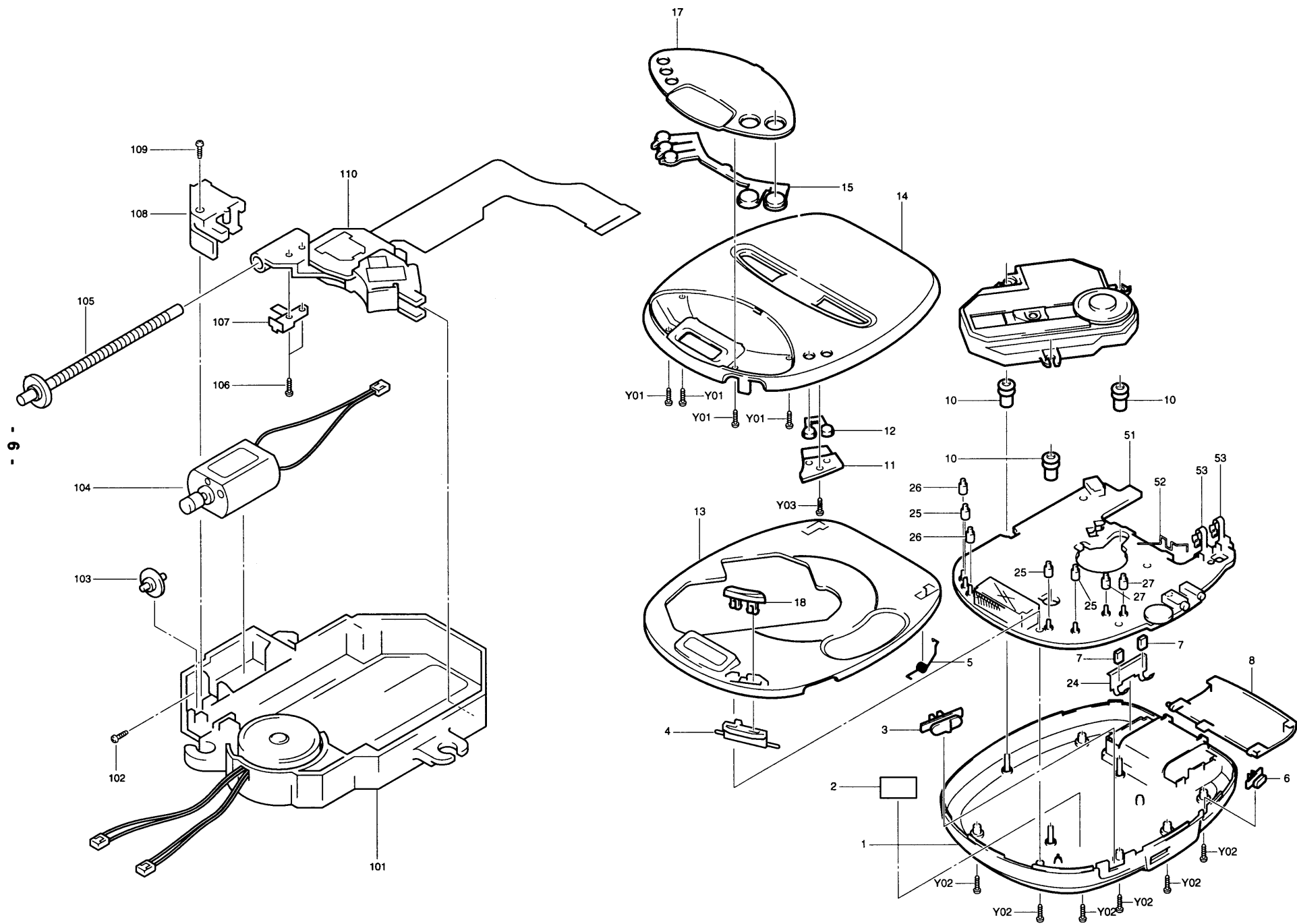
- Connect the oscilloscope to IC131 (pin23) (RF) and (VC).
- Switch "ON" the POWER.
- Load the test disc.
- Press the PLAY button.
- Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
- Press the STOP button.
- Switch "OFF" the DC POWER.



#### (d) Focus adjustment

- Pushes PLAY key(S1502) once and play.
- Record an indicator value of voltmeter.(V1)
- Pushes STOP key(S1501) and stop.
- Stops PWB ASSY VR132 by the time while reading an indicator value of a voltmeter(V2) it became it with right and left slow gang bang, V1-V2 < 5mV with adjustment driver.
- Switch "OFF" the DC POWER.





## PARTS LIST

### PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL  $\Delta$  IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY  $\Delta$ , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

### PACKING & ACCESSORY

| REF.NO. | PART NO.     | DESCRIPTION                                                                                                                                                        | REF.NO.  | PART NO.     | DESCRIPTION                                                                                                                       |
|---------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|-----------------------------------------------------------------------------------------------------------------------------------|
|         | 614 292 6369 | CARTON CASE, INNER(CDP-360/AU)                                                                                                                                     |          | 614 252 7764 | HEADPHONE(CDP-360BX/SS)<br>(CDP-360CR/UK)(CDP-360CR/AU)<br>(CDP-370/UK)(CDP-360/XE)<br>(CDP-360/AU)(CDP-400CR/UK)<br>(CDP-400/XE) |
|         | 614 292 6383 | CARTON CASE, INNER<br>(CDP-640CR/CA)                                                                                                                               |          | 645 016 2213 | HEADPHONE, 32(CDP-360CR/CA)<br>(CDP-360E/CA)(CDP-640CR/CA)                                                                        |
|         | 614 292 6390 | CARTON CASE, INNER<br>(CDP-360CR/AU)                                                                                                                               |          | 645 017 8771 | HEADPHONE, 16(CDP-560/UK)                                                                                                         |
|         | 614 292 6406 | CARTON CASE, INNER<br>(CDP-360CR/CA)                                                                                                                               | $\Delta$ | 645 011 8326 | PLUG, ADAPTOR AC(CDP-360BX/SS)                                                                                                    |
|         | 614 292 6413 | CARTON CASE, INNER<br>(CDP-360CR/UK)                                                                                                                               |          | 645 024 3448 | ADAPTOR, DC-DC(CDP-360BX/SS)<br>(CDP-360CR/UK)(CDP-360CR/CA)<br>(CDP-360CR/AU)(CDP-360E/CA)<br>(CDP-640CR/CA)(CDP-400CR/UK)       |
|         | 614 293 1486 | CARTON CASE, INNER(CDP-360/XE)                                                                                                                                     | $\Delta$ | 645 024 7262 | ADAPTOR, AC-DC, 6CV-120US2<br>(CDP-360CR/CA)(CDP-360E/CA)<br>(CDP-640CR/CA)                                                       |
|         | 614 293 1493 | CARTON CASE, INNER(CDP-560/UK)                                                                                                                                     | $\Delta$ | 645 024 7408 | ADAPTOR, AC-DC, 6CV-240AU2<br>(CDP-360CR/AU)(CDP-640CR/CA)<br>(CDP-640CR/CA)                                                      |
|         | 614 293 1509 | CARTON CASE, INNER(CDP-400/XE)                                                                                                                                     | $\Delta$ | 645 024 7415 | ADAPTOR, AC-DC, 6CV-230XE2<br>(CDP-360/XE)(CDP-400/XE)                                                                            |
|         | 614 293 1523 | CARTON CASE, INNER<br>(CDP-400CR/UK)                                                                                                                               | $\Delta$ | 645 024 7422 | ADAPTOR, AC-DC, 6CV-230UK2<br>(CDP-370/UK)(CDP-560/UK)<br>(CDP-400CR/UK)                                                          |
|         | 614 293 4982 | CARTON CASE, INNER(CDP-370/UK)                                                                                                                                     | $\Delta$ | 645 024 7439 | ADAPTOR, AC-DC, 6CV230SS2,<br>ADAPTOR AC-DC(CDP-360BX/SS)                                                                         |
|         | 614 293 1608 | CARTON CASE, INNER(CDP-360E/CA)                                                                                                                                    |          | 645 017 6104 | ADAPTOR, CAR CASSETTE<br>(CDP-360BX/SS)(CDP-360CR/UK)<br>(CDP-360CR/AU)(CDP-400CR/UK)                                             |
|         | 614 294 6169 | CARTON CASE, INNER(CDP-360BX/SS)                                                                                                                                   |          | 645 022 9688 | SPEAKER(CDP-360BX/SS)                                                                                                             |
|         | 614 292 6451 | INSTRUCTION MANUAL(CDP-360/AU)                                                                                                                                     |          | 645 025 7179 | ADAPTOR, CAR CASSETTE<br>(CDP-360CR/CA)(CDP-360E/CA)<br>(CDP-640CR/CA)                                                            |
|         | 614 292 6475 | INSTRUCTION MANUAL<br>(CDP-640CR/CA)                                                                                                                               |          | 645 011 9071 | CABLE, Y, RCA-2P                                                                                                                  |
|         | 614 292 6482 | INSTRUCTION MANUAL<br>(CDP-360CR/AU)                                                                                                                               |          | 645 017 8832 | CABLE, Y, RCA-2P                                                                                                                  |
|         | 614 292 6499 | INSTRUCTION MANUAL<br>(CDP-360CR/CA)(CDP-360E/CA)                                                                                                                  | or       |              |                                                                                                                                   |
|         | 614 292 6505 | INSTRUCTION MANUAL<br>(CDP-360CR/UK)                                                                                                                               |          |              |                                                                                                                                   |
|         | 614 293 1653 | INSTRUCTION MANUAL(CDP-360/XE)                                                                                                                                     |          |              |                                                                                                                                   |
|         | 614 295 3914 | INSTRUCTION MANUAL<br>(CDP-360BX/SS)                                                                                                                               |          |              |                                                                                                                                   |
|         | 614 293 1677 | INSTRUCTION MANUAL(CDP-560/UK)                                                                                                                                     |          |              |                                                                                                                                   |
|         | 614 293 1691 | INSTRUCTION MANUAL(CDP-400/XE)                                                                                                                                     |          |              |                                                                                                                                   |
|         | 614 293 1721 | INSTRUCTION MANUAL<br>(CDP-400CR/UK)                                                                                                                               |          |              |                                                                                                                                   |
|         | 614 293 5064 | INSTRUCTION MANUAL(CDP-370/UK)                                                                                                                                     |          |              |                                                                                                                                   |
|         | 614 280 6890 | CASE, CARRYING(CDP-400/XE)                                                                                                                                         |          |              |                                                                                                                                   |
|         | 614 281 1894 | CASE(CDP-360BX/SS)                                                                                                                                                 |          |              |                                                                                                                                   |
|         | 614 283 0963 | CAUTION, DISC                                                                                                                                                      |          |              |                                                                                                                                   |
|         | 614 231 6832 | LABEL, SAFETY, CABI BOTTOM<br>(CDP-360BX/SS)(CDP-360CR/UK)<br>(CDP-360CR/AU)(CDP-370/UK)<br>(CDP-360/XE)(CDP-360/AU)<br>(CDP-560/UK)(CDP-400CR/UK)<br>(CDP-400/XE) |          |              |                                                                                                                                   |
|         | 614 283 7733 | LABEL, LID-BATTERY(CDP-360BX/SS)                                                                                                                                   | 1        | 614 290 5357 | ASSY, CABINET, BOTTOM<br>(CDP-360/AU)                                                                                             |
|         | 645 011 9880 | POLY SHEET-0450X0250*NC, SET                                                                                                                                       | 1        | 614 293 0533 | ASSY, CABINET, BOTTOM<br>(CDP-360CR/UK)(CDP-360CR/CA)<br>(CDP-360CR/AU)                                                           |
|         | 645 017 9136 | ASSY, BATTERY, RECHARGE<br>(CDP-560/UK)(CDP-400CR/UK)<br>(CDP-400/XE)                                                                                              | 1        | 614 293 1233 | ASSY, CABINET, BOTTOM<br>(CDP-360/XE)                                                                                             |
|         | 645 017 9143 | ASSY, BATTERY, RECHARGE<br>(CDP-360BX/SS)(CDP-360CR/AU)<br>(CDP-360/AU)                                                                                            | 1        | 614 293 1240 | ASSY, CABINET, BOTTOM<br>(CDP-360E/CA)                                                                                            |
|         | 645 024 6807 | ASSY, BATTERY, RECHARGE<br>(CDP-560/UK)(CDP-400CR/UK)<br>(CDP-400/XE)                                                                                              | 1        | 614 293 1257 | ASSY, CABINET, BOTTOM<br>(CDP-560/UK)                                                                                             |
|         | 645 024 6814 | ASSY, BATTERY, RECHARGE<br>(CDP-360BX/SS)(CDP-360CR/AU)<br>(CDP-360/AU)                                                                                            | 1        | 614 293 1264 | ASSY, CABINET, BOTTOM<br>(CDP-400/XE)                                                                                             |
|         |              |                                                                                                                                                                    | 1        | 614 293 1288 | ASSY, CABINET, BOTTOM<br>(CDP-400CR/UK)                                                                                           |

### CABINET & CHASSIS

| REF.NO. | PART NO.     | DESCRIPTION                                                                                                                         |
|---------|--------------|-------------------------------------------------------------------------------------------------------------------------------------|
|         | 614 276 2844 | LABEL, SAFETY<br>(CDP-360BX/SS)(CDP-360CR/UK)<br>(CDP-360CR/AU)(CDP-370/UK)<br>(CDP-360/XE)(CDP-360/AU)<br>(CDP-380/UK)(CDP-560/UK) |
|         | 614 290 5357 | ASSY, CABINET, BOTTOM<br>(CDP-360/AU)                                                                                               |
|         | 614 293 0533 | ASSY, CABINET, BOTTOM<br>(CDP-360CR/UK)(CDP-360CR/CA)<br>(CDP-360CR/AU)                                                             |
|         | 614 293 1233 | ASSY, CABINET, BOTTOM<br>(CDP-360/XE)                                                                                               |
|         | 614 293 1240 | ASSY, CABINET, BOTTOM<br>(CDP-360E/CA)                                                                                              |
|         | 614 293 1257 | ASSY, CABINET, BOTTOM<br>(CDP-560/UK)                                                                                               |
|         | 614 293 1264 | ASSY, CABINET, BOTTOM<br>(CDP-400/XE)                                                                                               |
|         | 614 293 1288 | ASSY, CABINET, BOTTOM<br>(CDP-400CR/UK)                                                                                             |

PARTS LIST

| REF.NO. | PART NO.     | DESCRIPTION                                                                                                                                  |
|---------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | 614 293 4272 | ASSY,CABINET,BOTTOM<br>(CDP-370/UK)                                                                                                          |
| 1       | 614 294 6022 | ASSY,CABINET,BOTTOM<br>(CDP-360BX/SS)                                                                                                        |
| 1       | 614 293 0557 | ASSY,CABINET,BOTTOM<br>(CDP-640CR/CA)                                                                                                        |
| 2       | 614 293 3343 | SHIELD                                                                                                                                       |
| 3       | 614 290 5586 | KNOB,SLIDE,FLAT-A-B                                                                                                                          |
| 4       | 614 290 5623 | LEVER                                                                                                                                        |
| 5       | 614 290 5692 | SPRING,TORSION,LID OPEN                                                                                                                      |
| 6       | 614 290 5579 | KNOB,SLIDE,HOLD                                                                                                                              |
| 7       | 614 267 3584 | STAND,SPRING PLATE(+,-)                                                                                                                      |
| 8       | 614 290 5609 | LID,BATTERY                                                                                                                                  |
| 10      | 614 290 5661 | SPACER,MECHA,CD,MECHA                                                                                                                        |
| 11      | 614 290 5487 | COVER,BUTTON COVER                                                                                                                           |
| 12      | 614 290 5401 | BUTTON,FWD/BACK                                                                                                                              |
| 13      | 614 290 3827 | ASSY,CABINET<br>(CDP-360BX/SS)(CDP-360CR/UK)<br>(CDP-360CR/AU)(CDP-370/UK)<br>(CDP-360/XE)(CDP-360/AU)<br>(CDP-380/UK)(CDP-560/UK)(400CR/UK) |
| 13      | 614 293 0847 | ASSY,CABINET<br>(CDP-360CR/CA)(CDP-360E/CA)<br>(CDP-640CR/CA)                                                                                |
| 14      | 614 290 5371 | ASSY,LID,CD<br>(CDP-360BX/SS)(CDP-360CR/UK)<br>(CDP-360CR/AU)(CDP-370/UK)<br>(CDP-360/XE)(CDP-360/AU)                                        |
| 14      | 614 293 1073 | ASSY,LID,CD<br>(CDP-360CR/CA)(360E/CA)                                                                                                       |
| 14      | 614 293 1080 | ASSY,LID,CD(CDP-640CR/CA)                                                                                                                    |
| 14      | 614 293 1295 | ASSY,LID,CD<br>(CDP-560/UK)(CDP-400/XE)(400CR/UK)                                                                                            |
| 15      | 614 290 5395 | BUTTON,DEC, LCD                                                                                                                              |
| 17      | 614 290 4657 | DEC,LCD                                                                                                                                      |
| 18      | 614 290 5425 | BUTTON,EJECT                                                                                                                                 |
| 24      | 614 290 5760 | SPRING,PLATE,+,-                                                                                                                             |
| 25      | 614 290 5418 | BUTTON,BASE,PLAY/STOP/P-MODE                                                                                                                 |
| 26      | 614 294 5797 | BUTTON BASE,M-SET/ANTI-S                                                                                                                     |
| 27      | 614 294 5803 | BUTTON BASE,SKIP                                                                                                                             |

FIXNG PARTS

| REF.NO. | PART NO.     | DESCRIPTION                 |
|---------|--------------|-----------------------------|
| Y01     | 411 019 0002 | SXR FLT PCS 1.4X3.5,DEC LCD |
| Y02     | 411 022 6800 | SCR S-TPG PAN 2X10,         |
| Y03     | 411 019 0002 | SXR FLT PCS 1.4X3.5,COVER   |

CONTROL-CIRCUIT

| REF.NO. | PART NO.     | DESCRIPTION               |
|---------|--------------|---------------------------|
| 51      | 614 290 5975 | ASSY,PWB CD               |
| 51      | 614 290 6163 | ASSY,PWB CD(CDP-640CR/CA) |
| 52      | 614 292 9834 | SPRING,PLATE,+/-          |
| 53      | 614 283 8433 | TERMINAL,CHARGER          |
| A1501   | 645 024 0799 | LCD                       |
| C1308   | 404 060 2705 | OS-SOLID 10U M 10V        |
| C1309   | 403 216 2507 | TA-SOLID 47U M 4V         |
| C1409   | 403 311 1603 | TA-SOLID 22U M 4V         |
| C1419   | 403 276 7108 | TA-SOLID 10U M 4V         |
| C1437   | 404 060 2705 | OS-SOLID 10U M 10V        |
| C1452   | 404 060 2705 | OS-SOLID 10U M 10V        |
| C1466   | 403 190 7109 | TA-SOLID 2.2U M 10V       |
| or      | 403 114 5402 | TA-SOLID 2.2U M 10V       |
| or      | 403 306 3100 | TA-SOLID 2.2U M 10V       |
| C1469   | 403 323 8409 | TA-SOLID 3.3U M 6.3V      |
| C1503   | 403 276 7108 | TA-SOLID 10U M 4V         |
| C1903   | 403 216 2507 | TA-SOLID 47U M 4V         |
| CN101   | 645 024 7231 | SOCKET,FPC 15P            |
| or      | 645 023 1506 | SOCKET,FPC 15P            |

PARTS LIST

| REF.NO. | PART NO.     | DESCRIPTION             |
|---------|--------------|-------------------------|
| Q1702   | 405 021 2406 | TR 2SD1048-X7           |
| Q1721   | 405 029 3207 | TR DTC114TK             |
| Q1801   | 405 021 2406 | TR 2SD1048-X7           |
| Q1802   | 405 021 2406 | TR 2SD1048-X7           |
| Q1821   | 405 029 3207 | TR DTC114TK             |
| Q1911   | 405 000 1109 | TR DTA124EK             |
| Q1925   | 405 002 0308 | TR 2SA1037K-R           |
| or      | 405 005 5508 | TR 2SA812-M6            |
| R1011   | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| R1012   | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| R1013   | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| R1303   | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| R1305   | 401 039 0809 | MT-GLAZE 91 JA 1/10W    |
| R1307   | 401 037 8005 | MT-GLAZE 15K JA 1/10W   |
| R1308   | 401 038 6406 | MT-GLAZE 4.7K JA 1/10W  |
| R1309   | 401 038 2309 | MT-GLAZE 270K JA 1/10W  |
| R1310   | 401 038 2309 | MT-GLAZE 270K JA 1/10W  |
| R1311   | 401 038 0800 | MT-GLAZE 22K JA 1/10W   |
| R1313   | 401 037 5103 | MT-GLAZE 10 JA 1/10W    |
| R1315   | 401 037 6803 | MT-GLAZE 12K JA 1/10W   |
| R1316   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1320   | 401 038 5300 | MT-GLAZE 39K JA 1/10W   |
| R1321   | 401 038 5300 | MT-GLAZE 39K JA 1/10W   |
| R1322   | 401 038 5300 | MT-GLAZE 39K JA 1/10W   |
| R1323   | 401 038 5300 | MT-GLAZE 39K JA 1/10W   |
| R1324   | 401 038 5300 | MT-GLAZE 39K JA 1/10W   |
| R1325   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1326   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1341   | 401 038 6505 | MT-GLAZE 47K JA 1/10W   |
| R1347   | 401 038 6406 | MT-GLAZE 4.7K JA 1/10W  |
| R1349   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1358   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1371   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1372   | 401 038 6505 | MT-GLAZE 47K JA 1/10W   |
| R1391   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1393   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1395   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1402   | 401 039 0403 | MT-GLAZE 8.2K JA 1/10W  |
| R1403   | 401 039 0403 | MT-GLAZE 8.2K JA 1/10W  |
| R1404   | 401 039 0403 | MT-GLAZE 8.2K JA 1/10W  |
| R1405   | 401 038 3702 | MT-GLAZE 33K JA 1/10W   |
| R1406   | 401 038 3504 | MT-GLAZE 330 JA 1/10W   |
| R1407   | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| R1408   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1409   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1411   | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| R1412   | 401 038 6208 | MT-GLAZE 47 JA 1/10W    |
| R1414   | 401 038 0800 | MT-GLAZE 22K JA 1/10W   |
| R1421   | 401 038 3504 | MT-GLAZE 330 JA 1/10W   |
| R1422   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1423   | 401 038 5102 | MT-GLAZE 3.9K JA 1/10W  |
| R1424   | 401 038 6505 | MT-GLAZE 47K JA 1/10W   |
| R1426   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1432   | 401 038 3504 | MT-GLAZE 330 JA 1/10W   |
| R1433   | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| R1434   | 401 038 0800 | MT-GLAZE 22K JA 1/10W   |
| R1437   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1440   | 401 038 6406 | MT-GLAZE 4.7K JA 1/10W  |
| R1441   | 401 038 6505 | MT-GLAZE 47K JA 1/10W   |
| R1442   | 401 038 0909 | MT-GLAZE 220K JA 1/10W  |
| R1453   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1457   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1461   | 401 038 7809 | MT-GLAZE 56K JA 1/10W   |
| R1463   | 401 038 7700 | MT-GLAZE 5.6K JA 1/10W  |
| R1464   | 401 038 0909 | MT-GLAZE 220K JA 1/10W  |
| R1465   | 401 037 9309 | MT-GLAZE 18K JA 1/10W   |
| R1466   | 401 038 5102 | MT-GLAZE 3.9K JA 1/10W  |

| REF.NO. | PART NO.     | DESCRIPTION                               |
|---------|--------------|-------------------------------------------|
| R1467   | 401 037 8005 | MT-GLAZE 15K JA 1/10W                     |
| R1468   | 401 039 0502 | MT-GLAZE 82K JA 1/10W                     |
| R1469   | 401 038 6406 | MT-GLAZE 4.7K JA 1/10W                    |
| R1471   | 401 036 8303 | MT-GLAZE 4.7K JA 1/8W                     |
| R1478   | 401 038 6307 | MT-GLAZE 470 JA 1/10W                     |
| R1483   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1484   | 401 038 6604 | MT-GLAZE 470K JA 1/10W                    |
| R1485   | 401 039 0403 | MT-GLAZE 8.2K JA 1/10W                    |
| R1486   | 401 039 0403 | MT-GLAZE 8.2K JA 1/10W                    |
| R1487   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W                   |
| R1490   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1491   | 401 038 7601 | MT-GLAZE 560 JA 1/10W                     |
| R1492   | 401 038 7601 | MT-GLAZE 560 JA 1/10W                     |
| R1493   | 401 038 7601 | MT-GLAZE 560 JA 1/10W                     |
| R1494   | 401 038 7601 | MT-GLAZE 560 JA 1/10W                     |
| R1495   | 401 038 7601 | MT-GLAZE 560 JA 1/10W                     |
| R1496   | 401 038 7601 | MT-GLAZE 560 JA 1/10W                     |
| R1501   | 401 038 7908 | MT-GLAZE 560K JA 1/10W                    |
| R1503   | 401 038 6505 | MT-GLAZE 47K JA 1/10W                     |
| R1504   | 401 038 7908 | MT-GLAZE 560K JA 1/10W                    |
| R1505   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1506   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1507   | 401 038 0701 | MT-GLAZE 2.2K JA 1/10W                    |
| R1508   | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W                    |
| R1509   | 401 038 6406 | MT-GLAZE 4.7K JA 1/10W                    |
| R1510   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1511   | 401 038 2200 | MT-GLAZE 27K JA 1/10W                     |
| R1515   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1520   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W                   |
| R1521   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W<br>(CDP-640CR/CA) |
| R1554   | 401 038 6505 | MT-GLAZE 47K JA 1/10W                     |
| R1555   | 401 037 5707 | MT-GLAZE 100K JA 1/10W                    |
| R1557   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1559   | 401 035 5402 | MT-GLAZE 100K JA 1/8W                     |
| R1560   | 401 037 5806 | MT-GLAZE 1M JA 1/10W                      |
| R1562   | 401 038 6604 | MT-GLAZE 470K JA 1/10W                    |
| R1580   | 401 038 6505 | MT-GLAZE 47K JA 1/10W                     |
| R1584   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1585   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1586   | 401 035 5204 | MT-GLAZE 10K JA 1/8W                      |
| R1587   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1588   | 401 038 6505 | MT-GLAZE 47K JA 1/10W                     |
| R1589   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W                   |
| R1590   | 401 038 6604 | MT-GLAZE 470K JA 1/10W                    |
| R1591   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1593   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W                   |
| R1594   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1595   | 401 037 5707 | MT-GLAZE 100K JA 1/10W                    |
| R1596   | 401 037 5707 | MT-GLAZE 100K JA 1/10W                    |
| R1701   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1702   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1703   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1704   | 401 039 0502 | MT-GLAZE 82K JA 1/10W                     |
| R1705   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1706   | 401 038 0909 | MT-GLAZE 220K JA 1/10W                    |
| R1707   | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W                    |
| R1708   | 401 038 5508 | MT-GLAZE 4.7 JA 1/10W                     |
| R1710   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1711   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1751   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W                   |
| R1752   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W                   |
| R1801   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1802   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |
| R1803   | 401 037 5608 | MT-GLAZE 10K JA 1/10W                     |
| R1804   | 401 039 0502 | MT-GLAZE 82K JA 1/10W                     |
| R1805   | 401 037 5400 | MT-GLAZE 1K JA 1/10W                      |

PARTS LIST

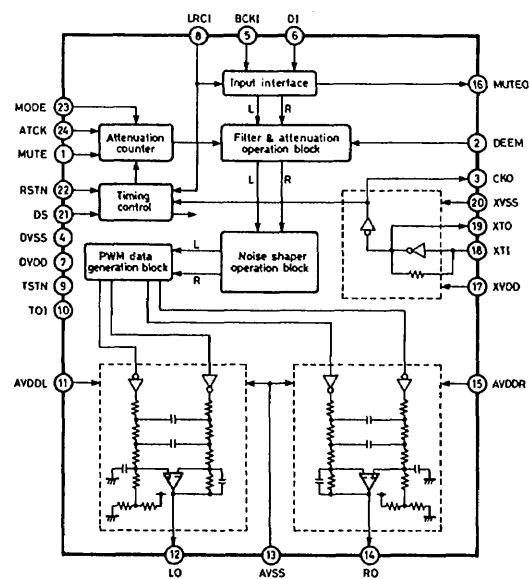
| REF.NO. | PART NO.     | DESCRIPTION             |
|---------|--------------|-------------------------|
| R1806   | 401 038 0909 | MT-GLAZE 220K JA 1/10W  |
| R1807   | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W  |
| R1808   | 401 038 5508 | MT-GLAZE 4.7 JA 1/10W   |
| R1810   | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| R1811   | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| R1851   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1852   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1901   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1911   | 401 038 7601 | MT-GLAZE 560 JA 1/10W   |
| R1912   | 401 038 7601 | MT-GLAZE 560 JA 1/10W   |
| R1913   | 401 038 7601 | MT-GLAZE 560 JA 1/10W   |
| R1914   | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| R1921   | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| R1922   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1927   | 401 038 6604 | MT-GLAZE 470K JA 1/10W  |
| R1928   | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| R1929   | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| R1941   | 401 038 3405 | MT-GLAZE 33 JA 1/10W    |
| R1942   | 401 038 3405 | MT-GLAZE 33 JA 1/10W    |
| R1943   | 401 038 3405 | MT-GLAZE 33 JA 1/10W    |
| R1944   | 401 038 3405 | MT-GLAZE 33 JA 1/10W    |
| R1945   | 401 038 3405 | MT-GLAZE 33 JA 1/10W    |
| R1947   | 401 038 0503 | MT-GLAZE 22 JA 1/10W    |
| R1950   | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R1951   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1952   | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| R1981   | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| R1982   | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| R1991   | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| S1501   | 645 024 0775 | SWITCH,PUSH             |
| S1502   | 645 024 0775 | SWITCH,PUSH             |
| S1503   | 645 024 0775 | SWITCH,PUSH             |
| S1504   | 645 024 0775 | SWITCH,PUSH             |
| S1505   | 645 024 0775 | SWITCH,PUSH             |
| S1506   | 645 024 0775 | SWITCH,PUSH             |
| S1507   | 645 024 0775 | SWITCH,PUSH             |
| S1511   | 645 008 8728 | SWITCH,SLIDE 1P-2T      |
| S1513   | 614 230 8578 | SWITCH,PUSH             |
| S1921   | 645 009 5795 | SWITCH,SLIDE 2P-3T      |
| VR131   | 645 013 4449 | VR,SEMI,22K S           |
| VR132   | 645 013 4470 | VR,SEMI,47K S           |
| VR191   | 645 024 0782 | VR,ROTARY 10KBX2        |
| X1501   | 614 215 5561 | RESONATOR,CERAM         |
| or      | 645 013 7532 | OSC,CERAMIC 4.19MHZ     |
| X1901   | 645 017 0157 | OSC,CERAMIC 16.93MHZ    |

M3 MECHANISM (CD542AAA-SN/SH)

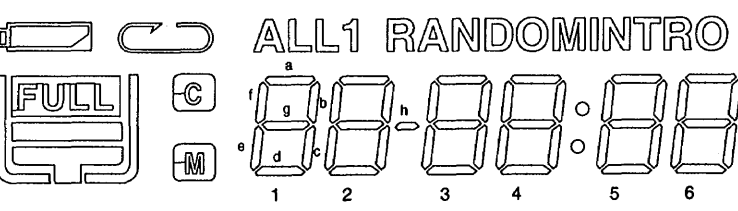
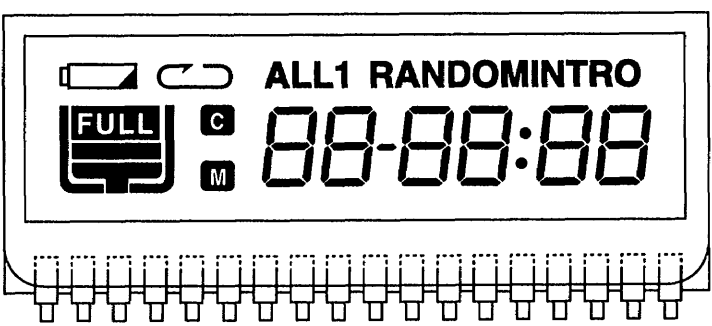
| REF.NO. | PART NO.     | DESCRIPTION                   |
|---------|--------------|-------------------------------|
| 101     | 645 025 3034 | ASSY,MD,CHASSIS & SPINDLE     |
| 102     | 645 025 6660 | SCREW M2X2.5,SLED-M FIX       |
| 103     | 645 025 3058 | GEAR BN,SLED GEAR             |
| 104     | 645 025 3027 | ASSY,SLED MOTOR,SLED MOTOR    |
| 105     | 645 025 3041 | ASSY,SLED SCREW,SLED          |
| 106     | 645 025 6677 | SCREW M1.7X2,SPRING FIX       |
| 107     | 645 025 3072 | GEAR BN,RACK SPRING           |
| 108     | 645 025 3065 | HOLDER,SLED GEAR HOLDER       |
| 109     | 645 025 6684 | TAPPING SCREW B2X8,HOLDER FIX |

IC BLOCK DIAGRAM & DESCRIPTION

IC191 SM5877AM

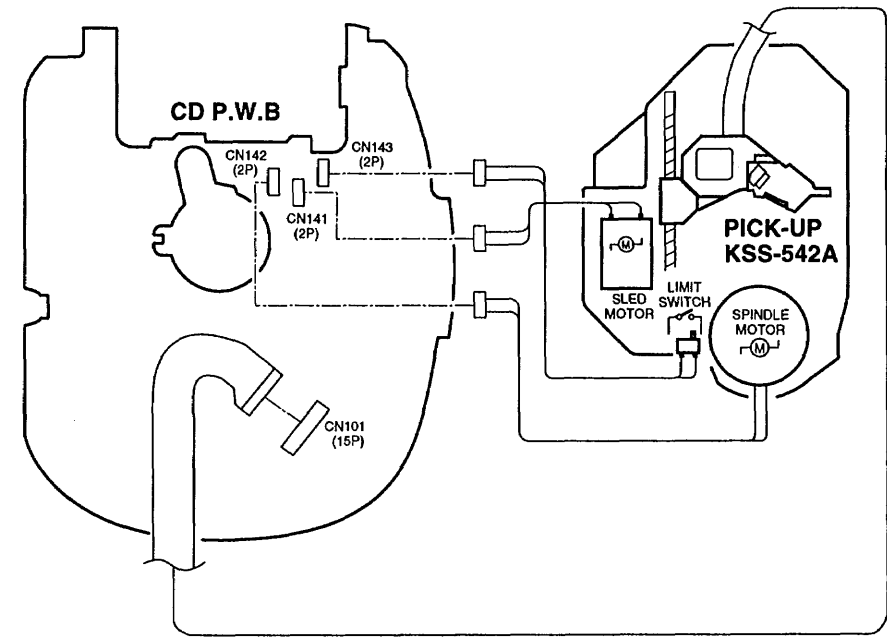


A1501 LCD Display



| No. | COM.0  | COM.1 | COM.2 | COM.3 |
|-----|--------|-------|-------|-------|
| 1   | COM0   |       |       |       |
| 2   |        | COM1  |       |       |
| 3   |        |       | COM2  |       |
| 4   |        |       |       | COM3  |
| 5   | 6a     | 6b    | 6c    | 6d    |
| 6   | INTRO  | 6f    | 6g    | 6e    |
| 7   | 5a     | 5b    | 5c    | 5d    |
| 8   | :      | 5f    | 5g    | 5e    |
| 9   | 4a     | 4b    | 4c    | 4d    |
| 10  | RANDOM | 4f    | 4g    | 4e    |
| 11  | 3a     | 3b    | 3c    | 3d    |
| 12  | 3h     | 3f    | 3g    | 3e    |
| 13  | 2a     | 2b    | 2c    | 2d    |
| 14  | C      | 2f    | 2g    | 2e    |
| 15  | 1a     | 1b    | 1c    | 1d    |
| 16  | FULL   | 1f    | 1g    | 1e    |
| 17  | 1      | ALL   |       | M     |
| 18  |        |       | LJ    |       |

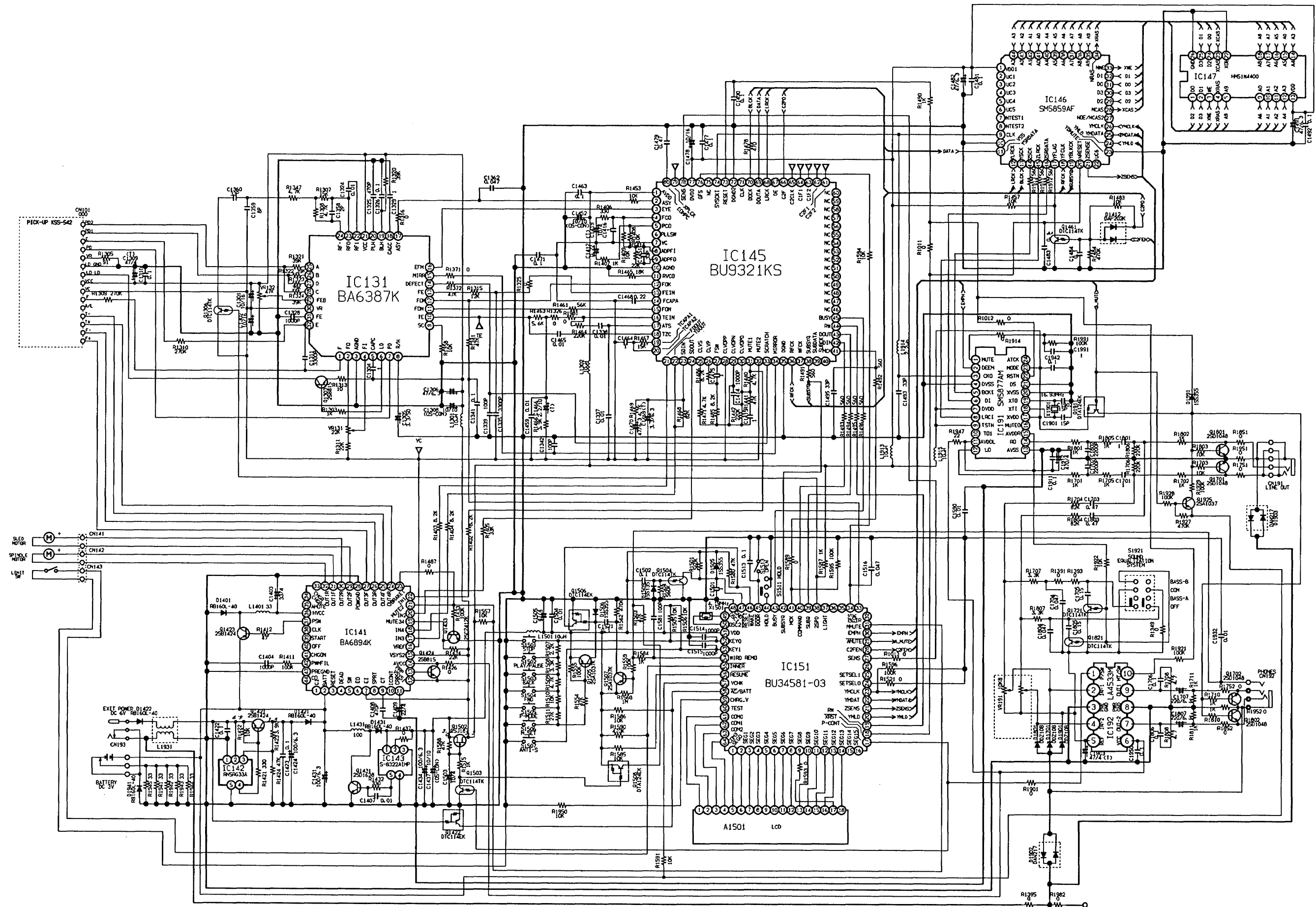
WIRING CONNECTION



CDP-360BX/SS, CDP-360CR/UK, CDP-360CR/CA, CDP-360CR/AU, CDP-360E/CA, CDP-370/UK, CDP-360/XE, CDP-360/AU

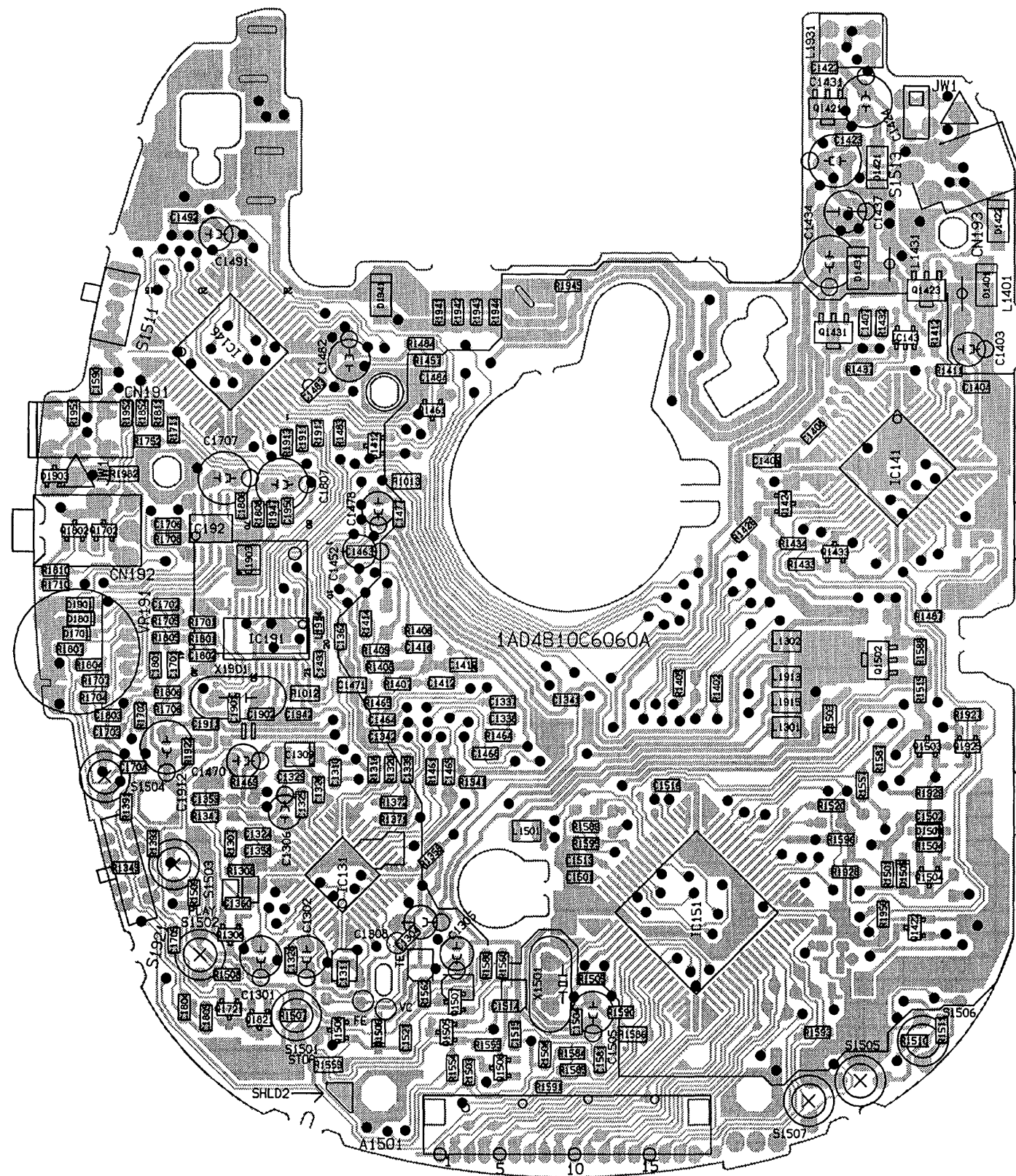


CDP-640CR/CA, CDP-560/UK, CDP-400CR/UK, CDP-400/XE

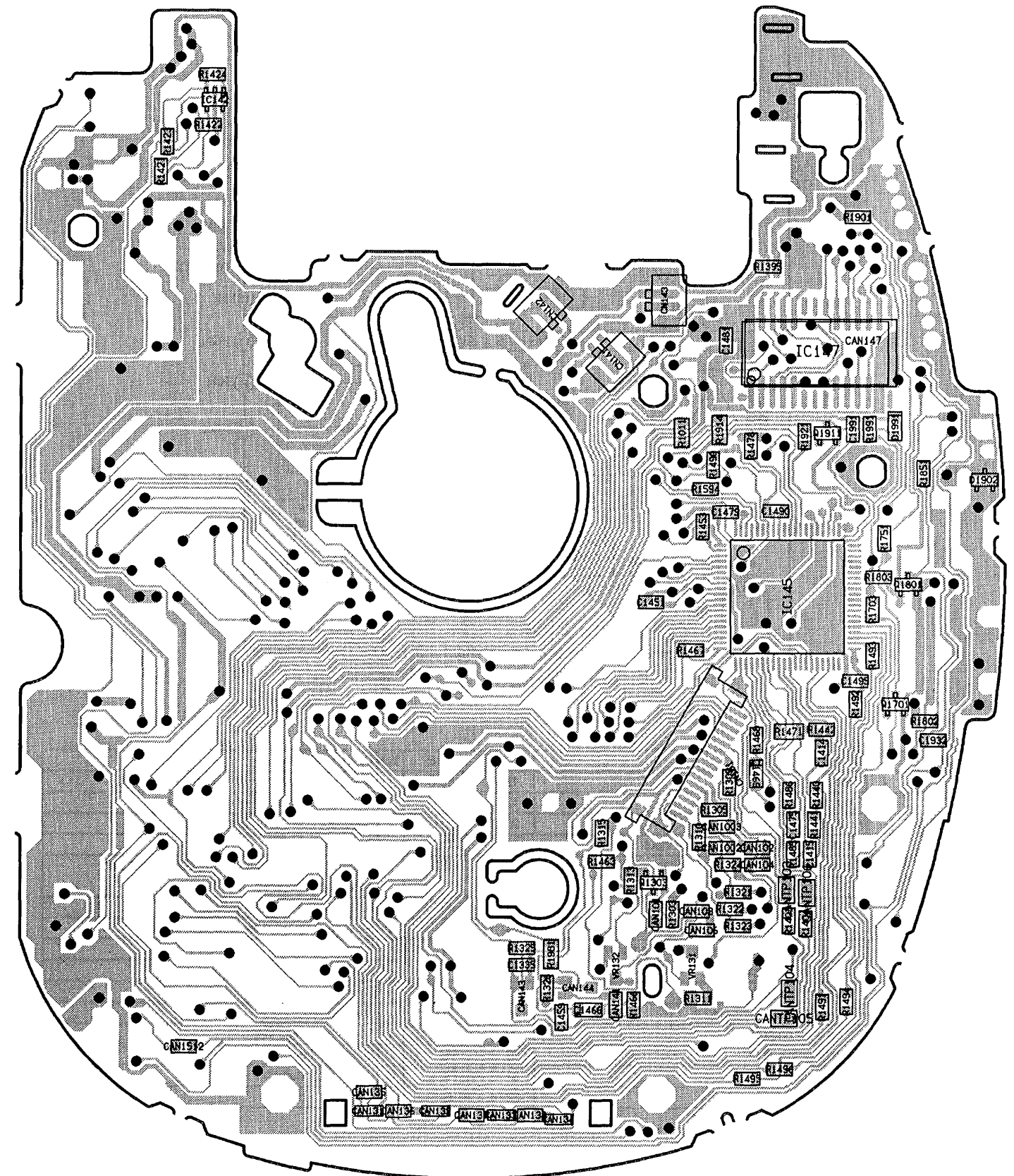




**BOTTOM VIEW**

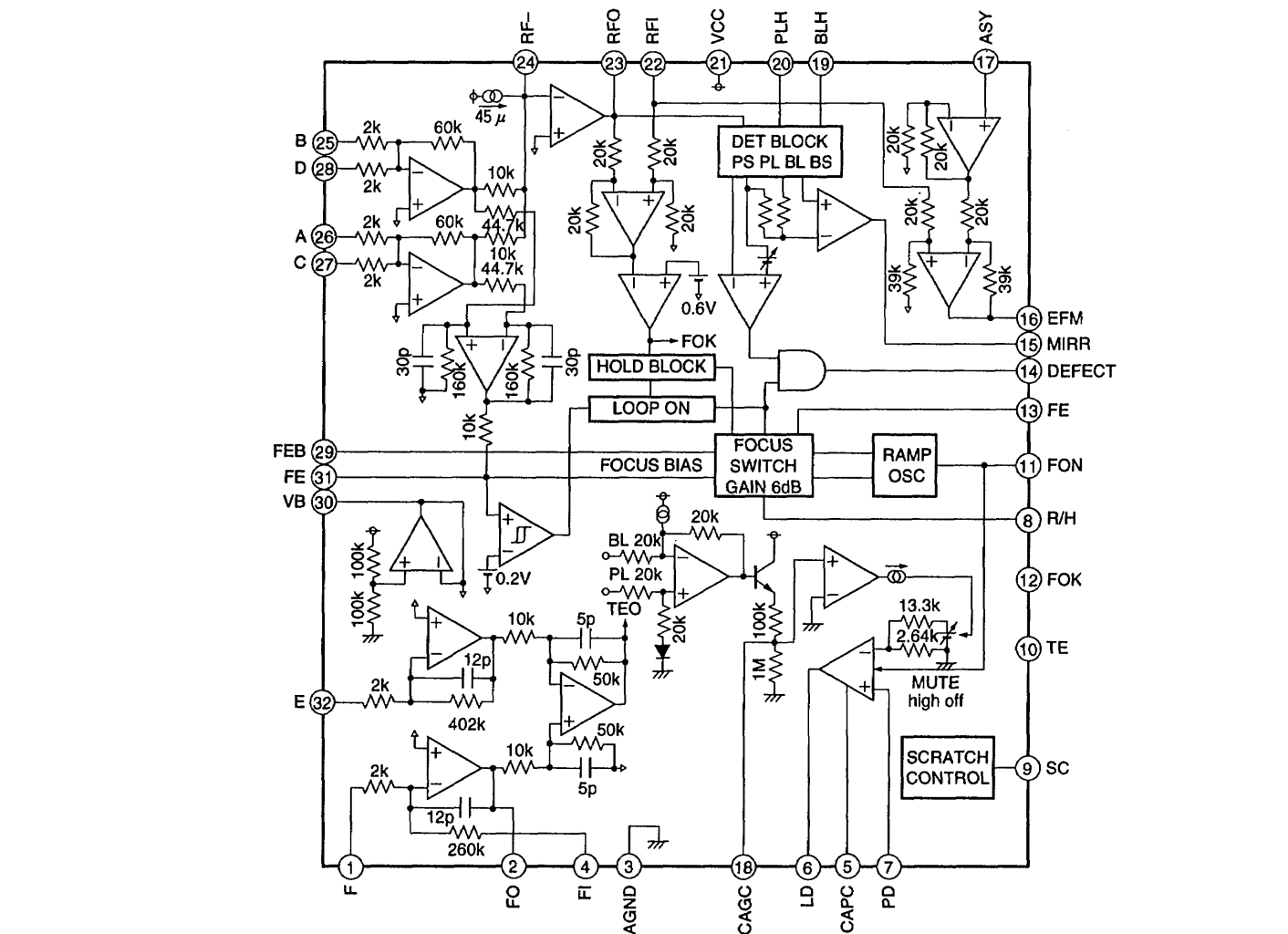


**TOP VIEW**



IC BLOCK DIAGRAM & DESCRIPTION

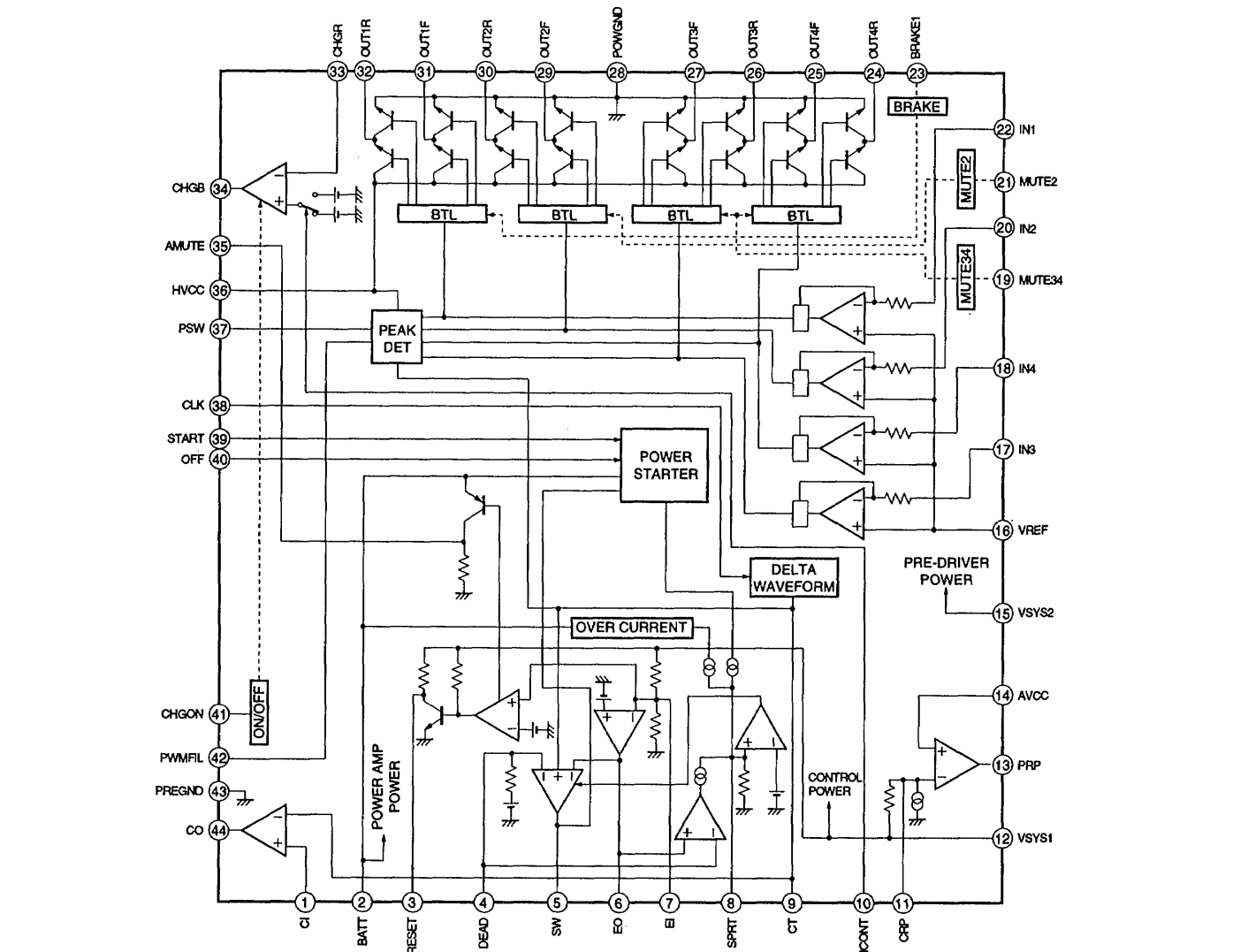
IC131 BA6387K



| NO. | NAME   | I/O | DESCRIPTION                                      | NO. | NAME | I/O | DESCRIPTION                                                         |
|-----|--------|-----|--------------------------------------------------|-----|------|-----|---------------------------------------------------------------------|
| 1   | F      | I   | F input.                                         | 18  | CAGC | I   | Capacitor connection of AGC time constant.                          |
| 2   | FO     | O   | F output.                                        | 19  | BLH  | I   | Capacitor connection of bottom long.                                |
| 3   | AGND   | -   | Analog GND.                                      | 20  | PLH  | I   | Capacitor connection of peak long.                                  |
| 4   | FI     | I   | Focus gain adjustment feedback input.            | 21  | VCC  | -   | Power supply.                                                       |
| 5   | CAPC   | I   | Capacitor connection of APC phase compensation.  | 22  | RFI  | I   | Input for the RF summing amplifier output with capacitance coupled. |
| 6   | LD     | O   | APC amplifier output.                            | 23  | RFO  | O   | RF summing amplifier output.                                        |
| 7   | PD     | I   | APC amplifier input.                             | 24  | RF-  | I   | RF summing amplifier feedback input.                                |
| 8   | R/H    | I   | Capacitor connection of lamp waveform/loop off.  | 25  | B    | I   | B input.                                                            |
| 9   | SC     | I   | Resistor connection of scratch depth adjustment. | 26  | A    | I   | A input.                                                            |
| 10  | TE     | O   | Tracking error output.                           | 27  | C    | I   | C input.                                                            |
| 11  | FON    | I   | Focus ON control input.                          | 28  | D    | I   | D input.                                                            |
| 12  | FOK    | O   | Focus OK comparator output.                      | 29  | FEB  | I   | Focus error bias input.                                             |
| 13  | FE     | O   | Focus error output1.                             | 30  | VB   | O   | Bias amplifier output.                                              |
| 14  | DEFECT | O   | Defect signal output.                            | 31  | FE'  | O   | Focus error output2.                                                |
| 15  | MIRR   | O   | Mirror signal output.                            | 32  | E    | I   | E input.                                                            |
| 16  | EFM    | O   | EFM signal output.                               |     |      |     |                                                                     |
| 17  | ASY    | I   | Auto asymmetry control input.                    |     |      |     |                                                                     |

IC BLOCK DIAGRAM & DESCRIPTION

IC141 BA6894K

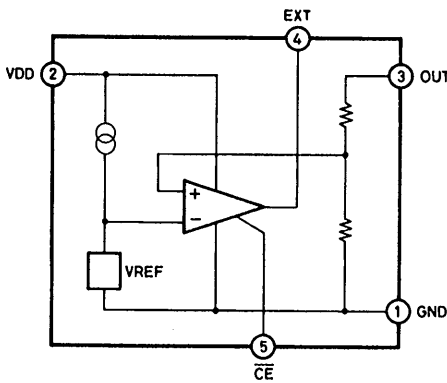


| NO. | NAME   | I/O | DESCRIPTION                         | NO. | NAME   | I/O | DESCRIPTION             |
|-----|--------|-----|-------------------------------------|-----|--------|-----|-------------------------|
| 1   | CI     | I   | PWM comparator input.               | 23  | BRAKE1 | I   | CH1 brake input.        |
| 2   | BATT   | I   | Battery detect input.               | 24  | OUT4R  | O   | CH4 reversed output.    |
| 3   | RESET  | O   | Reset detect output.                | 25  | OUT4F  | O   | CH4 positive output.    |
| 4   | DEAD   | I   | Dead time establishment.            | 26  | OUT3R  | O   | CH3 reversed output.    |
| 5   | SW     | O   | Boost transistor drive output.      | 27  | OUT3F  | O   | CH3 positive output.    |
| 6   | EO     | O   | Error amplifier output.             | 28  | POWGND | -   | Power GND.              |
| 7   | EI     | I   | Error amplifier input.              | 29  | OUT2F  | O   | CH2 positive output.    |
| 8   | SPRT   | I   | Short protect establishment.        | 30  | OUT2R  | O   | CH2 reversed output.    |
| 9   | CT     | O   | Delta waveform output.              | 31  | OUT1F  | O   | CH1 positive output.    |
| 10  | ICONT  | I   | Charge current switching input.     | 32  | OUT1R  | O   | CH1 reversed output.    |
| 11  | CRP    | I   | Ripple filter smoothing input.      | 33  | CHGR   | I   | Charge current          |
| 12  | VSYS1  | -   | Control circuit power supply.       | 34  | CHGB   | O   | Transistor drive for    |
| 13  | PRP    | O   | Transistor drive for ripple filter. | 35  | AMUTE  | O   | Reset inversion output. |
| 14  | AVCC   | O   | Ripple filter output.               | 36  | HVCC   | -   | H brige power supply.   |
| 15  | VSYS2  | -   | Pre driver power supply.            | 37  | PSW    | O   | PWM transistor drive.   |
| 16  | VREF   | I   | Reference voltage input.            | 38  | CLK    | I   | External clock          |
| 17  | IN3    | I   | CH3 control signal input.           | 39  | START  | I   | DC/DC converter boost   |
| 18  | IN4    | I   | CH4 control signal input.           | 40  | OFF    | I   | DC/DC converter boost   |
| 19  | MUTE34 | I   | CH3, CH4 mute input.                | 41  | CHGON  | I   | Charge circuit mute.    |
| 20  | IN2    | I   | CH2 control signal input.           | 42  | PWMFIL | O   | PWM phase               |
| 21  | MUTE2  | I   | CH2 mute input.                     | 43  | PREGND | -   | PRE GND.                |
| 22  | IN1    | I   | CH1 control signal input.           | 44  | CO     | O   | PWM comparator          |

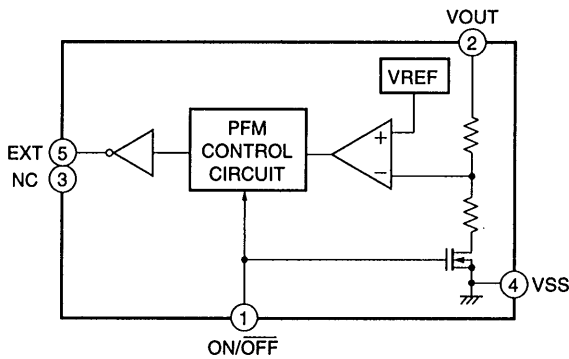


IC BLOCK DIAGRAM & DESCRIPTION

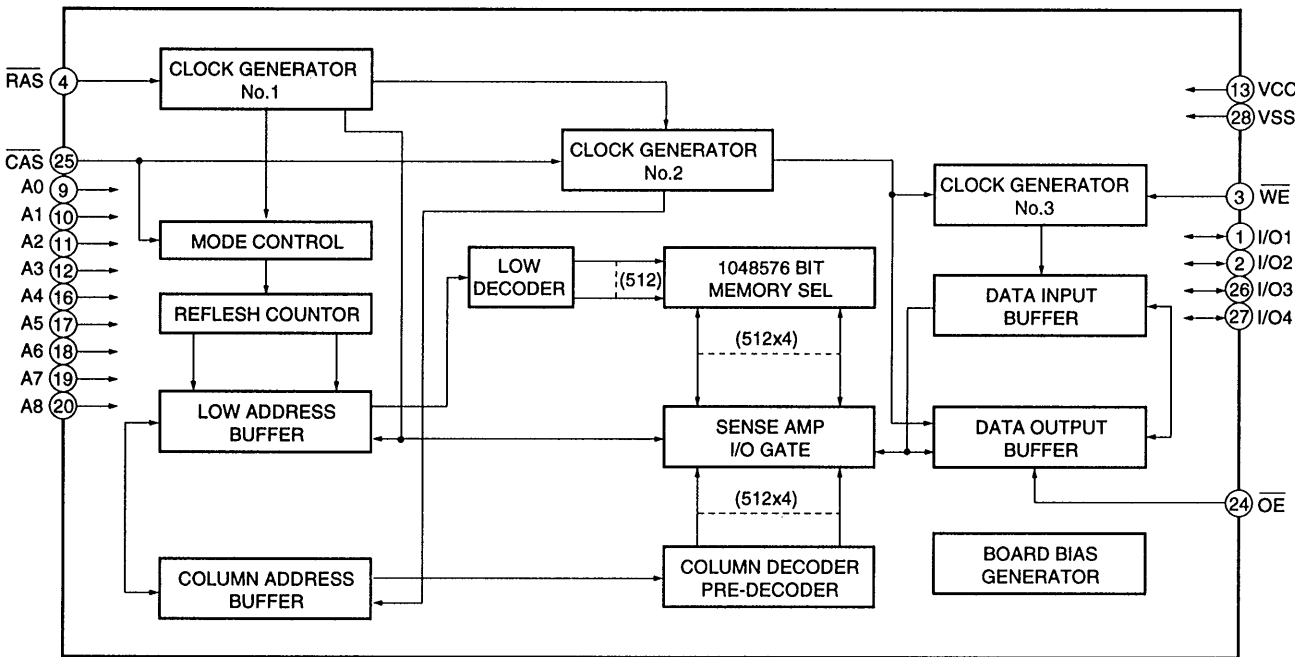
IC142 RN5RG33A (Regulator)



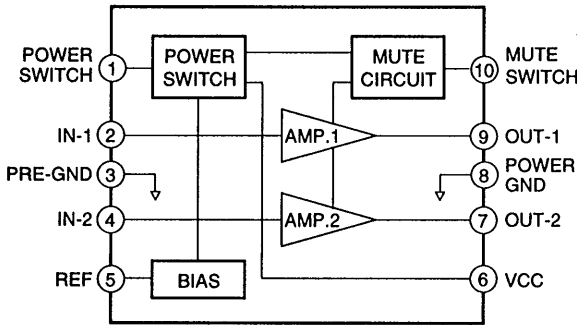
IC143 S-8322AIMP-DOI



IC147 LC32V4256BM

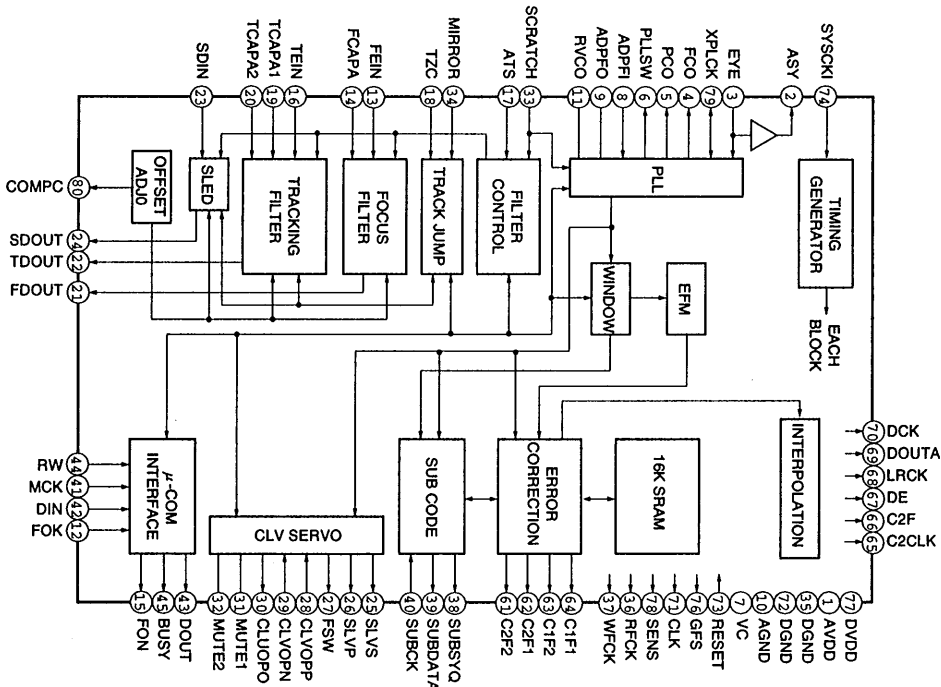


IC192 LA4533M



IC BLOCK DIAGRAM & DESCRIPTION

IC145 BU9321KS



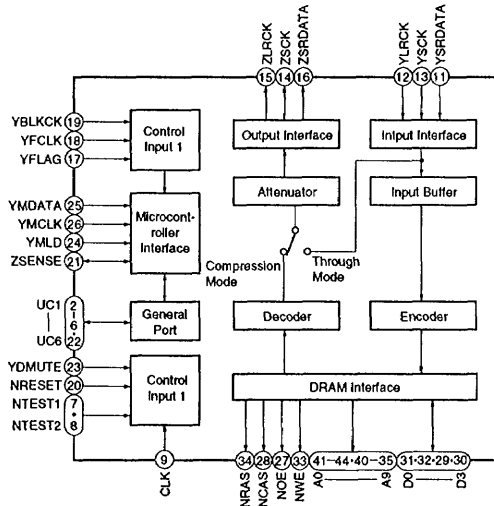
| NO. | NAME    | I/O | DESCRIPTION                                | NO. | NAME   | I/O | DESCRIPTION                                                       |
|-----|---------|-----|--------------------------------------------|-----|--------|-----|-------------------------------------------------------------------|
| 1   | AVDD    | -   | Analog power supply                        | 41  | MCK    | I   | Command reading, sub-code reading clock input                     |
| 2   | ASY     | O   | EFM signal slice level control output      | 42  | DIN    | I   | Command serial input from microcomputer                           |
| 3   | EYE     | I   | EFM signal input from the RF amplifier     | 43  | DOUT   | O   | Sub Q code serial output                                          |
| 4   | FCO     | O   | PLL frequency comparator output.           | 44  | RW     | O   | Read/write switching input                                        |
| 5   | PCO     | O   | PLL phase comparison error voltage output. | 45  | BUSY   | O   | BUSY output (L : During track jump)                               |
| 6   | PLLSW   | O   | PLL time constant selection                | 46  | N.C.   | -   | Not used.                                                         |
| 7   | VC      | I   | Bias voltage input                         | 47  | N.C.   | -   | Not used.                                                         |
| 8   | ADPFI   | I   | PLL adding amplifier inversion input       | 48  | N.C.   | -   | Not used.                                                         |
| 9   | ADPFO   | O   | PLL adding amplifier output                | 49  | N.C.   | -   | Not used.                                                         |
| 10  | AGND    | I   | Analog GND                                 | 50  | N.C.   | -   | Not used.                                                         |
| 11  | RVCO    | I   | PLL VCO oscillation frequency adjustment   | 51  | N.C.   | -   | Not used.                                                         |
| 12  | FOK     | I   | Focus OK signal input                      | 52  | N.C.   | -   | Not used.                                                         |
| 13  | FEIN    | I   | Focus error signal input                   | 53  | N.C.   | -   | Not used.                                                         |
| 14  | FCAPA   | O   | Focus servo filter capacitor connection    | 54  | N.C.   | -   | Not used.                                                         |
| 15  | FON     | O   | Focus ON signal output                     | 55  | N.C.   | -   | Not used.                                                         |
| 16  | TEIN    | I   | Tracking error signal input                | 56  | N.C.   | -   | Not used.                                                         |
| 17  | ATS     | I   | Anti-shock detection wind comparator input | 57  | N.C.   | -   | Not used.                                                         |
| 18  | TZC     | I   | Tracking zero-cross comparator input       | 58  | N.C.   | -   | Not used.                                                         |
| 19  | TCAPA1  | O   | Tracking servo filter switch connection    | 59  | N.C.   | -   | Not used.                                                         |
| 20  | TCAPA2  | O   | Tracking servo filter switch connection    | 60  | N.C.   | -   | Not used.                                                         |
| 21  | FDOUT   | O   | Focus drive output                         | 61  | C2F2   | O   | C22 correction flag output                                        |
| 22  | TDOUT   | O   | Tracking drive output                      | 62  | C2F1   | O   | C21 correction flag output                                        |
| 23  | SDIN    | I   | Sled amplifier input                       | 63  | C1F2   | O   | C12 correction flag output                                        |
| 24  | SDOUT   | O   | Sled drive output                          | 64  | C1F1   | O   | C11 correction flag output                                        |
| 25  | CLVS    | O   | CLV speed control output                   | 65  | C2CLK  | O   | Strobe signal (f=176.4 kHz)                                       |
| 26  | CLVP    | O   | CLV phase control input                    | 66  | C2F    | O   | Corrected condition output                                        |
| 27  | FSW     | O   | CLV filter time constant selection         | 67  | DE     | O   | Strobe signal (f=88.2 kHz)                                        |
| 28  | CLVOPP  | I   | CLV adding amplifier non-inversion input   | 68  | LRCK   | O   | Strobe signal (f=44.1 kHz)                                        |
| 29  | CLVOPN  | I   | CLV adding amplifier inversion input       | 69  | DOUTA  | O   | Audio data output (2's compliment)                                |
| 30  | CLVOPO  | O   | CLV adding amplifier output                | 70  | DOCK   | O   | DOUTA bit clock (f=2.1168 MHz)                                    |
| 31  | MUTE1   | I/O | CLV mute switch 1                          | 71  | CLK    | O   | Clock output (4 types can be selected by &hE4 command.)           |
| 32  | MUTE2   | I/O | CLV mute switch 2                          | 72  | DGND   | -   | Digital GND                                                       |
| 33  | SCRATCH | I   | Scratch signal input                       | 73  | RESET  | I   | Internal circuit reset                                            |
| 34  | MIRROR  | I   | Mirror signal input                        | 74  | SYSCKI | I   | System clock input (f=16.93 MHz)                                  |
| 35  | DGND    | -   | Digital GND                                | 75  | N.C.   | -   | Not used.                                                         |
| 36  | RFCK    | O   | Read frame clock output                    | 76  | GFS    | O   | GFS monitor output (4 types can be selected by &hE4 command.)     |
| 37  | WFCK    | O   | Write frame clock output                   | 77  | DVDD   | -   | Digital power supply                                              |
| 38  | SUBSYQ  | O   | Sub-code sync signal S1 output             | 78  | SENS   | O   | Monitor output (&hE4 command setting or offset comparator output) |
| 39  | SUBDATA | O   | Sub-code serial output                     | 79  | XPLCK  | I/O | PLL playback clock output or external PLL playback clock input    |
| 40  | SUBCK   | I   | Sub-code reading clock input               | 80  | COMPC  | O   | Offset adjustment smoothing (Analog offset measurement enable)    |

IC BLOCK DIAGRAM & DESCRIPTION

IC151 BU34581 03

| NO. | NAME   | I/O | DESCRIPTION                           | NO. | NAME    | I/O | DESCRIPTION                                  |
|-----|--------|-----|---------------------------------------|-----|---------|-----|----------------------------------------------|
| 1   | SEG0   | O   | LCD segment output.                   | 33  | FOK     | I   | Connection of DSP, BA6376K.                  |
| 2   | SEG1   | O   | LCD segment output.                   | 34  | GFS     | I   | Connection of DSP.                           |
| 3   | SEG2   | O   | LCD segment output.                   | 35  | -       | -   | N.C. (Open)                                  |
| 4   | SEG3   | O   | LCD segment output.                   | 36  | -       | -   | N.C. (Open)                                  |
| 5   | SEG4   | O   | LCD segment output.                   | 37  | LIGHT   | O   | Back light lighting output. (H : lighting)   |
| 6   | SEG5   | O   | LCD segment output.                   | 38  | 2SPD    | O   | High speed Hi output.                        |
| 7   | SEG6   | O   | LCD segment output.                   | 39  | SUB-Q   | I   | Connection of DSP (BU9317) DIN.              |
| 8   | SEG7   | O   | LCD segment output.                   | 40  | COMMAND | O   | Connection of DSP (BU9317) DIN.              |
| 9   | SEG8   | O   | LCD segment output.                   | 41  | MCK     | O   | Connection of DSP (BU9317) MCK.              |
| 10  | SEG9   | O   | LCD segment output.                   | 42  | SUBSYQ  | I   | Connection of DSP (BU9317) .                 |
| 11  | SEG10  | O   | LCD segment output.                   | 43  | BUSY    | I   | Connection of DSP (BU9317) .                 |
| 12  | SEG11  | O   | LCD segment output.                   | 44  | HOLD    | I   | HOLD SW input. (H : Hold)                    |
| 13  | SEG12  | O   | LCD segment output.                   | 45  | LID SW  | I   | Lid sw detect input. (H : Open)              |
| 14  | SEG13  | O   | LCD segment output.                   | 46  | WAKE-UP | I   | Stop mode release detect input. (L : Detect) |
| 15  | SEG14  | O   | LCD segment output.                   | 47  | RESET   | I   | Mi-con reset input.                          |
| 16  | SEG15  | O   | LCD segment output.                   | 48  | GND     | -   | Mi-con GND.                                  |
| 17  | P CON  | O   | Power control output. (H : ON)        | 49  | OSC1    | I   | X'tal input.                                 |
| 18  | XRESET | O   | DSP, ESP reset output. (L : Reset)    | 50  | OSC2    | O   | X'tal output.                                |
| 19  | RW     | O   | Connection of DSP.                    | 51  | VDD     | -   | Mi-con power supply.                         |
| 20  | YMLD   | O   | ESP (SM5856A1F) latch clock output.   | 52  | KEY0    | I   | Key input.                                   |
| 21  | ZSENS  | I   | ESP (SM5856A1F) status input.         | 53  | KEY1    | I   | Key input.                                   |
| 22  | YMDAT  | O   | ESP (SM5856A1F) control data output.  | 54  | WREM    | I   | Wireless remote control key input.           |
| 23  | YMCLK  | O   | ESP (SM5856A1F) data clock output.    | 55  | LIMIT   | I   | LIMIT SW detect input. (L : Detect)          |
| 24  | SEL 0  | I   | ESP select input.                     | 56  | RESUME  | I   | RESUME key input. (L : Resume)               |
| 25  | SEL 1  | I   | ESP select input.                     | 57  | VCHK    | I   | Power voltage detect input.                  |
| 26  | -      | -   | N.C. (Open)                           | 58  | AC/BATT | I   | Power detect input. (L : AC adapter in)      |
| 27  | SENS   | I   | DSP SENS signal input.                | 59  | CHRG V  | I   | Battery charge voltage detect input.         |
| 28  | C2FEN  | O   | DSP error detect flag control output. | 60  | TEST    | I   | Test input. (For chip test, open)            |
| 29  | AMUTE  | O   | Audio mute output. (L : Mute)         | 61  | COM0    | O   | LCD common output.                           |
| 30  | EMPH   | O   | Emphasis control. (H : Emphasis on)   | 62  | COM1    | O   | LCD common output.                           |
| 31  | MMUTE  | O   | Driver mute output. (H : Mute)        | 63  | COM2    | O   | LCD common output.                           |
| 32  | IR     | I   | Wireless remote control input.        | 64  | COM3    | O   | LCD common output.                           |

IC146 SM5859AF



| NO. | NAME    | I/O | DESCRIPTION                           | NO. | NAME    | I/O | DESCRIPTION                               | NO. | NAME | I/O | DESCRIPTION       |
|-----|---------|-----|---------------------------------------|-----|---------|-----|-------------------------------------------|-----|------|-----|-------------------|
| 1   | VDD     | -   | Power supply.                         | 16  | ZSRDATA | O   | Audio serial output data.                 | 30  | D3   | I/O | DRAM data.        |
| 2   | UC1     | I/O | Micro controller interface expansion. | 17  | YFLAG   | I   | RAM overflow flag of signal process IC.   | 31  | D0   | I/O | DRAM data.        |
| 3   | UC2     | I/O | Micro controller interface expansion. | 18  | YFCLK   | I   | Crystal frame clock.                      | 32  | D1   | I/O | DRAM data.        |
| 4   | UC3     | I/O | Micro controller interface expansion. | 19  | YBLKCK  | I   | Sub code block clock signal.              | 33  | NWE  | O   | DRAM WE control.  |
| 5   | UC4     | I/O | Micro controller interface expansion. | 20  | NRESET  | I   | Reset.                                    | 34  | NRAS | O   | DRAM RAS control. |
| 6   | UC5     | I/O | Micro controller interface expansion. | 21  | ZSENSE  | I   | Micro controller interface status output. | 35  | A9   | O   | DRAM address.     |
| 7   | NTEST1  | I   | Test terminal.                        | 22  | UC6     | I/O | Micro controller interface expansion.     | 36  | A8   | O   | DRAM address.     |
| 8   | NTEST2  | I   | Test terminal.                        | 23  | YDMUTE  | I   | Forced mute terminal.                     | 37  | A7   | O   | DRAM address.     |
| 9   | CLK     | I   | 16.9344MHz clock input.               | 24  | YMLD    | I   | Micro controller interface latch clock.   | 38  | A6   | O   | DRAM address.     |
| 10  | VSS     | -   | Ground.                               | 25  | YMDATA  | I   | Micro controller interface serial data.   | 39  | A5   | O   | DRAM address.     |
| 11  | YSRDATA | I   | Audio serial input data.              | 26  | YMCLK   | I   | Micro controller interface shift clock.   | 40  | A4   | O   | DRAM address.     |
| 12  | YLCK    | I   | Audio serial input LR clock.          | 27  | NOE     | O   | DRAM OE control (DRAM=1)                  | 41  | A0   | O   | DRAM address.     |
| 13  | YSCK    | I   | Audio serial input bit clock.         | 28  | NCAS    | O   | DRAM2 CAS control (DRAM=2)                | 42  | A1   | O   | DRAM address.     |
| 14  | ZSCK    | O   | Audio serial output bit clock.        | 29  | D2      | I/O | DRAM data.                                | 43  | A2   | O   | DRAM address.     |
| 15  | ZLCK    | O   | Audio serial output LR clock.         |     |         |     |                                           | 44  | A3   | O   | DRAM address.     |

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