

DENON

For U.S.A., Canada
& Europe model

Ver. 3

Please refer to the
MODIFICATION NOTICE.

SERVICE MANUAL

MODEL DCM-390
DCM-290
DCM-27
DCM-500AE

STEREO CD PLAYER

注 意

サービスをおこなう前に、このサービスマニュアルを必ずお読みください。本機は、火災、感電、けがなどに対する安全性を確保するために、さまざまな配慮をおこなっており、また法的には「電気用品安全法」にもとづき、所定の許可を得て製造されております。従ってサービスをおこなう際は、これらの安全性が維持されるよう、このサービスマニュアルに記載されている注意事項を必ずお守りください。

● For purposes of improvement, specifications and design are subject to change without notice.

● 本機の仕様は性能改良のため、予告なく変更することがあります。
● 補修用性能部品の保有期間は、製造打切後8年です。

● Please use this service manual with referring to the operating instructions without fail.

● 修理の際は、必ず取扱説明書を参照の上、作業を行ってください。

● Some illustrations using in this service manual are slightly different from the actual set.

● 本文中に使用しているイラストは、説明の都合上現物と多少異なる場合があります。

DENON

TOKYO, JAPAN
Denon Brand Company, D&M Holdings Inc.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

LASER RADIATION

Do not stare into beam or view directly with optical instruments, class 3A laser product.

CAUTION Please heed the points listed below during servicing and inspection.

◎ Heed the cautions!

Spots requiring particular attention when servicing, such as the cabinet, parts, chassis, etc., have cautions indicated on labels or seals. Be sure to heed these cautions and the cautions indicated in the handling instructions.

◎ Caution concerning electric shock!

(1) An AC voltage is impressed on this set, so touching internal metal parts when the set is energized could cause electric shock. Take care to avoid electric shock, by for example using an isolating transformer and gloves when servicing while the set is energized, unplugging the power cord when replacing parts, etc.

(2) There are high voltage parts inside. Handle with extra care when the set is energized.

◎ Caution concerning disassembly and assembly!

Though great care is taken when manufacturing parts from sheet metal, there may in some rare cases be burrs on the edges of parts which could cause injury if fingers are moved across them. Use gloves to protect your hands.

◎ Only use designated parts!

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). For replacement parts, be sure to use parts which have the same properties. In particular, for the important safety parts that are marked \triangle on wiring diagrams and parts lists, be sure to use the designated parts.

◎ Be sure to mount parts and arrange the wires as they were originally!

For safety reasons, some parts use tape, tubes or other insulating materials, and some parts are mounted away from the surface of printed circuit boards. Care is also taken with the positions of the wires inside and clamps are used to keep wires away from heating and high voltage parts, so be sure to set everything back as it was originally.

◎ Inspect for safety after servicing!

Check that all screws, parts and wires removed or disconnected for servicing have been put back in their original positions, inspect that no parts around the area that has been serviced have been negatively affected, conduct an insulation check on the external metal connectors and between the blades of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and turn the power switch on. Using a 500V insulation resistance tester, check that the insulation resistance between the terminals of the power plug and the externally exposed metal parts (antenna terminal, headphones terminal, microphone terminal, input terminal, etc.) is 1M Ω or greater. If it is less, the set must be inspected and repaired.

CAUTION Concerning important safety parts

Many of the electric and structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and using replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and parts lists in this service manual. Be sure to replace them with parts with the designated part number.

(1) Schematic diagrams ... Indicated by the \triangle mark.

(2) Parts lists ... Indicated by the \triangle mark.

Using parts other than the designated parts could result in electric shock, fires or other dangerous situations.

注意 サービス、点検時にはつぎのことにご注意願います。

◎ 注意事項をお守りください!

サービスのとき特に注意を必要とする個所についてはキャビネット、部品、シャーシなどにラベルや捺印で注意事項を表示しています。これらの注意書きおよび取扱説明書などの注意事項を必ずお守りください。

◎ 感電に注意!

(1) このセットは、交流電圧が印加されていますので通電時に内部金属部に触れると感電することがあります。従って通電サービス時には、絶縁トランスの使用や手袋の着用、部品交換には、電源プラグを抜くなどして感電にご注意ください。

(2) 内部には高電圧の部分がありますので、通電時の取扱には十分ご注意ください。

◎ 分解、組み立て作業時のご注意!

板金部品の端面の『バリ』は、部品製造時に充分管理をしておりますが、板金端面は鋭利となっている箇所がありますので、部品端面に触れたまま指を動かすとまれに怪我をする場合がありますので十分注意して作業して下さい。手の保護のために手袋を着用してください。

◎ 指定部品の使用!

セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用してください。特に配線図、部品表に \triangle 印で指定されている安全上重要な部品は必ず指定のものをご使用ください。

◎ 部品の取付けや配線の引きまわしは、元どおりに!

安全上、テープやチューブなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランパーによって発熱部品や高圧部品に接近しないように配慮されていますので、これらは必ず元どおりにしてください。

◎ サービス後は安全点検を!

サービスのために取り外したねじ、部品、配線などが元どおりになっているか、またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し、外部金属端子部と、電源プラグの刃の間の絶縁チェックをおこなうなど、安全性が確保されていることを確認してください。

(絶縁チェックの方法)

電源コンセントから電源プラグを抜き、アンテナやプラグなどを外し、電源スイッチを入れます。500V 絶縁抵抗計を用いて、電源プラグのそれぞれの端子と外部露出金属部 [アンテナ端子、ヘッドホン端子、マイク端子、入力端子など] との間で、絶縁抵抗値が 1 M Ω 以上であること、この値以下のときはセットの点検修理が必要です。

注意 安全上重要な部品について

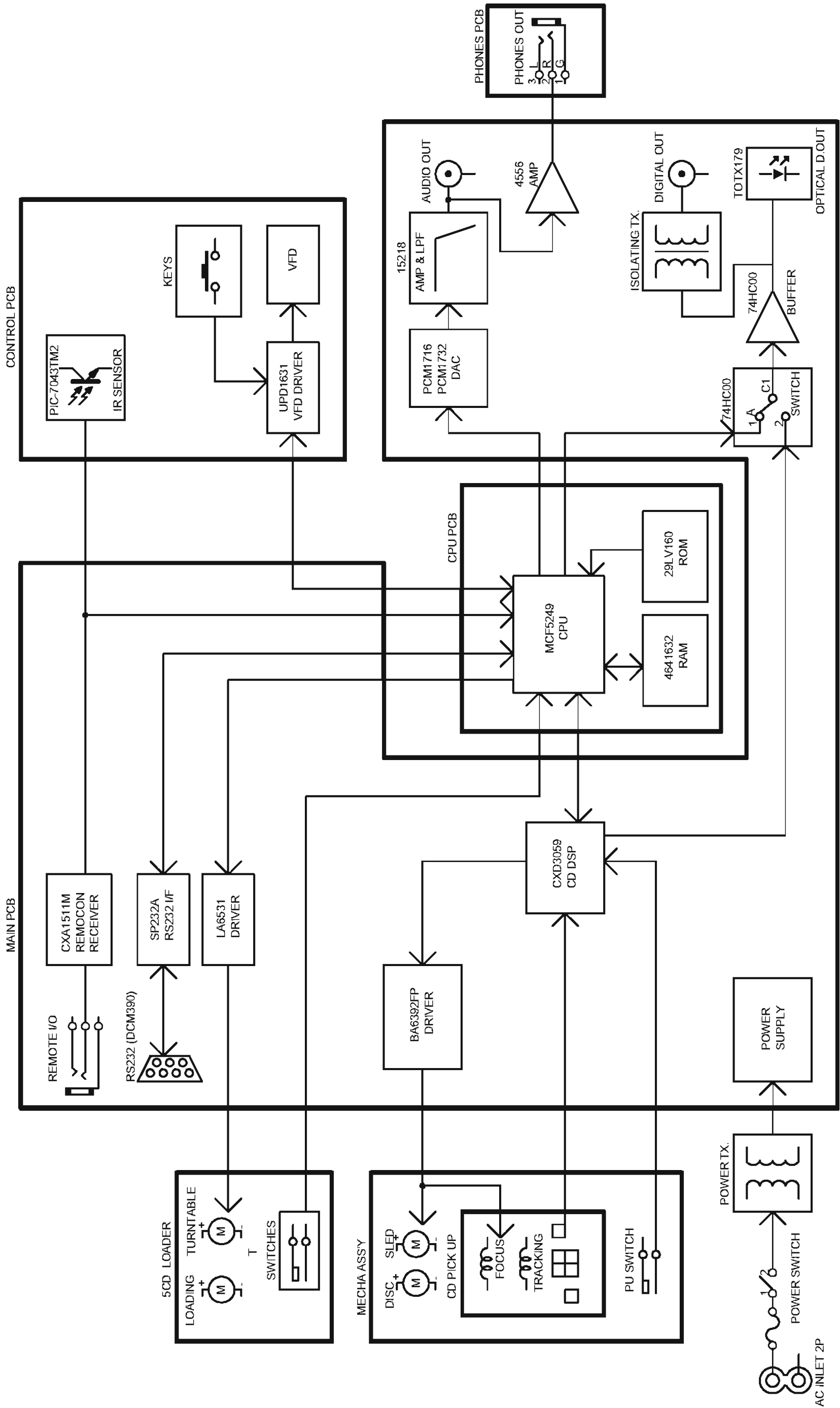
本機に使用している多くの電気部品、および機構部品は安全上、特別な特性を持っています。この特性はほとんどの場合、外観では判別つきにくく、またもとの部品より高い定格(定格電力、耐圧)を持ったものを使用しても安全性が維持されるとは、限りません。安全上の特性を持った部品は、このサービスマニュアルの配線図、部品表につぎのように表示していますので必ず指定されている部品番号のものを使用願います。

(1) 配線図... \triangle マークで表示しています。

(2) 部品表... \triangle マークで表示しています。

指定された部品と異なるものを使用した場合には、感電、火災などの危険を生じる恐れがあります。

BLOCK DIAGRAM

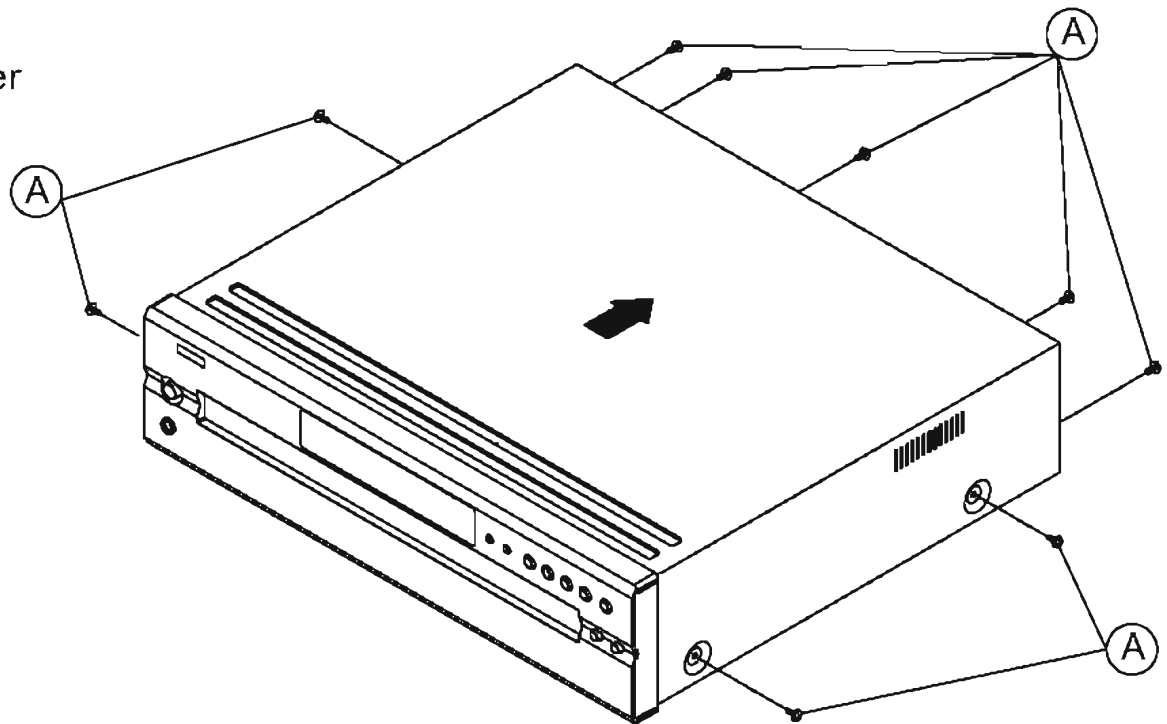


DISASSEMBLY

(To reassemble, reverse disassembly)

1. TOP COVER

Remove 4 screws (A) fixing the Top Cover and 5 screws (A) mounting the Rear Panel, then detach the Top Cover as shown in the arrow direction.

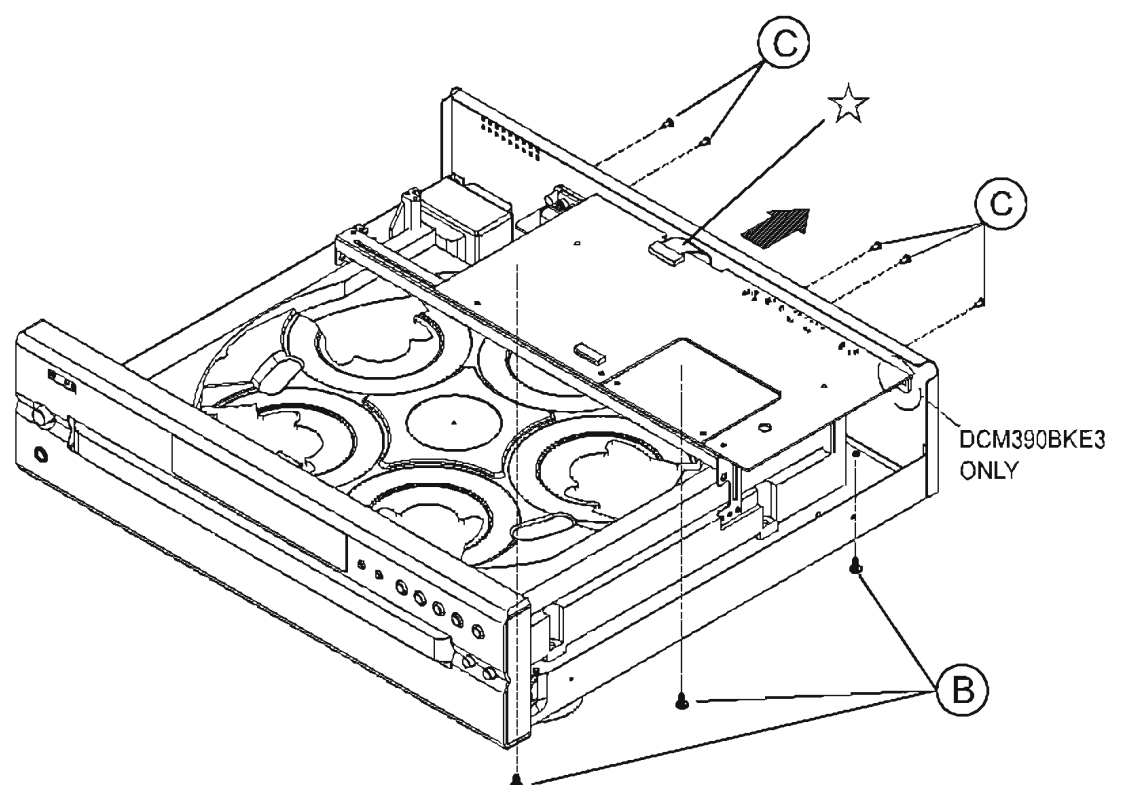


2. BACK PANEL

Remove 3 screws (B) mounting the Bottom Cover and 5 screws (C) mounting the Back Panel, then detach the Back Panel as shown in the arrow direction.

Note: Only in 3x5mm, other screws can't be used for (B).

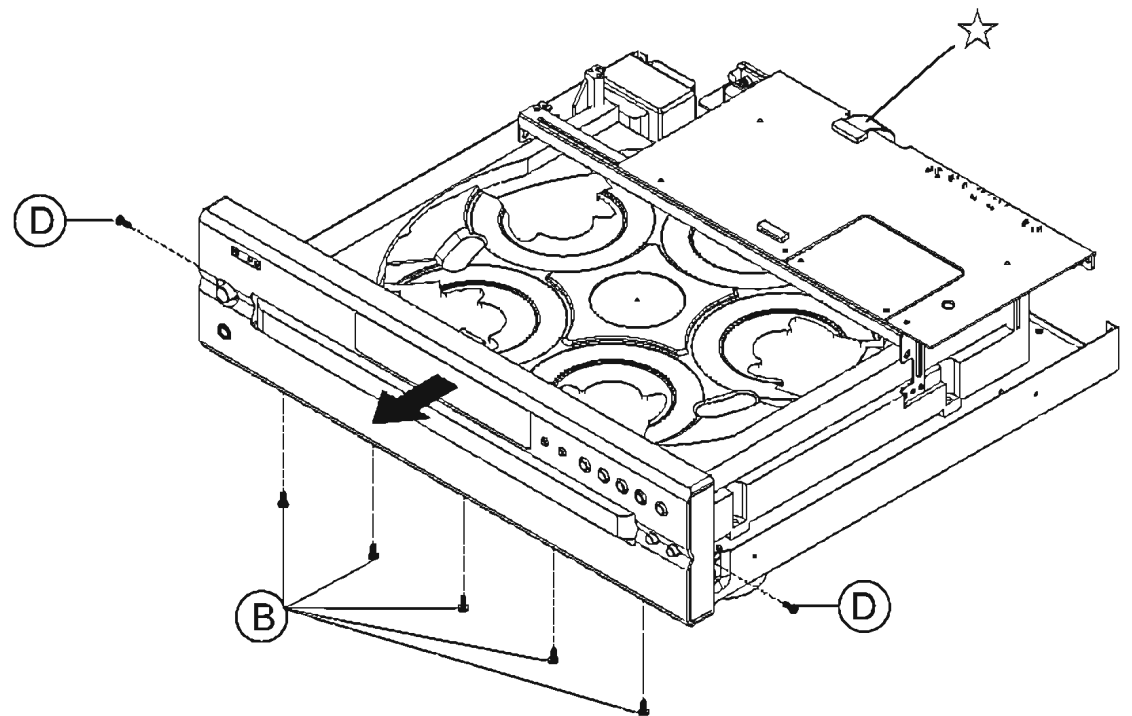
Note: Do not yet exclude FFC (☆mark)



3. FRONT PANEL

Remove 2 side screws (D) and 5 below screws (B) mounting the Front Panel, then detach the Front Panel as shown in the arrow direction.

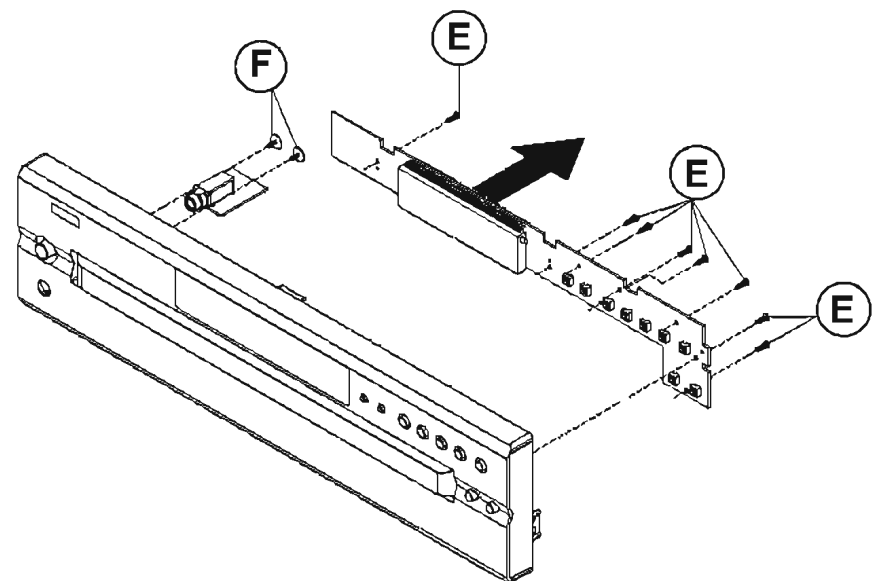
Note: Do not yet exclude FFC (☆mark)



4. CONTROL P.W.B. & Phone P.W.B.

Remove 8 screws (E) mounting the Front Panel and 1 (E) screw fixing the Control P.W.B., then detach the Control P.W.B. as shown in the arrow direction.

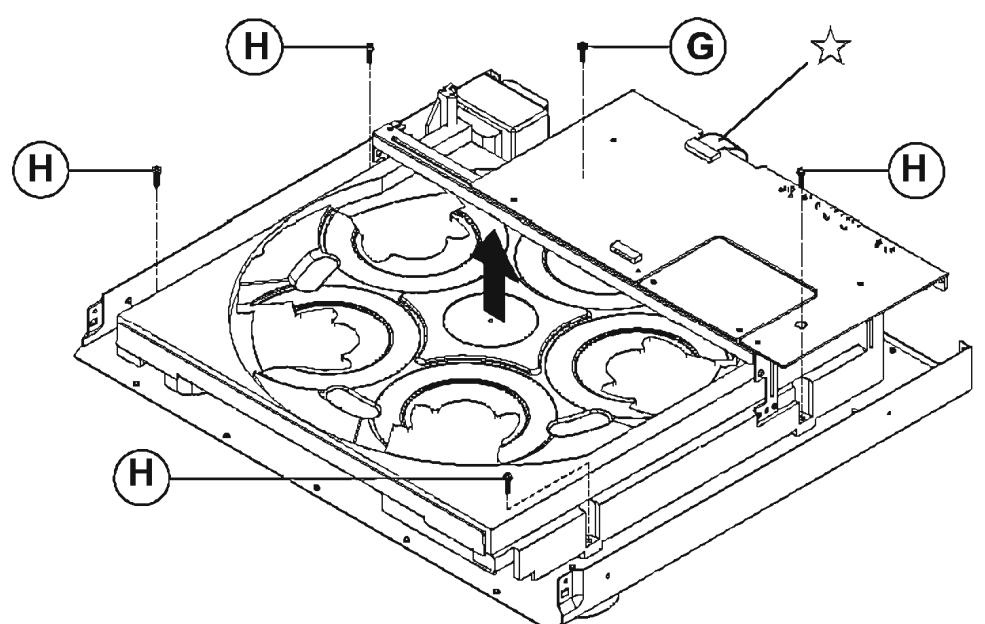
Remove 2 screws (F) mounting the Front Panel fixing the Phone P.W.B., then detach the Phone P.W.B..



5. LOADER ASS'Y & MAIN P.W.B.

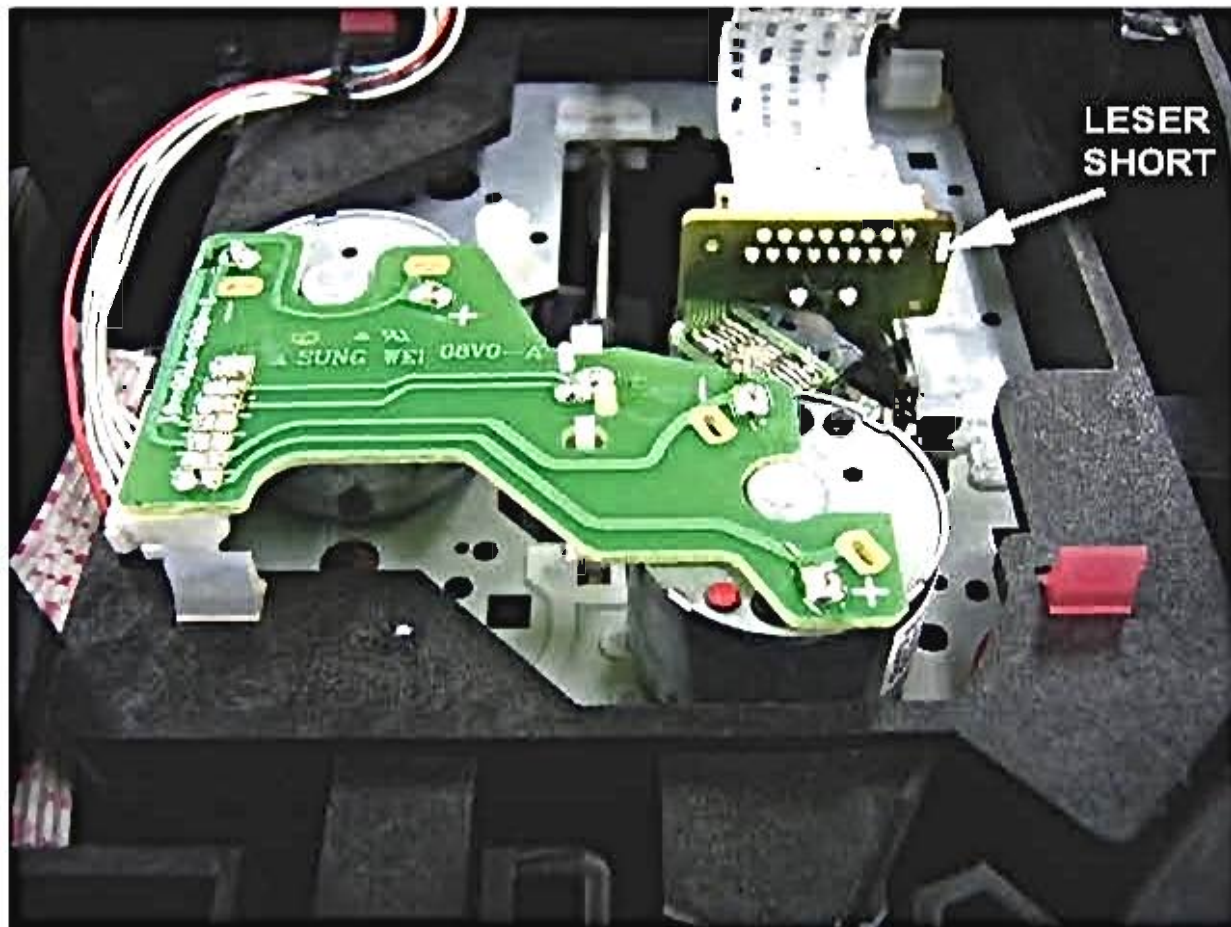
Remove 1 screw (G) and 4 screws (H) mounting the Bottom Cover, then detach the Loader Ass'y & Main P.W.B. as shown in the arrow direction.

Note: Do not yet exclude FFC (☆mark)

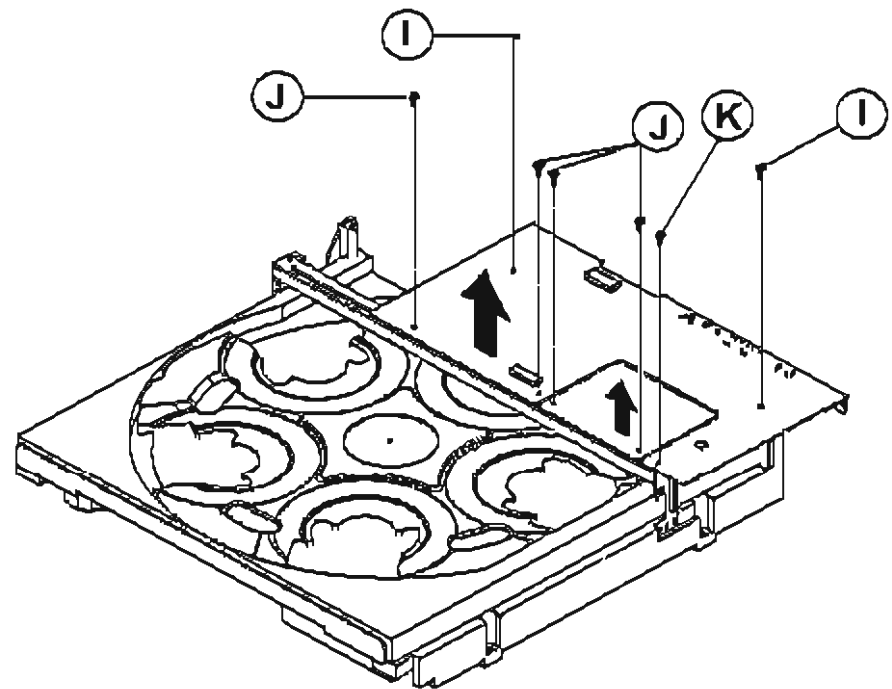


6. LASER SHORT

Reverse a Loader ass'y & Main P.W.B. unit
and a Laser short-circuit in Pick-up next.

**7. MAIN P.W.B.**

Remove 2 screws (I), 4 screws (J), 1
screw (K) fixing the Main P.W.B. then
detach the Main P.W.B. as shown in
the arrow direction.

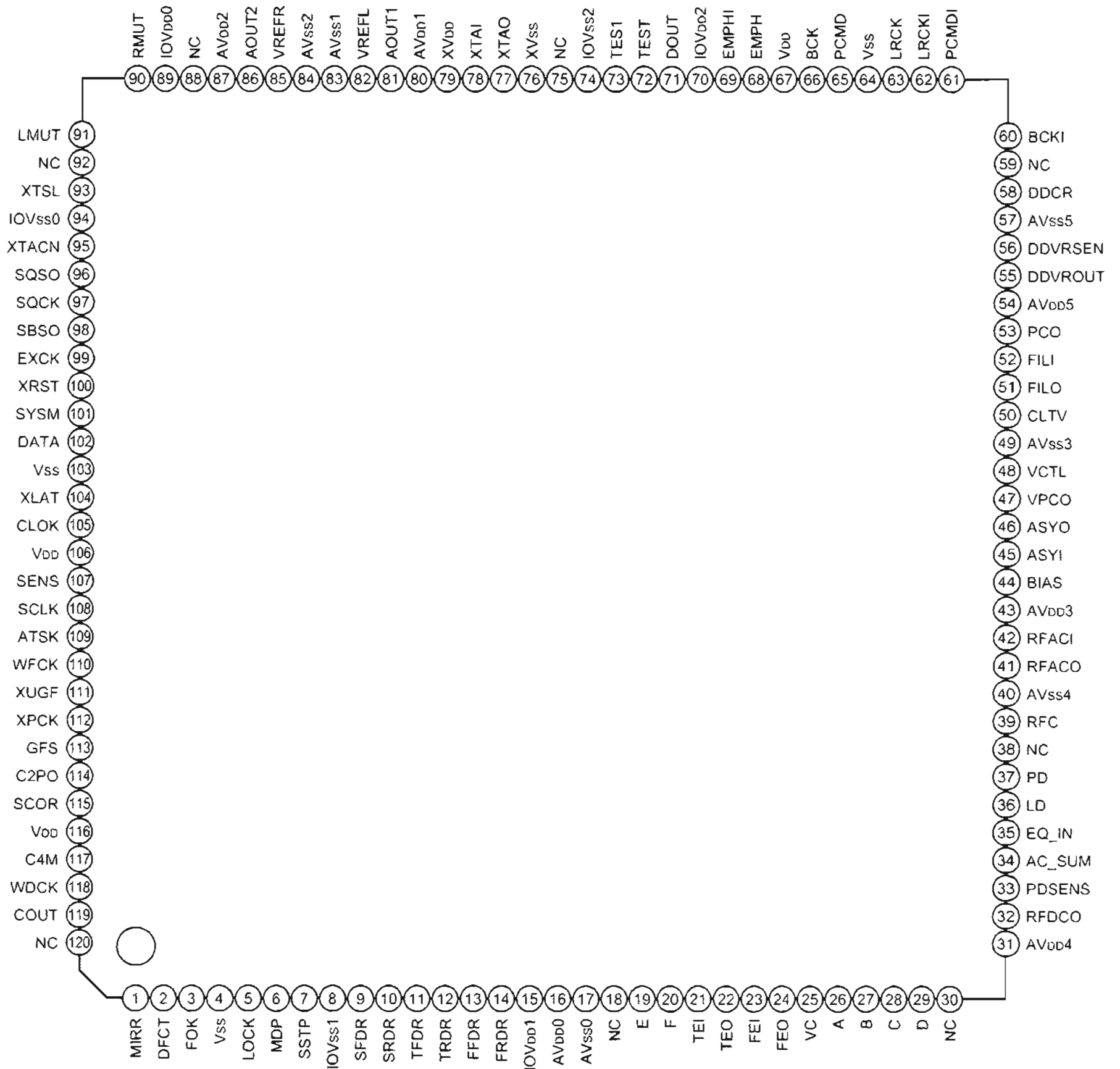


SEMICONDUCTORS

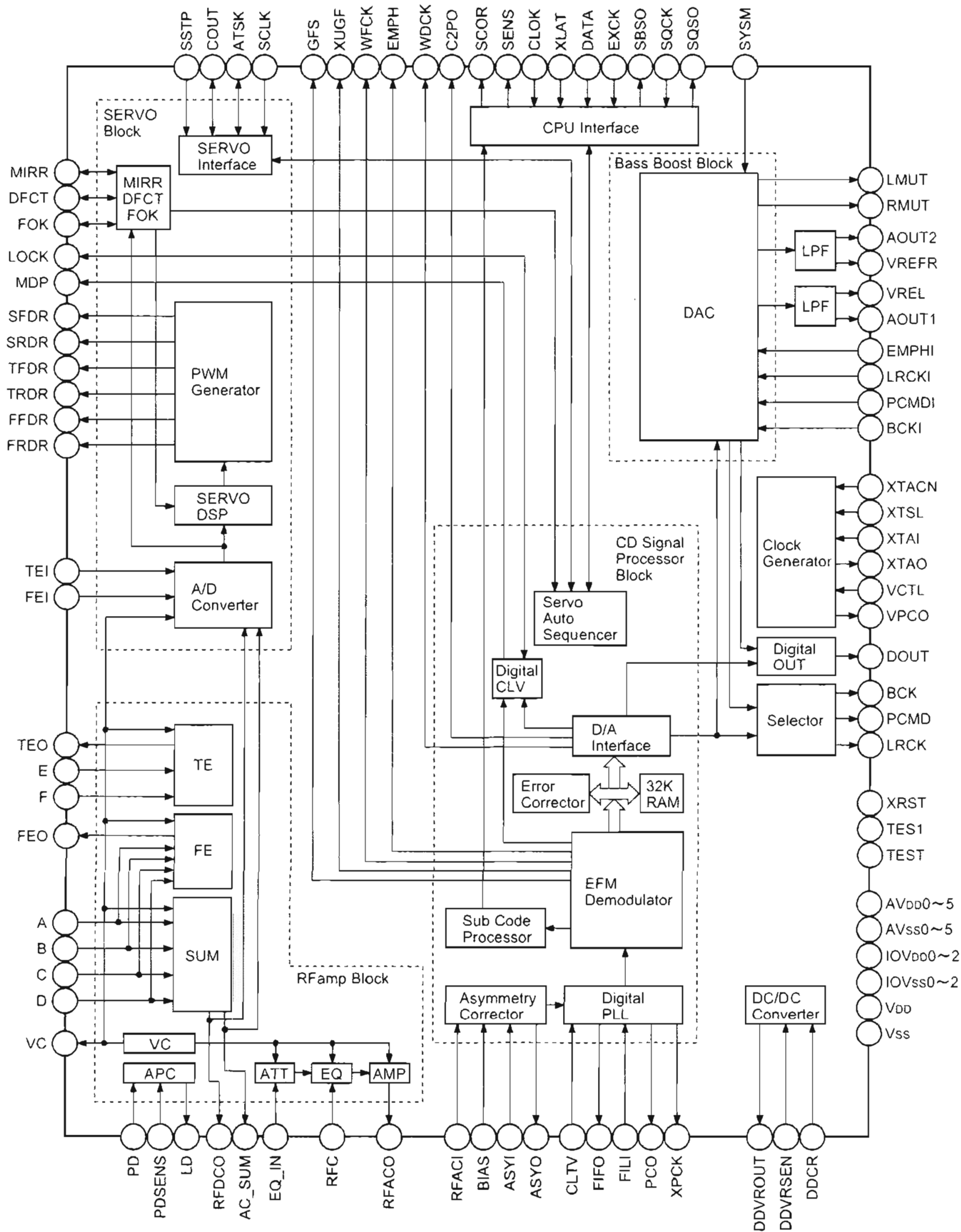
Only major semiconductors are shown, general semiconductors etc. are omitted to list.
 主な半導体を記載しています。汎用の半導体は記載を省略しています。

● IC's

CXD3059 (IC 101)



Block Diagram



Pin Description

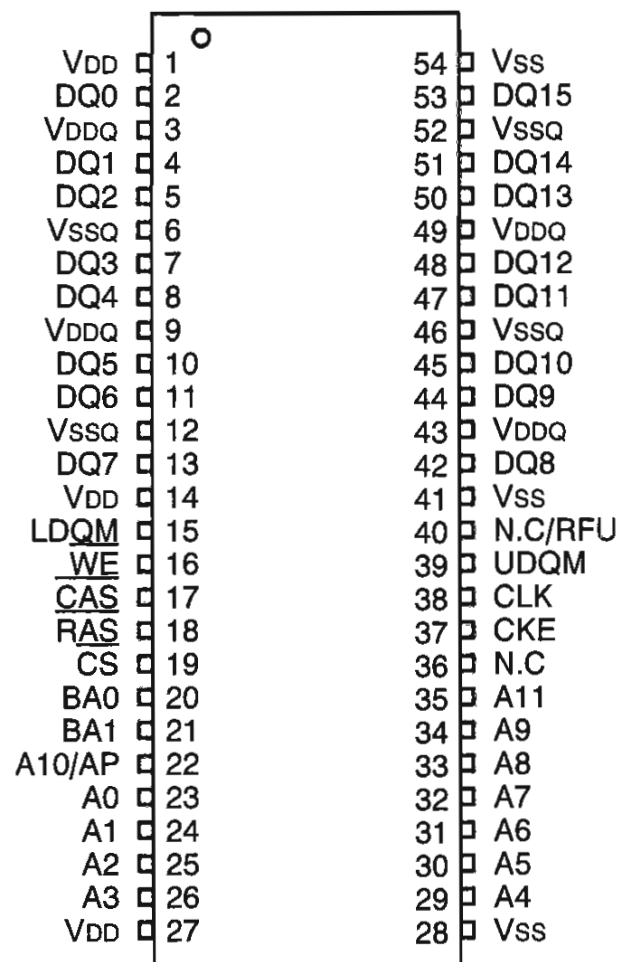
| Power supply | Pin No. | Symbol | I/O | | Description |
|---|---------|--------|-----|---------|--|
| Digital I/O = 3.3V Internal = 2.5V | 1 | MIRR | I/O | 1, 0 | Mirror signal input/output. |
| | 2 | DFCT | I/O | 1, 0 | Defect signal input/output. |
| | 3 | FOK | I/O | 1, 0 | Focus OK signal input/output. |
| | 4 | Vss | — | — | Internal digital GND. |
| | 5 | LOCK | I/O | 1, 0 | GFS is sampled at 460Hz; when GFS is high , this pin outputs a high signal. If GFS is low eight consecutive samples, this pin outputs low. Or this pin inputs when LKIN = "1". |
| | 6 | MDP | O | 1, Z, 0 | Spindle motor servo control output. |
| | 7 | SSTP | I | | Disk innermost detection signal input. |
| | 8 | IOVss1 | — | — | I/O digital GND. |
| | 9 | SFDR | O | 1, 0 | Sled drive output. |
| | 10 | SRDR | O | 1, 0 | Sled drive output. |
| | 11 | TFDR | O | 1, 0 | Tracking drive output. |
| | 12 | TRDR | O | 1, 0 | Tracking drive output. |
| | 13 | FFDR | O | 1, 0 | Focus drive output. |
| | 14 | FRDR | O | 1, 0 | Focus drive output. |
| | 15 | IOVdd1 | — | — | I/O digital power supply. |
| A/D 3.3V | 16 | AVdd0 | — | — | Analog power supply. |
| | 17 | AVss0 | — | — | Analog GND. |
| — | 18 | NC | — | — | |
| RFamp 3.3V | 19 | E | I | | E signal input. |
| | 20 | F | I | | F signal input. |
| | 21 | TEI | I | | Tracking error signal input to DSSP block. |
| | 22 | TEO | O | | Tracking error signal output from RF amplifier block. |
| | 23 | FEI | I | | Focus error signal input to DSSP block. |
| | 24 | FEO | O | | Focus error signal output from RF amplifier block. |
| | 25 | VC | I/O | | Center voltage output from RF amplifier block. Center voltage input to DSSP block by command switch. |
| | 26 | A | I | | A signal input. |
| | 27 | B | I | | B signal input. |
| | 28 | C | I | | C signal input. |
| | 29 | D | I | | D signal input. |
| | 30 | NC | — | — | |
| | 31 | AVdd4 | — | — | Analog power supply. |
| | 32 | RFDCO | I/O | | RFDC signal output. RFDC signal input to DSSP block by command switch. |
| | 33 | PDSENS | I | | Reference voltage pin for PD. |
| | 34 | AC_SUM | O | Analog | RFAC summing amplifier output. |

| Power supply | Pin No. | Symbol | I/O | Description |
|---|---------|---------|-----------|---|
| RFamp 3.3V | 35 | EQ_IN | I | Equalizer circuit input. |
| | 36 | LD | O | APC amplifier output. |
| | 37 | PD | I | APC amplifier input. |
| | 38 | NC | — — | |
| | 39 | RFC | I | Equalizer cut-off frequency adjustment pin. |
| | 40 | AVss4 | — — | Analog GND. |
| | 41 | RFACO | O | RFAC signal output. |
| ASYM 3.3V | 42 | RFACI | I | RFAC signal input or EFM signal input. |
| | 43 | AVDD3 | — — | Analog power supply. |
| | 44 | BIAS | I | Asymmetry circuit constant current input. |
| | 45 | ASYI | I | Asymmetry comparator voltage input. |
| | 46 | ASYO | O 1, 0 | EFM full-swing output. (Low = Vss, High = VDD) |
| | 47 | VPCO | O 1, Z, 0 | Wide-band EFM PLL charge pump output. |
| | 48 | VCTL | I | Wide-band EFM PLL VCO2 control voltage input. |
| | 49 | AVss3 | — — | Analog GND. |
| | 50 | CLTV | I | Multiplier VCO1 control voltage input. |
| | 51 | FILO | O Analog | Master PLL (slave = digital PLL) filter output. |
| | 52 | FILI | I | Master PLL filter input. |
| | 53 | PCO | O 1, Z, 0 | Master PLL charge pump output. |
| DC/DC 3.3V | 54 | AVDD5 | — — | Analog power supply. |
| | 55 | DDVROUT | O | DC/DC converter output. Leave open when not using. |
| | 56 | DDVRSEN | I | DC/DC converter output voltage monitor pin. Connect to analog power supply when not using. |
| | 57 | AVss5 | — — | Analog GND. |
| | 58 | DDCR | I | DC/DC converter reset pin. |
| — | 59 | NC | — — | |
| Digital I/O = 3.3V Internal = 2.5V | 60 | BCKI | I | D/A interface bit clock input. |
| | 61 | PCMDI | I | D/A interface serial data input. (2's COMP, MSB first) |
| | 62 | LRCKI | I | D/A interface LR clock input. |
| | 63 | LRCK | O 1, 0 | D/A interface LR clock output. $f = F_s$ |
| | 64 | Vss | — — | Internal digital GND. |
| | 65 | PCMD | O 1, 0 | D/A interface serial data output. (2's COMP, MSB first) |
| | 66 | BCK | O 1, 0 | D/A interface bit clock output. |
| | 67 | VDD | — — | Internal digital power supply. |
| | 68 | EMPH | O 1, 0 | High when the playback disc has emphasis, low it has not. |
| | 69 | EMPHI | I | High when de-emphasis is ON, low when input OFF. |

| Power supply | Pin No. | Symbol | I/O | | Description |
|---|---------|--------------------|-----|---|---|
| Digital I/O = 3.3V Internal = 2.5V | 70 | IOV _{DD2} | — | — | I/O digital power supply. |
| | 71 | DOUT | O | 1, 0 | Digital Out output. |
| | 72 | TEST | I | | Test pin. Normally GND. |
| | 73 | TES1 | I | | Test pin. Normally GND. |
| | 74 | IOV _{SS2} | — | — | I/O digital GND. |
| — | 75 | NC | — | — | |
| X'tal 2.5V | 76 | XV _{SS} | — | — | Master clock GND. |
| | 77 | XTAO | O | | Crystal oscillation circuit output. |
| | 78 | XTAI | I | | Crystal oscillation circuit input. |
| | 79 | XV _{DD} | — | — | Master clock power supply. |
| Lch 3.3V | 80 | AV _{DD1} | — | — | Analog power supply. |
| | 81 | AOUT1 | O | | Lch analog output. |
| | 82 | VREFL | O | | Lch reference voltage. |
| | 83 | AV _{SS1} | — | — | Analog GND. |
| Rch 3.3V | 84 | AV _{SS2} | — | — | Analog GND. |
| | 85 | VREFR | O | | Rch reference voltage. |
| | 86 | AOUT2 | O | | Rch analog output. |
| | 87 | AV _{DD2} | — | — | Analog power supply. |
| — | 88 | NC | — | — | |
| Digital I/O = 3.3V Internal = 2.5V | 89 | IOV _{DD0} | — | — | I/O digital power supply. |
| | 90 | RMUT | O | 1, 0 | Rch "0" detection flag. |
| | 91 | LMUT | O | 1, 0 | Lch "0" detection flag. |
| | 92 | NC | — | — | |
| | 93 | XTSL | I | | Crystal selection input. Low when the crystal is 16.9344MHz; high when the crystal is 33.8688MHz. |
| | 94 | IOV _{SS0} | — | — | I/O digital GND. |
| | 95 | XTACN | I | | Oscillation circuit control. Self-oscillation when high, oscillation stop when low. |
| | 96 | SQSO | O | 1, 0 | Subcode Q 80-bit and PCM peak and level data output. CD TEXT data output. |
| | 97 | SQCK | I | | SQSO readout clock input. |
| | 98 | SBSO | O | 1, 0 | Subcode P to W serial output. |
| | 99 | EXCK | I | | SBSO readout clock input. |
| | 100 | XRST | I | | System reset. Reset when low. |
| | 101 | SYSM | I | | Mute input. Muted when high. |
| | 102 | D ATA | I | | Serial data input from CPU. |
| | 103 | V _{SS} | — | — | Internal digital GND. |
| 104 | XLAT | I | | Latch input from CPU. The serial data is latched at the falling edge. | |

| Power supply | Pin No. | Symbol | I/O | | Description |
|---|---------|-----------------|------|---|---|
| Digital I/O = 3.3V Internal = 2.5V | 105 | CLOK | I | | Serial data transfer clock input from CPU. |
| | 106 | V _{DD} | — | — | Internal digital power supply. |
| | 107 | SENS | O | 1, 0 | SENS output to CPU. |
| | 108 | SCLK | I | | SENS serial data readout clock input. |
| | 109 | ATSK | I/O | 1, 0 | Anti-shock input/output. |
| | 110 | WFCK | O | 1, 0 | WFCK output. |
| | 111 | XUGF | O | 1, 0 | XUGF output. Output MNT0, RFCK, SOUT by command switch. |
| | 112 | XPCK | O | 1, 0 | XPCK output. Output MNT1, SOCK by command switch. |
| | 113 | GFS | O | 1, 0 | GFS output. Output MNT2, XROF, XOLT by command switch. |
| | 114 | C2PO | O | 1, 0 | C2PO output. Output MNT3, GTOP by command switch. |
| | 115 | SCOR | O | 1, 0 | High output when the subcode sync, S0 or S1, is detected. |
| | 116 | V _{DD} | — | — | Internal digital power supply. |
| | 117 | C4M | O | 1, 0 | 4.2336MHz output. 1/4 frequency-division output of the V16M in CAV-W mode and variable pitch mode. |
| | 118 | WDCK | O | 1, 0 | Word clock output. $f = 2Fs$. GRSCOR output by command switch. |
| 119 | COUT | I/O | 1, 0 | Track number count signal input/output. | |
| 120 | NC | — | — | | |

K4S641632E (IC 202)

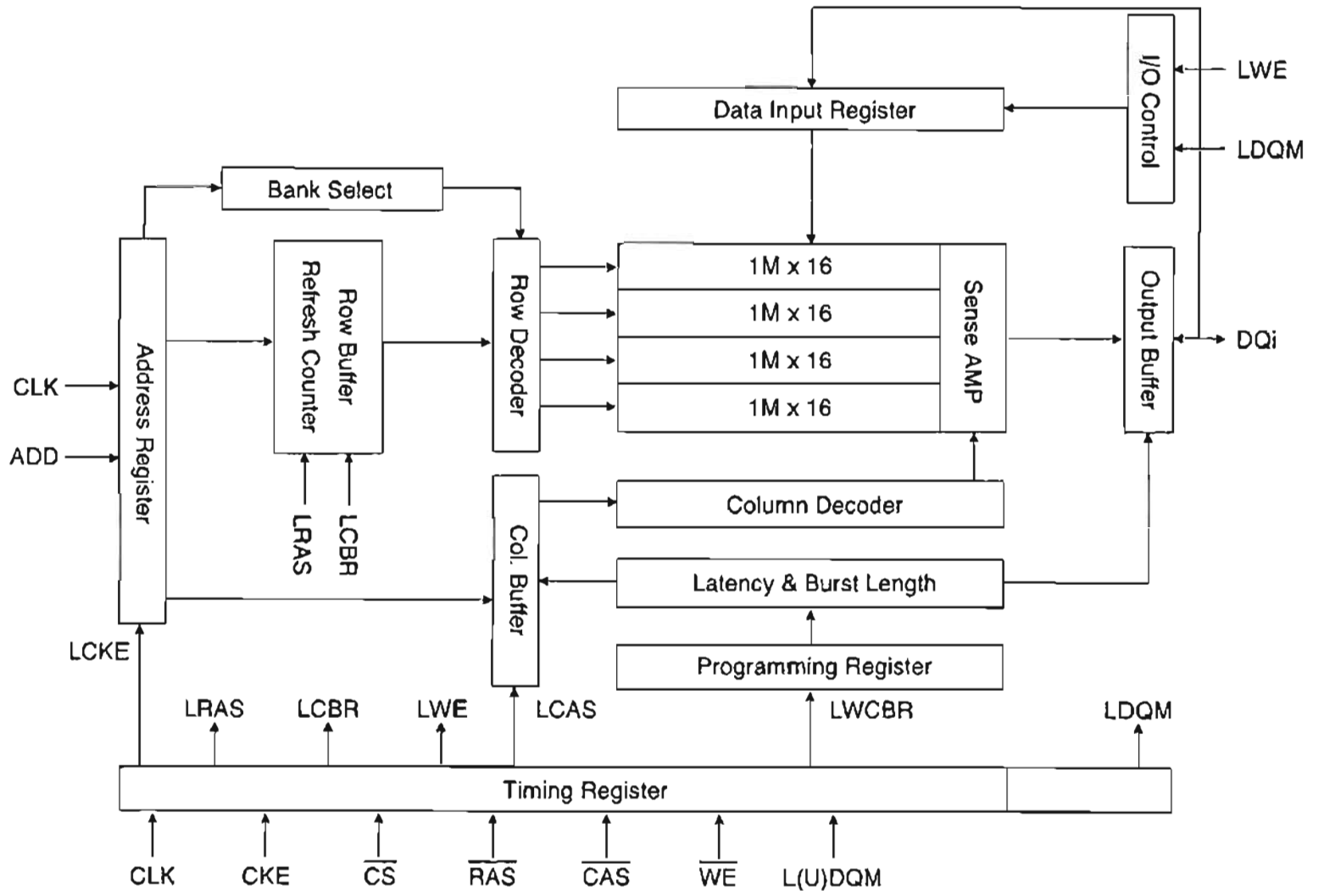


54Pin TSOP (II)
(400mil x 875mil)
(0.8 mm Pin pitch)

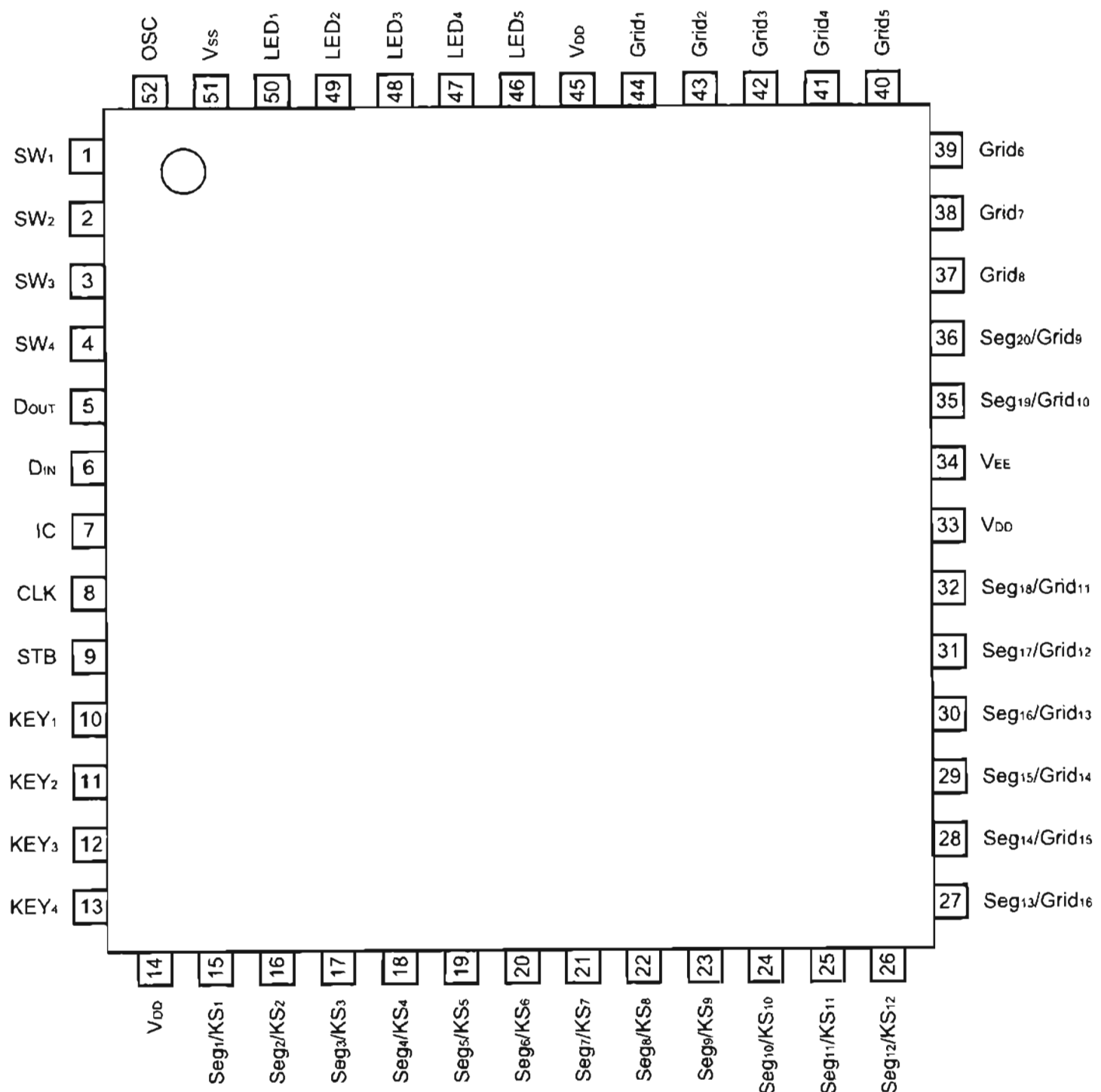
PIN FUNCTION DESCRIPTION

| Pin | Name | Input Function |
|-------------------------|---|---|
| CLK | System clock | Active on the positive going edge to sample all inputs. |
| $\overline{\text{CS}}$ | Chip select | Disables or enables device operation by masking or enabling all inputs except CLK, CKE and L(U)DQM |
| CKE | Clock enable | Masks system clock to freeze operation from the next clock cycle. CKE should be enabled at least one cycle prior to new command. Disable input buffers for power down in standby. |
| A0 ~ A11 | Address | Row/column addresses are multiplexed on the same pins. Row address : RA0 ~ RA11, Column address : CA0 ~ CA7 |
| BA0 ~ BA1 | Bank select address | Selects bank to be activated during row address latch time. Selects bank for read/write during column address latch time. |
| $\overline{\text{RAS}}$ | Row address strobe | Latches row addresses on the positive going edge of the CLK with $\overline{\text{RAS}}$ low. Enables row access & precharge. |
| $\overline{\text{CAS}}$ | Column address strobe | Latches column addresses on the positive going edge of the CLK with $\overline{\text{CAS}}$ low. Enables column access. |
| $\overline{\text{WE}}$ | Write enable | Enables write operation and row precharge. Latches data in starting from $\overline{\text{CAS}}$, $\overline{\text{WE}}$ active. |
| L(U)DQM | Data input/output mask | Makes data output Hi-Z, tSHZ after the clock and masks the output. Blocks data input when L(U)DQM active. |
| DQ0 ~ 15 | Data input/output | Data inputs/outputs are multiplexed on the same pins. |
| VDD/VSS | Power supply/ground | Power and ground for the input buffers and the core logic. |
| VDDQ/VSSQ | Data output power/ground | Isolated power supply and ground for the output buffers to provide improved noise immunity. |
| N.C/RFU | No connection /reserved for future use | This pin is recommended to be left No Connection on the device. |

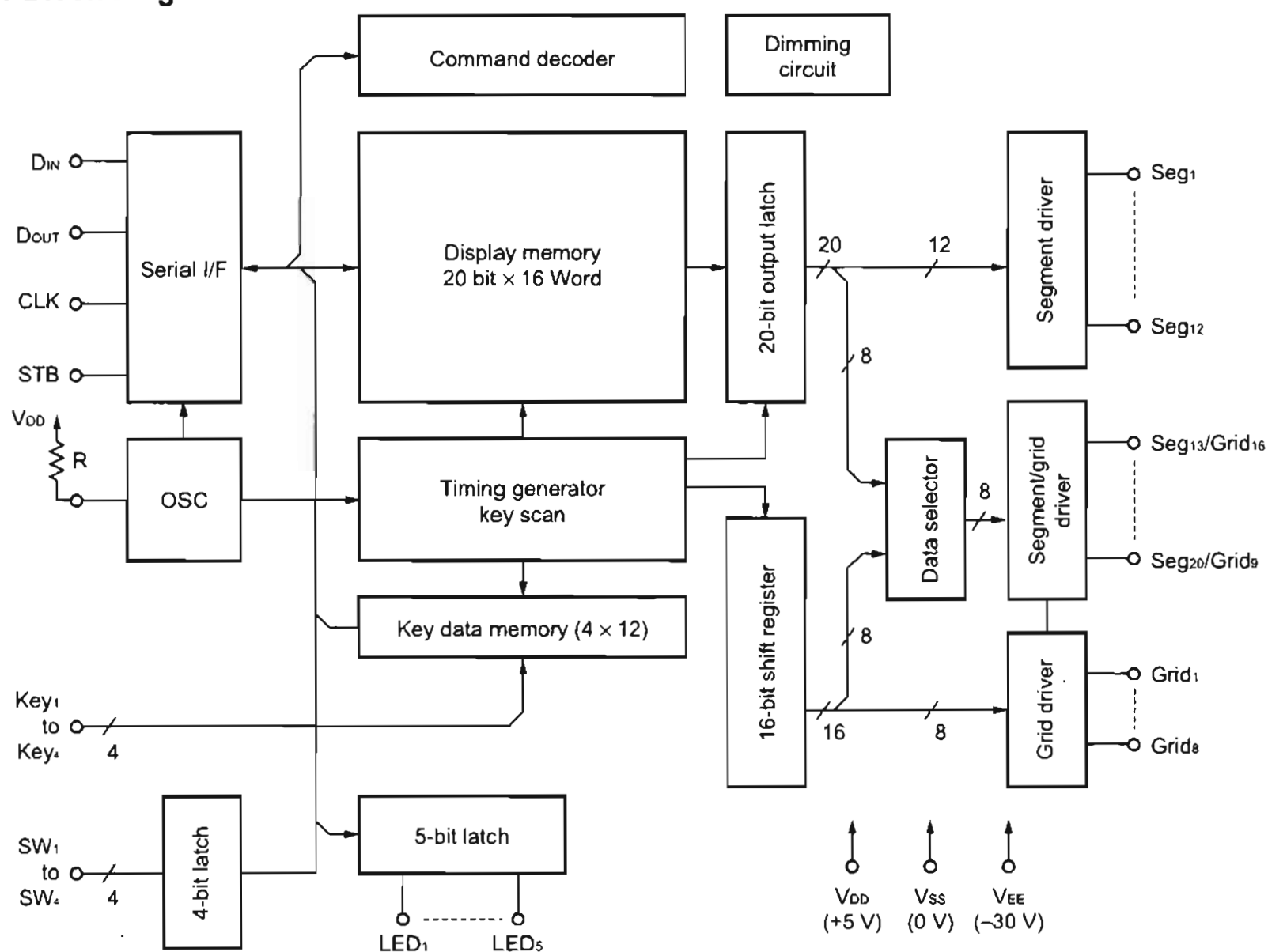
K4S641632E Block Diagram



UPD1631 (IC 401)



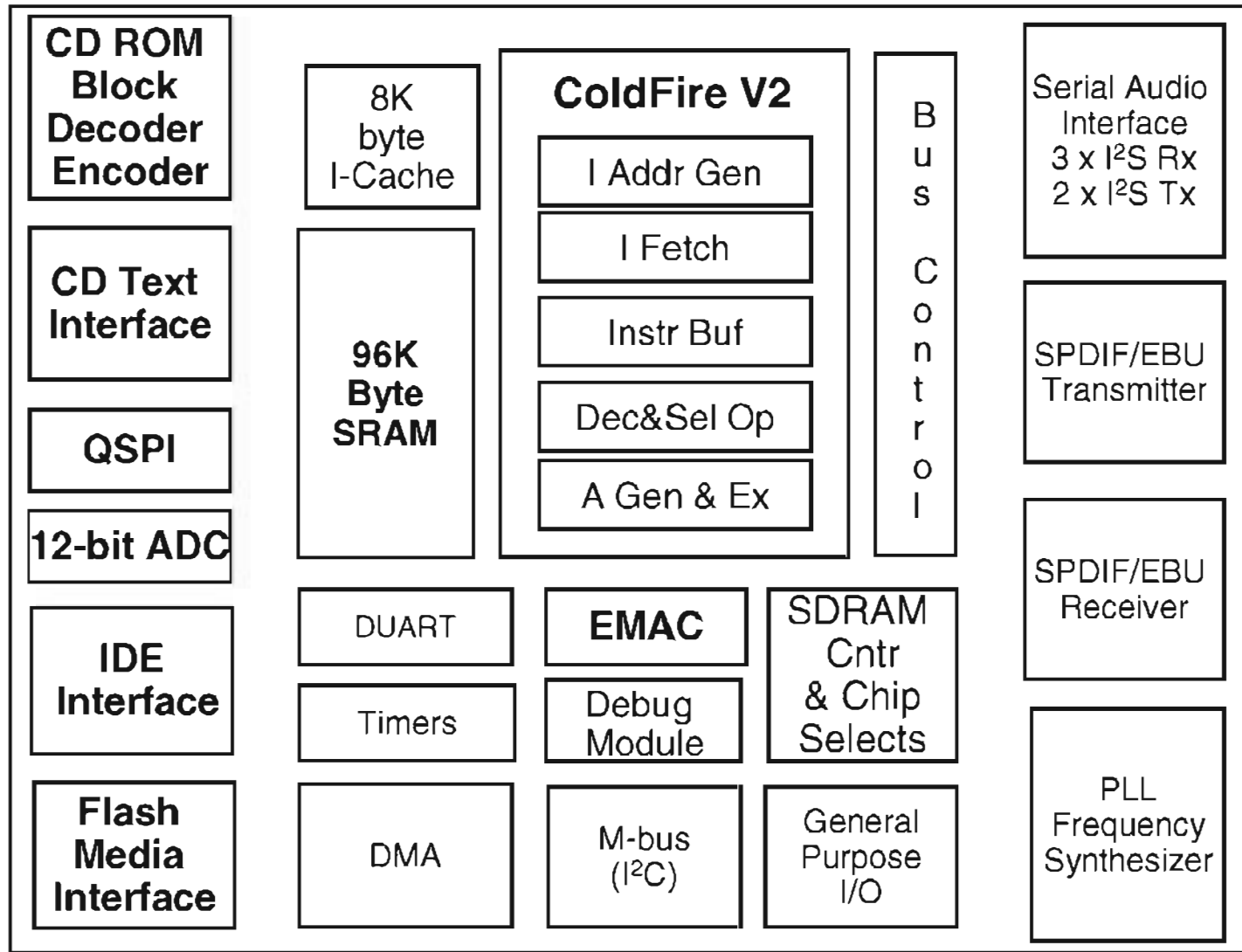
UPD16311 Block Diagram



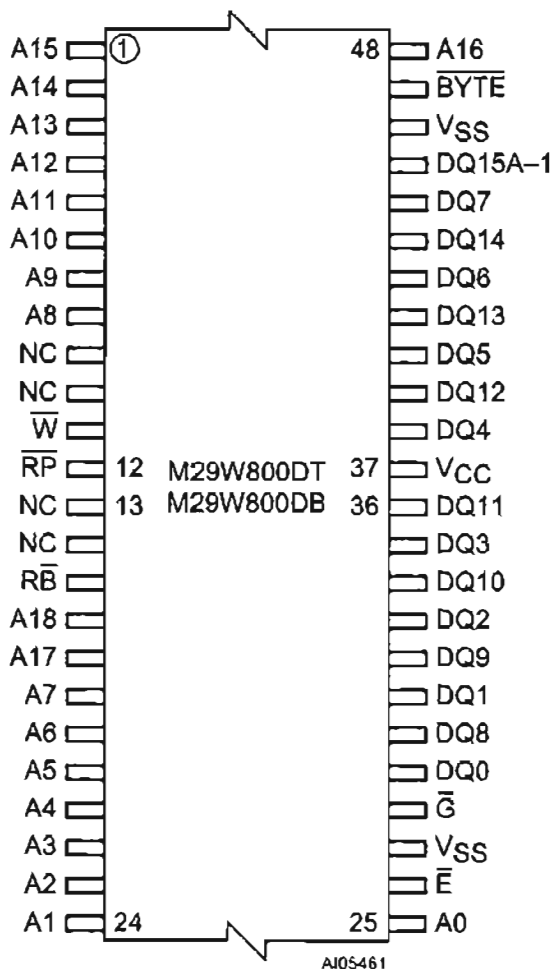
UPD16311 Pin Description

| Pin No. | Symbol | Pin Name | Description |
|----------------------|--|---------------------------------------|---|
| 6 | DIN | Data input | Inputs serial data at rising edge of shift clock, starting from lower bit. |
| 5 | DOUT | Data output | Outputs serial data at falling edge of shift clock, starting from lower bit. This is N-ch open-drain output pin. |
| 9 | STB | Strobe | Initializes serial interface at rising or falling edge to make μ PD16311 waiting for reception of command. Data input after STB has fallen is processed as command. While command data is processed, current processing is stopped, and serial interface is initialized. While STB is high, CLK is ignored. |
| 8 | CLK | Clock input | Reads serial data at rising edge, and outputs data at falling edge. |
| 52 | OSC | Oscillator pin | Connect resistor for determining oscillation frequency to this pin. |
| 15 to 26 | Seg ₁ /KS ₁ to Seg ₁₂ /KS ₁₂ | High-voltage output (segment) | Segment output pins (Dual function as key source) |
| 44 to 37 | Grid ₁ to Grid ₆ | High-voltage output (grid) | Grid output pins |
| 27 to 32 35 to 36 | Seg ₁₃ /Grid ₁₆ to Seg ₂₀ /Grid ₉ | High-voltage output (segment/grid) | These pins are selectable for segment or grid output. |
| 50 to 46 | LED ₁ to LED ₅ | LED output | CMOS output. +20 mA max. |
| 10 to 13 | Key ₁ to Key ₄ | Key data input | Data input to these pins is latched at end of display cycle. |
| 1 to 4 | SW ₁ to SW ₄ | Switch input | These pins constitute 4-bit general-purpose input port. |
| 14, 33, 45 | V _{DD} | Logic power | 5 V \pm 10 % |
| 51 | V _{SS} | Logic ground | Connect this pin to GND of system. |
| 34 | V _{EE} | Pull-down level | V _{DD} - 35 V max. |
| 7 | IC | Internally connected | Be sure to leave this pin open (this pin is at V _{DD} level). |

SCF5249 (IC 201)



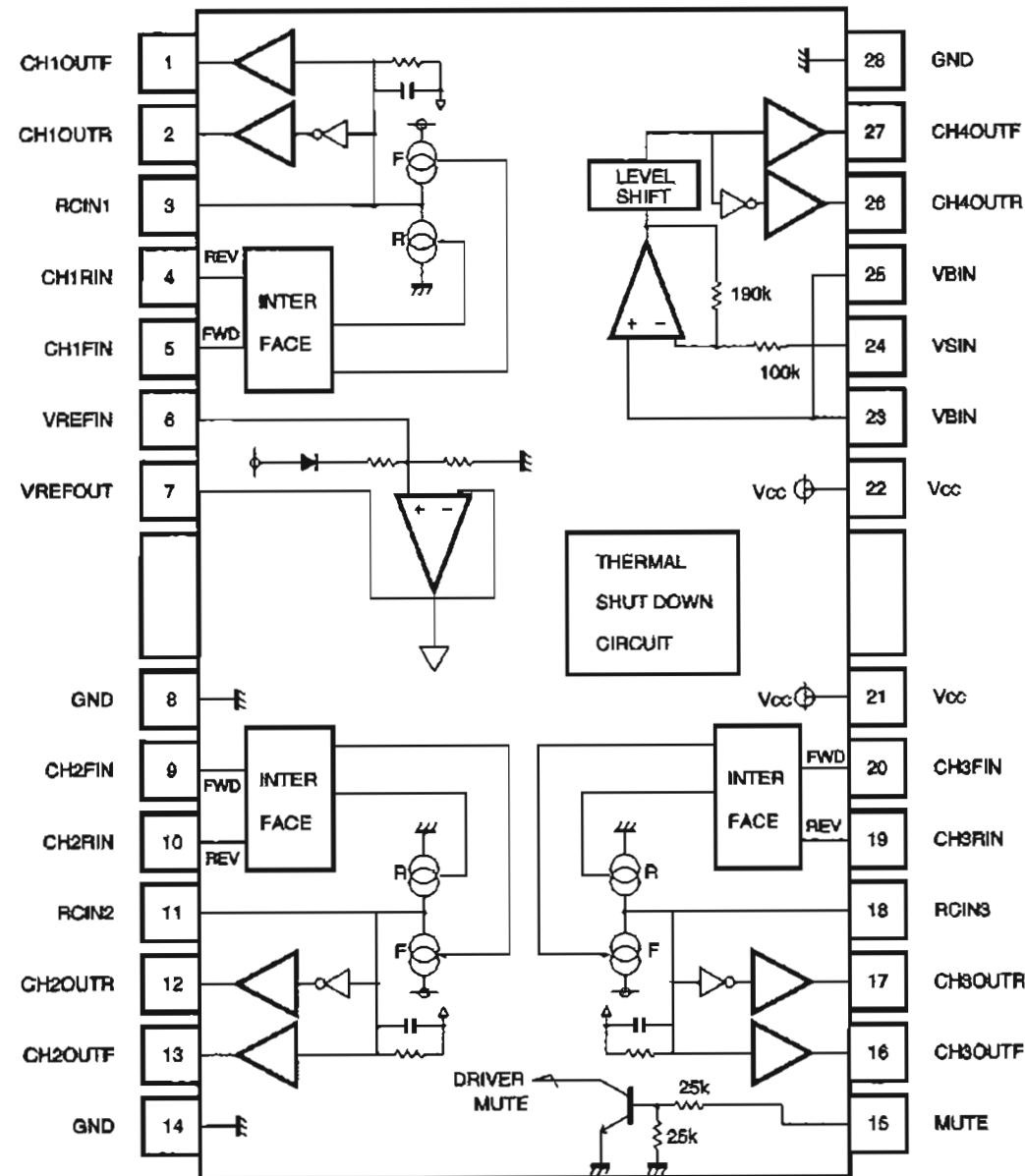
M29W800DB (IC 203)



Pin Description

| Signal | Description |
|-----------------|---|
| A0-A18 | Address Inputs |
| DQ0-DQ7 | Data Inputs/Outputs |
| DQ8-DQ14 | Data Inputs/Outputs |
| DQ15A-1 | Data Input/Output or Address Input |
| E | Chip Enable |
| G | Output Enable |
| W | Write Enable |
| RP | Reset/Block Temporary Unprotect |
| RB | Ready/Busy Output (not available on SO44 package) |
| BYTE | Byte/Word Organization Select |
| V _{CC} | Supply Voltage |
| V _{SS} | Ground |
| NC | Not Connected Internally |

BA6392FP (IC 102)

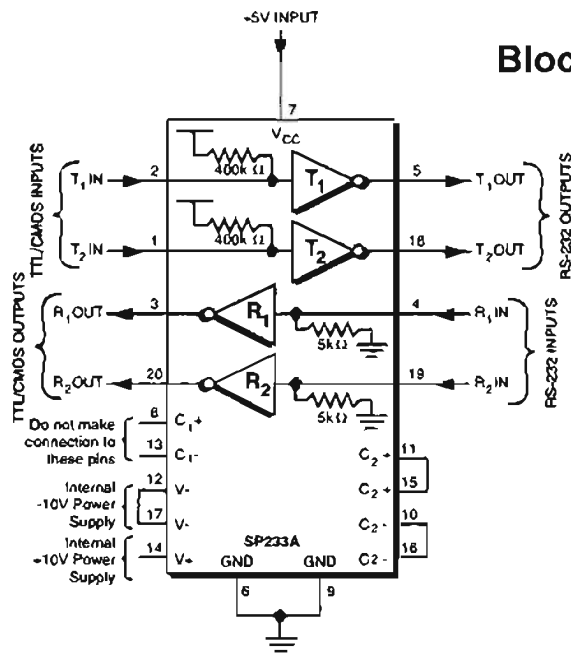
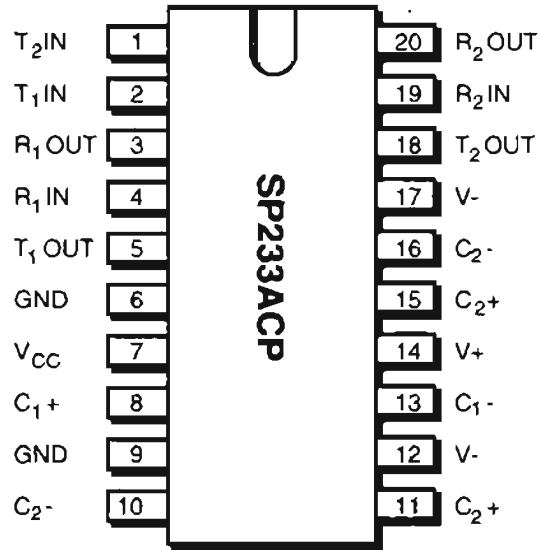


Pin Description

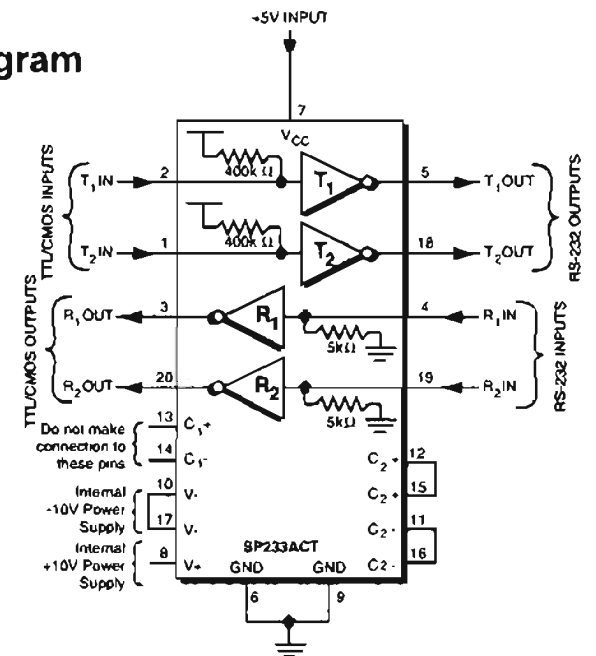
| Pin No. | Pin name | Function |
|---------|----------|--|
| 1 | CH1OUT F | Driver channel 1 forward output |
| 2 | CH1OUT R | Driver channel 1 reverse output |
| 3 | RC IN1 | Connect to attached resistor/capacitor (1) |
| 4 | CH1 RIN | Driver channel 1 reverse input |
| 5 | CH1 FIN | Driver channel 1 forward input |
| 6 | VREF IN | Internal reference amplifier input |
| 7 | VREF OUT | Internal reference amplifier output |
| 8 | GND | Ground for internal reference and internal power circuit |
| 9 | CH2 FIN | Driver channel 2 forward input |
| 10 | CH2 RIN | Driver channel 2 reverse input |
| 11 | RC IN2 | Connect to attached resistor/capacitor (2) |
| 12 | CH2OUT R | Driver channel 2 reverse output |
| 13 | CH2OUT F | Driver channel 2 forward output |
| 14 | GND | Ground |
| 15 | MUTE | Driver mute control input |
| 16 | CH3OUT F | Driver channel 3 forward output |
| 17 | CH3OUT R | Driver channel 3 reverse output |
| 18 | RC IN3 | Connect to attached resistor/capacitor (3) |
| 19 | CH3 RIN | Driver channel 3 reverse input |
| 20 | CH3 FIN | Driver channel 3 forward input |
| 21 | Vcc | Power supply |
| 22 | Vcc | Power supply |
| 23 | VBIN | Driver channel 4 bias input * |
| 24 | VSIN | Driver channel 4 input |
| 25 | VBIN | Driver channel 4 bias input * |
| 26 | CH4OUT R | Driver channel 4 reverse output |
| 27 | CH4OUT F | Driver channel 4 forward output |
| 28 | GND | Ground |

* Pin 23 and pin 25 are shorted internally.

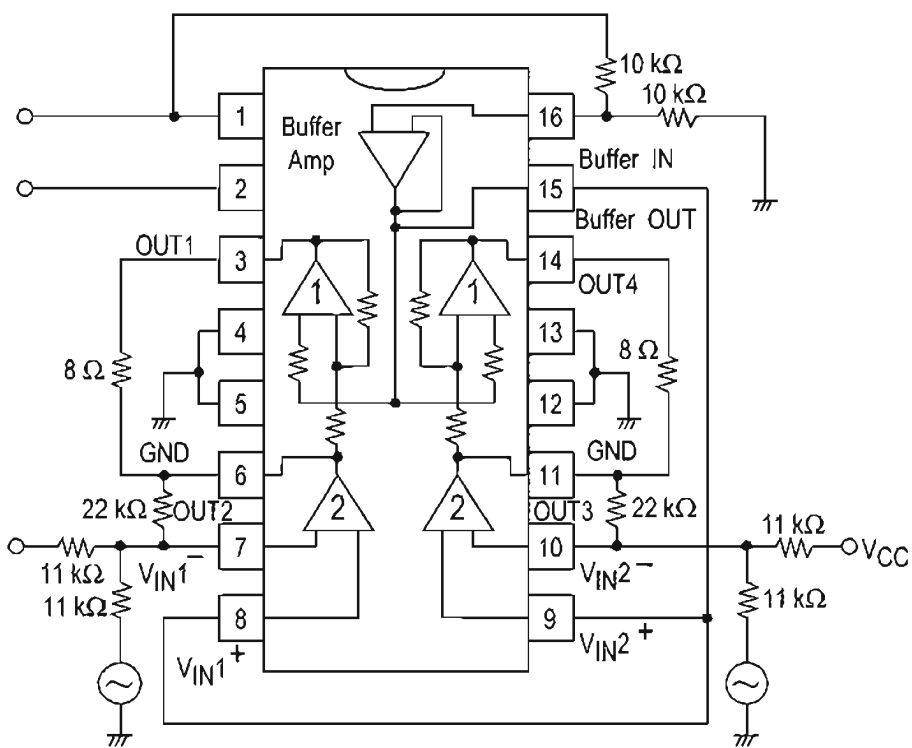
SP233ACP (IC 104)



Block Diagram



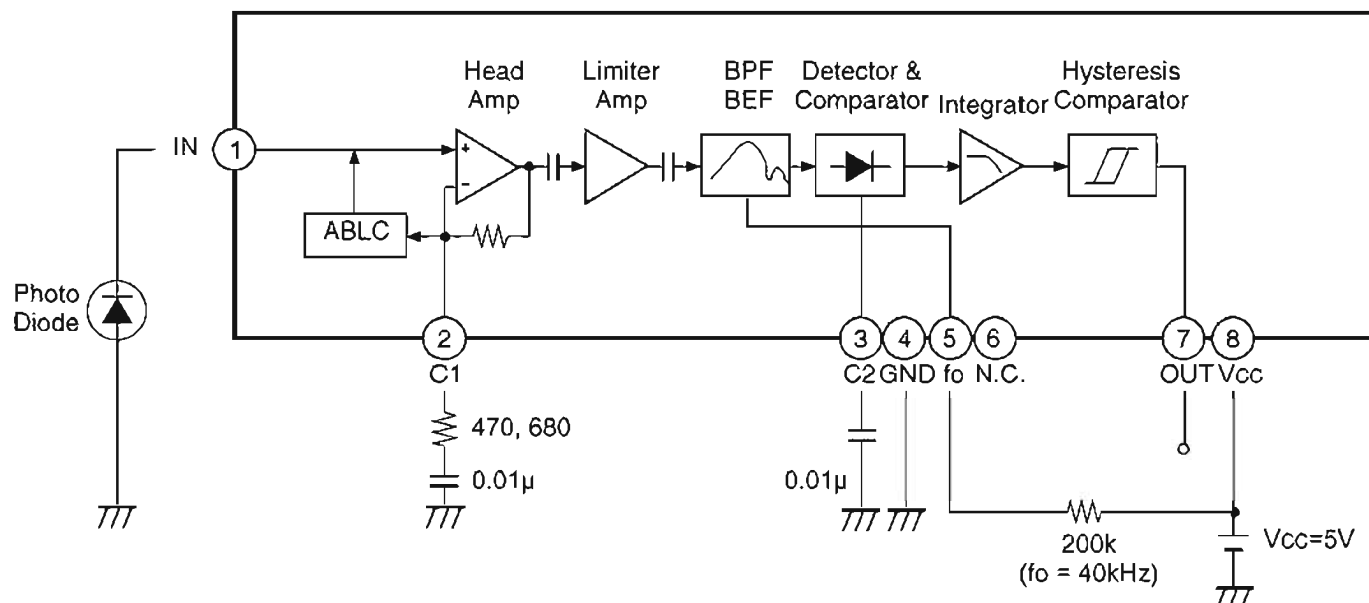
LA6531 (IC 106)



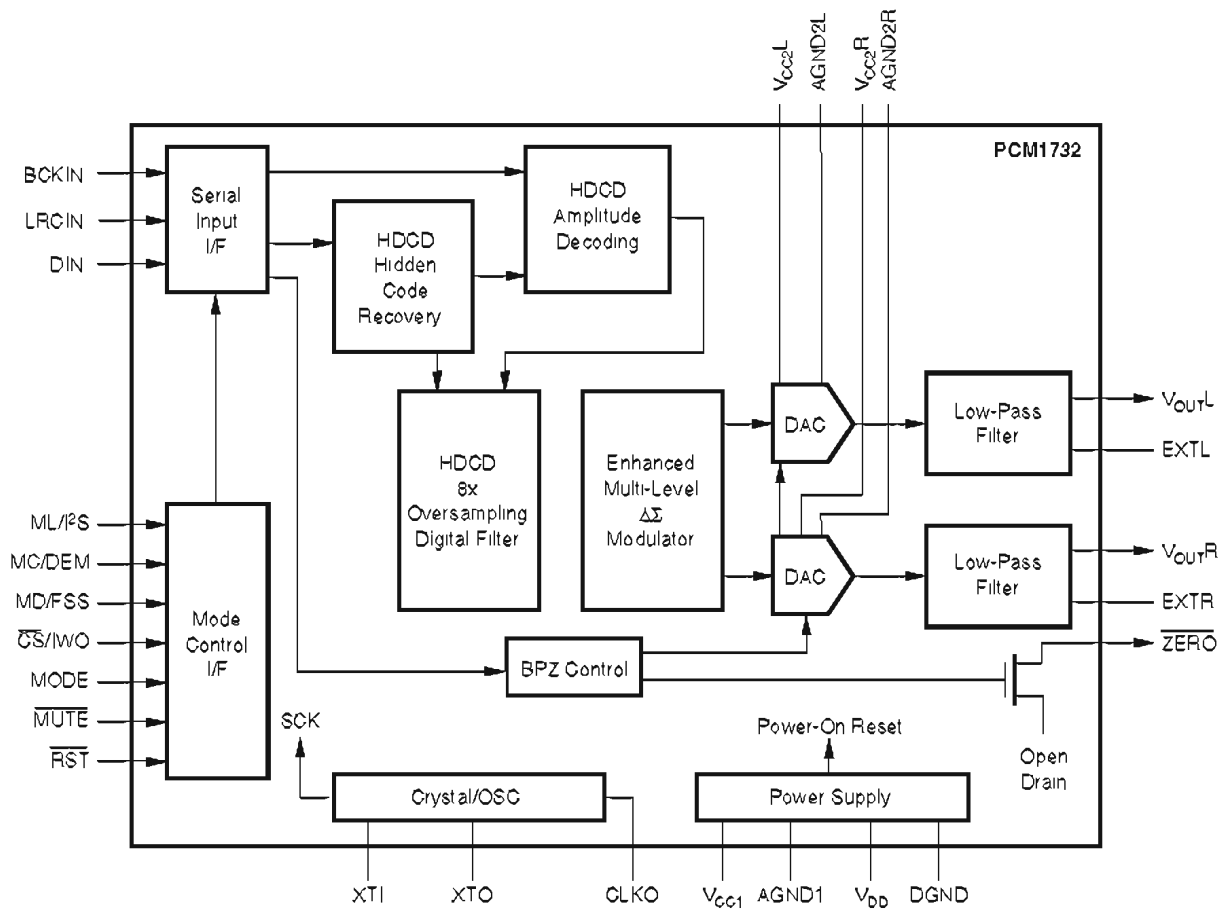
Pin Description

| Type No. | Functions | Io max (A) | Pd max (W) | Vcc max (V) |
|----------|--|------------|------------|-------------|
| LA6531 | <ul style="list-style-type: none"> ◆ Built-in muting circuits, bridge connection ◆ Amp 1 to 4 and buffer outputs are OFF when mute is ON. ◆ Thermal shutdown circuit built in | 0.7 | 1.9 | 16 |

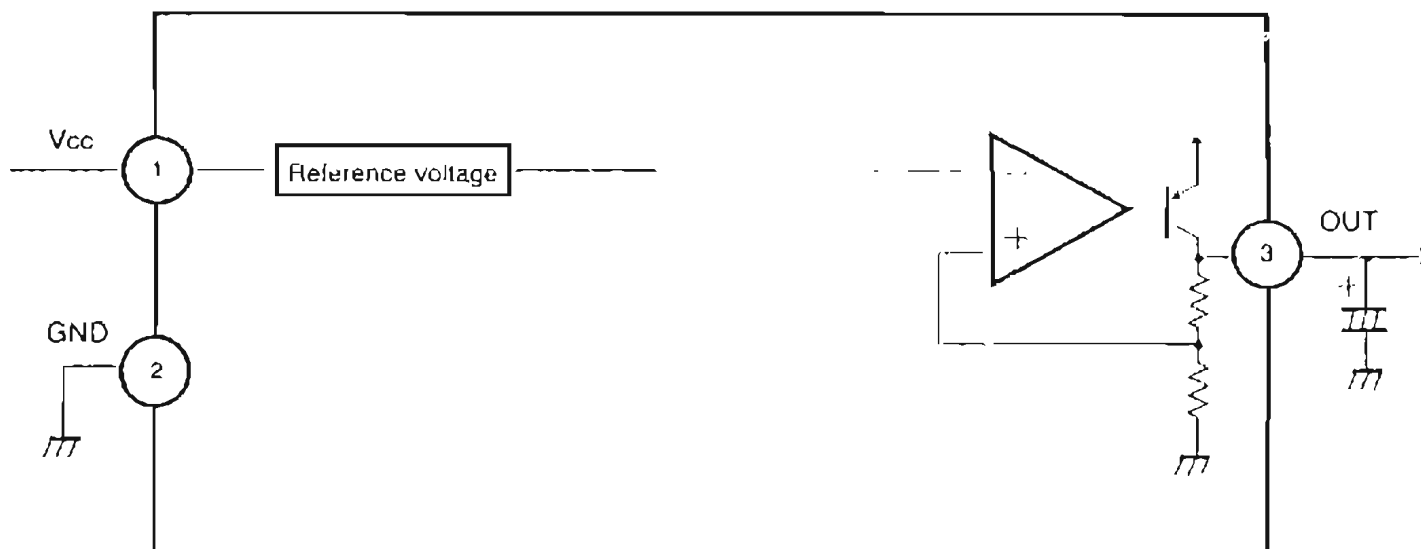
CXA1511L/M (IC 105)



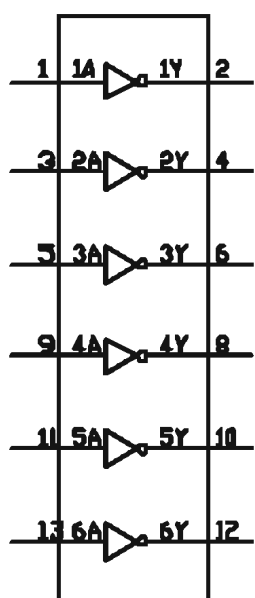
PCM1732 (IC 107)



BA033FP (IC 02)
BA08T (IC 03)

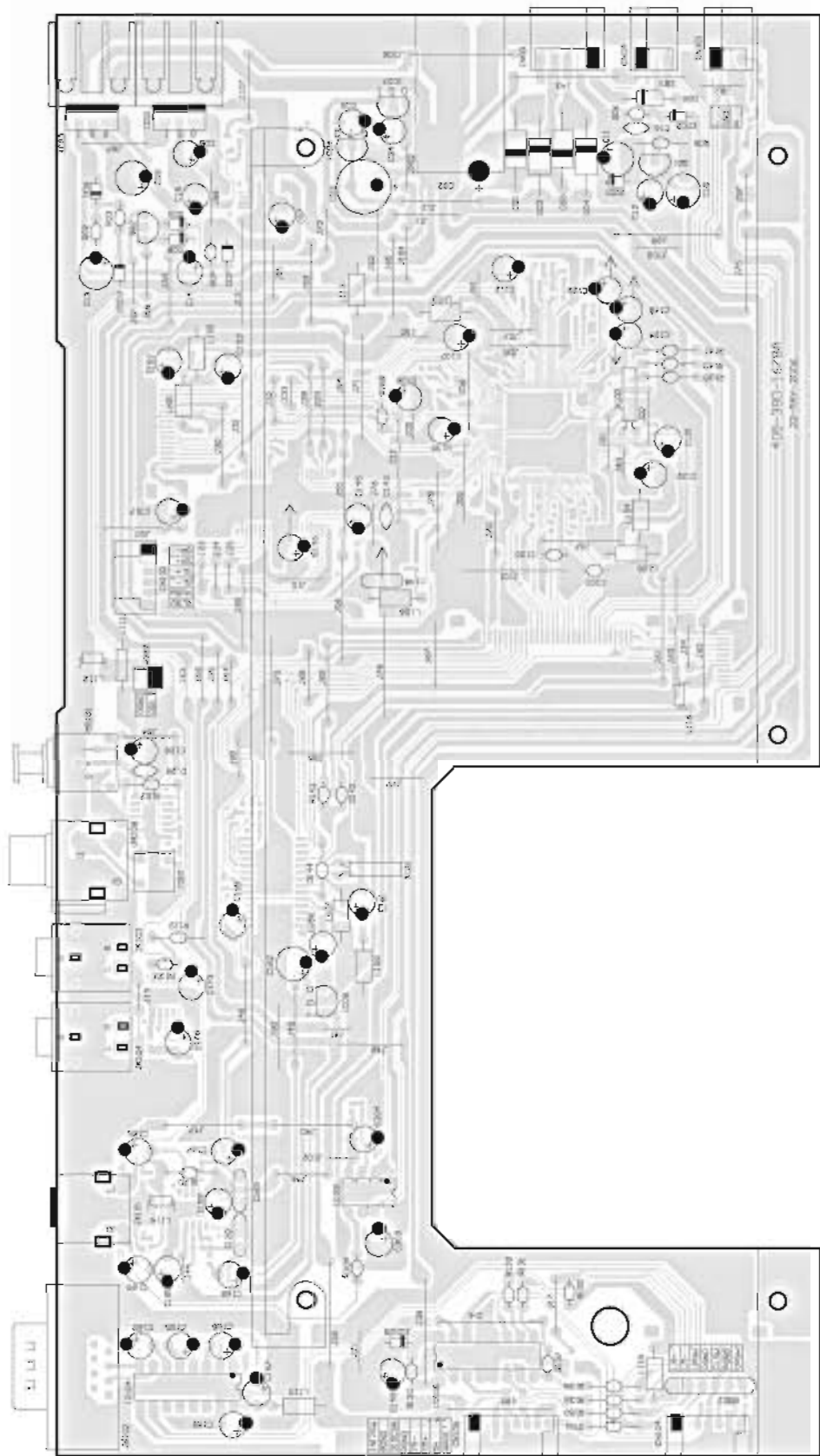


74HCU04 (IC 103)

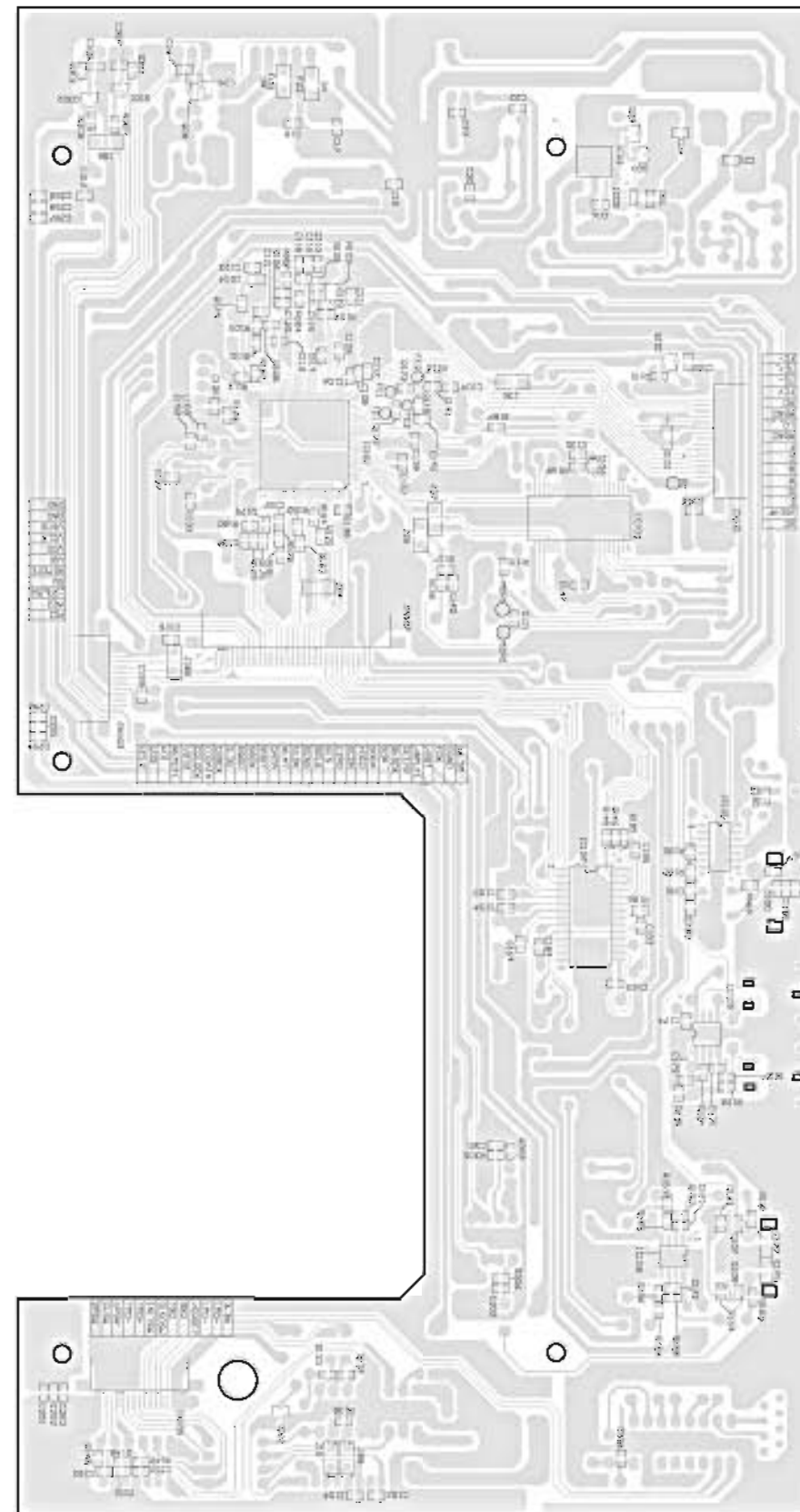


PRINTED WIRING BOARD

SERVO P.W.B. UNIT (for DCM-390)

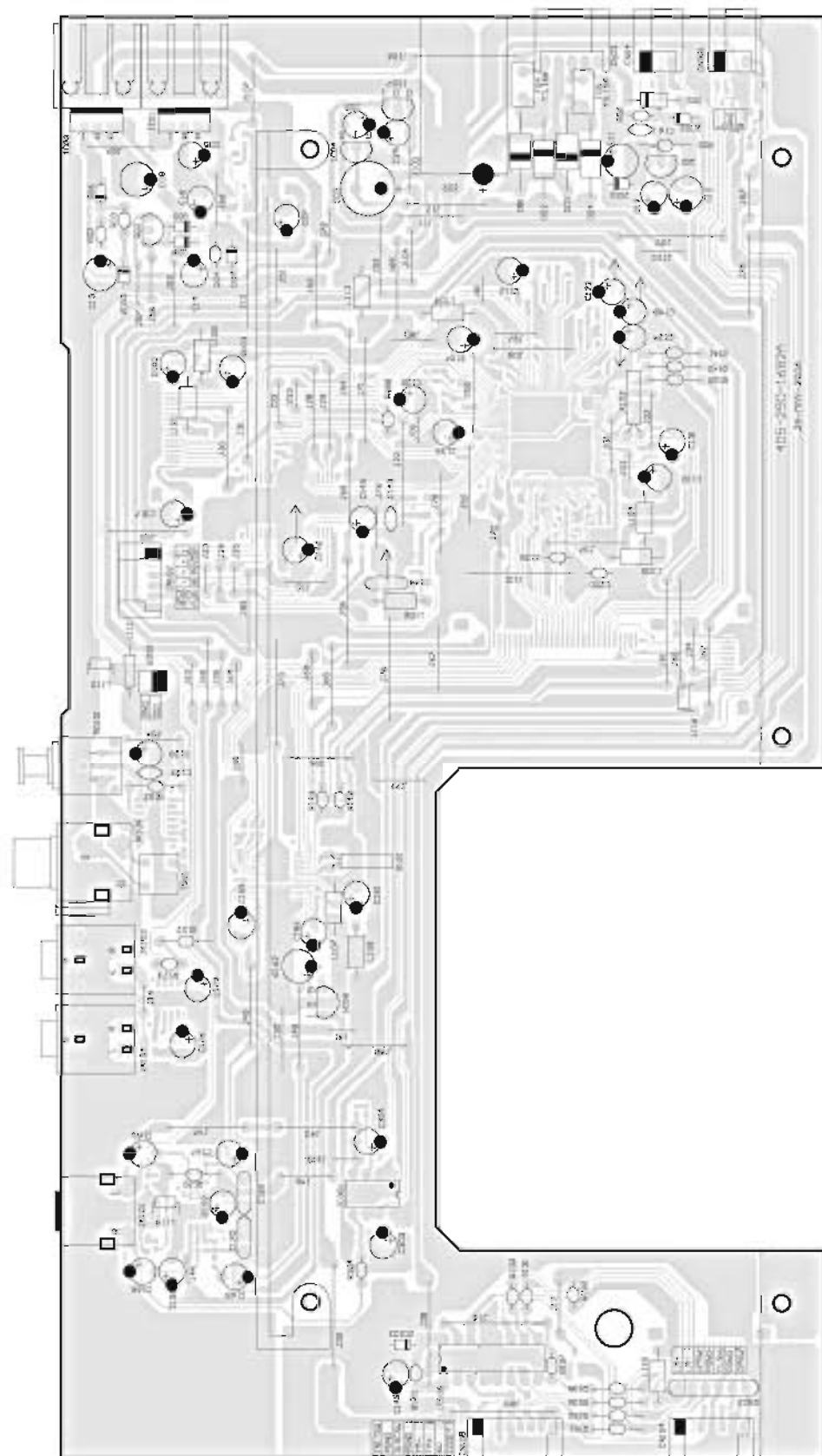


COMPONENT SIDE

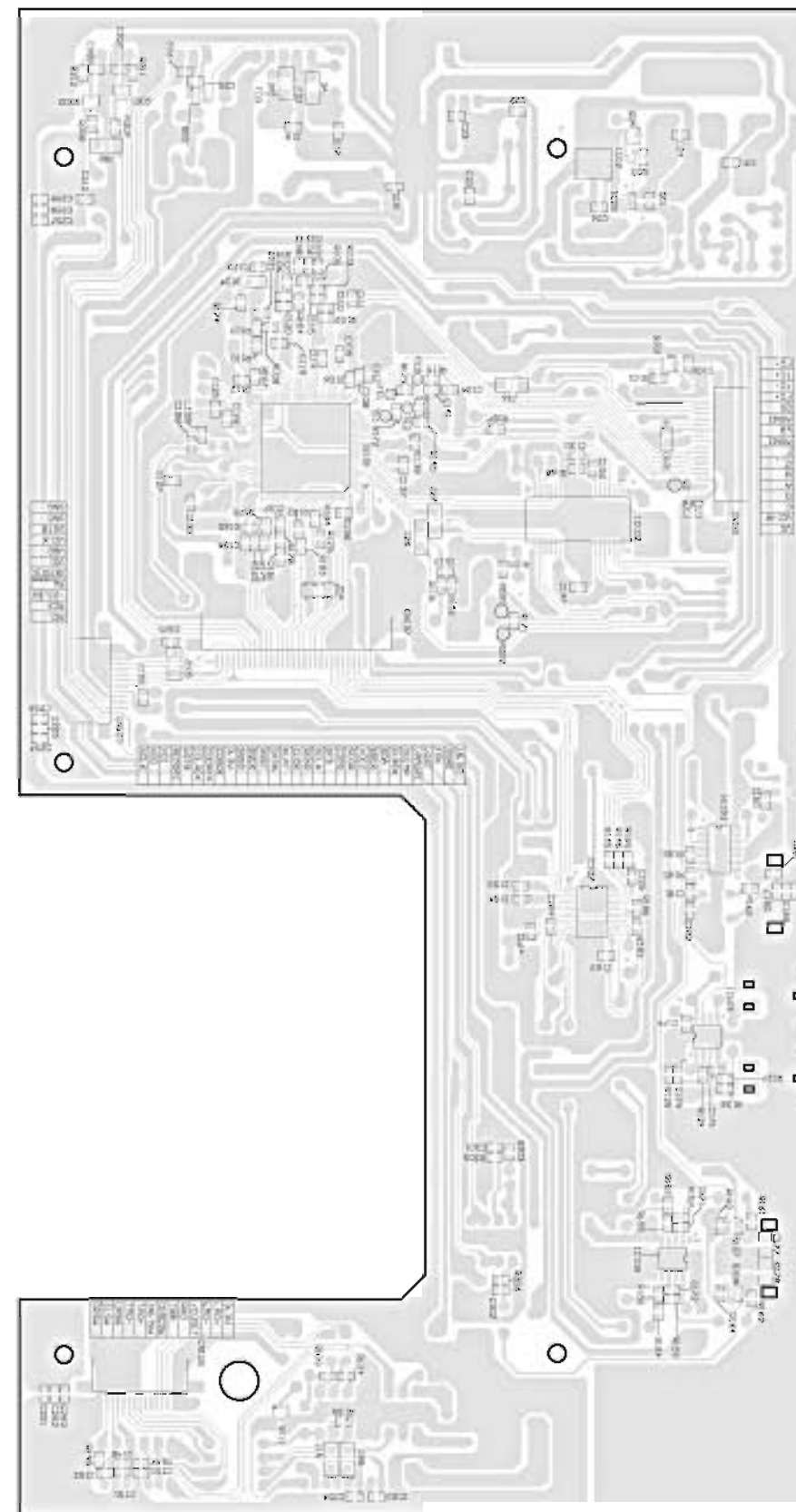


FOIL SIDE

SERVO P.W.B. UNIT (for DCM-290/27/500AE)

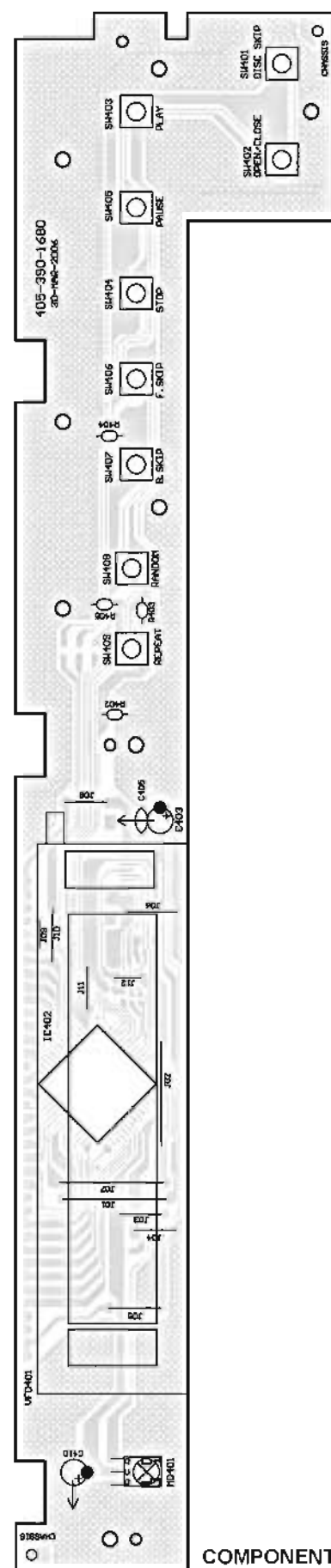


COMPONENT SIDE

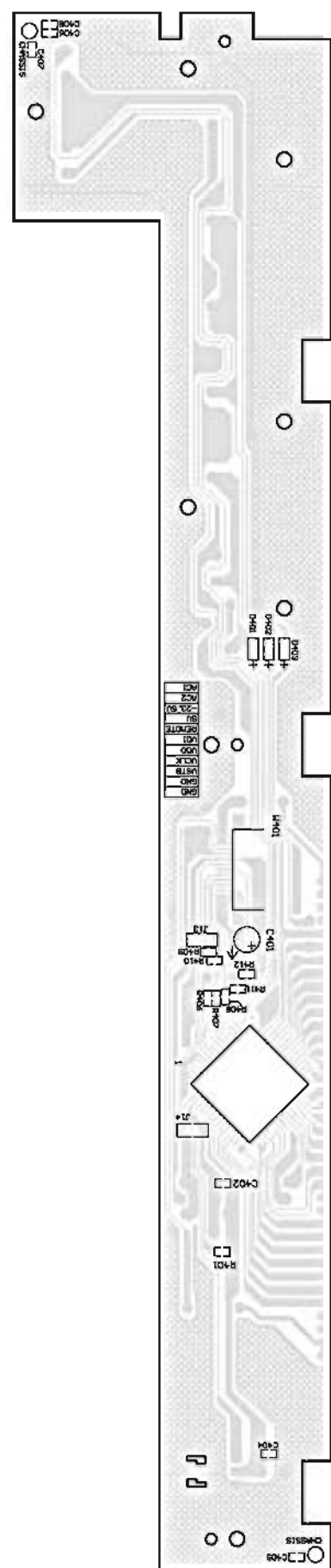


FOIL SIDE

CONTROL P.W.B. UNIT

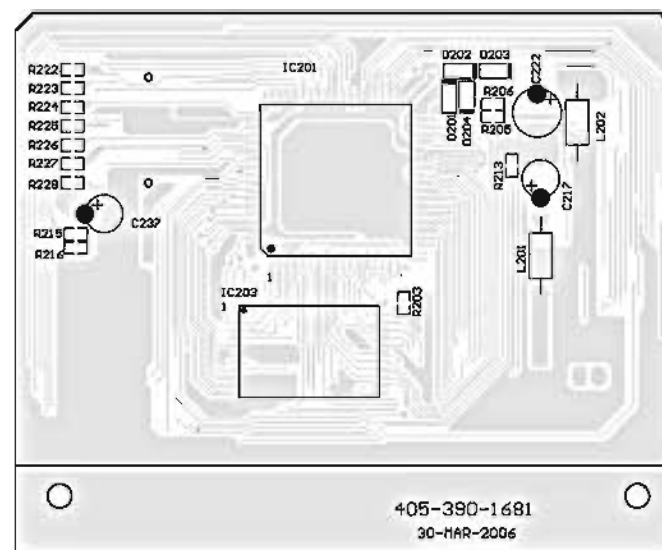


COMPONENT SIDE

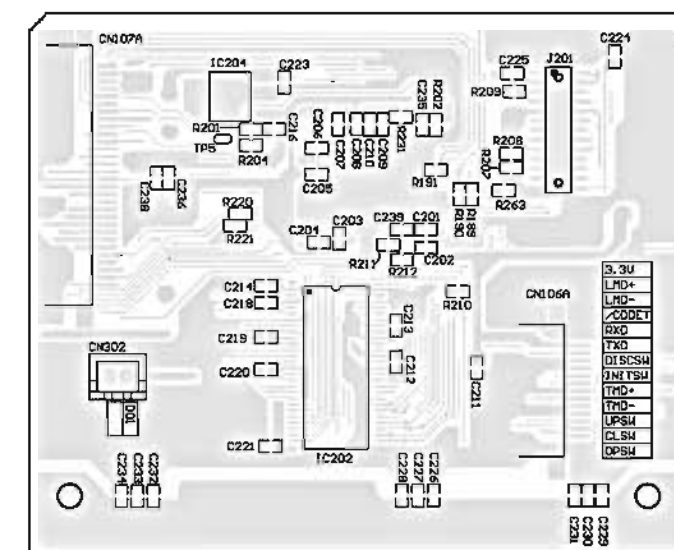


FOIL SIDE

BUFFER P.W.B. UNIT

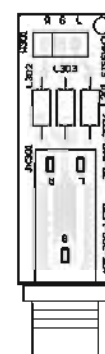


COMPONENT SIDE



FOIL SIDE

PHONE P.W.B. UNIT

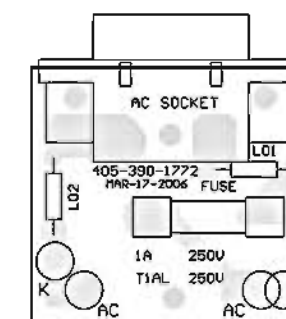


COMPONENT SIDE



FOIL SIDE

AC SOCKET P.W.B. UNIT



COMPONENT SIDE

NOTE FOR PARTS LIST

- Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including General-purpose Carbon Film Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
- Not including General-purpose Carbon Chip Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:
Parts marked with this symbol Δ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: RN 14K 2E 182 G FR
 Type Shape Power Resist- Allowable Others
 and per- ance error

| | | | | | | | |
|----|------------------|----|------|---|------|----|----------------------|
| RD | Carbon | 2B | 1/8W | F | ±1% | P | Pulse-resistant type |
| RC | Composition | 2E | 1/4W | G | ±2% | NL | Low noise type |
| RS | Metal oxide film | 2H | 1/2W | J | ±5% | NB | Non-burning type |
| RW | Winding | 3A | 1W | K | ±10% | FR | Fuse-resistor |
| RN | Metal film | 3D | 2W | M | ±20% | F | Lead wire forming |
| RK | Metal mixture | 3F | 3W | | | | |
| | | 3H | 5W | | | | |

* Resistance

$\overset{1}{\text{---}} \overset{8}{\text{---}} \overset{2}{\text{---}} \Rightarrow 1800 \text{ ohm} = 1.8 \text{ kohm}$
 Indicates number of zeros after effective number.
 2-digit effective number.
 • Units: ohm

$\overset{1}{\text{---}} \overset{R}{\text{---}} \overset{2}{\text{---}} \Rightarrow 1.2 \text{ ohm}$
 1-digit effective number.
 2-digit effective number, decimal point indicated by R.
 • Units: ohm

● Capacitors

Ex.: CE 04W 1H 2R2 M BP
 Type Shape Dielectric Capacity Allowable Others
 and per- strength error

| | | | | | | | |
|----|-----------------------------|----|------|---|---------|----|-----------------------------|
| CE | Aluminum foil electrolytic | 0J | 6.3V | F | ±1% | HS | High stability type |
| CA | Aluminum solid electrolytic | 1A | 10V | G | ±2% | BP | Non-polar type |
| CS | Tantalum electrolytic | 1C | 16V | J | ±5% | HR | Ripple-resistant type |
| CQ | Film | 1E | 25V | K | ±10% | DL | For charge and discharge |
| CK | Ceramic | 1V | 35V | M | ±20% | HF | For assuring high frequency |
| CC | Ceramic | 1H | 50V | Z | +80% | U | UL part |
| CP | Oil | 2A | 100V | | -20% | C | CSA part |
| CM | Mica | 2B | 125V | P | +100% | W | UL-CSA type |
| CF | Metallized | 2C | 160V | | -0% | F | Lead wire forming |
| CH | Metallized | 2D | 200V | C | ±0.25pF | | |
| | | 2E | 250V | D | ±0.5pF | | |
| | | 2H | 500V | = | Others | | |
| | | 2J | 630V | | | | |

* Capacity (electrolyte only)

$\overset{2}{\text{---}} \overset{2}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2200 \mu\text{F}$
 Indicates number of zeros after effective number.
 2-digit effective number.
 • Units: μF .

$\overset{2}{\text{---}} \overset{R}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2.2 \mu\text{F}$
 1-digit effective number.
 2-digit effective number, decimal point indicated by R.
 • Units: μF .

* Capacity (except electrolyte)

$\overset{2}{\text{---}} \overset{2}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2200 \text{ pF} = 0.0022 \mu\text{F}$
 (More than 2) — Indicates number of zeros after effective number.
 2-digit effective number.
 • Units: pF.

$\overset{2}{\text{---}} \overset{2}{\text{---}} \overset{1}{\text{---}} \Rightarrow 220 \text{ pF}$
 (0 or 1) — Indicates number of zeros after effective number.
 2-digit effective number.
 • Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

部品表について

1. nsp 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りすることがあります。
2. 部品を発注する際は特に数字の "1" と英字の "I" との区別をはっきり記入してください。
3. 部品番号を表示していない部品は供給できません。
4. Δ 印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。
5. ★印のついている部品は分解図中には記載していません。
6. 汎用カーボン抵抗器は記載していません。定数は回路図を参照願います。
7. 汎用カーボンチップ抵抗器は記載していません。定数は回路図を参照願います。
8. 部品表の抵抗器、コンデンサの品名記号の読み方は表を参照してください。

● 抵抗器

例) RN 14K 2E 182 G FR
 種類 形状特性 電力 抵抗値 許容差 その他

| | | | | | | | |
|----|-------|----|-------|---|------|----|--------|
| RD | カーボン | 2B | 1/8 W | F | ±1% | P | 耐バル人形 |
| RC | 固定体 | 2E | 1/4 W | G | ±2% | NL | 低雑音形 |
| RS | 金属系皮膜 | 2H | 1/2 W | J | ±5% | NB | 不燃形 |
| RW | 巻線 | 3A | 1 W | K | ±10% | FR | ヒューズ抵抗 |
| RN | 金属皮膜 | 3D | 2 W | M | ±20% | F | リード線成形 |
| RK | 金属混合体 | 3F | 3 W | | | | |
| | | 3H | 5 W | | | | |

* 抵抗値

$\overset{18}{\text{---}} \overset{2}{\text{---}} \Rightarrow 1800 \Omega = 1.8 \text{ k}\Omega$
 有効数字につづく0の数を表わす、
 2桁の有効数字を表わす。
 ;単位は Ω

$\overset{1R}{\text{---}} \overset{2}{\text{---}} \Rightarrow 1.2 \Omega$
 1桁の有効数字を表わす。
 2桁の有効数字で小数点はRで表わす。
 ;単位は Ω

● コンデンサ

例) CE 04W 1H 2R2 M BP
 種類 形状特性 耐圧 容量 許容差 その他

| | | | | | | | |
|----|---------|----|-------|---|---------|----|-----------|
| CE | アルミ箔電解 | 0J | 6.3 V | F | ±1% | HS | 高安定形 |
| CA | アルミ固体電解 | 1A | 10 V | G | ±2% | BP | 無極性形 |
| CS | タンタル電解 | 1C | 16 V | J | ±5% | HR | 耐リップル形 |
| CQ | フィルム | 1E | 25 V | K | ±10% | DL | 充放電対策用 |
| CK | セラミック | 1V | 35 V | M | ±20% | HF | 高周波保証用 |
| CC | セラミック | 1H | 50 V | Z | +80% | U | UL 部品 |
| CP | オイル | 2A | 100 V | | -20% | C | CSA 部品 |
| CM | マイカ | 2B | 125 V | P | +100% | W | UL-CSA 部品 |
| CF | メタライズド | 2C | 160 V | | -0% | F | リード線成形 |
| CH | メタライズド | 2D | 200 V | C | ±0.25pF | | |
| | | 2E | 250 V | D | ±0.5pF | | |
| | | 2H | 500 V | = | その他 | | |
| | | 2J | 630 V | | | | |

* 容量値

● 電解コンデンサの場合

$\overset{22}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2200 \mu\text{F}$
 有効数字につづく0の数を表わす。
 2桁の有効数字を表わす。
 ;単位は μF

$\overset{2R}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2.2 \mu\text{F}$
 1桁の有効数字を表わす。
 2桁の有効数字で小数点はRで表わす。
 ;単位は μF

● 電解コンデンサ以外の場合

$\overset{22}{\text{---}} \overset{2}{\text{---}} \Rightarrow 2200 \text{ pF} = 0.0022 \mu\text{F}$
 有効数字につづく0の数を表わす。
 (0の数が2以上の場合)
 2桁の有効数字を表わす。
 ;単位はpF

$\overset{22}{\text{---}} \overset{1}{\text{---}} \Rightarrow 220 \text{ pF}$
 有効数字につづく0の数を表わす。
 (0の数が0または1の場合)
 2桁の有効数字を表わす。
 ;単位はpF

● 耐圧を交流で表示する場合は、耐圧表示の次に "AC" を表示します。

PARTS LIST OF P.W.B. UNIT

* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

Note: The symbols in the column "Remarks" indicate the following destinations.

BKE3 : U.S.A. & Canada model (Black)

BKE2 : Europe model (Black)

SPE2 : Europe model (Premium Silver)

SERVO P.W.B. UNIT ASS'Y

| Ref. No. | nsp | Part No. | Part Name | Remarks | Q'ty | New |
|-----------------------------|-----|------------------|---|--|------------------|-----|
| SEMICONDUCTORS GROUP | | | | | | |
| IC01 | | 00D 958 0040 303 | IC 7805 | | 417-KC730-123 | 1 |
| IC02 | | 00D 958 0073 901 | IC (BA033FP-E2) | | 417-CTB200-500 | 1 |
| IC03 | | 00D 941 0045 407 | IC (BA08T 3PIN) | | 417-HMD5000-282 | 1 |
| IC04 | | 00D 941 0045 504 | IC (NJM-79L08A) | | 417-KT100-024 | 1 |
| IC05 | | 00D 941 0045 601 | IC (BD4745G/BD4745G-TR) | | 417-HDJ2000-503 | 1 |
| IC06 | | 00D 958 0016 308 | IC (LM78L05) | | 417-PMSE1-161 | 1 |
| IC07 | | 00D 941 0045 708 | IC (NJM-78L08A) | | 417-KT100-023 | 1 |
| IC101 | | 00D 941 0045 805 | IC (CXD3059) | | 417-385-760 | 1 |
| IC102 | | 00D 941 0045 902 | IC (BA6392FPE2) | | 417-CDN24-340 | 1 |
| IC103 | | 00D 958 0076 209 | IC (74HC04/74HC04DT) | | 417-DCM370E3-378 | 1 |
| IC104 | | 00D 941 0046 008 | IC (SP232ACP,16PIN) | for 390BKE3 | 417-MP3-430 | 1 |
| IC105 | | 00D 262 2580 906 | IC (CXA1511M) | | 417-DCM370E3-329 | 1 |
| IC106 | | 00D 958 0015 202 | IC (LA6531-E,DIP16F) | | 417-KC220-045 | 1 |
| IC107 | | 00D 262 2901 909 | IC (PCM1732) | for 390BKE3 | 417-DCM370X-328 | 1 |
| IC107 | | 00D 262 2490 902 | IC (PCM1716E) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 417-DCM270X-327A | 1 |
| IC108 | | 00D 941 0046 105 | IC (BA15218F/BA15218FE2) | | 417-QMX2-167 | 1 |
| IC301 | | 00D 958 0073 804 | INTEGRATED CIRCUIT (NJM-4556AD) | | 417-3113-018 | 1 |
| Q01 | | 00D 958 0015 901 | TRANSISTOR (2SB1010(R)) | | 416-1360S-017 | 1 |
| Q02 | | 00D 941 0046 202 | TRANSISTOR (DTA124TS/2SA1589/DTA124TSATP) | | 416-KE200S-024 | 1 |
| Q03 | | 00D 958 7057 409 | CHIP TRANSISTOR (2SC2412KT146R) | | 416-CDN88-051 | 1 |
| Q04 | | 00D 958 7057 506 | TRANSISTOR (DTA124TS/2SA1589/DTA124TSATP) | | 416-CTB200-178 | 1 |
| Q05 | | 00D 941 0046 503 | TRANSISTOR (DTC124EKAT146/DTC124EKA) | | 416-CDN88-044 | 1 |
| Q101 | | 00D 941 0046 309 | TRANSISTOR (2SA1037AKT146R/2SA1037AKR) | | 416-CDN88-045 | 1 |
| Q107,108 | | 00D 941 0046 406 | TRANSISTOR (2SC4695-TB-E) | | 416-DAIA-273 | 2 |
| Q111 | | 00D 941 0046 503 | TRANSISTOR (DTC124EKAT146/DTC124EKA) | | 416-CDN88-044 | 1 |
| Q301,302 | | 00D 941 0046 600 | TRANSISTOR (2SC4695-TB-E) | | 416-DAIA-273 | 2 |
| D01-04 | | 00D 941 0046 707 | RECTIFYING DIODE (1N5392) | | 414-HT7016-031 | 4 |
| D05 | | 00D 941 0046 804 | DIODE (1N4002/1N4002TA) | | 414-DV300-5014 | 1 |
| D06-09 | | 00D 958 0042 806 | SWITCHING DIODE (1SS132/133) | | 414-3113-005 | 4 |
| D101 | | 00D 941 0046 901 | SWITCHING DIODE (1SS355) | | 414-CD1000-075 | 1 |
| D104 | | 00D 941 0046 901 | SWITCHING DIODE (1SS355) | | 414-CD1000-075 | 1 |
| ZD01 | | 00D 941 0050 900 | ZENER DIODE (MTZJ27-C) | | 414-390-218 | 1 |
| ZD02 | | 00D 941 0047 007 | ZENER DIODE (MTZJ6.8-C) | | 414-KC720-016 | 1 |
| ZD03 | | 00D 958 0075 103 | ZENER DIODE (MTZJ5.1-B) | | 414-HDJ200-056 | 1 |
| ZD103 | | 90M -HD 3023 30R | ZENER DIODE (MTZJ4.7-B) | | 414-MDS930VS-102 | 1 |
| RESISTORS GROUP | | | | | | |
| R01 | | - | CHIP RESISTOR (10K OHM,1/10W) | | 412-CDVD2001-534 | 1 |
| R02 | | - | CARBON FILM RESISTOR (220 OHM,1/6W) | | 412-3113-058 | 1 |
| R03 | | - | CARBON FILM RESISTOR (470K OHM,1/6W) | | 412-3113-056 | 1 |
| R04 | | - | CARBON FILM RESISTOR (100K OHM,1/6W) | | 412-3113-047 | 1 |
| R05 | | - | CARBON FILM RESISTOR (10K OHM,1/4W) | | 412-3113-068 | 1 |

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
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| R06 | | - | CARBON FILM RESISTOR (4.7K OHM,1/6W) | | 412-3113-055 | 1 | |
| R101 | | - | CHIP RESISTOR (22 OHM,1/10W) | | 412-CDVD2001-554 | 1 | |
| R102 | | - | CHIP RESISTOR (15K OHM,1/10W) | | 412-007USB-687 | 1 | |
| R103 | | - | CHIP RESISTOR (470K OHM,1/10W) | | 412-007USB-707 | 1 | |
| R104 | | - | CHIP RESISTOR (10K OHM,1/10W) | | 412-CDVD2001-534 | 1 | |
| R105 | | - | CHIP RESISTOR (100K OHM,1/10W) | | 412-CDVD2001-537 | 1 | |
| R106 | | - | CHIP RESISTOR (1M OHM,1/10W) | | 412-CDVD2001-546 | 1 | |
| R107 | | - | CHIP RESISTOR (470K OHM,1/10W) | | 412-007USB-707 | 1 | |
| R108 | | - | CHIP RESISTOR (3.3K OHM,1/10W) | | 412-007USB-699 | 1 | |
| R109 | | - | CHIP RESISTOR (1K OHM,1/10W) | | 412-CDVD2001-540 | 1 | |
| R110 | | - | CHIP RESISTOR (4.7K OHM,1/10W) | | 412-CDVD2001-523 | 1 | |
| R112 | | - | CHIP RESISTOR (470K OHM,1/10W) | | 412-007USB-707 | 1 | |
| R115,116 | | - | CHIP RESISTOR (15K OHM,1/10W) | | 412-007USB-687 | 2 | |
| R117,118 | | - | CHIP RESISTOR (10K OHM,1/10W) | | 412-CDVD2001-534 | 1 | |
| R119 | | - | CHIP RESISTOR (150K OHM,1/10W) | | 412-007USB-688 | 1 | |
| R120 | | - | CHIP RESISTOR (47K OHM,1/10W) | | 412-CDVD2001-532 | 1 | |
| R122 | | - | CARBON FILM RESISTOR (47 OHM,1/6W) | | 412-KC220-133 | 1 | |
| R123 | | - | CARBON FILM RESISTOR (200K OHM,1/6W) | | 412-KC220-129 | 1 | |
| R124 | | - | CHIP RESISTOR (470 OHM,1/10W) | | 412-CDVD2001-545 | 1 | |
| R125 | | - | CHIP RESISTOR (1K OHM,1/10W) | | 412-CDVD2001-540 | 1 | |
| R126 | | - | CHIP RESISTOR (39K OHM,1/10W) | | 412-007USB-706 | 1 | |
| R127 | | - | CHIP RESISTOR (220 OHM,1/10W) | | 412-CDVD2001-521 | 1 | |
| R130 | | - | CARBON FILM RESISTOR (1.8K OHM,1/6W) | | 412-3113-075 | 1 | |
| R131,132 | | - | CARBON FILM RESISTOR (15K OHM,1/6W) | | 412-3113-053 | 2 | |
| R133,134 | | - | CHIP RESISTOR (20K OHM,1/10W) | | 412-DCM280-726 | 2 | |
| R135-137 | | - | CARBON FILM RESISTOR (15K OHM,1/6W) | | 412-3113-053 | 3 | |
| R138 | | - | CHIP RESISTOR (15K OHM,1/10W) | | 412-007USB-687 | 1 | |
| R139-141 | | - | CARBON FILM RESISTOR (220 OHM,1/6W) | | 412-3113-058 | 3 | |
| R142,143 | | - | CARBON FILM RESISTOR (100 OHM,1/6W) | | 412-3113-060 | 2 | |
| R144 | | - | CARBON FILM RESISTOR (1K OHM,1/6W) | for 390BKE3 | 412-3113-078 | 1 | |
| R145,146 | | - | CHIP RESISTOR (220 OHM,1/10W) | | 412-CDVD2001-521 | 2 | |
| R147-149 | | - | CHIP RESISTOR (330 OHM,1/10W) | | 412-900-983 | 3 | |
| R150,151 | | - | CARBON FILM RESISTOR (330 OHM,1/6W) | | 412-KM300-118 | 2 | |
| R152 | | - | CARBON FILM RESISTOR (1K OHM,1/6W) | | 412-3113-078 | 1 | |
| R153,154 | | - | CHIP RESISTOR (5.1K OHM,1/10W) | for 390BKE3 | 412-007USB-673 | 2 | |
| R153,154 | | - | CHIP RESISTOR (6.2K OHM,1/10W) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 412-900-985 | 2 | |
| R155,156 | | - | CHIP RESISTOR (1.5K OHM,1/10W) | for 390BKE3 | 412-CDVD2001-550 | 2 | |
| R155,156 | | - | CHIP RESISTOR (1K OHM,1/10W) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 412-CDVD2001-540 | 2 | |
| R157,158 | | - | CHIP RESISTOR (22K OHM,1/10W) | for 390BKE3 | 412-007USB-704 | 2 | |
| R157,158 | | - | CHIP RESISTOR (13K OHM,1/10W) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 412-900-981 | 2 | |
| R160 | | - | CHIP RESISTOR (0 OHM,1/10W) | | 412-CDVD2001-552 | 1 | |
| R161,162 | | - | CHIP RESISTOR (1K OHM,1/10W) | | 412-CDVD2001-540 | 2 | |
| R163,164 | | - | CHIP RESISTOR (2.7K OHM,1/10W) | | 412-007USB-677 | 2 | |
| R165 | | - | CHIP RESISTOR (22 OHM,1/10W) | | 412-CDVD2001-554 | 1 | |
| R166 | | - | CHIP RESISTOR (68 OHM,1/10W) | | 412-900-1016 | 1 | |
| R167 | | - | CHIP RESISTOR (0 OHM,1/10W) | | 412-CDVD2001-552 | 1 | |
| R168 | | - | CHIP RESISTOR (4.7 OHM,1/10W) | | 412-007USB-676 | 1 | |
| R170 | | - | CARBON FILM RESISTOR (100K OHM,1/6W) | | 412-3113-047 | 1 | |
| R171-173 | | - | CHIP RESISTOR (0 OHM,1/10W) | | 412-CDVD2001-552 | 3 | |
| R174 | | - | CHIP RESISTOR (22 OHM,1/10W) | | 412-CDVD2001-554 | 1 | |
| R175 | | - | CHIP RESISTOR (100 OHM,1/10W) | | 412-CDVD2001-530 | 1 | |
| R178,179 | | - | CHIP RESISTOR (100 OHM,1/10W) | | 412-CDVD2001-530 | 2 | |
| R181-184 | | - | CHIP RESISTOR (100 OHM,1/10W) | | 412-CDVD2001-530 | 4 | |
| R185,186 | | - | CHIP RESISTOR (1K OHM,1/10W) | | 412-CDVD2001-540 | 2 | |
| R187 | | - | CHIP RESISTOR (0 OHM,1/10W) | | 412-CDVD2001-552 | 1 | |

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| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|-------------------------|-----|----------|--|---------|------------------|------|-----|
| R192 | | - | CARBON FILM RESISTOR (4.7K OHM,1/6W) | | 412-3113-055 | 1 | |
| R195 | | - | CHIP RESISTOR (1M OHM,1/10W) | | 412-CDVD2001-546 | 1 | |
| R303 | | - | CHIP RESISTOR (18K OHM,1/10W) | | 412-007USB-703 | 1 | |
| R304 | | - | CARBON FILM RESISTOR (18K OHM,1/6W) | | 412-3113-061 | 1 | |
| R305,306 | | - | CHIP RESISTOR (15K OHM,1/10W) | | 412-007USB-687 | 2 | |
| R307,308 | | - | CHIP RESISTOR (3.3K OHM,1/10W) | | 412-007USB-699 | 2 | |
| R311,312 | | - | CHIP RESISTOR (39 OHM,1/10W) | | 412-DCM280-755 | 2 | |
| RB12 | | - | THICK FILM RESISTOR NETWORKS(4.7k OHM) | | 412-DV300-5139 | 1 | |
| CAPACITORS GROUP | | | | | | | |
| C02 | | - | ELEC.CAPACITOR (4700uF/16V) | | 413-DV300-293 | 1 | |
| C03 | | - | ELEC.CAPACITOR (470uF/16V) | | 413-HT8015-164 | 1 | |
| C04 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C05 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C06 | | - | CHIP CAPACITOR (0.1u/50V) | | 413-DCM280-773 | 1 | |
| C07 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C08 | | - | ELEC.CAPACITOR (220uF/10V) | | 413-HT801K-192 | 1 | |
| C09 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C10 | | - | ELEC.CAPACITOR (100uF/50V) | | 413-HC1421FR-277 | 1 | |
| C11 | | - | ELEC.CAPACITOR (100uF/35V) | | 413-HMD5000-356 | 1 | |
| C12 | | - | ELEC.CAPACITOR (10uF/35V) | | 413-810-919 | 1 | |
| C13 | | - | ELEC.CAPACITOR (220uF/16V) | | 413-RMX30-883 | 1 | |
| C14 | | - | ELEC.CAPACITOR (10uF/25V) | | 413-SPPW3-235 | 1 | |
| C15 | | - | ELEC.CAPACITOR (2.2uF/50V) | | 413-DV300-5156 | 1 | |
| C16 | | - | CERAMIC CAPACITOR (0.1uF/50V) | | 413-3113-035 | 1 | |
| C17-22 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 6 | |
| C23 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C24 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C25,26 | | - | CHIP CAPACITOR (1000pF/50V) | | 413-DCM280-768 | 2 | |
| C101 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C102,103 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 2 | |
| C104 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C105 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C107 | | - | ELEC.CAPACITOR (22uF/16V) | | 413-SPPW3-236 | 1 | |
| C108-111 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 4 | |
| C112 | | - | ELEC.CAPACITOR (22uF/16V) | | 413-SPPW3-236 | 1 | |
| C113 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C114 | | - | CHIP CAPACITOR (680pF/50V) | | 413-CDVD2003-719 | 1 | |
| C115 | | - | CHIP CAPACITOR (100pF/50V) | | 413-DCM280-767 | 1 | |
| C116 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C117 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C118 | | - | CHIP CAPACITOR (1000pF/50V) | | 413-DCM280-768 | 1 | |
| C119 | | - | CHIP CAPACITOR (1500pF/50V) | | 413-DCM280-769 | 1 | |
| C120,121 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 2 | |
| C122 | | - | ELEC.CAPACITOR (22uF/16V) | | 413-SPPW3-236 | 1 | |
| C123 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C124 | | - | ELEC.CAPACITOR (1uF/50V) | | 413-SPPW3-234 | 1 | |
| C125-127 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 3 | |
| C128 | | - | ELEC.CAPACITOR (10uF/25V) | | 413-SPPW3-235 | 1 | |
| C129 | | - | CERAMIC CAPACITOR (0.1uF/50V) | | 413-3113-035 | 1 | |
| C130 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C131,132 | | - | ELEC.CAPACITOR (10uF/25V) | | 413-SPPW3-235 | 2 | |
| C133,134 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 2 | |
| C135 | | - | C.CB(Y5P) AXIAL (0.1uF/50V) | | 413-HF6011E-563 | 1 | |
| C136-138 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 3 | |

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
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| C139 | | - | ELEC.CAPACITOR (22uF/16V) | | 413-SPPW3-236 | 1 | |
| C140,141 | | - | CHIP CAPACITOR (220pF/50V) | | 413-007USB-787 | 2 | |
| C143 | | - | CERAMIC CAPACITOR (0.1uF/50V) | | 413-3113-035 | 1 | |
| C144 | | - | POLYESTER CAPACITOR (0.022uF/50V) | | 413-KT300-101 | 1 | |
| C145 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C146 | | - | ELEC.CAPACITOR (220uF/10V) | | 413-HT801K-192 | 1 | |
| C147 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C148 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C149 | | - | ELEC.CAPACITOR (100uF/16V) | | 413-HT801K-193 | 1 | |
| C150-154 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 5 | |
| C155 | | - | ELEC.CAPACITOR (1uF/50V) | for 390BKE3 | 413-SPPW3-234 | 1 | |
| C156 | | - | CHIP CAPACITOR (0.1uF/50V) | for 390BKE3 | 413-DCM280-773 | 1 | |
| C157-160 | | - | ELEC.CAPACITOR (1uF/50V) | for 390BKE3 | 413-SPPW3-234 | 4 | |
| C161 | | - | ELEC.CAPACITOR (10uF/25V) | | 413-SPPW3-235 | 1 | |
| C162 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C163,164 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 2 | |
| C165,166 | | - | ELEC.CAPACITOR (10uF/25V) | | 413-SPPW3-235 | 2 | |
| C167,168 | | - | ELEC.CAPACITOR (33uF/16V) | | 413-HDJ201-350 | 2 | |
| C169,170 | | - | POLYESTER CAPACITOR (0.0039uF/50V) | for 390BKE3 | 413-HT8023K-179 | 2 | |
| C169,170 | | - | POLYESTER CAPACITOR (0.0047uF/50V) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 413-HT8015-159 | 2 | |
| C171,172 | | - | CHIP CAPACITOR (220pF/50V) | for 390BKE3 | 413-007USB-787 | 2 | |
| C171,172 | | - | CHIP CAPACITOR (300pF/50V) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 413-CR701-5175-787 | 2 | |
| C173 | | - | ELEC.CAPACITOR (22uF/16V) | | 413-SPPW3-236 | 1 | |
| C174 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C175 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C176 | | - | ELEC.CAPACITOR (1uF/50V) | | 413-SPPW3-234 | 1 | |
| C177,178 | | - | CHIP CAPACITOR (1000pF/50V) | | 413-DCM280-768 | 2 | |
| C179 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C180,181 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 2 | |
| C182 | | - | CHIP CAPACITOR (220pF/50V) | | 413-007USB-787 | 1 | |
| C183,184 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 2 | |
| C185,186 | | - | ELEC.CAPACITOR (10uF/25V) | | 413-SPPW3-235 | 2 | |
| C187 | | - | CHIP CAPACITOR (47pF/50V) | | 413-007USB-784 | 1 | |
| C188 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C189 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C190 | | - | CHIP CAPACITOR (1000pF/50V) | | 413-DCM280-768 | 1 | |
| C191,192 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 2 | |
| C193 | | - | CHIP CAPACITOR (56pF/50V) | for 390BKE3 | 413-900-929 | 1 | |
| C193 | | - | CHIP CAPACITOR (68pF/50V) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 413-DCM280-766 | 1 | |
| C194 | | - | CHIP CAPACITOR (47pF/50V) | for 390BKE3 | 413-007USB-784 | 1 | |
| C194 | | - | CHIP CAPACITOR (68pF/50V) | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 413-DCM280-766 | 1 | |
| C195 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C196 | | - | CHIP CAPACITOR (0.33uF/16V) | | 413-007USB-782 | 1 | |
| C197 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C199 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C200 | | - | C.CB(Y5P) AXIAL (0.1uF/50V) | | 413-HF6011E-563 | 1 | |
| C251 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C252 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C254 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C255 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C257 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C258 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C301,302 | | - | CHIP CAPACITOR (100pF/50V) | | 413-DCM280-767 | 2 | |
| C303,304 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 2 | |

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| C307,308 | | - | CHIP CAPACITOR (1500pF/50V) | | 413-DCM280-769 | 2 | |
| C312 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C315 | | - | CHIP CAPACITOR (39pF/50V) | | 413-390-987 | 1 | |
| C316 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C317 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| OTHER PARTS GROUP | | | | | | | |
| CN03 | nsp | 00D 941 0047 104 | 5P SOCKET | | 404-SPPW3-513 | 1 | |
| CN04 | nsp | 00D 941 0047 201 | 3P SOCKET | | 404-KMD3500-609 | 1 | |
| CN101 | | 00D 941 0047 308 | 16P FFC CONNECTOR | | 404-HV3423K-583 | 1 | |
| CN102 | nsp | 00D 958 0013 505 | 6P SOCKET | | 404-90V1-101 | 1 | |
| CN103 | | 00D 941 0047 405 | 11P FFC CONNECTOR | | 404-300-1914 | 1 | * |
| CN104 | nsp | 00D 958 0041 506 | 7P SOCKET(S7B-PH-K,JST) | | 404-HMD5000-785 | 1 | |
| CN105 | nsp | 00D 941 0047 502 | 8P SOCKET | | 404-DV300-506 | 1 | |
| CN106 | | 00D 941 0047 609 | 13P FFC CONNECTOR | | 404-385-2086 | 1 | * |
| CN107 | | 00D 941 0047 706 | 30P FFC CONNECTOR | | 404-385-2088 | 1 | * |
| CN301 | nsp | 00D 941 0047 803 | 3P SOCKET | | 404-DJ100-1077 | 1 | |
| J04 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 1 | |
| J15 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 1 | |
| J26,27 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 2 | |
| J36 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 1 | |
| J88 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 1 | |
| J98 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 1 | |
| J105 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 1 | |
| JK101 | | 00D 941 0047 900 | 2P RCA JACK (RJ-1060-10-0300A) | | 420-R1C-173A | 1 | |
| JK102 | | 00D 941 0048 006 | SIGNAL JACK (D-SMB,205A09FGTBB3) | for 390BKE3 | 420-MP3-104 | 1 | |
| JK103,104 | | 00D 958 0074 706 | HEADPHONE JACK (JY-3535-01-030G) | | 420-HMDV3360K-5014 | 2 | |
| JK106 | | 00D 958 0074 609 | 1P RCA JACK (RJ-1081-31-0341A) | | 420-HDJ2650-097A | 1 | |
| L101-106 | | 00D 958 0016 900 | BEAD CORE (86-019-A) | | 415-HV3500K-090 | 6 | |
| L109 | | 00D 958 0016 900 | BEAD CORE (86-019-A) | | 415-HV3500K-090 | 1 | |
| L110 | | 00D 958 0016 900 | BEAD CORE (86-019-A) | for 390BKE3 | 415-HV3500K-090 | 1 | |
| L111 | | 00D 958 0017 006 | INDUCTOR (10uH) | | 415-MPG100-047 | 1 | |
| L112 | | 00D 941 0048 103 | BEAD (RH03506BT-B) | | 415-DMC370E3-134 | 1 | |
| L113 | | 00D 958 0016 900 | BEAD CORE (86-019-A) | | 415-HV3500K-090 | 1 | |
| L114 | | 00D 941 0048 200 | BEAD (RH03506BT-B) | | 415-DMC370E3-134 | 1 | |
| L115 | | 00D 958 0016 900 | BEAD CORE (86-019-A) | | 415-HV3500K-090 | 1 | |
| L116 | | 00D 941 0048 307 | BEAD (RH03506BT-B) | | 415-DMC370E3-134 | 1 | |
| MD101 | | 00D 941 0048 404 | 3P OPTICAL TRANSMITTING CONNECTOR | | 420-900-205 | 1 | |
| T901 | | 00D 958 0020 705 | COIL (P-7GB) | | 415-RCC955A-091 | 1 | |
| W302 | | - | 3P CONNECTOR WIRE (L=160) | | 404-390-2167 | 1 | * |
| X101 | | 00D 958 0015 600 | CRYSTAL (16.9344MHz) | | 427-KC710-019 | 1 | |
| IC01 | | - | HEAT SINK | | 425-390-093 | 1 | * |
| IC03 | | - | HEAT SINK | | 425-P22-070 | 1 | |
| FUSE02,03 | | 00D 941 0051 103 | CHIP FUSE | for 390BKE3/290BKE3/ 27BKE3 | 422-MH2-076 | 2 | * |
| FUSE04,05 | | 00D 941 0051 200 | FUSE T3.15/250V type:392 | for 500AEBKE2/500AESPE2 | 422-500E2-088 | 2 | * |

CONTROL P.W.B. UNIT ASS'Y

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|-----------------------------|-----|------------------|-------------------------------------|------------------------------------|------------------|------|-----|
| SEMICONDUCTORS GROUP | | | | | | | |
| IC401 | | 00D 941 0048 501 | IC(VFD DRIVER IC UPD1631GC-AB6) | | 417-HV3500K-250A | 1 | |
| D401-403 | | 00D 941 0048 608 | SWITCHING DIODE (1SS355) | | 414-CD1000-075 | 3 | |
| RESISTORS GROUP | | | | | | | |
| R401 | | - | CHIP RESISTOR (56K OHM,1/10W) | | 412-007USB-674 | 1 | |
| R402-405 | | - | CARBON FILM RESISTOR (10K OHM,1/6W) | | 412-3113-068 | 4 | |
| R406-408 | | - | CHIP RESISTOR (1.5K OHM,1/10W) | | 412-CDVD2001-550 | 3 | |
| R409-411 | | - | CHIP RESISTOR (10K OHM,1/10W) | | 412-CDVD2001-534 | 3 | |
| R412 | | - | CHIP RESISTOR (1K OHM,1/10W) | | 412-CDVD2001-540 | 1 | |
| CAPACITORS GROUP | | | | | | | |
| C401 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C402 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C403 | | - | ELEC.CAPACITOR (10uF/35V) | | 413-810-919 | 1 | |
| C404 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C405 | | - | CERAMIC CAPACITOR (0.1uF/50V) | | 413-3113-035 | 1 | |
| C406 | | - | CHIP CAPACITOR (100pF/50V) | | 413-DCM280-767 | 1 | |
| C407 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C409 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C410 | | - | ELEC.CAPACITOR (47uF/10V) | | 413-810-920 | 1 | |
| OTHER PARTS GROUP | | | | | | | |
| J13,J14 | | - | CHIP RESISTOR (0 OHM,1/8W) | | 412-DJ3000-414 | 2 | |
| W401 | | 00D 941 0048 705 | 11P 1.0 FFC CONNECTOR | | 404-300-1914 | 1 | * |
| VFD401 | | 00D 941 0048 802 | VFD (HNA-07MM26) | | 410-385-290 | 1 | * |
| MD401 | | 00D 449 0303 004 | RECEIVER(GP1UM271XK) | | 417-390-777 | 1 | |
| SW401-409 | | 00D 958 0018 306 | TACT SW(H=5) | | 403-DCM270X-101A | 9 | |
| CHASSIS | | - | 1P GROUND WIRE(L=270) | | 406-390-840 | 1 | * |
| | | - | GROUND PLATE | for 390BKE3/290BKE3 | 300-390-1399 | 1 | * |
| | | - | GROUND PLATE | for 27BKE3/500AEBKE2/ 500AESPE2 | 300-500AE-1400 | 1 | * |

BUFFER P.W.B. UNIT ASS'Y

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|-----------------------------|-----|------------------|--|----------------------------|------------------|------|-----|
| SEMICONDUCTORS GROUP | | | | | | | |
| IC201 | | 00D 941 0048 909 | IC(SCF5249LPV120/SCF5249LAG120) | | 417-MCDS4-736 | 1 | |
| IC202 | | 00D 941 0049 005 | IC(K4S641632E-TC/K4S641632F/ K4S641632H-TC75) | | 417-CDN88-501 | 1 | |
| IC203 | | 00D 941 0049 102 | BUFFER IC ASS'Y (M29W800DB70N6Y) | for 390BKE3/290BKE3/27BKE3 | 704-390-6144 | 1 | * |
| IC203 | | 00D 941 0053 004 | BUFFER IC ASS'Y (M29W800DB70N6Y) | for 500AEBKE2/500AESPE2 | 704-C200-6660 | 1 | * |
| IC204 | | 00D 941 0049 209 | IC(BA18BC0FP-E2) | | 417-MCDS4-737 | 1 | |
| RESISTORS GROUP | | | | | | | |
| R189,190 | | - | CHIP RESISTOR (220K OHM,1/10W) | | 412-CDVD2001-521 | 2 | |
| R191 | | - | CHIP RESISTOR (47K OHM,1/10W) | | 412-CDVD2001-532 | 1 | |
| R201 | | - | CHIP RESISTOR (220K OHM,1/10W) | | 412-CDVD2001-521 | 1 | |
| R204-206 | | - | CHIP RESISTOR (220K OHM,1/10W) | | 412-CDVD2001-521 | 3 | |
| R215,216 | | - | CHIP RESISTOR (4.7K OHM,1/10W) | | 412-CDVD2001-523 | 2 | |
| R202,203 | | - | CHIP RESISTOR (4.7K OHM,1/10W) | | 412-CDVD2001-523 | 2 | |
| R210,211 | | - | CHIP RESISTOR (100 OHM,1/10W) | | 412-CDVD2001-530 | 2 | |
| R213 | | - | CHIP RESISTOR (100 OHM,1/10W) | | 412-CDVD2001-530 | 1 | |
| R220,221 | | - | CHIP RESISTOR (100 OHM,1/10W) | | 412-CDVD2001-530 | 2 | |
| R207,208 | | - | CHIP RESISTOR (0 OHM,1/10W) | | 412-CDVD2001-552 | 2 | |
| R222-228 | | - | CHIP RESISTOR (0 OHM,1/10W) | | 412-CDVD2001-552 | 7 | |
| R231 | | - | CHIP RESISTOR (10K OHM,1/10W) | | 412-CDVD2001-534 | 1 | |
| R236 | | - | CHIP RESISTOR (10K OHM,1/10W) | | 412-CDVD2001-534 | 1 | |
| CAPACITORS GROUP | | | | | | | |
| C201-214 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 14 | |
| C216 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C217 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C218-221 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 4 | |
| C222 | | - | ELEC.CAPACITOR (220uF/10V) | | 413-HT801K-192 | 1 | |
| C223 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C226 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C227 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C229 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C230 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C232 | | - | CHIP CAPACITOR (0.01uF/50V) | | 413-DCM280-771 | 1 | |
| C233 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 1 | |
| C235,236 | | - | CHIP CAPACITOR (0.1uF/50V) | | 413-DCM280-773 | 2 | |
| C237 | | - | ELEC.CAPACITOR (100uF/10V) | | 413-HMA2200-5017 | 1 | |
| C238 | | - | CHIP CAPACITOR (150pF/50V) | | 413-900-931 | 1 | |
| C239 | | - | CHIP CAPACITOR (39pF/50V) | | 413-390-987 | 1 | |
| OTHER PARTS GROUP | | | | | | | |
| CN106A | | 00D 941 0049 306 | 13P FFC CONNECTOR | | 404-385-2086 | 1 | * |
| CN107A | | 00D 941 0049 403 | 30P FFC CONNECTOR | | 404-385-2088 | 1 | * |
| CN302 | nsp | 00D 941 0049 500 | 2P SOCKET | | 404-KMD1500-608 | 1 | |
| L201,202 | | - | BEAD CORE (RH03506ST-B,65Ω/100MHz) | | 415-HV3500K-090 | 1 | |
| | | - | CUSHON | | 612-390-235 | 1 | * |



PHONE P.W.B. UNIT ASS'Y

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|--------------------------|-----|------------------|-------------------------------|---------|-----------------|------|-----|
| CAPACITORS GROUP | | | | | | | |
| C309 | | - | CHIP CAPACITOR (0.1ÉpF/50V) | | 413-DCM280-773 | 1 | |
| C313,314 | | - | CHIP CAPACITOR (470pF/50V) | | 413-007USB-786 | 2 | |
| OTHER PARTS GROUP | | | | | | | |
| W301 | | 00D 941 0049 704 | 3P 2.5 CONNECTOR WIRE (L=400) | | 404-390-2166 | 1 | * |
| JK301 | | 00D 958 0018 102 | 3P PHONE JACK | | 420-DCM270X-062 | 1 | |
| L301-303 | | 00D 958 0016 900 | BEAD CORE(86-019-A) | | 415-HV3500K-090 | 3 | |
| CHASSIS | | - | GROUND WIRE (L=60) | | 406-390-827 | 1 | * |
| | | - | 1P GROUND WIRE (L=80) | | 406-HV3500K-408 | 1 | |
| | | 00D 941 0050 803 | EMI CORE | | 415-390-277 | 1 | * |

PHOTO TRANSISTOR P.W.B. UNIT ASS'Y

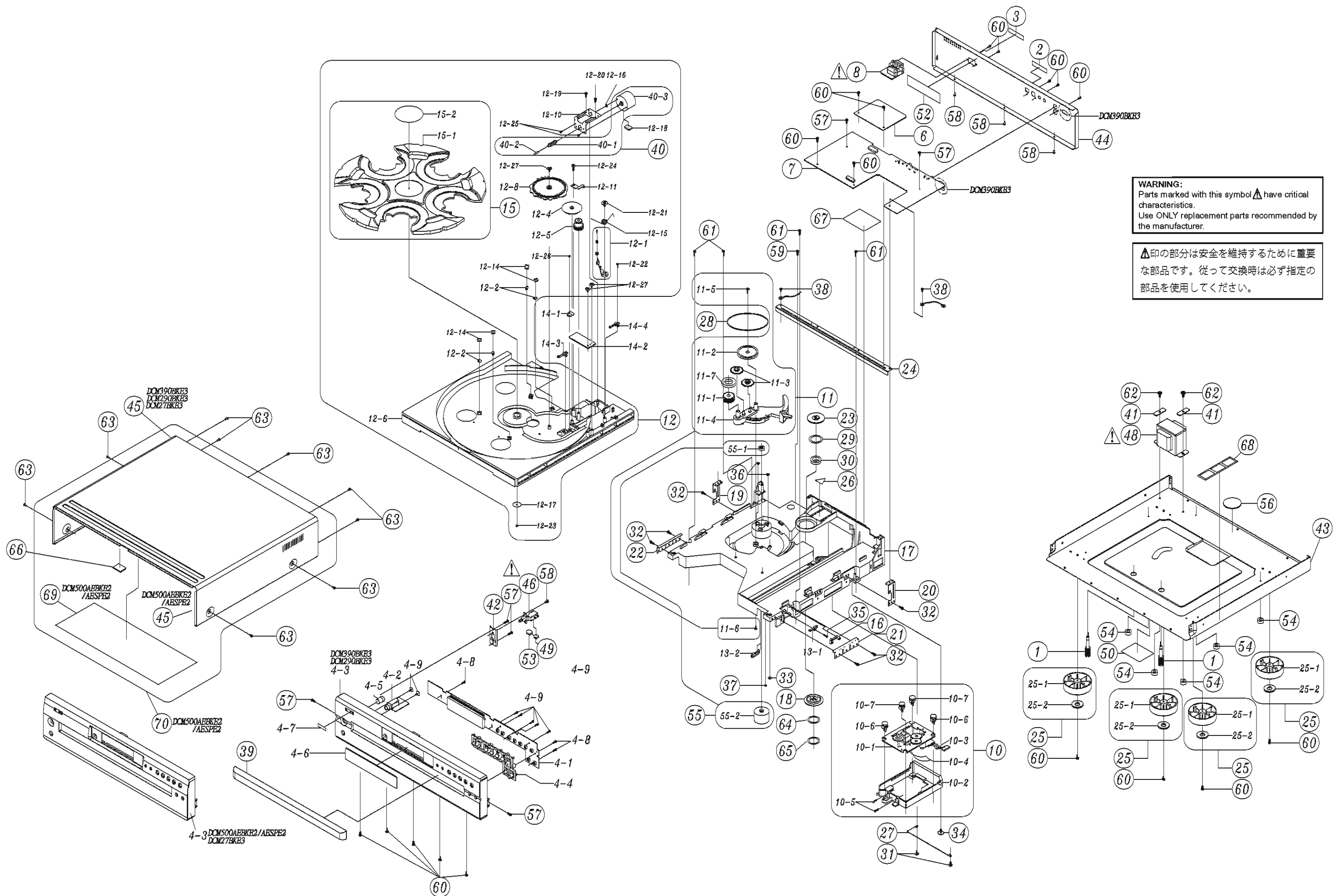
| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|----------|-----|------------------|---------------------------|---------|-----------------|------|-----|
| Q01 | | 00D 958 0018 209 | PHOTO TRANSISTOR(LTR-301) | | 416-DCM270X-120 | 1 | |

INFERARED EMITTING P.W.B. UNIT ASS'Y

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|----------|-----|------------------|--------------------------------------|---------|-----------------|------|-----|
| D01 | | 00D 958 0018 403 | INFERARED EMITTING DIODE(LTE-4206C) | | 410-DCM270X-132 | 1 | |
| R01 | | - | CARBON FILM RESISTOR (390K OHM,1/6W) | | 412-3113-076 | 1 | |
| | | 00D 958 0021 005 | ROUND PLASTIC SPACER(302A) | | 605-DCM270-055 | 1 | |

AC JACK P.W.B. UNIT ASS'Y

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|----------|-----|------------------|---------------------|-----------------------------------|------------------|------|-----|
| | | 00D 941 0049 801 | AC SOCKET | for 390BKE3/290BKE3/ 27BKE3 | 404-DJ2-021 | 1 | * |
| | | 00D 941 0050 405 | AC SOCKET | for 500AEBKE2/500AESPE2 | 404-HDJ2200E-969 | 1 | * |
| | | - | FUSE CLIPS | | 420-KT350A-004 | 2 | |
| | | 00D 958 0016 900 | BEAD CORE(86-019-A) | | 415-HV3500K-090 | 2 | |
| ⚠ FUSE01 | | 00D 941 0049 908 | FUSE(1A/250V) | for 390BKE3/290BKE3/ 27BKE3 | 422-CDN12F-028 | 1 | |
| ⚠ FUSE01 | | 00D 941 0050 007 | FUSE(T1AL/250V) | for DCM500AEBKE2/ DCM500AESPE2 | 422-HDJ7100-022 | 1 | |
| | | - | FUSE COVER | | 504-DJ2500J-046 | 1 | |



WARNING:
Parts marked with this symbol ▲ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

▲印の部分は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

PARTS LIST OF EXPLODED VIEW

* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

Note: The symbols in the column "Remarks" indicate the following destinations.

BKE3 : U.S.A. & Canada model (Black)

BKE2 : Europe model (Black)

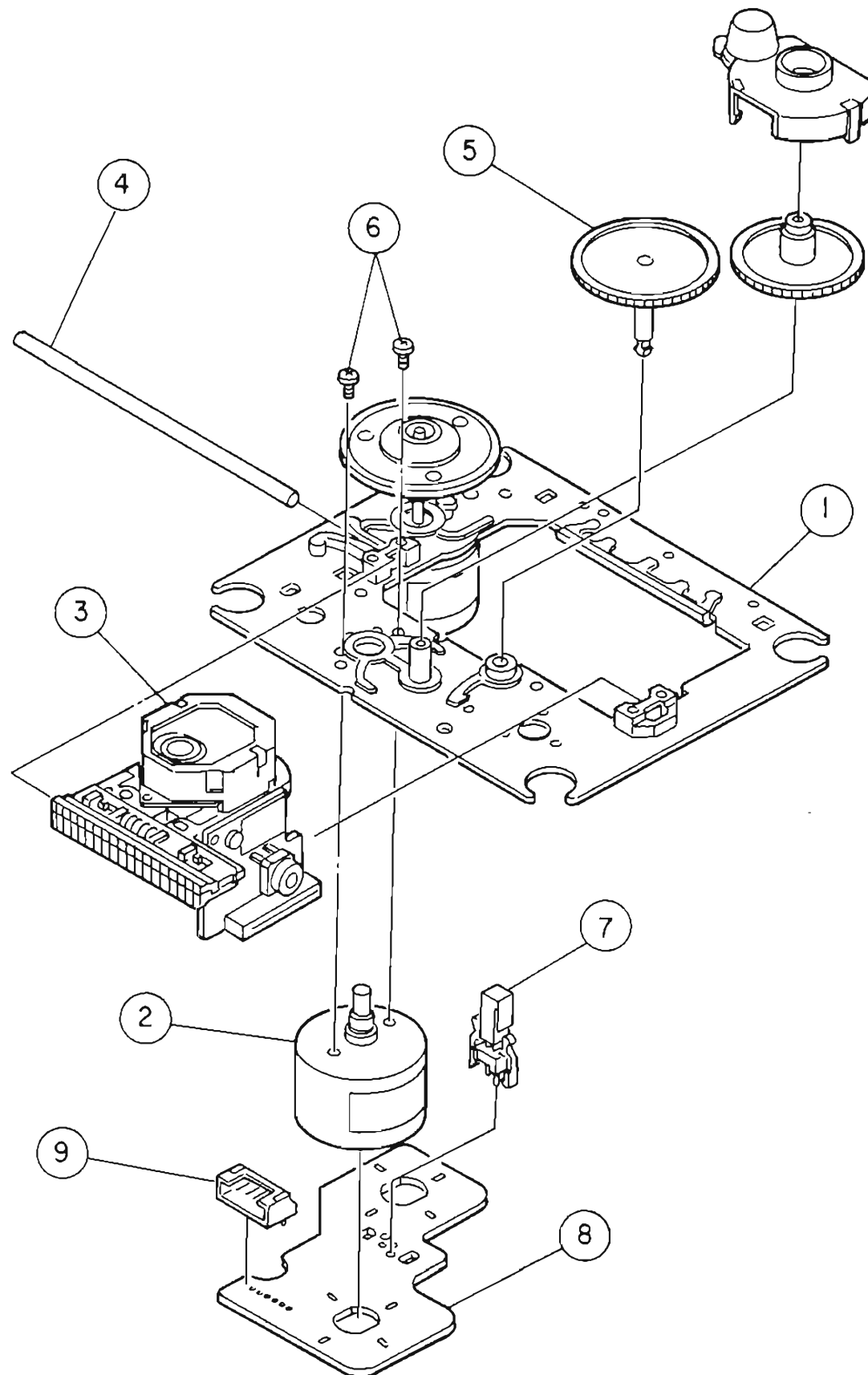
SPE2 : Europe model (Premium Silver)

| Ref. No. | nsp | Part No. | Part Name | Remarks | Q'ty | New |
|----------|-----|------------------|----------------------------|--|-------------------|-----|
| 1 | nsp | 00D 958 0009 807 | SCREW ASS'Y | | 701-AVD3500K-1668 | 2 |
| 2 | | - | DATE LABEL | for 390BKE3/290BKE3/ 27BKE3 | 701-DCM270BK-1930 | 1 |
| 3 | | - | SERIAL NO. LABEL | | 701-DCM270BK-1931 | 1 |
| 4-1 | | 00D 941 0041 207 | CONTROL PCB ASS'Y | for 390BKE3/290BKE3 | 704-390-6142 | 1 * |
| 4-1 | | 00D 941 0051 906 | CONTROL PCB ASS'Y | for 27BKE3 | 704-27-6327 | 1 * |
| 4-1 | | 00D 941 0041 304 | CONTROL PCB ASS'Y | for 500AEBKE2/500AESPE2 | 704-500AE-6326 | 1 * |
| 4-2 | | 00D 941 0041 401 | PHONE PCB ASS'Y | | 704-390-6145 | 1 * |
| 4-3 | | 00D 941 0041 508 | FRONT PANEL | for 390BKE3 | 100-390-2371 | 1 * |
| 4-3 | | 00D 941 0041 605 | FRONT PANEL | for 290BKE3 | 100-290-2371 | 1 * |
| 4-3 | | 00D 941 0041 702 | FRONT PANEL | for 27BKE3 | 100-27-2372 | 1 * |
| 4-3 | | 00D 941 0041 809 | FRONT PANEL | for 500AEBKE2 | 100-500-2372 | 1 * |
| 4-3 | | 00D 941 0041 906 | FRONT PANEL | for 500AESPE2 | 100-500SP-2372 | 1 * |
| 4-4 | | 00D 941 0042 002 | KNOB | for 390BKE3/290BKE3 | 100-390-2375 | 1 * |
| 4-4 | | 00D 941 0042 109 | KNOB | for 27BKE3/500AEBKE2 | 100-27-2376 | 1 * |
| 4-4 | | 00D 941 0042 206 | KNOB | for 500AESPE2 | 100-500-2376 | 1 * |
| 4-5 | | 00D 941 0042 303 | POWER KNOB | for 390BKE3/290BKE3/ 27BKE3/500AEBKE2 | 100-390-2393 | 1 * |
| 4-5 | | 00D 941 0042 400 | POWER KNOB | for 500AESPE2 | 100-500-2393 | 1 * |
| 4-6 | | 00D 941 0042 507 | DECORATION | | 501-390-1884 | 1 * |
| 4-7 | | 00D 941 0042 604 | BADGE | for 390BKE3/290BKE3/ 27BKE3/500AEBKE2 | 501-390-1888 | 1 * |
| 4-7 | | 00D 941 0042 701 | BADGE | for 500AESPE2 | 501-500-1888 | 1 * |
| 4-8 | | - | SCREW (SAE1018,BTP,Φ3X8) | | 602-2002-077 | 2 |
| 4-9 | | - | SCREW (SAE1018,PTP,Φ2.6X8) | | 602-SL24F-099 | 8 |
| 4-10 | | - | SCREW (TTP 2.6X7 CAP 10Z) | | 602-DV300-5023 | 2 |
| 6 | | 00D 941 0050 502 | BUFFER PCB ASS'Y | for 390BKE3/290BKE3/27BKE3 | 704-390-6143 | 1 * |
| 6 | | 00D 941 0053 101 | BUFFER PCB ASS'Y | for 500AEBKE2/500AESPE2 | 704-C200-6659 | 1 * |
| 7 | | 00D 941 0050 104 | SERVO PCB ASS'Y | for 390BKE3 | 704-390-6146 | 1 * |
| 7 | | 00D 941 0050 201 | SERVO PCB ASS'Y | for 290BKE3/27BKE3/ 500AEBKE2/500AESPE2 | 704-290-6153 | 1 * |
| 8 | | 00D 941 0050 609 | AC JACK ASS'Y | for 390BKE3/290BKE3/ 27BKE3 | 704-390-6147 | 1 * |
| 8 | | 00D 941 0050 706 | AC JACK ASS'Y | for 500AEBKE2/500AESPE2 | 704-290-6154 | 1 * |
| 10 | | 00D 941 0042 808 | CD HEAD TRACKING ASS'Y | | 701-KMD550-1588 | 1 |
| 10-1 | | - | MECHA ASS'Y (KSM-213CCM) | | 704-HV3423K-1441 | 1 |
| 10-2 | | - | CD DECK HOLDER | | 100-KMD550-1220B | 1 |
| 10-3 | | - | 6P CONNECTOR WIRE | | 404-KMD5000-663 | 1 |
| 10-4 | | - | RIBBON WIRE (16PIN) | | 406-KMD5000-413 | 1 |
| 10-5 | | - | SCREW (PTP M3X14) | | 602-KMD550-250 | 2 |
| 10-6 | | - | CUSHION RUBBER (RED) | | 604-KMD550-117 | 2 |
| 10-7 | | - | CUSHION RUBBER (WHITE) | | 604-KMD550-118 | 2 |
| 11 | | 00D 941 0042 905 | GEAR SLIDE PLATE ASSY | | 701-KMD550-1603 | 1 |
| 11-1 | | - | B.GEAR | | 100-KMD280-727 | 1 |
| 11-2 | | - | BELT GEAR | | 100-KMD280-732B | 1 |
| 11-3 | | - | S.GEAR | | 100-KMD280-734 | 2 |
| 11-4 | | - | GEAR SET | | 100-KMD550-860D2 | 1 |
| 11-5 | | - | SCREW (M3X8 PTP) | | 602-KMD510-169 | 1 |
| 11-6 | | - | SCREW (PTP 4X8mm L) | | 602-KMD550-261 | 1 |
| 11-7 | | - | WASHER (Φ13X8.1Xt0.4) | | 606-CMP1000-187 | 1 |

| Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|----------|-----|------------------|-----------------------------|---------|-------------------|------|-----|
| 12 | | 00D 941 0050 308 | TRAY ASS'Y | | 701-DCM280-3311 | 1 | |
| 12-1 | | - | CORRECTING LEVER ASS'Y | | 701-KMD550-1593 | 1 | |
| 12-2 | | - | WHEEL | | 100-KMD280-729 | 4 | |
| 12-4 | | - | MIDDLE GEAR | | 100-KMD280-733 | 1 | |
| 12-5 | | - | TRANSFER GEAR | | 100-KMD280-736A | 1 | |
| 12-6 | | - | BASE | | 100-KMD550-1214C | 1 | |
| 12-8 | | - | DRIVE GEAR | | 100-KMD550-1216 | 1 | |
| 12-10 | | - | MOTER FIXED PLATE | | 300-KMD550-262 | 1 | |
| 12-11 | | - | FORWARD GEAR FIXED IRON | | 300-KMD280-305 | 1 | |
| 12-14 | | - | FIXED SHEET (PVC) | | 501-KMD550-1146 | 4 | |
| 12-15 | | - | COMMENTING SPRING | | 603-KMD550-199 | 1 | |
| 12-16 | | - | WASHER | | 606-H900-052 | 1 | |
| 12-17 | | - | FIXED CENTER WASHER | | 606-C426-066 | 1 | |
| 12-18 | | - | MUTE SHEET | | 612-KMD510-032 | 1 | |
| 12-19 | | - | SCREW | | 602-M100-032 | 1 | |
| 12-20 | | - | SCREW (M3X8mm BTP) | | 602-2002-077 | 1 | |
| 12-21 | | - | SCREW (M3X9mm PTP) | | 602-SL24F-097 | 1 | |
| 12-22 | | - | SCREW (2.6X8PTP) | | 602-SL24F-099 | 1 | |
| 12-23 | | - | SCREW (TTP 3X10 ZK PTP) | | 602-MK7-131 | 1 | |
| 12-24 | | - | SCREW (2.6X5.5mm) | | 602-KM300-144 | 1 | |
| 12-25 | | - | SCREW (M2.6X3mm) | | 602-KM500-155 | 2 | |
| 12-26 | | - | SCREW (TTP M2.6X6 PTP) | | 602-KMD510-158 | 1 | |
| 12-27 | | - | SCREW (TTP 2.6X7 CAP 10Z) | | 602-DV300-5023 | 3 | |
| 15 | | 00D 941 0043 001 | DISK ASS'Y | | 701-KMD550B-1900 | 1 | * |
| 15-1 | | - | DISK | | 100-KMD550-1215A | 1 | |
| 15-2 | | - | FIXED SHEET | | 501-KMD550-1099 | 1 | |
| 40 | | 00D 941 0043 409 | MOTOR SPIRAL GEAR ASS'Y | | 704-390-6331 | 1 | * |
| 40-1 | | - | SPIRAL GEAR | | 100-KMD280-731A | 1 | |
| 40-2 | | - | SHAFT | | 200-KMD280-174 | 1 | |
| 40-3 | | - | MOTOR (MEN-7E2T5,DC12V) | | 401-MK7-043A | 1 | |
| 13-1 | | 00D 958 0003 405 | LEAF SW (LSA-1119H,2PIN) | | 403-DM11A-020 | 1 | |
| 13-2 | | 00D 958 0002 105 | LEAF SW (LSA-2127E,3PIN) | | 403-KMD280-048 | 1 | |
| 14-1 | | 00D 958 0003 803 | PHOTO TRANSISTOR PCB ASS'Y | | 704-DCM270X-1797 | 1 | |
| 14-2 | | 00D 958 0002 008 | INFRARED EMITTING PCB ASS'Y | | 704-DCM270X-1798 | 1 | |
| 14-3 | | 00D 958 0003 405 | LEAF SW (LSA-1119H,2PIN) | | 403-DM11A-020 | 1 | |
| 14-4 | | 00D 958 0005 704 | LEAF SW (LSA-1119F,2PIN) | | 403-KMD550-087 | 1 | |
| 16 | | - | SWITCH CONTROL | | 100-KMD280-730 | 1 | |
| 17 | | - | BOTTOM BASE | | 100-KMD550-1213A | 1 | |
| 18 | | - | DISK HOLDER | | 100-KMD550-1219 | 1 | |
| 19 | | - | L.FIXED PLATE | | 300-KMDV280C-263A | 1 | |
| 20 | | - | R.FIXED PLATE | | 300-KMDV280C-264A | 1 | |
| 21 | | - | STAY R | | 300-KMD280-265RA | 1 | |
| 22 | | - | STAY L | | 300-KMD550-265L | 1 | |
| 23 | | - | SWIVEL PLATE | | 300-KMD550-466 | 1 | |
| 24 | | - | MAIN PCB BRACKET | | 300-390-486A | 1 | * |
| 25 | nsp | 00D 941 0043 108 | FOOT ASS'Y | | 701-390-3728 | 4 | * |
| 25-1 | | - | FOOT (ABS,KURZ BM82361) | | 100-390-2374 | 4 | * |
| 25-2 | | - | FOOT | | 612-DCM370-067 | 4 | |
| 26 | | - | LASER BEAM LABEL | | 501-1033-428 | 1 | |
| 27 | | - | STEEL WIRE | | 603-KMD280-200 | 1 | |
| 28 | | 00D 958 0001 708 | MOTOR BELT | | 604-KMD280-094 | 1 | |
| 29 | | - | WASHER (HIMERON BLACK 18) | | 612-KT300-007 | 1 | |
| 30 | | - | MAGNET (Φ30X18X5t,650Gm) | | 613-MK7-002A | 1 | |
| 31 | | - | SCREW (TTP CAP M3X8mm) | | 602-B600-056 | 2 | |
| 32 | | - | SCREW (SAE1018,BTP,Φ3X8) | | 602-2002-077 | 6 | |
| 33 | | - | SCREW (M3X7 PTP) | | 602-SL24F-096 | 1 | |

| | Ref. No. | nsp | Part No. | Part Name | Remarks | | Q'ty | New |
|---|----------|-----|------------------|---------------------------------------|--|------------------|------|-----|
| | 34 | | - | SCREW (M3X9mm PTP) | | 602-SL24F-097 | 1 | |
| | 35 | | - | SCREW (SAE1018,PTP,Φ2.6X8) | | 602-SL24F-099 | 1 | |
| | 36 | | - | SCREW (M2.6X4 P0.45) | | 602-MK7-134 | 2 | |
| | 37 | | - | SCREW (PTP M3X14) | | 602-KMD550-250 | 1 | |
| | 38 | | - | SCREW (W BTP 2.6X6 MC) | | 602-KMD550-255 | 2 | |
| | 39 | | 00D 941 0043 205 | CD DOOR | for 390BKE3/290BKE3/ 27BKE3/500AEBKE2 | 100-390-2373 | 1 | * |
| | 39 | | 00D 941 0043 302 | CD DOOR | for 500AESPE2 | 100-500-2373 | 1 | * |
| | 41 | | - | BRACKET TRANSFORMER | | 300-DV300B-443 | 2 | |
| | 42 | | - | POWER SWITCH BRACKET | | 300-HDJ7000-478 | 1 | |
| | 43 | | - | BUTTOM BASE | | 300-CDC2050-502B | 1 | * |
| | 44 | nsp | 00D 941 0043 506 | BACK BOARD | for 390BKE3 | 300-390-573A | 1 | * |
| | 44 | nsp | 00D 941 0043 603 | BACK BOARD | for 290BKE3 | 300-290-573A | 1 | * |
| | 44 | nsp | 00D 941 0043 700 | BACK BOARD | for 27BKE3 | 300-27-573A | 1 | * |
| | 44 | nsp | 00D 941 0043 807 | BACK BOARD | for 500AEBKE2/500SPE2 | 300-500-573A | 1 | * |
| | 70 | | 00D 941 0051 307 | TOP COVER WITH METAL PLATE ASS'Y | for 500AEBKE2 | 703-500-1047 | 1 | * |
| | 70 | | 00D 941 0051 404 | TOP COVER WITH METAL PLATE ASS'Y | for 500AESPE2 | 703-500S-1047 | 1 | * |
| | 69 | | - | METAL PLATE | for 500AEBKE2/500SPE2 | 300-500-1421 | 1 | * |
| | 45 | | - | TOP COVER | for 500AEBKE2 | 300-390-574 | 1 | * |
| | 45 | | - | TOP COVER | for 500AESPE2 | 300-500-574 | 1 | * |
| | 45 | | 00D 941 0043 904 | TOP COVER | for 390BKE3/290BKE3/ 27BKE3 | 300-390-574 | 1 | * |
| | 66 | | - | HIMILON (0.5t, 19X6.5mm) | for 500AEBKE2/500SPE2 | 612-390-248 | 1 | * |
| ⚠ | 46 | | 00D 958 0008 303 | POWER SW (SDDL1017U-HF,2PIN) | | 403-A100-005 | 1 | |
| ⚠ | 48 | | 00D 941 0044 301 | TRANSFORMER (AC120V) | for 390BKE3/290BKE3/ 27BKE3 | 411-385-527 | 1 | * |
| ⚠ | 48 | | 00D 941 0044 408 | TRANSFORMER (AC230V) | for 500AEBKE2/500AESPE2 | 411-385-528 | 1 | * |
| | 49 | | - | AC CAPACITOR (0.01uF/250V,M,BULK,Y5V) | | 413-S250-747 | 1 | |
| | 50 | | - | TRANSFER SCREWS LABEL | | 501-HT8023K-949 | 1 | |
| | 52 | | - | FUSE LABEL (80X20mm,y=0.1mm) | for 390BKE3/290BKE3/ 27BKE3 | 501-390BKE3-1269 | 1 | * |
| | 53 | | - | CNR COVER (HU-13A-PRW) | | 504-SPANDMK2-160 | 1 | |
| | 54 | | - | PROTECTION MAT | | 612-HMD5000-065 | 5 | |
| | 55 | | 00D 941 0044 505 | MOTOR PULLEY ASS'Y | | 704-390-6332 | 1 | |
| | 55-1 | | - | MOTOR PULLEY | | 100-KMD280-728 | 1 | |
| | 55-2 | | - | MOTOR (MEN-7E2T5,DC12V) | | 401-MK7-043A | 1 | |
| | 56 | | - | CUSHION (EVA,Φ31.3,t=1) | | 612-DCM280-215 | 1 | |
| | 57 | | - | SCREW (SAE1018,BTP,Φ3X8) | | 602-2002-077 | 4 | |
| | 58 | | - | SCREW (3X5mm,BLACK) | | 602-KE200-145 | 4 | |
| | 59 | | - | SCREW (TTB M3X10mm) | | 602-HP1010K-174 | 1 | |
| | 60 | | - | SCREW (3X8mm) | | 602-HP1010K-175 | 18 | |
| | 61 | | - | SCREW (TTB M3X12mm) | | 602-DV300B-219 | 4 | |
| | 62 | | - | SCREW (4X8mm TTB BLACK) | | 602-DCM270-281 | 2 | |
| | 63 | | - | SCREW (3X8) | for 390BKE3/290BKE3/ 27BKE3/500AEBKE2 | 602-DCM280-429 | 9 | |
| | 63 | | - | SCREW (3X8) | for 500AESPE2 | 602--HT8011-192 | 9 | |
| | 64 | | - | PC WASHER | | 612-DCM390-247 | 1 | * |
| | 65 | | - | PC WASHER | | 501-DCM280-1628 | 1 | |
| | 67 | | - | LASER CAUTION LABEL (0.08t, 52X26mm) | for 390BKE3/290BKE3/ 27BKE3 | 501-390BKE3-1924 | 1 | |
| | 67 | | - | LASER CAUTION LABEL (0.08t, 52X26mm) | for 500AEBKE2/500SPE2 | 501-500SPE2-1924 | 1 | |
| | 68 | | - | LASE LABEL (0.08t, 52X26mm) | for 500AEBKE2/500SPE2 | 501-500SPE2-1925 | 1 | * |

EXPLODED VIEW OF CD MECHANISM UNIT (CD TRAV/UNIT KSM-213CCM)



PARTS LIST OF CD MECHANISM UNIT

*本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

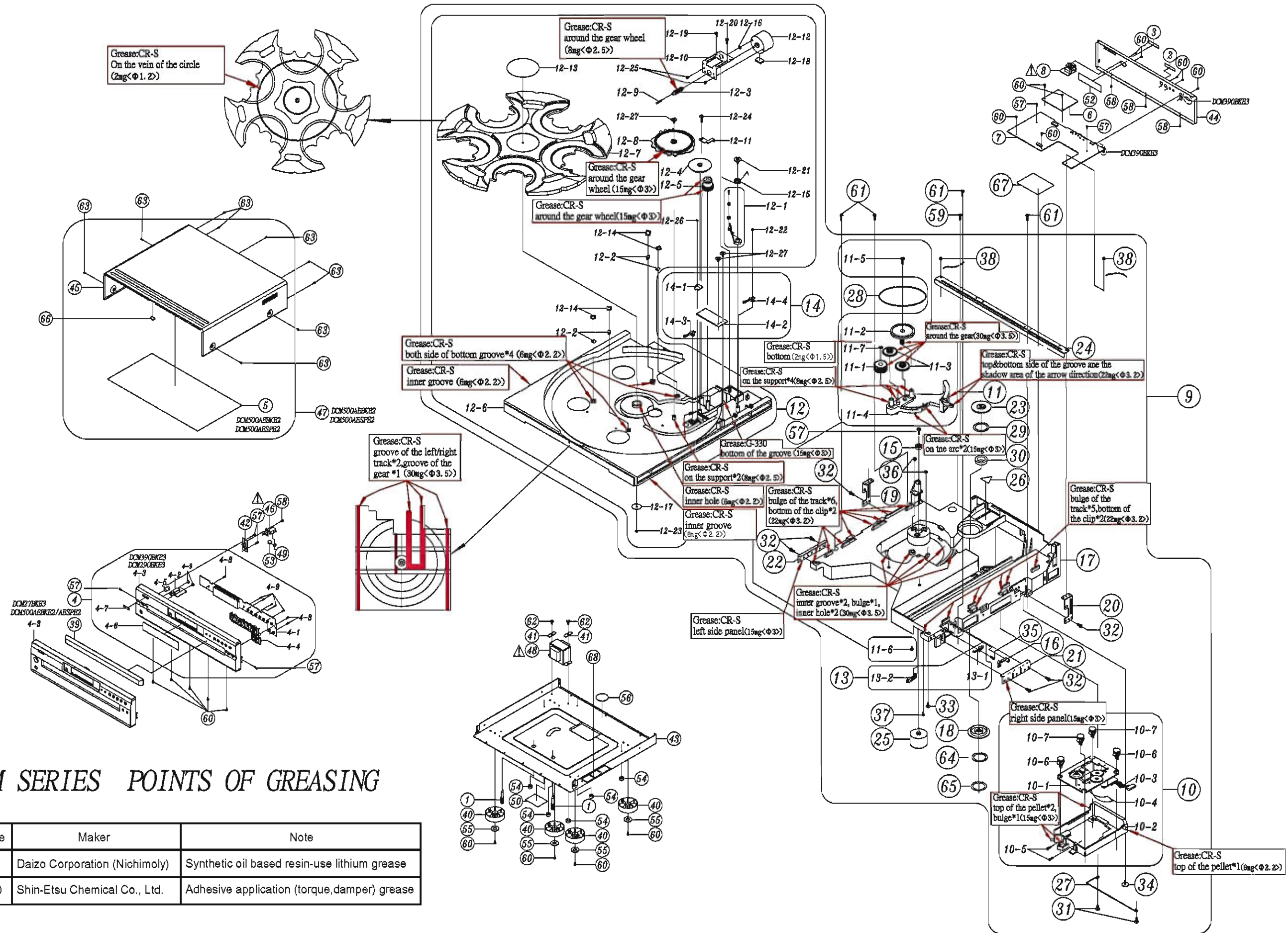
* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

| Ref.No. | nsp | Part No. | Part Name | Remarks | Q'ty | New |
|---------|-----|------------------|---------------------|----------|------|-----|
| 1 | nsp | 00D SX2 6258 771 | MOTOR CHASSIS ASS'Y | KSS-213C | 1 | |
| 2 | nsp | 00D SX2 6257 691 | MOTOR GEAR ASS'Y | | 1 | |
| 3 | nsp | 00D S88 4841 509 | OPTICAL PU | | 1 | |
| 4 | nsp | 00D S26 2690 801 | SLIDE SHAFT | | 1 | |
| 5 | nsp | 00D S26 2690 701 | GEAR(A)(S) | | 1 | |
| 6 | nsp | 00D S76 2125 510 | SCREW 2x3 | | 2 | |
| 7 | nsp | 00D S15 7208 511 | LEAF SW | | 1 | |
| 8 | nsp | 00D S16 3967 812 | MOTOR (6P) (S) PCB | | 1 | |
| 9 | nsp | 00D S15 6472 211 | 6P CONNECTOR (PIN) | | 1 | |

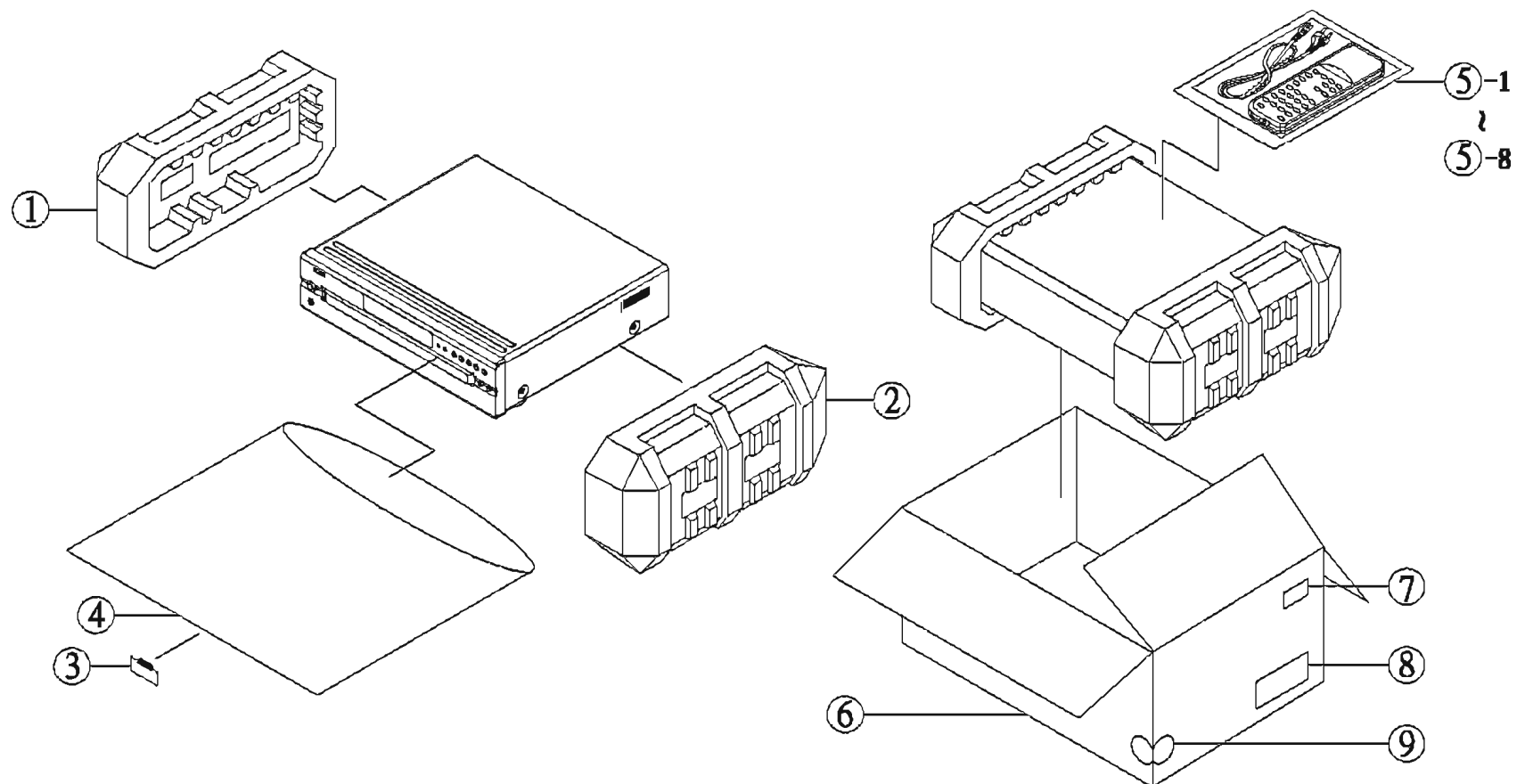
POINTS OF GREASING 



DCM SERIES POINTS OF GREASING

| Grease | Maker | Note |
|--------|-------------------------------|--|
| CR-S | Daizo Corporation (Nichimoly) | Synthetic oil based resin-use lithium grease |
| G-330 | Shin-Etsu Chemical Co., Ltd. | Adhesive application (torque,damper) grease |

PACKING VIEW



PARTS LIST OF PACKING & ACCESSORIES

* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

Note: The symbols in the column "Remarks" indicate the following destinations.

BKE3 : U.S.A. & Canada model (Black)

BKE2 : Europe model (Black)

SPE2 : Europe model (Premium Silver)

| Ref. No. | nsp | Part No. | Part Name | Remarks | Q'ty | New |
|----------|-----|------------------|-----------------------------|--|-------------------|-----|
| 1 | nsp | 00D 941 0044 602 | Polyfoam L | | 506-500-449L | 1 * |
| 2 | nsp | 00D 941 0044 709 | Polyfoam R | | 506-500-449R | 1 * |
| 3 | | - | TRANSPORTATION SCREW LABEL | | 501-DCM270-1260 | 1 |
| 4 | nsp | 00D 958 0023 304 | SOFT BAG | | 509-390-186 | 1 |
| 5-1 | | 00D 399 1053 008 | REMOTE CONTROL | for 390BKE3/290BKE3/27BKE3/ 500AEBKE2 | 704-385BK-6065 | 1 * |
| 5-1 | | 00D 399 1053 011 | REMOTE CONTROL | for 500AESPE2 | 704-500SP-6102 | 1 * |
| 5-2 | | 00D 941 0044 806 | INTSRUCTION BOOK | for 390BKE3/290BKE3/27BKE3 | 502-290BKE3-2009 | 1 * |
| 5-2 | | 00D 941 0044 903 | INTSRUCTION BOOK | for 500AEBKE2/500AESPE2 | 502-500AE-2010 | 1 * |
| 5-3 | | 00D 958 0011 400 | 2P RCA PATH CORD | | 408-DV300-5001 | 1 |
| 5-4 | | - | DRY BATTERY | | 426-DV300-5001 | 2 |
| 5-5 | | 00D 515 0944 406 | WARRANTY (HOME) | for 390BKE3/290BKE3/27BKE3 | 502-380BKE3-1329D | 1 |
| 5-6 | | 00D 515 0921 607 | S.S.LIST (EX) | | 502-DCM280-1347D | 1 |
| 5-7 | | 00D 941 0044 107 | AC CORD (L=1900+/-50mm,UL) | for 390BKE3/290BKE3/27BKE3 | 409-DJ2-069A | 1 * |
| 5-7 | | 00D 941 0044 204 | AC CORD (L=1900mm,VDE,TYPE) | for 500AEBKE2/500AESPE2 | 409-DJ2-070A | 1 * |
| 5-8 | | - | POLYBAG | | 509-DJ2500H-046 | 1 |
| 6 | nsp | 00D 941 0045 009 | GIFT BOX | for 390BKE3 | 507-390-2658 | 1 * |
| 6 | nsp | 00D 941 0045 106 | GIFT BOX | for 290BKE3 | 507-290BKE3-2658 | 1 * |
| 6 | nsp | 00D 941 0045 203 | GIFT BOX | for 27BKE3 | 507-27BKE3-2658 | 1 * |
| 6 | nsp | 00D 941 0045 300 | GIFT BOX | for 500AEBKE2/500AESPE2 | 507-500BKE2-2658 | 1 * |
| 7 | | - | BAR CORD | for 390BKE3 | 501-390BKE3-1248 | 1 * |
| 7 | | - | BAR CORD | for 290BKE3 | 501-290BKE3-1248 | 1 * |
| 7 | | - | BAR CORD | for 27BKE3 | 501-27BKE3-1248 | 1 * |
| 7 | | - | BAR CORD | for 500AEBKE2 | 501-500AEB2-1248 | 1 * |
| 7 | | - | BAR CORD | for 500AESPE2 | 501-500AES2-1248 | 1 * |
| 8 | | - | BAR CORD | for 390BKE3 | 701-390BKE3-3513 | 2 * |
| 8 | | - | BAR CORD | for 290BKE3 | 701-290BKE3-3513 | 2 * |
| 8 | | - | BAR CORD | for 27BKE3 | 701-27BKE3-3513 | 2 * |
| 8 | | - | BAR CORD | for 500AEBKE2 | 701-500AEB2-3513 | 2 * |
| 8 | | - | BAR CORD | for 500AESPE2 | 701-500AES2-3513 | 2 * |
| 9 | | - | Color label | for 500AESPE2 | 501-300FSPE2-1906 | 2 |

NOTE FOR SCHEMATIC DIAGRAM

WARNING:

Parts marked with this symbol \triangle have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM
M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD.
P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT
NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE
WITHOUT PRIOR NOTICE.

配線図について

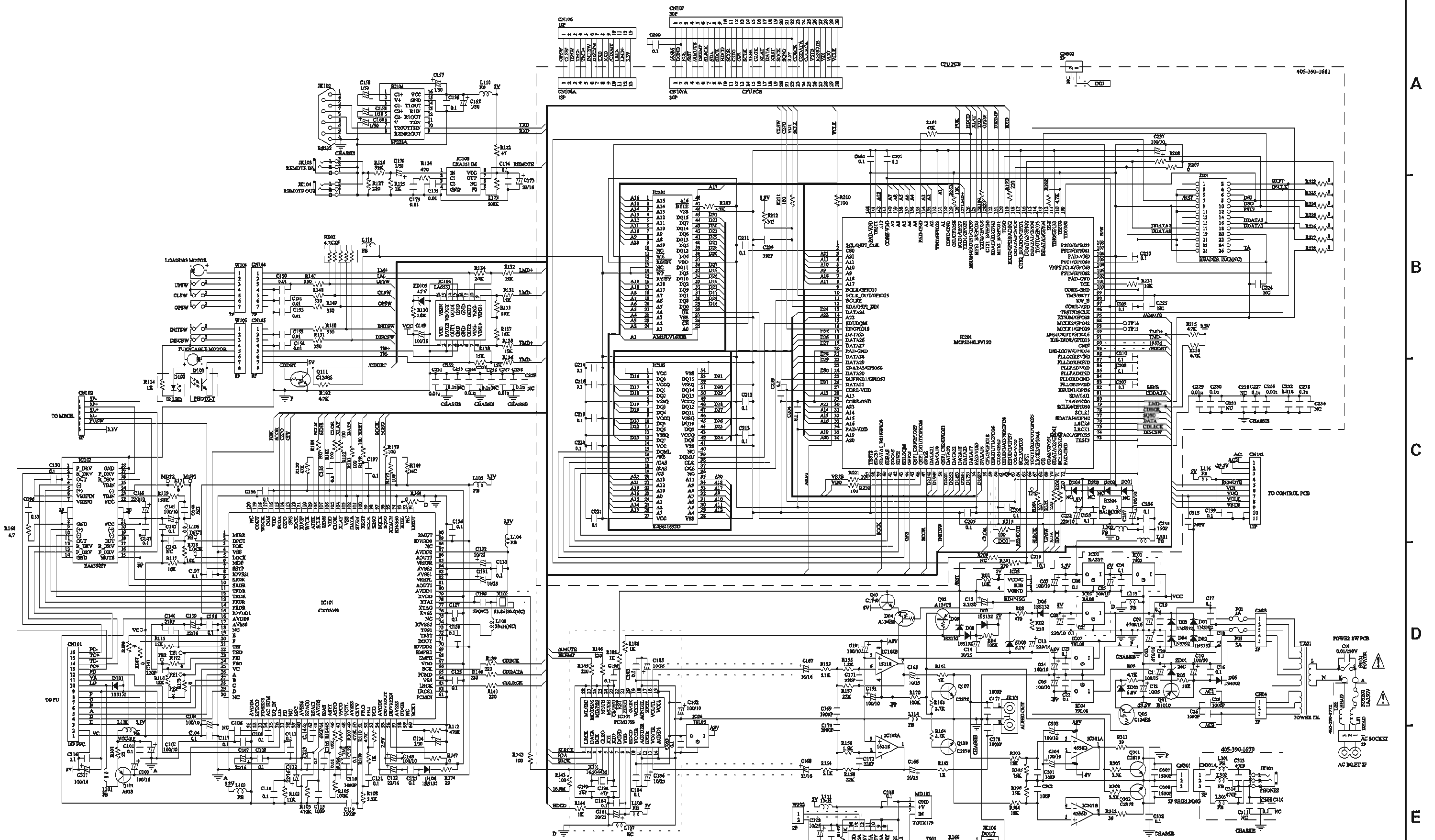
\triangle 印の部品は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

注)

- (1) 指定なき抵抗値は Ω 、k は $k\Omega$ 、M は $M\Omega$ を示す。
- (2) 指定なきコンデンサーの値は μF 、p は pF を示す。
- (3) 各部の電圧は無信号の値を示す。
- (4) この配線図は基本配線図です。改良等のため変更することがありますのでご了承ください。

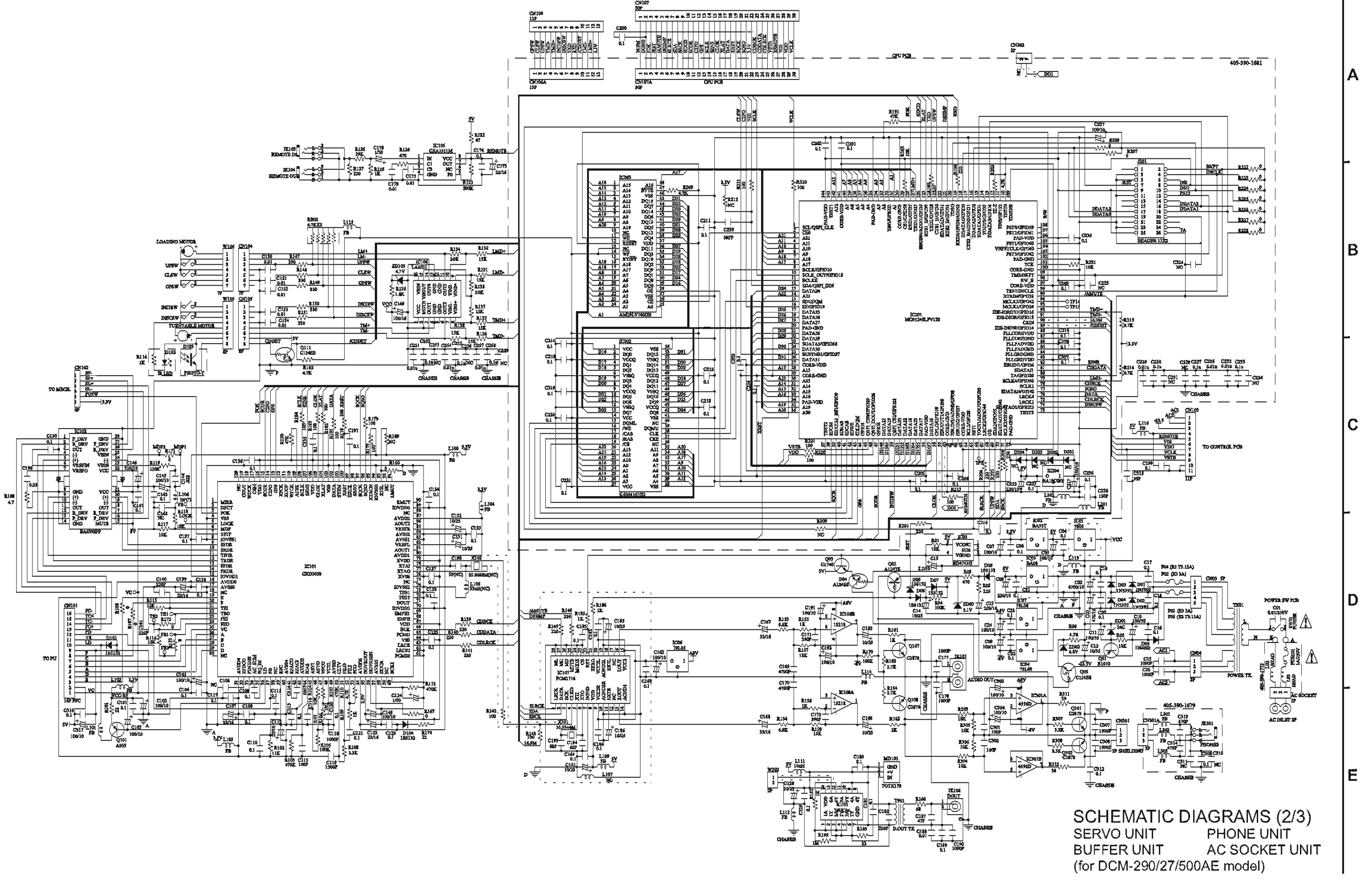
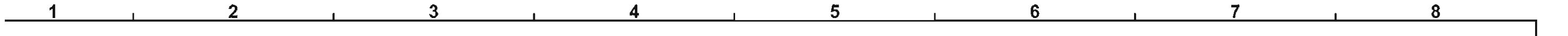
SCHEMATIC DIAGRAMS (1/3)

1 2 3 4 5 6 7 8



SCHEMATIC DIAGRAMS (1/3)
 SERVO UNIT PHONE UNIT
 BUFFER UNIT AC SOCKET UNIT
 (for DCM-390 model)

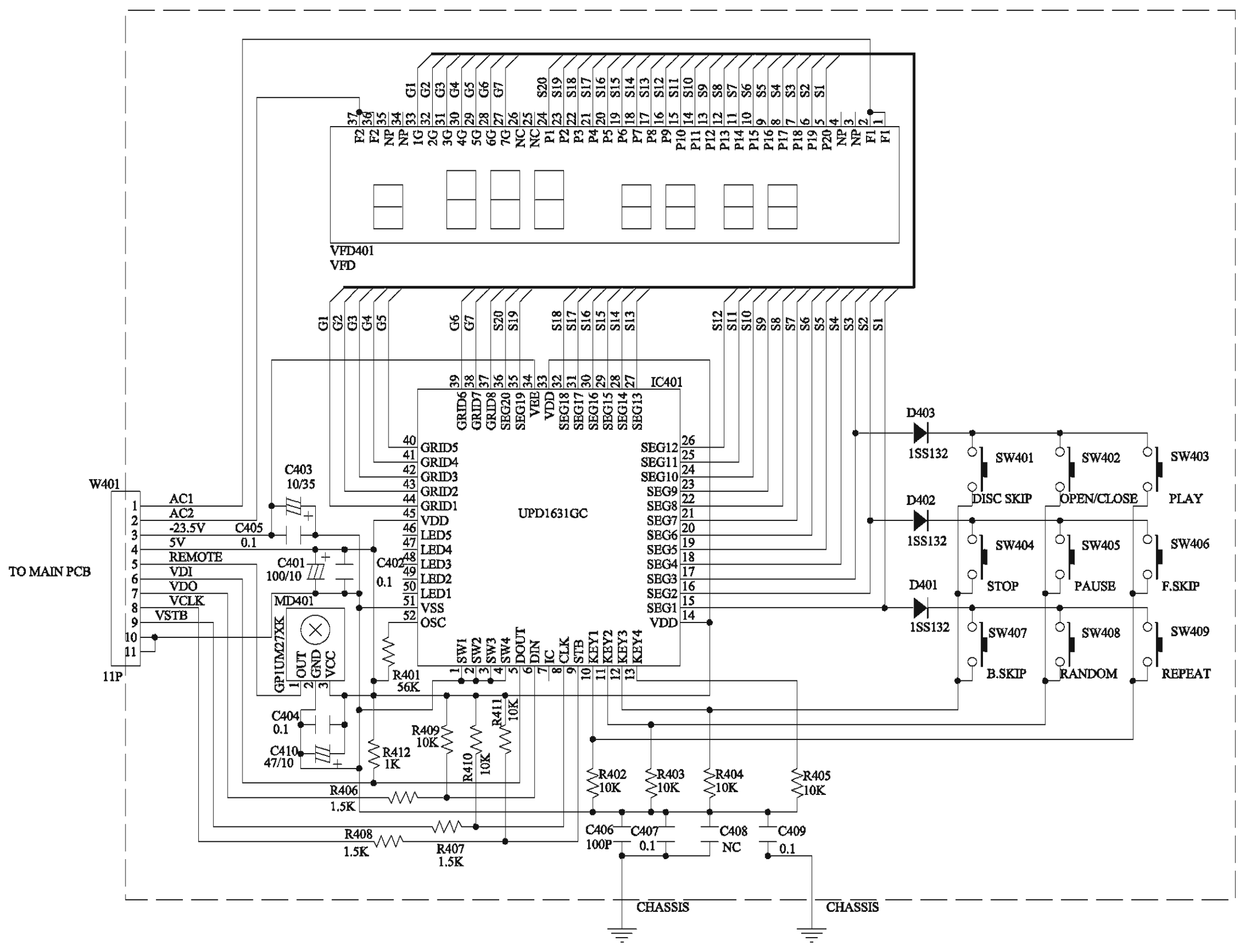
SCHEMATIC DIAGRAMS (2/3)



SCHEMATIC DIAGRAMS (2/3)
SERVO UNIT PHONE UNIT
BUFFER UNIT AC SOCKET UNIT
(for DCM-290/27/500AE model)

SCHEMATIC DIAGRAMS (3/3)

1 2 3 4 5 6 7 8



A
B
C
D
E

SCHEMATIC DIAGRAMS (3/3)
CONTROL UNIT

DOCUMENTS FOR WEEE

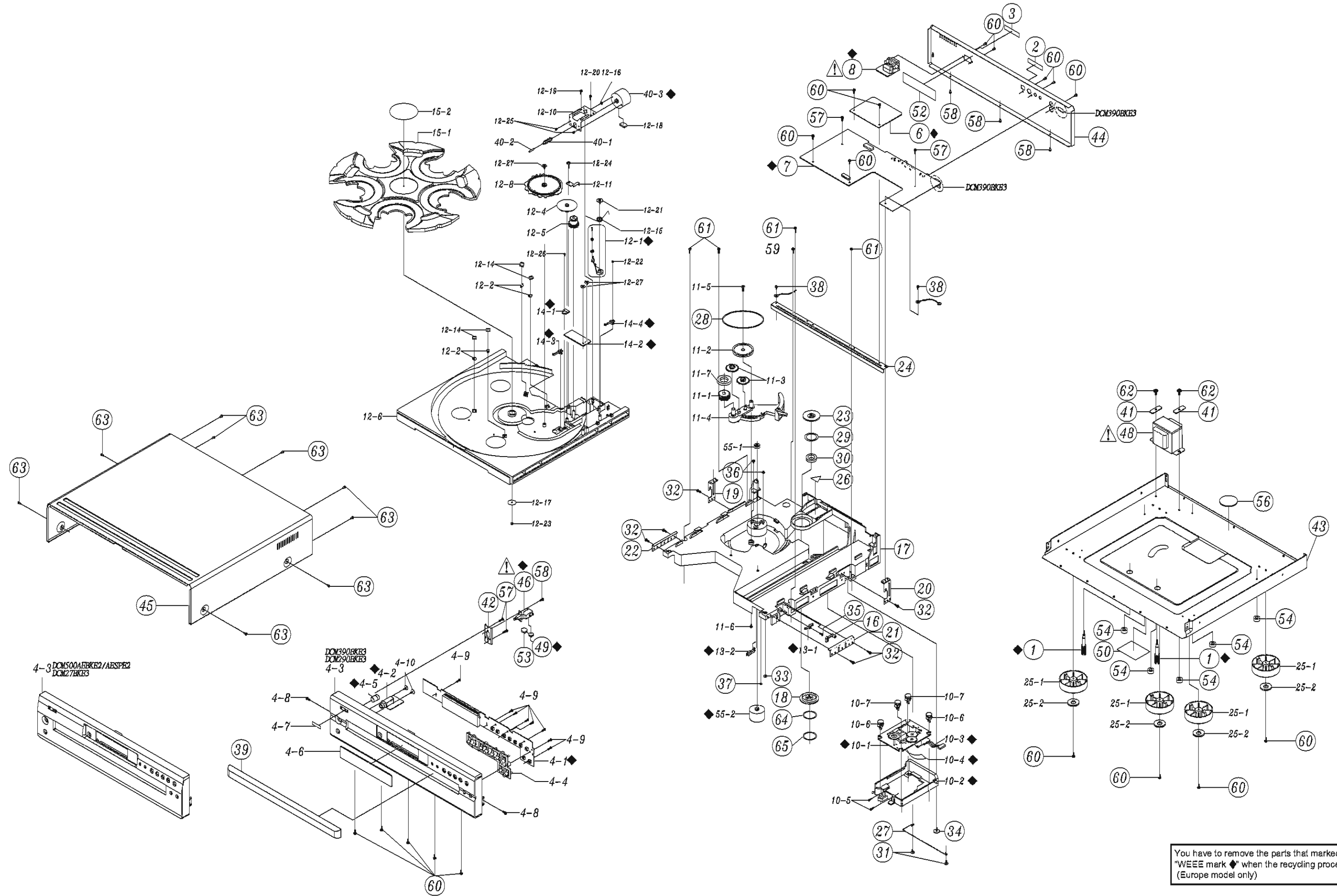
Details of Recycle parts for Main Unit

* You have to remove the parts that marked "WEEE Mark ◆" when the recycling processing. (Europe model only)

| Ref. No. | nsp | Part Name | Material | Q'ty |
|----------|-----|--------------------------------|----------------|------|
| 1 | ◆ | SCREW ASS'Y | COMPLEX | 2 |
| 2 | | DATE LABEL | POLYESTER | 1 |
| 3 | | SERIAL NO. LABEL | PAPER | 1 |
| 4-1 | ◆ | CONTROL P.W.B. ASS'Y | COMPLEX | 1 |
| 4-2 | ◆ | PHONE P.W.B. ASS'Y | COMPLEX | 1 |
| 4-3 | | FRONT PANEL | ABS | 1 |
| 4-4 | | KNOB | ABS | 1 |
| 4-5 | ◆ | POWER KNOB | COMPLEX | 1 |
| 4-6 | | DECORATION | PC | 1 |
| 4-7 | | BADGE | ALUMINUM | 1 |
| 4-8 | | SCREW (SAE1018,BTP,Φ3X8) | SWCH | 2 |
| 4-9 | | SCREW (SAE1018,PTP,Φ2.6X8) | SWCH | 8 |
| 4-10 | | SCREW (TTP 2.6X7 CAP 10Z) | SWCH | 2 |
| 6 | ◆ | BUFFER P.W.B. ASS'Y | COMPLEX | 1 |
| 7 | ◆ | SERVO P.W.B. ASS'Y | COMPLEX | 1 |
| 8 | ◆ | AC JACK ASS'Y | COMPLEX | 1 |
| 10-1 | ◆ | MECHA ASS'Y (KSM-213CCM) | COMPLEX | 1 |
| 10-2 | ◆ | CD DECK HOLDER | COMPLEX | 1 |
| 10-3 | ◆ | 6P CONNECTOR WIRE | COMPLEX | 1 |
| 10-4 | ◆ | RIBBON WIRE (16PIN) | COMPLEX | 1 |
| 10-5 | | SCREW (PTP M3X14) | SWCH | 2 |
| 10-6 | | CUSHION RUBBER (RED) | SILICON RUBBER | 2 |
| 10-7 | | CUSHION RUBBER (WHITE) | SILICON RUBBER | 2 |
| 11-1 | | B.GEAR | POM | 1 |
| 11-2 | | BELT GEAR | PA | 1 |
| 11-3 | | S.GEAR | PA | 2 |
| 11-4 | | GEAR SET | ABS | 1 |
| 11-5 | | SCREW (M3X8 PTP) | SWCH | 1 |
| 11-6 | | SCREW (PTP 4X8mm L) | SWCH | 1 |
| 11-7 | | WASHER(Φ13X8.1Xt0.4) | ABS | 1 |
| 12-1 | ◆ | CORRECTING LEVER ASS'Y | COMPLEX | 1 |
| 12-2 | | WHEEL | POM | 4 |
| 12-4 | | MIDDLE GEAR | POM | 1 |
| 12-5 | | TRANSFER GEAR | PA | 1 |
| 12-6 | | BASE | ABS | 1 |
| 12-8 | | DRIVE GEAR | POM | 1 |
| 12-10 | | MOTER FIXED PLATE | SPCC | 1 |
| 12-11 | | FORWARD GEAR FIXED IRON | SPCC | 1 |
| 12-14 | | FIXED SHEET (PVC) | PVC | 4 |
| 12-15 | | COMMENTING SPRING | SUS | 1 |
| 12-16 | | WASHER | SPCC | 1 |
| 12-17 | | FIXED CENTER WASHER | SPCC | 1 |
| 12-18 | | MUTE SHEET | CR FOAM | 1 |
| 12-19 | | SCREW | SWCH | 1 |
| 12-20 | | SCREW (M3X8mm BTP) | SWCH | 1 |
| 12-21 | | SCREW (M3X9mm PTP) | SWCH | 1 |
| 12-22 | | SCREW (2.6X8PTP) | SWCH | 1 |
| 12-23 | | SCREW (TTP 3X10 ZK PTP) | SWCH | 1 |
| 12-24 | | SCREW (2.6X5.5mm) | SWCH | 1 |
| 12-25 | | SCREW (M2.6X3mm) | SWCH | 2 |
| 12-26 | | SCREW (TTP M2.6X6 PTP) | SWCH | 1 |
| 12-27 | | SCREW (TTP 2.6X7 CAP 10Z) | SWCH | 3 |
| 13-1 | ◆ | LEAF SW (LSA-1119H,2PIN) | COMPLEX | 1 |
| 13-2 | ◆ | LEAF SW (LSA-2127E,3PIN) | COMPLEX | 1 |
| 14-1 | ◆ | PHOTO TRANSISTOR P.W.B. ASS'Y | COMPLEX | 1 |
| 14-2 | ◆ | INFRARED EMITTING P.W.B. ASS'Y | COMPLEX | 1 |
| 14-3 | ◆ | LEAF SW (LSA-1119H,2PIN) | COMPLEX | 1 |

| Ref. No. | nsp | Part Name | Material | Q'ty |
|----------|-----|---------------------------------------|-----------|------|
| 14-4 | ◆ | LEAF SW (LSA-1119F,2PIN) | COMPLEX | 1 |
| 15-1 | | DISK | ABS | 1 |
| 15-2 | | FIXED SHEET | PVC | 1 |
| 16 | | SWITCH CONTROL | POM | 1 |
| 17 | | BOTTOM BASE | ABS | 1 |
| 18 | | DISK HOLDER | PVC | 1 |
| 19 | | L.FIXED PLATE | SPCC | 1 |
| 20 | | R.FIXED PLATE | SPCC | 1 |
| 21 | | STAY R | SPCC | 1 |
| 22 | | STAY L | SPCC | 1 |
| 23 | | SWIVEL PLATE | SPCC | 1 |
| 24 | | MAIN P.W.B. BRACKET | SPCC | 1 |
| 25-1 | | FOOT (ABS,KURZ BM82361) | ABS | 4 |
| 25-2 | | FOOT | EVA | 4 |
| 26 | | LASER BEAM LABEL | PAPER | 1 |
| 27 | | STEEL WIRE | SUS | 1 |
| 28 | | MOTOR BELT | RUBBER | 1 |
| 29 | | WASHER (HIMERON BLACK 18) | FELT | 1 |
| 30 | | MAGNET (Φ30X18X5t,650Gm) | FERRITE | 1 |
| 31 | | SCREW (TTP CAP M3X8mm) | SWCH | 2 |
| 32 | | SCREW (SAE1018,BTP,Φ3X8) | SWCH | 6 |
| 33 | | SCREW (M3X7 PTP) | SWCH | 1 |
| 34 | | SCREW (M3X9mm PTP) | SWCH | 1 |
| 35 | | SCREW (SAE1018,PTP,Φ2.6X8) | SWCH | 1 |
| 36 | | SCREW (M2.6X4 P0.45) | SWCH | 2 |
| 37 | | SCREW (PTP M3X14) | SWCH | 1 |
| 38 | | SCREW (W BTP 2.6X6 MC) | SWCH | 2 |
| 39 | | CD DOOR | ABS | 1 |
| 40-1 | | SPIRAL GEAR | POM | 1 |
| 40-2 | | SHAFT | CU | 1 |
| 40-3 | ◆ | MOTOR (MEN-7E2T5,DC12V) | COMPLEX | 1 |
| 41 | | BRACKET TRANSFORMER | SPCC | 2 |
| 42 | | POWER SWITCH BRACKET | SPCC | 1 |
| 43 | | BUTTOM BASE | SPCC | 1 |
| 44 | | BACK BOARD | SPCC | 1 |
| 45 | | TOP COVER | PVC+SPCC | 1 |
| 46 | ◆ | POWER SW (SDDL B1017U-HF,2PIN) | COMPLEX | 1 |
| 48 | | TRANSFORMER (AC230V) | COMPLEX | 1 |
| 49 | ◆ | AC CAPACITOR (0.01uF/250V,M,BULK,Y5V) | COMPLEX | 1 |
| 50 | | TRANSFER SCREWS LABEL | PAPER | 1 |
| 52 | | FUSE LABEL (46X6mm,y=0.08mm) | POLYESTER | 1 |
| 53 | | CNR COVER (HU-13A-PRW) | PVC | 1 |
| 54 | | PROTECTION MAT | CR FOAM | 5 |
| 55-1 | | MOTOR PULLEY | PA | 1 |
| 55-2 | ◆ | MOTOR (MEN-7E2T5,DC12V) | COMPLEX | 1 |
| 56 | | CUSHION (EVA,Φ31.3,t=1) | EVA | 1 |
| 57 | | SCREW (SAE1018,BTP,Φ3X8) | SWCH | 4 |
| 58 | | SCREW (3X5mm,BLACK) | SWCH | 4 |
| 59 | | SCREW (TTB M3X10mm) | SWCH | 1 |
| 60 | | SCREW (3X8mm) | SWCH | 18 |
| 61 | | SCREW (TTB M3X12mm) | SWCH | 4 |
| 62 | | SCREW (4X8mm TTB BLACK) | SWCH | 2 |
| 63 | | SCREW (3X8) | SWCH | 4 |
| 64 | | PC WASHER | PC | 1 |
| 65 | | PC WASHER | PC | 1 |

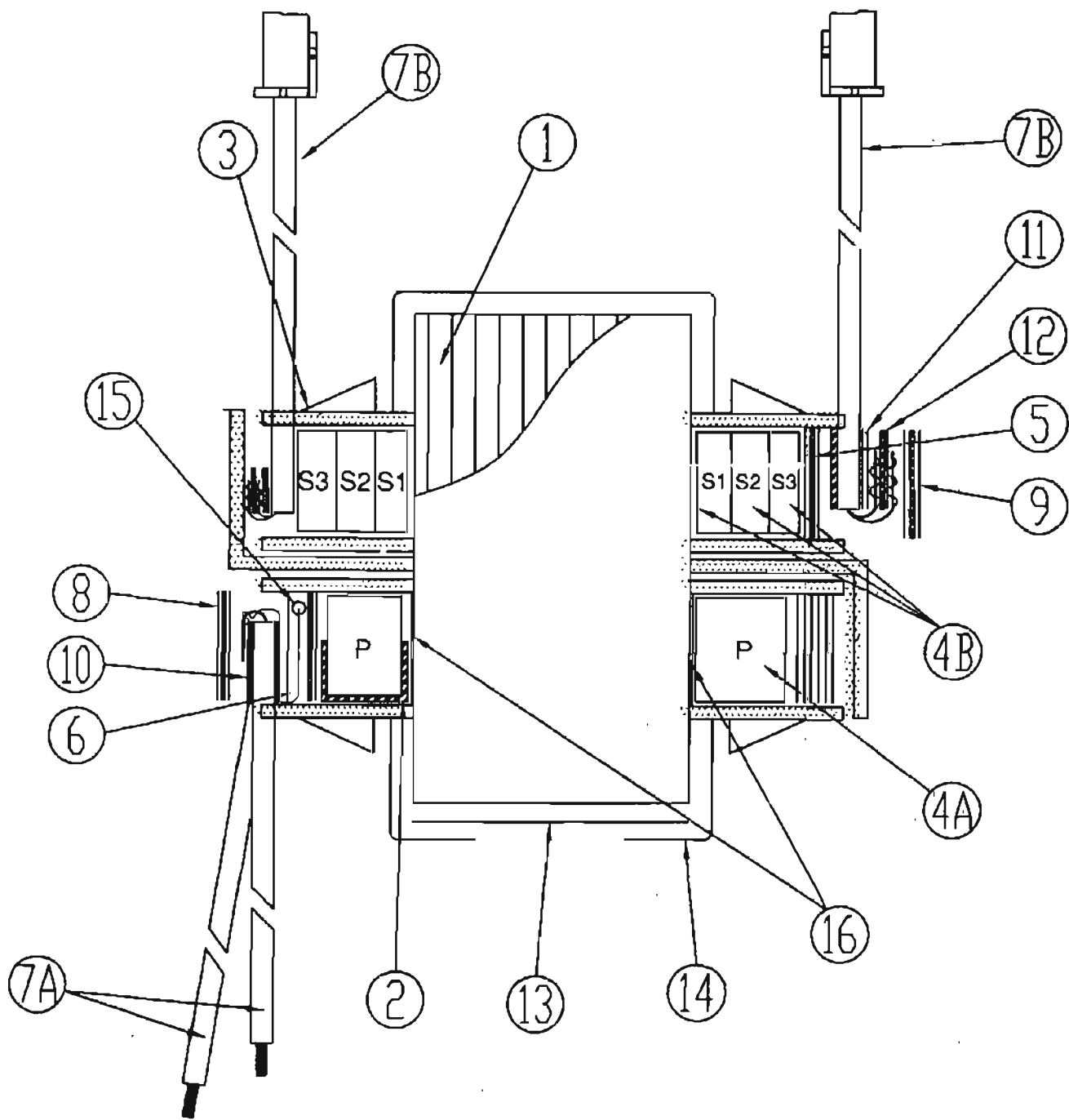
Exploded view of Main unit



You have to remove the parts that marked "WEEE mark ◆" when the recycling processing. (Europe model only)

Details of Recycle parts for Power transformer

Part No.48



| No. | Material |
|-----|-----------------------|
| 1 | Silicon Steel |
| 2 | Acetate Cloth Tape |
| 3 | PBT |
| 4A | PU |
| 4B | Enamelled Copper Wire |
| 5A | PE |
| 5B | Press Board |
| 6A | PE |
| 6B | Press Board |
| 7A | Copper Wire |
| 7B | Copper Wire |
| 8A | PE |
| 8B | Press Board |
| 9A | PE |
| 9B | Press Board |
| 10A | PE |
| 10B | PVC |
| 11A | PE |
| 11B | PVC |
| 12A | PE |
| 12B | Press Board |
| 13 | Steel |
| 14 | Steel |
| 15 | Complex |