



# Technical Manual

# CD PLAYER RCD-1070

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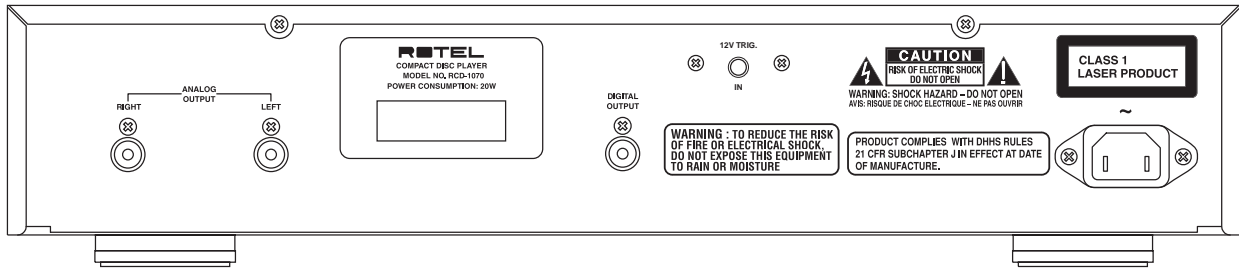
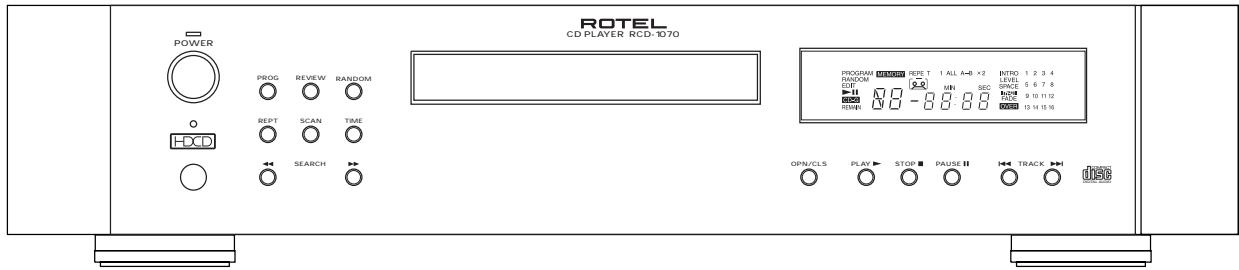
### Specifications

|                                     |                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------|
| Total Harmonic Distortion + Noise   | 0.0045% @ 1kHz                                                                                    |
| Intermodulation Distortion          | 0.0045% @ 1kHz                                                                                    |
| Frequency Response ( ± 0.5 dB)      | 20-20,000 Hz                                                                                      |
| Channel Balance                     | ± 0.5 dB                                                                                          |
| Phase Linearity                     | ± 0.5 degree                                                                                      |
| Channel Separation                  | > 98 dB @ 1kHz                                                                                    |
| Signal to Noise Ratio               | > 100dB                                                                                           |
| Dynamic Range                       | > 96 dB                                                                                           |
| Digital to Analog Converters        | 18 bit equivalent, multi-level Delta-Sigma DAC with 8x oversampling digital filter and HDCD       |
| Speed Accuracy, Wow & Flutter       | Quartz Crystal Precision                                                                          |
| Output Impedance                    | 100 Ohms                                                                                          |
| Digital Output                      | 0.5 Volt, Peak to Peak                                                                            |
| Load Impedance                      | 75 Ohms                                                                                           |
| Power Requirements                  |                                                                                                   |
| USA Version                         | AC 115V, 60 Hz                                                                                    |
| European Version                    | AC 230V, 50 Hz                                                                                    |
| Power Consumption                   | 20 Watts                                                                                          |
| Dimensions (W, H, D)                | 17 x 3 <sup>11</sup> / <sub>16</sub> x 13 <sup>1</sup> / <sub>4</sub> inches<br>432 x 93 x 337 mm |
| Front Panel Height (for rack mount) | 3 <sup>5</sup> / <sub>32</sub> inches, 80 mm                                                      |
| Weight (net)                        | 5.8 kg, 12.8 lb.                                                                                  |

**THE ROTEL CO., LTD**  
 SHINSEN-BLD. 4F 10-10 SHINSEN-CHO, SHIBUYA-KU,  
 TOKYO 150-0045, JAPAN

|                          |
|--------------------------|
| Serial. NO.<br>Beginning |
|--------------------------|

# Appearance



**Parts List 1/3**

| SYMBOL                           | PARTS NO.        | DESCRIPTION                           |
|----------------------------------|------------------|---------------------------------------|
| <b>016 X-1327A01-07 PCB ASSY</b> |                  |                                       |
| K201                             | 013 C-4522B00    | PJ SHIELD PLATE                       |
| K701,702                         | 013 C-4523A00T   | PJ SHIELD PLATE                       |
| M5,M13                           | 017 4TR-2792#3   | HEAT SINKER BOARD                     |
| M4                               | 017 C-4490A02    | HEAT SINKER BOARD                     |
| U901,U961,U981                   | 019 TO-220       | INSULATOR SHEET                       |
| L001                             | 021 TRL-356      | LINE CHOKE COIL                       |
| L202                             | 021 TRL-377A     | DIGITAL OUTPUT COIL                   |
| L651,661,662                     | 021 TRL-392      | MICRO INDUCTOR 33UH                   |
| L101,151,152,201,401,601,631     | 021 TRL-395      | MICRO INDUCTOR 4.7UH                  |
| X401                             | 023 CSA10.0MHZ   | CERAMIC RESONATOR                     |
| X631                             | 023 HC49U-002    | CRYSTAL 16.9344MHZ                    |
| U251                             | 031 BA6392FP     | INTEGRATED CIRCUIT                    |
| U101                             | 031 CXA1821M     | INTEGRATED CIRCUIT                    |
| U151                             | 031 CXD2545Q     | INTEGRATED CIRCUIT                    |
| U401                             | 031 CXP82440A-1  | INTEGRATED CIRCUIT CXP82440A-179Q     |
| U511                             | 031 LB1641       | INTEGRATED CIRCUIT                    |
| U981                             | 031 NJM7815FA    | INTEGRATED CIRCUIT                    |
| U982                             | 031 NJM7915FA    | INTEGRATED CIRCUIT                    |
| U701,702                         | 031 OPA2604AP    | INTEGRATED CIRCUIT                    |
| U451                             | 031 PC817B       | INTEGRATED CIRCUIT                    |
| U601                             | 031 PCM1732U     | INTEGRATED CIRCUIT                    |
| U351                             | 031 SBX3010-52B  | INTEGRATED CIRCUIT                    |
| U901,931,961                     | 031 SI3050J      | INTEGRATED CIRCUIT                    |
| U201,631                         | 031 TC74HCU04AP  | INTEGRATED CIRCUIT                    |
| T731                             | 032 TA1016-FG    | TRANSISTOR 2SA1016                    |
| T451,901,902                     | 032 TA608-FG     | TRANSISTOR 2SA608                     |
| T101                             | 032 TB764-EF     | TRANSISTOR 2SB764                     |
| T452,601,903,921-924             | 032 TC536-FG     | TRANSISTOR 2SC536                     |
| D901,903,904,921,922,951-954     | 034 T1N4003-TB   | DIODE                                 |
| D401,402,451,452,731             | 034 T1N4148-86   | DIODE                                 |
| D905                             | 034 TRD20JST1    | ZENER DIODE                           |
| D511                             | 034 TRD4.7JST1   | ZENER DIODE                           |
| D351,923                         | 034 TRD6.2JST1   | ZENER DIODE                           |
| O351                             | 035 6BT209GK     | FL TUBE                               |
| F001                             | 036 5ST250VT1A   | FUSE                                  |
| C717,718                         | 041 16BGF100M    | ELECTROLYTIC CAPACITOR BGF 16V100uF   |
| C631                             | 041 20SG22M+F    | ELECTROLYTIC CAPACITOR OS-CON 20V22uF |
| C741-744,981,982                 | 041 25BGF100M    | ELECTROLYTIC CAPACITOR BGF 25V100uF   |
| C651,661,662                     | 041 25BGF47M     | ELECTROLYTIC CAPACITOR BGF 25V47uF    |
| C665-668                         | 041 50BGF10M     | ELECTROLYTIC CAPACITOR BGF 50V10uF    |
| C955,956                         | 041 ALC20S1051CD | ELECTROLYTIC CAPACITOR BHC 35V4700uF  |
| C601,963,965                     | 041 TEEUFC1E221B | ELECTROLYTIC CAPACITOR FC 25V220uF    |
| C251                             | 041 TVX1C102     | ELECTROLYTIC CAPACITOR VX 16V1000uF   |
| C101,107,151,164,908,932         | 041 TVX1E101     | ELECTROLYTIC CAPACITOR VX 25V100uF    |
| C105,106,201,203,511             | 041 TVX1E470     | ELECTROLYTIC CAPACITOR VX 25V47uF     |
| C352,404,409                     | 041 UTES1A101-FB | ELECTROLYTIC CAPACITOR 10V100uF       |
| C402,924                         | 041 UTES1E101-FB | ELECTROLYTIC CAPACITOR 25V100uF       |
| C451,923,931,969                 | 041 UTES1H010-FB | ELECTROLYTIC CAPACITOR 50V1uF         |
| C910,911                         | 041 UTES1H100-FB | ELECTROLYTIC CAPACITOR 50V10uF        |
| C405,452                         | 041 UTES1H2R2-FB | ELECTROLYTIC CAPACITOR 50V2.2uF       |
| C906                             | 041 UTES1V101-FB | ELECTROLYTIC CAPACITOR 35V100uF       |
| C907                             | 041 VX1C332      | ELECTROLYTIC CAPACITOR VX 16V3300uF   |
| C901,903,905,921,922,951-954     | 043 TC500V103    | CERAMIC CAPACITOR 500V0.01uF          |
| C161                             | 043 TC50V101     | CERAMIC CAPACITOR 50V100PF            |
| C102,152,165,169,170,171         | 043 TC50V103     | CERAMIC CAPACITOR 50V0.01uF           |
| C202,206,252,351,401,403         | 043 TC50V103     | CERAMIC CAPACITOR 50V0.01uF           |
| C408,509,909,941                 | 043 TC50V103     | CERAMIC CAPACITOR 50V0.01uF           |
| C155,158                         | 043 TC50V471     | CERAMIC CAPACITOR 50V470PF            |
| C109                             | 043 TC50VCH150   | CERAMIC CAPACITOR CH 50V15PF          |
| C633,634                         | 043 TC50VCH220   | CERAMIC CAPACITOR CH 50V22PF          |

## Parts List 2/3

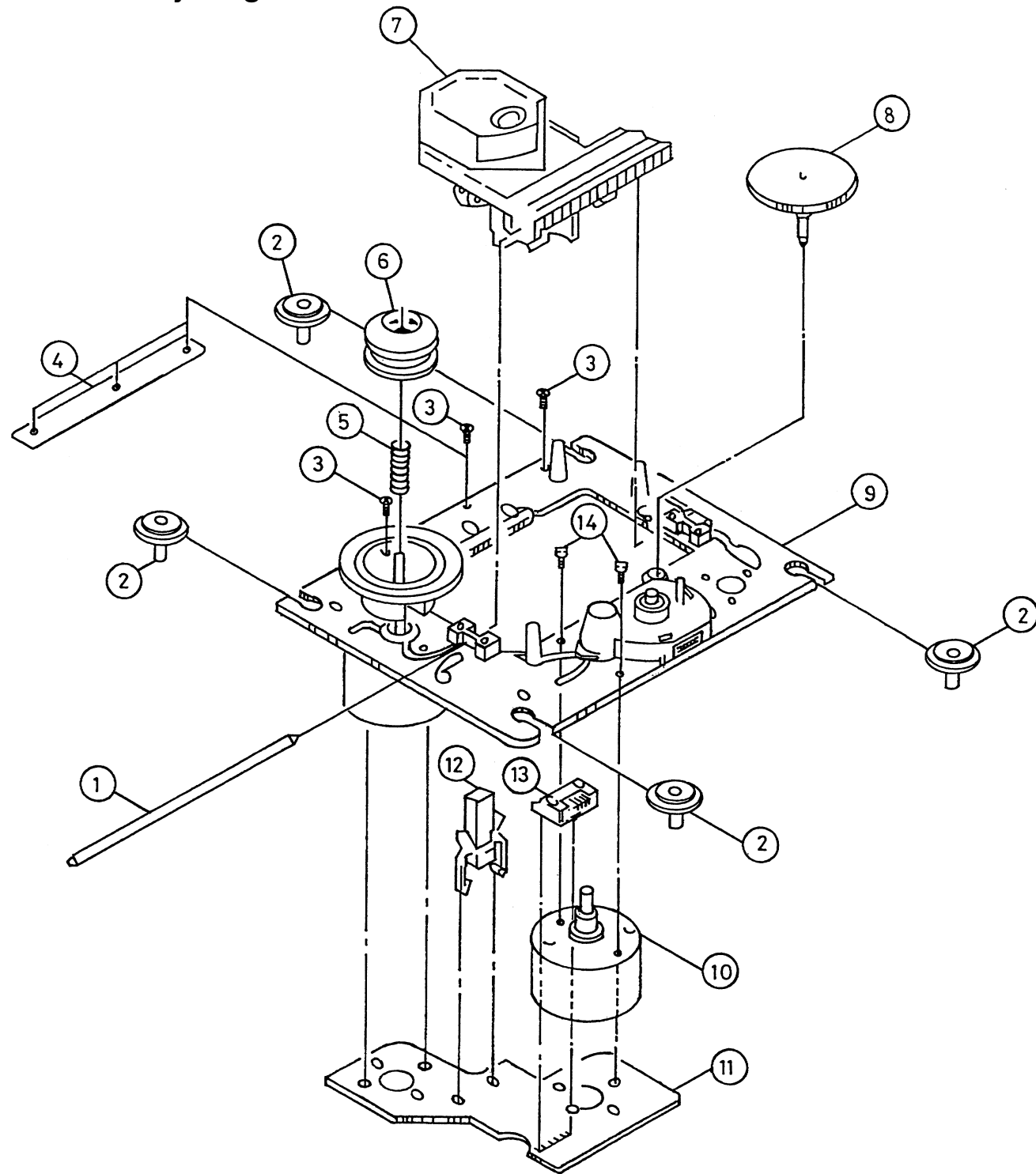
| SYMBOL                       | PARTS NO.        | DESCRIPTION                       |
|------------------------------|------------------|-----------------------------------|
| C254,258                     | 043 TC50VCH270   | CERAMIC CAPACITOR CH 50V27PF      |
| C406,407                     | 043 TC50VCH330   | CERAMIC CAPACITOR CH 50V33PF      |
| C205,207                     | 043 TC50VCH470   | CERAMIC CAPACITOR CH 50V47PF      |
| C731,732                     | 044 100UPZ103J   | POLYPROPYLENE FILM CAPACITOR      |
| C001                         | 044 DE1307E472M  | SPARK KILLER                      |
| C701,702                     | 044 FSC160V101H  | STYROL CAPACITOR 100P             |
| C707,708,713,714             | 044 PP400V1000PF | POLYPROPYLENE FILM CAPACITOR      |
| C711,712                     | 044 PP630V560PF  | POLYPROPYLENE FILM CAPACITOR      |
| C108                         | 044 TBF014D0102J | M.P CAPACITOR 63V1000PF           |
| C163                         | 044 TBF014D0103J | M.P CAPACITOR 63V0.01uF           |
| C103,104,153,154,156,257,513 | 044 TBF014D0104J | M.P CAPACITOR 63V0.1uF            |
| C159,255                     | 044 TBF014D0152J | M.P CAPACITOR 63V1500PF           |
| C157                         | 044 TBF014D0472J | M.P CAPACITOR 63V4700PF           |
| C160,204                     | 044 TBF014D0473J | M.P CAPACITOR 63V0.047uF          |
| C253                         | 044 TBF014D0682J | M.P CAPACITOR 63V6800PF           |
| C167,168                     | 044 TBF074D0105J | M.P CAPACITOR 63V1uF              |
| C256                         | 044 TBF074D0334J | M.P CAPACITOR 63V0.33uF           |
| C162                         | 044 TBF074D0474J | M.P CAPACITOR 63V0.47uF           |
| C602,632,652,663,664         | 046 T50V473K     | ML CERAMIC CAPACITOR 50V0.047uF   |
| C959,960,967,987,988         | 046 T50V473K     | ML CERAMIC CAPACITOR 50V0.047uF   |
| R601,902                     | 053 CR14-102J-A  | CARBON RESISTOR 1K 1/4W           |
| R904,922,923,927             | 053 CR14-103J-A  | CARBON RESISTOR 10K 1/4W          |
| R452,454,455,603,925         | 053 CR14-104J-A  | CARBON RESISTOR 100K 1/4W         |
| R907                         | 053 CR14-105J-A  | CARBON RESISTOR 1M 1/4W           |
| R451,453,732,906,921,928     | 053 CR14-223J-A  | CARBON RESISTOR 22K 1/4W          |
| R908                         | 053 CR14-224J-A  | CARBON RESISTOR 220K 1/4W         |
| R602,905                     | 053 CR14-473J-A  | CARBON RESISTOR 47K 1/4W          |
| R924,926                     | 053 CR14-563J-A  | CARBON RESISTOR 56K 1/4W          |
| R403-409,411,413-417         | 053 CR16-103J-A  | CARBON RESISTOR 10K 1/8W          |
| R402,410,412                 | 053 CR16-104J-A  | CARBON RESISTOR 100K 1/8W         |
| R256                         | 054 1WS2.2JF     | METAL OXIDE FILM RESISTOR 1WS2.2R |
| R511                         | 054 1WS4.7JF     | METAL OXIDE FILM RESISTOR 1WS4.7R |
| R719,720                     | 054 RC55Z1000F   | METAL FILM RESISTOR 100R 1%       |
| R703,704                     | 054 RC55Z1003F   | METAL FILM RESISTOR 100K 1%       |
| R713,714                     | 054 RC55Z1201F   | METAL FILM RESISTOR 1.2K 1%       |
| R707,708                     | 054 RC55Z1202F   | METAL FILM RESISTOR 12K 1%        |
| R711,712                     | 054 RC55Z1501F   | METAL FILM RESISTOR 1.5K 1%       |
| R715,716                     | 054 RC55Z2701F   | METAL FILM RESISTOR 2.7KK 1%      |
| R705,706                     | 054 RC55Z3301F   | METAL FILM RESISTOR 3.3KK 1%      |
| R701,702                     | 054 RC55Z4700F   | METAL FILM RESISTOR 470R 1%       |
| R717,718                     | 054 RC55Z5603F   | METAL FILM RESISTOR 560K 1%       |
| R423                         | 054 SE8102J      | THICK FILM NETWORK RESISTOR 1K    |
| R424                         | 054 SE8104J      | THICK FILM NETWORK RESISTOR 100K  |
| R152,168,169                 | 054 TMF1000      | METAL FILM RESISTOR 100R          |
| R151,456                     | 054 TMF1001      | METAL FILM RESISTOR 1K            |
| R110,158,164,301,303,901     | 054 TMF1002      | METAL FILM RESISTOR 10K           |
| R153,155,163                 | 054 TMF1003      | METAL FILM RESISTOR 100K          |
| R162                         | 054 TMF1004      | METAL FILM RESISTOR 1M            |
| R111                         | 054 TMF10R0      | METAL FILM RESISTOR 10R           |
| R112                         | 054 TMF12R0      | METAL FILM RESISTOR 12R           |
| R154,157                     | 054 TMF1502      | METAL FILM RESISTOR 15K           |
| R105,106,252,254             | 054 TMF1503      | METAL FILM RESISTOR 150K          |
| R305,352,353,354             | 054 TMF1801      | METAL FILM RESISTOR 1.8K          |
| R108,109                     | 054 TMF2202      | METAL FILM RESISTOR 22K           |
| R903                         | 054 TMF2203      | METAL FILM RESISTOR 220K          |
| R302,304,306                 | 054 TMF2702      | METAL FILM RESISTOR 27K           |
| R201                         | 054 TMF3300      | METAL FILM RESISTOR 330R          |
| R159,160                     | 054 TMF3301      | METAL FILM RESISTOR 3.3K          |
| R156                         | 054 TMF3302      | METAL FILM RESISTOR 33K           |
| R307                         | 054 TMF3901      | METAL FILM RESISTOR 3.9K          |
| R251                         | 054 TMF3903      | METAL FILM RESISTOR 390K          |

### Parts List 3/3

| SYMBOL                  | PARTS NO.        | DESCRIPTION               |
|-------------------------|------------------|---------------------------|
| R107,425                | 054 TMF4702      | METAL FILM RESISTOR 47K   |
| R255                    | 054 TMF4R70      | METAL FILM RESISTOR 4.7K  |
| R351                    | 054 TMF5601      | METAL FILM RESISTOR 5.6K  |
| R731                    | 054 TMF8200      | METAL FILM RESISTOR 820R  |
| R631                    | 054 TMFR4001M    | METAL RESISTOR MFR4 1M    |
| R633                    | 054 TMFR4018R    | METAL RESISTOR MFR4 18R   |
| R202                    | 054 TMFR4027R    | METAL RESISTOR MFR4 27R   |
| R635                    | 054 TMFR4039R    | METAL RESISTOR MFR4 39R   |
| R203                    | 054 TMFR4075R    | METAL RESISTOR MFR4 75R   |
| R161,165-167            | 054 TMFR4100R    | METAL RESISTOR MFR4 100R  |
| S001                    | 061 C-4176A08    | POWER SWITCH              |
| S351-356                | 061 C-4679A03    | KEY BOARD SWITCH          |
| S301-308                | 061 C-4679A04    | KEY BOARD SWITCH          |
| S731                    | 063 A24W-K       | RELAY                     |
| K451                    | 065 YKB21-5111A  | HEAD PHONE JACK           |
| K201                    | 066 4TR-2487#4   | 1P PIN JACK (BLACK)       |
| K702                    | 066 4TR-2487#7   | 1P PIN JACK (RED)         |
| K701                    | 066 4TR-2487#8   | 1P PIN JACK (WHITE)       |
| K31                     | 068 16FMN-BTRK   | FFC CONNECTOR 16P         |
| K91,K92                 | 068 B2B-EH       | CONNECTOR WAFER           |
| K64,K84                 | 068 B3B-EH       | CONNECTOR WAFER           |
| K42,K46,K48,K59,K81,K96 | 068 B5B-EH       | CONNECTOR WAFER           |
| K33                     | 068 B5B-PH-KS    | CONNECTOR WAFER           |
| K72                     | 068 B6B-EH       | CONNECTOR WAFER           |
| K32                     | 068 B6B-PH-KS    | CONNECTOR WAFER           |
| K74,K76                 | 068 B8B-EH       | CONNECTOR WAFER           |
| K22,K23,K25             | 068 C-3681#1     | WRAPPING PIN TERMINAL 2P  |
| K11,K13,K14             | 068 C-4422A01    | WRAPPING PIN TERMINAL 2P  |
| K21,K24                 | 068 C-4422A02    | WRAPPING PIN TERMINAL 3P  |
| K58                     | 068 CGP1709-0101 | CONNECTOR WAFER           |
| K63,K83                 | 068 S3B-EH       | CONNECTOR WAFER           |
| K57                     | 068 S4B-EH       | CONNECTOR WAFER           |
| K3                      | 068 TD02SG       | CONNECTOR WAFER 2P        |
| K4                      | 068 TD03SG       | CONNECTOR WAFER 3P        |
| F001                    | 069 C-3417A      | FUSE CLIP                 |
| M2,M3,M6,M7,M8,M9,M11   | 069 C-4484A00    | EARTH LUG                 |
| <b>OTHERS</b>           |                  |                           |
|                         | 505 FRCD-1070    | FRONT PANEL ASSY          |
|                         | 011 TF3-01A00    | H/S PANEL                 |
|                         | 012 RV4-09A00    | PUSH BUTTON 14F           |
|                         | 012 SK3-05A00    | TACT BUTTON 8KEY          |
|                         | 012 TT3-09A00    | TACT BUTTON 6KEY          |
|                         | 014 C-4550A03    | UPPER COVER               |
|                         | 014 RZ3-05A01    | PLASTIC DOOR (NO PRINT)   |
|                         | 014 RZ3-08A01    | BOTTOM BOARD              |
|                         | 015 RP-389       | REAR CHASSIS              |
|                         | 019 4TSH-19#2    | PLASTIC FOOT 50F          |
|                         | 022 T-1060N01 *  | POWER TRANSFORMER         |
|                         | 034 LTL1214A     | LED(RED) 2F               |
|                         | 034 SEL1124R     | LED(RED) 1x5              |
|                         | 069 C-4629A01 *  | AC INLET                  |
|                         | 072 C-4621A01 *  | AC CORD SET for STD       |
|                         | 072 C-4622A01 *  | AC CORD SET for AUSTRALIA |
|                         | 072 C-4623A01 *  | AC CORD SET for U.K.      |
|                         | 072 C-4624A01 *  | AC CORD SET for CEE       |
|                         | 072 C-4738A01 *  | PIN PLUG SHIELD CORD      |
|                         | 081 TV4-03A00    | INSIDE CARTON             |
|                         | 081 Z-204        | STYROL SIDE MOULDING      |
|                         | 092 RR-D94       | REMOTE UNIT               |
|                         | 192 KSL-2130RLM  | CD LOADER ASSY            |

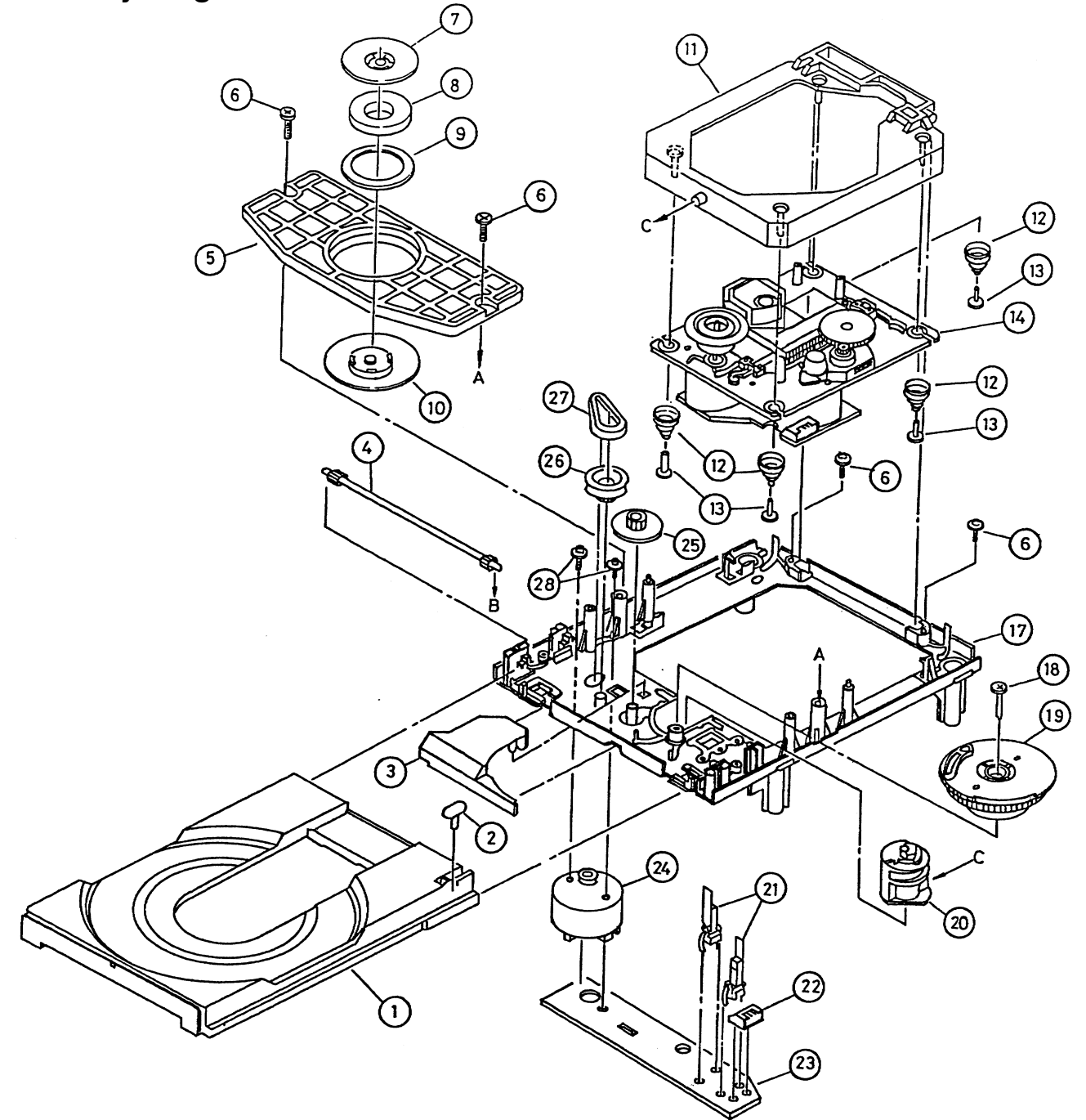


Disassembly Diagram-1



| ITEM | DESCRIPTION            | SPEC. NO.      |
|------|------------------------|----------------|
| 1    | CHAFT(S). SLED         | 2-625-464-(01) |
| 2    | INSULATOR(S)           | 2-625-538-(01) |
| 3    | SCREW(2X5). TAPPING(S) | 2-641-386-(01) |
| 4    | REINFORCEMENT(S)       | 2-625-625-(01) |
| 5    | SPRING(S). COMPRESSION | 2-626-465-(01) |
| 6    | RING(LO)(S). CENTER    | 2-626-477-(01) |
| 7    | PICK UP KSS 213C       |                |
| 8    | GEAR(A)(S)             | 2-626-462-(01) |
| 9    | CHASSIS ASS'Y(MB). TT  | X-2625-133-(2) |
| 10   | GEARASS'Y(MB). MOTOR   | X-2625-132-(1) |
| 11   | PC BOARD. MOTOR(6P)(S) | 1-639-678-(13) |
| 12   | SWITCH LEAF            | 1-572-085-(12) |
| 13   | PIN. CONNECTOR 6P      | 1-564-722-(11) |
| 14   | SCREW+P 2X3            | 7-621-255-(15) |

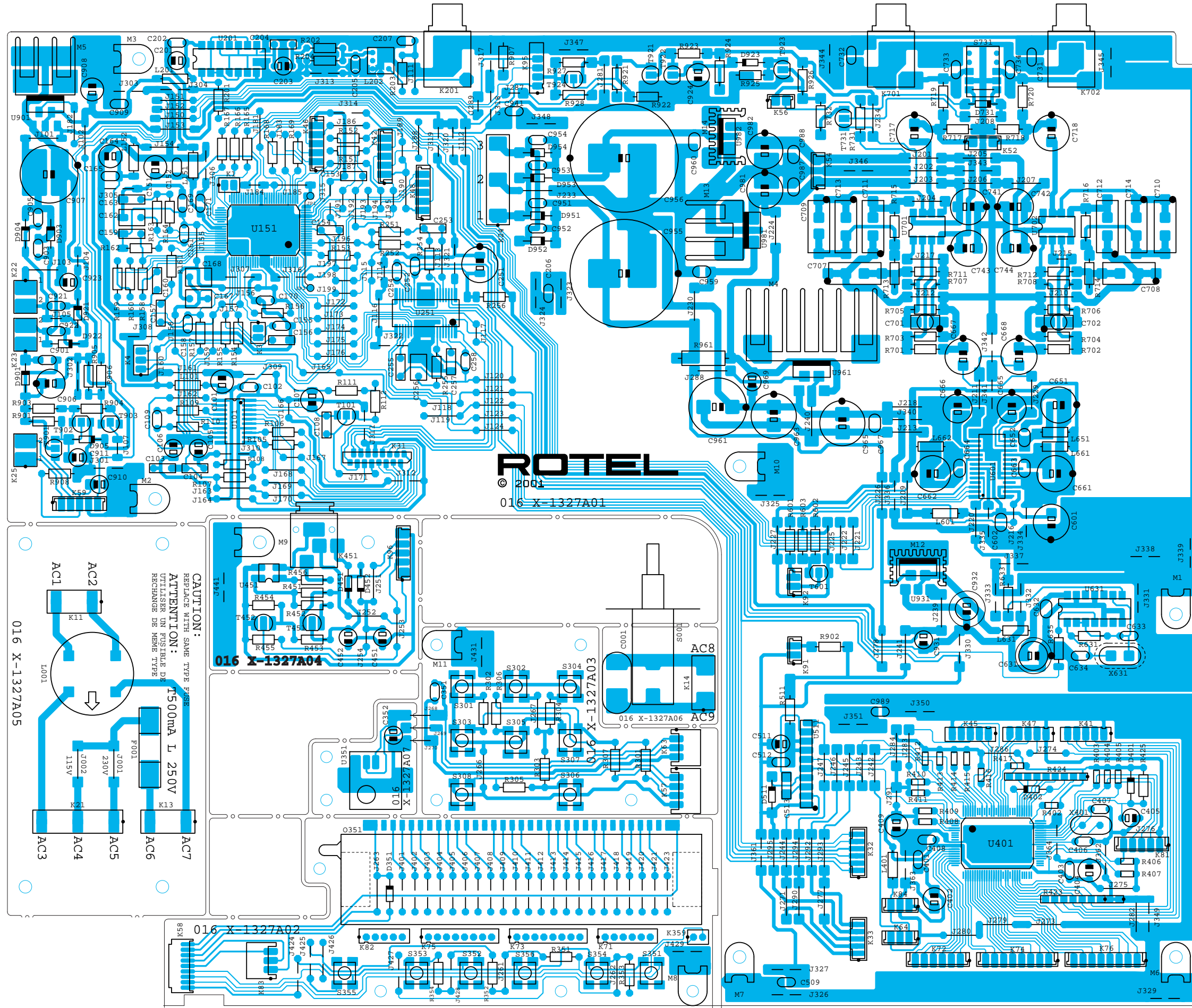
Disassembly Diagram-2



| ITEM | DESCRIPTION           | SPEC. NO.      |
|------|-----------------------|----------------|
| 1    | TRAY(S)               | 2-625-550-(03) |
| 2    |                       |                |
| 3    | COVER(S). GEAR        | 2-625-544-(01) |
| 4    | GEAR(S). TRAY         | 2-625-535-(01) |
| 5    | PLATE(S). CHUCKING    | 2-626-546-(01) |
| 6    | SCREW+P TP WH 2.D6X7  | 2-625-537-(01) |
| 7    | YOKE(S). CHUCKING     | 2-625-537-(01) |
| 8    | MAGNET                | 1-452-483-(21) |
| 9    | DAMPER(S)             | 2-625-541-(02) |
| 10   | PULLEY(G). CHUCKING   | 2-625-548-(02) |
| 11   | CHASSIS ASS'Y(G). SUB | X-2625-227-(2) |
| 12   | SPRING(S)             | 2-825-539-(01) |
| 13   | WASHER BASED SCREW    | 2-625-730-(01) |
| 14   | DRIVE UNIT KSM-213CCM |                |

| ITEM | DESCRIPTION              | SPEC. NO.      |
|------|--------------------------|----------------|
| 17   | CHASSIS(S). OUTSERT MAIN | 2-625-552-(06) |
| 18   | SCREW+P TP WH 2.D6X16    | 3-319-501-(51) |
| 19   | GEAR(S). DRIVE           | 2-625-547-(03) |
| 20   | CAM(S). CONTROL          | 2-625-545-(04) |
| 21   | SWITCH. LEAF             | 1-572-086-(11) |
| 22   | PIN. CONNECTOR 5P        | 1-564-721-(11) |
| 23   | PC BOARD LOADING         | 1-640-523-(12) |
| 24   | MOTOR ASS'Y. LOADING     | X-2625-117-(1) |
| 25   | GEAR(S). MIDWAY          | 2-625-534-(02) |
| 26   | PULLEY(S). LOADING       | 2-625-536-(02) |
| 27   | BELT. LM                 | 3-653-387-(01) |
| 28   | SCREW+P 2.D6X2.D5        | 2-625-279-(01) |

# PCB Assembly





# Schematic Diagram

