

# MICRO COMPONENT SYSTEM MCR-E810 DVD PLAYER DVD-E810

## SERVICE MANUAL

The MCR-E810 is composed of the DVD-E810, RX-E810 and NX-E800.

This service manual is for the DVD-E810.

For service manual of the RX-E810 and NX-E800, please refer to the following publication number:

RX-E810/RX-E410/NX-E800 101019

### IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

**WARNING:** Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

**IMPORTANT:** The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

**WARNING:** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

**IMPORTANT:** Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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This Service Manual uses recycled paper.

101017

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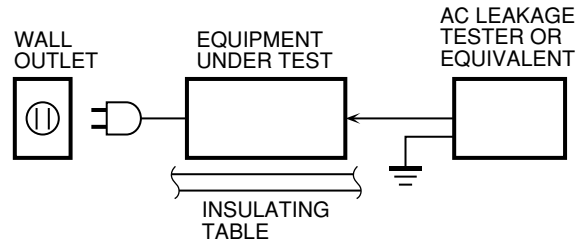
# YAMAHA

YAMAHA CORPORATION  
P.O.Box 1, Hamamatsu, Japan

'06.08

## ■ TO SERVICE PERSONNEL

1. Critical Components Information  
Components having special characteristics are marked  $\triangle$  and must be replaced with parts having specifications equal to those originally installed.
  2. Leakage Current Measurement (For 120V Models Only)  
When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.
- Meter impedance should be equivalent to 1500 ohms shunted by 0.15 $\mu$ F.



- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

## WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

**DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!**

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

## WARNING: Laser Safety

This product contains a laser beam component. This component may emit invisible, as well as visible radiation, which may cause eye damage. To protect your eyes and skin from laser radiation, the following precautions must be used during servicing of the unit.

- 1) When testing and/or repairing any component within the product, keep your eyes and skin more than 30 cm away from the laser pick-up unit at all times. Do not stare at the laser beam at any time.
- 2) Do not attempt to readjust, disassemble or repair the laser pick-up, unless noted elsewhere in this manual.
- 3) CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

## Laser Emitting conditions:

- 1) When the Top Cover is removed, and the STANDBY/ON SW is turned to the "ON" position, the laser component will emit a beam for several seconds to detect if a disc is present. During this time (5-10 sec.) the laser may radiate through the lens of the laser pick-up unit. Do not attempt any servicing during this period!  
If no disc is detected, the laser will stop emitting the beam. When a disc is loaded, you will not be exposed to any laser emissions.
- 2) The laser power level can be adjusted with the VR on the pick-up PWB, however, this level has been set by the factory prior to shipping from the factory. Do not adjust this laser level control unless instruction is provided elsewhere in this manual. Adjustment of this control can increase the laser emission level from the device.

## Laser Diode Properties

|                  |                                 |
|------------------|---------------------------------|
| Type:            | Semiconductor laser GaAlAs      |
| Wave length:     | 650 nm (DVD)<br>780 nm (VCD/CD) |
| Output power:    | 7 mW (DVD)<br>10 mW (VCD/CD)    |
| Beam divergence: | 60 degree                       |

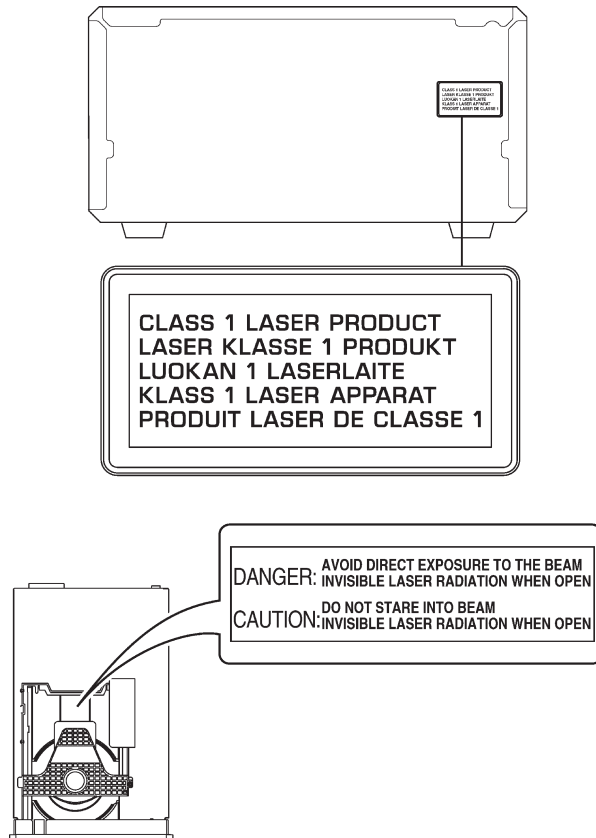
### VARO!

**AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.**

### WARNING!

**OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.**

## WARNING



**CAUTION** VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

**ADVARSEL** SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING. **ADVARSEL** SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.

**VARNING** SYNLIG OCH OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.

**VARO!** AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LASER SÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

**VORSICHT** SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

**DANGER** VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.

**ATTENTION** RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.

## Warning for power supply

The primary side of the power supply carries live mains voltage when the player is connected to the mains even when the player is switched off !

This primary area is not shielded so it is possible to touch copper tracks and/or components when servicing the player. Service personnel have to take precautions to prevent touching this area or components in this area.

### Note:

The screws on the DVD mechanism may never be touched, removed or re-adjusted.

Handle the DVD mechanism with care when the unit has to be exchanged!

The DVD mechanism is very sensitive for dropping or giving shocks.

## ■ PREVENTION OF ELECTROSTATIC DISCHARGE

The laser diode in the DVD mechanism may be damaged due to static electricity from clothes or the human body. Use caution to prevent electrostatic damage when servicing or handling the DVD-mechanism.

### 1. Grounding for electrostatic damage prevention

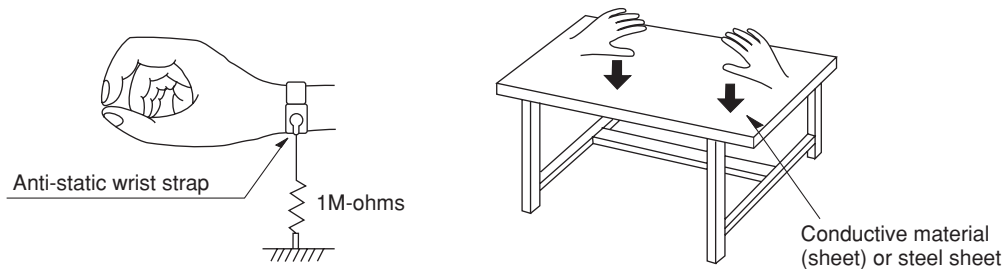
Some devices, such as the DVD player, use an optical pickup (laser diode) that will be damaged by static electricity in the working environment. Only attempt service after ensuring that all grounding procedures have been completed.

#### 1. Worktable grounding

Put a grounded conductive material (sheet) or iron sheet on the area where the optical pickup is placed.

#### 2. Human body grounding

Use an anti-static wrist strap to discharge the static electricity from your body.



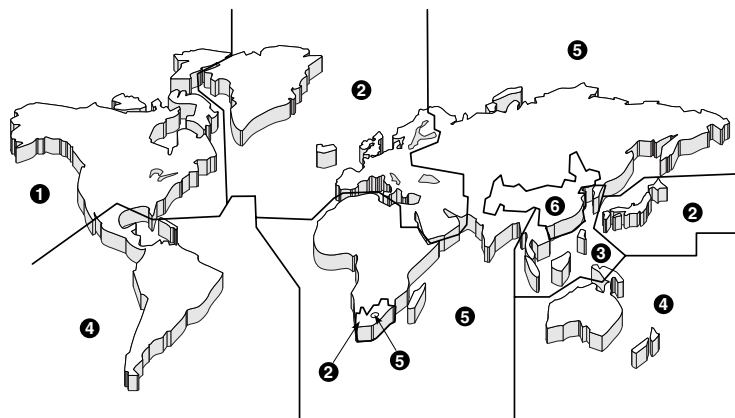
### 2. Handling Precautions for DVD mechanism

1. Handle the DVD mechanism gently, as it is an extremely high-precision assembly.
2. The flexible cable lines may break if an excessive force is applied to it. Use caution when handling the cable.
3. The semi-fixed resistor for laser power adjustment should not be adjusted. Do not turn the resistor.

## ■ LOCALE MANAGEMENT INFORMATION

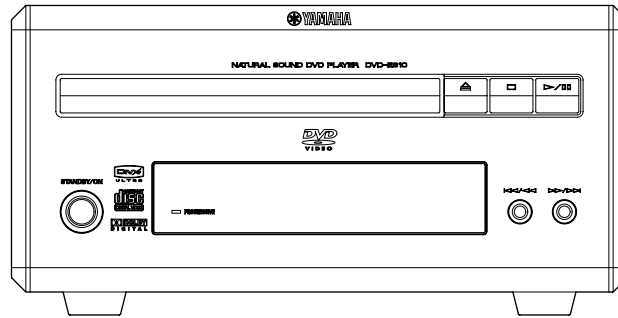
Locale Management Information : This DVD player is designed and manufactured to respond to the Locale Management Information that is recorded on a DVD disc. If the Locale number described on the DVD disc does not correspond to the Locale number of this DVD player, this DVD player cannot play this disc.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.



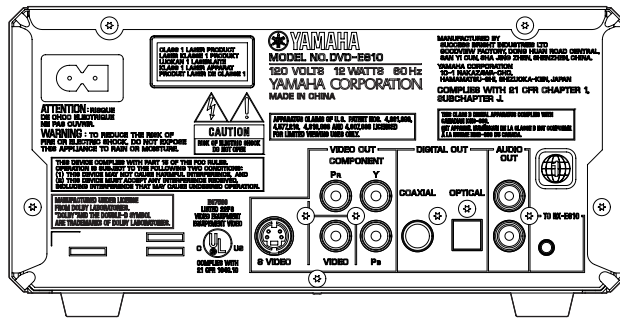
## FRONT PANEL

DVD-E810 (U, C, T, K, A, B, G, L, V models)

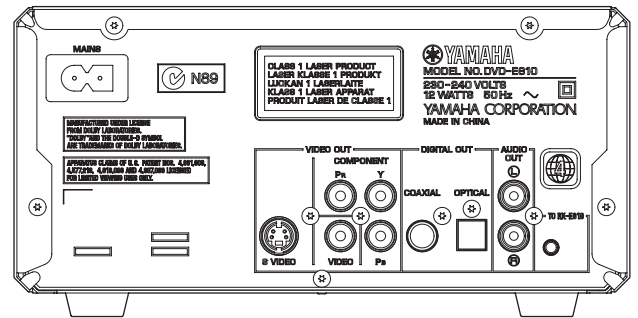


## REAR PANELS

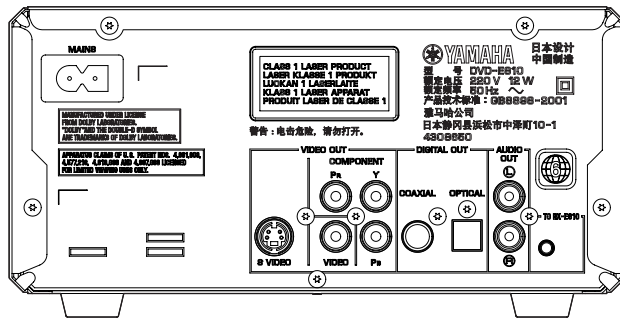
DVD-E810 (U, C models)



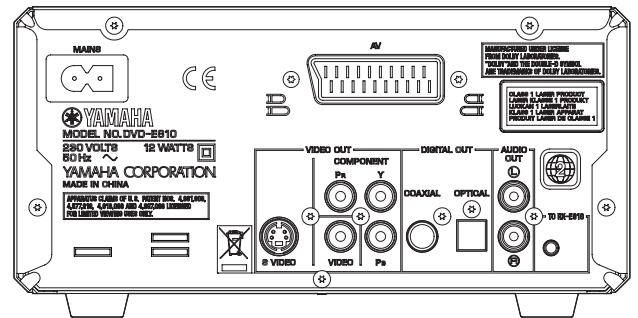
DVD-E810 (A model)



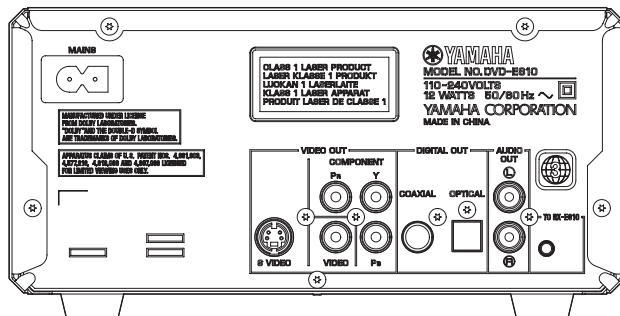
DVD-E810 (T model)



DVD-E810 (B, G models)



DVD-E810 (K, L, V models)



DVD-E810

## ■ SPECIFICATIONS

### PLAYBACK SYSTEM

DVD Video, VR (Video Recording) format (DVD-RW)  
 Video CD & SVCD  
 CD  
 Picture CD  
 CD-R, CD-RW  
 DVD+R, DVD+RW, DVD+R DL  
 DVD-R, DVD-RW, DVD-R DL

### VIDEO PERFORMANCE

Video (CVBS) output 1 Vpp into 75 ohms  
 S-Video output Y: 1 Vpp into 75 ohms  
 C: 305 mVpp into 75 ohms  
 RGB (Scart) output 700 mVpp into 75 ohms  
 Component video output Y: 1 Vpp into 75 ohms  
 Pb/Cb Pr/Cr: 700 mVpp into 75 ohms

### AUDIO FORMAT

Digital Dolby Digital/DTS/MPGE  
 Compressed Digital  
 PCM 16, 20, 24 bits  
 fs, 44.1, 48, 96 kHz  
 MP3 (ISO 9660) 96, 128, 256, 320 kbps  
 fs, 32, 44.1, 48 kHz  
 WMA 64 kbps to 192 kbps  
 fs, 44.1, 48 kHz  
 Analog sound Stereo

### AUDIO PERFORMANCE

DA converter 24 bits/192 kHz  
 Signal to noise (1 kHz) 105 dB  
 Dynamic range (1 kHz) 97 dB  
 DVD fs 96 kHz 2 Hz to 44 kHz  
 fs 48 kHz 2 Hz to 22 kHz  
 SVCD fs 48 kHz 2 Hz to 22 kHz  
 fs 44.1 kHz 2 Hz to 20 kHz  
 CD/VCD fs 44.1 kHz 2 Hz to 20 kHz  
 Distortion and noise (1kHz) 0.0035 %

### TV STANDARD (PAL/50 Hz) (NTSC/60 Hz)

Number of lines 625 525  
 Playback Multistandard (PAL/NTSC)

### CONNECTIONS

SCART (B, G models) Euroconnector  
 Y output Cinch (green)  
 Pb/Cb output Cinch (blue)  
 Pr/Cr output Cinch (red)  
 S-Video output Mini DIN, 4 pins  
 Video output Cinch  
 Audio output (L+R) Cinch  
 Digital output 1 coaxial, 1 optical  
 IEC60958 for CDDA/LPCM  
 IEC61937 for MPEG 2, Dolby Digital

### GENERAL

Dimensions (W x H x D) 215 x 108 x 330 mm  
 (8-7/16" x 4-1/4" x 13")  
 Weight 2.3 Kg (5 lbs. 1 oz)  
 Finish Gold color (T, A models)  
 Black color (G model)  
 Silver color  
 (U, K, B, G, L, V models)  
 Power supply AC 120 V, 60 Hz (U, C models)  
 AC 220 V, 50 Hz (T model)  
 AC 110-240 V, 50/60 Hz  
 (K, L, V models)  
 AC 240 V, 50 Hz (A model)  
 AC 230 V, 50 Hz (B, G models)  
 Power consumption Approx. 12 W  
 Standby power consumption < 1.0 W

### ACCESSORIES

Power cable (1.8 m) x 1 (U, C models)  
 Power cable (1.5 m) x 1 (T, A, B, G models)  
 Power cable (1.5 m) x 3 (K, L, V models)  
 Audio pin cable (1.5 m) x 1  
 Video pin cable (1.5 m) x 1

*\* Specifications are subject to change without prior notice.*

**U** ..... USA model                      **C** ..... Canadian model  
**T** ..... Chinese model                  **K** ..... Korean model  
**A** ..... Australian model              **B** ..... British model  
**G** ..... European model              **L** ..... Singapore model  
**V** ..... Taiwan model

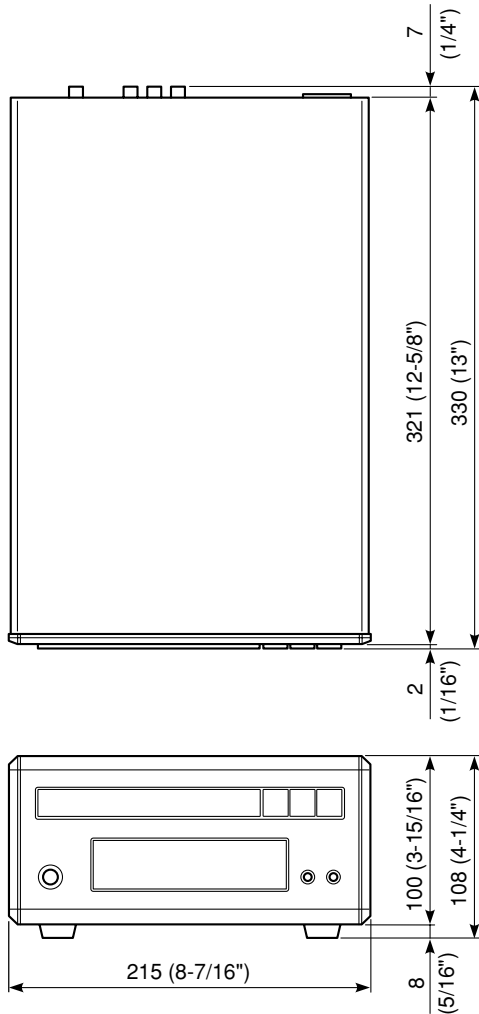


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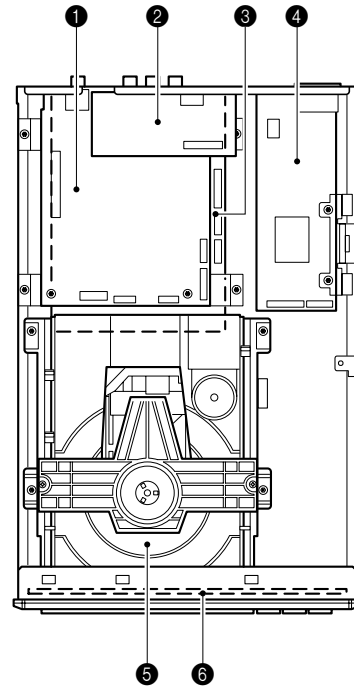
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## • DIMENSIONS



Unit: mm (inch)

## ■ INTERNAL VIEW



- ① MONO P.C.B.
- ② SCART P.C.B. (B, G models)
- ③ AV P.C.B.
- ④ Power Supply Unit
- ⑤ DVD Mechanism
- ⑥ FRONT P.C.B.

## ■ REPAIR NOTES

None of the components of the following unit can be supplied separately. Each unit must be replaced as a whole in case of a failure.

- DVD Mechanism
- MONO P.C.B.
- AV P.C.B.
- FRONT P.C.B.
- SCART P.C.B. (B, G models)
- Power Supply Unit

## ■ TRADE MODE

This unit provides TRADE mode which prevents the tray from opening even when the “OPEN/CLOSE” key is pressed.

### • Activating TRADE mode

The power to the main unit should be turned on before activating the TRADE mode.

1. Press the “OPEN/CLOSE” key to open the tray. (Fig. 1)
2. Press the “DVD/CD”, “2”, “5” and “9” keys on the remote control in that order. (Fig. 2)
3. “TRA ON” is displayed and TRADE mode is activated. (Fig. 3)

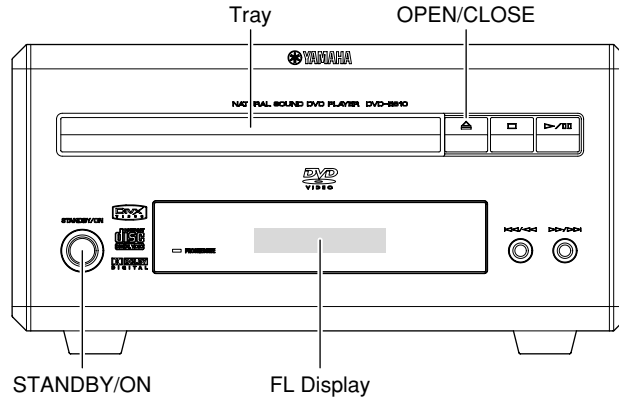
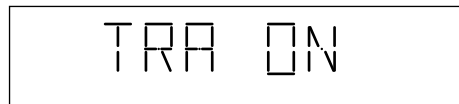


Fig. 1



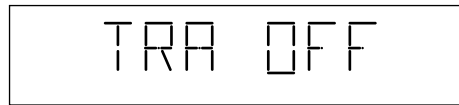
Fig. 2

TRADE mode display



Enter

Fig. 3



Cancel

Fig. 4

- \* After activating TRADE mode, it is not possible to operate keys of the main unit as usual except the following key.  
STANDBY/ON (Turn on the power only)  
But operation with the remote control is available as usual.

### • Canceling TRADE mode

The power to the main unit should be turned on before canceling TRADE mode.

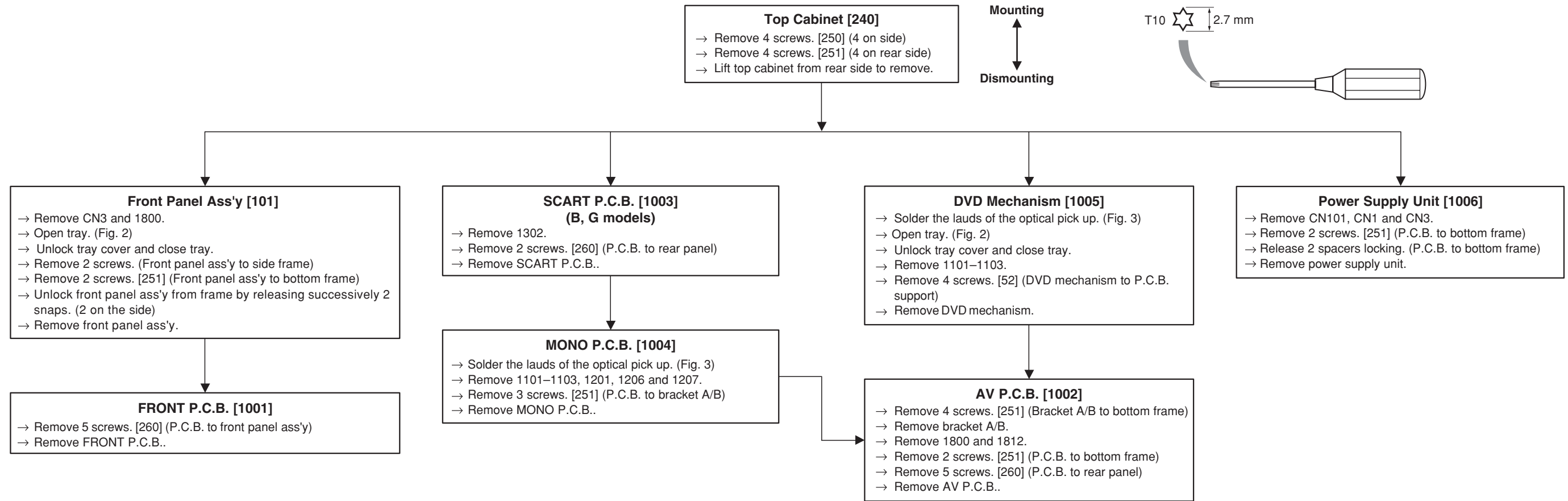
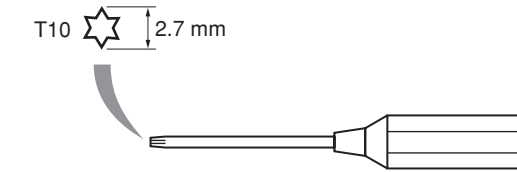
1. Press and hold the “STOP” key on the remote control. (Fig. 2)  
The tray opens after about 2 second.
2. Press the “DVD/CD”, “2”, “5” and “9” keys on the remote control in that order. (Fig. 2)
3. “TRA OFF” is displayed and TRADE mode is cancelled. (Fig. 4)



## DISASSEMBLY PROCEDURES

See REPLACEMENT PARTS LIST for item numbers.

When disassembling, use the special screw driver with tip shape in figure.



### ● Cable connections

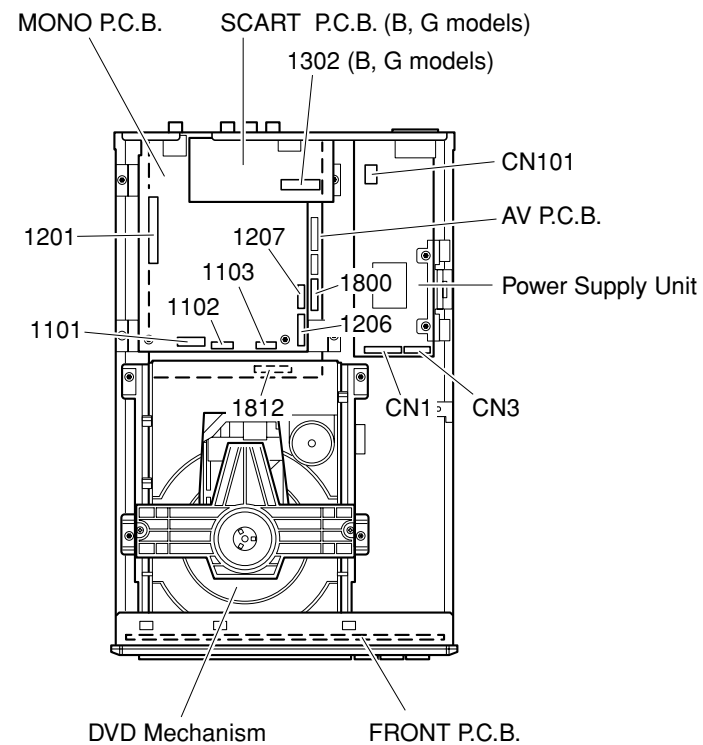


Fig. 1

### ● How to manually eject the tray

- Turn the player bottom up.
- Move the slider in the direction indicated with a screw driver until the tray is ejected.
- Gently pull the tray out.

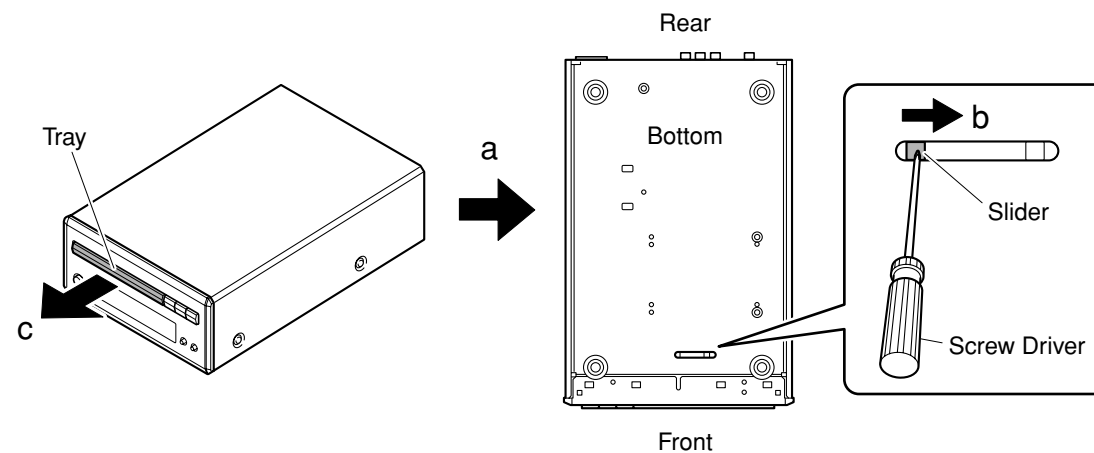


Fig. 2

### ● Preventive measure for laser diode from electrostatic breakdown

When replacing the MONO P.C.B. or DVD mechanism, solder between lands of the optical pick up P.C.B. to protect the laser diode against electrostatic breakdown.

#### Notes

- Use an anti-static soldering iron to short-circuit and unshort-circuit laser diode.
- After you have finished repairing, remove the solder from the short-circuit location.

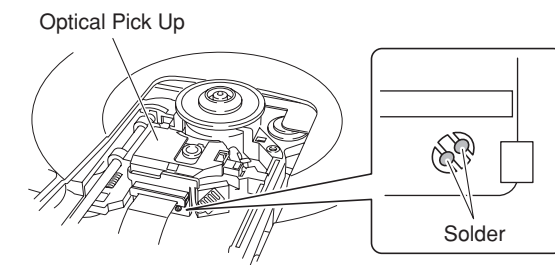


Fig. 3

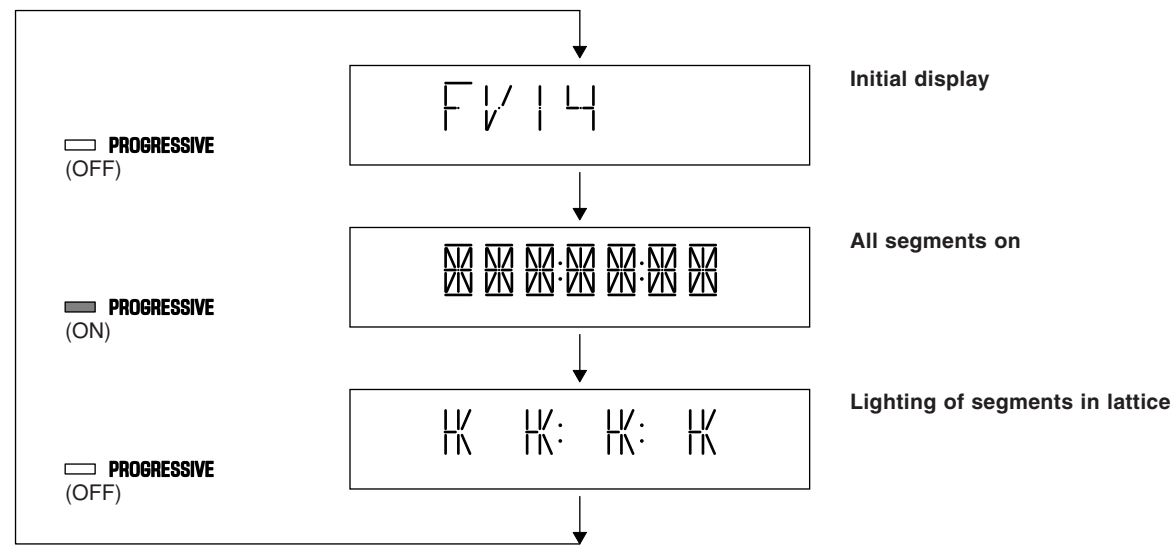
## ■ TEST MODE

### • Starting Test Mode

- Connect the power cable to the AC outlet.
- Press the "STANDBY/ON" key while simultaneously pressing "NEXT/F.FWD" and "STOP" keys of the main unit.  
At this time, keep pressing "NEXT/F.FWD" and "STOP" keys for 8 seconds or longer.
- The "FV xx" (firmware version) is displayed.  
\* The firmware version and region code appears on the TV monitor screen at this time.

### • Display Test

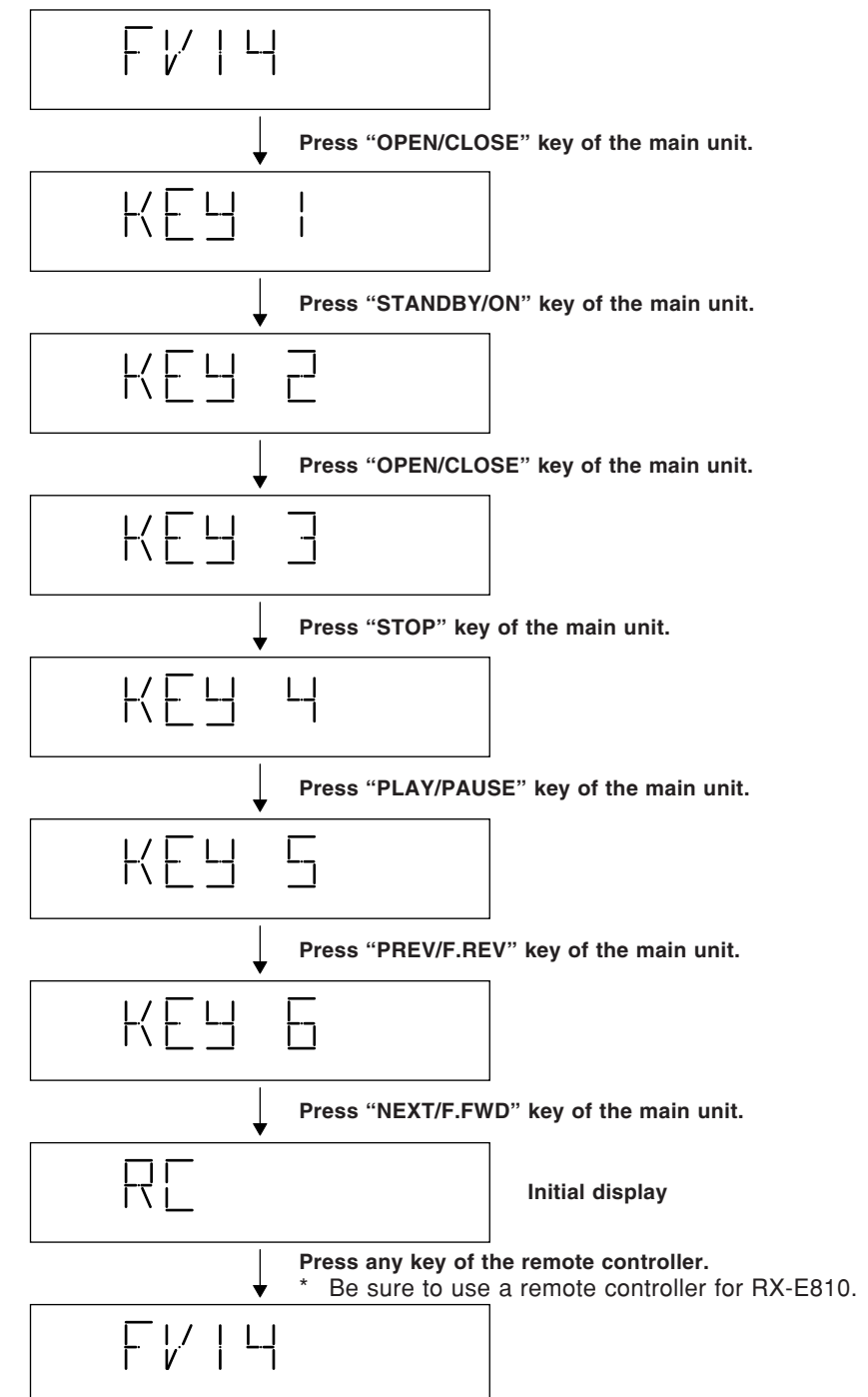
The display condition varies as shown below according to the "PLAY" key of the main unit.



### • Panel Key Test

The display changes as shown below as the specified key is pressed.

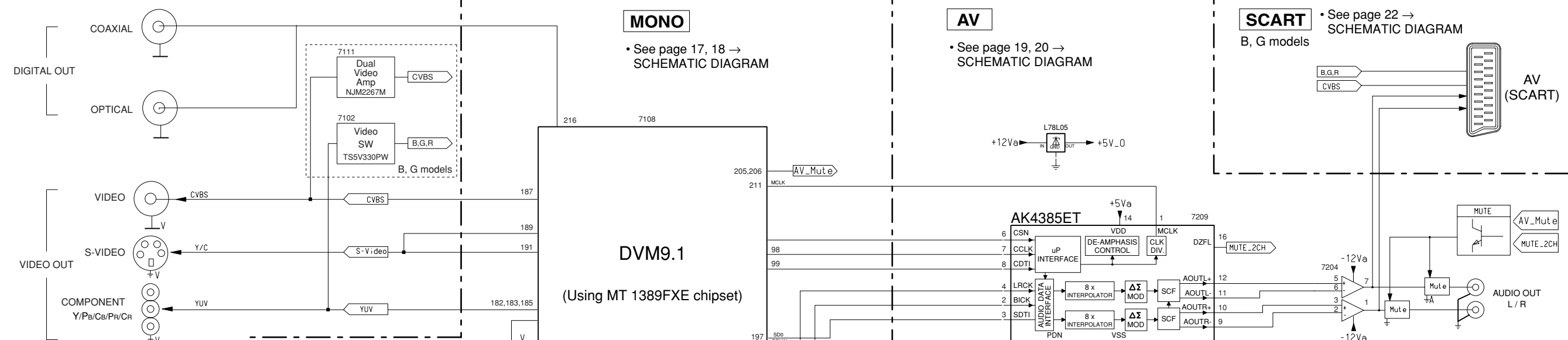
\* When performing the panel key test, a remote controller for RX-E810 is required.



### • Canceling Test Mode

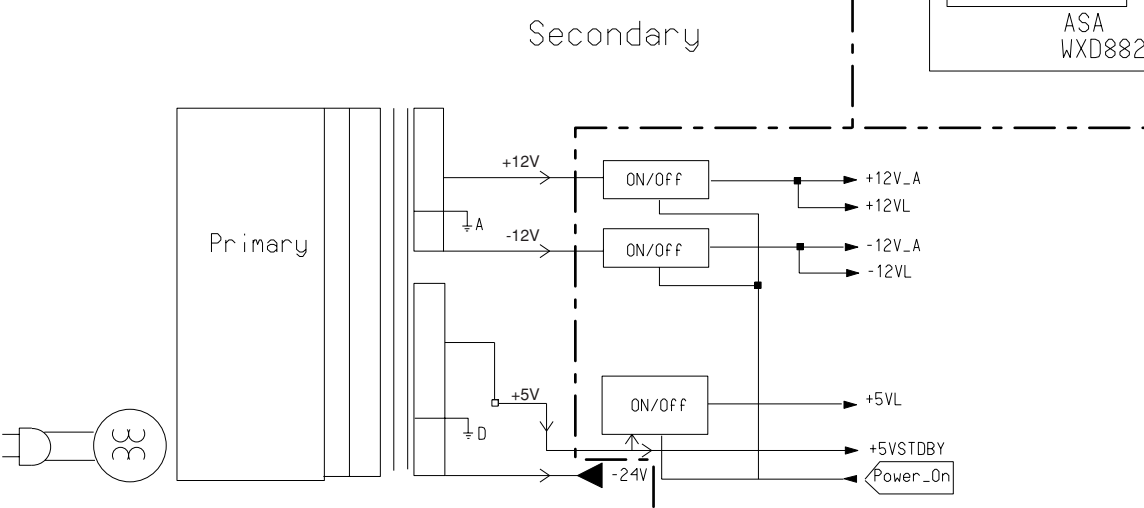
Disconnect the power cable from the AC outlet.

# BLOCK DIAGRAM



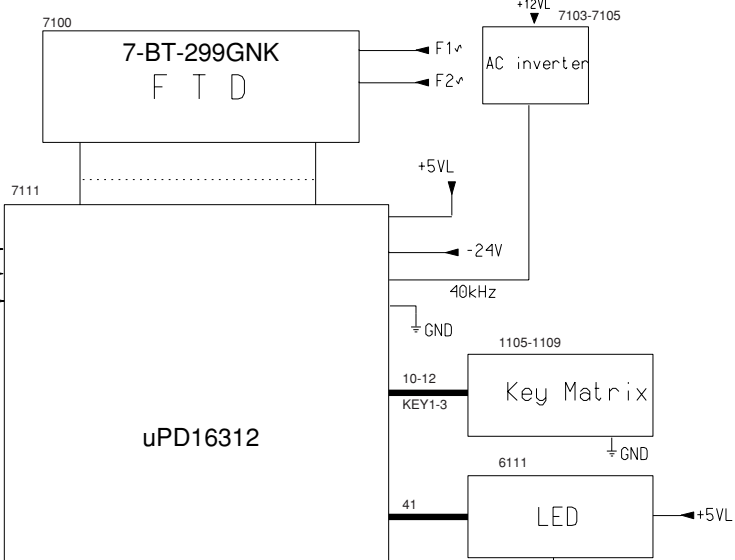
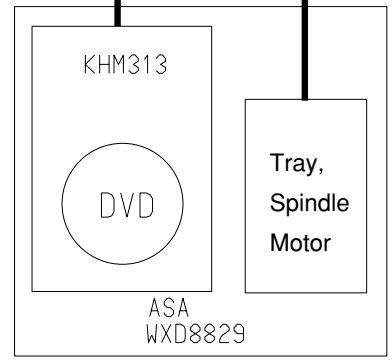
**AV**  
• See page 19, 20 → SCHEMATIC DIAGRAM

## Power Supply Unit

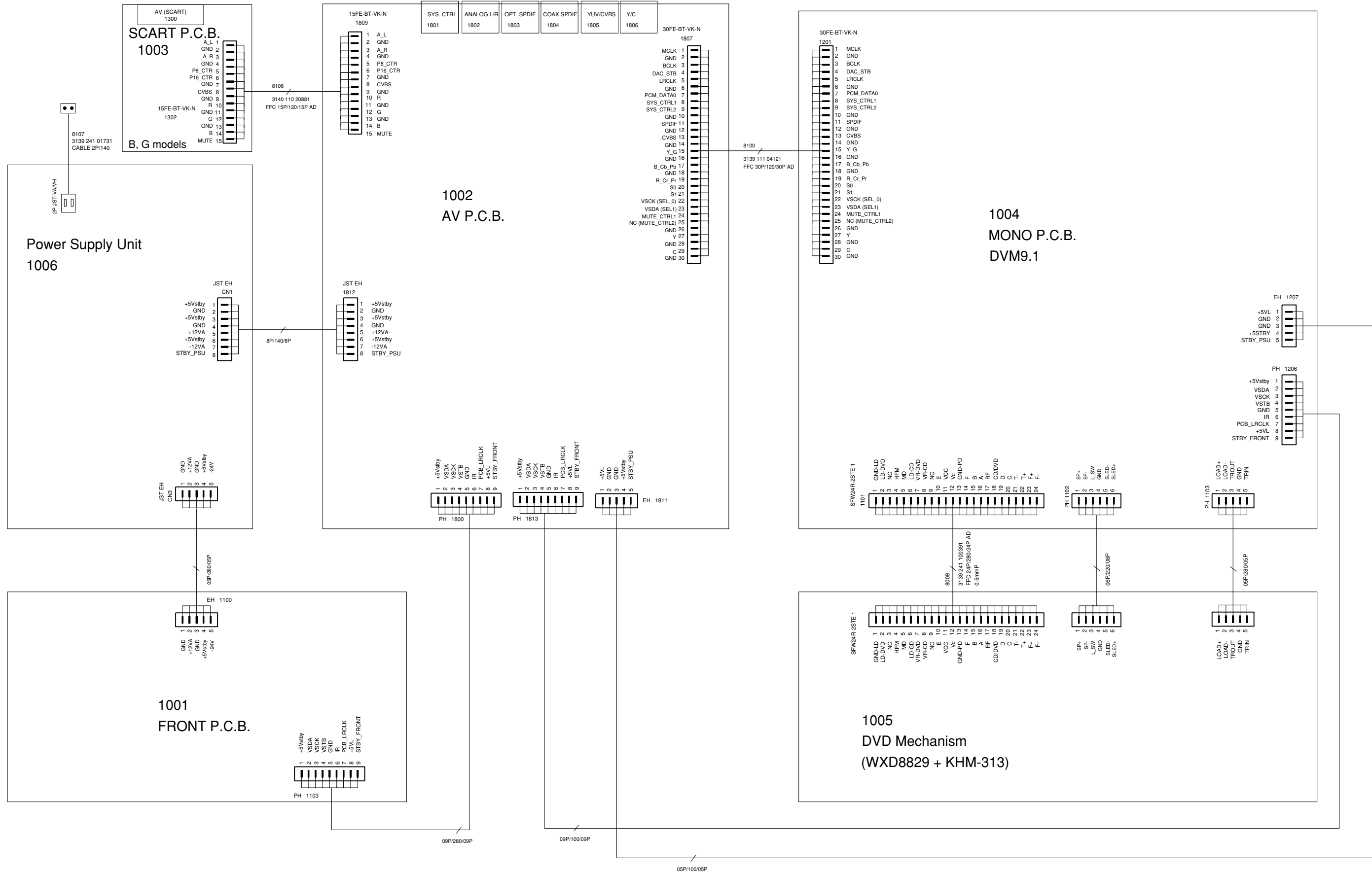


**AV**  
• See page 19, 20 → SCHEMATIC DIAGRAM

## DVD Mechanism



# WIRING DIAGRAM



# PRINTED CIRCUIT BOARDS

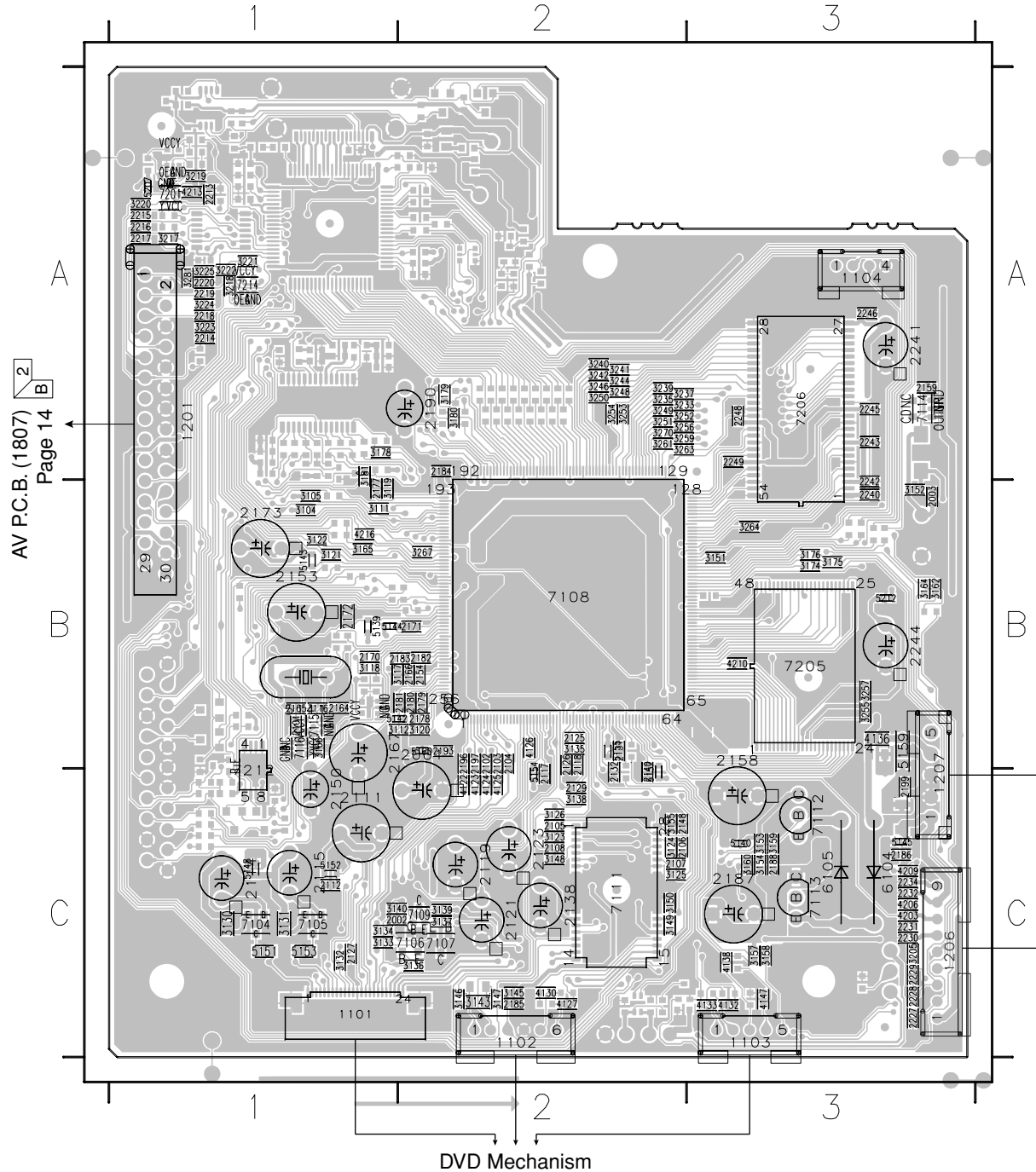
FOR INFORMATION ONLY (NO SERVICE PARTS WILL BE AVAILABLE)

The first digit of a component indicates the component type.

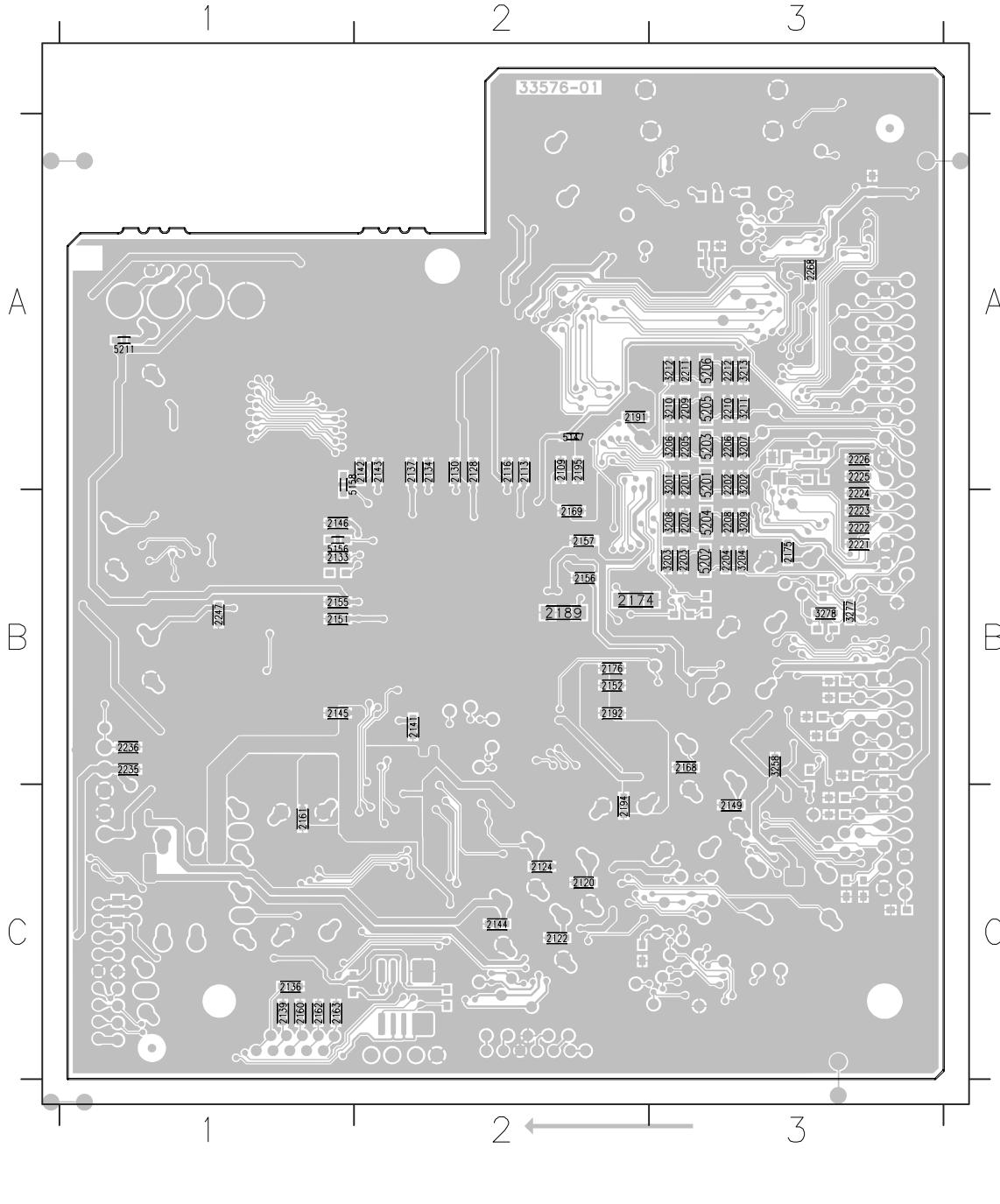
1xxx : Connector    3xxx : Resistor    5xxx : Coil    7xxx : IC, Transistor, FET  
 2xxx : Capacitor    4xxx : SMD jumper    6xxx : Diode    9xxx : Wire jumper

MONO P.C.B. Top View

MONO P.C.B. Bottom View



|      |    |      |    |      |    |
|------|----|------|----|------|----|
| 1101 | C1 | 3104 | B1 | 3324 | A2 |
| 1102 | C2 | 105  | B1 | 3327 | A2 |
| 1103 | C3 | 112  | B2 | 3328 | A2 |
| 1104 | A3 | 116  | B1 | 3329 | A2 |
| 1201 | A1 | 117  | B1 | 3330 | A2 |
| 1206 | C3 | 118  | B1 | 4122 | C2 |
| 1207 | C3 | 119  | B1 | 4123 | C2 |
| 2001 | B2 | 120  | B2 | 4124 | C2 |
| 2002 | C1 | 121  | B1 | 4125 | C2 |
| 2003 | B3 | 122  | B1 | 4126 | B2 |
| 2101 | B1 | 123  | C2 | 4127 | C2 |
| 2102 | B2 | 124  | C2 | 4130 | C2 |
| 2103 | B2 | 125  | C2 | 4132 | C3 |
| 2104 | B2 | 126  | C2 | 4133 | C3 |
| 2105 | C2 | 130  | C1 | 4136 | B3 |
| 2106 | C2 | 131  | C1 | 4138 | C3 |
| 2107 | C2 | 132  | C1 | 4147 | C3 |
| 2108 | C2 | 133  | C1 | 4203 | C3 |
| 2111 | C1 | 134  | C1 | 4206 | C3 |
| 2112 | C1 | 135  | B2 | 4209 | B3 |
| 2114 | C1 | 136  | C2 | 4210 | B3 |
| 2115 | C1 | 137  | C2 | 4213 | B3 |
| 2117 | C2 | 138  | C2 | 4216 | B3 |
| 2118 | B2 | 139  | C2 | 4219 | B3 |
| 2119 | C2 | 140  | C2 | 5139 | B1 |
| 221  | C2 | 141  | C2 | 5141 | A1 |
| 223  | B2 | 142  | C2 | 5142 | A1 |
| 225  | B2 | 143  | C2 | 5143 | A1 |
| 226  | B2 | 147  | C2 | 5144 | A1 |
| 227  | C1 | 148  | C2 | 5145 | C3 |
| 229  | C2 | 149  | C2 | 5148 | B1 |
| 231  | B2 | 150  | C2 | 5151 | C1 |
| 232  | C2 | 151  | B3 | 5152 | C1 |
| 238  | C2 | 152  | B3 | 5153 | C1 |
| 2140 | C2 | 153  | C3 | 5154 | C2 |
| 2148 | C2 | 154  | C3 | 5155 | B2 |
| 2150 | C1 | 155  | C2 | 5157 | C2 |
| 2153 | B1 | 157  | C3 | 5159 | B3 |
| 2154 | B2 | 158  | C3 | 5160 | B2 |
| 2158 | B3 | 159  | C3 | 5207 | A1 |
| 2159 | A3 | 160  | C3 | 5212 | B3 |
| 2164 | B1 | 162  | B3 | 6104 | B3 |
| 2165 | B1 | 164  | B3 | 6105 | B3 |
| 2166 | B2 | 165  | B1 | 7104 | C1 |
| 2167 | B1 | 166  | B3 | 7105 | C1 |
| 2170 | B2 | 174  | B3 | 7106 | C1 |
| 2171 | B2 | 175  | B3 | 7107 | C3 |
| 2172 | B1 | 176  | B3 | 7108 | C3 |
| 2173 | B1 | 177  | A1 | 7109 | C3 |
| 2177 | B1 | 178  | A1 | 7111 | C3 |
| 2178 | B2 | 179  | A2 | 7112 | C3 |
| 2179 | B2 | 181  | A1 | 7113 | C3 |
| 2180 | B2 | 205  | C3 | 7114 | A3 |
| 2181 | B2 | 217  | A1 | 7115 | B1 |
| 2182 | B2 | 218  | A1 | 7116 | B1 |
| 2183 | B2 | 219  | A1 | 7201 | A1 |
| 2184 | A2 | 220  | A1 | 7205 | B3 |
| 2185 | C2 | 221  | A1 | 7206 | A3 |
| 2186 | C3 | 222  | A1 | 7212 | C1 |
| 2187 | C3 | 223  | A1 | 7214 | A1 |
| 2188 | C3 | 224  | A1 |      |    |
| 2190 | A2 | 225  | A1 |      |    |
| 2193 | B2 | 233  | A2 |      |    |
| 2196 | B2 | 235  | A2 |      |    |
| 2197 | B2 | 237  | A2 |      |    |
| 2199 | C3 | 239  | A2 |      |    |
| 2213 | A1 | 3240 | A2 |      |    |
| 2214 | A1 | 3241 | A2 |      |    |
| 2215 | A1 | 3242 | A2 |      |    |
| 2216 | A1 | 3244 | A2 |      |    |
| 2217 | A1 | 3246 | A2 |      |    |
| 2218 | A1 | 3248 | A2 |      |    |
| 2219 | A1 | 3249 | A2 |      |    |
| 2220 | A1 | 3250 | A2 |      |    |
| 2227 | C3 | 3251 | A2 |      |    |
| 2228 | C3 | 3252 | A2 |      |    |
| 2229 | C3 | 3253 | A2 |      |    |
| 2230 | C3 | 3254 | A2 |      |    |
| 2231 | C3 | 3255 | B3 |      |    |
| 2232 | C3 | 3256 | A2 |      |    |
| 2234 | C3 | 3257 | B3 |      |    |
| 2240 | B3 | 3259 | A2 |      |    |
| 2241 | A3 | 3261 | A2 |      |    |
| 2242 | B3 | 3263 | A2 |      |    |
| 2243 | A3 | 3264 | B3 |      |    |
| 2244 | B3 | 3267 | B2 |      |    |
| 2245 | A3 | 3268 | A1 |      |    |
| 2246 | A3 | 3269 | A1 |      |    |
| 2248 | A3 | 3270 | A2 |      |    |
| 2249 | A3 | 3281 | A1 |      |    |



|      |    |
|------|----|
| 2109 | A2 |
| 2113 | A2 |
| 2116 | A2 |
| 2120 | C2 |
| 2122 | C2 |
| 2124 | C2 |
| 2128 | A2 |
| 2130 | A2 |
| 2133 | B1 |
| 2134 | A2 |
| 2136 | C1 |
| 2137 | A2 |
| 2139 | C1 |
| 2141 | B2 |
| 2142 | A2 |
| 2143 | A2 |
| 2144 | C2 |
| 2145 | B1 |
| 2146 | B1 |
| 2149 | C3 |
| 2151 | B1 |
| 2152 | B2 |
| 2155 | B1 |
| 2156 | B2 |
| 2157 | B2 |
| 2160 | C1 |
| 2161 | C1 |
| 2162 | C1 |
| 2163 | C1 |
| 2168 | B3 |
| 2169 | B2 |
| 2174 | B2 |
| 2175 | B3 |
| 2176 | B2 |
| 2189 | B2 |
| 2191 | A2 |
| 2192 | B2 |
| 2194 | C2 |
| 2195 | A2 |
| 2201 | A3 |
| 2202 | A3 |
| 2203 | B3 |
| 2204 | B3 |
| 2205 | A3 |
| 2206 | A3 |
| 2207 | B3 |
| 2208 | B3 |
| 2209 | A3 |
| 2210 | A3 |
| 2211 | A3 |
| 2212 | A3 |
| 2221 | B3 |
| 2222 | B3 |
| 2223 | B3 |
| 2224 | B3 |
| 2225 | A3 |
| 2226 | A3 |
| 2235 | B1 |
| 2236 | B1 |
| 2247 | B1 |
| 2268 | A3 |
| 2270 | A3 |
| 2272 | A3 |
| 2273 | B3 |
| 2275 | B3 |
| 2276 | B3 |
| 2278 | B3 |
| 2279 | B3 |
| 2281 | A3 |
| 2282 | A3 |
| 2284 | A3 |
| 2285 | A3 |
| 2287 | A3 |
| 2288 | A3 |
| 2290 | A3 |
| 2291 | A3 |
| 2293 | A3 |
| 2294 | A3 |
| 2296 | A3 |
| 2297 | A3 |
| 2299 | A3 |
| 2300 | A3 |
| 2302 | A3 |
| 2303 | A3 |
| 2305 | A3 |
| 2306 | A3 |
| 2308 | B3 |
| 2309 | B3 |
| 2310 | A3 |
| 2311 | A3 |
| 2312 | A3 |
| 2313 | A3 |
| 2314 | A3 |
| 2315 | A3 |
| 2317 | B3 |
| 2318 | B3 |
| 2320 | B3 |
| 2321 | B3 |
| 2323 | B3 |
| 2324 | B3 |
| 2326 | B3 |
| 2327 | B3 |
| 2329 | B3 |
| 2330 | B3 |
| 2332 | B3 |
| 2333 | B3 |
| 2335 | B3 |
| 2336 | B3 |
| 2338 | B3 |
| 2339 | B3 |
| 2341 | A3 |
| 2342 | A3 |
| 2344 | A3 |
| 2345 | A3 |
| 2347 | A3 |
| 2348 | A3 |
| 2350 | A3 |
| 2351 | A3 |
| 2352 | A3 |
| 2353 | A3 |
| 2354 | A3 |
| 2355 | A3 |
| 2356 | A3 |
| 2357 | A3 |
| 2359 | A3 |
| 2360 | A3 |
| 2362 | A3 |
| 2363 | A3 |
| 2365 | A3 |
| 2366 | A3 |
| 2368 | A3 |
| 2369 | A3 |
| 2371 | A3 |
| 2372 | A3 |
| 2374 | A3 |
| 2375 | A3 |
| 2377 | A3 |
| 2378 | A3 |
| 2380 | A3 |
| 2381 | A3 |
| 2383 | A3 |
| 2384 | A3 |
| 2386 | A3 |
| 2387 | A3 |
| 2389 | A3 |
| 2390 | A3 |
| 2392 | A3 |
| 2393 | A3 |
| 2395 | A3 |
| 2396 | A3 |
| 2398 | A3 |
| 2399 | A3 |



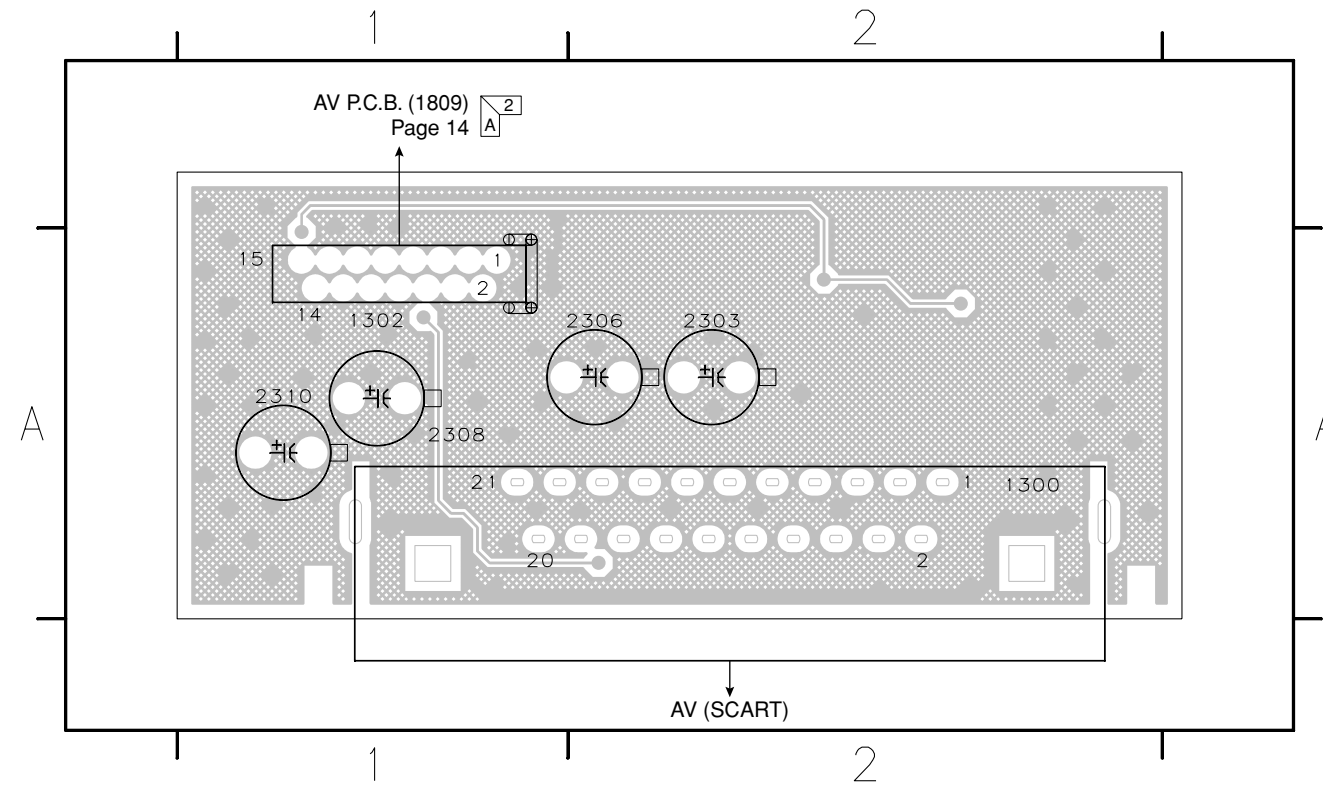




The first digit of a component indicates the component type.

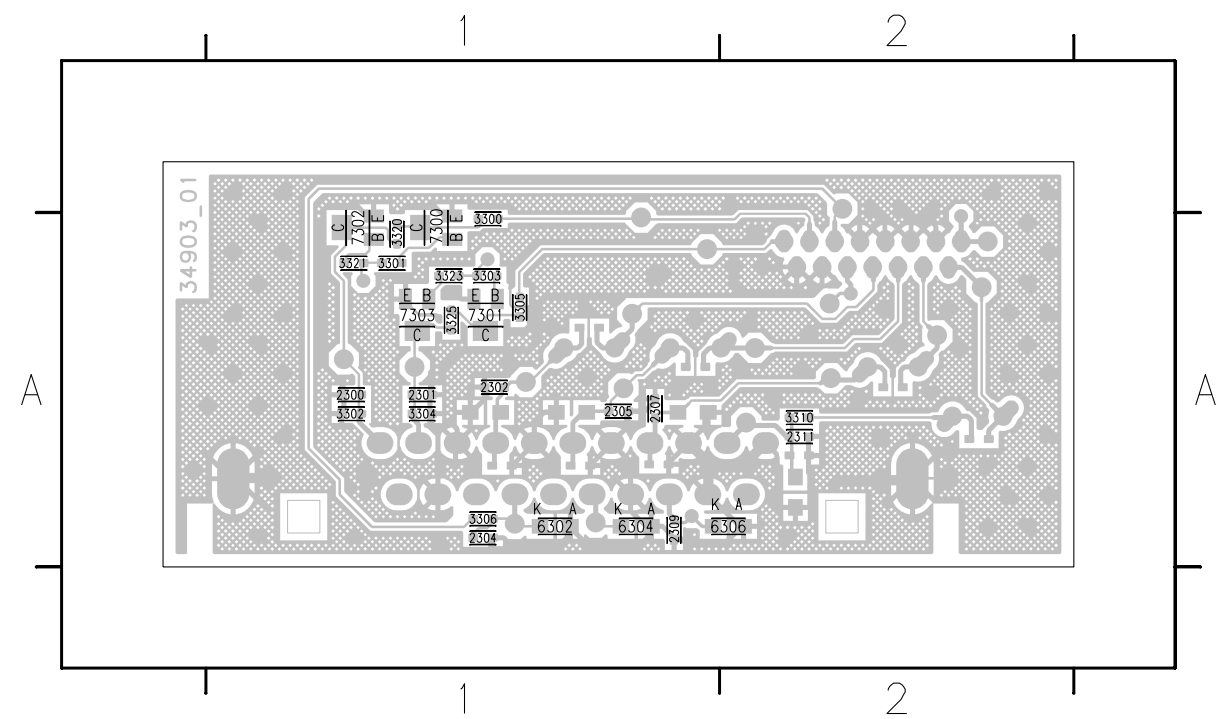
1xxx : Connector    3xxx : Resistor    5xxx : Coil    7xxx : IC, Transistor, FET  
 2xxx : Capacitor    4xxx : SMD jumper    6xxx : Diode    9xxx : Wire jumper

**SCART P.C.B. Top View** (B, G models)



- 1300 A2
- 1302 A1
- 2306 A2
- 2303 A2
- 2308 A1
- 2310 A1

**SCART P.C.B. Bottom View** (B, G models)



- 2300 A1
- 2301 A1
- 2302 A1
- 2304 A1
- 2305 A1
- 2309 A1
- 2311 A2
- 2311 A2
- 3300 A1
- 3301 A1
- 3302 A1
- 3303 A1
- 3304 A1
- 3305 A1
- 3306 A1
- 3310 A2
- 3321 A1
- 3323 A1
- 3325 A1
- 3325 A1
- 6302 A1
- 6304 A2
- 6306 A2
- 7300 A1
- 7301 A1
- 7302 A1
- 7303 A1



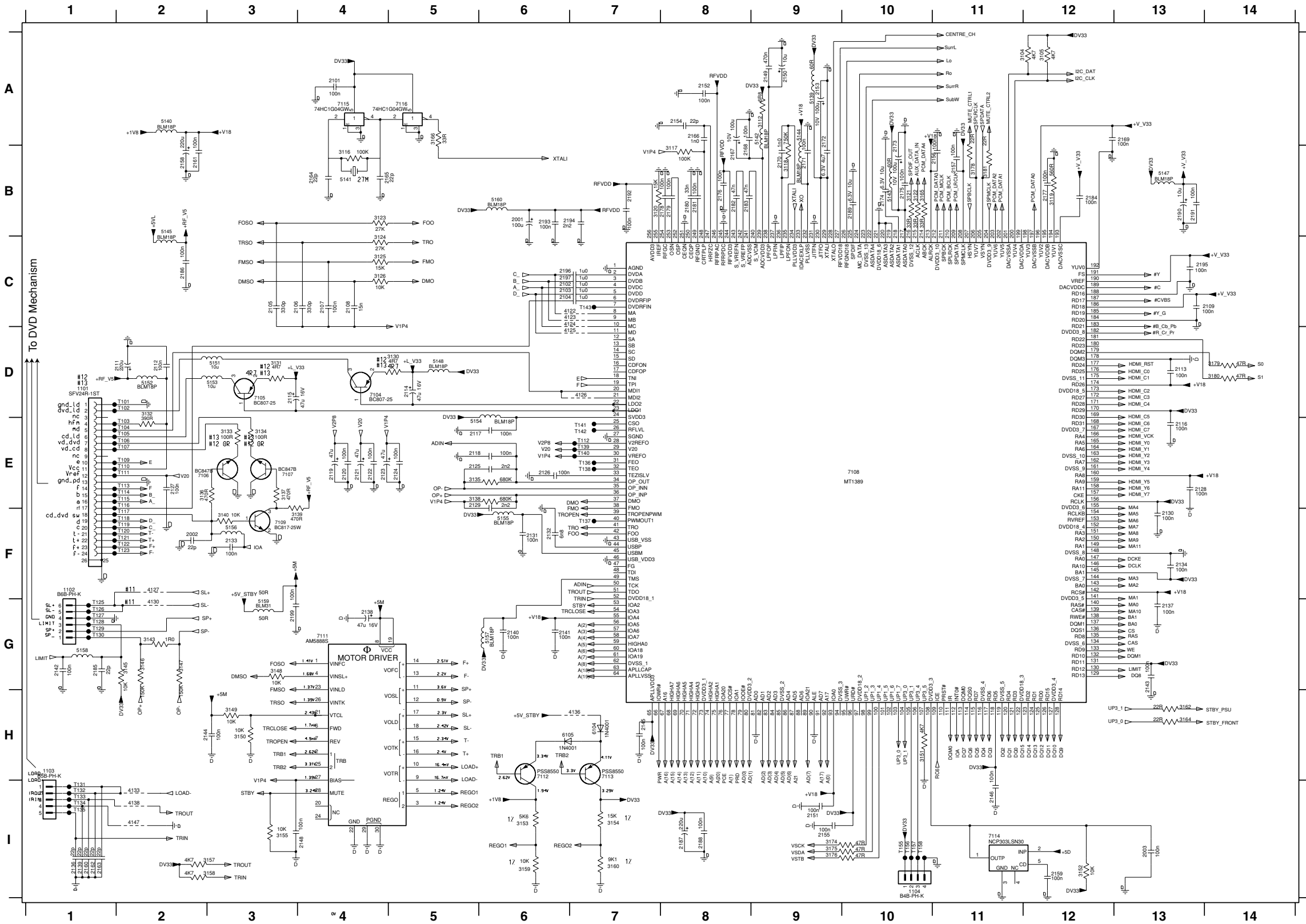
# SCHEMATIC DIAGRAMS

FOR INFORMATION ONLY (NO SERVICE PARTS WILL BE AVAILABLE)

MONO 1/2

The first digit of a component indicates the component type.

- 1xxx : Connector
- 2xxx : Capacitor
- 3xxx : Resistor
- 4xxx : SMD jumper
- 5xxx : Coil
- 6xxx : Diode
- 7xxx : IC, Transistor, FET
- 8xxx : Wire jumper
- 9xxx : Wire jumper

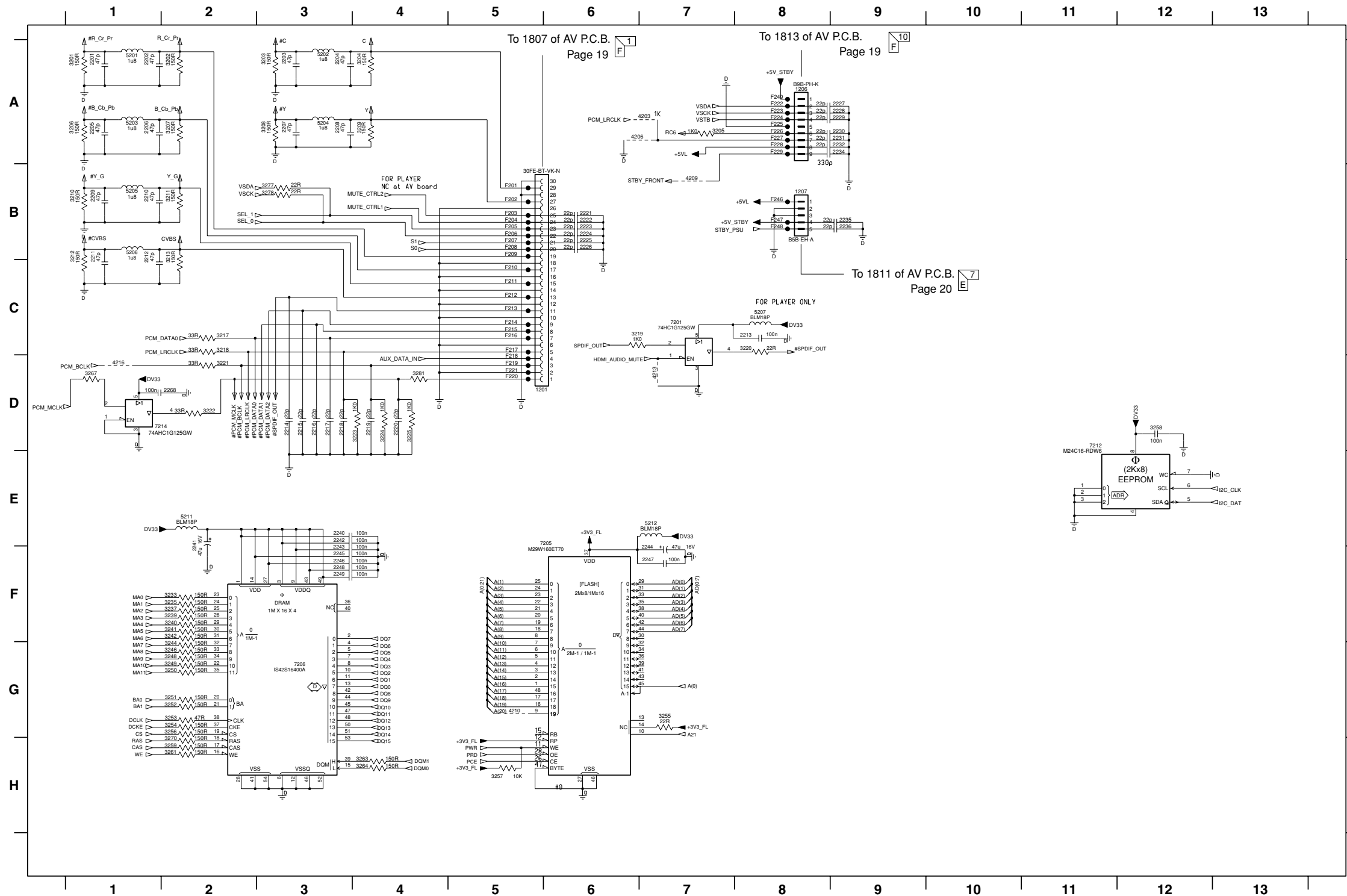


|          |          |          |
|----------|----------|----------|
| 1101 D1  | 3125 C4  | T133 H1  |
| 1102 F1  | 3129 D14 | T134 I1  |
| 1103 H1  | 3130 D5  | T135 I1  |
| 1104 H10 | 3131 D3  | T136 E7  |
| 2001 B6  | 3132 D2  | T137 F7  |
| 2002 F2  | 3133 E3  | T138 E7  |
| 2003 I13 | 3134 E3  | T139 E7  |
| 2101 A4  | 3135 E5  | T140 E7  |
| 2102 C6  | 3136 E2  | T141 E7  |
| 2103 C6  | 3137 E3  | T142 E7  |
| 2104 C6  | 3138 E5  | T143 C7  |
| 2105 C3  | 3139 F3  | T155 H10 |
| 2106 C4  | 3140 G3  | T156 H10 |
| 2107 C4  | 3143 G2  | T157 H10 |
| 2108 C4  | 3145 G2  | T158 H10 |
| 2109 C14 | 3146 G2  |          |
| 2111 D2  | 3147 G2  |          |
| 2112 D2  | 3148 G3  |          |
| 2113 D13 | 3149 H3  |          |
| 2114 D5  | 3150 H3  |          |
| 2115 D3  | 3151 H10 |          |
| 2116 E13 | 3152 H12 |          |
| 2117 E5  | 3153 H6  |          |
| 2118 E5  | 3154 I7  |          |
| 2119 E4  | 3155 I3  |          |
| 2120 E4  | 3157 I3  |          |
| 2121 E4  | 3158 I3  |          |
| 2122 E4  | 3159 I6  |          |
| 2123 E4  | 3160 I7  |          |
| 2124 E5  | 3162 H13 |          |
| 2125 E5  | 3164 H13 |          |
| 2126 E5  | 3165 B10 |          |
| 2127 E2  | 3166 A5  |          |
| 2128 E13 | 3174 I9  |          |
| 2129 E5  | 3175 I9  |          |
| 2130 F13 | 3176 I9  |          |
| 2131 F6  | 3178 B11 |          |
| 2132 F6  | 3179 B14 |          |
| 2133 F3  | 3180 D14 |          |
| 2134 F13 | 3183 F7  |          |
| 2136 I1  | 4122 C7  |          |
| 2137 G13 | 4123 C7  |          |
| 2138 G4  | 4124 C7  |          |
| 2139 I1  | 4125 D7  |          |
| 2140 G6  | 4126 D7  |          |
| 2141 G6  | 4127 F2  |          |
| 2142 G1  | 4130 G2  |          |
| 2143 G13 | 4133 I2  |          |
| 2144 H3  | 4136 H7  |          |
| 2145 H7  | 4138 I2  |          |
| 2146 I11 | 4147 I2  |          |
| 2148 I4  | 5139 A9  |          |
| 2149 A9  | 5140 A2  |          |
| 2150 A9  | 5141 B4  |          |
| 2151 I9  | 5142 A9  |          |
| 2152 A8  | 5143 B10 |          |
| 2153 A9  | 5144 A9  |          |
| 2154 A8  | 5145 B2  |          |
| 2155 I9  | 5147 B13 |          |
| 2156 B10 | 5148 D5  |          |
| 2157 B11 | 5151 D3  |          |
| 2158 B2  | 5152 D3  |          |
| 2159 I12 | 5153 D3  |          |
| 2160 I1  | 5154 E5  |          |
| 2161 B2  | 5155 F6  |          |
| 2162 I1  | 5156 F3  |          |
| 2163 I1  | 5157 G1  |          |
| 2164 B4  | 5158 G6  |          |
| 2165 B5  | 5159 G3  |          |
| 2166 A8  | 5160 B6  |          |
| 2167 B8  | 6104 H7  |          |
| 2168 B8  | 6105 H6  |          |
| 2169 A13 | 7104 D4  |          |
| 2170 B9  | 7105 D3  |          |
| 2171 B9  | 7106 E2  |          |
| 2172 A9  | 7107 E3  |          |
| 2173 B10 | 7108 E10 |          |
| 2174 B10 | 7109 F3  |          |
| 2175 B10 | 7111 G4  |          |
| 2176 B8  | 7112 H6  |          |
| 2177 B12 | 7113 H7  |          |
| 2178 B8  | 7114 I11 |          |
| 2179 B8  | 7115 A4  |          |
| 2180 B8  | 7116 A5  |          |
| 2181 B8  | T101 D2  |          |
| 2182 B8  | T102 D2  |          |
| 2183 B8  | T103 E2  |          |
| 2184 B12 | T104 E2  |          |
| 2185 G1  | T105 E2  |          |
| 2186 C2  | T106 E2  |          |
| 2187 I8  | T107 E2  |          |
| 2188 I8  | T109 E2  |          |
| 2189 B10 | T110 E2  |          |
| 2190 B13 | T111 E2  |          |
| 2191 B13 | T112 E7  |          |
| 2192 B7  | T113 E2  |          |
| 2193 B6  | T114 E2  |          |
| 2194 B6  | T115 E2  |          |
| 2195 C13 | T116 E2  |          |
| 2196 C6  | T117 F2  |          |
| 2197 C6  | T118 F2  |          |
| 2199 G3  | T119 F2  |          |
| 3104 A12 | T120 F2  |          |
| 3105 A12 | T121 F2  |          |
| 3112 A9  | T122 F2  |          |
| 3116 B4  | T123 F2  |          |
| 3117 B8  | T125 G1  |          |
| 3118 B9  | T126 G1  |          |
| 3119 B12 | T127 G1  |          |
| 3120 B7  | T128 G1  |          |
| 3121 B10 | T129 G1  |          |
| 3122 B10 | T130 G1  |          |
| 3123 B4  | T131 I1  |          |
| 3124 C4  | T132 I1  |          |

★ Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.  
 ★ Schematic diagram is subject to change without notice.

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1xxx : Connector    3xxx : Resistor    5xxx : Coil    7xxx : IC, Transistor, FET  
 2xxx : Capacitor    4xxx : SMD jumper    6xxx : Diode    9xxx : Wire jumper



To 1807 of AV P.C.B. Page 19

To 1813 of AV P.C.B. Page 19

To 1811 of AV P.C.B. Page 20

- 1201 D5
- 1206 A8
- 1207 B8
- 2201 A1
- 2202 A1
- 2203 A3
- 2204 A3
- 2205 A1
- 2206 A1
- 2207 A3
- 2208 A3
- 2209 B1
- 2210 B1
- 2211 B1
- 2212 B1
- 2213 C8
- 2214 D3
- 2215 D3
- 2216 D3
- 2217 D3
- 2218 D3
- 2219 D4
- 2220 D4
- 2221 B6
- 2222 B6
- 2223 B6
- 2224 B6
- 2225 B6
- 2226 B6
- 2227 A9
- 2228 A9
- 2229 A9
- 2230 A9
- 2231 A9
- 2232 A9
- 2233 A9
- 2234 A9
- 2235 B9
- 2236 B9
- 2240 E3
- 2241 E2
- 2242 E3
- 2243 F3
- 2244 F7
- 2245 F3
- 2246 F3
- 2247 F7
- 2248 F3
- 2249 F3
- 2268 D2
- 3201 A1
- 3202 A2
- 3203 A3
- 3204 A4
- 3205 A7
- 3206 A1
- 3207 A2
- 3208 A3
- 3209 A4
- 3210 B1
- 3211 B2
- 3212 B1
- 3213 B2
- 3217 C2
- 3218 C2
- 3219 C6
- 3220 C8
- 3221 D2
- 3222 D2
- 3223 D4
- 3224 D4
- 3225 D4
- 3233 F2
- 3235 F2
- 3237 F2
- 3239 F2
- 3240 F2
- 3241 F2
- 3242 F2
- 3244 G2
- 3246 G2
- 3248 G2
- 3249 G2
- 3250 G2
- 3251 G2
- 3252 G2
- 3253 G2
- 3254 G2
- 3255 G7
- 3256 G2
- 3257 H5
- 3258 D12
- 3259 H2
- 3261 H2
- 3263 H4
- 3264 H4
- 3267 D1
- 3270 H2
- 3277 B3
- 3278 B3
- 3281 D4
- 4203 A7
- 4206 A6
- 4209 B7

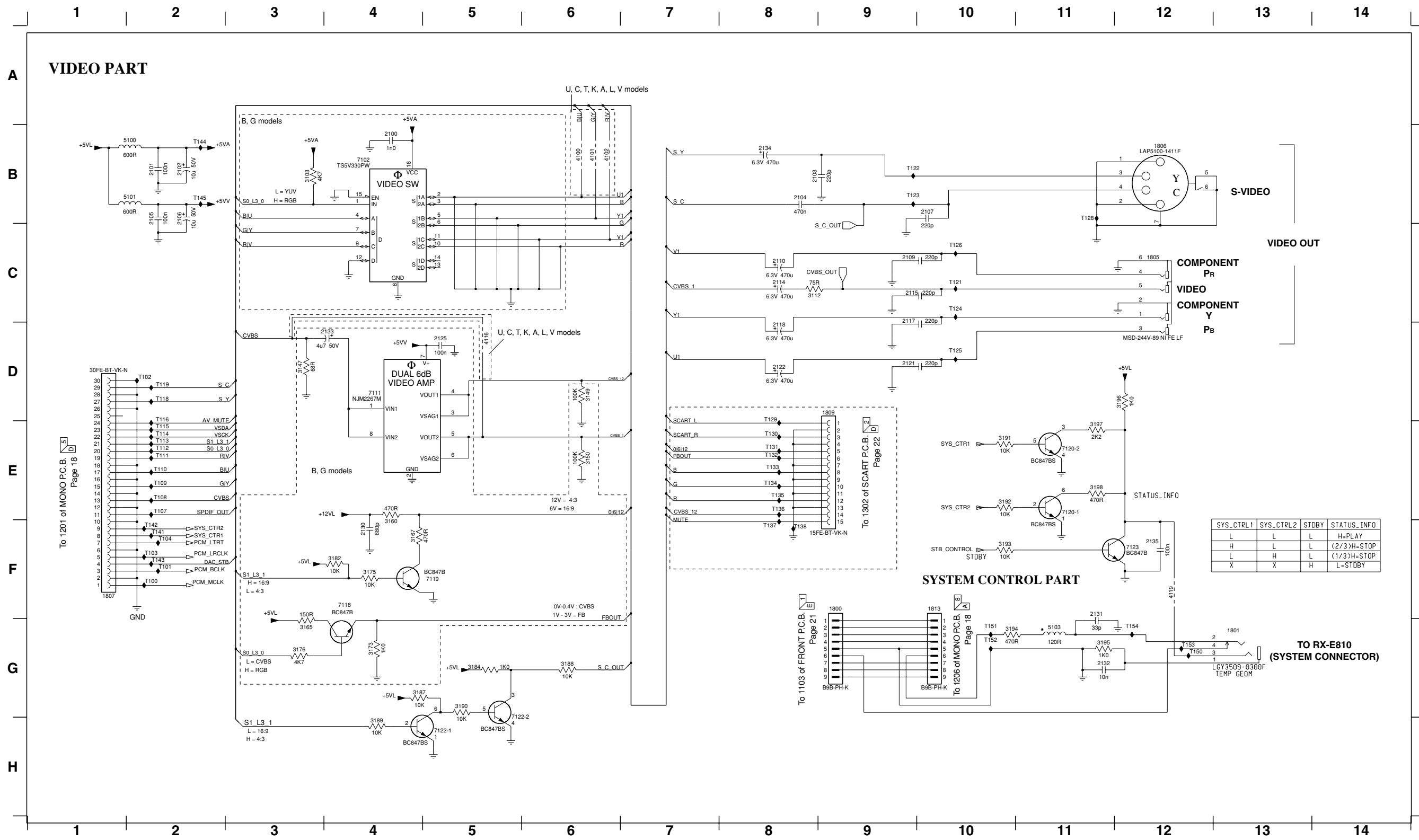
★ Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.  
 ★ Schematic diagram is subject to change without notice.

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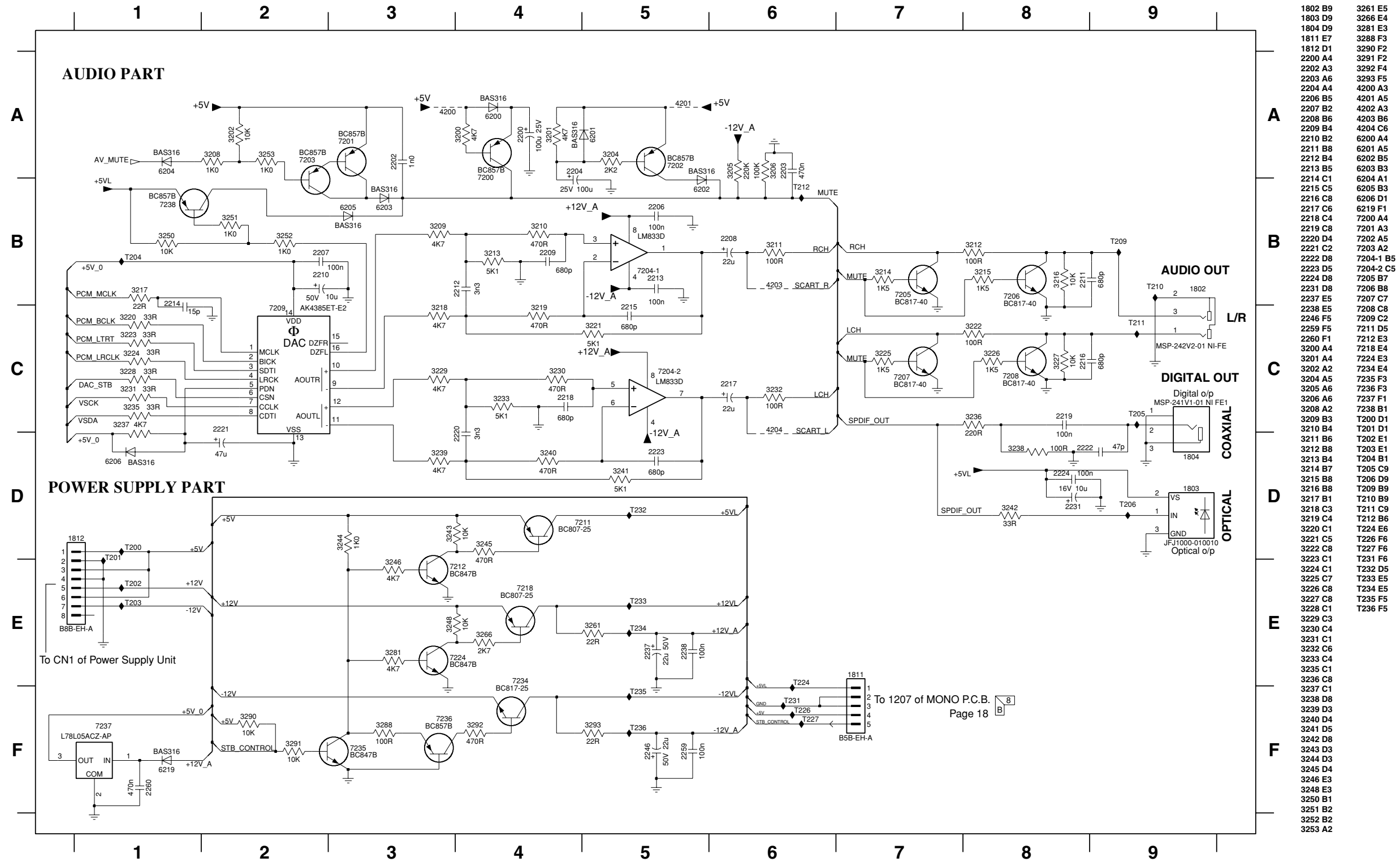
AV 1/2

- |          |          |          |         |          |         |         |          |          |          |          |            |         |         |          |          |         |         |          |          |   |
|----------|----------|----------|---------|----------|---------|---------|----------|----------|----------|----------|------------|---------|---------|----------|----------|---------|---------|----------|----------|---|
| 1800 F9  | 1813 F10 | 2105 B2  | 2115 C9 | 2130 F4  | 3103 B3 | 3165 G3 | 3184 G5  | 3192 E10 | 3198 E11 | 5100 B2  | 7119 F5    | T100 F2 | T108 E2 | T114 E2  | T122 B9  | T129 D8 | T135 E8 | T143 F2  | T153 G12 | ★ Components having special characteristics are marked $\triangle$ and must be replaced with parts having specifications equal to those originally installed.<br>★ Schematic diagram is subject to change without notice. |
| 1801 G13 | 2100 B4  | 2106 B2  | 2117 D9 | 2131 F11 | 3112 C8 | 3167 F4 | 3187 G4  | 3193 F10 | 4100 B6  | 5101 B2  | 7120-1 E11 | T101 F2 | T109 E2 | T115 E2  | T123 B9  | T130 E8 | T136 E8 | T144 B2  | T154 G12 |   |
| 1805 C12 | 2101 B2  | 2107 B10 | 2118 D8 | 2132 G11 | 3147 D3 | 3173 G4 | 3188 G6  | 3194 G10 | 4101 B6  | 5103 G11 | 7120-2 E11 | T102 D2 | T110 E2 | T116 D2  | T124 C10 | T131 E8 | T137 F8 | T145 B2  |          |   |
| 1806 B12 | 2102 B2  | 2109 C9  | 2121 D9 | 2133 D4  | 3149 D6 | 3175 F4 | 3189 H4  | 3195 G11 | 4102 B6  | 5102 B4  | 7122-1 H5  | T103 F2 | T111 E2 | T118 D2  | T125 D10 | T132 E8 | T138 F8 | T150 G12 |          |   |
| 1807 F1  | 2103 B8  | 2110 C8  | 2122 D8 | 2134 B8  | 3150 E6 | 3176 G3 | 3190 G5  | 3196 D12 | 4116 D5  | 7111 D4  | 7122-2 H5  | T104 F2 | T112 E2 | T119 D2  | T126 C10 | T133 E8 | T141 F2 | T151 G10 |          |   |
| 1809 D9  | 2104 B8  | 2114 C8  | 2125 D5 | 2135 F12 | 3160 E4 | 3182 F4 | 3191 E10 | 3197 E11 | 4119 F12 | 7118 F4  | 7123 F12   | T107 E2 | T113 E2 | T121 C10 | T128 B11 | T134 E8 | T142 F2 | T152 G10 |          |   |



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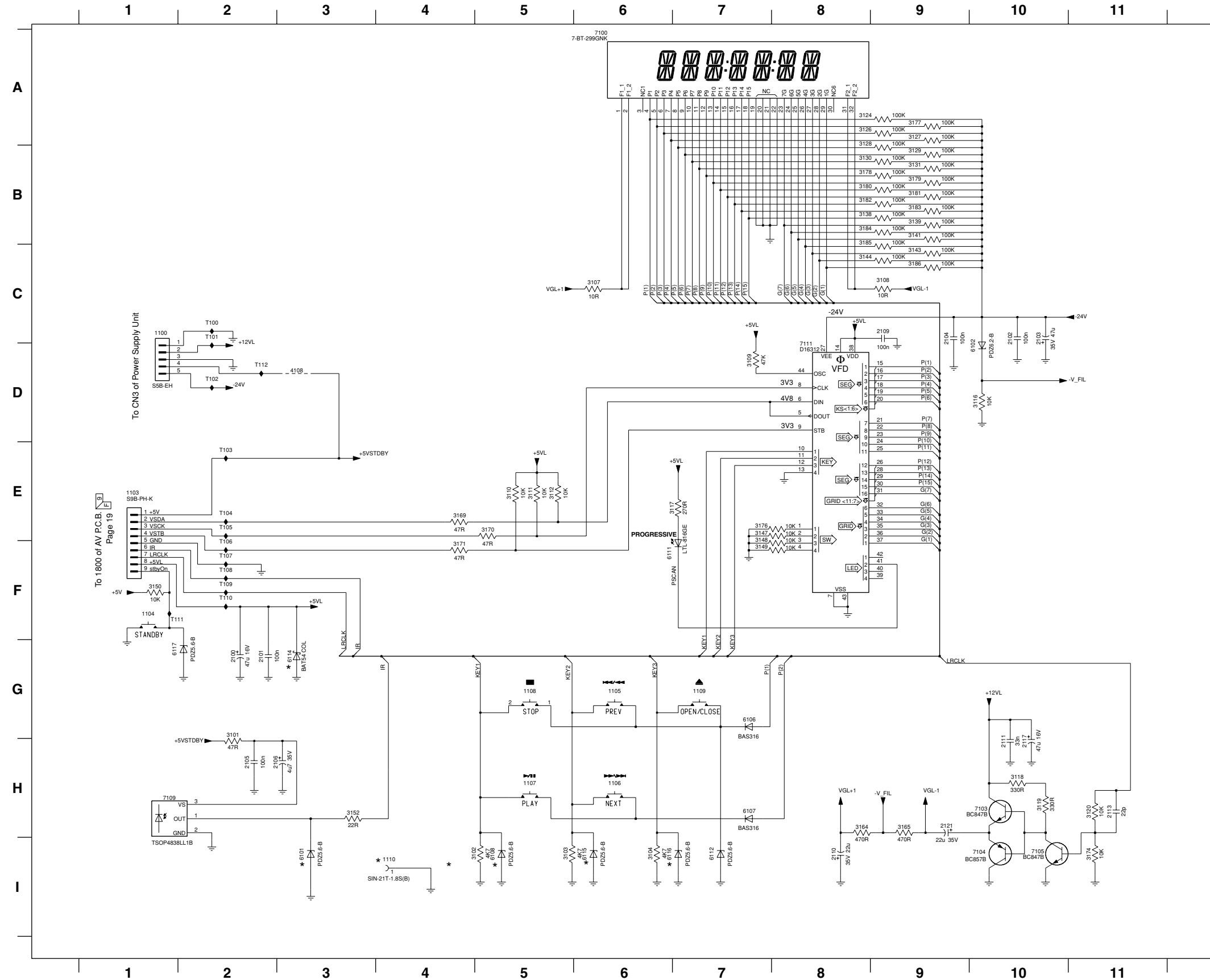
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| 1803 D9 | 3266 E4   |
| 1804 D9 | 3281 E3   |
| 1811 E7 | 3288 F3   |
| 1812 D1 | 3290 F2   |
| 2200 A4 | 3291 F2   |
| 2202 A3 | 3292 F4   |
| 2203 A6 | 3293 F5   |
| 2204 A4 | 4200 A3   |
| 2206 B5 | 4201 A5   |
| 2207 B2 | 4202 A3   |
| 2208 B6 | 4203 B6   |
| 2209 B4 | 4204 C6   |
| 2210 B2 | 6200 A4   |
| 2211 B8 | 6201 A5   |
| 2212 B4 | 6202 B5   |
| 2213 B5 | 6203 B3   |
| 2214 C1 | 6204 A1   |
| 2215 C5 | 6205 B3   |
| 2216 C8 | 6206 D1   |
| 2217 C6 | 6219 F1   |
| 2218 C4 | 7200 A4   |
| 2219 C8 | 7201 A3   |
| 2220 D4 | 7202 A5   |
| 2221 C2 | 7203 A2   |
| 2222 D8 | 7204-1 B5 |
| 2223 D5 | 7204-2 C5 |
| 2224 D8 | 7205 B7   |
| 2231 D8 | 7206 B8   |
| 2237 E5 | 7207 C7   |
| 2238 E5 | 7208 C8   |
| 2246 F5 | 7209 C2   |
| 2259 F5 | 7211 D5   |
| 2260 F1 | 7212 E3   |
| 3200 A4 | 7218 E4   |
| 3201 A4 | 7224 E3   |
| 3202 A2 | 7234 E4   |
| 3204 A5 | 7235 F3   |
| 3205 A6 | 7236 F3   |
| 3206 A6 | 7237 F1   |
| 3208 A2 | 7238 B1   |
| 3209 B3 | T200 D1   |
| 3210 B4 | T201 D1   |
| 3211 B6 | T202 E1   |
| 3212 B8 | T203 E1   |
| 3213 B4 | T204 B1   |
| 3214 B7 | T205 C9   |
| 3215 B8 | T206 D9   |
| 3216 B8 | T209 B9   |
| 3217 B1 | T210 B9   |
| 3218 C3 | T211 C9   |
| 3219 C4 | T212 B6   |
| 3220 C1 | T224 E6   |
| 3221 C5 | T226 F6   |
| 3222 C8 | T227 F6   |
| 3223 C1 | T231 F6   |
| 3224 C1 | T232 D5   |
| 3225 C7 | T233 E5   |
| 3226 C8 | T234 E5   |
| 3227 C8 | T235 F5   |
| 3228 C1 | T236 F5   |
| 3229 C3 |           |
| 3230 C4 |           |
| 3231 C1 |           |
| 3232 C6 |           |
| 3233 C4 |           |
| 3235 C1 |           |
| 3236 C8 |           |
| 3237 C1 |           |
| 3238 D8 |           |
| 3239 D3 |           |
| 3240 D4 |           |
| 3241 D5 |           |
| 3242 D8 |           |
| 3243 D3 |           |
| 3244 D3 |           |
| 3245 D4 |           |
| 3246 E3 |           |
| 3248 E3 |           |
| 3250 B1 |           |
| 3251 B2 |           |
| 3252 B2 |           |
| 3253 A2 |           |

★ Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.  
 ★ Schematic diagram is subject to change without notice.

The first digit of a component indicates the component type.

- 1xxx : Connector
- 2xxx : Capacitor
- 3xxx : Resistor
- 4xxx : SMD jumper
- 5xxx : Coil
- 6xxx : Diode
- 7xxx : IC, Transistor, FET
- 8xxx : Diode
- 9xxx : Wire jumper

FRONT



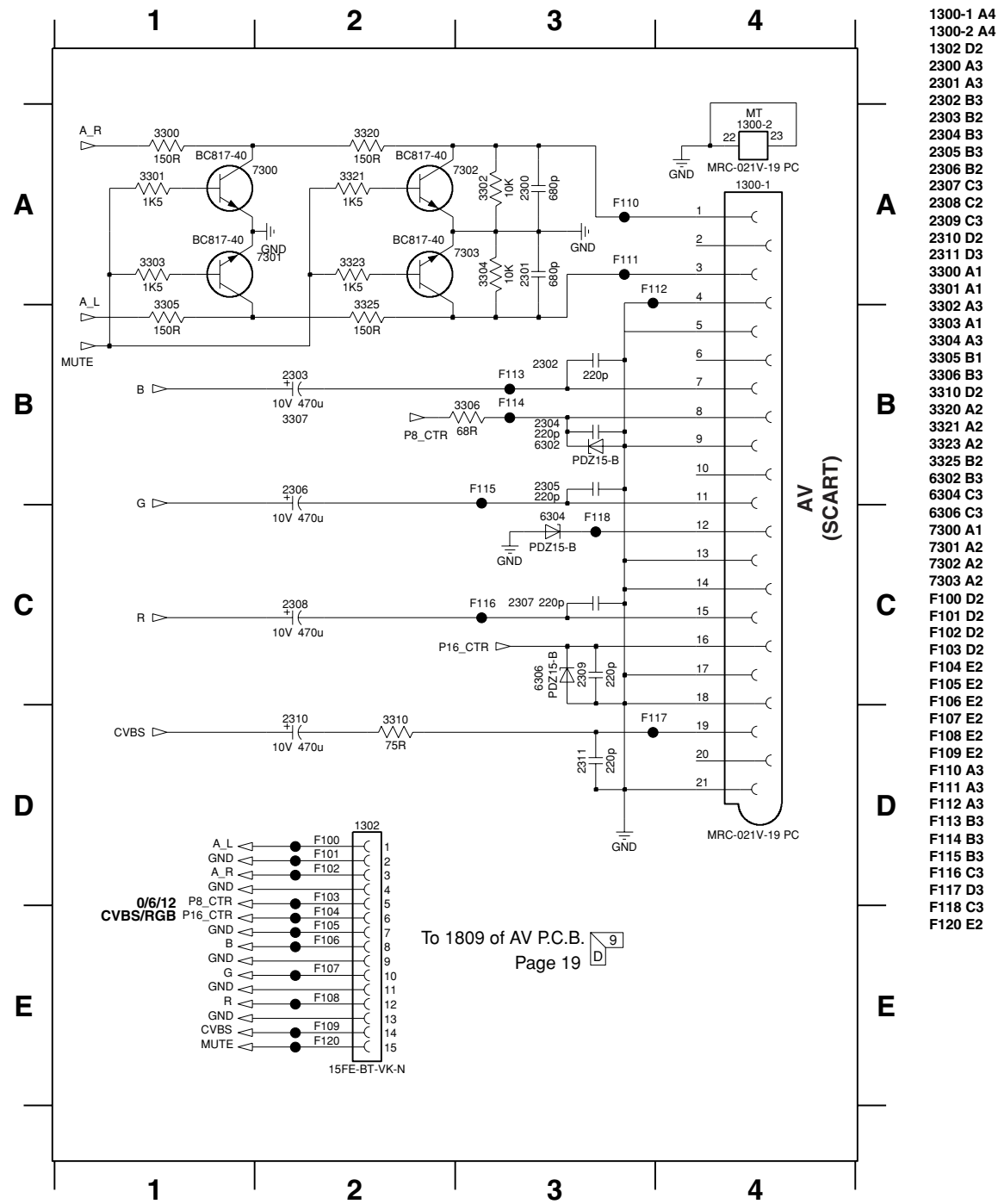
- 1100 C1
- 1103 E1
- 1104 F1
- 1105 G6
- 1106 H6
- 1107 H5
- 1108 G5
- 1109 G7
- 1110 I4
- 2100 G2
- 2101 G2
- 2102 C10
- 2103 C10
- 2104 C9
- 2105 H2
- 2106 H3
- 2109 C9
- 2110 I8
- 2111 H10
- 2113 H11
- 2117 H10
- 2121 H9
- 3101 G2
- 3102 I5
- 3103 I5
- 3104 I6
- 3105 I3
- 3108 C9
- 3109 D7
- 3110 E5
- 3111 E5
- 3112 E5
- 3116 D10
- 3117 E7
- 3118 H10
- 3119 H10
- 3120 H11
- 3124 A8
- 3126 A8
- 3127 A9
- 3128 B8
- 3129 B9
- 3130 B8
- 3131 B9
- 3138 B8
- 3139 B9
- 3141 B9
- 3143 C9
- 3144 C8
- 3147 E7
- 3148 F7
- 3149 F7
- 3150 F1
- 3152 H3
- 3164 H8
- 3165 H9
- 3169 E4
- 3170 E5
- 3171 F4
- 3174 I11
- 3176 E7
- 3177 A9
- 3178 B8
- 3179 B9
- 3180 B8
- 3181 B9
- 3182 B8
- 3183 B9
- 3184 B8
- 3185 C8
- 3186 C9
- 4108 D3
- 6101 I3
- 6102 D10
- 6106 G7
- 6107 H7
- 6108 I5
- 6111 F6
- 6112 I7
- 6114 G3
- 6115 I6
- 6116 I6
- 6117 G1
- 7100 A6
- 7103 H10
- 7104 H10
- 7105 H10
- 7109 H1
- 7111 D8
- T100 C2
- T101 C2
- T102 D2
- T103 E2
- T104 E2
- T105 E2
- T106 F2
- T107 F2
- T108 F2
- T109 F2
- T110 F2
- T111 F1
- T112 D2


★ Components having special characteristics are marked with a star and must be replaced with parts having specifications equal to those originally installed.  
 ★ Schematic diagram is subject to change without notice.

The first digit of a component indicates the component type.

1xxx : Connector    3xxx : Resistor    5xxx : Coil    7xxx : IC, Transistor, FET  
 2xxx : Capacitor    4xxx : SMD jumper    6xxx : Diode    9xxx : Wire jumper

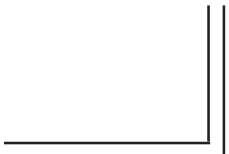
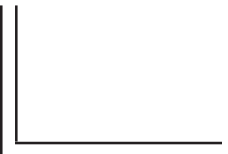
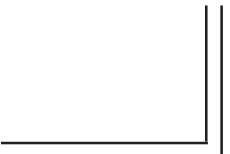
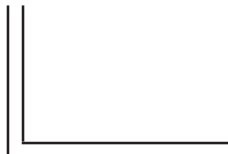
SCART (B, G models)



★ Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.  
 ★ Schematic diagram is subject to change without notice.

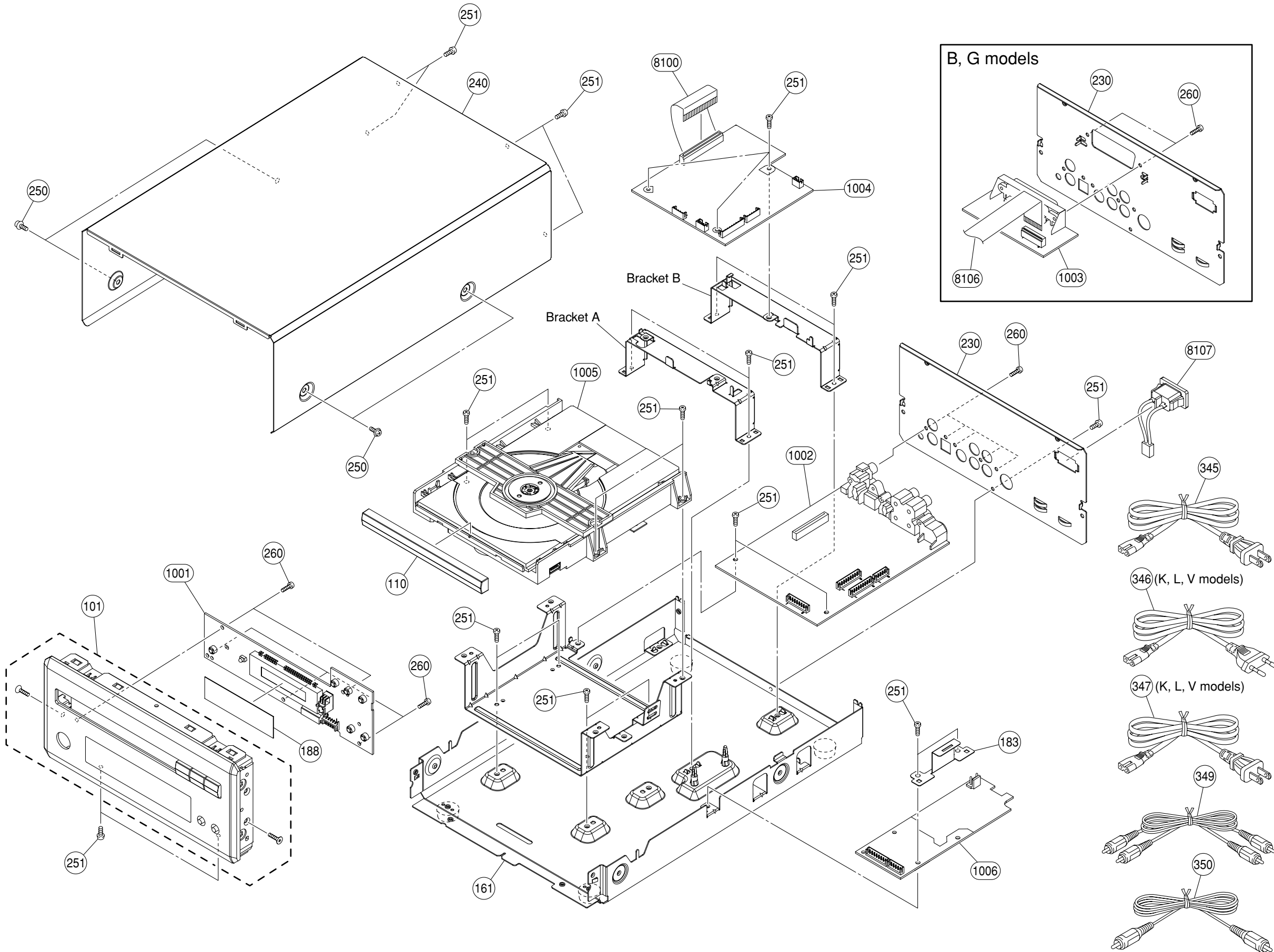
MEMO

MEMO















# REPLACEMENT PARTS LIST





**WARNING**

- Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.

| Ref. No.  | Part No. | Description                 | Remarks             | Markets        |         |
|---|----------|-----------------------------|---------------------|----------------|---------|
| * 101   | AAX79590 | FRONT PANEL ASS'Y           | GD                  | 3141 079 39811 |         |
| * 101   | AAX79570 | FRONT PANEL ASS'Y           | BL                  | 3141 079 39791 |         |
| * 101   | AAX79580 | FRONT PANEL ASS'Y           | SI                  | 3141 079 39801 |         |
| * 110   | AAX79530 | TRAY COVER                  | GD                  | 3139 244 11871 |         |
| * 110   | AAX79550 | TRAY COVER                  | BL                  | 3139 244 12921 |         |
| * 110   | AAX79540 | TRAY COVER                  | SI                  | 3139 244 11881 |         |
| * 161   | AAX79560 | FRAME ASS'Y                 |                     | 3141 079 39821 |         |
| * 183   | AAX79490 | CUT SHEET                   |                     | 3139 243 20621 |         |
| * 188   | AAX79450 | WINDOW SHEET (ORANGE)       | GD                  | 3139 243 20541 |         |
| * 188   | AAX79460 | WINDOW SHEET (BLUE)         | BL, SI              | 3139 243 20551 |         |
| * 230   | AAX79640 | REAR PANEL                  |                     | 3139 241 60751 | UC      |
| * 230   | AAX79621 | REAR PANEL                  |                     | 3139 241 60732 | T       |
| * 230   | AAX79610 | REAR PANEL                  |                     | 3139 241 25061 | KLV     |
| * 230   | AAX79630 | REAR PANEL                  |                     | 3139 241 60741 | A       |
| * 230   | AAX79600 | REAR PANEL                  |                     | 3139 241 24761 | B       |
| * 230   | AAX79600 | REAR PANEL                  |                     | 3139 241 24761 | G       |
| * 240   | AAX79500 | TOP COVER                   | GD                  | 3139 241 24681 |         |
| * 240   | AAX79520 | TOP COVER                   | BL                  | 3139 241 25071 |         |
| * 240   | AAX79510 | TOP COVER                   | SI                  | 3139 241 24691 |         |
| 250   | AAX53440 | PW HEAD TORX S-TIGHT SCREW  | GD, SI 3x6-8 MFN133 | 3104 120 40081 |         |
| 250   | AAX55450 | PW HEAD TORX S-TIGHT SCREW  | BL 3x6-8 MFZN2B3    | 3139 110 40611 |         |
| 251   | AAX23640 | PAN HEAD TORX S-TIGHT SCREW | 3x6 MFZN2B3         | 2511 077 00039 |         |
| 260   | AAX53520 | PAN HEAD TORX P-TIGHT SCREW | 3x8 MFZN2B3         | 2511 076 50012 |         |
| * 1001  | AAX79440 | P. C. B. ASS'Y              | FRONT               | 3139 248 89721 |         |
| * 1002  | AAX79410 | P. C. B. ASS'Y              | AV                  | 3139 248 89681 | UCTKALV |
| * 1002  | AAX79400 | P. C. B. ASS'Y              | AV                  | 3139 248 89661 | BG      |
| * 1003  | AAX79430 | P. C. B. ASS'Y              | SCART               | 3139 248 89671 | BG      |
| * 1004  | AAX79420 | P. C. B. ASS'Y              | MONO DVM9.1         | 3139 248 50221 |         |
| 1005  | AAX79060 | DVD MECHANISM               | WXD8829             | 3139 247 13341 |         |
|  1006  | AAX79050 | POWER SUPPLY UNIT           | SRV1919WW           | 3139 247 13351 | UCTKALV |
|  1006  | AAX77890 | POWER SUPPLY UNIT           | SRV1797EK           | 3139 247 12432 | BG      |
| * 8100  | AAX79470 | FLEXIBLE FLAT CABLE         | 30P 120mm           | 3139 111 04121 |         |
| * 8106  | AAX79480 | FLEXIBLE FLAT CABLE         | 15P 120mm           | 3140 110 20881 |         |
| * 8107  | AAX79930 | CABLE ASS'Y                 | 2P 140mm            | 3139 241 01731 | UCTABG  |
| * 8107  | AAX80010 | CABLE ASS'Y                 | 2P 140mm            | 3139 241 03121 | KLV     |
|   |          | ACCESSORY                   |                     |                |         |
|  345   | AAX56530 | POWER CABLE                 | 1.8m 1pc            | 2422 070 98134 | UC      |
| *  345 | AAX79670 | POWER CABLE                 | 1.5m 1pc            | 2422 070 98257 | T       |
| *  345 | AAX79940 | POWER CABLE                 | 1.5m 1pc            | 2422 070 00094 | KLV     |
|  345   | AAX56540 | POWER CABLE                 | 1.5m 1pc            | 2422 070 98248 | A       |
| *  345 | AAX79650 | POWER CABLE                 | 1.5m 1pc            | 2422 070 98147 | B       |
| *  345 | AAX79660 | POWER CABLE                 | 1.5m 1pc            | 2422 070 98151 | G       |
| *  346 | AAX79660 | POWER CABLE                 | 1.5m 1pc            | 2422 070 98151 | KLV     |
| *  347 | AAX79950 | POWER CABLE                 | 1.5m 1pc            | 2422 070 98242 | KLV     |
| 349   | AAX21980 | AUDIO PIN CABLE             | RD/WH 1.5m 1pc      | 3103 308 92611 |         |
| 350   | AAX22970 | VIDEO PIN CABLE             | YE 1.5m 1pc         | 3104 108 45432 |         |

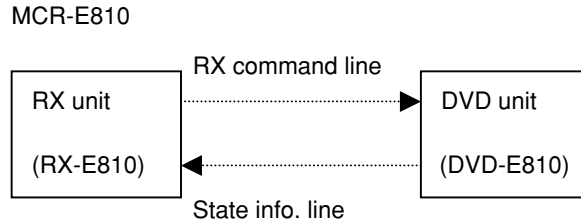
\* New Parts

## SYSTEM CONTROL

### 1. External Bus

#### 1.1. Physical format of external bus

It is composed of 2 bus lines.



#### 1.2. Format of RX command

RX command is the request of RX to DVD unit.

Both are expressed by the remote control code of the NEC format. And the signal wave form is the demodulated signal of remote control IR signal.

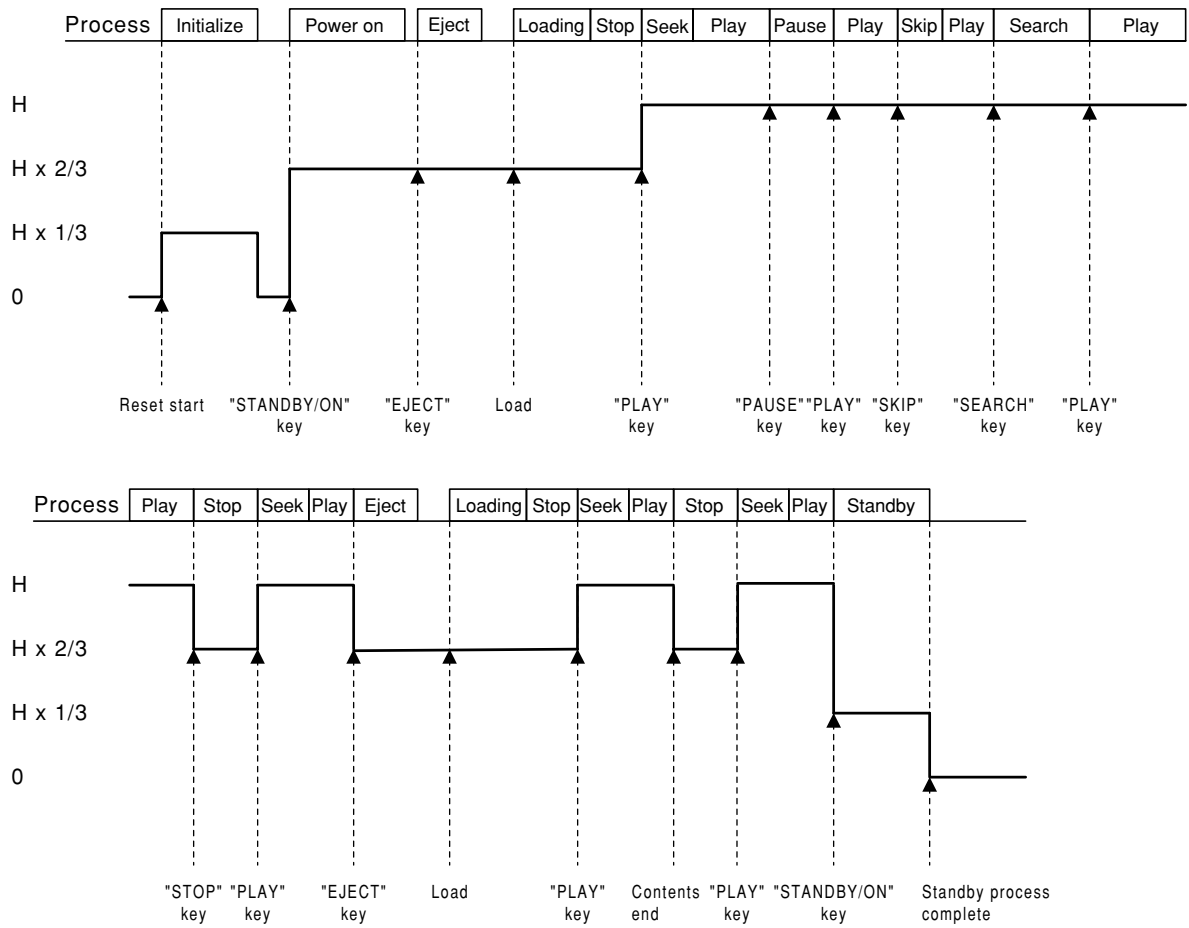
#### 1.3. Format of state info.

State info. is the state information of DVD and expressed by the DC voltage level.

| Name             | DC voltage level | Content  |
|------------------|------------------|--|
| PORT_PLAY        | H                | The period between from playback operation to stop factor generation.<br>Playback operation: "PLAY" key operation, disc tray hand push close<br>Stop factor: "STOP", "EJECT", "STANDBY/ON" key operation<br>Playback contents end<br>Failsafe stop by abnormal detection |
| PORT_STOP        | H x 2/3          | Power on state other than PORT_PLAY state  |
| PORT_PRE_STANDBY | H x 1/3          | The period between from standby operation to standby process completion and from DVD reset start to initialize process completion  |
| PORT_STANDBY     | 0                | Standby state after standby process completion   |

H: Microprocessor Vcc level

Example:



Note: The details or some limitations regarding the change of player status need the extra discussion.

## 2. Command and Operation Key Code

The system command and the system remote control code described as follows are transmitted through RX command bus.

### 2.1 RX request command

| Name       | Code  | Function  |
|------------|-------|---|
| POWER_ON   | 7C-F6 | Power on request                                |
| POWER_OFF  | 7C-F7 | Standby request                                 |
| PLAY       | 7C-82 | Playback request                                |
| STOP       | 7C-85 | playback stop request                           |
| DIMMER_ON  | 78-FE | Display dimmer(decrement of brightness) request |
| DIMMER_OFF | 78-FF | Cancel display dimmer                           |
| VFD_OFF    | 78-FD | VFD turn off request                            |

RX request command is not transmitted if DVD is already in the state that RX requests.

### 2.2 Operation key code

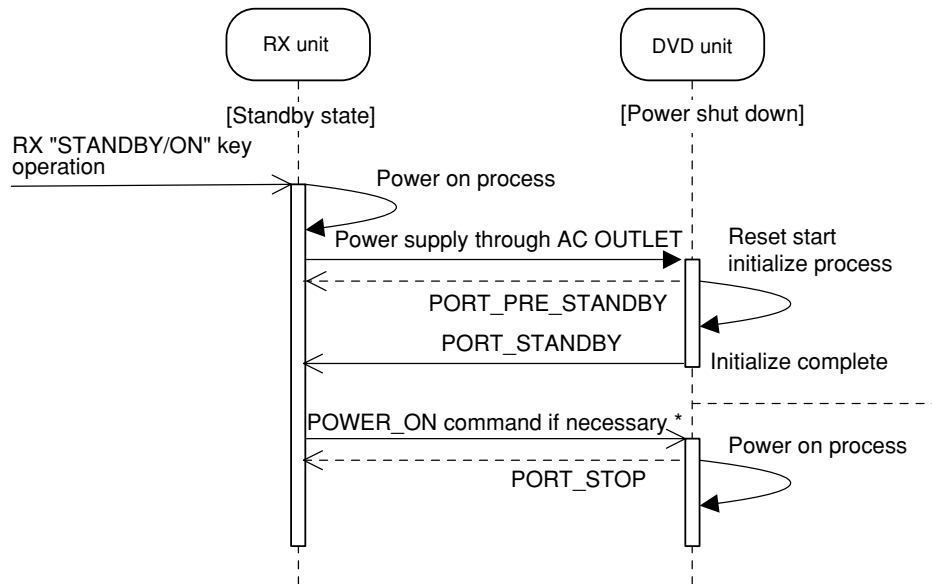
The DVD unit receives the remote control signal directly.

### 3. Command Communication for System Function

#### 3.1 Power on

##### (1) Power on by RX "STANDBY/ON" key operation

RX turns on the power by RX's "STANDBY/ON" key and at the same time DVD also turns on the power if DVD state is power on at the last RX's power on.

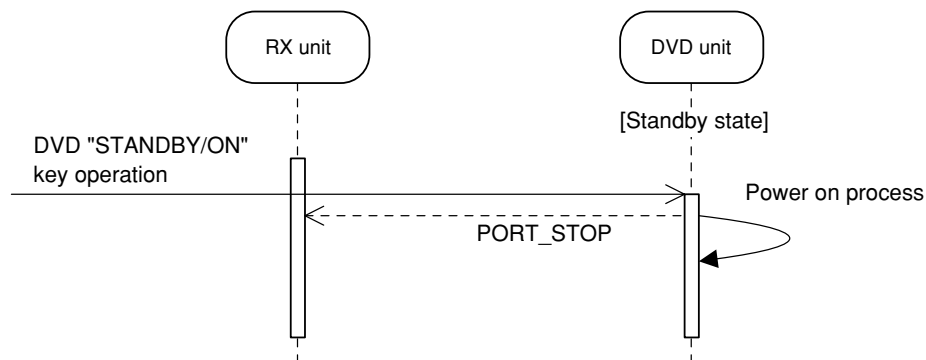


\* RX transmits POWER\_ON command if DVD state at the last RX's power on is power on.

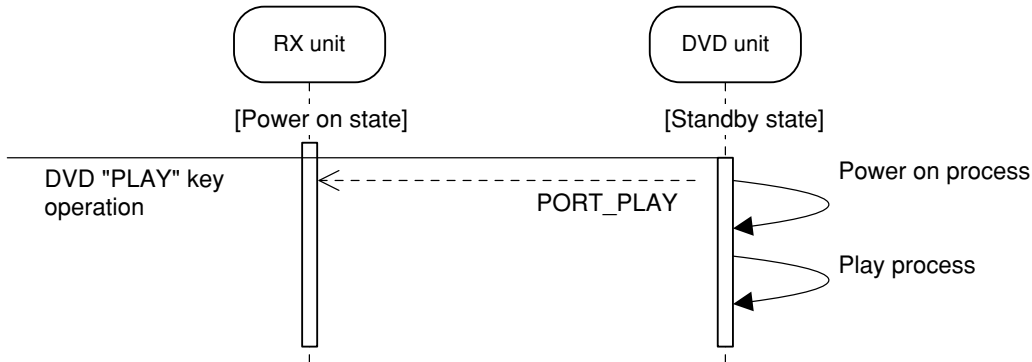
##### (2) Power on of individual unit by each "STANDBY/ON" key operation

In the system power on, the each unit can be changed into standby and then into power on again by the "STANDBY/ON" key operation of the unit.

When the power supply of the unit is individually supplied, only the unit can turn on the power by operating "STANDBY/ON" key of an individual unit even in system standby.



DVD unit can turn on the power by also other key, "PLAY" or "OPEN/CLOSE (EJECT)".  
 In this case, it carries out a peculiar function to the key after processing power on. However, only the power on processing is done by "PLAY" key without media.  
 When the system is in power on state and DVD unit is in standby state, only DVD unit is changed into power on state by this operation.

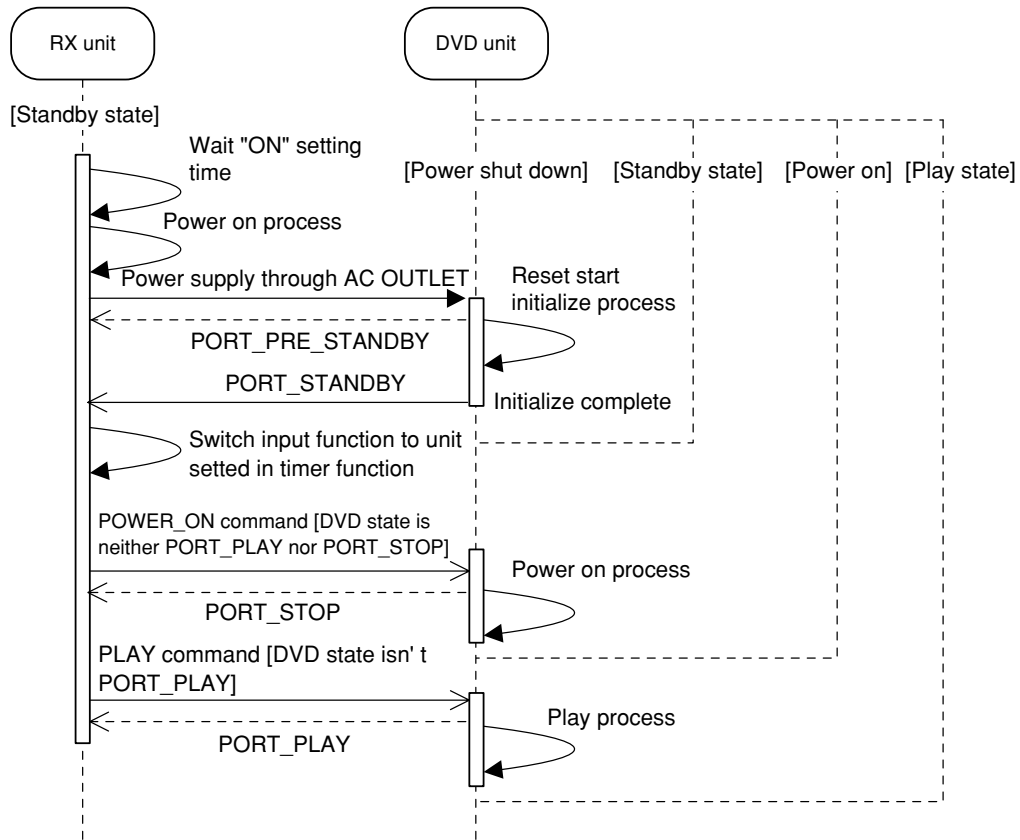


### 3.2 Timer function

The unit setted in this RX timer function is playbacked at the setting time as the ON-TIME.  
 It functions even when at setted time the system is already in power on state or the unit is already playbacked.

#### (1) Timer play

The state is not changed if the setted unit is already in the state of playback.



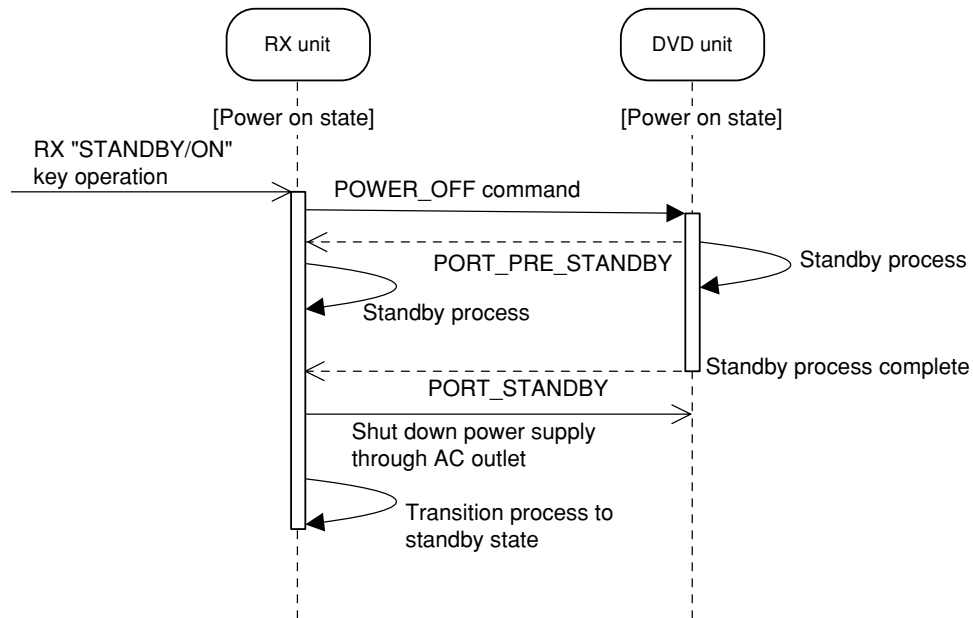
After sending POWER\_ON command, if DVD unit has Auto-play function after power-on, RX will not send PLAY command.

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### 3.3 Standby (power off)

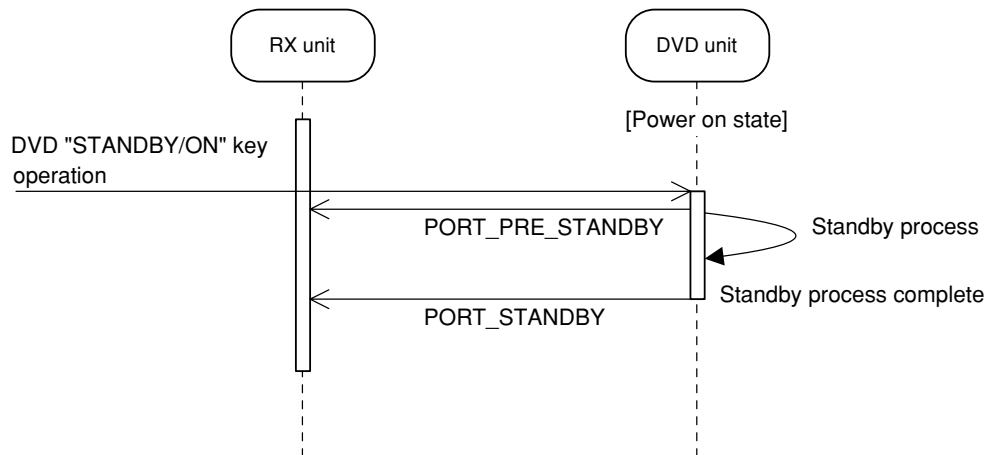
#### (1) System standby

The power supply through AC outlet of RX is shut down in system standby (power off).  
 The microcomputer of the unit connected with AC outlet of RX cannot work after system power off.  
 When there is processing that should be finished before the system power off, the system is turned power off after such processing completion.



#### (2) Unit standby (power off)

Each unit can be individually standby (power off) with an individual "STANDBY/ON" key of each unit.

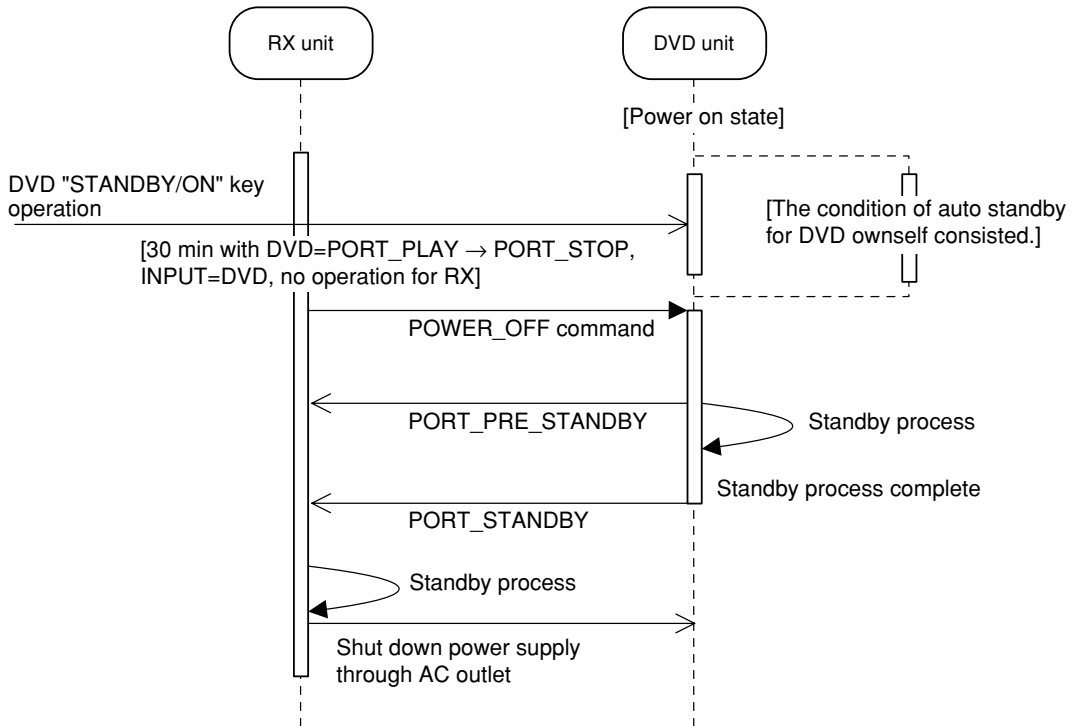


**(3) Auto standby (power off)**

When 30 minutes pass with the following conditions consisted, the system turns off the power (standby) automatically.

- a. The unit connected with an external bus is in the standby state.
- b. RX input function is DVD.
- c. RX is not operated

DVD might turn off the power by own auto standby function.

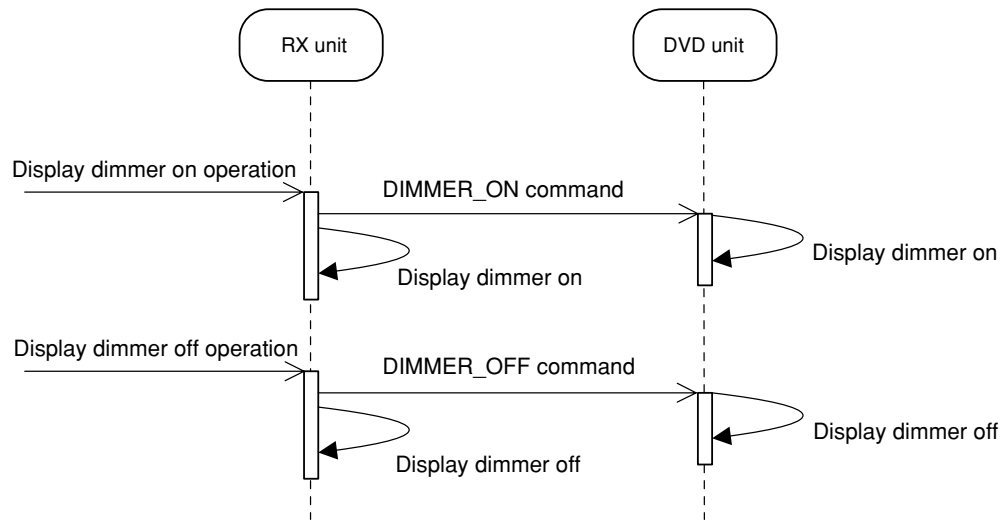




### 3.4 Display control

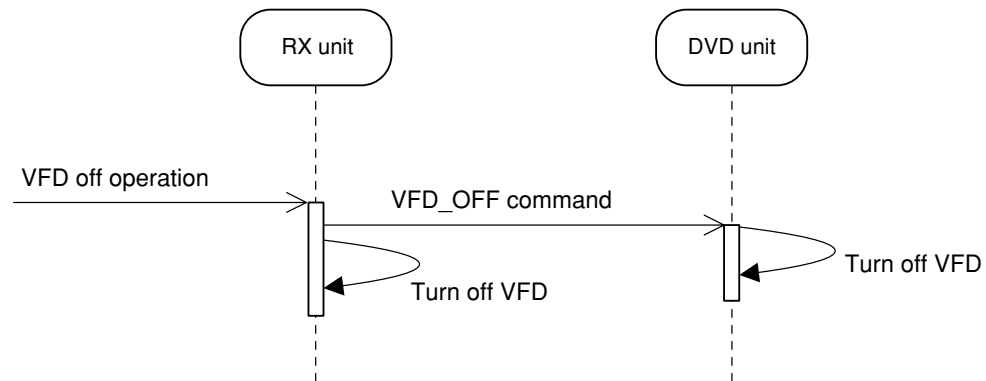
#### (1) Display dimmer function

This is the function to change the brightness of DVD's display by operating RX.



#### (2) Turn off VFD

This is the function to turn off VFD.



Exit: RX sends DIMMER\_ON or DIMMER\_OFF command, and then DVD unit turn on VFD with the appropriate dimmer value.

# DVD-E810

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