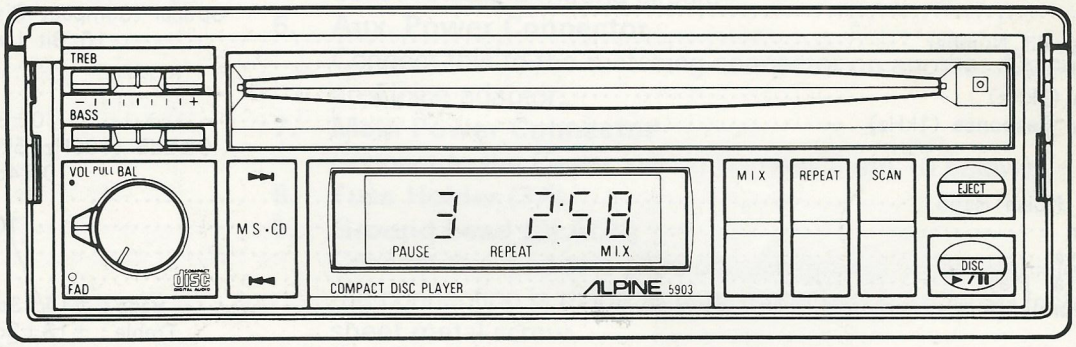
# ALPINE SERVICE MANUAL

## Compact Disc Player

- For information that is not mentioned in this service manual refer to the Service Manual 5903 (Part No. 68P13308W02, 03)
- For the CD player mechanism parts of this model, refer to the DP-S Series · Service Manual (Part No. 68P13315W03)

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# 5903S

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Additional Schematic Diagram Inserted.


# Specifications

**CD SECTION**

System ..... Optical (Compact Disc System)
Quantizing Bit Number ..... 16 Bit Liner System
Channels ..... 2 Channels
Distortion (1kHz) ..... 0.08%
Frequency Response (1kHz) ..... 0±3dB (20Hz)
0±2dB (100Hz, 5kHz, 10kHz)
0±4dB (20kHz)
Signal to Noise Ratio ..... 80dB
Separation ..... 70dB (1kHz)
Noise Level ..... 0.1mV
Currents (at Play) ..... 1.2A
Tone Control Effect ..... Bass : ±14±3dB (100Hz)
Treble : ±13±3dB (10kHz)

**GENERAL**

Power Supply ..... DC14V
Output Voltage ..... 1.2v
Impedance ..... 10k Ω
Semiconductors ..... 29 IC's, 55 Transistors, (North American model only)
54 Transistors (General Foreign model only)
21 Diodes, 13 Zener Diodes
Dimensions (W × H × D) ..... Nose : 178 × 50 × 15 (mm)
Chassis : 178 × 50 × 155 (mm)
Weight ..... 1.5kg

**COMPACT DISC**

Track Pitch ..... 1.6 μm
Modulation Frequency ..... 44.1kHz
Transfer Rate ..... 4.3218M bit/sec.
Dimensions ..... 120 × 1.2mm

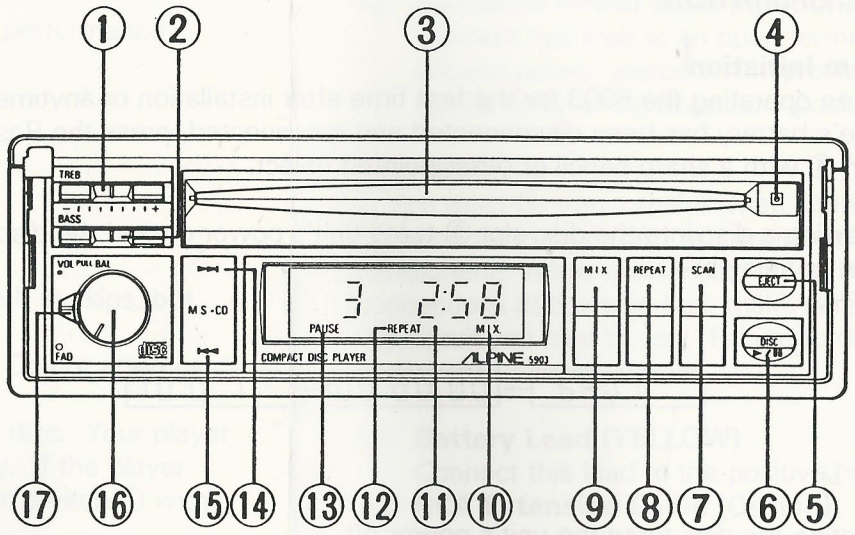
**NOTE** : Due to continuing product improvement, specifications and designs are subject to change without notice.

# FEATURES

- **8-TIME OVERSAMPLING DIGITAL FILTER**
- **POWER LOADING/SELF LOADING**
  Gently pulls the partially inserted compact disc into the play position and begins playback.
- **3-INCH DISC**
  Can play 3-inch discs without using an adaptor ring.
- **SCAN PLAY**
- **M.I.X.**
  When the M.I.X. button is pressed, the microprocessor inside the 5903 will randomly select tracks for playback. After all tracks have been played, the M.I.X. feature will go into Repeat mode and begin a new random sequence.
- **EJECT AUTO-LOCK**
  This protects the laser mechanism by locking it when a disc is ejected.
- **DUAL PRE-AMP OUTPUTS**
  The 5903 allows you to expand your system easily with its Dual Outputs and Pre-Amp Fader.
- **QUICK RELEASE BRACKET (Q.R.B.)**
  Alpine's exclusive Q.R.B. design allows for easy removal and insertion of the 5903 while still maintaining the unit's memory. The 5903 can be removed and hidden in the vehicle, or taken with the owner for theft prevention. This Q.R.B. is compatible with all Alpine Q.R.B. units that have RCA Connectors.



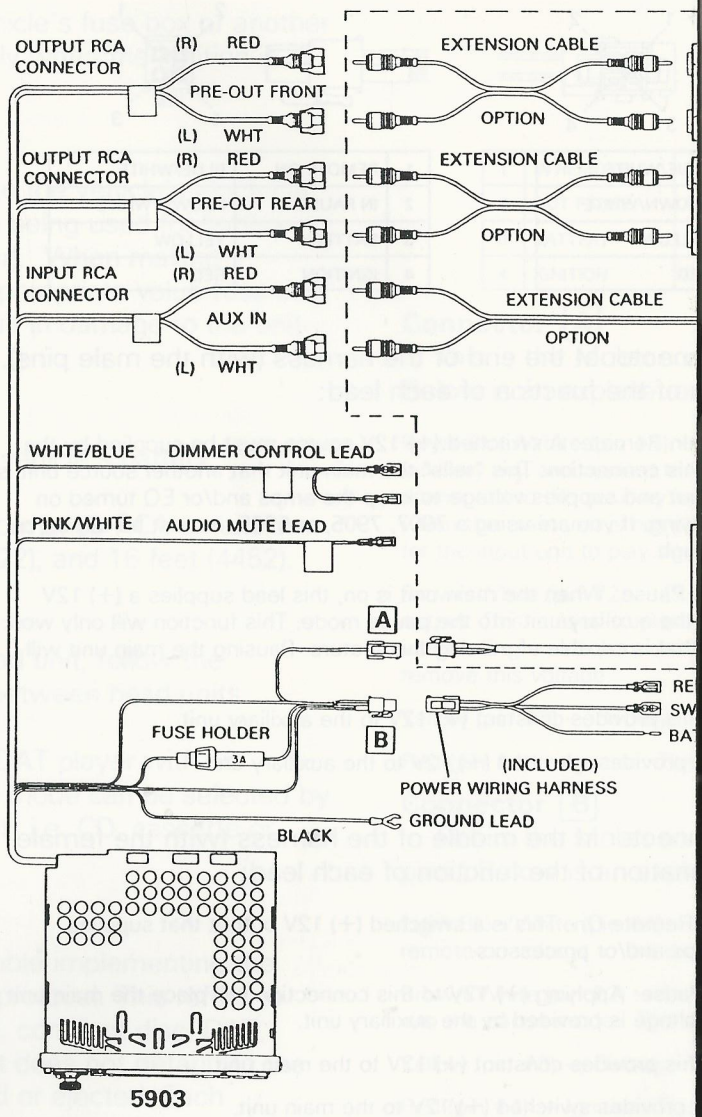
# CONTROLS AND INDICATORS



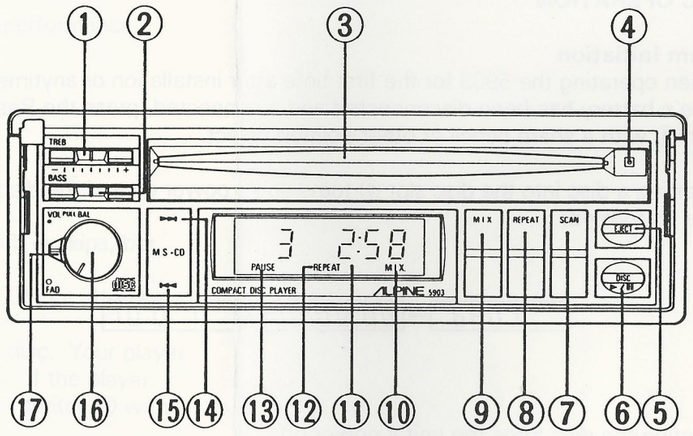

Listed below are all the Controls and their Indicators. Please see the Operation Section for explanations.

① **TREBle Control**
② **BASS Control**
③ **Disc Slot**
④ **Reset Switch**
⑤ **EJECT Button**
⑥ **DISC ▶/II (Play/Pause) Button**
⑦ **SCAN Button**
⑧ **REPEAT Button**
⑨ **M.I.X. Button**
⑩ **M.I.X. Indicator**
⑪ **Digital Display**
⑫ **REPEAT Indicator**
⑬ **PAUSE Indicator**
⑭ **M.S. · CD ⏭ (Up) Switch**
⑮ **M.S. · CD ⏮ (Down) Switch**
⑯ **VOLume Control/BALance Control (PULL)**
⑰ **FADer Control**

# CONNECTIONS



# CONTROLS AND INDICATORS

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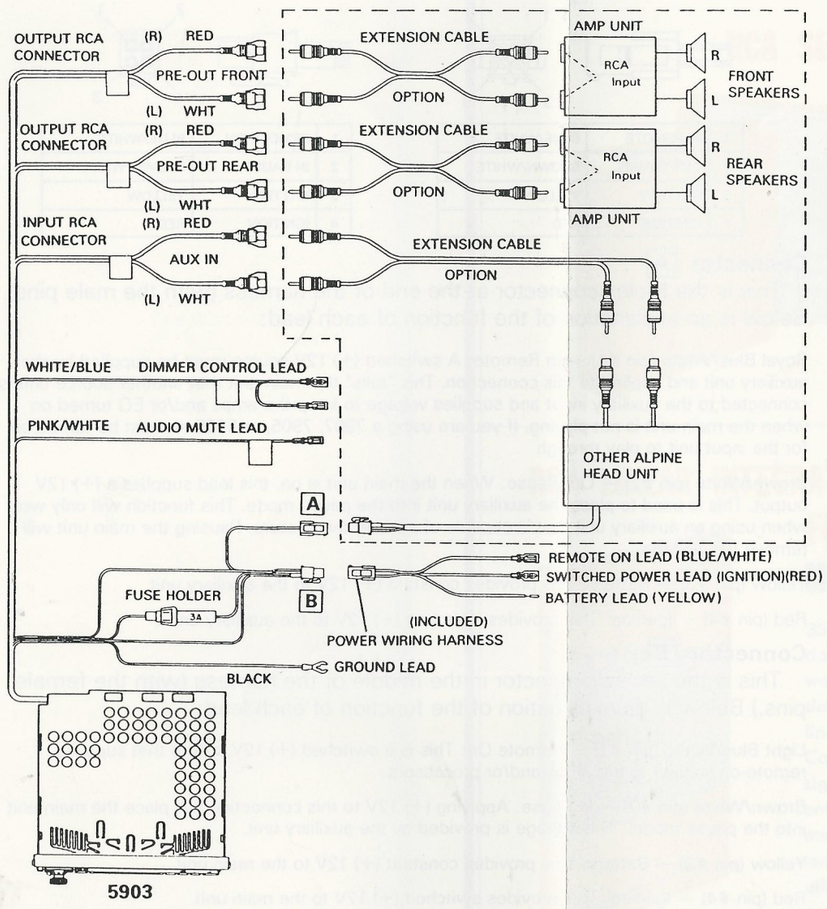
**FADer Control**



# CONNECTIONS




# CONNECTIONS

1. **Front Output RCA Connectors (Labeled LINE OUT FRONT)**
   RED is Right and WHITE is Left.
2. **Rear Output RCA Connectors (Labeled LINE OUT REAR)**
   RED is Right and WHITE is Left.
3. **Input RCA Connectors (Labeled LINE IN)**
   RED is Right and WHITE is Left.

**NOTE:**
The 5903 uses female RCA type connectors that are designed to connect to another unit (source unit, signal processor, or amplifier) having RCA connectors. You may need an adaptor to convert the other unit to this format. If so, please contact your authorized Alpine dealer for assistance.

4. **Dimmer Control Lead (WHITE/BLUE)**
   This lead is for connection to a rheostat such as the dashboard light dimmer in your vehicle. Applying (+) 12V to this lead causes the maximum dimming. Varying the voltage controls the brightness of the display. This allows you to dim the unit's display with the dashboard lights.
5. **Audio Mute Lead (Labeled Audio Interrupt In) (PINK/WHITE)**
   Applying (+) 12V to this lead mutes the audio output. This works well when connecting the 5903 with an Alpine 9510 or 9511 Cellular Phone equipped with Audio Interface output. Removing (+)12V from this lead deactivates the muting circuit.
6. **Aux. Power Connector**
   Connect this to the matching connector on another Alpine source unit or an Alpine adaptor.
7. **Main Power Connector**
   Connect to the Power Wiring Harness (item 10 below).
8. **Fuse Holder (3A)**
9. **Ground Lead (BLACK)**
   Connect this lead to a good chassis ground on the vehicle. Make sure the connection is made to bare metal and is securely fastened using the sheet metal screw.
10. **Power Wiring Harness**
    Connect the BLUE/WHITE, RED and YELLOW leads as described below.
11. **Remote On Lead (BLUE/WHITE)**
    Connect this lead to the remote turn-on lead of your amplifier or signal processor.

# CONNECTIONS

**12. Switched Power Lead (Ignition) (RED)**
Connect this lead to an open terminal on the vehicle's fuse box or another unused power source which provides (+)12V only when the ignition is turned on or in the accessory position.

**CAUTION:**
You must be very careful when connecting wires to the vehicle's electrical system. Be sure you **do not** interface leads that are being used for factory components in the vehicle (like an on-board computer). When making connections at the fuse box, make sure there is an appropriate value fuse on the circuit you plan to use. Failure to do so may result in damage to the unit and/or the vehicle.

**13. Battery Lead (YELLOW)**
Connect this lead to the positive (+) post of the vehicle's battery.

**14. RCA Extension Cable (Option)**
Your authorized Alpine dealer also has high performance RCA extension cables in three lengths: 4 feet (4410), 8 feet (4422), and 16 feet (4452).

**NOTE:**
When the 5903 is connected to another Alpine head unit, follow the procedures below for changing modes of operation between head units.

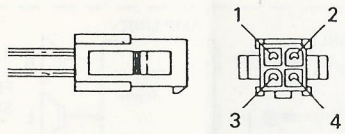
When combined with an Alpine FM/AM cassette or DAT player with an independent tuner mode select switch, any playback mode can be selected by pressing the desired function switch on the other unit; i.e. CD, cassette or tuner, etc.

**B Protocol**
We have heard from installers who are having trouble implementing the auxiliary input features of Alpine CD players using B protocol. This refers to the switching operation in multi-function systems (i.e. compact disc, DAT, cassette, and tuner). B protocol means the head unit does not default to the tuner or auxiliary input mode when the disc is paused or ejected. Each function must be initiated by the operator. These units are identified by the two Molex connectors on the power supply wiring harness. One of the Molex connectors has a matching wiring harness supplied with the unit. This is for providing battery and ignition power to the CD player. It also supplies remote turn-on output to amplifiers and/or processors in the system. The other Molex connector is for the auxiliary input unit. The illustration on the next page shows the two connectors:



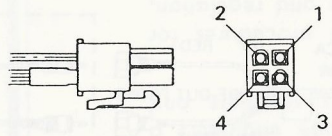
# CONNECTIONS

A AUX. POWER CONNECTOR




| | | |
|---|---|---|
| 1 | IN REMOTE | BLUE/WHITE |
| 2 | OUT PAUSE | BROWN/WHITE |
| 3 | BATTERY | YELLOW |
| 4 | IGNITION | RED |

B MAIN POWER CONNECTOR




| | | |
|---|---|---|
| 1 | REMOTE ON | BLUE/WHITE |
| 2 | IN PAUSE | BROWN/WHITE |
| 3 | BATTERY | YELLOW |
| 4 | IGNITION | RED |

**Connector A**
This is the Molex connector at the end of the harness (with the male pins). Below is an explanation of the function of each lead:

Royal Blue/White (pin #1) — In Remote: A switched (+) 12V source must be supplied by the auxiliary unit and applied to this connection. This "tells" the main unit that another source unit is connected to the auxiliary input and supplies voltage to keep the amps and/or EQ turned on when the main unit is not playing. If you are using a 7907, 7905, or 5905, it must be turned on for the input unit to play through.

Brown/White (pin #2) — Out Pause: When the main unit is on, this lead supplies a (+) 12V output. This is used to place the auxiliary unit into the pause mode. This function will only work when using an auxiliary unit that is capable of utilizing this feature. Pausing the main unit will remove this voltage.

Yellow (pin #3) — Battery: This provides constant (+) 12V to the auxiliary unit.

Red (pin #4) — Ignition: This provides switched (+) 12V to the auxiliary unit.

**Connector B**
This is the Molex connector in the middle of the harness (with the female pins.) Below is an explanation of the function of each lead:

Light Blue/White (pin #1) — Remote On: This is a switched (+) 12V output that supplies remote-on voltage to the amps and/or processors.

Brown/White (pin #2) — In Pause: Applying (+) 12V to this connection will place the main unit into the pause mode. This voltage is provided by the auxiliary unit.

Yellow (pin #3) — Battery: This provides constant (+) 12V to the main unit.

Red (pin #4) — Ignition: This provides switched (+) 12V to the main unit.

Operational problems arise when interfacing B protocol units with non-B protocol units (including non-Alpine product). To allow the auxiliary unit to play through in these applications, you must do two things: (1) provide (+) 12V on pin #1 (In Remote) of Connector A and (2) press and hold the pause button on the 5903 for 3 seconds. The 4095 and 4096 DIN/RCA adaptors have Molex connectors to Interface with B protocol units. Future product (units that have the pause function) will also have these Molex connectors. To resume CD playback, press the play button on the CD player.

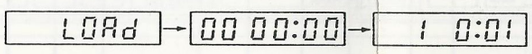
# OPERATION

## BASIC OPERATION

### System Initiation

When operating the 5903 for the first time after installation or anytime the vehicle's battery has been disconnected and reconnected, press the Reset switch ④ with a sharp pencil or other pointed object.

Inserting a disc into the disc slot ③ turns unit's power on and the display shows as follows:




Ejecting the disc turns the unit's power off.

### Volume Control

Rotating the Volume control ⑯ clockwise continuously increases the volume. Rotating the control counterclockwise will continuously decrease the volume.

### NOTE:

The noise level on compact discs is much lower than on analog-type records or tapes; therefore, when inserting a disc, keep the volume control turned fully counterclockwise, then adjust volume by gradually turning the control clockwise once playback begins.
Do not turn clockwise abruptly, as this could damage the speakers.

### Balance Control ⑯

Pull the Volume control ⑯ and rotate to balance between left and right speakers.

### Fader Control ⑰

Rotate the Fader control ⑰ for your desired front to rear volume balance.

### Separate Treble and Bass Controls (①, ②)

Slide these controls to the right to increase, and to the left to decrease the level of Bass or Treble.

# OPERATION

## CD OPERATION

### Normal Play (Repeat All)

1. Load the disc into the slot ③.
2. The digital display ⑪ shows "LOAd" during the loading operation then "00 00:00 " for a second while the data on the disc is read. The first track on the disc will begin playback and the display will show " 1 0:01."
3. After the last track on the disc is played back, the pickup will return to the beginning of the disc and begin playback from that point.

### NOTE:

Playing a disc while driving on a bumpy road may cause a player to skip, but this will not scratch the disc or damage the player.

### Load and Reload

1. Insert a disc into the disc slot ③. When the disc is halfway in, the power loading system will take over and guide the disc into the play position.
2. If the disc is ejected and left at least halfway in, press the ▶/II button ⑥.
3. When a disc is loaded the CD mode will automatically switch on and the digital display ⑪ shows "LOAd" during the power loading then "00 00:00" for a second while the data on the disc is read.
4. Playback will begin and the display ⑪ will show " 1 0:01."

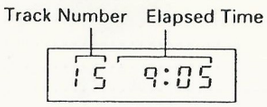
### CAUTION:

1. Your player accepts only one disc at a time for playback. Do not attempt to load more than one disc.
2. Make sure the label side is facing up when you insert the disc. Your player will automatically eject any disc that is inserted incorrectly. If the player continues to eject a correctly inserted disc, push the Reset switch ④ with a pointed object such as a sharp pencil.
3. You can also play 3-inch CDs in this player without using a 3-inch adaptor ring. Do not use any adaptor ring as this may cause the unit to malfunction.
4. Make sure your discs are labeled as shown below:

COMPACT disc DIGITAL AUDIO

### Track/Elapsed Time Display

The Track Number being played and the Elapsed Time from the beginning of the current track will appear in the digital display ⑪ as shown below.



# OPERATION

**EJECT**

If the eject status is maintained more than 15 seconds (when using a 5-inch disc), the self-loading system will be automatically actuated and the disc will be reloaded into the mechanism. The player will be in the pause mode. Press the ▶/II button ⑥ to resume playback. When using 3-inch discs, the eject status continues until the disc is pushed in.

**PAUSE**

Press the ▶/II button ⑥ to temporarily stop playback. The PAUSE indicator ⑬ appears in the display and the playback stops while the disc remains inside the player. To resume playback, press the ▶/II button ⑥ again.

**NOTE:**

If this CD player is placed in the Pause mode by another interconnected unit (to activate the tuner mode etc.) or a remote control, the display will show the track number and "PAU."

**Fast Forward/Fast Backward**

The Fast Forward/Fast Backward feature works in both play and pause modes.

1. Press either the M.S. ⏭ ⑭ or the M.S. ⏮ ⑮ switch and hold it down for more than 2 seconds.
2. To move the pickup forward rapidly, hold down the M.S. ⏭ switch ⑭.
3. To move the pickup backward rapidly, hold down the M.S. ⏮ switch ⑮.
4. When the pickup reaches the end of the disc in the Fast Forward mode, it automatically returns to the beginning. Playback will then start from the beginning of the disc.
5. When the pickup reaches the beginning of the disc in the Fast Backward mode, playback automatically begins from that point.

**REPEAT (One)**

This feature allows you to continuously playback a single track.

1. Press the REPEAT button ⑧.
2. The musical track shown in the display ⑪ will be played back repeatedly.
3. To defeat the Repeat function, press the REPEAT button a second time.

**M.I.X. (Random Play)**

Depress the M.I.X. button ⑨ while in play or pause mode. The music tracks will be played back in a random sequence generated by the microprocessor. After all the tracks on the disc have been played back once, the player will begin a new random sequence. To defeat random play, press the M.I.X. button ⑨ again.



# OPERATION

**SCAN**

This function allows playback of the first 10 seconds of each track in succession. This function is useful in searching for a specific program ahead on a disc. Push the SCAN button ⑦ to activate the scan mode. The track number being scanned will blink in the display. A second push of the SCAN button ⑦ deactivates the scan function.

**Music Sensor (Skip)**

This feature allows you to access the beginning of your musical track selection simply and quickly. It is functional in the play or pause mode. The digital display ⑪ shows the track number you have selected.

- To advance to the next track on the disc, press ⏭ side of the M.S. switch ⑭.
  1. Playback stops, the pickup moves up to the beginning of the next track. That track number appears in the digital display ⑪.
  2. Playback begins immediately.
  3. If you wish to access a track further ahead on the disc, continue pressing the ⏭ side of the M.S. switch ⑭ until you reach the track of your choice.

- To replay the track that is currently playing, press ⏮ side of the M.S. switch ⑮.
  1. Playback stops, the pickup moves back to the beginning of the current track. That track number in the digital display ⑪ remains the same.
  2. Playback begins immediately from the beginning of the track.
  3. If you wish to access a track further towards the beginning of the disc, continue pressing the ⏮ side of the M.S. switch ⑮ until you reach the track of your choice.

# PRECAUTIONS

**IMPORTANT NOTICE**

This compact disc player has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules. This equipment generates and uses radio frequency energy, and it must be installed and used properly in accordance with the manufacturer's instructions.

**Replacing the Fuse**

When replacing a fuse, make sure the replacement fuse has the same amperage rating (3A), as shown on the fuse holder. If the fuse continues to blow, carefully check all electrical connections for short circuits. It is also a good idea to check the car's voltage regulator. Do not attempt to repair or service the unit yourself. Return the unit to your nearest authorized Alpine Service Station for servicing.

**Eject Auto-Lock**

Be sure to eject the compact disc from the player before removing the unit from the dash. It is necessary to remove the CD in order for the locking mechanism to be activated. Failure to do this may cause damage to the compact disc or the laser mechanism.

**Thermal Protection Circuit**

Be sure the temperature inside the vehicle is between +60°C (+140°F) and −10°C (+14°F) before attempting to play a disc. When the temperature is over +60°C (+ 140°F), the protection circuit functions to stop the CD player, and "— — — H" is displayed.

**Moisture Condensation**

You may notice the playback sound wavering. When this happens, remove the disc from the player and wait about an hour until the moisture evaporates.

**Handling of the Unit When Removed From Quick Release Bracket**

When the 5903 is removed from the in-dash bracket, remember these care tips:

1. Do not drop or apply shock to the unit. It might cause permanent damage.
2. Keep the unit away from:
   a: Water and moisture
   b: Direct sun and heat
   c: Excessive dust
   d: Strong magnetic field such as an audio speaker, magnet, or TV.
3. Your authorized Alpine dealer carries an optional carrying case for transporting the player when it is out of the vehicle.



# PRECAUTIONS

**Installation Location**

The 5903 is designed for in-dash mounting. For optimum performance, make sure the player will not be exposed to:

1. Direct sun and heat
2. High humidity
3. Excessive dust
4. Excessive vibrations.

**Caution During Playback**

Playing a disc while driving on a very bumpy road may result in skips, but this will not scratch the disc or damage the player.

1. Your player accepts only one disc at a time for playback. Do not attempt to load more than one disc.
2. Make sure the label side is facing up when you insert the disc. Your player will automatically eject any disc that is inserted incorrectly. If the player continues to eject a correctly inserted disc, push the Reset switch ④ with a pointed object such as a sharp pencil.

**Playing 3-inch CDs**

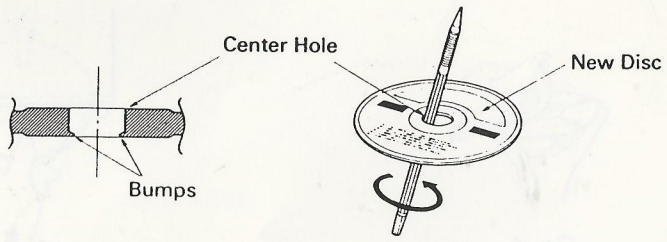
When playing 3-inch CDs in the 5903, do not use an adaptor ring. Adaptor rings may become stuck inside the player and damage the mechanism.

**Caution for New Discs**

When a newly purchased disc is inserted, it may be ejected after initial loading.
This is caused by small bumps around the center hole of the disc, which prevents stable loading to the correct position.
Remove bumps by rubbing inside the hole with a ball-point pen or other such instrument, then insert the disc again.

**Please note**

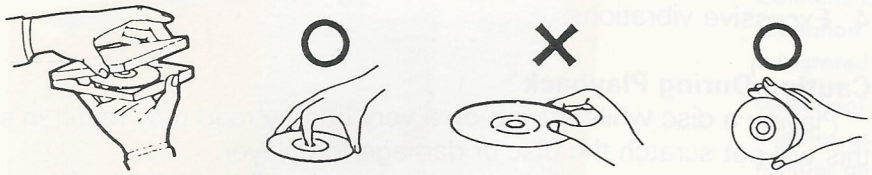
The mechanism automatically ejects such a disc as a protective measure, and this is not a faulty operation.



# PROPER CARE OF YOUR DISC

**Proper Handling**

Handle your disc as shown. Do not drop the disc while handling. Hold the disc so you will not leave fingerprints on the surface. If the surface is scratched, it may cause the pickup to skip signal tracks. Do not affix tape, paper, or gummed labels on the disc. Do not write on the disc.



**Keep Your Discs Clean**

Fingerprints, dust, or soil on the surface could cause the pickup to skip signal tracks. For routine cleaning, wipe the playing surface with a clean, soft cloth from the center of the disc to the outer edge. If the surface is heavily soiled, dampen a clean soft cloth in a solution of mild neutral detergent before cleaning the disc. (Fig. A)

**Damaged Disc**

Do not attempt to play cracked, warped, or otherwise damaged discs. Playing a bad disc could severely damage the playback mechanism.

**Storage**

When not in use, place your discs in their individual cases and store them in a cool place away from the sun, heat, and dust.

**Never Attempt the Following**

Do not grip or pull out the disc while it is being pulled back into the player by the automatic Reloading mechanism. (Fig. B)

Do not pull the unit out from the dash while a disc is playing. The disc will be unstable in the unit and may be damaged.

Do not attempt to insert a disc into the unit when the unit power is off.

Fig. A

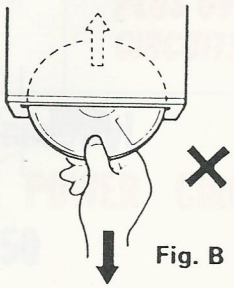


Fig. B

# Adjustment Procedures

## 1. Compact Disc

(1) Connections

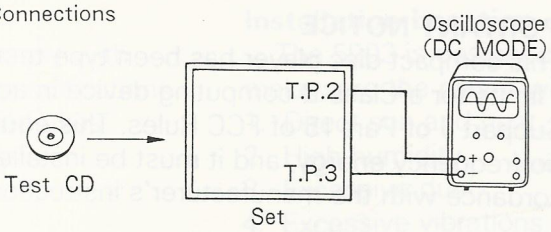



Figure 1

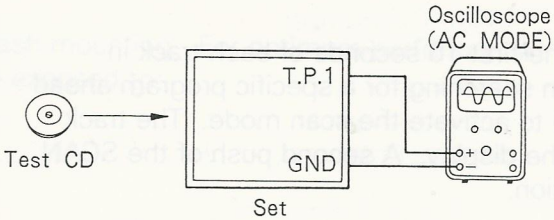
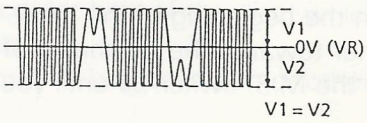
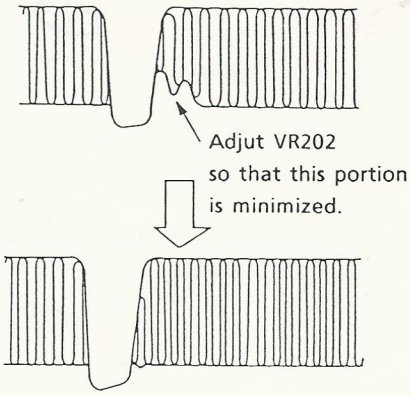



Figure 2

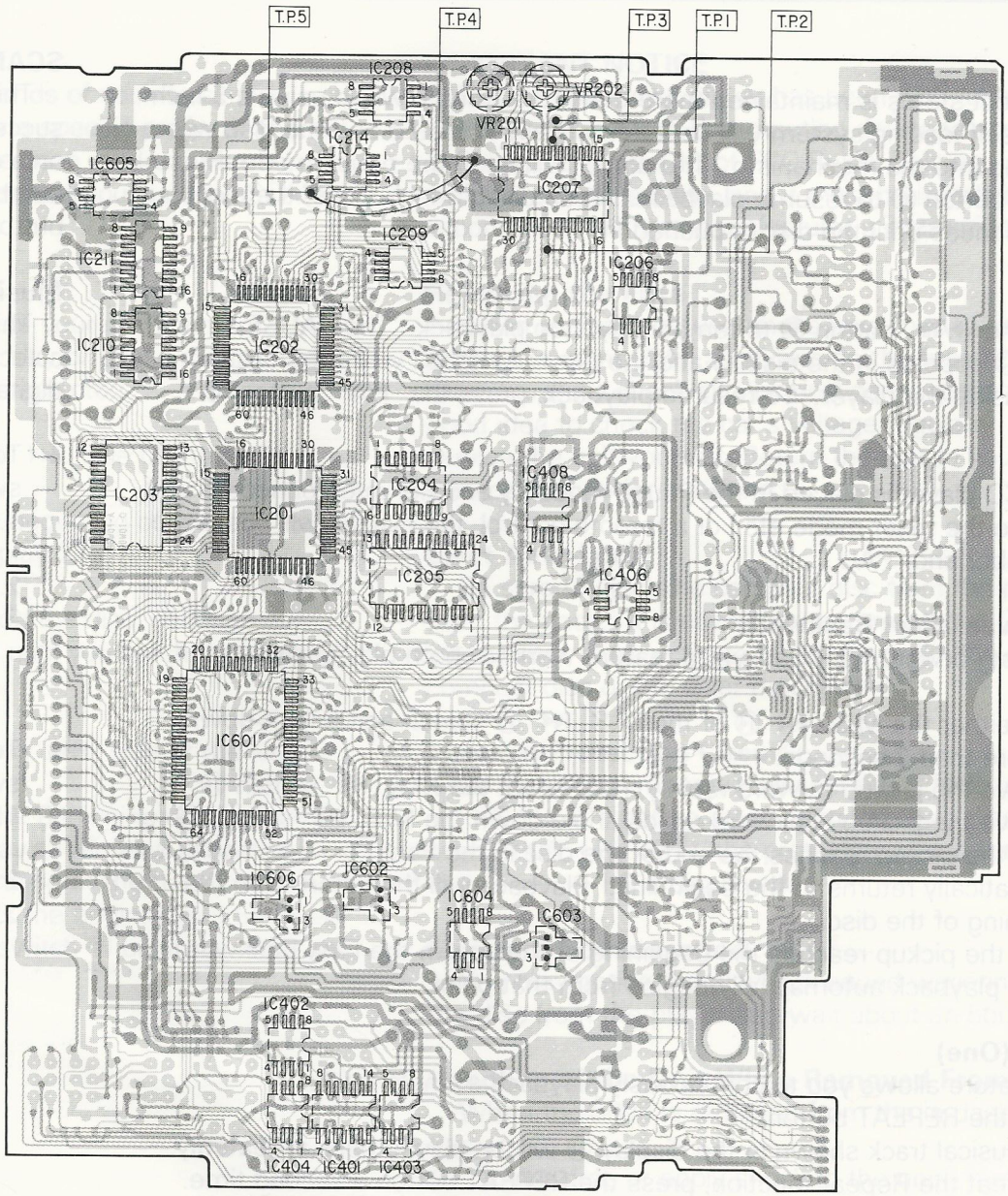
(2) Control Setting

Balance Control ····· Mechanical Center
Treble／Bass Control ····· Mechanical Center
Other Switches ····· OFF

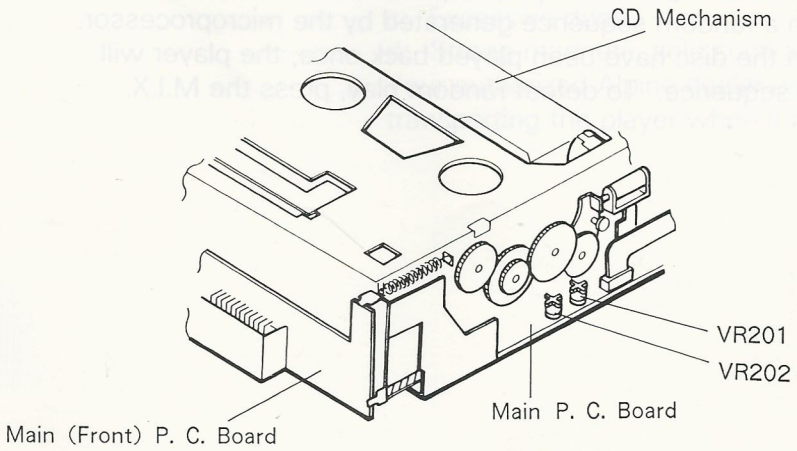
(3) Adjustment Procedures

| Step | Description | Test CD | Connection | Test Point | Adjustment Point | Adjustment |
|---|---|---|---|---|---|---|
| 1 | Tracking Balance Adjustment | TCD782 Track No.8 (A-BEX) | Figure 1 | T.P.2 T.P.3 | VR201 | ① Set the mode to playback with the test disc loaded.<br>② Use wire to connect T.P.4 to T.P.5.<br>③ Using the oscilloscope, measure the T.P.2 signal in reference to VR. (VR standard=0V)<br>④ Adjust VR201 so that the positive and negative deflection widths of the T.P.2 signal are at the same level, relative to VR (0V). (The entire waveform moves up and down.)<br>  <br><br>⑤ After adjustment, remove the wire connecting to T.P.4 to T.P.5. |
| 2 | Tracking Offset Adjustment | TCD721 Track No. 6 (A-BEX) | Figure 2 | T.P.1 | VR202 | ① Set the mode to playback with the test disc loaded.<br>② Using the oscilloscope, measure the T.P.1 signal.<br>③ Adjust VR202 in order to minimize the waveform induced by the reaction to the omission of the T.P.1 signal.<br>④ Conduct the tracking balance adjustment once again.<br>  <br> |

# Adjustment Locations




**Main P. C. Board** (Foil Side)



# Description of IC Terminal

## ● μ PD6376GS (IC204)

| No. | Symbol | I/O | Terminal description |
|---|---|---|---|
| 1 | 4/8fs SEL | I | Low : "R"Data→15 pin input<br>"L"Data→15 pin input<br>High : "R"Data→14 pin input<br>"L"Data→15 pin input |
| 2 | D. GND | | Digital GND |
| 3 | NC | | No Connection |
| 4 | D. $V_{DD}$ | | Digital $V_{DD}$ |
| 5 | A. GND | | Analog GND |
| 6 | R. OUT | O | R-ch OUTPUT |
| 7 | A. $V_{DD}$ | | Analog $V_{DD}$ |
| 8 | A. $V_{DD}$ | | Analog $V_{DD}$ |
| 9 | R. REF | | R-ch Voltage Reference |
| 10 | L. REF | | L-ch Voltage Reference |
| 11 | L. OUT | O | L-ch OUTPUT |
| 12 | A. GND | | Analog GND |
| 13 | LRCK/WDCK | I | Left/Right Clock WORD Clock |
| 14 | LRSEL/RSI | I | Left/Right Selection R-ch Series Input |
| 15 | SI/LSI | I | Series Input L-ch Series Input |
| 16 | CLK | I | CLOCK |

## ● CXD2551M (IC205)

| No. | Symbol | I/O | Terminal description |
|---|---|---|---|
| 1 | TEST | I | Test pin |
| 2 | 8fs/$\overline{4fs}$ | I | Fir 3 designation "H" ; 8fs, "L" ; 4fs |
| 3 | XOUT | O | Clock output (f=384fs) |
| 4 | XIN | I | Clock input (f=384fs) |
| 5 | NC | | N. C. |
| 6 | $V_{DD}$ | | Power supply (5V) |
| 7 | NC | | N. C. |
| 8 | NC | | N. C. |
| 9 | BCK | I | BCK input |
| 10 | DATA | I | Serial data input |
| 11 | LRCK | I | LRCK input |
| 12 | $\overline{INIT}$ | I | Timing generator start ↑ |
| 13 | LATCH | I | Latch clock input |
| 14 | SHIFT | I | Shift clock input |
| 15 | ATT | I | ATT data input |
| 16 | BCKO | O | BCK output |
| 17 | NC | | N. C. |
| 18 | NC | | N. C. |

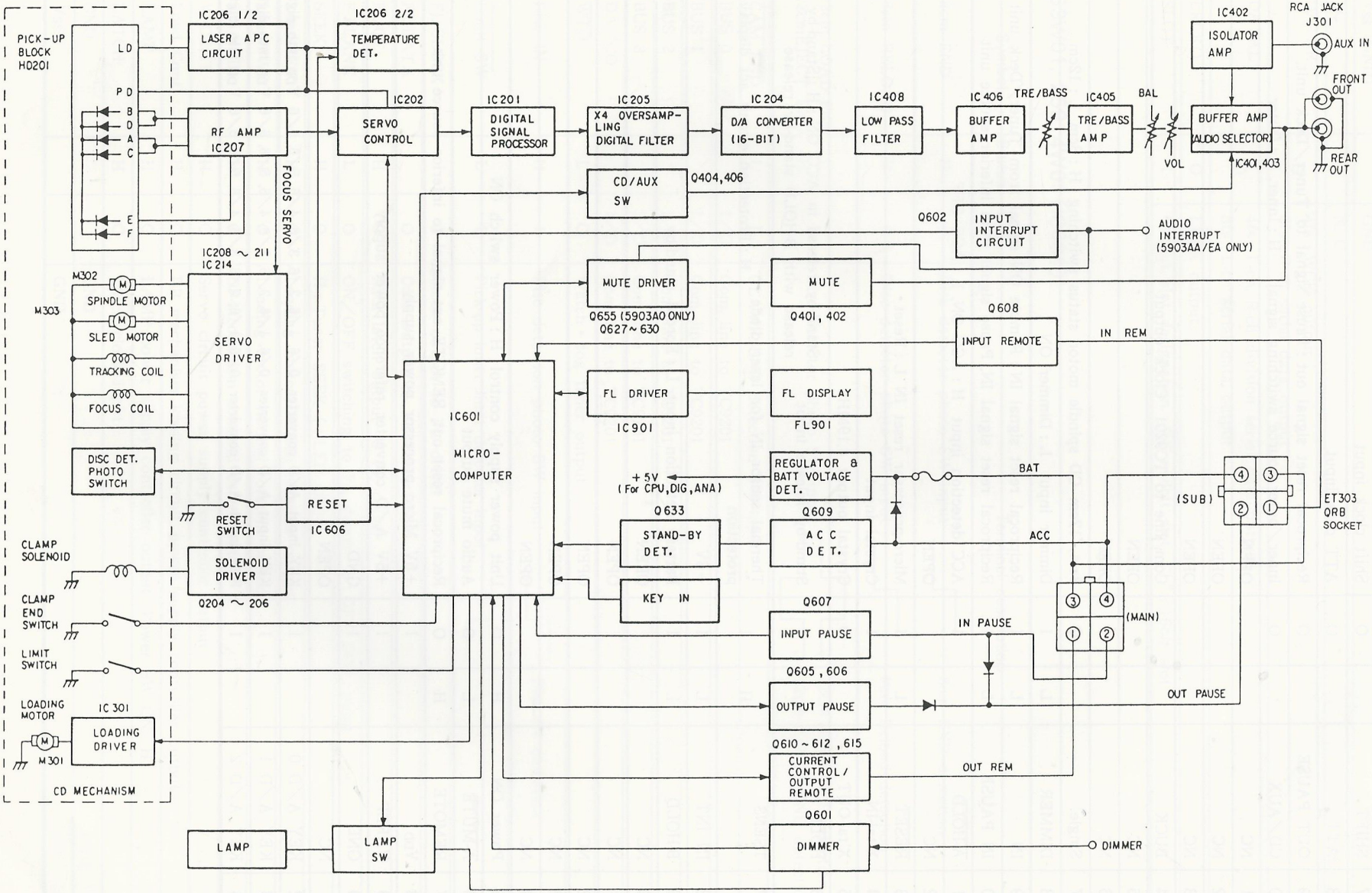
| No. | Symbol | I/O | Terminal description |
|---|---|---|---|
| 19 | Vss (GND) | | GND |
| 20 | NC | | N. C. |
| 21 | DATAR | O | 4fs : WCK output<br>8fs : R-ch serial data output |
| 22 | DATAL | O | 4fs : L-ch, R-ch division serial data output<br>8fs : L-ch serial data output |
| 23 | LRCKO | O | LRCK output |
| 24 | SLOT | I | Output slot designation "H" : 18bit slot, "L" : 16bit slot |

## ● 15263W01, 25914W01 (IC601)

| No. | Symbol | Status | I/O | Terminal description |
|---|---|---|---|---|
| 1 | 8cm END | H | I | Disc detector photo SW input 8cm END detection |
| 2 | 8cm RELOAD | H | I | Disc detector photo SW input 8cm Reload detection |
| 3 | 12cm LOAD END<br>12cmEJECT END | L<br>H | I | Disc detector photo SW input 12cm Load End detection<br>12cm EJECT END detection |
| 4 | $\overline{\text{CAM END}}$ | L | I | CLAMP END detection SW input |
| 5 | BUS 0 | | I/O | Com. line to TC9201 |
| 6 | BUS 1 | | I/O | Com. line to TC9201 |
| 7 | BUS 2 | | I/O | Com. line to TC9201 |
| 8 | BUS 3 | | I/O | Com. line to TC9201 |
| 9 | DA/CO | | I/O | Com. line to TC9201 |
| 10 | $\overline{\text{WTO}}$ | L | O | Watch • dog timer output |
| 11 | Disc IN | H | I | Disc detection photo SW input Disc IN detection |
| 12 | $\overline{\text{Limit SW}}$ | L | I | Pick-up inner limit detector input |
| 13 | FL-CLOCK | | O | Clock output to FL driver |
| 14 | FL-DATA | | O | Data output to FL driver |
| 15 | FL-CE | H | O | Data latch output to FL driver |
| 16 | F-BLANK | L | O | ON/OFF switching to FL driver L : OFF, DIM : pulse |
| 17 | SEEK | H | O | H : Tuner SEEK ( : LED ON) |
| 18 | Load-REV | H | O | Loading motor inverse rotation output |
| 19 | Load-FWD | H | O | Loading motor normal rotation output |
| 20 | SOLNOID | H | O | DP-Mechanism solenoid driver output |
| 21 | V CONT | H | O | Servo circuit power supply controller output |
| 22 | Load Cont | H | O | DP mechanism loading circuit power supply controller output |
| 23 | LAMP | H | O | LAMP power supply controller output Power SW ON : H |
| 24 | LATCH | H | O | Latch clock input |
| 25 | GND | | | GND |
| 26 | Vss | | | GND |

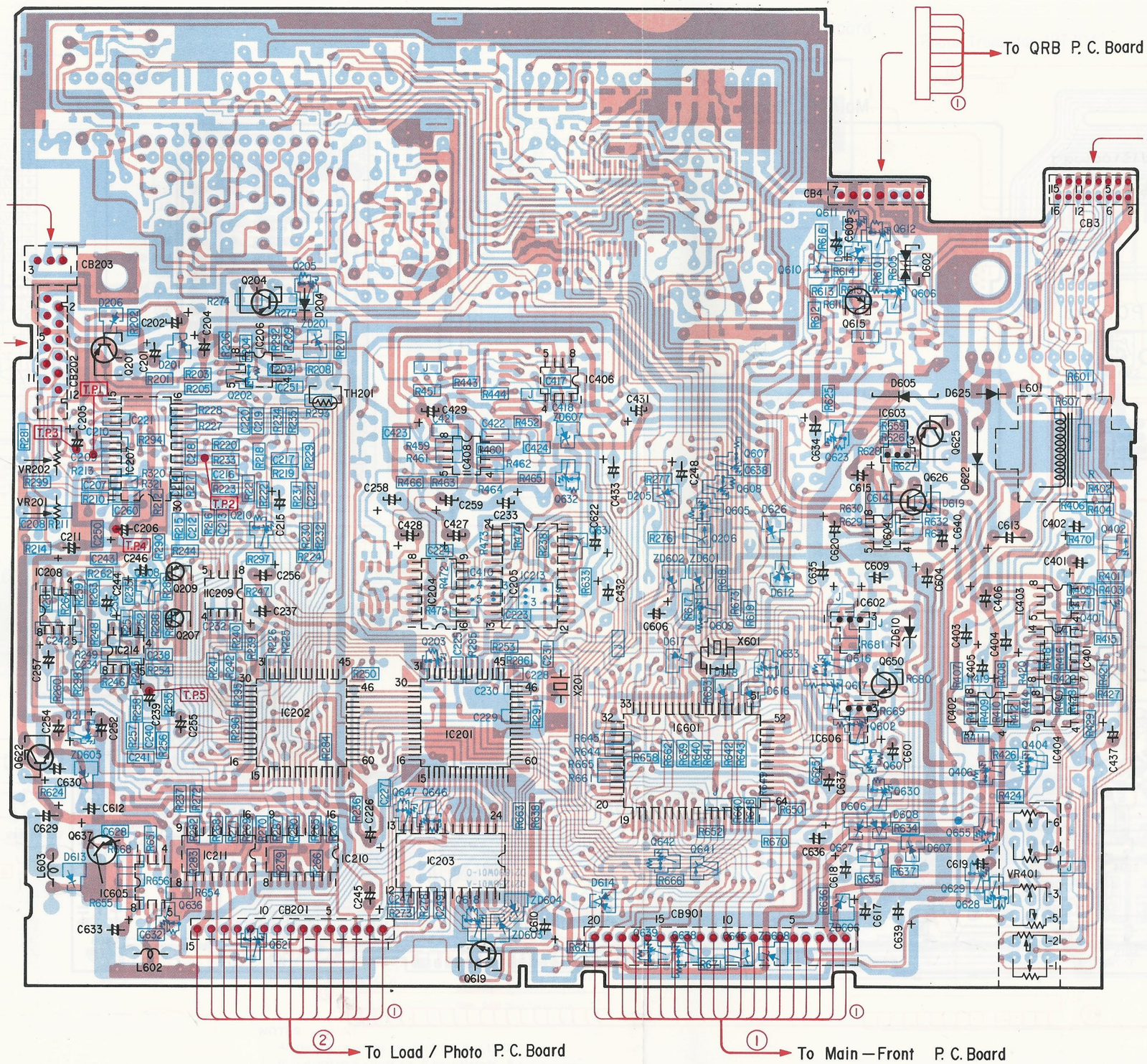
| No. | Symbol | Status | I/O | Terminal description |
|---|---|---|---|---|
| 27 | SHIFT | | O | Shift clock input |
| 28 | ATT | | O | ATT data input |
| 29 | OUT PAUSE | | O | Reciprocal reset signal out : Pause signal to Tuner/Deck unit. |
| 30 | CD/AUX | | O | Inner/outer source switching signal H : Inner, L : Outer |
| 31 | NC | | | OPEN |
| 32 | NC | | | OPEN |
| 33 | NC | | | OPEN |
| 34 | BUCK | | | Com. line to TC9201 Clock output |
| 35 | NC | | | OPEN |
| 36 | NC | | | OPEN |
| 37 | Single | | O | 8cm/12cm CD spindle motor status switching H : 8cm, L : 12cm |
| 38 | DIMMER | L | I | Dimmer input L : Dimmer ON |
| 39 | IN | L | I | Reciprocal reset signal IN : Remote ON signal from Tuner/Deck unit |
| 40 | IN PAUSE | L | I | Reciprocal reset signal IN. Pause signal from inferior source unit |
| 41 | $\overline{\text{A-HOLD}}$ | | I | ACC detection input H : ACC ON, L : ACC OFF |
| 42 | NC | | | OPEN |
| 43 | $\overline{\text{RESET}}$ | L | I | Micro-processor reset IN L : Reset |
| 44 | X'tal-IN | | I | Crystal input |
| 45 | X'tal-OUT | | O | Crystal output 4.19MHz |
| 46 | $\overline{\text{HOLD}}$ | | I | Stand-by release input Stand-by release in ACC ON ; H : Stand-by release with B-HOLD stand-by release |
| 47 | TSENS | H | I | Thermal sensor IN for laser diode protection H : Protection circuit act display…H |
| 48 | IN INT | L | I | +5V |
| 49 | B-HOLD | L | I | Battery detection input. L : Forced stand-by |
| 50 | NC | | | OPEN |
| 51 | NC | | | OPEN |
| 52 | NC | | | OPEN |
| 53 | NC | | | OPEN |
| 54 | NC | | | OPEN |
| 55 | Power ON | H | O | Unit power supply control H : Power switch ON |
| 56 | $\overline{\text{A-MUTE}}$ | L | O | Audio mute output |
| 57 | REMOTE | H | O | Reciprocal reset out. REMOTE out signal to inferior source unit |
| 58 | $V_{DD}$ | | I | +5V Micro processor power supply |
| 59 | VAREF | | I | +5V A/D converter reference power supply |
| 60 | GND | | I | GND |
| 61 | NC | | | OPEN |
| 62 | KEY A/D 0 | | I | KEY input A/D converter 0/6, 1/6, 2/6, 3/6, 4/6, 5/6, 6/6 $V_{DD}$ into digit |
| 63 | KEY A/D 1 | | I | KEY input A/D converter 0/6, 1/6, 2/6, 3/6, 4/6, 5/6, 6/6 $V_{DD}$ into digit |
| 64 | KEY A/D 2 | | I | KEY input A/D converter 0/6, 1/6, 2/6, 3/6, 4/6, 5/6, 6/6 $V_{DD}$ into digit |

# Block Diagram



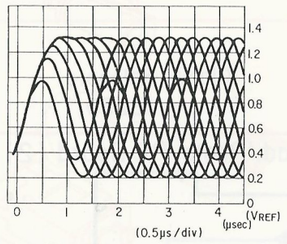
# Parts Layout on P.C. Boards and Wiring Diagram (1/2)

Main P. C. Board

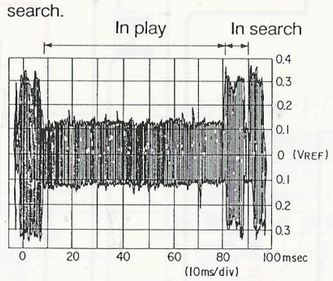



●: North American model only

(i) Waveform at RFO terminal (No. 10 pin of IC207, TA8101F), when unit in play.



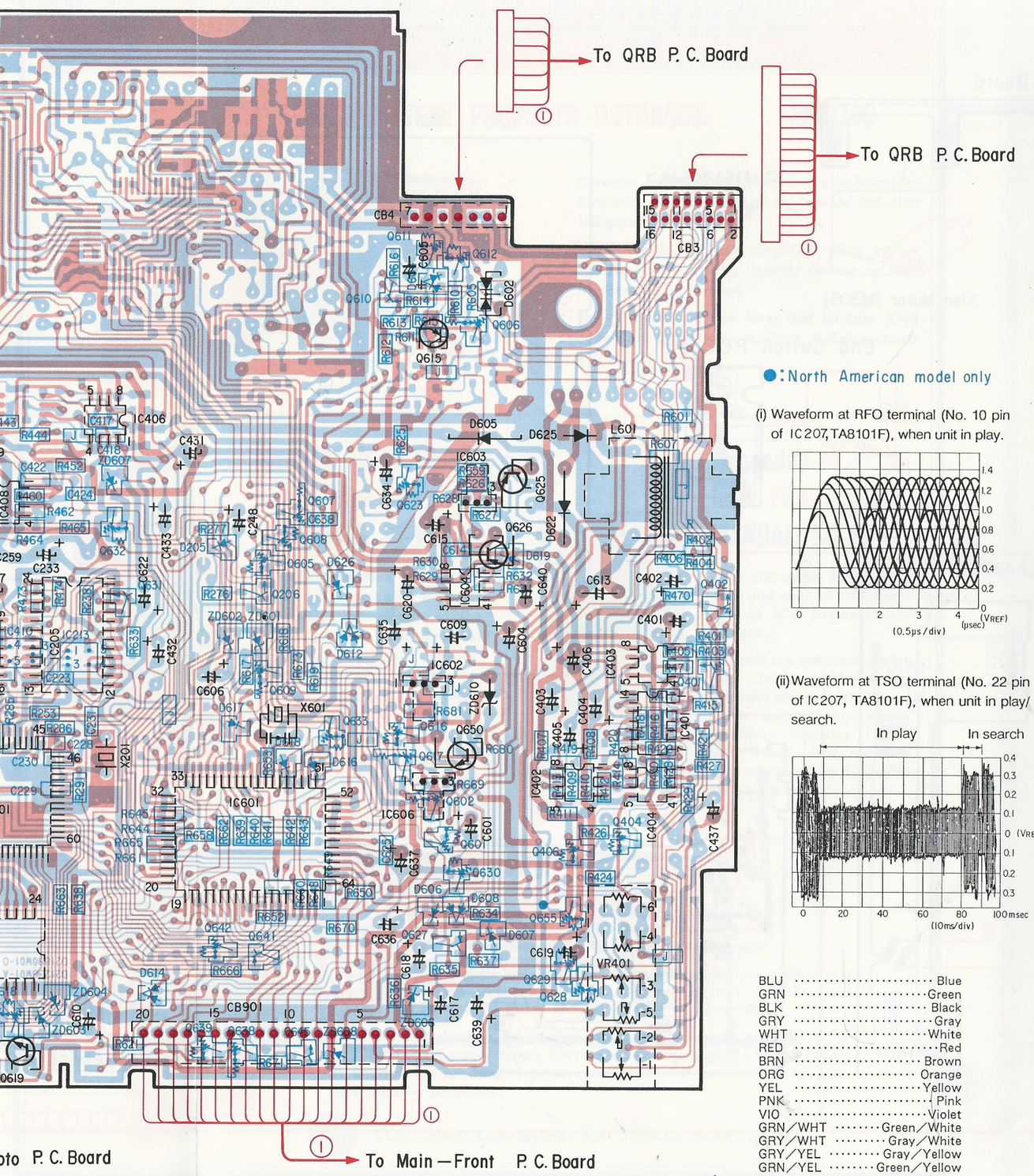

(ii) Waveform at TSO terminal (No. 22 pin of IC207, TA8101F), when unit in play/search.




| | |
|---|---|
| BLU | Blue |
| GRN | Green |
| BLK | Black |
| GRY | Gray |
| WHT | White |
| RED | Red |
| BRN | Brown |
| ORG | Orange |
| YEL | Yellow |
| PNK | Pink |
| VIO | Violet |
| GRN/WHT | Green/White |
| GRY/WHT | Gray/White |
| GRY/YEL | Gray/Yellow |
| GRN/YEL | Green/Yellow |
| SHLD | Shield |

# agram (1/2)

## Board

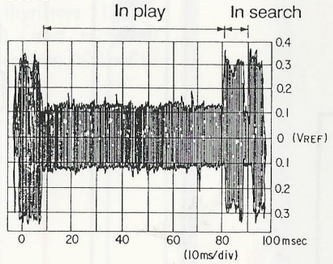



●: North American model only

(i) Waveform at RFO terminal (No. 10 pin of IC207, TA8101F), when unit in play.




(ii) Waveform at TSO terminal (No. 22 pin of IC207, TA8101F), when unit in play/search.




| | |
|---|---|
| BLU | Blue |
| GRN | Green |
| BLK | Black |
| GRY | Gray |
| WHT | White |
| RED | Red |
| BRN | Brown |
| ORG | Orange |
| YEL | Yellow |
| PNK | Pink |
| VIO | Violet |
| GRN/WHT | Green/White |
| GRY/WHT | Gray/White |
| GRY/YEL | Gray/Yellow |
| GRN/YEL | Green/Yellow |
| SHLD | Shield |

| | E | C | B | | E | C | B |
|---|---|---|---|---|---|---|---|
| Q201 | 3.6V | 1.9V | 3V | Q615 | 14V | 14V | 13.4V |
| Q202 | 5.2V | 0.3V | 5.1V | Q616 | 0V | 0V | 4.5V |
| Q203 | 0V | 2.2V | 0V | Q617 | 5.1V | 4.9V | 0V |
| Q204 | 13.7V | 0V | 13.1V | Q618 | 0V | 4V | 0V |
| Q205 | 0V | 14V | 0V | Q619 | 7.6V | 14V | 8.2V |
| Q206 | 0V | 0V | 0V | Q621 | 0V | 0V | 3.9V |
| Q207 | 4.1V | 8.3V | 4.7V | Q622 | 5.1V | 8.3V | 5.7V |
| Q208 | 3.5V | 4.7V | 4.1V | Q623 | 0V | 0.4V | 3.3V |
| Q209 | 4.1V | 0V | 3.5V | Q625 | 14.1V | 14.1V | 13.4V |
| Q210 | 2.2V/2.2V | 2.3V/2.3V | 4.8V/0V | Q626 | 14.1V | 8.7V | 13.5V |
| Q211 | 2.3V | 2.3V | 5V | Q627 | 10V | 0.3V | 10V |
| Q401 | 0V | 0V | 0.2V | Q628 | 14V | 0.3V | 14V |
| Q402 | 0V | 0V | 0.2V | Q629 | 0V | 14V | 0V |
| Q404 | 0V | 8.7V | 0V | Q630 | 0V | 0V | 4.3V |
| Q406 | 0V | 0V | 3.5V | Q631 | 2.4V | 8.7V | 3V |
| Q601 | 0V/0V | 4.8V/0V | 0V/8.1V | Q632 | 3V | 0V | 0V |
| | DM ON/OFF | | | Q633 | 5.7V | 4.5V | 5.7V |
| Q602 | 0V/0V | 4.9V/0V | 0V/14V | Q636 | 14.2V | 14.1V | 0V |
| | IN INT ON/OFF | | | Q637 | 13.8V | PS | PS |
| Q605 | 0V | 0V | 3.8V | Q638 | 14V | 13.1V | 0V |
| Q606 | 14V | 14V | 0V | Q639 | 0V | 0V | 5V |
| Q607 | 0V/0V | 4.7V/0V | 0V/14.4V | Q641 | 7.6V | 7.4V | 6.8V |
| Q608 | 0V/0V | 4.7V/0V | 0V/14.4V | Q642 | 0V | 0.2V | 2.2V |
| Q609 | 14.2V | 14.2V | 7.3V | Q645 | 12.2V | 13.3V | 12.9V |
| Q610 | 14V | 14V | 13.3V | Q646 | 0V | 0V | 3.3V |
| Q611 | 0V | 0V | 10V | Q647 | 5.5V | 5V | 0V |
| Q612 | 0V | 0V | 9.7V | Q650 | 5.1V | 14.1V | 5.7V |

North American Model Only

| | E | C | B |
|---|---|---|---|
| Q655 | 0V | 14V | 0V/14V |

IC201

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PS | 11 | PS | 21 | 0V | 31 | 0V | 41 | PS | 51 | 5V |
| 2 | PS | 12 | PS | 22 | 0V | 32 | PS | 42 | PS | 52 | 5V |
| 3 | PS | 13 | PS | 23 | 5V | 33 | PS | 43 | PS | 53 | 5V |
| 4 | PS | 14 | PS | 24 | 5V | 34 | PS | 44 | PS | 54 | 0V |
| 5 | PS | 15 | PS | 25 | PS | 35 | PS | 45 | PS | 55 | 5V |
| 6 | PS | 16 | PS | 26 | PS | 36 | 5V | 46 | 0V | 56 | PS |
| 7 | PS | 17 | PS | 27 | PS | 37 | 0V | 47 | PS | 57 | PS |
| 8 | PS | 18 | 5V | 28 | PS | 38 | PS | 48 | PS | 58 | PS |
| 9 | PS | 19 | 5V | 29 | PS | 39 | PS | 49 | 5V | 59 | PS |
| 10 | PS | 20 | 0V | 30 | 0V | 40 | PS | 50 | 5V | 60 | PS |

IC202

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PS | 11 | PS | 21 | PS | 31 | 0/PS | 41 | 0V | 51 | PS |
| 2 | 5V/0V | 12 | 2.2V | 22 | 2.2V | 32 | 0/4.9 | 42 | PS | 52 | PS |
| 3 | 5V/0V | 13 | 2.2V | 23 | 5V | 33 | 0/4.2 | 43 | PS | 53 | PS |
| 4 | PS | 14 | 2.2V | 24 | 2.2V | 34 | PS | 44 | PS | 54 | 4.9/0 |
| 5 | PS | 15 | 2.2V | 25 | 2.2V | 35 | 4.9V | 45 | 5V | 55 | 4.5/0 |
| 6 | PS | 16 | 2.2V | 26 | 2.2V | 36 | 4.9/0 | 46 | 5V | 56 | 4.3/0 |
| 7 | 2.2V | 17 | 2.2V | 27 | 2V | 37 | 0/4.9 | 47 | PS | 57 | 4.3/0 |
| 8 | 1V | 18 | 2.2V | 28 | PS | 38 | 4.9/0 | 48 | PS | 58 | 4.9V |
| 9 | PS | 19 | 2.6V | 29 | PS | 39 | 4.8/0 | 49 | PS | 59 | 4.9V |
| 10 | 1V | 20 | 2V | 30 | 2.2V | 40 | 4.8/0 | 50 | PS | 60 | 0V |

IC203

| | | | |
|---|---|---|---|
| 1 | PS | 13 | PS |
| 2 | PS | 14 | PS |
| 3 | PS | 15 | PS |
| 4 | PS | 16 | PS |
| 5 | PS | 17 | PS |
| 6 | PS | 18 | 0V |
| 7 | PS | 19 | PS |
| 8 | PS | 20 | PS |
| 9 | PS | 21 | PS |
| 10 | PS | 22 | PS |
| 11 | PS | 23 | PS |
| 12 | 0V | 24 | 5V |

IC204

| | | | |
|---|---|---|---|
| 1 | 4.7V | 9 | 2V |
| 2 | 0V | 10 | 2V |
| 3 | 4.7V | 11 | 1.5V |
| 4 | 4.7V | 12 | 0V |
| 5 | 0V | 13 | PS |
| 6 | 1.5V | 14 | PS |
| 7 | 4.7V | 15 | PS |
| 8 | 4.7V | 16 | PS |

IC205

| | | | |
|---|---|---|---|
| 1 | 0V | 13 | PS |
| 2 | 5V | 14 | PS |
| 3 | 2.4V | 15 | PS |
| 4 | 2.4V | 16 | PS |
| 5 | | 17 | |
| 6 | 0V | 18 | |
| 7 | | 19 | 0V |
| 8 | | 20 | |
| 9 | PS | 21 | PS |
| 10 | PS | 22 | PS |
| 11 | PS | 23 | PS |
| 12 | 5V | 24 | 0V |

IC206

| | |
|---|---|
| 1 | 0.6V |
| 2 | 5V |
| 3 | 2.6V |
| 4 | 0V |
| 5 | 0.2/0V |
| 6 | 0.2V |
| 7 | 2.8V |
| 8 | 5V |

IC207

| | | | | | |
|---|---|---|---|---|---|
| 1 | 2V | 11 | 2.2V | 21 | 2.2V |
| 2 | 2V | 12 | 2.2V | 22 | 2.2V |
| 3 | 2.2V | 13 | 2.2V | 23 | 2.2V |
| 4 | 2V | 14 | 0V | 24 | 2.2V |
| 5 | 2V | 15 | PS | 25 | 2.2V |
| 6 | 2V | 16 | 1V | 26 | 2.8V |
| 7 | 2V | 17 | PS | 27 | 2.2V |
| 8 | 5V | 18 | 1V | 28 | 2.2V |
| 9 | 2V | 19 | PS | 29 | 2.2V |
| 10 | 2V | 20 | 2.5V | 30 | 2.2V |

IC208

| | |
|---|---|
| 1 | 2.2V |
| 2 | 2.2V |
| 3 | 2.2V |
| 4 | 0V |
| 5 | 2.2V |
| 6 | 2.2V |
| 7 | 2.2V |
| 8 | 5V |

IC209

| | |
|---|---|
| 1 | 2.5V |
| 2 | 2.5V |
| 3 | 2.5V |
| 4 | 0V |
| 5 | 4.1V |
| 6 | 4.1V |
| 7 | 3.5V |
| 8 | 8V |

IC210

| | | | |
|---|---|---|---|
| 1 | 0V | 9 | 0V |
| 2 | 0V | 10 | 0V |
| 3 | 4.5V | 11 | 4V |
| 4 | 8V | 12 | 4V |
| 5 | 4V | 13 | 4V |
| 6 | 0V | 14 | 4V |
| 7 | 0V | 15 | 0V |
| 8 | 0V | 16 | 0V |

IC211

| | | | |
|---|---|---|---|
| 1 | 0V | 9 | 0V |
| 2 | 0V | 10 | 0V |
| 3 | 2.5V | 11 | 4V |
| 4 | 8V | 12 | 4V |
| 5 | 4V | 13 | 4V |
| 6 | 0V | 14 | 4V |
| 7 | 0V | 15 | 0V |
| 8 | 0V | 16 | 0V |

IC213
IC410

| | |
|---|---|
| 1 | 0V |
| 2 | PS |
| 3 | 0V |
| 4 | PS |
| 5 | 5V |

IC214

| | |
|---|---|
| 1 | 2.2V |
| 2 | 2.2V |
| 3 | 2:2V |
| 4 | 0V |
| 5 | 2.2V |
| 6 | 2.2V |
| 7 | 2.2V |
| 8 | 5V |

IC401

| | | | | | |
|---|---|---|---|---|---|
| 1 | 4.4V | 6 | 8.7V | 11 | 4.4V |
| 2 | 4.4V | 7 | 0V | 12 | 0V |
| 3 | 4.4V | 8 | 4.4V | 13 | 0V |
| 4 | 4.4V | 9 | 4.4V | 14 | 8.7V |
| 5 | 8.7V | 10 | 4.4V | | |

IC402

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

IC403

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.9V |

IC404

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

IC406

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

IC408

| | |
|---|---|
| 1 | 4.7V |
| 2 | 4.7V |
| 3 | 4.6V |
| 4 | 0V |
| 5 | 1.3V |
| 6 | 4.7V |
| 7 | 4.7V |
| 8 | 8.9V |

IC601

| | | | | | |
|---|---|---|---|---|---|
| 1 | 0V/5V | 23 | 2.2V/0V | 45 | PS |
| 2 | 0V/5V | 24 | 3.6V/0V | 46 | 4.6V/0V |
| 3 | 0V/5V | 25 | 0V | 47 | 0V/5V |
| 4 | 0V/5V | 26 | 0V | 48 | 4.6V/0V |
| 5 | PS | 27 | 0V | 49 | 5V/0V |
| 6 | PS | 28 | 0V | 50 | 4.9V/0V |
| 7 | PS | 29 | 3.6V/0V | 51 | PS |
| 8 | PS | 30 | 3.6V/0V | 52 | PS |
| 9 | PS | 31 | 0V/PS | 53 | PS |
| 10 | 4.8V | 32 | 0V/4.9V | 54 | 4.9V/0V |
| 11 | 0V/5V | 33 | 0V/4.2V | 55 | 4.5V/0V |
| 12 | 4.8V/0V | 34 | PS | 56 | 4.3V/0V |
| 13 | PS | 35 | 4.9V | 57 | 4.3V/0V |
| 14 | PS | 36 | 4.9V/0V | 58 | 4.9V |
| 15 | PS | 37 | 0V/4.9V | 59 | 4.9V |
| 16 | 5V/0V | 38 | 4.9V/0V | 60 | 0V |
| 17 | 0V/5V | 39 | 4.8V/0V | 61 | 0V/4.9V |
| 18 | 0V/5V | 40 | 4.8V/0V | 62 | – |
| 19 | 0V/5V | 41 | 5V/0V | 63 | – |
| 20 | 0V/5V | 42 | 0V/PS | 64 | – |
| 21 | 3.9V/0V | 43 | 5V/0V | | |
| 22 | 0V/5V | 44 | PS | | |

IC602

| | |
|---|---|
| 1 | 5.7V |
| 2 | 5.1V |
| 3 | 0V |

IC603

| | |
|---|---|
| 1 | 13.5V |
| 2 | 0V |
| 3 | 1.3V |

IC604

| | |
|---|---|
| 1 | 8.2V |
| 2 | 0.4V |
| 3 | 2.4V |
| 4 | 0V |
| 5 | 4.3V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

IC605

| | |
|---|---|
| 1 | PS |
| 2 | 0V |
| 3 | PS |
| 4 | 0V |
| 5 | 1.3V |
| 6 | 13.9V |
| 7 | 13.9V |
| 8 | PS |

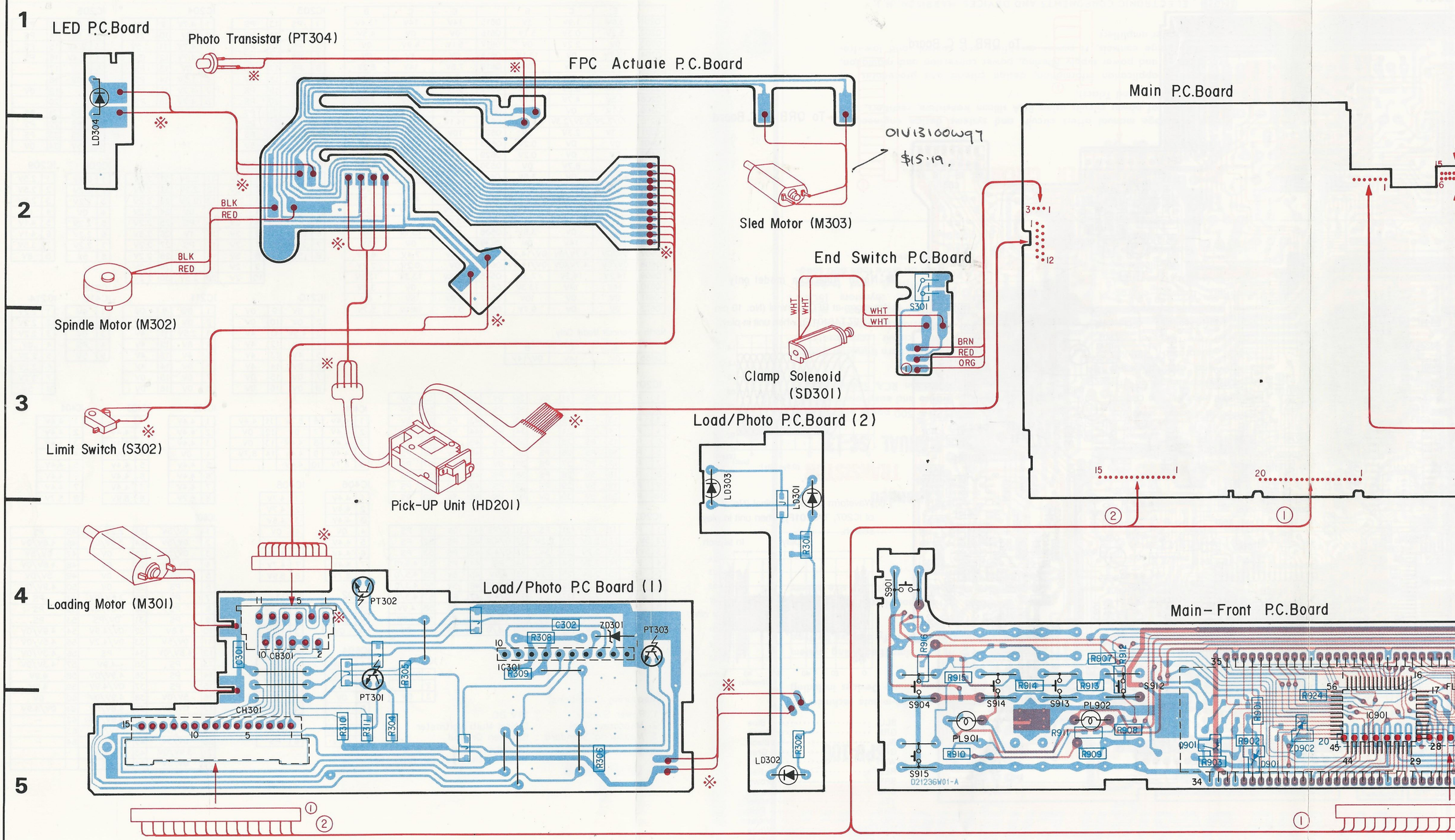
IC606

| | |
|---|---|
| 1 | 5V/0V |
| 2 | 5V |
| 3 | 0V |

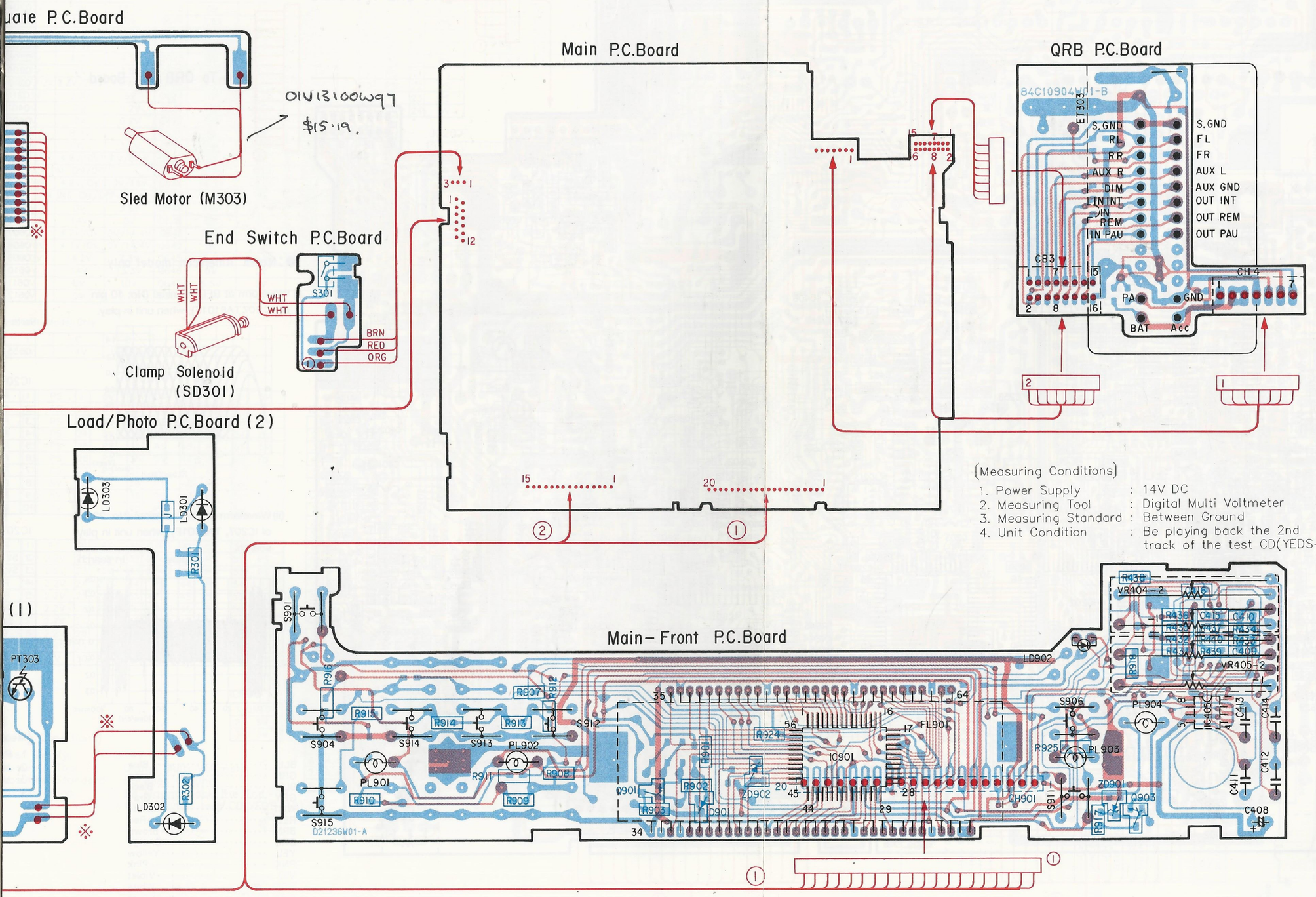
(Measuring Conditions)

1. Power Supply : 14V DC
2. Measuring Tool : Digital Multi Voltmeter
3. Measuring Standard : Between Ground
4. Unit Condition : Be playing back the 2nd track of the test CD(YEDS-18).

# Parts Layout on P.C. Boards and Wiring Diagram (2/2)



2)




| | E | C | B |
|---|---|---|---|
| PT301 | 0V | 5V/0V | |
| PT302 | 0V | 5V/0V | |
| PT303 | 0V | 5V/0V | |
| PT304 | 0V | 5V/0V | |
| Q901 | 0.7V | 2V | 1.4V |
| Q903 | 6.1V | 7.4V | 6.7V |

IC301

| | |
|---|---|
| 1 | 0V |
| 2 | 0V/6V |
| 3 | 8V/0V |
| 4 | 6V/0V |
| 5 | 2V/0V |
| 6 | 2V/0V |
| 7 | 10V/0V |
| 8 | 10V/0V |
| 9 | 8V/0V |
| 10 | 0V/6V |

IC405

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.9V |

IC901

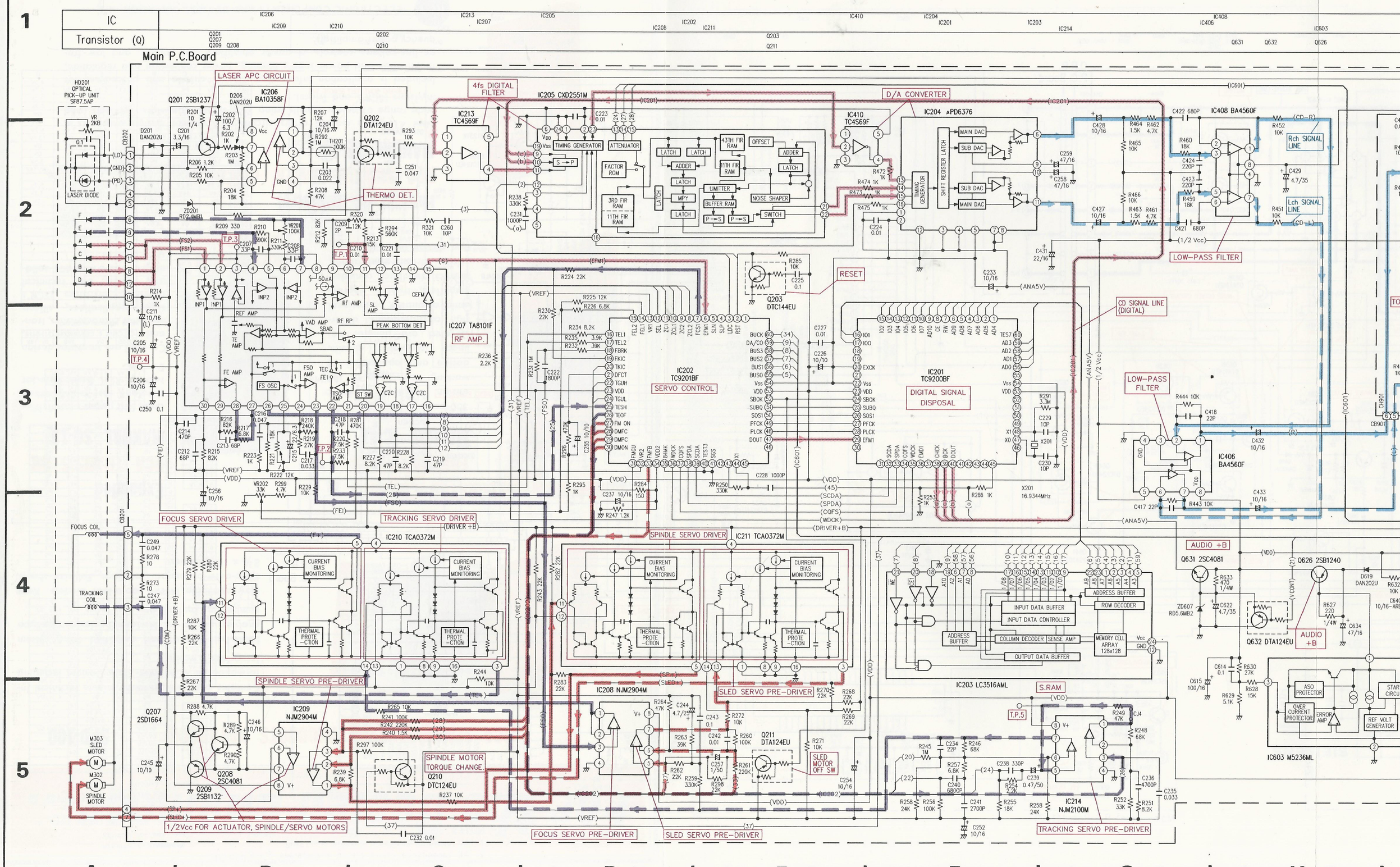
| | | | | | |
|---|---|---|---|---|---|
| 1 | | 20 | PS | 39 | PS |
| 2 | | 21 | PS | 40 | PS |
| 3 | 4.9V | 22 | PS | 41 | PS |
| 4 | PS | 23 | PS | 42 | PS |
| 5 | PS | 24 | PS | 43 | PS |
| 6 | PS | 25 | PS | 44 | PS |
| 7 | PS | 26 | PS | 45 | PS |
| 8 | PS | 27 | PS | 46 | PS |
| 9 | PS | 28 | PS | 47 | PS |
| 10 | PS | 29 | PS | 48 | PS |
| 11 | PS | 30 | PS | 49 | PS |
| 12 | PS | 31 | PS | 50 | PS |
| 13 | PS | 32 | PS | 51 | PS |
| 14 | PS | 33 | PS | 52 | PS |
| 15 | PS | 34 | PS | 53 | PS |
| 16 | PS | 35 | PS | 54 | PS |
| 17 | PS | 36 | 0V | 55 | PS |
| 18 | | 37 | PS | 56 | PS |
| 19 | | 38 | PS | | |

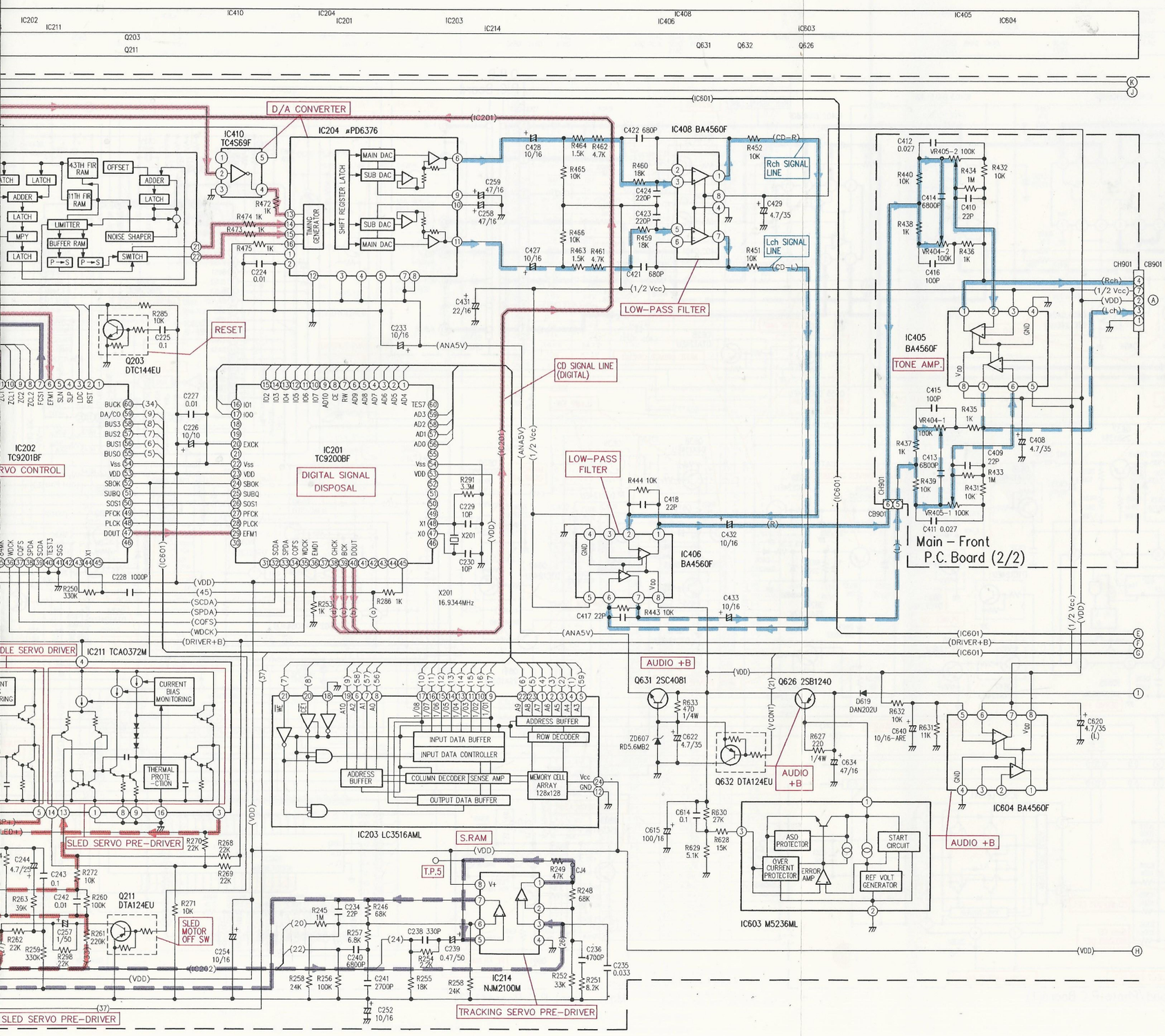
(Measuring Conditions)

1. Power Supply : 14V DC
2. Measuring Tool : Digital Multi Voltmeter
3. Measuring Standard : Between Ground
4. Unit Condition : Be playing back the 2nd track of the test CD(YEDS-18).

| | |
|---|---|
| BLU | Blue |
| GRN | Green |
| BLK | Black |
| GRY | Gray |
| WHT | White |
| RED | Red |
| BRN | Brown |
| ORG | Orange |
| YEL | Yellow |
| PNK | Pink |
| VIO | Violet |
| GRN/WHT | Green/White |
| GRY/WHT | Gray/White |
| GRY/YEL | Gray/Yellow |
| GRN/YEL | Green/Yellow |
| SHLD | Shield |

# Schematic Diagram (1/2)






IC201

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PS | 11 | PS | 21 | 0V | 31 | 0V | 41 | PS | 51 | 5V |
| 2 | PS | 12 | PS | 22 | 0V | 32 | PS | 42 | PS | 52 | 5V |
| 3 | PS | 13 | PS | 23 | 5V | 33 | PS | 43 | PS | 53 | 5V |
| 4 | PS | 14 | PS | 24 | 5V | 34 | PS | 44 | PS | 54 | 0V |
| 5 | PS | 15 | PS | 25 | PS | 35 | PS | 45 | PS | 55 | 5V |
| 6 | PS | 16 | PS | 26 | PS | 36 | 5V | 46 | 0V | 56 | PS |
| 7 | PS | 17 | PS | 27 | PS | 37 | 0V | 47 | PS | 57 | PS |
| 8 | PS | 18 | 5V | 28 | PS | 38 | PS | 48 | PS | 58 | PS |
| 9 | PS | 19 | 5V | 29 | PS | 39 | PS | 49 | 5V | 59 | PS |
| 10 | PS | 20 | 0V | 30 | 0V | 40 | PS | 50 | 5V | 60 | PS |

IC203

| | | | |
|---|---|---|---|
| 1 | PS | 13 | PS |
| 2 | PS | 14 | PS |
| 3 | PS | 15 | PS |
| 4 | PS | 16 | PS |
| 5 | PS | 17 | PS |
| 6 | PS | 18 | 0V |
| 7 | PS | 19 | PS |
| 8 | PS | 20 | PS |
| 9 | PS | 21 | PS |
| 10 | PS | 22 | PS |
| 11 | PS | 23 | PS |
| 12 | 0V | 24 | 5V |

IC202

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PS | 11 | PS | 21 | PS | 31 | 0/PS | 41 | 0V | 51 | PS |
| 2 | 5V/0V | 12 | 2.2V | 22 | 2.2V | 32 | 0/4.9 | 42 | PS | 52 | PS |
| 3 | 5V/0V | 13 | 2.2V | 23 | 5V | 33 | 0/4.2 | 43 | PS | 53 | PS |
| 4 | PS | 14 | 2.2V | 24 | 2.2V | 34 | PS | 44 | PS | 54 | 4.9/0 |
| 5 | PS | 15 | 2.2V | 25 | 2.2V | 35 | 4.9V | 45 | 5V | 55 | 4.5/0 |
| 6 | PS | 16 | 2.2V | 26 | 2.2V | 36 | 4.9/0 | 46 | 5V | 56 | 4.3/0 |
| 7 | 2.2V | 17 | 2.2V | 27 | 2V | 37 | 0/4.9 | 47 | PS | 57 | 4.3/0 |
| 8 | 1V | 18 | 2.2V | 28 | PS | 38 | 4.9/0 | 48 | PS | 58 | 4.9V |
| 9 | PS | 19 | 2.6V | 29 | PS | 39 | 4.8/0 | 49 | PS | 59 | 4.9V |
| 10 | 1V | 20 | 2V | 30 | 2.2V | 40 | 4.8/0 | 50 | PS | 60 | 0V |

IC204

| | | | |
|---|---|---|---|
| 1 | 4.7V | 9 | 2V |
| 2 | 0V | 10 | 2V |
| 3 | 4.7V | 11 | 1.5V |
| 4 | 4.7V | 12 | 0V |
| 5 | 0V | 13 | PS |
| 6 | 1.5V | 14 | PS |
| 7 | 4.7V | 15 | PS |
| 8 | 4.7V | 16 | PS |

IC206

| | |
|---|---|
| 1 | 0.6V |
| 2 | 5V |
| 3 | 2.6V |
| 4 | 0V |
| 5 | 0.2/0V |
| 6 | 0.2V |
| 7 | 2.8V |
| 8 | 5V |

IC207

| | | | | | |
|---|---|---|---|---|---|
| 1 | 2V | 11 | 2.2V | 21 | 2.2V |
| 2 | 2V | 12 | 2.2V | 22 | 2.2V |
| 3 | 2.2V | 13 | 2.2V | 23 | 2.2V |
| 4 | 2V | 14 | 0V | 24 | 2.2V |
| 5 | 2V | 15 | PS | 25 | 2.2V |
| 6 | 2V | 16 | 1V | 26 | 2.8V |
| 7 | 2V | 17 | PS | 27 | 2.2V |
| 8 | 5V | 18 | 1V | 28 | 2.2V |
| 9 | 2V | 19 | PS | 29 | 2.2V |
| 10 | 2V | 20 | 2.5V | 30 | 2.2V |

IC208

| | |
|---|---|
| 1 | 2.2V |
| 2 | 2.2V |
| 3 | 2.2V |
| 4 | 0V |
| 5 | 2.2V |
| 6 | 2.2V |
| 7 | 2.2V |
| 8 | 5V |

IC205

| | | | |
|---|---|---|---|
| 1 | 0V | 13 | PS |
| 2 | 5V | 14 | PS |
| 3 | 2.4V | 15 | PS |
| 4 | 2.4V | 16 | PS |
| 5 | | 17 | |
| 6 | 0V | 18 | |
| 7 | | 19 | 0V |
| 8 | | 20 | |
| 9 | PS | 21 | PS |
| 10 | PS | 22 | PS |
| 11 | PS | 23 | PS |
| 12 | 5V | 24 | 0V |

IC209

| | |
|---|---|
| 1 | 2.5V |
| 2 | 2.5V |
| 3 | 2.5V |
| 4 | 0V |
| 5 | 4.1V |
| 6 | 4.1V |
| 7 | 3.5V |
| 8 | 8V |

IC210

| | | | |
|---|---|---|---|
| 1 | 0V | 9 | 0V |
| 2 | 0V | 10 | 0V |
| 3 | 4.5V | 11 | 4V |
| 4 | 8V | 12 | 4V |
| 5 | 4V | 13 | 4V |
| 6 | 0V | 14 | 4V |
| 7 | 0V | 15 | 0V |
| 8 | 0V | 16 | 0V |

IC211

| | | | |
|---|---|---|---|
| 1 | 0V | 9 | 0V |
| 2 | 0V | 10 | 0V |
| 3 | 2.5V | 11 | 4V |
| 4 | 8V | 12 | 4V |
| 5 | 4V | 13 | 4V |
| 6 | 0V | 14 | 4V |
| 7 | 0V | 15 | 0V |
| 8 | 0V | 16 | 0V |

IC214

| | |
|---|---|
| 1 | 2.2V |
| 2 | 2.2V |
| 3 | 2.2V |
| 4 | 0V |
| 5 | 2.2V |
| 6 | 2.2V |
| 7 | 2.2V |
| 8 | 5V |

IC405

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.9V |

IC406

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

IC408

| | |
|---|---|
| 1 | 4.7V |
| 2 | 4.7V |
| 3 | 4.6V |
| 4 | 0V |
| 5 | 1.3V |
| 6 | 4.7V |
| 7 | 4.7V |
| 8 | 8.9V |

IC213 IC410

| | |
|---|---|
| 1 | 0V |
| 2 | PS |
| 3 | 0V |
| 4 | PS |
| 5 | 5V |

IC603

| | |
|---|---|
| 1 | 13.5V |
| 2 | 0V |
| 3 | 1.3V |

IC604

| | |
|---|---|
| 1 | 8.2V |
| 2 | 0.4V |
| 3 | 2.4V |
| 4 | 0V |
| 5 | 4.3V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

| | E | C | B |
|---|---|---|---|
| Q201 | 3.6V | 1.9V | 3V |
| Q202 | 5.2V | 0.3V | 5.1V |
| Q203 | 0V | 2.2V | 0V |
| Q210 | 2.2V/2.2V | 2.3V/2.3V | 4.8V/0V |
| Q626 | 14.1V | 8.7V | 13.5V |
| Q631 | 2.4V | 8.7V | 3V |
| Q632 | 3V | 0V | 0V |

| | E | C | B |
|---|---|---|---|
| Q207 | 4.1V | 8.3V | 4.7V |
| Q208 | 3.5V | 4.7V | 4.1V |
| Q209 | 4.1V | 0V | 3.5V |
| Q211 | 2.3V | 2.3V | 5V |

[Measuring Conditions]
1. Power Supply: 14V DC
2. Measuring Tool: Digital Multi Voltmeter.
3. Measuring Standard: Between Ground
4. Unit Condition: Be playing back the 2nd track of the test CD (YEDS-18).

CD Signal Line (Digital)
L-ch Signal Line
R-ch Signal Line
Focus Servo Line
Tracking Servo Line
Spindle Servo Line
Sled Servo Line

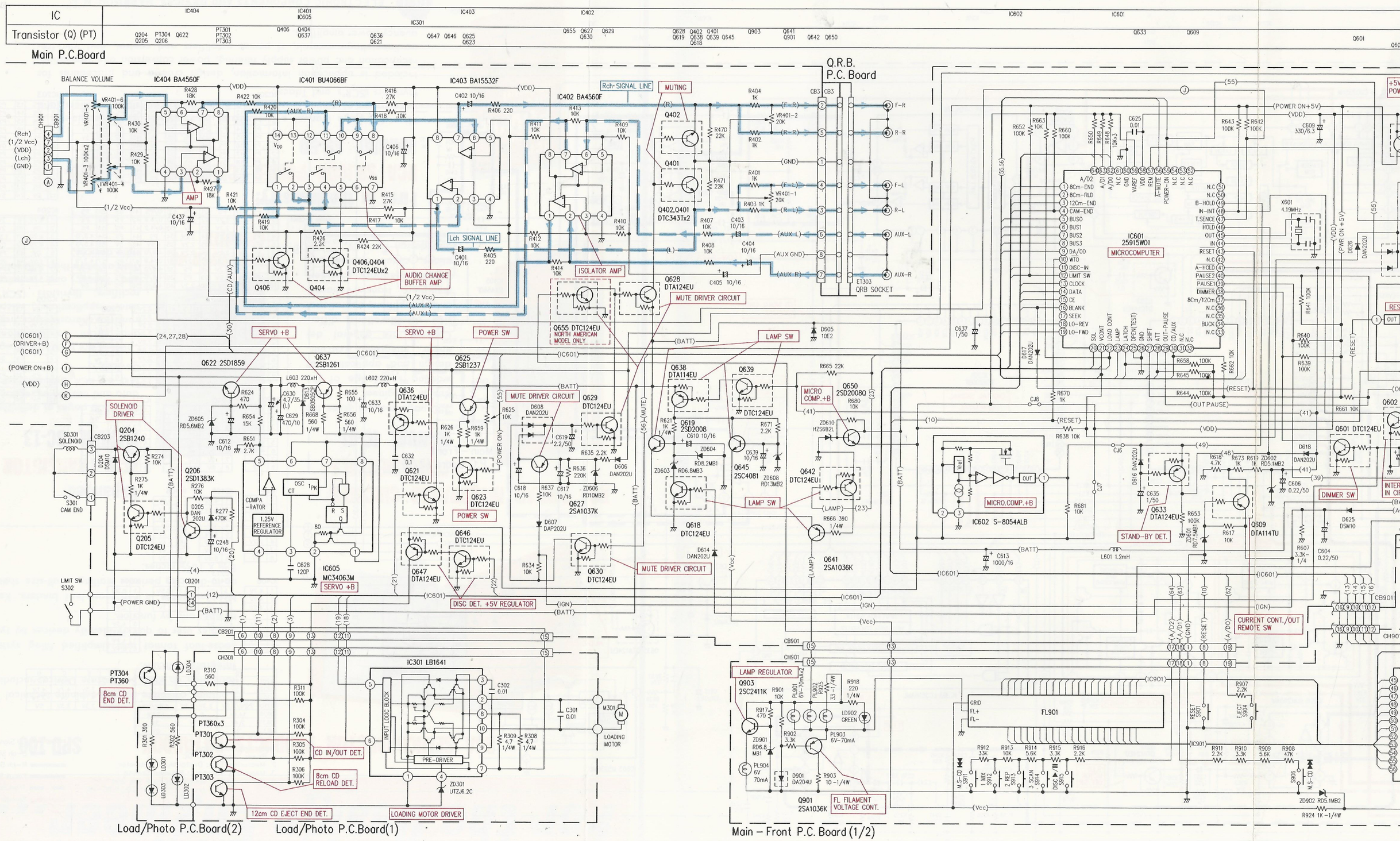
NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

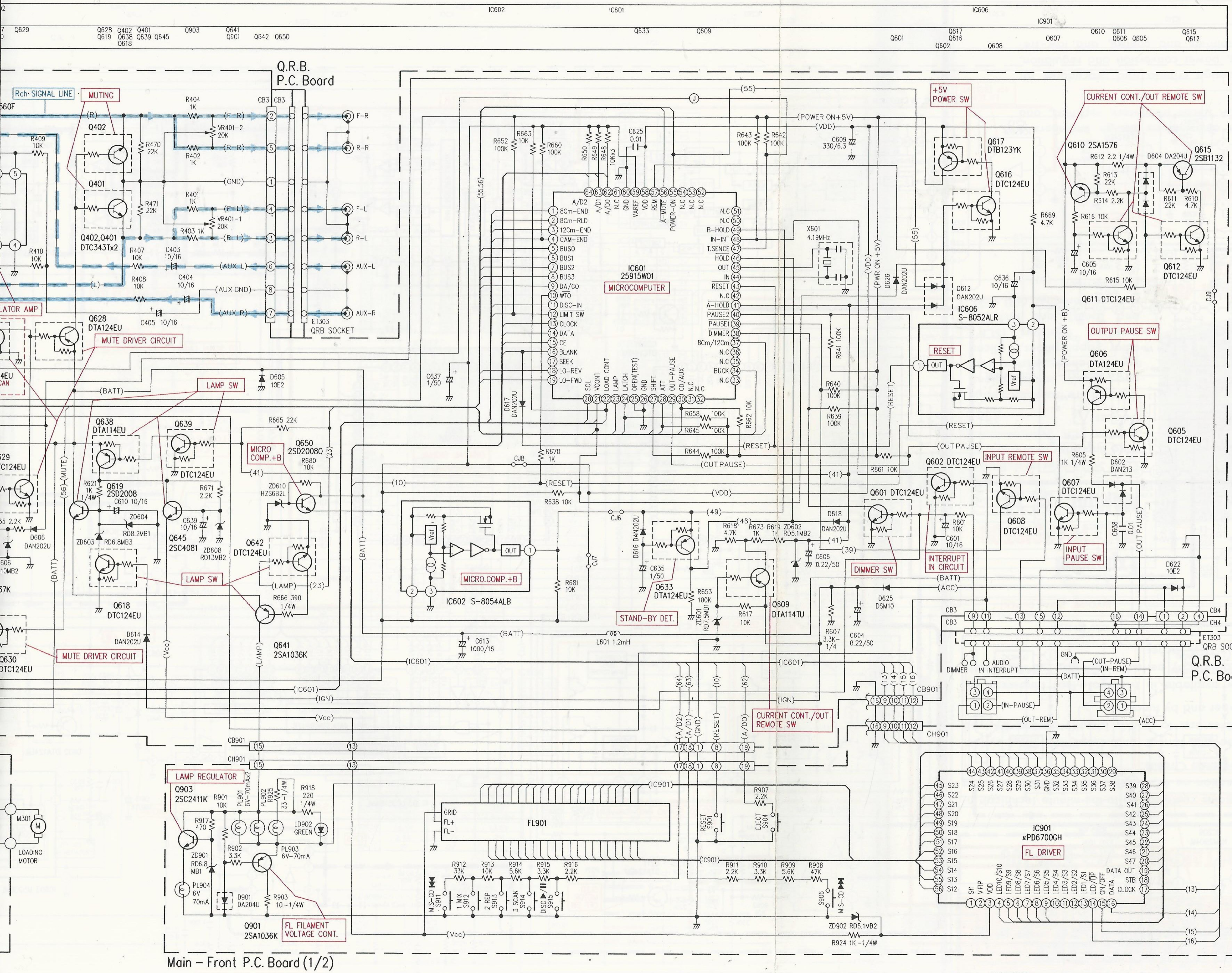


SIEMENS AKTIEN

5903S 5903S

# Schematic Diagram (2/2)






|  | E | C | B |  | E | C | B |
|---|---|---|---|---|---|---|---|
| Q636 | 14.2V | 14.1V | 0V | Q630 | 0V | 0V | 4.3V |
| Q637 | 13.8V | PS | PS | Q633 | 5.7V | 4.5V | 5.7V |
| Q638 | 14V | 13.1V | 0V | Q401 | 0V | 0V | 0.2V |
| Q639 | 0V | 0V | 5V | Q402 | 0V | 0V | 0.2V |
| Q641 | 7.6V | 7.4V | 6.8V | Q404 | 0V | 8.7V | 0V |
| Q642 | 0V | 0.2V | 2.2V | Q901 | 0.7V | 2V | 1.4V |
| Q645 | 12.2V | 13.3V | 12.9V | Q903 | 6.1V | 7.4V | 6.7V |
| Q601 | 0V/0V | 4.8V/0V | 0V/8.1V | Q204 | 13.7V | 0V | 13.1V |
|  | DM ON/OFF |  |  | Q205 | 0V | 14V | 0V |
| Q605 | 0V | 0V | 3.8V | Q206 | 0V | 0V | 0V |
| Q606 | 14V | 14V | 0V | Q406 | 0V | 0V | 3.5V |
| Q607 | 0V/0V | 4.7V/0V | 0V/14.4V | Q602 | 0V/0V | 4.9V/0V | 0V/14V |
| Q608 | 0V/0V | 4.7V/0V | 0V/14.4V |  | IN INT ON/OFF |  |  |
| Q609 | 14.2V | 14.2V | 7.3V | Q650 | 5.1V | 14.1V | 5.7V |
| Q610 | 14V | 14V | 13.3V | Q646 | 0V | 0V | 3.3V |
| Q611 | 0V | 0V | 10V | Q647 | 5.5V | 5V | 0V |
| Q612 | 0V | 0V | 9.7V | PT301 | 0V | 5V/0V |  |
| Q615 | 14V | 14V | 13.4V | PT302 | 0V | 5V/0V |  |
| Q616 | 0V | 0V | 4.5V | PT303 | 0V | 5V/0V |  |
| Q617 | 5.1V | 4.9V | 0V | PT304 | 0V | 5V/0V |  |
| Q618 | 0V | 4V | 0V |  |  |  |  |
| Q619 | 7.6V | 14V | 8.2V |  |  |  |  |
| Q621 | 0V | 0V | 3.9V |  |  |  |  |
| Q622 | 5.1V | 8.3V | 5.7V |  |  |  |  |
| Q623 | 0V | 0.4V | 3.3V |  |  |  |  |
| Q628 | 14V | 0.3V | 14V |  |  |  |  |
| Q625 | 14.1V | 14.1V | 13.4V |  |  |  |  |
| Q627 | 10V | 0.3V | 10V |  |  |  |  |
| Q629 | 0V | 14V | 0V |  |  |  |  |

North American Model Only

|  | E | C | B |
|---|---|---|---|
| Q655 | 0V | 14V | 0V/14V |

IC301

| | |
|---|---|
| 1 | 0V |
| 2 | 0V/6V |
| 3 | 8V/0V |
| 4 | 6V/0V |
| 5 | 2V/0V |
| 6 | 2V/0V |
| 7 | 10V/0V |
| 8 | 10V/0V |
| 9 | 8V/0V |
| 10 | 0V/6V |

IC401

| | | | | | |
|---|---|---|---|---|---|
| 1 | 4.4V | 6 | 8.7V | 11 | 4.4V |
| 2 | 4.4V | 7 | 0V | 12 | 0V |
| 3 | 4.4V | 8 | 4.4V | 13 | 0V |
| 4 | 4.4V | 9 | 4.4V | 14 | 8.7V |
| 5 | 8.7V | 10 | 4.4V |  |  |

IC402

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

IC403

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.9V |

IC901

| | | | | | |
|---|---|---|---|---|---|
| 1 |  | 20 | PS | 39 | PS |
| 2 |  | 21 | PS | 40 | PS |
| 3 | 4.9V | 22 | PS | 41 | PS |
| 4 | PS | 23 | PS | 42 | PS |
| 5 | PS | 24 | PS | 43 | PS |
| 6 | PS | 25 | PS | 44 | PS |
| 7 | PS | 26 | PS | 45 | PS |
| 8 | PS | 27 | PS | 46 | PS |
| 9 | PS | 28 | PS | 47 | PS |
| 10 | PS | 29 | PS | 48 | PS |
| 11 | PS | 30 | PS | 49 | PS |
| 12 | PS | 31 | PS | 50 | PS |
| 13 | PS | 32 | PS | 51 | PS |
| 14 | PS | 33 | PS | 52 | PS |
| 15 | PS | 34 | PS | 53 | PS |
| 16 | PS | 35 | PS | 54 | PS |
| 17 | PS | 36 | 0V | 55 | PS |
| 18 |  | 37 | PS | 56 | PS |
| 19 |  | 38 | PS |  |  |

IC602

| | |
|---|---|
| 1 | 5.7V |
| 2 | 5.1V |
| 3 | 0V |

IC606

| | |
|---|---|
| 1 | 5V/0V |
| 2 | 5V |
| 3 | 0V |

IC404

| | |
|---|---|
| 1 | 4.4V |
| 2 | 4.4V |
| 3 | 4.4V |
| 4 | 0V |
| 5 | 4.4V |
| 6 | 4.4V |
| 7 | 4.4V |
| 8 | 8.7V |

IC605

| | |
|---|---|
| 1 | PS |
| 2 | 0V |
| 3 | PS |
| 4 | 0V |
| 5 | 1.3V |
| 6 | 13.9V |
| 7 | 13.9V |
| 8 | PS |

IC601

| | | | | | |
|---|---|---|---|---|---|
| 1 | 0V/5V | 23 | 2.2V/0V | 45 | PS |
| 2 | 0V/5V | 24 | 3.6V/0V | 46 | 4.6V/0V |
| 3 | 0V/5V | 25 | 0V | 47 | 0V/5V |
| 4 | 0V/5V | 26 | 0V | 48 | 4.6V/0V |
| 5 | PS | 27 | 0V | 49 | 5V/0V |
| 6 | PS | 28 | 0V | 50 | 4.9V/0V |
| 7 | PS | 29 | 3.6V/0V | 51 | PS |
| 8 | PS | 30 | 3.6V/0V | 52 | PS |
| 9 | PS | 31 | 0V/PS | 53 | PS |
| 10 | 4.8V | 32 | 0V/4.9V | 54 | 4.9V/0V |
| 11 | 0V/5V | 33 | 0V/4.2V | 55 | 4.5V/0V |
| 12 | 4.8V/0V | 34 | PS | 56 | 4.3V/0V |
| 13 | PS | 35 | 4.9V | 57 | 4.3V/0V |
| 14 | PS | 36 | 4.9V/0V | 58 | 4.9V |
| 15 | PS | 37 | 0V/4.9V | 59 | 4.9V |
| 16 | 5V/0V | 38 | 4.9V/0V | 60 | 0V |
| 17 | 0V/5V | 39 | 4.8V/0V | 61 | 0V/4.9V |
| 18 | 0V/5V | 40 | 4.8V/0V | 62 | – |
| 19 | 0V/5V | 41 | 5V/0V | 63 | – |
| 20 | 0V/5V | 42 | 0V/PS | 64 | – |
| 21 | 3.9V/0V | 43 | 5V/0V |  |  |
| 22 | 0V/5V | 44 | PS |  |  |

[Measuring Conditions]

1. Power Supply: 14V DC
2. Measuring Tool: Digital Multi Voltmeter.
3. Measuring Standard: Between Ground.
4. Unit Condition : Be playing back the 2nd. track of the test CD(YEDS-18).

L-ch Signal Line

R-ch Signal Line

**NOTES:**

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1.000.000}$

# Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
uF = microfarads, pF = picofarads

## Abbreviations

| | |
|---|---|
| RES. = Resistor | CAP. = Capacitor |
| C.F. = Carbon Film | ELY. = Electrolytic |
| M.F. = Metal Film | CER. = Ceramic |
| M.O. = Metal Oxide Film | MYL. = Mylar |
| M.P. = Metal Plate | TAN. = Tantalum |
| TR. = Transistor | POLY. = Polystyrol |
| TRANS. = Transformer | PP. = Polypropylene |
| CP. = Chip | PLT. = Polyethylene |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| **Main P. C. Board** | | | | |
| IC's | | | | |
| IC201 | 51T15260W01 | TC9200BF | | |
| IC202 | 51T15261W01 | TC9201BF | | |
| IC203 | 51T84723F02 | LC3516AML | | |
| or | 51T90640F01 | CXK5816M | | |
| IC204 | 51T25676W01 | μ PD6376 | | |
| IC205 | 51T25675W01 | CXD2551M | | |
| IC206 | 51T92693F01 | BA10358F | | |
| IC207 | 51T15262W01 | TA8101F | | |
| IC208 | 51T93333F01 | NJM2904M | | |
| IC209 | 51T93333F01 | NJM2904M | | |
| IC210 | 51T15264W01 | TCA0372M | | |
| IC211 | 51T15264W01 | TCA0372M | | |
| IC213 | 51T93532F01 | TC4S69F | | |
| IC214 | 51T16025W01 | NJM2100M | | |
| IC401 | 51T68999F03 | BU4066BF | | |
| IC402 | 51T92001F01 | BA4560F | | |
| or | 51T93338F01 | NJM4560E | | |
| IC403 | 51T25154W01 | BA15532F | | |
| IC404 | 51T92001F01 | BA4560F | | |
| or | 51T93338F01 | NJM4560E | | |
| IC406 | 51T92001F01 | BA4560F | | |
| or | 51T93338F01 | NJM4560E | | |
| IC408 | 51T92001F01 | BA4560F | | |
| or | 51T93338F01 | NJM4560E | | |
| IC410 | 51T93532F01 | TC4S69F | | |
| IC601 | 51T25915W01 | 25915W01 | | |
| or | 51T15263W01 | 15263W01 | | |
| IC602 | 51T95014F01 | S-8054ALB | | |
| IC603 | 51T90890F01 | M5236ML | | |
| IC604 | 51T92001F01 | BA4560F | | |
| or | 51T93338F01 | NJM4560E | | |
| IC605 | 51T15510W01 | MC34063M | | |
| IC606 | 51T95014F05 | S-8052ALR | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| Transistors | | | | |
| Q201 | 48T83417F03 | 2SB1237 | | |
| Q202 | 48T94606F53 | CP., DTA124EU | | |
| Q203 | 48T94606F01 | CP., DTC144EU | | |
| Q204 | 48T84238F03 | 2SB1240 | | |
| Q205 | 48T94606F03 | CP., DTC124EU | | |
| Q206 | 48T81552F01 | CP., 2SD1383K | | |
| Q207 | 48T80614F01 | CP., 2SD1664 | | |
| Q208 | 48T94582F01 | CP., 2SC4081 | | |
| Q209 | 48T80611F01 | CP., 2SB1132 | | |
| Q210 | 48T94606F03 | CP., DTC124EU | | |
| Q211 | 48T94606F53 | CP., DTA124EU | | |
| Q401 | 48T62967F33 | CP., DTC343T | | |
| Q402 | 48T62967F33 | CP., DTC343T | | |
| Q404 | 48T94606F03 | CP., DTC124EU | | |
| Q406 | 48T94606F03 | CP., DTC124EU | | |
| Q601 | 48T94606F03 | CP., DTC124EU | | |
| Q602 | 48T94606F03 | CP., DTC124EU | | |
| Q605 | 48T94606F03 | CP., DTC124EU | | |
| Q606 | 48T94606F53 | CP., DTA124EU | | |
| Q607 | 48T94606F03 | CP., DTC124EU | | |
| Q608 | 48T94606F03 | CP., DTC124EU | | |
| Q609 | 48T94606F55 | CP., DTA114TU | | |
| Q610 | 48T94581F01 | CP., 2SA1576 | | |
| Q611 | 48T94606F03 | CP., DTC124EU | | |
| Q612 | 48T94606F03 | CP., DTC124EU | | |
| Q615 | 48T80611F01 | CP., 2SB1132 | | |
| Q616 | 48T94606F03 | CP., DTC124EU | | |
| Q617 | 48T94875F04 | CP., DTB123YK | | |
| Q618 | 48T94606F03 | CP., DTC124EU | | |
| Q619 | 48T15289W03 | 2SD2008 | | |
| Q621 | 48T94606F03 | CP., DTC124EU | | |
| Q622 | 48T83835F03 | 2SD1859 | | |
| Q623 | 48T94606F03 | CP., DTC124EU | | |
| Q625 | 48T83417F03 | 2SB1237 | | |
| Q626 | 48T84238F03 | 2SB1240 | | |
| Q627 | 48T63420F01 | CP., 2SA1037K | | |
| Q628 | 48T94606F53 | CP., DTA124EU | | |
| Q629 | 48T94606F03 | CP., DTC124EU | | |
| Q630 | 48T94606F03 | CP., DTC124EU | | |
| Q631 | 48T94582F01 | CP., 2SC4081 | | |
| Q632 | 48T94606F53 | CP., DTA124EU | | |
| Q633 | 48T94606F53 | CP., DTA124EU | | |
| Q636 | 48T94606F53 | CP., DTA124EU | | |
| Q637 | 48T15511W02 | CP., 2SB1261 | | |
| Q638 | 48T94606F56 | CP., DTA114EU | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| Q639 | 48T94606F03 | CP., DTC124EU | | |
| Q641 | 48T63419F01 | CP., 2SA1036K | | |
| Q642 | 48T94606F03 | CP., DTC124EU | | |
| Q645 | 48T94582F01 | CP., 2SC4081 | | |
| Q646 | 48T94606F03 | CP., DTC124EU | | |
| Q647 | 48T94606F53 | CP., DTA124EU | | |
| Q650 | 48T15289W03 | 2SD2008Q | | |
| ● Q655 | 48T94606F03 | CP., DTC124EU | | |
| **Diodes** | | | | |
| D201 | 48T94608F03 | CP., DAN202U | | |
| D204 | 48T15512W01 | CP., DSM10 | | |
| D205 | 48T94608F03 | CP., DAN202U | | |
| D206 | 48T94608F03 | CP., DAN202U | | |
| D602 | 48T15290W01 | DAN213 | | |
| D604 | 48T94608F01 | CP., DA204U | | |
| D605 | 48C40235G02 | 10E2 | | |
| D606 | 48T94608F03 | CP., DAN202U | | |
| D607 | 48T94608F02 | CP., DAP202U | | |
| D608 | 48T94608F03 | CP., DAN202U | | |
| D612 | 48T94608F03 | CP., DAN202U | | |
| D613 | 48T15702W01 | CP., SB0505CP | | |
| D614 | 48T94608F03 | CP., DAN202U | | |
| D616 | 48T94608F03 | CP., DAN202U | | |
| D617 | 48T94608F03 | CP., DAN202U | | |
| D618 | 48T94608F03 | CP., DAN202U | | |
| D619 | 48T94608F03 | CP., DAN202U | | |
| D622 | 48C40235G02 | 10E2 | | |
| D625 | 48T15512W01 | CP., DSM10 | | |
| D626 | 48T94608F03 | CP., DAN202U | | |
| ZD201 | 48T62934F01 | Zener, CP., RD2.4MB1 | | |
| ZD601 | 48T62934F30 | Zener, CP., RD7.5MB1 | | |
| ZD602 | 48T62934F19 | Zener, CP., RD5.1MB2 | | |
| ZD603 | 48T62934F29 | Zener, CP., RD6.8MB3 | | |
| ZD604 | 48T62934F33 | Zener, CP., RD8.2MB1 | | |
| ZD605 | 48T62934F22 | Zener, CP., RD5.6MB2 | | |
| ZD606 | 48T62934F40 | Zener, CP., RD10MB2 | | |
| ZD607 | 48T62934F22 | Zener, CP., RD5.6MB2 | | |
| ZD608 | 48T62934F49 | Zener, CP., RD13MB2 | | |
| ZD610 | 48T83128F05 | Zener, HZS6B2L | | |
| **Thermister/Coils** | | | | |
| TH201 | 48T93439F06 | Thermistor, 100k ohm | | |
| L601 | 25C40894G01 | Choke, EI19 1.2mH | | |
| L602 | 24T71179F05 | Inductor, RC805 220 μ H | | |
| L603 | 24T16271W13 | Inductor, RCR875D 220 μ H | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| **Crystals** | | | | |
| X201 | 91T25806W92 | AT-51 16.9344MHz | | |
| X601 | 91T15285W01 | CER., LOCK 4.19MHz | | |
| **Capacitors** | | | | |
| C201 | 23T74437F29 | TAN., 3.3 μ F/16V | | |
| C202 | 23S61524F08 | ELY., 100 μ F/6.3V | | |
| C203 | 08S65128F72 | CP., 0.022 μ F | | |
| C204 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C205 | 23T74437F32 | TAN., 10 μ F/16V | | |
| C206 | 23T74437F32 | TAN., 10 μ F/16V | | |
| C207 | 08S65128F23 | CP., 33pF | | |
| C208 | 08S65128F23 | CP., 33pF | | |
| C209 | 08S65128F04 | CP., 2pF | | |
| C210 | 08S65128F69 | CP., 0.01 μ F | | |
| C211 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C212 | 08S65128F31 | CP., 68pF | | |
| C213 | 08S65128F31 | CP., 68pF | | |
| C214 | 08S65128F51 | CP., 470pF | | |
| C215 | 23S61524F05 | ELY., 22 μ F/6.3V | | |
| C216 | 08T15399W03 | CP., 0.047 μ F | | |
| C217 | 08T15399W02 | CP., 0.033 μ F | | |
| C218 | 08S65128F27 | CP., 47pF | | |
| C219 | 08S65128F27 | CP., 47pF | | |
| C220 | 08S65128F27 | CP., 47pF | | |
| C221 | 08S65128F69 | CP., 0.01 μ F | | |
| C222 | 08S65128F60 | CP., 1800pF | | |
| C223 | 08S65128F69 | CP., 0.01 μ F | | |
| C224 | 08S65128F69 | CP., 0.01 μ F | | |
| C225 | 08S65128F76 | CP., 0.1 μ F | | |
| C226 | 23T74437F37 | TAN., 10 μ F/16V | | |
| C227 | 08S65128F69 | CP., 0.01 μ F | | |
| C228 | 08S65128F57 | CP., 1000pF | | |
| C229 | 08S82122F13 | CP., 10pF | | |
| C230 | 08S82122F13 | CP., 10pF | | |
| C231 | 08S65128F57 | CP., 1000pF | | |
| C232 | 08S65128F69 | CP., 0.01 μ F | | |
| C233 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C234 | 08S65128F19 | CP., 22pF | | |
| C235 | 08T15339W02 | CP., 0.033 μ F | | |
| C236 | 08S65128F65 | CP., 4700pF | | |
| C237 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C238 | 08S65128F47 | CP., 330pF | | |
| C239 | 23S61524F31 | ELY., 0.47 μ F/50V | | |
| C240 | 08S65128F67 | CP., 6800pF | | |

Notes : ● : For North American model only, Others : Common.

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| C241 | 08S65128F62 | CP., 2700pF | | |
| C242 | 08S65128F69 | CP., 0.01 μ F | | |
| C243 | 08T15807W05 | CP., 0.1 μ F | | |
| C244 | 23S61523F17 | ELY., 4.7 μ F/25V | | |
| C245 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C246 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C247 | 08S65128F74 | CP., 0.047 μ F | | |
| C248 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C249 | 08S65128F74 | CP., 0.047 μ F | | |
| C250 | 08S65128F76 | CP., 0.1 μ F | | |
| C251 | 08S65128F74 | CP., 0.047 μ F | | |
| C252 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C254 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C255 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C256 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C257 | 23S61523F29 | ELY., 1 μ F/50V | | |
| C258 | 23T25149W12 | ELY., 47 μ F/16V | | |
| C259 | 23T25149W12 | ELY., 47 μ F/16V | | |
| C260 | 08S65128F12 | CP., 10pF | | |
| C401 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C402 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C403 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C404 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C405 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C406 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C417 | 08S82122F21 | CP., 22pF | | |
| C418 | 08S82122F21 | CP., 22pF | | |
| C421 | 08S72783F33 | CP., 680pF | | |
| C422 | 08S72783F33 | CP., 680pF | | |
| C423 | 08S82122F45 | CP., 220pF | | |
| C424 | 08S82122F45 | CP., 220pF | | |
| C427 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C428 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C429 | 23T25149W15 | ELY., 4.7 μ F/35V | | |
| C431 | 23T25149W10 | ELY., 22 μ F/16V | | |
| C432 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C433 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C437 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C601 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C604 | 23S61524F29 | ELY., 0.22 μ F/50V | | |
| C605 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C606 | 23S61523F26 | ELY., 0.22 μ F/50V | | |
| C609 | 23T16086W02 | ELY., 330 μ F/6.3V | | |
| C610 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C612 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C613 | 23S40657F63 | ELY., 1000 μ F/16V | | |
| C614 | 08S65128F76 | CP., 0.1 μ F | | |
| C615 | 23T25149W12 | ELY., 47 μ F/16V | | |
| C617 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C618 | 23S61524F13 | ELY., 10 μ F/16V | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| C619 | 23S61524F33 | ELY., 2.2 μ F/50V | | |
| C620 | 23T25149W15 | ELY., 4.7 μ F/35V | | |
| C622 | 23T25149W15 | ELY., 4.7 μ F/35V | | |
| C625 | 08S65128F69 | CP., 0.01 μ F | | |
| C628 | 08S65128F37 | CP., 120pF | | |
| C629 | 23T16314W01 | ELY., 470 μ F/10V | | |
| C630 | 23T25149W15 | ELY., 4.7 μ F/35V | | |
| C632 | 08S65128F76 | CP., 0.1 μ F | | |
| C633 | 23T25149W09 | ELY., 10 μ F/16V | | |
| C634 | 23T25149W12 | ELY., 47 μ F/16V | | |
| C635 | 23S61523F29 | ELY., 1 μ F/50V | | |
| C636 | 23S61524F13 | ELY., 10 μ F/16V | | |
| C637 | 23S61523F29 | ELY., 1 μ F/50V | | |
| C638 | 08S65128F69 | CP., 0.01 μ F | | |
| C639 | 23S61523F12 | ELY., 10 μ F/16V | | |
| C640 | 23T25149W09 | ELY., 10 μ F/16V | | |
| Resistors (All resistors are chip 1/10W±5% unless otherwise noted.) | | | | |
| R201 | 06T70072F05 | 10 ohm 1/4W | | |
| R202 | 06S64995F53 | 1k ohm | | |
| R203 | 06S64996F26 | 1M ohm | | |
| R204 | 06S64995F83 | 18k ohm | | |
| R205 | 06S64995F77 | 10k ohm | | |
| R206 | 06S64995F55 | 1.2k ohm | | |
| R207 | 06S64995F79 | 12k ohm | | |
| R208 | 06S64995F93 | 47k ohm | | |
| R209 | 06S64995F41 | 330 ohm | | |
| R210 | 06S64996F16 | 390k ohm | | |
| R211 | 06S64996F14 | 330k ohm | | |
| R212 | 06S64995F99 | 82k ohm | | |
| R213 | 06S64995F81 | 15k ohm | | |
| R214 | 06S64995F53 | 1k ohm | | |
| R215 | 06S64995F99 | 82k ohm | | |
| R216 | 06S64995F99 | 82k ohm | | |
| R217 | 06S64995F73 | 6.8k ohm | | |
| R218 | 06S64996F11 | 240k ohm | | |
| R219 | 06S64995F87 | 27k ohm | | |
| R220 | 06S64995F74 | 7.5k ohm | | |
| R221 | 06S64995F83 | 18k ohm | | |
| R222 | 06S64995F79 | 12k ohm | | |
| R223 | 06S64995F53 | 1k ohm | | |
| R224 | 06S64995F85 | 22k ohm | | |
| R225 | 06S64995F79 | 12k ohm | | |
| R226 | 06S64995F73 | 6.8k ohm | | |
| R227 | 06S64995F75 | 8.2k ohm | | |
| R228 | 06S64995F75 | 8.2k ohm | | |
| R229 | 06S64995F77 | 10k ohm | | |
| R230 | 06S64995F85 | 22k ohm | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| R231 | 06S64996F26 | 1M ohm | | |
| R232 | 06S64995F91 | 39k ohm | | |
| R233 | 06S64995F74 | 7.5k ohm | | |
| R234 | 06S64995F75 | 8.2k ohm | | |
| R235 | 06S64995F67 | 3.9k ohm | | |
| R236 | 06S64995F61 | 2.2k ohm | | |
| R237 | 06S64995F77 | 10k ohm | | |
| R238 | 06S64996F14 | 330k ohm | | |
| R239 | 06S64995F73 | 6.8k ohm | | |
| R240 | 06S64995F57 | 1.5k ohm | | |
| R241 | 06S64996F02 | 100k ohm | | |
| R242 | 06S64996F10 | 220k ohm | | |
| R243 | 06S64995F85 | 22k ohm | | |
| R244 | 06S64995F77 | 10k ohm | | |
| R245 | 06S64996F26 | 1M ohm | | |
| R246 | 06S64995F97 | 68k ohm | | |
| R247 | 06S64995F55 | 1.2k ohm | | |
| R248 | 06S64995F97 | 68k ohm | | |
| R249 | 06S64995F93 | 47k ohm | | |
| R250 | 06S64996F14 | 330k ohm | | |
| R251 | 06S64995F75 | 8.2k ohm | | |
| R252 | 06S64995F89 | 33k ohm | | |
| R253 | 06S64995F53 | 1k ohm | | |
| R254 | 06S64995F61 | 2.2k ohm | | |
| R255 | 06S64995F83 | 18k ohm | | |
| R256 | 06S64996F02 | 100k ohm | | |
| R257 | 06S64995F73 | 6.8k ohm | | |
| R258 | 06S64995F86 | 24k ohm | | |
| R259 | 06S64996F14 | 330k ohm | | |
| R260 | 06S64996F02 | 100k ohm | | |
| R261 | 06S64996F10 | 220k ohm | | |
| R262 | 06S64995F85 | 22k ohm | | |
| R263 | 06S64995F91 | 39k ohm | | |
| R264 | 06S64995F93 | 47k ohm | | |
| R265 | 06S64995F77 | 10k ohm | | |
| R266 | 06S64995F85 | 22k ohm | | |
| R267 | 06S64995F85 | 22k ohm | | |
| R268 | 06S64995F85 | 22k ohm | | |
| R269 | 06S64995F85 | 22k ohm | | |
| R270 | 06S64995F85 | 22k ohm | | |
| R271 | 06S64995F77 | 10k ohm | | |
| R272 | 06S64995F77 | 10k ohm | | |
| R273 | 06S64995F05 | 10 ohm | | |
| R274 | 06S64995F77 | 10k ohm | | |
| R275 | 06T70072F53 | 1k ohm 1/4W | | |
| R276 | 06S64995F77 | 10k ohm | | |
| R277 | 06S64996F18 | 470k ohm | | |
| R278 | 06S64995F05 | 10 ohm | | |
| R279 | 06S64995F85 | 22k ohm | | |
| R280 | 06S64995F85 | 22k ohm | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| R281 | 06S64996F18 | 470k ohm | | |
| R282 | 06S64995F85 | 22k ohm | | |
| R283 | 06S64995F85 | 22k ohm | | |
| R284 | 06S64995F33 | 150 ohm | | |
| R285 | 06S64995F77 | 10k ohm | | |
| R286 | 06S64995F53 | 1k ohm | | |
| R287 | 06S64995F77 | 10k ohm | | |
| R288 | 06S64995F69 | 4.7k ohm | | |
| R289 | 06S64995F69 | 4.7k ohm | | |
| R290 | 06S64995F69 | 4.7k ohm | | |
| R291 | 06S64996F32 | 3.3M ohm | | |
| R292 | 06S64996F26 | 1M ohm | | |
| R293 | 06S64995F77 | 10k ohm | | |
| R294 | 06S64996F20 | 560k ohm | | |
| R295 | 06S64995F53 | 1k ohm | | |
| R296 | 06S64996F18 | 470k ohm | | |
| R297 | 06S64996F02 | 100k ohm | | |
| R298 | 06S64996F02 | 100k ohm | | |
| R299 | 06S64995F69 | 4.7k ohm | | |
| R320 | 06S64995F79 | 12k ohm | | |
| R321 | 06S64995F77 | 10k ohm | | |
| R401 | 06S64995F53 | 1k ohm | | |
| R402 | 06S64995F53 | 1k ohm | | |
| R403 | 06S64995F53 | 1k ohm | | |
| R404 | 06S64995F53 | 1k ohm | | |
| R405 | 06S64995F37 | 220 ohm | | |
| R406 | 06S64995F37 | 220 ohm | | |
| R407 | 06S64995F77 | 10k ohm | | |
| R408 | 06S64995F77 | 10k ohm | | |
| R409 | 06S64995F77 | 10k ohm | | |
| R410 | 06S64995F77 | 10k ohm | | |
| R411 | 06S64995F77 | 10k ohm | | |
| R412 | 06S64995F77 | 10k ohm | | |
| R413 | 06S64995F77 | 10k ohm | | |
| R414 | 06S64995F77 | 10k ohm | | |
| R415 | 06S64995F87 | 27k ohm | | |
| R416 | 06S64995F87 | 27k ohm | | |
| R417 | 06S64995F77 | 10k ohm | | |
| R418 | 06S64995F77 | 10k ohm | | |
| R419 | 06S64995F77 | 10k ohm | | |
| R420 | 06S64995F77 | 10k ohm | | |
| R421 | 06S64995F77 | 10k ohm | | |
| R422 | 06S64995F77 | 10k ohm | | |
| R424 | 06S64995F85 | 22k ohm | | |
| R426 | 06S64995F61 | 2.2k ohm | | |
| R427 | 06S64995F83 | 18k ohm | | |
| R428 | 06S64995F83 | 18k ohm | | |
| R429 | 06S64995F77 | 10k ohm | | |
| R430 | 06S64995F77 | 10k ohm | | |
| R443 | 06S64995F77 | 10k ohm | | |

| Symbol No. | Part No. | Description |
|---|---|---|
| R444 | 06S64995F77 | 10k ohm |
| R451 | 06S64995F77 | 10k ohm |
| R452 | 06S64995F77 | 10k ohm |
| R459 | 06S64995F83 | 18k ohm |
| R460 | 06S64995F83 | 18k ohm |
| R461 | 06S64995F69 | 4.7k ohm |
| R462 | 06S64995F69 | 4.7k ohm |
| R463 | 06S64995F57 | 1.5k ohm |
| R464 | 06S64995F57 | 1.5k ohm |
| R465 | 06S64995F77 | 10k ohm |
| R466 | 06S64995F77 | 10k ohm |
| R470 | 06S64995F85 | 22k ohm |
| R471 | 06S64995F85 | 22k ohm |
| R472 | 06S64995F53 | 1k ohm |
| R473 | 06S64995F53 | 1k ohm |
| R474 | 06S64995F53 | 1k ohm |
| R475 | 06S64995F53 | 1k ohm |
| R601 | 06S64995F77 | 10k ohm |
| R605 | 06T70072F53 | 1k ohm 1/4W |
| R607 | 06T70072F65 | 3.3k ohm 1/4W |
| R610 | 06S64995F69 | 4.7k ohm |
| R611 | 06S64995F85 | 22k ohm |
| R612 | 06T70072F78 | 2.2 ohm 1/4W |
| R613 | 06S64995F85 | 22k ohm |
| R614 | 06S64995F61 | 2.2k ohm |
| R615 | 06S64995F77 | 10k ohm |
| R616 | 06S64995F77 | 10k ohm |
| R617 | 06S64995F77 | 10k ohm |
| R618 | 06S64995F69 | 4.7k ohm |
| R619 | 06S64995F53 | 1k ohm |
| R621 | 06T70072F53 | 1k ohm 1/4W |
| R624 | 06S64995F45 | 470 ohm |
| R625 | 06S64995F77 | 10k ohm |
| R626 | 06T70072F53 | 1k ohm 1/4W |
| R627 | 06T70072F37 | 220 ohm 1/4W |
| R628 | 06S64995F81 | 15k ohm |
| R629 | 06S64995F70 | 5.1k ohm |
| R630 | 06S64995F87 | 27k ohm |
| R631 | 06S64995F78 | 11k ohm |
| R632 | 06S64995F77 | 10k ohm |
| R633 | 06T70072F45 | 470 ohm 1/4W |
| R634 | 06S64995F77 | 10k ohm |
| R635 | 06S64995F61 | 2.2k ohm |
| R636 | 06S64996F10 | 220k ohm |
| R637 | 06S64995F77 | 10k ohm |
| R638 | 06S64995F77 | 10k ohm |
| R639 | 06S64996F02 | 100k ohm |
| R640 | 06S64996F02 | 100k ohm |
| R641 | 06S64996F02 | 100k ohm |
| R642 | 06S64996F02 | 100k ohm |

| Symbol No. | Part No. | Description |
|---|---|---|
| R643 | 06S64996F02 | 100k ohm |
| R644 | 06S64996F02 | 100k ohm |
| R645 | 06S64996F02 | 100k ohm |
| R648 | 06S64995F77 | 10k ohm |
| R649 | 06S64995F77 | 10k ohm |
| R650 | 06S64995F77 | 10k ohm |
| R651 | 06S64995F63 | 2.7k ohm |
| R652 | 06S64996F02 | 100k ohm |
| R653 | 06S64996F02 | 100k ohm |
| R654 | 06S64995F81 | 15k ohm |
| R655 | 06T70072F29 | 100 ohm 1/4W |
| R656 | 06T70072F47 | 560 ohm 1/4W |
| R658 | 06S64996F02 | 100k ohm |
| R659 | 06T70072F53 | 1k ohm 1/4W |
| R660 | 06S64996F02 | 100k ohm |
| R661 | 06S64995F77 | 10k ohm |
| R662 | 06S64995F77 | 10k ohm |
| R663 | 06S64995F77 | 10k ohm |
| R665 | 06S64995F85 | 22k ohm |
| R666 | 06T70072F43 | 390k ohm 1/4W |
| R668 | 06T70072F47 | 560 ohm 1/4W |
| R669 | 06S64995F69 | 4.7k ohm |
| R670 | 06S64995F53 | 1k ohm |
| R671 | 06S64995F61 | 2.2k ohm |
| R673 | 06S64995F53 | 1k ohm |
| R680 | 06S64995F77 | 10k ohm |
| R681 | 06S64995F77 | 10k ohm |
| VR201 | 18T15805W19 | Volume, Metal 100k ohm |
| VR202 | 18T10024W16 | Volume, Sol. 33k ohm |
| VR401 | 18T15283W02 | Volume, Rotary (Balance,Volume, Fader) |

## Main-Front P. C. Board

| IC's | | |
|---|---|---|
| IC405 | 51T92001F01 | BA4560F |
| or | 51T93338F01 | NJM4560E |
| IC901 | 51T16032W01 | μ PD6700GH |

| Transistors | | |
|---|---|---|
| Q901 | 48T63419F01 | CP., 2SA1036K |
| Q903 | 48T63461F01 | CP., 2SC2411K |

| Symbol No. | Part No. | Description |
|---|---|---|
| **Diodes／LED** | | |
| D901 | 48T94608F01 | CP., DA204U |
| ZD901 | 48T62934F27 | Zener, CP., RD6.8MB1 |
| ZD902 | 48T62934F19 | Zener, CP., RD5.1MB2 |
| LD902 | 48T42449F12 | LED, (GRN) BG5535K－C19 |
| **Switches** | | |
| S901 | 40T66861F03 | Tact, SKHHAQ STK (RESET) |
| S904 | 40T66861F03 | Tact, SKHHAQ STK (EJECT) |
| S906 | 40T66861F03 | Tact, SKHHAQ STK (M. S.・CD ▶▶| ) |
| S911 | 40T66861F03 | Tact, SKHHAQ STK (M. S.・CD |◀◀ ) |
| S912 | 40T66861F03 | Tact, SKHHAQ STK (1 MIX) |
| S913 | 40T66861F03 | Tact, SKHHAQ STK (2 REP) |
| S914 | 40T66861F03 | Tact, SKHHAQ STK (3 SCAN) |
| S915 | 40T66861F03 | Tact, SKHHAQ STK (DISC▶／II) |
| **Lamps** | | |
| PL901 | 65T25170W06 | Pilot, 6V－70mA |
| PL902 | 65T25170W06 | Pilot, 6V－70mA |
| PL903 | 65T25170W06 | Pilot, 6V－70mA |
| PL904 | 65T25170W06 | Pilot, 6V－70mA |
| **Capacitors** | | |
| C408 | 23T25149W15 | ELY., 4.7 μ F／35V |
| C409 | 08S82122F21 | CP., 22pF |
| C410 | 08S82122F21 | CP., 22pF |
| C411 | 08T90316F22 | TF., 0.027 μ F |
| C412 | 08T90316F22 | TF., 0.027 μ F |
| C413 | 08T90316F15 | TF., 6800pF |
| C414 | 08T90316F15 | TF., 6800pF |
| C415 | 08S82122F37 | CP., 100pF |
| C416 | 08S82122F37 | CP., 100pF |
| **Resistors (All resistors are chip 1／10W±5% unless otherwise noted.)** | | |
| R431 | 06S64995F77 | 10k ohm |
| R432 | 06S64995F77 | 10k ohm |
| R433 | 06S64996F26 | 1M ohm |
| R434 | 06S64996F26 | 1M ohm |
| R435 | 06S64995F53 | 1k ohm |
| R436 | 06S64995F53 | 1k ohm |
| R437 | 06S64995F53 | 1k ohm |
| R438 | 06S64995F53 | 1k ohm |
| R439 | 06S64995F77 | 10k ohm |
| R440 | 06S64995F77 | 10k ohm |
| R901 | 06S64995F77 | 10k ohm |
| R902 | 06S64995F65 | 3.3k ohm |
| R903 | 06T70072F05 | 10 ohm 1／4W |
| R907 | 06S64995F61 | 2.2k ohm |
| R908 | 06S64995F93 | 47k ohm |
| R909 | 06S64995F71 | 5.6k ohm |
| R910 | 06S64995F65 | 3.3k ohm |
| R911 | 06S64995F61 | 2.2k ohm |
| R912 | 06S64995F89 | 33k ohm |
| R913 | 06S64995F77 | 10k ohm |
| R914 | 06S64995F71 | 5.6k ohm |
| R915 | 06S64995F65 | 3.3k ohm |
| R916 | 06S64995F61 | 2.2k ohm |
| R917 | 06S64995F45 | 470 ohm |
| R918 | 06T70072F37 | 220 ohm 1／4W |
| R924 | 06T70072F53 | 1k ohm 1／4W |
| R925 | 06T70072F17 | 33 ohm 1／4W |
| VR404 | 18T15284W01 | Volume, Slide (Treble) |
| VR405 | 18T15284W01 | Volume, Slide (Bass) |
| **Load／Photo P. C. Board** | | |
| **IC／Transistors** | | |
| IC301 | 51T15267W01 | IC, LB1641 |
| PT301 | 48T92913F01 | PHOTO PT360 |
| PT302 | 48T92913F01 | PHOTO PT360 |
| PT303 | 48T92913F01 | PHOTO PT360 |
| **Diode／LEDs** | | |
| ZD301 | 48T15440W12 | Zener, UTZJ6.2C |
| LD301 | 48T16057W02 | AN 501－B1 (RED) |
| LD302 | 48T16057W02 | AN 501－B1 (RED) |
| LD303 | 48T16057W02 | AN 501－B1 (RED) |
| **Capacitors** | | |
| C301 | 08S65128F69 | CP., 0.01 μ F |
| C302 | 08S65128F69 | CP., 0.01 μ F |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| Resistors (All resistors are chip 1/8W±5% unless otherwise noted.) | | | | |
| R301 | 06S53330F43 | 390 ohm | | |
| R302 | 06S53330F47 | 560 ohm | | |
| R304 | 06S53331F02 | 100k ohm | | |
| R305 | 06S53331F02 | 100k ohm | | |
| R306 | 06S53331F02 | 100k ohm | | |
| R308 | 06T70072F01 | 4.7k ohm 1/4W | | |
| R309 | 06T70072F01 | 4.7k ohm 1/4W | | |
| R310 | 06S53330F47 | 560 ohm | | |
| R311 | 06S53331F02 | 100k ohm | | |
| Miscellaneous | | | | |
| ET303 | 09T15921W03 | QRB Socket (22P) | | |
| FL901 | 65T15282W02 | FL Display (6-BT-100N) | | |
| HD201 | 88T15309W01 | Pick-Up Unit | | |
| LD304 | 48T16057W02 | LED, AN 501 (RED) | | |
| M301 | 01V13100W97 | Assy., Motor Load | | |
| M302 | 59T91005F01 | Motor, Spindle | | |
| M303 | 59T52973F03 | Motor, Sled | | |
| PT304 | 48T92913F01 | TR., Photo PT360 | | |
| S301 | 40T71025F03 | Switch, Detector (END) | | |
| S302 | 40T71025F01 | Switch, Detector (Limit) | | |
| SD301 | 01A90816F01 | Assy., DP Frame Solenoid | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|

# Cabinet Assembly Parts List

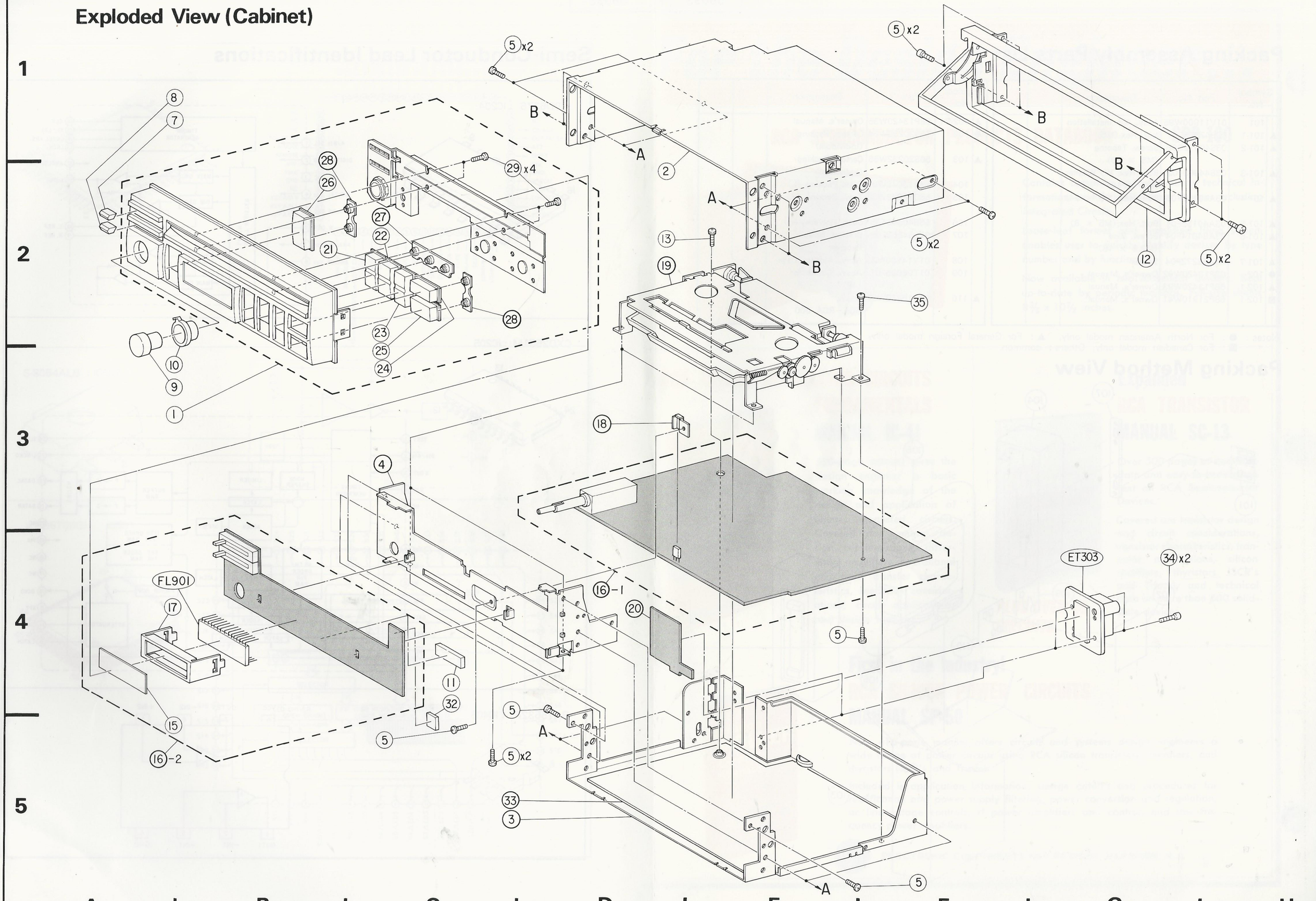
NOTE : The parts without part numbers are not supplied.

| Symbol No. | | Index | Part No. | Description | | |
|---|---|---|---|---|---|---|
| ● | 1 | 3-A | 13C21722W01 | Assy., Nosepiece | | |
| ▲ | 1 | | 13C21722W02 | Assy., Nosepiece | | |
| | 2 | 2-D | 15C21807W04 | Cover, Top | | |
| | 5 | | 03S44205G34 | Screw, Pan (M2.6 × 5) | | |
| | 7 | 1-A | 36B10950W01 | Knob, Slide (A) | | |
| | 8 | 1-A | 36B10950W02 | Knob, Slide (B) | | |
| | 9 | 3-A | 36A94114F01 | Knob, Control (Front) | | |
| | 10 | 3-A | 36A94115F01 | Knob, Control (Back) | | |
| | 11 | 4-C | 75S12196W16 | Cushion, Rubber | | |
| | 12 | 2-G | 07C20703W03 | Assy., Handle Bracket | | |
| | 13 | 2-D | 03S40012G18 | Screw, Tapping (M2.6 × 6) | | |
| | 15 | 5-A | 26B11440W03 | Reflector, Sheet | | |
| | 17 | 4-A | 26A10949W01 | Shield, FL | | |
| | 21 | 2-B | 36A10932W01 | Knob, Push M.I.X. | | |
| | 22 | 2-C | 36A10932W02 | Knob, Push Repeat | | |
| | 23 | 2-C | 36A10932W03 | Knob, Scan | | |
| | 24 | 3-C | 36B21710W03 | Knob, Eject | | |
| | 25 | 3-C | 36B21710W02 | Knob, Disc | | |
| | 26 | 2-B | 36B94088F03 | Knob, UP／DOWN | | |
| | 29 | 2-C | 03S68555F07 | Screw, Pan (M2 × 4) | | |
| | 32 | 4-C | 75S72374F26 | Cushion, Rubber | | |
| | 34 | 4-G | 03S44205G76 | Screw, Pan (M2.6×8) | | |
| | 35 | 2-F | 03S44205G29 | Screw, Pan (M2.6×6) | | |

| Symbol No. | Index | Part No. | Description | | |
|---|---|---|---|---|---|

Notes : ● : For North American model only, ▲ : For General Foreign model only, Others : Common.

# Exploded View (Cabinet)



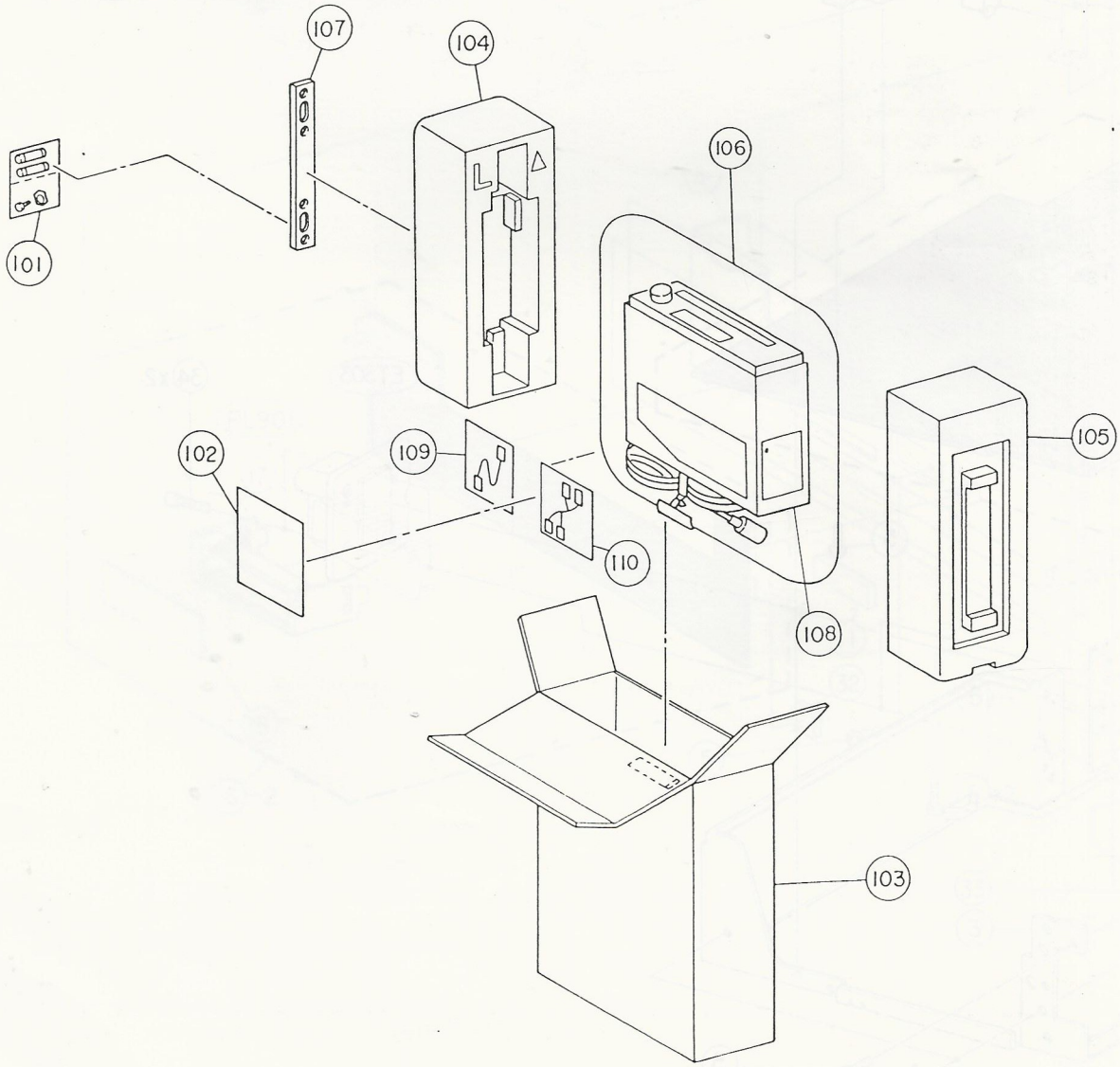
# Packing Assembly Parts List

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| 101 | 01V11900W95 | Assy., Kit Installation | | |
| ▲ 101-1 | 02B47353F01 | Nut, Hex.(M5) | | |
| ▲ 101-2 | 03S40012G66 | Screw, Tapping (M5 × 20) | | |
| ▲ 101-3 | 03B44963F03 | Bolt, Hex. W/Washer (M5 × 10) | | |
| ▲ 101-4 | 03A40155F05 | Bolt, Hex.(M5 × 14) | | |
| ▲ 101-5 | 03A40155F01 | Bolt, Hex.(M5 × 8) | | |
| ▲ 101-6 | 03A84814F04 | Screw, Bind (M2.6 × 18) | | |
| ▲ 101-7 | 43A58272F04 | Spacer | | |
| ● 102 | 68P13420W92 | Owner's, Manual | | |
| ▲ 102-1 | 68P13420W93 | Owner's, Manual | | |
| ■ 102-1 | 68P21910W41 | Owner's, Manual | | |

| Symbol No. | Part No. | Description | | |
|---|---|---|---|---|
| ▲ 102-2 | 68P13420W35 | Owner's, Manual | | |
| ● 103 | 56S20232W64 | Carton, Packing (Individual) | | |
| ▲ 103 | 56S20232W66 | Carton, Packing (Individual) | | |
| 104 | 56D13048W01 | Tray, Packing (L) | | |
| 105 | 56D13048W02 | Tray, Packing (R) | | |
| 106 | 56B40990T36 | Sack, Polyethylene | | |
| 107 | 07B64552F01 | Bracket, Strap Receiver | | |
| 108 | 01V14800W23 | Assy., Mother Case | | |
| 109 | 01T96095F01 | Assy., Connector (4P) | | |
| ▲ 110 | 01T15832W01 | Assy., RCA−RCA 600 | | |

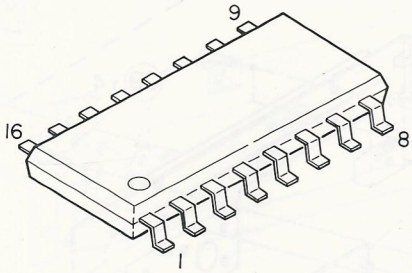
Notes : ● : For North American model only, ▲ : For General Foreign model only,
■ : For Canadian model only, Others : common.

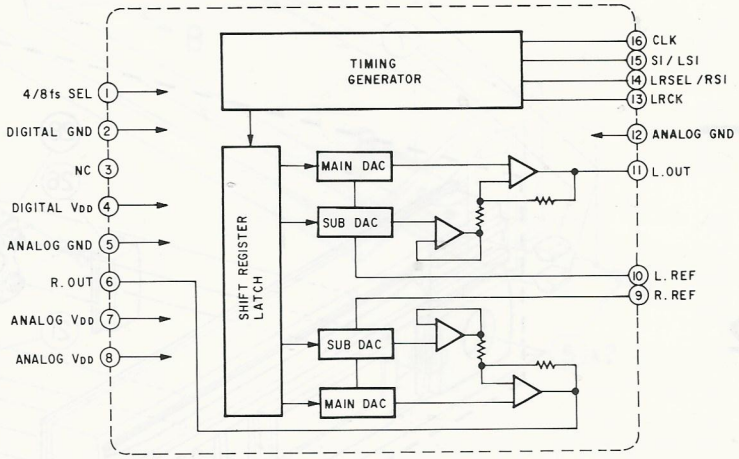
# Packing Method View



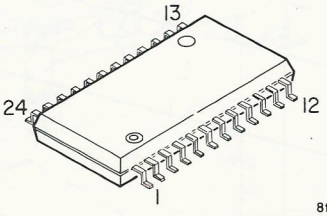
# Semi-Conductor Lead Identifications

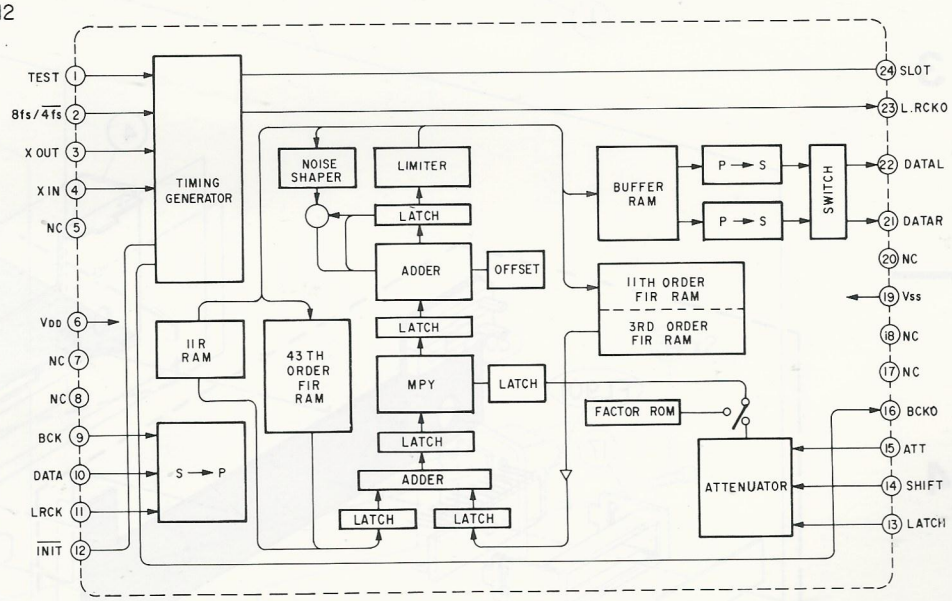
μ PD6376 : IC204



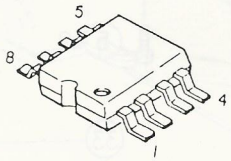



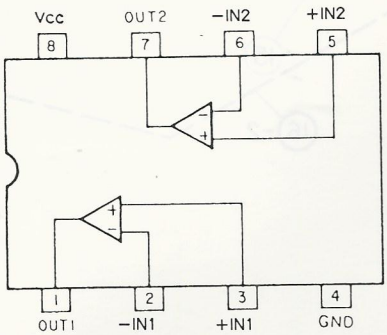

CXD2551M : IC205



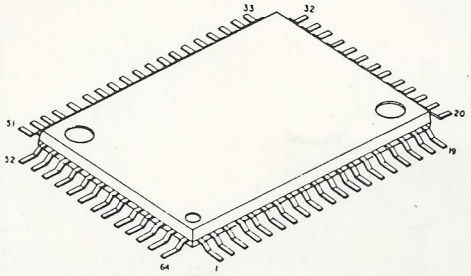



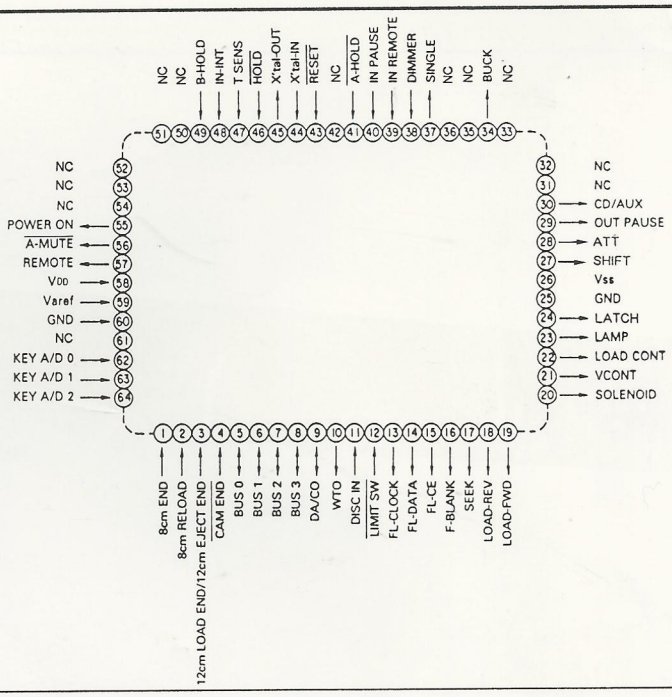

BA15532F : IC403



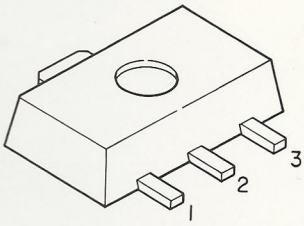



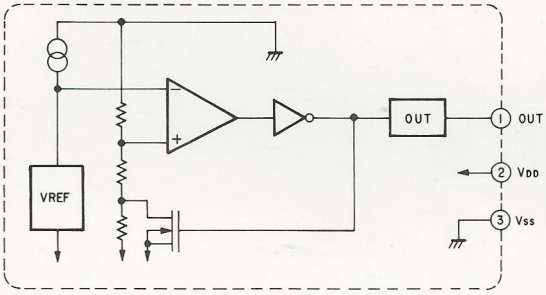
25915W01
15263W01 : IC601

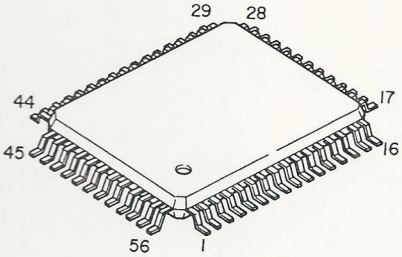
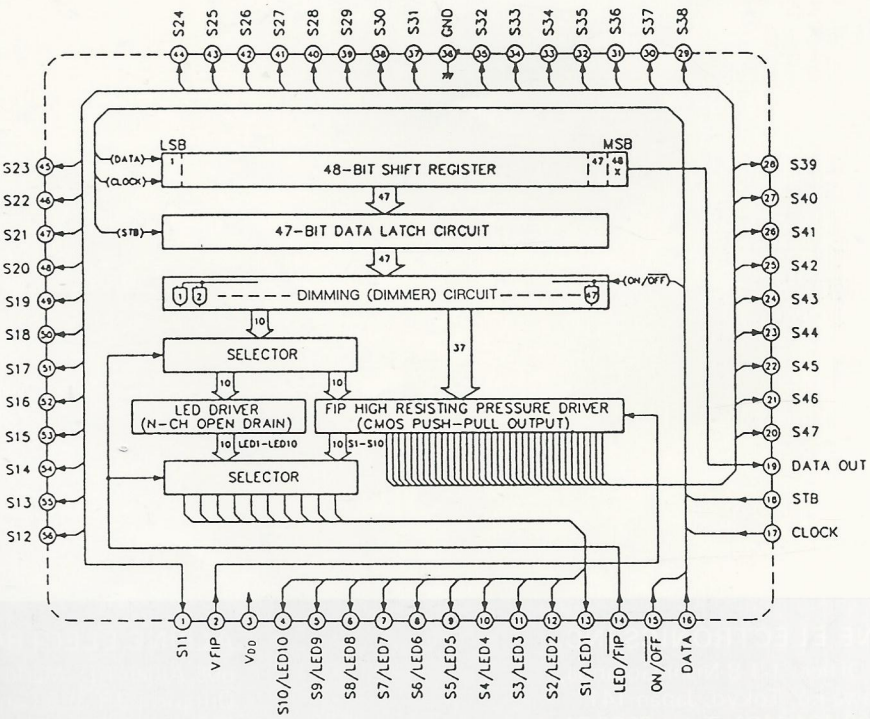





S-8054ALB : IC602






μ PD6700GH : IC901