

# Service Manual

Stereo Integrated Amplifier

Amplifier  
**SU-X840**

Color

(K) . . . . Black Type



| Color | Areas                                                                      |
|-------|----------------------------------------------------------------------------|
| (K)   | [EX] . . . . Continental Europe                                            |
| (K)   | [EH] . . . . Holland                                                       |
| (K)   | [EB] . . . . Belgium                                                       |
| (K)   | [EF] . . . . France                                                        |
| (K)   | [EK] . . . . United Kingdom                                                |
| (K)   | [EG] . . . . F.R. Germany                                                  |
| (K)   | [EW] . . . . Switzerland                                                   |
| (K)   | [Ei] . . . . Italy                                                         |
| (K)   | [XL] . . . . Australia                                                     |
| (K)   | [XA] . . . . Asia, Latin America,<br>Middle Near East,<br>Africa & Oceania |
| (K)   | [PA] . . . . East PX.                                                      |
| (K)   | [PE] . . . . European Military                                             |
| (K)   | [XB] . . . . Saudi Arabia                                                  |

## SPECIFICATIONS (DIN 45 500)

### ■ AMPLIFIER SECTION

|                                    |                       |
|------------------------------------|-----------------------|
| DIN power output                   | 2 × 50W (8Ω)          |
| 1 kHz THD: 1%                      |                       |
| Total harmonic distortion          |                       |
| rated power at 1 kHz               | 1% (8Ω)               |
| half power at 1 kHz                | 0.009% (8Ω)           |
| Residual hum and noise             | 0.4 mV                |
| Damping factor                     | 30 (8Ω)               |
| Input sensitivity and impedance    |                       |
| PHONO                              | 3 mV/47kΩ             |
| TUNER, CD, AUX, TAPE 1, TAPE 2     |                       |
|                                    | 200 mV/22kΩ           |
| MIC                                | 1.2 mV/10kΩ           |
| Maximum input voltage (1 kHz, RMS) |                       |
| PHONO                              | 120 mV                |
| MIC                                | 40 mV                 |
| S/N (rated power 8Ω)               |                       |
| PHONO                              | 73 dB (IHF, A, 79 dB) |

### TUNER, CD, AUX, TAPE 1, TAPE 2

|                                       |                                               |
|---------------------------------------|-----------------------------------------------|
|                                       | 84 dB (IHF, A: 83 dB)                         |
| Frequency response                    |                                               |
| PHONO                                 | RIAA standard curve<br>±0.8 dB (30 Hz~15 kHz) |
| TUNER, CD, AUX, TAPE 1, TAPE 2        |                                               |
|                                       | 10 Hz~50 kHz (−3 dB)                          |
| Tone controls                         |                                               |
| BASS                                  | 50 Hz, +10 dB, −10 dB                         |
| TREBLE                                | 20 kHz, +10 dB, −10 dB                        |
| Muting                                | −20 dB                                        |
| Super bass                            | 70 Hz, +10 dB                                 |
| Output voltage                        |                                               |
| TAPE 1, TAPE 2, REC OUT               | 200 mV                                        |
| Channel balance, AUX 250 Hz~6,300 Hz  | ±1.0 dB                                       |
| Channel separation, AUX 1 kHz         | 60 dB                                         |
| Headphones output level and impedance |                                               |
|                                       | 435 mV/340Ω                                   |

|                        |                                                        |
|------------------------|--------------------------------------------------------|
| Load impedance         |                                                        |
| MAIN                   | 8Ω~16Ω                                                 |
| SURROUND               | 8Ω~16Ω                                                 |
| ■ GENERAL              |                                                        |
| Power consumption      | 230W                                                   |
| Power supply           |                                                        |
| For continental Europe | AC 50 Hz/60 Hz, 220V                                   |
| For others             | AC 50 Hz/60 Hz, 110V/127V/220V/240V                    |
| Dimensions (W×H×D)     | 360 × 103 × 300 mm<br>(14-3/16" × 4-1/16" × 11-13/16") |
| Weight                 | 5.0 kg (11 lb.)                                        |

- Notes:
- Specifications are subject to change without notice.  
Weight and dimensions are approximate.
  - Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Specifications are subject to change without notice for further improvement.

## ■ CONTENTS

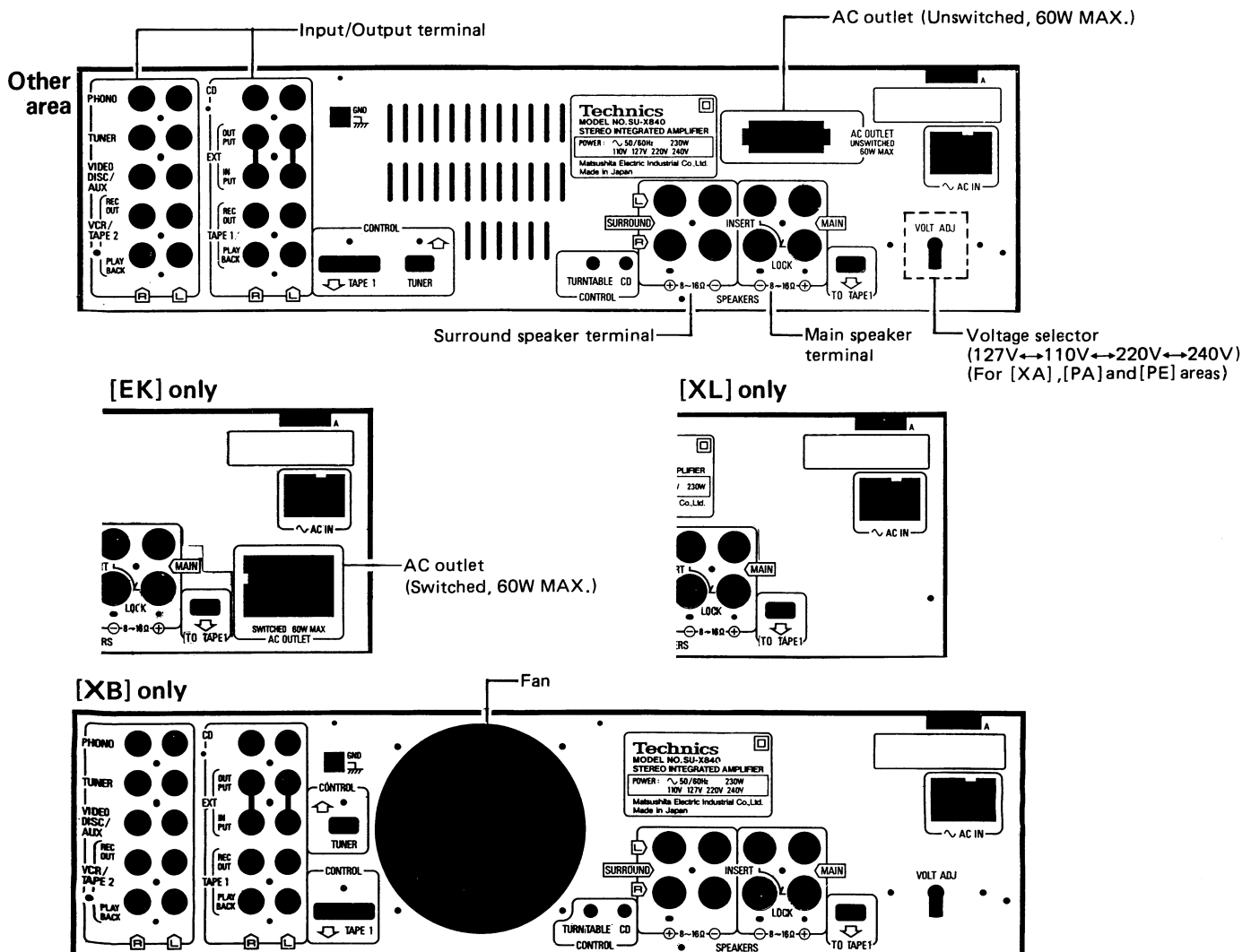
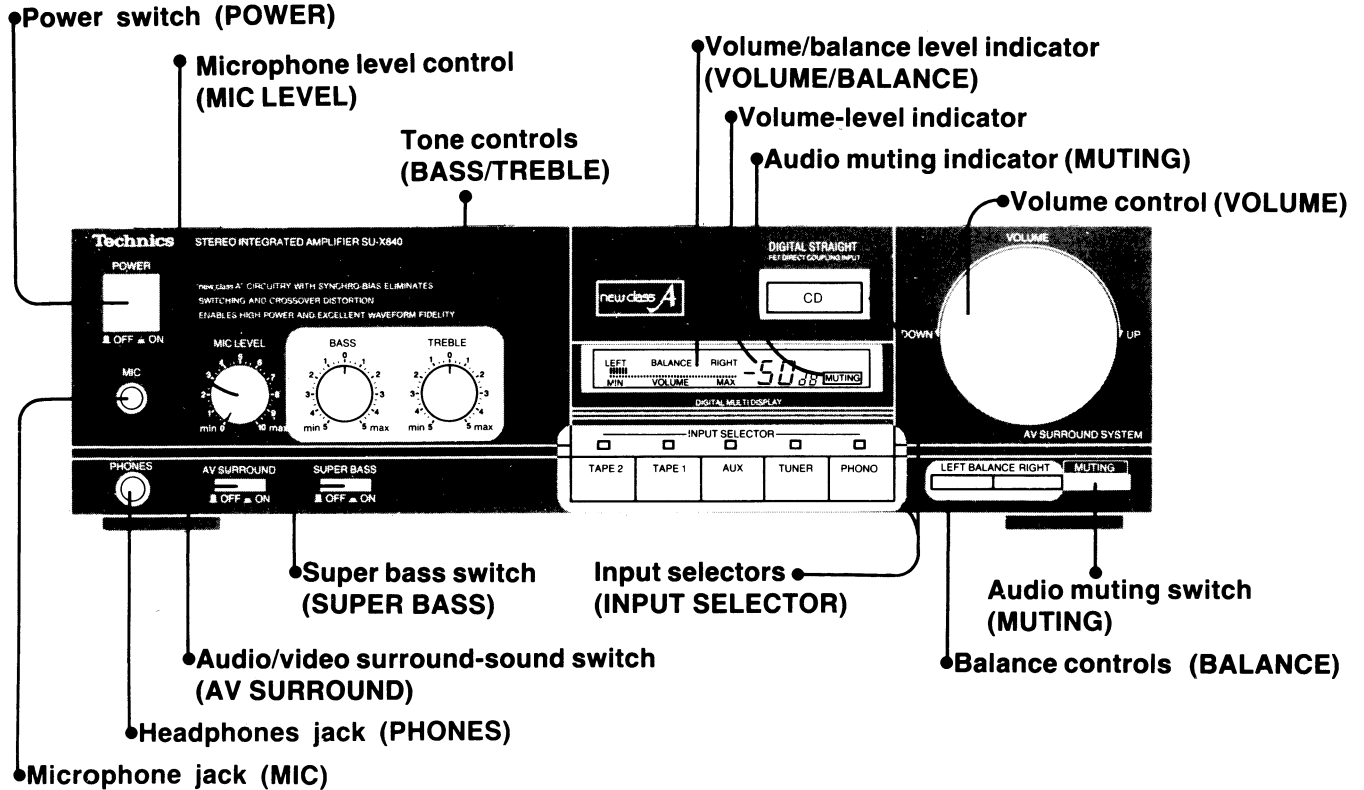
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# Technics

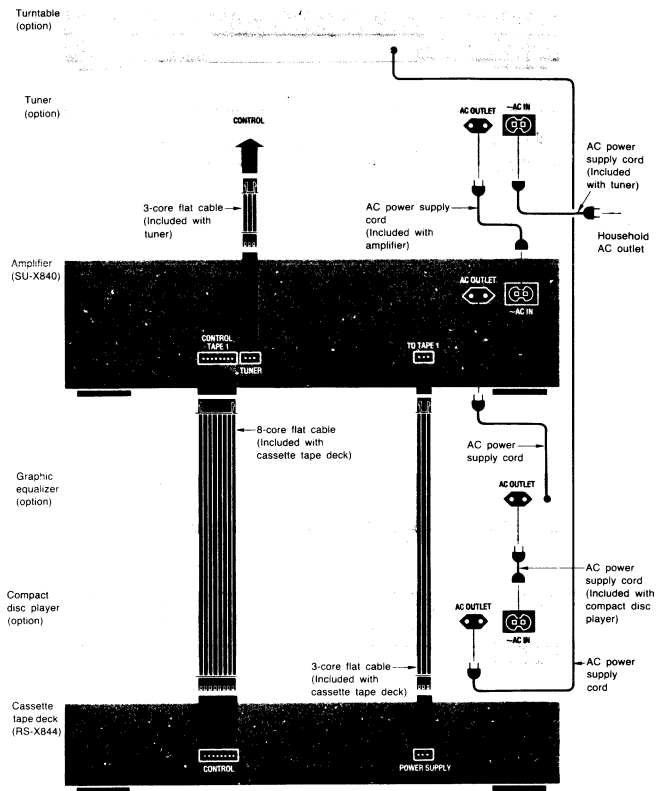
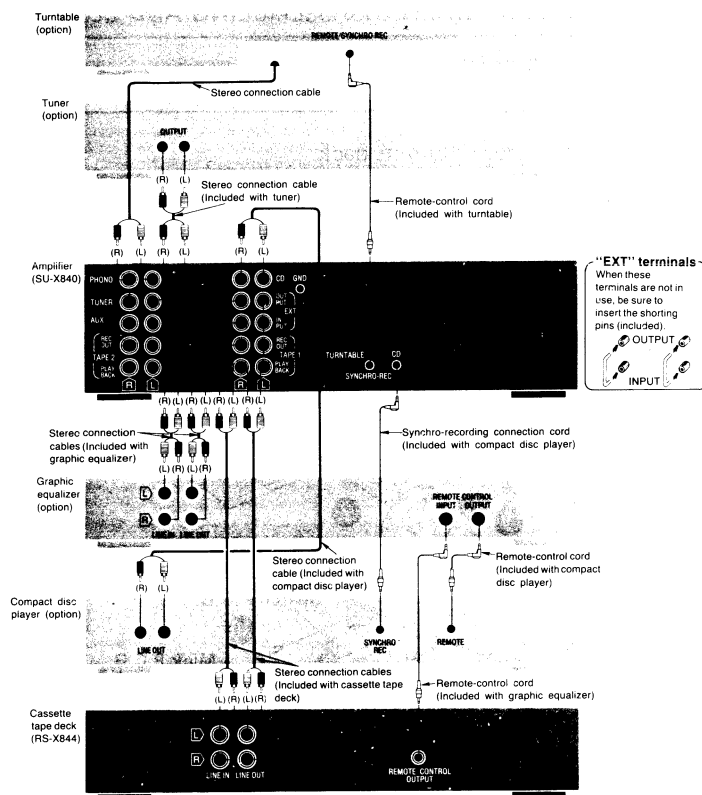
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Tokyo 105, Japan

## LOCATION OF CONTROLS

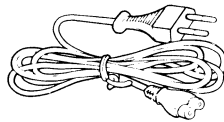


## CONNECTION



## ACCESSORY

- AC power supply cord ... 1



## PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

### Note

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

## BEFORE REPAIR AND ADJUSTMENT

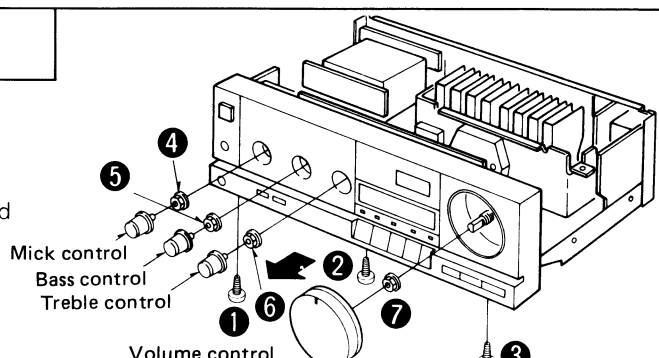
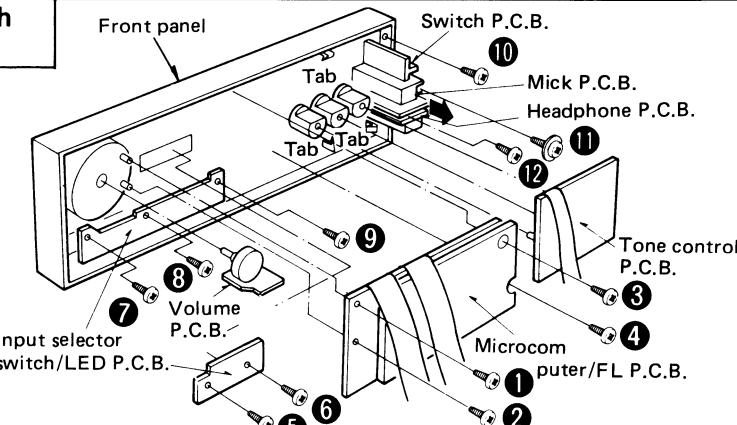
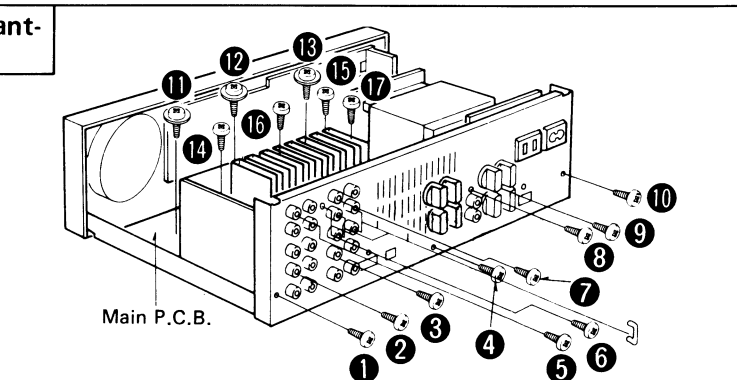
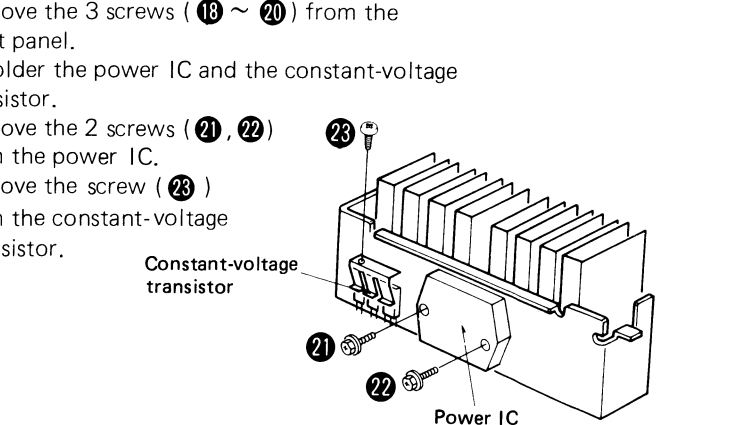
1. Turn off the power, Discharge both power supply capacitors (C701, C702, 3300 $\mu$ F) through a 10 $\Omega$ , 5W resistor to ground. Do not short between C701 and C702. It may damage the capacitors.
2. After completion of repair, slowly apply the primary voltage by using a variac to avoid over current. Current consumption at 60Hz/50Hz in no signal mode should be shown below with respect to supply voltage 110/127V /220V/240V.

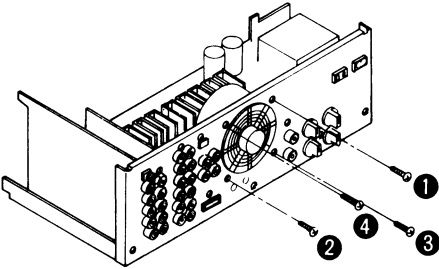
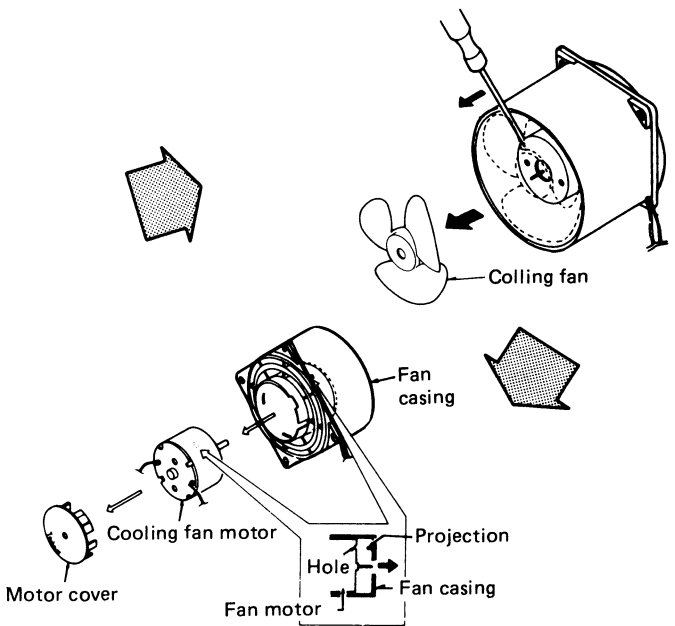
| Power supply voltage |      | AC110V      | AC127V      | AC220V     | AC240V     |
|----------------------|------|-------------|-------------|------------|------------|
| Consumed current     | 50Hz | 190 ~ 300mA | 185 ~ 290mA | 90 ~ 150mA | 85 ~ 140mA |
|                      | 60Hz | 180 ~ 285mA | 170 ~ 260mA | 85 ~ 140mA | 80 ~ 130mA |

# ■ DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"

SOME CHASSIS COMPONENTS MAY HAVE SHARP EDGES. BE CAREFUL WHEN DISASSEMBLING AND SERVICING.

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Ref. No.</b><br>1          | <b>How to remove the cabinet</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| <b>Procedure</b><br>1         | 1. Remove the 4 screws from both sides of the cabinet and the 2 screws from its back.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| <b>Ref. No.</b><br>2          | <b>How to remove the front panel</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| <b>Procedure</b><br>1 → 2     | <p>1. Remove the 3 screws (① ~ ③) from the front panel.<br/> 2. Remove the 4 controls-volume, mike, treble and bass-and their respective nuts (④ ~ ⑦).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| <b>Ref. No.</b><br>3          | <b>How to remove the input selector switch and microcomputer FL P.C.B.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| <b>Procedure</b><br>1 → 2 → 3 | <p>1. Remove the 4 screws (① ~ ④) from the microcomputer/FL P.C.B.<br/> 2. Remove the 5 screws (⑤ ~ ⑨) from the input selector switch/LED P.C.B.<br/> 3. Undo the tabs off the tone control P.C.B.<br/> 4. Remove the screw (⑩) from the switch P.C.B.<br/> 5. Remove the screw (⑪) from the mike P.C.B.<br/> 6. Remove the screw (⑫) from the headphone P.C.B.</p>                                                                                                                                                                                                                                                                                               |  |
| <b>Ref. No.</b><br>4          | <b>How to remove the power IC and constant-voltage transistor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| <b>Procedure</b><br>1 → 4     | <p>1. Remove the 10 screws (① ~ ⑩) from the rear panel.<br/> 2. Remove the 5 screws (⑪ ~ ⑮) from the main P.C.B.<br/> 3. Remove the 2 screws (⑯, ⑰) from the heat sink.</p>  <p>4. Remove the 3 screws (⑱ ~ ⑳) from the front panel.<br/> 5. Unsolder the power IC and the constant-voltage transistor.<br/> 6. Remove the 2 screws (㉑, ㉒) from the power IC.<br/> 7. Remove the screw (㉓) from the constant-voltage transistor.</p>  <p>8. When mounting the power IC and the constant-voltage transistor, apply silicone grease (SZ0GYG6260) over their contact areas.</p> |  |

|                                                                                                   |                                            |                                                                                    |
|---------------------------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------|
| <b>Ref. No.</b><br>5                                                                              | <b>How to remove the cooling fan motor</b> | 2. Insert a screwdriver at the root of the cooling fan it out of the motor shaft.  |
| <b>Procedure</b><br>1 → 5                                                                         | <b>[XB] only</b>                           |                                                                                    |
| 1. Remove the 4 screws (① ~ ④) and the connector.                                                 |                                            |                                                                                    |
|                  |                                            |                                                                                    |
| 3. Remove the motor cover.<br>4. Remove the motor from the fan casing.                            |                                            |                                                                                    |
| 5. When mounting the fan motor, align the fan casing's projection with the hole of the fan motor. |                                            |                                                                                    |
|                                                                                                   |                                            |  |

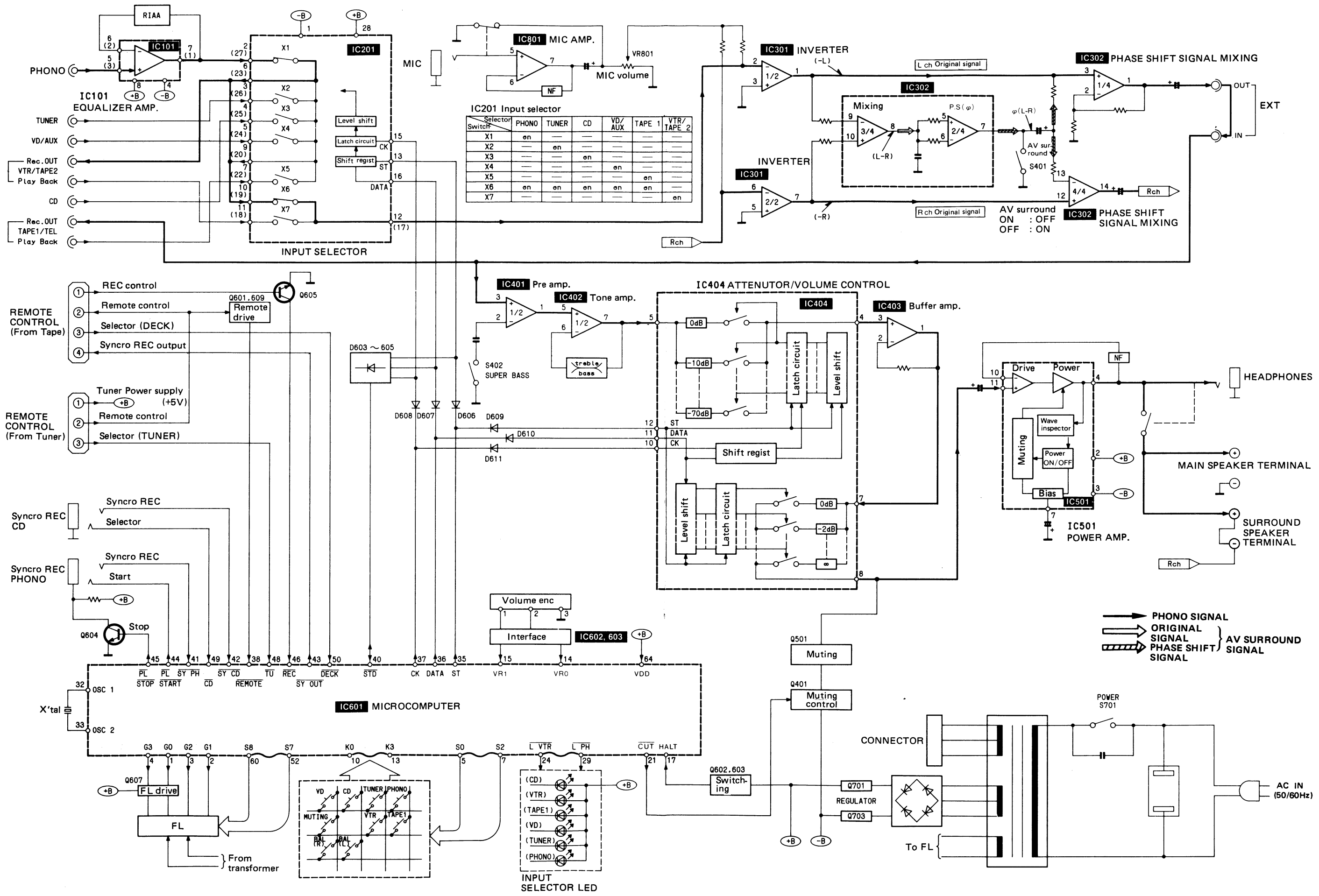
## ■ FUNCTION OF TERMINAL

### ● IC601 (LC6554D-3230)

| Pin No.         | Symbol                 | Function Description                              |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
|-----------------|------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--|-----------------|---|---|---|----|------------------------|--------------|--------------------|----|---|---|--------------------|----|---------------|--------------------|---|----|---------------|----------------|---|
| 1<br>3<br>4     | G0<br>}<br>G3          | Grid drive output for digital multi-display (FL). |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 5<br>6<br>7     | S0<br>}<br>S2          | Key matrix output.                                | <table><tr><th>Output<br/>Input</th><th>5</th><th>6</th><th>7</th></tr><tr><td>10</td><td>S603<br/>VIDEO DISC/AUX</td><td>S612<br/>MUTE</td><td>S608<br/>BALANCE(R)</td></tr><tr><td>11</td><td>—</td><td>—</td><td>S607<br/>BALANCE(L)</td></tr><tr><td>12</td><td>S602<br/>TUNER</td><td>S605<br/>VTR/TAPE 2</td><td>—</td></tr><tr><td>13</td><td>S601<br/>PHONO</td><td>S604<br/>TAPE 1</td><td>—</td></tr></table> |   |  | Output<br>Input | 5 | 6 | 7 | 10 | S603<br>VIDEO DISC/AUX | S612<br>MUTE | S608<br>BALANCE(R) | 11 | — | — | S607<br>BALANCE(L) | 12 | S602<br>TUNER | S605<br>VTR/TAPE 2 | — | 13 | S601<br>PHONO | S604<br>TAPE 1 | — |
| Output<br>Input | 5                      |                                                   | 6                                                                                                                                                                                                                                                                                                                                                                                                                       | 7 |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 10              | S603<br>VIDEO DISC/AUX | S612<br>MUTE                                      | S608<br>BALANCE(R)                                                                                                                                                                                                                                                                                                                                                                                                      |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 11              | —                      | —                                                 | S607<br>BALANCE(L)                                                                                                                                                                                                                                                                                                                                                                                                      |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 12              | S602<br>TUNER          | S605<br>VTR/TAPE 2                                | —                                                                                                                                                                                                                                                                                                                                                                                                                       |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 13              | S601<br>PHONO          | S604<br>TAPE 1                                    | —                                                                                                                                                                                                                                                                                                                                                                                                                       |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 10<br>13        | K0<br>}<br>K3          | Key matrix input.                                 |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
|                 |                        |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 8               | S3                     | Not used.                                         |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 9               | POWER ON               | Not used.                                         |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 14<br>15        | VR0<br>VR1             | Rotary encoder input of volume control (VR601).   |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 16              | CS0                    | Not used.                                         |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 17              | HALT                   | Input for power detection.                        |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 18              | CS1                    | Not used.                                         |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 19              | AMP                    | Input for power detection.                        |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |
| 20              | AMP POWER              | Not used.                                         |                                                                                                                                                                                                                                                                                                                                                                                                                         |   |  |                 |   |   |   |    |                        |              |                    |    |   |   |                    |    |               |                    |   |    |               |                |   |

| Pin. No.       | Symbol                    | Function Description                          |                         |
|----------------|---------------------------|-----------------------------------------------|-------------------------|
| 21             | $\overline{\text{CUT}}$   | Input selector noise cut muting output.       |                         |
| 22             | $\overline{\text{S. ON}}$ | Not used.                                     |                         |
| 23             | $\overline{\text{DTS}}$   | Not used.                                     |                         |
| 24             | $\overline{\text{LVTR}}$  | LED selector display (VTR) output.            |                         |
| 25             | $\overline{\text{LTA}}$   | LED selector display (TAPE) output.           |                         |
| 26             | $\overline{\text{LVD}}$   | LED selector display (VIDEO DISC/AUX) output. |                         |
| 27             | $\overline{\text{LCD}}$   | LED selector display (CD) output.             |                         |
| 28             | $\overline{\text{LTU}}$   | LED selector display (TUNER) output.          |                         |
| 29             | $\overline{\text{LPH}}$   | LED selector display (PHONO) output.          |                         |
| 30             | TEST                      | Not used.                                     |                         |
| 31             | V <sub>SS</sub>           | Grounding.                                    |                         |
| 32             | OSC1                      | Clock oscillation input/output.               |                         |
| 33             | OSC2                      |                                               |                         |
| 34             | $\overline{\text{RES}}$   | Reset signal input.                           |                         |
| 35             | ST                        | ST signal control output                      |                         |
| 36             | DATA                      | DATA signal control output.                   |                         |
| 37             | CK                        | CK signal control output.                     |                         |
| 38             | $\overline{\text{REM}}$   | Remote control data input.                    |                         |
| 39             | $\overline{\text{DCD}}$   | Deck control output.                          |                         |
| 40             | $\overline{\text{SID}}$   | ST, CK and DATA signal control.               |                         |
| 41             | $\overline{\text{SYPH}}$  | Player synchronized recording input.          |                         |
| 42             | $\overline{\text{SYCD}}$  | CD synchronized recording input.              |                         |
| 43             | SY OUT                    | Deck synchronized recording output.           |                         |
| 44             | $\overline{\text{START}}$ | Player STOP/START signal output.              |                         |
| 45             | $\overline{\text{STOP}}$  |                                               |                         |
| 46             | $\overline{\text{REC}}$   | Deck on-recording signal input.               |                         |
| 47             | $\overline{\text{PH}}$    | Input selection by phono unit signal.         | Direct operation input. |
| 48             | $\overline{\text{TU}}$    | Input selection by tuner unit signal.         |                         |
| 49             | $\overline{\text{CD}}$    | Input selection by CD unit signal.            |                         |
| 50             | $\overline{\text{DECK}}$  | Input selection by tape unit signal.          |                         |
| 51             | V <sub>P</sub>            | Power supply.                                 |                         |
| 52<br>53<br>60 | S0<br>S1<br>S8            | Digital multi-display (FL) output.            |                         |
| 61             | S music                   | Not used.                                     |                         |
| 62             | S movie                   |                                               |                         |
| 63             | S mono                    |                                               |                         |
| 64             | V <sub>DD</sub>           | Power supply.                                 |                         |

BLOCK DIAGRAM



RESIS

Notes: \* Important  
Compon  
teristics  
these co  
parts.  
\* Brackete  
area.  
Parts wit

Numbering System

Example

|      |         |
|------|---------|
| ERD  | 25      |
| Type | Wattage |

|      |         |
|------|---------|
| ERX  | 2       |
| Type | Wattage |

Numbering System

Example

|      |         |
|------|---------|
| ECKD | 1H      |
| Type | Voltage |

|      |         |
|------|---------|
| ECEA | 50      |
| Type | Voltage |

| Ref. No.       |   |
|----------------|---|
| RESISTORS      |   |
| C513           | E |
| R101, R102     | E |
| R103, R104     | E |
| R105, R106     | E |
| R107, R108     | E |
| R109, R110     | E |
| R111, R112     | E |
| R113, R114     | E |
| R115, R116     | E |
| R117, R118     | E |
| R119, R120(EG) | E |
| R201, R202     | E |
| R203           | E |
| R204, R205     | E |
| R206           | E |
| R207, R208     | E |
| (EG)           | E |
| R209, R210     | E |
| (EG)           | E |
| R211, R212     | E |
| (EG)           | E |
| R213, R214     | E |
| (EG)           | E |
| R215, R216     | E |
| (EG)           | E |
| R217, R218     | E |
| (EG)           | E |
| R219, R220     | E |
| (EG)           | E |
| R221, R222     | E |
| (EG)           | E |
| R223, R224     | E |
| (EG)           | E |
| R301, R302     | E |
| R303, R304     | E |
| R305, R306     | E |
| R307, R308     | E |
| R309, R310     | E |
| R311, R312     | E |
| R313, R314     | E |
| R315, R316     | E |

# RESISTORS & CAPACITORS

## Notes: \* Important safety notice:

Components identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

\* Bracketed indications in Ref. No. columns specify the area.

Parts without these indications can be used for all areas.

## Numbering System of Resistor

### Example

| ERD  | 25      | F     | J         | 102                           |
|------|---------|-------|-----------|-------------------------------|
| Type | Wattage | Shape | Tolerance | Value (10) $\times 10^2$ ohms |

| ERX  | 2       | AN    | J         | 471                           |
|------|---------|-------|-----------|-------------------------------|
| Type | Wattage | Shape | Tolerance | Value (47) $\times 10^1$ ohms |

## Numbering System of Capacitor

### Example

| ECKD | 1H      | 102                                                   | Z         | F           |
|------|---------|-------------------------------------------------------|-----------|-------------|
| Type | Voltage | Value (10 $\times 10^2$ ) $\times 10^{-6}$ microfarad | Tolerance | Peculiarity |

| ECEA | 50      | M           | 331                                 |
|------|---------|-------------|-------------------------------------|
| Type | Voltage | Peculiarity | Value (33) $\times 10^1$ microfarad |

| Resistor Type             | Wattage   | Tolerance      |
|---------------------------|-----------|----------------|
| ERD : Carbon              | 10 : 1/8W | F : $\pm 1\%$  |
| ERG : Metal Oxide         | 18 : 1/8W | G : $\pm 2\%$  |
| ERX : Metal Film          | S2 : 1/4W | J : $\pm 5\%$  |
| ERQ : Fuse Type Metal     | 2F : 1/4W | K : $\pm 10\%$ |
| ERD L : Carbon (chip)     | 50 : 1/2W |                |
| ERO K : Metal Film (chip) | S1 : 1/2W |                |
| ERC : Solid               | 12 : 1/2W |                |
|                           | 25 : 1/4W |                |
|                           | 1A : 1W   |                |
|                           | 2A : 2W   |                |

| Capacitor Type                                   | Voltage           | Tolerance               |
|--------------------------------------------------|-------------------|-------------------------|
| ECE : Electrolytic                               | 0J : 6.3V         | C : $\pm 0.25\text{pF}$ |
| ECCD : Ceramic                                   | 1A : 10V          | D : $\pm 0.5\text{pF}$  |
| ECKD : Ceramic                                   | 1C : 16V          | G : $\pm 2\%$           |
| ECQM : Polyester                                 | 1E : 25V          | J : $\pm 5\%$           |
|                                                  | 1V : 35V          | K : $\pm 10\%$          |
| ECQP : Polypropylene                             | 1H : 50V          | M : $\pm 20\%$          |
|                                                  | 1J : 63V          | Z : $\pm 80\%$          |
| ECG : Ceramic                                    | 50 : 50V          | -20%                    |
| ECEADDN : Non Polar Electrolytic                 | 05 : 50V          | P : $\pm 100\%$         |
| QCU : Ceramic (Chip Type)                        | 2A : 100V         | -0%                     |
| ECUX : Ceramic (Chip Type)                       | 1 : 100V          |                         |
| ECF : Semiconductor                              | 2H : 500V         |                         |
|                                                  | KC : 400V AC      |                         |
|                                                  | KC : 125V AC (UL) |                         |
| EECW : Liquid electrolyte double layer capacitor |                   |                         |

| Ref. No.       | Part No.    | Part Code      | Ref. No.   | Part No.   | Part Code      | Ref. No.     | Part No.   | Part Code      |
|----------------|-------------|----------------|------------|------------|----------------|--------------|------------|----------------|
| RESISTORS      |             |                |            |            |                |              |            |                |
| C513           | ECFTD473KXL | 001 108 0361 3 | R317, R318 | ERDS2TJ223 | 001 152 2432 7 | R503, R504   | ERDS2TJ472 | 001 152 2362 4 |
| R101, R102     | ERDS2TJ391  | 001 152 2360 6 | R319       | ERDS2TJ393 | 001 152 2440 7 | R505, R506   | ERDS2TJ473 | 001 152 2363 3 |
| R103, R104     | ERDS2TJ224  | 001 152 2433 6 | R320, R321 | ERDS2TJ223 | 001 152 2432 7 | R507, R508   | ERDS1FJ477 | 001 152 2631 2 |
| R105, R106     | ERDS2TJ563  | 001 152 2446 1 | R322       | ERDS2TJ223 | 001 152 2432 7 | R509, R510   | ERDS2TJ100 | 001 152 2420 1 |
| R107, R108     | ERDS2TJ221  | 001 152 2431 8 | R323       | ERDS2TJ821 | 001 152 2454 1 | R511         | ERDS2TJ154 | 001 152 2427 4 |
| R109, R110     | ERDS2TJ680  | 001 152 2448 9 | R324       | ERDS2TJ151 | 001 152 2426 5 | R512         | ERD2FCG220 | 001 152 0190 4 |
| R111, R112     | ERDS2TJ184  | 001 152 2588 8 | R325       | ERDS2TJ393 | 001 152 2440 7 | (E)          |            |                |
| R113, R114     | ERDS2TJ123  | 001 152 2424 7 | R401       | ERDS2TJ183 | 001 152 2429 2 | (EX, EH, EI) |            |                |
| R115, R116     | ERDS2TJ563  | 001 152 2446 1 | (E)        |            |                | (EB, EF, EW) |            |                |
| R117, R118     | ERDS2TJ102  | 001 152 2346 4 | R402       | ERDS2TJ183 | 001 152 2429 2 | (XL, XA, XB) |            |                |
| R119, R120 (E) | ERDS2TJ470  |                | (E)        |            |                | (PA, PE, EG) |            |                |
| R201, R202     | ERDS2TJ152  | 001 152 2350 8 | R403       | ERDS2TJ562 | 001 152 2445 2 | R513, R514   | ERDS2TJ121 | 001 152 2349 1 |
| R203           | ERDS2TJ182  | 001 152 2352 6 | R403       | ERDS2TJ102 | 001 152 2346 4 | R515, R516   | ERDS2TJ121 | 001 152 2349 1 |
| R204, R205     | ERDS2TJ562  | 001 152 2445 2 | R403       | ERDS2TJ272 | 001 152 2354 4 | R517, R518   | ERDS2TJ101 | 001 152 2421 0 |
| R206           | ERDS2TJ562  | 001 152 2445 2 | (E)        |            |                | R601, R602   | ERDS2TJ562 | 001 152 2445 2 |
| R207, R208     | ERDS2TJ222  | 001 152 2353 5 | R404       | ERDS2TJ102 | 001 152 2346 4 | R603, R604   | ERDS2TJ562 | 001 152 2445 2 |
| (E)            |             |                | R404       | ERDS2TJ272 | 001 152 2354 4 | R605, R606   | ERDS2TJ103 | 001 152 2347 3 |
| R209, R210     | ERDS2TJ222  | 001 152 2353 5 | (E)        |            |                | R607         | ERDS2TJ224 | 001 152 2433 6 |
| (E)            |             |                | R405, R406 | ERDS2TJ473 | 001 152 2363 3 | R608         | ERDS2TJ223 | 001 152 2432 7 |
| R211, R212     | ERDS2TJ222  | 001 152 2353 5 | R407, R408 | ERDS2TJ562 | 001 152 2445 2 | R609         | ERDS2TJ822 | 001 152 2455 0 |
| (E)            |             |                | R409, R410 | ERDS2TJ224 | 001 152 2433 6 | R610         | ERDS2TJ562 | 001 152 2445 2 |
| R213, R214     | ERDS2TJ222  | 001 152 2353 5 | R411, R412 | ERDS2TJ474 | 001 152 2443 4 | R611, R612   | ERDS2TJ103 | 001 152 2347 3 |
| (E)            |             |                | R413, R414 | ERDS2TJ223 | 001 152 2432 7 | R613         | ERDS2TJ224 | 001 152 2433 6 |
| R215, R216     | ERDS2TJ222  | 001 152 2353 5 | R415, R416 | ERDS2TJ392 | 001 152 2439 0 | R614, R615   | ERDS2TJ470 | 001 152 2442 5 |
| (E)            |             |                | R417, R418 | ERDS2TJ182 | 001 152 2352 6 | R616, R617   | ERDS2TJ470 | 001 152 2442 5 |
| R217, R218     | ERDS2TJ222  | 001 152 2353 5 | R419, R420 | ERDS2TJ821 | 001 152 2454 1 | R618, R619   | ERDS2TJ470 | 001 152 2442 5 |
| (E)            |             |                | R421, R422 | ERDS2TJ563 | 001 152 2446 1 | R620         | ERDS2TJ470 | 001 152 2442 5 |
| R219, R220     | ERDS2TJ222  | 001 152 2353 5 | R423, R424 | ERDS2TJ224 | 001 152 2433 6 | R626, R627   | ERDS2TJ223 | 001 152 2432 7 |
| (E)            |             |                | R425, R426 | ERDS2TJ392 | 001 152 2357 1 | R628         | ERDS2TJ562 | 001 152 2445 2 |
| R221, R222     | ERDS2TJ222  | 001 152 2353 5 | R427, R428 | ERDS2TJ273 | 001 152 2436 3 | R629         | ERDS2TJ822 | 001 152 2455 0 |
| (E)            |             |                | R429       | ERDS2TJ122 | 001 152 2423 8 | R630, R631   | ERDS2TJ101 | 001 152 2421 0 |
| R223, R224     | ERDS2TJ222  | 001 152 2353 5 | R430, R431 | ERDS2TJ562 | 001 152 2445 2 | R632         | ERDS2TJ390 | 001 152 2355 3 |
| (E)            |             |                | R432       | ERDS2TJ562 | 001 152 2445 2 | R634         | ERDS2TJ104 | 001 152 2348 2 |
| R301, R302     | ERDS2TJ223  | 001 152 2432 7 | R433, R434 | ERDS2TJ103 | 001 152 2347 3 | R635, R636   | ERDS2TJ153 | 001 152 2351 7 |
| R303, R304     | ERDS2TJ223  | 001 152 2432 7 | R435       | ERDS2TJ103 | 001 152 2347 3 | R637, R638   | ERDS2TJ473 | 001 152 2363 3 |
| R305, R306     | ERDS2TJ223  | 001 152 2432 7 | R436       | ERDS2TJ154 | 001 152 2427 4 | R639, R640   | ERDS2TJ221 | 001 152 2431 8 |
| R307, R308     | ERDS2TJ273  | 001 152 2436 3 | R437, R438 | ERDS2TJ392 | 001 152 2439 0 | R641, R642   | ERDS2TJ221 | 001 152 2431 8 |
| R309, R310     | ERDS2TJ103  | 001 152 2347 3 | R439, R440 | ERDS2TJ182 | 001 152 2352 6 | R643, R645   | ERDS2TJ221 | 001 152 2431 8 |
| R311, R312     | ERDS2TJ103  | 001 152 2347 3 | R445, R446 | ERDS2TJ224 | 001 152 2433 6 | R647         | ERDS2TJ223 | 001 152 2432 7 |
| R313, R314     | ERDS2TJ273  | 001 152 2436 3 | R447, R501 | ERDS2TJ473 | 001 152 2363 3 | R648         | ERDS2TJ104 | 001 152 2348 2 |
| R315, R316     | ERDS2TJ104  | 001 152 2348 2 | R502       | ERDS2TJ473 | 001 152 2363 3 | R649         | ERDS2TJ101 | 001 152 2421 0 |

| Ref. No.          | Part No.    | Part Code      | Ref. No.            | Part No.     | Part Code      | Ref. No.      | Part No.     | Part Code      |
|-------------------|-------------|----------------|---------------------|--------------|----------------|---------------|--------------|----------------|
| R701 (E)          | ERD2FCG220  | 001 152 0190 4 | C105, C106          | ECKD1H102KB  | 001 103 1414 8 | C425, C426    | ECEA1HPS010  | 001 120 6063 4 |
| R701 (EX, EH, EI) | ERD25FJ470  | 001 152 0309 7 | C107, C108          | ECEA1CPS220  | 001 120 6060 7 | C427, C428    | RCBS1H820KBY | 001 103 5646 8 |
| (EB, EF, EW)      |             |                | C109, C110          | ECFTD223KXL  | 001 108 0342 6 | C429, C430    | ECEA1HPS3R3  | 001 120 6064 3 |
| (XL, XA, XB)      |             |                | C111, C112          | ECFTD682KXL  | 001 108 0363 1 | C431, C432    | ECEA1CKS100  | 001 120 2600 7 |
| (PA, PE, EG)      |             |                | C113, C114          | ECEA1HPS3R3  | 001 120 6064 3 | C433, C434    | ECKD1H103PF  | 001 103 1449 7 |
| R702 (E)          | ERD2FCG220  | 001 152 0190 4 | C115, C116          | ECKD1H103PF  | 001 103 1449 7 | C435          | ECEA1CKS100  | 001 120 2600 7 |
| R702 (EX, EH, EI) | ERD25FJ470  | 001 152 0309 7 | C117, C118          | ECEA1CKS100  | 001 120 2600 7 | C436          | ECEA1HK0R1   | 001 120 0340 6 |
| (EB, EF, EW)      |             |                | C119                | RCBS1H180KBY |                | C437, C438    | ECEA1HK010   | 001 120 0341 5 |
| (XL, XA, XB)      |             |                | (E)                 |              |                | C439          | ECKD1H103PF  | 001 103 1449 7 |
| (PA, PE, EG)      |             |                | C120                | RCBS1H180KBY |                | C501, C502    | ECEA1HPS3R3  | 001 120 6064 3 |
| R703 (E)          | ERD2FCG220  | 001 152 0190 4 | C121                | RCBS1H151KBY |                | C503, C504    | ECCD1H121K   | 001 103 0390 3 |
| R703 (EX, EH, EI) | ERD25FJ100  | 001 152 0213 4 | (E)                 |              |                | C505, C506    | ECEA1CPS100  | 001 120 6036 7 |
| R703 (EB, EF, EW) | ERD25FJ470  | 001 152 0309 7 | C122                | RCBS1H151KBY |                | C507, C508    | ECCD1H150KC  | 001 103 0410 6 |
| (XL, XA, XB)      |             |                | (E)                 |              |                | C509, C510    | ECKD1H102KB  | 001 103 1414 8 |
| (PA, PE, EG)      |             |                | C201, C202          | ECKD1H103PF  | 001 103 1449 7 | C511, C512    | ECFTD473KXL  | 001 108 0361 3 |
| R704, R705        | ERDS2TJ682  | 001 152 2365 1 | C203, C204          | RCBS1H101KBY | 001 103 5569 4 | C514          | ECFTD473KXL  | 001 108 0361 3 |
| R706              | ERDS2TJ103  | 001 152 2347 3 | (E)                 |              |                | C515          | ECEA1H100    | 001 120 3251 4 |
| R707              | ERDS2TJ562  | 001 152 2445 2 | C211, C212          | RCBS1H101KBY | 001 103 5569 4 | C516          | ECEA0JK330   | 001 120 0141 1 |
| R708              | ERDS2TJ472  | 001 152 2362 4 | (E)                 |              |                | C601          | ECEA0JS102   | 001 120 0152 8 |
| R709              | ERG1ANJ681  | 001 151 0086 8 | C213, C214          | RCBS1H101KBY | 001 103 5569 4 | C602 $\Delta$ | ECKD1H223PF  | 001 103 1510 9 |
| (EX, EH, EI)      |             |                | (E)                 |              |                | C603          | ECEA0JKS470  | 001 120 2531 3 |
| (EB, EF, EW)      |             |                | C215, C216          | RCBS1H101KBY | 001 103 5569 4 | C604, C605    | ECEA1VU330   | 001 120 3273 8 |
| (XL, XA, XB)      |             |                | (E)                 |              |                | C606, C607    | RCBS1H331KBY | 001 103 5619 1 |
| (PA, PE, EG)      |             |                | C217, C218          | RCBS1H101KBY | 001 103 5569 4 | C608, C609    | RCBS1H331KBY | 001 103 5619 1 |
| R709 (E)          | ERG2ANJ681  | 001 151 0178 5 | (E)                 |              |                | C610          | RCBS1H331KBY | 001 103 5619 1 |
| R710              | ERDS2TJ222  | 001 152 2353 5 | C219, C220          | RCBS1H101KBY | 001 103 5569 4 | C611, C612    | ECEA1HK2R2B  | 001 120 0346 0 |
| R710 (XB)         | ERDS2TJ392  | 001 152 2439 0 | (E)                 |              |                | C613, C614    | RCBS1H330JLY | 001 103 5617 3 |
| R711 (XB)         | ERDS2TJ223  | 001 152 2432 7 | C221, C222 $\Delta$ | ECKD1H223PF  | 001 103 1510 9 | C615, C616    | RCBS1H221KBY | 001 103 5603 9 |
| R712              | ERDS2TJ223  | 001 152 2432 7 | C301, C302          | ECEA1HPS3R3  | 001 120 6064 3 | C617, C618    | ECKD1H103PF  | 001 103 1449 7 |
| (E)               |             |                | C303, C304          | ECKD1H103PF  | 001 103 1449 7 | C619, C620    | ECKD1H103PF  | 001 103 1449 7 |
| R713              | ERDS2TJ103  | 001 152 2347 3 | C305                | ECKD1H103PF  | 001 103 1449 7 | C621, C622    | ECKD1H103PF  | 001 103 1449 7 |
| R714 (XB)         | ERDS2TJ153  | 001 152 2351 7 | C307                | ECCD1H180KC  | 001 103 0448 2 | C623          | ECBT1E103ZF5 | 001 103 8080 2 |
| R801              | ERDS2TJ101  | 001 152 2421 0 | C308                | ECFTD823KXL  | 001 108 0364 0 | C624          | ECKD1H103PF  | 001 103 1449 7 |
| R802              | ERDS2TJ473  | 001 152 2363 3 | C309                | ECEA1CPS100  | 001 120 6036 7 | C625, C626    | ECBT1E103ZF5 | 001 103 8080 2 |
| R803              | ERDS2TJ102  | 001 152 2346 4 | C310                | ECFTD472KXL  | 001 108 0746 0 | C627          | ECKD1H103PF  | 001 103 1449 7 |
| R804              | ERDS2TJ123  | 001 152 2424 7 | C311                | ECEA1CPUI01B | 001 120 6272 7 | C701, C702    | ECEA1H332G   | 001 120 5399 7 |
| R805              | ERDS2TJ154  | 001 152 2427 4 | C401, C402          | ECFTD473KXL  | 001 108 0361 3 | C703          | ECQET104KN   | 001 106 2264 5 |
| R806              | ERDS2TJ821  | 001 152 2454 1 | C403, C404          | ECEA1HK010   | 001 120 0341 5 | C704, C705    | ECKD1H103PF  | 001 103 1449 7 |
| R807              | ERDS2TJ681  | 001 152 2449 8 | C405, C406          | ECKD1H103PF  | 001 103 1449 7 | C706          | ECKD1H103PF  | 001 103 1449 7 |
| CAPACITORS        |             |                | C407, C408          | ECKD1H103PF  | 001 103 1449 7 | C707, C708    | ECEA1CU470   | 001 120 2835 0 |
| C101, C102        | ECEA1HPS010 | 001 120 6063 4 | C409, C410          | ECKD1H821KB  | 001 103 1596 7 | C709          | ECEA1CU470   | 001 120 2835 0 |
| C103, C104        | ECCD1H101K  | 001 103 0341 2 | C411, C412          | ECCD1H560K   | 001 103 0660 0 | C710          | ECEA1HK470   | 001 120 2640 9 |

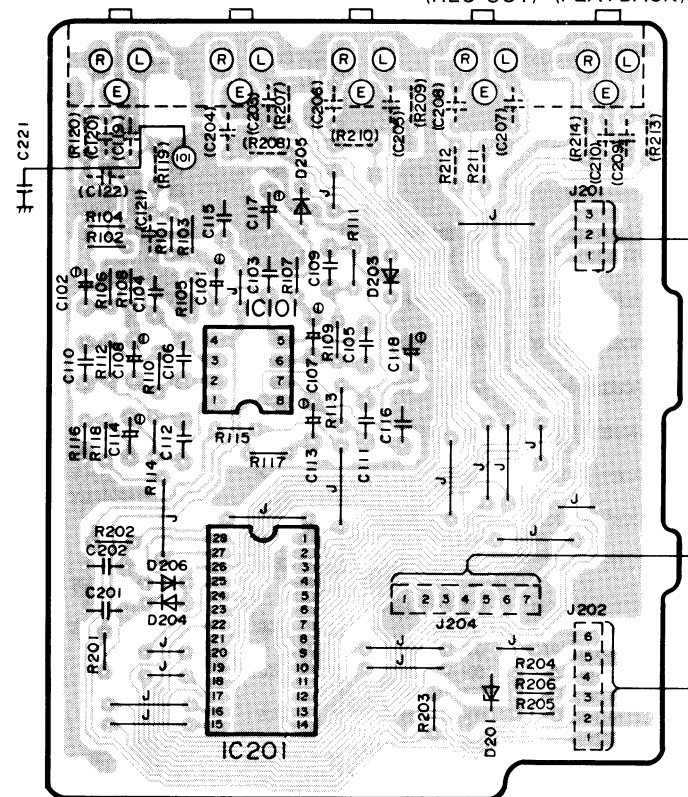


# ■ CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

A  
B  
C  
D  
E  
F

PHONO TUNER VD / AUX VCR / TAPE 2

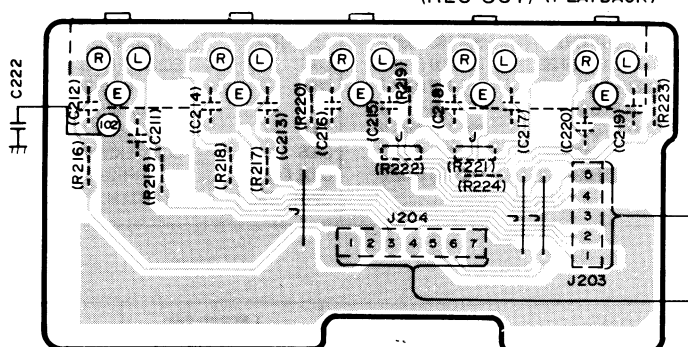
(REC OUT) (PLAYBACK)



**A** ELECTRIC SELECTOR/  
IN/OUTPUT TERMINAL (1) P.C.B.

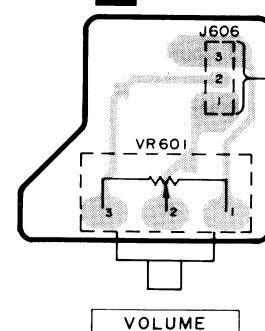
CD EXT OUT EXT IN TAPE 1

(REC OUT) (PLAYBACK)



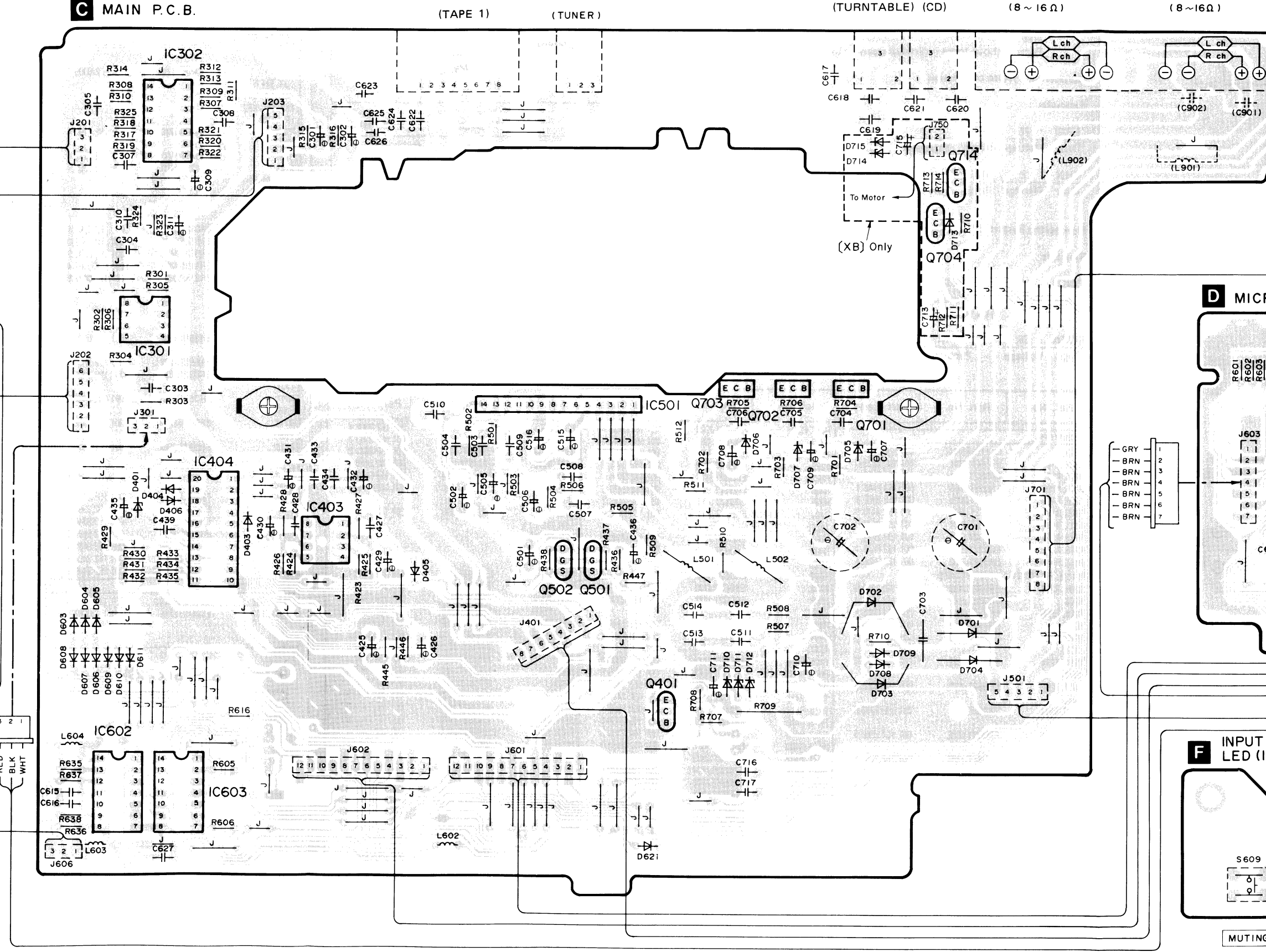
**B** IN/OUTPUT TERMINAL (2) P.C.B.

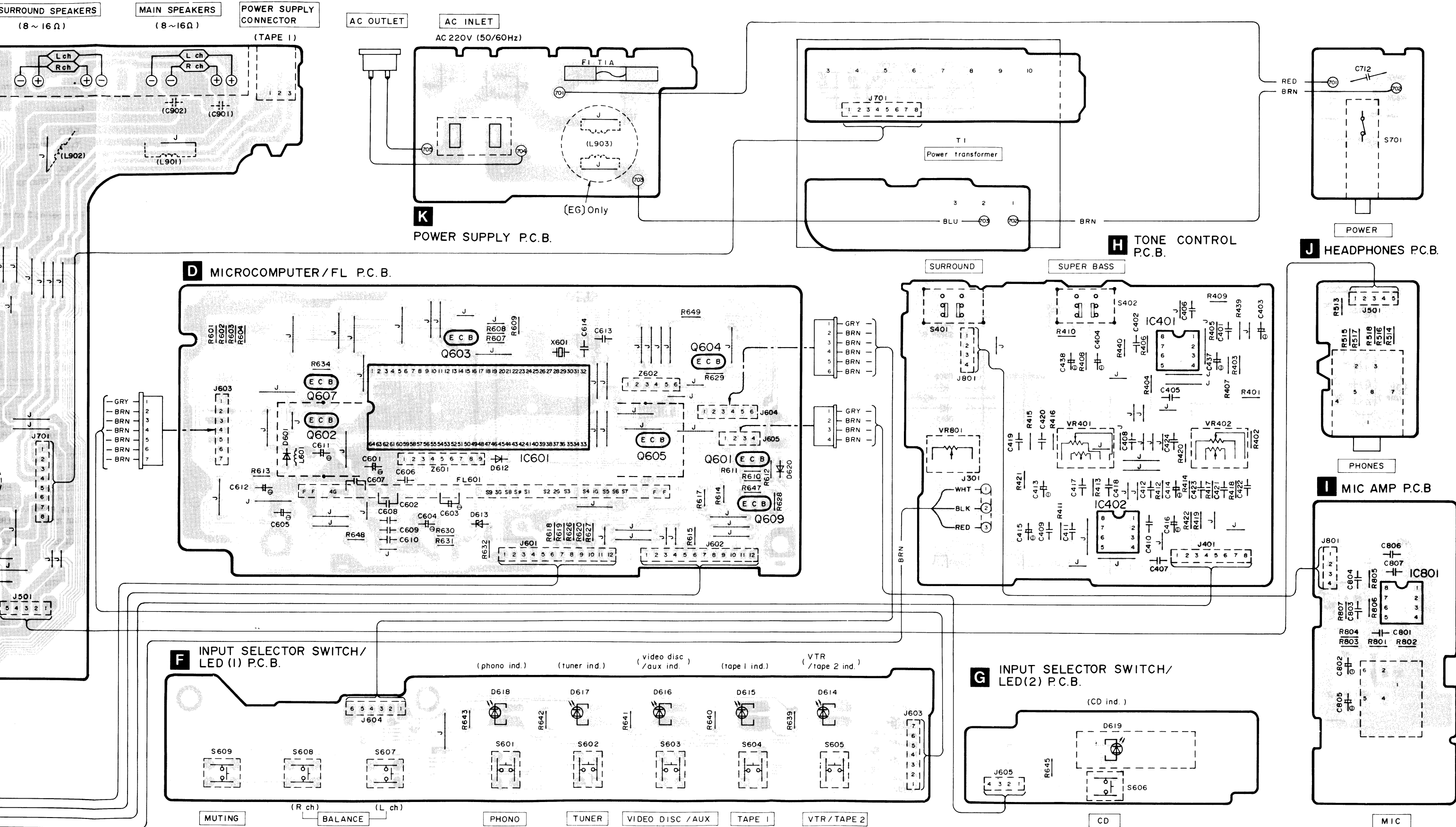
**E** VOLUME P.C.B.



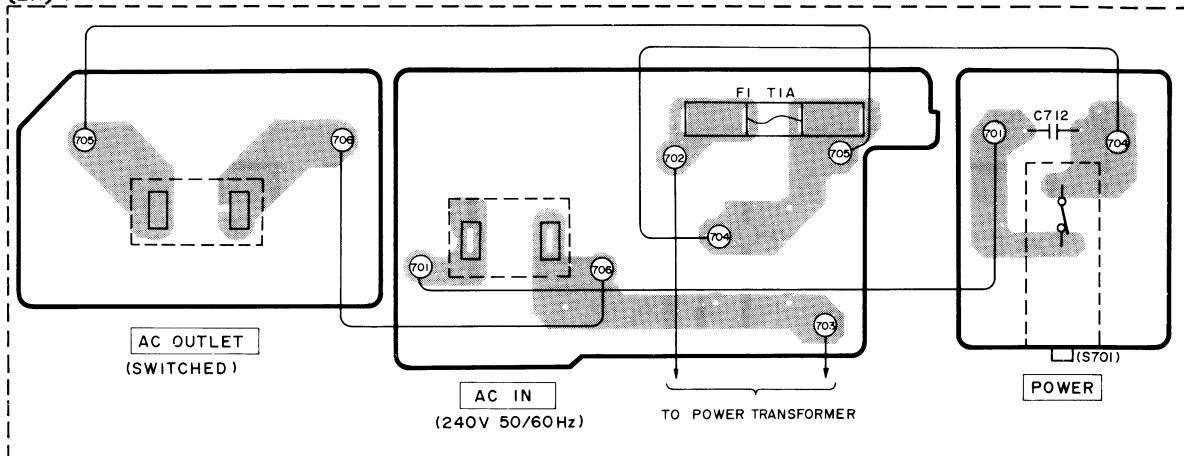
VOLUME

**C** MAIN P.C.B.

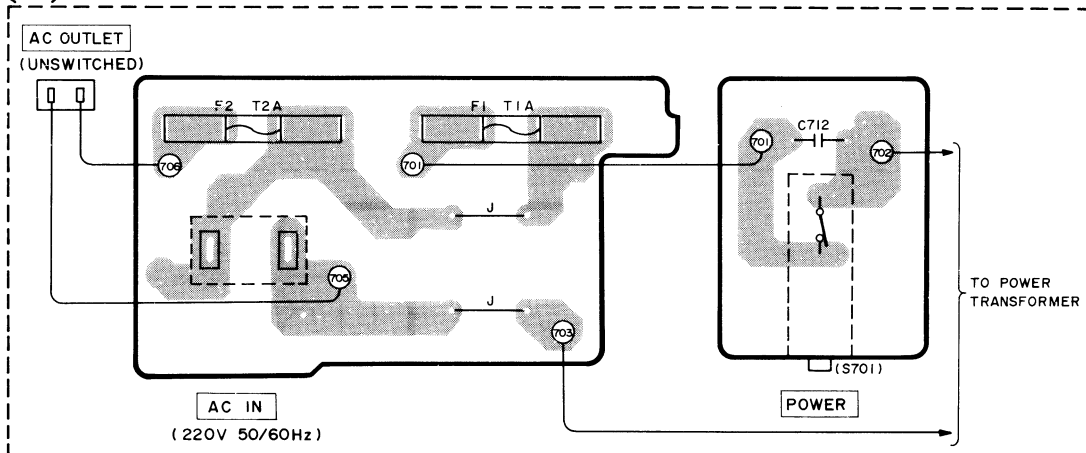




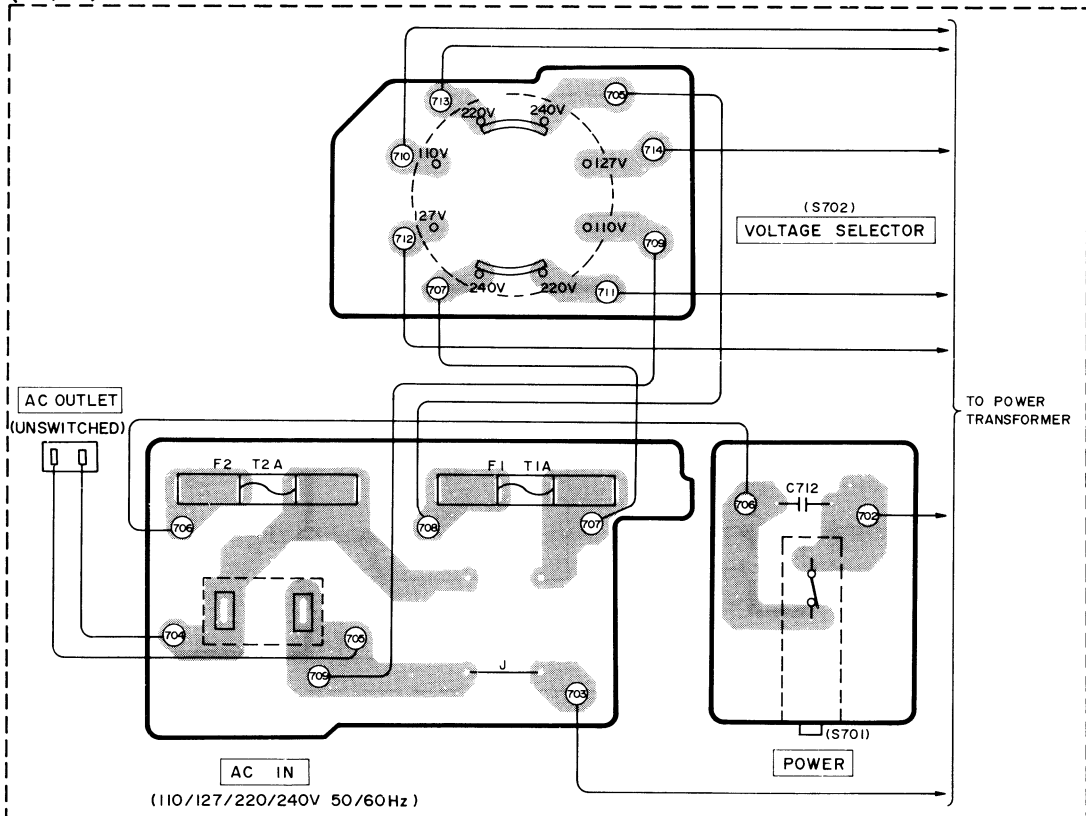
(EK) ONLY



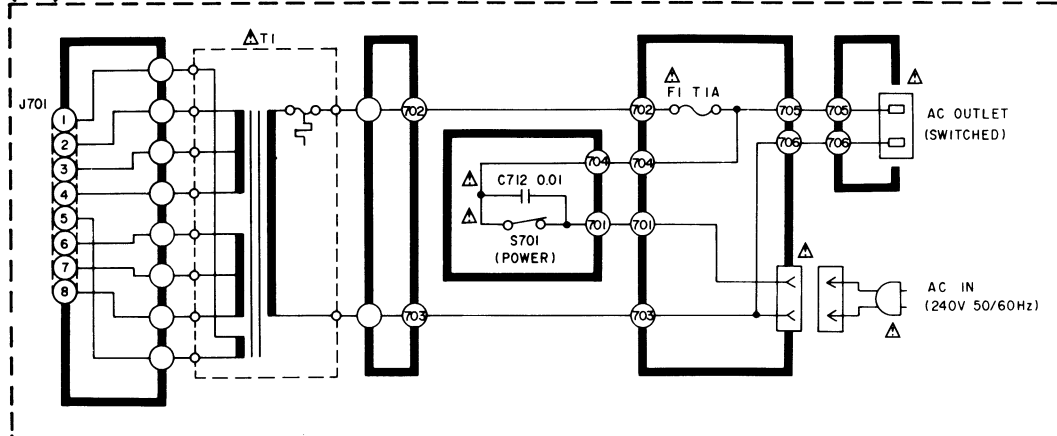
(EW) ONLY



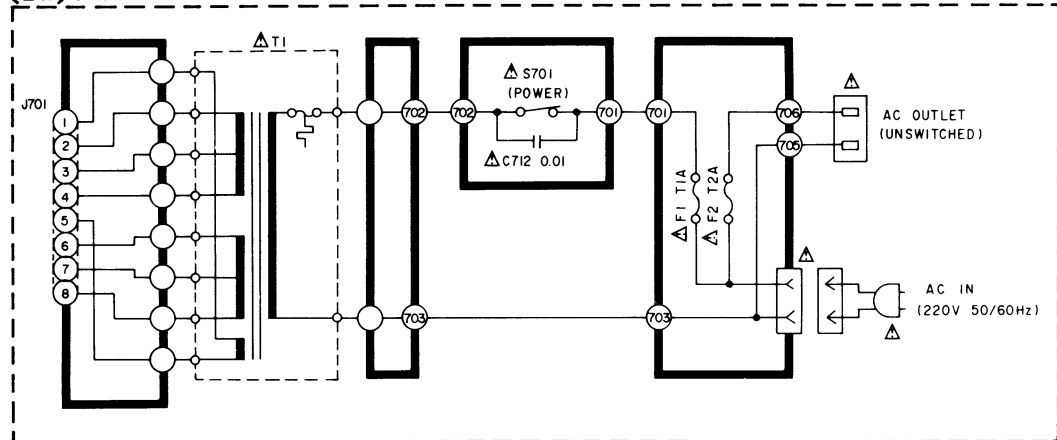
(XA, XB) ONLY



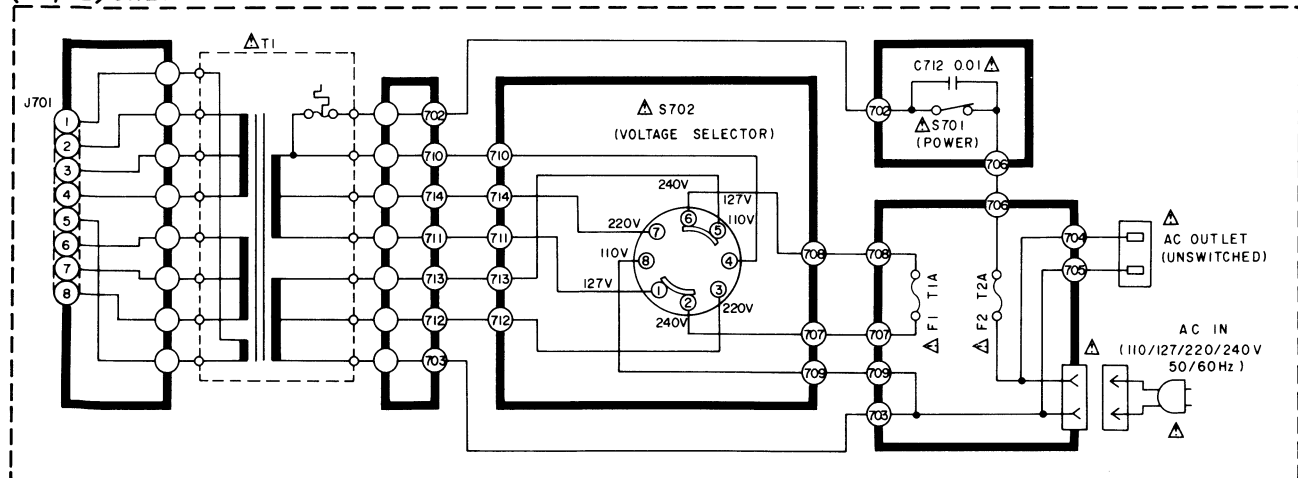
(EK) ONLY

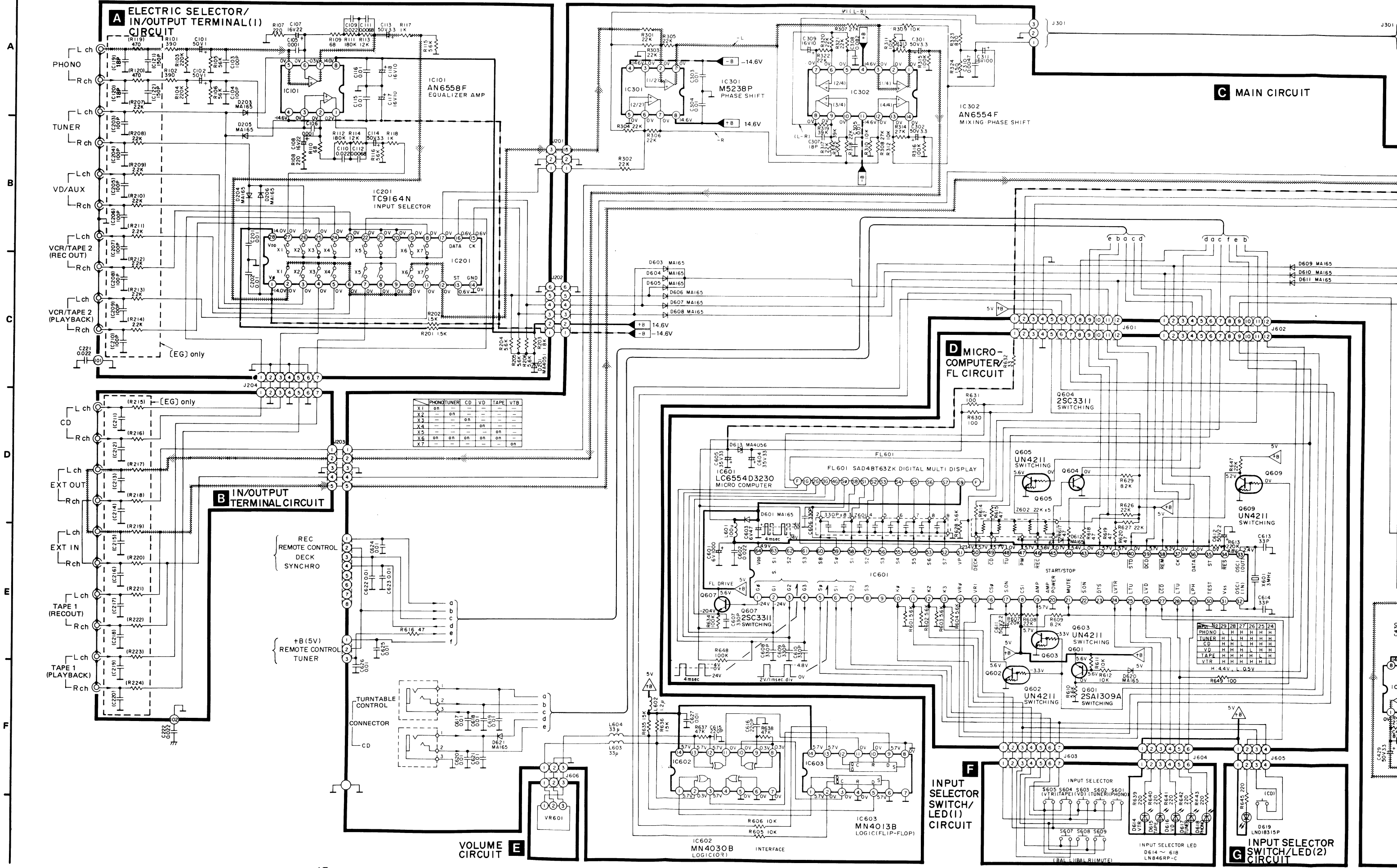


(EW) ONLY



(XA, XB) ONLY









## SCHEMATIC DIAGRAM

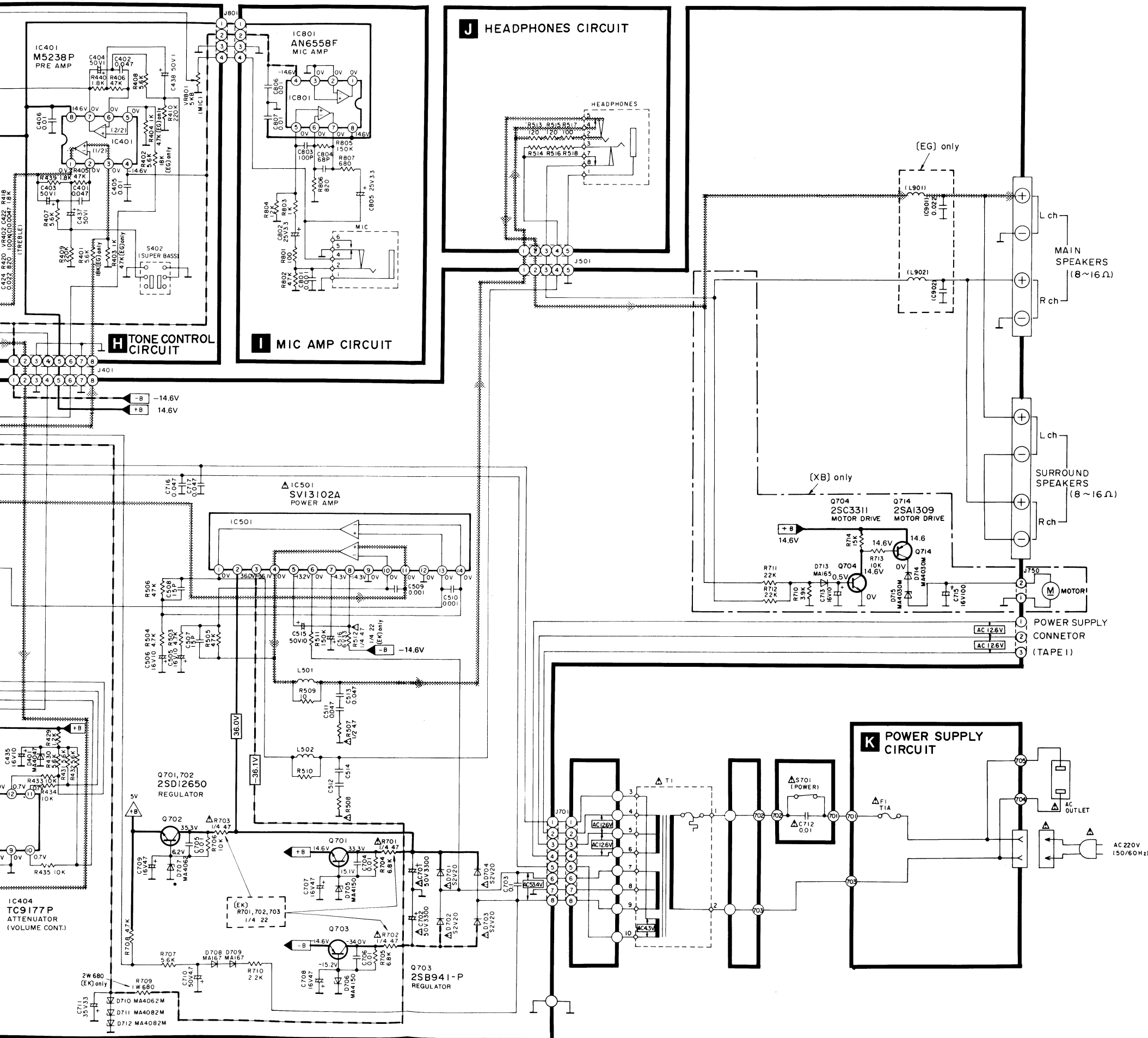
(This schematic diagram may be modified at any time with the development of new technology.)

### Notes:

1. S401 : AV surround on/off switch in "off" position.
2. S402 : Super-bass switch in "off" position.
3. S601~S606 : Input selector switches in "off" position.  
S601: phono, S602: tuner,  
S603: Video disc/aux, S604: tape 1,  
S605: VTR/tape 2, S606: CD
4. S607, S608 : Balance switches.  
S607: left, S608: right
5. S609 : Muting switch.
6. S701 : Power switch.  
( $\blacksquare$  off,  $\blacktriangle$  on)
7. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.  
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
8.  Left-channel phono signal route.  
 Microphone signal.  
 Phase difference signal.  
  $\oplus$  B voltage line  $\ominus$  B voltage line.
9. Important safety notice:  
Components identified by  $\triangle$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

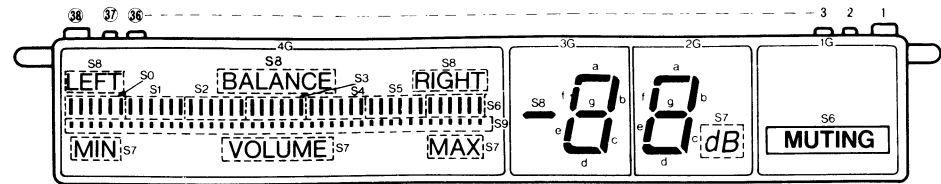
### \* Caution!

- IC and LSI are sensitive to static electricity.  
Secondary trouble can be prevented by taking care during repair.
- \* Cover the parts boxes made of plastics with aluminum foil.
  - \* Ground the soldering iron.
  - \* Put a conductive mat on the work table.
  - \* Do not touch the legs of IC or LSI with the fingers directly.



● Flourescent display tube (FL)

\* Grid connections



| Pin No.          | 38  | 37  | 36  | 35  | 34  | 33  | 32  | 31  | 30  | 29  | 28  | 27  | 26  | 25  | 24  | 23  | 22  | 21  | 20  |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Name of Terminal | F 2 | F 2 | N P | 4 G | N P | N P | N P | N P | N P | N P | N P | 4 G | N P | N P | N P | N P | N P | N P | 4 G |
| Pin No.          | 19  | 18  | 17  | 16  | 15  | 14  | 13  | 12  | 11  | 10  | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   |
| Name of Terminal | S 9 | 3 G | S 8 | S 0 | S 1 | 3 G | S 2 | S 3 | 2 G | S 4 | 1 G | S 5 | S 6 | S 7 | 1 G | N P | F 1 | F 1 |     |

\* Anode connections

|    | 4G                 | 3G | 2G | 1G     |
|----|--------------------|----|----|--------|
| S0 |                    | a  | a  | —      |
| S1 |                    | b  | b  | —      |
| S2 |                    | c  | c  | —      |
| S3 |                    | d  | d  | —      |
| S4 |                    | e  | e  | —      |
| S5 |                    | f  | f  | —      |
| S6 |                    | g  | g  | MUTING |
| S7 | MIN VOLUME MAX     | —  | dB | —      |
| S8 | LEFT BALANCE RIGHT | —  | —  | —      |
| S9 | <br>(×7)           | —  | —  | —      |

■ REPLACEMENT PARTS LIST

- Notes:**
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
  2. Important safety notice: Components identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
  3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
  4. The parenthesized numbers in the column of description stand for the quantity per set.

| Ref. No.                                   | Part No.     | Part Code      | Description          | Ref. No.                                                           | Part No.    | Part Code      | Description           |
|--------------------------------------------|--------------|----------------|----------------------|--------------------------------------------------------------------|-------------|----------------|-----------------------|
| INTEGRATED CIRCUITS                        |              |                |                      | T1<br>(XA, XB, )<br>(PA, PE)                                       | SLT5M506    | 001 202 9062 8 | POWER TRANSFORMER     |
| IC101                                      | AN6558F      | 001 060 4009 1 | I.C., EQUALIZER      | COMPONENT COMBINATIONS                                             |             |                |                       |
| IC201                                      | TC9164N      | 001 061 0204 1 | I.C., INPUT SELECTOR | Z601                                                               | EXFP8331MW  | 001 230 1628 6 | C-R COMBINATION       |
| IC301                                      | M5238P       | 001 060 8887 7 | I.C., SHIFT          | Z602                                                               | EXBP85223JR | 001 230 2835 7 | COMPONENT COMBINATION |
| IC302                                      | AN6554F      | 001 060 2992 1 | I.C., MIXING         | OSCILLATORS                                                        |             |                |                       |
| IC401                                      | M5238P       | 001 060 8887 7 | I.C., PRE AMP        | X601                                                               | SVFCSA300MG | 001 241 1296 5 | CERAMIC FILTER        |
| IC402                                      | SVIUPC4570C  | 001 060 8992 7 | I.C., TONE AMP       | DISPLAYS                                                           |             |                |                       |
| IC403                                      | M5238P       | 001 060 8887 7 | I.C., AMP            | FL601                                                              | SAD4BT63ZK  | 001 001 0508 4 | DISPLAY               |
| IC404                                      | TC9177P      | 001 061 0839 2 | I.C., VOLUME CONTROL | FUSES                                                              |             |                |                       |
| IC501                                      | SVI3102A     | 001 061 4832 3 | INTEGRATED CIRCUIT   | F1<br>(EK)                                                         | XBA2C10TB0  | 002 380 1351 1 | CURRENT FUSE, T1A250V |
| IC601                                      | LC6554D-3230 | 001 061 4016 7 | I.C., MICRO COMPUTER | F1<br>(EX, EH, E1)<br>(EF, EB, EW)<br>(XL, XA, XB)<br>(PA, PE, EG) | XBA2C10NS5  | 002 380 0404 9 | FUSE, T1A250V         |
| IC602                                      | MN4030B      | 001 060 6553 4 | I.C., LOGIC          | F2<br>$\Delta$<br>(EW, XA, XB)<br>(PA, PE, EG)                     | XBAS2A2001  | 002 380 0410 1 | FUSE, T2A250V         |
| IC603                                      | MN4013B      | 001 060 3656 0 | I.C., LOGIC          | SWITCHES                                                           |             |                |                       |
| IC801                                      | AN6558F      | 001 060 4009 1 | I.C., MIC AMP        | S401, S402                                                         | SSH1198     | 003 435 5171 7 | SW                    |
| TRANSISTORS                                |              |                |                      | S601, S602                                                         | EVQQAC05G   | 003 439 2072 1 | SW                    |
| Q401                                       | 2SA1309A-R   | 001 030 6079 7 | TRANSISTOR           | S603, S604                                                         | EVQQAC05G   | 003 439 2072 1 | SW                    |
| Q501, Q502                                 | 2SK301       | 001 030 2428 2 | TRANSISTOR           | S605, S606                                                         | EVQQAC05G   | 003 439 2072 1 | SW                    |
| Q601                                       | 2SA1309A-R   | 001 030 6079 7 | TRANSISTOR           | S607, S608                                                         | EVQQAC05G   | 003 439 2072 1 | SW                    |
| Q602, Q603                                 | UN4211       | 001 030 4033 9 | TRANSISTOR           | S609                                                               | EVQQAC05G   | 003 439 2072 1 | SW                    |
| Q604                                       | 2SC3311A-Q   | 001 030 5279 5 | TRANSISTOR           | S701<br>$\Delta$                                                   | ESB8249V    | 003 435 5877 0 | POWER SW              |
| Q605                                       | UN4211       | 001 030 4033 9 | TRANSISTOR           | S702<br>(XA, XB)<br>(PA, PE)                                       | ESE37263    | 003 430 2327 2 | SW                    |
| Q607                                       | 2SC3311A-Q   | 001 030 5279 5 | TRANSISTOR           | CABINET AND CHASSIS                                                |             |                |                       |
| Q609                                       | UN4211       | 001 030 4033 9 | TRANSISTOR           | 1                                                                  | SGYUX840-KN | 016 840 7548 4 | FRONT PANEL (K)       |
| Q701, Q702                                 | 2SD1265-0    | 001 030 2632 6 | TRANSISTOR           | 1-1                                                                | SGU538A     | 016 842 1597 9 | GLASS PLATE           |
| Q703                                       | 2SB941-P     | 001 030 2696 4 | TRANSISTOR           | 2                                                                  | SGX9028A    | 016 846 3749 3 | ORNAMENT              |
| Q704<br>(XB)                               | 2SC3311A-Q   | 001 030 5279 5 | TRANSISTOR           | 3                                                                  | SDU323A     | 016 842 1598 8 | FILTER                |
| Q714<br>(XB)                               | 2SA1309A-R   | 001 030 6079 7 | TRANSISTOR           | 4                                                                  | SGL238-1    | 016 846 3751 9 | ORNAMENT              |
| DIODES                                     |              |                |                      | 5                                                                  | SGL242      | 016 846 3750 0 | ORNAMENT              |
| D201                                       | MA4051-M     | 001 032 4947 6 | DIODE                | 6                                                                  | SBC666-1    | 016 702 6076 0 | BUTTON                |
| D203, D204                                 | MA165        | 001 032 0494 0 | DIODE                | 7                                                                  | SBC928      | 016 702 6969 2 | KNOB                  |
| D205, D206                                 | MA165        | 001 032 0494 0 | DIODE                | 8                                                                  | SBN1221     | 016 700 1974 5 | KNOB                  |
| D401                                       | MA4047M      | 001 032 6186 5 | DIODE                | 9                                                                  | SBN1224     | 016 700 1972 7 | KNOB                  |
| D403, D404                                 | MA165        | 001 032 0494 0 | DIODE                | 10                                                                 | SBC925B     | 016 702 7115 6 | BUTTON                |
| D405, D406                                 | MA165        | 001 032 0494 0 | DIODE                | 11                                                                 | SBC926      | 016 702 6963 8 | KNOB                  |
| D601, D603                                 | MA165        | 001 032 0494 0 | DIODE                | 12                                                                 | SBC927A     | 016 702 6956 7 | KNOB                  |
| D604, D605                                 | MA165        | 001 032 0494 0 | DIODE                | 13                                                                 | SKC2050K961 | 016 800 3040 7 | CABINET ASS'Y         |
| D606, D607                                 | MA165        | 001 032 0494 0 | DIODE                | (EX, EH, E1)<br>(EF, EB, EW)<br>(EK, XL, XA)<br>(PA, PE, EG)       |             |                |                       |
| D608, D609                                 | MA165        | 001 032 0494 0 | DIODE                | 13<br>(XB)                                                         | SKC2050K962 | 016 800 3126 2 | CABINET BODY          |
| D610, D611                                 | MA165        | 001 032 0494 0 | DIODE                | 14                                                                 | SJJ130-3    | 003 400 7580 9 | JACK                  |
| D612                                       | MA165        | 001 032 0494 0 | DIODE                | 15                                                                 | SJJ63D      | 003 400 6041 5 | JACK                  |
| D613                                       | MA4056-M     | 001 032 7209 1 | DIODE                | 16                                                                 | SJJ63E      | 003 400 4329 0 | JACK, HEADPHONE       |
| D614, D615                                 | LN846RP-C    | 001 032 8341 4 | LED, INPUT           | 17                                                                 | SUS832      | 016 726 0938 1 | SPRING                |
| D616, D617                                 | LN846RP-C    | 001 032 8341 4 | LED, INPUT           | 18                                                                 | SHE185      | 016 918 0330 9 | SPACER                |
| D618                                       | LN846RP-C    | 001 032 8341 4 | LED, INPUT           | 19                                                                 | SMC1261     | 016 601 0617 9 | SHIELD COVER          |
| D619                                       | LN018315P    | 001 032 9292 2 | LED, CD INPUT        | 20                                                                 | SMC1262     | 016 601 0616 0 | SHIELD COVER          |
| D620, D621                                 | MA165        | 001 032 0494 0 | DIODE                | 21                                                                 | SMC6379     | 016 601 0538 7 | SHIELD COVER          |
| D701, D702 $\Delta$                        | SVDS2V20     | 001 032 1343 0 | RECTIFIER            | 22                                                                 | SMC1263     | 016 601 0615 1 | SHIELD COVER          |
| D703, D704 $\Delta$                        | SVDS2V20     | 001 032 1343 0 | RECTIFIER            | 23                                                                 | SUW3033     | 016 650 5282 7 | BRACKET               |
| D705, D706                                 | MA4150M      | 001 032 4961 8 | DIODE                | 24                                                                 | SUW3040     | 016 650 5281 8 | BRACKET               |
| D707                                       | MA4062-M     | 001 032 7211 7 | DIODE                | 25                                                                 | SKU11650-1  | 016 802 2190 8 | BOTTOM BOARD          |
| D708, D709                                 | MA167        | 001 032 4142 5 | DIODE                | 26                                                                 | SKL307      | 016 828 0325 7 | FOOT                  |
| D710                                       | MA4062-M     | 001 032 7211 7 | DIODE                | 27                                                                 | SGP7031-1A  | 016 840 7706 8 | REAR PANEL            |
| D711, D712                                 | MA4082M      | 001 032 4955 6 | DIODE                | (EK)                                                               | SGP7031-2A  | 016 840 7841 2 | REAR PANEL            |
| D714, D715<br>(XB)                         | MA4030M      | 001 032 5807 3 | DIODE                | (XA)                                                               | SGP7031-3A  | 016 840 7842 1 | REAR PANEL            |
| VARIABLE RESISTORS                         |              |                |                      | (XL)                                                               | SGP7031-4A  | 016 840 7843 0 | REAR PANEL            |
| VR401, VR402                               | EWX2XAF20C15 | 001 174 8804 3 | VARIABLE RESISTOR    | (XB)                                                               |             |                |                       |
| VR601                                      | EVQWX2F2040B | 001 174 8803 4 | VR                   |                                                                    |             |                |                       |
| VR801                                      | EVH0XAF20B53 | 001 174 8846 3 | V.R.                 |                                                                    |             |                |                       |
| COILS AND TRANSFORMERS                     |              |                |                      |                                                                    |             |                |                       |
| L501, L502                                 | SLQY07G-40   | 001 211 2149 9 | CHOKE COIL           |                                                                    |             |                |                       |
| L601                                       | ELEXT101KA   | 001 211 3878 9 | COIL                 |                                                                    |             |                |                       |
| L602                                       | ELEXT120KA   | 001 211 3879 8 | COIL                 |                                                                    |             |                |                       |
| L603, L604                                 | ELEXT330KA   | 001 211 3880 5 | COIL                 |                                                                    |             |                |                       |
| L901, L902<br>(EG)                         | SLQY07G-40   | 001 211 2149 9 | CHOKE COIL           |                                                                    |             |                |                       |
| L903 $\Delta$<br>(EG)                      | SLQZ650MH49  | 001 210 7126 1 | COIL                 |                                                                    |             |                |                       |
| T1<br>(EX, EH, E1)<br>(EF, EB, EW)<br>(EG) | SLT5M504     | 001 202 9072 6 | POWER TRANSFORMER    |                                                                    |             |                |                       |
| T1<br>(EK, XL)                             | SLT5M505     | 001 202 9022 6 | POWER TRANSFORMER    |                                                                    |             |                |                       |

| Ref. No.                                                           | Part No.     | Part Code      | Description    |
|--------------------------------------------------------------------|--------------|----------------|----------------|
| 27<br>(PA, PE)                                                     | SGP7031-5A   | 016 840 7845 8 | REAR PANEL     |
| 27<br>(EX, EH, E1)<br>(EF, EB)                                     | SGP7031A     | 016 840 7758 6 | REAR PANEL     |
| 27<br>(EG)                                                         | SGP7031B     | 016 840 7846 7 | REAR PANEL     |
| 27<br>(EW)                                                         | SGP7031C     | 016 840 7847 6 | REAR PANEL     |
| 28                                                                 | SJF3062-2NK  | 003 410 8074 2 | TERMINAL PLATE |
| 29                                                                 | SJF4818-1    | 003 410 7347 0 | TERMINAL BOARD |
| 30                                                                 | SJS306       | 003 403 4936 8 | CONNECTOR      |
| 31                                                                 | SJS804       | 003 403 4910 8 | CONNECTOR      |
| 32<br>(EX, EH, E1)<br>(EF, EB, EW)<br>(EK, XA, XB)<br>(PA, PE, EG) | SJS9231A     | 003 410 5984 5 | SOCKET COVER   |
| 32<br>(XL)                                                         | SJS9234A     | 003 400 5921 6 | AC INLET COVER |
| 33<br>(EK)                                                         | SJS9332B     | 003 403 7377 5 | CONNECTOR      |
| 34<br>(EX, EH, E1)<br>(EF, EB, EW)<br>(EG)                         | SHR301       | 016 645 0044 0 | CLAMPER        |
| 35                                                                 | SJS5425      | 003 400 5926 1 | SOCKET(4P)     |
| 35                                                                 | SJS5629      | 003 400 5917 2 | CONNECTOR      |
| 35                                                                 | SJS5633      | 003 400 5929 8 | CONNECTOR      |
| 35                                                                 | SJS5715      | 003 400 6034 4 | SOCKET(7P)     |
| 35                                                                 | SJS5717      | 003 400 6573 2 | SOCKET         |
| 36                                                                 | SJT783       | 003 410 6001 7 | CONTACT        |
| 37                                                                 | SNE2053      | 005 500 0720 0 | SCREW          |
| 38                                                                 | SNE2118      | 005 500 5011 2 | SCREW          |
| 39                                                                 | SNE2123      | 005 500 4920 8 | SCREW          |
| 40                                                                 | SNE2129-1    | 005 500 7938 6 | SCREW          |
| 41                                                                 | SNE4021      | 005 507 0372 5 | NUT            |
| 42                                                                 | XTB3+6FFZ    | 005 501 1590 3 | SCREW          |
| 43<br>(EX, EH, E1)<br>(EF, EB, EW)<br>(EK, XL, XA)<br>(PA, PE, EG) | XTB3+8JFZ1   | 005 501 2523 0 | SCREW          |
| 44                                                                 | XTB3+8G      | 005 501 2607 7 | SCREW          |
| 45                                                                 | XTW3+15T     | 005 501 1353 4 | SCREW          |
| 46                                                                 | XTWS3+8T     | 005 501 3311 6 | SCREW          |
| 47                                                                 | XTB3+8FFR    | 005 501 3569 2 | SCREW          |
| 48                                                                 | XTB3+8JFZ    | 005 501 0138 3 | SCREW          |
| 49                                                                 | SJT30840LX-V | 003 410 5998 9 | LUG TERMINAL   |
| 49                                                                 | SJT31243-V   | 003 410 7349 8 | CONNECTOR      |
| 50                                                                 | SJT30645JQ   | 003 410 8079 7 | TERMINAL PLATE |
| 51                                                                 | SJS50678JQ   | 003 403 7155 7 | CONNECTOR      |
| 52                                                                 | SJT30345JQ   | 003 410 8077 9 | TERMINAL PLATE |

| Ref. No.                                                           | Part No.    | Part Code      | Description      |
|--------------------------------------------------------------------|-------------|----------------|------------------|
| PACKINGS                                                           |             |                |                  |
| P1<br>(EX, EH, E1)<br>(EB, EW, EK)<br>(XL, XA, XB)<br>(PA, PB, EG) | SPPT40      | 016 978 0437 3 | PROTECTION COVER |
| P2                                                                 | SPG5933     | 016 971 5033 4 | CARTON BOX       |
| P2<br>(EF)                                                         | SPG5934     | 016 971 5072 7 | CARTON BOX       |
| P3                                                                 | SPS4914-1   | 016 977 3328 0 | PAD              |
| P4                                                                 | SPS4915-2   |                | PAD              |
| P5                                                                 | SPS4999     | 016 977 3344 0 | PAD              |
| ACCESSORIES                                                        |             |                |                  |
| A1<br>(EX, EH, E1)<br>(EF, EB, EW)<br>(EG)                         | SFDCAC05E03 | 003 490 4809 5 | POWER CORD       |
| A1<br>(XA)                                                         | SJA168-1    | 003 490 4122 9 | POWER CORD       |
| (PA, PE)                                                           |             |                |                  |
| A1<br>(XL)                                                         | SJA173      | 003 490 4161 2 | POWER CORD       |



| Ref. No.                       | Part No.     | Part Code      | Description    | Ref. No.     | Part No.   | Part Code      | Description    |
|--------------------------------|--------------|----------------|----------------|--------------|------------|----------------|----------------|
| 27<br>(PA, PE)                 | SGP7031-5A   | 016 840 7845 8 | REAR PANEL     | 53           | SJS50378JQ | 003 403 7153 9 | CONNECTOR      |
| 27<br>(EX, EH, EI)<br>(EF, EB) | SGP7031A     | 016 840 7758 6 | REAR PANEL     | 54<br>(XB)   | SJT3213    | 003 410 6011 5 | CONNECTOR      |
| 27<br>(EG)                     | SGP7031B     | 016 840 7846 7 | REAR PANEL     | 54           | SJT3319    | 003 403 3892 7 | CONNECTOR      |
| 27<br>(EW)                     | SGP7031C     | 016 840 7847 6 | REAR PANEL     | 54           | SJT3415    | 003 403 3909 5 | POST(4P)       |
| 28                             | SJF3062-2NK  | 003 410 8074 2 | TERMINAL PLATE | 54           | SJT3611    | 003 410 6000 8 | CONNECTOR      |
| 29                             | SJF4818-1    | 003 410 7347 0 | TERMINAL BOARD | 54           | SJT3709    | 003 403 4232 3 | CONNECTOR      |
| 30                             | SJS306       | 003 403 4936 8 | CONNECTOR      | 55           | SJS9231-1B | 003 400 7442 8 | SOCKET         |
| 31                             | SJS804       | 003 403 4910 8 | CONNECTOR      | (EX, EH, EI) |            |                |                |
| 32                             | SJS9231A     | 003 410 5984 5 | SOCKET COVER   | (EB, EF, EW) |            |                |                |
| (EX, EH, EI)                   |              |                |                | (EK, XA, XB) |            |                |                |
| (EF, EB, EW)                   |              |                |                | (PA, PE, EG) |            |                |                |
| (EK, XA, XB)                   |              |                |                | 55           | SJS9234B   | 003 400 5922 5 | AC INLET       |
| (PA, PE, EG)                   |              |                |                | (XL)         |            |                |                |
| 32                             | SJS9234A     | 003 400 5921 6 | AC INLET COVER | 56           | SJS9225    | 003 400 3946 5 | AC OUTLET      |
| (XL)                           |              |                |                | (EX, EH, EI) |            |                |                |
| 33                             | SJS9332B     | 003 403 7377 5 | CONNECTOR      | (EF, EB, EW) |            |                |                |
| (EK)                           |              |                |                | (XA, EG)     |            |                |                |
| 34                             | SHR301       | 016 645 0044 0 | CLAMPER        | (PA, PE)     |            |                |                |
| (EX, EH, EI)                   |              |                |                | 56           | SJS9332A   | 003 403 7376 6 | CONNECTOR      |
| (EF, EB, EW)                   |              |                |                | (EK)         |            |                |                |
| (EG)                           |              |                |                | 57           | SJT30545JQ | 003 410 8078 8 | CONNECTOR      |
| 35                             | SJS5425      | 003 400 5926 1 | SOCKET(4P)     | 58           | SJS50578JQ | 003 403 7154 8 | CONNECTOR      |
| 35                             | SJS5629      | 003 400 5917 2 | CONNECTOR      | 59           | SJS5431    | 003 400 5927 0 | SOCKET         |
| 35                             | SJS5633      | 003 400 5929 8 | CONNECTOR      | 60           | SJS5331    | 003 400 5924 3 | CONNECTOR      |
| 35                             | SJS5715      | 003 400 6034 4 | SOCKET(7P)     | 60           | SJT388     | 003 410 6092 8 | LUG TERMINAL   |
| 35                             | SJS5717      | 003 400 6573 2 | SOCKET         | (EX, EH, EI) |            |                |                |
| 36                             | SJT783       | 003 410 6001 7 | CONTACT        | (EB, EF, EW) |            |                |                |
| 37                             | SNE2053      | 005 500 0720 0 | SCREW          | (XA, XB)     |            |                |                |
| 38                             | SNE2118      | 005 500 5011 2 | SCREW          | (PA, PE)     |            |                |                |
| 39                             | SNE2123      | 005 500 4920 8 | SCREW          | 61           | SJT785     | 003 410 6015 1 | CONTACT        |
| 40                             | SNE2129-1    | 005 500 7938 6 | SCREW          | 62           | SJP9205-2Y | 003 492 6791 0 | SHORTING PIN   |
| 41                             | SNE4021      | 005 507 0372 5 | NUT            | 63           | XTB3+8JFZ  | 005 501 0138 3 | SCREW          |
| 42                             | XTB3+6FFZ    | 005 501 1590 3 | SCREW          | 64           | SHD3X36J   | 016 634 0164 4 | BRACING STRUT  |
| 43                             | XTB3+8JFZ1   | 005 501 2523 0 | SCREW          | 65           | SHE143     | 016 918 0045 1 | FAN            |
| (EX, EH, EI)                   |              |                |                | (XB)         |            |                |                |
| (EF, EB, EW)                   |              |                |                | 65           | XYN3+C6FZ  | 005 503 0168 7 | SCREW          |
| (EK, XL, XA)                   |              |                |                | (XA, XB, )   |            |                |                |
| (PA, PE, EG)                   |              |                |                | (PA, PE)     |            |                |                |
| 44                             | XTB3+8G      | 005 501 2607 7 | SCREW          | 66           | SUS271     | 016 726 0357 6 | SPRING         |
| 45                             | XTW3+15T     | 005 501 1353 4 | SCREW          | (XB)         |            |                |                |
| 46                             | XTWS3+8T     | 005 501 3311 6 | SCREW          | 67           | SME95      | 016 632 0143 9 | ANGLE          |
| 47                             | XTB3+8FFR    | 005 501 3569 2 | SCREW          | (XB)         |            |                |                |
| 48                             | XTB3+8JFZ    | 005 501 0138 3 | SCREW          | 68           | MMN6C2RKMS | 002 310 0999 3 | DC MOTOR 0.24W |
| 49                             | SJT30840LX-V | 003 410 5998 9 | LUG TERMINAL   | 69           | SME97-1    | 016 632 1309 1 | ANGLE          |
| 49                             | SJT31243-V   | 003 410 7349 8 | CONNECTOR      | (XB)         |            |                |                |
| 50                             | SJT30645JQ   | 003 410 8079 7 | TERMINAL PLATE | 69           |            |                |                |
| 51                             | SJS50678JQ   | 003 403 7155 7 | CONNECTOR      |              |            |                |                |
| 52                             | SJT30345JQ   | 003 410 8077 9 | TERMINAL PLATE |              |            |                |                |

| Ref. No.     | Part No.   | Part Code      | Description      | Ref. No.     | Part No.   | Part Code      | Description      |
|--------------|------------|----------------|------------------|--------------|------------|----------------|------------------|
| PACKINGS     |            |                |                  | A1           | SJA183     | 003 490 4873 7 | POWER CORD       |
| P1           | SPP740     | 016 978 0437 3 | PROTECTION COVER | (XB)         |            |                |                  |
| P2           | SPG5933    | 016 971 5033 4 | CARTON BOX       | A1           | SJA188     | 003 490 5443 1 | POWER CORD       |
| (EX, EH, EI) |            |                |                  | (EK)         |            |                |                  |
| (EB, EW, EK) |            |                |                  | A2           | SJP9215    | 003 402 1437 9 | AC PLUG ADAPTOR  |
| (XL, XA, XB) |            |                |                  | (XA, XB)     |            |                |                  |
| (PA, PB, EG) |            |                |                  | (PA, PE)     |            |                |                  |
| P2           | SPG5934    | 016 971 5072 7 | CARTON BOX       | A3           | SQF12970-1 | 016 983 5266 3 | INSTRUCTION BOOK |
| (EF)         |            |                |                  | (EX, EH, EI) |            |                |                  |
| P3           | SPS4914-1  | 016 977 3328 0 | PAD              | (EB, EW)     |            |                |                  |
| P4           | SPS4915-2  |                | PAD              | A3           | SQF12971   | 016 983 5154 0 | INSTRUCTION BOOK |
| P5           | SPS4999    | 016 977 3344 0 | PAD              | (EK)         |            |                |                  |
| ACCESSORIES  |            |                |                  | A3           | SQF12972-1 | 016 983 5312 4 | INSTRUCTION BOOK |
| A1           | SFDAC05E03 | 003 490 4809 5 | POWER CORD       | (EF, XA)     |            |                |                  |
| (EX, EH, EI) |            |                |                  | A3           | SQF12973   | 016 983 5238 7 | INSTRUCTION BOOK |
| (EF, EB, EW) |            |                |                  | (EG)         |            |                |                  |
| (EG)         |            |                |                  | A3           | SQF12974   | 016 983 5237 8 | INSTRUCTION BOOK |
| A1           | SJA168-1   | 003 490 4122 9 | POWER CORD       | (EI)         |            |                |                  |
| (XA)         |            |                |                  | A3           | SQF12975   | 016 983 5236 9 | INSTRUCTION BOOK |
| (PA, PE)     |            |                |                  | (XL, XB)     |            |                |                  |
| A1           | SJA173     | 003 490 4161 2 | POWER CORD       | A3           | SQF12976   | 016 983 5235 0 | INSTRUCTION BOOK |
| (XL)         |            |                |                  | (PA, PE)     |            |                |                  |

