

# Service Manual

Telephone Equipment

Model No. **KX-TSC11B**  
**KX-TSC11W**  
**KX-TSC11CB**  
**KX-TSC11MXB**  
**KX-TSC11MXW**  
**KX-TSC11SNW**

Integrated Telephone System

B : Black Version

W: White Version

*Supplement*

Please use this manual with the original service manual mentioned on the next page.

## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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# 1 ORIGINAL SERVICE MANUAL INFORMATION

| Model No. on S/M        | Destinations                           | Order No. of S/M | Suffix Code |         |
|-------------------------|--|------------------|-------------|---------|
|                         |  |                  | Base Unit   | Handset |
| KX-TSC11B/KX-TSC11W     | U.S.A.                                 | KM40501588CE     | C to D      | ---     |
| KX-TSC11CB              | Canada                                 | KM40504691CE     | C to D      | ---     |
| KX-TSC11MXB/KX-TSC11MXW | Asia, Middle Near East and Other Areas | KM40410538C3     | C to D      | ---     |
| KX-TSC11SNB/KX-TSC11SNW | Singapore                              | KM40502640CE     | A to B      | ---     |

## 2 REPLACEMENT PARTS LIST

### 2.1. REFERENCE CHART

| Reason for Change   |  |
|---|--|
| *The following items (1-8) indicate the reason for change. See the "Notes" column for each part in ORIGINAL AND NEW PARTS COMPARISON LISTS. |  |
| 1. Improve performance  | <b>Note:</b><br>To be replaced with a new part and change PCB board. (PQUP11270Z*→PQUP11270Y*)<br>Parts with *1 marking have been changed at the same time.<br><br><b>Remarks:</b><br>*a: To enhance the quality |
| 2. Change of material or dimension  |  |
| 3. To meet approved specification   |  |
| 4. Standardization  |  |
| 5. Addition   |  |
| 6. Deletion   |  |
| 7. Correction   |  |
| 8. Other  |  |

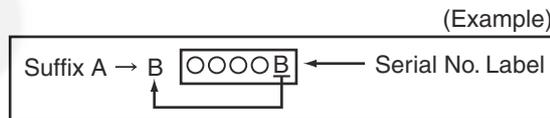
| Interchangeability Code   |   |  |
|---|---|--|
| **The following items (V-Z) indicate the Interchangeability. See the "Notes" column for each part in ORIGINAL AND NEW PARTS COMPARISON LISTS. |   |  |
| V   | Original  Early (before change)<br>New  Late (after change) | Original or new parts may be used in early or late production sets. Use original parts until exhausted, then stock new parts.  |
| W   | Original  Early (before change)<br>New  Late (after change) | Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible, then stock new parts. |
| X   | Original  Early (before change)<br>New  Late (after change) | New parts only may be used in early or late production sets. Stock new parts.  |
| Y   | Original  Early (before change)<br>New  Late (after change) | Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.                           |
| Z   | Other   |  |

**Note:**

Alphabets in the "Remarks" column in the following lists correspond to the alphabets in the "Remarks" in REFERENCE CHART.

### 2.2. ORIGINAL AND NEW PARTS COMPARISON LISTS

Serial No.Label tells you the suffix code as follows.



| Ref. No.                                 | Part No.       |            | Part Name & Description | Pcs/ Set | Remarks | Notes | Time of Change (Suffix) |
|--|----------------|------------|-------------------------|----------|---------|-------|-------------------------|
|  | Original (Old) | New        |                         |          |         |       |                         |
| <b>Main P.C. Board Parts (Base Unit)</b> |                |            |                         |          |         |       |                         |
| D102                                     | MA4180         | -----      | DIODE(SI)               | *1       | 0       | *a    | 6 Y *2                  |
| D107                                     | -----          | DY2J25000L | DIODE(SI)               | *1       | 1       | *a    | 5 Y *2                  |
| R487                                     | ERJ3GEY0R00    | -----      | RESISTOR, 0Ω            | *1       | 0       | *a    | 6 Y *2                  |

**Note:**

\*2: Please refer to "1 ORIGINAL SERVICE MANUAL INFORMATION".

PQUP11270YA PCB uses new diode with part no. DY2J25000L (chip mount type) at D107 location to replaced axial diode with part no. B0BA01700055 which previously at D102 location. Old PCB with PCB date (2004.10.01) has no land.

Please refer to "3.1 SCHEMATIC DIAGRAM (FOR P.C.BOARD PART No. PQUP11270YA)" (P.4) and "3.2 CIRCUIT BOARD (FOR

P.C.BOARD PART No. PQUP11270YA) (P.13) for detail.

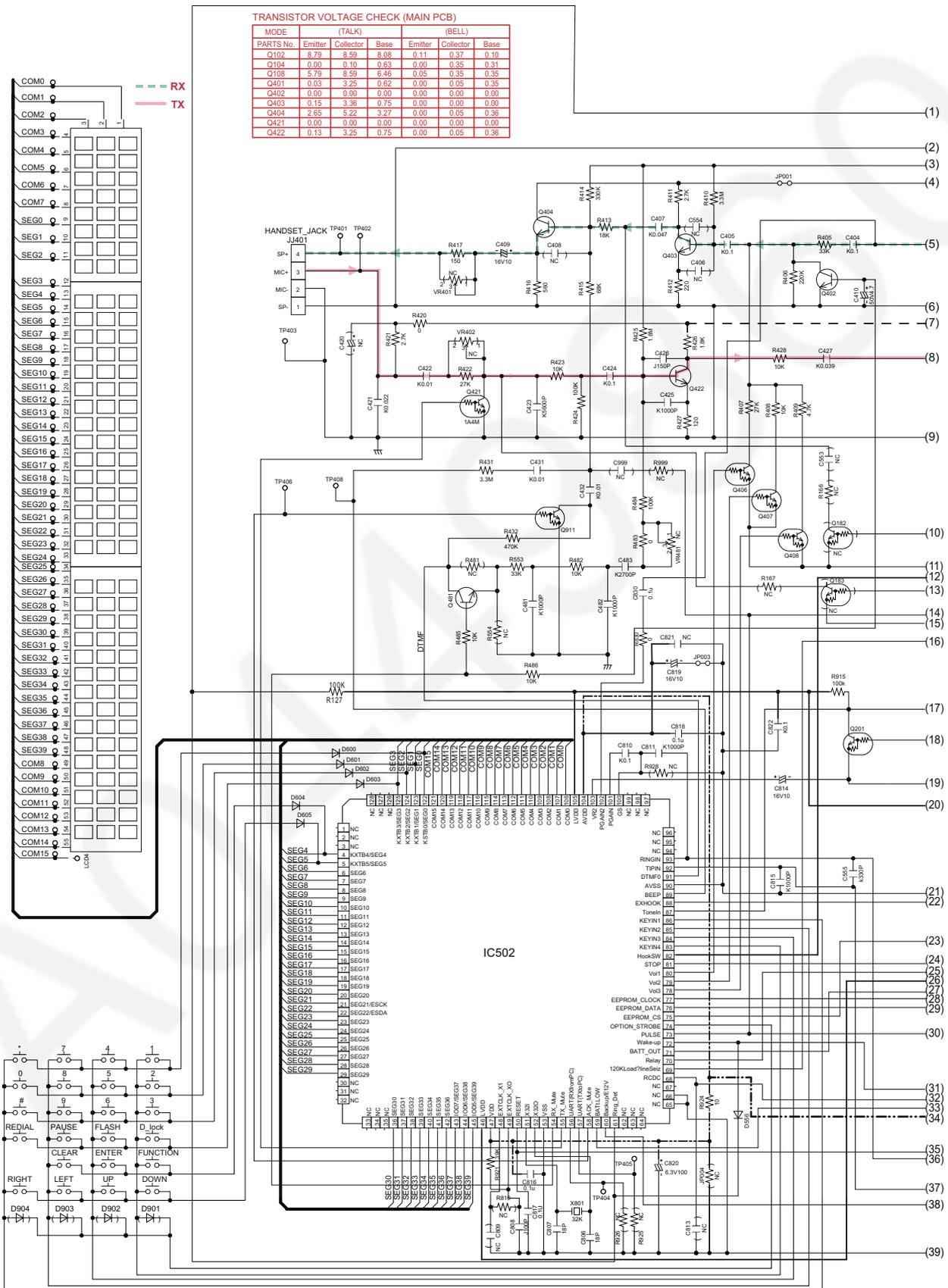
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# 3 CHANGES

## 3.1. SCHEMATIC DIAGRAM (FOR P.C.BOARD PART No. PQUP11270YA)

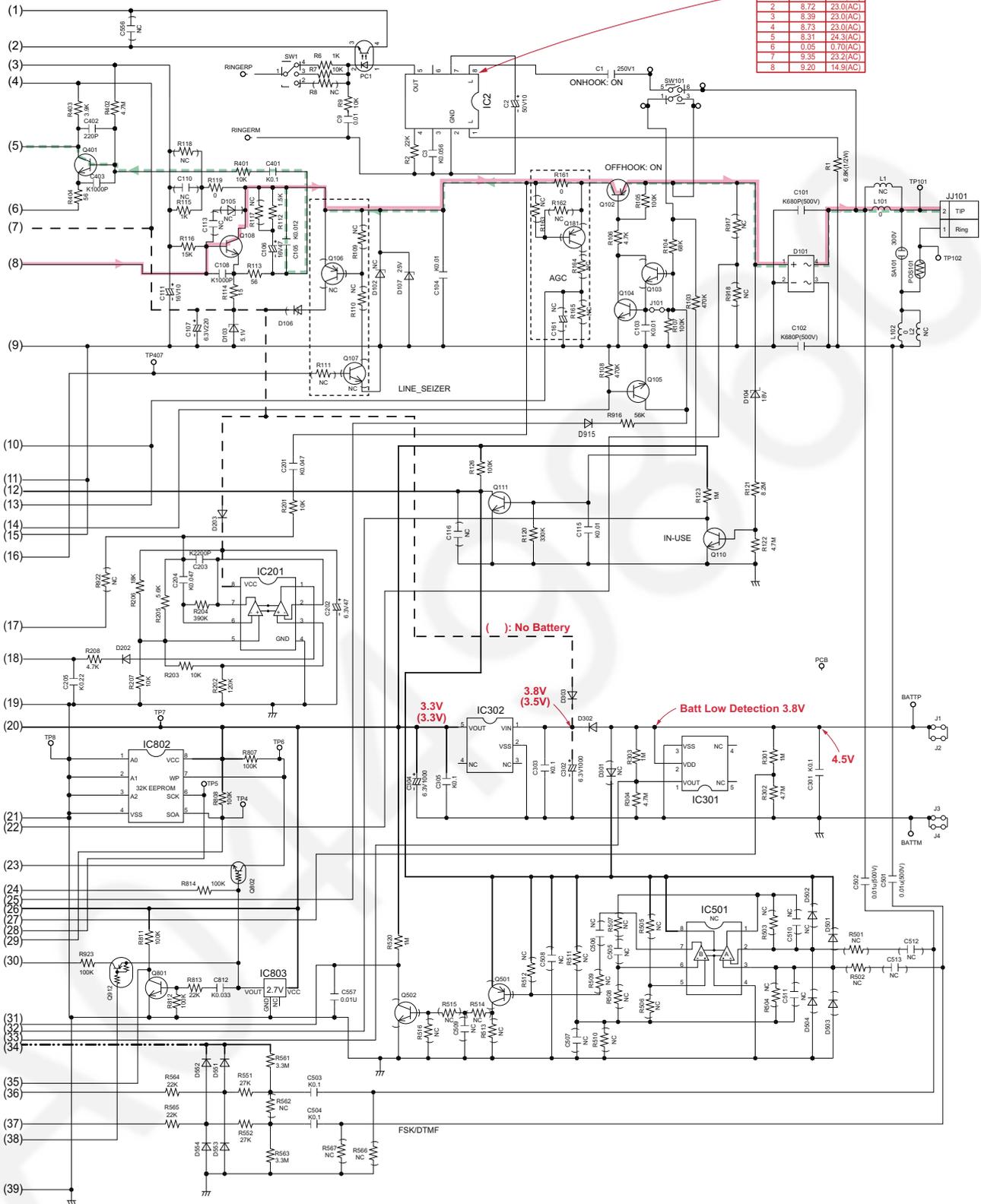
### 3.1.1. For KX-TSC11B/KX-TSC11W

[Changed from original section "11 SCHEMATIC DIAGRAM"]



VOLTAGE CHECK (IC2)

| MODE | (TALK) | (BELL)   |
|------|--------|----------|
| 1    | 7.65   | 32.0(AC) |
| 2    | 8.72   | 23.0(AC) |
| 3    | 8.30   | 23.0(AC) |
| 4    | 8.73   | 23.0(AC) |
| 5    | 8.31   | 24.3(AC) |
| 6    | 0.05   | 0.70(AC) |
| 7    | 9.35   | 23.2(AC) |
| 8    | 9.20   | 14.9(AC) |



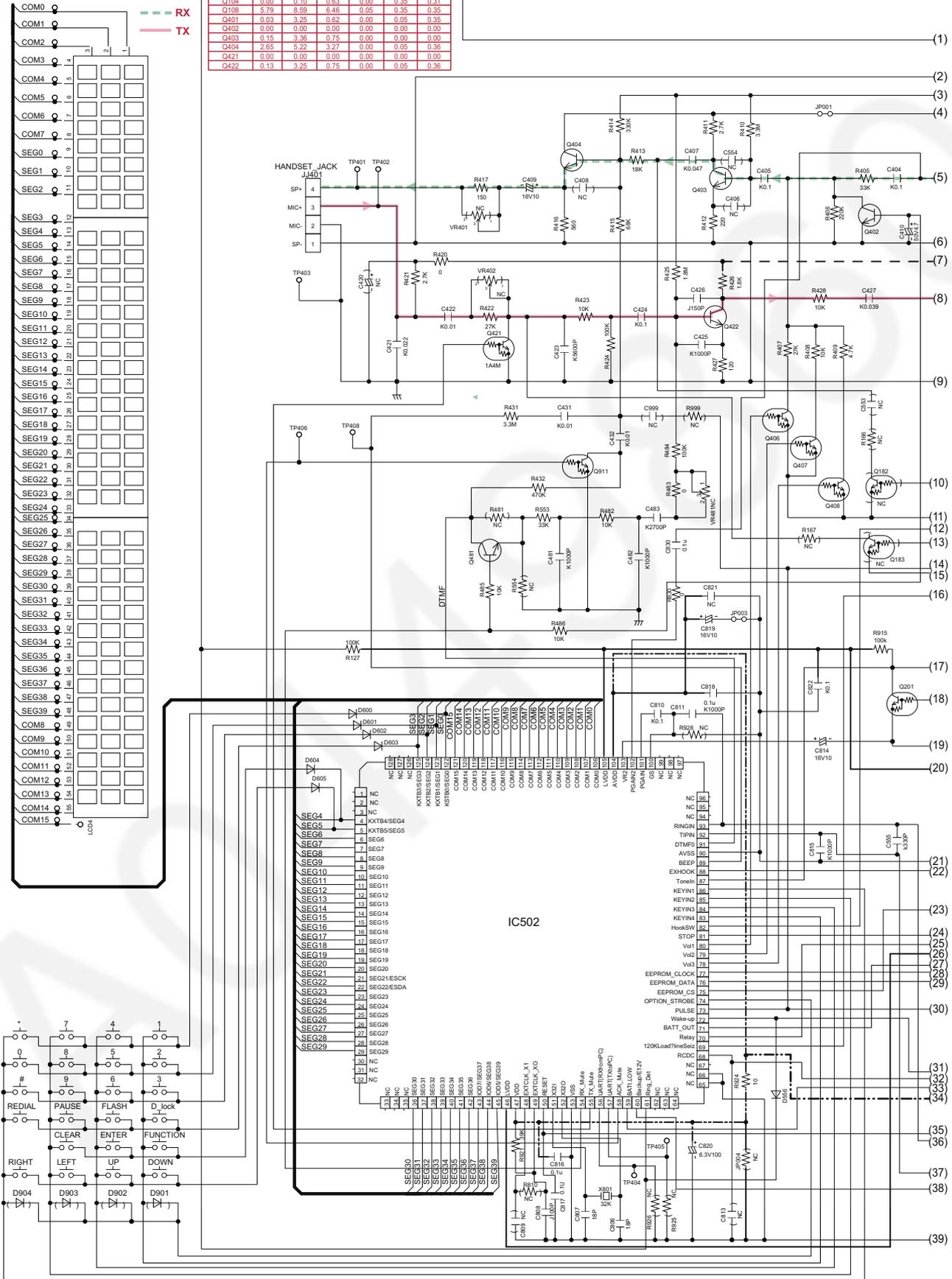
NC : No Components  
KX-TSC11 SCHEMATIC DIAGRAM (Main P.C. Board)

### 3.1.2. For KX-TSC11CB

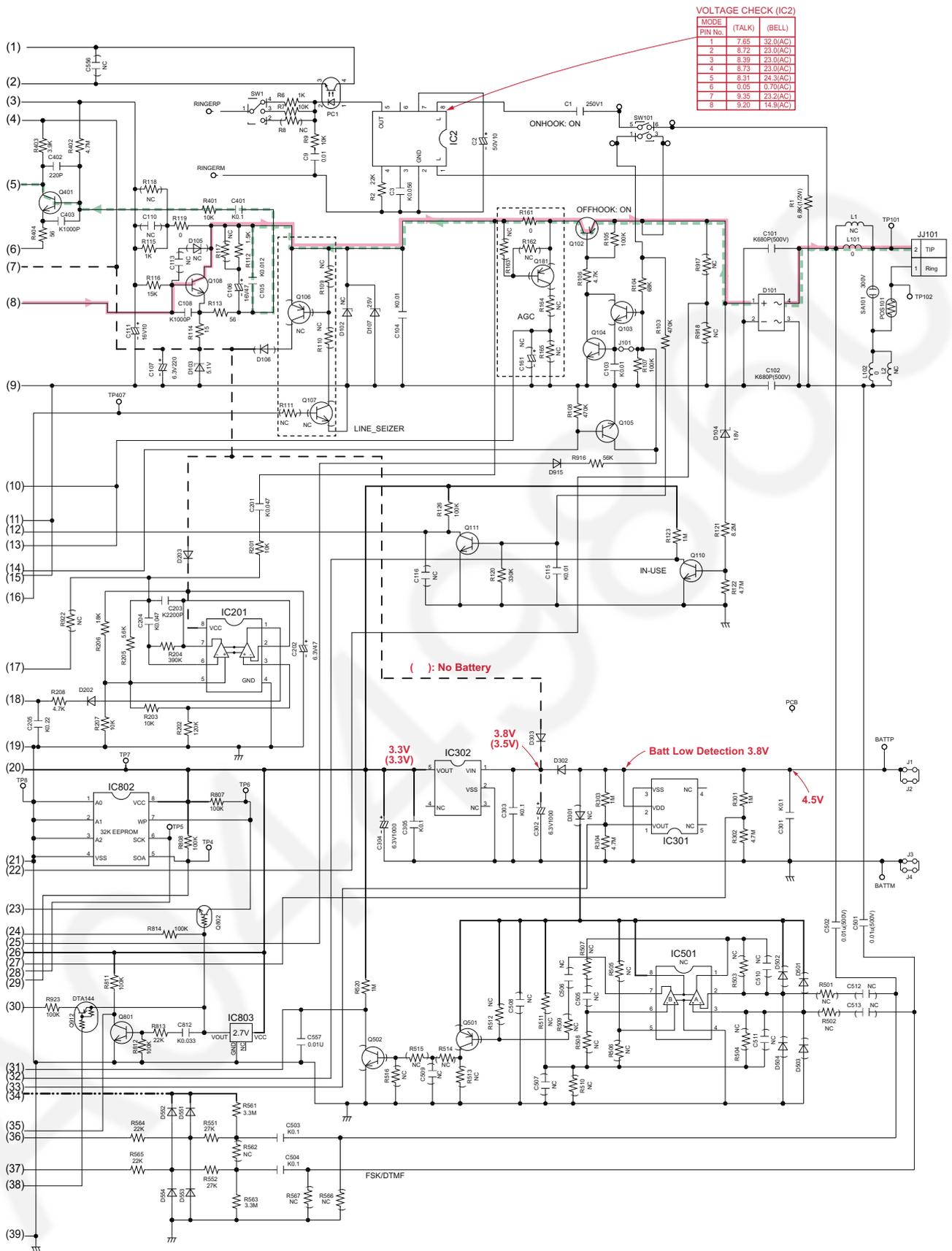
[Changed from original section "11 SCHEMATIC DIAGRAM"]

TRANSISTOR VOLTAGE CHECK (MAIN PCB)

| MODE | (TALK)  |           |      | (BELL)  |           |      |
|------|---------|-----------|------|---------|-----------|------|
|      | Emitter | Collector | Base | Emitter | Collector | Base |
| Q102 | 8.79    | 8.59      | 8.08 | 0.11    | 0.37      | 0.10 |
| Q104 | 0.00    | 0.10      | 0.63 | 0.00    | 0.35      | 0.31 |
| Q108 | 5.79    | 8.59      | 6.46 | 0.05    | 0.35      | 0.35 |
| Q401 | 0.03    | 3.25      | 0.62 | 0.00    | 0.05      | 0.35 |
| Q402 | 0.00    | 0.00      | 0.00 | 0.00    | 0.00      | 0.00 |
| Q403 | 0.15    | 3.36      | 0.75 | 0.00    | 0.00      | 0.00 |
| Q404 | 2.55    | 3.22      | 3.27 | 0.00    | 0.05      | 0.36 |
| Q421 | 0.00    | 0.00      | 0.00 | 0.00    | 0.00      | 0.00 |
| Q422 | 0.13    | 3.25      | 0.75 | 0.00    | 0.05      | 0.36 |

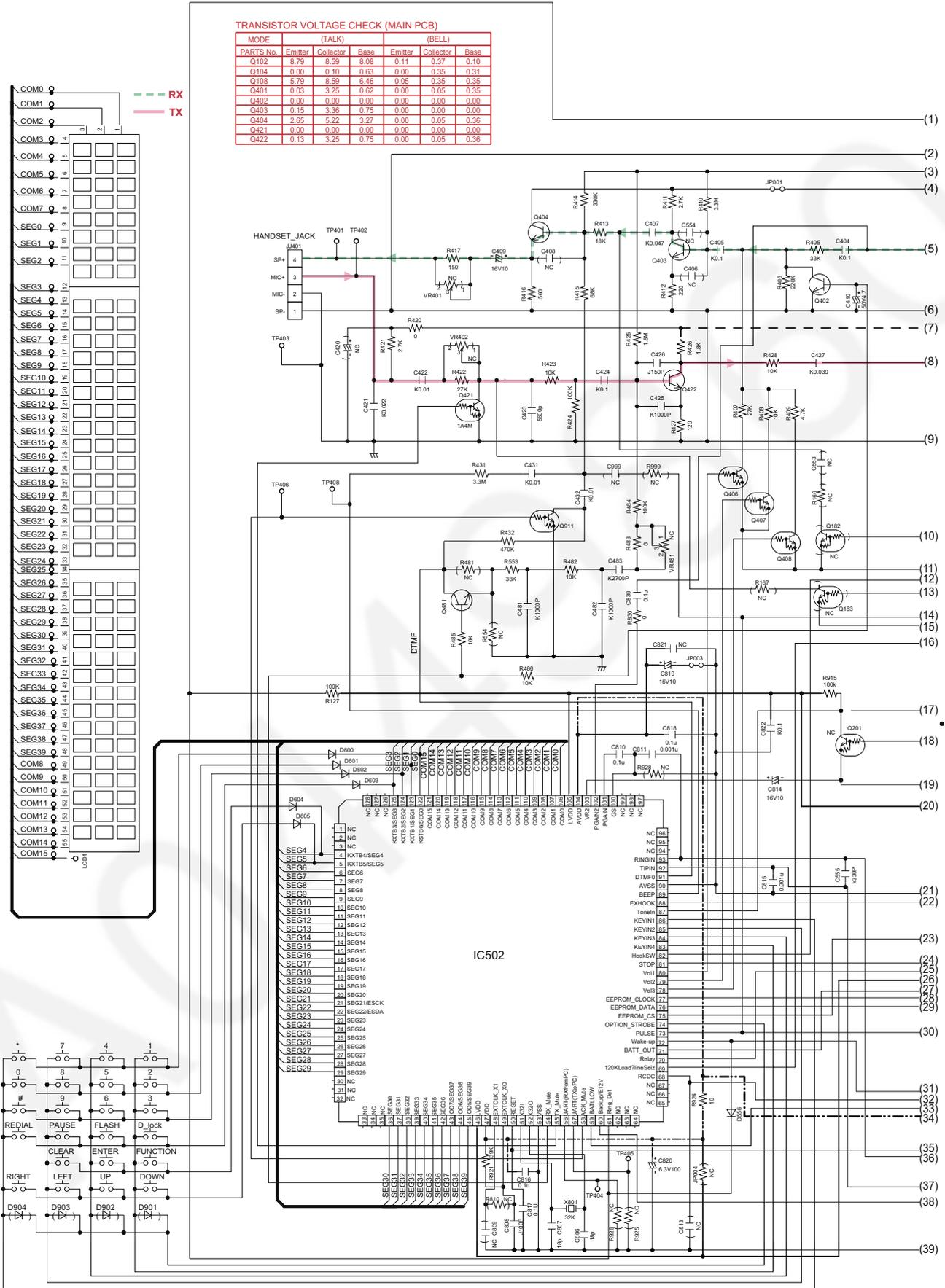


NC : No Components



NC : No Components  
KX-TSC11C SCHEMATIC DIAGRAM (Main P.C. Board)

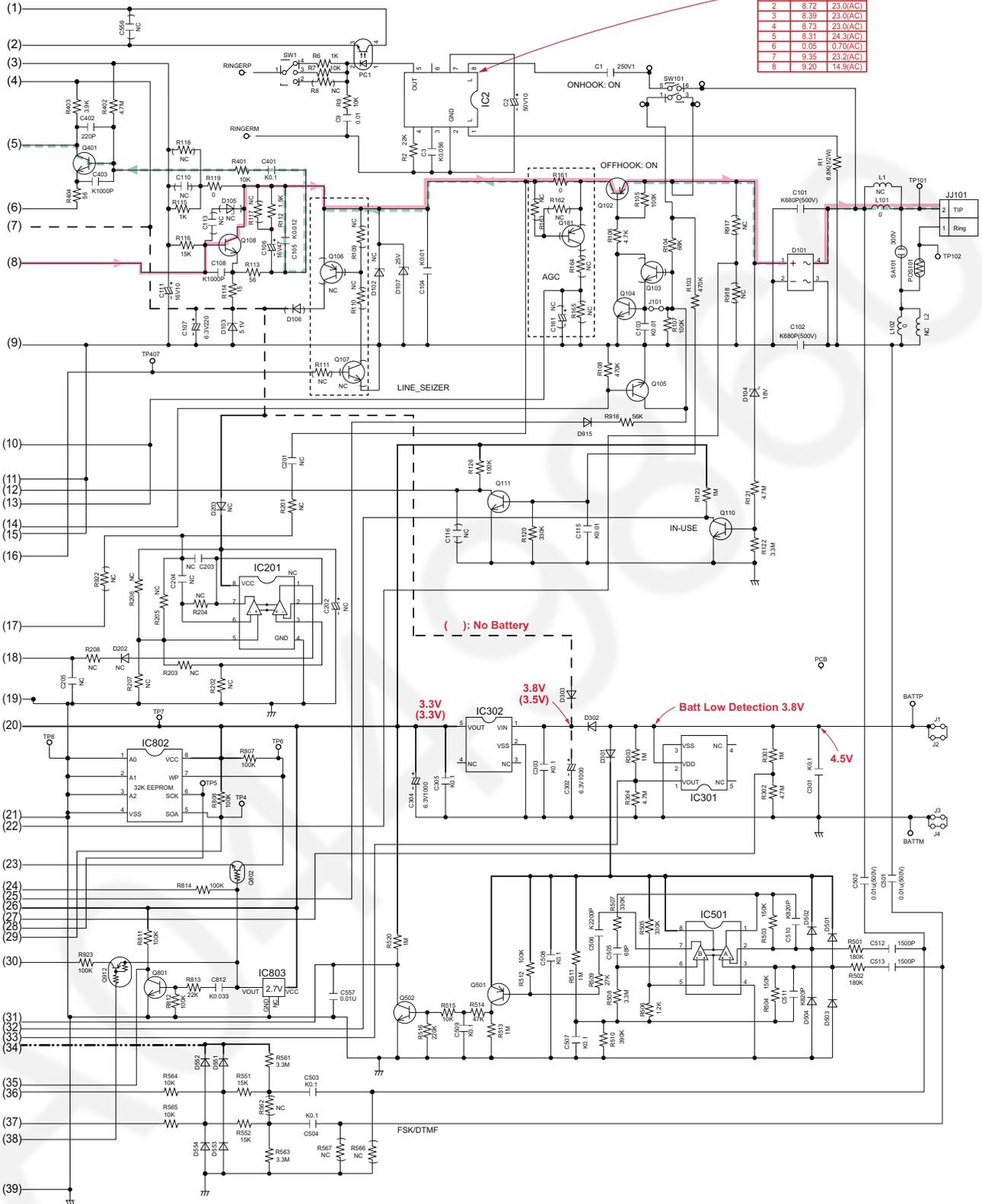
### 3.1.3. For KX-TSC11MXB/KX-TSC11MXW [Changed from original section "22 SCHEMATIC DIAGRAM"]



NC : No Components

VOLTAGE CHECK (IC2)

| MODE | (TALK) | (BELL)   |
|------|--------|----------|
| 1    | 7.65   | 32.0(AC) |
| 2    | 8.72   | 23.0(AC) |
| 3    | 8.39   | 23.0(AC) |
| 4    | 8.73   | 23.0(AC) |
| 5    | 8.31   | 24.3(AC) |
| 6    | 0.05   | 0.70(AC) |
| 7    | 9.35   | 23.2(AC) |
| 8    | 9.20   | 14.9(AC) |



( ) : No Battery

3.3V (3.3V)

3.8V (3.5V)

Batt Low Detection 3.8V

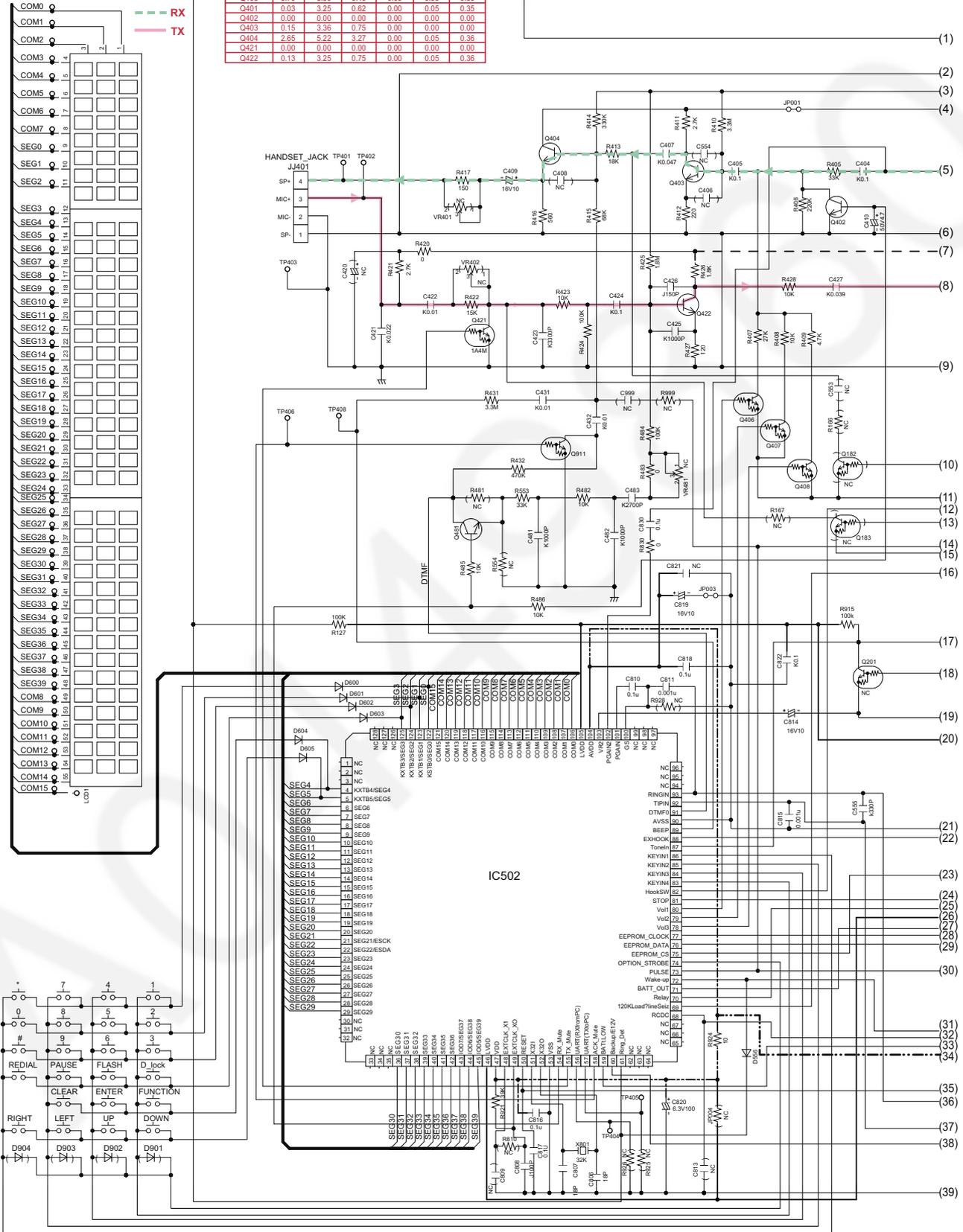
4.5V

NC : No Components  
KX-TSC11MXB/MXW SCHEMATIC DIAGRAM

### 3.1.4. For KX-TSC11SNB/KX-TSC11SNW [Changed from original section "22 SCHEMATIC DIAGRAM"]

TRANSISTOR VOLTAGE CHECK (MAIN PCB)

| PARTS No. | (TALK)  |           |      | (BELL)  |           |      |
|-----------|---------|-----------|------|---------|-----------|------|
|           | Emitter | Collector | Base | Emitter | Collector | Base |
| Q102      | 8.79    | 8.59      | 8.08 | 0.11    | 0.37      | 0.10 |
| Q104      | 0.00    | 0.10      | 0.63 | 0.00    | 0.35      | 0.31 |
| Q108      | 5.79    | 8.59      | 6.46 | 0.05    | 0.35      | 0.35 |
| Q401      | 0.03    | 3.25      | 0.62 | 0.00    | 0.05      | 0.35 |
| Q402      | 0.00    | 0.00      | 0.00 | 0.00    | 0.00      | 0.00 |
| Q403      | 0.15    | 3.36      | 0.75 | 0.00    | 0.00      | 0.00 |
| Q404      | 2.65    | 5.22      | 3.27 | 0.00    | 0.05      | 0.36 |
| Q421      | 0.00    | 0.00      | 0.00 | 0.00    | 0.00      | 0.00 |
| Q422      | 0.13    | 3.25      | 0.75 | 0.00    | 0.05      | 0.36 |



NC : No Components

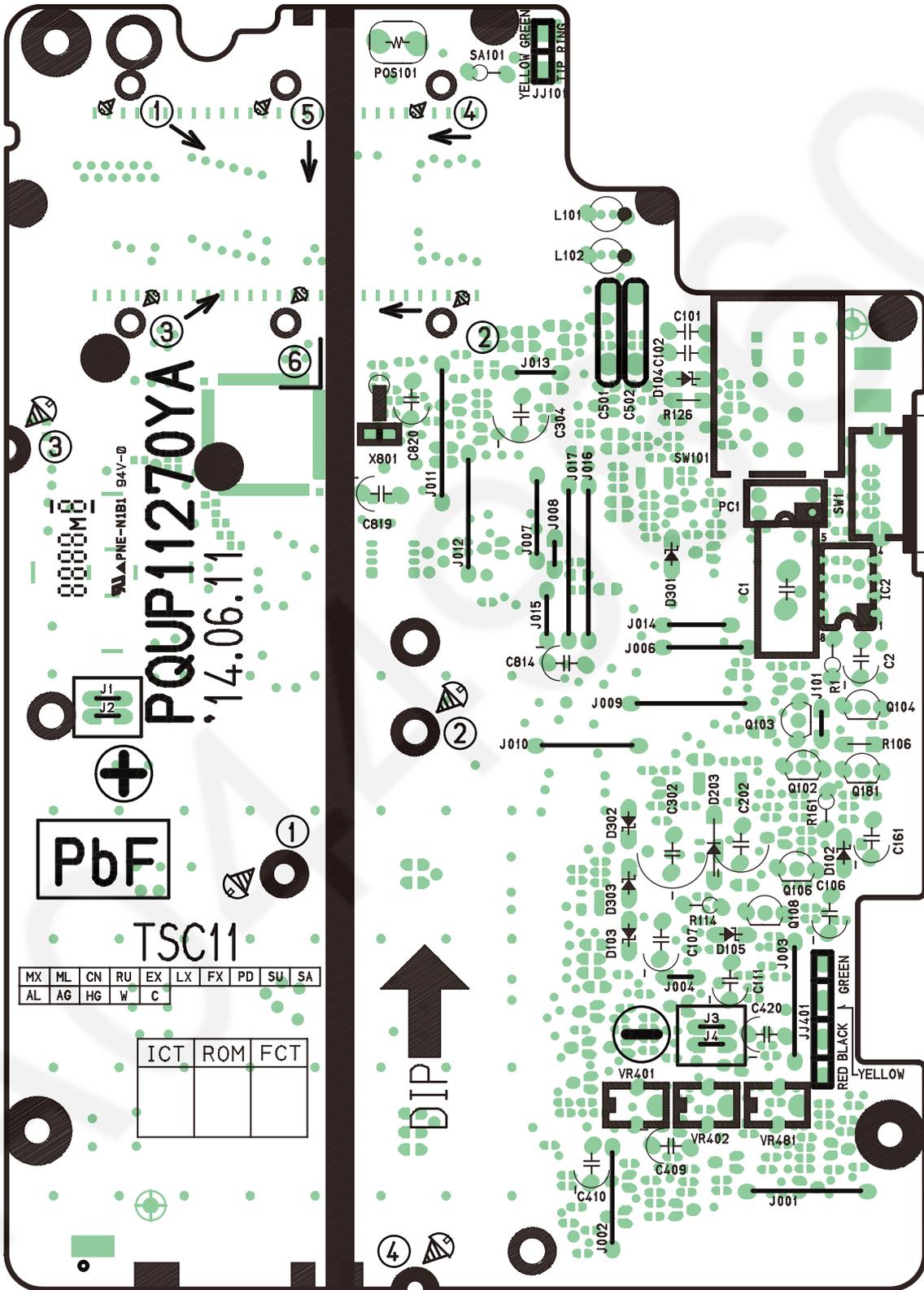


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### 3.2. CIRCUIT BOARD (FOR P.C.BOARD PART No. PQUP11270YA)

#### 3.2.1. Main (Component View)

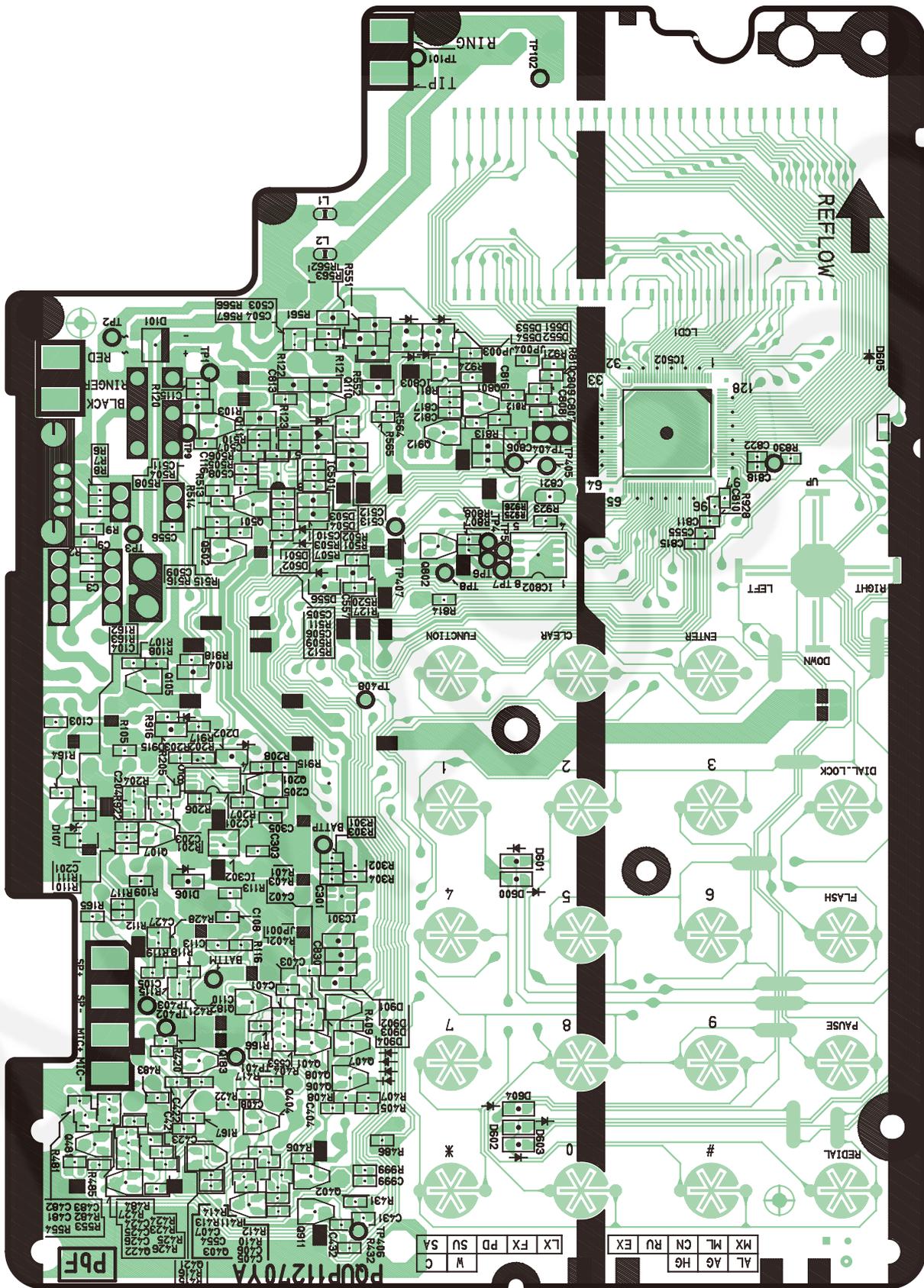
[Changed from original section "23.1 Component View"]  
 (For KX-TSC11MXB/KX-TSC11MXW, KX-TSC11SNB/KX-TSC11SNW)



KX-TSC11 CIRCUIT BOARD (Component View)

### 3.2.2. Main (Flow Solder Side View)

[Changed from original section "23.2 Flow Solder Side View"]  
 (For KX-TSC11MXB/KX-TSC11MXW, KX-TSC11SNB/KX-TSC11SNW)



KX-TSC11 CIRCUIT BOARD (Flow Solder Side View)